

AIR CONDITIONING SYSTEMS

CITY MULTI

DATA BOOK

MODEL

PQHY-P72-360T(S)LMU-A2

PQHY-P72-360Y(S)LMU-A2

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

PQRY-P72-336T(S)LMU-A2

PQRY-P72-336Y(S)LMU-A2

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

-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-A2/PQHY-P-Y(S)LMU-A2/PQHY-P-Z(S)LMU-B/PQRY-P-T(S)LMU-A2/PQRY-P-Y(S)LMU-A2/PQRY-P-Z(S)LMU-B 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

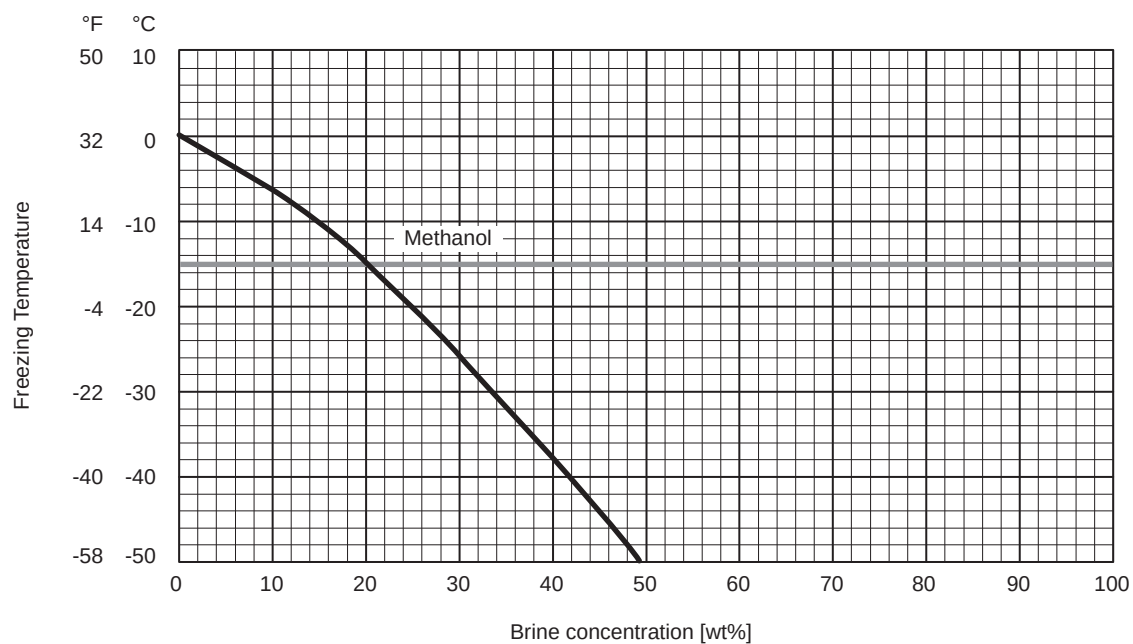
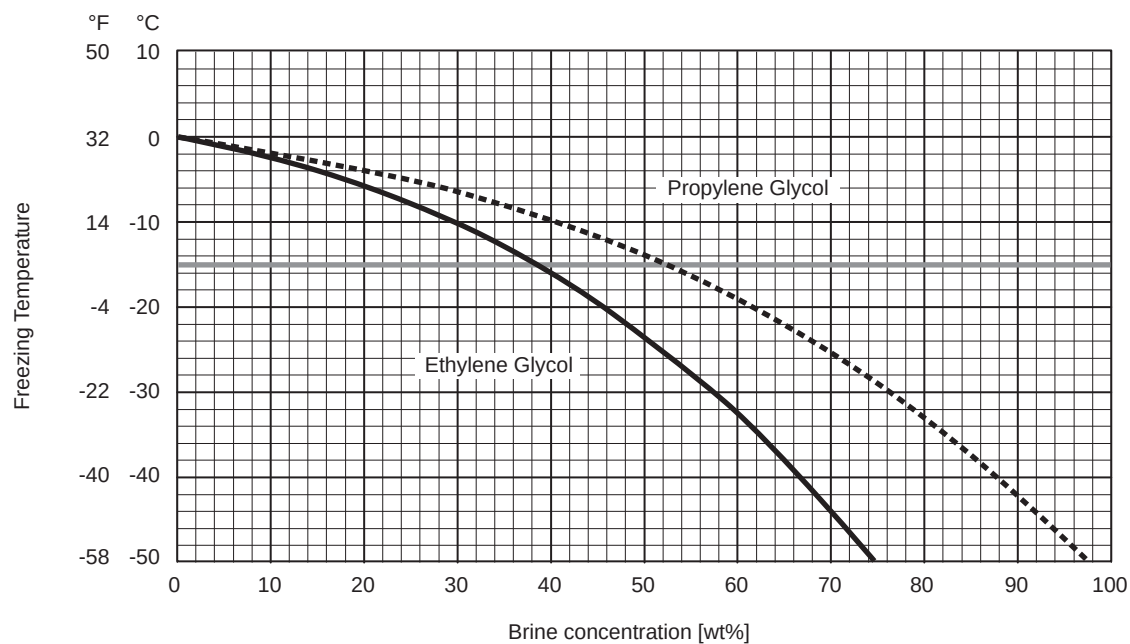
WY-SERIES	1
WY-SERIES-575V	99
WR2-SERIES	165
WR2-SERIES-575V	259

SYSTEM DESIGN

SYSTEM DESIGN WY-SERIES	323
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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.

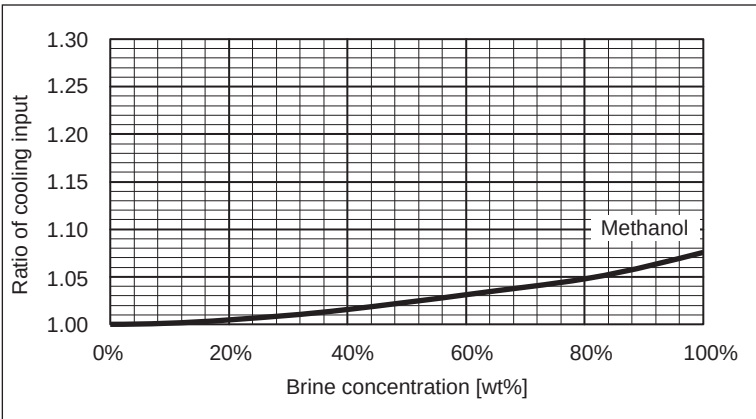
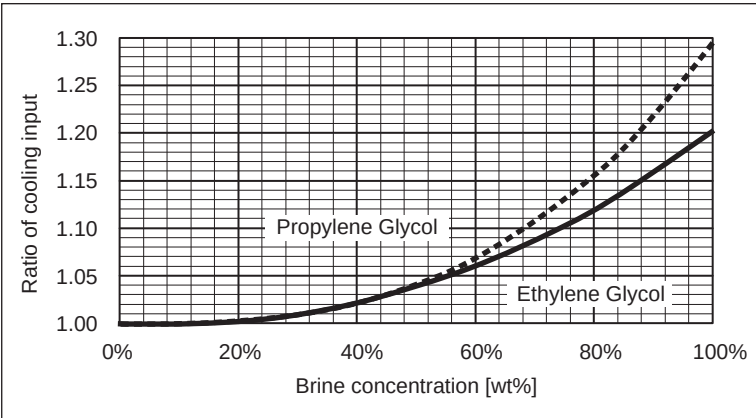
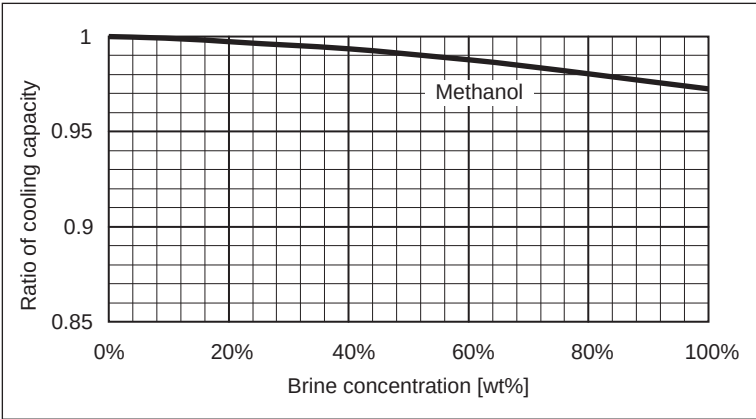
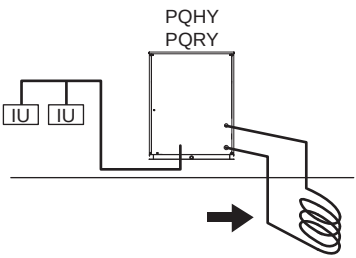
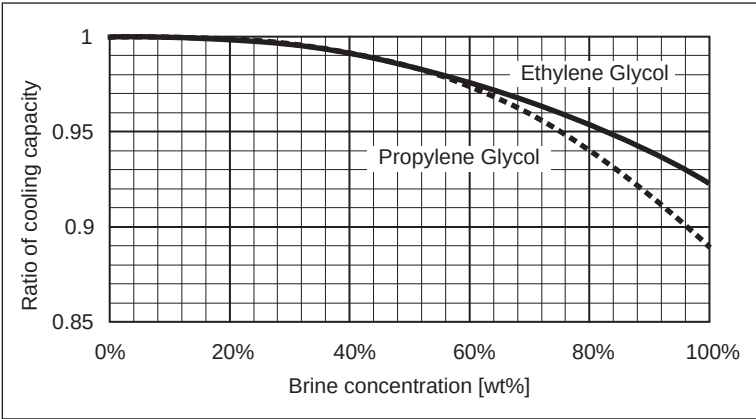
Please confirm detail data to the chemical company directly.

It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.

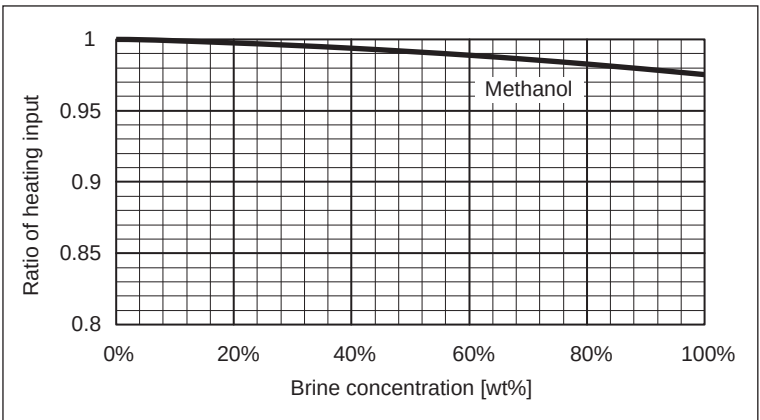
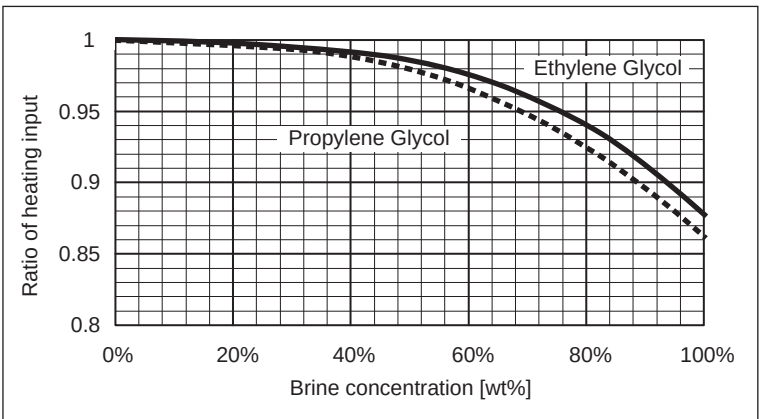
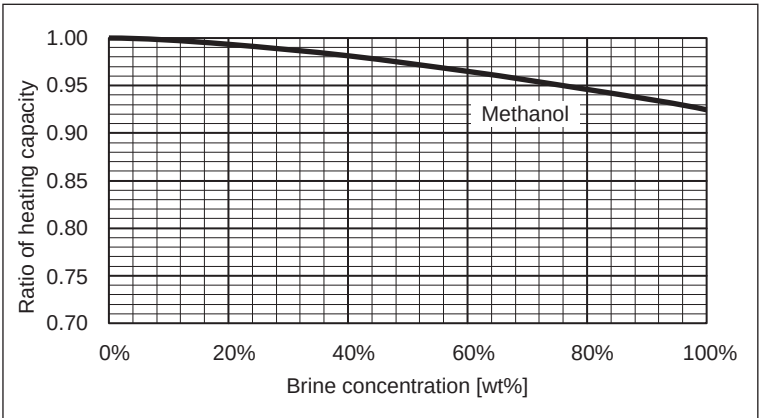
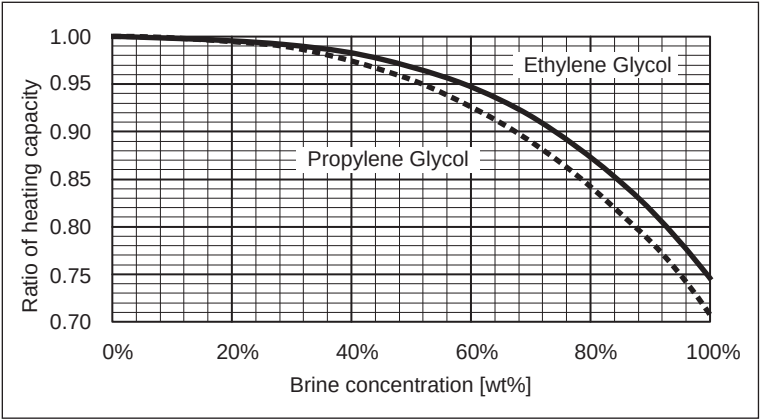
Capacity correction by brine concentration (For heat source unit)

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



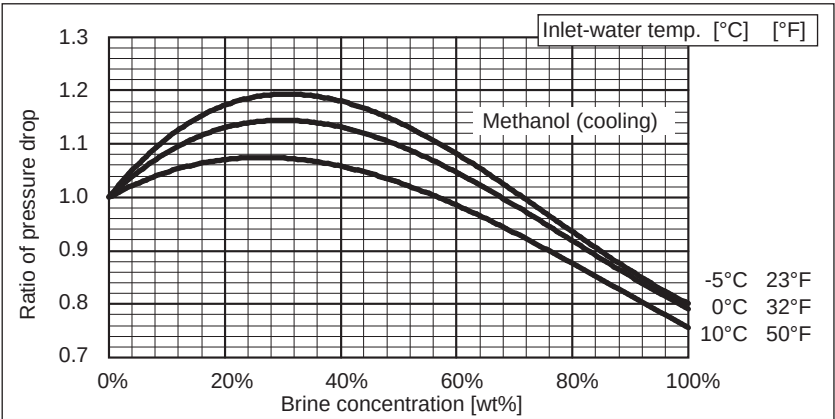
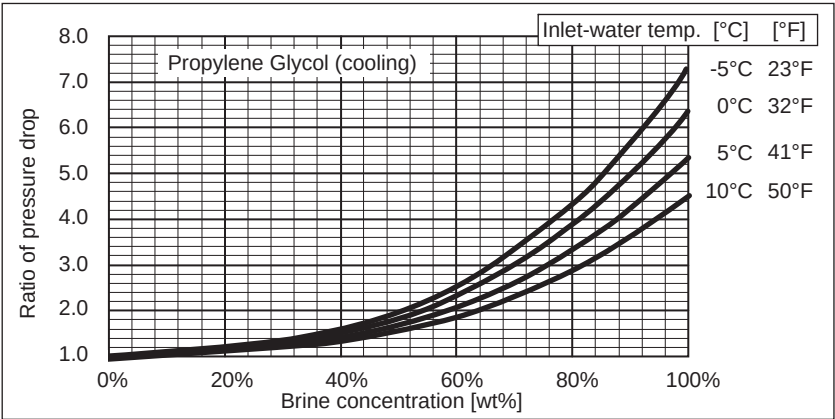
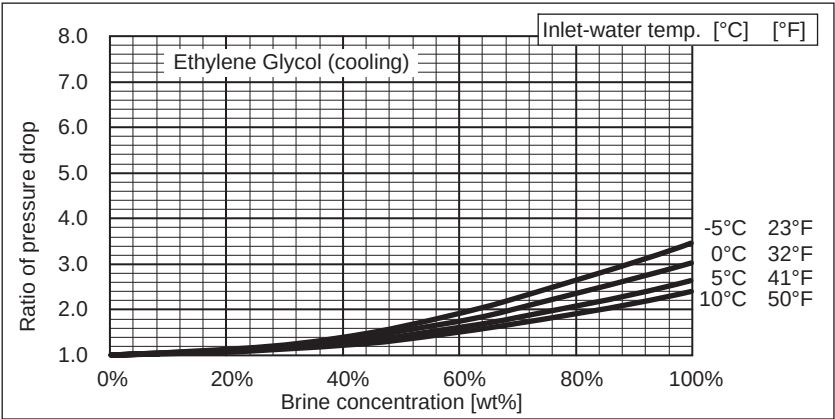
Heating



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

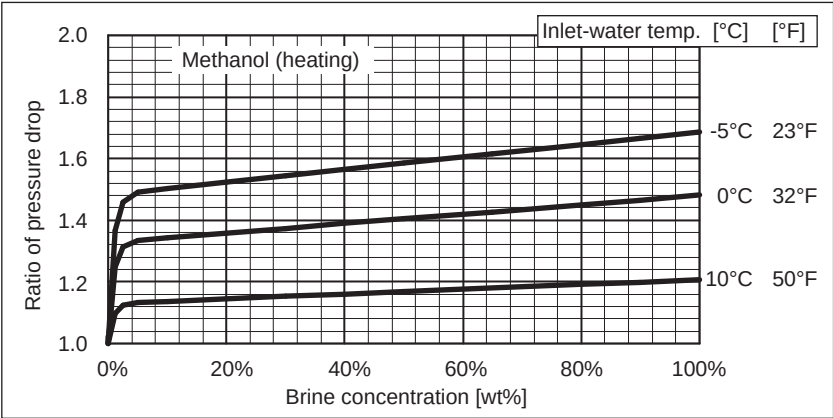
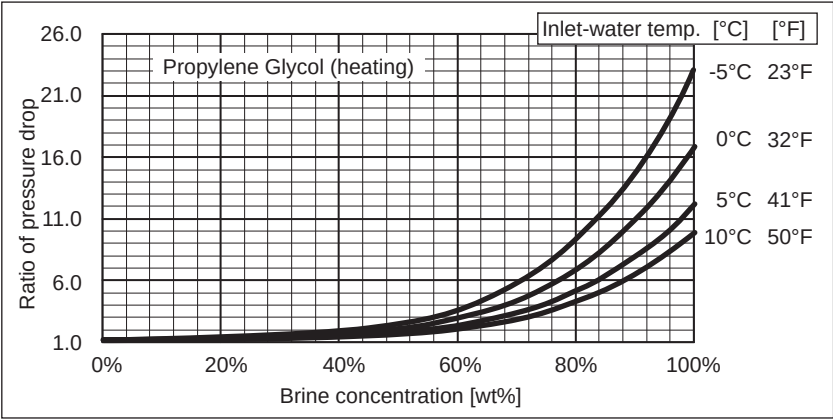
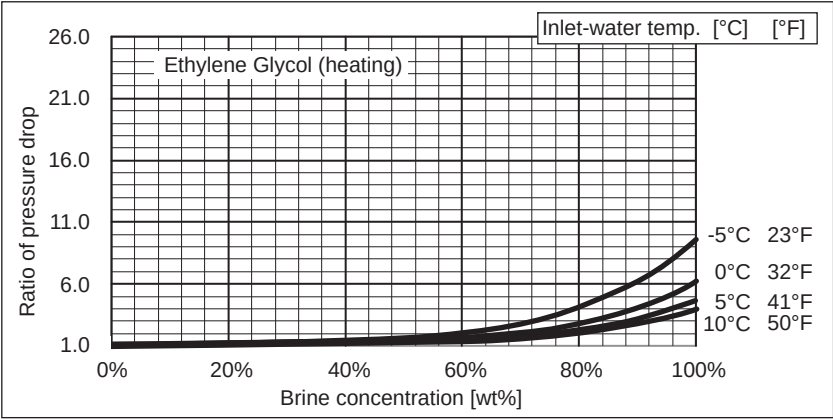
Also, water pump is selected by the ratio of pressure drop of depending on the brine concentration.

Cooling



* Please supply strainer on site.

Heating



* Please supply strainer on site.

Water Cooled WY-Series-208-230V



Type(BTU/h)	72K	96K	120K
Model Name	PQHY-P72TLMU-A2	PQHY-P96TLMU-A2	PQHY-P120TLMU-A2



Type(BTU/h)	144K	168K	192K
Model Name	PQHY-P144TLMU-A2	PQHY-P168TLMU-A2	PQHY-P192TLMU-A2
Type(BTU/h)	216K	240K	
Model Name	PQHY-P216TLMU-A2	PQHY-P240TLMU-A2	



Type(BTU/h)	144K	168K	192K
Model Name	PQHY-P144TSLMU-A2	PQHY-P168TSLMU-A2	PQHY-P192TSLMU-A2
Type(BTU/h)	216K	240K	
Model Name	PQHY-P216TSLMU-A2	PQHY-P240TSLMU-A2	



Type(BTU/h)	288K	312K	336K
Model Name	PQHY-P288TSLMU-A2	PQHY-P312TSLMU-A2	PQHY-P336TSLMU-A2
Type(BTU/h)	360K		
Model Name	PQHY-P360TSLMU-A2		

Water Cooled WY-Series-460V



Type(BTU/h)	72K	96K	120K
Model Name	PQHY-P72YLMU-A2	PQHY-P96YLMU-A2	PQHY-P120YLMU-A2



Type(BTU/h)	144K	168K	192K
Model Name	PQHY-P144YLMU-A2	PQHY-P168YLMU-A2	PQHY-P192YLMU-A2
Type(BTU/h)	216K	240K	
Model Name	PQHY-P216YLMU-A2	PQHY-P240YLMU-A2	



Type(BTU/h)	144K	168K	192K
Model Name	PQHY-P144YSLMU-A2	PQHY-P168YSLMU-A2	PQHY-P192YSLMU-A2
Type(BTU/h)	216K	240K	
Model Name	PQHY-P216YSLMU-A2	PQHY-P240YSLMU-A2	



Type(BTU/h)	288K	312K	336K
Model Name	PQHY-P288YSLMU-A2	PQHY-P312YSLMU-A2	PQHY-P336YSLMU-A2
Type(BTU/h)	360K		
Model Name	PQHY-P360YSLMU-A2		

Water Cooled WY-Series-575V



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



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



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



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

Water Cooled WR2-Series-208-230V



Type(BTU/h)	72K	96K	120K
Model Name	PQRY-P72TLMU-A2	PQRY-P96TLMU-A2	PQRY-P120TLMU-A2



Type(BTU/h)	144K	168K	192K
Model Name	PQRY-P144TLMU-A2	PQRY-P168TLMU-A2	PQRY-P192TLMU-A2
Type(BTU/h)	216K	240K	
Model Name	PQRY-P216TLMU-A2	PQRY-P240TLMU-A2	



Type(BTU/h)	144K	168K	192K
Model Name	PQRY-P144TSLMU-A2	PQRY-P168TSLMU-A2	PQRY-P192TSLMU-A2
Type(BTU/h)	216K	240K	
Model Name	PQRY-P216TSLMU-A2	PQRY-P240TSLMU-A2	



Type(BTU/h)	288K	312K	336K
Model Name	PQRY-P288TSLMU-A2	PQRY-P312TSLMU-A2	PQRY-P336TSLMU-A2

Water Cooled WR2-Series-460V



Type(BTU/h)	72K	96K	120K
Model Name	PQRY-P72YLMU-A2	PQRY-P96YLMU-A2	PQRY-P120YLMU-A2



Type(BTU/h)	144K	168K	192K
Model Name	PQRY-P144YLMU-A2	PQRY-P168YLMU-A2	PQRY-P192YLMU-A2
Type(BTU/h)	216K	240K	
Model Name	PQRY-P216YLMU-A2	PQRY-P240YLMU-A2	



Type(BTU/h)	144K	168K	192K
Model Name	PQRY-P144YSLMU-A2	PQRY-P168YSLMU-A2	PQRY-P192YSLMU-A2
Type(BTU/h)	216K	240K	
Model Name	PQRY-P216YSLMU-A2	PQRY-P240YSLMU-A2	



Type(BTU/h)	288K	312K	336K
Model Name	PQRY-P288YSLMU-A2	PQRY-P312YSLMU-A2	PQRY-P336YSLMU-A2

Water Cooled WR2-Series-575V



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



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



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



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

PQHY-P-T(S)LMU-A2, PQHY-P-Y(S)LMU-A2

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1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model			PQHY-P72TLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)		*1	BTU/h	72,000	
			kW	21.1	
	(208-230)	Power input	kW	3.61	
		Current input	A	11.1-10.0	
	(Rated)		BTU/h	69,000	
			kW	20.2	
	(208-230)	Power input	kW	3.60	3.59
		Current input	A	11.1-10.0	11.0-10.0
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)		*2	BTU/h	80,000	
			kW	23.4	
	(208-230)	Power input	kW	4.04	
		Current input	A	12.4-11.2	
	(Rated)		BTU/h	76,000	
			kW	22.3	
	(208-230)	Power input	kW	3.78	3.36
		Current input	A	11.6-10.5	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 power level (measured in anechoic room) *3		dB <A>	60.5		
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	17-16		
Maximum Overcurrent Protection		A	30-25		
Circulating water	Water flow rate	G/h	1,440		
		G/min	24		
		m³/h	5.45		
		L/min	91		
		cfm	3.2		
	Pressure drop	psi	3.48		
		kPa	24		
	Operating volume range	G/h	793 ~ 1,902		
		G/min	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	0.035		
	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)	371 (168)		
Heat exchanger			plate type		
	Water volume in plate	G	1.22		
		l	4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing	External		KB94C8C0		
	Wiring		KE94L341		
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.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.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%	cfm =m³/min x 35.31
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

Heat Source Model			PQHY-P96TLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)		*1	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	5.22	5.45
		Current input	A	16.0-14.5	16.8-15.2
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)		*2	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	4.49	4.48
		Current input	A	13.8-12.5	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 power level (measured in anechoic room) *3		dB <A>	65.0		
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	25-22		
Maximum Overcurrent Protection		A	45-35		
Circulating water		Water flow rate	G/h	1,522	
			G/min	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	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	0.035	
		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)	371 (168)		
Heat exchanger				plate type	
		Water volume in plate	G	1.22	
			l	4.6	
		Water pressure Max.	psi	290	
			MPa	2.0	
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing		External		KB94C8C0	
		Wiring		KE94L341	
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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 cfm =m³/min x 35.31 lbs =kg/0.4536
2. 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%	
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model			PQHY-P120TLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)		*1	BTU/h	120,000	
			kW	35.2	
	(208-230)	Power input	kW	7.51	
		Current input	A	23.1-20.9	
	(Rated)		BTU/h	115,000	
			kW	33.7	
	(208-230)	Power input	kW	7.38	7.77
		Current input	A	22.7-20.5	23.9-21.6
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)		*2	BTU/h	135,000	
			kW	39.6	
	(208-230)	Power input	kW	7.09	
		Current input	A	21.8-19.7	
	(Rated)		BTU/h	129,000	
			kW	37.8	
	(208-230)	Power input	kW	5.78	5.89
		Current input	A	17.8-16.1	18.1-16.4
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~P96/1~30			
Sound power level (measured in anechoic room) *3		dB <A>	71.0		
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	35-32		
Maximum Overcurrent Protection		A	60-50		
Circulating water	Water flow rate	G/h	1,522		
		G/min	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	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	0.035		
	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)	371 (168)		
Heat exchanger			plate type		
	Water volume in plate	G	1.22		
		l	4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing	External		KB94C8C0		
	Wiring		KE94L341		
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.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.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%	cfm =m³/min x 35.31
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

Heat Source Model			PQHY-P144TLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	144,000		
		kW	42.2		
	(208-230)	Power input	8.78		
		Current input	27.0-24.4		
	(Rated)	BTU/h	138,000		
		kW	40.4		
	(208-230)	Power input	9.44	10.12	
		Current input	29.1-26.3	31.2-28.2	
	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)	*2	BTU/h	160,000		
		kW	46.9		
	(208-230)	Power input	8.11		
		Current input	25.0-22.6		
	(Rated)	BTU/h	152,000		
		kW	44.5		
	(208-230)	Power input	7.29	7.92	
		Current input	22.4-20.3	24.4-22.0	
	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 power level (measured in anechoic room) *3		dB <A>	68.0		
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	40-40		
Maximum Overcurrent Protection		A	70-70		
Circulating water	Water flow rate	G/h	1,902		
		G/min	31.7		
		m ³ /h	7.20		
		L/min	120		
		cfm	4.2		
		Pressure drop	psi	6.38	
	Operating volume range	kPa	44		
		G/h	1,189 ~ 3,054		
		G/min	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	0.045		
	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)	470 (213)		
Heat exchanger			plate type		
	Water volume in plate	G	1.22		
		l	4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing	External		KB94C8C1		
	Wiring		KE94L342		
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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 cfm = m³/min x 35.31 lbs = kg/0.4536
2. 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%	
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model			PQHY-P168TLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)		*1	BTU/h	168,000	
			kW	49.2	
	(208-230)	Power input	kW	12.05	
		Current input	A	37.1-33.6	
	(Rated)		BTU/h	160,000	
			kW	46.9	
	(208-230)	Power input	kW	11.98	12.47
		Current input	A	36.9-33.4	38.4-34.7
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)		*2	BTU/h	188,000	
			kW	55.1	
	(208-230)	Power input	kW	9.86	
		Current input	A	30.4-27.5	
	(Rated)		BTU/h	178,000	
			kW	52.2	
	(208-230)	Power input	kW	8.86	9.66
		Current input	A	27.3-24.7	29.7-26.9
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~P96/1~42			
Sound power level (measured in anechoic room) *3		dB <A>	70.0		
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	50-48		
Maximum Overcurrent Protection		A	90-80		
Circulating water	Water flow rate	G/h	1,902		
		G/min	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	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	0.045		
	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)	470 (213)		
Heat exchanger			plate type		
	Water volume in plate	G	1.22		
		l	4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)		Copper pipe, tube-in-tube structure			
Drawing	External		KB94C8C1		
	Wiring		KE94L342		
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		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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.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.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%	cfm =m³/min x 35.31
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

Heat Source Model			PQHY-P192TLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	192,000		
		kW	56.3		
	(208-230)	Power input	15.05		
		Current input	46.4-41.9		
	(Rated)	BTU/h	184,000		
		kW	53.9		
	(208-230)	Power input	15.17	15.00	
		Current input	46.7-42.3	46.2-41.8	
	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)	*2	BTU/h	215,000		
		kW	63.0		
	(208-230)	Power input	11.90		
		Current input	36.7-33.1		
	(Rated)	BTU/h	204,000		
		kW	59.8		
	(208-230)	Power input	10.78	11.53	
		Current input	33.2-30.0	35.5-32.1	
	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~P96/1~48			
Sound power level (measured in anechoic room) *3		dB <A>	72.0		
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	66-63		
Maximum Overcurrent Protection		A	110-110		
Circulating water	Water flow rate	G/h	1,902		
		G/min	31.7		
		m ³ /h	7.20		
		L/min	120		
		cfm	4.2		
		Pressure drop	psi	6.38	
	Operating volume range	kPa	44		
		G/h	1,189 ~ 3,054		
		G/min	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	12.4		
	Case heater	kW	0.045		
	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)	470 (213)		
Heat exchanger			plate type		
	Water volume in plate	G	1.22		
		l	4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing	External		KB94C8C1		
	Wiring		KE94L342		
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%	cfm =m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model			PQHY-P216TLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)		*1	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	18.12	
		Current input	A	55.8-50.5	17.22
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)		*2	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	11.78	
		Current input	A	36.3-32.8	12.07
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 power level (measured in anechoic room) *3		dB <A>	72.5		
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	78-78		
Maximum Overcurrent Protection		A	125-125		
Circulating water	Water flow rate	G/h	3,044		
		G/min	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	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		
	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)	538 (244)		
Heat exchanger			plate type		
	Water volume in plate	G	2.43		
		l	9.2		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing	External		KB94C8C2		
	Wiring		KE94L343		
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.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.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%	cfm =m³/min x 35.31
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

Heat Source Model			PQHY-P240TLMU-A2 < For Ground source >			
Indoor Model			Non-Ducted	Ducted		
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz			
Cooling capacity (Nominal)		*1	BTU/h	224,000		
			kW	65.7		
(208-230)		Power input	kW	21.14		
		Current input	A	65.1-58.9		
(Rated)			BTU/h	214,000		
			kW	62.7		
(208-230)		Power input	kW	18.67	18.61	
		Current input	A	57.5-52.0	57.3-51.9	
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)		*2	BTU/h	270,000		
			kW	79.1		
(208-230)		Power input	kW	15.12		
		Current input	A	46.6-42.1		
(Rated)			BTU/h	258,000		
			kW	75.6		
(208-230)		Power input	kW	13.75	14.48	
		Current input	A	42.4-38.3	44.6-40.3	
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 power level (measured in anechoic room) *3			dB <A>	73.0		
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	79-78		
Maximum Overcurrent Protection			A	125-125		
Circulating water		Water flow rate	G/h	3,044		
			G/min	50.7		
			m ³ /h	11.52		
			L/min	192		
			cfm	6.8		
			psi	6.53		
		Pressure drop	kPa	45		
			Operating volume range	G/h	1,585 ~ 3,804	
				G/min	26.4 ~ 63.4	
				m ³ /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		
		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)	538 (244)		
Heat exchanger			plate type			
			Water volume in plate	G	2.43	
				l	9.2	
			Water pressure Max.	psi	290	
				MPa	2.0	
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure			
Drawing		External		KB94C8C2		
		Wiring		KE94L343		
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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 cfm =m³/min x 35.31 lbs =kg/0.4536
2. 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%	
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model			PQHY-P144TSLMU-A2 < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz	
Cooling capacity (Nominal)	(208-230) (Rated)	*1 BTU/h	144,000	
		kW	42.2	
		Power input kW	7.11	
		Current input A	21.9-19.8	
		BTU/h	138,000	
	(208-230)	kW	40.4	
		Power input kW	7.13	
		Current input A	21.9-19.8	
		BTU/h	8.17	
		kW	25.1-22.7	
Heating capacity (Nominal)	(208-230) (Rated)	*2 BTU/h	160,000	
		kW	46.9	
		Power input kW	7.45	
		Current input A	22.9-20.7	
		BTU/h	152,000	
	(208-230)	kW	44.5	
		Power input kW	6.50	
		Current input A	20.0-18.1	
		BTU/h	7.29	
		kW	22.4-20.3	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)	
	Inlet water	°F	23~113°F (-5~45°C)	
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 heat source unit capacity	
	Model/Quantity		P04~P96/1~36	
Sound power level (measured in anechoic room) *3		dB <A>	63.5	
Refrigerant piping diameter	Liquid pipe	in. (mm)	1/2 (12.7) Braze	
	Gas pipe	in. (mm)	1-1/8 (28.58) Braze	

Set Model			PQHY-P72TLMU-A2 < For Ground source >		PQHY-P72TLMU-A2 < For Ground source >	
Model			17-16		17-16	
Minimum Circuit Ampacity		A	17-16		17-16	
Maximum Overcurrent Protection		A	30-25		30-25	
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min	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		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	0.035		0.035	
	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)	371 (168)		371 (168)	
Heat exchanger			plate type		plate type	
	Water volume in plate	G	1.22		1.22	
		l	4.6		4.6	
	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) Braze		3/8 (9.52) Braze	
	Gas pipe	in. (mm)	3/4 (19.05) Braze		3/4 (19.05) Braze	
Drawing	External		KB94C7PN			
	Wiring		KE94L341		KE94L341	
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%	cfm = m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs = kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

Heat Source Model			PQHY-P168TSLMU-A2 < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz	
Cooling capacity (Nominal)	*1	BTU/h	168,000	
		kW	49.2	
		Power input	9.33	
		Current input	28.7-26.0	
	(Rated)	BTU/h	160,000	
		kW	46.9	
		Power input	8.87	9.66
		Current input	27.3-24.7	29.7-26.9
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)	*2	BTU/h	188,000	
		kW	55.1	
		Power input	9.34	
		Current input	28.8-26.0	
	(Rated)	BTU/h	178,000	
		kW	52.2	
		Power input	8.05	8.04
		Current input	24.8-22.4	24.7-22.4
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 heat source unit capacity	
	Model/Quantity		P04~P96/1~42	
Sound power level (measured in anechoic room) *3			66.5	
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Braze	
	Gas pipe	in. (mm)	1-1/8 (28.58) Braze	

Set Model			PQHY-P96TLMU-A2 < For Ground source >	PQHY-P72TLMU-A2 < For Ground source >
Model			A	A
Minimum Circuit Ampacity			25-22	17-16
Maximum Overcurrent Protection			45-35	30-25
Circulating water	Water flow rate	G/h	1,522 + 1,522	
		G/min	25.4 + 25.4	
		m ³ /h	5.76 + 5.76	
		L/min	96 + 96	
		cfm	3.4 + 3.4	
		Pressure drop	3.48	3.48
	Operating volume range	psi	24	24
		kPa		
		G/h	793 + 793 ~ 1,902 + 1,902	13.2 + 13.2 ~ 31.7 + 31.7
Compressor	Type x Quantity	G/min	3.0 + 3.0 ~ 7.2 + 7.2	
		m ³ /h		
		Starting method	Inverter scroll hermetic compressor x 1	Inverter scroll hermetic compressor x 1
		Motor output	Inverter	Inverter
		Case heater	6.0	4.3
External finish	Type x Quantity	Case heater	0.035	0.035
		Lubricant	MEL32	MEL32
		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)	
		Over-heat protection, Over-current protection	Over-heat protection, Over-current protection	
		Over-heat protection	Over-heat protection	
		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)		371 (168)	371 (168)
Heat exchanger	Water volume in plate	plate type	plate type	
		G	1.22	
		l	4.6	
		Water pressure Max.	290	290
HIC circuit (HIC: Heat Inter-Changer)	in. (mm)	psi	2.0	2.0
		MPa		
Pipe between unit and distributor	Liquid pipe	Copper pipe, tube-in-tube structure	Copper pipe, tube-in-tube structure	
		3/8 (9.52) Braze	3/8 (9.52) Braze	
Drawing	Gas pipe	7/8 (22.2) Braze	7/8 (22.2) Braze	
Standard attachment	External	KB94C7PN	KB94C7PN	
		KE94L341	KE94L341	
Optional parts	Document	Installation Manual	Installation Manual	
		Accessory	Details refer to External Drw	
Remarks		Heat Source Twinning kit: CMY-Y100CBK3	Heat Source Twinning kit: CMY-Y100CBK3	
		joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2	joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2	
		Header: CMY-Y104/108/1010C-G	Header: CMY-Y104/108/1010C-G	

Notes:		Unit converter
1. Nominal cooling conditions (Test conditions are based on AHRI 1230)		BTU/h =kW x 3.412
Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		cfm =m ³ /min x 35.31
Brine concentration 0%		lbs =kg/0.4536
2. 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%		
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).		
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		
		*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model			PQHY-P192TSLMU-A2 < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz	
Cooling capacity (Nominal)	(208-230) (Rated)	*1 BTU/h	192,000	
		kW	56.3	
		Power input kW	11.30	
		Current input A	34.8-31.5	
		BTU/h	184,000	
	(208-230)	kW	53.9	
		Power input kW	10.57	
		Current input A	32.5-29.4	
		BTU/h	11.54	
		°F	35.5-32.1	
Heating capacity (Nominal)	(208-230) (Rated)	*2 BTU/h	215,000	
		kW	63.0	
		Power input kW	11.02	
		Current input A	33.9-30.7	
		BTU/h	204,000	
	(208-230)	kW	59.8	
		Power input kW	9.53	
		Current input A	29.3-26.5	
		BTU/h	8.82	
		°F	27.2-24.6	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)	
	Inlet water	°F	23~113°F (-5~45°C)	
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 heat source unit capacity	
	Model/Quantity		P04~P96/1~48	
Sound power level (measured in anechoic room) *3		dB <A>	68.0	
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Braze	
	Gas pipe	in. (mm)	1-1/8 (28.58) Braze	

Set Model			PQHY-P96TLMU-A2 < For Ground source >		PQHY-P96TLMU-A2 < For Ground source >		
Model			25-22		25-22		
Minimum Circuit Ampacity		A	25-22		25-22		
Maximum Overcurrent Protection		A	45-35		45-35		
Circulating water	Water flow rate	G/h	1,522 + 1,522				
		G/min	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		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	0.035		0.035		
	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)	371 (168)		371 (168)		
Heat exchanger	Water volume in plate		G	plate type		plate type	
			l	1.22		1.22	
	Water pressure Max.		psi	4.6		4.6	
			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) Braze		3/8 (9.52) Braze		
	Gas pipe	in. (mm)	7/8 (22.2) Braze		7/8 (22.2) Braze		
Drawing	External		KB94C7PN				
	Wiring		KE94L341		KE94L341		
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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm =m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs =kg/0.4536
		*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

Heat Source Model			PQHY-P216TSLMU-A2 < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz	
Cooling capacity (Nominal)	*1	BTU/h	216,000	
		kW	63.3	
		Power input	14.03	
		Current input	43.2-39.1	
	(Rated)	BTU/h	206,000	
		kW	60.4	
		Power input	13.09	
		Current input	40.3-36.5	42.8-38.7
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)	*2	BTU/h	243,000	
		kW	71.2	
		Power input	12.88	
		Current input	39.7-35.9	
	(Rated)	BTU/h	232,000	
		kW	68.0	
		Power input	11.11	
		Current input	34.2-30.9	30.9-28.0
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 heat source unit capacity	
	Model/Quantity		P04~P96/2~50	
Sound power level (measured in anechoic room) *3		dB <A>	72.0	
Refrigerant piping diameter	Liquid pipe	in. (mm)	5/8 (15.88) Braze	
	Gas pipe	in. (mm)	1-1/8 (28.58) Braze	

Set Model			PQHY-P120TLMU-A2 < For Ground source >		PQHY-P96TLMU-A2 < For Ground source >	
Model			35-32		25-22	
Minimum Circuit Ampacity		A	60-50		45-35	
Maximum Overcurrent Protection		A				
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min	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	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	0.035		0.035	
	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)	371 (168)		371 (168)	
Heat exchanger	Water volume in plate		plate type		plate type	
			G	1.22		1.22
	I	4.6		4.6		
	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		KB94C7PN			
	Wiring		KE94L341		KE94L341	
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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm = m ³ /min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs = kg/0.4536
		*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model				PQHY-P240TSLMU-A2 < For Ground source >			
Indoor Model				Non-Ducted		Ducted	
Power source				3-phase 3-wire 208-230 V ±10% 60 Hz			
Cooling capacity (Nominal)		*1	BTU/h	240,000			
			kW	70.3			
(208-230) (Rated)	Power input	kW	16.89				
		Current input	A	52.0-47.1			
	BTU/h	230,000					
		kW	67.4				
	Power input	kW	15.73	16.79			
		Current input	A	48.5-43.8	51.7-46.8		
	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)		*2	BTU/h	270,000			
			kW	79.1			
(208-230) (Rated)	Power input	kW	14.58				
		Current input	A	44.9-40.6			
	BTU/h	258,000					
		kW	75.6				
	Power input	kW	12.83	11.67			
		Current input	A	39.5-35.7	35.9-32.5		
	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 power level (measured in anechoic room) *3			dB <A>	74.0			
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-A2 < For Ground source >		PQHY-P120TLMU-A2 < For Ground source >		
Model			35-32		35-32		
Minimum Circuit Ampacity		A	35-32		35-32		
Maximum Overcurrent Protection		A	60-50		60-50		
Circulating water	Water flow rate	G/h	1,522 + 1,522				
		G/min	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	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	0.035		0.035		
	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)	371 (168)		371 (168)		
Heat exchanger	Water volume in plate		G	plate type		plate type	
			l	1.22		1.22	
	Water pressure Max.		psi	4.6		4.6	
			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		KB94C7PN				
	Wiring		KE94L341		KE94L341		
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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%	cfm =m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

Heat Source Model			PQHY-P288TSLMU-A2 < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz	
Cooling capacity (Nominal)	*1	BTU/h	288,000	
		kW	84.4	
		Power input	20.42	
		Current input	62.9-56.9	
	(Rated)	BTU/h	276,000	
		kW	80.9	
		Power input	20.11	
		Current input	62.0-56.0	69.9-63.2
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)	*2	BTU/h	323,000	
		kW	94.7	
		Power input	17.50	
		Current input	53.9-48.8	
	(Rated)	BTU/h	304,000	
		kW	89.1	
		Power input	15.48	
		Current input	47.7-43.1	47.3-42.8
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 power level (measured in anechoic room) *3		dB <A>	71.0	
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/4 (19.05) Braze	
	Gas pipe	in. (mm)	1-3/8 (34.93) Braze	

Set Model			PQHY-P144TLMU-A2 < For Ground source >		PQHY-P144TLMU-A2 < For Ground source >	
Model			40-40		40-40	
Minimum Circuit Ampacity			A		A	
Maximum Overcurrent Protection			A		70-70	
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min	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	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	0.045		0.045	
	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)	470 (213)		470 (213)	
Heat exchanger			plate type		plate type	
	Water volume in plate	G	1.22		1.22	
		l	4.6		4.6	
	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)	1-1/8 (28.58) Brazed		1-1/8 (28.58) Brazed	
Drawing	External		KB94C7PP			
	Wiring		KE94L342		KE94L342	
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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.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.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%		cfm =m ³ /min x 35.31
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs =kg/0.4536
		*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model			PQHY-P312TSLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	(208-230) (Rated)	*1	BTU/h	312,000	
			kW	91.4	
		Power input	kW	23.41	
		Current input	A	72.1-65.2	
			BTU/h	298,000	
	(208-230)		kW	87.3	
		Power input	kW	22.45	24.98
		Current input	A	69.2-62.6	77.0-69.6
		Indoor	W.B.	59~75°F (15~24°C)	
		Inlet water	°F	23~113°F (-5~45°C)	
Heating capacity (Nominal)			*2		
(208-230) (Rated)		BTU/h	350,000		
		kW	102.6		
	Power input	kW	19.11		
	Current input	A	58.9-53.3		
		BTU/h	334,000		
		kW	97.9		
	Power input	kW	17.09	17.12	
	Current input	A	52.7-47.6	52.8-47.7	
	Temp. range of cooling	Indoor	D.B.	59~81°F (15~27°C)	
		Inlet water	°F	23~113°F (-5~45°C)	
Indoor unit connectable			Total capacity Model/Quantity		
			50~130% of heatsource unit capacity P04~P96/2~50		
Sound power level (measured in anechoic room) *3			dB <A> 72.5		
Refrigerant			Liquid pipe in. (mm)		
piping diameter			Gas pipe in. (mm)		
			3/4 (19.05) Brazed 1-3/8 (34.93) Brazed		
Set Model					
Model			PQHY-P168TLMU-A2 < For Ground source >		
Minimum Circuit Ampacity			A 50-48		
Maximum Overcurrent Protection			A 90-80		
Circulating water	Water flow rate	G/h	1,902 ± 1,902		
		G/min	31.7 ± 31.7		
		m³/h	7.20 ± 7.20		
		L/min	120 ± 120		
		cfm	4.2 ± 4.2		
	Pressure drop	psi	6.38		
		kPa	44		
	Operating volume range	G/h	1,189 ± 1,189 ~ 3,054 ± 3,054		
		G/min	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	0.045		
	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)		
			470 (213)		
Heat exchanger	Water volume in plate	G	plate type		
		l	1.22		
			4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Change)			Copper pipe, tube-in-tube structure		
Pipe between unit and distributor	Liquid pipe	in. (mm)	5/8 (15.88) Brazed		
	Gas pipe	in. (mm)	1-1/8 (28.58) Brazed		
Drawing	External		KB94C7PP		
	Wiring		KE94L342		
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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%	cfm =m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

Heat Source Model			PQHY-P336TSLMU-A2 < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz	
Cooling capacity (Nominal)	*1	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	25.14	
		Current input	77.5-70.1	
			83.6-75.6	
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)	*2	BTU/h	378,000	
		kW	110.8	
	(208-230)	Power input	20.77	
		Current input	64.0-57.9	
(Rated)		BTU/h	360,000	
		kW	105.5	
	(208-230)	Power input	18.49	
		Current input	57.0-51.5	
			58.9-53.2	
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 heat source unit capacity	
	Model/Quantity		P04~P96/2~50	
Sound power level (measured in anechoic room) *3		dB <A>	73.0	
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/4 (19.05) Braze	
	Gas pipe	in. (mm)	1-5/8 (41.28) Braze	

Set Model			PQHY-P168TLMU-A2 < For Ground source >		PQHY-P168TLMU-A2 < For Ground source >		
Model			50-48		50-48		
Minimum Circuit Ampacity			A		A		
Maximum Overcurrent Protection			A		90-80		
Circulating water	Water flow rate	G/h	1,902 + 1,902		1,902 + 1,902		
		G/min	31.7 + 31.7		31.7 + 31.7		
		m³/h	7.20 + 7.20		7.20 + 7.20		
		L/min	120 + 120		120 + 120		
		cfm	4.2 + 4.2		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		1,189 + 1,189 ~ 3,054 + 3,054		
		G/min	19.8 + 19.8 ~ 50.9 + 50.9		19.8 + 19.8 ~ 50.9 + 50.9		
m³/h		4.5 + 4.5 ~ 11.6 + 11.6		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	0.045		0.045		
	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		LEV and HIC circuit		
Net weight		lbs (kg)	470 (213)		470 (213)		
Heat exchanger	Water volume in plate		G	plate type		plate type	
			l	1.22		1.22	
	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) Braze		5/8 (15.88) Braze		
	Gas pipe	in. (mm)	1-1/8 (28.58) Braze		1-1/8 (28.58) Braze		
Drawing	External		KB94C7PP		KB94C7PP		
Standard attachment	Wiring		KE94L342		KE94L342		
	Document		Installation Manual		Installation Manual		
Optional parts	Accessory		Details refer to External Drw		Details refer to External Drw		
			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		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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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 cfm = m ³ /min x 35.31 lbs = kg/0.4536
2. 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%	
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model			PQHY-P360TSLMU-A2 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz			
Cooling capacity (Nominal)	(208-230)	*1	BTU/h	360,000		
			kW	105.5		
		Power input	kW	29.43		
		Current input	A	90.7-82.0		
		(Rated)	BTU/h	344,000		
	(208-230)		kW	100.8		
		Power input	kW	27.28	28.91	
		Current input	A	84.1-76.0	89.1-80.6	
		Indoor	W.B.	59~75°F (15~24°C)		
		Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)	(208-230)	*2	BTU/h	405,000		
			kW	118.7		
		Power input	kW	22.85		
		Current input	A	70.4-63.7		
		(Rated)	BTU/h	386,000		
	(208-230)		kW	113.1		
		Power input	kW	20.56	20.71	
		Current input	A	63.4-57.3	63.8-57.7	
		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 power level (measured in anechoic room) *3			dB <A>	74.5		
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-A2 < For Ground source >	PQHY-P168TLMU-A2 < For Ground source >
Minimum Circuit Ampacity			66-63	50-48
Maximum Overcurrent Protection			110-110	90-80
Circulating water	Water flow rate	G/h	1,902 + 1,902	
		G/min	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	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	0.045	0.045
	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)	470 (213)	470 (213)
Heat exchanger			plate type	plate type
	Water volume in plate	G	1.22	1.22
		I	4.6	4.6
	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		KB94C7PP	
	Wiring		KE94L342	KE94L342
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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%	cfm =m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

Heat Source Model			PQHY-P72YLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)		*1	BTU/h	72,000	
			kW	21.1	
(460)		Power input	kW	3.61	
		Current input	A	5.0	
(Rated)			BTU/h	69,000	
			kW	20.2	
(460)		Power input	kW	3.60	3.59
		Current input	A	5.0	5.0
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)		*2	BTU/h	80,000	
			kW	23.4	
(460)		Power input	kW	4.04	
		Current input	A	5.6	
(Rated)			BTU/h	76,000	
			kW	22.3	
(460)		Power input	kW	3.78	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 power level (measured in anechoic room) *3		dB <A>	60.5		
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	8		
Maximum Overcurrent Protection		A	15		
Circulating water		Water flow rate	G/h	1,440	
			G/min	24	
			m ³ /h	5.45	
			L/min	91	
			cfm	3.2	
		Pressure drop	psi	3.48	
			kPa	24	
		Operating volume range	G/h	793 ~ 1,902	
			G/min	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	4.3	
		Case heater	kW	0.035	
		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	1.22	
			l	4.6	
		Water pressure Max.	psi	290	
			MPa	2.0	
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing		External		KB94C8C3	
		Wiring		KE94L344	
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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 cfm =m³/min x 35.31 lbs =kg/0.4536
2. 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%	
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model			PQHY-P96YLMU-A2 < For Ground source >					
Indoor Model			Non-Ducted	Ducted				
Power source			3-phase 3-wire 460 V ±10% 60 Hz					
Cooling capacity (Nominal)		*1	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	5.22	5.45	
			Current input		A	7.2	7.6	
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)		*2	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		4.49	4.48
			Current input		A		6.2	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		50~130% of heatsource unit capacity				
		Model/Quantity		P04~P96/1~24				
Sound power level (measured in anechoic room) *3		dB <A>		65.0				
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		11				
Maximum Overcurrent Protection		A		15				
Circulating water		Water flow rate		G/h		1,522		
				G/min		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		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		0.035		
		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		1.22		
				l		4.6		
		Water pressure Max.		psi		290		
				MPa		2.0		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure					
Drawing		External		KB94C8C3				
		Wiring		KE94L344				
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.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.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%	cfm =m³/min x 35.31
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

Heat Source Model			PQHY-P120YLMU-A2 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1	BTU/h	120,000			
		kW	35.2			
	(460)	Power input	kW	7.51		
		Current input	A	10.4		
	(Rated)	BTU/h	115,000			
		kW	33.7			
	(460)	Power input	kW	7.38	7.77	
		Current input	A	10.2	10.8	
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)	*2	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	5.78	5.89	
		Current input	A	8.0	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 power level (measured in anechoic room) *3	dB <A>	71.0				
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	16				
Maximum Overcurrent Protection	A	25				
Circulating water	Water flow rate	G/h	1,522			
		G/min	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	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	7.7			
	Case heater	kW	0.035			
	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	1.22			
		l	4.6			
	Water pressure Max.	psi	290			
		MPa	2.0			
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure			
Drawing	External		KB94C8C3			
	Wiring		KE94L344			
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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 cfm =m³/min x 35.31 lbs =kg/0.4536
2. 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%	
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model			PQHY-P144YLMU-A2 < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 460 V ±10% 60 Hz	
Cooling capacity (Nominal)	*1	BTU/h	144,000	
		kW	42.2	
	(460)	Power input	8.78	
		Current input	12.2	
	(Rated)	BTU/h	138,000	
		kW	40.4	
	(460)	Power input	9.44	10.12
		Current input	13.1	14.1
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)	*2	BTU/h	160,000	
		kW	46.9	
	(460)	Power input	8.11	
		Current input	11.3	
	(Rated)	BTU/h	152,000	
		kW	44.5	
	(460)	Power input	7.29	7.92
		Current input	10.1	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		50~130% of heatsource unit capacity	
	Model/Quantity		P04~P96/1~36	
Sound power level (measured in anechoic room) *3		dB <A>	68.0	
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	19	
Maximum Overcurrent Protection		A	30	
Circulating water	Water flow rate	G/h	1,902	
		G/min	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	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	0.045	
	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)	497 (225)	
Heat exchanger			plate type	
	Water volume in plate	G	1.22	
		l	4.6	
	Water pressure Max.	psi	290	
		MPa	2.0	
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure	
Drawing	External		KB94C8C4	
	Wiring		KE94L344	
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.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.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%	cfm =m³/min x 35.31
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

Heat Source Model			PQHY-P168YLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)		*1	BTU/h	168,000	
			kW	49.2	
(460)		Power input	kW	12.05	
		Current input	A	16.8	
(Rated)			BTU/h	160,000	
			kW	46.9	
(460)		Power input	kW	11.98	12.47
		Current input	A	16.7	17.3
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)		*2	BTU/h	188,000	
			kW	55.1	
(460)		Power input	kW	9.86	
		Current input	A	13.7	
(Rated)			BTU/h	178,000	
			kW	52.2	
(460)		Power input	kW	8.86	9.66
		Current input	A	12.3	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~P96/1~42		
Sound power level (measured in anechoic room) *3		dB <A>	70.0		
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	26		
Maximum Overcurrent Protection		A	45		
Circulating water		Water flow rate	G/h	1,902	
			G/min	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	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	11.0	
		Case heater	kW	0.045	
		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)	497 (225)		
Heat exchanger				plate type	
		Water volume in plate	G	1.22	
			l	4.6	
		Water pressure Max.	psi	290	
			MPa	2.0	
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing		External		KB94C8C4	
		Wiring		KE94L344	
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%	cfm =m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model			PQHY-P192YLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	192,000		
		kW	56.3		
	(460)	Power input	kW	15.05	
		Current input	A	20.9	
	(Rated)	BTU/h	184,000		
		kW	53.9		
	(460)	Power input	kW	15.17	15.00
		Current input	A	21.1	20.9
	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)	*2	BTU/h	215,000		
		kW	63.0		
	(460)	Power input	kW	11.90	
		Current input	A	16.5	
	(Rated)	BTU/h	204,000		
		kW	59.8		
	(460)	Power input	kW	10.78	11.53
		Current input	A	15.0	16.0
	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~P96/1~48		
Sound power level (measured in anechoic room) *3		dB <A>	72.0		
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	27		
Maximum Overcurrent Protection		A	45		
Circulating water	Water flow rate	G/h	1,902		
		G/min	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	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	0.045		
	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)	497 (225)		
Heat exchanger			plate type		
	Water volume in plate	G	1.22		
		l	4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing	External		KB94C8C4		
	Wiring		KE94L344		
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.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.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%	cfm =m³/min x 35.31
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

Heat Source Model			PQHY-P216YLMU-A2 < For Ground source >			
Indoor Model			Non-Ducted	Ducted		
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)		*1	BTU/h	216,000		
			kW	63.3		
(460)	Power input	kW	19.23			
		Current input	A	26.8		
	(Rated)	BTU/h	206,000			
		kW	60.4			
	(460)	Power input	kW	18.12	17.22	
		Current input	A	25.2	24.0	
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)		*2	BTU/h	243,000		
			kW	71.2		
(460)	Power input	kW	13.04			
		Current input	A	18.1		
	(Rated)	BTU/h	232,000			
		kW	68.0			
	(460)	Power input	kW	11.78	12.07	
		Current input	A	16.4	16.8	
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 power level (measured in anechoic room) *3		dB <A>	72.5			
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	37			
Maximum Overcurrent Protection		A	60			
Circulating water		Water flow rate	G/h	3,044		
			G/min	50.7		
			m ³ /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	26.4 ~ 63.4		
			m ³ /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		
		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)	554 (251)			
Heat exchanger			plate type			
			Water volume in plate	G	2.43	
				l	9.2	
			Water pressure Max.	psi	290	
				MPa	2.0	
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure			
Drawing		External		KB94C8C5		
		Wiring		KE94L344		
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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 cfm =m³/min x 35.31 lbs =kg/0.4536
2. 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%	
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model			PQHY-P240YLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)		*1	BTU/h		224,000
			kW		65.7
(460)		Power input	kW		21.14
		Current input	A		29.4
(Rated)			BTU/h		214,000
			kW		62.7
(460)		Power input	kW	18.67	18.61
		Current input	A	26.0	25.9
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)		*2	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	13.75	14.48
		Current input	A	19.1	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~P96/2~50		
Sound power level (measured in anechoic room) *3		dB <A>	73.0		
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	40		
Maximum Overcurrent Protection		A	70		
Circulating water		Water flow rate	G/h	3,044	
			G/min	50.7	
			m ³ /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	26.4 ~ 63.4	
			m ³ /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	
		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)	554 (251)		
Heat exchanger				plate type	
		Water volume in plate	G	2.43	
			l	9.2	
		Water pressure Max.	psi	290	
			MPa	2.0	
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing		External		KB94C8C5	
		Wiring		KE94L344	
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.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.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%	cfm =m³/min x 35.31
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

Heat Source Model				PQHY-P144YSLMU-A2 < For Ground source >			
Indoor Model				Non-Ducted		Ducted	
Power source				3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)		*1	BTU/h	144,000			
			kW	42.2			
(460)			Power input	7.11			
			Current input	9.9			
(Rated)			BTU/h	138,000			
			kW	40.4			
(460)			Power input	7.13		8.17	
			Current input	9.9		11.3	
Temp. range of cooling			Indoor	59~75°F (15~24°C)			
			Inlet water	23~113°F (-5~45°C)			
Heating capacity (Nominal)		*2	BTU/h	160,000			
			kW	46.9			
(460)			Power input	7.45			
			Current input	10.3			
(Rated)			BTU/h	152,000			
			kW	44.5			
(460)			Power input	6.50		7.29	
			Current input	9.0		10.1	
Temp. range of heating			Indoor	59~81°F (15~27°C)			
			Inlet water	23~113°F (-5~45°C)			
Indoor unit connectable			Total capacity	50~130% of heatsource unit capacity			
			Model/Quantity	P04~P96/1~36			
Sound power level (measured in anechoic room) *3				dB <A>		63.5	
Refrigerant piping diameter			Liquid pipe	1/2 (12.7) Braze			
			Gas pipe	1-1/8 (28.58) Braze			

Set Model			PQHY-P72YLMU-A2 < For Ground source >		PQHY-P72YLMU-A2 < For Ground source >	
Model		A	8		8	
Minimum Circuit Ampacity		A	15		15	
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min	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		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	0.035		0.035	
	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	1.22		1.22
	I	4.6		4.6		
	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		KB94C7PQ			
	Wiring		KE94L344		KE94L344	
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm = m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs = kg/0.4536
		*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model			PQHY-P168YSLMU-A2 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	(460)	*1	BTU/h	168,000		
			kW	49.2		
		Power input	kW	9.33		
		Current input	A	13.0		
		(Rated)	BTU/h	160,000		
	(460)		kW	46.9		
		Power input	kW	8.87	9.66	
		Current input	A	12.3	13.4	
		Indoor	W.B.	59~75°F (15~24°C)		
		Inlet water	°F	23~113°F (-5~45°C)		
Heating capacity (Nominal)			*2	BTU/h	188,000	
(460)	(Rated)		kW	55.1		
		Power input	kW	9.34		
		Current input	A	13.0		
			BTU/h	178,000		
			kW	52.2		
	(460)	Power input	kW	8.05	8.04	
		Current input	A	11.2	11.2	
		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 power level (measured in anechoic room) *3			dB <A>	66.5		
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-A2 < For Ground source >	PQHY-P72YLMU-A2 < For Ground source >
Minimum Circuit Ampacity			11	8
Maximum Overcurrent Protection			15	15
Circulating water	Water flow rate	G/h	1,522 + 1,522	
		G/min	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	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	0.035	0.035
	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)	400 (181)	400 (181)
Heat exchanger			plate type	plate type
	Water volume in plate	G	1.22	1.22
		I	4.6	4.6
	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		KB94C7PQ	
	Wiring		KE94L344	KE94L344
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.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.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%	cfm =m ³ /min x 35.31
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

Heat Source Model				PQHY-P192YSLMU-A2 < For Ground source >			
Indoor Model				Non-Ducted		Ducted	
Power source				3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)		*1	BTU/h	192,000			
			kW	56.3			
(460)		(Rated)	Power input	kW		11.30	
			Current input	A		15.7	
(460)		(Rated)	BTU/h	184,000			
			kW	53.9			
(460)		(Rated)	Power input	kW		10.57	11.54
			Current input	A		14.7	16.0
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)		*2	BTU/h	215,000			
			kW	63.0			
(460)		(Rated)	Power input	kW		11.02	
			Current input	A		15.3	
(460)		(Rated)	BTU/h	204,000			
			kW	59.8			
(460)		(Rated)	Power input	kW		9.53	8.82
			Current input	A		13.2	12.3
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~P96/1~48			
Sound power level (measured in anechoic room) *3			dB <A>	68.0			
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-A2 < For Ground source >		PQHY-P96YLMU-A2 < For Ground source >	
Model						
Minimum Circuit Ampacity			A		11	
Maximum Overcurrent Protection			A		15	
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min	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	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	0.035		0.035	
	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	1.22		1.22
	l	4.6		4.6		
	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		KB94C7PQ			
	Wiring		KE94L344		KE94L344	
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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. Nominal cooling conditions (Test conditions are based on AHRI 1230)		BTU/h = kW x 3.412	
Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		cfm = m³/min x 35.31	
Brine concentration 0%		lbs = kg/0.4536	
2. 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%			
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).			
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)			
		*Above specification data is subject to rounding variation.	

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model			PQHY-P216YSLMU-A2 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	(460)	*1	BTU/h	216,000		
			kW	63.3		
		Power input	kW	14.03		
		Current input	A	19.5		
		(Rated)	BTU/h	206,000		
	(460)		kW	60.4		
		Power input	kW	13.09	13.88	
		Current input	A	18.2	19.3	
		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)	(460)	*2	BTU/h	243,000		
			kW	71.2		
		Power input	kW	12.88		
		Current input	A	17.9		
		(Rated)	BTU/h	232,000		
	(460)		kW	68.0		
		Power input	kW	11.11	10.04	
		Current input	A	15.4	14.0	
		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 power level (measured in anechoic room) *3			dB <A>	72.0		
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-A2 < For Ground source >		PQHY-P96YLMU-A2 < For Ground source >	
Model						
Minimum Circuit Ampacity		A	16		11	
Maximum Overcurrent Protection		A	25		15	
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min	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	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	0.035		0.035	
	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		1.22	
			I		4.6	
	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		KB94C7PQ			
	Wiring		KE94L344		KE94L344	
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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%	cfm =m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

Heat Source Model				PQHY-P240YSLMU-A2 < For Ground source >			
Indoor Model				Non-Ducted		Ducted	
Power source				3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)		*1	BTU/h	240,000			
			kW	70.3			
(460)			Power input	16.89			
			Current input	23.5			
(Rated)			BTU/h	230,000			
			kW	67.4			
(460)			Power input	15.73		16.79	
			Current input	21.9		23.4	
Temp. range of cooling			Indoor	59~75°F (15~24°C)			
			Inlet water	23~113°F (-5~45°C)			
Heating capacity (Nominal)		*2	BTU/h	270,000			
			kW	79.1			
(460)			Power input	14.58			
			Current input	20.3			
(Rated)			BTU/h	258,000			
			kW	75.6			
(460)			Power input	12.83		11.67	
			Current input	17.8		16.2	
Temp. range of heating			Indoor	59~81°F (15~27°C)			
			Inlet water	23~113°F (-5~45°C)			
Indoor unit connectable		Total capacity		50~130% of heatsource unit capacity			
		Model/Quantity		P04~P96/2~50			
Sound power level (measured in anechoic room) *3				74.0			
Refrigerant piping diameter			Liquid pipe	5/8 (15.88) Brazed			
			Gas pipe	1-1/8 (28.58) Brazed			

Set Model			PQHY-P120YLMU-A2 < For Ground source >		PQHY-P120YLMU-A2 < For Ground source >	
Model		A	16		16	
Minimum Circuit Ampacity		A	25		25	
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min	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		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	0.035		0.035	
	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	1.22		1.22
	l	4.6		4.6		
	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		KB94C7PQ			
	Wiring		KE94L344		KE94L344	
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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%	cfm = m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs = kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model				PQHY-P288YSLMU-A2 < For Ground source >				
Indoor Model				Non-Ducted		Ducted		
Power source				3-phase 3-wire 460 V ±10% 60 Hz				
Cooling capacity (Nominal)		*1	BTU/h	288,000				
			kW	84.4				
(460)	(Rated)	Power input	kW	20.42				
		Current input	A	28.4				
			BTU/h	276,000				
			kW	80.9				
	(460)	Power input	kW	20.11		22.67		
		Current input	A	28.0		31.6		
		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)		*2	BTU/h	323,000				
			kW	94.7				
(460)	(Rated)	Power input	kW	17.50				
		Current input	A	24.4				
			BTU/h	304,000				
			kW	89.1				
	(460)	Power input	kW	15.48		15.36		
		Current input	A	21.5		21.4		
		Temp. range of heating		Indoor	D.B.		59~81°F (15~27°C)	
						Inlet water	°F	
Indoor unit connectable		Total capacity	50~130% of heatsource unit capacity					
		Model/Quantity	P04~P96/2~50					
Sound power level (measured in anechoic room) *3				dB <A>	71.0			
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-A2 < For Ground source >		PQHY-P144YLMU-A2 < For Ground source >		
Model			19		19		
Minimum Circuit Ampacity		A	30		30		
Maximum Overcurrent Protection		A	30		30		
Circulating water	Water flow rate	G/h	1,902 + 1,902				
		G/min	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		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	0.045		0.045		
	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)	497 (225)		497 (225)		
Heat exchanger	Water volume in plate		plate type		plate type		
			1.22		1.22		
	l		4.6		4.6		
	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)	1-1/8 (28.58) Brazed		1-1/8 (28.58) Brazed		
Drawing	External		KB94C7PR				
	Wiring		KE94L344		KE94L344		
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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm =m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs =kg/0.4536
		*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

Heat Source Model			PQHY-P312YSLMU-A2 < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 460 V ±10% 60 Hz	
Cooling capacity (Nominal)	*1	BTU/h	312,000	
		kW	91.4	
	(460)	Power input kW	23.41	
		Current input A	32.6	
(Rated)		BTU/h	298,000	
		kW	87.3	
	(460)	Power input kW	22.45	24.98
		Current input A	31.3	34.8
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)	*2	BTU/h	350,000	
		kW	102.6	
	(460)	Power input kW	19.11	
		Current input A	26.6	
(Rated)		BTU/h	334,000	
		kW	97.9	
	(460)	Power input kW	17.09	17.12
		Current input A	23.8	23.8
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 heat source unit capacity	
	Model/Quantity		P04~P96/2~50	
Sound power level (measured in anechoic room) *3		dB <A>	72.5	
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/4 (19.05) Braze	
	Gas pipe	in. (mm)	1-3/8 (34.93) Braze	

Set Model			PQHY-P168YLMU-A2 < For Ground source >		PQHY-P144YLMU-A2 < For Ground source >	
Model						
Minimum Circuit Ampacity			A		A	
Maximum Overcurrent Protection			A		A	
Circulating water	Water flow rate	G/h			1,902 + 1,902	
		G/min			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			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	0.045		0.045	
	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)	497 (225)		497 (225)	
Heat exchanger	Water volume in plate		plate type		plate type	
			G	1.22		
	I	4.6				
	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		KB94C7PR			
	Wiring		KE94L344		KE94L344	
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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.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 cfm =m³/min x 35.31 lbs =kg/0.4536
2.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%	
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model				PQHY-P336YSLMU-A2 < For Ground source >			
Indoor Model				Non-Ducted		Ducted	
Power source				3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)		*1	BTU/h	336,000			
			kW	98.5			
(460)	(Rated)	Power input	kW	26.84			
		Current input	A	37.4			
		BTU/h	320,000				
		kW	93.8				
	(460)	Power input	kW	25.14	27.11		
		Current input	A	35.0	37.8		
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)		*2	BTU/h	378,000			
			kW	110.8			
(460)	(Rated)	Power input	kW	20.77			
		Current input	A	28.9			
		BTU/h	360,000				
		kW	105.5				
	(460)	Power input	kW	18.49	19.10		
		Current input	A	25.7	26.6		
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-P96/2~50				
Sound power level (measured in anechoic room) *3			dB <A>	73.0			
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-A2 < For Ground source >		PQHY-P168YLMU-A2 < For Ground source >	
Model			26		26	
Minimum Circuit Ampacity		A	45		45	
Maximum Overcurrent Protection		A				
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min	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		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	0.045		0.045	
	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)	497 (225)		497 (225)	
Heat exchanger			plate type		plate type	
	Water volume in plate	G	1.22		1.22	
		l	4.6		4.6	
	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		KB94C7PR			
	Wiring		KE94L344		KE94L344	
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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%	cfm =m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series

Heat Source Model			PQHY-P360YSLMU-A2 < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 460 V ±10% 60 Hz	
Cooling capacity (Nominal)	*1	BTU/h	360,000	
		kW	105.5	
	(460)	Power input kW	29.43	
		Current input A	41.0	
(Rated)		BTU/h	344,000	
		kW	100.8	
	(460)	Power input kW	27.28	28.91
		Current input A	38.0	40.3
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)	*2	BTU/h	405,000	
		kW	118.7	
	(460)	Power input kW	22.85	
		Current input A	31.8	
(Rated)		BTU/h	386,000	
		kW	113.1	
	(460)	Power input kW	20.56	20.71
		Current input A	28.6	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 heat source unit capacity	
	Model/Quantity		P04~P96/2~50	
Sound power level (measured in anechoic room) *3		dB <A>	74.5	
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/4 (19.05) Braze	
	Gas pipe	in. (mm)	1-5/8 (41.28) Braze	

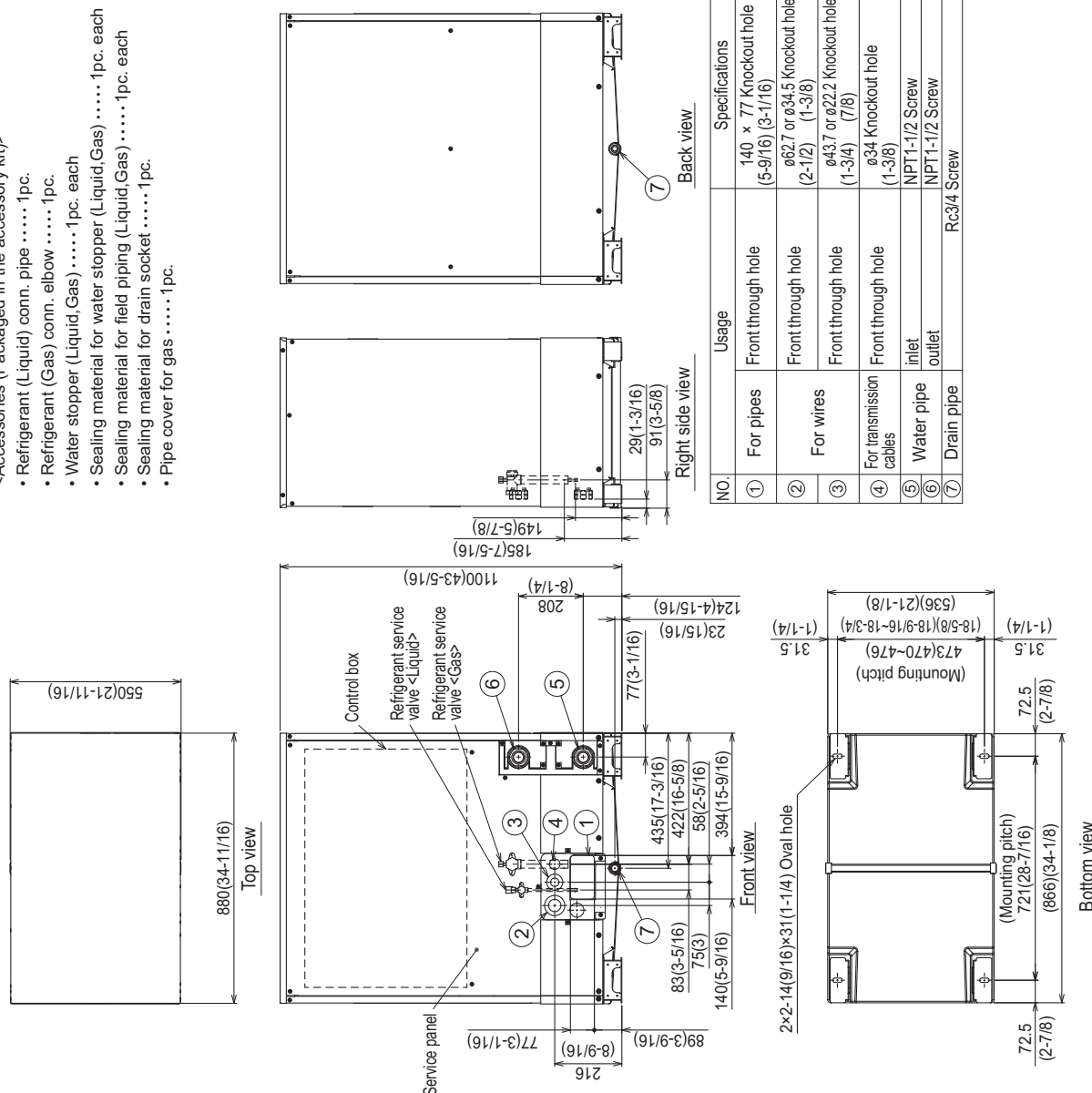
Set Model			PQHY-P192YLMU-A2 < For Ground source >		PQHY-P168YLMU-A2 < For Ground source >	
Model						
Minimum Circuit Ampacity			A		27	
Maximum Overcurrent Protection			A		45	
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min	31.7 + 31.7			
		m ³ /h	7.20 + 7.20			
		L/min	120 + 120			
		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	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	0.045		0.045	
	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)	497 (225)		497 (225)	
Heat exchanger			plate type		plate type	
	Water volume in plate	G	1.22		1.22	
		l	4.6		4.6	
	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		KB94C7PR			
	Wiring		KE94L344		KE94L344	
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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.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.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%		cfm =m ³ /min x 35.31
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs =kg/0.4536
		*Above specification data is subject to rounding variation.

Unit: mm(in)

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

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



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. (fieldrectionwork)

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: $-20 \sim -40^{\circ}\text{C}(\text{DB})(-4 \sim 104^{\circ}\text{F})$ as indoor installation.

Note6. In case the temperature around the heat source unit has possibility to drop under $0^{\circ}\text{C}(32^{\circ}\text{F})$ or the inlet-water temp. drops under $10^{\circ}\text{C}(50^{\circ}\text{F})$, be careful for the following points 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 the refrigerant service valve under $120^{\circ}\text{C}(248^{\circ}\text{F})$.

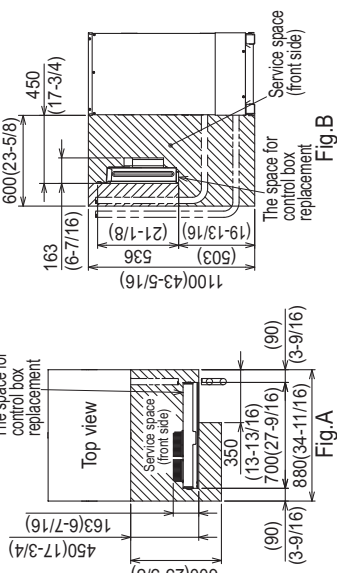


Fig.B

Fig. A

Connecting pipe specifications		Diameter				Service valve
Model	Refrigerant pipe		Gas		Liquid	
PQHY-P72TLU-A2	ø 9.52 Brazed (3/8)"1	Liquid	ø 19.05 Brazed (3/4)"1 1/4	Gas		Gas
PQHY-P96TLU-A2	ø 9.52 Brazed (3/8)"1 (ø 12.7 Brazed) (1/2)"2 1/4	Liquid	ø 52 Brazed (3/8)"1	Gas	ø 9.52 (3/8)	ø 25.4 (1)
PQHY-P20TLU-A2	ø 9.52 Brazed (3/8)"1 (ø 12.7 Brazed) (1/2)"3 1/4	Liquid	ø 22.2 Brazed (7/8)"1 1/4	Gas		

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

2. Total length $\geq 90\text{m}(295\text{ft})$

3. Total length $\geq 40\text{m}$ (131ft)

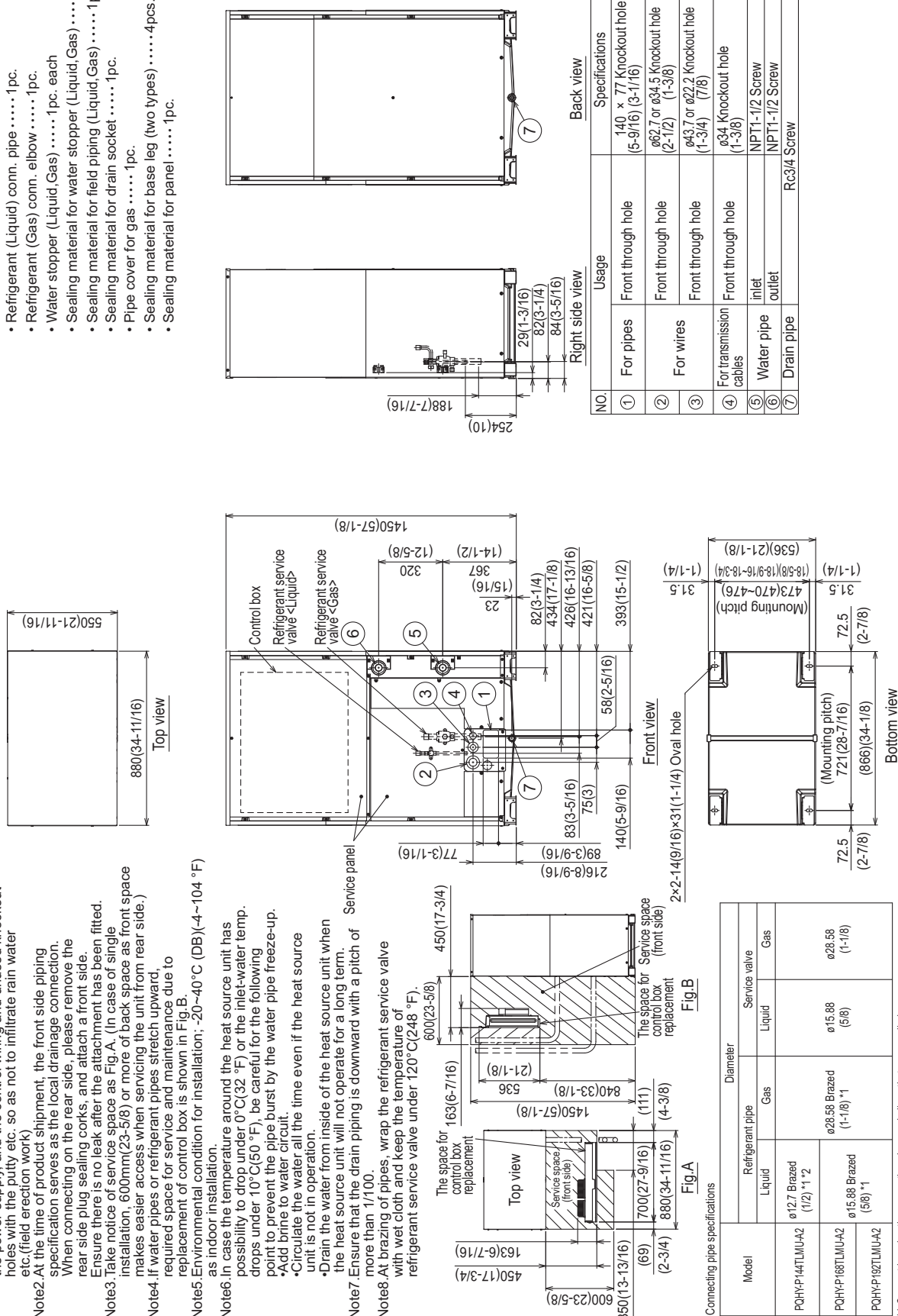
4. Use the pipe joint (field supply) and connect to the refrigerant service valve piping.

РQНУ-Р-Т(С)LMU-A2, Y(С)LMU-A2

PQHY-P144, 168, 192TLMU-A2

Unit: mm(in)

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



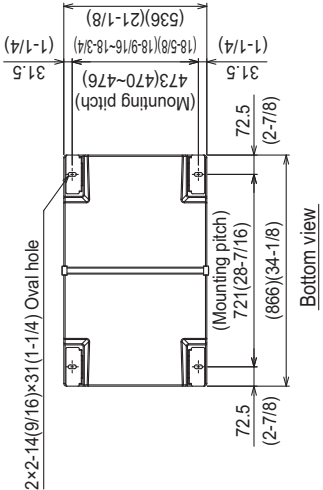
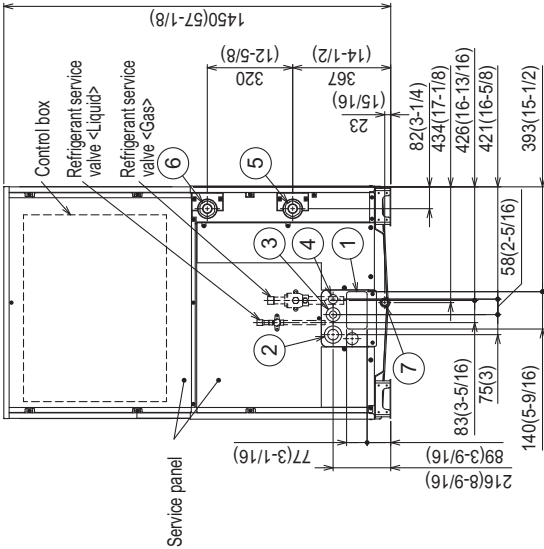
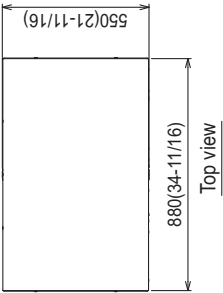
1. Connect by using the connecting pipes and elbow that are supplied.

2. Use the pipe joint(field supply) and connect to the refrigerant service valve piping.

PQHY-P216, 240TLMU-A2

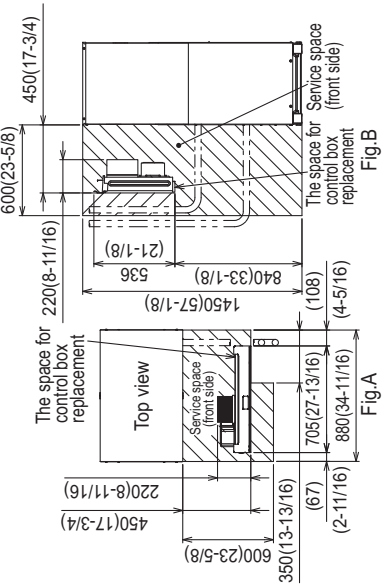
Unit: mm(in)

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



NO.	Usage		Specifications
	For pipes	Front through hole	
①		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		Front through hole	ø43.7 or ø22.2 Knockout hole (1-3/4) (7/8)
④	For transmission cables	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

- 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.
- 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).



