

AIR CONDITIONING SYSTEMS

CITY MULTI

DATA BOOK

MODEL

PQHY-P72-360T(S)LMU-A1

PQHY-P72-360Y(S)LMU-A1

PQHY-P72-360Z(S)LMU-A1

PQRY-P72-336T(S)LMU-A1

PQRY-P72-336Y(S)LMU-A1

PQRY-P72-336Z(S)LMU-A1

-For ground source application

DATA BOOK describes the technical specifications of MITSUBISHI ELECTRIC Corp.'s CITYMULTI air conditioning system products.

In this DATA BOOK for ground source application, the information on water-cooled heat source unit PQHY-P-T(S)LMU-A1/PQHY-P-Y(S)LMU-A1/PQHY-P-Z(S)LMU-A1/PQRY-P-T(S)LMU-A1/PQRY-P-Y(S)LMU-A1/PQRY-P-Z(S)LMU-A1 with the connection of standard CITY MULTI indoor unit series is specified.

For capacity tables with indoor units, refer to the DATA BOOK for standard CITY MULTI units.

We recommend DATA BOOK users to read carefully and take advantage of all the contents inside to design the CITY MULTI air conditioning system and/or to prepare documents for promotions.

Along with the DATA BOOK, MITSUBISHI ELECTRIC provides a Design-Tool software to ensure the users to design the system correctly and simplify the calculations.

Please contact your local distributor for this software.

Please be notified that specifications are subject to change without notice due to continual improvements of the product.

For any inquiries, please contact your local distributor.

CITY MULTI

Databook for ground source application

HEAT SOURCE UNITS

BRINE INFORMATION

GENERAL LINE-UP

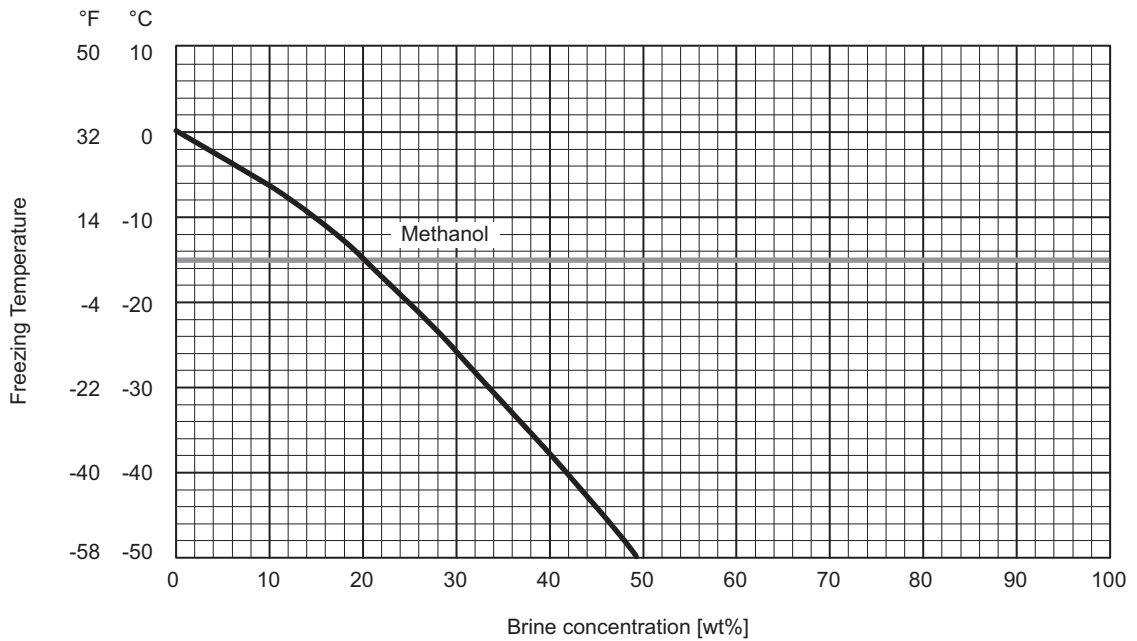
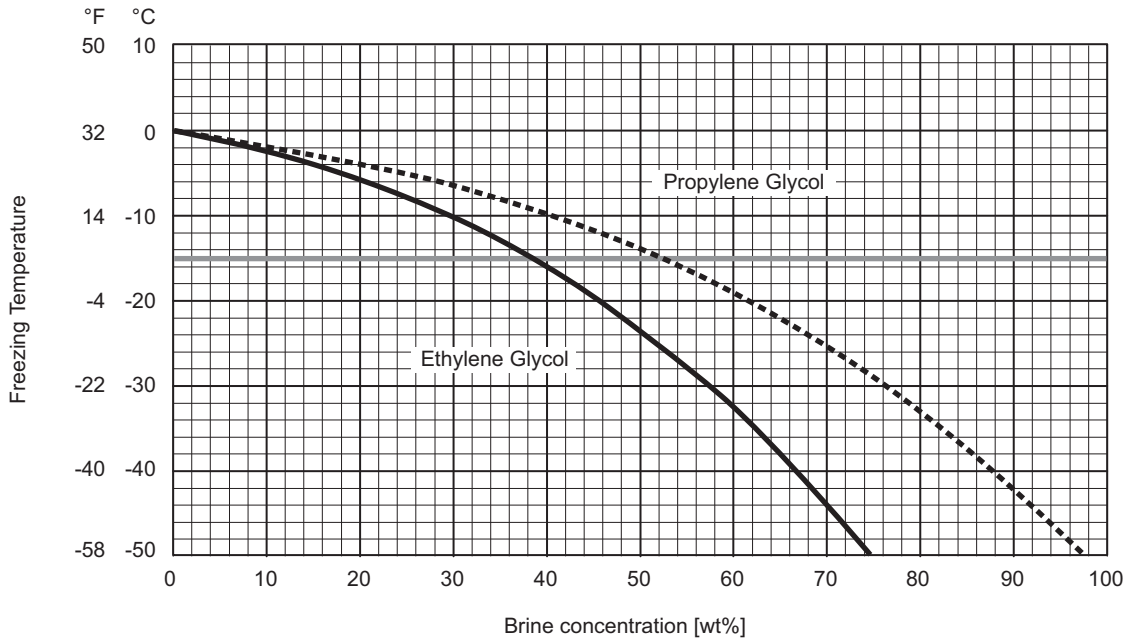
WY-SERIES.....	1
WY-SERIES-575V	99
WR2-SERIES.....	165
WR2-SERIES-575V	261

SYSTEM DESIGN

SYSTEM DESIGN WY-SERIES	325
SYSTEM DESIGN WR2-SERIES	337

Brine freezing temperature

Brine concentration is decided by the freezing temperature. First, it is necessary to decide the freezing temperature and find out brine concentration which will correspond to the freezing temperature.



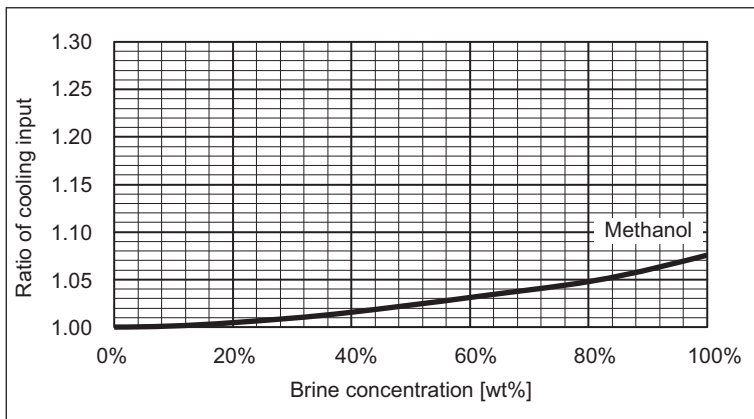
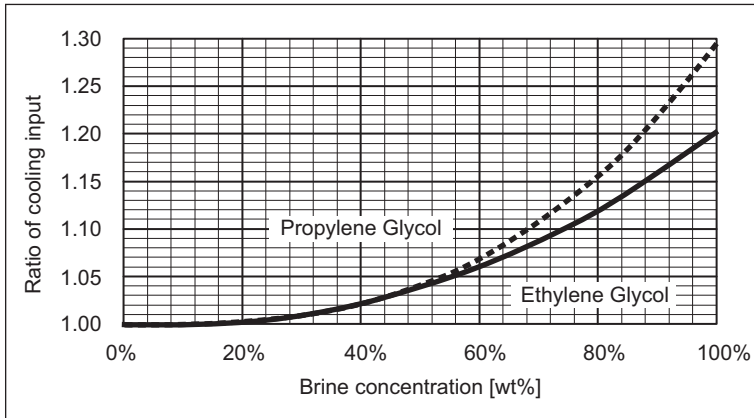
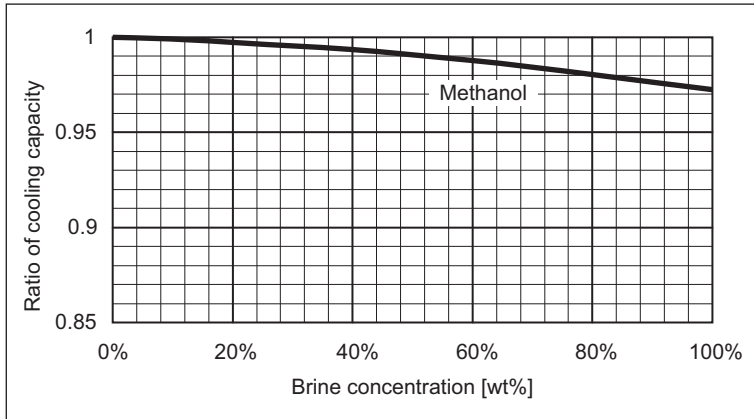
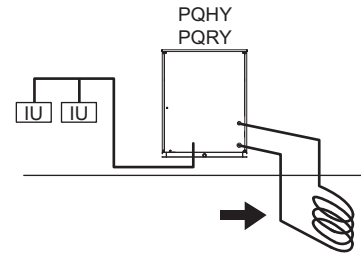
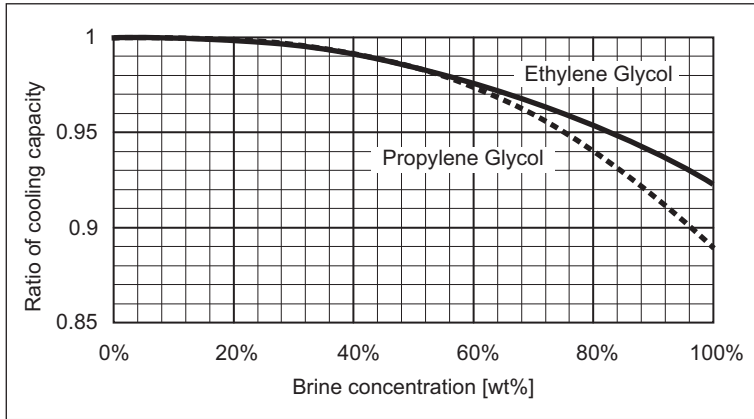
Note

The graph was referred from chemical company data.
 But Freezing Temperature condition will be slightly different based on each company.
 Please confirm detail data to the chemical company directly.
 It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.

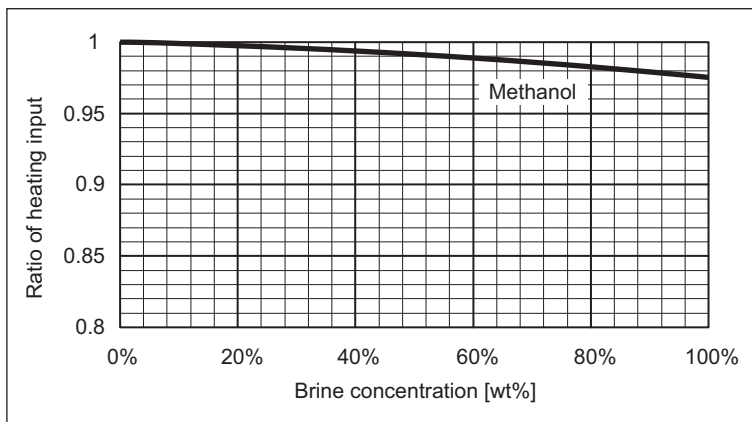
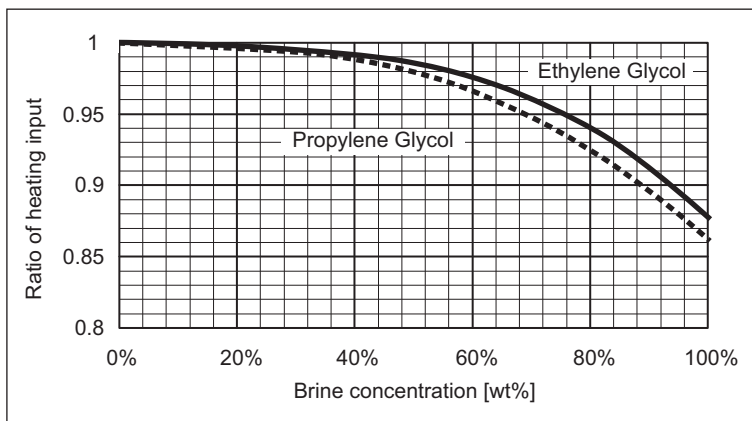
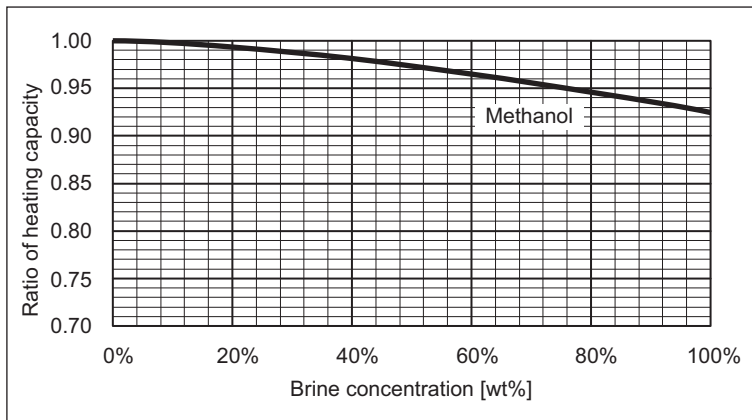
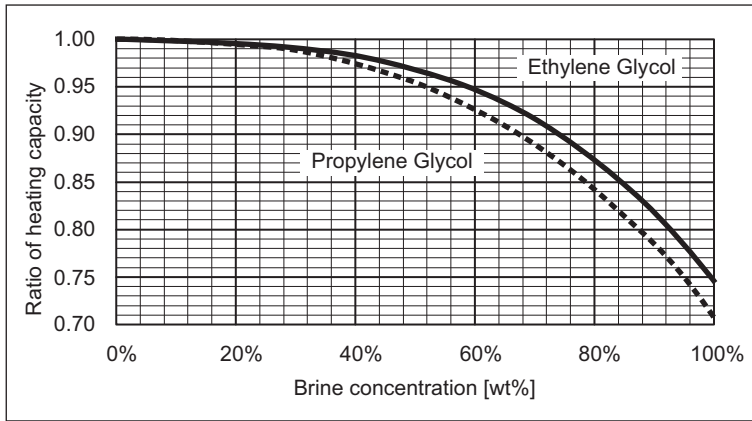
Capacity correction by brine concentration (For heat source unit)

Depending on the freezing temperature and brine concentration, the ratio of unit capacity will change. As shown in the line diagram, higher the brine concentration, the lower the ratio of capacity becomes.

Cooling



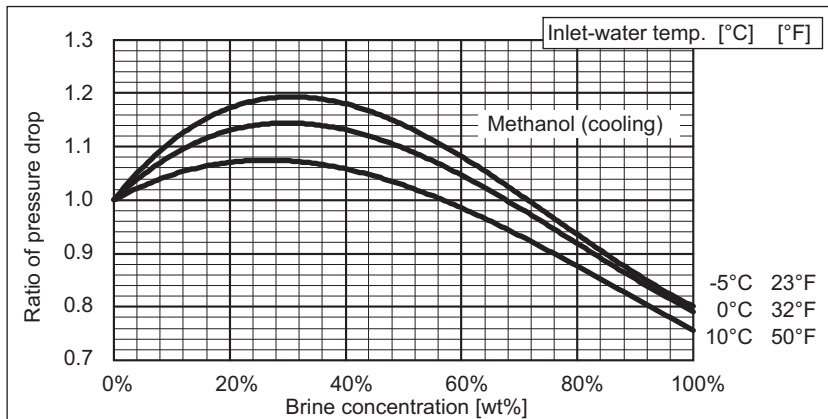
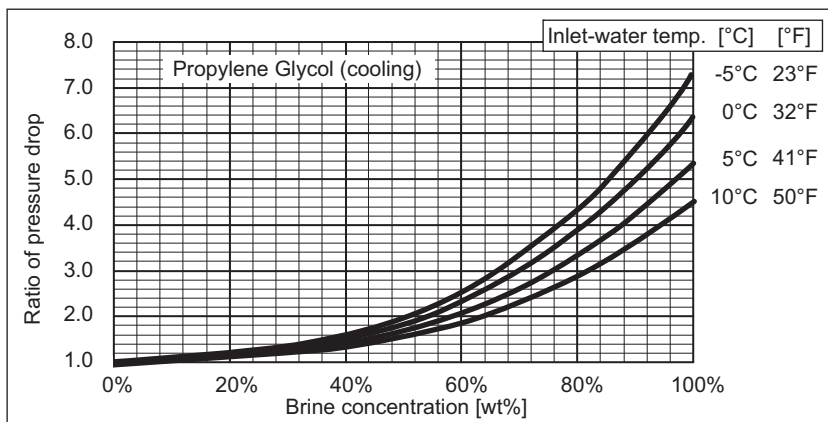
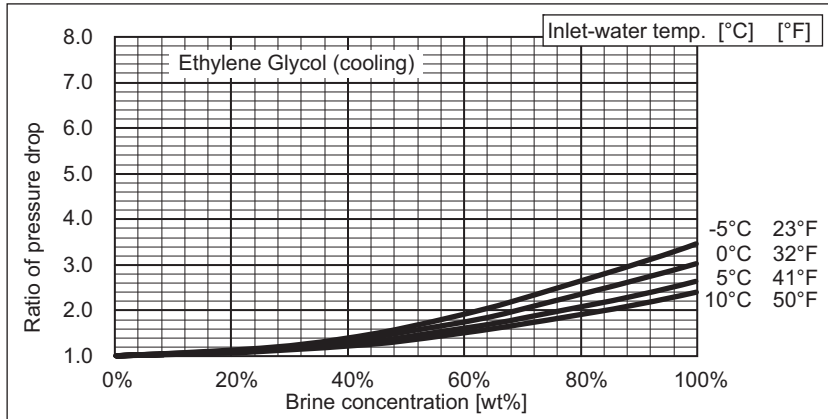
Heating



Pressure drop correction by brine concentration (For heat source unit)

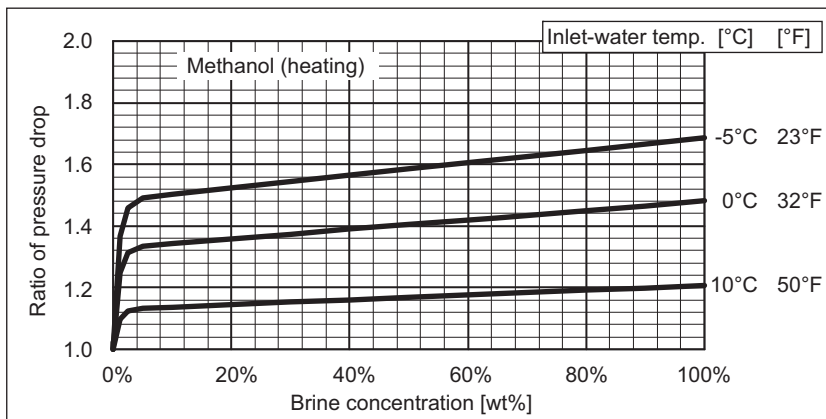
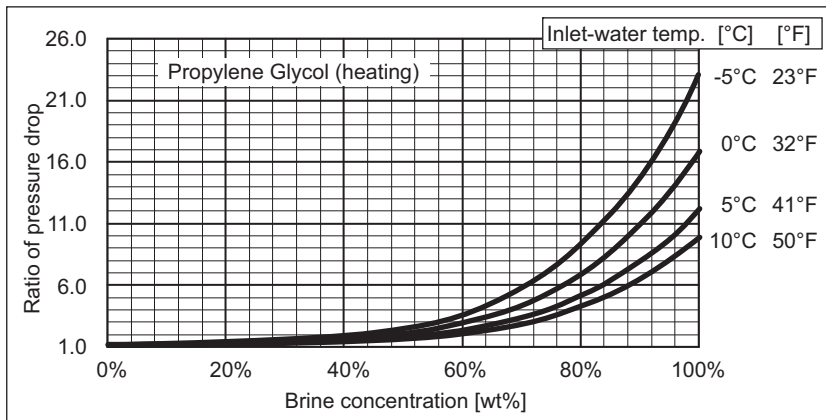
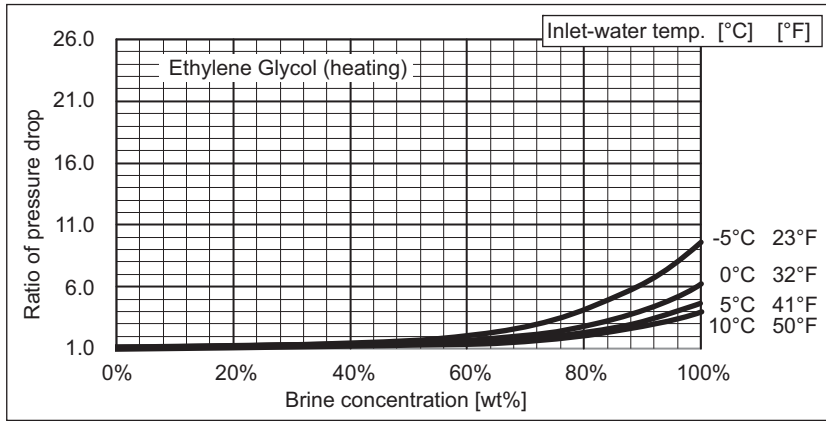
Also, water pump is selected by the ratio of pressure drop of depending on the brine concentration.

Cooling



* Please supply strainer on site.

Heating



* Please supply strainer on site.

Water Cooled WY-Series-208-230V

Water Cooled WY-Series-460V



Type(BTU/h)	72K	96K	120K
Model Name	PQHY-P72TLMU-A1	PQHY-P96TLMU-A1	PQHY-P120TLMU-A1

Type(BTU/h)	72K	96K	120K
Model Name	PQHY-P72YLMU-A1	PQHY-P96YLMU-A1	PQHY-P120YLMU-A1



Type(BTU/h)	144K	168K	192K
Model Name	PQHY-P144TLMU-A1	PQHY-P168TLMU-A1	PQHY-P192TLMU-A1
Type(BTU/h)	216K	240K	
Model Name	PQHY-P216TLMU-A1	PQHY-P240TLMU-A1	

Type(BTU/h)	144K	168K	192K
Model Name	PQHY-P144YLMU-A1	PQHY-P168YLMU-A1	PQHY-P192YLMU-A1
Type(BTU/h)	216K	240K	
Model Name	PQHY-P216YLMU-A1	PQHY-P240YLMU-A1	



Type(BTU/h)	144K	168K	192K
Model Name	PQHY-P144TSLMU-A1	PQHY-P168TSLMU-A1	PQHY-P192TSLMU-A1
Type(BTU/h)	216K	240K	
Model Name	PQHY-P216TSLMU-A1	PQHY-P240TSLMU-A1	

Type(BTU/h)	144K	168K	192K
Model Name	PQHY-P144YSLMU-A1	PQHY-P168YSLMU-A1	PQHY-P192YSLMU-A1
Type(BTU/h)	216K	240K	
Model Name	PQHY-P216YSLMU-A1	PQHY-P240YSLMU-A1	



Type(BTU/h)	288K	312K	336K
Model Name	PQHY-P288TSLMU-A1	PQHY-P312TSLMU-A1	PQHY-P336TSLMU-A1
Type(BTU/h)	360K		
Model Name	PQHY-P360TSLMU-A1		

Type(BTU/h)	288K	312K	336K
Model Name	PQHY-P288YSLMU-A1	PQHY-P312YSLMU-A1	PQHY-P336YSLMU-A1
Type(BTU/h)	360K		
Model Name	PQHY-P360YSLMU-A1		

Water Cooled WY-Series-575V

Water Cooled WR2-Series-208-230V



Type(BTU/h)	72K	96K	120K
Model Name	PQHY-P72ZLMU-A1	PQHY-P96ZLMU-A1	PQHY-P120ZLMU-A1



Type(BTU/h)	72K	96K	120K
Model Name	PQRY-P72TLMU-A1	PQRY-P96TLMU-A1	PQRY-P120TLMU-A1



Type(BTU/h)	144K	168K	192K
Model Name	PQHY-P144ZLMU-A1	PQHY-P168ZLMU-A1	PQHY-P192ZLMU-A1



Type(BTU/h)	144K	168K	192K
Model Name	PQRY-P144TLMU-A1	PQRY-P168TLMU-A1	PQRY-P192TLMU-A1
Type(BTU/h)	216K	240K	
Model Name	PQRY-P216TLMU-A1	PQRY-P240TLMU-A1	



Type(BTU/h)	144K	168K	192K
Model Name	PQHY-P144ZSLMU-A1	PQHY-P168ZSLMU-A1	PQHY-P192ZSLMU-A1
Type(BTU/h)	216K	240K	
Model Name	PQHY-P216ZSLMU-A1	PQHY-P240ZSLMU-A1	



Type(BTU/h)	144K	168K	192K
Model Name	PQRY-P144TSLMU-A1	PQRY-P168TSLMU-A1	PQRY-P192TSLMU-A1
Type(BTU/h)	216K	240K	
Model Name	PQRY-P216TSLMU-A1	PQRY-P240TSLMU-A1	



Type(BTU/h)	288K	312K	336K
Model Name	PQHY-P288ZSLMU-A1	PQHY-P312ZSLMU-A1	PQHY-P336ZSLMU-A1
Type(BTU/h)	360K		
Model Name	PQHY-P360ZSLMU-A1		



Type(BTU/h)	288K	312K	336K
Model Name	PQRY-P288TSLMU-A1	PQRY-P312TSLMU-A1	PQRY-P336TSLMU-A1

Water Cooled WR2-Series-460V



Type(BTU/h)	72K	96K	120K
Model Name	PQRY-P72YLMU-A1	PQRY-P96YLMU-A1	PQRY-P120YLMU-A1



Type(BTU/h)	144K	168K	192K
Model Name	PQRY-P144YLMU-A1	PQRY-P168YLMU-A1	PQRY-P192YLMU-A1
Type(BTU/h)	216K	240K	
Model Name	PQRY-P216YLMU-A1	PQRY-P240YLMU-A1	



Type(BTU/h)	144K	168K	192K
Model Name	PQRY-P144YSLMU-A1	PQRY-P168YSLMU-A1	PQRY-P192YSLMU-A1
Type(BTU/h)	216K	240K	
Model Name	PQRY-P216YSLMU-A1	PQRY-P240YSLMU-A1	



Type(BTU/h)	288K	312K	336K
Model Name	PQRY-P288YSLMU-A1	PQRY-P312YSLMU-A1	PQRY-P336YSLMU-A1

Water Cooled WR2-Series-575V



Type(BTU/h)	72K	96K	120K
Model Name	PQRY-P72ZLMU-A1	PQRY-P96ZLMU-A1	PQRY-P120ZLMU-A1



Type(BTU/h)	144K	168K	192K
Model Name	PQRY-P144ZLMU-A1	PQRY-P168ZLMU-A1	PQRY-P192ZLMU-A1



Type(BTU/h)	144K	168K	192K
Model Name	PQRY-P144ZSLMU-A1	PQRY-P168ZSLMU-A1	PQRY-P192ZSLMU-A1
Type(BTU/h)	216K	240K	
Model Name	PQRY-P216ZSLMU-A1	PQRY-P240ZSLMU-A1	



Type(BTU/h)	288K	312K	336K
Model Name	PQRY-P288ZSLMU-A1	PQRY-P312ZSLMU-A1	PQRY-P336ZSLMU-A1

PQHY-P-T(S)LMU-A1, PQHY-P-Y(S)LMU-A1

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1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model			PQHY-P72TLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	72,000		
		kW	21.1		
	(208-230)	Power input	kW		
		Current input	A		
	(Rated)	BTU/h	11.1-10.0		
		kW	69,000		
	(208-230)	Power input	kW		3.12
		Current input	A		9.6-8.7
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h	80,000		
		kW	23.4		
	(208-230)	Power input	kW		
		Current input	A		
	(Rated)	BTU/h	12.4-11.2		
		kW	76,000		
	(208-230)	Power input	kW		3.36
		Current input	A		10.3-9.3
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity			
	Model/Quantity	P04~P96/1~18			
Sound pressure level (measured in anechoic room)		dB <A>	46.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/8 (9.52) Brazed		
	Gas pipe	in. (mm)	3/4 (19.05) Brazed		
Minimum Circuit Ampacity		A	13-12		
Maximum Overcurrent Protection		A	20-20		
Circulating water	Water flow rate	G/h	1,522		
		G/min (gpm)	25.4		
		m³/h	5.76		
		L/min	96		
		cfm	3.4		
	Pressure drop	psi	3.48		
		kPa	24		
	Operating volume range	G/h	793 ~ 1,902		
G/min (gpm)		13.2 ~ 31.7			
m³/h		3.0 ~ 7.2			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1			
	Starting method	Inverter			
	Motor output	kW	4.3		
	Case heater	kW	-		
	Lubricant	MEL32			
External finish			Galvanized steel sheets		
External dimension H x W x D	in.	43-5/16 x 34-11/16 x 21-11/16			
	mm	1,100 x 880 x 550			
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			
	Inverter circuit	Over-heat protection, Over-current protection			
	Compressor	Over-heat protection			
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)			
	Control	LEV and HIC circuit			
Net weight	lbs (kg)	375 (170)			
Heat exchanger	Water volume in plate	G	1.32		
		l	5.0		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)		Copper pipe, tube-in-tube structure			
Drawing	External	KL94C229			
	Wiring	KE94G422			
Standard attachment	Document	Installation Manual			
	Accessory	Details refer to External Drw			
Optional parts		joint: CMY-Y102SS-G2, CMY-Y102LS-G2 Header: CMY-Y104/108/1010C-G			
Remarks		<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>			

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMLU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B.(20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMLU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQHY-P96TLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	96,000		
		kW	28.1		
	(208-230)	Power input	kW	5.21	
		Current input	A	16.0-14.5	
	(Rated)	(208-230)	BTU/h	92,000	
			kW	27.0	
(208-230)	Power input	kW	4.82	5.19	
	Current input	A	14.8-13.4	16.0-14.4	
Temp. range of cooling	Indoor	W.B.	59-75°F (15-24°C)		
	Inlet water	°F	23-113°F (-5-45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h	108,000		
		kW	31.7		
	(208-230)	Power input	kW	5.64	
		Current input	A	17.3-15.7	
	(Rated)	(208-230)	BTU/h	103,000	
			kW	30.2	
(208-230)	Power input	kW	5.21	4.48	
	Current input	A	16.0-14.5	13.8-12.4	
Temp. range of heating	Indoor	D.B.	59-81°F (15-27°C)		
	Inlet water	°F	23-113°F (-5-45°C)		
Indoor unit connectable	Total capacity		50-130% of heatsource unit capacity		
	Model/Quantity		P04~P96/1~24		
Sound pressure level (measured in anechoic room)			dB <A>		
			48.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/8 (9.52) Braze (1/2 (12.7) Braze, total length ≥ 90 m)		
	Gas pipe	in. (mm)	7/8 (22.2) Braze		
Minimum Circuit Ampacity			A		
			19-17		
Maximum Overcurrent Protection			A		
			30-25		
Circulating water	Water flow rate	G/h	1,522		
		G/min (gpm)	25.4		
		m³/h	5.76		
		L/min	96		
		cfm	3.4		
	Pressure drop	psi	3.48		
kPa		24			
Operating volume range	G/h	793 ~ 1,902			
	G/min (gpm)	13.2 ~ 31.7			
	m³/h	3.0 ~ 7.2			
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1		
	Starting method		Inverter		
	Motor output	kW	6.0		
	Case heater	kW	-		
	Lubricant		MEL32		
External finish			Galvanized steel sheets		
External dimension H x W x D	in.		43-5/16 x 34-11/16 x 21-11/16		
	mm		1,100 x 880 x 550		
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit		Over-heat protection, Over-current protection		
	Compressor		Over-heat protection		
Refrigerant	Type x original charge		R410A x 11 lbs + 1 oz (5.0 kg)		
	Control		LEV and HIC circuit		
Net weight		lbs (kg)	375 (170)		
Heat exchanger			plate type		
Water volume in plate	G		1.32		
	l		5.0		
	psi		290		
	MPa		2.0		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing	External		KL94C229		
	Wiring		KE94C422		
Standard attachment	Document		Installation Manual		
	Accessory		Details refer to External Drw		
Optional parts			joint: CMY-Y102SS-G2, CMY-Y102LS-G2 Header: CMY-Y104/108/1010C-G		
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A1, Y(S)ILMU-A1

Heat Source Model		PQHY-P120TLMU-A1 < For Ground source >			
Indoor Model		Non-Ducted	Ducted		
Power source		3-phase 3-wire 208-230 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	120,000		
		kW	35.2		
	(208-230)	Power input	kW	7.51	
		Current input	A	23.1-20.9	
	(Rated)	(208-230)	BTU/h	114,000	
			kW	33.4	
		Power input	kW	6.95	7.35
		Current input	A	21.4-19.3	22.6-20.5
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h	135,000		
		kW	39.6		
	(208-230)	Power input	kW	7.09	
		Current input	A	21.8-19.7	
	(Rated)	(208-230)	BTU/h	129,000	
			kW	37.8	
		Power input	kW	6.55	5.92
		Current input	A	20.2-18.2	18.2-16.5
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity			
	Model/Quantity	P04-P96/1~30			
Sound pressure level (measured in anechoic room)		dB <A>			
Refrigerant		3/8 (9.52) Brazed (1/2 (12.7) Brazed, total length >= 40 m)			
piping diameter	Liquid pipe	in. (mm)			
	Gas pipe	in. (mm)			
Minimum Circuit Ampacity		A			
Maximum Overcurrent Protection		A			
Circulating water	Water flow rate	G/h	1,522		
		G/min (gpm)	25.4		
		m³/h	5.76		
		L/min	96		
		cfm	3.4		
	Pressure drop	psi	3.48		
		kPa	24		
	Operating volume range	G/h	793 ~ 1,902		
G/min (gpm)		13.2 ~ 31.7			
m³/h		3.0 ~ 7.2			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1			
	Starting method	Inverter			
	Motor output	kW			
	Case heater	kW			
	Lubricant	MEL32			
External finish		Galvanized steel sheets			
External dimension H x W x D		in.			
		mm			
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			
	Inverter circuit	Over-heat protection, Over-current protection			
	Compressor	Over-heat protection			
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)			
	Control	LEV and HIC circuit			
Net weight		lbs (kg)			
Heat exchanger		plate type			
Water volume in plate	G	1.32			
		5.0			
	Water pressure Max.	psi			
		MPa			
HIC circuit (HIC: Heat Inter-Changer)		Copper pipe, tube-in-tube structure			
Drawing	External	KL94C229			
	Wiring	KE94G422			
Standard attachment	Document	Installation Manual			
	Accessory	Details refer to External Drw			
Optional parts		joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010C-G			
Remarks		<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>			

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQHY-P144TLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	144,000		
		kW	42.2		
	(208-230)	Power input	kW	8.78	
		Current input	A	27.0-24.4	
	(Rated)	(208-230)	BTU/h	137,000	
			kW	40.2	
(208-230)	Power input	kW	8.07	9.98	
	Current input	A	24.8-22.5	30.7-27.8	
Temp. range of cooling	Indoor	W.B.	59-75°F (15-24°C)		
	Inlet water	°F	23-113°F (-5-45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h	160,000		
		kW	46.9		
	(208-230)	Power input	kW	8.11	
		Current input	A	25.0-22.6	
	(Rated)	(208-230)	BTU/h	152,000	
			kW	44.5	
(208-230)	Power input	kW	7.47	7.90	
	Current input	A	23.0-20.8	24.3-22.0	
Temp. range of heating	Indoor	D.B.	59-81°F (15-27°C)		
	Inlet water	°F	23-113°F (-5-45°C)		
Indoor unit connectable	Total capacity		50-130% of heatsource unit capacity		
	Model/Quantity		P04-P96/1-36		
Sound pressure level (measured in anechoic room)			dB <A>		
			54.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	1/2 (12.7) Brazed		
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		
Minimum Circuit Ampacity			A		
			35-32		
Maximum Overcurrent Protection			A		
			60-50		
Circulating water	Water flow rate	G/h	1,902		
		G/min (gpm)	31.7		
		m³/h	7.20		
		L/min	120		
		cfm	4.2		
	Pressure drop	psi	6.38		
kPa		44			
Operating volume range	G/h	1,189 ~ 3,054			
	G/min (gpm)	19.8 ~ 50.9			
	m³/h	4.5 ~ 11.6			
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1		
	Starting method		Inverter		
	Motor output	kW	9.5		
	Case heater	kW	-		
	Lubricant		MEL32		
External finish			Galvanized steel sheets		
External dimension H x W x D	in.		57-1/8 x 34-11/16 x 21-11/16		
	mm		1,450 x 880 x 550		
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit		Over-heat protection, Over-current protection		
	Compressor		Over-heat protection		
Refrigerant	Type x original charge		R410A x 13 lbs + 4 oz (6.0 kg)		
	Control		LEV and HIC circuit		
Net weight		lbs (kg)	474 (215)		
Heat exchanger			plate type		
Water volume in plate	G		1.32		
	l		5.0		
	psi		290		
	MPa		2.0		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing	External		KL94C230		
	Wiring		KE94C423		
Standard attachment	Document		Installation Manual		
	Accessory		Details refer to External Drw		
Optional parts			joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010C-G		
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A1, Y(S)ILMU-A1

Heat Source Model		PQHY-P168TLMU-A1 < For Ground source >		
Indoor Model		Non-Ducted	Ducted	
Power source		3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	168,000	
		kW	49.2	
	(208-230)	Power input	kW	12.05
		Current input	A	37.1-33.6
	(Rated)	BTU/h		161,000
		kW		47.2
(208-230)	Power input	kW	11.10	
	Current input	A	34.2-30.9	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)	
	Inlet water	°F	23~113°F (-5~45°C)	
Heating capacity (Nominal)	*3, 4	BTU/h	188,000	
		kW	55.1	
	(208-230)	Power input	kW	9.86
		Current input	A	30.4-27.5
	(Rated)	BTU/h		179,000
		kW		52.5
(208-230)	Power input	kW	9.09	
	Current input	A	28.0-25.3	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)	
	Inlet water	°F	23~113°F (-5~45°C)	
Indoor unit connectable	Total capacity		50~130% of heatsource unit capacity	
	Model/Quantity		P04-P96/1~42	
Sound pressure level (measured in anechoic room)		dB <A>		
Refrigerant		5/8 (15.88) Brazed		
piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Brazed	
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed	
Minimum Circuit Ampacity		A		
Maximum Overcurrent Protection		A		
Circulating water	Water flow rate	G/h	1,902	
		G/min (gpm)	31.7	
		m³/h	7.20	
		L/min	120	
		cfm	4.2	
	Pressure drop	psi	6.38	
	kPa	44		
Operating volume range	G/h	1,189 ~ 3,054		
	G/min (gpm)	19.8 ~ 50.9		
	m³/h	4.5 ~ 11.6		
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		
	Motor output	kW	11.0	
	Case heater	kW	-	
	Lubricant	MEL32		
External finish		Galvanized steel sheets		
External dimension H x W x D		in.	57-1/8 x 34-11/16 x 21-11/16	
		mm	1,450 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)		
	Control	LEV and HIC circuit		
Net weight		lbs (kg)	474 (215)	
Heat exchanger		plate type		
Water volume in plate	G		1.32	
			5.0	
	Water pressure Max.	psi	290	
		MPa	2.0	
HIC circuit (HIC: Heat Inter-Changer)		Copper pipe, tube-in-tube structure		
Drawing	External	KL94C230		
	Wiring	KE94G423		
Standard attachment	Document	Installation Manual		
	Accessory	Details refer to External Drw		
Optional parts		joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010C-G		
Remarks		<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h = kW x 3,412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm = m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs = kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQHY-P192TLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	192,000		
		kW	56.3		
	(208-230)	Power input	kW	15.05	
		Current input	A	46.4-41.9	
	(Rated)	(208-230)	BTU/h	183,000	
			kW	53.6	
(208-230)	Power input	kW	13.87	14.19	
	Current input	A	42.7-38.6	43.7-39.5	
Temp. range of cooling	Indoor	W.B.	59-75°F (15-24°C)		
	Inlet water	°F	23-113°F (-5-45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h	215,000		
		kW	63.0		
	(208-230)	Power input	kW	11.90	
		Current input	A	36.7-33.1	
	(Rated)	(208-230)	BTU/h	205,000	
			kW	60.1	
(208-230)	Power input	kW	10.97	11.56	
	Current input	A	33.8-30.5	35.6-32.2	
Temp. range of heating	Indoor	D.B.	59-81°F (15-27°C)		
	Inlet water	°F	23-113°F (-5-45°C)		
Indoor unit connectable	Total capacity		50-130% of heatsource unit capacity		
	Model/Quantity		P04~P96/1~48		
Sound pressure level (measured in anechoic room)			dB <A>		
			58.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Brazed		
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		
Minimum Circuit Ampacity			A		
			54-49		
Maximum Overcurrent Protection			A		
			90-80		
Circulating water	Water flow rate	G/h	1,902		
		G/min (gpm)	31.7		
		m³/h	7.20		
		L/min	120		
		cfm	4.2		
	Pressure drop	psi	6.38		
kPa		44			
Operating volume range	G/h	1,189 ~ 3,054			
	G/min (gpm)	19.8 ~ 50.9			
	m³/h	4.5 ~ 11.6			
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1		
	Starting method		Inverter		
	Motor output	kW	12.4		
	Case heater	kW	-		
	Lubricant		MEL32		
External finish			Galvanized steel sheets		
External dimension H x W x D	in.		57-1/8 x 34-11/16 x 21-11/16		
	mm		1,450 x 880 x 550		
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit		Over-heat protection, Over-current protection		
	Compressor		Over-heat protection		
Refrigerant	Type x original charge		R410A x 13 lbs + 4 oz (6.0 kg)		
	Control		LEV and HIC circuit		
Net weight			lbs (kg)		
			474 (215)		
Heat exchanger			plate type		
Water volume in plate	G		1.32		
	l		5.0		
	psi		290		
	MPa		2.0		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing	External		KL94C230		
	Wiring		KE94C423		
Standard attachment	Document		Installation Manual		
	Accessory		Details refer to External Drw		
Optional parts			joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104/108/1010C-G		
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQHY-P-T(S)LMU-A1, Y(S)ILMU-A1

Heat Source Model		PQHY-P216TLMU-A1 < For Ground source >		
Indoor Model		Non-Ducted	Ducted	
Power source		3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	216,000	
		kW	63.3	
	(208-230)	Power input	kW	19.23
		Current input	A	59.3-53.6
	(Rated)	BTU/h		206,000
		kW		60.4
(208-230)	Power input	kW	17.72	
	Current input	A	54.6-49.4	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)	
	Inlet water	°F	23~113°F (-5~45°C)	
Heating capacity (Nominal)	*3, 4	BTU/h	243,000	
		kW	71.2	
	(208-230)	Power input	kW	13.04
		Current input	A	40.2-36.3
	(Rated)	BTU/h		232,000
		kW		68.0
(208-230)	Power input	kW	12.01	
	Current input	A	37.0-33.4	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)	
	Inlet water	°F	23~113°F (-5~45°C)	
Indoor unit connectable	Total capacity		50~130% of heatsource unit capacity	
	Model/Quantity		P04-P96/2~50	
Sound pressure level (measured in anechoic room)		dB <A>		
Refrigerant		in. (mm)		
piping diameter		in. (mm)		
Minimum Circuit Ampacity		A		
Maximum Overcurrent Protection		A		
Circulating water	Water flow rate	G/h	3,044	
		G/min (gpm)	50.7	
		m³/h	11.52	
		L/min	192	
		cfm	6.8	
	Pressure drop	psi	6.53	
		kPa	45	
	Operating volume range	G/h	1,585 ~ 3,804	
G/min (gpm)		26.4 ~ 63.4		
m³/h		6.0 ~ 14.4		
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		
	Motor output	kW		
	Case heater	kW		
	Lubricant	MEL32		
External finish		Galvanized steel sheets		
External dimension H x W x D		in.		
Protection devices		High pressure protection		
Refrigerant		Type x original charge		
Net weight		lbs (kg)		
Heat exchanger		plate type		
HIC circuit (HIC: Heat Inter-Changer)		Copper pipe, tube-in-tube structure		
Drawing		External		
Standard attachment		Document		
Optional parts		joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104/108/1010C-G		
Remarks		Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.). The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQHY-P240TLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	240,000		
		kW	70.3		
	(208-230)	Power input	kW	21.14	
		Current input	A	65.1-58.9	
	(Rated)	(208-230)	BTU/h	228,000	
			kW	66.8	
(208-230)	Power input	kW	19.49	18.74	
	Current input	A	60.1-54.3	57.7-52.2	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h	270,000		
		kW	79.1		
	(208-230)	Power input	kW	15.12	
		Current input	A	46.6-42.1	
	(Rated)	(208-230)	BTU/h	258,000	
			kW	75.6	
(208-230)	Power input	kW	13.93	14.62	
	Current input	A	42.9-38.8	45.0-40.7	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity		50~130% of heatsource unit capacity		
	Model/Quantity		P04~P96/2~50		
Sound pressure level (measured in anechoic room)			dB <A>		
			58.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Brazed		
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		
Minimum Circuit Ampacity			A		
			79-71		
Maximum Overcurrent Protection			A		
			125-125		
Circulating water	Water flow rate	G/h	3,044		
		G/min (gpm)	50.7		
		m³/h	11.52		
		L/min	192		
		cfm	6.8		
	Pressure drop	psi	6.53		
	kPa	45			
Operating volume range	G/h	1,585 ~ 3,804			
	G/min (gpm)	26.4 ~ 63.4			
	m³/h	6.0 ~ 14.4			
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1		
	Starting method		Inverter		
	Motor output	kW	16.1		
	Case heater	kW	0.045 (240 V)		
	Lubricant		MEL32		
External finish			Galvanized steel sheets		
External dimension H x W x D	in.		57-1/8 x 34-11/16 x 21-11/16		
	mm		1,450 x 880 x 550		
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit		Over-heat protection, Over-current protection		
	Compressor		Over-heat protection		
Refrigerant	Type x original charge		R410A x 25 lbs + 13 oz (11.7 kg)		
	Control		LEV and HIC circuit		
Net weight			lbs (kg)		
			552 (250)		
Heat exchanger			plate type		
Water volume in plate	G		2.64		
	l		10.0		
	psi		290		
	MPa		2.0		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing	External		KL94C231		
	Wiring		KE94C426		
Standard attachment	Document		Installation Manual		
	Accessory		Details refer to External Drw		
Optional parts			joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104/108/1010C-G		
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQHY-P-T(S)LMU-A1, Y(S)ILMU-A1

Heat Source Model			PQHY-P144TSLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	144,000		
		kW	42.2		
	(208-230)	Power input	7.11		
		Current input	21.9-19.8		
	(Rated)	BTU/h	137,000		
		kW	40.2		
	(208-230)	Power input	6.53	7.72	
		Current input	A	20.1-18.2	23.8-21.5
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h	160,000		
		kW	46.9		
	(208-230)	Power input	7.45		
		Current input	22.9-20.7		
	(Rated)	BTU/h	152,000		
		kW	44.5		
	(208-230)	Power input	6.86	7.22	
		Current input	A	21.1-19.1	22.2-20.1
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity			
	Model/Quantity	P04~P96/1~36			
Sound pressure level (measured in anechoic room)		dB <A>	49.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	1/2 (12.7) Brazed		
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		

Set Model			PQHY-P72TLMU-A1 < For Ground source >		PQHY-P72TLMU-A1 < For Ground source >
Minimum Circuit Ampacity			A		13-12
Maximum Overcurrent Protection			A		20-20
Circulating water	Water flow rate	G/h	1,522 + 1,522		
		G/min (gpm)	25.4 + 25.4		
		m ³ /h	5.76 + 5.76		
		L/min	96 + 96		
		cfm	3.4 + 3.4		
	Pressure drop	psi	3.48	3.48	
	kPa	24	24		
Operating volume range	G/h	793 + 793 ~ 1,902 + 1,902			
	G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7			
	m ³ /h	3.0 + 3.0 ~ 7.2 + 7.2			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1	
	Starting method	Inverter		Inverter	
	Motor output	kW		4.3	
	Case heater	kW		-	
	Lubricant	MEL32		MEL32	
External finish			Galvanized steel sheets		Galvanized steel sheets
External dimension H x W x D			in.		43-5/16 x 34-11/16 x 21-11/16
	mm		1,100 x 880 x 550		1,100 x 880 x 550
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter circuit		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection
	Compressor		Over-heat protection		Over-heat protection
Refrigerant	Type x original charge		R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)
	Control		LEV and HIC circuit		
Net weight			lbs (kg)		375 (170)
Heat exchanger	Water volume in plate		plate type		plate type
			G		1.32
	I		5.0		
	Water pressure Max.	psi		290	
MPa		2.0			
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure
Pipe between unit and distributor	Liquid pipe	in. (mm)	3/8 (9.52) Brazed		3/8 (9.52) Brazed
	Gas pipe	in. (mm)	3/4 (19.05) Brazed		3/4 (19.05) Brazed
Drawing	External		KL94C235		
	Wiring		KE94G422		
Standard attachment	Document		Installation Manual		
	Accessory		Details refer to External Drw		
Optional parts			Heat Source Twinning kit: CMY-Y100CBK3 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010C-G		
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHR1 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHR1 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQHY-P168TSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	168,000			
		kW	49.2			
	(208-230)	Power input	9.33			
		Current input	28.7-26.0			
	(Rated)	(208-230)	BTU/h	161,000		
			kW	47.2		
(208-230)	Power input	8.58	9.22			
	Current input	A	26.4-23.9	28.4-25.7		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4	BTU/h	188,000			
		kW	55.1			
	(208-230)	Power input	9.34			
		Current input	28.8-26.0			
	(Rated)	(208-230)	BTU/h	179,000		
			kW	52.5		
(208-230)	Power input	8.60	8.03			
	Current input	A	26.5-23.9	24.7-22.3		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity				
	Model/Quantity	P04~P96/1~42				
Sound pressure level (measured in anechoic room)	dB <A>	50.0				
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Brazed			
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed			

Set Model			PQHY-P96TLMU-A1 < For Ground source >		PQHY-P72TLMU-A1 < For Ground source >		
Minimum Circuit Ampacity			A	19-17	13-12		
Maximum Overcurrent Protection			A	30-25	20-20		
Circulating water	Water flow rate	G/h	1,522 + 1,522				
		G/min (gpm)	25.4 + 25.4				
		m³/h	5.76 + 5.76				
		L/min	96 + 96				
		cfm	3.4 + 3.4				
		Pressure drop	psi	3.48	3.48		
Operating volume range		kPa	24	24			
		G/h	793 + 793 ~ 1,902 + 1,902				
		G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7				
		m³/h	3.0 + 3.0 ~ 7.2 + 7.2				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1			
	Starting method	Inverter		Inverter			
	Motor output	kW	6.0	4.3			
	Case heater	kW	-	-			
	Lubricant	MEL32		MEL32			
External finish			Galvanized steel sheets		Galvanized steel sheets		
External dimension H x W x D			in.	43-5/16 x 34-11/16 x 21-11/16		43-5/16 x 34-11/16 x 21-11/16	
			mm	1,100 x 880 x 550		1,100 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection			
	Compressor	Over-heat protection		Over-heat protection			
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)			
	Control	LEV and HIC circuit					
Net weight	lbs (kg)	375 (170)		375 (170)			
Heat exchanger	Water volume in plate	plate type		plate type			
		G	1.32		1.32		
		l	5.0		5.0		
		Water pressure Max.	psi	290	290		
		MPa	2.0	2.0			
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure		
Pipe between unit and distributor	Liquid pipe	in. (mm)	3/8 (9.52) Brazed		3/8 (9.52) Brazed		
	Gas pipe	in. (mm)	7/8 (22.2) Brazed		7/8 (22.2) Brazed		
Drawing	External	KL94C235					
	Wiring	KE94G422		KE94G422			
Standard attachment	Document	Installation Manual					
	Accessory	Details refer to External Drw					
Optional parts			Heat Source Twinning kit: CMY-Y100CBK3 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010C-G				
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F (40°C).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>				

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQHY-P-T(S)LMU-A1, Y(S)ILMU-A1

Heat Source Model			PQHY-P192TSLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	192,000		
		kW	56.3		
	(208-230)	Power input	11.30		
		Current input	34.8-31.5		
	(Rated)	BTU/h	183,000		
		kW	53.6		
	(208-230)	Power input	10.40	10.98	
		Current input	32.0-29.0	33.8-30.6	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h	215,000		
		kW	63.0		
	(208-230)	Power input	11.02		
		Current input	33.9-30.7		
	(Rated)	BTU/h	205,000		
		kW	60.1		
	(208-230)	Power input	10.16	8.90	
		Current input	31.3-28.3	27.4-24.8	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity			
	Model/Quantity	P04~P96/1~48			
Sound pressure level (measured in anechoic room)		dB <A>	51.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Brazed		
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		

Set Model			PQHY-P96TLMU-A1 < For Ground source >		PQHY-P96TLMU-A1 < For Ground source >
Minimum Circuit Ampacity			A		19-17
Maximum Overcurrent Protection			A		30-25
Circulating water	Water flow rate	G/h	1,522 + 1,522		
		G/min (gpm)	25.4 + 25.4		
		m ³ /h	5.76 + 5.76		
		L/min	96 + 96		
		cfm	3.4 + 3.4		
	Pressure drop	psi	3.48	3.48	
		kPa	24	24	
Operating volume range	G/h	793 + 793 ~ 1,902 + 1,902			
	G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7			
	m ³ /h	3.0 + 3.0 ~ 7.2 + 7.2			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1	
	Starting method	Inverter		Inverter	
	Motor output	6.0		6.0	
	Case heater	-		-	
	Lubricant	MEL32		MEL32	
External finish			Galvanized steel sheets		Galvanized steel sheets
External dimension H x W x D			in.		43-5/16 x 34-11/16 x 21-11/16
			mm		1,100 x 880 x 550
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter circuit		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection
	Compressor		Over-heat protection		Over-heat protection
Refrigerant	Type x original charge		R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)
	Control		LEV and HIC circuit		
Net weight			lbs (kg)		375 (170)
Heat exchanger			plate type		plate type
	Water volume in plate	G	1.32		1.32
		l	5.0		5.0
	Water pressure Max.	psi	290		290
		MPa	2.0		2.0
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure
Pipe between unit and distributor	Liquid pipe	in. (mm)	3/8 (9.52) Brazed		3/8 (9.52) Brazed
	Gas pipe	in. (mm)	7/8 (22.2) Brazed		7/8 (22.2) Brazed
Drawing	External		KL94C235		
	Wiring		KE94G422		
Standard attachment	Document		Installation Manual		
	Accessory		Details refer to External Drw		
Optional parts			Heat Source Twinning kit: CMY-Y100CBK3 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104/108/1010C-G		
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHR1 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHR1 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model			PQHY-P216TSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	216,000			
		kW	63.3			
	(208-230)	Power input	14.03			
		Current input	43.2-39.1			
	(Rated)	(208-230)	BTU/h	206,000		
			kW	60.4		
(208-230)	Power input	12.93	13.24			
	Current input	39.8-36.0	40.8-36.9			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4	BTU/h	243,000			
		kW	71.2			
	(208-230)	Power input	12.88			
		Current input	39.7-35.9			
	(Rated)	(208-230)	BTU/h	232,000		
			kW	68.0		
(208-230)	Power input	11.88	10.35			
	Current input	36.6-33.1	31.9-28.8			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity				
	Model/Quantity	P04~P96/2~50				
Sound pressure level (measured in anechoic room)	dB <A>	55.0				
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Brazed			
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed			

Set Model			PQHY-P120TLMU-A1 < For Ground source >		PQHY-P96TLMU-A1 < For Ground source >	
Minimum Circuit Ampacity			A	29-26	19-17	
Maximum Overcurrent Protection			A	50-45	30-25	
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min (gpm)	25.4 + 25.4			
		m ³ /h	5.76 + 5.76			
		L/min	96 + 96			
		cfm	3.4 + 3.4			
		Pressure drop	psi	3.48	3.48	
Operating volume range	range	G/h	793 + 793 ~ 1,902 + 1,902			
		G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7			
		m ³ /h	3.0 + 3.0 ~ 7.2 + 7.2			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		Inverter		
	Motor output	7.7		6.0		
	Case heater	-		-		
	Lubricant	MEL32		MEL32		
External finish			Galvanized steel sheets		Galvanized steel sheets	
External dimension H x W x D			in.	43-5/16 x 34-11/16 x 21-11/16	43-5/16 x 34-11/16 x 21-11/16	
			mm	1,100 x 880 x 550	1,100 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		Over-heat protection		
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)		
	Control	LEV and HIC circuit				
Net weight	lbs (kg)	375 (170)		375 (170)		
Heat exchanger	Water volume in plate	plate type		plate type		
		G	1.32		1.32	
		l	5.0		5.0	
		Water pressure Max.	psi	290	290	
	MPa	2.0	2.0			
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure	
Pipe between unit and distributor	Liquid pipe	in. (mm)	1/2 (12.7) Brazed		1/2 (12.7) Brazed	
	Gas pipe	in. (mm)	7/8 (22.2) Brazed		7/8 (22.2) Brazed	
Drawing	External	KL94C235				
	Wiring	KE94G422		KE94G422		
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts			Heat Source Twinning kit: CMY-Y100CBK3 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104/108/1010C-G			
Remarks			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F (40°C). The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.			

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model			PQHY-P240TSLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	240,000		
		kW	70.3		
	(208-230)	Power input	16.89		
		Current input	52.0-47.1		
	(Rated)	BTU/h	228,000		
		kW	66.8		
	(208-230)	Power input	15.57	16.15	
		Current input	48.0-43.4	49.8-45.0	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h	270,000		
		kW	79.1		
	(208-230)	Power input	14.58		
		Current input	44.9-40.6		
	(Rated)	BTU/h	258,000		
		kW	75.6		
	(208-230)	Power input	13.45	12.02	
		Current input	41.4-37.5	37.0-33.5	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity			
	Model/Quantity	P04~P96/2~50			
Sound pressure level (measured in anechoic room)			dB <A>		
			57.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Brazed		
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		

Set Model			PQHY-P120TLMU-A1 < For Ground source >		PQHY-P120TLMU-A1 < For Ground source >
Minimum Circuit Ampacity			A		29-26
Maximum Overcurrent Protection			A		50-45
Circulating water	Water flow rate	G/h	1,522 + 1,522		
		G/min (gpm)	25.4 + 25.4		
		m ³ /h	5.76 + 5.76		
		L/min	96 + 96		
		cfm	3.4 + 3.4		
	Pressure drop	psi	3.48	3.48	
		kPa	24	24	
Operating volume range	G/h	793 + 793 ~ 1,902 + 1,902			
	G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7			
	m ³ /h	3.0 + 3.0 ~ 7.2 + 7.2			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1	
	Starting method	Inverter		Inverter	
	Motor output	7.7		7.7	
	Case heater	-		-	
	Lubricant	MEL32		MEL32	
External finish			Galvanized steel sheets		Galvanized steel sheets
External dimension H x W x D			in.		43-5/16 x 34-11/16 x 21-11/16
			mm		1,100 x 880 x 550
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection	
	Compressor	Over-heat protection		Over-heat protection	
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)	
	Control	LEV and HIC circuit			
Net weight			lbs (kg)		375 (170)
Heat exchanger			plate type		plate type
	Water volume in plate	G	1.32		1.32
		l	5.0		5.0
	Water pressure Max.	psi	290		290
		MPa	2.0		2.0
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure
Pipe between unit and distributor	Liquid pipe	in. (mm)	1/2 (12.7) Brazed		1/2 (12.7) Brazed
	Gas pipe	in. (mm)	7/8 (22.2) Brazed		7/8 (22.2) Brazed
Drawing	External	KL94C235			
	Wiring	KE94G422		KE94G422	
Standard attachment	Document	Installation Manual			
	Accessory	Details refer to External Drw			
Optional parts			Heat Source Twinning kit: CMY-Y100CBK3 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104/108/1010C-G		
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHR1 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHR1 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

Heat Source Model			PQHY-P288TSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	288,000			
		kW	84.4			
	(208-230)	Power input	20.42			
		Current input	62.9-56.9			
	(Rated)	(208-230)	BTU/h	275,000		
			kW	80.6		
(208-230)	Power input	18.82	21.43			
	Current input	A	58.0-52.4	66.1-59.7		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4	BTU/h	323,000			
		kW	94.7			
	(208-230)	Power input	17.50			
		Current input	A	53.9-48.8		
	(Rated)	(208-230)	BTU/h	308,000		
			kW	90.3		
(208-230)	Power input	16.13	16.05			
	Current input	A	49.7-44.9	49.5-44.7		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity				
	Model/Quantity	P04~P96/2~50				
Sound pressure level (measured in anechoic room)	dB <A>	57.0				
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/4 (19.05) Brazed			
	Gas pipe	in. (mm)	1-3/8 (34.93) Brazed			

Set Model			PQHY-P144TLMU-A1 < For Ground source >		PQHY-P144TLMU-A1 < For Ground source >	
Minimum Circuit Ampacity	A		35-32		35-32	
Maximum Overcurrent Protection	A		60-50		60-50	
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min (gpm)	31.7 + 31.7			
		m ³ /h	7.20 + 7.20			
		L/min	120 + 120			
		cfm	4.2 + 4.2			
	Pressure drop	psi	6.38	6.38		6.38
kPa		44	44		44	
Operating volume range	G/h	1,189 + 1,189 ~ 3,054 + 3,054				
	G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9				
	m ³ /h	4.5 + 4.5 ~ 11.6 + 11.6				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		Inverter		
	Motor output	kW	9.5	9.5		
	Case heater	kW	-	-		
	Lubricant		MEL32		MEL32	
External finish		Galvanized steel sheets		Galvanized steel sheets		
External dimension H x W x D	in.	57-1/8 x 34-11/16 x 21-11/16		57-1/8 x 34-11/16 x 21-11/16		
	mm	1,450 x 880 x 550		1,450 x 880 x 550		
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		Over-heat protection		
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)		R410A x 13 lbs + 4 oz (6.0 kg)		
	Control	LEV and HIC circuit				
Net weight	lbs (kg)	474 (215)		474 (215)		
Heat exchanger	Water volume in plate	G	1.32		1.32	
		l	5.0		5.0	
	Water pressure Max.	psi	290		290	
		MPa	2.0		2.0	
HIC circuit (HIC: Heat Inter-Change)		Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure		
Pipe between unit and distributor	Liquid pipe	in. (mm)	1/2 (12.7) Brazed		1/2 (12.7) Brazed	
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		1-1/8 (28.58) Brazed	
Drawing	External	KL94C236				
	Wiring	KE94G423		KE94G423		
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts		Heat Source Twinning kit: CMY-Y200CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104/108/1010C-G				
Remarks		Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F FD.B. (40°C CD.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.				

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model			PQHY-P312TSLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	312,000		
		kW	91.4		
	(208-230)	Power input	23.41		
		Current input	72.1-65.2		
	(Rated)	BTU/h	297,000		
		kW	87.0		
	(208-230)	Power input	21.59	23.67	
		Current input	66.5-60.2	73.0-66.0	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h	350,000		
		kW	102.6		
	(208-230)	Power input	19.11		
		Current input	58.9-53.3		
	(Rated)	BTU/h	334,000		
		kW	97.9		
	(208-230)	Power input	17.62	17.96	
		Current input	54.3-49.1	55.3-50.0	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity			
	Model/Quantity	P04~P96/2~50			
Sound pressure level (measured in anechoic room)			dB <A>		
			58.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/4 (19.05) Brazed		
	Gas pipe	in. (mm)	1-3/8 (34.93) Brazed		

Set Model			PQHY-P168TLMU-A1 < For Ground source >		PQHY-P144TLMU-A1 < For Ground source >		
Minimum Circuit Ampacity			A	44-39	35-32		
Maximum Overcurrent Protection			A	70-70	60-50		
Circulating water	Water flow rate	G/h	1,902 + 1,902				
		G/min (gpm)	31.7 + 31.7				
		m ³ /h	7.20 + 7.20				
		L/min	120 + 120				
		cfm	4.2 + 4.2				
	Pressure drop	psi	6.38	6.38			
		kPa	44	44			
Operating volume range	G/h	1,189 + 1,189 ~ 3,054 + 3,054					
	G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9					
	m ³ /h	4.5 + 4.5 ~ 11.6 + 11.6					
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1			
	Starting method	Inverter		Inverter			
	Motor output	kW	11.0	9.5			
	Case heater	kW	-	-			
	Lubricant	MEL32		MEL32			
External finish			Galvanized steel sheets		Galvanized steel sheets		
External dimension H x W x D			in.	57-1/8 x 34-11/16 x 21-11/16		57-1/8 x 34-11/16 x 21-11/16	
			mm	1,450 x 880 x 550		1,450 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection			
	Compressor	Over-heat protection		Over-heat protection			
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)		R410A x 13 lbs + 4 oz (6.0 kg)			
	Control	LEV and HIC circuit					
Net weight			lbs (kg)	474 (215)	474 (215)		
Heat exchanger			plate type		plate type		
	Water volume in plate	G	1.32		1.32		
		l	5.0		5.0		
	Water pressure Max.	psi	290		290		
		MPa	2.0		2.0		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure		
Pipe between unit and distributor	Liquid pipe	in. (mm)	5/8 (15.88) Brazed		5/8 (15.88) Brazed		
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		1-1/8 (28.58) Brazed		
Drawing	External	KL94C236					
	Wiring	KE94G423		KE94G423			
Standard attachment	Document	Installation Manual					
	Accessory	Details refer to External Drw					
Optional parts			Heat Source Twinning kit: CMY-Y200CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104/108/1010C-G				
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>				

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHR1 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHR1 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQHY-P336TSLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	336,000		
		kW	98.5		
	(208-230)	Power input	26.84		
		Current input	82.7-74.8		
	(Rated)	BTU/h	320,000		
		kW	93.8		
(208-230)	Power input	24.76	25.85		
	Current input	A	76.3-69.0	79.7-72.0	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h	378,000		
		kW	110.8		
	(208-230)	Power input	20.77		
		Current input	A	64.0-57.9	
	(Rated)	BTU/h	361,000		
		kW	105.8		
(208-230)	Power input	19.16	20.05		
	Current input	A	59.0-53.4	61.8-55.9	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity			
	Model/Quantity	P04~P96/2~50			
Sound pressure level (measured in anechoic room)		dB <A>	59.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/4 (19.05) Brazed		
	Gas pipe	in. (mm)	1-5/8 (41.28) Brazed		

Set Model			PQHY-P168TLMU-A1 < For Ground source >		PQHY-P168TLMU-A1 < For Ground source >	
Minimum Circuit Ampacity			A	44-39	44-39	
Maximum Overcurrent Protection			A	70-70	70-70	
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min (gpm)	31.7 + 31.7			
		m ³ /h	7.20 + 7.20			
		L/min	120 + 120			
		cfm	4.2 + 4.2			
	Pressure drop	psi	6.38	6.38		
	kPa	44	44			
Operating volume range	G/h	1,189 + 1,189 ~ 3,054 + 3,054				
	G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9				
	m ³ /h	4.5 + 4.5 ~ 11.6 + 11.6				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		Inverter		
	Motor output	kW	11.0	11.0		
	Case heater	kW	-	-		
	Lubricant	MEL32		MEL32		
External finish			Galvanized steel sheets		Galvanized steel sheets	
External dimension H x W x D			in.	57-1/8 x 34-11/16 x 21-11/16	57-1/8 x 34-11/16 x 21-11/16	
	mm		1,450 x 880 x 550		1,450 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		Over-heat protection		
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)		R410A x 13 lbs + 4 oz (6.0 kg)		
	Control	LEV and HIC circuit				
Net weight	lbs (kg)	474 (215)		474 (215)		
Heat exchanger			plate type		plate type	
	Water volume in plate	G	1.32		1.32	
		l	5.0		5.0	
	Water pressure Max.	psi	290		290	
MPa		2.0		2.0		
HIC circuit (HIC: Heat Inter-Change)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure	
Pipe between unit and distributor	Liquid pipe	in. (mm)	5/8 (15.88) Brazed		5/8 (15.88) Brazed	
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		1-1/8 (28.58) Brazed	
Drawing	External	KL94C236				
	Wiring	KE94G423		KE94G423		
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts			Heat Source Twinning kit: CMY-Y200CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104/108/1010C-G			
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F (40°C).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>			

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model			PQHY-P360TSLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	360,000		
		kW	105.5		
	(208-230)	Power input	29.43		
		Current input	90.7-82.0		
	(Rated)	BTU/h	342,000		
		kW	100.2		
	(208-230)	Power input	27.17	27.41	
		Current input	83.7-75.7	84.5-76.4	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h	405,000		
		kW	118.7		
	(208-230)	Power input	22.85		
		Current input	70.4-63.7		
	(Rated)	BTU/h	387,000		
		kW	113.4		
	(208-230)	Power input	21.09	21.70	
		Current input	65.0-58.8	66.9-60.5	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity			
	Model/Quantity	P04~P96/2~50			
Sound pressure level (measured in anechoic room)		dB <A>	60.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/4 (19.05) Brazed		
	Gas pipe	in. (mm)	1-5/8 (41.28) Brazed		

Set Model			PQHY-P192TLMU-A1 < For Ground source >		PQHY-P168TLMU-A1 < For Ground source >
Minimum Circuit Ampacity			A		44-39
Maximum Overcurrent Protection			A		70-70
Circulating water	Water flow rate	G/h	1,902 + 1,902		
		G/min (gpm)	31.7 + 31.7		
		m ³ /h	7.20 + 7.20		
		L/min	120 + 120		
		cfm	4.2 + 4.2		
		Pressure drop	psi	6.38	6.38
		kPa	44	44	
Operating volume range	G/h	1,189 + 1,189 ~ 3,054 + 3,054			
	G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9			
	m ³ /h	4.5 + 4.5 ~ 11.6 + 11.6			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1	
	Starting method	Inverter		Inverter	
	Motor output	kW	12.4	11.0	
	Case heater	kW	-	-	
	Lubricant		MEL32	MEL32	
External finish			Galvanized steel sheets		Galvanized steel sheets
External dimension H x W x D			in.		57-1/8 x 34-11/16 x 21-11/16
	mm		1,450 x 880 x 550		1,450 x 880 x 550
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection	
	Compressor	Over-heat protection		Over-heat protection	
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)		R410A x 13 lbs + 4 oz (6.0 kg)	
	Control	LEV and HIC circuit			
Net weight			lbs (kg)		474 (215)
Heat exchanger			plate type		plate type
	Water volume in plate	G	1.32		1.32
		l	5.0		5.0
	Water pressure Max.	psi	290		290
		MPa	2.0		2.0
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure
Pipe between unit and distributor	Liquid pipe	in. (mm)	5/8 (15.88) Brazed		5/8 (15.88) Brazed
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		1-1/8 (28.58) Brazed
Drawing	External	KL94C236			
	Wiring	KE94G423		KE94G423	
Standard attachment	Document	Installation Manual			
	Accessory	Details refer to External Drw			
Optional parts			Heat Source Twinning kit: CMY-Y200CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104/108/1010C-G		
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHR1 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHR1 1230) Indoor: 68°F D.B.(20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQHY-P72YLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	72,000		
		kW	21.1		
	(460)	Power input	kW	3.61	
		Current input	A	5.0	
	(Rated)	(460)	BTU/h	69,000	
			kW	20.2	
	(460)	Power input	kW	3.34	3.12
		Current input	A	4.6	4.3
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h	80,000		
		kW	23.4		
	(460)	Power input	kW	4.04	
		Current input	A	5.6	
	(Rated)	(460)	BTU/h	76,000	
			kW	22.3	
	(460)	Power input	kW	3.74	3.36
		Current input	A	5.2	4.6
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity			
	Model/Quantity	P04~P96/1~18			
Sound pressure level (measured in anechoic room)		dB <A>	46.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/8 (9.52) Brazed		
	Gas pipe	in. (mm)	3/4 (19.05) Brazed		
Minimum Circuit Ampacity		A	6		
Maximum Overcurrent Protection		A	15		
Circulating water	Water flow rate	G/h	1,522		
		G/min (gpm)	25.4		
		m³/h	5.76		
		L/min	96		
		cfm	3.4		
	Pressure drop	psi	3.48		
		kPa	24		
	Operating volume range	G/h	793 ~ 1,902		
G/min (gpm)		13.2 ~ 31.7			
m³/h		3.0 ~ 7.2			
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1		
	Starting method		Inverter		
	Motor output	kW	4.3		
	Case heater	kW	-		
	Lubricant	MEL32			
External finish		Galvanized steel sheets			
External dimension H x W x D	in.	43-5/16 x 34-11/16 x 21-11/16			
	mm	1,100 x 880 x 550			
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit		Over-heat protection, Over-current protection		
	Compressor		Over-heat protection		
Refrigerant	Type x original charge		R410A x 11 lbs + 1 oz (5.0 kg)		
	Control		LEV and HIC circuit		
Net weight		lbs (kg)	400 (181)		
Heat exchanger		plate type			
Water volume in plate	G	1.32			
		5.0			
	psi	290			
		2.0			
HIC circuit (HIC: Heat Inter-Changer)		Copper pipe, tube-in-tube structure			
Drawing	External	KL94C232			
	Wiring	KE94C419			
Standard attachment	Document	Installation Manual			
Optional parts	Accessory	Details refer to External Drw			
Remarks		joint: CMY-Y102SS-G2, CMY-Y102LS-G2 Header: CMY-Y104/108/1010C-G			

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A1, Y(S)ILMU-A1

Heat Source Model		PQHY-P96YLMU-A1 < For Ground source >		
Indoor Model		Non-Ducted	Ducted	
Power source		3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	96,000	
		kW	28.1	
	(460)	Power input	kW	5.21
		Current input	A	7.2
	(Rated)		BTU/h	92,000
			kW	27.0
(460)	Power input	kW	4.82	
	Current input	A	6.7	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)	
	Inlet water	°F	23~113°F (-5~45°C)	
Heating capacity (Nominal)	*3, 4	BTU/h	108,000	
		kW	31.7	
	(460)	Power input	kW	5.64
		Current input	A	7.8
	(Rated)		BTU/h	103,000
			kW	30.2
(460)	Power input	kW	5.21	
	Current input	A	7.2	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)	
	Inlet water	°F	23~113°F (-5~45°C)	
Indoor unit connectable	Total capacity		50~130% of heatsource unit capacity	
	Model/Quantity		P04-P96/1~24	
Sound pressure level (measured in anechoic room)		dB <A>		
Refrigerant		Liquid pipe in. (mm) 3/8 (9.52) Brazed (1/2 (12.7) Brazed, total length >= 90 m)		
piping diameter		Gas pipe in. (mm) 7/8 (22.2) Brazed		
Minimum Circuit Ampacity		A 9		
Maximum Overcurrent Protection		A 15		
Circulating water	Water flow rate	G/h	1,522	
		G/min (gpm)	25.4	
		m³/h	5.76	
		L/min	96	
		cfm	3.4	
	Pressure drop	psi	3.48	
	kPa	24		
Operating volume range	G/h	793 ~ 1,902		
	G/min (gpm)	13.2 ~ 31.7		
	m³/h	3.0 ~ 7.2		
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		
	Motor output	kW	6.0	
	Case heater	kW	-	
	Lubricant	MEL32		
External finish		Galvanized steel sheets		
External dimension H x W x D		in. 43-5/16 x 34-11/16 x 21-11/16	mm 1,100 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		
	Control	LEV and HIC circuit		
Net weight		lbs (kg)	400 (181)	
Heat exchanger		plate type		
Water volume in plate	G		1.32	
			5.0	
	Water pressure Max.	psi	290	
		MPa	2.0	
HIC circuit (HIC: Heat Inter-Changer)		Copper pipe, tube-in-tube structure		
Drawing	External	KL94C232		
	Wiring	KE94G419		
Standard attachment	Document	Installation Manual		
	Accessory	Details refer to External Drw		
Optional parts		joint: CMY-Y102SS-G2, CMY-Y102LS-G2 Header: CMY-Y104/108/1010C-G		
Remarks		<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQHY-P120YLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2		BTU/h	120,000	
			kW	35.2	
	(460)	Power input	kW	7.51	
		Current input	A	10.4	
	(Rated)			BTU/h	114,000
				kW	33.4
	(460)	Power input	kW	6.95	7.35
		Current input	A	9.6	10.2
Temp. range of cooling	Indoor	W.B.	59-75°F (15-24°C)		
	Inlet water	°F	23-113°F (-5-45°C)		
Heating capacity (Nominal)	*3, 4		BTU/h	135,000	
			kW	39.6	
	(460)	Power input	kW	7.09	
		Current input	A	9.8	
	(Rated)			BTU/h	129,000
				kW	37.8
	(460)	Power input	kW	6.55	5.92
		Current input	A	9.1	8.2
Temp. range of heating	Indoor	D.B.	59-81°F (15-27°C)		
	Inlet water	°F	23-113°F (-5-45°C)		
Indoor unit connectable	Total capacity	50-130% of heatsource unit capacity			
	Model/Quantity	P04-P96/1-30			
Sound pressure level (measured in anechoic room)			dB <A>		
			54.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/8 (9.52) Brazed (1/2 (12.7) Brazed, total length ≥ 40 m)		
	Gas pipe	in. (mm)	7/8 (22.2) Brazed		
Minimum Circuit Ampacity			A		
			13		
Maximum Overcurrent Protection			A		
			20		
Circulating water	Water flow rate	G/h	1,522		
		G/min (gpm)	25.4		
		m³/h	5.76		
		L/min	96		
		cfm	3.4		
	Pressure drop	psi	3.48		
		kPa	24		
	Operating volume range	G/h	793 ~ 1,902		
G/min (gpm)		13.2 ~ 31.7			
m³/h		3.0 ~ 7.2			
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1		
	Starting method		Inverter		
	Motor output	kW	7.7		
	Case heater	kW	-		
	Lubricant	MEL32			
External finish			Galvanized steel sheets		
External dimension H x W x D	in.		43-5/16 x 34-11/16 x 21-11/16		
	mm		1,100 x 880 x 550		
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit		Over-heat protection, Over-current protection		
	Compressor		Over-heat protection		
Refrigerant	Type x original charge		R410A x 11 lbs + 1 oz (5.0 kg)		
	Control		LEV and HIC circuit		
Net weight		lbs (kg)	400 (181)		
Heat exchanger			plate type		
Water volume in plate	G		1.32		
	l		5.0		
	psi		290		
	MPa		2.0		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing	External		KL94C232		
	Wiring		KE94C419		
Standard attachment	Document		Installation Manual		
	Accessory		Details refer to External Drw		
Optional parts			joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010C-G		
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A1, Y(S)ILMU-A1

Heat Source Model		PQHY-P144YLMU-A1 < For Ground source >		
Indoor Model		Non-Ducted	Ducted	
Power source		3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h		
		144,000		
		kW		
		42.2		
	(460)	Power input	kW	
		8.78		
(Rated)	(460)	Current input	A	
		12.2		
		BTU/h	137,000	
		kW	40.2	
	(460)	Power input	kW	
		8.07	9.98	
Temp. range of cooling	Inlet water	°F		
		59~75°F (15~24°C)		
		23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h		
		160,000		
		kW		
		46.9		
	(460)	Power input	kW	
		8.11		
(Rated)	(460)	Current input	A	
		11.3		
		BTU/h	152,000	
		kW	44.5	
	(460)	Power input	kW	
		7.47	7.90	
Temp. range of heating	Inlet water	°F		
		59~81°F (15~27°C)		
		23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity		
	Model/Quantity	P04-P96/1~36		
Sound pressure level (measured in anechoic room)		dB <A>		
		54.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)		
		1/2 (12.7) Brazed		
	Gas pipe	in. (mm)		
		1-1/8 (28.58) Brazed		
Minimum Circuit Ampacity		A		
		16		
Maximum Overcurrent Protection		A		
		25		
Circulating water	Water flow rate	G/h	1,902	
		G/min (gpm)	31.7	
		m³/h	7.20	
		L/min	120	
		cfm	4.2	
	Pressure drop	psi	6.38	
		kPa	44	
	Operating volume range	G/h	1,189 ~ 3,054	
G/min (gpm)		19.8 ~ 50.9		
m³/h		4.5 ~ 11.6		
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		
	Motor output	kW		
		9.5		
	Case heater	kW		
	-			
	Lubricant	MEL32		
External finish		Galvanized steel sheets		
External dimension H x W x D	in.		57-1/8 x 34-11/16 x 21-11/16	
	mm		1,450 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)		
	Control	LEV and HIC circuit		
Net weight	lbs (kg)	501 (227)		
Heat exchanger			plate type	
	Water volume in plate	G	1.32	
		l	5.0	
	Water pressure Max.	psi	290	
MPa		2.0		
HIC circuit (HIC: Heat Inter-Changer)		Copper pipe, tube-in-tube structure		
Drawing	External	KL94C233		
	Wiring	KE94G419		
Standard attachment	Document	Installation Manual		
	Accessory	Details refer to External Drw		
Optional parts	joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010C-G			
Remarks	<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>			

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model			PQHY-P168YLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	168,000		
		kW	49.2		
	(460)	Power input	kW	12.05	
		Current input	A	16.8	
	(Rated)	(460)	BTU/h	161,000	
			kW	47.2	
(460)	Power input	kW	11.10	11.88	
	Current input	A	15.4	16.5	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h	188,000		
		kW	55.1		
	(460)	Power input	kW	9.86	
		Current input	A	13.7	
	(Rated)	(460)	BTU/h	179,000	
			kW	52.5	
(460)	Power input	kW	9.09	9.72	
	Current input	A	12.6	13.5	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity			
	Model/Quantity	P04~P96/1~42			
Sound pressure level (measured in anechoic room)			dB <A>		
			56.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Brazed		
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		
Minimum Circuit Ampacity			A		
			20		
Maximum Overcurrent Protection			A		
			35		
Circulating water	Water flow rate	G/h	1,902		
		G/min (gpm)	31.7		
		m³/h	7.20		
		L/min	120		
		cfm	4.2		
	Pressure drop	psi	6.38		
kPa		44			
Operating volume range	G/h	1,189 ~ 3,054			
	G/min (gpm)	19.8 ~ 50.9			
	m³/h	4.5 ~ 11.6			
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1		
	Starting method		Inverter		
	Motor output	kW	11.0		
	Case heater	kW	-		
	Lubricant	MEL32			
External finish			Galvanized steel sheets		
External dimension H x W x D	in.		57-1/8 x 34-11/16 x 21-11/16		
	mm		1,450 x 880 x 550		
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit		Over-heat protection, Over-current protection		
	Compressor		Over-heat protection		
Refrigerant	Type x original charge		R410A x 13 lbs + 4 oz (6.0 kg)		
	Control		LEV and HIC circuit		
Net weight		lbs (kg)	501 (227)		
Heat exchanger			plate type		
Water volume in plate	G		1.32		
	l		5.0		
	psi		290		
	MPa		2.0		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing	External		KL94C233		
	Wiring		KE94C419		
Standard attachment	Document		Installation Manual		
	Accessory		Details refer to External Drw		
Optional parts			joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010C-G		
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQHY-P-T(S)LMU-A1, Y(S)ILMU-A1

Heat Source Model		PQHY-P192YLMU-A1 < For Ground source >		
Indoor Model		Non-Ducted	Ducted	
Power source		3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h		
		192,000		
		kW		
		56.3		
	(460)	Power input	kW	
		15.05		
(Rated)	(460)	Current input	A	
		20.9		
		BTU/h		
		183,000		
		kW		
		53.6		
Temp. range of cooling	(460)	Power input	13.87	
		14.19		
		Current input	19.3	
		19.7		
		Indoor	W.B.	
		59~75°F (15~24°C)		
	Inlet water	°F		
	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4	BTU/h		
		215,000		
		kW		
		63.0		
	(460)	Power input	kW	
		11.90		
(Rated)	(460)	Current input	A	
		16.5		
		BTU/h		
		205,000		
		kW		
		60.1		
Temp. range of heating	(460)	Power input	10.97	
		11.56		
		Current input	15.2	
		16.1		
		Indoor	D.B.	
		59~81°F (15~27°C)		
	Inlet water	°F		
	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity		
	Model/Quantity	P04-P96/1~48		
Sound pressure level (measured in anechoic room)		dB <A>		
		58.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)		
			5/8 (15.88) Brazed	
Minimum Circuit Ampacity	Gas pipe	in. (mm)		
			1-1/8 (28.58) Brazed	
Maximum Overcurrent Protection		A		
		25		
Circulating water		Water flow rate		
	Water flow rate	G/h	1,902	
		G/min (gpm)	31.7	
		m³/h	7.20	
		L/min	120	
		cfm	4.2	
	Pressure drop	psi	6.38	
	kPa	44		
Operating volume range	G/h	1,189 ~ 3,054		
	G/min (gpm)	19.8 ~ 50.9		
	m³/h	4.5 ~ 11.6		
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		
	Motor output	kW		
		12.4		
	Case heater	kW		
	-			
Lubricant	MEL32			
External finish		Galvanized steel sheets		
External dimension H x W x D	in.		57-1/8 x 34-11/16 x 21-11/16	
	mm		1,450 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)		
	Control	LEV and HIC circuit		
Net weight	lbs (kg)	501 (227)		
Heat exchanger		plate type		
Water volume in plate	G	1.32		
		5.0		
	Water pressure Max.	psi	290	
		MPa	2.0	
HIC circuit (HIC: Heat Inter-Changer)		Copper pipe, tube-in-tube structure		
Drawing	External	KL94C233		
	Wiring	KE94G419		
Standard attachment	Document	Installation Manual		
	Accessory	Details refer to External Drw		
Optional parts		joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104/108/1010C-G		
Remarks	<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>			

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQHY-P216YLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	216,000		
		kW	63.3		
	(460)	Power input	kW	19.23	
		Current input	A	26.8	
	(Rated)	(460)	BTU/h	206,000	
			kW	60.4	
(460)	Power input	kW	17.72	16.10	
	Current input	A	24.7	22.4	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h	243,000		
		kW	71.2		
	(460)	Power input	kW	13.04	
		Current input	A	18.1	
	(Rated)	(460)	BTU/h	232,000	
			kW	68.0	
(460)	Power input	kW	12.01	12.34	
	Current input	A	16.7	17.2	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity			
	Model/Quantity	P04~P96/2~50			
Sound pressure level (measured in anechoic room)			dB <A>		
			58.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Brazed		
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		
Minimum Circuit Ampacity			A		
			31		
Maximum Overcurrent Protection			A		
			50		
Circulating water	Water flow rate	G/h	3,044		
		G/min (gpm)	50.7		
		m³/h	11.52		
		L/min	192		
		cfm	6.8		
	Pressure drop	psi	6.53		
kPa		45			
Operating volume range	G/h	1,585 ~ 3,804			
	G/min (gpm)	26.4 ~ 63.4			
	m³/h	6.0 ~ 14.4			
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1		
	Starting method		Inverter		
	Motor output	kW	14.5		
	Case heater	kW	0.045 (240 V)		
	Lubricant		MEL32		
External finish			Galvanized steel sheets		
External dimension H x W x D	in.		57-1/8 x 34-11/16 x 21-11/16		
	mm		1,450 x 880 x 550		
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit		Over-heat protection, Over-current protection		
	Compressor		Over-heat protection		
Refrigerant	Type x original charge		R410A x 25 lbs + 13 oz (11.7 kg)		
	Control		LEV and HIC circuit		
Net weight		lbs (kg)	567 (257)		
Heat exchanger			plate type		
Water volume in plate	G		2.64		
	l		10.0		
	psi		290		
	MPa		2.0		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing	External		KL94C234		
	Wiring		KE94C419		
Standard attachment	Document		Installation Manual		
	Accessory		Details refer to External Drw		
Optional parts			joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104/108/1010C-G		
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.)</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQHY-P-T(S)LMU-A1, Y(S)ILMU-A1

Heat Source Model		PQHY-P240YLMU-A1 < For Ground source >		
Indoor Model		Non-Ducted	Ducted	
Power source		3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	240,000	
		kW	70.3	
	(460)	Power input	kW	21.14
		Current input	A	29.4
	(Rated)		BTU/h	228,000
			kW	66.8
(460)	Power input	kW	19.49	
	Current input	A	27.1	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)	
	Inlet water	°F	23~113°F (-5~45°C)	
Heating capacity (Nominal)	*3, 4	BTU/h	270,000	
		kW	79.1	
	(460)	Power input	kW	15.12
		Current input	A	21.0
	(Rated)		BTU/h	258,000
			kW	75.6
(460)	Power input	kW	13.93	
	Current input	A	19.4	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)	
	Inlet water	°F	23~113°F (-5~45°C)	
Indoor unit connectable	Total capacity		50~130% of heatsource unit capacity	
	Model/Quantity		P04-P96/2-50	
Sound pressure level (measured in anechoic room)		dB <A>		
Refrigerant		5/8 (15.88) Brazed		
piping diameter	Liquid pipe	in. (mm)		
	Gas pipe	in. (mm)		
Minimum Circuit Ampacity		A		
Maximum Overcurrent Protection		A		
Circulating water	Water flow rate	G/h	3,044	
		G/min (gpm)	50.7	
		m³/h	11.52	
		L/min	192	
		cfm	6.8	
	Pressure drop	psi	6.53	
	kPa	45		
Operating volume range	G/h	1,585 ~ 3,804		
	G/min (gpm)	26.4 ~ 63.4		
	m³/h	6.0 ~ 14.4		
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		
	Motor output	kW		
	Case heater	kW		
	Lubricant	MEL32		
External finish		Galvanized steel sheets		
External dimension H x W x D		in.		
		mm		
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		
Refrigerant	Type x original charge	R410A x 25 lbs + 13 oz (11.7 kg)		
	Control	LEV and HIC circuit		
Net weight		lbs (kg)		
Heat exchanger		plate type		
Water volume in plate	G	2.64		
		10.0		
	Water pressure Max.	psi	290	
		MPa	2.0	
HIC circuit (HIC: Heat Inter-Changer)		Copper pipe, tube-in-tube structure		
Drawing	External	KL94C234		
	Wiring	KE94G419		
Standard attachment	Document	Installation Manual		
	Accessory	Details refer to External Drw		
Optional parts		joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104/108/1010C-G		
Remarks		<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h = kW x 3.412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm = m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs = kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQHY-P144YSLMU-A1 < For Ground source >				
Indoor Model			Non-Ducted		Ducted		
Power source			3-phase 3-wire 460 V ±10% 60 Hz				
Cooling capacity (Nominal)	*1, 2	BTU/h	144,000				
		kW	42.2				
	(Rated)	(460)	Power input	7.11			
			Current input	9.9			
		(Rated)	(460)	BTU/h	137,000		
				kW	40.2		
(460)	(Rated)	Power input	6.53	7.72			
		Current input	9.1	10.7			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)				
	Inlet water	°F	23~113°F (-5~45°C)				
Heating capacity (Nominal)	*3, 4	BTU/h	160,000				
		kW	46.9				
	(Rated)	(460)	Power input	7.45			
			Current input	10.3			
		(Rated)	(460)	BTU/h	152,000		
				kW	44.5		
(460)	(Rated)	Power input	6.86	7.22			
		Current input	9.5	10.0			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)				
	Inlet water	°F	23~113°F (-5~45°C)				
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity					
	Model/Quantity	P04~P96/1~36					
Sound pressure level (measured in anechoic room)		dB <A>	49.0				
Refrigerant piping diameter	Liquid pipe	in. (mm)	1/2 (12.7) Brazed				
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed				

Set Model			PQHY-P72YLMU-A1 < For Ground source >		PQHY-P72YLMU-A1 < For Ground source >	
Minimum Circuit Ampacity			A	6	6	
Maximum Overcurrent Protection			A	15	15	
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min (gpm)	25.4 + 25.4			
		m ³ /h	5.76 + 5.76			
		L/min	96 + 96			
		cfm	3.4 + 3.4			
		Pressure drop	psi	3.48	3.48	
	kPa	24	24			
Operating volume range		G/h	793 + 793 ~ 1,902 + 1,902			
		G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7			
		m ³ /h	3.0 + 3.0 ~ 7.2 + 7.2			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		Inverter		
	Motor output	4.3		4.3		
	Case heater	-		-		
	Lubricant	MEL32		MEL32		
External finish			Galvanized steel sheets		Galvanized steel sheets	
External dimension H x W x D			in.	43-5/16 x 34-11/16 x 21-11/16	43-5/16 x 34-11/16 x 21-11/16	
	mm		1,100 x 880 x 550		1,100 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		Over-heat protection		
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)		
	Control	LEV and HIC circuit				
Net weight	lbs (kg)	400 (181)		400 (181)		
Heat exchanger	Water volume in plate	plate type		plate type		
		G	1.32		1.32	
		l	5.0		5.0	
		Water pressure Max.	psi	290		290
	MPa	2.0		2.0		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure	
Pipe between unit and distributor	Liquid pipe	in. (mm)	3/8 (9.52) Brazed		3/8 (9.52) Brazed	
	Gas pipe	in. (mm)	3/4 (19.05) Brazed		3/4 (19.05) Brazed	
Drawing	External	KL94C237				
	Wiring	KE94G419		KE94G419		
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts			Heat Source Twinning kit: CMY-Y100CBK3 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010C-G			
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>			

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQHY-P-T(S)LMU-A1, Y(S)ILMU-A1

Heat Source Model			PQHY-P168YSLMU-A1 < For Ground source >				
Indoor Model			Non-Ducted		Ducted		
Power source			3-phase 3-wire 460 V ±10% 60 Hz				
Cooling capacity (Nominal)	*1, 2	BTU/h	168,000				
		kW	49.2				
	(460)	Power input	kW	9.33			
			A	13.0			
		(Rated)	Current input	BTU/h	161,000		
				kW	47.2		
(460)	Power input	kW	8.58	9.22			
		A	11.9	12.8			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)				
	Inlet water	°F	23~113°F (-5~45°C)				
Heating capacity (Nominal)	*3, 4	BTU/h	188,000				
		kW	55.1				
	(460)	Power input	kW	9.34			
			A	13.0			
		(Rated)	Current input	BTU/h	179,000		
				kW	52.5		
(460)	Power input	kW	8.60	8.03			
		A	11.9	11.1			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)				
	Inlet water	°F	23~113°F (-5~45°C)				
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity					
	Model/Quantity	P04~P96/1~42					
Sound pressure level (measured in anechoic room)		dB <A>	50.0				
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Brazed				
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed				

Set Model			PQHY-P96YLMU-A1 < For Ground source >		PQHY-P72YLMU-A1 < For Ground source >		
Minimum Circuit Ampacity			A	9	6		
Maximum Overcurrent Protection			A	15	15		
Circulating water	Water flow rate	G/h	1,522 + 1,522				
		G/min (gpm)	25.4 + 25.4				
		m ³ /h	5.76 + 5.76				
		L/min	96 + 96				
		cfm	3.4 + 3.4				
	Pressure drop	psi	3.48			3.48	
Operating volume range		kPa	24			24	
		G/h	793 + 793 ~ 1,902 + 1,902				
		G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7				
		m ³ /h	3.0 + 3.0 ~ 7.2 + 7.2				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1			
	Starting method	Inverter		Inverter			
	Motor output	kW	6.0	4.3			
	Case heater	kW	-	-			
	Lubricant	MEL32		MEL32			
External finish			Galvanized steel sheets		Galvanized steel sheets		
External dimension H x W x D			in.	43-5/16 x 34-11/16 x 21-11/16		43-5/16 x 34-11/16 x 21-11/16	
			mm	1,100 x 880 x 550		1,100 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection			
	Compressor	Over-heat protection		Over-heat protection			
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)			
	Control	LEV and HIC circuit					
Net weight			lbs (kg)	400 (181)		400 (181)	
Heat exchanger	Water volume in plate		plate type		plate type		
			G	1.32		1.32	
	Water pressure Max.		psi	290		290	
			MPa	2.0		2.0	
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure		
Pipe between unit and distributor	Liquid pipe	in. (mm)	3/8 (9.52) Brazed		3/8 (9.52) Brazed		
	Gas pipe	in. (mm)	7/8 (22.2) Brazed		7/8 (22.2) Brazed		
Drawing	External	KL94C237					
	Wiring	KE94G419					
Standard attachment	Document	Installation Manual					
	Accessory	Details refer to External Drw					
Optional parts			Heat Source Twinning kit: CMY-Y100CBK3 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010C-G				
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>				

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHR1 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHR1 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQHY-P192YSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	192,000			
		kW	56.3			
	(460)	Power input	11.30			
		Current input	15.7			
	(Rated)	(460)	BTU/h	183,000		
			kW	53.6		
(460)	Power input	10.40	10.98			
	Current input	14.5	15.3			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4	BTU/h	215,000			
		kW	63.0			
	(460)	Power input	11.02			
		Current input	15.3			
	(Rated)	(460)	BTU/h	205,000		
			kW	60.1		
(460)	Power input	10.16	8.90			
	Current input	14.1	12.4			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity				
	Model/Quantity	P04~P96/1~48				
Sound pressure level (measured in anechoic room)		dB <A>	51.0			
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Brazed			
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed			

Set Model			PQHY-P96YLMU-A1 < For Ground source >		PQHY-P96YLMU-A1 < For Ground source >		
Minimum Circuit Ampacity			A	9	9		
Maximum Overcurrent Protection			A	15	15		
Circulating water	Water flow rate	G/h	1,522 + 1,522				
		G/min (gpm)	25.4 + 25.4				
		m ³ /h	5.76 + 5.76				
		L/min	96 + 96				
		cfm	3.4 + 3.4				
		Pressure drop	psi	3.48	3.48		
kPa	24		24				
Operating volume range	G/h	793 + 793 ~ 1,902 + 1,902					
	G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7					
	m ³ /h	3.0 + 3.0 ~ 7.2 + 7.2					
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1			
	Starting method	Inverter		Inverter			
	Motor output	6.0		6.0			
	Case heater	-		-			
	Lubricant	MEL32		MEL32			
External finish			Galvanized steel sheets		Galvanized steel sheets		
External dimension H x W x D			in.	43-5/16 x 34-11/16 x 21-11/16		43-5/16 x 34-11/16 x 21-11/16	
			mm	1,100 x 880 x 550		1,100 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection			
	Compressor	Over-heat protection		Over-heat protection			
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)			
	Control	LEV and HIC circuit					
Net weight		lbs (kg)	400 (181)		400 (181)		
Heat exchanger			plate type		plate type		
	Water volume in plate	G	1.32		1.32		
		l	5.0		5.0		
	Water pressure Max.	psi	290		290		
MPa		2.0		2.0			
HIC circuit (HIC: Heat Inter-Change)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure		
Pipe between unit and distributor	Liquid pipe	in. (mm)	3/8 (9.52) Brazed		3/8 (9.52) Brazed		
	Gas pipe	in. (mm)	7/8 (22.2) Brazed		7/8 (22.2) Brazed		
Drawing	External	KL94C237					
	Wiring	KE94G419		KE94G419			
Standard attachment	Document	Installation Manual					
	Accessory	Details refer to External Drw					
Optional parts			Heat Source Twinning kit: CMY-Y100CBK3 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104/108/1010C-G				
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F (40°C).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>				

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQHY-P-T(S)LMU-A1, Y(S)ILMU-A1

Heat Source Model			PQHY-P216YSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	216,000			
		kW	63.3			
	(460)	Power input	14.03			
		Current input	19.5			
	(Rated)	(460)	BTU/h	206,000		
			kW	60.4		
Power input		12.93	13.24			
Current input		18.0	18.4			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4	BTU/h	243,000			
		kW	71.2			
	(460)	Power input	12.88			
		Current input	17.9			
	(Rated)	(460)	BTU/h	232,000		
			kW	68.0		
Power input		11.88	10.35			
Current input		16.5	14.4			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity				
	Model/Quantity	P04~P96/2~50				
Sound pressure level (measured in anechoic room)			dB <A> 55.0			
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Brazed			
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed			

Set Model			PQHY-P120YLMU-A1 < For Ground source >		PQHY-P96YLMU-A1 < For Ground source >
Minimum Circuit Ampacity			A	13	9
Maximum Overcurrent Protection			A	20	15
Circulating water	Water flow rate	G/h	1,522 + 1,522		
		G/min (gpm)	25.4 + 25.4		
		m ³ /h	5.76 + 5.76		
		L/min	96 + 96		
		cfm	3.4 + 3.4		
	Pressure drop	psi	3.48	3.48	
Operating volume range		kPa	24	24	
		G/h	793 + 793 ~ 1,902 + 1,902		
		G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7		
		m ³ /h	3.0 + 3.0 ~ 7.2 + 7.2		
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1	
	Starting method	Inverter		Inverter	
	Motor output	kW	7.7	6.0	
	Case heater	kW	-	-	
	Lubricant		MEL32	MEL32	
External finish			Galvanized steel sheets		Galvanized steel sheets
External dimension H x W x D			in.	43-5/16 x 34-11/16 x 21-11/16	43-5/16 x 34-11/16 x 21-11/16
			mm	1,100 x 880 x 550	1,100 x 880 x 550
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter circuit		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection
	Compressor		Over-heat protection		Over-heat protection
Refrigerant	Type x original charge		R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)
	Control		LEV and HIC circuit		
Net weight			lbs (kg)	400 (181)	400 (181)
Heat exchanger	Water volume in plate		plate type		plate type
			G	1.32	1.32
			l	5.0	5.0
	Water pressure Max.			psi	290
		MPa	2.0	2.0	
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure
Pipe between unit and distributor	Liquid pipe	in. (mm)	1/2 (12.7) Brazed		1/2 (12.7) Brazed
	Gas pipe	in. (mm)	7/8 (22.2) Brazed		7/8 (22.2) Brazed
Drawing	External		KL94C237		
	Wiring		KE94G419		
Standard attachment	Document		Installation Manual		
	Accessory		Details refer to External Drw		
Optional parts			Heat Source Twinning kit: CMY-Y100CBK3 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104/108/1010C-G		
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHR1 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHR1 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQHY-P240YSLMU-A1 < For Ground source >				
Indoor Model			Non-Ducted		Ducted		
Power source			3-phase 3-wire 460 V ±10% 60 Hz				
Cooling capacity (Nominal)	*1, 2	BTU/h	240,000				
		kW	70.3				
	(Rated)	(460)	Power input	16.89			
			Current input	23.5			
		(Rated)	(460)	BTU/h	228,000		
				kW	66.8		
(460)	(Rated)	Power input	15.57	16.15			
		Current input	21.7	22.5			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)				
	Inlet water	°F	23~113°F (-5~45°C)				
Heating capacity (Nominal)	*3, 4	BTU/h	270,000				
		kW	79.1				
	(Rated)	(460)	Power input	14.58			
			Current input	20.3			
		(Rated)	(460)	BTU/h	258,000		
				kW	75.6		
(460)	(Rated)	Power input	13.45	12.02			
		Current input	18.7	16.7			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)				
	Inlet water	°F	23~113°F (-5~45°C)				
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity					
	Model/Quantity	P04~P96/2~50					
Sound pressure level (measured in anechoic room)	dB <A>	57.0					
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Brazed				
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed				

Set Model			PQHY-P120YLMU-A1 < For Ground source >		PQHY-P120YLMU-A1 < For Ground source >	
Model						
Minimum Circuit Ampacity	A		13		13	
Maximum Overcurrent Protection	A		20		20	
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min (gpm)	25.4 + 25.4			
		m ³ /h	5.76 + 5.76			
		L/min	96 + 96			
		cfm	3.4 + 3.4			
		Pressure drop	psi	3.48		
Operating volume range		kPa	24		24	
		G/h	793 + 793 ~ 1,902 + 1,902			
		G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7			
		m ³ /h	3.0 + 3.0 ~ 7.2 + 7.2			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		Inverter		
	Motor output	7.7		7.7		
	Case heater	-		-		
	Lubricant	MEL32		MEL32		
External finish	Galvanized steel sheets		Galvanized steel sheets		Galvanized steel sheets	
External dimension H x W x D	in.	43-5/16 x 34-11/16 x 21-11/16		43-5/16 x 34-11/16 x 21-11/16		
	mm	1,100 x 880 x 550		1,100 x 880 x 550		
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		Over-heat protection		
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)		
	Control	LEV and HIC circuit				
Net weight	lbs (kg)	400 (181)		400 (181)		
Heat exchanger	Water volume in plate	plate type		plate type		
		G	1.32		1.32	
		l	5.0		5.0	
		Water pressure Max.	psi	290		290
	MPa	2.0		2.0		
HIC circuit (HIC: Heat Inter-Changer)	Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure	
Pipe between unit and distributor	Liquid pipe	in. (mm)	1/2 (12.7) Brazed		1/2 (12.7) Brazed	
	Gas pipe	in. (mm)	7/8 (22.2) Brazed		7/8 (22.2) Brazed	
Drawing	External	KL94C237				
	Wiring	KE94G419		KE94G419		
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts	Heat Source Twinning kit: CMY-Y100CBK3 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104/108/1010C-G					
Remarks	<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>					

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model			PQHY-P28YSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	288,000			
		kW	84.4			
	(460)	Power input	20.42			
		Current input	28.4			
	(Rated)	(460)	BTU/h	275,000		
			kW	80.6		
Power input		18.82	21.43			
Current input		26.2	29.8			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4	BTU/h	323,000			
		kW	94.7			
	(460)	Power input	17.50			
		Current input	24.4			
	(Rated)	(460)	BTU/h	308,000		
			kW	90.3		
Power input		16.13	16.05			
Current input		22.4	22.3			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity				
	Model/Quantity	P04~P96/2~50				
Sound pressure level (measured in anechoic room)		dB <A>	57.0			
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/4 (19.05) Brazed			
	Gas pipe	in. (mm)	1-3/8 (34.93) Brazed			

Set Model			PQHY-P144YLMU-A1 < For Ground source >		PQHY-P144YLMU-A1 < For Ground source >
Minimum Circuit Ampacity			A	16	16
Maximum Overcurrent Protection			A	25	25
Circulating water	Water flow rate	G/h	1,902 + 1,902		
		G/min (gpm)	31.7 + 31.7		
		m³/h	7.20 + 7.20		
		L/min	120 + 120		
		cfm	4.2 + 4.2		
	Pressure drop	psi	6.38	6.38	
Operating volume range		kPa	44	44	
		G/h	1,189 + 1,189 ~ 3,054 + 3,054		
		G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9		
		m³/h	4.5 + 4.5 ~ 11.6 + 11.6		
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1	
	Starting method	Inverter		Inverter	
	Motor output	kW	9.5	9.5	
	Case heater	kW	-	-	
	Lubricant		MEL32	MEL32	
External finish			Galvanized steel sheets		Galvanized steel sheets
External dimension H x W x D			in.	57-1/8 x 34-11/16 x 21-11/16	57-1/8 x 34-11/16 x 21-11/16
			mm	1,450 x 880 x 550	1,450 x 880 x 550
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter circuit		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection
	Compressor		Over-heat protection		Over-heat protection
Refrigerant	Type x original charge		R410A x 13 lbs + 4 oz (6.0 kg)		R410A x 13 lbs + 4 oz (6.0 kg)
	Control		LEV and HIC circuit		
Net weight			lbs (kg)	501 (227)	501 (227)
Heat exchanger	Water volume in plate		plate type		plate type
			G	1.32	1.32
			l	5.0	5.0
	Water pressure Max.			psi	290
		MPa	2.0	2.0	
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure
Pipe between unit and distributor	Liquid pipe		in. (mm)	1/2 (12.7) Brazed	1/2 (12.7) Brazed
	Gas pipe		in. (mm)	1-1/8 (28.58) Brazed	1-1/8 (28.58) Brazed
Drawing	External		KL94C238		
	Wiring		KE94G419		
Standard attachment	Document		Installation Manual		
	Accessory		Details refer to External Drw		
Optional parts			Heat Source Twinning kit: CMY-Y200CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104/108/1010C-G		
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHR1 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHR1 1230) Indoor: 68°F D.B.(20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

Heat Source Model			PQHY-P312YSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	312,000			
		kW	91.4			
	(460)	Power input	23.41			
		Current input	32.6			
	(Rated)	(460)	BTU/h	297,000		
			kW	87.0		
(460)	Power input	21.59	23.67			
	Current input	30.1	33.0			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4	BTU/h	350,000			
		kW	102.6			
	(460)	Power input	19.11			
		Current input	26.6			
	(Rated)	(460)	BTU/h	334,000		
			kW	97.9		
(460)	Power input	17.62	17.96			
	Current input	24.5	25.0			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity				
	Model/Quantity	P04~P96/2~50				
Sound pressure level (measured in anechoic room)		dB <A>	58.0			
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/4 (19.05) Brazed			
	Gas pipe	in. (mm)	1-3/8 (34.93) Brazed			

Set Model			PQHY-P168YLMU-A1 < For Ground source >		PQHY-P144YLMU-A1 < For Ground source >	
Minimum Circuit Ampacity			A	20	16	
Maximum Overcurrent Protection			A	35	25	
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min (gpm)	31.7 + 31.7			
		m ³ /h	7.20 + 7.20			
		L/min	120 + 120			
		cfm	4.2 + 4.2			
		Pressure drop	psi	6.38	6.38	
kPa	44		44			
Operating volume range	G/h	1,189 + 1,189 ~ 3,054 + 3,054				
	G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9				
	m ³ /h	4.5 + 4.5 ~ 11.6 + 11.6				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		Inverter		
	Motor output	kW	11.0	9.5		
	Case heater	kW	-	-		
	Lubricant		MEL32	MEL32		
External finish			Galvanized steel sheets		Galvanized steel sheets	
External dimension H x W x D			in.	57-1/8 x 34-11/16 x 21-11/16	57-1/8 x 34-11/16 x 21-11/16	
			mm	1,450 x 880 x 550	1,450 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		Over-heat protection		
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)		R410A x 13 lbs + 4 oz (6.0 kg)		
	Control	LEV and HIC circuit				
Net weight		lbs (kg)	501 (227)	501 (227)		
Heat exchanger			plate type		plate type	
	Water volume in plate	G	1.32		1.32	
		l	5.0		5.0	
	Water pressure Max.	psi	290		290	
MPa		2.0		2.0		
HIC circuit (HIC: Heat Inter-Change)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure	
Pipe between unit and distributor	Liquid pipe	in. (mm)	5/8 (15.88) Brazed		5/8 (15.88) Brazed	
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		1-1/8 (28.58) Brazed	
Drawing	External	KL94C238				
	Wiring	KE94G419		KE94G419		
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts			Heat Source Twinning kit: CMY-Y200CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104/108/1010C-G			
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>			

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQHY-P-T(S)LMU-A1, Y(S)ILMU-A1

Heat Source Model			PQHY-P336YSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	336,000			
		kW	98.5			
	(460)	Power input	26.84			
		Current input	37.4			
	(Rated)	(460)	BTU/h	320,000		
			kW	93.8		
Power input		24.76	25.85			
Current input		34.5	36.0			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4	BTU/h	378,000			
		kW	110.8			
	(460)	Power input	20.77			
		Current input	28.9			
	(Rated)	(460)	BTU/h	361,000		
			kW	105.8		
Power input		19.16	20.05			
Current input		26.7	27.9			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity				
	Model/Quantity	P04~P96/2~50				
Sound pressure level (measured in anechoic room)			dB <A> 59.0			
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/4 (19.05) Brazed			
	Gas pipe	in. (mm)	1-5/8 (41.28) Brazed			

Set Model			PQHY-P168YLMU-A1 < For Ground source >		PQHY-P168YLMU-A1 < For Ground source >
Minimum Circuit Ampacity			A	20	20
Maximum Overcurrent Protection			A	35	35
Circulating water	Water flow rate	G/h	1,902 + 1,902		
		G/min (gpm)	31.7 + 31.7		
		m³/h	7.20 + 7.20		
		L/min	120 + 120		
		cfm	4.2 + 4.2		
	Pressure drop	psi	6.38	6.38	
	kPa	44	44		
Operating volume range	G/h	1,189 + 1,189 ~ 3,054 + 3,054			
	G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9			
	m³/h	4.5 + 4.5 ~ 11.6 + 11.6			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1	
	Starting method	Inverter		Inverter	
	Motor output	kW	11.0	11.0	
	Case heater	kW	-	-	
	Lubricant		MEL32	MEL32	
External finish			Galvanized steel sheets		Galvanized steel sheets
External dimension H x W x D			in.	57-1/8 x 34-11/16 x 21-11/16	57-1/8 x 34-11/16 x 21-11/16
		mm		1,450 x 880 x 550	1,450 x 880 x 550
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection	
	Compressor	Over-heat protection		Over-heat protection	
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)		R410A x 13 lbs + 4 oz (6.0 kg)	
	Control	LEV and HIC circuit			
Net weight			lbs (kg)	501 (227)	501 (227)
Heat exchanger			plate type		plate type
	Water volume in plate	G	1.32		1.32
		l	5.0		5.0
	Water pressure Max.	psi	290		290
MPa		2.0		2.0	
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure
Pipe between unit and distributor	Liquid pipe	in. (mm)	5/8 (15.88) Brazed		5/8 (15.88) Brazed
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		1-1/8 (28.58) Brazed
Drawing	External	KL94C238			
	Wiring	KE94G419			
Standard attachment	Document	Installation Manual			
	Accessory	Details refer to External Drw			
Optional parts			Heat Source Twinning kit: CMY-Y200CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104/108/1010C-G		
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHR1 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHR1 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

Heat Source Model			PQHY-P360YSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	360,000			
		kW	105.5			
	(460)	Power input	kW	29.43		
		Current input	A	41.0		
	(Rated)	(460)	BTU/h	342,000		
			kW	100.2		
(460)	Power input	kW	27.17	27.41		
	Current input	A	37.8	38.2		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4	BTU/h	405,000			
		kW	118.7			
	(460)	Power input	kW	22.85		
		Current input	A	31.8		
	(Rated)	(460)	BTU/h	387,000		
			kW	113.4		
(460)	Power input	kW	21.09	21.70		
	Current input	A	29.4	30.2		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity				
	Model/Quantity	P04~P96/2~50				
Sound pressure level (measured in anechoic room)	dB <A>	60.0				
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/4 (19.05) Brazed			
	Gas pipe	in. (mm)	1-5/8 (41.28) Brazed			

Set Model			PQHY-P192YLMU-A1 < For Ground source >		PQHY-P168YLMU-A1 < For Ground source >	
Model						
Minimum Circuit Ampacity	A		25	20		
Maximum Overcurrent Protection	A		40	35		
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min (gpm)	31.7 + 31.7			
		m ³ /h	7.20 + 7.20			
		L/min	120 + 120			
		cfm	4.2 + 4.2			
	Pressure drop	psi	6.38	6.38		
Operating volume range		kPa	44	44		
		G/h	1,189 + 1,189 ~ 3,054 + 3,054			
		G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9			
		m ³ /h	4.5 + 4.5 ~ 11.6 + 11.6			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		Inverter		
	Motor output	kW	12.4	11.0		
	Case heater	kW	-	-		
	Lubricant	MEL32		MEL32		
External finish	Galvanized steel sheets		Galvanized steel sheets			
External dimension H x W x D	in.	57-1/8 x 34-11/16 x 21-11/16		57-1/8 x 34-11/16 x 21-11/16		
	mm	1,450 x 880 x 550		1,450 x 880 x 550		
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		Over-heat protection		
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)		R410A x 13 lbs + 4 oz (6.0 kg)		
	Control	LEV and HIC circuit				
Net weight	lbs (kg)	501 (227)		501 (227)		
Heat exchanger	Water volume in plate	plate type		plate type		
		G	1.32	1.32		
	l	5.0	5.0			
	Water pressure Max.	psi	290	290		
MPa		2.0	2.0			
HIC circuit (HIC: Heat Inter-Change)	Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure			
Pipe between unit and distributor	Liquid pipe	in. (mm)	5/8 (15.88) Brazed		5/8 (15.88) Brazed	
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		1-1/8 (28.58) Brazed	
Drawing	External	KL94C238				
	Wiring	KE94G419		KE94G419		
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts	Heat Source Twinning kit: CMY-Y200CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104/108/1010C-G					
Remarks	<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>					

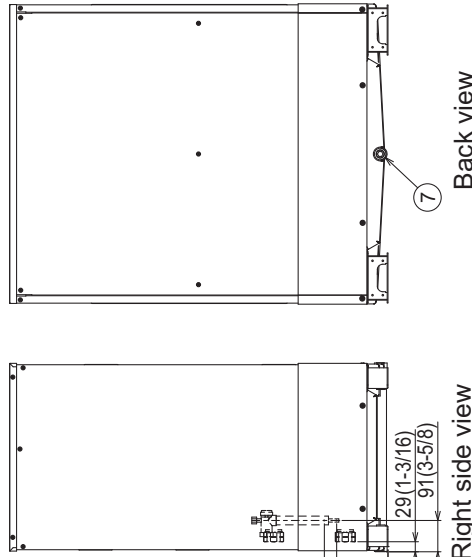
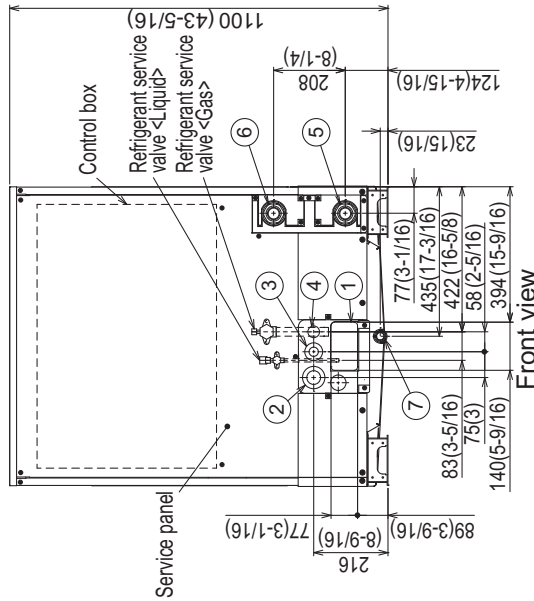
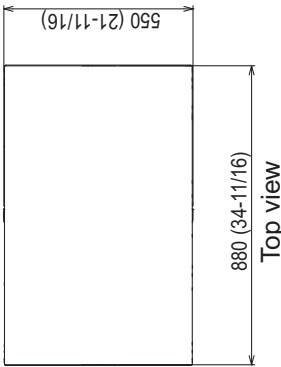
Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

PQHY-P72, 96, 120TLMU-A1

Unit: mm(in)

- <Accessories>
- Refrigerant (Liquid) conn. pipe 1pc. (P72/P96/P120 ; Packaged in the accessory kit)
 - Refrigerant (Gas) conn. elbow 1pc. (P72/P96/P120 ; Packaged in the accessory kit)
 - Water stopper(Liquid,Gas) 1pc. each (P72/P96/P120 ; Packaged in the accessory kit)
 - Sealing material for water stopper (Liquid,Gas) 1pc. each (P72/P96/P120 ; Packaged in the accessory kit)
 - Sealing material for field piping (Liquid,Gas) 1pc. each (P72/P96/P120 ; Packaged in the accessory kit)
 - Sealing material for drain socket 1pc. (P72/P96/P120 ; Packaged in the accessory kit)
 - Pipe cover for gas 1pc. (P72/P96/P120 ; Packaged in the accessory kit)

- Note1. Close a hole of the water piping, the refrigerant piping, the power supply, and the control wiring and unused knockout etc. (field erection work)
- Note2. At the time of product shipment, the front-side piping specification serves as the local drainage connection. When connecting on the rear side, please remove the rear side plug sealing corks, and attach a front side. Ensure there is no leak after the attachment has been fitted.
- Note3. Take notice of service space as Fig.A. (In case of single installation, 600mm(23-5/8) or more of back space as front space makes easier access when servicing the unit from rear side.)
- Note4. If water pipes or refrigerant pipes stretch upward, required space for service and maintenance due to replacement of control box is shown in Fig.B.
- Note5. Environmental condition for installation: -20~40°C(DB) (-4~104°F) as indoor installation.
- Note6. In case the temperature around the heat source unit has possibility to drop under 0°C(32°F) or the inlet-water temp. drops under 10°C(50°F), be careful for the following point to prevent the pipe burst by the water pipe freeze-up.
- Add brine to water circuit.
 - Circulate the water all the time even if the heat source unit is not in operation.
 - Drain the water from inside of the heat source unit when more than 1/100.
- Note7. Ensure that the drain piping is downward with a pitch of more than 1/100.
- Note8. At brazing of pipes, wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248°F).



NO.	Usage	Specifications
①	For pipes	140 x 77 Knockout hole (5-9/16) (3-1/16)
②	For wires	ø62.7 or ø34.5 Knockout hole (2-1/2) (1-3/8)
③	For transmission cables	ø43.7 or ø22.2 Knockout hole (1-3/4) (7/8)
④	Water pipe inlet	ø34 Knockout hole (1-3/8)
⑤	Water pipe outlet	NPT1-1/2 Screw
⑥	Drain pipe	NPT1-1/2 Screw
⑦		Rc3/4 Screw

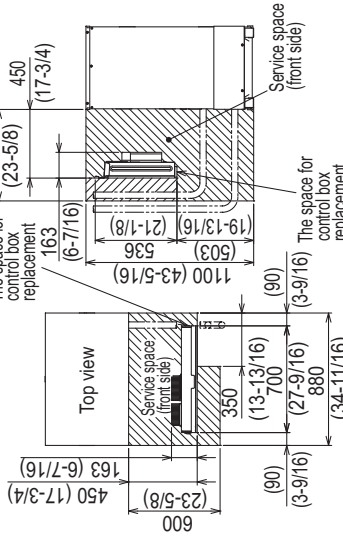


Fig. A

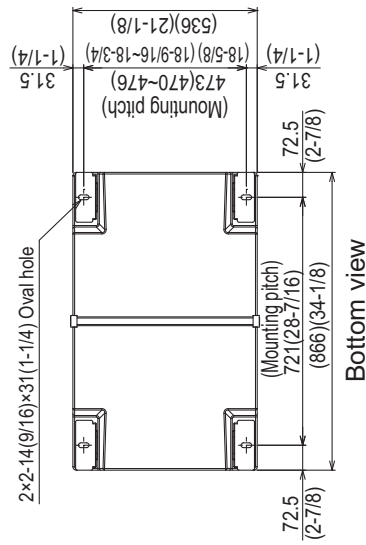


Fig. B

Connecting pipe specifications

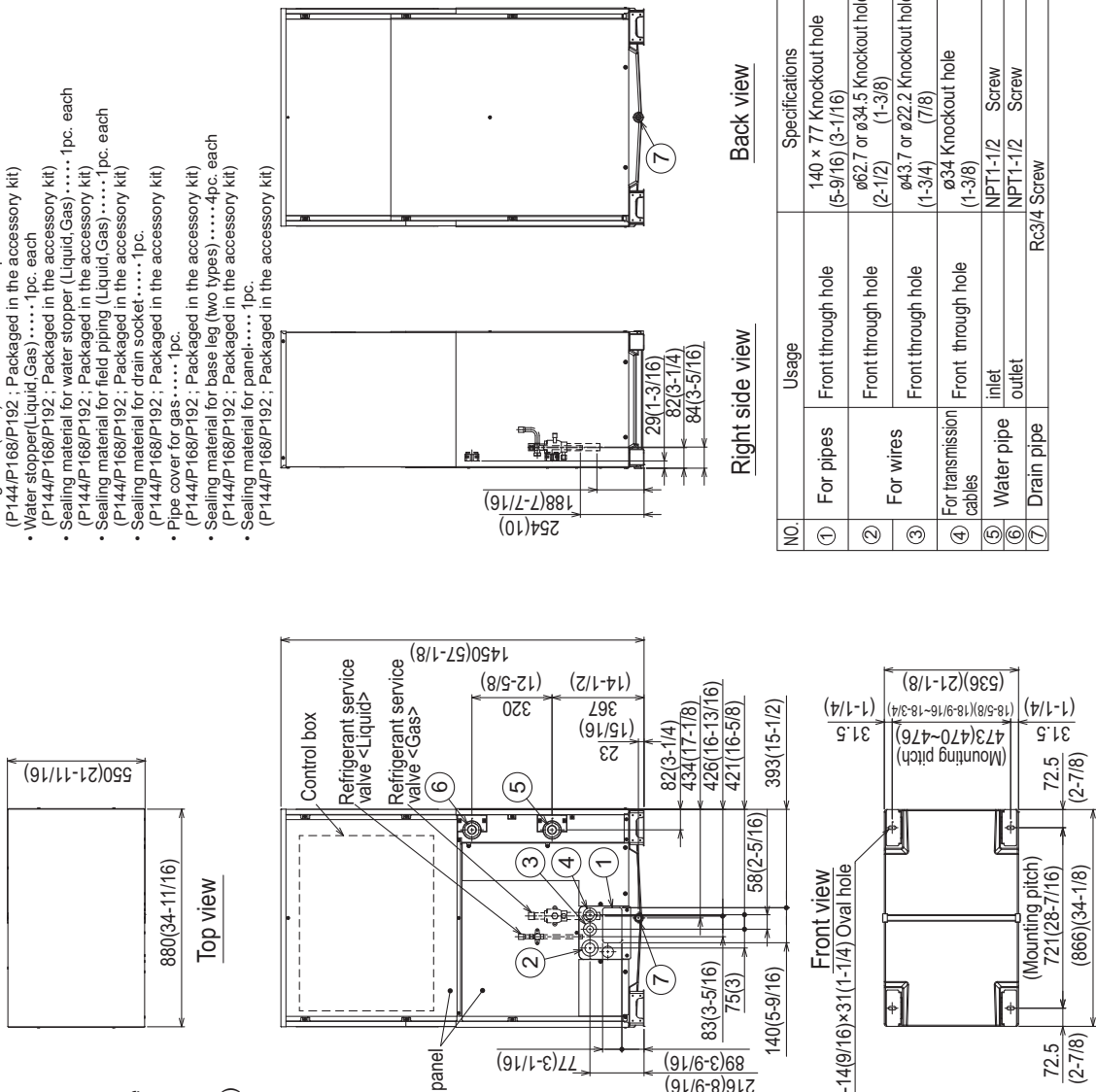
Model	Refrigerant pipe		Service valve	
	Liquid	Gas	Liquid	Gas
PQHY-P72TLMU-A1	ø9.52 Braze (3/8) *1	ø19.05 Braze (3/4) *1,4	ø9.52 Braze (3/8)	ø25.4 (1)
PQHY-P96TLMU-A1	ø9.52 Braze (3/8) *1	ø12.7 Braze (1/2) *2,4	ø9.52 Braze (3/8)	ø25.4 (1)
PQHY-P120TLMU-A1	ø9.52 Braze (3/8) *1	ø22.2 Braze (7/8) *1,4	ø9.52 Braze (3/8)	ø25.4 (1)

- *1. Connect by using the connecting pipes and elbow that are supplied.
- *2. Total length ≥ 90m(295ft)
- *3. Total length ≥ 40m(131ft)
- *4. Use the pipe joint(field supply) and connect to the refrigerant service valve piping.

PQHY-P144, 168, 192TLMU-A1

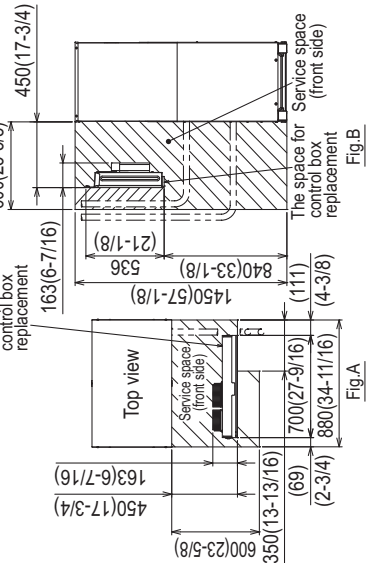
Unit: mm(in)

- <Accessories>
- Refrigerant (Liquid) conn. pipe.....1pc.
(P144/P168/P192; Packaged in the accessory kit)
 - Refrigerant (Gas) conn. elbow.....1pc.
(P144/P168/P192; Packaged in the accessory kit)
 - Water stopper(Liquid, Gas).....1pc. each
(P144/P168/P192; Packaged in the accessory kit)
 - Sealing material for water stopper (Liquid, Gas).....1pc. each
(P144/P168/P192; Packaged in the accessory kit)
 - Sealing material for field piping (Liquid, Gas).....1pc. each
(P144/P168/P192; Packaged in the accessory kit)
 - Sealing material for drain socket.....1pc.
(P144/P168/P192; Packaged in the accessory kit)
 - Pipe cover for gas.....1pc.
(P144/P168/P192; Packaged in the accessory kit)
 - Sealing material for base leg (two types).....4pc. each
(P144/P168/P192; Packaged in the accessory kit)
 - Sealing material for panel.....1pc.
(P144/P168/P192; Packaged in the accessory kit)



NO	For pipes	Usage	Specifications
①	For pipes	Front through hole	140 × 77 Knockout hole (5-9/16) (3-1/16)
②	For wires	Front through hole	∅62.7 or ∅34.5 Knockout hole (2-1/2) (1-3/8)
③	For transmission cables	Front through hole	∅43.7 or ∅22.2 Knockout hole (1-3/4) (7/8)
④	Water pipe inlet	Front through hole	∅34 Knockout hole (1-3/8)
⑤	Water pipe outlet		NPT1-1/2 Screw
⑦	Drain pipe		NPT1-1/2 Screw Rc3/4 Screw

- Note 1. Close a hole of the water piping, the refrigerant piping, the power supply, and the control wiring and unused knockout holes with the putty etc. so as not to infiltrate rain water etc. (field erection work)
- Note 2. At the time of product shipment, the front side piping specification serves as the local drainage connection. When connecting on the rear side, please remove the rear side plug sealing corks, and attach a front side. Ensure there is no leak after the attachment has been fitted.
- Note 3. Take notice of service space as Fig.A. (In case of single installation, 600mm(23-5/8) or more of back space as front space makes easier access when servicing the unit from rear side.)
- Note 4. If water pipes or refrigerant pipes stretch upward, required space for service and maintenance due to replacement of control box is shown in Fig.B.
- Note 5. Environmental condition for installation: -20~40°C(DB) (-4~104°F) as indoor installation.
- Note 6. In case the temperature around the heat source unit has possibility to drop under 0°C(32°F) or the inlet-water temp. drops under 10°C(50°F), be careful for the following point to prevent the pipe burst by the water pipe freeze-up.
- Add brine to water circuit.
 - Circulate the water all the time even if the heat source unit is not in operation.
- Note 7. Drain the water from inside of the heat source unit when the heat water unit will not operate for a long term.
- Note 8. Ensure that the drain piping is downward with a pitch of more than 1/100.
- Note 9. At brazing of pipes, wrap the refrigerant service valve refrigerant service valve under 120°C(248°F).



Connecting pipe specifications

Model	Refrigerant pipe		Service valve	
	Liquid	Gas	Liquid	Gas
PQHY-P144TLMU-A1	∅12.7 Brazed (1/2)"*2	∅28.58 Brazed (1-1/8)"*1	∅15.88 (5/8)	∅28.58 (1-1/8)
PQHY-P168TLMU-A1	∅15.88 Brazed (5/8)"*1			
PQHY-P192TLMU-A1				

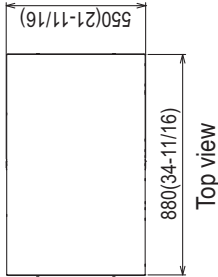
*1. Connect by using the connecting pipes and elbow that are supplied.
*2. Use the pipe joint(field supply) and connect to the refrigerant service valve piping.

PQHY-P216, 240TLMU-A1

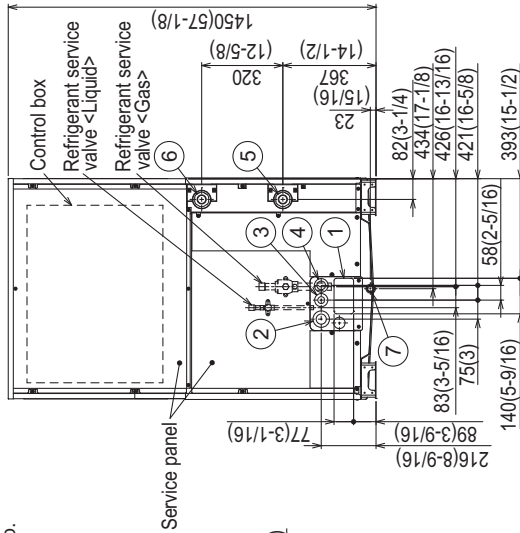
Unit: mm(in)

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

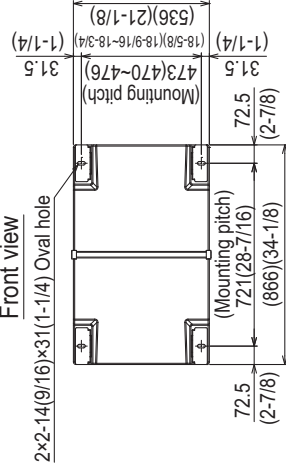
- <Accessories>
- Refrigerant (Liquid) conn. pipe 1pc.
(P216/P240 ; Packaged in the accessory kit)
- Refrigerant (Gas) conn. elbow 1pc.
(P216/P240 ; Packaged in the accessory kit)
- Water stopper(Liquid,Gas) 1pc. each
(P216/P240 ; Packaged in the accessory kit)
- Sealing material for water stopper (Liquid,Gas) 1pc. each
(P216/P240 ; Packaged in the accessory kit)
- Sealing material for field piping (Liquid,Gas) 1pc. each
(P216/P240 ; Packaged in the accessory kit)
- Sealing material for drain socket 1pc.
(P216/P240 ; Packaged in the accessory kit)
- Pipe cover for gas 1pc.
(P216/P240 ; Packaged in the accessory kit)
- Sealing material for base leg (two types) 4pc. each
(P216/P240 ; Packaged in the accessory kit)
- Sealing material for panel 1pc.
(P216/P240 ; Packaged in the accessory kit)



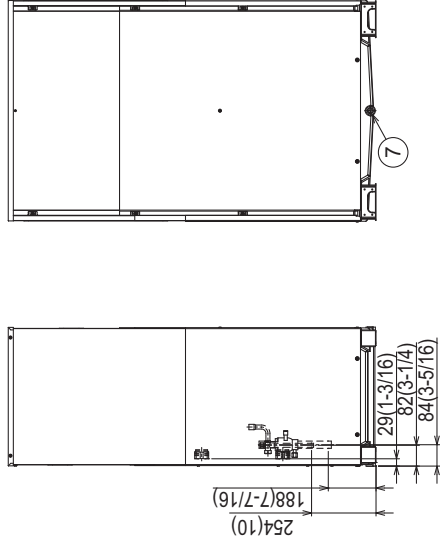
Top view



Front view



Bottom view

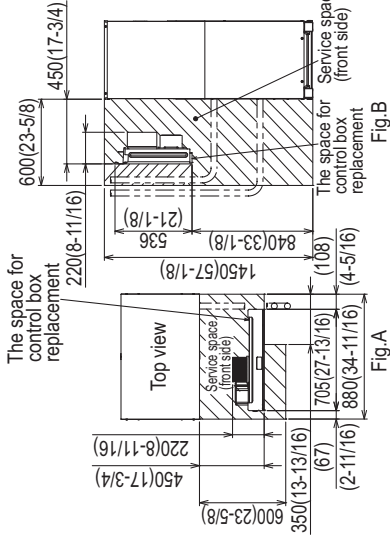


Right side view

Back view

NO.	Usage	Specifications
①	For pipes	140 x 77 Knockout hole (5-9/16) (3-1/16)
②	For wires	Front through hole (2-1/2) (1-3/8) ø62.7 or ø34.5 Knockout hole
③	For transmission cables	Front through hole (1-3/4) (7/8) ø43.7 or ø22.2 Knockout hole
④	Water pipe inlet	Front through hole (1-3/8) ø34 Knockout hole
⑤	Water pipe outlet	NPT1-1/2 Screw
⑦	Drain pipe	NPT1-1/2 Screw Rc3/4 Screw

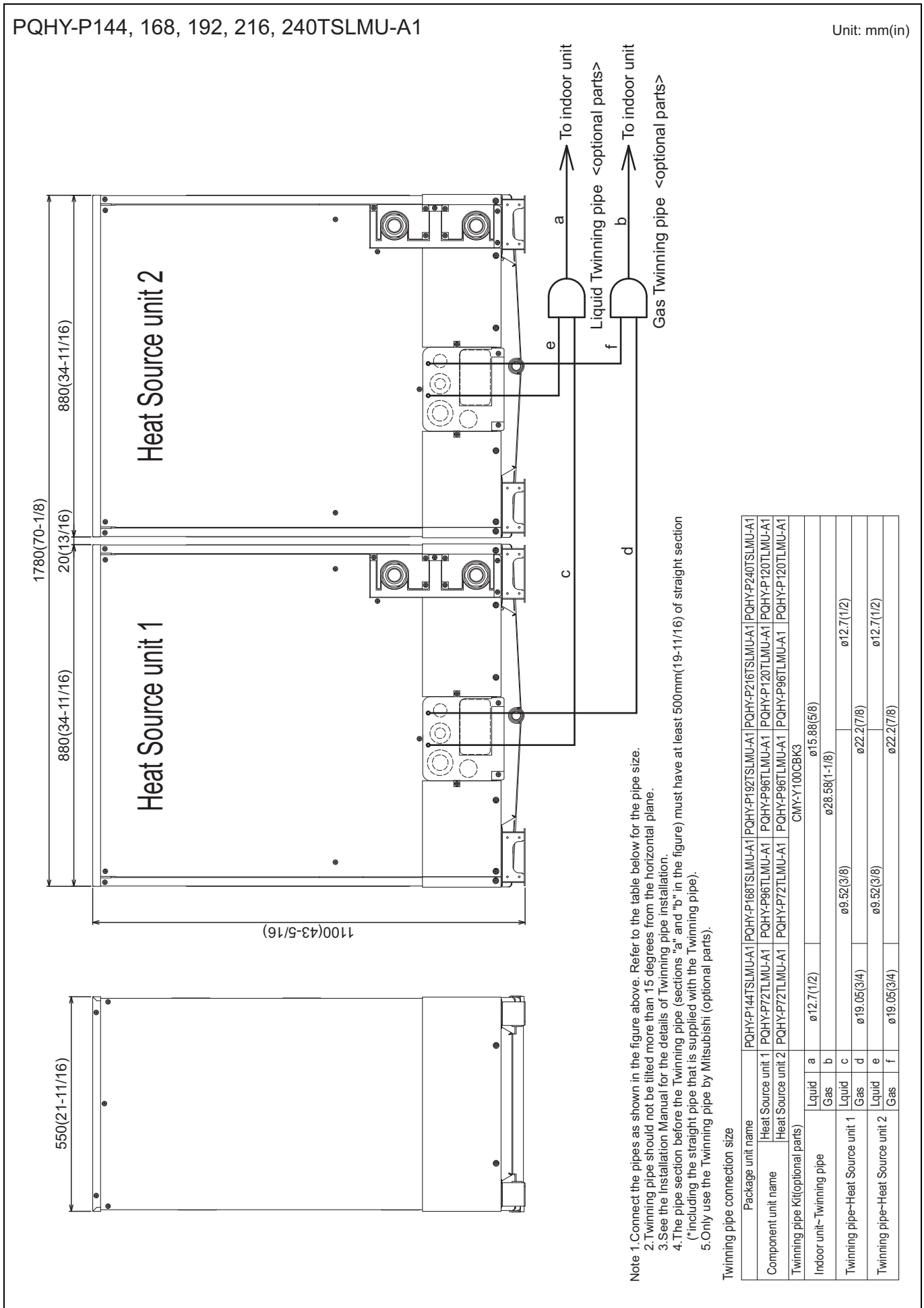
- Note1. Close a hole of the water piping, the refrigerant piping, the power supply, and the control wiring and unused knockout holes with the putty etc. so as not to infiltrate rain water etc.(field erection work)
- Note2. At the time of product shipment, the front side piping specification serves as the local drainage connection. When connecting on the rear side, please remove the rear side plug sealing corks, and attach a front side. Ensure there is no leak after the attachment has been fitted.
- Note3. Take notice of service space as Fig.A. (In case of single installation, 600mm(23-5/8) or more of back space as front space makes easier access when servicing the unit from rear side.)
- Note4. If water pipes or refrigerant pipes stretch upward, required space for service and maintenance due to replacement of control box is shown in Fig.B.
- Note5. Environmental condition for installation: -20~40°C(DB) (-4~104°F) as indoor installation.
- Note6. In case the temperature around the heat source unit has possibility to drop under 0°C(32°F) or the inlet-water temp. drops under 10°C(50°F), be careful for the following point to prevent the pipe burst by the water pipe freeze-up.
- Add brine to water circuit.
 - Circulate the water all the time even if the heat source unit is not in operation.
 - Drain the water from inside of the heat source unit when the heat source unit will not operate for a long term.
- Note7. Ensure that the drain piping is downward with a pitch of more than 1/100.
- Note8. At brazing of pipes, wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248°F).



Connecting pipe specifications

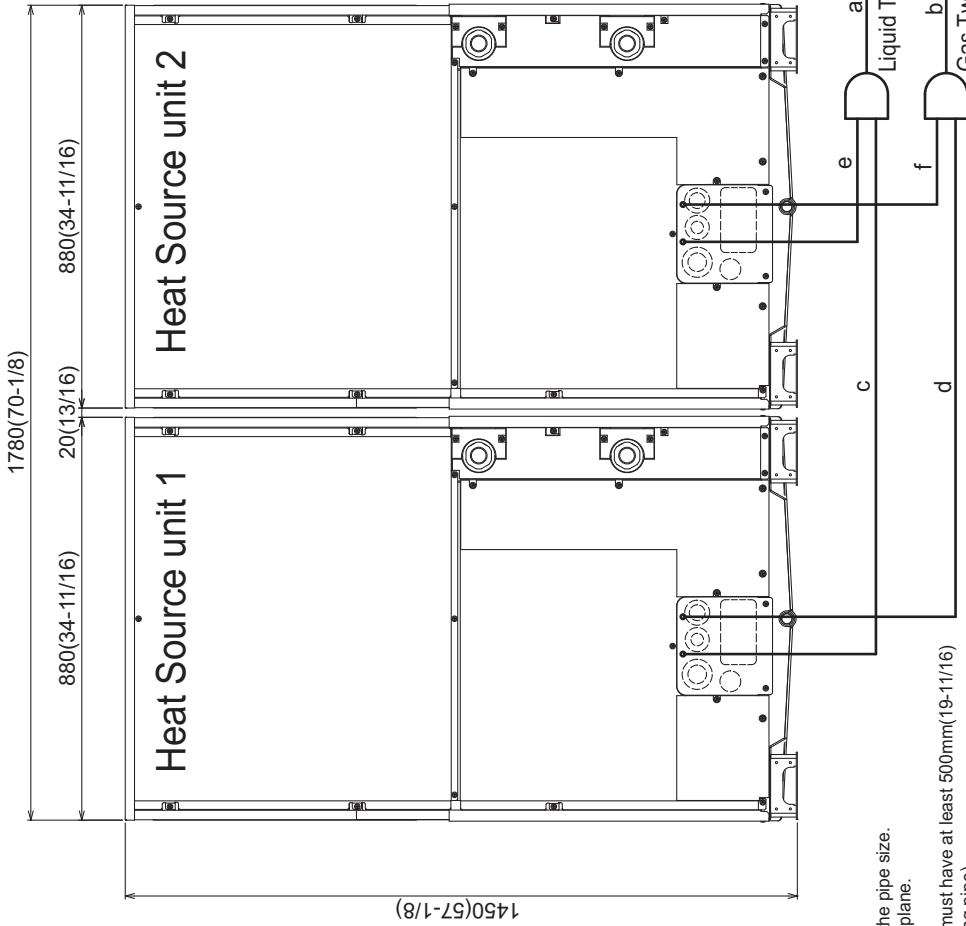
Model	Refrigerant pipe		Service valve	
	Liquid	Gas	Liquid	Gas
PQHY-P216TLMU-A1	ø15.88 Brazed (5/8) *1	ø28.58 Brazed (1-1/8) *1	ø15.88 (5/8)	ø28.58 (1-1/8)
PQHY-P240TLMU-A1				

*1. Connect by using the connecting pipes and elbow that are supplied.



PQHY-P288, 312, 336, 360TSLMU-A1

Unit: mm(in)



- Note 1. Connect the pipes as shown in the figure above. Refer to the table above for the pipe size.
 2. Twinning pipes should not be tilted more than 15 degrees from the horizontal plane.
 3. See the Installation Manual for the details of Twinning pipe installation.
 4. The pipe section before the Twinning pipe (sections "a" and "b" in the figure) must have at least 500mm(19-11/16) of straight section (*including the straight pipe that is supplied with the Twinning pipe).
 5. Only use the Twinning pipe by Mitsubishi (optional parts).

Twinning pipe connection size

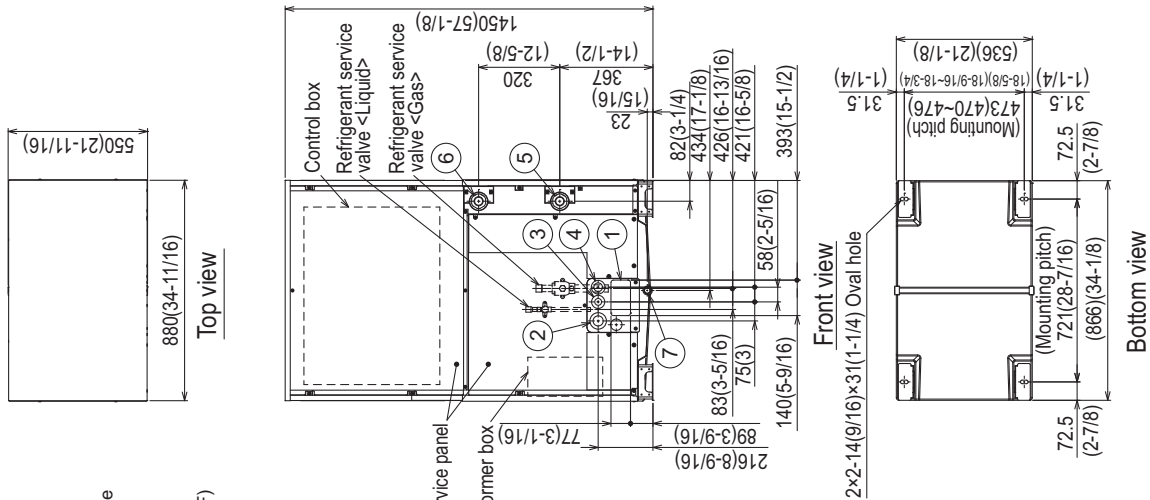
Package unit name	PQHY-P288TSLMU-A1	PQHY-P312TSLMU-A1	PQHY-P336TSLMU-A1	PQHY-P360TSLMU-A1
Heat Source unit 1	PQHY-P144TLMU-A1	PQHY-P168TLMU-A1	PQHY-P168TLMU-A1	PQHY-P192TLMU-A1
Heat Source unit 2	PQHY-P144TLMU-A1	PQHY-P144TLMU-A1	PQHY-P168TLMU-A1	PQHY-P168TLMU-A1
Twinning Kit(optional parts)	CMY-Y200CBK2			
Indoor unit-Twinning pipe	ø19.05(3/4)			
Twinning pipe-Heat Source unit 1	Liquid	a	ø34.93(1-3/8)	ø41.28(1-5/8)
	Gas	b	ø12.7(1/2)	ø15.88(5/8)
Twinning pipe-Heat Source unit 2	Liquid	c	ø28.58(1-1/8)	ø15.88(5/8)
	Gas	d	ø12.7(1/2)	ø15.88(5/8)

PQHY-P144, 168, 192YLMU-A1

Unit: mm(in)

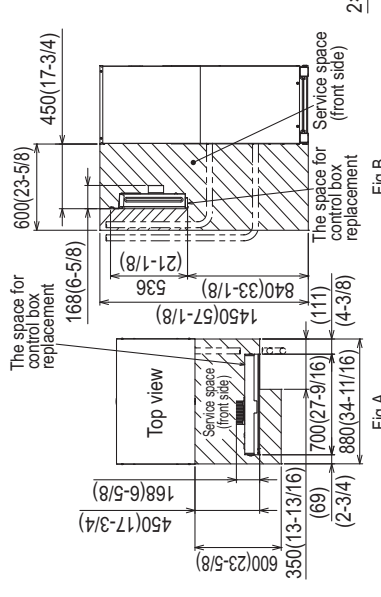
PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

- <Accessories>
- Refrigerant (Liquid) conn. pipe.....1pc.
(P144/P168/P192; Packaged in the accessory kit)
 - Refrigerant (Gas) conn. elbow.....1pc.
(P144/P168/P192; Packaged in the accessory kit)
 - Water stopper(Liquid,Gas).....1pc. each
(P144/P168/P192; Packaged in the accessory kit)
 - Sealing material for water stopper(Liquid,Gas).....1pc. each
(P144/P168/P192; Packaged in the accessory kit)
 - Sealing material for field piping (Liquid,Gas).....1pc. each
(P144/P168/P192; Packaged in the accessory kit)
 - Sealing material for drain socket.....1pc.
(P144/P168/P192; Packaged in the accessory kit)
 - Pipe cover for gas.....1pc.
(P144/P168/P192; Packaged in the accessory kit)
 - Sealing material for base leg (two types).....4pc. each
(P144/P168/P192; Packaged in the accessory kit)
 - Sealing material for panel.....1pc.
(P144/P168/P192; Packaged in the accessory kit)



NO	Usage	Specifications
①	For pipes	Front through hole 140 x 77 Knockout hole (5-9/16) (3-1/16)
②	For wires	Front through hole ø62.7 or ø34.5 Knockout hole (2-1/2) (1-3/8)
③	For transmission cables	Front through hole ø43.7 or ø22.2 Knockout hole (1-3/4) (7/8)
④	Water pipe inlet	Front through hole ø34 Knockout hole (1-3/8)
⑤	Water pipe outlet	NPT1-1/2 Screw
⑦	Drain pipe	NPT1-1/2 Screw Rc3/4 Screw

- Note1. Close a hole of the water piping, the refrigerant piping, the power supply, and the control wiring and unused knockout holes with the putty etc. so as not to infiltrate rain water etc.(field erection work)
- Note2. At the time of product shipment, the front side piping specification serves as the local drainage connection. When connecting on the rear side, please remove the rear side plug sealing corks, and attach a front side. Ensure there is no leak after the attachment has been fitted.
- Note3. Take notice of service space as Fig.A. (In case of single installation, 600mm(23-5/8) or more of back space as front space makes easier access when servicing the unit from rear side.)
- Note4. If water pipes or refrigerant pipes stretch upward, required space for service and maintenance due to replacement of control box is shown in Fig.B.
- Note5. Environmental condition for installation: -20~40°C(DB) (-4~104°F) as indoor installation.
- Note6. In case the temperature around the heat source unit has possibility to drop under 0°C(32°F) or the inlet-water temp. drops under 10°C(50°F), be careful for the following point to prevent the pipe burst by the water pipe freeze-up.
•Add brine to water circuit.
•Circulate the water all the time even if the heat source unit is not in operation.
•Drain the water from inside of the heat source unit when the heat source unit will not operate for a long term.
- Note7. Ensure that the drain piping is downward with a pitch of more than 1/100.
- Note8. At brazing of pipes, wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248°F).



Connecting pipe specifications

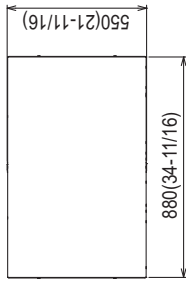
Model	Refrigerant pipe		Service valve	
	Liquid	Gas	Liquid	Gas
PQHY-P144YLMU-A1	ø12.7 Braze (1/2) *1 *2	ø28.58 Braze (1-1/8) *1	ø15.88 (5/8)	ø28.58 (1-1/8)
PQHY-P168YLMU-A1	ø15.88 Braze (5/8) *1			
PQHY-P192YLMU-A1				

*1. Connect by using the connecting pipes and elbow that are supplied.
*2. Use the pipe joint(field supply) and connect to the refrigerant service valve piping.

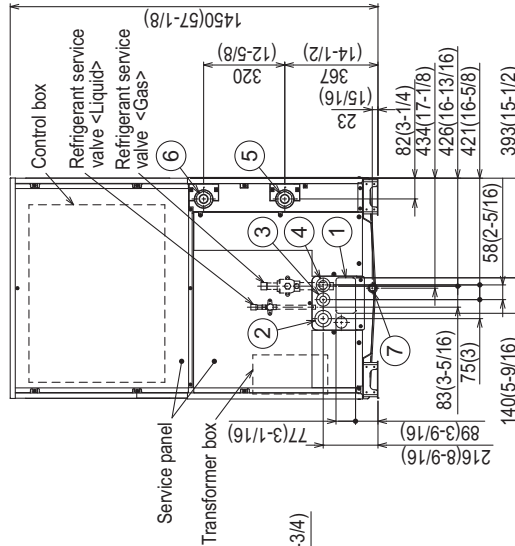
Unit: mm(in)

PQHY-P216, 240YLMU-A1

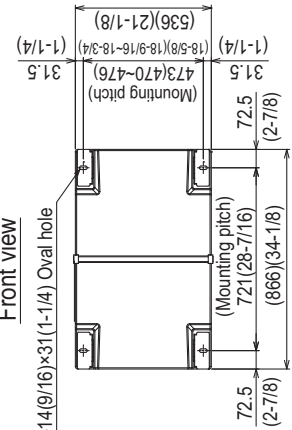
- <Accessories>
- Refrigerant (Liquid) conn. pipe 1pc. (P216/P240 ; Packaged in the accessory kit)
 - Refrigerant (Gas) conn. elbow 1pc. (P216/P240 ; Packaged in the accessory kit)
 - Water stopper(Liquid,Gas) 1pc. each (P216/P240 ; Packaged in the accessory kit)
 - Sealing material for water stopper (Liquid,Gas) 1pc. each (P216/P240 ; Packaged in the accessory kit)
 - Sealing material for field piping (Liquid,Gas) 1pc. each (P216/P240 ; Packaged in the accessory kit)
 - Sealing material for drain socket 1pc. (P216/P240 ; Packaged in the accessory kit)
 - Pipe cover for gas 1pc. (P216/P240 ; Packaged in the accessory kit)
 - Sealing material for base leg (two types) 4pc. each (P216/P240 ; Packaged in the accessory kit)
 - Sealing material for panel 1pc. (P216/P240 ; Packaged in the accessory kit)



Top view



Front view



Bottom view

Note1. Close a hole of the water piping, the refrigerant piping, the power supply, and the control wiring and unused knockout holes with the putty etc. so as not to infiltrate rain water etc.(field erection work)

Note2. At the time of product shipment, the front side piping specification serves as the local drainage connection. When connecting on the rear side, please remove the rear side plug sealing corks, and attach a front side. Ensure there is no leak after the attachment has been fitted.

Note3. Take notice of service space as Fig.A. (In case of single installation, 600mm(23-5/8) or more of back space as front space makes easier access when servicing the unit from rear side.)

Note4. If water pipes or refrigerant pipes stretch upward, required space for service and maintenance due to replacement of control box is shown in Fig.B.

Note5. Environmental condition for installation: -20~40°C(DB) (-4~104°F) as indoor installation.

Note6. In case the temperature around the heat source unit has possibility to drop under 0°C(32°F) or the inlet-water temp. drops under 10°C(50°F), be careful for the following point to prevent the pipe burst by the water pipe freeze-up.

- Add brine to water circuit.
- Circulate the water all the time even if the heat source unit is not in operation.
- Drain the water from inside of the heat source unit when the heat source unit will not operate for a long term.

Note7. Ensure that the drain piping is downward with a pitch of more than 1/100.

Note8. At brazing of pipes, wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248°F).

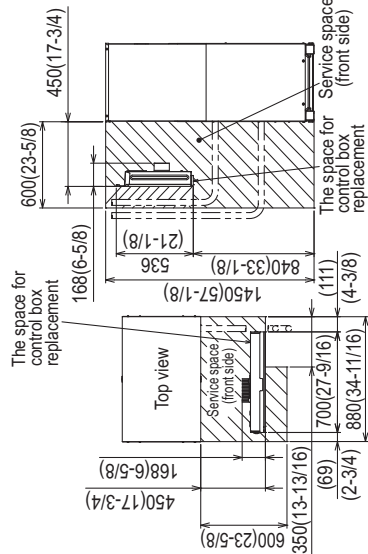


Fig.A

Fig.B

Connecting pipe specifications

Model	Refrigerant pipe		Service valve	
	Liquid	Gas	Liquid	Gas
PQHY-P216/240YLMU-A1	ø15.88 Brazed (5/8) *1	ø28.58 Brazed (1-1/8) *1	ø15.88 (5/8)	ø28.58 (1-1/8)
PQHY-P240/240YLMU-A1				

*1. Connect by using the connecting pipes and elbow that are supplied.

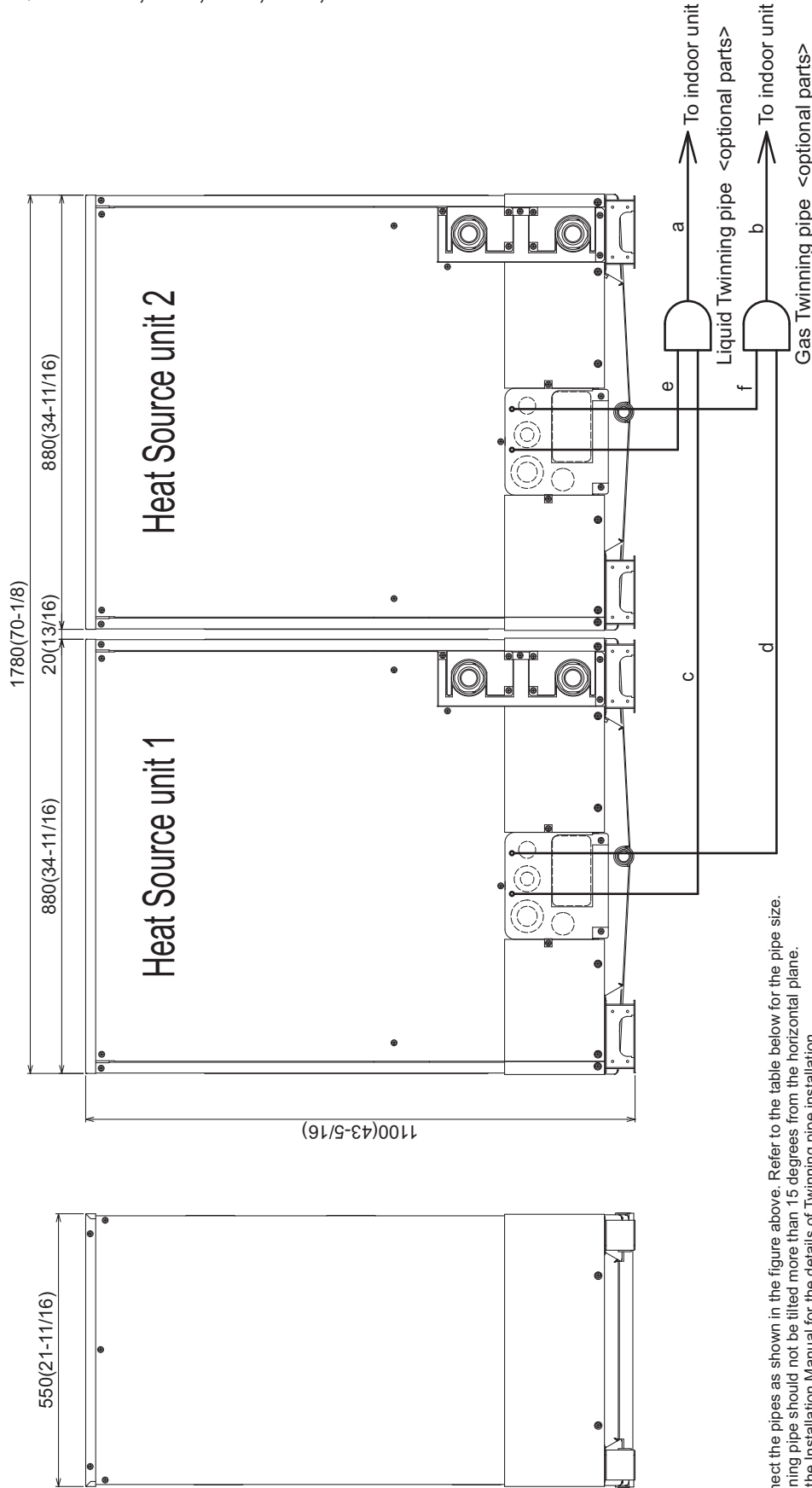
NO.	Usage		Specifications
	For pipes	Front through hole	
①		140 x 77 Knockout hole (5-9/16) (3-1/16)	
②		Front through hole	ø62.7 or ø34.5 Knockout hole (2-1/2) (1-3/8)
③		Front through hole	ø43.7 or ø22.2 Knockout hole (1-3/4) (7/8)
④		Front through hole	ø34 Knockout hole (1-3/8)
⑤	Water pipe inlet		NPT1-1/2 Screw
⑥	Water pipe outlet		NPT1-1/2 Screw
⑦	Drain pipe		Rc3/4 Screw

Back view

Right side view

PQHY-P144, 168, 192, 216, 240YSLMU-A1

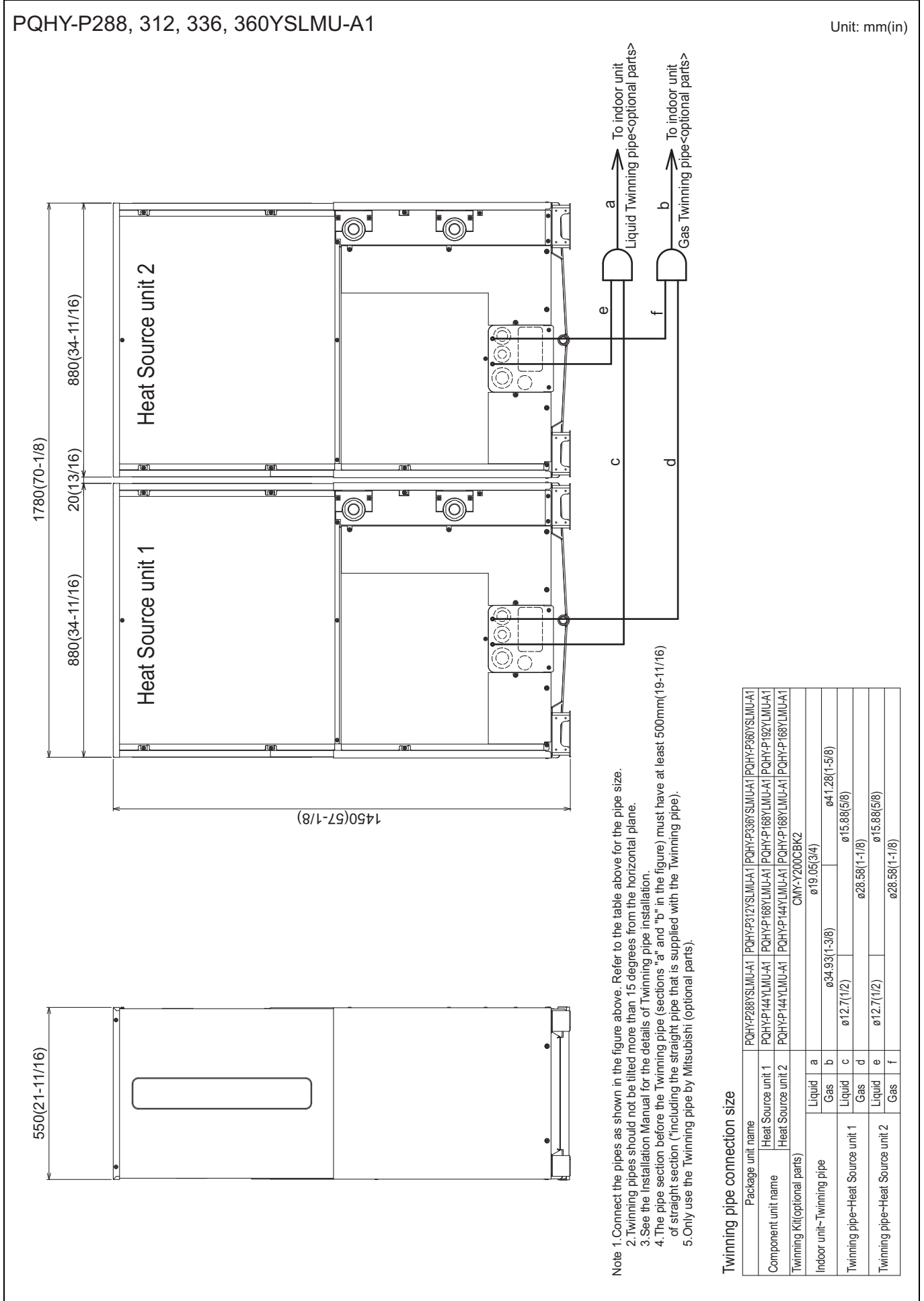
Unit: mm(in)



- Note 1. Connect the pipes as shown in the figure above. Refer to the table below for the pipe size.
- 2. Twinning pipe should not be filled more than 15 degrees from the horizontal plane.
- 3. See the Installation Manual for the details of Twinning pipe installation.
- 4. The pipe section before the Twinning pipe (sections "a" and "b" in the figure) must have at least 500mm (19-11/16) of straight section (*including the straight pipe that is supplied with the Twinning pipe).
- 5. Only use the Twinning pipe by Mitsubishi (optional parts).

Twining pipe connection size

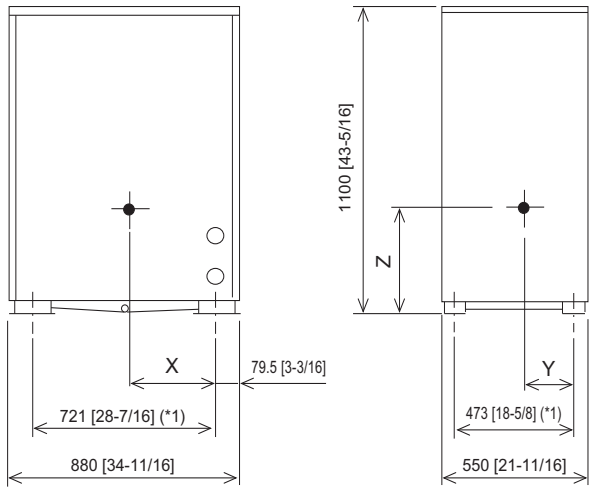
Package unit name	PQHY-P144YSLMU-A1	PQHY-P168YSLMU-A1	PQHY-P182YSLMU-A1	PQHY-P192YSLMU-A1	PQHY-P216YSLMU-A1	PQHY-P240YSLMU-A1
Heat Source unit 1	PQHY-P72YLMU-A1	PQHY-P96YLMU-A1	PQHY-P120YLMU-A1	PQHY-P144YLMU-A1	PQHY-P168YLMU-A1	PQHY-P192YLMU-A1
Heat Source unit 2	PQHY-P72YLMU-A1	PQHY-P96YLMU-A1	PQHY-P120YLMU-A1	PQHY-P144YLMU-A1	PQHY-P168YLMU-A1	PQHY-P192YLMU-A1
Twining pipe Kit(optional parts)	CMY-Y100CBK3					
Indoor unit-Twinning pipe	Liquid a	ø12.7(1/2)	ø15.88(5/8)			
	Gas b	ø28.58(1-1/8)				
Twining pipe-Heat Source unit 1	Liquid c	ø9.52(3/8)	ø12.7(1/2)			
	Gas d	ø19.05(3/4)	ø22.2(7/8)			
Twining pipe-Heat Source unit 2	Liquid e	ø9.52(3/8)	ø12.7(1/2)			
	Gas f	ø19.05(3/4)	ø22.2(7/8)			



PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

PQHY-P72, 96, 120TLMU-A1/YLMU-A1

Unit: mm [in.]

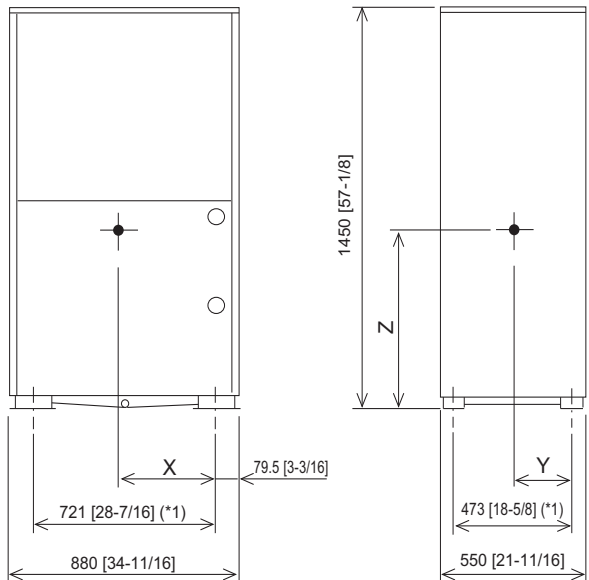


Model	X	Y	Z
PQHY-P72TLMU-A1	359 [14-3/16]	236 [9-5/16]	437 [17-1/4]
PQHY-P96TLMU-A1	359 [14-3/16]	236 [9-5/16]	437 [17-1/4]
PQHY-P120TLMU-A1	359 [14-3/16]	236 [9-5/16]	437 [17-1/4]
PQHY-P72YLMU-A1	385 [15-3/16]	224 [8-7/8]	425 [16-3/4]
PQHY-P96YLMU-A1	385 [15-3/16]	224 [8-7/8]	425 [16-3/4]
PQHY-P120YLMU-A1	385 [15-3/16]	224 [8-7/8]	425 [16-3/4]

*1 Mounting Pitch

PQHY-P144, 168, 192, 216, 240TLMU-A1/YLMU-A1

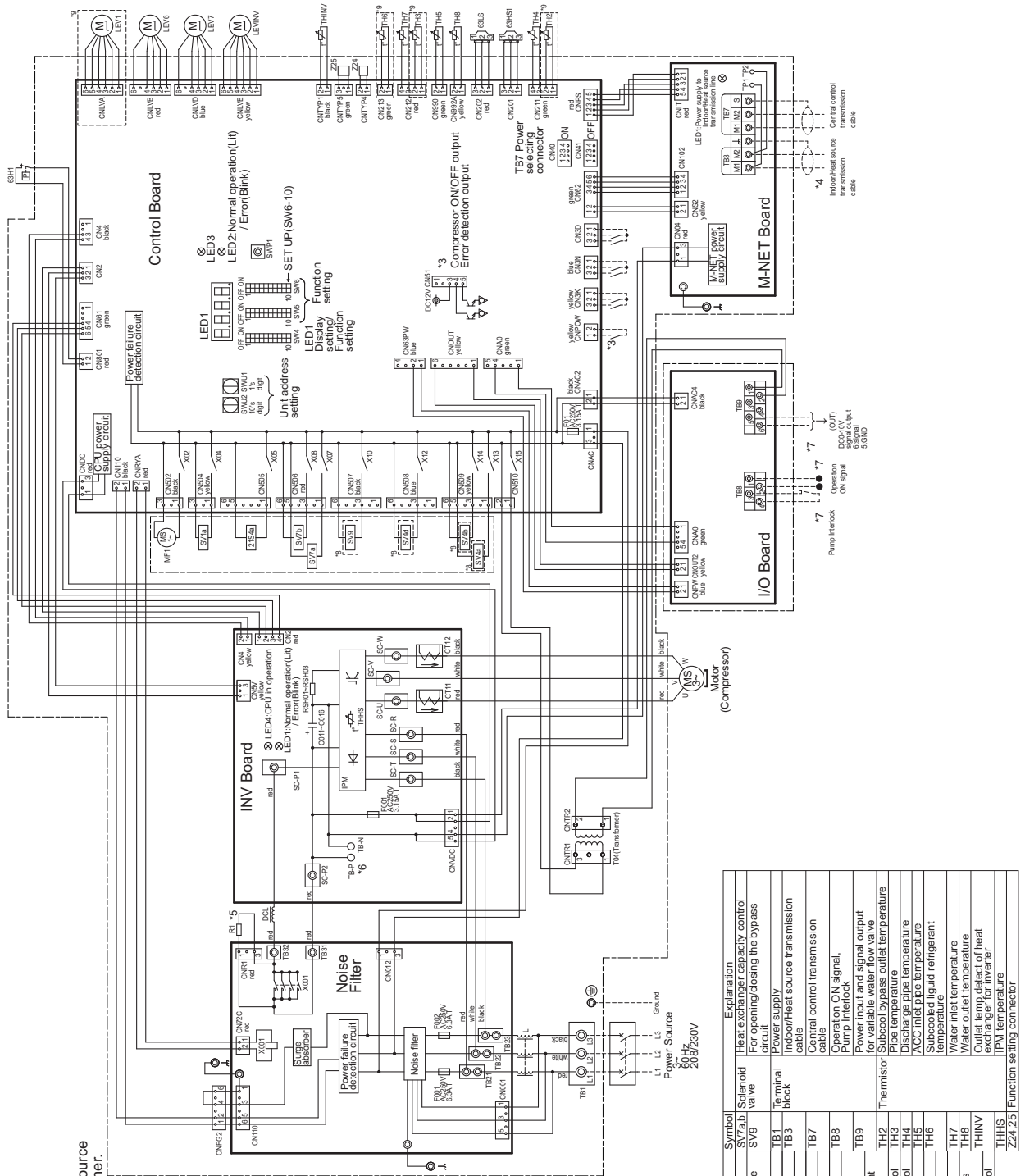
Unit: mm [in.]



Model	X	Y	Z
PQHY-P144TLMU-A1	375 [14-13/16]	237 [9-3/8]	631 [24-7/8]
PQHY-P168TLMU-A1	375 [14-13/16]	237 [9-3/8]	631 [24-7/8]
PQHY-P192TLMU-A1	375 [14-13/16]	237 [9-3/8]	631 [24-7/8]
PQHY-P216TLMU-A1	349 [13-3/4]	231 [9-1/8]	669 [26-3/8]
PQHY-P240TLMU-A1	349 [13-3/4]	231 [9-1/8]	669 [26-3/8]
PQHY-P144YLMU-A1	392 [15-7/16]	227 [8-15/16]	610 [24-1/16]
PQHY-P168YLMU-A1	392 [15-7/16]	227 [8-15/16]	610 [24-1/16]
PQHY-P192YLMU-A1	392 [15-7/16]	227 [8-15/16]	610 [24-1/16]
PQHY-P216YLMU-A1	365 [14-3/8]	221 [8-3/4]	637 [25-1/8]
PQHY-P240YLMU-A1	365 [14-3/8]	221 [8-3/4]	637 [25-1/8]

*1 Mounting Pitch

PQHY-P72, 96, 120TLMU-A1



- *1. Single-dotted lines indicate wiring not supplied with the unit.
- *2. Dot-dash lines indicate the control box boundaries.
- *3. Refer to the Data book for connecting input/output signal connectors.
- *4. Daisy-chain terminals (TB3) on the heat source units in the same refrigerant system together.
- *5. Faston terminals have a locking function. Make sure the terminals are securely locked in place after insertion. Press the tab on the terminals to removed them.
- *6. Control box houses high-voltage parts. Before inspecting the inside of the control box, turn off the power, keep the unit off for at least 10 minutes, and confirm that the voltage between TB-P and TB-N on INV Board has dropped to DC20V or less.
- *7. Refer to the Data book for wiring terminal block for Pump Interlock, Operation ON signal and DC0-10V signal output.
- *8. Difference of appliance.
- *9. Difference of appliance.

Model name	Appliance
PQHY	*8 do not exist
PQRY	*8 exist
Model name	Appliance
PQHY	*9 exist
PQRY	*9 do not exist

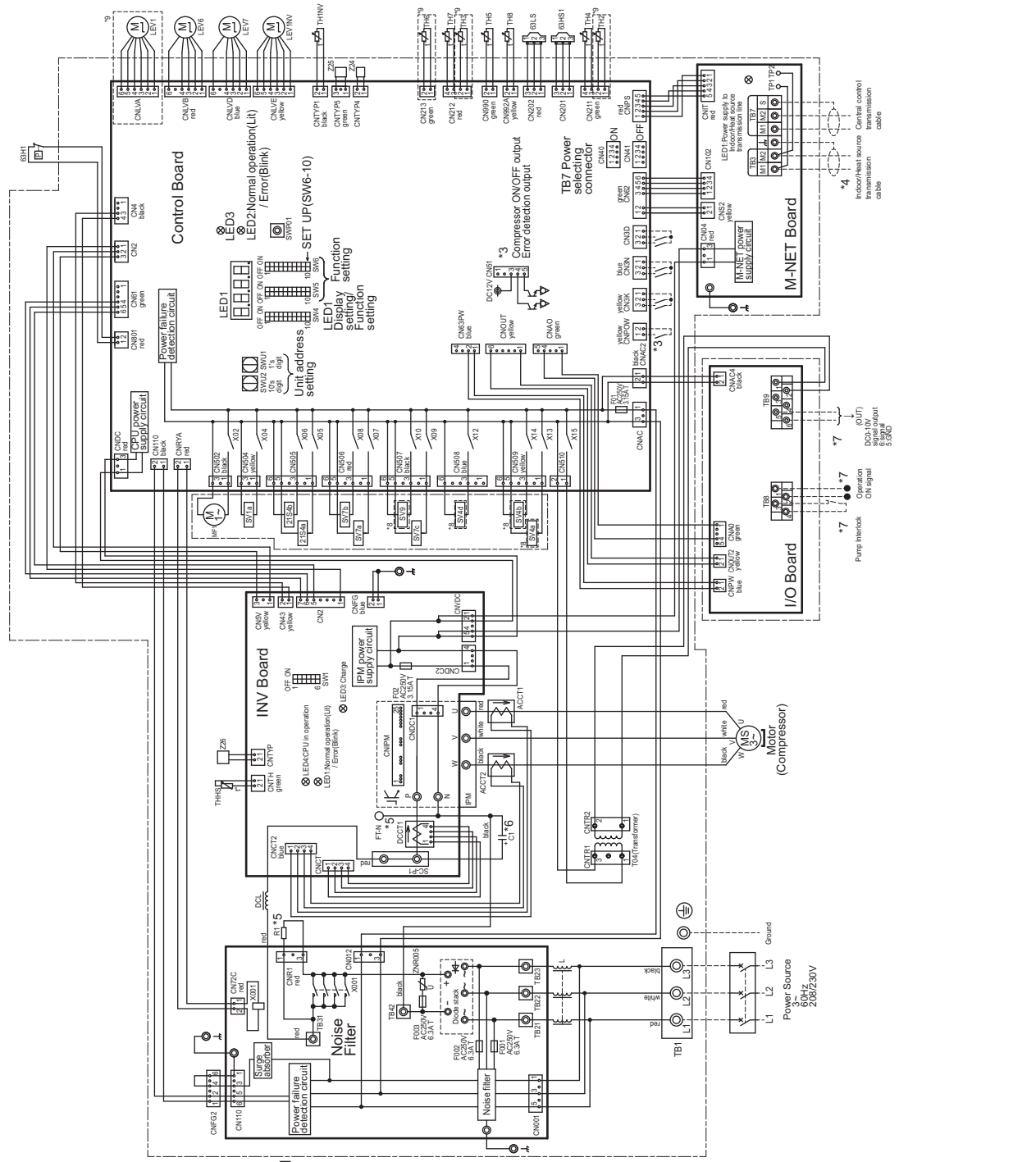
<<Symbol explanation>>

Symbol	Explanation
21S4a	4-way valve
SV7a,b	Cooling/Heating switching valve
SV9	High pressure protection for the heat source unit
TB1	Terminal block
TB3	Pressure
TB7	Low pressure
X101	Magnetic relay (inverter main circuit)
Y11, Y2	Capacitor (inverter main circuit)
Y11, Y2	Current sensor (AC)
Y11, Y2	Choke coil (for high frequency noise reduction)
LEV1	Linear expansion
LEV6	HIC bypass Controls refrigerant flow in HIC circuit
LEV7	Valve
LEVINV	Heat exchanger capacity control
MF-1	Heat exchanger capacity control for inverter
RS1, RS2, RS3	Fan motor (Radiator panel)
SV1a	Resistor
SV4a,b,d	For current detection
	For concentration prevention circuit under the bypass
	Solenoid valve
	Heat exchanger capacity control
	IPM temperature
	Z24, 25 Function setting connector

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

PQHY-P144, 168, 192TLMU-A1

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

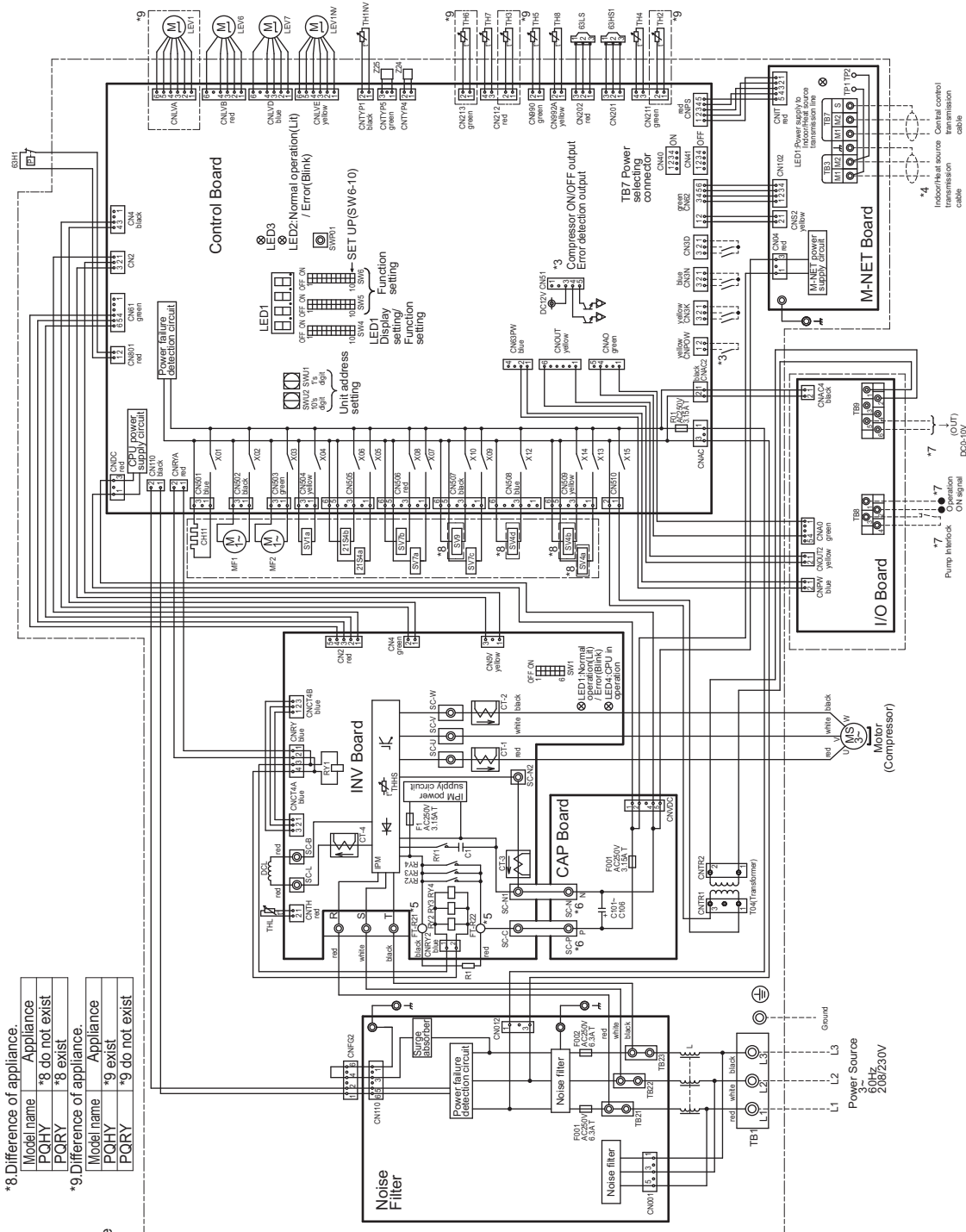


- *1. Single-dotted lines indicate wiring not supplied with the unit.
- *2. Dot-dash lines indicate the control box boundaries.
- *3. Refer to the Data book for connecting input/output signal connectors.
- *4. Daisy-chain terminals (TB3) on the heat source units in the same refrigerant system together.
- *5. Faston terminals have a locking function. Make sure the terminals are securely locked in place after insertion. Press the tab on the terminals to removed them.
- *6. Control box houses high-voltage parts. Before inspecting the inside of the control box, turn off the power, keep the unit off for at least 10 minutes, and confirm that the voltage at both ends of the main capacitor (C1) has dropped to DC20V or less.
- *7. Refer to the Databook for wiring terminal block for Pump Interlock, Operation ON signal and DC0-10V signal output.
- *8. Difference of appliance.
 Model name Appliance
 PQHY *8 do not exist
 PQRY *8 exist
- *9. Difference of appliance.
 Model name Appliance
 PQHY *9 exist
 PQRY *9 do not exist

<Symbol explanation>

Symbol	Explanation
Z1S4a	4-way valve (Cooling/Heating switching)
Z1S4b	Heat exchanger capacity control
63SH1	Pressure High pressure protection for the unit
63LH1	Pressure High pressure
63LS1	Pressure Low pressure
X001	Magnetic relay (inverter main circuit)
C1	Capacitor (inverter main circuit)
ACCT1,2	Current sensor (AC)
DCCT1	Current sensor (DC)
DCL	DC reactor
L	Choke coil (for high frequency noise reduction)
LEV1	H/C bypass (Controls refrigerant expansion valve)
LEV6	Heat exchanger capacity control
LEV7	Heat exchanger capacity control
LEVINV	Heat exchanger for inverter
MF1	Fan motor (Radiator panel)
SV1a	Resistor For inrush current prevention circuit under the O/S
SV4a,b,d	Heat exchanger capacity control
SV7a,b,c	Heat exchanger capacity control
SV9	Heat exchanger capacity control circuit opening/closing the bypass
TB1	Terminal block
TB3	Indoor/Heat source transmission cable
TB7	Central control transmission cable
TB8	Operation ON signal, Power input and signal output for inverter
TB9	Pump Interlock
TH2	Thermistor (Supercool bypass outlet temperature)
TH3	Pipe temperature
TH4	Discharge pipe temperature
TH5	ACC inlet pipe temperature
TH6	Subcooled liquid refrigerant temperature
TH7	Water inlet temperature
TH8	Water outlet temperature
TH9	Outlet temp. detect of heat exchanger for inverter
THHS	IPM temperature
Z24,25,26	Function setting connector

PQHY-P216, 240TLMU-A1



- *8. Difference of appliance.

Model name	Appliance
PQHY	*8 do not exist
PQRY	*8 exist

- *9. Difference of appliance.

Model name	Appliance
PQHY	*9 exist
PQRY	*9 do not exist

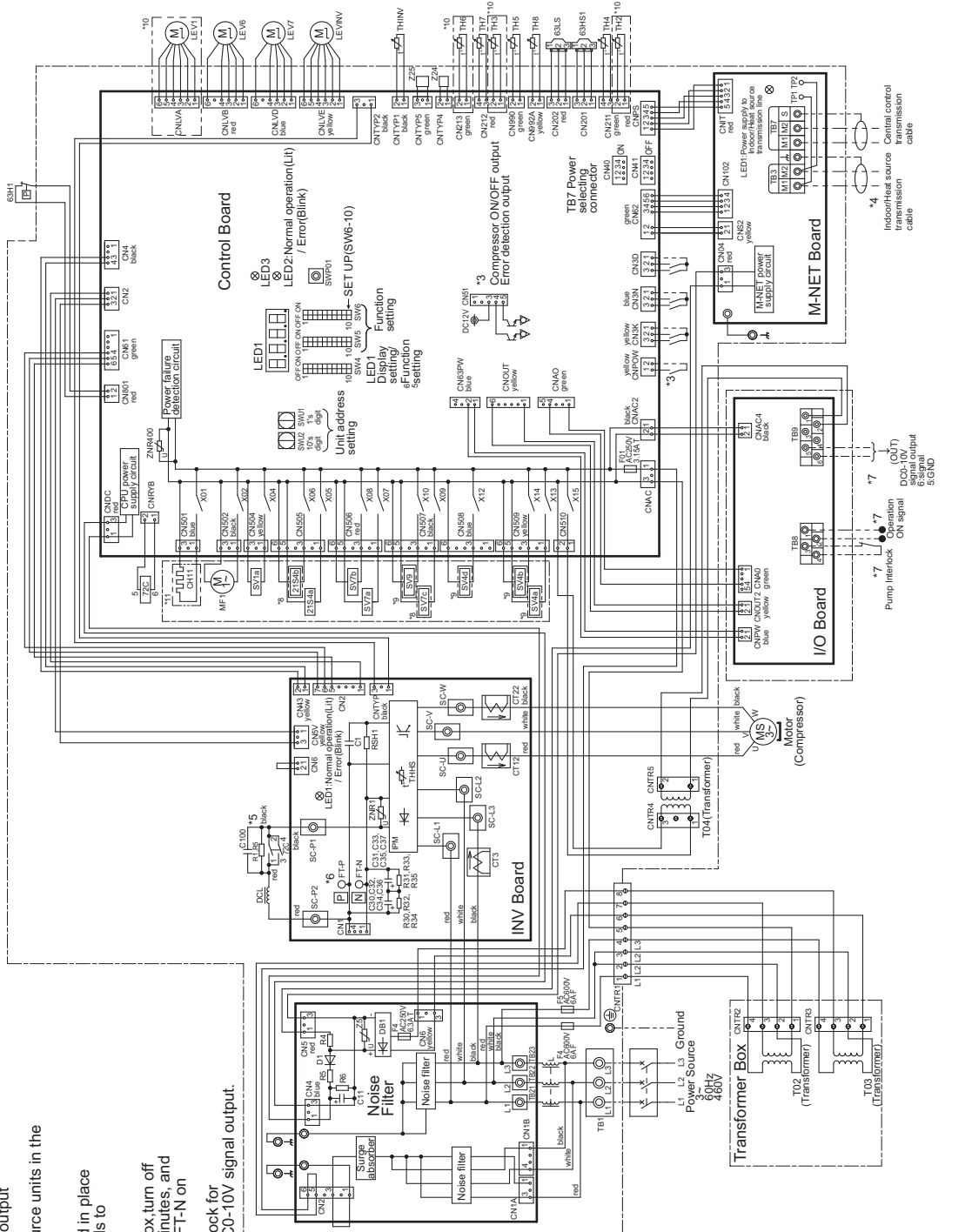
- *1. Single-dotted lines indicate wiring not supplied with the unit.
- *2. Dot-dash lines indicate the control box boundaries.
- *3. Refer to the Data book for connecting input/output signal connectors.
- *4. Daisy-chain terminals (TB3) on the heat source units in the same refrigerant system together.
- *5. Faston terminals have a locking function. Make sure the terminals are securely locked in place after insertion. Press the tab on the terminals to removed them.
- *6. Control box houses high-voltage parts. Before inspecting the inside of the control box, turn off the power, keep the unit off for at least 10 minutes, and confirm that the voltage between SC-P and SC-N on CAP Board has dropped to DC20V or less.
- *7. Refer to the Data book for wiring terminal block for Pump Interlock, Operation ON signal and DC0-10V signal output.

<Symbol explanation>

Symbol	Explanation
21S4a	4-way valve
21S4b	Cooling/Heating switching
63HT	Heat exchanger capacity control
63HS1	High pressure protection for the heat source unit
63HS2	High pressure
63LS	Low pressure
C1	Capacitor filter circuit
C101-C106	Inverter main circuit
CH1, CH2	Crankcase heater (for heating the compressor)
CI1, CI2	Current sensor (AC)
CI13, CI14	DC reactor
DCL	Diode coil (for high frequency noise reduction)
L	Linear
LEV1	HIC bypass Controls refrigerant expansion valve
LEV6	Heat exchanger capacity control
LEV7	flow in HIC circuit
LEV8	Heat exchanger capacity control
LEV9	Heat exchanger capacity control
LEV10	Heat exchanger capacity control
LEV11	Heat exchanger capacity control
LEV12	Heat exchanger capacity control
LEV13	Heat exchanger capacity control
LEV14	Heat exchanger capacity control
LEV15	Heat exchanger capacity control
LEV16	Heat exchanger capacity control
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LEV18	Heat exchanger capacity control
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LEV94	Heat exchanger capacity control
LEV95	Heat exchanger capacity control
LEV96	Heat exchanger capacity control
LEV97	Heat exchanger capacity control
LEV98	Heat exchanger capacity control
LEV99	Heat exchanger capacity control
LEV100	Heat exchanger capacity control
RV1	Fan motor (radiator panel)
RV2	Fan motor (compressor)
RV3	Fan motor (condenser)
RV4	Fan motor (evaporator)
RV5	Fan motor (blower)
RV6	Fan motor (fan)
RV7	Fan motor (fan)
RV8	Fan motor (fan)
RV9	Fan motor (fan)
RV10	Fan motor (fan)
RV11	Fan motor (fan)
RV12	Fan motor (fan)
RV13	Fan motor (fan)
RV14	Fan motor (fan)
RV15	Fan motor (fan)
RV16	Fan motor (fan)
RV17	Fan motor (fan)
RV18	Fan motor (fan)
RV19	Fan motor (fan)
RV20	Fan motor (fan)
RV21	Fan motor (fan)
RV22	Fan motor (fan)
RV23	Fan motor (fan)
RV24	Fan motor (fan)
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RV26	Fan motor (fan)
RV27	Fan motor (fan)
RV28	Fan motor (fan)
RV29	Fan motor (fan)
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RV36	Fan motor (fan)
RV37	Fan motor (fan)
RV38	Fan motor (fan)
RV39	Fan motor (fan)
RV40	Fan motor (fan)
RV41	Fan motor (fan)
RV42	Fan motor (fan)
RV43	Fan motor (fan)
RV44	Fan motor (fan)
RV45	Fan motor (fan)
RV46	Fan motor (fan)
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RV88	Fan motor (fan)
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RV91	Fan motor (fan)
RV92	Fan motor (fan)
RV93	Fan motor (fan)
RV94	Fan motor (fan)
RV95	Fan motor (fan)
RV96	Fan motor (fan)
RV97	Fan motor (fan)
RV98	Fan motor (fan)
RV99	Fan motor (fan)
RV100	Fan motor (fan)
SV1a	Magnetic
SV1b	Magnetic
SV1c	Magnetic
SV1d	Magnetic
SV1e	Magnetic
SV1f	Magnetic
SV1g	Magnetic
SV1h	Magnetic
SV1i	Magnetic
SV1j	Magnetic
SV1k	Magnetic
SV1l	Magnetic
SV1m	Magnetic
SV1n	Magnetic
SV1o	Magnetic
SV1p	Magnetic
SV1q	Magnetic
SV1r	Magnetic
SV1s	Magnetic
SV1t	Magnetic
SV1u	Magnetic
SV1v	Magnetic
SV1w	Magnetic
SV1x	Magnetic
SV1y	Magnetic
SV1z	Magnetic
SV2	For opening/closing the bypass circuit under the O/S
SV3	Heat exchanger capacity control
SV4	Heat exchanger capacity control
SV5	Heat exchanger capacity control
SV6	Heat exchanger capacity control
SV7	Heat exchanger capacity control
SV8	Heat exchanger capacity control
SV9	Heat exchanger capacity control
SV10	Heat exchanger capacity control
SV11	Heat exchanger capacity control
SV12	Heat exchanger capacity control
SV13	Heat exchanger capacity control
SV14	Heat exchanger capacity control
SV15	Heat exchanger capacity control
SV16	Heat exchanger capacity control
SV17	Heat exchanger capacity control
SV18	Heat exchanger capacity control
SV19	Heat exchanger capacity control
SV20	Heat exchanger capacity control
SV21	Heat exchanger capacity control
SV22	Heat exchanger capacity control
SV23	Heat exchanger capacity control
SV24	Heat exchanger capacity control
SV25	Heat exchanger capacity control
SV26	Heat exchanger capacity control
SV27	Heat exchanger capacity control
SV28	Heat exchanger capacity control
SV29	Heat exchanger capacity control
SV30	Heat exchanger capacity control
SV31	Heat exchanger capacity control
SV32	Heat exchanger capacity control
SV33	Heat exchanger capacity control
SV34	Heat exchanger capacity control
SV35	Heat exchanger capacity control
SV36	Heat exchanger capacity control
SV37	Heat exchanger capacity control
SV38	Heat exchanger capacity control
SV39	Heat exchanger capacity control
SV40	Heat exchanger capacity control
SV41	Heat exchanger capacity control
SV42	Heat exchanger capacity control
SV43	Heat exchanger capacity control
SV44	Heat exchanger capacity control
SV45	Heat exchanger capacity control
SV46	Heat exchanger capacity control
SV47	Heat exchanger capacity control
SV48	Heat exchanger capacity control
SV49	Heat exchanger capacity control
SV50	Heat exchanger capacity control
SV51	Heat exchanger capacity control
SV52	Heat exchanger capacity control
SV53	Heat exchanger capacity control
SV54	Heat exchanger capacity control
SV55	Heat exchanger capacity control
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SV57	Heat exchanger capacity control
SV58	Heat exchanger capacity control
SV59	Heat exchanger capacity control
SV60	Heat exchanger capacity control
SV61	Heat exchanger capacity control
SV62	Heat exchanger capacity control
SV63	Heat exchanger capacity control
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SV67	Heat exchanger capacity control
SV68	Heat exchanger capacity control
SV69	Heat exchanger capacity control
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SV71	Heat exchanger capacity control
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SV80	Heat exchanger capacity control
SV81	Heat exchanger capacity control
SV82	Heat exchanger capacity control
SV83	Heat exchanger capacity control
SV84	Heat exchanger capacity control
SV85	Heat exchanger capacity control
SV86	Heat exchanger capacity control
SV87	Heat exchanger capacity control
SV88	Heat exchanger capacity control
SV89	Heat exchanger capacity control
SV90	Heat exchanger capacity control
SV91	Heat exchanger capacity control
SV92	Heat exchanger capacity control
SV93	Heat exchanger capacity control
SV94	Heat exchanger capacity control
SV95	Heat exchanger capacity control
SV96	Heat exchanger capacity control
SV97	Heat exchanger capacity control
SV98	Heat exchanger capacity control
SV99	Heat exchanger capacity control
SV100	Heat exchanger capacity control
TH1	Temperature
TH2	Subcool/bypass outlet temperature
TH3	Pipe temperature
TH4	AGC inlet pipe temperature
TH5	AGC outlet pipe temperature
TH6	Subcooled liquid refrigerant temperature
TH7	Water inlet temperature
TH8	Water outlet temperature
TH9	Outlet temp. detect of heat exchanger for inverter
TH10	Water inlet temperature
TH11	Water outlet temperature
TH12	Water inlet temperature
TH13	Water outlet temperature
TH14	Water inlet temperature
TH15	Water outlet temperature
TH16	Water inlet temperature
TH17	Water outlet temperature
TH18	Water inlet temperature
TH19	Water outlet temperature
TH20	Water inlet temperature
TH21	Water outlet temperature
TH22	Water inlet temperature
TH23	Water outlet temperature
TH24	Water inlet temperature
TH25	Water outlet temperature
TH26	Water inlet temperature
TH27	Water outlet temperature
TH28	Water inlet temperature
TH29	Water outlet temperature
TH30	Water inlet temperature
TH31	Water outlet temperature
TH32	Water inlet temperature
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TH34	Water inlet temperature
TH35	Water outlet temperature
TH36	Water inlet temperature
TH37	Water outlet temperature
TH38	Water inlet temperature
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TH41	Water outlet temperature
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TH43	Water outlet temperature
TH44	Water inlet temperature
TH45	Water outlet temperature
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TH56	Water inlet temperature
TH57	Water outlet temperature
TH58	Water inlet temperature
TH59	Water outlet temperature
TH60	Water inlet temperature
TH61	Water outlet temperature
TH62	Water inlet temperature
TH63	Water outlet temperature
TH64	Water inlet temperature
TH65	Water outlet temperature
TH66	Water inlet temperature
TH67	Water outlet temperature
TH68	Water inlet temperature
TH69	Water outlet temperature
TH70	Water inlet temperature
TH71	Water outlet temperature
TH72	Water inlet temperature
TH73	Water outlet temperature
TH74	Water inlet temperature
TH75	Water outlet temperature
TH76	Water inlet temperature

PQHY-P72, 96, 120, 144, 168, 192, 216, 240YLMU-A1

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1



- *1 Single-dotted lines indicate wiring not supplied with the unit.
- *2 Dot-dash lines indicate the control box boundaries.
- *3 Refer to the Data book for connecting input/output signal connectors.
- *4 Daisy-chain terminals (TB3) on the heat source units in the same refrigerant system together.
- *5 Faston terminals have a locking function. Make sure the terminals are securely locked in place after insertion. Press the tab on the terminals to removed them.
- *6 Control box houses high-voltage parts. Before inspecting the inside of the control box turn off the power, keep the unit off for at least 10 minutes, and confirm that the voltage between FT-P and FT-N on INV Board has dropped to DC20V or less.
- *7 Refer to the Data book for wiring terminal block for Pump Interlock, Operation ON signal and DCU-10V signal output.
- *8 Difference of appliance.
- *9 Difference of appliance.
- *10 Difference of appliance.
- *11 Difference of appliance.

Model name	Appliance
P72/96/120	*8 do not exist
P144/168/192/216/240	*8 exist
Model name	Appliance
PQHY	*9 do not exist
PQRY	*9 exist
Model name	Appliance
PQHY	*10 exist
PQRY	*10 do not exist

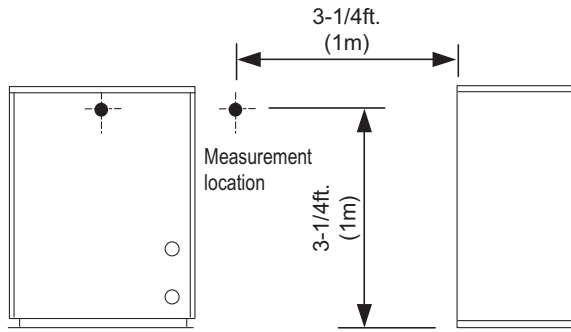
<Symbol explanation>

Symbol	Explanation
Z1S4b	4-way valve Cooling/Heating switching
Z1S4b	Heat exchanger capacity control
63H1	Pressure Protection Unit
63HS1	High pressure protection for the sensor
63LS	Low pressure
Z2C	Magnetic relay (inverter main circuit)
C33-C37	Capacitor (inverter main circuit)
CH11	Crankcase heater (for heating the compressor)
CT12.22.3	Current sensor (AC)
DCL	DC reactor
L	Choke coil (for high frequency noise reduction)
LEV1	Linear expansion valve
LEV6	HIC bypass; Controls refrigerant expansion valve
LEV9	Heat exchanger capacity control
LEV10V	Heat exchanger capacity control
MF1	Fan motor (Radiator panel)
R1-5	Resistor
SV1a	For opening/closing the bypass circuit under the O/S
SV4a,b,d	Solenoid valve
SV7a,b,c	Heat exchanger capacity control
SV9	For opening/closing the bypass circuit
TB1	Terminal block
TB3	Power supply indoor/heat source transmission cable
TB7	Central control transmission cable
TB8	Operation ON signal
TB9	Pump Interlock
TB9	Power input and signal output for variable water flow valve
TH2	Subcool bypass outlet temperature
TH3	Pipe temperature
TH4	Discharge pipe temperature
TH5	SCC inlet pipe temperature
TH6	Water outlet temperature
TH7	Water inlet temperature
TH8	Water outlet temperature
TH10V	Outlet temp detect of heat exchanger for inverter
THHS	IPM temperature
Z24.25	Function setting connector

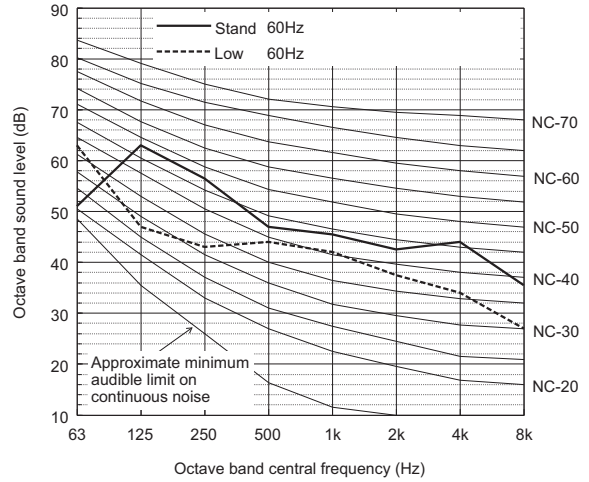
*11 Difference of appliance.

Model name	Appliance
P72/96/120/144/168/192	*11 do not exist
P216/240	*11 exist

Measurement condition
PQHY-P72, 96, 120TLMU-A1/YLMU-A1



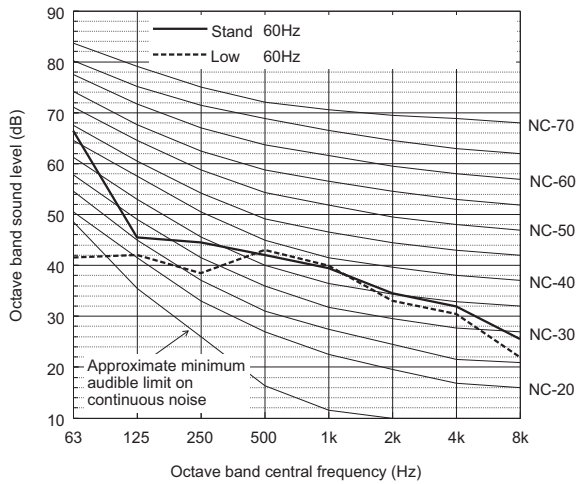
Sound level of PQHY-P120TLMU-A1/YLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	51.0	63.0	56.5	47.0	45.5	42.5	44.0	35.5	54.0
Low noise mode	60Hz	63.0	47.0	43.0	44.0	42.0	37.5	34.0	27.0	47.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

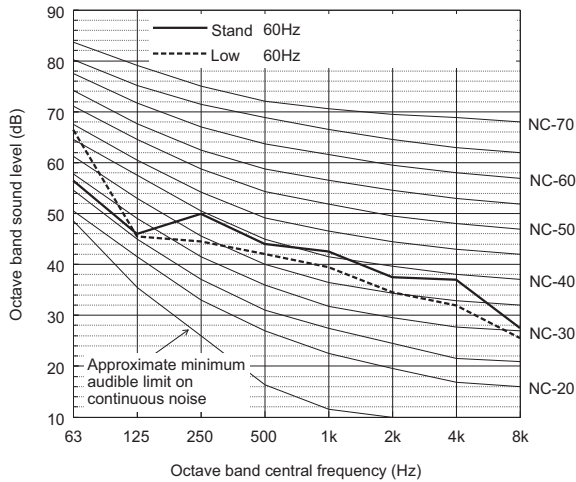
Sound level of PQHY-P72TLMU-A1/YLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	66.5	45.5	44.5	42.0	39.5	34.5	32.0	25.5	46.0
Low noise mode	60Hz	41.5	42.0	38.5	43.0	40.0	33.0	30.5	22.0	44.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound level of PQHY-P96TLMU-A1/YLMU-A1

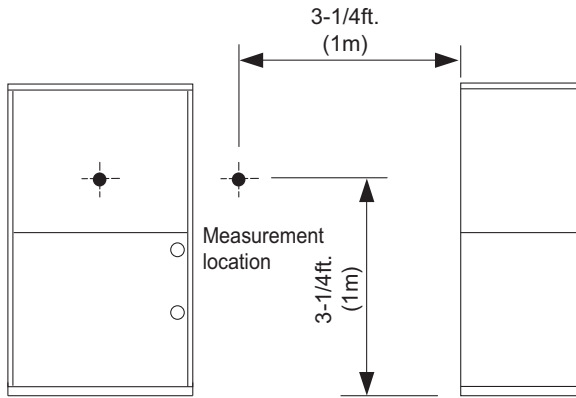


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	56.5	46.0	50.0	44.0	42.5	37.5	37.0	27.5	48.0
Low noise mode	60Hz	66.5	45.5	44.5	42.0	39.5	34.5	32.0	25.5	46.0

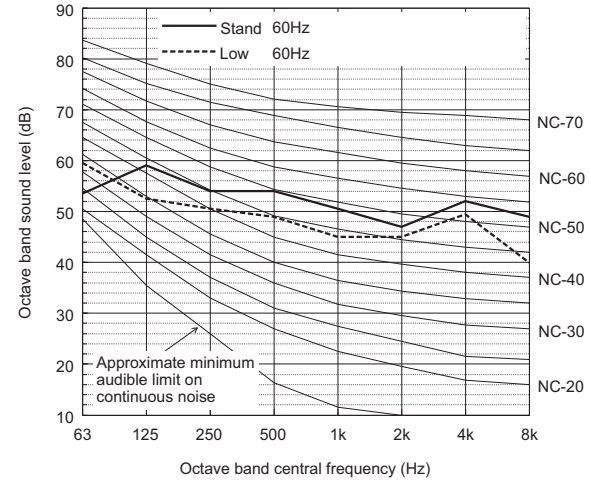
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

◆ Depending on the operation conditions, the unit generates noise caused by valve actuation, refrigerant flow, and pressure changes when operating normally. Please consider to avoid location where quietness is required.