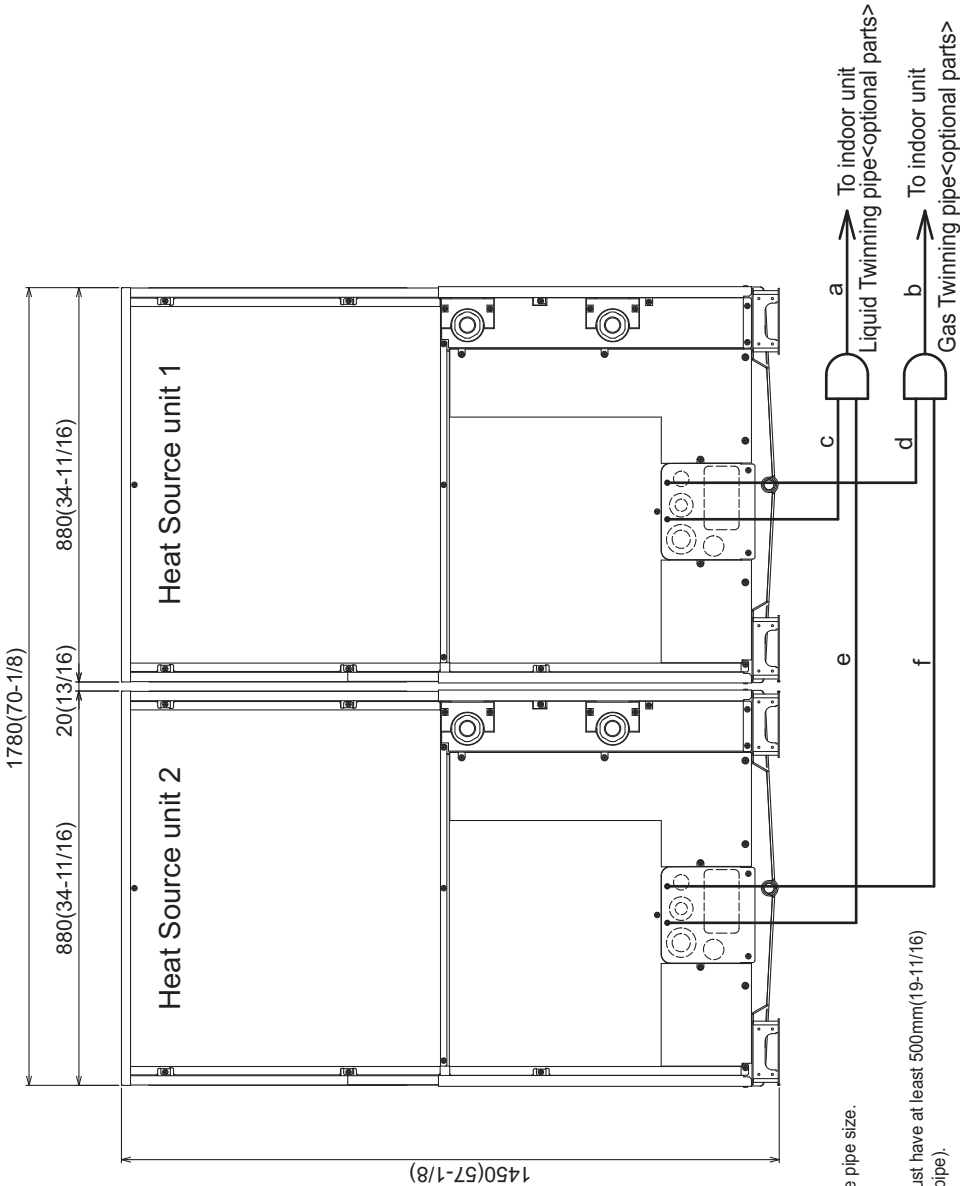
Model	Refrigerant pipe		Service valve	
	Liquid	Gas	Liquid	Gas
PQHY-P216TLMU-A2	ø15.88 Brazed (5/8) *1	ø28.58 Brazed (1-1/8) *1	ø15.88 (5/8)	ø28.58 (1-1/8)
PQHY-P240TLMU-A2				

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

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

PQHY-P288, 312, 336, 360TSLMU-A2

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 pipes must be installed horizontally using a level vessel.
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-A2	PQHY-P312TSLMU-A2	PQHY-P336TSLMU-A2	PQHY-P360TSLMU-A2
Component unit name	Heat Source unit 1	PQHY-P144TLMU-A2	PQHY-P168TLMU-A2	PQHY-P168TLMU-A2	PQHY-P192TLMU-A2
	Heat Source unit 2	PQHY-P144TLMU-A2	PQHY-P144TLMU-A2	PQHY-P168TLMU-A2	PQHY-P168TLMU-A2
Twinning Kit(optional parts)		CMY-Y200CBK2			
Indoor unit-Twinning pipe	Liquid	ø19.05(3/4)			
	Gas	ø41.28(1-5/8)			
Twinning pipe-Heat Source unit 1	Liquid	ø15.88(5/8)			
	Gas	ø28.58(1-1/8)			
Twinning pipe-Heat Source unit 2	Liquid	ø15.88(5/8)			
	Gas	ø28.58(1-1/8)			

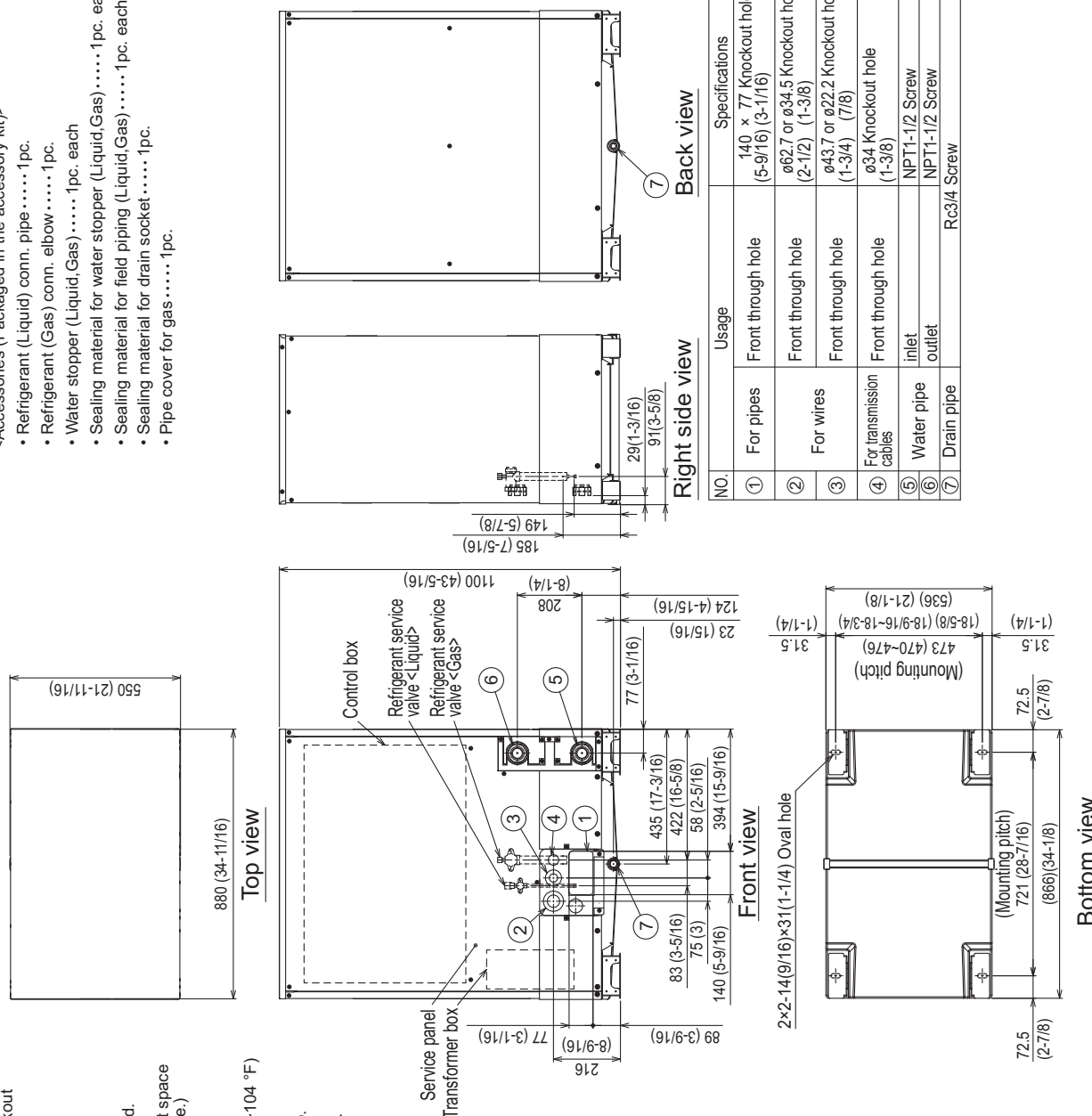
РQНУ-Р-Т(С)LMU-A2, Y(С)LMU-A2

2. EXTERNAL DIMENSIONS

Unit: mm(in)

PQHY-P72, 96, 120YLMU-A2

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



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)

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.

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.

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.

Note7. 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).

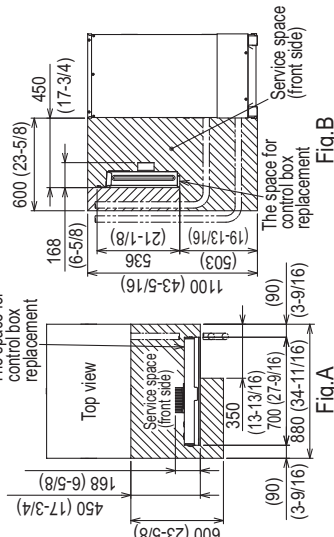


Fig. B

Fig. A

Connecting pipe specifications				
Model	Refrigerant pipe		Diameter	
	Liquid	Gas	Liquid	Service valve
PQH-P72YLMU-A2	ø9.52 BraZed (3/8) *1 *4	ø19.05 BraZed (3/4) *1 *4		Gas
PQH-P96YLMU-A2	ø9.52 BraZed (3/8) *1			ø9.52 (3/8)
	ø12.7 BraZed (1/2) *2 *4	ø22.2 BraZed (7/8) *1 *4		
PQH-P120YLMU-A2	ø9.52 BraZed (3/8) *1			ø25.4 (1)
	ø12.7 BraZed (1/2) *2 *4			

	(1/2")	3/4"	1"
*1.Connect by using the connecting pipes and elbow that are supplied.			

*2. Total length $\geq 90\text{m}(295\text{ft})$

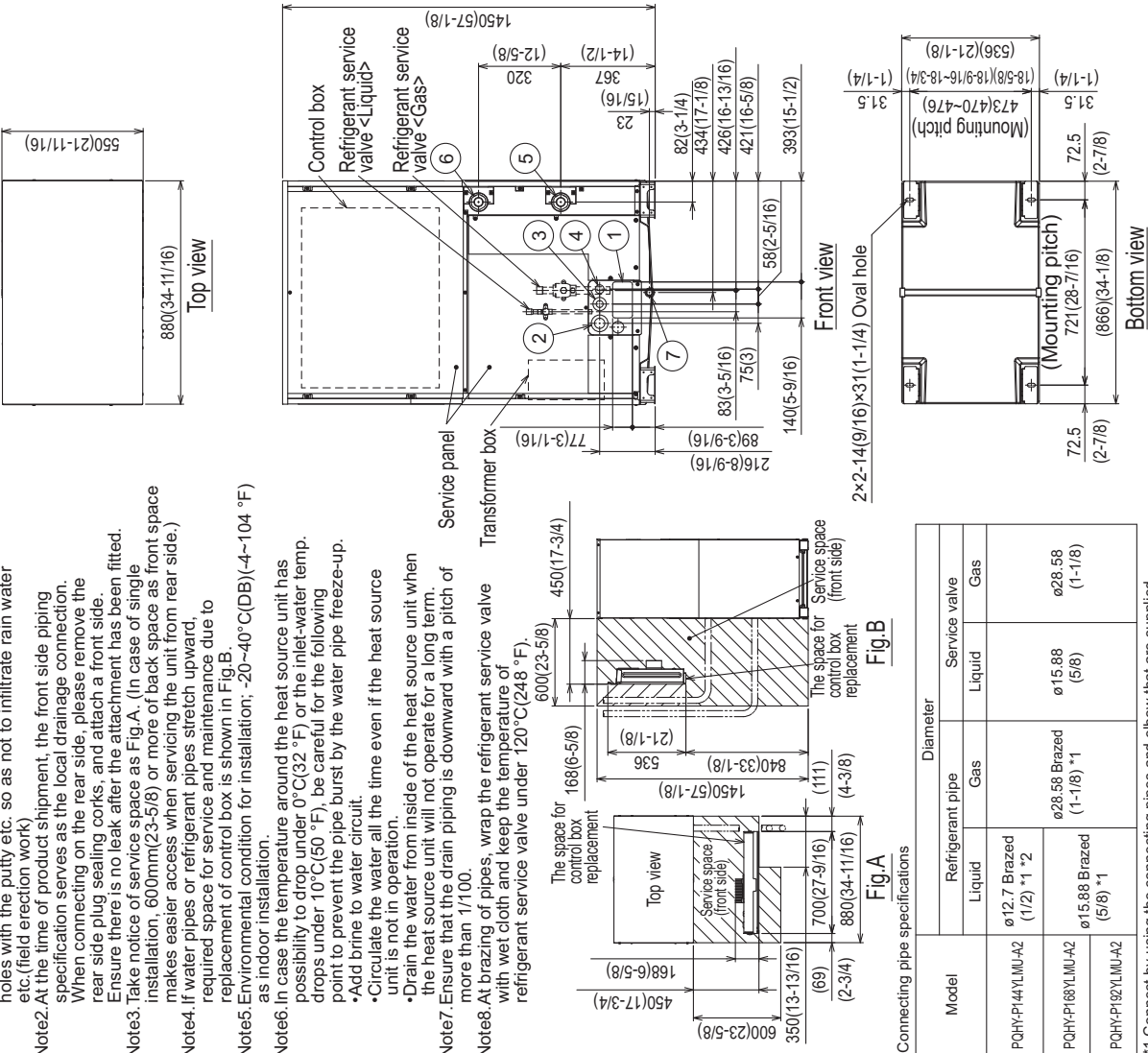
*3. Total length $\geq 40\text{m}(131\text{ft})$

4: Use the pipe joint (new supply) and connect to the intelligent service valve piping.

PQHY-P144, 168, 192YLMU-A2

Unit: mm(in)

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



- 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.
- Note7. Drain the water from inside of the heat source unit when the heat source unit will not operate for a long term.
Note8. Ensure that the drain piping is downward with a pitch of more than 1/100.
- Note9. 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
	For pipes	Front through hole	
①			140 x 77 Knockout hole (5-9/16) (3-1/16)
②			ø62.7 or ø34.5 Knockout hole (2-1/2) (1-3/8)
③			ø43.7 or ø22.2 Knockout hole (1-3/4) (7/8)
④			ø34 Knockout hole (1-3/8)
⑤			NPT 1-1/2 Screw
⑥			NPT 1-1/2 Screw
⑦			Rc3/4 Screw

Model	Diameter		
	Refrigerant pipe	Service valve	Gas
PQHY-P144YLMU-A2	ø12.7 Braze (1/2) *1 *2	ø15.88 (5/8)	ø28.58 (1-1/8)
PQHY-P168YLMU-A2	ø28.58 Braze (1-1/8) *1	ø15.88 (5/8)	ø28.58 (1-1/8)
PQHY-P192YLMU-A2	ø15.88 Braze (5/8) *1	ø15.88 (5/8)	ø28.58 (1-1/8)

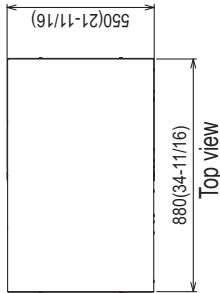
*1. Connect by using the connecting pipes and elbow that are supplied.
*2. Use the pipe joint(field supply) and connect to the refrigerant service valve piping.

PQHY-P216, 240YLMU-A2

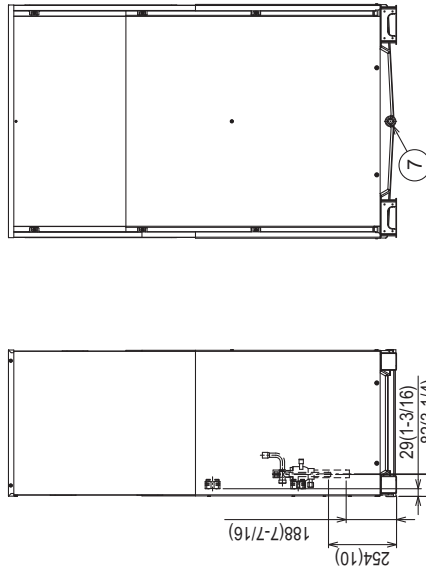
Unit: mm(in)

<Accessories (Packaged in the accessory kit)>

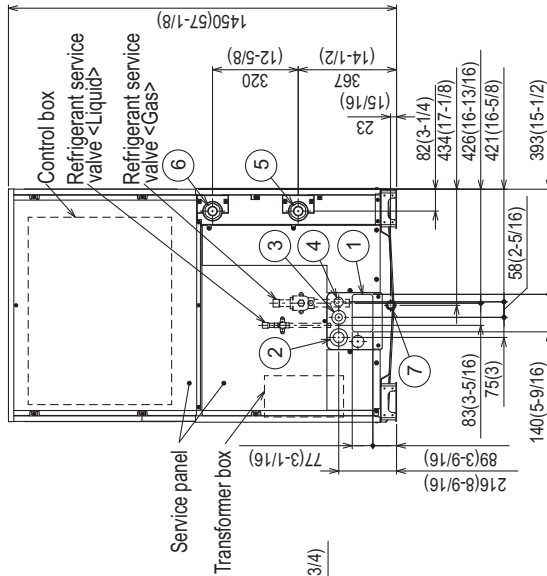
- Refrigerant (Liquid) conn. pipe 1pc.
- Refrigerant (Gas) conn. elbow 1pc.
- Water stopper (Liquid, Gas) 1pc. each
- Sealing material for water stopper (Liquid, Gas) 1pc. each
- Sealing material for field piping (Liquid, Gas) 1pc. each
- Sealing material for drain socket 1pc.
- Pipe cover for gas 1pc.
- Sealing material for base leg (two types) 4 pcs each
- Sealing material for panel 1pc.



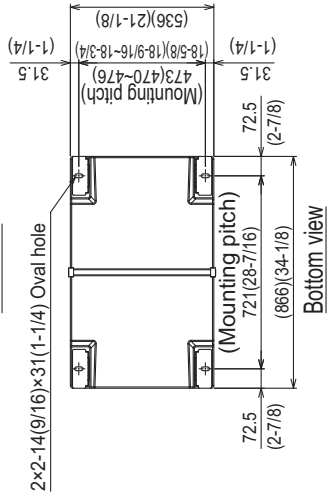
Top view



Right side 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).

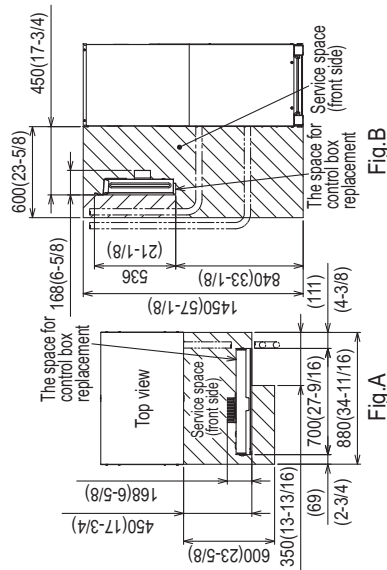


Fig.A

Fig.B

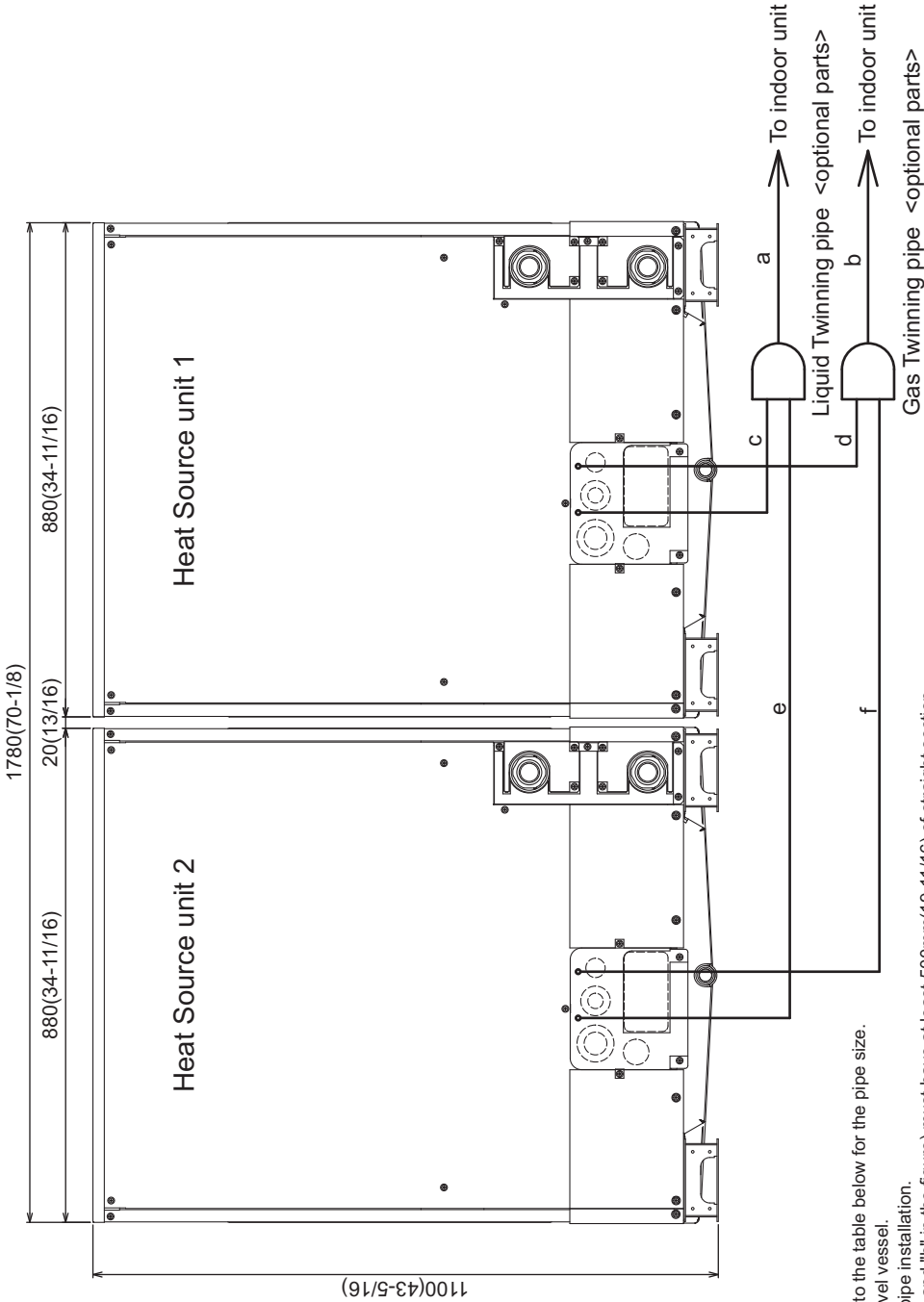
Connecting pipe specifications

Model	Diameter			
	Refrigerant pipe	Service valve		
	Liquid	Gas	Liquid	Gas
PQHY-P216YLMU-A2	ø15.88 Brazed (5/8) *1	ø28.58 Brazed (1-1/8) *1	ø15.88 (5/8)	ø28.58 (1-1/8)
PQHY-P240YLMU-A2				

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

PQHY-P144, 168, 192, 216, 240YSLMU-A2

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 pipes must be installed horizontally using a level vessel.
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

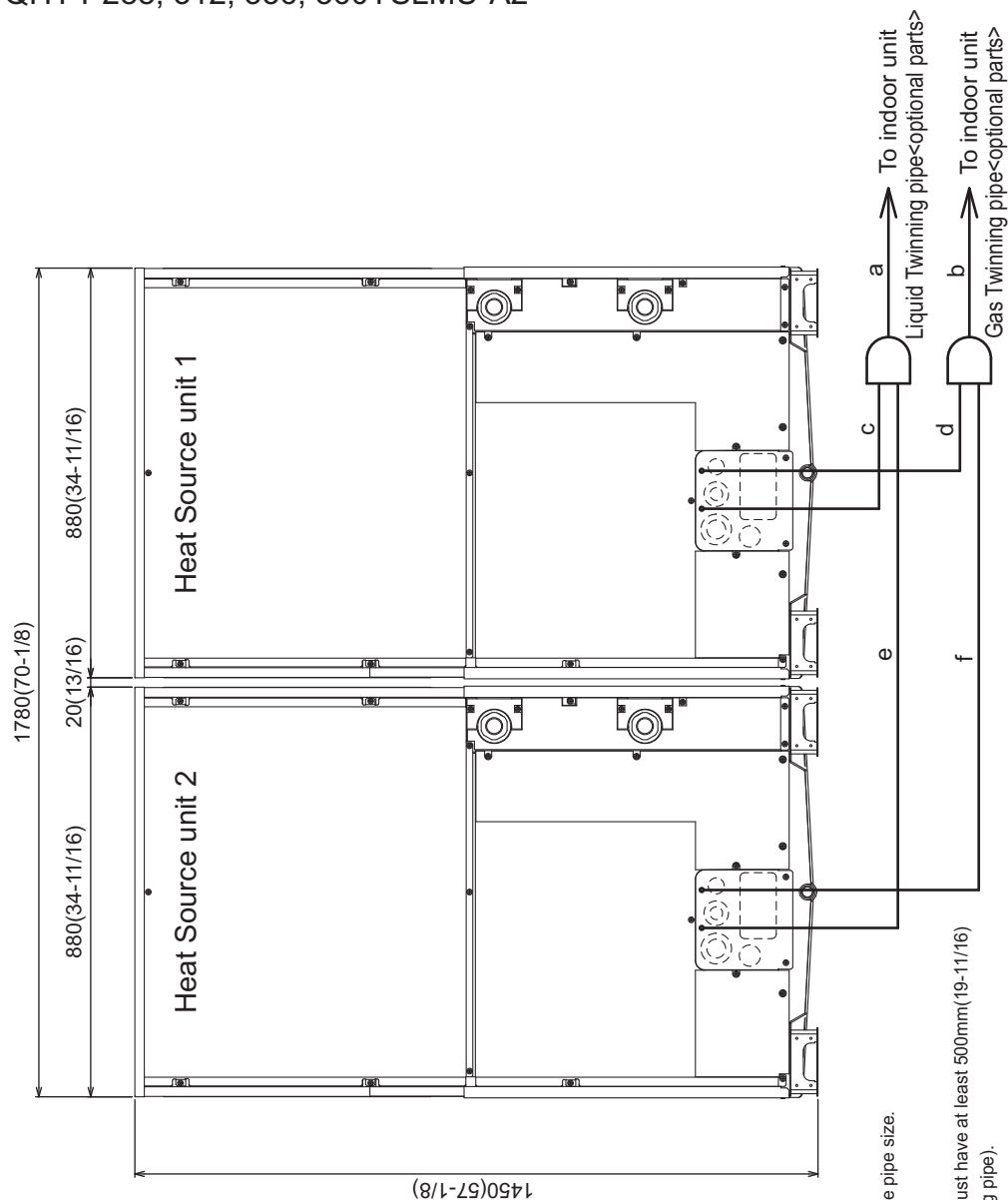
Package unit name		PQHY-P144YSLMU-A2	PQHY-P168YSLMU-A2	PQHY-P192YSLMU-A2	PQHY-P216YSLMU-A2	PQHY-P240YSLMU-A2
Component unit name	Heat Source unit 1	PQHY-P72YLMU-A2	PQHY-P96YLMU-A2	PQHY-P120YLMU-A2	PQHY-P120YLMU-A2	PQHY-P120YLMU-A2
	Heat Source unit 2	PQHY-P72YLMU-A2	PQHY-P96YLMU-A2	PQHY-P120YLMU-A2	PQHY-P96YLMU-A2	PQHY-P120YLMU-A2
Twinning 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)			
Twinning 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)		
Twinning 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)		

РQНУ-Р-Т(С)LMU-A2, Y(С)LMU-A2

2. EXTERNAL DIMENSIONS

PQHY-P288, 312, 336, 360YSLMU-A2

Unit: mm(in)



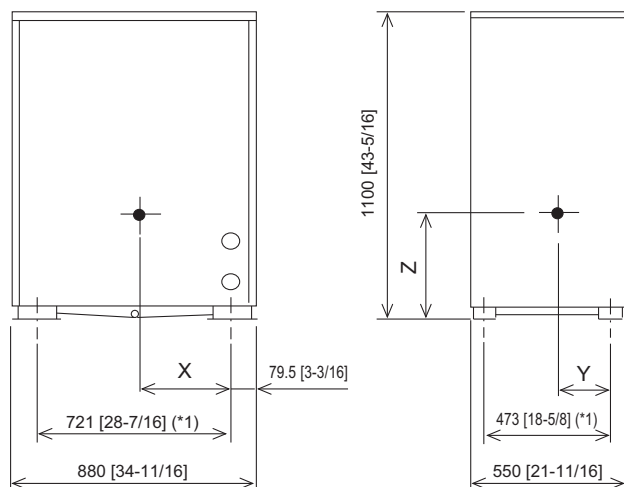
1. Connect the pipes as shown in the figure above. Refer to the table below for the pipe size.
2. Twinning pipes must be installed horizontally using a level vessel.
3. See the Installation Manual for the details of Twinning pipe installation.
4. The pipe section before the Twinning pipe (sections "a" and "b" in the figure) must have at least 100 mm (4 in.) 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-P288YSLMU-A2	PQHY-P312YSLMU-A2	PQHY-P336YSLMU-A2	PQHY-P360YSLMU-A2
Component unit name	Heat Source unit 1	PQHY-P144YLMU-A2	PQHY-P168YLMU-A2	PQHY-P168YLMU-A2	PQHY-P192YLMU-A2
	Heat Source unit 2	PQHY-P144YLMU-A2	PQHY-P144YLMU-A2	PQHY-P168YLMU-A2	PQHY-P168YLMU-A2
Twinning Kit(optional parts)		CMY-V200C8BK2			
Indoor unit~Twinning pipe	Liquid	a	ø19.05(3/4)		
	Gas	b	ø34.93(1-3/8)	ø41.28(1-5/8)	
Twinning pipe~Heat Source unit 1	Liquid	c	ø15.88(5/8)		
	Gas	d	ø28.58(1-1/8)		
Twinning pipe~Heat Source unit 2	Liquid	e	ø15.88(5/8)		
	Gas	f	ø28.58(1-1/8)		

PQHY-P72, 96, 120TLMU-A2/YLMU-A2

Unit: mm [in.]

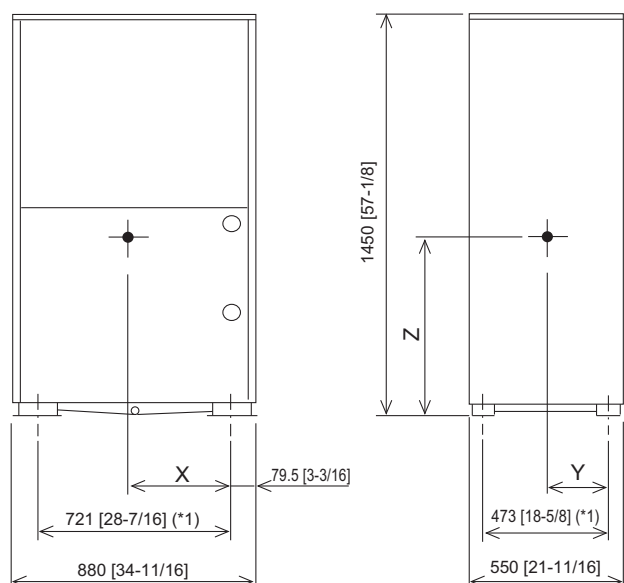


Model	X	Y	Z
PQHY-P72TLMU-A2	360 [14-3/16]	241 [9-1/2]	444 [17-1/2]
PQHY-P96TLMU-A2	360 [14-3/16]	241 [9-1/2]	444 [17-1/2]
PQHY-P120TLMU-A2	360 [14-3/16]	241 [9-1/2]	444 [17-1/2]
PQHY-P72YLMU-A2	387 [15-1/4]	228 [9]	430 [16-15/16]
PQHY-P96YLMU-A2	387 [15-1/4]	228 [9]	430 [16-15/16]
PQHY-P120YLMU-A2	387 [15-1/4]	228 [9]	430 [16-15/16]

*1 Mounting Pitch

PQHY-P144, 168, 192, 216, 240TLMU-A2/YLMU-A2

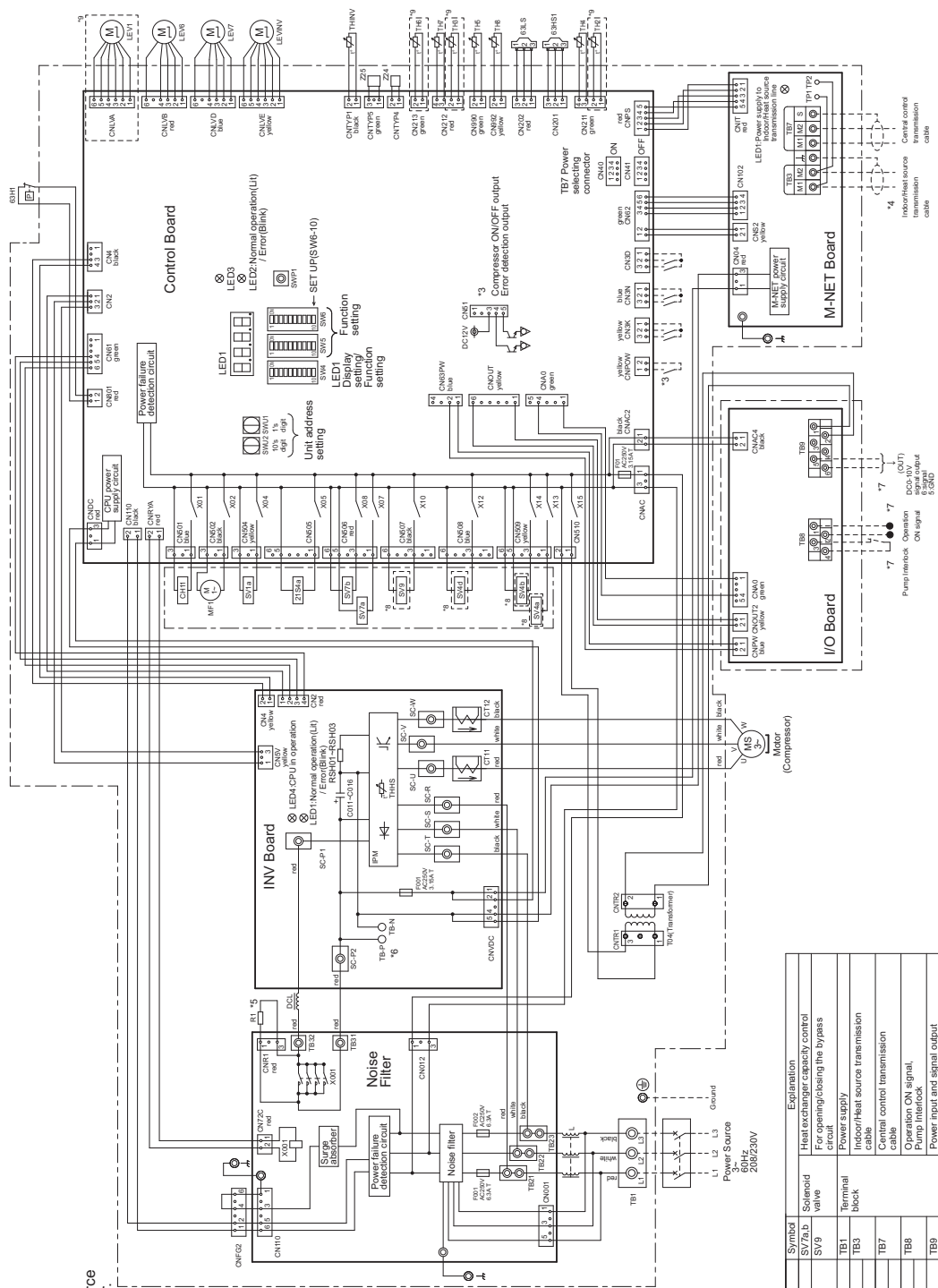
Unit: mm [in.]



Model	X	Y	Z
PQHY-P144TLMU-A2	384 [15-1/8]	240 [9-1/2]	626 [24-11/16]
PQHY-P168TLMU-A2	384 [15-1/8]	240 [9-1/2]	626 [24-11/16]
PQHY-P192TLMU-A2	384 [15-1/8]	240 [9-1/2]	626 [24-11/16]
PQHY-P216TLMU-A2	369 [14-9/16]	237 [9-3/8]	658 [25-15/16]
PQHY-P240TLMU-A2	369 [14-9/16]	237 [9-3/8]	658 [25-15/16]
PQHY-P144YLMU-A2	396 [15-5/8]	230 [9-1/16]	606 [23-7/8]
PQHY-P168YLMU-A2	396 [15-5/8]	230 [9-1/16]	606 [23-7/8]
PQHY-P192YLMU-A2	396 [15-5/8]	230 [9-1/16]	606 [23-7/8]
PQHY-P216YLMU-A2	379 [14-15/16]	226 [8-15/16]	626 [24-11/16]
PQHY-P240YLMU-A2	379 [14-15/16]	226 [8-15/16]	626 [24-11/16]

*1 Mounting Pitch

PQHY-P72, 92, 120TLMU-A2



- *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 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.

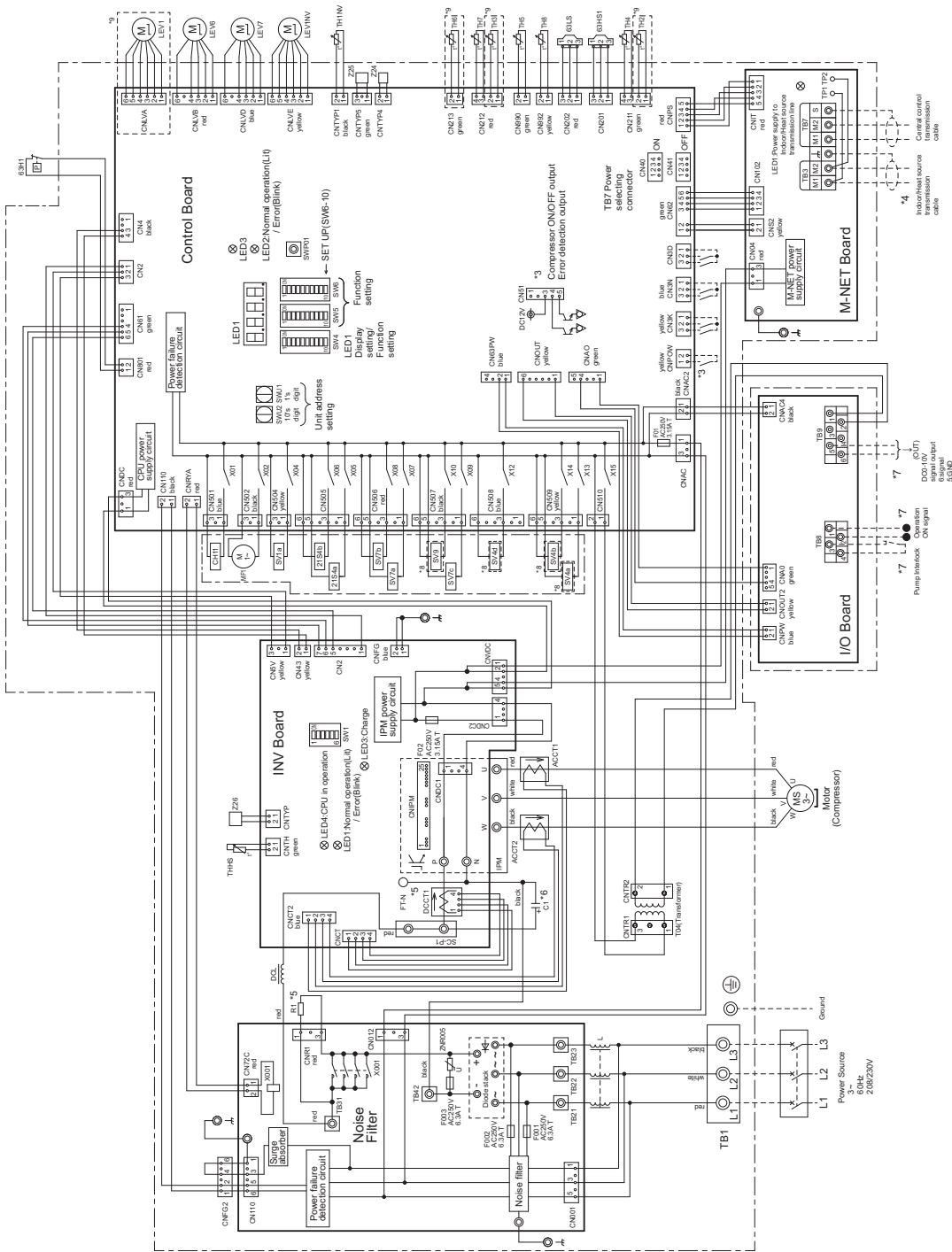
Model name	Appliance
PQHY	*8 do not exist
PQRY	*8 exist
Model name	Appliance
PQHY	*9 exist
PQRY	*9 do not exist

<Symbol explanation>

Symbol	Explanation	Symbol	Explanation
21S4a	4-way valve	SV7a,b	Solenoid valve
63H1	Pressure switch	SV9	High pressure protection for the heat source unit
63H51	Pressure sensor	TB1	Terminal block
63LS	Low pressure	TB3	Indoor/Heat source transmission cable
X001	Magnetic relay (inverter main circuit)	TB7	Indoor control transmission cable
CH11	Crankcase heater (for heating the compressor)	TB8	Operation ON signal, Pump Interlock
CT11.12	Current sensor (AC)	TB9	Power input and signal output for variable water flow valve
DL	DC reactor	TH2	Subcool bypass outlet temperature
L	Choke coil (for high frequency noise reduction)	TH3	Pipe temperature
LEV1	Linear expansion valve	TH4	Discharge pipe temperature
LEV6	Heat exchanger capacity control valve	TH5	ACC inlet pipe temperature
LEV7	Heat exchanger capacity control valve	TH6	Water inlet temperature
MF1	Fin motor (Radiator panel)	TH7	Water outlet temperature
RI	Resistor	TH8	Outlet temp. detect of heat exchanger for inverter
RS901-RS903	For current detection	TH9	IPM temperature
SV1a	Solenoid valve	THHS	Function setting connector
SV4a,b,d	Heat exchanger capacity control		

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

PQHY-P144, 168, 192TLMU-A2



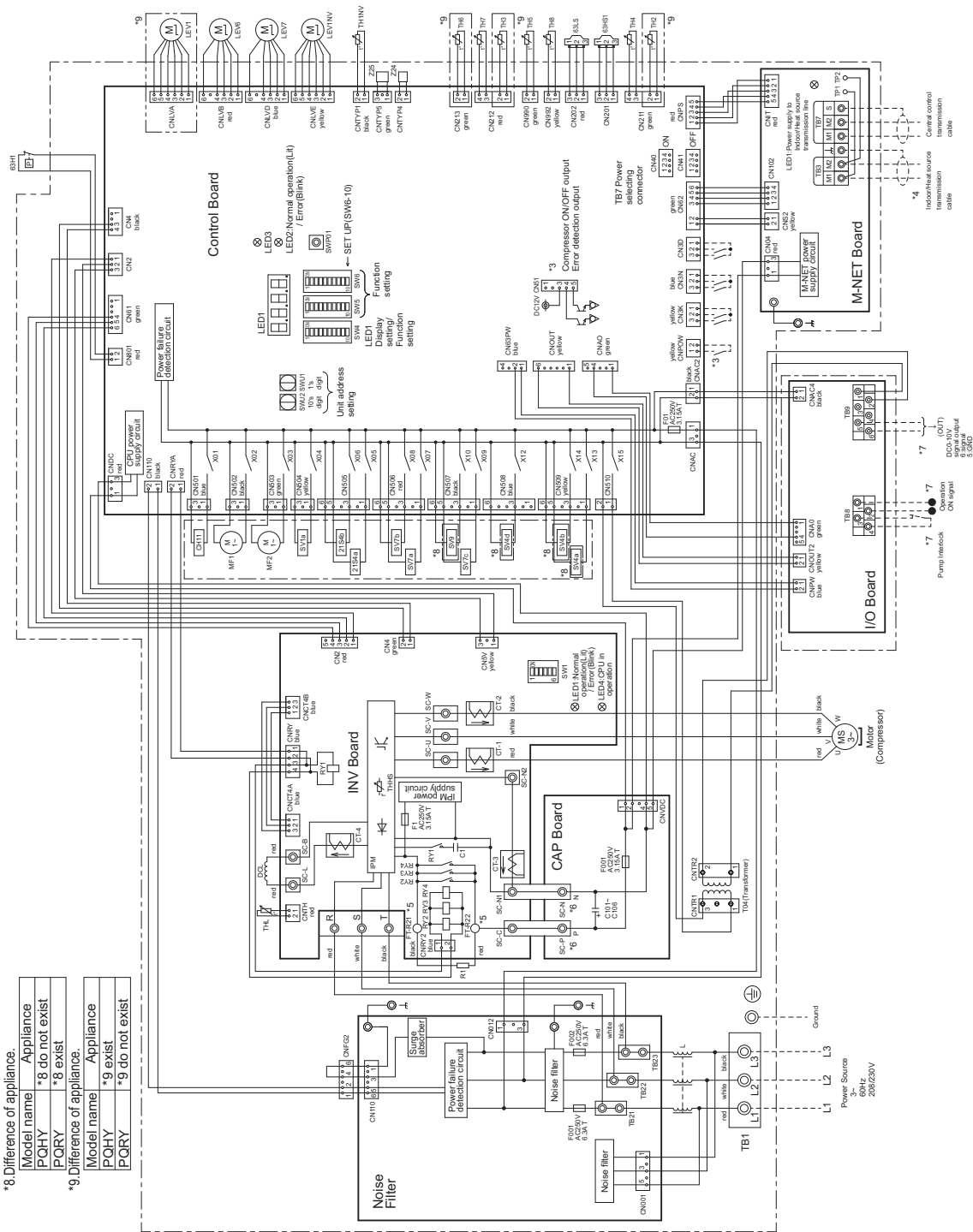
- *1. Single-dotted lines indicate wiring not supplied with the unit.
- *2. Dot-dash lines indicate the control box boundaries.
- *3. Refer to the Data book for connecting input/output signal connectors.
- *4. Daisy-chain terminals (TB3) on the heat source units in the same refrigerant system together.
- *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 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
Z1S4a	4-way valve
21S4b	Cooling/Heating switching
63H1	Pressure
63H1	High pressure protection for the heat source unit
63H1S	Pressure
63LS	Low pressure
C1	Main capacitor (inverter main circuit)
CH1	Compressor heater (for heating the compressor)
ACCT1.2	Current sensor (AC)
DCCT1	Current sensor (DC)
DC	DC reactor
L	Choke coil (for high frequency noise reduction)
LEV1	Linear expansion valve
LEV6	Linear expansion valve
LEV7	Linear expansion valve
LEV1V	Linear expansion valve
MF1	Fan motor (radiator panel)
R1	Resistor
SV1a	For inrush current prevention circuit under the O/S
SV4a,b,d	Heat exchanger capacity control
SV7a,b,c	Heat exchanger capacity control
SV9	For opening/closing the bypass
TB1	Terminal block
TB3	Indoor/Heat source transmission cable
TB7	Central control transmission cable
TB8	Operation ON signal, Pump interlock
TB9	Power input and signal output for outdoor water flow valve
TH2	Subcooled liquid outlet temperature
TH3	Subcooled liquid outlet temperature
TH4	Subcooled liquid outlet temperature
TH5	Discharge pipe temperature
TH6	Subcooled liquid refrigerant temperature
TH7	Water inlet temperature
TH8	Water outlet temperature
TH1V	Outlet temp detect of heat exchanger for inverter
TH4S	IPN temperature
Z24.25.26	Function setting connector

PQHY-P216, 240TLMU-A2



- *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

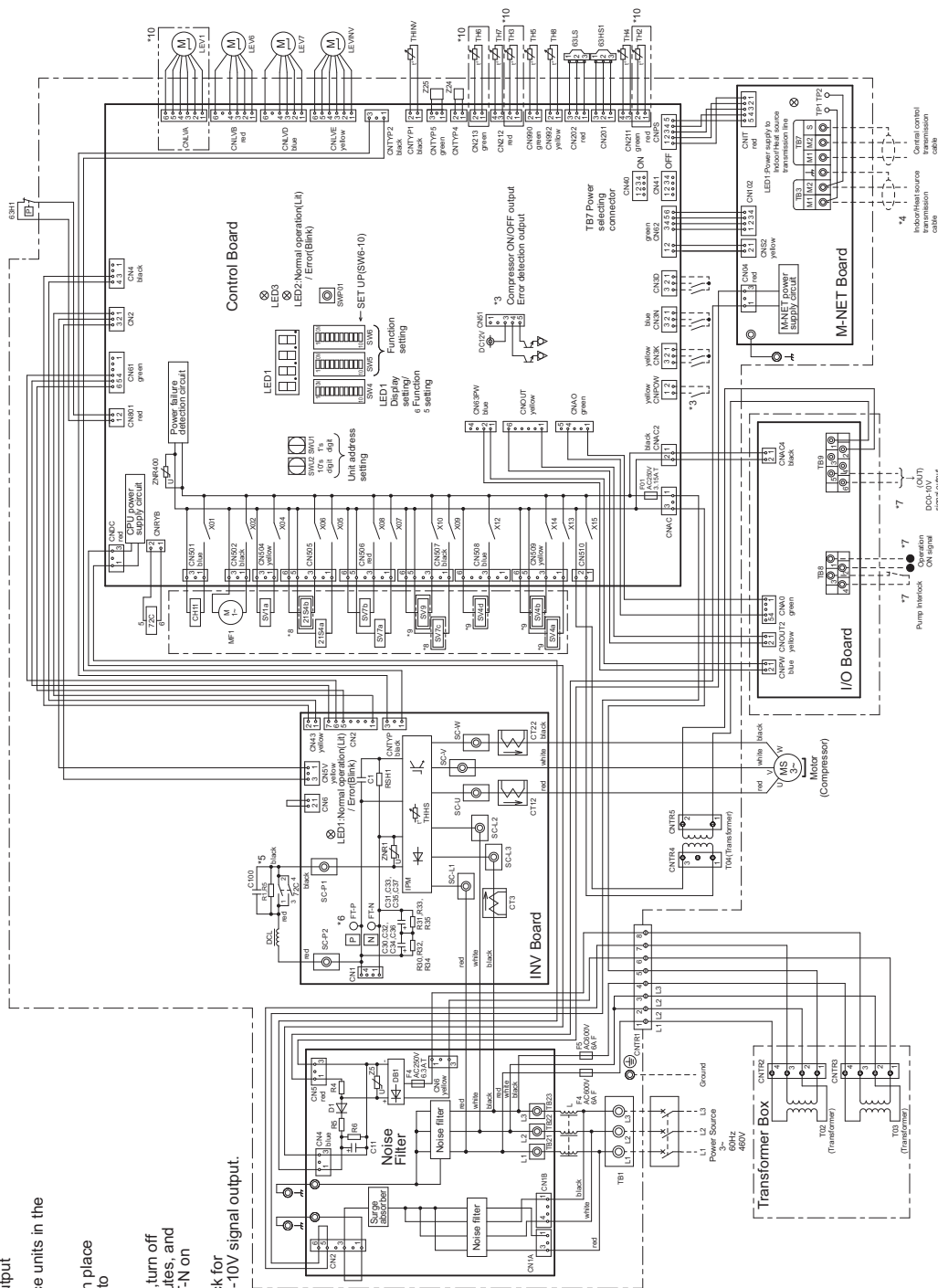
- *1. Single-dotted lines indicate wiring not supplied with the unit.
- *2. Dot-dash lines indicate the control box boundaries.
- *3. Refer to the Data book for connecting input/output signal connectors.
- *4. Daisy-chain terminals (TB3) on the heat source units in the same refrigerant system together.
- *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 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 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	Coding/heating switching
63H1	Heat exchanger capacity control
63H5	Pressure
63H51	High pressure protection for the
63LS	Pressure sensor
C1	Low pressure
C101-C106	Capacitor
C11	filter circuit
C111	Inverter main circuit
CT-1,CT-2	Crankcase heater (for heating the compressor)
CT-3,CT-4	Current sensor (AC)
DCL	DC reactor
L	Choke coil (for high frequency noise reduction)
LEV1	N/C bypass. Controls refrigerant expansion valve flow in H/C circuit
LEV6	Heat exchanger capacity control
LEV7	Heat exchanger capacity control
LEVINV	Heat exchanger capacity control
MF1, MF2	Heat exchanger for inverter
R1	Fan motor (Radiator panel)
RY1	Magnetic
RY2,RY3,RY4	Relay
SV1a	Inverter main circuit (ZC)
SV4a,b,d	For opening/closing the bypass
SV7a,b,c	Heat exchanger capacity control
SV9	Heat exchanger capacity control
TB1	For opening/closing the bypass circuit
TB3	Power supply
TB7	Indoor/Heat source transmission cable
TB8	Central control transmission cable
TB9	Operation ON signal, Pump Interlock
TB9	Power input and signal output for variable water flow valve
TH2	Pipe temperature
TH3	Subcool bypass outlet temperature
TH4	Discharge pipe temperature
TH5	ACC inlet pipe temperature
TH6	Subcooled liquid refrigerant
TH7	Water inlet temperature
TH8	Water outlet temperature
THINV	Outlet temp. detect of heat exchanger for inverter
THHS	IPM temperature
THL	DCL temperature
Z24.25	Function setting connector

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

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.
6. Make sure the terminals are securely locked in place after insertion. Press the tab on the terminals to remove them.
7. Control box houses high-voltage parts.
8. 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 F-T-P and F-T-N on INV Board has dropped to DC20V or less.
9. Refer to the Data book for wiring terminal block for Pump Interlock, Operation ON signal and DC0-10V signal output.
10. Discharge of appliance.



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

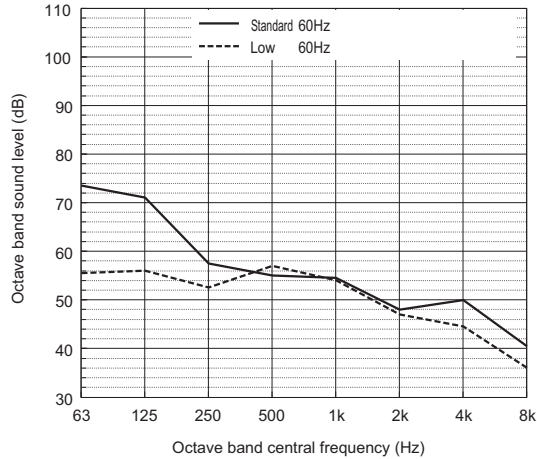
Model name	Appliance
PQHY	*9 do not exist
PQRY	*9 exist

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

<Symbol explanation>

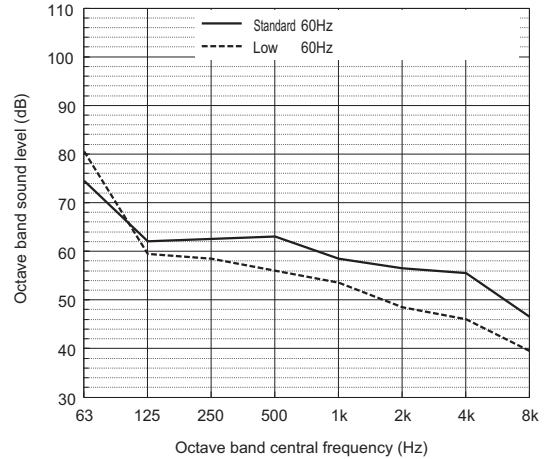
Symbol	Explanation
2154a	4-way valve
2154b	Cooling/Heating switching
63H1	Heat exchanger capacity control
63H2	High pressure protection for the heat source unit
63H3	High pressure
63H4	Low pressure
63LS	High/low relay (forward main circuit)
72C-C37	Compressor
GH1	Condensate heater (for heating the compressor)
CT12.2.3	Current sensor (AC)
DC reactor	DC reactor
L	Inductor
DC coil	Coil for high frequency noise reduction
LEV1	Linear expansion valve
LEV6	HIC bypass Controls refrigerant flow in HIC circuit
LEV7	Heat exchanger capacity control
LEV8	Heat exchanger capacity control
LEV9	Heat exchanger capacity control
MF1	Heat exchanger for freewheel
Fan motor	Blower fan motor
RSH1	Resistor
R1.5	For current detection
SV1a	For opening/closing the bypass circuit under the OS
SV1a,b,d	Heat exchanger capacity control
SV1a,b,c	Heat exchanger capacity control
SV9	For opening/closing the bypass circuit
TS1	Power supply
TS3	Indoor/Heat source transmission cable
TS7	Control circuit transmission cable
TS8	Operation ON signal, Pump Interlock
TS9	Power input and signal output
TH2	For variable water flow valve
TH3	Water inlet pipe temperature
TH4	Pipe temperature
TH5	Discharge pipe temperature
TH6	ACC inlet pipe temperature
TH7	Subcooled liquid refrigerant temperature
TH8	Water inlet temperature
TH9	Water outlet temperature
TH10	Coil temp. detect of heat exchanger for freewheel
TH11	IP31 temperature
TH12	Function switching connector
TH13	
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TH84	
TH85	
TH86	
TH87	
TH88	
TH89	
TH90	
TH91	
TH92	
TH93	
TH94	
TH95	
TH96	
TH97	
TH98	
TH99	
TH100	
TH101	
TH102	
TH103	
TH	

Sound power level of PQHY-P72TLMU/YLMU-A2



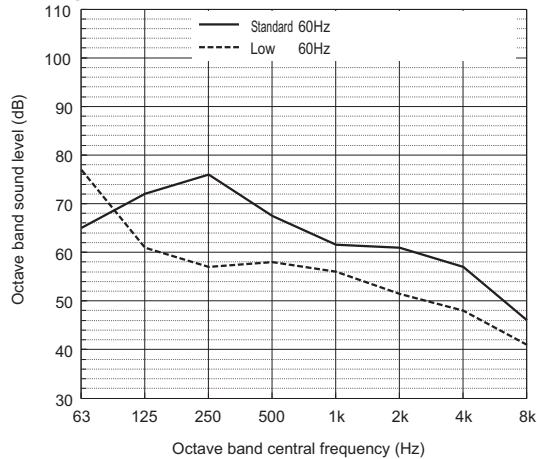
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound power level of PQHY-P96TLMU/YLMU-A2



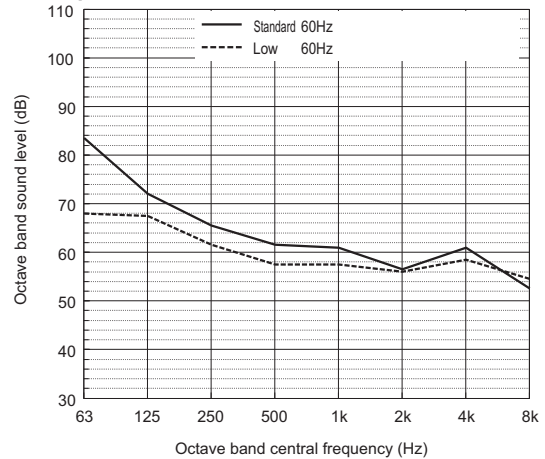
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound power level of PQHY-P120TLMU/YLMU-A2



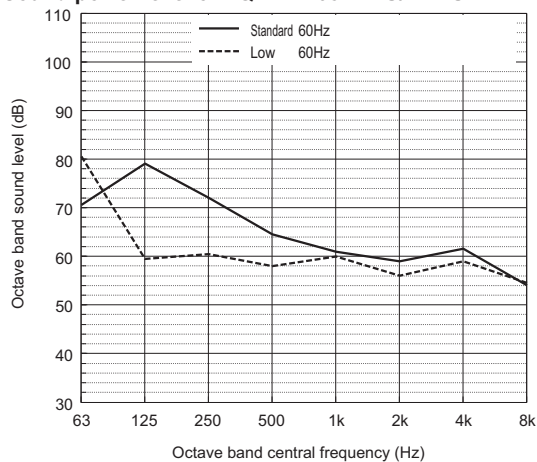
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound power level of PQHY-P144TLMU/YLMU-A2



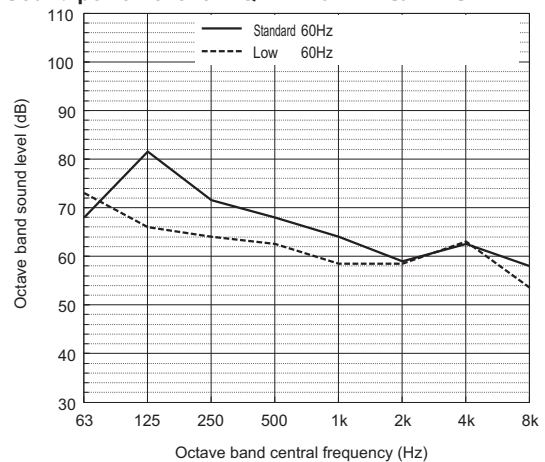
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound power level of PQHY-P168TLMU/YLMU-A2



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 power level of PQHY-P192TLMU/YLMU-A2

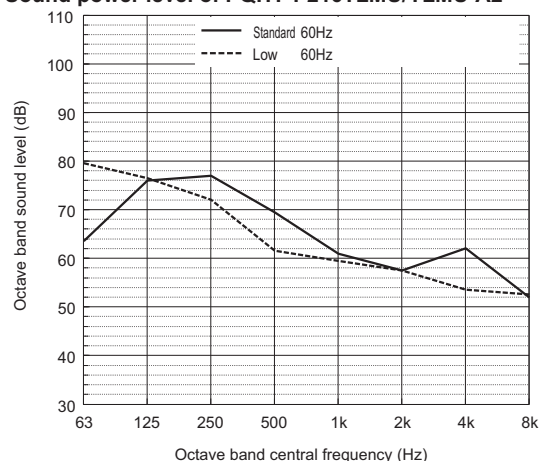


When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

- 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.
- The sound values are sound power level (PWL) based on ISO 3744:2010 ($r = 3.5 \text{ m}$).

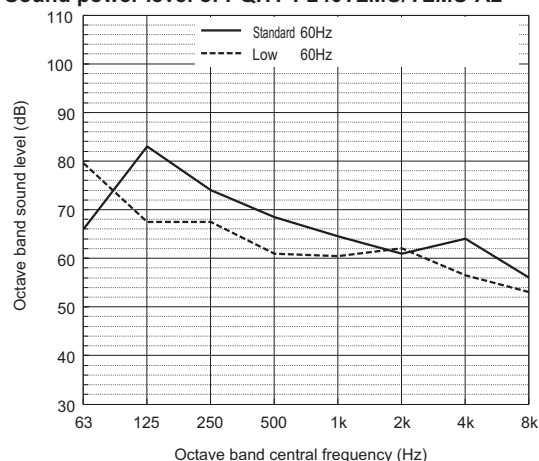
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Sound power level of PQHY-P216TLMU/YLMU-A2



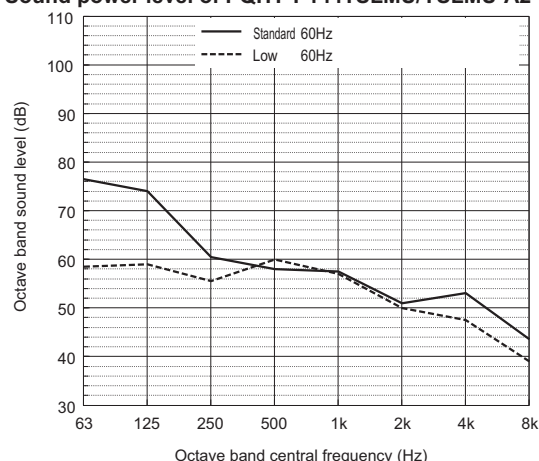
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound power level of PQHY-P240TLMU/YLMU-A2



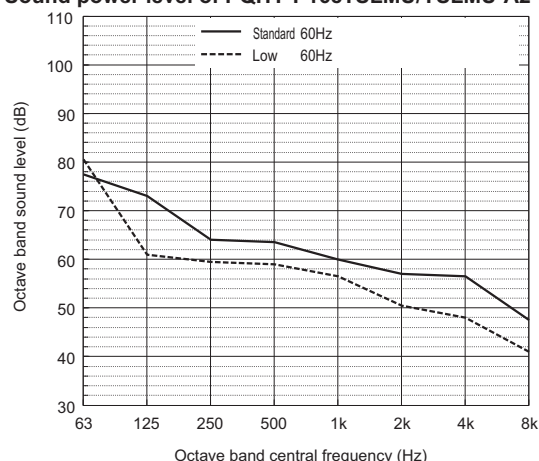
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound power level of PQHY-P144TSLMU/YSLMU-A2



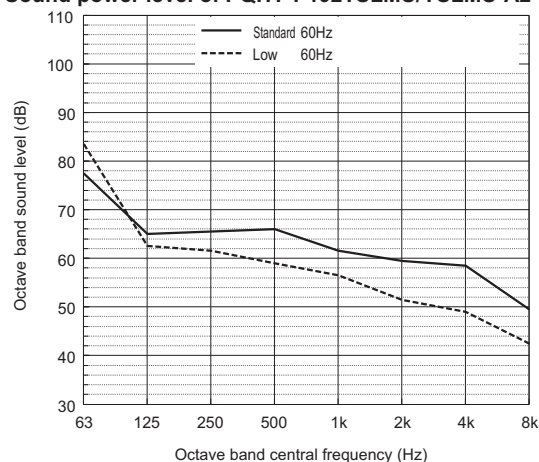
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound power level of PQHY-P168TSLMU/YSLMU-A2



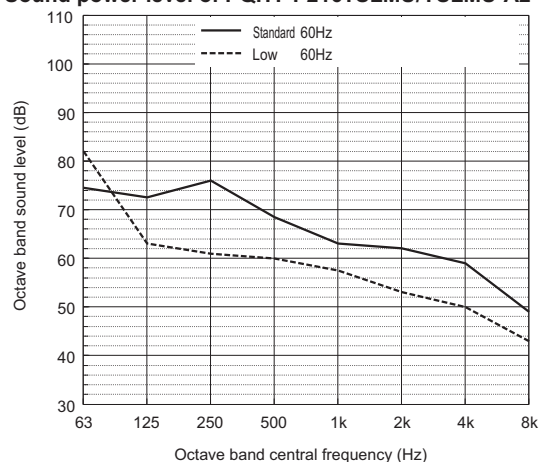
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound power level of PQHY-P192TSLMU/YSLMU-A2



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 power level of PQHY-P216TSLMU/YSLMU-A2

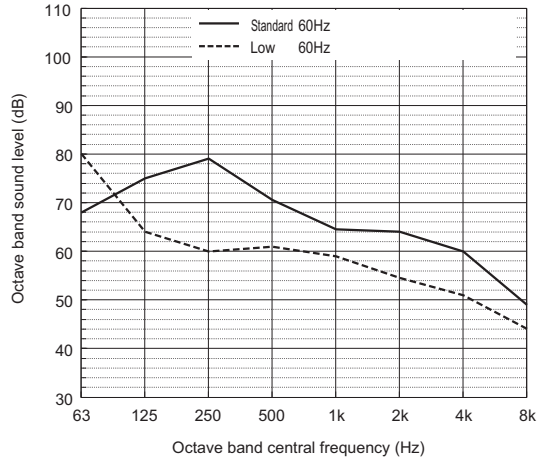


When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

- 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.
- The sound values are sound power level (PWL) based on ISO 3744:2010 ($r = 3.5$ m).

Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

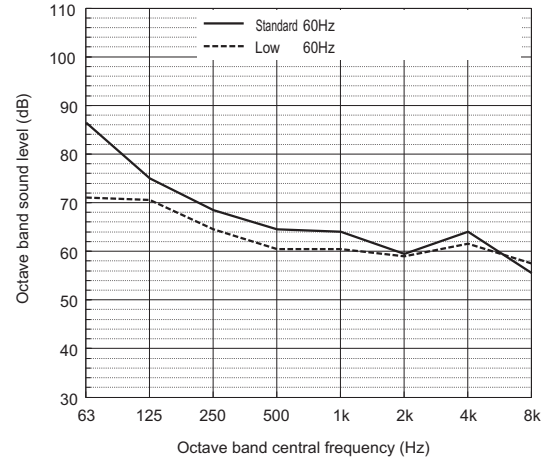
Sound power level of PQHY-P240TSLMU/YSLMU-A2



	63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	68.0	75.0	79.0	70.5	64.0	60.0	49.0	74.0
Low noise mode	60Hz	80.0	64.0	60.0	61.0	59.0	54.5	51.0	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.

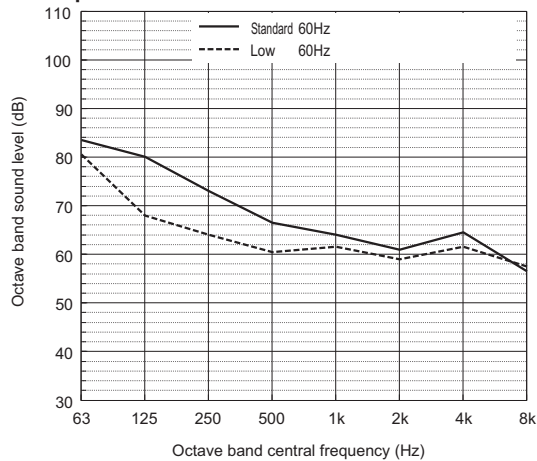
Sound power level of PQHY-P288TSLMU/YSLMU-A2



	63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	86.5	75.0	68.5	64.5	64.0	59.5	64.0	55.5
Low noise mode	60Hz	71.0	70.5	64.5	60.5	60.5	59.0	61.5	57.5

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.

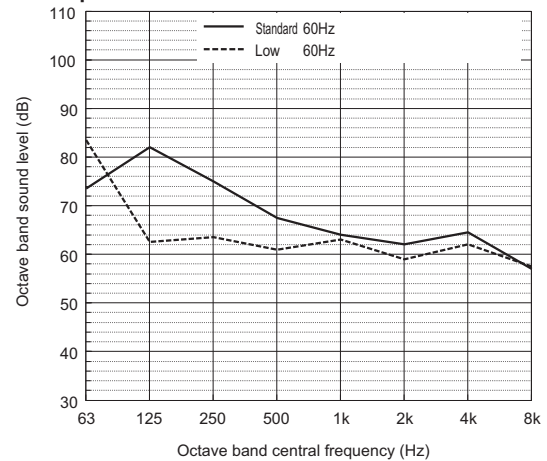
Sound power level of PQHY-P312TSLMU/YSLMU-A2



	63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	83.5	80.0	73.0	66.5	64.0	61.0	64.5	56.5
Low noise mode	60Hz	80.5	68.0	64.0	60.5	61.5	59.0	61.5	57.5

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.

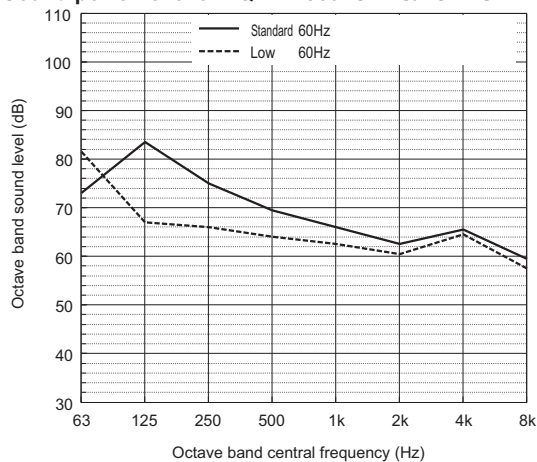
Sound power level of PQHY-P336TSLMU/YSLMU-A2



	63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	73.5	82.0	75.0	67.5	64.0	62.0	64.5	57.0
Low noise mode	60Hz	83.5	62.5	63.5	61.0	63.0	59.0	62.0	57.5

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 power level of PQHY-P360TSLMU/YSLMU-A2



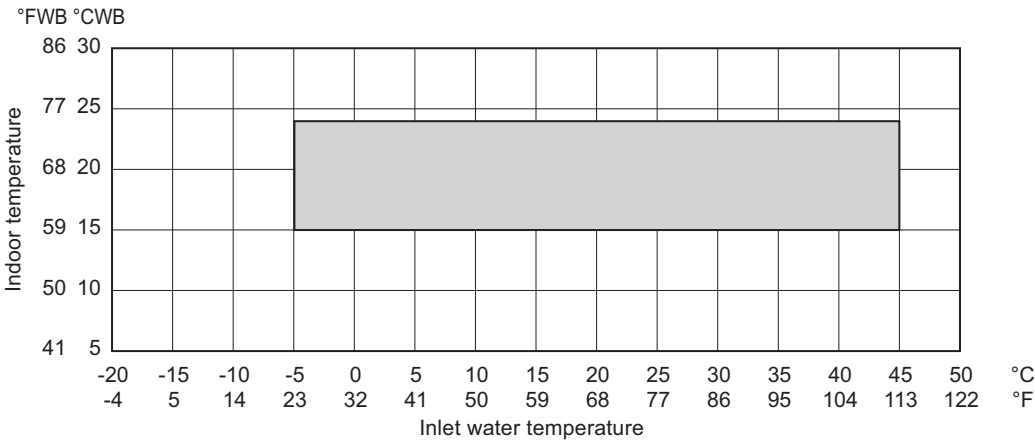
	63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	73.0	83.5	75.0	69.5	66.0	62.5	65.5	59.5
Low noise mode	60Hz	81.5	67.0	66.0	64.0	62.5	60.5	64.5	57.5

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.

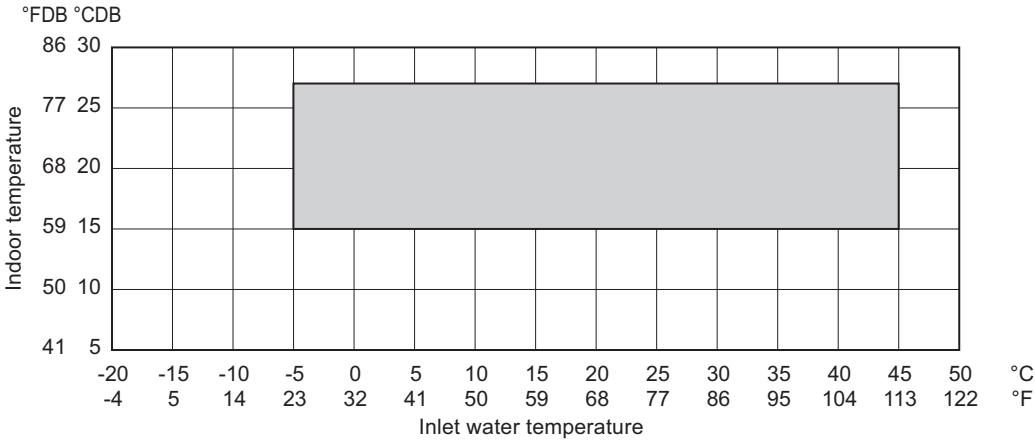
- Depending on the operation conditions, the unit generates noise caused by valve actuation, refrigerant flow, and pressure changes when operating normally. Please consider to avoid location where quietness is required.
 - The sound values are sound power level (PWL) based on ISO 3744:2010 ($r = 3.5$ m).
- Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

Cooling



Heating

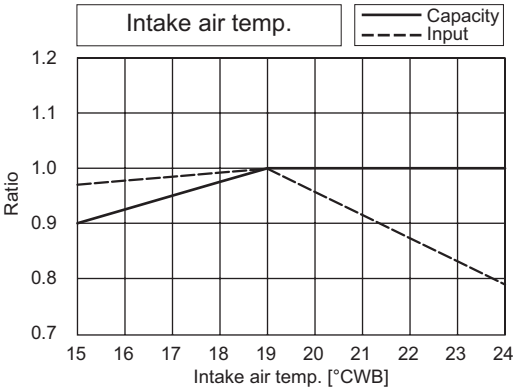
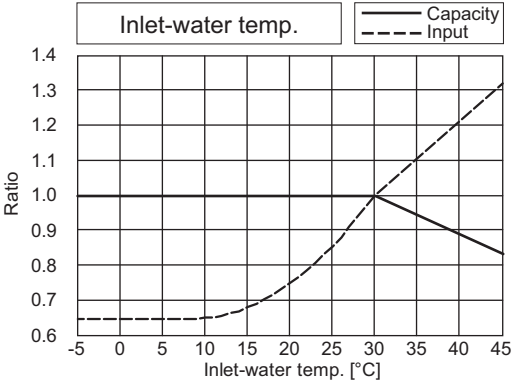


* The upper limit of the outlet water temperature is approximately 70°C (158°F) when the circulating-water flow rate is within the normal range.
If the circulating-water flow rate goes outside the normal range, the outlet water temperature may exceed the above limit.

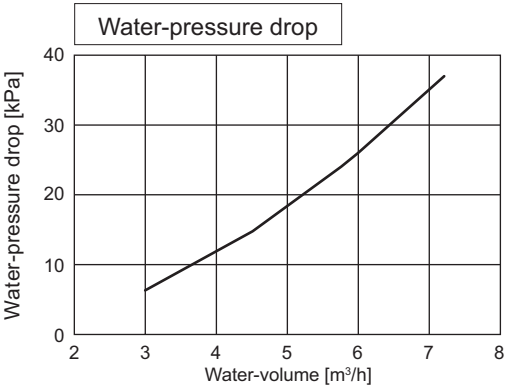
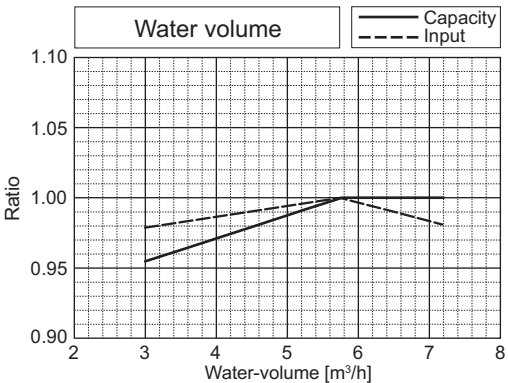
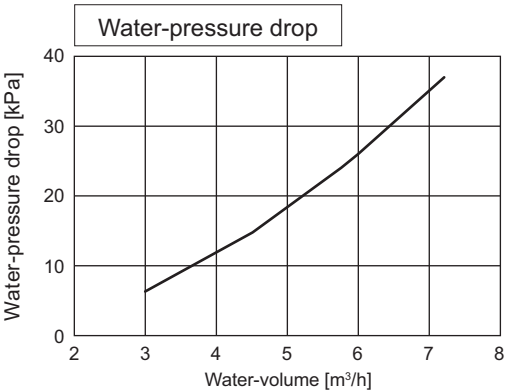
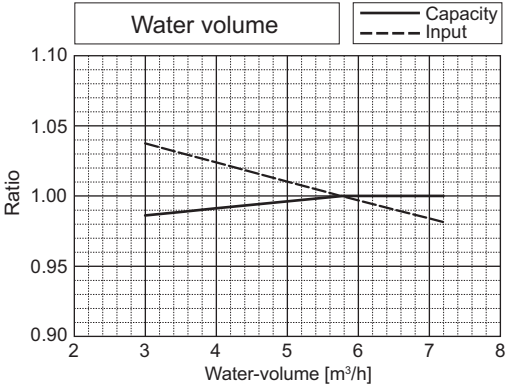
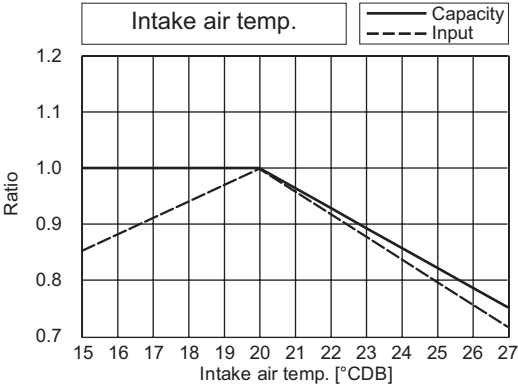
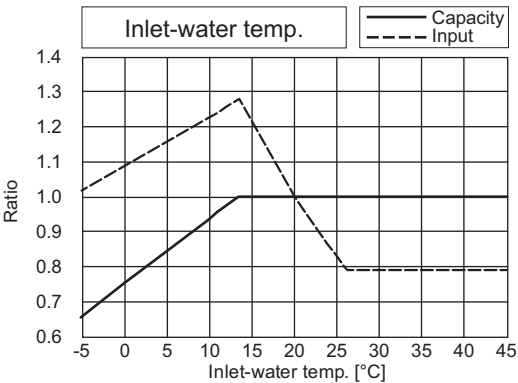
7-1. Correction by temperature

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-		P72TLMU/YLMU
Nominal Cooling Capacity	kW	21.1
	BTU/h	72,000
Input	kW	3.61

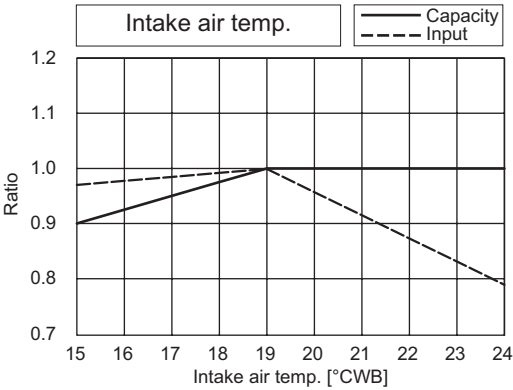
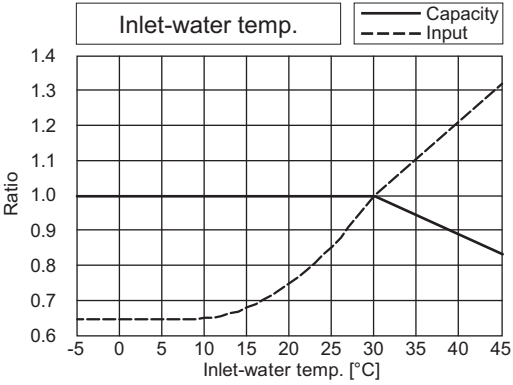


PQHY-		P72TLMU/YLMU
Nominal Heating Capacity	kW	23.4
	BTU/h	80,000
Input	kW	4.04

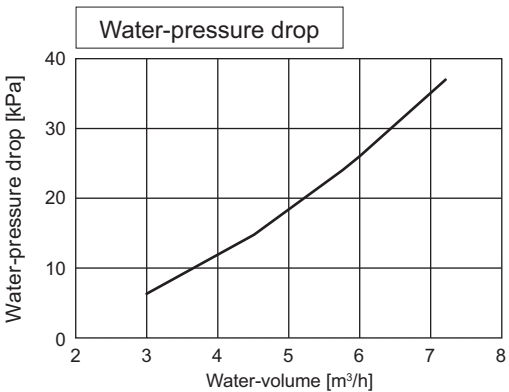
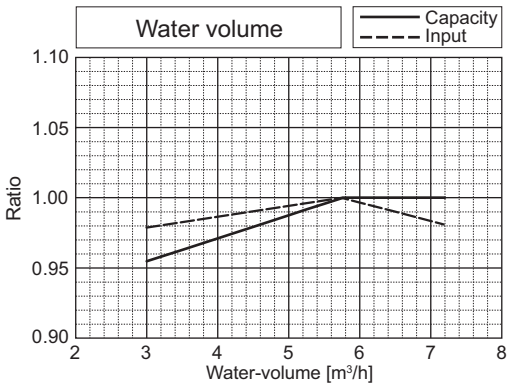
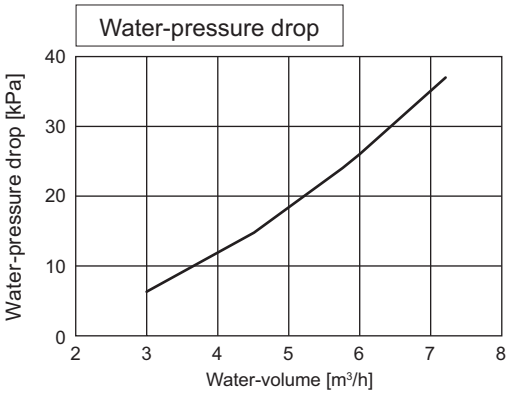
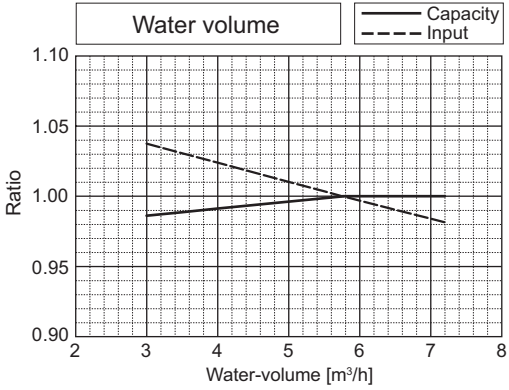
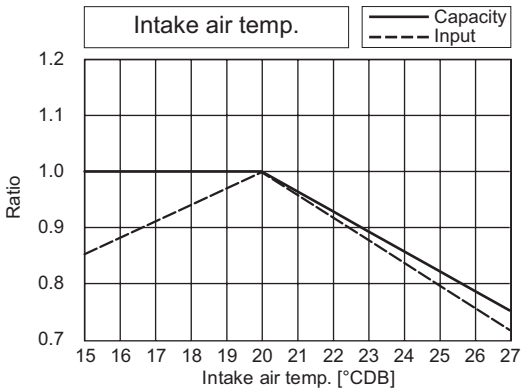
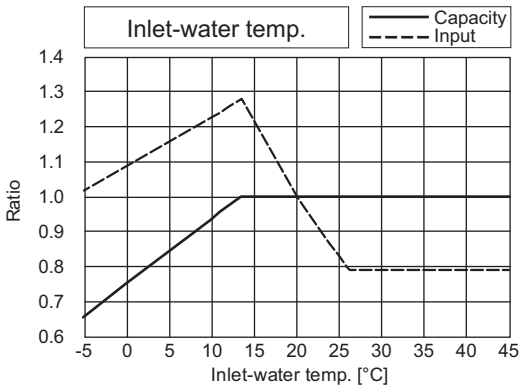


PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

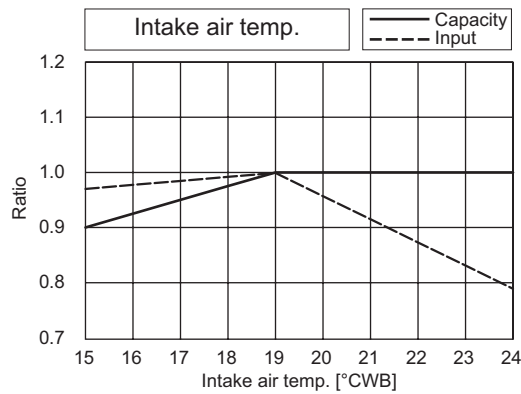
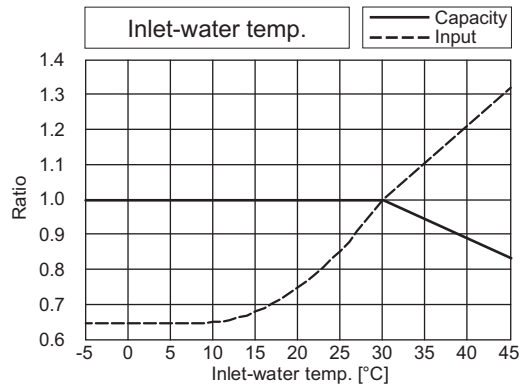
PQHY-		P96TLMU/YLMU
Nominal Cooling Capacity	kW	28.1
	BTU/h	96,000
Input	kW	5.21



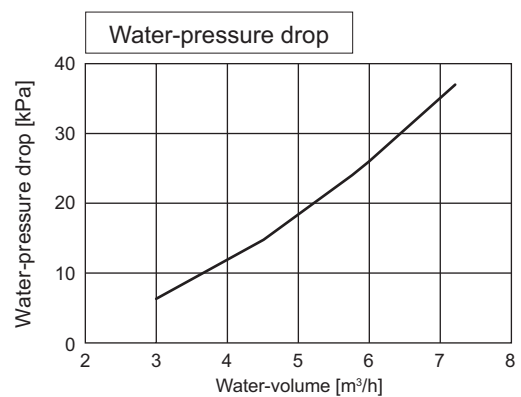
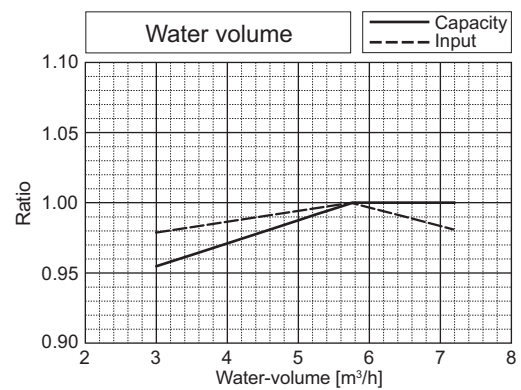
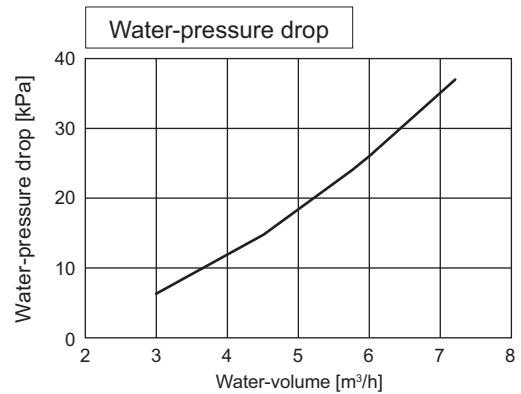
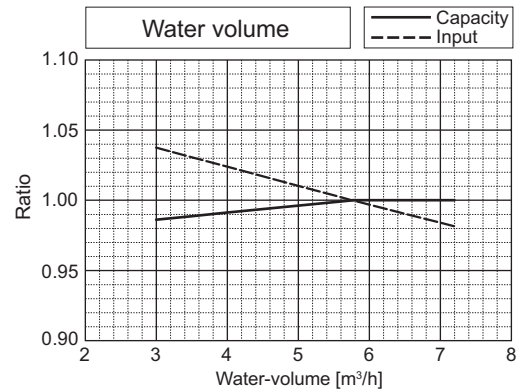
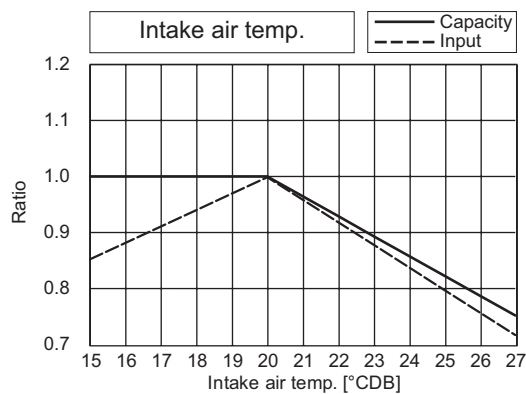
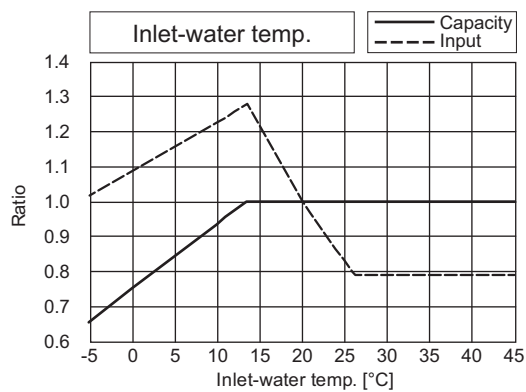
PQHY-		P96TLMU/YLMU
Nominal Heating Capacity	kW	31.7
	BTU/h	108,000
Input	kW	5.64



PQHY-		P120TLMU/YLMU
Nominal Cooling Capacity	kW	35.2
	BTU/h	120,000
Input	kW	7.51

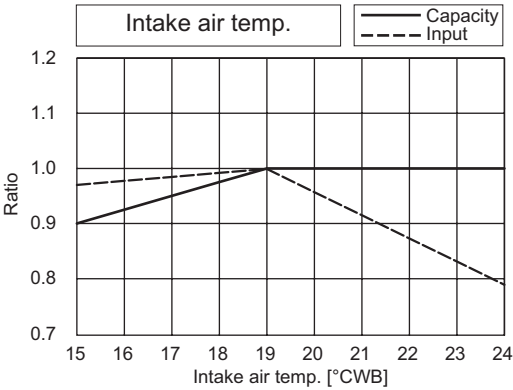
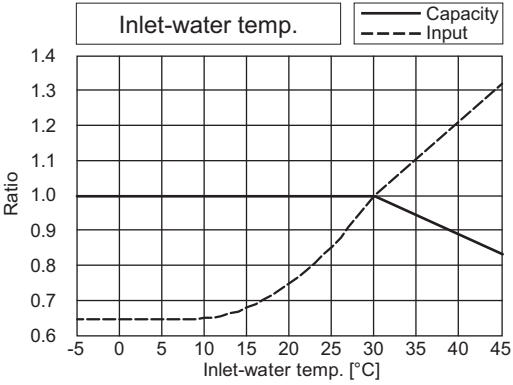


PQHY-		P120TLMU/YLMU
Nominal Heating Capacity	kW	39.6
	BTU/h	135,000
Input	kW	7.09

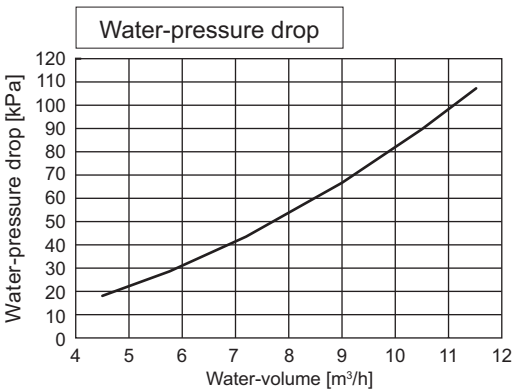
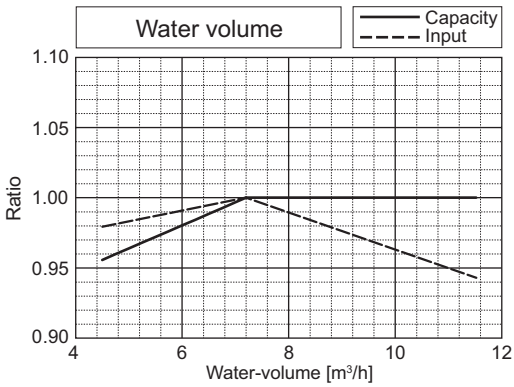
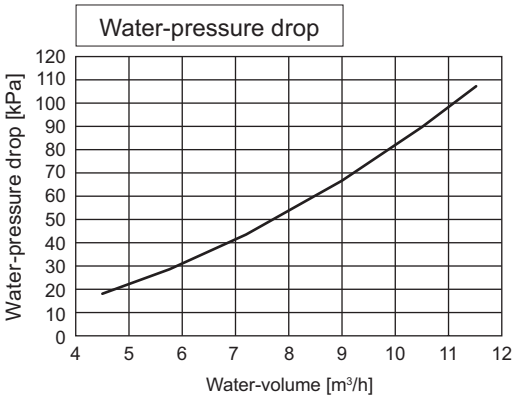
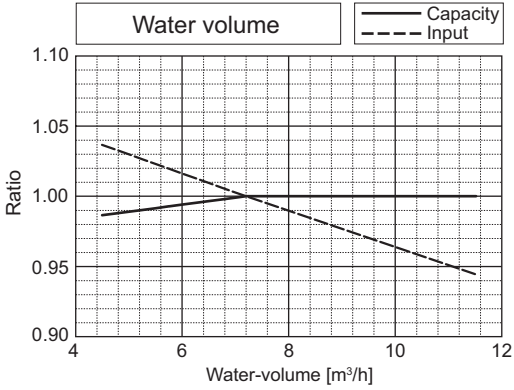
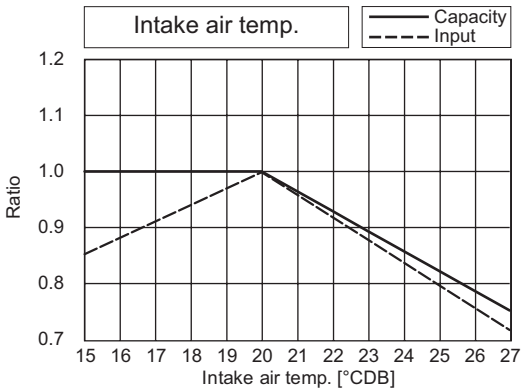
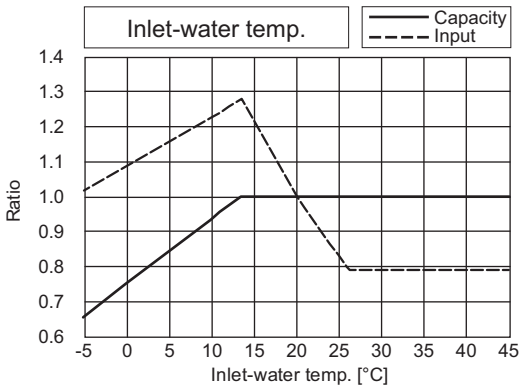


PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

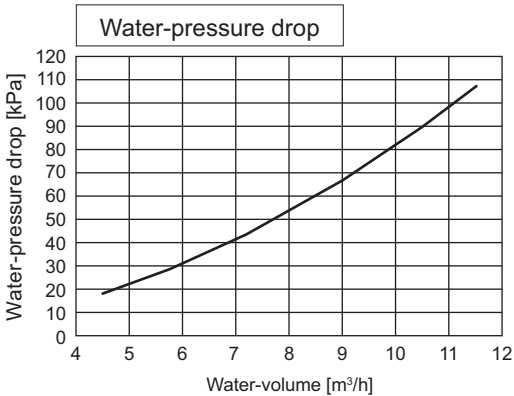
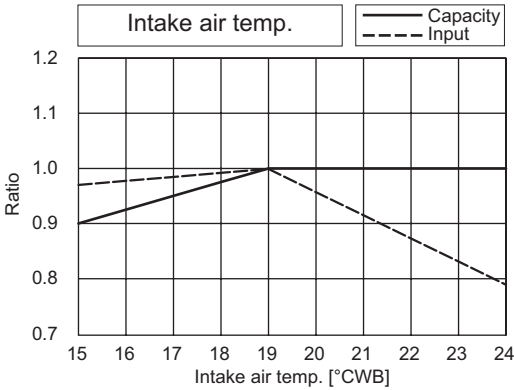
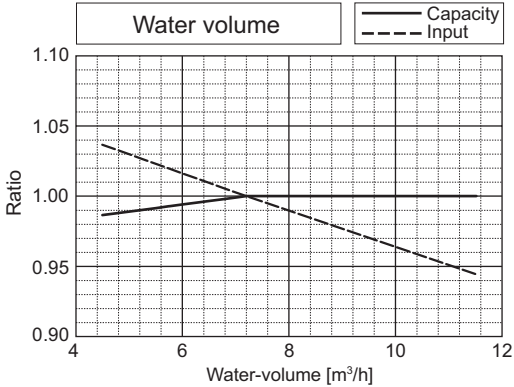
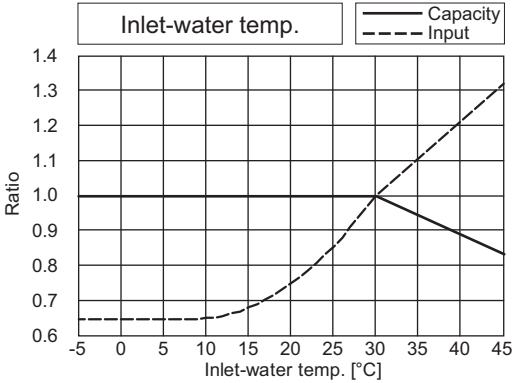
PQHY-		P144TLMU/YLMU
Nominal Cooling Capacity	kW	42.2
	BTU/h	144,000
Input	kW	8.78



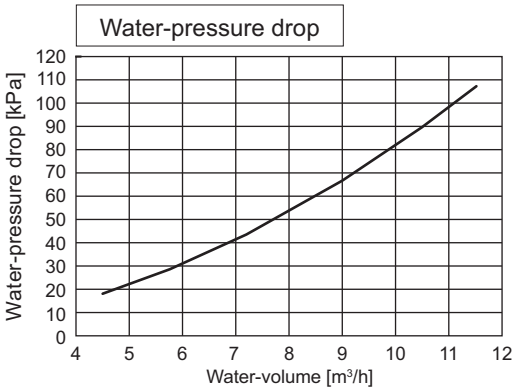
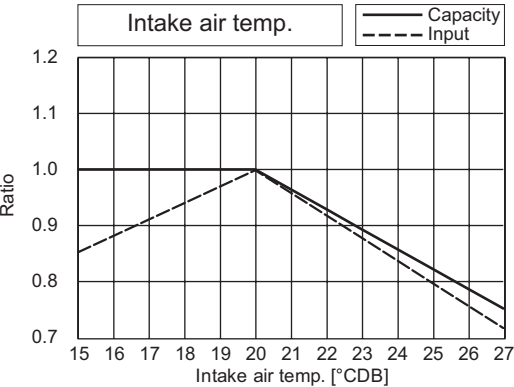
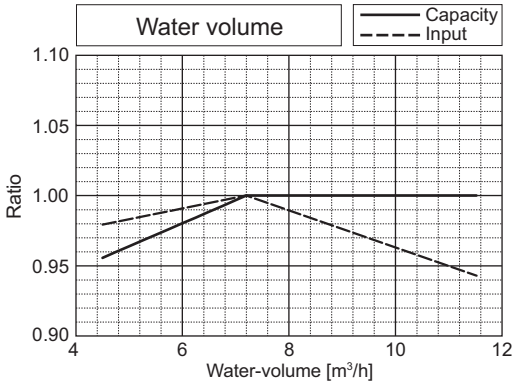
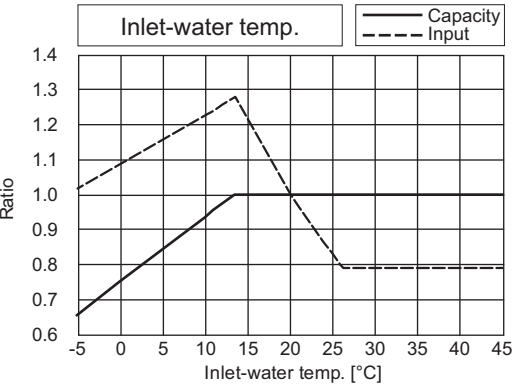
PQHY-		P144TLMU/YLMU
Nominal Heating Capacity	kW	46.9
	BTU/h	160,000
Input	kW	8.11



PQHY-		P168TLMU/YLMU
Nominal Cooling Capacity	kW	49.2
	BTU/h	168,000
Input	kW	12.05

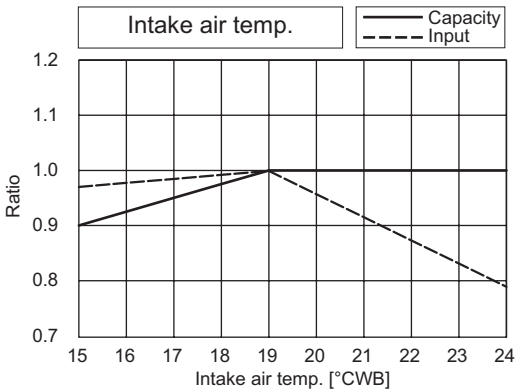
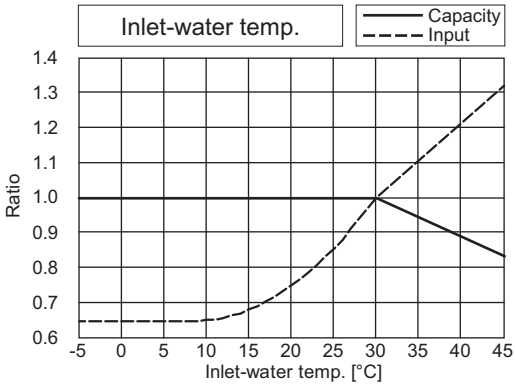


PQHY-		P168TLMU/YLMU
Nominal Heating Capacity	kW	55.1
	BTU/h	188,000
Input	kW	9.86

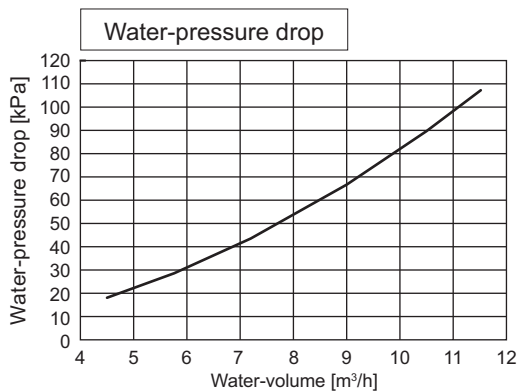
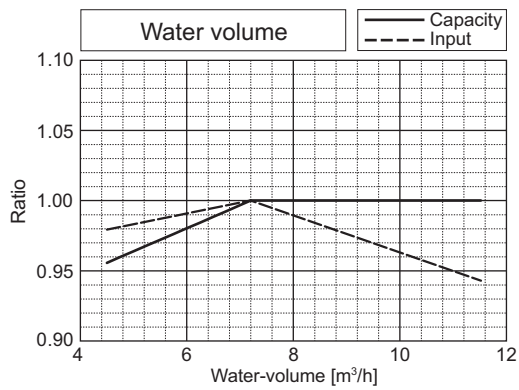
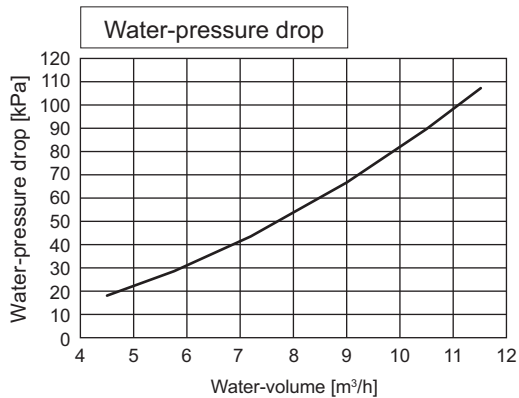
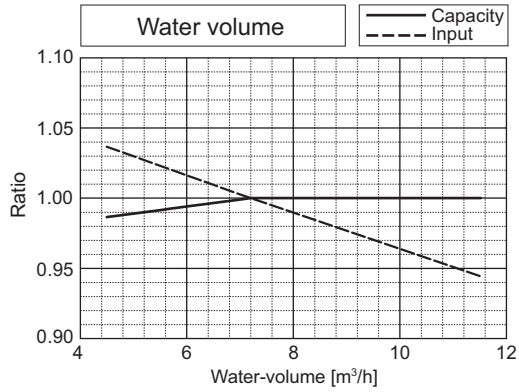
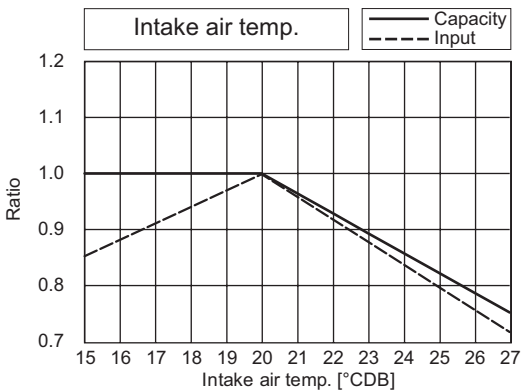
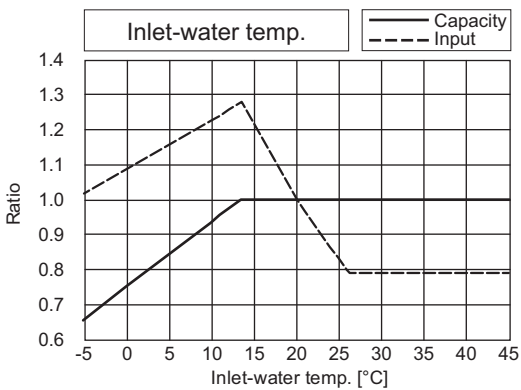


PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

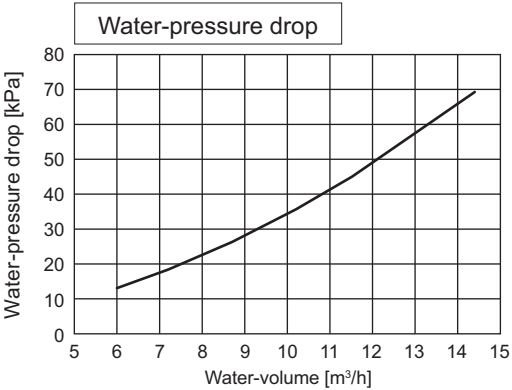
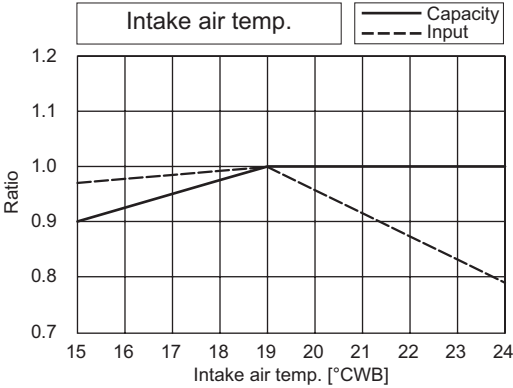
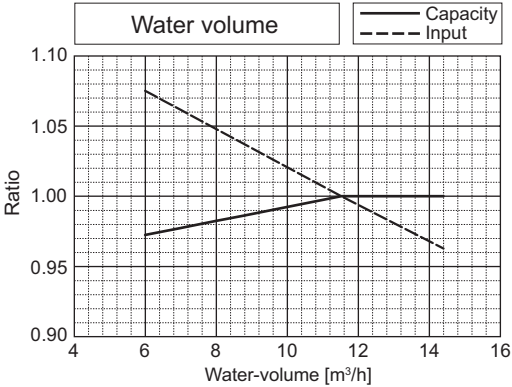
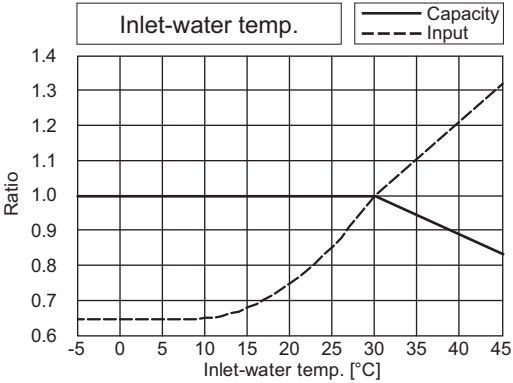
PQHY-		P192TLMU/YLMU
Nominal Cooling Capacity	kW	56.3
	BTU/h	192,000
Input	kW	15.05



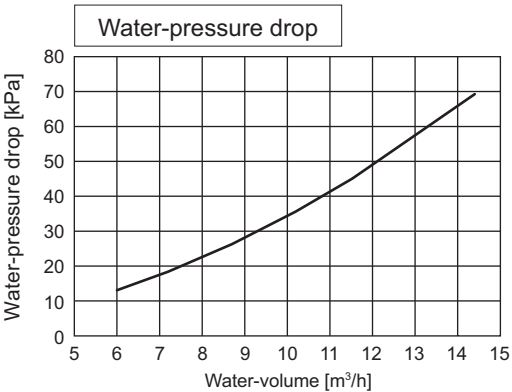
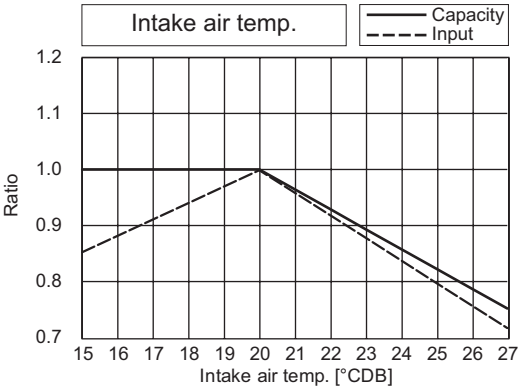
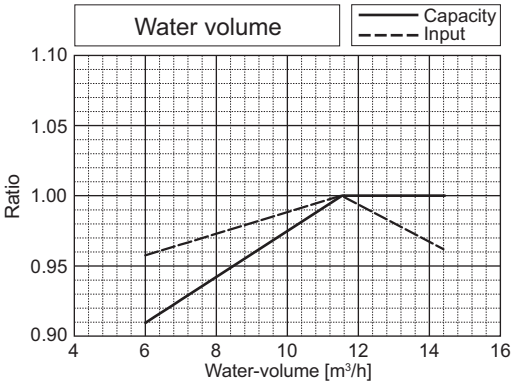
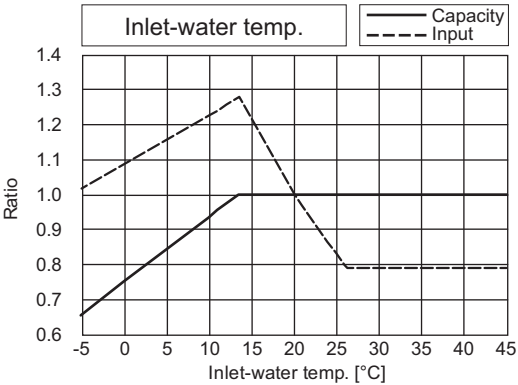
PQHY-		P192TLMU/YLMU
Nominal Heating Capacity	kW	63.0
	BTU/h	215,000
Input	kW	11.90



PQHY-		P216TLMU/YLMU
Nominal Cooling Capacity	kW	63.3
	BTU/h	216,000
Input	kW	19.23

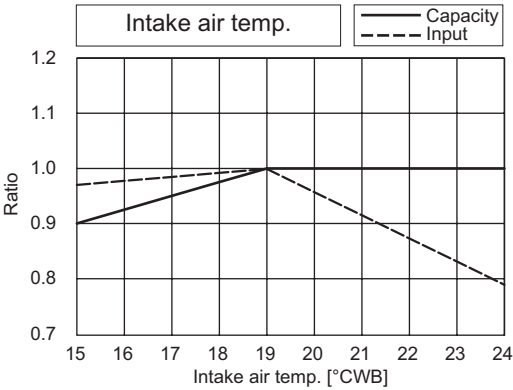
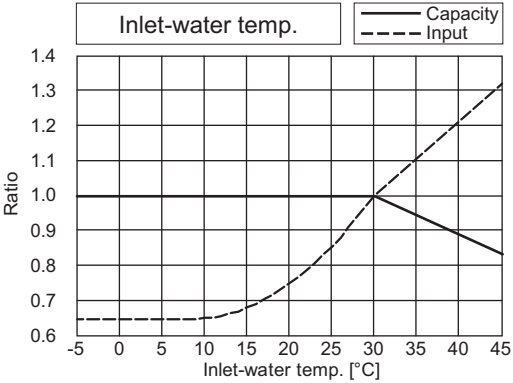


PQHY-		P216TLMU/YLMU
Nominal Heating Capacity	kW	71.2
	BTU/h	243,000
Input	kW	13.04

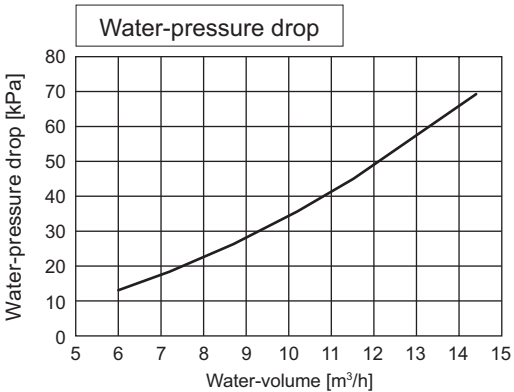
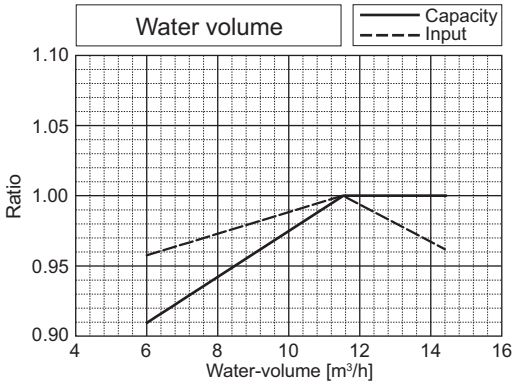
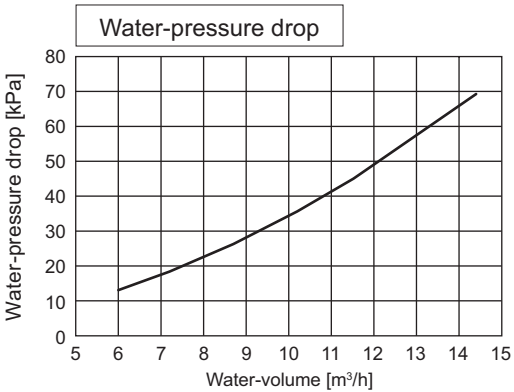
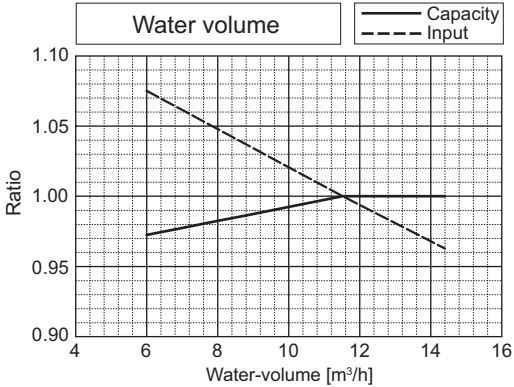
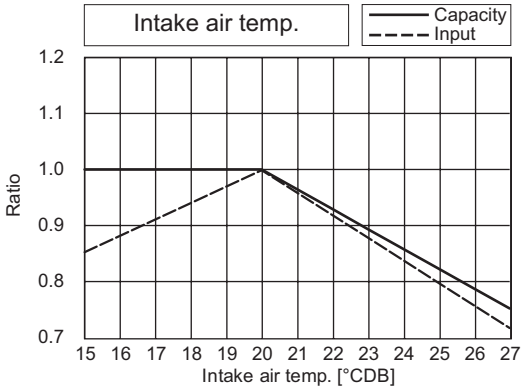
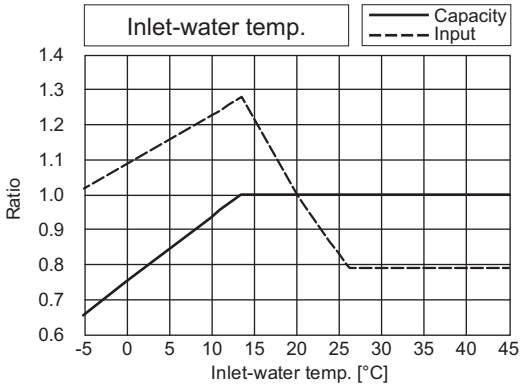


PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

PQHY-		P240TLMU/YLMU
Nominal Cooling Capacity	kW	65.7
	BTU/h	224,000
Input	kW	21.14

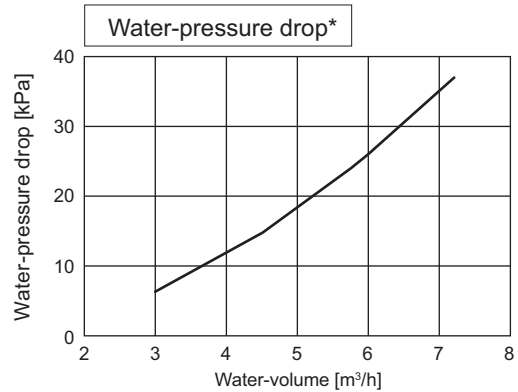
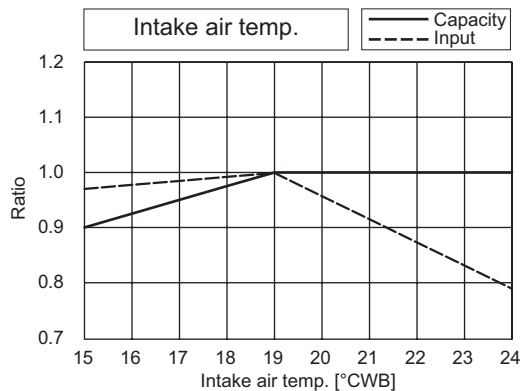
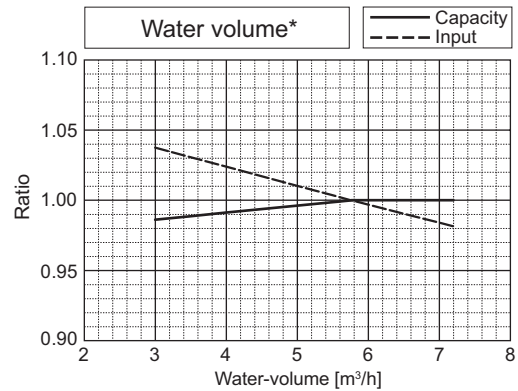
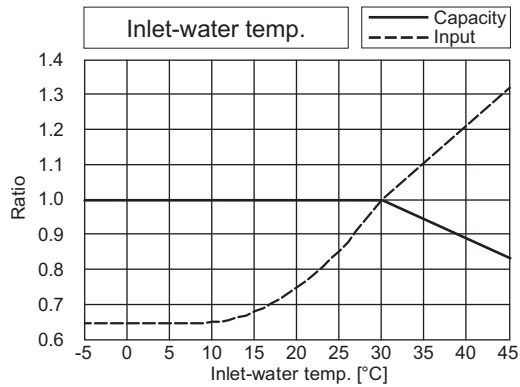


PQHY-		P240TLMU/YLMU
Nominal Heating Capacity	kW	79.1
	BTU/h	270,000
Input	kW	15.12

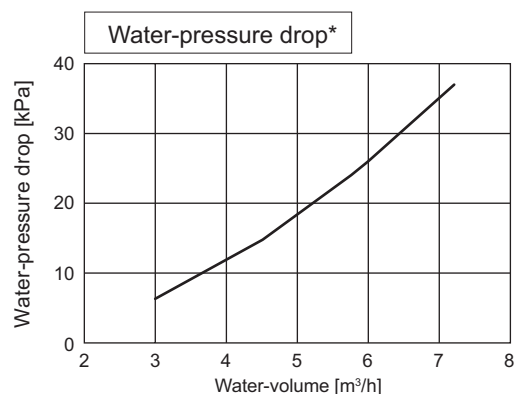
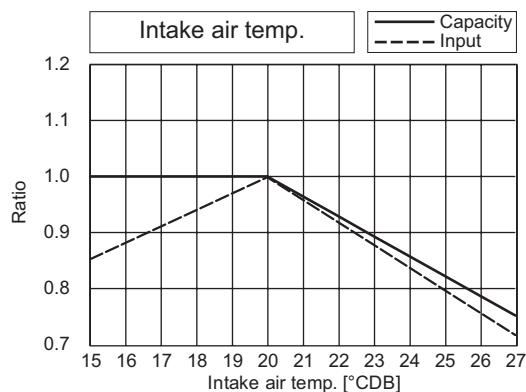
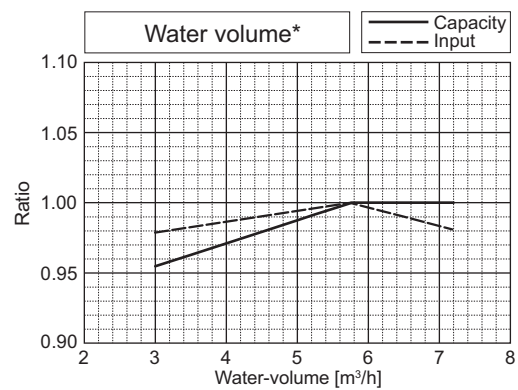
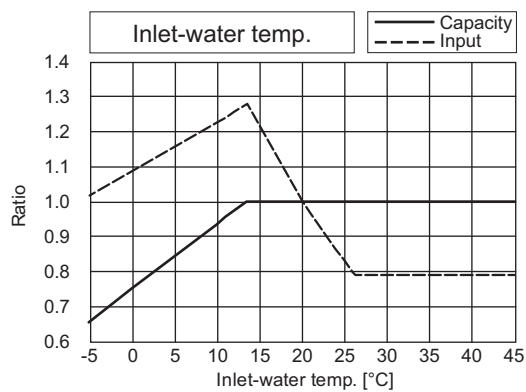


PQHY-		P144TSLMU/YSLMU
Nominal Cooling Capacity	kW	42.2
	BTU/h	144,000
Input	kW	7.11

*The drawing indicates characteristic per unit.

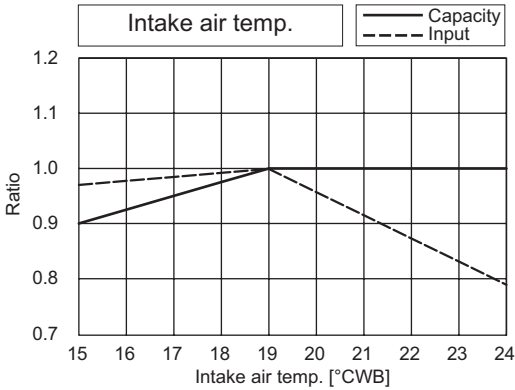
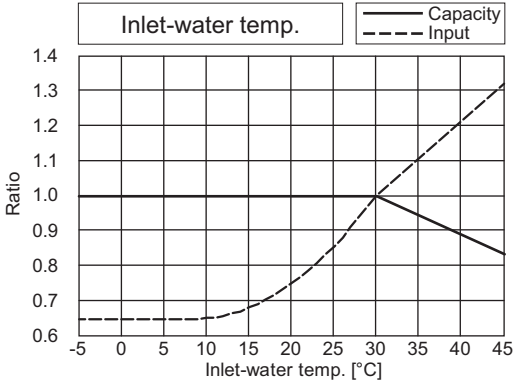


PQHY-		P144TSLMU/YSLMU
Nominal Heating Capacity	kW	46.9
	BTU/h	160,000
Input	kW	7.45

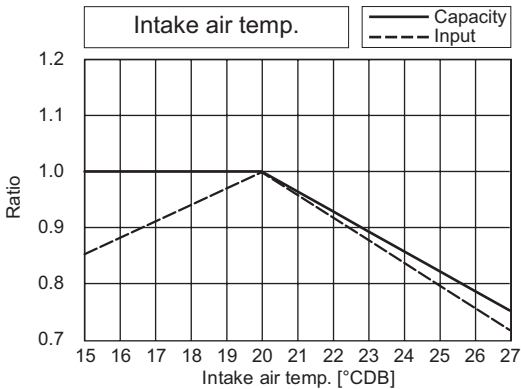
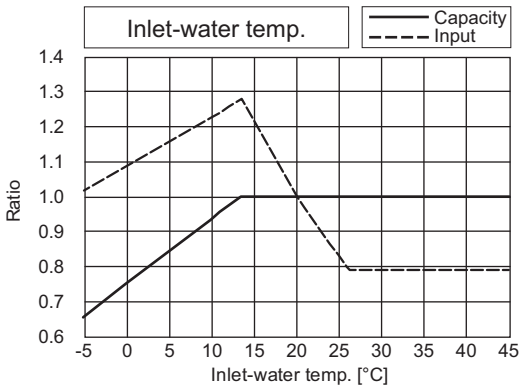


PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

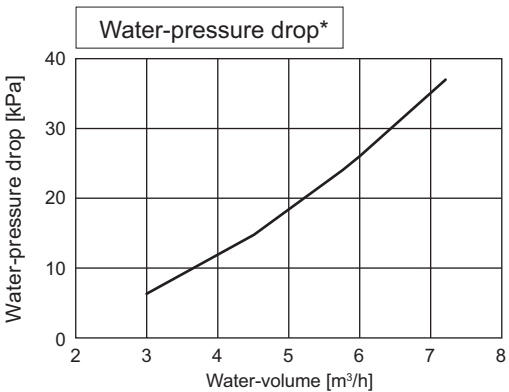
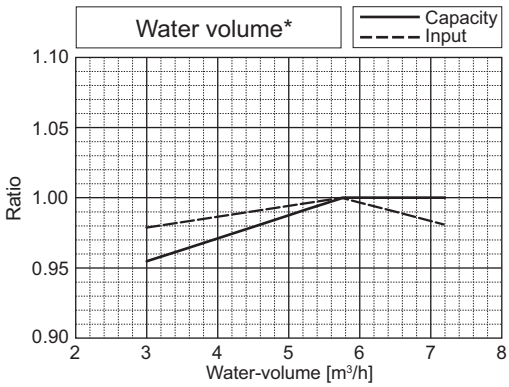
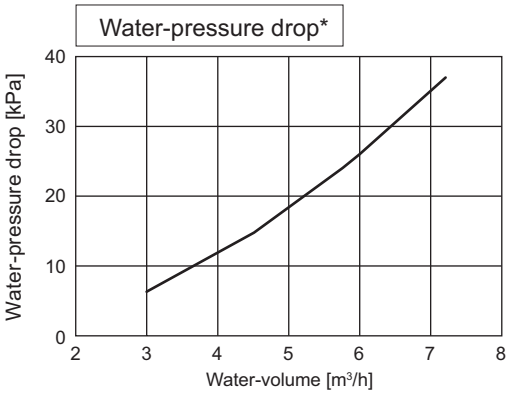
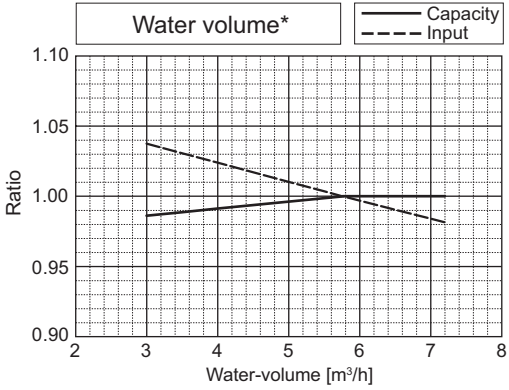
PQHY-		P168TSLMU/YSLMU
Nominal Cooling Capacity	kW	49.2
	BTU/h	168,000
Input	kW	9.33



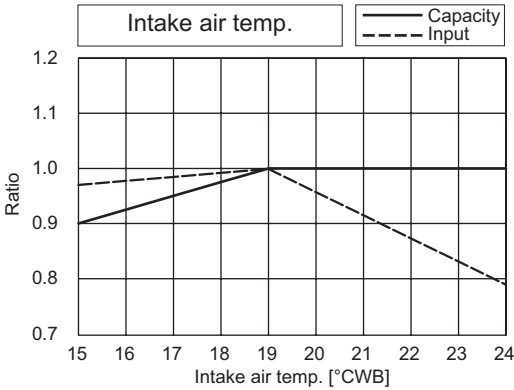
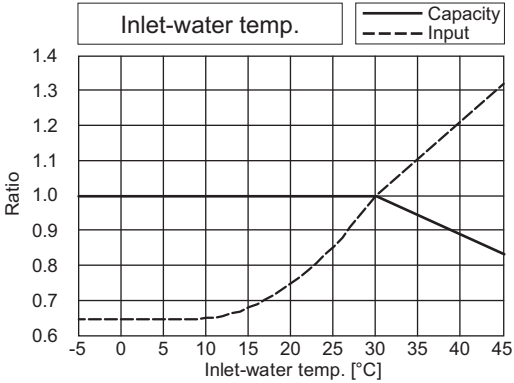
PQHY-		P168TSLMU/YSLMU
Nominal Heating Capacity	kW	55.1
	BTU/h	188,000
Input	kW	9.34



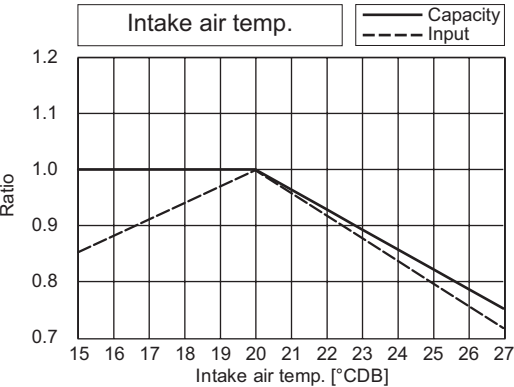
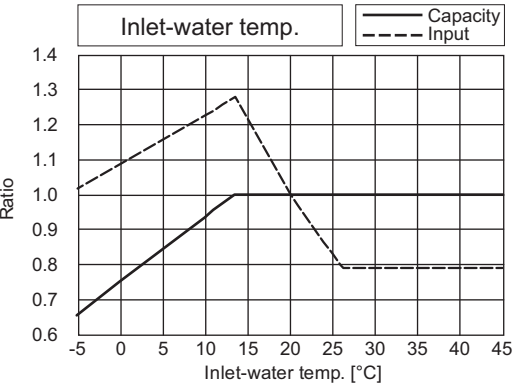
*The drawing indicates characteristic per unit.



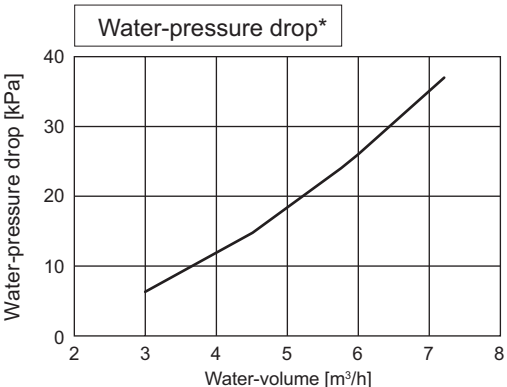
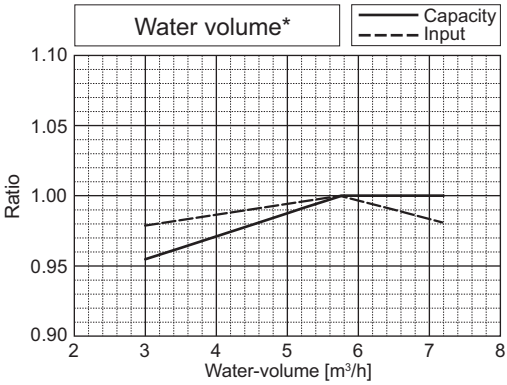
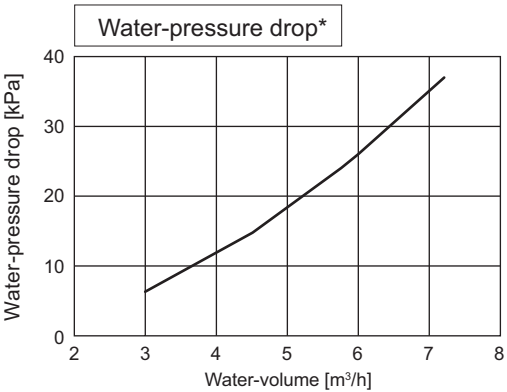
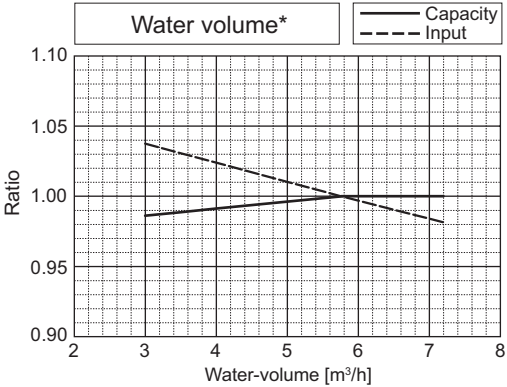
PQHY-		P192TSLMU/YSLMU
Nominal Cooling Capacity	kW	56.3
	BTU/h	192,000
Input	kW	11.30



PQHY-		P192TSLMU/YSLMU
Nominal Heating Capacity	kW	63.0
	BTU/h	215,000
Input	kW	11.02



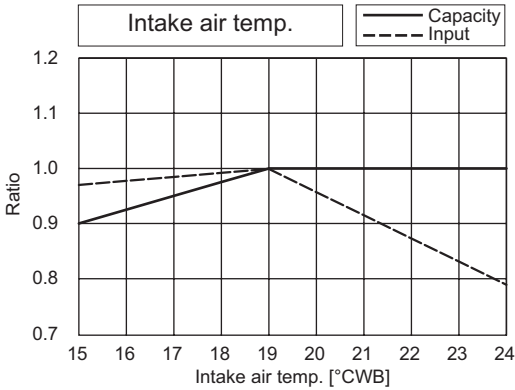
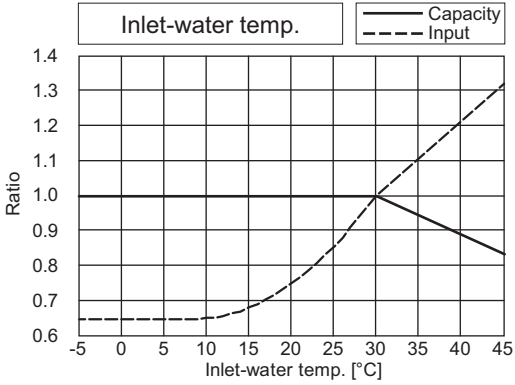
*The drawing indicates characteristic per unit.



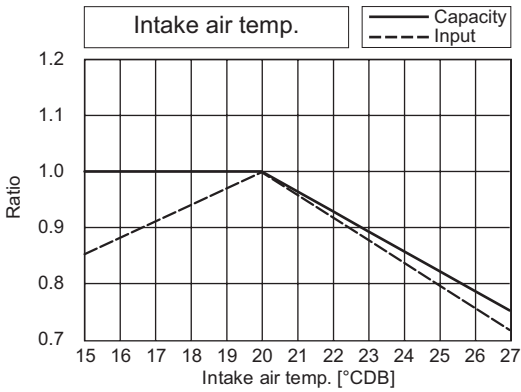
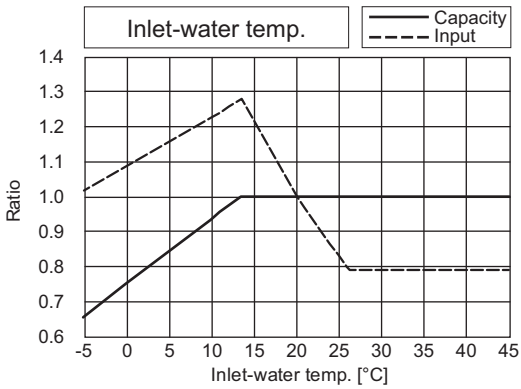
PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

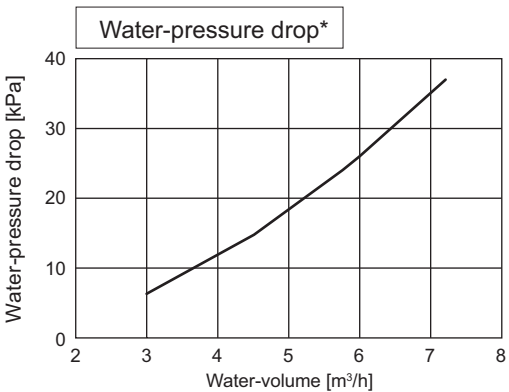
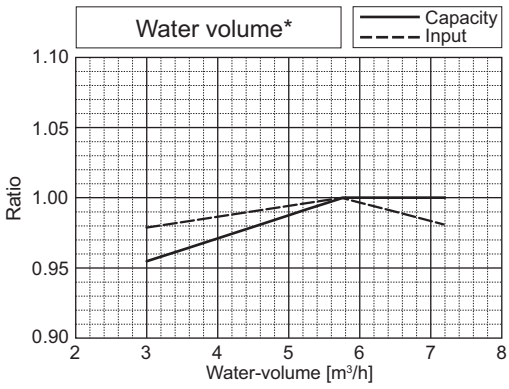
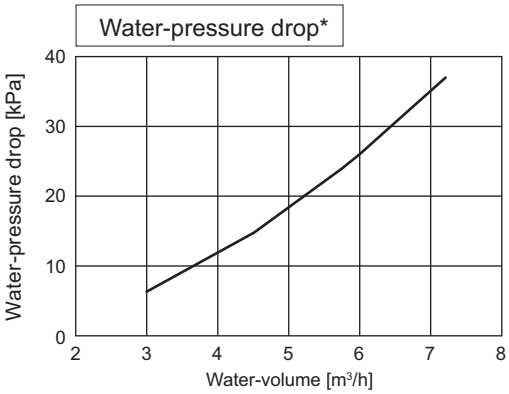
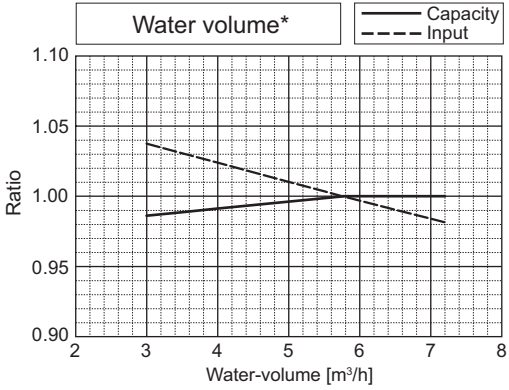
PQHY-		P216TSLMU/YSLMU
Nominal Cooling Capacity	kW	63.3
	BTU/h	216,000
Input	kW	14.03



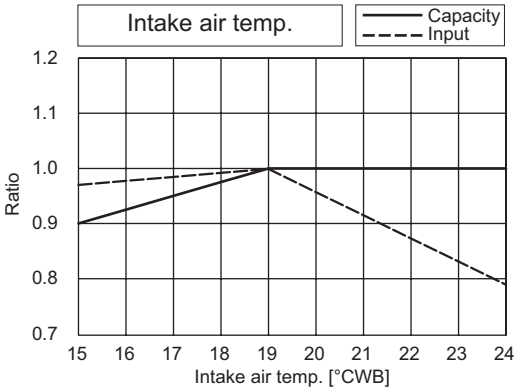
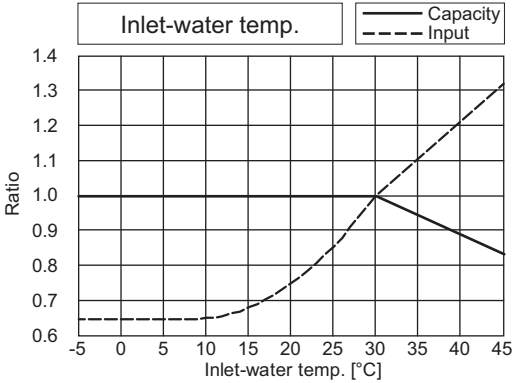
PQHY-		P216TSLMU/YSLMU
Nominal Heating Capacity	kW	71.2
	BTU/h	243,000
Input	kW	12.88



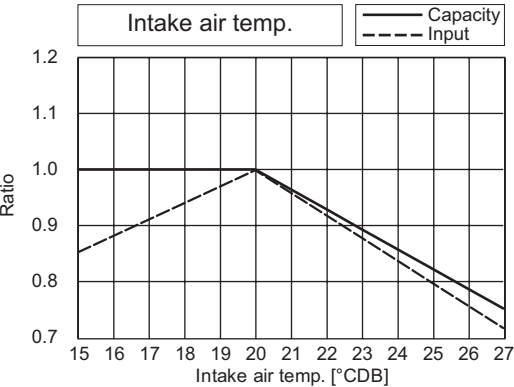
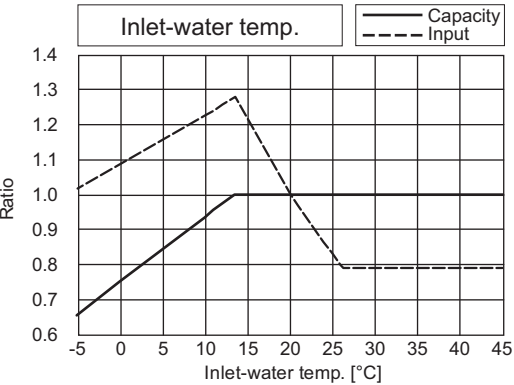
*The drawing indicates characteristic per unit.



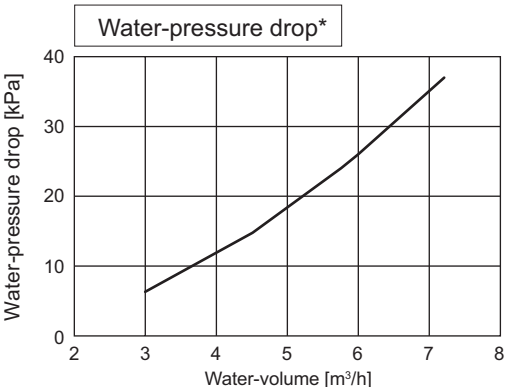
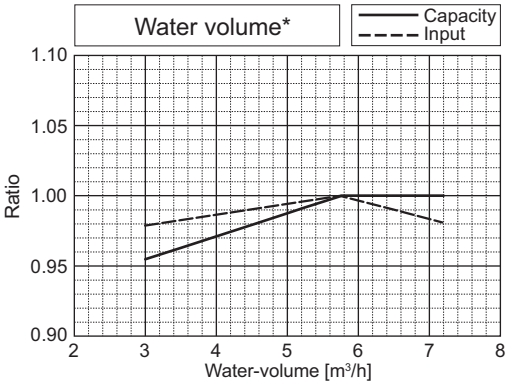
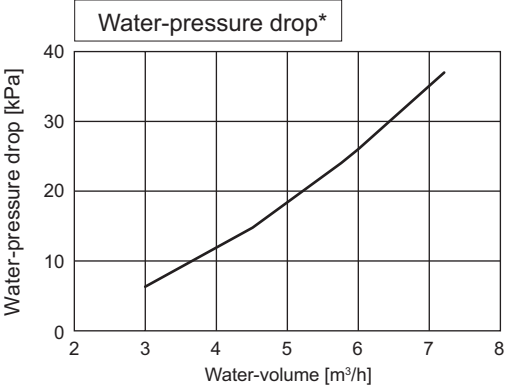
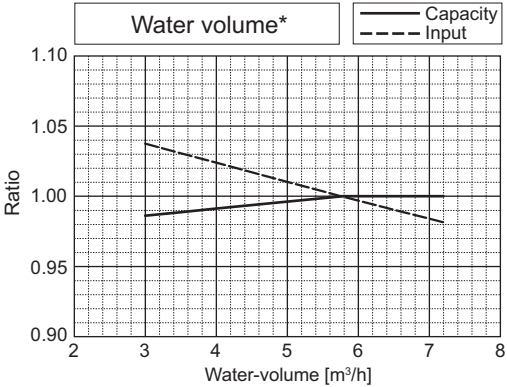
PQHY-		P240TSLMU/YSLMU
Nominal Cooling Capacity	kW	70.3
	BTU/h	240,000
Input	kW	16.89



PQHY-		P240TSLMU/YSLMU
Nominal Heating Capacity	kW	79.1
	BTU/h	270,000
Input	kW	14.58

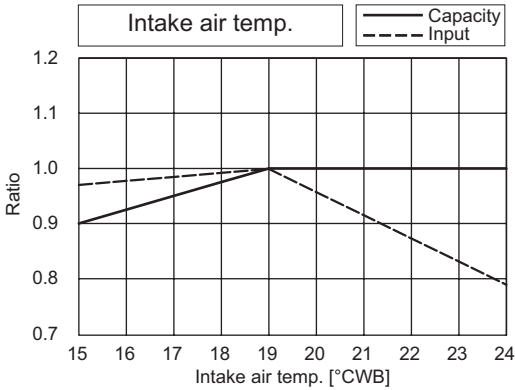
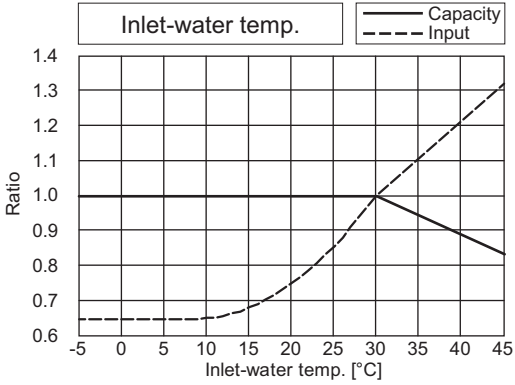


*The drawing indicates characteristic per unit.

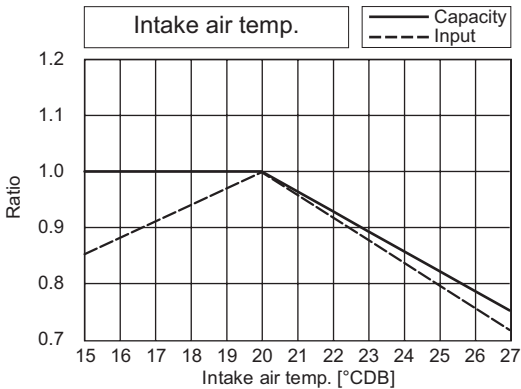
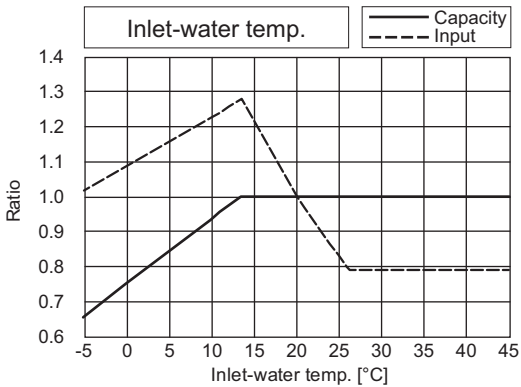


PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

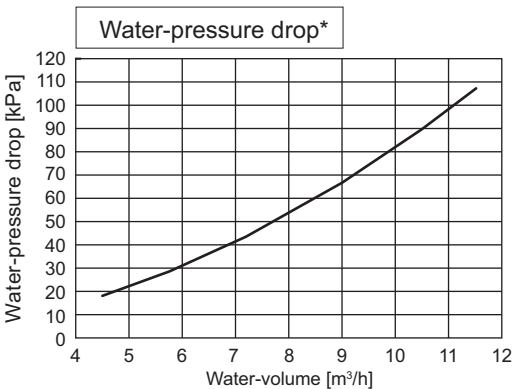
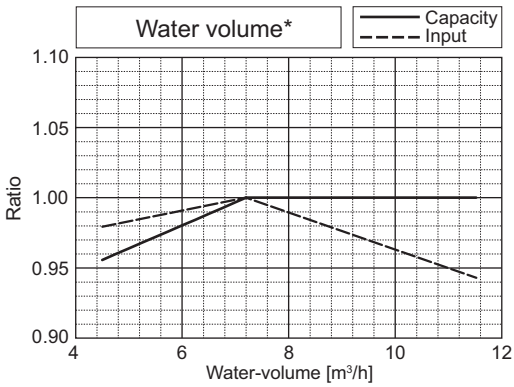
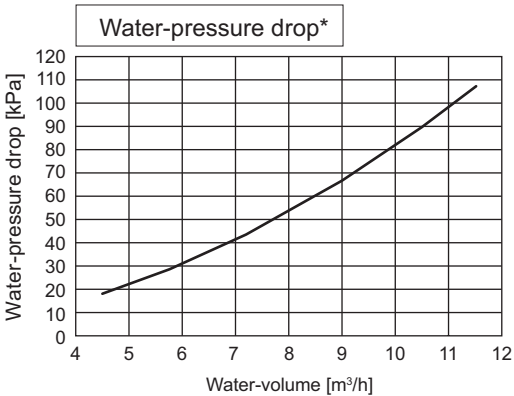
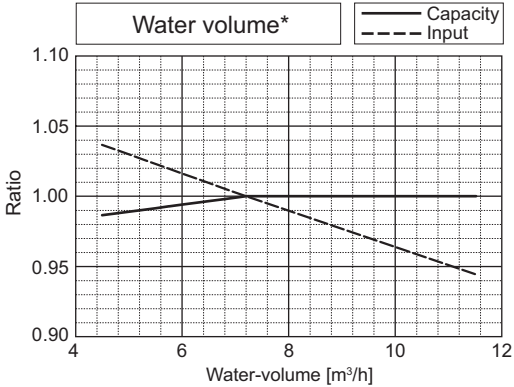
PQHY-		P288TSLMU/YSLMU
Nominal Cooling Capacity	kW	84.4
	BTU/h	288,000
Input	kW	20.42



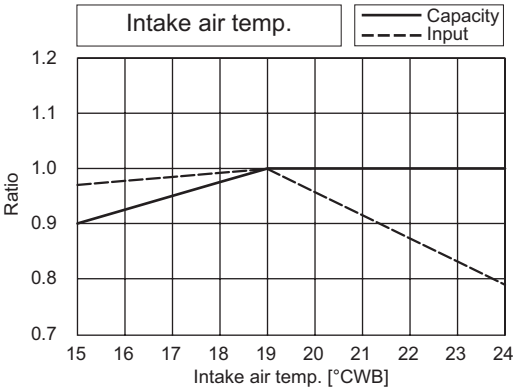
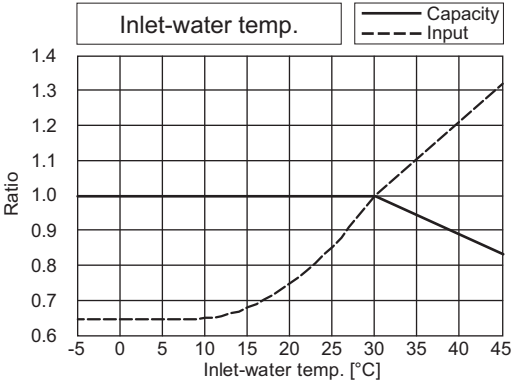
PQHY-		P288TSLMU/YSLMU
Nominal Heating Capacity	kW	94.7
	BTU/h	323,000
Input	kW	17.50



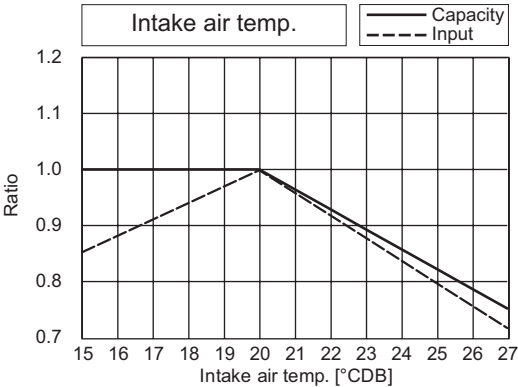
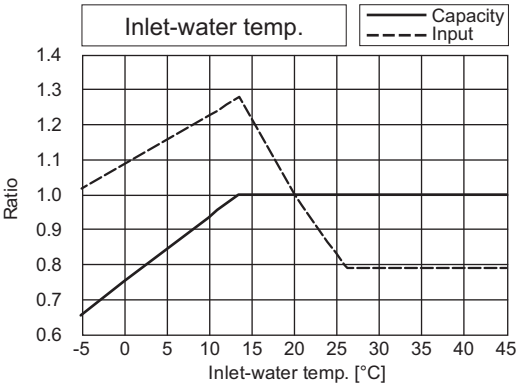
*The drawing indicates characteristic per unit.



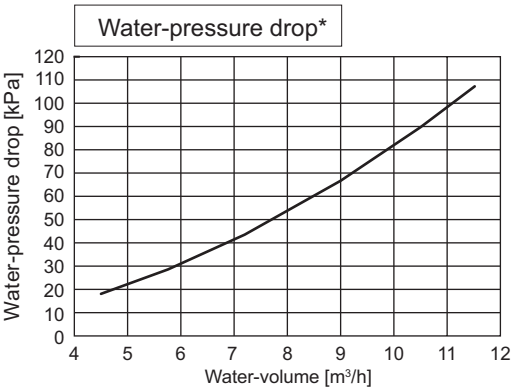
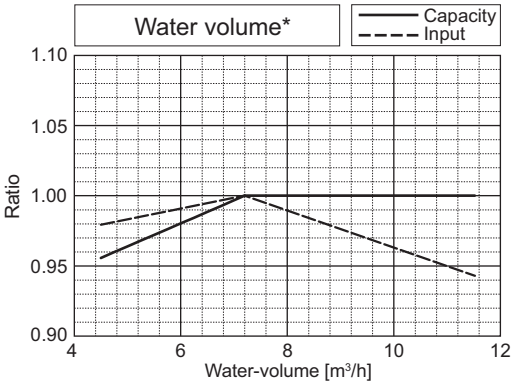
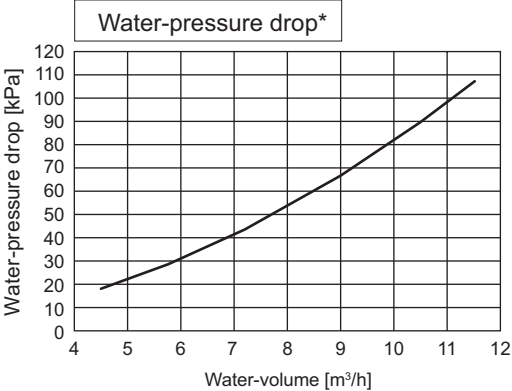
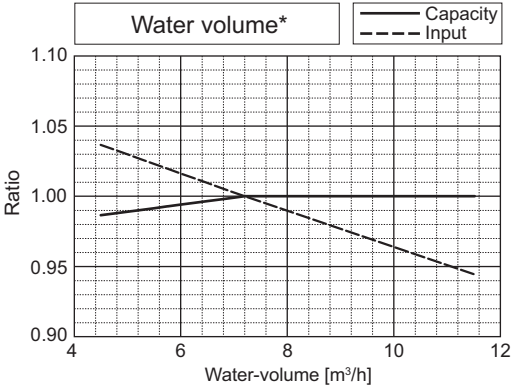
PQHY-		P312TSLMU/YSLMU
Nominal Cooling Capacity	kW	91.4
	BTU/h	312,000
Input	kW	23.41



PQHY-		P312TSLMU/YSLMU
Nominal Heating Capacity	kW	102.6
	BTU/h	350,000
Input	kW	19.11

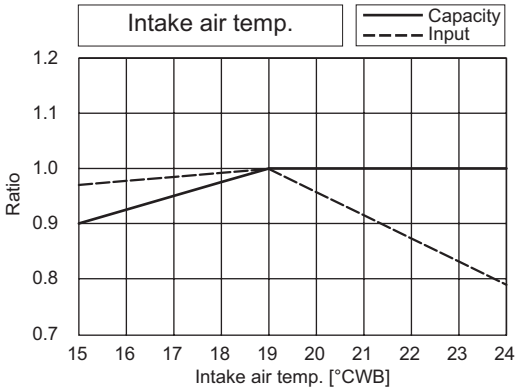
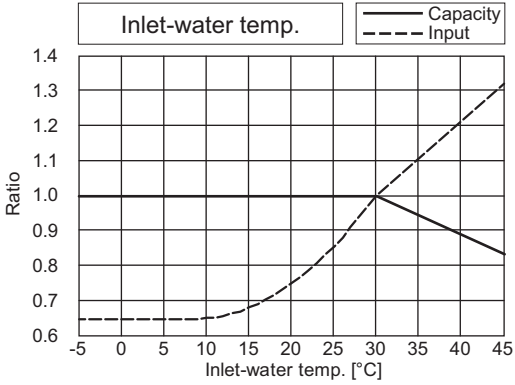


*The drawing indicates characteristic per unit.

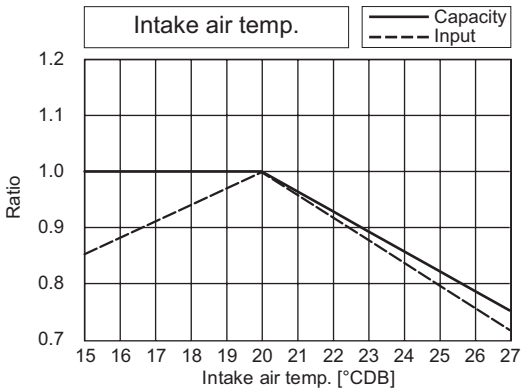
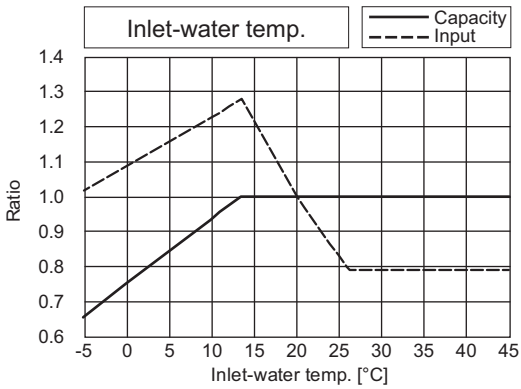


PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

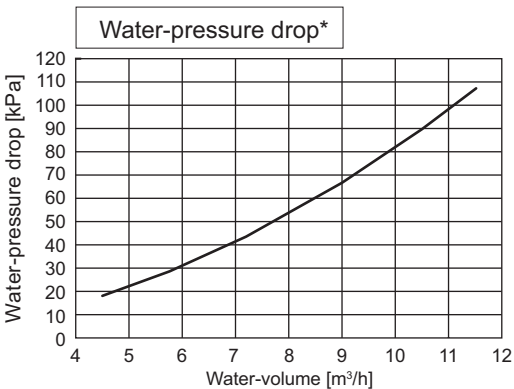
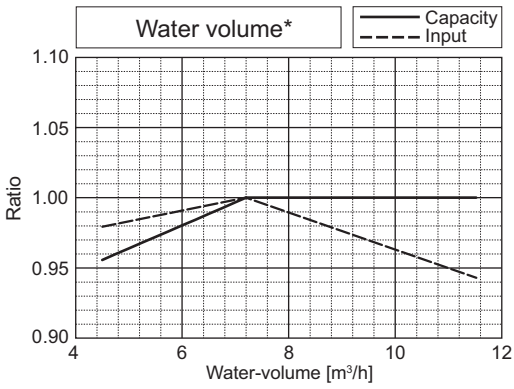
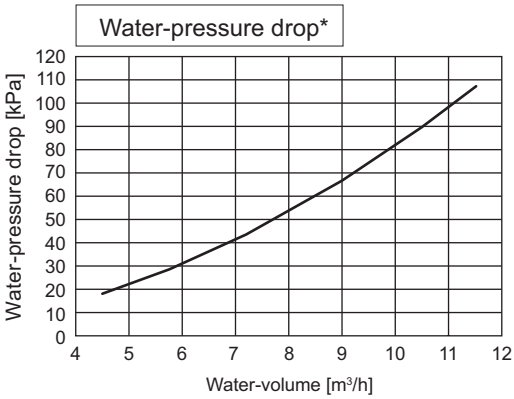
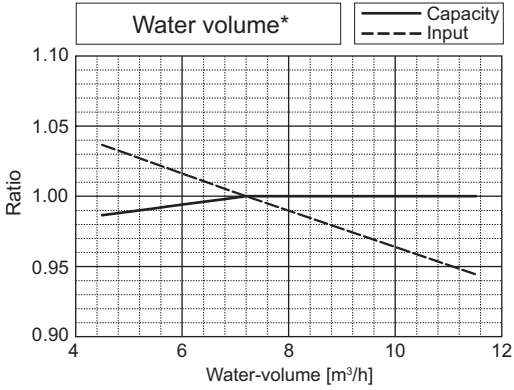
PQHY-		P336TSLMU/YSLMU
Nominal Cooling Capacity	kW	98.5
	BTU/h	336,000
Input	kW	26.84



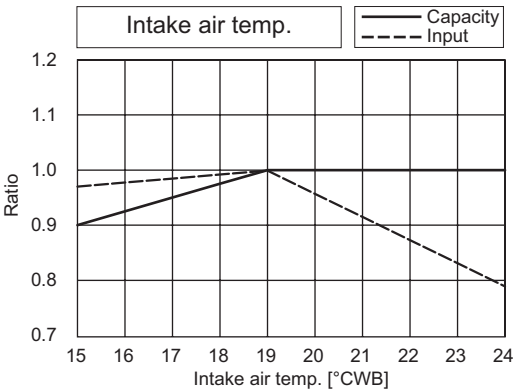
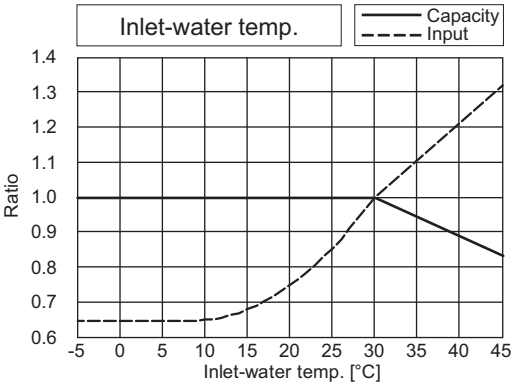
PQHY-		P336TSLMU/YSLMU
Nominal Heating Capacity	kW	110.8
	BTU/h	378,000
Input	kW	20.77



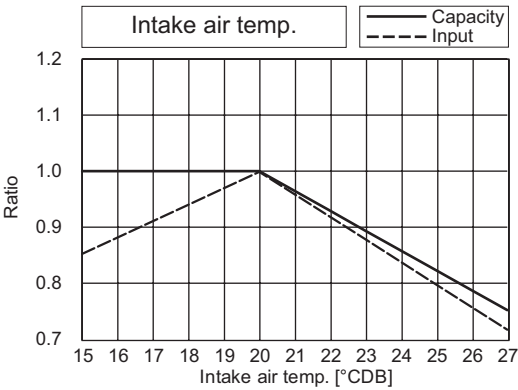
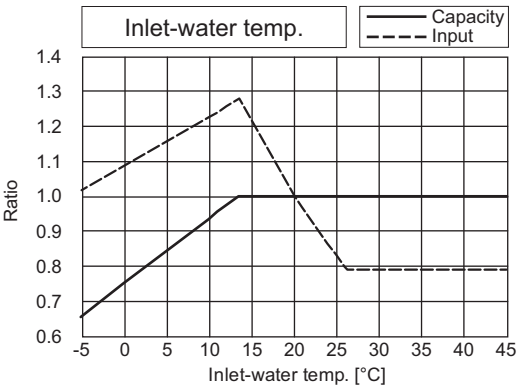
*The drawing indicates characteristic per unit.



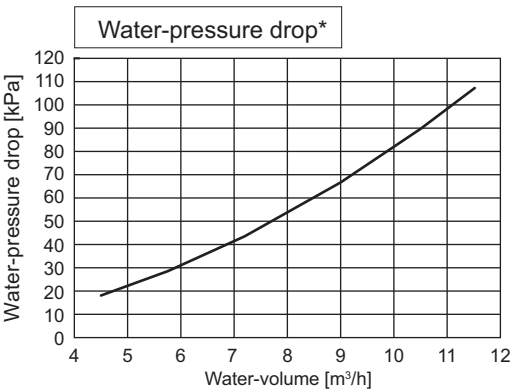
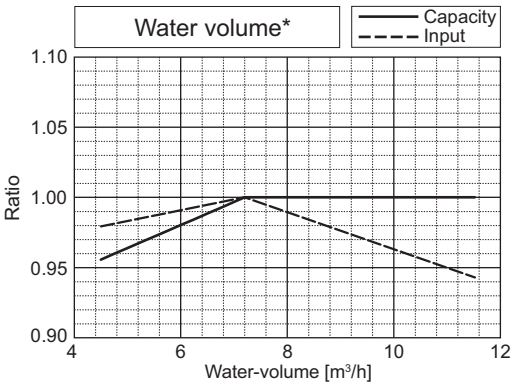
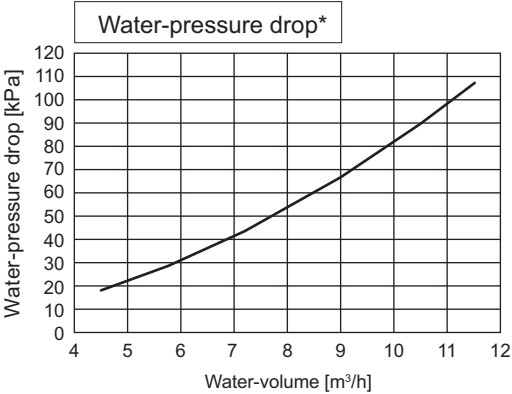
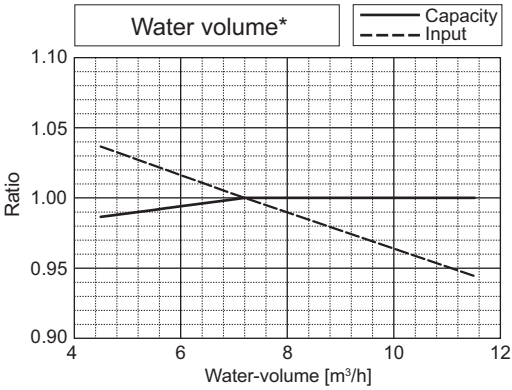
PQHY-		P360TSLMU/YSLMU
Nominal Cooling Capacity	kW	105.5
	BTU/h	360,000
Input	kW	29.43



PQHY-		P360TSLMU/YSLMU
Nominal Heating Capacity	kW	118.7
	BTU/h	405,000
Input	kW	22.85

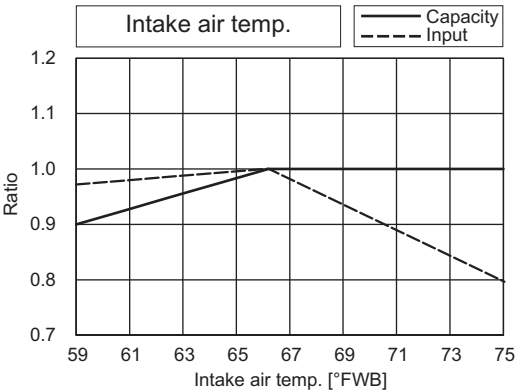
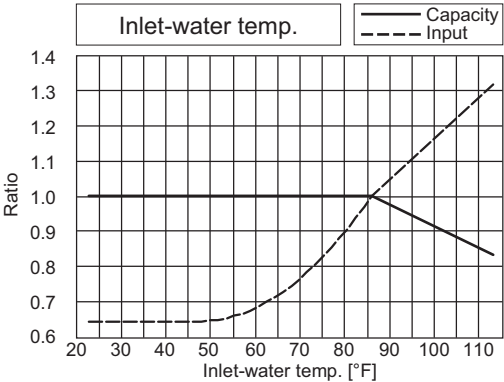


*The drawing indicates characteristic per unit.