Measurement condition
PQHY-P144, 168, 192, 216, 240TLMU-A1/YLMU-A1



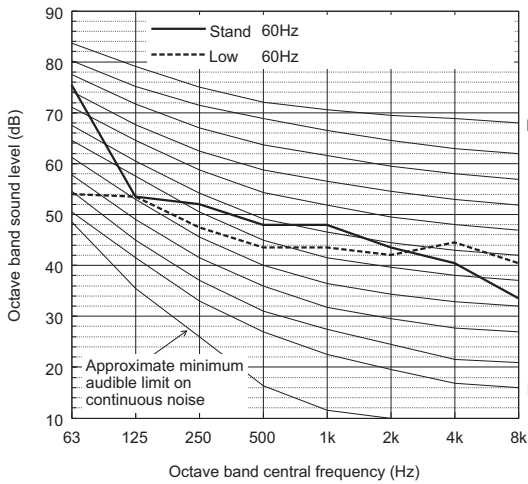
Sound level of PQHY-P192TLMU-A1/YLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	53.5	59.0	54.0	54.0	50.5	47.0	52.0	49.0	58.0
Low noise mode	60Hz	59.5	52.5	50.5	49.0	45.0	45.0	49.5	40.0	54.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

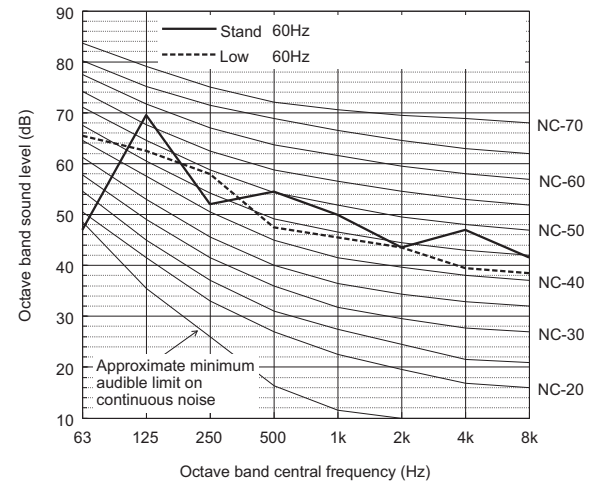
Sound level of PQHY-P144TLMU-A1/YLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	75.5	53.5	52.0	48.0	48.0	43.5	40.5	33.5	54.0
Low noise mode	60Hz	54.0	53.5	47.5	43.5	43.5	42.0	44.5	40.5	50.5

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

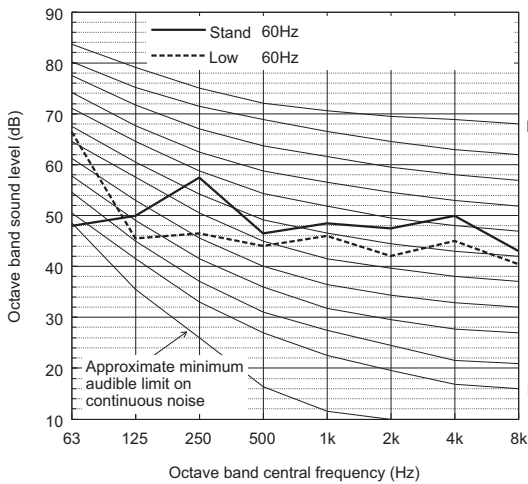
Sound level of PQHY-P216TLMU-A1/YLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	47.0	69.5	52.0	54.5	50.0	43.5	47.0	41.5	58.0
Low noise mode	60Hz	65.5	62.5	58.0	47.5	45.5	43.5	39.5	38.5	54.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

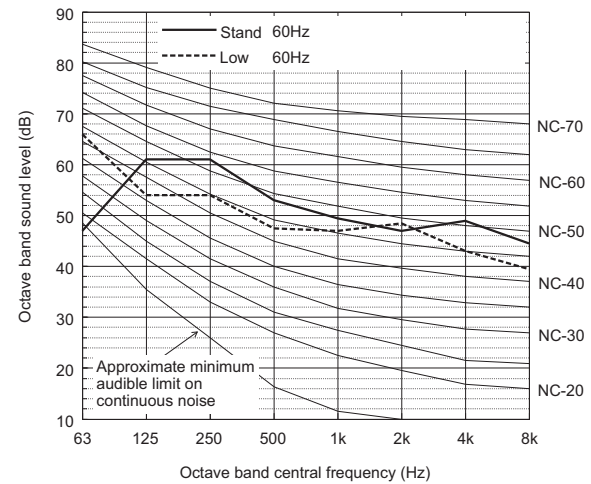
Sound level of PQHY-P168TLMU-A1/YLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	48.0	50.0	57.5	46.5	48.5	47.5	50.0	43.0	56.0
Low noise mode	60Hz	66.5	45.5	46.5	44.0	46.0	42.0	45.0	40.5	51.5

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound level of PQHY-P240TLMU-A1/YLMU-A1

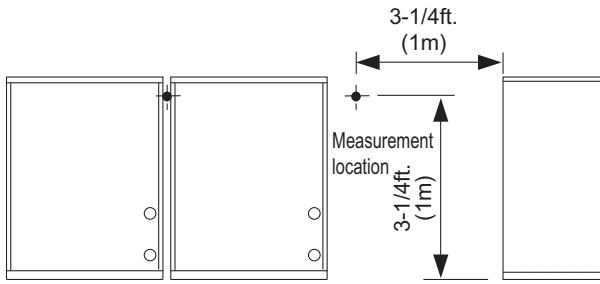


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	47.0	61.0	61.0	53.0	49.5	47.0	49.0	44.5	58.0
Low noise mode	60Hz	66.0	54.0	54.0	47.5	47.0	48.5	43.0	39.5	54.0

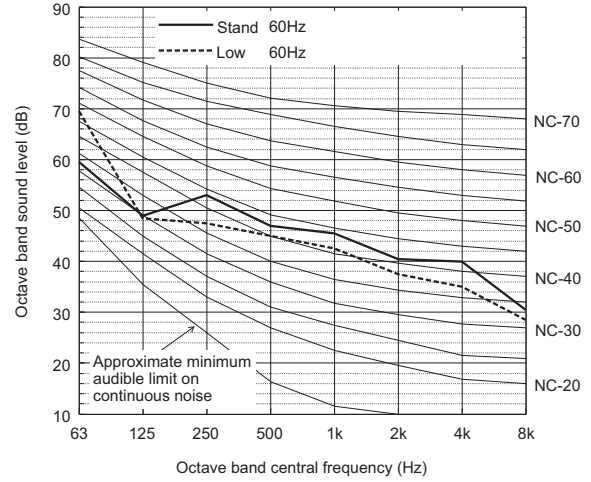
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

♦ Depending on the operation conditions, the unit generates noise caused by valve actuation, refrigerant flow, and pressure changes when operating normally. Please consider to avoid location where quietness is required.

Measurement condition
PQHY-P144, 168, 192, 216, 240TSLMU-A1/YSLMU-A1



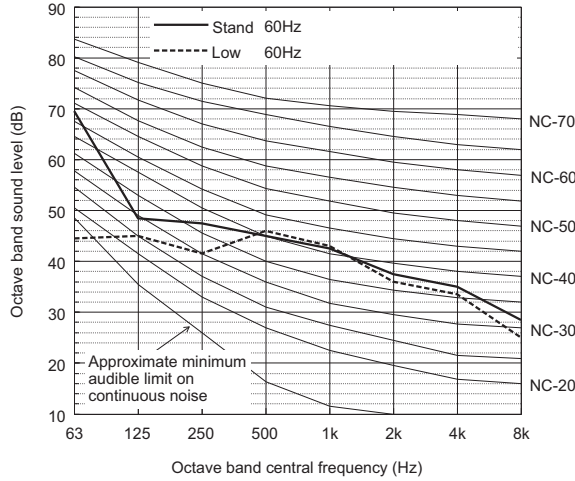
Sound level of PQHY-P192TSLMU-A1/YSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	59.5	49.0	53.0	47.0	45.5	40.5	40.0	30.5	51.0
Low noise mode	60Hz	69.5	48.5	47.5	45.0	42.5	37.5	35.0	28.5	49.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

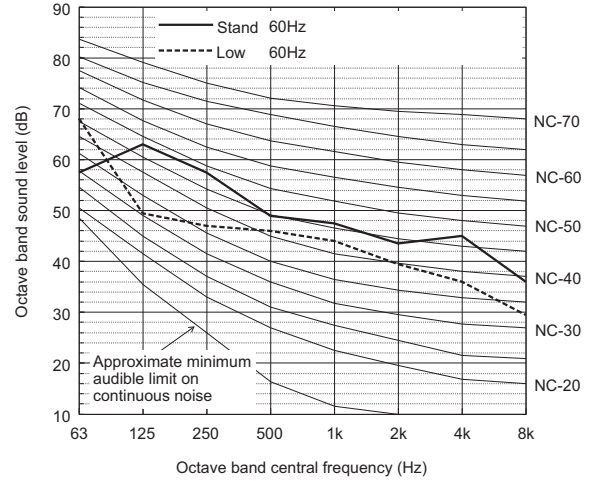
Sound level of PQHY-P144TSLMU-A1/YSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	69.5	48.5	47.5	45.0	42.5	37.5	35.0	28.5	49.0
Low noise mode	60Hz	44.5	45.0	41.5	46.0	43.0	36.0	33.5	25.0	47.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

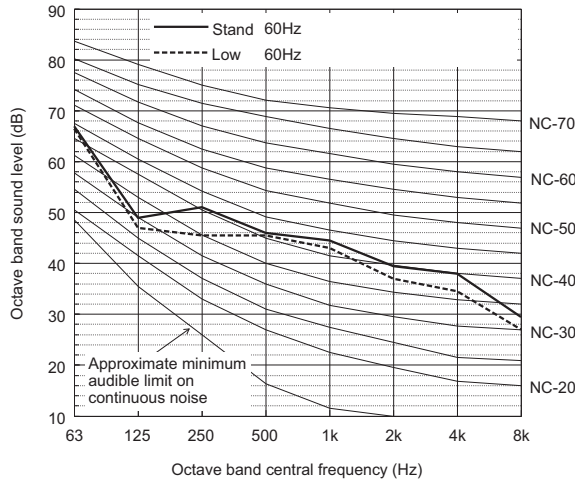
Sound level of PQHY-P216TSLMU-A1/YSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	57.5	63.0	57.5	49.0	47.5	43.5	45.0	36.0	55.0
Low noise mode	60Hz	68.0	49.5	47.0	46.0	44.0	39.5	36.0	29.5	49.5

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

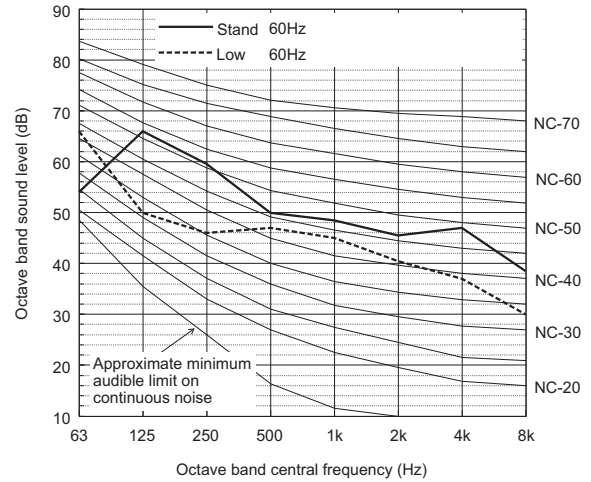
Sound level of PQHY-P168TSLMU-A1/YSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	67.0	49.0	51.0	46.0	44.5	39.5	38.0	29.5	50.0
Low noise mode	60Hz	66.5	47.0	45.5	45.5	43.0	37.0	34.5	27.0	48.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound level of PQHY-P240TSLMU-A1/YSLMU-A1



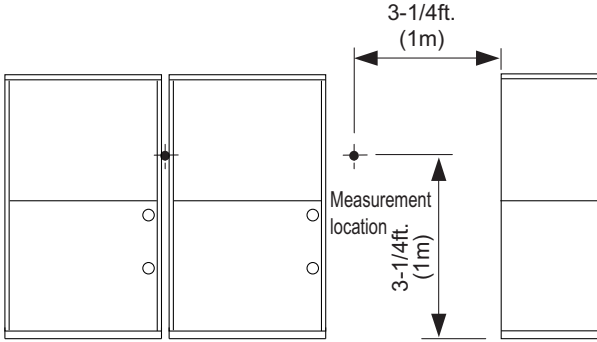
		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	54.0	66.0	59.5	50.0	48.5	45.5	47.0	38.5	57.0
Low noise mode	60Hz	66.0	50.0	46.0	47.0	45.0	40.5	37.0	30.0	50.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

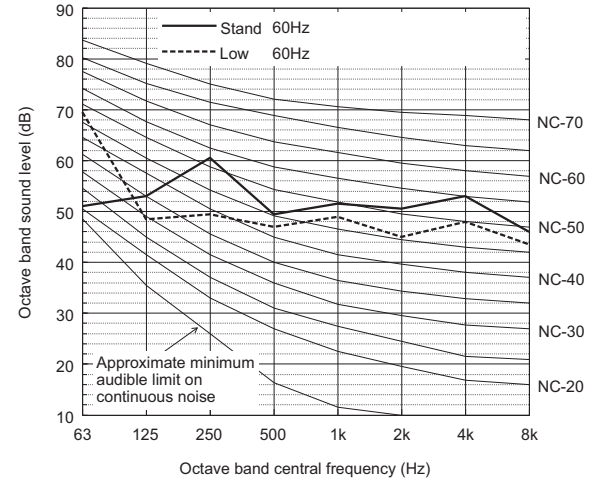
• Depending on the operation conditions, the unit generates noise caused by valve actuation, refrigerant flow, and pressure changes when operating normally. Please consider to avoid location where quietness is required.

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

Measurement condition
PQHY-P288, 312, 336, 360TSLMU-A1/YSLMU-A1



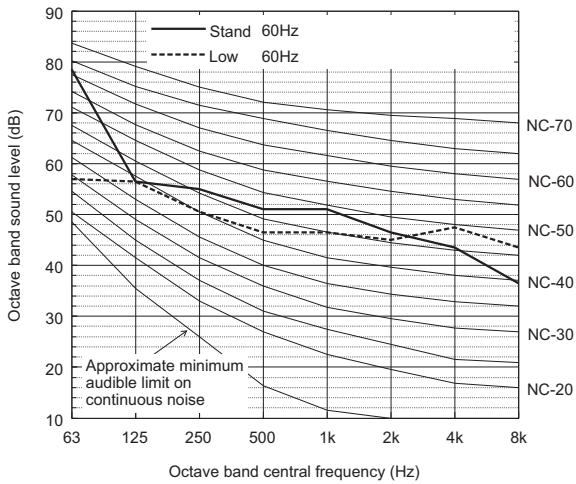
Sound level of PQHY-P336TSLMU-A1/YSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	51.0	53.0	60.5	49.5	51.5	50.5	53.0	46.0	59.0
Low noise mode	60Hz	69.5	48.5	49.5	47.0	49.0	45.0	48.0	43.5	54.5

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

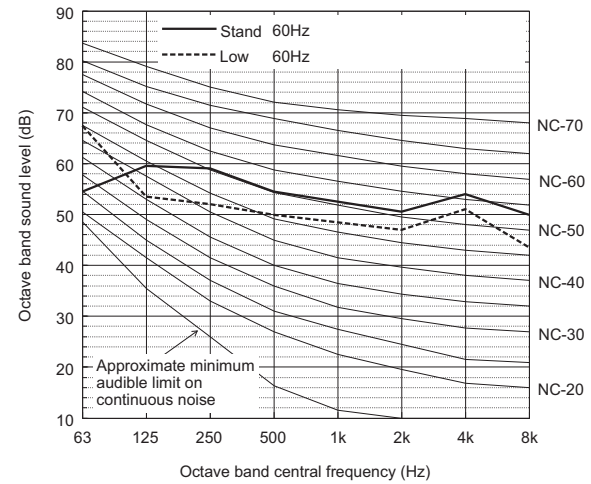
Sound level of PQHY-P288TSLMU-A1/YSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	78.5	56.5	55.0	51.0	51.0	46.5	43.5	36.5	57.0
Low noise mode	60Hz	57.0	56.5	50.5	46.5	46.5	45.0	47.5	43.5	53.5

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

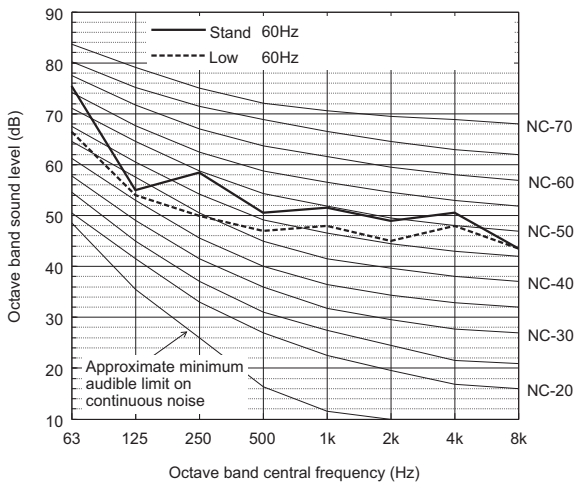
Sound level of PQHY-P360TSLMU-A1/YSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	54.5	59.5	59.0	54.5	52.5	50.5	54.0	50.0	60.0
Low noise mode	60Hz	67.5	53.5	52.0	50.0	48.5	47.0	51.0	43.5	56.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound level of PQHY-P312TSLMU-A1/YSLMU-A1

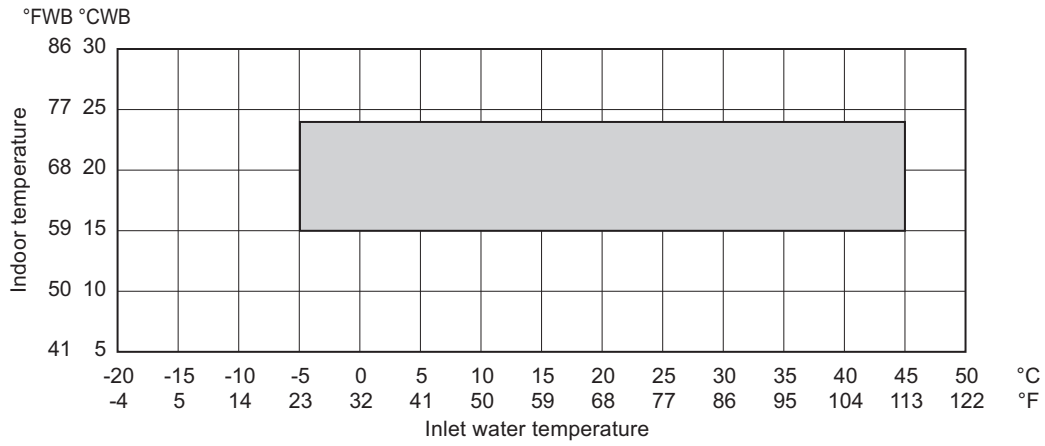


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	75.5	55.0	58.5	50.5	51.5	49.0	50.5	43.5	58.0
Low noise mode	60Hz	66.5	54.0	50.0	47.0	48.0	45.0	48.0	43.5	54.0

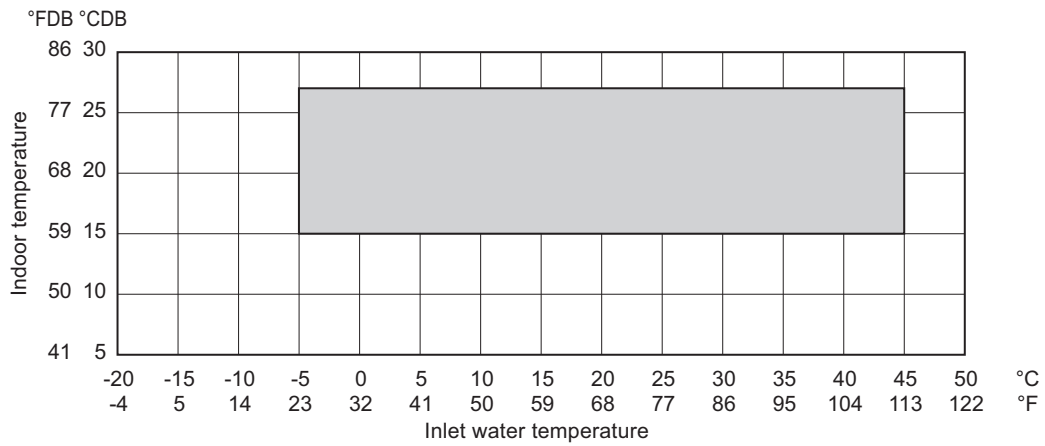
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

◆ Depending on the operation conditions, the unit generates noise caused by valve actuation, refrigerant flow, and pressure changes when operating normally. Please consider to avoid location where quietness is required.

Cooling



Heating



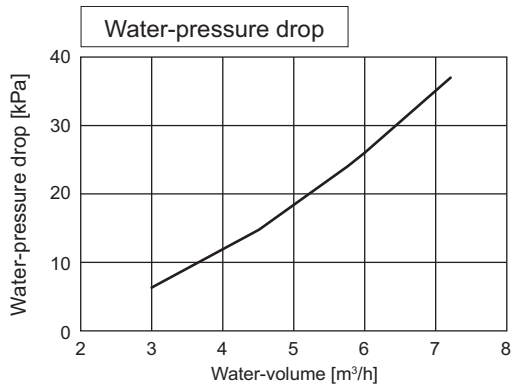
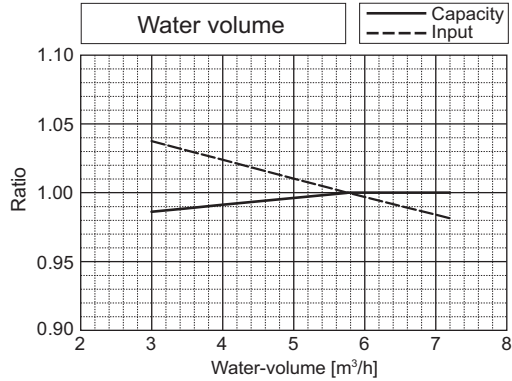
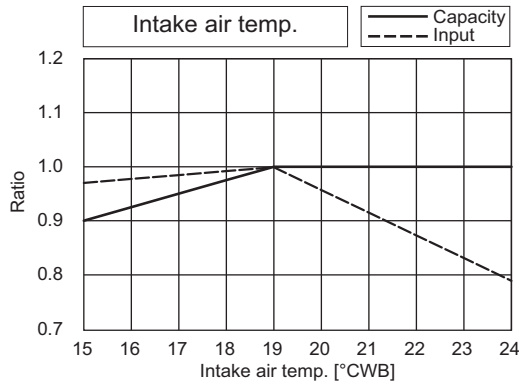
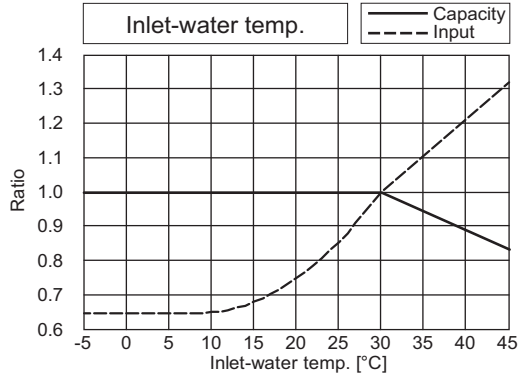
* The upper limit of the outlet water temperature is approximately 70°C (158°F) when the circulating-water flow rate is within the normal range.
 If the circulating-water flow rate goes outside the normal limit, the outlet water temperature may exceed the above limit.

7-1. Correction by temperature

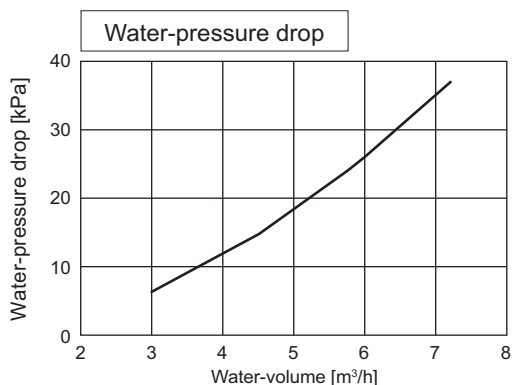
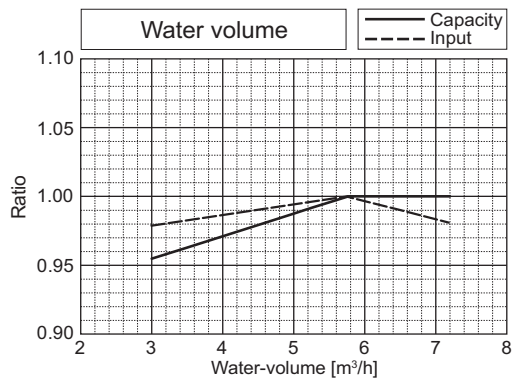
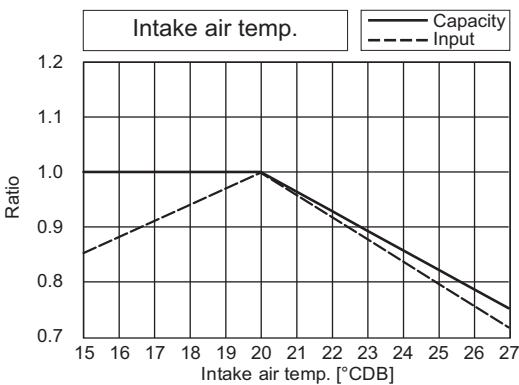
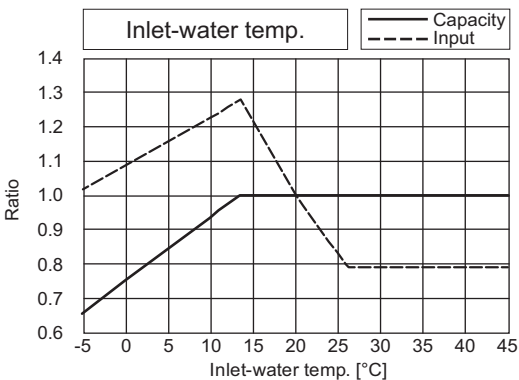
CITY MULTI could have varied capacity at different designing temperature. Using the nominal cooling/heating capacity value and the ratio below, the capacity can be observed at various temperature.

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

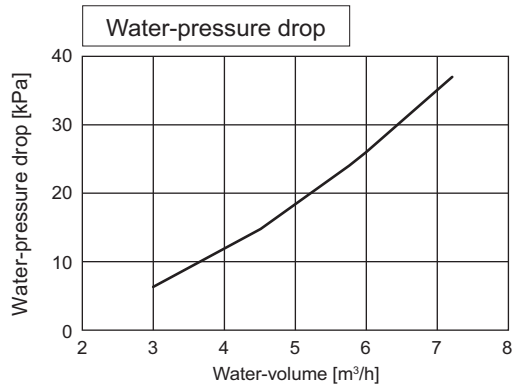
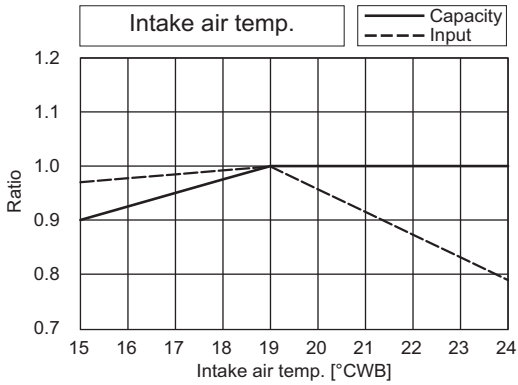
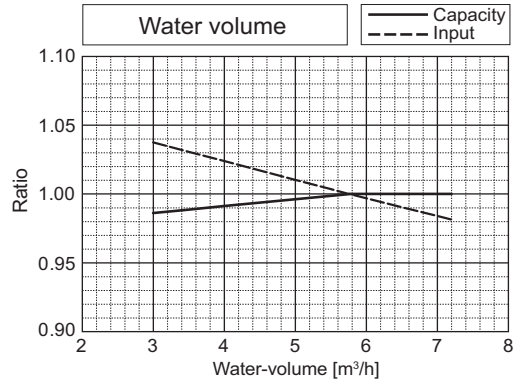
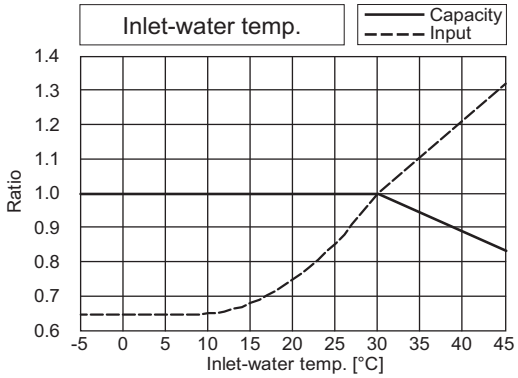
PQHY-			P72TLMU/YLMU		
Nominal Cooling Capacity	kW	21.1	Rated Cooling Capacity	kW	20.2
	BTU/h	72,000		BTU/h	69,000
Input	kW	3.61	Input	kW	(Non-Ducted) 3.34 (Ducted) 3.12



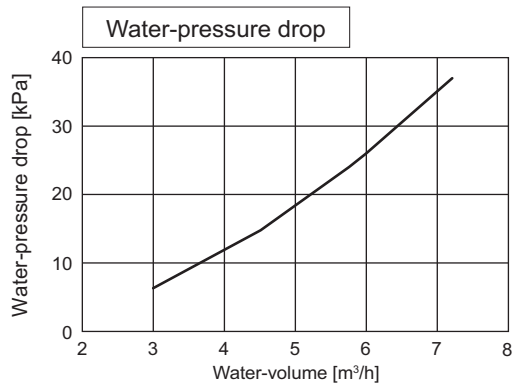
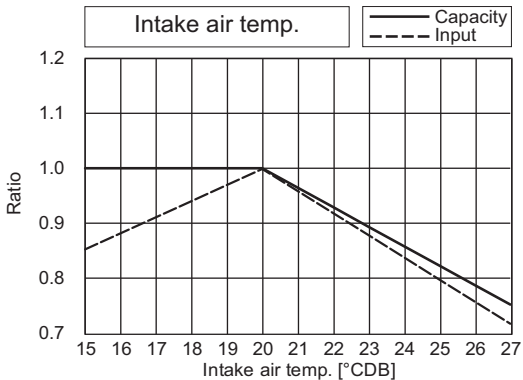
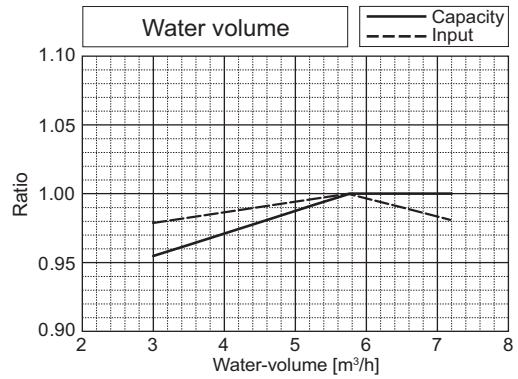
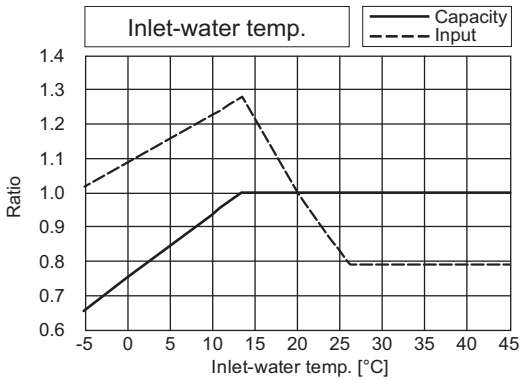
PQHY-			P72TLMU/YLMU		
Nominal Heating Capacity	kW	23.4	Rated Heating Capacity	kW	22.3
	BTU/h	80,000		BTU/h	76,000
Input	kW	4.04	Input	kW	(Non-Ducted) 3.74 (Ducted) 3.36



PQHY-		P96TLMU/YLMU			
Nominal Cooling Capacity	kW	28.1	Rated Cooling Capacity	kW	27.0
	BTU/h	96,000		BTU/h	92,000
Input	kW	5.21	Input	kW	(Non-Ducted) 4.82 (Ducted) 5.19



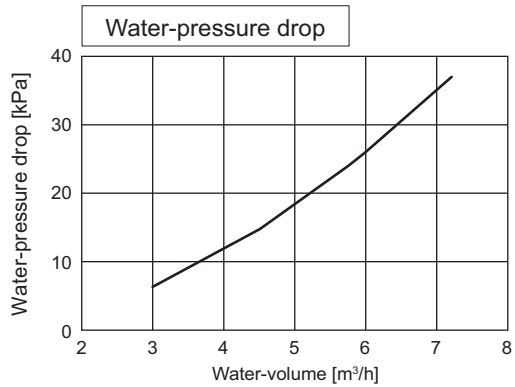
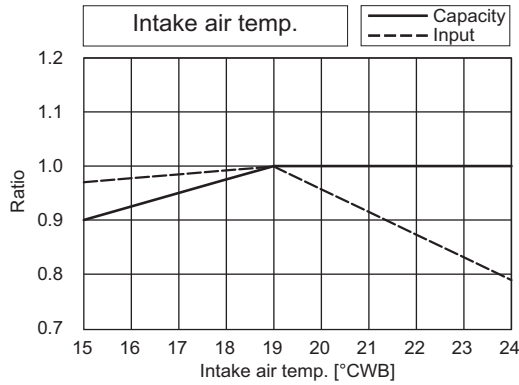
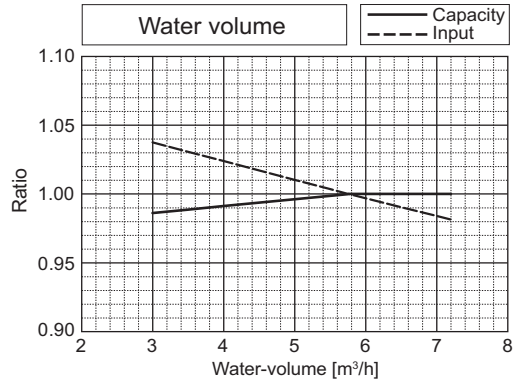
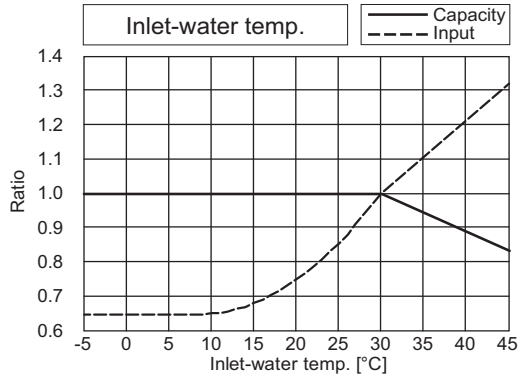
PQHY-		P96TLMU/YLMU			
Nominal Heating Capacity	kW	31.7	Rated Heating Capacity	kW	30.2
	BTU/h	108,000		BTU/h	103,000
Input	kW	5.64	Input	kW	(Non-Ducted) 5.21 (Ducted) 4.48



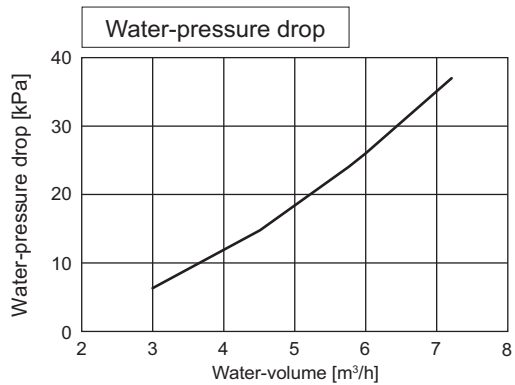
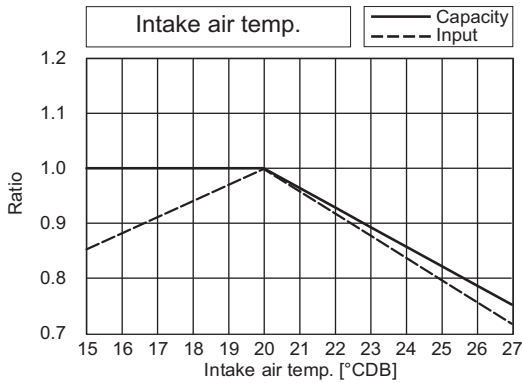
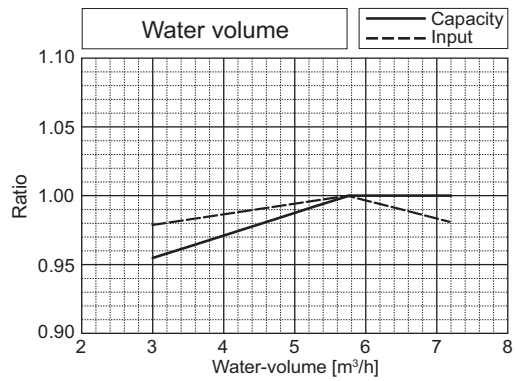
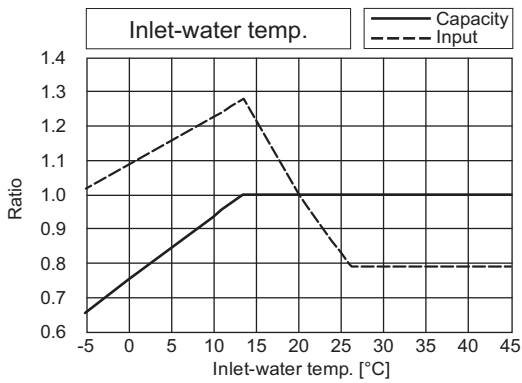
7. CAPACITY TABLES

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

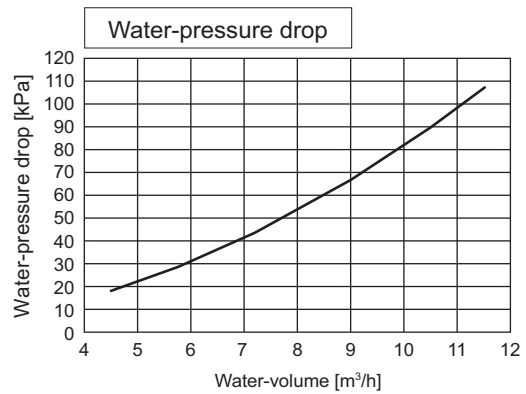
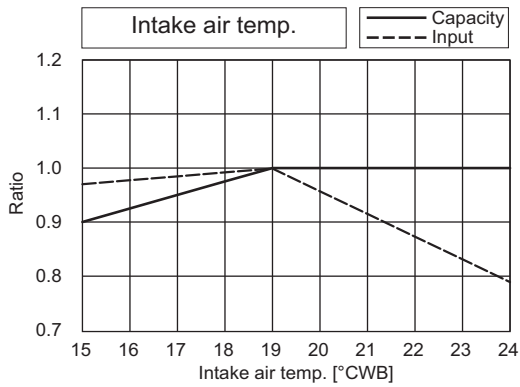
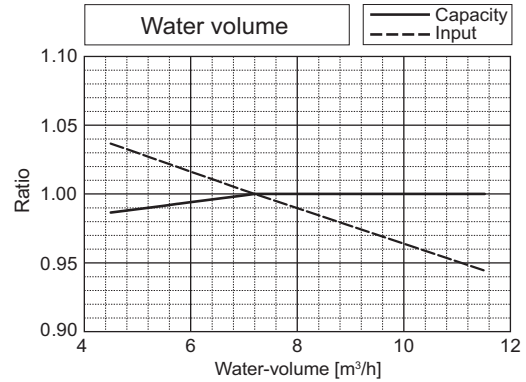
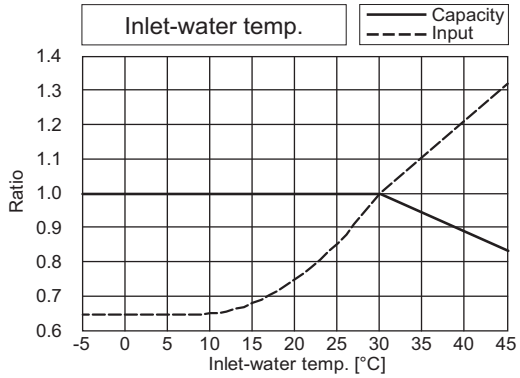
PQHY-		P120TLMU/YLMU			
Nominal Cooling Capacity	kW	35.2	Rated Cooling Capacity	kW	33.4
	BTU/h	120,000		BTU/h	114,000
Input	kW	7.51	Input	kW	(Non-Ducted) 6.95 (Ducted) 7.35



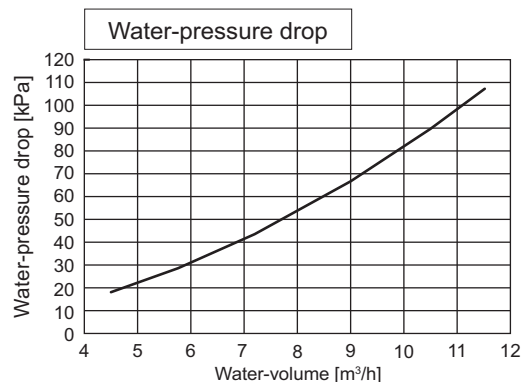
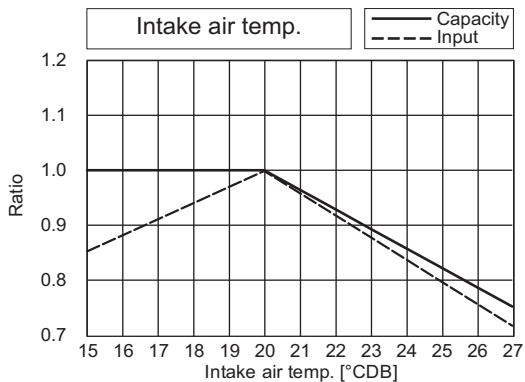
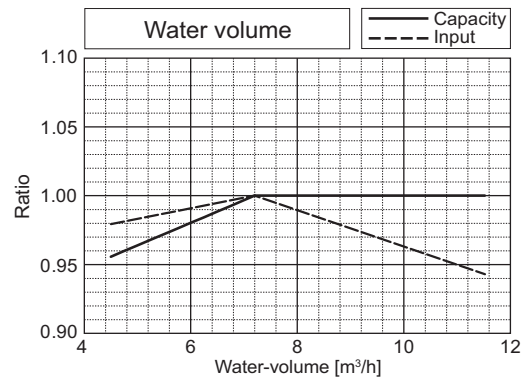
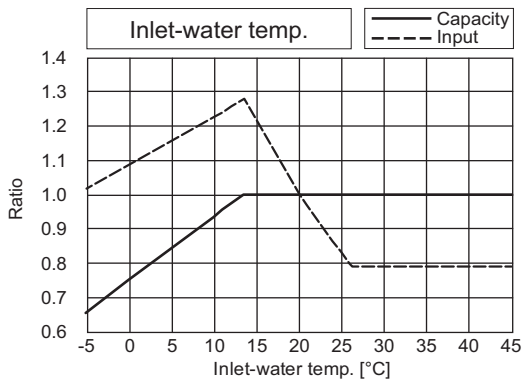
PQHY-		P120TLMU/YLMU			
Nominal Heating Capacity	kW	39.6	Rated Heating Capacity	kW	37.8
	BTU/h	135,000		BTU/h	129,000
Input	kW	7.09	Input	kW	(Non-Ducted) 6.55 (Ducted) 5.92



PQHY-			P144TLMU/YLMU		
Nominal Cooling Capacity	kW	42.2	Rated Cooling Capacity	kW	40.2
	BTU/h	144,000		BTU/h	137,000
Input	kW	8.78	Input	kW	(Non-Ducted) 8.07 (Ducted) 9.98



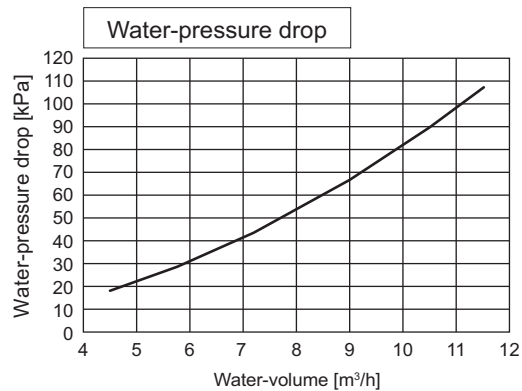
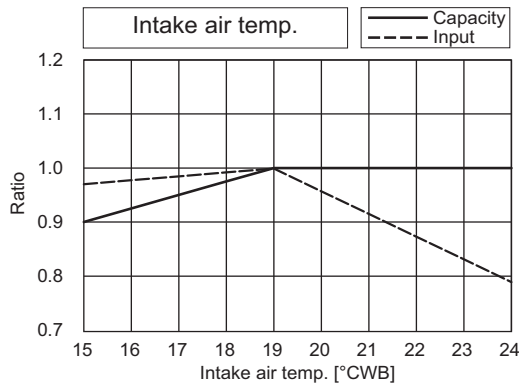
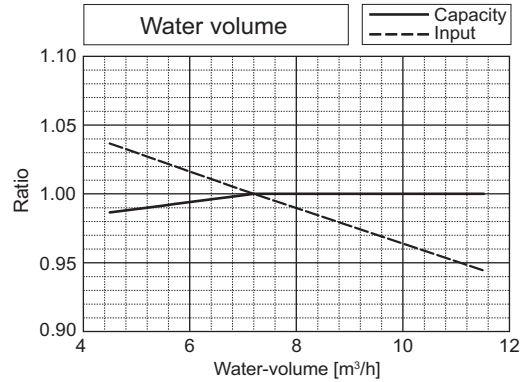
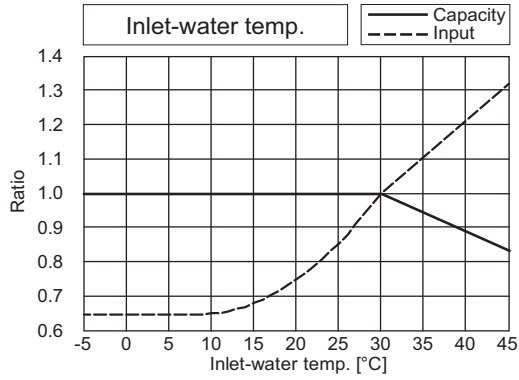
PQHY-			P144TLMU/YLMU		
Nominal Heating Capacity	kW	46.9	Rated Heating Capacity	kW	44.5
	BTU/h	160,000		BTU/h	152,000
Input	kW	8.11	Input	kW	(Non-Ducted) 7.47 (Ducted) 7.90



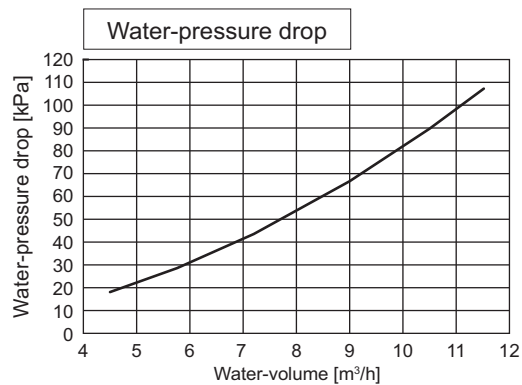
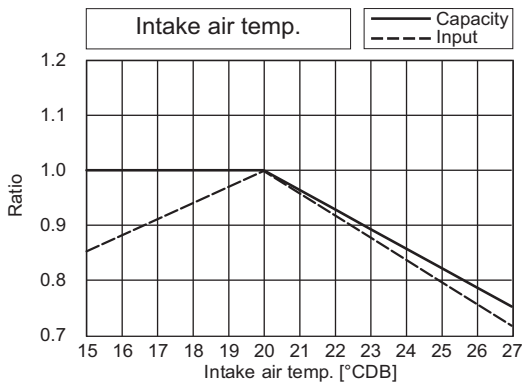
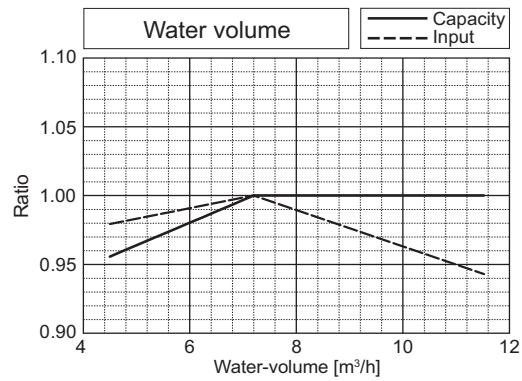
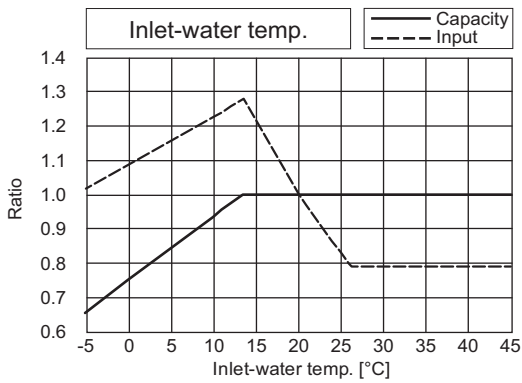
7. CAPACITY TABLES

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

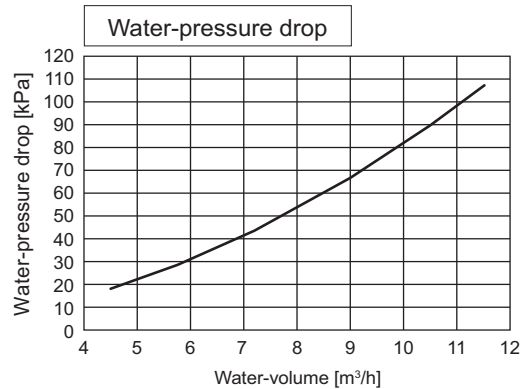
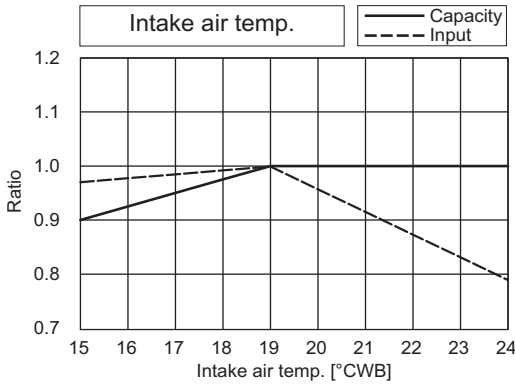
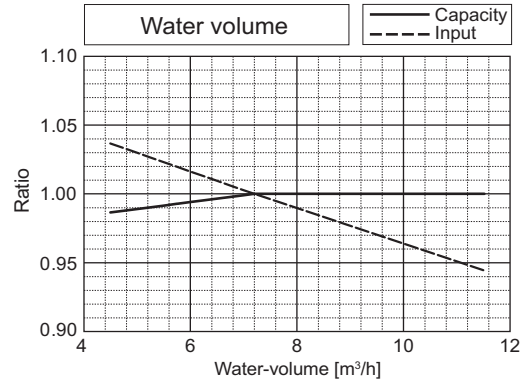
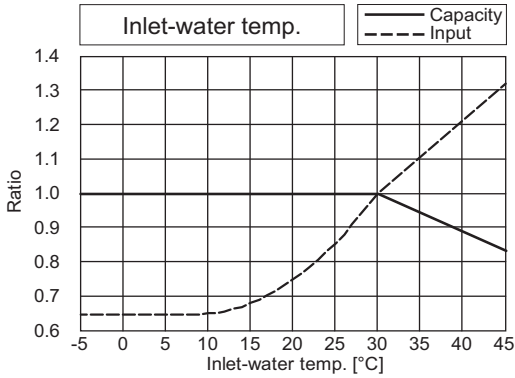
PQHY-		P168TLMU/YLMU			
Nominal Cooling Capacity	kW	49.2	Rated Cooling Capacity	kW	47.2
	BTU/h	168,000		BTU/h	161,000
Input	kW	12.05	Input	kW	(Non-Ducted) 11.10 (Ducted) 11.88



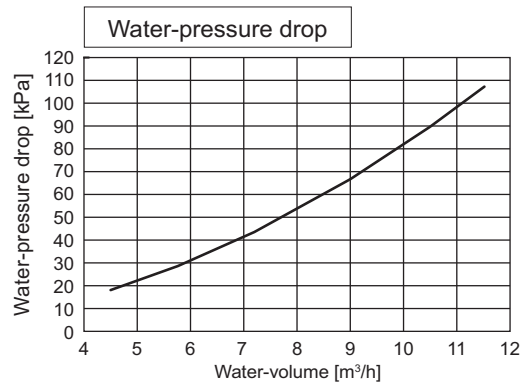
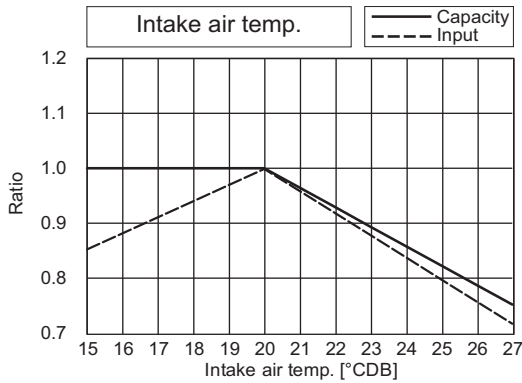
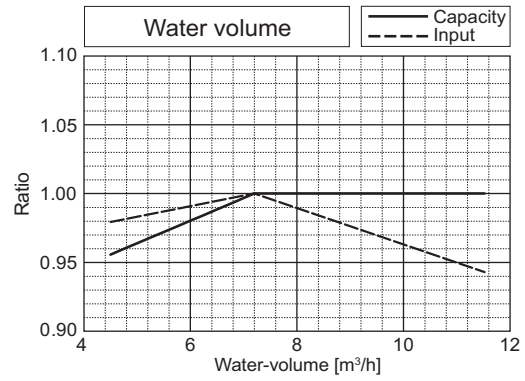
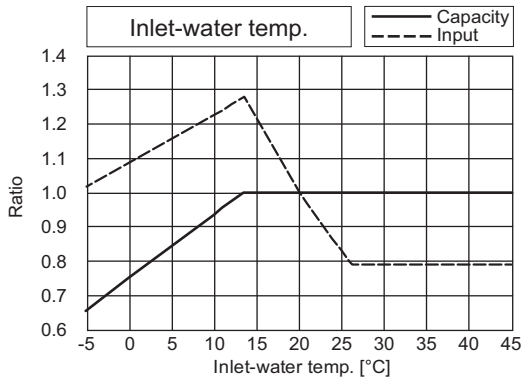
PQHY-		P168TLMU/YLMU			
Nominal Heating Capacity	kW	55.1	Rated Heating Capacity	kW	52.5
	BTU/h	188,000		BTU/h	179,000
Input	kW	9.86	Input	kW	(Non-Ducted) 9.09 (Ducted) 9.72



PQHY-		P192TLMU/YLMU			
Nominal Cooling Capacity	kW	56.3	Rated Cooling Capacity	kW	53.6
	BTU/h	192,000		BTU/h	183,000
Input	kW	15.05	Input	kW	(Non-Ducted) 13.87 (Ducted) 14.19



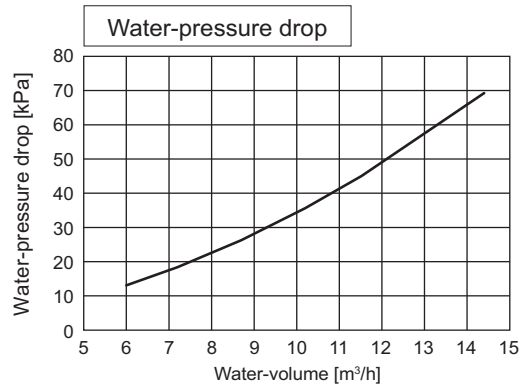
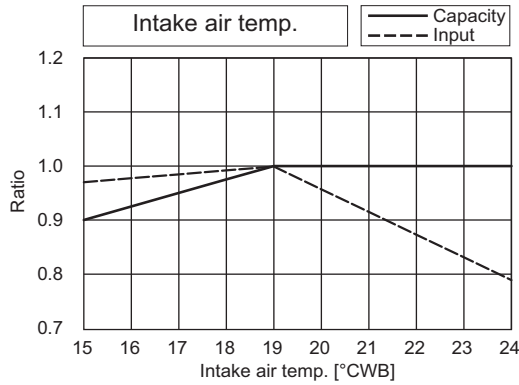
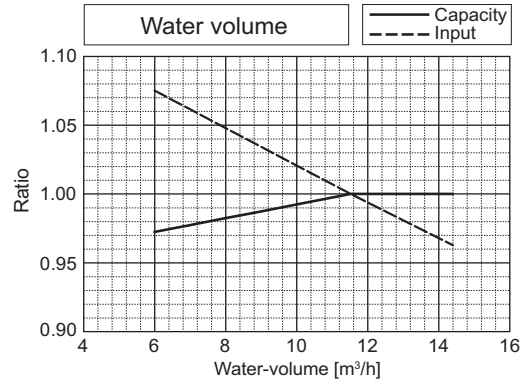
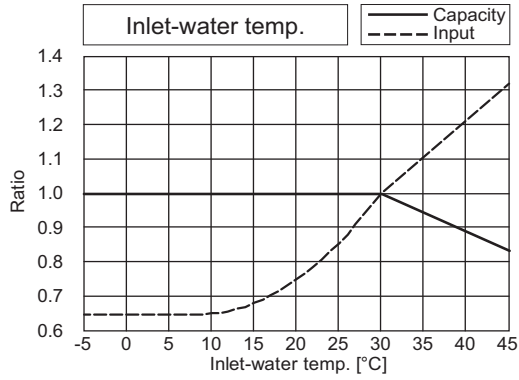
PQHY-		P192TLMU/YLMU			
Nominal Heating Capacity	kW	63.0	Rated Heating Capacity	kW	60.1
	BTU/h	215,000		BTU/h	205,000
Input	kW	11.90	Input	kW	(Non-Ducted) 10.97 (Ducted) 11.56



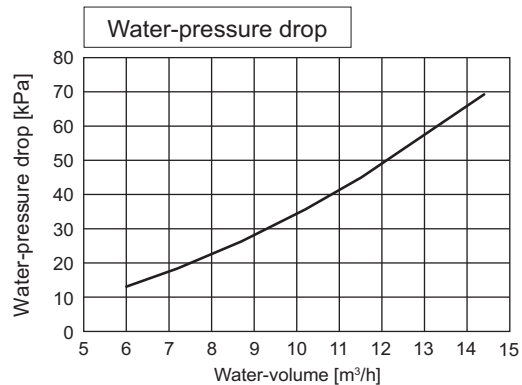
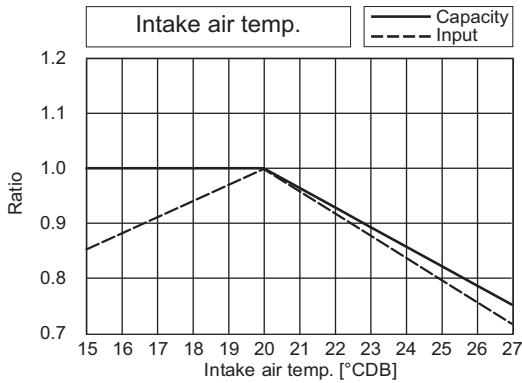
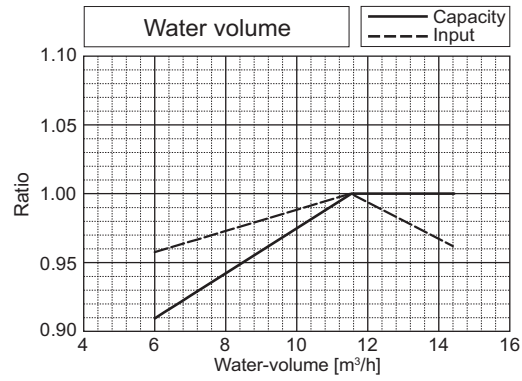
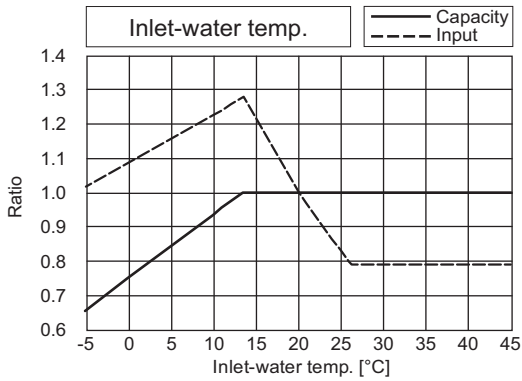
7. CAPACITY TABLES

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

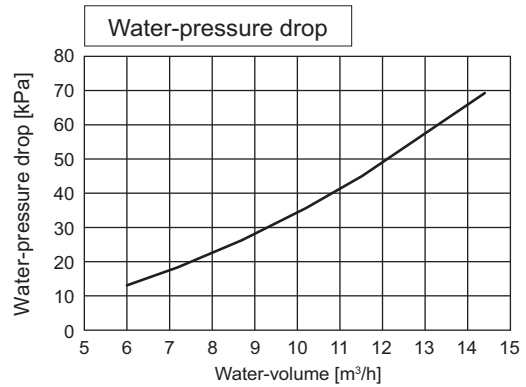
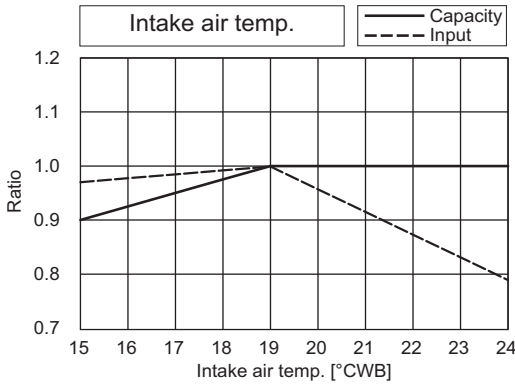
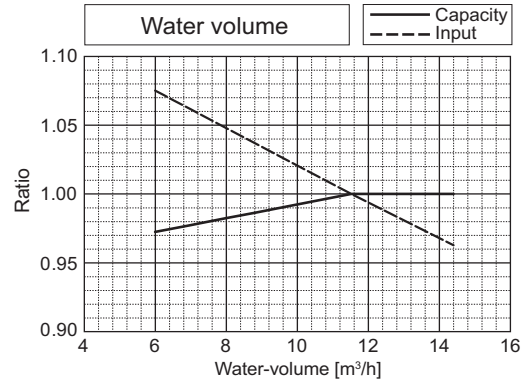
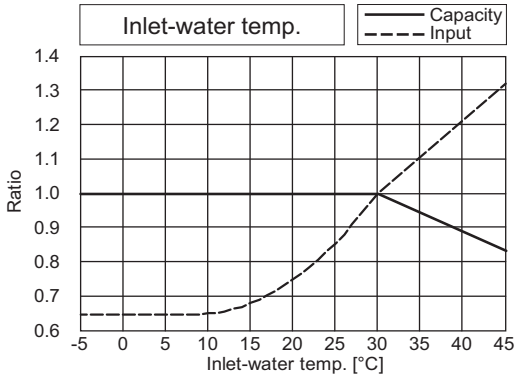
PQHY-		P216TLMU/YLMU			
Nominal Cooling Capacity	kW	63.3	Rated Cooling Capacity	kW	60.4
	BTU/h	216,000		BTU/h	206,000
Input	kW	19.23	Input	kW	(Non-Ducted) 17.72 (Ducted) 16.10



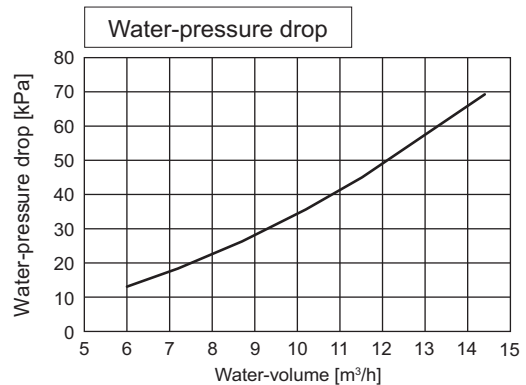
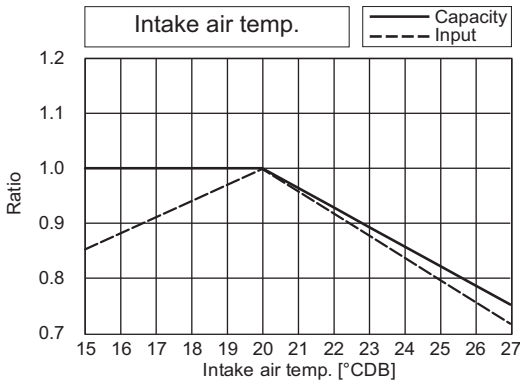
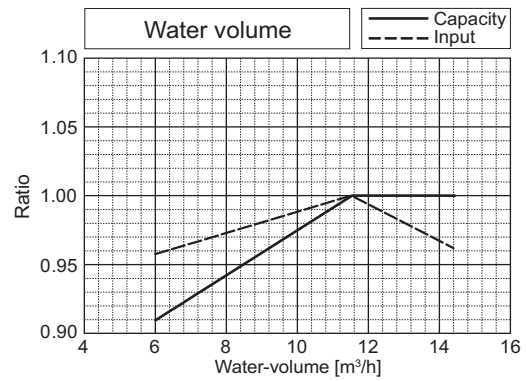
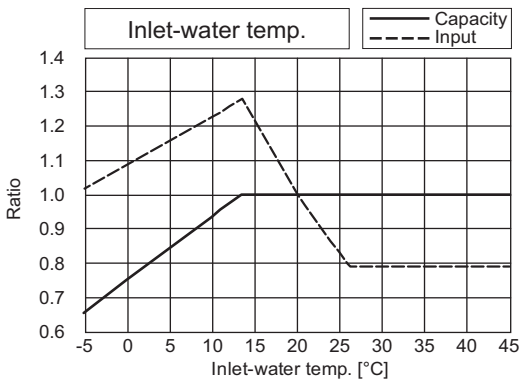
PQHY-		P216TLMU/YLMU			
Nominal Heating Capacity	kW	71.2	Rated Heating Capacity	kW	68.0
	BTU/h	243,000		BTU/h	232,000
Input	kW	13.04	Input	kW	(Non-Ducted) 12.01 (Ducted) 12.34



PQHY-		P240TLMU/YLMU			
Nominal Cooling Capacity	kW	70.3	Rated Cooling Capacity	kW	66.8
	BTU/h	240,000		BTU/h	228,000
Input	kW	21.14	Input	kW	(Non-Ducted) 19.49 (Ducted) 18.74



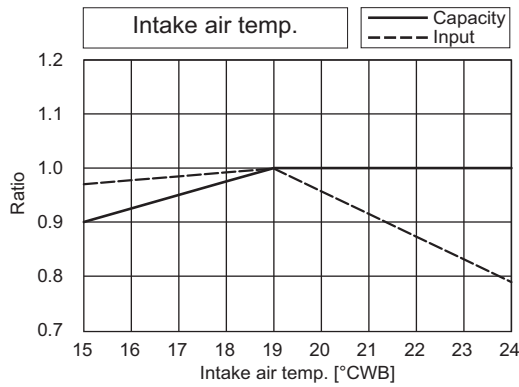
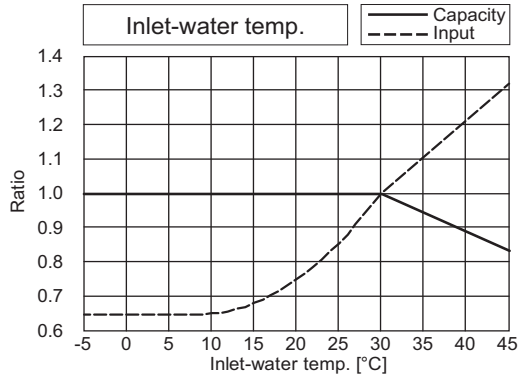
PQHY-		P240TLMU/YLMU			
Nominal Heating Capacity	kW	79.1	Rated Heating Capacity	kW	75.6
	BTU/h	270,000		BTU/h	258,000
Input	kW	15.12	Input	kW	(Non-Ducted) 13.93 (Ducted) 14.62



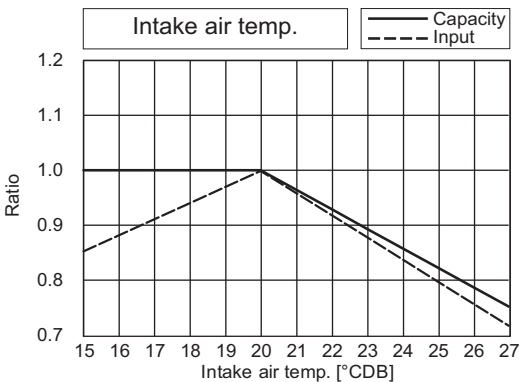
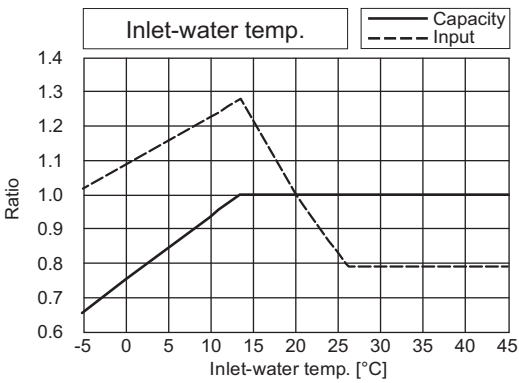
7. CAPACITY TABLES

PQHY-P-T(S)LMU-A1, Y(S)ILMU-A1

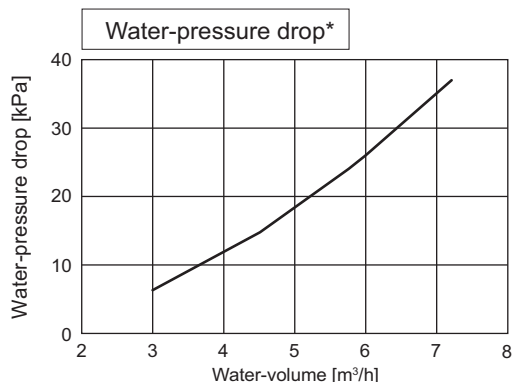
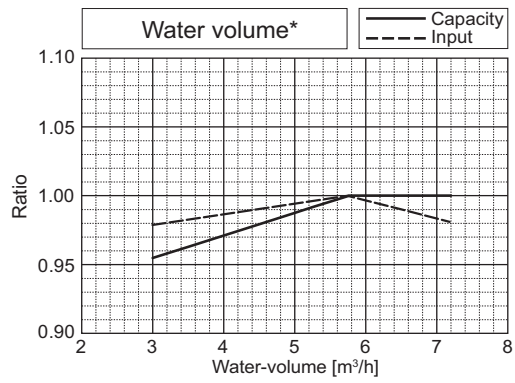
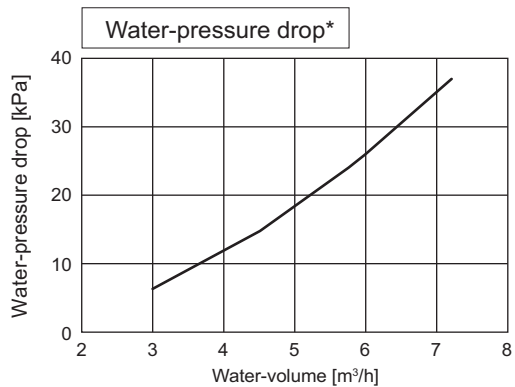
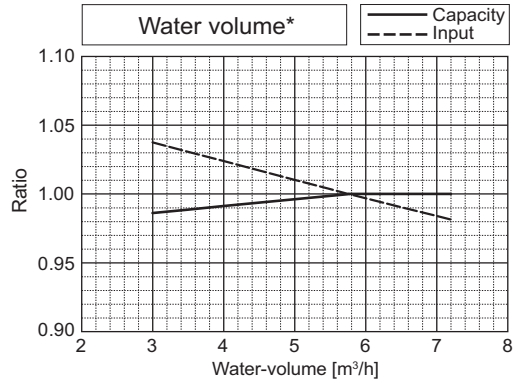
PQHY-		P144TSLMU/YSLMU			
Nominal Cooling Capacity	kW	42.2	Rated Cooling Capacity	kW	40.2
	BTU/h	144,000		BTU/h	137,000
Input	kW	7.11	Input	kW	(Non-Ducted) 6.53 (Ducted) 7.72



PQHY-		P144TSLMU/YSLMU			
Nominal Heating Capacity	kW	46.9	Rated Heating Capacity	kW	44.5
	BTU/h	160,000		BTU/h	152,000
Input	kW	7.45	Input	kW	(Non-Ducted) 6.86 (Ducted) 7.22

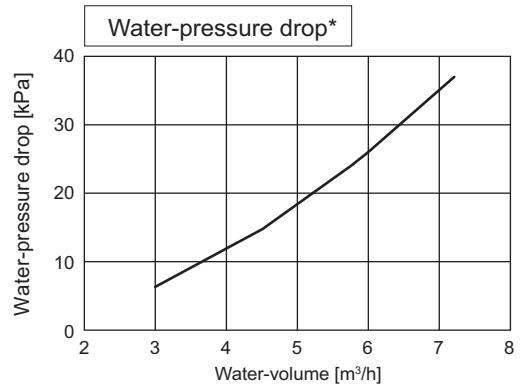
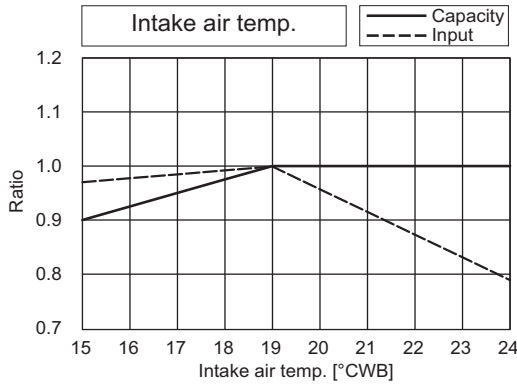
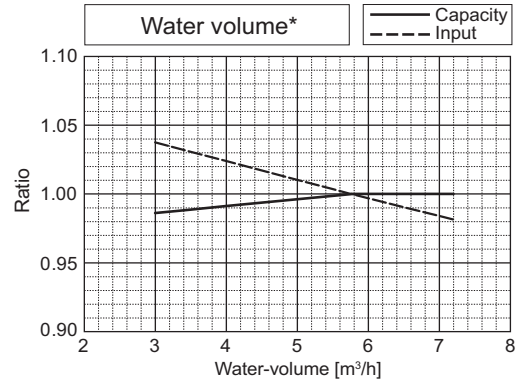
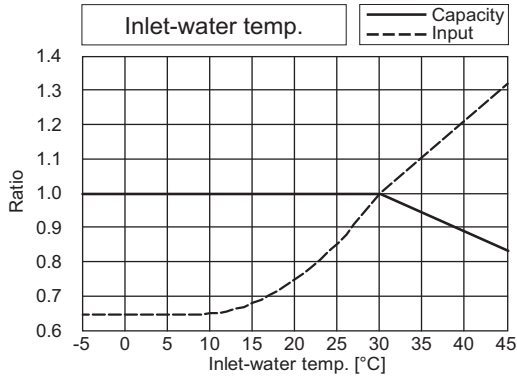


*The drawing indicates characteristic per unit.

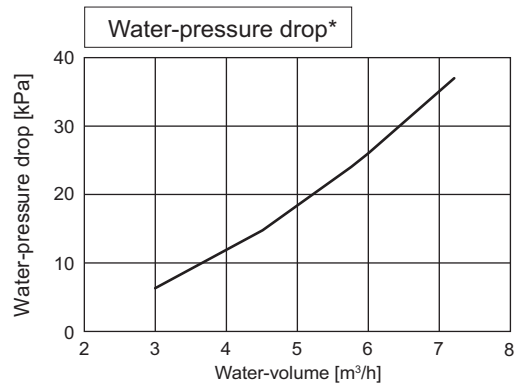
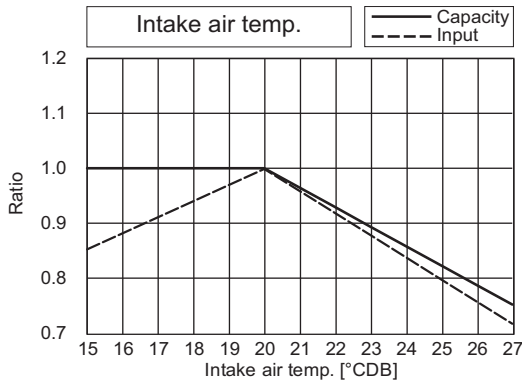
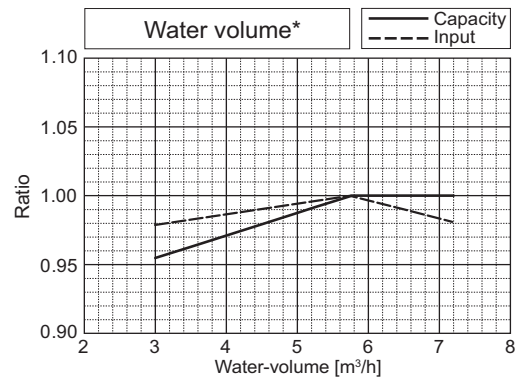
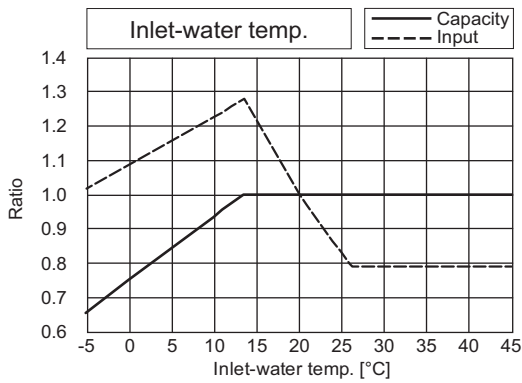


PQHY-		P168TSLMU/YSLMU			
Nominal Cooling Capacity	kW	49.2	Rated Cooling Capacity	kW	47.2
	BTU/h	168,000		BTU/h	161,000
Input	kW	9.33	Input	kW	(Non-Ducted) 8.58 (Ducted) 9.22

*The drawing indicates characteristic per unit.



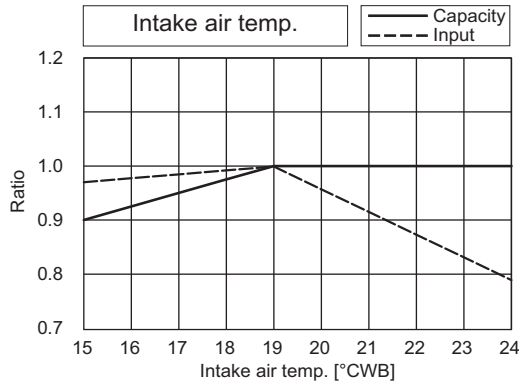
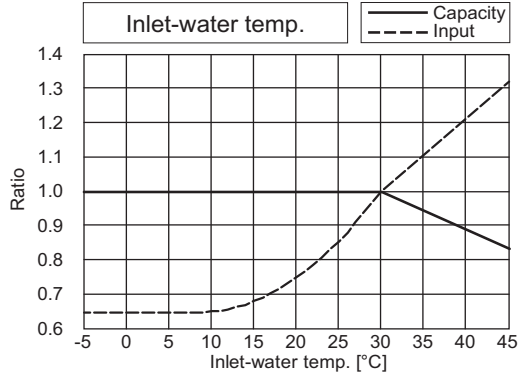
PQHY-		P168TSLMU/YSLMU			
Nominal Heating Capacity	kW	55.1	Rated Heating Capacity	kW	52.5
	BTU/h	188,000		BTU/h	179,000
Input	kW	9.34	Input	kW	(Non-Ducted) 8.60 (Ducted) 8.03



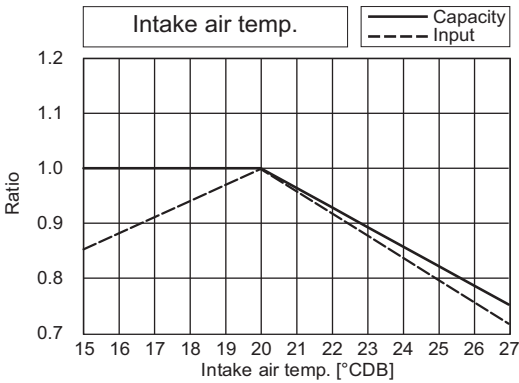
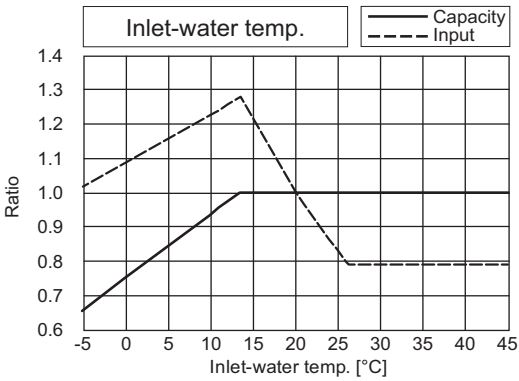
7. CAPACITY TABLES

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

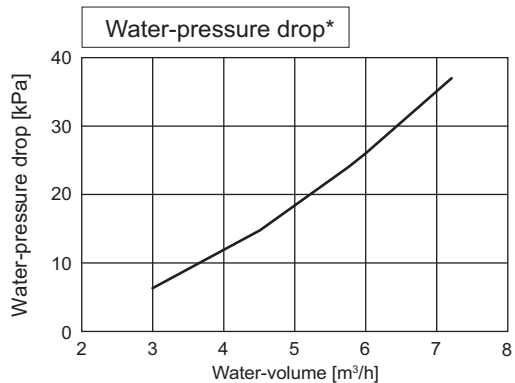
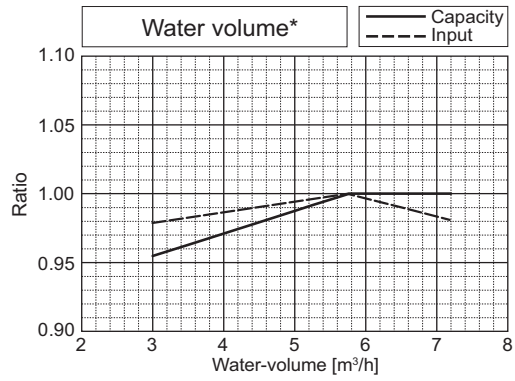
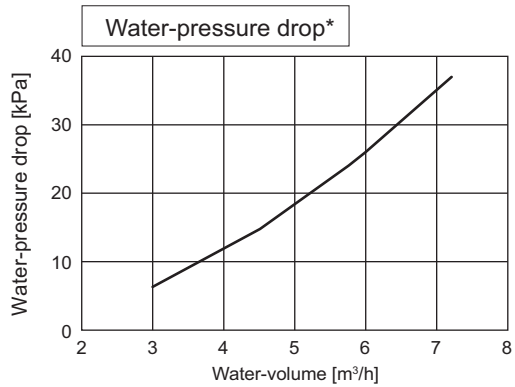
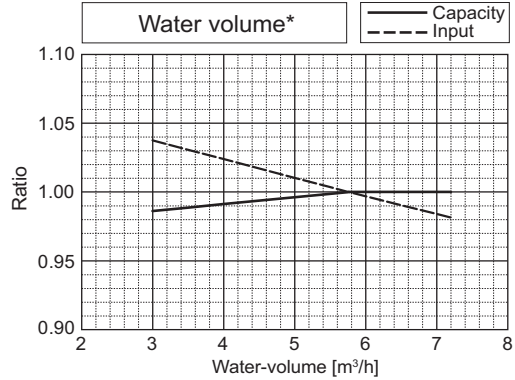
PQHY-		P192TSLMU/YSLMU			
Nominal Cooling Capacity	kW	56.3	Rated Cooling Capacity	kW	53.6
	BTU/h	192,000		BTU/h	183,000
Input	kW	11.30	Input	kW	(Non-Ducted) 10.40 (Ducted) 10.98



PQHY-		P192TSLMU/YSLMU			
Nominal Heating Capacity	kW	63.0	Rated Heating Capacity	kW	60.1
	BTU/h	215,000		BTU/h	205,000
Input	kW	11.02	Input	kW	(Non-Ducted) 10.16 (Ducted) 8.90

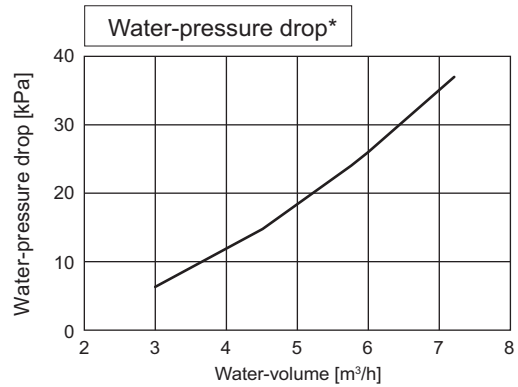
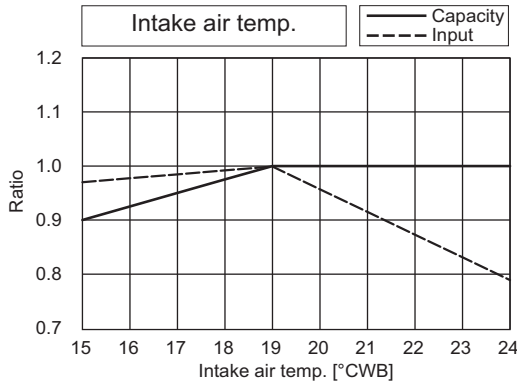
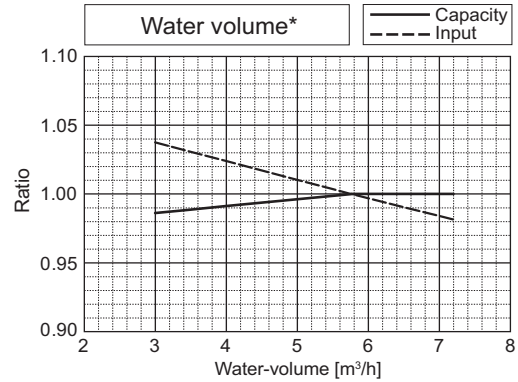
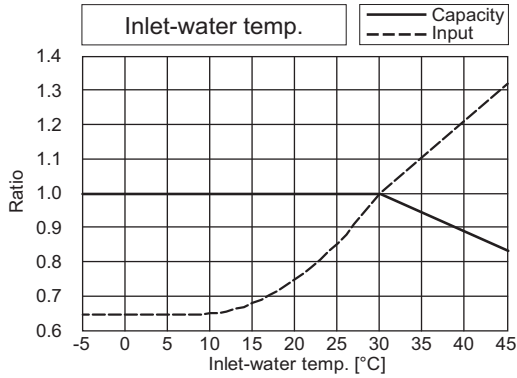


*The drawing indicates characteristic per unit.

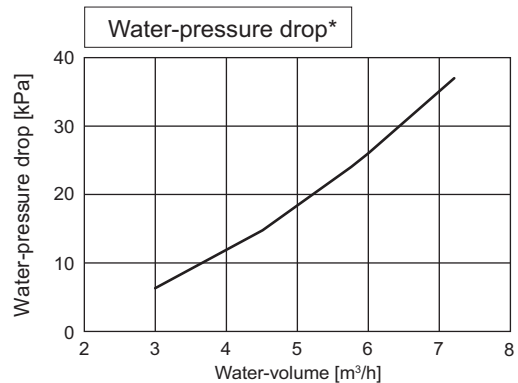
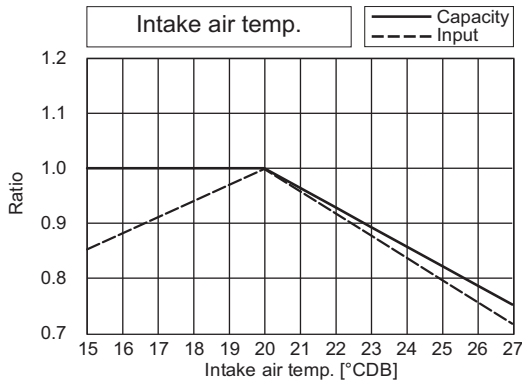
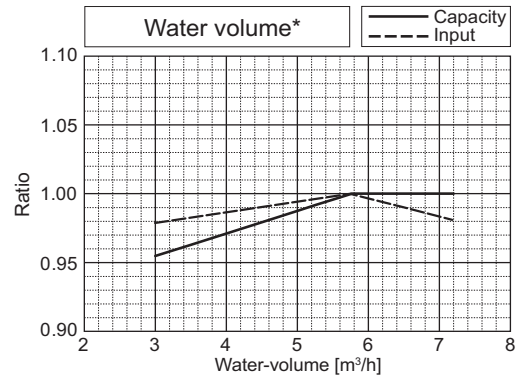
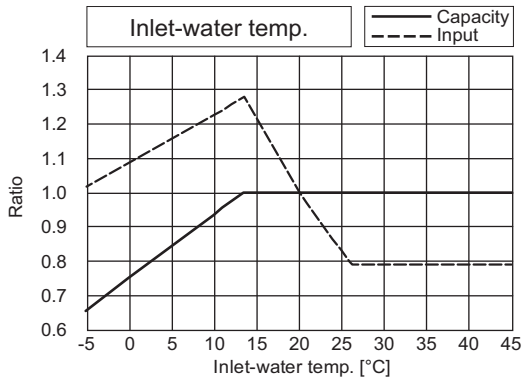


PQHY-		P216TSLMU/YSLMU			
Nominal Cooling Capacity	kW	63.3	Rated Cooling Capacity	kW	60.4
	BTU/h	216,000		BTU/h	206,000
Input	kW	14.03	Input	kW	(Non-Ducted) 12.93 (Ducted) 13.24

*The drawing indicates characteristic per unit.



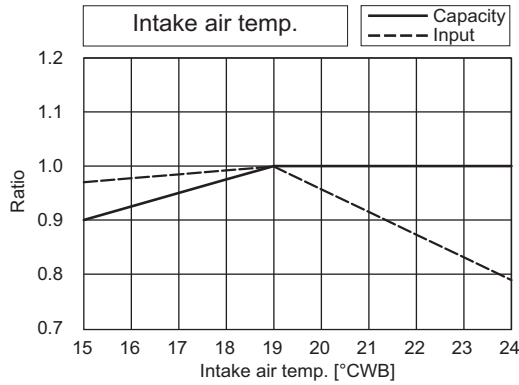
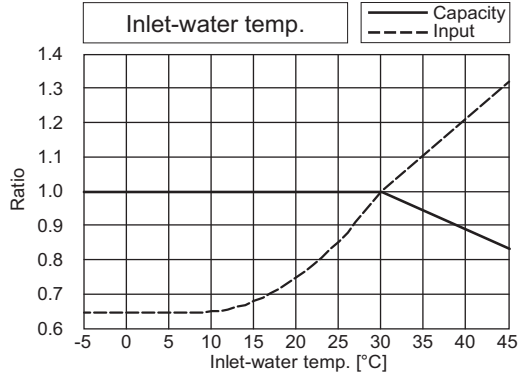
PQHY-		P216TSLMU/YSLMU			
Nominal Heating Capacity	kW	71.2	Rated Heating Capacity	kW	68.0
	BTU/h	243,000		BTU/h	232,000
Input	kW	12.88	Input	kW	(Non-Ducted) 11.88 (Ducted) 10.35



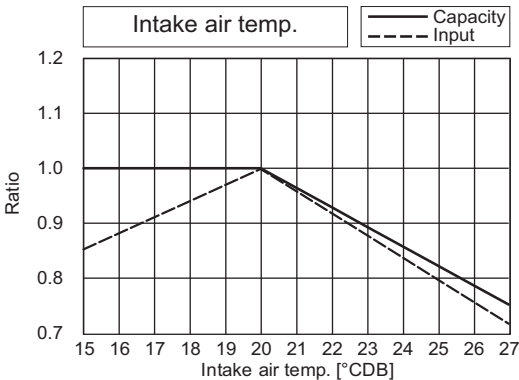
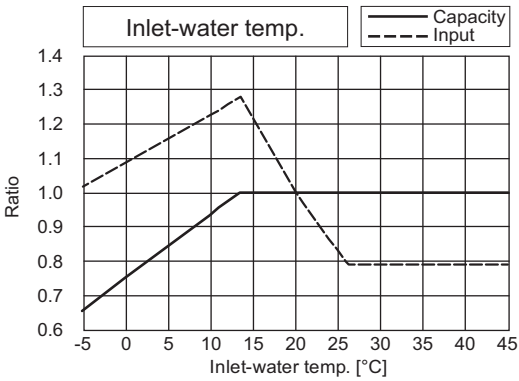
7. CAPACITY TABLES

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

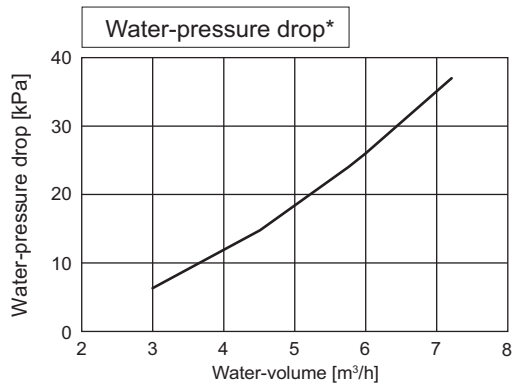
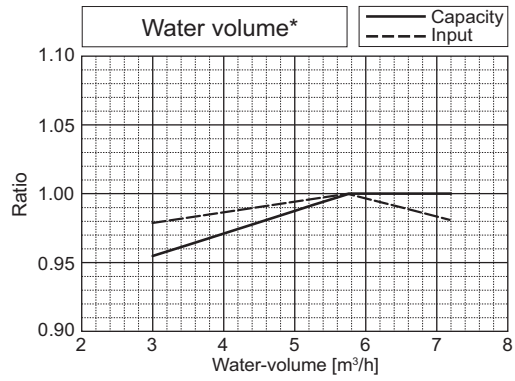
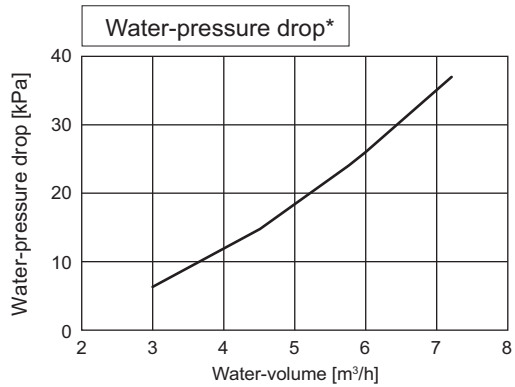
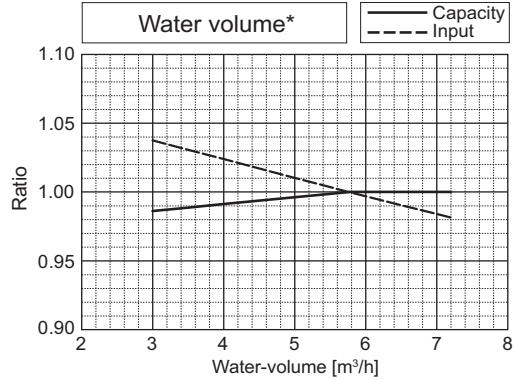
PQHY-		P240TSLMU/YSLMU			
Nominal Cooling Capacity	kW	70.3	Rated Cooling Capacity	kW	66.8
	BTU/h	240,000		BTU/h	228,000
Input	kW	16.89	Input	kW	(Non-Ducted) 15.57 (Ducted) 16.15



PQHY-		P240TSLMU/YSLMU			
Nominal Heating Capacity	kW	79.1	Rated Heating Capacity	kW	75.6
	BTU/h	270,000		BTU/h	258,000
Input	kW	14.58	Input	kW	(Non-Ducted) 13.45 (Ducted) 12.02

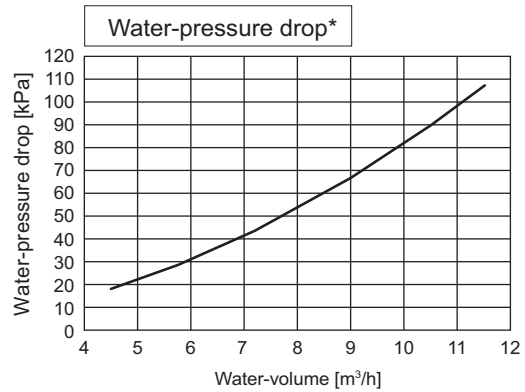
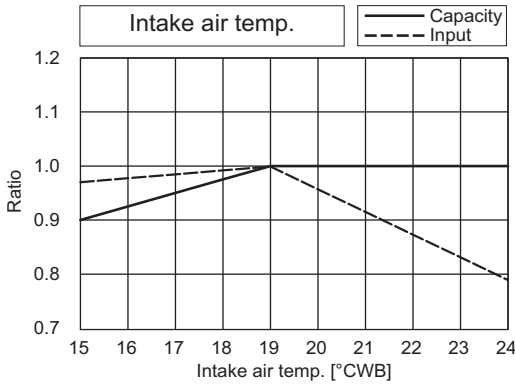
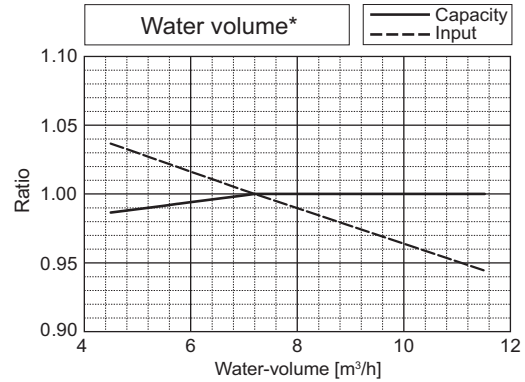
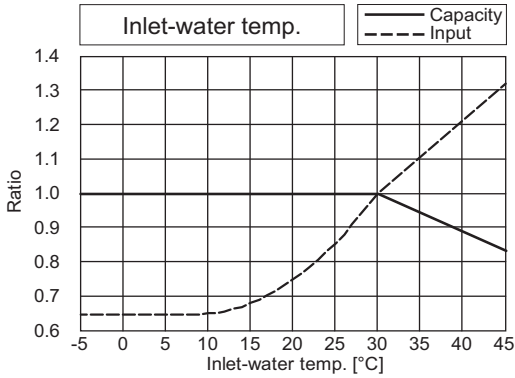


*The drawing indicates characteristic per unit.

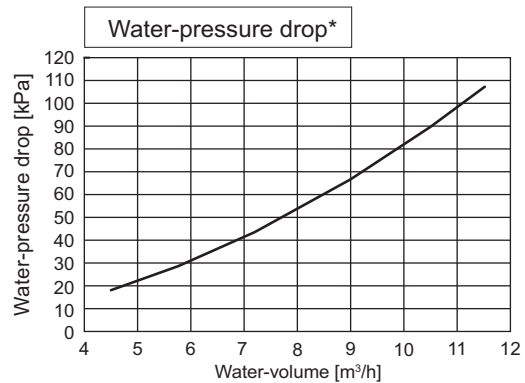
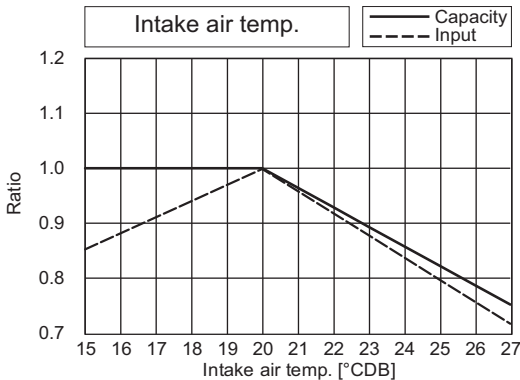
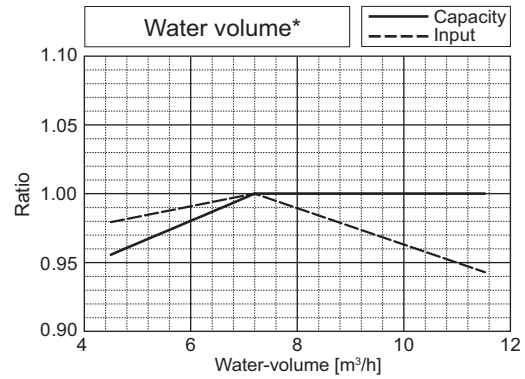
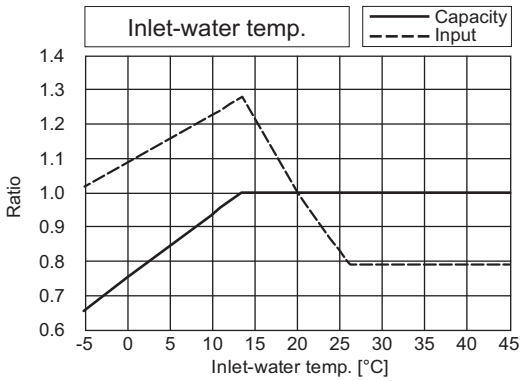


PQHY-		P288TSLMU/YSLMU			
Nominal Cooling Capacity	kW	84.4	Rated Cooling Capacity	kW	80.6
	BTU/h	288,000		BTU/h	275,000
Input	kW	20.42	Input	kW	(Non-Ducted) 18.82 (Ducted) 21.43

*The drawing indicates characteristic per unit.

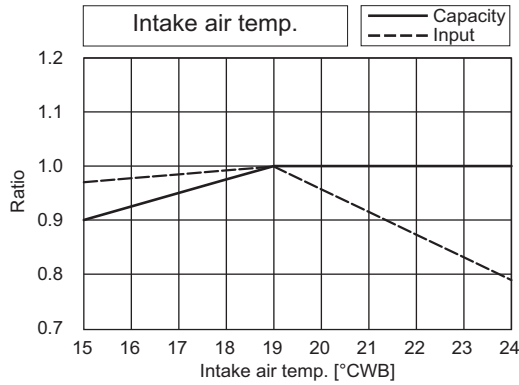
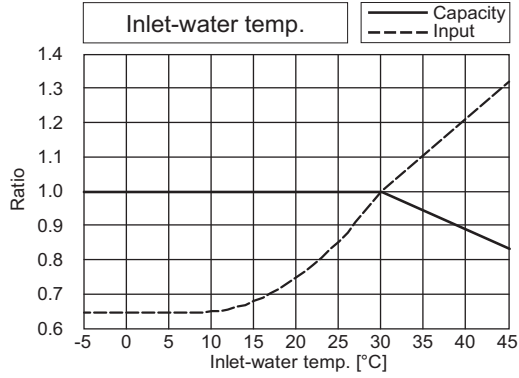


PQHY-		P288TSLMU/YSLMU			
Nominal Heating Capacity	kW	94.7	Rated Heating Capacity	kW	90.3
	BTU/h	323,000		BTU/h	308,000
Input	kW	17.50	Input	kW	(Non-Ducted) 16.13 (Ducted) 16.05

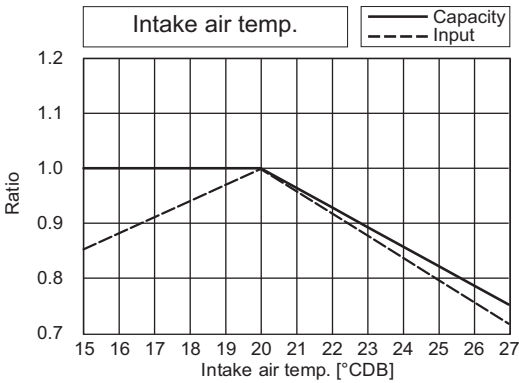
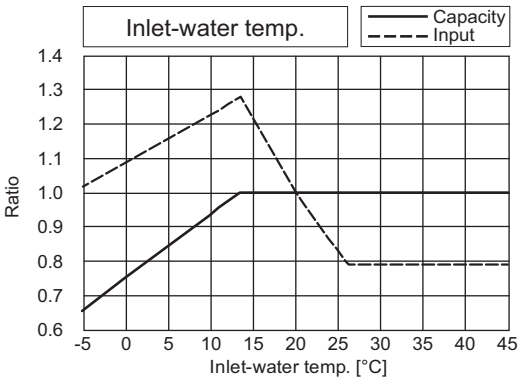


PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

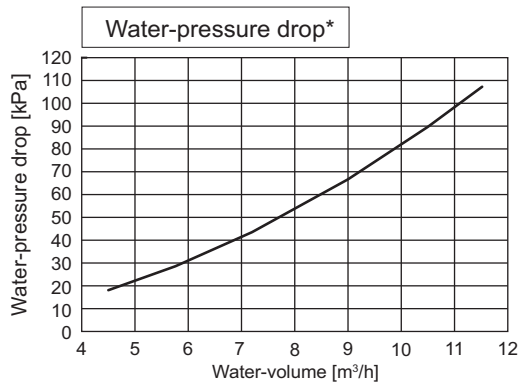
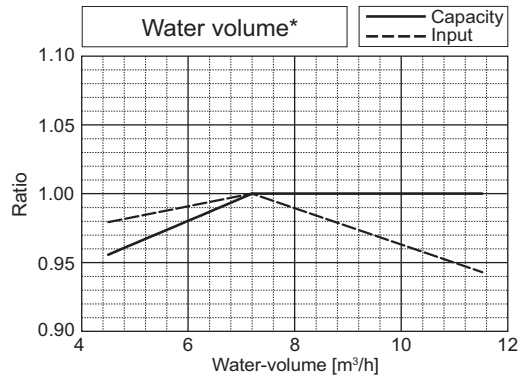
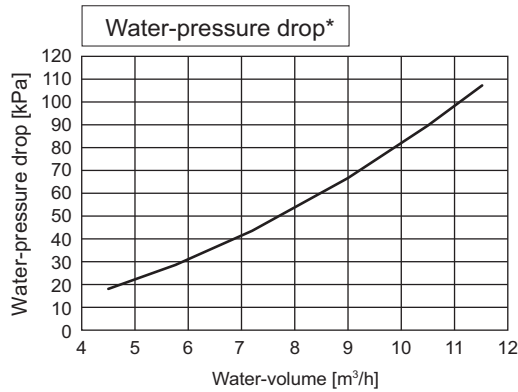
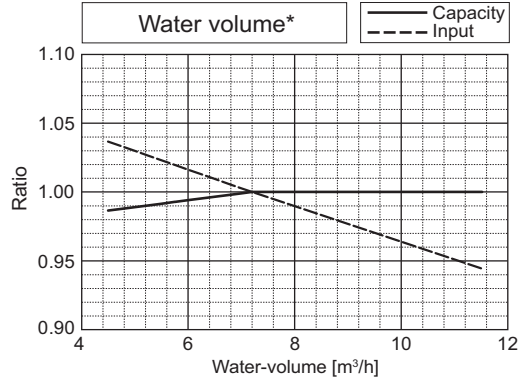
PQHY-		P312TSLMU/YSLMU			
Nominal Cooling Capacity	kW	91.4	Rated Cooling Capacity	kW	87.0
	BTU/h	312,000		BTU/h	297,000
Input	kW	23.41	Input	kW	(Non-Ducted) 21.59 (Ducted) 23.67



PQHY-		P312TSLMU/YSLMU			
Nominal Heating Capacity	kW	102.6	Rated Heating Capacity	kW	97.9
	BTU/h	350,000		BTU/h	334,000
Input	kW	19.11	Input	kW	(Non-Ducted) 17.62 (Ducted) 17.96

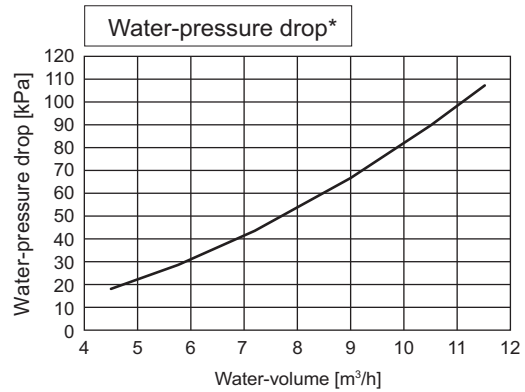
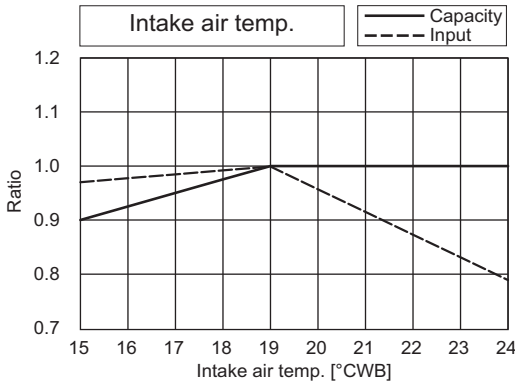
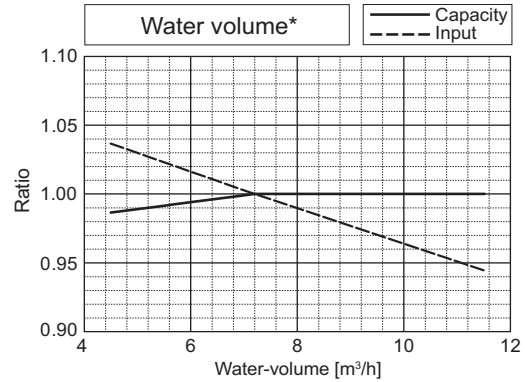
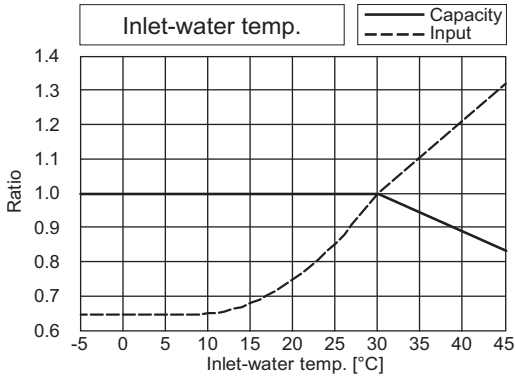


*The drawing indicates characteristic per unit.

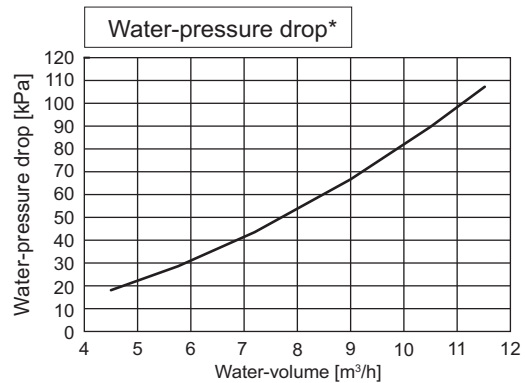
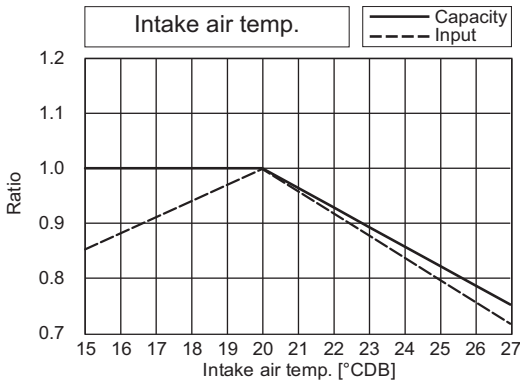
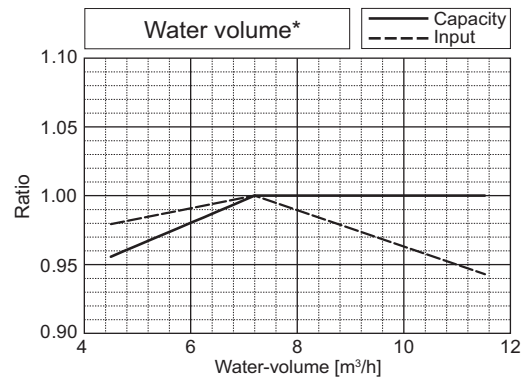
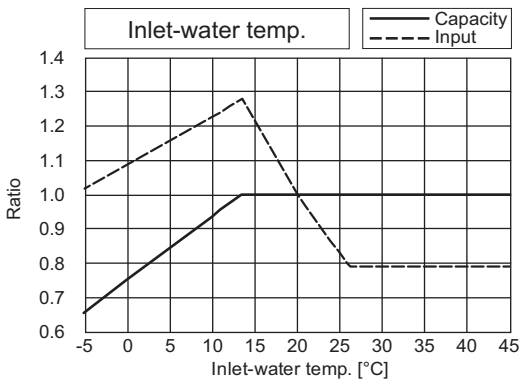


PQHY-		P336TSLMU/YSLMU			
Nominal Cooling Capacity	kW	98.5	Rated Cooling Capacity	kW	93.8
	BTU/h	336,000		BTU/h	320,000
Input	kW	26.84	Input	kW	(Non-Ducted) 24.76 (Ducted) 25.85

*The drawing indicates characteristic per unit.



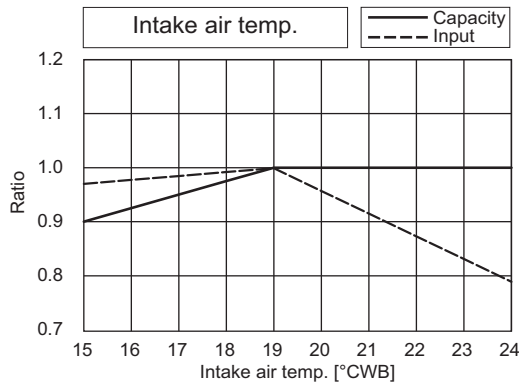
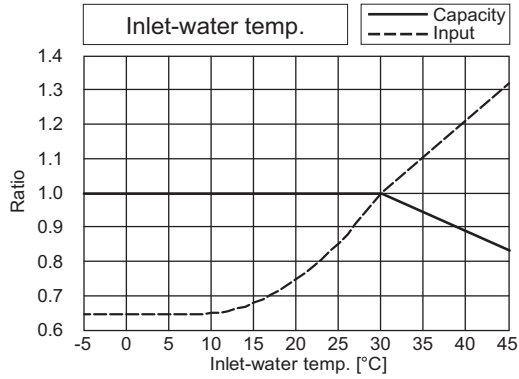
PQHY-		P336TSLMU/YSLMU			
Nominal Heating Capacity	kW	110.8	Rated Heating Capacity	kW	105.8
	BTU/h	378,000		BTU/h	361,000
Input	kW	20.77	Input	kW	(Non-Ducted) 19.16 (Ducted) 20.05



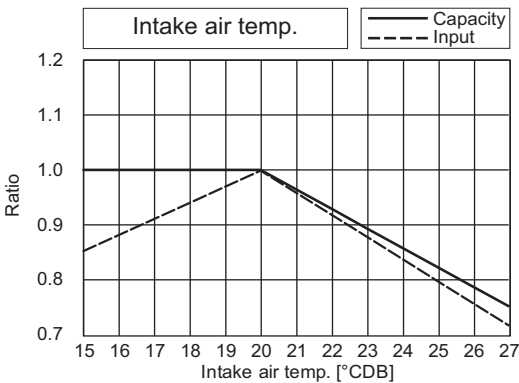
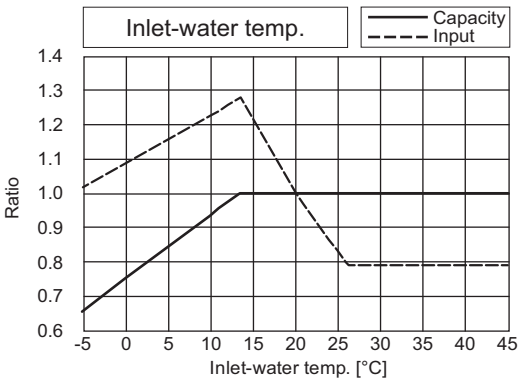
7. CAPACITY TABLES

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

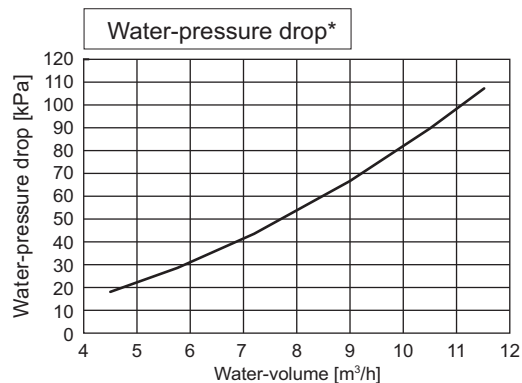
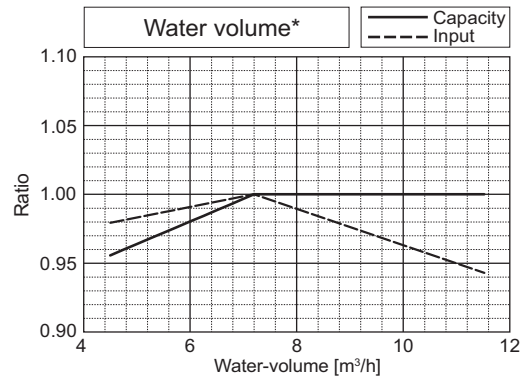
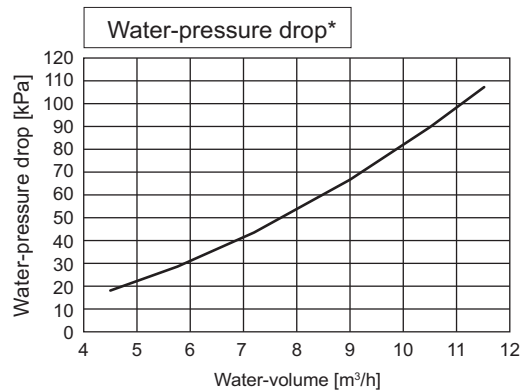
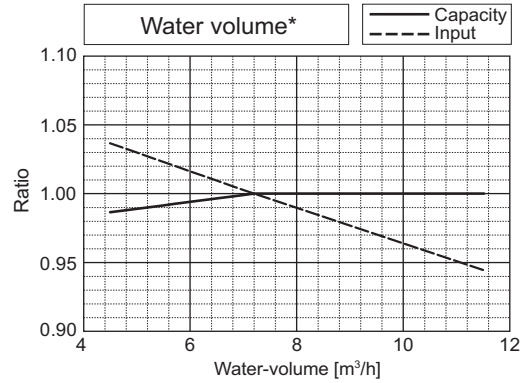
PQHY-			P360TSLMU/YSLMU		
Nominal Cooling Capacity	kW	105.5	Rated Cooling Capacity	kW	100.2
	BTU/h	360,000		BTU/h	342,000
Input	kW	29.43	Input	kW	(Non-Ducted) 27.17 (Ducted) 27.41



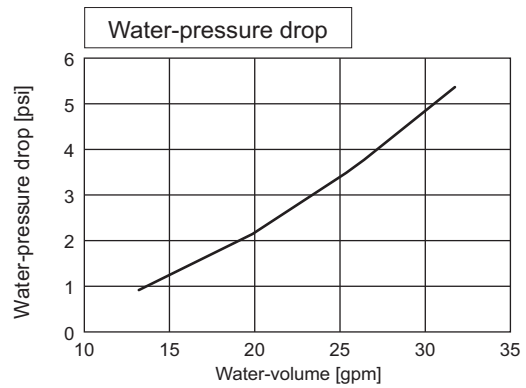
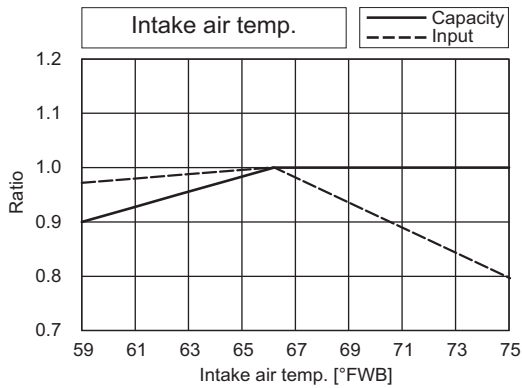
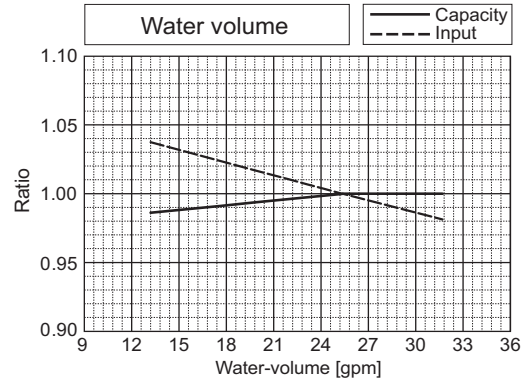
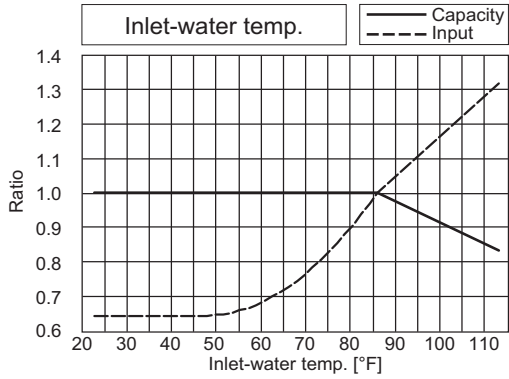
PQHY-			P360TSLMU/YSLMU		
Nominal Heating Capacity	kW	118.7	Rated Heating Capacity	kW	113.4
	BTU/h	405,000		BTU/h	387,000
Input	kW	22.85	Input	kW	(Non-Ducted) 21.09 (Ducted) 21.70



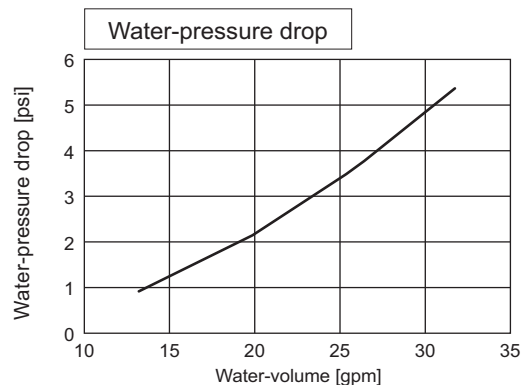
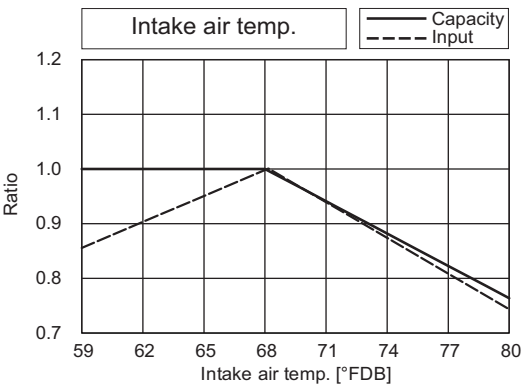
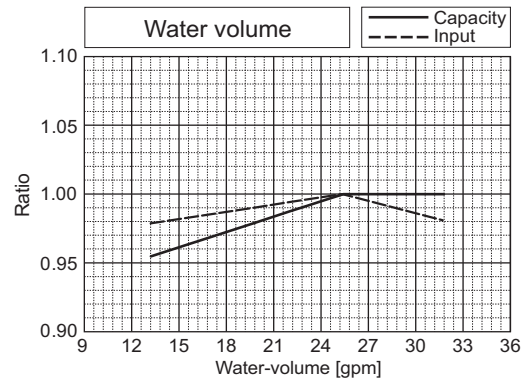
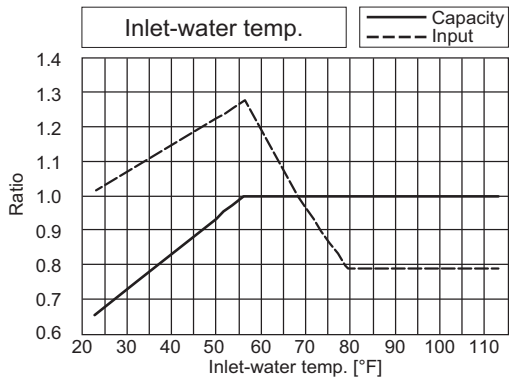
*The drawing indicates characteristic per unit.



PQHY-		P72TLMU/YLMU			
Nominal Cooling Capacity	kW	21.1	Rated Cooling Capacity	kW	20.2
	BTU/h	72,000		BTU/h	69,000
Input	kW	3.61	Input	kW	(Non-Ducted) 3.34 (Ducted) 3.12



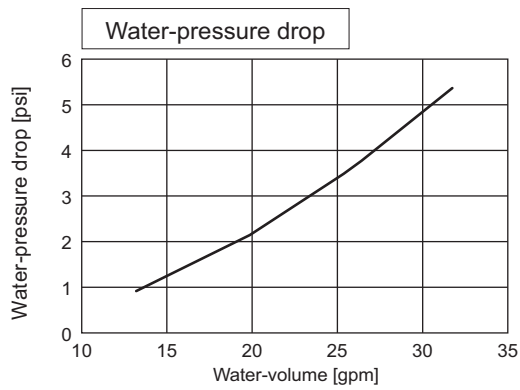
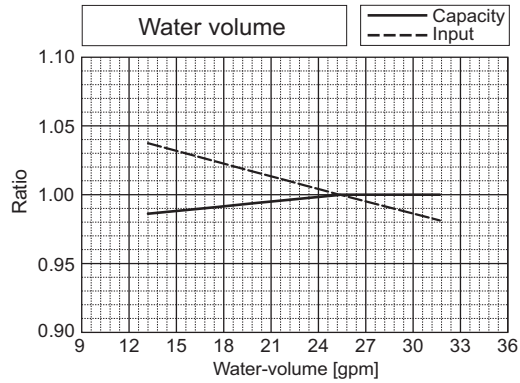
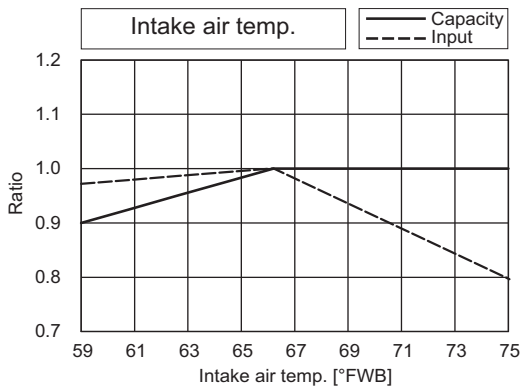
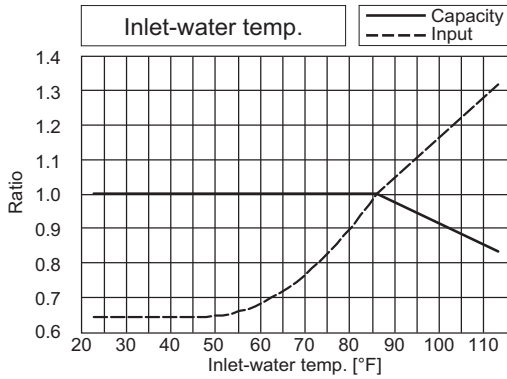
PQHY-		P72TLMU/YLMU			
Nominal Heating Capacity	kW	23.4	Rated Heating Capacity	kW	22.3
	BTU/h	80,000		BTU/h	76,000
Input	kW	4.04	Input	kW	(Non-Ducted) 3.74 (Ducted) 3.36



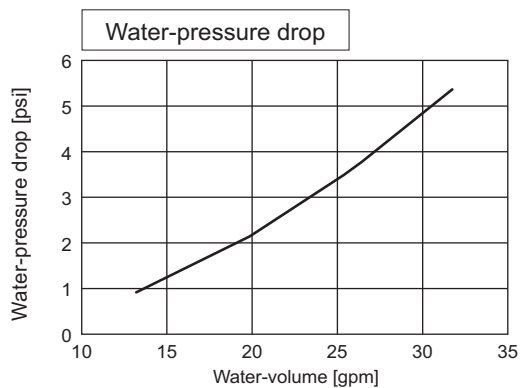
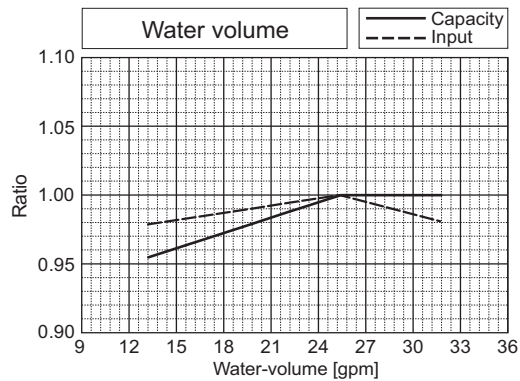
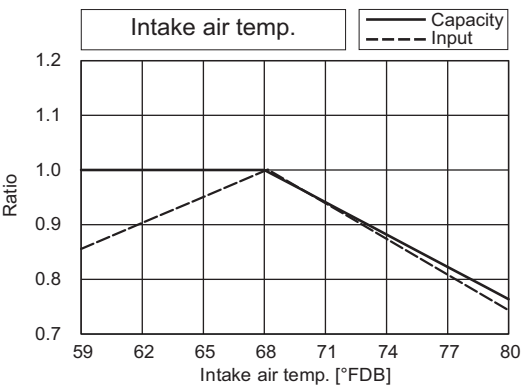
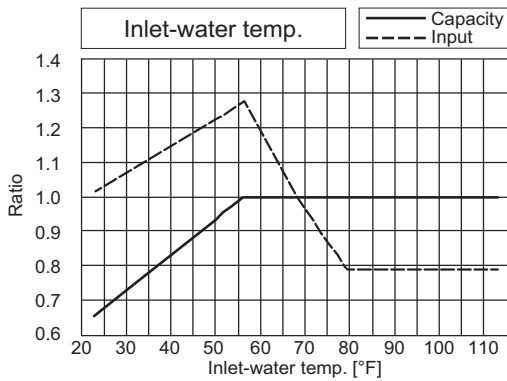
7. CAPACITY TABLES

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

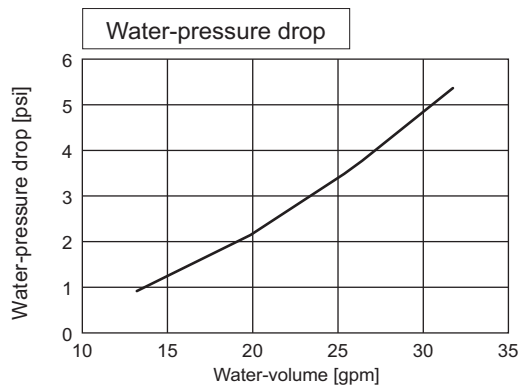
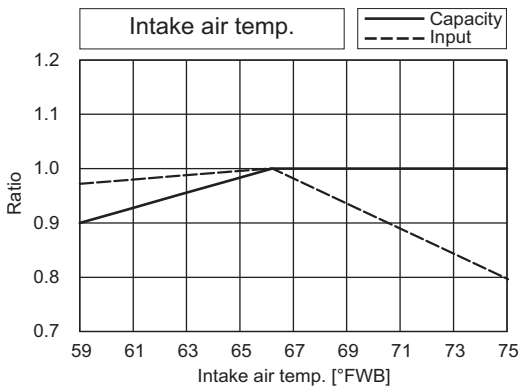
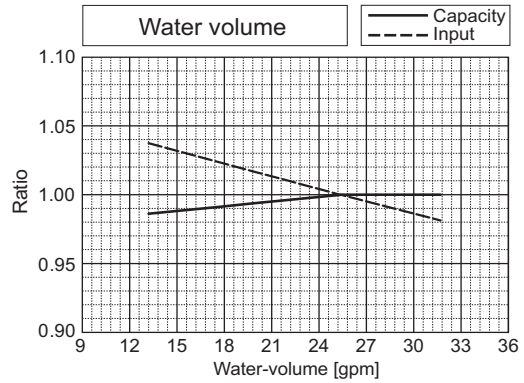
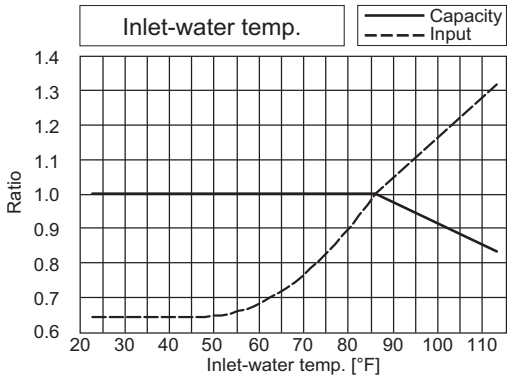
PQHY-		P96TLMU/YLMU			
Nominal Cooling Capacity	kW	28.1	Rated Cooling Capacity	kW	27.0
	BTU/h	96,000		BTU/h	92,000
Input	kW	5.21	Input	kW	(Non-Ducted) 4.82 (Ducted) 5.19



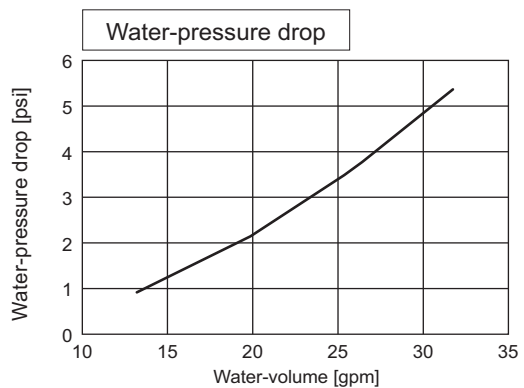
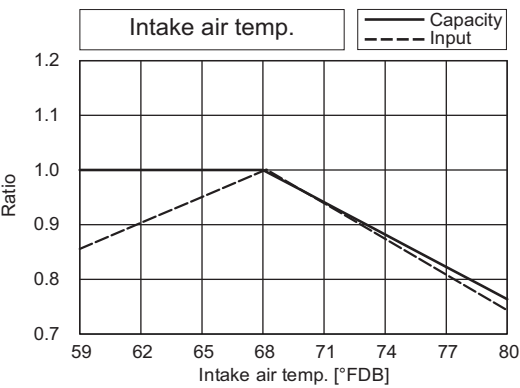
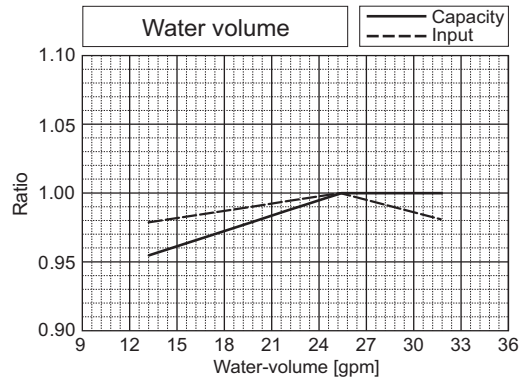
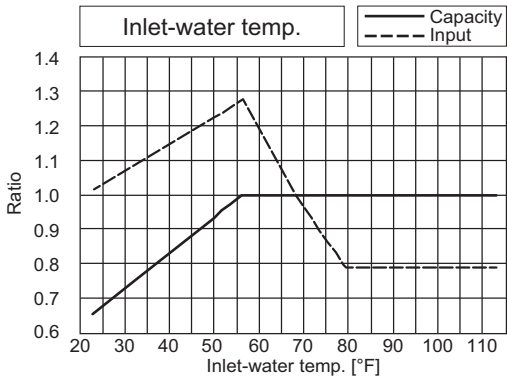
PQHY-		P96TLMU/YLMU			
Nominal Heating Capacity	kW	31.7	Rated Heating Capacity	kW	30.2
	BTU/h	108,000		BTU/h	103,000
Input	kW	5.64	Input	kW	(Non-Ducted) 5.21 (Ducted) 4.48



PQHY-		P120TLMU/YLMU			
Nominal Cooling Capacity	kW	35.2	Rated Cooling Capacity	kW	33.4
	BTU/h	120,000		BTU/h	114,000
Input	kW	7.51	Input	kW	(Non-Ducted) 6.95 (Ducted) 7.35



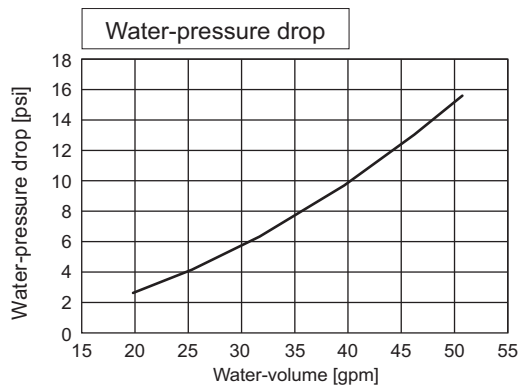
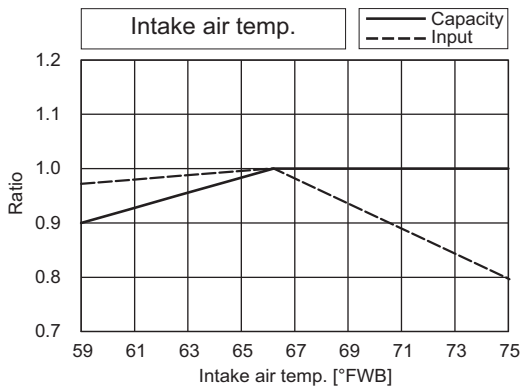
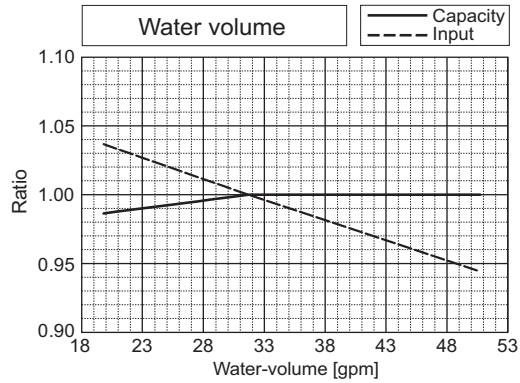
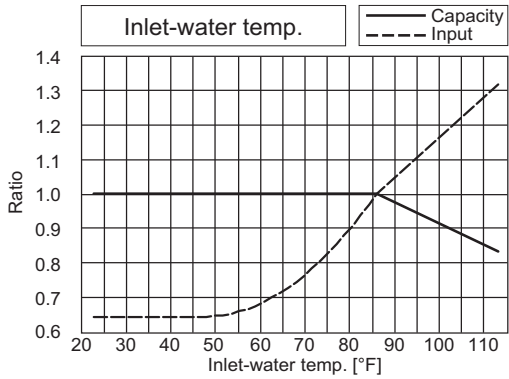
PQHY-		P120TLMU/YLMU			
Nominal Heating Capacity	kW	39.6	Rated Heating Capacity	kW	37.8
	BTU/h	135,000		BTU/h	129,000
Input	kW	7.09	Input	kW	(Non-Ducted) 6.55 (Ducted) 5.92



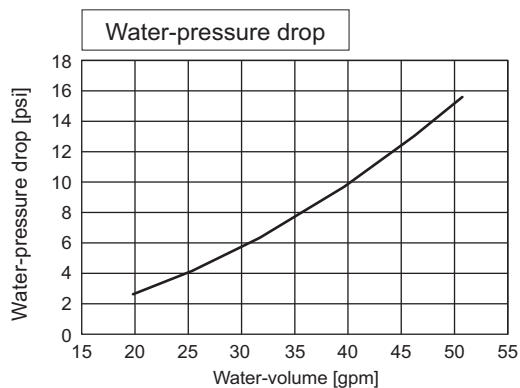
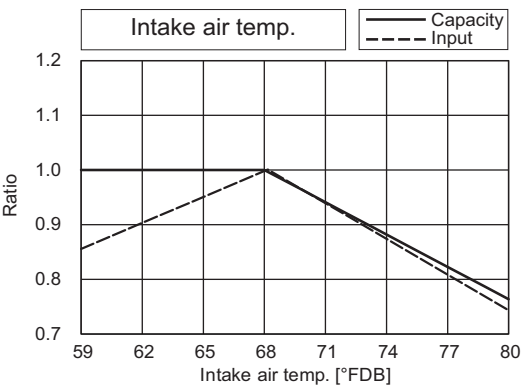
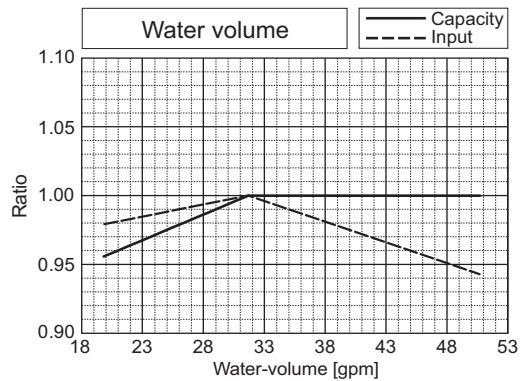
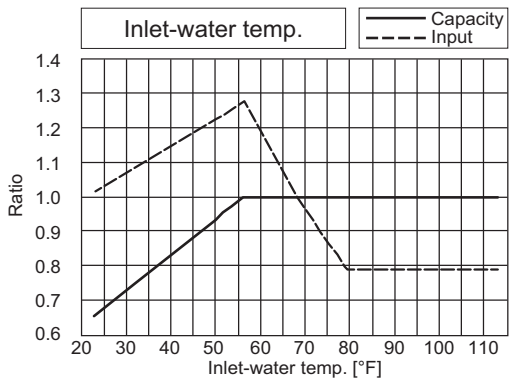
7. CAPACITY TABLES

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

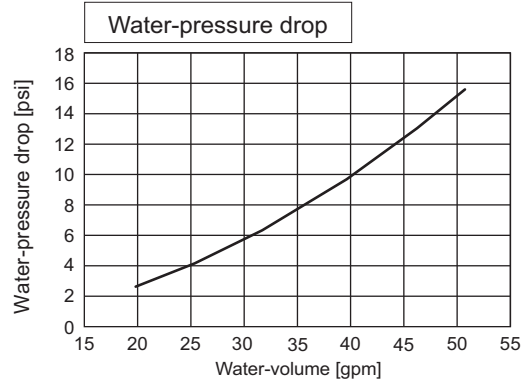
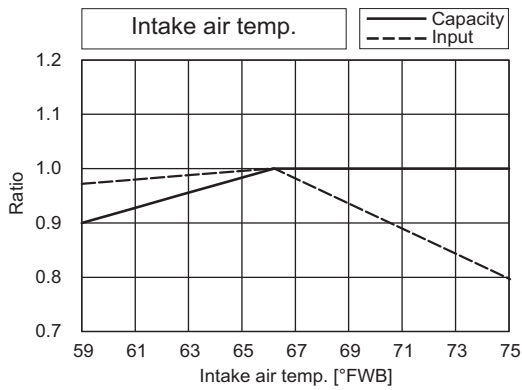
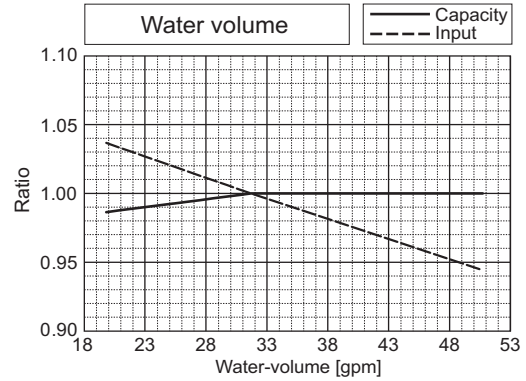
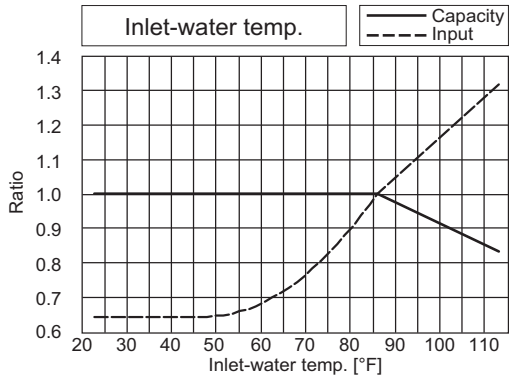
PQHY-		P144TLMU/YLMU			
Nominal Cooling Capacity	kW	42.2	Rated Cooling Capacity	kW	40.2
	BTU/h	144,000		BTU/h	137,000
Input	kW	8.78	Input	kW	(Non-Ducted) 8.07 (Ducted) 9.98



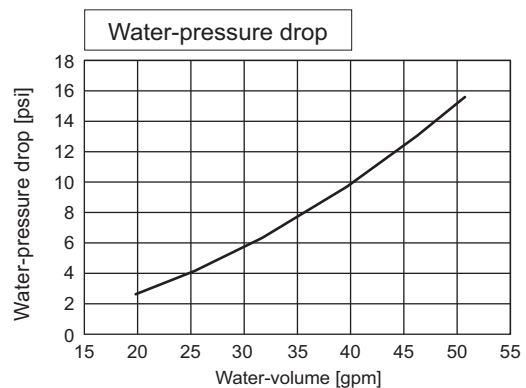
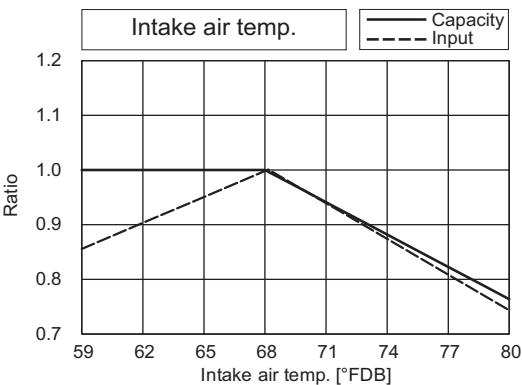
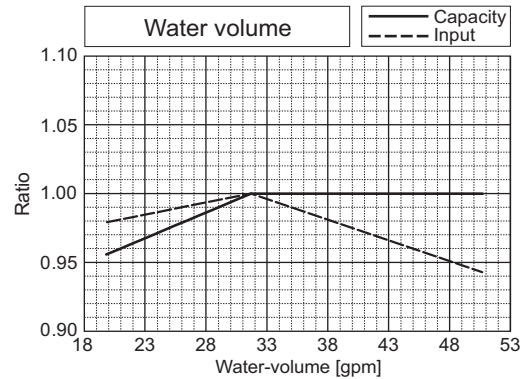
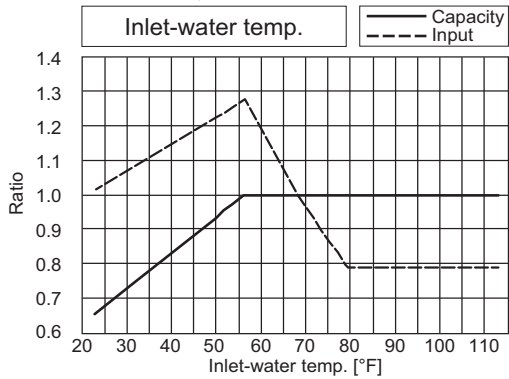
PQHY-		P144TLMU/YLMU			
Nominal Heating Capacity	kW	46.9	Rated Heating Capacity	kW	44.5
	BTU/h	160,000		BTU/h	152,000
Input	kW	8.11	Input	kW	(Non-Ducted) 7.47 (Ducted) 7.90



PQHY-		P168TLMU/YLMU			
Nominal Cooling Capacity	kW	49.2	Rated Cooling Capacity	kW	47.2
	BTU/h	168,000		BTU/h	161,000
Input	kW	12.05	Input	kW	(Non-Ducted) 11.10 (Ducted) 11.88

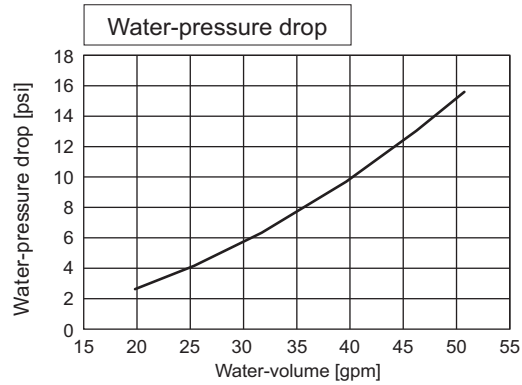
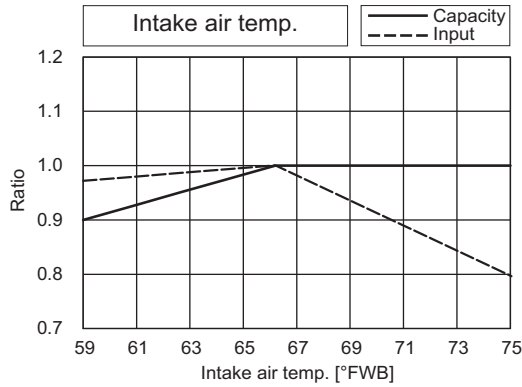
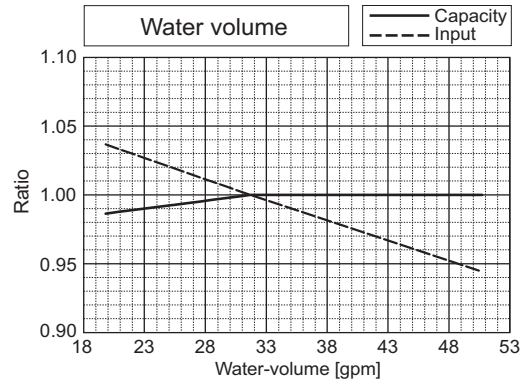
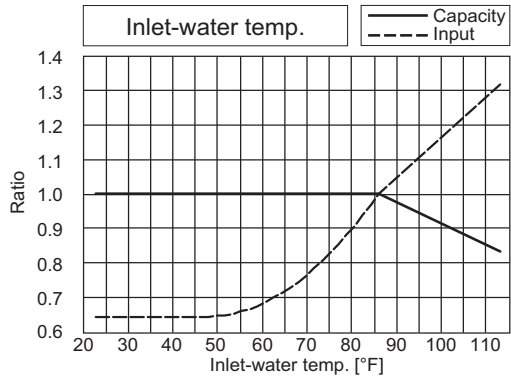


PQHY-		P168TLMU/YLMU			
Nominal Heating Capacity	kW	55.1	Rated Heating Capacity	kW	52.5
	BTU/h	188,000		BTU/h	179,000
Input	kW	9.86	Input	kW	(Non-Ducted) 9.09 (Ducted) 9.72

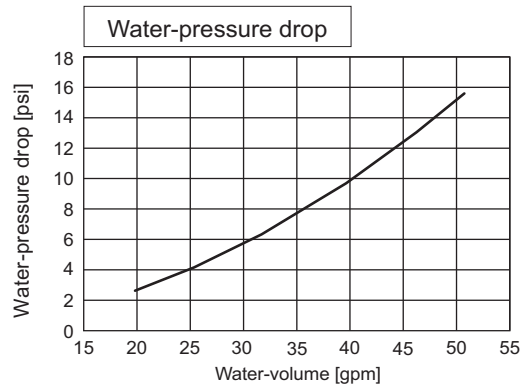
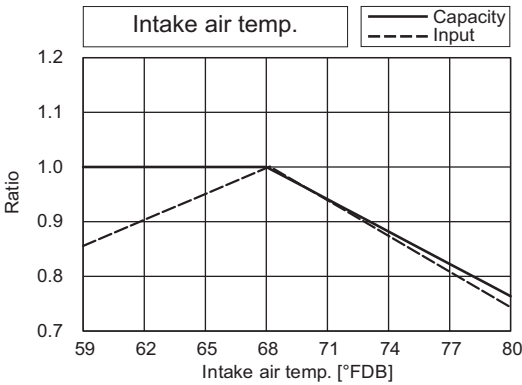
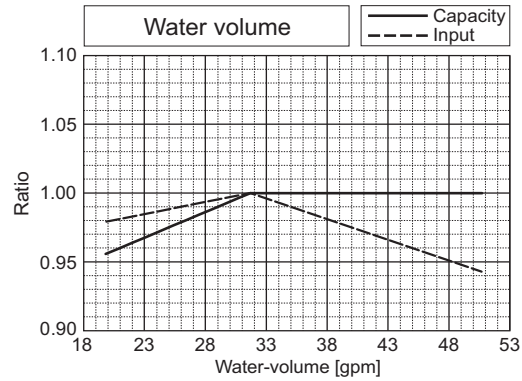
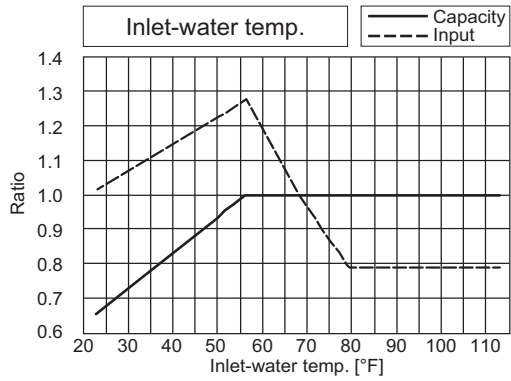


PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

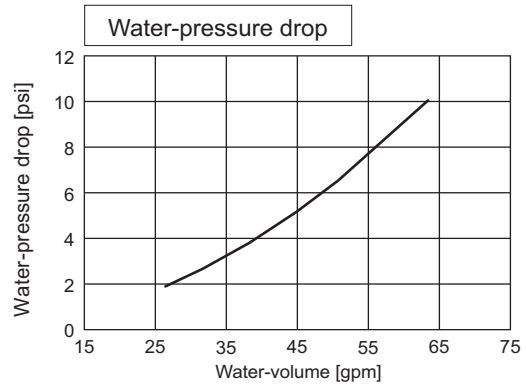
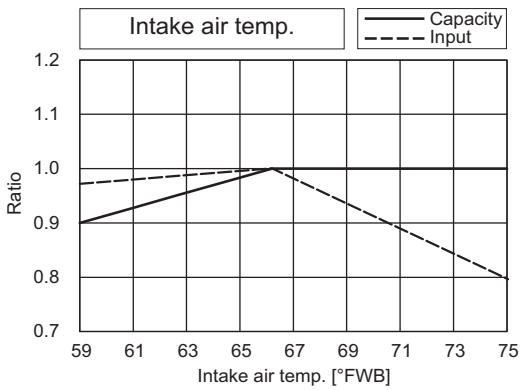
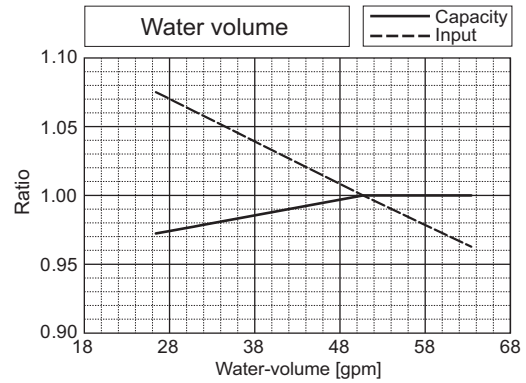
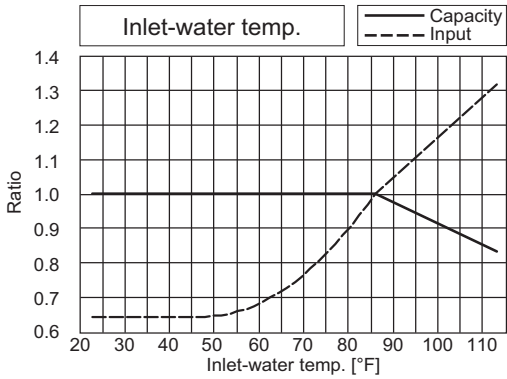
PQHY-			P192TLMU/YLMU		
Nominal Cooling Capacity	kW	56.3	Rated Cooling Capacity	kW	53.6
	BTU/h	192,000		BTU/h	183,000
Input	kW	15.05	Input	kW	(Non-Ducted) 13.87 (Ducted) 14.19



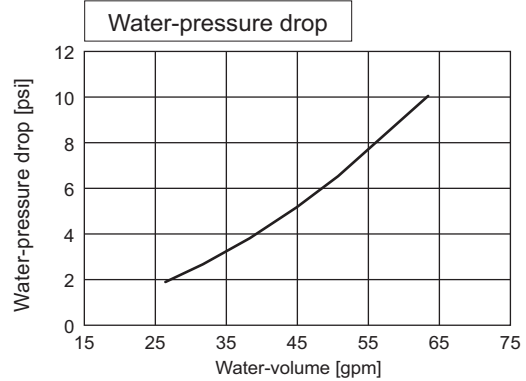
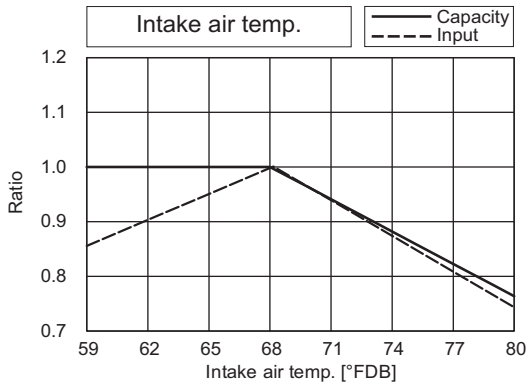
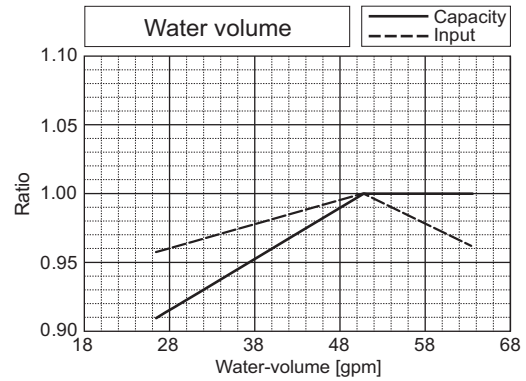
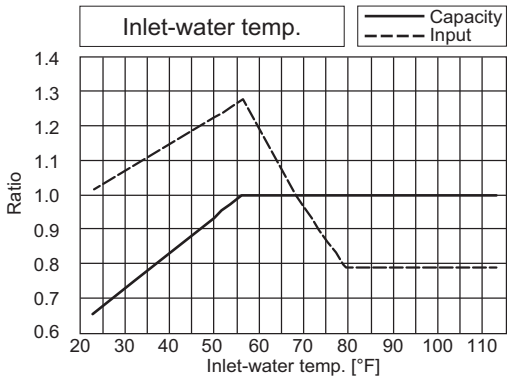
PQHY-			P192TLMU/YLMU		
Nominal Heating Capacity	kW	63.0	Rated Heating Capacity	kW	60.1
	BTU/h	215,000		BTU/h	205,000
Input	kW	11.90	Input	kW	(Non-Ducted) 10.97 (Ducted) 11.56



PQHY-		P216TLMU/YLMU			
Nominal Cooling Capacity	kW	63.3	Rated Cooling Capacity	kW	60.4
	BTU/h	216,000		BTU/h	206,000
Input	kW	19.23	Input	kW	(Non-Ducted) 17.72 (Ducted) 16.10



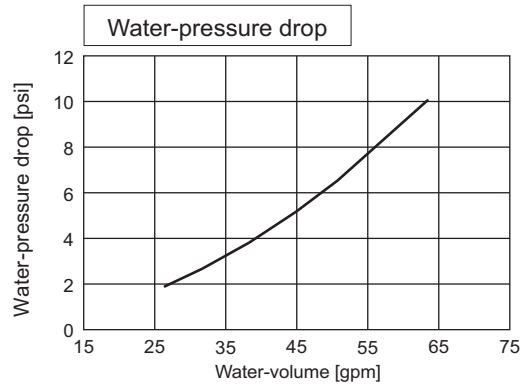
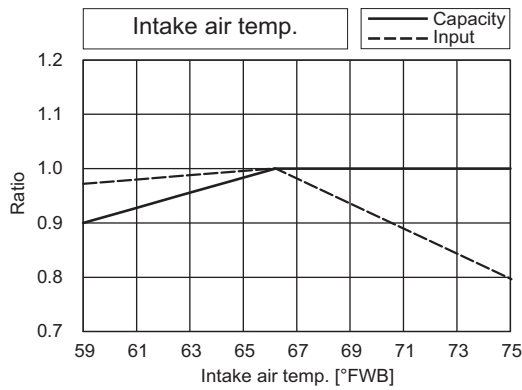
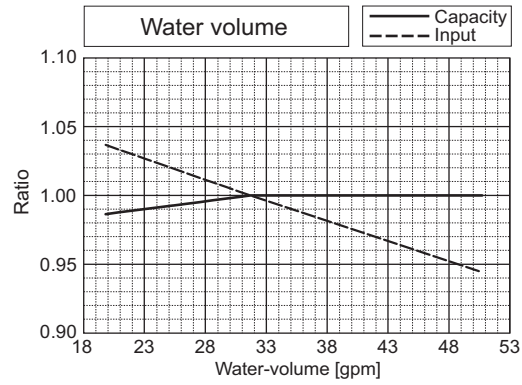
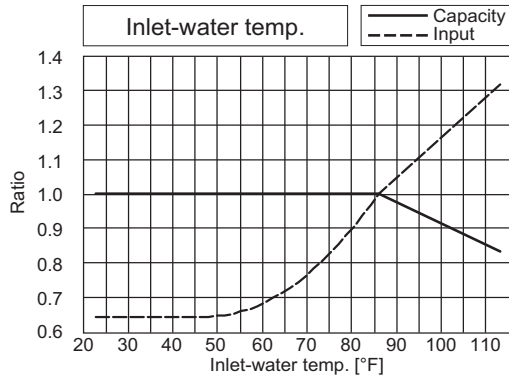
PQHY-		P216TLMU/YLMU			
Nominal Heating Capacity	kW	71.2	Rated Heating Capacity	kW	68.0
	BTU/h	243,000		BTU/h	232,000
Input	kW	13.04	Input	kW	(Non-Ducted) 12.01 (Ducted) 12.34



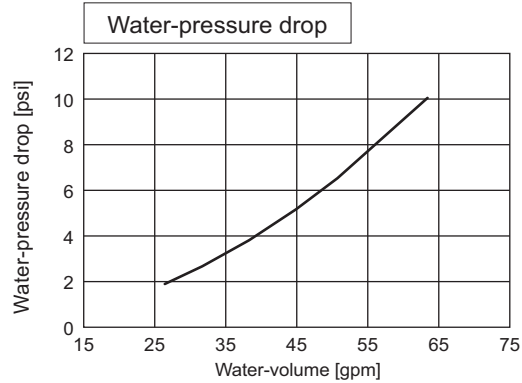
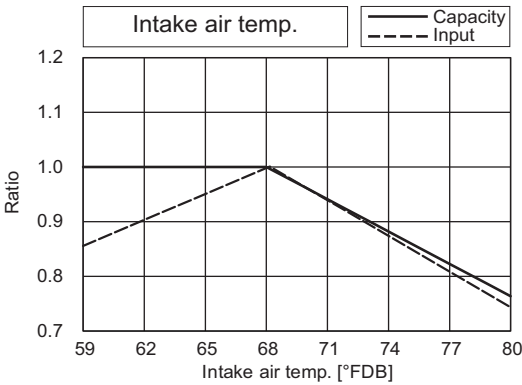
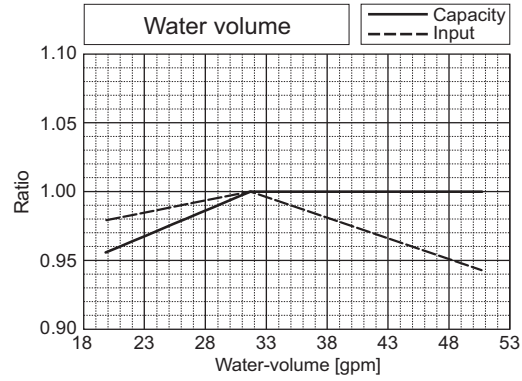
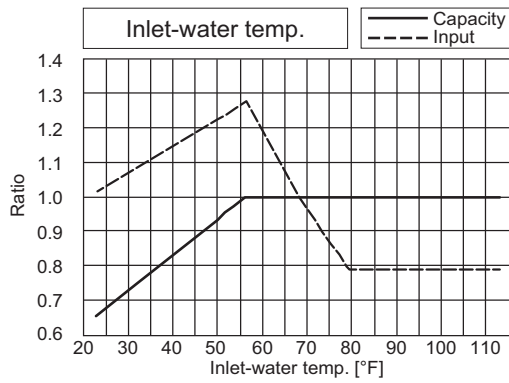
7. CAPACITY TABLES

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

PQHY-		P240TLMU/YLMU			
Nominal Cooling Capacity	kW	70.3	Rated Cooling Capacity	kW	66.8
	BTU/h	240,000		BTU/h	228,000
Input	kW	21.14	Input	kW	(Non-Ducted) 19.49 (Ducted) 18.74

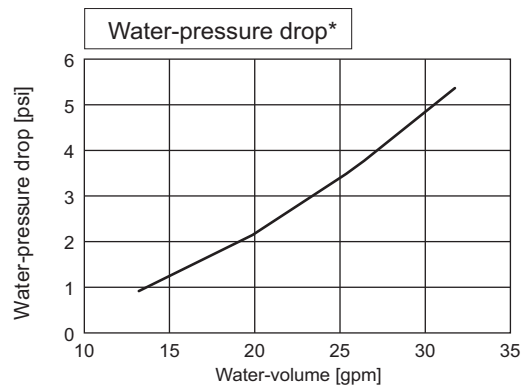
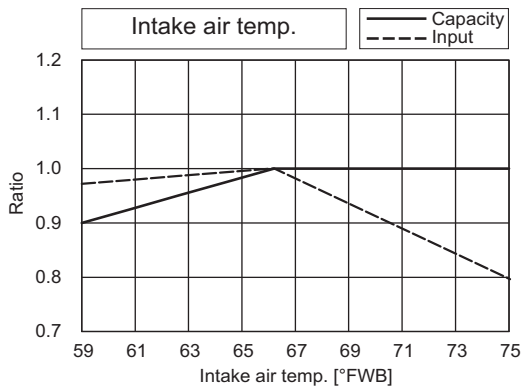
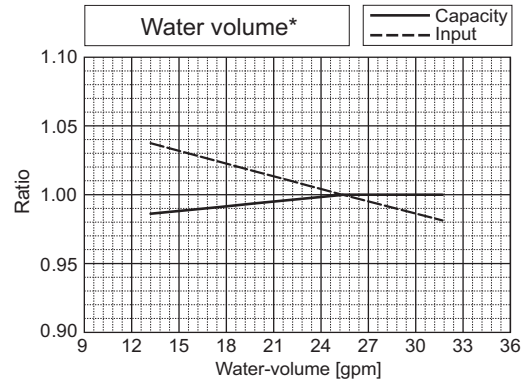
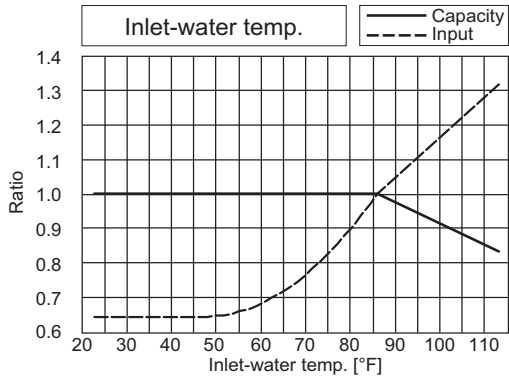


PQHY-		P240TLMU/YLMU			
Nominal Heating Capacity	kW	79.1	Rated Heating Capacity	kW	75.6
	BTU/h	270,000		BTU/h	258,000
Input	kW	15.12	Input	kW	(Non-Ducted) 13.93 (Ducted) 14.62

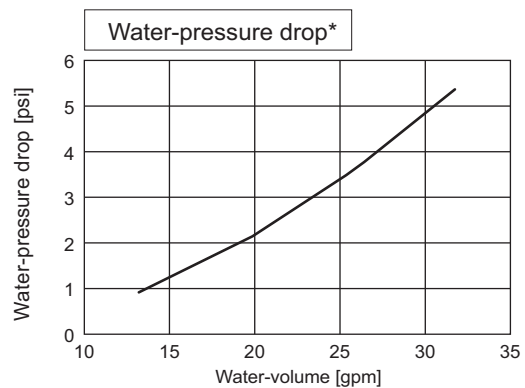
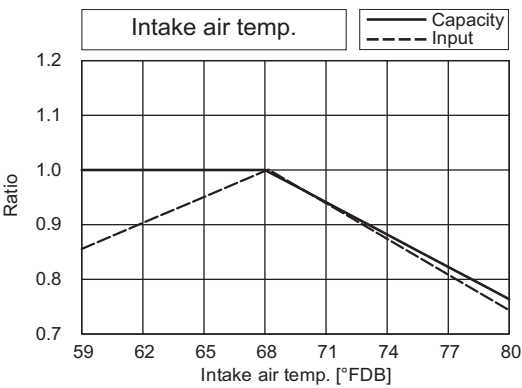
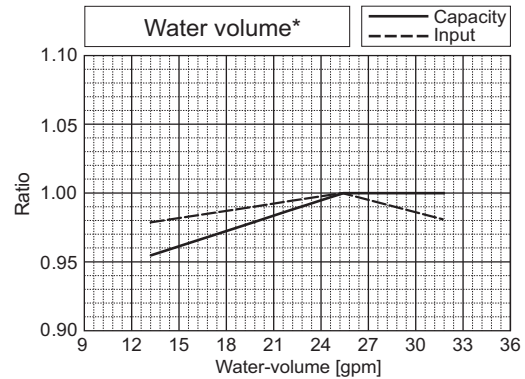
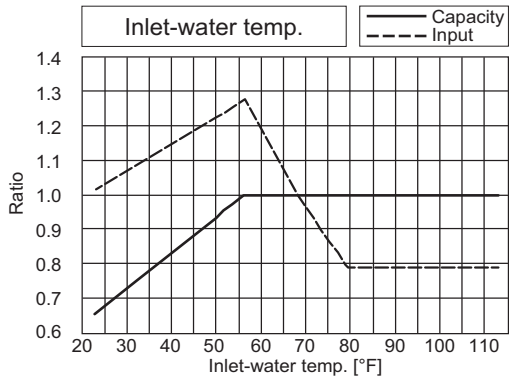


PQHY-		P144TSLMU/YSLMU			
Nominal Cooling Capacity	kW	42.2	Rated Cooling Capacity	kW	40.2
	BTU/h	144,000		BTU/h	137,000
Input	kW	7.11	Input	kW	(Non-Ducted) 6.53 (Ducted) 7.72

*The drawing indicates characteristic per unit.



PQHY-		P144TSLMU/YSLMU			
Nominal Heating Capacity	kW	46.9	Rated Heating Capacity	kW	44.5
	BTU/h	160,000		BTU/h	152,000
Input	kW	7.45	Input	kW	(Non-Ducted) 6.86 (Ducted) 7.22

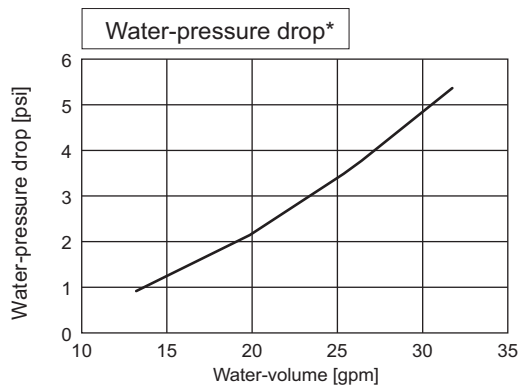
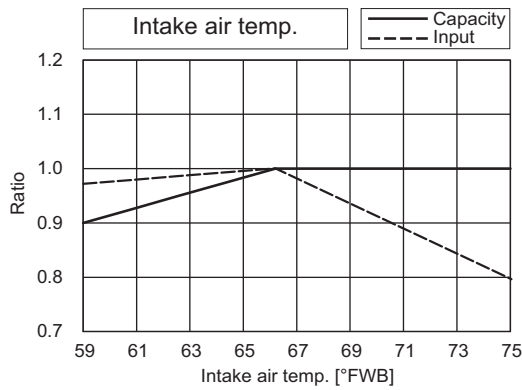
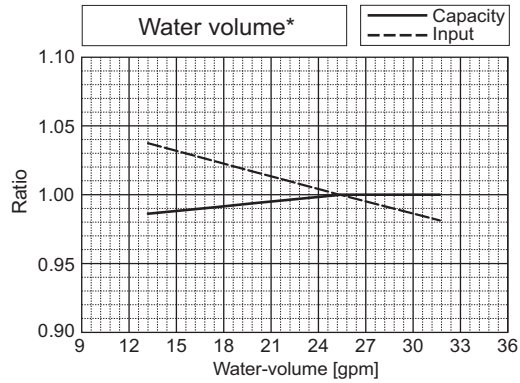
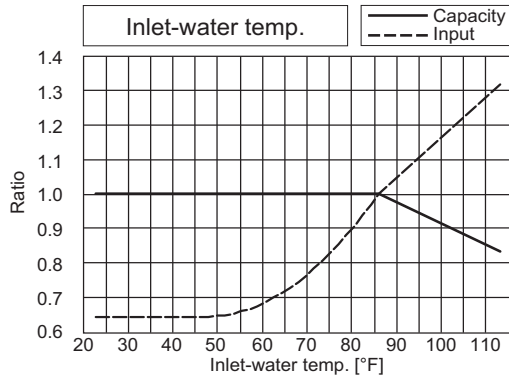


PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

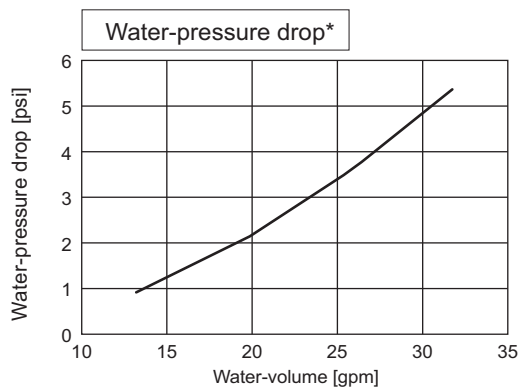
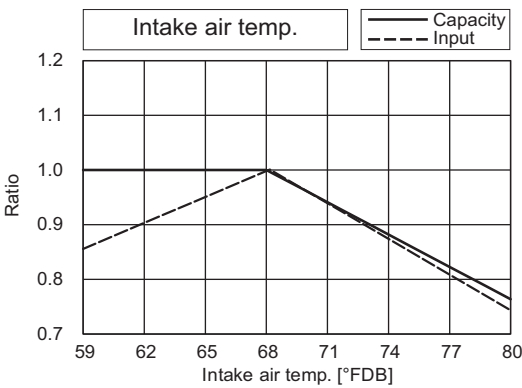
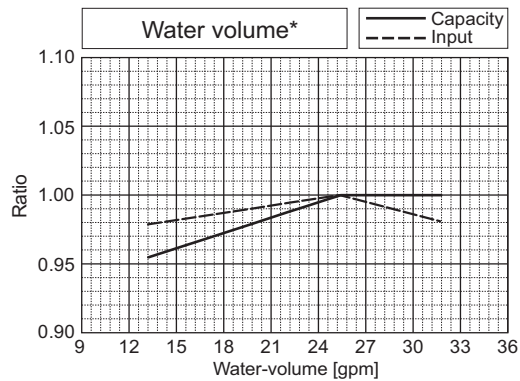
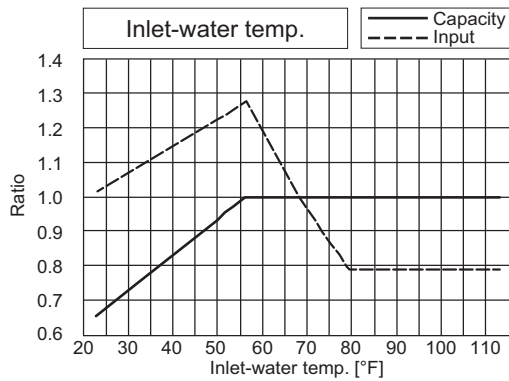
PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

PQHY-		P168TSLMU/YSLMU			
Nominal Cooling Capacity	kW	49.2	Rated Cooling Capacity	kW	47.2
	BTU/h	168,000		BTU/h	161,000
Input	kW	9.33	Input	kW	(Non-Ducted) 8.58 (Ducted) 9.22

*The drawing indicates characteristic per unit.

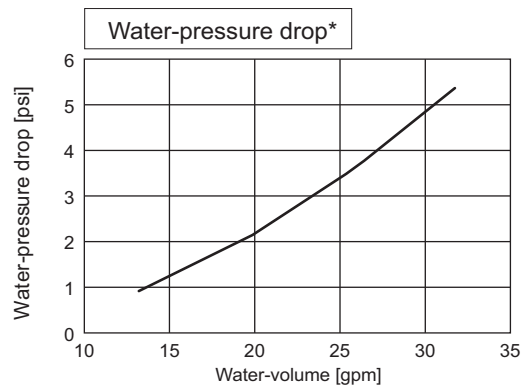
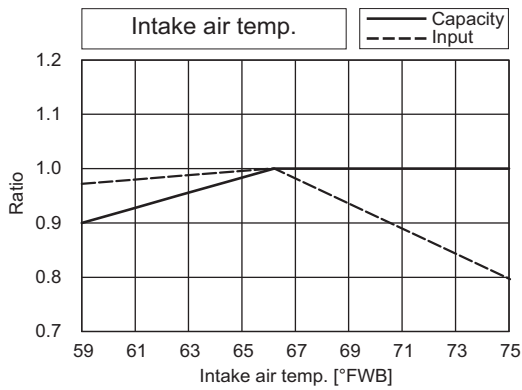
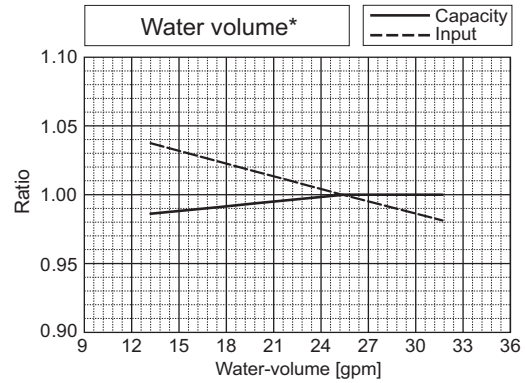
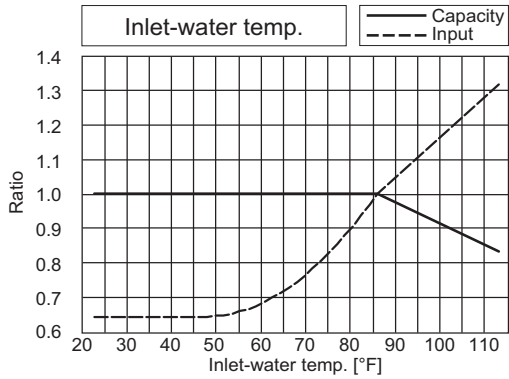


PQHY-		P168TSLMU/YSLMU			
Nominal Heating Capacity	kW	55.1	Rated Heating Capacity	kW	52.5
	BTU/h	188,000		BTU/h	179,000
Input	kW	9.34	Input	kW	(Non-Ducted) 8.60 (Ducted) 8.03

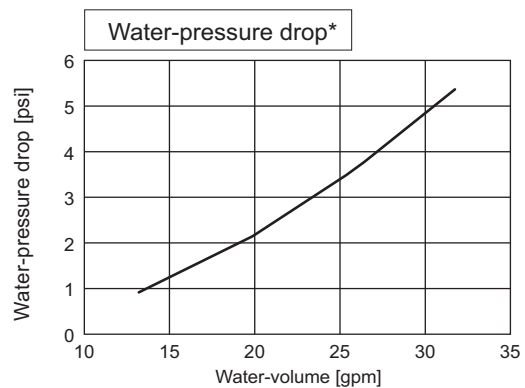
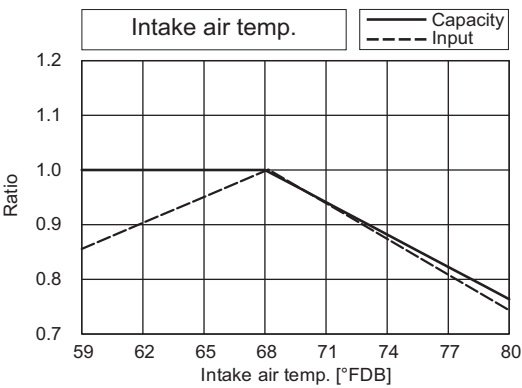
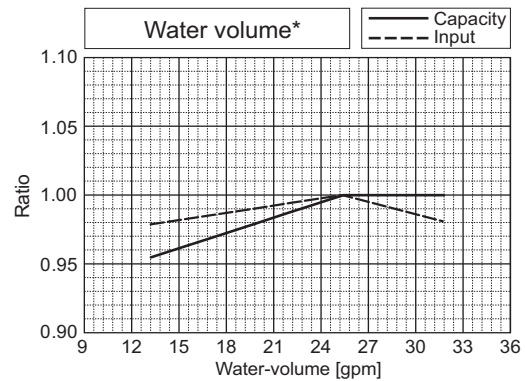
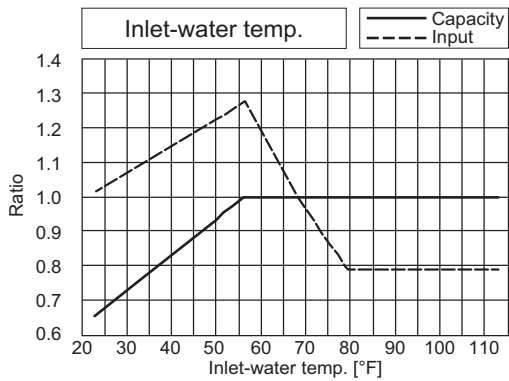


PQHY-		P192TSLMU/YSLMU			
Nominal Cooling Capacity	kW	56.3	Rated Cooling Capacity	kW	53.6
	BTU/h	192,000		BTU/h	183,000
Input	kW	11.30	Input	kW	(Non-Ducted) 10.40 (Ducted) 10.98

*The drawing indicates characteristic per unit.



PQHY-		P192TSLMU/YSLMU			
Nominal Heating Capacity	kW	63.0	Rated Heating Capacity	kW	60.1
	BTU/h	215,000		BTU/h	205,000
Input	kW	11.02	Input	kW	(Non-Ducted) 10.16 (Ducted) 8.90

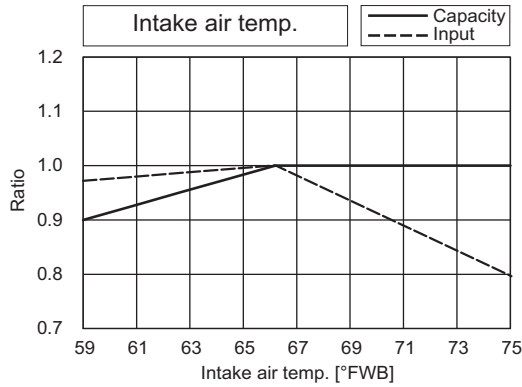
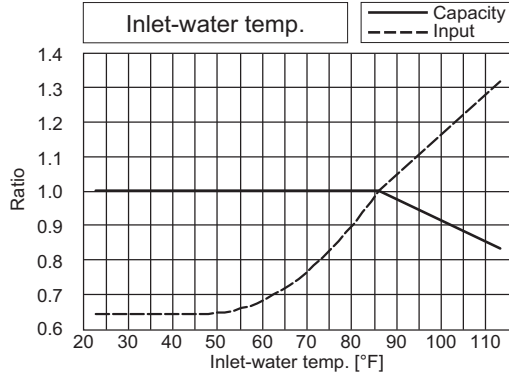


PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

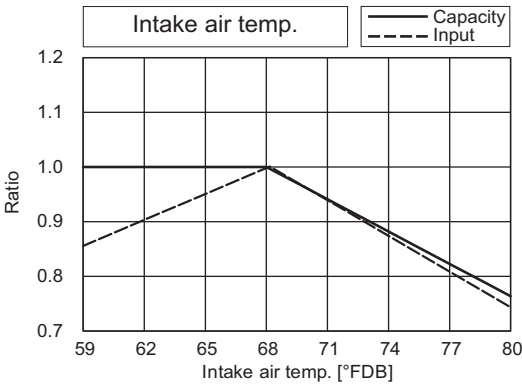
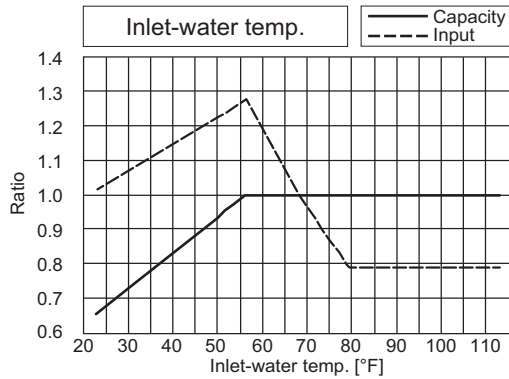
7. CAPACITY TABLES

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

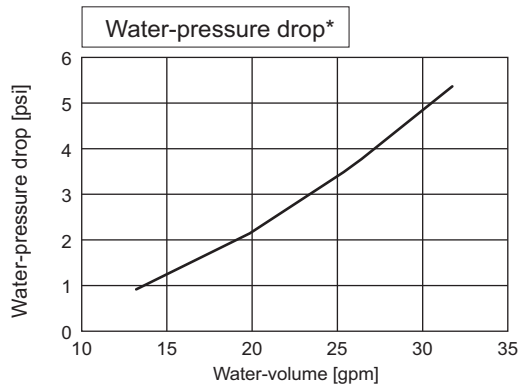
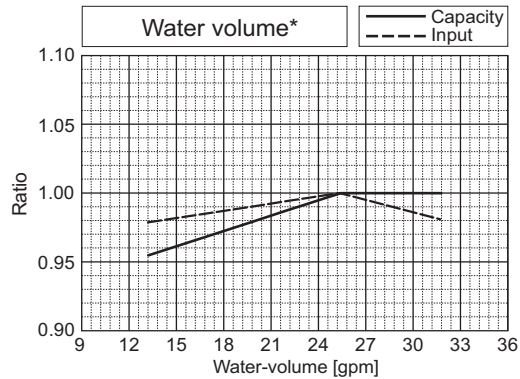
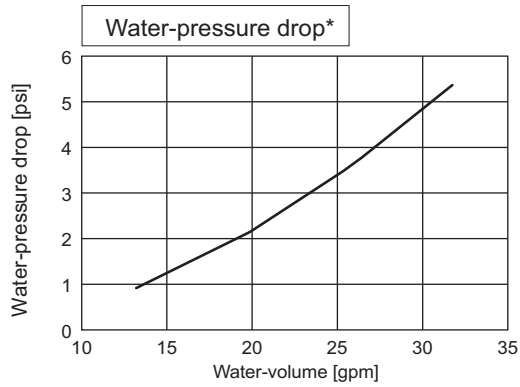
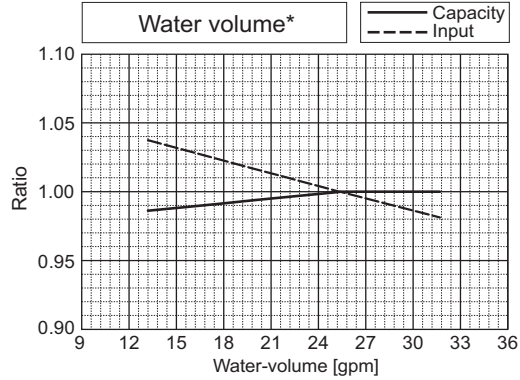
PQHY-		P216TSLMU/YSLMU			
Nominal Cooling Capacity	kW	63.3	Rated Cooling Capacity	kW	60.4
	BTU/h	216,000		BTU/h	206,000
Input	kW	14.03	Input	kW	(Non-Ducted) 12.93 (Ducted) 13.24



PQHY-		P216TSLMU/YSLMU			
Nominal Heating Capacity	kW	71.2	Rated Heating Capacity	kW	68.0
	BTU/h	243,000		BTU/h	232,000
Input	kW	12.88	Input	kW	(Non-Ducted) 11.88 (Ducted) 10.35

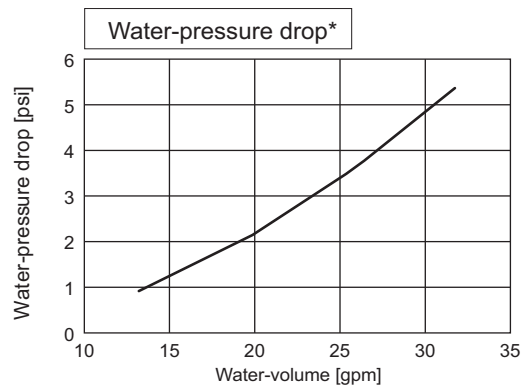
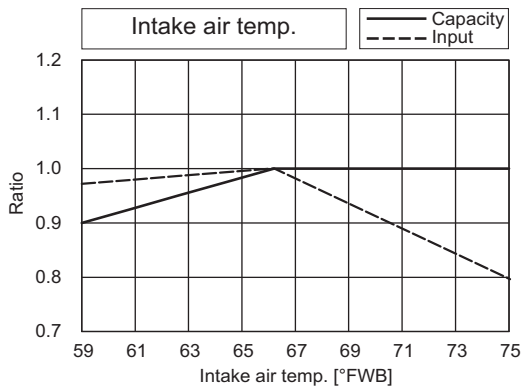
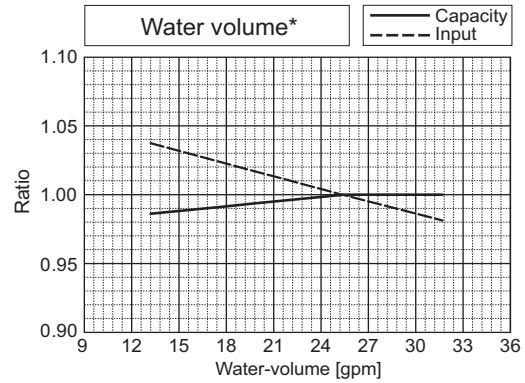
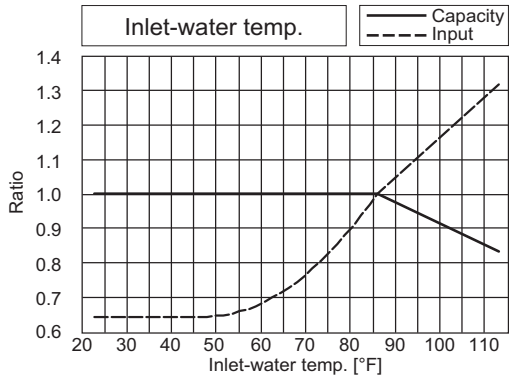


*The drawing indicates characteristic per unit.

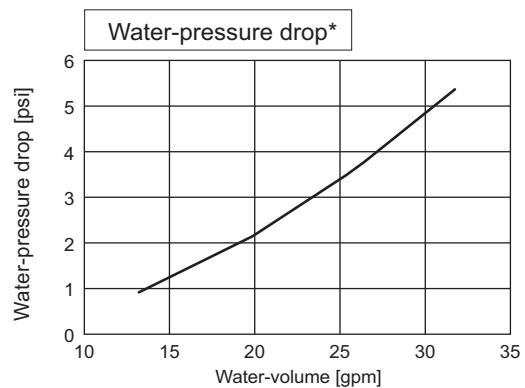
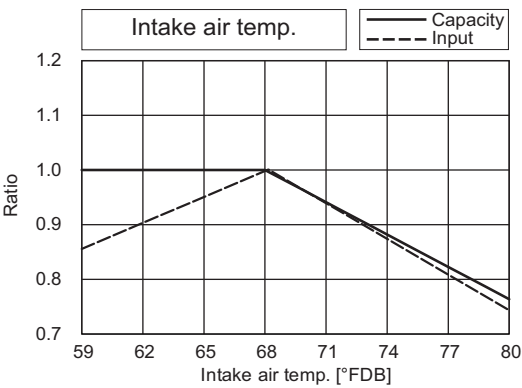
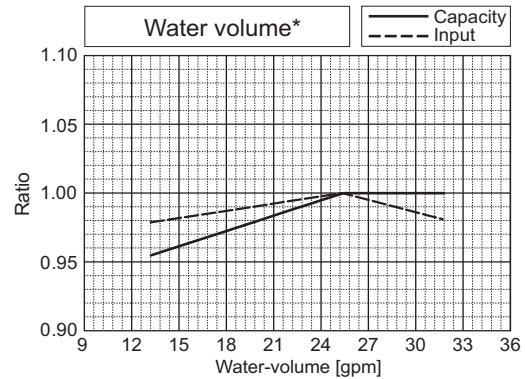
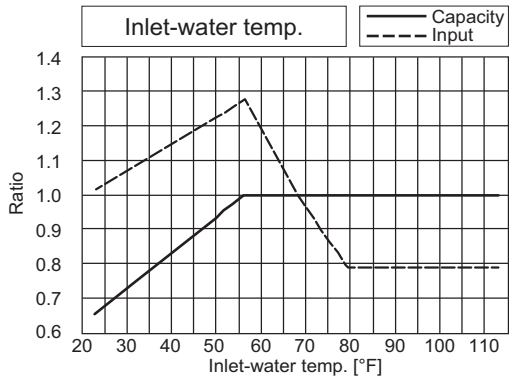


PQHY-		P240TSLMU/YSLMU			
Nominal Cooling Capacity	kW	70.3	Rated Cooling Capacity	kW	66.8
	BTU/h	240,000		BTU/h	228,000
Input	kW	16.89	Input	kW	(Non-Ducted) 15.57 (Ducted) 16.15

*The drawing indicates characteristic per unit.



PQHY-		P240TSLMU/YSLMU			
Nominal Heating Capacity	kW	79.1	Rated Heating Capacity	kW	75.6
	BTU/h	270,000		BTU/h	258,000
Input	kW	14.58	Input	kW	(Non-Ducted) 13.45 (Ducted) 12.02

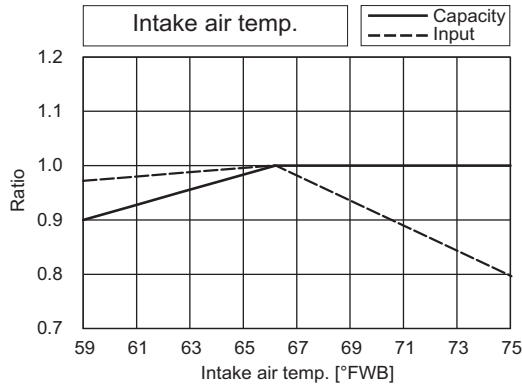
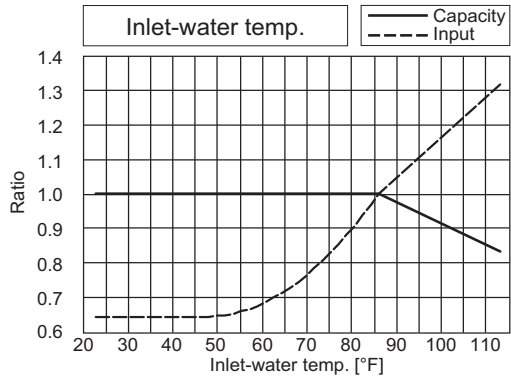


PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

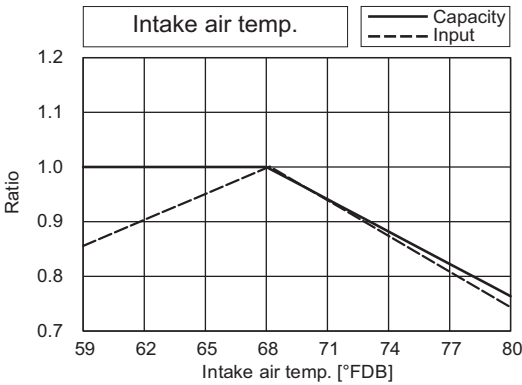
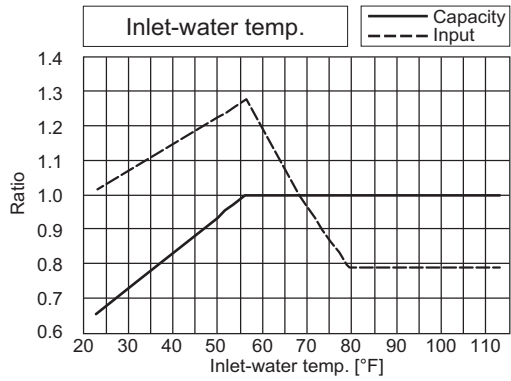
7. CAPACITY TABLES

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

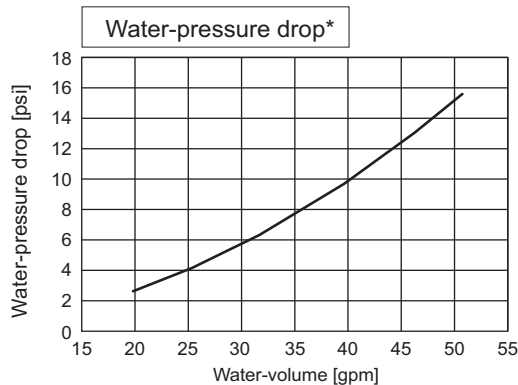
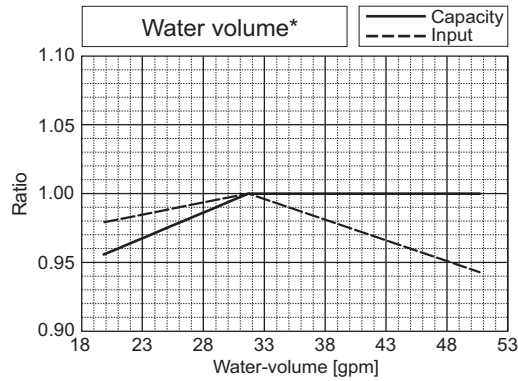
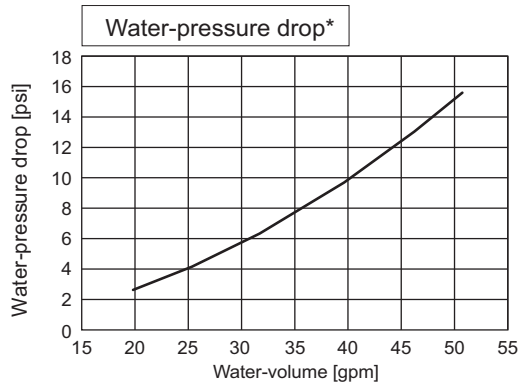
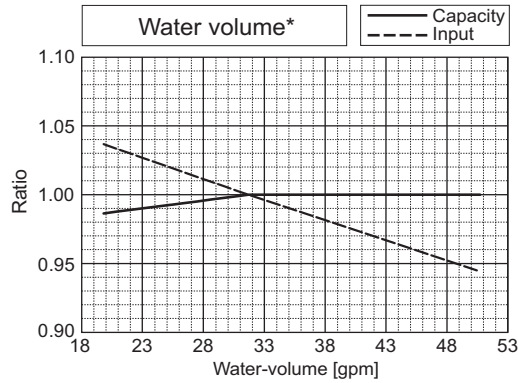
PQHY-		P288TSLMU/YSLMU			
Nominal Cooling Capacity	kW	84.4	Rated Cooling Capacity	kW	80.6
	BTU/h	288,000		BTU/h	275,000
Input	kW	20.42	Input	kW	(Non-Ducted) 18.82 (Ducted) 21.43



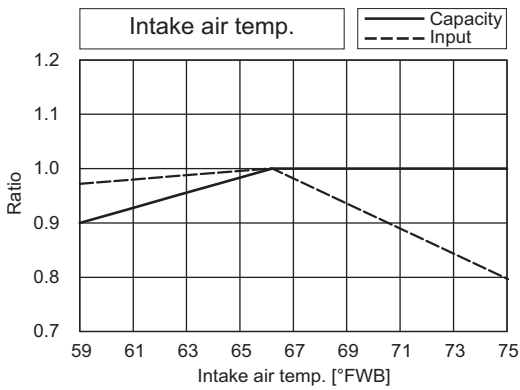
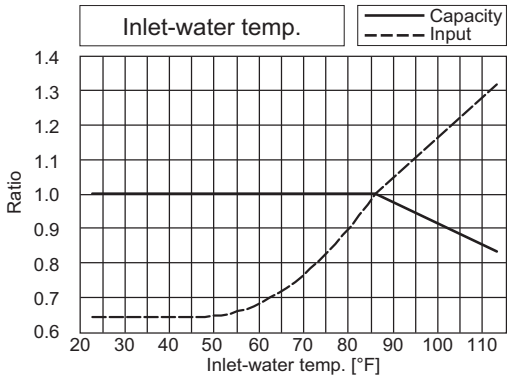
PQHY-		P288TSLMU/YSLMU			
Nominal Heating Capacity	kW	94.7	Rated Heating Capacity	kW	90.3
	BTU/h	323,000		BTU/h	308,000
Input	kW	17.50	Input	kW	(Non-Ducted) 16.13 (Ducted) 16.05



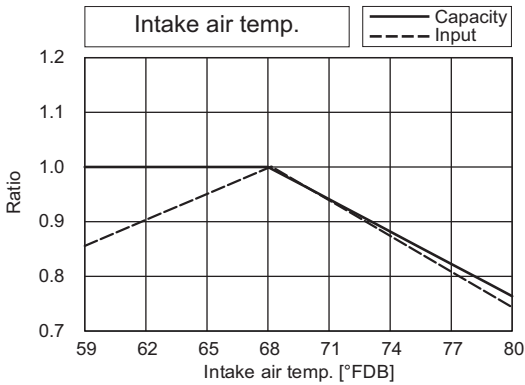
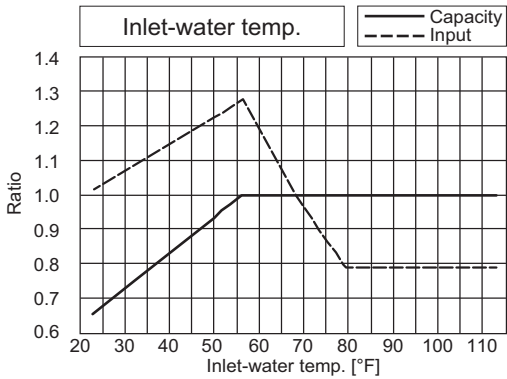
*The drawing indicates characteristic per unit.



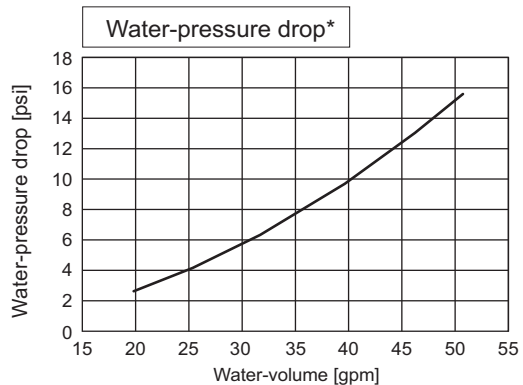
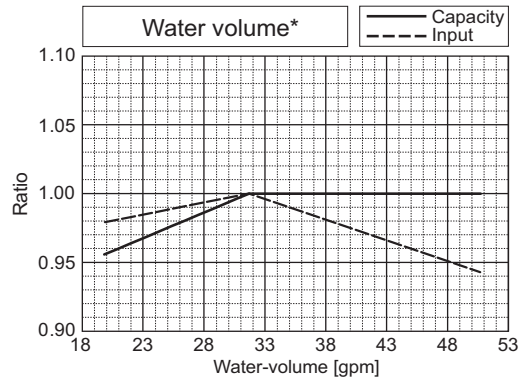
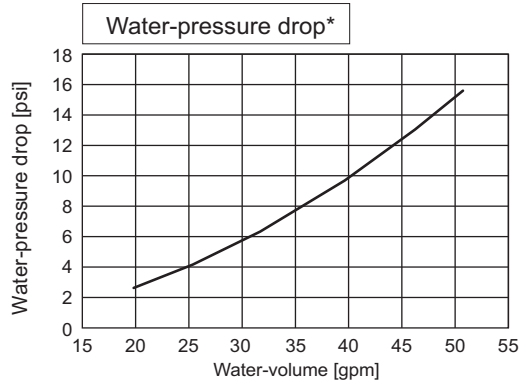
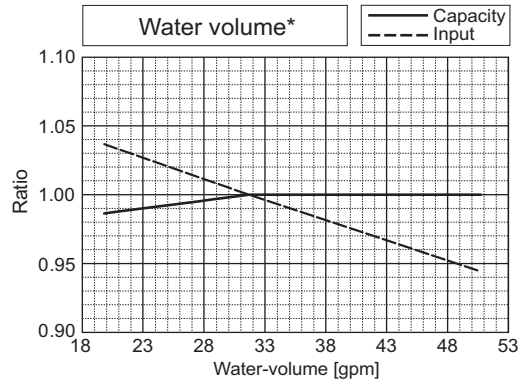
PQHY-		P312TSLMU/YSLMU			
Nominal Cooling Capacity	kW	91.4	Rated Cooling Capacity	kW	87.0
	BTU/h	312,000		BTU/h	297,000
Input	kW	23.41	Input	kW	(Non-Ducted) 21.59 (Ducted) 23.67



PQHY-		P312TSLMU/YSLMU			
Nominal Heating Capacity	kW	102.6	Rated Heating Capacity	kW	97.9
	BTU/h	350,000		BTU/h	334,000
Input	kW	19.11	Input	kW	(Non-Ducted) 17.62 (Ducted) 17.96



*The drawing indicates characteristic per unit.



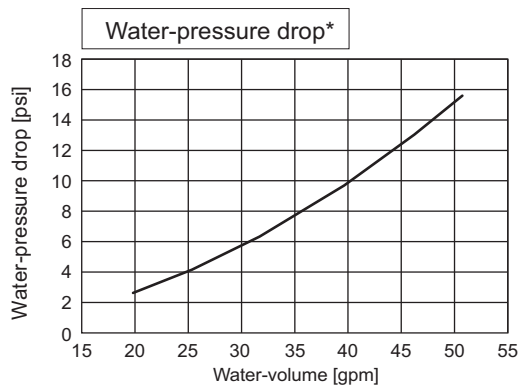
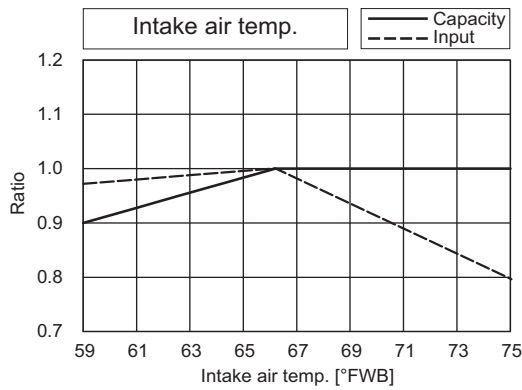
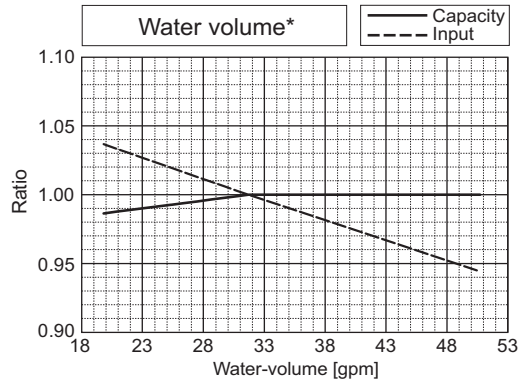
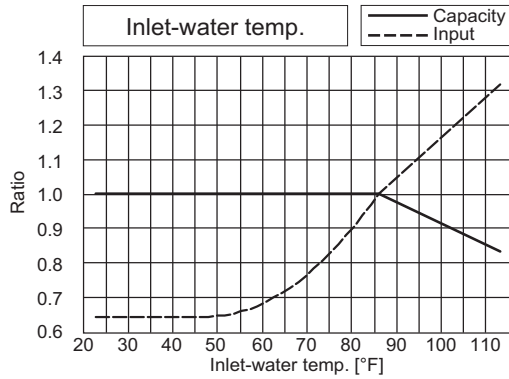
PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

7. CAPACITY TABLES

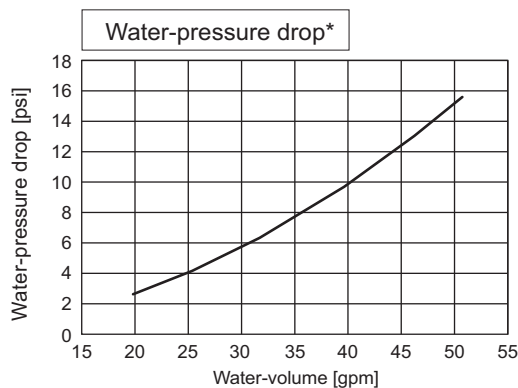
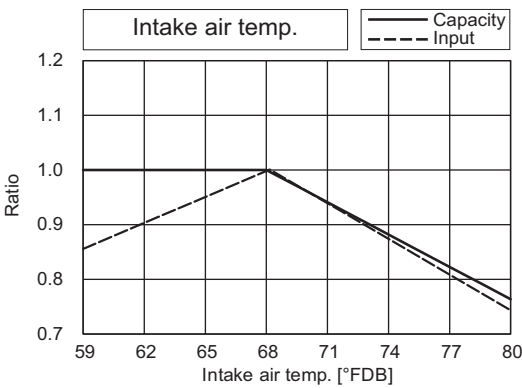
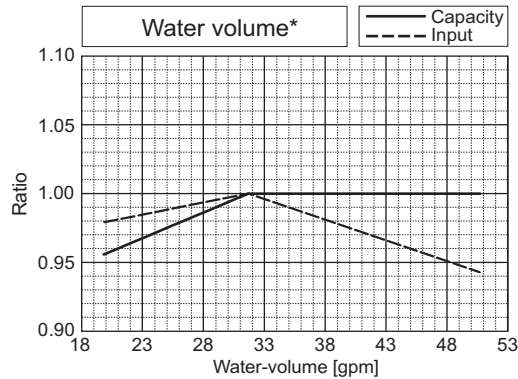
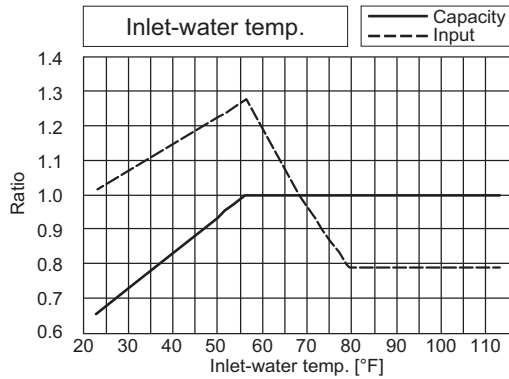
PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

PQHY-		P336TSLMU/YSLMU			
Nominal Cooling Capacity	kW	98.5	Rated Cooling Capacity	kW	93.8
	BTU/h	336,000		BTU/h	320,000
Input	kW	26.84	Input	kW	(Non-Ducted) 24.76 (Ducted) 25.85

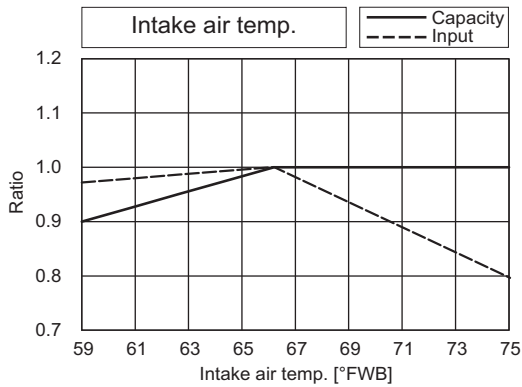
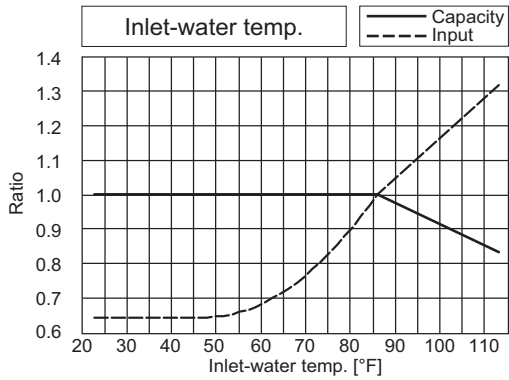
*The drawing indicates characteristic per unit.



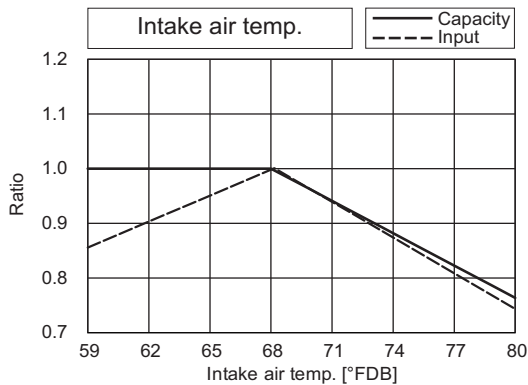
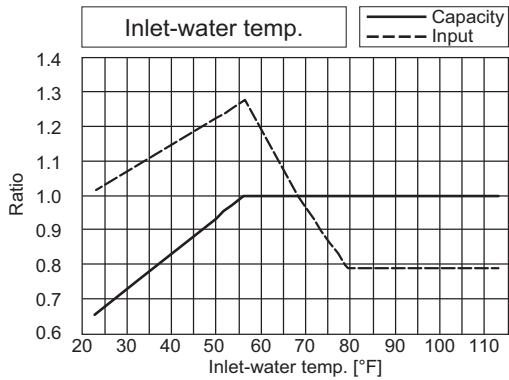
PQHY-		P336TSLMU/YSLMU			
Nominal Heating Capacity	kW	110.8	Rated Heating Capacity	kW	105.8
	BTU/h	378,000		BTU/h	361,000
Input	kW	20.77	Input	kW	(Non-Ducted) 19.16 (Ducted) 20.05



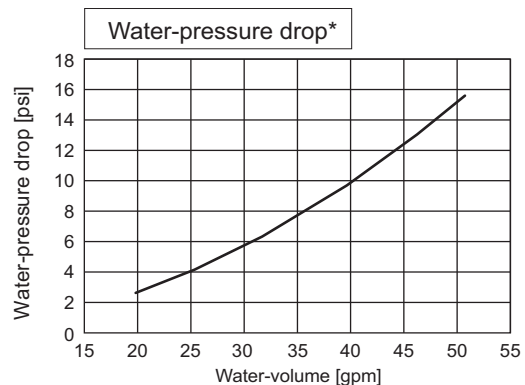
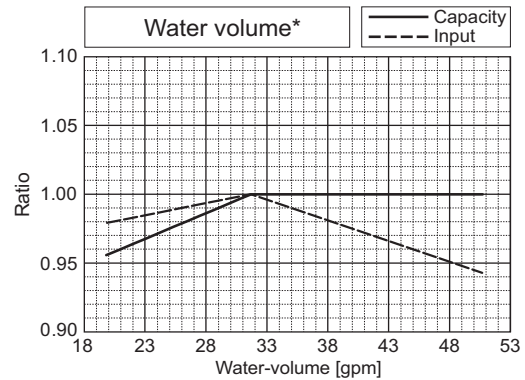
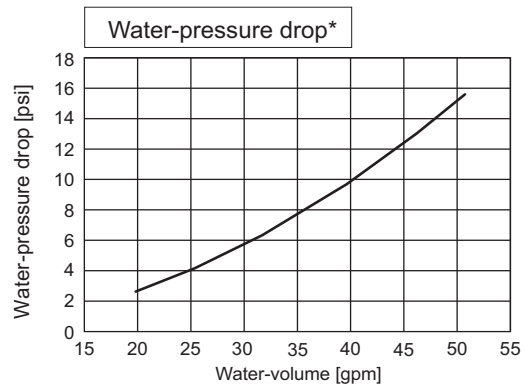
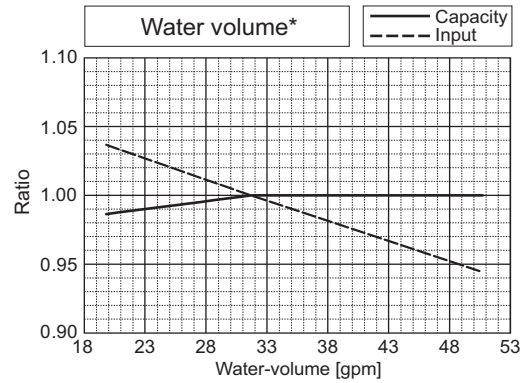
PQHY-		P360TSLMU/YSLMU			
Nominal Cooling Capacity	kW	105.5	Rated Cooling Capacity	kW	100.2
	BTU/h	360,000		BTU/h	342,000
Input	kW	29.43	Input	kW	(Non-Ducted) 27.17 (Ducted) 27.41



PQHY-		P360TSLMU/YSLMU			
Nominal Heating Capacity	kW	118.7	Rated Heating Capacity	kW	113.4
	BTU/h	405,000		BTU/h	387,000
Input	kW	22.85	Input	kW	(Non-Ducted) 21.09 (Ducted) 21.70



*The drawing indicates characteristic per unit.



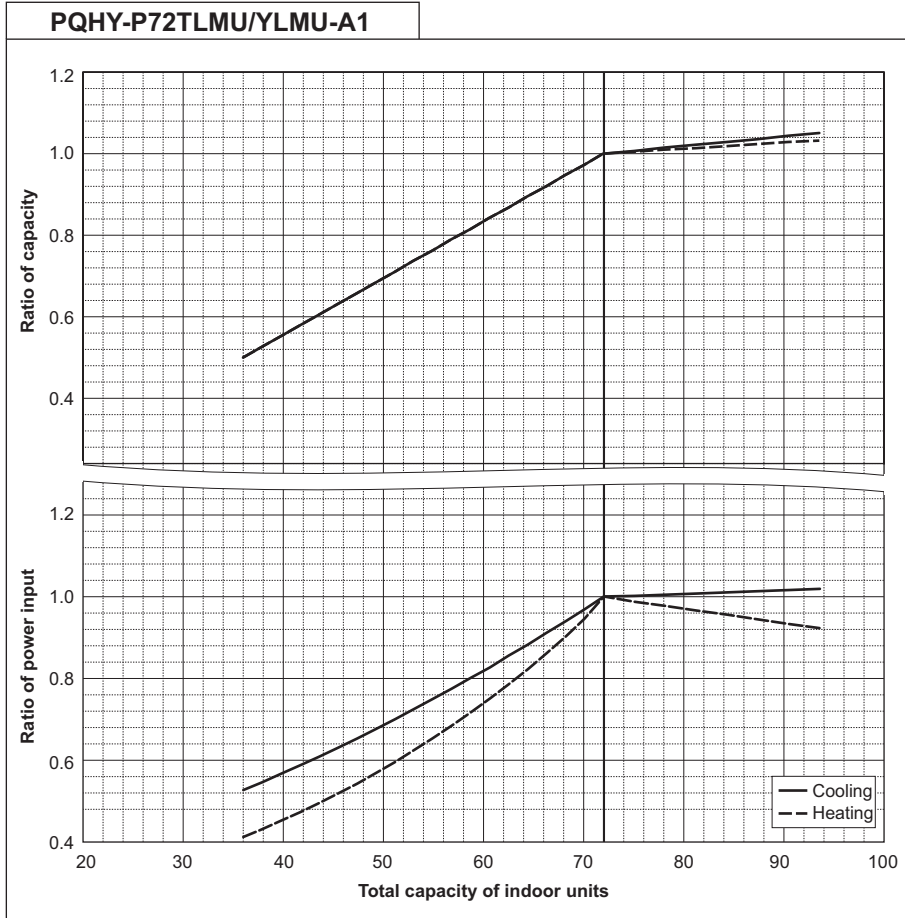
7-2. Correction by total indoor

CITY MULTI system have different capacities and inputs when many combinations of indoor units with different total capacities are connected. Using following tables, the maximum capacity can be found to ensure the system is installed with enough capacity for a particular application.

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

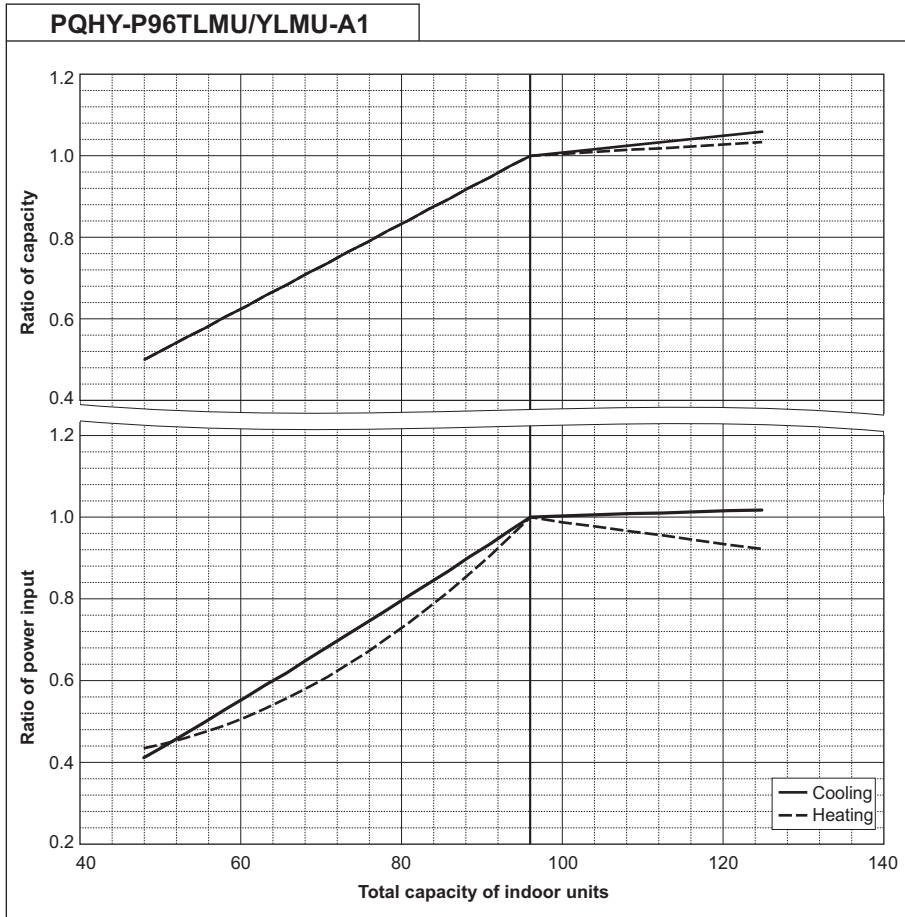
PQHY-		P72TLMU/YLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	72,000	
	kW	21.1	
Input	kW	3.61	
	BTU/h	69,000	
Rated cooling capacity	kW	20.2	
	Input kW	3.34	3.12

PQHY-		P72TLMU/YLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	80,000	
	kW	23.4	
Input	kW	4.04	
	BTU/h	76,000	
Rated Heating capacity	kW	22.3	
	Input kW	3.74	3.36



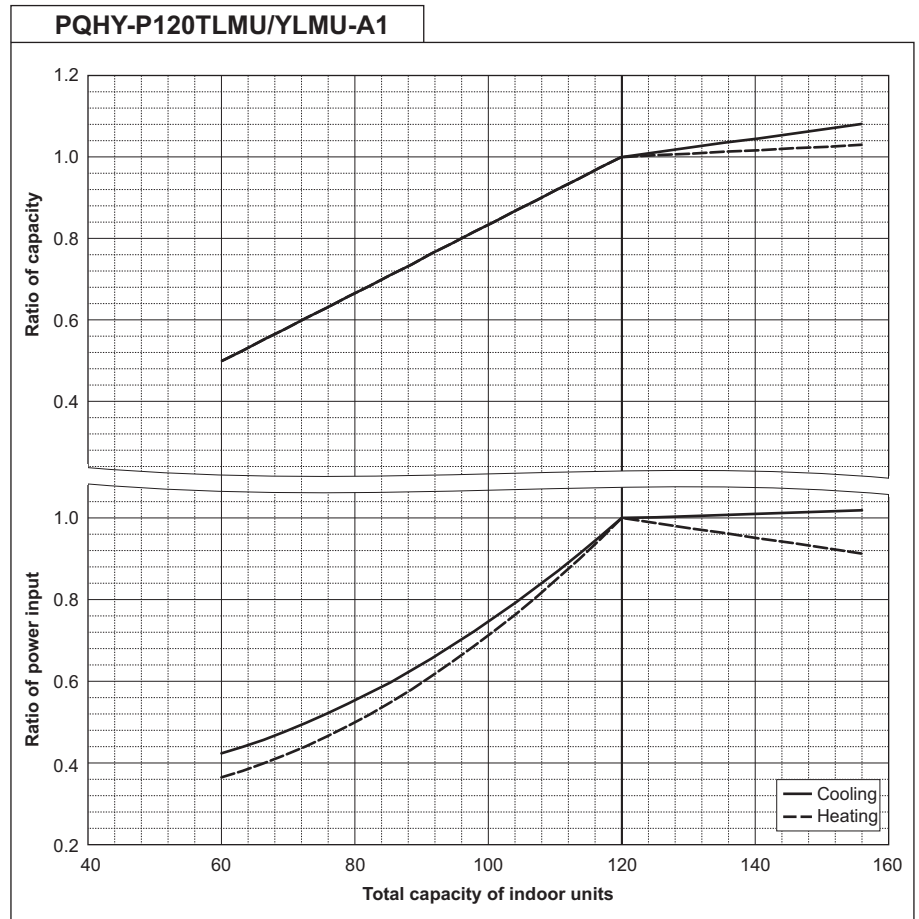
PQHY-		P96TLMU/YLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	96,000	
	kW	28.1	
Input	kW	5.21	
	BTU/h	92,000	
Rated cooling capacity	kW	27.0	
	Input kW	4.82	5.19

PQHY-		P96TLMU/YLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	108,000	
	kW	31.7	
Input	kW	5.64	
	BTU/h	103,000	
Rated Heating capacity	kW	30.2	
	Input kW	5.21	4.48



PQHY-		P120TLMU/YLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	120,000	
	kW	35.2	
Input	kW	7.51	
	BTU/h	114,000	
Rated cooling capacity	kW	33.4	
	Input kW	6.95	7.35

PQHY-		P120TLMU/YLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	135,000	
	kW	39.6	
Input	kW	7.09	
	BTU/h	129,000	
Rated Heating capacity	kW	37.8	
	Input kW	6.55	5.92

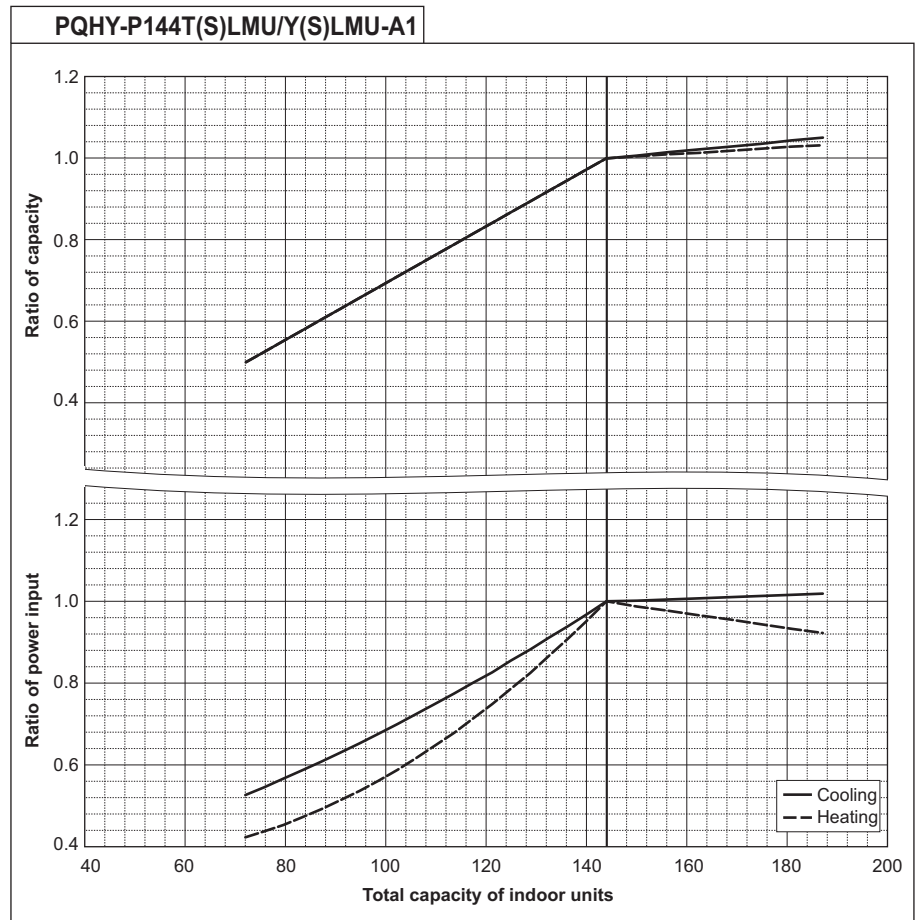


PQHY-		P144TLMU/YLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	144,000	
	kW	42.2	
Input	kW	8.78	
	BTU/h	137,000	
Rated cooling capacity	kW	40.2	
	Input kW	8.07	9.98

PQHY-		P144TLMU/YLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	160,000	
	kW	46.9	
Input	kW	8.11	
	BTU/h	152,000	
Rated Heating capacity	kW	44.5	
	Input kW	7.47	7.90

PQHY-		P144TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	144,000	
	kW	42.2	
Input	kW	7.11	
	BTU/h	137,000	
Rated cooling capacity	kW	40.2	
	Input kW	6.53	7.72

PQHY-		P144TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	160,000	
	kW	46.9	
Input	kW	7.45	
	BTU/h	152,000	
Rated Heating capacity	kW	44.5	
	Input kW	6.86	7.22



PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

PQHY-		P168TLMU/YLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	168,000	
	kW	49.2	
Input	kW	12.05	
	BTU/h	161,000	
Rated cooling capacity	kW	47.2	
	Input kW	11.10	11.88

PQHY-		P168TLMU/YLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	188,000	
	kW	55.1	
Input	kW	9.86	
	BTU/h	179,000	
Rated Heating capacity	kW	52.5	
	Input kW	9.09	9.72

PQHY-		P168TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	168,000	
	kW	49.2	
Input	kW	9.33	
	BTU/h	161,000	
Rated cooling capacity	kW	47.2	
	Input kW	8.58	9.22

PQHY-		P168TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	188,000	
	kW	55.1	
Input	kW	9.34	
	BTU/h	179,000	
Rated Heating capacity	kW	52.5	
	Input kW	8.60	8.03

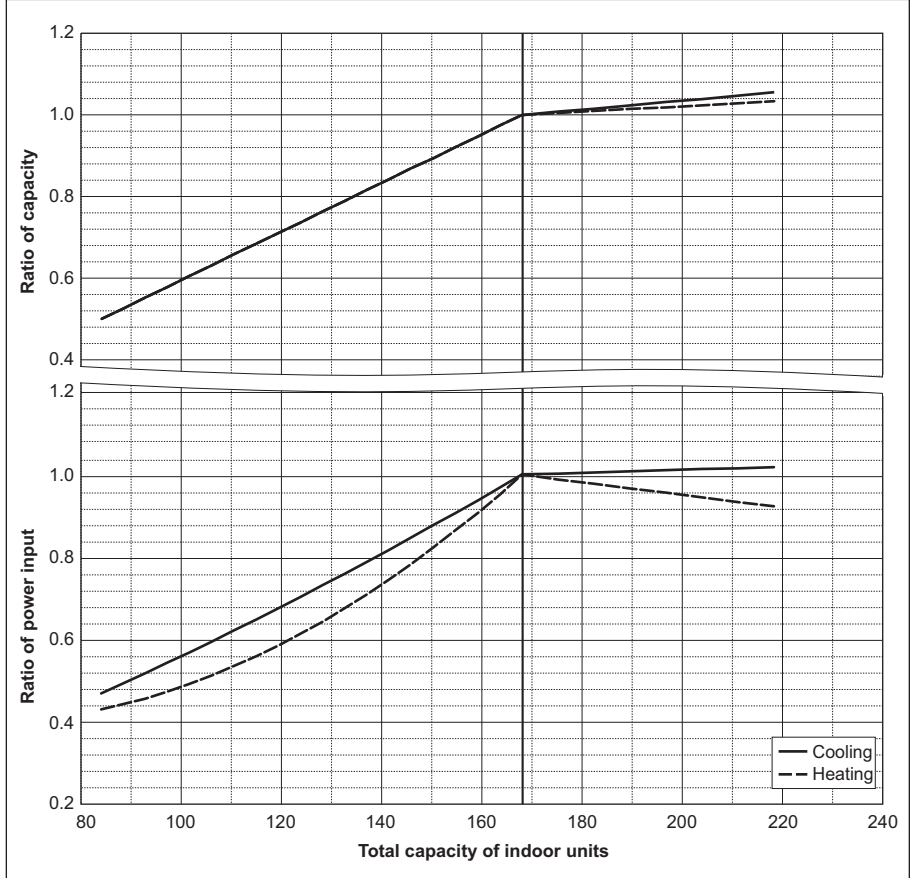
PQHY-		P192TLMU/YLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	192,000	
	kW	56.3	
Input	kW	15.05	
	BTU/h	183,000	
Rated cooling capacity	kW	53.6	
	Input kW	13.87	14.19

PQHY-		P192TLMU/YLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	215,000	
	kW	63.0	
Input	kW	11.90	
	BTU/h	205,000	
Rated Heating capacity	kW	60.1	
	Input kW	10.97	11.56

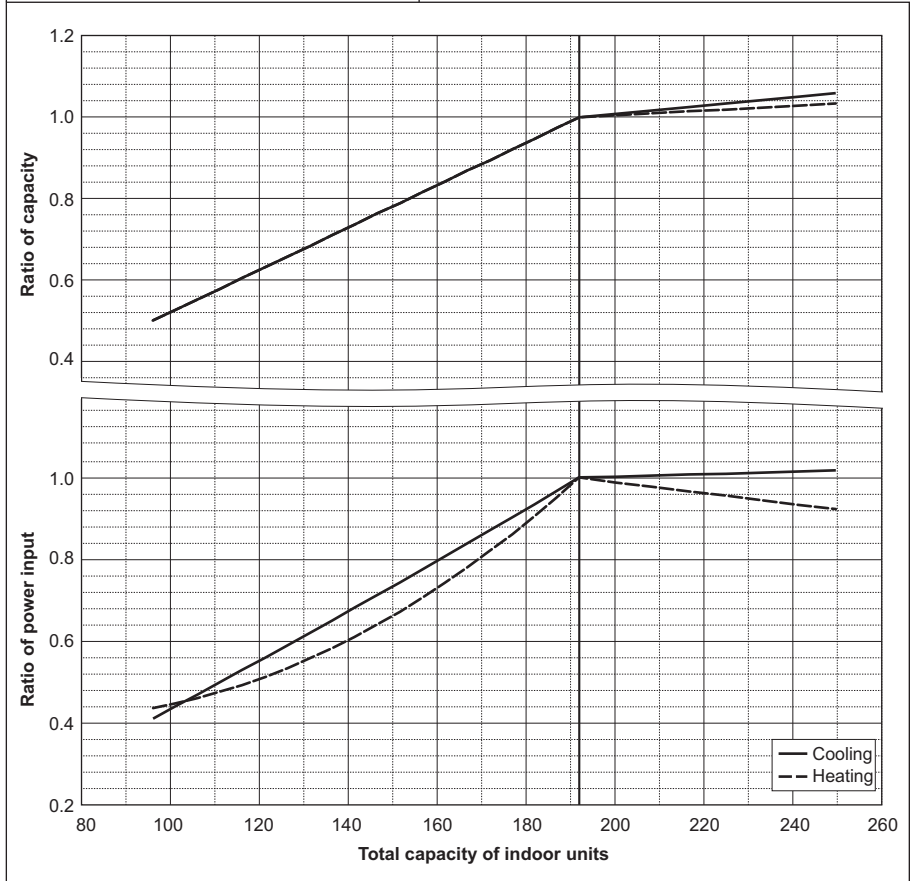
PQHY-		P192TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	192,000	
	kW	56.3	
Input	kW	11.30	
	BTU/h	183,000	
Rated cooling capacity	kW	53.6	
	Input kW	10.40	10.98

PQHY-		P192TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	215,000	
	kW	63.0	
Input	kW	11.02	
	BTU/h	205,000	
Rated Heating capacity	kW	60.1	
	Input kW	10.16	8.90

PQHY-P168T(S)LMU/Y(S)LMU-A1



PQHY-P192T(S)LMU/Y(S)LMU-A1



PQHY-		P216TLMU/YLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	216,000	
	kW	63.3	
Input	kW	19.23	
	BTU/h	206,000	
Rated cooling capacity	kW	60.4	
	Input kW	17.72	16.10

PQHY-		P216TLMU/YLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	243,000	
	kW	71.2	
Input	kW	13.04	
	BTU/h	232,000	
Rated Heating capacity	kW	68.0	
	Input kW	12.01	12.34

PQHY-		P216TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	216,000	
	kW	63.3	
Input	kW	14.03	
	BTU/h	206,000	
Rated cooling capacity	kW	60.4	
	Input kW	12.93	13.24

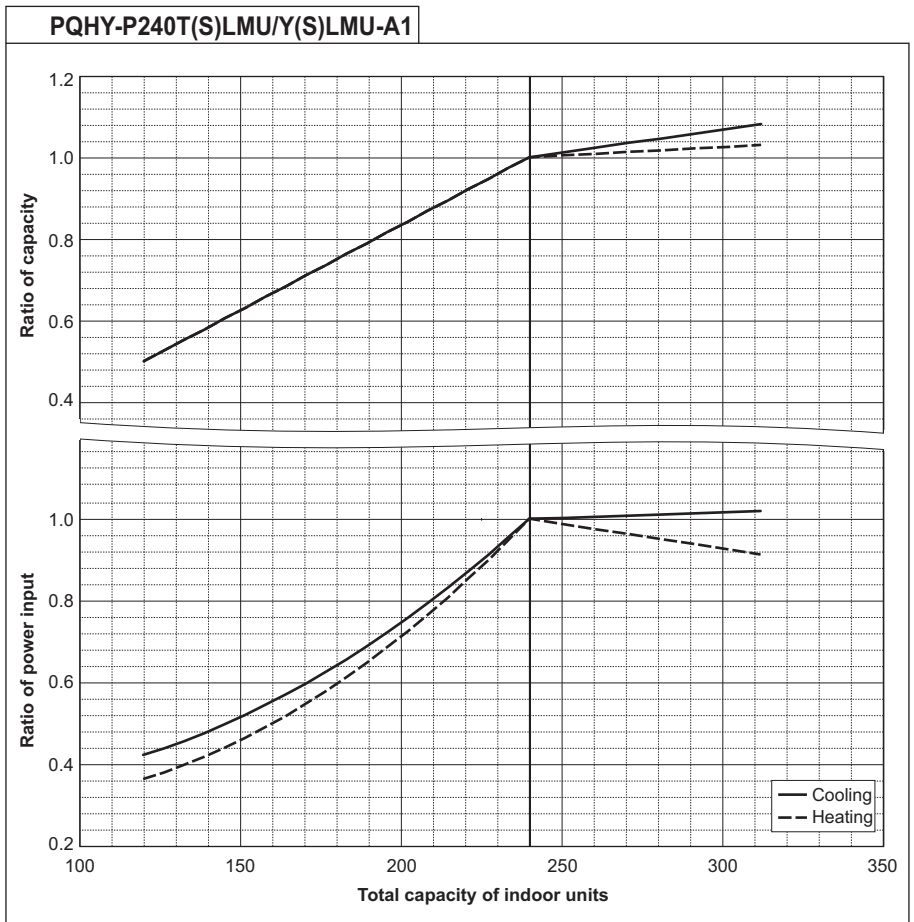
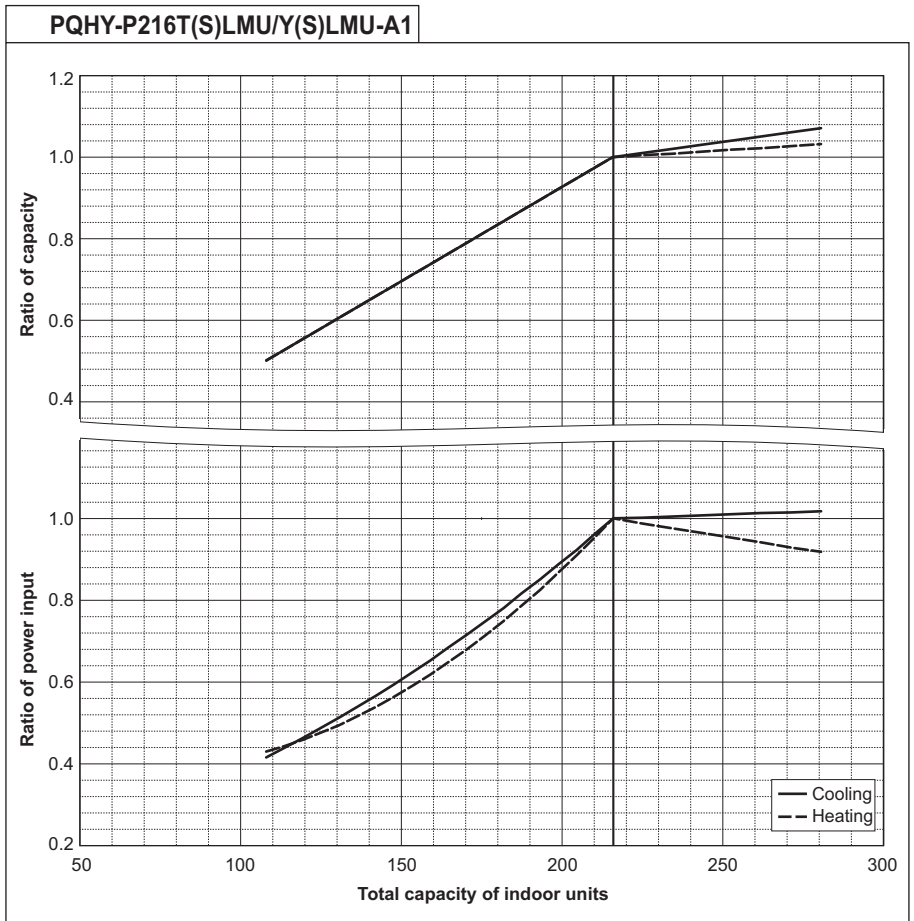
PQHY-		P216TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	243,000	
	kW	71.2	
Input	kW	12.88	
	BTU/h	232,000	
Rated Heating capacity	kW	68.0	
	Input kW	11.88	10.35

PQHY-		P240TLMU/YLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	240,000	
	kW	70.3	
Input	kW	21.14	
	BTU/h	228,000	
Rated cooling capacity	kW	66.8	
	Input kW	19.49	18.74

PQHY-		P240TLMU/YLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	270,000	
	kW	79.1	
Input	kW	15.12	
	BTU/h	258,000	
Rated Heating capacity	kW	75.6	
	Input kW	13.93	14.62

PQHY-		P240TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	240,000	
	kW	70.3	
Input	kW	16.89	
	BTU/h	228,000	
Rated cooling capacity	kW	66.8	
	Input kW	15.57	16.15

PQHY-		P240TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	270,000	
	kW	79.1	
Input	kW	14.58	
	BTU/h	258,000	
Rated Heating capacity	kW	75.6	
	Input kW	13.45	12.02

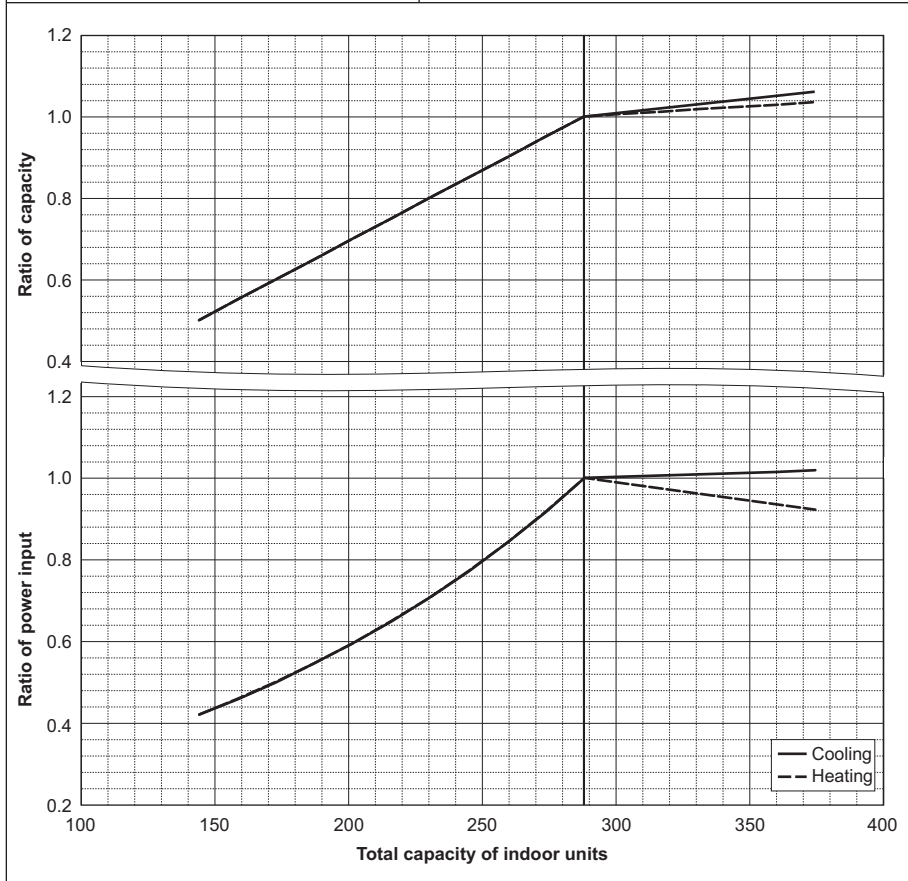


PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

PQHY-		P288TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	288,000	
	kW	84.4	
Input	kW	20.42	
	BTU/h	275,000	
Rated cooling capacity	kW	80.6	
	Input kW	18.82	21.43

PQHY-		P288TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	323,000	
	kW	94.7	
Input	kW	17.50	
	BTU/h	308,000	
Rated Heating capacity	kW	90.3	
	Input kW	16.13	16.05

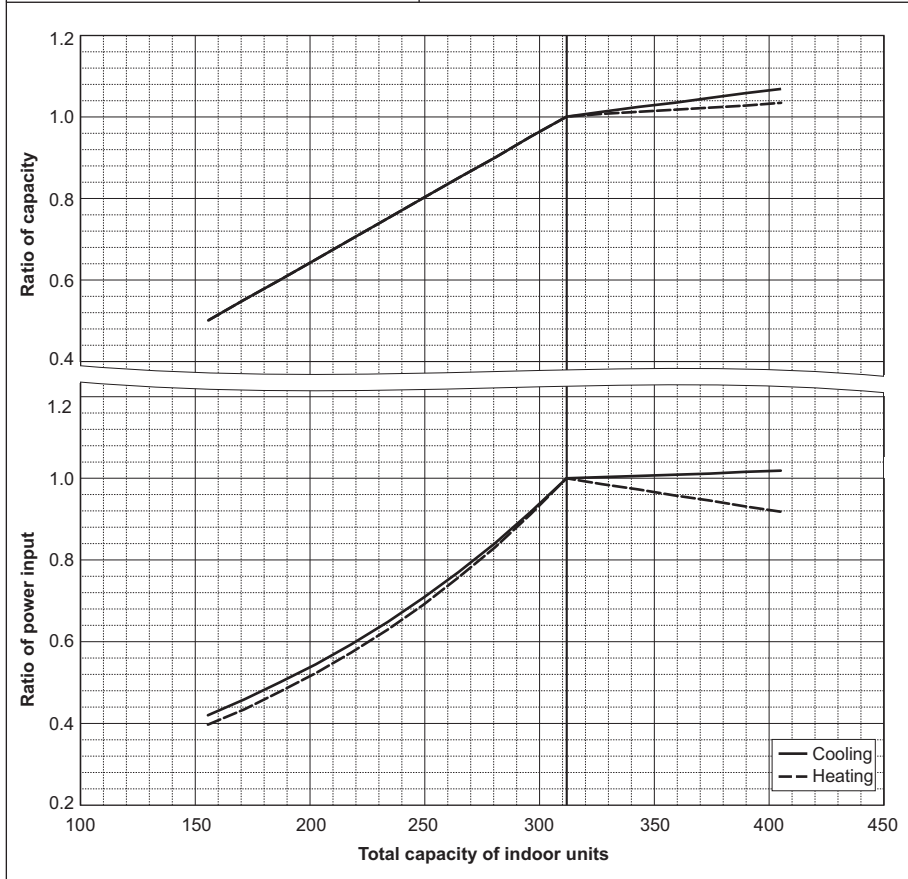
PQHY-P288TSLMU/YSLMU-A1



PQHY-		P312TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	312,000	
	kW	91.4	
Input	kW	23.41	
	BTU/h	297,000	
Rated cooling capacity	kW	87.0	
	Input kW	21.59	23.67

PQHY-		P312TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	350,000	
	kW	102.6	
Input	kW	19.11	
	BTU/h	334,000	
Rated Heating capacity	kW	97.9	
	Input kW	17.62	17.96

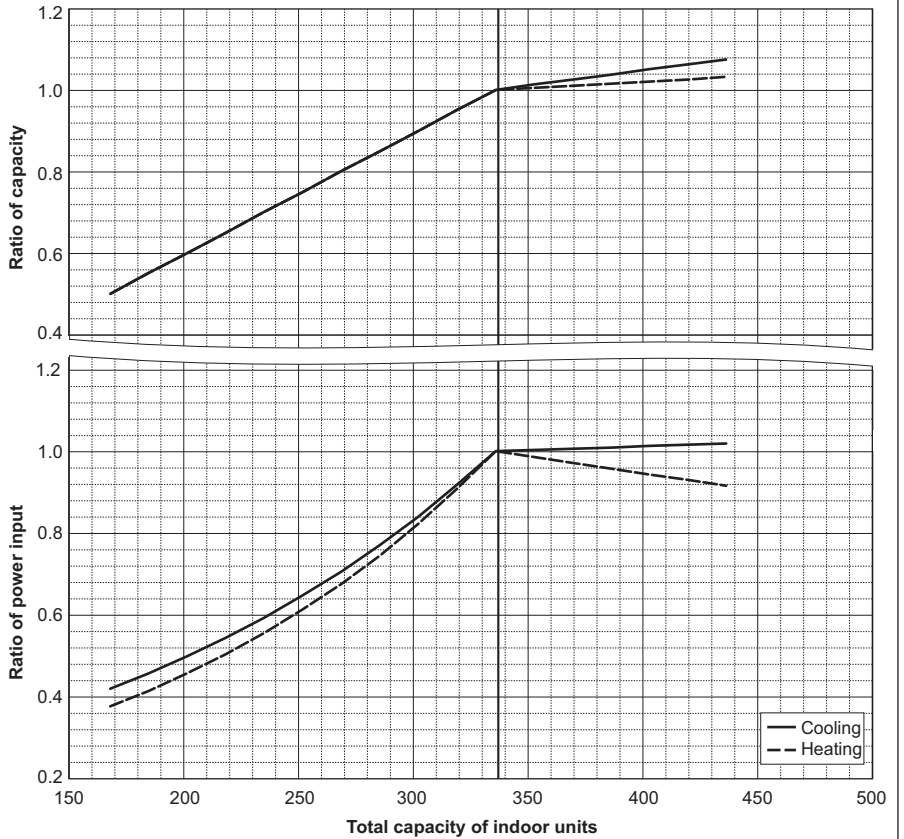
PQHY-P312TSLMU/YSLMU-A1



PQHY-		P336TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	336,000	
	kW	98.5	
Input	kW	26.84	
	BTU/h	320,000	
Rated cooling capacity	kW	93.8	
	Input	kW	24.76 25.85

PQHY-		P336TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	378,000	
	kW	110.8	
Input	kW	20.77	
	BTU/h	361,000	
Rated Heating capacity	kW	105.8	
	Input	kW	19.16 20.05

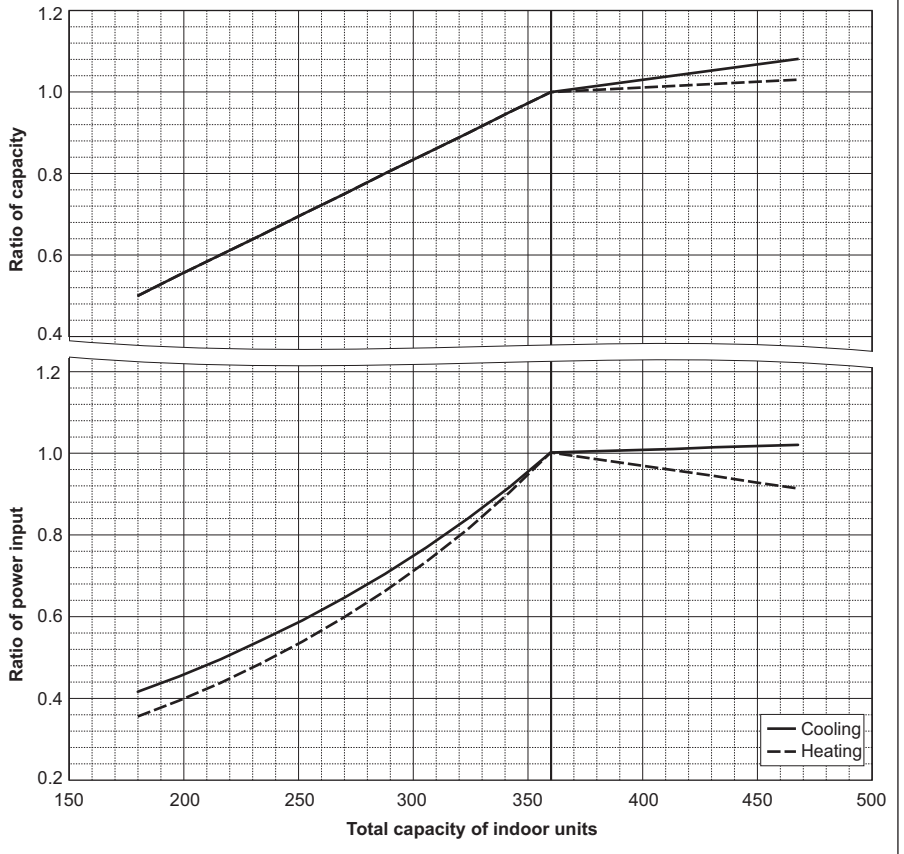
PQHY-P336TSLMU/YSLMU-A1



PQHY-		P360TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	360,000	
	kW	105.5	
Input	kW	29.43	
	BTU/h	342,000	
Rated cooling capacity	kW	100.2	
	Input	kW	27.17 27.41

PQHY-		P360TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	405,000	
	kW	118.7	
Input	kW	22.85	
	BTU/h	387,000	
Rated Heating capacity	kW	113.4	
	Input	kW	21.09 21.70

PQHY-P360TSLMU/YSLMU-A1



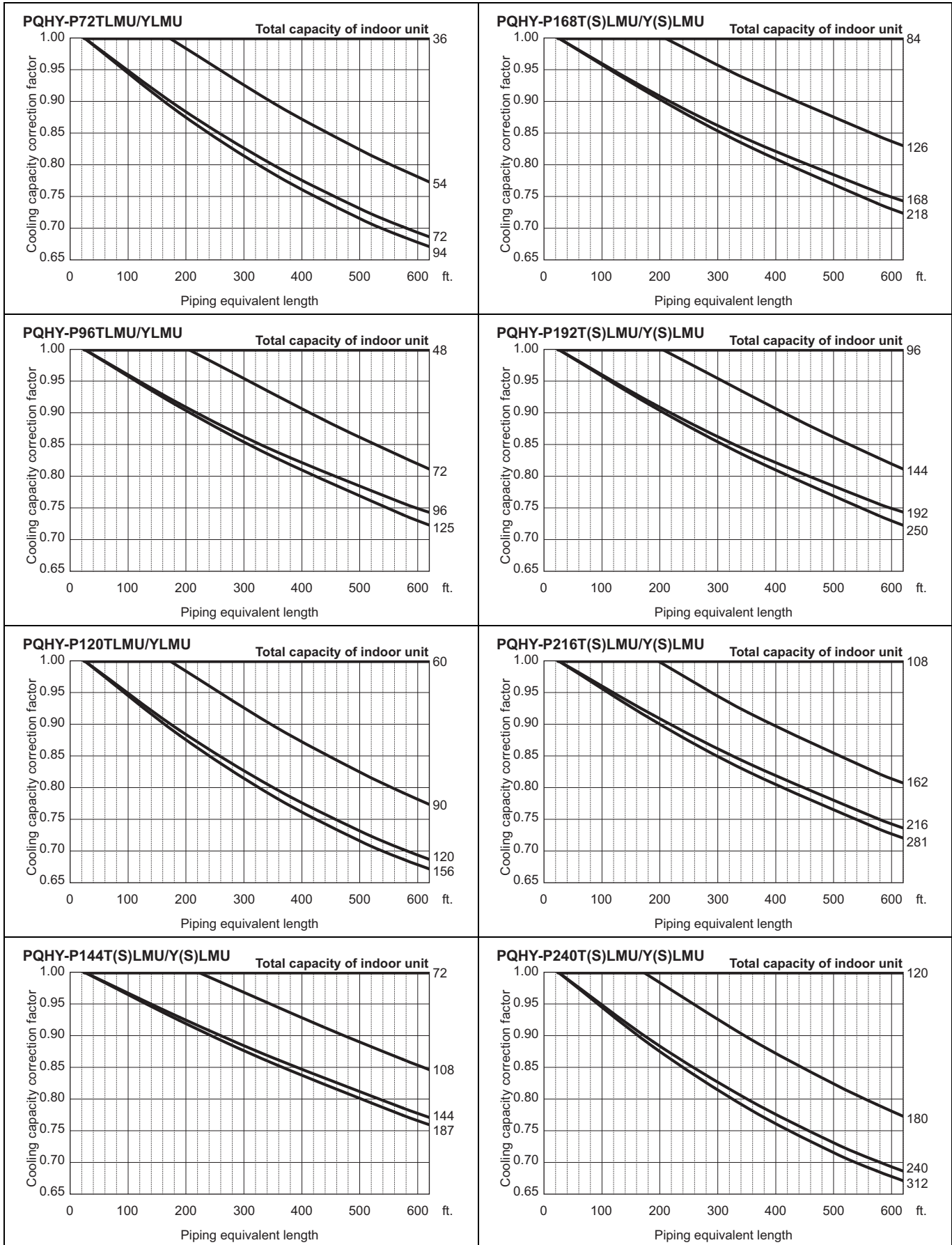
PQHY-P-T(S)LMU-A1, Y(S)LMU-A1

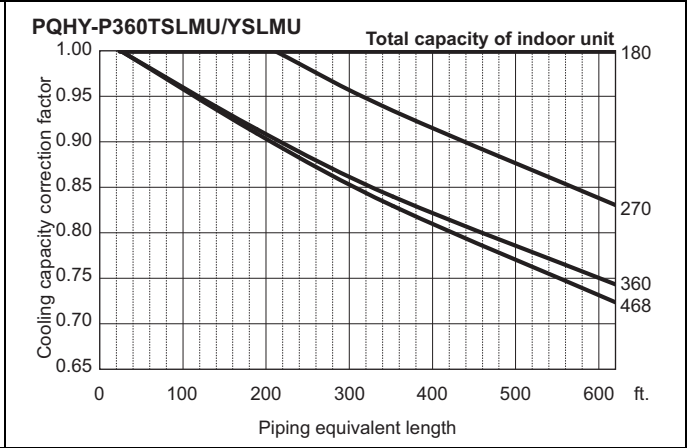
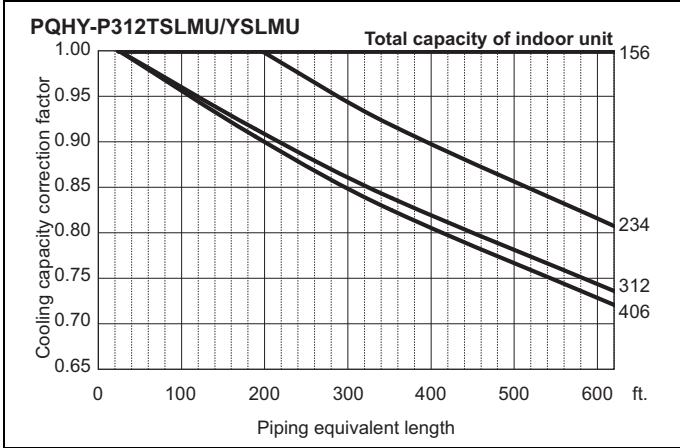
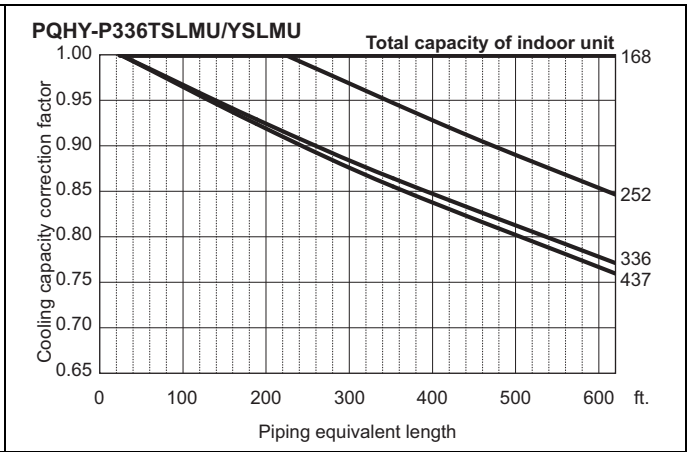
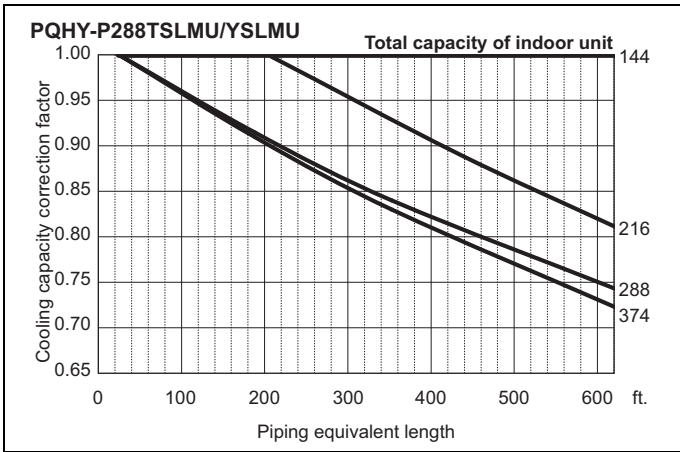
7-3. Correction by refrigerant piping length

CITY MULTI system can extend the piping flexibly within its limitation for the actual situation. However, a decrease of cooling/heating capacity could happen correspondently. Using following correction factor according to the equivalent length of the piping shown at 7-3-1 and 7-3-2, the capacity can be observed. 7-3-3 shows how to obtain the equivalent length of piping.

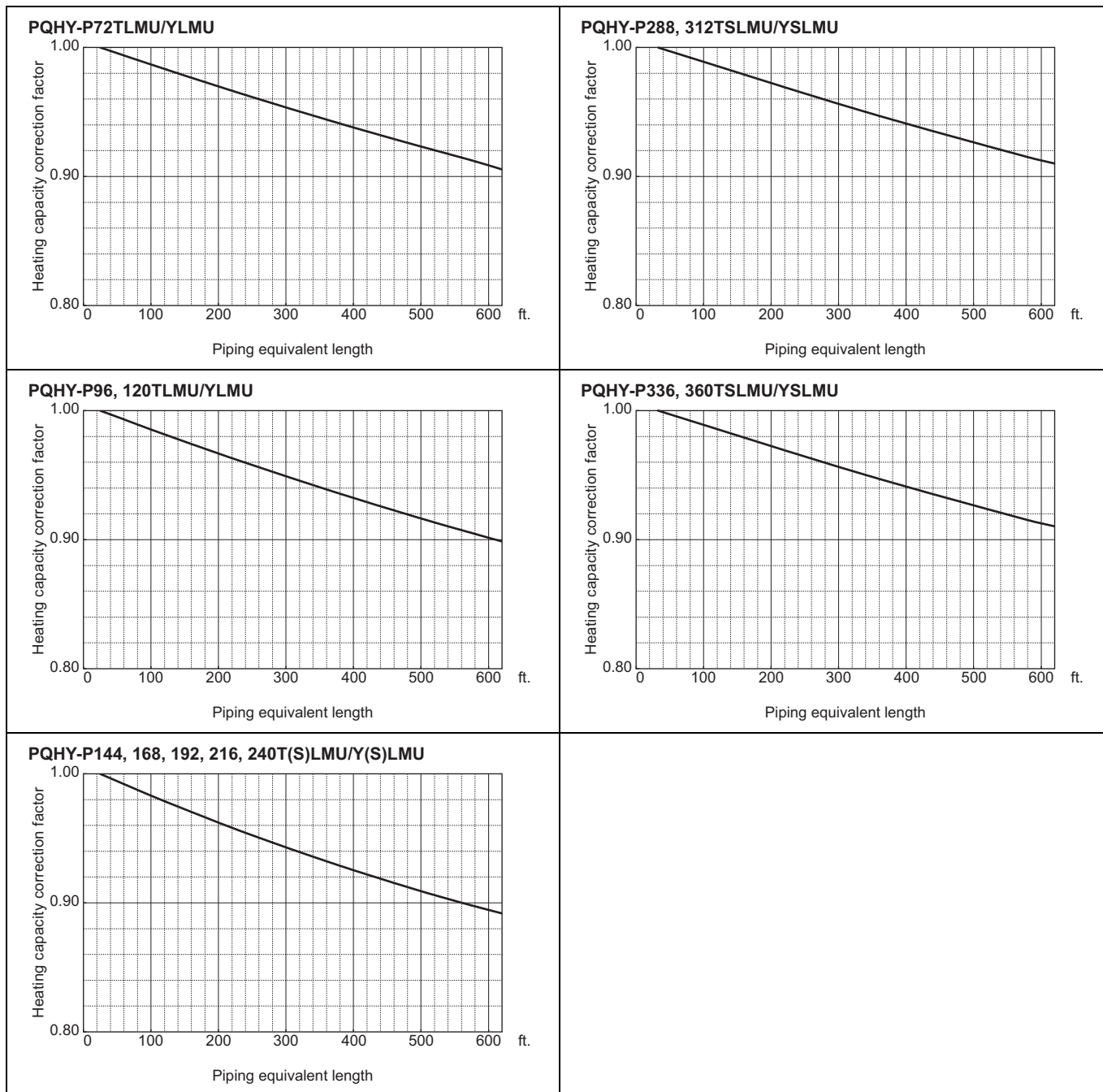
7-3-1. Cooling capacity correction

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1





7-3-2. Heating capacity correction



7-3-3. How to obtain the equivalent piping length

1. PQHY-P72TLMU/YLMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (1.15 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.35 x number of bent on the piping) [m]

2. PQHY-P96, 120TLMU/YLMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (1.38 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.42 x number of bent on the piping) [m]

3. PQHY-P144, 168, 192, 216, 240T(S)LMU/Y(S)LMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (1.64 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.50 x number of bent on the piping) [m]

4. PQHY-P288, 312TSLMU/YSLMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (2.30 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.70 x number of bent on the piping) [m]

5. PQHY-P336, 360TSLMU/YSLMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (2.63 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.80 x number of bent on the piping) [m]

PQHY-P-Z(S)LMU-A1

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1. SPECIFICATIONS

WY-Series-575V

PQHY-P-Z(S)LMU-A1

Heat Source Model		PQHY-P72ZLMU-A1< For Ground source >		
Indoor Model		Non-Ducted	Ducted	
Power source		3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	72,000	
		kW	21.1	
	(575)	Power input	kW	3.61
		Current input	A	4.0
	(Rated)		BTU/h	69,000
			kW	20.2
(575)	Power input	kW	3.34	
	Current input	A	3.7	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)	
	Inlet water	°F	23~113°F (-5~45°C)	
Heating capacity (Nominal)	*3, 4	BTU/h	80,000	
		kW	23.4	
	(575)	Power input	kW	4.04
		Current input	A	4.5
	(Rated)		BTU/h	76,000
			kW	22.3
(575)	Power input	kW	3.74	
	Current input	A	4.1	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)	
	Inlet water	°F	23~113°F (-5~45°C)	
Indoor unit connectable	Total capacity		50~130% of heatsource unit capacity	
	Model/Quantity		P04~P96/1~18	
Sound pressure level (measured in anechoic room)		dB <A>		
Refrigerant		Liquid pipe in. (mm) 3/8 (9.52) Brazed		
piping diameter		Gas pipe in. (mm) 3/4 (19.05) Brazed		
Minimum Circuit Ampacity		A 5		
Maximum Overcurrent Protection		A 15		
Circulating water	Water flow rate	G/h	1,522	
		G/min (gpm)	25.4	
		m³/h	5.76	
		L/min	96	
		cfm	3.4	
	Pressure drop	psi	3.48	
	kPa	24		
Operating volume range	G/h	793 ~ 1,902		
	G/min (gpm)	13.2 ~ 31.7		
	m³/h	3.0 ~ 7.2		
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		
	Motor output	kW	4.3	
	Case heater	kW	-	
	Lubricant	MEL32		
External finish		Galvanized steel sheets		
External dimension H x W x D		in. 43-5/16 x 34-11/16 x 21-11/16		
		mm 1,100 x 880 x 550		
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		
	Control	LEV and HIC circuit		
Net weight		lbs (kg)	404 (183)	
Heat exchanger	Water volume in plate	G	1.32	
		l	5.0	
	Water pressure Max.	psi	290	
		MPa	2.0	
HIC circuit (HIC: Heat Inter-Changer)		Copper pipe, tube-in-tube structure		
Drawing	External	KL94C249		
	Wiring	KE94G421		
Standard attachment	Document	Installation Manual		
	Accessory	Details refer to External Drw		
Optional parts		joint: CMY-Y102SS-G2, CMY-Y102LS-G2 Header: CMY-Y104, 108, 1010C-G		
Remarks		<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 86°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series-575V

Heat Source Model			PQHY-P96ZLMU-A1< For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	96,000		
		kW	28.1		
	(Rated)	Power input	kW	5.21	
		(575) Current input	A	5.8	
		(Rated)	BTU/h	92,000	
	kW		27.0		
	(575)	Power input	kW	4.82	5.19
Current input		A	5.3	5.7	
Temp. range of cooling	Indoor	W.B.	59-75°F (15-24°C)		
	Inlet water	°F	23-113°F (-5-45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h	108,000		
		kW	31.7		
	(Rated)	Power input	kW	5.64	
		(575) Current input	A	6.2	
		(Rated)	BTU/h	103,000	
	kW		30.2		
	(575)	Power input	kW	5.21	4.48
Current input		A	5.8	4.9	
Temp. range of heating	Indoor	D.B.	59-81°F (15-27°C)		
	Inlet water	°F	23-113°F (-5-45°C)		
Indoor unit connectable	Total capacity		50-130% of heatsource unit capacity		
	Model/Quantity		P04~P96/1-24		
Sound pressure level (measured in anechoic room)			dB <A>		
			48.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/8 (9.52) Brazed (1/2 (12.7) Brazed, total length ≥ 90 m)		
	Gas pipe	in. (mm)	7/8 (22.2) Brazed		
Minimum Circuit Ampacity			A		
			7		
Maximum Overcurrent Protection			A		
			15		
Circulating water	Water flow rate	G/h	1,522		
		G/min (gpm)	25.4		
		m³/h	5.76		
		L/min	96		
		cfm	3.4		
	Pressure drop	psi	3.48		
		kPa	24		
Operating volume range	G/h	793 ~ 1,902			
	G/min (gpm)	13.2 ~ 31.7			
	m³/h	3.0 ~ 7.2			
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1		
	Starting method		Inverter		
	Motor output	kW	6.0		
	Case heater	kW	-		
	Lubricant		MEL32		
External finish			Galvanized steel sheets		
External dimension H x W x D	in.		43-5/16 x 34-11/16 x 21-11/16		
	mm		1,100 x 880 x 550		
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit		Over-heat protection, Over-current protection		
	Compressor		Over-heat protection		
Refrigerant	Type x original charge		R410A x 11 lbs + 1 oz (5.0 kg)		
	Control		LEV and HIC circuit		
Net weight		lbs (kg)	404 (183)		
Heat exchanger			plate type		
	Water volume in plate	G	1.32		
		l	5.0		
	Water pressure Max.	psi	290		
MPa		2.0			
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing	External		KL94C249		
	Wiring		KE94G421		
Standard attachment	Document		Installation Manual		
	Accessory		Details refer to External Drw		
Optional parts			joint: CMY-Y102SS-G2, CMY-Y102LS-G2 Header: CMY-Y104, 108, 1010C-G		
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHR1 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h = kW x 3.412
2. <PWFY-P36/72NMMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm = m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHR1 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs = kg/0.4536
4. <PWFY-P36/72NMMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

PQHY-P-Z(S)LMU-A1

1. SPECIFICATIONS

WY-Series-575V

PQHY-P-Z(S)LMU-A1

Heat Source Model			PQHY-P120ZLMU-A1< For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	120,000		
		kW	35.2		
	(575)	Power input	kW	7.51	
		Current input	A	8.3	
	(Rated)	(575)	BTU/h	114,000	
			kW	33.4	
	(575)	Power input	kW	6.95	7.35
		Current input	A	7.7	8.2
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h	135,000		
		kW	39.6		
	(575)	Power input	kW	7.09	
		Current input	A	7.9	
	(Rated)	(575)	BTU/h	129,000	
			kW	37.8	
	(575)	Power input	kW	6.55	5.92
		Current input	A	7.3	6.6
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity		50~130% of heatsource unit capacity		
	Model/Quantity		P04~P96/1~30		
Sound pressure level (measured in anechoic room)			dB <A>		
Refrigerant			54.0		
piping diameter	Liquid pipe	in. (mm)	3/8 (9.52) Brazed (1/2 (12.7) Brazed, total length >= 40 m)		
	Gas pipe	in. (mm)	7/8 (22.2) Brazed		
Minimum Circuit Ampacity			A		
Maximum Overcurrent Protection			A		
Circulating water	Water flow rate	G/h	1,522		
		G/min (gpm)	25.4		
		m³/h	5.76		
		L/min	96		
		cfm	3.4		
	Pressure drop	psi	3.48		
		kPa	24		
	Operating volume range	G/h	793 ~ 1,902		
G/min (gpm)		13.2 ~ 31.7			
m³/h		3.0 ~ 7.2			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1			
	Starting method	Inverter			
	Motor output	kW	7.7		
	Case heater	kW	-		
	Lubricant	MEL32			
External finish			Galvanized steel sheets		
External dimension H x W x D			in. mm		
			43-5/16 x 34-11/16 x 21-11/16 1,100 x 880 x 550		
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			
	Inverter circuit	Over-heat protection, Over-current protection			
	Compressor	Over-heat protection			
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)			
	Control	LEV and HIC circuit			
Net weight			lbs (kg)		
			404 (183)		
Heat exchanger	Water volume in plate	G	plate type		
		l	1.32		
	Water pressure Max.	psi	5.0		
		MPa	290		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing	External	KL94C249			
	Wiring	KE94G421			
Standard attachment	Document	Installation Manual			
	Accessory	Details refer to External Drw			
Optional parts			joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2 Header: CMY-Y104, 108, 1010C-G		
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 86°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series-575V

Heat Source Model		PQHY-P144ZLMU-A1< For Ground source >		
Indoor Model		Non-Ducted	Ducted	
Power source		3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	144,000	
		kW	42.2	
	(575)	Power input	kW	8.78
		Current input	A	9.7
	(Rated)		BTU/h	137,000
			kW	40.2
	(575)	Power input	kW	8.07
Current input		A	9.0	
Temp. range of cooling	Indoor	W.B.	59-75°F (15-24°C)	
	Inlet water	°F	23-113°F (-5-45°C)	
Heating capacity (Nominal)	*3, 4	BTU/h	160,000	
		kW	46.9	
	(575)	Power input	kW	8.11
		Current input	A	9.0
	(Rated)		BTU/h	152,000
			kW	44.5
	(575)	Power input	kW	7.47
Current input		A	8.3	
Temp. range of heating	Indoor	D.B.	59-81°F (15-27°C)	
	Inlet water	°F	23-113°F (-5-45°C)	
Indoor unit connectable	Total capacity	50-130% of heatsource unit capacity		
	Model/Quantity	P04-P96/1-36		
Sound pressure level (measured in anechoic room)		dB <A>		
		54.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	1/2 (12.7) Braze	
	Gas pipe	in. (mm)	1-1/8 (28.58) Braze	
Minimum Circuit Ampacity		A		
		13		
Maximum Overcurrent Protection		A		
		20		
Circulating water	Water flow rate	G/h	1,902	
		G/min (gpm)	31.7	
		m³/h	7.20	
		L/min	120	
		cfm	4.2	
	Pressure drop	psi	6.38	
		kPa	44	
Operating volume range	G/h	1,189 ~ 3,054		
	G/min (gpm)	19.8 ~ 50.9		
	m³/h	4.5 ~ 11.6		
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1	
	Starting method		Inverter	
	Motor output	kW	9.5	
	Case heater	kW	-	
	Lubricant	MEL32		
External finish		Galvanized steel sheets		
External dimension H x W x D	in.	57-1/8 x 34-11/16 x 21-11/16		
	mm	1,450 x 880 x 550		
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)		
	Control	LEV and HIC circuit		
Net weight	lbs (kg)	505 (229)		
Heat exchanger			plate type	
	Water volume in plate	G	1.32	
		l	5.0	
	Water pressure Max.	psi	290	
MPa		2.0		
HIC circuit (HIC: Heat Inter-Changer)		Copper pipe, tube-in-tube structure		
Drawing	External	KL94C250		
	Wiring	KE94G421		
Standard	Document	Installation Manual		
attachment	Accessory	Details refer to External Drw		
Optional parts		joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2 Header: CMY-Y104, 108, 1010C-G		
Remarks	<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.)</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>			

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHR1 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHR1 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQHY-P-Z(S)LMU-A1

Heat Source Model			PQHY-P168ZLMU-A1< For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	168,000		
		kW	49.2		
	(575)	Power input	kW	12.05	
		Current input	A	13.4	
	(Rated)	(575)	BTU/h	161,000	
			kW	47.2	
	(575)	Power input	kW	11.10	11.88
		Current input	A	12.3	13.2
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h	188,000		
		kW	55.1		
	(575)	Power input	kW	9.86	
		Current input	A	11.0	
	(Rated)	(575)	BTU/h	179,000	
			kW	52.5	
	(575)	Power input	kW	9.09	9.72
		Current input	A	10.1	10.8
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity		50~130% of heatsource unit capacity		
	Model/Quantity		P04~P96/1~42		
Sound pressure level (measured in anechoic room)			dB <A>		
Refrigerant piping diameter			56.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Brazed		
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		
Minimum Circuit Ampacity			A		
Maximum Overcurrent Protection			A		
Circulating water	Water flow rate	G/h	1,902		
		G/min (gpm)	31.7		
		m³/h	7.20		
		L/min	120		
		cfm	4.2		
	Pressure drop	psi	6.38		
		kPa	44		
	Operating volume range	G/h	1,189 ~ 3,054		
G/min (gpm)		19.8 ~ 50.9			
m³/h		4.5 ~ 11.6			
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1		
	Starting method		Inverter		
	Motor output	kW	11.0		
	Case heater	kW	-		
	Lubricant		MEL32		
External finish			Galvanized steel sheets		
External dimension H x W x D			in. mm		
			57-1/8 x 34-11/16 x 21-11/16 1,450 x 880 x 550		
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit		Over-heat protection, Over-current protection		
	Compressor		Over-heat protection		
Refrigerant	Type x original charge		R410A x 13 lbs + 4 oz (6.0 kg)		
	Control		LEV and HIC circuit		
Net weight			lbs (kg)		
			505 (229)		
Heat exchanger	Water volume in plate	G	plate type		
		l	1.32		
	Water pressure Max.	psi	5.0		
		MPa	290		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing	External		KL94C250		
	Wiring		KE94G421		
Standard attachment	Document		Installation Manual		
	Accessory		Details refer to External Drw		
Optional parts			joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2 Header: CMY-Y104, 108, 1010C-G		
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 86°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series-575V

Heat Source Model		PQHY-P192ZLMU-A1< For Ground source >		
Indoor Model		Non-Ducted	Ducted	
Power source		3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	192,000	
		kW	56.3	
	(575)	Power input	kW	15.05
		Current input	A	16.7
	(Rated)		BTU/h	183,000
			kW	53.6
(575)	Power input	kW	13.87	
	Current input	A	15.4	
Temp. range of cooling	Indoor	W.B.	59-75°F (15-24°C)	
	Inlet water	°F	23-113°F (-5-45°C)	
Heating capacity (Nominal)	*3, 4	BTU/h	215,000	
		kW	63.0	
	(575)	Power input	kW	11.90
		Current input	A	13.2
	(Rated)		BTU/h	205,000
			kW	60.1
(575)	Power input	kW	10.97	
	Current input	A	12.2	
Temp. range of heating	Indoor	D.B.	59-81°F (15-27°C)	
	Inlet water	°F	23-113°F (-5-45°C)	
Indoor unit connectable	Total capacity	50-130% of heatsource unit capacity		
	Model/Quantity	P04~P96/1-48		
Sound pressure level (measured in anechoic room)		dB <A>		
		58.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Brazed	
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed	
Minimum Circuit Ampacity		A		
		20		
Maximum Overcurrent Protection		A		
		30		
Circulating water	Water flow rate	G/h	1,902	
		G/min (gpm)	31.7	
		m³/h	7.20	
		L/min	120	
		cfm	4.2	
	Pressure drop	psi	6.38	
		kPa	44	
	Operating volume range	G/h	1,189 ~ 3,054	
G/min (gpm)		19.8 ~ 50.9		
m³/h		4.5 ~ 11.6		
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1	
	Starting method		Inverter	
	Motor output	kW	12.4	
	Case heater	kW	-	
	Lubricant	MEL32		
External finish		Galvanized steel sheets		
External dimension H x W x D	in.	57-1/8 x 34-11/16 x 21-11/16		
	mm	1,450 x 880 x 550		
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit		Over-heat protection, Over-current protection	
	Compressor		Over-heat protection	
Refrigerant	Type x original charge		R410A x 13 lbs + 4 oz (6.0 kg)	
	Control		LEV and HIC circuit	
Net weight	lbs (kg)	505 (229)		
Heat exchanger			plate type	
	Water volume in plate	G	1.32	
		l	5.0	
	Water pressure Max.	psi	290	
MPa		2.0		
HIC circuit (HIC: Heat Inter-Changer)		Copper pipe, tube-in-tube structure		
Drawing	External	KL94C250		
	Wiring	KE94G421		
Standard attachment	Document	Installation Manual		
Optional parts	Accessory		Details refer to External Drw	
	joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104, 108, 1010C-G			
Remarks	<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>			

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHR1 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2. <PWFY-P36/72NMMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHR1 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMMU-E2-AU> Nominal heating conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

PQHY-P-Z(S)LMU-A1

Heat Source Model			PQHY-P144ZSLMU-A1< For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	144,000		
		kW	42.2		
	(575)	Power input	kW	7.11	
		Current input	A	7.9	
	(Rated)	(575)	BTU/h	137,000	
			kW	40.2	
(575)	Power input	kW	6.53	7.72	
	Current input	A	7.2	8.6	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h	160,000		
		kW	46.9		
	(575)	Power input	kW	7.45	
		Current input	A	8.3	
	(Rated)	(575)	BTU/h	152,000	
			kW	44.5	
(575)	Power input	kW	6.86	7.22	
	Current input	A	7.6	8.0	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity		50~130% of heatsource unit capacity		
	Model/Quantity		P04~P96/1~36		
Sound pressure level (measured in anechoic room)			49.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	1/2 (12.7) Brazed		
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		

Set Model			PQHY-P72ZLMU-A1< For Ground source >	
Model			PQHY-P72ZLMU-A1< For Ground source >	PQHY-P72ZLMU-A1< For Ground source >
Minimum Circuit Ampacity			5	5
Maximum Overcurrent Protection			15	15
Circulating water	Water flow rate	G/h	1,522 + 1,522	
		G/min (gpm)	25.4 + 25.4	
		m³/h	5.76 + 5.76	
		L/min	96 + 96	
		cfm	3.4 + 3.4	
	Pressure drop	psi	3.48	3.48
	kPa	24	24	
Operating volume range	G/h	793 + 793 ~ 1,902 + 1,902		
	G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7		
	m³/h	3.0 + 3.0 ~ 7.2 + 7.2		
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1
	Starting method	Inverter		Inverter
	Motor output	kW	4.3	4.3
	Case heater	kW	-	-
	Lubricant		MEL32	
External finish			Galvanized steel sheets	Galvanized steel sheets
External dimension H x W x D	in.	43-5/16 x 34-11/16 x 21-11/16		43-5/16 x 34-11/16 x 21-11/16
		mm		1,100 x 880 x 550
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection
	Compressor	Over-heat protection		Over-heat protection
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)
	Control	LEV and HIC circuit		
Net weight	lbs (kg)	404 (183)	404 (183)	
Heat exchanger	Water volume in plate	G	plate type	
		l	1.32	1.32
	Water pressure Max.	psi	290	
		MPa	2.0	
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure	
Pipe between unit and distributor	Liquid pipe	in. (mm)	3/8 (9.52) Brazed	
	Gas pipe	in. (mm)	3/4 (19.05) Brazed	
Drawing	External	KL94C253		
	Wiring	KE94G421		
Standard attachment	Document	Installation Manual		
	Accessory	Details refer to External Drw		
Optional parts		Heat Source Twinning kit: CMY-Y100CBK3 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2 Header: CMY-Y104, 108, 1010C-G		
Remarks		<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m). Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQH-Y-P168ZSLMU-A1< For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	168,000			
		kW	49.2			
	(575)	Power input	9.33			
		Current input	10.4			
	(Rated)		BTU/h	161,000		
			kW	47.2		
(575)	Power input	8.58	9.22			
	Current input	9.5	10.2			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4	BTU/h	188,000			
		kW	55.1			
	(575)	Power input	9.34			
		Current input	10.4			
	(Rated)		BTU/h	179,000		
			kW	52.5		
(575)	Power input	8.60	8.03			
	Current input	9.5	8.9			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable			50~130% of heatsource unit capacity			
Sound pressure level (measured in anechoic room)			dB <A> 50.0			
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Brazed			
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed			

Set Model			PQH-Y-P96ZLMU-A1< For Ground source >		PQH-Y-P72ZLMU-A1< For Ground source >		
Minimum Circuit Ampacity			A 7		A 5		
Maximum Overcurrent Protection			A 15		A 15		
Circulating water	Water flow rate	G/h	1,522 + 1,522				
		G/min (gpm)	25.4 + 25.4				
		m³/h	5.76 + 5.76				
		L/min	96 + 96				
		cfm	3.4 + 3.4				
		Pressure drop	psi	3.48			3.48
Operating volume range		kPa	24			24	
		G/h	793 + 793 ~ 1,902 + 1,902				
		G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7				
		m³/h	3.0 + 3.0 ~ 7.2 + 7.2				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1			
	Starting method	Inverter		Inverter			
	Motor output	6.0		4.3			
	Case heater	-		-			
	Lubricant	MEL32		MEL32			
External finish			Galvanized steel sheets		Galvanized steel sheets		
External dimension H x W x D	in.	43-5/16 x 34-11/16 x 21-11/16		43-5/16 x 34-11/16 x 21-11/16			
		mm	1,100 x 880 x 550		1,100 x 880 x 550		
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection			
	Compressor	Over-heat protection		Over-heat protection			
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)			
	Control	LEV and HIC circuit					
Net weight	lbs (kg)	404 (183)		404 (183)			
Heat exchanger	Water volume in plate	G	plate type 1.32		plate type 1.32		
			5.0		5.0		
			Water pressure Max.	psi 290		psi 290	
				MPa 2.0		MPa 2.0	
HIC circuit (HIC: Heat Inter-Change)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure		
Pipe between unit and distributor	Liquid pipe	in. (mm)	3/8 (9.52) Brazed		3/8 (9.52) Brazed		
	Gas pipe	in. (mm)	7/8 (22.2) Brazed		7/8 (22.2) Brazed		
Drawing	External	KL94C253					
	Wiring	KE94G421		KE94G421			
Standard attachment	Document	Installation Manual					
	Accessory	Details refer to External Drw					
Optional parts			Heat Source Twinning kit: CMY-Y100CBK3 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2 Header: CMY-Y104, 108, 1010C-G				
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F (40°C).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>				

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQHY-P-Z(S)LMU-A1

Heat Source Model			PQHY-P192ZSLMU-A1< For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	192,000			
		kW	56.3			
	(Rated)	(575)	Power input	11.30		
			Current input	12.6		
		(575)	BTU/h	183,000		
			kW	53.6		
(575)	Power input	10.40	10.98			
	Current input	11.6	12.2			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4	BTU/h	215,000			
		kW	63.0			
	(Rated)	(575)	Power input	11.02		
			Current input	12.2		
		(575)	BTU/h	205,000		
			kW	60.1		
(575)	Power input	10.16	8.90			
	Current input	11.3	9.9			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity				
	Model/Quantity	P04~P96/1~48				
Sound pressure level (measured in anechoic room)		dB <A>	51.0			
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Brazed			
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed			

Set Model			PQHY-P96ZLMU-A1< For Ground source >		PQHY-P96ZLMU-A1< For Ground source >
Minimum Circuit Ampacity			A	7	7
Maximum Overcurrent Protection			A	15	15
Circulating water	Water flow rate	G/h	1,522 + 1,522		
		G/min (gpm)	25.4 + 25.4		
		m ³ /h	5.76 + 5.76		
		L/min	96 + 96		
		cfm	3.4 + 3.4		
	Pressure drop	psi	3.48	3.48	
Operating volume range		kPa	24	24	
		G/h	793 + 793 ~ 1,902 + 1,902		
		G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7		
		m ³ /h	3.0 + 3.0 ~ 7.2 + 7.2		
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1	
	Starting method	Inverter		Inverter	
	Motor output	kW	6.0	6.0	
	Case heater	kW	-	-	
	Lubricant		MEL32	MEL32	
External finish			Galvanized steel sheets		Galvanized steel sheets
External dimension H x W x D			in.		43-5/16 x 34-11/16 x 21-11/16
			mm		1,100 x 880 x 550
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection	
	Compressor	Over-heat protection		Over-heat protection	
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)	
	Control	LEV and HIC circuit			
Net weight			lbs (kg)	404 (183)	404 (183)
Heat exchanger	Water volume in plate	plate type		plate type	
		G	1.32	1.32	
	l	5.0	5.0		
	Water pressure Max.	psi	290	290	
MPa		2.0	2.0		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure
Pipe between unit and distributor	Liquid pipe	in. (mm)	3/8 (9.52) Brazed		3/8 (9.52) Brazed
	Gas pipe	in. (mm)	7/8 (22.2) Brazed		7/8 (22.2) Brazed
Drawing	External	KL94C253			
	Wiring	KE94G421		KE94G421	
Standard attachment	Document	Installation Manual			
	Accessory	Details refer to External Drw			
Optional parts			Heat Source Twinning kit: CMY-Y100CBK3 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104, 108, 1010C-G		
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQHY-P-Z(S)LMU-A1

Heat Source Model			PQHY-P216ZSLMU-A1< For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	216,000			
		kW	63.3			
	(575)	Power input	14.03			
		Current input	15.6			
	(Rated)	(575)	BTU/h	206,000		
			kW	60.4		
(575)	Power input	12.93	13.24			
	Current input	14.4	14.7			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4	BTU/h	243,000			
		kW	71.2			
	(575)	Power input	12.88			
		Current input	14.3			
	(Rated)	(575)	BTU/h	232,000		
			kW	68.0		
(575)	Power input	11.88	10.35			
	Current input	13.2	11.5			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable		Total capacity	50~130% of heatsource unit capacity			
		Model/Quantity	P04-P96/2-50			
Sound pressure level (measured in anechoic room)		dB <A>	55.0			
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Brazed			
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed			

Set Model			PQHY-P120ZLMU-A1< For Ground source >		PQHY-P96ZLMU-A1< For Ground source >		
Minimum Circuit Ampacity			A	11	7		
Maximum Overcurrent Protection			A	15	15		
Circulating water	Water flow rate	G/h	1,522 + 1,522		25.4 + 25.4		
		G/min (gpm)	25.4 + 25.4		5.76 + 5.76		
		m³/h	96 + 96		3.4 + 3.4		
		L/min	3.4 + 3.4				
		cfm					
		Pressure drop	psi	3.48	3.48		
Operating volume range		kPa	24	24			
		G/h	793 + 793 ~ 1,902 + 1,902		13.2 + 13.2 ~ 31.7 + 31.7		
		G/min (gpm)	3.0 + 3.0 ~ 7.2 + 7.2				
		m³/h					
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1		
	Starting method		Inverter		Inverter		
	Motor output		7.7		6.0		
	Case heater		-		-		
	Lubricant		MEL32		MEL32		
External finish			Galvanized steel sheets		Galvanized steel sheets		
External dimension H x W x D			in.	43-5/16 x 34-11/16 x 21-11/16		43-5/16 x 34-11/16 x 21-11/16	
			mm	1,100 x 880 x 550		1,100 x 880 x 550	
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		
	Compressor		Over-heat protection		Over-heat protection		
Refrigerant	Type x original charge		R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)		
	Control		LEV and HIC circuit				
Net weight		lbs (kg)	404 (183)		404 (183)		
Heat exchanger	Water volume in plate		plate type		plate type		
			G		1.32		
			l		5.0		
			Water pressure Max.		psi		290
		MPa		2.0			
HIC circuit (HIC: Heat Inter-Change)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure		
Pipe between unit and distributor	Liquid pipe	in. (mm)	1/2 (12.7) Brazed		1/2 (12.7) Brazed		
	Gas pipe	in. (mm)	7/8 (22.2) Brazed		7/8 (22.2) Brazed		
Drawing	External		KL94C253				
	Wiring		KE94G421		KE94G421		
Standard attachment	Document		Installation Manual				
	Accessory		Details refer to External Drw				
Optional parts			Heat Source Twinning kit: CMY-Y100CBK3 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104, 108, 1010C-G				
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F FD.B. (40°C CD.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>				

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

PQHY-P-Z(S)LMU-A1

Heat Source Model			PQHY-P240ZLMU-A1< For Ground source >			
Indoor Model			Non-Ducted	Ducted		
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	240,000			
		kW	70.3			
	(Rated)	Power input	kW	16.89		
		Current input	A	18.8		
		(575)	BTU/h	228,000		
			kW	66.8		
(575)	Power input	kW	15.57	16.15		
	Current input	A	17.3	18.0		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4	BTU/h	270,000			
		kW	79.1			
	(Rated)	Power input	kW	14.58		
		Current input	A	16.2		
		(575)	BTU/h	258,000		
			kW	75.6		
(575)	Power input	kW	13.45	12.02		
	Current input	A	15.0	13.4		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity				
	Model/Quantity	P04~P96/2~50				
Sound pressure level (measured in anechoic room)		dB <A>	57.0			
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Brazed			
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed			

Set Model			PQHY-P120ZLMU-A1< For Ground source >	
Model			PQHY-P120ZLMU-A1< For Ground source >	
Minimum Circuit Ampacity			A	11
Maximum Overcurrent Protection			A	15
Circulating water	Water flow rate	G/h	1,522 + 1,522	
		G/min (gpm)	25.4 + 25.4	
		m ³ /h	5.76 + 5.76	
		L/min	96 + 96	
		cfm	3.4 + 3.4	
		Pressure drop	psi	3.48
Operating volume range		kPa	24	
		G/h	793 + 793 ~ 1,902 + 1,902	
		G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7	
		m ³ /h	3.0 + 3.0 ~ 7.2 + 7.2	
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1
	Starting method	Inverter		Inverter
	Motor output	kW	7.7	7.7
	Case heater	kW	-	-
	Lubricant	MEL32		MEL32
External finish			Galvanized steel sheets	
External dimension H x W x D			in. 43-5/16 x 34-11/16 x 21-11/16	
			mm 1,100 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection
	Compressor	Over-heat protection		Over-heat protection
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)
	Control	LEV and HIC circuit		
Net weight			lbs (kg)	404 (183)
Heat exchanger	Water volume in plate	plate type		
		G	1.32	
		l	5.0	
		psi	290	
Water pressure Max.	MPa			
	2.0			
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure	
Pipe between unit and distributor	Liquid pipe	in. (mm)	1/2 (12.7) Brazed	
	Gas pipe	in. (mm)	7/8 (22.2) Brazed	
Drawing	External	KL94C253		
	Wiring	KE94G421		
Standard attachment	Document	Installation Manual		
	Accessory	Details refer to External Drw		
Optional parts			Heat Source Twinning kit: CMY-Y100CBK3 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104, 108, 1010C-G	
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>	

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQHY-P-Z(S)L/MU-A1

Heat Source Model			PQHY-P288ZSLMU-A1< For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	288,000			
		kW	84.4			
	(575)	Power input	20.42			
		Current input	22.7			
	(Rated)		BTU/h	275,000		
			kW	80.6		
(575)		Power input	18.82	21.43		
		Current input	20.9	23.9		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4	BTU/h	323,000			
		kW	94.7			
	(575)	Power input	17.50			
		Current input	19.5			
	(Rated)		BTU/h	308,000		
			kW	90.3		
(575)		Power input	16.13	16.05		
		Current input	17.9	17.9		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity				
	Model/Quantity	P04~P96/2~50				
Sound pressure level (measured in anechoic room)		dB <A>	57.0			
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/4 (19.05) Brazed			
	Gas pipe	in. (mm)	1-3/8 (34.93) Brazed			

Set Model			PQHY-P144ZLMU-A1< For Ground source >		PQHY-P144ZLMU-A1< For Ground source >		
Minimum Circuit Ampacity			A	13	13		
Maximum Overcurrent Protection			A	20	20		
Circulating water	Water flow rate	G/h	1,902 + 1,902				
		G/min (gpm)	31.7 + 31.7				
		m ³ /h	7.20 + 7.20				
		L/min	120 + 120				
		cfm	4.2 + 4.2				
		Pressure drop	psi	6.38	6.38		
		kPa	44	44			
Operating volume range	G/h	1,189 + 1,189 ~ 3,054 + 3,054					
	G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9					
	m ³ /h	4.5 + 4.5 ~ 11.6 + 11.6					
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1		
	Starting method		Inverter		Inverter		
	Motor output	kW	9.5		9.5		
	Case heater	kW	-		-		
	Lubricant		MEL32		MEL32		
External finish			Galvanized steel sheets		Galvanized steel sheets		
External dimension H x W x D			in.	57-1/8 x 34-11/16 x 21-11/16		57-1/8 x 34-11/16 x 21-11/16	
			mm	1,450 x 880 x 550		1,450 x 880 x 550	
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		
	Compressor		Over-heat protection		Over-heat protection		
Refrigerant	Type x original charge		R410A x 13 lbs + 4 oz (6.0 kg)		R410A x 13 lbs + 4 oz (6.0 kg)		
	Control		LEV and HIC circuit				
Net weight			lbs (kg)	505 (229)		505 (229)	
Heat exchanger			plate type		plate type		
	Water volume in plate	G	1.32		1.32		
		l	5.0		5.0		
	Water pressure Max.	psi	290		290		
MPa		2.0		2.0			
HIC circuit (HIC: Heat Inter-Change)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure		
Pipe between unit and distributor	Liquid pipe	in. (mm)	1/2 (12.7) Brazed		1/2 (12.7) Brazed		
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		1-1/8 (28.58) Brazed		
Drawing	External		KL94C254				
	Wiring		KE94G421		KE94G421		
Standard attachment	Document		Installation Manual				
	Accessory		Details refer to External Drw				
Optional parts			Heat Source Twinning kit: CMY-Y200CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104, 108, 1010C-G				
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F (40°C).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>				

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

PQHY-P-Z(S)LMU-A1

Heat Source Model			PQHY-P312ZSLMU-A1< For Ground source >			
Indoor Model			Non-Ducted	Ducted		
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	312,000			
		kW	91.4			
	(575)	Power input	23.41			
		Current input	26.1			
	(Rated)		BTU/h	297,000		
			kW	87.0		
(575)		Power input	21.59	23.67		
		Current input	24.0	26.4		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4	BTU/h	350,000			
		kW	102.6			
	(575)	Power input	19.11			
		Current input	21.3			
	(Rated)		BTU/h	334,000		
			kW	97.9		
(575)		Power input	17.62	17.96		
		Current input	19.6	20.0		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity				
	Model/Quantity	P04~P96/2~50				
Sound pressure level (measured in anechoic room)		dB <A>	58.0			
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/4 (19.05) Brazed			
	Gas pipe	in. (mm)	1-3/8 (34.93) Brazed			

Set Model			PQHY-P168ZLMU-A1< For Ground source >		PQHY-P144ZLMU-A1< For Ground source >	
Minimum Circuit Ampacity		A	16		13	
Maximum Overcurrent Protection		A	25		20	
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min (gpm)	31.7 + 31.7			
		m³/h	7.20 + 7.20			
		L/min	120 + 120			
		cfm	4.2 + 4.2			
	Pressure drop	psi	6.38		6.38	
Operating volume range		kPa	44			
		G/h	1,189 + 1,189 ~ 3,054 + 3,054			
		G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9			
		m³/h	4.5 + 4.5 ~ 11.6 + 11.6			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		Inverter		
	Motor output	kW		9.5		
	Case heater	kW		-		
	Lubricant	MEL32		MEL32		
External finish		Galvanized steel sheets				
External dimension H x W x D		in.	57-1/8 x 34-11/16 x 21-11/16		57-1/8 x 34-11/16 x 21-11/16	
		mm	1,450 x 880 x 550		1,450 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		Over-heat protection		
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)		R410A x 13 lbs + 4 oz (6.0 kg)		
	Control	LEV and HIC circuit				
Net weight	lbs (kg)	505 (229)		505 (229)		
Heat exchanger	Water volume in plate	plate type				
		G	1.32		1.32	
	l	5.0		5.0		
	Water pressure Max.	psi	290		290	
MPa		2.0		2.0		
HIC circuit (HIC: Heat Inter-Changer)		Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure		
Pipe between unit and distributor	Liquid pipe	in. (mm)	5/8 (15.88) Brazed		5/8 (15.88) Brazed	
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		1-1/8 (28.58) Brazed	
Drawing	External	KL94C254				
	Wiring	KE94G421		KE94G421		
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts		Heat Source Twinning kit: CMY-Y200CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104, 108, 1010C-G				
Remarks		<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>				

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQHY-P336ZSLMU-A1< For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	336,000			
		kW	98.5			
	(575)	Power input	26.84			
		Current input	29.9			
	(Rated)		BTU/h	320,000		
			kW	93.8		
(575)	Power input	24.76	25.85			
	Current input	27.6	28.8			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4	BTU/h	378,000			
		kW	110.8			
	(575)	Power input	20.77			
		Current input	23.1			
	(Rated)		BTU/h	361,000		
			kW	105.8		
(575)	Power input	19.16	20.05			
	Current input	21.3	22.3			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity				
Indoor unit connectable	Model/Quantity	P04~P96/2~50				
Sound pressure level (measured in anechoic room)	dB <A>	59.0				
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/4 (19.05) Brazed			
	Gas pipe	in. (mm)	1-5/8 (41.28) Brazed			

Set Model			PQHY-P168ZLMU-A1< For Ground source >		PQHY-P168ZLMU-A1< For Ground source >	
Minimum Circuit Ampacity	A		16		16	
Maximum Overcurrent Protection	A		25		25	
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min (gpm)	31.7 + 31.7			
		m ³ /h	7.20 + 7.20			
		L/min	120 + 120			
		cfm	4.2 + 4.2			
	Pressure drop	psi	6.38		6.38	
	kPa	44		44		
Operating volume range	G/h	1,189 + 1,189 ~ 3,054 + 3,054				
	G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9				
	m ³ /h	4.5 + 4.5 ~ 11.6 + 11.6				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		Inverter		
	Motor output	11.0		11.0		
	Case heater	-		-		
	Lubricant	MEL32		MEL32		
External finish	Galvanized steel sheets		Galvanized steel sheets			
External dimension H x W x D	in.	57-1/8 x 34-11/16 x 21-11/16		57-1/8 x 34-11/16 x 21-11/16		
	mm	1,450 x 880 x 550		1,450 x 880 x 550		
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		Over-heat protection		
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)		R410A x 13 lbs + 4 oz (6.0 kg)		
	Control	LEV and HIC circuit				
Net weight	lbs (kg)	505 (229)		505 (229)		
Heat exchanger	Water volume in plate	G	1.32		1.32	
		l	5.0		5.0	
	Water pressure Max.	psi	290		290	
		MPa	2.0		2.0	
HIC circuit (HIC: Heat Inter-Change)	Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure			
Pipe between unit and distributor	Liquid pipe	in. (mm)	5/8 (15.88) Brazed		5/8 (15.88) Brazed	
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		1-1/8 (28.58) Brazed	
Drawing	External	KL94C254				
	Wiring	KE94G421		KE94G421		
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts	Heat Source Twinning kit: CMY-Y200CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104, 108, 1010C-G					
Remarks	<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F FD.B. (40°C CD.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>					

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

PQHY-P-Z(S)LMU-A1

Heat Source Model			PQHY-P360ZLMU-A1< For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	360,000		
		kW	105.5		
	(Rated)	Power input	kW	29.43	
		Current input	A	32.8	
		(575)	BTU/h	342,000	
			kW	100.2	
(575)	Power input	kW	27.17	27.41	
	Current input	A	30.3	30.5	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4	BTU/h	405,000		
		kW	118.7		
	(Rated)	Power input	kW	22.85	
		Current input	A	25.4	
		(575)	BTU/h	387,000	
			kW	113.4	
(575)	Power input	kW	21.09	21.70	
	Current input	A	23.5	24.2	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~130% of heatsource unit capacity			
	Model/Quantity	P04~P96/2~50			
Sound pressure level (measured in anechoic room)		dB <A>	60.0		
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/4 (19.05) Brazed		
	Gas pipe	in. (mm)	1-5/8 (41.28) Brazed		

Set Model			PQHY-P192ZLMU-A1< For Ground source >		PQHY-P168ZLMU-A1< For Ground source >		
Minimum Circuit Ampacity			A	20	16		
Maximum Overcurrent Protection			A	30	25		
Circulating water	Water flow rate	G/h	1,902 + 1,902				
		G/min (gpm)	31.7 + 31.7				
		m ³ /h	7.20 + 7.20				
		L/min	120 + 120				
		cfm	4.2 + 4.2				
		Pressure drop	psi	6.38	6.38		
Operating volume range		kPa	44	44			
		G/h	1,189 + 1,189 ~ 3,054 + 3,054				
		G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9				
		m ³ /h	4.5 + 4.5 ~ 11.6 + 11.6				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1			
	Starting method	Inverter		Inverter			
	Motor output	kW	12.4	11.0			
	Case heater	kW	-	-			
	Lubricant	MEL32		MEL32			
External finish			Galvanized steel sheets		Galvanized steel sheets		
External dimension H x W x D			in.	57-1/8 x 34-11/16 x 21-11/16		57-1/8 x 34-11/16 x 21-11/16	
			mm	1,450 x 880 x 550		1,450 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection			
	Compressor	Over-heat protection		Over-heat protection			
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)		R410A x 13 lbs + 4 oz (6.0 kg)			
	Control	LEV and HIC circuit					
Net weight			lbs (kg)	505 (229)	505 (229)		
Heat exchanger	Water volume in plate	plate type		plate type			
		G	1.32	1.32			
		l	5.0	5.0			
		Water pressure Max.	psi	290	290		
		MPa	2.0	2.0			
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure		
Pipe between unit and distributor	Liquid pipe	in. (mm)	5/8 (15.88) Brazed		5/8 (15.88) Brazed		
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		1-1/8 (28.58) Brazed		
Drawing	External	KL94C254					
	Wiring	KE94G421		KE94G421			
Standard attachment	Document	Installation Manual					
	Accessory	Details refer to External Drw					
Optional parts			Heat Source Twinning kit: CMY-Y200CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2 Header: CMY-Y104, 108, 1010C-G				
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>				

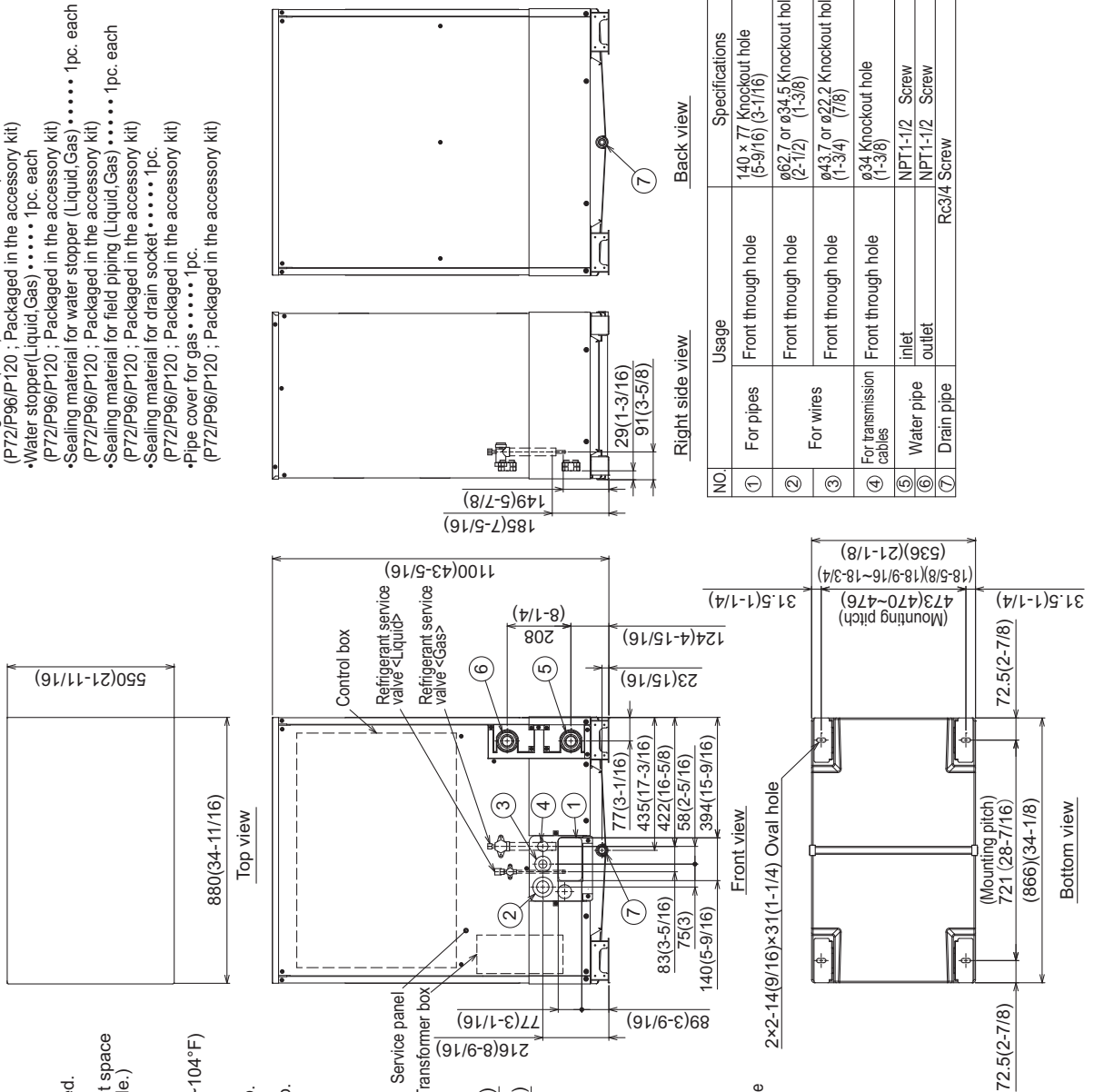
Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
	*Above specification data is subject to rounding variation.

PQHY-P72, 96, 120ZLMU-A1

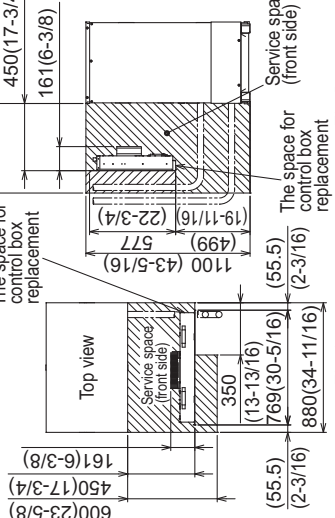
Unit: mm(in)

- <Accessories>
- Refrigerant (Liquid) conn. pipe..... 1pc.
(P72/P96/P120 ; Packaged in the accessory kit)
 - Refrigerant (Gas) conn. elbow..... 1pc.
(P72/P96/P120 ; Packaged in the accessory kit)
 - Water stopper(Liquid,Gas)..... 1pc. each
(P72/P96/P120 ; Packaged in the accessory kit)
 - Sealing material for water stopper (Liquid,Gas)..... 1pc. each
(P72/P96/P120 ; Packaged in the accessory kit)
 - Sealing material for field piping (Liquid,Gas)..... 1pc. each
(P72/P96/P120 ; Packaged in the accessory kit)
 - Sealing material for drain socket..... 1pc.
(P72/P96/P120 ; Packaged in the accessory kit)
 - Pipe cover for gas..... 1pc.
(P72/P96/P120 ; Packaged in the accessory kit)

- Note1. Close a hole of the water piping, the refrigerant piping, the power supply, and the control wiring and unused knockout holes with the putty etc. so as not to infiltrate rain water etc.(field erection work)
- Note2. At the time of product shipment, the front side piping specification serves as the local drainage connection. When connecting on the rear side, please remove the rear side plug sealing corks, and attach a front side. Ensure there is no leak after the attachment has been fitted.
- Note3. Take notice of service space as Fig.A. (In case of single installation, 600mm(23-5/8) or more of back space as front space makes easier access when servicing the unit from rear side.)
- Note4. If water pipes or refrigerant pipes stretch upward, required space for service and maintenance due to replacement of control box is shown in Fig.B.
- Note5. Environmental condition for installation; -20~40°C(DB)(-4~104°F) as indoor installation.
- Note6. In case the temperature around the heat source unit has possibility to drop under 0°C(32°F) or the inlet-water temp. drops under 10°C(50°F), be careful for the following point to prevent the pipe burst by the water pipe freeze-up.
- Add brine to water circuit.
 - Circulate the water all the time even if the heat source unit is not in operation.
 - Drain the water from inside of the heat source unit when the heat source unit will not operate for a long term.
- Note7. Ensure that the drain piping is downward with a pitch of more than 1/100.
- Note8. At brazing of pipes, wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248°F).



NO.	Usage	Specifications
①	For pipes	Front through hole 140 x 77 Knockout hole (5-9/16) (3-1/16)
②	For wires	Front through hole ø62.7 or ø34.5 Knockout hole (2-1/2) (1-3/8)
③	For transmission cables	Front through hole ø43.7 or ø22.2 Knockout hole (1-3/4) (7/8)
④	Water pipe inlet	Front through hole ø34 Knockout hole (1-3/8)
⑤	Water pipe outlet	NPT1-1/2 Screw
⑦	Drain pipe	NPT1-1/2 Screw Rc3/4 Screw



Connecting pipe specifications

Model	Refrigerant pipe		Service valve		Diameter
	Liquid	Gas	Liquid	Gas	
PQHY-P72ZLMU-A1	ø9.52 Braze (3/8)" ¹	ø19.05 Braze (3/4)" ^{1,4}	ø9.52 Braze (3/8)" ¹	ø25.4 (1)"	ø9.52 (3/8) ø25.4 (1)
PQHY-P96ZLMU-A1	ø9.52 Braze (3/8)" ¹	ø22.2 Braze (7/8)" ^{1,4}	ø9.52 Braze (3/8)" ¹	ø25.4 (1)"	
PQHY-P120ZLMU-A1	ø9.52 Braze (3/8)" ¹	ø21.7 Braze (7/8)" ^{1,4}	ø9.52 Braze (3/8)" ¹	ø25.4 (1)"	

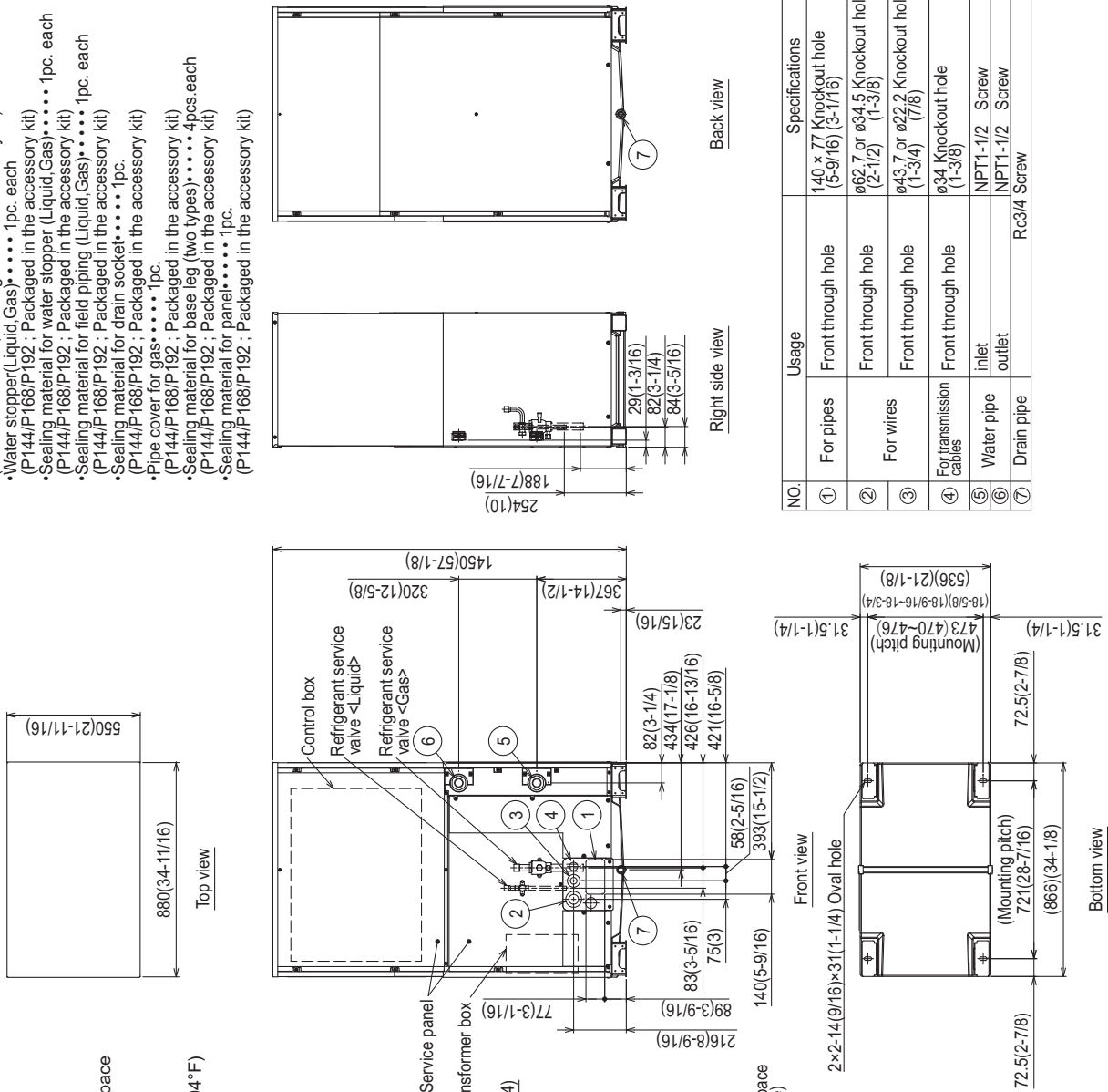
*1 Connect by using the connecting pipes and elbow that are supplied.
 *2 Total length: 90(255)mm (3.54ft) (field supply)
 *3. Total length: 40(131)mm (1.57ft) (field supply)
 *4. Use the pipe joint (field supply) and connect to the refrigerant service valve piping.

PQHY-P144, 168, 192ZLMU-A1

Unit: mm(in)

PQHY-P-Z(S)LMU-A1

- <Accessories>
- Refrigerant (Liquid) conn. pipe..... 1pc. (P144/P168/P192; Packaged in the accessory kit)
 - Refrigerant (Gas) conn. elbow..... 1pc. (P144/P168/P192; Packaged in the accessory kit)
 - Water stopper(Liquid, Gas)..... 1pc. each (P144/P168/P192; Packaged in the accessory kit)
 - Sealing material for water stopper (Liquid, Gas)..... 1pc. each (P144/P168/P192; Packaged in the accessory kit)
 - Sealing material for field piping (Liquid, Gas)..... 1pc. each (P144/P168/P192; Packaged in the accessory kit)
 - Sealing material for drain socket..... 1pc. (P144/P168/P192; Packaged in the accessory kit)
 - Pipe cover for gas..... 1pc. (P144/P168/P192; Packaged in the accessory kit)
 - Sealing material for base leg (two types)..... 4pcs. each (P144/P168/P192; Packaged in the accessory kit)
 - Sealing material for panel..... 1pc. (P144/P168/P192; Packaged in the accessory kit)



NO.	Usage	Specifications
①	For pipes	140 x 77 Knockout hole (5-9/16) (3-1/16)
②	For wires	Ø62.7 or Ø34.5 Knockout hole (2-1/2) (1-3/8)
③	For transmission cables	Ø43.7 or Ø22.2 Knockout hole (1-3/4) (7/8)
④	Water pipe inlet	Ø34 Knockout hole (1-3/8)
⑤	Water pipe outlet	NPT-1/2 Screw
⑦	Drain pipe	NPT-1/2 Screw Rc3/4 Screw

- Note 1. Close a hole of the water piping, the refrigerant piping, the power supply, and the control wiring and unused knockout holes with the putty etc. so as not to infiltrate rain water etc. (field erection work)
- Note 2. At the time of product shipment, the front side piping specification serves as the local drainage connection. When connecting on the rear side, please remove the rear side plug, sealing corks, and attach a front side. Ensure there is no leak after the attachment has been fitted.
- Note 3. Take notice of service space as Fig.A. (In case of single installation, 600mm(23-5/8) or more of back space as front side.) makes easier access when servicing the unit from rear side.)
- Note 4. If water pipes or refrigerant pipes stretch upward, required space for service and maintenance due to replacement of control box is shown in Fig.B.
- Note 5. Environmental condition for installation: -20~40°C(DB)(-4~104°F) as indoor installation.
- Note 6. In case the temperature around the heat source unit has possibility to drop under 0°C(32°F) or the inlet-water temp. drops under 10°C(50°F), be careful for the following point to prevent the pipe burst by the water pipe freeze-up.
 - Add brine to water circuit.
 - Circulate the water all the time even if the heat source unit is not in operation.
 - Drain the water from inside of the heat source unit when the heat source unit will not operate for a long term.
- Note 7. Ensure that the drain piping is downward with a pitch of more than 1/100.
- Note 8. At brazing of pipes, wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248°F).

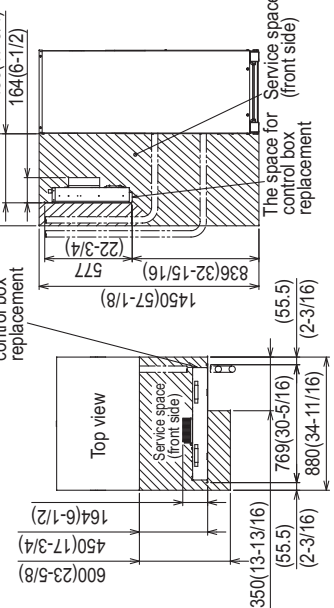


Fig.A

Fig.B

2x2-14(9/16)×3(1-1/4) Oval hole

31.5(1-1/4)

(536)(21-1/8)

(18-5/8)(18-9/16-18-3/4)

473(470~476)

(Mounting pitch)

72.5(2-7/8)

72.5(2-7/8)

72(28-7/16)

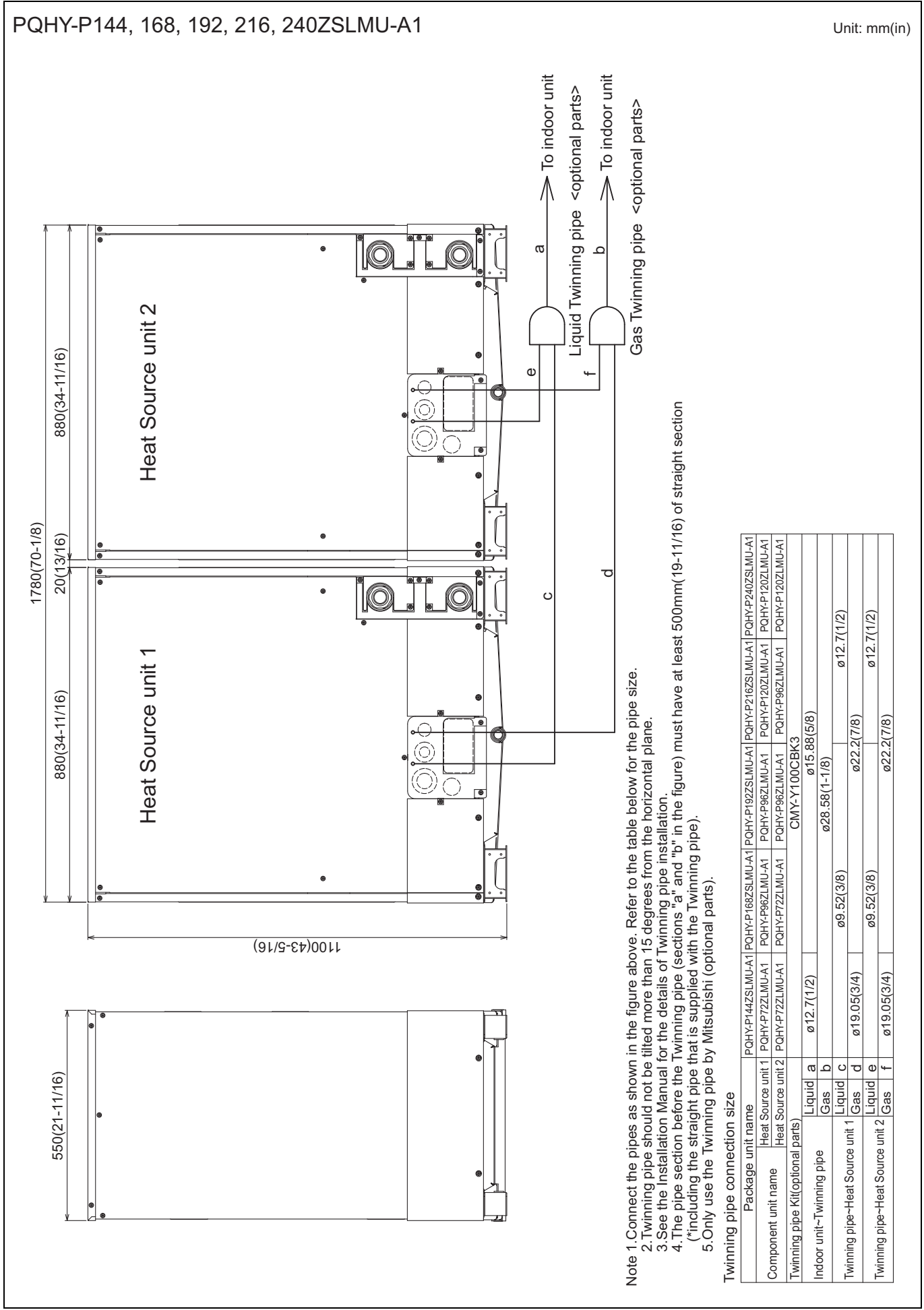
(Mounting pitch)

(866)(34-1/8)

Bottom view

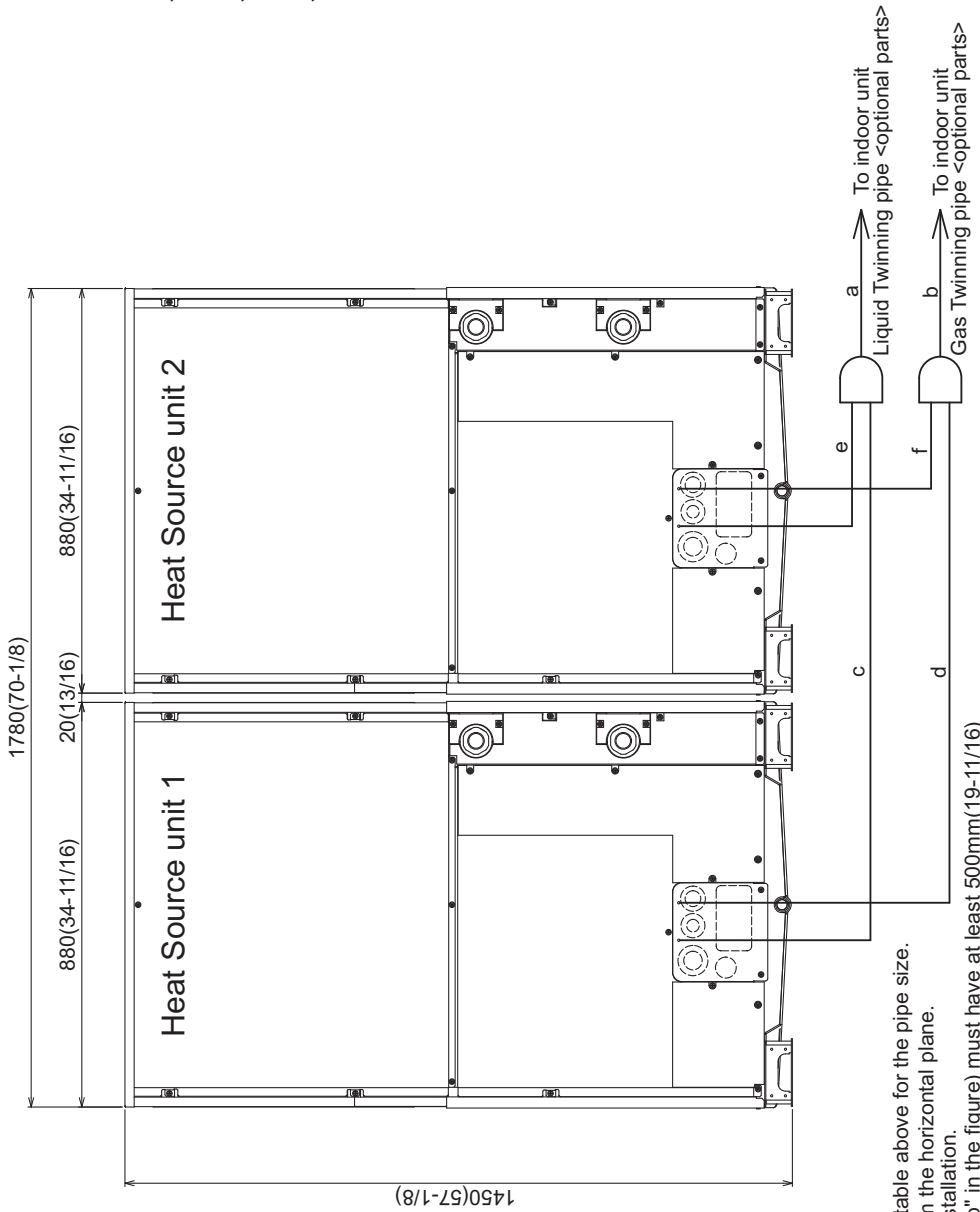
Model	Refrigerant pipe		Service valve	
	Liquid	Gas	Liquid	Gas
PQHY-P144ZLMU-A1	Ø12.7 Brazed (1/2) *1, *2	Ø28.58 Brazed (1-1/8) *1	Ø15.88 (5/8)	Ø28.58 (1-1/8)
PQHY-P168ZLMU-A1	Ø15.88 Brazed (3/8) *1	Ø28.58 Brazed (1-1/8) *1	Ø15.88 (5/8)	Ø28.58 (1-1/8)
PQHY-P192ZLMU-A1	Ø15.88 Brazed (3/8) *1	Ø28.58 Brazed (1-1/8) *1	Ø15.88 (5/8)	Ø28.58 (1-1/8)

*1. Connect by using the connecting pipes and elbow that are supplied.
 *2. Use the pipe joint(field supply) and connect to the refrigerant service valve piping.



PQHY-P288, 312, 336, 360ZSLMU-A1

Unit: mm(in)



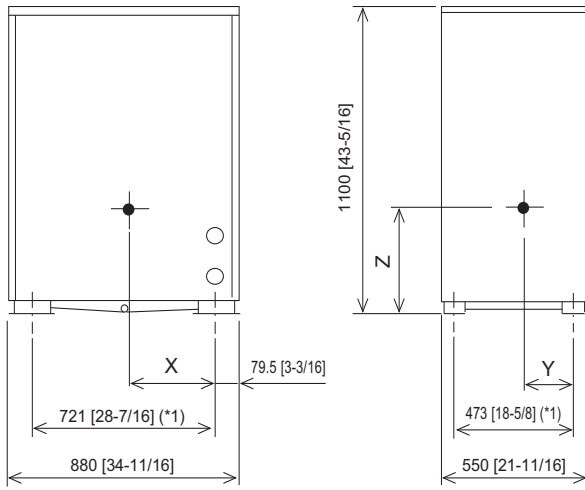
- Note 1. Connect the pipes as shown in the figure above. Refer to the table above for the pipe size.
2. Twinning pipes should not be tilted more than 15 degrees from the horizontal plane.
3. See the Installation Manual for the details of Twinning pipe installation.
4. The pipe section before the Twinning pipe (sections "a" and "b" in the figure) must have at least 500mm(19-11/16) of straight section (*including the straight pipe that is supplied with the Twinning pipe).
5. Only use the Twinning pipe by Mitsubishi (optional parts).

Twinning pipe connection size

Package unit name	PQHY-P288ZSLMU-A1	PQHY-P312ZSLMU-A1	PQHY-P336ZSLMU-A1	PQHY-P360ZSLMU-A1
Heat Source unit 1	PQHY-P144ZLMU-A1	PQHY-P168ZLMU-A1	PQHY-P168ZLMU-A1	PQHY-P192ZLMU-A1
Heat Source unit 2	PQHY-P144ZLMU-A1	PQHY-P144ZLMU-A1	PQHY-P168ZLMU-A1	PQHY-P168ZLMU-A1
Twinning Kit(optional parts)	CMY-Y200CBK2			
Indoor unit~Twinning pipe	ø34.93(1-3/8)	ø19.05(3/4)		
Liquid a				
Gas b				
Liquid c				
Gas d				
Liquid e				
Gas f				

PQHY-P72, 96, 120ZLMU-A1

Unit: mm [in.]

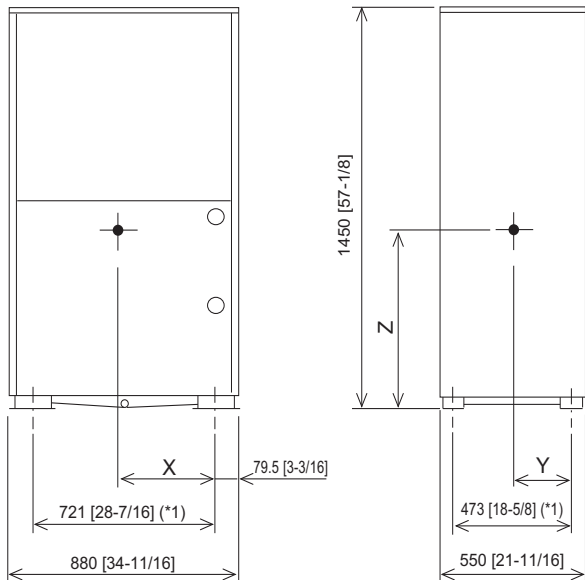


Model	X	Y	Z
PQHY-P72ZLMU-A1	387 [15-1/4]	227 [8-15/16]	430 [16-15/16]
PQHY-P96ZLMU-A1	387 [15-1/4]	227 [8-15/16]	430 [16-15/16]
PQHY-P120ZLMU-A1	387 [15-1/4]	227 [8-15/16]	430 [16-15/16]

*1 Mounting Pitch

PQHY-P144, 168, 192ZLMU-A1

Unit: mm [in.]

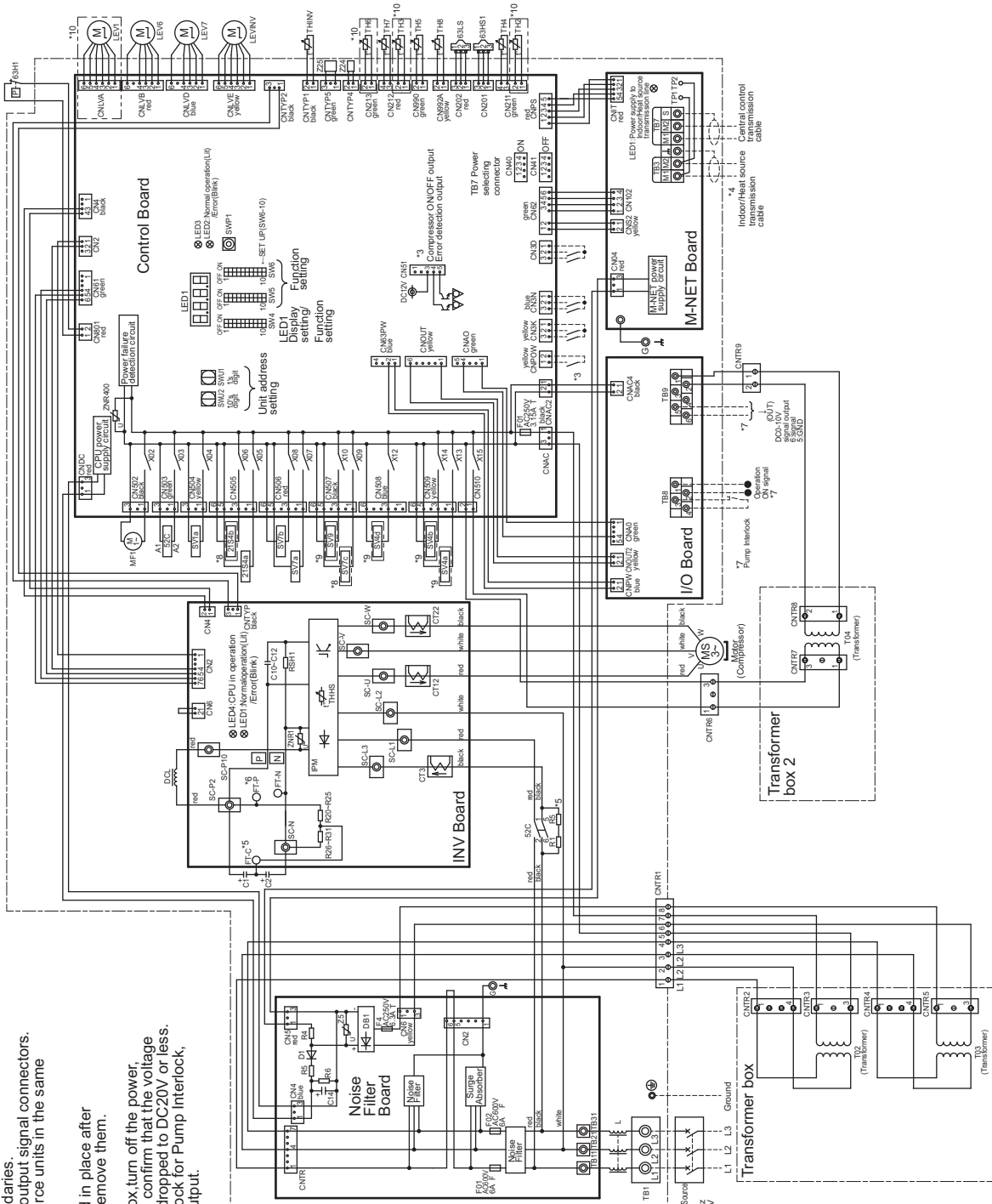


Model	X	Y	Z
PQHY-P144ZLMU-A1	387 [15-1/4]	230 [9-1/16]	616 [24-5/16]
PQHY-P168ZLMU-A1	387 [15-1/4]	230 [9-1/16]	616 [24-5/16]
PQHY-P192ZLMU-A1	387 [15-1/4]	230 [9-1/16]	616 [24-5/16]

*1 Mounting Pitch

PQHY-P72, 96, 120, 144, 168, 192ZLMU-A1

PQHY-P-Z(S)LMU-A1



- *1. Single-dotted lines indicate wiring not supplied with the unit.
- *2. Dot-dash lines indicate the control box boundaries.
- *3. Refer to the Data book for connecting input/output signal connectors.
- *4. Daisy-chain terminals (TB3) on the heat source units in the same refrigerant system together.
- *5. Faston terminals have a locking function. Make sure the terminals are securely locked in place after insertion. Press the tab on the terminals to remove them.
- *6. Control box houses high-voltage parts. Before inspecting the inside of the control box, turn off the power, keep the unit off for at least 10 minutes, and confirm that the voltage between FT-P and FT-N on INV Board has dropped to DC20V or less.
- *7. Refer to the Data book for wiring terminal block for Pump Interlock, Operation ON signal and DC0-10V signal output.
- *8. Difference of appliance.

Model name	Appliance
P72/96/120	*8 do not exist
P144/168/192	*8 exist

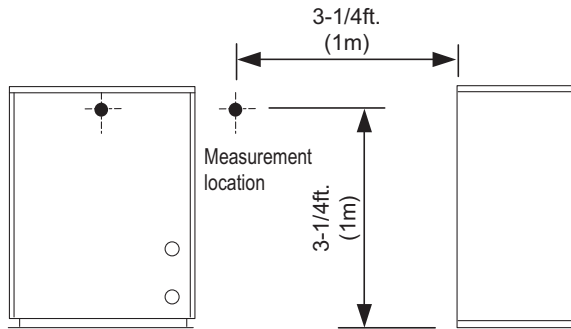
Model name	Appliance
PQHY	*9 do not exist
PQRY	*9 exist

Model name	Appliance
PQHY	*10 exist
PQRY	*10 do not exist

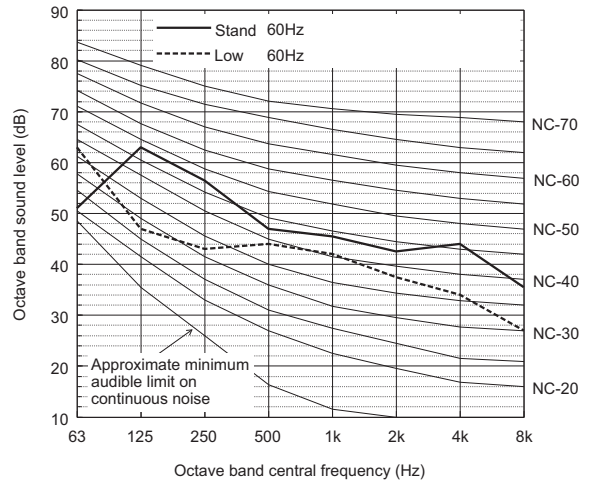
<Symbol explanation>

Symbol	Explanation
Z1SAa	4-way valve (Cooling/Heating switching)
Z1SAb	Heat exchanger capacity control
63H1	Pressure High pressure protection for the heat source unit
63HS1	Pressure Low pressure
63LS	Sensor High pressure
52C	Magnetic contactor (inverter main circuit)
C1,2	Capacitor (inverter main circuit)
OZ,223	Current sensor (AC)
D,DL	Diode (for high frequency noise reduction)
LEV1	Linear expansion valve
LEV6	HIC bypass. Controls refrigerant flow in HIC circuit
LEV7	Heat exchanger capacity control
LEVINV	Heat exchanger capacity control
MF-1	Fan motor (Radiator panel)
R1,5	Resistor For inrush current prevention or current detection
SV1a	Solenoid valve For opening/closing the bypass circuit under the O/S
SV4a,b,d	Heat exchanger capacity control
SV7,a,b,c	Heat exchanger capacity control
SV9	For opening/closing the bypass circuit
TB1	Terminal block
TB3	Indoor/Heat source transmission cable
TB7	Optical control transmission
TB8	Operation ON signal, Pump Interlock
TB9	Power input and signal output for variable water flow valve
TH2	Thermistor Subcool bypass outlet temperature
TH3	Pipe temperature
TH4	Discharge pipe temperature
TH5	ACC. inlet pipe temperature
TH6	Subcool liquid refrigerant temperature
TH7	Water inlet temperature
TH8	Water outlet temperature
THINV	Outlet temp detector/heat exchanger for inverter
THHS	IPM temperature
Z24,25	Function setting connector

Measurement condition
PQHY-P72, 96, 120ZLMU-A1



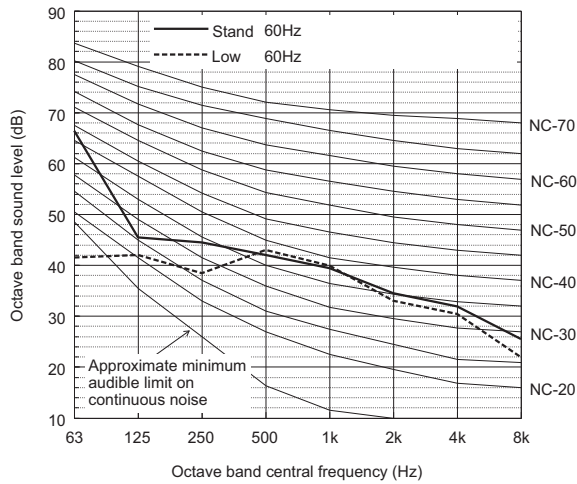
Sound level of PQHY-P120ZLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	51.0	63.0	56.5	47.0	45.5	42.5	44.0	35.5	54.0
Low noise mode	60Hz	63.0	47.0	43.0	44.0	42.0	37.5	34.0	27.0	47.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

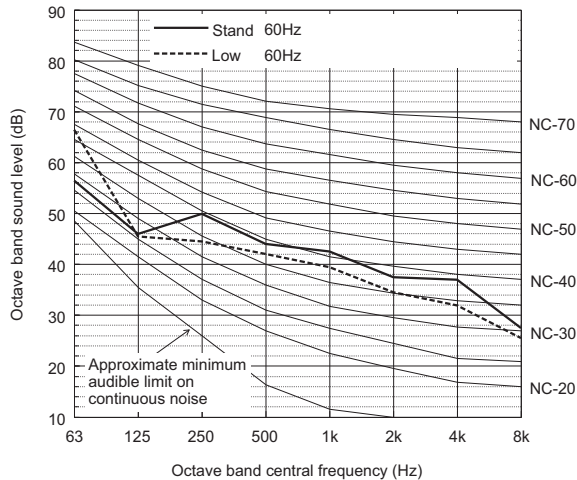
Sound level of PQHY-P72ZLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	66.5	45.5	44.5	42.0	39.5	34.5	32.0	25.5	46.0
Low noise mode	60Hz	41.5	42.0	38.5	43.0	40.0	33.0	30.5	22.0	44.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound level of PQHY-P96ZLMU-A1



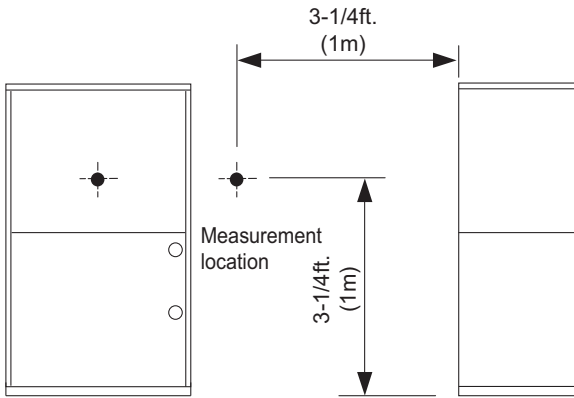
		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	56.5	46.0	50.0	44.0	42.5	37.5	37.0	27.5	48.0
Low noise mode	60Hz	66.5	45.5	44.5	42.0	39.5	34.5	32.0	25.5	46.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

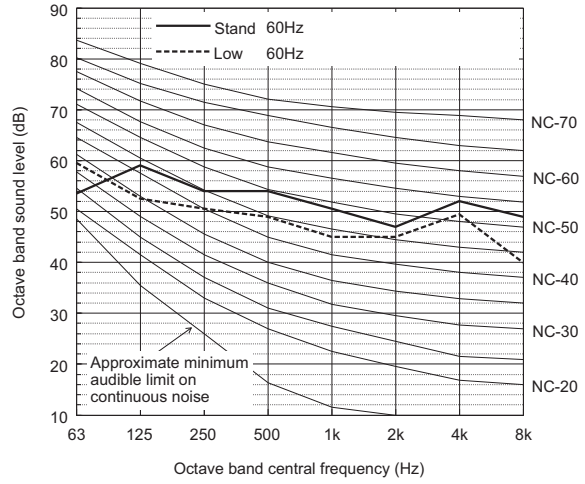
◆ Depending on the operation conditions, the unit generates noise caused by valve actuation, refrigerant flow, and pressure changes when operating normally. Please consider to avoid location where quietness is required.

PQHY-P-Z(S)LMU-A1

Measurement condition
PQHY-P144, 168, 192ZLMU-A1



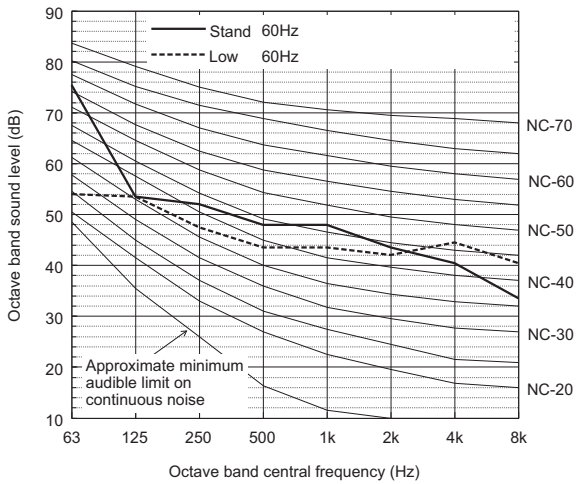
Sound level of PQHY-P192ZLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	53.5	59.0	54.0	54.0	50.5	47.0	52.0	49.0	58.0
Low noise mode	60Hz	59.5	52.5	50.5	49.0	45.0	45.0	49.5	40.0	54.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

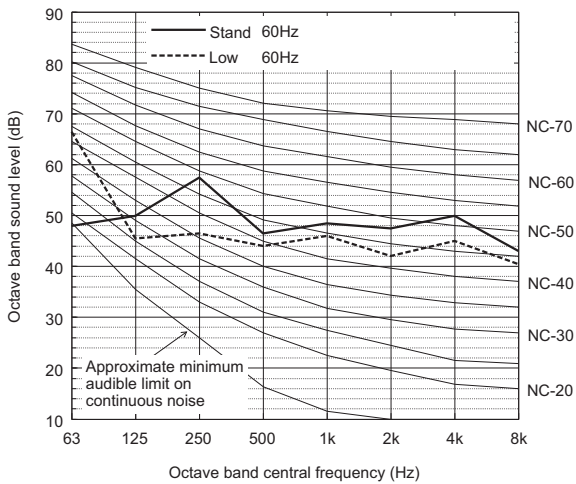
Sound level of PQHY-P144ZLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	75.5	53.5	52.0	48.0	48.0	43.5	40.5	33.5	54.0
Low noise mode	60Hz	54.0	53.5	47.5	43.5	43.5	42.0	44.5	40.5	50.5

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound level of PQHY-P168ZLMU-A1

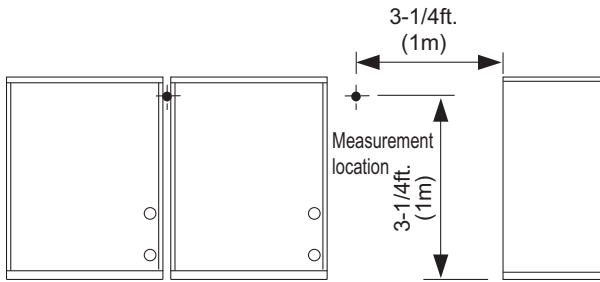


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	48.0	50.0	57.5	46.5	48.5	47.5	50.0	43.0	56.0
Low noise mode	60Hz	66.5	45.5	46.5	44.0	46.0	42.0	45.0	40.5	51.5

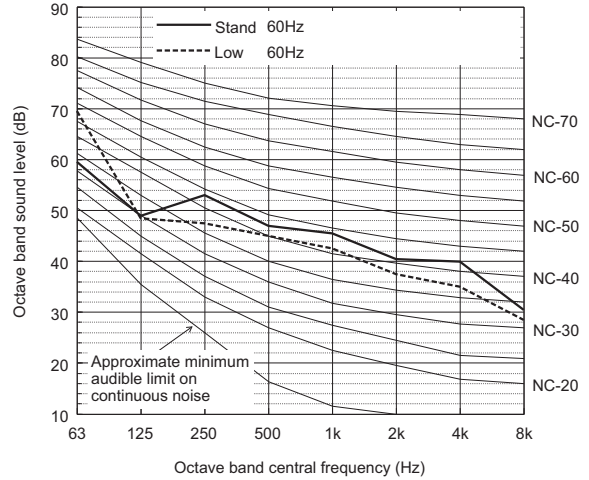
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

♦ Depending on the operation conditions, the unit generates noise caused by valve actuation, refrigerant flow, and pressure changes when operating normally. Please consider to avoid location where quietness is required.

Measurement condition
PQHY-P144, 168, 192, 216, 240ZSLMU-A1



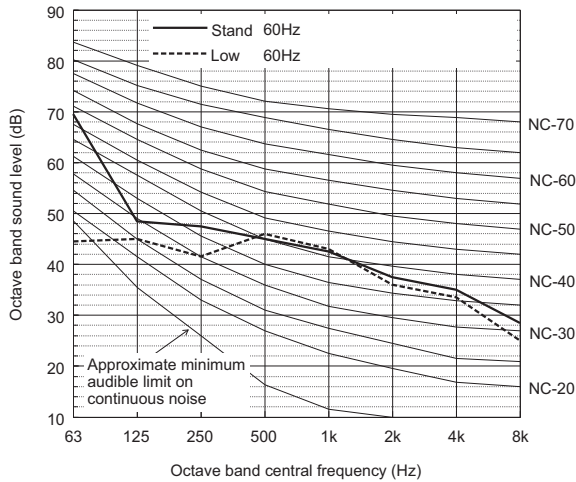
Sound level of PQHY-P192ZSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	59.5	49.0	53.0	47.0	45.5	40.5	40.0	30.5	51.0
Low noise mode	60Hz	69.5	48.5	47.5	45.0	42.5	37.5	35.0	28.5	49.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

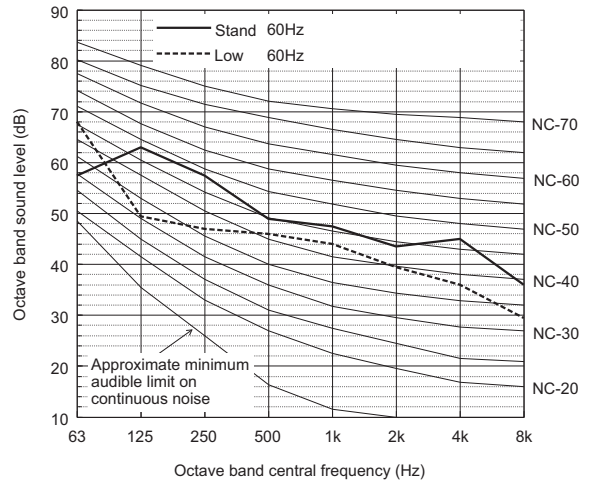
Sound level of PQHY-P144ZSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	69.5	48.5	47.5	45.0	42.5	37.5	35.0	28.5	49.0
Low noise mode	60Hz	44.5	45.0	41.5	46.0	43.0	36.0	33.5	25.0	47.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

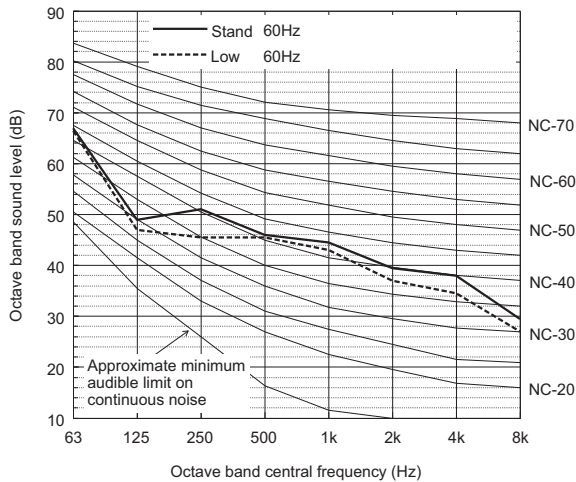
Sound level of PQHY-P216ZSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	57.5	63.0	57.5	49.0	47.5	43.5	45.0	36.0	55.0
Low noise mode	60Hz	68.0	49.5	47.0	46.0	44.0	39.5	36.0	29.5	49.5

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

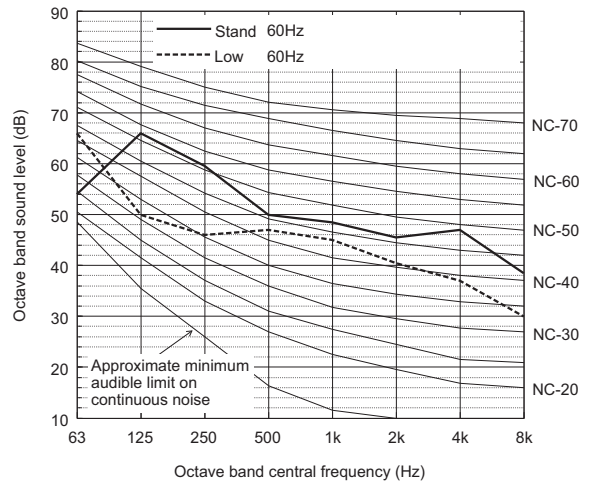
Sound level of PQHY-P168ZSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	67.0	49.0	51.0	46.0	44.5	39.5	38.0	29.5	50.0
Low noise mode	60Hz	66.5	47.0	45.5	45.5	43.0	37.0	34.5	27.0	48.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound level of PQHY-P240ZSLMU-A1

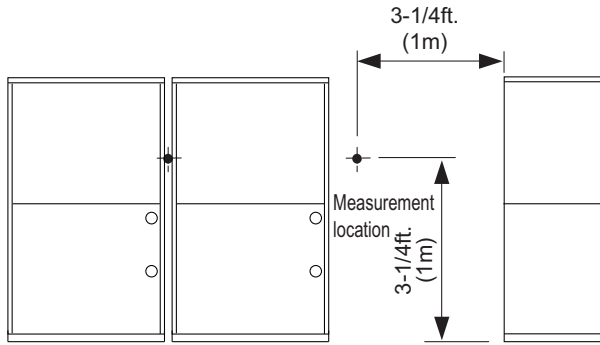


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	54.0	66.0	59.5	50.0	48.5	45.5	47.0	38.5	57.0
Low noise mode	60Hz	66.0	50.0	46.0	47.0	45.0	40.5	37.0	30.0	50.0

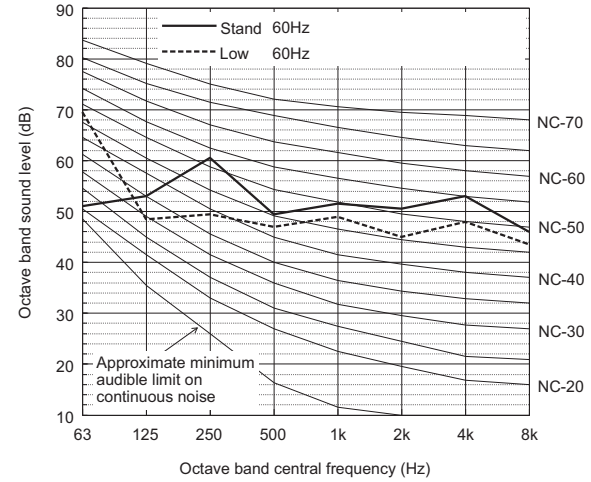
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

• Depending on the operation conditions, the unit generates noise caused by valve actuation, refrigerant flow, and pressure changes when operating normally. Please consider to avoid location where quietness is required.

Measurement condition
PQHY-P288, 312, 336, 360ZSLMU-A1



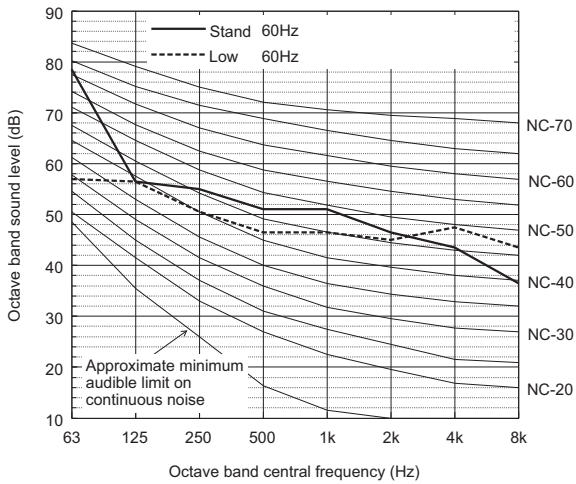
Sound level of PQHY-P336ZSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	51.0	53.0	60.5	49.5	51.5	50.5	53.0	46.0	59.0
Low noise mode	60Hz	69.5	48.5	49.5	47.0	49.0	45.0	48.0	43.5	54.5

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

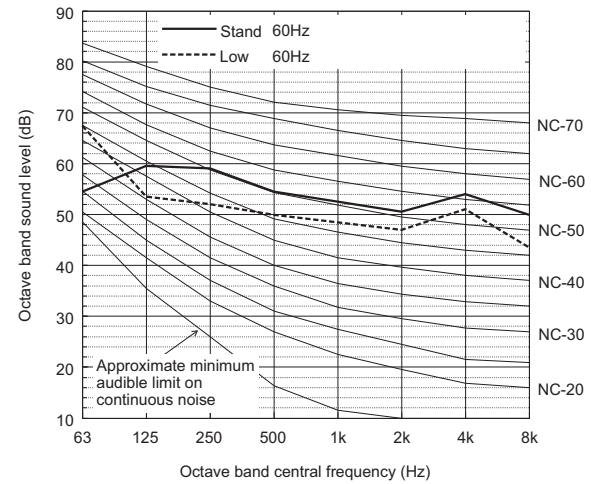
Sound level of PQHY-P288ZSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	78.5	56.5	55.0	51.0	51.0	46.5	43.5	36.5	57.0
Low noise mode	60Hz	57.0	56.5	50.5	46.5	46.5	45.0	47.5	43.5	53.5

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

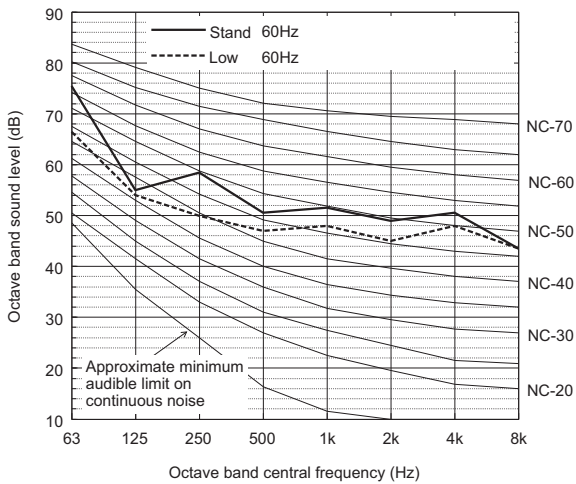
Sound level of PQHY-P360ZSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	54.5	59.5	59.0	54.5	52.5	50.5	54.0	50.0	60.0
Low noise mode	60Hz	67.5	53.5	52.0	50.0	48.5	47.0	51.0	43.5	56.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound level of PQHY-P312ZSLMU-A1

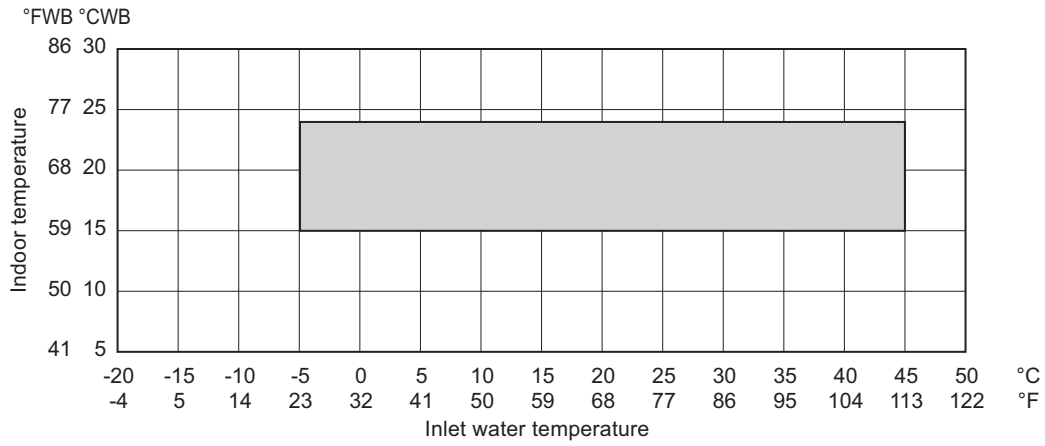


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	75.5	55.0	58.5	50.5	51.5	49.0	50.5	43.5	58.0
Low noise mode	60Hz	66.5	54.0	50.0	47.0	48.0	45.0	48.0	43.5	54.0

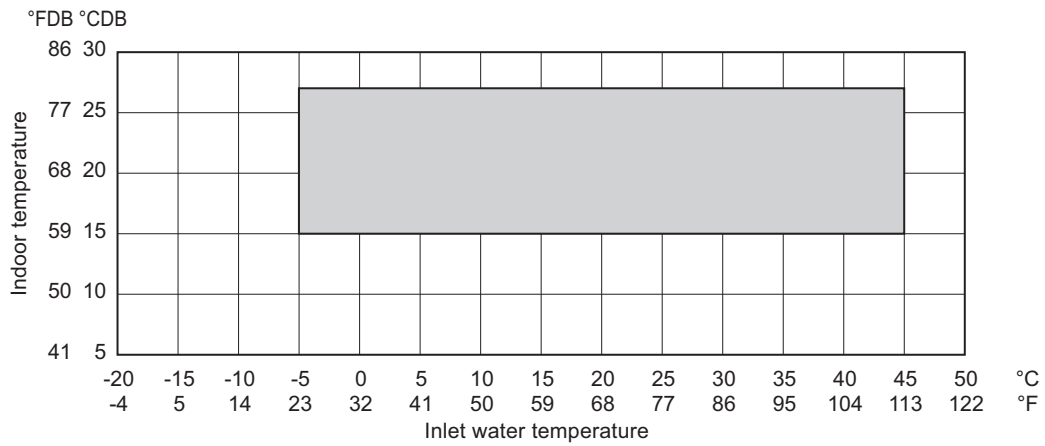
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

◆ Depending on the operation conditions, the unit generates noise caused by valve actuation, refrigerant flow, and pressure changes when operating normally. Please consider to avoid location where quietness is required.

Cooling



Heating



* The upper limit of the outlet water temperature is approximately 70°C (158°F) when the circulating-water flow rate is within the normal range.
 If the circulating-water flow rate goes outside the normal range, the outlet water temperature may exceed the above limit.

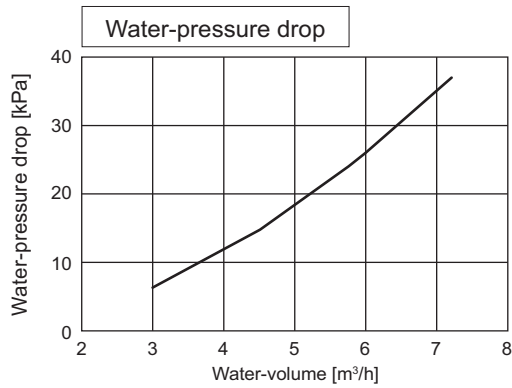
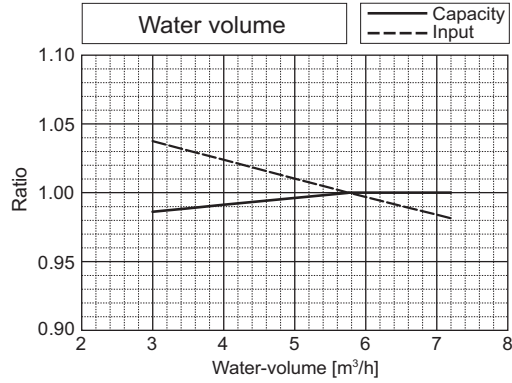
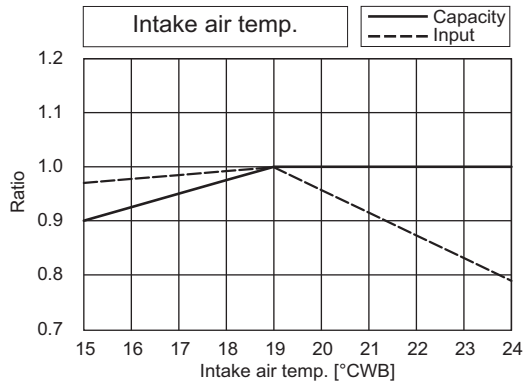
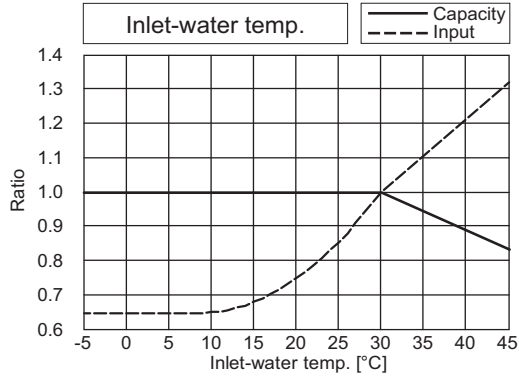
PQH-Y-P-Z(S)LMU-A1

7-1. Correction by temperature

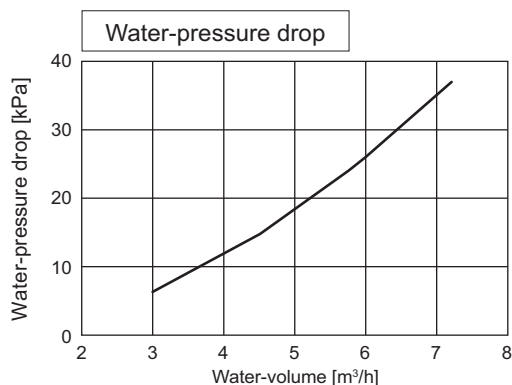
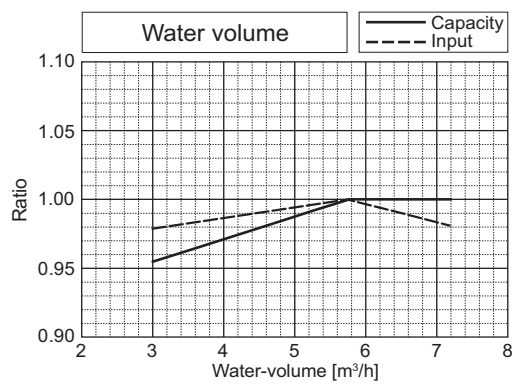
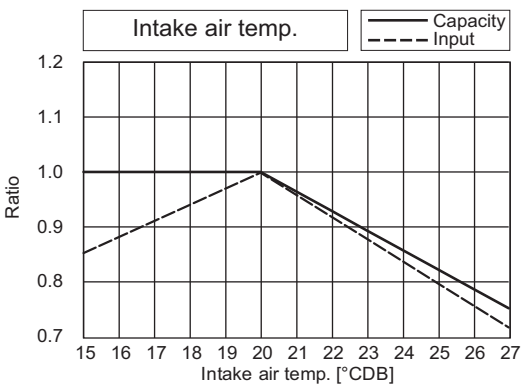
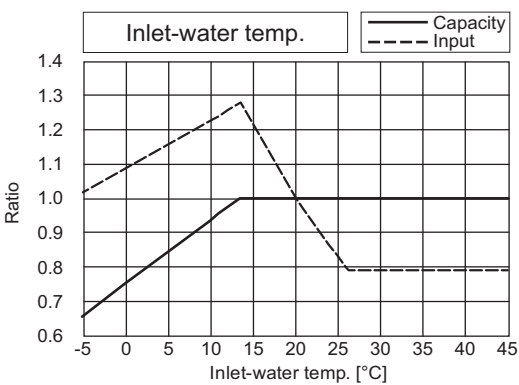
CITY MULTI could have varied capacity at different designing temperature. Using the nominal cooling/heating capacity value and the ratio below, the capacity can be observed at various temperature.

PQHY-P-Z(S)LMU-A1

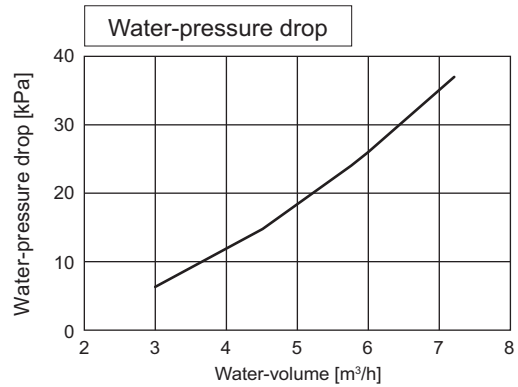
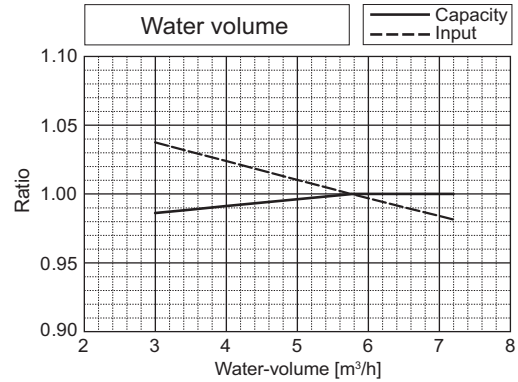
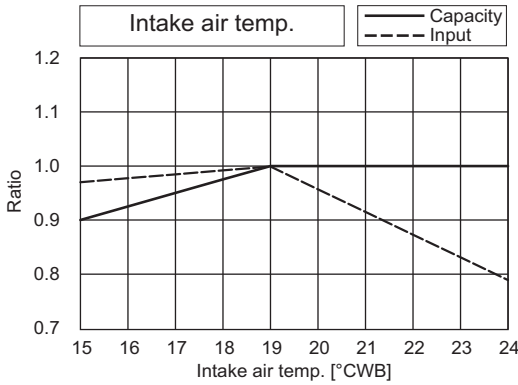
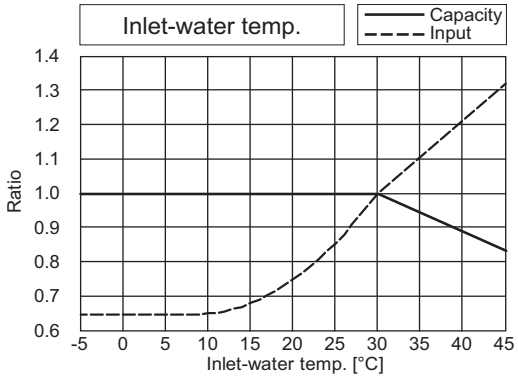
PQHY-			P72ZLMU		
Nominal Cooling Capacity	kW	21.1	Rated Cooling Capacity	kW	20.2
	BTU/h	72,000		BTU/h	69,000
Input	kW	3.61	Input	kW	(Non-Ducted) 3.34 (Ducted) 3.12



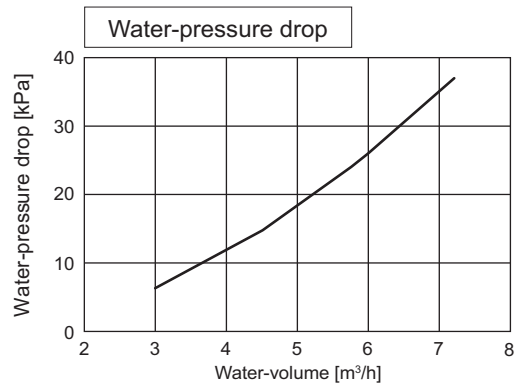
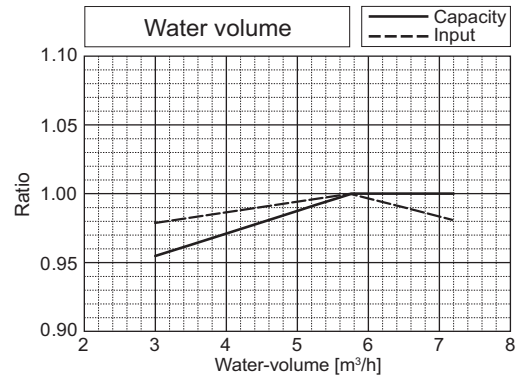
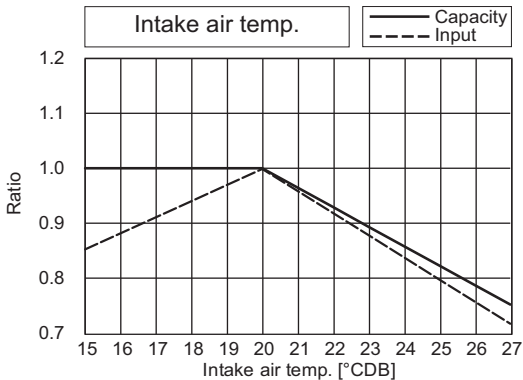
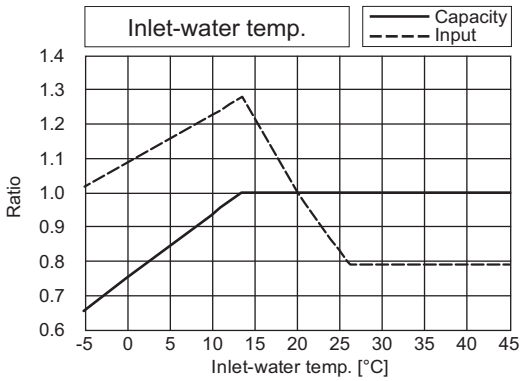
PQHY-			P72ZLMU		
Nominal Heating Capacity	kW	23.4	Rated Heating Capacity	kW	22.3
	BTU/h	80,000		BTU/h	76,000
Input	kW	4.04	Input	kW	(Non-Ducted) 3.74 (Ducted) 3.36



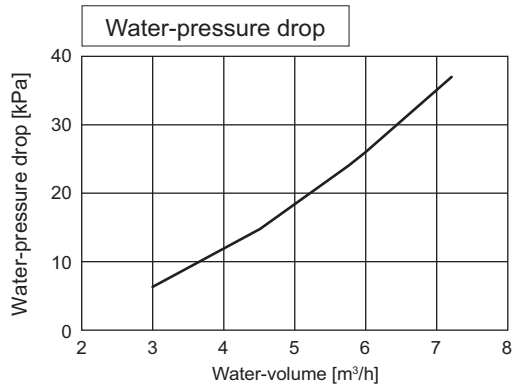
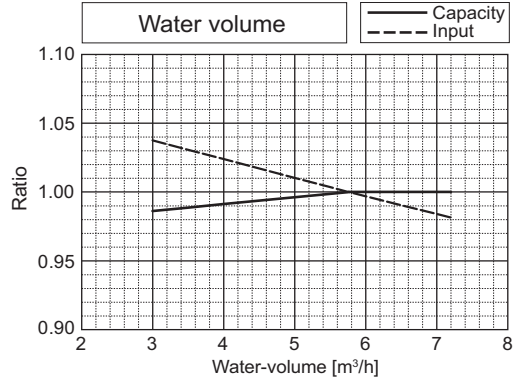
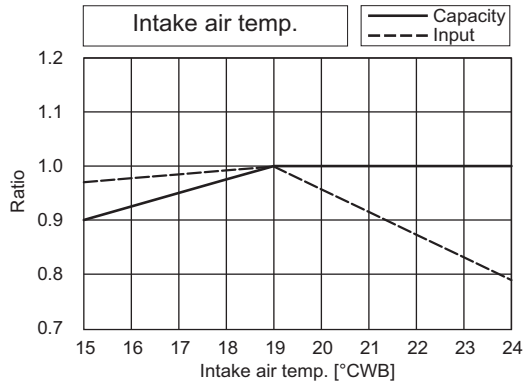
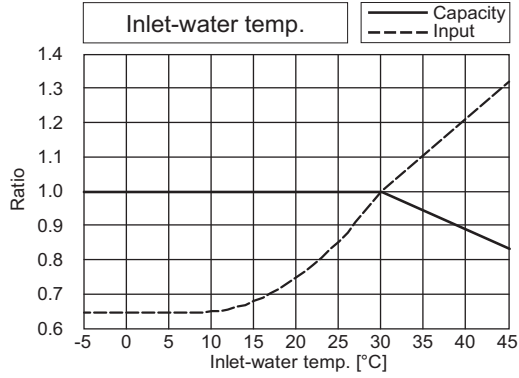
PQHY-			P96ZLMU		
Nominal Cooling Capacity	kW	28.1	Rated Cooling Capacity	kW	27.0
	BTU/h	96,000		BTU/h	92,000
Input	kW	5.21	Input	kW	(Non-Ducted) 4.82 (Ducted) 5.19



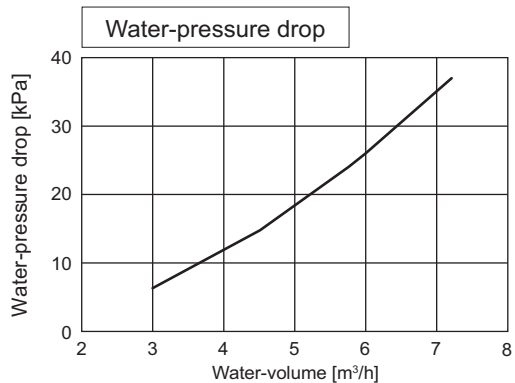
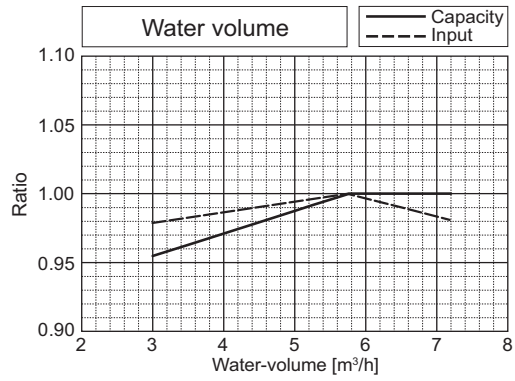
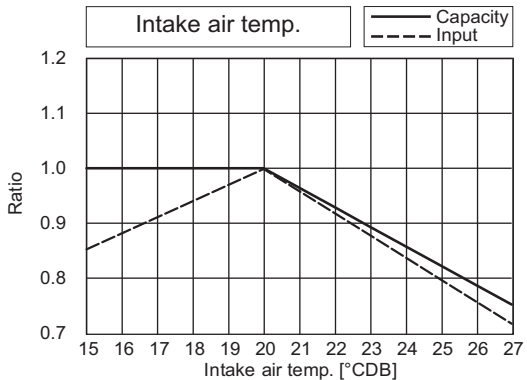
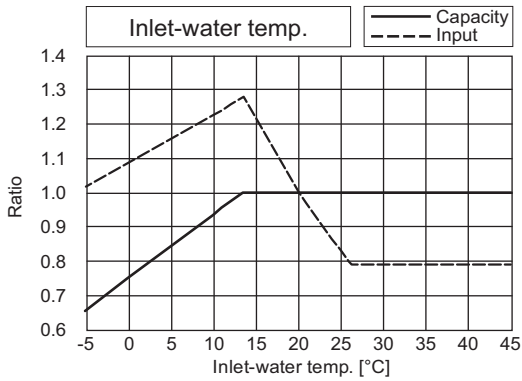
PQHY-			P96ZLMU		
Nominal Heating Capacity	kW	31.7	Rated Heating Capacity	kW	30.2
	BTU/h	108,000		BTU/h	103,000
Input	kW	5.64	Input	kW	(Non-Ducted) 5.21 (Ducted) 4.48



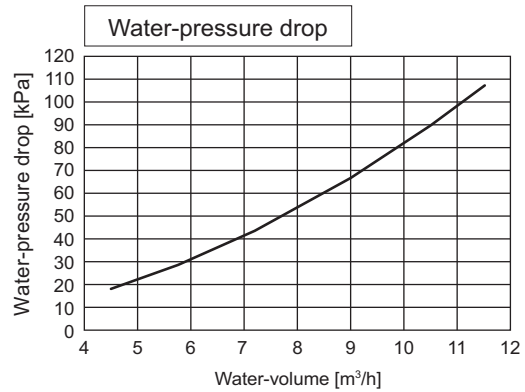
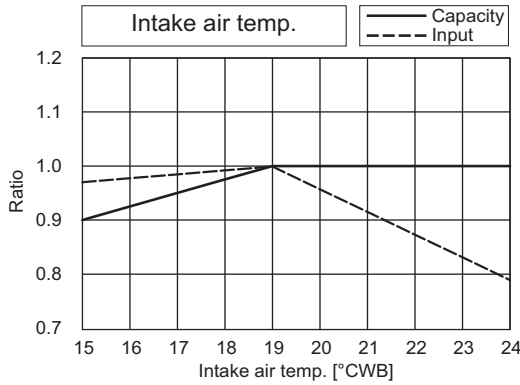
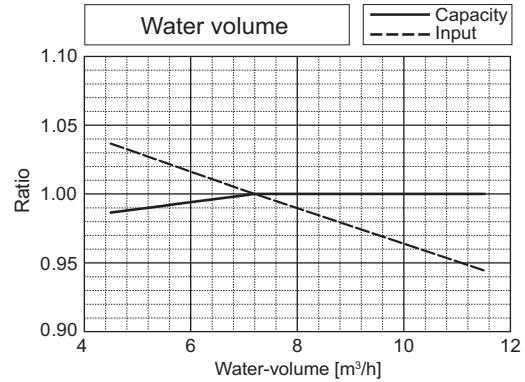
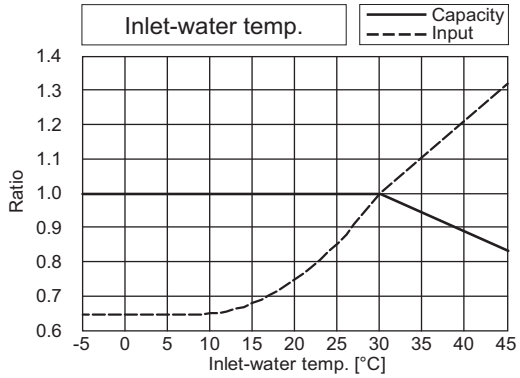
PQHY-			P120ZLMU		
Nominal Cooling Capacity	kW	35.2	Rated Cooling Capacity	kW	33.4
	BTU/h	120,000		BTU/h	114,000
Input	kW	7.51	Input	kW	(Non-Ducted) 6.95 (Ducted) 7.35



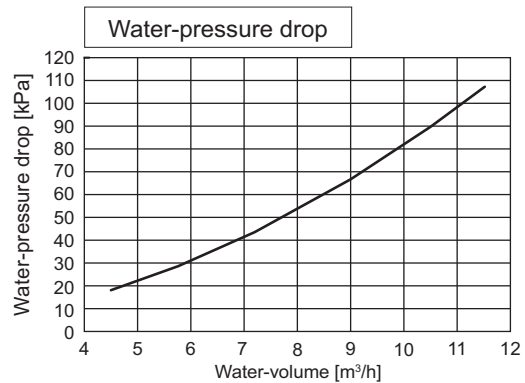
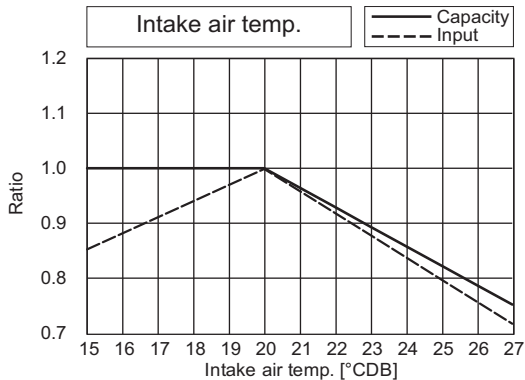
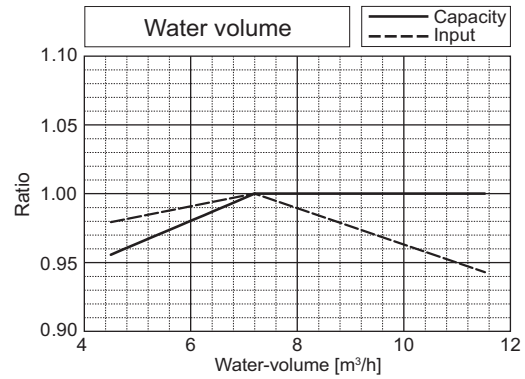
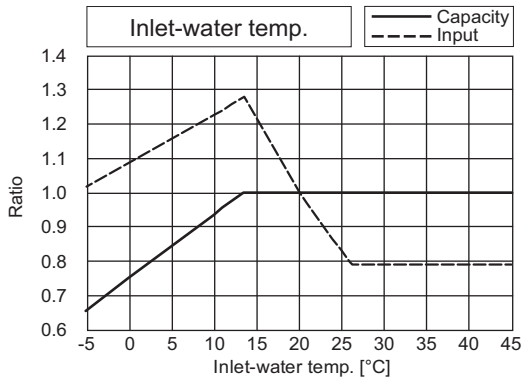
PQHY-			P120ZLMU		
Nominal Heating Capacity	kW	39.6	Rated Heating Capacity	kW	37.8
	BTU/h	135,000		BTU/h	129,000
Input	kW	7.09	Input	kW	(Non-Ducted) 6.55 (Ducted) 5.92



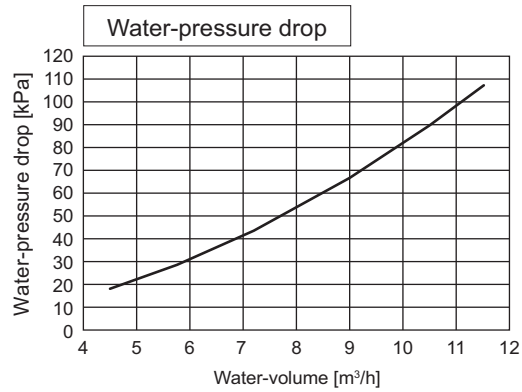
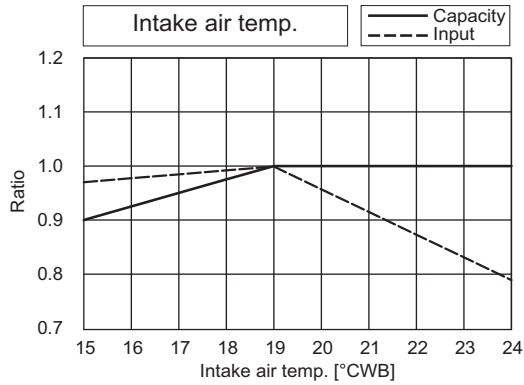
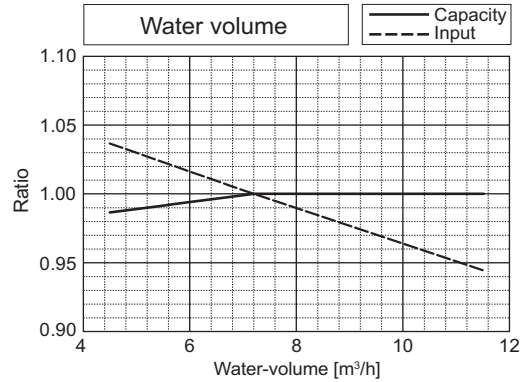
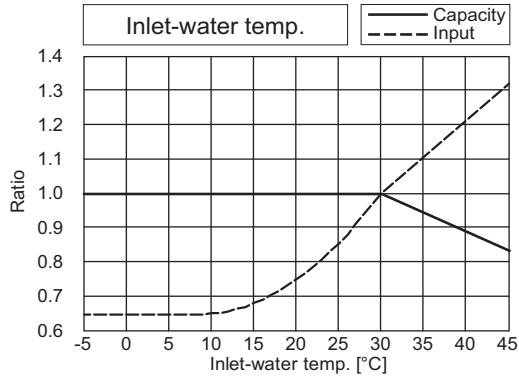
PQHY-			P144ZLMU		
Nominal Cooling Capacity	kW	42.2	Rated Cooling Capacity	kW	40.2
	BTU/h	144,000		BTU/h	137,000
Input	kW	8.78	Input	kW	(Non-Ducted) 8.07 (Ducted) 9.98



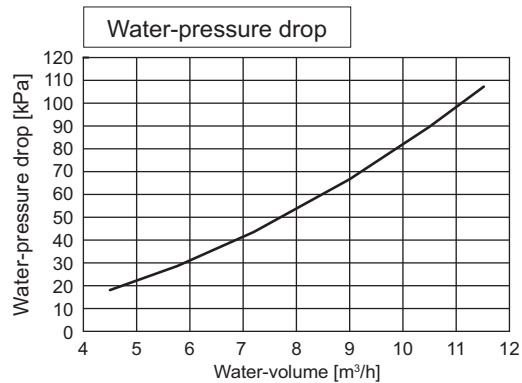
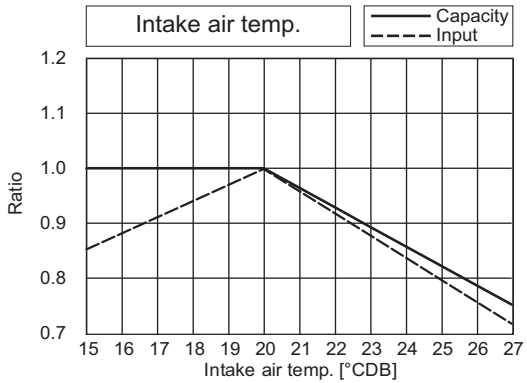
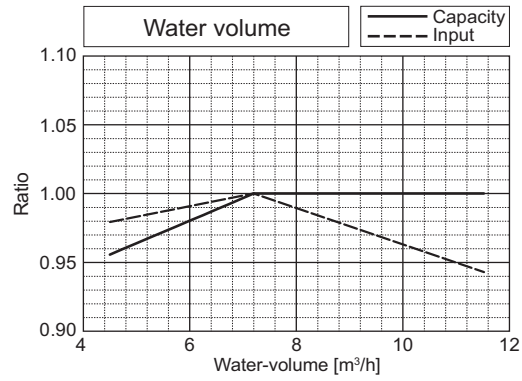
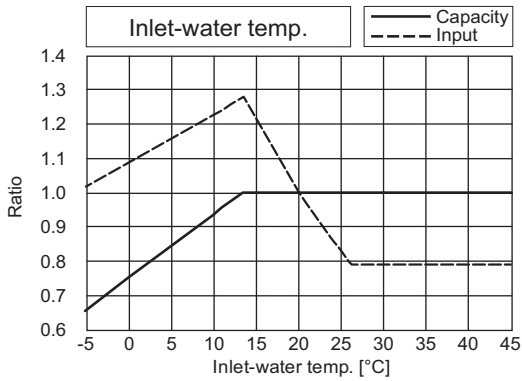
PQHY-			P144ZLMU		
Nominal Heating Capacity	kW	46.9	Rated Heating Capacity	kW	44.5
	BTU/h	160,000		BTU/h	152,000
Input	kW	8.11	Input	kW	(Non-Ducted) 7.47 (Ducted) 7.90



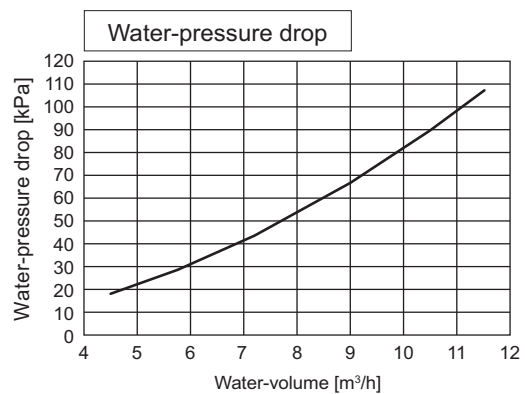
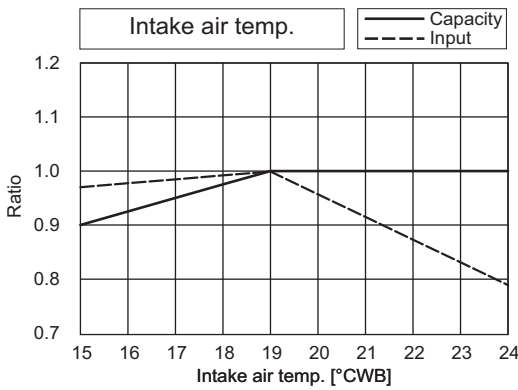
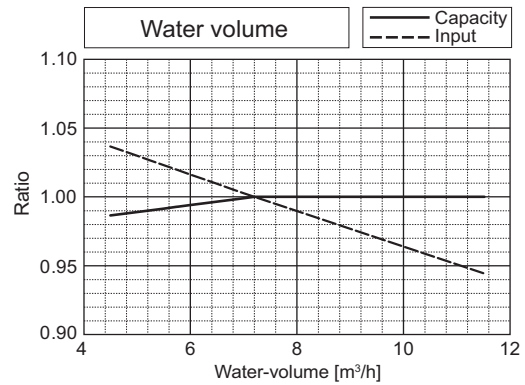
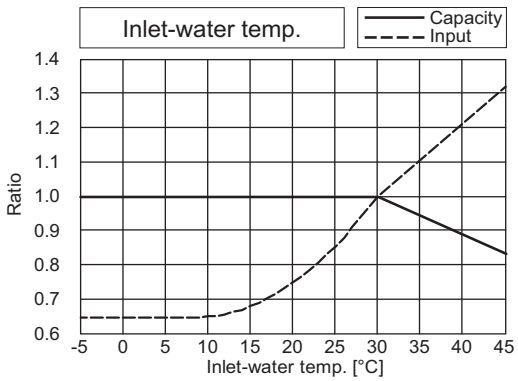
PQHY-			P168ZLMU		
Nominal Cooling Capacity	kW	49.2	Rated Cooling Capacity	kW	47.2
	BTU/h	168,000		BTU/h	161,000
Input	kW	12.05	Input	kW	(Non-Ducted) 11.10 (Ducted) 11.88



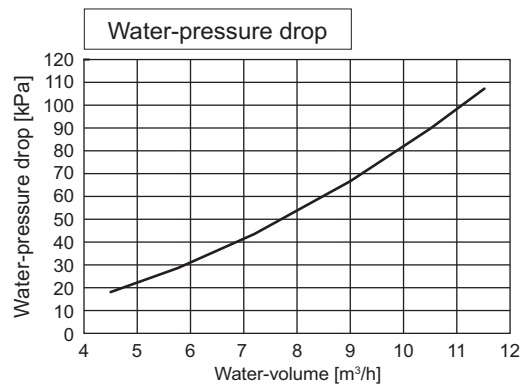
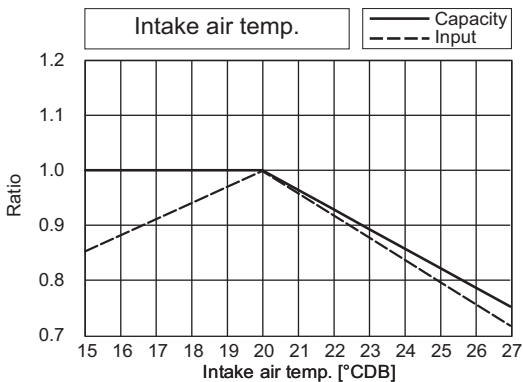
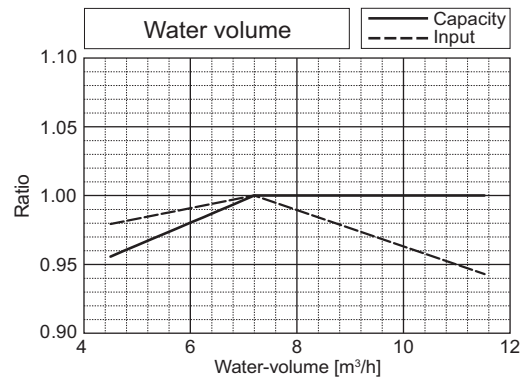
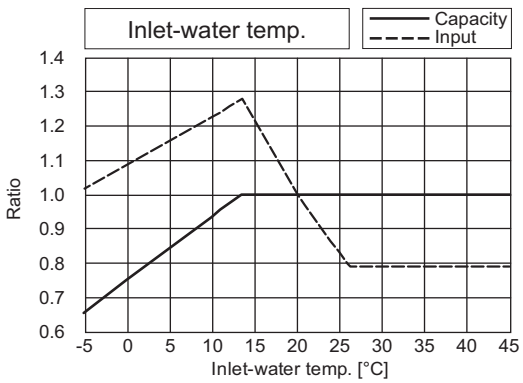
PQHY-			P168ZLMU		
Nominal Heating Capacity	kW	55.1	Rated Heating Capacity	kW	52.5
	BTU/h	188,000		BTU/h	179,000
Input	kW	9.86	Input	kW	(Non-Ducted) 9.09 (Ducted) 9.72



PQHY-			P192ZLMU		
Nominal Cooling Capacity	kW	56.3	Rated Cooling Capacity	kW	53.6
	BTU/h	192,000		BTU/h	183,000
Input	kW	15.05	Input	kW	(Non-Ducted) 13.87 (Ducted) 14.19

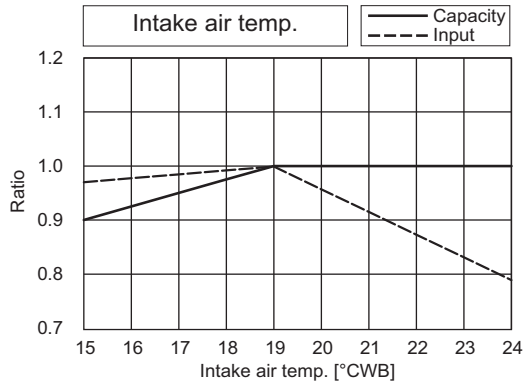
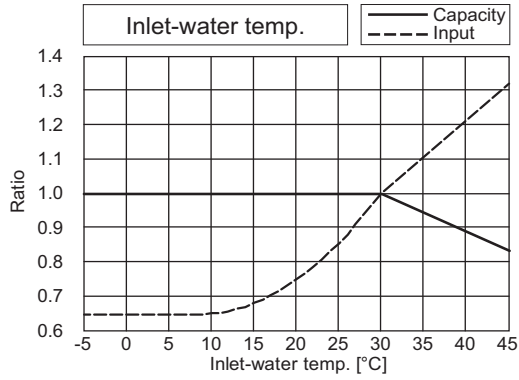


PQHY-			P192ZLMU		
Nominal Heating Capacity	kW	63.0	Rated Heating Capacity	kW	60.1
	BTU/h	215,000		BTU/h	205,000
Input	kW	11.90	Input	kW	(Non-Ducted) 10.97 (Ducted) 11.56

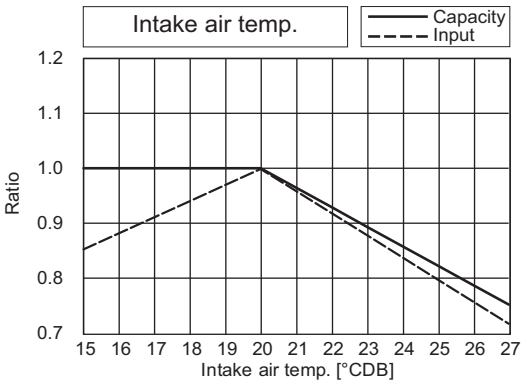
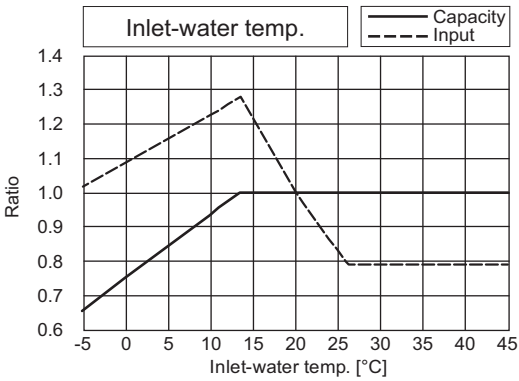


PQHY-P-Z(S)LMU-A1

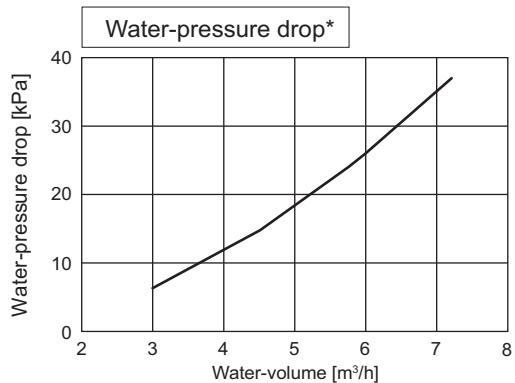
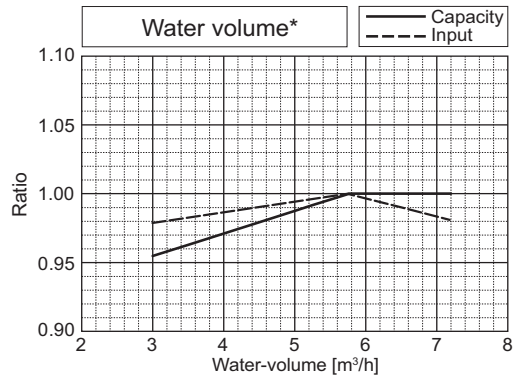
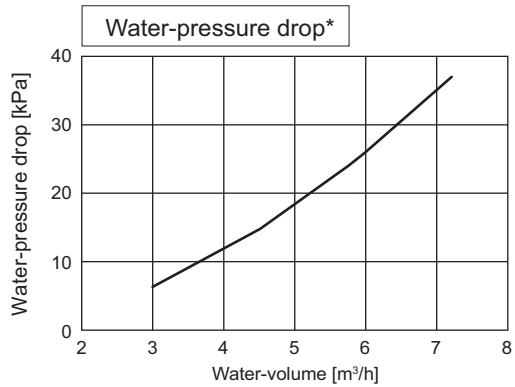
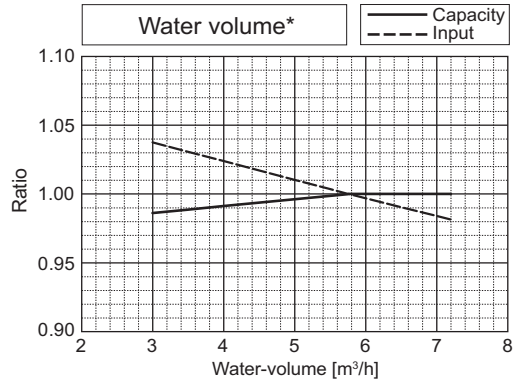
PQHY-			P144ZSLMU		
Nominal Cooling Capacity	kW	42.2	Rated Cooling Capacity	kW	40.2
	BTU/h	144,000		BTU/h	137,000
Input	kW	7.11	Input	kW	(Non-Ducted) 6.53 (Ducted) 7.72



PQHY-			P144ZSLMU		
Nominal Heating Capacity	kW	46.9	Rated Heating Capacity	kW	44.5
	BTU/h	160,000		BTU/h	152,000
Input	kW	7.45	Input	kW	(Non-Ducted) 6.86 (Ducted) 7.22

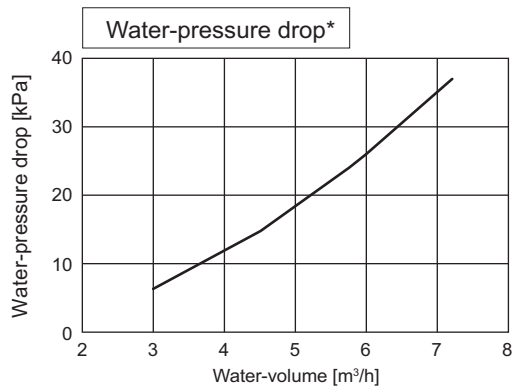
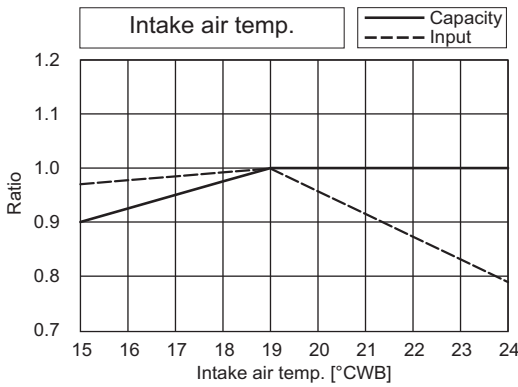
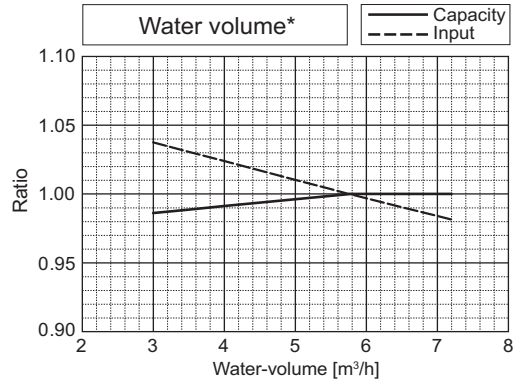
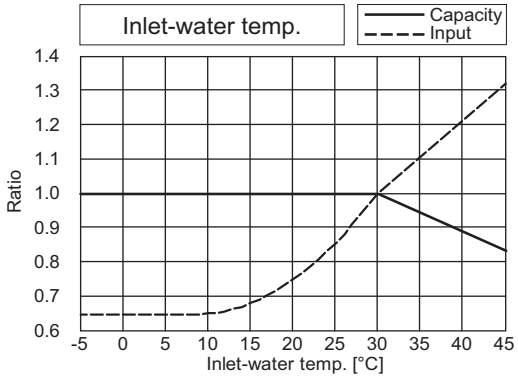


*The drawing indicates characteristic per unit.

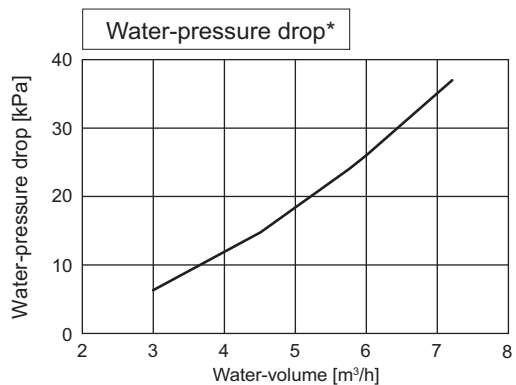
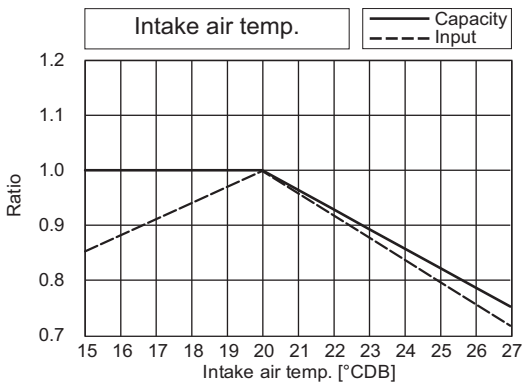
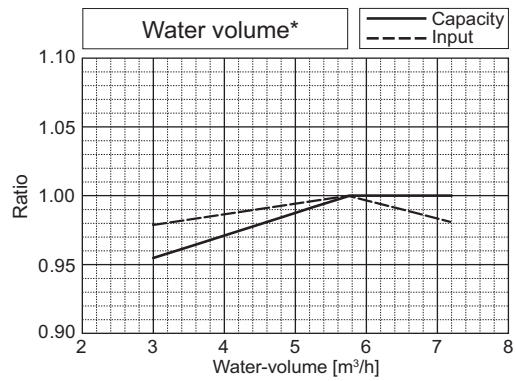
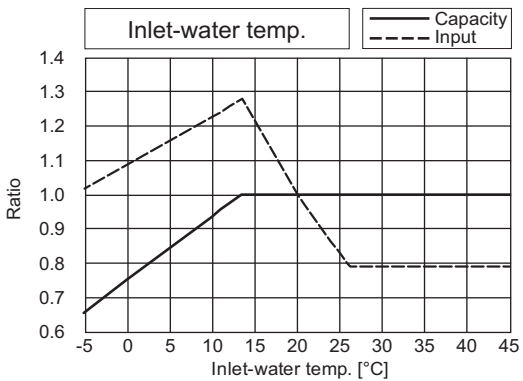


PQHY-		P168ZSLMU			
Nominal Cooling Capacity	kW	49.2	Rated Cooling Capacity	kW	47.2
	BTU/h	168,000		BTU/h	161,000
Input	kW	9.33	Input	kW	(Non-Ducted) 8.58 (Ducted) 9.22

*The drawing indicates characteristic per unit.

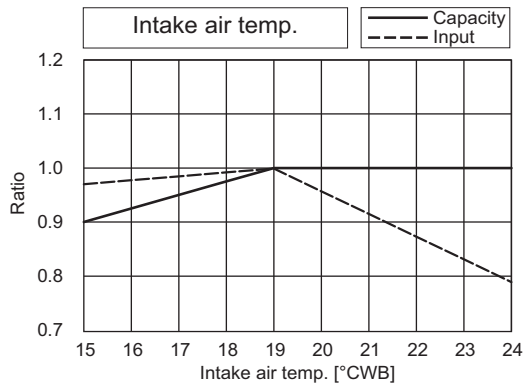
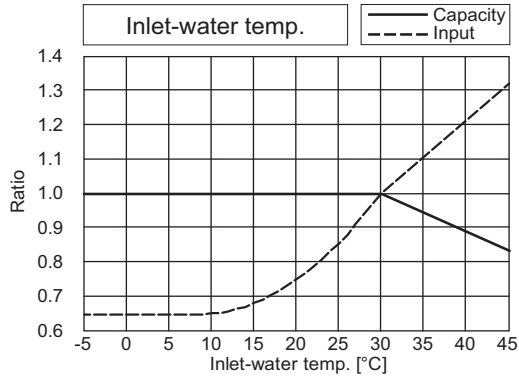


PQHY-		P168ZSLMU			
Nominal Heating Capacity	kW	55.1	Rated Heating Capacity	kW	52.5
	BTU/h	188,000		BTU/h	179,000
Input	kW	9.34	Input	kW	(Non-Ducted) 8.60 (Ducted) 8.03

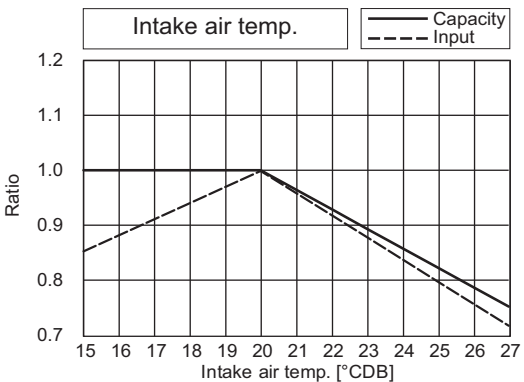
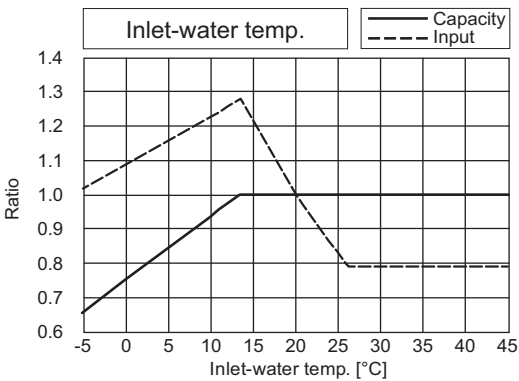


PQHY-P-Z(S)LMU-A1

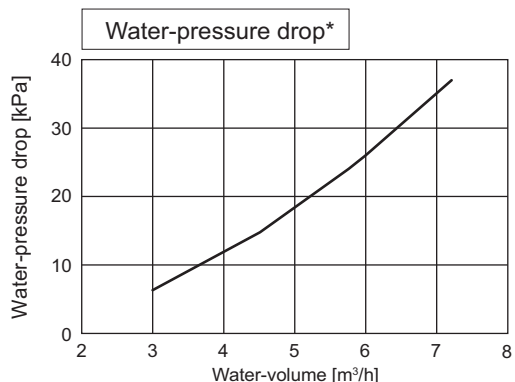
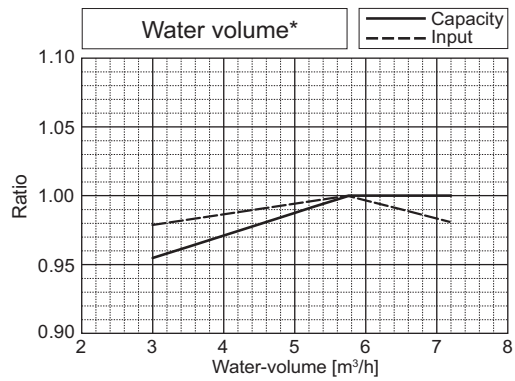
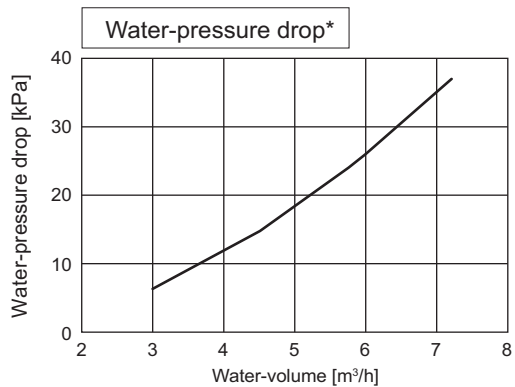
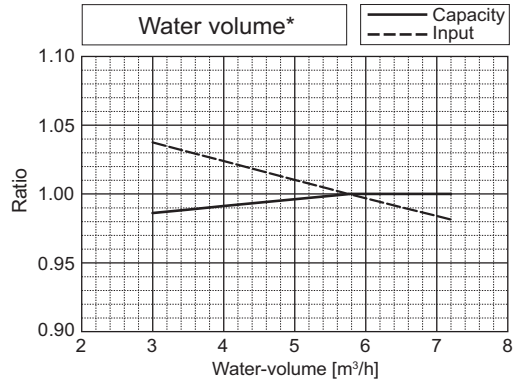
PQHY-			P192ZSLMU		
Nominal Cooling Capacity	kW	56.3	Rated Cooling Capacity	kW	53.6
	BTU/h	192,000		BTU/h	183,000
Input	kW	11.30	Input	kW	(Non-Ducted) 10.40 (Ducted) 10.98



PQHY-			P192ZSLMU		
Nominal Heating Capacity	kW	63.0	Rated Heating Capacity	kW	60.1
	BTU/h	215,000		BTU/h	205,000
Input	kW	11.02	Input	kW	(Non-Ducted) 10.16 (Ducted) 8.90

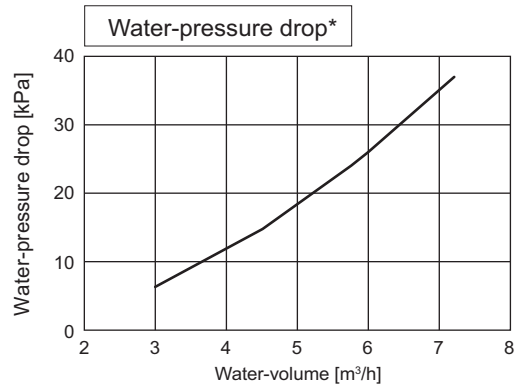
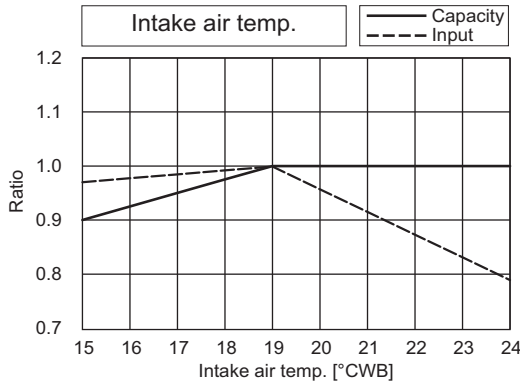
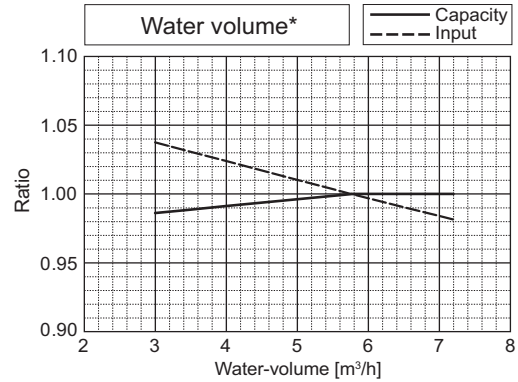
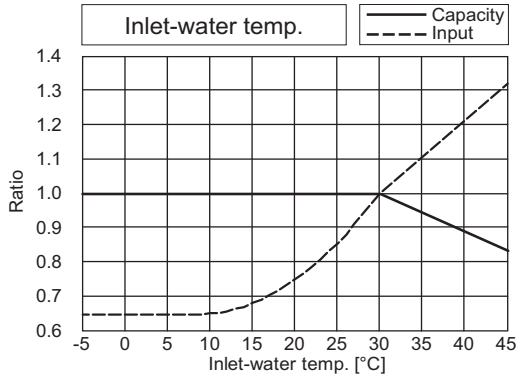


*The drawing indicates characteristic per unit.

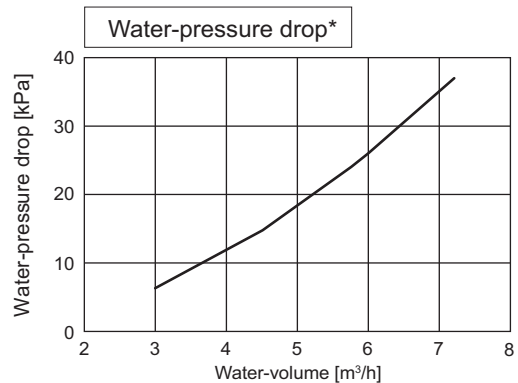
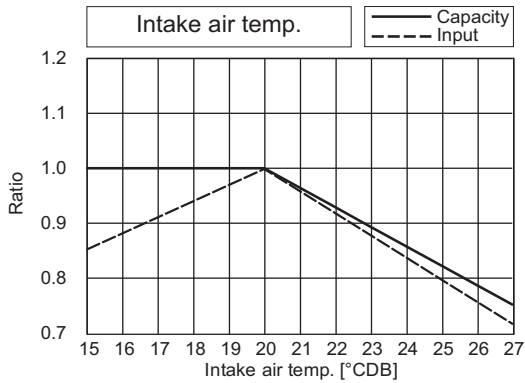
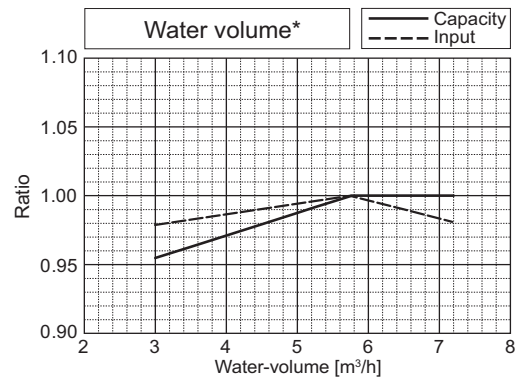
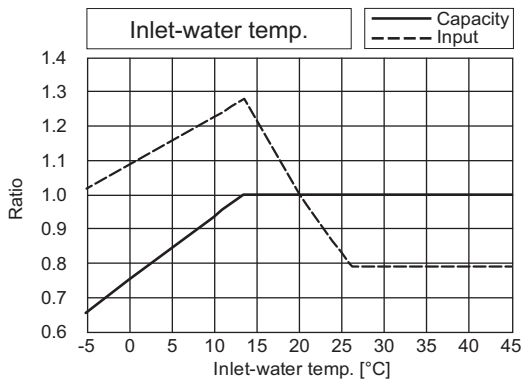


PQHY-			P216ZSLMU		
Nominal Cooling Capacity	kW	63.3	Rated Cooling Capacity	kW	60.4
	BTU/h	216,000		BTU/h	206,000
Input	kW	14.03	Input	kW	(Non-Ducted) 12.93 (Ducted) 13.24

*The drawing indicates characteristic per unit.