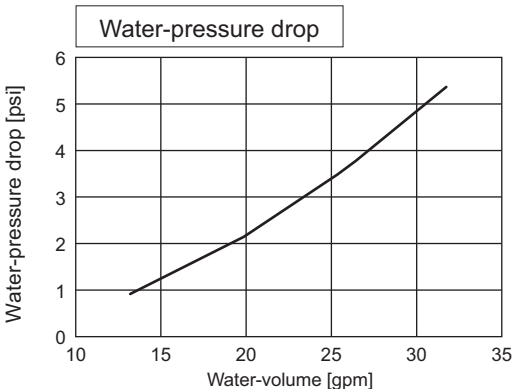
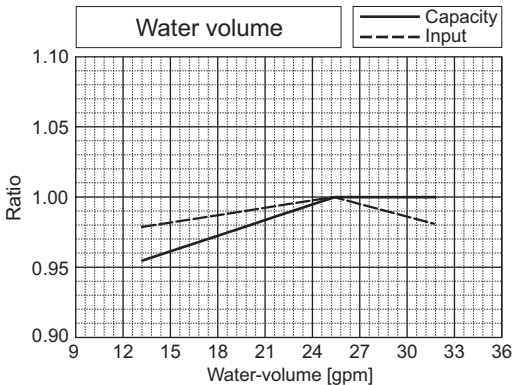
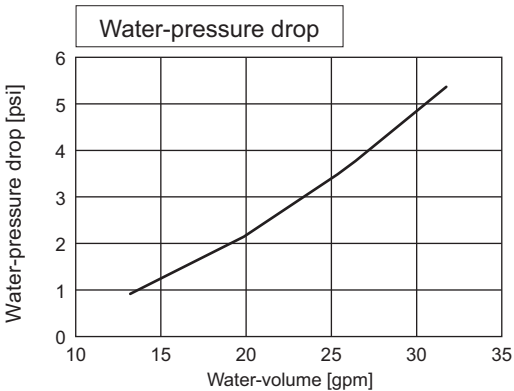
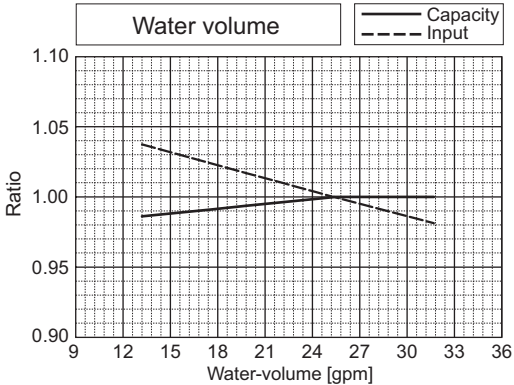
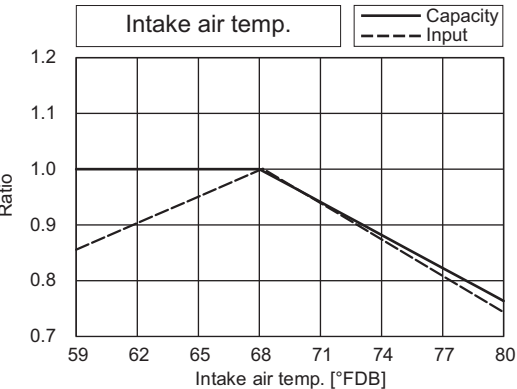
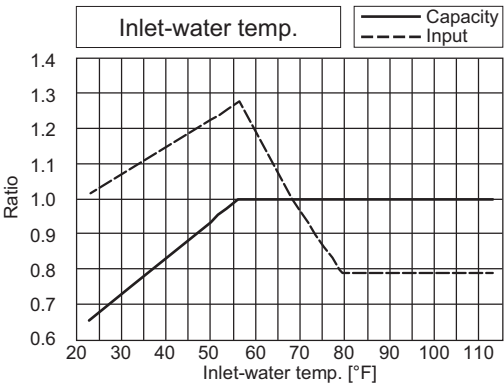


PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

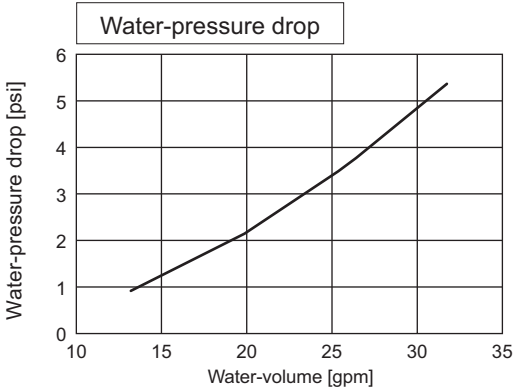
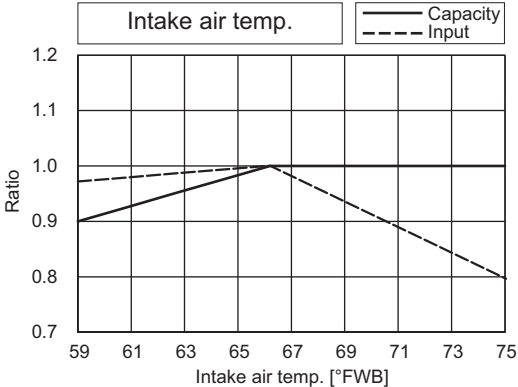
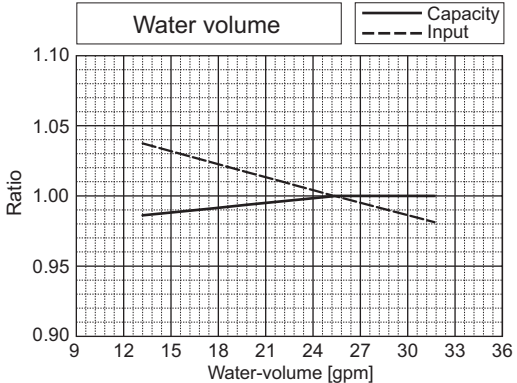
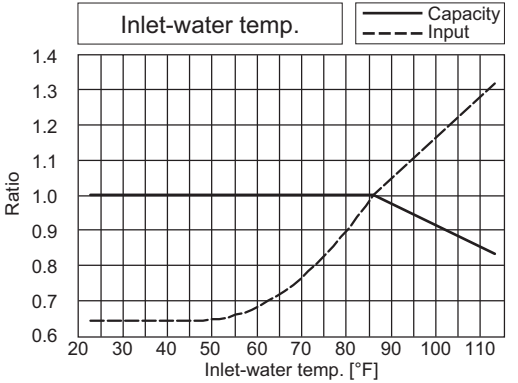
PQHY-		P72TLMU/YLMU
Nominal Cooling Capacity	kW	21.1
	BTU/h	72,000
Input	kW	3.61



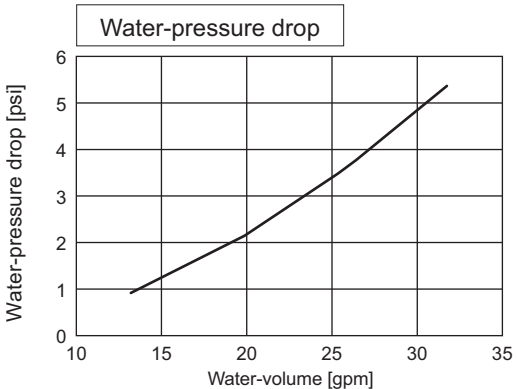
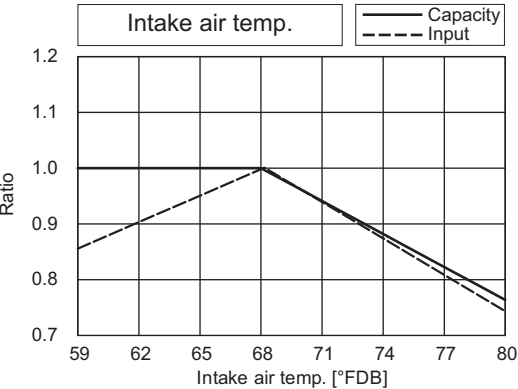
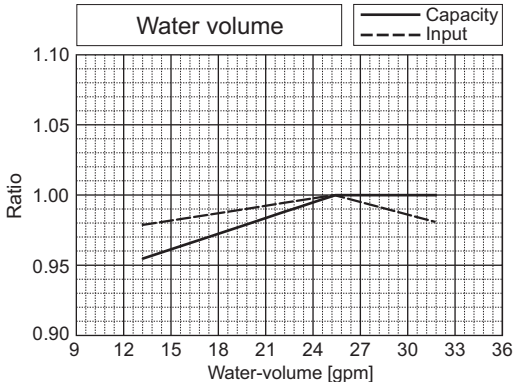
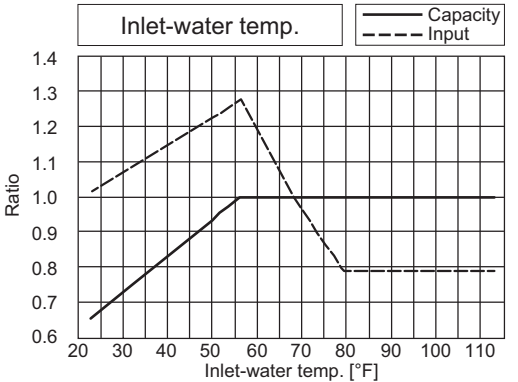
PQHY-		P72TLMU/YLMU
Nominal Heating Capacity	kW	23.4
	BTU/h	80,000
Input	kW	4.04



PQHY-		P96TLMU/YLMU
Nominal Cooling Capacity	kW	28.1
	BTU/h	96,000
Input	kW	5.21

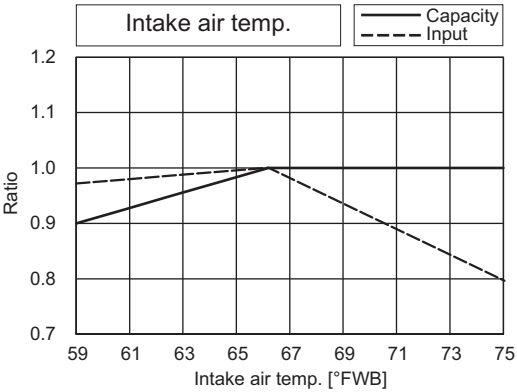
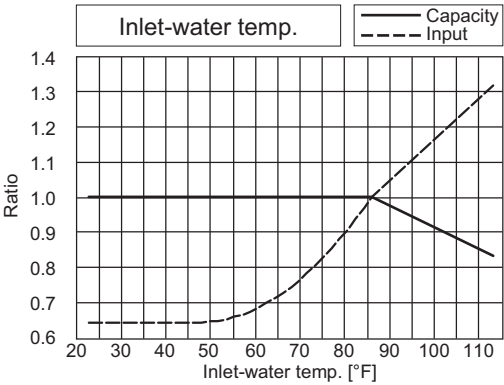


PQHY-		P96TLMU/YLMU
Nominal Heating Capacity	kW	31.7
	BTU/h	108,000
Input	kW	5.64

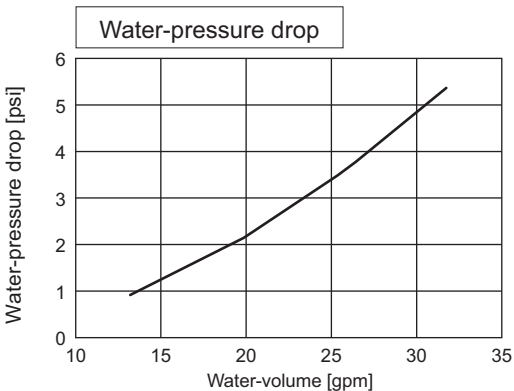
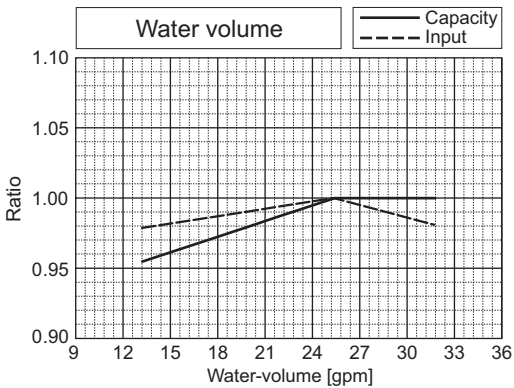
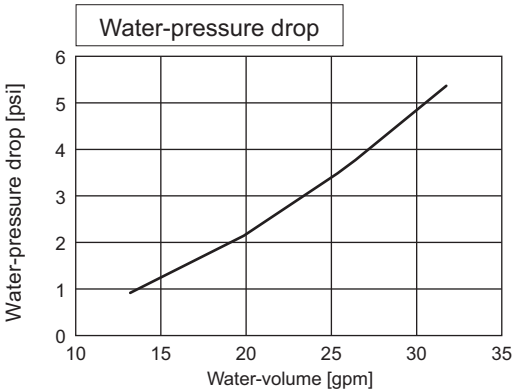
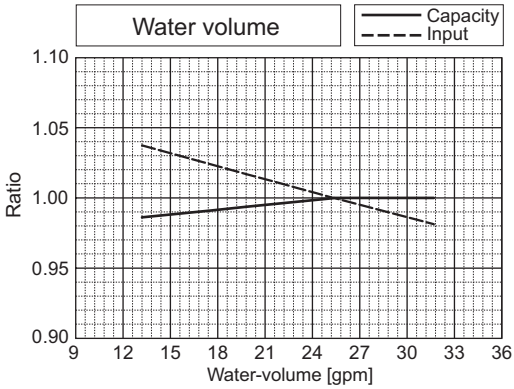
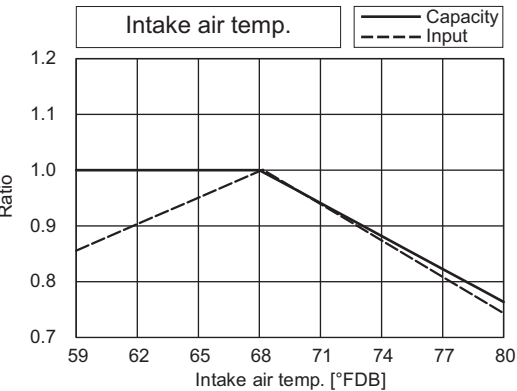
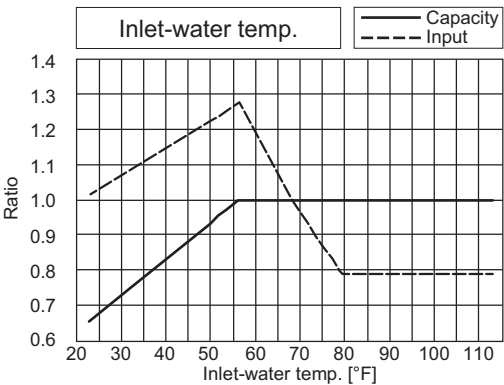


PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

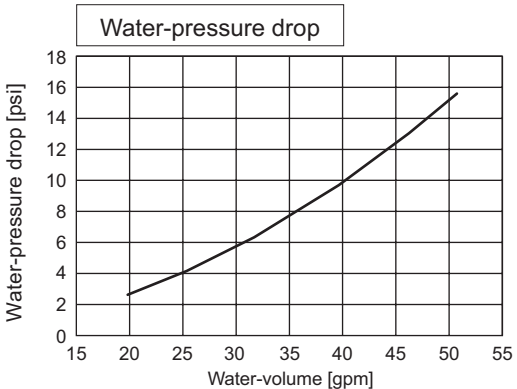
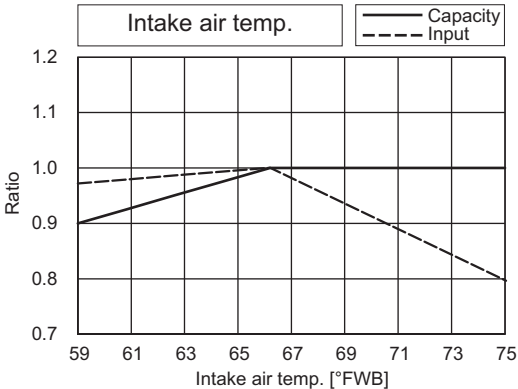
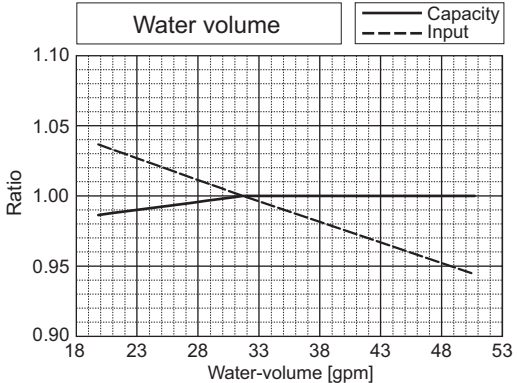
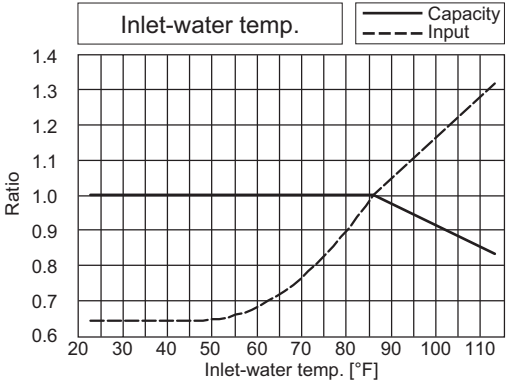
PQHY-		P120TLMU/YLMU
Nominal Cooling Capacity	kW	35.2
	BTU/h	120,000
Input	kW	7.51



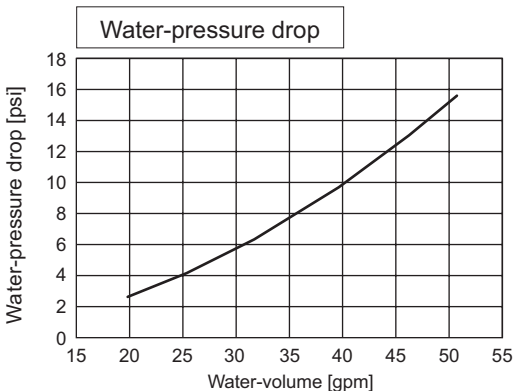
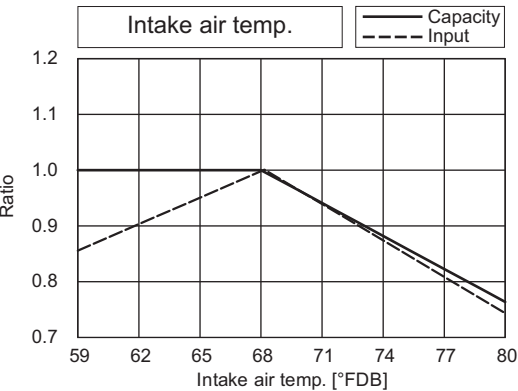
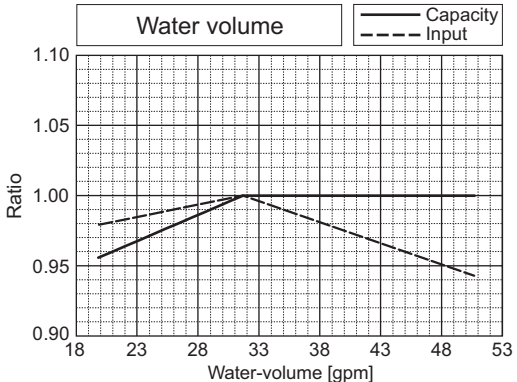
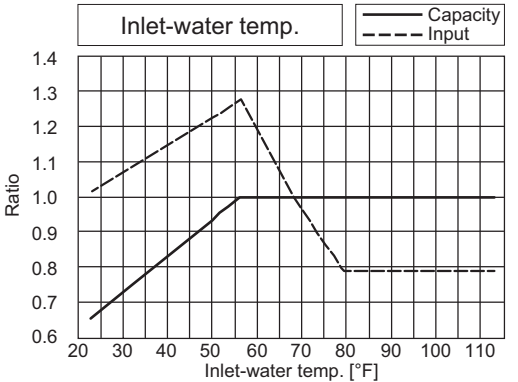
PQHY-		P120TLMU/YLMU
Nominal Heating Capacity	kW	39.6
	BTU/h	135,000
Input	kW	7.09



PQHY-		P144TLMU/YLMU
Nominal Cooling Capacity	kW	42.2
	BTU/h	144,000
Input	kW	8.78

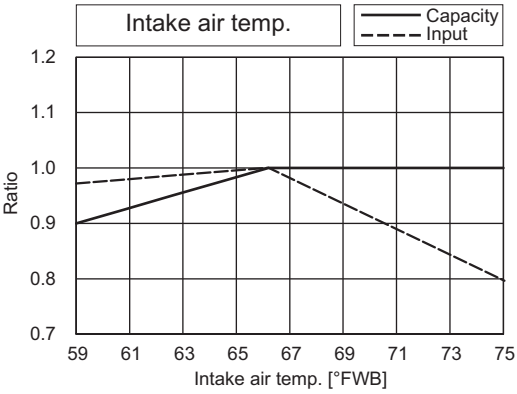
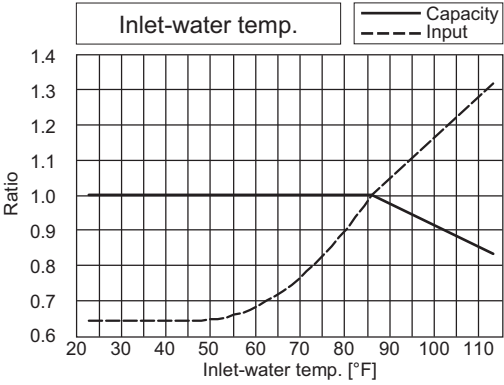


PQHY-		P144TLMU/YLMU
Nominal Heating Capacity	kW	46.9
	BTU/h	160,000
Input	kW	8.11

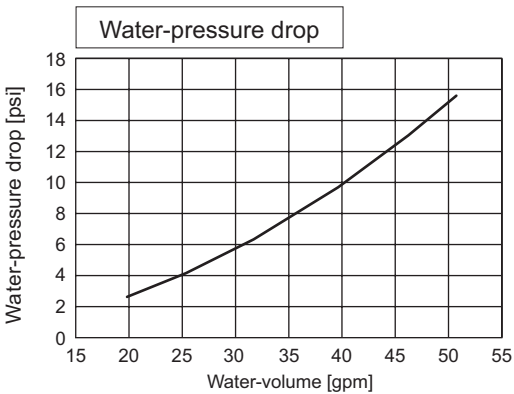
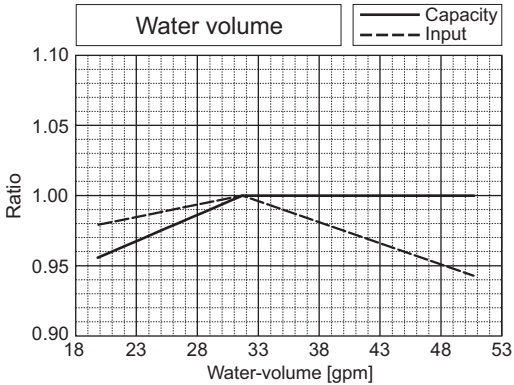
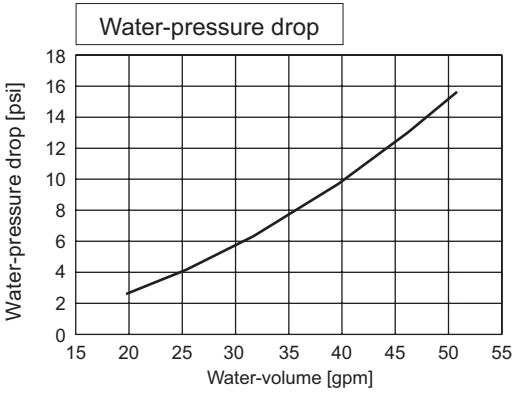
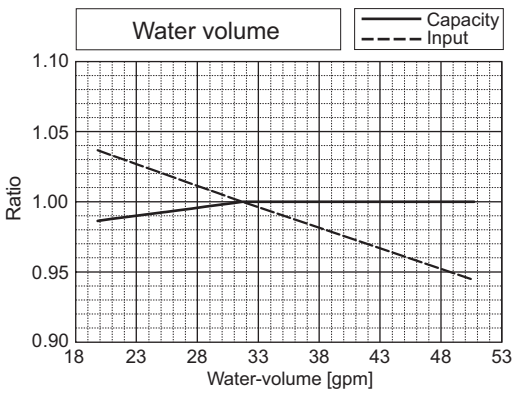
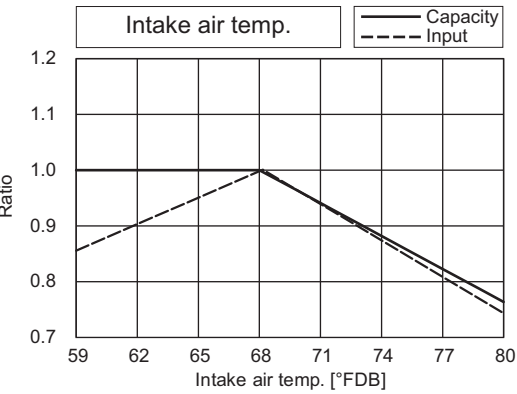
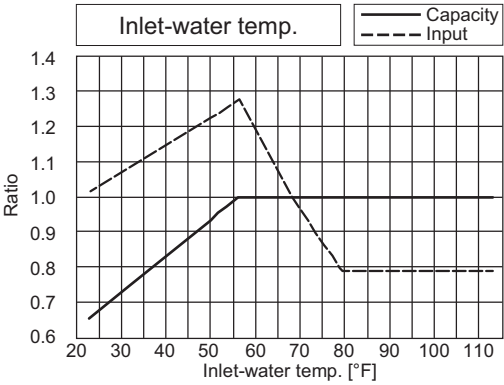


PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

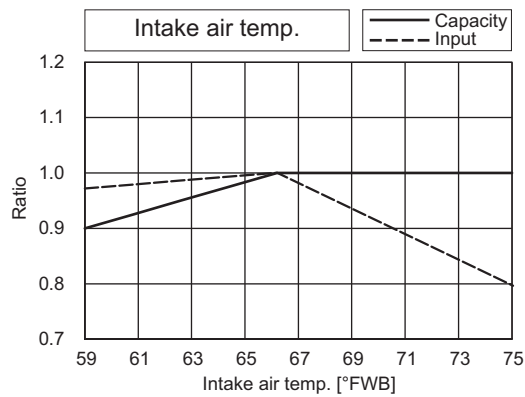
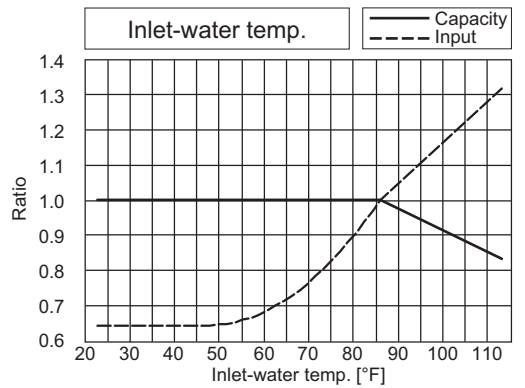
PQHY-		P168TLMU/YLMU
Nominal Cooling Capacity	kW	49.2
	BTU/h	168,000
Input	kW	12.05



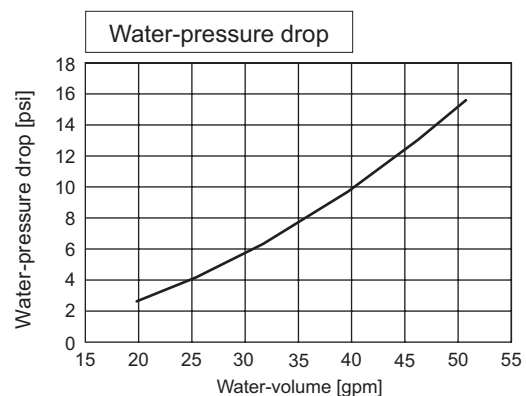
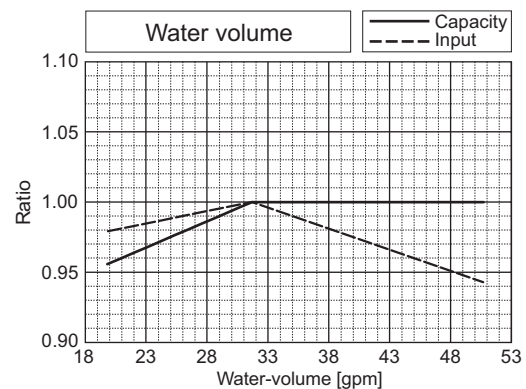
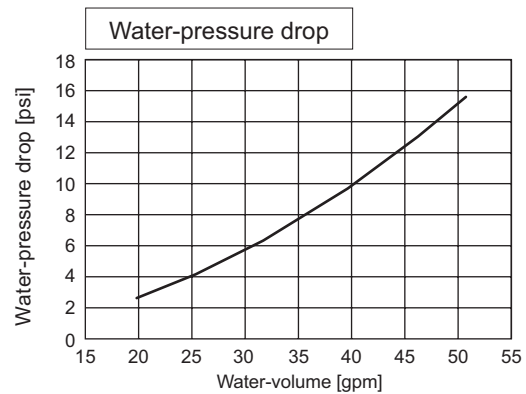
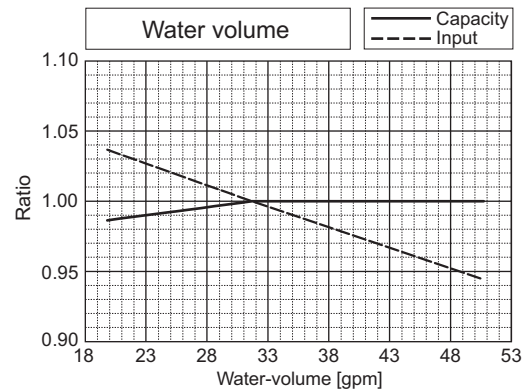
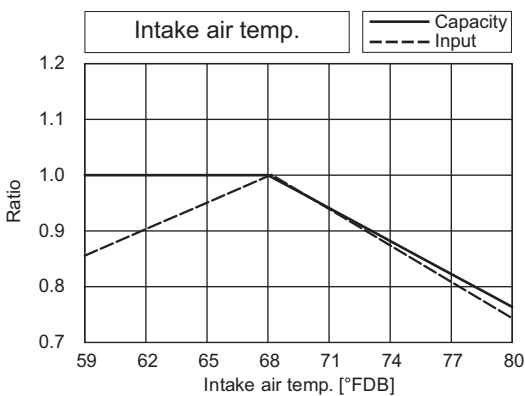
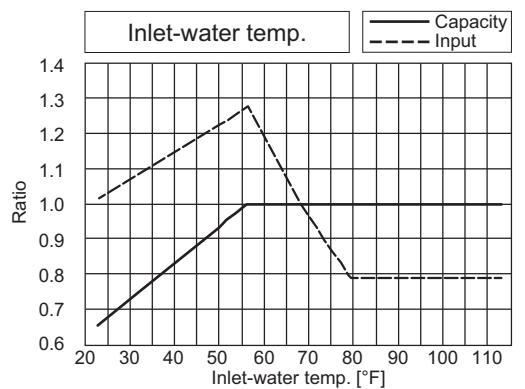
PQHY-		P168TLMU/YLMU
Nominal Heating Capacity	kW	55.1
	BTU/h	188,000
Input	kW	9.86



PQHY-		P192TLMU/YLMU
Nominal Cooling Capacity	kW	56.3
	BTU/h	192,000
Input	kW	15.05

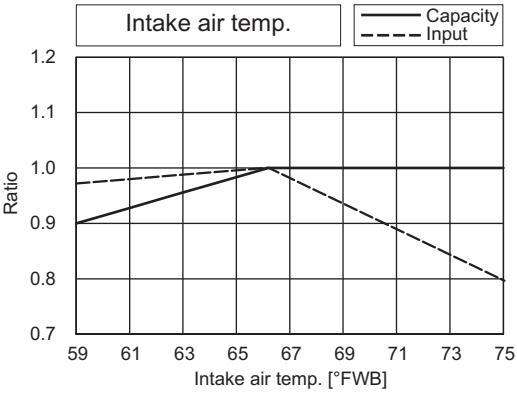
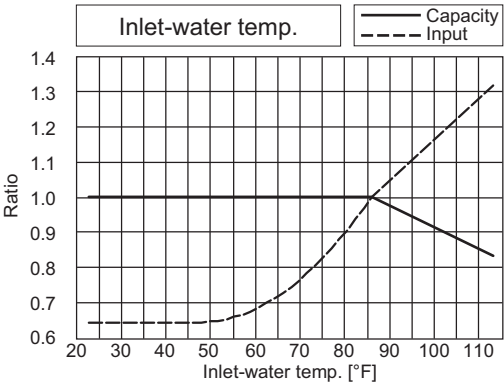


PQHY-		P192TLMU/YLMU
Nominal Heating Capacity	kW	63.0
	BTU/h	215,000
Input	kW	11.90

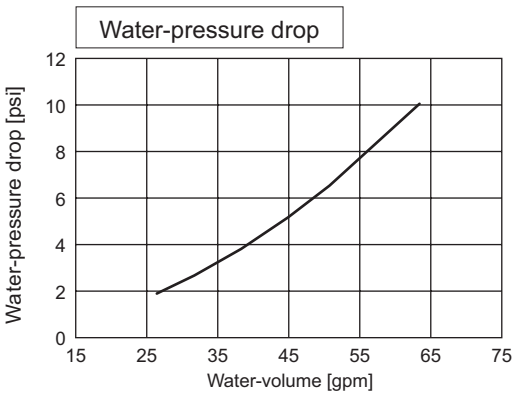
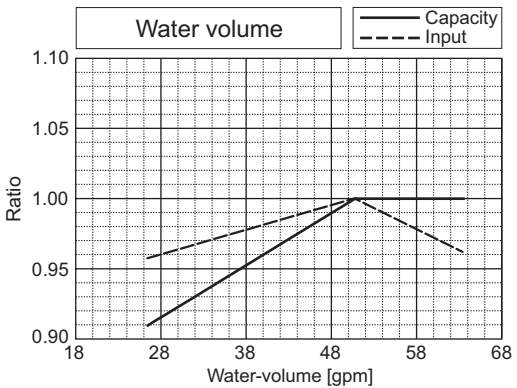
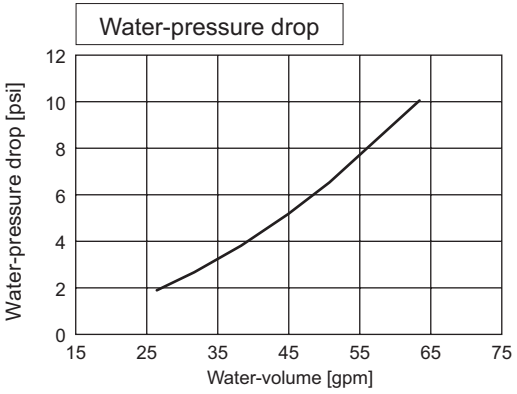
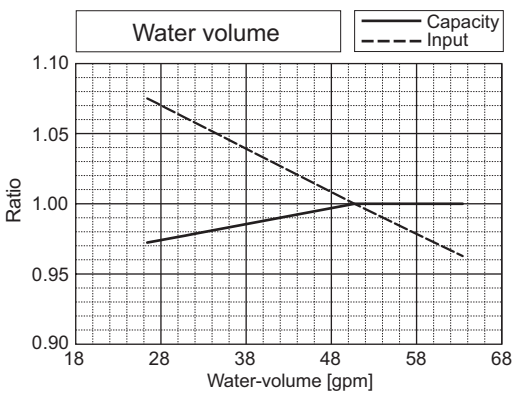
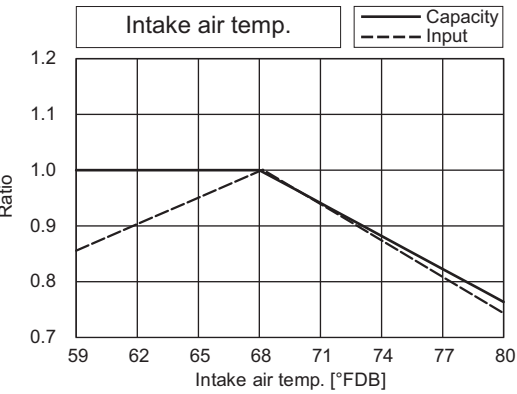
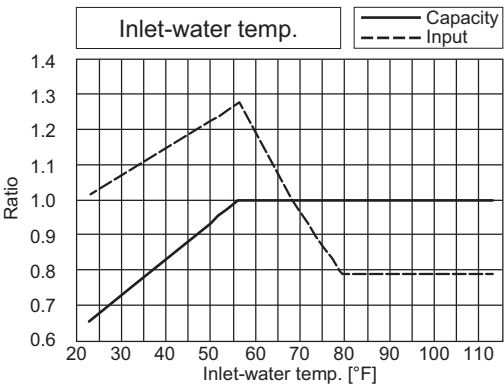


PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

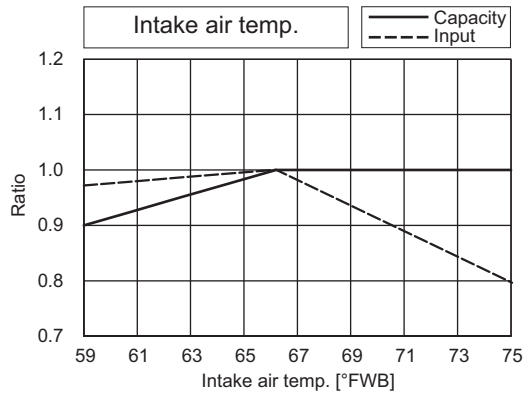
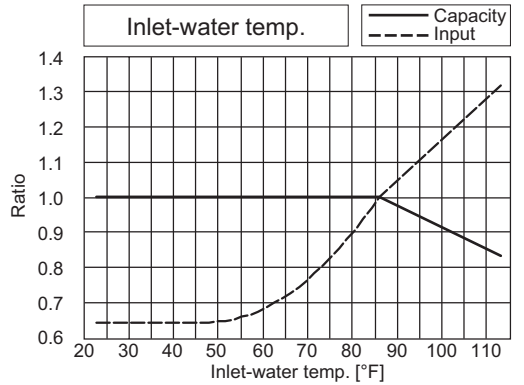
PQHY-		P216TLMU/YLMU
Nominal Cooling Capacity	kW	63.3
	BTU/h	216,000
Input	kW	19.23



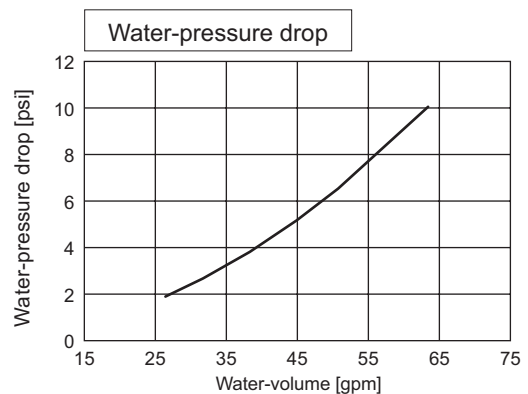
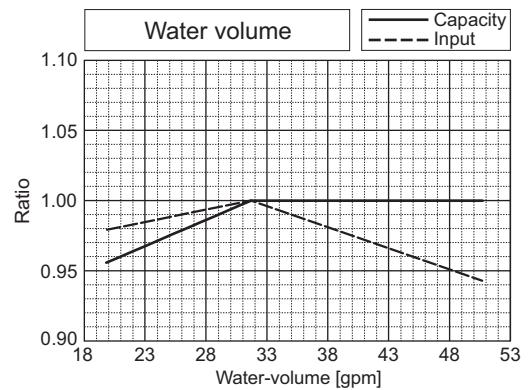
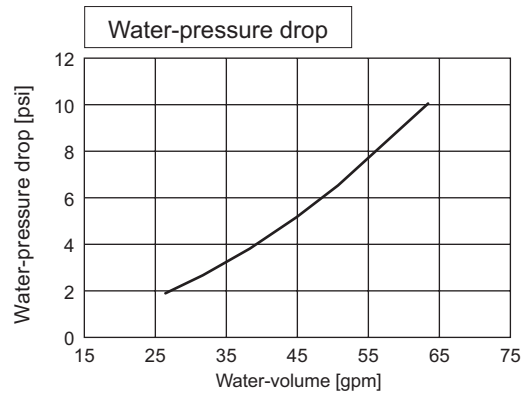
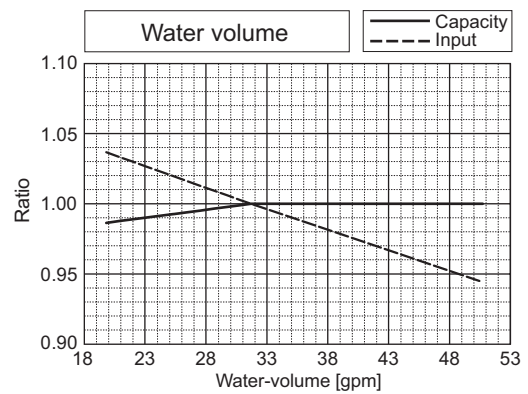
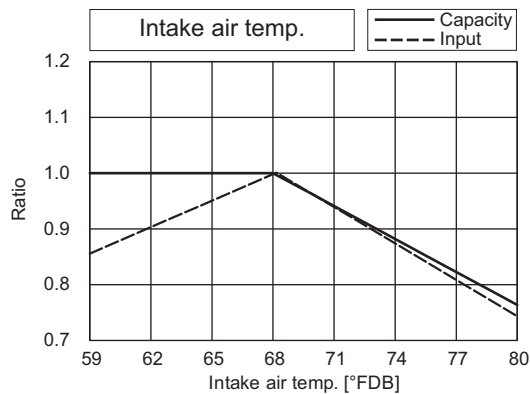
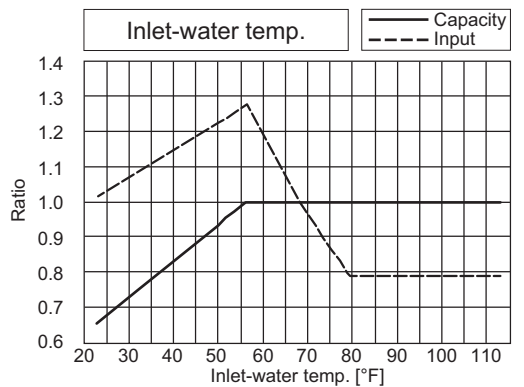
PQHY-		P216TLMU/YLMU
Nominal Heating Capacity	kW	71.2
	BTU/h	243,000
Input	kW	13.04



PQHY-		P240TLMU/YLMU
Nominal Cooling Capacity	kW	65.7
	BTU/h	224,000
Input	kW	21.14

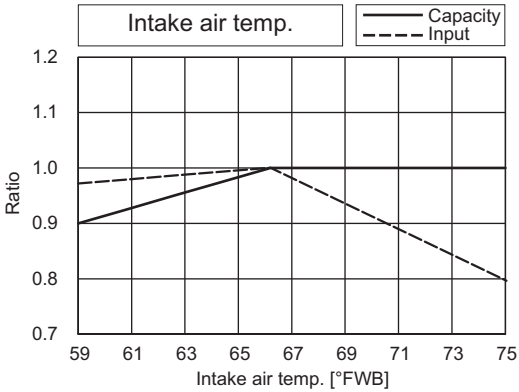
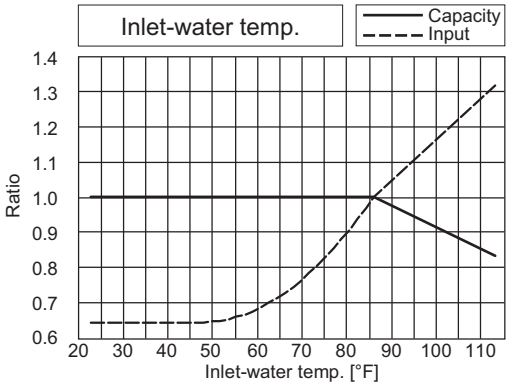


PQHY-		P240TLMU/YLMU
Nominal Heating Capacity	kW	79.1
	BTU/h	270,000
Input	kW	15.12

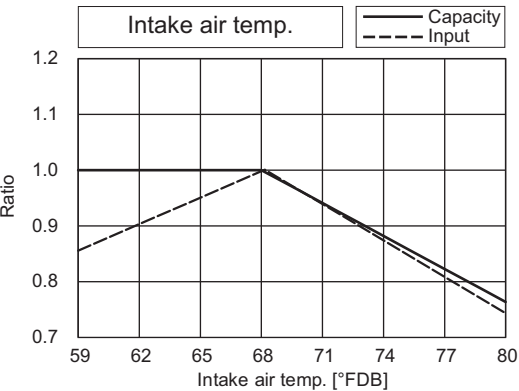
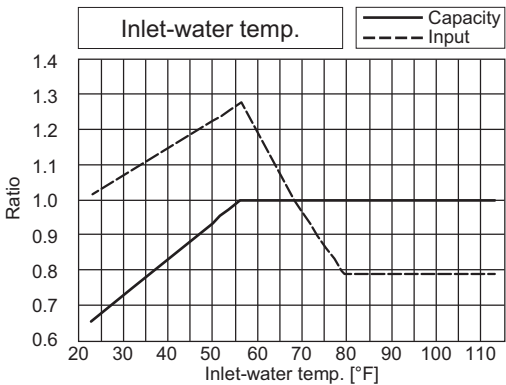


PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

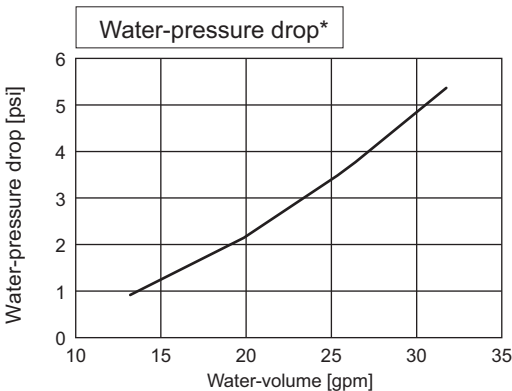
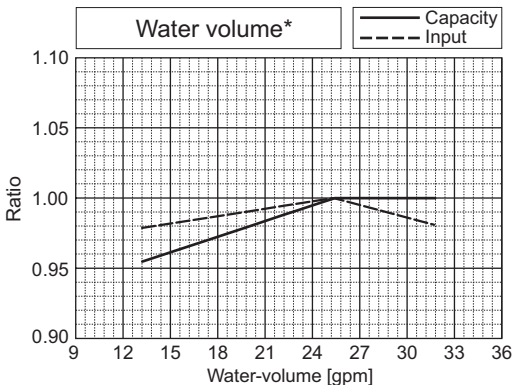
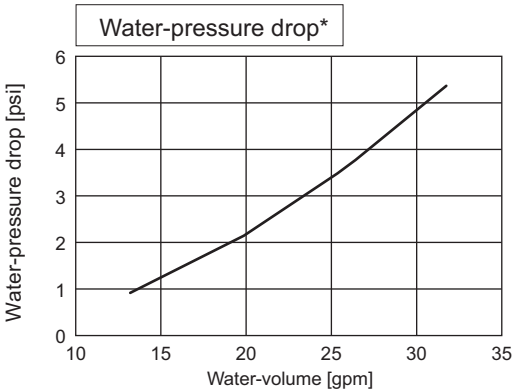
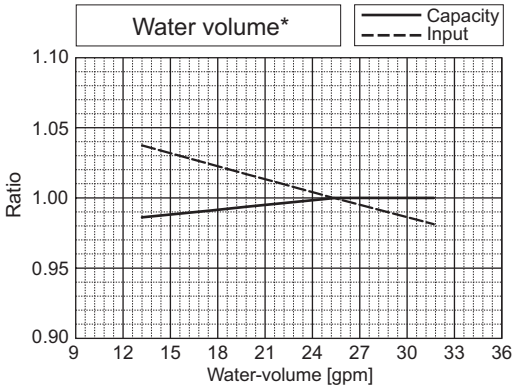
PQHY-		P144TSLMU/YSLMU
Nominal Cooling Capacity	kW	42.2
	BTU/h	144,000
Input	kW	7.11



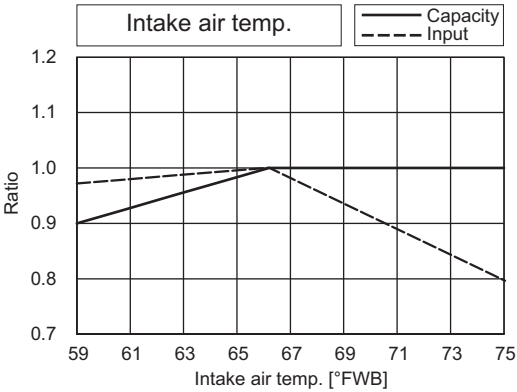
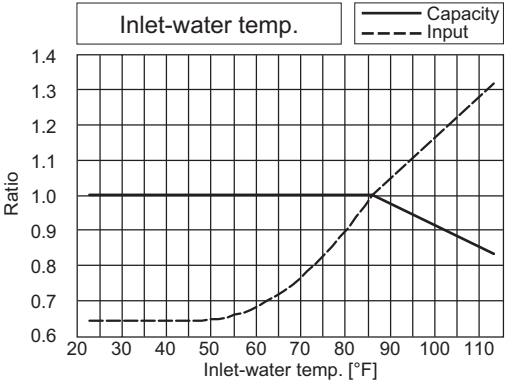
PQHY-		P144TSLMU/YSLMU
Nominal Heating Capacity	kW	46.9
	BTU/h	160,000
Input	kW	7.45



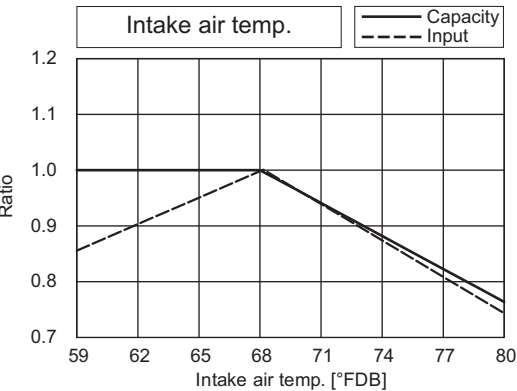
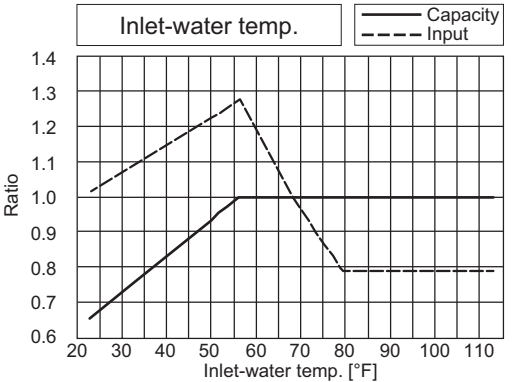
*The drawing indicates characteristic per unit.



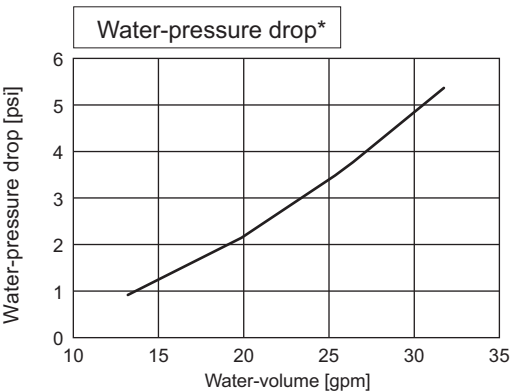
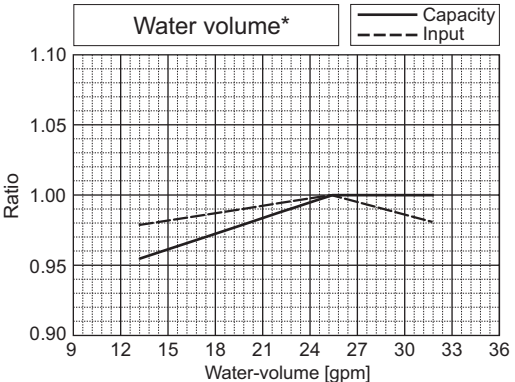
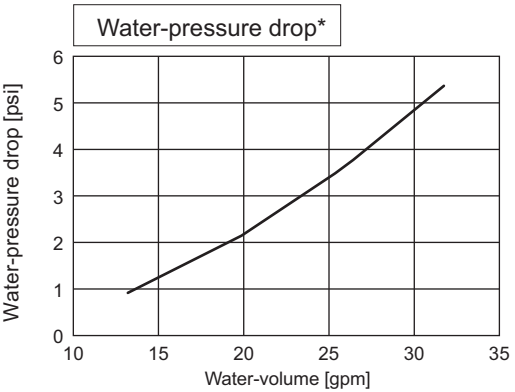
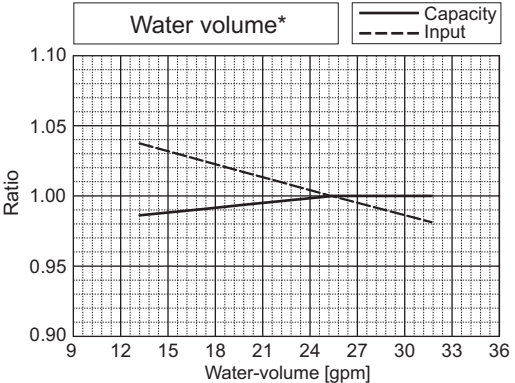
PQHY-		P168TSLMU/YSLMU
Nominal Cooling Capacity	kW	49.2
	BTU/h	168,000
Input	kW	9.33



PQHY-		P168TSLMU/YSLMU
Nominal Heating Capacity	kW	55.1
	BTU/h	188,000
Input	kW	9.34



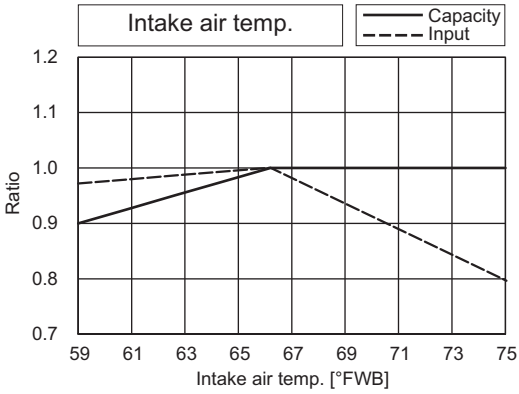
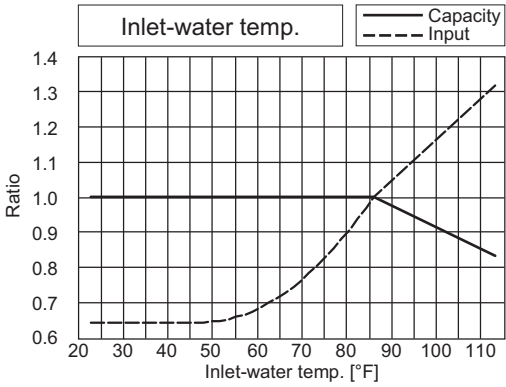
*The drawing indicates characteristic per unit.



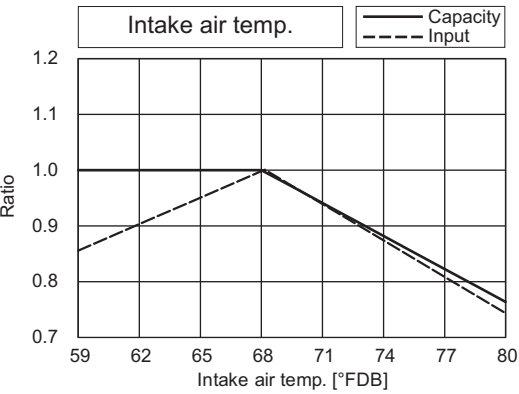
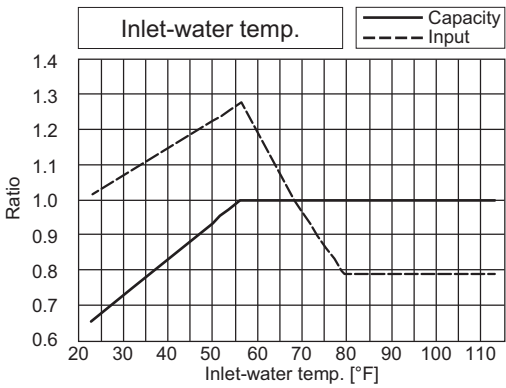
PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

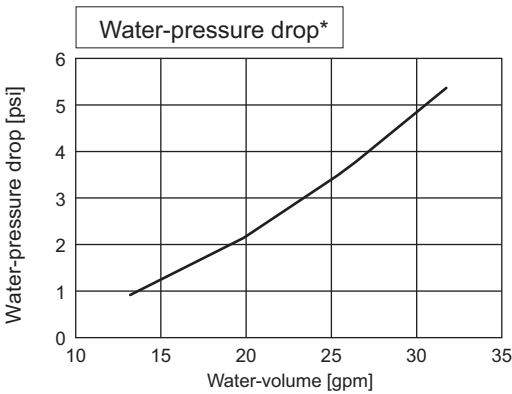
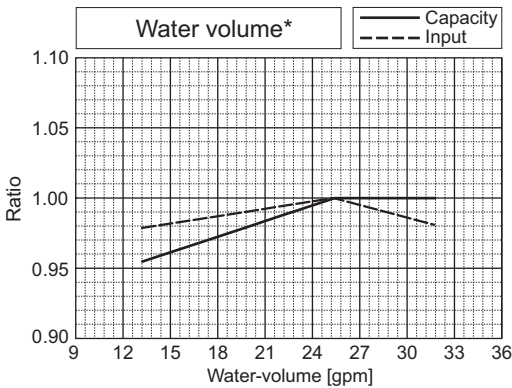
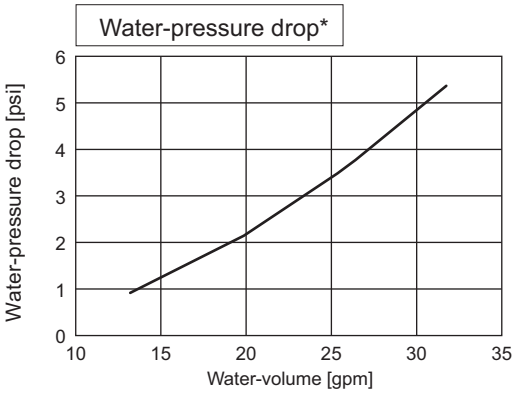
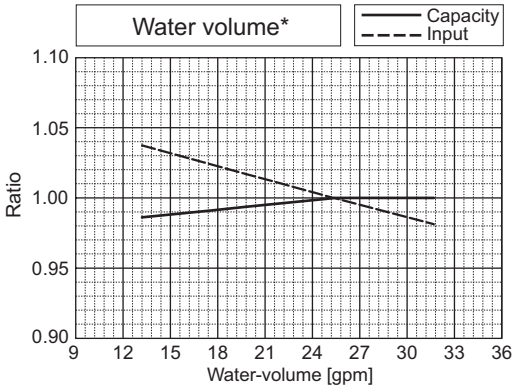
PQHY-		P192TSLMU/YSLMU
Nominal Cooling Capacity	kW	56.3
	BTU/h	192,000
Input	kW	11.30



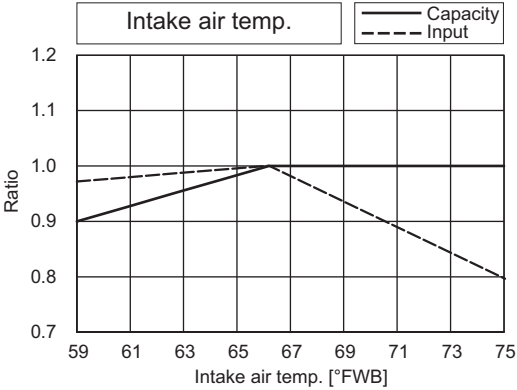
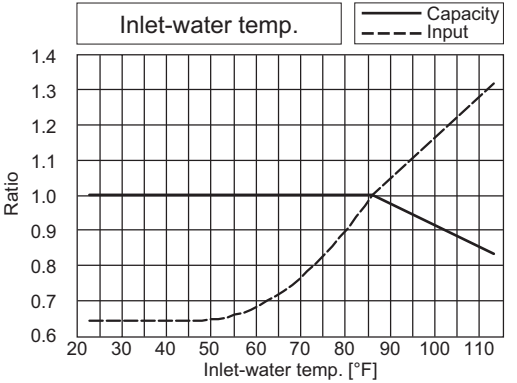
PQHY-		P192TSLMU/YSLMU
Nominal Heating Capacity	kW	63.0
	BTU/h	215,000
Input	kW	11.02



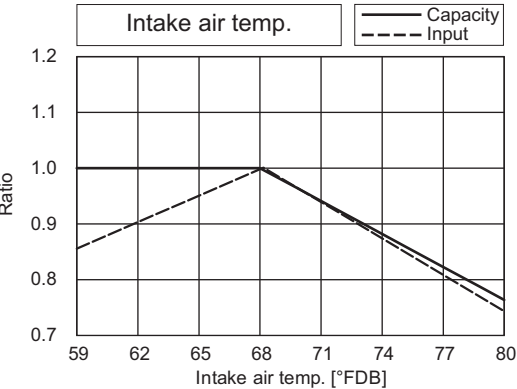
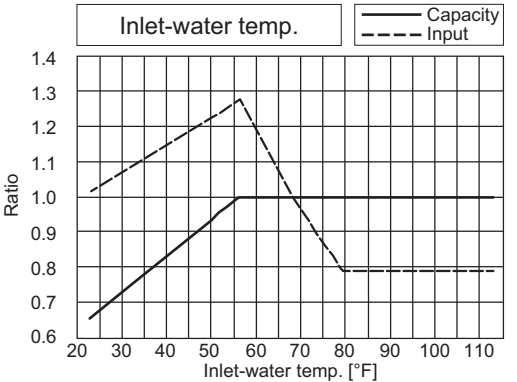
*The drawing indicates characteristic per unit.



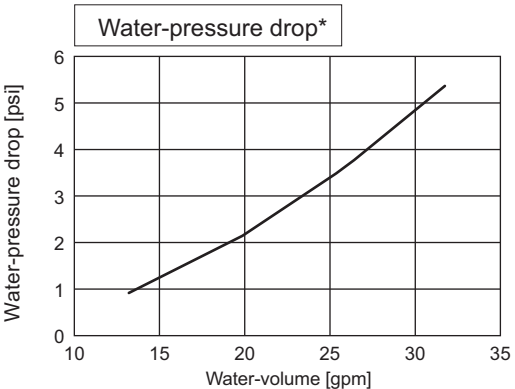
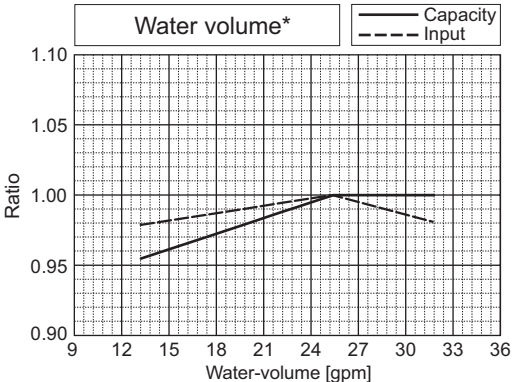
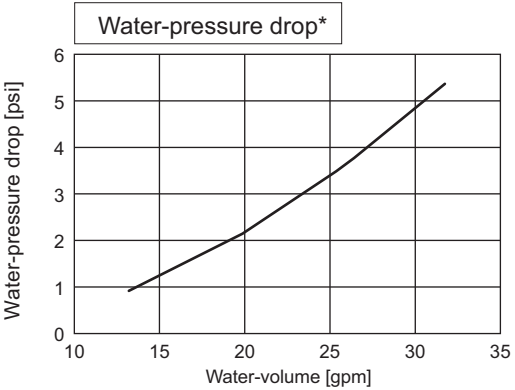
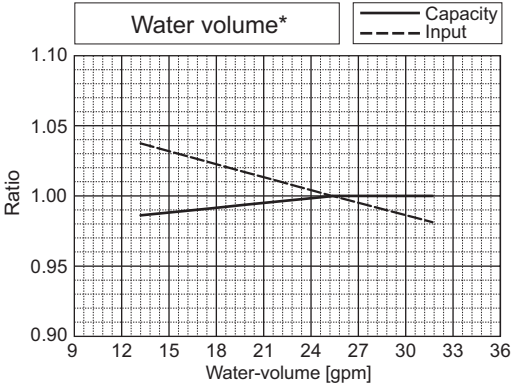
PQHY-		P216TSLMU/YSLMU
Nominal Cooling Capacity	kW	63.3
	BTU/h	216,000
Input	kW	14.03



PQHY-		P216TSLMU/YSLMU
Nominal Heating Capacity	kW	71.2
	BTU/h	243,000
Input	kW	12.88



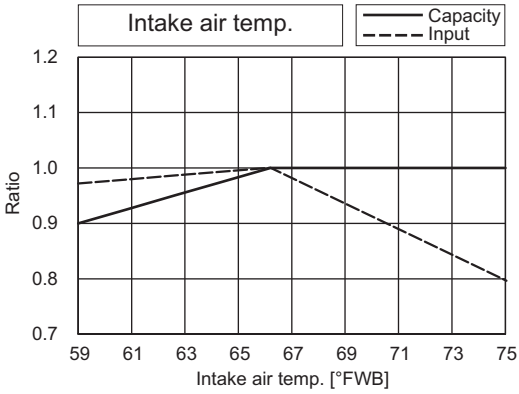
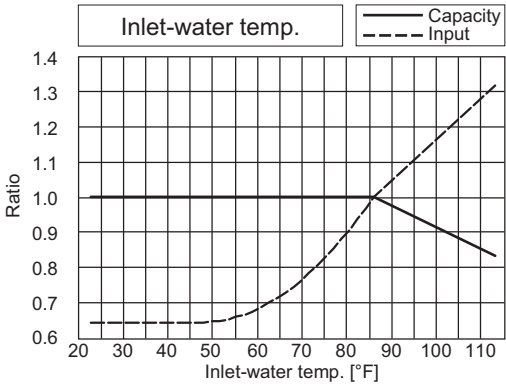
*The drawing indicates characteristic per unit.



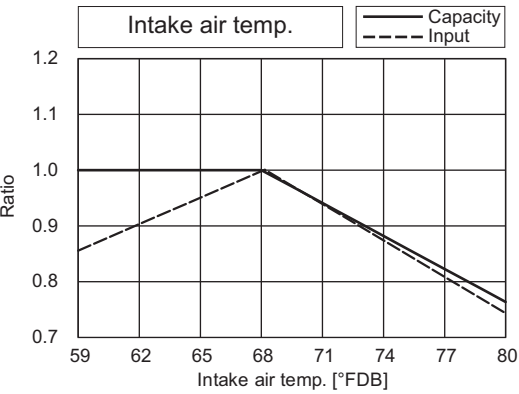
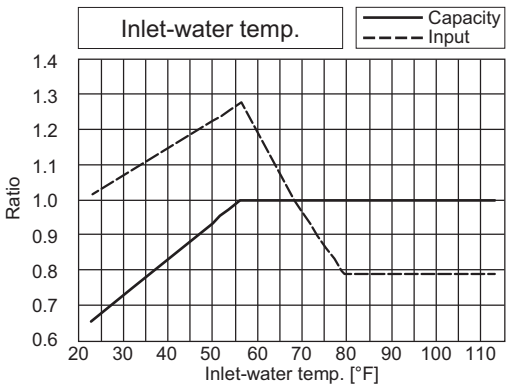
PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

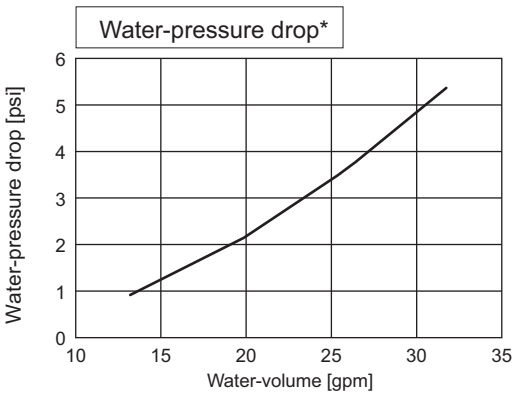
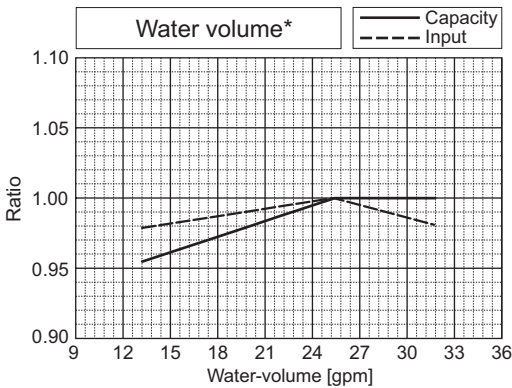
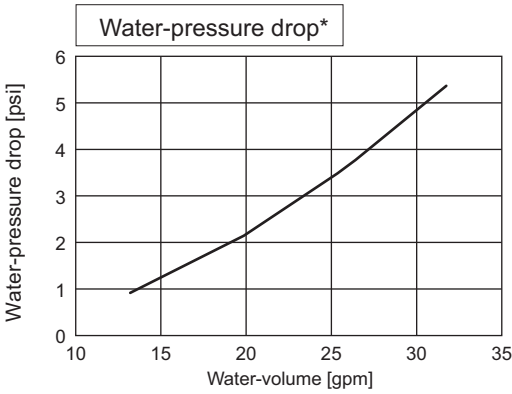
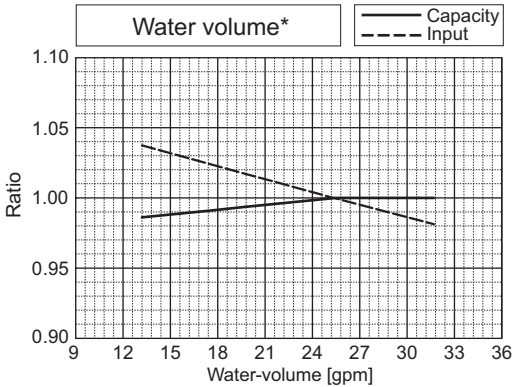
PQHY-		P240TSLMU/YSLMU
Nominal Cooling Capacity	kW	70.3
	BTU/h	240,000
Input	kW	16.89



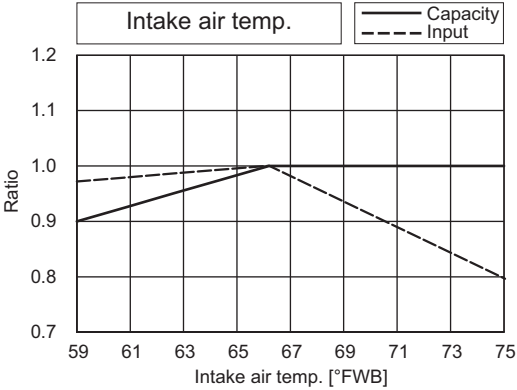
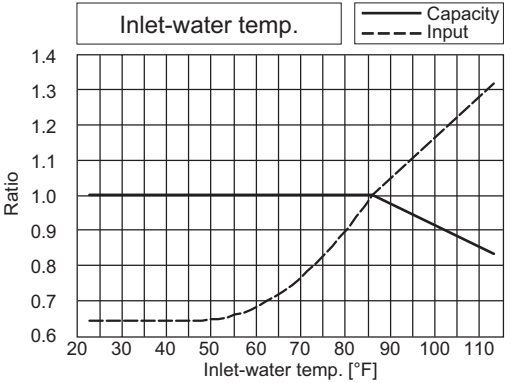
PQHY-		P240TSLMU/YSLMU
Nominal Heating Capacity	kW	79.1
	BTU/h	270,000
Input	kW	14.58



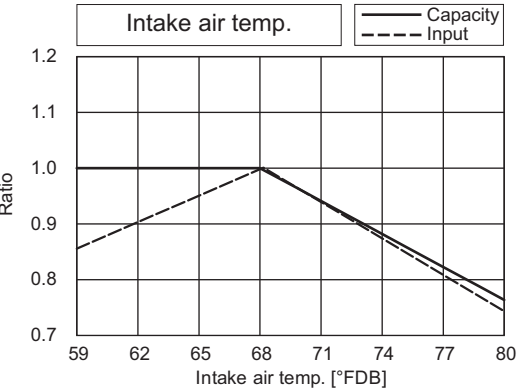
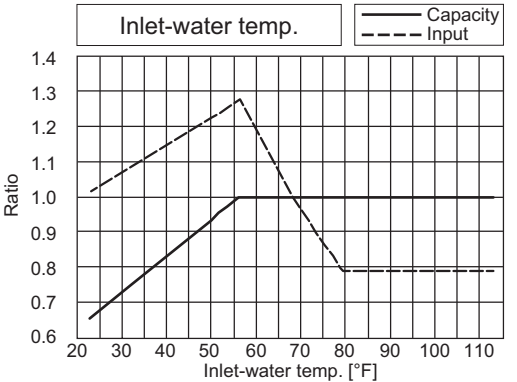
*The drawing indicates characteristic per unit.



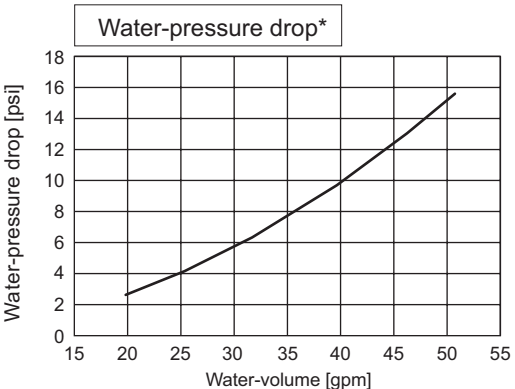
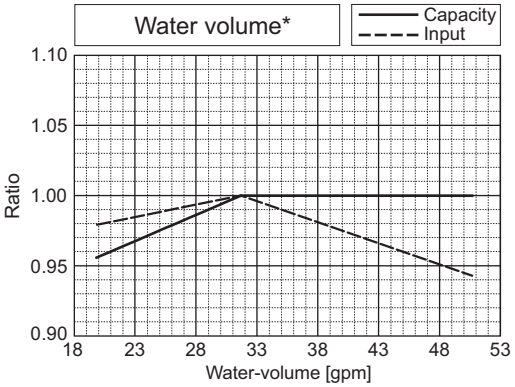
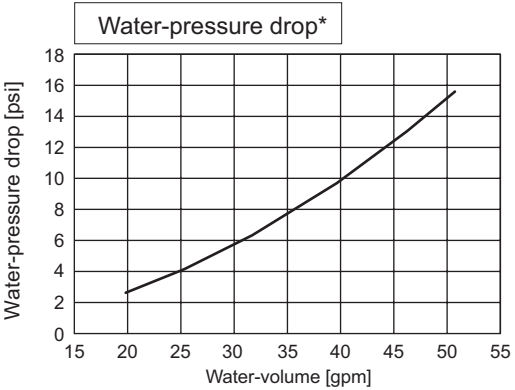
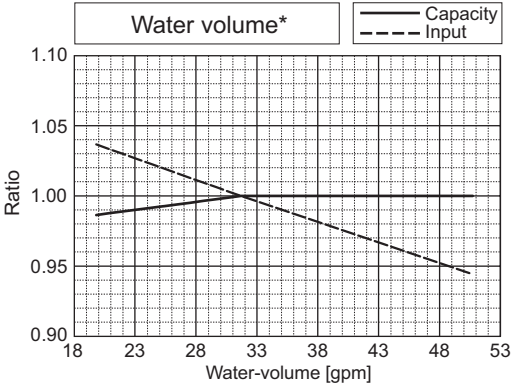
PQHY-		P288TSLMU/YSLMU
Nominal Cooling Capacity	kW	84.4
	BTU/h	288,000
Input	kW	20.42



PQHY-		P288TSLMU/YSLMU
Nominal Heating Capacity	kW	94.7
	BTU/h	323,000
Input	kW	17.50



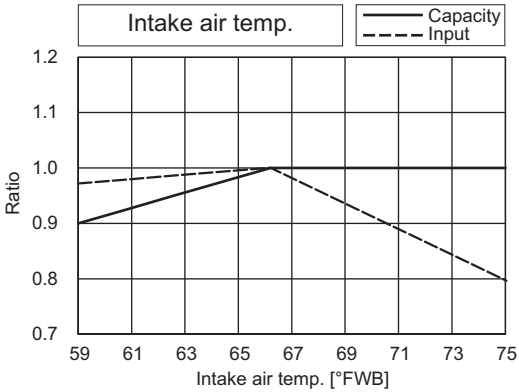
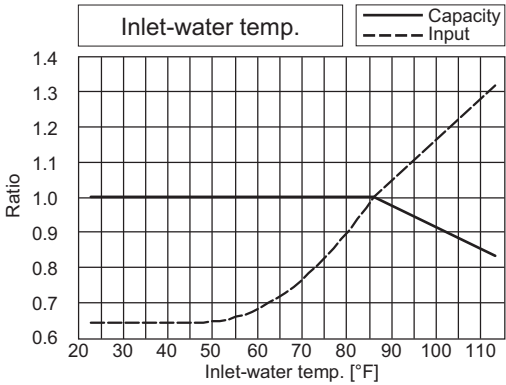
*The drawing indicates characteristic per unit.



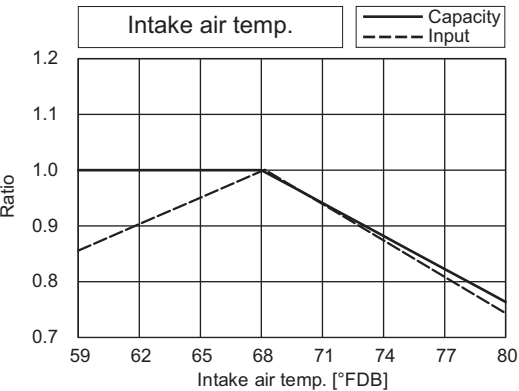
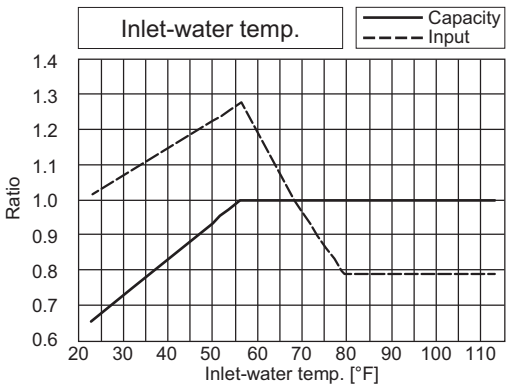
PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

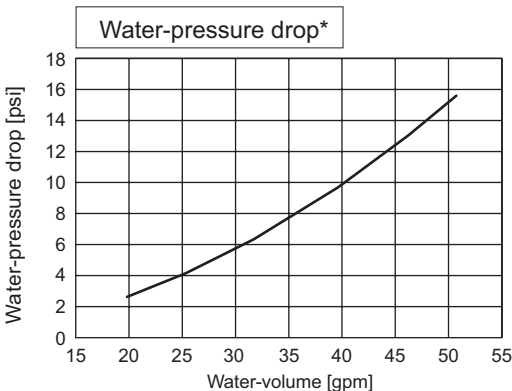
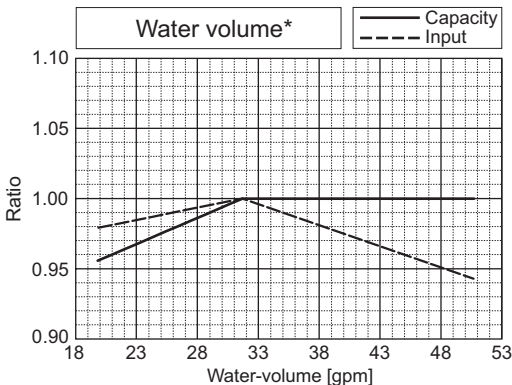
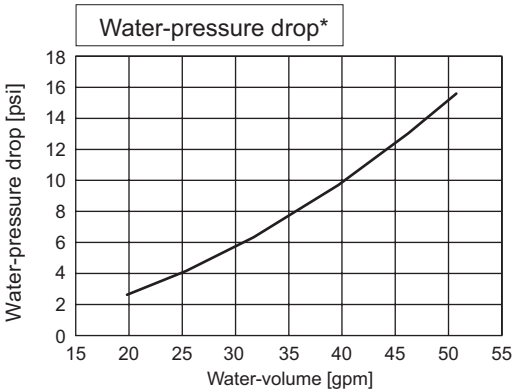
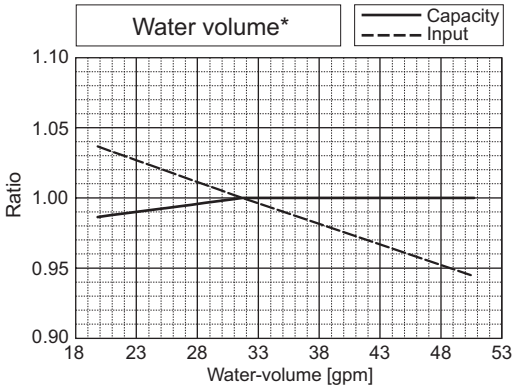
PQHY-		P312TSLMU/YSLMU
Nominal Cooling Capacity	kW	91.4
	BTU/h	312,000
Input	kW	23.41



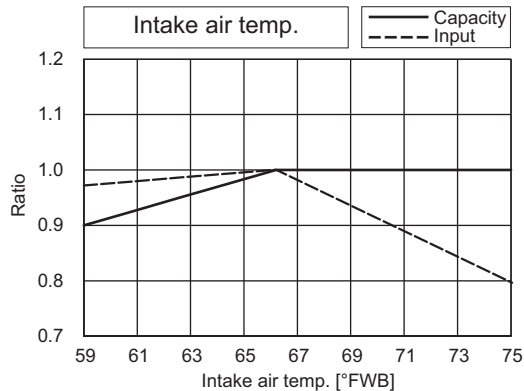
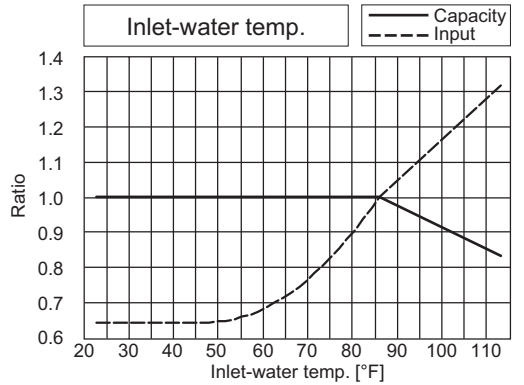
PQHY-		P312TSLMU/YSLMU
Nominal Heating Capacity	kW	102.6
	BTU/h	350,000
Input	kW	19.11



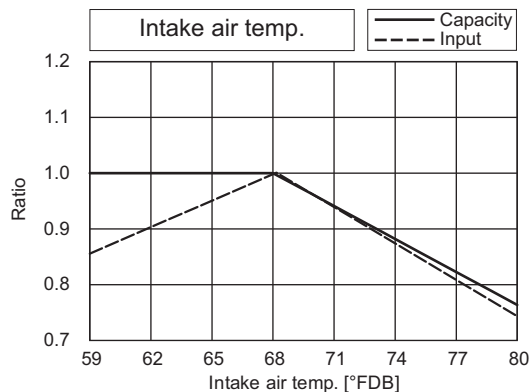
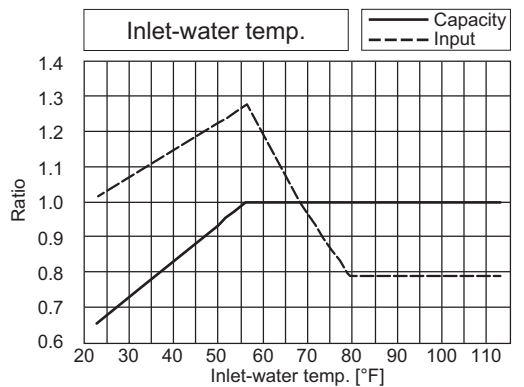
*The drawing indicates characteristic per unit.



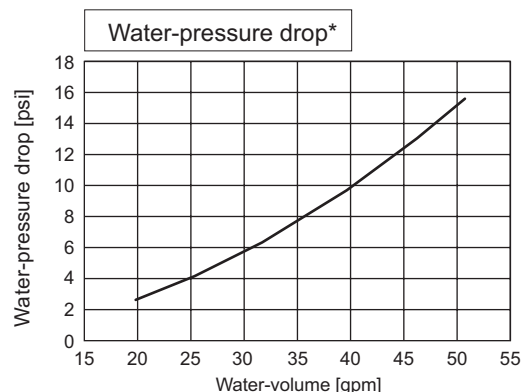
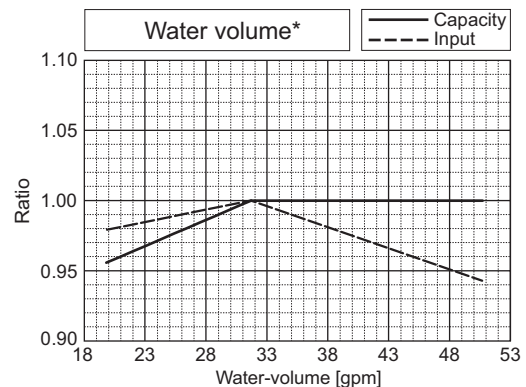
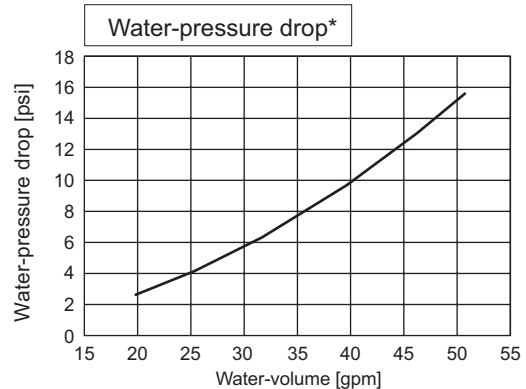
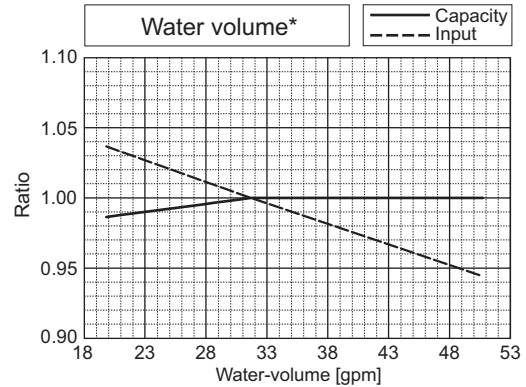
PQHY-		P336TSLMU/YSLMU
Nominal Cooling Capacity	kW	98.5
	BTU/h	336,000
Input	kW	26.84



PQHY-		P336TSLMU/YSLMU
Nominal Heating Capacity	kW	110.8
	BTU/h	378,000
Input	kW	20.77

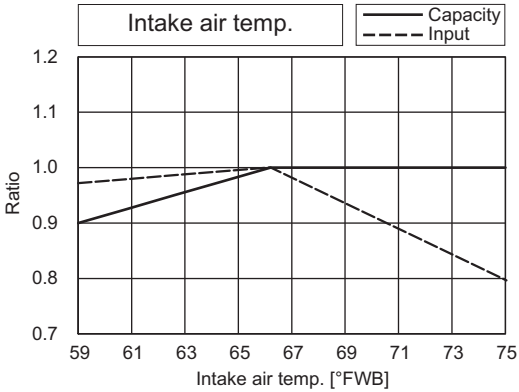
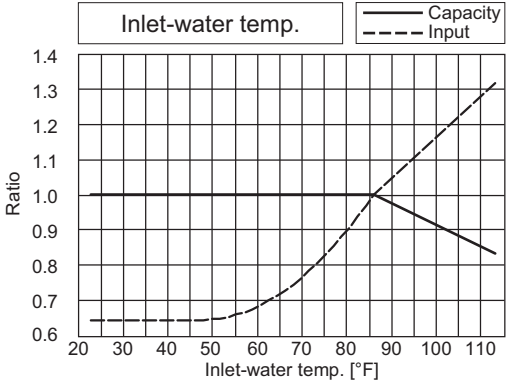


*The drawing indicates characteristic per unit.

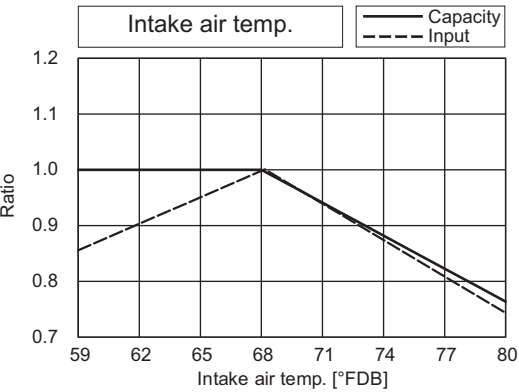
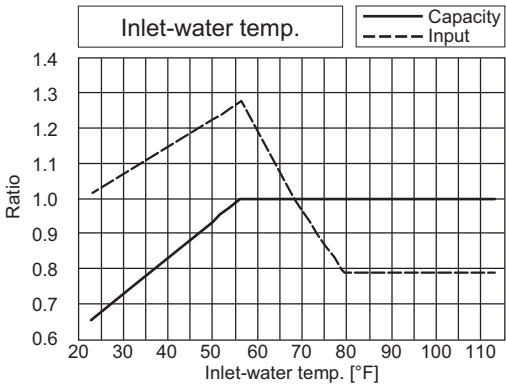


PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

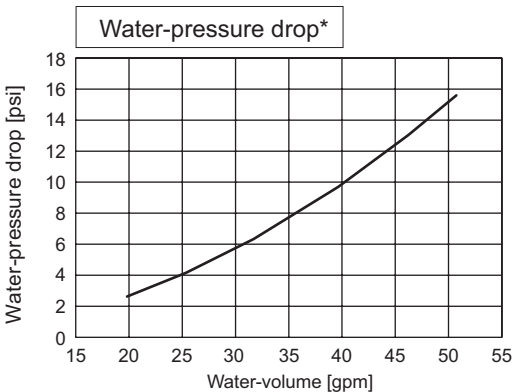
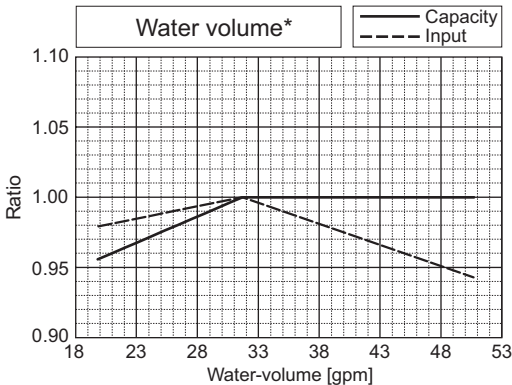
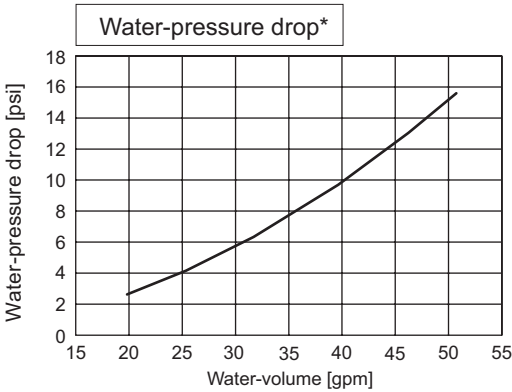
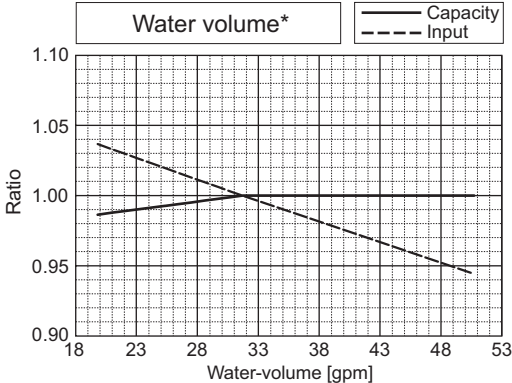
PQHY-		P360TSLMU/YSLMU
Nominal Cooling Capacity	kW	105.5
	BTU/h	360,000
Input	kW	29.43



PQHY-		P360TSLMU/YSLMU
Nominal Heating Capacity	kW	118.7
	BTU/h	405,000
Input	kW	22.85



*The drawing indicates characteristic per unit.