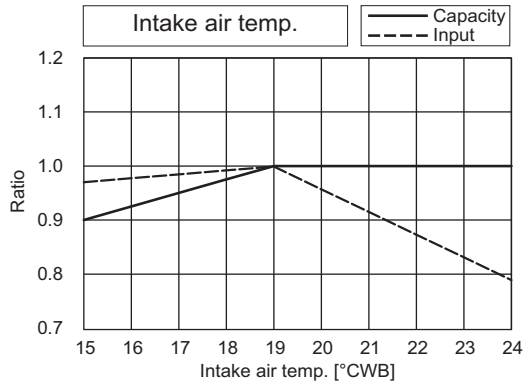
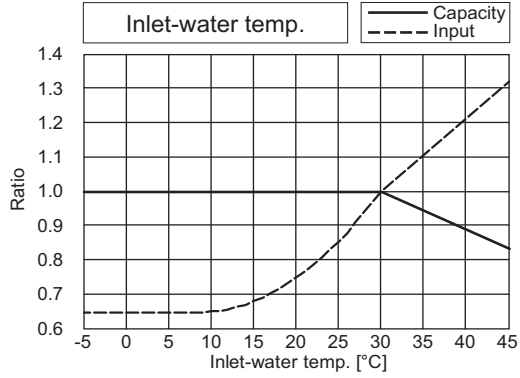


PQHY-			P216ZSLMU		
Nominal Heating Capacity	kW	71.2	Rated Heating Capacity	kW	68.0
	BTU/h	243,000		BTU/h	232,000
Input	kW	12.88	Input	kW	(Non-Ducted) 11.88 (Ducted) 10.35

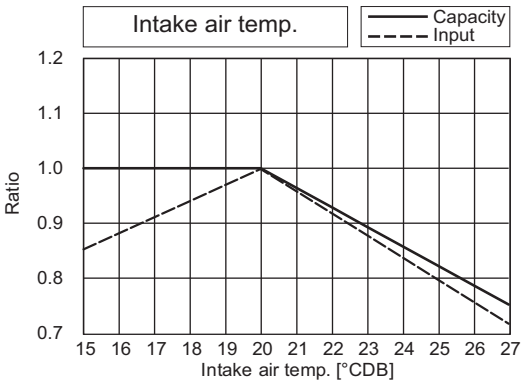
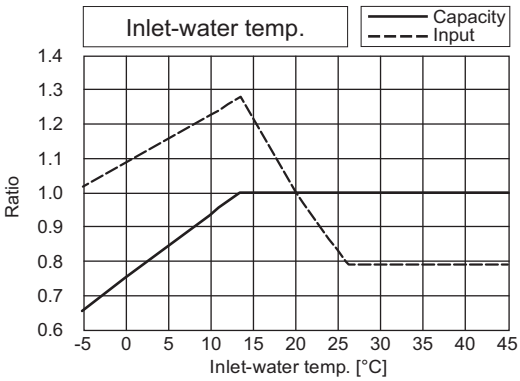


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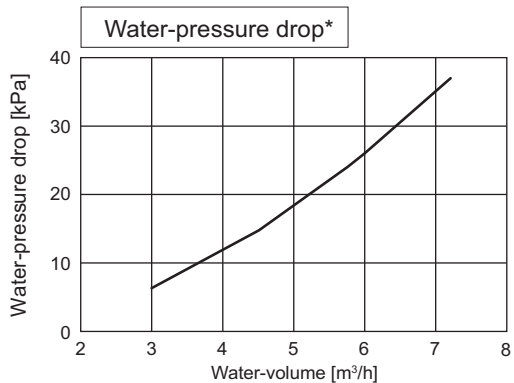
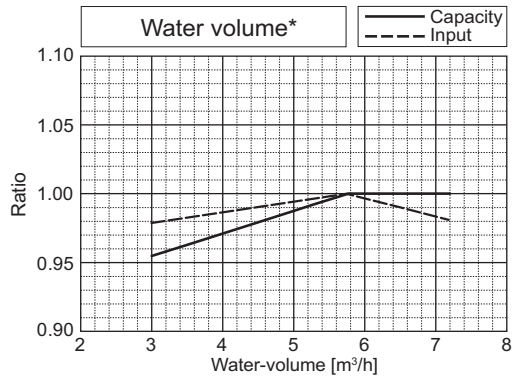
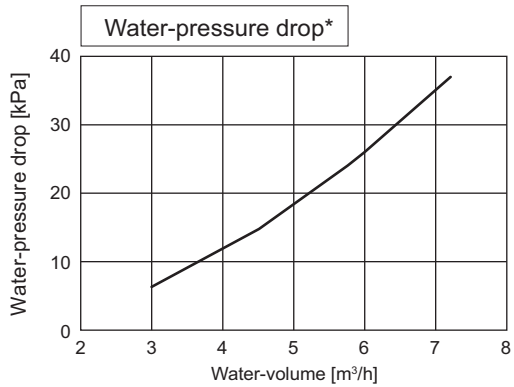
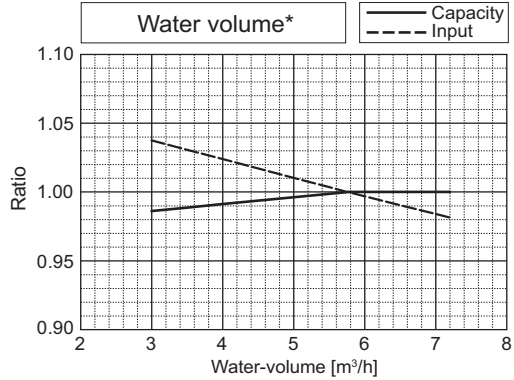
PQHY-		P240ZSLMU			
Nominal Cooling Capacity	kW	70.3	Rated Cooling Capacity	kW	66.8
	BTU/h	240,000		BTU/h	228,000
Input	kW	16.89	Input	kW	(Non-Ducted) 15.57 (Ducted) 16.15



PQHY-		P240ZSLMU			
Nominal Heating Capacity	kW	79.1	Rated Heating Capacity	kW	75.6
	BTU/h	270,000		BTU/h	258,000
Input	kW	14.58	Input	kW	(Non-Ducted) 13.45 (Ducted) 12.02

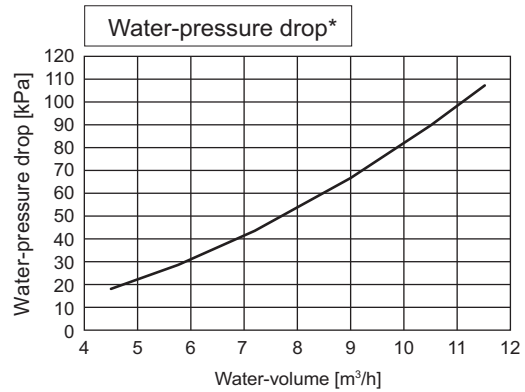
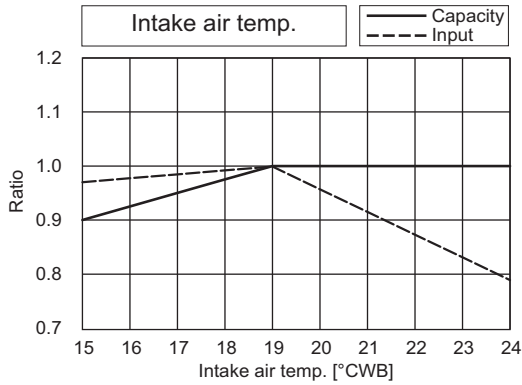
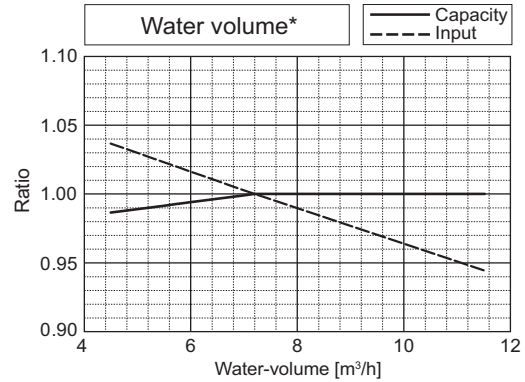
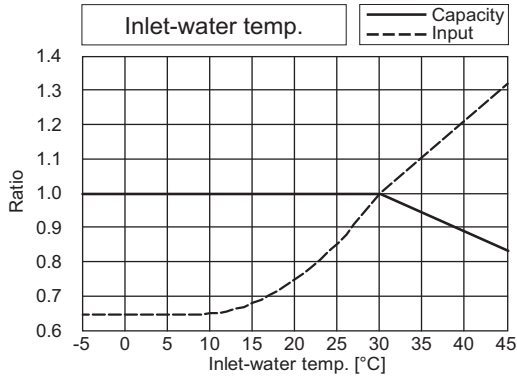


*The drawing indicates characteristic per unit.

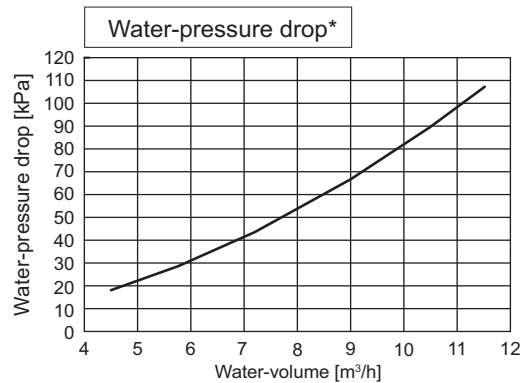
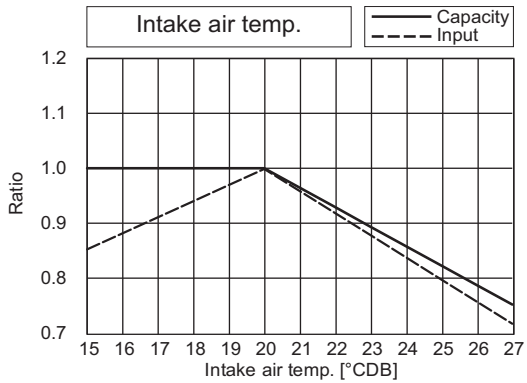
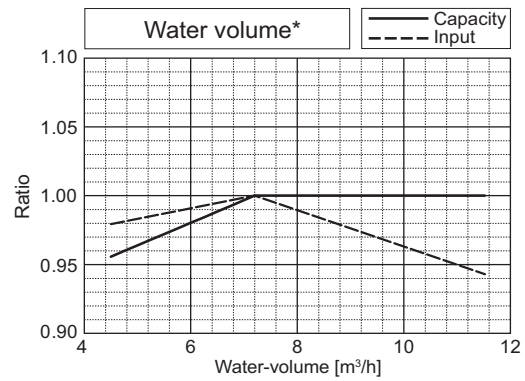
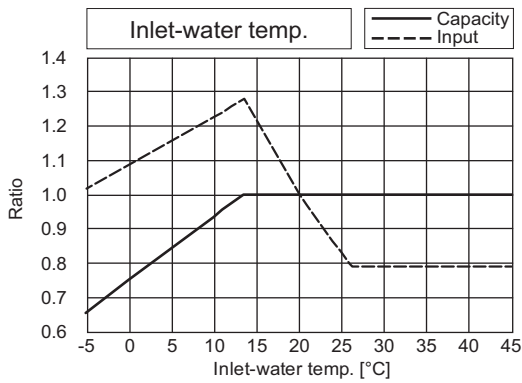


PQHY-		P288ZSLMU			
Nominal Cooling Capacity	kW	84.4	Rated Cooling Capacity	kW	80.6
	BTU/h	288,000		BTU/h	275,000
Input	kW	20.42	Input	kW	(Non-Ducted) 18.82 (Ducted) 21.43

*The drawing indicates characteristic per unit.

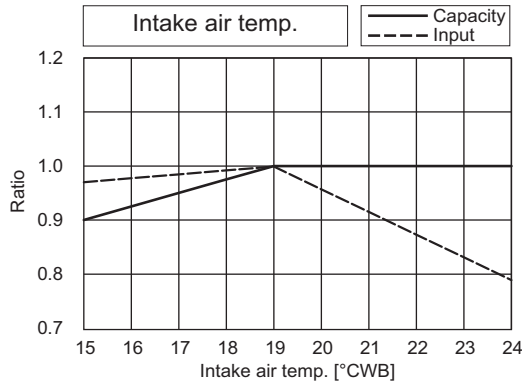
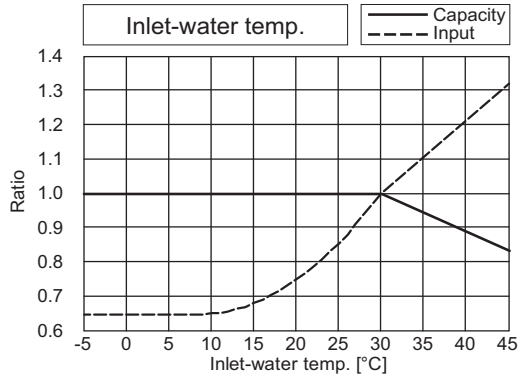


PQHY-		P288ZSLMU			
Nominal Heating Capacity	kW	94.7	Rated Heating Capacity	kW	90.3
	BTU/h	323,000		BTU/h	308,000
Input	kW	17.50	Input	kW	(Non-Ducted) 16.13 (Ducted) 16.05

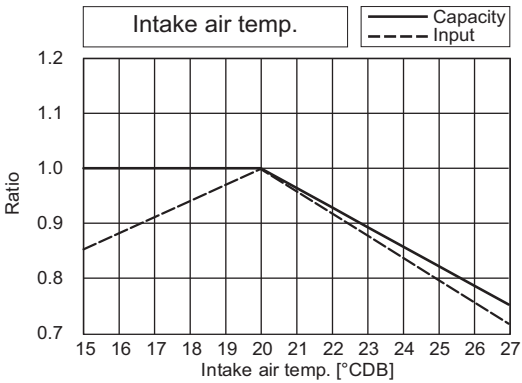
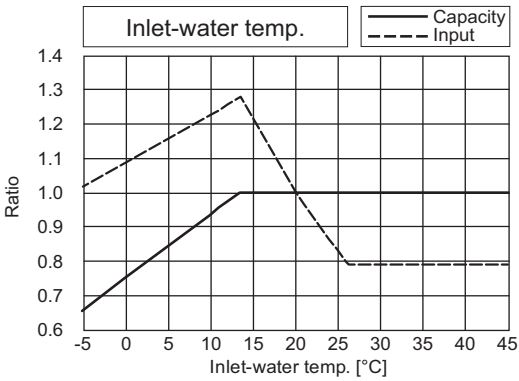


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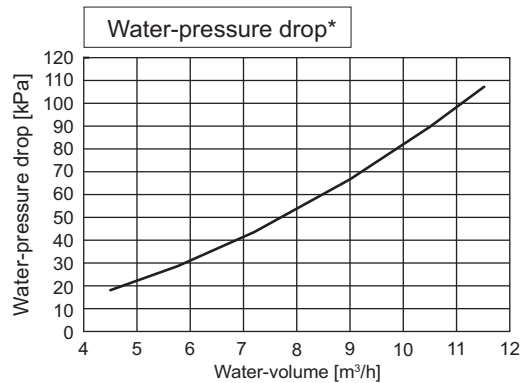
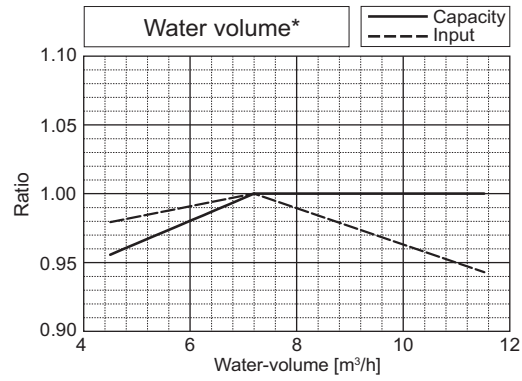
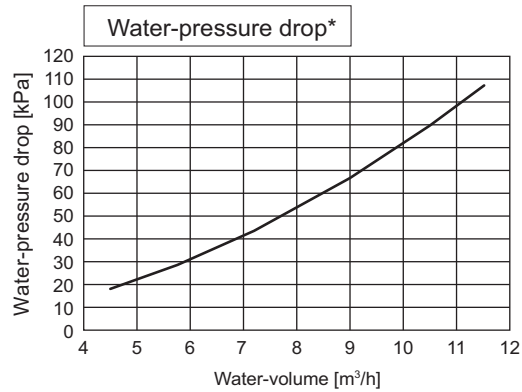
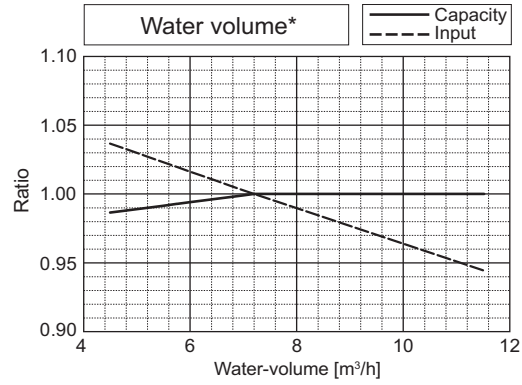
PQHY-		P312ZSLMU			
Nominal Cooling Capacity	kW	91.4	Rated Cooling Capacity	kW	87.0
	BTU/h	312,000		BTU/h	297,000
Input	kW	23.41	Input	kW	(Non-Ducted) 21.59 (Ducted) 23.67



PQHY-		P312ZSLMU			
Nominal Heating Capacity	kW	102.6	Rated Heating Capacity	kW	97.9
	BTU/h	350,000		BTU/h	334,000
Input	kW	19.11	Input	kW	(Non-Ducted) 17.62 (Ducted) 17.96

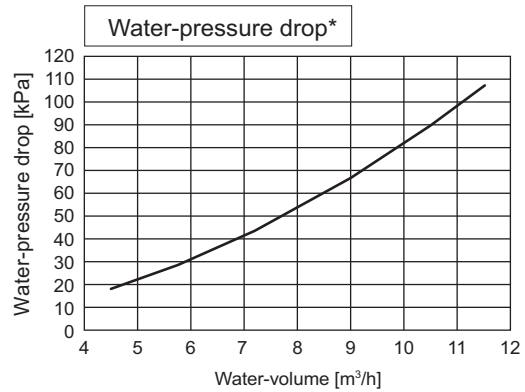
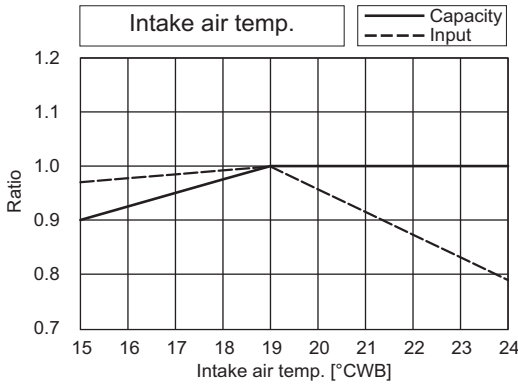
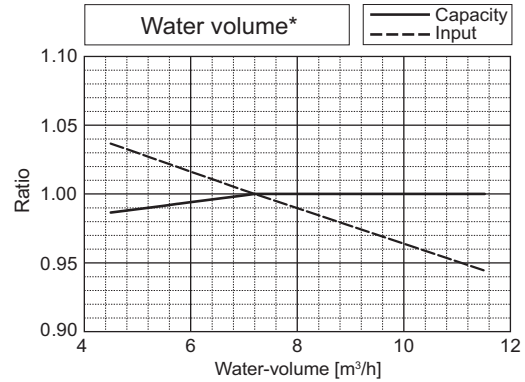
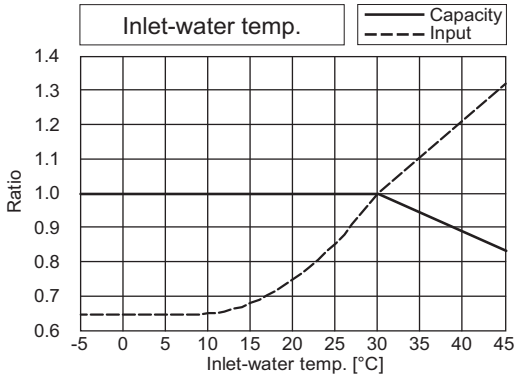


*The drawing indicates characteristic per unit.

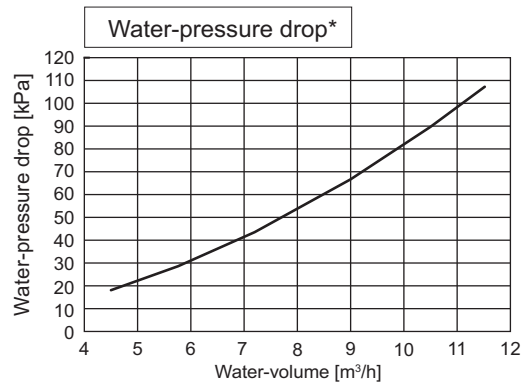
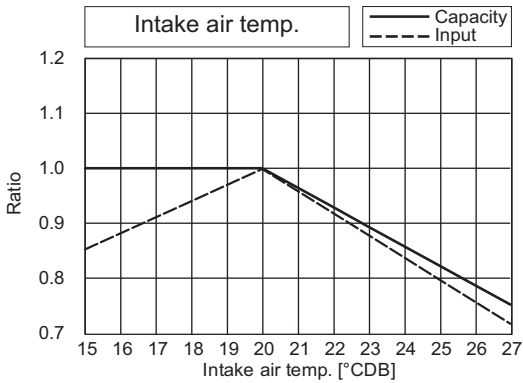
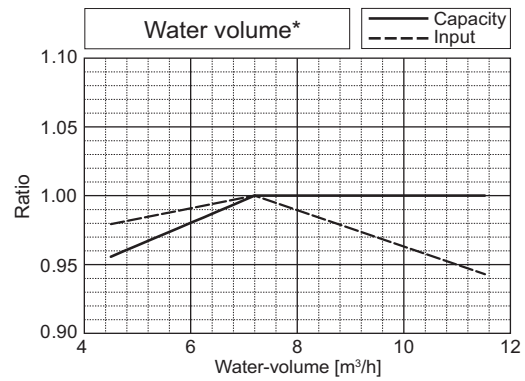
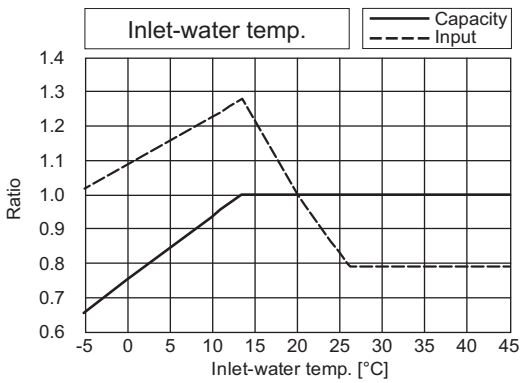


PQHY-			P336ZSLMU		
Nominal Cooling Capacity	kW	98.5	Rated Cooling Capacity	kW	93.8
	BTU/h	336,000		BTU/h	320,000
Input	kW	26.84	Input	kW	(Non-Ducted) 24.76 (Ducted) 25.85

*The drawing indicates characteristic per unit.



PQHY-			P336ZSLMU		
Nominal Heating Capacity	kW	110.8	Rated Heating Capacity	kW	105.8
	BTU/h	378,000		BTU/h	361,000
Input	kW	20.77	Input	kW	(Non-Ducted) 19.16 (Ducted) 20.05

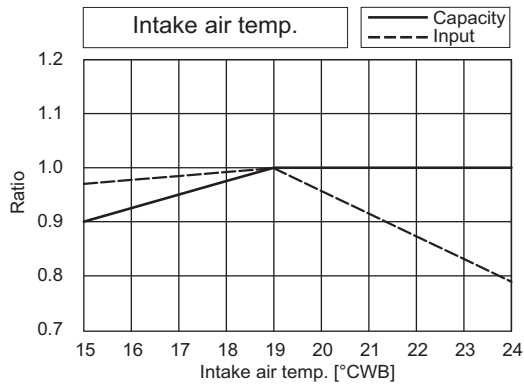
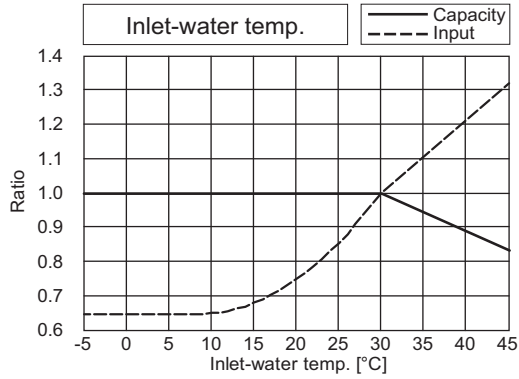


PQHY-P-Z(S)LMU-A1

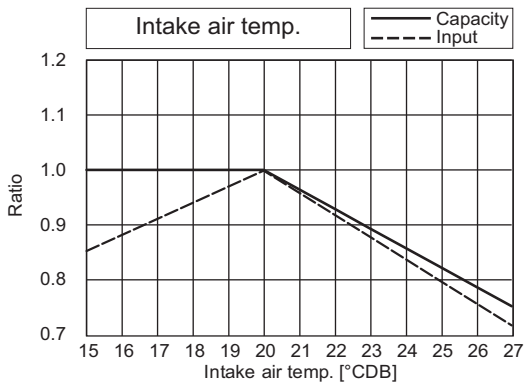
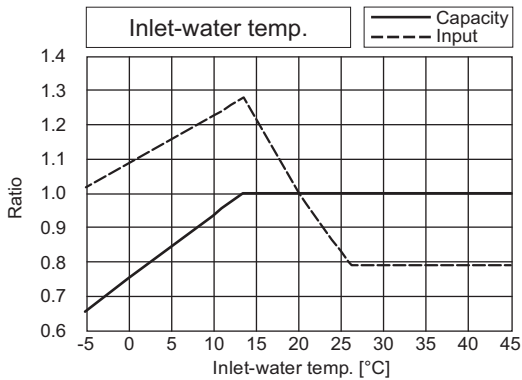
7. CAPACITY TABLES

PQHY-P-Z(S)LMU-A1

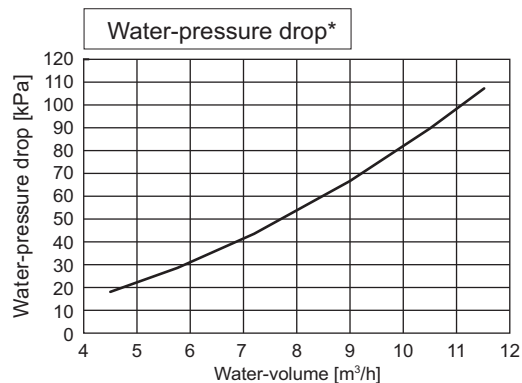
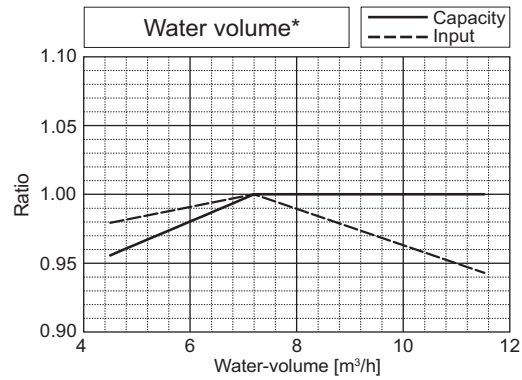
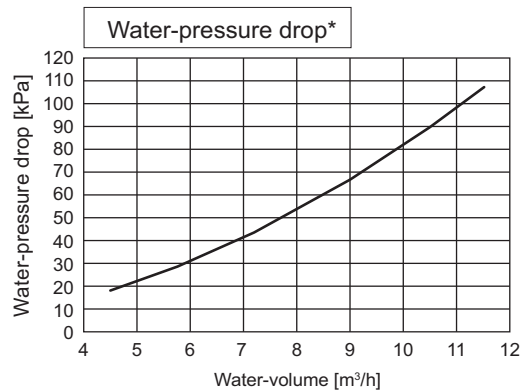
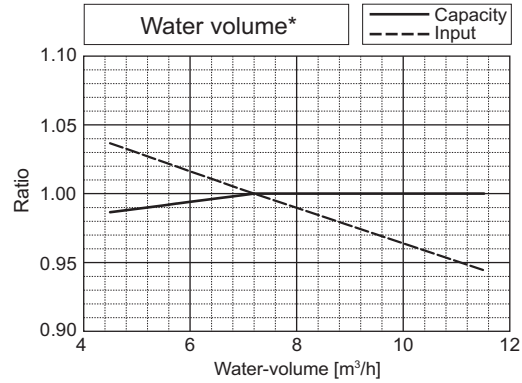
PQHY-			P360ZSLMU		
Nominal Cooling Capacity	kW	105.5	Rated Cooling Capacity	kW	100.2
	BTU/h	360,000		BTU/h	342,000
Input	kW	29.43	Input	kW	(Non-Ducted) 27.17 (Ducted) 27.41



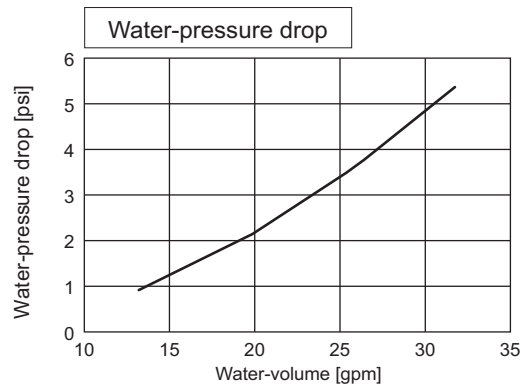
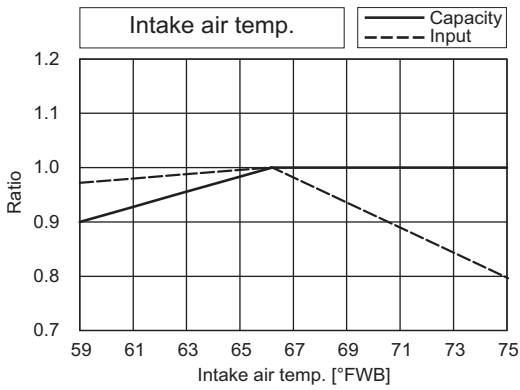
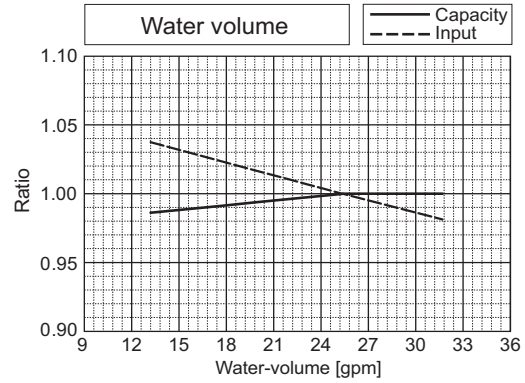
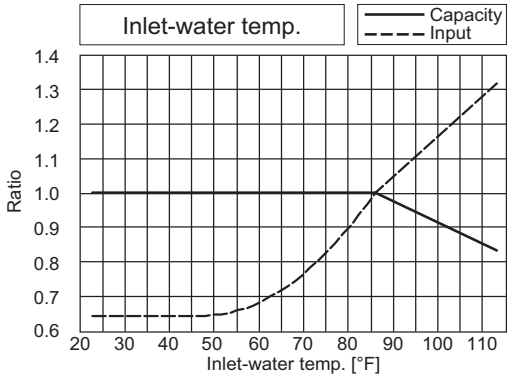
PQHY-			P360ZSLMU		
Nominal Heating Capacity	kW	118.7	Rated Heating Capacity	kW	113.4
	BTU/h	405,000		BTU/h	387,000
Input	kW	22.85	Input	kW	(Non-Ducted) 21.09 (Ducted) 21.70



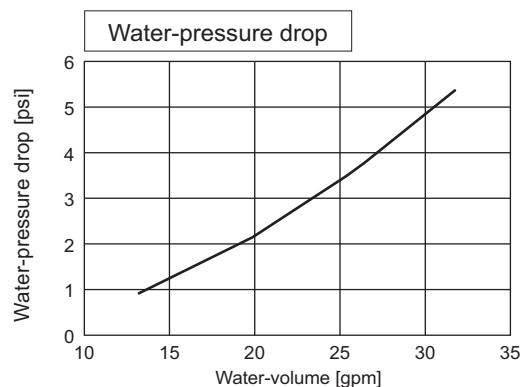
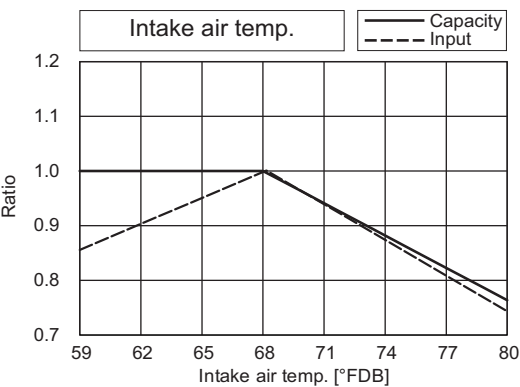
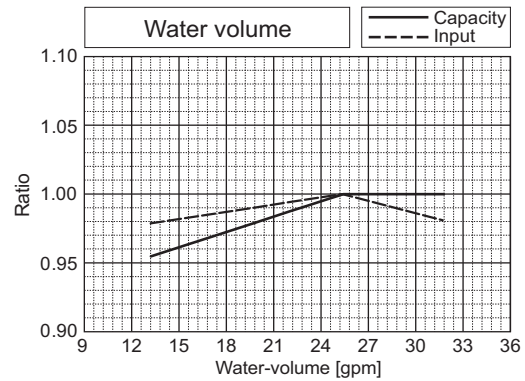
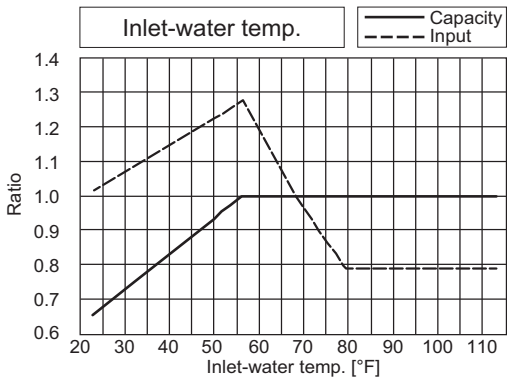
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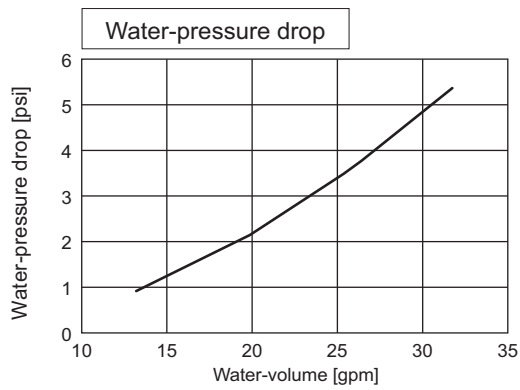
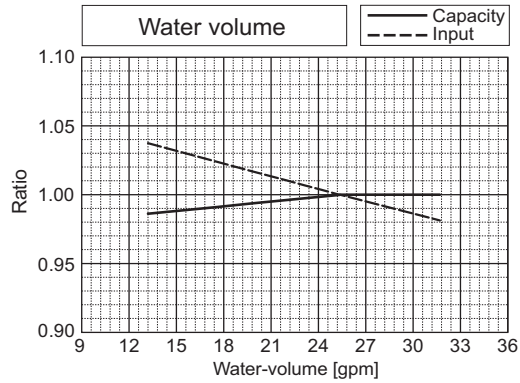
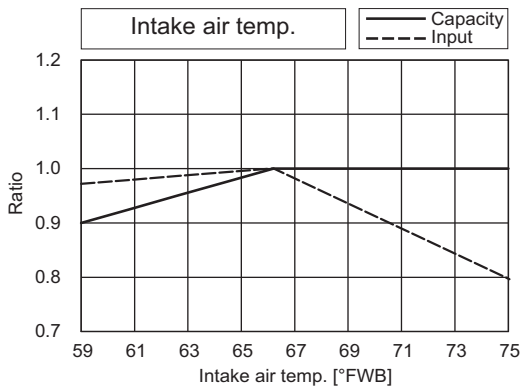
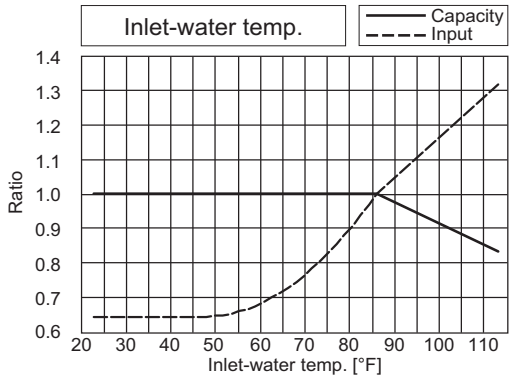
PQHY-		P72ZLMU			
Nominal Cooling Capacity	kW	21.1	Rated Cooling Capacity	kW	20.2
	BTU/h	72,000		BTU/h	69,000
Input	kW	3.61	Input	kW	(Non-Ducted) 3.34 (Ducted) 3.12



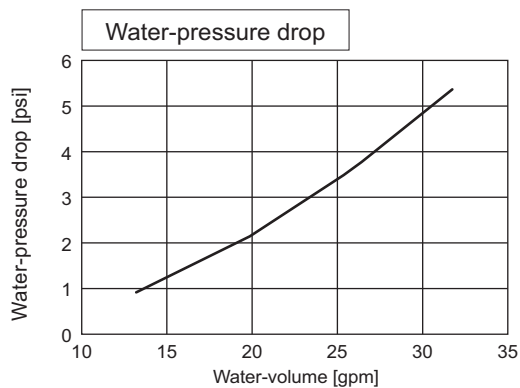
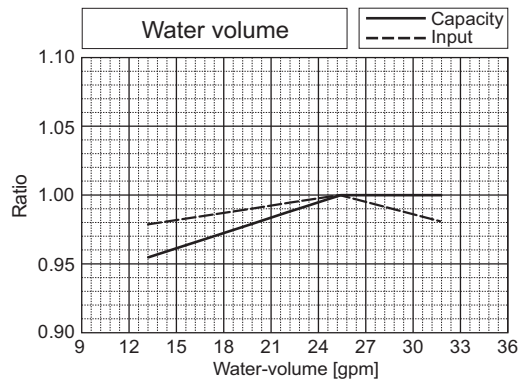
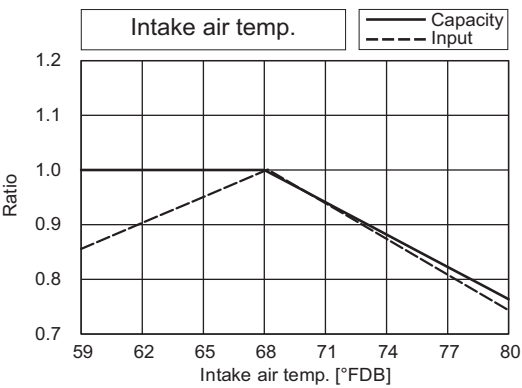
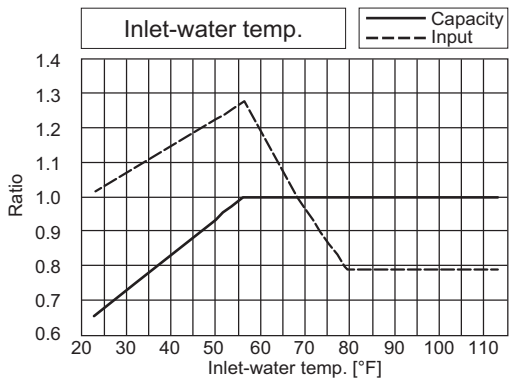
PQHY-		P72ZLMU			
Nominal Heating Capacity	kW	23.4	Rated Heating Capacity	kW	22.3
	BTU/h	80,000		BTU/h	76,000
Input	kW	4.04	Input	kW	(Non-Ducted) 3.74 (Ducted) 3.36



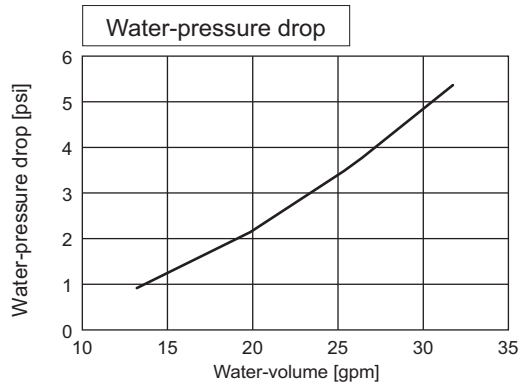
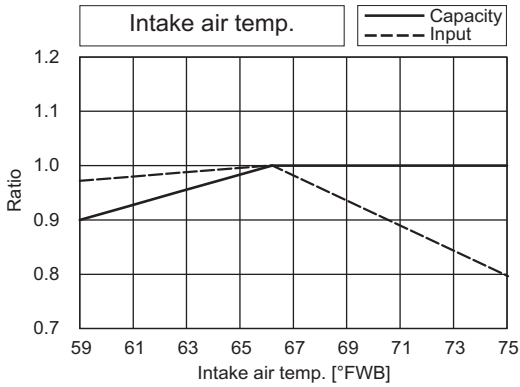
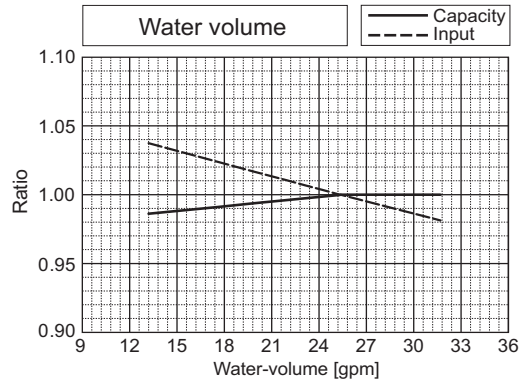
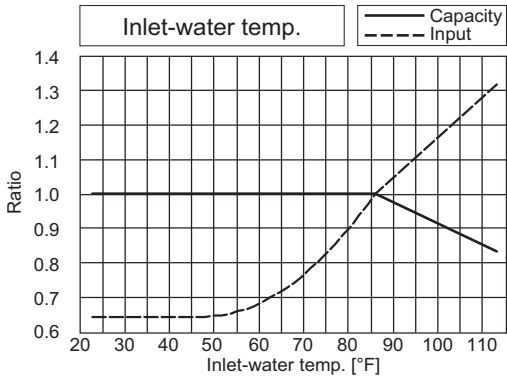
PQHY-			P96ZLMU		
Nominal Cooling Capacity	kW	28.1	Rated Cooling Capacity	kW	27.0
	BTU/h	96,000		BTU/h	92,000
Input	kW	5.21	Input	kW	(Non-Ducted) 4.82 (Ducted) 5.19



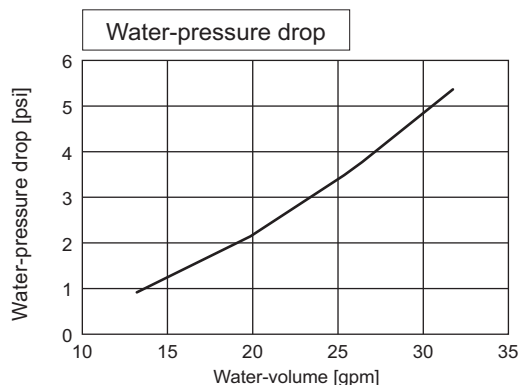
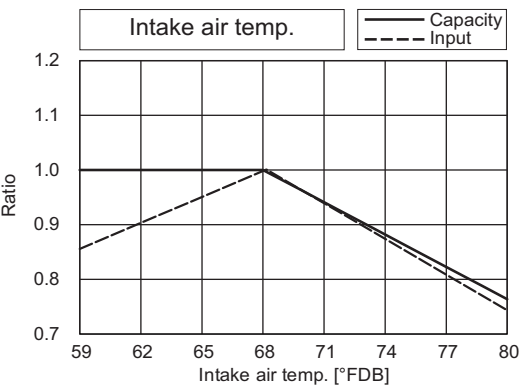
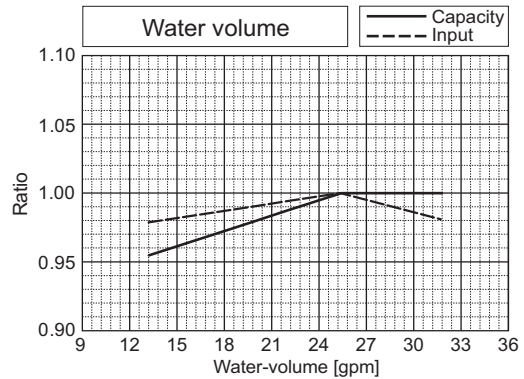
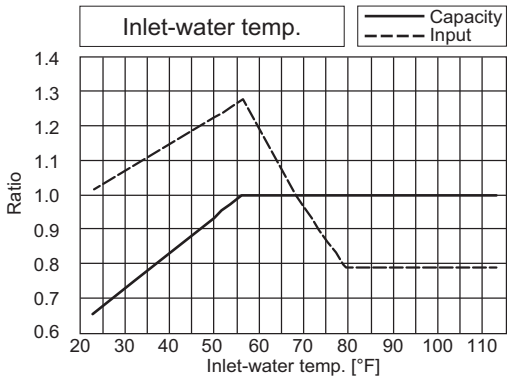
PQHY-			P96ZLMU		
Nominal Heating Capacity	kW	31.7	Rated Heating Capacity	kW	30.2
	BTU/h	108,000		BTU/h	103,000
Input	kW	5.64	Input	kW	(Non-Ducted) 5.21 (Ducted) 4.48



PQHY-		P120ZLMU			
Nominal Cooling Capacity	kW	35.2	Rated Cooling Capacity	kW	33.4
	BTU/h	120,000		BTU/h	114,000
Input	kW	7.51	Input	kW	(Non-Ducted) 6.95 (Ducted) 7.35

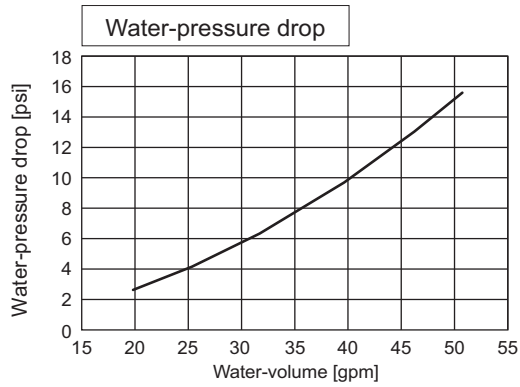
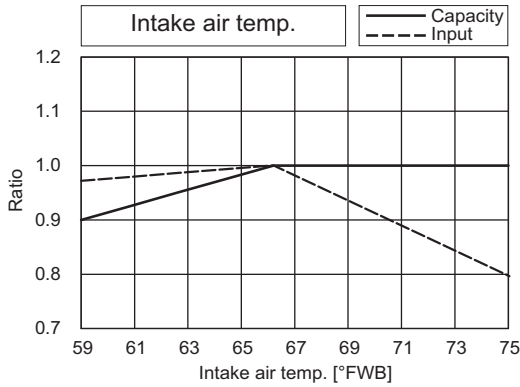
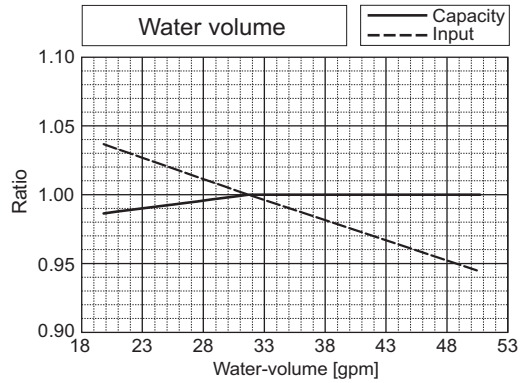
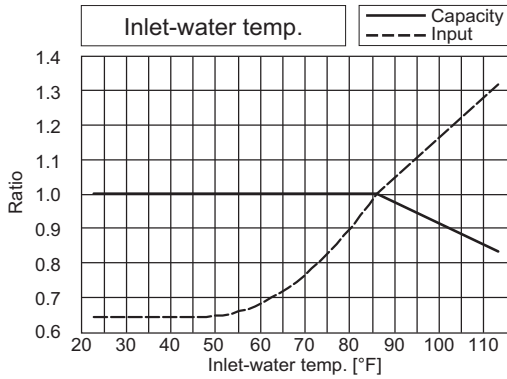


PQHY-		P120ZLMU			
Nominal Heating Capacity	kW	39.6	Rated Heating Capacity	kW	37.8
	BTU/h	135,000		BTU/h	129,000
Input	kW	7.09	Input	kW	(Non-Ducted) 6.55 (Ducted) 5.92

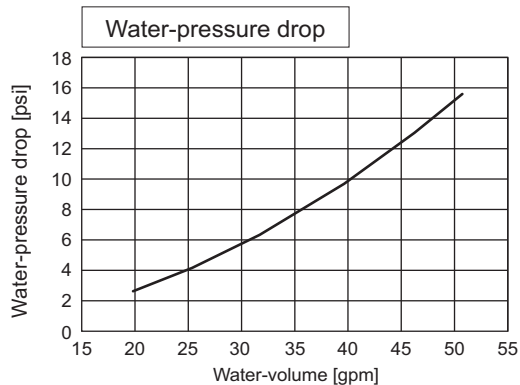
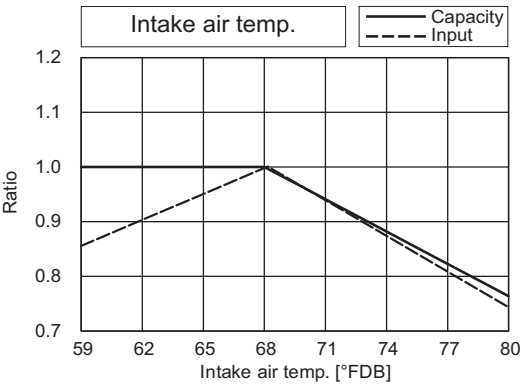
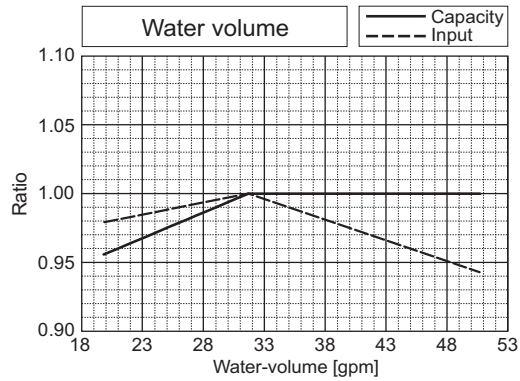
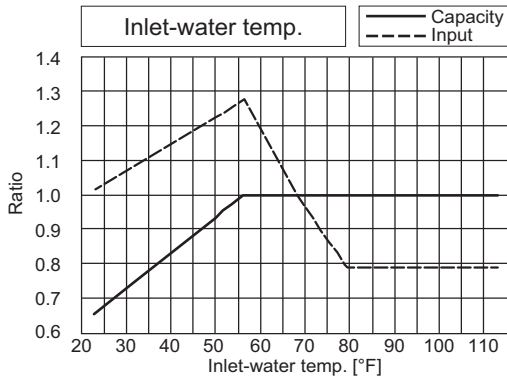


PQHY-P-Z(S)LMU-A1

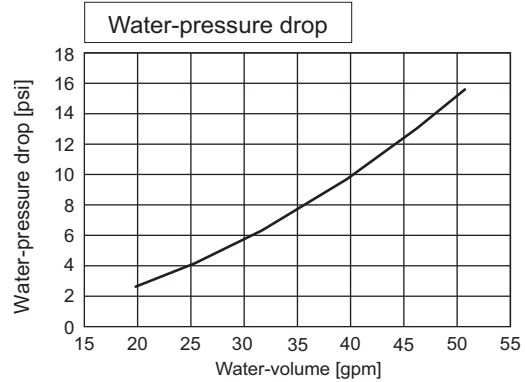
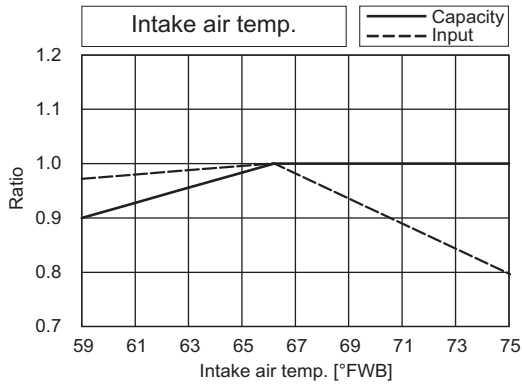
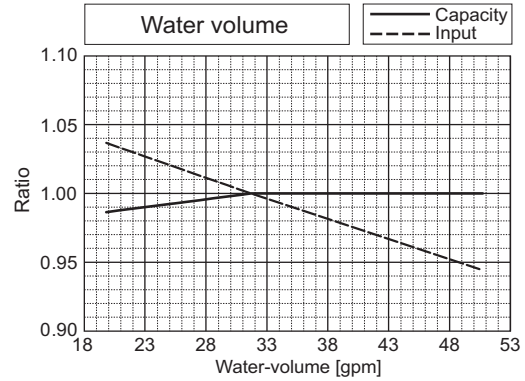
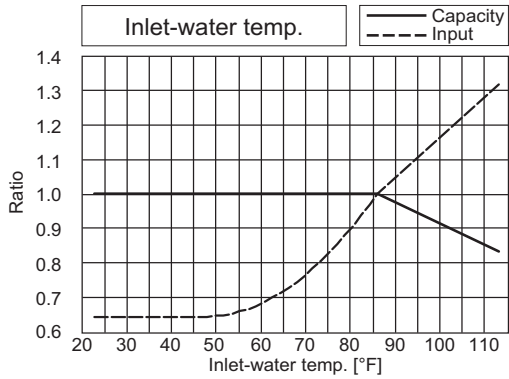
PQHY-			P144ZLMU		
Nominal Cooling Capacity	kW	42.2	Rated Cooling Capacity	kW	40.2
	BTU/h	144,000		BTU/h	137,000
Input	kW	8.78	Input	kW	(Non-Ducted) 8.07 (Ducted) 9.98



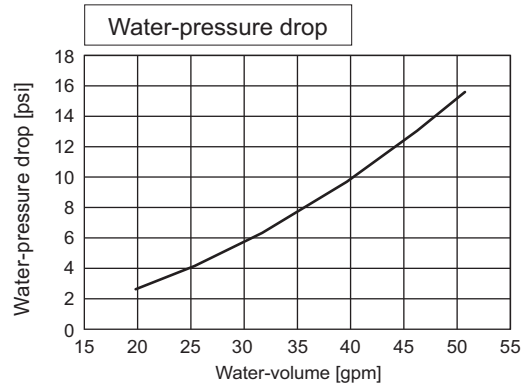
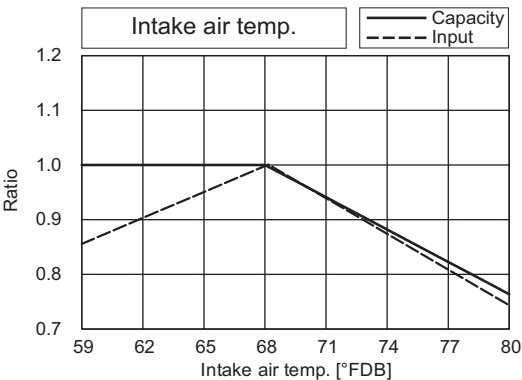
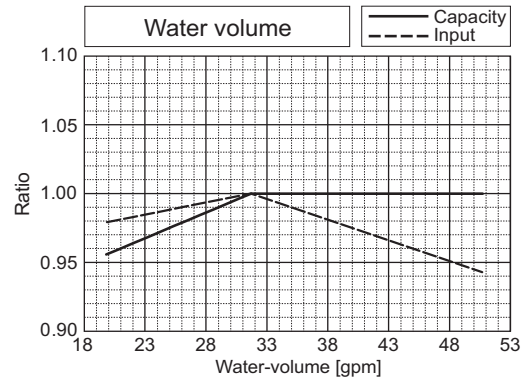
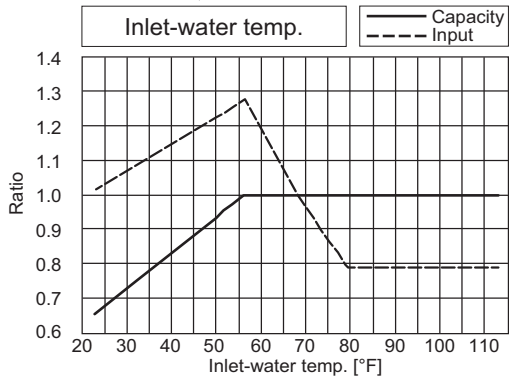
PQHY-			P144ZLMU		
Nominal Heating Capacity	kW	46.9	Rated Heating Capacity	kW	44.5
	BTU/h	160,000		BTU/h	152,000
Input	kW	8.11	Input	kW	(Non-Ducted) 7.47 (Ducted) 7.90



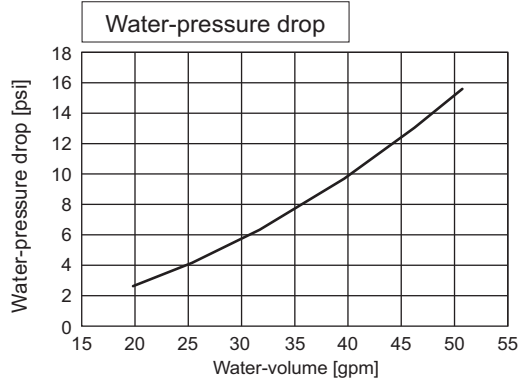
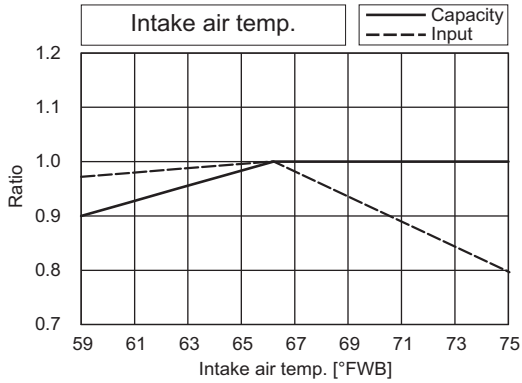
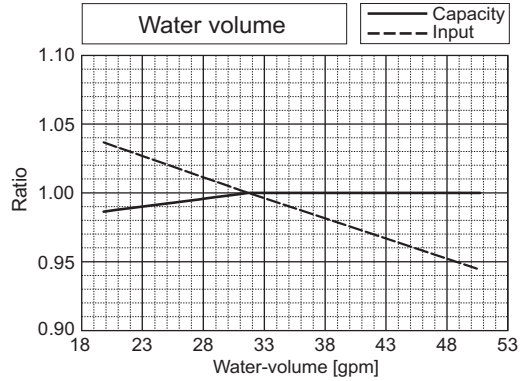
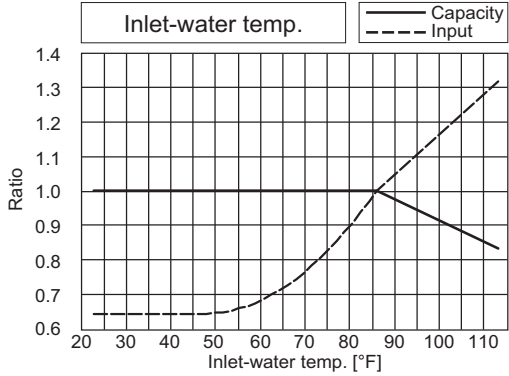
PQHY-			P168ZLMU		
Nominal Cooling Capacity	kW	49.2	Rated Cooling Capacity	kW	47.2
	BTU/h	168,000		BTU/h	161,000
Input	kW	12.05	Input	kW	(Non-Ducted) 11.10 (Ducted) 11.88



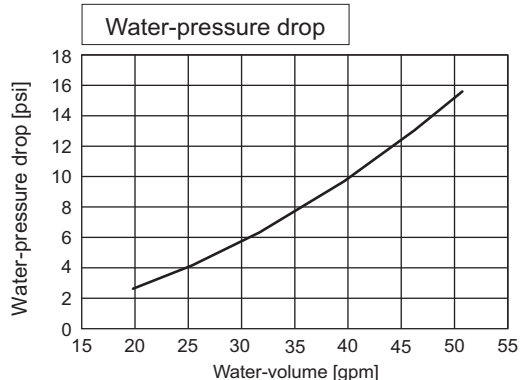
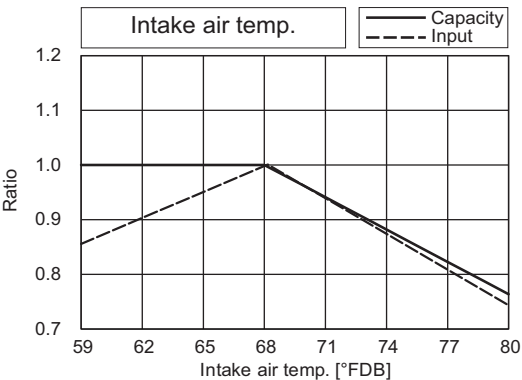
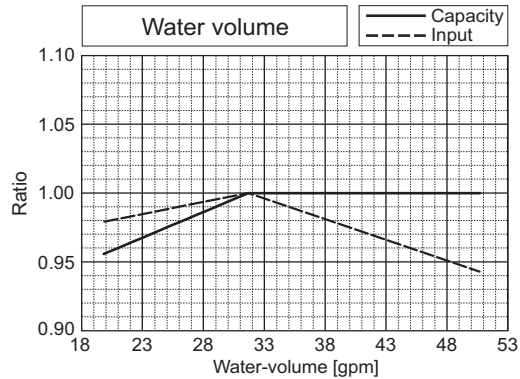
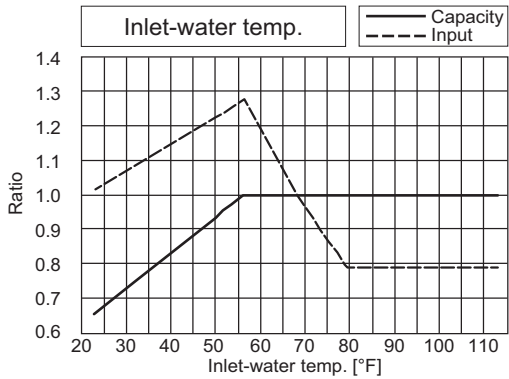
PQHY-			P168ZLMU		
Nominal Heating Capacity	kW	55.1	Rated Heating Capacity	kW	52.5
	BTU/h	188,000		BTU/h	179,000
Input	kW	9.86	Input	kW	(Non-Ducted) 9.09 (Ducted) 9.72



PQHY-			P192ZLMU		
Nominal Cooling Capacity	kW	56.3	Rated Cooling Capacity	kW	53.6
	BTU/h	192,000		BTU/h	183,000
Input	kW	15.05	Input	kW	(Non-Ducted) 13.87 (Ducted) 14.19

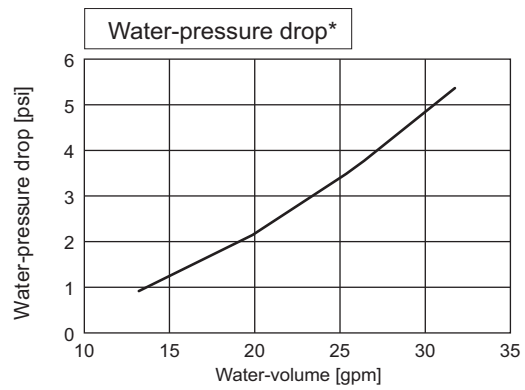
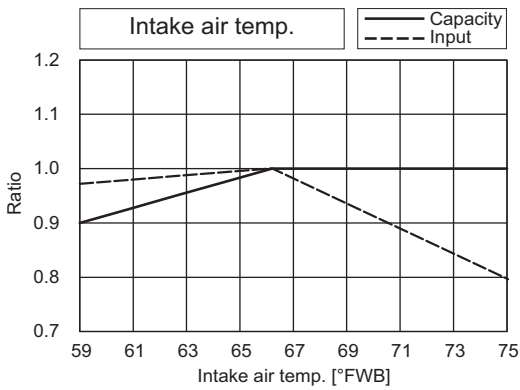
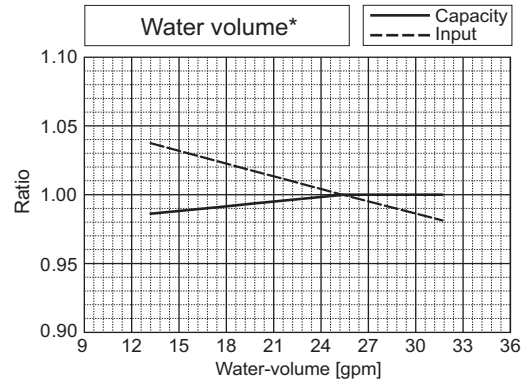
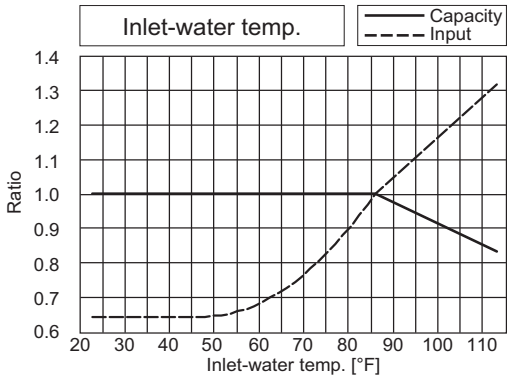


PQHY-			P192ZLMU		
Nominal Heating Capacity	kW	63.0	Rated Heating Capacity	kW	60.1
	BTU/h	215,000		BTU/h	205,000
Input	kW	11.90	Input	kW	(Non-Ducted) 10.97 (Ducted) 11.56

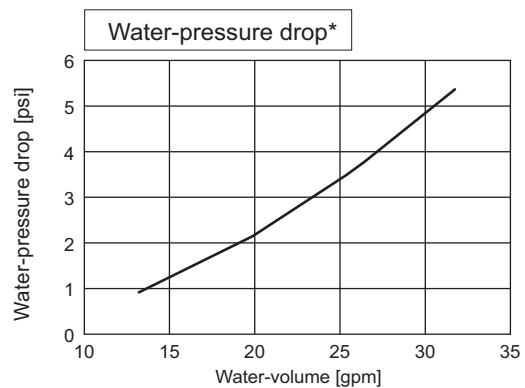
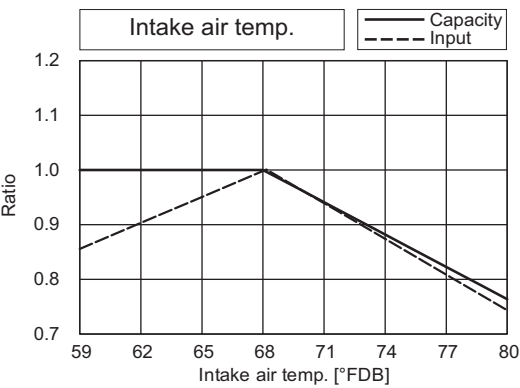
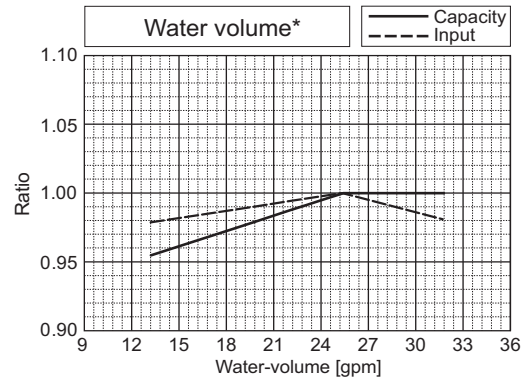
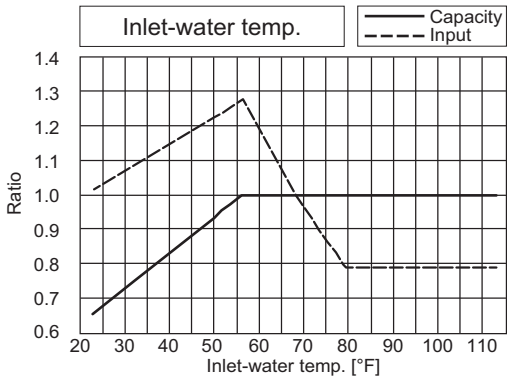


PQHY-			P144ZSLMU		
Nominal Cooling Capacity	kW	42.2	Rated Cooling Capacity	kW	40.2
	BTU/h	144,000		BTU/h	137,000
Input	kW	7.11	Input	kW	(Non-Ducted) 6.53 (Ducted) 7.72

*The drawing indicates characteristic per unit.

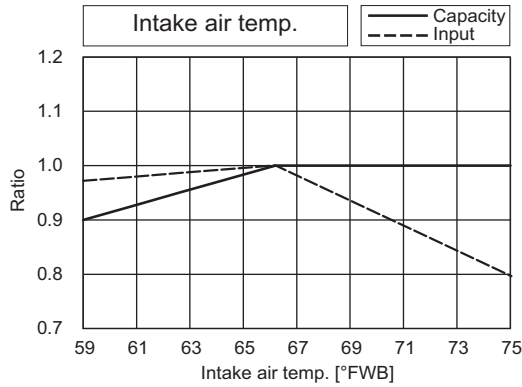
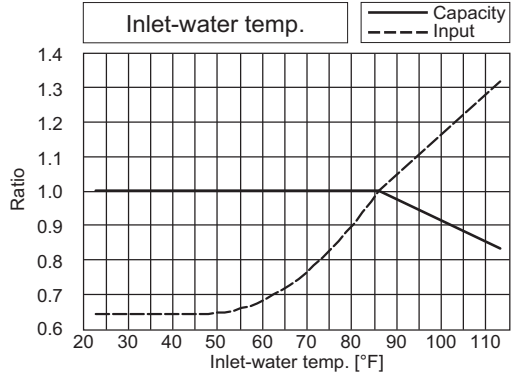


PQHY-			P144ZSLMU		
Nominal Heating Capacity	kW	46.9	Rated Heating Capacity	kW	44.5
	BTU/h	160,000		BTU/h	152,000
Input	kW	7.45	Input	kW	(Non-Ducted) 6.86 (Ducted) 7.22

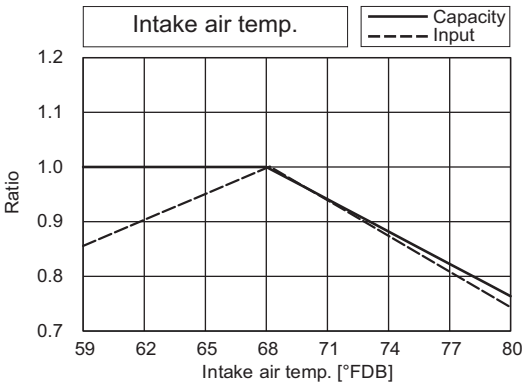
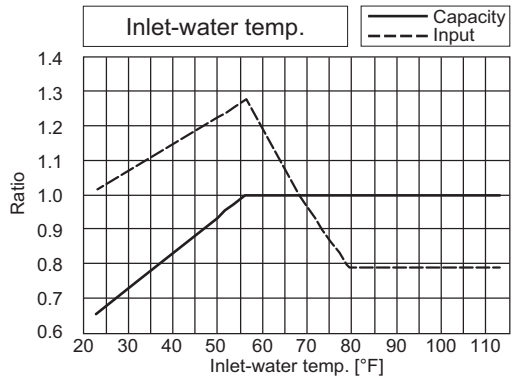


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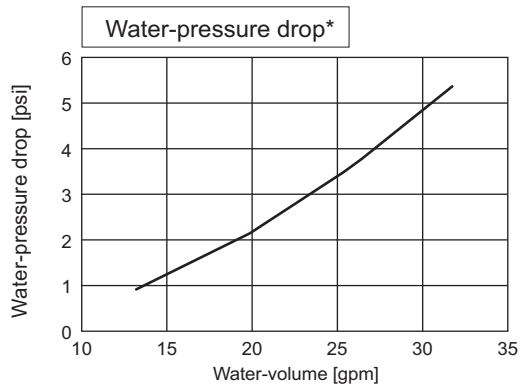
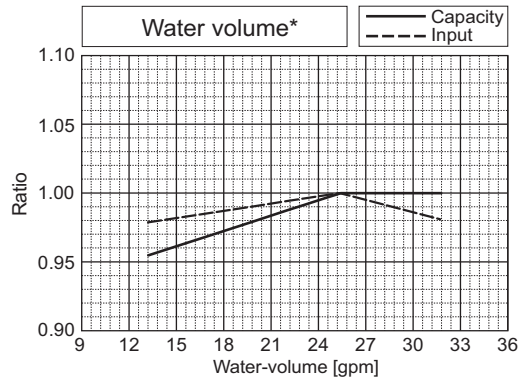
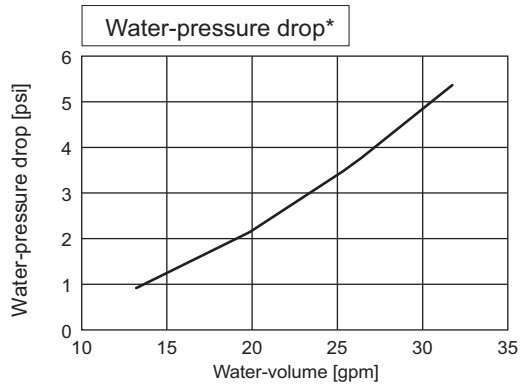
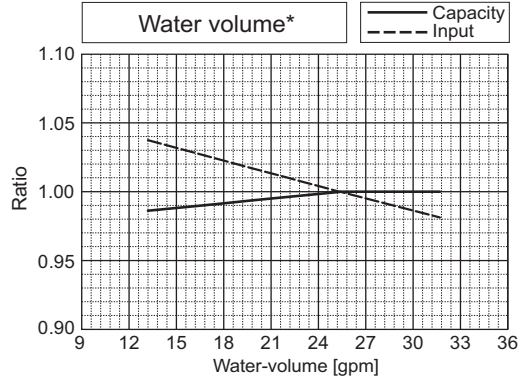
PQHY-			P168ZSLMU		
Nominal Cooling Capacity	kW	49.2	Rated Cooling Capacity	kW	47.2
	BTU/h	168,000		BTU/h	161,000
Input	kW	9.33	Input	kW	(Non-Ducted) 8.58 (Ducted) 9.22



PQHY-			P168ZSLMU		
Nominal Heating Capacity	kW	55.1	Rated Heating Capacity	kW	52.5
	BTU/h	188,000		BTU/h	179,000
Input	kW	9.34	Input	kW	(Non-Ducted) 8.60 (Ducted) 8.03

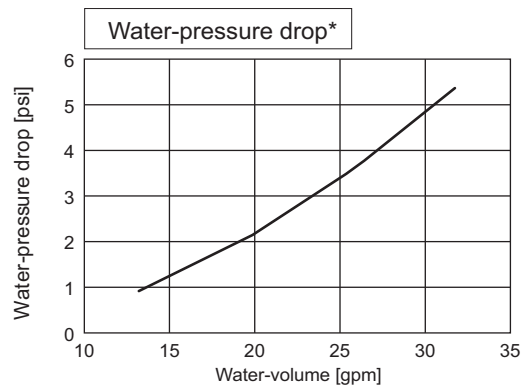
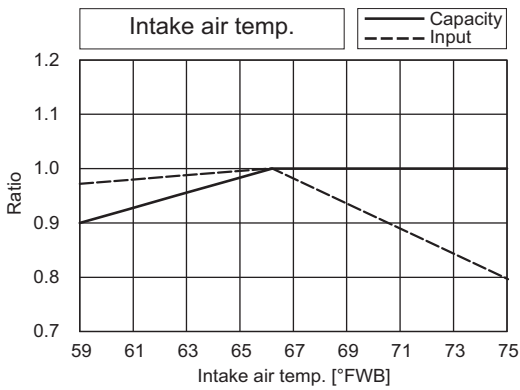
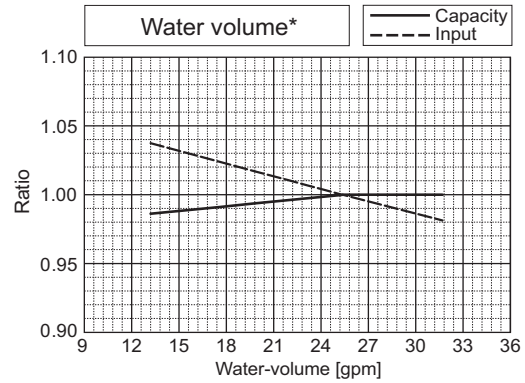
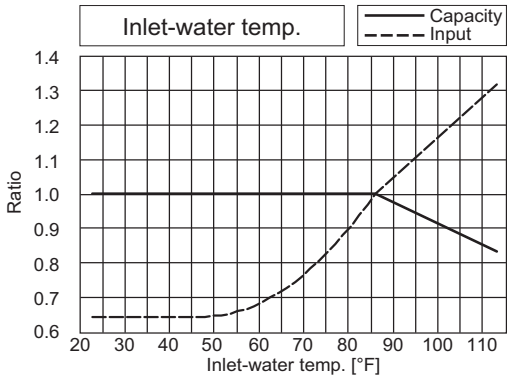


*The drawing indicates characteristic per unit.

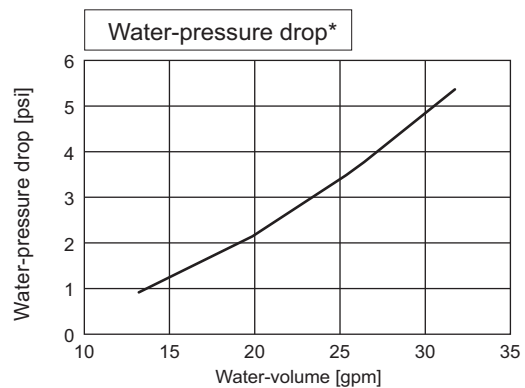
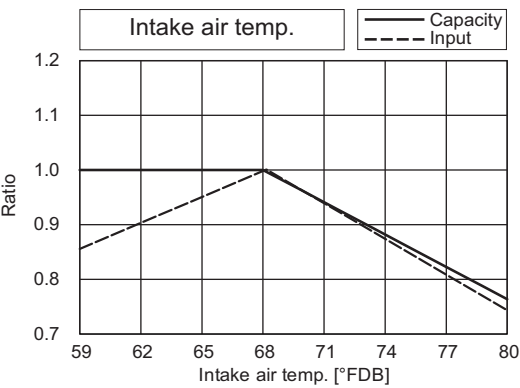
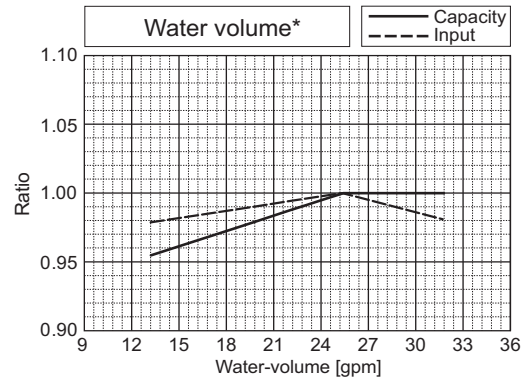
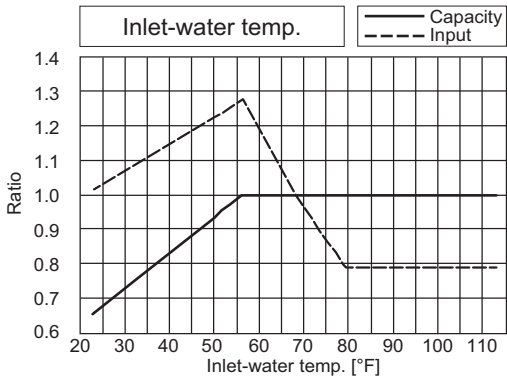


PQHY-		P192ZSLMU			
Nominal Cooling Capacity	kW	56.3	Rated Cooling Capacity	kW	53.6
	BTU/h	192,000		BTU/h	183,000
Input	kW	11.30	Input	kW	(Non-Ducted) 10.40 (Ducted) 10.98

*The drawing indicates characteristic per unit.

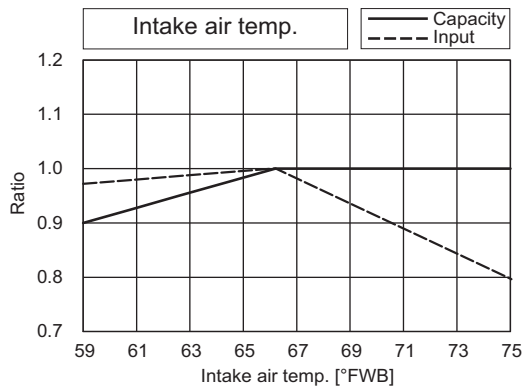
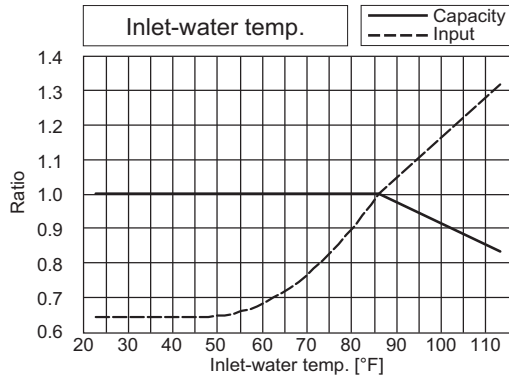


PQHY-		P192ZSLMU			
Nominal Heating Capacity	kW	63.0	Rated Heating Capacity	kW	60.1
	BTU/h	215,000		BTU/h	205,000
Input	kW	11.02	Input	kW	(Non-Ducted) 10.16 (Ducted) 8.90

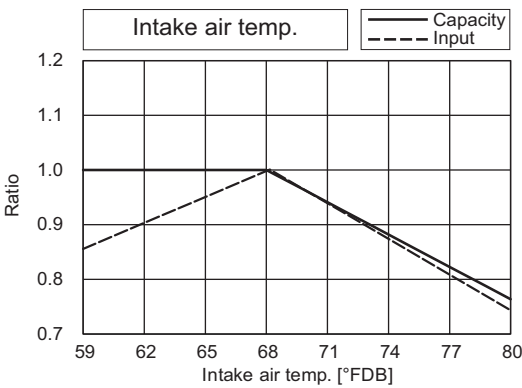
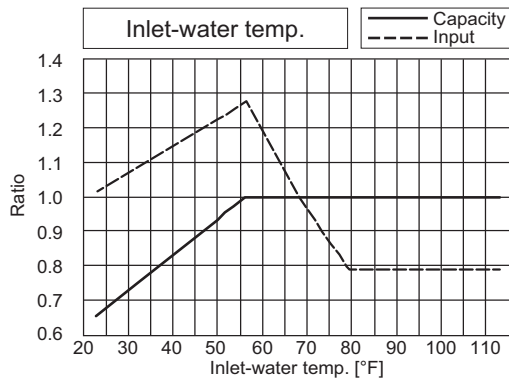


PQHY-P-Z(S)LMU-A1

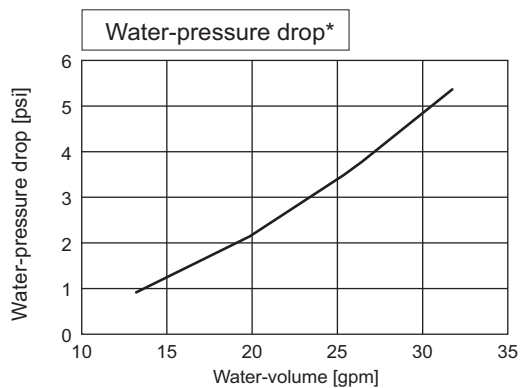
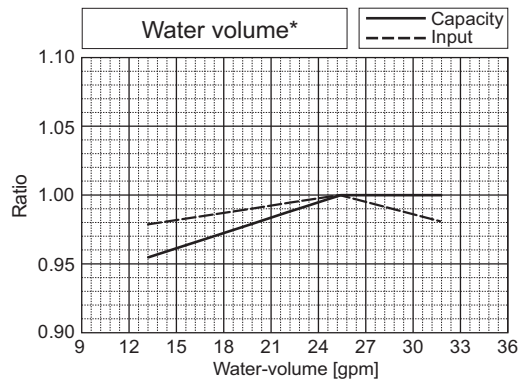
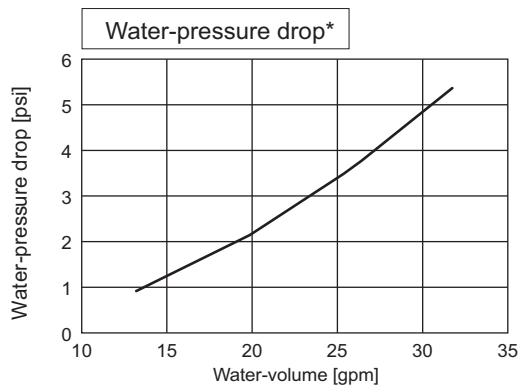
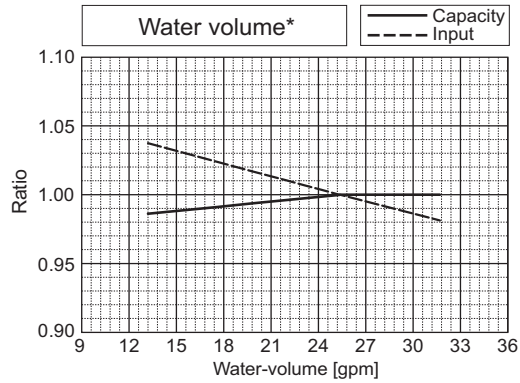
PQHY-			P216ZSLMU		
Nominal Cooling Capacity	kW	63.3	Rated Cooling Capacity	kW	60.4
	BTU/h	216,000		BTU/h	206,000
Input	kW	14.03	Input	kW	(Non-Ducted) 12.93 (Ducted) 13.24



PQHY-			P216ZSLMU		
Nominal Heating Capacity	kW	71.2	Rated Heating Capacity	kW	68.0
	BTU/h	243,000		BTU/h	232,000
Input	kW	12.88	Input	kW	(Non-Ducted) 11.88 (Ducted) 10.35

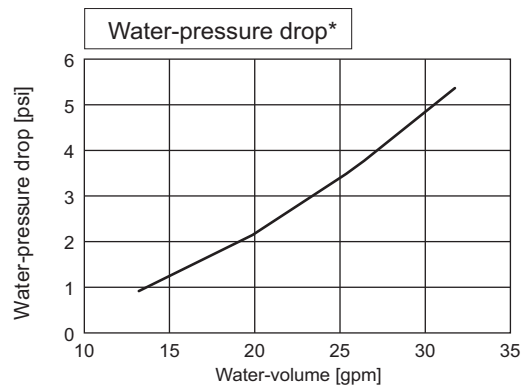
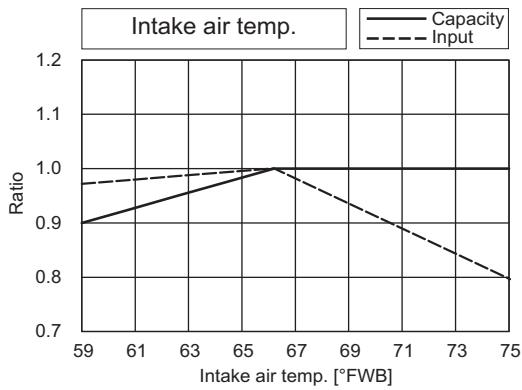
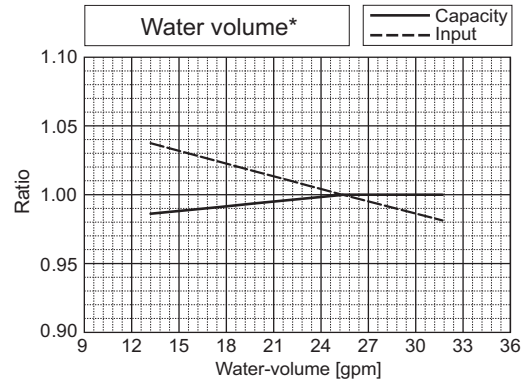
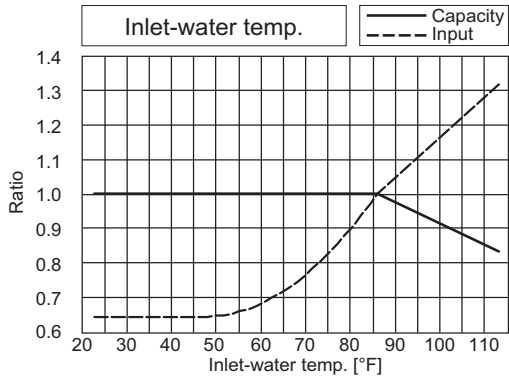


*The drawing indicates characteristic per unit.

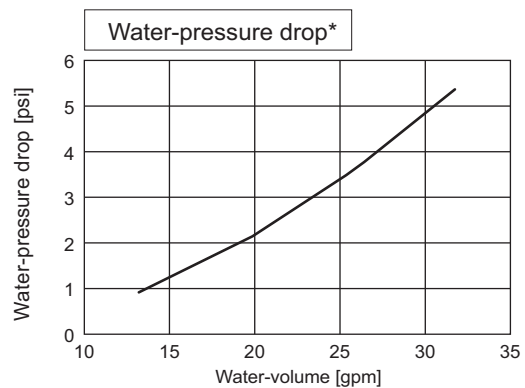
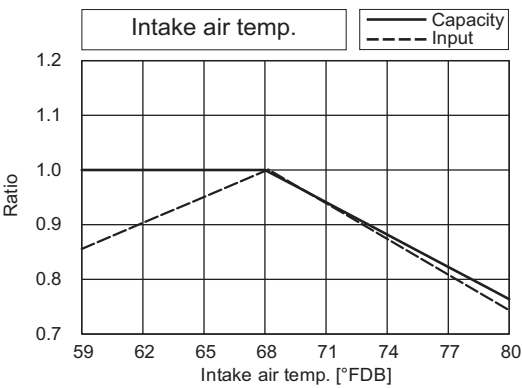
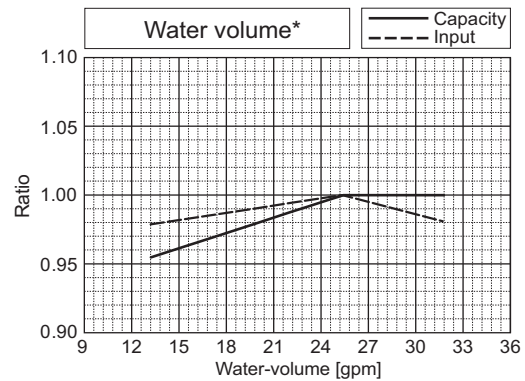
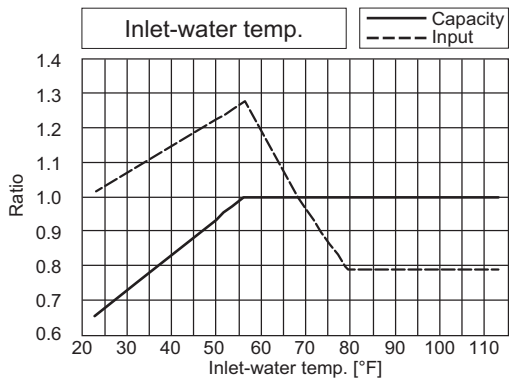


PQHY-			P240ZSLMU		
Nominal Cooling Capacity	kW	70.3	Rated Cooling Capacity	kW	66.8
	BTU/h	240,000		BTU/h	228,000
Input	kW	16.89	Input	kW	(Non-Ducted) 15.57 (Ducted) 16.15

*The drawing indicates characteristic per unit.

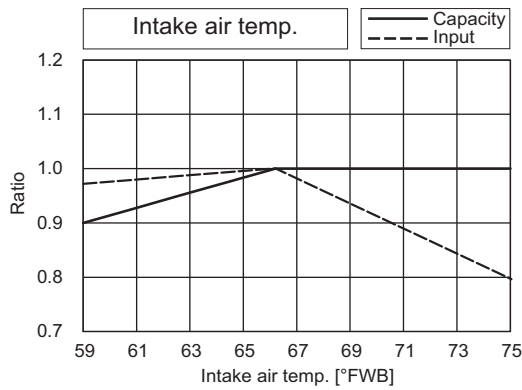
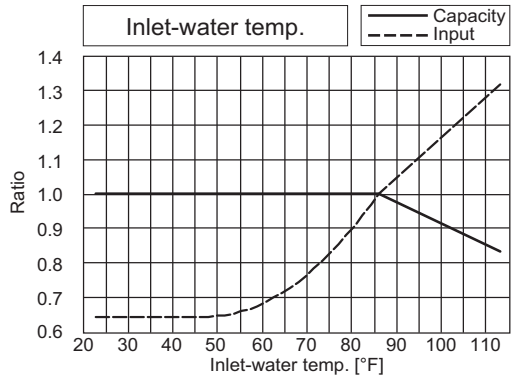


PQHY-			P240ZSLMU		
Nominal Heating Capacity	kW	79.1	Rated Heating Capacity	kW	75.6
	BTU/h	270,000		BTU/h	258,000
Input	kW	14.58	Input	kW	(Non-Ducted) 13.45 (Ducted) 12.02

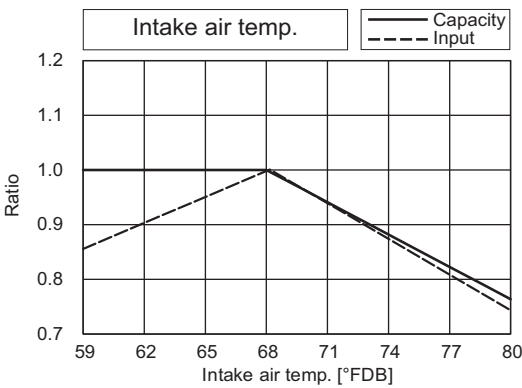
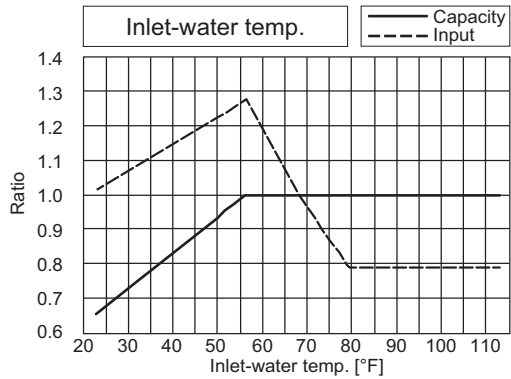


PQHY-P-Z(S)LMU-A1

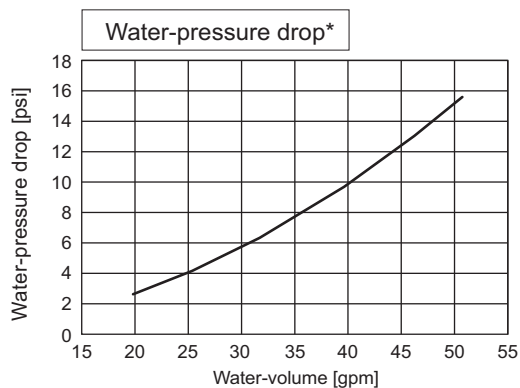
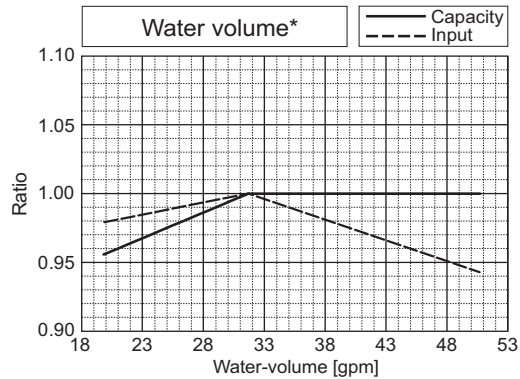
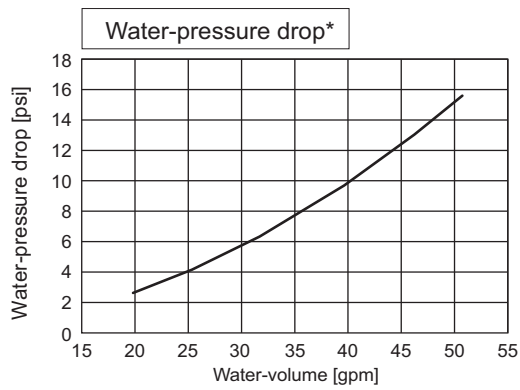
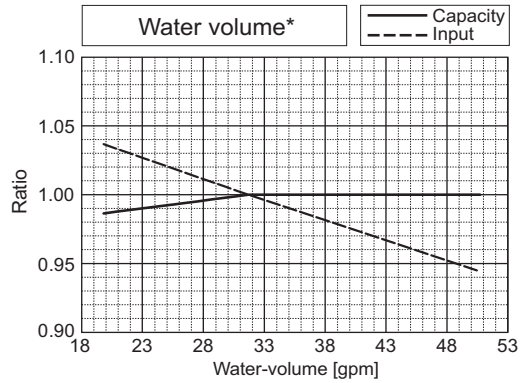
PQHY-			P288ZSLMU		
Nominal Cooling Capacity	kW	84.4	Rated Cooling Capacity	kW	80.6
	BTU/h	288,000		BTU/h	275,000
Input	kW	20.42	Input	kW	(Non-Ducted) 18.82 (Ducted) 21.43



PQHY-			P288ZSLMU		
Nominal Heating Capacity	kW	94.7	Rated Heating Capacity	kW	90.3
	BTU/h	323,000		BTU/h	308,000
Input	kW	17.50	Input	kW	(Non-Ducted) 16.13 (Ducted) 16.05

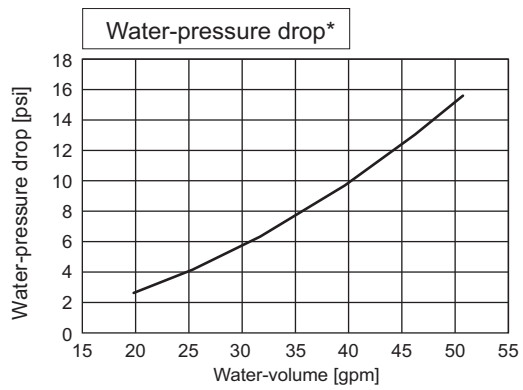
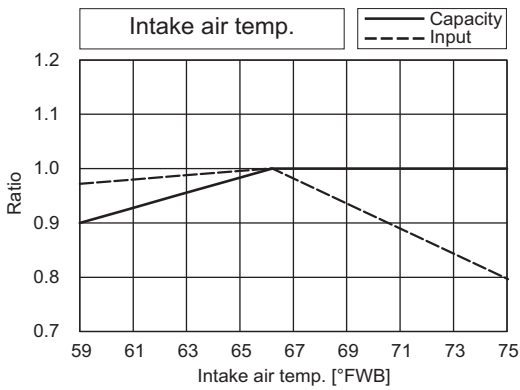
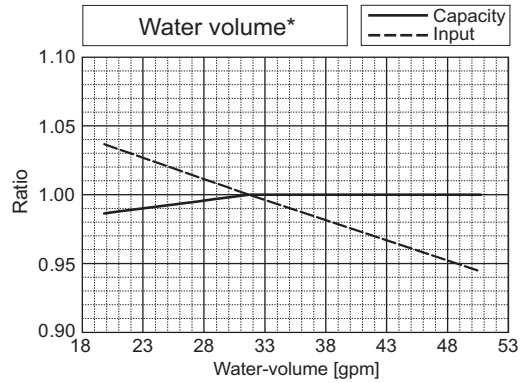
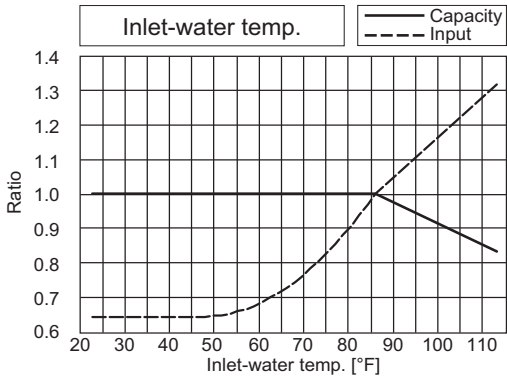


*The drawing indicates characteristic per unit.

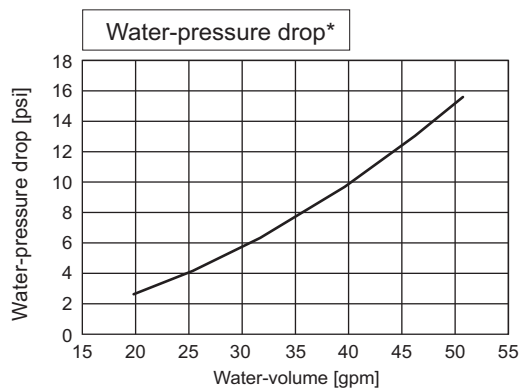
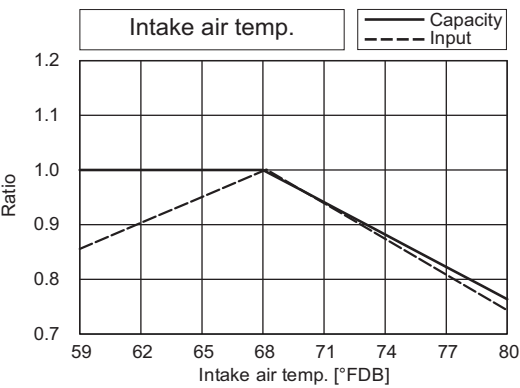
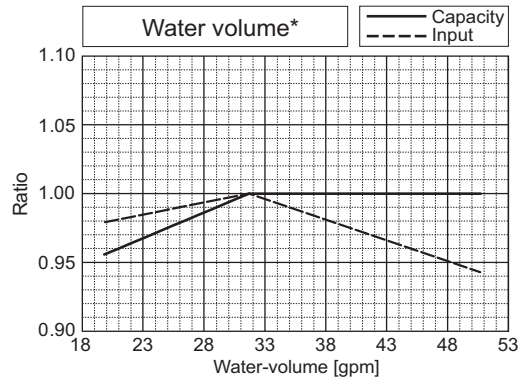
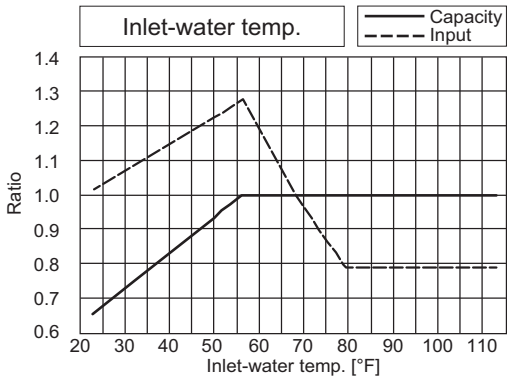


PQHY-		P312ZSLMU			
Nominal Cooling Capacity	kW	91.4	Rated Cooling Capacity	kW	87.0
	BTU/h	312,000		BTU/h	297,000
Input	kW	23.41	Input	kW	(Non-Ducted) 21.59 (Ducted) 23.67

*The drawing indicates characteristic per unit.

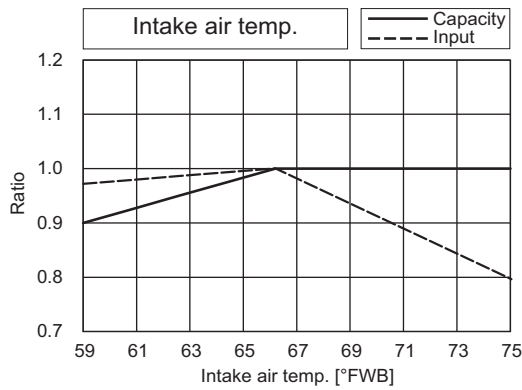
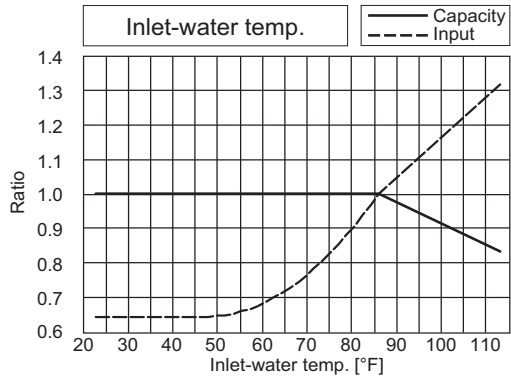


PQHY-		P312ZSLMU			
Nominal Heating Capacity	kW	102.6	Rated Heating Capacity	kW	97.9
	BTU/h	350,000		BTU/h	334,000
Input	kW	19.11	Input	kW	(Non-Ducted) 17.62 (Ducted) 17.96

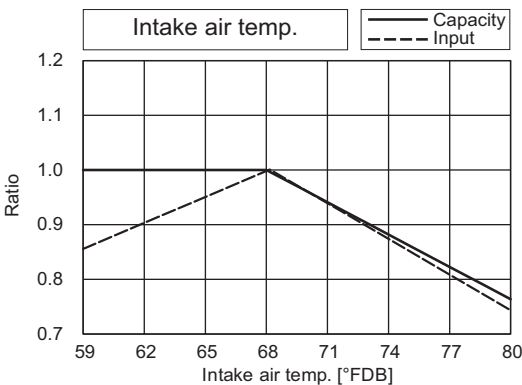
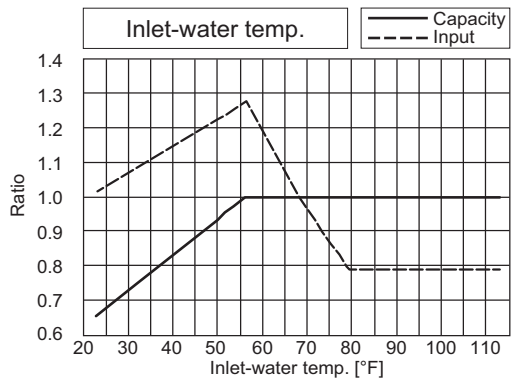


PQHY-P-Z(S)LMU-A1

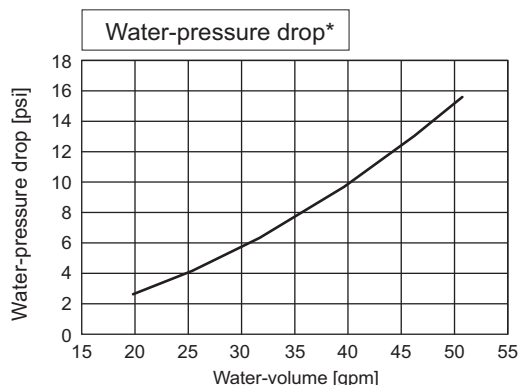
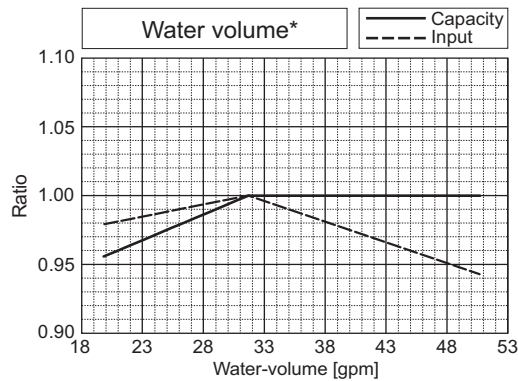
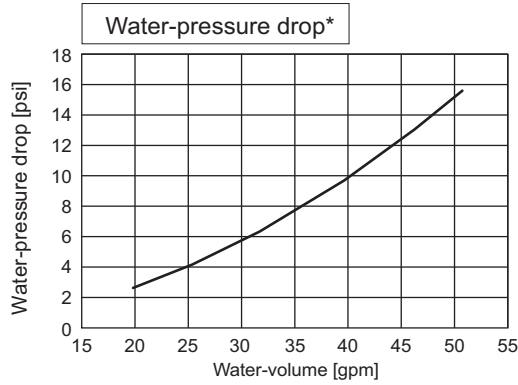
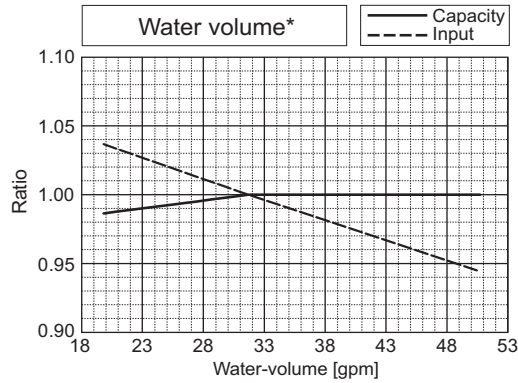
PQHY-		P336ZSLMU			
Nominal Cooling Capacity	kW	98.5	Rated Cooling Capacity	kW	93.8
	BTU/h	336,000		BTU/h	320,000
Input	kW	26.84	Input	kW	(Non-Ducted) 24.76 (Ducted) 25.85



PQHY-		P336ZSLMU			
Nominal Heating Capacity	kW	110.8	Rated Heating Capacity	kW	105.8
	BTU/h	378,000		BTU/h	361,000
Input	kW	20.77	Input	kW	(Non-Ducted) 19.16 (Ducted) 20.05

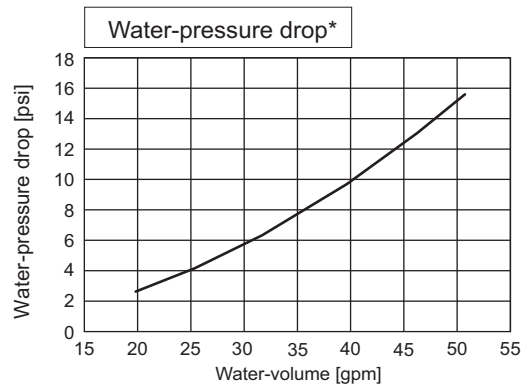
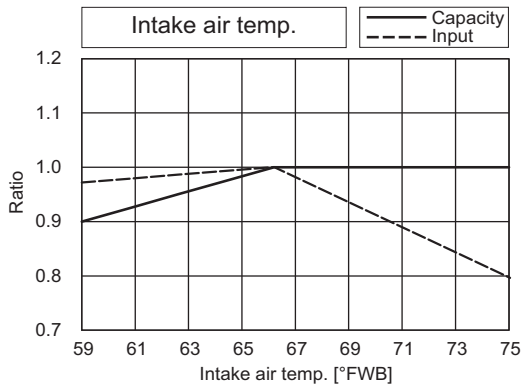
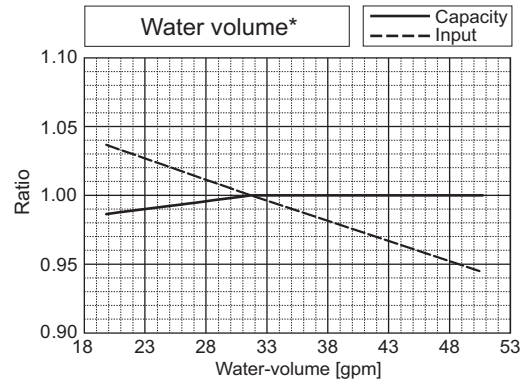
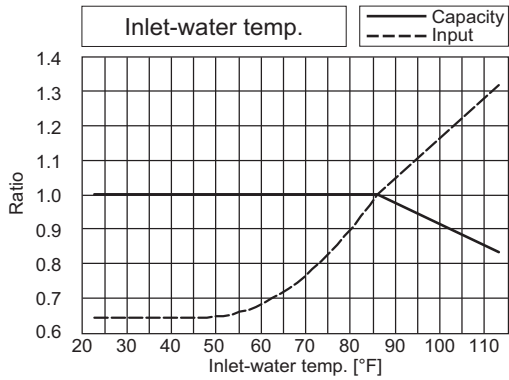


*The drawing indicates characteristic per unit.

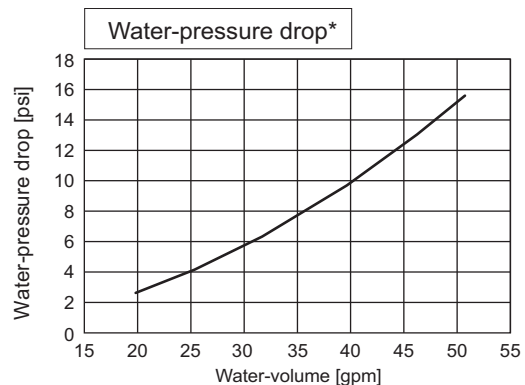
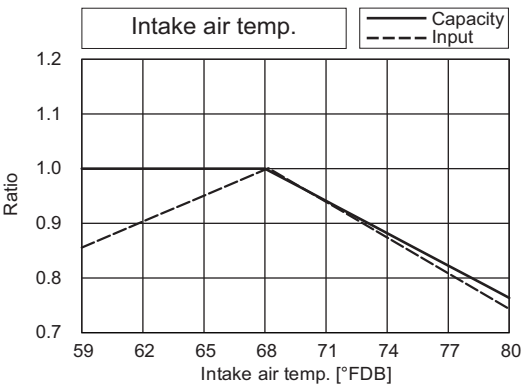
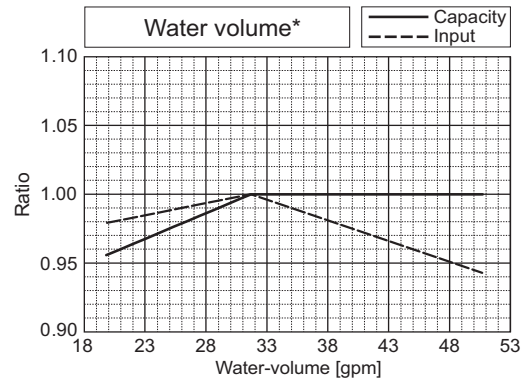
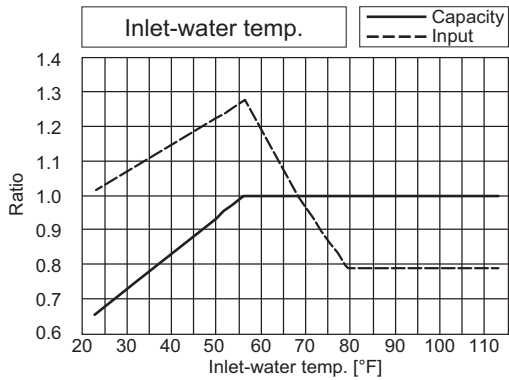


PQHY-		P360ZSLMU			
Nominal Cooling Capacity	kW	105.5	Rated Cooling Capacity	kW	100.2
	BTU/h	360,000		BTU/h	342,000
Input	kW	29.43	Input	kW	(Non-Ducted) 27.17 (Ducted) 27.41

*The drawing indicates characteristic per unit.



PQHY-		P360ZSLMU			
Nominal Heating Capacity	kW	118.7	Rated Heating Capacity	kW	113.4
	BTU/h	405,000		BTU/h	387,000
Input	kW	22.85	Input	kW	(Non-Ducted) 21.09 (Ducted) 21.70



PQHY-P-Z(S)LMU-A1

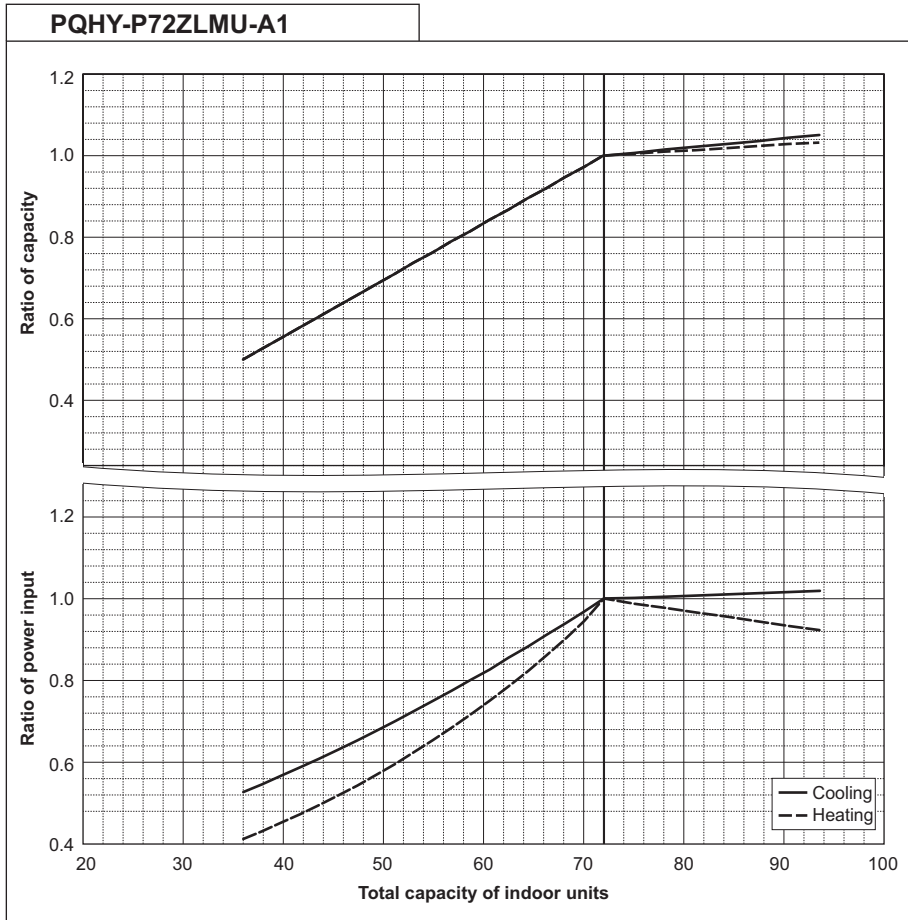
7-2. Correction by total indoor

CITY MULTI system have different capacities and inputs when many combinations of indoor units with different total capacities are connected. Using following tables, the maximum capacity can be found to ensure the system is installed with enough capacity for a particular application.

PQHY-P-Z(S)LMU-A1

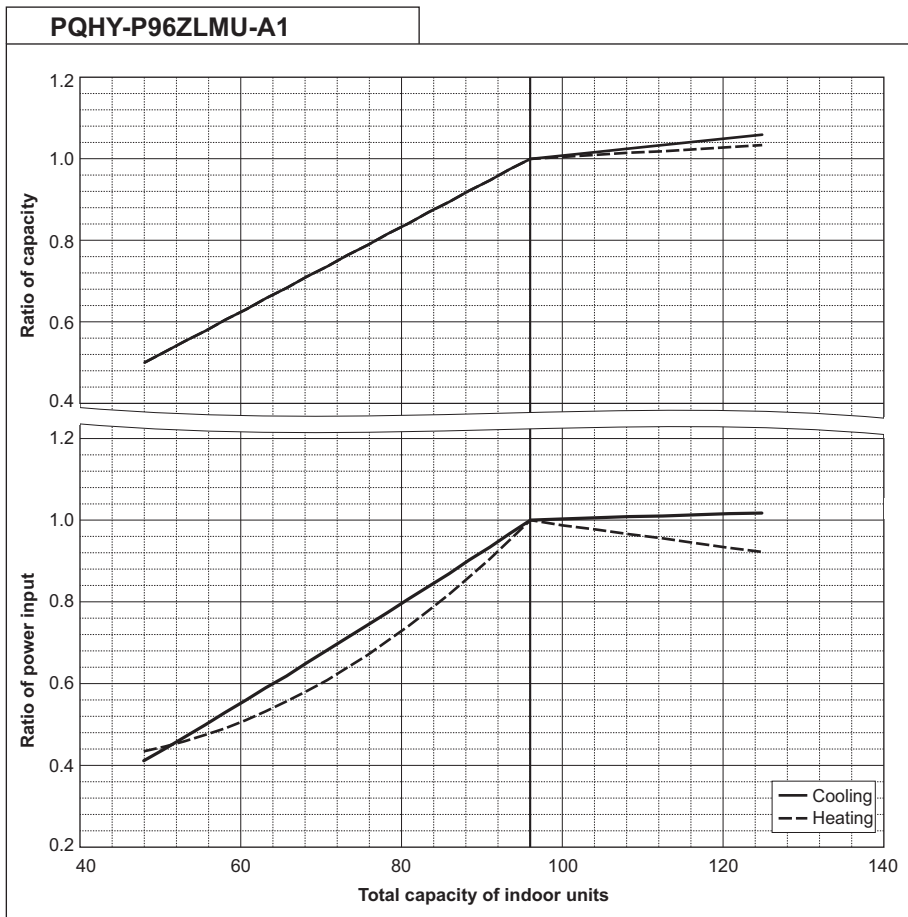
PQHY-		P72ZLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	72,000	
	kW	21.1	
Input	kW	3.61	
	BTU/h	69,000	
Rated cooling capacity	kW	20.2	
	Input kW	3.34	3.12

PQHY-		P72ZLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	80,000	
	kW	23.4	
Input	kW	4.04	
	BTU/h	76,000	
Rated Heating capacity	kW	22.3	
	Input kW	3.74	3.36



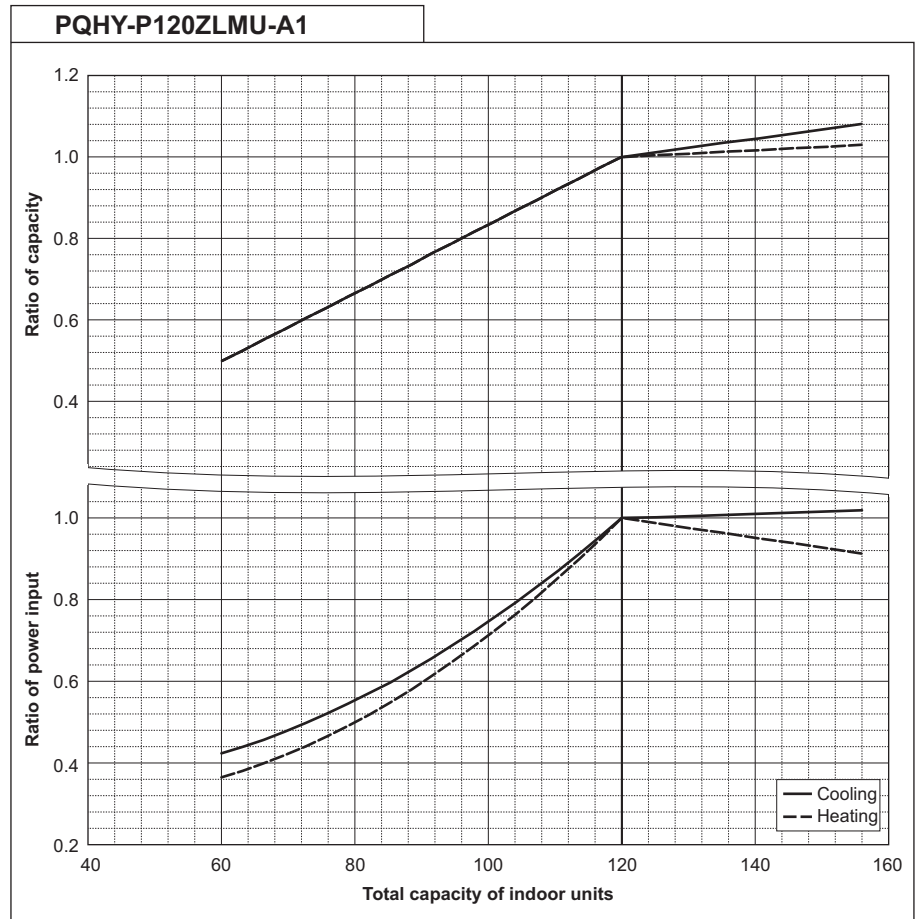
PQHY-		P96ZLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	96,000	
	kW	28.1	
Input	kW	5.21	
	BTU/h	92,000	
Rated cooling capacity	kW	27.0	
	Input kW	4.82	5.19

PQHY-		P96ZLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	108,000	
	kW	31.7	
Input	kW	5.64	
	BTU/h	103,000	
Rated Heating capacity	kW	30.2	
	Input kW	5.21	4.48



PQHY-		P120ZLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	120,000	
	kW	35.2	
Input	kW	7.51	
	BTU/h	114,000	
Rated cooling capacity	kW	33.4	
	Input	kW	6.95 7.35

PQHY-		P120ZLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	135,000	
	kW	39.6	
Input	kW	7.09	
	BTU/h	129,000	
Rated Heating capacity	kW	37.8	
	Input	kW	6.55 5.92

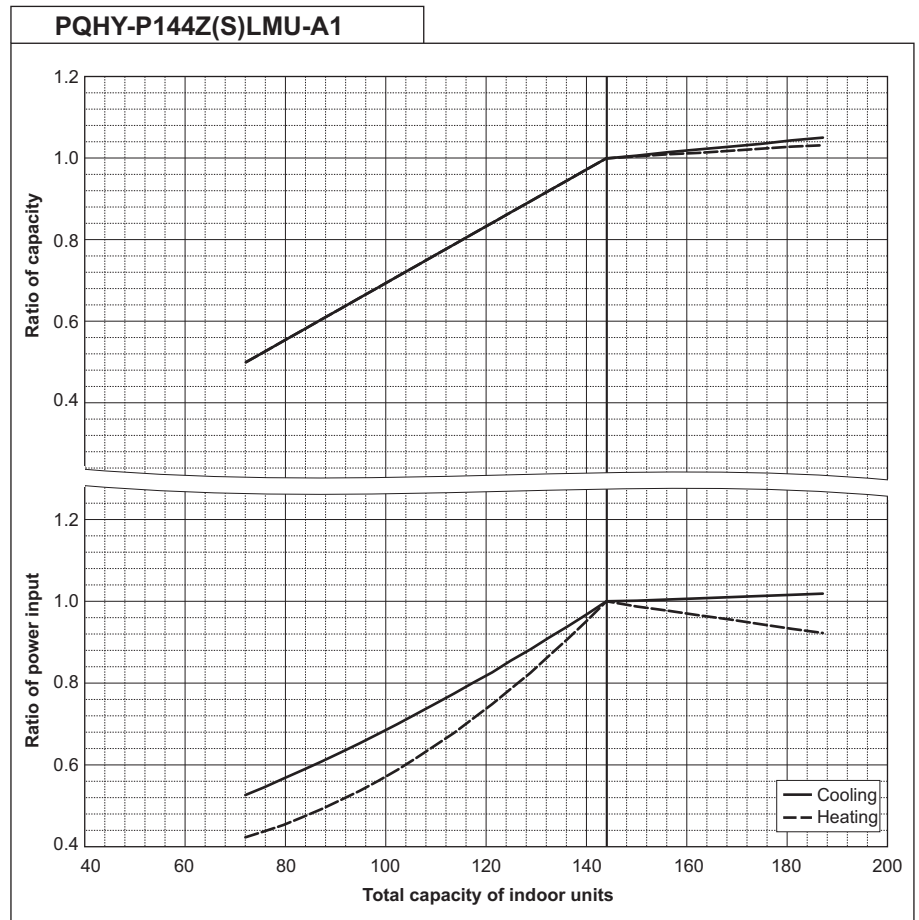


PQHY-		P144ZLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	144,000	
	kW	42.2	
Input	kW	8.78	
	BTU/h	137,000	
Rated cooling capacity	kW	40.2	
	Input	kW	8.07 9.98

PQHY-		P144ZLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	160,000	
	kW	46.9	
Input	kW	8.11	
	BTU/h	152,000	
Rated Heating capacity	kW	44.5	
	Input	kW	7.47 7.90

PQHY-		P144ZSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	144,000	
	kW	42.2	
Input	kW	7.11	
	BTU/h	137,000	
Rated cooling capacity	kW	40.2	
	Input	kW	6.53 7.72

PQHY-		P144ZSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	160,000	
	kW	46.9	
Input	kW	7.45	
	BTU/h	152,000	
Rated Heating capacity	kW	44.5	
	Input	kW	6.86 7.22



PQHY-P-Z(S)LMU-A1

PQHY-		P168ZLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	168,000	
	kW	49.2	
Input	kW	12.05	
	BTU/h	161,000	
Rated cooling capacity	kW	47.2	
	Input kW	11.10	11.88

PQHY-		P168ZLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	188,000	
	kW	55.1	
Input	kW	9.86	
	BTU/h	179,000	
Rated Heating capacity	kW	52.5	
	Input kW	9.09	9.72

PQHY-		P168ZSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	168,000	
	kW	49.2	
Input	kW	9.33	
	BTU/h	161,000	
Rated cooling capacity	kW	47.2	
	Input kW	8.58	9.22

PQHY-		P168ZSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	188,000	
	kW	55.1	
Input	kW	9.34	
	BTU/h	179,000	
Rated Heating capacity	kW	52.5	
	Input kW	8.60	8.03

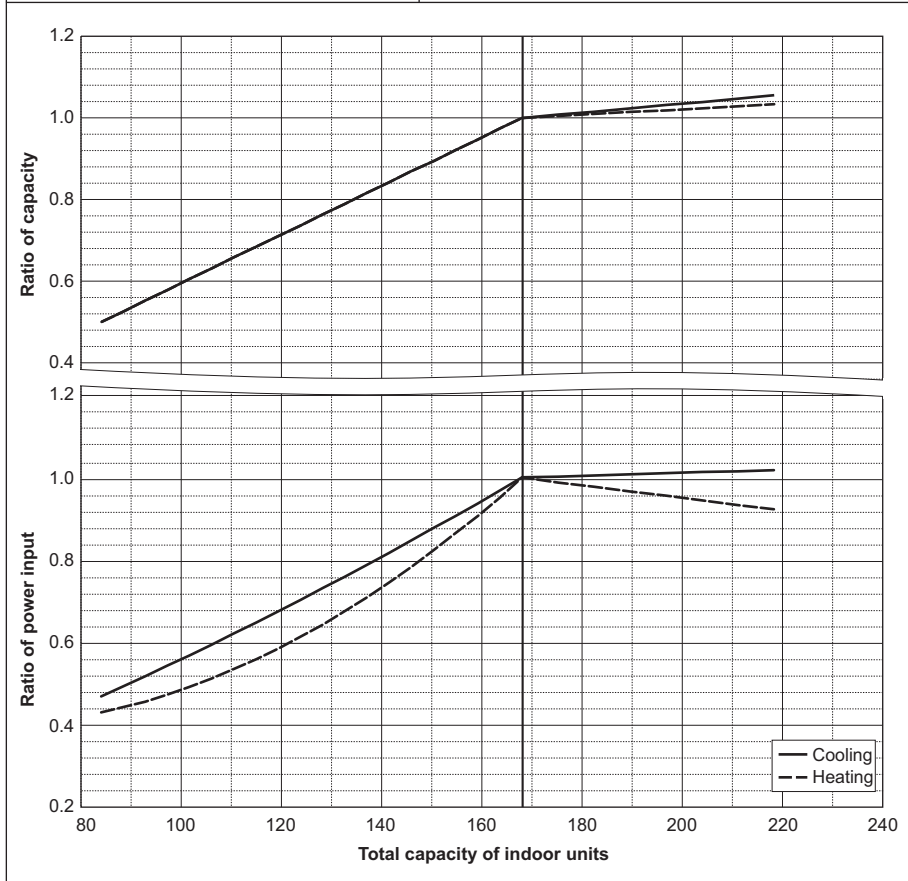
PQHY-		P192ZLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	192,000	
	kW	56.3	
Input	kW	15.05	
	BTU/h	183,000	
Rated cooling capacity	kW	53.6	
	Input kW	13.87	14.19

PQHY-		P192ZLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	215,000	
	kW	63.0	
Input	kW	11.90	
	BTU/h	205,000	
Rated Heating capacity	kW	60.1	
	Input kW	10.97	11.56

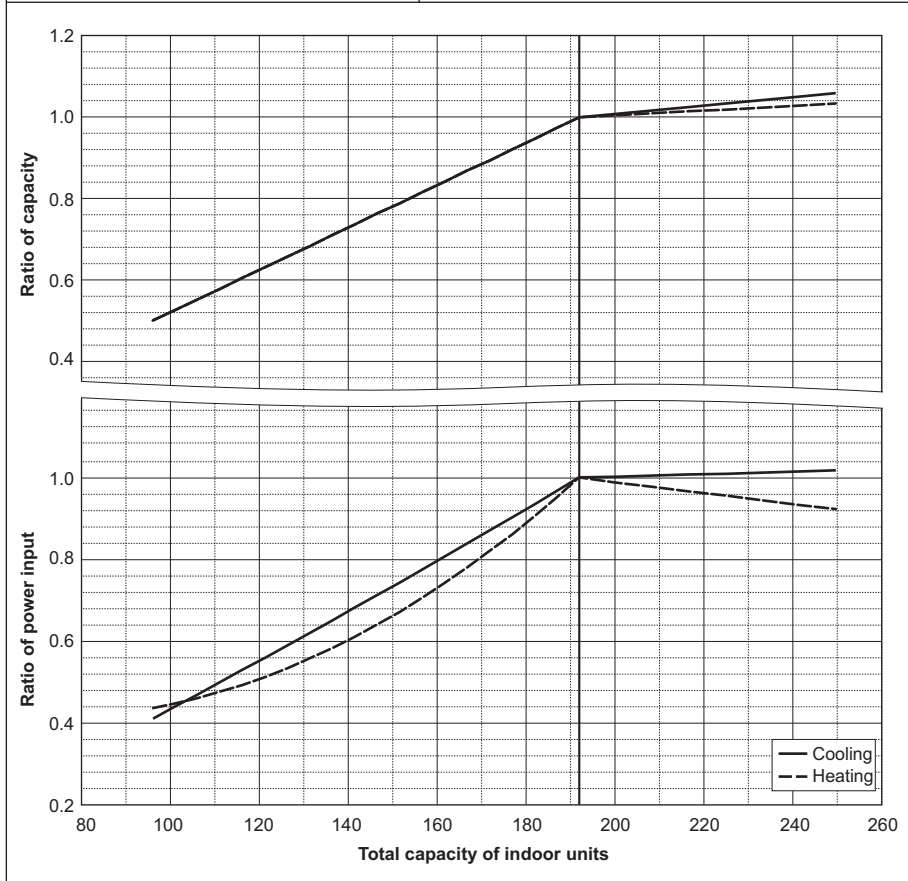
PQHY-		P192ZSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	192,000	
	kW	56.3	
Input	kW	11.30	
	BTU/h	183,000	
Rated cooling capacity	kW	53.6	
	Input kW	10.40	10.98

PQHY-		P192ZSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	215,000	
	kW	63.0	
Input	kW	11.02	
	BTU/h	205,000	
Rated Heating capacity	kW	60.1	
	Input kW	10.16	8.90

PQHY-P168Z(S)LMU-A1



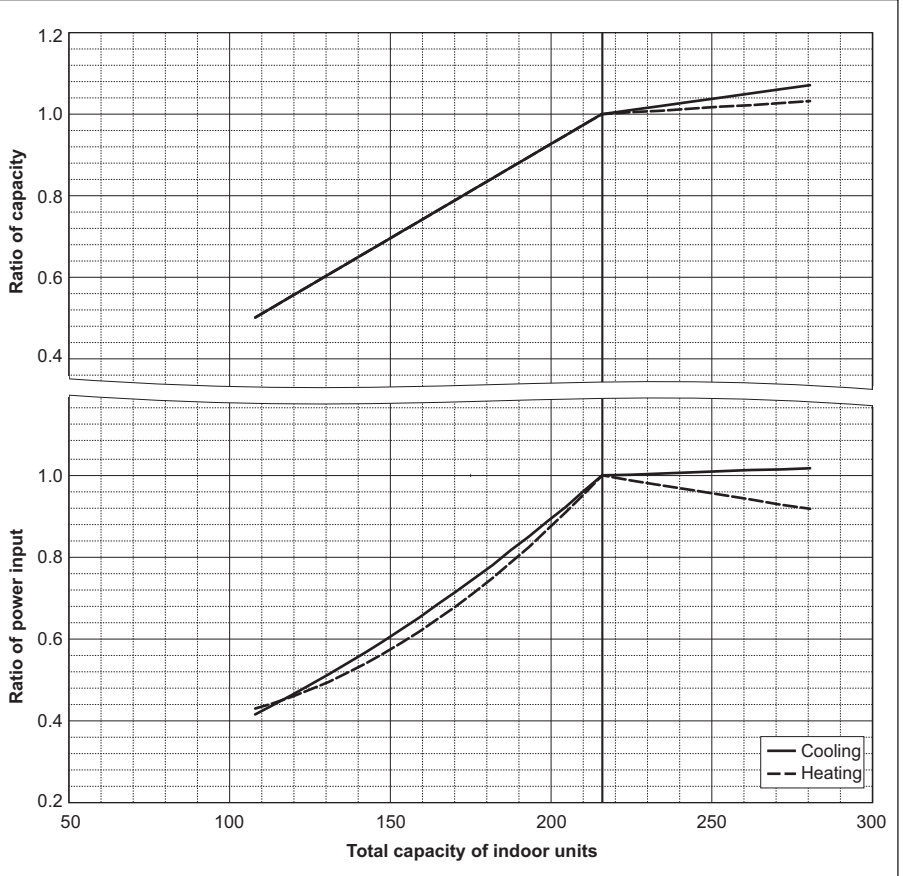
PQHY-P192Z(S)LMU-A1



PQHY-		P216ZSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	216,000	
	kW	63.3	
Input	kW	14.03	
	BTU/h	206,000	
Rated cooling capacity	kW	60.4	
	Input kW	12.93	13.24

PQHY-		P216ZSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	243,000	
	kW	71.2	
Input	kW	12.88	
	BTU/h	232,000	
Rated Heating capacity	kW	68.0	
	Input kW	11.88	10.35

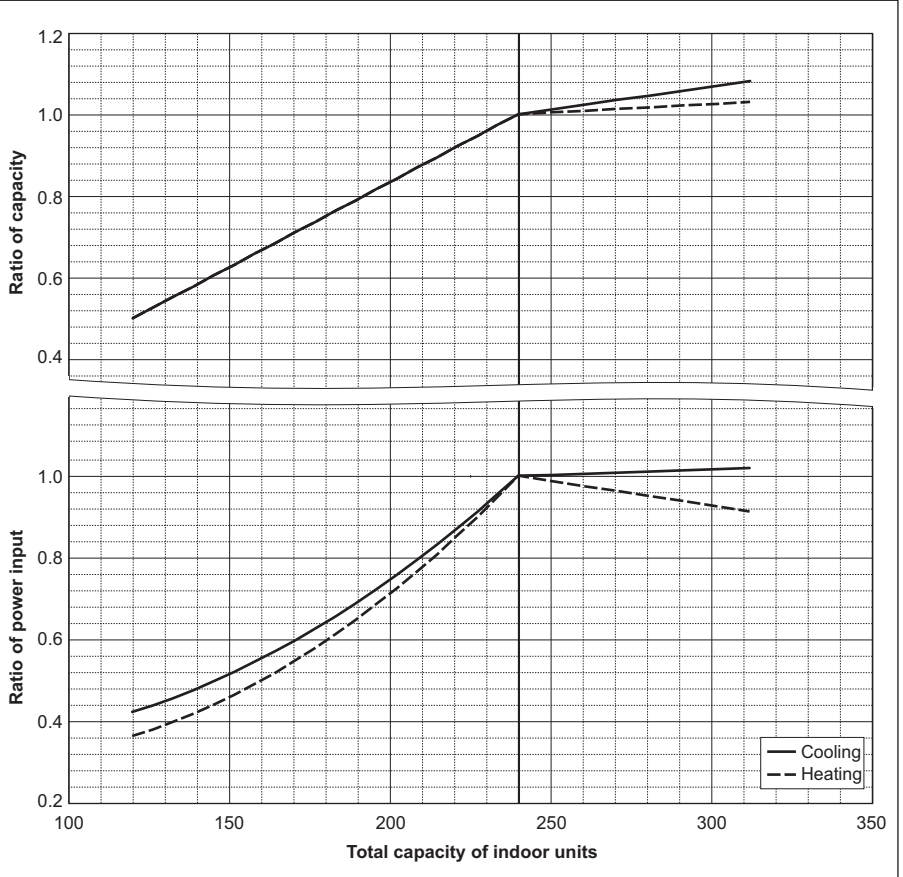
PQHY-P216Z(S)LMU-A1



PQHY-		P240ZSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	240,000	
	kW	70.3	
Input	kW	16.89	
	BTU/h	228,000	
Rated cooling capacity	kW	66.8	
	Input kW	15.57	16.15

PQHY-		P240ZSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	270,000	
	kW	79.1	
Input	kW	14.58	
	BTU/h	258,000	
Rated Heating capacity	kW	75.6	
	Input kW	13.45	12.02

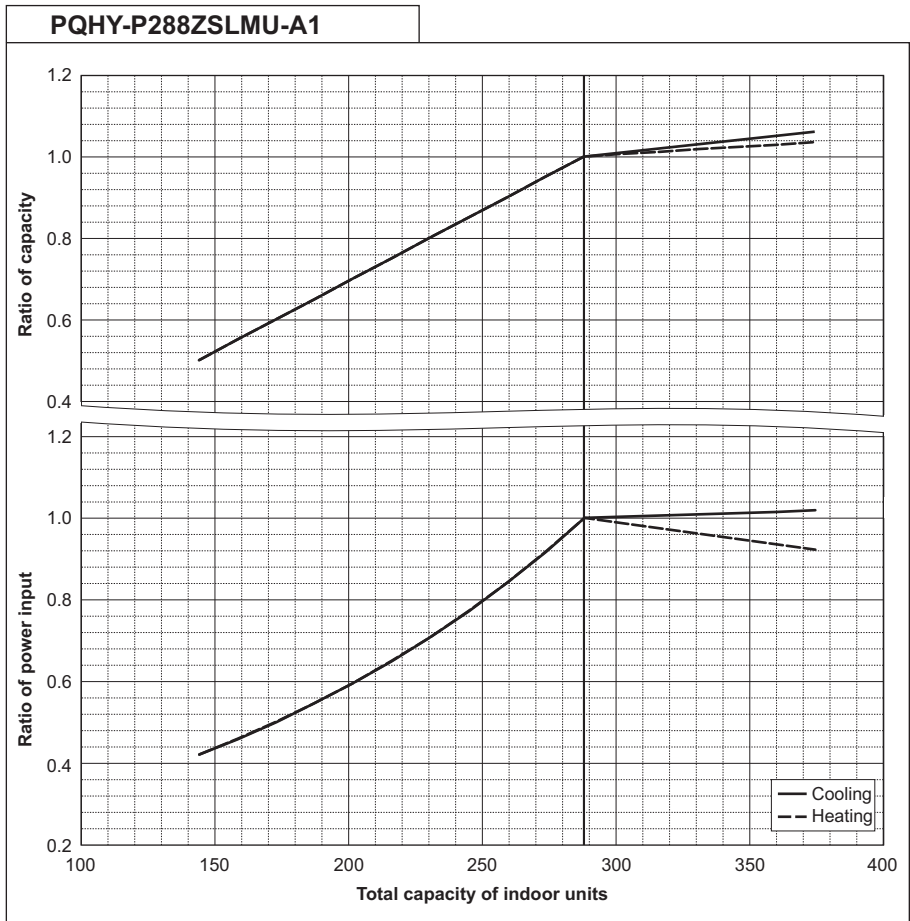
PQHY-P240Z(S)LMU-A1



PQHY-P-Z(S)LMU-A1

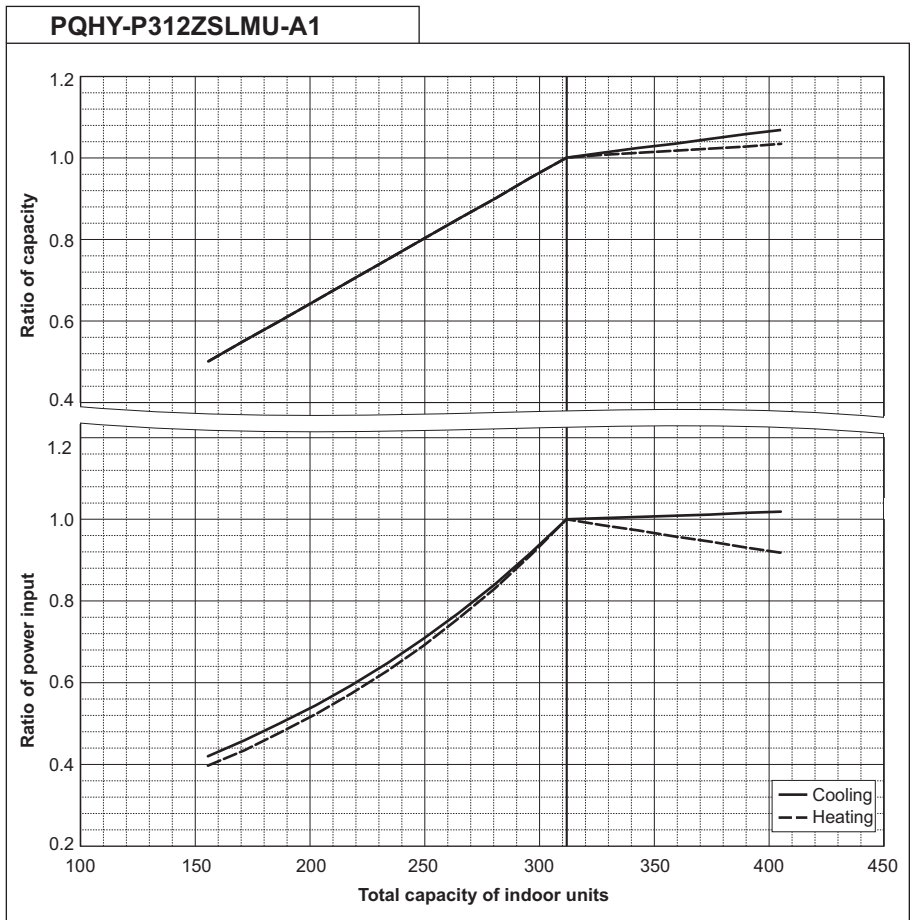
PQHY-		P288ZSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	288,000	
	kW	84.4	
Input	kW	20.42	
	BTU/h	275,000	
Rated cooling capacity	kW	80.6	
	Input kW	18.82	21.43

PQHY-		P288ZSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	323,000	
	kW	94.7	
Input	kW	17.50	
	BTU/h	308,000	
Rated Heating capacity	kW	90.3	
	Input kW	16.13	16.05



PQHY-		P312ZSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	312,000	
	kW	91.4	
Input	kW	23.41	
	BTU/h	297,000	
Rated cooling capacity	kW	87.0	
	Input kW	21.59	23.67

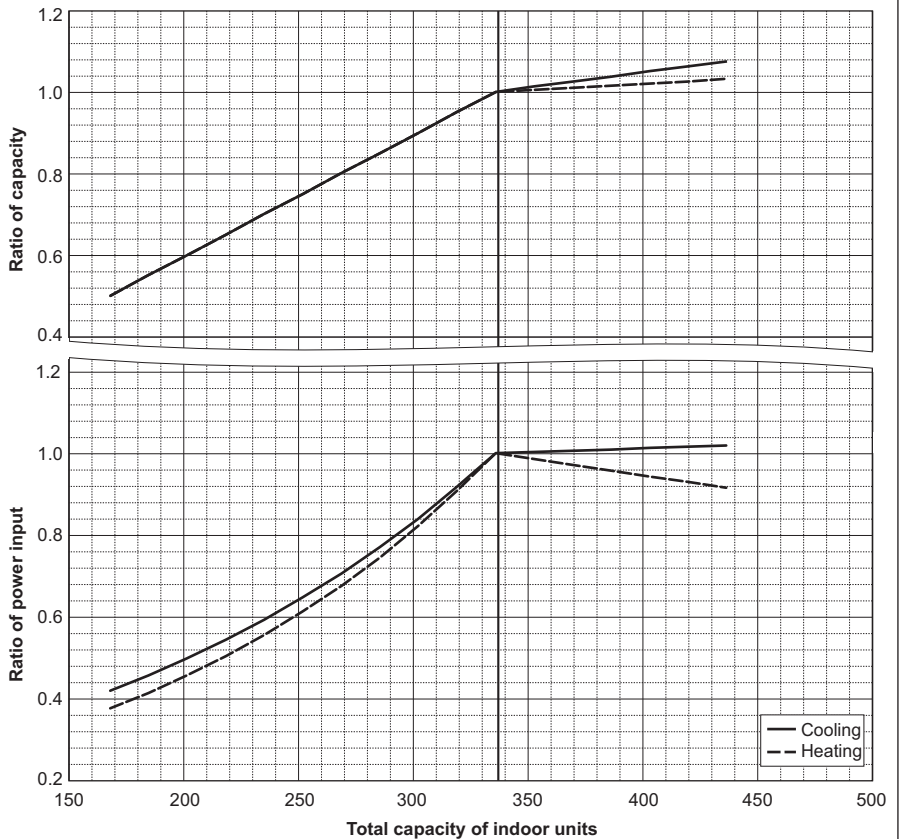
PQHY-		P312ZSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	350,000	
	kW	102.6	
Input	kW	19.11	
	BTU/h	334,000	
Rated Heating capacity	kW	97.9	
	Input kW	17.62	17.96



PQHY-		P336ZSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	336,000	
	kW	98.5	
Input	kW	26.84	
	BTU/h	320,000	
Rated cooling capacity	kW	93.8	
	Input	kW	24.76 25.85

PQHY-		P336ZSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	378,000	
	kW	110.8	
Input	kW	20.77	
	BTU/h	361,000	
Rated Heating capacity	kW	105.8	
	Input	kW	19.16 20.05

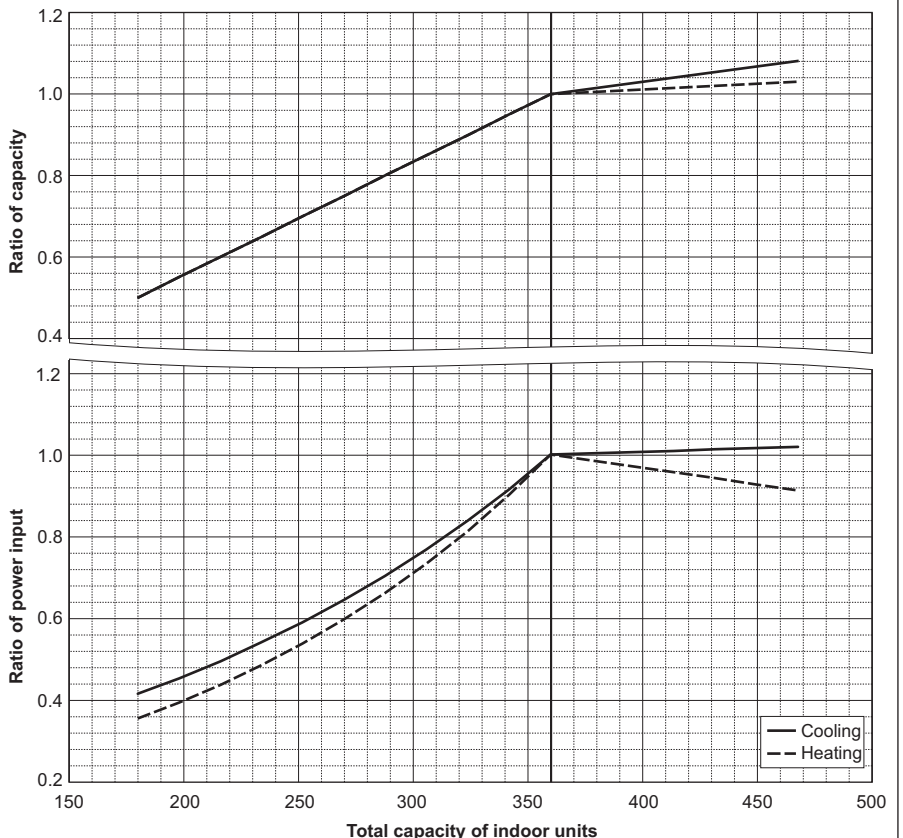
PQHY-P336ZSLMU-A1



PQHY-		P360ZSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	360,000	
	kW	105.5	
Input	kW	29.43	
	BTU/h	342,000	
Rated cooling capacity	kW	100.2	
	Input	kW	27.17 27.41

PQHY-		P360ZSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	405,000	
	kW	118.7	
Input	kW	22.85	
	BTU/h	387,000	
Rated Heating capacity	kW	113.4	
	Input	kW	21.09 21.70

PQHY-P360ZSLMU-A1



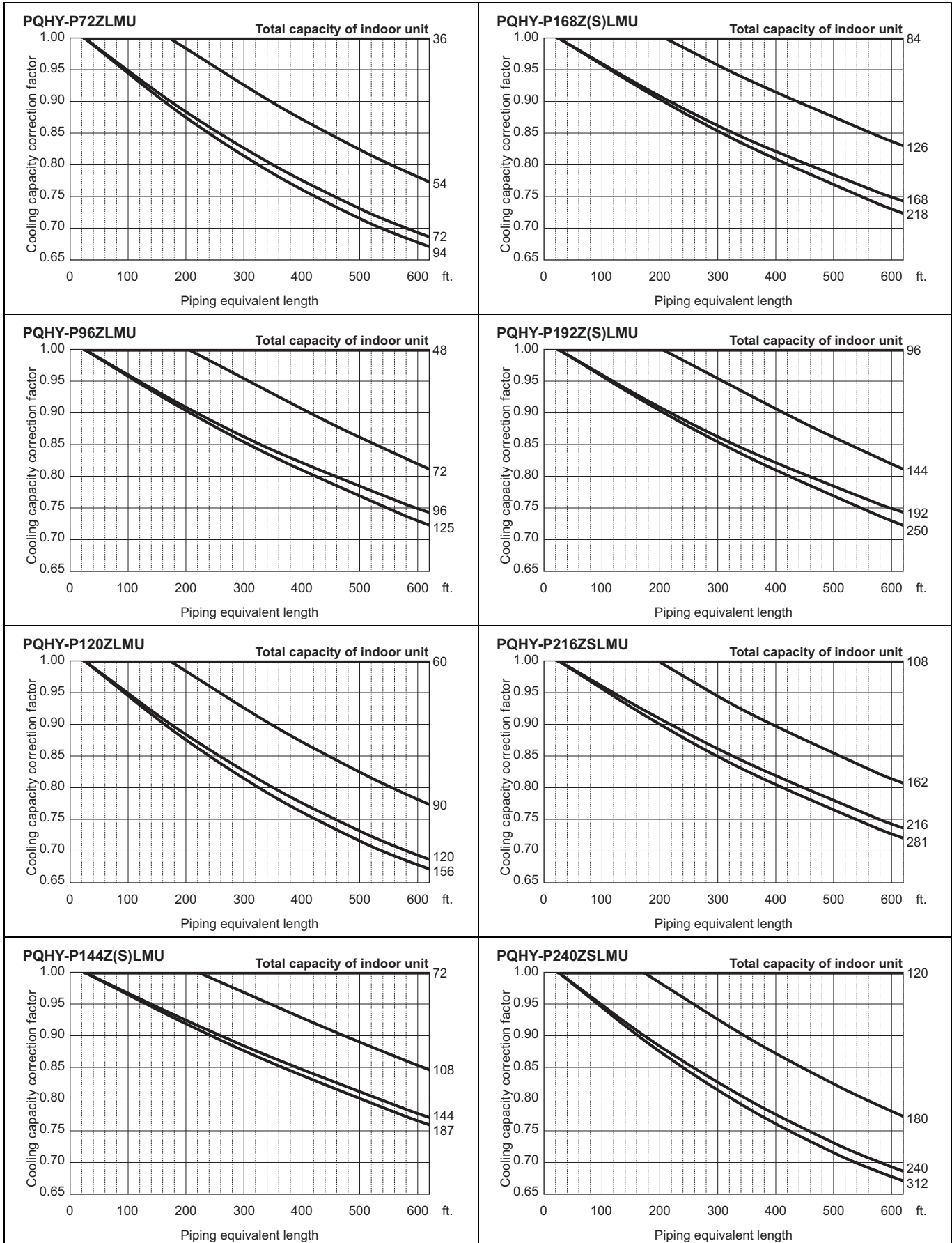
PQHY-P-(S)LMU-A1

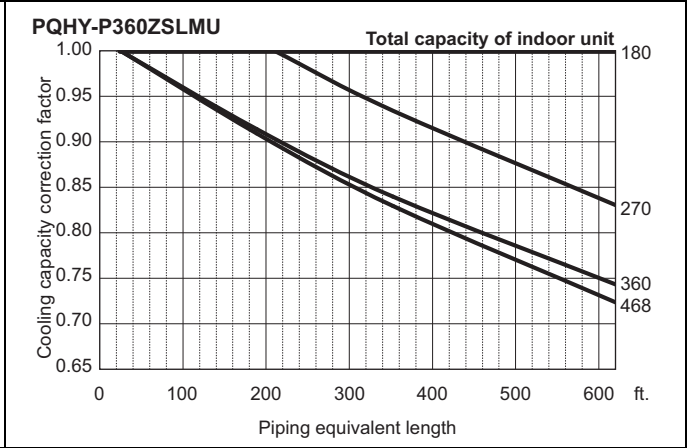
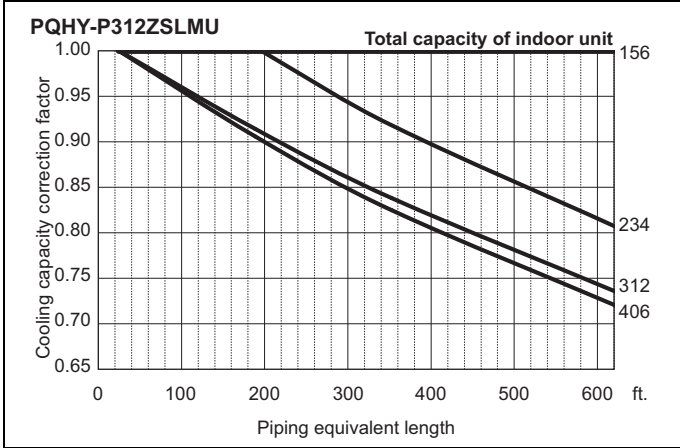
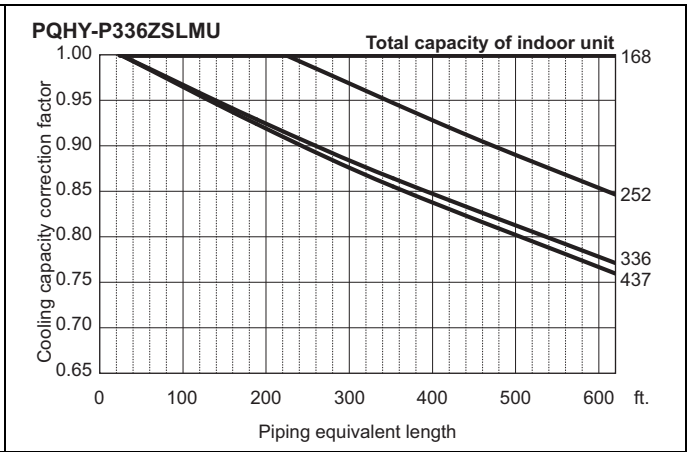
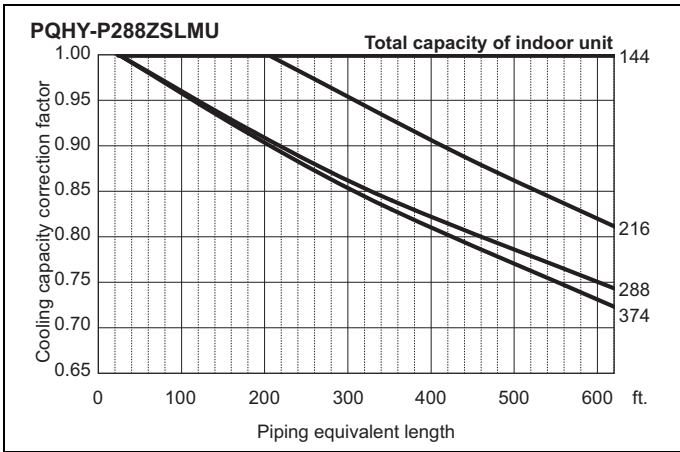
7-3. Correction by refrigerant piping length

CITY MULTI system can extend the piping flexibly within its limitation for the actual situation. However, a decrease of cooling/heating capacity could happen correspondently. Using following correction factor according to the equivalent length of the piping shown at 7-3-1 and 7-3-2, the capacity can be observed. 7-3-3 shows how to obtain the equivalent length of piping.

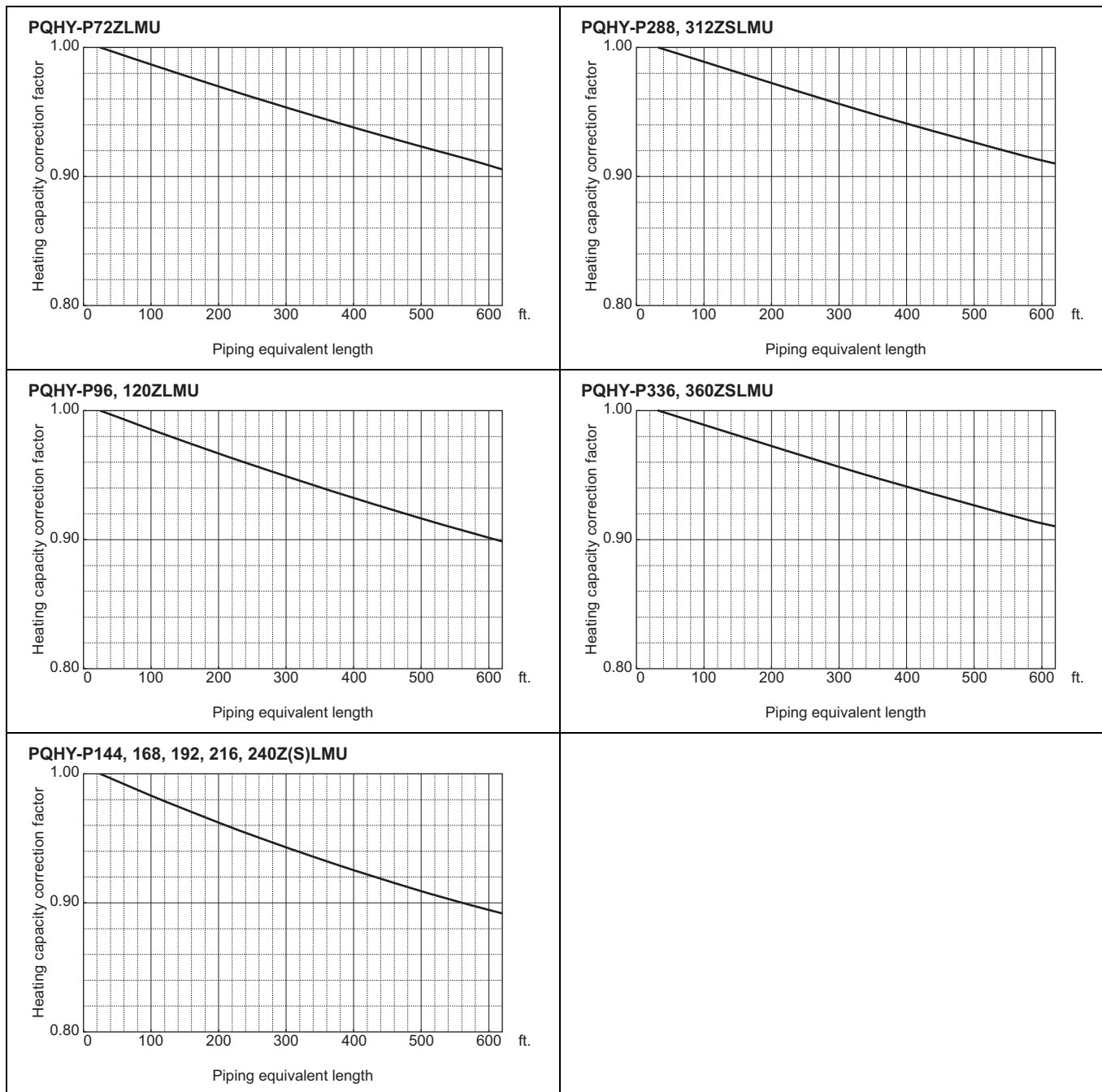
7-3-1. Cooling capacity correction

PQHY-P-Z(S)LMU-A1





7-3-2. Heating capacity correction



7-3-3. How to obtain the equivalent piping length

1. PQHY-P72ZLMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (1.15 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.35 x number of bent on the piping) [m]

2. PQHY-P96, 120ZLMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (1.38 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.42 x number of bent on the piping) [m]

3. PQHY-P144, 168, 192, 216, 240Z(S)LMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (1.64 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.50 x number of bent on the piping) [m]

4. PQHY-P288, 312ZSLMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (2.30 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.70 x number of bent on the piping) [m]

5. PQHY-P336, 360ZSLMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (2.63 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.80 x number of bent on the piping) [m]

PQRY-P-T(S)LMU-A1, PQRY-P-Y(S)LMU-A1

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1. SPECIFICATIONS

WR2-Series

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model		PQRY-P72TLMU-A1 < For Ground source >		
Indoor Model		Non-Ducted	Ducted	
Power source		3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h		
		72,000		
		kW		
		21.1		
	(208-230)	Power input	kW	
			3.61	
(Rated)		BTU/h		
		69,000		
		kW		
		20.2		
	(208-230)	Power input	3.34	3.12
		Current input	10.3-9.3	9.6-8.7
Temp. range of cooling	Indoor	W.B.		
	Inlet water	°F		
		59~75°F (15~24°C)		
		23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4, 5	BTU/h		
		80,000		
		kW		
		23.4		
	(208-230)	Power input	kW	
			4.04	
(Rated)		BTU/h		
		76,000		
		kW		
		22.3		
	(208-230)	Power input	3.74	3.36
		Current input	11.5-10.4	10.3-9.3
Temp. range of heating	Indoor	D.B.		
	Inlet water	°F		
		59~81°F (15~27°C)		
		23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity		
	Model/Quantity	P04~P96/1~18		
Sound pressure level (measured in anechoic room)		dB <A>		
		46.0		
Refrigerant piping diameter	High pressure	in. (mm)		
		5/8 (15.88) Brazed		
	Low pressure	in. (mm)		
		3/4 (19.05) Brazed		
Minimum Circuit Ampacity		A		
		13-12		
Maximum Overcurrent Protection		A		
		20-20		
Circulating water	Water flow rate	G/h	1,522	
		G/min (gpm)	25.4	
		m³/h	5.76	
		L/min	96	
		cfm	3.4	
	Pressure drop	psi	3.48	
		kPa	24	
	Operating volume range	G/h	793 ~ 1,902	
		G/min (gpm)	13.2 ~ 31.7	
		m³/h	3.0 ~ 7.2	
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		
	Motor output	kW		
		4.3		
	Case heater	kW		
	-			
	Lubricant	MEL32		
External finish		Galvanized steel sheets		
External dimension H x W x D	in.	43-5/16 x 34-11/16 x 21-11/16		
	mm	1,100 x 880 x 550		
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		
Refrigerant	Type x original charge	R410A x 11 lbs ± 1 oz (5.0 kg)		
	Control	Indoor LEV and BC controller		
Net weight	lbs (kg)	382 (173)		
Heat exchanger	Water volume in plate	G	plate type	
		l	1.32	
	Water pressure Max.	psi	290	
		MPa	2.0	
HIC circuit (HIC: Heat Inter-Changer)		-		
Drawing	External	KL94C213		
	Wiring	KE94G422		
Standard attachment	Document	Installation Manual		
	Accessory	Details refer to External Drw		
Optional parts	joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-R160-J1, CMY-R201, 202, 301, 306S-G, CMY-R302, 303, 304, 305S-G1 BC controller: CMB-P104, 105, 106, 108, 1010, 1013, 1016NU-G1, CMB-P104, 106, 108, 1012, 1016NU-J1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1			
Remarks	Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.). The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.			

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQRY-P96TLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	96,000			
		kW	28.1			
	(208-230)	Power input	kW	5.21		
		Current input	A	16.0-14.5		
	(Rated)		BTU/h	92,000		
			kW	27.0		
(208-230)	Power input	kW	4.82	5.19		
	Current input	A	14.8-13.4	16.0-14.4		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	108,000			
		kW	31.7			
	(208-230)	Power input	kW	5.64		
		Current input	A	17.3-15.7		
	(Rated)		BTU/h	103,000		
			kW	30.2		
(208-230)	Power input	kW	5.21	4.48		
	Current input	A	16.0-14.5	13.8-12.4		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity				
	Model/Quantity	P04~P96/1~24				
Sound pressure level (measured in anechoic room)		dB <A>	48.0			
Refrigerant piping diameter	High pressure	in. (mm)	3/4 (19.05) Brazed			
	Low pressure	in. (mm)	7/8 (22.2) Brazed			
Minimum Circuit Ampacity		A	19-17			
Maximum Overcurrent Protection		A	30-25			
Circulating water	Water flow rate	G/h	1,522			
		G/min (gpm)	25.4			
		m³/h	5.76			
		L/min	96			
		cfm	3.4			
	Pressure drop	psi	3.48			
		kPa	24			
	Operating volume range	G/h	793 ~ 1,902			
G/min (gpm)		13.2 ~ 31.7				
m³/h		3.0 ~ 7.2				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1				
	Starting method	Inverter				
	Motor output	kW	6.0			
	Case heater	kW	-			
	Lubricant	MEL32				
External finish			Galvanized steel sheets			
External dimension H x W x D		in.	43-5/16 x 34-11/16 x 21-11/16			
		mm	1,100 x 880 x 550			
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)				
	Inverter circuit	Over-heat protection, Over-current protection				
	Compressor	Over-heat protection				
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)				
	Control	Indoor LEV and BC controller				
Net weight		lbs (kg)	382 (173)			
Heat exchanger		Water volume in plate	G	plate type		
			L	1.32		
		Water pressure Max.	psi	5.0		
			MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			-			
Drawing	External	KL94C213				
	Wiring	KE94G422				
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts	joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-R160-J1, CMY-R201, 202, 301, 306S-G, CMY-R302, 303, 304, 305S-G1 BC controller: CMB-P104, 105, 106, 108, 1010, 1013, 1016NU-G1, CMB-P104, 106, 108, 1012, 1016NU-J1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1					
Remarks	Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.					

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model		PQRY-P120TLMU-A1 < For Ground source >		
Indoor Model		Non-Ducted	Ducted	
Power source		3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h		
		120,000		
		kW		
		35.2		
	(208-230)	Power input	kW	
			7.51	
(Rated)		BTU/h		
		114,000		
		kW		
		33.4		
	(208-230)	Power input	6.95	7.35
		Current input	21.4-19.3	22.6-20.5
Temp. range of cooling	Indoor	W.B.		
		59~75°F (15~24°C)		
	Inlet water	°F		
		23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4, 5	BTU/h		
		135,000		
		kW		
		39.6		
	(208-230)	Power input	kW	
			7.09	
(Rated)		BTU/h		
		129,000		
		kW		
		37.8		
	(208-230)	Power input	6.55	5.92
		Current input	20.2-18.2	18.2-16.5
Temp. range of heating	Indoor	D.B.		
		59~81°F (15~27°C)		
	Inlet water	°F		
		23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity		
	Model/Quantity	P04-P96/1~30		
Sound pressure level (measured in anechoic room)		dB <A>		
		54.0		
Refrigerant piping diameter	High pressure	in. (mm)		
		3/4 (19.05) Brazed		
	Low pressure	in. (mm)		
		7/8 (22.2) Brazed		
Minimum Circuit Ampacity		A		
		29-26		
Maximum Overcurrent Protection		A		
		50-45		
Circulating water	Water flow rate	G/h	1,522	
		G/min (gpm)	25.4	
		m³/h	5.76	
		L/min	96	
		cfm	3.4	
	Pressure drop	psi	3.48	
		kPa	24	
	Operating volume range	G/h	793 ~ 1,902	
		G/min (gpm)	13.2 ~ 31.7	
		m³/h	3.0 ~ 7.2	
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		
	Motor output	kW		
		7.7		
	Case heater	kW		
		-		
	Lubricant	MEL32		
External finish		Galvanized steel sheets		
External dimension H x W x D		in.		
		43-5/16 x 34-11/16 x 21-11/16		
		mm		
		1,100 x 880 x 550		
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		
	Control	Indoor LEV and BC controller		
Net weight		lbs (kg)		
		382 (173)		
Heat exchanger	Heat exchanger		plate type	
	Water volume in plate	G	1.32	
		l	5.0	
	Water pressure Max.	psi	290	
MPa		2.0		
HIC circuit (HIC: Heat Inter-Changer)		-		
Drawing	External	KL94C213		
	Wiring	KE94G422		
Standard attachment	Document	Installation Manual		
	Accessory	Details refer to External Drw		
Optional parts		joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-R160-J1, CMY-R201, 202, 301, 306S-G, CMY-R302, 303, 304, 305S-G1 BC controller: CMB-P104, 105, 106, 108, 1010, 1013, 1016NU-G1, CMB-P104, 106, 108, 1012, 1016NU-J1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1		
Remarks		<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.)</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P144TLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	144,000			
		kW	42.2			
	(208-230)	Power input	kW			8.78
		Current input	A			27.0-24.4
	(Rated)	BTU/h	137,000			
		kW	40.2			
(208-230)	Power input	8.07	9.98			
	Current input	24.8-22.5	30.7-27.8			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	160,000			
		kW	46.9			
	(208-230)	Power input	kW			8.11
		Current input	A			25.0-22.6
	(Rated)	BTU/h	152,000			
		kW	44.5			
(208-230)	Power input	7.47	7.90			
	Current input	23.0-20.8	24.3-22.0			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity				
	Model/Quantity	P04~P96/1~36				
Sound pressure level (measured in anechoic room)			dB <A>			
Refrigerant piping diameter			in. (mm)			
High pressure			7/8 (22.2) Brazed			
Low pressure			1-1/8 (28.58) Brazed			
Minimum Circuit Ampacity			A			
Maximum Overcurrent Protection			A			
Circulating water			Water flow rate			
			G/h			
			G/min (gpm)			
			m ³ /h			
			L/min			
			cfm			
			Pressure drop			
			psi			
			kPa			
			Operating volume range			
			G/h			
			G/min (gpm)			
			m ³ /h			
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1			
	Starting method		Inverter			
	Motor output	kW	9.5			
	Case heater	kW	-			
	Lubricant		MEL32			
External finish			Galvanized steel sheets			
External dimension H x W x D			in.			
			mm			
			57-1/8 x 34-11/16 x 21-11/16			
			1,450 x 880 x 550			
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			
	Inverter circuit		Over-heat protection, Over-current protection			
	Compressor		Over-heat protection			
Refrigerant	Type x original charge		R410A x 13 lbs + 4 oz (6.0 kg)			
	Control		Indoor LEV and BC controller			
Net weight			lbs (kg)			
			481 (218)			
Heat exchanger			plate type			
			Water volume in plate			
			G			
			l			
			Water pressure Max.			
			psi			
			MPa			
			290			
			2.0			
HIC circuit (HIC: Heat Inter-Changer)			-			
Drawing	External		KL94C214			
	Wiring		KE94G423			
Standard attachment	Document		Installation Manual			
	Accessory		Details refer to External Drw			
Optional parts			joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1			
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.)</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>			

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h = kW x 3,412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm = m ³ /min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs = kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m ³ /h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model			PQRY-P168TLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	168,000		
		kW	49.2		
	(208-230)	Power input	12.05		
		Current input	37.1-33.6		
	(Rated)	BTU/h	161,000		
		kW	47.2		
(208-230)	Power input	11.10	11.88		
	Current input	34.2-30.9	36.6-33.1		
	Inlet water	59~75°F (15~24°C) 23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	188,000		
		kW	55.1		
	(208-230)	Power input	9.86		
		Current input	30.4-27.5		
	(Rated)	BTU/h	179,000		
		kW	52.5		
(208-230)	Power input	9.09	9.72		
	Current input	28.0-25.3	29.9-27.1		
	Inlet water	59~81°F (15~27°C) 23~113°F (-5~45°C)			
Temp. range of heating	Indoor	D.B.			
	Inlet water	°F			
Indoor unit connectable			50~150% of heat source unit capacity		
Model/Quantity			P04~P96/1~42		
Sound pressure level (measured in anechoic room)			dB <A>		
Refrigerant piping diameter			56.0		
High pressure			7/8 (22.2) Brazed		
Low pressure			1-1/8 (28.58) Brazed		
Minimum Circuit Ampacity			A		
Maximum Overcurrent Protection			44-39		
Circulating water			70-70		
Water flow rate	G/h	1,902			
		G/min (gpm)	31.7		
		m³/h	7.20		
		L/min	120		
		cfm	4.2		
	Pressure drop	psi	6.38		
		kPa	44		
		G/h	1,189 ~ 3,054		
		G/min (gpm)	19.8 ~ 50.9		
		m³/h	4.5 ~ 11.6		
Compressor			Inverter scroll hermetic compressor x 1		
Starting method			Inverter		
Motor output			kW		
Case heater			kW		
Lubricant			MEL32		
External finish			Galvanized steel sheets		
External dimension H x W x D			in.		
			57-1/8 x 34-11/16 x 21-11/16		
			mm		
			1,450 x 880 x 550		
Protection devices			High pressure protection		
High pressure protection			High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
Inverter circuit			Over-heat protection, Over-current protection		
Compressor			Over-heat protection		
Refrigerant			Type x original charge		
Control			R410A x 13 lbs + 4 oz (6.0 kg)		
Net weight			Indoor LEV and BC controller		
Heat exchanger			lbs (kg)		
Water volume in plate			481 (218)		
Water pressure Max.			plate type		
			1.32		
			5.0		
			290		
			2.0		
HIC circuit (HIC: Heat Inter-Changer)			-		
Drawing			External		
			KL94C214		
			Wiring		
			KE94G423		
Standard attachment			Document		
			Installation Manual		
			Accessory		
			Details refer to External Drw		
Optional parts			joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1		
			Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1		
			Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1		
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B.(20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQRY-P192TLMU-A1 < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz	
Cooling capacity (Nominal)	*1, 2	BTU/h	192,000	
		kW	56.3	
	(208-230)	Power input	15.05	
		Current input	46.4-41.9	
	(Rated)	BTU/h	183,000	
		kW	53.6	
(208-230)	Power input	13.87	14.19	
	Current input	42.7-38.6	43.7-39.5	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)	
	Inlet water	°F	23~113°F (-5~45°C)	
Heating capacity (Nominal)	*3, 4, 5	BTU/h	215,000	
		kW	63.0	
	(208-230)	Power input	11.90	
		Current input	36.7-33.1	
	(Rated)	BTU/h	205,000	
		kW	60.1	
(208-230)	Power input	10.97	11.56	
	Current input	33.8-30.5	35.6-32.2	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)	
	Inlet water	°F	23~113°F (-5~45°C)	
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity		
	Model/Quantity	P04~P96/1~48		
Sound pressure level (measured in anechoic room)		dB <A>	58.0	
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed	
	Low pressure	in. (mm)	1-1/8 (28.58) Brazed	
Minimum Circuit Ampacity		A	54-49	
Maximum Overcurrent Protection		A	90-80	
Circulating water	Water flow rate	G/h	1,902	
		G/min (gpm)	31.7	
		m³/h	7.20	
		L/min	120	
		cfm	4.2	
	Pressure drop	psi	6.38	
kPa		44		
Operating volume range	G/h	1,189 ~ 3,054		
	G/min (gpm)	19.8 ~ 50.9		
	m³/h	4.5 ~ 11.6		
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		
	Motor output	kW	12.4	
	Case heater	kW	-	
	Lubricant	MEL32		
External finish			Galvanized steel sheets	
External dimension H x W x D		in.	57-1/8 x 34-11/16 x 21-11/16	
		mm	1,450 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)		
	Control	Indoor LEV and BC controller		
Net weight		lbs (kg)	481 (218)	
Heat exchanger	Water volume in plate	G	plate type	
		l	1.32	
	Water pressure Max.	psi	5.0	
		MPa	2.90	
HIC circuit (HIC: Heat Inter-Changer)			-	
Drawing	External	KL94C214		
	Wiring	KE94G423		
Standard attachment	Document	Installation Manual		
	Accessory	Details refer to External Drw		
Optional parts	joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1			
Remarks	Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.			

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHR1 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2. <PWFY-P36/72NMMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHR1 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NMMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	

*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model			PQRY-P216TLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	216,000		
		kW	63.3		
	(208-230)	Power input	19.23		
		Current input	59.3-53.6		
	(Rated)	BTU/h	206,000		
		kW	60.4		
(208-230)	Power input	17.72	16.10		
	Current input	54.6-49.4	49.6-44.9		
	Temp. range of cooling		Indoor W.B. 59~75°F (15~24°C)		
	Inlet water		°F 23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4, 5	BTU/h	243,000		
		kW	71.2		
	(208-230)	Power input	13.04		
		Current input	40.2-36.3		
	(Rated)	BTU/h	232,000		
		kW	68.0		
(208-230)	Power input	12.01	12.34		
	Current input	37.0-33.4	38.0-34.4		
Temp. range of heating		Indoor D.B. 59~81°F (15~27°C)			
Inlet water		°F 23~113°F (-5~45°C)			
Indoor unit connectable			50~150% of heat source unit capacity		
Model/Quantity			P04~P96/2~50 (Connectable branch pipe number is max. 48.)		
Sound pressure level (measured in anechoic room)			dB <A> 58.0		
Refrigerant piping diameter			High pressure 7/8 (22.2) Brazed (1-1/8 (28.58) Brazed for the part that exceeds 65 m)		
Low pressure			in. (mm) 1-1/8 (28.58) Brazed		
Minimum Circuit Ampacity			A 69-63		
Maximum Overcurrent Protection			A 110-110		
Circulating water	Water flow rate	G/h	3,044		
		G/min (gpm)	50.7		
		m³/h	11.52		
		L/min	192		
		cfm	6.8		
	Pressure drop	psi	6.53		
kPa		45			
Operating volume range	G/h	1,585 ~ 3,804			
	G/min (gpm)	26.4 ~ 63.4			
	m³/h	6.0 ~ 14.4			
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1		
	Starting method		Inverter		
	Motor output	kW	14.5		
	Case heater	kW	0.045 (240 V)		
	Lubricant		MEL32		
External finish			Galvanized steel sheets		
External dimension H x W x D		in.	57-1/8 x 34-11/16 x 21-11/16		
		mm	1,450 x 880 x 550		
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit		Over-heat protection, Over-current protection		
	Compressor		Over-heat protection		
Refrigerant	Type x original charge		R410A x 25 lbs + 13 oz (11.7 kg)		
	Control		Indoor LEV and BC controller		
Net weight		lbs (kg)	558 (253)		
Heat exchanger	Water volume in plate		plate type		
			G 2.64		
			l 10.0		
	Water pressure Max.	psi		290	
MPa		2.0			
HIC circuit (HIC: Heat Inter-Changer)			-		
Drawing	External		KL94C215		
	Wiring		KE94G426		
Standard attachment	Document		Installation Manual		
	Accessory		Details refer to External Drw		
Optional parts			joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1		
Remarks			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less. When the high pressure piping length is 65 m or less, use 7/8 (22.2) pipe. When the high pressure piping length exceeds 65 m, use 1-1/8 (28.58) pipe for the part that exceeds 65 m.		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 68°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQRY-P240TLMU-A1 < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz	
Cooling capacity (Nominal)	*1, 2	BTU/h	240,000	
		kW	70.3	
	(208-230)	Power input	21.14	
		Current input	65.1-58.9	
	(Rated)	BTU/h	228,000	
		kW	66.8	
(208-230)	Power input	19.49	18.74	
	Current input	60.1-54.3	57.7-52.2	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)	
	Inlet water	°F	23~113°F (-5~45°C)	
Heating capacity (Nominal)	*3, 4, 5	BTU/h	270,000	
		kW	79.1	
	(208-230)	Power input	15.12	
		Current input	46.6-42.1	
	(Rated)	BTU/h	258,000	
		kW	75.6	
(208-230)	Power input	13.93	14.62	
	Current input	42.9-38.8	45.0-40.7	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)	
	Inlet water	°F	23~113°F (-5~45°C)	
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity		
	Model/Quantity	P04~P96/2~50 (Connectable branch pipe number is max. 48.)		
Sound pressure level (measured in anechoic room)		dB <A>	58.0	
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed (1-1/8 (28.58) Brazed for the part that exceeds 65 m)	
	Low pressure	in. (mm)	1-3/8 (34.93) Brazed	
Minimum Circuit Ampacity		A	79-71	
Maximum Overcurrent Protection		A	125-125	
Circulating water	Water flow rate	G/h	3,044	
		G/min (gpm)	50.7	
		m³/h	11.52	
		L/min	192	
		cfm	6.8	
	Pressure drop	psi	6.53	
		kPa	45	
		Operating volume range	G/h	1,585 ~ 3,804
	G/min (gpm)	26.4 ~ 63.4		
	m³/h	6.0 ~ 14.4		
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		
	Motor output	kW	16.1	
	Case heater	kW	0.045 (240 V)	
	Lubricant	MEL32		
External finish			Galvanized steel sheets	
External dimension H x W x D		in.	57-1/8 x 34-11/16 x 21-11/16	
		mm	1,450 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		
Refrigerant	Type x original charge	R410A x 25 lbs + 13 oz (11.7 kg)		
	Control	Indoor LEV and BC controller		
Net weight		lbs (kg)	558 (253)	
Heat exchanger	Water volume in plate	G	plate type	
		l	2.64	
	Water pressure Max.	psi	10.0	
		MPa	290	
			2.0	
HIC circuit (HIC: Heat Inter-Changer)				
Drawing	External	KL94C215		
	Wiring	KE94G426		
Standard attachment	Document	Installation Manual		
	Accessory	Details refer to External Drw		
Optional parts	joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1			
Remarks	Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less. When the high pressure piping length is 65 m or less, use 7/8 (22.2) pipe. When the high pressure piping length exceeds 65 m, use 7/8 (22.2) pipe until 65 m, use 1-1/8 (28.58) pipe for the part that exceeds 65 m.			

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHR1 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2. <PWFY-P36/72NMMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHR1 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NMMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model			PQRY-P144TSLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	144,000		
		kW	42.2		
	(208-230)	Power input	7.11		
		Current input	21.9-19.8		
	(Rated)	BTU/h	137,000		
		kW	40.2		
(208-230)	Power input	6.53		7.72	
	Current input	20.1-18.2		23.8-21.5	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4, 5	BTU/h	160,000		
		kW	46.9		
	(208-230)	Power input	7.45		
		Current input	22.9-20.7		
	(Rated)	BTU/h	152,000		
		kW	44.5		
(208-230)	Power input	6.86		7.22	
	Current input	21.1-19.1		22.2-20.1	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity			
	Model/Quantity	P04~P96/1~36			
Sound pressure level (measured in anechoic room)		dB <A>	49.0		
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed		
	Low pressure	in. (mm)	1-1/8 (28.58) Brazed		

Set Model			PQRY-P72TLMU-A1 < For Ground source >		PQRY-P72TLMU-A1 < For Ground source >	
Minimum Circuit Ampacity			A		13-12	
Maximum Overcurrent Protection			A		20-20	
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min (gpm)	25.4 + 25.4			
		m³/h	5.76 + 5.76			
		L/min	96 + 96			
		cfm	3.4 + 3.4			
	Pressure drop	psi	3.48		3.48	
	kPa	24		24		
Operating volume range	G/h	793 + 793 ~ 1,902 + 1,902				
	G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7				
	m³/h	3.0 + 3.0 ~ 7.2 + 7.2				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1				
	Starting method	Inverter				
	Motor output	kW		4.3		
	Case heater	kW		-		
	Lubricant	MEL32				
External finish			Galvanized steel sheets		Galvanized steel sheets	
External dimension H x W x D			in.		43-5/16 x 34-11/16 x 21-11/16	
	mm		1,100 x 880 x 550		1,100 x 880 x 550	
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection	
	Compressor		Over-heat protection			
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)		
	Control	Indoor LEV and BC controller				
Net weight		lbs (kg)	382 (173)		382 (173)	
Heat exchanger			plate type		plate type	
	Water volume in plate	G	1.32		1.32	
		l	5.0		5.0	
	Water pressure Max.	psi	290		290	
MPa		2.0		2.0		
HIC circuit (HIC: Heat Inter-Change)						
Pipe between unit and distributor	High pressure	in. (mm)	5/8 (15.88) Brazed		5/8 (15.88) Brazed	
	Low pressure	in. (mm)	-		3/4 (19.05) Brazed	
Drawing	External	KL94C219				
	Wiring	KE94G422		KE94G422		
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts						
Heat Source Twinning kit: CMY-Q100CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1						
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.)</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>			

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 86°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQRV-P168TSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	168,000			
		kW	49.2			
	(208-230)	Power input	9.33			
		Current input	28.7-26.0			
	(Rated)	(208-230)	BTU/h	161,000		
			kW	47.2		
(208-230)	Power input	8.58		9.22		
	Current input	26.4-23.9		28.4-25.7		
Temp. range of cooling	Indoor	W.B.	59-75°F (15-24°C)			
	Inlet water	°F	23-113°F (-5-45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	188,000			
		kW	55.1			
	(208-230)	Power input	9.34			
		Current input	28.8-26.0			
	(Rated)	(208-230)	BTU/h	179,000		
			kW	52.5		
(208-230)	Power input	8.60		8.03		
	Current input	26.5-23.9		24.7-22.3		
Temp. range of heating	Indoor	D.B.	59-81°F (15-27°C)			
	Inlet water	°F	23-113°F (-5-45°C)			
Indoor unit connectable	Total capacity	50-150% of heat source unit capacity				
Indoor unit connectable	Model/Quantity	P04~P96/1~42				
Sound pressure level (measured in anechoic room)	dB <A>	50.0				
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed			
	Low pressure	in. (mm)	1-1/8 (28.58) Brazed			

Set Model			PQRV-P96TLMU-A1 < For Ground source >		PQRV-P72TLMU-A1 < For Ground source >
Minimum Circuit Ampacity	A		19-17	13-12	
Maximum Overcurrent Protection	A		30-25	20-20	
Circulating water	Water flow rate	G/h	1,522 + 1,522		
		G/min (gpm)	25.4 + 25.4		
		m³/h	5.76 + 5.76		
		L/min	96 + 96		
		cfm	3.4 + 3.4		
	Pressure drop	psi	3.48	3.48	
	kPa	24	24		
Operating volume range	G/h	793 + 793 ~ 1,902 + 1,902			
	G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7			
	m³/h	3.0 + 3.0 ~ 7.2 + 7.2			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1	
	Starting method	Inverter		Inverter	
	Motor output	kW	6.0	4.3	
	Case heater	kW	-	-	
	Lubricant	MEL32		MEL32	
External finish	Galvanized steel sheets		Galvanized steel sheets		
External dimension H x W x D	in.	43-5/16 x 34-11/16 x 21-11/16		43-5/16 x 34-11/16 x 21-11/16	
	mm	1,100 x 880 x 550		1,100 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection	
	Compressor	Over-heat protection		Over-heat protection	
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)	
	Control	Indoor LEV and BC controller			
Net weight	lbs (kg)	382 (173)		382 (173)	
Heat exchanger	Water volume in plate	G	plate type		plate type
		l	1.32	1.32	
	Water pressure Max.	psi	290		290
		MPa	2.0		2.0
HIC circuit (HIC: Heat Inter-Changer)	-		-		
Pipe between unit and distributor	High pressure	in. (mm)	3/4 (19.05) Brazed		3/4 (19.05) Brazed
	Low pressure	in. (mm)	-		7/8 (22.2) Brazed
Drawing	External	KL94C219		KL94C219	
	Wiring	KE94G422		KE94G422	
Standard attachment	Document	Installation Manual			
	Accessory	Details refer to External Drw			
Optional parts	Heat Source Twinning kit: CMY-Q100CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1				
Remarks	<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>				

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	*Above specification data is subject to rounding variation.

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model			PQRY-P192TSLMU-A1 < For Ground source >				
Indoor Model			Non-Ducted		Ducted		
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz				
Cooling capacity (Nominal)	*1, 2	BTU/h	192,000				
		kW	56.3				
	(208-230)	(Rated)	Power input	11.30			
			Current input	34.8-31.5			
		(208-230)	(Rated)	BTU/h	183,000		
				kW	53.6		
(208-230)	(Rated)	Power input	10.40	10.98			
		Current input	A	33.8-30.6			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)				
	Inlet water	°F	23~113°F (-5~45°C)				
Heating capacity (Nominal)	*3, 4, 5	BTU/h	215,000				
		kW	63.0				
	(208-230)	(Rated)	Power input	11.02			
			Current input	33.9-30.7			
		(208-230)	(Rated)	BTU/h	205,000		
				kW	60.1		
(208-230)	(Rated)	Power input	10.16	8.90			
		Current input	A	27.4-24.8			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)				
	Inlet water	°F	23~113°F (-5~45°C)				
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity					
	Model/Quantity	P04~P96/1~48					
Sound pressure level (measured in anechoic room)		dB <A>	51.0				
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed				
	Low pressure	in. (mm)	1-1/8 (28.58) Brazed				

Set Model			PQRY-P96TLMU-A1 < For Ground source >		PQRY-P96TLMU-A1 < For Ground source >
Minimum Circuit Ampacity			A	19-17	19-17
Maximum Overcurrent Protection			A	30-25	30-25
Circulating water	Water flow rate	G/h	1,522 + 1,522		
		G/min (gpm)	25.4 + 25.4		
		m³/h	5.76 + 5.76		
		L/min	96 + 96		
		cfm	3.4 + 3.4		
	Pressure drop	psi	3.48	3.48	
	kPa	24	24		
Operating volume range	G/h	793 + 793 ~ 1,902 + 1,902			
	G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7			
	m³/h	3.0 + 3.0 ~ 7.2 + 7.2			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1			
	Starting method	Inverter			
	Motor output	kW	6.0		
	Case heater	kW	-		
	Lubricant	MEL32			
External finish			Galvanized steel sheets		Galvanized steel sheets
External dimension H x W x D	in.		43-5/16 x 34-11/16 x 21-11/16		43-5/16 x 34-11/16 x 21-11/16
	mm		1,100 x 880 x 550		1,100 x 880 x 550
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter circuit		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection
	Compressor		Over-heat protection		Over-heat protection
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)	
	Control	Indoor LEV and BC controller			
Net weight	lbs (kg)	382 (173)		382 (173)	
Heat exchanger			plate type		plate type
	Water volume in plate	G	1.32		1.32
		l	5.0		5.0
	Water pressure Max.	psi	290		290
MPa		2.0		2.0	
HIC circuit (HIC: Heat Inter-Change)					
Pipe between unit and distributor	High pressure	in. (mm)	3/4 (19.05) Brazed		3/4 (19.05) Brazed
	Low pressure	in. (mm)	-		7/8 (22.2) Brazed
Drawing	External	KL94C219		KL94C219	
	Wiring	KE94G422		KE94G422	
Standard attachment	Document	Installation Manual			
	Accessory	Details refer to External Drw			
Optional parts					
Heat Source Twinning kit: CMY-Q100CBK2					
joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1					
Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1					
Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1					
Remarks	Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.				

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQRYP216TSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	216,000			
		kW	63.3			
	(Rated)	(208-230)	Power input	14.03		
			Current input	43.2-39.1		
		(208-230)	BTU/h	206,000		
			kW	60.4		
Temp. range of cooling	Indoor	W.B.	59-75°F (15-24°C)			
	Inlet water	°F	23-113°F (-5-45°C)			
		°C				
Heating capacity (Nominal)	*3, 4, 5	BTU/h	243,000			
		kW	71.2			
	(Rated)	(208-230)	Power input	12.88		
			Current input	39.7-35.9		
		(208-230)	BTU/h	232,000		
			kW	68.0		
Temp. range of heating	Indoor	D.B.	59-81°F (15-27°C)			
	Inlet water	°F	23-113°F (-5-45°C)			
		°C				
Indoor unit connectable	Total capacity	50-150% of heat source unit capacity				
Sound pressure level (measured in anechoic room)	Model/Quantity	P04-P96/2-50 (Connectable branch pipe number is max. 48.)				
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed (1-1/8 (28.58) Brazed for the part that exceeds 65 m)			
	Low pressure	in. (mm)	1-1/8 (28.58) Brazed			

Set Model			PQRYP2120TLMU-A1 < For Ground source >		PQRYP96TLMU-A1 < For Ground source >
Minimum Circuit Ampacity	A		29-26		19-17
Maximum Overcurrent Protection	A		50-45		30-25
Circulating water	Water flow rate	G/h	1,522 + 1,522		
		G/min (gpm)	25.4 + 25.4		
		m³/h	5.76 + 5.76		
		L/min	96 + 96		
		cfm	3.4 + 3.4		
	Pressure drop	psi	3.48		3.48
	kPa	24		24	
Operating volume range	G/h	793 + 793 ~ 1,902 + 1,902			
	G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7			
	m³/h	3.0 + 3.0 ~ 7.2 + 7.2			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1			
	Starting method	Inverter			
	Motor output	kW	7.7		
	Case heater	kW	-		
	Lubricant	MEL32			
External finish	Galvanized steel sheets				
External dimension H x W x D	in.	43-5/16 x 34-11/16 x 21-11/16		43-5/16 x 34-11/16 x 21-11/16	
	mm	1,100 x 880 x 550		1,100 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection	
	Compressor	Over-heat protection		Over-heat protection	
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)	
	Control	Indoor LEV and BC controller			
Net weight	lbs (kg)	382 (173)		382 (173)	
Heat exchanger	Water volume in plate	G	plate type		
		l	1.32		
	Water pressure Max.	psi	290		290
		MPa	2.0		2.0
HIC circuit (HIC: Heat Inter-Changer)	-				
Pipe between unit and distributor	High pressure	in. (mm)	3/4 (19.05) Brazed		
	Low pressure	in. (mm)	-		
Drawing	External	KL94C219			
	Wiring	KE94G422		KE94G422	
Standard attachment	Document	Installation Manual			
	Accessory	Details refer to External Drw			
Optional parts	Heat Source Twinning kit: CMY-Q100CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1				
Remarks	<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.)</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p> <p>When the high pressure piping length is 65 m or less, use 7/8 (22.2) pipe. When the high pressure piping length exceeds 65 m, use 1-1/8 (28.58) pipe for the part that exceeds 65 m.</p>				

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2. <PWFY-P36/72NNU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NNU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NNU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model		PQRY-P240TSLMU-A1 < For Ground source >		
Indoor Model		Non-Ducted	Ducted	
Power source		3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	240,000	
	(208-230)	Power input	kW	70.3
		Current input	A	16.89
	(Rated)	BTU/h		52.0-47.1
		Power input	kW	228,000
	(208-230)	Current input	A	66.8
Power input		kW	15.57	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)	
	Inlet water	°F	23~113°F (-5~45°C)	
Heating capacity (Nominal)	*3, 4, 5	BTU/h	270,000	
	(208-230)	Power input	kW	79.1
		Current input	A	14.58
	(Rated)	BTU/h		44.9-40.6
		Power input	kW	258,000
	(208-230)	Current input	A	75.6
Power input		kW	13.45	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)	
	Inlet water	°F	23~113°F (-5~45°C)	
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity		
	Model/Quantity	P04~P96/2~50 (Connectable branch pipe number is max. 48.)		
Sound pressure level (measured in anechoic room)		dB <A>	57.0	
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed (1-1/8 (28.58) Brazed for the part that exceeds 65 m)	
	Low pressure	in. (mm)	1-3/8 (34.93) Brazed	

Set Model		PQRY-P120TLMU-A1 < For Ground source >		PQRY-P120TLMU-A1 < For Ground source >		
Minimum Circuit Ampacity		A	29-26	29-26		
Maximum Overcurrent Protection		A	50-45	50-45		
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min (gpm)	25.4 + 25.4			
		m³/h	5.76 + 5.76			
		L/min	96 + 96			
	Pressure drop	psi	3.48	3.48		
		kPa	24	24		
Operating volume range	G/h	793 + 793 ~ 1,902 + 1,902				
	G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7				
	m³/h	3.0 + 3.0 ~ 7.2 + 7.2				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		Inverter		
	Motor output	kW	7.7	7.7		
	Case heater	kW	-	-		
	Lubricant		MEL32		MEL32	
External finish		Galvanized steel sheets		Galvanized steel sheets		
External dimension H x W x D	in.	43-5/16 x 34-11/16 x 21-11/16		43-5/16 x 34-11/16 x 21-11/16		
	mm	1,100 x 880 x 550		1,100 x 880 x 550		
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		Over-heat protection		
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)		
	Control	Indoor LEV and BC controller				
Net weight	lbs (kg)	382 (173)		382 (173)		
Heat exchanger			plate type		plate type	
	Water volume in plate	G	1.32		1.32	
		l	5.0		5.0	
	Water pressure Max.	psi	290		290	
MPa		2.0		2.0		
HIC circuit (HIC: Heat Inter-Changer)						
Pipe between unit and distributor	High pressure	in. (mm)	3/4 (19.05) Brazed		3/4 (19.05) Brazed	
	Low pressure	in. (mm)	-		7/8 (22.2) Brazed	
Drawing	External	KL94C219		KL94C219		
	Wiring	KE94G422		KE94G422		
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts						
Heat Source Twinning kit: CMY-Q100CBK2						
joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1						
Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1						
Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1						
Remarks						
Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.						
Due to continuing improvement, above specifications may be subject to change without notice.						
The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.)						
The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.						
The Heat Source Unit should not be installed at outdoor.						
Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.						
Be sure to provide interlocking for the unit operation and water circuit.						
The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit.						
Install the supplied insulation material to the unused drain-socket.						
When installing insulation material around both water and refrigerant piping, follow the installation manual.						
The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).						
Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.						
It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.						
When the high pressure piping length is 65 m or less, use 7/8 (22.2) pipe. When the high pressure piping length exceeds 65 m, use 1-1/8 (28.58) pipe for the part that exceeds 65 m.						

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQR-P288TSLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	288,000		
		kW	84.4		
	(208-230)	Power input	20.42		
		Current input	62.9-56.9		
	(Rated)	BTU/h	275,000		
		kW	80.6		
(208-230)	Power input	18.82	21.43		
	Current input	58.0-52.4	66.1-59.7		
Temp. range of cooling	Indoor	W.B.	59-75°F (15-24°C)		
	Inlet water	°F	23-113°F (-5-45°C)		
Heating capacity (Nominal)	*3, 4, 5	BTU/h	323,000		
		kW	94.7		
	(208-230)	Power input	17.50		
		Current input	53.9-48.8		
	(Rated)	BTU/h	308,000		
		kW	90.3		
(208-230)	Power input	16.13	16.05		
	Current input	49.7-44.9	49.5-44.7		
Temp. range of heating	Indoor	D.B.	59-81°F (15-27°C)		
	Inlet water	°F	23-113°F (-5-45°C)		
Indoor unit connectable	Total capacity	50-150% of heat source unit capacity			
	Model/Quantity	P04~P96/2~50 (Connectable branch pipe number is max. 48.)			
Sound pressure level (measured in anechoic room)		dB <A>	57.0		
Refrigerant piping diameter	High pressure	in. (mm)	1-1/8 (28.58) Brazed		
	Low pressure	in. (mm)	1-3/8 (34.93) Brazed		

Set Model			PQR-P144TLMU-A1 < For Ground source >		PQR-P144TLMU-A1 < For Ground source >
Minimum Circuit Ampacity			A	35-32	35-32
Maximum Overcurrent Protection			A	60-50	60-50
Circulating water	Water flow rate	G/h	1,902 + 1,902		
		G/min (gpm)	31.7 + 31.7		
		m³/h	7.20 + 7.20		
		L/min	120 + 120		
		cfm	4.2 + 4.2		
	Pressure drop	psi	6.38	6.38	
	kPa	44	44		
Operating volume range	G/h	1,189 + 1,189 ~ 3,054 + 3,054			
	G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9			
	m³/h	4.5 + 4.5 ~ 11.6 + 11.6			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1			
	Starting method	Inverter			
	Motor output	kW	9.5		
	Case heater	kW	-		
	Lubricant	MEL32			
External finish			Galvanized steel sheets		Galvanized steel sheets
External dimension H x W x D	in.	57-1/8 x 34-11/16 x 21-11/16			57-1/8 x 34-11/16 x 21-11/16
	mm	1,450 x 880 x 550			1,450 x 880 x 550
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			
	Inverter circuit	Over-heat protection, Over-current protection			
	Compressor	Over-heat protection			
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)			R410A x 13 lbs + 4 oz (6.0 kg)
	Control	Indoor LEV and BC controller			
Net weight	lbs (kg)	481 (218)			481 (218)
Heat exchanger	Water volume in plate	G	plate type		
		l	1.32		
	Water pressure Max.	psi	5.0		
		MPa	2.90		
		2.0			
HIC circuit (HIC: Heat Inter-Changer)					
Pipe between unit and distributor	High pressure	in. (mm)	7/8 (22.2) Brazed		
	Low pressure	in. (mm)	-		
Drawing	External	KL94C220			
	Wiring	KE94G423			KE94G423
Standard attachment	Document	Installation Manual			
	Accessory	Details refer to External Drw			
Optional parts					
Heat Source Twinning kit: CMY-Q200CBK					
joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1					
Main BC controller: CMB-P108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1					
Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1					
Remarks					
Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.					
Due to continuing improvement, above specifications may be subject to change without notice.					
The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.)					
The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.					
The Heat Source Unit should not be installed at outdoor.					
Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.					
Be sure to provide interlocking for the unit operation and water circuit.					
The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit.					
Install the supplied insulation material to the unused drain-socket.					
When installing insulation material around both water and refrigerant piping, follow the installation manual.					
The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).					
Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.					
It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.					

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model		PQRY-P312TSLMU-A1 < For Ground source >		
Indoor Model		Non-Ducted	Ducted	
Power source		3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	312,000	
		kW	91.4	
	(208-230)	Power input	23.41	
		Current input	72.1-65.2	
	(Rated)	BTU/h	297,000	
		kW	87.0	
(208-230)		Power input	21.59	
		Current input	66.5-60.2	
		Power input	23.67	
		Current input	73.0-66.0	
	Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)
		Inlet water	°F	23~113°F (-5~45°C)
Heating capacity (Nominal)	*3, 4, 5	BTU/h	350,000	
		kW	102.6	
	(208-230)	Power input	19.11	
		Current input	58.9-53.3	
	(Rated)	BTU/h	334,000	
		kW	97.9	
(208-230)		Power input	17.62	
		Current input	54.3-49.1	
		Power input	17.96	
		Current input	55.3-50.0	
	Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)
		Inlet water	°F	23~113°F (-5~45°C)
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity		
	Model/Quantity	P04~P96/2~50 (Connectable branch pipe number is max. 48.)		
Sound pressure level (measured in anechoic room)		dB <A>	58.0	
Refrigerant piping diameter	High pressure	in. (mm)	1-1/8 (28.58) Brazed	
	Low pressure	in. (mm)	1-3/8 (34.93) Brazed	

Set Model		PQRY-P168TLMU-A1 < For Ground source >		PQRY-P144TLMU-A1 < For Ground source >		
Minimum Circuit Ampacity		A	44-39	35-32		
Maximum Overcurrent Protection		A	70-70	60-50		
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min (gpm)	31.7 + 31.7			
		m³/h	7.20 + 7.20			
		L/min	120 + 120			
		cfm	4.2 + 4.2			
	Pressure drop	psi	6.38	6.38		
	kPa	44	44			
Operating volume range	G/h	1,189 + 1,189 ~ 3,054 + 3,054				
	G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9				
	m³/h	4.5 + 4.5 ~ 11.6 + 11.6				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		Inverter		
	Motor output	kW	11.0	9.5		
	Case heater	kW	-	-		
	Lubricant		MEL32		MEL32	
External finish		Galvanized steel sheets		Galvanized steel sheets		
External dimension H x W x D	in.	57-1/8 x 34-11/16 x 21-11/16		57-1/8 x 34-11/16 x 21-11/16		
	mm	1,450 x 880 x 550		1,450 x 880 x 550		
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		Over-heat protection		
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)		R410A x 13 lbs + 4 oz (6.0 kg)		
	Control	Indoor LEV and BC controller				
Net weight	lbs (kg)	481 (218)		481 (218)		
Heat exchanger			plate type		plate type	
	Water volume in plate	G	1.32		1.32	
		l	5.0		5.0	
	Water pressure Max.	psi	290		290	
MPa		2.0		2.0		
HIC circuit (HIC: Heat Inter-Changer)						
Pipe between unit and distributor	High pressure	in. (mm)	7/8 (22.2) Brazed		7/8 (22.2) Brazed	
	Low pressure	in. (mm)	-		1-1/8 (28.58) Brazed	
Drawing	External	KL94C220		KL94C220		
	Wiring	KE94G423		KE94G423		
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts						
Heat Source Twinning kit: CMY-Q200CBK						
joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1						
Main BC controller: CMB-P108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1						
Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1						
Remarks	<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.)</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>					

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P336TSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	336,000			
		kW	98.5			
	(208-230)	Power input	26.84			
		Current input	82.7-74.8			
	(Rated)	(208-230)	BTU/h	320,000		
			kW	93.8		
(208-230)	Power input	24.76		25.85		
	Current input	76.3-69.0		79.7-72.0		
Temp. range of cooling	Indoor	W.B.	59-75°F (15-24°C)			
	Inlet water	°F	23-113°F (-5-45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	378,000			
		kW	110.8			
	(208-230)	Power input	20.77			
		Current input	64.0-57.9			
	(Rated)	(208-230)	BTU/h	361,000		
			kW	105.8		
(208-230)	Power input	19.16		20.05		
	Current input	59.0-53.4		61.8-55.9		
Temp. range of heating	Indoor	D.B.	59-81°F (15-27°C)			
	Inlet water	°F	23-113°F (-5-45°C)			
Indoor unit connectable	Total capacity	50-150% of heat source unit capacity				
	Model/Quantity	P04~P96/2~50 (Connectable branch pipe number is max. 48.)				
Sound pressure level (measured in anechoic room)		dB <A>	59.0			
Refrigerant piping diameter	High pressure	in. (mm)	1-1/8 (28.58) Brazed			
	Low pressure	in. (mm)	1-5/8 (41.28) Brazed			

Set Model			PQRY-P168TLMU-A1 < For Ground source >		PQRY-P168TLMU-A1 < For Ground source >
Minimum Circuit Ampacity			A	44-39	44-39
Maximum Overcurrent Protection			A	70-70	70-70
Circulating water	Water flow rate	G/h	1,902 + 1,902		
		G/min (gpm)	31.7 + 31.7		
		m³/h	7.20 + 7.20		
		L/min	120 + 120		
		cfm	4.2 + 4.2		
	Pressure drop	psi	6.38	6.38	
	kPa	44	44		
Operating volume range	G/h	1,189 + 1,189 ~ 3,054 + 3,054			
	G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9			
	m³/h	4.5 + 4.5 ~ 11.6 + 11.6			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1			
	Starting method	Inverter			
	Motor output	kW	11.0		
	Case heater	kW	-		
	Lubricant	MEL32			
External finish			Galvanized steel sheets		Galvanized steel sheets
External dimension H x W x D	in.	57-1/8 x 34-11/16 x 21-11/16			57-1/8 x 34-11/16 x 21-11/16
	mm	1,450 x 880 x 550			1,450 x 880 x 550
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			
	Inverter circuit	Over-heat protection, Over-current protection			
	Compressor	Over-heat protection			
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)			R410A x 13 lbs + 4 oz (6.0 kg)
	Control	Indoor LEV and BC controller			
Net weight	lbs (kg)	481 (218)			481 (218)
Heat exchanger			plate type		plate type
	Water volume in plate	G	1.32		
		l	5.0		
	Water pressure Max.	psi	290		
MPa		2.0			
HIC circuit (HIC: Heat Inter-Changer)					
Pipe between unit and distributor	High pressure	in. (mm)	7/8 (22.2) Brazed		
	Low pressure	in. (mm)	-		
Drawing	External	KL94C220			
	Wiring	KE94G423		KE94G423	
Standard attachment	Document	Installation Manual			
	Accessory	Details refer to External Drw			
Optional parts					
Heat Source Twinning kit: CMY-Q200CBK					
joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1					
Main BC controller: CMB-P108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1					
Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1					
Remarks					
Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.					

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model			PQRY-P72YLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	72,000			
		kW	21.1			
	(Rated)	(460)	Power input	3.61		
			Current input	5.0		
		(460)	BTU/h	69,000		
			kW	20.2		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
		°F	23~113°F (-5~45°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
		°C	-5~45°C			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	80,000			
		kW	23.4			
	(Rated)	(460)	Power input	4.04		
			Current input	5.6		
		(460)	BTU/h	76,000		
			kW	22.3		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
		°F	23~113°F (-5~45°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
		°C	-5~45°C			
Indoor unit connectable			50~150% of heat source unit capacity			
Sound pressure level (measured in anechoic room)			dB <A>			
Refrigerant piping diameter			46.0			
High pressure			5/8 (15.88) Brazed			
Low pressure			3/4 (19.05) Brazed			
Minimum Circuit Ampacity			6			
Maximum Overcurrent Protection			15			
Circulating water	Water flow rate	G/h	1,522			
		G/min (gpm)	25.4			
		m³/h	5.76			
		L/min	96			
		cfm	3.4			
	Pressure drop	psi	3.48			
		kPa	24			
	Operating volume range	G/h	793 ~ 1,902			
		G/min (gpm)	13.2 ~ 31.7			
		m³/h	3.0 ~ 7.2			
Compressor			Inverter scroll hermetic compressor x 1			
Starting method			Inverter			
Motor output			4.3			
Case heater			-			
Lubricant			MEL32			
External finish			Galvanized steel sheets			
External dimension H x W x D			43-5/16 x 34-11/16 x 21-11/16			
Protection devices			1,100 x 880 x 550			
High pressure protection			High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			
Inverter circuit			Over-heat protection, Over-current protection			
Compressor			Over-heat protection			
Refrigerant			R410A x 11 lbs + 1 oz (5.0 kg)			
Type x original charge			Indoor LEV and BC controller			
Control			-			
Net weight			406 (184)			
Heat exchanger			plate type			
Water volume in plate			1.32			
Water pressure Max.			5.0			
			290			
			2.0			
HIC circuit (HIC: Heat Inter-Changer)			-			
Drawing			KL94C216			
Wiring			KE94G419			
Standard attachment			Installation Manual			
Accessory			Details refer to External Drw			
Optional parts			joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-R160-J1, CMY-R201, 202, 301, 306S-G, CMY-R302, 303, 304, 305S-G1 BC controller: CMB-P104, 105, 106, 108, 1010, 1013, 1016NU-G1, CMB-P104, 106, 108, 1012, 1016NU-J1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1			
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.)</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>			

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQRY-P96YLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	96,000			
		kW	28.1			
	(460)	Power input	kW	5.21		
		Current input	A	7.2		
	(Rated)	(460)	BTU/h	92,000		
			kW	27.0		
(460)	Power input	kW	4.82	5.19		
	Current input	A	6.7	7.2		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	108,000			
		kW	31.7			
	(460)	Power input	kW	5.64		
		Current input	A	7.8		
	(Rated)	(460)	BTU/h	103,000		
			kW	30.2		
(460)	Power input	kW	5.21	4.48		
	Current input	A	7.2	6.2		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity				
	Model/Quantity	P04~P96/1~24				
Sound pressure level (measured in anechoic room)		dB <A>	48.0			
Refrigerant piping diameter	High pressure	in. (mm)	3/4 (19.05) Brazed			
	Low pressure	in. (mm)	7/8 (22.2) Brazed			
Minimum Circuit Ampacity		A	9			
Maximum Overcurrent Protection		A	15			
Circulating water	Water flow rate	G/h	1,522			
		G/min (gpm)	25.4			
		m³/h	5.76			
		L/min	96			
		cfm	3.4			
	Pressure drop	psi	3.48			
		kPa	24			
		G/h	793 ~ 1,902			
	Operating volume range	G/min (gpm)	13.2 ~ 31.7			
		m³/h	3.0 ~ 7.2			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1				
	Starting method	Inverter				
	Motor output	kW	6.0			
	Case heater	kW	-			
	Lubricant	MEL32				
External finish			Galvanized steel sheets			
External dimension H x W x D		in.	43-5/16 x 34-11/16 x 21-11/16			
		mm	1,100 x 880 x 550			
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)				
	Inverter circuit	Over-heat protection, Over-current protection				
	Compressor	Over-heat protection				
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)				
	Control	Indoor LEV and BC controller				
Net weight		lbs (kg)	406 (184)			
Heat exchanger	Water volume in plate	G	plate type			
		l	1.32			
	Water pressure Max.	psi	5.0			
		MPa	290			
HIC circuit (HIC: Heat Inter-Changer)			2.0			
Drawing	External	KL94C216				
	Wiring	KE94G419				
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts	joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-R160-J1, CMY-R201, 202, 301, 306S-G, CMY-R302, 303, 304, 305S-G1 BC controller: CMB-P104, 105, 106, 108, 1010, 1013, 1016NU-G1, CMB-P104, 106, 108, 1012, 1016NU-J1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1					
Remarks	Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.					