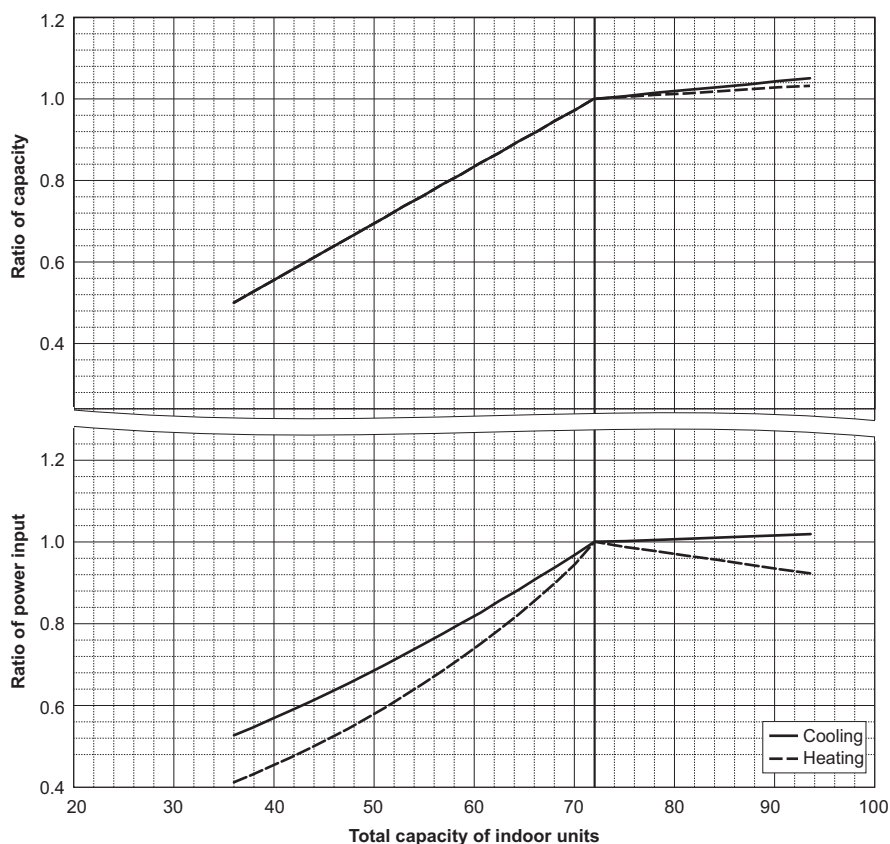
7-2. Correction by total indoor

CITY MULTI system has 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-		P72TLMU/YLMU
Nominal cooling capacity	BTU/h	72,000
	kW	21.1
	Input kW	3.61

PQHY-		P72TLMU/YLMU
Nominal Heating capacity	BTU/h	80,000
	kW	23.4
	Input kW	4.04

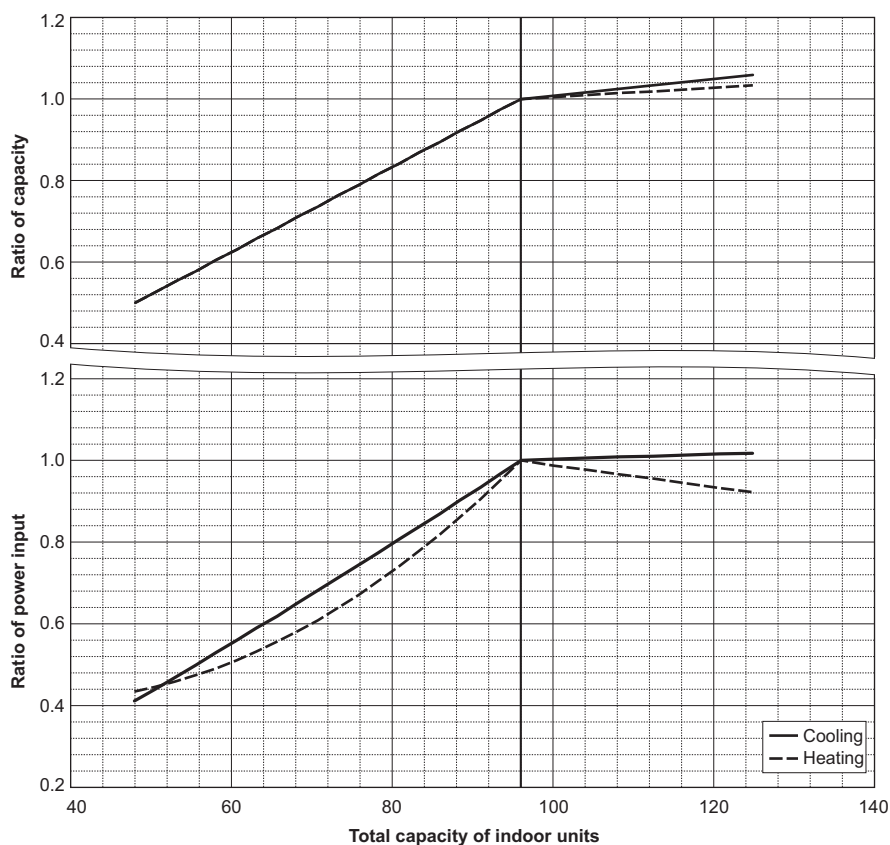
PQHY-P72TLMU/YLMU-A2



PQHY-		P96TLMU/YLMU
Nominal cooling capacity	BTU/h	96,000
	kW	28.1
	Input kW	5.21

PQHY-		P96TLMU/YLMU
Nominal Heating capacity	BTU/h	108,000
	kW	31.7
	Input kW	5.64

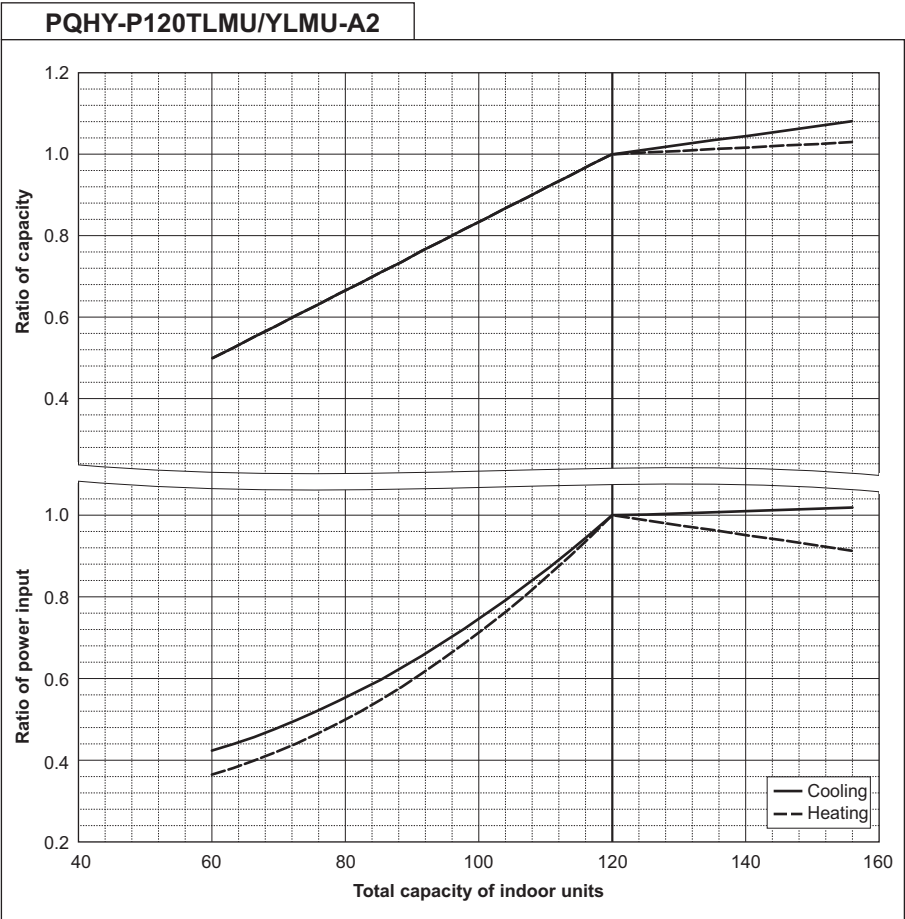
PQHY-P96TLMU/YLMU-A2



PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

PQHY-		P120TLMU/YLMU
Nominal cooling capacity	BTU/h	120,000
	kW	35.2
	Input kW	7.51

PQHY-		P120TLMU/YLMU
Nominal Heating capacity	BTU/h	135,000
	kW	39.6
	Input kW	7.09

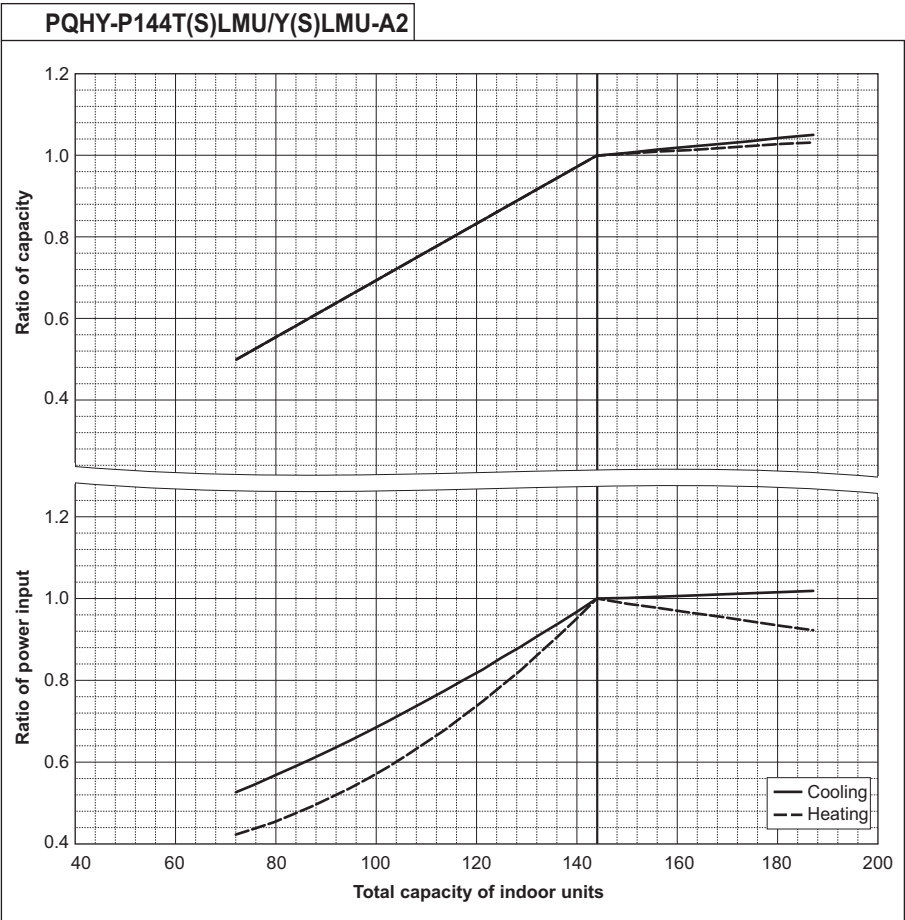


PQHY-		P144TLMU/YLMU
Nominal cooling capacity	BTU/h	144,000
	kW	42.2
	Input kW	8.78

PQHY-		P144TLMU/YLMU
Nominal Heating capacity	BTU/h	160,000
	kW	46.9
	Input kW	8.11

PQHY-		P144TSLMU/YSLMU
Nominal cooling capacity	BTU/h	144,000
	kW	42.2
	Input kW	7.11

PQHY-		P144TSLMU/YSLMU
Nominal Heating capacity	BTU/h	160,000
	kW	46.9
	Input kW	7.45



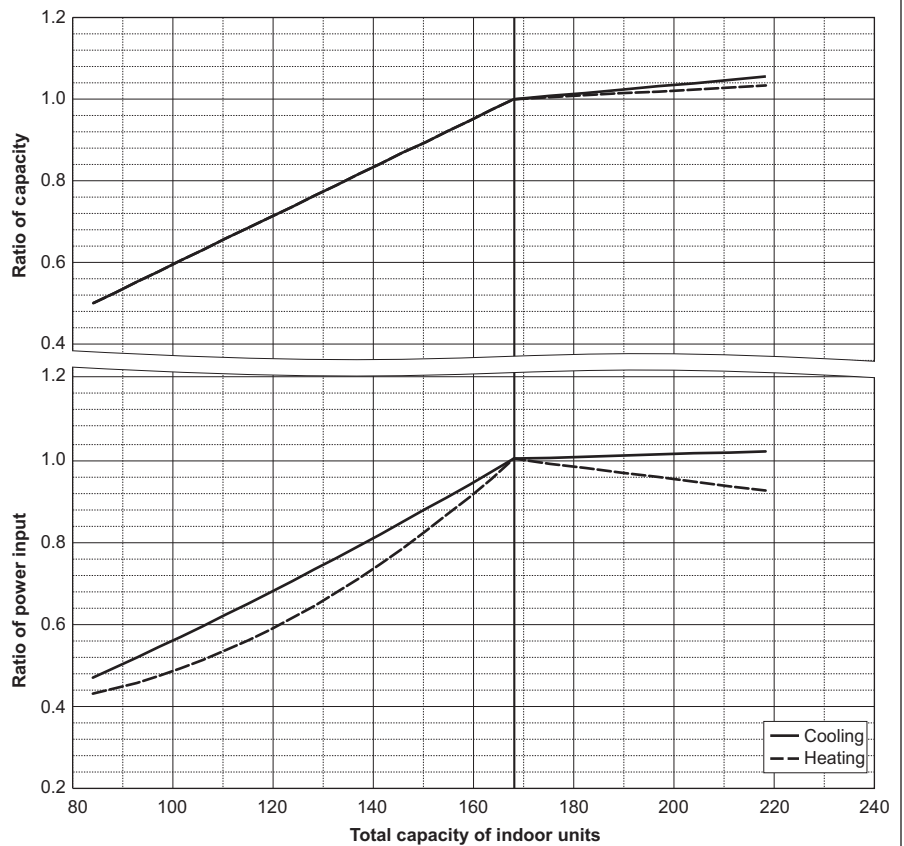
PQHY-		P168TLMU/YLMU
Nominal cooling capacity	BTU/h	168,000
	kW	49.2
	Input kW	12.05

PQHY-		P168TLMU/YLMU
Nominal Heating capacity	BTU/h	188,000
	kW	55.1
	Input kW	9.86

PQHY-		P168TSLMU/YSLMU
Nominal cooling capacity	BTU/h	168,000
	kW	49.2
	Input kW	9.33

PQHY-		P168TSLMU/YSLMU
Nominal Heating capacity	BTU/h	188,000
	kW	55.1
	Input kW	9.34

PQHY-P168T(S)LMU/Y(S)LMU-A2



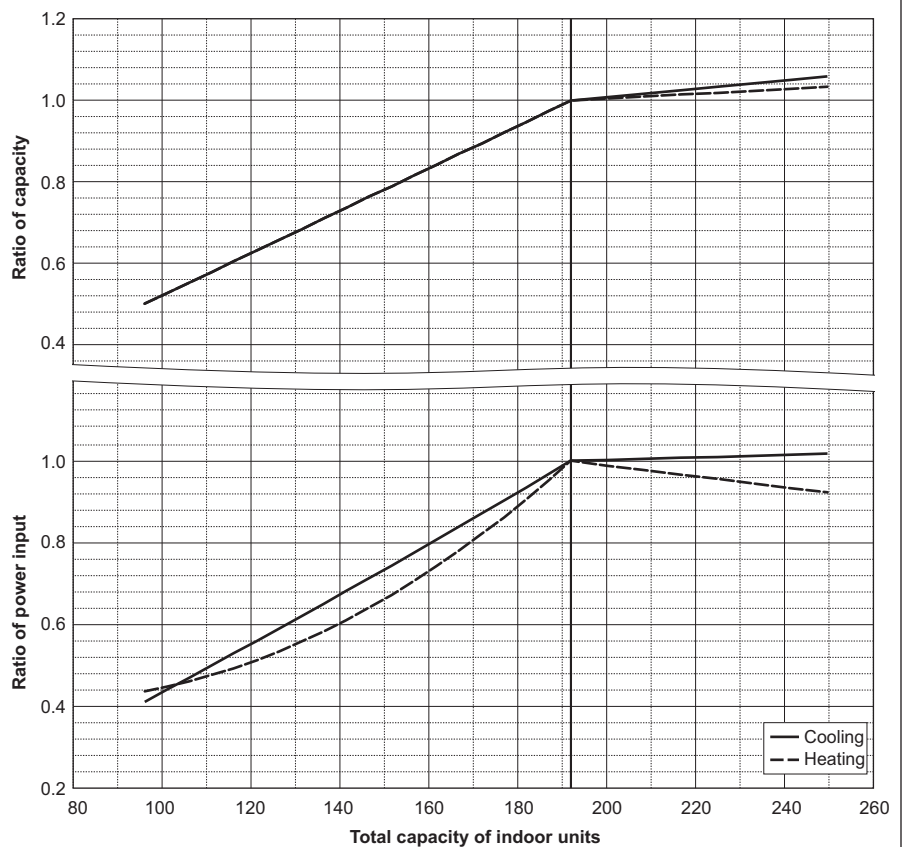
PQHY-		P192TLMU/YLMU
Nominal cooling capacity	BTU/h	192,000
	kW	56.3
	Input kW	15.05

PQHY-		P192TLMU/YLMU
Nominal Heating capacity	BTU/h	215,000
	kW	63.0
	Input kW	11.90

PQHY-		P192TSLMU/YSLMU
Nominal cooling capacity	BTU/h	192,000
	kW	56.3
	Input kW	11.30

PQHY-		P192TSLMU/YSLMU
Nominal Heating capacity	BTU/h	215,000
	kW	63.0
	Input kW	11.02

PQHY-P192T(S)LMU/Y(S)LMU-A2



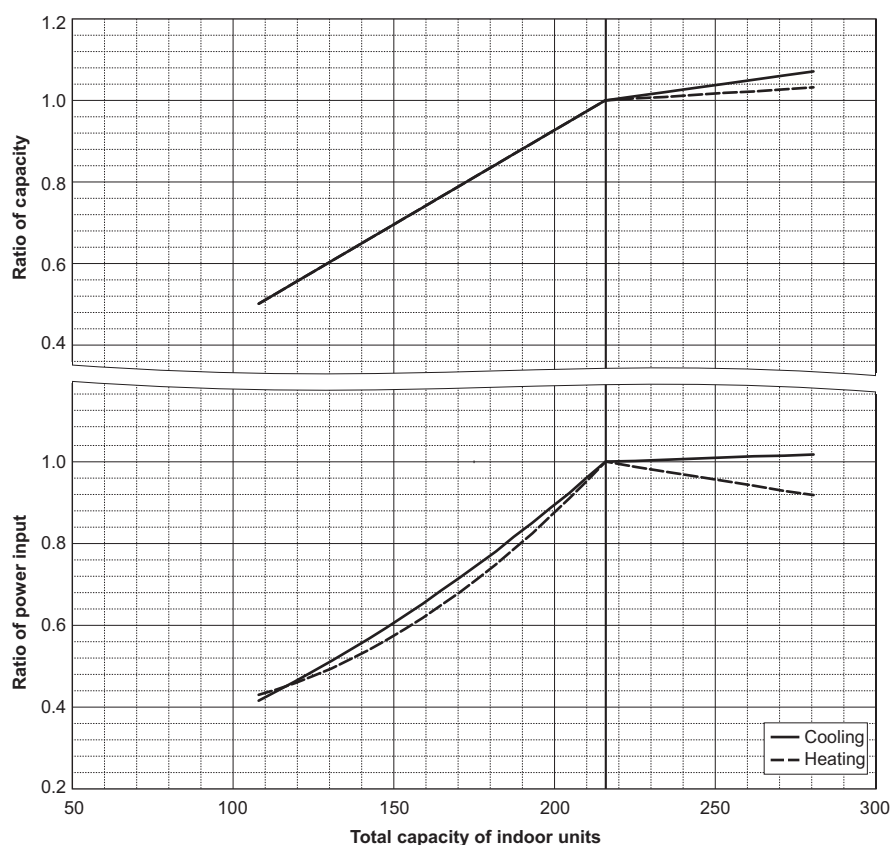
PQHY-		P216TLMU/YLMU
Nominal cooling capacity	BTU/h	216,000
	kW	63.3
	Input kW	19.23

PQHY-		P216TLMU/YLMU
Nominal Heating capacity	BTU/h	243,000
	kW	71.2
	Input kW	13.04

PQHY-		P216TSLMU/YSLMU
Nominal cooling capacity	BTU/h	216,000
	kW	63.3
	Input kW	14.03

PQHY-		P216TSLMU/YSLMU
Nominal Heating capacity	BTU/h	243,000
	kW	71.2
	Input kW	12.88

PQHY-P216T(S)LMU/Y(S)LMU-A2



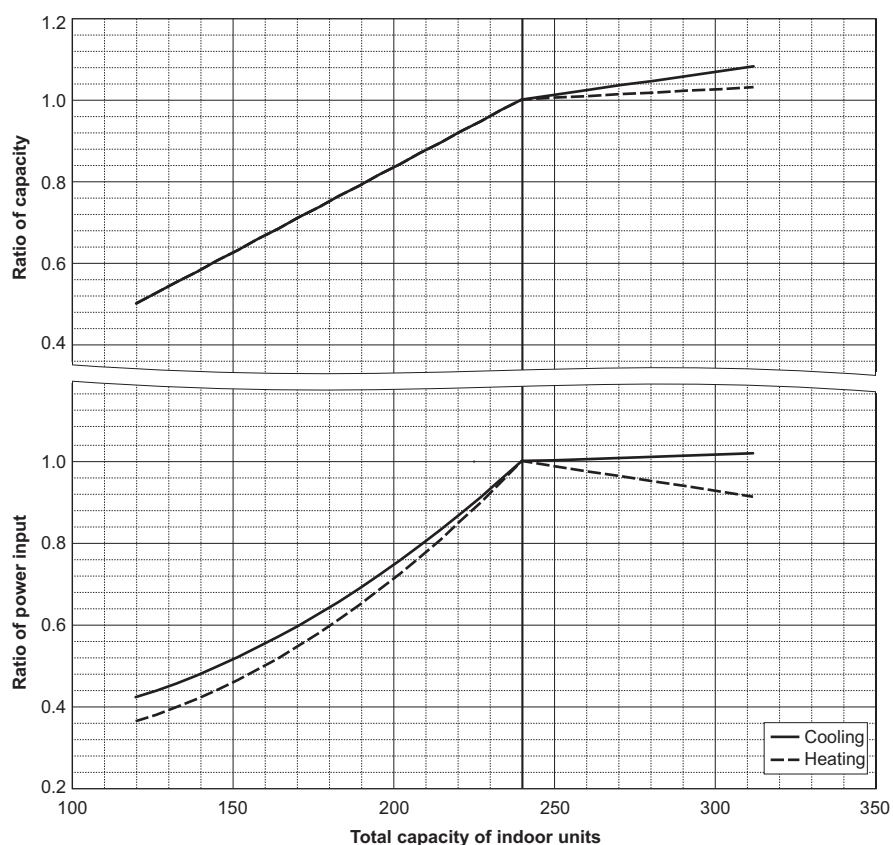
PQHY-		P240TLMU/YLMU
Nominal cooling capacity	BTU/h	224,000
	kW	65.7
	Input kW	21.14

PQHY-		P240TLMU/YLMU
Nominal Heating capacity	BTU/h	270,000
	kW	79.1
	Input kW	15.12

PQHY-		P240TSLMU/YSLMU
Nominal cooling capacity	BTU/h	240,000
	kW	70.3
	Input kW	16.89

PQHY-		P240TSLMU/YSLMU
Nominal Heating capacity	BTU/h	270,000
	kW	79.1
	Input kW	14.58

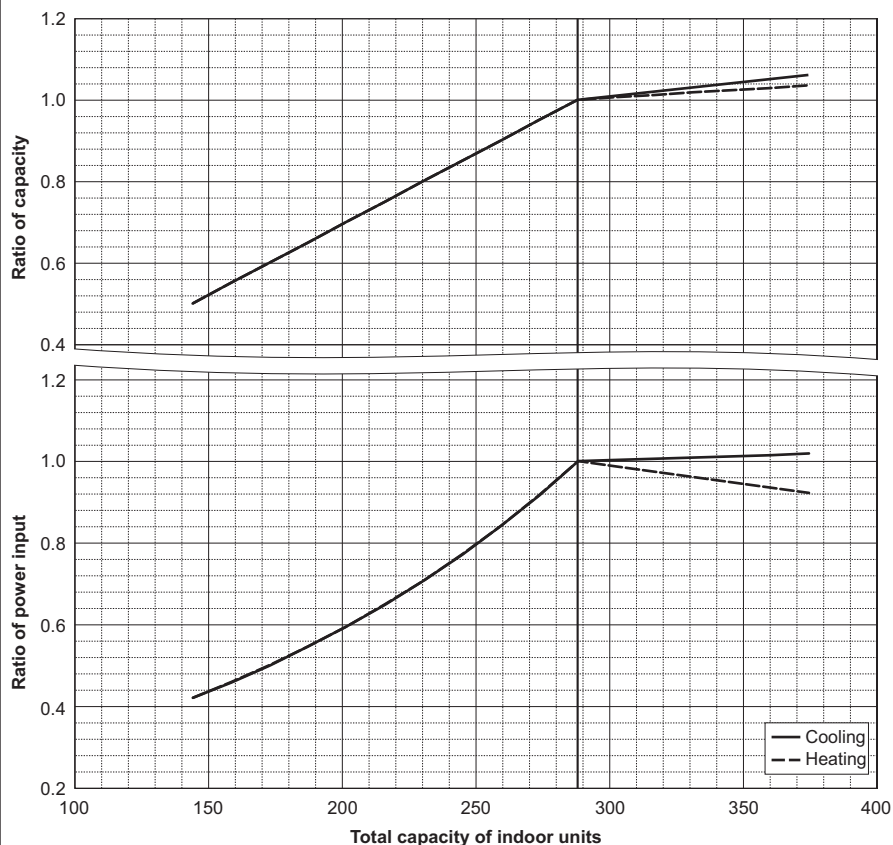
PQHY-P240T(S)LMU/Y(S)LMU-A2



PQHY-		P288TSLMU/YSLMU
Nominal cooling capacity	BTU/h	288,000
	kW	84.4
	Input kW	20.42

PQHY-		P288TSLMU/YSLMU
Nominal Heating capacity	BTU/h	323,000
	kW	94.7
	Input kW	17.50

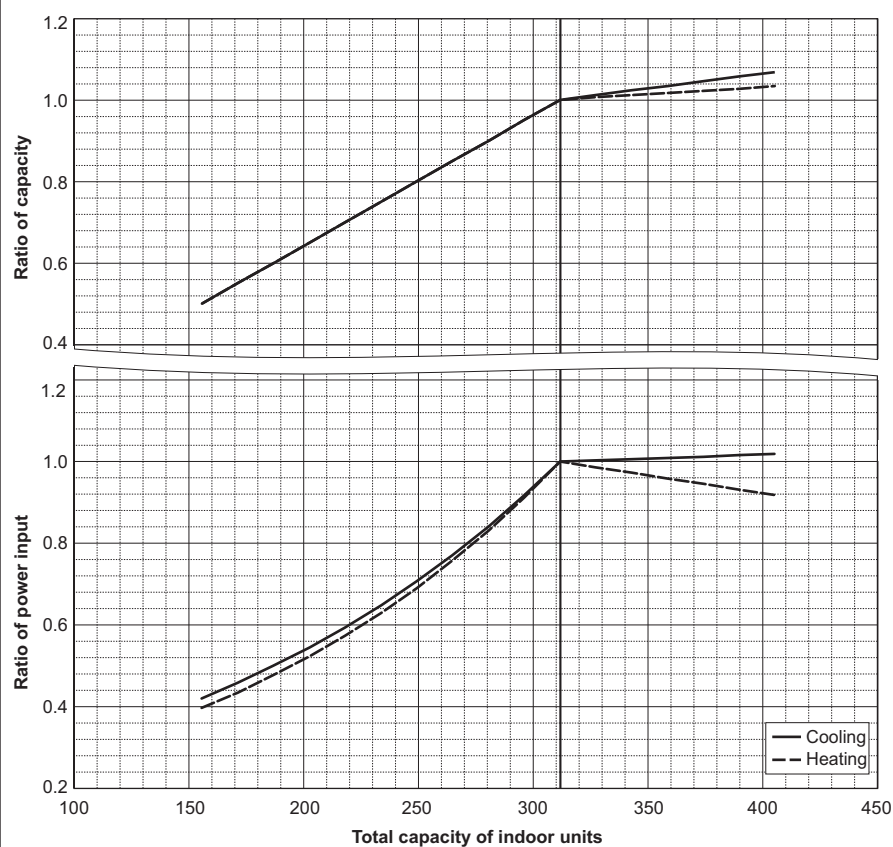
PQHY-P288TSLMU/YSLMU-A2



PQHY-		P312TSLMU/YSLMU
Nominal cooling capacity	BTU/h	312,000
	kW	91.4
	Input kW	23.41

PQHY-		P312TSLMU/YSLMU
Nominal Heating capacity	BTU/h	350,000
	kW	102.6
	Input kW	19.11

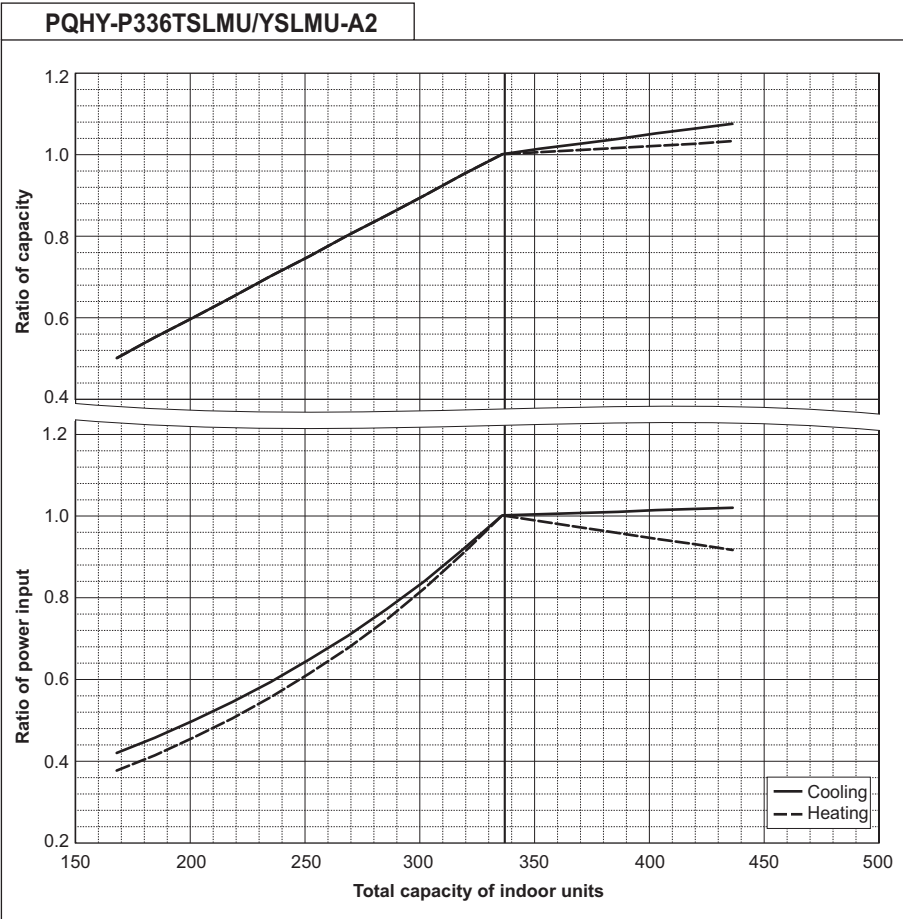
PQHY-P312TSLMU/YSLMU-A2



PQHY-P-T(S)LMU-A2, Y(S)LMU-A2

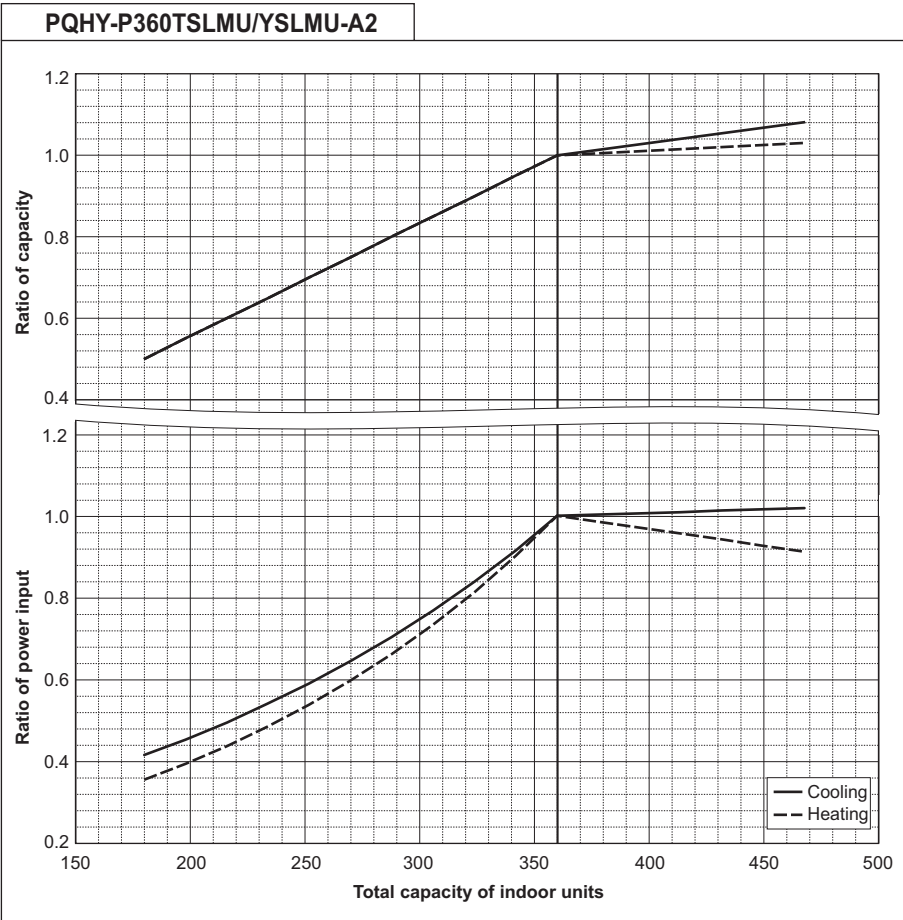
PQHY-		P336TSLMU/YSLMU
Nominal cooling capacity	BTU/h	336,000
	kW	98.5
	Input kW	26.84

PQHY-		P336TSLMU/YSLMU
Nominal Heating capacity	BTU/h	378,000
	kW	110.8
	Input kW	20.77



PQHY-		P360TSLMU/YSLMU
Nominal cooling capacity	BTU/h	360,000
	kW	105.5
	Input kW	29.43

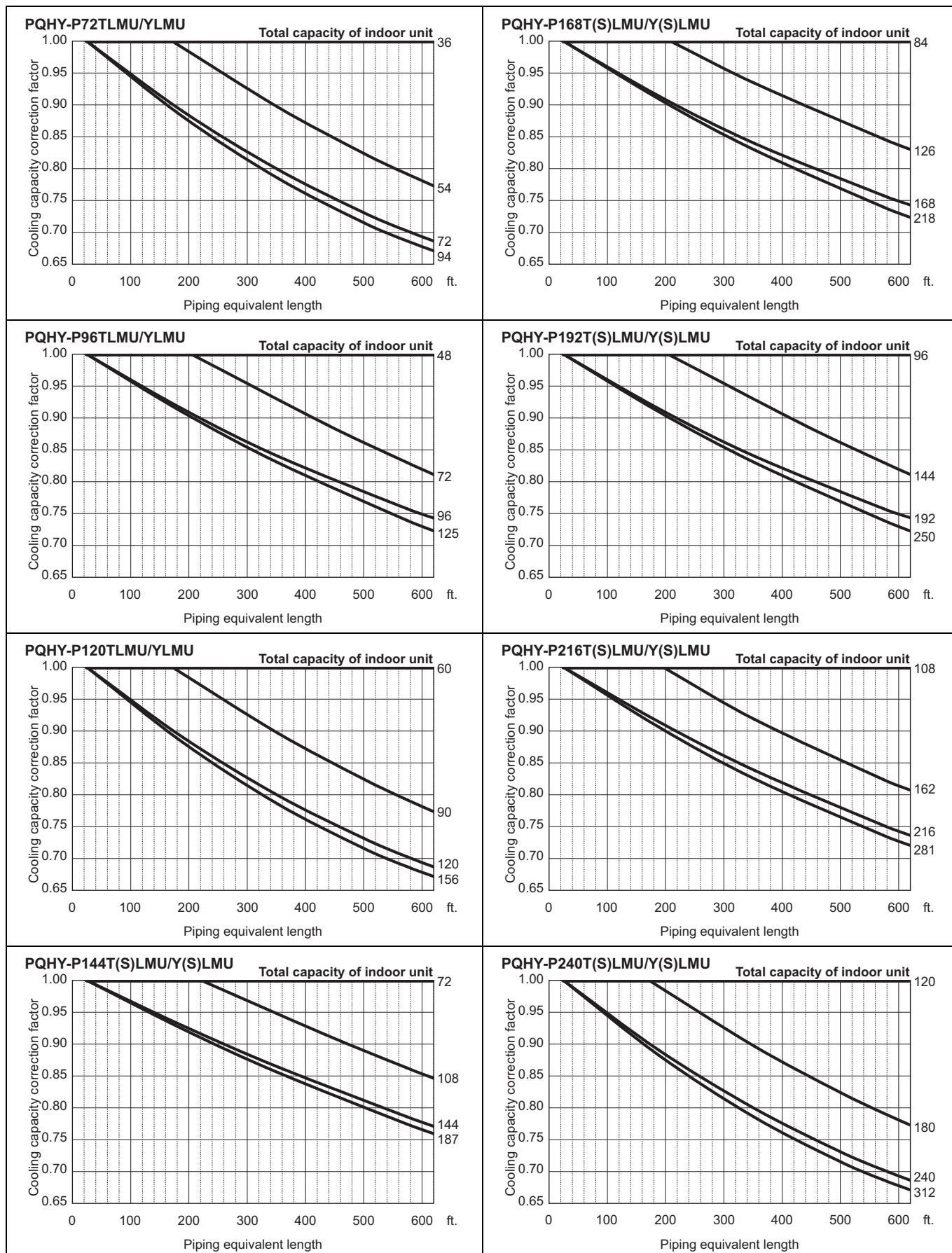
PQHY-		P360TSLMU/YSLMU
Nominal Heating capacity	BTU/h	405,000
	kW	118.7
	Input kW	22.85



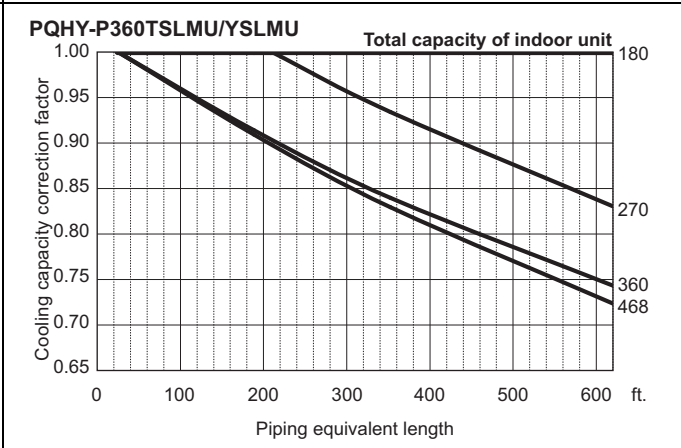
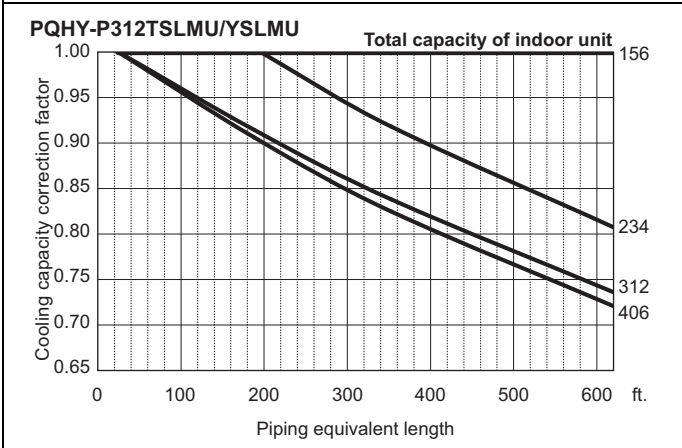
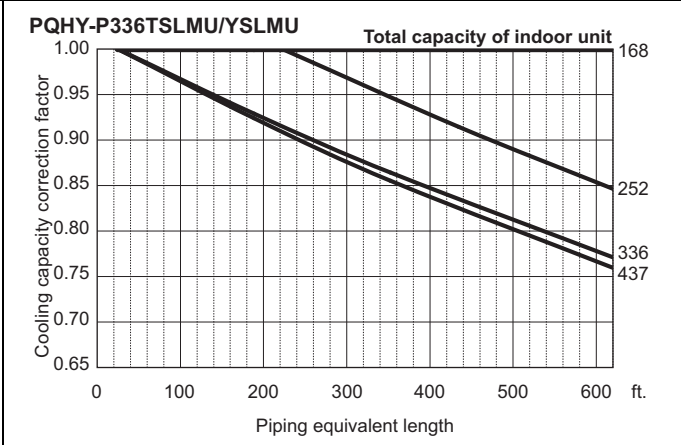
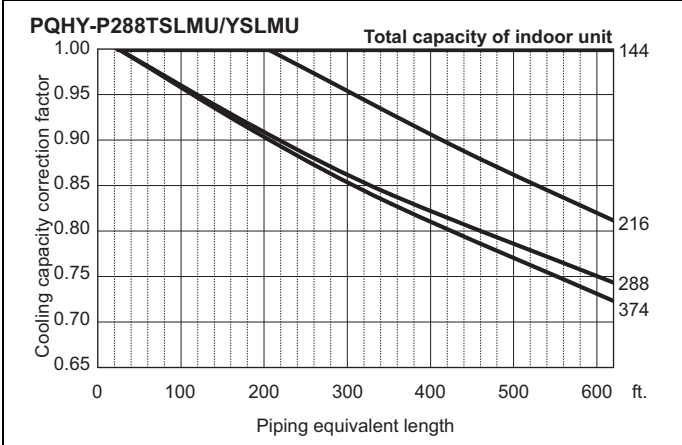
7-3. Correction by refrigerant piping length

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.

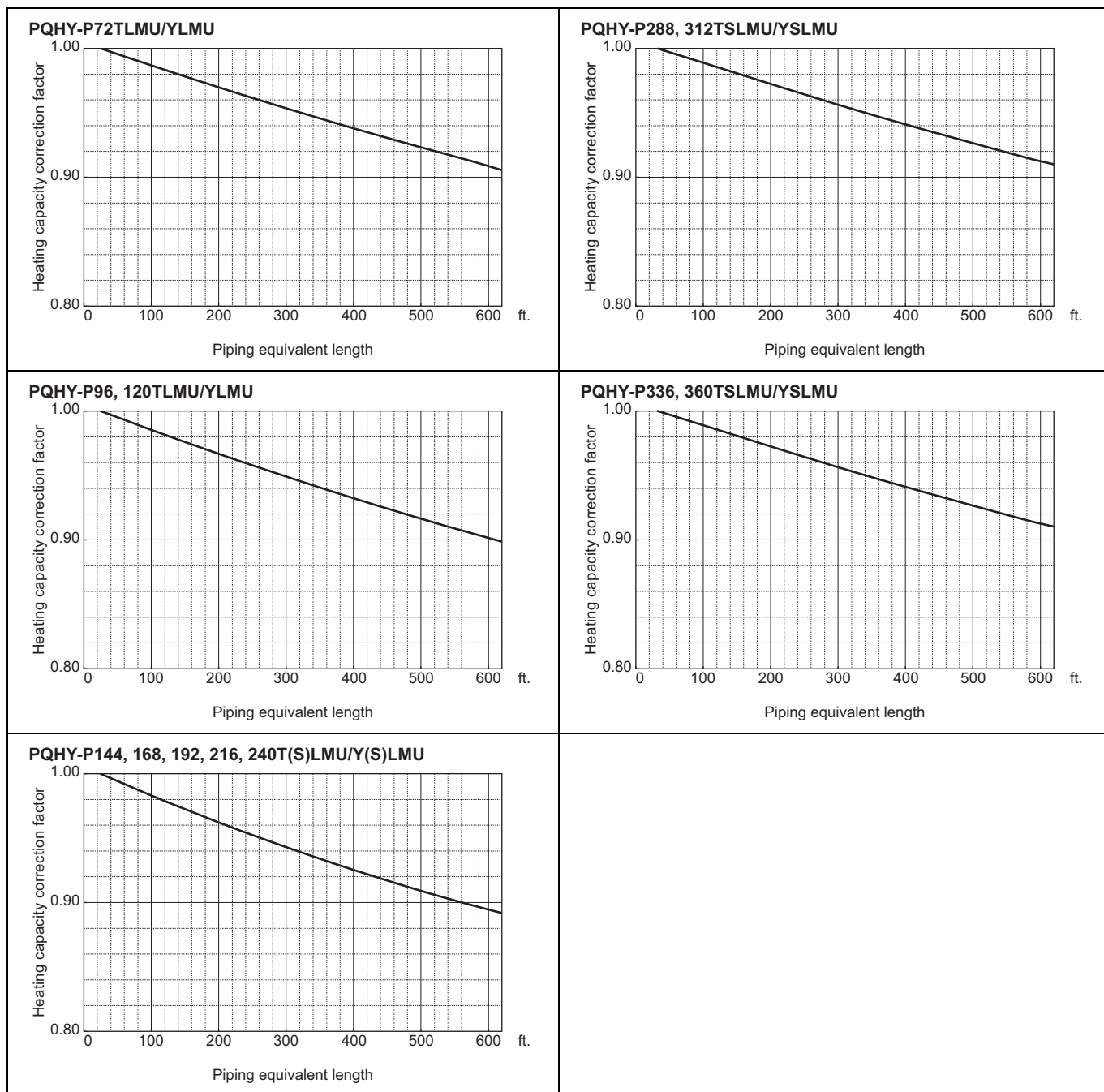
7-3-1. Cooling capacity correction



PQHY-P-T(S)LMU-A2, Y(S)LMU-A2



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-B

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Heat Source Model			PQHY-P72ZLMU-B < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	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	3.60	3.59
		Current input	A	4.0	4.0
	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)	*2	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	3.78	3.36
		Current input	A	4.2	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		50~130% of heatsource unit capacity		
	Model/Quantity		P04~P96/1~18		
Sound power level (measured in anechoic room) *3		dB <A>	60.5		
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	1,440		
		G/min	24		
		m³/h	5.45		
		L/min	91		
		cfm	3.2		
	Pressure drop	psi	3.48		
		kPa	24		
	Operating volume range	G/h	793 ~ 1,902		
		G/min	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	0.035		
	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	1.22		
		l	4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing	External		KB94C8C6		
	Wiring		KE94L345		
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back on. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.		

Notes:

- 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%
- 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%
- The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Unit converter

BTU/h	=kW x 3.412
cfm	=m ³ /min x 35.31
lbs	=kg/0.4536

*Above specification data is
subject to rounding variation.

Heat Source Model			PQHY-P96ZLMU-B < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1	BTU/h	96,000			
		kW	28.1			
	(575)	Power input	kW	5.21		
		Current input	A	5.8		
	(Rated)	BTU/h	92,000			
		kW	27.0			
	(575)	Power input	kW	5.22	5.45	
		Current input	A	5.8	6.0	
	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)	*2	BTU/h	108,000			
		kW	31.7			
	(575)	Power input	kW	5.64		
		Current input	A	6.2		
	(Rated)	BTU/h	103,000			
		kW	30.2			
	(575)	Power input	kW	4.49	4.48	
		Current input	A	5.0	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 power level (measured in anechoic room) *3	dB <A>	65.0				
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	9				
Maximum Overcurrent Protection	A	15				
Circulating water	Water flow rate	G/h	1,522			
		G/min	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	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	0.035			
	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	1.22			
		l	4.6			
	Water pressure Max.	psi	290			
		MPa	2.0			
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure			
Drawing	External		KB94C8C6			
	Wiring		KE94L345			
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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 cfm = m ³ /min x 35.31 lbs = kg/0.4536
2. 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%	
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	
	*Above specification data is subject to rounding variation.

Heat Source Model			PQHY-P120ZLMU-B < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 575 V ±10% 60 Hz	
Cooling capacity (Nominal)	*1	BTU/h	120,000	
		kW	35.2	
	(575)	Power input	7.51	
		Current input	8.3	
	(Rated)	BTU/h	115,000	
		kW	33.7	
	(575)	Power input	7.38	7.77
		Current input	8.2	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)	*2	BTU/h	135,000	
		kW	39.6	
	(575)	Power input	7.09	
		Current input	7.9	
	(Rated)	BTU/h	129,000	
		kW	37.8	
	(575)	Power input	5.78	5.89
		Current input	6.4	6.5
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 power level (measured in anechoic room) *3		dB <A>	71.0	
Refrigerant piping diameter	Liquid pipe	in. (mm)	3/8 (9.52) Brazed	
	Gas pipe	in. (mm)	1/2 (12.7) Brazed, total length >= 40 m	
Minimum Circuit Ampacity		A	7/8 (22.2) Brazed	
Maximum Overcurrent Protection		A	13	
Circulating water	Water flow rate	G/h	20	
		G/min	1,522	
		m³/h	25.4	
		L/min	5.76	
		cfm	96	
	Pressure drop	psi	3.4	
		kPa	3.48	
	Operating volume range	G/h	24	
		G/min	793 ~ 1,902	
		m³/h	13.2 ~ 31.7	
Compressor	Type x Quantity		3.0 ~ 7.2	
	Starting method		Inverter scroll hermetic compressor x 1	
	Motor output	kW	Inverter	
	Case heater	kW	7.7	
	Lubricant		0.035	
External finish			MEL32	
External dimension H x W x D		in.	Galvanized steel sheets	
		mm	43-5/16 x 34-11/16 x 21-11/16	
Protection devices	High pressure protection		1,100 x 880 x 550	
	Inverter circuit		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Compressor		Over-heat protection, Over-current protection	
Refrigerant	Type x original charge		Over-heat protection	
	Control		R410A x 11 lbs + 1 oz. (5.0 kg)	
Net weight		lbs (kg)	LEV and HIC circuit	
Heat exchanger			400 (181)	
	Water volume in plate	G	plate type	
		l	1.22	
	Water pressure Max.	psi	4.6	
		MPa	290	
HIC circuit (HIC: Heat Inter-Changer)			2.0	
Drawing	External		Copper pipe, tube-in-tube structure	
	Wiring		KB94C8C6	
Standard attachment	Document		KE94L345	
	Accessory		Installation Manual	
Optional parts			Details refer to External Drw	
Remarks			joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2 Header: CMY-Y104, 108, 1010C-G	
			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back on. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.	

Notes:

- 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%
- 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%
- The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Unit converter

BTU/h	=kW x 3.412
cfm	=m ³ /min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

Heat Source Model			PQHY-P144ZLMU-B < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1	BTU/h	144,000			
		kW	42.2			
		Power input	8.78			
	(575)	Current input	9.7			
		(Rated)	BTU/h	138,000		
			kW	40.4		
			Power input	9.44		10.12
		(575)	Current input	10.5		11.2
		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)	*2	BTU/h	160,000			
		kW	46.9			
		Power input	8.11			
	(575)	Current input	9.0			
		(Rated)	BTU/h	152,000		
			kW	44.5		
			Power input	7.29		7.92
		(575)	Current input	8.1		8.8
		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~P96/1~36				
Sound power level (measured in anechoic room) *3		dB <A>	68.0			
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	15			
Maximum Overcurrent Protection		A	25			
Circulating water	Water flow rate	G/h	1,902			
		G/min	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	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	0.045			
	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)	499 (226)			
Heat exchanger			plate type			
	Water volume in plate	G	1.22			
		l	4.6			
	Water pressure Max.	psi	290			
		MPa	2.0			
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure			
Drawing	External		KB94C8C7			
	Wiring		KE94L345			
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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 cfm = m³/min x 35.31 lbs = kg/0.4536
2. 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%	
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	
	*Above specification data is subject to rounding variation.

Heat Source Model			PQHY-P168ZLMU-B < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	168,000		
		kW	49.2		
	(575)	Power input	kW	12.05	
		Current input	A	13.4	
	(Rated)	BTU/h	160,000		
		kW	46.9		
	(575)	Power input	kW	11.98	12.47
		Current input	A	13.3	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)	*2	BTU/h	188,000		
		kW	55.1		
	(575)	Power input	kW	9.86	
		Current input	A	11.0	
	(Rated)	BTU/h	178,000		
		kW	52.2		
	(575)	Power input	kW	8.86	9.66
		Current input	A	9.8	10.7
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~P96/1~42		
Sound power level (measured in anechoic room) *3		dB <A>	70.0		
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	21		
Maximum Overcurrent Protection		A	35		
Circulating water	Water flow rate	G/h	1,902		
		G/min	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	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	0.045		
	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)	499 (226)		
Heat exchanger			plate type		
	Water volume in plate	G	1.22		
		l	4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing	External		KB94C8C7		
	Wiring		KE94L345		
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back on. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.		

Notes:

- 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%
- 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%
- The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Unit converter

BTU/h	=kW x 3.412
cfm	=m ³ /min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

Heat Source Model			PQHY-P192ZLMU-B < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	192,000		
		kW	56.3		
	(575)	Power input	15.05		
		Current input	16.7		
	(Rated)	BTU/h	184,000		
		kW	53.9		
	(575)	Power input	15.17	15.00	
		Current input	16.9	16.7	
	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)	*2	BTU/h	215,000		
		kW	63.0		
	(575)	Power input	11.90		
		Current input	13.2		
	(Rated)	BTU/h	204,000		
		kW	59.8		
	(575)	Power input	10.78	11.53	
		Current input	12.0	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		50~130% of heatsource unit capacity		
	Model/Quantity		P04~P96/1~48		
Sound power level (measured in anechoic room) *3		dB <A>	72.0		
Refrigerant piping diameter	Liquid pipe		5/8 (15.88) Brazed		
	Gas pipe		1-1/8 (28.58) Brazed		
Minimum Circuit Ampacity		A	26		
Maximum Overcurrent Protection		A	45		
Circulating water	Water flow rate	G/h	1,902		
		G/min	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	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	12.4		
	Case heater	kW	0.045		
	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)	499 (226)		
Heat exchanger			plate type		
	Water volume in plate	G	1.22		
		l	4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		
Drawing	External		KB94C8C7		
	Wiring		KE94L345		
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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 cfm = m ³ /min x 35.31 lbs = kg/0.4536
2. 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%	
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	
	*Above specification data is subject to rounding variation.

Heat Source Model			PQHY-P144ZSLMU-B < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	144,000		
		kW	42.2		
	(575)	Power input	kW	7.11	
		Current input	A	7.9	
	(Rated)	BTU/h	138,000		
		kW	40.4		
	(575)	Power input	kW	7.13	8.17
		Current input	A	7.9	9.1
	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)	*2	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	6.50	7.29
		Current input	A	7.2	8.1
	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 power level (measured in anechoic room) *3			dB <A>		
			63.5		
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-B < For Ground source >		PQHY-P72ZLMU-B < For Ground source >		
Model			6		6		
Minimum Circuit Ampacity		A	15		15		
Maximum Overcurrent Protection		A					
Circulating water	Water flow rate	G/h	1,522 + 1,522				
		G/min	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		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	0.035		0.035		
	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		G	plate type		plate type	
			l	1.22		1.22	
	Water pressure Max.	psi	4.6		4.6		
		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		KB94C7PS				
	Wiring		KE94L345		KE94L345		
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.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.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%		cfm =m³/min x 35.31
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs =kg/0.4536
		*Above specification data is subject to rounding variation.

Heat Source Model				PQHY-P168ZSLMU-B < For Ground source >			
Indoor Model				Non-Ducted		Ducted	
Power source				3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)		*1	BTU/h	168,000			
			kW	49.2			
(575)		(Rated)	Power input	kW		9.33	
			Current input	A		10.4	
(575)		(Rated)	BTU/h	160,000			
			kW	46.9			
(575)		(Rated)	Power input	kW		8.87	
			Current input	A		9.8	
Temp. range of cooling			Indoor	W.B.			
			Inlet water	°F			
Heating capacity (Nominal)		*2	BTU/h	188,000			
			kW	55.1			
(575)		(Rated)	Power input	kW		9.34	
			Current input	A		10.4	
(575)		(Rated)	BTU/h	178,000			
			kW	52.2			
(575)		(Rated)	Power input	kW		8.05	
			Current input	A		8.9	
Temp. range of heating			Indoor	D.B.			
			Inlet water	°F			
Indoor unit connectable			Total capacity	50~130% of heatsource unit capacity			
			Model/Quantity	P04~P96/1~42			
Sound power level (measured in anechoic room) *3			dB <A>	66.5			
Refrigerant piping diameter			Liquid pipe	in. (mm)		5/8 (15.88) Brazed	
			Gas pipe	in. (mm)		1-1/8 (28.58) Brazed	

Model			PQHY-P96ZLMU-B < For Ground source >	PQHY-P72ZLMU-B < 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	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	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	0.035	0.035
	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	1.22
	I	4.6		
	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		KB94C7PS	
	Wiring		KE94L345	KE94L345
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			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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. Nominal cooling conditions (Test conditions are based on AHRI 1230)		BTU/h = kW x 3.412
Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		cfm = m ³ /min x 35.31
Brine concentration 0%		lbs = kg/0.4536
2. 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%		
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).		
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		
		*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series-575V

PQHY-P-Z(S)LMU-B

Heat Source Model				PQHY-P192ZSLMU-B < For Ground source >			
Indoor Model				Non-Ducted		Ducted	
Power source				3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)		*1	BTU/h	192,000			
			kW	56.3			
			Power input	kW			
			11.30				
(575)	(Rated)	Current input	A				
		12.6					
		BTU/h	184,000				
		kW					
(575)	(575)	Power input	kW				
		10.57					
		Current input	A				
		11.7					
Temp. range of cooling		Indoor	W.B.				
		Inlet water	°F				
Heating capacity (Nominal)		*2	BTU/h	215,000			
			kW	63.0			
			Power input	kW			
			11.02				
(575)	(Rated)	Current input	A				
		12.2					
		BTU/h	204,000				
		kW					
(575)	(575)	Power input	kW				
		9.53					
		Current input	A				
		10.6					
Temp. range of heating		Indoor	D.B.				
		Inlet water	°F				
Indoor unit connectable		Total capacity	50~130% of heatsource unit capacity				
		Model/Quantity	P04-P96/1~48				
Sound power level (measured in anechoic room) *3				dB <A>			
				68.0			
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-B < For Ground source >		PQHY-P96ZLMU-B < For Ground source >	
Model			9		9	
Minimum Circuit Ampacity		A	15		15	
Maximum Overcurrent Protection		A	15		15	
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min	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	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	0.035		0.035	
	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	1.22		1.22	
		l	4.6		4.6	
	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) Braze		3/8 (9.52) Braze	
	Gas pipe	in. (mm)	7/8 (22.2) Braze		7/8 (22.2) Braze	
Drawing	External		KB94C7PS			
	Wiring		KE94L345		KE94L345	
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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm =m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs =kg/0.4536
		*Above specification data is subject to rounding variation.

Heat Source Model			PQHY-P216ZSLMU-B < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 575 V ±10% 60 Hz	
Cooling capacity (Nominal)	*1	BTU/h	216,000	
		kW	63.3	
	(575)	Power input kW	14.03	
		Current input A	15.6	
	(Rated)	BTU/h	206,000	
		kW	60.4	
Temp. range of cooling	(575)	Power input kW	13.09	13.88
		Current input A	14.6	15.4
	Indoor		59~75°F (15~24°C)	
Inlet water		°F	23~113°F (-5~45°C)	
Heating capacity (Nominal)	*2	BTU/h	243,000	
		kW	71.2	
	(575)	Power input kW	12.88	
		Current input A	14.3	
	(Rated)	BTU/h	232,000	
		kW	68.0	
Temp. range of heating	(575)	Power input kW	11.11	10.04
		Current input A	12.3	11.2
	Indoor		59~81°F (15~27°C)	
Inlet water		°F	23~113°F (-5~45°C)	
Indoor unit connectable			50~130% of heat source unit capacity	
Sound power level (measured in anechoic room) *3			P04~P96/2~50	
Refrigerant			72.0	
piping diameter	Liquid pipe		5/8 (15.88) Brazed	
	Gas pipe		1-1/8 (28.58) Brazed	

Model			PQHY-P120ZLMU-B <For Ground source >	PQHY-P96ZLMU-B <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	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		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	0.035	0.035
	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	1.22
	I	4.6	4.6	
	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		KB94C7PS	
	Wiring		KE94L345	KE94L345
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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.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.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%	cfm =m ³ /min x 35.31
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series-575V

PQHY-P-Z(S)LMU-B

Heat Source Model				PQHY-P240ZSLMU-B < For Ground source >			
Indoor Model				Non-Ducted		Ducted	
Power source				3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)		*1	BTU/h	240,000			
			kW	70.3			
			kW	16.89			
			A	18.8			
(Rated)	(575)	Current input	BTU/h	230,000			
			kW	67.4			
			kW	15.73		16.79	
			A	17.5		18.7	
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)		*2	BTU/h	270,000			
			kW	79.1			
			kW	14.58			
			A	16.2			
(Rated)	(575)	Current input	BTU/h	258,000			
			kW	75.6			
			kW	12.83		11.67	
			A	14.3		13.0	
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 power level (measured in anechoic room) *3				dB <A>		74.0	
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-B < For Ground source >		PQHY-P120ZLMU-B < For Ground source >		
Model		A	13		13		
Minimum Circuit Ampacity		A	20		20		
Maximum Overcurrent Protection		A	20		20		
Circulating water	Water flow rate	G/h	1,522 + 1,522				
		G/min	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		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	0.035		0.035		
	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		G	plate type		plate type	
			l	1.22		1.22	
	Water pressure Max.	psi	4.6		4.6		
		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) Braze		1/2 (12.7) Braze		
	Gas pipe	in. (mm)	7/8 (22.2) Braze		7/8 (22.2) Braze		
Drawing	External		KB94C7PS				
	Wiring		KE94L345		KE94L345		
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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm =m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs =kg/0.4536
		*Above specification data is subject to rounding variation.

Heat Source Model			PQHY-P288ZSLMU-B < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	288,000		
		kW	84.4		
		Power input	20.42		
	(575)	Current input	22.7		
		(Rated)	BTU/h		
			276,000		
Temp. range of cooling	(575)	Power input	kW		
			80.9		
		Current input	A		
			20.11		
			22.4		
			25.2		
Heating capacity (Nominal)	*2	BTU/h	323,000		
		kW	94.7		
		Power input	kW		
	(575)		17.50		
		Current input	A		
			19.5		
Temp. range of heating	(575)	(Rated)	BTU/h		
			304,000		
		Power input	kW		
			89.1		
		Current input	A		
			15.48		
Indoor unit connectable	(575)		17.2		
			15.36		
			17.1		
	Temp. range of cooling	Indoor	W.B.		
			59~75°F (15~24°C)		
		Inlet water	°F		
Sound power level (measured in anechoic room) *3	(575)		23~113°F (-5~45°C)		
			50~130% of heat source unit capacity		
			P04~P96/2~50		
	Refrigerant	Total capacity	71.0		
		Model/Quantity	3/4 (19.05) Braze		
			1-3/8 (34.93) Braze		

Set Model			PQHY-P144ZLMU-B < For Ground source >		PQHY-P144ZLMU-B < For Ground source >		
Model			15		15		
Minimum Circuit Ampacity			A		15		
Maximum Overcurrent Protection			A		25		
Circulating water	Water flow rate	G/h			1,902 + 1,902		
		G/min			31.7 + 31.7		
		m ³ /h			7.20 + 7.20		
		L/min			120 + 120		
		cfm			4.2 + 4.2		
		psi	6.38		6.38		
	Pressure drop	kPa	44		44		
		Operating volume range	G/h	1,189 + 1,189 ~ 3,054 + 3,054			
			G/min	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	0.045		0.045		
	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)	499 (226)		499 (226)		
Heat exchanger			plate type		plate type		
	Water volume in plate	G	1.22		1.22		
		l	4.6		4.6		
	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) Braze		1/2 (12.7) Braze		
	Gas pipe	in. (mm)	1-1/8 (28.58) Braze		1-1/8 (28.58) Braze		
Drawing	External		KB94C7PT				
	Wiring		KE94L345		KE94L345		
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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm = m ³ /min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs = kg/0.4536
		*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series-575V

PQHY-P-Z(S)LMU-B

Heat Source Model				PQHY-P312ZSLMU-B < For Ground source >			
Indoor Model				Non-Ducted		Ducted	
Power source				3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)		*1	BTU/h	312,000			
			kW	91.4			
			Power input	kW 23.41			
			(575) Current input	A 26.1			
(Rated)			BTU/h	298,000			
			kW	87.3			
			Power input	kW 22.45 24.98			
			(575) Current input	A 25.0 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)		*2	BTU/h	350,000			
			kW	102.6			
			Power input	kW 19.11			
			(575) Current input	A 21.3			
(Rated)			BTU/h	334,000			
			kW	97.9			
			Power input	kW 17.09 17.12			
			(575) Current input	A 19.0 19.0			
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 power level (measured in anechoic room) *3			dB <A>	72.5			
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-B < For Ground source >		PQHY-P144ZLMU-B < For Ground source >	
Model			21		15	
Minimum Circuit Ampacity		A	35		25	
Maximum Overcurrent Protection		A				
Circulating water	Water flow rate	G/h	1,902 ± 1,902			
		G/min	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	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	0.045		0.045	
	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)	499 (226)		499 (226)	
Heat exchanger			plate type		plate type	
	Water volume in plate	G	1.22		1.22	
		l	4.6		4.6	
	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		KB94C7PT			
	Wiring		KE94L345		KE94L345	
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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm =m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs =kg/0.4536
		*Above specification data is subject to rounding variation.

Heat Source Model				PQHY-P336ZSLMU-B < For Ground source >				
Indoor Model				Non-Ducted		Ducted		
Power source				3-phase 3-wire 575 V ±10% 60 Hz				
Cooling capacity (Nominal)	*1	BTU/h		336,000				
		kW		98.5				
		Power input		kW		26.84		
	(575)	Current input		A		29.9		
		(Rated)	BTU/h		320,000			
			kW		93.8			
	(575)		Power input		kW		25.14	
		Current input		A		28.0		
						30.2		
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)	*2	BTU/h		378,000				
		kW		110.8				
		Power input		kW		20.77		
	(575)	Current input		A		23.1		
		(Rated)	BTU/h		360,000			
			kW		105.5			
	(575)		Power input		kW		18.49	
		Current input		A		20.6		
						21.3		
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 power level (measured in anechoic room) *3				dB <A>		73.0		
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-B < For Ground source >		PQHY-P168ZLMU-B < For Ground source >	
Model			21		21	
Minimum Circuit Ampacity		A	35		35	
Maximum Overcurrent Protection		A	35		35	
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min	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		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	0.045		0.045	
	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)	499 (226)		499 (226)	
Heat exchanger	Water volume in plate		plate type		plate type	
			1.22		1.22	
	l		4.6		4.6	
	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		KB94C7PT			
	Wiring		KE94L345		KE94L345	
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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm = m ³ /min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs = kg/0.4536
		*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WY-Series-575V

PQHY-P-Z(S)LMU-B

Heat Source Model				PQHY-P360ZSLMU-B < For Ground source >			
Indoor Model				Non-Ducted		Ducted	
Power source				3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)		*1	BTU/h	360,000			
			kW	105.5			
			Power input	kW			
			Current input	A			
(Rated)	(575)		BTU/h	344,000			
			kW	100.8			
			Power input	kW		27.28	
			Current input	A		30.4	
Temp. range of cooling			Indoor	W.B.			
			Inlet water	°F			
Heating capacity (Nominal)		*2	BTU/h	405,000			
			kW	118.7			
			Power input	kW			
			Current input	A			
(Rated)	(575)		BTU/h	386,000			
			kW	113.1			
			Power input	kW		20.56	
			Current input	A		22.9	
Temp. range of heating			Indoor	D.B.			
			Inlet water	°F			
Indoor unit connectable			Total capacity	50~130% of heatsource unit capacity			
			Model/Quantity	P04~P96/2~50			
Sound power level (measured in anechoic room) *3				dB <A>		74.5	
Refrigerant piping diameter			Liquid pipe	in. (mm)			
			Gas pipe	in. (mm)			

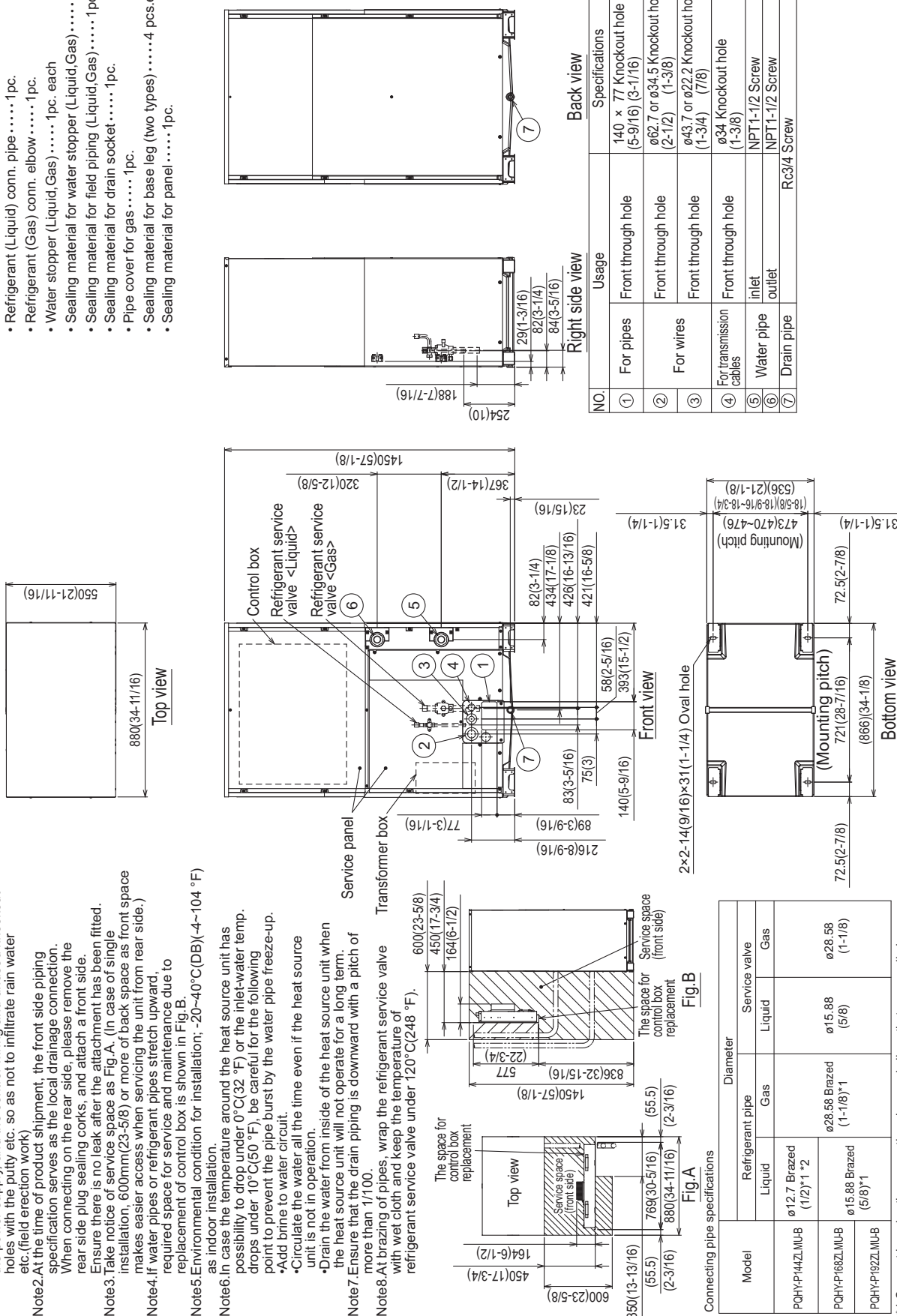
Set Model			PQHY-P192ZLMU-B < For Ground source >	PQHY-P168ZLMU-B < For Ground source >
Model				
Minimum Circuit Ampacity		A	26	21
Maximum Overcurrent Protection		A	45	35
Circulating water	Water flow rate	G/h	1,902 ± 1,902	
		G/min	31.7 ± 31.7	
		m³/h	7.20 ± 7.20	
		L/min	120 ± 120	
		cfm	4.2 ± 4.2	
	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		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	12.4	11.0
	Case heater	kW	0.045	0.045
	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)	499 (226)	499 (226)
Heat exchanger			plate type	plate type
	Water volume in plate	G	1.22	1.22
		l	4.6	4.6
	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		KB94C7PT	
	Wiring		KE94L345	KE94L345
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 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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm =m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs =kg/0.4536
		*Above specification data is subject to rounding variation.

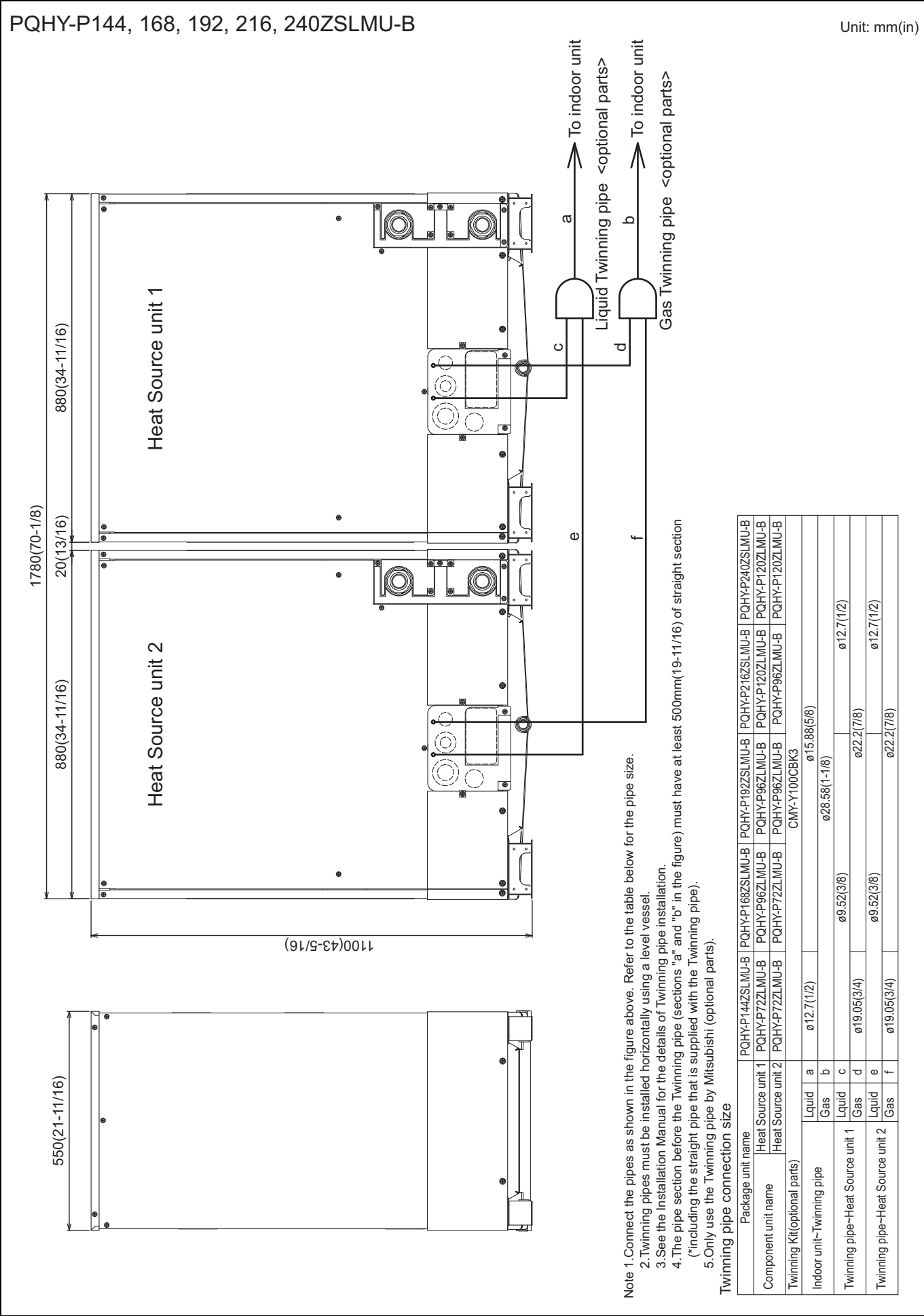
Unit: mm(in)

PQHY-P-Z(S)LMU-B

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



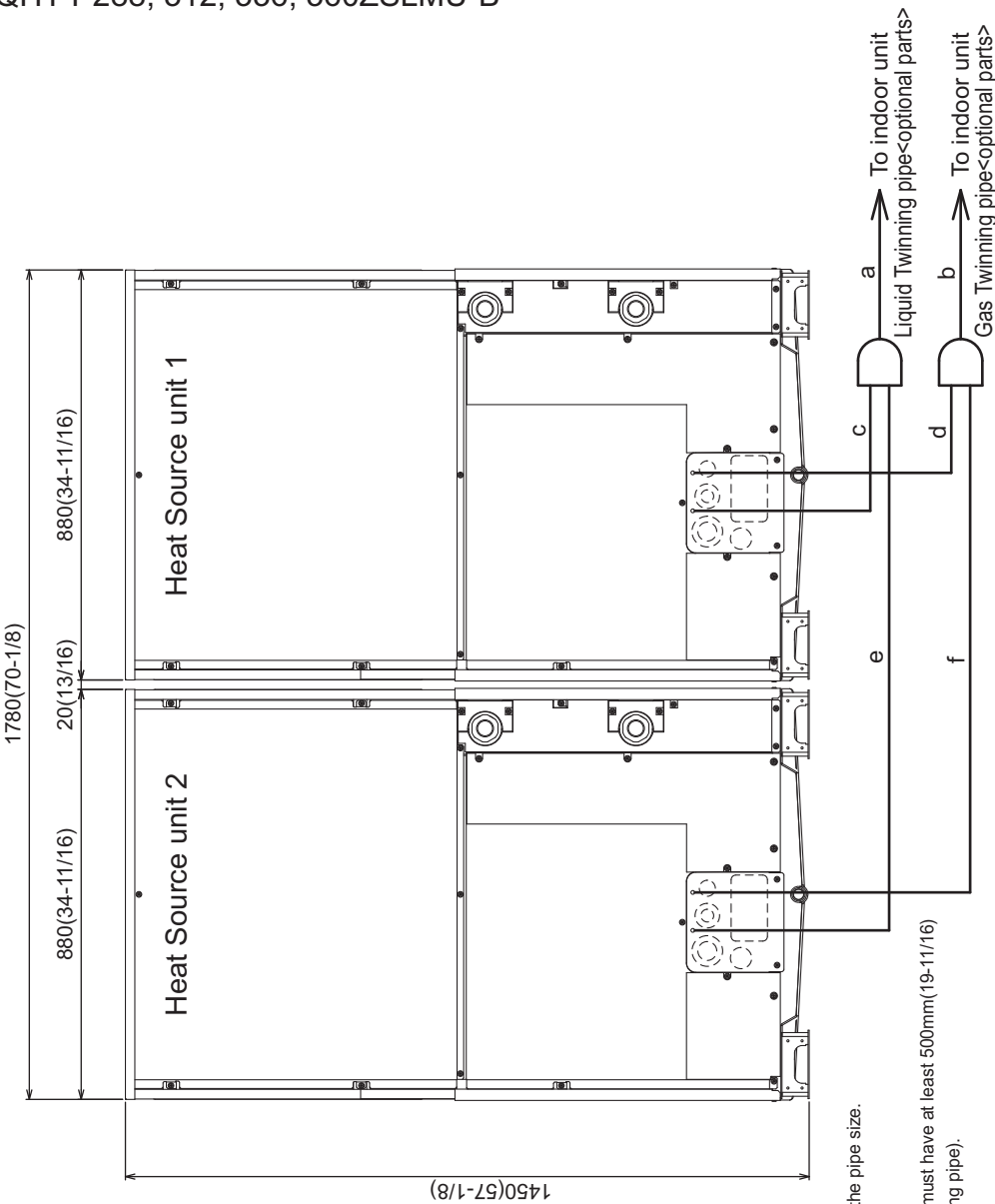
1. Connect by using the connecting pipes and elbow that are supplied.
2. Use the pipe joint(field supply) and connect to the refrigerant service valve piping.



PQHY-P-Z(S)LMU-B

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

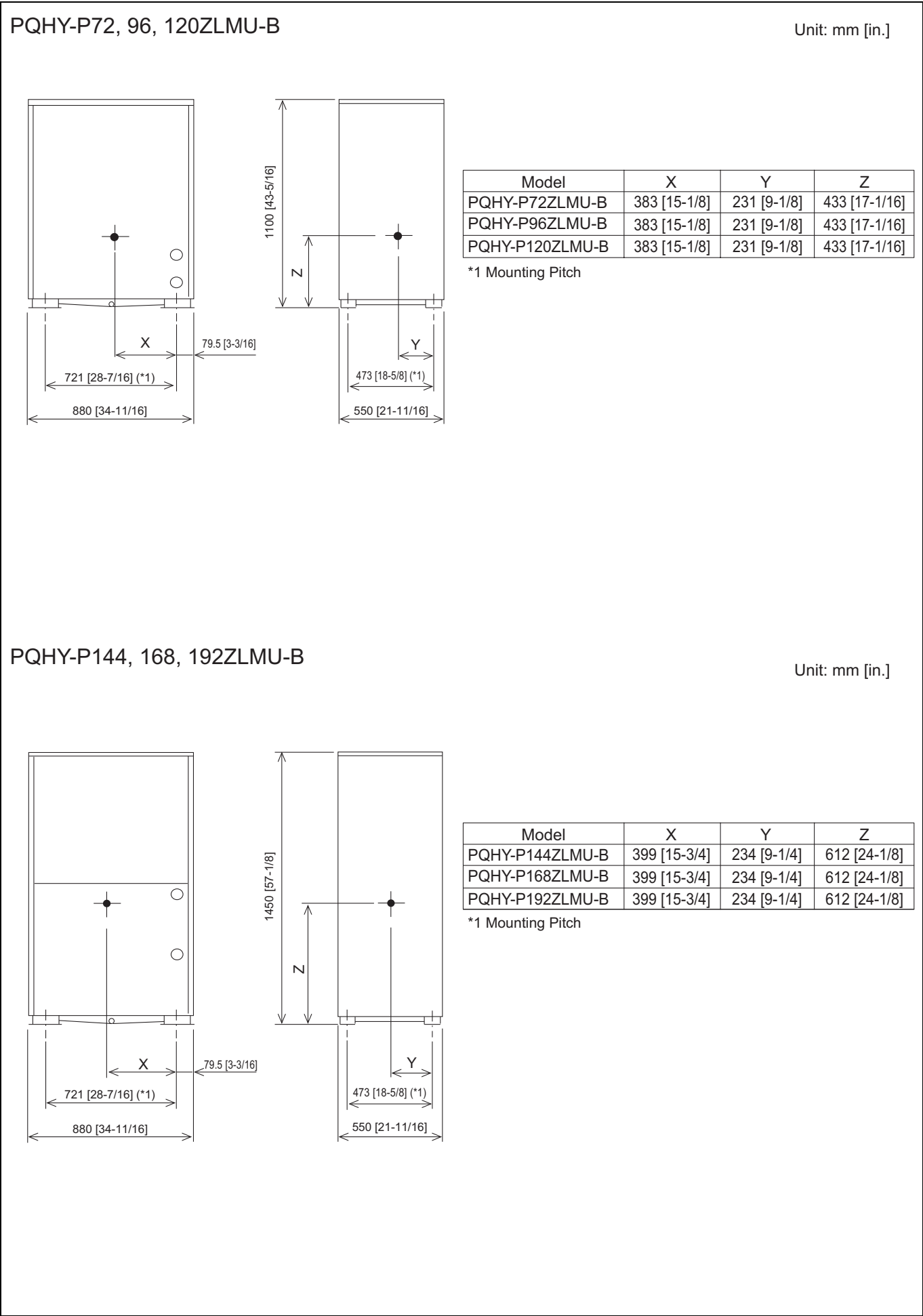
Unit: mm(in)



- Note 1. Connect the pipes as shown in the figure above. Refer to the table below for the pipe size.
2. Twinning pipes must be installed horizontally using a level vessel.
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).

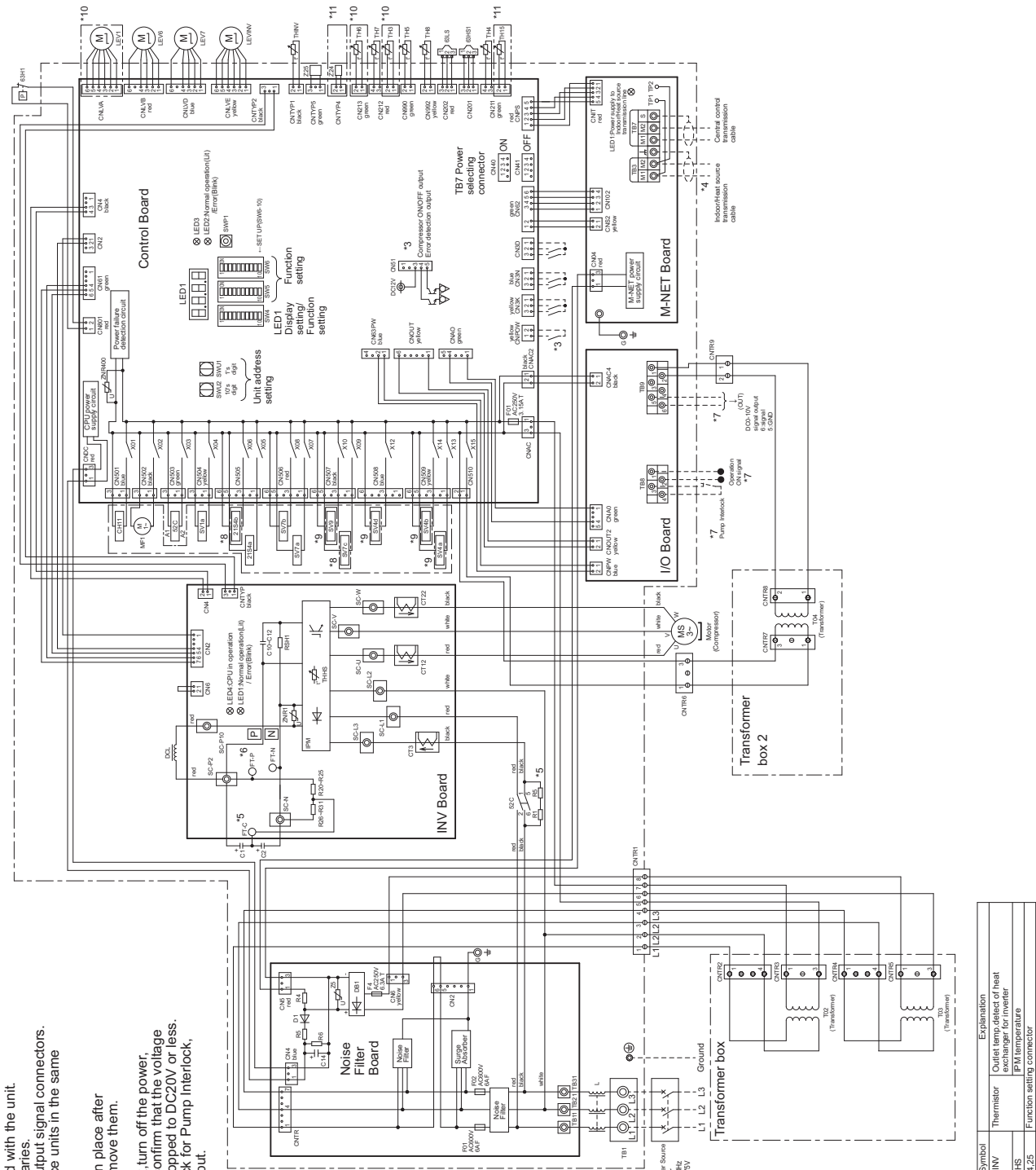
Twinning pipe connection size

Package unit name		PQHY-P288ZSLMU-B	PQHY-P312ZSLMU-B	PQHY-P336ZSLMU-B	PQHY-P360ZSLMU-B
Component unit name	Heat Source unit 1	PQHY-P144ZLMU-B	PQHY-P168ZLMU-B	PQHY-P168ZLMU-B	PQHY-P192ZLMU-B
	Heat Source unit 2	PQHY-P144ZLMU-B	PQHY-P144ZLMU-B	PQHY-P168ZLMU-B	PQHY-P168ZLMU-B
Twinning Kit(optional parts)		CMY-Y200CBK2			
Indoor unit-Twinning pipe	Liquid	a	ø19.05(3/4)		
	Gas	b	ø41.28(1-5/8)		
Twinning pipe-Heat Source unit 1	Liquid	c	ø15.88(5/8)		
	Gas	d	ø28.58(1-1/8)		
Twinning pipe-Heat Source unit 2	Liquid	e	ø15.88(5/8)		
	Gas	f	ø28.58(1-1/8)		



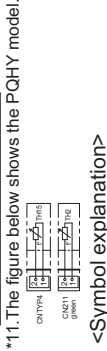
PQHY-P-Z(S)LMU-B

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



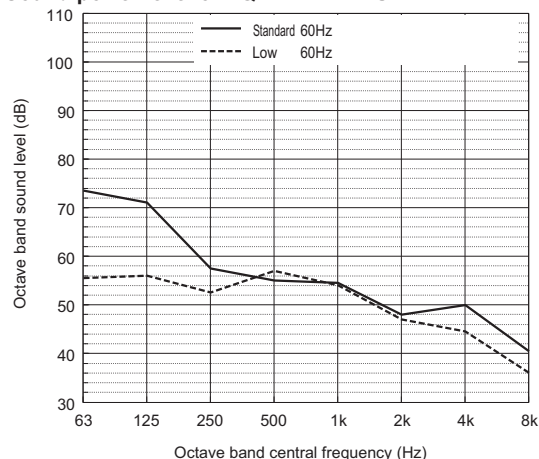
- *1. Single-dotted lines indicate wiring not supplied with the unit.
- *2. Dot-dash lines indicate the control box boundaries.
- *3. Refer to the Data book for connecting input/output signal connectors.
- *4. Daisy-chain terminals (TB3) on the heat source units in the same refrigerant system together.
- *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.
- *9. Difference of appliance.
- *10. Difference of appliance.
- *11. The figure below shows the PQHY model.

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
21S4a	4-way valve
21S4b	Heat exchanger capacity control
63H1	Pressure switch
63H51	High pressure
63H52	High pressure
63H53	Pressure
63H54	Pressure
63H55	Pressure
63H56	Pressure
63H57	Pressure
63H58	Pressure
63H59	Pressure
63H60	Pressure
63H61	Pressure
63H62	Pressure
63H63	Pressure
63H64	Pressure
63H65	Pressure
63H66	Pressure
63H67	Pressure
63H68	Pressure
63H69	Pressure
63H70	Pressure
63H71	Pressure
63H72	Pressure
63H73	Pressure
63H74	Pressure
63H75	Pressure
63H76	Pressure
63H77	Pressure
63H78	Pressure
63H79	Pressure
63H80	Pressure
63H81	Pressure
63H82	Pressure
63H83	Pressure
63H84	Pressure
63H85	Pressure
63H86	Pressure
63H87	Pressure
63H88	Pressure
63H89	Pressure
63H90	Pressure
63H91	Pressure
63H92	Pressure
63H93	Pressure
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63H97	Pressure
63H98	Pressure
63H99	Pressure
63H100	Pressure

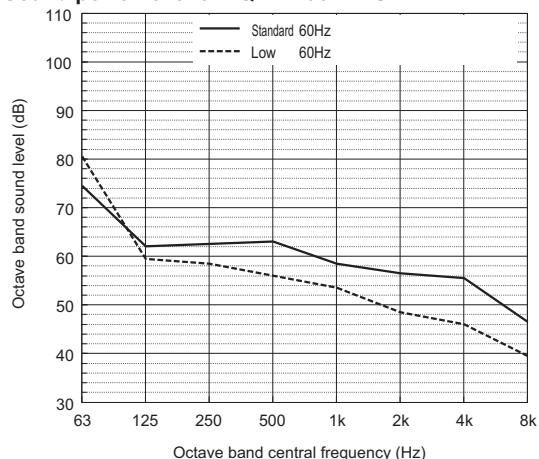
Sound power level of PQHY-P72ZLMU-B



	63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	73.5	71.0	57.5	55.0	54.5	48.0	50.0	40.5
Low noise mode	60Hz	55.5	56.0	52.5	57.0	54.0	47.0	44.5	36.0

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.

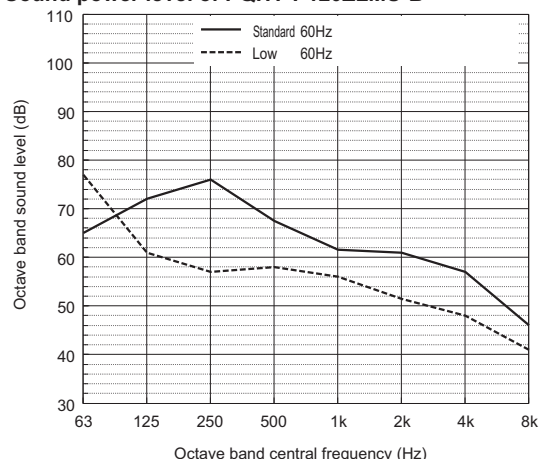
Sound power level of PQHY-P96ZLMU-B



	63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	74.5	62.0	62.5	63.0	58.5	56.5	55.5	46.5
Low noise mode	60Hz	80.5	59.5	58.5	56.0	53.5	48.5	46.0	39.5

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.

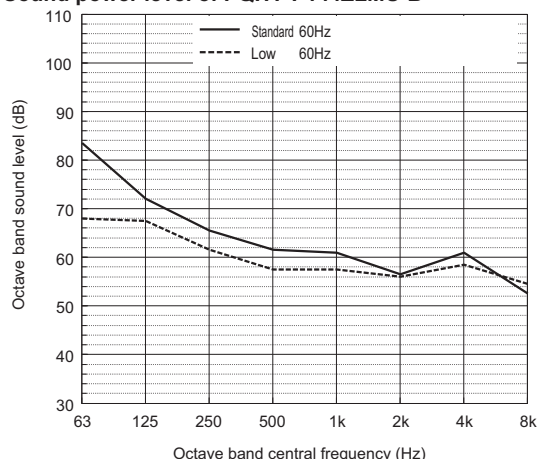
Sound power level of PQHY-P120ZLMU-B



	63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	65.0	72.0	76.0	67.5	61.5	61.0	57.0	46.0
Low noise mode	60Hz	77.0	61.0	57.0	58.0	56.0	51.5	48.0	41.0

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.

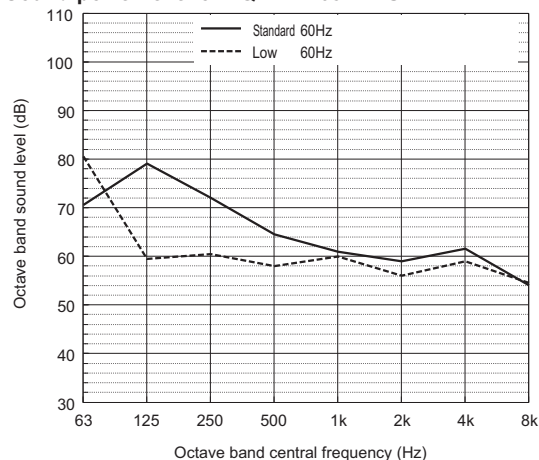
Sound power level of PQHY-P144ZLMU-B



	63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	83.5	72.0	65.5	61.5	61.0	56.5	61.0	52.5
Low noise mode	60Hz	68.0	67.5	61.5	57.5	57.5	56.0	58.5	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.

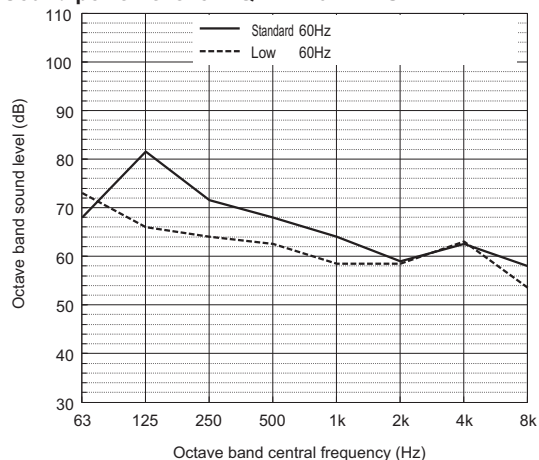
Sound power level of PQHY-P168ZLMU-B



	63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	70.5	79.0	72.0	64.5	61.0	59.0	61.5	54.0
Low noise mode	60Hz	80.5	59.5	60.5	58.0	60.0	56.0	59.0	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 power level of PQHY-P192ZLMU-B



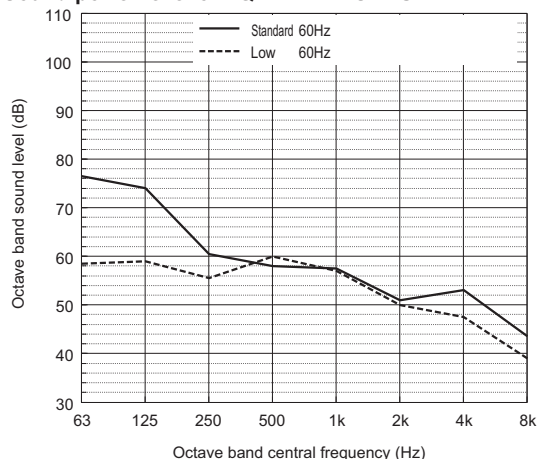
	63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	68.0	81.5	71.5	68.0	64.0	59.0	62.5	58.0
Low noise mode	60Hz	73.0	66.0	64.0	62.5	58.5	58.5	63.0	53.5

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.

- 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.
- The sound values are sound power level (PWL) based on ISO 3744:2010 ($r = 3.5$ m).

Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

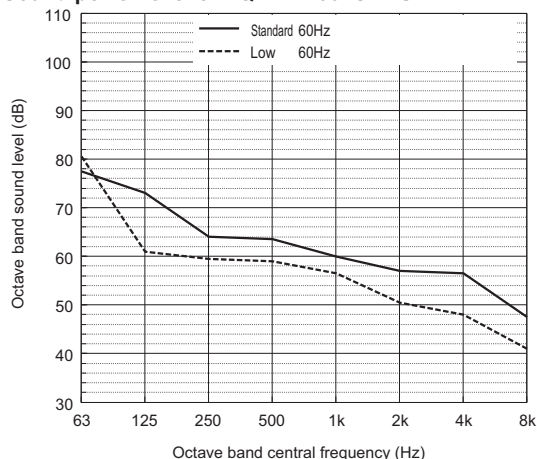
Sound power level of PQHY-P144ZSLMU-B



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	76.5	74.0	60.5	58.0	57.5	51.0	53.0	43.5	63.5
Low noise mode	60Hz	58.5	59.0	55.5	60.0	57.0	50.0	47.5	39.0	61.0

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.

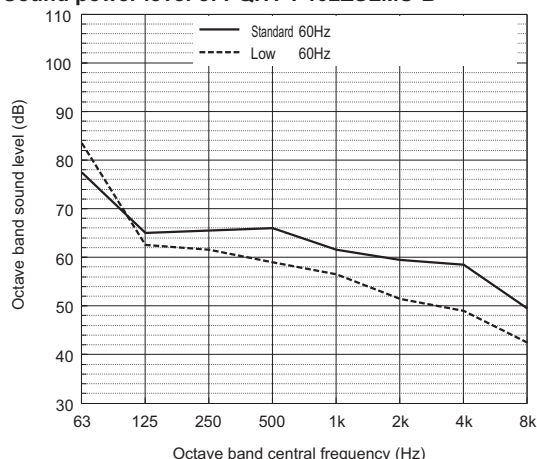
Sound power level of PQHY-P168ZSLMU-B



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	77.5	73.0	64.0	63.5	60.0	57.0	56.5	47.5	66.5
Low noise mode	60Hz	80.5	61.0	59.5	59.0	56.5	50.5	48.0	41.0	62.0

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.

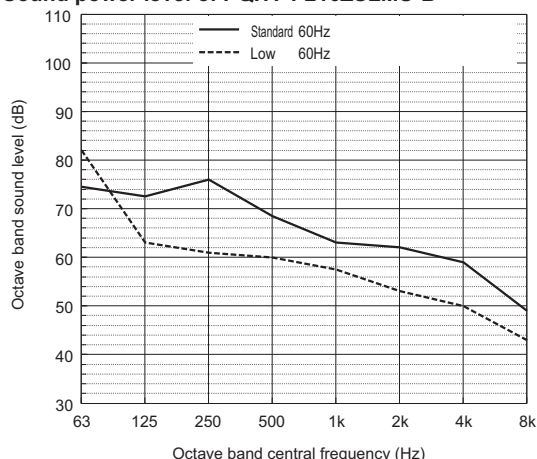
Sound power level of PQHY-P192ZSLMU-B



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	77.5	65.0	65.5	66.0	61.5	59.5	58.5	49.5	68.0
Low noise mode	60Hz	83.5	62.5	61.5	59.0	56.5	51.5	49.0	42.5	63.0

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.

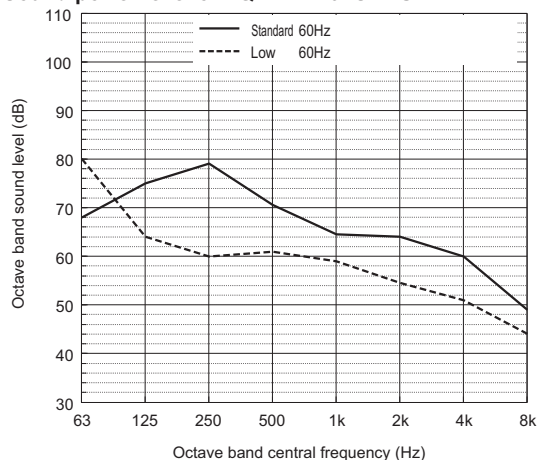
Sound power level of PQHY-P216ZSLMU-B



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	74.5	72.5	76.0	68.5	63.0	62.0	59.0	49.0	72.0
Low noise mode	60Hz	82.0	63.0	61.0	60.0	57.5	53.0	50.0	43.0	63.5

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.

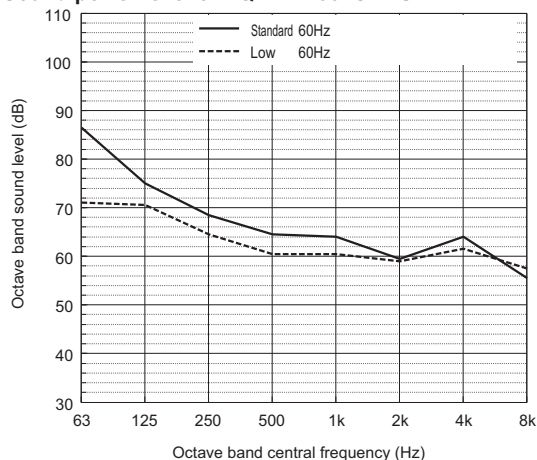
Sound power level of PQHY-P240ZSLMU-B



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	68.0	75.0	79.0	70.5	64.5	64.0	60.0	49.0	74.0
Low noise mode	60Hz	80.0	64.0	60.0	61.0	59.0	54.5	51.0	44.0	64.0

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 power level of PQHY-P288ZSLMU-B



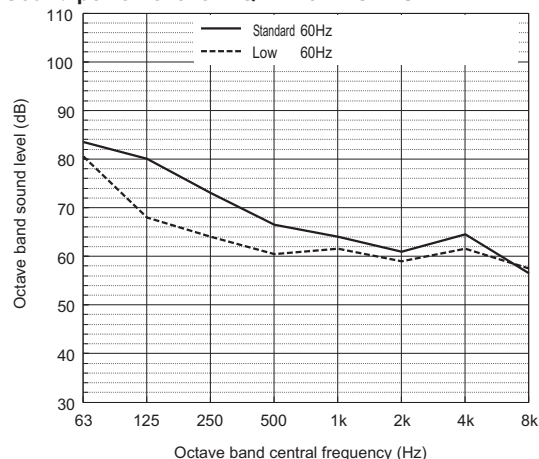
		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	86.5	75.0	68.5	64.5	64.0	59.5	64.0	55.5	71.0
Low noise mode	60Hz	71.0	70.5	64.5	60.5	60.5	59.0	61.5	57.5	67.5

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.
- The sound values are sound power level (PWL) based on ISO 3744:2010 (r = 3.5 m).

Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

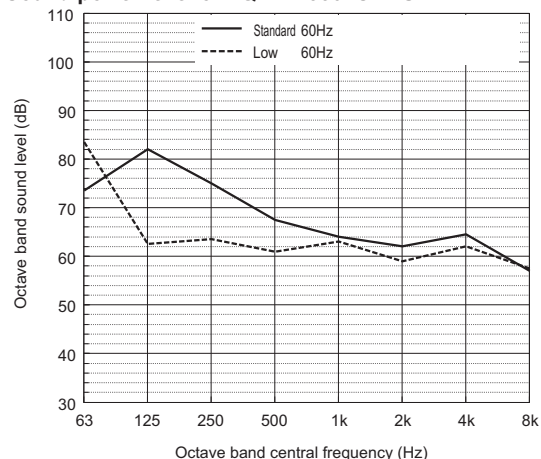
Sound power level of PQHY-P312ZSLMU-B



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	83.5	80.0	73.0	66.5	64.0	61.0	64.5	56.5	72.5
Low noise mode	60Hz	80.5	68.0	64.0	60.5	61.5	59.0	61.5	57.5	68.0

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.

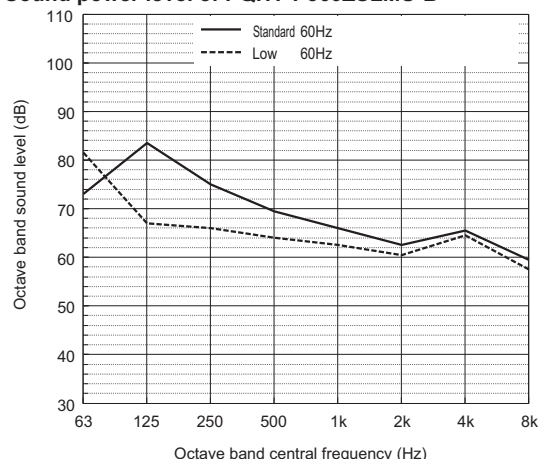
Sound power level of PQHY-P336ZSLMU-B



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	73.5	82.0	75.0	67.5	64.0	62.0	64.5	57.0	73.0
Low noise mode	60Hz	83.5	62.5	63.5	61.0	63.0	59.0	62.0	57.5	68.5

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 power level of PQHY-P360ZSLMU-B

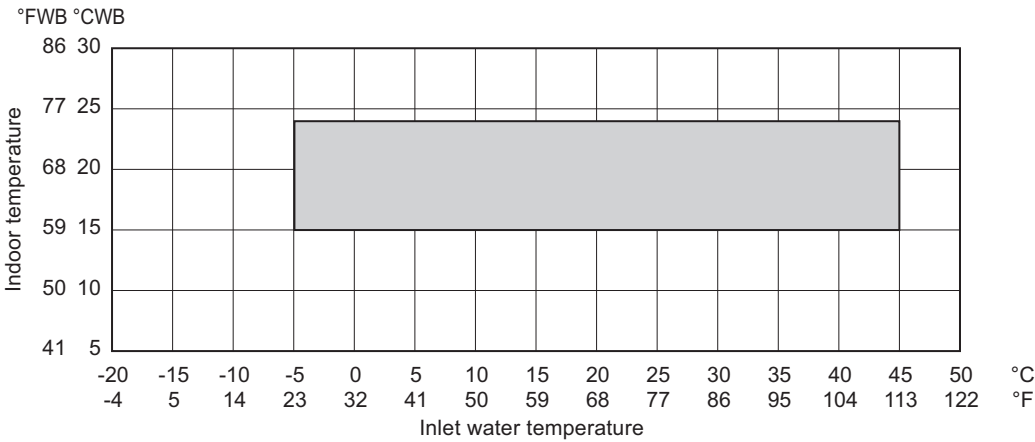


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	73.0	83.5	75.0	69.5	66.0	62.5	65.5	59.5	74.5
Low noise mode	60Hz	81.5	67.0	66.0	64.0	62.5	60.5	64.5	57.5	70.0

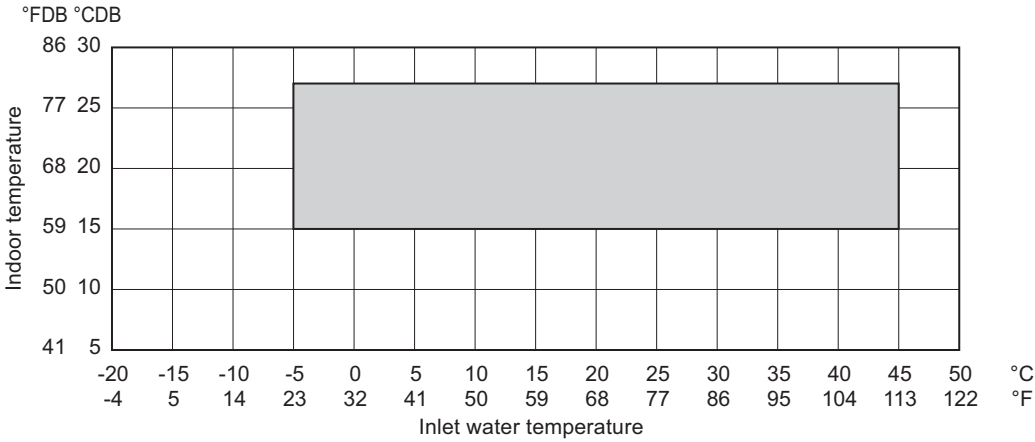
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

- 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.
 - The sound values are sound power level (PWL) based on ISO 3744:2010 ($r = 3.5$ m).
- Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Cooling



Heating

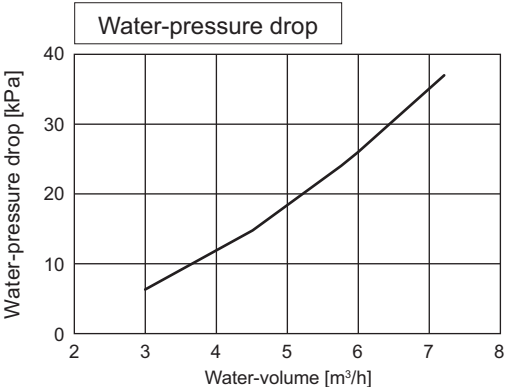
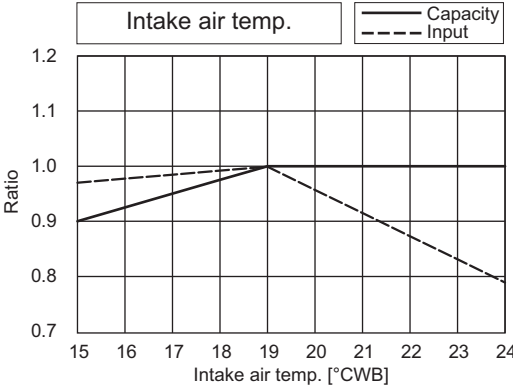
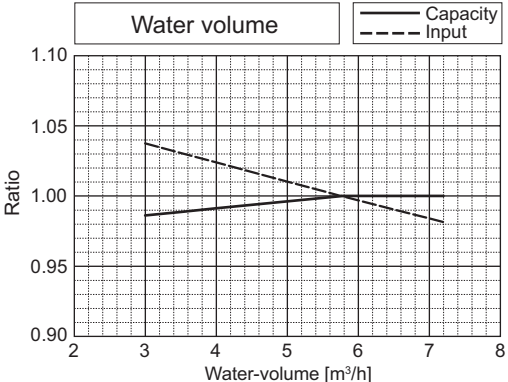
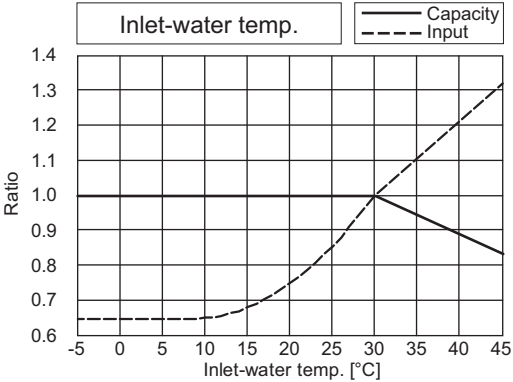


* The upper limit of the outlet water temperature is approximately 70°C (158°F) when the circulating-water flow rate is within the normal range.
If the circulating-water flow rate goes outside the normal range, the outlet water temperature may exceed the above limit.

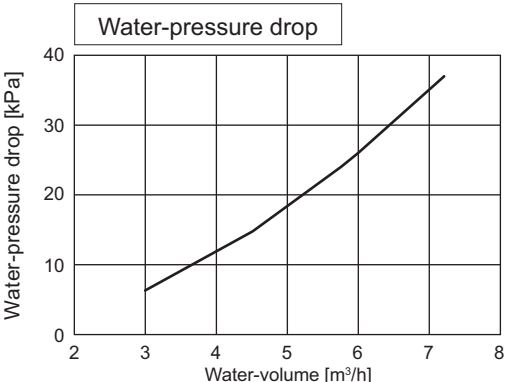
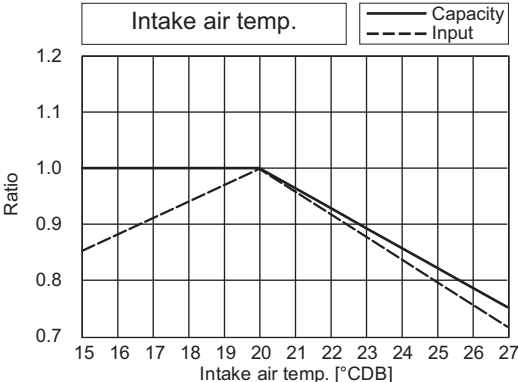
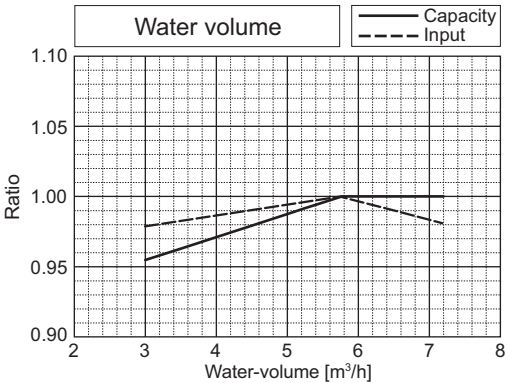
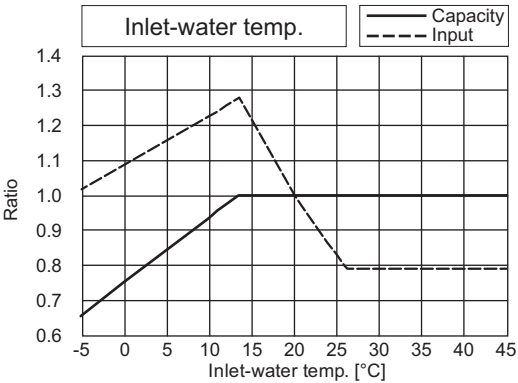
7-1. Correction by temperature

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-		P72ZLMU
Nominal Cooling Capacity	kW	21.1
	BTU/h	72,000
Input	kW	3.61

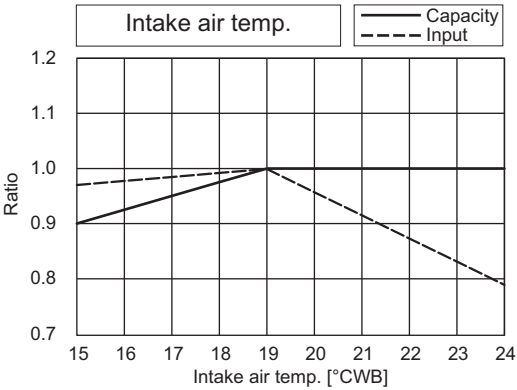
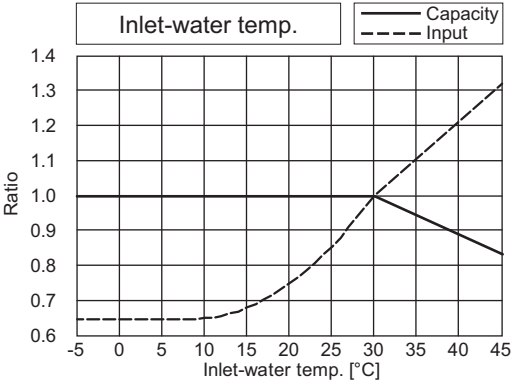


PQHY-		P72ZLMU
Nominal Heating Capacity	kW	23.4
	BTU/h	80,000
Input	kW	4.04

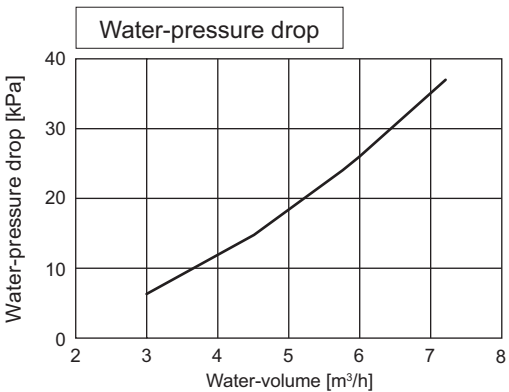
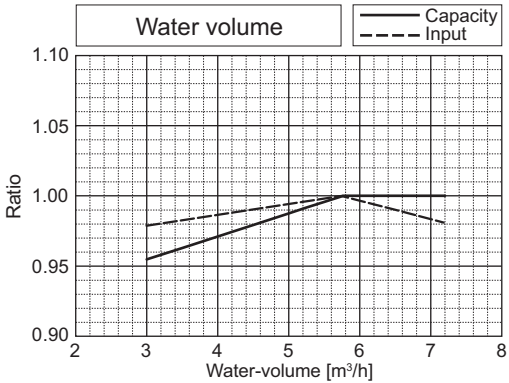
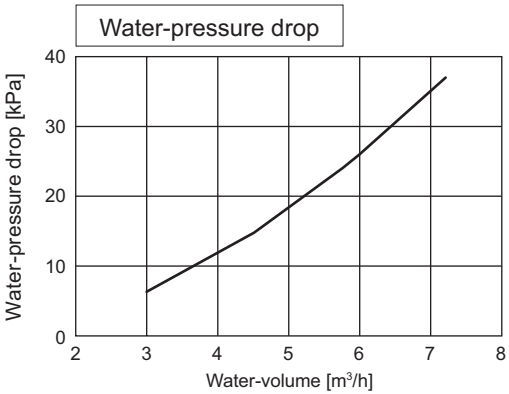
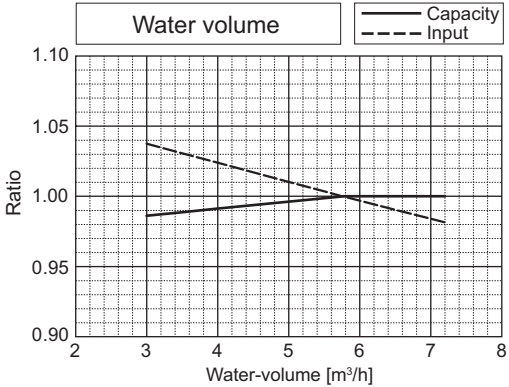
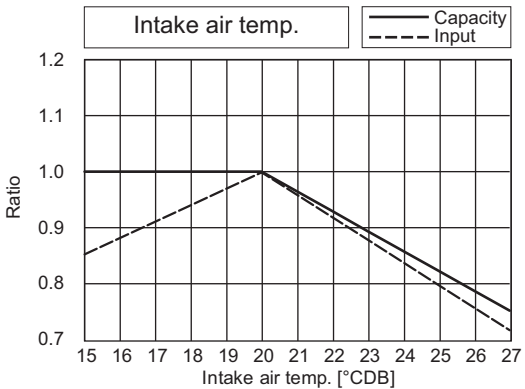
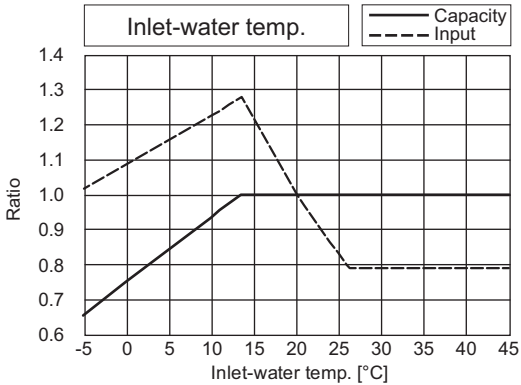


PQHY-P-Z(S)LMU-B

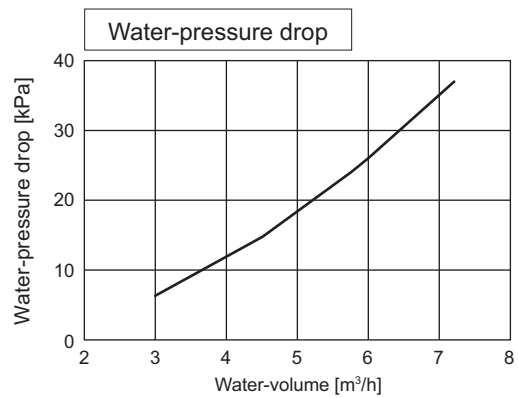
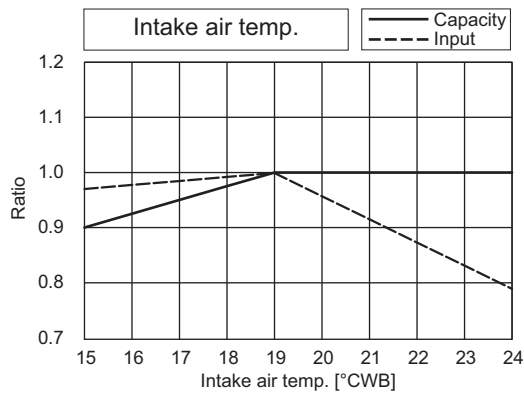
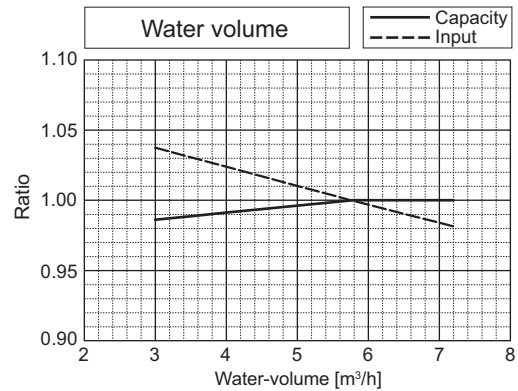
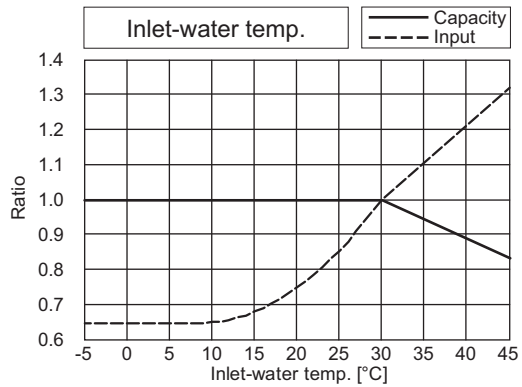
PQHY-		P96ZLMU
Nominal Cooling Capacity	kW	28.1
	BTU/h	96,000
Input	kW	5.21



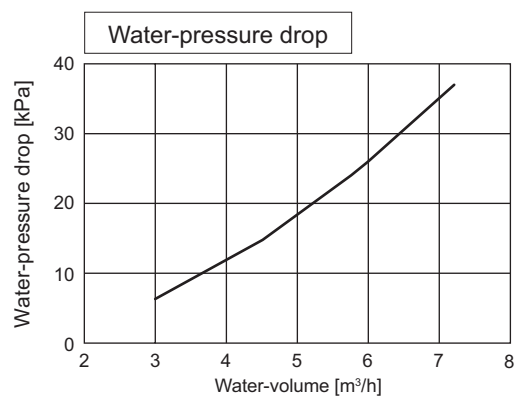
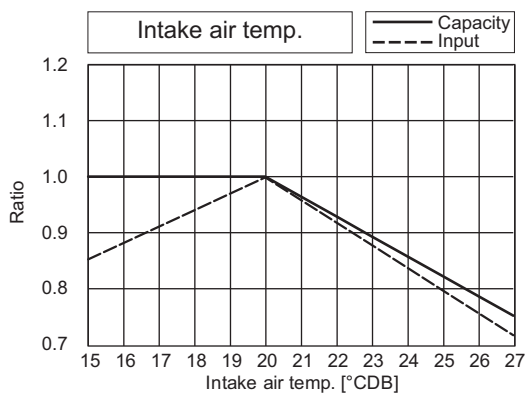
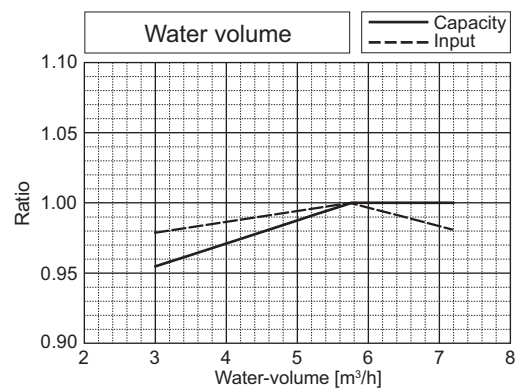
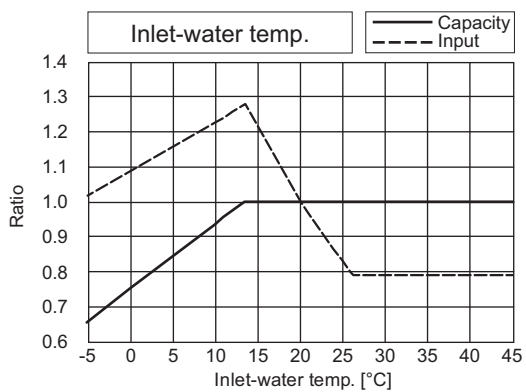
PQHY-		P96ZLMU
Nominal Heating Capacity	kW	31.7
	BTU/h	108,000
Input	kW	5.64



PQHY-		P120ZLMU
Nominal Cooling Capacity	kW	35.2
	BTU/h	120,000
Input	kW	7.51

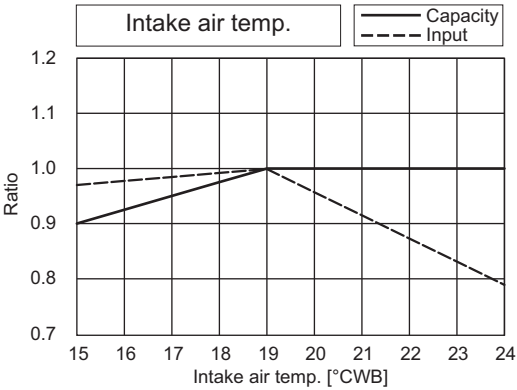
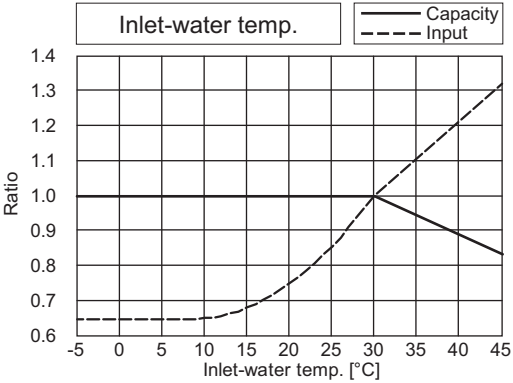


PQHY-		P120ZLMU
Nominal Heating Capacity	kW	39.6
	BTU/h	135,000
Input	kW	7.09

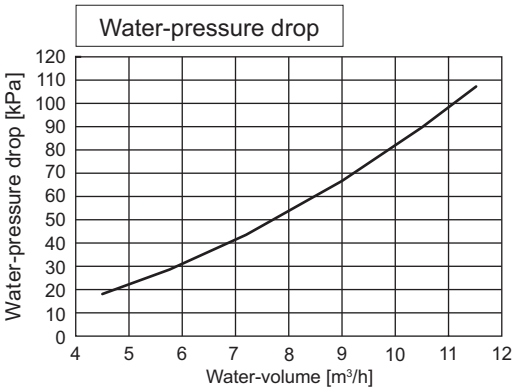
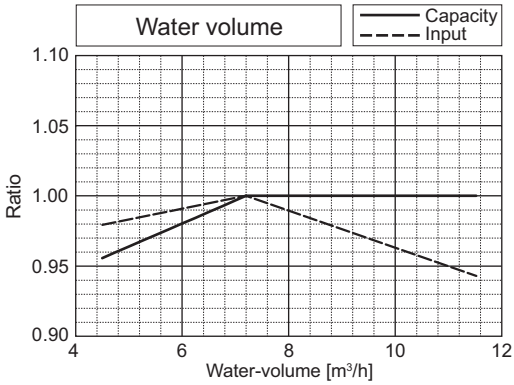
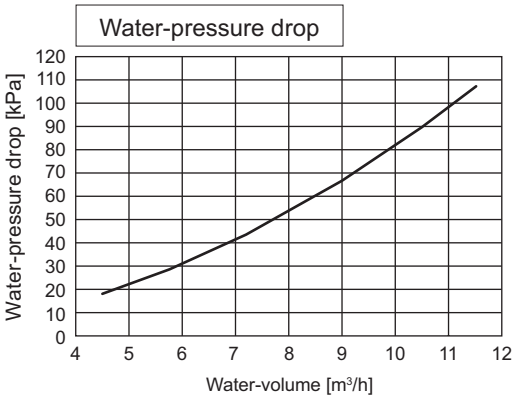
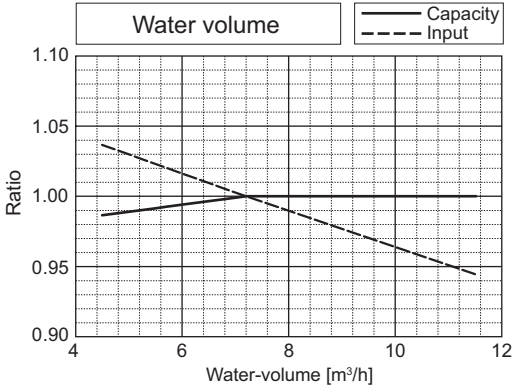
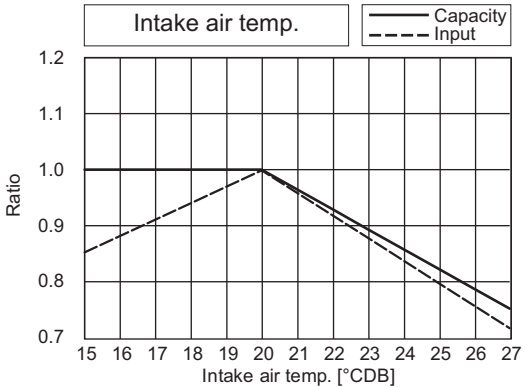
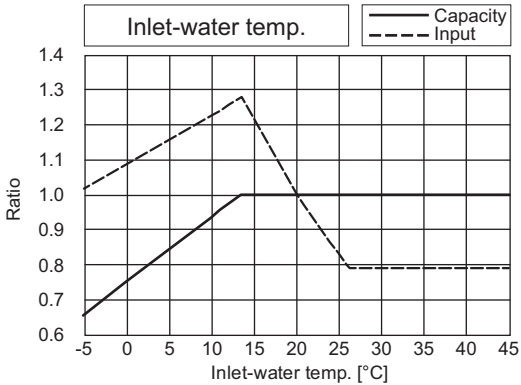


PQHY-P-Z(S)LMU-B

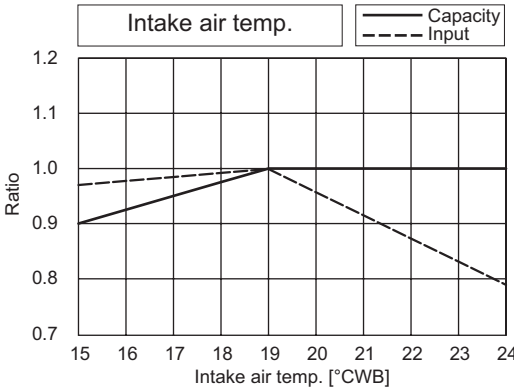
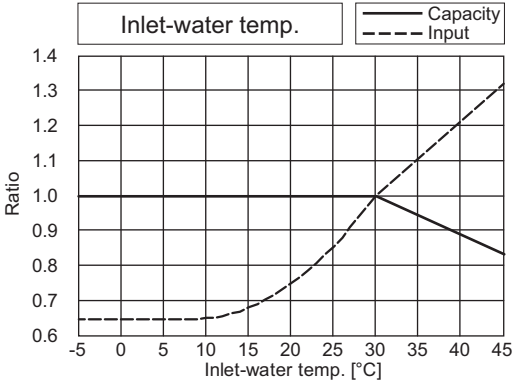
PQHY-		P144ZLMU
Nominal Cooling Capacity	kW	42.2
	BTU/h	144,000
Input	kW	8.78



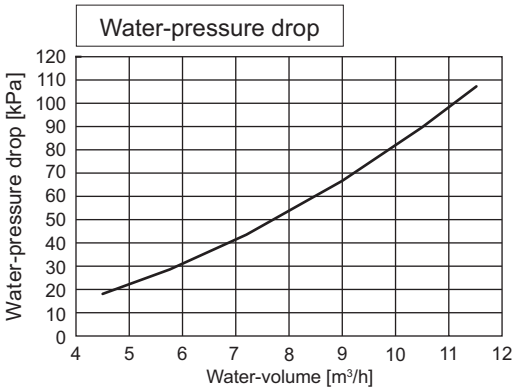
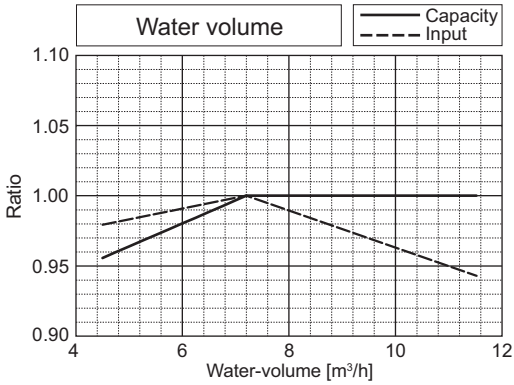
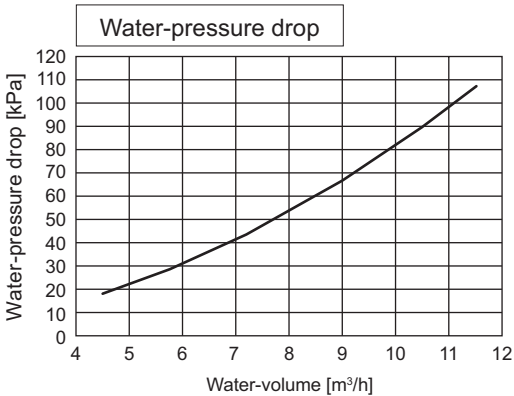
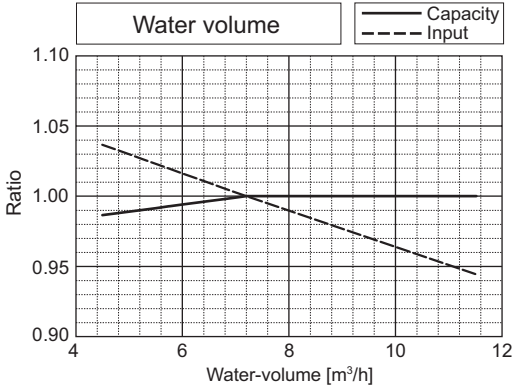
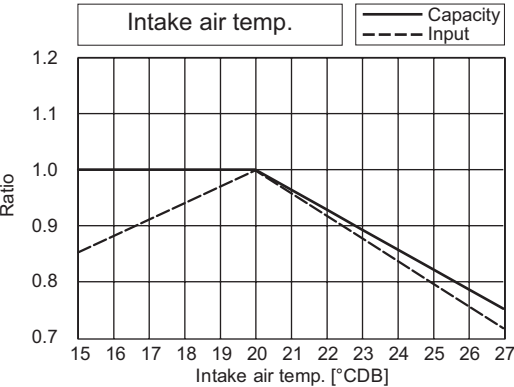
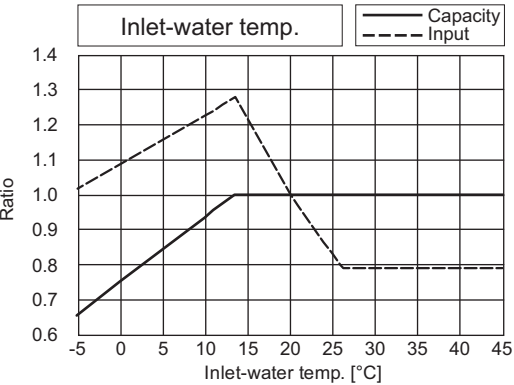
PQHY-		P144ZLMU
Nominal Heating Capacity	kW	46.9
	BTU/h	160,000
Input	kW	8.11



PQHY-		P168ZLMU
Nominal Cooling Capacity	kW	49.2
	BTU/h	168,000
Input	kW	12.05

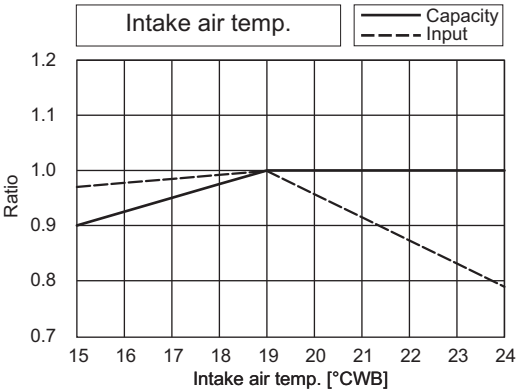
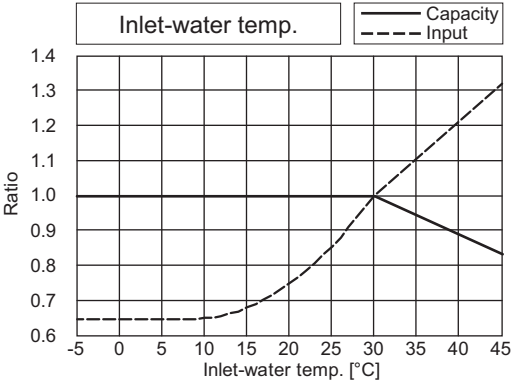


PQHY-		P168ZLMU
Nominal Heating Capacity	kW	55.1
	BTU/h	188,000
Input	kW	9.86

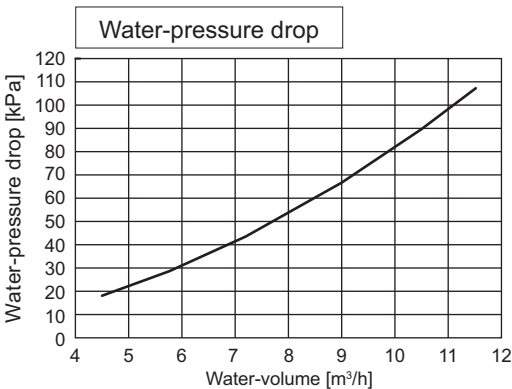
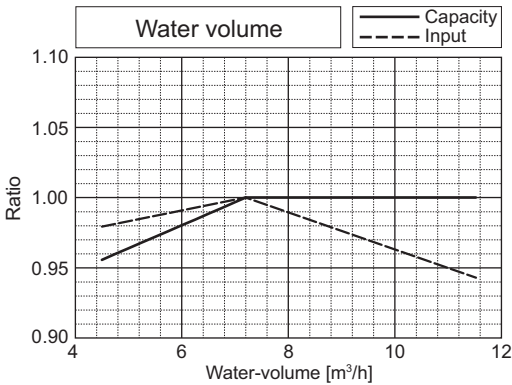
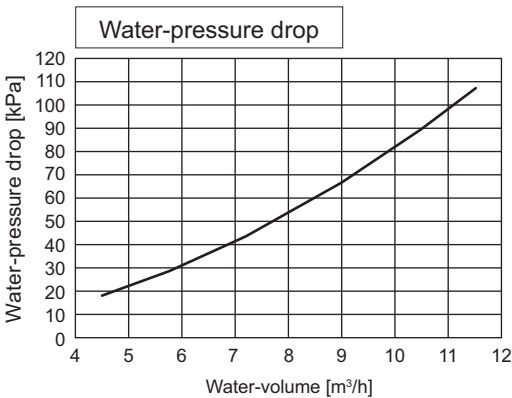
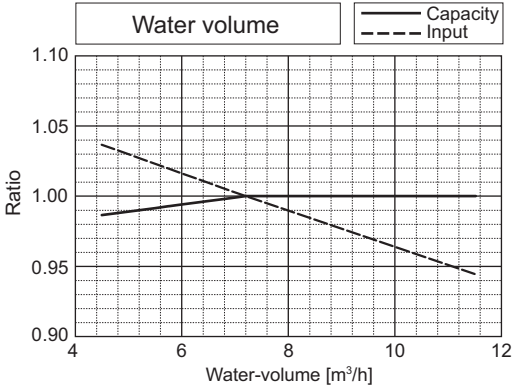
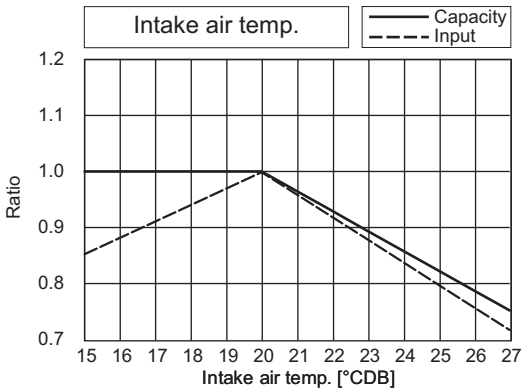
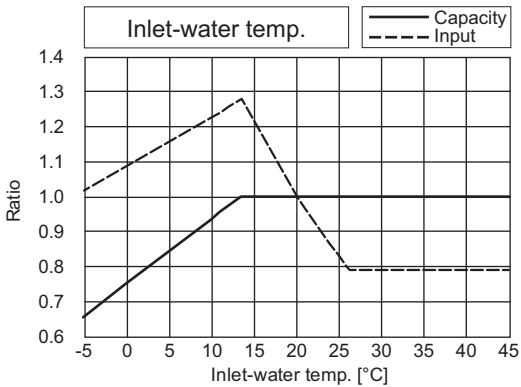


PQHY-P-Z(S)LMU-B

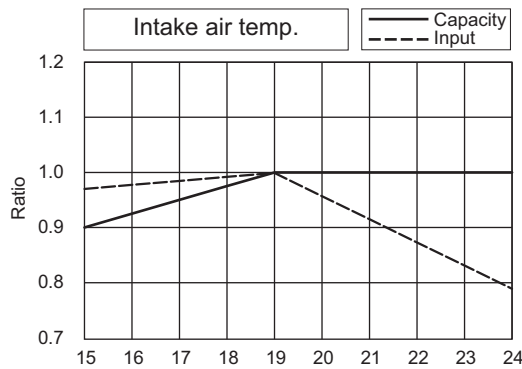
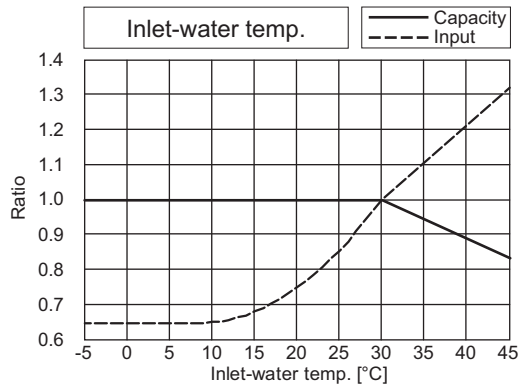
PQHY-		P192ZLMU
Nominal Cooling Capacity	kW	56.3
	BTU/h	192,000
Input	kW	15.05



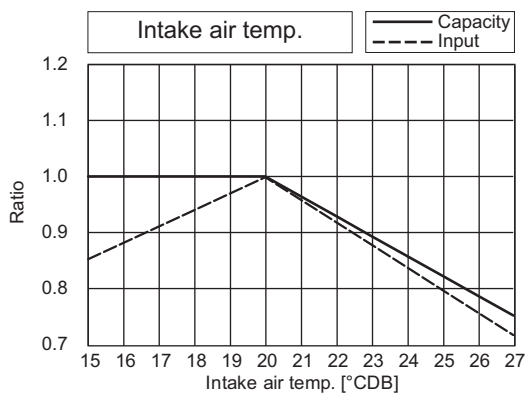
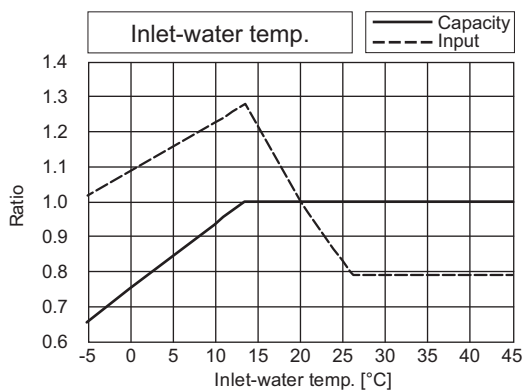
PQHY-		P192ZLMU
Nominal Heating Capacity	kW	63.0
	BTU/h	215,000
Input	kW	11.90



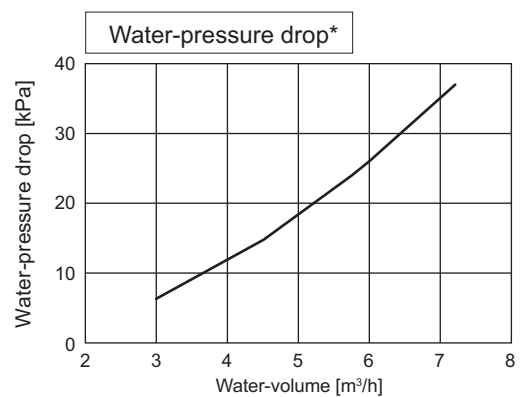
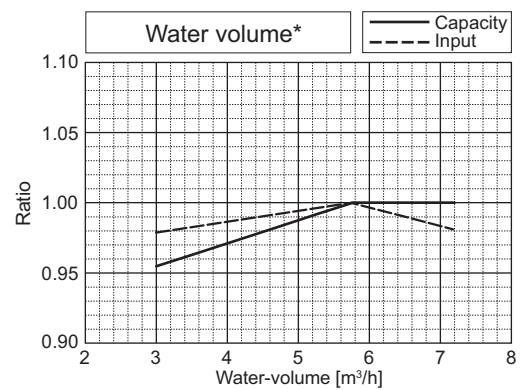
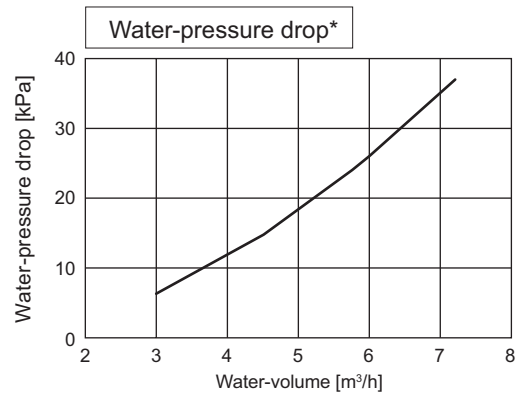
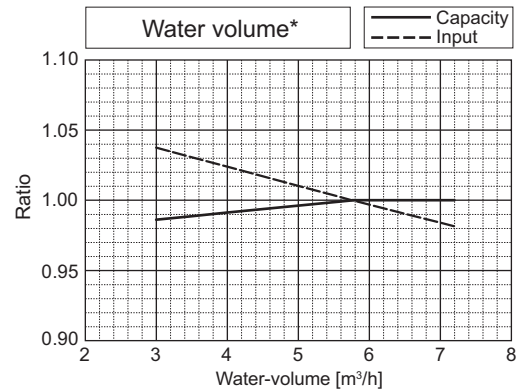
PQHY-		P144ZSLMU
Nominal Cooling Capacity	kW	42.2
	BTU/h	144,000
Input	kW	7.11



PQHY-		P144ZSLMU
Nominal Heating Capacity	kW	46.9
	BTU/h	160,000
Input	kW	7.45

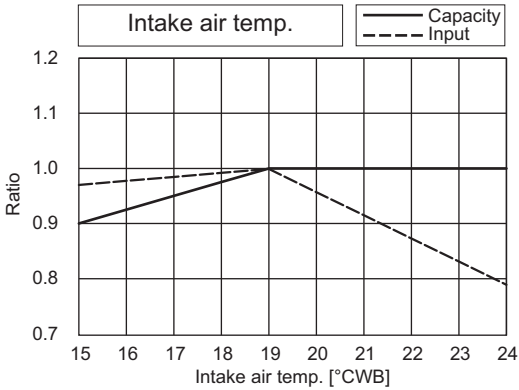
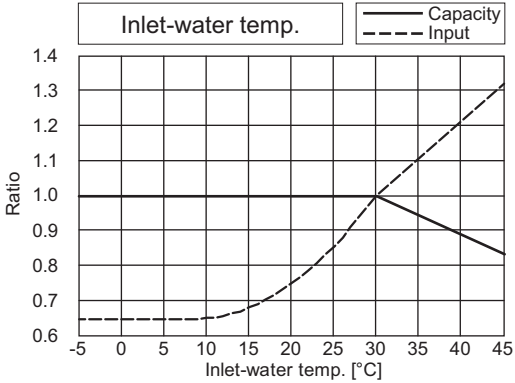


*The drawing indicates characteristic per unit.

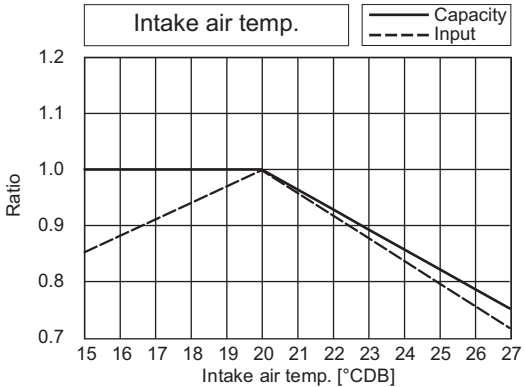
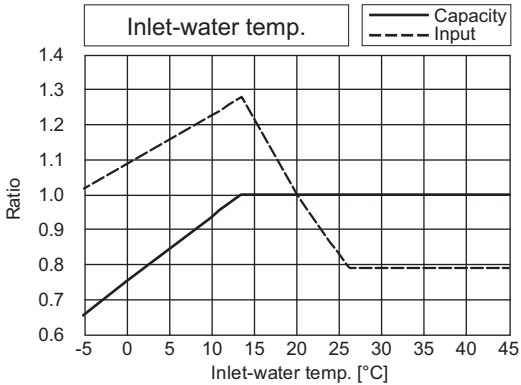


PQHY-P-Z(S)LMU-B

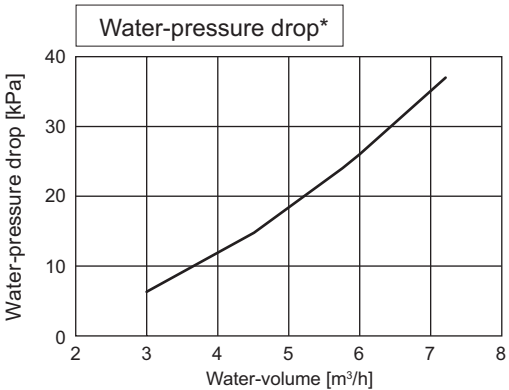
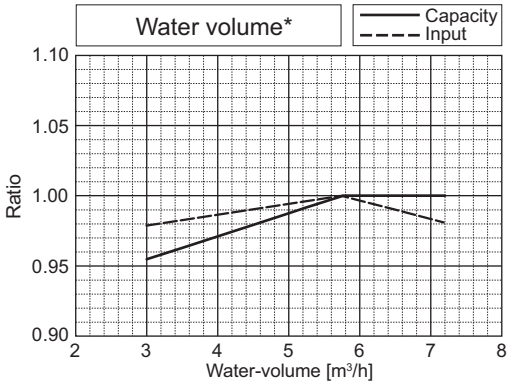
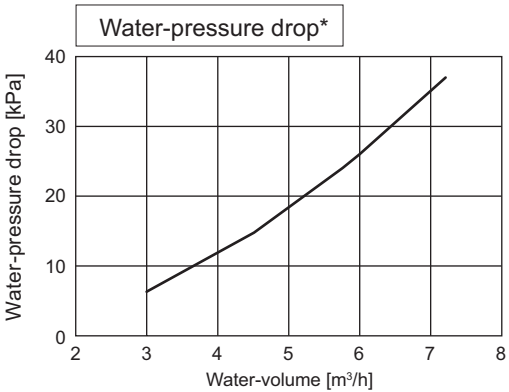
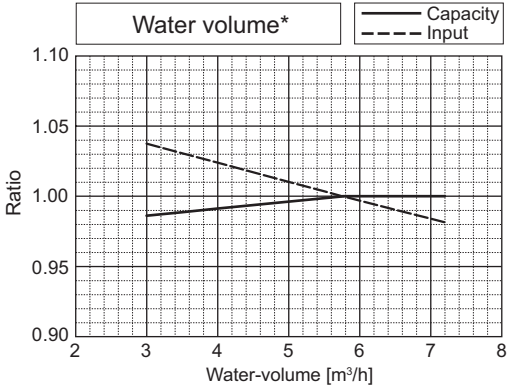
PQHY-		P168ZSLMU
Nominal Cooling Capacity	kW	49.2
	BTU/h	168,000
Input	kW	9.33



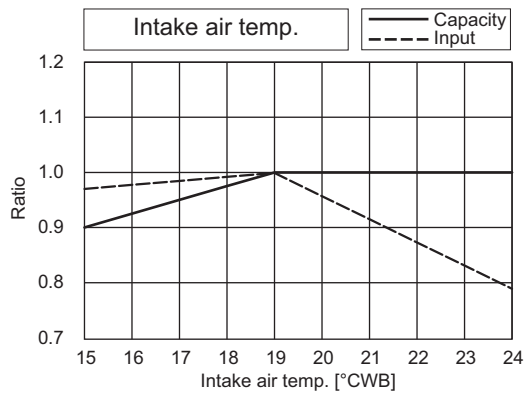
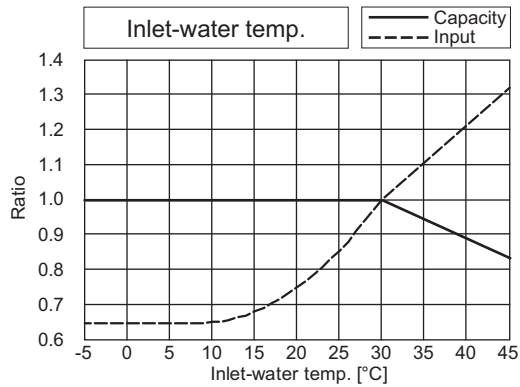
PQHY-		P168ZSLMU
Nominal Heating Capacity	kW	55.1
	BTU/h	188,000
Input	kW	9.34



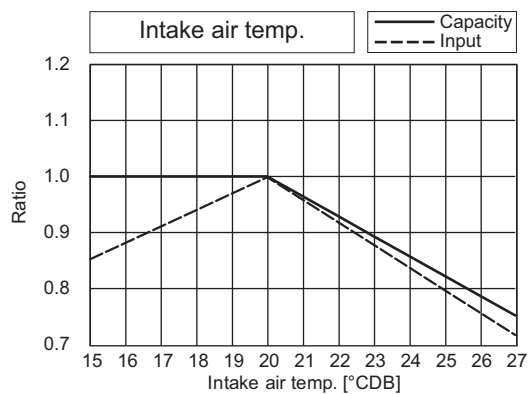
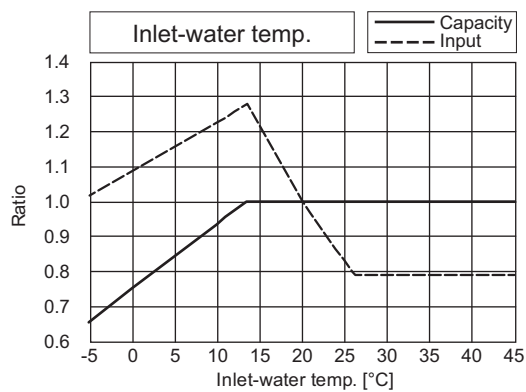
*The drawing indicates characteristic per unit.



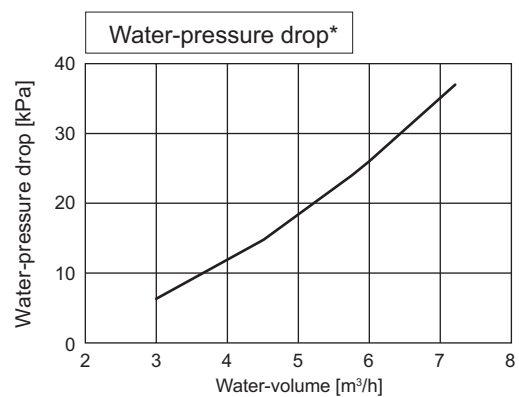
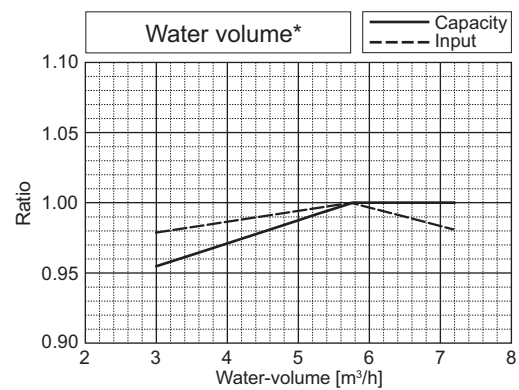
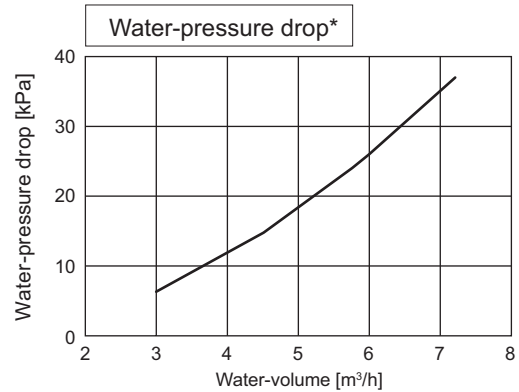
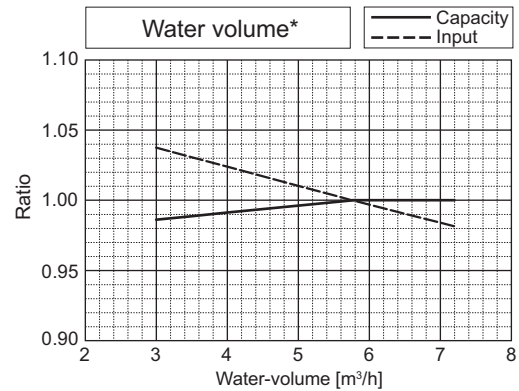
PQHY-		P192ZSLMU
Nominal Cooling Capacity	kW	56.3
	BTU/h	192,000
Input	kW	11.30



PQHY-		P192ZSLMU
Nominal Heating Capacity	kW	63.0
	BTU/h	215,000
Input	kW	11.02

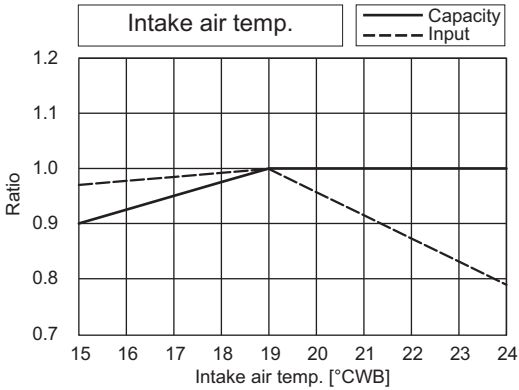
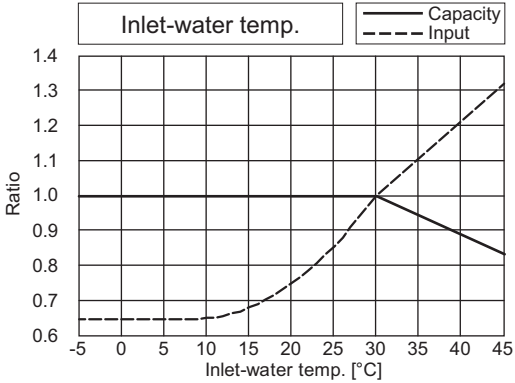


*The drawing indicates characteristic per unit.

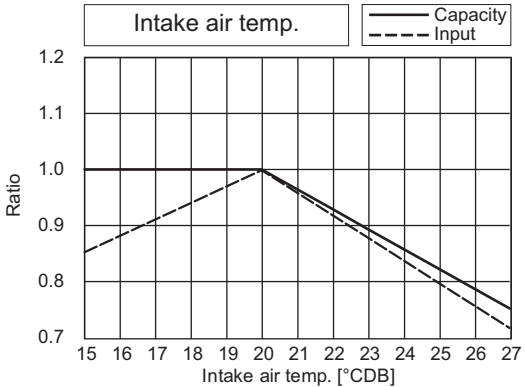
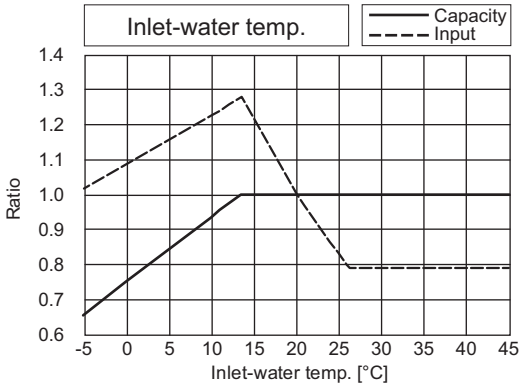


PQHY-P-Z(S)LMU-B

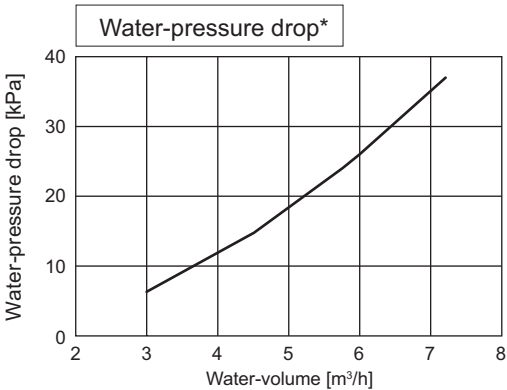
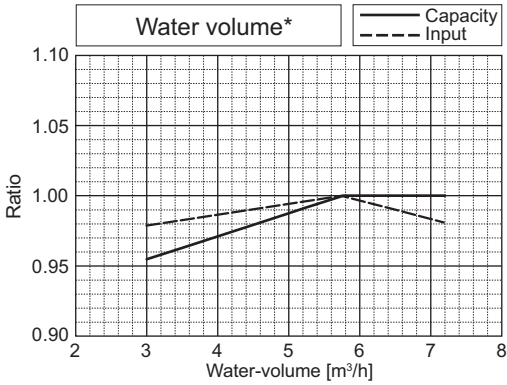
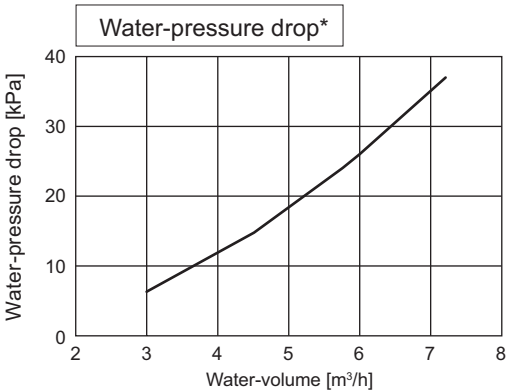
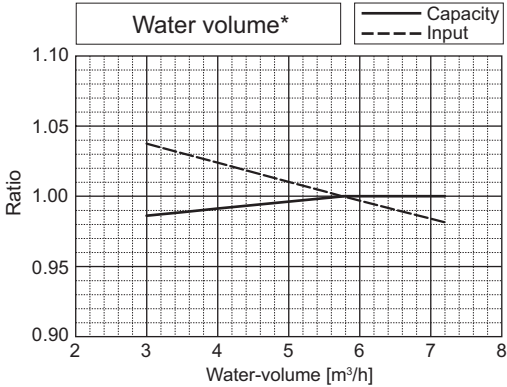
PQHY-		P216ZSLMU
Nominal Cooling Capacity	kW	63.3
	BTU/h	216,000
Input	kW	14.03



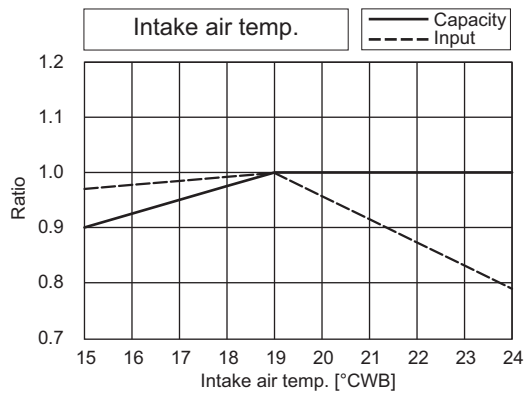
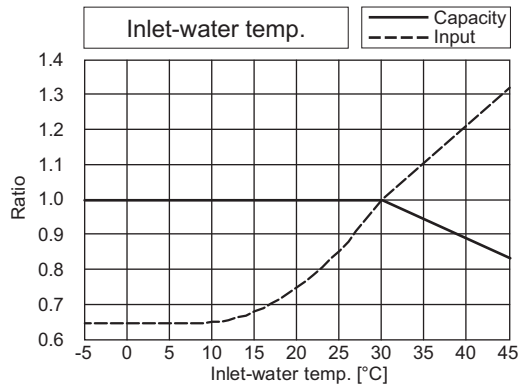
PQHY-		P216ZSLMU
Nominal Heating Capacity	kW	71.2
	BTU/h	243,000
Input	kW	12.88



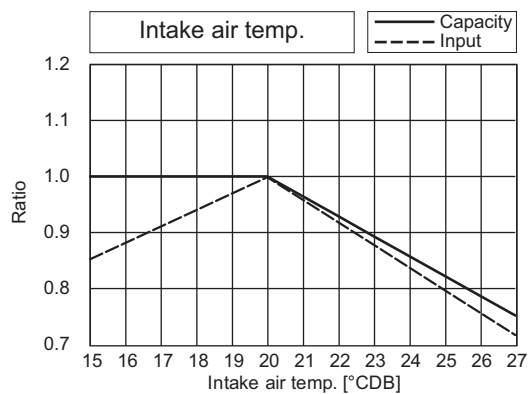
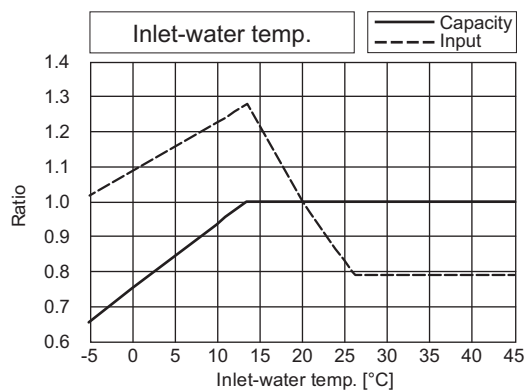
*The drawing indicates characteristic per unit.



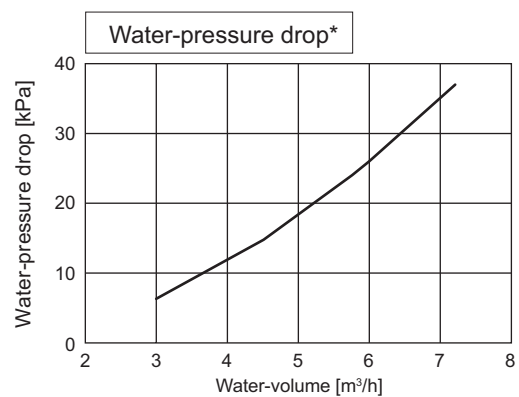
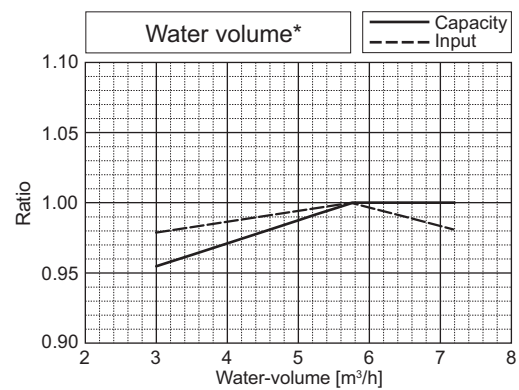
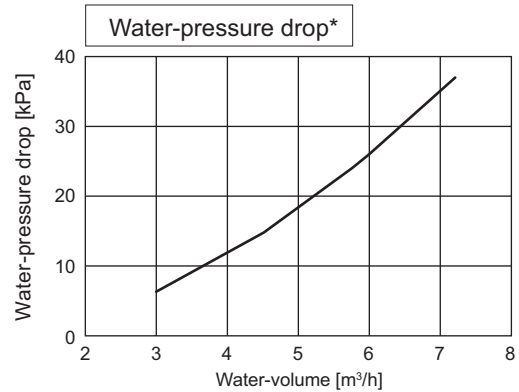
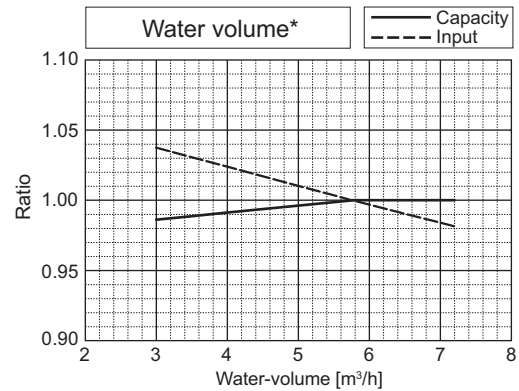
PQHY-		P240ZSLMU
Nominal Cooling Capacity	kW	70.3
	BTU/h	240,000
Input	kW	16.89



PQHY-		P240ZSLMU
Nominal Heating Capacity	kW	79.1
	BTU/h	270,000
Input	kW	14.58

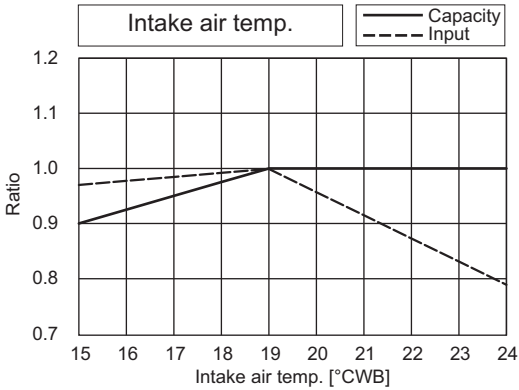
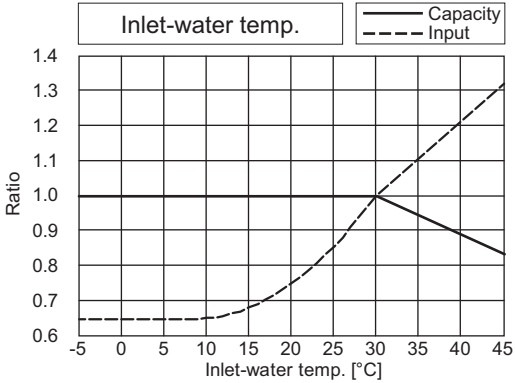


*The drawing indicates characteristic per unit.