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model			PQRY-P120YLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	120,000		
		kW	35.2		
	(460)	Power input	kW	7.51	
		Current input	A	10.4	
	(Rated)	(460)	BTU/h	114,000	
			kW	33.4	
(460)	Power input	kW	6.95	7.35	
	Current input	A	9.6	10.2	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4, 5	BTU/h	135,000		
		kW	39.6		
	(460)	Power input	kW	7.09	
		Current input	A	9.8	
	(Rated)	(460)	BTU/h	129,000	
			kW	37.8	
(460)	Power input	kW	6.55	5.92	
	Current input	A	9.1	8.2	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity		50~150% of heat source unit capacity		
	Model/Quantity		P04~P96/1~30		
Sound pressure level (measured in anechoic room)		dB <A>	54.0		
Refrigerant piping diameter	High pressure	in. (mm)	3/4 (19.05) Brazed		
	Low pressure	in. (mm)	7/8 (22.2) Brazed		
Minimum Circuit Ampacity		A	13		
Maximum Overcurrent Protection		A	20		
Circulating water	Water flow rate	G/h	1,522		
		G/min (gpm)	25.4		
		m³/h	5.76		
	Pressure drop	L/min	96		
		cfm	3.4		
		psi	3.48		
Operating volume range	kPa	24			
	G/h	793 ~ 1,902			
	G/min (gpm)	13.2 ~ 31.7			
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1		
	Starting method		Inverter		
	Motor output	kW	7.7		
	Case heater	kW	-		
	Lubricant		MEL32		
External finish			Galvanized steel sheets		
External dimension H x W x D		in.	43-5/16 x 34-11/16 x 21-11/16		
		mm	1,100 x 880 x 550		
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit		Over-heat protection, Over-current protection		
	Compressor		Over-heat protection		
Refrigerant	Type x original charge		R410A x 11 lbs + 1 oz (5.0 kg)		
	Control		Indoor LEV and BC controller		
Net weight		lbs (kg)	406 (184)		
Heat exchanger	Water volume in plate	G	plate type		
		l	1.32		
	Water pressure Max.	psi	5.0		
		MPa	290		
HIC circuit (HIC: Heat Inter-Changer)			2.0		
Drawing	External		KL94C216		
	Wiring		KE94G419		
Standard attachment	Document		Installation Manual		
	Accessory		Details refer to External Drw		
Optional parts			joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-R160-J1, CMY-R201, 202, 301, 306S-G, CMY-R302, 303, 304, 305S-G1 BC controller: CMB-P104, 105, 106, 108, 1010, 1013, 1016NU-G1, CMB-P104, 106, 108, 1012, 1016NU-J1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1		
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>		

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQRY-P144YLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	144,000			
		kW	42.2			
	(460)	Power input	kW	8.78		
		Current input	A	12.2		
	(Rated)		BTU/h	137,000		
			kW	40.2		
(460)	Power input	kW	8.07	9.98		
	Current input	A	11.2	13.9		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	160,000			
		kW	46.9			
	(460)	Power input	kW	8.11		
		Current input	A	11.3		
	(Rated)		BTU/h	152,000		
			kW	44.5		
(460)	Power input	kW	7.47	7.90		
	Current input	A	10.4	11.0		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity				
	Model/Quantity	P04~P96/1~36				
Sound pressure level (measured in anechoic room)		dB <A>	54.0			
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed			
	Low pressure	in. (mm)	1-1/8 (28.58) Brazed			
Minimum Circuit Ampacity		A	16			
Maximum Overcurrent Protection		A	25			
Circulating water	Water flow rate	G/h	1,902			
		G/min (gpm)	31.7			
		m³/h	7.20			
		L/min	120			
	Pressure drop	cfm	4.2			
		psi	6.38			
		kPa	44			
		Operating volume range	G/h	1,189 ~ 3,054		
	G/min (gpm)	19.8 ~ 50.9				
	m³/h	4.5 ~ 11.6				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1				
	Starting method	Inverter				
	Motor output	kW	9.5			
	Case heater	kW	-			
	Lubricant	MEL32				
External finish			Galvanized steel sheets			
External dimension H x W x D		in.	57-1/8 x 34-11/16 x 21-11/16			
		mm	1,450 x 880 x 550			
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)				
	Inverter circuit	Over-heat protection, Over-current protection				
	Compressor	Over-heat protection				
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)				
	Control	Indoor LEV and BC controller				
Net weight		lbs (kg)	508 (230)			
Heat exchanger	Water volume in plate	G	plate type			
		l	1.32			
			5.0			
	Water pressure Max.	psi	290			
MPa		2.0				
HIC circuit (HIC: Heat Inter-Changer)			-			
Drawing	External	KL94C217				
	Wiring	KE94G419				
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts	joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1					
Remarks	<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.)</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>					

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2. <PWFY-P36/72NMMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B.(20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NMMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model		PQRY-P168YLMU-A1 < For Ground source >		
Indoor Model		Non-Ducted	Ducted	
Power source		3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	168,000	
		kW	49.2	
	(460)	Power input	kW	12.05
		Current input	A	16.8
	(Rated)		BTU/h	161,000
			kW	47.2
(460)	Power input	kW	11.10	
	Current input	A	15.4	
	Temp. range of cooling		Indoor W.B. 59~75°F (15~24°C)	
	Inlet water °F		23~113°F (-5~45°C)	
Heating capacity (Nominal)	*3, 4, 5	BTU/h	188,000	
		kW	55.1	
	(460)	Power input	kW	9.86
		Current input	A	13.7
	(Rated)		BTU/h	179,000
			kW	52.5
(460)	Power input	kW	9.09	
	Current input	A	12.6	
Temp. range of heating		Indoor D.B. 59~81°F (15~27°C)		
Inlet water °F		23~113°F (-5~45°C)		
Indoor unit connectable		50~150% of heat source unit capacity		
Model/Quantity		P04~P96/1~42		
Sound pressure level (measured in anechoic room)		dB <A> 56.0		
Refrigerant piping diameter		High pressure in. (mm)	7/8 (22.2) Brazed	
Low pressure in. (mm)		1-1/8 (28.58) Brazed		
Minimum Circuit Ampacity		A 20		
Maximum Overcurrent Protection		A 35		
Circulating water	Water flow rate	G/h	1,902	
		G/min (gpm)	31.7	
		m³/h	7.20	
		L/min	120	
	Pressure drop	psi	6.38	
		kPa	44	
Operating volume range	G/h	1,189 ~ 3,054		
	G/min (gpm)	19.8 ~ 50.9		
	m³/h	4.5 ~ 11.6		
Compressor		Inverter scroll hermetic compressor x 1		
Starting method		Inverter		
Motor output		kW 11.0		
Case heater		kW -		
Lubricant		MEL32		
External finish		Galvanized steel sheets		
External dimension H x W x D		in. 57-1/8 x 34-11/16 x 21-11/16		
mm 1,450 x 880 x 550				
Protection devices		High pressure protection High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
Inverter circuit		Over-heat protection, Over-current protection		
Compressor		Over-heat protection		
Refrigerant		Type x original charge R410A x 13 lbs + 4 oz (6.0 kg)		
Control		Indoor LEV and BC controller		
Net weight		lbs (kg) 508 (230)		
Heat exchanger		plate type		
Water volume in plate		G 1.32		
l 5.0				
Water pressure Max.		psi 290		
MPa 2.0				
HIC circuit (HIC: Heat Inter-Changer)		-		
Drawing		External KL94C217		
Wiring		KE94G419		
Standard attachment		Document Installation Manual		
Accessory		Details refer to External Drw		
Optional parts		joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1		
Remarks		Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.). The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.		

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B.(20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQRY-P192YLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2		BTU/h		
			192,000		
			kW		
			56.3		
	(460)	Power input	kW	15.05	
		Current input	A	20.9	
(Rated)			BTU/h		
			183,000		
			kW		
			53.6		
	(460)	Power input	kW	13.87	14.19
		Current input	A	19.3	19.7
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4, 5		BTU/h		
			215,000		
			kW		
			63.0		
	(460)	Power input	kW	11.90	
		Current input	A	16.5	
(Rated)			BTU/h		
			205,000		
			kW		
			60.1		
	(460)	Power input	kW	10.97	11.56
		Current input	A	15.2	16.1
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity			
	Model/Quantity	P04~P96/1~48			
Sound pressure level (measured in anechoic room)			dB <A>		
		58.0			
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed		
	Low pressure	in. (mm)	1-1/8 (28.58) Brazed		
Minimum Circuit Ampacity			A		
		25			
Maximum Overcurrent Protection			A		
		40			
Circulating water	Water flow rate	G/h	1,902		
		G/min (gpm)	31.7		
		m³/h	7.20		
		L/min	120		
		cfm	4.2		
	Pressure drop	psi	6.38		
		kPa	44		
		Operating volume range		1,189 ~ 3,054	
			G/min (gpm)		
			19.8 ~ 50.9		
		m³/h			
		4.5 ~ 11.6			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1			
	Starting method	Inverter			
	Motor output	kW	12.4		
	Case heater	kW	-		
	Lubricant	MEL32			
External finish			Galvanized steel sheets		
External dimension H x W x D			in.		
			57-1/8 x 34-11/16 x 21-11/16		
		mm			
		1,450 x 880 x 550			
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			
	Inverter circuit	Over-heat protection, Over-current protection			
	Compressor	Over-heat protection			
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)			
	Control	Indoor LEV and BC controller			
Net weight	lbs (kg)		508 (230)		
Heat exchanger			plate type		
	Water volume in plate	G	1.32		
		l	5.0		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)					
-					
Drawing	External	KL94C217			
	Wiring	KE94G419			
Standard attachment	Document	Installation Manual			
	Accessory	Details refer to External Drw			
Optional parts	joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1				
		Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1			
		Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1			
Remarks	<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.)</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>				

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHR1 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2. <PWFY-P36/72NMMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHR1 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NMMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model			PQRY-P216YLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	216,000			
		kW	63.3			
	(460)	Power input	kW	19.23		
		Current input	A	26.8		
	(Rated)	(460)	BTU/h	206,000		
			kW	60.4		
(460)	Power input	kW	17.72	16.10		
	Current input	A	24.7	22.4		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	243,000			
		kW	71.2			
	(460)	Power input	kW	13.04		
		Current input	A	18.1		
	(Rated)	(460)	BTU/h	232,000		
			kW	68.0		
(460)	Power input	kW	12.01	12.34		
	Current input	A	16.7	17.2		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable			50~150% of heat source unit capacity			
Model/Quantity			P04~P96/2~50 (Connectable branch pipe number is max. 48.)			
Sound pressure level (measured in anechoic room)			dB <A>			
			58.0			
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed (1-1/8 (28.58) Brazed for the part that exceeds 65 m)			
	Low pressure	in. (mm)	1-1/8 (28.58) Brazed			
Minimum Circuit Ampacity			A			
			31			
Maximum Overcurrent Protection			A			
			50			
Circulating water	Water flow rate	G/h	3,044			
		G/min (gpm)	50.7			
		m³/h	11.52			
		L/min	192			
		cfm	6.8			
	Pressure drop	psi	6.53			
kPa		45				
Operating volume range	G/h	1,585 ~ 3,804				
	G/min (gpm)	26.4 ~ 63.4				
	m³/h	6.0 ~ 14.4				
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1			
	Starting method		Inverter			
	Motor output	kW	14.5			
	Case heater	kW	0.045 (240 V)			
	Lubricant		MEL32			
External finish			Galvanized steel sheets			
External dimension H x W x D		in.	57-1/8 x 34-11/16 x 21-11/16			
		mm	1,450 x 880 x 550			
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			
	Inverter circuit		Over-heat protection, Over-current protection			
	Compressor		Over-heat protection			
Refrigerant	Type x original charge		R410A x 25 lbs + 13 oz (11.7 kg)			
	Control		Indoor LEV and BC controller			
Net weight		lbs (kg)	574 (260)			
Heat exchanger	Water volume in plate		plate type			
			G			
			l			
			10.0			
Water pressure Max.			psi			
			290			
				MPa		
				2.0		
HIC circuit (HIC: Heat Inter-Changer)			-			
Drawing	External		KL94C218			
	Wiring		KE94G419			
Standard attachment	Document		Installation Manual			
	Accessory		Details refer to External Drw			
Optional parts			joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1			
Remarks			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less. When the high pressure piping length is 65 m or less, use 7/8 (22.2) pipe. When the high pressure piping length exceeds 65 m, use 1-1/8 (28.58) pipe for the part that exceeds 65 m.			

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model		PQRY-P240YLMU-A1 < For Ground source >		
Indoor Model		Non-Ducted	Ducted	
Power source		3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	240,000	
		kW	70.3	
	(460)	Power input	kW	21.14
		Current input	A	29.4
	(Rated)		BTU/h	228,000
			kW	66.8
(460)	Power input	kW	19.49	
	Current input	A	27.1	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)	
	Inlet water	°F	23~113°F (-5~45°C)	
Heating capacity (Nominal)	*3, 4, 5	BTU/h	270,000	
		kW	79.1	
	(460)	Power input	kW	15.12
		Current input	A	21.0
	(Rated)		BTU/h	258,000
			kW	75.6
(460)	Power input	kW	13.93	
	Current input	A	19.4	
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)	
	Inlet water	°F	23~113°F (-5~45°C)	
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity		
	Model/Quantity	P04~P96/2~50 (Connectable branch pipe number is max. 48.)		
Sound pressure level (measured in anechoic room)		dB <A>	58.0	
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed (1-1/8 (28.58) Brazed for the part that exceeds 65 m)	
	Low pressure	in. (mm)	1-3/8 (34.93) Brazed	
Minimum Circuit Ampacity		A	36	
Maximum Overcurrent Protection		A	60	
Circulating water	Water flow rate	G/h	3,044	
		G/min (gpm)	50.7	
		m³/h	11.52	
		L/min	192	
		cfm	6.8	
	Pressure drop	psi	6.53	
		kPa	45	
	Operating volume range	G/h	1,585 ~ 3,804	
G/min (gpm)		26.4 ~ 63.4		
m³/h		6.0 ~ 14.4		
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		
	Motor output	kW	16.1	
	Case heater	kW	0.045 (240 V)	
	Lubricant	MEL32		
External finish		Galvanized steel sheets		
External dimension H x W x D		in.	57-1/8 x 34-11/16 x 21-11/16	
		mm	1,450 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		
Refrigerant	Type x original charge	R410A x 25 lbs + 13 oz (11.7 kg)		
	Control	Indoor LEV and BC controller		
Net weight		lbs (kg)	574 (260)	
Heat exchanger	Water volume in plate	G	2.64	
		l	10.0	
	Water pressure Max.	psi	290	
		MPa	2.0	
HIC circuit (HIC: Heat Inter-Changer)		-		
Drawing	External	KL94C218		
	Wiring	KE94G419		
Standard attachment	Document	Installation Manual		
	Accessory	Details refer to External Drw		
Optional parts	joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1			
Remarks	Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less. When the high pressure piping length is 65 m or less, use 7/8 (22.2) pipe. When the high pressure piping length exceeds 65 m, use 7/8 (22.2) pipe until 65 m, use 1-1/8 (28.58) pipe for the part that exceeds 65 m.			

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHR1 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2. <PWFY-P36/72NMMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHR1 1230) Indoor: 68°F D.B.(20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NMMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model			PQRY-P144YSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	144,000			
		kW	42.2			
	(Rated)	Power input	kW	7.11		
		Current input	A	9.9		
		(460)	BTU/h	137,000		
			kW	40.2		
(460)	Power input	kW	6.53	7.72		
	Current input	A	9.1	10.7		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	160,000			
		kW	46.9			
	(Rated)	Power input	kW	7.45		
		Current input	A	10.3		
		(460)	BTU/h	152,000		
			kW	44.5		
(460)	Power input	kW	6.86	7.22		
	Current input	A	9.5	10.0		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity				
	Model/Quantity	P04~P96/1~36				
Sound pressure level (measured in anechoic room)		dB <A>	49.0			
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed			
	Low pressure	in. (mm)	1-1/8 (28.58) Brazed			

Set Model			PQRY-P72YLMU-A1 < For Ground source >		PQRY-P72YLMU-A1 < For Ground source >	
Minimum Circuit Ampacity			A	6	6	
Maximum Overcurrent Protection			A	15	15	
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min (gpm)	25.4 + 25.4			
		m³/h	5.76 + 5.76			
		L/min	96 + 96			
		cfm	3.4 + 3.4			
	Pressure drop	psi	3.48			3.48
	kPa	24			24	
Operating volume range	G/h	793 + 793 ~ 1,902 + 1,902				
	G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7				
	m³/h	3.0 + 3.0 ~ 7.2 + 7.2				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		Inverter		
	Motor output	kW	4.3	4.3		
	Case heater	kW	-	-		
	Lubricant	MEL32		MEL32		
External finish			Galvanized steel sheets		Galvanized steel sheets	
External dimension H x W x D			in. 43-5/16 x 34-11/16 x 21-11/16		in. 43-5/16 x 34-11/16 x 21-11/16	
	mm		1,100 x 880 x 550		1,100 x 880 x 550	
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection	
	Compressor		Over-heat protection		Over-heat protection	
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)		
	Control	Indoor LEV and BC controller				
Net weight			lbs (kg)	406 (184)	406 (184)	
Heat exchanger			plate type		plate type	
	Water volume in plate	G	1.32		1.32	
		l	5.0		5.0	
	Water pressure Max.	psi	290		290	
MPa		2.0		2.0		
HIC circuit (HIC: Heat Inter-Change)						
Pipe between unit and distributor	High pressure	in. (mm)	5/8 (15.88) Brazed		5/8 (15.88) Brazed	
	Low pressure	in. (mm)	-		3/4 (19.05) Brazed	
Drawing	External	KL94C221				
	Wiring	KE94G419		KE94G419		
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts						
Heat Source Twinning kit: CMY-Q100CBK2						
joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1						
Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1						
Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1						
Remarks						
Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.						
Due to continuing improvement, above specifications may be subject to change without notice.						
The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.)						
The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.						
The Heat Source Unit should not be installed at outdoor.						
Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.						
Be sure to provide interlocking for the unit operation and water circuit.						
The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit.						
Install the supplied insulation material to the unused drain-socket.						
When installing insulation material around both water and refrigerant piping, follow the installation manual.						
The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).						
Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.						
It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.						

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B.(20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 86°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	*Above specification data is subject to rounding variation.

Heat Source Model			PQR-Y-P168YSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted			
			Ducted			
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	168,000			
		kW	49.2			
	(460)	Power input	9.33			
		Current input	13.0			
	(Rated)	(460)	BTU/h	161,000		
			kW	47.2		
(460)	Power input	8.58	9.22			
	Current input	11.9	12.8			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	188,000			
		kW	55.1			
	(460)	Power input	9.34			
		Current input	13.0			
	(Rated)	(460)	BTU/h	179,000		
			kW	52.5		
(460)	Power input	8.60	8.03			
	Current input	11.9	11.1			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity				
Indoor unit connectable	Model/Quantity	P04~P96/1~42				
Sound pressure level (measured in anechoic room)	dB <A>	50.0				
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed			
	Low pressure	in. (mm)	1-1/8 (28.58) Brazed			

Set Model			PQR-Y-P96YLMU-A1 < For Ground source >			PQR-Y-P72YLMU-A1 < For Ground source >		
Minimum Circuit Ampacity			A			9		
Maximum Overcurrent Protection			A			15		
Circulating water	Water flow rate	G/h	1,522 + 1,522					
		G/min (gpm)	25.4 + 25.4					
		m³/h	5.76 + 5.76					
		L/min	96 + 96					
		cfm	3.4 + 3.4					
		Pressure drop	psi	3.48				
	kPa	24						
Operating volume range	G/h	793 + 793 ~ 1,902 + 1,902						
	G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7						
	m³/h	3.0 + 3.0 ~ 7.2 + 7.2						
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1						
	Starting method	Inverter						
	Motor output	kW	6.0					
	Case heater	kW	-					
	Lubricant	MEL32						
External finish	Galvanized steel sheets			Galvanized steel sheets				
External dimension H x W x D	in.	43-5/16 x 34-11/16 x 21-11/16			43-5/16 x 34-11/16 x 21-11/16			
	mm	1,100 x 880 x 550			1,100 x 880 x 550			
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			
	Inverter circuit	Over-heat protection, Over-current protection			Over-heat protection, Over-current protection			
	Compressor	Over-heat protection			Over-heat protection			
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)			R410A x 11 lbs + 1 oz (5.0 kg)			
	Control	Indoor LEV and BC controller						
Net weight	lbs (kg)	406 (184)			406 (184)			
Heat exchanger	Water volume in plate	G	plate type			plate type		
		l	1.32			1.32		
		psi	5.0			5.0		
		MPa	2.90			2.90		
HIC circuit (HIC: Heat Inter-Changer)	High pressure	2.0			2.0			
	Low pressure	-			-			
Pipe between unit and distributor	High pressure	in. (mm)	3/4 (19.05) Brazed			3/4 (19.05) Brazed		
	Low pressure	in. (mm)	-			7/8 (22.2) Brazed		
Drawing	External	KL94C221						
	Wiring	KE94G419			KE94G419			
Standard attachment	Document	Installation Manual						
	Accessory	Details refer to External Drw						
Optional parts	Heat Source Twinning kit: CMY-Q100CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1							
Remarks	Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.							

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	*Above specification data is subject to rounding variation.

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model		PQRY-P192YSLMU-A1 < For Ground source >			
Indoor Model		Non-Ducted		Ducted	
Power source		3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	192,000		
	(460)	Power input	56.3		
		Current input	11.30		
	(Rated)	(460)	BTU/h	183,000	
			Power input	53.6	
		Current input	10.40	10.98	
Current input		14.5	15.3		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4, 5	BTU/h	215,000		
	(460)	Power input	63.0		
		Current input	11.02		
	(Rated)	(460)	BTU/h	205,000	
			Power input	60.1	
		Current input	10.16	8.90	
Current input		14.1	12.4		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity			
	Model/Quantity	P04~P96/1~48			
Sound pressure level (measured in anechoic room)		dB <A>	51.0		
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed		
	Low pressure	in. (mm)	1-1/8 (28.58) Brazed		

Set Model		PQRY-P96YLMU-A1 < For Ground source >		PQRY-P96YLMU-A1 < For Ground source >		
Minimum Circuit Ampacity	A	9		9		
Maximum Overcurrent Protection	A	15		15		
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min (gpm)	25.4 + 25.4			
		m³/h	5.76 + 5.76			
		L/min	96 + 96			
		cfm	3.4 + 3.4			
	Pressure drop	psi	3.48		3.48	
	kPa	24		24		
Operating volume range	G/h	793 + 793 ~ 1,902 + 1,902				
	G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7				
	m³/h	3.0 + 3.0 ~ 7.2 + 7.2				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		Inverter		
	Motor output	kW	6.0		6.0	
	Case heater	kW	-		-	
	Lubricant		MEL32		MEL32	
External finish		Galvanized steel sheets		Galvanized steel sheets		
External dimension H x W x D	in.	43-5/16 x 34-11/16 x 21-11/16		43-5/16 x 34-11/16 x 21-11/16		
	mm	1,100 x 880 x 550		1,100 x 880 x 550		
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		Over-heat protection		
	Control	Indoor LEV and BC controller		Indoor LEV and BC controller		
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)		
Net weight	lbs (kg)	406 (184)		406 (184)		
Heat exchanger	Water volume in plate	G	1.32		1.32	
		l	5.0		5.0	
	Water pressure Max.	psi	290		290	
		MPa	2.0		2.0	
HIC circuit (HIC: Heat Inter-Change)		-		-		
Pipe between unit and distributor	High pressure	in. (mm)	3/4 (19.05) Brazed		3/4 (19.05) Brazed	
	Low pressure	in. (mm)	-		7/8 (22.2) Brazed	
Drawing	External	KL94C221		KL94C221		
	Wiring	KE94G419		KE94G419		
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts		Heat Source Twinning kit: CMY-Q100CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1				
Remarks		Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.				

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQR-Y-P216YSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	216,000			
		kW	63.3			
	(460)	Power input	14.03			
		Current input	19.5			
	(Rated)	(460)	BTU/h	206,000		
			kW	60.4		
(460)	Power input	12.93	13.24			
	Current input	A	18.4			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	243,000			
		kW	71.2			
	(460)	Power input	12.88			
		Current input	17.9			
	(Rated)	(460)	BTU/h	232,000		
			kW	68.0		
(460)	Power input	11.88	10.35			
	Current input	A	16.5			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity				
Indoor unit connectable	Model/Quantity	P04~P96/2~50 (Connectable branch pipe number is max. 48.)				
Sound pressure level (measured in anechoic room)	dB <A>	55.0				
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed (1-1/8 (28.58) Brazed for the part that exceeds 65 m)			
	Low pressure	in. (mm)	1-1/8 (28.58) Brazed			

Set Model			PQR-Y-P120YLMU-A1 < For Ground source >		PQR-Y-P96YLMU-A1 < For Ground source >		
Minimum Circuit Ampacity			A	13	9		
Maximum Overcurrent Protection			A	20	15		
Circulating water	Water flow rate	G/h	1,522 + 1,522				
		G/min (gpm)	25.4 + 25.4				
		m³/h	5.76 + 5.76				
		L/min	96 + 96				
		cfm	3.4 + 3.4				
	Pressure drop	psi	3.48	3.48		3.48	
	kPa	24	24		24		
Operating volume range	G/h	793 + 793 ~ 1,902 + 1,902					
	G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7					
	m³/h	3.0 + 3.0 ~ 7.2 + 7.2					
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1			
	Starting method	Inverter		Inverter			
	Motor output	kW	7.7	6.0			
	Case heater	kW	-	-			
	Lubricant	MEL32		MEL32			
External finish	Galvanized steel sheets		Galvanized steel sheets				
External dimension H x W x D	in.	43-5/16 x 34-11/16 x 21-11/16		43-5/16 x 34-11/16 x 21-11/16			
	mm	1,100 x 880 x 550		1,100 x 880 x 550			
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection			
	Compressor	Over-heat protection		Over-heat protection			
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)			
	Control	Indoor LEV and BC controller					
Net weight	lbs (kg)	406 (184)		406 (184)			
Heat exchanger	Water volume in plate	G	plate type		plate type		
		l	1.32	1.32			
	Water pressure Max.	psi	290	290		290	
		MPa	2.0	2.0		2.0	
HIC circuit (HIC: Heat Inter-Changer)							
Pipe between unit and distributor	High pressure	in. (mm)	3/4 (19.05) Brazed		3/4 (19.05) Brazed		
	Low pressure	in. (mm)	-		7/8 (22.2) Brazed		
Drawing	External	KL94C221					
	Wiring	KE94G419		KE94G419			
Standard attachment	Document	Installation Manual					
	Accessory	Details refer to External Drw					
Optional parts	Heat Source Twinning kit: CMY-Q100CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1						
Remarks	<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p> <p>When the high pressure piping length is 65 m or less, use 7/8 (22.2) pipe. When the high pressure piping length exceeds 65 m, use 7/8 (22.2) pipe until 65 m, use 1-1/8 (28.58) pipe for the part that exceeds 65 m.</p>						

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model			PQRY-P240YSLMU-A1 < For Ground source >				
Indoor Model			Non-Ducted		Ducted		
Power source			3-phase 3-wire 460 V ±10% 60 Hz				
Cooling capacity (Nominal)	*1, 2	BTU/h	240,000				
		kW	70.3				
	(460)	(Rated)	Power input	16.89			
			Current input	23.5			
		(460)	(Rated)	BTU/h	228,000		
				kW	66.8		
(460)	(Rated)	Power input	15.57	16.15			
		Current input	21.7	22.5			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)				
	Inlet water	°F	23~113°F (-5~45°C)				
			°C	-5~45			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	270,000				
		kW	79.1				
	(460)	(Rated)	Power input	14.58			
			Current input	20.3			
		(460)	(Rated)	BTU/h	258,000		
				kW	75.6		
(460)	(Rated)	Power input	13.45	12.02			
		Current input	18.7	16.7			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)				
	Inlet water	°F	23~113°F (-5~45°C)				
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity					
	Model/Quantity	P04~P96/2~50 (Connectable branch pipe number is max. 48.)					
Sound pressure level (measured in anechoic room)		dB <A>	57.0				
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed (1-1/8 (28.58) Brazed for the part that exceeds 65 m)				
	Low pressure	in. (mm)	1-3/8 (34.93) Brazed				

Set Model			PQRY-P120YLMU-A1 < For Ground source >		PQRY-P120YLMU-A1 < For Ground source >
Minimum Circuit Ampacity	A		13	13	
Maximum Overcurrent Protection	A		20	20	
Circulating water	Water flow rate	G/h	1,522 + 1,522		
		G/min (gpm)	25.4 + 25.4		
		m³/h	5.76 + 5.76		
		L/min	96 + 96		
		cfm	3.4 + 3.4		
	Pressure drop	psi	3.48	3.48	
	kPa	24	24		
Operating volume range	G/h	793 + 793 ~ 1,902 + 1,902			
	G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7			
	m³/h	3.0 + 3.0 ~ 7.2 + 7.2			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1			
	Starting method	Inverter			
	Motor output	kW	7.7		
	Case heater	kW	-		
	Lubricant	MEL32			
External finish	Galvanized steel sheets				
External dimension H x W x D	in.	43-5/16 x 34-11/16 x 21-11/16		43-5/16 x 34-11/16 x 21-11/16	
	mm	1,100 x 880 x 550		1,100 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			
	Inverter circuit	Over-heat protection, Over-current protection			
	Compressor	Over-heat protection			
	Control	Indoor LEV and BC controller			
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)	
Net weight	lbs (kg)	406 (184)		406 (184)	
Heat exchanger	Water volume in plate	G	1.32		
		l	5.0		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Change)	-				
Pipe between unit and distributor	High pressure	in. (mm)	3/4 (19.05) Brazed		
	Low pressure	in. (mm)	-		
Drawing	External	KL94C221		KL94C221	
	Wiring	KE94G419		KE94G419	
Standard attachment	Document	Installation Manual			
	Accessory	Details refer to External Drw			
Optional parts	Heat Source Twinning kit: CMY-Q100CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1				
Remarks	<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F (40°C).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p> <p>When the high pressure piping length is 65 m or less, use 7/8 (22.2) pipe. When the high pressure piping length exceeds 65 m, use 1-1/8 (31.75) pipe for the part that exceeds 65 m.</p>				

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B.(20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQRY-P288YSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	288,000			
		kW	84.4			
	(460)	Power input	20.42			
		Current input	28.4			
	(Rated)	(460)	BTU/h	275,000		
			kW	80.6		
(460)	Power input	18.82	21.43			
	Current input	26.2	29.8			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	323,000			
		kW	94.7			
	(460)	Power input	17.50			
		Current input	24.4			
	(Rated)	(460)	BTU/h	308,000		
			kW	90.3		
(460)	Power input	16.13	16.05			
	Current input	22.4	22.3			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity				
Indoor unit connectable	Model/Quantity	P04~P96/2~50 (Connectable branch pipe number is max. 48.)				
Sound pressure level (measured in anechoic room)		dB <A>	57.0			
Refrigerant piping diameter	High pressure	in. (mm)	1-1/8 (28.58) Brazed			
	Low pressure	in. (mm)	1-3/8 (34.93) Brazed			

Set Model			PQRY-P144YLMU-A1 < For Ground source >		PQRY-P144YLMU-A1 < For Ground source >
Model			PQRY-P144YLMU-A1 < For Ground source >		PQRY-P144YLMU-A1 < For Ground source >
Minimum Circuit Ampacity	A		16		16
Maximum Overcurrent Protection	A		25		25
Circulating water	Water flow rate	G/h	1,902 + 1,902		
		G/min (gpm)	31.7 + 31.7		
		m³/h	7.20 + 7.20		
		L/min	120 + 120		
		cfm	4.2 + 4.2		
	Pressure drop	psi	6.38	6.38	
	kPa	44	44		
Operating volume range	G/h	1,189 + 1,189 ~ 3,054 + 3,054			
	G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9			
	m³/h	4.5 + 4.5 ~ 11.6 + 11.6			
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1	
	Starting method	Inverter		Inverter	
	Motor output	kW	9.5		9.5
	Case heater	kW	-		-
	Lubricant	MEL32		MEL32	
External finish			Galvanized steel sheets		Galvanized steel sheets
External dimension H x W x D	in.	57-1/8 x 34-11/16 x 21-11/16		57-1/8 x 34-11/16 x 21-11/16	
	mm	1,450 x 880 x 550		1,450 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection	
	Compressor	Over-heat protection		Over-heat protection	
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)		R410A x 13 lbs + 4 oz (6.0 kg)	
	Control	Indoor LEV and BC controller			
Net weight	lbs (kg)	508 (230)		508 (230)	
Heat exchanger	Water volume in plate	G	plate type		plate type
		l	1.32		1.32
	Water pressure Max.	psi	290		290
		MPa	2.0		2.0
HIC circuit (HIC: Heat Inter-Change)			-		
Pipe between unit and distributor	High pressure	in. (mm)	7/8 (22.2) Brazed		7/8 (22.2) Brazed
	Low pressure	in. (mm)	-		1-1/8 (28.58) Brazed
Drawing	External	KL94C222			
	Wiring	KE94G419		KE94G419	
Standard attachment	Document	Installation Manual			
	Accessory	Details refer to External Drw			
Optional parts	Heat Source Twinning kit: CMY-Q200CBK joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1				
Remarks	Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.				

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	*Above specification data is subject to rounding variation.

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

Heat Source Model		PQRY-P312YSLMU-A1 < For Ground source >		
Indoor Model		Non-Ducted	Ducted	
Power source		3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h		
		312,000		
		kW		
		91.4		
	(460)	Power input	kW	
		23.41		
(Rated)		A		
		32.6		
		BTU/h		
		297,000		
		kW		
		87.0		
(460)		Power input	kW	
		21.59		
		Current input	A	
		30.1		
		BTU/h		
		297,000		
Temp. range of cooling	Indoor	W.B.		
	Inlet water	°F		
Heating capacity (Nominal)	*3, 4, 5	BTU/h		
		350,000		
(Rated)		kW		
		102.6		
		kW		
		19.11		
	(460)	Power input	kW	
		26.6		
(460)		A		
		26.6		
		BTU/h		
		334,000		
		kW		
		97.9		
Temp. range of heating		Power input	kW	
		17.62		
		Current input	A	
		24.5		
		BTU/h		
		334,000		
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity		
	Model/Quantity	P04~P96/2~50 (Connectable branch pipe number is max. 48.)		
Sound pressure level (measured in anechoic room)		dB <A>		
		58.0		
Refrigerant piping diameter	High pressure	in. (mm)		
	Low pressure	in. (mm)		
		1-1/8 (28.58) Brazed		
		1-3/8 (34.93) Brazed		

Set Model		PQRY-P168YLMU-A1 < For Ground source >		PQRY-P144YLMU-A1 < For Ground source >		
Minimum Circuit Ampacity		A	20	16		
Maximum Overcurrent Protection		A	35	25		
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min (gpm)	31.7 + 31.7			
		m³/h	7.20 + 7.20			
		L/min	120 + 120			
		cfm	4.2 + 4.2			
	Pressure drop	psi	6.38	6.38		
	kPa	44	44			
Operating volume range	G/h	1,189 + 1,189 ~ 3,054 + 3,054				
	G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9				
	m³/h	4.5 + 4.5 ~ 11.6 + 11.6				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		Inverter		
	Motor output	kW		9.5		
	Case heater	kW		-		
	Lubricant	MEL32		MEL32		
External finish		Galvanized steel sheets		Galvanized steel sheets		
External dimension H x W x D	in.	57-1/8 x 34-11/16 x 21-11/16		57-1/8 x 34-11/16 x 21-11/16		
	mm	1,450 x 880 x 550		1,450 x 880 x 550		
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		Over-heat protection		
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)		R410A x 13 lbs + 4 oz (6.0 kg)		
	Control	Indoor LEV and BC controller				
Net weight	lbs (kg)	508 (230)		508 (230)		
Heat exchanger			plate type		plate type	
	Water volume in plate	G	1.32		1.32	
		l	5.0		5.0	
	Water pressure Max.	psi	290		290	
MPa		2.0		2.0		
HIC circuit (HIC: Heat Inter-Changer)						
Pipe between unit and distributor	High pressure	in. (mm)		7/8 (22.2) Brazed		
	Low pressure	in. (mm)		-		
Drawing	External	KL94C222		1-1/8 (28.58) Brazed		
	Wiring	KE94G419		KE94G419		
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts						
Heat Source Twinning kit: CMY-Q200CBK						
joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1						
Main BC controller: CMB-P108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1						
Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1						
Remarks	<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F (40°C).</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>					

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F (27.8°C), 66°F (19.4°C), (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F (20°C), (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQRYP336YSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	336,000			
		kW	98.5			
	(460)	Power input	26.84			
		Current input	37.4			
	(Rated)	(460)	BTU/h	320,000		
			kW	93.8		
(460)	Power input	24.76	25.85			
	Current input	34.5	36.0			
Temp. range of cooling	Indoor	W.B.	59-75°F (15-24°C)			
	Inlet water	°F	23-113°F (-5-45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	378,000			
		kW	110.8			
	(460)	Power input	20.77			
		Current input	28.9			
	(Rated)	(460)	BTU/h	361,000		
			kW	105.8		
(460)	Power input	19.16	20.05			
	Current input	26.7	27.9			
Temp. range of heating	Indoor	D.B.	59-81°F (15-27°C)			
	Inlet water	°F	23-113°F (-5-45°C)			
Indoor unit connectable	Total capacity	50-150% of heat source unit capacity				
Sound pressure level (measured in anechoic room)	Model/Quantity	P04~P96/2~50 (Connectable branch pipe number is max. 48.)				
Refrigerant piping diameter	High pressure	in. (mm)	1-1/8 (28.58) Brazed			
	Low pressure	in. (mm)	1-5/8 (41.28) Brazed			

Set Model			PQRYP168YLMU-A1 < For Ground source >		PQRYP168YLMU-A1 < For Ground source >		
Minimum Circuit Ampacity			A	20	20		
Maximum Overcurrent Protection			A	35	35		
Circulating water	Water flow rate	G/h	1,902 + 1,902				
		G/min (gpm)	31.7 + 31.7				
		m³/h	7.20 + 7.20				
		L/min	120 + 120				
		cfm	4.2 + 4.2				
	Pressure drop	psi	6.38	6.38		6.38	
	kPa	44	44		44		
Operating volume range	G/h	1,189 + 1,189 ~ 3,054 + 3,054					
	G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9					
	m³/h	4.5 + 4.5 ~ 11.6 + 11.6					
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1					
	Starting method	Inverter					
	Motor output	kW	11.0				
	Case heater	kW	-				
	Lubricant	MEL32					
External finish	Galvanized steel sheets				Galvanized steel sheets		
External dimension H x W x D	in.	57-1/8 x 34-11/16 x 21-11/16				57-1/8 x 34-11/16 x 21-11/16	
	mm	1,450 x 880 x 550				1,450 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)				High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit	Over-heat protection, Over-current protection				Over-heat protection, Over-current protection	
	Compressor	Over-heat protection				Over-heat protection	
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)				R410A x 13 lbs + 4 oz (6.0 kg)	
	Control	Indoor LEV and BC controller					
Net weight	lbs (kg)	508 (230)				508 (230)	
Heat exchanger	Water volume in plate	G	plate type		plate type		
		l	1.32		1.32		
	Water pressure Max.	psi	290		290		
		MPa	2.0		2.0		
HIC circuit (HIC: Heat Inter-Change)	-					-	
Pipe between unit and distributor	High pressure	in. (mm)	7/8 (22.2) Brazed			7/8 (22.2) Brazed	
	Low pressure	in. (mm)	-			1-1/8 (28.58) Brazed	
Drawing	External	KL94C222				KL94C222	
	Wiring	KE94G419				KE94G419	
Standard attachment	Document	Installation Manual					
	Accessory	Details refer to External Drw					
Optional parts	Heat Source Twinning kit: CMY-Q200CBK joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1						
Remarks	Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.						

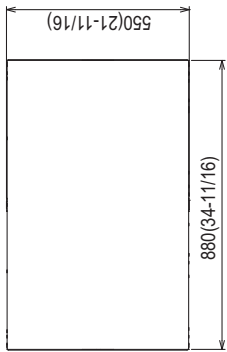
Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B.(20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	*Above specification data is subject to rounding variation.

PQRY-P72, 96, 120TLMU-A1

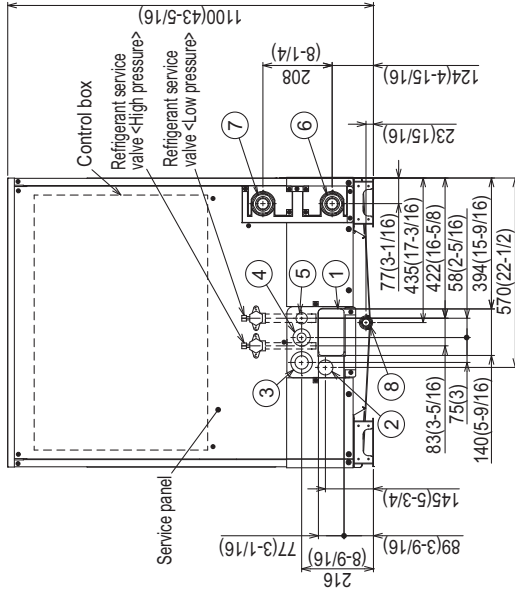
Unit: mm(in)

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

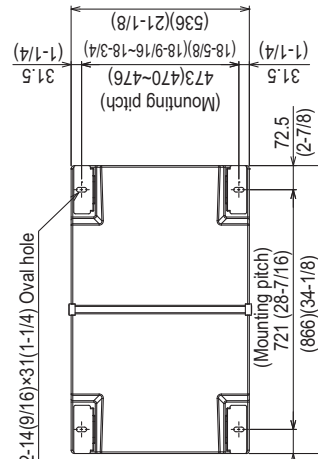
- <Accessories>
- Refrigerant (high pressure) conn. pipe.....1pc. (P72/P96/P120; Packaged in the accessory kit)
 - Refrigerant (low pressure) conn. elbow.....1pc. (P72/P96/P120; Packaged in the accessory kit)
 - Water stopper.....1pc. (P72/P96/P120; Packaged in the accessory kit)
 - Sealing material for water stopper.....1pc. (P72/P96/P120; Packaged in the accessory kit)
 - Sealing material for field piping (high pressure, low pressure).....1pc. each (P72/P96/P120; Packaged in the accessory kit)
 - Sealing material for drain socket.....1pc. (P72/P96/P120; Packaged in the accessory kit)
 - Pipe cover for low pressure.....1pc. (P72/P96/P120; Packaged in the accessory kit)



Top view



Front view



Bottom view

- Note1. Close a hole of the water piping, the refrigerant piping, the power supply, and the control wiring and unused knockout holes with the putty etc. so as not to infiltrate rain water etc. (field erection work)
- Note2. At the time of product shipment, the front side piping specification serves as the local drainage connection. When connecting on the rear side, please remove the rear side plug sealing corks, and attach a front side. Ensure there is no leak after the attachment has been fitted.
- Note3. Take notice of service space as Fig.A. (in case of single installation, 600mm(23-5/8) or more of back space as front space makes easier access when servicing the unit from rear side.)
- Note4. If water pipes or refrigerant pipes stretch upward, required space for service and maintenance due to replacement of control box is shown in Fig.B.
- Note5. Environmental condition for installation; -20~40°C(DB) (-4~104°F) as indoor installation.
- Note6. In case the temperature around the heat source unit has possibility to drop under 0°C(32°F) or the inlet-water temp. drops under 10°C(50°F), be careful for the following point to prevent the pipe burst by the water pipe freeze-up.
- Add brine to water circuit.
 - Circulate the water all the time even if the heat source unit is not in operation.
 - Drain the water from inside of the heat source unit when the heat source unit will not operate for a long term.
- Note7. Ensure that the drain piping is downward with a pitch of more than 1/100.
- Note8. At brazing of pipes, wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248°F).

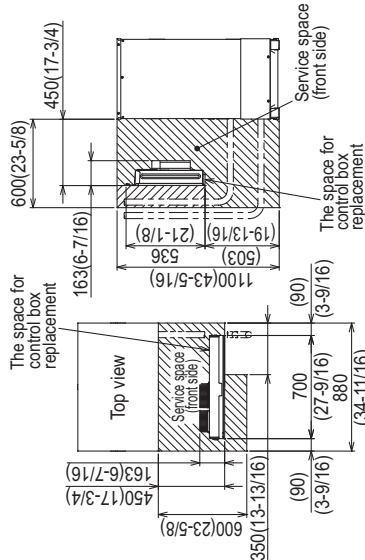


Fig. B

Fig. A

NO	Usage	Specifications
①	Front through hole	140 x 77 Knockout hole (5-9/16) (3-1/16)
②	For pipes	Front through hole (Uses when twinning kit (optional parts) is mounted.) (1-13/16)
③	For wires	Front through hole (2-1/2) or ø34.5 Knockout hole (1-3/8)
④	For transmission cables	Front through hole ø43.7 or ø22.2 Knockout hole (1-3/4) (7/8)
⑤	Water pipe inlet	Front through hole ø34 Knockout hole (1-3/8)
⑥	Water pipe outlet	NPT1-1/2 Screw
⑧	Drain pipe	NPT1-1/2 Screw Rc3/4 Screw

Back view

Right side view

Model	Refrigerant pipe		Service valve	
	High pressure	Low pressure	High pressure	Low pressure
PQRY-P72TLMU-A1	ø15.88 Brazed (5/6) *1 *2	ø19.05 Brazed (3/4) *1 *2	ø19.05 (3/4)	ø25.4 (1)
PQRY-P96TLMU-A1	ø19.05 Brazed (3/4) *1	ø22.2 Brazed (7/8) *1 *2		
PQRY-P120TLMU-A1				

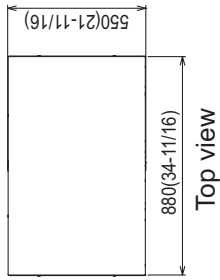
- *1. Connect by using the connecting pipes and elbow that are supplied.
- *2. Use the pipe joint(field supply) and connect to the refrigerant service valve piping.

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

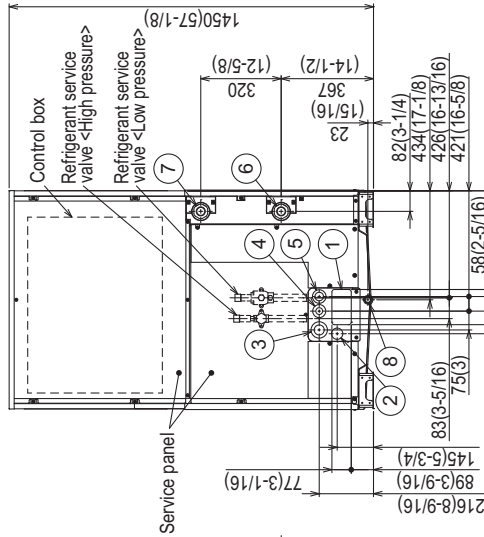
Unit: mm(in)

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

- Note1. Close a hole of the water piping, the refrigerant piping, the power supply, and the control wiring and unused knockout holes with the putty etc. so as not to infiltrate rain water etc. (field erection work)
- Note2. At the time of product shipment, the front side piping specification serves as the local drainage connection. When connecting on the rear side, please remove the rear side plug sealing corks, and attach a front side. Ensure there is no leak after the attachment has been fitted.
- Note3. Take notice of service space as Fig.A. (In case of single installation, 600mm(23-5/8) or more of back space as front side) makes easier access when servicing the unit from rear side.)
- Note4. If water pipes or refrigerant pipes stretch upward, required space for service and maintenance due to replacement of control box is shown in Fig.B.
- Note5. Environmental condition for installation: -20~40°C(DB) (-4~104°F) as indoor installation.
- Note6. In case the temperature around the heat source unit has possibility to drop under 0°C(32°F) or the inlet-water temp. drops under 10°C(50°F), be careful for the following point to prevent the pipe burst by the water pipe freeze-up.
 •Add brine to water circuit.
 •Circulate the water all the time even if the heat source unit is not in operation.
 •Drain the water from inside of the heat source unit when the heat source unit will not operate for a long term.
- Note7. Ensure that the drain piping is downward with a pitch of more than 1/100.
- Note8. At brazing of pipes, wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248°F).



Top view



Front view

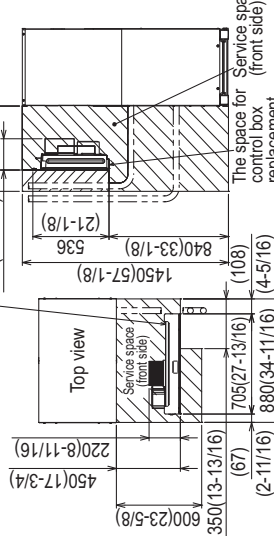


Fig.A

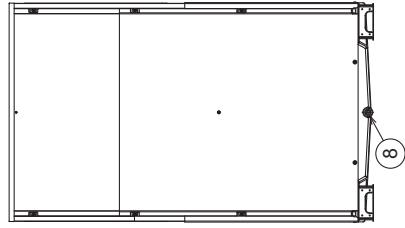
Fig.B

Connecting pipe specifications

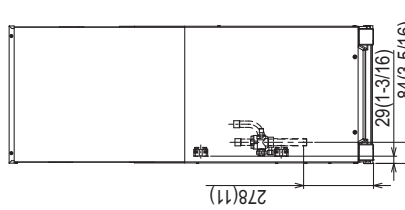
Model	Refrigerant pipe		Service valve	
	High pressure	Low pressure	High pressure	Low pressure
PQRY-P216TLMU-A1	ø22.2 Brazed (7/8) *1 *2	ø28.58 Brazed (1-1/8) *1	ø25.4 (1)	ø28.58 (1-1/8)
PQRY-P240TLMU-A1	ø34.93 Brazed (1-3/8) *1 *3			

- *1. Connect by using the connecting pipes that are supplied.
 *2. When the piping length is 65 m or longer, use the ø28.58(1-1/8) pipe for the part that exceeds 65 m.
 *3. Use the pipe joint(field supply) and connect to the refrigerant service valve piping.

- <Accessories>
 • Refrigerant (high pressure) conn. pipe.....1pc.
 (P216/P240 ; Packaged in the accessory kit)
 • Refrigerant (low pressure) conn. pipe.....1pc.
 (P216/P240 ; Packaged in the accessory kit)
 • Water stopper.....1pc.
 (P216/P240 ; Packaged in the accessory kit)
 • Sealing material for water stopper.....1pc.
 (P216/P240 ; Packaged in the accessory kit)
 • Sealing material for field piping (high pressure, low pressure).....1pc. each
 (P216/P240 ; Packaged in the accessory kit)
 • Sealing material for drain socket.....1pc.
 (P216/P240 ; Packaged in the accessory kit)
 • Pipe cover for low pressure.....1pc.
 (P216/P240 ; Packaged in the accessory kit)
 • Sealing material for base leg (two types).....4pc. each
 (P216/P240 ; Packaged in the accessory kit)
 • Sealing material for panel.....1pc.
 (P216/P240 ; Packaged in the accessory kit)

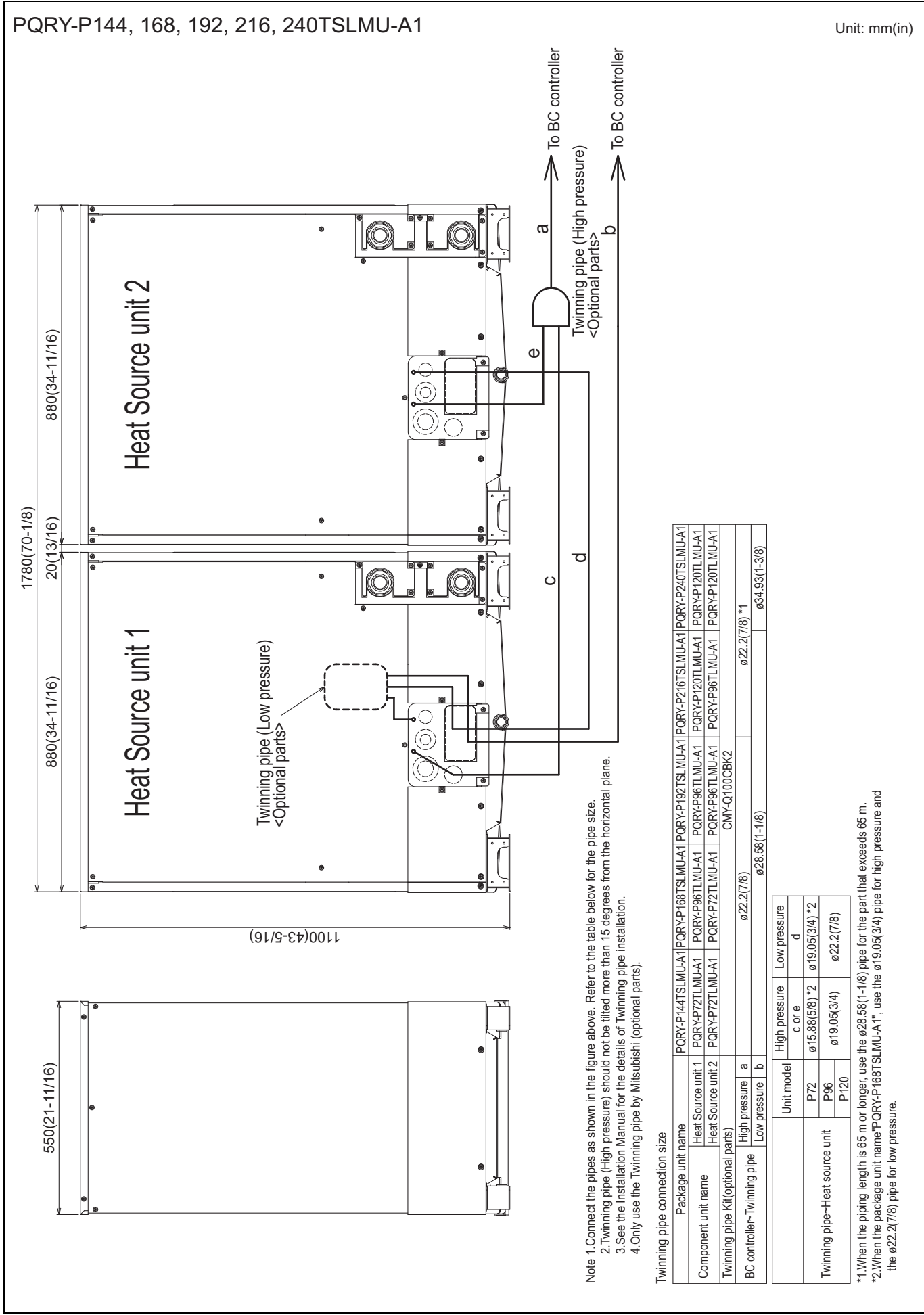


Back view



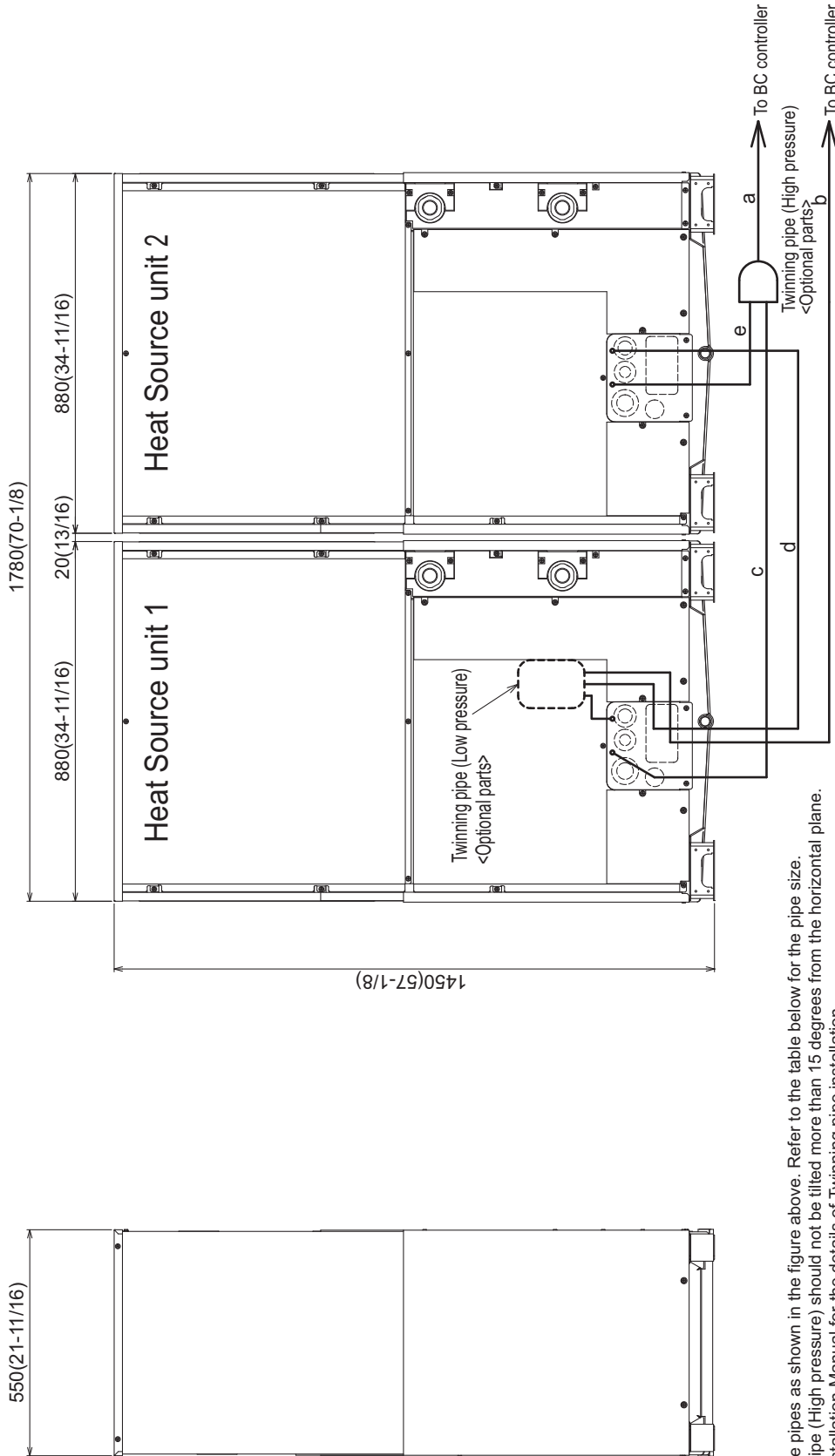
Right side view

No.	Usage	Specifications
①	Front through hole	140 x 77 Knockout hole (5-9/16) (3-1/16)
②	For pipes	Front through hole (Uses when twinning kit (optional parts) is mounted.) ø45 Knockout hole (1-13/16)
③	For wires	Front through hole ø62.7 or ø34.5 Knockout hole (2-1/2) (1-3/8)
④		Front through hole ø43.7 or ø22.2 Knockout hole (1-3/4) (7/8)
⑤	For transmission cables	Front through hole ø34 Knockout hole (1-3/8)
⑥	Water pipe inlet	NPT1-1/2 Screw
⑦		NPT1-1/2 Screw
⑧	Drain pipe outlet	RC3/4 Screw



PQRY-P288, 312, 336TSLMU-A1

Unit: mm(in)



- Note 1. Connect the pipes as shown in the figure above. Refer to the table below for the pipe size.
 2. Twinning pipe (High pressure) should not be tilted more than 15 degrees from the horizontal plane.
 3. See the Installation Manual for the details of Twinning pipe installation.
 4. Only use the Twinning pipe by Mitsubishi (optional parts).

Twinning pipe connection size

Package unit name	PQRY-P288TSLMU-A1 PQRY-P312TSLMU-A1 PQRY-P336TSLMU-A1
Component unit name	Heat Source unit 1 PQRY-P144TLMU-A1 PQRY-P168TLMU-A1 PQRY-P168TLMU-A1
Twinning pipe Kit(optional parts)	PQRY-P144TLMU-A1 PQRY-P144TLMU-A1 PQRY-P168TLMU-A1 PQRY-P168TLMU-A1
BC controller~Twinning pipe	CMY-Q200CBK
High pressure	a
Low pressure	b
	ø28.58(1-1/8)
	ø34.93(1-3/8)
	ø41.28(1-5/8)

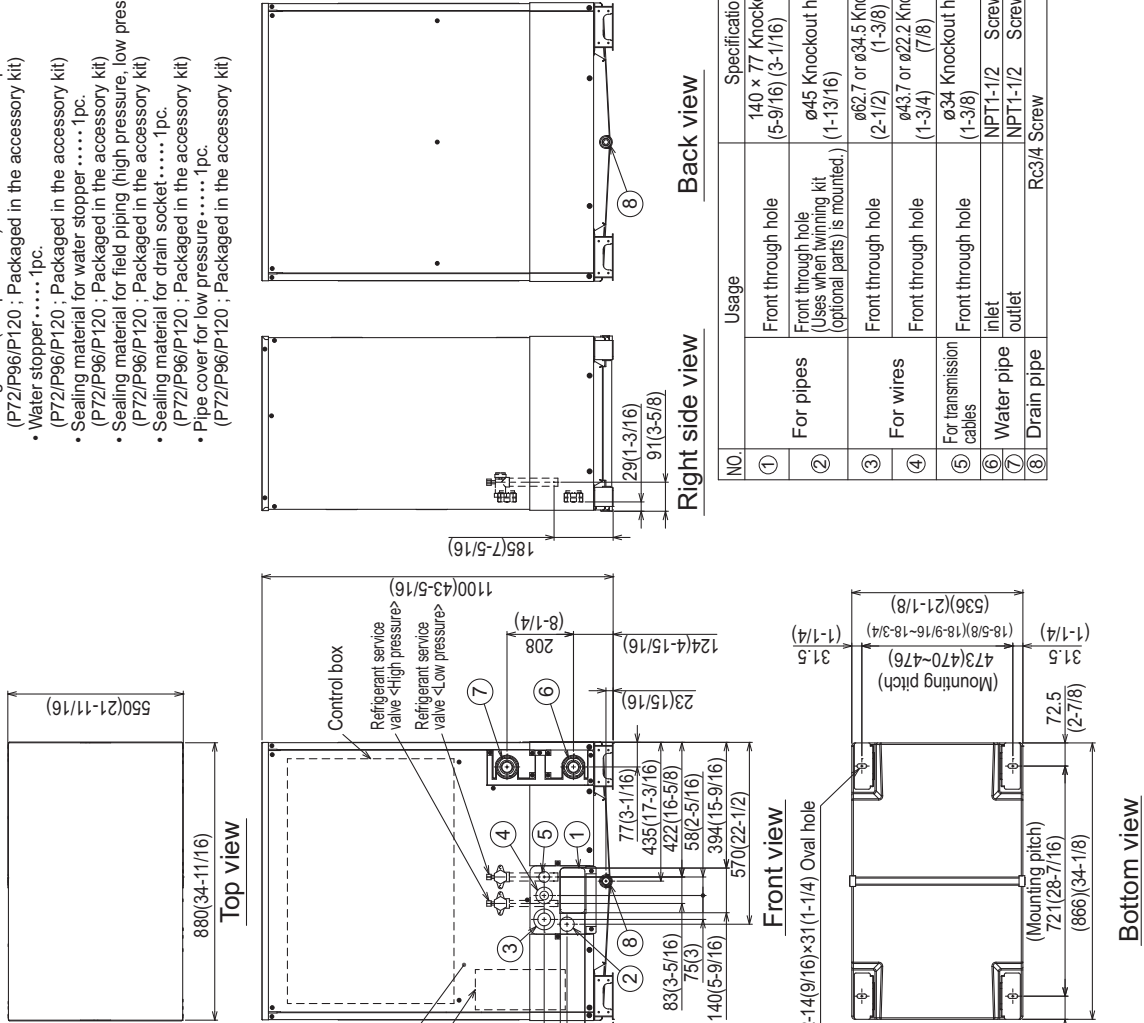
Twinning pipe~Heat source unit	Unit model	High pressure	Low pressure
	P144	c or e	d
P168		ø22.2(7/8)	ø28.58(1-1/8)

PQRY-P72, 96, 120YLMU-A1

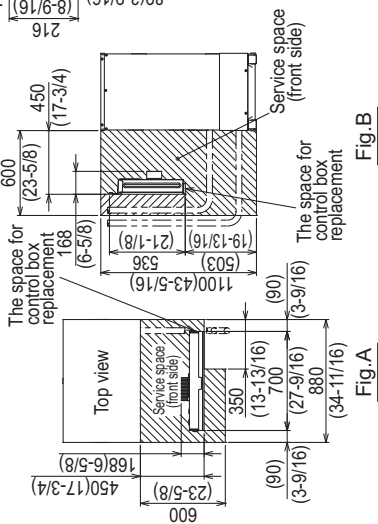
Unit: mm(in)

- <Accessories>
- Refrigerant (high pressure) conn. pipe 1pc. (P72/P96/P120; Packaged in the accessory kit)
 - Refrigerant (low pressure) conn. elbow 1pc. (P72/P96/P120; Packaged in the accessory kit)
 - Water stopper 1pc. (P72/P96/P120; Packaged in the accessory kit)
 - Sealing material for water stopper 1pc. (P72/P96/P120; Packaged in the accessory kit)
 - Sealing material for field piping (high pressure, low pressure) 1pc. each (P72/P96/P120; Packaged in the accessory kit)
 - Sealing material for drain socket 1pc. (P72/P96/P120; Packaged in the accessory kit)
 - Pipe cover for low pressure 1pc. (P72/P96/P120; Packaged in the accessory kit)

- Note1. Close a hole of the water piping, the refrigerant piping, the power supply, and the control wiring, and unused knockout holes with the putty etc. so as not to infiltrate rain water etc. (field erection work)
- Note2. At the time of product shipment, the front side piping specification serves as the local drainage connection. When connecting on the rear side, please remove the rear side plug sealing corks, and attach a front side. Ensure there is no leak after the attachment has been fitted.
- Note3. Take notice of service space as Fig.A. (In case of single installation, 600mm(23-5/8) or more of back space as front space makes easier access when servicing the unit from rear side.)
- Note4. If water pipes or refrigerant pipes stretch upward, required space for service and maintenance due to replacement of control box is shown in Fig.B.
- Note5. Environmental condition for installation; -20~40°C(DB) (-4~104°F) as indoor installation.
- Note6. In case the temperature around the heat source unit has possibility to drop under 0°C(32°F) or the inlet-water temp. drops under 10°C(50°F), be careful for the following point to prevent the pipe burst by the water pipe freeze-up.
- Add brine to water circuit.
 - Circulate the water all the time even if the heat source unit is not in operation.
 - Drain the water from inside of the heat source unit when the heat source unit will not operate for a long term.
- Note7. Ensure that the drain piping is downward with a pitch of more than 1/100.
- Note8. At brazing of pipes, wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248°F).



NO.	Usage	Specifications
①	Front through hole	140 x 77 Knockout hole (5-9/16) (3-1/16)
②	For pipes	Front through hole (Uses when twinning kit (optional parts) is mounted.) ø45 Knockout hole (1-13/16)
③	For wires	Front through hole ø62.7 or ø34.5 Knockout hole (2-1/2) (1-3/8)
④	For transmission cables	Front through hole ø43.7 or ø22.2 Knockout hole (1-3/4) (7/8)
⑤	Water pipe inlet	ø34 Knockout hole (1-3/8)
⑥	Water pipe outlet	NPT-1/2 Screw
⑦	Drain pipe	NPT-1/2 Screw
⑧		Rc3/4 Screw



Connecting pipe specifications

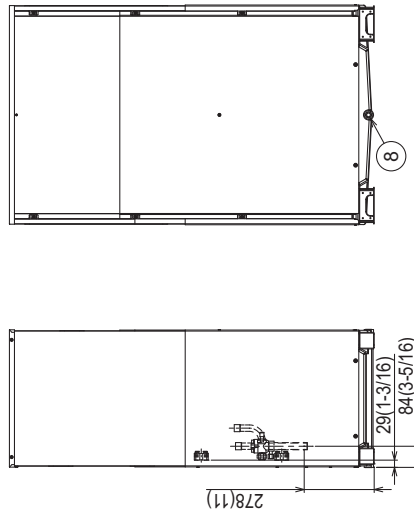
Model	Refrigerant pipe		Service valve	
	High pressure	Low pressure	High pressure	Low pressure
PQRY-P72YLMU-A1	ø15.88 Brazed (5/8) *1 *2	ø19.05 Brazed (3/4) *1 *2	ø19.05 (3/4)	ø25.4 (1)
PQRY-P96YLMU-A1	ø19.05 Brazed (3/4) *1	ø22.2 Brazed (7/8) *1 *2		
PQRY-P120YLMU-A1				

*1. Connect by using the connecting pipes and elbow that are supplied.
 *2. Use the pipe joint (field supply) and connect to the refrigerant service valve piping.

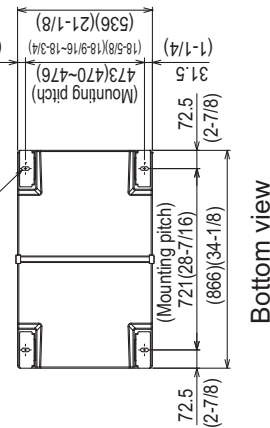
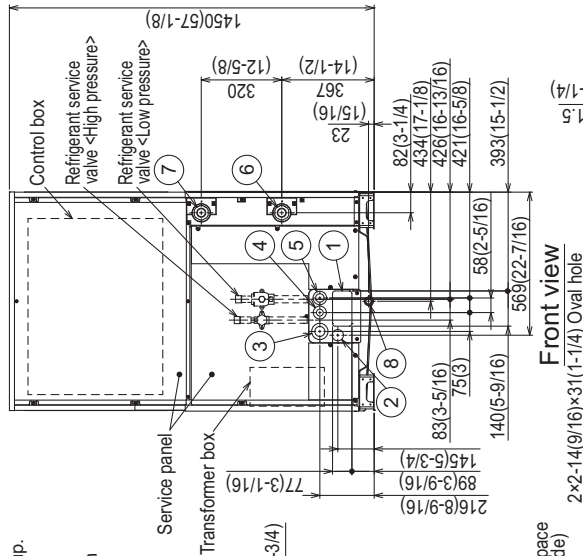
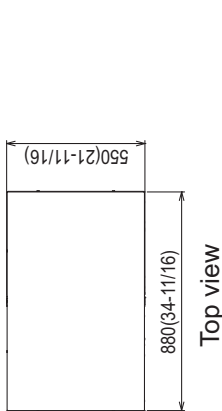
PQRY-P216, 240YLMU-A1

Unit: mm(in)

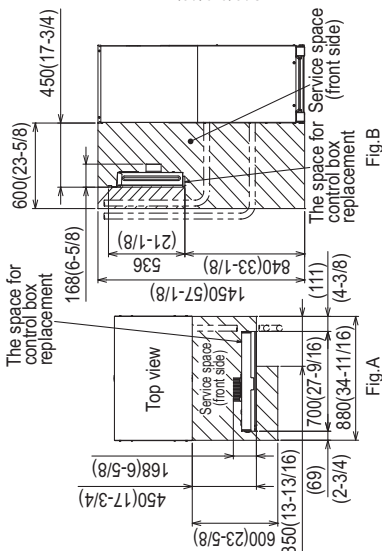
- <Accessories>
- Refrigerant (high pressure) conn. pipe.....1pc.
(P216/P240; Packaged in the accessory kit)
 - Refrigerant (low pressure) conn. pipe.....1pc.
(P216/P240; Packaged in the accessory kit)
 - Water stopper.....1pc.
(P216/P240; Packaged in the accessory kit)
 - Sealing material for water stopper.....1pc.
(P216/P240; Packaged in the accessory kit)
 - Sealing material for field piping (high pressure, low pressure).....1pc. each
(P216/P240; Packaged in the accessory kit)
 - Sealing material for drain socket.....1pc.
(P216/P240; Packaged in the accessory kit)
 - Pipe cover for low pressure.....1pc.
(P216/P240; Packaged in the accessory kit)
 - Sealing material for base leg (two types).....4pcs. each
(P216/P240; Packaged in the accessory kit)
 - Sealing material for panel.....1pc.
(P216/P240; Packaged in the accessory kit)



NO.	Usage	Specifications
①	Front through hole	140 x 77 Knockout hole (5-9/16) (3-1/16)
②	For pipes	Front through hole (Uses when twinning kit (optional parts) is mounted.) ø45 Knockout hole (1-13/16)
③	For wires	Front through hole (2-1/2) (1-3/8)
④	For transmission cables	Front through hole (1-3/4) (7/8)
⑤	Water pipe inlet	ø34 Knockout hole (1-3/8)
⑥	Drain pipe outlet	NPT1-1/2 Screw
⑦		NPT1-1/2 Screw
⑧		Rc3/4 Screw



- Note1. Close a hole of the water piping, the refrigerant piping, the power supply, and the control wiring and unused knockout holes with the putty etc. so as not to infiltrate rain water etc.(field erection work)
- Note2. At the time of product shipment, the front side piping specification serves as the local drainage connection. When connecting on the rear side, please remove the rear side plug sealing corks, and attach a front side. Ensure there is no leak after the attachment has been fitted.
- Note3. Take notice of service space as Fig.A. (In case of single installation, 600mm(23-5/8) or more of back space as front space makes easier access when servicing the unit from rear side.)
- Note4. If water pipes or refrigerant pipes stretch upward, required space for service and maintenance due to replacement of control box is shown in Fig.B.
- Note5. Environmental condition for installation; -20~40°C(DB) (-4~104°F) as indoor installation.
- Note6. In case the temperature around the heat source unit has possibility to drop under 0°C(32°F) or the inlet-water temp. drops under 10°C(50°F), be careful for the following point to prevent the pipe burst by the water pipe freeze-up.
•Add brine to water circuit.
•Circulate the water all the time even if the heat source unit is not in operation.
•Drain the water from inside of the heat source unit when the heat source unit will not operate for a long term.
- Note7. Ensure that the drain piping is downward with a pitch of more than 1/100.
- Note8. At brazing of pipes, wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248°F).



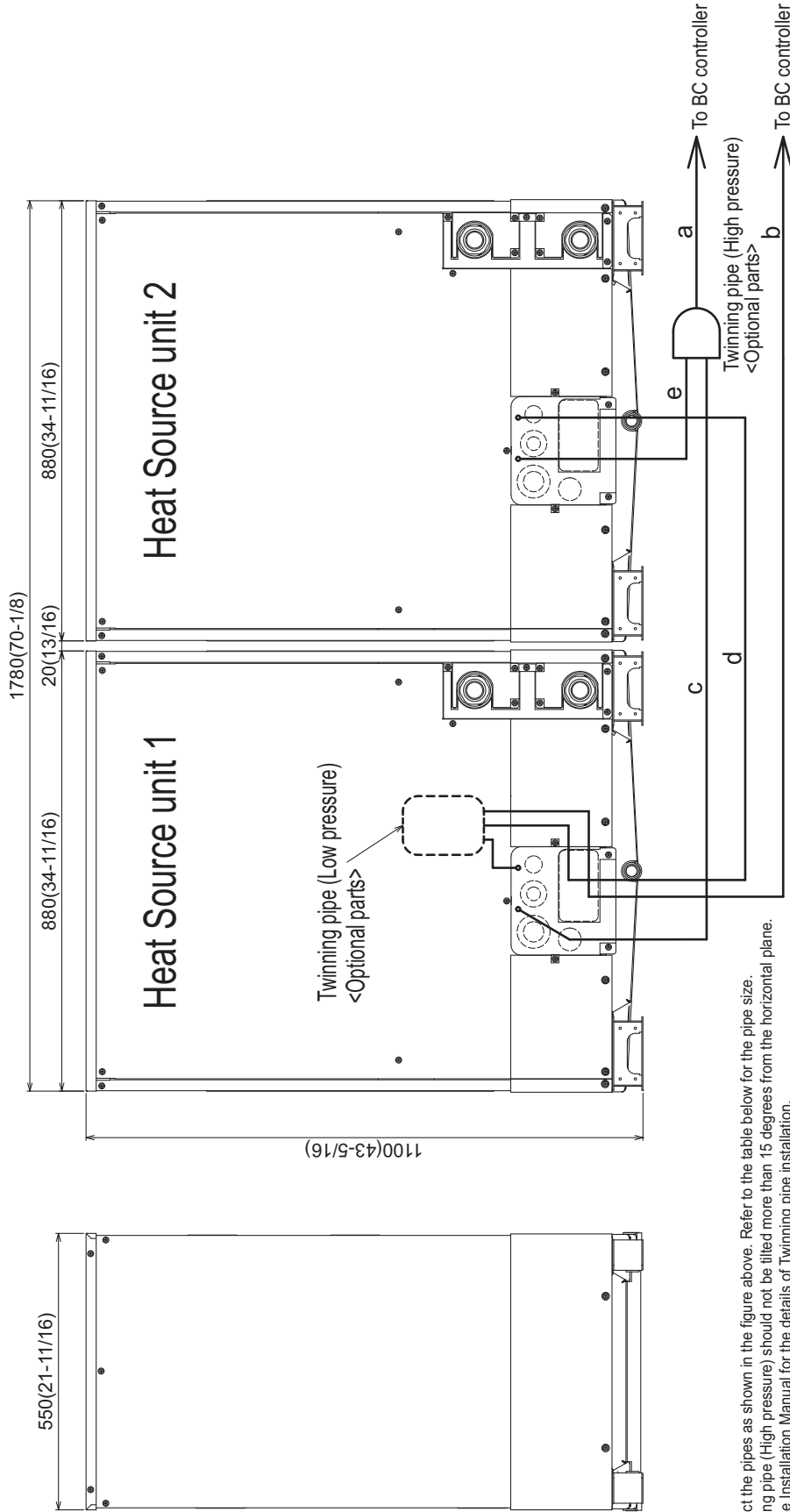
Connecting pipe specifications

Model	Refrigerant pipe		Service valve	
	High pressure	Low pressure	High pressure	Low pressure
PQRY-P216 YLMU-A1	ø22.2 Brazed (7/8) *1 *2	ø28.58 Brazed (1-1/8) *1	ø25.4 (1)	ø28.58 (1-1/8)
PQRY-P240 YLMU-A1	ø34.93 Brazed (1-3/8) *1 *3			

- *1. Connect by using the connecting pipes and that are supplied.
*2. When the piping length is 65 m or longer, use the ø28.58(1-1/8) pipe for the part that exceeds 65 m.
*3. Use the pipe joint(field supply) and connect to the refrigerant service valve piping.

PQRY-P144, 168, 192, 216, 240YSLMU-A1

Unit: mm(in)



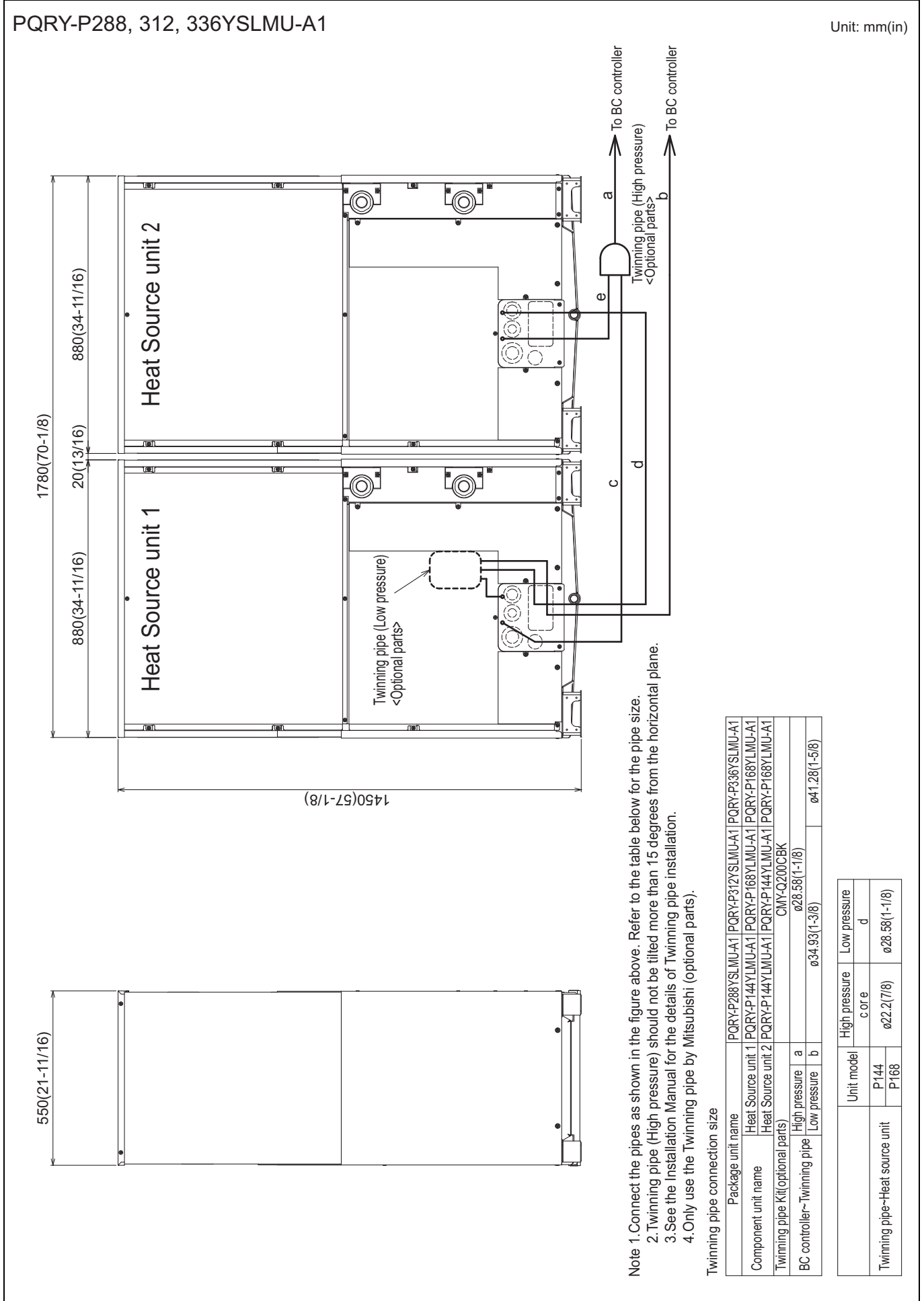
- Note 1. Connect the pipes as shown in the figure above. Refer to the table below for the pipe size.
- 2. Twinning pipe (High pressure) should not be tilted more than 15 degrees from the horizontal plane.
- 3. See the Installation Manual for the details of Twinning pipe installation.
- 4. Only use the Twinning pipe by Mitsubishi (optional parts).

Twinning pipe connection size

Package unit name	PQRY-P144YSLMU-A1	PQRY-P168YSLMU-A1	PQRY-P192YSLMU-A1	PQRY-P216YSLMU-A1	PQRY-P240YSLMU-A1
Heat Source unit 1	PQRY-P72YLMU-A1	PQRY-P96YLMU-A1	PQRY-P120YLMU-A1	PQRY-P144YLMU-A1	PQRY-P168YLMU-A1
Heat Source unit 2	PQRY-P72YLMU-A1	PQRY-P96YLMU-A1	PQRY-P120YLMU-A1	PQRY-P144YLMU-A1	PQRY-P168YLMU-A1
Twinning pipe Kit (optional parts)	C-WY-Q100CBK2				
BC controller~Twinning pipe	High pressure	Low pressure	a	b	
			ø22.2(7/8)	ø28.58(1-1/8)	ø34.93(1-3/8)

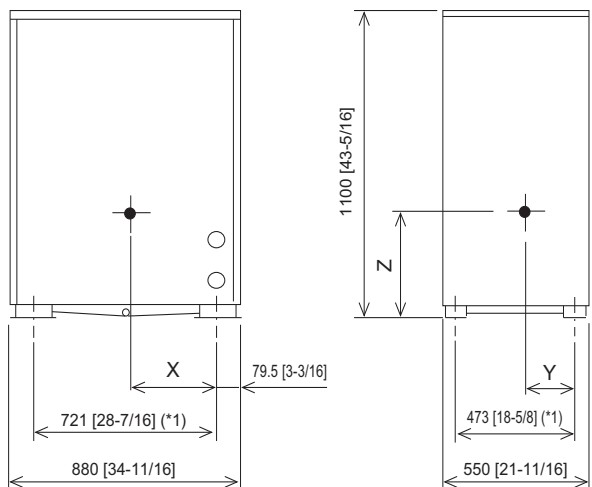
Twinning pipe-Heat source unit	Unit model	High pressure	Low pressure
	P72	c or e	d
	P96	ø15.88(5/8) *2	ø19.05(3/4) *2
	P120	ø19.05(3/4)	ø22.2(7/8)

*1. When the piping length is 65 m or longer, use the ø28.58(1-1/8) pipe for the part that exceeds 65 m.
 *2. When the package unit name "PQRY-P168YSLMU-A1", use the ø19.05(3/4) pipe for high pressure and the ø22.2(7/8) pipe for low pressure.



PQRY-P72, 96, 120TLMU-A1/YLMU-A1

Unit: mm [in.]

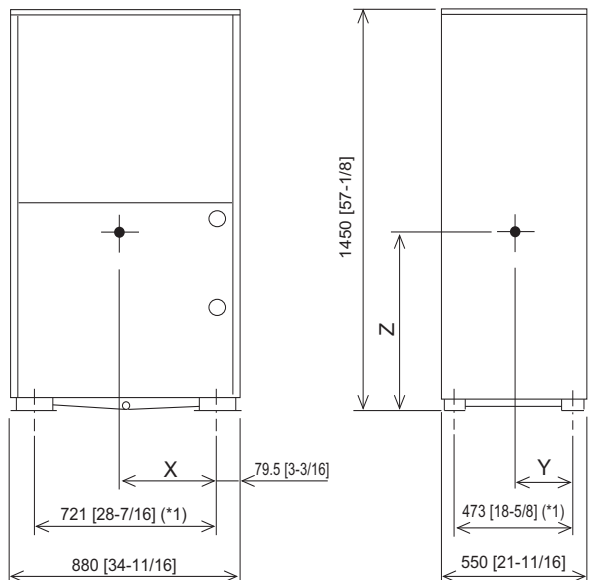


Model	X	Y	Z
PQRY-P72TLMU-A1	351 [13-7/8]	235 [9-5/16]	438 [17-1/4]
PQRY-P96TLMU-A1	351 [13-7/8]	235 [9-5/16]	438 [17-1/4]
PQRY-P120TLMU-A1	351 [13-7/8]	235 [9-5/16]	438 [17-1/4]
PQRY-P72YLMU-A1	370 [14-5/8]	224 [8-7/8]	428 [16-7/8]
PQRY-P96YLMU-A1	370 [14-5/8]	224 [8-7/8]	428 [16-7/8]
PQRY-P120YLMU-A1	370 [14-5/8]	224 [8-7/8]	428 [16-7/8]

*1 Mounting Pitch

PQRY-P144, 168, 192, 216, 240TLMU-A1/YLMU-A1

Unit: mm [in.]



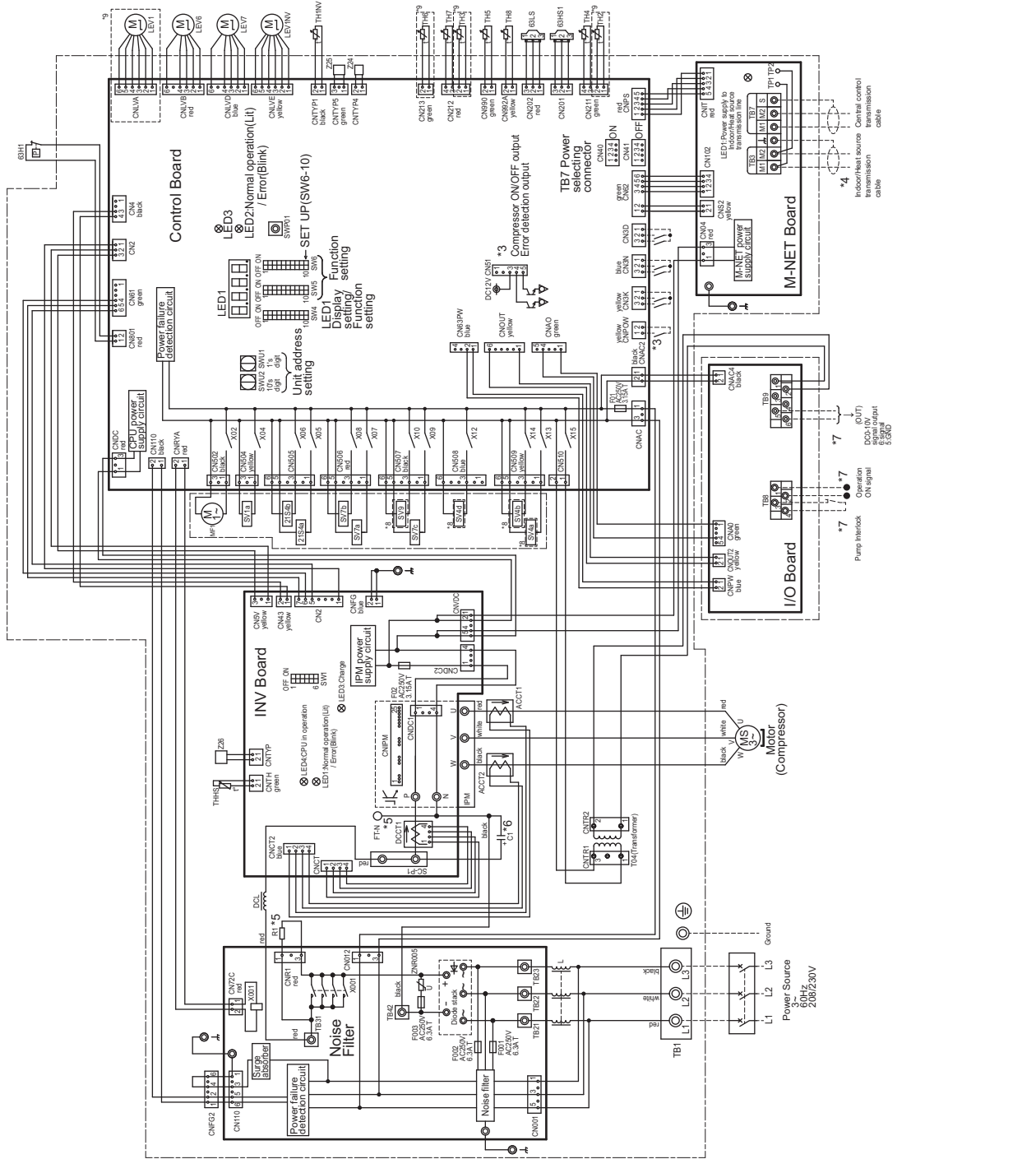
Model	X	Y	Z
PQRY-P144TLMU-A1	382 [15-1/16]	233 [9-3/16]	622 [24-1/2]
PQRY-P168TLMU-A1	382 [15-1/16]	233 [9-3/16]	622 [24-1/2]
PQRY-P192TLMU-A1	382 [15-1/16]	233 [9-3/16]	622 [24-1/2]
PQRY-P216TLMU-A1	371 [14-5/8]	232 [9-3/16]	685 [27]
PQRY-P240TLMU-A1	371 [14-5/8]	232 [9-3/16]	685 [27]
PQRY-P144YLMU-A1	399 [15-3/4]	228 [9]	611 [24-1/16]
PQRY-P168YLMU-A1	399 [15-3/4]	228 [9]	611 [24-1/16]
PQRY-P192YLMU-A1	399 [15-3/4]	228 [9]	611 [24-1/16]
PQRY-P216YLMU-A1	380 [15]	221 [8-3/4]	632 [24-15/16]
PQRY-P240YLMU-A1	380 [15]	221 [8-3/4]	632 [24-15/16]

*1 Mounting Pitch

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

PQRY-P144, 168, 192TLMU-A1

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

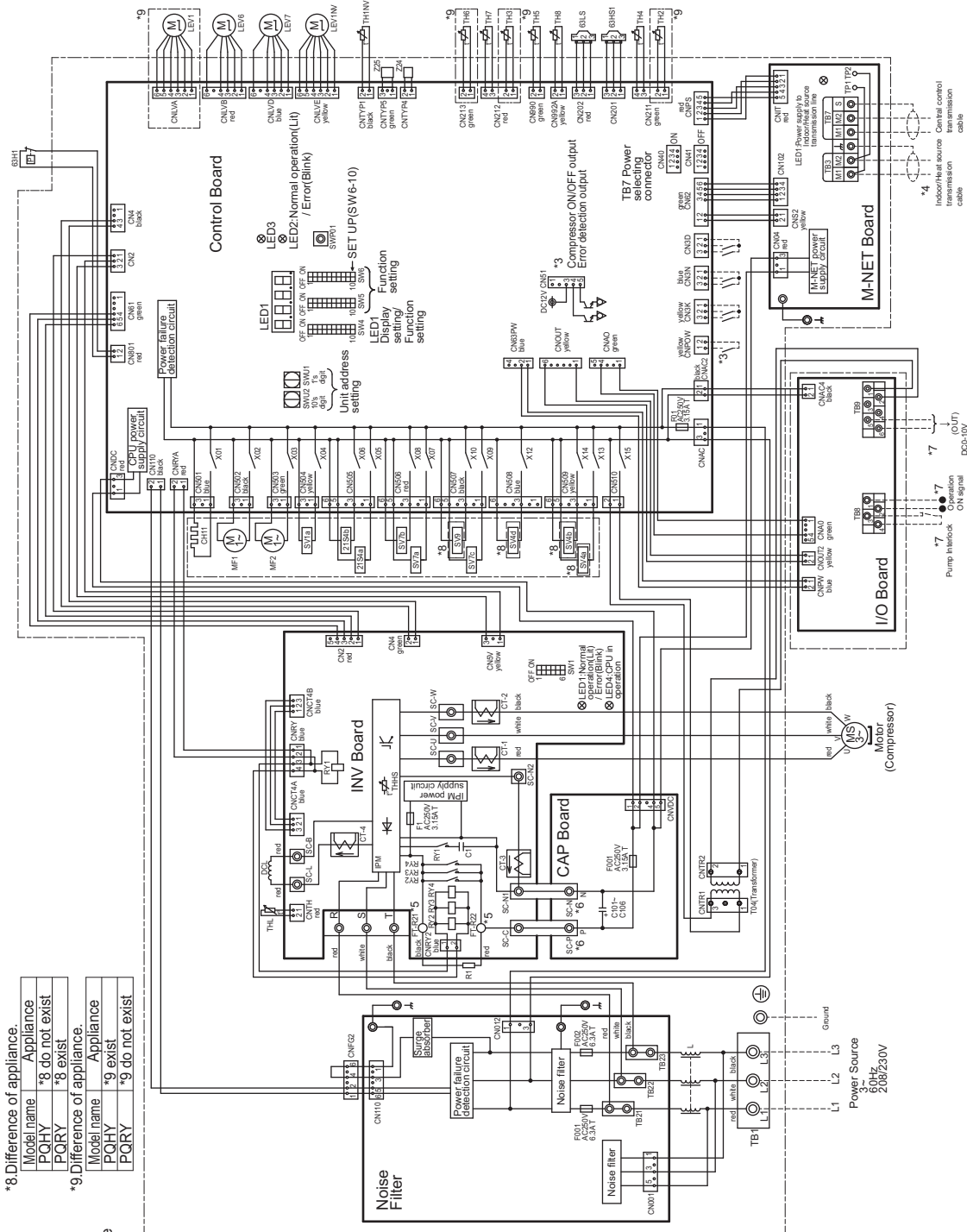


- *1. Single-dotted lines indicate wiring not supplied with the unit.
- *2. Dot-dash lines indicate the control box boundaries.
- *3. Refer to the Data book for connecting input/output signal connectors.
- *4. Daisy-chain terminals (TB3) on the heat source units in the same refrigerant system together.
- *5. Faston terminals have a locking function. Make sure the terminals are securely locked in place after insertion. Press the tab on the terminals to removed them.
- *6. Control box houses high-voltage parts. Before inspecting the inside of the control box, turn off the power, keep the unit off for at least 10 minutes, and confirm that the voltage at both ends of the main capacitor (C1) has dropped to DC20V or less.
- *7. Refer to the Databook for wiring terminal block for Pump Interlock, Operation ON signal and DC0-10V signal output.
- *8. Difference of appliance.
 Model name Appliance
 PQHY *8 do not exist
 PQRY *8 exist
- *9. Difference of appliance.
 Model name Appliance
 PQHY *9 exist
 PQRY *9 do not exist

<Symbol explanation>

Symbol	Explanation
Z1S4a	4-way valve (Cooling/Heating switching)
Z1S4b	Heat exchanger capacity control
63SH1	Pressure
63SH2	High pressure protection for the compressor
63SH3	Pressure
63LS1	Low pressure
X001	Magnetic relay (inverter main circuit)
C1	Capacitor (inverter main circuit)
ACCT1,2	Current sensor (AC)
DCCT1	Current sensor (DC)
DCL	DC reactor
L	Choke coil (for high frequency noise reduction)
LEV1	H/C bypass (Controls refrigerant expansion valve)
LEV6	Heat exchanger capacity control
LEV7	Heat exchanger capacity control
LEVINV	Heat exchanger for inverter
MF1	Fan motor (Radiator panel)
SV1a	Resistor
SV1b	Solenoid valve
SV4a,b,d	Heat exchanger capacity control
SV7a,b,c	Heat exchanger capacity control
SV9	Valve opening/closing the bypass circuit
TB1	Terminal block
TB3	Indoor/Heat source transmission cable
TB7	Central control transmission cable
TB8	Operation ON signal, Power input and signal output for inverter
TB9	Pump Interlock
TH2	Thermistor (Surge bypass outlet temperature)
TH3	Pipe temperature
TH4	Discharge pipe temperature
TH5	ACC inlet pipe temperature
TH6	Subcooled liquid refrigerant temperature
TH7	Water inlet temperature
TH8	Water outlet temperature
TH9	Outlet temp. detect of heat exchanger for inverter
THHS	IPM temperature
Z24,25,26	Function setting connector

PQRY-P216, 240TLMU-A1



- *8. Difference of appliance.

Model name	Appliance
PQRY	*8 do not exist
PQRY	*8 exist

- *9. Difference of appliance.

Model name	Appliance
PQRY	*9 exist
PQRY	*9 do not exist

- *1. Single-dotted lines indicate wiring not supplied with the unit.
- *2. Dot-dash lines indicate the control box boundaries.
- *3. Refer to the Data book for connecting input/output signal connectors.
- *4. Daisy-chain terminals (TB3) on the heat source units in the same refrigerant system together.
- *5. Faston terminals have a locking function. Make sure the terminals are securely locked in place after insertion. Press the tab on the terminals to removed them.
- *6. Control box houses high-voltage parts. Before inspecting the inside of the control box, turn off the power, keep the unit off for at least 10 minutes, and confirm that the voltage between SC-P and SC-N on CAP Board has dropped to DC20V or less.
- *7. Refer to the Data book for wiring terminal block for Pump Interlock, Operation ON signal and DC0-10V signal output.

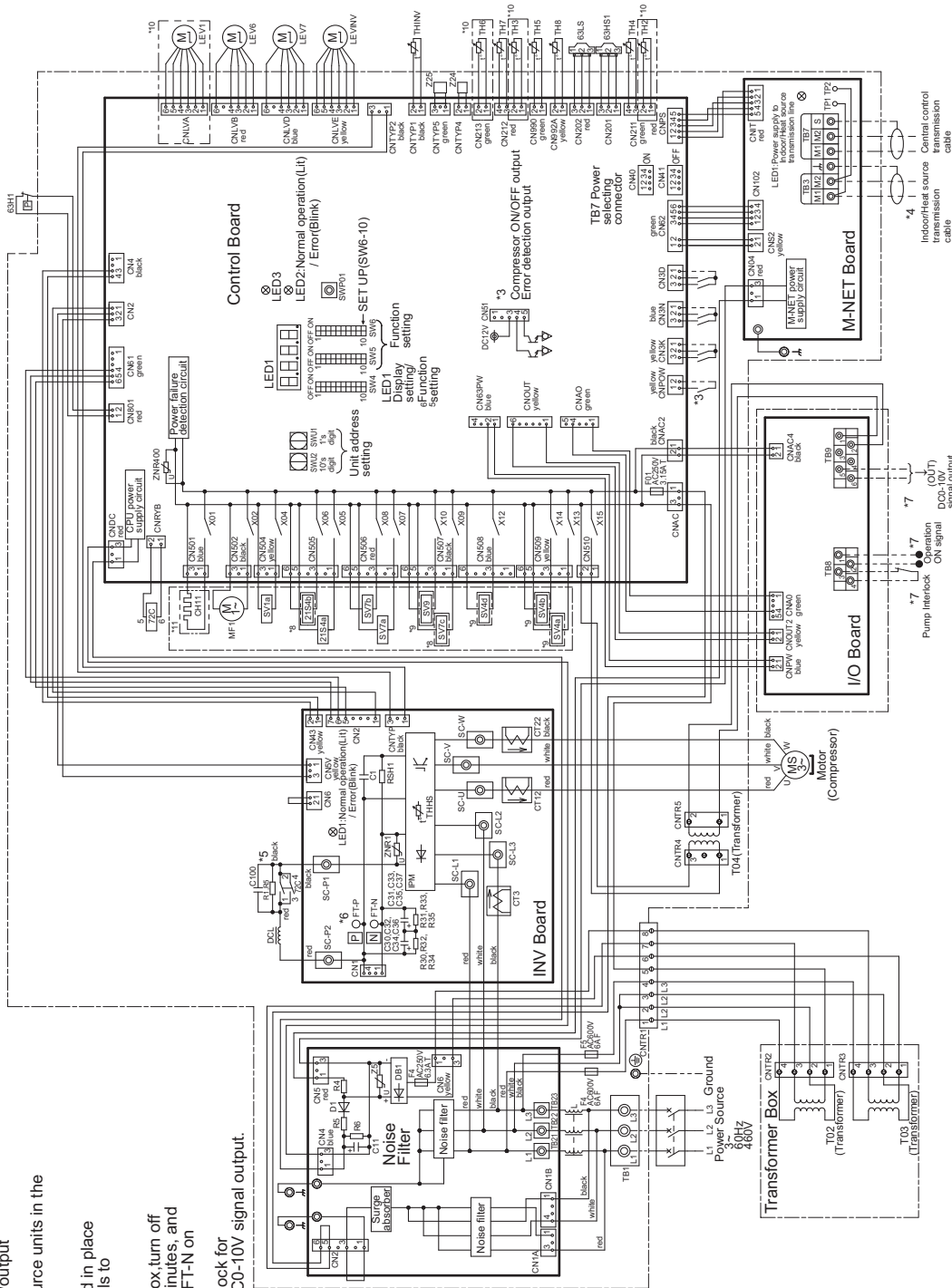
<Symbol explanation>

Symbol	Explanation
21S4a	4-way valve
21S4b	Cooling/Heating switching
63HT	Heat exchanger capacity control
63HS1	High pressure protection for the heat source unit
63HS2	High pressure
63LS	Low pressure
C1	Capacitor filter circuit
C101-C106	Inverter main circuit
CH1, CH2	Crankcase heater (for heating the compressor)
CI1, CI2	Current sensor (AC)
CI1, CI1-4	DC resistor
DCL	Diode coil (for high frequency noise reduction)
L	Linear
LEV1	HIC bypass Controls refrigerant flow in HIC circuit
LEV6	Heat exchanger capacity control
LEV7	Heat exchanger capacity control
LEV8	Heat exchanger capacity control
LEV9	Heat exchanger capacity control
LEV10	Heat exchanger capacity control
LEV11	Heat exchanger capacity control
LEV12	Heat exchanger capacity control
RV1	Fan motor (radiator panel)
RV2, RV3, RV4	Fan motor (current prevention)
SV1a	Magnetic filter circuit
SV1a	Inverter main circuit (ZFC)
SV4a,b,d	For opening/closing the bypass circuit under the O/S
SV7a,b,c	Heat exchanger capacity control
SV9	Heat exchanger capacity control
TB1	For opening/closing the bypass circuit
TB3	Solenoid valve
TB7	Terminal block
TB8	Power supply
TB9	Subcool/heat source transmission cable
TB10	Central control transmission cable
TB11	Operation ON signal,
TB12	Pump interlock
TB13	Power input and signal output for variable water flow valve
TB14	Subcool bypass outlet temperature
TB15	Pipe temperature
TB16	AGC inlet pipe temperature
TB17	Subcooled liquid refrigerant temperature
TB18	Water inlet temperature
TB19	Water outlet temperature
TB20	Outlet temp. detect of heat exchanger for inverter
TB21	PWM temperature
TB22	DCL temperature
ZZ4, Z5	Function setting connector

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

PQRY-P72, 96, 120, 144, 168, 192, 216, 240YLMU-A1

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1



- *1 Single-dotted lines indicate wiring not supplied with the unit.
- *2 Dot-dash lines indicate the control box boundaries.
- *3 Refer to the Data book for connecting input/output signal connectors.
- *4 Daisy-chain terminals (TB3) on the heat source units in the same refrigerant system together.
- *5 Faston terminals have a locking function. Make sure the terminals are securely locked in place after insertion. Press the tab on the terminals to removed them.
- *6 Control box noises high-voltage parts. Before inspecting the inside of the control box turn off the power, keep the unit off for at least 10 minutes, and confirm that the voltage between FT-P and FT-N on INV Board has dropped to DC20V or less.
- *7 Refer to the Data book for wiring terminal block for Pump Interlock, Operation ON signal and DCU-10V signal output.
- *8 Difference of appliance.

Model name	Appliance
P72/96/120	*8 do not exist
P144/168/192/216/240	*8 exist

Model name	Appliance
PQRY	*9 do not exist
PQRY	*9 exist

Model name	Appliance
PQRY	*10 exist
PQRY	*10 do not exist

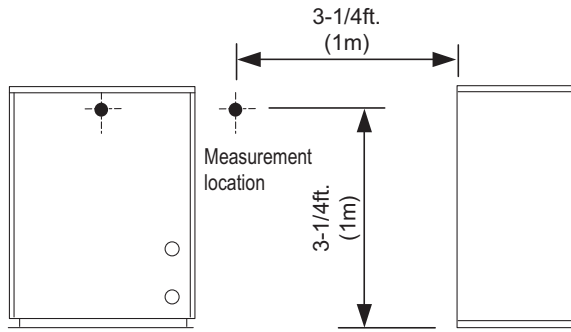
<Symbol explanation>

Symbol	Explanation
Z1S4B	4-way valve Cooling/Heating switching
Z1S4B	Heat exchanger capacity control
63H1	Pressure Protection unit
63HS1	High pressure protection for the protection unit
63LS	Low pressure sensor
Z2C	Magnetic relay (inverter main circuit)
C30-C37	Capacitor (inverter main circuit)
CH11	Crankcase heater (for heating the compressor)
CT12.22.3	Current sensor (AC)
DCL	DC reactor
L	Choke coil (for high frequency noise reduction)
LEV1	Linear expansion valve
LEV6	HIC bypass, Controls refrigerant expansion valve
LEV6V	Heat exchanger capacity control
LEV6V	Heat exchanger capacity control
MF1	Fan motor (Radiator panel)
R1-5	Resistor
SV1a	Four inrush current prevention
SV1a	For opening/closing the bypass circuit under the O/S
SV4a,b,d	Solenoid valve
SV7a,b,c	Heat exchanger capacity control
SV9	For opening/closing the bypass circuit
TB1	Terminal block
TB3	Power supply for heat source transmission cable
TB7	Central control transmission cable
TB8	Operation ON signal
TB9	Pump Interlock
TB9	Power input and signal output for variable water flow valve
TH2	Subcool/bypass outlet temperature
TH3	Pipe temperature
TH4	Discharge pipe temperature
TH5	SCC inlet pipe temperature
TH6	Water inlet temperature
TH7	Water outlet temperature
TH8	Water outlet temperature
THINV	Outlet temp detect of heat exchanger for inverter
THHS	IPM temperature
Z24.25	Function setting connector

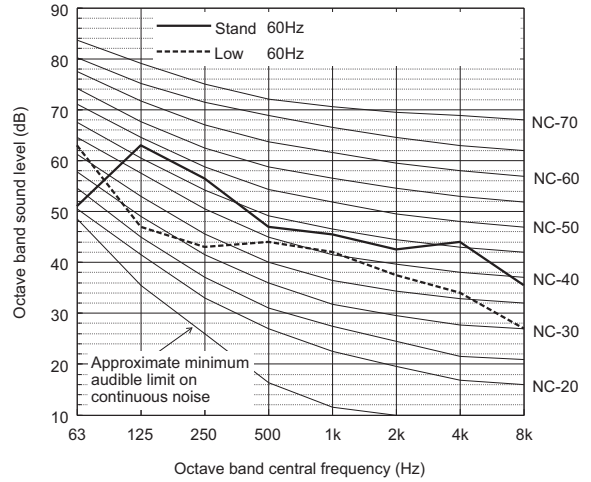
*11 Difference of appliance.

Model name	Appliance
P72/96/120/144/168/192	*11 do not exist
P216/240	*11 exist

Measurement condition
PQRY-P72, 96, 120TLMU-A1/YLMU-A1



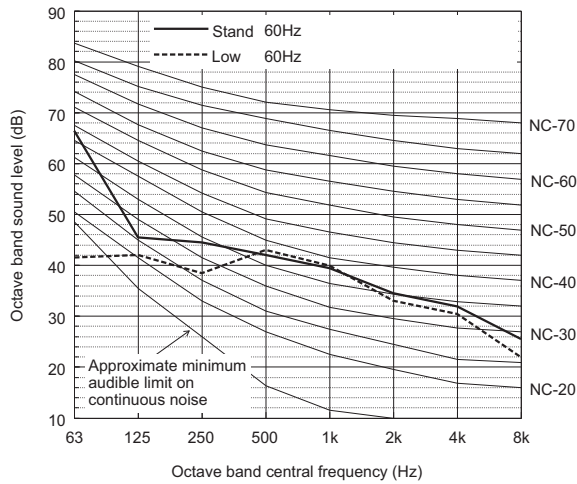
Sound level of PQRY-P120TLMU-A1/YLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	51.0	63.0	56.5	47.0	45.5	42.5	44.0	35.5	54.0
Low noise mode	60Hz	63.0	47.0	43.0	44.0	42.0	37.5	34.0	27.0	47.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

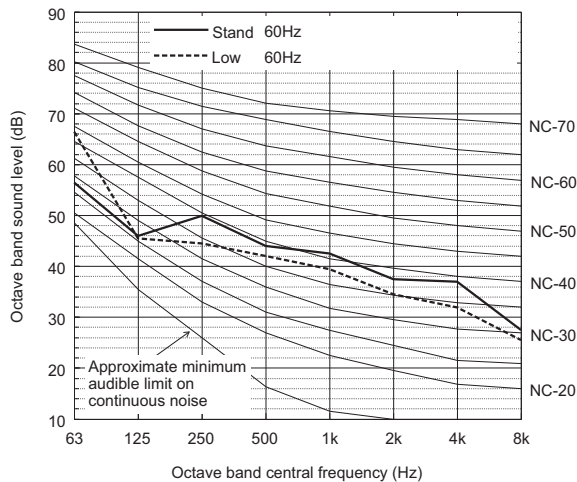
Sound level of PQRY-P72TLMU-A1/YLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	66.5	45.5	44.5	42.0	39.5	34.5	32.0	25.5	46.0
Low noise mode	60Hz	41.5	42.0	38.5	43.0	40.0	33.0	30.5	22.0	44.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound level of PQRY-P96TLMU-A1/YLMU-A1

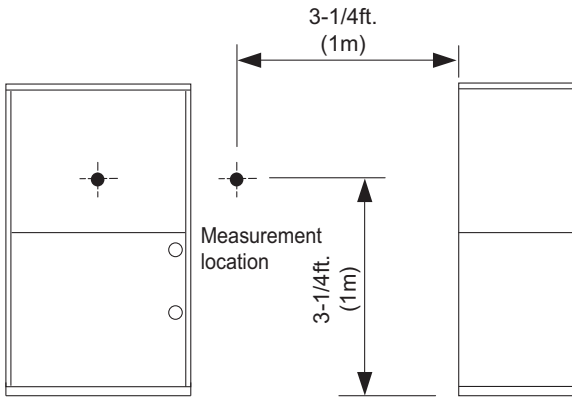


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	56.5	46.0	50.0	44.0	42.5	37.5	37.0	27.5	48.0
Low noise mode	60Hz	66.5	45.5	44.5	42.0	39.5	34.5	32.0	25.5	46.0

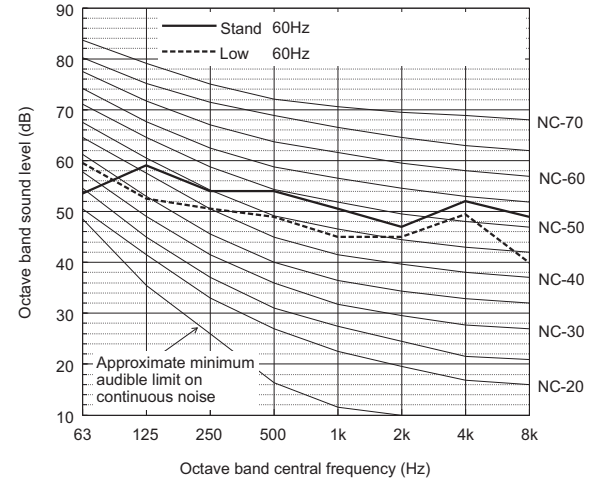
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

- Depending on the operation conditions, the unit generates noise caused by valve actuation, refrigerant flow, and pressure changes when operating normally. Please consider to avoid location where quietness is required. For BC controller, it is recommended to be installed in places such as ceilings of corridor, rest rooms and plant rooms.

Measurement condition
PQRY-P144, 168, 192, 216, 240TLMU-A1/YLMU-A1



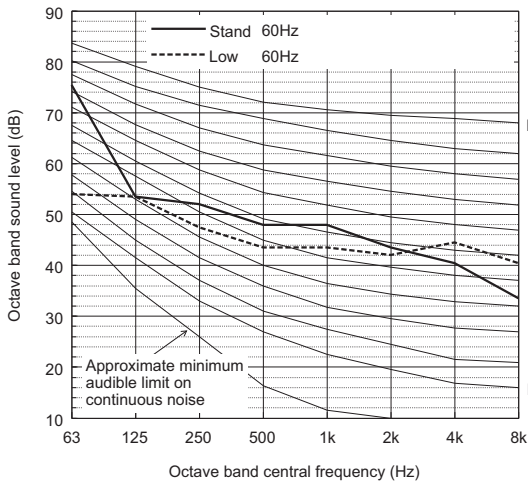
Sound level of PQRY-P192TLMU-A1/YLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	53.5	59.0	54.0	54.0	50.5	47.0	52.0	49.0	58.0
Low noise mode	60Hz	59.5	52.5	50.5	49.0	45.0	45.0	49.5	40.0	54.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

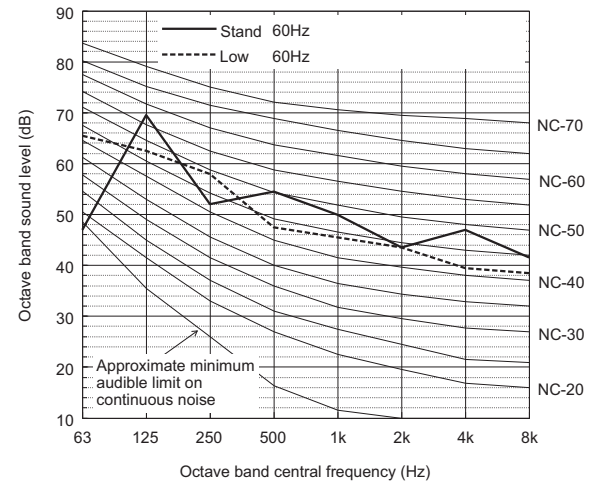
Sound level of PQRY-P144TLMU-A1/YLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	75.5	53.5	52.0	48.0	48.0	43.5	40.5	33.5	54.0
Low noise mode	60Hz	54.0	53.5	47.5	43.5	43.5	42.0	44.5	40.5	50.5

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

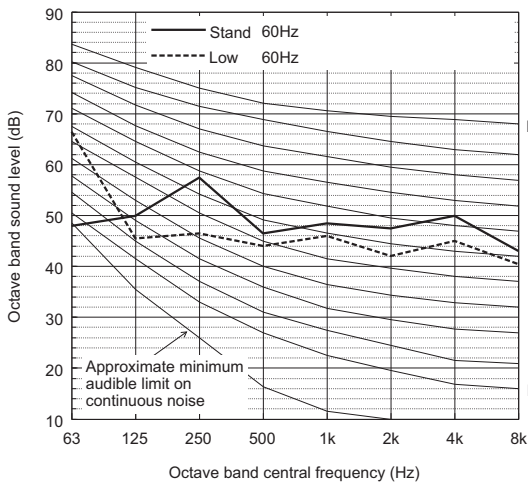
Sound level of PQRY-P216TLMU-A1/YLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	47.0	69.5	52.0	54.5	50.0	43.5	47.0	41.5	58.0
Low noise mode	60Hz	65.5	62.5	58.0	47.5	45.5	43.5	39.5	38.5	54.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

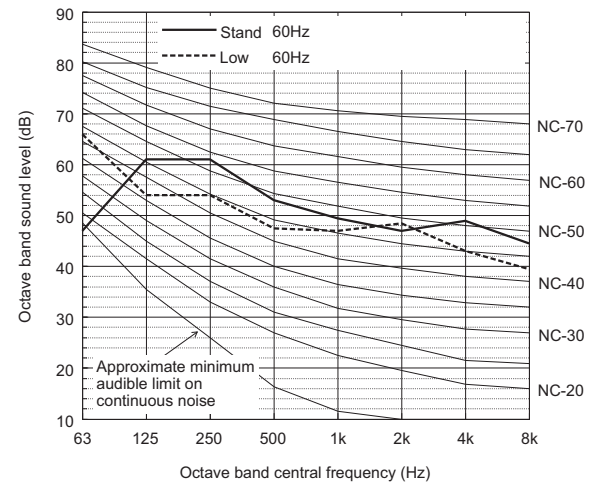
Sound level of PQRY-P168TLMU-A1/YLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	48.0	50.0	57.5	46.5	48.5	47.5	50.0	43.0	56.0
Low noise mode	60Hz	66.5	45.5	46.5	44.0	46.0	42.0	45.0	40.5	51.5

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound level of PQRY-P240TLMU-A1/YLMU-A1

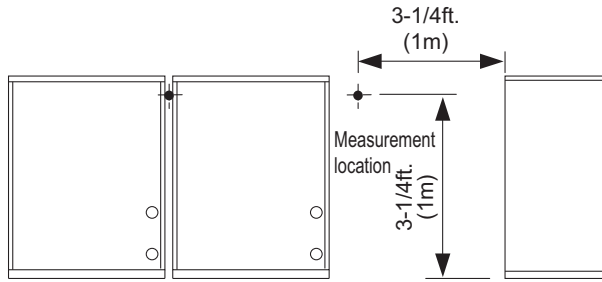


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	47.0	61.0	61.0	53.0	49.5	47.0	49.0	44.5	58.0
Low noise mode	60Hz	66.0	54.0	54.0	47.5	47.0	48.5	43.0	39.5	54.0

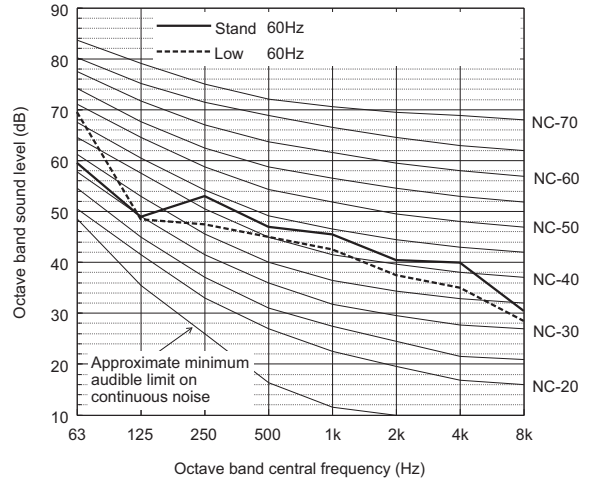
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

- Depending on the operation conditions, the unit generates noise caused by valve actuation, refrigerant flow, and pressure changes when operating normally. Please consider to avoid location where quietness is required. For BC controller, it is recommended to be installed in places such as ceilings of corridor, rest rooms and plant rooms.

Measurement condition
PQRY-P144, 168, 192, 216, 240TSLMU-A1/YSLMU-A1



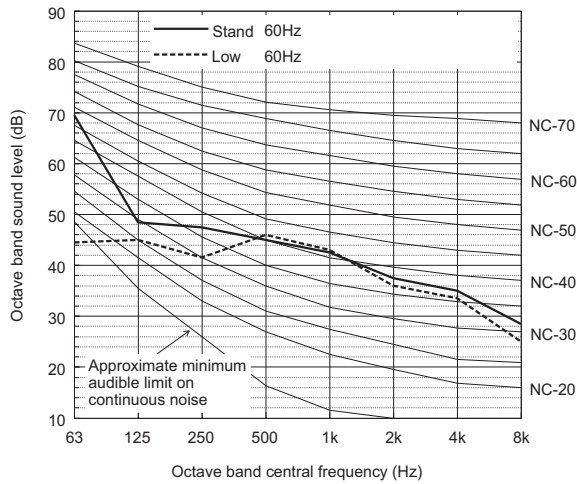
Sound level of PQRY-P192TSLMU-A1/YSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	59.5	49.0	53.0	47.0	45.5	40.5	40.0	30.5	51.0
Low noise mode	60Hz	69.5	48.5	47.5	45.0	42.5	37.5	35.0	28.5	49.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

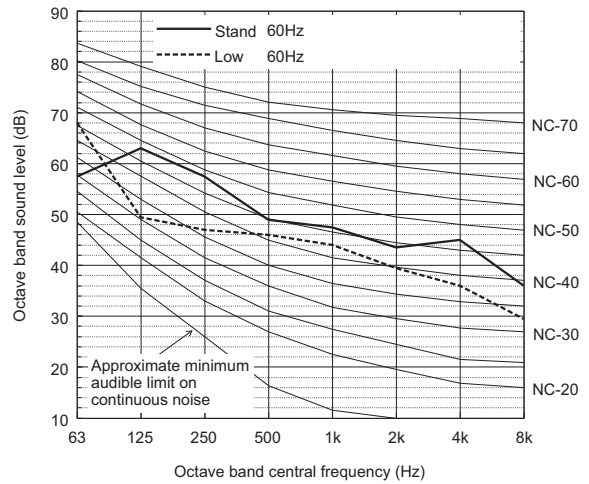
Sound level of PQRY-P144TSLMU-A1/YSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	69.5	48.5	47.5	45.0	42.5	37.5	35.0	28.5	49.0
Low noise mode	60Hz	44.5	45.0	41.5	46.0	43.0	36.0	33.5	25.0	47.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

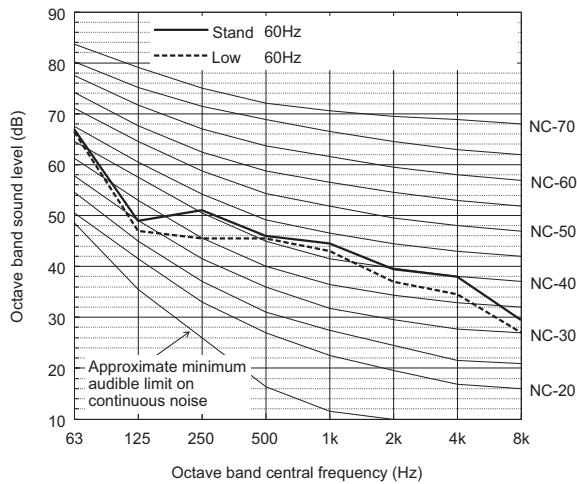
Sound level of PQRY-P216TSLMU-A1/YSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	57.5	63.0	57.5	49.0	47.5	43.5	45.0	36.0	55.0
Low noise mode	60Hz	68.0	49.5	47.0	46.0	44.0	39.5	36.0	29.5	49.5

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

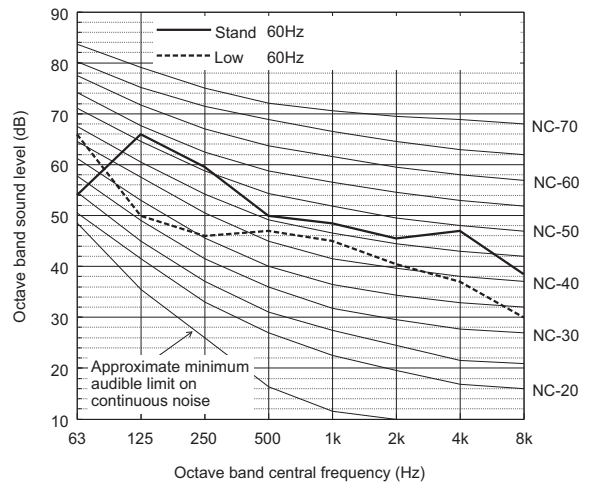
Sound level of PQRY-P168TSLMU-A1/YSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	67.0	49.0	51.0	46.0	44.5	39.5	38.0	29.5	50.0
Low noise mode	60Hz	66.5	47.0	45.5	45.5	43.0	37.0	34.5	27.0	48.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound level of PQRY-P240TSLMU-A1/YSLMU-A1

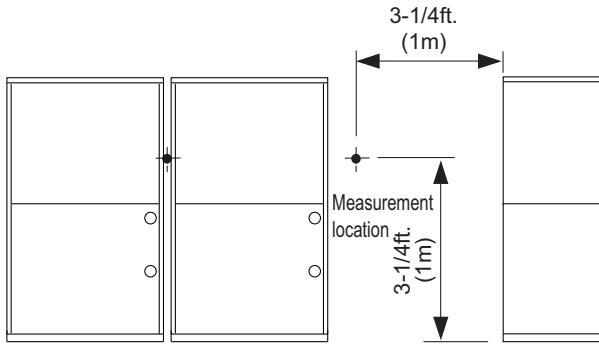


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	54.0	66.0	59.5	50.0	48.5	45.5	47.0	38.5	57.0
Low noise mode	60Hz	66.0	50.0	46.0	47.0	45.0	40.5	37.0	30.0	50.0

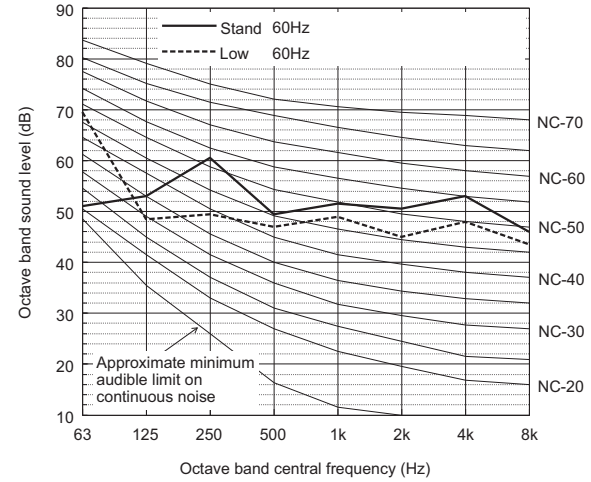
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

- Depending on the operation conditions, the unit generates noise caused by valve actuation, refrigerant flow, and pressure changes when operating normally. Please consider to avoid location where quietness is required. For BC controller, it is recommended to be installed in places such as ceilings of corridor, rest rooms and plant rooms.

Measurement condition
PQRY-P288, 312, 336TSLMU-A1/YSLMU-A1



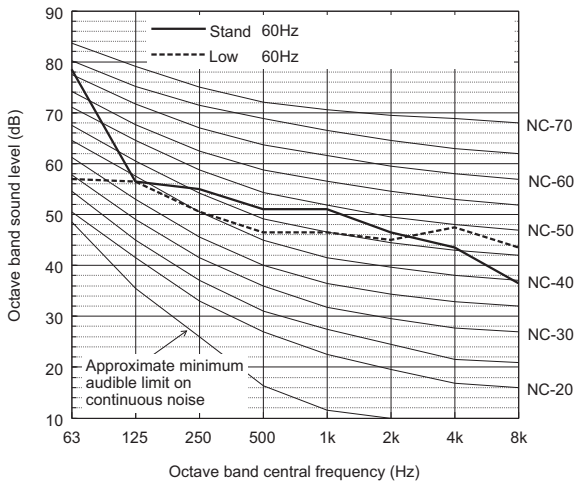
Sound level of PQRY-P336TSLMU-A1/YSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	51.0	53.0	60.5	49.5	51.5	50.5	53.0	46.0	59.0
Low noise mode	60Hz	69.5	48.5	49.5	47.0	49.0	45.0	48.0	43.5	54.5

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

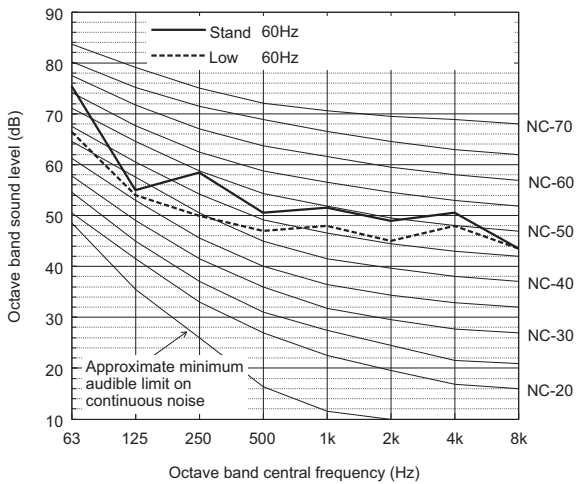
Sound level of PQRY-P288TSLMU-A1/YSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	78.5	56.5	55.0	51.0	51.0	46.5	43.5	36.5	57.0
Low noise mode	60Hz	57.0	56.5	50.5	46.5	46.5	45.0	47.5	43.5	53.5

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound level of PQRY-P312TSLMU-A1/YSLMU-A1

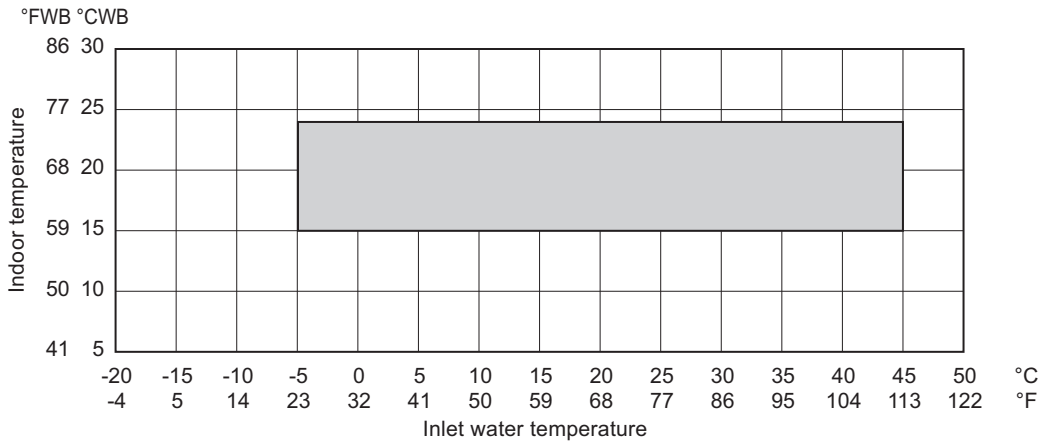


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	75.5	55.0	58.5	50.5	51.5	49.0	50.5	43.5	58.0
Low noise mode	60Hz	66.5	54.0	50.0	47.0	48.0	45.0	48.0	43.5	54.0

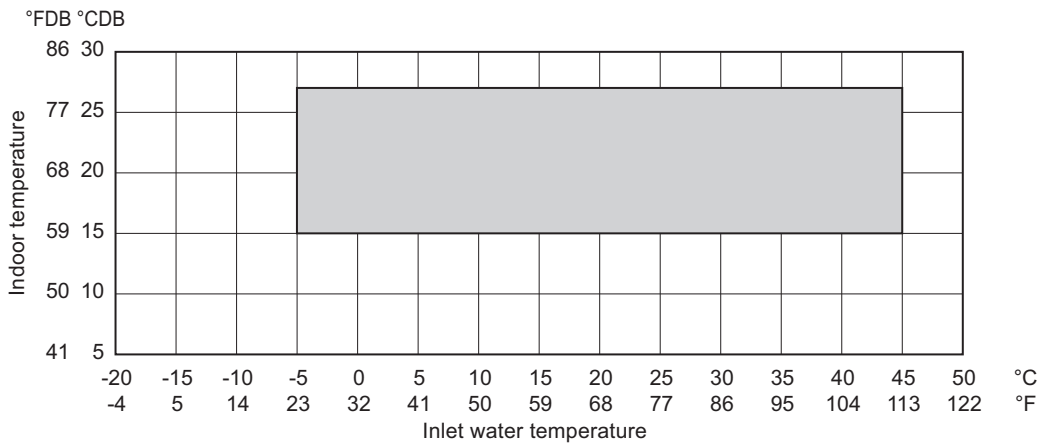
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

- Depending on the operation conditions, the unit generates noise caused by valve actuation, refrigerant flow, and pressure changes when operating normally. Please consider to avoid location where quietness is required. For BC controller, it is recommended to be installed in places such as ceilings of corridor, rest rooms and plant rooms.

Cooling



Heating



Combination of cooling/heating operation (Cooling main or Heating main)

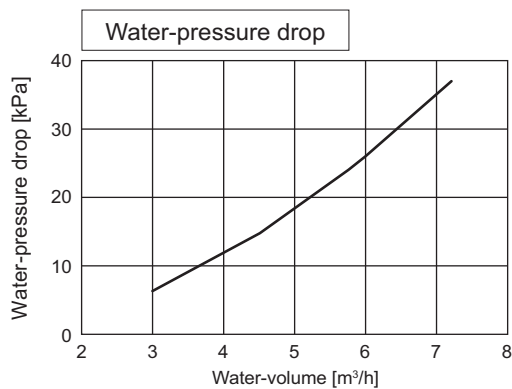
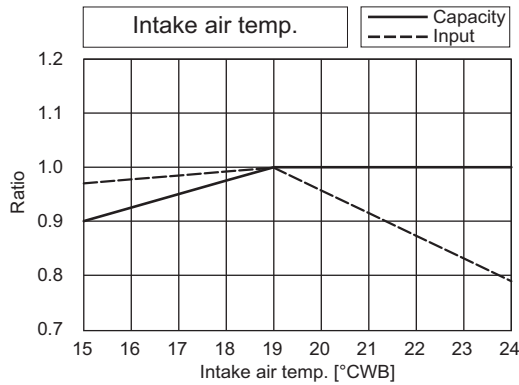
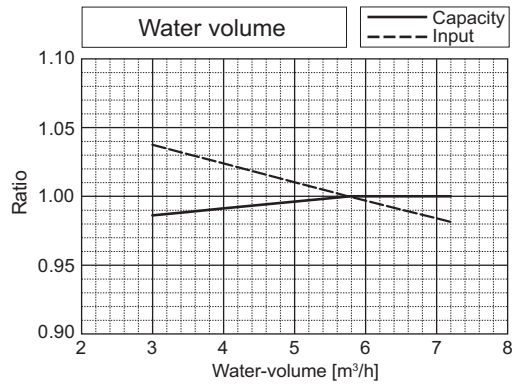
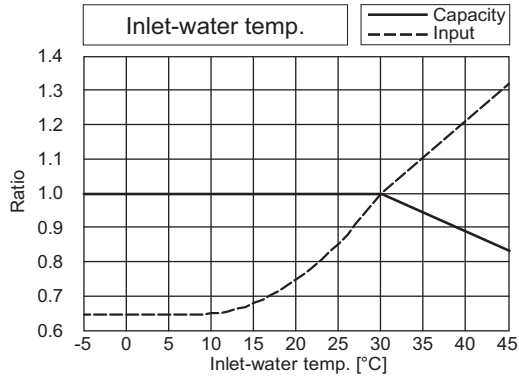
Inlet water temperature	Indoor temperature	
	Cooling	Heating
-5 to 45°C (23 to 113°F)	15 to 24°CWB (59 to 75°FWB)	15 to 27°CDB (59 to 81°FDB)

* The upper limit of the outlet water temperature is approximately 70°C (158°F) when the circulating-water flow rate is within the normal range.
 If the circulating-water flow rate goes outside the normal range, the outlet water temperature may exceed the above limit.

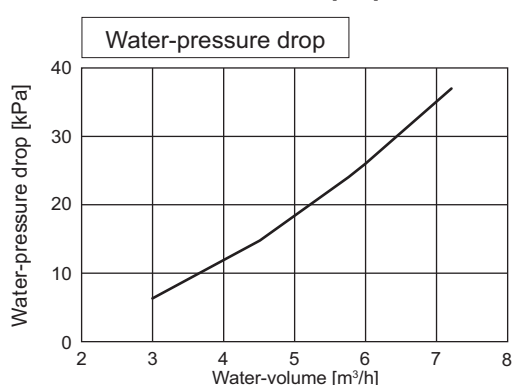
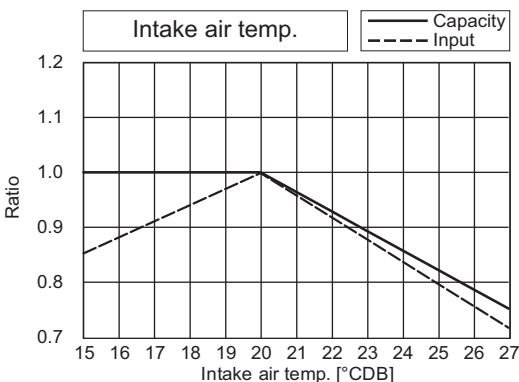
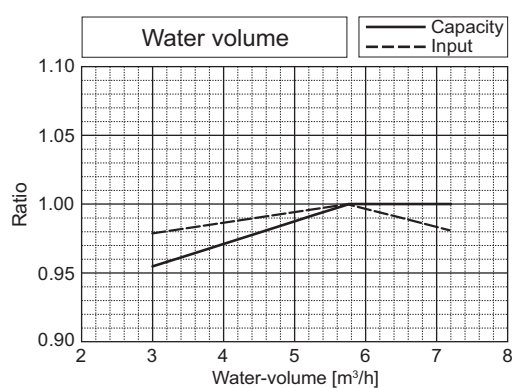
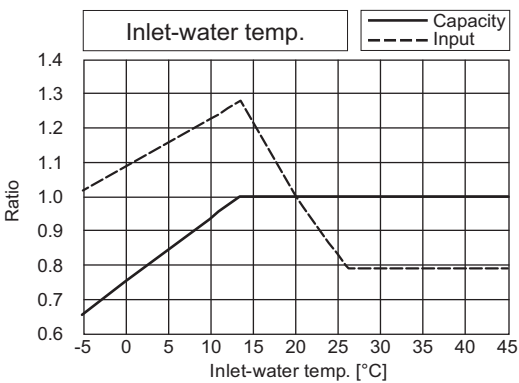
7-1. Correction by temperature

CITY MULTI could have varied capacity at different designing temperature. Using the nominal cooling/heating capacity value and the ratio below, the capacity can be observed at various temperature.

PQRY-			P72TLMU/YLMU		
Nominal Cooling Capacity	kW	21.1	Rated Cooling Capacity	kW	20.2
	BTU/h	72,000		BTU/h	69,000
Input	kW	3.61	Input	kW	(Non-Ducted) 3.34 (Ducted) 3.12

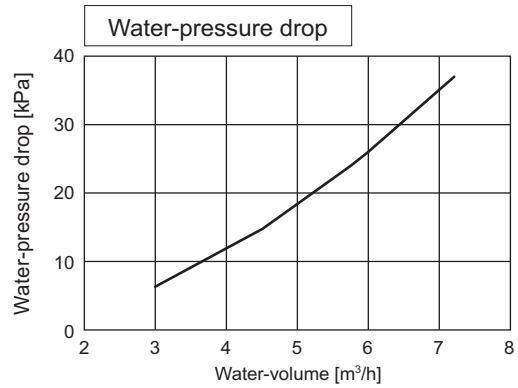
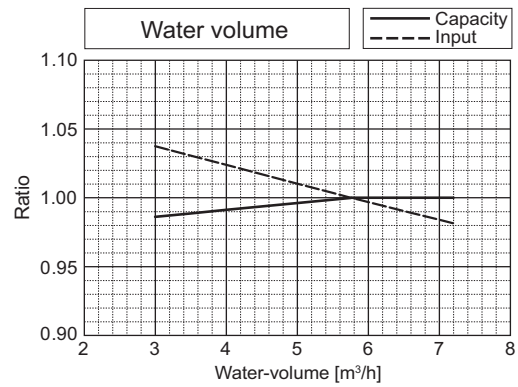
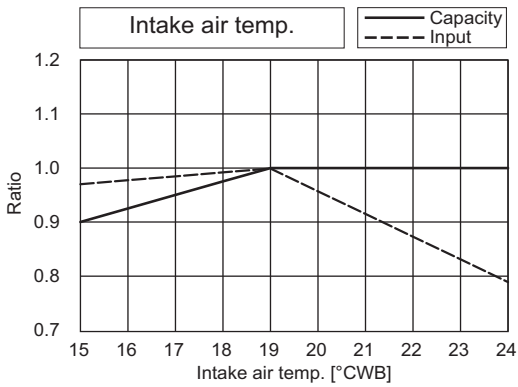
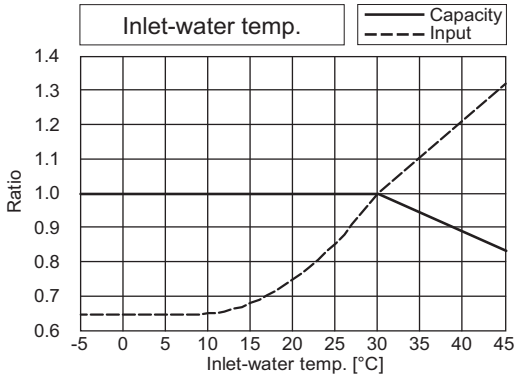


PQRY-			P72TLMU/YLMU		
Nominal Heating Capacity	kW	23.4	Rated Heating Capacity	kW	22.3
	BTU/h	80,000		BTU/h	76,000
Input	kW	4.04	Input	kW	(Non-Ducted) 3.74 (Ducted) 3.36

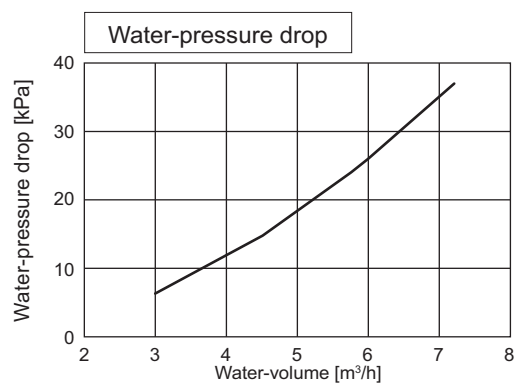
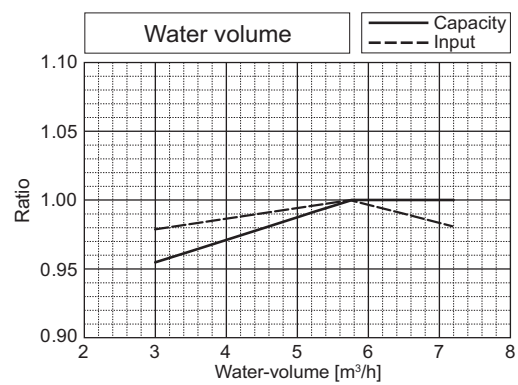
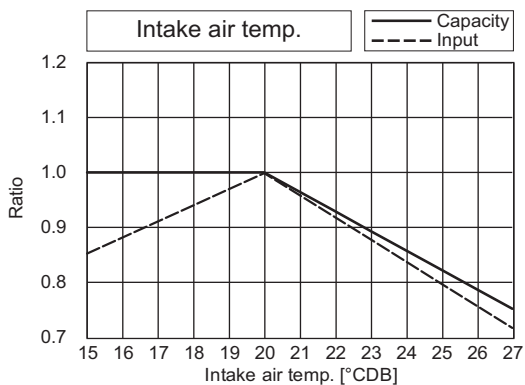
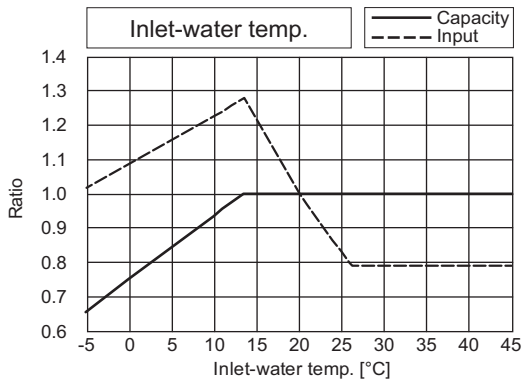


PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

PQR-			P96TLMU/YLMU		
Nominal Cooling Capacity	kW	28.1	Rated Cooling Capacity	kW	27.0
	BTU/h	96,000		BTU/h	92,000
Input	kW	5.21	Input	kW	(Non-Ducted) 4.82 (Ducted) 5.19

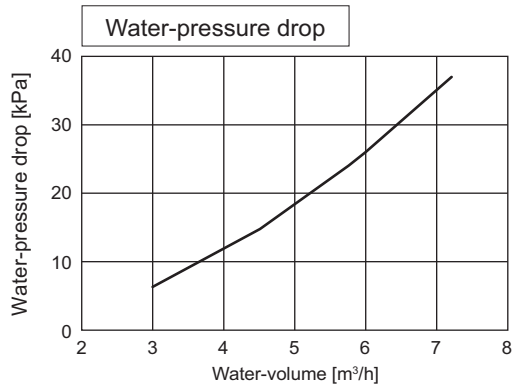
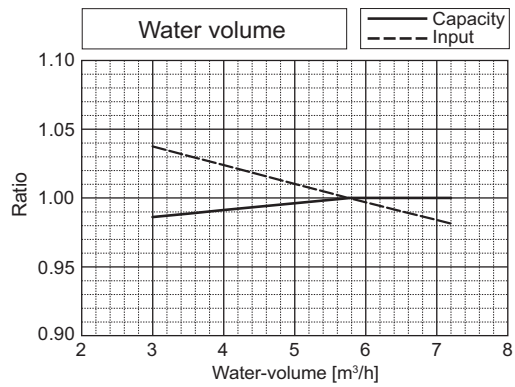
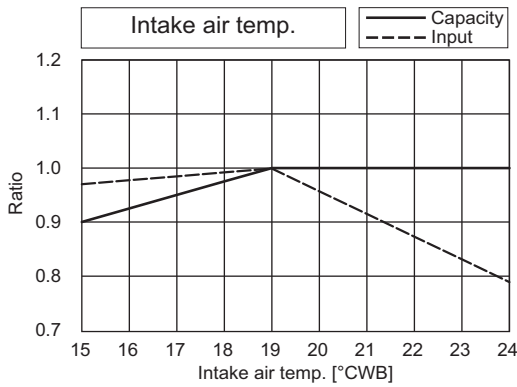
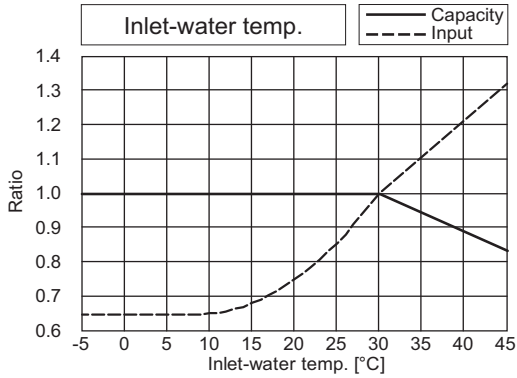


PQR-			P96TLMU/YLMU		
Nominal Heating Capacity	kW	31.7	Rated Heating Capacity	kW	30.2
	BTU/h	108,000		BTU/h	103,000
Input	kW	5.64	Input	kW	(Non-Ducted) 5.21 (Ducted) 4.48

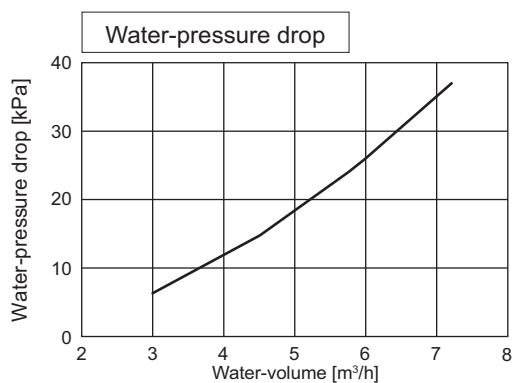
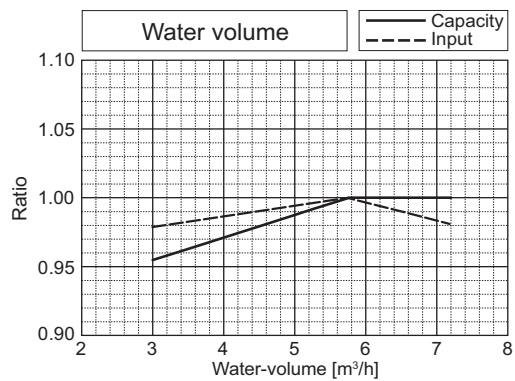
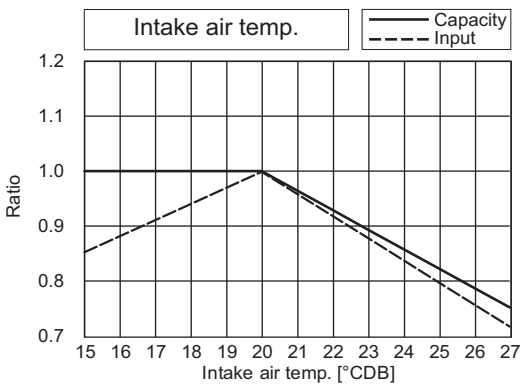
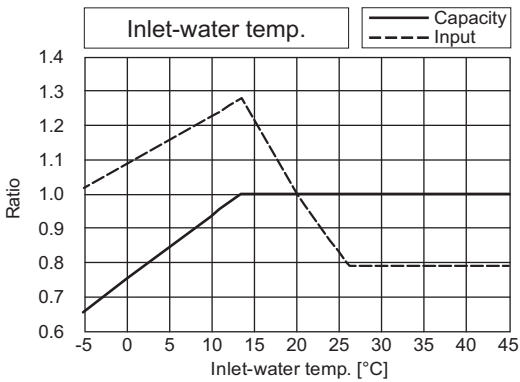


PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

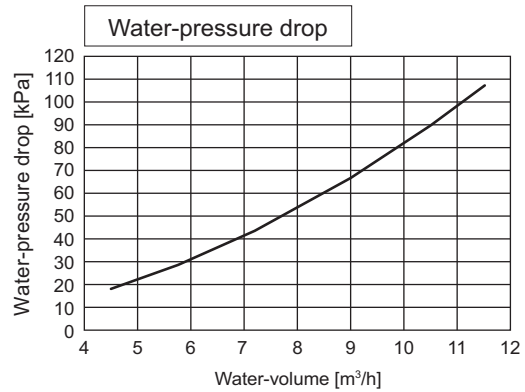
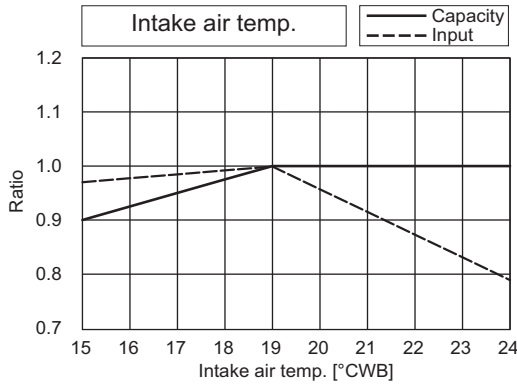
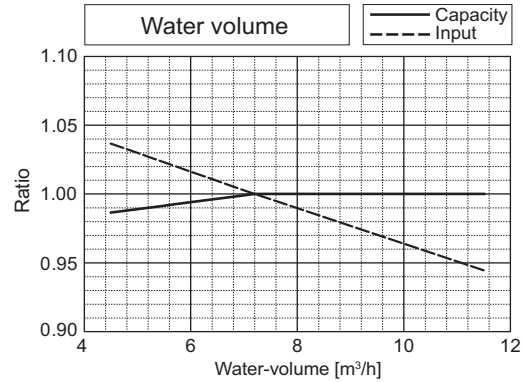
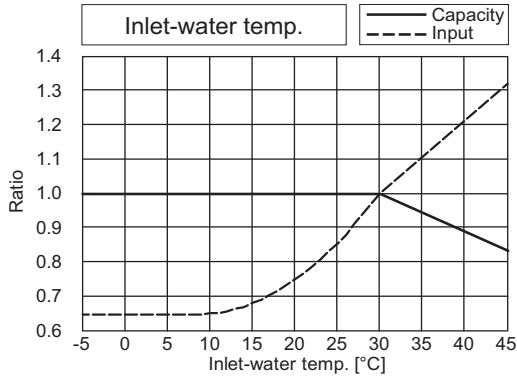
PQRY-			P120TLMU/YLMU		
Nominal Cooling Capacity	kW	35.2	Rated Cooling Capacity	kW	33.4
	BTU/h	120,000		BTU/h	114,000
Input	kW	7.51	Input	kW	(Non-Ducted) 6.95 (Ducted) 7.35



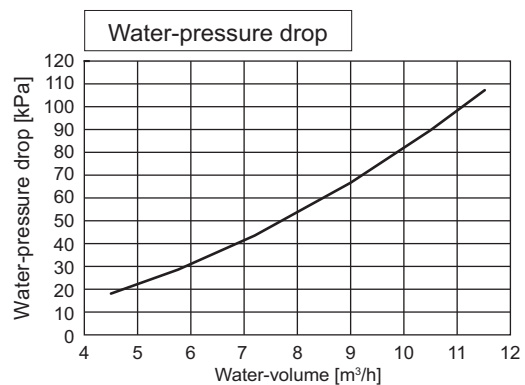
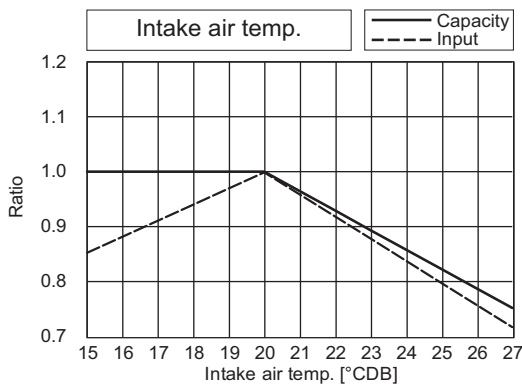
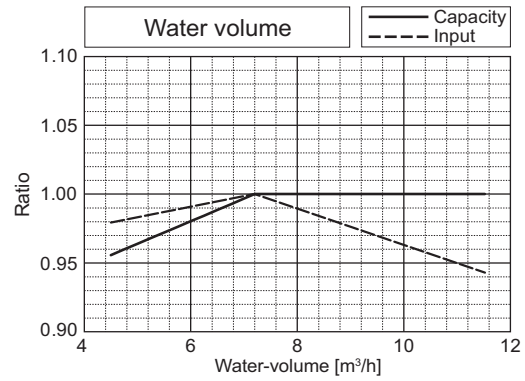
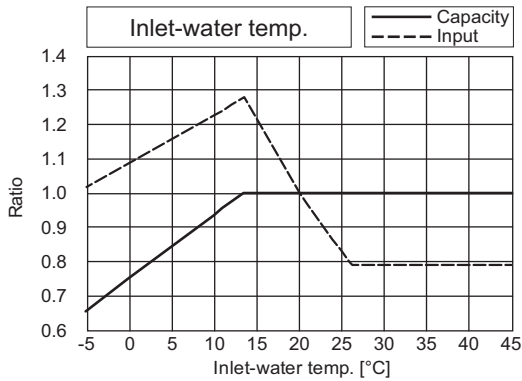
PQRY-			P120TLMU/YLMU		
Nominal Heating Capacity	kW	39.6	Rated Heating Capacity	kW	37.8
	BTU/h	135,000		BTU/h	129,000
Input	kW	7.09	Input	kW	(Non-Ducted) 6.55 (Ducted) 5.92



PQR-			P144TLMU/YLMU		
Nominal Cooling Capacity	kW	42.2	Rated Cooling Capacity	kW	40.2
	BTU/h	144,000		BTU/h	137,000
Input	kW	8.78	Input	kW	(Non-Ducted) 8.07 (Ducted) 9.98



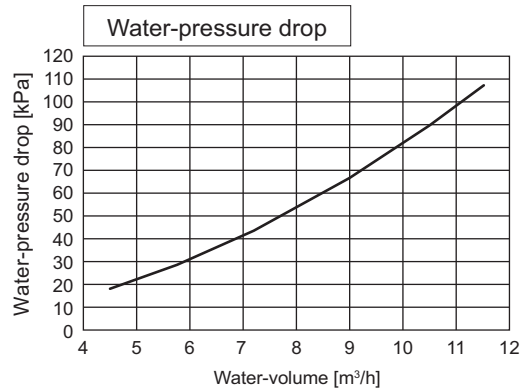
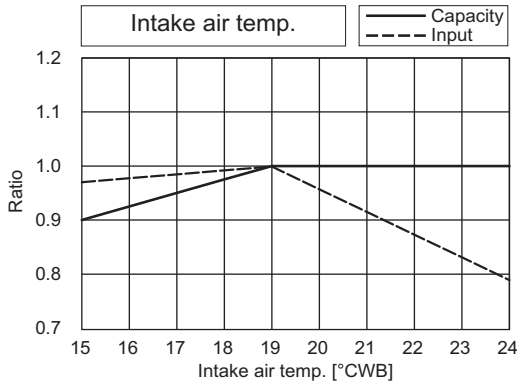
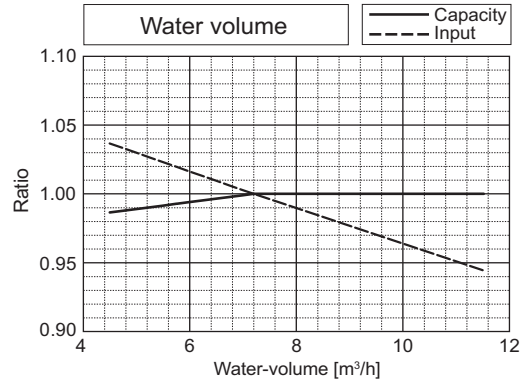
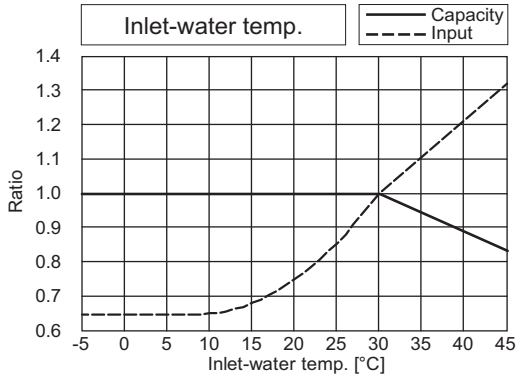
PQR-			P144TLMU/YLMU		
Nominal Heating Capacity	kW	46.9	Rated Heating Capacity	kW	44.5
	BTU/h	160,000		BTU/h	152,000
Input	kW	8.11	Input	kW	(Non-Ducted) 7.47 (Ducted) 7.90



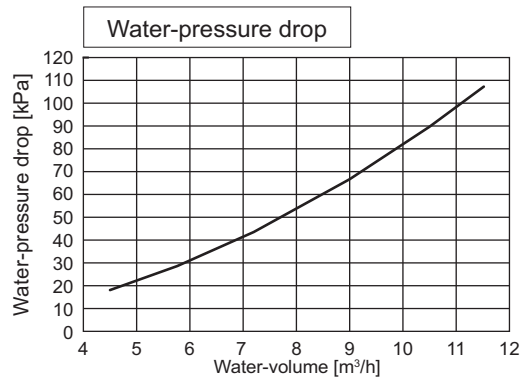
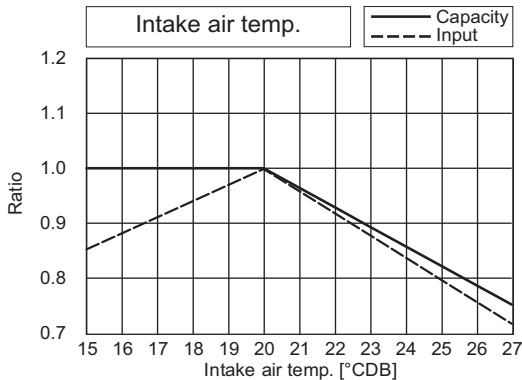
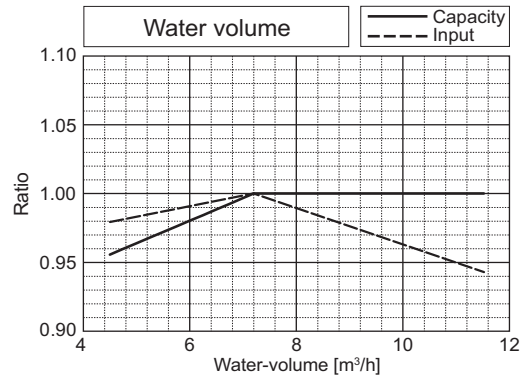
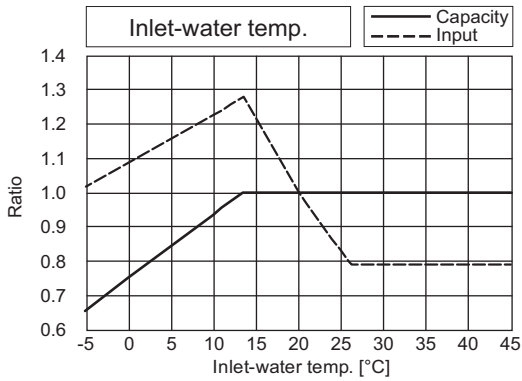
PQR-P-T(S)LMU-A1, Y(S)LMU-A1

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

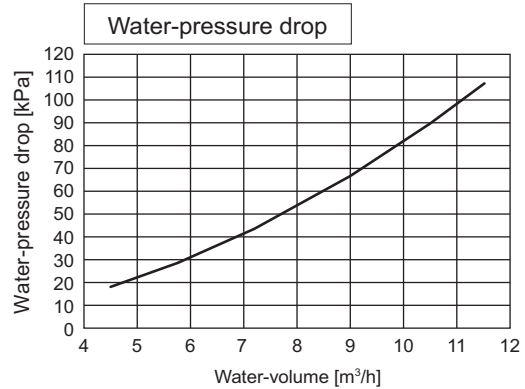
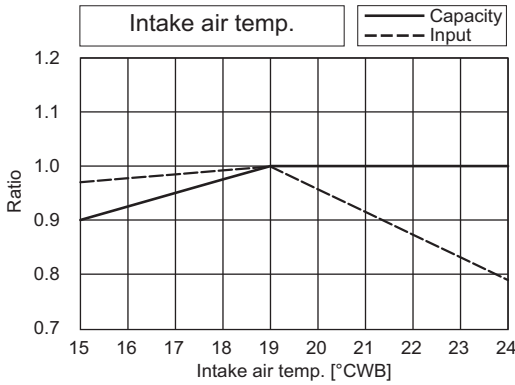
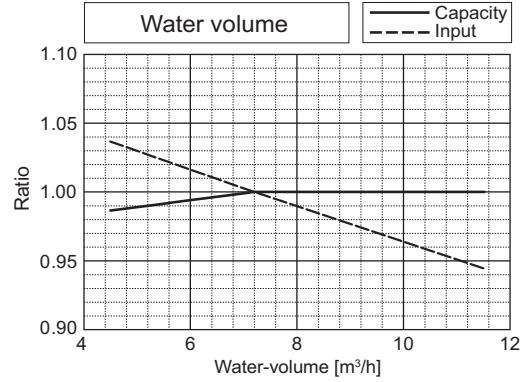
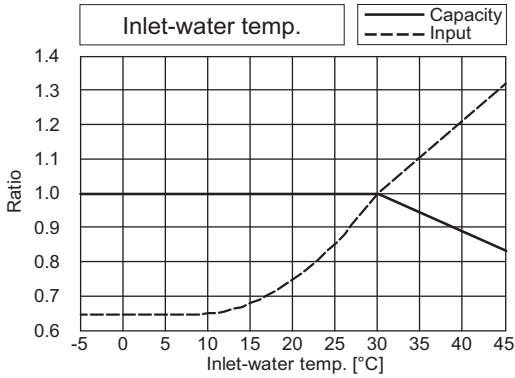
PQRY-		P168TLMU/YLMU			
Nominal Cooling Capacity	kW	49.2	Rated Cooling Capacity	kW	47.2
	BTU/h	168,000		BTU/h	161,000
Input	kW	12.05	Input	kW	(Non-Ducted) 11.10 (Ducted) 11.88



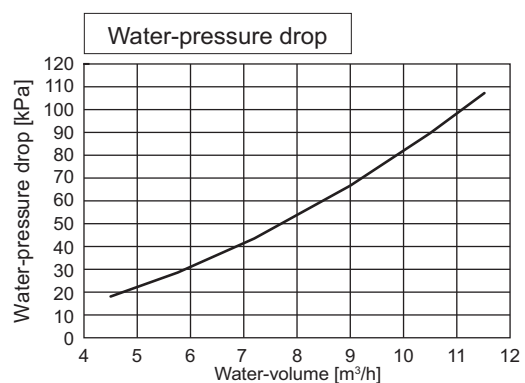
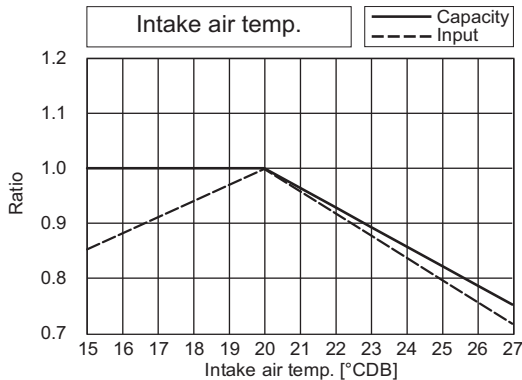
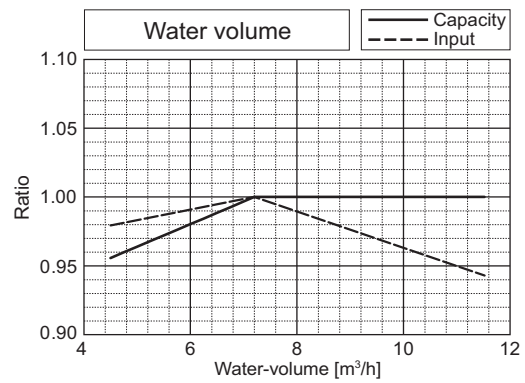
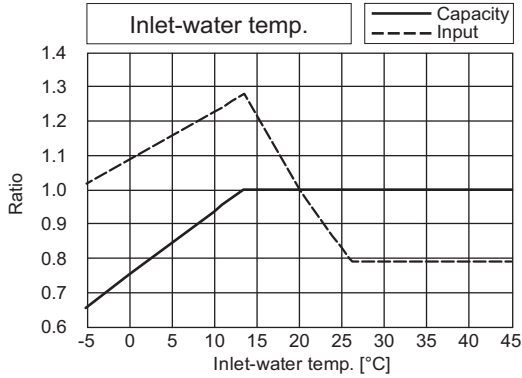
PQRY-		P168TLMU/YLMU			
Nominal Heating Capacity	kW	55.1	Rated Heating Capacity	kW	52.5
	BTU/h	188,000		BTU/h	179,000
Input	kW	9.86	Input	kW	(Non-Ducted) 9.09 (Ducted) 9.72



PQRY-			P192TLMU/YLMU		
Nominal Cooling Capacity	kW	56.3	Rated Cooling Capacity	kW	53.6
	BTU/h	192,000		BTU/h	183,000
Input	kW	15.05	Input	kW	(Non-Ducted) 13.87 (Ducted) 14.19

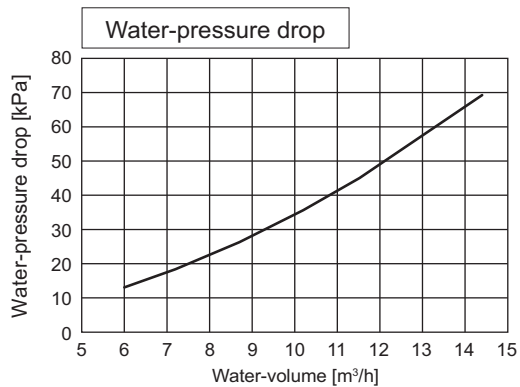
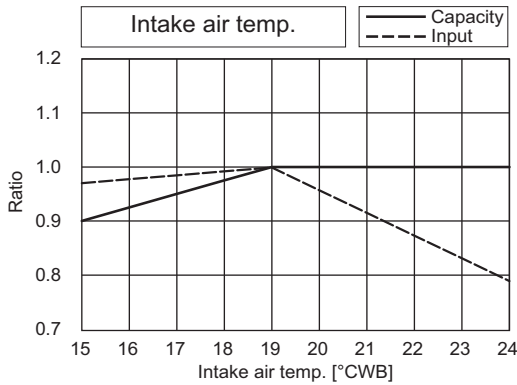
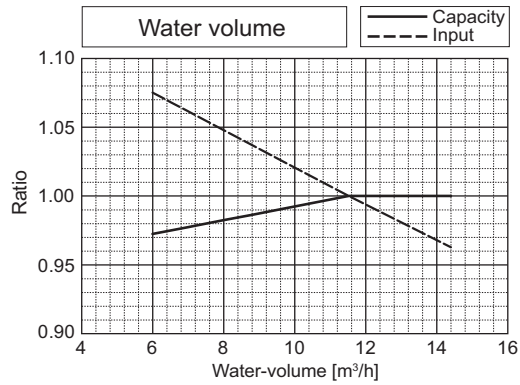
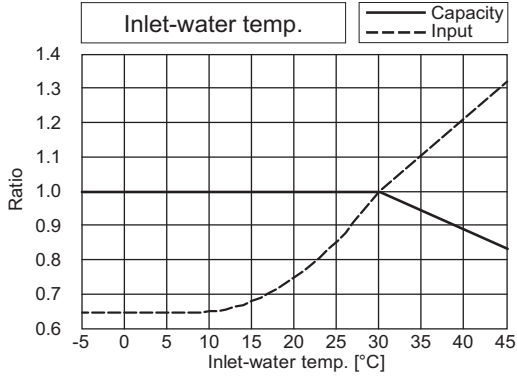


PQRY-			P192TLMU/YLMU		
Nominal Heating Capacity	kW	63.0	Rated Heating Capacity	kW	60.1
	BTU/h	215,000		BTU/h	205,000
Input	kW	11.90	Input	kW	(Non-Ducted) 10.97 (Ducted) 11.56

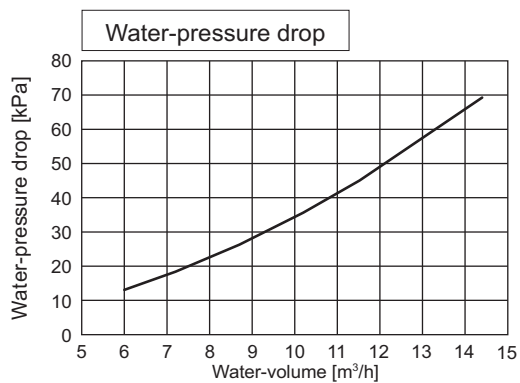
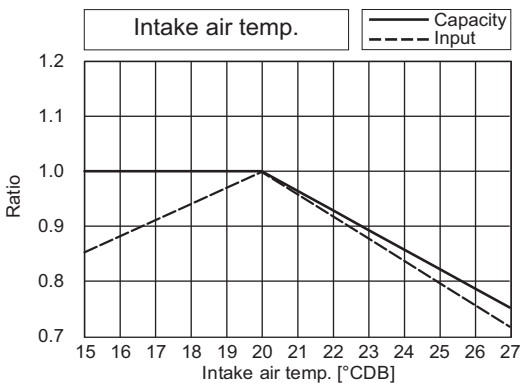
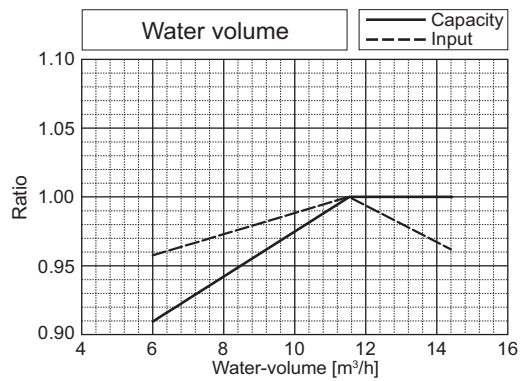
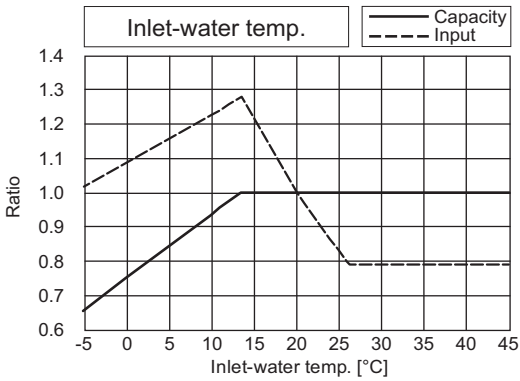


PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

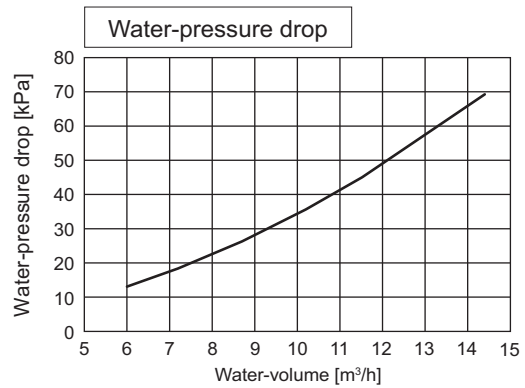
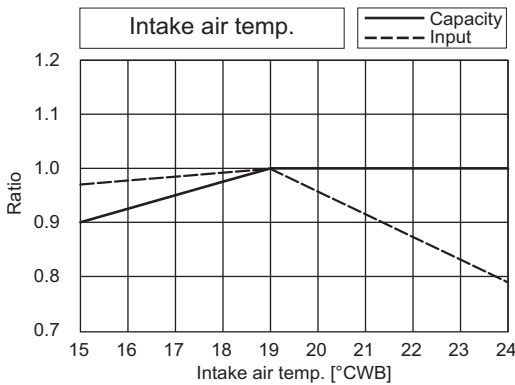
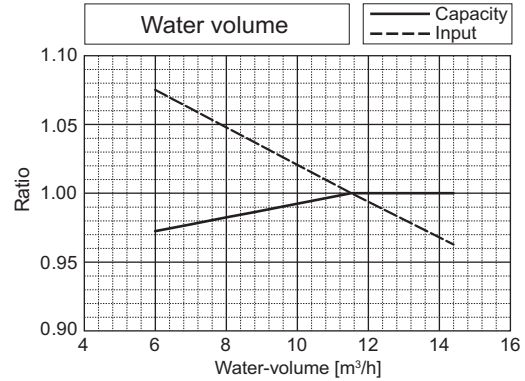
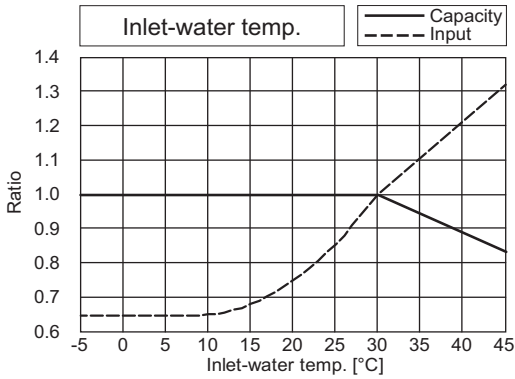
PQRY-			P216TLMU/YLMU		
Nominal Cooling Capacity	kW	63.3	Rated Cooling Capacity	kW	60.4
	BTU/h	216,000		BTU/h	206,000
Input	kW	19.23	Input	kW	(Non-Ducted) 17.72 (Ducted) 16.10



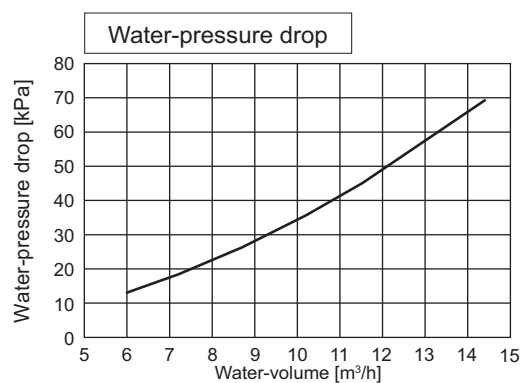
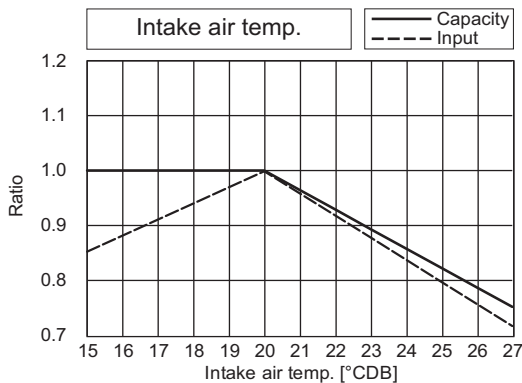
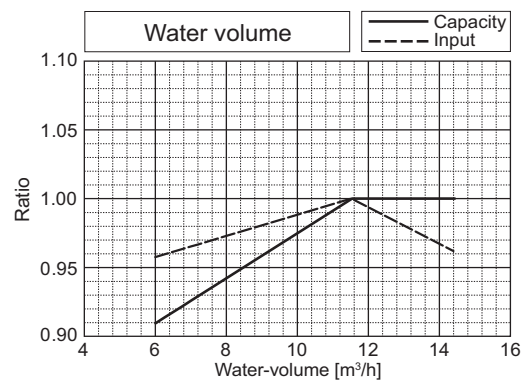
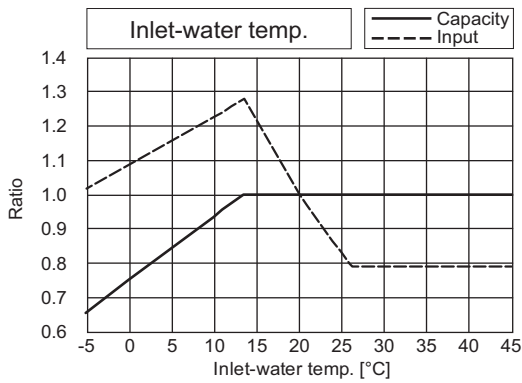
PQRY-			P216TLMU/YLMU		
Nominal Heating Capacity	kW	71.2	Rated Heating Capacity	kW	68.0
	BTU/h	243,000		BTU/h	232,000
Input	kW	13.04	Input	kW	(Non-Ducted) 12.01 (Ducted) 12.34



PQRY-			P240TLMU/YLMU		
Nominal Cooling Capacity	kW	70.3	Rated Cooling Capacity	kW	66.8
	BTU/h	240,000		BTU/h	228,000
Input	kW	21.14	Input	kW	(Non-Ducted) 19.49 (Ducted) 18.74



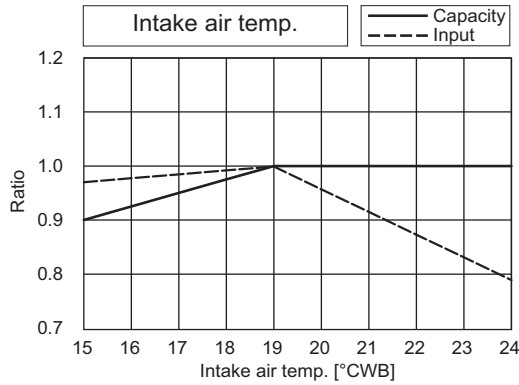
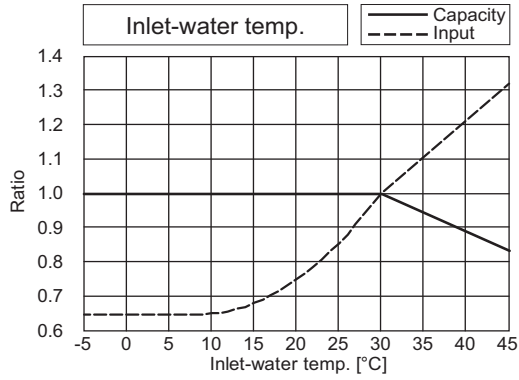
PQRY-			P240TLMU/YLMU		
Nominal Heating Capacity	kW	79.1	Rated Heating Capacity	kW	75.6
	BTU/h	270,000		BTU/h	258,000
Input	kW	15.12	Input	kW	(Non-Ducted) 13.93 (Ducted) 14.62



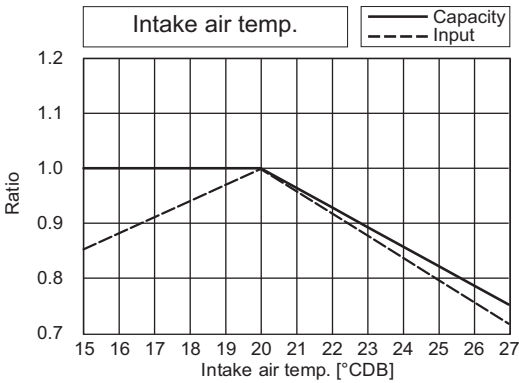
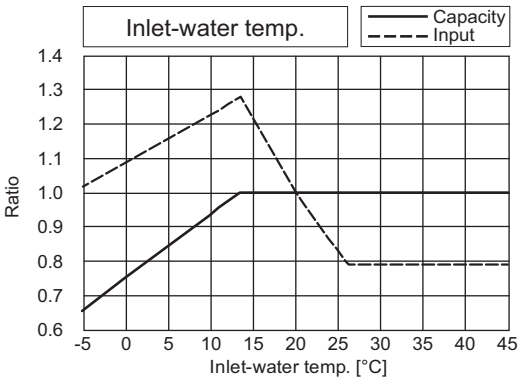
7. CAPACITY TABLES

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

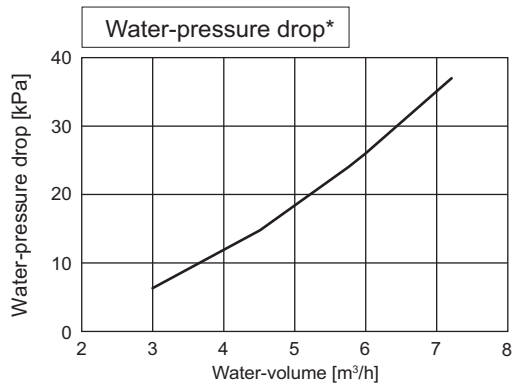
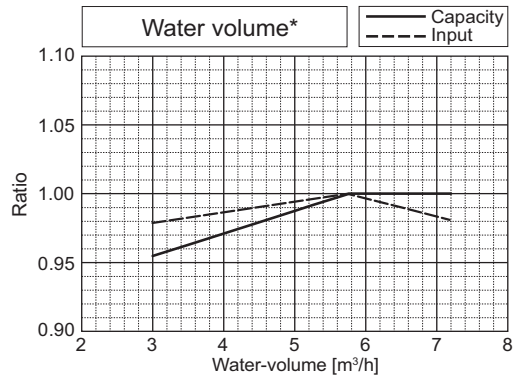
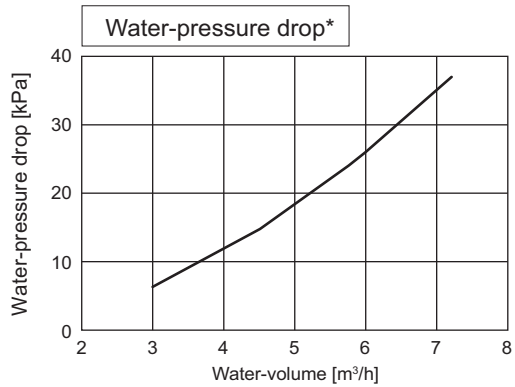
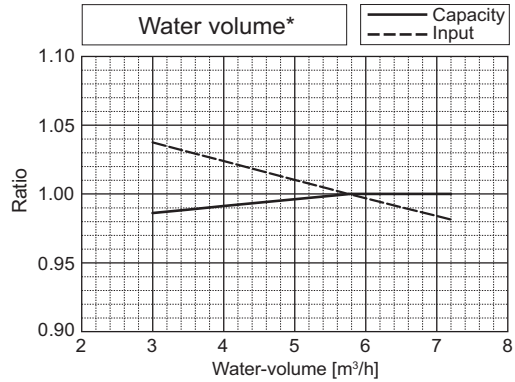
PQRY-		P144TSLMU/YSLMU			
Nominal Cooling Capacity	kW	42.2	Rated Cooling Capacity	kW	40.2
	BTU/h	144,000		BTU/h	137,000
Input	kW	7.11	Input	kW	(Non-Ducted) 6.53 (Ducted) 7.72



PQRY-		P144TSLMU/YSLMU			
Nominal Heating Capacity	kW	46.9	Rated Heating Capacity	kW	44.5
	BTU/h	160,000		BTU/h	152,000
Input	kW	7.45	Input	kW	(Non-Ducted) 6.86 (Ducted) 7.22

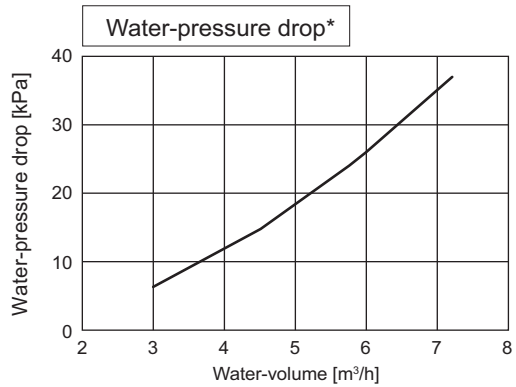
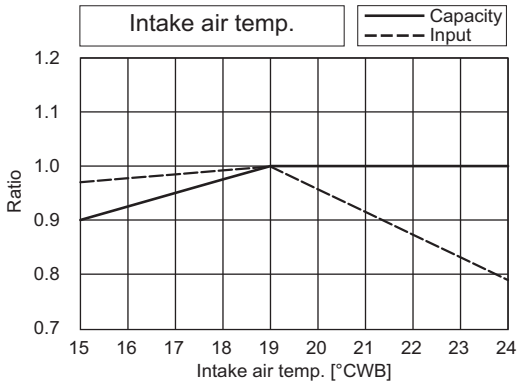
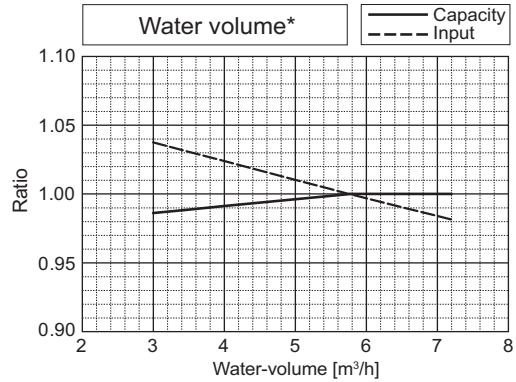
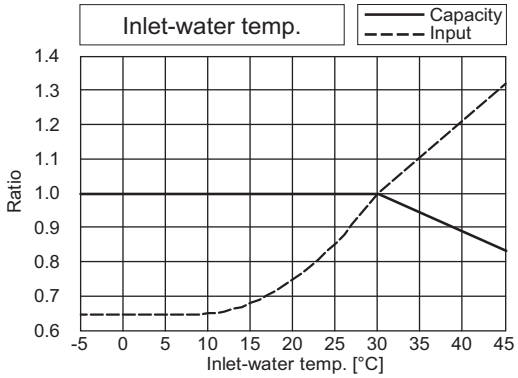


*The drawing indicates characteristic per unit.

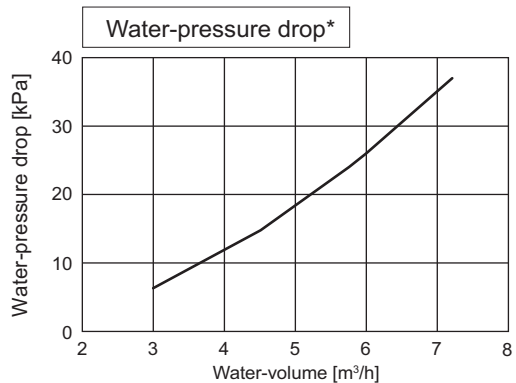
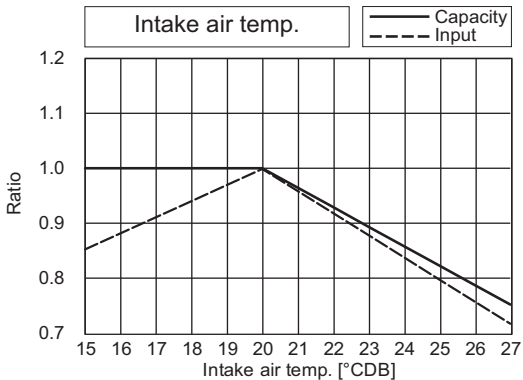
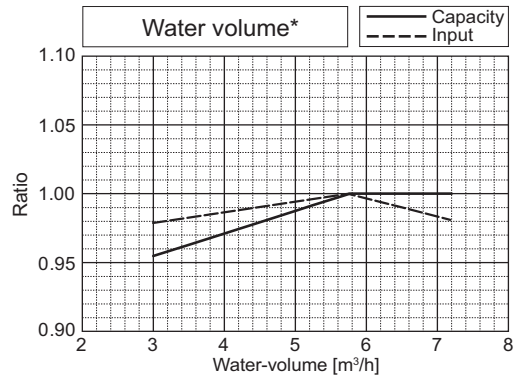
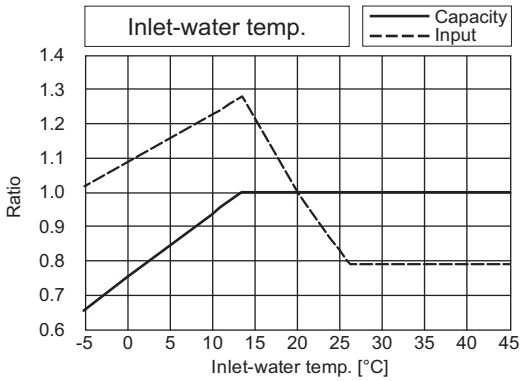


PQRY-		P168TSLMU/YSLMU			
Nominal Cooling Capacity	kW	49.2	Rated Cooling Capacity	kW	47.2
	BTU/h	168,000		BTU/h	161,000
Input	kW	9.33	Input	kW	(Non-Ducted) 8.58 (Ducted) 9.22

*The drawing indicates characteristic per unit.



PQRY-		P168TSLMU/YSLMU			
Nominal Heating Capacity	kW	55.1	Rated Heating Capacity	kW	52.5
	BTU/h	188,000		BTU/h	179,000
Input	kW	9.34	Input	kW	(Non-Ducted) 8.60 (Ducted) 8.03

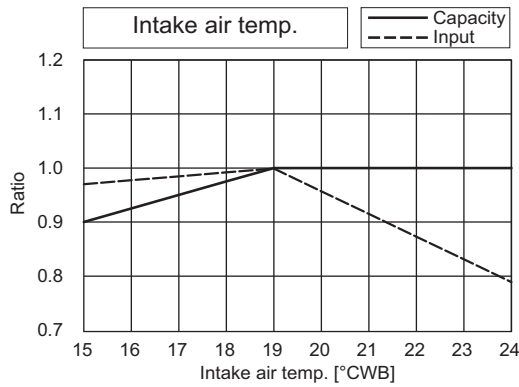
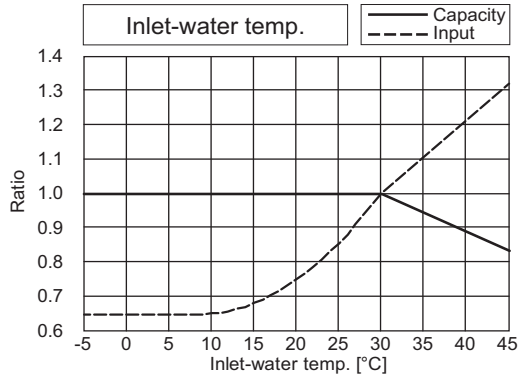


PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

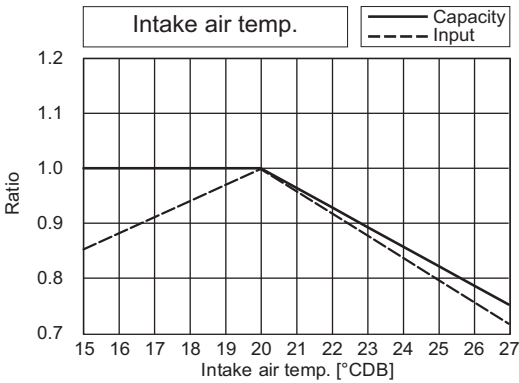
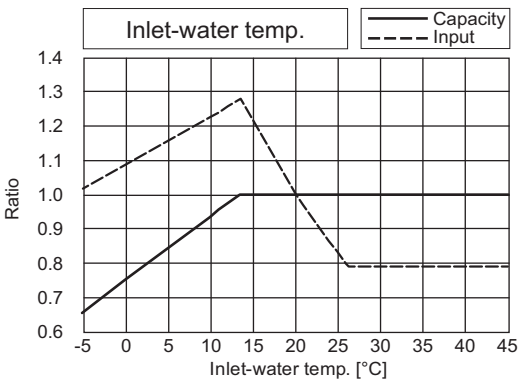
7. CAPACITY TABLES

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

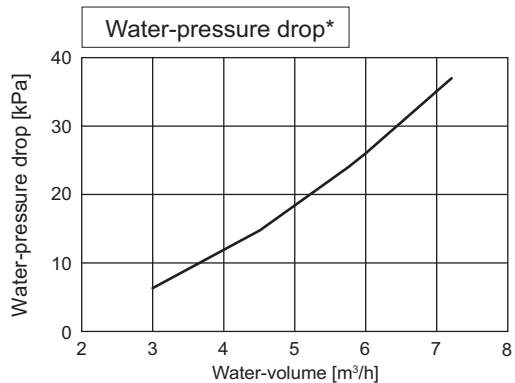
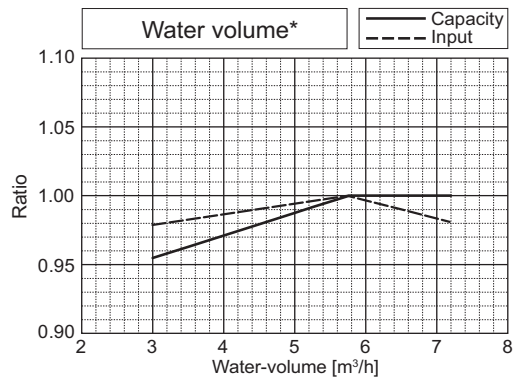
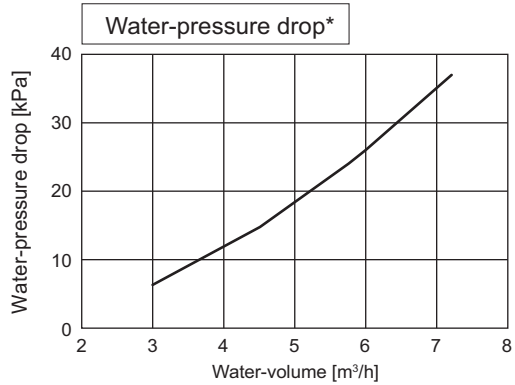
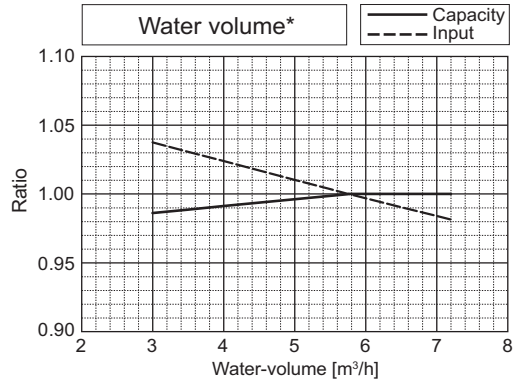
PQRY-		P192TSLMU/YSLMU			
Nominal Cooling Capacity	kW	56.3	Rated Cooling Capacity	kW	53.6
	BTU/h	192,000		BTU/h	183,000
Input	kW	11.30	Input	kW	(Non-Ducted) 10.40 (Ducted) 10.98



PQRY-		P192TSLMU/YSLMU			
Nominal Heating Capacity	kW	63.0	Rated Heating Capacity	kW	60.1
	BTU/h	215,000		BTU/h	205,000
Input	kW	11.02	Input	kW	(Non-Ducted) 10.16 (Ducted) 8.90

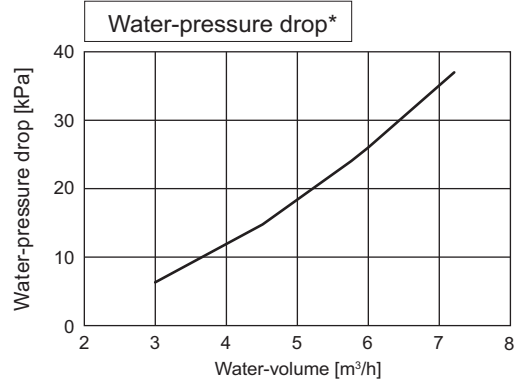
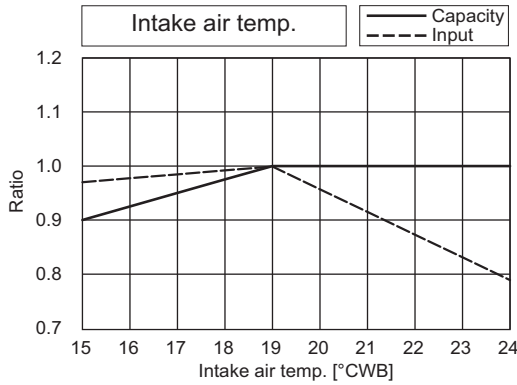
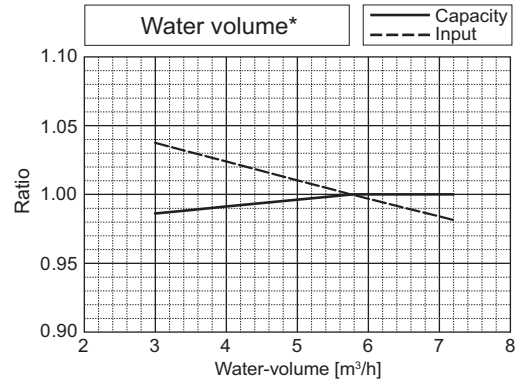
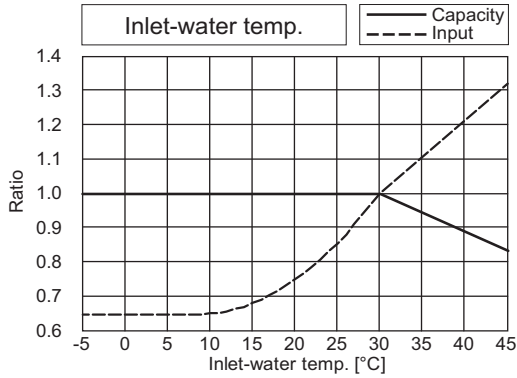


*The drawing indicates characteristic per unit.

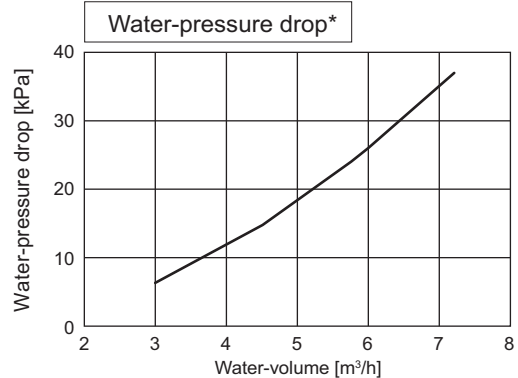
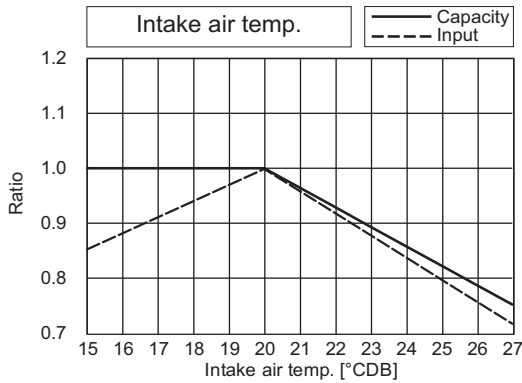
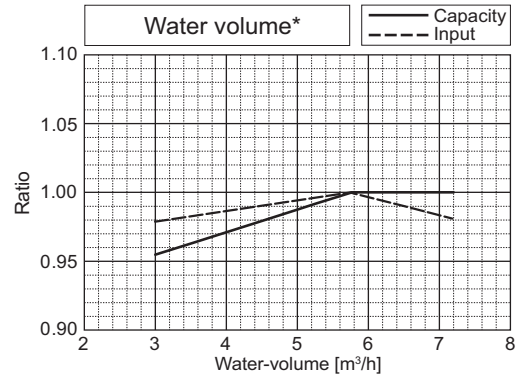
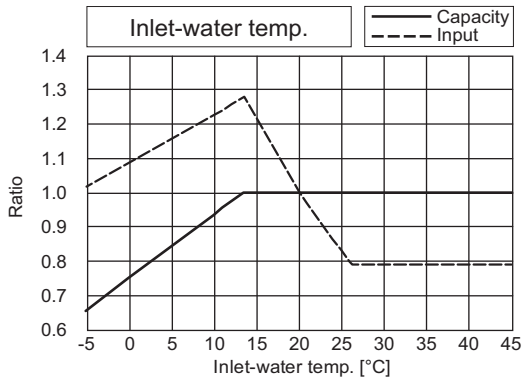


PQRY-		P216TSLMU/YSLMU			
Nominal Cooling Capacity	kW	63.3	Rated Cooling Capacity	kW	60.4
	BTU/h	216,000		BTU/h	206,000
Input	kW	14.03	Input	kW	(Non-Ducted) 12.93 (Ducted) 13.24

*The drawing indicates characteristic per unit.



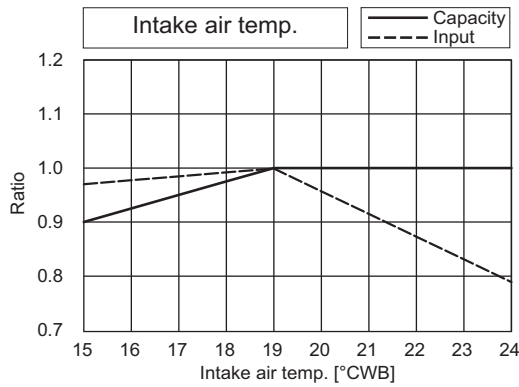
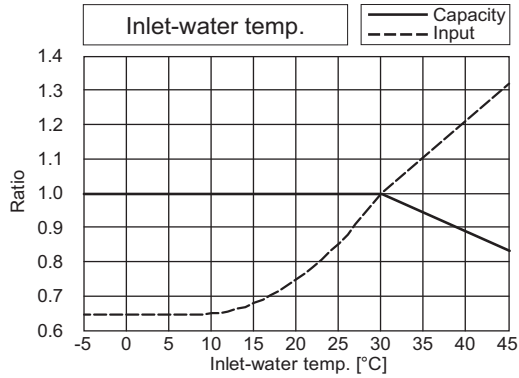
PQRY-		P216TSLMU/YSLMU			
Nominal Heating Capacity	kW	71.2	Rated Heating Capacity	kW	68.0
	BTU/h	243,000		BTU/h	232,000
Input	kW	12.88	Input	kW	(Non-Ducted) 11.88 (Ducted) 10.35



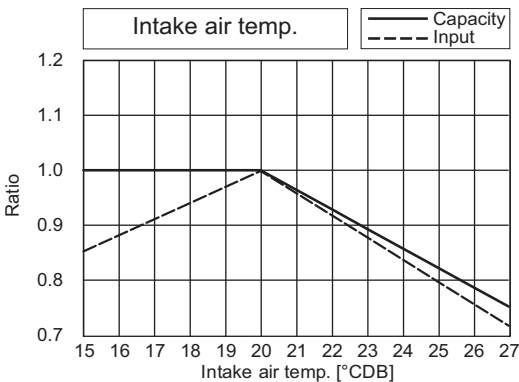
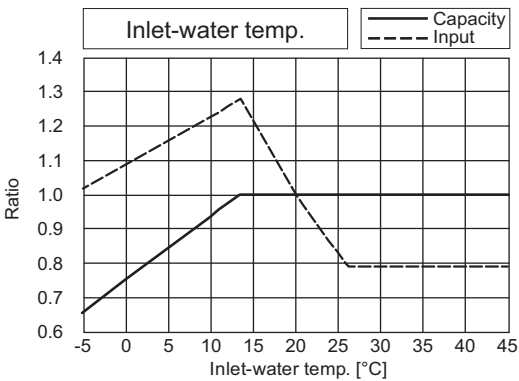
PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

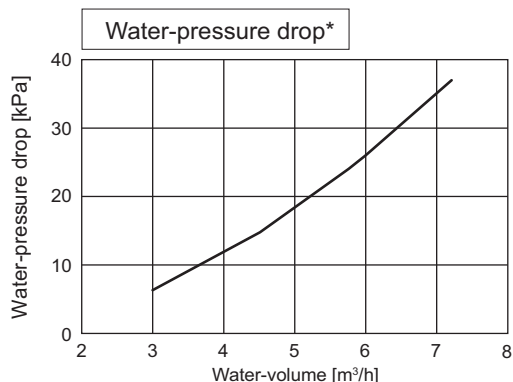
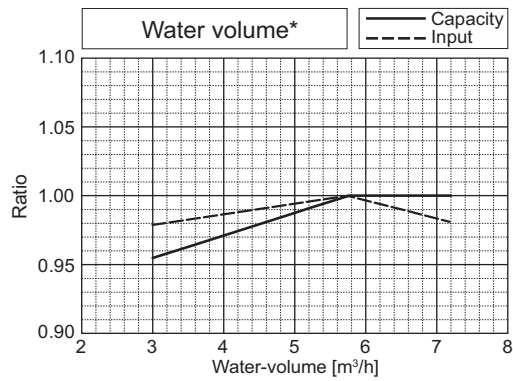
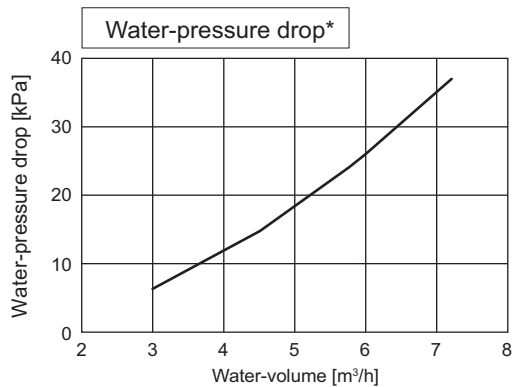
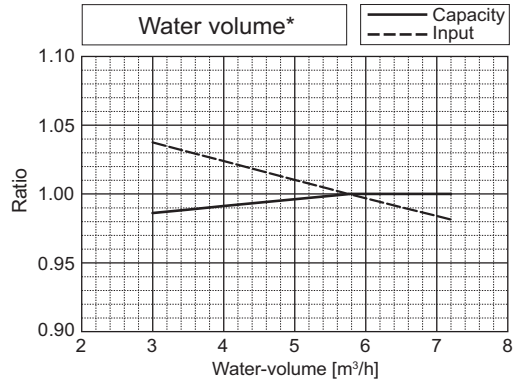
PQRY-		P240TSLMU/YSLMU			
Nominal Cooling Capacity	kW	70.3	Rated Cooling Capacity	kW	66.8
	BTU/h	240,000		BTU/h	228,000
Input	kW	16.89	Input	kW	(Non-Ducted) 15.57 (Ducted) 16.15



PQRY-		P240TSLMU/YSLMU			
Nominal Heating Capacity	kW	79.1	Rated Heating Capacity	kW	75.6
	BTU/h	270,000		BTU/h	258,000
Input	kW	14.58	Input	kW	(Non-Ducted) 13.45 (Ducted) 12.02

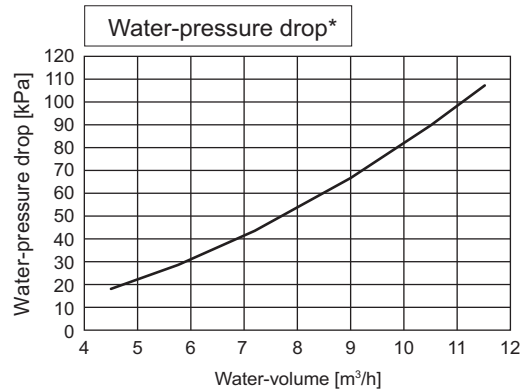
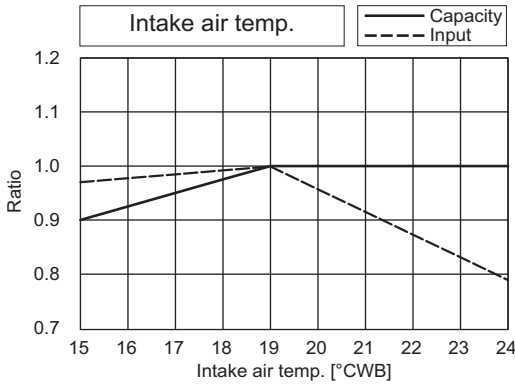
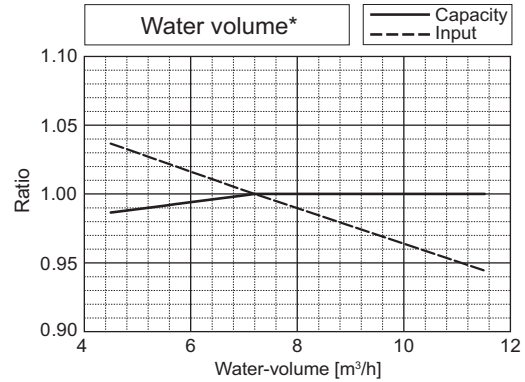
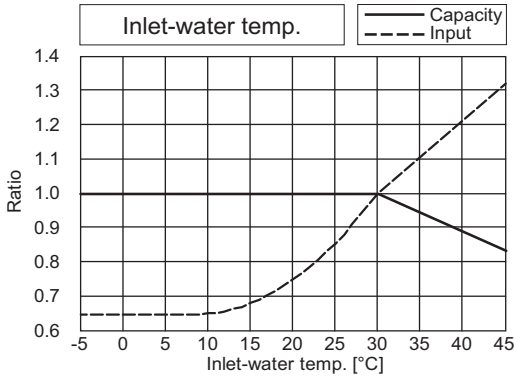


*The drawing indicates characteristic per unit.