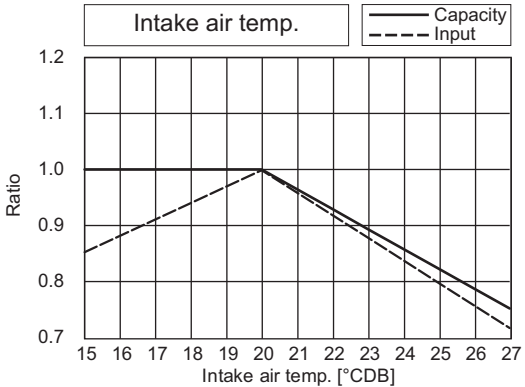
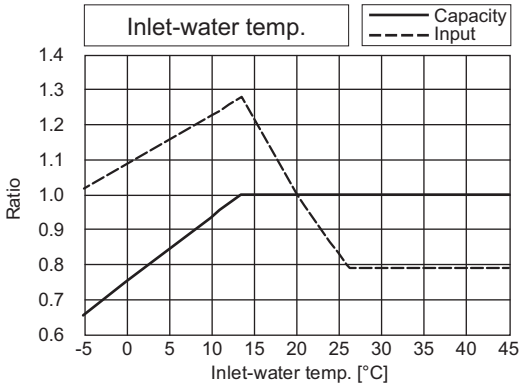


PQHY-P-Z(S)LMU-B

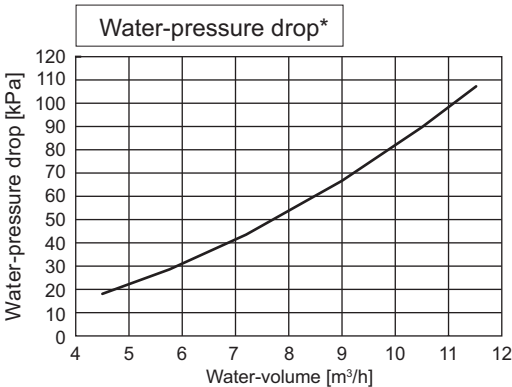
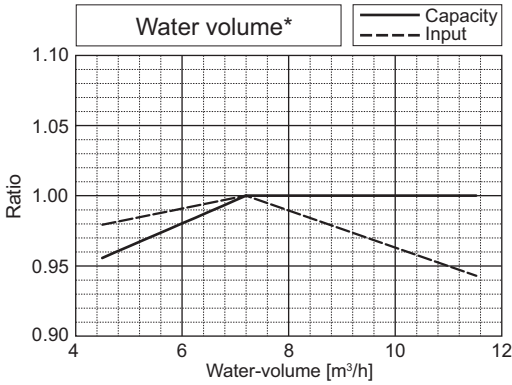
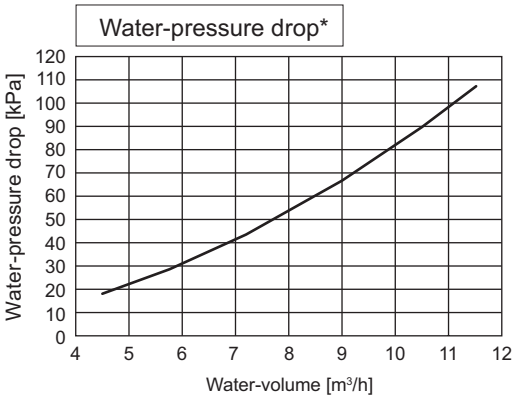
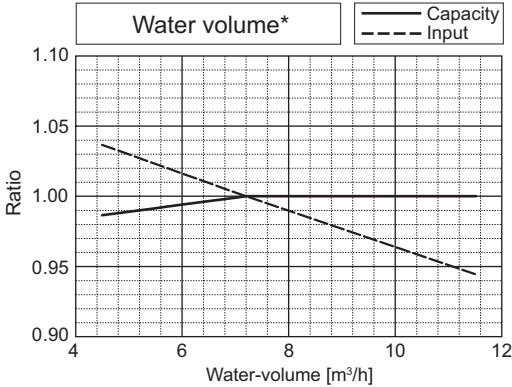
PQHY-		P288ZSLMU
Nominal Cooling Capacity	kW	84.4
	BTU/h	288,000
Input	kW	20.42



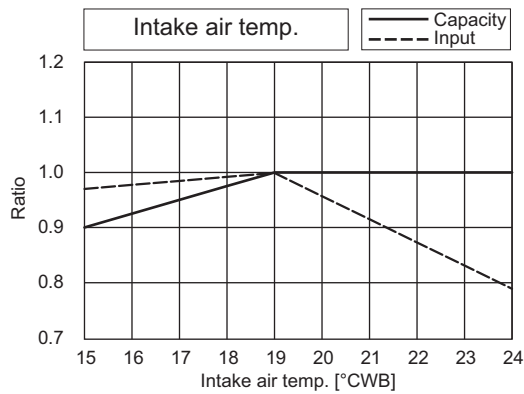
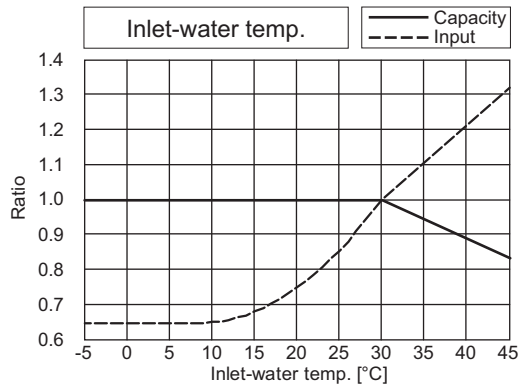
PQHY-		P288ZSLMU
Nominal Heating Capacity	kW	94.7
	BTU/h	323,000
Input	kW	17.50



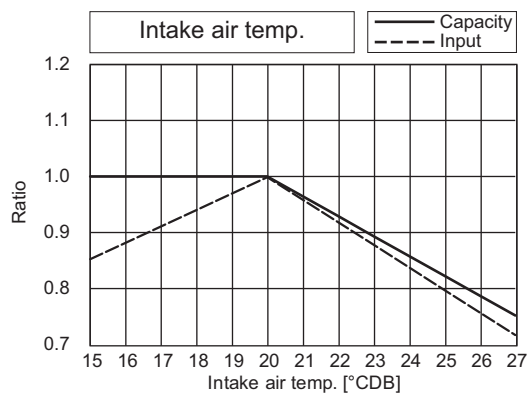
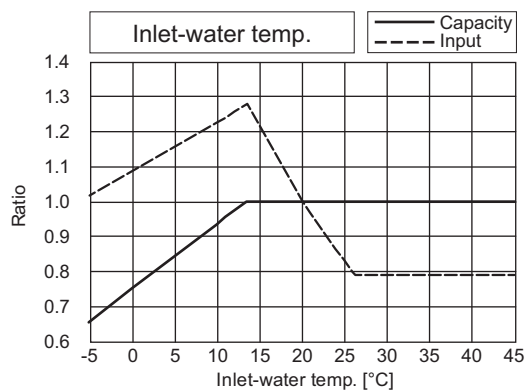
*The drawing indicates characteristic per unit.



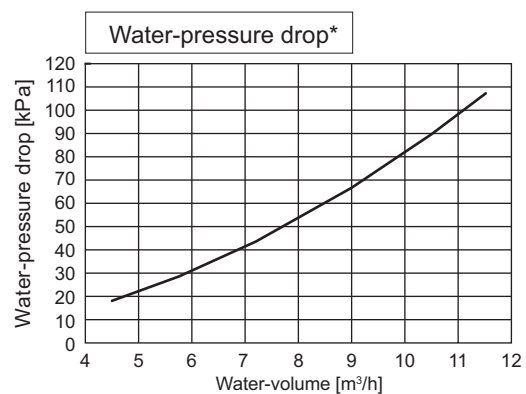
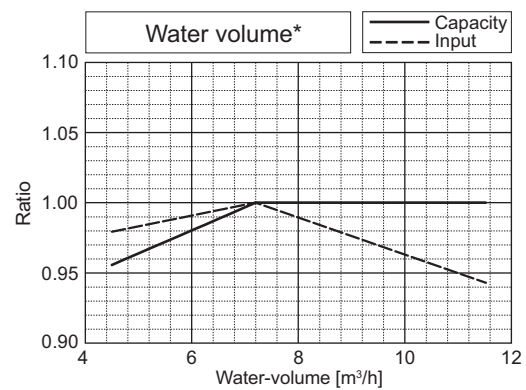
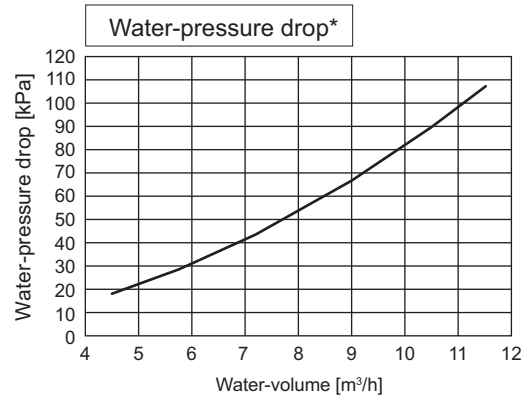
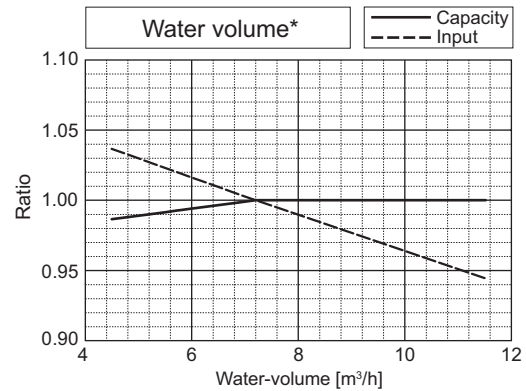
PQHY-		P312ZSLMU
Nominal Cooling Capacity	kW	91.4
	BTU/h	312,000
Input	kW	23.41



PQHY-		P312ZSLMU
Nominal Heating Capacity	kW	102.6
	BTU/h	350,000
Input	kW	19.11

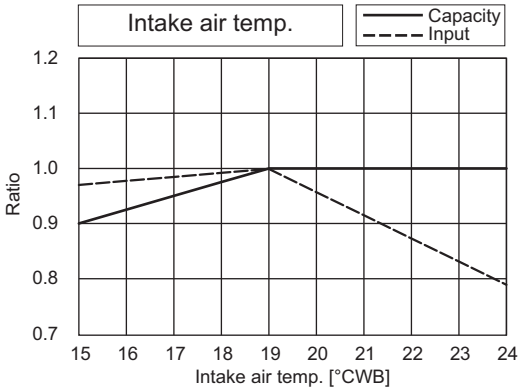
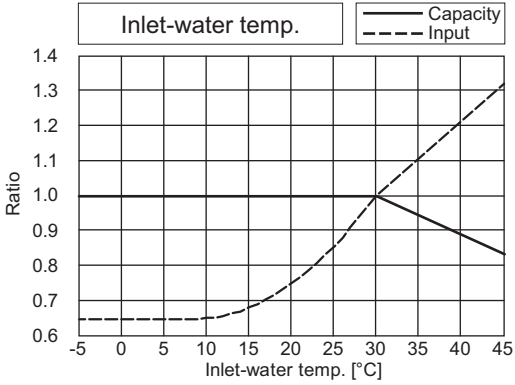


*The drawing indicates characteristic per unit.

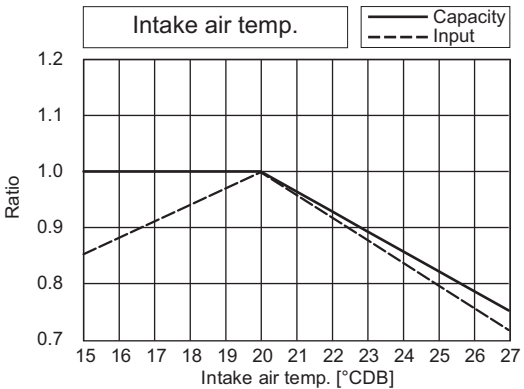
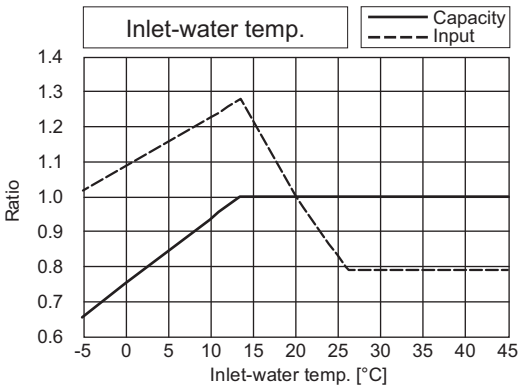


PQHY-P-Z(S)LMU-B

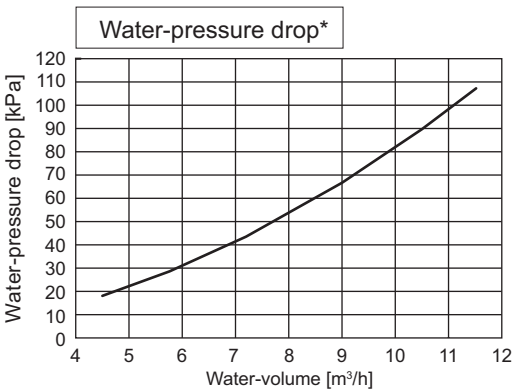
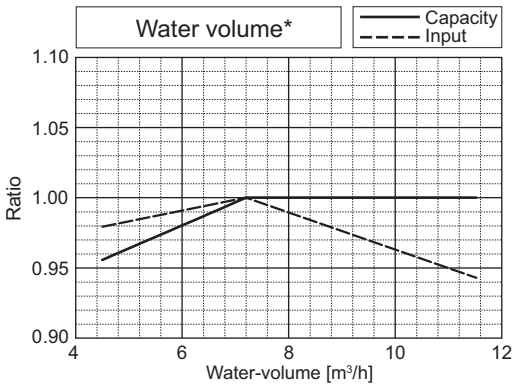
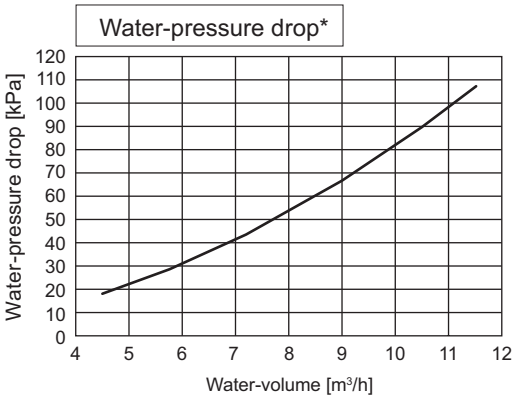
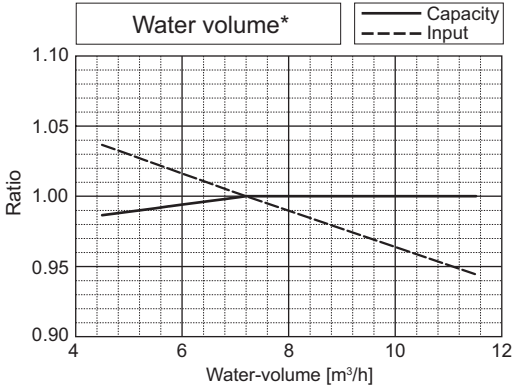
PQHY-		P336ZSLMU
Nominal Cooling Capacity	kW	98.5
	BTU/h	336,000
Input	kW	26.84



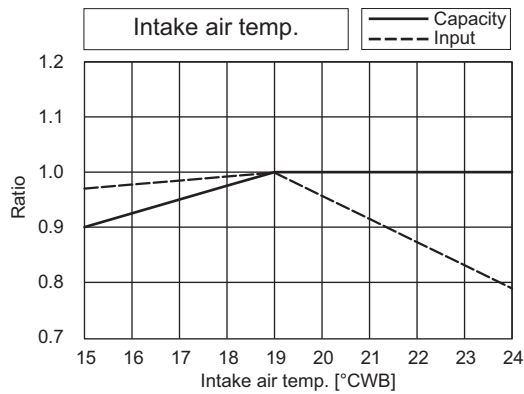
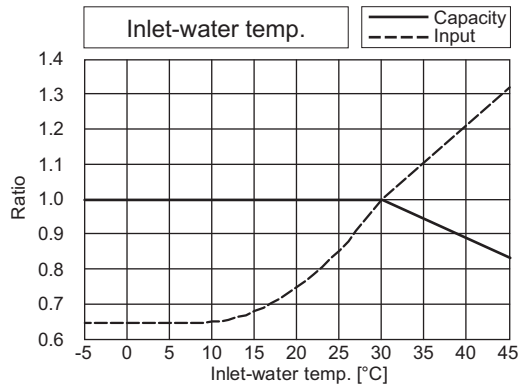
PQHY-		P336ZSLMU
Nominal Heating Capacity	kW	110.8
	BTU/h	378,000
Input	kW	20.77



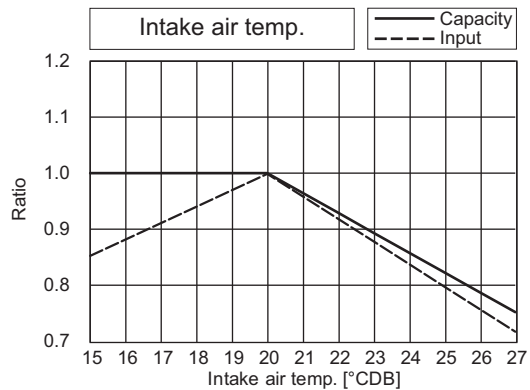
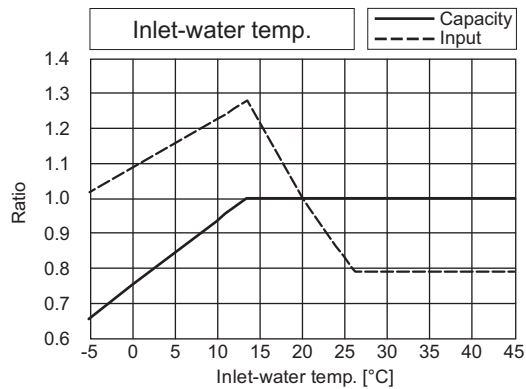
*The drawing indicates characteristic per unit.



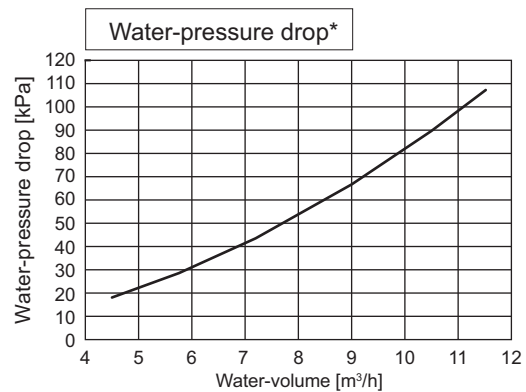
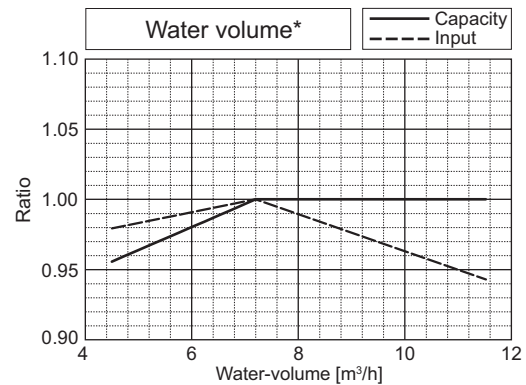
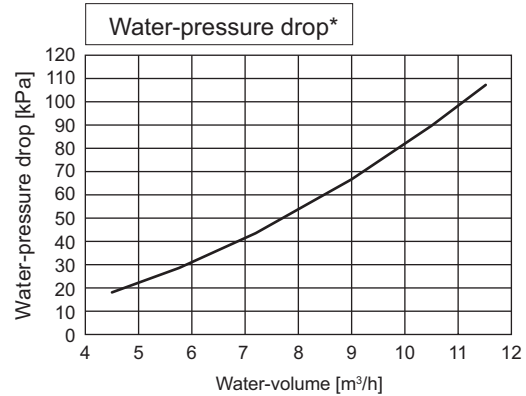
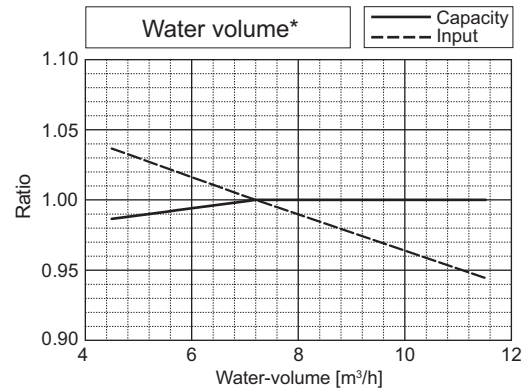
PQHY-		P360ZSLMU
Nominal Cooling Capacity	kW	105.5
	BTU/h	360,000
Input	kW	29.43



PQHY-		P360ZSLMU
Nominal Heating Capacity	kW	118.7
	BTU/h	405,000
Input	kW	22.85

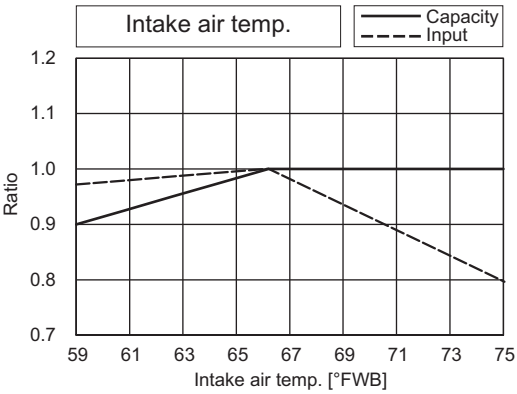
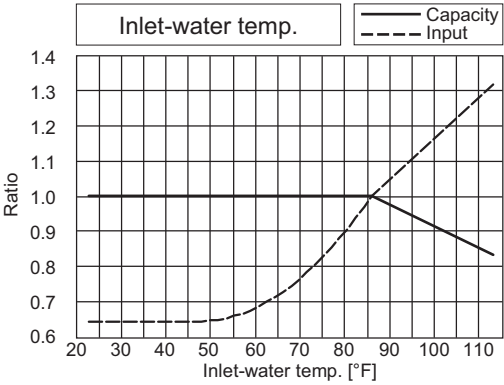


*The drawing indicates characteristic per unit.

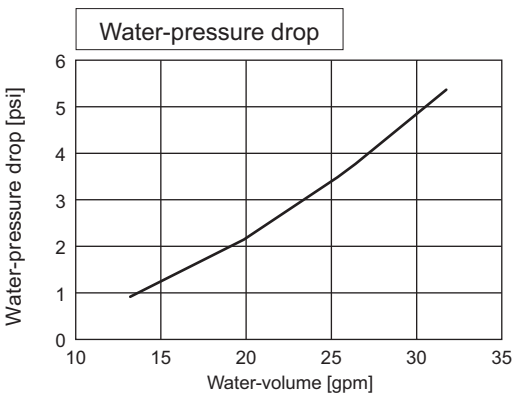
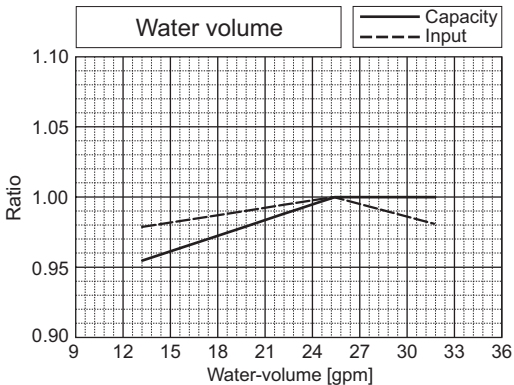
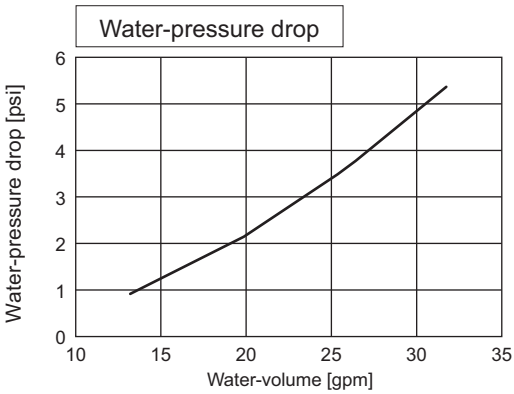
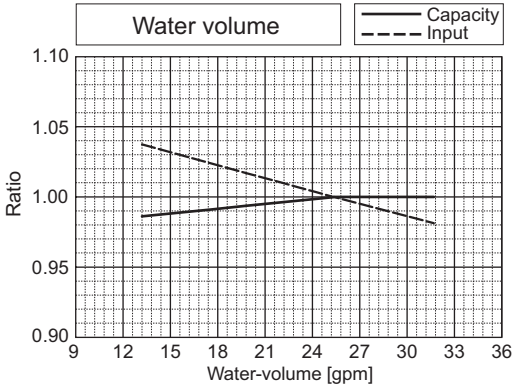
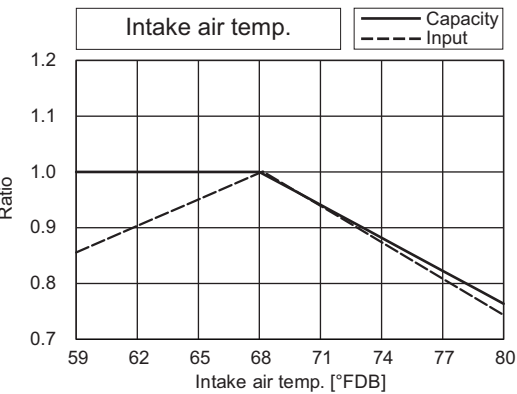
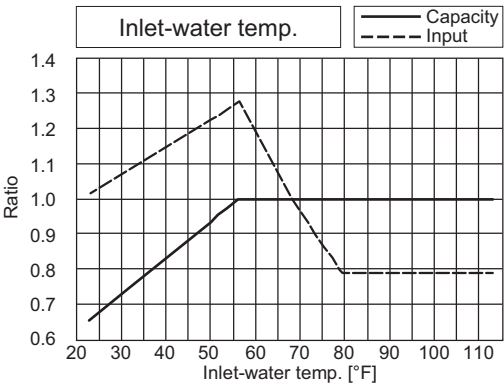


PQHY-P-Z(S)LMU-B

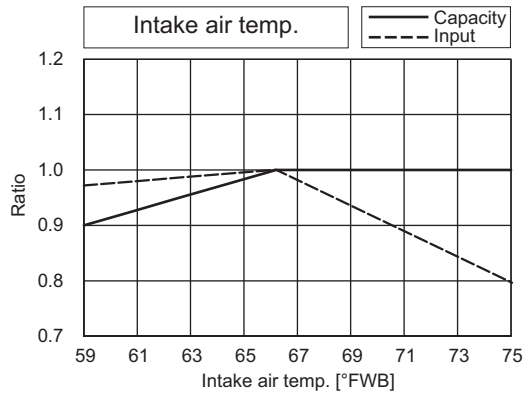
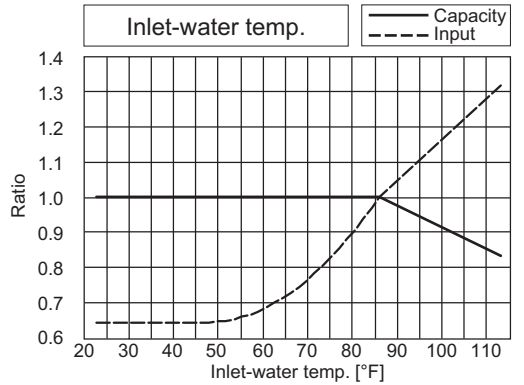
PQHY-		P72ZLMU
Nominal Cooling Capacity	kW	21.1
	BTU/h	72,000
Input	kW	3.61



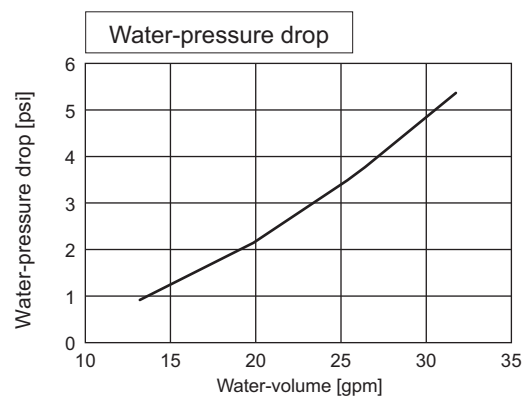
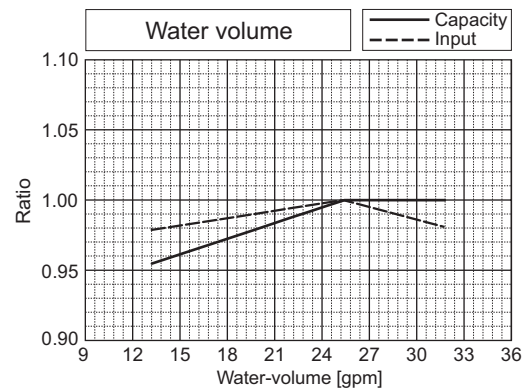
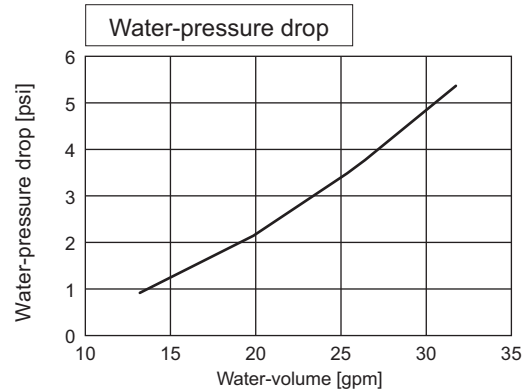
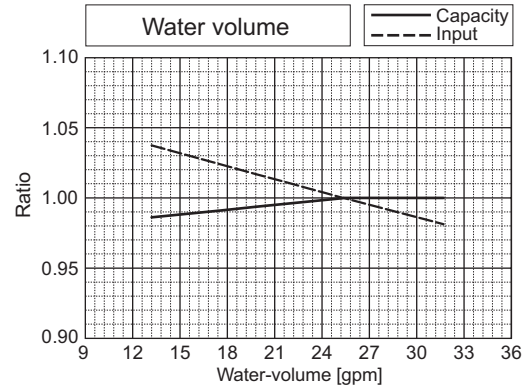
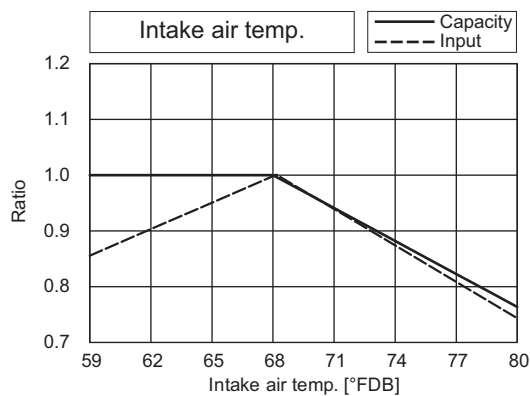
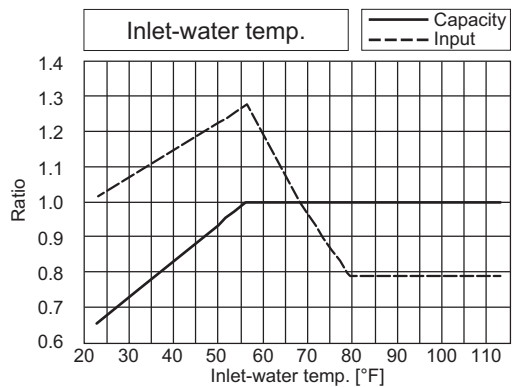
PQHY-		P72ZLMU
Nominal Heating Capacity	kW	23.4
	BTU/h	80,000
Input	kW	4.04



PQHY-		P96ZLMU
Nominal Cooling Capacity	kW	28.1
	BTU/h	96,000
Input	kW	5.21

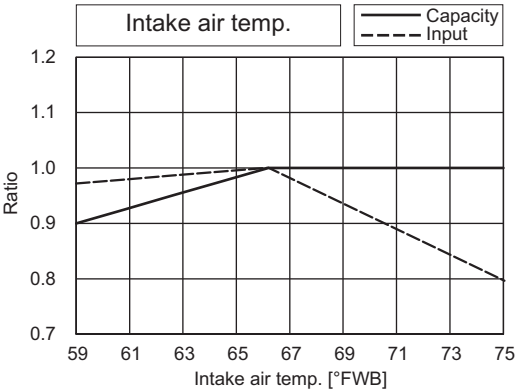
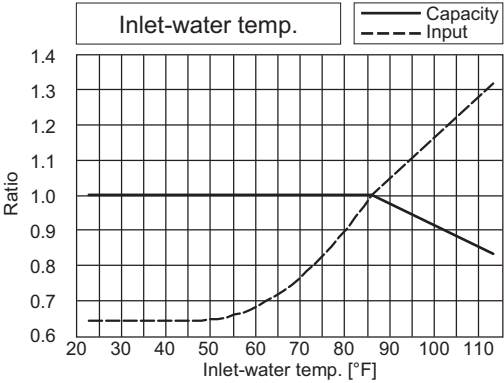


PQHY-		P96ZLMU
Nominal Heating Capacity	kW	31.7
	BTU/h	108,000
Input	kW	5.64

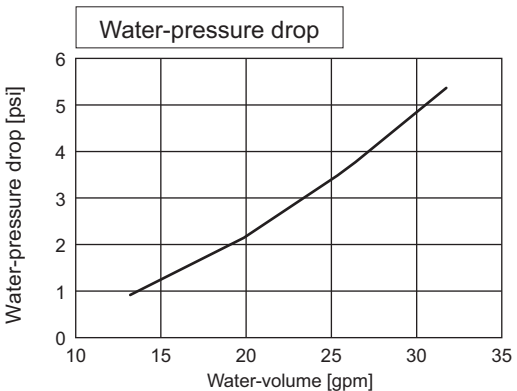
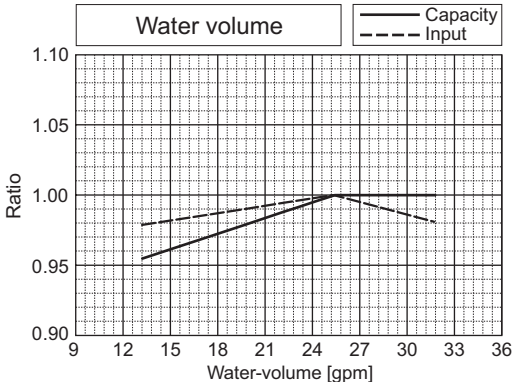
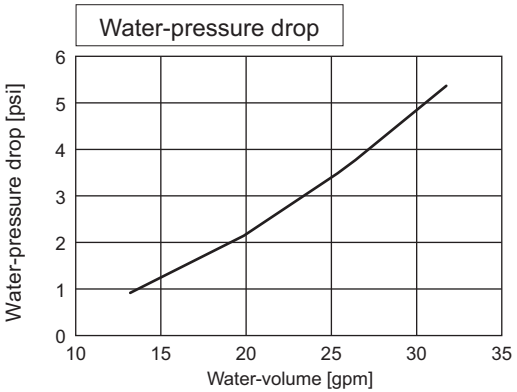
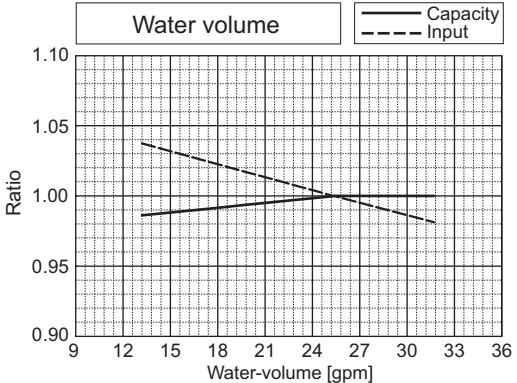
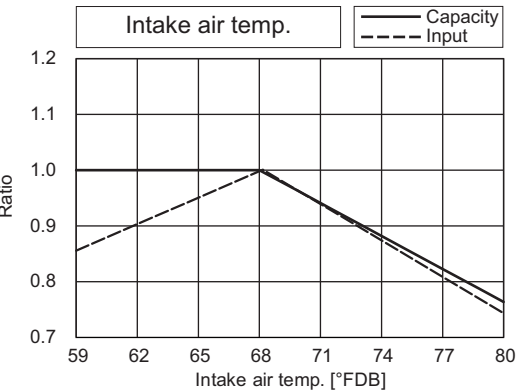
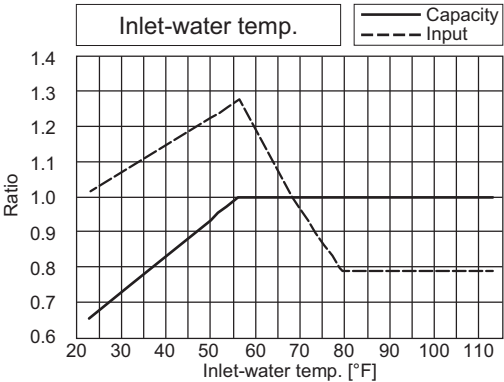


PQHY-P-Z(S)LMU-B

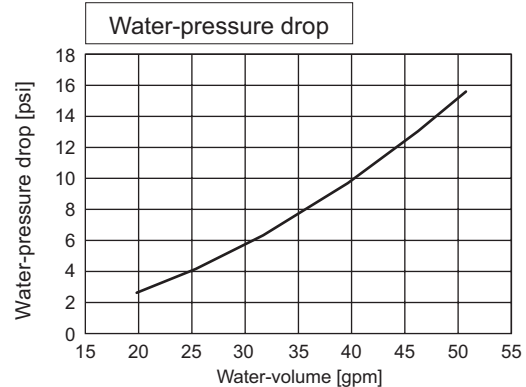
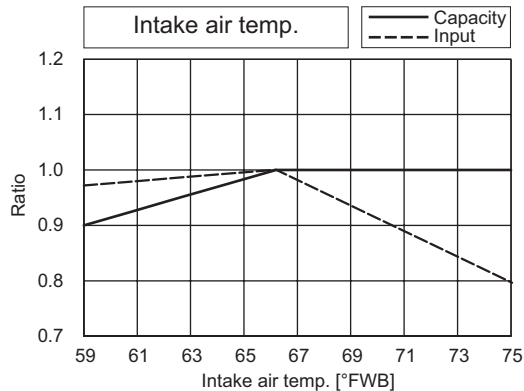
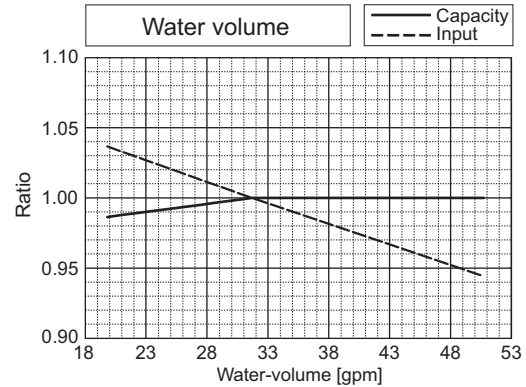
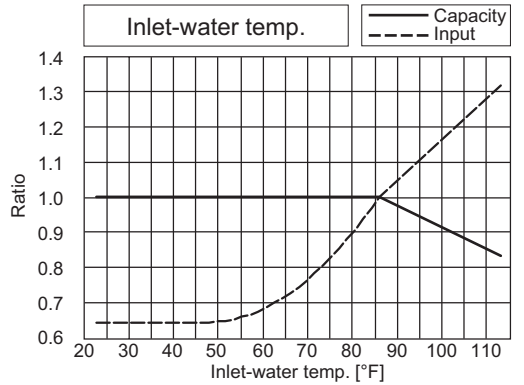
PQHY-		P120ZLMU
Nominal Cooling Capacity	kW	35.2
	BTU/h	120,000
Input	kW	7.51



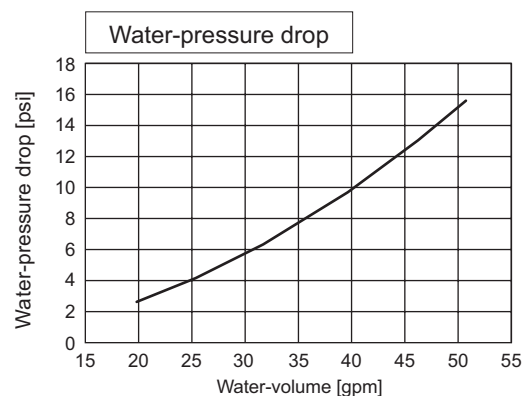
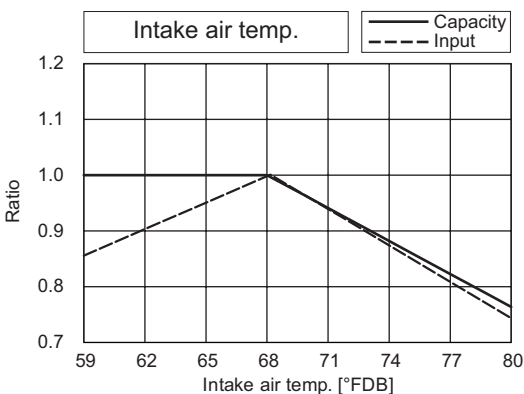
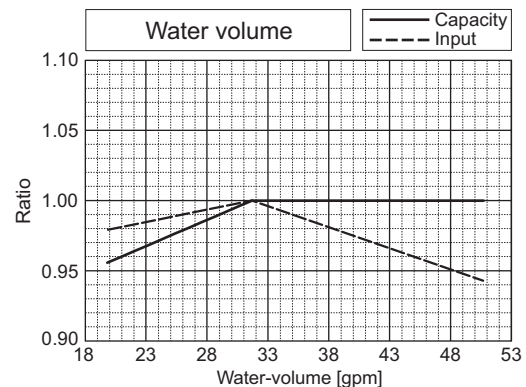
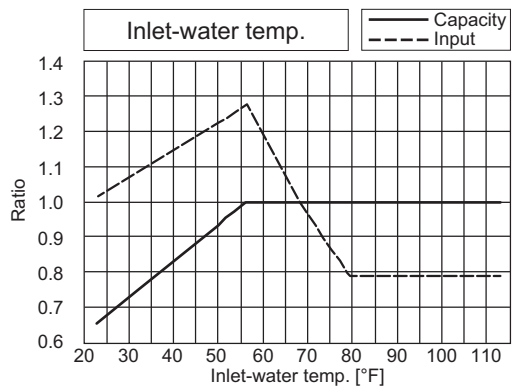
PQHY-		P120ZLMU
Nominal Heating Capacity	kW	39.6
	BTU/h	135,000
Input	kW	7.09



PQHY-		P144ZLMU
Nominal Cooling Capacity	kW	42.2
	BTU/h	144,000
Input	kW	8.78

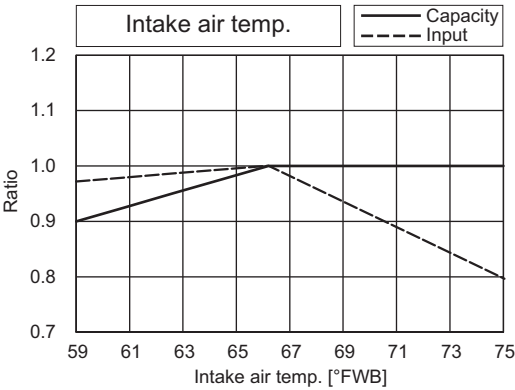
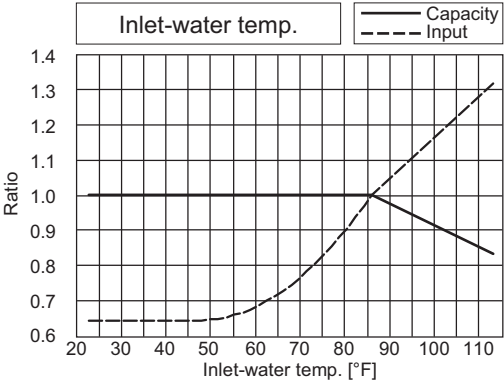


PQHY-		P144ZLMU
Nominal Heating Capacity	kW	46.9
	BTU/h	160,000
Input	kW	8.11

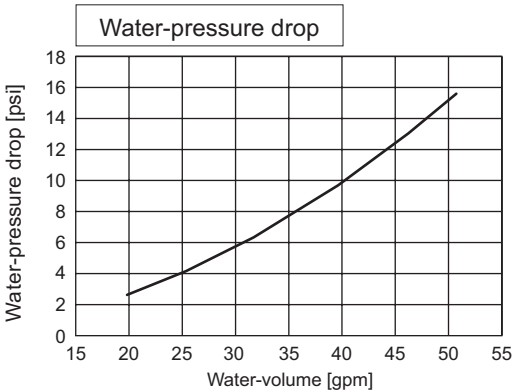
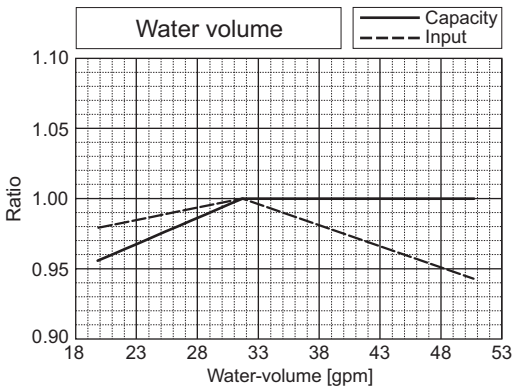
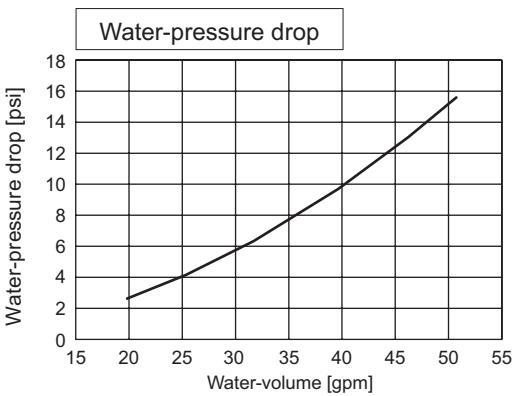
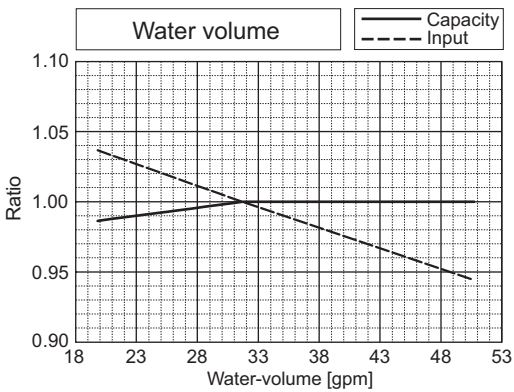
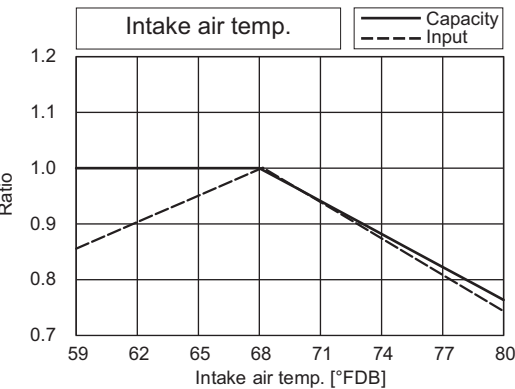
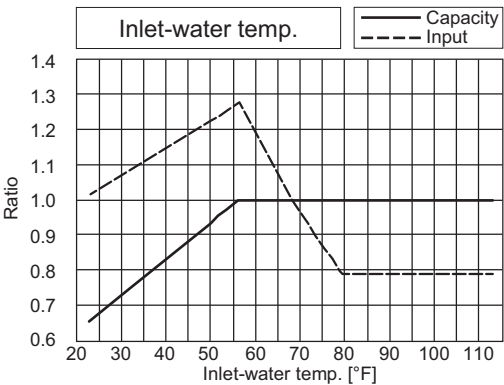


PQHY-P-Z(S)LMU-B

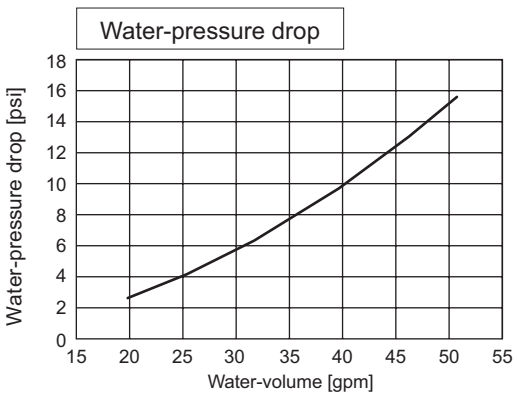
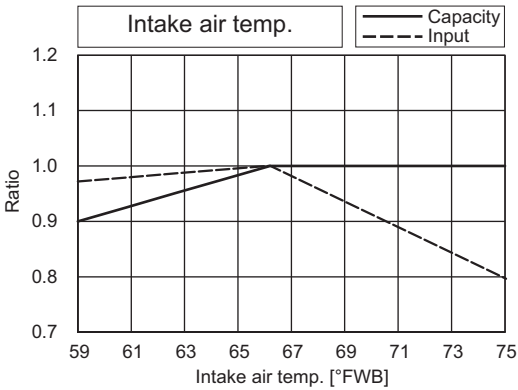
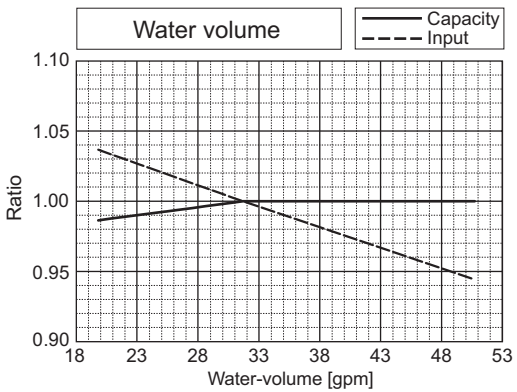
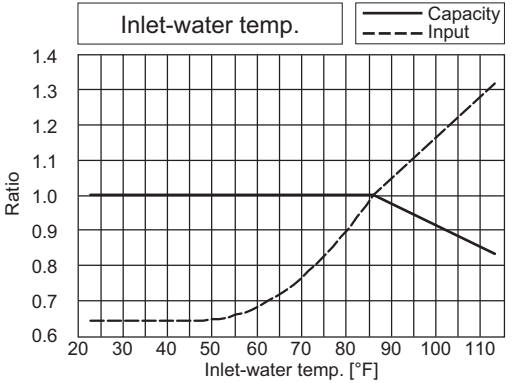
PQHY-		P168ZLMU
Nominal Cooling Capacity	kW	49.2
	BTU/h	168,000
Input	kW	12.05



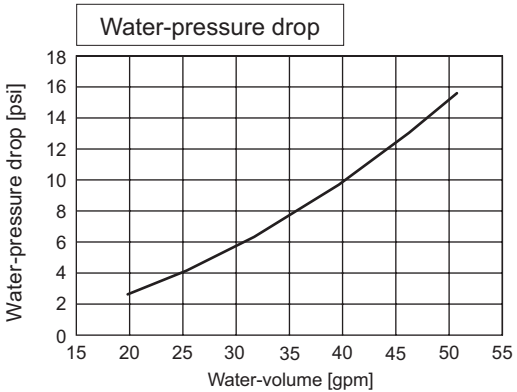
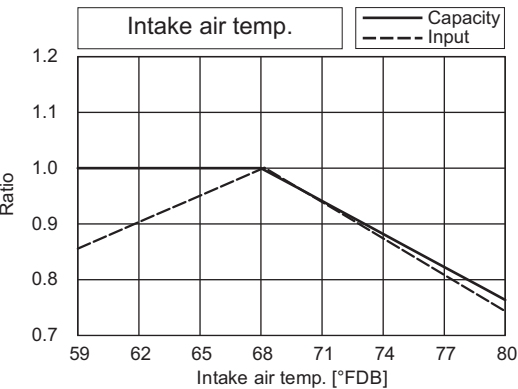
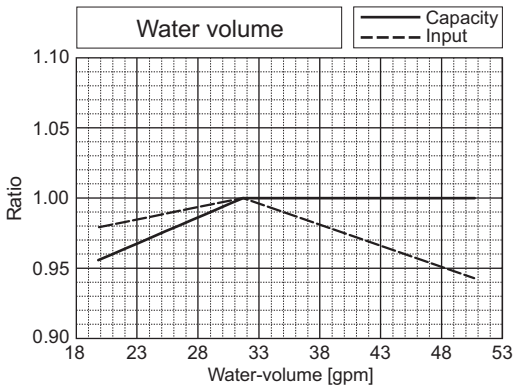
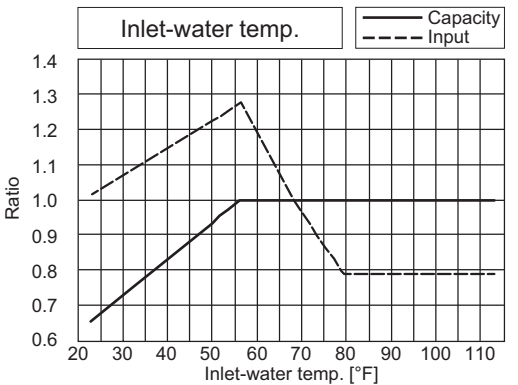
PQHY-		P168ZLMU
Nominal Heating Capacity	kW	55.1
	BTU/h	188,000
Input	kW	9.86



PQHY-		P192ZLMU
Nominal Cooling Capacity	kW	56.3
	BTU/h	192,000
Input	kW	15.05

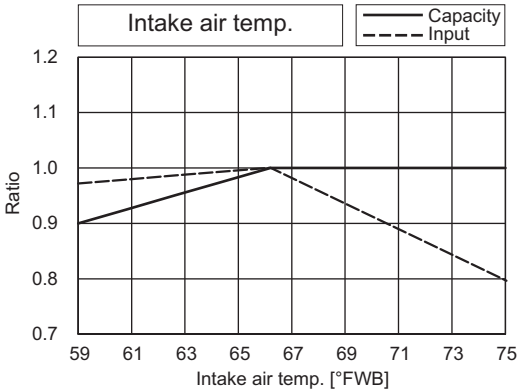
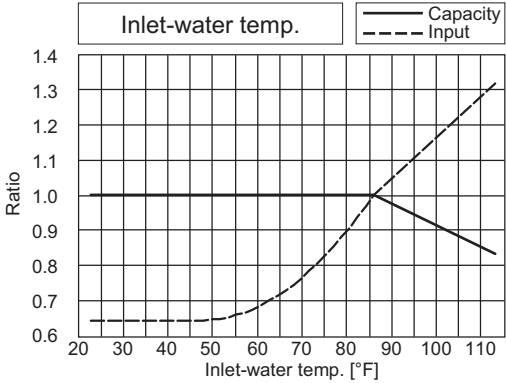


PQHY-		P192ZLMU
Nominal Heating Capacity	kW	63.0
	BTU/h	215,000
Input	kW	11.90

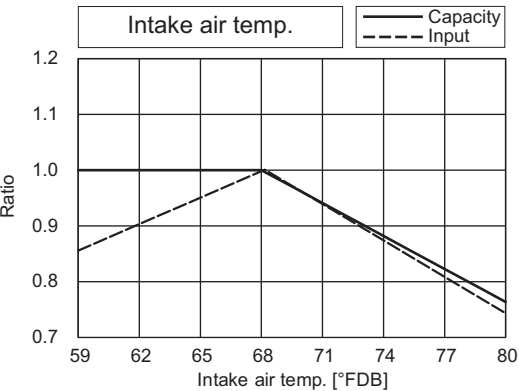
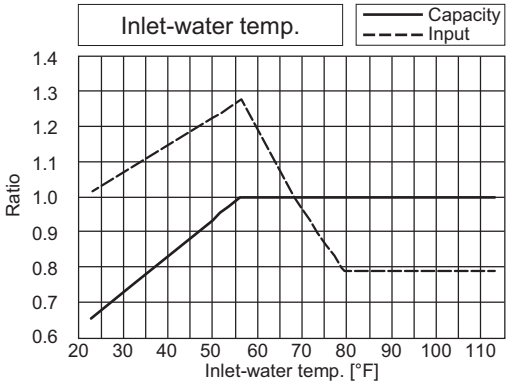


PQHY-P-Z(S)LMU-B

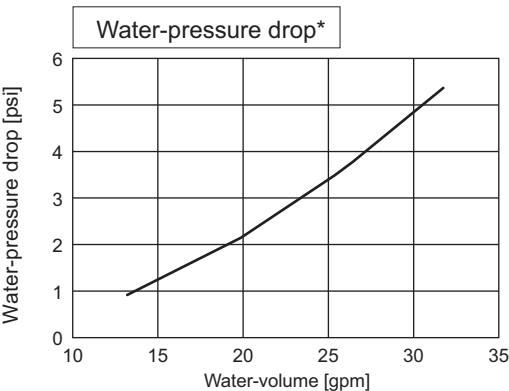
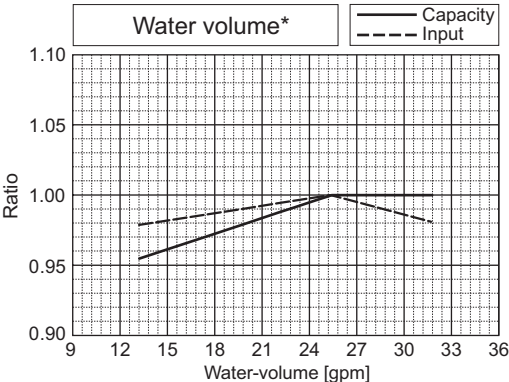
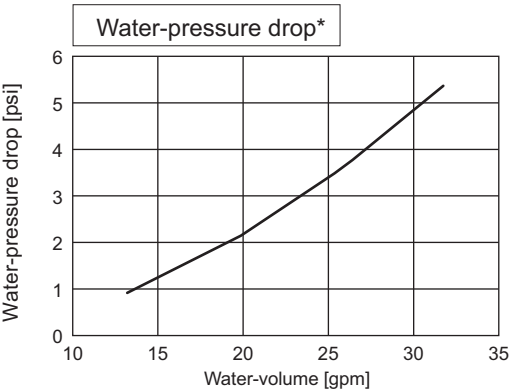
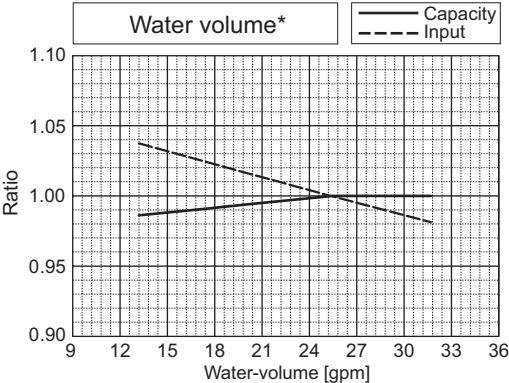
PQHY-		P144ZSLMU
Nominal Cooling Capacity	kW	42.2
	BTU/h	144,000
Input	kW	7.11



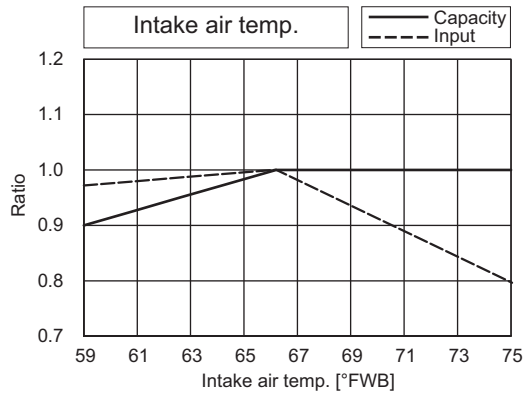
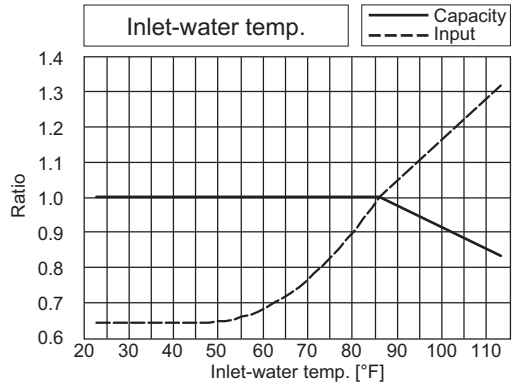
PQHY-		P144ZSLMU
Nominal Heating Capacity	kW	46.9
	BTU/h	160,000
Input	kW	7.45



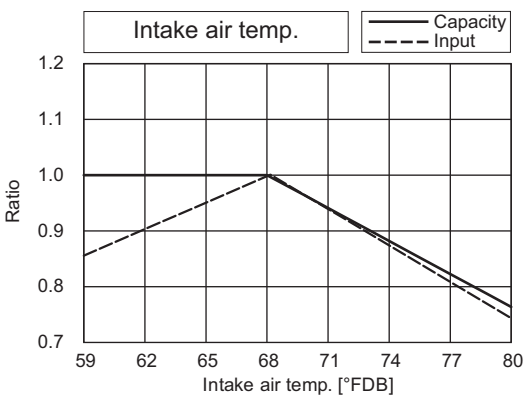
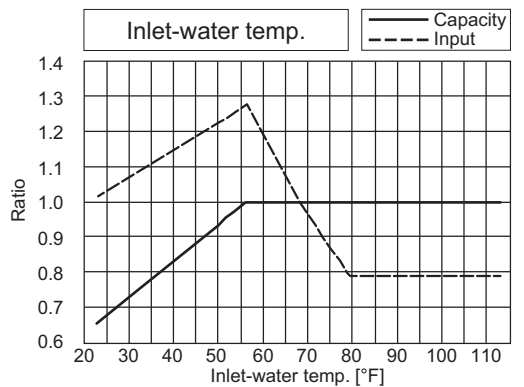
*The drawing indicates characteristic per unit.



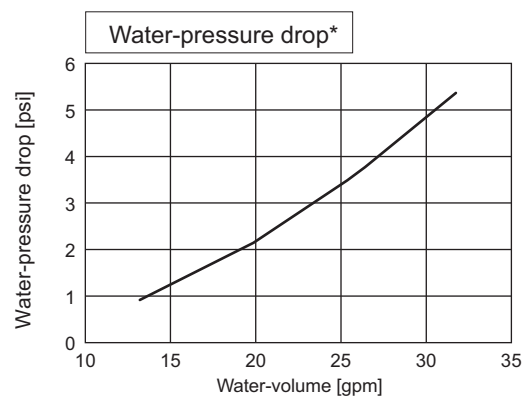
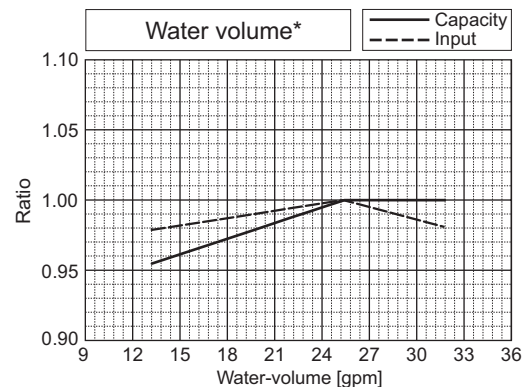
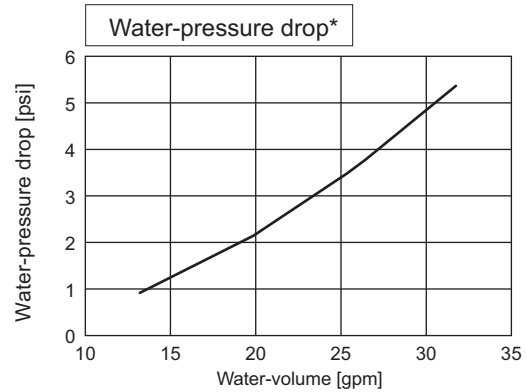
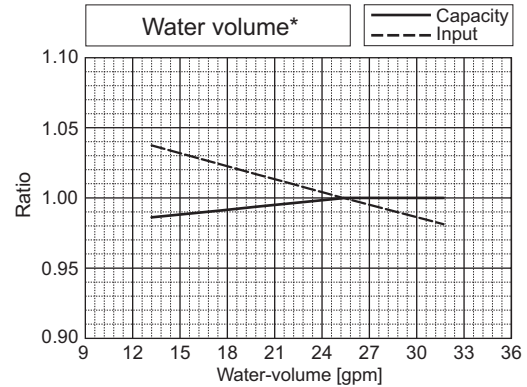
PQHY-		P168ZSLMU
Nominal Cooling Capacity	kW	49.2
	BTU/h	168,000
Input	kW	9.33



PQHY-		P168ZSLMU
Nominal Heating Capacity	kW	55.1
	BTU/h	188,000
Input	kW	9.34

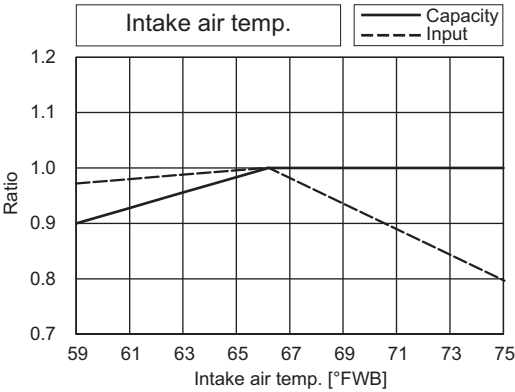
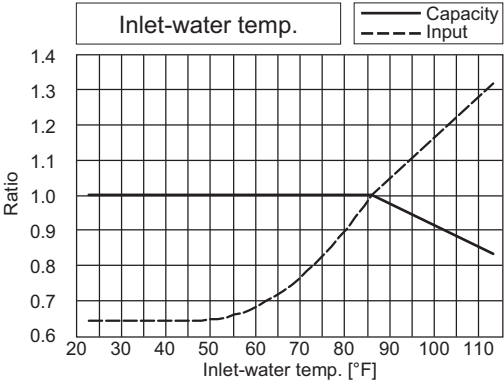


*The drawing indicates characteristic per unit.

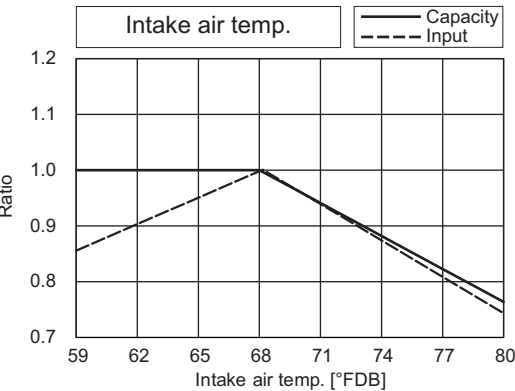
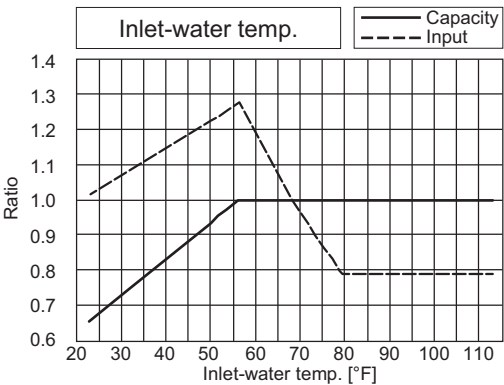


PQHY-P-Z(S)LMU-B

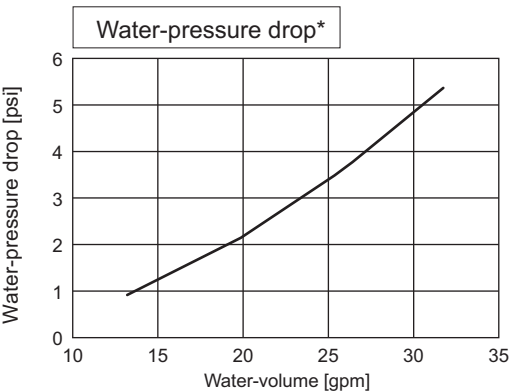
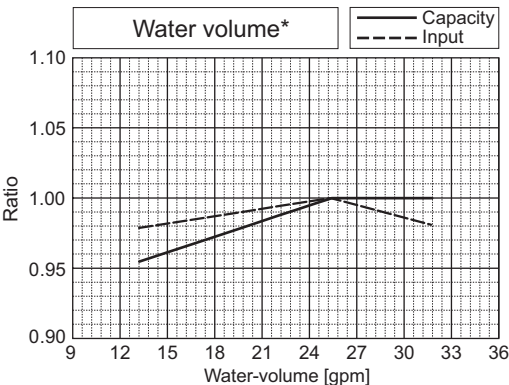
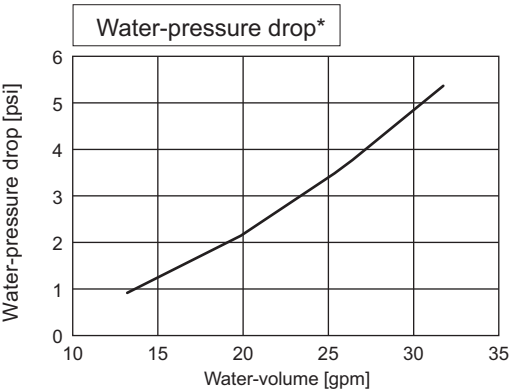
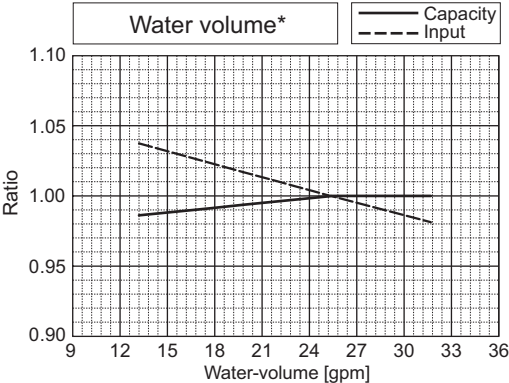
PQHY-		P192ZSLMU
Nominal Cooling Capacity	kW	56.3
	BTU/h	192,000
Input	kW	11.30



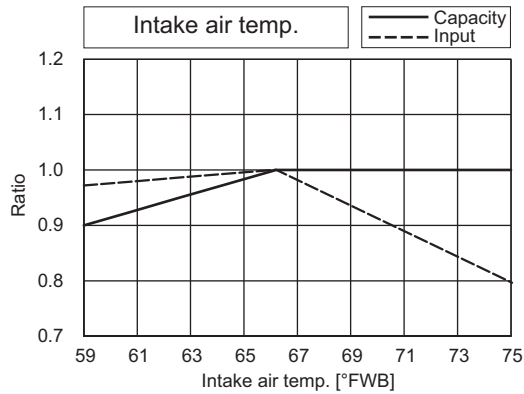
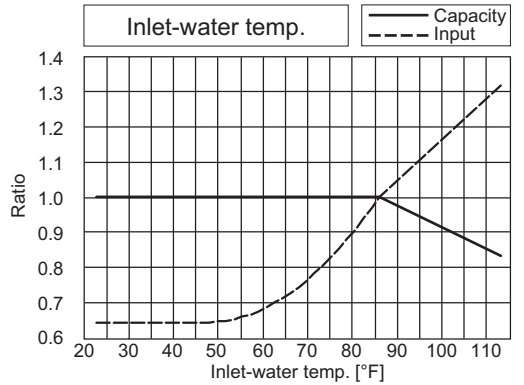
PQHY-		P192ZSLMU
Nominal Heating Capacity	kW	63.0
	BTU/h	215,000
Input	kW	11.02



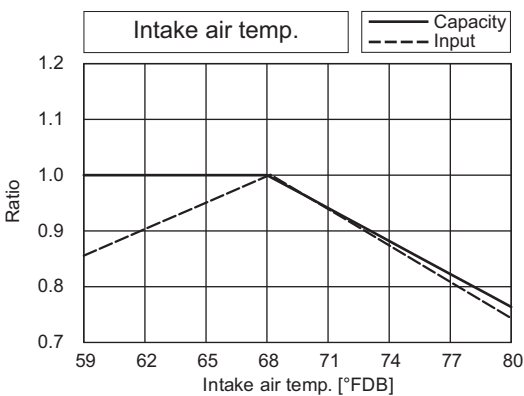
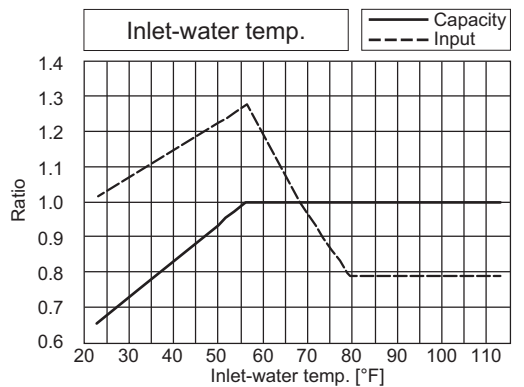
*The drawing indicates characteristic per unit.



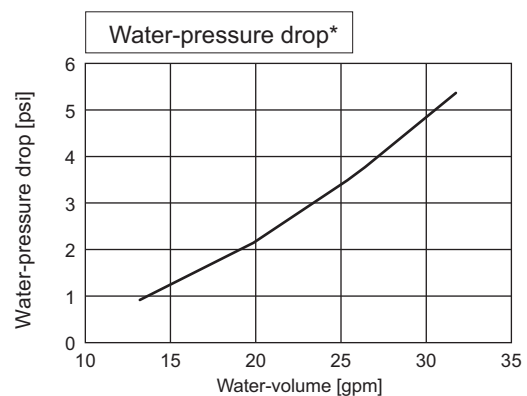
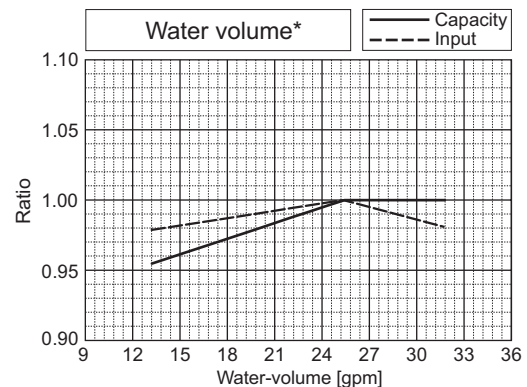
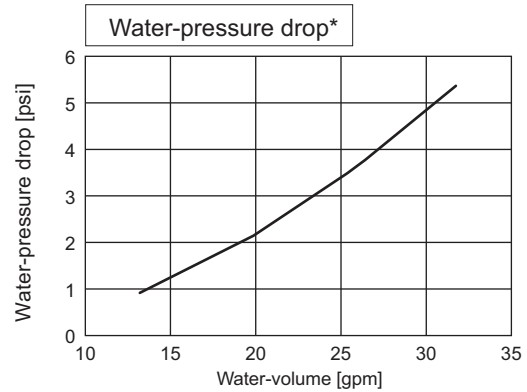
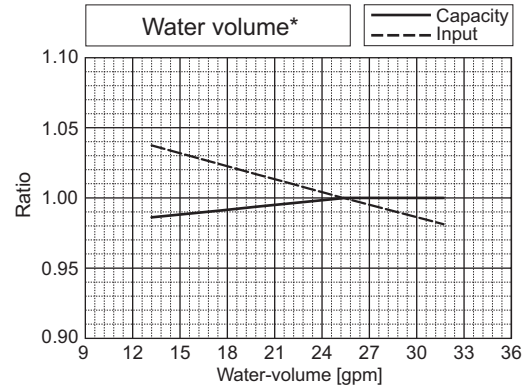
PQHY-		P216ZSLMU
Nominal Cooling Capacity	kW	63.3
	BTU/h	216,000
Input	kW	14.03



PQHY-		P216ZSLMU
Nominal Heating Capacity	kW	71.2
	BTU/h	243,000
Input	kW	12.88

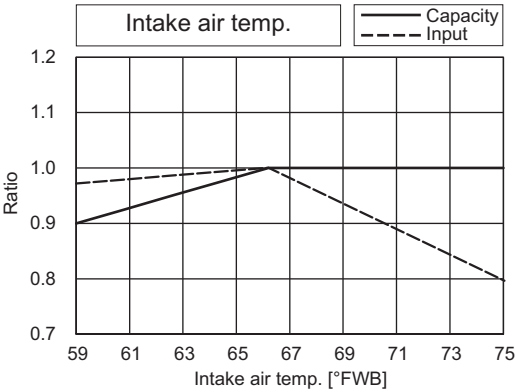
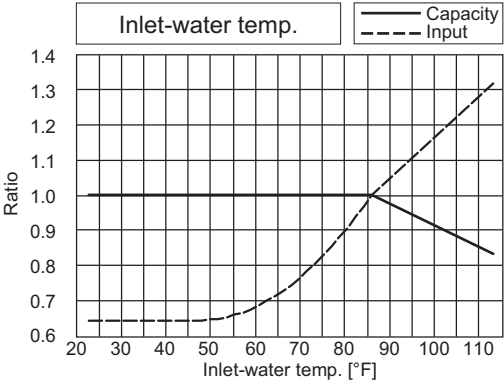


*The drawing indicates characteristic per unit.

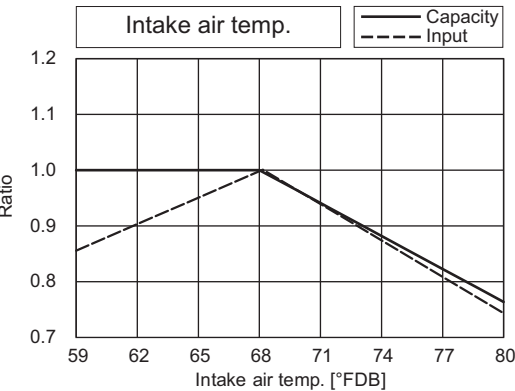
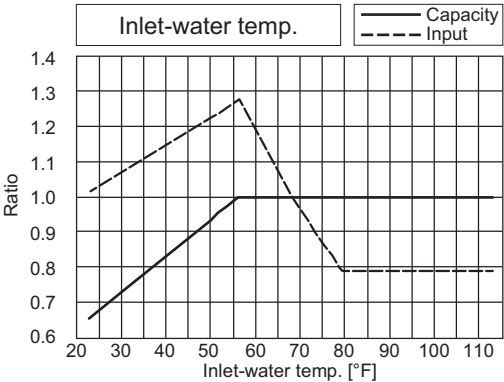


PQHY-P-Z(S)LMU-B

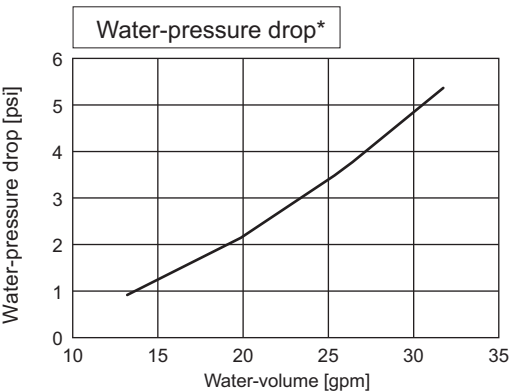
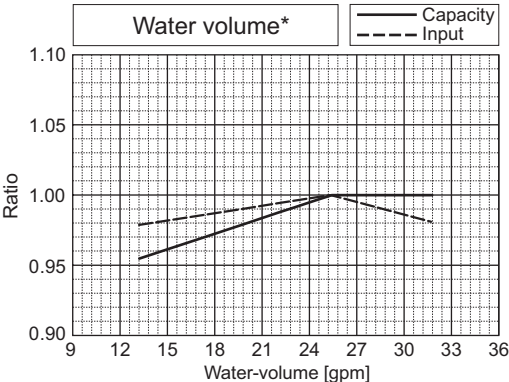
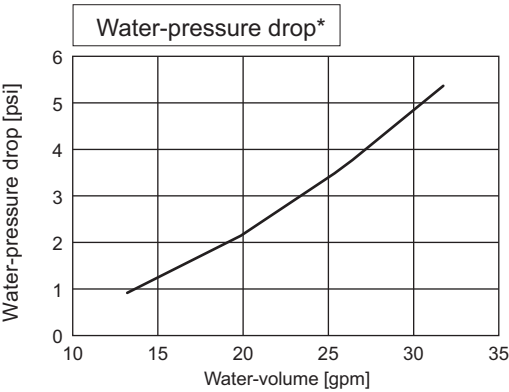
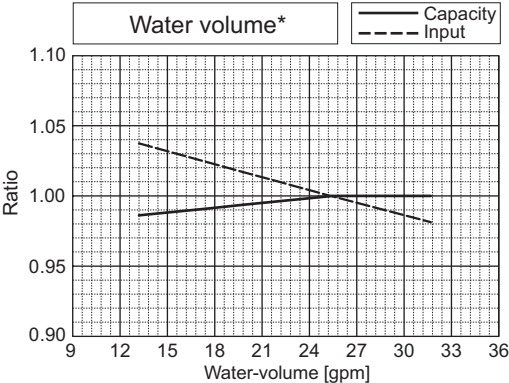
PQHY-		P240ZSLMU
Nominal Cooling Capacity	kW	70.3
	BTU/h	240,000
Input	kW	16.89



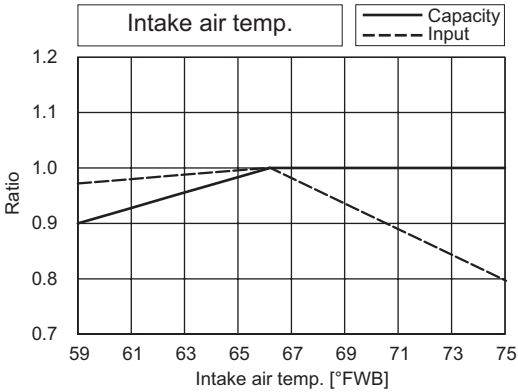
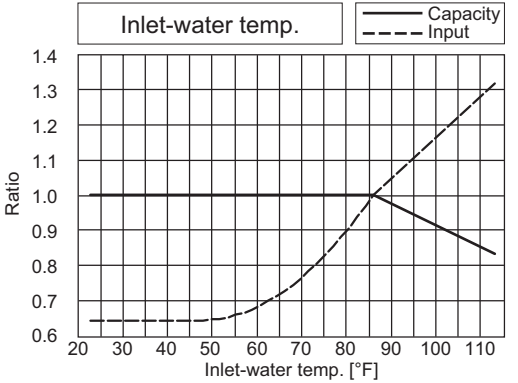
PQHY-		P240ZSLMU
Nominal Heating Capacity	kW	79.1
	BTU/h	270,000
Input	kW	14.58



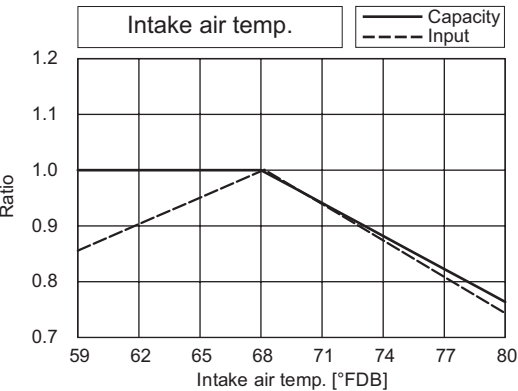
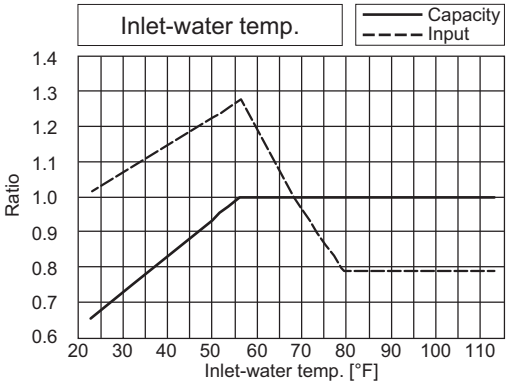
*The drawing indicates characteristic per unit.



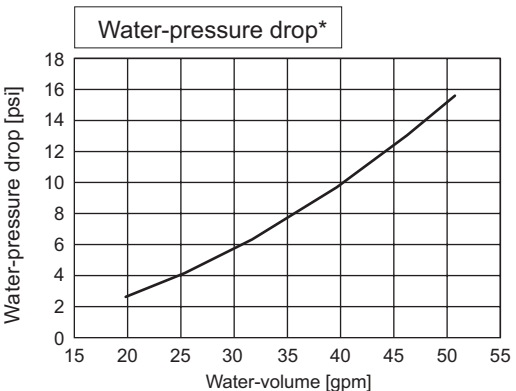
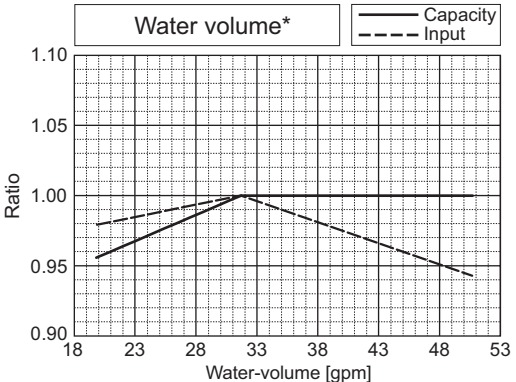
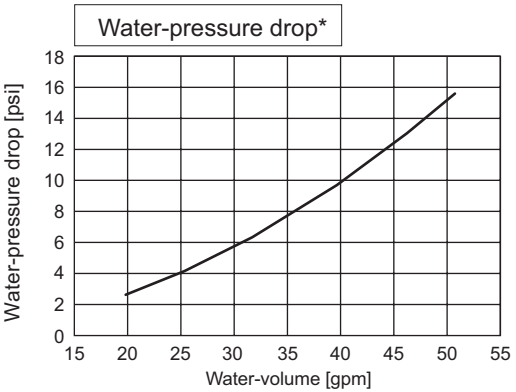
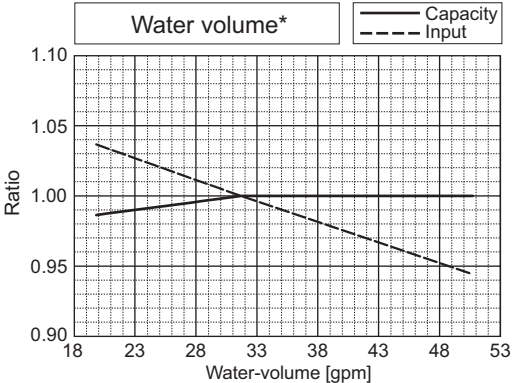
PQHY-		P288ZSLMU
Nominal Cooling Capacity	kW	84.4
	BTU/h	288,000
Input	kW	20.42



PQHY-		P288ZSLMU
Nominal Heating Capacity	kW	94.7
	BTU/h	323,000
Input	kW	17.50

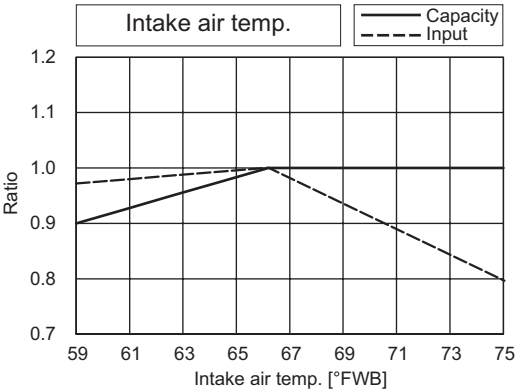
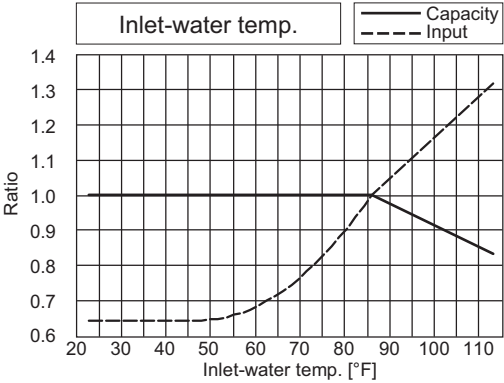


*The drawing indicates characteristic per unit.