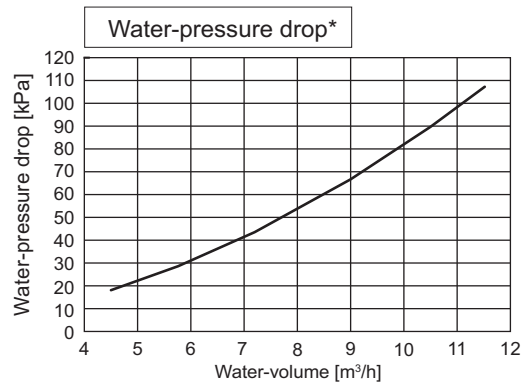
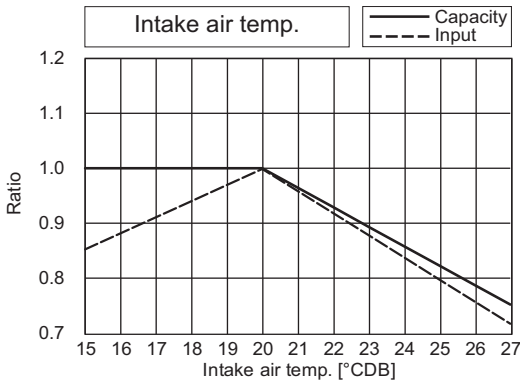
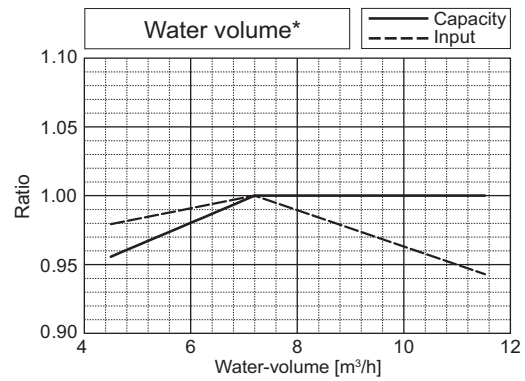
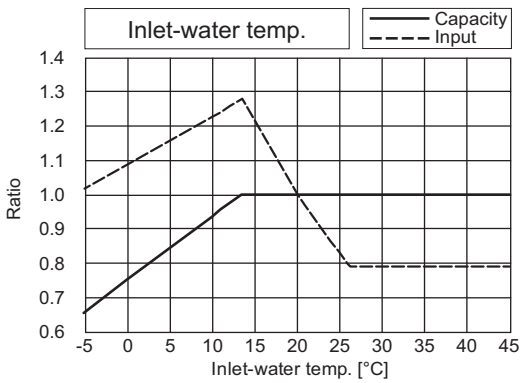


PQRY-		P288TSLMU/YSLMU			
Nominal Cooling Capacity	kW	84.4	Rated Cooling Capacity	kW	80.6
	BTU/h	288,000		BTU/h	275,000
Input	kW	20.42	Input	kW	(Non-Ducted) 18.82 (Ducted) 21.43

*The drawing indicates characteristic per unit.

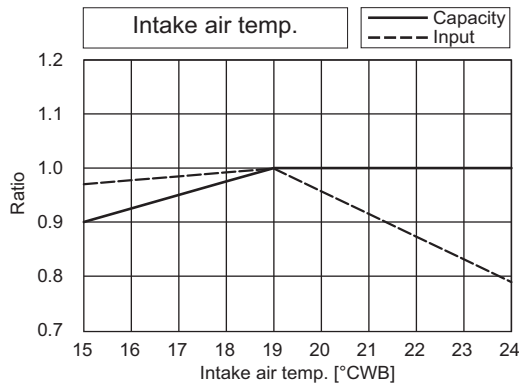
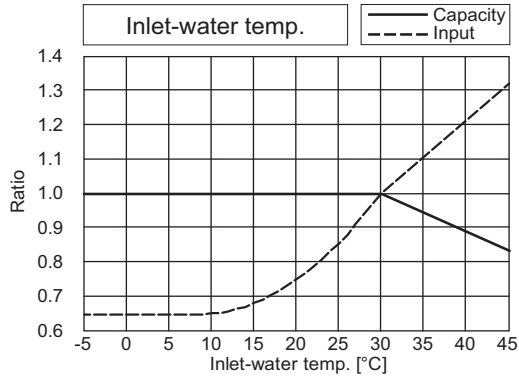


PQRY-		P288TSLMU/YSLMU			
Nominal Heating Capacity	kW	94.7	Rated Heating Capacity	kW	90.3
	BTU/h	323,000		BTU/h	308,000
Input	kW	17.50	Input	kW	(Non-Ducted) 16.13 (Ducted) 16.05

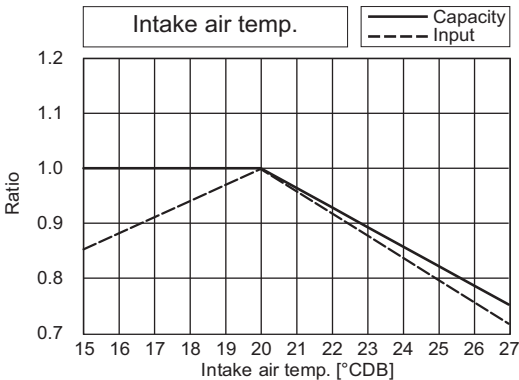
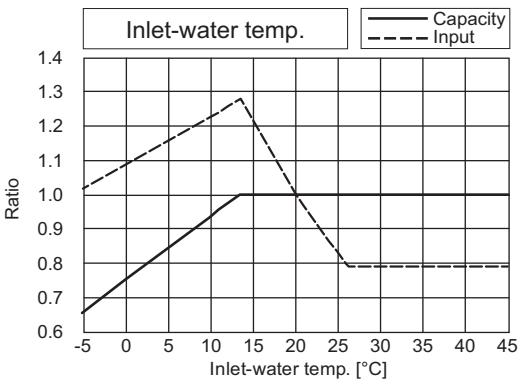


PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

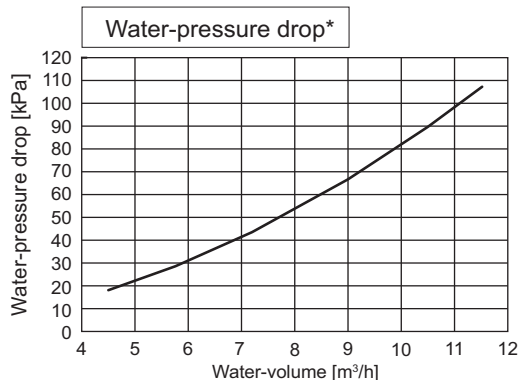
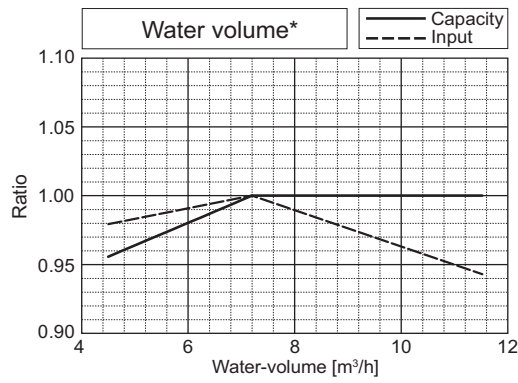
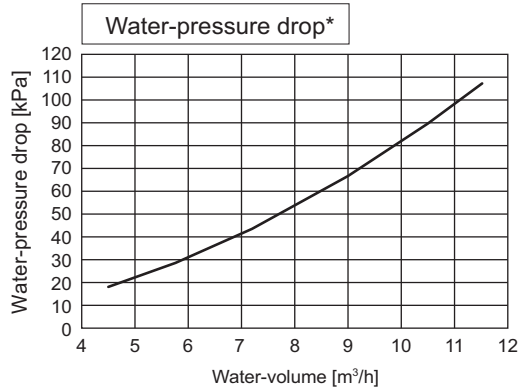
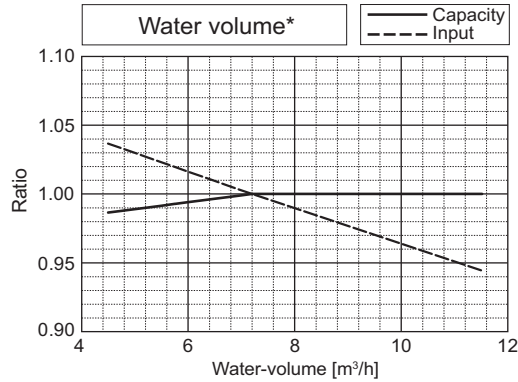
PQRY-		P312TSLMU/YSLMU			
Nominal Cooling Capacity	kW	91.4	Rated Cooling Capacity	kW	87.0
	BTU/h	312,000	BTU/h	297,000	
Input	kW	23.41	Input	kW	(Non-Ducted) 21.59 (Ducted) 23.67



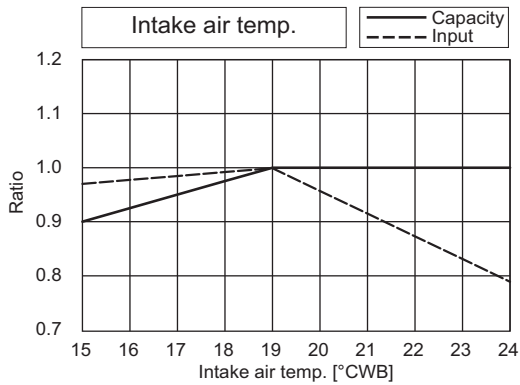
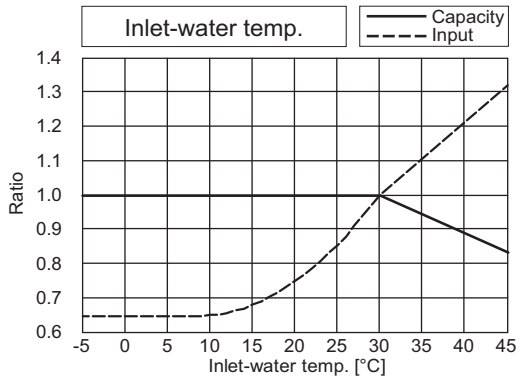
PQRY-		P312TSLMU/YSLMU			
Nominal Heating Capacity	kW	102.6	Rated Heating Capacity	kW	97.9
	BTU/h	350,000	BTU/h	334,000	
Input	kW	19.11	Input	kW	(Non-Ducted) 17.62 (Ducted) 17.96



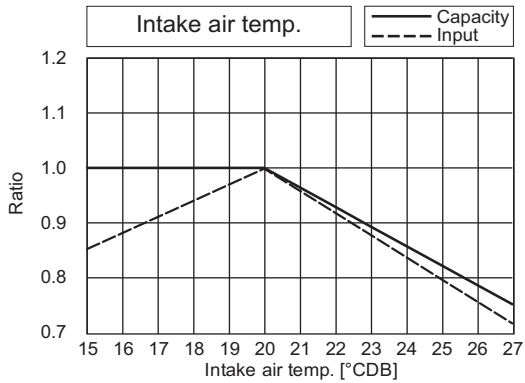
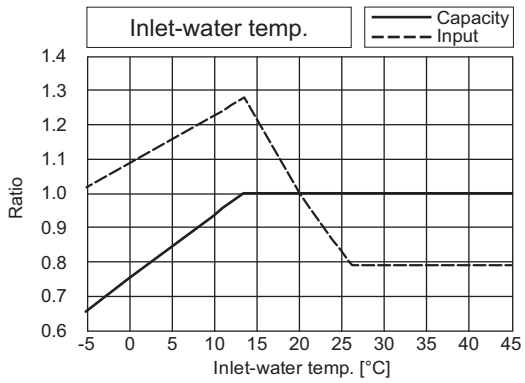
*The drawing indicates characteristic per unit.



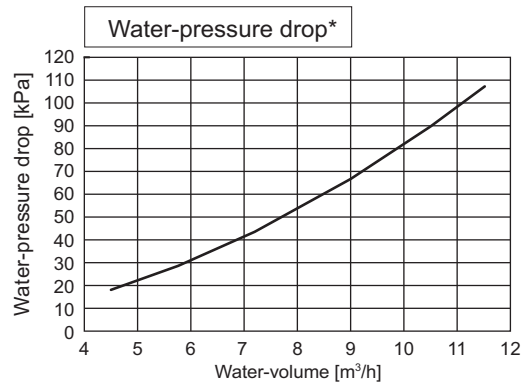
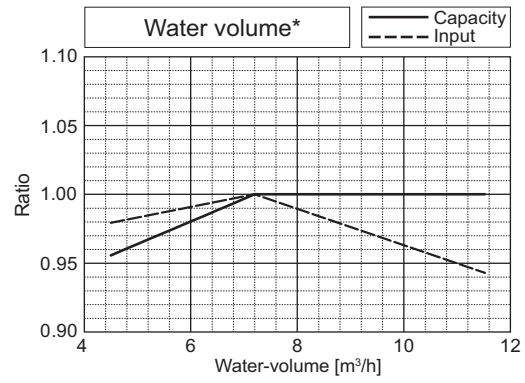
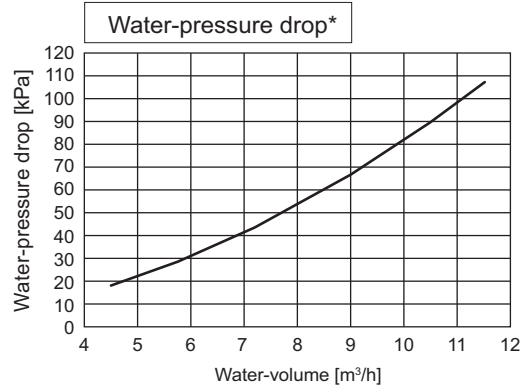
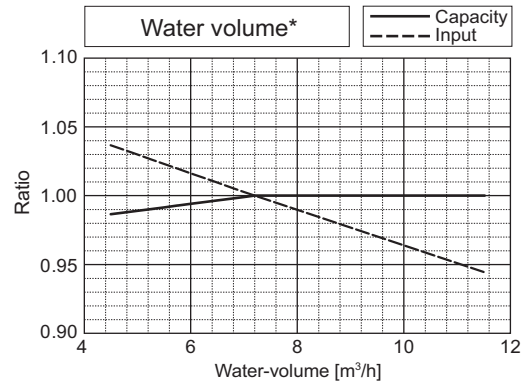
PQRY-		P336TSLMU/YSLMU			
Nominal Cooling Capacity	kW	98.5	Rated Cooling Capacity	kW	93.8
	BTU/h	336,000		BTU/h	320,000
Input	kW	26.84	Input	kW	(Non-Ducted) 24.76 (Ducted) 25.85



PQRY-		P336TSLMU/YSLMU			
Nominal Heating Capacity	kW	110.8	Rated Heating Capacity	kW	105.8
	BTU/h	378,000		BTU/h	361,000
Input	kW	20.77	Input	kW	(Non-Ducted) 19.16 (Ducted) 20.05

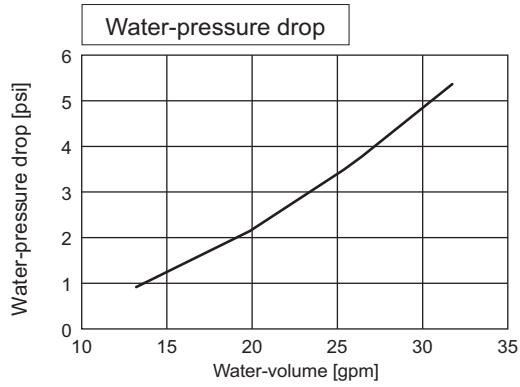
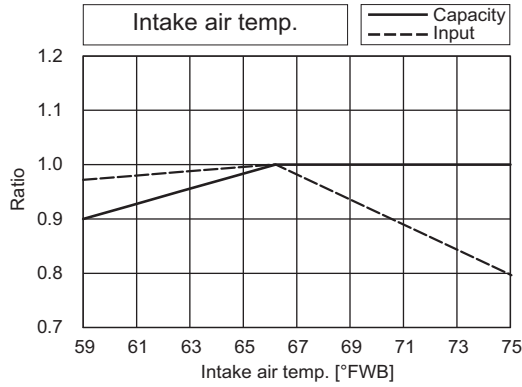
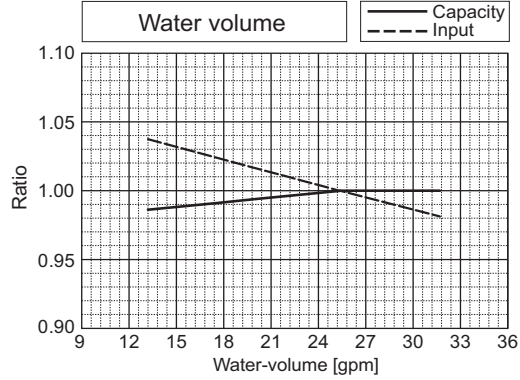
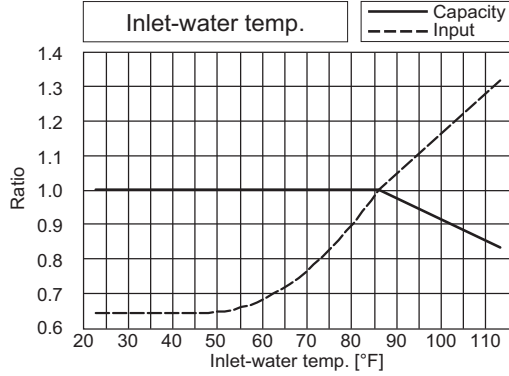


*The drawing indicates characteristic per unit.

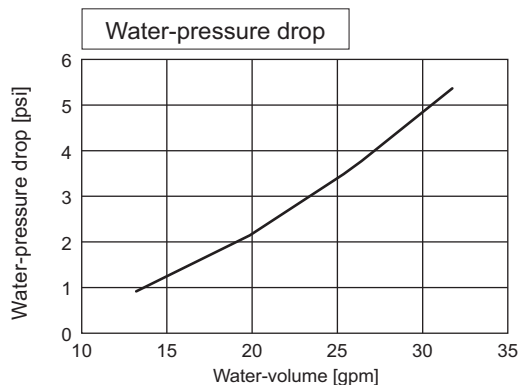
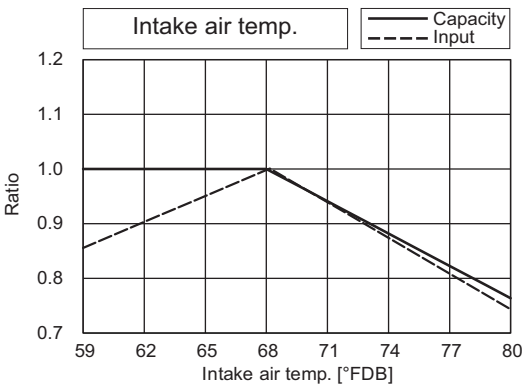
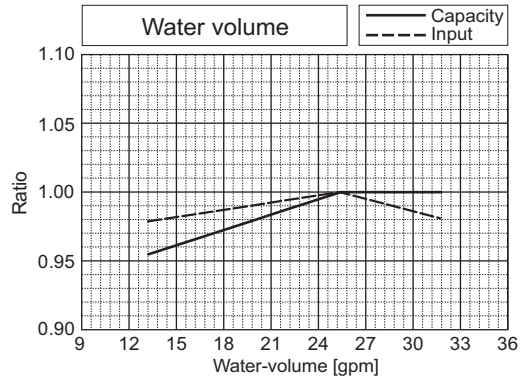
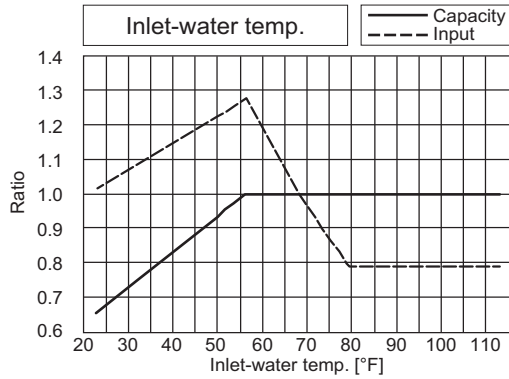


PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

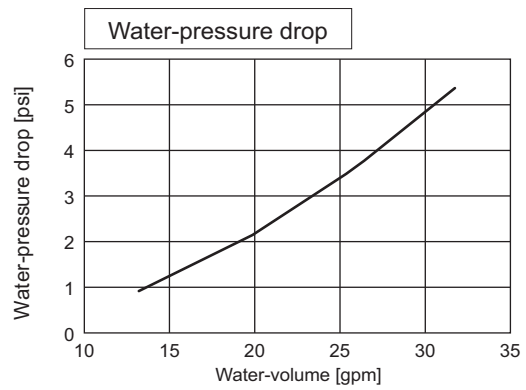
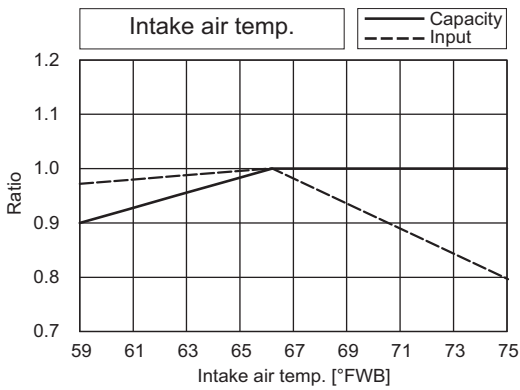
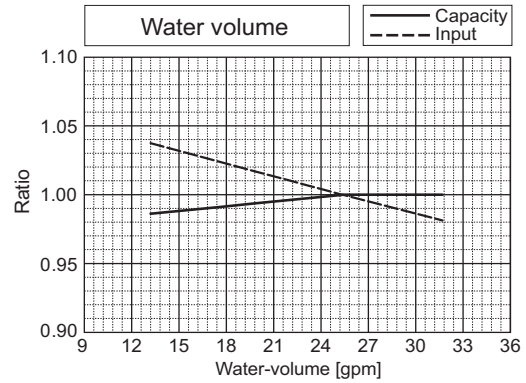
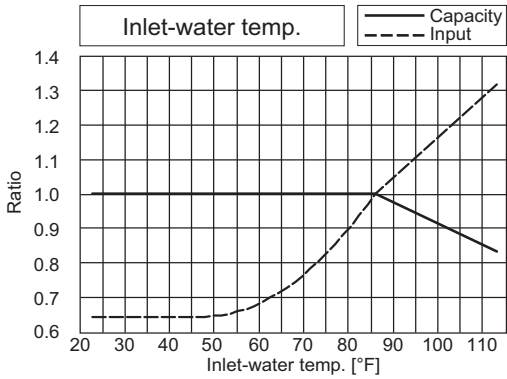
PQRY-			P72TLMU/YLMU		
Nominal Cooling Capacity	kW	21.1	Rated Cooling Capacity	kW	20.2
	BTU/h	72,000		BTU/h	69,000
Input	kW	3.61	Input	kW	(Non-Ducted) 3.34 (Ducted) 3.12



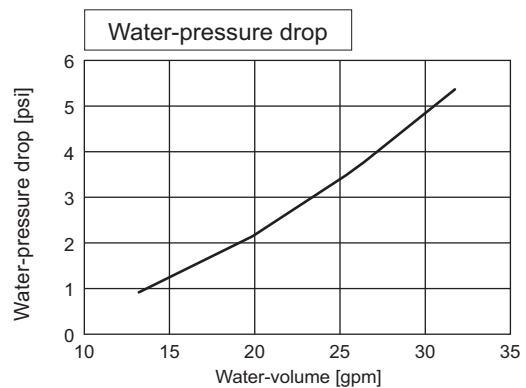
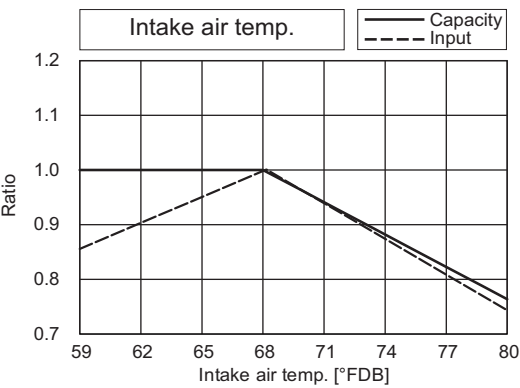
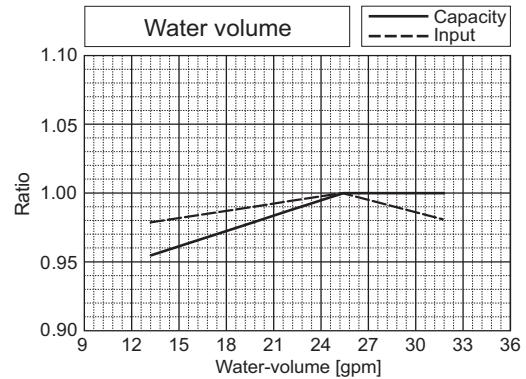
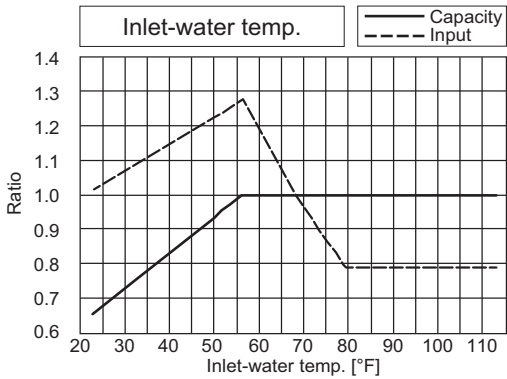
PQRY-			P72TLMU/YLMU		
Nominal Heating Capacity	kW	23.4	Rated Heating Capacity	kW	22.3
	BTU/h	80,000		BTU/h	76,000
Input	kW	4.04	Input	kW	(Non-Ducted) 3.74 (Ducted) 3.36



PQRY-		P96TLMU/YLMU			
Nominal Cooling Capacity	kW	28.1	Rated Cooling Capacity	kW	27.0
	BTU/h	96,000		BTU/h	92,000
Input	kW	5.21	Input	kW	(Non-Ducted) 4.82 (Ducted) 5.19



PQRY-		P96TLMU/YLMU			
Nominal Heating Capacity	kW	31.7	Rated Heating Capacity	kW	30.2
	BTU/h	108,000		BTU/h	103,000
Input	kW	5.64	Input	kW	(Non-Ducted) 5.21 (Ducted) 4.48

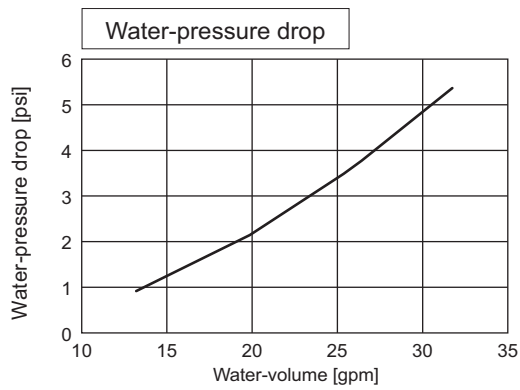
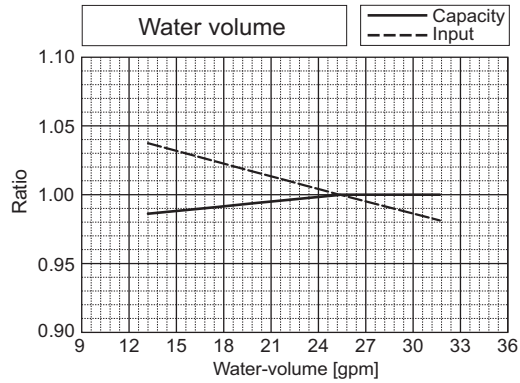
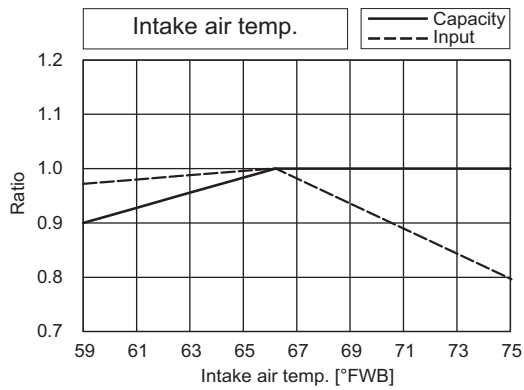
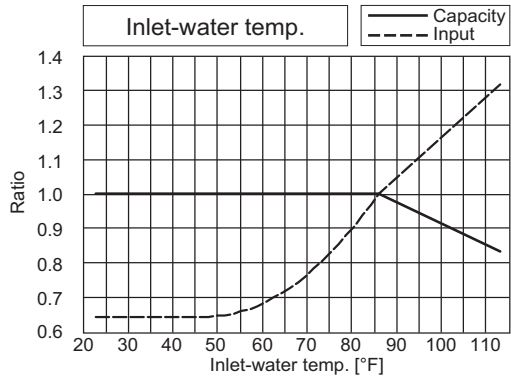


PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

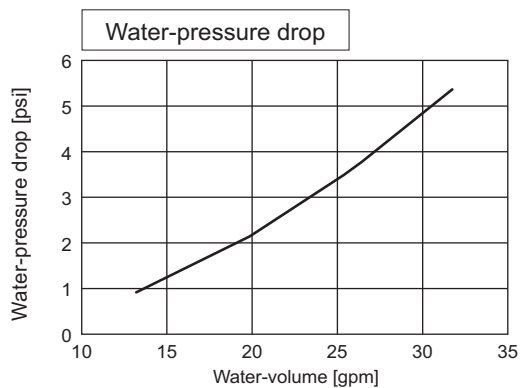
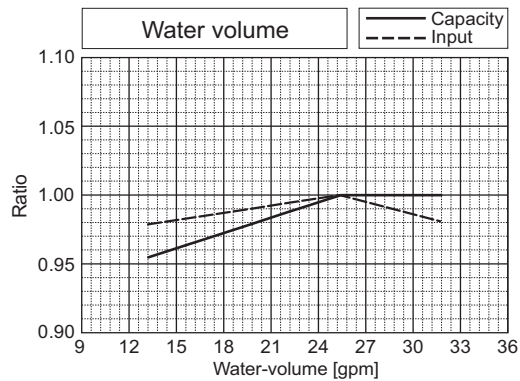
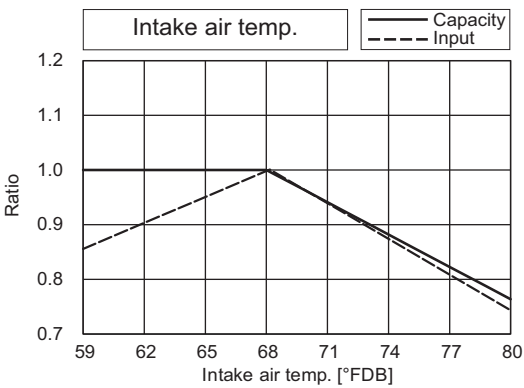
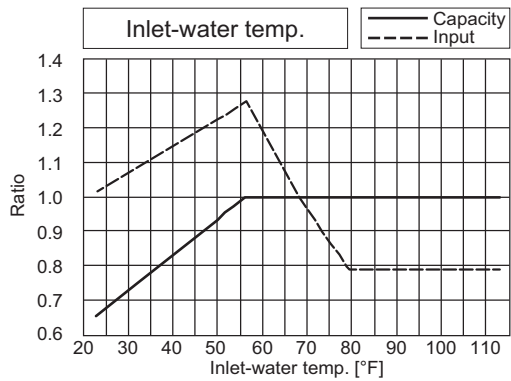
7. CAPACITY TABLES

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

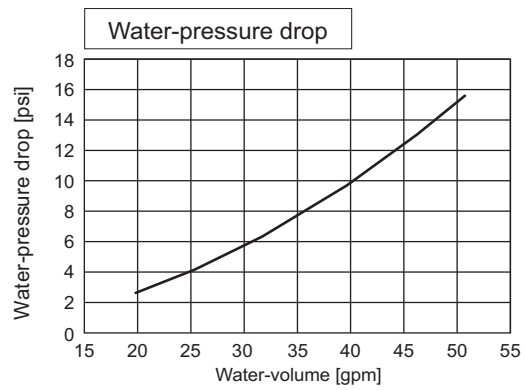
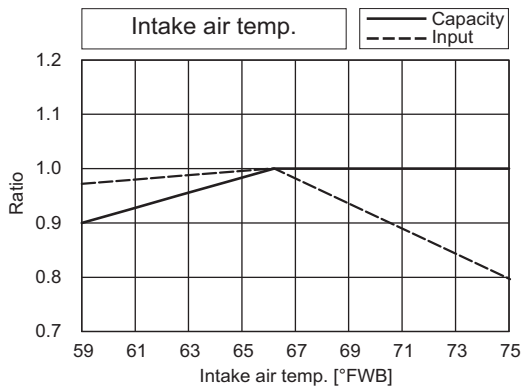
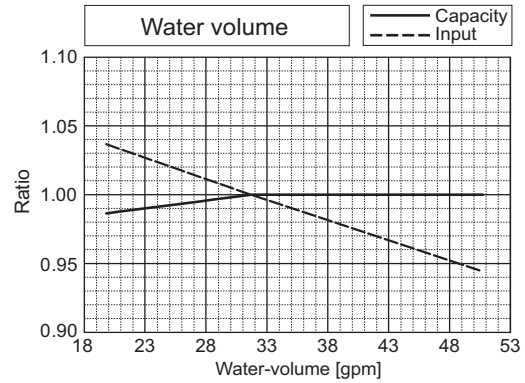
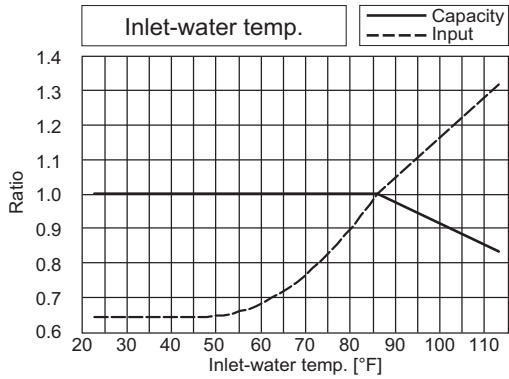
PQRY-			P120TLMU/YLMU		
Nominal Cooling Capacity	kW	35.2	Rated Cooling Capacity	kW	33.4
	BTU/h	120,000		BTU/h	114,000
Input	kW	7.51	Input	kW	(Non-Ducted) 6.95 (Ducted) 7.35



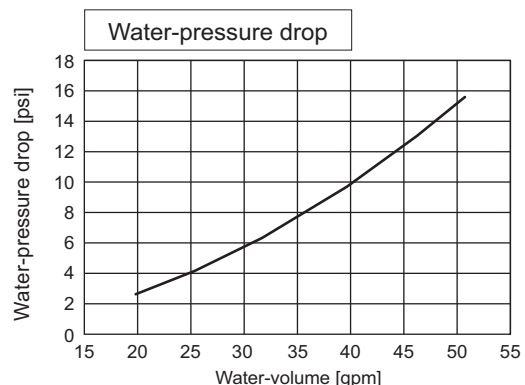
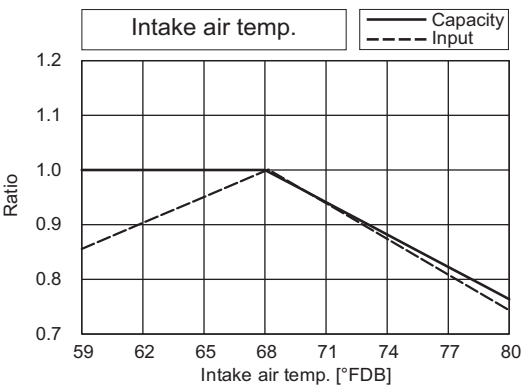
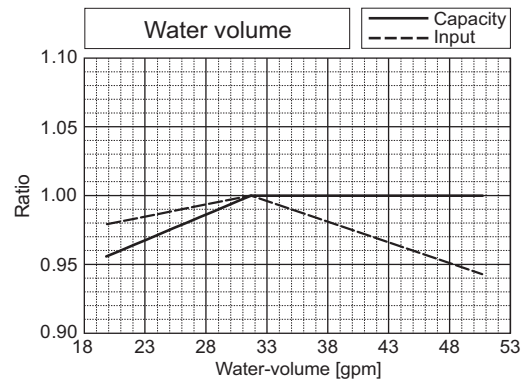
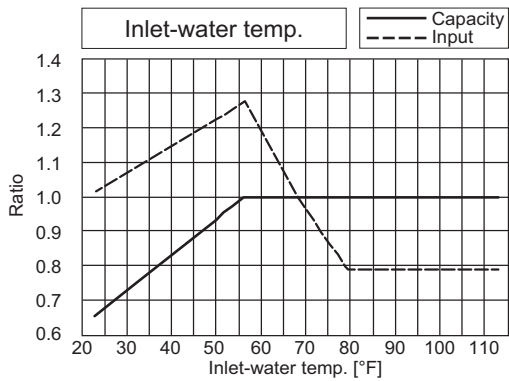
PQRY-			P120TLMU/YLMU		
Nominal Heating Capacity	kW	39.6	Rated Heating Capacity	kW	37.8
	BTU/h	135,000		BTU/h	129,000
Input	kW	7.09	Input	kW	(Non-Ducted) 6.55 (Ducted) 5.92



PQRY-		P144TLMU/YLMU			
Nominal Cooling Capacity	kW	42.2	Rated Cooling Capacity	kW	40.2
	BTU/h	144,000		BTU/h	137,000
Input	kW	8.78	Input	kW	(Non-Ducted) 8.07 (Ducted) 9.98

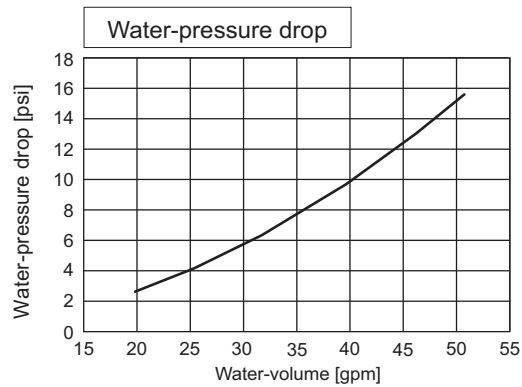
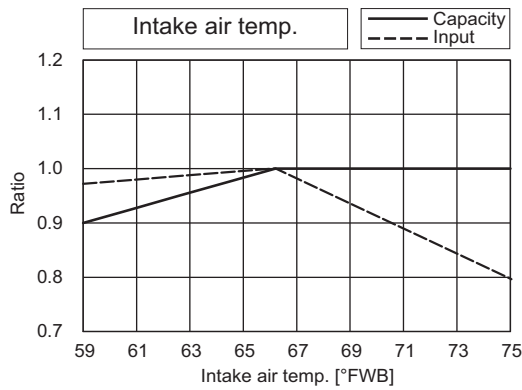
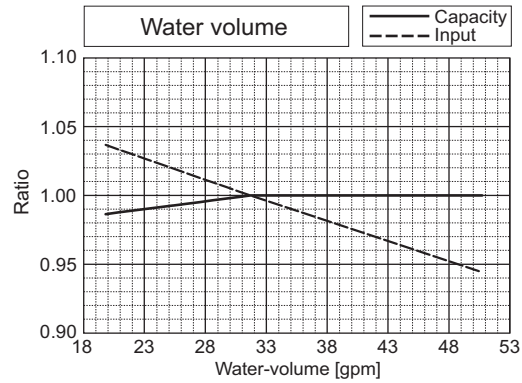
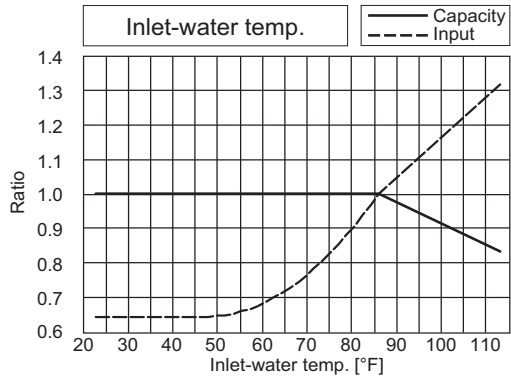


PQRY-		P144TLMU/YLMU			
Nominal Heating Capacity	kW	46.9	Rated Heating Capacity	kW	44.5
	BTU/h	160,000		BTU/h	152,000
Input	kW	8.11	Input	kW	(Non-Ducted) 7.47 (Ducted) 7.90

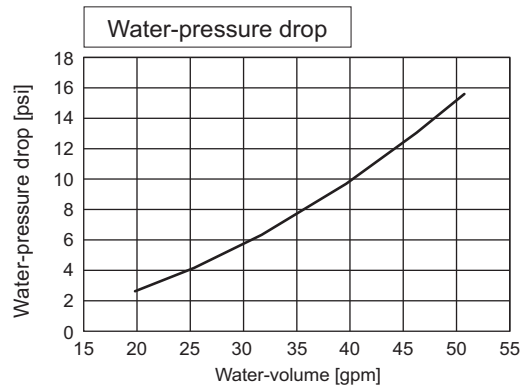
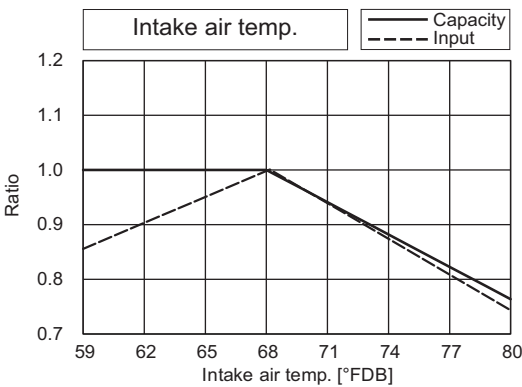
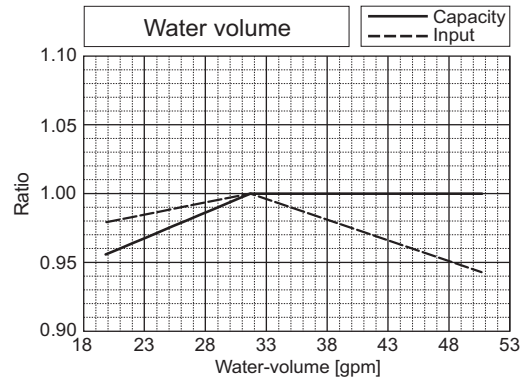
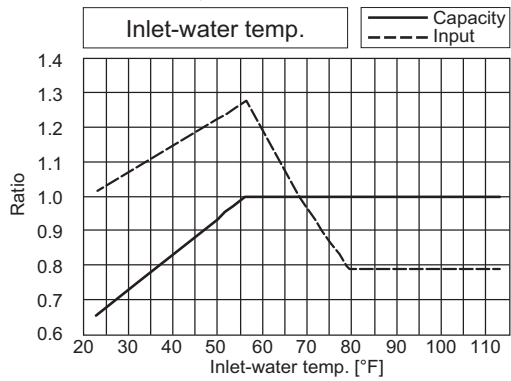


PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

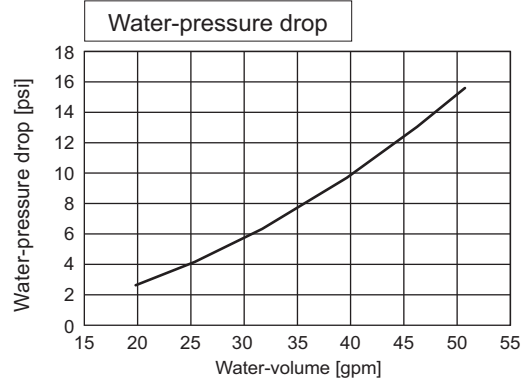
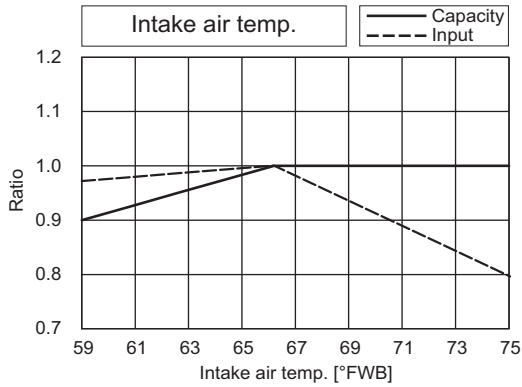
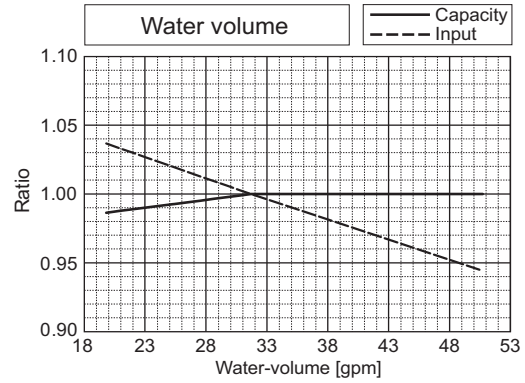
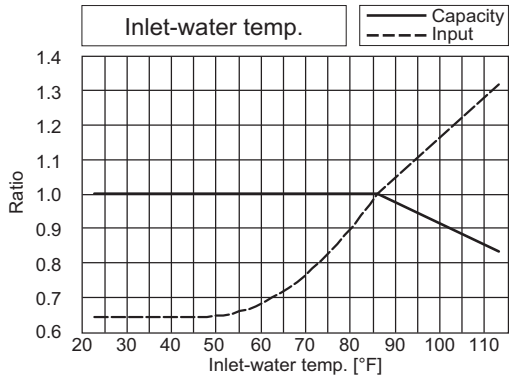
PQRY-			P168TLMU/YLMU		
Nominal Cooling Capacity	kW	49.2	Rated Cooling Capacity	kW	47.2
	BTU/h	168,000		BTU/h	161,000
Input	kW	12.05	Input	kW	(Non-Ducted) 11.10 (Ducted) 11.88



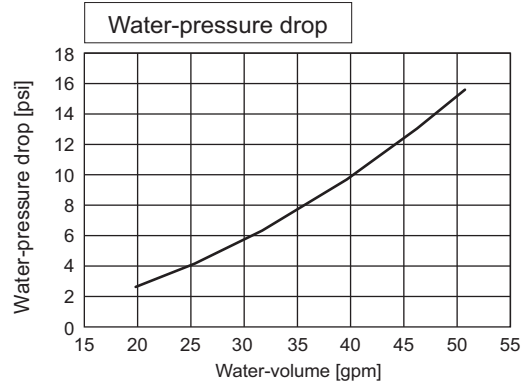
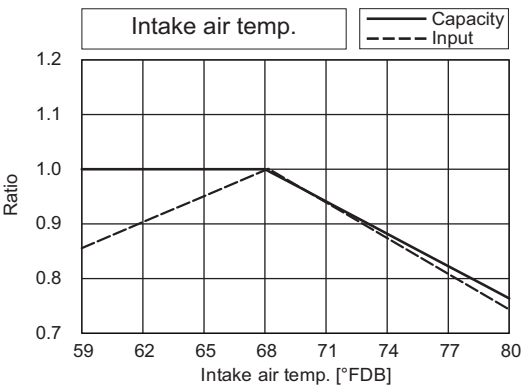
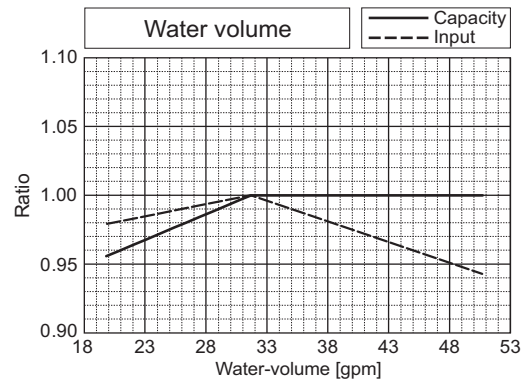
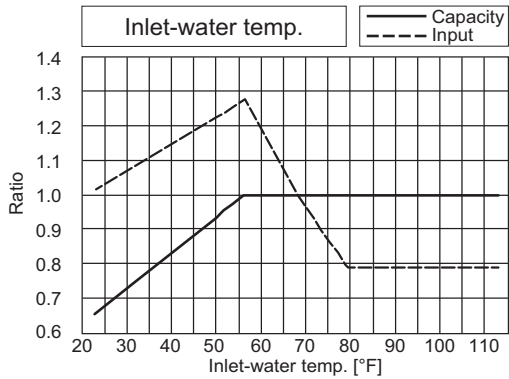
PQRY-			P168TLMU/YLMU		
Nominal Heating Capacity	kW	55.1	Rated Heating Capacity	kW	52.5
	BTU/h	188,000		BTU/h	179,000
Input	kW	9.86	Input	kW	(Non-Ducted) 9.09 (Ducted) 9.72



PQRY-		P192TLMU/YLMU			
Nominal Cooling Capacity	kW	56.3	Rated Cooling Capacity	kW	53.6
	BTU/h	192,000		BTU/h	183,000
Input	kW	15.05	Input	kW	(Non-Ducted) 13.87 (Ducted) 14.19



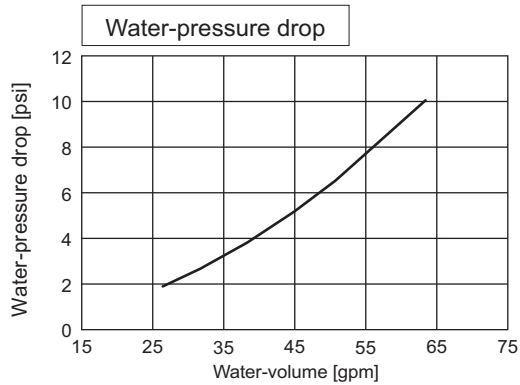
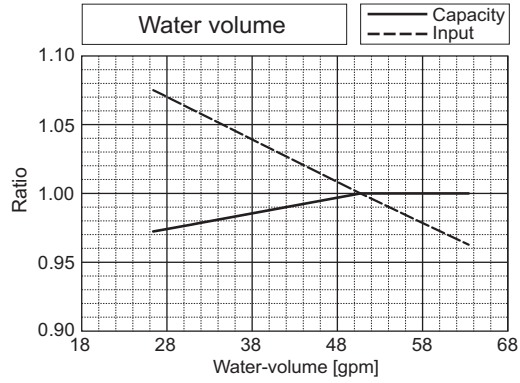
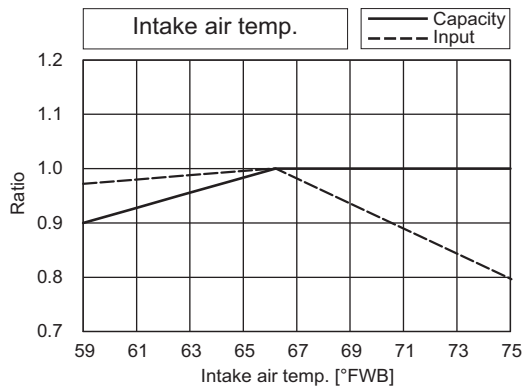
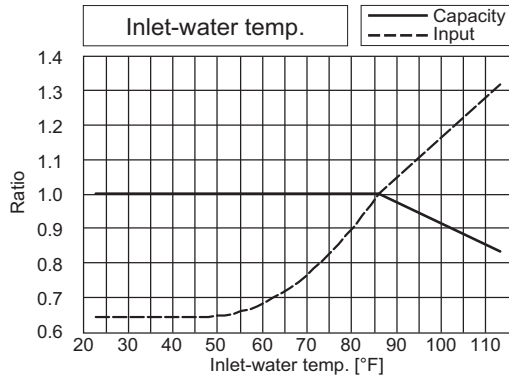
PQRY-		P192TLMU/YLMU			
Nominal Heating Capacity	kW	63.0	Rated Heating Capacity	kW	60.1
	BTU/h	215,000		BTU/h	205,000
Input	kW	11.90	Input	kW	(Non-Ducted) 10.97 (Ducted) 11.56



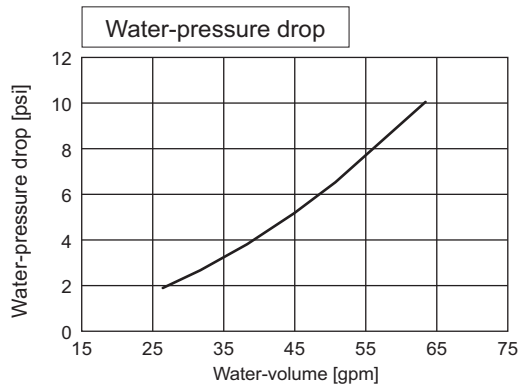
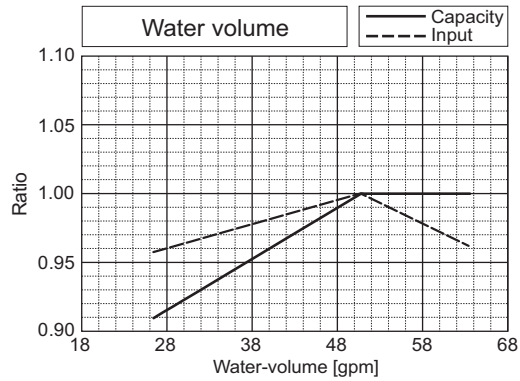
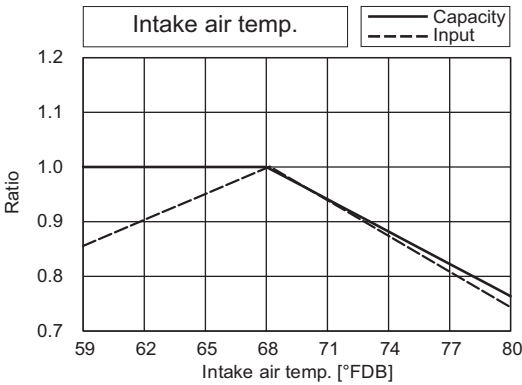
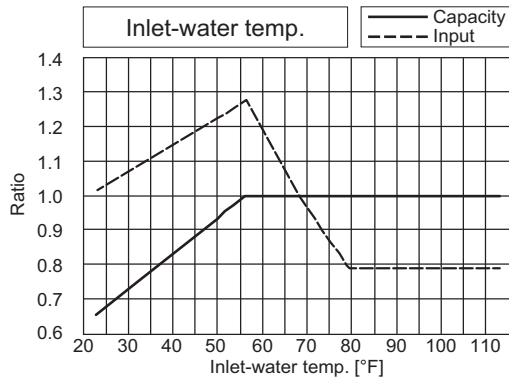
PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

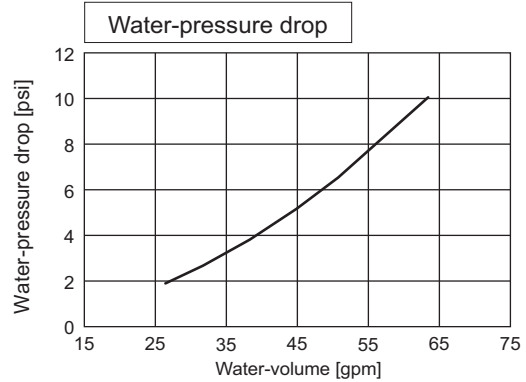
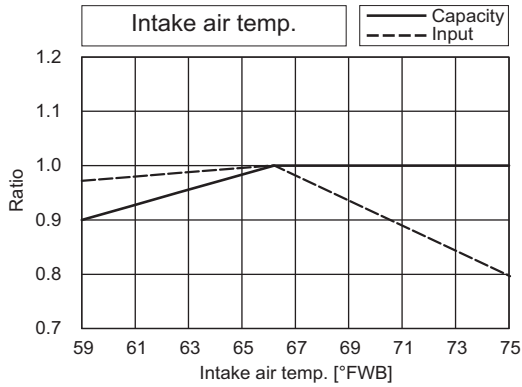
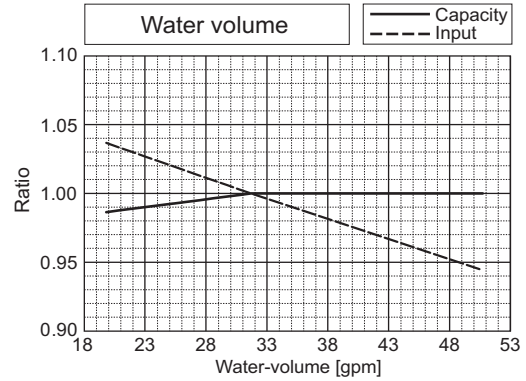
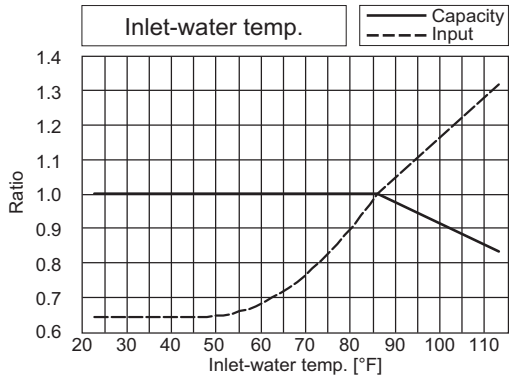
PQRY-			P216TLMU/YLMU		
Nominal Cooling Capacity	kW	63.3	Rated Cooling Capacity	kW	60.4
	BTU/h	216,000		BTU/h	206,000
Input	kW	19.23	Input	kW	(Non-Ducted) 17.72 (Ducted) 16.10



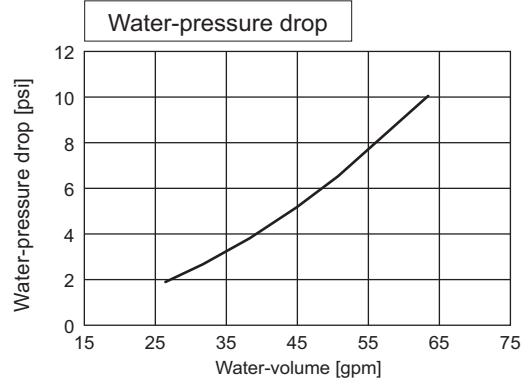
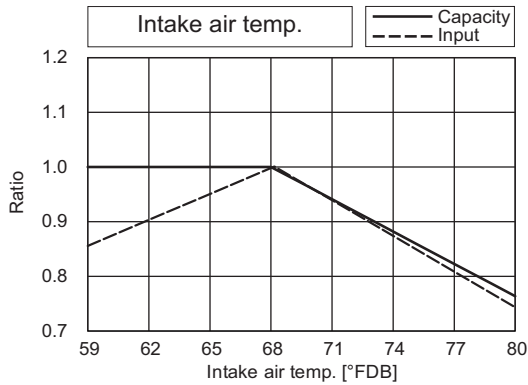
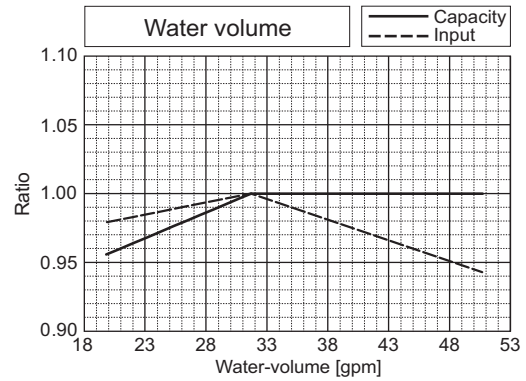
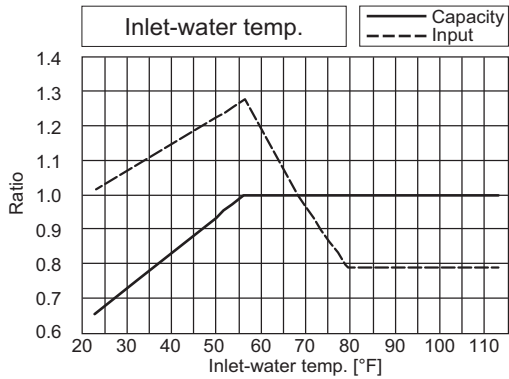
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Nominal Heating Capacity	kW	71.2	Rated Heating Capacity	kW	68.0
	BTU/h	243,000		BTU/h	232,000
Input	kW	13.04	Input	kW	(Non-Ducted) 12.01 (Ducted) 12.34



PQRY-		P240TLMU/YLMU			
Nominal Cooling Capacity	kW	70.3	Rated Cooling Capacity	kW	66.8
	BTU/h	240,000		BTU/h	228,000
Input	kW	21.14	Input	kW	(Non-Ducted) 19.49 (Ducted) 18.74

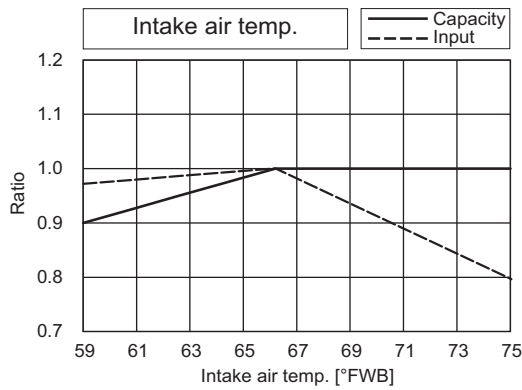
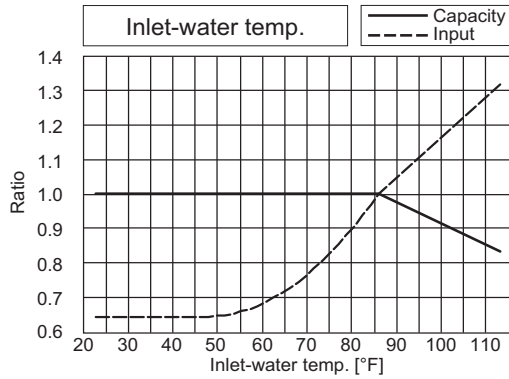


PQRY-		P240TLMU/YLMU			
Nominal Heating Capacity	kW	79.1	Rated Heating Capacity	kW	75.6
	BTU/h	270,000		BTU/h	258,000
Input	kW	15.12	Input	kW	(Non-Ducted) 13.93 (Ducted) 14.62

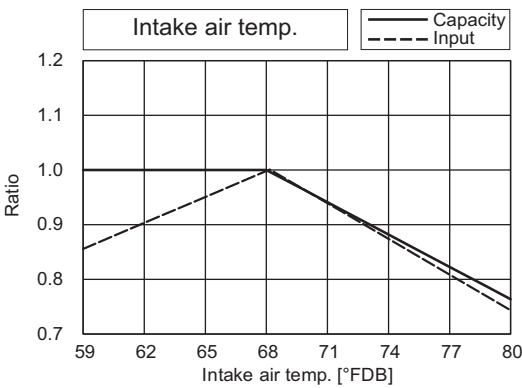
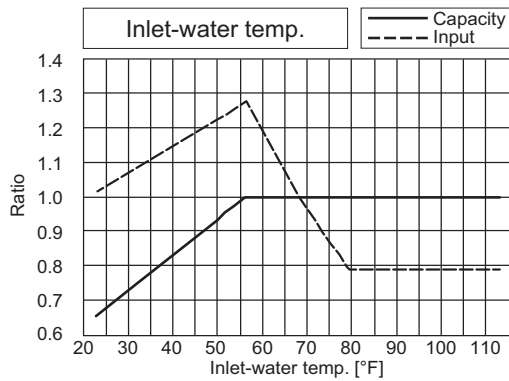


PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

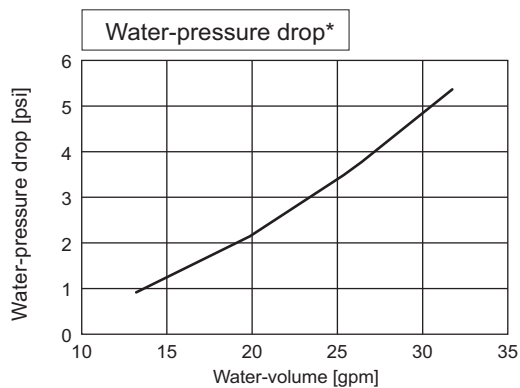
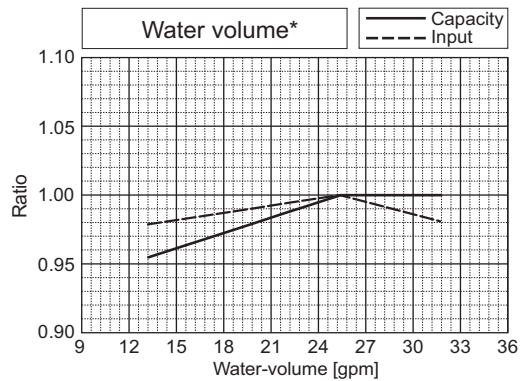
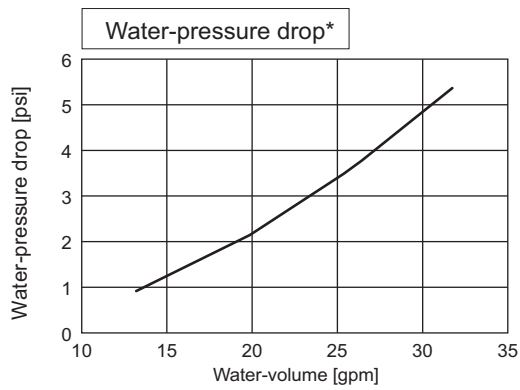
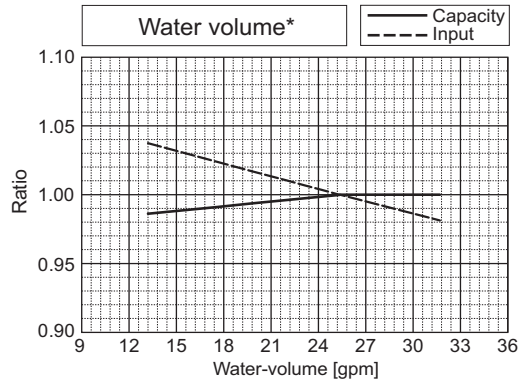
PQRY-		P144TSLMU/YSLMU			
Nominal Cooling Capacity	kW	42.2	Rated Cooling Capacity	kW	40.2
	BTU/h	144,000		BTU/h	137,000
Input	kW	7.11	Input	kW	(Non-Ducted) 6.53 (Ducted) 7.72



PQRY-		P144TSLMU/YSLMU			
Nominal Heating Capacity	kW	46.9	Rated Heating Capacity	kW	44.5
	BTU/h	160,000		BTU/h	152,000
Input	kW	7.45	Input	kW	(Non-Ducted) 6.86 (Ducted) 7.22

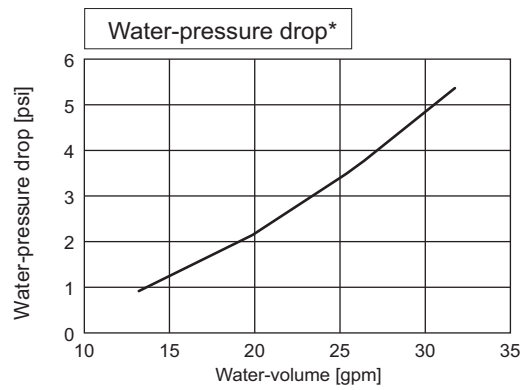
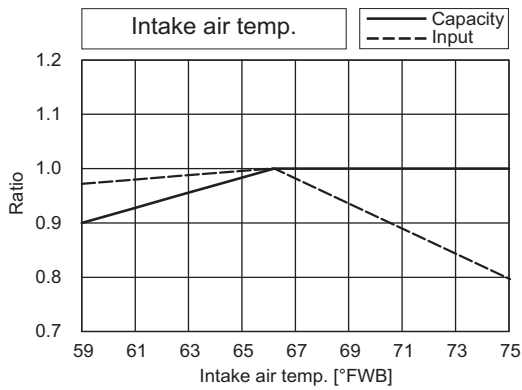
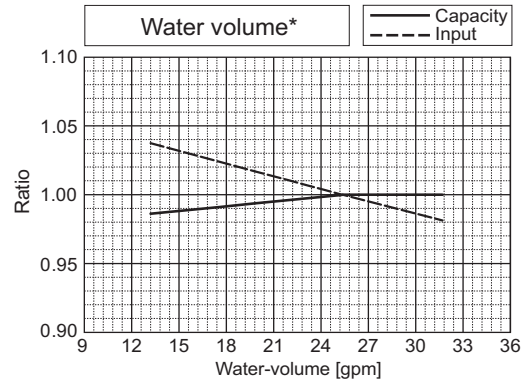
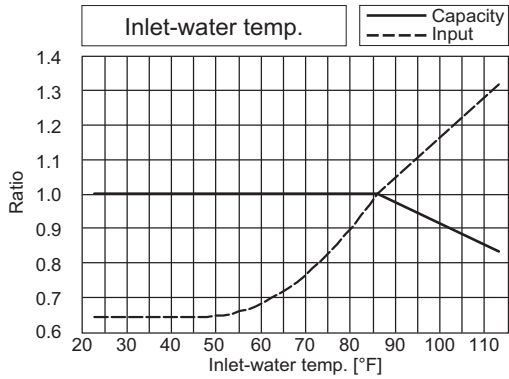


*The drawing indicates characteristic per unit.

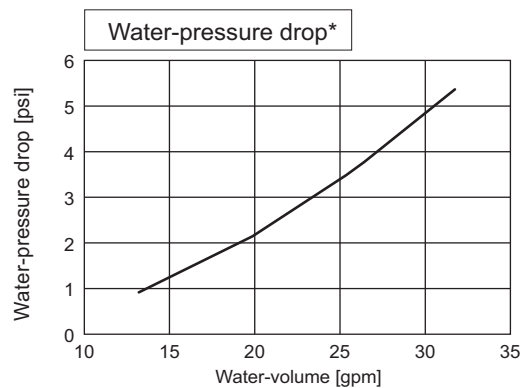
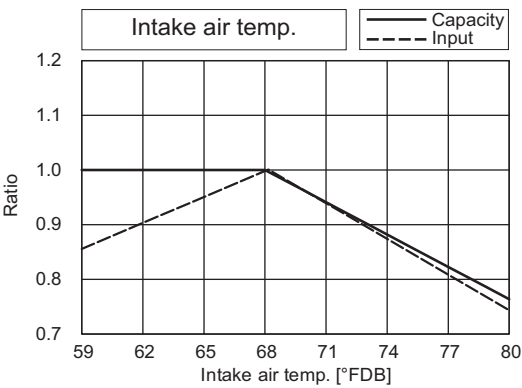
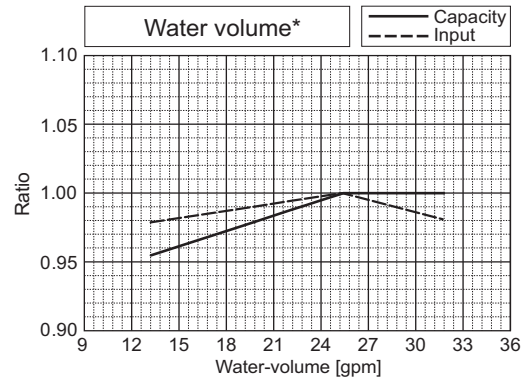
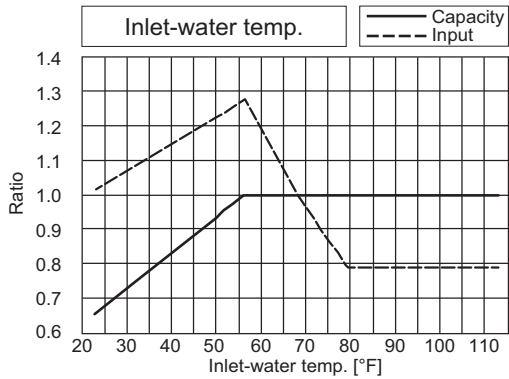


PQRY-		P168TSLMU/YSLMU			
Nominal Cooling Capacity	kW	49.2	Rated Cooling Capacity	kW	47.2
	BTU/h	168,000		BTU/h	161,000
Input	kW	9.33	Input	kW	(Non-Ducted) 8.58 (Ducted) 9.22

*The drawing indicates characteristic per unit.



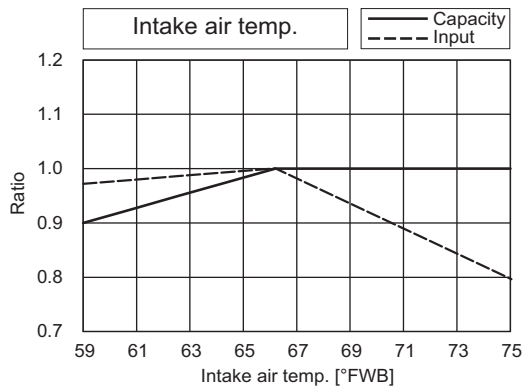
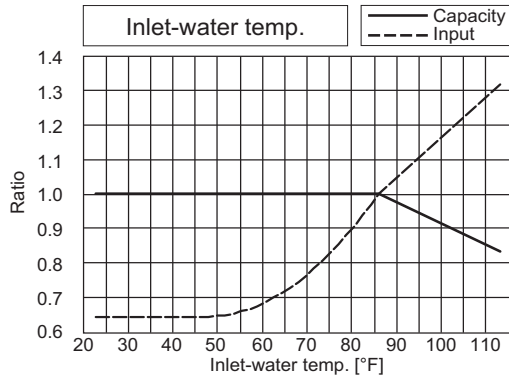
PQRY-		P168TSLMU/YSLMU			
Nominal Heating Capacity	kW	55.1	Rated Heating Capacity	kW	52.5
	BTU/h	188,000		BTU/h	179,000
Input	kW	9.34	Input	kW	(Non-Ducted) 8.60 (Ducted) 8.03



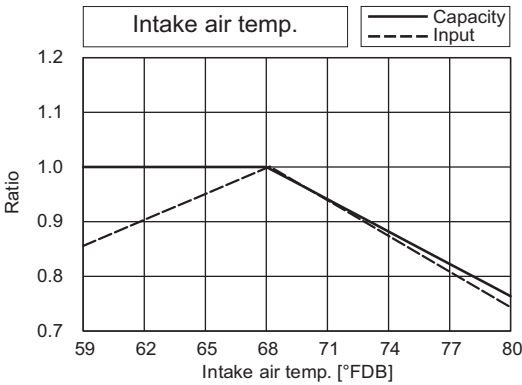
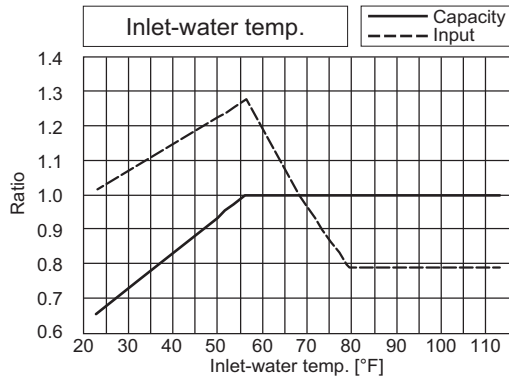
PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

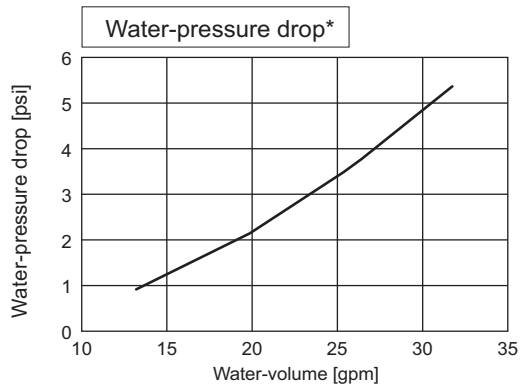
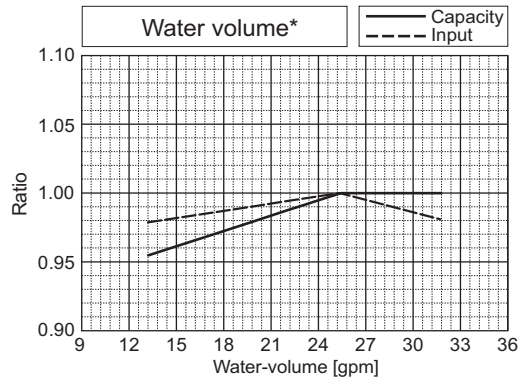
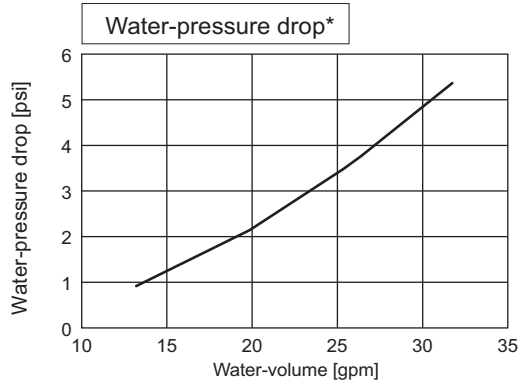
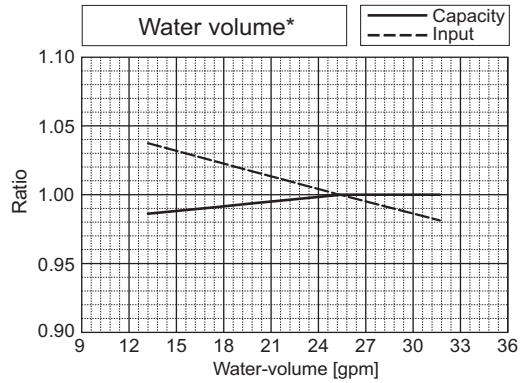
PQRY-		P192TSLMU/YSLMU			
Nominal Cooling Capacity	kW	56.3	Rated Cooling Capacity	kW	53.6
	BTU/h	192,000		BTU/h	183,000
Input	kW	11.30	Input	kW	(Non-Ducted) 10.40 (Ducted) 10.98



PQRY-		P192TSLMU/YSLMU			
Nominal Heating Capacity	kW	63.0	Rated Heating Capacity	kW	60.1
	BTU/h	215,000		BTU/h	205,000
Input	kW	11.02	Input	kW	(Non-Ducted) 10.16 (Ducted) 8.90

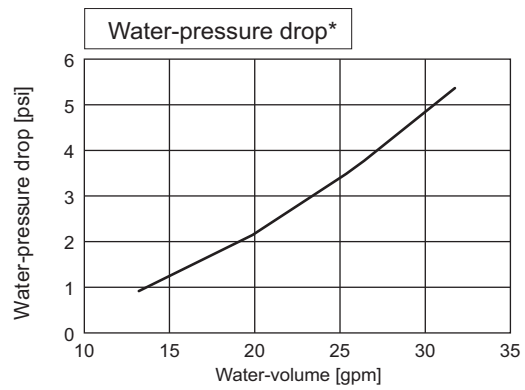
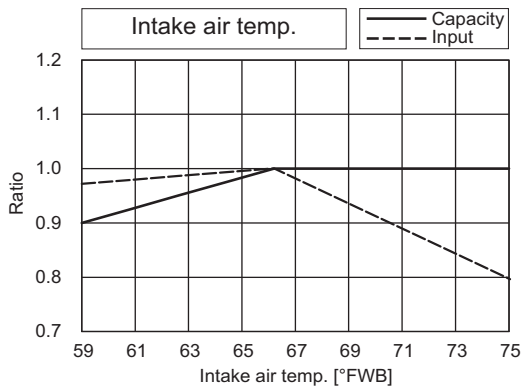
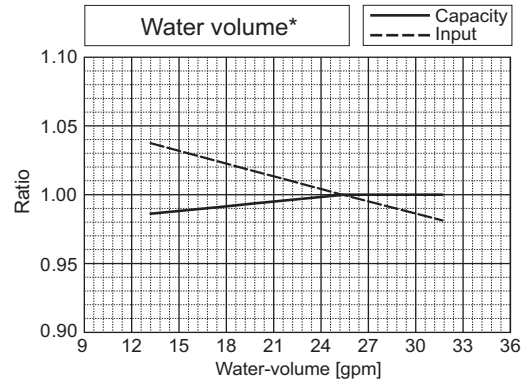
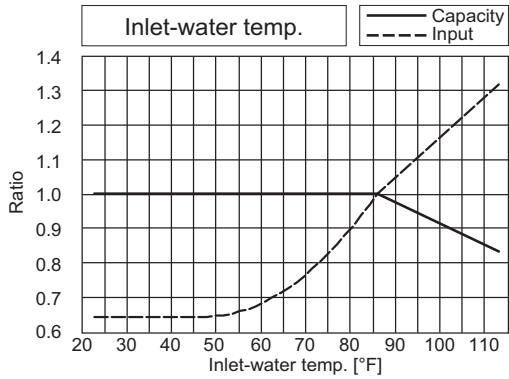


*The drawing indicates characteristic per unit.

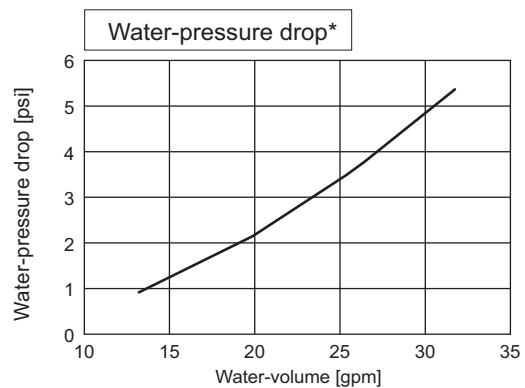
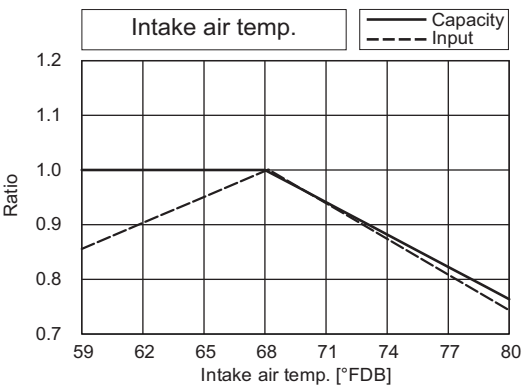
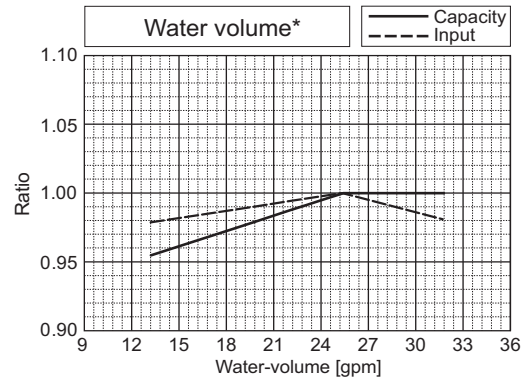
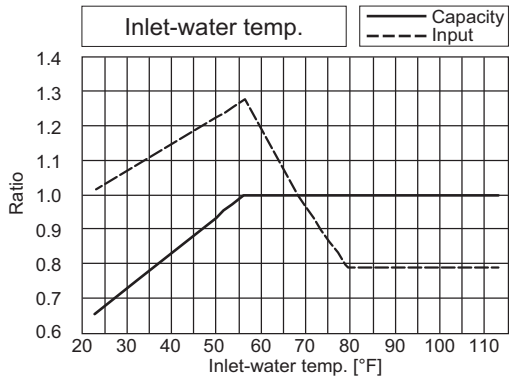


PQRY-		P216TSLMU/YSLMU			
Nominal Cooling Capacity	kW	63.3	Rated Cooling Capacity	kW	60.4
	BTU/h	216,000		BTU/h	206,000
Input	kW	14.03	Input	kW	(Non-Ducted) 12.93 (Ducted) 13.24

*The drawing indicates characteristic per unit.



PQRY-		P216TSLMU/YSLMU			
Nominal Heating Capacity	kW	71.2	Rated Heating Capacity	kW	68.0
	BTU/h	243,000		BTU/h	232,000
Input	kW	12.88	Input	kW	(Non-Ducted) 11.88 (Ducted) 10.35

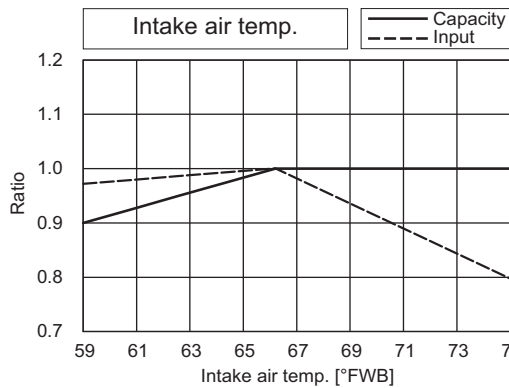
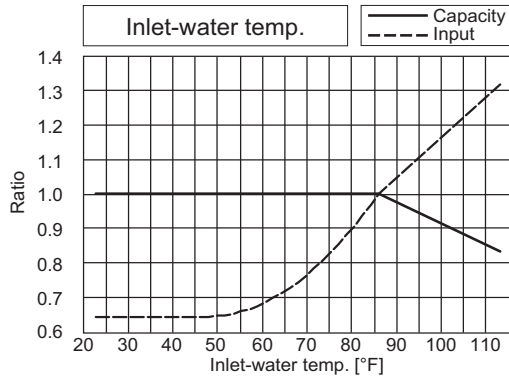


PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

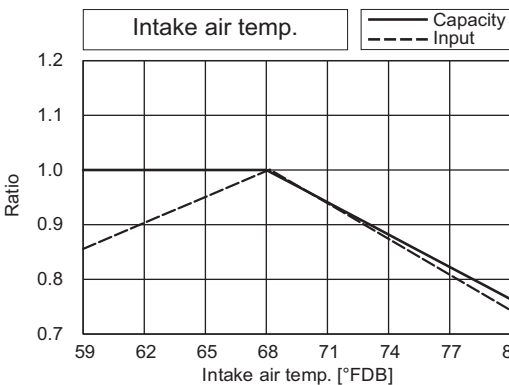
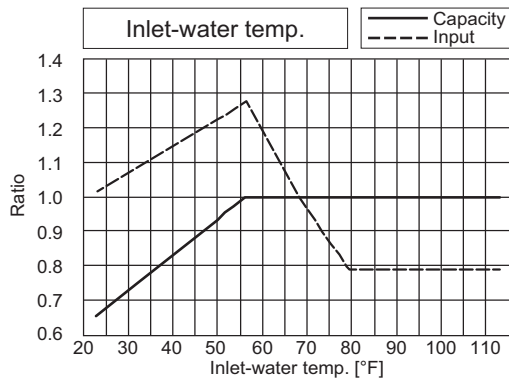
7. CAPACITY TABLES

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

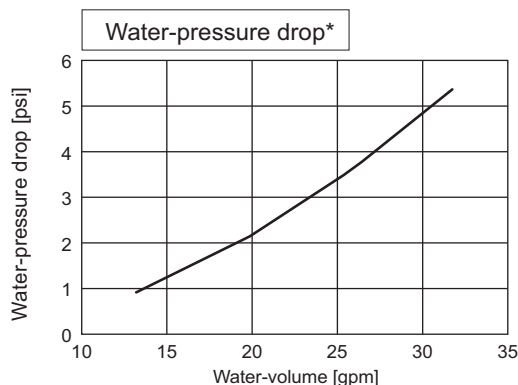
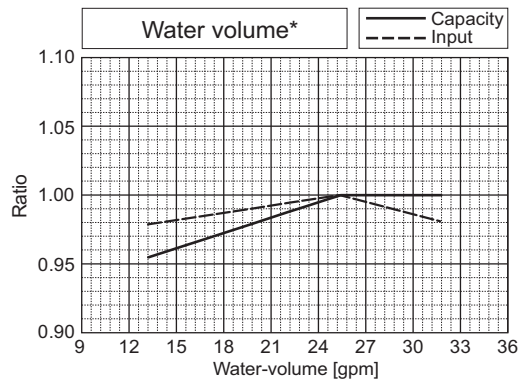
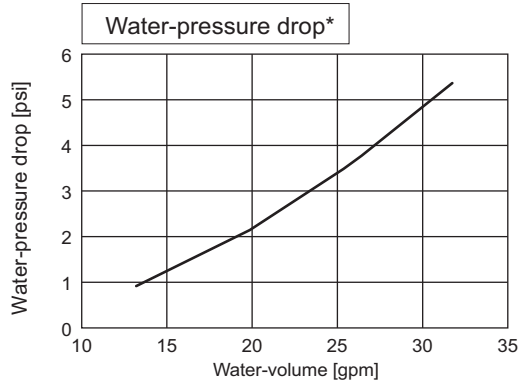
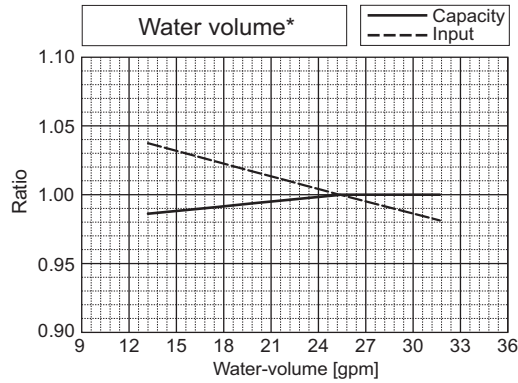
PQRY-		P240TSLMU/YSLMU			
Nominal Cooling Capacity	kW	70.3	Rated Cooling Capacity	kW	66.8
	BTU/h	240,000		BTU/h	228,000
Input	kW	16.89	Input	kW	(Non-Ducted) 15.57 (Ducted) 16.15



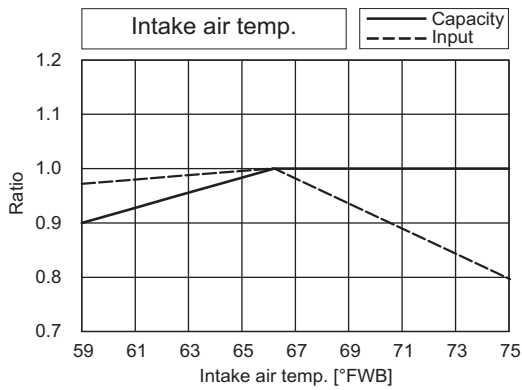
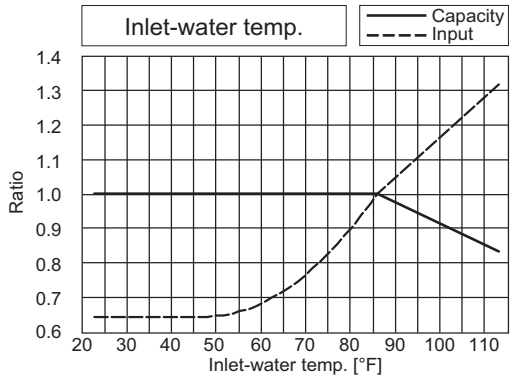
PQRY-		P240TSLMU/YSLMU			
Nominal Heating Capacity	kW	79.1	Rated Heating Capacity	kW	75.6
	BTU/h	270,000		BTU/h	258,000
Input	kW	14.58	Input	kW	(Non-Ducted) 13.45 (Ducted) 12.02



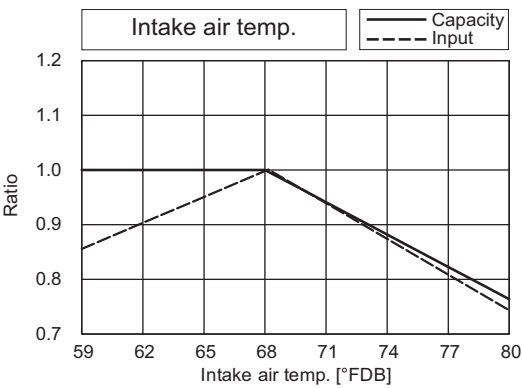
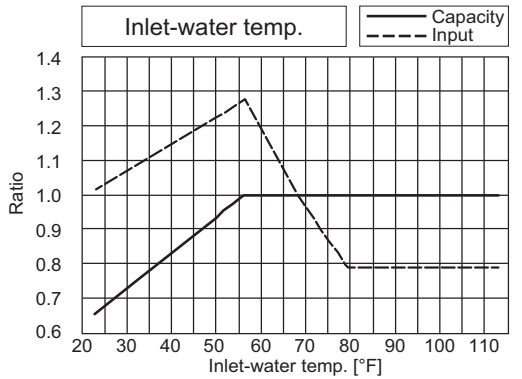
*The drawing indicates characteristic per unit.



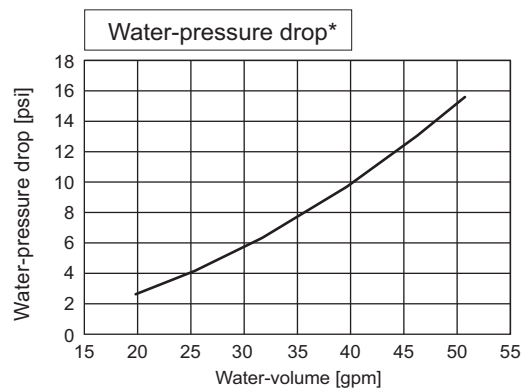
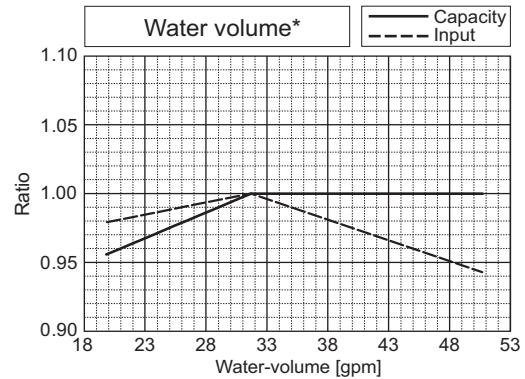
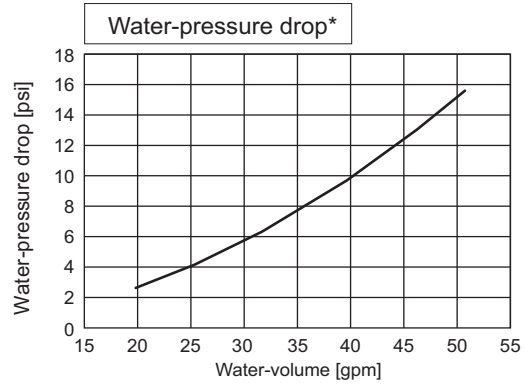
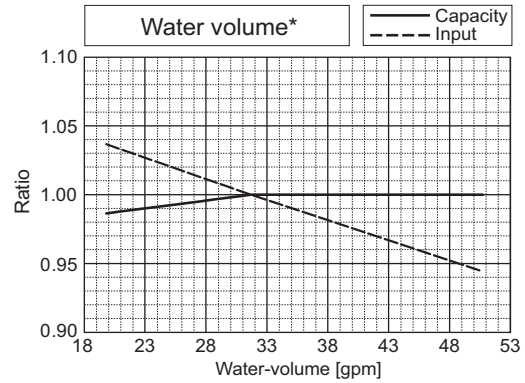
PQRY-		P288TSLMU/YSLMU			
Nominal Cooling Capacity	kW	84.4	Rated Cooling Capacity	kW	80.6
	BTU/h	288,000		BTU/h	275,000
Input	kW	20.42	Input	kW	(Non-Ducted) 18.82 (Ducted) 21.43



PQRY-		P288TSLMU/YSLMU			
Nominal Heating Capacity	kW	94.7	Rated Heating Capacity	kW	90.3
	BTU/h	323,000		BTU/h	308,000
Input	kW	17.50	Input	kW	(Non-Ducted) 16.13 (Ducted) 16.05



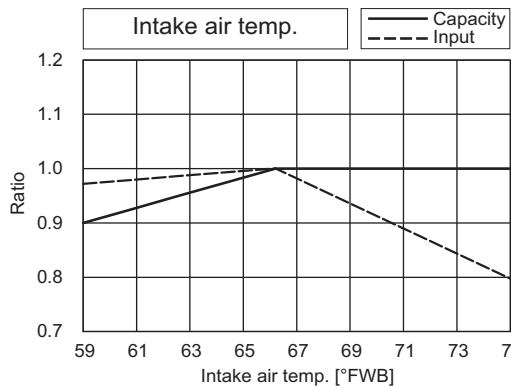
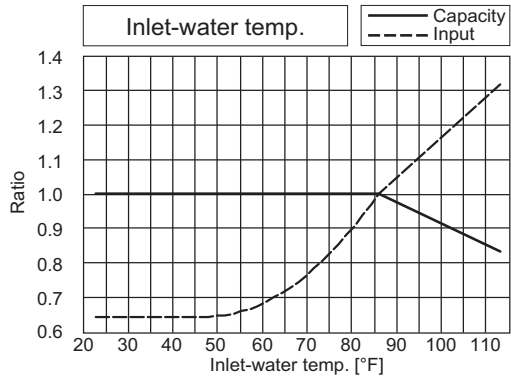
*The drawing indicates characteristic per unit.



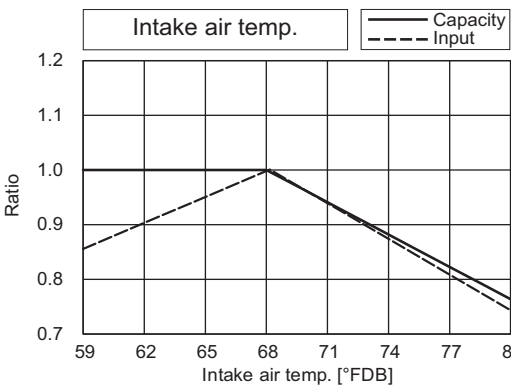
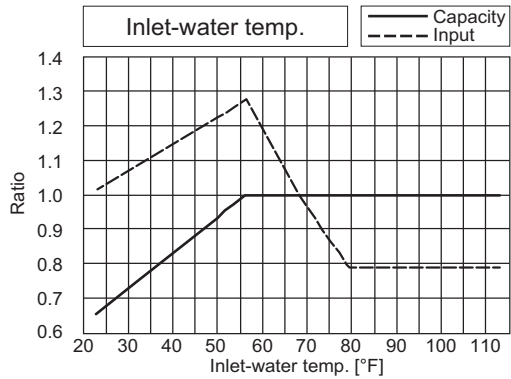
PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

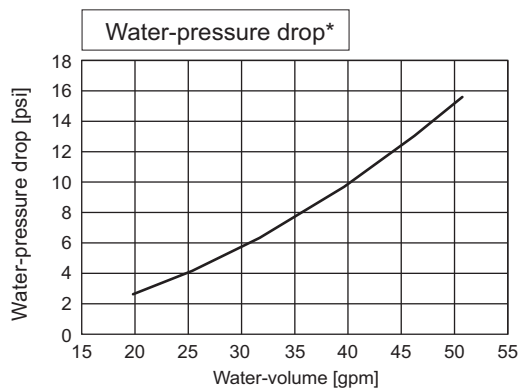
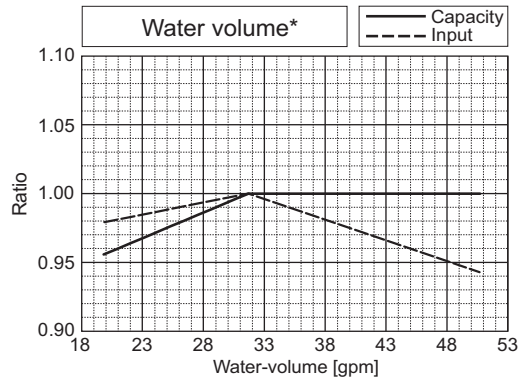
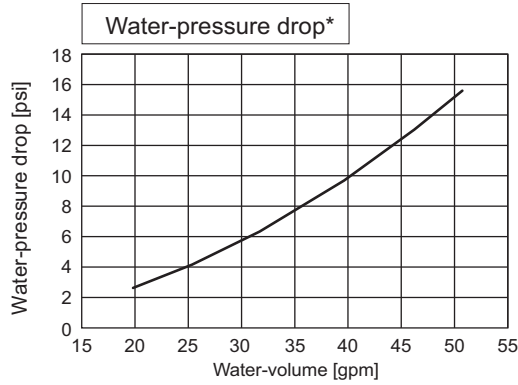
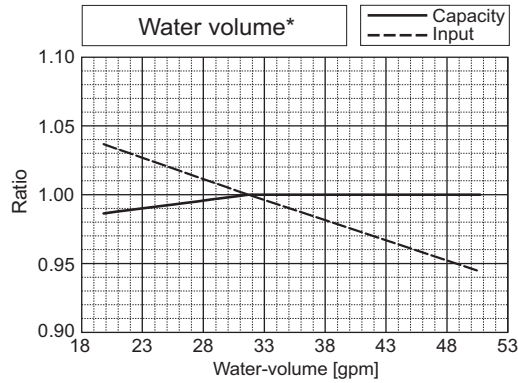
PQRY-		P312TSLMU/YSLMU			
Nominal Cooling Capacity	kW	91.4	Rated Cooling Capacity	kW	87.0
	BTU/h	312,000		BTU/h	297,000
Input	kW	23.41	Input	kW	(Non-Ducted) 21.59 (Ducted) 23.67



PQRY-		P312TSLMU/YSLMU			
Nominal Heating Capacity	kW	102.6	Rated Heating Capacity	kW	97.9
	BTU/h	350,000		BTU/h	334,000
Input	kW	19.11	Input	kW	(Non-Ducted) 17.62 (Ducted) 17.96

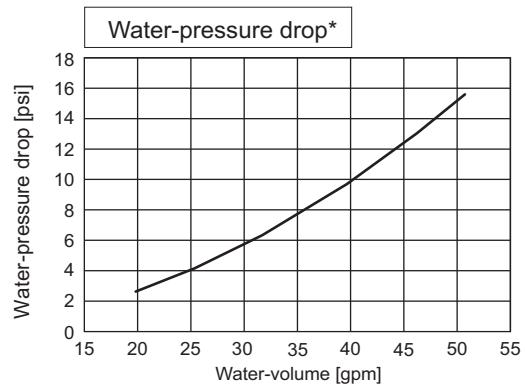
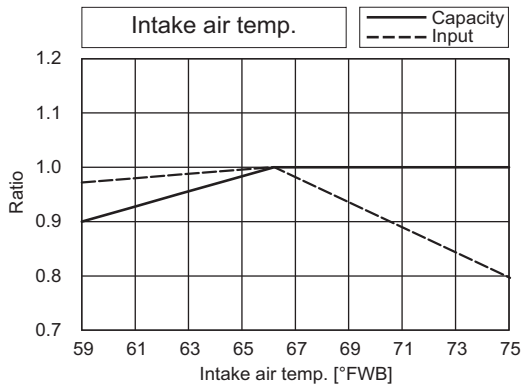
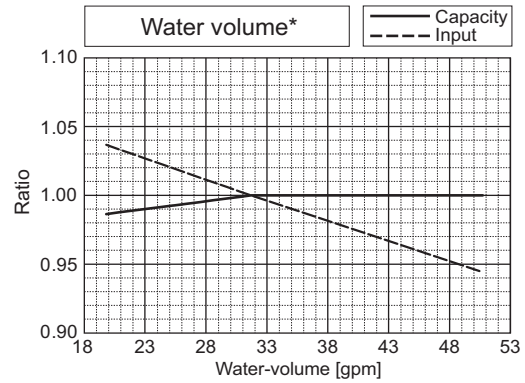
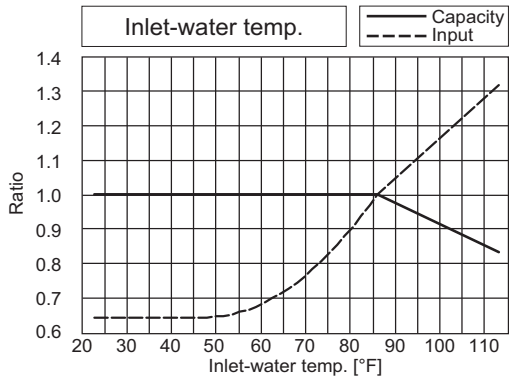


*The drawing indicates characteristic per unit.

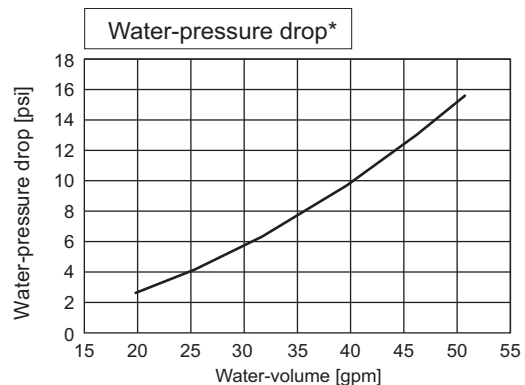
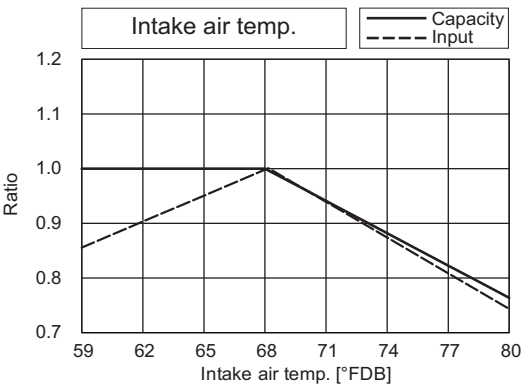
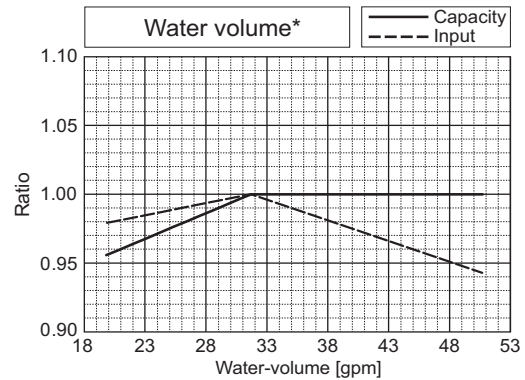
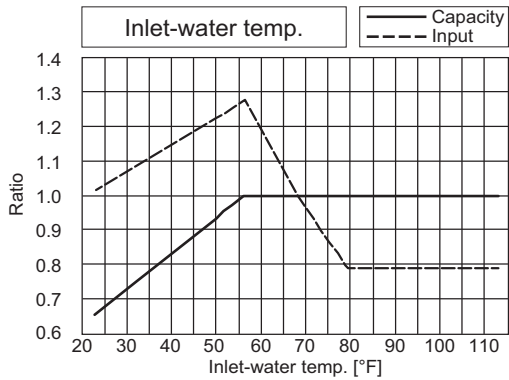


PQRY-		P336TSLMU/YSLMU			
Nominal Cooling Capacity	kW	98.5	Rated Cooling Capacity	kW	93.8
	BTU/h	336,000		BTU/h	320,000
Input	kW	26.84	Input	kW	(Non-Ducted) 24.76 (Ducted) 25.85

*The drawing indicates characteristic per unit.



PQRY-		P336TSLMU/YSLMU			
Nominal Heating Capacity	kW	110.8	Rated Heating Capacity	kW	105.8
	BTU/h	378,000		BTU/h	361,000
Input	kW	20.77	Input	kW	(Non-Ducted) 19.16 (Ducted) 20.05



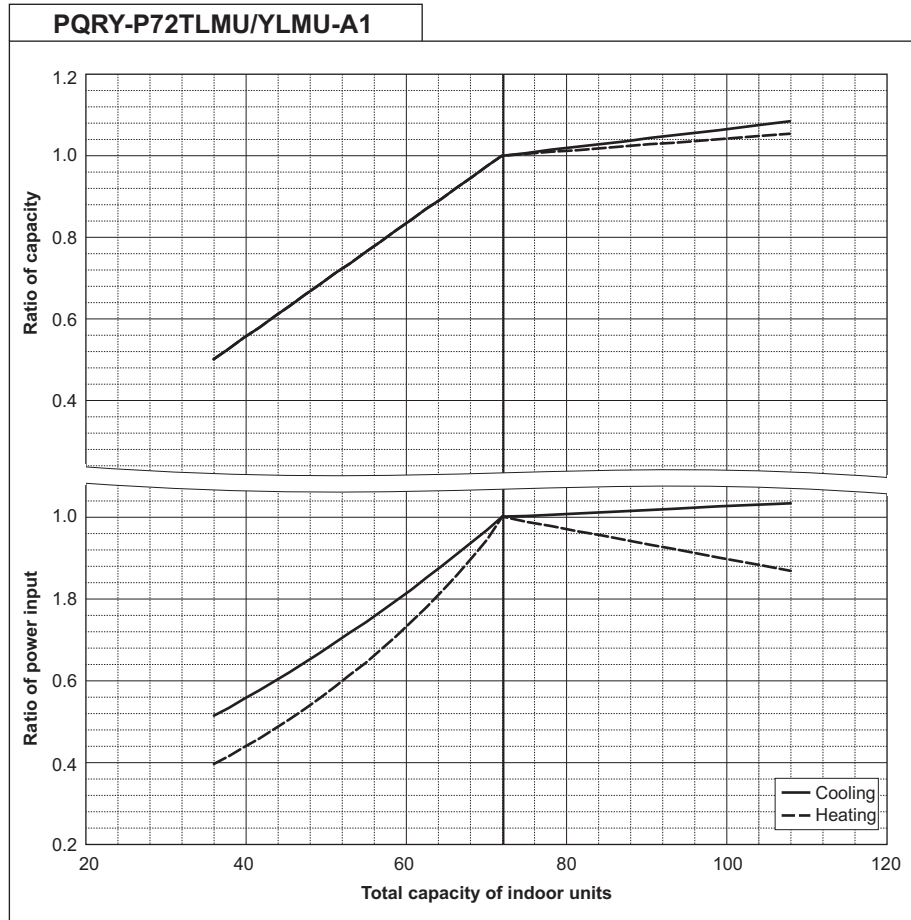
PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

7-2. Correction by total indoor

CITY MULTI system have different capacities and inputs when many combinations of indoor units with different total capacities are connected. Using following tables, the maximum capacity can be found to ensure the system is installed with enough capacity for a particular application.

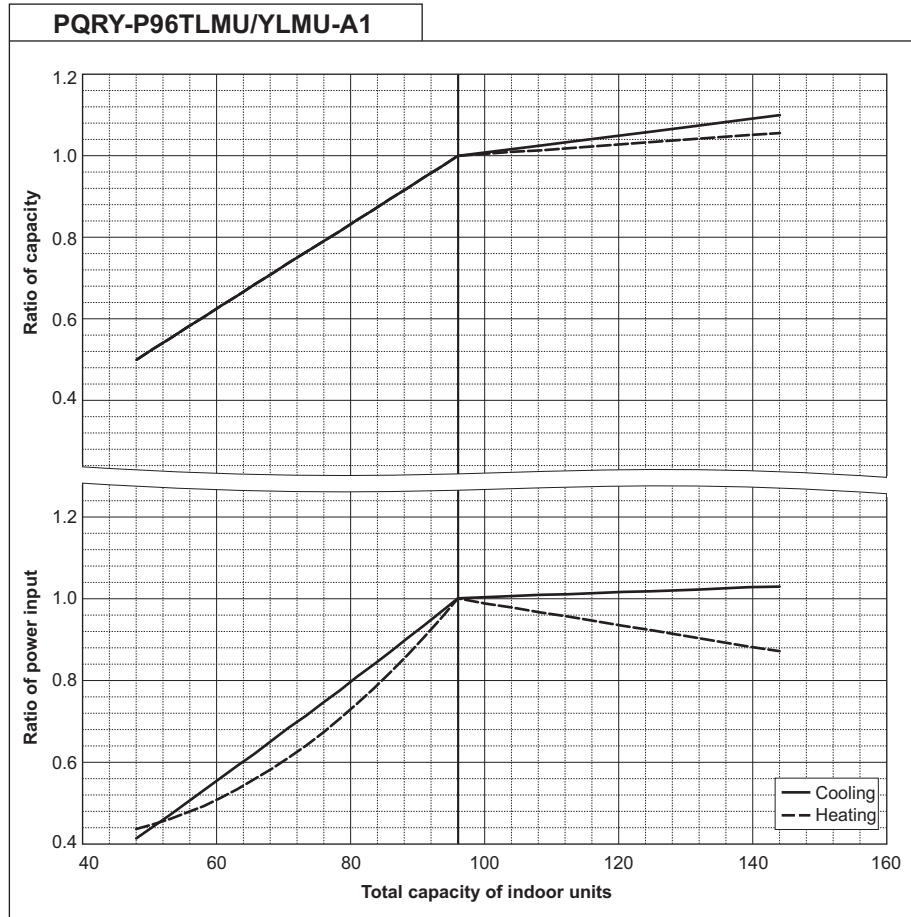
PQRY-		P72TLMU/YLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	72,000	
	kW	21.1	
Input	kW	3.61	
	BTU/h	69,000	
Rated cooling capacity	kW	20.2	
	Input kW	3.34	3.12

PQRY-		P72TLMU/YLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	80,000	
	kW	23.4	
Input	kW	4.04	
	BTU/h	76,000	
Rated Heating capacity	kW	22.3	
	Input kW	3.74	3.36



PQRY-		P96TLMU/YLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	96,000	
	kW	28.1	
Input	kW	5.21	
	BTU/h	92,000	
Rated cooling capacity	kW	27.0	
	Input kW	4.82	5.19

PQRY-		P96TLMU/YLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	108,000	
	kW	31.7	
Input	kW	5.64	
	BTU/h	103,000	
Rated Heating capacity	kW	30.2	
	Input kW	5.21	4.48

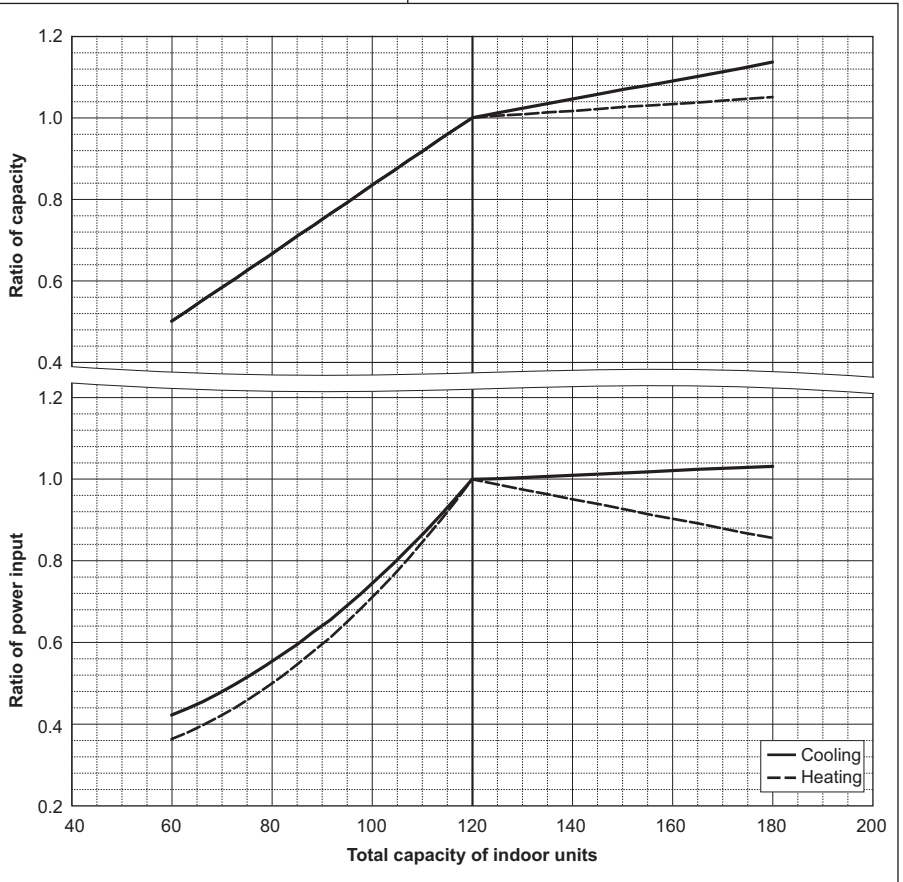


PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

PQRY-		P120TLMU/YLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	120,000	
	kW	35.2	
Input	kW	7.51	
	BTU/h	114,000	
Rated cooling capacity	kW	33.4	
	Input kW	6.95	7.35

PQRY-		P120TLMU/YLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	135,000	
	kW	39.6	
Input	kW	7.09	
	BTU/h	129,000	
Rated Heating capacity	kW	37.8	
	Input kW	6.55	5.92

PQRY-P120TLMU/YLMU-A1



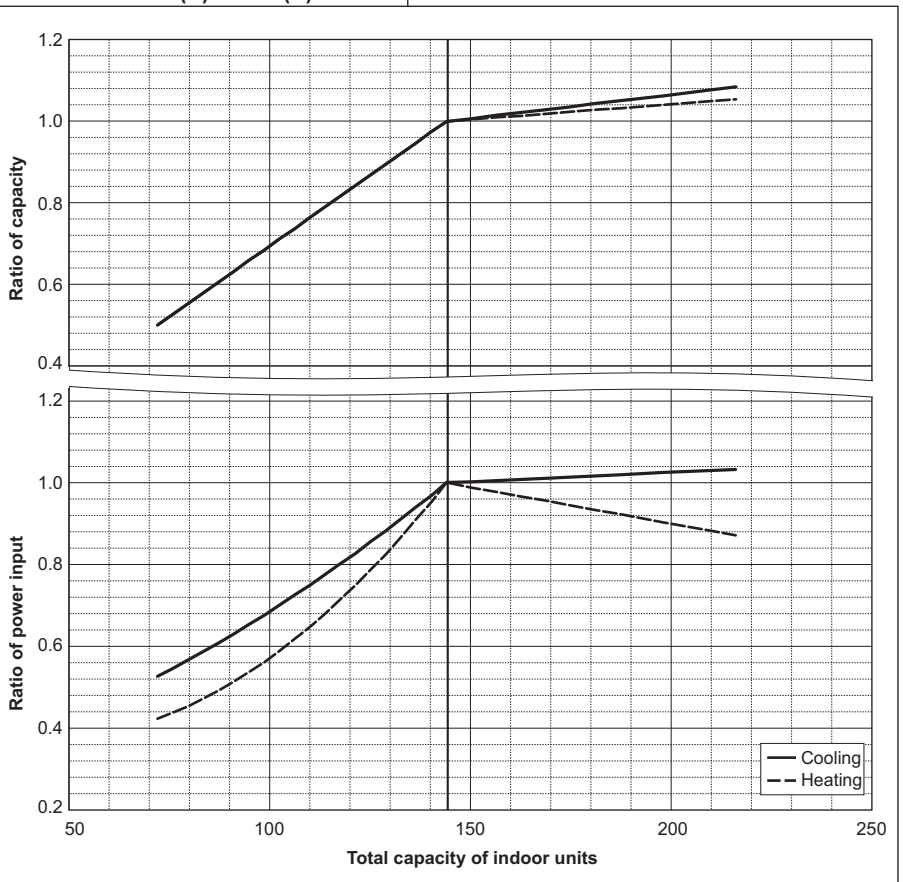
PQRY-		P144TLMU/YLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	144,000	
	kW	42.2	
Input	kW	8.78	
	BTU/h	137,000	
Rated cooling capacity	kW	40.2	
	Input kW	8.07	9.98

PQRY-		P144TLMU/YLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	160,000	
	kW	46.9	
Input	kW	8.11	
	BTU/h	152,000	
Rated Heating capacity	kW	44.5	
	Input kW	7.47	7.90

PQRY-		P144TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	144,000	
	kW	42.2	
Input	kW	7.11	
	BTU/h	137,000	
Rated cooling capacity	kW	40.2	
	Input kW	6.53	7.72

PQRY-		P144TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	160,000	
	kW	46.9	
Input	kW	7.45	
	BTU/h	152,000	
Rated Heating capacity	kW	44.5	
	Input kW	6.86	7.22

PQRY-P144T(S)LMU/Y(S)LMU-A1



PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

PQRY-		P168TLMU/YLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	168,000	
	kW	49.2	
Input	kW	12.05	
	BTU/h	161,000	
Rated cooling capacity	kW	47.2	
	Input kW	11.10	11.88

PQRY-		P168TLMU/YLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	188,000	
	kW	55.1	
Input	kW	9.86	
	BTU/h	179,000	
Rated Heating capacity	kW	52.5	
	Input kW	9.09	9.72

PQRY-		P168TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	168,000	
	kW	49.2	
Input	kW	9.33	
	BTU/h	161,000	
Rated cooling capacity	kW	47.2	
	Input kW	8.58	9.22

PQRY-		P168TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	188,000	
	kW	55.1	
Input	kW	9.34	
	BTU/h	179,000	
Rated Heating capacity	kW	52.5	
	Input kW	8.60	8.03

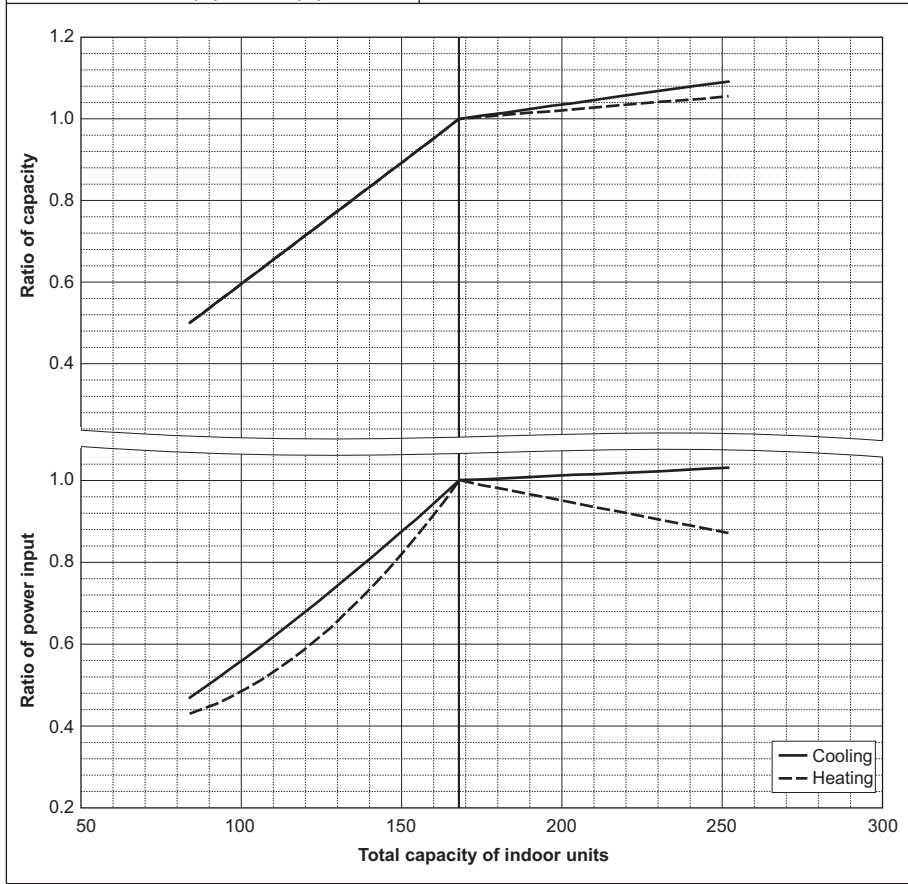
PQRY-		P192TLMU/YLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	192,000	
	kW	56.3	
Input	kW	15.05	
	BTU/h	183,000	
Rated cooling capacity	kW	53.6	
	Input kW	13.87	14.19

PQRY-		P192TLMU/YLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	215,000	
	kW	63.0	
Input	kW	11.90	
	BTU/h	205,000	
Rated Heating capacity	kW	60.1	
	Input kW	10.97	11.56

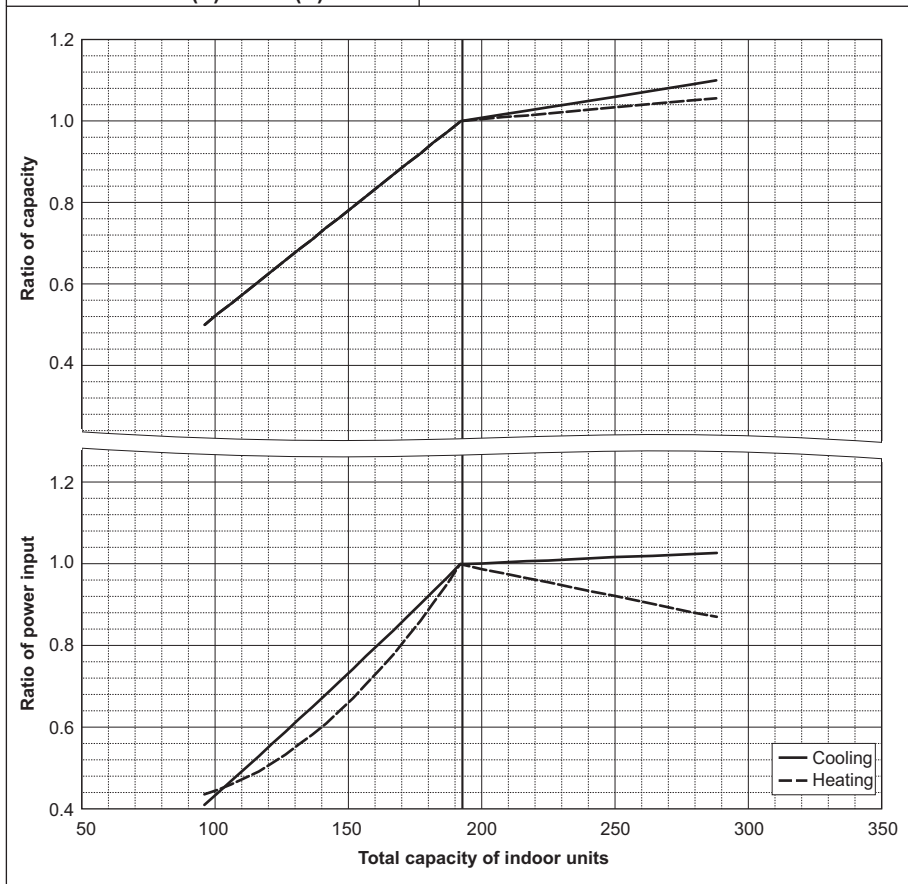
PQRY-		P192TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	192,000	
	kW	56.3	
Input	kW	11.30	
	BTU/h	183,000	
Rated cooling capacity	kW	53.6	
	Input kW	10.40	10.98

PQRY-		P192TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	215,000	
	kW	63.0	
Input	kW	11.02	
	BTU/h	205,000	
Rated Heating capacity	kW	60.1	
	Input kW	10.16	8.90

PQRY-P168T(S)LMU/Y(S)LMU-A1



PQRY-P192T(S)LMU/Y(S)LMU-A1



PQRY-		P216TLMU/YLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	216,000	
	kW	63.3	
Input	kW	19.23	
	BTU/h	206,000	
Rated cooling capacity	kW	60.4	
	Input	kW	17.72 16.10

PQRY-		P216TLMU/YLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	243,000	
	kW	71.2	
Input	kW	13.04	
	BTU/h	232,000	
Rated Heating capacity	kW	68.0	
	Input	kW	12.01 12.34

PQRY-		P216TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	216,000	
	kW	63.3	
Input	kW	14.03	
	BTU/h	206,000	
Rated cooling capacity	kW	60.4	
	Input	kW	12.93 13.24

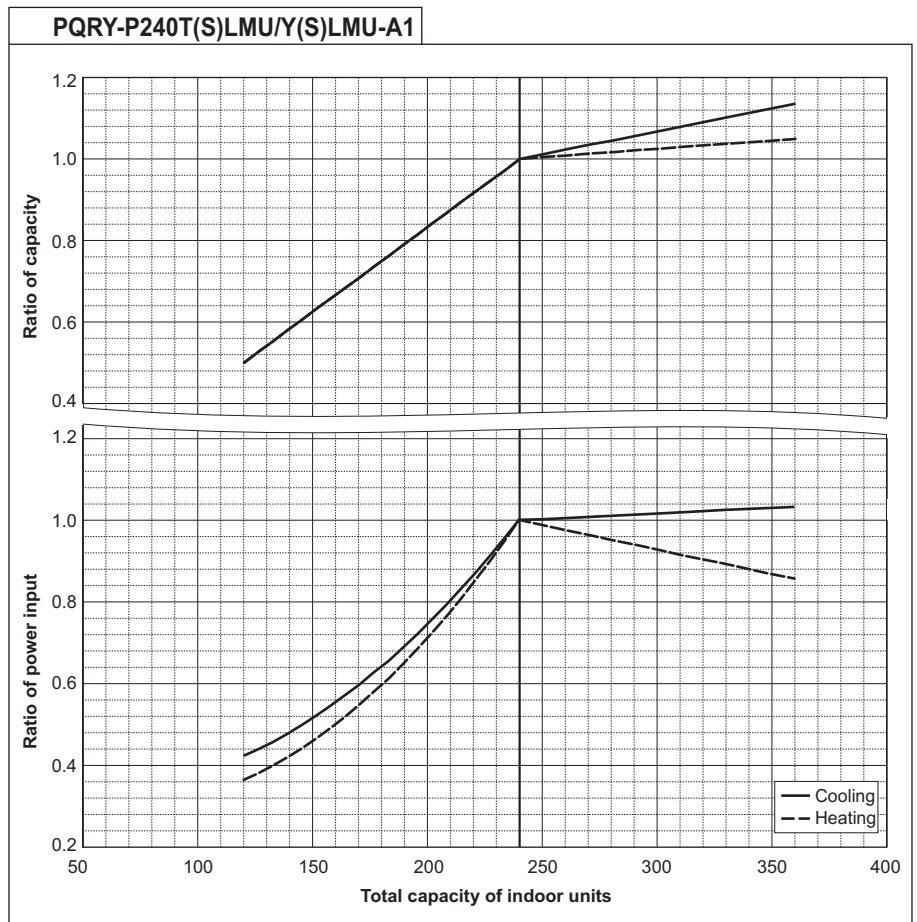
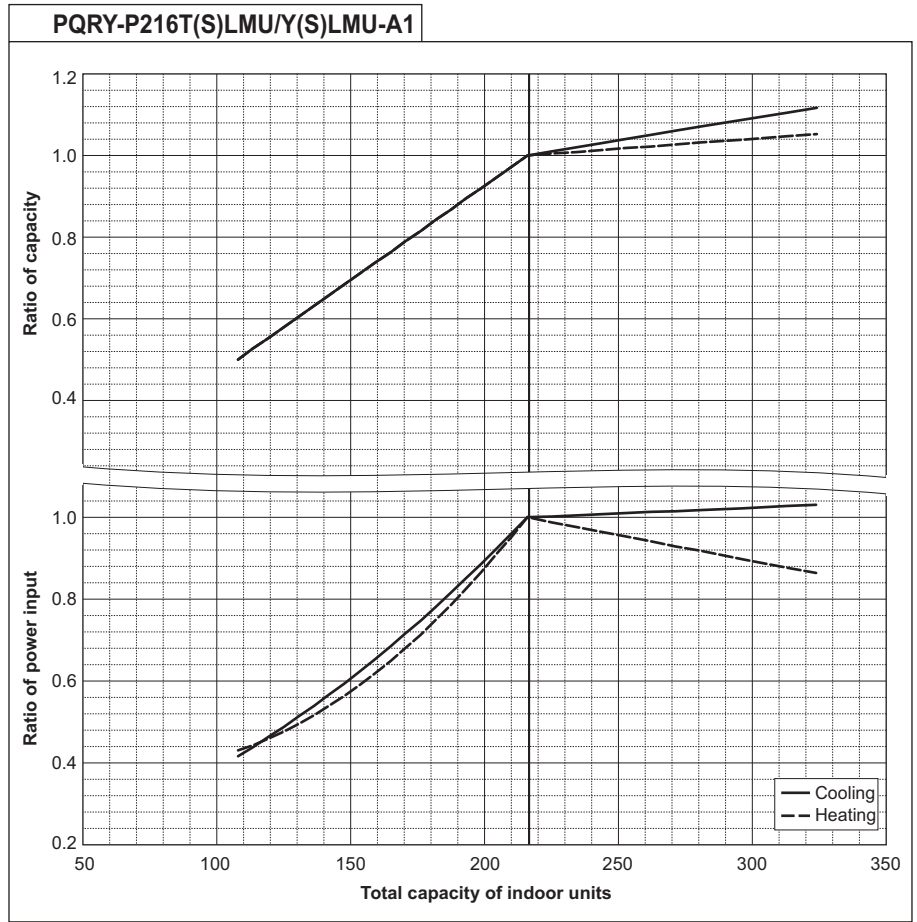
PQRY-		P216TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	243,000	
	kW	71.2	
Input	kW	12.88	
	BTU/h	232,000	
Rated Heating capacity	kW	68.0	
	Input	kW	11.88 10.35

PQRY-		P240TLMU/YLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	240,000	
	kW	70.3	
Input	kW	21.14	
	BTU/h	228,000	
Rated cooling capacity	kW	66.8	
	Input	kW	19.49 18.74

PQRY-		P240TLMU/YLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	270,000	
	kW	79.1	
Input	kW	15.12	
	BTU/h	258,000	
Rated Heating capacity	kW	75.6	
	Input	kW	13.93 14.62

PQRY-		P240TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	240,000	
	kW	70.3	
Input	kW	16.89	
	BTU/h	228,000	
Rated cooling capacity	kW	66.8	
	Input	kW	15.57 16.15

PQRY-		P240TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	270,000	
	kW	79.1	
Input	kW	14.58	
	BTU/h	258,000	
Rated Heating capacity	kW	75.6	
	Input	kW	13.45 12.02

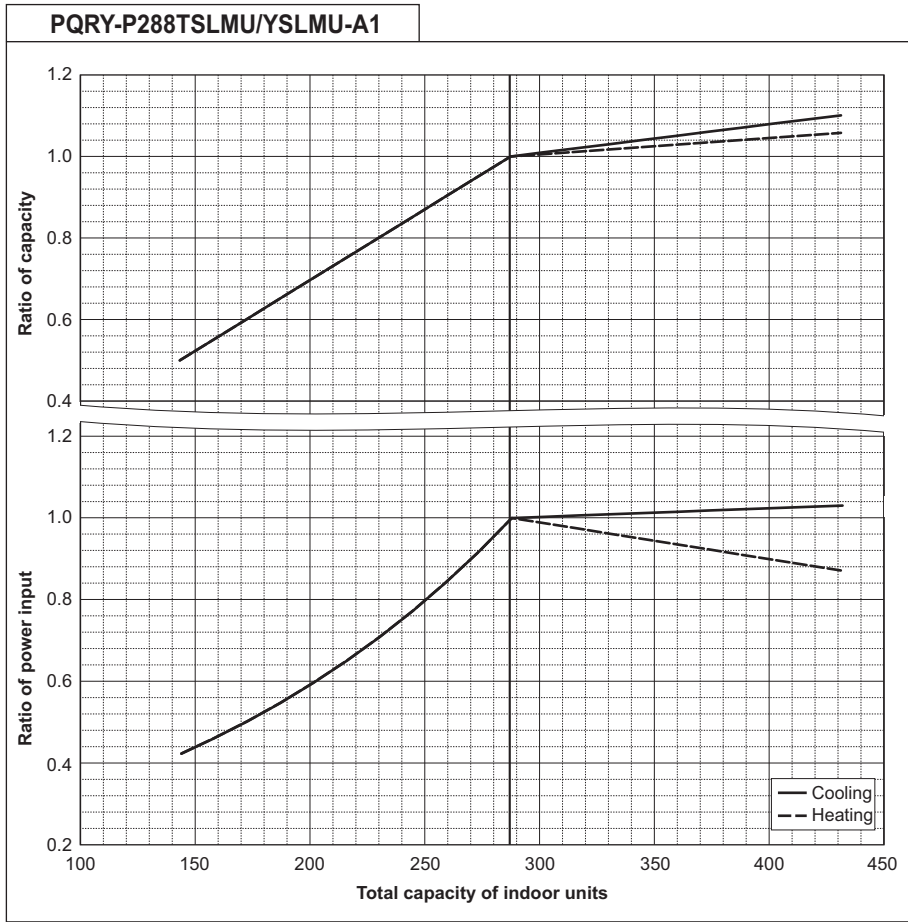


PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

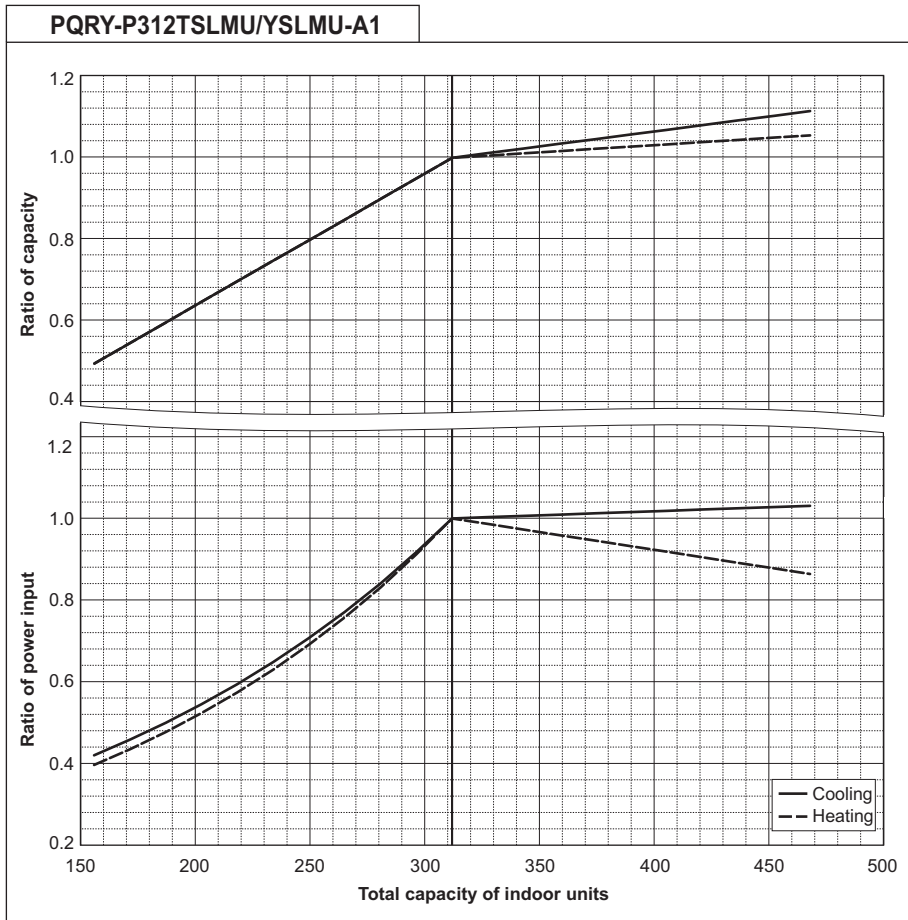
PQRY-		P288TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	288,000	
	kW	84.4	
Input	BTU/h	20.42	
	kW	6.25	
Rated cooling capacity	BTU/h	275,000	
	kW	80.6	
Input	BTU/h	18.82	21.43
	kW	5.85	6.42

PQRY-		P288TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	323,000	
	kW	94.7	
Input	BTU/h	17.50	
	kW	5.13	
Rated Heating capacity	BTU/h	308,000	
	kW	90.3	
Input	BTU/h	16.13	16.05
	kW	4.72	4.70



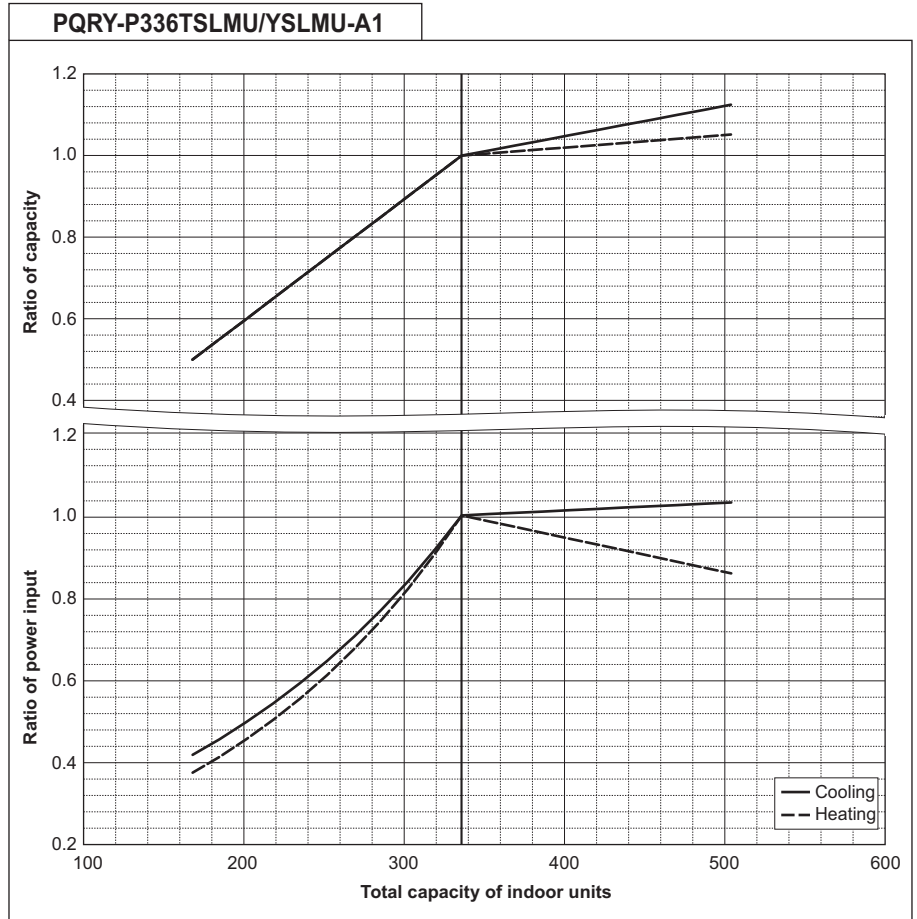
PQRY-		P312TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	312,000	
	kW	91.4	
Input	BTU/h	23.41	
	kW	6.92	
Rated cooling capacity	BTU/h	297,000	
	kW	87.0	
Input	BTU/h	21.59	23.67
	kW	6.31	6.95

PQRY-		P312TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	350,000	
	kW	102.6	
Input	BTU/h	19.11	
	kW	5.57	
Rated Heating capacity	BTU/h	334,000	
	kW	97.9	
Input	BTU/h	17.62	17.96
	kW	5.13	5.20



PQRY-		P336TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	336,000	
	kW	98.5	
Input	kW	26.84	
	BTU/h	320,000	
Rated cooling capacity	kW	93.8	
	Input kW	24.76	25.85

PQRY-		P336TSLMU/YSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	378,000	
	kW	110.8	
Input	kW	20.77	
	BTU/h	361,000	
Rated Heating capacity	kW	105.8	
	Input kW	19.16	20.05



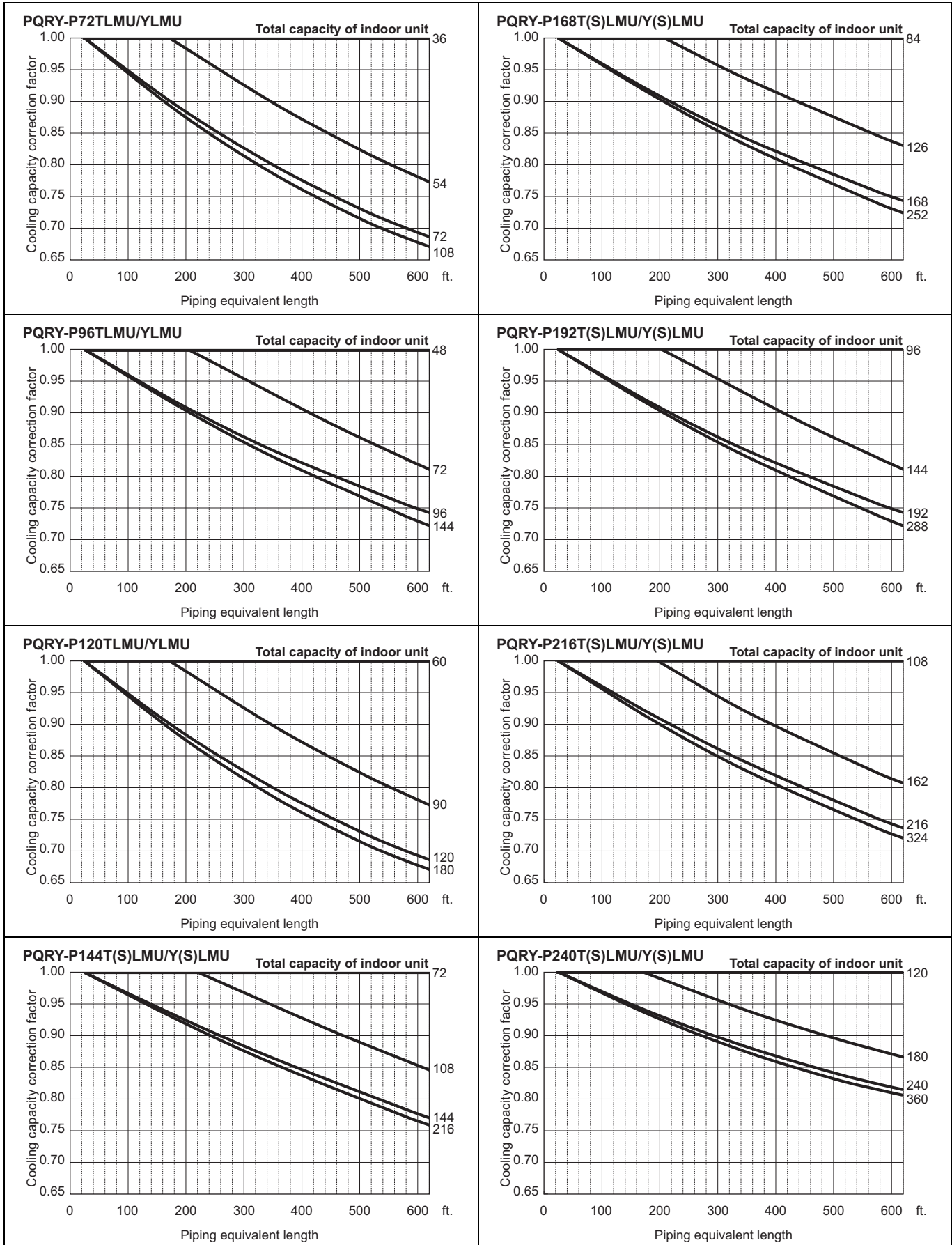
PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

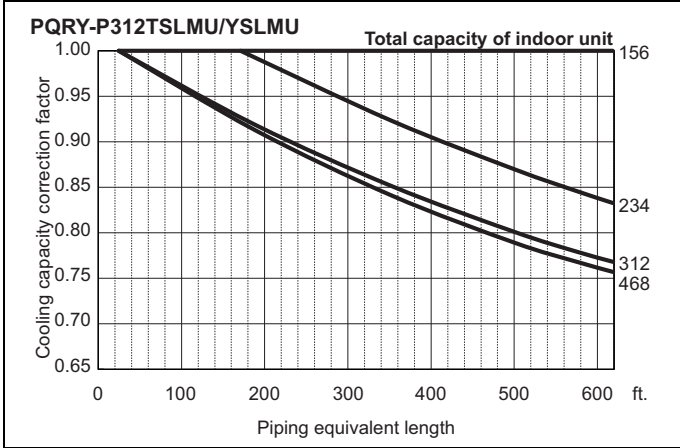
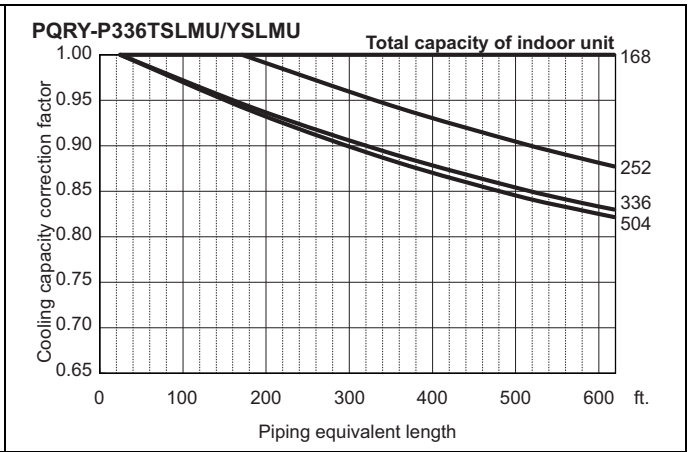
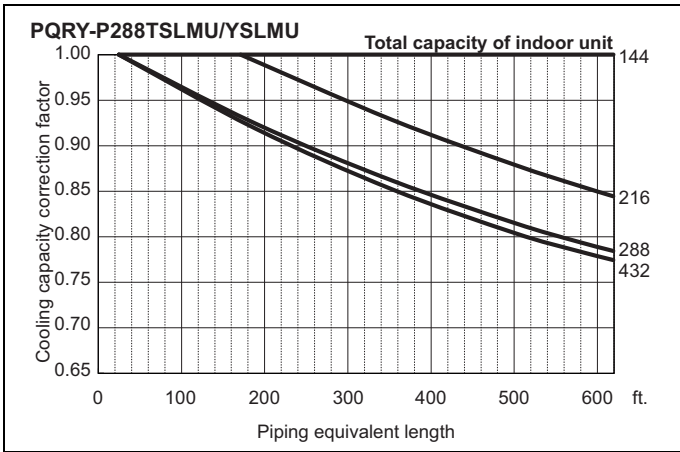
7-3. Correction by refrigerant piping length

CITY MULTI system can extend the piping flexibly within its limitation for the actual situation. However, a decrease of cooling/heating capacity could happen correspondently. Using following correction factor according to the equivalent length of the piping shown at 7-3-1 and 7-3-2, the capacity can be observed. 7-3-3 shows how to obtain the equivalent length of piping.

7-3-1. Cooling capacity correction

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

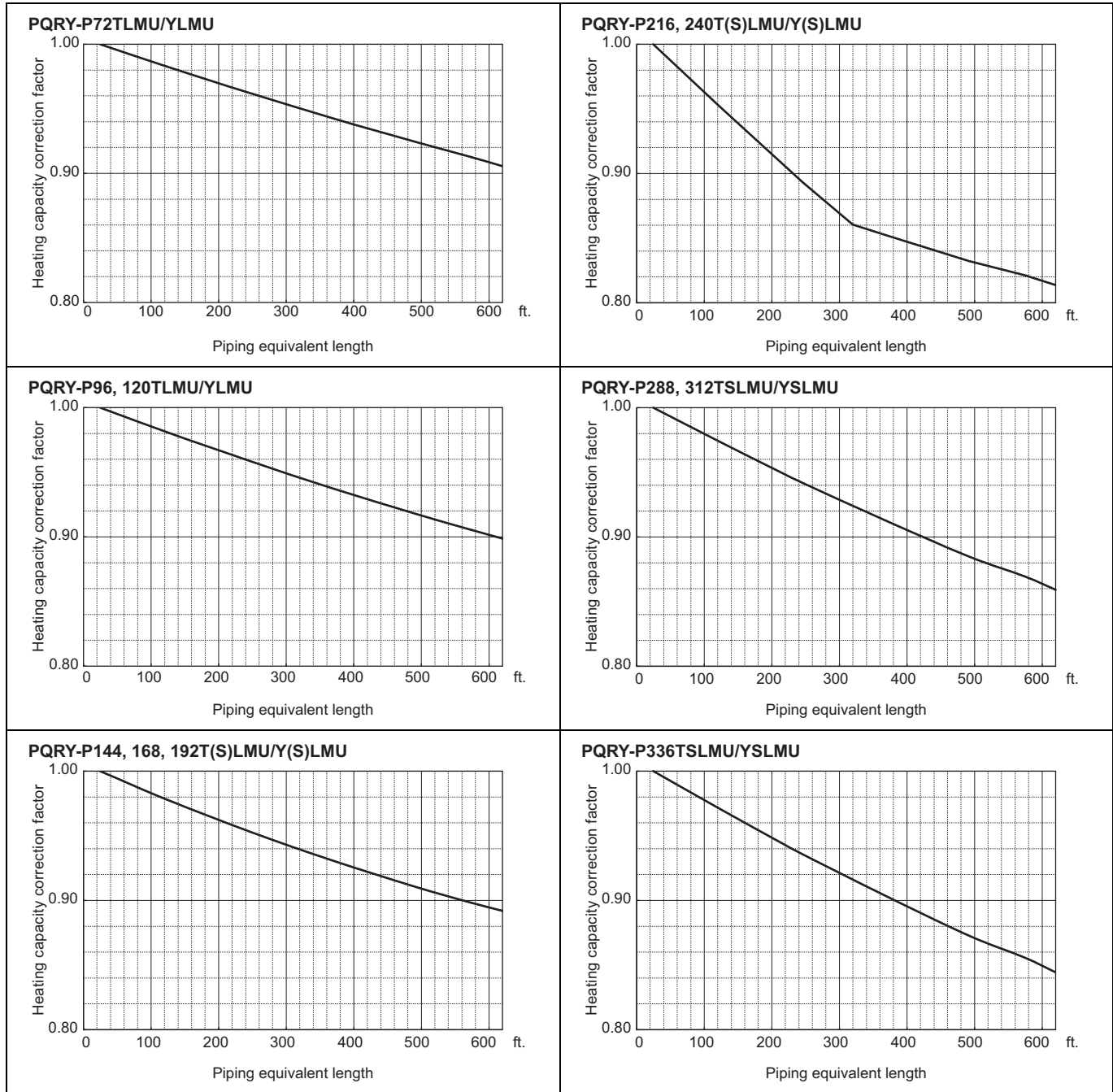




PQRY-P-T(S)LMU-A1, Y(S)LMU-A1

7-3-2. Heating capacity correction

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1



7-3-3. How to obtain the equivalent piping length**1. PQRYP72TLMU/YLMU**

Equivalent length = (Actual piping length to the farthest indoor unit) + (1.15 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.35 x number of bent on the piping) [m]

2. PQRYP96TLMU/YLMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (1.38 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.42 x number of bent on the piping) [m]

3. PQRYP120TLMU/YLMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (1.54 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.47 x number of bent on the piping) [m]

4. PQRYP144, 168, 192, 216, 240T(S)LMU/Y(S)LMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (1.64 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.50 x number of bent on the piping) [m]

5. PQRYP288, 312TSLMU/YSLMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (2.29 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.70 x number of bent on the piping) [m]

6. PQRYP336TSLMU/YSLMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (2.70 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.80 x number of bent on the piping) [m]

PQRY-P-Z(S)LMU-A1

1. SPECIFICATIONS	262
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1. SPECIFICATIONS

PQRY-P-Z(S)LMU-A1

Heat Source Model			PQRY-P72ZLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	72,000			
		kW	21.1			
	(Rated)	(575)	Power input	3.61		
			Current input	4.0		
		(575)	BTU/h	69,000		
			kW	20.2		
(575)	Power input	3.34	3.12			
	Current input	3.7	3.4			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	80,000			
		kW	23.4			
	(Rated)	(575)	Power input	4.04		
			Current input	4.5		
		(575)	BTU/h	76,000		
			kW	22.3		
(575)	Power input	3.74	3.36			
	Current input	4.1	3.7			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity				
	Model/Quantity	P04~P96/1~18				
Sound pressure level (measured in anechoic room)		dB <A>	46.0			
Refrigerant piping diameter	High pressure	in. (mm)	5/8 (15.88) Brazed			
	Low pressure	in. (mm)	3/4 (19.05) Brazed			
Minimum Circuit Ampacity		A	5			
Maximum Overcurrent Protection		A	15			
Circulating water	Water flow rate	G/h	1,522			
		G/min (gpm)	25.4			
		m³/h	5.76			
		L/min	96			
		cfm	3.4			
	Pressure drop	psi	3.48			
		kPa	24			
	Operating volume range	G/h	793 ~ 1,902			
G/min (gpm)		13.2 ~ 31.7				
m³/h		3.0 ~ 7.2				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1				
	Starting method	Inverter				
	Motor output	kW	4.3			
	Case heater	kW	-			
	Lubricant	MEL32				
External finish			Galvanized steel sheets			
External dimension H x W x D	in.	43-5/16 x 34-11/16 x 21-11/16				
	mm	1,100 x 880 x 550				
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)				
	Inverter circuit	Over-heat protection, Over-current protection				
	Compressor	Over-heat protection				
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)				
	Control	Indoor LEV and BC controller				
Net weight	lbs (kg)	411 (186)				
Heat exchanger	Water volume in plate	G	1.32			
		l	5.0			
	Water pressure Max.	psi	290			
		MPa	2.0			
HIC circuit (HIC: Heat Inter-Changer)			-			
Drawing	External	KL94C247				
	Wiring	KE94G421				
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts	joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-R160-J1, CMY-R201, 202, 301, 306S-G, CMY-R302, 303, 304, 306S-G1 BC controller: CMB-P104, 105, 106, 108, 1010, 1013, 1016NU-G1, CMB-P104, 106, 108, 1012, 1016NU-J1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1					
Remarks	Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.					

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

Heat Source Model			PQRY-P96ZLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	96,000			
		kW	28.1			
	(575)	Power input	5.21			
		Current input	5.8			
	(Rated)	(575)	BTU/h	92,000		
			kW	27.0		
(575)	Power input	4.82	5.19			
	Current input	5.3	5.7			
Temp. range of cooling	Indoor	W.B.	59-75°F (15-24°C)			
	Inlet water	°F	23-113°F (-5-45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	108,000			
		kW	31.7			
	(575)	Power input	5.64			
		Current input	6.2			
	(Rated)	(575)	BTU/h	103,000		
			kW	30.2		
(575)	Power input	5.21	4.48			
	Current input	5.8	4.9			
Temp. range of heating	Indoor	D.B.	59-81°F (15-27°C)			
	Inlet water	°F	23-113°F (-5-45°C)			
Indoor unit connectable	Total capacity	50-150% of heat source unit capacity				
Indoor unit connectable	Model/Quantity	P04~P96/1-24				
Sound pressure level (measured in anechoic room)	dB <A>	48.0				
Refrigerant piping diameter	High pressure	in. (mm)	3/4 (19.05) Brazed			
	Low pressure	in. (mm)	7/8 (22.2) Brazed			
Minimum Circuit Ampacity	A	7				
Maximum Overcurrent Protection	A	15				
Circulating water	Water flow rate	G/h	1,522			
		G/min (gpm)	25.4			
		m ³ /h	5.76			
		L/min	96			
		cfm	3.4			
	Pressure drop	psi	3.48			
		kPa	24			
	Operating volume range	G/h	793 ~ 1,902			
G/min (gpm)		13.2 ~ 31.7				
m ³ /h		3.0 ~ 7.2				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1				
	Starting method	Inverter				
	Motor output	kW	6.0			
	Case heater	kW	-			
	Lubricant	MEL32				
External finish	Galvanized steel sheets					
External dimension H x W x D	in.	43-5/16 x 34-11/16 x 21-11/16				
	mm	1,100 x 880 x 550				
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)				
	Inverter circuit	Over-heat protection, Over-current protection				
	Compressor	Over-heat protection				
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)				
	Control	Indoor LEV and BC controller				
Net weight	lbs (kg)	411 (186)				
Heat exchanger	Water volume in plate	G	1.32			
		l	5.0			
	Water pressure Max.	psi	290			
		MPa	2.0			
HIC circuit (HIC: Heat Inter-Changer)	-					
Drawing	External	KL94C247				
	Wiring	KE94G421				
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts	joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-R160-J1, CMY-R201, 202, 301, 306S-G, CMY-R302, 303, 304, 305S-G1 BC controller: CMB-P104, 105, 106, 108, 1010, 1013, 1016NU-G1, CMB-P104, 106, 108, 1012, 1016NU-J1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1					
Remarks	Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.					

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m ³ /h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P120ZLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted	Ducted		
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	120,000			
		kW	35.2			
	(Rated)	(575)	Power input	7.51		
			Current input	8.3		
		(Rated)	(575)	BTU/h	114,000	
				kW	33.4	
(575)	(Rated)	Power input	6.95	7.35		
		Current input	7.7	8.2		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	135,000			
		kW	39.6			
	(Rated)	(575)	Power input	7.09		
			Current input	7.9		
		(Rated)	(575)	BTU/h	129,000	
				kW	37.8	
(575)	(Rated)	Power input	6.55	5.92		
		Current input	7.3	6.6		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity				
	Model/Quantity	P04~P96/1~30				
Sound pressure level (measured in anechoic room)		dB <A>	54.0			
Refrigerant piping diameter	High pressure	in. (mm)	3/4 (19.05) Brazed			
	Low pressure	in. (mm)	7/8 (22.2) Brazed			
Minimum Circuit Ampacity		A	11			
Maximum Overcurrent Protection		A	15			
Circulating water	Water flow rate	G/h	1,522			
		G/min (gpm)	25.4			
		m³/h	5.76			
		L/min	96			
		cfm	3.4			
	Pressure drop	psi	3.48			
		kPa	24			
	Operating volume range	G/h	793 ~ 1,902			
G/min (gpm)		13.2 ~ 31.7				
m³/h		3.0 ~ 7.2				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1				
	Starting method	Inverter				
	Motor output	kW	7.7			
	Case heater	kW	-			
	Lubricant	MEL32				
External finish			Galvanized steel sheets			
External dimension H x W x D	in.	43-5/16 x 34-11/16 x 21-11/16				
	mm	1,100 x 880 x 550				
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)				
	Inverter circuit	Over-heat protection, Over-current protection				
	Compressor	Over-heat protection				
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)				
	Control	Indoor LEV and BC controller				
Net weight	lbs (kg)	411 (186)				
Heat exchanger	Water volume in plate	G	1.32			
		l	5.0			
	Water pressure Max.	psi	290			
		MPa	2.0			
HIC circuit (HIC: Heat Inter-Changer)			-			
Drawing	External	KL94C247				
	Wiring	KE94G421				
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts	joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-R160-J1, CMY-R201, 202, 301, 306S-G, CMY-R302, 303, 304, 306S-G1 BC controller: CMB-P104, 105, 106, 108, 1010, 1013, 1016NU-G1, CMB-P104, 106, 108, 1012, 1016NU-J1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1					
Remarks	Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.					

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>., Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>., Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

PQRY-P-Z(S)LMU-A1

1. SPECIFICATIONS

Heat Source Model		PQRY-P144ZLMU-A1 < For Ground source >		
Indoor Model		Non-Ducted	Ducted	
Power source		3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	144,000	
		kW	42.2	
	(575)	Power input	kW	8.78
		Current input	A	9.7
	(Rated)		BTU/h	137,000
			kW	40.2
(575)	Power input	kW	8.07	
	Current input	A	9.0	
Temp. range of cooling	Indoor	W.B.	59-75°F (15-24°C)	
	Inlet water	°F	23-113°F (-5-45°C)	
Heating capacity (Nominal)	*3, 4, 5	BTU/h	160,000	
		kW	46.9	
	(575)	Power input	kW	8.11
		Current input	A	9.0
	(Rated)		BTU/h	152,000
			kW	44.5
(575)	Power input	kW	7.47	
	Current input	A	8.3	
Temp. range of heating	Indoor	D.B.	59-81°F (15-27°C)	
	Inlet water	°F	23-113°F (-5-45°C)	
Indoor unit connectable	Total capacity	50-150% of heat source unit capacity		
	Model/Quantity	P04~P96/1-36		
Sound pressure level (measured in anechoic room)	dB <A>	54.0		
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed	
	Low pressure	in. (mm)	1-1/8 (28.58) Brazed	
Minimum Circuit Ampacity	A	13		
Maximum Overcurrent Protection	A	20		
Circulating water	Water flow rate	G/h	1,902	
		G/min (gpm)	31.7	
		m ³ /h	7.20	
		L/min	120	
		cfm	4.2	
	Pressure drop	psi	6.38	
		kPa	44	
	Operating volume range	G/h	1,189 ~ 3,054	
		G/min (gpm)	19.8 ~ 50.9	
		m ³ /h	4.5 ~ 11.6	
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		
	Motor output	kW	9.5	
	Case heater	kW	-	
	Lubricant	MEL32		
External finish	Galvanized steel sheets			
External dimension H x W x D	in.	57-1/8 x 34-11/16 x 21-11/16		
	mm	1,450 x 880 x 550		
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		
	Compressor	Over-heat protection		
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)		
	Control	Indoor LEV and BC controller		
Net weight	lbs (kg)	512 (232)		
Heat exchanger	plate type			
	Water volume in plate	G	1.32	
		l	5.0	
	Water pressure Max.	psi	290	
MPa		2.0		
HIC circuit (HIC: Heat Inter-Changer)	-			
Drawing	External	KL94C248		
	Wiring	KE94G421		
Standard attachment	Document	Installation Manual		
	Accessory	Details refer to External Drw		
Optional parts	joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1			
Remarks	Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.			

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m ³ /h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P168ZLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	168,000		
		kW	49.2		
	(575)	Power input	12.05		
		Current input	13.4		
	(Rated)		BTU/h	161,000	
			kW	47.2	
(575)	Power input	11.10	11.88		
	Current input	12.3	13.2		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4, 5	BTU/h	188,000		
		kW	55.1		
	(575)	Power input	9.86		
		Current input	11.0		
	(Rated)		BTU/h	179,000	
			kW	52.5	
(575)	Power input	9.09	9.72		
	Current input	10.1	10.8		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity			
	Model/Quantity	P04~P96/1~42			
Sound pressure level (measured in anechoic room)	dB <A>	56.0			
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed		
	Low pressure	in. (mm)	1-1/8 (28.58) Brazed		
Minimum Circuit Ampacity	A	16			
Maximum Overcurrent Protection	A	25			
Circulating water	Water flow rate	G/h	1,902		
		G/min (gpm)	31.7		
		m³/h	7.20		
		L/min	120		
		cfm	4.2		
	Pressure drop	psi	6.38		
		kPa	44		
	Operating volume range	G/h	1,189 ~ 3,054		
		G/min (gpm)	19.8 ~ 50.9		
		m³/h	4.5 ~ 11.6		
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1			
	Starting method	Inverter			
	Motor output	kW	11.0		
	Case heater	kW	-		
	Lubricant	MEL32			
External finish	Galvanized steel sheets				
External dimension H x W x D	in.	57-1/8 x 34-11/16 x 21-11/16			
	mm	1,450 x 880 x 550			
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			
	Inverter circuit	Over-heat protection, Over-current protection			
	Compressor	Over-heat protection			
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)			
	Control	Indoor LEV and BC controller			
Net weight	lbs (kg)	512 (232)			
Heat exchanger	Water volume in plate	G	1.32		
		l	5.0		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)	-				
Drawing	External	KL94C248			
	Wiring	KE94G421			
Standard attachment	Document	Installation Manual			
	Accessory	Details refer to External Drw			
Optional parts	Joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1				
Remarks	Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.				

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

PQRY-P-Z(S)LMU-A1

1. SPECIFICATIONS

WR2-Series-575V

Heat Source Model			PQRY-P19Z2LMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	192,000			
		kW	56.3			
	(575)	Power input	15.05			
		Current input	16.7			
	(Rated)	(575)	BTU/h	183,000		
			kW	53.6		
(575)	Power input	13.87	14.19			
	Current input	15.4	15.8			
Temp. range of cooling	Indoor	W.B.	59-75°F (15-24°C)			
	Inlet water	°F	23-113°F (-5-45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	215,000			
		kW	63.0			
	(575)	Power input	11.90			
		Current input	13.2			
	(Rated)	(575)	BTU/h	205,000		
			kW	60.1		
(575)	Power input	10.97	11.56			
	Current input	12.2	12.8			
Temp. range of heating	Indoor	D.B.	59-81°F (15-27°C)			
	Inlet water	°F	23-113°F (-5-45°C)			
Indoor unit connectable	Total capacity	50-150% of heat source unit capacity				
	Model/Quantity	P04~P96/1-48				
Sound pressure level (measured in anechoic room)	dB <A>	58.0				
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed			
	Low pressure	in. (mm)	1-1/8 (28.58) Brazed			
Minimum Circuit Ampacity	A	20				
Maximum Overcurrent Protection	A	30				
Circulating water	Water flow rate	G/h	1,902			
		G/min (gpm)	31.7			
		m³/h	7.20			
		L/min	120			
		cfm	4.2			
	Pressure drop	psi	6.38			
		kPa	44			
	Operating volume range	G/h	1,189 ~ 3,054			
G/min (gpm)		19.8 ~ 50.9				
m³/h		4.5 ~ 11.6				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1				
	Starting method	Inverter				
	Motor output	kW	12.4			
	Case heater	kW	-			
	Lubricant	MEL32				
External finish	Galvanized steel sheets					
External dimension H x W x D	in.	57-1/8 x 34-11/16 x 21-11/16				
	mm	1,450 x 880 x 550				
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)				
	Inverter circuit	Over-heat protection, Over-current protection				
	Compressor	Over-heat protection				
Refrigerant	Type x original charge	R410A x 13 lbs + 4 oz (6.0 kg)				
	Control	Indoor LEV and BC controller				
Net weight	lbs (kg)	512 (232)				
Heat exchanger	plate type					
	Water volume in plate	G	1.32			
		l	5.0			
	Water pressure Max.	psi	290			
MPa		2.0				
HIC circuit (HIC: Heat Inter-Changer)	-					
Drawing	External	KL94C248				
	Wiring	KE94G421				
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts	joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1					
Remarks	Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.					

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P144ZSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	144,000			
		kW	42.2			
	(575)	Power input	kW	7.11		
		Current input	A	7.9		
		(Rated)	BTU/h	137,000		
			kW	40.2		
(575)	Power input	kW	6.53	7.72		
	Current input	A	7.2	8.6		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	160,000			
		kW	46.9			
	(575)	Power input	kW	7.45		
		Current input	A	8.3		
		(Rated)	BTU/h	152,000		
			kW	44.5		
(575)	Power input	kW	6.86	7.22		
	Current input	A	7.6	8.0		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity				
	Model/Quantity	P04~P96/1~36				
Sound pressure level (measured in anechoic room)			dB <A> 49.0			
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed			
	Low pressure	in. (mm)	1-1/8 (28.58) Brazed			

Set Model			PQRY-P72ZLMU-A1 < For Ground source >		PQRY-P72ZLMU-A1 < For Ground source >	
Model			PQRY-P72ZLMU-A1 < For Ground source >		PQRY-P72ZLMU-A1 < For Ground source >	
Minimum Circuit Ampacity			A		5	
Maximum Overcurrent Protection			A		15	
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min (gpm)	25.4 + 25.4			
		m³/h	5.76 + 5.76			
		L/min	96 + 96			
		cfm	3.4 + 3.4			
		Pressure drop	psi	3.48		3.48
	kPa	24		24		
Operating volume range	G/h	793 + 793 ~ 1,902 + 1,902				
	G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7				
	m³/h	3.0 + 3.0 ~ 7.2 + 7.2				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		Inverter		
	Motor output	kW		4.3		
	Case heater	kW		-		
	Lubricant	MEL32		MEL32		
External finish			Galvanized steel sheets		Galvanized steel sheets	
External dimension H x W x D			in.		43-5/16 x 34-11/16 x 21-11/16	
	mm		1,100 x 880 x 550		1,100 x 880 x 550	
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		
Refrigerant	Compressor	Over-heat protection		Over-heat protection		
	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)		
Control			Indoor LEV and BC controller			
Net weight			lbs (kg)		411 (186)	
Heat exchanger	Water volume in plate		plate type		plate type	
	G	1.32		1.32		
	l	5.0		5.0		
	Water pressure Max.	psi		290		
		MPa		2.0		
HIC circuit (HIC: Heat Inter-Changer)			-			
Pipe between unit and distributor	High pressure	in. (mm)	5/8 (15.88) Brazed		5/8 (15.88) Brazed	
	Low pressure	in. (mm)	-		3/4 (19.05) Brazed	
Drawing	External	KL94C251				
	Wiring	KE94G421		KE94G421		
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Drw				
Optional parts			Heat Source Twinning kit: CMY-Q100CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1			
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.)</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>			

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>. Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>. Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	

*Above specification data is subject to rounding variation.

PQRY-P-Z(S)LMU-A1

1. SPECIFICATIONS

Heat Source Model			PQRY-P168ZSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2		BTU/h	168,000		
			kW	49.2		
	(575)	Power input	kW	9.33		
		Current input	A	10.4		
	(Rated)			BTU/h	161,000	
				kW	47.2	
(575)	Power input	kW	8.58	9.22		
	Current input	A	9.5	10.2		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4, 5		BTU/h	188,000		
			kW	55.1		
	(575)	Power input	kW	9.34		
		Current input	A	10.4		
	(Rated)			BTU/h	179,000	
				kW	52.5	
(575)	Power input	kW	8.60	8.03		
	Current input	A	9.5	8.9		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity				
	Model/Quantity	P04~P96/1~42				
Sound pressure level (measured in anechoic room)			dB <A>			
			50.0			
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed			
	Low pressure	in. (mm)	1-1/8 (28.58) Brazed			

Set Model			PQRY-P96ZLMU-A1 < For Ground source >		PQRY-P72ZLMU-A1 < For Ground source >	
Minimum Circuit Ampacity			A		7	
Maximum Overcurrent Protection			A		15	
Circulating water	Water flow rate	G/h	1,522 + 1,522		15	
		G/min (gpm)	25.4 + 25.4			
		m ³ /h	5.76 + 5.76			
		L/min	96 + 96			
		cfm	3.4 + 3.4			
	Pressure drop	psi	3.48		3.48	
	kPa	24		24		
Operating volume range	G/h	793 + 793 ~ 1,902 + 1,902				
	G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7				
	m ³ /h	3.0 + 3.0 ~ 7.2 + 7.2				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		Inverter		
	Motor output	kW		4.3		
	Case heater	kW		-		
	Lubricant	MEL32		MEL32		
External finish			Galvanized steel sheets		Galvanized steel sheets	
External dimension H x W x D	in.		43-5/16 x 34-11/16 x 21-11/16		43-5/16 x 34-11/16 x 21-11/16	
	mm		1,100 x 880 x 550		1,100 x 880 x 550	
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection	
	Compressor		Over-heat protection		Over-heat protection	
Refrigerant	Type x original charge		R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)	
	Control		Indoor LEV and BC controller			
Net weight			lbs (kg)		411 (186)	
Heat exchanger	Water volume in plate		plate type		plate type	
	G		1.32		1.32	
	l		5.0		5.0	
	Water pressure Max.	psi		290		290
MPa		2.0		2.0		
HIC circuit (HIC: Heat Inter-Changer)			-		-	
Pipe between unit and distributor	High pressure		in. (mm)		3/4 (19.05) Brazed	
	Low pressure		in. (mm)		7/8 (22.2) Brazed	
Drawing	External		KL94C251			
	Wiring		KE94G421		KE94G421	
Standard attachment	Document		Installation Manual			
	Accessory		Details refer to External Drw			
Optional parts			Heat Source Twinning kit: CMY-Q100CBK2			
			joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1			
			Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1			
			Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1			
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.)</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON.</p> <p>It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p>			

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m ³ /h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series-575V

Heat Source Model			PQRY-P192ZSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	192,000			
		kW	56.3			
	(Rated)	(575)	Power input	11.30		
			Current input	12.6		
		(575)	BTU/h	183,000		
			kW	53.6		
(575)	Power input	10.40	10.98			
	Current input	11.6	12.2			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	215,000			
		kW	63.0			
	(Rated)	(575)	Power input	11.02		
			Current input	12.2		
		(575)	BTU/h	205,000		
			kW	60.1		
(575)	Power input	10.16	8.90			
	Current input	11.3	9.9			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity				
	Model/Quantity	P04~P96/1~48				
Sound pressure level (measured in anechoic room)	dB <A>	51.0				
Refrigerant piping diameter	High pressure	7/8 (22.2) Brazed				
	Low pressure	1-1/8 (28.58) Brazed				

Set Model			PQRY-P96ZLMU-A1 < For Ground source >		PQRY-P96ZLMU-A1 < For Ground source >		
Model			PQRY-P96ZLMU-A1 < For Ground source >		PQRY-P96ZLMU-A1 < For Ground source >		
Minimum Circuit Ampacity	A	7		7			
Maximum Overcurrent Protection	A	15		15			
Circulating water	Water flow rate	G/h	1,522 + 1,522				
		G/min (gpm)	25.4 + 25.4				
		m ³ /h	5.76 + 5.76				
		L/min	96 + 96				
		cfm	3.4 + 3.4				
	Pressure drop	psi	3.48	3.48		3.48	
	kPa	24	24		24		
Operating volume range	G/h	793 + 793 ~ 1,902 + 1,902					
	G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7					
	m ³ /h	3.0 + 3.0 ~ 7.2 + 7.2					
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1			
	Starting method	Inverter		Inverter			
	Motor output	kW	6.0		6.0		
	Case heater	kW	-		-		
	Lubricant	MEL32		MEL32		MEL32	
External finish	Galvanized steel sheets		Galvanized steel sheets		Galvanized steel sheets		
External dimension H x W x D	in.	43-5/16 x 34-11/16 x 21-11/16		43-5/16 x 34-11/16 x 21-11/16			
	mm	1,100 x 880 x 550		1,100 x 880 x 550			
Protection devices	High pressure protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			
	Inverter circuit	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection			
	Compressor	Over-heat protection		Over-heat protection			
Refrigerant	Type x original charge	R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)			
	Control	Indoor LEV and BC controller					
Net weight	lbs (kg)	411 (186)		411 (186)			
Heat exchanger	Water volume in plate	G	plate type		plate type		
		l	1.32		1.32		
	Water pressure Max.	psi	290		290		
		MPa	2.0		2.0		
HIC circuit (HIC: Heat Inter-Changer)	-		-		-		
Pipe between unit and distributor	High pressure	in. (mm)	3/4 (19.05) Brazed		3/4 (19.05) Brazed		
	Low pressure	in. (mm)	-		7/8 (22.2) Brazed		
Drawing	External	KL94C251					
	Wiring	KE94G421		KE94G421			
Standard attachment	Document	Installation Manual					
	Accessory	Details refer to External Drw					
Optional parts	Heat Source Twinning kit: CMY-Q100CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1						
Remarks	Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.						

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m ³ /h (8.3 gpm) <P36>/3.86 m ³ /h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m ³ /min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m ³ /h (9.2 gpm) <P36>/4.30 m ³ /h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m ³ /h (9.2 gpm), Brine concentration 0%	*Above specification data is subject to rounding variation.

PQRY-P-Z(S)LMU-A1

1. SPECIFICATIONS

Heat Source Model			PQR-P216ZSLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	216,000		
		kW	63.3		
	(575)	Power input	14.03		
		Current input	15.6		
	(Rated)	BTU/h	206,000		
		kW	60.4		
(575)	Power input	12.93	13.24		
	Current input	14.4	14.7		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4, 5	BTU/h	243,000		
		kW	71.2		
	(575)	Power input	12.88		
		Current input	14.3		
	(Rated)	BTU/h	232,000		
		kW	68.0		
(575)	Power input	11.88	10.35		
	Current input	13.2	11.5		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity			
	Model/Quantity	P04~P96/2~50 (Connectable branch pipe number is max. 48.)			
Sound pressure level (measured in anechoic room)			dB <A>		
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Braze (1-1/8 (28.58) Braze for the part that exceeds 65 m)		
	Low pressure	in. (mm)	1-1/8 (28.58) Braze		

Set Model			PQR-P216ZSLMU-A1 < For Ground source >		PQR-P96ZLMU-A1 < For Ground source >	
Model			PQR-P216ZSLMU-A1 < For Ground source >		PQR-P96ZLMU-A1 < For Ground source >	
Minimum Circuit Ampacity			A		7	
Maximum Overcurrent Protection			A		15	
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min (gpm)	25.4 + 25.4			
		m³/h	5.76 + 5.76			
		L/min	96 + 96			
		cfm	3.4 + 3.4			
	Pressure drop	psi	3.48		3.48	
kPa		24		24		
Operating volume range	G/h	793 + 793 ~ 1,902 + 1,902				
	G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7				
	m³/h	3.0 + 3.0 ~ 7.2 + 7.2				
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1		
	Starting method	Inverter		Inverter		
	Motor output	kW		6.0		
	Case heater	kW		-		
	Lubricant	MEL32		MEL32		
External finish			Galvanized steel sheets		Galvanized steel sheets	
External dimension H x W x D			in.		43-5/16 x 34-11/16 x 21-11/16	
			mm		1,100 x 880 x 550	
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection	
	Compressor		Over-heat protection		Over-heat protection	
Refrigerant	Type x original charge		R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)	
	Control		Indoor LEV and BC controller			
Net weight			lbs (kg)		411 (186)	
Heat exchanger	Water volume in plate		plate type		plate type	
			G		1.32	
	l		5.0		5.0	
	Water pressure Max.	psi		290		290
MPa		2.0		2.0		
HIC circuit (HIC: Heat Inter-Change)			-		-	
Pipe between unit and distributor	High pressure		in. (mm)		3/4 (19.05) Braze	
	Low pressure		in. (mm)		7/8 (22.2) Braze	
Drawing	External		KE94G421		KL94C251	
	Wiring		KE94G421		KE94G421	
Standard attachment	Document		Installation Manual			
	Accessory		Details refer to External Dnw			
Optional parts			Heat Source Twinning kit: CMY-Q100CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1			
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.)</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p> <p>When the high pressure piping length is 65 m or less, use 7/8 (22.2) pipe. When the high pressure piping length exceeds 65 m, use 1-1/8 (28.58) pipe for the part that exceeds 65 m.</p>			

Notes:		Unit converter	
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%		BTU/h	=kW x 3.412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%		cfm	=m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%		lbs	=kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%		*Above specification data is subject to rounding variation.	
5. <PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%			

1. SPECIFICATIONS

Heat Source Model			PQRY-P240ZSLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	240,000		
		kW	70.3		
	(575)	Power input	16.89		
		Current input	18.8		
	(Rated)	BTU/h	228,000		
		kW	66.8		
(575)	Power input	15.57	16.15		
	Current input	17.3	18.0		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4, 5	BTU/h	270,000		
		kW	79.1		
	(575)	Power input	14.58		
		Current input	16.2		
	(Rated)	BTU/h	258,000		
		kW	75.6		
(575)	Power input	13.45	12.02		
	Current input	15.0	13.4		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity			
	Model/Quantity	P04-P96/2~50 (Connectable branch pipe number is max. 48.)			
Sound pressure level (measured in anechoic room)		dB <A>	57.0		
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Brazed (1-1/8 (28.58) Brazed for the part that exceeds 65 m)		
	Low pressure	in. (mm)	1-3/8 (34.93) Brazed		

Set Model			PQRY-P120ZLMU-A1 < For Ground source >		PQRY-P120ZLMU-A1 < For Ground source >	
Model			PQRY-P120ZLMU-A1 < For Ground source >		PQRY-P120ZLMU-A1 < For Ground source >	
Minimum Circuit Ampacity			A	11	11	
Maximum Overcurrent Protection			A	15	15	
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min (gpm)	25.4 + 25.4			
		m³/h	5.76 + 5.76			
	Pressure drop	L/min	96 + 96			
		cfm	3.4 + 3.4			
		psi	3.48	3.48		3.48
Operating volume range	kPa	24	24		24	
	G/h	793 + 793 ~ 1,902 + 1,902				
	G/min (gpm)	13.2 + 13.2 ~ 31.7 + 31.7				
	m³/h	3.0 + 3.0 ~ 7.2 + 7.2				
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1	
	Starting method		Inverter		Inverter	
	Motor output	kW	7.7		7.7	
	Case heater	kW	-		-	
	Lubricant		MEL32		MEL32	
External finish			Galvanized steel sheets		Galvanized steel sheets	
External dimension H x W x D		in.	43-5/16 x 34-11/16 x 21-11/16		43-5/16 x 34-11/16 x 21-11/16	
		mm	1,100 x 880 x 550		1,100 x 880 x 550	
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection	
	Compressor		Over-heat protection		Over-heat protection	
Refrigerant	Type x original charge		R410A x 11 lbs + 1 oz (5.0 kg)		R410A x 11 lbs + 1 oz (5.0 kg)	
	Control		Indoor LEV and BC controller			
Net weight		lbs (kg)	411 (186)		411 (186)	
Heat exchanger			plate type		plate type	
	Water volume in plate	G	1.32		1.32	
		l	5.0		5.0	
	Water pressure Max.	psi	290		290	
MPa		2.0		2.0		
HIC circuit (HIC: Heat Inter-Changer)						
Pipe between unit and distributor	High pressure		3/4 (19.05) Brazed		3/4 (19.05) Brazed	
	Low pressure		-		7/8 (22.2) Brazed	
Drawing	External		KL94C251			
	Wiring		KE94G421		KE94G421	
Standard attachment	Document		Installation Manual			
	Accessory		Details refer to External Drw			
Optional parts			Heat Source Twinning kit: CMY-Q100CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1013, 1016NU-GA1, 108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1			
Remarks			<p>Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.</p> <p>Due to continuing improvement, above specifications may be subject to change without notice.</p> <p>The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.)</p> <p>The ambient relative humidity of the Heat Source Unit needs to be kept below 80%.</p> <p>The Heat Source Unit should not be installed at outdoor.</p> <p>Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit.</p> <p>Be sure to provide interlocking for the unit operation and water circuit.</p> <p>The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit.</p> <p>Install the supplied insulation material to the unused drain-socket.</p> <p>When installing insulation material around both water and refrigerant piping, follow the installation manual.</p> <p>The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere).</p> <p>Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.</p> <p>When the high pressure piping length is 65 m or less, use 7/8 (22.2) pipe. When the high pressure piping length exceeds 65 m, use 1-1/8 (28.58) pipe for the part that exceeds 65 m.</p>			

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	*Above specification data is subject to rounding variation.

PQRY-P-Z(S)LMU-A1

1. SPECIFICATIONS

Heat Source Model			PQRY-P282ZSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted	Ducted		
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	288,000			
		kW	84.4			
	(575)	Power input	20.42			
		Current input	22.7			
	(Rated)		BTU/h	275,000		
			kW	80.6		
(575)	Power input	18.82	21.43			
	Current input	20.9	23.9			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	323,000			
		kW	94.7			
	(575)	Power input	17.50			
		Current input	19.5			
	(Rated)		BTU/h	308,000		
			kW	90.3		
(575)	Power input	16.13	16.05			
	Current input	17.9	17.9			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity				
	Model/Quantity	P04~P96/2~50 (Connectable branch pipe number is max. 48.)				
Sound pressure level (measured in anechoic room)		dB <A>		57.0		
Refrigerant piping diameter	High pressure	in. (mm)		1-1/8 (28.58) Brazed		
	Low pressure	in. (mm)		1-3/8 (34.93) Brazed		

Set Model			PQRY-P144ZLMU-A1 < For Ground source >		PQRY-P144ZLMU-A1 < For Ground source >	
Minimum Circuit Ampacity			A		13	
Maximum Overcurrent Protection			A		20	
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min (gpm)	31.7 + 31.7			
		m³/h	7.20 + 7.20			
		L/min	120 + 120			
		cfm	4.2 + 4.2			
	Pressure drop	psi	6.38		6.38	
	kPa	44		44		
Operating volume range	G/h	1,189 + 1,189 ~ 3,054 + 3,054				
	G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9				
	m³/h	4.5 + 4.5 ~ 11.6 + 11.6				
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1	
	Starting method		Inverter		Inverter	
	Motor output	kW	9.5		9.5	
	Case heater	kW	-		-	
	Lubricant		MEL32		MEL32	
External finish			Galvanized steel sheets		Galvanized steel sheets	
External dimension H x W x D	in.	57-1/8 x 34-11/16 x 21-11/16		57-1/8 x 34-11/16 x 21-11/16		
		mm		1,450 x 880 x 550		
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection	
	Compressor		Over-heat protection		Over-heat protection	
Refrigerant	Type x original charge		R410A x 13 lbs + 4 oz (6.0 kg)		R410A x 13 lbs + 4 oz (6.0 kg)	
	Control		Indoor LEV and BC controller			
Net weight		lbs (kg)	512 (232)		512 (232)	
Heat exchanger	Water volume in plate		plate type		plate type	
			G		1.32	
	Water pressure Max.		l		5.0	
			psi		290	
		MPa		2.0		
HIC circuit (HIC: Heat Inter-Change)			-		-	
Pipe between unit and distributor	High pressure	in. (mm)	7/8 (22.2) Brazed		7/8 (22.2) Brazed	
	Low pressure	in. (mm)	-		1-1/8 (28.58) Brazed	
Drawing	External	KL94C252				
	Wiring	KE94G421		KE94G421		
Standard attachment	Document	Installation Manual				
	Accessory	Details refer to External Dnw				
Optional parts			Heat Source Twinning kit: CMY-Q200CBK joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1			
Remarks			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F D.B. (40°C D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.			

Notes:	Unit converter
1. <Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3.412
2. <PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3. <Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4. <PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5. <PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P312ZSLMU-A1 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1, 2	BTU/h	312,000		
		kW	91.4		
	(575)	Power input	23.41		
		Current input	26.1		
	(Rated)	BTU/h	297,000		
		kW	87.0		
(575)	Power input	21.59	23.67		
	Current input	24.0	26.4		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*3, 4, 5	BTU/h	350,000		
		kW	102.6		
	(575)	Power input	19.11		
		Current input	21.3		
	(Rated)	BTU/h	334,000		
		kW	97.9		
(575)	Power input	17.62	17.96		
	Current input	19.6	20.0		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
	Inlet water	°F	23~113°F (-5~45°C)		
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity			
	Model/Quantity	P04-P96/2~50 (Connectable branch pipe number is max. 48.)			
Sound pressure level (measured in anechoic room)		dB <A>	58.0		
Refrigerant piping diameter	High pressure	in. (mm)	1-1/8 (28.58) Brazed		
	Low pressure	in. (mm)	1-3/8 (34.93) Brazed		

Set Model			PQRY-P168ZLMU-A1 < For Ground source >		PQRY-P144ZLMU-A1 < For Ground source >	
Model			PQRY-P168ZLMU-A1 < For Ground source >		PQRY-P144ZLMU-A1 < For Ground source >	
Minimum Circuit Ampacity			A		13	
Maximum Overcurrent Protection			A		20	
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min (gpm)	31.7 + 31.7			
		m³/h	7.20 + 7.20			
		L/min	120 + 120			
		cfm	4.2 + 4.2			
	Pressure drop	psi	6.38		6.38	
kPa		44		44		
Operating volume range		G/h	1,189 + 1,189 ~ 3,054 + 3,054			
	G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9				
	m³/h	4.5 + 4.5 ~ 11.6 + 11.6				
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1	
	Starting method		Inverter		Inverter	
	Motor output		kW		9.5	
	Case heater		kW		-	
	Lubricant		MEL32		MEL32	
External finish			Galvanized steel sheets		Galvanized steel sheets	
External dimension H x W x D			in.	57-1/8 x 34-11/16 x 21-11/16		57-1/8 x 34-11/16 x 21-11/16
			mm	1,450 x 880 x 550		1,450 x 880 x 550
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection	
	Compressor		Over-heat protection		Over-heat protection	
Refrigerant	Type x original charge		R410A x 13 lbs + 4 oz (6.0 kg)		R410A x 13 lbs + 4 oz (6.0 kg)	
	Control		Indoor LEV and BC controller			
Net weight			lbs (kg)	512 (232)		512 (232)
Heat exchanger	Water volume in plate		plate type		plate type	
			G		1.32	
			l		5.0	
	Water pressure Max.	psi		290		290
MPa		2.0		2.0		
HIC circuit (HIC: Heat Inter-Changer)						
Pipe between unit and distributor	High pressure		in. (mm)		7/8 (22.2) Brazed	
	Low pressure		in. (mm)		-	
Drawing	External		KL94C252			
	Wiring		KE94G421			
Standard attachment	Document		Installation Manual			
	Accessory		Details refer to External Drw			
Optional parts			Heat Source Twinning kit: CMY-Q200CBK joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1			
Remarks			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.). The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.			

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

PQRY-P-Z(S)LMU-A1

1. SPECIFICATIONS

Heat Source Model			PQRY-P336ZSLMU-A1 < For Ground source >			
Indoor Model			Non-Ducted	Ducted		
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1, 2	BTU/h	336,000			
		kW	98.5			
	(575)	Power input	26.84			
		Current input	29.9			
	(Rated)		BTU/h	320,000		
			kW	93.8		
(575)	Power input	24.76	25.85			
	Current input	27.6	28.8			
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Heating capacity (Nominal)	*3, 4, 5	BTU/h	378,000			
		kW	110.8			
	(575)	Power input	20.77			
		Current input	23.1			
	(Rated)		BTU/h	361,000		
			kW	105.8		
(575)	Power input	19.16	20.05			
	Current input	21.3	22.3			
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)			
	Inlet water	°F	23~113°F (-5~45°C)			
Indoor unit connectable	Total capacity	50~150% of heat source unit capacity				
	Model/Quantity	P04~P96/2~50 (Connectable branch pipe number is max. 48.)				
Sound pressure level (measured in anechoic room)		dB <A>		59.0		
Refrigerant piping diameter	High pressure	in. (mm)		1-1/8 (28.58) Brazed		
	Low pressure	in. (mm)		1-5/8 (41.28) Brazed		

Set Model			PQRY-P168ZLMU-A1 < For Ground source >		PQRY-P168ZLMU-A1 < For Ground source >	
Model			PQRY-P168ZLMU-A1 < For Ground source >		PQRY-P168ZLMU-A1 < For Ground source >	
Minimum Circuit Ampacity			A		16	
Maximum Overcurrent Protection			A		25	
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min (gpm)	31.7 + 31.7			
		m³/h	7.20 + 7.20			
		L/min	120 + 120			
		cfm	4.2 + 4.2			
		Pressure drop	psi	6.38		6.38
	kPa	44		44		
Operating volume range		G/h	1,189 + 1,189 ~ 3,054 + 3,054			
		G/min (gpm)	19.8 + 19.8 ~ 50.9 + 50.9			
		m³/h	4.5 + 4.5 ~ 11.6 + 11.6			
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1	
	Starting method		Inverter		Inverter	
	Motor output	kW	11.0		11.0	
	Case heater	kW	-		-	
	Lubricant		MEL32		MEL32	
External finish			Galvanized steel sheets		Galvanized steel sheets	
External dimension H x W x D			in.		57-1/8 x 34-11/16 x 21-11/16	
			mm		1,450 x 880 x 550	
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection	
	Compressor		Over-heat protection		Over-heat protection	
Refrigerant	Type x original charge		R410A x 13 lbs + 4 oz (6.0 kg)		R410A x 13 lbs + 4 oz (6.0 kg)	
	Control		Indoor LEV and BC controller			
Net weight		lbs (kg)	512 (232)		512 (232)	
Heat exchanger	Water volume in plate		plate type		plate type	
			G		1.32	
			l		5.0	
	Water pressure Max.		psi		290	
MPa			2.0			
HIC circuit (HIC: Heat Inter-Changer)			-		-	
Pipe between unit and distributor	High pressure		in. (mm)		7/8 (22.2) Brazed	
	Low pressure		in. (mm)		1-1/8 (28.58) Brazed	
Drawing	External		KL94C252			
	Wiring		KE94G421			
Standard attachment	Document		Installation Manual			
	Accessory		Details refer to External Drw			
Optional parts			Heat Source Twinning kit: CMY-Q200CBK joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1010, 1016NU-HA1, CMB-P108, 1012, 1016NU-JA1, CMB-P1016NU-KA1 Sub BC controller: CMB-P104, 108NU-GB1, CMB-P1016NU-HB1, CMB-P104, 108NU-KB1			
Remarks			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. Due to continuing improvement, above specifications may be subject to change without notice. The ambient temperature of the Heat Source Unit needs to be kept below 104°F.D.B. (40°C.D.B.) The ambient relative humidity of the Heat Source Unit needs to be kept below 80%. The Heat Source Unit should not be installed at outdoor. Be sure to mount a strainer (more than 50 meshes) at the water inlet piping of the unit. Be sure to provide interlocking for the unit operation and water circuit. The Heat Source twinning kit (low pressure) should be connected to the low pressure side of the heat source unit. Install the supplied insulation material to the unused drain-socket. When installing insulation material around both water and refrigerant piping, follow the installation manual. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). Add brine to circulating water when a unit is operating at water temperature below 50°F (10°C), and turn DipSW4 (773) ON before power ON. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.			

Notes:	Unit converter
1.<Standard CITY MULTI indoor unit> Nominal cooling conditions (Test conditions are based on AHRI 1230) Indoor: 81°F.D.B./66°F.W.B. (27°C.D.B./19°C.W.B.), Inlet water temperature: 86°F (30°C), Brine concentration 0%	BTU/h =kW x 3,412
2.<PWFY-P36/72NMU-E2-AU> Nominal cooling conditions Inlet water Temp.: 86°F (30°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 73°F (23°C), Water flow rate: 1.93 m³/h (8.3 gpm) <P36>/3.86 m³/h (16.6 gpm) <P72>, Brine concentration 0%	cfm =m³/min x 35.31
3.<Standard CITY MULTI indoor unit> Nominal heating conditions (Test conditions are based on AHRI 1230) Indoor: 68°F.D.B. (20°C.D.B.), Inlet water temperature: 68°F (20°C), Brine concentration 0%	lbs =kg/0.4536
4.<PWFY-P36/72NMU-E2-AU> Nominal heating conditions Inlet water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 86°F (30°C), Water flow rate: 2.15 m³/h (9.2 gpm) <P36>/4.30 m³/h (18.5 gpm) <P72>, Brine concentration 0%	
5.<PWFY-P36NMU-E-BU> Nominal heating conditions Circulating water Temp.: 68°F (20°C), Pipe length: 25 ft. (7.6 m), Level difference: 0 ft. (0 m), Inlet water Temp.: 149°F (65°C), Water flow rate: 2.15 m³/h (9.2 gpm), Brine concentration 0%	
	*Above specification data is subject to rounding variation.

PQRY-P72, 96, 120ZLMU-A1

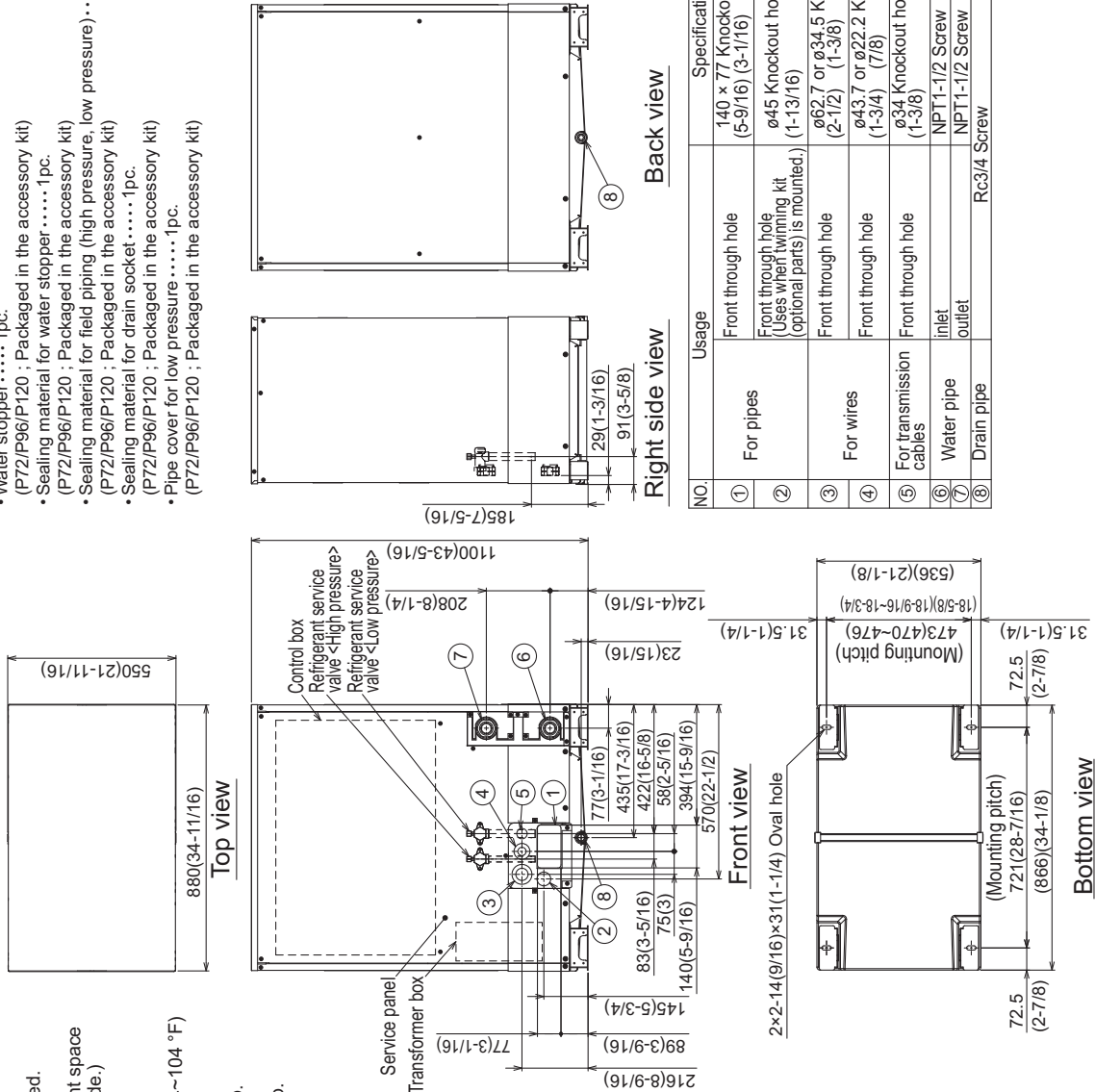
Unit: mm(in)

PQRY-P-Z(S)LMU-A1

- Note1. Close a hole of the water piping, the refrigerant piping, the power supply, and the control wiring and unused knockout holes with the putty etc. so as not to infiltrate rain water etc.(field erection work)
- Note2. At the time of product shipment, the front side piping specification serves as the local drainage connection. When connecting on the rear side, please remove the rear side plug sealing corks, and attach a front side. Ensure there is no leak after the attachment has been fitted.
- Note3. Take notice of service space as Fig.A. (In case of single installation, 600mm(23-5/8) or more of back space as front space makes easier access when servicing the unit from rear side.)
- Note4. If water pipes or refrigerant pipes stretch upward, required space for service and maintenance due to replacement of control box is shown in Fig.B.
- Note5. Environmental condition for installation; -20~40°C(DB) (-4~104 °F) as indoor installation.
- Note6. In case the temperature around the heat source unit has possibility to drop under 0°C(32°F) or the inlet-water temp. drops under 10°C(50°F), be careful for the following point to prevent the pipe burst by the water pipe freeze-up.
- Add brine to water circuit.
 - Circulate the water all the time even if the heat source unit is not in operation.
 - Drain the water from inside of the heat source unit when the heat source unit will not operate for a long term.
- Note7. Ensure that the drain piping is downward with a pitch of more than 1/100.
- Note8. At brazing of pipes, wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248 °F).

<Accessories>

- Refrigerant (high pressure) conn. pipe1pc. (P72/P96/P120 ; Packaged in the accessory kit)
- Refrigerant (low pressure) conn. elbow1pc. (P72/P96/P120 ; Packaged in the accessory kit)
- Water stopper1pc. (P72/P96/P120 ; Packaged in the accessory kit)
- Sealing material for water stopper1pc. (P72/P96/P120 ; Packaged in the accessory kit)
- Sealing material for field piping (high pressure, low pressure)1pc. each (P72/P96/P120 ; Packaged in the accessory kit)
- Sealing material for drain socket1pc. (P72/P96/P120 ; Packaged in the accessory kit)
- Pipe cover for low pressure1pc. (P72/P96/P120 ; Packaged in the accessory kit)



NO.	Usage	Specifications
①	For pipes	Front through hole 140 x 77 Knockout hole (5-9/16) (3-1/16)
②		Front through hole (Uses when twinning kit (optional parts) is mounted.) ø45 Knockout hole (1-13/16)
③	For wires	Front through hole ø62.7 or ø34.5 Knockout hole (2-1/2) (1-3/8)
④		Front through hole ø43.7 or ø22.2 Knockout hole (1-3/4) (7/8)
⑤	For transmission cables	Front through hole ø34 Knockout hole (1-3/8)
⑥	Water pipe inlet	NPT1-1/2 Screw
⑦	Water pipe outlet	NPT1-1/2 Screw
⑧	Drain pipe	Rc3/4 Screw

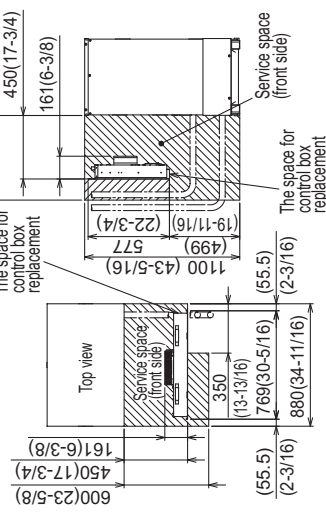


Fig.A

Fig.B

Connecting pipe specifications

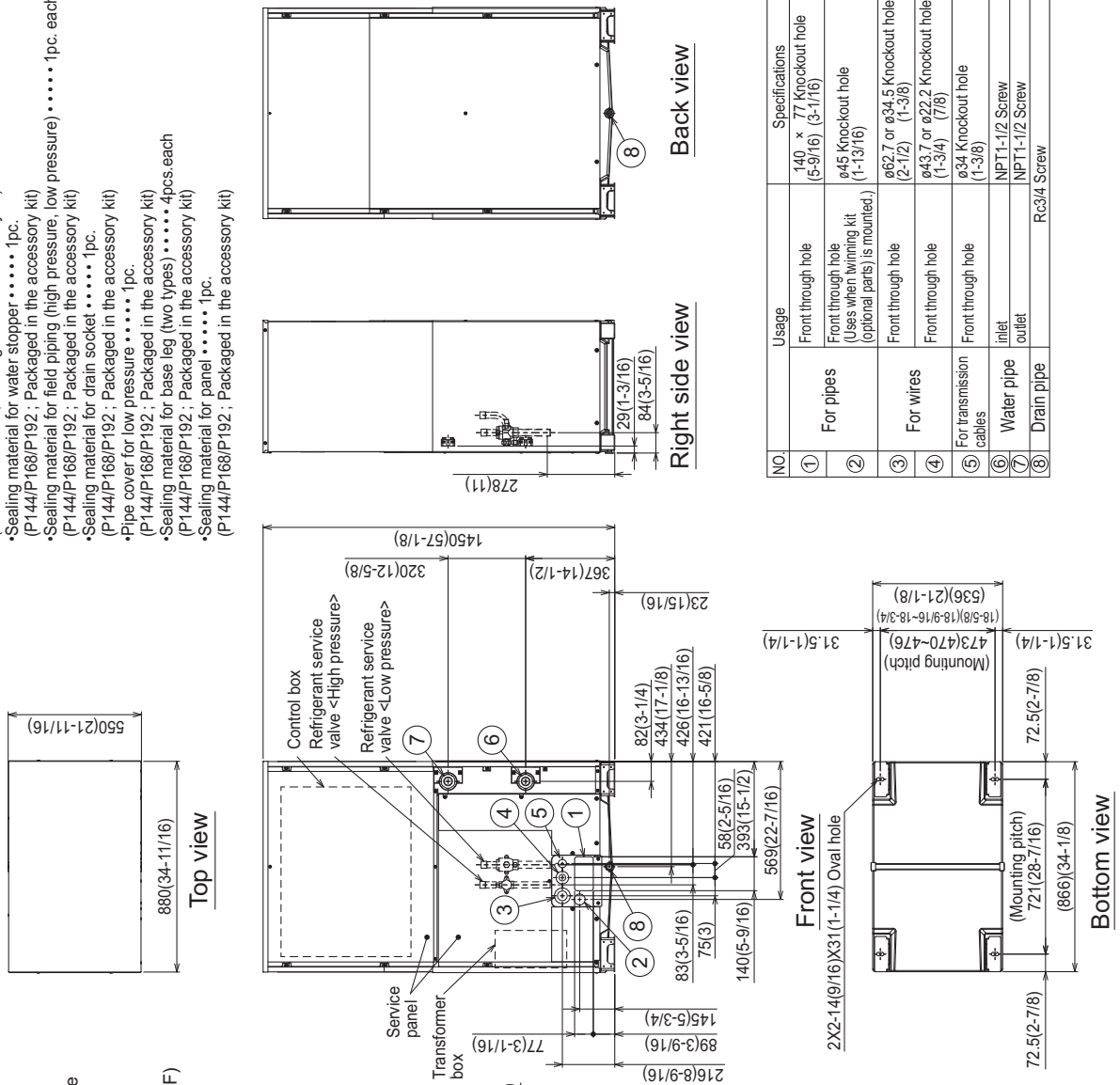
Model	Refrigerant pipe		Service valve	
	High pressure	Low pressure	High pressure	Low pressure
PQRY-P72ZLMU-A1	ø15.88 Brazed (5/8) 1/2	ø19.05 Brazed (3/4) 1/2	ø19.05 (3/4)	ø25.4 (1)
PQRY-P96ZLMU-A1	ø19.05 Brazed (3/4) 1/2	ø22.2 Brazed (7/8) 1/2		
PQRY-P120ZLMU-A1				

- *1. Connect by using the connecting pipes and elbow that are supplied.
- *2. Use the pipe joint (field supply) and connect to the refrigerant service valve piping.

PQRY-P144, 168, 192ZLMU-A1

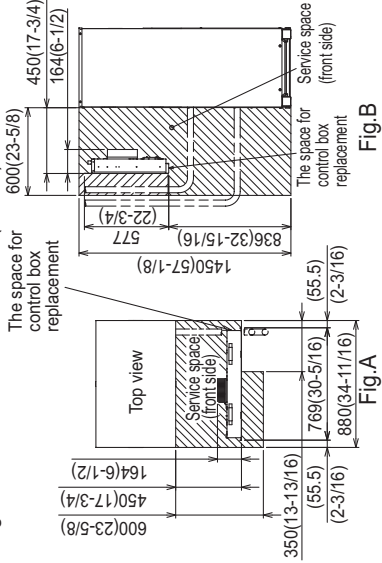
Unit: mm(in)

- <Accessories>
- Refrigerant (high pressure) conn. pipe 1pc. (P144/P168/P192; Packaged in the accessory kit)
 - Refrigerant (low pressure) conn. pipe 1pc. (P144/P168/P192; Packaged in the accessory kit)
 - Water stopper 1pc. (P144/P168/P192; Packaged in the accessory kit)
 - Sealing material for water stopper 1pc. (P144/P168/P192; Packaged in the accessory kit)
 - Sealing material for field piping (high pressure, low pressure) 1pc. each (P144/P168/P192; Packaged in the accessory kit)
 - Sealing material for drain socket 1pc. (P144/P168/P192; Packaged in the accessory kit)
 - Pipe cover for low pressure 1pc. (P144/P168/P192; Packaged in the accessory kit)
 - Sealing material for base leg (two types) 4pcs. each (P144/P168/P192; Packaged in the accessory kit)
 - Sealing material for panel 1pc. (P144/P168/P192; Packaged in the accessory kit)



NO.	Usage	Specifications
①	Front through hole	140 x 77 Knockout hole (5-9/16) (3-1/16)
②	For pipes	Front through hole (Uses when twinning kit (optional parts) is mounted.)
③	For wires	Front through hole
④	For transmission cables	Front through hole
⑤	Water pipe inlet	Front through hole
⑥	Water pipe outlet	Front through hole
⑦	Drain pipe	Front through hole

- Note1. Close a hole of the water piping, the refrigerant piping, the power supply, and the control wiring and unused knockout holes with the putty etc. so as not to infiltrate rain water etc. (field erection work)
- Note2. At the time of product shipment, the front side piping specification serves as the local drainage connection. When connecting on the rear side, please remove the rear side plug sealing corks, and attach a front side. Ensure there is no leak after the attachment has been fitted.
- Note3. Take notice of service space as Fig.A. (In case of single installation, 600mm(23-5/8) or more of back space as front space makes easier access when servicing the unit from rear side.)
- Note4. If water pipes or refrigerant pipes stretch upward, required space for service and maintenance due to replacement of control box is shown in Fig.B.
- Note5. Environmental condition for installation: -20~40°C(DB) (-4~104 °F) as indoor installation.
- Note6. In case the temperature around the heat source unit has possibility to drop under 0°C(32°F) or the inlet-water temp. drops under 10°C(50°F), be careful for the following point to prevent the pipe burst by the water pipe freeze-up.
- Add brine to water circuit.
 - Circulate the water all the time even if the heat source unit is not in operation.
 - Drain the water from inside of the heat source unit when the heat source unit will not operate for a long term.
- Note7. Ensure that the drain piping is downward with a pitch of more than 1/100.
- Note8. At brazing of pipes, wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248 °F).



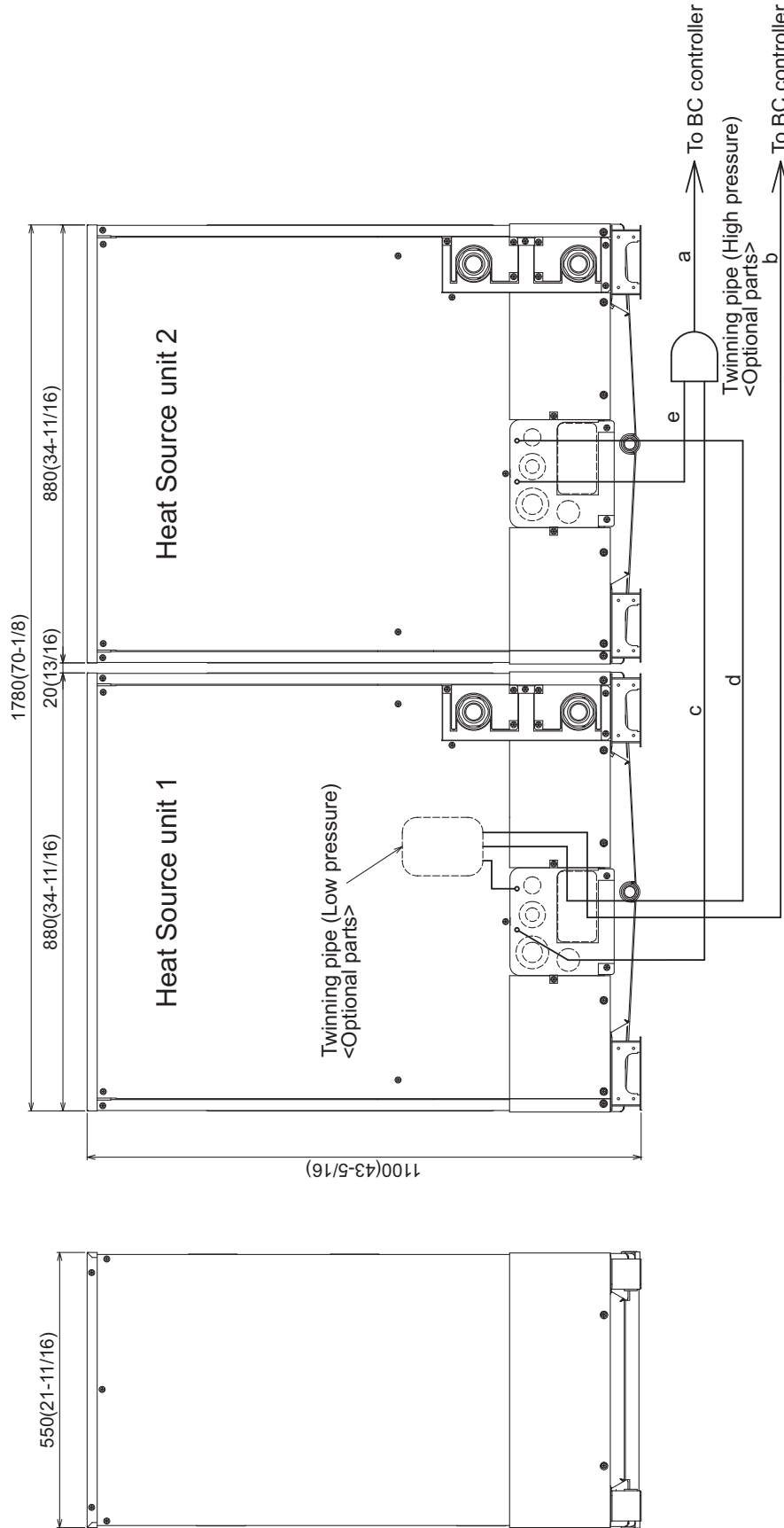
Connecting pipe specifications

Model	Refrigerant pipe		Service valve	
	High pressure	Low pressure	High pressure	Low pressure
PQRY-P144ZLMU-A1	φ22.2 Brazed (7/16) ¹	φ28.58 Brazed (1-1/8) ¹	φ25.4 (1)	φ28.58 (1-1/8)
PQRY-P168ZLMU-A1				
PQRY-P192ZLMU-A1				

¹Connect by using the connecting pipes that are supplied.

PQRY-P144, 168, 192, 216, 240ZSLMU-A1

Unit: mm(in)



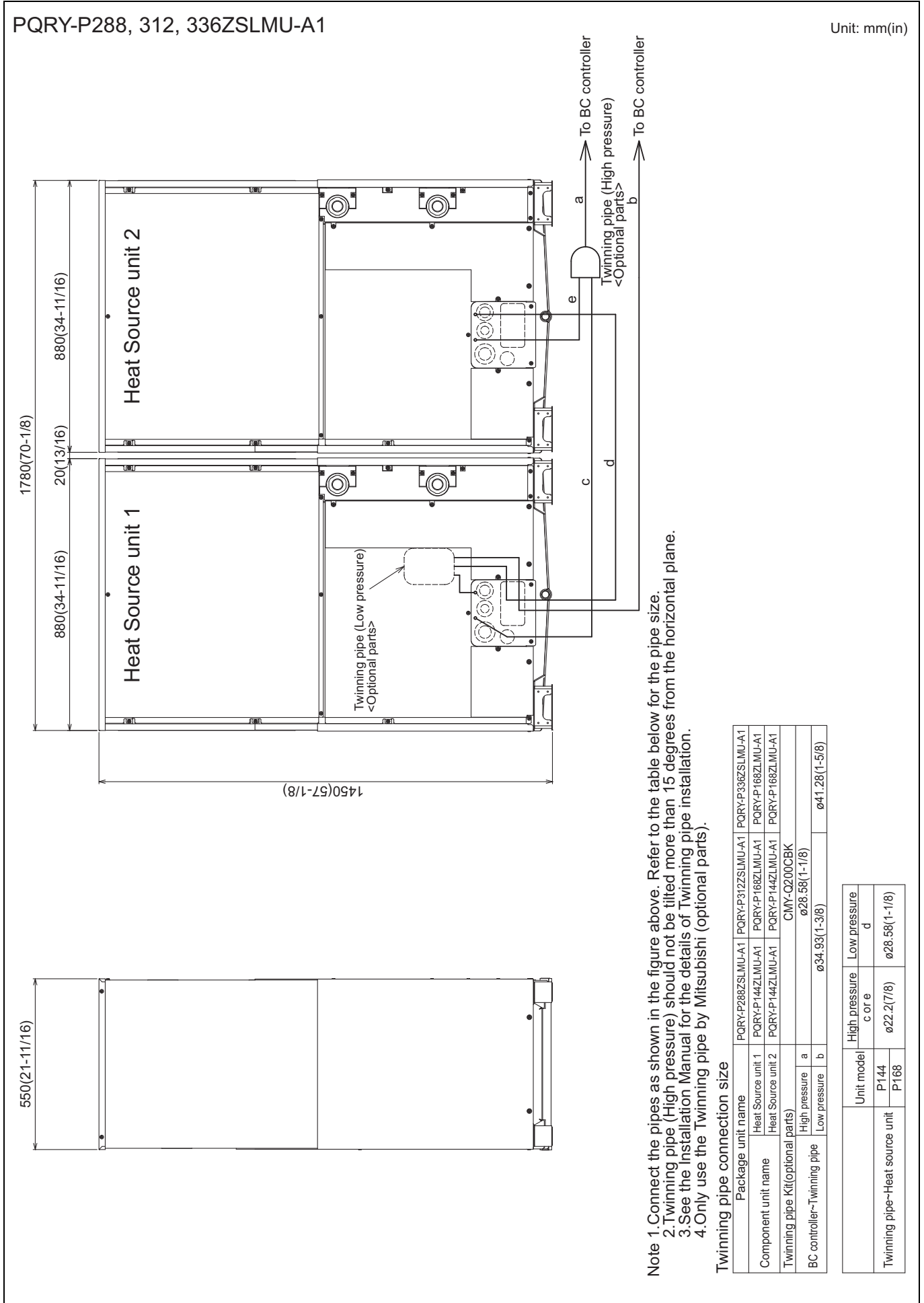
- Note 1. Connect the pipes as shown in the figure above. Refer to the table below for the pipe size.
 2. Twinning pipe (High pressure) should not be tilted more than 15 degrees from the horizontal plane.
 3. See the Installation Manual for the details of Twinning pipe installation.
 4. Only use the Twinning pipe by Mitsubishi (optional parts).

Twinning pipe connection size

Package unit name	PQRY-P144ZSLMU-A1	PQRY-P168ZSLMU-A1	PQRY-P192ZSLMU-A1	PQRY-P216ZSLMU-A1	PQRY-P240ZSLMU-A1
Heat source unit 1	PQRY-P72ZLMU-A1	PQRY-P96ZLMU-A1	PQRY-P120ZLMU-A1	PQRY-P144ZLMU-A1	PQRY-P168ZLMU-A1
Heat source unit 2	PQRY-P72ZLMU-A1	PQRY-P96ZLMU-A1	PQRY-P120ZLMU-A1	PQRY-P144ZLMU-A1	PQRY-P168ZLMU-A1
Twinning pipe Kit(optional parts)	CMY-Q100CBK2				
BC controller-Twinning pipe	High pressure	ø22.2(7/8)		ø22.2(7/8) *1	
Low pressure	b	ø28.58(1-1/8)		ø34.93(1-3/8)	

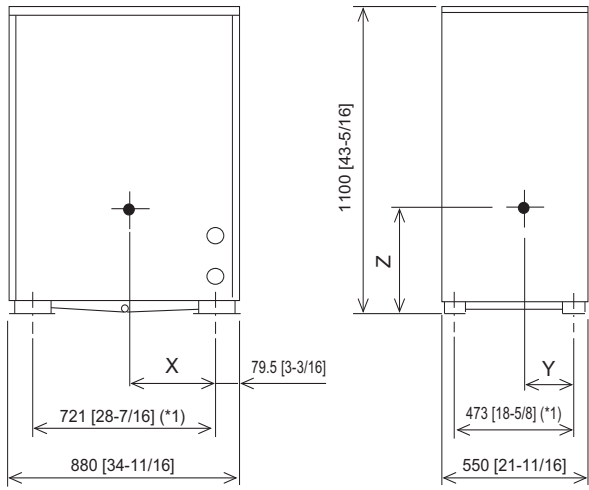
Unit model	High pressure		Low pressure	
	c or e	d	c	d
P72	ø5.88(5/8) *2	ø19.05(3/4) *2		
P96	ø19.05(3/4)	ø22.2(7/8)		
P120				

*1. When the piping length is 65 m or longer, use the ø28.58(1-1/8) pipe for the part that exceeds 65 m.
 *2. When the package unit name "PQRY-P168ZSLMU-A1", use the ø19.05(3/4) pipe for high pressure and the ø22.2(7/8) pipe for low pressure.



PQRY-P72, 96, 120ZLMU-A1

Unit: mm [in.]



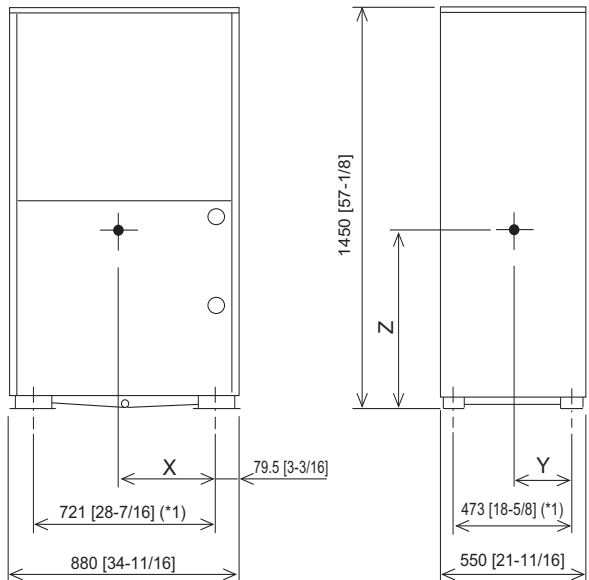
Model	X	Y	Z
PQRY-P72ZLMU-A1	373 [14-11/16]	228 [9]	428 [16-7/8]
PQRY-P96ZLMU-A1	373 [14-11/16]	228 [9]	428 [16-7/8]
PQRY-P120ZLMU-A1	373 [14-11/16]	228 [9]	428 [16-7/8]

*1 Mounting Pitch

PQRY-P-Z(S)LMU-A1

PQRY-P144, 168, 192ZLMU-A1

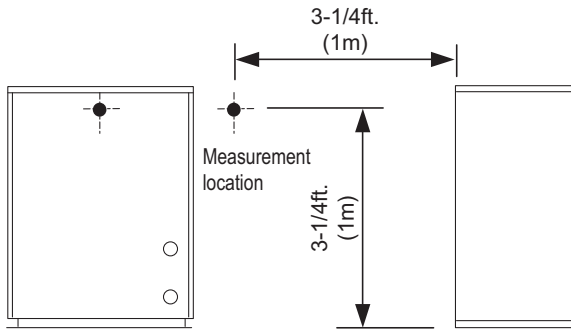
Unit: mm [in.]



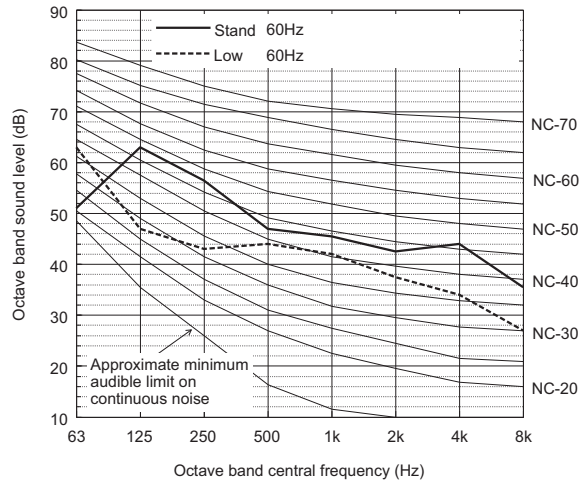
Model	X	Y	Z
PQRY-P144ZLMU-A1	387 [15-1/4]	232 [9-3/16]	616 [24-5/16]
PQRY-P168ZLMU-A1	387 [15-1/4]	232 [9-3/16]	616 [24-5/16]
PQRY-P192ZLMU-A1	387 [15-1/4]	232 [9-3/16]	616 [24-5/16]

*1 Mounting Pitch

Measurement condition
PQRY-P72, 96, 120ZLMU-A1



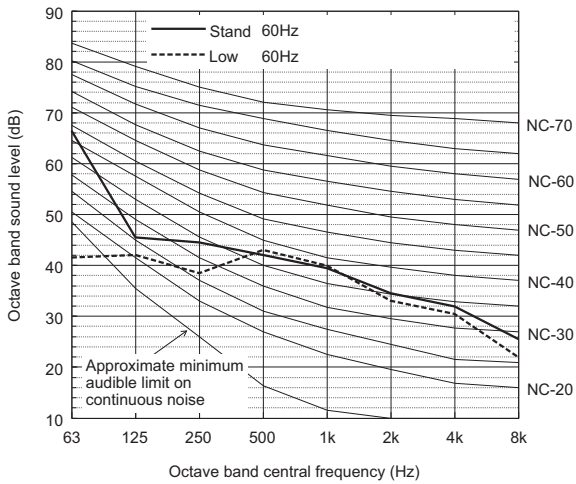
Sound level of PQRY-P120ZLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	51.0	63.0	56.5	47.0	45.5	42.5	44.0	35.5	54.0
Low noise mode	60Hz	63.0	47.0	43.0	44.0	42.0	37.5	34.0	27.0	47.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

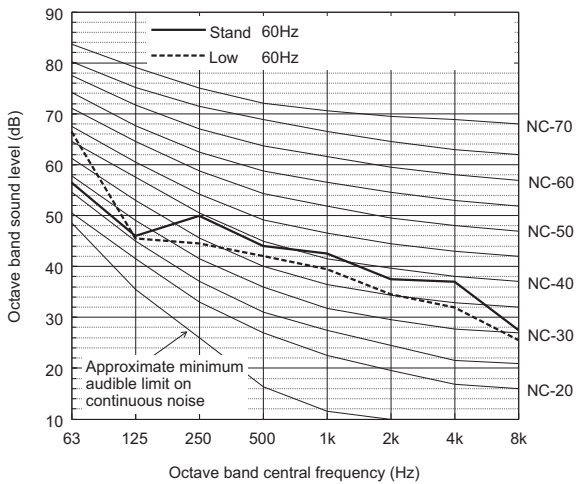
Sound level of PQRY-P72ZLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	66.5	45.5	44.5	42.0	39.5	34.5	32.0	25.5	46.0
Low noise mode	60Hz	41.5	42.0	38.5	43.0	40.0	33.0	30.5	22.0	44.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound level of PQRY-P96ZLMU-A1

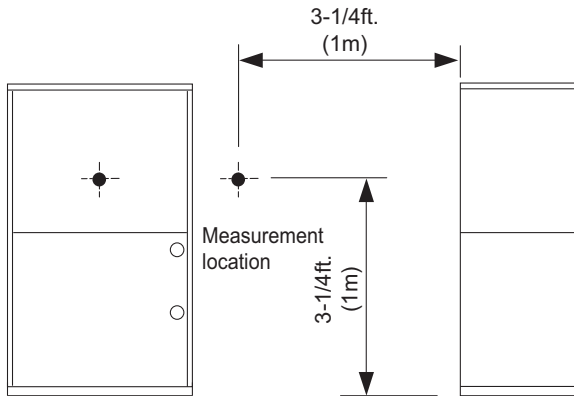


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	56.5	46.0	50.0	44.0	42.5	37.5	37.0	27.5	48.0
Low noise mode	60Hz	66.5	45.5	44.5	42.0	39.5	34.5	32.0	25.5	46.0

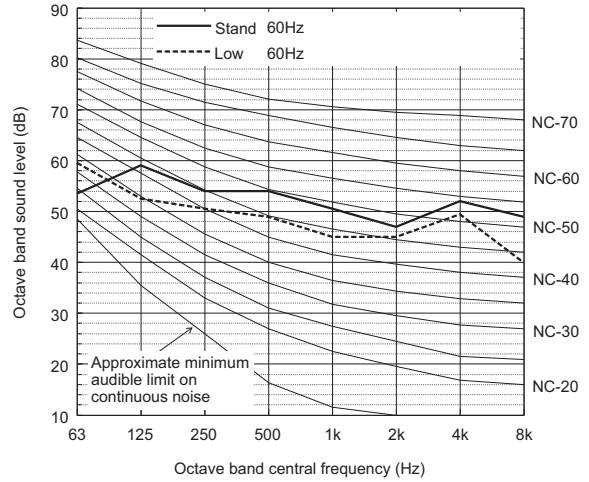
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

- Depending on the operation conditions, the unit generates noise caused by valve actuation, refrigerant flow, and pressure changes when operating normally. Please consider to avoid location where quietness is required. For BC controller, it is recommended to be installed in places such as ceilings of corridor, rest rooms and plant rooms.

Measurement condition
PQRY-P144, 168, 192ZLMU-A1



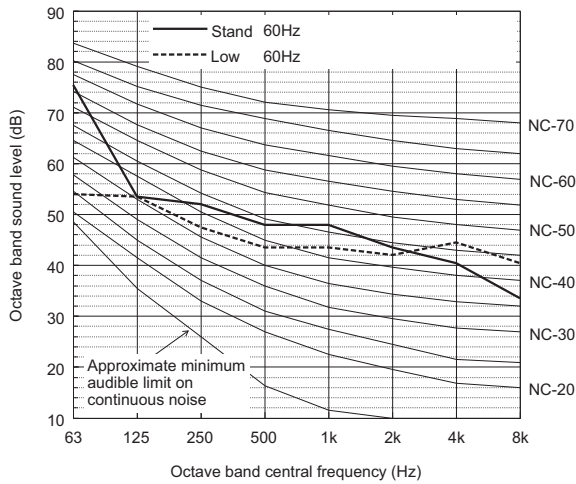
Sound level of PQRY-P192ZLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	53.5	59.0	54.0	54.0	50.5	47.0	52.0	49.0	58.0
Low noise mode	60Hz	59.5	52.5	50.5	49.0	45.0	45.0	49.5	40.0	54.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

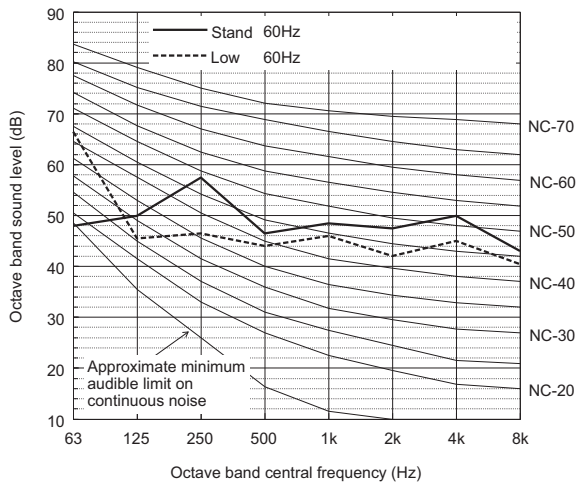
Sound level of PQRY-P144ZLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	75.5	53.5	52.0	48.0	48.0	43.5	40.5	33.5	54.0
Low noise mode	60Hz	54.0	53.5	47.5	43.5	43.5	42.0	44.5	40.5	50.5

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound level of PQRY-P168ZLMU-A1

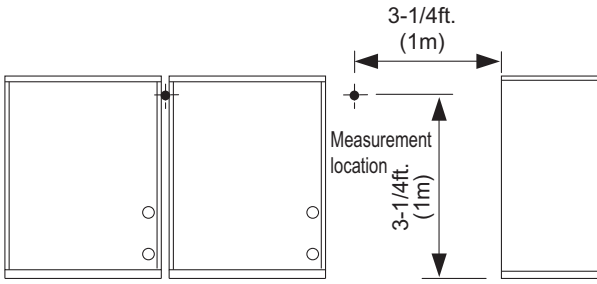


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	48.0	50.0	57.5	46.5	48.5	47.5	50.0	43.0	56.0
Low noise mode	60Hz	66.5	45.5	46.5	44.0	46.0	42.0	45.0	40.5	51.5

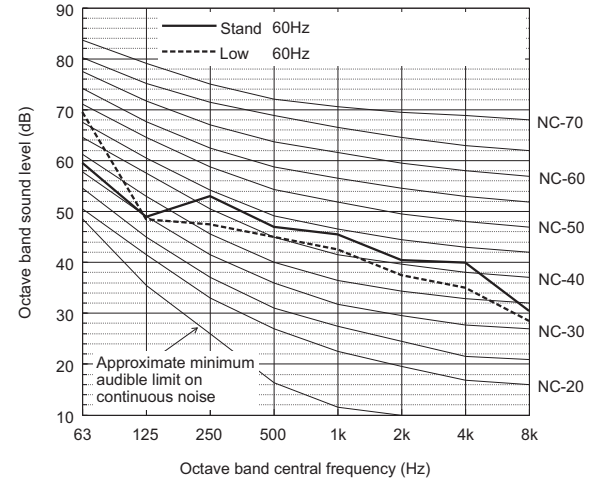
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

- ◆ Depending on the operation conditions, the unit generates noise caused by valve actuation, refrigerant flow, and pressure changes when operating normally. Please consider to avoid location where quietness is required. For BC controller, it is recommended to be installed in places such as ceilings of corridor, rest rooms and plant rooms.

Measurement condition
PQRY-P144, 168, 192, 216, 240ZSLMU-A1



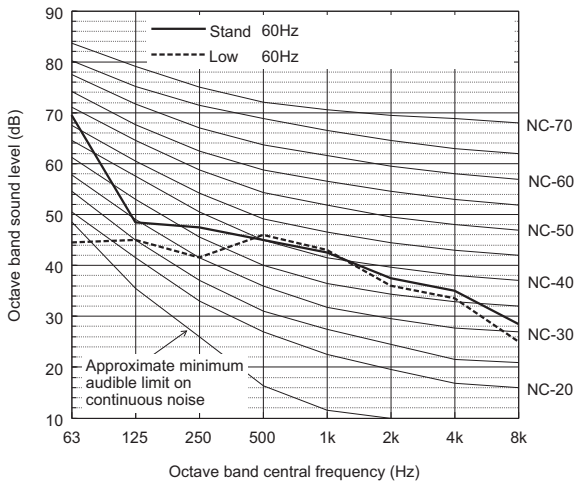
Sound level of PQRY-P192ZSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	59.5	49.0	53.0	47.0	45.5	40.5	40.0	30.5	51.0
Low noise mode	60Hz	69.5	48.5	47.5	45.0	42.5	37.5	35.0	28.5	49.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

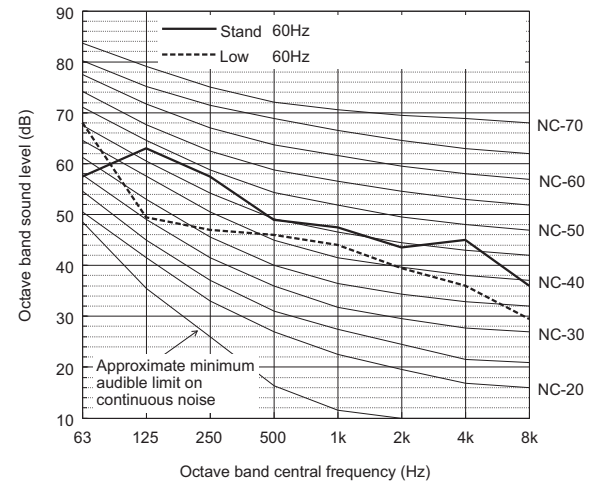
Sound level of PQRY-P144ZSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	69.5	48.5	47.5	45.0	42.5	37.5	35.0	28.5	49.0
Low noise mode	60Hz	44.5	45.0	41.5	46.0	43.0	36.0	33.5	25.0	47.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

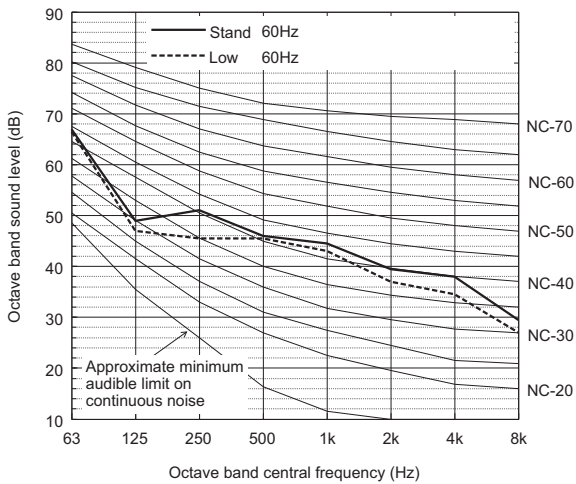
Sound level of PQRY-P216ZSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	57.5	63.0	57.5	49.0	47.5	43.5	45.0	36.0	55.0
Low noise mode	60Hz	68.0	49.5	47.0	46.0	44.0	39.5	36.0	29.5	49.5

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

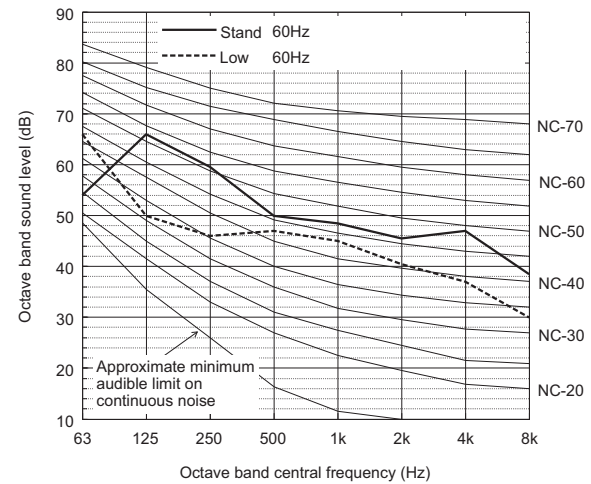
Sound level of PQRY-P168ZSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	67.0	49.0	51.0	46.0	44.5	39.5	38.0	29.5	50.0
Low noise mode	60Hz	66.5	47.0	45.5	45.5	43.0	37.0	34.5	27.0	48.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound level of PQRY-P240ZSLMU-A1

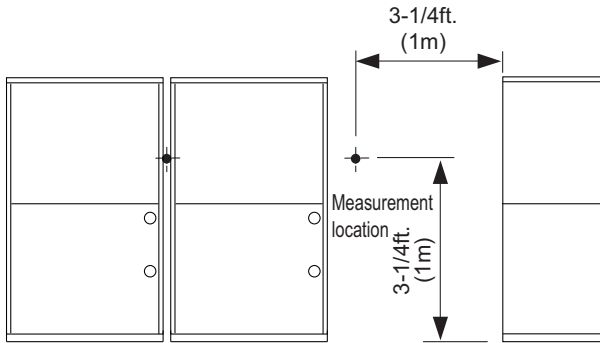


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	54.0	66.0	59.5	50.0	48.5	45.5	47.0	38.5	57.0
Low noise mode	60Hz	66.0	50.0	46.0	47.0	45.0	40.5	37.0	30.0	50.0

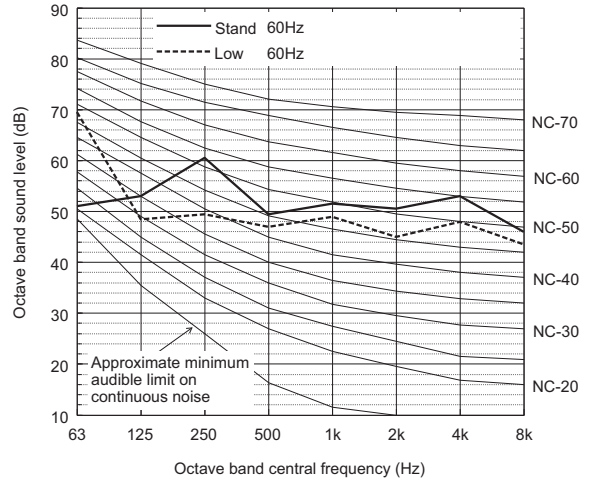
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

- Depending on the operation conditions, the unit generates noise caused by valve actuation, refrigerant flow, and pressure changes when operating normally. Please consider to avoid location where quietness is required. For BC controller, it is recommended to be installed in places such as ceilings of corridor, rest rooms and plant rooms.

Measurement condition
PQRY-P288, 312, 336ZSLMU-A1



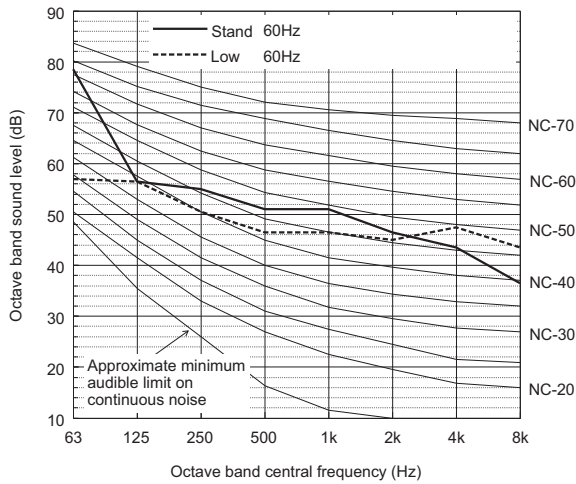
Sound level of PQRY-P336ZSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	51.0	53.0	60.5	49.5	51.5	50.5	53.0	46.0	59.0
Low noise mode	60Hz	69.5	48.5	49.5	47.0	49.0	45.0	48.0	43.5	54.5

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

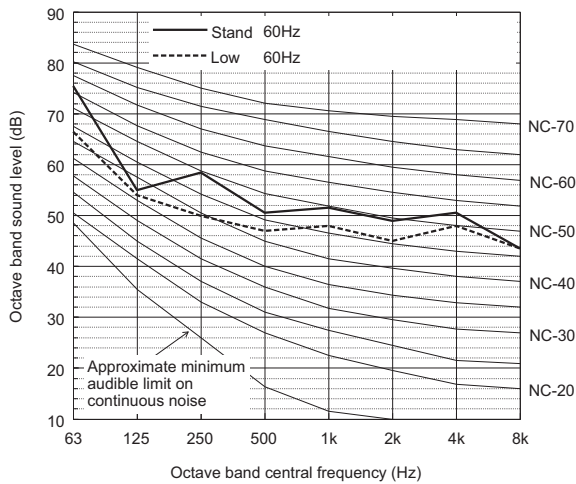
Sound level of PQRY-P288ZSLMU-A1



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	78.5	56.5	55.0	51.0	51.0	46.5	43.5	36.5	57.0
Low noise mode	60Hz	57.0	56.5	50.5	46.5	46.5	45.0	47.5	43.5	53.5

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound level of PQRY-P312ZSLMU-A1

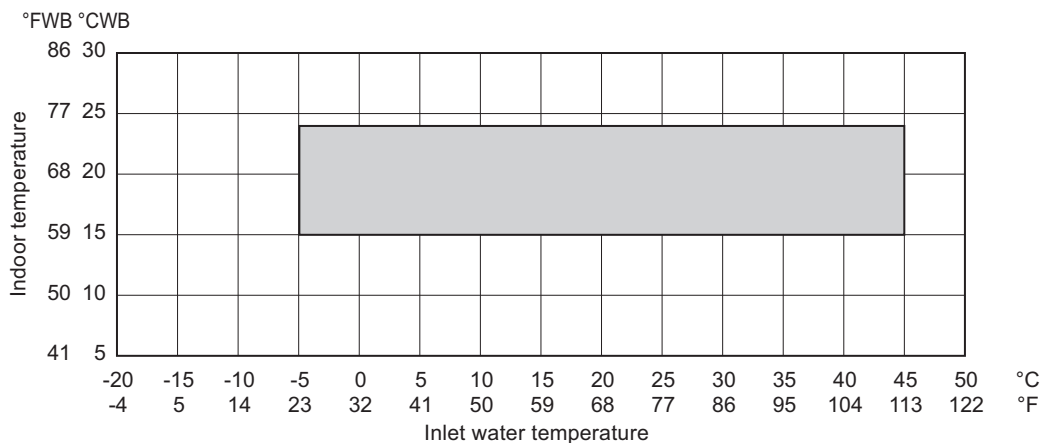


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	75.5	55.0	58.5	50.5	51.5	49.0	50.5	43.5	58.0
Low noise mode	60Hz	66.5	54.0	50.0	47.0	48.0	45.0	48.0	43.5	54.0

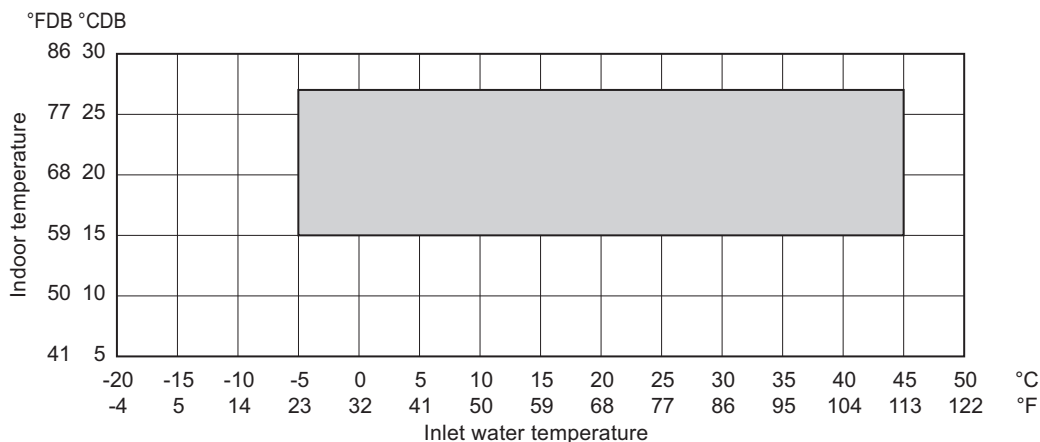
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

- ◆ Depending on the operation conditions, the unit generates noise caused by valve actuation, refrigerant flow, and pressure changes when operating normally. Please consider to avoid location where quietness is required. For BC controller, it is recommended to be installed in places such as ceilings of corridor, rest rooms and plant rooms.

Cooling



Heating



Combination of cooling/heating operation (Cooling main or Heating main)

Inlet water temperature	Indoor temperature	
	Cooling	Heating
-5 to 45°C (23 to 113°F)	15 to 24°CWB (59 to 75°FWB)	15 to 27°CDB (59 to 81°FDB)

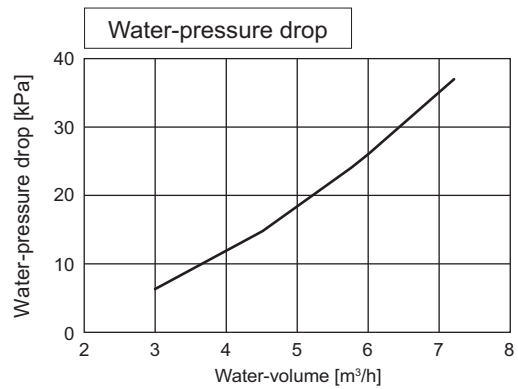
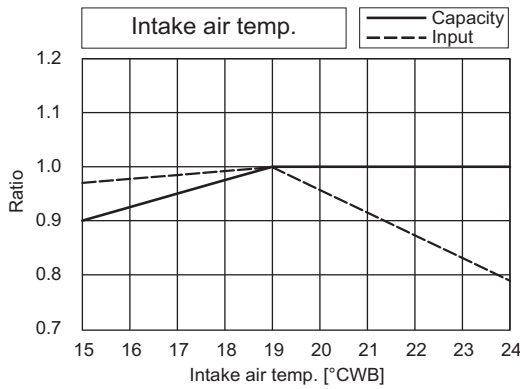
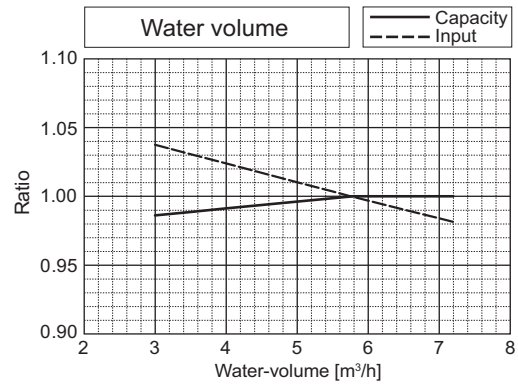
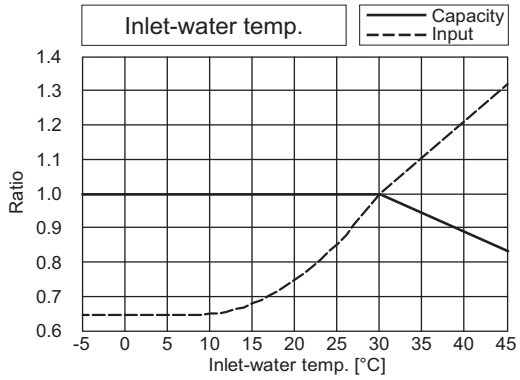
* The upper limit of the outlet water temperature is approximately 70°C (158°F) when the circulating-water flow rate is within the normal range.

If the circulating-water flow rate goes outside the normal range, the outlet water temperature may exceed the above limit.

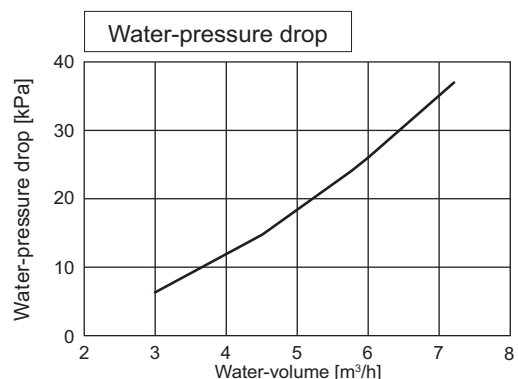
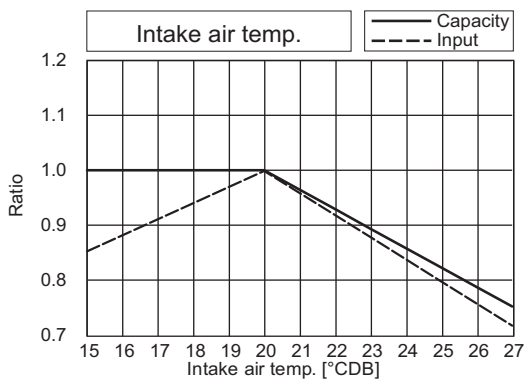
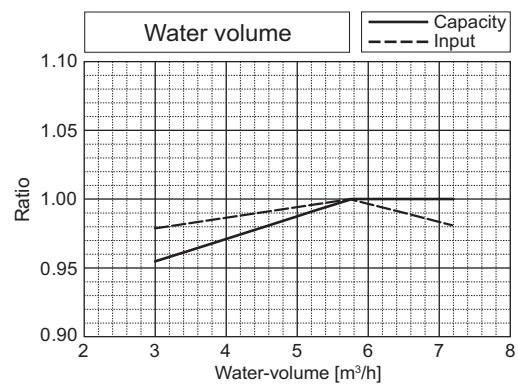
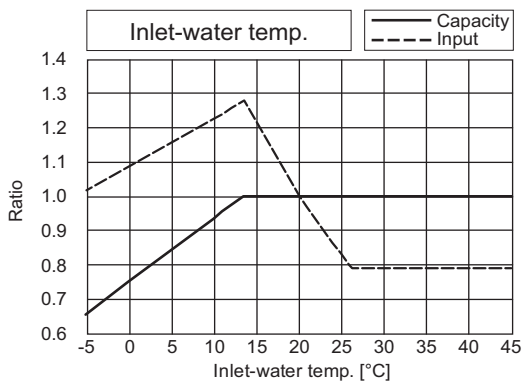
7-1. Correction by temperature

CITY MULTI could have varied capacity at different designing temperature. Using the nominal cooling/heating capacity value and the ratio below, the capacity can be observed at various temperature.

PQRY-			P72ZLMU		
Nominal Cooling Capacity	kW	21.1	Rated Cooling Capacity	kW	20.2
	BTU/h	72,000		BTU/h	69,000
Input	kW	3.61	Input	kW	(Non-Ducted) 3.34 (Ducted) 3.12



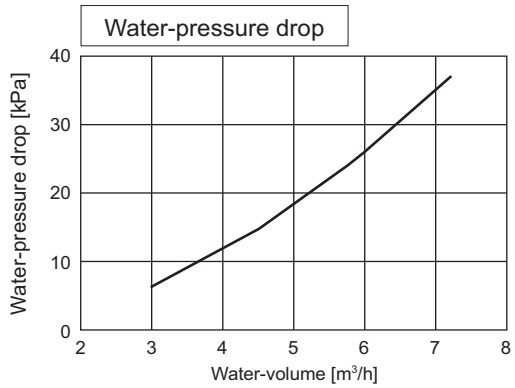
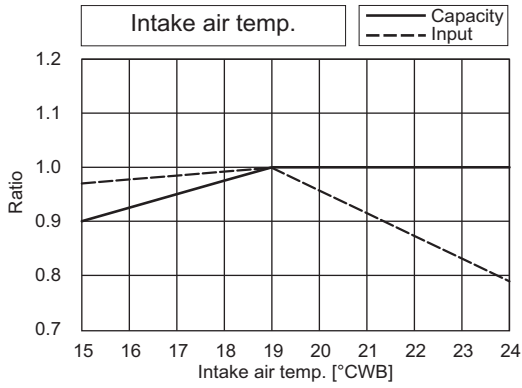
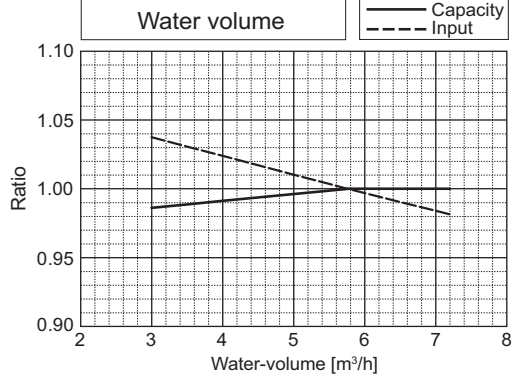
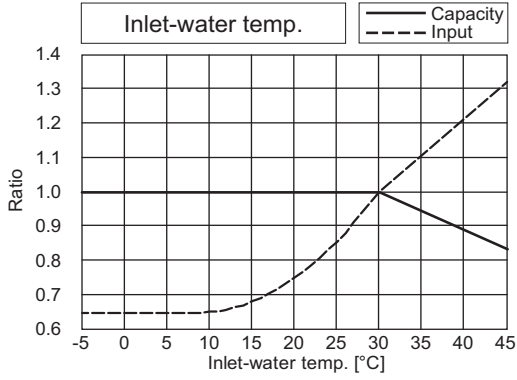
PQRY-			P72ZLMU		
Nominal Heating Capacity	kW	23.4	Rated Heating Capacity	kW	22.3
	BTU/h	80,000		BTU/h	76,000
Input	kW	4.04	Input	kW	(Non-Ducted) 3.74 (Ducted) 3.36



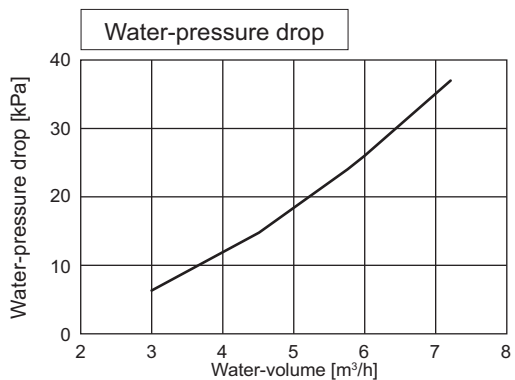
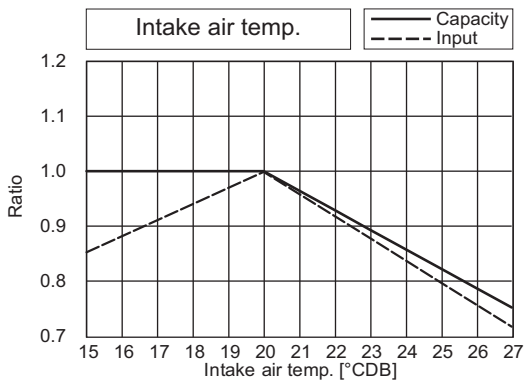
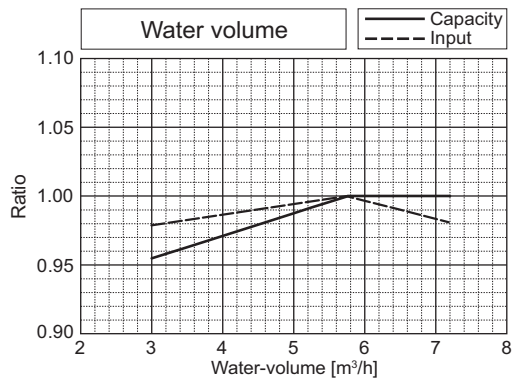
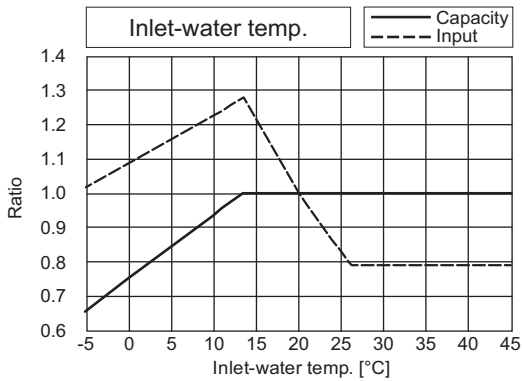
PQRY-P-Z(S)LMU-A1

PQRY-P-Z(S)LMU-A1

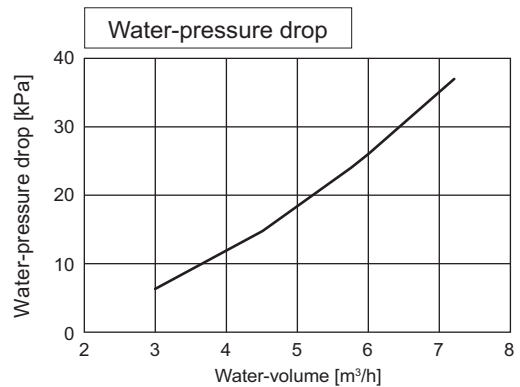
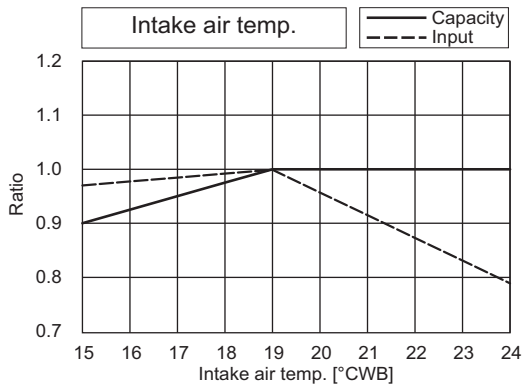
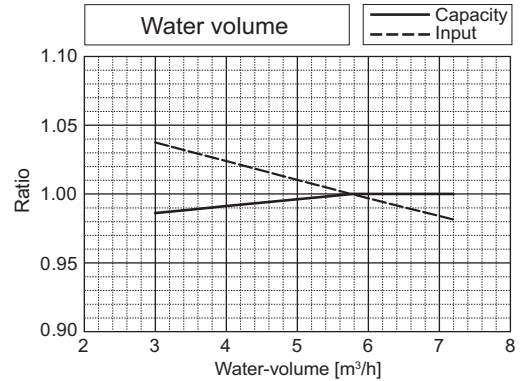
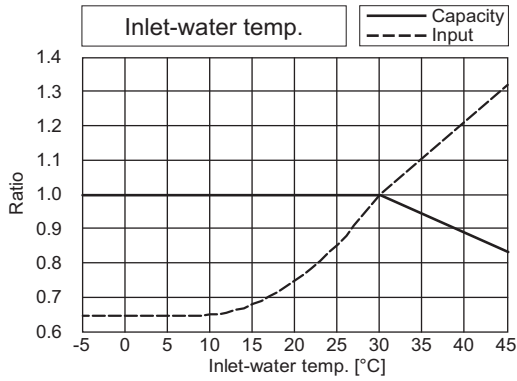
PQRY-			P96ZLMU		
Nominal Cooling Capacity	kW	28.1	Rated Cooling Capacity	kW	27.0
	BTU/h	96,000		BTU/h	92,000
Input	kW	5.21	Input	kW	(Non-Ducted) 4.82 (Ducted) 5.19



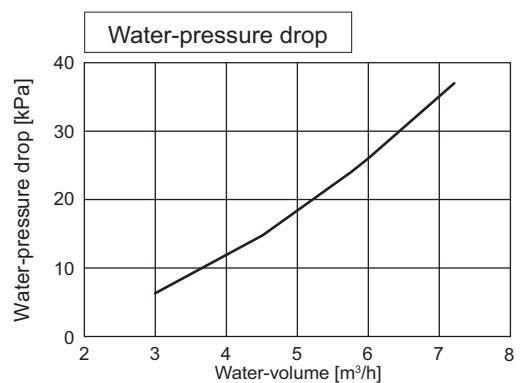
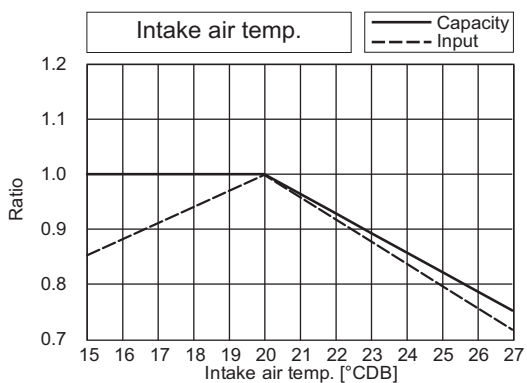
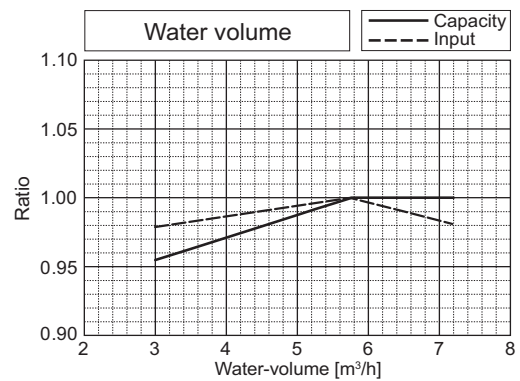
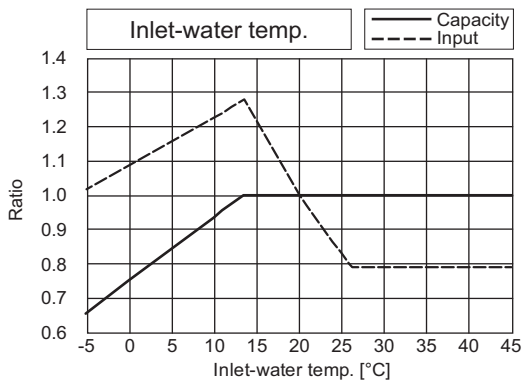
PQRY-			P96ZLMU		
Nominal Heating Capacity	kW	31.7	Rated Heating Capacity	kW	30.2
	BTU/h	108,000		BTU/h	103,000
Input	kW	5.64	Input	kW	(Non-Ducted) 5.21 (Ducted) 4.48



PQRY-			P120ZLMU		
Nominal Cooling Capacity	kW	35.2	Rated Cooling Capacity	kW	33.4
	BTU/h	120,000		BTU/h	114,000
Input	kW	7.51	Input	kW	(Non-Ducted) 6.95 (Ducted) 7.35



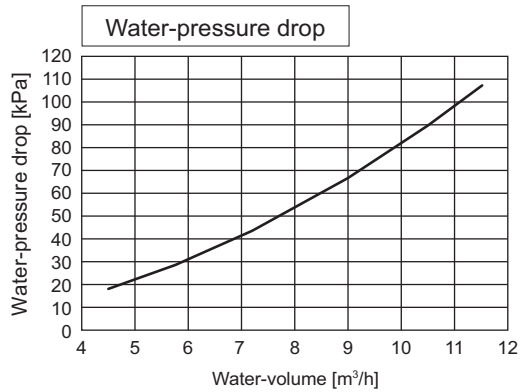
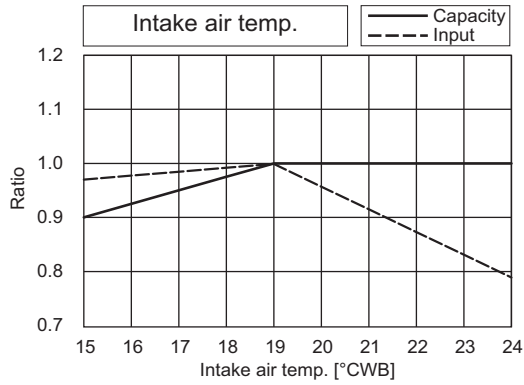
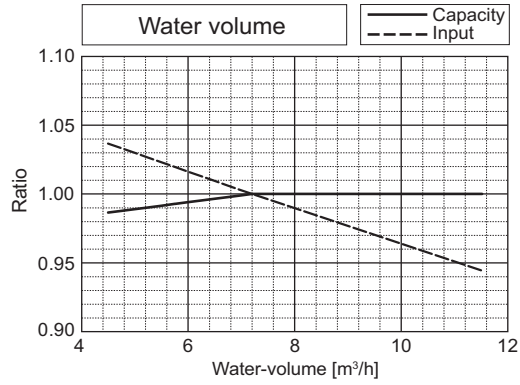
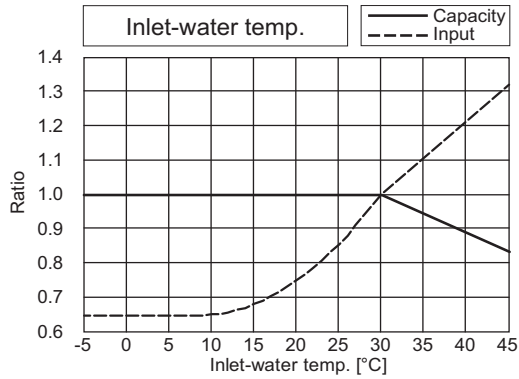
PQRY-			P120ZLMU		
Nominal Heating Capacity	kW	39.6	Rated Heating Capacity	kW	37.8
	BTU/h	135,000		BTU/h	129,000
Input	kW	7.09	Input	kW	(Non-Ducted) 6.55 (Ducted) 5.92



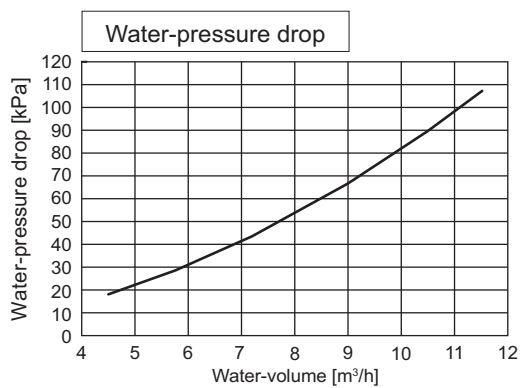
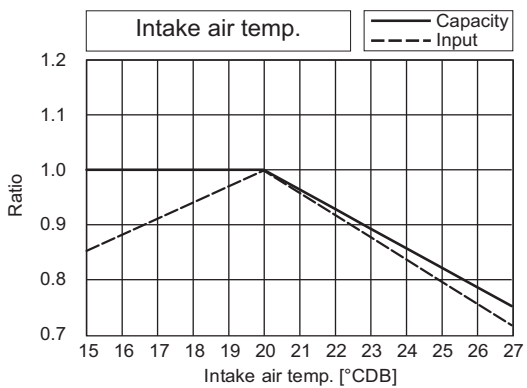
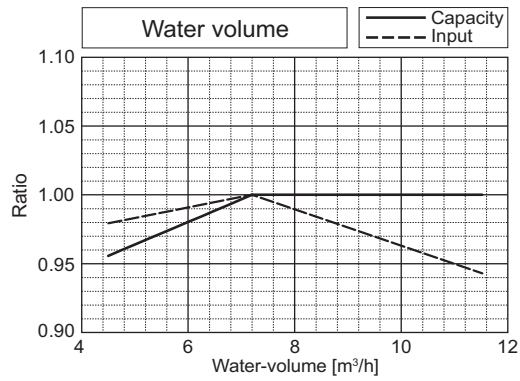
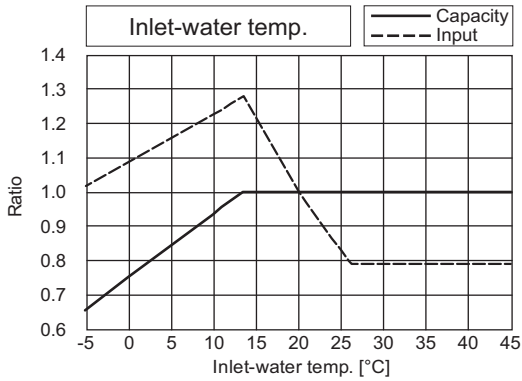
PQRY-P-Z(S)LMU-A1

PQRY-P-Z(S)LMU-A1

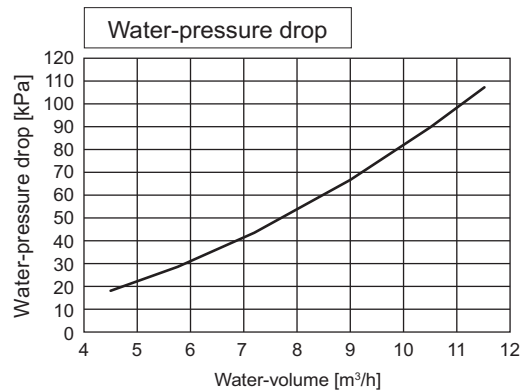
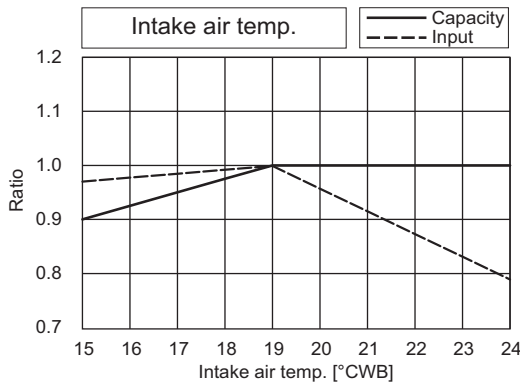
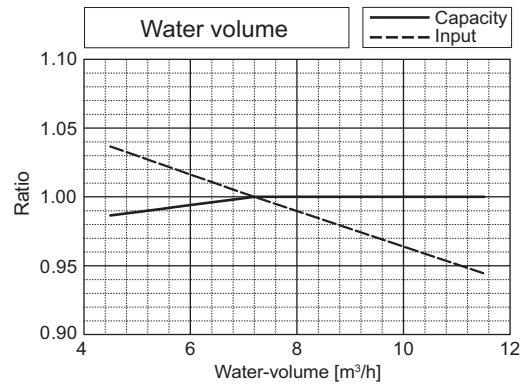
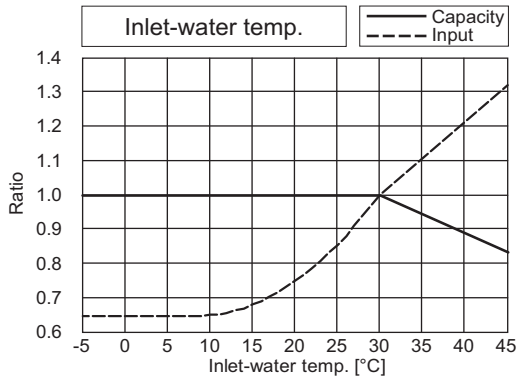
PQRY-			P144ZLMU		
Nominal Cooling Capacity	kW	42.2	Rated Cooling Capacity	kW	40.2
	BTU/h	144,000		BTU/h	137,000
Input	kW	8.78	Input	kW	(Non-Ducted) 8.07 (Ducted) 9.98



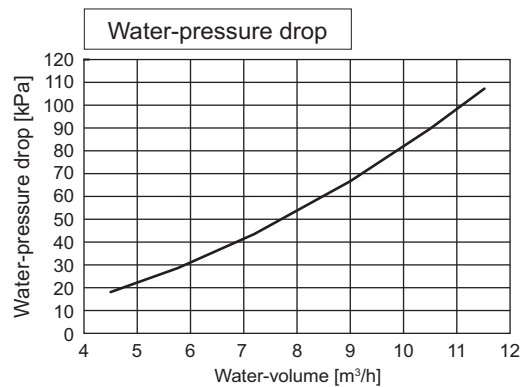
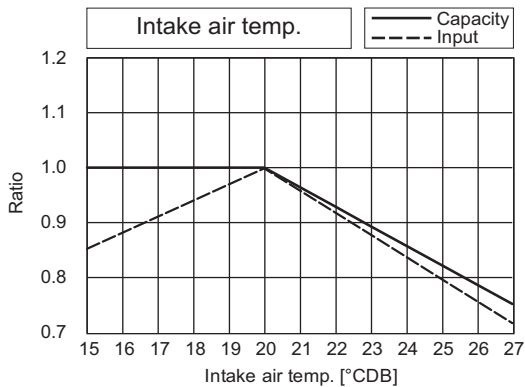
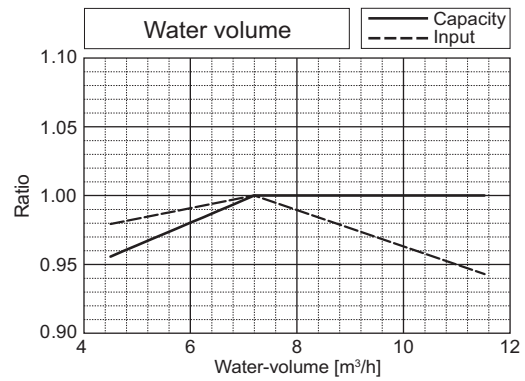
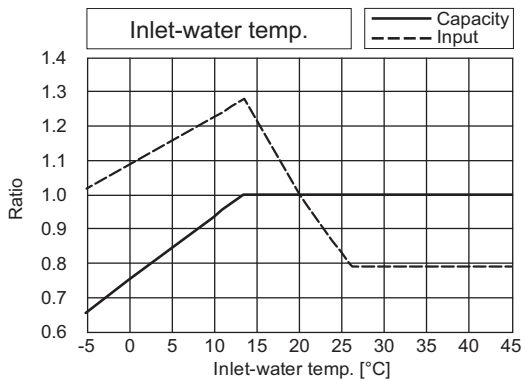
PQRY-			P144ZLMU		
Nominal Heating Capacity	kW	46.9	Rated Heating Capacity	kW	44.5
	BTU/h	160,000		BTU/h	152,000
Input	kW	8.11	Input	kW	(Non-Ducted) 7.47 (Ducted) 7.90



PQRY-			P168ZLMU		
Nominal Cooling Capacity	kW	49.2	Rated Cooling Capacity	kW	47.2
	BTU/h	168,000		BTU/h	161,000
Input	kW	12.05	Input	kW	(Non-Ducted) 11.10 (Ducted) 11.88

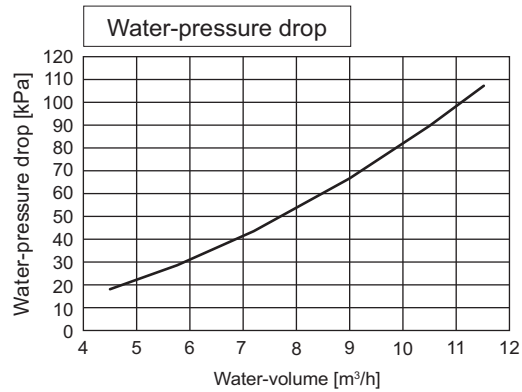
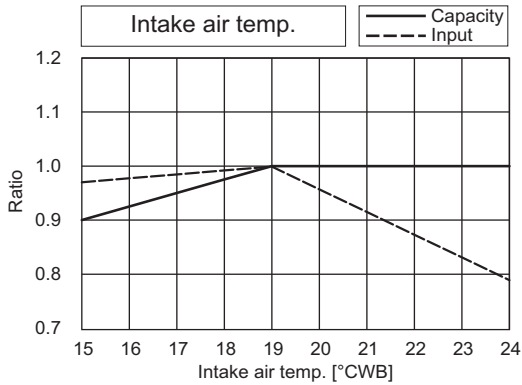
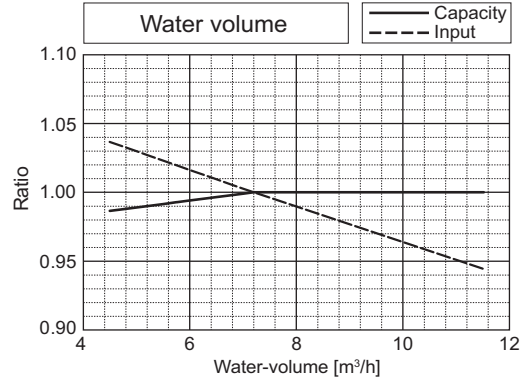
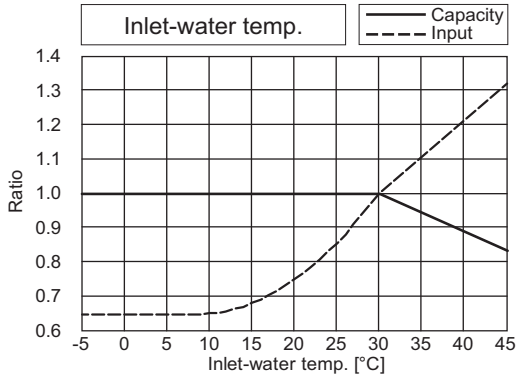


PQRY-			P168ZLMU		
Nominal Heating Capacity	kW	55.1	Rated Heating Capacity	kW	52.5
	BTU/h	188,000		BTU/h	179,000
Input	kW	9.86	Input	kW	(Non-Ducted) 9.09 (Ducted) 9.72

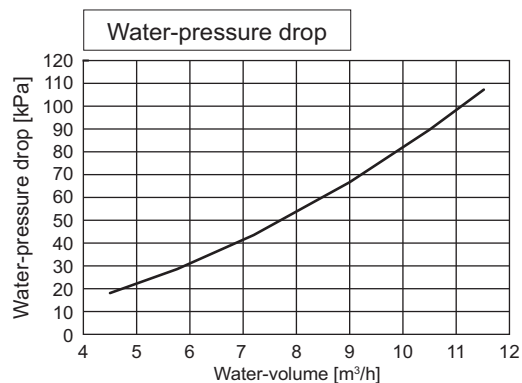
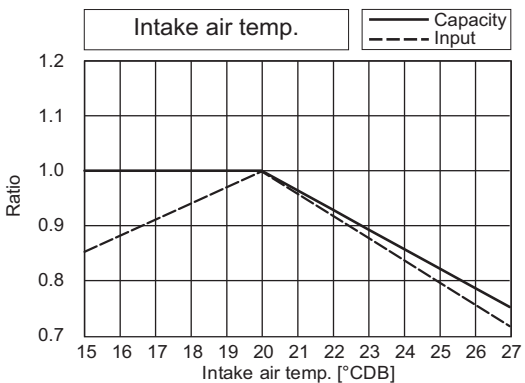
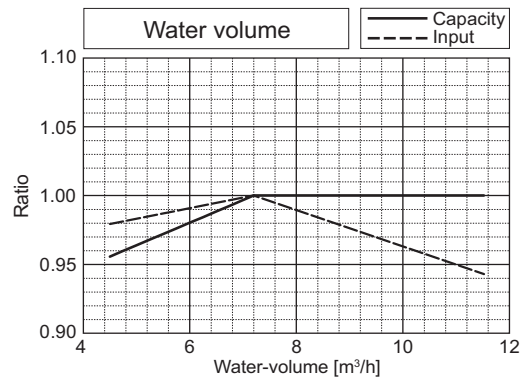
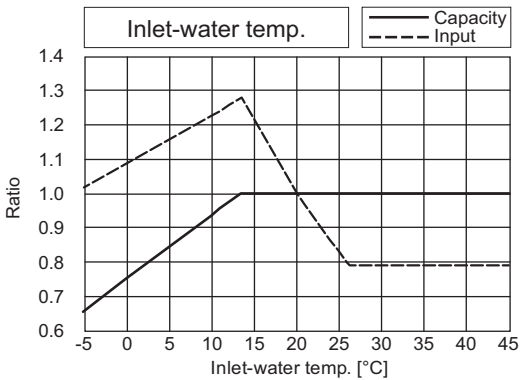


PQRY-P-Z(S)LMU-A1

PQRY-			P192ZLMU		
Nominal Cooling Capacity	kW	56.3	Rated Cooling Capacity	kW	53.6
	BTU/h	192,000		BTU/h	183,000
Input	kW	15.05	Input	kW	(Non-Ducted) 13.87 (Ducted) 14.19

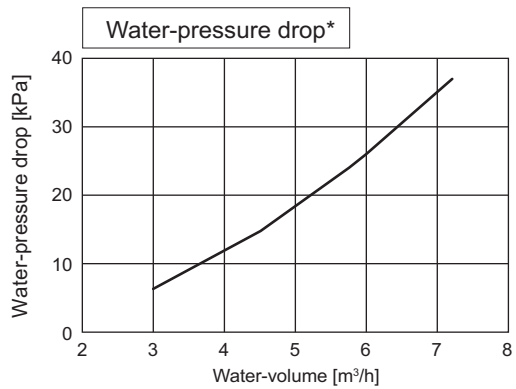
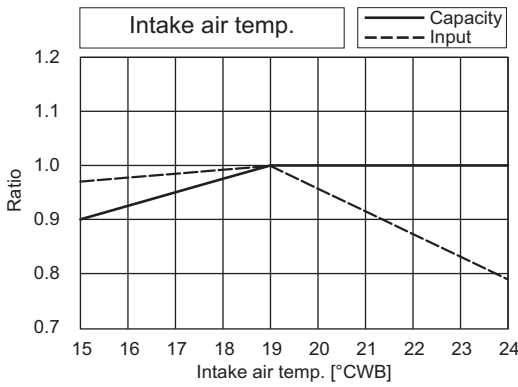
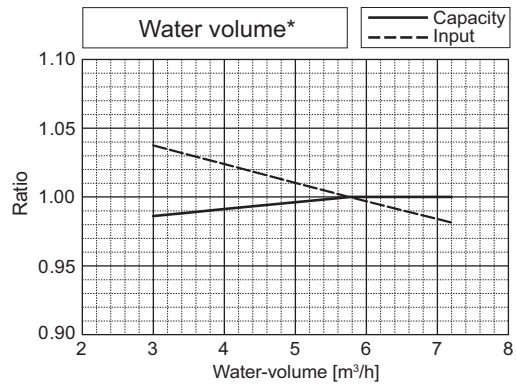
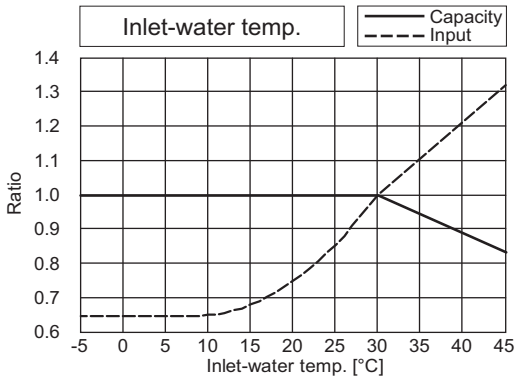


PQRY-			P192ZLMU		
Nominal Heating Capacity	kW	63.0	Rated Heating Capacity	kW	60.1
	BTU/h	215,000		BTU/h	205,000
Input	kW	11.90	Input	kW	(Non-Ducted) 10.97 (Ducted) 11.56

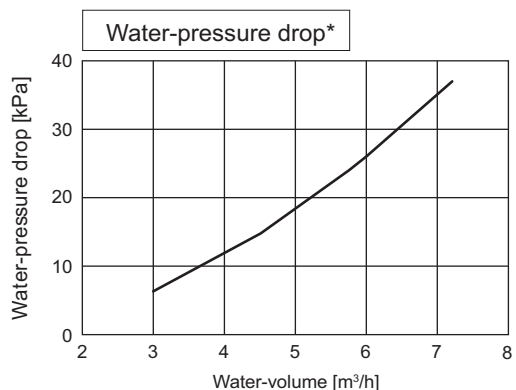
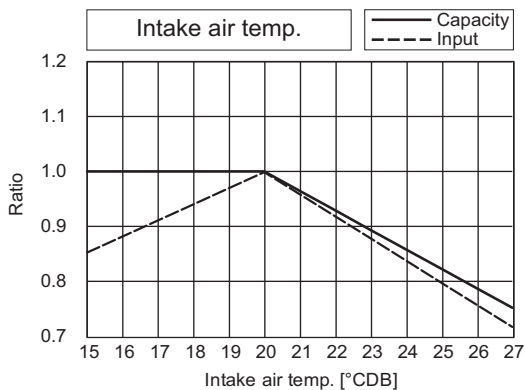
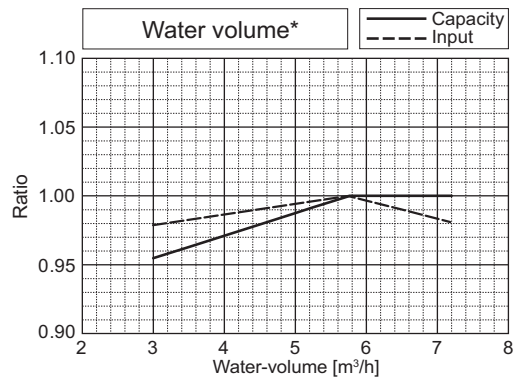
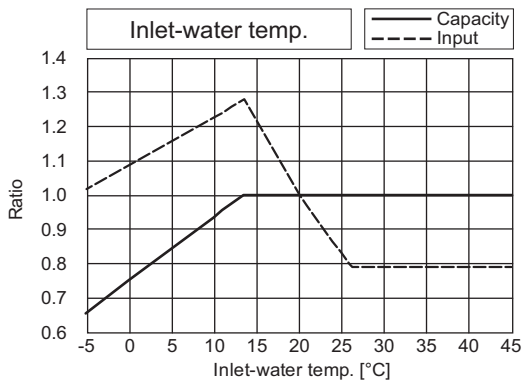


PQRY-			P144ZSLMU		
Nominal Cooling Capacity	kW	42.2	Rated Cooling Capacity	kW	40.2
	BTU/h	144,000		BTU/h	137,000
Input	kW	7.11	Input	kW	(Non-Ducted) 6.53 (Ducted) 7.72

*The drawing indicates characteristic per unit.



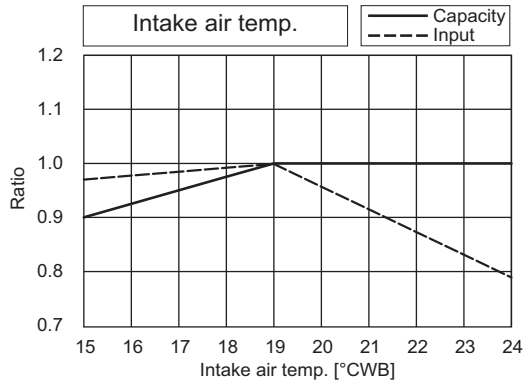
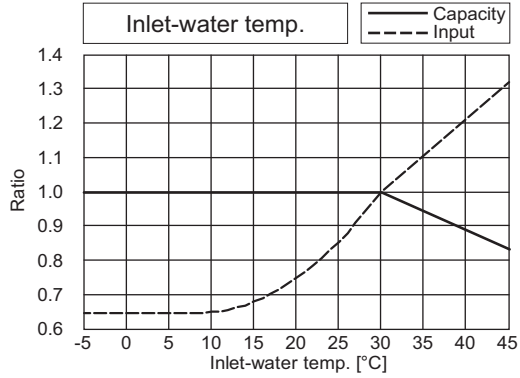
PQRY-			P144ZSLMU		
Nominal Heating Capacity	kW	46.9	Rated Heating Capacity	kW	44.5
	BTU/h	160,000		BTU/h	152,000
Input	kW	7.45	Input	kW	(Non-Ducted) 6.86 (Ducted) 7.22



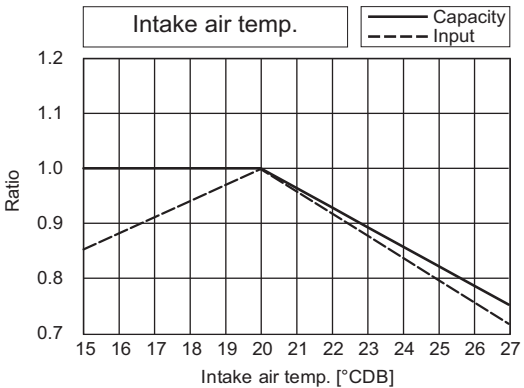
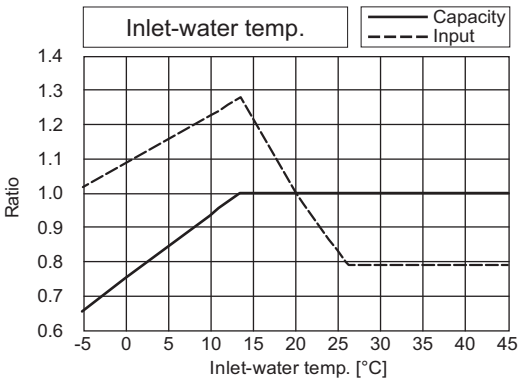
PQRY-P-Z(S)LMU-A1

PQRY-P-Z(S)LMU-A1

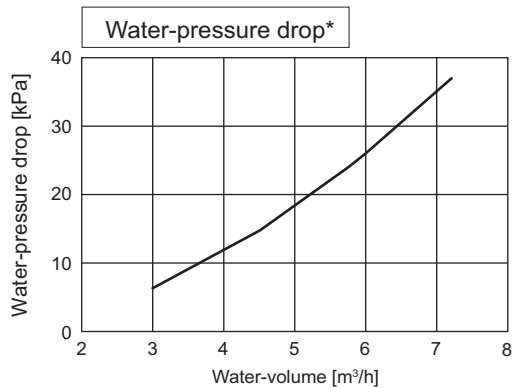
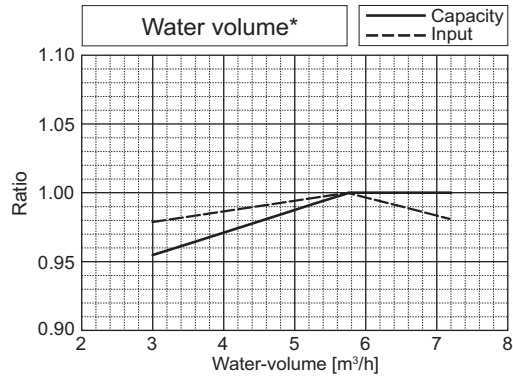
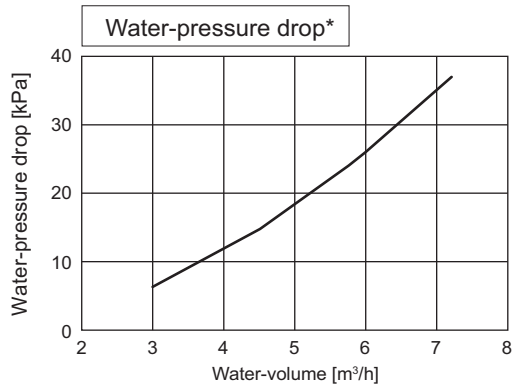
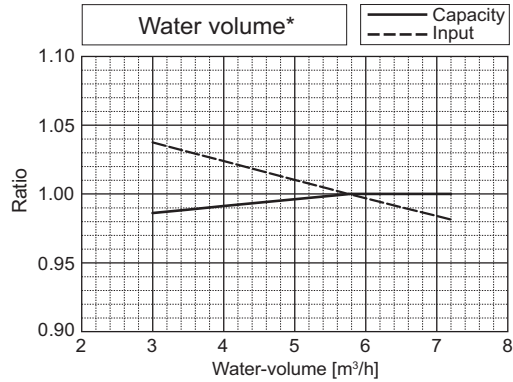
PQRY-			P168ZSLMU		
Nominal Cooling Capacity	kW	49.2	Rated Cooling Capacity	kW	47.2
	BTU/h	168,000		BTU/h	161,000
Input	kW	9.33	Input	kW	(Non-Ducted) 8.58 (Ducted) 9.22



PQRY-			P168ZSLMU		
Nominal Heating Capacity	kW	55.1	Rated Heating Capacity	kW	52.5
	BTU/h	188,000		BTU/h	179,000
Input	kW	9.34	Input	kW	(Non-Ducted) 8.60 (Ducted) 8.03

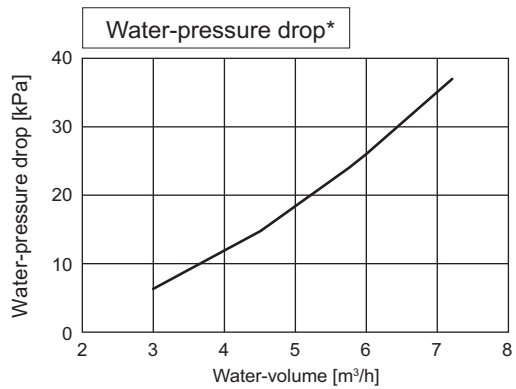
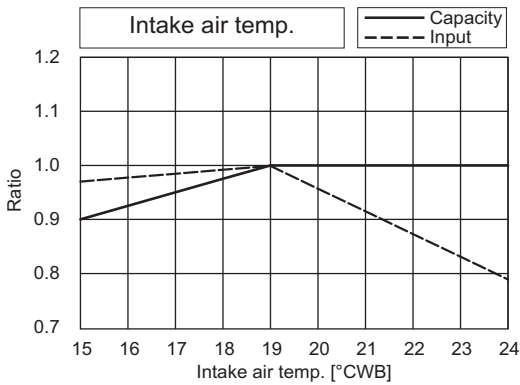
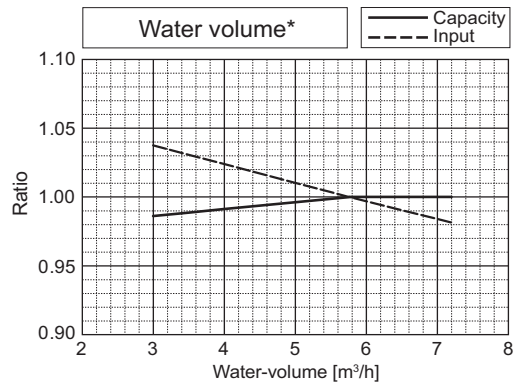
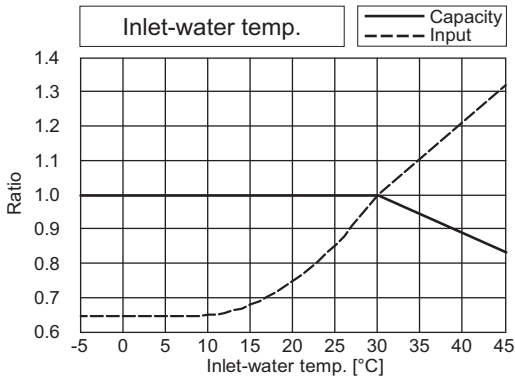


*The drawing indicates characteristic per unit.

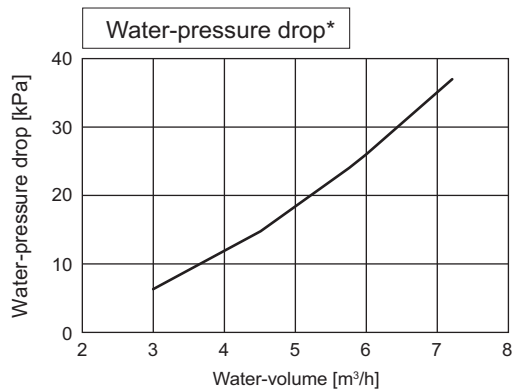
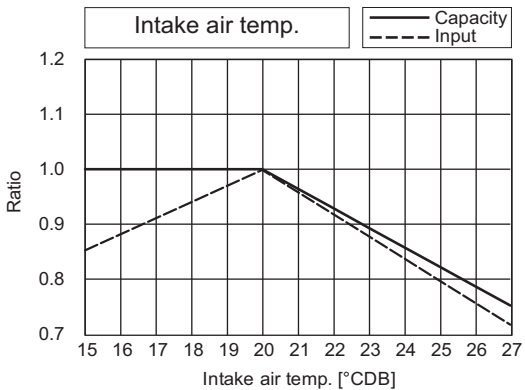
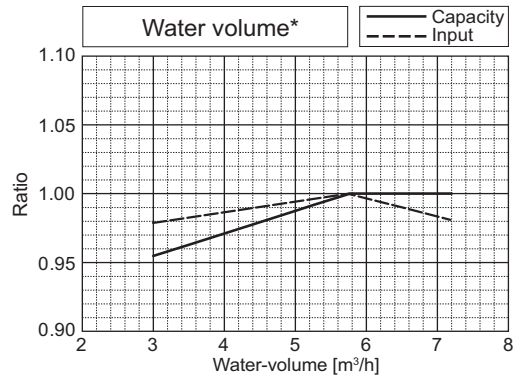
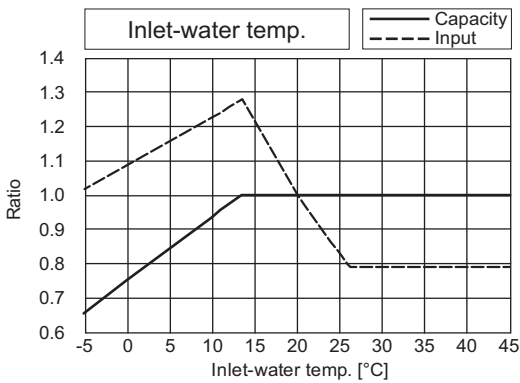


PQRY-			P192ZSLMU		
Nominal Cooling Capacity	kW	56.3	Rated Cooling Capacity	kW	53.6
	BTU/h	192,000		BTU/h	183,000
Input	kW	11.30	Input	kW	(Non-Ducted) 10.40 (Ducted) 10.98

*The drawing indicates characteristic per unit.



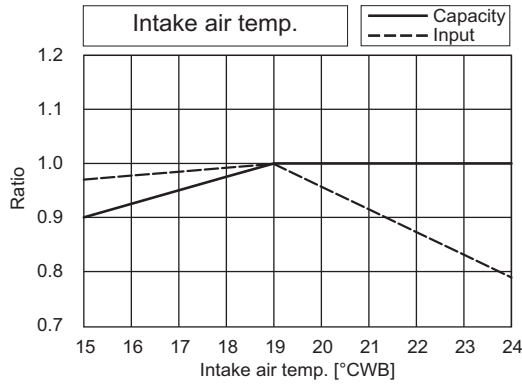
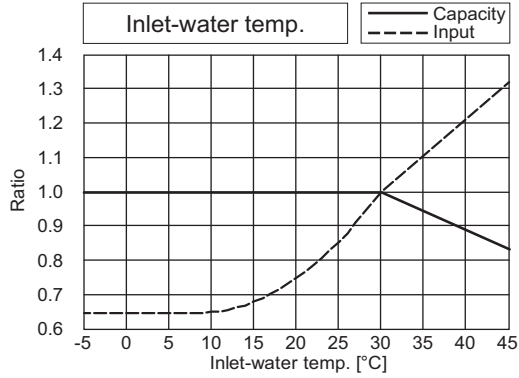
PQRY-			P192ZSLMU		
Nominal Heating Capacity	kW	63.0	Rated Heating Capacity	kW	60.1
	BTU/h	215,000		BTU/h	205,000
Input	kW	11.02	Input	kW	(Non-Ducted) 10.16 (Ducted) 8.90



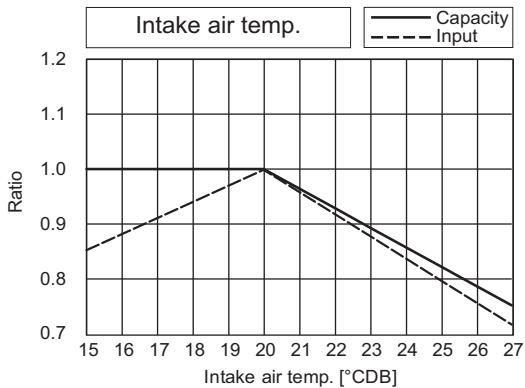
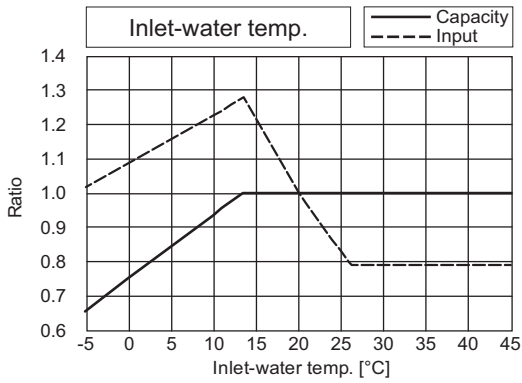
PQRY-P-Z(S)LMU-A1

PQRY-P-Z(S)LMU-A1

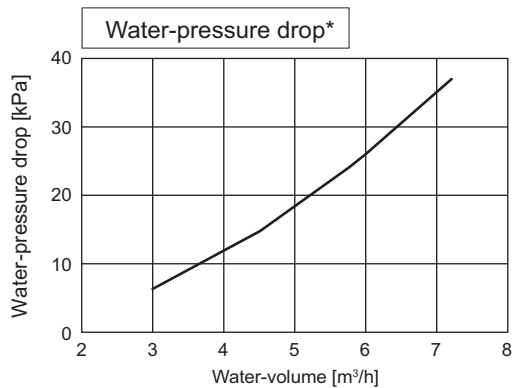
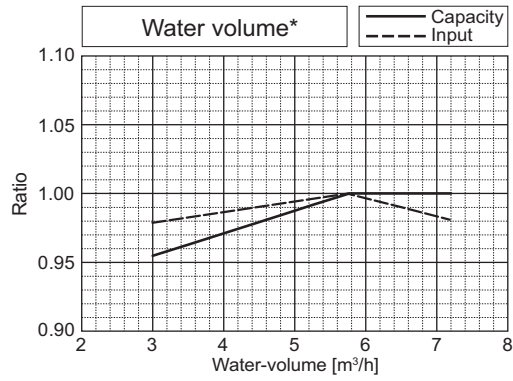
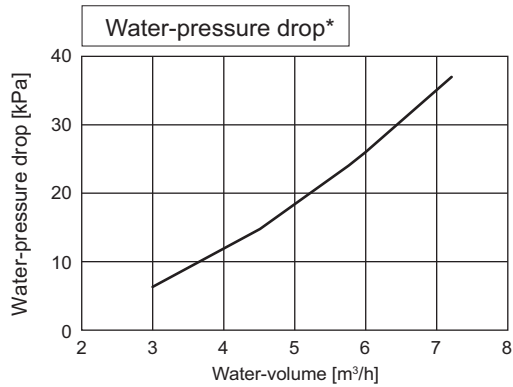
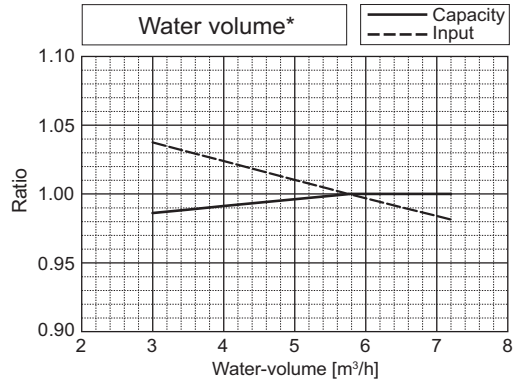
PQRY-			P216ZSLMU		
Nominal Cooling Capacity	kW	63.3	Rated Cooling Capacity	kW	60.4
	BTU/h	216,000		BTU/h	206,000
Input	kW	14.03	Input	kW	(Non-Ducted) 12.93 (Ducted) 13.24



PQRY-			P216ZSLMU		
Nominal Heating Capacity	kW	71.2	Rated Heating Capacity	kW	68.0
	BTU/h	243,000		BTU/h	232,000
Input	kW	12.88	Input	kW	(Non-Ducted) 11.88 (Ducted) 10.35

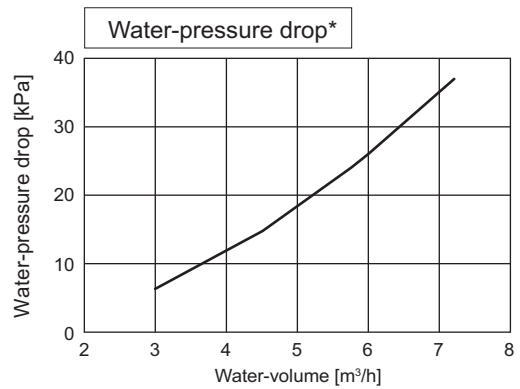
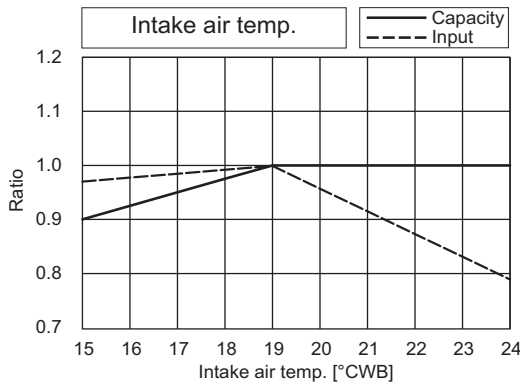
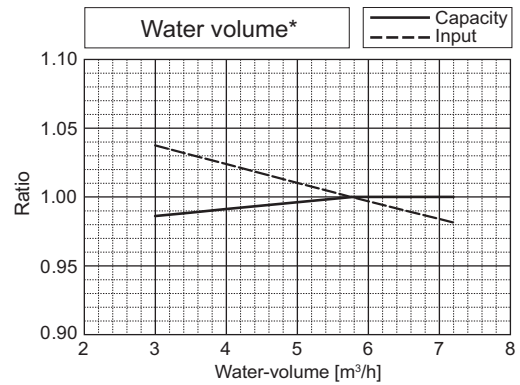
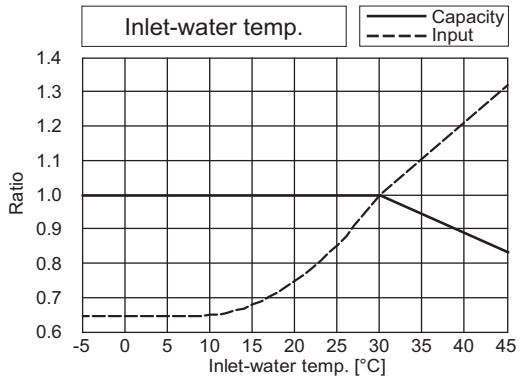


*The drawing indicates characteristic per unit.

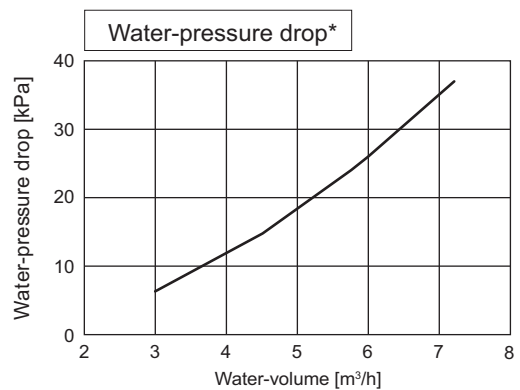
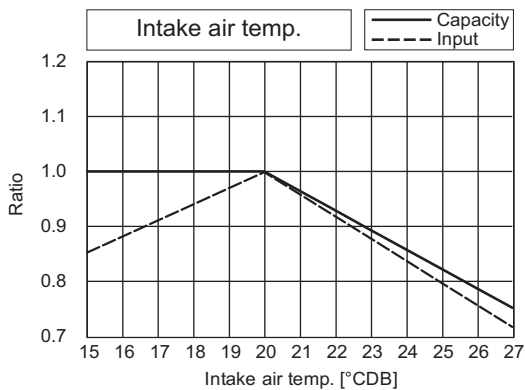
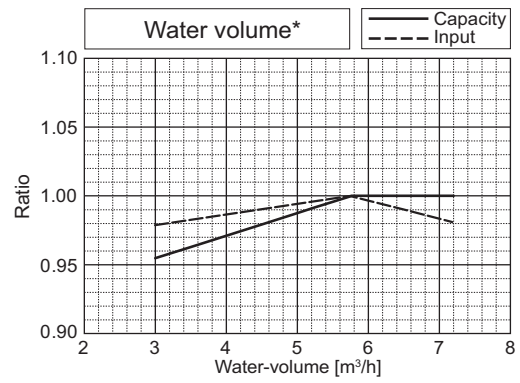
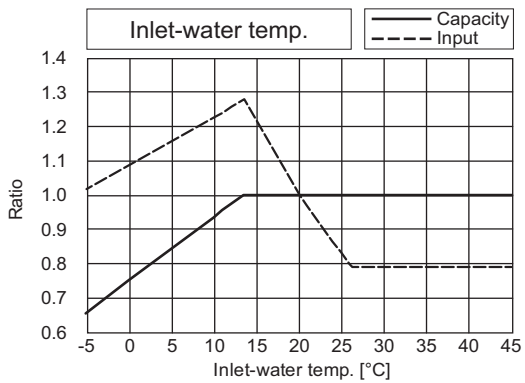


PQRY-			P240ZSLMU		
Nominal Cooling Capacity	kW	70.3	Rated Cooling Capacity	kW	66.8
	BTU/h	240,000		BTU/h	228,000
Input	kW	16.89	Input	kW	(Non-Ducted) 15.57 (Ducted) 16.15

*The drawing indicates characteristic per unit.



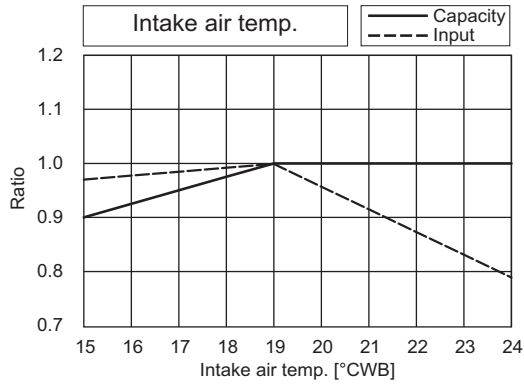
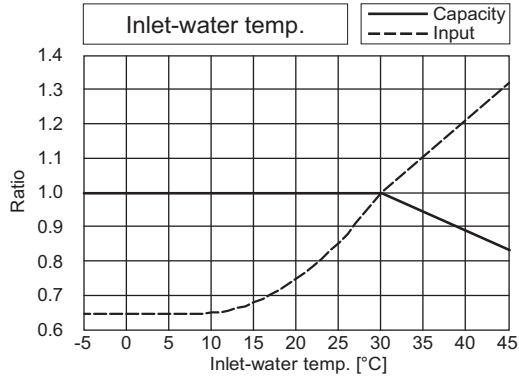
PQRY-			P240ZSLMU		
Nominal Heating Capacity	kW	79.1	Rated Heating Capacity	kW	75.6
	BTU/h	270,000		BTU/h	258,000
Input	kW	14.58	Input	kW	(Non-Ducted) 13.45 (Ducted) 12.02



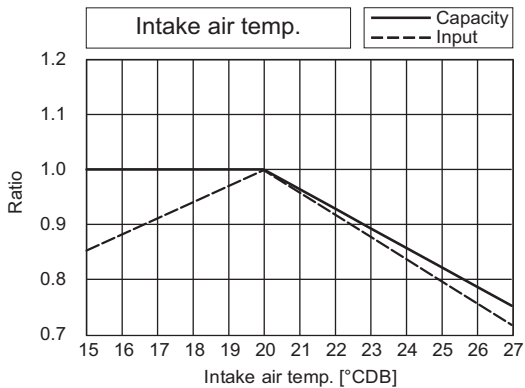
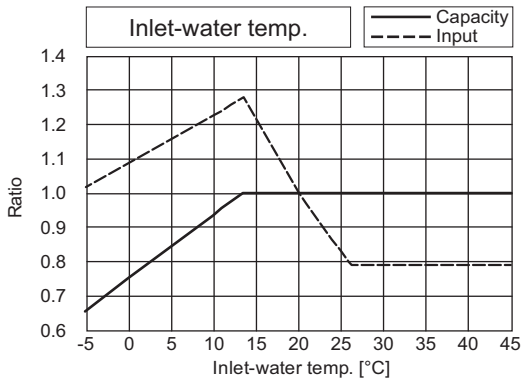
PQRY-P-Z(S)LMU-A1

PQRY-P-Z(S)LMU-A1

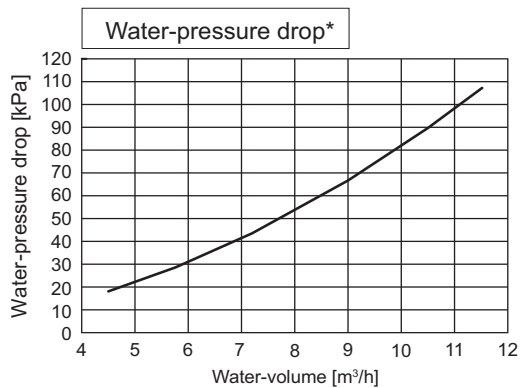
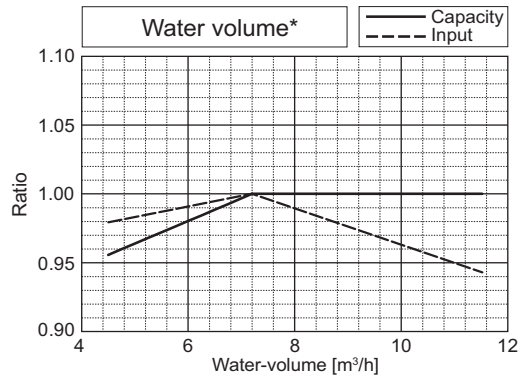
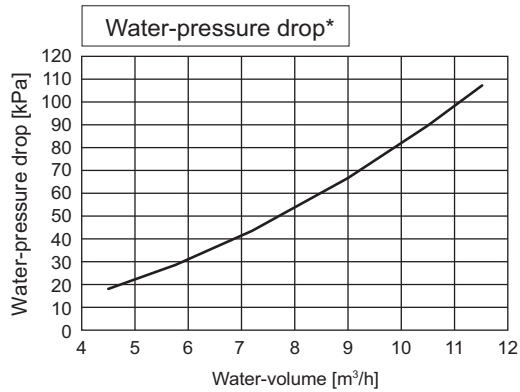
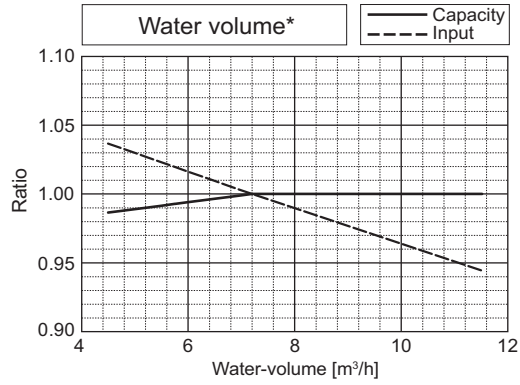
PQRY-			P288ZSLMU		
Nominal Cooling Capacity	kW	84.4	Rated Cooling Capacity	kW	80.6
	BTU/h	288,000		BTU/h	275,000
Input	kW	20.42	Input	kW	(Non-Ducted) 18.82 (Ducted) 21.43



PQRY-			P288ZSLMU		
Nominal Heating Capacity	kW	94.7	Rated Heating Capacity	kW	90.3
	BTU/h	323,000		BTU/h	308,000
Input	kW	17.50	Input	kW	(Non-Ducted) 16.13 (Ducted) 16.05

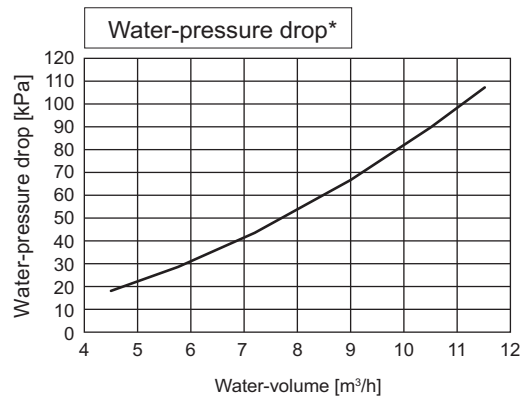
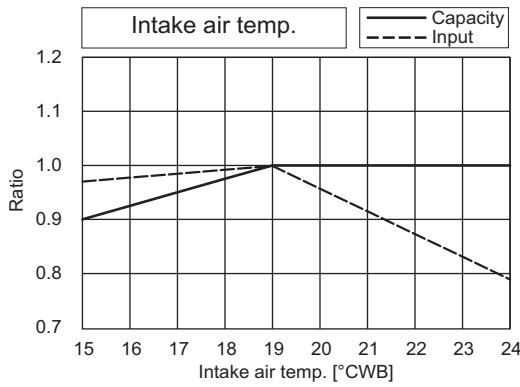
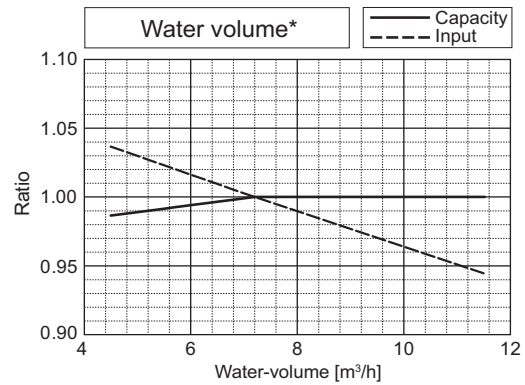
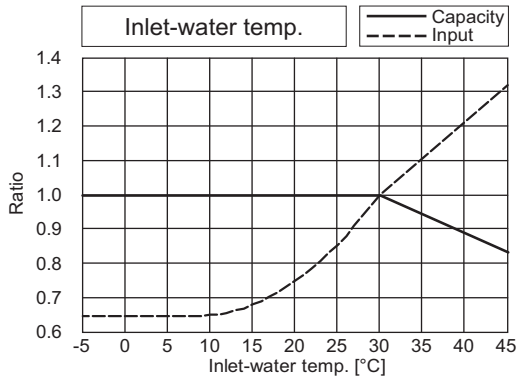


*The drawing indicates characteristic per unit.

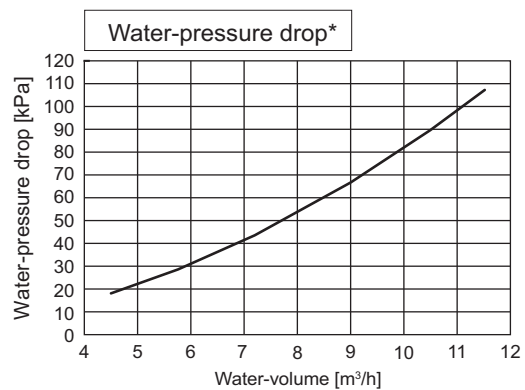
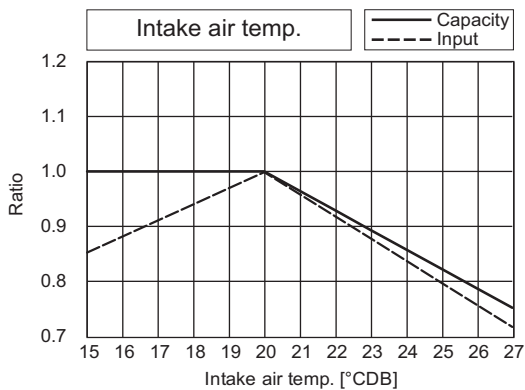
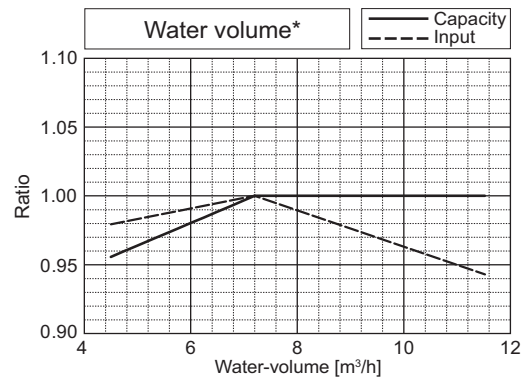
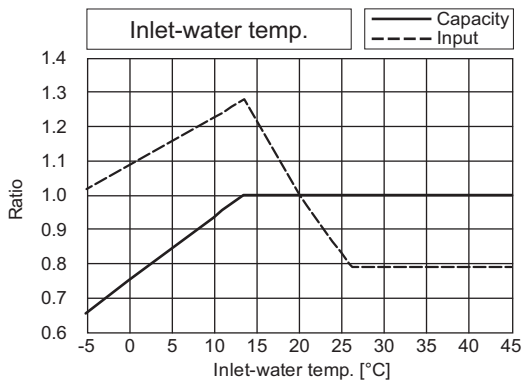


PQRY-			P312ZSLMU		
Nominal Cooling Capacity	kW	91.4	Rated Cooling Capacity	kW	87.0
	BTU/h	312,000		BTU/h	297,000
Input	kW	23.41	Input	kW	(Non-Ducted) 21.59 (Ducted) 23.67

*The drawing indicates characteristic per unit.



PQRY-			P312ZSLMU		
Nominal Heating Capacity	kW	102.6	Rated Heating Capacity	kW	97.9
	BTU/h	350,000		BTU/h	334,000
Input	kW	19.11	Input	kW	(Non-Ducted) 17.62 (Ducted) 17.96

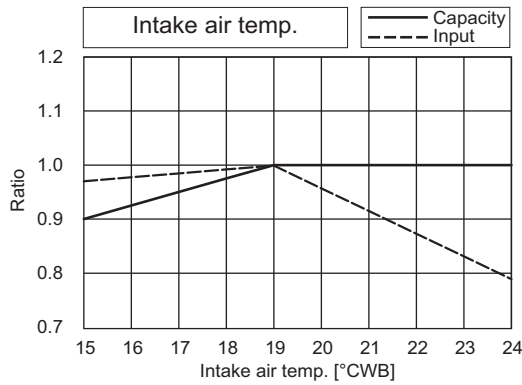
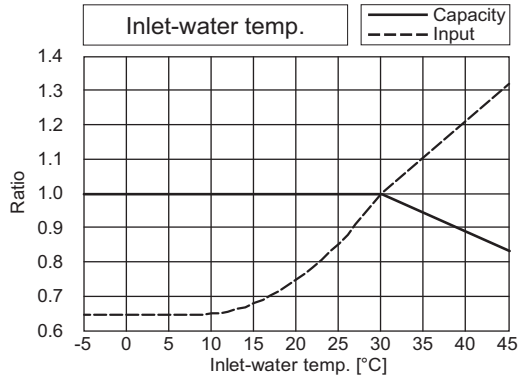


PQRY-P-Z(S)LMU-A1

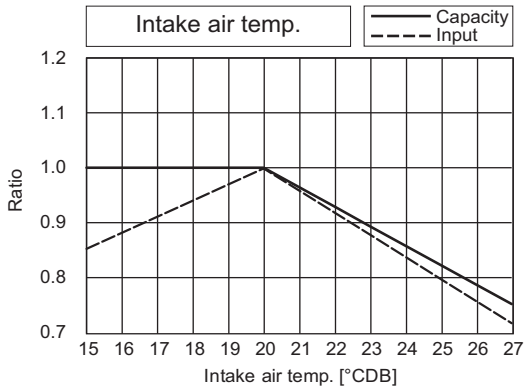
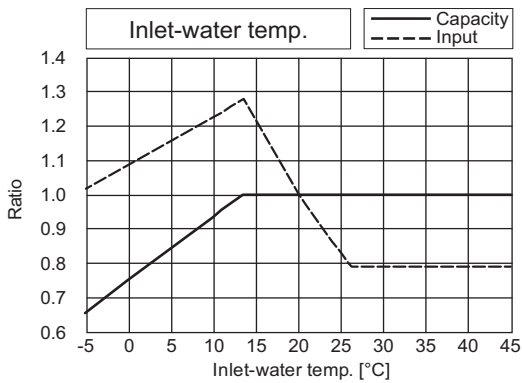
7. CAPACITY TABLES

PQRY-P-Z(S)LMU-A1

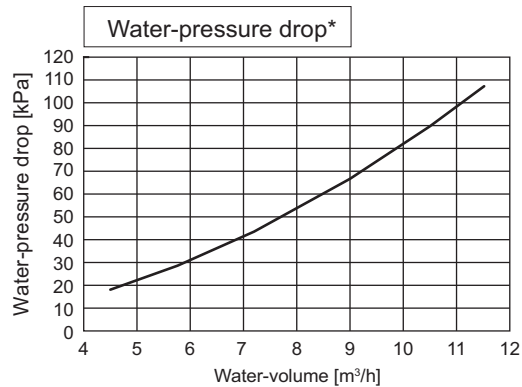
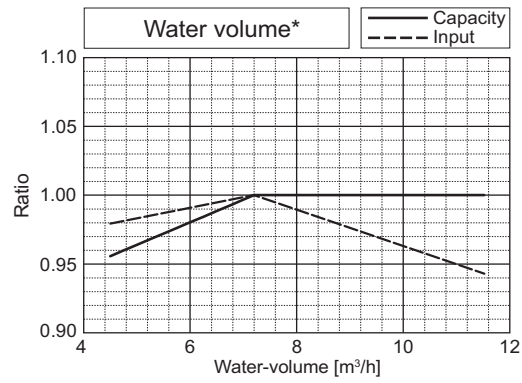
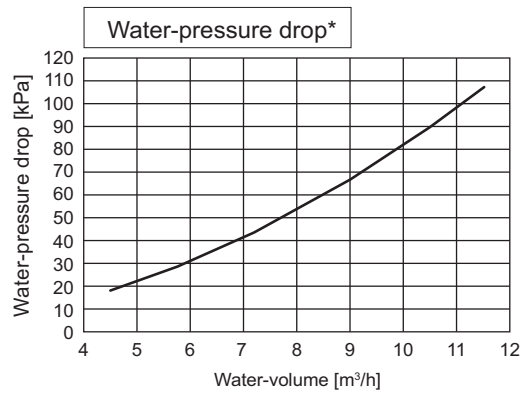
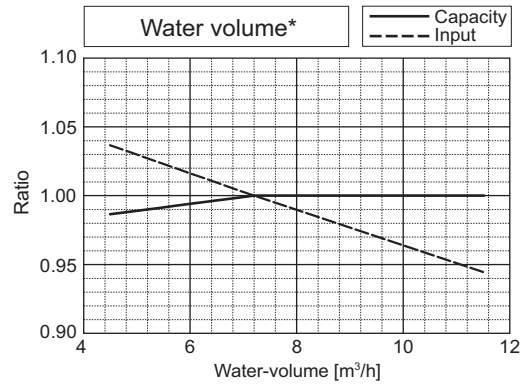
PQRY-			P336ZSLMU		
Nominal Cooling Capacity	kW	98.5	Rated Cooling Capacity	kW	93.8
	BTU/h	336,000		BTU/h	320,000
Input	kW	26.84	Input	kW	(Non-Ducted) 24.76 (Ducted) 25.85



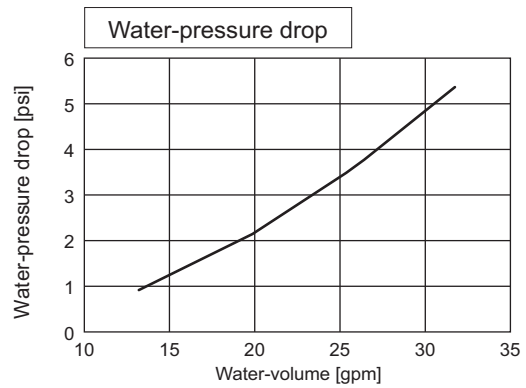
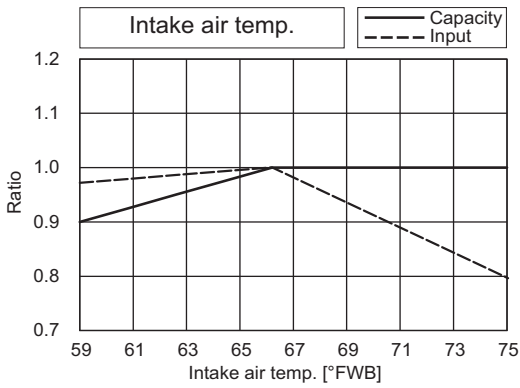
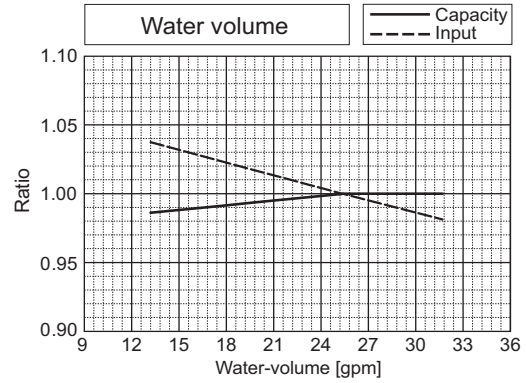
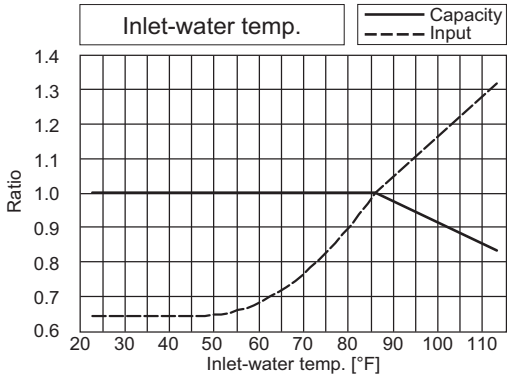
PQRY-			P336ZSLMU		
Nominal Heating Capacity	kW	110.8	Rated Heating Capacity	kW	105.8
	BTU/h	378,000		BTU/h	361,000
Input	kW	20.77	Input	kW	(Non-Ducted) 19.16 (Ducted) 20.05



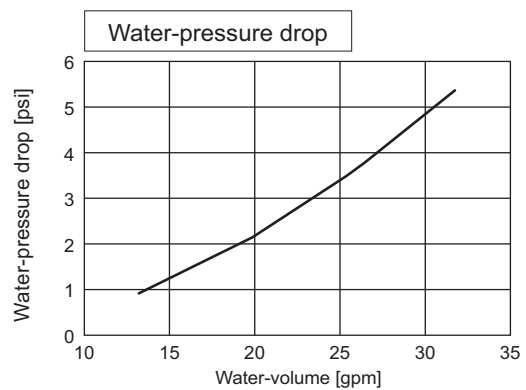
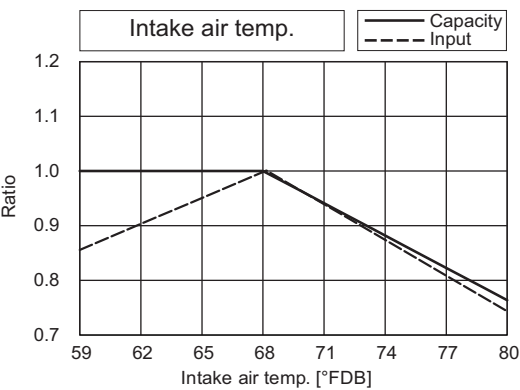
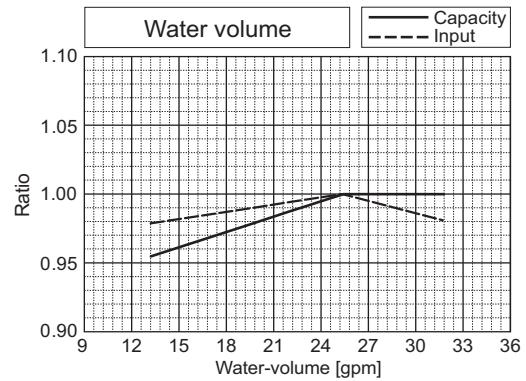
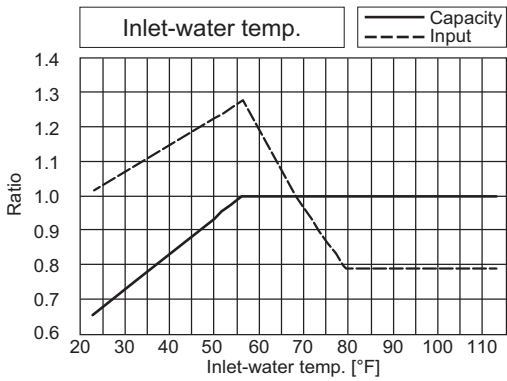
*The drawing indicates characteristic per unit.



PQRY-			P72ZLMU		
Nominal Cooling Capacity	kW	21.1	Rated Cooling Capacity	kW	20.2
	BTU/h	72,000		BTU/h	69,000
Input	kW	3.61	Input	kW	(Non-Ducted) 3.34 (Ducted) 3.12



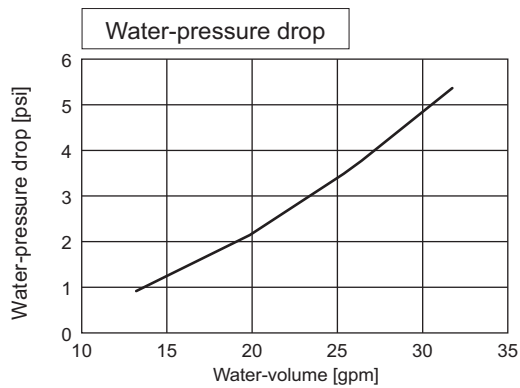
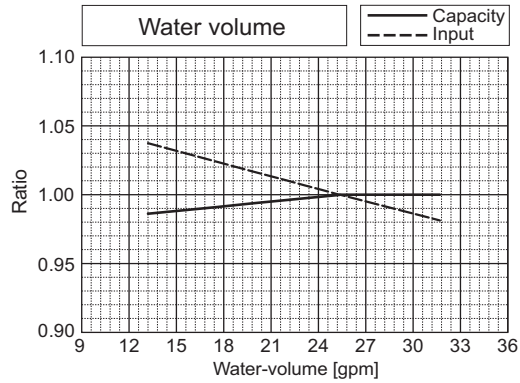
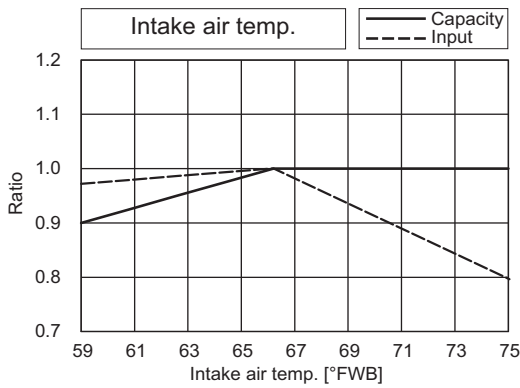
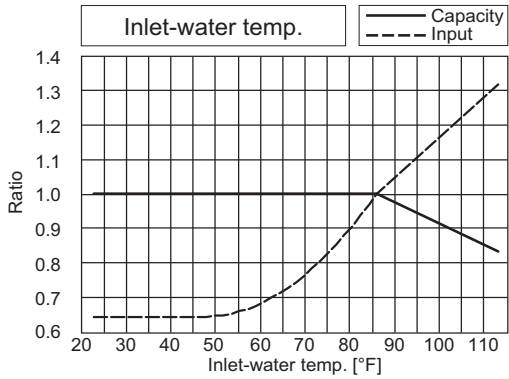
PQRY-			P72ZLMU		
Nominal Heating Capacity	kW	23.4	Rated Heating Capacity	kW	22.3
	BTU/h	80,000		BTU/h	76,000
Input	kW	4.04	Input	kW	(Non-Ducted) 3.74 (Ducted) 3.36



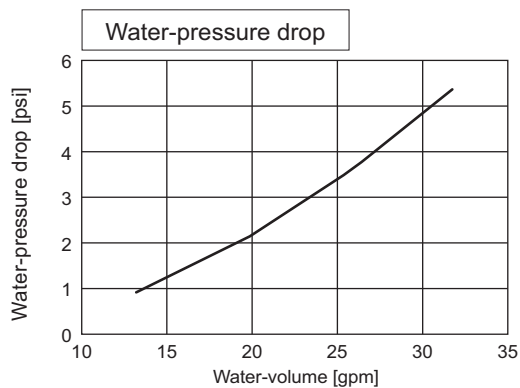
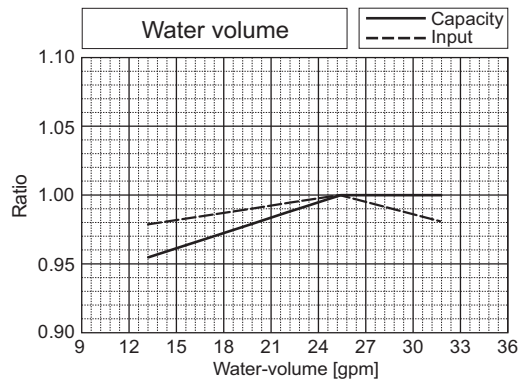
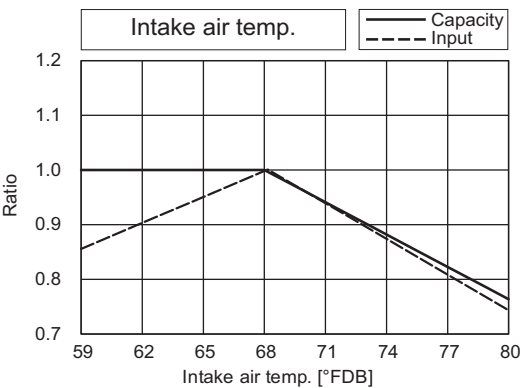
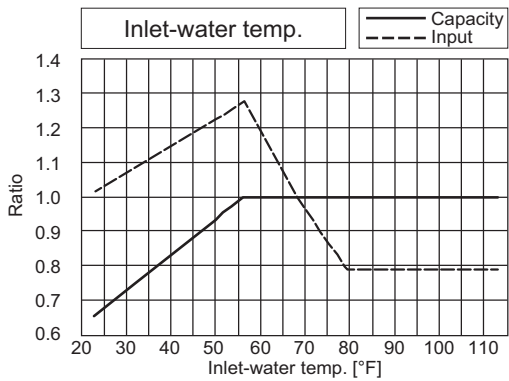
PQRY-P-Z(S)LMU-A1

PQRY-P-Z(S)LMU-A1

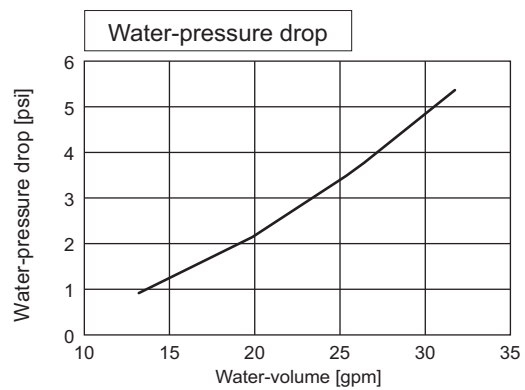
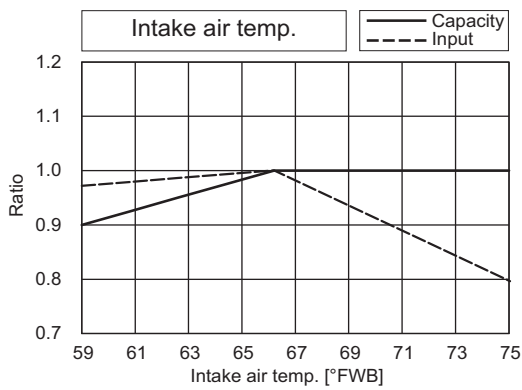
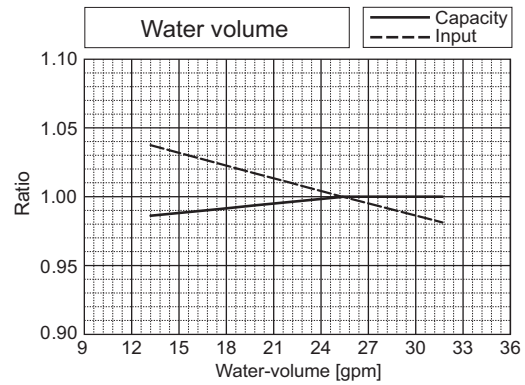
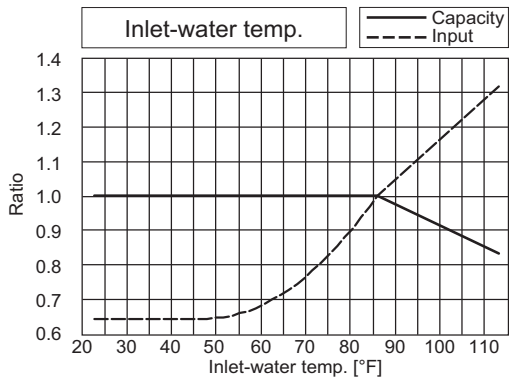
PQRY-			P96ZLMU		
Nominal Cooling Capacity	kW	28.1	Rated Cooling Capacity	kW	27.0
	BTU/h	96,000		BTU/h	92,000
Input	kW	5.21	Input	kW	(Non-Ducted) 4.82 (Ducted) 5.19



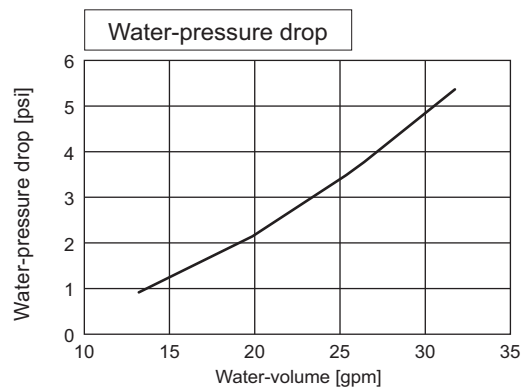
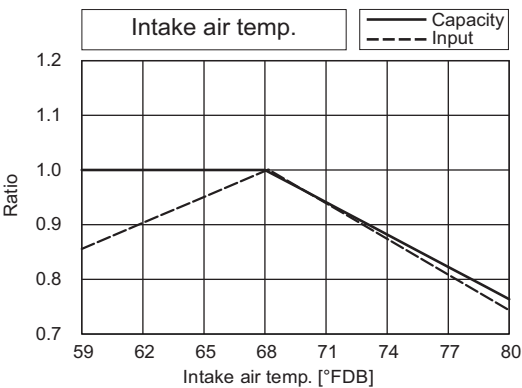
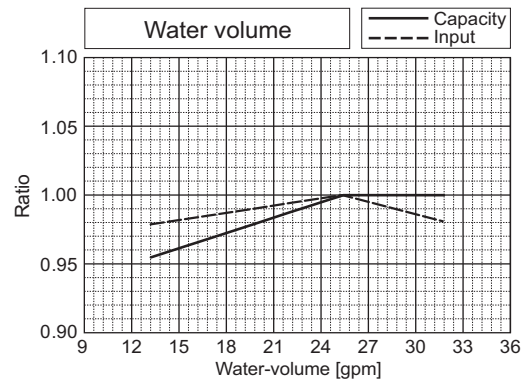
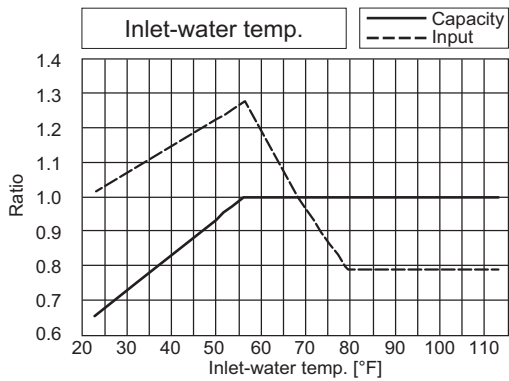
PQRY-			P96ZLMU		
Nominal Heating Capacity	kW	31.7	Rated Heating Capacity	kW	30.2
	BTU/h	108,000		BTU/h	103,000
Input	kW	5.64	Input	kW	(Non-Ducted) 5.21 (Ducted) 4.48



PQRY-			P120ZLMU		
Nominal Cooling Capacity	kW	35.2	Rated Cooling Capacity	kW	33.4
	BTU/h	120,000		BTU/h	114,000
Input	kW	7.51	Input	kW	(Non-Ducted) 6.95 (Ducted) 7.35



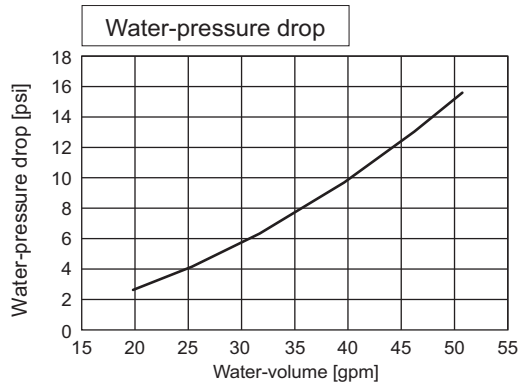
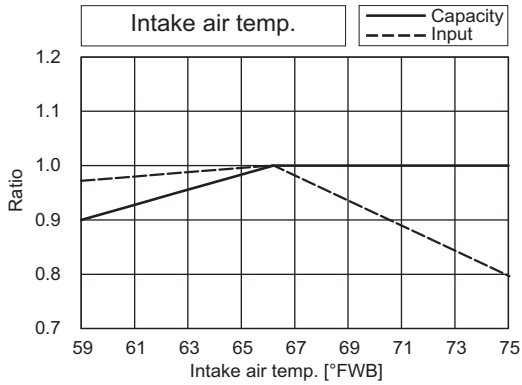
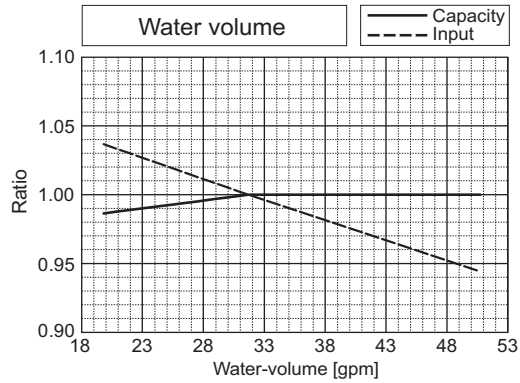
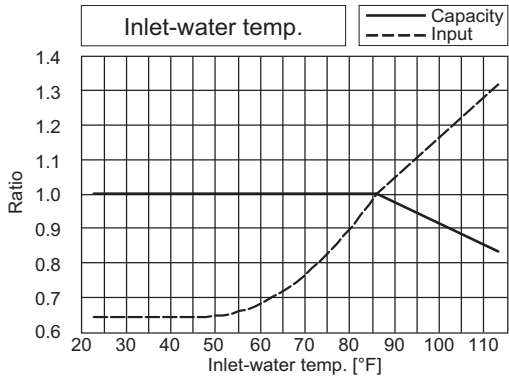
PQRY-			P120ZLMU		
Nominal Heating Capacity	kW	39.6	Rated Heating Capacity	kW	37.8
	BTU/h	135,000		BTU/h	129,000
Input	kW	7.09	Input	kW	(Non-Ducted) 6.55 (Ducted) 5.92



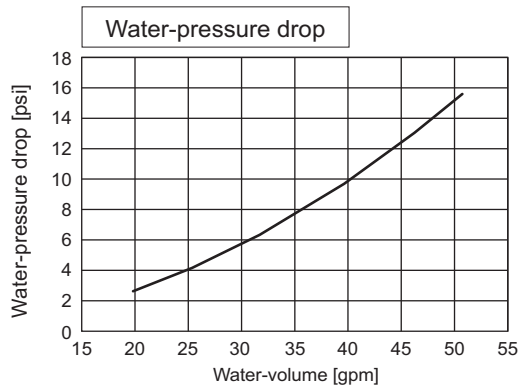
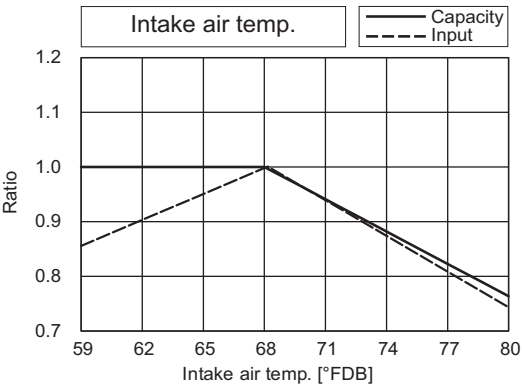
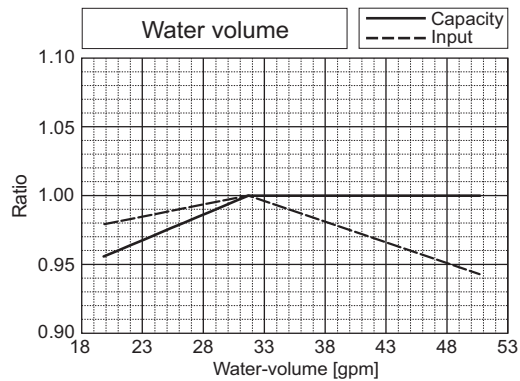
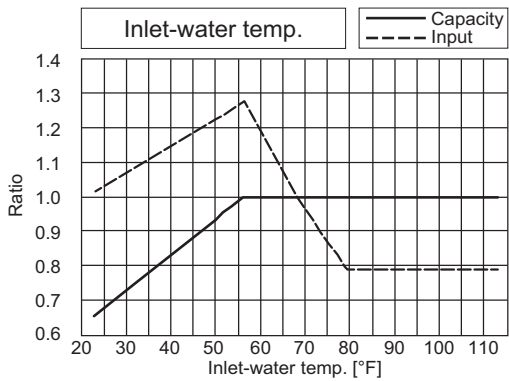
PQRY-P-Z(S)LMU-A1

PQRY-P-Z(S)LMU-A1

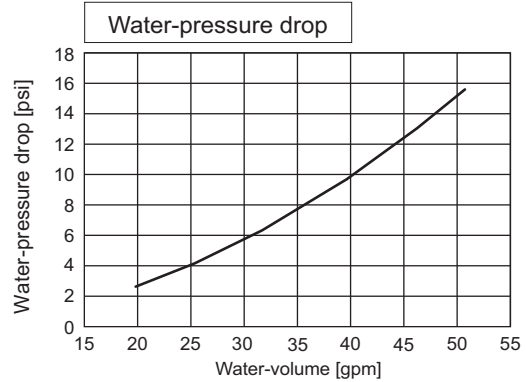
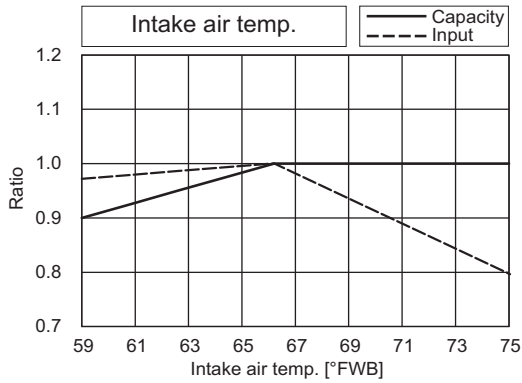
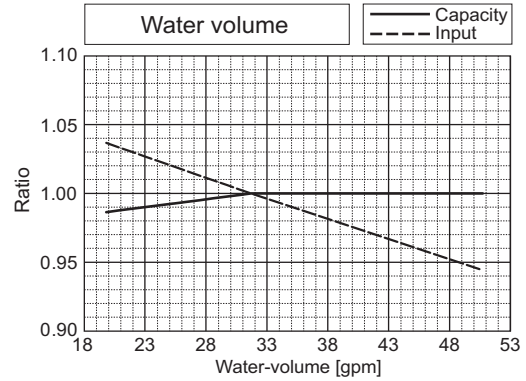
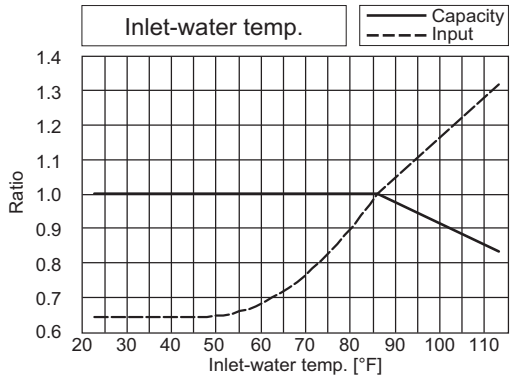
PQRY-			P144ZLMU		
Nominal Cooling Capacity	kW	42.2	Rated Cooling Capacity	kW	40.2
	BTU/h	144,000		BTU/h	137,000
Input	kW	8.78	Input	kW	(Non-Ducted) 8.07 (Ducted) 9.98



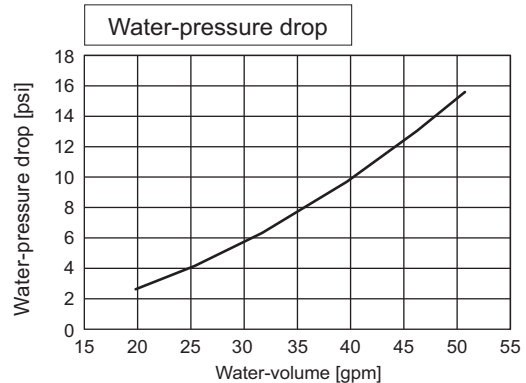
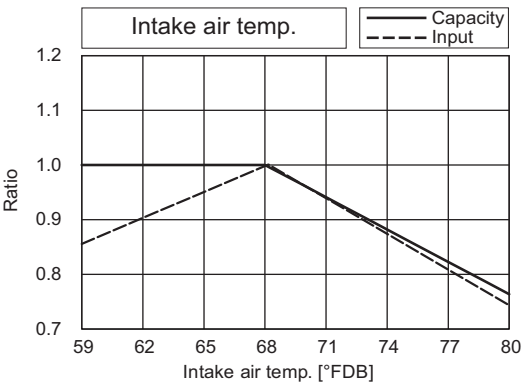
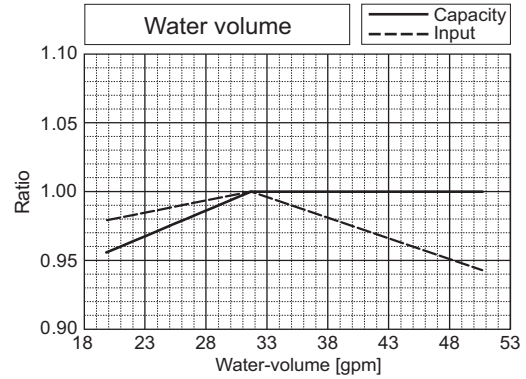
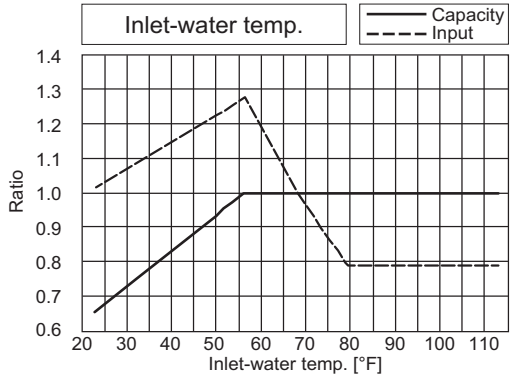
PQRY-			P144ZLMU		
Nominal Heating Capacity	kW	46.9	Rated Heating Capacity	kW	44.5
	BTU/h	160,000		BTU/h	152,000
Input	kW	8.11	Input	kW	(Non-Ducted) 7.47 (Ducted) 7.90



PQRY-			P168ZLMU		
Nominal Cooling Capacity	kW	49.2	Rated Cooling Capacity	kW	47.2
	BTU/h	168,000		BTU/h	161,000
Input	kW	12.05	Input	kW	(Non-Ducted) 11.10 (Ducted) 11.88



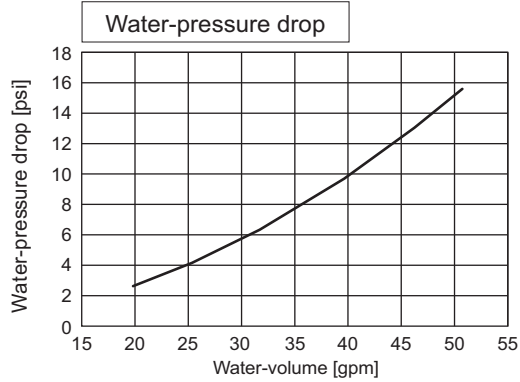
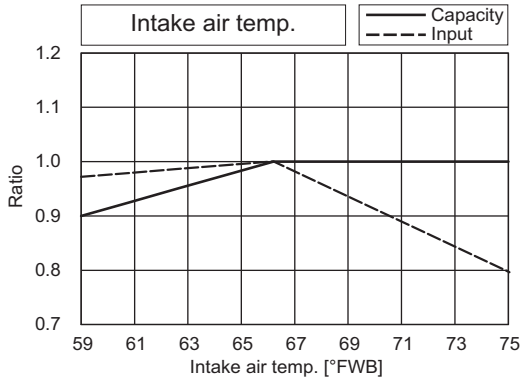
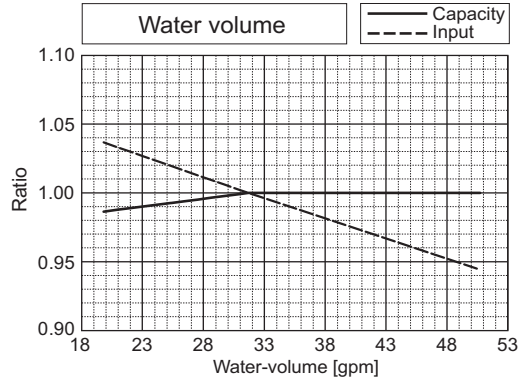
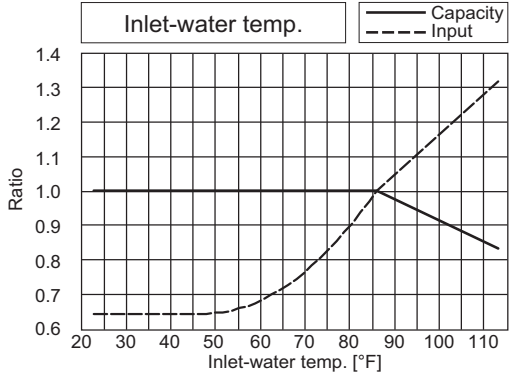
PQRY-			P168ZLMU		
Nominal Heating Capacity	kW	55.1	Rated Heating Capacity	kW	52.5
	BTU/h	188,000		BTU/h	179,000
Input	kW	9.86	Input	kW	(Non-Ducted) 9.09 (Ducted) 9.72



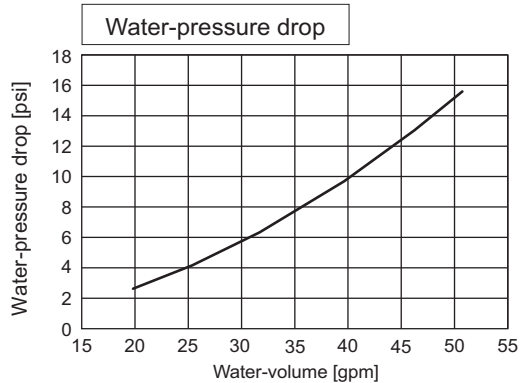
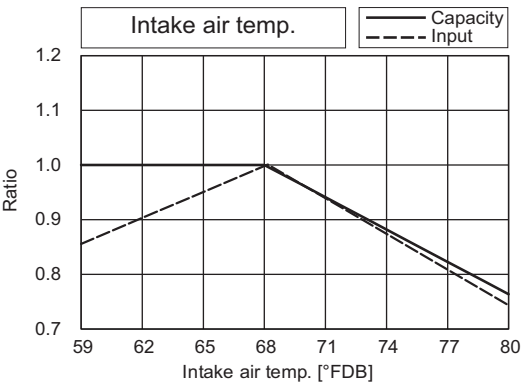
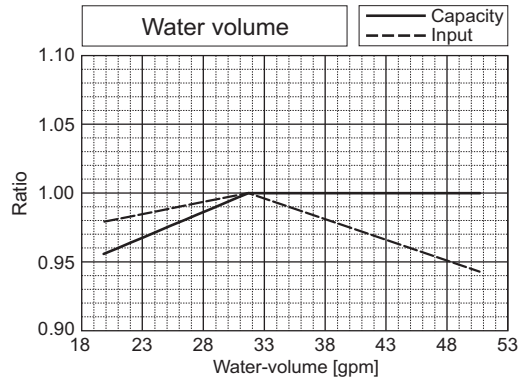
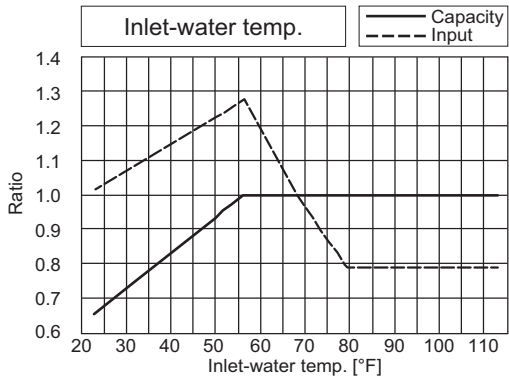
PQRY-P-Z(S)LMU-A1

PQRY-P-Z(S)LMU-A1

PQRY-			P192ZLMU		
Nominal Cooling Capacity	kW	56.3	Rated Cooling Capacity	kW	53.6
	BTU/h	192,000		BTU/h	183,000
Input	kW	15.05	Input	kW	(Non-Ducted) 13.87 (Ducted) 14.19

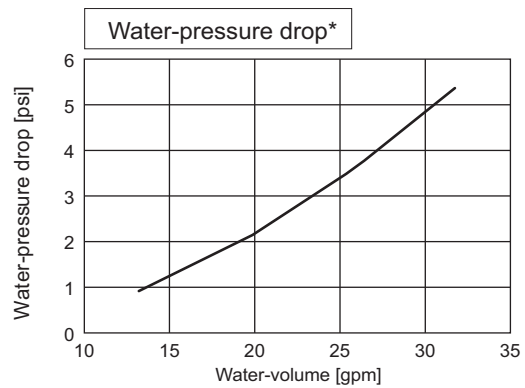
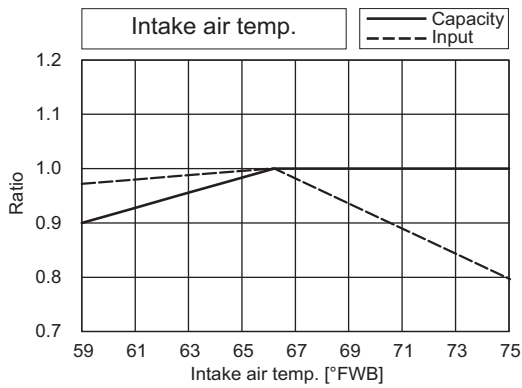
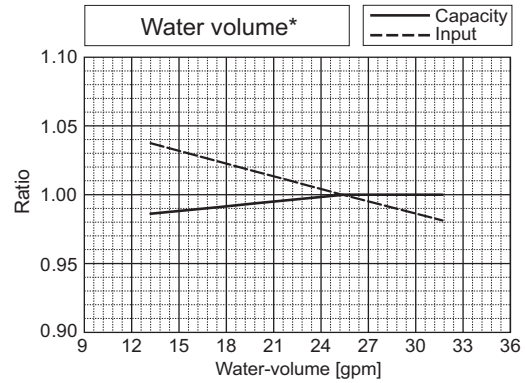
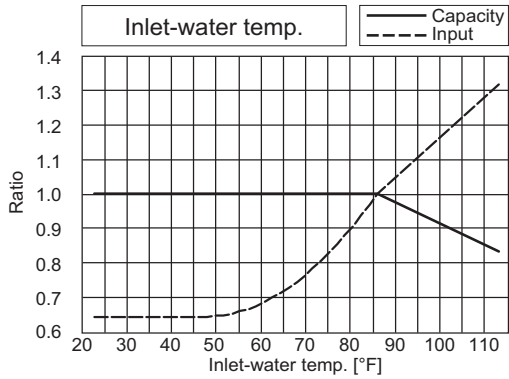


PQRY-			P192ZLMU		
Nominal Heating Capacity	kW	63.0	Rated Heating Capacity	kW	60.1
	BTU/h	215,000		BTU/h	205,000
Input	kW	11.90	Input	kW	(Non-Ducted) 10.97 (Ducted) 11.56

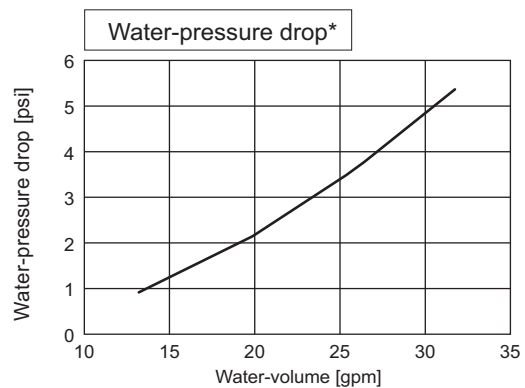
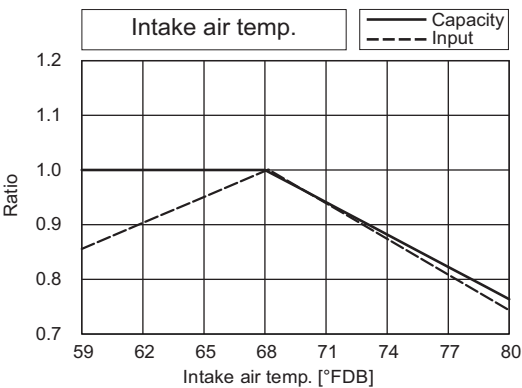
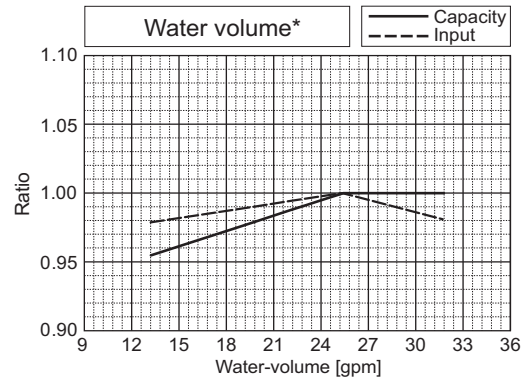
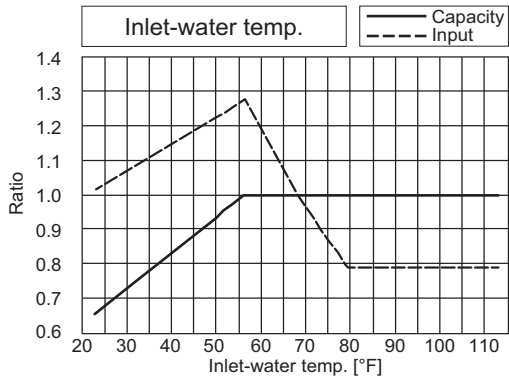


PQRY-			P144ZSLMU		
Nominal Cooling Capacity	kW	42.2	Rated Cooling Capacity	kW	40.2
	BTU/h	144,000		BTU/h	137,000
Input	kW	7.11	Input	kW	(Non-Ducted) 6.53 (Ducted) 7.72

*The drawing indicates characteristic per unit.



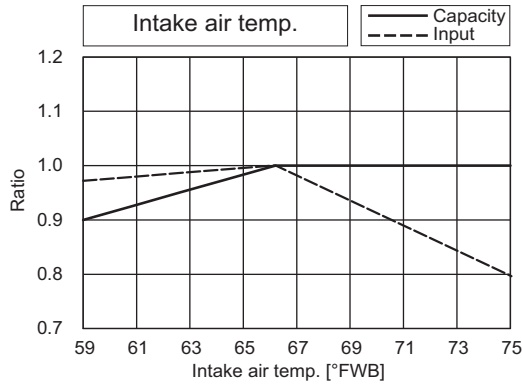
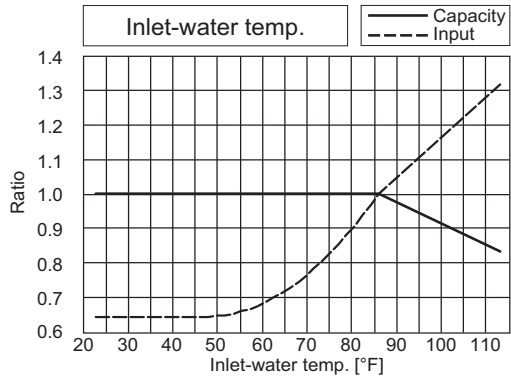
PQRY-			P144ZSLMU		
Nominal Heating Capacity	kW	46.9	Rated Heating Capacity	kW	44.5
	BTU/h	160,000		BTU/h	152,000
Input	kW	7.45	Input	kW	(Non-Ducted) 6.86 (Ducted) 7.22



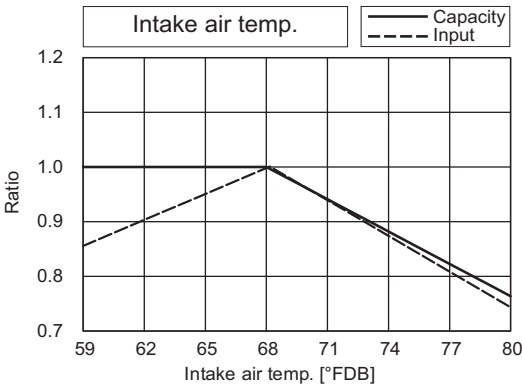
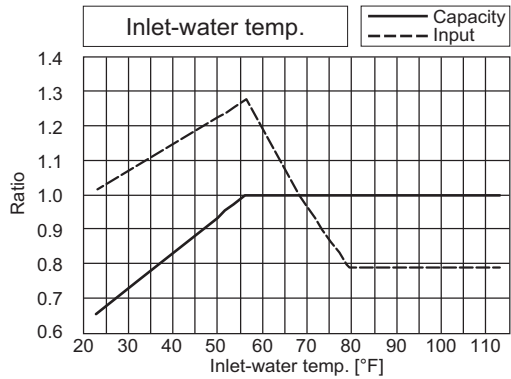
PQRY-P-Z(S)LMU-A1

PQRY-P-Z(S)LMU-A1

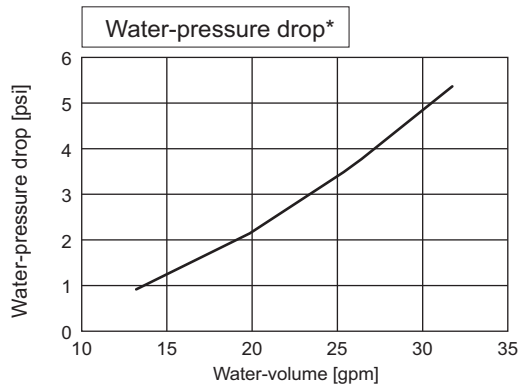
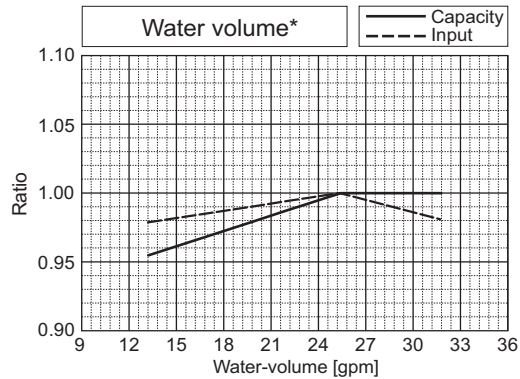
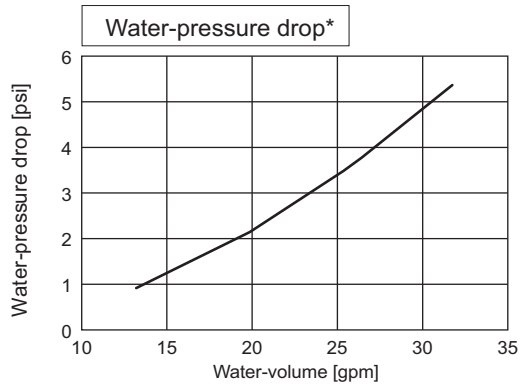
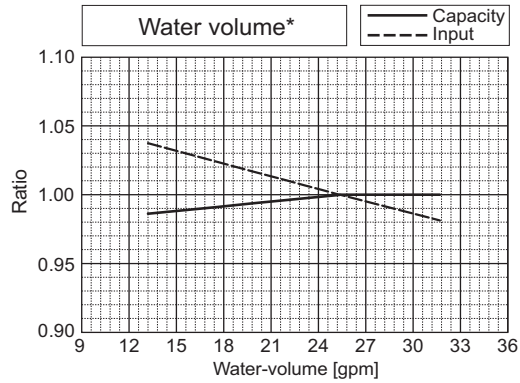
PQRY-			P168ZSLMU		
Nominal Cooling Capacity	kW	49.2	Rated Cooling Capacity	kW	47.2
	BTU/h	168,000		BTU/h	161,000
Input	kW	9.33	Input	kW	(Non-Ducted) 8.58 (Ducted) 9.22



PQRY-			P168ZSLMU		
Nominal Heating Capacity	kW	55.1	Rated Heating Capacity	kW	52.5
	BTU/h	188,000		BTU/h	179,000
Input	kW	9.34	Input	kW	(Non-Ducted) 8.60 (Ducted) 8.03

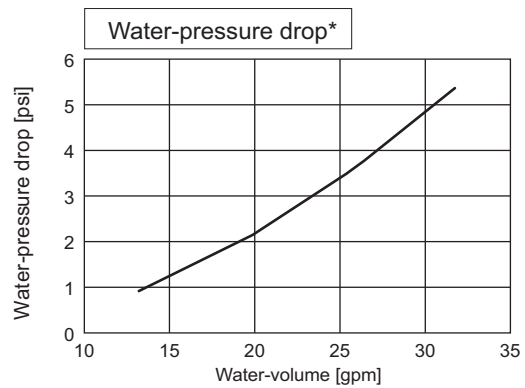
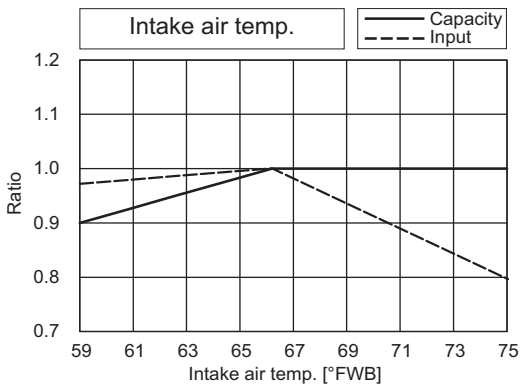
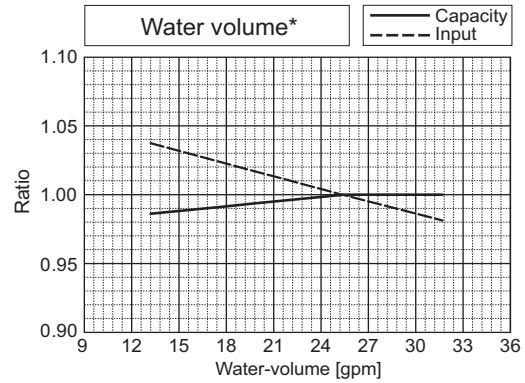
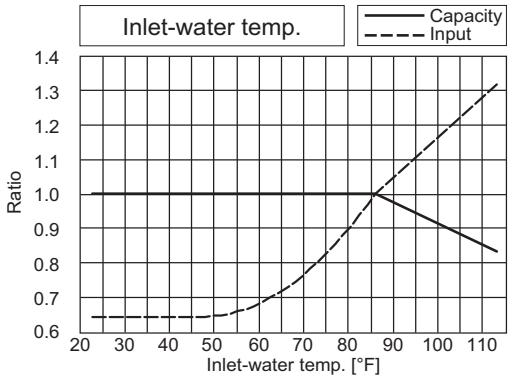


*The drawing indicates characteristic per unit.

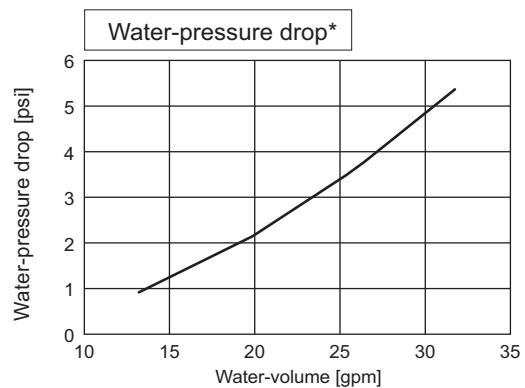
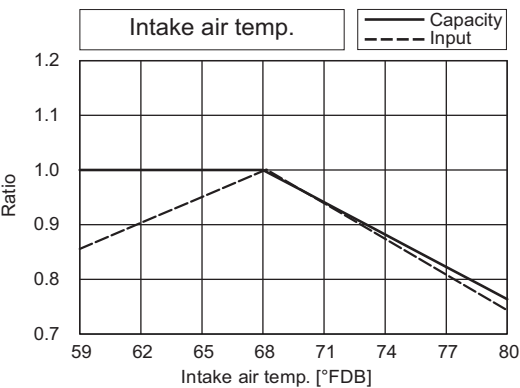
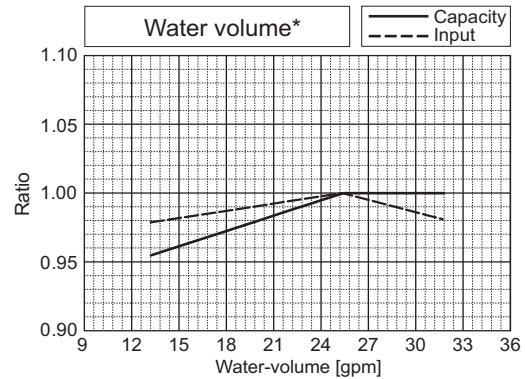
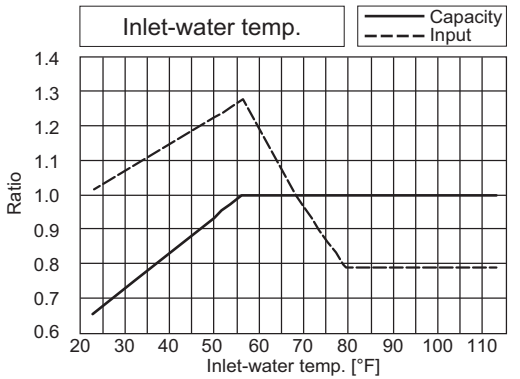


PQRY-			P192ZSLMU		
Nominal Cooling Capacity	kW	56.3	Rated Cooling Capacity	kW	53.6
	BTU/h	192,000		BTU/h	183,000
Input	kW	11.30	Input	kW	(Non-Ducted) 10.40 (Ducted) 10.98

*The drawing indicates characteristic per unit.

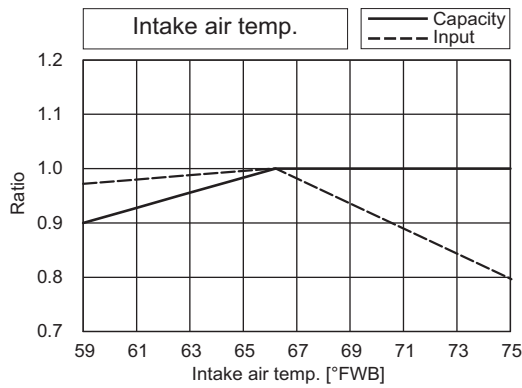
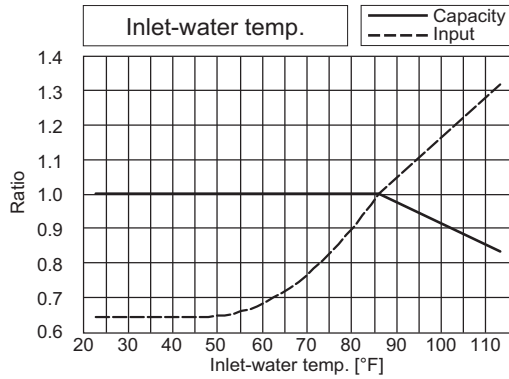


PQRY-			P192ZSLMU		
Nominal Heating Capacity	kW	63.0	Rated Heating Capacity	kW	60.1
	BTU/h	215,000		BTU/h	205,000
Input	kW	11.02	Input	kW	(Non-Ducted) 10.16 (Ducted) 8.90

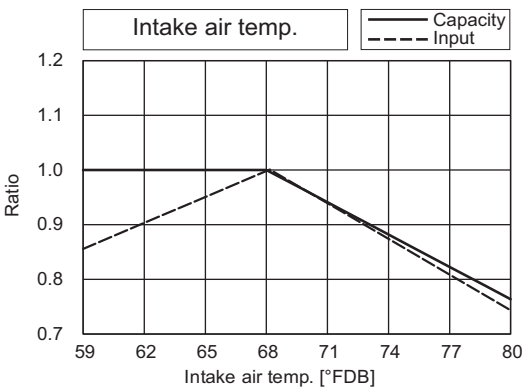
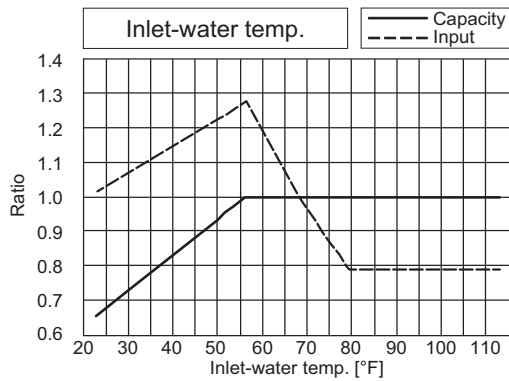


PQRY-P-Z(S)LMU-A1

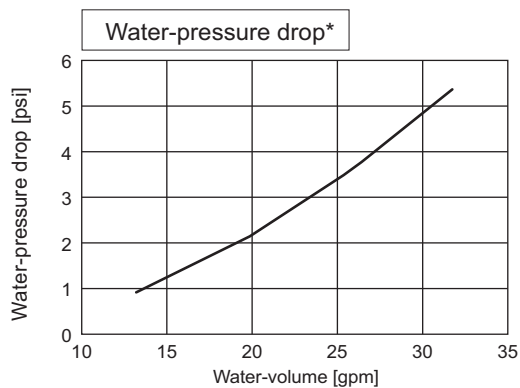
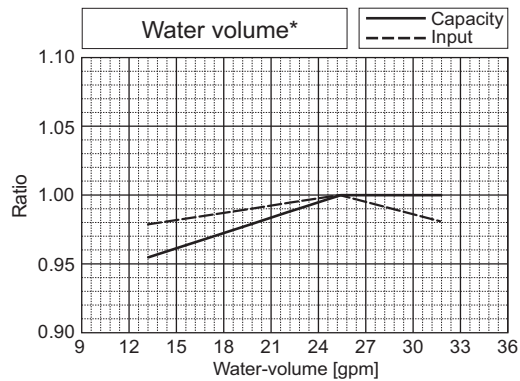
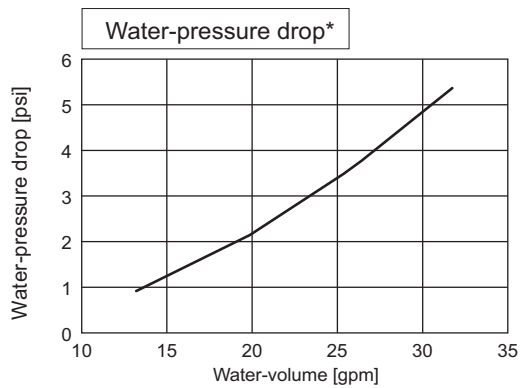
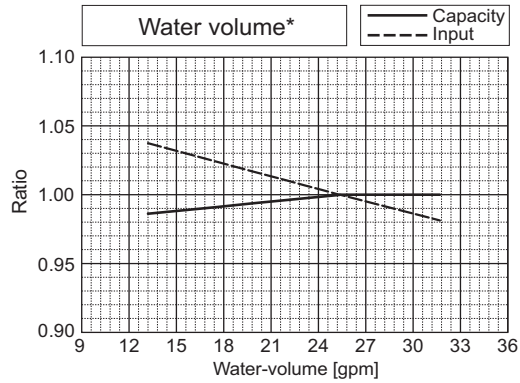
PQRY-			P216ZSLMU		
Nominal Cooling Capacity	kW	63.3	Rated Cooling Capacity	kW	60.4
	BTU/h	216,000		BTU/h	206,000
Input	kW	14.03	Input	kW	(Non-Ducted) 12.93 (Ducted) 13.24



PQRY-			P216ZSLMU		
Nominal Heating Capacity	kW	71.2	Rated Heating Capacity	kW	68.0
	BTU/h	243,000		BTU/h	232,000
Input	kW	12.88	Input	kW	(Non-Ducted) 11.88 (Ducted) 10.35



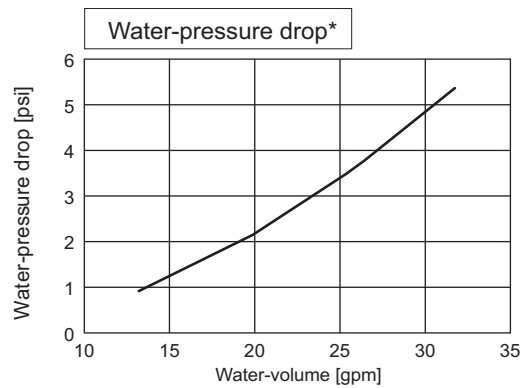
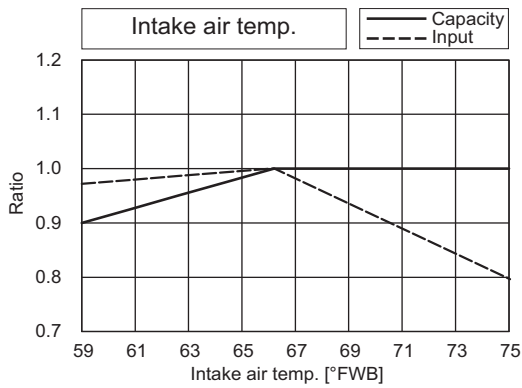
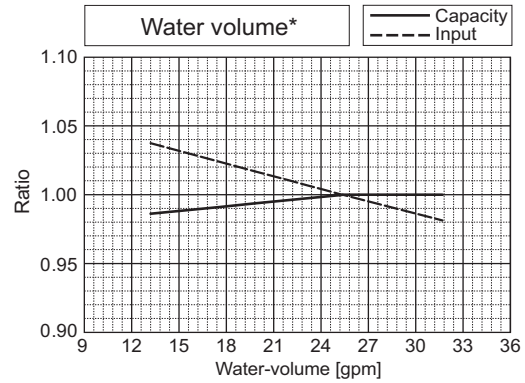
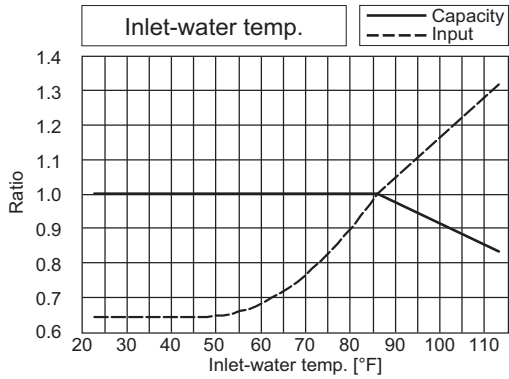
*The drawing indicates characteristic per unit.



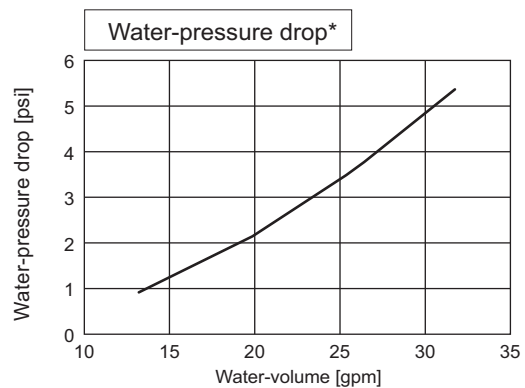
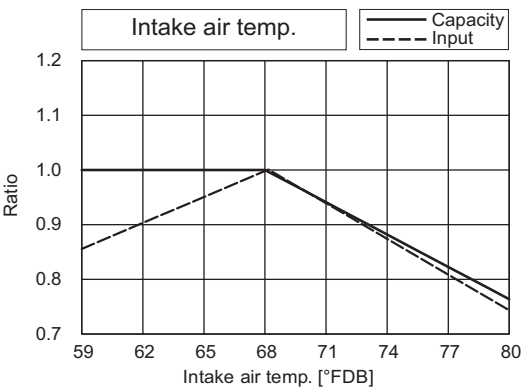
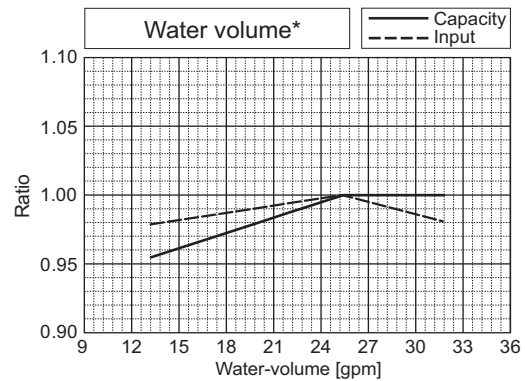
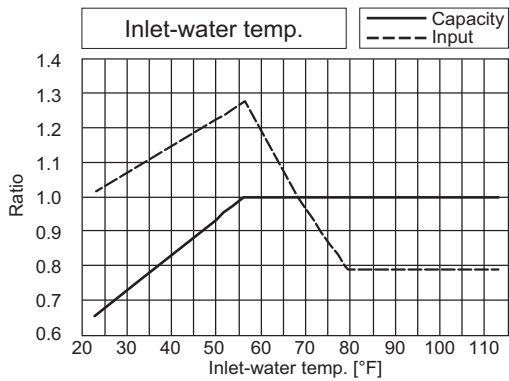
PQRY-P-Z(S)LMU-A1

PQRY-			P240ZSLMU		
Nominal Cooling Capacity	kW	70.3	Rated Cooling Capacity	kW	66.8
	BTU/h	240,000		BTU/h	228,000
Input	kW	16.89	Input	kW	(Non-Ducted) 15.57 (Ducted) 16.15

*The drawing indicates characteristic per unit.



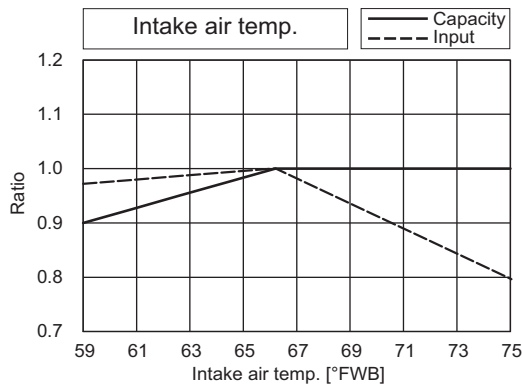
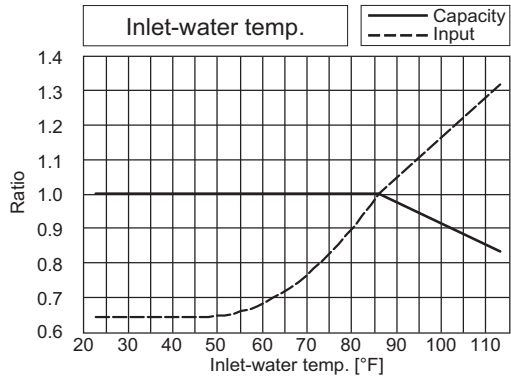
PQRY-			P240ZSLMU		
Nominal Heating Capacity	kW	79.1	Rated Heating Capacity	kW	75.6
	BTU/h	270,000		BTU/h	258,000
Input	kW	14.58	Input	kW	(Non-Ducted) 13.45 (Ducted) 12.02



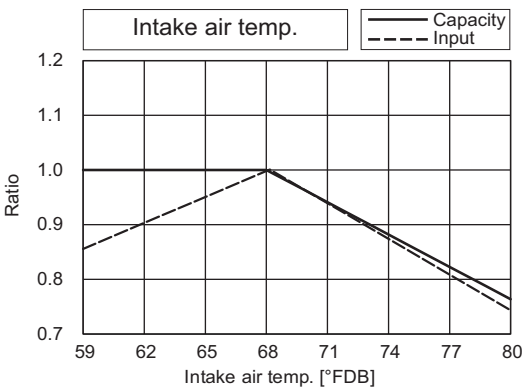
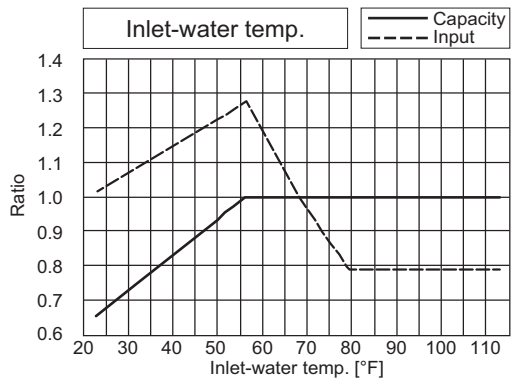
PQRY-P-Z(S)LMU-A1

PQRY-P-Z(S)LMU-A1

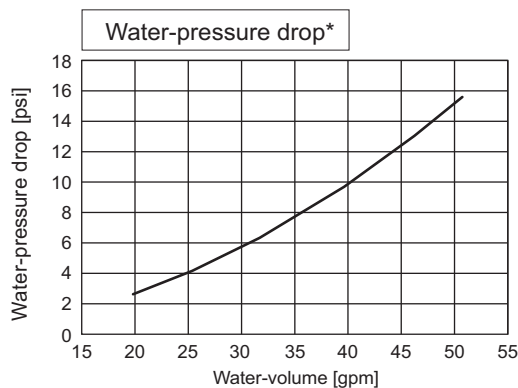
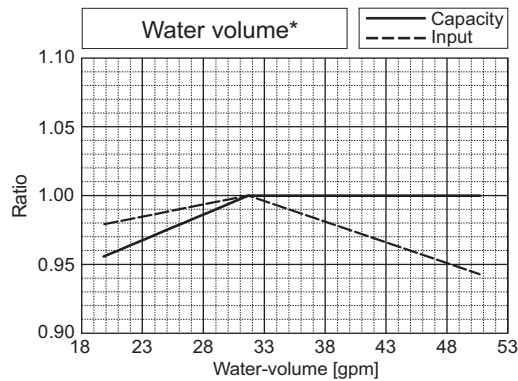
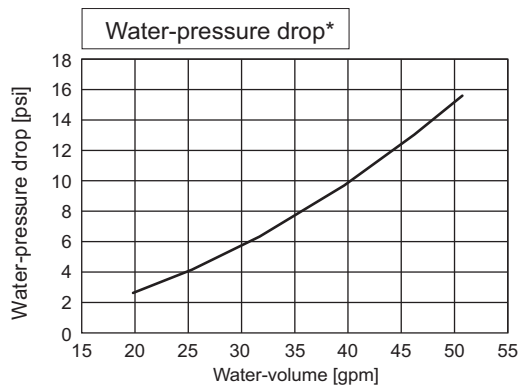
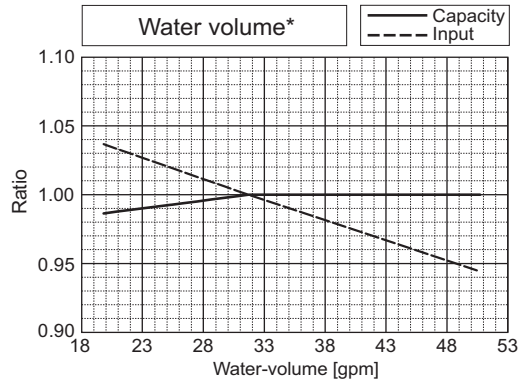
PQRY-			P288ZSLMU		
Nominal Cooling Capacity	kW	84.4	Rated Cooling Capacity	kW	80.6
	BTU/h	288,000		BTU/h	275,000
Input	kW	20.42	Input	kW	(Non-Ducted) 18.82 (Ducted) 21.43



PQRY-			P288ZSLMU		
Nominal Heating Capacity	kW	94.7	Rated Heating Capacity	kW	90.3
	BTU/h	323,000		BTU/h	308,000
Input	kW	17.50	Input	kW	(Non-Ducted) 16.13 (Ducted) 16.05

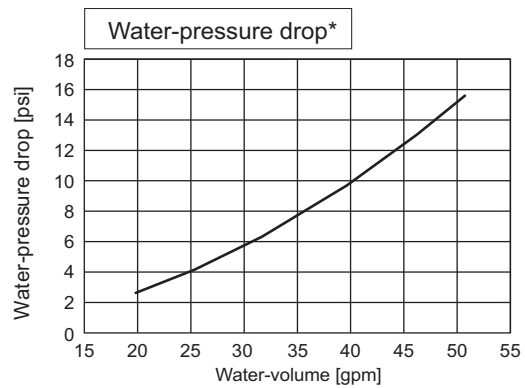
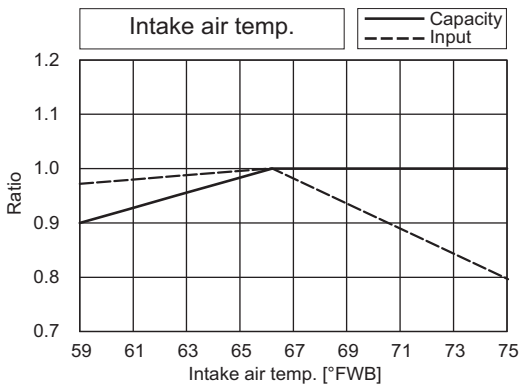
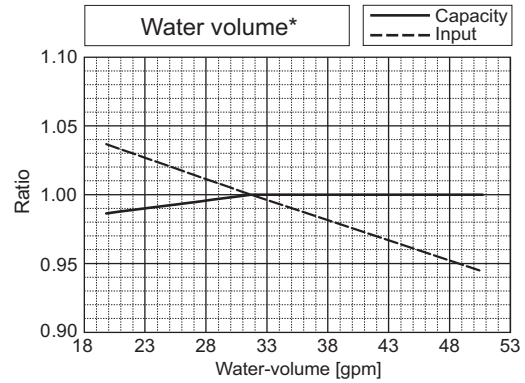
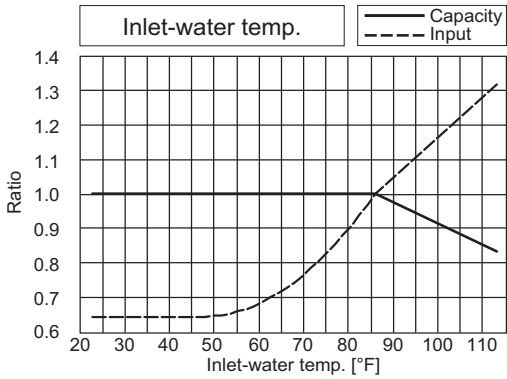


*The drawing indicates characteristic per unit.

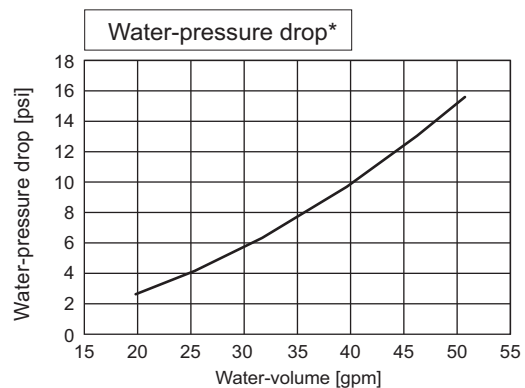
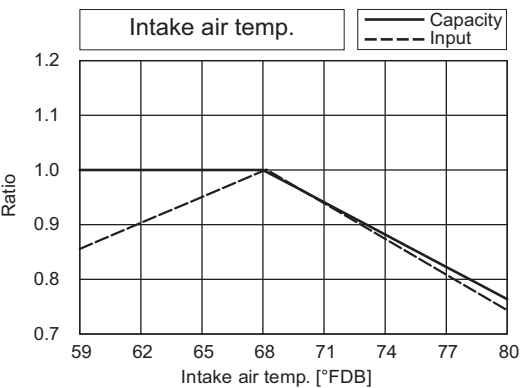
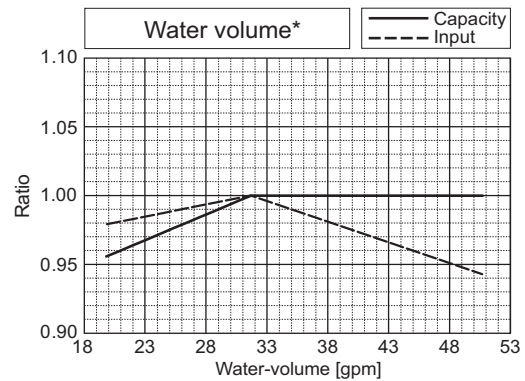
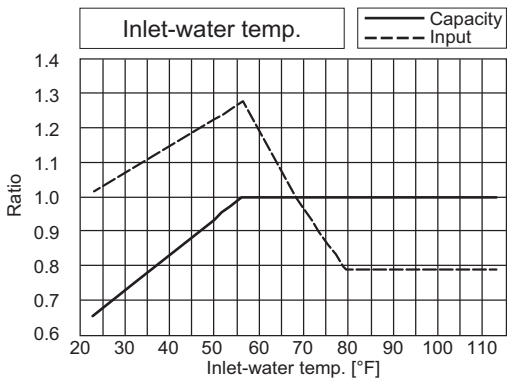


PQRY-			P312ZSLMU		
Nominal Cooling Capacity	kW	91.4	Rated Cooling Capacity	kW	87.0
	BTU/h	312,000		BTU/h	297,000
Input	kW	23.41	Input	kW	(Non-Ducted) 21.59 (Ducted) 23.67

*The drawing indicates characteristic per unit.



PQRY-			P312ZSLMU		
Nominal Heating Capacity	kW	102.6	Rated Heating Capacity	kW	97.9
	BTU/h	350,000		BTU/h	334,000
Input	kW	19.11	Input	kW	(Non-Ducted) 17.62 (Ducted) 17.96

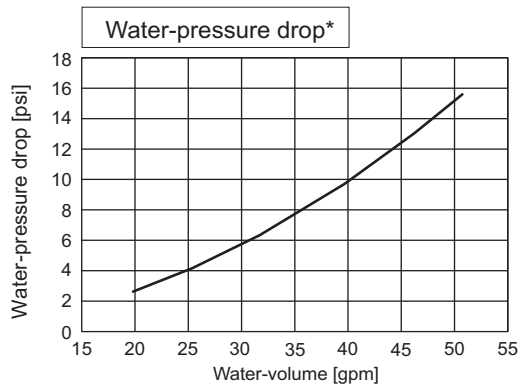
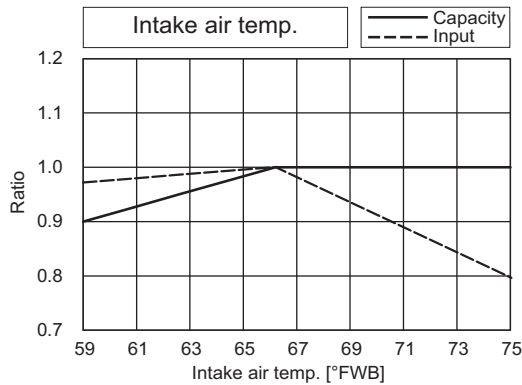
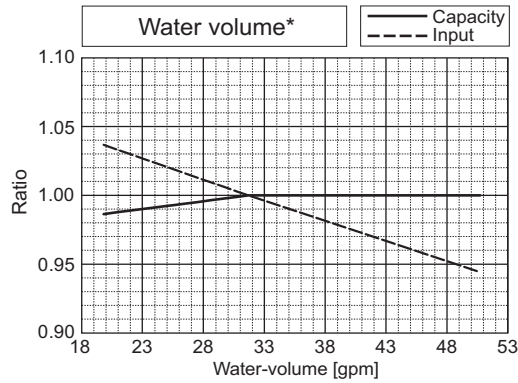
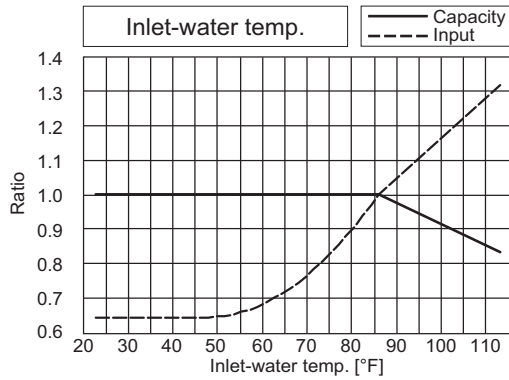


PQRY-P-Z(S)LMU-A1

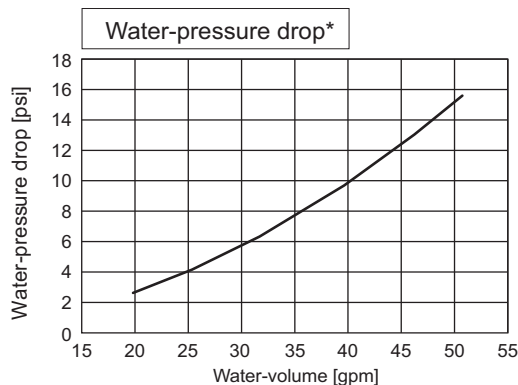
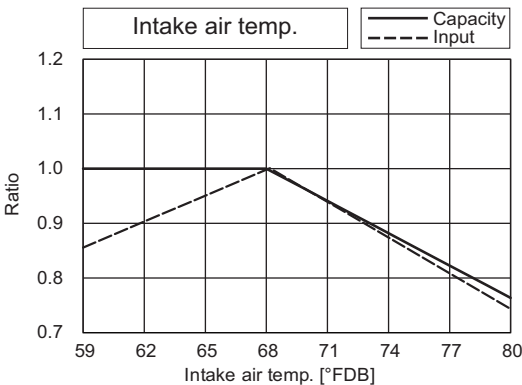
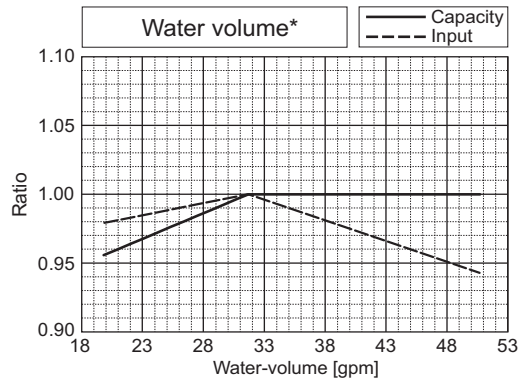
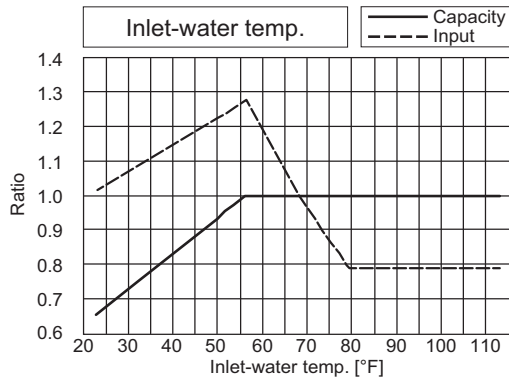
7. CAPACITY TABLES

PQRY-			P336ZSLMU		
Nominal Cooling Capacity	kW	98.5	Rated Cooling Capacity	kW	93.8
	BTU/h	336,000		BTU/h	320,000
Input	kW	26.84	Input	kW	(Non-Ducted) 24.76 (Ducted) 25.85

*The drawing indicates characteristic per unit.



PQRY-			P336ZSLMU		
Nominal Heating Capacity	kW	110.8	Rated Heating Capacity	kW	105.8
	BTU/h	378,000		BTU/h	361,000
Input	kW	20.77	Input	kW	(Non-Ducted) 19.16 (Ducted) 20.05



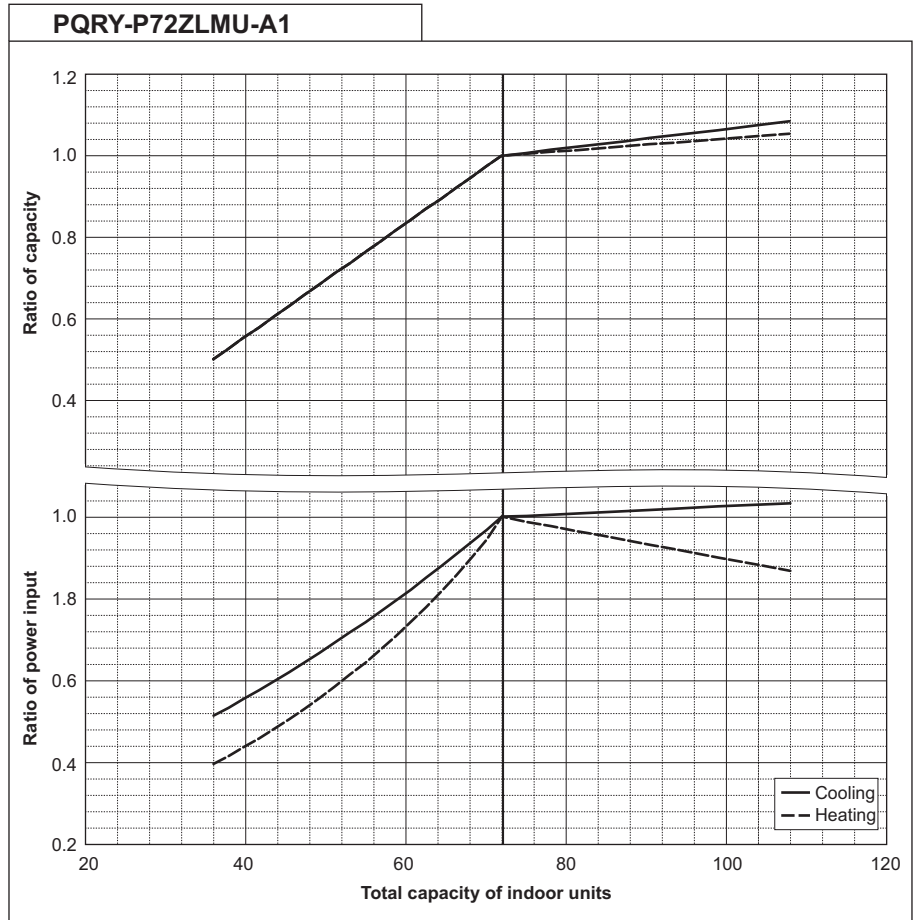
PQRY-P-Z(S)LMU-A1

7-2. Correction by total indoor

CITY MULTI system have different capacities and inputs when many combinations of indoor units with different total capacities are connected. Using following tables, the maximum capacity can be found to ensure the system is installed with enough capacity for a particular application.

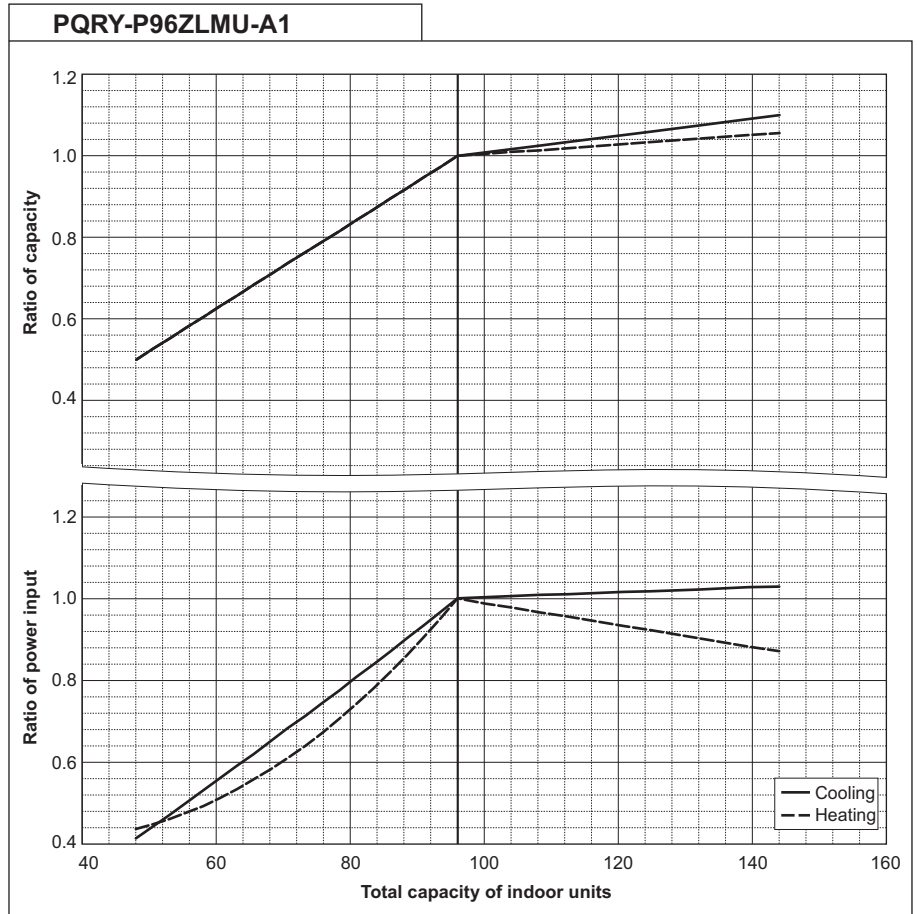
PQRY-		P72ZLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	72,000	
	kW	21.1	
Input	kW	3.61	
	BTU/h	69,000	
Rated cooling capacity	kW	20.2	
	Input	kW	3.34 3.12

PQRY-		P72ZLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	80,000	
	kW	23.4	
Input	kW	4.04	
	BTU/h	76,000	
Rated Heating capacity	kW	22.3	
	Input	kW	3.74 3.36



PQRY-		P96ZLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	96,000	
	kW	28.1	
Input	kW	5.21	
	BTU/h	92,000	
Rated cooling capacity	kW	27.0	
	Input	kW	4.82 5.19

PQRY-		P96ZLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	108,000	
	kW	31.7	
Input	kW	5.64	
	BTU/h	103,000	
Rated Heating capacity	kW	30.2	
	Input	kW	5.21 4.48

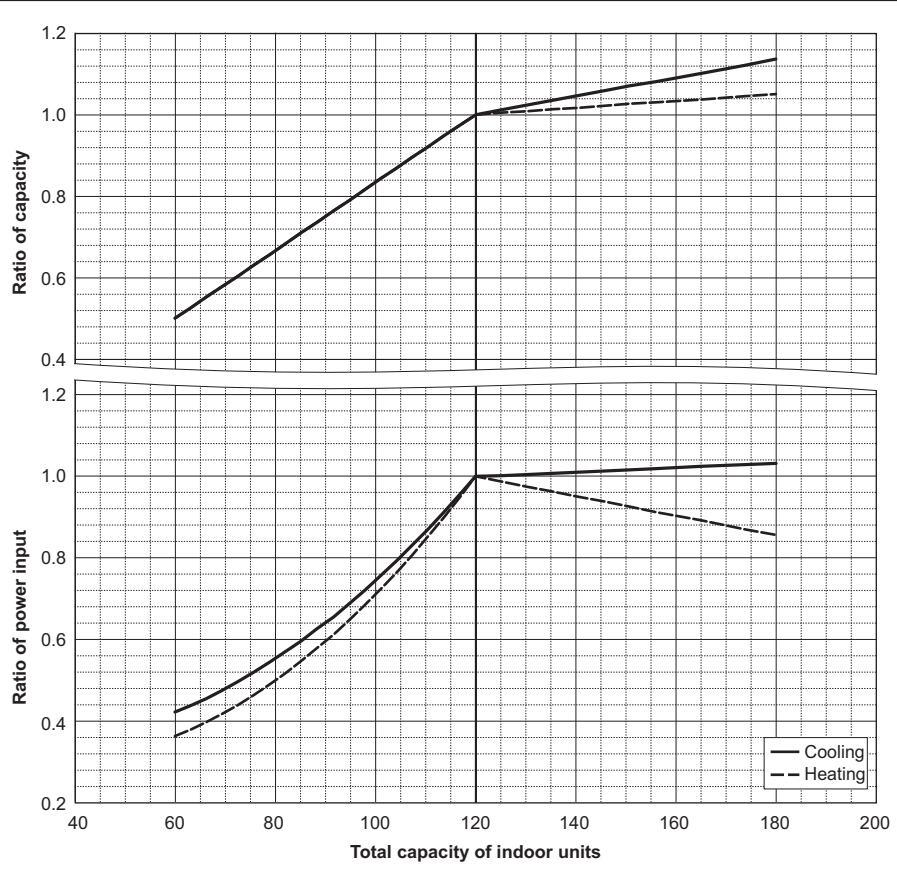


PQRY-P-Z(S)LMU-A1

PQRY-		P120ZLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	120,000	
	kW	35.2	
Input	BTU/h	7.51	
	kW	2.21	
Rated cooling capacity	BTU/h	114,000	
	kW	33.4	
Input	BTU/h	6.95	7.35
	kW	2.03	2.15

PQRY-		P120ZLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	135,000	
	kW	39.6	
Input	BTU/h	7.09	
	kW	2.06	
Rated Heating capacity	BTU/h	129,000	
	kW	37.8	
Input	BTU/h	6.55	5.92
	kW	1.90	1.73

PQRY-P120ZLMU-A1



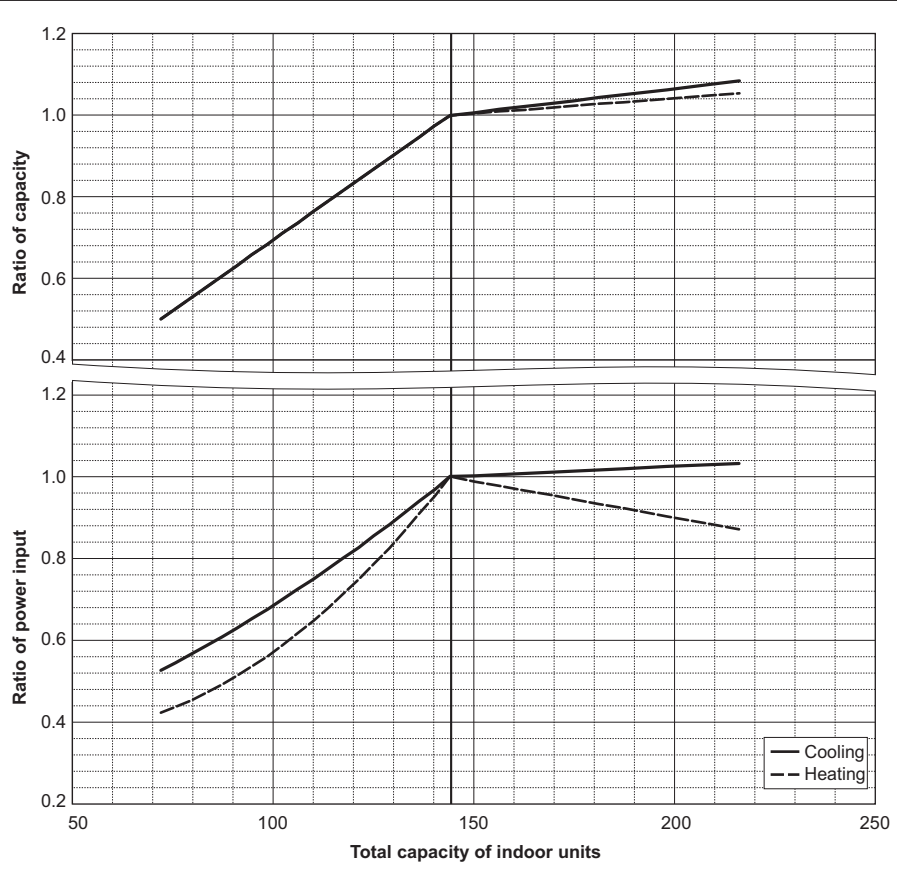
PQRY-		P144ZLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	144,000	
	kW	42.2	
Input	BTU/h	8.78	
	kW	2.55	
Rated cooling capacity	BTU/h	137,000	
	kW	40.2	
Input	BTU/h	8.07	9.98
	kW	2.37	2.90

PQRY-		P144ZLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	160,000	
	kW	46.9	
Input	BTU/h	8.11	
	kW	2.37	
Rated Heating capacity	BTU/h	152,000	
	kW	44.5	
Input	BTU/h	7.47	7.90
	kW	2.18	2.30

PQRY-		P144ZSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	144,000	
	kW	42.2	
Input	BTU/h	7.11	
	kW	2.07	
Rated cooling capacity	BTU/h	137,000	
	kW	40.2	
Input	BTU/h	6.53	7.72
	kW	1.90	2.25

PQRY-		P144ZSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	160,000	
	kW	46.9	
Input	BTU/h	7.45	
	kW	2.18	
Rated Heating capacity	BTU/h	152,000	
	kW	44.5	
Input	BTU/h	6.86	7.22
	kW	2.00	2.10

PQRY-P144Z(S)LMU-A1



PQRY-		P168ZLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	168,000	
	kW	49.2	
Input	kW	12.05	
Rated cooling capacity	BTU/h	161,000	
	kW	47.2	
Input	kW	11.10	11.88

PQRY-		P168ZLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	188,000	
	kW	55.1	
Input	kW	9.86	
Rated Heating capacity	BTU/h	179,000	
	kW	52.5	
Input	kW	9.09	9.72

PQRY-		P168ZSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	168,000	
	kW	49.2	
Input	kW	9.33	
Rated cooling capacity	BTU/h	161,000	
	kW	47.2	
Input	kW	8.58	9.22

PQRY-		P168ZSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	188,000	
	kW	55.1	
Input	kW	9.34	
Rated Heating capacity	BTU/h	179,000	
	kW	52.5	
Input	kW	8.60	8.03

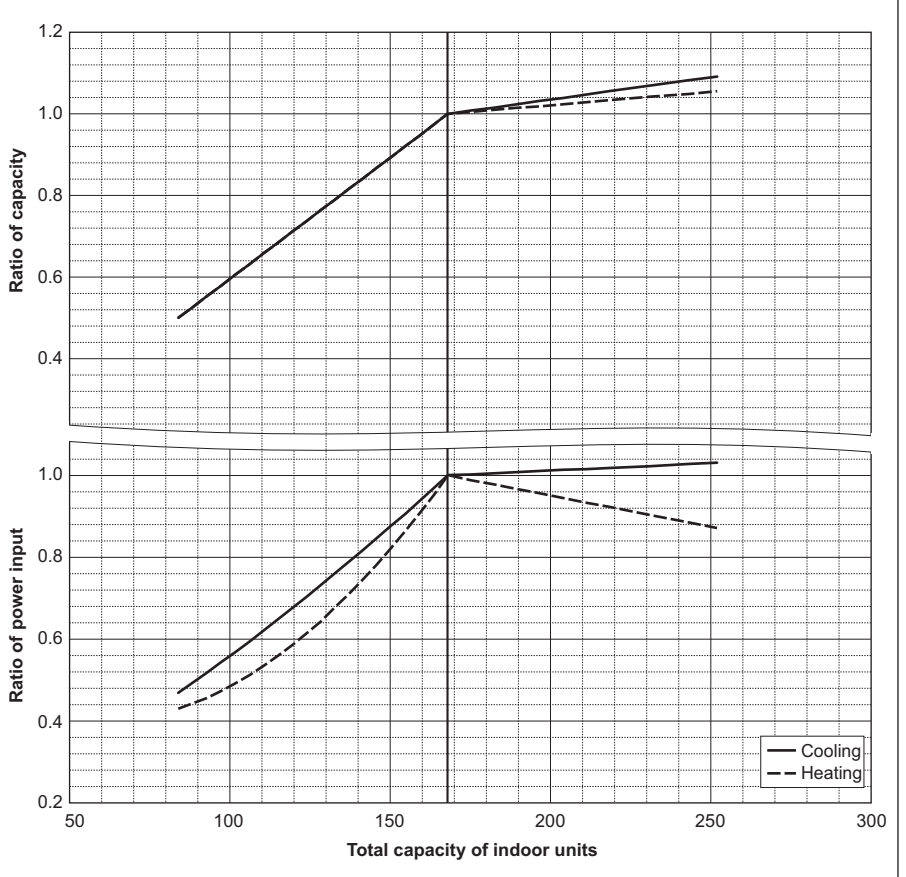
PQRY-		P192ZLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	192,000	
	kW	56.3	
Input	kW	15.05	
Rated cooling capacity	BTU/h	183,000	
	kW	53.6	
Input	kW	13.87	14.19

PQRY-		P192ZLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	215,000	
	kW	63.0	
Input	kW	11.90	
Rated Heating capacity	BTU/h	205,000	
	kW	60.1	
Input	kW	10.97	11.56

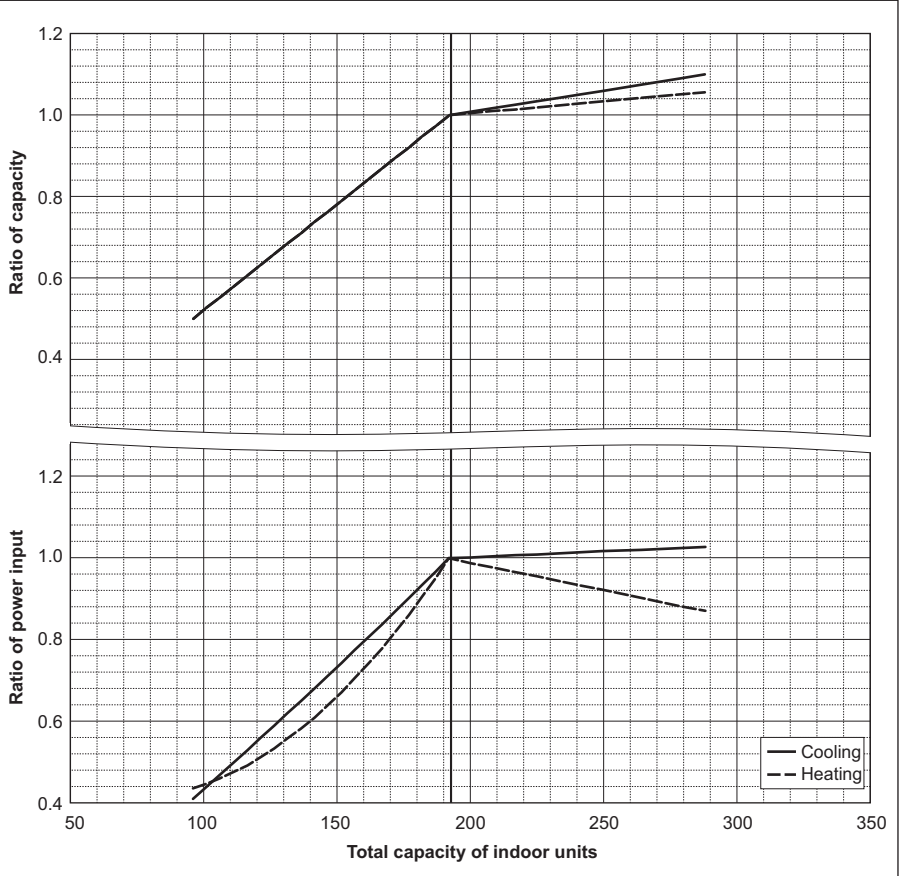
PQRY-		P192ZSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	192,000	
	kW	56.3	
Input	kW	11.30	
Rated cooling capacity	BTU/h	183,000	
	kW	53.6	
Input	kW	10.40	10.98

PQRY-		P192ZSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	215,000	
	kW	63.0	
Input	kW	11.02	
Rated Heating capacity	BTU/h	205,000	
	kW	60.1	
Input	kW	10.16	8.90

PQRY-P168Z(S)LMU-A1



PQRY-P192Z(S)LMU-A1

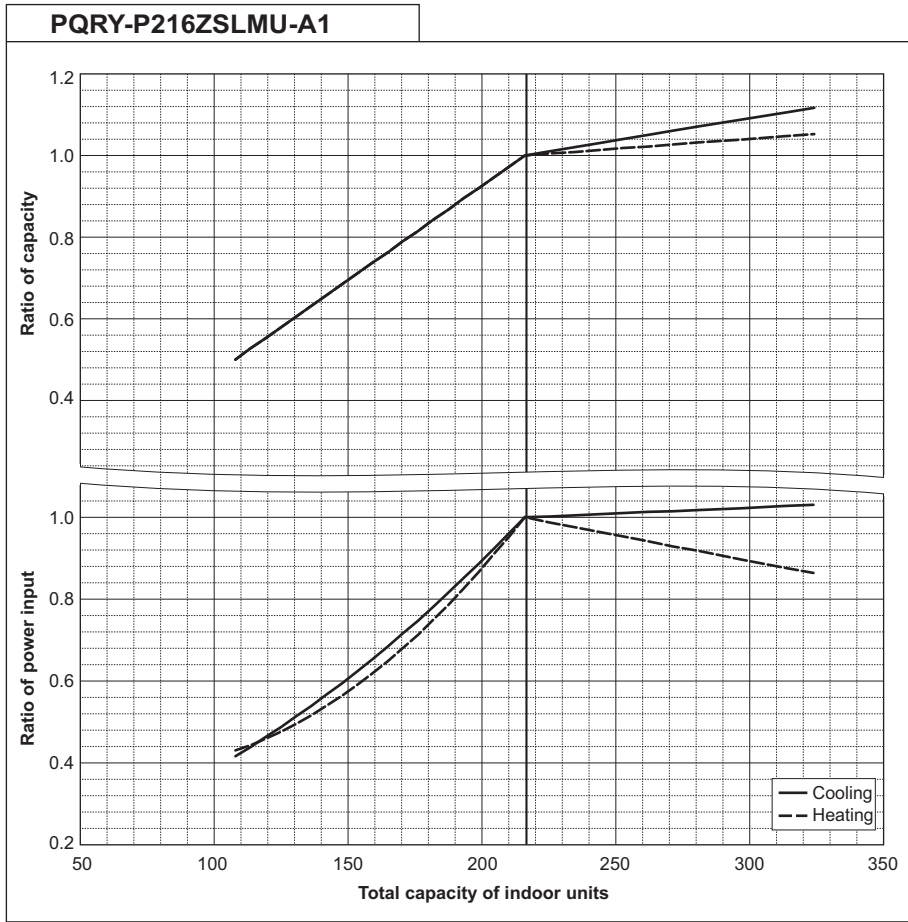


PQRY-P-Z(S)LMU-A1

PQRY-P-Z(S)LMU-A1

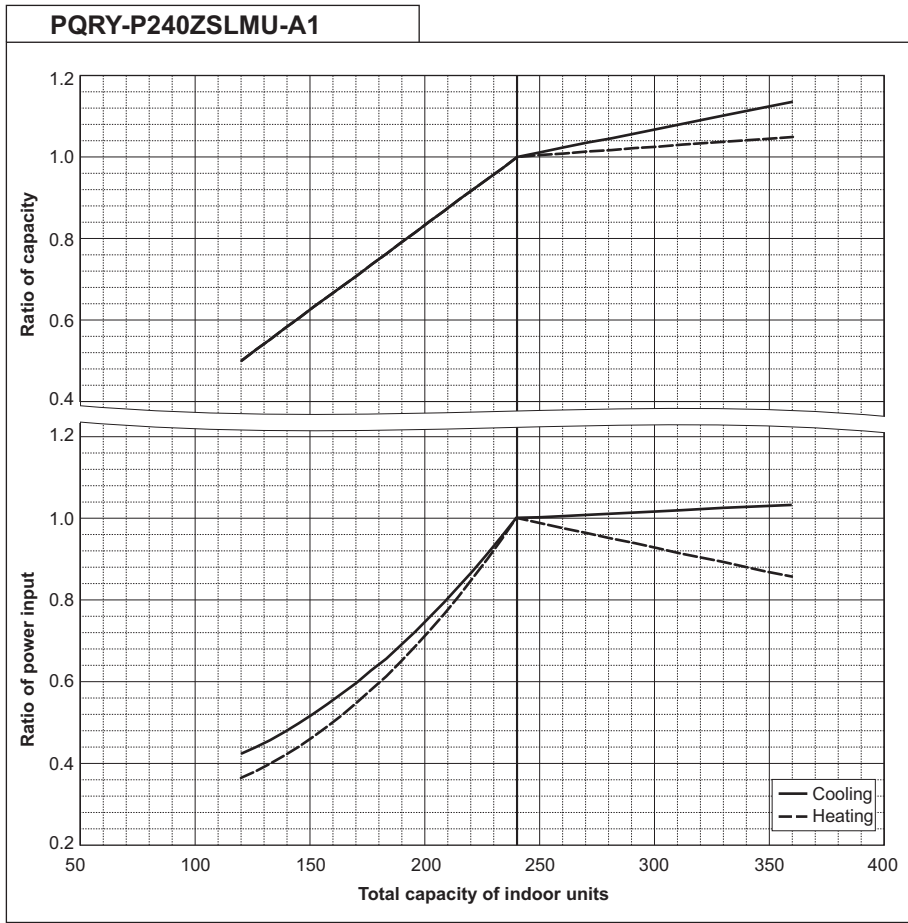
PQRY-		P216ZSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	216,000	
	kW	63.3	
Input	kW	14.03	
	BTU/h	206,000	
Rated cooling capacity	kW	60.4	
	Input	kW	12.93 13.24

PQRY-		P216ZSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	243,000	
	kW	71.2	
Input	kW	12.88	
	BTU/h	232,000	
Rated Heating capacity	kW	68.0	
	Input	kW	11.88 10.35



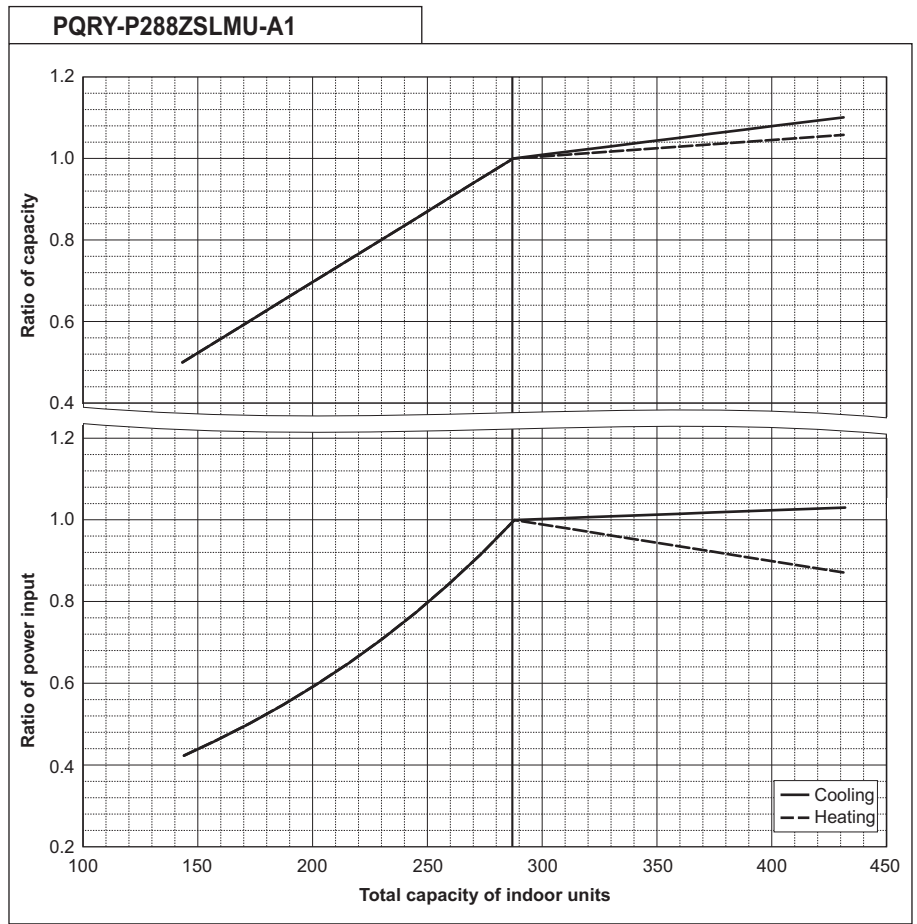
PQRY-		P240ZSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	240,000	
	kW	70.3	
Input	kW	16.89	
	BTU/h	228,000	
Rated cooling capacity	kW	66.8	
	Input	kW	15.57 16.15

PQRY-		P240ZSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	270,000	
	kW	79.1	
Input	kW	14.58	
	BTU/h	258,000	
Rated Heating capacity	kW	75.6	
	Input	kW	13.45 12.02



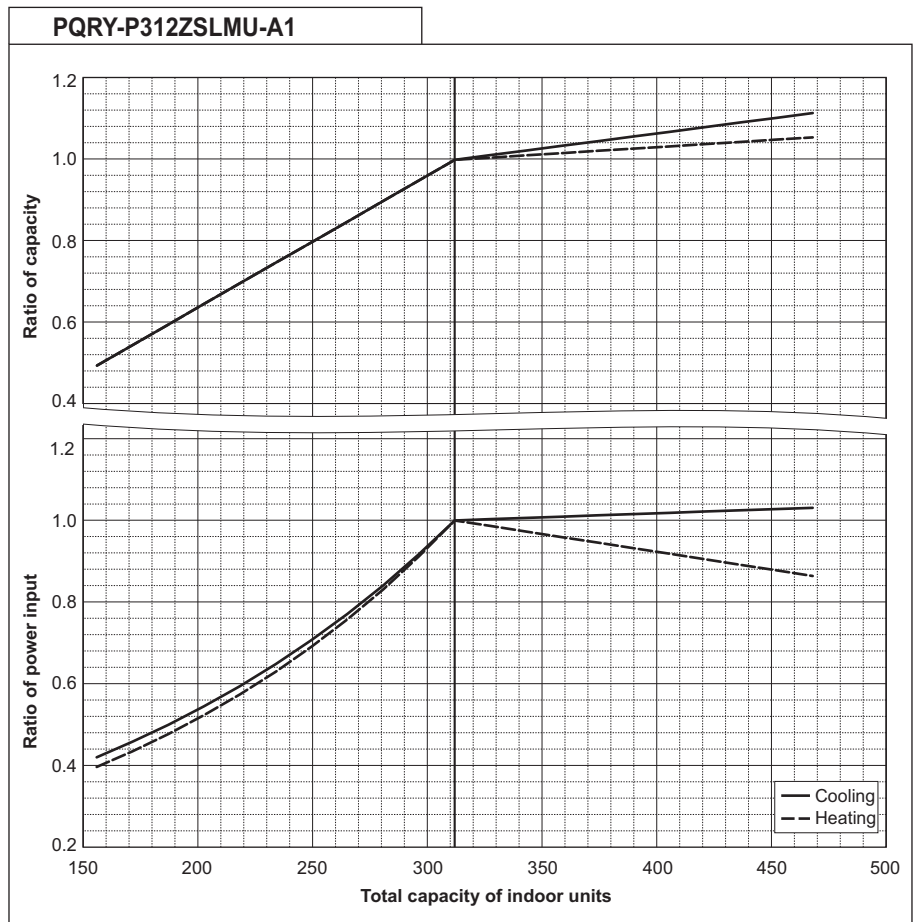
PQRY-		P288ZSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	288,000	
	kW	84.4	
Input	kW	20.42	
	BTU/h	275,000	
Rated cooling capacity	kW	80.6	
	Input kW	18.82	21.43

PQRY-		P288ZSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	323,000	
	kW	94.7	
Input	kW	17.50	
	BTU/h	308,000	
Rated Heating capacity	kW	90.3	
	Input kW	16.13	16.05



PQRY-		P312ZSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	312,000	
	kW	91.4	
Input	kW	23.41	
	BTU/h	297,000	
Rated cooling capacity	kW	87.0	
	Input kW	21.59	23.67

PQRY-		P312ZSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	350,000	
	kW	102.6	
Input	kW	19.11	
	BTU/h	334,000	
Rated Heating capacity	kW	97.9	
	Input kW	17.62	17.96

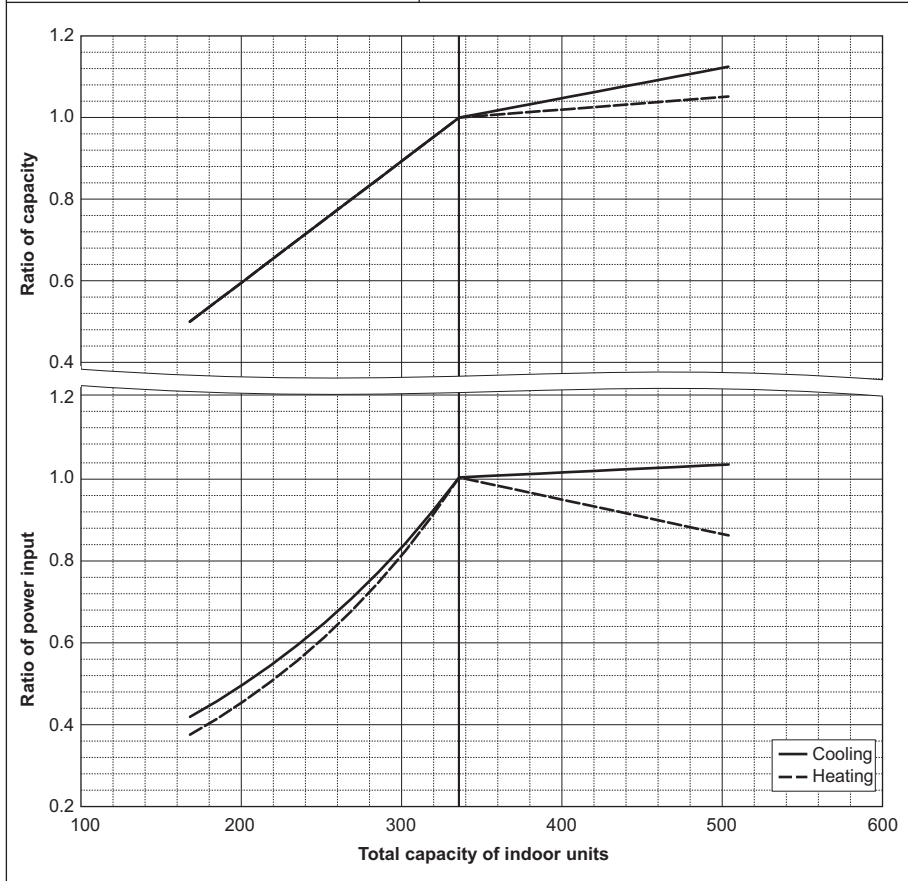


PQRY-P-Z(S)LMU-A1

PQRY-		P336ZSLMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	336,000	
	kW	98.5	
Input	kW	26.84	
	BTU/h	320,000	
Rated cooling capacity	kW	93.8	
	Input kW	24.76	25.85

PQRY-		P336ZSLMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	378,000	
	kW	110.8	
Input	kW	20.77	
	BTU/h	361,000	
Rated Heating capacity	kW	105.8	
	Input kW	19.16	20.05

PQRY-P336ZSLMU-A1

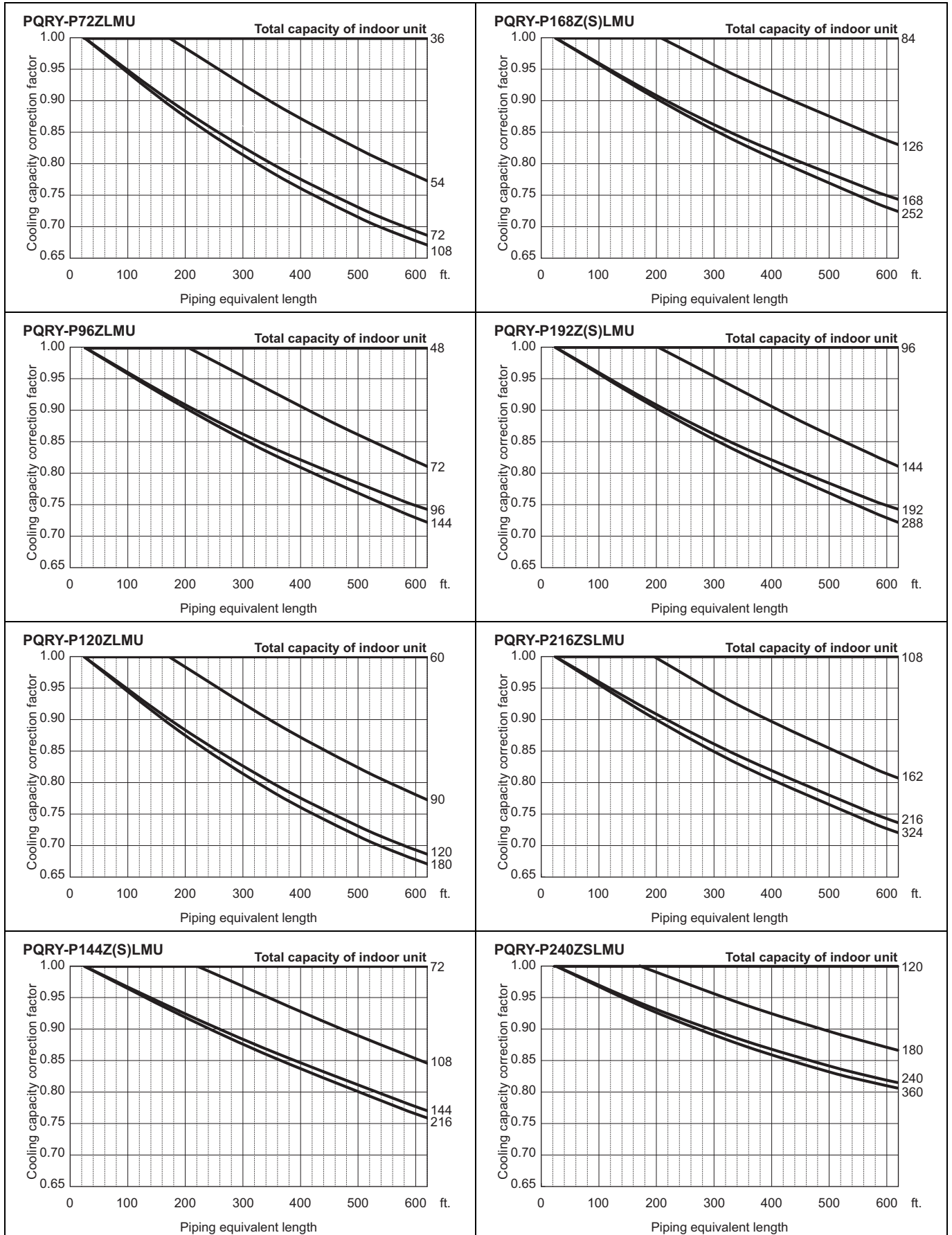


PQRY-P-Z(S)LMU-A1

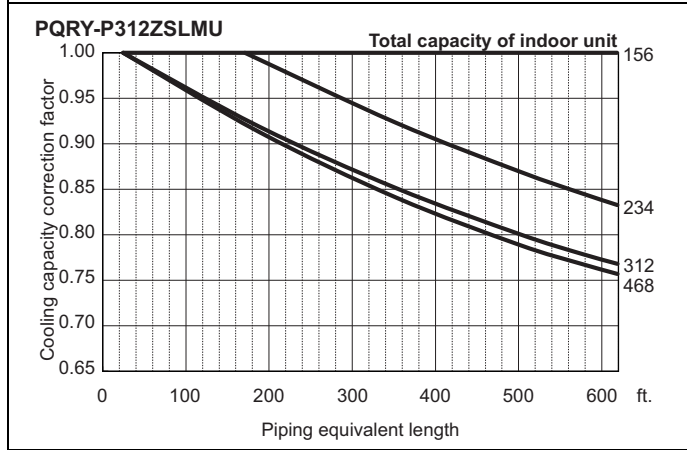
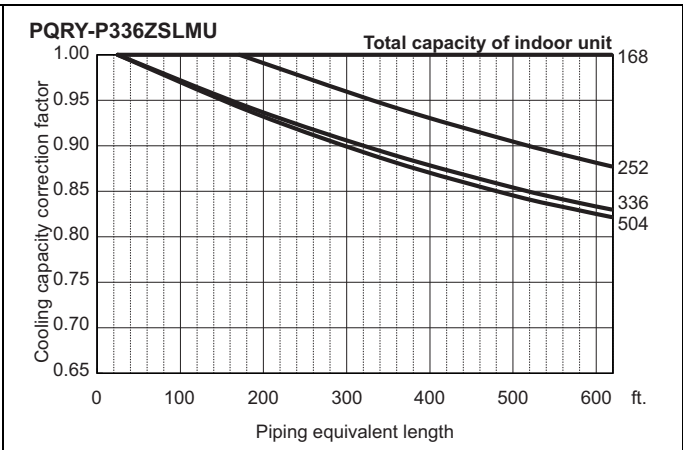
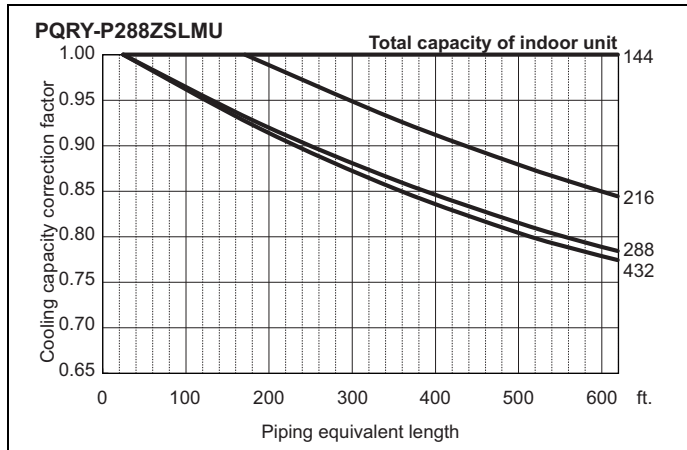
7-3. Correction by refrigerant piping length

CITY MULTI system can extend the piping flexibly within its limitation for the actual situation. However, a decrease of cooling/heating capacity could happen correspondently. Using following correction factor according to the equivalent length of the piping shown at 7-3-1 and 7-3-2, the capacity can be observed. 7-3-3 shows how to obtain the equivalent length of piping.

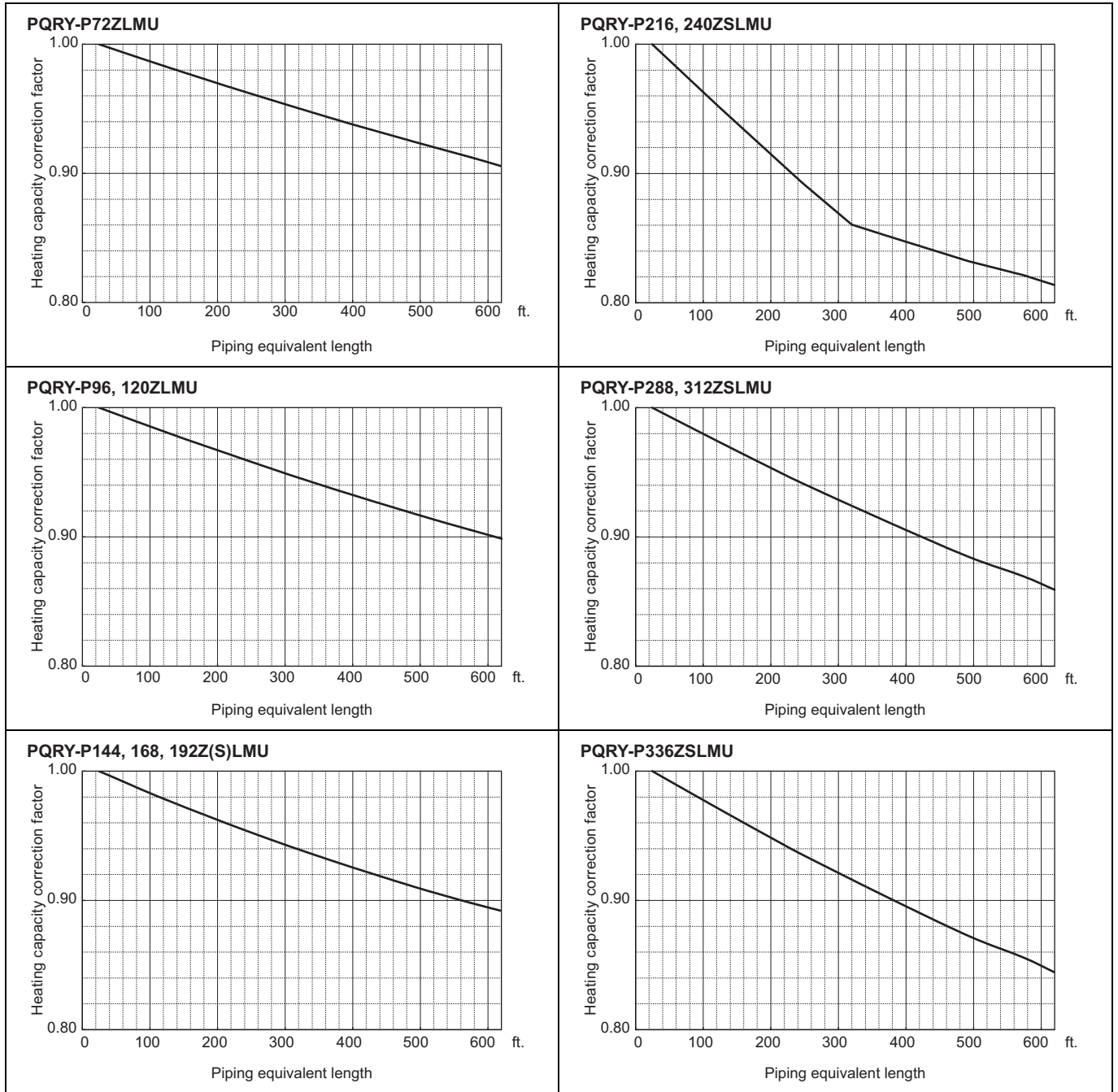
7-3-1. Cooling capacity correction



PQRY-P-Z(S)LMU-A1



7-3-2. Heating capacity correction



PQRY-P-Z(S)LMU-A1

7-3-3. How to obtain the equivalent piping length**1. PQRV-P72ZLMU**

Equivalent length = (Actual piping length to the farthest indoor unit) + (1.15 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.35 x number of bent on the piping) [m]

2. PQRV-P96ZLMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (1.38 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.42 x number of bent on the piping) [m]

3. PQRV-P120ZLMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (1.54 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.47 x number of bent on the piping) [m]

4. PQRV-P144, 168, 192, 216, 240Z(S)LMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (1.64 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.50 x number of bent on the piping) [m]

5. PQRV-P288, 312ZSLMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (2.29 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.70 x number of bent on the piping) [m]

6. PQRV-P336ZSLMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (2.70 x number of bent on the piping) [ft.]

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.80 x number of bent on the piping) [m]

CITY MULTI SYSTEM DESIGN WY-Series

1. Piping Design.....	326
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1-2.Piping Design	328
1-3.Refrigerant charging calculation	333

1. Piping Design

1-1. R410A Piping material

Refrigerant pipe for CITY MULTI shall be made of phosphorus deoxidized copper, and has two types.

A. Type-O: Soft copper pipe (annealed copper pipe), can be easily bent with human's hand.

B. Type-1/2H pipe: Hard copper pipe (Straight pipe), being stronger than Type-O pipe of the same radical thickness.

The maximum operation pressure of R410A air conditioner is 4.30 MPa [623psi]. The refrigerant piping should ensure the safety under the maximum operation pressure. MITSUBISHI ELECTRIC recommends pipe size as Table1, or You shall follow the local industrial standard. Pipes of radical thickness 0.7mm or less shall not be used.

Table 1. Copper pipe size and radial thickness for R410A CITY MULTI.

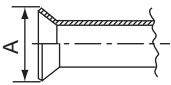
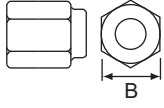
Size (mm)	Size (inch)	Radial thickness (mm)	Radial thickness (mil)	Pipe type
ø6.35	ø1/4"	0.8	[32]	Type-O
ø9.52	ø3/8"	0.8	[32]	Type-O
ø12.7	ø1/2"	0.8	[32]	Type-O
ø15.88	ø5/8"	1.0	[40]	Type-O
ø19.05	ø3/4"	1.2	[48]	Type-O
ø19.05	ø3/4"	1.0	[40]	Type-1/2H or H
ø22.2	ø7/8"	1.0	[40]	Type-1/2H or H
ø25.4	ø1"	1.0	[40]	Type-1/2H or H
ø28.58	ø1-1/8"	1.0	[40]	Type-1/2H or H
ø31.75	ø1-1/4"	1.1	[44]	Type-1/2H or H
ø34.93	ø1-3/8"	1.2	[48]	Type-1/2H or H
ø41.28	ø1-5/8"	1.4	[56]	Type-1/2H or H

* For pipe sized ø19.05 (3/4") for R410A air conditioner, choice of pipe type is up to you.

* The figures in the radial thickness column are based on the Japanese standards and provided only as a reference. Use pipes that meet the local standards.

Flare

Due to the relative higher operation pressure of R410A compared to R22, the flare connection should follow dimensions mentioned below so as to achieve enough the air-tightness.

Flare pipe	Pipe size	A (For R410A)	(mm[in.])	Flare nut	Pipe size	B (For R410A)	(mm[in.])
	ø6.35 [1/4"]	9.1			ø6.35 [1/4"]	17.0	
	ø9.52 [3/8"]	13.2			ø9.52 [3/8"]	22.0	
	ø12.70 [1/2"]	16.6			ø12.70 [1/2"]	26.0	
	ø15.88 [5/8"]	19.7			ø15.88 [5/8"]	29.0	
	ø19.05 [3/4"]	24.0			ø19.05 [3/4"]	36.0	

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1, Z(S)LMU-A1

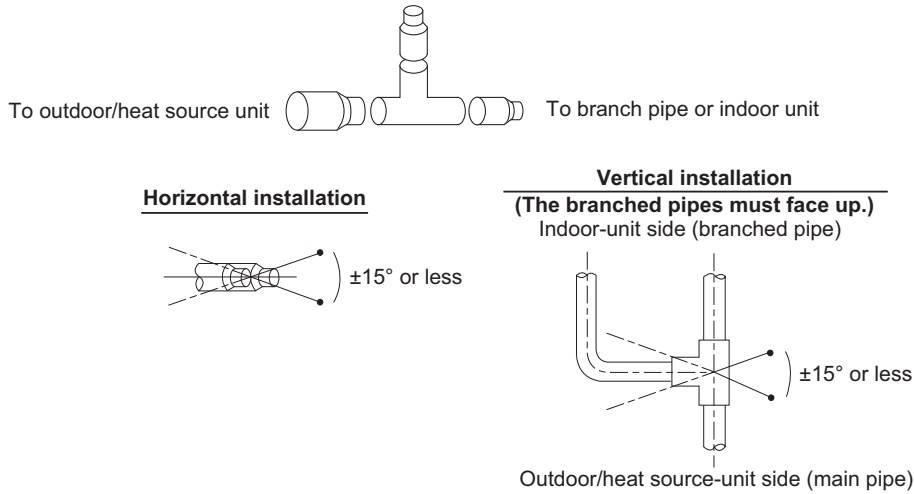
1. Piping Design

Procedures for installing the branched pipes

Refer to the instructions that came with the branched pipe kit (separately sold) for details.

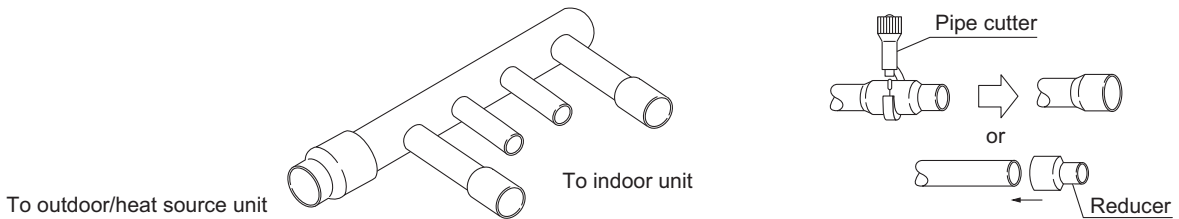
[1] Branches on the indoor-unit side

■Joint



- Restrictions for installing the joint described here only apply to CMY-Y202S-G2 and CMY-Y302S-G2 in the gas line.
- CMY-Y202S-G2 and CMY-Y302S-G2 in the gas line must be installed horizontally (see figure above) or with the branched pipes facing up.
- If the size of the refrigerant pipe that is selected by following the instructions under “Piping Design” section does not match the size of the joint, use a reducer to connect them. A reducer is included in the kit.

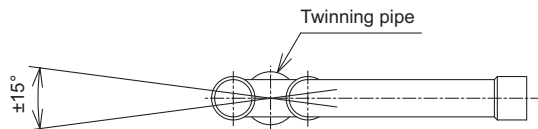
■Header



- No restrictions apply to the installation of the header.
- If the size of the refrigerant pipe that is selected by following the instructions under “Piping Design” section does not match the size of the header, cut the pipe to an appropriate size using a pipe cutter, or use a reducer to connect them.
- If the number of header branches exceeds the number of pipes to be connected, cap the unused header branches. Caps are included in the kit.

[2] Branches on the outdoor/heat source-unit side

Note. Refer to the figure below for the installation position of the twinning pipe.



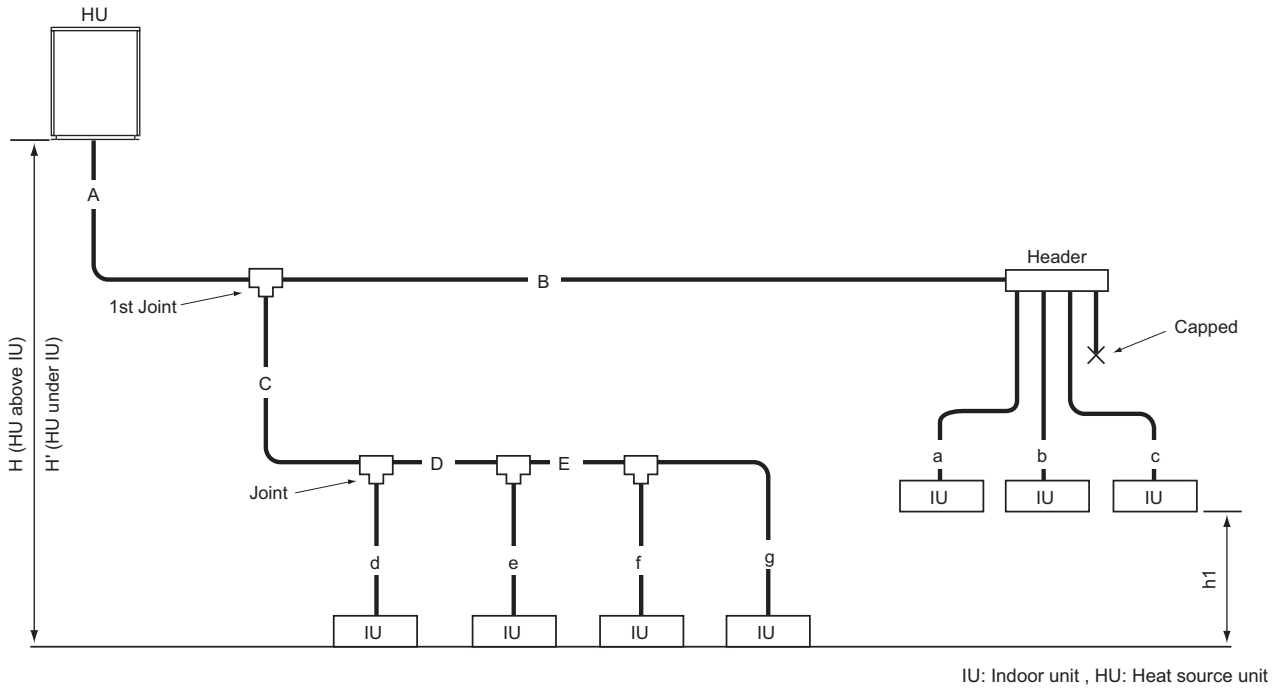
Slope of the twinning pipes are at an angle within $\pm 15^\circ$ to the horizontal plane.

- Inclination of the twinning pipes
The inclination of the twinning pipes must be $\pm 15^\circ$ or less against the horizontal plane. Excessive inclination of the twinning pipes may damage the unit.
- Minimum length of the straight section of the pipe before the twinning pipes
Always use the pipes supplied in the twinning pipe kit, and make sure the straight section of the pipe immediately before it connects to the twinning pipe is at least 500 mm (19-11/16 in.). Failure to do so may damage the unit.

1. Piping Design

1-2. Piping Design

Rule for piping size selection



1. Selecting joints

Select joints from Table 4-1 [Selection criteria for joints] based on the total capacity of indoor units on the downstream side. When selecting the first joint for the system to which the heat source unit listed in Table 4-2 [See the table below for the first joint of the heat source unit described below.] is connected, select the first joint from Table 4-2.

2. Selecting headers

Select headers from Table 5 [Header selection rule] based on the number of indoor units to be connected. Refer to Table 5, which shows the total capacity limits, for the indoor units to be connected on the downstream side. When connecting a header directly to the heat source unit, select the header by referring to the notes in Table 5. *The piping cannot be branched on the downstream of the header.

3. Selecting refrigerant pipe sizes

- (1) Between heat source unit and the 1st joint [A]
Select the appropriate size pipes for the selected heat source unit from Table 1 [Piping "A" size selection rule].
- (2) Between joints [B, C, D, and E]
Select the appropriate size pipes from Table 2 [Piping "B", "C", "D", ... size selection rule] based on the total capacity of indoor units on the downstream side.
- (3) Between joints and indoor units [a, b, c, d, e, f, and g]
Select the appropriate size pipes from Table 3 [Piping "a", "b", "c", "d", ... size selection rule] based on the capacity of indoor units.
- (4) After selecting the pipe sizes in accordance with steps (1) through (3) above, if the size of the pipes on the downstream is larger than that on the upstream, it is not necessary to be bigger than the upstream one.

4. Checking the refrigerant charge

Calculate the amount of refrigerant to be added based on the pipe sizes selected in Items 1 through 3 above, and make sure that the total amount of the initial charge and the additional charge combined will not exceed the maximum allowable refrigerant charge amount. If this amount exceeds the maximum allowable amount, redesign the system (i.e., piping length) so that the total refrigerant charge will not exceed the maximum allowable amount.

1. Piping Design

1-2-1. PQHY-P72-240TLMU/YLMU Piping

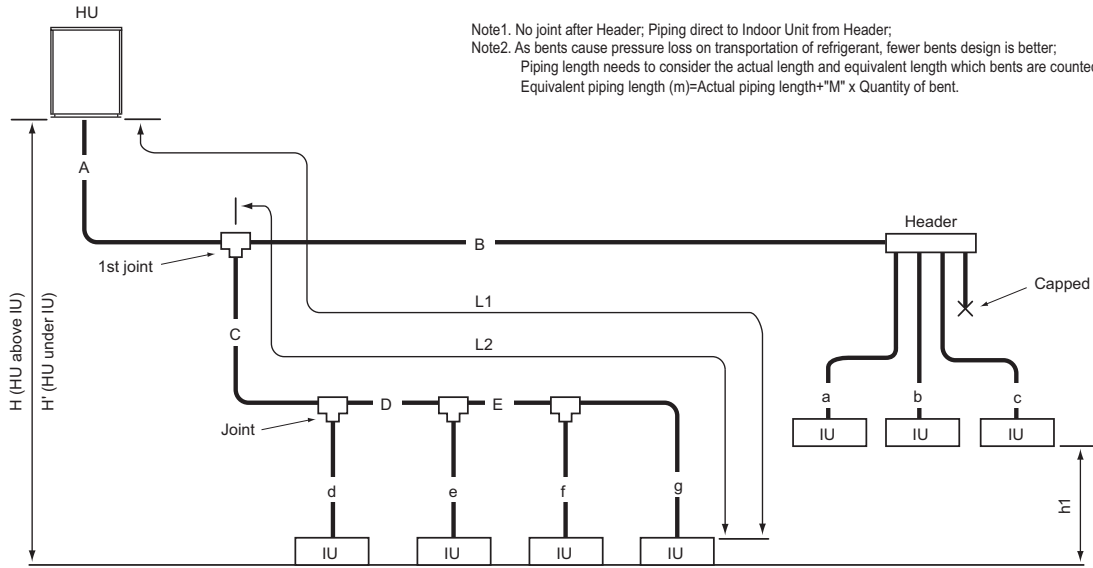


Fig. 1-2-1A Piping scheme

IU: Indoor unit, HU: Heat source unit

Note1. No joint after Header; Piping direct to Indoor Unit from Header;
 Note2. As bents cause pressure loss on transportation of refrigerant, fewer bents design is better;
 Piping length needs to consider the actual length and equivalent length which bents are counted.
 Equivalent piping length (m)=Actual piping length+"M" x Quantity of bent.

Piping length		(m [ft.])		Bent equivalent length "M"	
Item	Piping in the figure	Max. length	Max. equivalent length	Heat source Model	M (m/bent [ft./bent])
Total piping length	A+B+C+D+E+a+b+c+d+e+f+g	*1	-	PQHY-P72T/YLMU	0.35 [1.15]
Farthest IU from HU (L1)	A+C+D+E+g / A+B+c	165 [541]	190 [623]	PQHY-P96T/YLMU	0.42 [1.38]
Farthest IU from first joint (L2)	C+D+E+g / B+c	40 [131] *2	40 [131]	PQHY-P120T/YLMU	0.42 [1.38]
Height between HU and IU (HU above IU)	H	50 [164]	-	PQHY-P144T/YLMU	0.50 [1.64]
Height between HU and IU (HU under IU)	H'	40 [131]	-	PQHY-P168T/YLMU	0.50 [1.64]
Height between IU and IU	h1	15 [49]	-	PQHY-P192T/YLMU	0.50 [1.64]
				PQHY-P216T/YLMU	0.50 [1.64]
				PQHY-P240T/YLMU	0.50 [1.64]

HU: Heat source Unit, IU: Indoor Unit

*1 300 [984] for PQHY-P72-120TLMU/YLMU, 500 [1640] for PQHY-P144-240TLMU/YLMU

*2 90 m is available. When the piping length exceeds 40 m, use one size larger liquid pipe starting with the section of piping where 40 m is exceeded and all piping after that point. In the figure above, if the piping labeled "E" exceeds 40 m (but does not exceed 90 m), increase the size of the liquid piping labeled E, f, and g by one size.

Table1. Piping "A" size selection rule (mm [in.])

Heat source unit	Pipe(Liquid)	Pipe(Gas)
PQHY-P72T/YLMU	ø9.52 [3/8]	ø19.05 [3/4]
PQHY-P96T/YLMU	ø9.52 [3/8] *1	ø22.20 [7/8]
PQHY-P120T/YLMU	ø9.52 [3/8] *2	ø22.20 [7/8]
PQHY-P144T/YLMU	ø12.70 [1/2]	ø28.58 [1-1/8]
PQHY-P168-240T/YLMU	ø15.88 [5/8]	ø28.58 [1-1/8]

*1 L1>=90 m [295 ft.], ø12.70 mm [1/2 in.]

*2 L1>=40 m [131 ft.], ø12.70 mm [1/2 in.]

Table4-1. Selection criteria for joints

Total down-stream Indoor capacity	Joint
~ P72	CMY-Y102SS-G2
P73 ~ P144	CMY-Y102LS-G2
P145 ~ P240	CMY-Y202S-G2
P241 ~	CMY-Y302S-G2

*Concerning detailed usage of joint parts, refer to its Installation Manual.

Table4-2. See the table below for the first joint of the heat source unit described below.

heat source unit model	Joint model
P96 to P120	CMY-Y102LS-G2
P144 to P240	CMY-Y202S-G2

Table2. Piping "B", "C", "D", "E" size selection rule (mm [in.])

Total down-stream Indoor capacity	Pipe(Liquid)	Pipe(Gas)
~ P54	ø9.52 [3/8]	ø15.88 [5/8]
P55 ~ P72	ø9.52 [3/8]	ø19.05 [3/4]
P73 ~ P108	ø9.52 [3/8]	ø22.20 [7/8]
P109 ~ P144	ø12.70 [1/2]	ø28.58 [1-1/8]
P145 ~ P240	ø15.88 [5/8]	ø28.58 [1-1/8]
P241 ~ P308	ø19.05 [3/4]	ø34.93 [1-3/8]
P309 ~	ø19.05 [3/4]	ø41.28 [1-5/8]

Table5. Header selection rule

	4-branch Header	8-branch Header	10-branch Header
	CMY-Y104C-G	CMY-Y108C-G	CMY-Y1010C-G
total down-stream Indoor capacity	<=P72	<=P144	<=P240

* CMY-Y104C-G can directly connect PQHY-P72T/YLMU, but can NOT directly connect PQHY-P96T/YLMU or above;

* CMY-Y108C-G can directly connect PQHY-P72-144T/Y(S)LMU, but can NOT directly connect PQHY-P168T/Y(S)LMU or above;

* CMY-Y1010C-G can directly connect PQHY-P72-240T/Y(S)LMU;

* CMY-Y104C-G can NOT connect P72~P96 Indoor, but CMY-Y108,Y1010C-G can do;

* Concerning detailed usage of Header parts, refer to its Installation Manual.

Table3. Piping "a", "b", "c", "d", "e", "f", "g" size selection rule (mm [in.])

Indoor Unit size	Pipe(Liquid)	Pipe(Gas)
P04,P05,P06,P08,P12,P15,P18	ø6.35 [1/4]	ø12.70 [1/2]
P24,P27,P30,P36,P48,P54	ø9.52 [3/8]	ø15.88 [5/8]
P72	ø9.52 [3/8]	ø19.05 [3/4]
P96	ø9.52 [3/8]	ø22.20 [7/8]

Note3. Indoor capacity is described as its model size;

For example, PEFY-P06NMAU-E3, its capacity is P06;

Note4. Total down-stream Indoor capacity is the summary of the model size of Indoors downstream.

For example, PEFY-P06NMAU-E3+PEFY-P08NMAU-E3: Total Indoor capacity=P06+P08=P14

Note5. Piping sized determined by the Total down-stream indoor capacity is NOT necessary to be bigger than the up-stream one.

i.e. A>=B; A>=C>=D

1. Piping Design

1-2-2. PQHY-P144-360TSLMU/YSLMU Piping

Note1. No joint after Header; Piping direct to Indoor Unit from Header;
 Note2. As bends cause pressure loss on transportation of refrigerant, fewer bends design is better;
 Piping length needs to consider the actual length and equivalent length which bends are counted.
 Equivalent piping length (m)=Actual piping length+"M" x Quantity of bent.

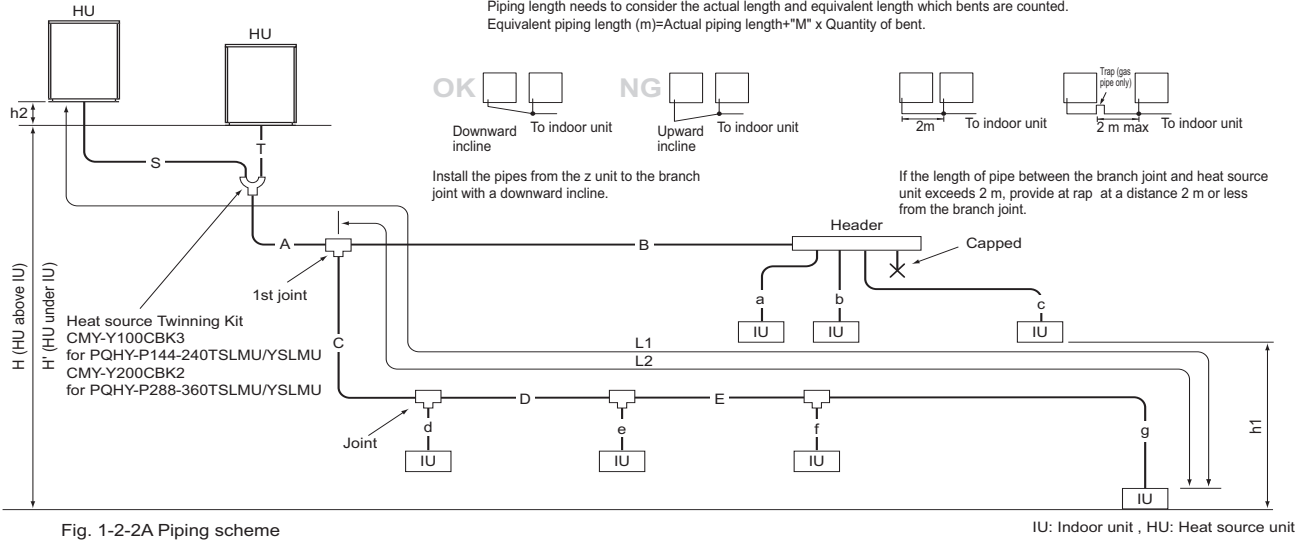


Fig. 1-2-2A Piping scheme

IU: Indoor unit, HU: Heat source unit

Piping length

Item	Piping in the figure	Max. length	Max. equivalent length
Total piping length	S+T+A+B+C+D+E+a+b+c+d+e+f+g	500 [1640]	-
Distance between HU and HU	S+T	10[32]	-
Height between HU and HU	h2	0.1[0.3]	-
Farthest IU from HU (L1)	S(T)+A+C+D+E+g / S(T)+A+B+c	165 [541]	190 [623]
Farthest IU from the first joint (L2)	C+D+E+g / B+c	40 [131] *1	40 [131]
Height between HU and IU (HU above IU)	H	50 [164]	-
Height between HU and IU (HU under IU)	H'	40 [131]	-
Height between IU and IU	h1	15 [49]	-

HU: Heat source Unit, IU: Indoor Unit

*1 90 m is available. When the piping length exceeds 40 m, use one size larger liquid pipe starting with the section of piping where 40 m is exceeded and all piping after that point.

In the figure above, if the piping labeled "E" exceeds 40 m (but does not exceed 90 m), increase the size of the liquid piping labeled E, f, and g by one size.

Bends equivalent length "M"

Heat source Model	M (m/bent [ft./bent])
PQHY-P144T/YSLMU	0.50 [1.64]
PQHY-P168T/YSLMU	0.50 [1.64]
PQHY-P192T/YSLMU	0.50 [1.64]
PQHY-P216T/YSLMU	0.50 [1.64]
PQHY-P240T/YSLMU	0.50 [1.64]
PQHY-P288T/YSLMU	0.70 [2.29]
PQHY-P312T/YSLMU	0.70 [2.29]
PQHY-P336T/YSLMU	0.80 [2.62]
PQHY-P360T/YSLMU	0.80 [2.62]

Table1. Piping "A" size selection rule

Heat source unit	Pipe(Liquid)	Pipe(Gas)
PQHY-P144T/YSLMU	ø12.70 [1/2]	ø28.58 [1-1/8]
PQHY-P168-240T/YSLMU	ø15.88 [5/8]	ø28.58 [1-1/8]
PQHY-P288-312T/YSLMU	ø19.05 [3/4]	ø34.93 [1-3/8]
PQHY-P336-360T/YSLMU	ø19.05 [3/4]	ø41.28 [1-5/8]

For Piping size "S", "T", please refer to specification of the Twinning kit CMY-Y100CBK3, CMY-Y200CBK2 at the Heat source unit's external drawing.

Table4-1. Selection criteria for joints

Total down-stream Indoor capacity	Joint
~ P72	CMY-Y102SS-G2
P73 ~ P144	CMY-Y102LS-G2
P145 ~ P240	CMY-Y202S-G2
P241 ~	CMY-Y302S-G2

*Concerning detailed usage of joint parts, refer to its Installation Manual.

*The total capacity of the units in the downstream of the branch joint on at least one of the piping lines that are connected to the branch joint should be 240 or below.
 If the total capacity of the units in the downstream of the branch joints on both lines is 240 or above use two branch joints (CMY-Y302S-G2).

Table4-2. See the table below for the first joint of the heat source unit described below.

heat source unit model	Joint model
P144 to P240	CMY-Y202S-G2
P288 to P360	CMY-Y302S-G2

Table2. Piping "B", "C", "D", "E" size selection rule

Total down-stream Indoor capacity	Pipe(Liquid)	Pipe(Gas)
~ P54	ø9.52 [3/8]	ø15.88 [5/8]
P55 ~ P72	ø9.52 [3/8]	ø19.05 [3/4]
P73 ~ P108	ø9.52 [3/8]	ø22.20 [7/8]
P109 ~ P144	ø12.70 [1/2]	ø28.58 [1-1/8]
P145 ~ P240	ø15.88 [5/8]	ø28.58 [1-1/8]
P241 ~ P308	ø19.05 [3/4]	ø34.93 [1-3/8]
P309 ~	ø19.05 [3/4]	ø41.28 [1-5/8]

Table3. Piping "a", "b", "c", "d", "e", "f", "g" size selection rule

Indoor Unit size	Pipe(Liquid)	Pipe(Gas)
P04,P05,P06,P08,P12,P15,P18	ø6.35 [1/4]	ø12.70 [1/2]
P24,P27,P30,P36,P48,P54	ø9.52 [3/8]	ø15.88 [5/8]
P72	ø9.52 [3/8]	ø19.05 [3/4]
P96	ø9.52 [3/8]	ø22.20 [7/8]

Table5. Header selection rule

Total down-stream Indoor capacity	4-branch Header	8-branch Header	10-branch Header
	CMY-Y104C-G	CMY-Y108C-G	CMY-Y1010C-G
<=P72	<=P144	<=P240	

* CMY-Y104C-G can directly connect PQHY-P72T/YLMU, but can NOT directly connect PQHY-P96T/YLMU or above;
 * CMY-Y108C-G can directly connect PQHY-P72-144T(Y)(S)LMU, but can NOT directly connect PQHY-P168T(Y)(S)LMU or above;
 * CMY-Y1010C-G can directly connect PQHY-P72-240T(Y)(S)LMU;
 * CMY-Y104C-G can NOT connect P72-P96 Indoor, but CMY-Y108,Y1010C-G can do;
 * Concerning detailed usage of Header parts, refer to its Installation Manual.

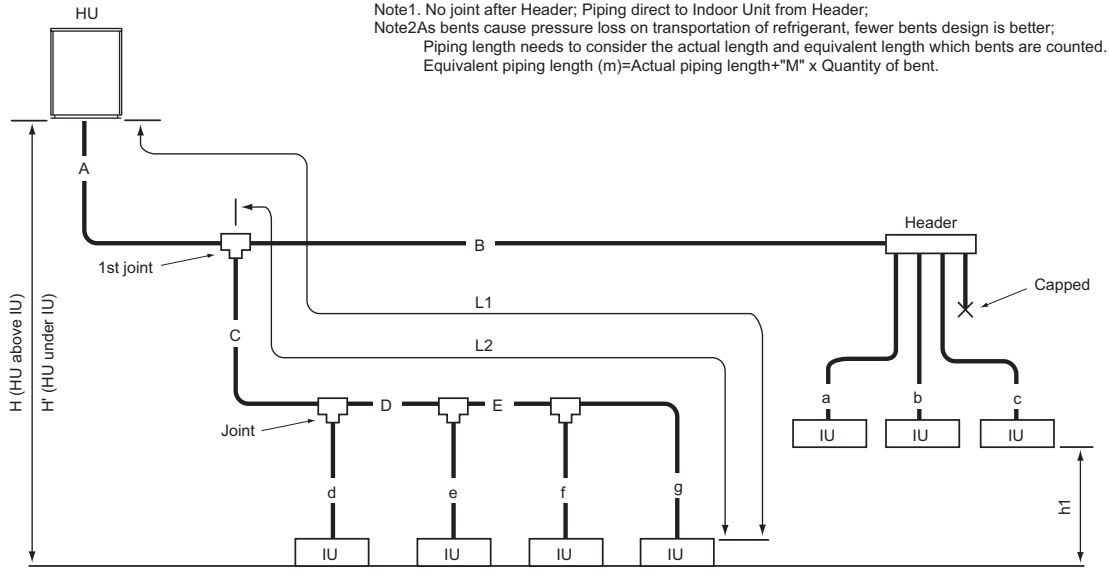
Note3. Indoor capacity is described as its model size;
 For example, PEFY-P06NMAU-E3, its capacity is P06;

Note4. Total down-stream Indoor capacity is the summary of the model size of Indoors downstream.
 For example, PEFY-P06NMAU-E3+PEFY-P08NMAU-E3: Total Indoor capacity=P06+P08=P14

Note5. Piping sized determined by the Total down-stream indoor capacity is NOT necessary to be bigger than the up-stream one.
 i.e. A>=B, A>=C>=D

1. Piping Design

1-2-3. PQHY-P72-192ZLMU Piping



Note1. No joint after Header; Piping direct to Indoor Unit from Header;
 Note2As bents cause pressure loss on transportation of refrigerant, fewer bents design is better;
 Piping length needs to consider the actual length and equivalent length which bents are counted.
 Equivalent piping length (m)=Actual piping length+"M" x Quantity of bent.

Fig. 1-2-3A Piping scheme

IU: Indoor unit, HU: Heat source unit

Piping length		(m [ft.])		Bent equivalent length "M"	
Item	Piping in the figure	Max. length	Max. equivalent length	Heat source Model	M (m/bends [ft./bends])
Total piping length	A+B+C+D+E+a+b+c+d+e+f+g	*1	-	PQHY-P72ZLMU	0.35 [1.15]
Farthest IU from HU (L1)	A+C+D+E+g / A+B+c	165 [541]	190 [623]	PQHY-P96ZLMU	0.42 [1.38]
Farthest IU from first joint (L2)	C+D+E+g / B+c	40 [131] *2	40 [131]	PQHY-P120ZLMU	0.42 [1.38]
Height between HU and IU (HU above IU)	H	50 [164]	-	PQHY-P144ZLMU	0.50 [1.64]
Height between HU and IU (HU under IU)	H'	40 [131]	-	PQHY-P168ZLMU	0.50 [1.64]
Height between IU and IU	h1	15 [49]	-	PQHY-P192ZLMU	0.50 [1.64]

HU: Heat source Unit, IU: Indoor Unit

*1 300 [984] for PQHY-P72-120ZLMU, 500 [1640] for PQHY-P144-192ZLMU

*2 90 m [295 ft.] is available. When the piping length exceeds 40 m [131 ft.], use one size larger liquid pipe starting with the section of piping where 40 m [131 ft.] is exceeded and all piping after that point. In the figure above, if the piping labeled "E" exceeds 40 m [131 ft.] (but does not exceed 90 m [295 ft.]), increase the size of the liquid piping labeled E, f, and g by one size.

Table1. Piping "A" size selection rule (mm [in.])

Heat source unit	Pipe(Liquid)	Pipe(Gas)
PQHY-P72ZLMU	ø9.52 [3/8]	ø19.05 [3/4]
PQHY-P96ZLMU	ø9.52 [3/8] *1	ø22.20 [7/8]
PQHY-P120ZLMU	ø9.52 [3/8] *2	ø22.20 [7/8]
PQHY-P144ZLMU	ø12.70 [1/2]	ø28.58 [1-1/8]
PQHY-P168-192ZLMU	ø15.88 [5/8]	ø28.58 [1-1/8]

*1 L1>=90 m [295 ft.], ø12.70 mm [1/2 in.]

*2 L1>=40 m [131 ft.], ø12.70 mm [1/2 in.]

Table4-1. Selection criteria for joints

Total down-stream Indoor capacity	Joint
~ P72	CMY-Y102SS-G2
P73 ~ P144	CMY-Y102LS-G2
P145 ~ P240	CMY-Y202S-G2
P241 ~	CMY-Y302S-G2

*Concerning detailed usage of joint parts, refer to its Installation Manual.

Table4-2. See the table below for the first joint of the heat source unit described below.

heat source unit model	Joint model
P96 to P120	CMY-Y102LS-G2
P144 to P192	CMY-Y202S-G2

Table2. Piping "B", "C", "D", "E" size selection rule (mm [in.])

Total down-stream Indoor capacity	Pipe(Liquid)	Pipe(Gas)
~ P54	ø9.52 [3/8]	ø15.88 [5/8]
P55 ~ P72	ø9.52 [3/8]	ø19.05 [3/4]
P73 ~ P108	ø9.52 [3/8]	ø22.20 [7/8]
P109 ~ P144	ø12.70 [1/2]	ø28.58 [1-1/8]
P145 ~ P240	ø15.88 [5/8]	ø28.58 [1-1/8]
P241 ~ P308	ø19.05 [3/4]	ø34.93 [1-3/8]
P309 ~	ø19.05 [3/4]	ø41.28 [1-5/8]

Table5. Header selection rule

	4-branch Header	8-branch Header	10-branch Header
	CMY-Y104C-G	CMY-Y108C-G	CMY-Y1010C-G
total down-stream Indoor capacity	<=P72	<=P144	<=P240

* CMY-Y104C-G can directly connect PQHY-P72ZLMU, but can NOT directly connect PQHY-P96ZLMU or above;

* CMY-Y108C-G can directly connect PQHY-P72-144Z(S)LMU, but can NOT directly connect PQHY-P168Z(S)LMU or above;

* CMY-Y1010C-G can directly connect PQHY-P72-240Z(S)LMU;

* CMY-Y104C-G can NOT connect P72~P96 Indoor, but CMY-Y108, Y1010C-G can do;

* Concerning detailed usage of Header parts, refer to its Installation Manual.

Table3. Piping "a", "b", "c", "d", "e", "f", "g" size selection rule (mm [in.])

Indoor Unit size	Pipe(Liquid)	Pipe(Gas)
P04, P05, P06, P08, P12, P15, P18	ø6.35 [1/4]	ø12.70 [1/2]
P24, P27, P30, P36, P48, P54	ø9.52 [3/8]	ø15.88 [5/8]
P72	ø9.52 [3/8]	ø19.05 [3/4]
P96	ø9.52 [3/8]	ø22.20 [7/8]

Note3. Indoor capacity is described as its model size;

For example, PEFY-P06NMAU-E3, its capacity is P06;

Note4. Total down-stream Indoor capacity is the summary of the model size of Indoors downstream.

For example, PEFY-P06NMAU-E3+PEFY-P08NMAU-E3: Total Indoor capacity=P06+P08=P14

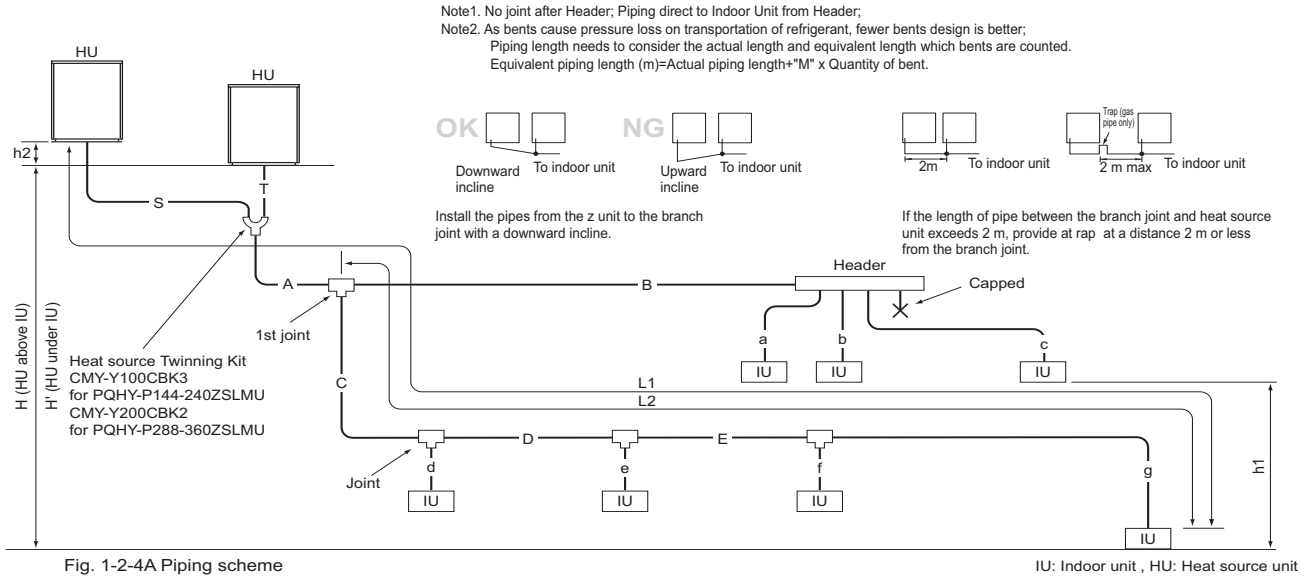
Note5. Piping sized determined by the Total down-stream indoor capacity is NOT necessary

to be bigger than the up-stream one.
 i.e. A>=B; A>C>=D

1. Piping Design

1-2-4. PQHY-P144-360ZSLMU Piping

PQHY-P-T(S)LMU-A1, Y(S)LMU-A1, Z(S)LMU-A1



Piping length

Item	Piping in the figure	Max. length	Max. equivalent length
Total piping length	S+T+A+B+C+D+E+a+b+c+d+e+f+g	500 [1640]	-
Distance between HU and HU	S+T	10[32]	-
Height between HU and HU	h2	0.1[0.3]	-
Farthest IU from HU (L1)	S(T)+A+C+D+E+g / S(T)+A+B+c	165 [541]	190 [623]
Farthest IU from the first joint (L2)	C+D+E+g / B+c	40 [131] *1	40 [131]
Height between HU and IU (HU above IU)	H	50 [164]	-
Height between HU and IU (HU under IU)	H'	40 [131]	-
Height between IU and IU	h1	15 [49]	-

Bends equivalent length "M"

Heat source Model	M (m/bends [ft./bends])
PQHY-P144ZSLMU	0.50 [1.64]
PQHY-P168ZSLMU	0.50 [1.64]
PQHY-P192ZSLMU	0.50 [1.64]
PQHY-P216ZSLMU	0.50 [1.64]
PQHY-P240ZSLMU	0.50 [1.64]
PQHY-P288ZSLMU	0.70 [2.29]
PQHY-P312ZSLMU	0.70 [2.29]
PQHY-P336ZSLMU	0.80 [2.62]
PQHY-P360ZSLMU	0.80 [2.62]

HU: Heat source Unit, IU: Indoor Unit

*1 90 m [295 ft.] is available. When the piping length exceeds 40 m [131 ft.], use one size larger liquid pipe starting with the section of piping where 40 m [131 ft.] is exceeded and all piping after that point. In the figure above, if the piping labeled "E" exceeds 40 m [131 ft.] (but does not exceed 90 m [295 ft.]), increase the size of the liquid piping labeled E, f, and g by one size.

Table1. Piping "A" size selection rule

Heat source unit	(mm [in.])	
	Pipe(Liquid)	Pipe(Gas)
PQHY-P144ZSLMU	ø12.70 [1/2]	ø28.58 [1-1/8]
PQHY-P168-240ZSLMU	ø15.88 [5/8]	ø28.58 [1-1/8]
PQHY-P288-312ZSLMU	ø19.05 [3/4]	ø34.93 [1-3/8]
PQHY-P336-360ZSLMU	ø19.05 [3/4]	ø41.28 [1-5/8]

For Piping size "S", "T", please refer to specification of the Twinning kit CMY-Y100CBK3, CMY-Y200CBK2 at the Heat source unit's external drawing.

Table2. Piping "B", "C", "D", "E" size selection rule

Total down-stream Indoor capacity	(mm [in.])	
	Pipe(Liquid)	Pipe(Gas)
~ P54	ø9.52 [3/8]	ø15.88 [5/8]
P55 ~ P72	ø9.52 [3/8]	ø19.05 [3/4]
P73 ~ P108	ø9.52 [3/8]	ø22.20 [7/8]
P109 ~ P144	ø12.70 [1/2]	ø28.58 [1-1/8]
P145 ~ P240	ø15.88 [5/8]	ø28.58 [1-1/8]
P241 ~ P308	ø19.05 [3/4]	ø34.93 [1-3/8]
P309 ~	ø19.05 [3/4]	ø41.28 [1-5/8]

Table3. Piping "a", "b", "c", "d", "e", "f", "g" size selection rule

Indoor Unit size	(mm [in.])	
	Pipe(Liquid)	Pipe(Gas)
P04, P05, P06, P08, P12, P15, P18	ø6.35 [1/4]	ø12.70 [1/2]
P24, P27, P30, P36, P48, P54	ø9.52 [3/8]	ø15.88 [5/8]
P72	ø9.52 [3/8]	ø19.05 [3/4]
P96	ø9.52 [3/8]	ø22.20 [7/8]

Table4-1. Selection criteria for joints

Total down-stream Indoor capacity	Joint
~ P72	CMY-Y102S-G2
P73 ~ P144	CMY-Y102LS-G2
P145 ~ P240	CMY-Y202S-G2
P241 ~	CMY-Y302S-G2

* Concerning detailed usage of joint parts, refer to its Installation Manual.

* The total capacity of the units in the downstream of the branch joint on at least one of the piping lines that are connected to the branch joint should be 240 or below.
 If the total capacity of the units in the downstream of the branch joints on both lines is 240 or above use two branch joints (CMY-Y302S-G2).

Table4-2. See the table below for the first joint of the heat source unit described below.

heat source unit model	Joint model
P144 to P240	CMY-Y202S-G2
P288 to P360	CMY-Y302S-G2

Table5. Header selection rule

Total down-stream Indoor capacity	4-branch Header	8-branch Header	10-branch Header
	CMY-Y104C-G	CMY-Y108C-G	CMY-Y1010C-G
<=P72	<=P144	<=P240	

* CMY-Y104C-G can directly connect PQHY-P72ZSLMU, but can NOT directly connect PQHY-P96ZSLMU or above;

* CMY-Y108C-G can directly connect PQHY-P72-144Z(S)LMU, but can NOT directly connect PQHY-P168Z(S)LMU or above;

* CMY-Y1010C-G can directly connect PQHY-P72-240Z(S)LMU;

* CMY-Y104C-G can NOT connect P72-P96 Indoor, but CMY-Y108, Y1010C-G can do;

* Concerning detailed usage of Header parts, refer to its Installation Manual.

Note3. Indoor capacity is described as its model size:
 For example, PEFY-P06NMAU-E3, its capacity is P06;

Note4. Total down-stream Indoor capacity is the summary of the model size of Indoors downstream.
 For example, PEFY-P06NMAU-E3+PEFY-P08NMAU-E3: Total Indoor capacity=P06+P08=P14

Note5. Piping sized determined by the Total down-stream indoor capacity is NOT necessary to be bigger than the up-stream one.

i.e. A>=B; A>C>=D

1. Piping Design

1-3. Refrigerant charging calculation

■ PQHY-P-T(S)LMU-A1/Y(S)LMU-A1

At the time of shipping, the heat source unit is charged with the refrigerant. As this charge does not include the amount needed for extended piping, additional charging for each refrigerant line will be required on site. In order that future servicing may be properly provided, always keep a record of the size and length of each refrigerant line and the amount of additional charge by writing it in the space provided on the heat source unit.

(1) Calculation of additional refrigerant charge

- Calculate the amount of additional charge based on the length of the piping extension and the size of the refrigerant line.
- Use the table to the below as a guide to calculating the amount of additional charging and charge the system accordingly.
 - * When connecting PLFY-P08NBMU-E2, add 0.3kg [11oz] of refrigerant per indoor unit.
 - * When connecting PLFY-EP08NEMU-E, add 0.3kg [11oz] of refrigerant per indoor unit.
- If the calculation results in a fraction of less than 0.1kg[1oz], round up to the next 0.1kg[1oz]. For example, if the result of the calculation was 11.89kg[420.0oz], round the result up to 11.9kg[420oz].

<Additional Charge>

- Piping length from heat source unit to the most farthest indoor unit ≤ 30.5m[100ft] use the table [A]
- Piping length from heat source unit to the most farthest indoor unit > 30.5m[100ft] use the table [B]

Additional refrigerant charge		+		Liquid Piping Size Total length of ø19.05mm [3/4in]		+		Liquid Piping Size Total length of ø15.88mm [5/8in]		+		Liquid Piping Size Total length of ø12.7mm [1/2in]		+		Liquid Piping Size Total length of ø9.52mm [3/8in]		+		Liquid Piping Size Total length of ø6.35mm [1/4in]		
		[A]	(kg) [oz]	[A]	(m) × 0.29 (kg/m) (ft) × 3.12 (oz/ft)	[A]	(m) × 0.2 (kg/m) (ft) × 2.16 (oz/ft)	[A]	(m) × 0.12 (kg/m) (ft) × 1.30 (oz/ft)	[A]	(m) × 0.06 (kg/m) (ft) × 0.65 (oz/ft)	[A]	(m) × 0.024 (kg/m) (ft) × 0.26 (oz/ft)									
[B]	(kg) [oz]	[B]	(m) × 0.26 (kg/m) (ft) × 2.80 (oz/ft)	[B]	(m) × 0.18 (kg/m) (ft) × 1.94 (oz/ft)	[B]	(m) × 0.11 (kg/m) (ft) × 1.19 (oz/ft)	[B]	(m) × 0.054 (kg/m) (ft) × 0.59 (oz/ft)	[B]	(m) × 0.021 (kg/m) (ft) × 0.23 (oz/ft)											
+																						
Additional charge																						
Heat source unit model Charged amount																						
+																						
Single																						
P216 1.0 kg																						
P240 1.0 kg																						
+ α																						

Table3-2-4-1. Value of α

Total capacity of connecting indoor units	α	
Models ~ 27	2.0 kg	[71 oz]
Models 28 ~ 54	2.5 kg	[89 oz]
Models 55 ~ 126	3.0 kg	[106 oz]
Models 127 ~ 144	3.5 kg	[124 oz]
Models 145 ~ 180	4.5 kg	[160 oz]
Models 181 ~ 234	5.0 kg	[177 oz]
Models 235 ~ 273	6.0 kg	[212 oz]
Models 274 ~ 307	8.0 kg	[283 oz]
Models 308 ~ 342	9.0 kg	[318 oz]
Models 343 ~ 411	10.0 kg	[353 oz]
Models 412 ~ 480	12.0 kg	[424 oz]
Models 481 ~	14.0 kg	[494 oz]

1. Piping Design

■ PQHY-P-Z(S)LMU-A1

At the time of shipping, the heat source unit is charged with the refrigerant. As this charge does not include the amount needed for extended piping, additional charging for each refrigerant line will be required on site. In order that future servicing may be properly provided, always keep a record of the size and length of each refrigerant line and the amount of additional charge by writing it in the space provided on the heat source unit.

(1) Calculation of additional refrigerant charge

- Calculate the amount of additional charge based on the length of the piping extension and the size of the refrigerant line.
- Use the table to the below as a guide to calculating the amount of additional charging and charge the system accordingly.
 - * When connecting PLFY-P08NBMU-E2, add 0.3kg [11oz] of refrigerant per indoor unit.
 - When connecting PLFY-EP08NEMU-E, add 0.3kg [11oz] of refrigerant per indoor unit.
- If the calculation results in a fraction of less than 0.1kg[1oz], round up to the next 0.1kg[1oz]. For example, if the result of the calculation was 11.89kg[420.0oz], round the result up to 11.9kg[420oz].

<Additional Charge>

- Piping length from heat source unit to the most farthest indoor unit ≤ 30.5m[100ft] use the table [A]
- Piping length from heat source unit to the most farthest indoor unit > 30.5m[100ft] use the table [B]

Additional refrigerant charge		+	Liquid Piping Size Total length of ø19.05mm [3/4in]		+	Liquid Piping Size Total length of ø15.88mm [5/8in]		+	Liquid Piping Size Total length of ø12.7mm [1/2in]		+	Liquid Piping Size Total length of ø9.52mm [3/8in]		+	Liquid Piping Size Total length of ø6.35mm [1/4in]		+	α
[A]	(kg) [oz]		[A]	(m) × 0.29 (kg/m) (ft) × 3.12 (oz/ft)		[A]	(m) × 0.2 (kg/m) (ft) × 2.16 (oz/ft)		[A]	(m) × 0.12 (kg/m) (ft) × 1.30 (oz/ft)		[A]	(m) × 0.06 (kg/m) (ft) × 0.65 (oz/ft)		[A]	(m) × 0.024 (kg/m) (ft) × 0.26 (oz/ft)		
[B]	(kg) [oz]		[B]	(m) × 0.26 (kg/m) (ft) × 2.80 (oz/ft)		[B]	(m) × 0.18 (kg/m) (ft) × 1.94 (oz/ft)		[B]	(m) × 0.11 (kg/m) (ft) × 1.19 (oz/ft)		[B]	(m) × 0.054 (kg/m) (ft) × 0.59 (oz/ft)		[B]	(m) × 0.021 (kg/m) (ft) × 0.23 (oz/ft)		

Table3-2-4-1. Value of α

Total capacity of connecting indoor units	α	
Models ~ 27	2.0 kg	[71 oz]
Models 28 ~ 54	2.5 kg	[89 oz]
Models 55 ~ 126	3.0 kg	[106 oz]
Models 127 ~ 144	3.5 kg	[124 oz]
Models 145 ~ 180	4.5 kg	[160 oz]
Models 181 ~ 234	5.0 kg	[177 oz]
Models 235 ~ 273	6.0 kg	[212 oz]
Models 274 ~ 307	8.0 kg	[283 oz]
Models 308 ~ 342	9.0 kg	[318 oz]
Models 343 ~ 411	10.0 kg	[353 oz]
Models 412 ~ 480	12.0 kg	[424 oz]
Models 481 ~	14.0 kg	[494 oz]

CITY MULTI SYSTEM DESIGN WR2-Series

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1. Piping Design

1-1. R410A Piping material

Refrigerant pipe for CITY MULTI shall be made of phosphorus deoxidized copper, and has two types.

A. Type-O: Soft copper pipe (annealed copper pipe), can be easily bent with human's hand.

B. Type-1/2H pipe: Hard copper pipe (Straight pipe), being stronger than Type-O pipe of the same radical thickness.

The maximum operation pressure of R410A air conditioner is 4.30 MPa [623psi]. The refrigerant piping should ensure the safety under the maximum operation pressure. MITSUBISHI ELECTRIC recommends pipe size as Table1, or You shall follow the local industrial standard. Pipes of radical thickness 0.7mm or less shall not be used.

Table 1. Copper pipe size and radial thickness for R410A CITY MULTI.

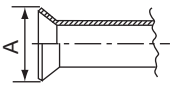
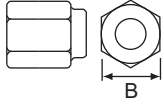
Size (mm)	Size (inch)	Radial thickness (mm)	Radial thickness (mil)	Pipe type
ø6.35	ø1/4"	0.8	[32]	Type-O
ø9.52	ø3/8"	0.8	[32]	Type-O
ø12.7	ø1/2"	0.8	[32]	Type-O
ø15.88	ø5/8"	1.0	[40]	Type-O
ø19.05	ø3/4"	1.2	[48]	Type-O
ø19.05	ø3/4"	1.0	[40]	Type-1/2H or H
ø22.2	ø7/8"	1.0	[40]	Type-1/2H or H
ø25.4	ø1"	1.0	[40]	Type-1/2H or H
ø28.58	ø1-1/8"	1.0	[40]	Type-1/2H or H
ø31.75	ø1-1/4"	1.1	[44]	Type-1/2H or H
ø34.93	ø1-3/8"	1.2	[48]	Type-1/2H or H
ø41.28	ø1-5/8"	1.4	[56]	Type-1/2H or H

* For pipe sized ø19.05 (3/4") for R410A air conditioner, choice of pipe type is up to you.

* The figures in the radial thickness column are based on the Japanese standards and provided only as a reference. Use pipes that meet the local standards.

Flare

Due to the relative higher operation pressure of R410A compared to R22, the flare connection should follow dimensions mentioned below so as to achieve enough the air-tightness.

Flare pipe	Pipe size	A (For R410A)	(mm[in.])	Flare nut	Pipe size	B (For R410A)	(mm[in.])
	ø6.35 [1/4"]	9.1			ø6.35 [1/4"]	17.0	
	ø9.52 [3/8"]	13.2			ø9.52 [3/8"]	22.0	
	ø12.70 [1/2"]	16.6			ø12.70 [1/2"]	26.0	
	ø15.88 [5/8"]	19.7			ø15.88 [5/8"]	29.0	
	ø19.05 [3/4"]	24.0			ø19.05 [3/4"]	36.0	

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1, Z(S)LMU-A1

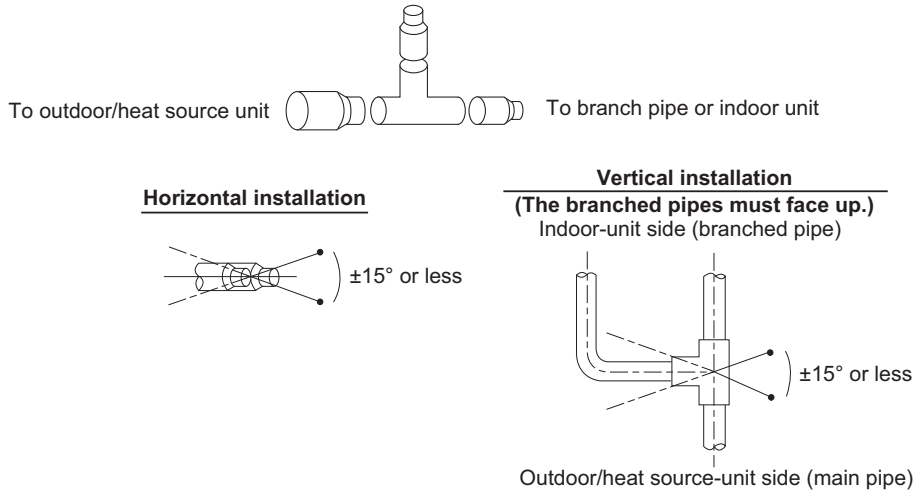
1. Piping Design

Procedures for installing the branched pipes

Refer to the instructions that came with the branched pipe kit (separately sold) for details.

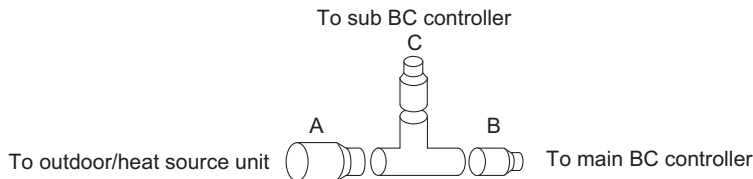
[1] Branches on the indoor-unit side

- Restriction on installing the 2-Branch Joint Pipe CMY-Y202/302S-G2 on the gas piping



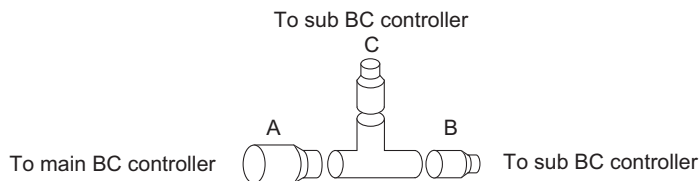
- CMY-Y202S-G2 and CMY-Y302S-G2 in the gas line must be installed horizontally (see figure above) or with the branched pipes facing up.
- If the size of the refrigerant pipe that is selected by following the instructions under “Piping Design” section does not match the size of the joint, use a reducer to connect them. A reducer is included in the kit.

- Restriction on installing the 2-Branch Joint Pipe CMY-R101/102S-G on the low-pressure piping (for P-J type, P-JA type, P-KA type, and P-KB type)



-Regarding the 2-Branch Joint Pipe on the low-pressure piping, A and B must be installed horizontally, and C must be installed upward higher than the horizontal plane of A and B.

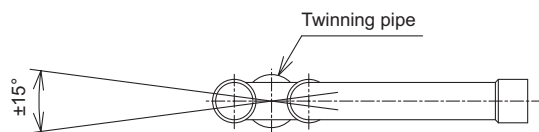
- Restriction on installing the 2-Branch Joint Pipe CMY-R201/202/203/204/205S-G on the high-pressure piping, low-pressure piping, and liquid piping.



-Regarding the 2-Branch Joint Pipe on the high-pressure/low-pressure/liquid piping, A and B must be installed horizontally, and C must be installed upward higher than the horizontal plane of A and B.

[2] Branches on the outdoor/heat source-unit side

Note. Refer to the figure below for the installation position of the twinning pipe.



Slope of the twinning pipes are at an angle within $\pm 15^\circ$ to the horizontal plane.

- Inclination of the branched pipes
 The inclination of the branched pipes must be $\pm 15^\circ$ or less against the horizontal plane.
 Excessive inclination of the branched pipes may damage the unit.
- Minimum length of the straight section of the pipe before the branched pipes
 Always use the pipes supplied in the branched pipe kit, and make sure the straight section of the pipe immediately before it connects to the branched pipe is at least 500 mm (19-11/16 in.). Failure to do so may damage the unit.

1. Piping Design

1-2. Piping Design

1-2-1. IF 16 ports or less are in use, i.e., if only one BC controller is in use with no sub BC controller.

"BC controller," "BC controller (Main)," and "BC controller (Sub)" that appear in this section refer to the J1-type, JA1/KA1 type, and KB1 type.

When mixing GA1/HA1/GB1/HB1 type and JA1/KA1/KB1 type, specifications and restrictions is according to GA1/HA1/GB1/HB1 type. (piping length, connectable number of Sub BC)

- Note1. No Header usable on PQRY system.
- Note2. Indoor unit sized P72-P96 should be connected to BC controller via Y shape joint CMY-R160-J1.
- Note3. Indoor unit sized P72-P96 does NOT share BC controller ports with other Indoor units ;
- Note4. As bents cause pressure loss on transportation of refrigerant, fewer bents design is better ; Piping length needs to consider the actual length and equivalent length which bents are counted. Equivalent piping length (m)=Actual piping length* M x Number of bent.
- Note5. Set DIP-SW 4-6 to ON of BC controller, in case of connected Indoor unit sized P72-P96 with 2 ports.
- Note6. Do not connect multiple indoor units to the same port when operating each of them in different mod (cooling, heating, stop, and thermo-off). The indoor units connected to the same port must be set to operate in the same mode. Set them in the same group to make them run/stop in the same mode all together. For other options, enable the thermo setting on the remote controller, or set the common thermostat (optional) to run/stop the units in the same mode based on a representative temperature.
- Note7. Indoor capacity is described as its model size. For example, PEFY-P24NMAU-E3, its capacity is P24.
- Note8. Total down-stream Indoor capacity is the summary of the model size of Indoors down-stream. For example, PEFY-P24NMAU-E3 + PEFY-P06NMAU-E3: Total Indoor capacity = P24 + P06 = P30.
- Note9. To connect the BC controller to the main pipe, use the reducer (CMY-R301S-G, CMY-R302S-G1, or CMY-R304S-G1).
- Note10. Install the pipes correctly referring to the section titled "Procedures for installing the branched pipes."

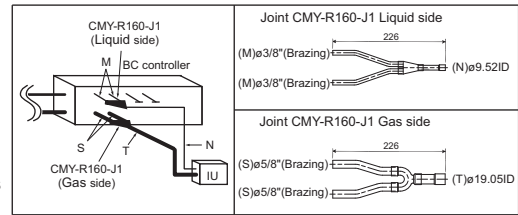


Fig. 1-2-1AA

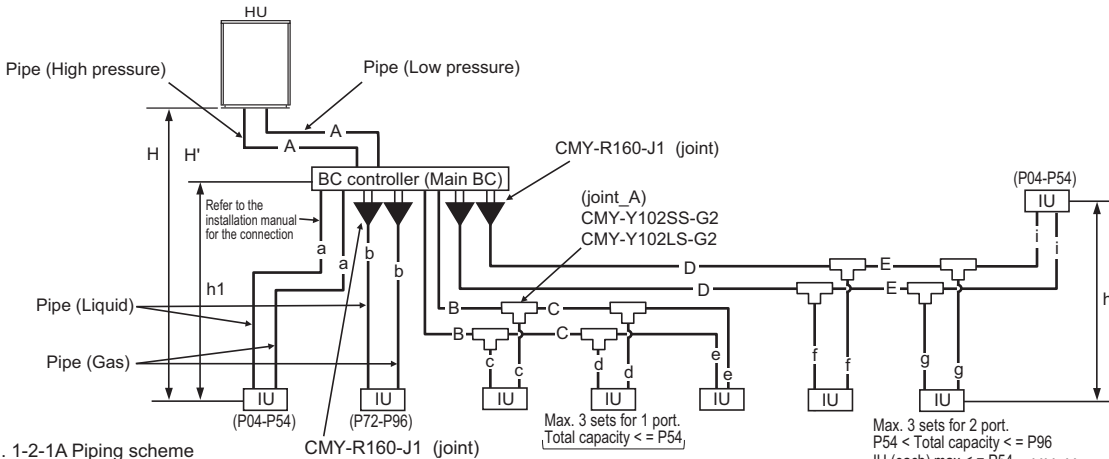


Fig. 1-2-1A Piping scheme

Piping length limitation *8

Item	Piping in the figure	Max. length	Max. equivalent length
Total piping length (Total length of high pressure and liquid pipes)	A+B+C+D+E+a+b+c+d+e+f+g+i	*1	-
Farthest IU from HU	A+D+E+i	165 [541']	190 [623']
Distance between HU and BC	A	110 [360']	110 [360'] *1
Farthest IU from BC controller	D+E+i	60 [197'] *2*3	60 [197'] *2*3
Height between HU and IU (HU above IU)	H	50 [164'] *6	-
Height between HU and IU (HU under IU)	H'	40 [131'] *7	-
Height between IU and BC	h1	15 [49'] (10 [32']) *4	-
Height between IU and IU	h2	30 [98'] (20 [65']) *5	-

Bent equivalent length

Heat source Model	M (m/bent [ft./bent])
P72TLMU, YLMU	0.35 [1.15']
P96TLMU, YLMU	0.42 [1.38']
P120TLMU, YLMU	0.47 [1.54']
P144TLMU, YLMU	0.50 [1.64']
P168TLMU, YLMU	0.50 [1.64']
P192TLMU, YLMU	0.50 [1.64']
P216TLMU, YLMU	0.50 [1.64']
P240TLMU, YLMU	0.50 [1.64']

HU: Heat source Unit; IU: Indoor Unit; BC: BC controller

*1. Refer to the section 1-2-7.

*2. Details refer to Fig. 1.

*3. When the P72 or P96 model of indoor units are connected to the system, the maximum distance from the BC controller to the farthest indoor unit indicated as "D + E + i" in the figure is 40 meters.

*4. Distance of Indoor sized P72, P96 from BC must be less than 10 m, if any.

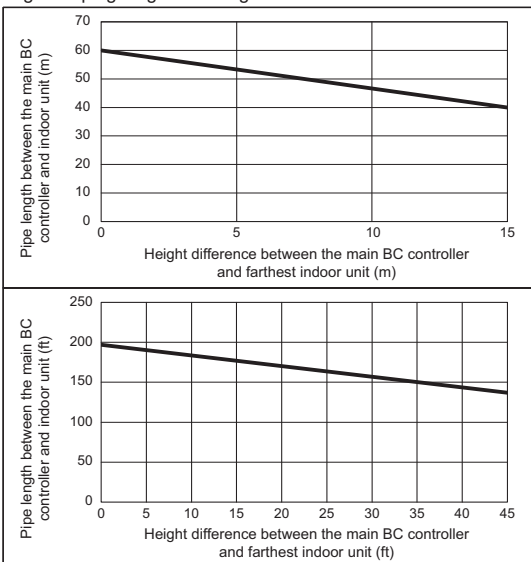
*5. Distance of Indoor sized P72, P96 from IU must be less than 20 m, if any.

*6. 90 m is available depending on the model and installation conditions. For more detailed information, contact your local distributor.

*7. 60 m is available depending on the model and installation conditions. For more detailed information, contact your local distributor.

*8. Total length of high-pressure pipes and liquid pipes

Fig. 1 Piping length and height between IU and BC controller



Piping "A" size selection rule

Heat source Model	Pipe(High pressure)	Pipe(Low pressure)
P72TLMU, YLMU	ø15.88 [5/8"]	ø19.05 [3/4"]
P96-120TLMU, YLMU	ø19.05 [3/4"]	ø22.20 [7/8"]
P144-192TLMU, YLMU	ø22.20 [7/8"]	ø28.58 [1-1/8"]
P216TLMU, YLMU	ø22.20 [7/8"] *9	ø28.58 [1-1/8"]
P240TLMU, YLMU	ø22.20 [7/8"] *9	ø34.93 [1-3/8"]

*9. When the piping length is 65 m or longer, use the ø28.58 [1-1/8"] pipe for the part that exceeds 65 m.

Piping "B", "C", "D", "E" size selection rule

Total down-stream Indoor capacity	Pipe(Liquid)	Pipe(Gas)
P54 or less	ø9.52 [3/8"]	ø15.88 [5/8"]
P55-P72	ø9.52 [3/8"]	ø19.05 [3/4"]
P73-P96	ø9.52 [3/8"]	ø22.20 [7/8"]

Piping "a", "b", "c", "d", "e", "f", "g", "i" size selection rule

Indoor Unit size	Pipe(Liquid)	Pipe(Gas)
P04-P18	ø6.35 [1/4"]	ø12.70 [1/2"]
P24-P54	ø9.52 [3/8"]	ø15.88 [5/8"]
P72	ø9.52 [3/8"]	ø19.05 [3/4"]
P96	ø9.52 [3/8"]	ø22.20 [7/8"]

Selection criteria for joints_A

Total down-stream Indoor capacity	Joint
-P72	CMY-Y102SS-G2
P73-P96	CMY-Y102LS-G2

1. Piping Design

1-2-2. IF more than 16 ports are in use, or if there is more than one BC controller in use for one Heat source unit

- Note1. No Header usable on PQRY system.
 Note2. Indoor unit sized P72-P96 should be connected to BC controller via Y shape joint CMY-R160-J1.
 Note3. Indoor unit sized P72-P96 does NOT share BC controller ports with other Indoor units ;
 Note4. As bents cause pressure loss on transportation of refrigerant, fewer bents design is better ;
 Piping length needs to consider the actual length and equivalent length which bents are counted.
 Equivalent piping length (m)=Actual piping length+"M" x Number of bent.
 Note5. Set DIP-SW 4-6 to ON of BC controller, in case of connected Indoor unit sized P72-P96 with 2 ports.
 Note6. Do not connect multiple indoor units to the same port when operating each of them in different mode (cooling, heating, stop, and thermo-off). The indoor units connected to the same port must be set to operate in the same mode. Set them in the same group to make them run/stop in the same mode all together. For other options, enable the thermo setting on the remote controller, or set the common thermostat (optional) to run/stop the units in the same mode based on a representative temperature.
 Note7. The maximum total capacity of indoor units that can be connected to each sub BC controller CMB-P•NU-KB1 is 126.
 Note8. Indoor capacity is described as its model size. For example, PEFY-P24NMAU-E3, its capacity is P24.
 Note9. Total down-stream Indoor capacity is the summary of the model size of Indoors down-stream. For example, PEFY-P24NMAU-E3 + PEFY-P06NMAU-E3 : Total Indoor capacity = P24 + P06 = P30.
 Note10. To connect the BC controller to the main pipe, use the reducer (CMY-R301S-G, CMY-R302S-G1, or CMY-R304S-G1).
 Note11. To connect the sub BC controller to the main BC controller, use the reducer (CMY-R303S-G1, CMY-R305S-G1, or CMY-R306S-G).
 Note12. Install the pipes correctly referring to the section titled "Procedures for installing the branched pipes."
 Note13. Up to 11 sub BC controllers can be connected.

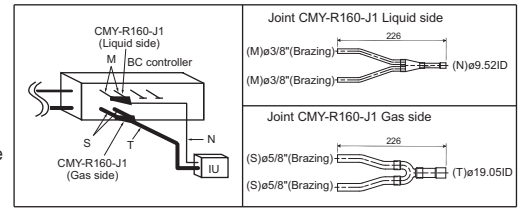


Fig. 1-2-2AA

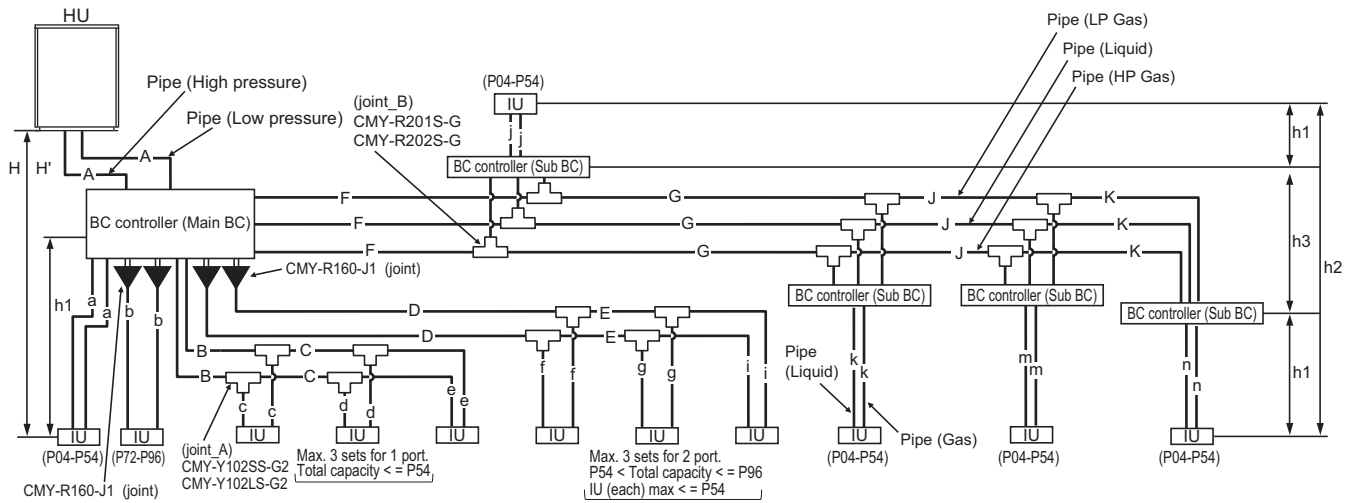


Fig. 1-2-2A Piping scheme

HU: Heat source unit, IU: Indoor unit

Piping length limitation *10

Item	Piping in the figure	Max. length	Max. equivalent length
Total piping length (Total length of high pressure and liquid pipes)	A+B+C+D+E+F+G+J+K+a+b+c+d+e+f+g+i+j+k+m+n	*1	-
Farthest IU from HU	A+F+G+J+K+n	165 [541']	190 [623']
Distance between HU and BC	A	110 [360'] *1	110 [360'] *1
Farthest IU from BC controller	D+E+i	60 [197'] *2*3	60 [197'] *2*3
Farthest IU from BC controller via Sub BC controller	F+G+J+K+n	90 [295'] *9	90 [295'] *9
Height between HU and IU (HU above IU)	H	50 [164'] *7	-
Height between HU and IU (HU under IU)	H'	40 [131'] *8	-
Height between IU and BC	h1	15 [49'] (10 [32']) *4	-
Height between IU and IU	h2	30 [98'] (20 [65']) *5	-
Height between BC(Main or Sub) and BC(Sub)	h3	15 [49'] (10 [32']) *6	-

HU: Heat source Unit; IU: Indoor Unit; BC: BC controller

*1. Refer to the section 1-2-7.

*2. Details refer to Fig. 2.

*3. When the P72 or P96 model of indoor units are connected to the system, the maximum distance from the BC controller to the farthest indoor unit indicated as "D + E + i" in the figure is 40 meters.

*4. Distance of Indoor sized P72, P96 from BC must be less than 10 m, if any.

*5. Distance of Indoor sized P72, P96 from IU must be less than 20 m, if any.

*6. When using 2 or more Sub BC controllers, max. height "h3" should be considered.

*7. 90 m is available depending on the model and installation conditions. For more detailed information, contact your local distributor.

*8. 60 m is available depending on the model and installation conditions. For more detailed information, contact your local distributor.

*9. When the piping length or the vertical separation exceeds the limit specified in Fig. 2, connect a sub BC to the system. The restriction for a system with a sub BC connection is shown in Fig. 3. When a given system configuration falls within the shaded area in Fig. 3, increase the size of the high-pressure pipe and the liquid pipe between the main BC and sub BC by one size. When using P12, P15, P18, P36, or P48 model of indoor units, increase the size of the liquid branch pipe between the sub BC and indoor unit by one size. When using indoor models P54 or larger, the restrictions shown in Fig. 2 cannot be exceeded.

*10. Total length of high-pressure pipes and liquid pipes

Bent equivalent length

Heat source Model	M (m/bent [ft./bent])
P72TLMU, YLMU	0.35 [1.15']
P96TLMU, YLMU	0.42 [1.38']
P120TLMU, YLMU	0.47 [1.54']
P144TLMU, YLMU	0.50 [1.64']
P168TLMU, YLMU	0.50 [1.64']
P192TLMU, YLMU	0.50 [1.64']
P216TLMU, YLMU	0.50 [1.64']
P240TLMU, YLMU	0.50 [1.64']

1. Piping Design

Piping length and height between IU and BC controller

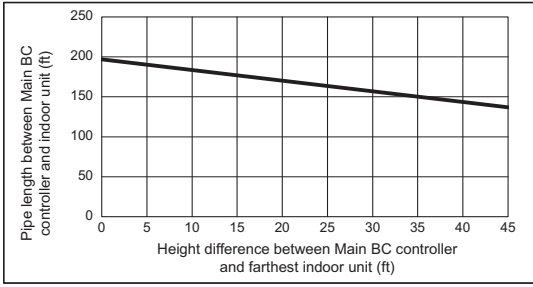


Fig. 2

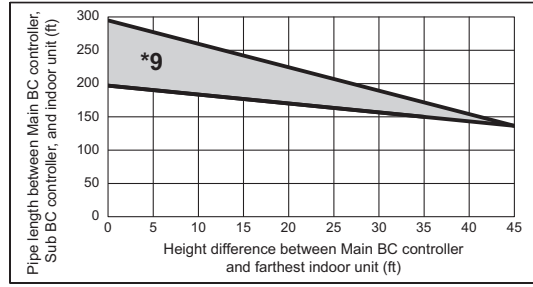
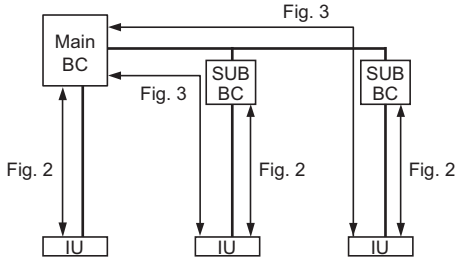


Fig. 3



*9. When the piping length or the vertical separation exceeds the limit specified in Fig. 2, connect a sub BC to the system.

The restriction for a system with a sub BC connection is shown in Fig. 3.

When a given system configuration falls within the shaded area in Fig. 3, increase the size of the high-pressure pipe and the liquid pipe between the main BC and sub BC by one size.

The maximum liquid branch pipe diameter is $\phi 19.05$. If a given system already has a $\phi 19.05$ -pipe between the main BC and sub BC, there is no need to increase the pipe size.

When using P12, P15, P18, P36, or P48 model of indoor units, increase the size of the liquid branch pipe between the sub BC and indoor unit by one size.

When using indoor models P54 or larger, the restrictions shown in Fig. 2 cannot be exceeded.

Piping "A" size selection rule

(mm [in.])

Heat source Model	Pipe(High pressure)	Pipe(Low pressure)
P72TLMU, YLMU	$\phi 15.88$ [5/8"]	$\phi 19.05$ [3/4"]
P96-120TLMU, YLMU	$\phi 19.05$ [3/4"]	$\phi 22.20$ [7/8"]
P144-192TLMU, YLMU	$\phi 22.20$ [7/8"]	$\phi 28.58$ [1-1/8"]
P216TLMU, YLMU	$\phi 22.20$ [7/8"] *11	$\phi 28.58$ [1-1/8"]
P240TLMU, YLMU	$\phi 22.20$ [7/8"] *11	$\phi 34.93$ [1-3/8"]

*11. When the piping length is 65 m or longer, use the $\phi 28.58$ [1-1/8"] pipe for the part that exceeds 65 m.

Selection criteria for joints_A

Total down-stream Indoor capacity	Joint
-P72	CMY-Y102SS-G2
P73-P96	CMY-Y102LS-G2

Piping "B", "C", "D", "E" size selection rule

(mm [in.])

Total down-stream Indoor capacity	Pipe(Liquid)	Pipe(Gas)
P54 or less	$\phi 9.52$ [3/8"]	$\phi 15.88$ [5/8"]
P55-P72	$\phi 9.52$ [3/8"]	$\phi 19.05$ [3/4"]
P73-P96	$\phi 9.52$ [3/8"]	$\phi 22.20$ [7/8"]

Selection criteria for joints_B

Total down-stream Indoor capacity	Joint
-P120	CMY-R201S-G
P121-P216	CMY-R202S-G

Piping "a", "b", "c", "d", "e", "f", "g", "i", "j", "k", "m", "n" size selection rule (mm [in.])

Indoor Unit size	Pipe(Liquid)	Pipe(Gas)
P04-P18	$\phi 6.35$ [1/4"]	$\phi 12.70$ [1/2"]
P24-P54	$\phi 9.52$ [3/8"]	$\phi 15.88$ [5/8"]
P72	$\phi 9.52$ [3/8"]	$\phi 19.05$ [3/4"]
P96	$\phi 9.52$ [3/8"]	$\phi 22.20$ [7/8"]

Piping "F", "G", "J", "K" size selection rule

(mm [in.])

Total down-stream Indoor capacity	Pipe(Liquid)	Pipe(HP Gas)	Pipe(LP Gas)
P72 or less	$\phi 9.52$ [3/8"]	$\phi 15.88$ [5/8"]	$\phi 19.05$ [3/4"]
P73 to P108	$\phi 9.52$ [3/8"]	$\phi 19.05$ [3/4"]	$\phi 22.20$ [7/8"]
P109 to P126	$\phi 12.70$ [1/2"]	$\phi 19.05$ [3/4"]	$\phi 28.58$ [1-1/8"]
P127 to P144	$\phi 12.70$ [1/2"]	$\phi 22.20$ [7/8"]	$\phi 28.58$ [1-1/8"]
P145 to P180	$\phi 15.88$ [5/8"]	$\phi 22.20$ [7/8"]	$\phi 28.58$ [1-1/8"]
P181 to P234	$\phi 15.88$ [5/8"]	$\phi 28.58$ [1-1/8"]	$\phi 28.58$ [1-1/8"]
P235 to P288	$\phi 19.05$ [3/4"]	$\phi 28.58$ [1-1/8"]	$\phi 34.93$ [1-3/8"]
P289 to P360	$\phi 19.05$ [3/4"]	$\phi 28.58$ [1-1/8"]	$\phi 41.28$ [1-5/8"]
P361 or above	$\phi 19.05$ [3/4"]	$\phi 34.93$ [1-3/8"]	$\phi 41.28$ [1-5/8"]

HP: High pressure, LP: Low pressure

1. Piping Design

1-2-3. IF more than 16 ports are in use, or if there is more than one BC controller in use for two Heat source units

- Note1. No Header usable on PQRY system.
 Note2. Indoor unit sized P72-P96 should be connected to BC controller via Y shape joint CMY-R160-J1.
 Note3. Indoor unit sized P72-P96 does NOT share BC controller ports with other Indoor units ;
 Note4. As bents cause pressure loss on transportation of refrigerant, fewer bents design is better ;
 Piping length needs to consider the actual length and equivalent length which bents are counted.
 Equivalent piping length (m)=Actual piping length+"M" x Number of bent.
 Note5. Set DIP-SW 4-6 to ON of BC controller, in case of connected Indoor unit sized P72-P96 with 2 ports.
 Note6. Do not connect multiple indoor units to the same port when operating each of them in different mode (cooling, heating, stop, and thermo-off). The indoor units connected to the same port must be set to operate in the same mode. Set them in the same group to make them run/stop in the same mode all together. For other options, enable the thermo setting on the remote controller, or set the common thermostat (optional) to run/stop the units in the same mode based on a representative temperature.
 Note7. The maximum total capacity of indoor units that can be connected to each sub BC controller CMB-P•NU-KB1 is P126.
 Note8. Indoor capacity is described as its model size. For example, PEFY-P24NMAU-E3, its capacity is P24.
 Note9. Total down-stream Indoor capacity is the summary of the model size of Indoors down-stream. For example, PEFY-P24NMAU-E3 + PEFY-P06NMAU-E3 : Total Indoor capacity = P24 + P06 = P30.
 Note10. To connect the BC controller to the main pipe, use the reducer (CMY-R301S-G, CMY-R302S-G1, or CMY-R304S-G1).
 Note11. To connect the sub BC controller to the main BC controller, use the reducer (CMY-R303S-G1, CMY-R305S-G1, or CMY-R306S-G).
 Note12. Install the pipes correctly referring to the section titled "Procedures for installing the branched pipes."
 Note13. Up to 11 sub BC controllers can be connected.

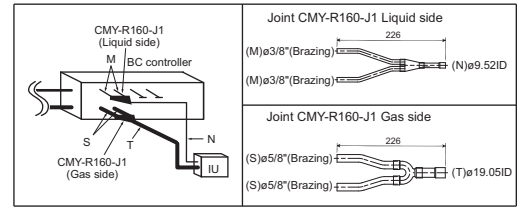


Fig. 1-2-3AA

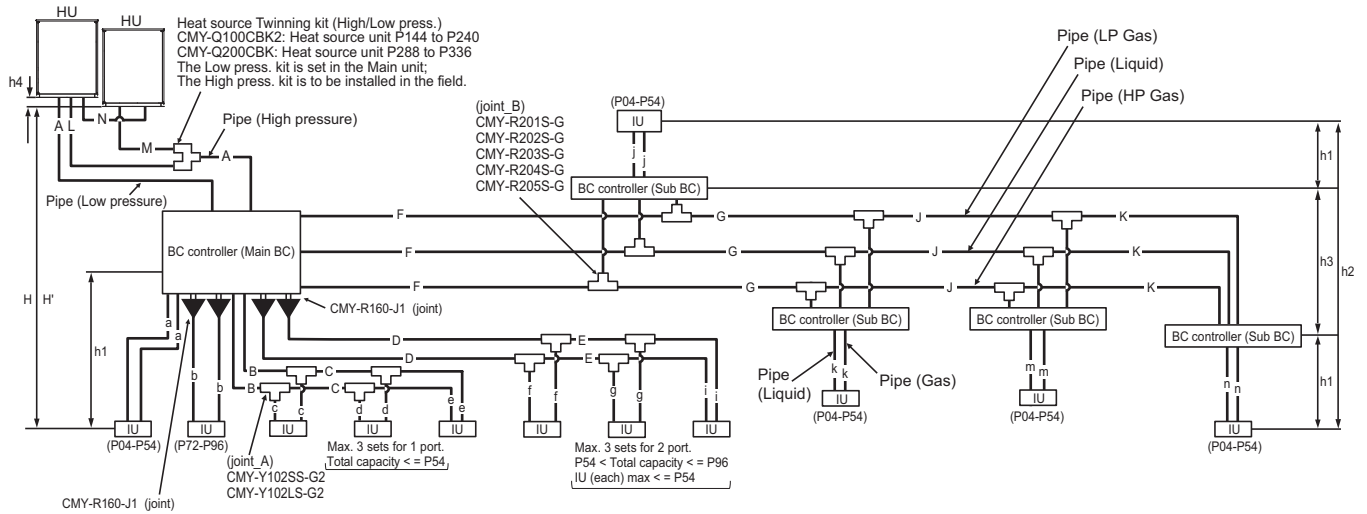


Fig. 1-2-3A Piping scheme

HU: Heat source unit, IU: Indoor unit

Piping length limitation *11

Item	Piping in the figure	Max. length	Max. equivalent length (m [ft.])
Total piping length (Total length of high pressure and liquid pipes)	L+M+A+B+C+D+E+F+G+J+K+a+b+c+d+e+f+g+i+j+k+m+n	*1	-
Farthest IU from HU	L(M)+A+F+G+J+K+n	165 [541']	190 [623']
Distance between HU and BC	L(M)+A	110 [360'] *1	110 [360'] *1
Farthest IU from BC controller	D+E+i	60 [197'] *2 *3	60 [197'] *2*3
Farthest IU from BC controller via Sub BC controller	F+G+J+K+n	90 [295'] *9	90 [295'] *9
Height between HU and IU (HU above IU)	H	50 [164'] *7	-
Height between HU and IU (HU under IU)	H'	40 [131'] *8	-
Height between IU and BC	h1	15 [49'] (10 [32']) *4	-
Height between IU and IU	h2	30 [98'] (20 [65']) *5	-
Height between BC(Main or Sub) and BC(Sub)	h3	15 [49'] (10 [32']) *6	-
Distance between Main unit and Sub unit	L+M or N	5 [16']	-
Height between Main unit and Sub unit	h4	0.1 [0.3']	-

HU: Heat source Unit; IU: Indoor Unit; BC: BC controller
 *1. Refer to the section 1-2-7.
 *2. Details refer to Fig. 2.

- *3. When the P72 or P96 model of indoor units are connected to the system, the maximum distance from the BC controller to the farthest indoor unit (indicated as "D + E + i" in the figure is 40 meters.)
 *4. Distance of Indoor sized P72, P96 from BC must be less than 10 m, if any.
 *5. Distance of Indoor sized P72, P96 from IU must be less than 20 m, if any.
 *6. When using 2 or more Sub BC controllers, max. height "h3" should be considered.
 *7. 90 m is available depending on the model and installation conditions. For more detailed information, contact your local distributor.
 *8. 60 m is available depending on the model and installation conditions. For more detailed information, contact your local distributor.
 *9. When the piping length or the vertical separation exceeds the limit specified in Fig. 2, connect a sub BC to the system.
 The restriction for a system with a sub BC connection is shown in Fig. 3.
 When a given system configuration falls within the shaded area in Fig. 3, increase the size of the high-pressure pipe and the liquid pipe between the main BC and sub BC by one size.
 When using P12, P15, P18, P36, or P48 model of indoor units, increase the size of the liquid branch pipe between the sub BC and indoor unit by one size.
 When using indoor models P54 or larger, the restrictions shown in Fig. 2 cannot be exceeded.
 *10. When the high pressure piping length is 65 m or less, use ø22.2 (ø7/8) pipe.
 When the high pressure piping length exceeds 65 m, use ø22.2 (ø7/8) pipe until 65 m, use ø28.58 (ø1-1/8) pipe for the part that exceeds 65 m.
 *11. Total length of high-pressure pipes and liquid pipes

Bent equivalent length

Heat source Model	M (m/bent [ft./bent])
P144TSLMU, YSLMU	0.50 [1.64']
P168TSLMU, YSLMU	0.50 [1.64']
P192TSLMU, YSLMU	0.50 [1.64']
P216TSLMU, YSLMU	0.50 [1.64']
P240TSLMU, YSLMU	0.50 [1.64']
P288TSLMU, YSLMU	0.70 [2.29']
P312TSLMU, YSLMU	0.70 [2.29']
P336TSLMU, YSLMU	0.80 [2.62']

1. Piping Design

Piping length and height between IU and BC controller

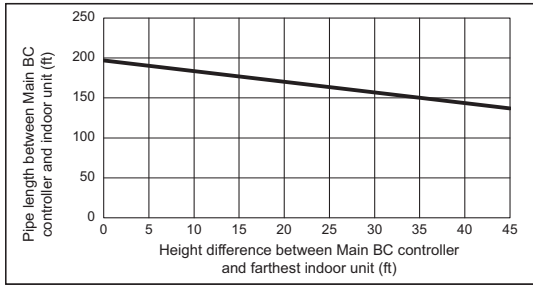


Fig. 2

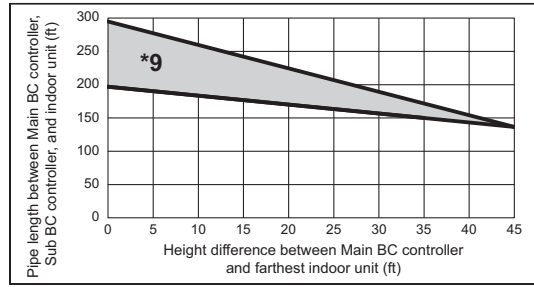
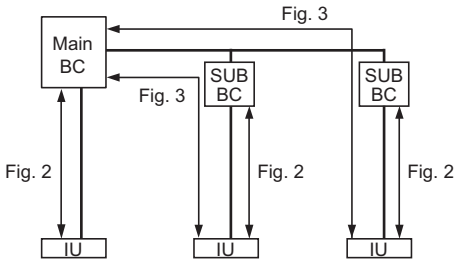


Fig. 3



*9. When the piping length or the vertical separation exceeds the limit specified in Fig. 2, connect a sub BC to the system.

The restriction for a system with a sub BC connection is shown in Fig. 3.

When a given system configuration falls within the shaded area in Fig. 3, increase the size of the high-pressure pipe and the liquid pipe between the main BC and sub BC by one size.

The maximum liquid branch pipe diameter is $\phi 19.05$. If a given system already has a $\phi 19.05$ -pipe between the main BC and sub BC, there is no need to increase the pipe size.

When using P12, P15, P18, P36, or P48 model of indoor units, increase the size of the liquid branch pipe between the sub BC and indoor unit by one size.

When using indoor models P54 or larger, the restrictions shown in Fig. 2 cannot be exceeded.

Piping "A" size selection rule

(mm [in.])

Heat source Model	Pipe(High pressure)	Pipe(Low pressure)
P144-192TSLMU, YSLMU	$\phi 22.20$ [7/8"]	$\phi 28.58$ [1-1/8"]
P216TSLMU, YSLMU	$\phi 22.20$ [7/8"] *12	$\phi 28.58$ [1-1/8"]
P240TSLMU, YSLMU	$\phi 22.20$ [7/8"] *12	$\phi 34.93$ [1-3/8"]
P288-312TSLMU, YSLMU	$\phi 28.58$ [1-1/8"]	$\phi 34.93$ [1-3/8"]
P336TSLMU, YSLMU	$\phi 28.58$ [1-1/8"]	$\phi 41.28$ [1-5/8"]

*12. When the piping length is 65 m or longer, use the $\phi 28.58$ [1-1/8"] pipe for the part that exceeds 65 m.

Piping "L", "M", "N" size selection rule

(mm [in.])

Heat source Model	Pipe(High pressure)	Pipe(Low pressure)
P72TLMU, YLMU	$\phi 15.88$ [5/8"]	$\phi 19.05$ [3/4"]
P96TLMU, YLMU	$\phi 19.05$ [3/4"]	$\phi 22.20$ [7/8"]
P120TLMU, YLMU	$\phi 19.05$ [3/4"]	$\phi 22.20$ [7/8"]
P144TLMU, YLMU	$\phi 22.20$ [7/8"]	$\phi 28.58$ [1-1/8"]
P168TLMU, YLMU	$\phi 22.20$ [7/8"]	$\phi 28.58$ [1-1/8"]

Piping "B", "C", "D", "E" size selection rule

(mm [in.])

Total down-stream Indoor capacity	Pipe(Liquid)	Pipe(Gas)
P54 or less	$\phi 9.52$ [3/8"]	$\phi 15.88$ [5/8"]
P55-P72	$\phi 9.52$ [3/8"]	$\phi 19.05$ [3/4"]
P73-P96	$\phi 9.52$ [3/8"]	$\phi 22.20$ [7/8"]

Selection criteria for joints_A

Total down-stream Indoor capacity	Joint
-P72	CMY-Y102SS-G2
P73-P96	CMY-Y102LS-G2

Piping "a", "b", "c", "d", "e", "f", "g", "i", "j", "k", "m", "n" size selection rule

(mm [in.])

Indoor Unit size	Pipe(Liquid)	Pipe(Gas)
P04-P18	$\phi 6.35$ [1/4"]	$\phi 12.70$ [1/2"]
P24-P54	$\phi 9.52$ [3/8"]	$\phi 15.88$ [5/8"]
P72	$\phi 9.52$ [3/8"]	$\phi 19.05$ [3/4"]
P96	$\phi 9.52$ [3/8"]	$\phi 22.20$ [7/8"]

Selection criteria for joints_B

Total down-stream Indoor capacity	Joint
-P120	CMY-R201S-G
P121-P216	CMY-R202S-G
P217-P240	CMY-R203S-G
P241-P360	CMY-R204S-G
P361-	CMY-R205S-G

Piping "F", "G", "J", "K" size selection rule

(mm [in.])

Total down-stream Indoor capacity	Pipe(Liquid)	Pipe(HP Gas)	Pipe(LP Gas)
P72 or less	$\phi 9.52$ [3/8"]	$\phi 15.88$ [5/8"]	$\phi 19.05$ [3/4"]
P73 to P108	$\phi 9.52$ [3/8"]	$\phi 19.05$ [3/4"]	$\phi 22.20$ [7/8"]
P109 to P126	$\phi 12.70$ [1/2"]	$\phi 19.05$ [3/4"]	$\phi 28.58$ [1-1/8"]
P127 to P144	$\phi 12.70$ [1/2"]	$\phi 22.20$ [7/8"]	$\phi 28.58$ [1-1/8"]
P145 to P180	$\phi 15.88$ [5/8"]	$\phi 22.20$ [7/8"]	$\phi 28.58$ [1-1/8"]
P181 to P234	$\phi 15.88$ [5/8"]	$\phi 28.58$ [1-1/8"]	$\phi 28.58$ [1-1/8"]
P235 to P288	$\phi 19.05$ [3/4"]	$\phi 28.58$ [1-1/8"]	$\phi 34.93$ [1-3/8"]
P289 to P360	$\phi 19.05$ [3/4"]	$\phi 28.58$ [1-1/8"]	$\phi 41.28$ [1-5/8"]
P361 or above	$\phi 19.05$ [3/4"]	$\phi 34.93$ [1-3/8"]	$\phi 41.28$ [1-5/8"]

HP: High pressure, LP: Low pressure

1. Piping Design

1-2-4. IF 16 ports or less are in use, i.e., if only one BC controller is in use with no sub BC controller.

"BC controller," "BC controller (Main)," and "BC controller (Sub)" that appear in this section refer to the J1-type, JA1/KA1 type, and KB1 type.

When mixing GA1/HA1/GB1/HB1 type and JA1/KA1/KB1 type, specifications and restrictions is according to GA1/HA1/GB1/HB1 type. (piping length, connectable number of Sub BC)

- Note1. No Header usable on PQRY system.
- Note2. Indoor unit sized P72-P96 should be connected to BC controller via Y shape joint CMY-R160-J1.
- Note3. Indoor unit sized P72-P96 does NOT share BC controller ports with other Indoor units ;
- Note4. As bents cause pressure loss on transportation of refrigerant, fewer bents design is better ;
Piping length needs to consider the actual length and equivalent length which bents are counted.
Equivalent piping length (m)=Actual piping length+"M" x Number of bent.
- Note5. Set DIP-SW 4-6 to ON of BC controller, in case of connected Indoor unit sized P72-P96 with 2 ports.
- Note6. Do not connect multiple indoor units to the same port when operating each of them in different mod (cooling, heating, stop, and thermo-off). The indoor units connected to the same port must be set to operate in the same mode. Set them in the same group to make them run/stop in the same mode all together. For other options, enable the thermo setting on the remote controller, or set the common thermostat (optional) to run/stop the units in the same mode based on a representative temperature.
- Note7. Indoor capacity is described as its model size. For example, PEFY-P24NMAU-E3, its capacity is P24.
- Note8. Total down-stream Indoor capacity is the summary of the model size of Indoors down-stream. For example, PEFY-P24NMAU-E3 + PEFY-P06NMAU-E3: Total Indoor capacity = P24 + P06 = P30.
- Note9. To connect the BC controller to the main pipe, use the reducer (CMY-R301S-G, CMY-R302S-G1, or CMY-R304S-G1).
- Note10. Install the pipes correctly referring to the section titled "Procedures for installing the branched pipes."

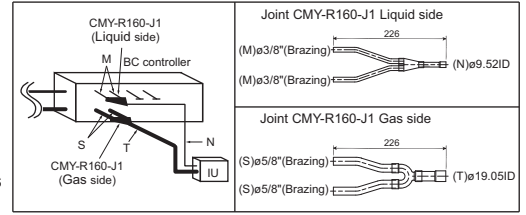


Fig. 1-2-4AA

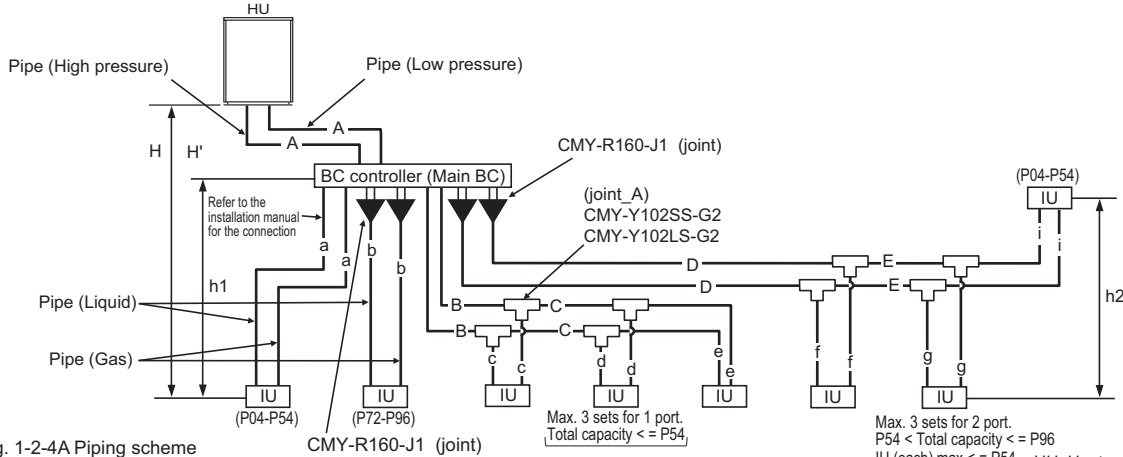


Fig. 1-2-4A Piping scheme

Piping length limitation *8

Item	Piping in the figure	Max. length	Max. equivalent length
Total piping length (Total length of high pressure and liquid pipes)	A+B+C+D+E+a+b+c+d+e+f+g+i	*1	-
Farthest IU from HU	A+D+E+i	165 [541']	190 [623']
Distance between HU and BC	A	110 [360'] *1	110 [360'] *1
Farthest IU from BC controller	D+E+i	60 [197'] *2*3	60 [197'] *2*3
Height between HU and IU (HU above IU)	H	50 [164'] *6	-
Height between HU and IU (HU under IU)	H'	40 [131'] *7	-
Height between IU and BC	h1	15 [49'] (10 [32']) *4	-
Height between IU and IU	h2	30 [98'] (20 [65']) *5	-

Bent equivalent length

Heat source Model	M (m/bent [ft./bent])
P72ZLMU	0.35 [1.15']
P96ZLMU	0.42 [1.38']
P120ZLMU	0.47 [1.54']
P144ZLMU	0.50 [1.64']
P168ZLMU	0.50 [1.64']
P192ZLMU	0.50 [1.64']

HU: Heat source Unit; IU: Indoor Unit; BC: BC controller

*1. Refer to the section 1-2-7.

*2. Details refer to Fig. 1.

*3. When the P72 or P96 model of indoor units are connected to the system, the maximum distance from the BC controller to the farthest indoor unit indicated as "D + E + i" in the figure is 40 meters.

*4. Distance of Indoor sized P72, P96 from BC must be less than 10 m, if any.

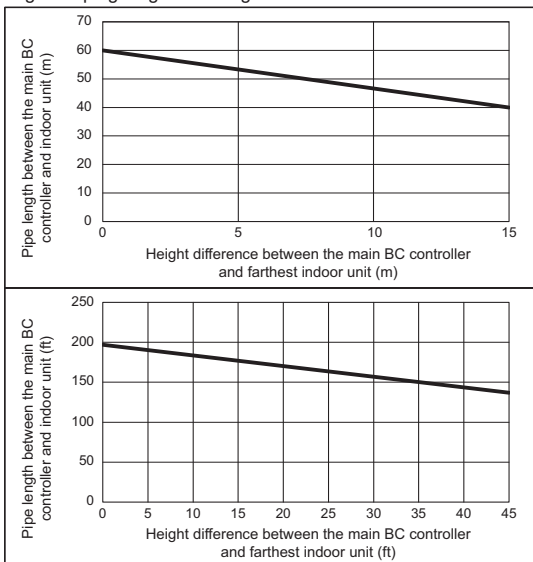
*5. Distance of Indoor sized P72, P96 from IU must be less than 20 m, if any.

*6. 90 m is available depending on the model and installation conditions. For more detailed information, contact your local distributor.

*7. 60 m is available depending on the model and installation conditions. For more detailed information, contact your local distributor.

*8. Total length of high-pressure pipes and liquid pipes

Fig. 1 Piping length and height between IU and BC controller



Piping "A" size selection rule (mm [in.])

Heat source Model	Pipe(High pressure)	Pipe(Low pressure)
P72ZLMU	ø15.88 [5/8"]	ø19.05 [3/4"]
P96-120ZLMU	ø19.05 [3/4"]	ø22.20 [7/8"]
P144-192ZLMU	ø22.20 [7/8"]	ø28.58 [1-1/8"]

*9. When the piping length is 65 m or longer, use the ø28.58 [1-1/8"] pipe for the part that exceeds 65 m.

Piping "B", "C", "D", "E" size selection rule (mm [in.])

Total down-stream Indoor capacity	Pipe(Liquid)	Pipe(Gas)
P54 or less	ø9.52 [3/8"]	ø15.88 [5/8"]
P55-P72	ø9.52 [3/8"]	ø19.05 [3/4"]
P73-P96	ø9.52 [3/8"]	ø22.20 [7/8"]

Piping "a", "b", "c", "d", "e", "f", "g", "i" size selection rule (mm [in.])

Indoor Unit size	Pipe(Liquid)	Pipe(Gas)
P04-P18	ø6.35 [1/4"]	ø12.70 [1/2"]
P24-P54	ø9.52 [3/8"]	ø15.88 [5/8"]
P72	ø9.52 [3/8"]	ø19.05 [3/4"]
P96	ø9.52 [3/8"]	ø22.20 [7/8"]

Selection criteria for joints_A

Total down-stream Indoor capacity	Joint
-P72	CMY-Y102SS-G2
P73-P96	CMY-Y102LS-G2

1. Piping Design

1-2-5. IF more than 16 ports are in use, or if there is more than one BC controller in use for one Heat source unit

- Note1. No Header usable on PQRY system.
 Note2. Indoor unit sized P72-P96 should be connected to BC controller via Y shape joint CMY-R160-J1.
 Note3. Indoor unit sized P72-P96 does NOT share BC controller ports with other Indoor units ;
 Note4. As bents cause pressure loss on transportation of refrigerant, fewer bents design is better ;
 Piping length needs to consider the actual length and equivalent length which bents are counted.
 Equivalent piping length (m)=Actual piping length+“M” x Number of bent.
 Note5. Set DIP-SW 4-6 to ON of BC controller, in case of connected Indoor unit sized P72-P96 with 2 ports.
 Note6. Do not connect multiple indoor units to the same port when operating each of them in different mode (cooling, heating, stop, and thermo-off). The indoor units connected to the same port must be set to operate in the same mode. Set them in the same group to make them run/stop in the same mode all together. For other options, enable the thermo setting on the remote controller, or set the common thermostat (optional) to run/stop the units in the same mode based on a representative temperature.
 Note7. The maximum total capacity of indoor units that can be connected to each sub BC controller CMB-P•NU-KB1 is 126.
 Note8. Indoor capacity is described as its model size. For example, PEFY-P24NMAU-E3, its capacity is P24.
 Note9. Total down-stream Indoor capacity is the summary of the model size of Indoors down-stream. For example, PEFY-P24NMAU-E3 + PEFY-P06NMAU-E3 : Total Indoor capacity = P24 + P06 = P30.
 Note10. To connect the BC controller to the main pipe, use the reducer (CMY-R301S-G, CMY-R302S-G1, or CMY-R304S-G1).
 Note11. To connect the sub BC controller to the main BC controller, use the reducer (CMY-R303S-G1, CMY-R305S-G1, or CMY-R306S-G1).
 Note12. Install the pipes correctly referring to the section titled "Procedures for installing the branched pipes."
 Note13. Up to 11 sub BC controllers can be connected.

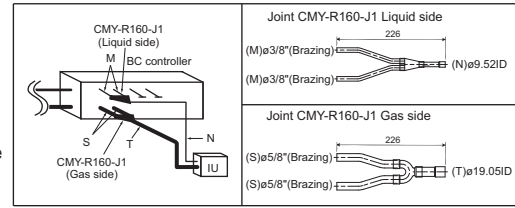


Fig. 1-2-5AA

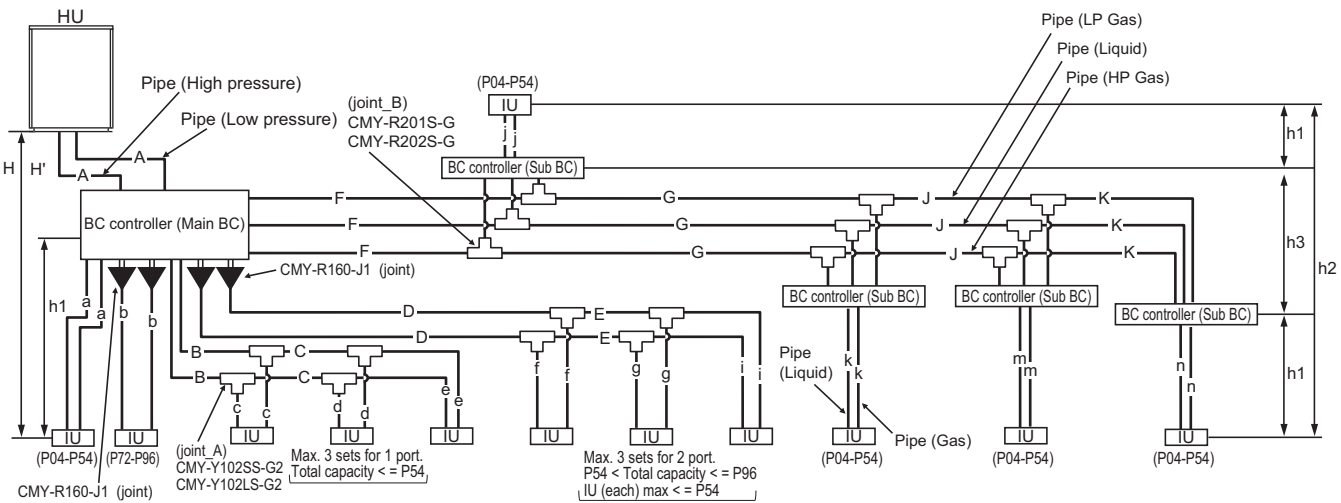


Fig. 1-2-5A Piping scheme

HU: Heat source unit, IU: Indoor unit

Piping length limitation *10

Item	Piping in the figure	Max. length	Max. equivalent length
Total piping length (Total length of high pressure and liquid pipes)	A+B+C+D+E+F+G+J+K+a+b+c+d+e+f+g+i+j+k+m+n	*1	-
Farthest IU from HU	A+F+G+J+K+n	165 [541']	190 [623']
Distance between HU and BC	A	110 [360'] *1	110 [360'] *1
Farthest IU from BC controller	D+E+i	60 [197'] *2*3	60 [197'] *2*3
Farthest IU from BC controller via Sub BC controller	F+G+J+K+n	90 [295'] *9	90 [295'] *9
Height between HU and IU (HU above IU)	H	50 [164'] *7	-
Height between HU and IU (HU under IU)	H'	40 [131'] *8	-
Height between IU and BC	h1	15 [49'] (10 [32']) *4	-
Height between IU and IU	h2	30 [98'] (20 [65']) *5	-
Height between BC(Main or Sub) and BC(Sub)	h3	15 [49'] (10 [32']) *6	-

HU: Heat source Unit; IU: Indoor Unit; BC: BC controller

*1. Refer to the section 1-2-7.

*2. Details refer to Fig. 2.

*3. When the P72 or P96 model of indoor units are connected to the system, the maximum distance from the BC controller to the farthest indoor unit indicated as "D + E + i" in the figure is 40 meters.

*4. Distance of indoor sized P72, P96 from BC must be less than 10 m, if any.

*5. Distance of indoor sized P72, P96 from IU must be less than 20 m, if any.

*6. When using 2 or more Sub BC controllers, max. height "h3" should be considered.

*7. 90 m is available depending on the model and installation conditions. For more detailed information, contact your local distributor.

*8. 60 m is available depending on the model and installation conditions. For more detailed information, contact your local distributor.

*9. When the piping length or the vertical separation exceeds the limit specified in Fig. 2, connect a sub BC to the system. The restriction for a system with a sub BC connection is shown in Fig. 3. When a given system configuration falls within the shaded area in Fig. 3, increase the size of the high-pressure pipe and the liquid pipe between the main BC and sub BC by one size. When using P12, P15, P18, P36, or P48 model of indoor units, increase the size of the liquid branch pipe between the sub BC and indoor unit by one size.

When using indoor models P54 or larger, the restrictions shown in Fig. 2 cannot be exceeded.

*10. Total length of high-pressure pipes and liquid pipes

Bent equivalent length

Heat source Model	M (m/bent ft./bent)
P72ZLMU	0.35 [1.15']
P96ZLMU	0.42 [1.38']
P120ZLMU	0.47 [1.54']
P144ZLMU	0.50 [1.64']
P168ZLMU	0.50 [1.64']
P192ZLMU	0.50 [1.64']

1. Piping Design

Piping length and height between IU and BC controller

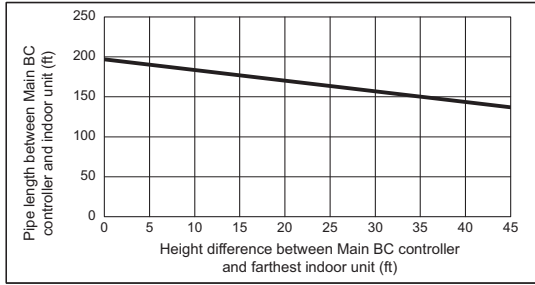


Fig. 2

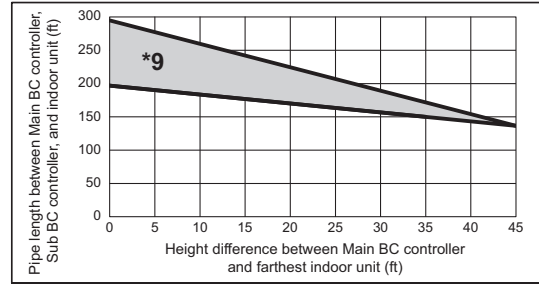
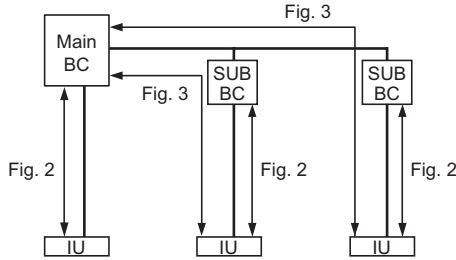


Fig. 3



*9. When the piping length or the vertical separation exceeds the limit specified in Fig. 2, connect a sub BC to the system.
 The restriction for a system with a sub BC connection is shown in Fig. 3.
 When a given system configuration falls within the shaded area in Fig. 3, increase the size of the high-pressure pipe and the liquid pipe between the main BC and sub BC by one size.
 The maximum liquid branch pipe diameter is $\phi 19.05$. If a given system already has a $\phi 19.05$ -pipe between the main BC and sub BC, there is no need to increase the pipe size.
 When using P12, P15, P18, P36, or P48 model of indoor units, increase the size of the liquid branch pipe between the sub BC and indoor unit by one size.
 When using indoor models P54 or larger, the restrictions shown in Fig. 2 cannot be exceeded.

Piping "A" size selection rule

Heat source Model	Pipe(High pressure)	Pipe(Low pressure)
P72ZLMU	$\phi 15.88$ [5/8"]	$\phi 19.05$ [3/4"]
P96-120ZLMU	$\phi 19.05$ [3/4"]	$\phi 22.20$ [7/8"]
P144-192ZLMU	$\phi 22.20$ [7/8"]	$\phi 28.58$ [1-1/8"]

Selection criteria for joints_A

Total down-stream Indoor capacity	Joint
-P72	CMY-Y102SS-G2
P73-P96	CMY-Y102LS-G2

Piping "B", "C", "D", "E" size selection rule

Total down-stream Indoor capacity	Pipe(Liquid)	Pipe(Gas)
P54 or less	$\phi 9.52$ [3/8"]	$\phi 15.88$ [5/8"]
P55-P72	$\phi 9.52$ [3/8"]	$\phi 19.05$ [3/4"]
P73-P96	$\phi 9.52$ [3/8"]	$\phi 22.20$ [7/8"]

Selection criteria for joints_B

Total down-stream Indoor capacity	Joint
-P120	CMY-R201S-G
P121-P216	CMY-R202S-G

Piping "a", "b", "c", "d", "e", "f", "g", "i", "j", "k", "m", "n" size selection rule (mm [in.])

Indoor Unit size	Pipe(Liquid)	Pipe(Gas)
P04-P18	$\phi 6.35$ [1/4"]	$\phi 12.70$ [1/2"]
P24-P54	$\phi 9.52$ [3/8"]	$\phi 15.88$ [5/8"]
P72	$\phi 9.52$ [3/8"]	$\phi 19.05$ [3/4"]
P96	$\phi 9.52$ [3/8"]	$\phi 22.20$ [7/8"]

Piping "F", "G", "J", "K" size selection rule

Total down-stream Indoor capacity	Pipe(Liquid)	Pipe(HP Gas)	Pipe(LP Gas)
P72 or less	$\phi 9.52$ [3/8"]	$\phi 15.88$ [5/8"]	$\phi 19.05$ [3/4"]
P73 to P108	$\phi 9.52$ [3/8"]	$\phi 19.05$ [3/4"]	$\phi 22.20$ [7/8"]
P109 to P126	$\phi 12.70$ [1/2"]	$\phi 19.05$ [3/4"]	$\phi 28.58$ [1-1/8"]
P127 to P144	$\phi 12.70$ [1/2"]	$\phi 22.20$ [7/8"]	$\phi 28.58$ [1-1/8"]
P145 to P180	$\phi 15.88$ [5/8"]	$\phi 22.20$ [7/8"]	$\phi 28.58$ [1-1/8"]
P181 to P234	$\phi 15.88$ [5/8"]	$\phi 28.58$ [1-1/8"]	$\phi 28.58$ [1-1/8"]
P235 to P288	$\phi 19.05$ [3/4"]	$\phi 28.58$ [1-1/8"]	$\phi 34.93$ [1-3/8"]
P289 to P360	$\phi 19.05$ [3/4"]	$\phi 28.58$ [1-1/8"]	$\phi 41.28$ [1-5/8"]
P361 or above	$\phi 19.05$ [3/4"]	$\phi 34.93$ [1-3/8"]	$\phi 41.28$ [1-5/8"]

HP: High pressure, LP: Low pressure

1. Piping Design

1-2-6. IF more than 16 ports are in use, or if there is more than one BC controller in use for two Heat source units

- Note1. No Header usable on PQRY system.
 Note2. Indoor unit sized P72-P96 should be connected to BC controller via Y shape joint CMY-R160-J1.
 Note3. Indoor unit sized P72-P96 does NOT share BC controller ports with other Indoor units ;
 Note4. As bents cause pressure loss on transportation of refrigerant, fewer bents design is better ;
 Piping length needs to consider the actual length and equivalent length which bents are counted.
 Equivalent piping length (m)=Actual piping length+"M" x Number of bent.
 Note5. Set DIP-SW 4-6 to ON of BC controller, in case of connected Indoor unit sized P72-P96 with 2 ports.
 Note6. Do not connect multiple indoor units to the same port when operating each of them in different mode (cooling, heating, stop, and thermo-off). The indoor units connected to the same port must be set to operate in the same mode. Set them in the same group to make them run/stop in the same mode all together. For other options, enable the thermo setting on the remote controller, or set the common thermostat (optional) to run/stop the units in the same mode based on a representative temperature.
 Note7. The maximum total capacity of indoor units that can be connected to each sub BC controller CMB-P*NU-KB1 is P126.
 Note8. Indoor capacity is described as its model size. For example, PEFY-P24NMAU-E3, its capacity is P24.
 Note9. Total down-stream Indoor capacity is the summary of the model size of Indoors down-stream. For example, PEFY-P24NMAU-E3 + PEFY-P06NMAU-E3 : Total Indoor capacity = P24 + P06 = P30.
 Note10. To connect the BC controller to the main pipe, use the reducer (CMY-R301S-G, CMY-R302S-G1, or CMY-R304S-G1).
 Note11. To connect the sub BC controller to the main BC controller, use the reducer (CMY-R303S-G1, CMY-R305S-G1, or CMY-R306S-G).
 Note12. Install the pipes correctly referring to the section titled "Procedures for installing the branched pipes."
 Note13. Up to 11 sub BC controllers can be connected.

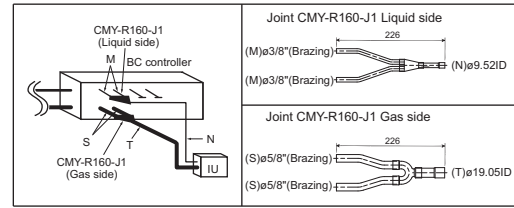
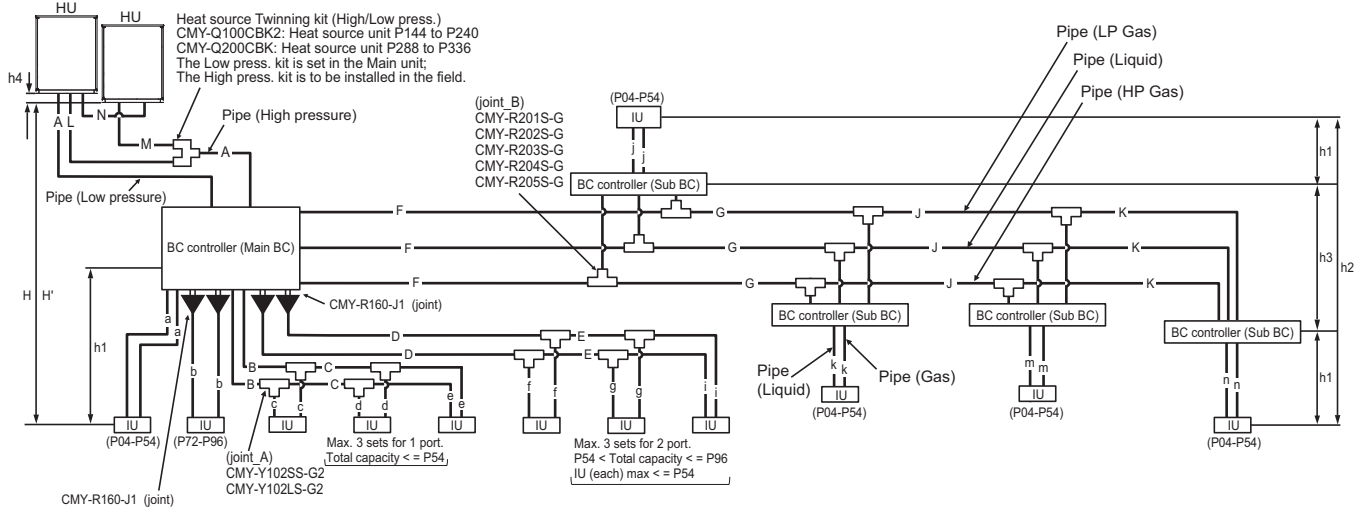


Fig. 1-2-6AA



HU: Heat source unit, IU: Indoor unit

Fig. 1-2-6A Piping scheme

Piping length limitation *11

Item	Piping in the figure	Max. length	Max. equivalent length (m [ft.])
Total piping length (Total length of high pressure and liquid pipes)	$L+M+A+B+C+D+E+F+G+J+K+a+b+c+d+e+f+g+i+j+k+m+n$	*1	-
Farthest IU from HU	$L(M)+A+F+G+J+K+n$	165 [541']	190 [623']
Distance between HU and BC	$L(M)+A$	110 [360'] *1	110 [360'] *1
Farthest IU from BC controller	$D+E+i$	60 [197'] *2 *3	60 [197'] *2*3
Farthest IU from BC controller via Sub BC controller	$F+G+J+K+n$	90 [295'] *9	90 [295'] *9
Height between HU and IU (HU above IU)	H	50 [164'] *7	-
Height between HU and IU (HU under IU)	H'	40 [131'] *8	-
Height between IU and BC	h1	15 [49'] (10 [32']) *4	-
Height between IU and IU	h2	30 [98'] (20 [65']) *5	-
Height between BC(Main or Sub) and BC(Sub)	h3	15 [49'] (10 [32']) *6	-
Distance between Main unit and Sub unit	$L+M$ or N	5 [16']	-
Height between Main unit and Sub unit	h4	0.1 [0.3']	-

HU: Heat source Unit; IU: Indoor Unit; BC: BC controller

*1. Refer to the section 1-2-7.

*2. Details refer to Fig. 2.

*3. When the P72 or P96 model of indoor units are connected to the system, the maximum distance from the BC controller to the farthest indoor unit (indicated as "D + E + i" in the figure is 40 meters.)

*4. Distance of Indoor sized P72, P96 from BC must be less than 10 m, if any.

*5. Distance of Indoor sized P72, P96 from IU must be less than 20 m, if any.

*6. When using 2 or more Sub BC controllers, max. height "h3" should be considered.

*7. 90 m is available depending on the model and installation conditions. For more detailed information, contact your local distributor.

*8. 60 m is available depending on the model and installation conditions. For more detailed information, contact your local distributor.

*9. When the piping length or the vertical separation exceeds the limit specified in Fig. 2, connect a sub BC to the system.

The restriction for a system with a sub BC connection is shown in Fig. 3.

When a given system configuration falls within the shaded area in Fig. 3, increase the size of the high-pressure pipe and the liquid pipe between the main BC and sub BC by one size.

When using P12, P15, P18, P36, or P48 model of indoor units, increase the size of the liquid branch pipe between the sub BC and indoor unit by one size.

When using indoor models P54 or larger, the restrictions shown in Fig. 2 cannot be exceeded.

*10. When the high pressure piping length is 65 m or less, use ø22.2 (ø7/8) pipe.

When the high pressure piping length exceeds 65 m, use ø22.2 (ø7/8) pipe until 65 m, use ø28.58 (ø1-1/8) pipe for the part that exceeds 65 m.

*11. Total length of high-pressure pipes and liquid pipes

Bent equivalent length

Heat source Model	M (m/bent [ft./bent])
P144ZSLMU	0.50 [1.64']
P168ZSLMU	0.50 [1.64']
P192ZSLMU	0.50 [1.64']
P216ZSLMU	0.50 [1.64']
P240ZSLMU	0.50 [1.64']
P288ZSLMU	0.70 [2.29']
P312ZSLMU	0.70 [2.29']
P336ZSLMU	0.80 [2.62']

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1, Z(S)LMU-A1

1. Piping Design

Piping length and height between IU and BC controller

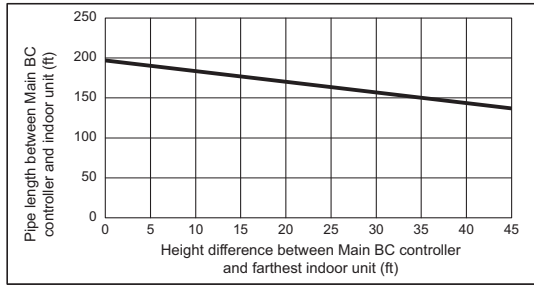


Fig. 2

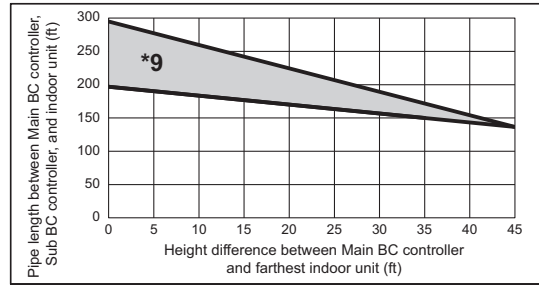
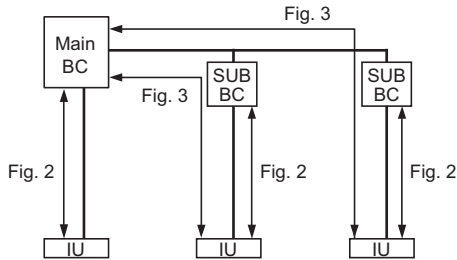


Fig. 3



*9. When the piping length or the vertical separation exceeds the limit specified in Fig. 2, connect a sub BC to the system.

The restriction for a system with a sub BC connection is shown in Fig. 3. When a given system configuration falls within the shaded area in Fig. 3, increase the size of the high-pressure pipe and the liquid pipe between the main BC and sub BC by one size. The maximum liquid branch pipe diameter is $\phi 19.05$. If a given system already has a $\phi 19.05$ -pipe between the main BC and sub BC, there is no need to increase the pipe size. When using P12, P15, P18, P36, or P48 model of indoor units, increase the size of the liquid branch pipe between the sub BC and indoor unit by one size. When using indoor models P54 or larger, the restrictions shown in Fig. 2 cannot be exceeded.

Piping "A" size selection rule (mm [in.])

Heat source Model	Pipe(High pressure)	Pipe(Low pressure)
P144-192ZSLMU	$\phi 22.20$ [7/8"]	$\phi 28.58$ [1-1/8"]
P216ZSLMU	$\phi 22.20$ [7/8"] *12	$\phi 28.58$ [1-1/8"]
P240ZSLMU	$\phi 22.20$ [7/8"] *12	$\phi 34.93$ [1-3/8"]
P288-312ZSLMU	$\phi 28.58$ [1-1/8"]	$\phi 34.93$ [1-3/8"]
P336ZSLMU	$\phi 28.58$ [1-1/8"]	$\phi 41.28$ [1-5/8"]

*12. When the piping length is 65 m or longer, use the $\phi 28.58$ [1-1/8] pipe for the part that exceeds 65 m.

Piping "L", "M", "N" size selection rule (mm [in.])

Heat source Model	Pipe(High pressure)	Pipe(Low pressure)
P72ZLMU	$\phi 15.88$ [5/8"]	$\phi 19.05$ [3/4"]
P96ZLMU	$\phi 19.05$ [3/4"]	$\phi 22.20$ [7/8"]
P120ZLMU	$\phi 19.05$ [3/4"]	$\phi 22.20$ [7/8"]
P144ZLMU	$\phi 22.20$ [7/8"]	$\phi 28.58$ [1-1/8"]
P168ZLMU	$\phi 22.20$ [7/8"]	$\phi 28.58$ [1-1/8"]

Piping "B", "C", "D", "E" size selection rule (mm [in.])

Total down-stream Indoor capacity	Pipe(Liquid)	Pipe(Gas)
P54 or less	$\phi 9.52$ [3/8"]	$\phi 15.88$ [5/8"]
P55-P72	$\phi 9.52$ [3/8"]	$\phi 19.05$ [3/4"]
P73-P96	$\phi 9.52$ [3/8"]	$\phi 22.20$ [7/8"]

Selection criteria for joints_A

Total down-stream Indoor capacity	Joint
-P72	CMY-Y102SS-G2
P73-P96	CMY-Y102LS-G2

Piping "a", "b", "c", "d", "e", "f", "g", "i", "j", "k", "m", "n" size selection rule (mm [in.])

Indoor Unit size	Pipe(Liquid)	Pipe(Gas)
P04-P18	$\phi 6.35$ [1/4"]	$\phi 12.70$ [1/2"]
P24-P54	$\phi 9.52$ [3/8"]	$\phi 15.88$ [5/8"]
P72	$\phi 9.52$ [3/8"]	$\phi 19.05$ [3/4"]
P96	$\phi 9.52$ [3/8"]	$\phi 22.20$ [7/8"]

Selection criteria for joints_B

Total down-stream Indoor capacity	Joint
-P120	CMY-R201S-G
P121-P216	CMY-R202S-G
P217-P240	CMY-R203S-G
P241-P360	CMY-R204S-G
P361-	CMY-R205S-G

Piping "F", "G", "J", "K" size selection rule (mm [in.])

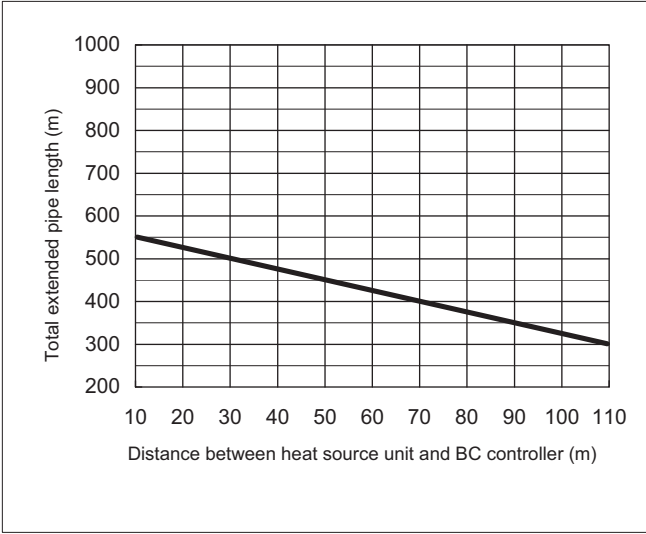
Total down-stream Indoor capacity	Pipe(Liquid)	Pipe(HP Gas)	Pipe(LP Gas)
P72 or less	$\phi 9.52$ [3/8"]	$\phi 15.88$ [5/8"]	$\phi 19.05$ [3/4"]
P73 to P108	$\phi 9.52$ [3/8"]	$\phi 19.05$ [3/4"]	$\phi 22.20$ [7/8"]
P109 to P126	$\phi 12.70$ [1/2"]	$\phi 19.05$ [3/4"]	$\phi 28.58$ [1-1/8"]
P127 to P144	$\phi 12.70$ [1/2"]	$\phi 22.20$ [7/8"]	$\phi 28.58$ [1-1/8"]
P145 to P180	$\phi 15.88$ [5/8"]	$\phi 22.20$ [7/8"]	$\phi 28.58$ [1-1/8"]
P181 to P234	$\phi 15.88$ [5/8"]	$\phi 28.58$ [1-1/8"]	$\phi 28.58$ [1-1/8"]
P235 to P288	$\phi 19.05$ [3/4"]	$\phi 28.58$ [1-1/8"]	$\phi 34.93$ [1-3/8"]
P289 to P360	$\phi 19.05$ [3/4"]	$\phi 28.58$ [1-1/8"]	$\phi 41.28$ [1-5/8"]
P361 or above	$\phi 19.05$ [3/4"]	$\phi 34.93$ [1-3/8"]	$\phi 41.28$ [1-5/8"]

HP: High pressure, LP: Low pressure

1. Piping Design

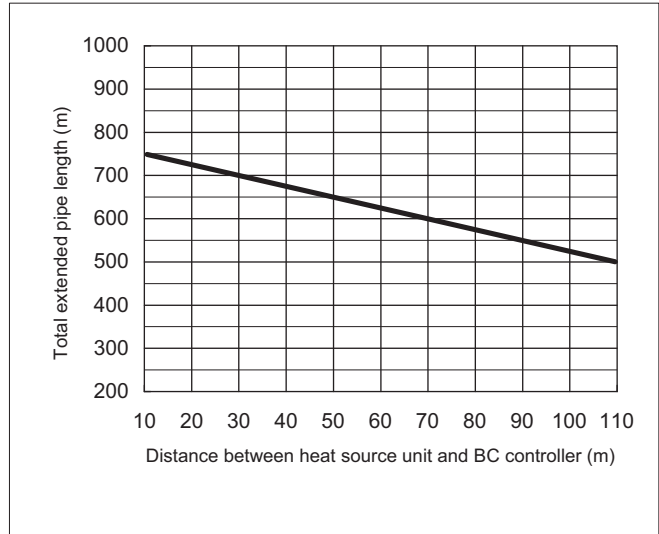
1-2-7. Total piping length restrictions (m)

[PQRY-P72, 96, 120TLMU-A1/YLMU-A1]



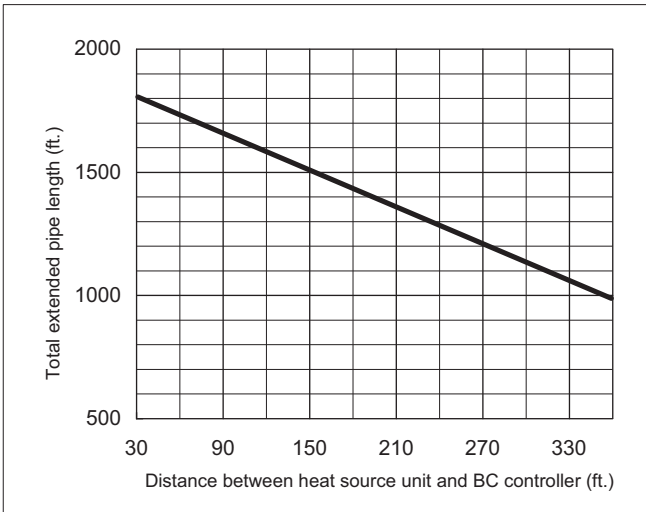
[PQRY-P144, 168, 192, 216, 240TLMU-A1/YLMU-A1]

[PQRY-P144, 168, 192, 216, 240, 288, 312, 336TSLMU-A1/YSLMU-A1]



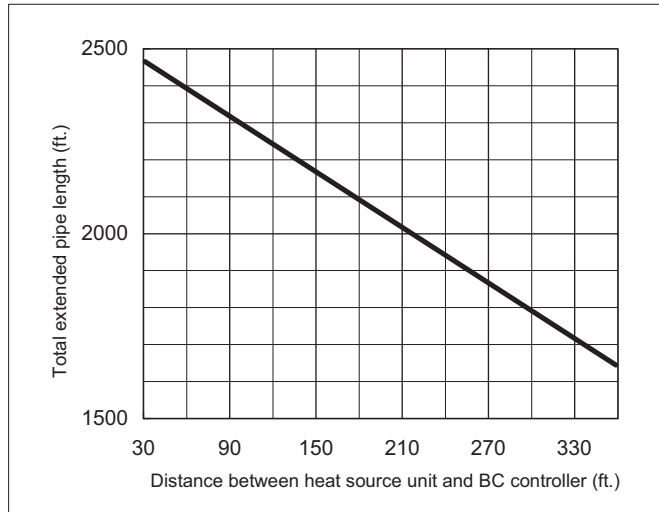
Total piping length restrictions (ft.)

[PQRY-P72, 96, 120TLMU-A1/YLMU-A1]



[PQRY-P144, 168, 192, 216, 240TLMU-A1/YLMU-A1]

[PQRY-P144, 168, 192, 216, 240, 288, 312, 336TSLMU-A1/YSLMU-A1]

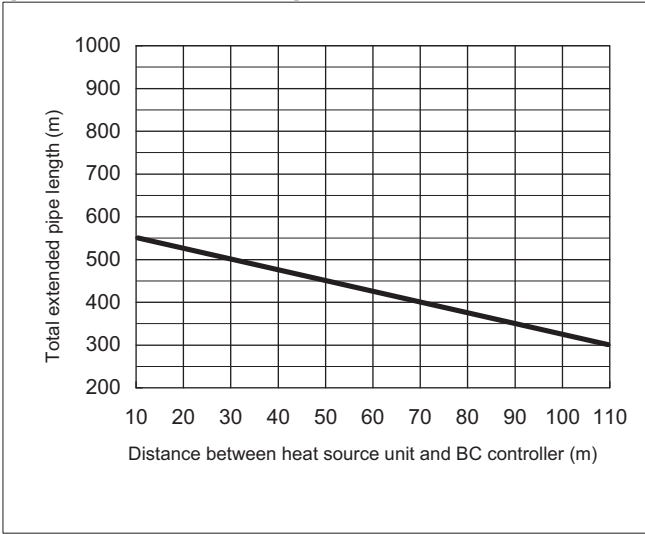


PQRY-P-T(S)LMU-A1, Y(S)LMU-A1, Z(S)LMU-A1

1. Piping Design

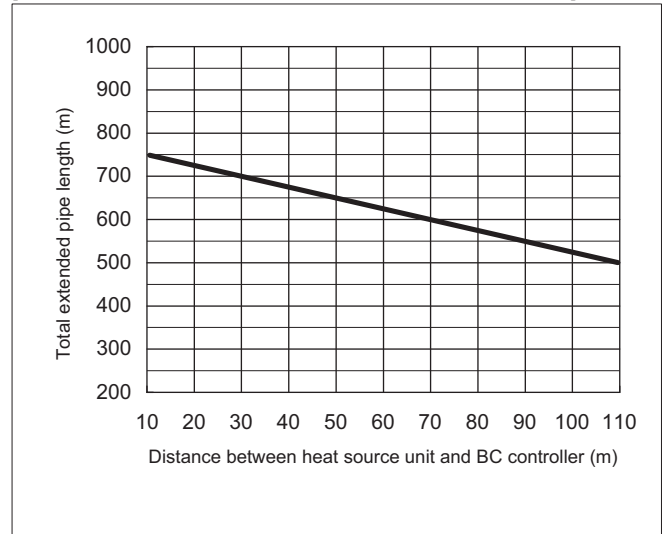
Total piping length restrictions (m)

[PQRY-P72, 96, 120ZLMU-A1]



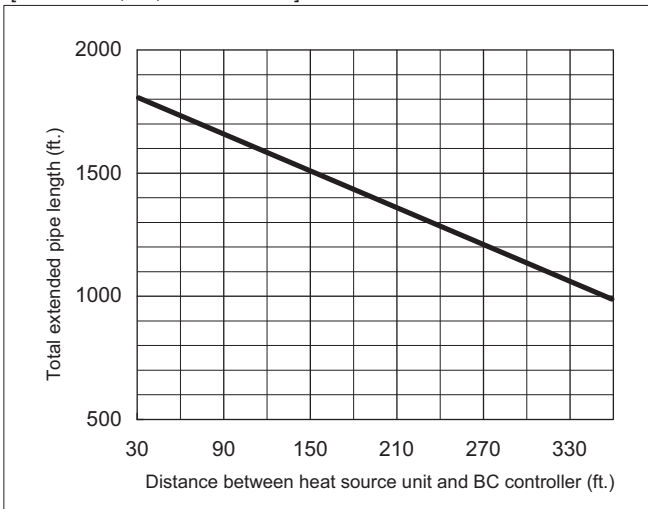
[PQRY-P144, 168, 192ZLMU-A1]

[PQRY-P144, 168, 192, 216, 240, 288, 312, 336ZLMU-A1]



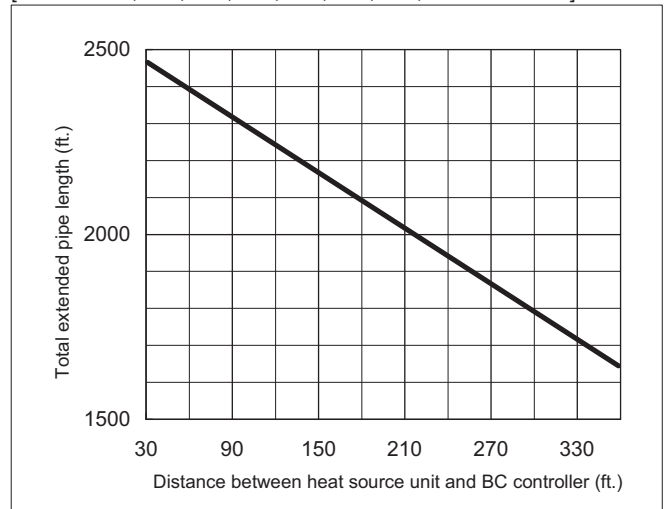
Total piping length restrictions (ft.)

[PQRY-P72, 96, 120ZLMU-A1]



[PQRY-P144, 168, 192ZLMU-A1]

[PQRY-P144, 168, 192, 216, 240, 288, 312, 336ZLMU-A1]



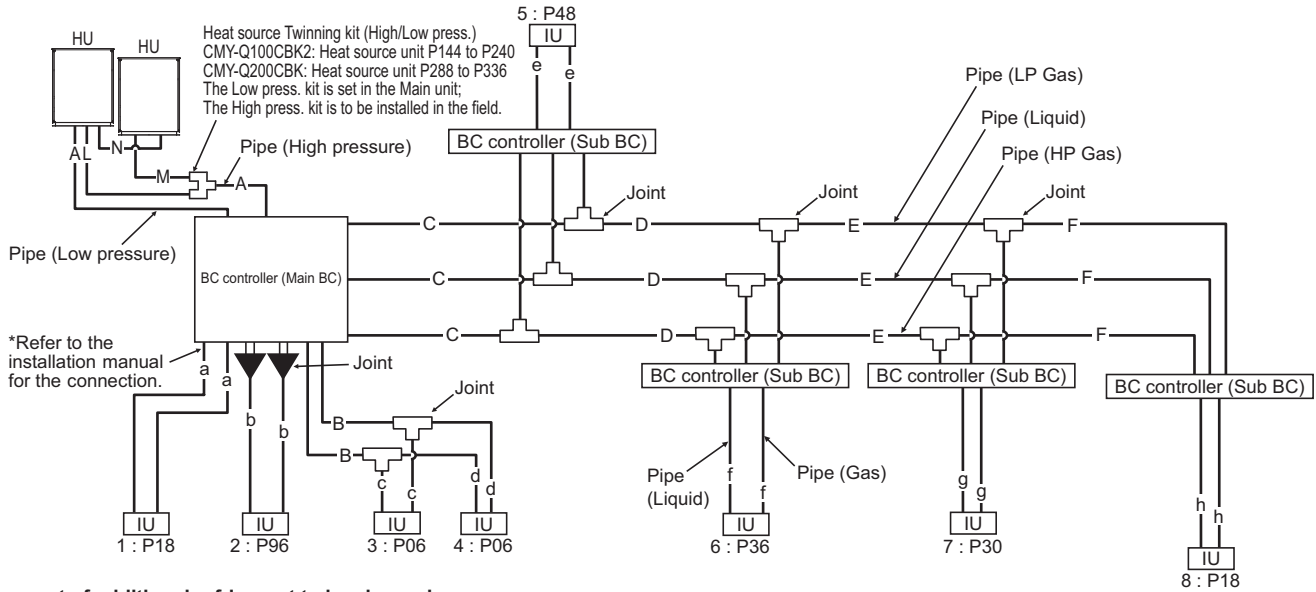
PQRY-P-T(S)LMU-A1, Y(S)LMU-A1, Z(S)LMU-A1

1. Piping Design

1-3. Refrigerant charging calculation

■ PQRV-P-T(S)LMU-A1/Y(S)LMU-A1

Sample connection (with 5 BC controllers and 8 indoor units) (PQRV-P288YSLMU-A1)



■ Amount of additional refrigerant to be charged

Refrigerant for extended pipes (field piping) is not factory-charged to the outdoor unit. Add an appropriate amount of refrigerant for each pipes on site. Record the size of each high pressure pipe and liquid pipe, and the amount of refrigerant that was charged on the outdoor unit for future reference.

■ Calculating the amount of additional refrigerant to be charged

The amount of refrigerant to be charged is calculated with the size of the on-site-installed high pressure pipes and liquid pipes, and their length.

Calculate the amount of refrigerant to be charged according to the formula below.

Round up the calculation result to the nearest 0.1kg. (i.e., 16.03 kg = 16.1 kg)

<Amount of additional refrigerant to be charged>

■ Calculating the amount of additional refrigerant to be charged

Units "m" and "kg" (In an WR2 system)

<Formula>

• When the piping length from the outdoor unit to the farthest indoor unit is 30.5 m (100 ft) or shorter

Amount of additional charge (kg)	=	High-pressure pipe ø28.58 total length × 0.36 (kg/m)	+	High-pressure pipe ø22.2 total length × 0.23 (kg/m)	+	High-pressure pipe ø19.05 total length × 0.16 (kg/m)	+	High-puressure pipe ø15.88 total length × 0.11(kg/m)		
	+	Liquid pipe ø19.05 total length × 0.29 (kg/m)	+	Liquid pipe ø15.88 total length × 0.2 (kg/m)	+	Liquid pipe ø12.7 total length × 0.12 (kg/m)	+	Liquid pipe ø9.52 total length × 0.06 (kg/m)	+	Liquid pipe ø6.35 total length × 0.024 (kg/m)

Additional charge		
Heat source unit model	Charged amount	
Single	P216	1.0 kg
	P240	1.0 kg

Main or Sub BC controller	Amount (kg/unit)
J-type	1.5
JA-type	3.0
KA-type	4.7
KB-type	0.4

Total capacity of connected indoor units	Amount (kg) (to be added for indoor unit)
27 or below	2.0
28 to 54	2.5
55 to 126	3.0
127 to 144	3.5
145 to 180	4.5
181 to 234	5.0
235 to 273	6.0
274 to 307	8.0
308 to 342	9.0
343 to 411	10.0
412 to 450	12.0
451 or above	14.0

* High-pressure pipe: Main high-pressure pipe between outdoor unit and BC controller

* Liquid pipe: Liquid pipe between BC controller and indoor unit or between main BC controller and sub BC controller

1. Piping Design

* When connecting the CMB-P**-NU-G1, CMB-P**-NU-GA1, CMB-P**-NU-HA1, CMB-P**-NU-GB1, or CMB-P**-NU-HB1 to a given system, add the amount of refrigerant as indicated in the table below.

BC controller	Amount (kg/unit)
G1/GA1-type	3.0
HA1-type	5.0
GB1/HB1-type	1.0

• When the piping length from the outdoor unit to the farthest indoor unit is longer than 30.5 m (100 ft)

Amount of additional charge (kg)	High-pressure pipe ø28.58 total length × 0.33 (kg/m)	+	High-pressure pipe ø22.2 total length × 0.21 (kg/m)	+	High-pressure pipe ø19.05 total length × 0.14 (kg/m)	+	High-pressure pipe ø15.88 total length × 0.1 (kg/m)	+	Liquid pipe ø19.05 total length × 0.26 (kg/m)	+	Liquid pipe ø15.88 total length × 0.18 (kg/m)	+	Liquid pipe ø12.7 total length × 0.11 (kg/m)	+	Liquid pipe ø9.52 total length × 0.054 (kg/m)	+	Liquid pipe ø6.35 total length × 0.021 (kg/m)
	Additional charge																
+	Heat source unit model		Charged amount														
	Single	P216	1.0 kg														
		P240	1.0 kg														
+	Main or Sub BC controller	Amount (kg/unit)	Total capacity of connected indoor units		Amount (kg) (to be added for indoor unit)												
	J-type	1.5	27 or below		2.0												
	JA-type	3.0	28 to 54		2.5												
	KA-type	4.7	55 to 126		3.0												
	KB-type	0.4	127 to 144		3.5												
			145 to 180		4.5												
			181 to 234		5.0												
			235 to 273		6.0												
			274 to 307		8.0												
			308 to 342		9.0												
			343 to 411		10.0												
			412 to 450		12.0												
			451 or above		14.0												

* When connecting PEFY-P06NMAU-E**, PEFY-P24NMAU-E**, or PEFY-P36NMAU-E**, add 0.55 kg [20 oz] of refrigerant per indoor unit.

* When connecting PLFY-EP06NEMU-E**, PLFY-EP18NEMU-E**, or PLFY-EP36NEMU-E**, add 0.67 kg [24 oz] of refrigerant per indoor unit.

* When connecting PLFY-P08NBMU-E2, add 0.3kg [11oz] of refrigerant per indoor unit.

* When connecting PLFY-EP08NEMU-E, add 0.3kg [11oz] of refrigerant per indoor unit.

* High-pressure pipe: Main high-pressure pipe between outdoor unit and BC controller

* Liquid pipe: Liquid pipe between BC controller and indoor unit or between main BC controller and sub BC controller

* When connecting the CMB-P**-NU-G1, CMB-P**-NU-GA1, CMB-P**-NU-HA1, CMB-P**-NU-GB1, or CMB-P**-NU-HB1 to a given system, add the amount of refrigerant as indicated in the table below.

BC controller	Amount (kg/unit)
G1/GA1-type	0
HA1-type	2.0
GB1/HB1-type	1.0

Units "ft" and "oz" (In an WR2 system)

<Formula>

• When the piping length from the outdoor unit to the farthest indoor unit is 30.5 m (100 ft) or shorter

Amount of additional charge (oz)	High-pressure pipe ø1-1/8 total length × 3.88 (oz/ft)	+	High-pressure pipe ø7/8 total length × 2.48 (oz/ft)	+	High-pressure pipe ø3/4 total length × 1.73 (oz/ft)	+	High-pressure pipe ø5/8 total length × 1.19 (oz/ft)	+	Liquid pipe ø3/4 total length × 3.13 (oz/ft)	+	Liquid pipe ø5/8 total length × 2.16 (oz/ft)	+	Liquid pipe ø1/2 total length × 1.30 (oz/ft)	+	Liquid pipe ø3/8 total length × 0.65 (oz/ft)	+	Liquid pipe ø1/4 total length × 0.26 (oz/ft)
	Additional charge																
+	Heat source unit model		Charged amount														
	Single	P216	36 oz														
		P240	36 oz														
+	Main or Sub BC controller	Amount (oz/unit)	Total capacity of connected indoor units		Amount (oz) (to be added for indoor unit)												
	J-type	53	27 or below		71												
	JA-type	106	28 to 54		89												
	KA-type	166	55 to 126		106												
	KB-type	15	127 to 144		124												
			145 to 180		159												
			181 to 234		177												
			235 to 273		212												
			274 to 307		283												
			308 to 342		318												
			343 to 411		353												
			412 to 450		424												
			451 or above		494												

* High-pressure pipe: Main high-pressure pipe between outdoor unit and BC controller

* Liquid pipe: Liquid pipe between BC controller and indoor unit or between main BC controller and sub BC controller

1. Piping Design

* When connecting the CMB-P**-NU-G1, CMB-P**-NU-GA1, CMB-P**-NU-HA1, CMB-P**-NU-GB1, or CMB-P**-NU-HB1 to a given system, add the amount of refrigerant as indicated in the table below.

BC controller	Amount (oz/unit)
G1/GA1-type	106
HA1-type	177
GB1/HB1-type	36

• When the piping length from the outdoor unit to the farthest indoor unit is longer than 30.5 m (100 ft)

Amount of additional charge (oz)	=	High-pressure pipe ø1-1/8 total length × 3.54 (oz/ft)	+	High-pressure pipe ø7/8 total length × 2.26 (oz/ft)	+	High-pressure pipe ø3/4 total length × 1.51 (oz/ft)	+	High-pressure pipe ø5/8 total length × 1.08 (oz/ft)	
	+	Liquid pipe ø3/4 total length × 2.81 (oz/ft)	+	Liquid pipe ø5/8 total length × 1.94 (oz/ft)	+	Liquid pipe ø1/2 total length × 1.19 (oz/ft)	+	Liquid pipe ø3/8 total length × 0.59 (oz/ft)	+

Additional charge		
Heat source unit model	Charged amount	
Single	P216	36 oz
	P240	36 oz

Main or Sub BC controller	Amount (oz/unit)	Total capacity of connected indoor units	Amount (oz) (to be added for indoor unit)
J-type	53	27 or below	71
JA-type	106	28 to 54	89
KA-type	166	55 to 126	106
KB-type	15	127 to 144	124
		145 to 180	159
		181 to 234	177
		235 to 273	212
		274 to 307	283
		308 to 342	318
		343 to 411	353
		412 to 450	424
		451 or above	494

* When connecting PEFY-P06NMAU-E**, PEFY-P24NMAU-E**, or PEFY-P36NMAU-E**, add 0.55 kg [20 oz] of refrigerant per indoor unit.

* When connecting PLFY-EP06NEMU-E**, PLFY-EP18NEMU-E**, or PLFY-EP36NEMU-E**, add 0.67 kg [24 oz] of refrigerant per indoor unit.

* When connecting PLFY-P08NBMU-E2, add 0.3kg [11oz] of refrigerant per indoor unit.

* When connecting PLFY-EP08NEMU-E, add 0.3kg [11oz] of refrigerant per indoor unit.

* High-pressure pipe: Main high-pressure pipe between outdoor unit and BC controller

* Liquid pipe: Liquid pipe between BC controller and indoor unit or between main BC controller and sub BC controller

* When connecting the CMB-P**-NU-G1, CMB-P**-NU-GA1, CMB-P**-NU-HA1, CMB-P**-NU-GB1, or CMB-P**-NU-HB1 to a given system, add the amount of refrigerant as indicated in the table below.

BC controller	Amount (oz/unit)
G1/GA1-type	106
HA1-type	177
GB1/HB1-type	36

■ Amount of factory charged refrigerant

Heat source unit Model	Charged amount
P72	5.0 kg
P96	
P120	
P144	6.0 kg
P168	
P192	
P216	11.7 kg
P240	

■ Sample calculation

Units "m" and "kg"

Indoor	1: 18	A: ø28.58	40m	a: ø6.35	10m
	2: 96	B: ø9.52	10m	b: ø9.52	10m
	3: 06	C: ø12.7	20m	c: ø6.35	5m
	4: 06	D: ø9.52	5m	d: ø6.35	5m
	5: 48	E: ø9.52	5m	e: ø9.52	5m
	6: 36	F: ø9.52	5m	f: ø9.52	5m
	7: 30	G: ø19.05	3m	g: ø9.52	5m
	8: 18	H: ø19.05	1m	h: ø6.35	10m

Outdoor P288

Main BC controller CMB-P108NU-JA1
Sub BC controller CMB-P104NU-KB1 × 4

Units "ft" and "oz"

Indoor	1: 18	A: ø1-1/8	131ft	a: ø1/4	32ft
	2: 96	B: ø3/8	32ft	b: ø3/8	32ft
	3: 06	C: ø1/2	65ft	c: ø1/4	16ft
	4: 06	D: ø3/8	16ft	d: ø1/4	16ft
	5: 48	E: ø3/8	16ft	e: ø3/8	16ft
	6: 36	F: ø3/8	16ft	f: ø3/8	16ft
	7: 30	G: ø3/4	9ft	g: ø3/8	16ft
	8: 18	H: ø3/4	3ft	h: ø1/4	32ft

Outdoor P288

Main BC controller CMB-P108NU-JA1
Sub BC controller CMB-P104NU-KB1 × 4

The total length of each liquid line as follows:

ø28.58: A = 40 m
ø19.05: G + H = 4 m
ø12.70: C = 20 m
ø9.52: B + D + E + F + b + e + f + g = 50 m
ø6.35: a + c + d + h = 30 m

<Calculation example>

Additional refrigerant charge
= 40 × 0.33 + 4 × 0.14 + 20 × 0.11 + 50 × 0.054
+ 30 × 0.021 + 3 + 0.4 × 4 + 8
= 31.9 (31.89)kg

The total length of each liquid line as follows:

ø1-1/8: A = 131 ft
ø3/4: G + H = 12 ft
ø1/2: C = 65 ft
ø3/8: B + D + E + F + b + e + f + g = 160 ft
ø1/4: a + c + d + h = 96 ft

<Calculation example>

Additional refrigerant charge
= 131 × 3.54 + 12 × 1.51 + 65 × 1.19 + 160 × 0.59
+ 96 × 0.23 + 106 + 15 × 4 + 283
= 1124.7 (1124.69)oz

1. Piping Design

■ Limitation of the amount of refrigerant to be charged

The above calculation result of the amount of refrigerant to be charged must become below the value in the table below. If the amount of refrigerant exceeds the value in the below table, please redesign the system.

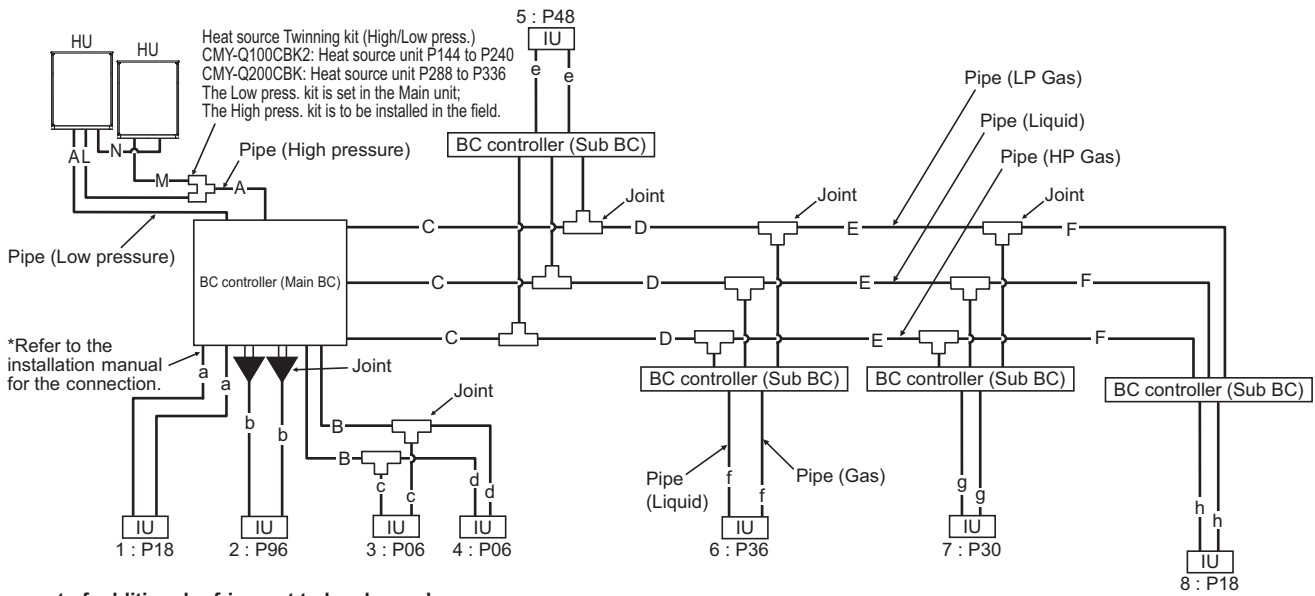
Total index of the heat source units		P72 T/YLMU	P96 T/YLMU	P120 T/YLMU	P144 T/YLMU	P168 T/YLMU	P192 T/YLMU	P216 T/YLMU	P240 T/YLMU	P144 T/YSLMU	P168 T/YSLMU
Maximum refrigerant charge	Factory charged	5.0kg	5.0kg	5.0kg	6.0kg	6.0kg	6.0kg	11.7kg	11.7kg	10.0kg	10.0kg
	Charged on site	28.0kg	30.0kg	31.0kg	46.0kg	47.0kg	48.0kg	43.3kg	44.3kg	49.0kg	50.0kg
	Total for system	33.0kg	35.0kg	36.0kg	52.0kg	53.0kg	54.0kg	55.0kg	56.0kg	59.0kg	60.0kg
	Factory charged	11 lbs 1 oz	11 lbs 1 oz	11 lbs 1 oz	13 lbs 4 oz	13 lbs 4 oz	13 lbs 4 oz	25 lbs 13 oz	25 lbs 13 oz	22 lbs 1 oz	22 lbs 1 oz
	Charged on site	61 lbs 12 oz	66 lbs 3 oz	68 lbs 6 oz	101 lbs 7 oz	103 lbs 10 oz	105 lbs 14 oz	95 lbs 8 oz	97 lbs 11 oz	108 lbs 1 oz	110 lbs 4 oz
	Total for system	72 lbs 13 oz	77 lbs 3 oz	79 lbs 6 oz	114 lbs 11 oz	116 lbs 14 oz	119 lbs 1 oz	121 lbs 5 oz	123 lbs 8 oz	130 lbs 2 oz	132 lbs 5 oz

Total index of the heat source units		P192 T/YSLMU	P216 T/YSLMU	P240 T/YSLMU	P288 T/YSLMU	P312 T/YSLMU	P336 T/YSLMU
Maximum refrigerant charge	Factory charged	10.0kg	10.0kg	10.0kg	12.0kg	12.0kg	12.0kg
	Charged on site	51.0kg	52.0kg	54.0kg	70.0kg	70.0kg	73.0kg
	Total for system	61.0kg	62.0kg	64.0kg	82.0kg	82.0kg	85.0kg
	Factory charged	22 lbs 1 oz	22 lbs 1 oz	22 lbs 1 oz	26 lbs 8 oz	26 lbs 8 oz	26 lbs 8 oz
	Charged on site	112 lbs 7 oz	114 lbs 11 oz	119 lbs 1 oz	154 lbs 6 oz	154 lbs 6 oz	160 lbs 15 oz
	Total for system	134 lbs 8 oz	136 lbs 11 oz	141 lbs 2 oz	180 lbs 13 oz	180 lbs 13 oz	187 lbs 7 oz

1. Piping Design

■ PQRV-P-Z(S)LMU-A1

Sample connection (with 5 BC controllers and 8 indoor units) (PQRV-P288ZSLMU-A1)



■ Amount of additional refrigerant to be charged

Refrigerant for extended pipes (field piping) is not factory-charged to the outdoor unit. Add an appropriate amount of refrigerant for each pipes on site. Record the size of each high pressure pipe and liquid pipe, and the amount of refrigerant that was charged on the outdoor unit for future reference.

■ Calculating the amount of additional refrigerant to be charged

The amount of refrigerant to be charged is calculated with the size of the on-site-installed high pressure pipes and liquid pipes, and their length.

Calculate the amount of refrigerant to be charged according to the formula below.

Round up the calculation result to the nearest 0.1kg. (i.e., 16.03 kg = 16.1 kg)

<Amount of additional refrigerant to be charged>

■ Calculating the amount of additional refrigerant to be charged

Units "m" and "kg" (In an WR2 system)

<Formula>

• When the piping length from the outdoor unit to the farthest indoor unit is 30.5 m (100 ft) or shorter

Amount of additional charge (kg)	=	High-pressure pipe ø28.58 total length × 0.36 (kg/m)	+	High-pressure pipe ø22.2 total length × 0.23 (kg/m)	+	High-pressure pipe ø19.05 total length × 0.16 (kg/m)	+	High-puressure pipe ø15.88 total length × 0.11(kg/m)		
	+	Liquid pipe ø19.05 total length × 0.29 (kg/m)	+	Liquid pipe ø15.88 total length × 0.2 (kg/m)	+	Liquid pipe ø12.7 total length × 0.12 (kg/m)	+	Liquid pipe ø9.52 total length × 0.06 (kg/m)	+	Liquid pipe ø6.35 total length × 0.024 (kg/m)

Additional charge			
	Heat source unit model	Charged amount	
+	Single	P216	1.0 kg
		P240	1.0 kg

Main or Sub BC controller	Amount (kg/unit)	Total capacity of connected indoor units	Amount (kg) (to be added for indoor unit)	
+	J-type	1.5	27 or below	2.0
	JA-type	3.0	28 to 54	2.5
	KA-type	4.7	55 to 126	3.0
	KB-type	0.4	127 to 144	3.5
+			145 to 180	4.5
			181 to 234	5.0
			235 to 273	6.0
			274 to 307	8.0
			308 to 342	9.0
			343 to 411	10.0
			412 to 450	12.0
			451 or above	14.0

* High-pressure pipe: Main high-pressure pipe between outdoor unit and BC controller

* Liquid pipe: Liquid pipe between BC controller and indoor unit or between main BC controller and sub BC controller

1. Piping Design

* When connecting the CMB-P**-NU-G1, CMB-P**-NU-GA1, CMB-P**-NU-HA1, CMB-P**-NU-GB1, or CMB-P**-NU-HB1 to a given system, add the amount of refrigerant as indicated in the table below.

BC controller	Amount (kg/unit)
G1/GA1-type	3.0
HA1-type	5.0
GB1/HB1-type	1.0

• When the piping length from the outdoor unit to the farthest indoor unit is longer than 30.5 m (100 ft)

Amount of additional charge (kg)	High-pressure pipe ø28.58 total length × 0.33 (kg/m)	+	High-pressure pipe ø22.2 total length × 0.21 (kg/m)	+	High-pressure pipe ø19.05 total length × 0.14 (kg/m)	+	High-pressure pipe ø15.88 total length × 0.1 (kg/m)	+	Liquid pipe ø19.05 total length × 0.26 (kg/m)	+	Liquid pipe ø15.88 total length × 0.18 (kg/m)	+	Liquid pipe ø12.7 total length × 0.11 (kg/m)	+	Liquid pipe ø9.52 total length × 0.054 (kg/m)	+	Liquid pipe ø6.35 total length × 0.021 (kg/m)
	Additional charge																
+	Heat source unit model		Charged amount														
	Single	P216	1.0 kg														
		P240	1.0 kg														
+	Main or Sub BC controller	Amount (kg/unit)	Total capacity of connected indoor units		Amount (kg) (to be added for indoor unit)												
	J-type	1.5	27 or below		2.0												
	JA-type	3.0	28 to 54		2.5												
	KA-type	4.7	55 to 126		3.0												
	KB-type	0.4	127 to 144		3.5												
			145 to 180		4.5												
			181 to 234		5.0												
			235 to 273		6.0												
			274 to 307		8.0												
			308 to 342		9.0												
			343 to 411		10.0												
			412 to 450		12.0												
			451 or above		14.0												

* When connecting PEFY-P06NMAU-E**, PEFY-P24NMAU-E**, or PEFY-P36NMAU-E**, add 0.55 kg [20 oz] of refrigerant per indoor unit.

* When connecting PLFY-EP06NEMU-E**, PLFY-EP18NEMU-E**, or PLFY-EP36NEMU-E**, add 0.67 kg [24 oz] of refrigerant per indoor unit.

* When connecting PLFY-P08NBMU-E2, add 0.3kg [11oz] of refrigerant per indoor unit.

* When connecting PLFY-EP08NEMU-E, add 0.3kg [11oz] of refrigerant per indoor unit.

* High-pressure pipe: Main high-pressure pipe between outdoor unit and BC controller

* Liquid pipe: Liquid pipe between BC controller and indoor unit or between main BC controller and sub BC controller

* When connecting the CMB-P**-NU-G1, CMB-P**-NU-GA1, CMB-P**-NU-HA1, CMB-P**-NU-GB1, or CMB-P**-NU-HB1 to a given system, add the amount of refrigerant as indicated in the table below.

BC controller	Amount (kg/unit)
G1/GA1-type	0
HA1-type	2.0
GB1/HB1-type	1.0

Units "ft" and "oz" (In an WR2 system)

<Formula>

• When the piping length from the outdoor unit to the farthest indoor unit is 30.5 m (100 ft) or shorter

Amount of additional charge (oz)	High-pressure pipe ø1-1/8 total length × 3.88 (oz/ft)	+	High-pressure pipe ø7/8 total length × 2.48 (oz/ft)	+	High-pressure pipe ø3/4 total length × 1.73 (oz/ft)	+	High-pressure pipe ø5/8 total length × 1.19 (oz/ft)	+	Liquid pipe ø3/4 total length × 3.13 (oz/ft)	+	Liquid pipe ø5/8 total length × 2.16 (oz/ft)	+	Liquid pipe ø1/2 total length × 1.30 (oz/ft)	+	Liquid pipe ø3/8 total length × 0.65 (oz/ft)	+	Liquid pipe ø1/4 total length × 0.26 (oz/ft)
	Additional charge																
+	Heat source unit model		Charged amount														
	Single	P216	36 oz														
		P240	36 oz														
+	Main or Sub BC controller	Amount (oz/unit)	Total capacity of connected indoor units		Amount (oz) (to be added for indoor unit)												
	J-type	53	27 or below		71												
	JA-type	106	28 to 54		89												
	KA-type	166	55 to 126		106												
	KB-type	15	127 to 144		124												
			145 to 180		159												
			181 to 234		177												
			235 to 273		212												
			274 to 307		283												
			308 to 342		318												
			343 to 411		353												
			412 to 450		424												
			451 or above		494												

* High-pressure pipe: Main high-pressure pipe between outdoor unit and BC controller

* Liquid pipe: Liquid pipe between BC controller and indoor unit or between main BC controller and sub BC controller

1. Piping Design

* When connecting the CMB-P**-NU-G1, CMB-P**-NU-GA1, CMB-P**-NU-HA1, CMB-P**-NU-GB1, or CMB-P**-NU-HB1 to a given system, add the amount of refrigerant as indicated in the table below.

BC controller	Amount (oz/unit)
G1/GA1-type	106
HA1-type	177
GB1/HB1-type	36

• When the piping length from the outdoor unit to the farthest indoor unit is longer than 30.5 m (100 ft)

Amount of additional charge (oz)	=	High-pressure pipe ϕ 1-1/8 total length \times 3.54 (oz/ft)	+	High-pressure pipe ϕ 7/8 total length \times 2.26 (oz/ft)	+	High-pressure pipe ϕ 3/4 total length \times 1.51 (oz/ft)	+	High-pressure pipe ϕ 5/8 total length \times 1.08 (oz/ft)	+	Liquid pipe ϕ 3/4 total length \times 2.81 (oz/ft)	+	Liquid pipe ϕ 5/8 total length \times 1.94 (oz/ft)	+	Liquid pipe ϕ 1/2 total length \times 1.19 (oz/ft)	+	Liquid pipe ϕ 3/8 total length \times 0.59 (oz/ft)	+	Liquid pipe ϕ 1/4 total length \times 0.23 (oz/ft)

Additional charge		
Heat source unit model	Charged amount	
Single	P216	36 oz
	P240	36 oz

Main or Sub BC controller	Amount (oz/unit)	Total capacity of connected indoor units	Amount (oz) (to be added for indoor unit)
J-type	53	27 or below	71
JA-type	106	28 to 54	89
KA-type	166	55 to 126	106
KB-type	15	127 to 144	124
		145 to 180	159
		181 to 234	177
		235 to 273	212
		274 to 307	283
		308 to 342	318
		343 to 411	353
		412 to 450	424
		451 or above	494

* When connecting PEFY-P06NMAU-E**, PEFY-P24NMAU-E**, or PEFY-P36NMAU-E**, add 0.55 kg [20 oz] of refrigerant per indoor unit.

* When connecting PLFY-EP06NEMU-E**, PLFY-EP18NEMU-E**, or PLFY-EP36NEMU-E**, add 0.67 kg [24 oz] of refrigerant per indoor unit.

* When connecting PLFY-P08NBMU-E2, add 0.3kg [11oz] of refrigerant per indoor unit.

* When connecting PLFY-EP08NEMU-E, add 0.3kg [11oz] of refrigerant per indoor unit.

* High-pressure pipe: Main high-pressure pipe between outdoor unit and BC controller

* Liquid pipe: Liquid pipe between BC controller and indoor unit or between main BC controller and sub BC controller

* When connecting the CMB-P**-NU-G1, CMB-P**-NU-GA1, CMB-P**-NU-HA1, CMB-P**-NU-GB1, or CMB-P**-NU-HB1 to a given system, add the amount of refrigerant as indicated in the table below.

BC controller	Amount (oz/unit)
G1/GA1-type	106
HA1-type	177
GB1/HB1-type	36

PQRY-P-T(S)LMU-A1, Y(S)LMU-A1, Z(S)LMU-A1

1. Piping Design

Amount of factory charged refrigerant ■ Sample calculation

Heat source unit Model	Charged amount
P72	5.0 kg
P96	
P120	
P144	6.0 kg
P168	
P192	
P216	11.7 kg
P240	

		Indoor	
A :	ø28.58 [1-1/8"] 40m [131ft.]	1 : P18	a : ø6.35 [1/4"] 5m [16ft.]
B :	ø9.52 [3/8"] 10m [32ft.]	2 : P96	b : ø9.52 [3/8"] 3m [10ft.]
C :	ø12.70 [1/2"] 10m [32ft.]	3 : P06	c : ø6.35 [1/4"] 2m [6ft.]
D :	ø9.52 [3/8"] 5m [16ft.]	4 : P08	d : ø6.35 [1/4"] 3m [10ft.]
E :	ø9.52 [3/8"] 5m [16ft.]	5 : P54	e : ø9.52 [3/8"] 3m [10ft.]
F :	ø22.20 [7/8"] 2m [6ft.]	6 : P72	f : ø9.52 [3/8"] 10m [32ft.]
G :	ø22.20 [7/8"] 1m [4ft.]		
Total length for each pipe size :		ø28.58	A = 40m [131ft.]
		ø22.20	F+G = 2+1 = 3m [10ft.]
		ø12.70	C = 10m [32ft.]
		ø9.52	B+D+E+b+e+f = 36m [116ft.]
		ø6.35	a+c+d = 10m [32ft.]
Therefore, additional refrigerant charge (kg)		= 40×0.33+3×0.21+10×0.11+36×0.054+10×0.021+3.0+2.0+8.0	
		= 30.08kg	
		≒ 30.1kg	
or			
Therefore, additional refrigerant charge (oz)		= 131×3.55+10×2.26+32×1.19+116×0.59+32×0.23+106+71+283	
		= 1061.5oz	
		≒ 1062oz	

Limitation of the amount of refrigerant to be charged

The above calculation result of the amount of refrigerant to be charged must become below the value in the table below. If the amount of refrigerant exceeds the value in the below table, please redesign the system.

Total index of the heat source units		P72 ZLMU	P96 ZLMU	P120 ZLMU	P144 ZLMU	P168 ZLMU	P192 ZLMU	P144 ZSLMU	P168 ZSLMU
Maximum refrigerant charge	Factory charged	5.0kg	5.0kg	5.0kg	6.0kg	6.0kg	6.0kg	10.0kg	10.0kg
	Charged on site	28.0kg	30.0kg	31.0kg	46.0kg	47.0kg	48.0kg	49.0kg	50.0kg
	Total for system	33.0kg	35.0kg	36.0kg	52.0kg	53.0kg	54.0kg	59.0kg	60.0kg
	Factory charged	11 lbs 1 oz	11 lbs 1 oz	11 lbs 1 oz	13 lbs 4 oz	13 lbs 4 oz	13 lbs 4 oz	22 lbs 1 oz	22 lbs 1 oz
	Charged on site	61 lbs 12 oz	66 lbs 3 oz	68 lbs 6 oz	101 lbs 7 oz	103 lbs 10 oz	105 lbs 14 oz	108 lbs 1 oz	110 lbs 4 oz
	Total for system	72 lbs 13 oz	77 lbs 3 oz	79 lbs 6 oz	114 lbs 11 oz	116 lbs 14 oz	119 lbs 1 oz	130 lbs 2 oz	132 lbs 5 oz

Total index of the heat source units		P192 ZSLMU	P216 ZSLMU	P240 ZSLMU	P288 ZSLMU	P312 ZSLMU	P336 ZSLMU
Maximum refrigerant charge	Factory charged	10.0kg	10.0kg	10.0kg	12.0kg	12.0kg	12.0kg
	Charged on site	51.0kg	52.0kg	54.0kg	70.0kg	70.0kg	73.0kg
	Total for system	61.0kg	62.0kg	64.0kg	82.0kg	82.0kg	85.0kg
	Factory charged	22 lbs 1 oz	22 lbs 1 oz	22 lbs 1 oz	26 lbs 8 oz	26 lbs 8 oz	26 lbs 8 oz
	Charged on site	112 lbs 7 oz	114 lbs 11 oz	119 lbs 1 oz	154 lbs 6 oz	154 lbs 6 oz	160 lbs 15 oz
	Total for system	134 lbs 8 oz	136 lbs 11 oz	141 lbs 2 oz	180 lbs 13 oz	180 lbs 13 oz	187 lbs 7 oz

1. Piping Design

1-4. Compatibility

Outdoor/Heat source unit	BC controller	Compatibility
PQRY-P-T/Y(S)LMU, PQRY-P-Z(S)LMU	G1 type	Compatible
PURY-P-T/Y(S)LMU S/W Ver. 7.08 or later PQRY-P-Z(S)LMU S/W Ver. 6.42 or later	J1 type	Compatible

Outdoor/Heat source unit	BC controller			Compatibility
	Main	Sub		
PQRY-P-T/Y(S)LMU S/W Ver. 6.42 or later PQRY-P-Z(S)LMU S/W Ver. 6.42 or later	JA1/KA1 type	GB1/HB1 type	GB1/HB1 type	Compatible
	JA1/KA1 type	KB1 type	GB1/HB1 type	Not compatible
	JA1/KA1 type	GB1/HB1 type		Compatible
	GA1/HA1 type	KB1 type	KB1 type	Compatible
	GA1/HA1 type	KB1 type	GB1/HB1 type	Not compatible
	GA1/HA1 type	KB1 type		Compatible

Outdoor/Heat source unit	BC controller		Compatibility
	Main	Sub	
PQRY-P-T/Y(S)LMU S/W Ver. 6.42 or later PQRY-P-Z(S)LMU S/W Ver. 6.42 or later	JA1/KA1 type	KB1 type	Compatible(*)

*Up to 11 Sub BC controllers can be connected (KB1 type only).

GA1/HA1/GB1/HB1 type and JA1/KA1/KB1 type can be mixed.

The only combination that is not available is mix of GB1/HB1 type and KB1 type.

When mixing GA1/HA1/GB1/HB1 type and JA1/KA1/KB1 type, specifications and restrictions is according to GA1/HA1/GB1/HB1 type. (piping length, connectable number of Sub BC)



for a greener tomorrow

Eco Changes is the Mitsubishi Electric Group's environmental statement, and expresses the Group's stance on environmental management. Through a wide range of businesses, we are helping contribute to the realization of a sustainable society.

⚠ Warning

- Do not use refrigerant other than the type indicated in the manuals provided with the unit and on the nameplate.
 - Doing so may cause the unit or pipes to burst, or result in explosion or fire during use, repair, or at the time of disposal of the unit.
 - It may also be in violation of applicable laws.
 - MITSUBISHI ELECTRIC CORPORATION cannot be held responsible for malfunctions or accidents resulting from the use of the wrong type of refrigerant.
- Our air conditioning equipment and heat pumps contain a fluorinated greenhouse gas, R410A.

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