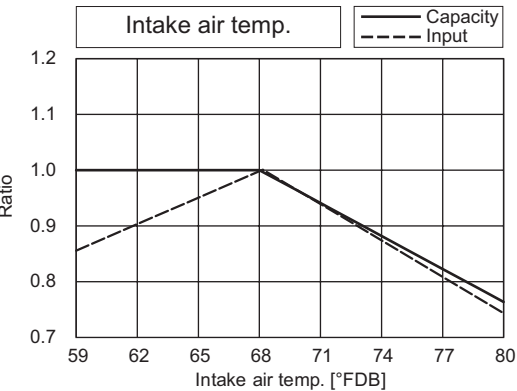
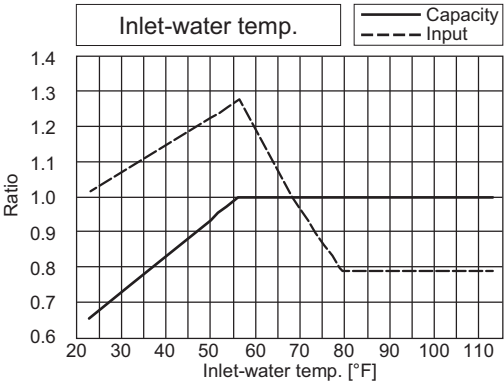


PQHY-P-Z(S)LMU-B

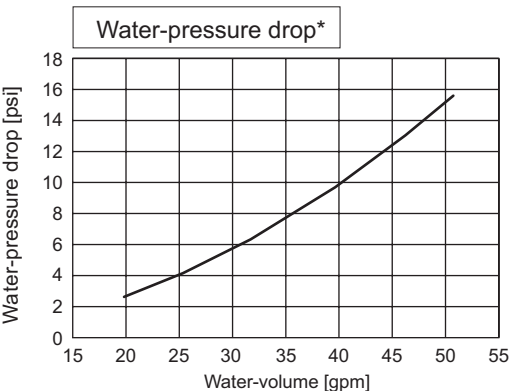
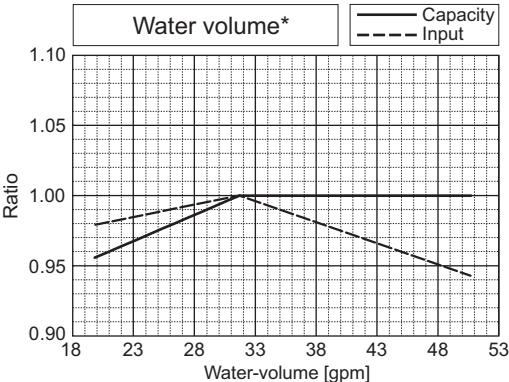
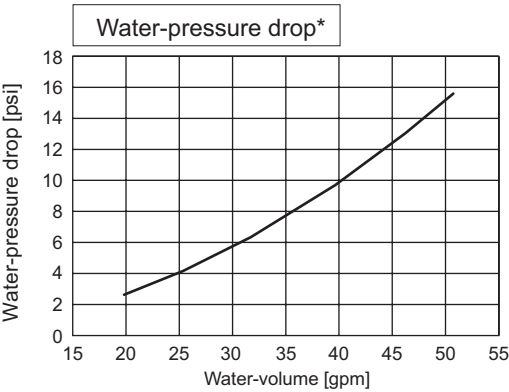
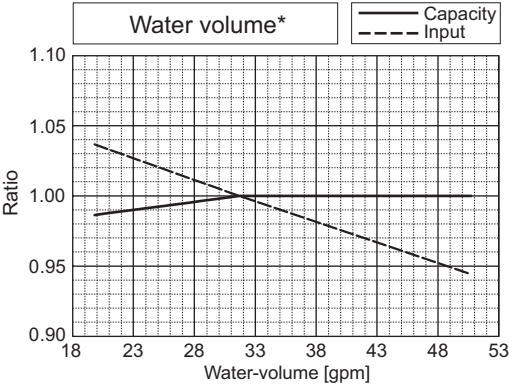
PQHY-		P312ZSLMU
Nominal Cooling Capacity	kW	91.4
	BTU/h	312,000
Input	kW	23.41



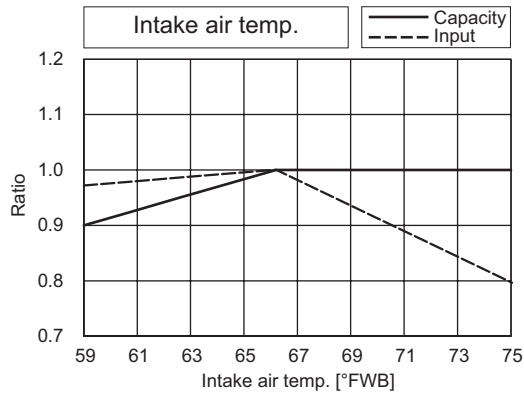
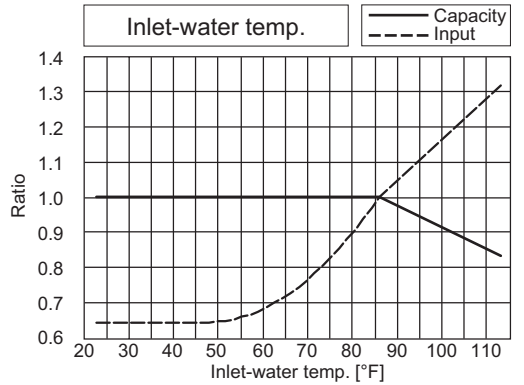
PQHY-		P312ZSLMU
Nominal Heating Capacity	kW	102.6
	BTU/h	350,000
Input	kW	19.11



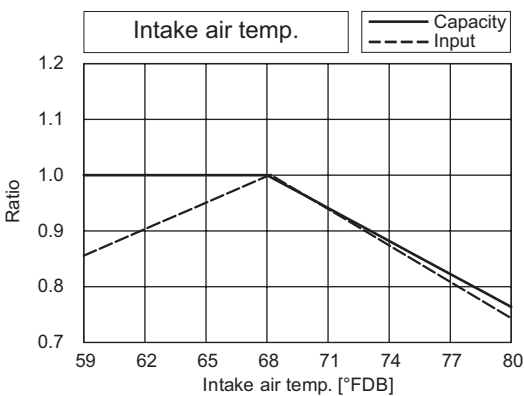
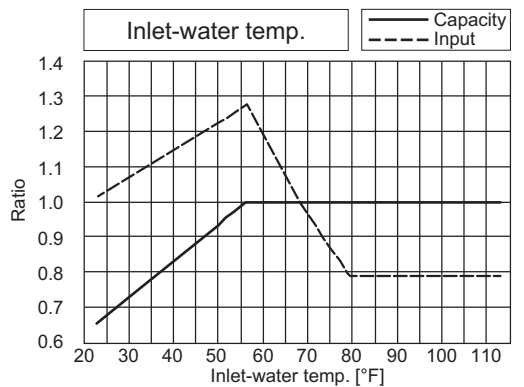
*The drawing indicates characteristic per unit.



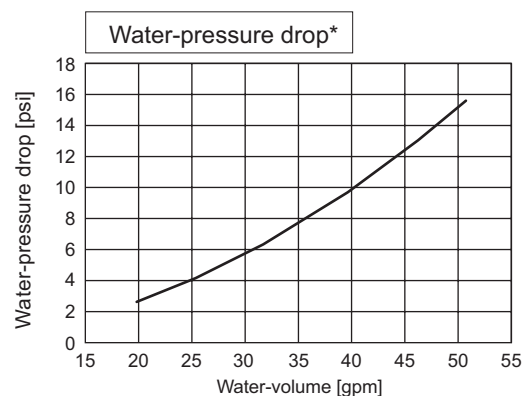
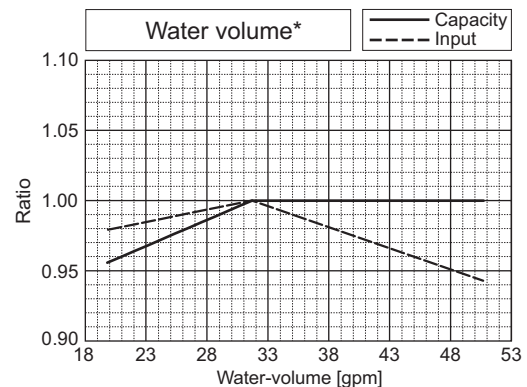
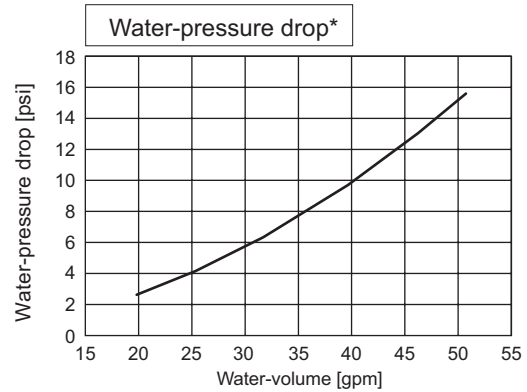
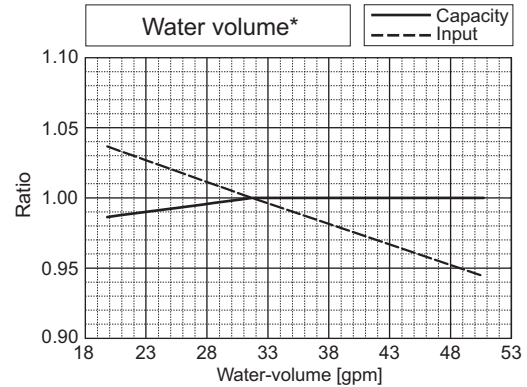
PQHY-		P336ZSLMU
Nominal Cooling Capacity	kW	98.5
	BTU/h	336,000
Input	kW	26.84



PQHY-		P336ZSLMU
Nominal Heating Capacity	kW	110.8
	BTU/h	378,000
Input	kW	20.77

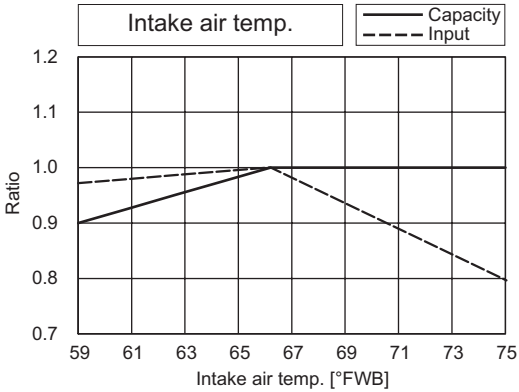
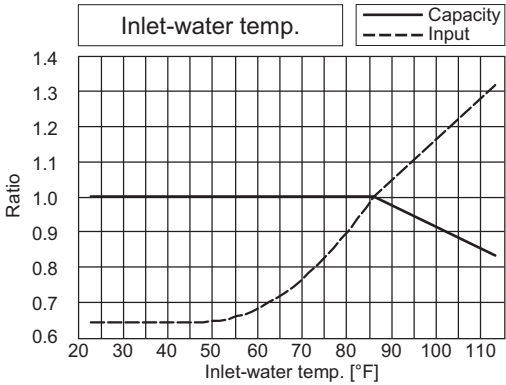


*The drawing indicates characteristic per unit.

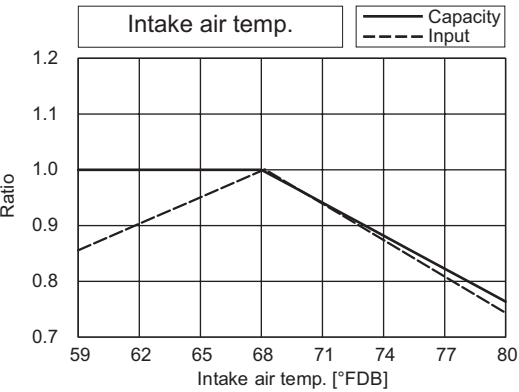
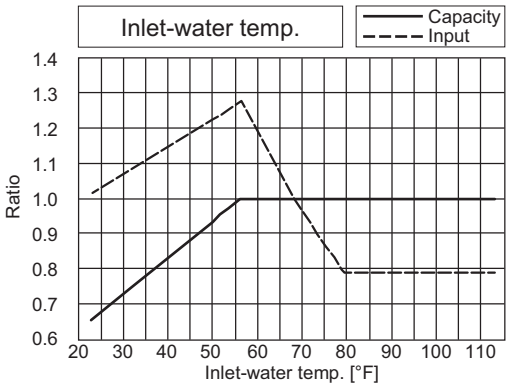


PQHY-P-Z(S)LMU-B

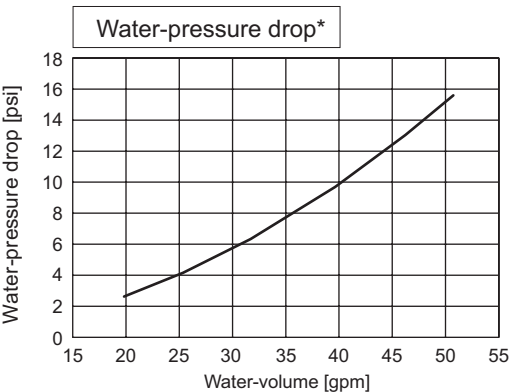
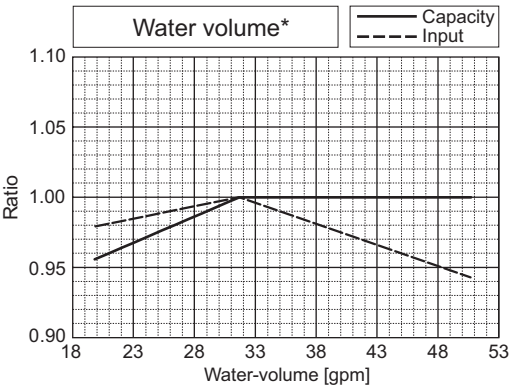
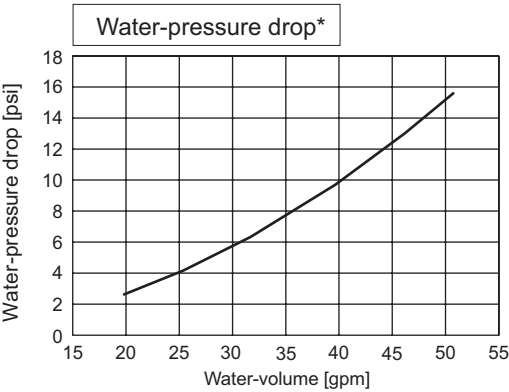
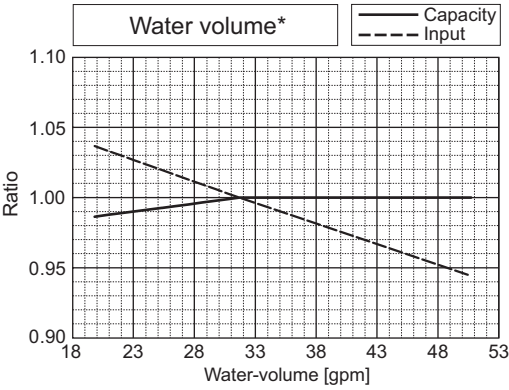
PQHY-		P360ZSLMU
Nominal Cooling Capacity	kW	105.5
	BTU/h	360,000
Input	kW	29.43



PQHY-		P360ZSLMU
Nominal Heating Capacity	kW	118.7
	BTU/h	405,000
Input	kW	22.85



*The drawing indicates characteristic per unit.



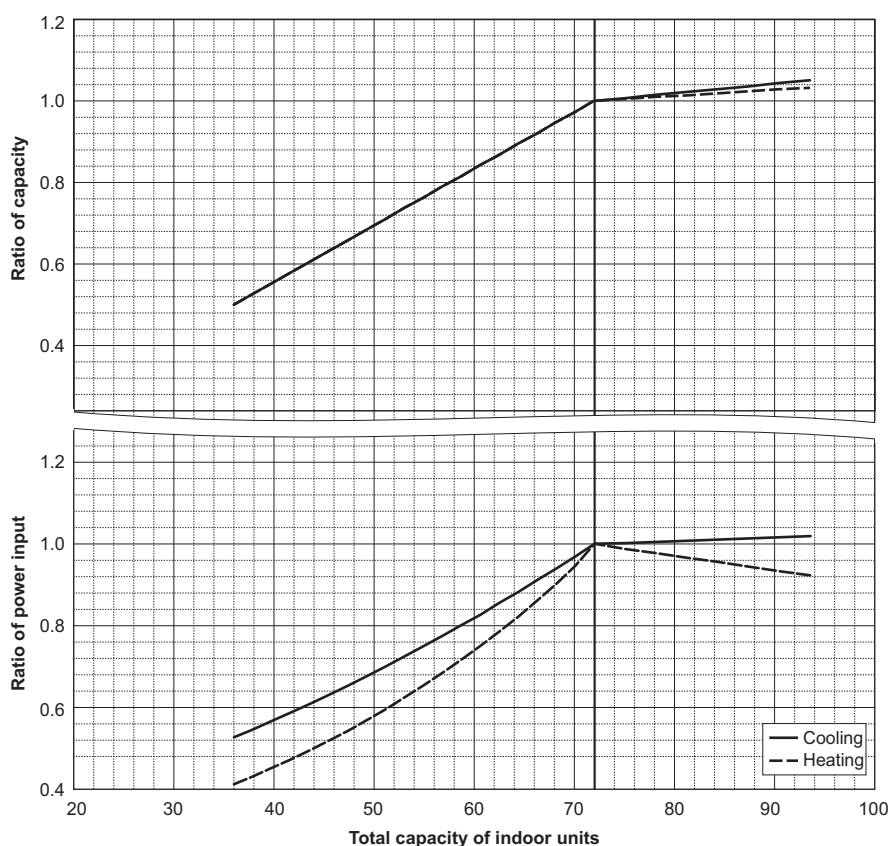
7-2. Correction by total indoor

CITY MULTI system has 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-		P72ZLMU
Nominal cooling capacity	BTU/h	72,000
	kW	21.1
	Input kW	3.61

PQHY-		P72ZLMU
Nominal Heating capacity	BTU/h	80,000
	kW	23.4
	Input kW	4.04

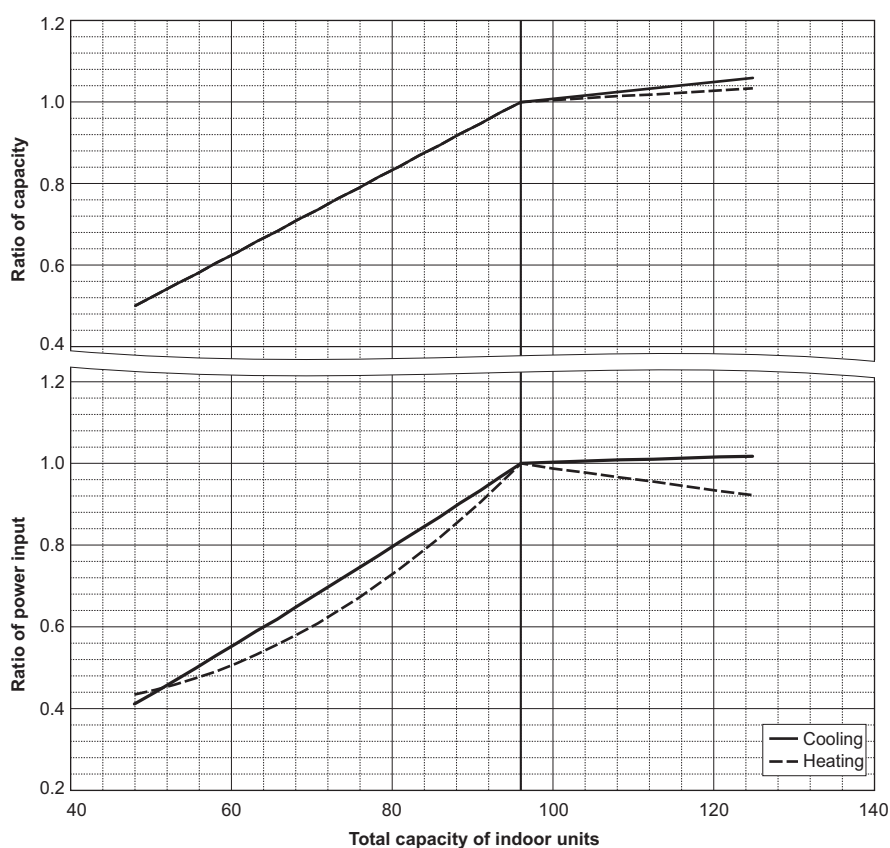
PQHY-P72ZLMU-B



PQHY-		P96ZLMU
Nominal cooling capacity	BTU/h	96,000
	kW	28.1
	Input kW	5.21

PQHY-		P96ZLMU
Nominal Heating capacity	BTU/h	108,000
	kW	31.7
	Input kW	5.64

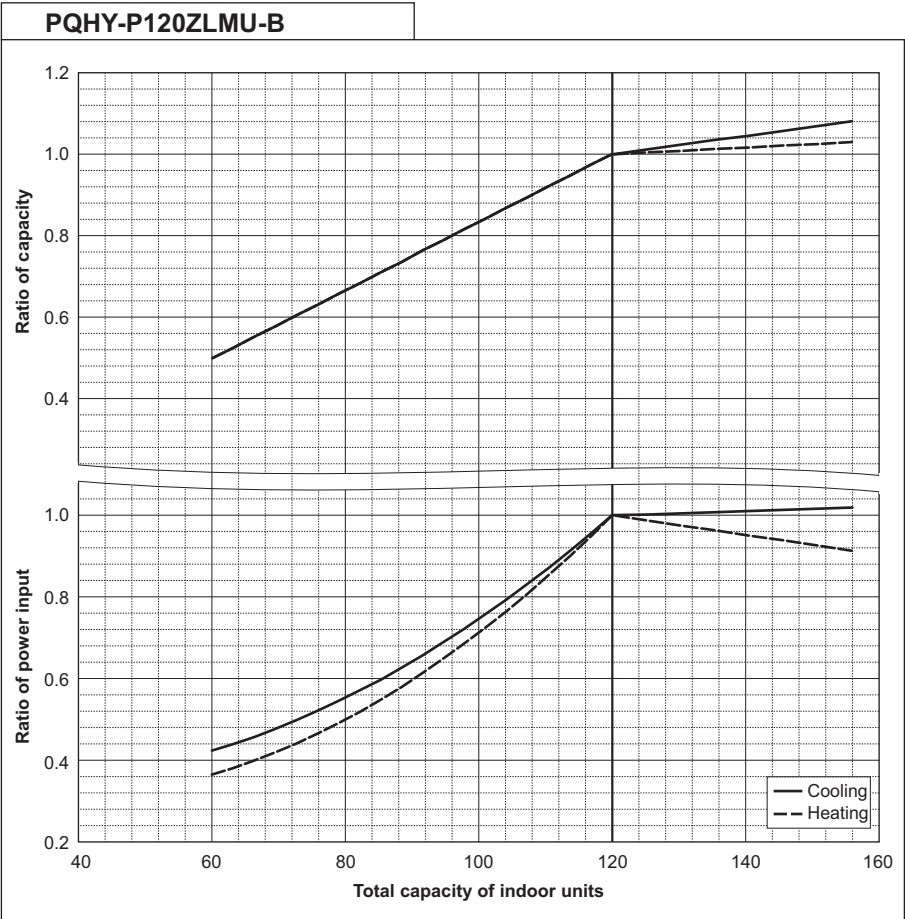
PQHY-P96ZLMU-B



PQHY-P-Z(S)LMU-B

PQHY-		P120ZLMU
Nominal cooling capacity	BTU/h	120,000
	kW	35.2
	Input kW	7.51

PQHY-		P120ZLMU
Nominal Heating capacity	BTU/h	135,000
	kW	39.6
	Input kW	7.09

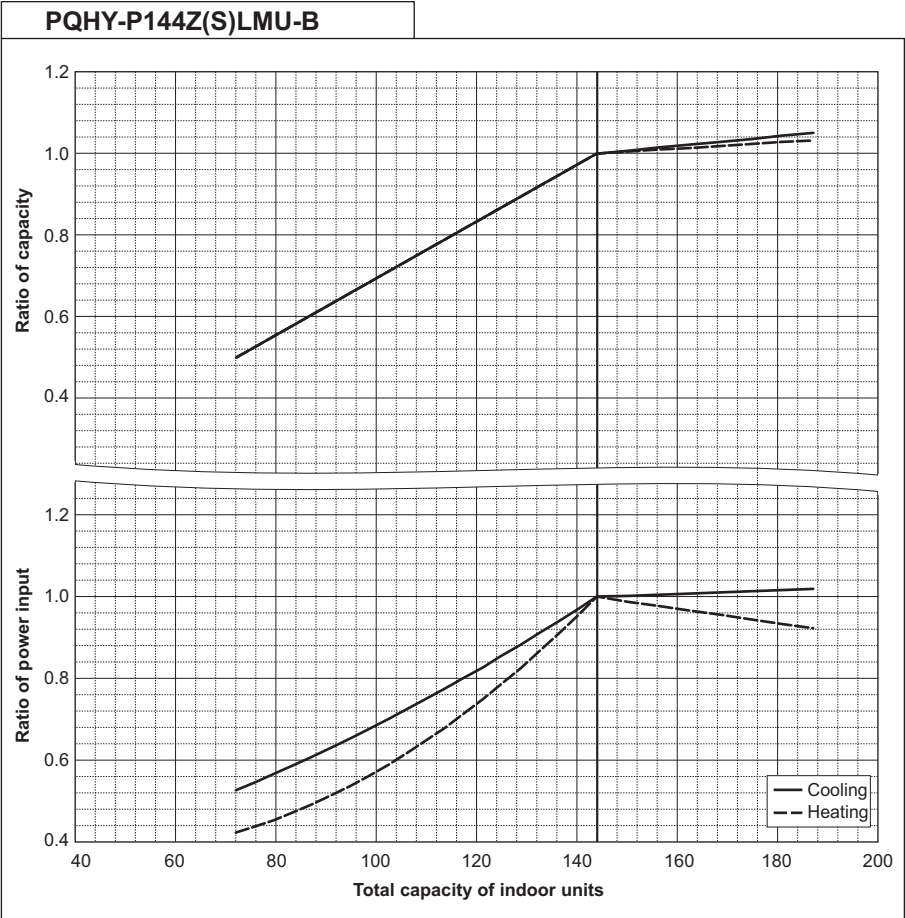


PQHY-		P144ZLMU
Nominal cooling capacity	BTU/h	144,000
	kW	42.2
	Input kW	8.78

PQHY-		P144ZLMU
Nominal Heating capacity	BTU/h	160,000
	kW	46.9
	Input kW	8.11

PQHY-		P144ZSLMU
Nominal cooling capacity	BTU/h	144,000
	kW	42.2
	Input kW	7.11

PQHY-		P144ZSLMU
Nominal Heating capacity	BTU/h	160,000
	kW	46.9
	Input kW	7.45



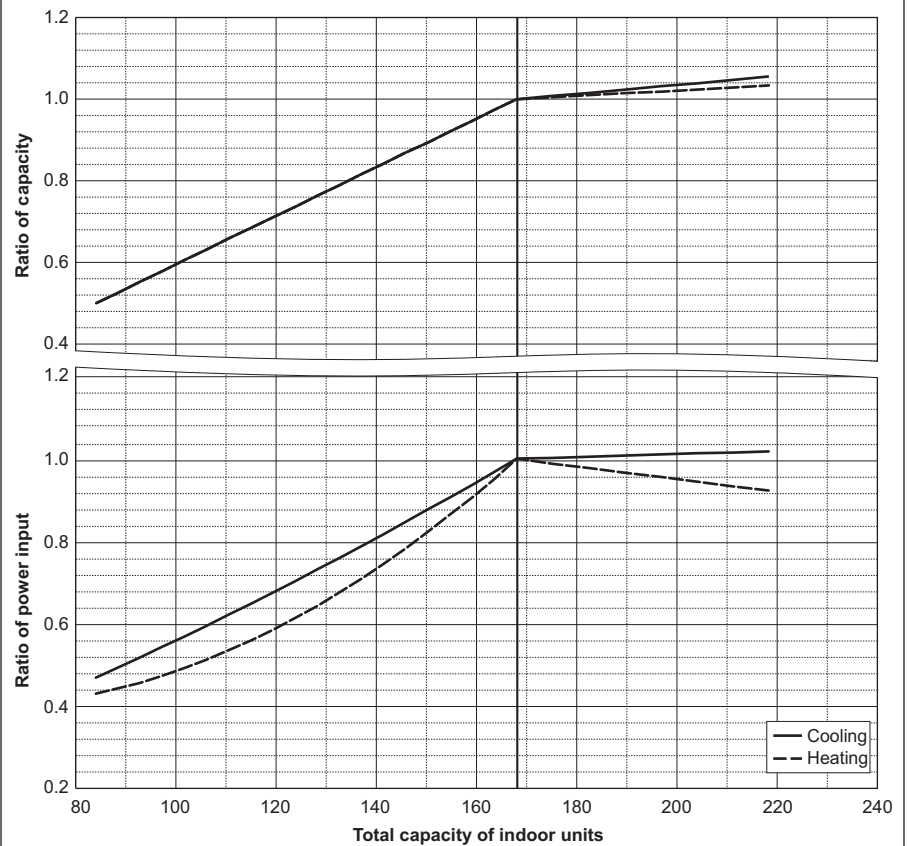
PQHY-		P168ZLMU
Nominal cooling capacity	BTU/h	168,000
	kW	49.2
	Input kW	12.05

PQHY-		P168ZLMU
Nominal Heating capacity	BTU/h	188,000
	kW	55.1
	Input kW	9.86

PQHY-		P168ZSLMU
Nominal cooling capacity	BTU/h	168,000
	kW	49.2
	Input kW	9.33

PQHY-		P168ZSLMU
Nominal Heating capacity	BTU/h	188,000
	kW	55.1
	Input kW	9.34

PQHY-P168Z(S)LMU-B



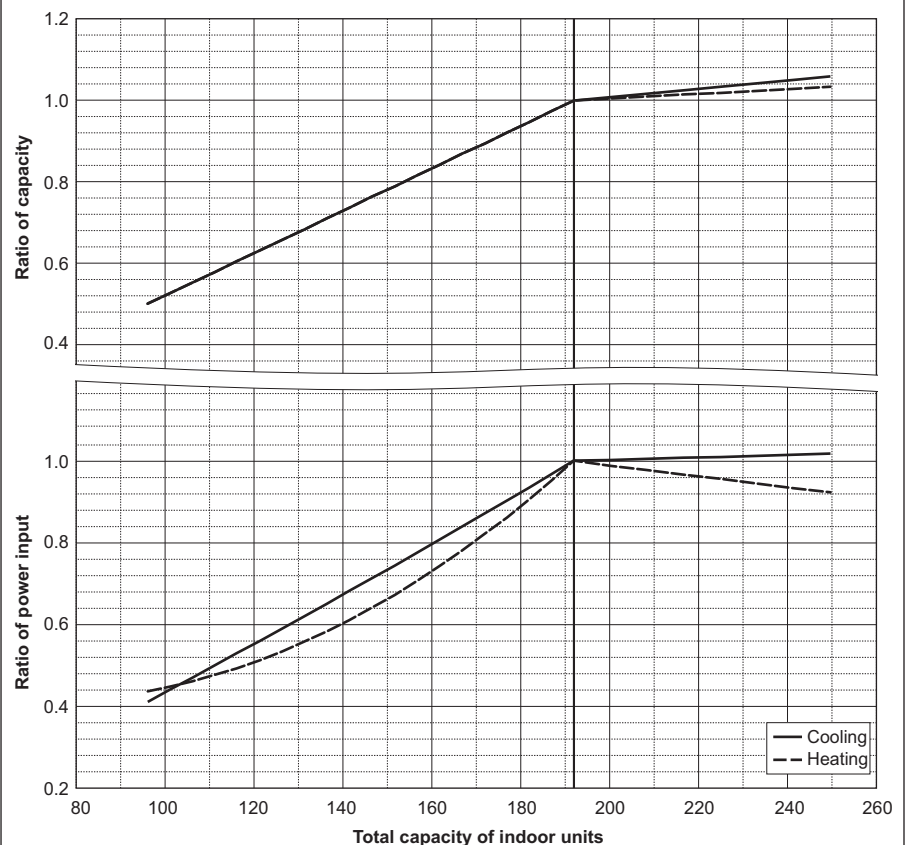
PQHY-		P192ZLMU
Nominal cooling capacity	BTU/h	192,000
	kW	56.3
	Input kW	15.05

PQHY-		P192ZLMU
Nominal Heating capacity	BTU/h	215,000
	kW	63.0
	Input kW	11.90

PQHY-		P192ZSLMU
Nominal cooling capacity	BTU/h	192,000
	kW	56.3
	Input kW	11.30

PQHY-		P192ZSLMU
Nominal Heating capacity	BTU/h	215,000
	kW	63.0
	Input kW	11.02

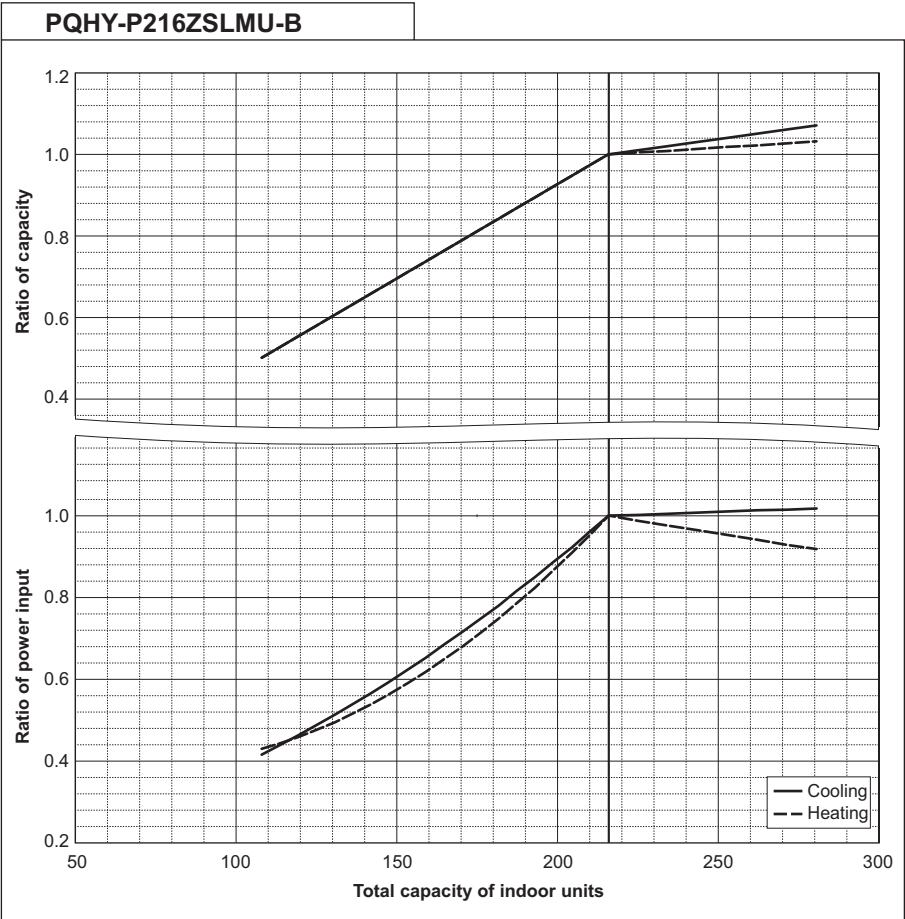
PQHY-P192Z(S)LMU-B



PQHY-P-Z(S)LMU-B

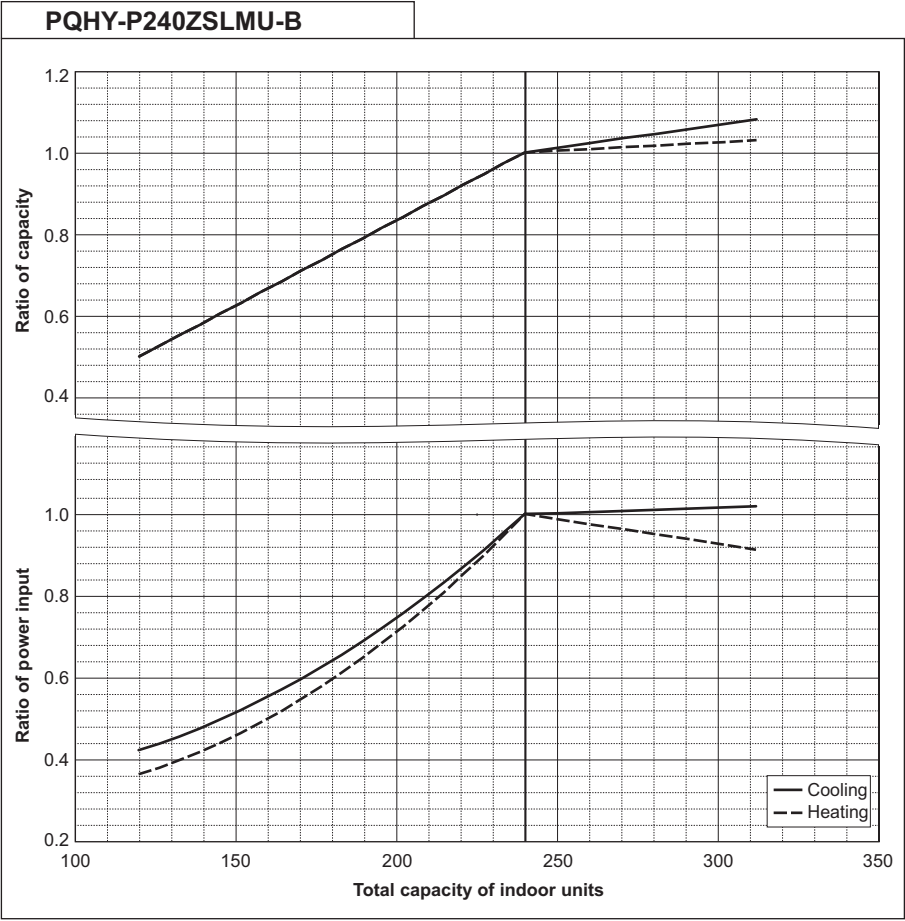
PQHY-		P216ZSLMU
Nominal cooling capacity	BTU/h	216,000
	kW	63.3
	Input kW	14.03

PQHY-		P216ZSLMU
Nominal Heating capacity	BTU/h	243,000
	kW	71.2
	Input kW	12.88



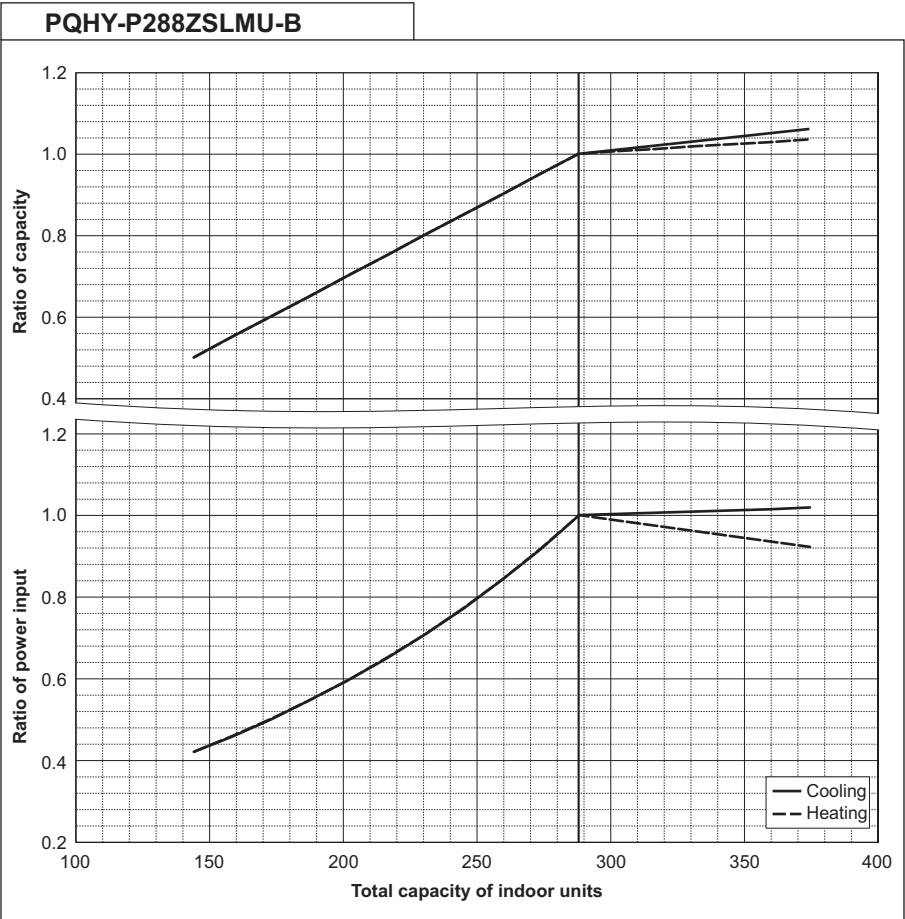
PQHY-		P240ZSLMU
Nominal cooling capacity	BTU/h	240,000
	kW	70.3
	Input kW	16.89

PQHY-		P240ZSLMU
Nominal Heating capacity	BTU/h	270,000
	kW	79.1
	Input kW	14.58



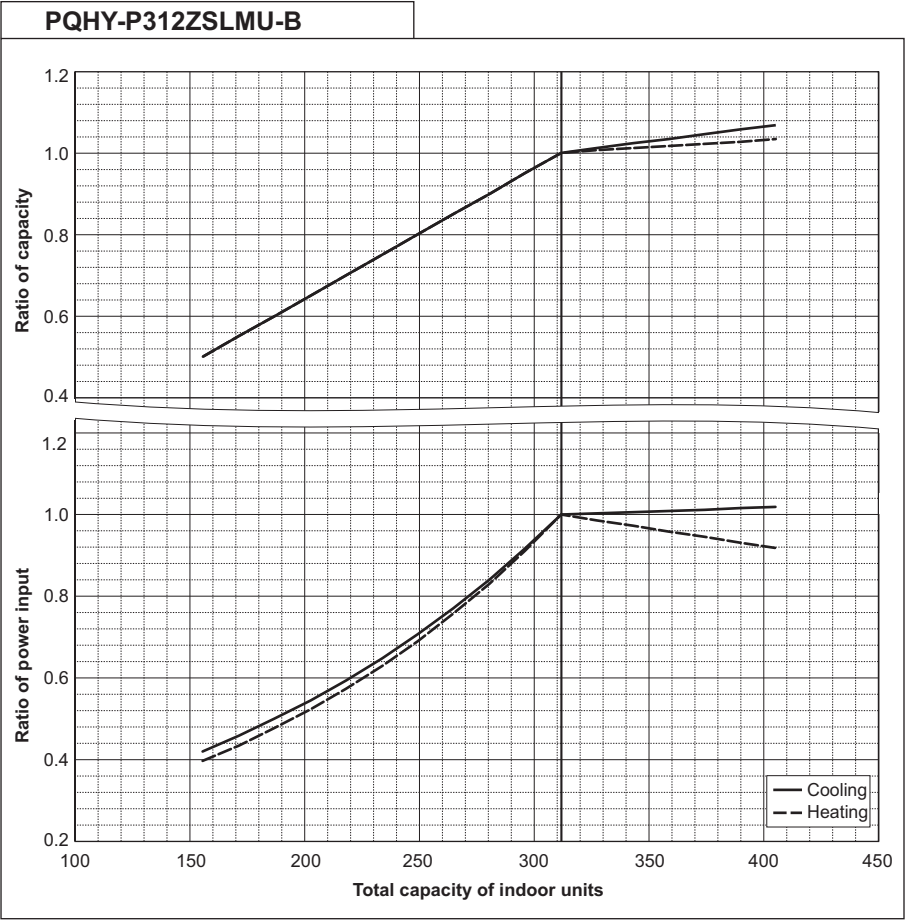
PQHY-		P288ZSLMU
Nominal cooling capacity	BTU/h	288,000
	kW	84.4
	Input kW	20.42

PQHY-		P288ZSLMU
Nominal Heating capacity	BTU/h	323,000
	kW	94.7
	Input kW	17.50



PQHY-		P312ZSLMU
Nominal cooling capacity	BTU/h	312,000
	kW	91.4
	Input kW	23.41

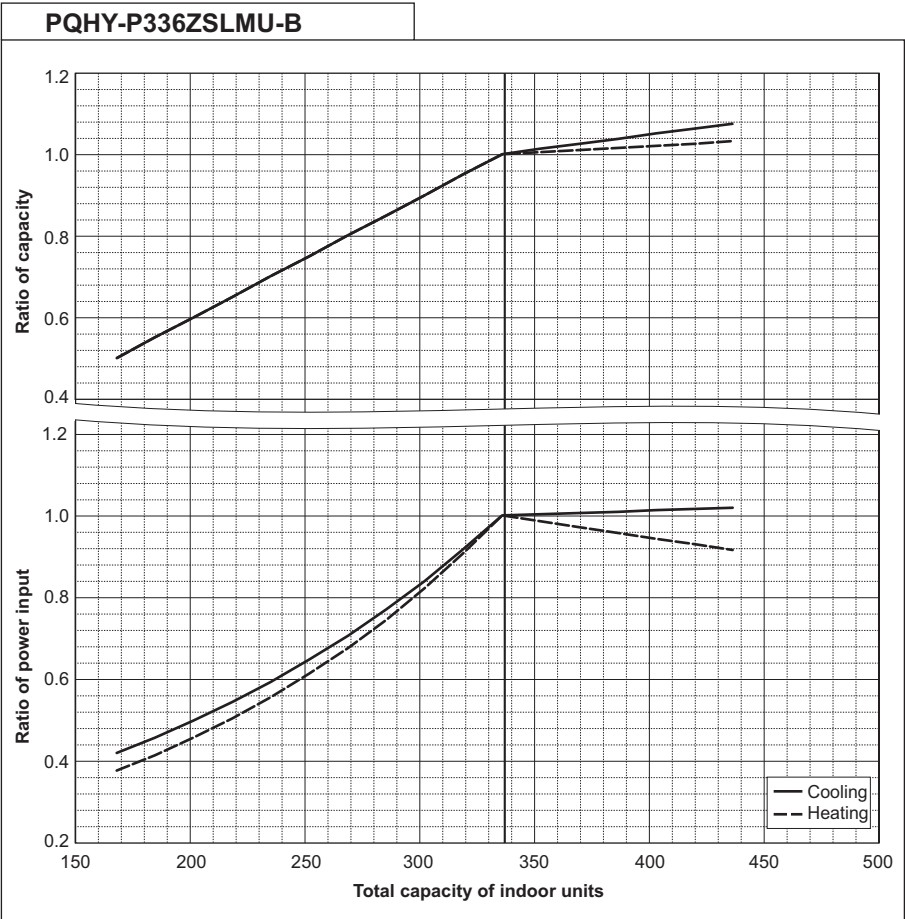
PQHY-		P312ZSLMU
Nominal Heating capacity	BTU/h	350,000
	kW	102.6
	Input kW	19.11



PQHY-P-Z(S)LMU-B

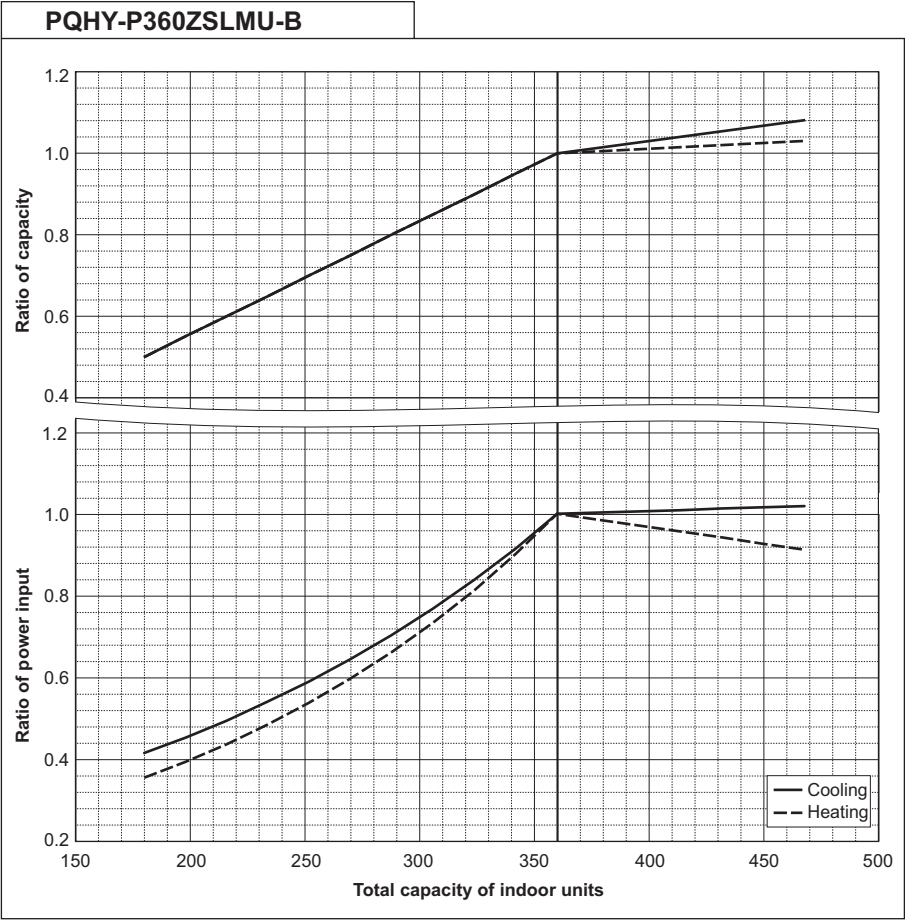
PQHY-		P336ZSLMU
Nominal cooling capacity	BTU/h	336,000
	kW	98.5
	Input kW	26.84

PQHY-		P336ZSLMU
Nominal Heating capacity	BTU/h	378,000
	kW	110.8
	Input kW	20.77



PQHY-		P360ZSLMU
Nominal cooling capacity	BTU/h	360,000
	kW	105.5
	Input kW	29.43

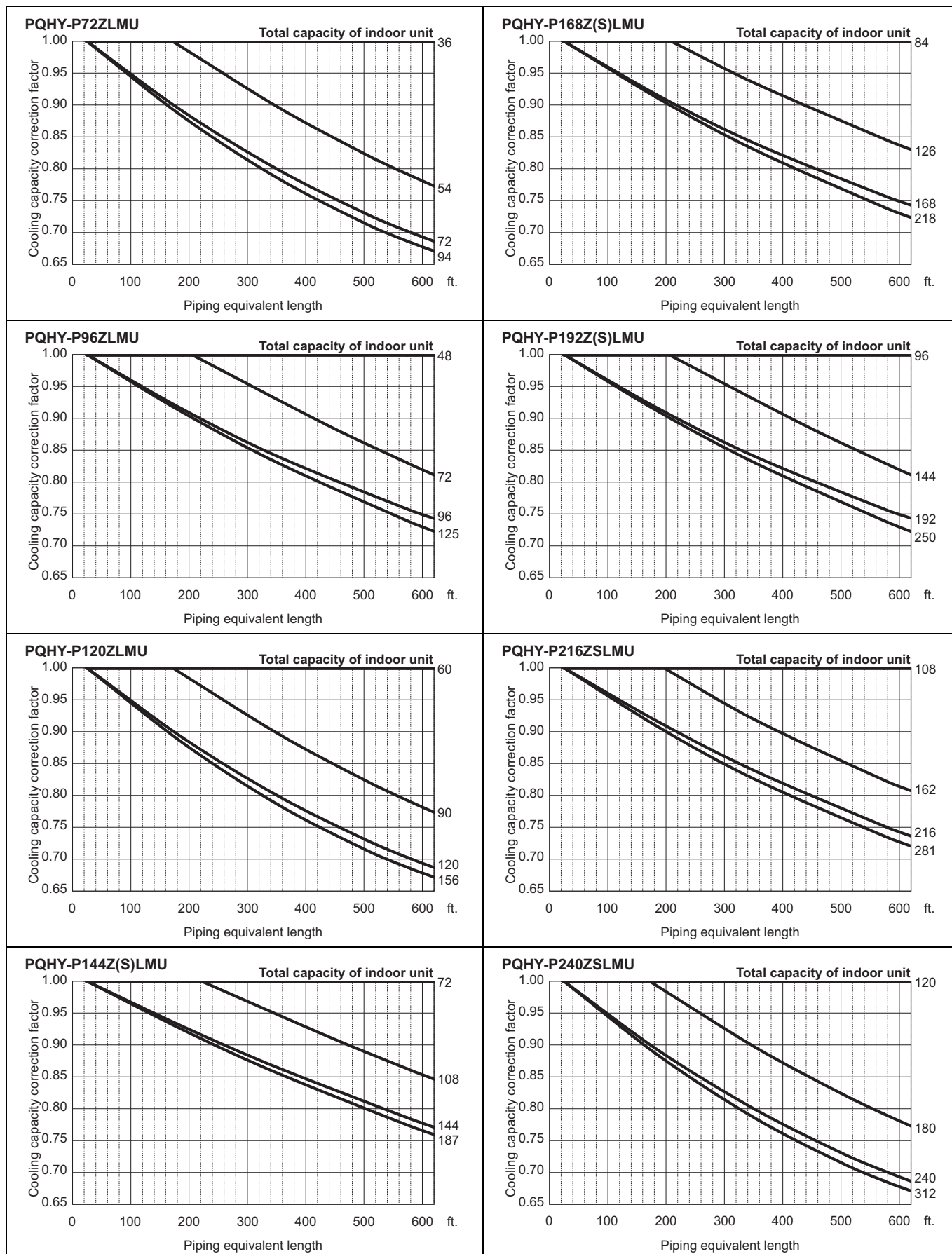
PQHY-		P360ZSLMU
Nominal Heating capacity	BTU/h	405,000
	kW	118.7
	Input kW	22.85



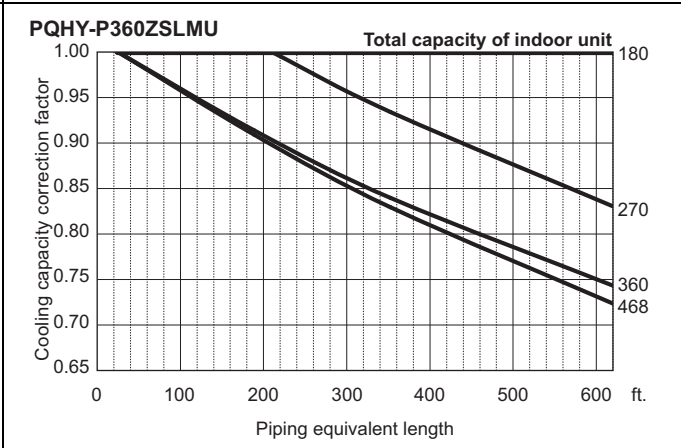
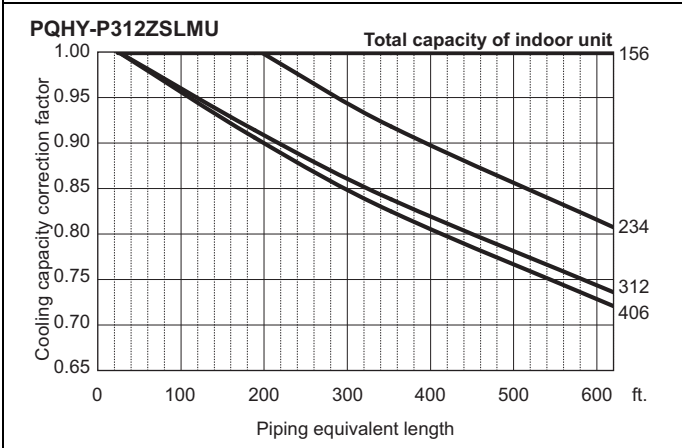
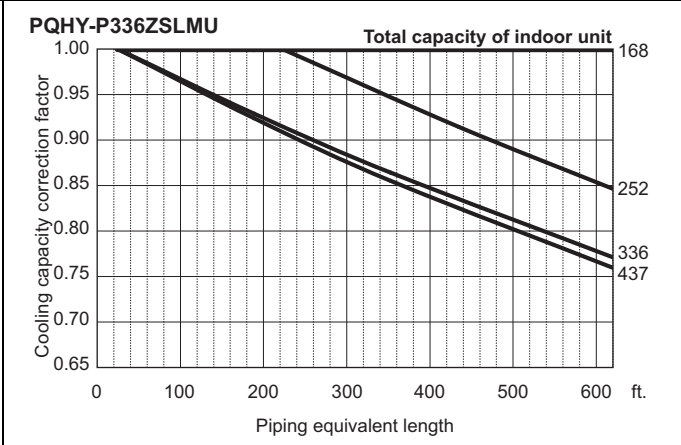
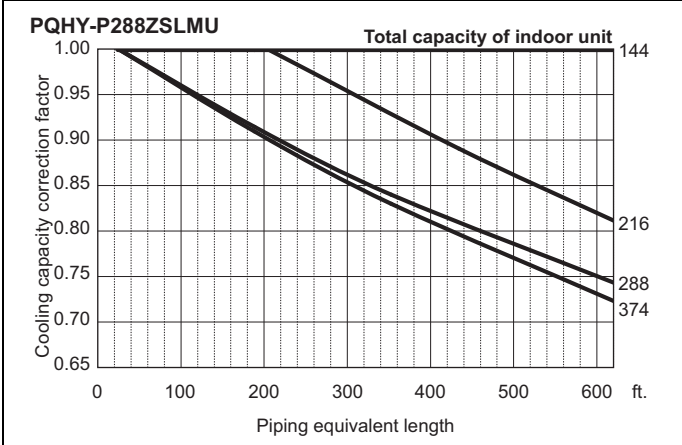
7-3. Correction by refrigerant piping length

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.

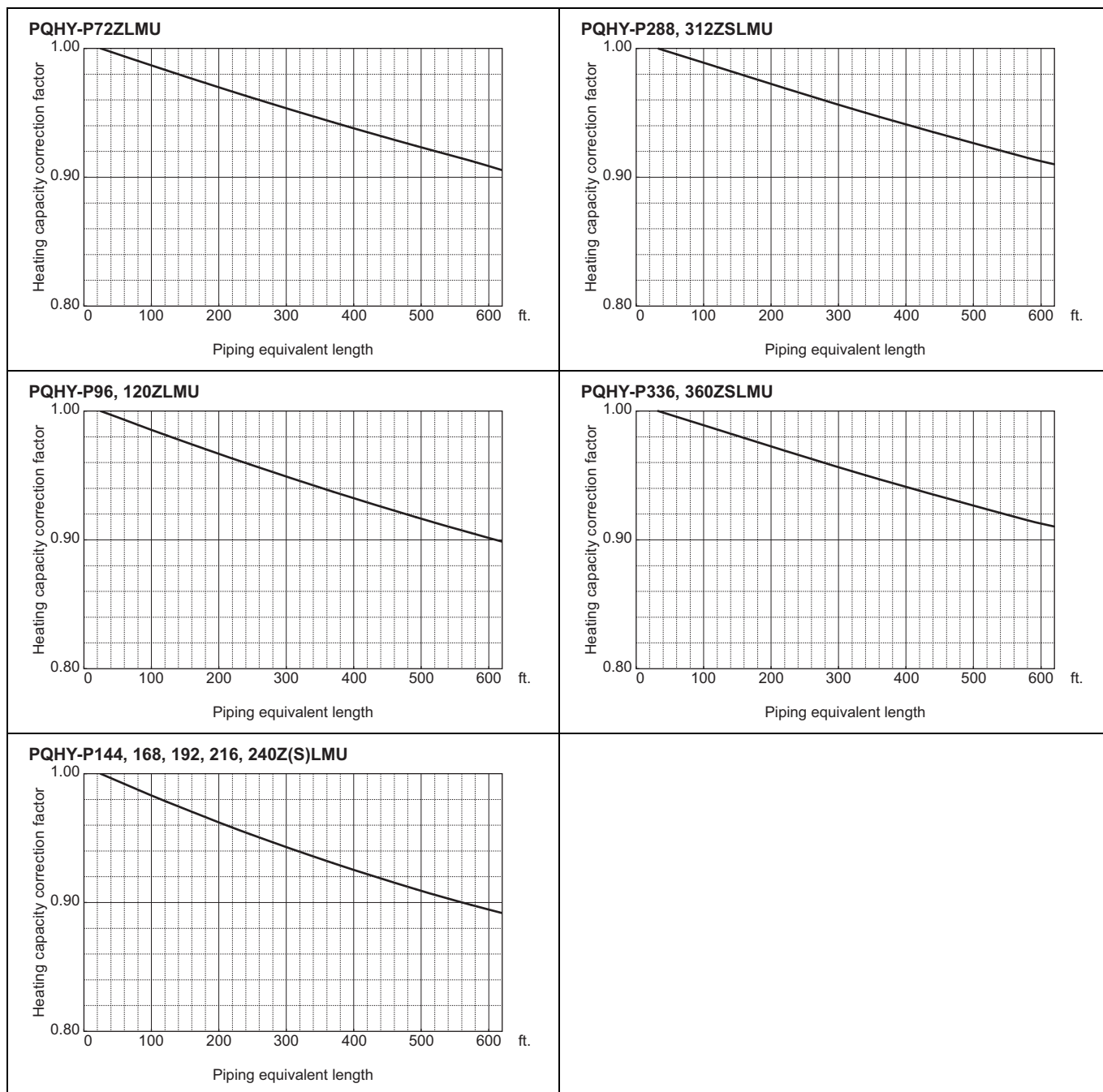
7-3-1. Cooling capacity correction



PQHY-P-Z(S)LMU-B



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-A2, PQRY-P-Y(S)LMU-A2

1. SPECIFICATIONS	166
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1. SPECIFICATIONS

WR2-Series

PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model			PQRY-P72TLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	72,000		
		kW	21.1		
		Power input	kW	3.61	
		(208-230) Current input	A	11.1-10.0	
	(Rated)	BTU/h	69,000		
		kW	20.2		
		Power input	kW	3.60	3.59
		(208-230) Current input	A	11.1-10.0	11.0-10.0
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)	*2	BTU/h	80,000		
		kW	23.4		
		Power input	kW	4.04	
		(208-230) Current input	A	12.4-11.2	
	(Rated)	BTU/h	76,000		
		kW	22.3		
		Power input	kW	3.78	3.36
		(208-230) Current input	A	11.6-10.5	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	50~150% of heat source unit capacity			
	Model/Quantity	P04~P96/1~18			
Sound power level (measured in anechoic room) *3		dB <A>	60.5		
Refrigerant	High pressure	in. (mm)	5/8 (15.88) Brazed		
piping diameter	Low pressure	in. (mm)	3/4 (19.05) Brazed		
Minimum Circuit Ampacity		A	17-16		
Maximum Overcurrent Protection		A	30-25		
Circulating water	Water flow rate	G/h	1,440		
		G/min	24		
		m³/h	5.45		
		L/min	91		
		cfm	3.2		
	Pressure drop	psi	3.48		
		kPa	24		
	Operating volume range	G/h	793 ~ 1,902		
		G/min	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	0.035		
	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)	377 (171)		
Heat exchanger			plate type		
	Water volume in plate	G	1.22		
		l	4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			-		
Drawing	External		KB94C8BU		
	Wiring		KE94L341		
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, 301, 306S-G, CMY-R302, 303, 304, 305S-G1 BC controller: CMB-P104, 106, 108, 1012, 1016NU-J2 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2		
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back on. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.		

Notes:

- 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%
- 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%
- The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Unit converter

BTU/h	=kW x 3.412
cfm	=m³/min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P96TLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)		*1	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	5.22	5.45
		Current input	A	16.0-14.5	16.8-15.2
	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)		*2	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	4.49	4.48
		Current input	A	13.8-12.5	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 power level (measured in anechoic room) *3			dB <A>	65.0	
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	25-22	
Maximum Overcurrent Protection			A	45-35	
Circulating water	Water flow rate	G/h	1,522		
		G/min	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	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	0.035		
	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)	377 (171)		
Heat exchanger			plate type		
	Water volume in plate	G	1.22		
		l	4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			-		
Drawing	External		KB94C8BU		
	Wiring		KE94L341		
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-P104,106,108,1012,1016NU-J2 Main BC controller: CMB-P108,1012,1016NU-JA2,CMB-1016NU-KA2 Sub BC controller: CMB-P104,108NU-KB2		
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%	cfm = m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs = kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series

PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model			PQRY-P120TLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)		*1 BTU/h	120,000		
		kW	35.2		
	(208-230)	Power input	kW	7.51	
		Current input	A	23.1-20.9	
	(Rated)	BTU/h	115,000		
		kW	33.7		
	(208-230)	Power input	kW	7.38	7.77
		Current input	A	22.7-20.5	23.9-21.6
	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)		*2 BTU/h	135,000		
		kW	39.6		
	(208-230)	Power input	kW	7.09	
		Current input	A	21.8-19.7	
	(Rated)	BTU/h	129,000		
		kW	37.8		
	(208-230)	Power input	kW	5.78	5.89
		Current input	A	17.8-16.1	18.1-16.4
	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~P96/1~30		
Sound power level (measured in anechoic room) *3			dB <A> 71.0		
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 35-32		
Maximum Overcurrent Protection			A 60-50		
Circulating water	Water flow rate	G/h	1,522		
		G/min	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	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	0.035		
	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)	377 (171)		
Heat exchanger			plate type		
	Water volume in plate	G	1.22		
		l	4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			-		
Drawing	External		KB94C8BU		
	Wiring		KE94L341		
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, 106, 108, 1012, 1016NU-J2 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2		
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.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.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%	cfm =m³/min x 35.31
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series

Heat Source Model			PQRY-P144TLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	144,000		
		kW	42.2		
	Power input	8.78			
		(208-230) Current input	27.0-24.4		
	(Rated)	BTU/h	138,000		
		kW	40.4		
	Power input	9.44	10.12		
		(208-230) Current input	29.1-26.3	31.2-28.2	
	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)	*2	BTU/h	160,000		
		kW	46.9		
	Power input	8.11			
		(208-230) Current input	25.0-22.6		
	(Rated)	BTU/h	152,000		
		kW	44.5		
	Power input	7.29	7.92		
		(208-230) Current input	22.4-20.3	24.4-22.0	
	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 power level (measured in anechoic room) *3			dB <A>	68.0	
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	40-40		
Maximum Overcurrent Protection		A	70-70		
Circulating water	Water flow rate	G/h	1,902		
		G/min	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	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	0.045		
	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			plate type		
	Water volume in plate	G	1.22		
		l	4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			-		
Drawing	External		KB94C8BV		
	Wiring		KE94L342		
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, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2		
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%	cfm = m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs = kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series

PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model			PQRY-P168TLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)		*1 BTU/h	168,000		
		kW	49.2		
	(208-230)	Power input kW	12.05		
		Current input A	37.1-33.6		
	(Rated)	BTU/h	160,000		
		kW	46.9		
	(208-230)	Power input kW	11.98	12.47	
		Current input A	36.9-33.4	38.4-34.7	
	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)		*2 BTU/h	188,000		
		kW	55.1		
	(208-230)	Power input kW	9.86		
		Current input A	30.4-27.5		
	(Rated)	BTU/h	178,000		
		kW	52.2		
	(208-230)	Power input kW	8.86	9.66	
		Current input A	27.3-24.7	29.7-26.9	
	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 power level (measured in anechoic room) *3			dB <A>		
			70.0		
Refrigerant	High pressure	in. (mm)	7/8 (22.2) Brazed		
piping diameter	Low pressure	in. (mm)	1-1/8 (28.58) Brazed		
Minimum Circuit Ampacity			A		
			50-48		
Maximum Overcurrent Protection			A		
			90-80		
Circulating water	Water flow rate	G/h	1,902		
		G/min	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	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	0.045		
	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			plate type		
	Water volume in plate	G	1.22		
		l	4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			-		
Drawing	External		KB94C8BV		
	Wiring		KE94L342		
Standard attachment	Document		Installation Manual		
	Accessory		Details refer to External Drw		
Optional parts			joint: CMY-Y102SS-G2,CMY-Y102LS-G2,CMY-R160-J1,CMY-R201,202,203,204,306S-G,CMY-R302,303,304,305S-G1 Main BC controller: CMB-P108,1012,1016NU-JA2,CMB-P1016NU-KA2 Sub BC controller: CMB-P104,108NU-KB2		
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.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.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%	cfm =m³/min x 35.31
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P192TLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)		*1 BTU/h	192,000		
		kW	56.3		
	(208-230)	Power input	15.05		
		Current input	46.4-41.9		
	(Rated)	BTU/h	184,000		
		kW	53.9		
	(208-230)	Power input	15.17	15.00	
		Current input	46.7-42.3	46.2-41.8	
	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)		*2 BTU/h	215,000		
		kW	63.0		
	(208-230)	Power input	11.90		
		Current input	36.7-33.1		
	(Rated)	BTU/h	204,000		
		kW	59.8		
	(208-230)	Power input	10.78	11.53	
		Current input	33.2-30.0	35.5-32.1	
	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 power level (measured in anechoic room) *3			dB <A>	72.0	
Refrigerant	High pressure	in. (mm)	7/8 (22.2) Brazed		
piping diameter	Low pressure	in. (mm)	1-1/8 (28.58) Brazed		
Minimum Circuit Ampacity			A	66-63	
Maximum Overcurrent Protection			A	110-110	
Circulating water	Water flow rate	G/h	1,902		
		G/min	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	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	0.045		
	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			plate type		
	Water volume in plate	G	1.22		
		l	4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			-		
Drawing	External		KB94C8BV		
	Wiring		KE94L342		
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, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2		
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back on. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.		

Notes:

- 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%
- 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%
- The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Unit converter

BTU/h	=kW x 3.412
cfm	=m³/min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

Heat Source Model				PQRY-P216TLMU-A2 < For Ground source >				
Indoor Model				Non-Ducted		Ducted		
Power source				3-phase 3-wire 208-230 V ±10% 60 Hz				
Cooling capacity (Nominal)		*1	BTU/h	216,000				
			kW	63.3				
		Power input	kW	19.23				
			(208-230) Current input	A	59.3-53.6			
		(Rated)		BTU/h	206,000			
				kW	60.4			
		Power input	kW	18.12		17.22		
			(208-230) Current input	A	55.8-50.5		53.1-48.0	
		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)		*2	BTU/h	243,000				
			kW	71.2				
		Power input	kW	13.04				
			(208-230) Current input	A	40.2-36.3			
		(Rated)		BTU/h	232,000			
				kW	68.0			
		Power input	kW	11.78		12.07		
			(208-230) Current input	A	36.3-32.8		37.2-33.6	
		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~P96/2~50 (Connectable branch pipe number is max. 48.)				
Sound power level (measured in anechoic room) *3			dB <A>	72.5				
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	78-78				
Maximum Overcurrent Protection			A	125-125				
Circulating water		Water flow rate	G/h	3,044				
			G/min	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	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				
		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)	549 (249)				
Heat exchanger				plate type				
		Water volume in plate	G	2.43				
			l	9.2				
		Water pressure Max.	psi	290				
			MPa	2.0				
HIC circuit (HIC: Heat Inter-Changer)				-				
Drawing		External		KB94C8BW				
		Wiring		KE94L343				
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, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1				
				Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2				
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. 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. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back on. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.				

Notes:

- 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%
- 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%
- The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Unit converter

BTU/h	=kW x 3.412
cfm	=m ³ /min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series

Heat Source Model			PQRY-P240TLMU-A2 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1	BTU/h	224,000			
		kW	65.7			
		Power input	21.14			
		(208-230) Current input	65.1-58.9			
		(Rated)	BTU/h	214,000		
	(208-230)	kW	62.7			
		Power input	kW	18.67	18.61	
		Current input	A	57.5-52.0	57.3-51.9	
		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)	*2	BTU/h	270,000			
		kW	79.1			
		Power input	15.12			
		(208-230) Current input	46.6-42.1			
		(Rated)	BTU/h	258,000		
	(208-230)	kW	75.6			
		Power input	kW	13.75	14.48	
		Current input	A	42.4-38.3	44.6-40.3	
		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 power level (measured in anechoic room) *3			dB <A>	73.0		
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)	1-3/8 (34.93) Braze			
Minimum Circuit Ampacity		A	79-78			
Maximum Overcurrent Protection		A	125-125			
Circulating water	Water flow rate	G/h	3,044			
		G/min	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	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			
	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)	549 (249)			
Heat exchanger	Water volume in plate		plate type			
			G	2.43		
			l	9.2		
	Water pressure Max.	psi	290			
		MPa	2.0			
HIC circuit (HIC: Heat Inter-Changer)			-			
Drawing	External		KB94C8BW			
	Wiring		KE94L343			
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, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2			
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. 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. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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 cfm = m³/min x 35.31 lbs = kg/0.4536
2. 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%	
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series

Heat Source Model			PQRY-P144TSLMU-A2 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1	BTU/h	144,000			
		kW	42.2			
		Power input	kW 7.11			
	(208-230) (Rated)	Current input	A 21.9-19.8			
		BTU/h	138,000			
		kW	40.4			
(208-230)	Power input	kW 6.96		8.17		
	Current input	A 21.4-19.4		25.1-22.7		
	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)	*2	BTU/h 160,000		
			kW	46.9		
Power input			kW 7.45			
(208-230)			Current input	A 22.9-20.7		
(Rated)	BTU/h		152,000			
	kW		44.5			
	Power input	kW 6.50		7.29		
(208-230)	Current input	A 20.0-18.1		22.4-20.3		
	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 power level (measured in anechoic room) *3	dB <A>	63.5	
Refrigerant piping diameter				High pressure	in. (mm) 7/8 (22.2) Brazed	
	Low pressure			in. (mm) 1-1/8 (28.58) Brazed		

Model			PQRY-P72TLMU-A2 < For Ground source >		PQRY-P72TLMU-A2 < For Ground source >
Minimum Circuit Ampacity			A		17-16
Maximum Overcurrent Protection			A		30-25
Circulating water	Water flow rate	G/h	1,522 + 1,522		
		G/min	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
Compressor	Starting method	kPa	24		24
		G/h	793 + 793 ~ 1,902 + 1,902		
		G/min	13.2 + 13.2 ~ 31.7 + 31.7		
		m ³ /h	3.0 + 3.0 ~ 7.2 + 7.2		
		m ³ /h	3.0 + 3.0 ~ 7.2 + 7.2		
	Lubricant		Inverter scroll hermetic compressor x 1		
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
Protection devices			mm		43-5/16 x 34-11/16 x 21-11/16
Refrigerant	High pressure protection	psi	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
		Over-heat protection	Over-heat protection, Over-current protection		
		Over-heat protection	Over-heat protection, Over-current protection		
	Control		R410A x 11 lbs + 1 oz (5.0 kg)		
Net weight			Indoor LEV and BC controller		
Heat exchanger			plate type		plate type
HIC circuit (HIC: Heat Inter-Changer)	Water volume in plate	G	1.22		
		I	4.6		
		psi	290		
	Water pressure Max.	MPa	2.0		
Pipe between unit and distributor			5/8 (15.88) Brazed		5/8 (15.88) Brazed
Drawing			-		3/4 (19.05) Brazed
Standard attachment			KB94C7PU		KE94L341
Optional parts			Installation Manual		Details refer to External Drw
Remarks			Heat Source Twinning kit: CMY-Q100CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-R160-J1, CMY-R201, 202, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2		

Notes:		Unit converter
1. 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. 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%		cfm =m ³ /min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs =kg/0.4536
		*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P168TSLMU-A2 < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz	
Cooling capacity (Nominal)	*1	BTU/h	168,000	
		kW	49.2	
		Power input	9.33	
		Current input	28.7-26.0	
	(Rated)	BTU/h	160,000	
		kW	46.9	
		Power input	8.87	
		Current input	27.3-24.7	
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)	*2	BTU/h	188,000	
		kW	55.1	
		Power input	9.34	
		Current input	28.8-26.0	
	(Rated)	BTU/h	178,000	
		kW	52.2	
		Power input	8.05	
		Current input	24.8-22.4	
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~P96/1~42	
Sound power level (measured in anechoic room) *3		dB <A>	66.5	
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Braze	
	Low pressure	in. (mm)	1-1/8 (28.58) Braze	

Set Model					
Model		PQRY-P96TLMU-A2 < For Ground source >		PQRY-P72TLMU-A2 < For Ground source >	
Minimum Circuit Ampacity		A	25-22		17-16
Maximum Overcurrent Protection		A	45-35		30-25
Circulating water	Water flow rate	G/h	1,522 + 1,522		
		G/min	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	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	0.035		0.035
	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)	377 (171)		377 (171)
Heat exchanger	Water volume in plate		plate type		plate type
			G	1.22	1.22
	I	4.6	4.6		
	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		KB94C7PU		
	Wiring		KE94L341		KE94L341
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-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2			
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm = m ³ /min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs = kg/0.4536
		*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series

Heat Source Model			PQRY-P192TSLMU-A2 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1	BTU/h	192,000			
		kW	56.3			
	(208-230)	Power input	kW	11.30		
		(Rated)	Current input	A	34.8-31.5	
	(208-230)	BTU/h	184,000			
		kW	53.9			
	(208-230)	Power input	kW	10.57		11.54
		Current input	A	32.5-29.4		35.5-32.1
Temp. range of cooling		Indoor	W.B.			
		Inlet water	°F			
Heating capacity (Nominal)			*2			
		BTU/h	215,000			
		kW	63.0			
	(208-230)	Power input	kW	11.02		
		(Rated)	Current input	A	33.9-30.7	
	(208-230)	BTU/h	204,000			
		kW	59.8			
	(208-230)	Power input	kW	9.53		8.82
		Current input	A	29.3-26.5		27.2-24.6
Temp. range of heating		Indoor	D.B.			
		Inlet water	°F			
Indoor unit connectable		Total capacity	50~150% of heat source unit capacity			
		Model/Quantity	P04~P96/1~48			
Sound power level (measured in anechoic room) *3			dB <A>			
Refrigerant piping diameter			High pressure in. (mm)			
			Low pressure in. (mm)			
Set Model						
Model			PQRY-P96TLMU-A2 < For Ground source >		PQRY-P96TLMU-A2 < For Ground source >	
Minimum Circuit Ampacity			A		25-22	
Maximum Overcurrent Protection			A		45-35	
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min	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	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	0.035		0.035	
	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)		377 (171)	
Heat exchanger			plate type		plate type	
	Water volume in plate	G	1.22		1.22	
		l	4.6		4.6	
	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) Braze		3/4 (19.05) Braze	
	Low pressure	in. (mm)	-		7/8 (22.2) Braze	
Drawing	External		KB94C7PU			
	Wiring		KE94L341		KE94L341	
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-R160-J1,CMY-R201,202,203,204,306S-G,CMY-R302,303,304,305S-G1 Main BC controller: CMB-P108,1012,1016NU-JA2,CMB-P1016NU-KA2 Sub BC controller: CMB-P104,108NU-KB2			
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back on. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.			

Notes:

- 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%
- 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%
- The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Unit converter

BTU/h	=kW x 3.412
cfm	=m³/min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series

Heat Source Model			PQRY-P216TSLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	216,000		
		kW	63.3		
		Power input	14.03		
		Current input	43.2-39.1		
		(208-230)	60.4		
	(Rated)	BTU/h	206,000		
		kW	60.4		
		Power input	13.09		
		Current input	40.3-36.5		
		(208-230)	13.88		
Temp. range of cooling	Indoor	W.B.			
	Inlet water	°F			
Heating capacity (Nominal)	*2	BTU/h	243,000		
		kW	71.2		
		Power input	12.88		
		Current input	39.7-35.9		
		(208-230)	68.0		
	(Rated)	BTU/h	232,000		
		kW	68.0		
		Power input	11.11		
		Current input	34.2-30.9		
		(208-230)	10.04		
Temp. range of heating	Indoor	D.B.			
	Inlet water	°F			
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 power level (measured in anechoic room) *3		dB <A>	72.0		
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		

Model			PQRY-P120TI MU-A2 < For Ground source >	PQRY-P96TI MU-A2 < For Ground source >
Minimum Circuit Ampacity			35-32	25-22
Maximum Overcurrent Protection			60-50	45-35
Circulating water	Water flow rate	G/h	1,522 + 1,522	
		G/min	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	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	0.035	0.035
	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)	377 (171)	377 (171)
Heat exchanger	Water volume in plate	G	plate type	plate type
		L	1.22	1.22
		I	4.6	4.6
	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		KB94C7PU	
	Wiring		KF94I 341	
Standard attachment	Document		Installation Manual	
	Accessory		Details refer to External Dwg	
Optional parts			Heat Source Twinning kit: CMY-Q100CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2	
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. 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. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm =m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs =kg/0.4536
		*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series

Heat Source Model			PQRY-P240TSLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 208-230 V +10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	240,000		
		kW	70.3		
		(208-230) Power input	16.89		
		(Rated) Current input	52.0-47.1		
		BTU/h	230,000		
	(208-230)	kW	67.4		
		Power input	15.73		16.79
		Current input	48.5-43.8		51.7-46.8
		Indoor	59~75°F (15~24°C)		
		Inlet water	23~113°F (-5~45°C)		
Heating capacity (Nominal)	*2	BTU/h	270,000		
		kW	79.1		
		(208-230) Power input	14.58		
		(Rated) Current input	44.9-40.6		
		BTU/h	258,000		
	(208-230)	kW	75.6		
		Power input	12.83		11.67
		Current input	39.5-35.7		35.9-32.5
		Indoor	59~81°F (15~27°C)		
		Inlet water	23~113°F (-5~45°C)		
Temp. range of cooling		50~150% of heat source unit capacity			
Indoor unit connectable		P04~P96/2~50 (Connectable branch pipe number is max. 48.)			
Sound power level (measured in anechoic room) *3		74.0			
Refrigerant		7/8 (22.2) Brazed (1-1/8 (28.58) Brazed for the part that exceeds 65 m)			
piping diameter		1-3/8 (34.93) Brazed			
Set Model					
Model			PQRY-P120TLMU-A2 < For Ground source >		PQRY-P120TLMU-A2 < For Ground source >
Minimum Circuit Ampacity			A		35-32
Maximum Overcurrent Protection			A		60-50
Circulating water	Water flow rate	G/h	1,522 + 1,522		
		G/min	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	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	0.035		0.035
	Lubricant		MEI 32		MEI 32
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 (60.1 psi)		High pressure sensor, High pressure switch at 4.15 MPa (60.1 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)	377 (171)		377 (171)
Heat exchanger	Water volume in plate		plate type		plate type
			G	1.22	
	I	4.6		4.6	
	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		KB94C7PU		
	Wiring		KF94I 341		KF94I 341
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-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2		
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. 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. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm = m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs = kg/0.4536
		*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P288TSLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	288,000		
		kW	84.4		
		Power input	20.42		
	(208-230)	Current input	62.9-56.9		
		BTU/h	276,000		
		kW	80.9		
(Rated)	(208-230)	Power input	20.11		22.67
		Current input	62.0-56.0		69.9-62.2
		A			
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)	*2	BTU/h	323,000		
		kW	94.7		
		Power input	17.50		
	(208-230)	Current input	53.9-48.8		
		BTU/h	304,000		
		kW	89.1		
(Rated)	(208-230)	Power input	15.48		15.36
		Current input	47.7-43.1		47.3-42.8
		A			
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 power level (measured in anechoic room) *3		dB <A>	71.0		
Refrigerant piping diameter	High pressure	in. (mm)	1-1/8 (28.58) Braze		
	Low pressure	in. (mm)	1-3/8 (34.93) Braze		

Set Model			PQRY-P144TLMU-A2 < For Ground source >		PQRY-P144TLMU-A2 < For Ground source >	
Minimum Circuit Ampacity		A	40-40		40-40	
Maximum Overcurrent Protection		A	70-70		70-70	
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min	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	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	0.045		0.045	
	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	1.22		1.22	
		L	4.6		4.6	
	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		KB94C7PV			
	Wiring		KE94L342		KE94L342	
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-R160-J1, CMY-R201, 202, 203, 204, 205, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2			
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm = m ³ /min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs = kg/0.4536
		*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series

Heat Source Model			PQRY-P312TSLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	312,000		
		kW	91.4		
		kW	23.41		
	(208-230)	Current input	72.1-65.2		
		BTU/h	298,000		
		kW	87.3		
Heating capacity (Nominal)	*2	BTU/h	350,000		
		kW	102.6		
		kW	19.11		
	(208-230)	Current input	58.9-53.3		
		BTU/h	334,000		
		kW	97.9		
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)		
		°F	23~113°F (-5~45°C)		
		Inlet water	22.45		24.98
	(208-230)	Current input	69.2-62.6		77.0-69.6
		BTU/h	350,000		
		kW	102.6		
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)		
		°F	23~113°F (-5~45°C)		
		Total capacity	50~150% of heat source unit capacity		
	(208-230)	Model/Quantity	P04~P96/2~50 (Connectable branch pipe number is max. 48.)		
		dB <A>	72.5		
		in. (mm)	1-1/8 (28.58) Braze		
Refrigerant piping diameter	High pressure	in. (mm)	1-1/8 (28.58) Braze		
		in. (mm)	1-3/8 (34.93) Braze		
		in. (mm)	1-3/8 (34.93) Braze		
	Low pressure	in. (mm)	1-3/8 (34.93) Braze		
		in. (mm)	1-3/8 (34.93) Braze		
		in. (mm)	1-3/8 (34.93) Braze		

Set Model			PQRY-P168TLMU-A2 < For Ground source >		PQRY-P144TLMU-A2 < For Ground source >	
Model			50-48		40-40	
Minimum Circuit Ampacity			A			
Maximum Overcurrent Protection			A		70-70	
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min	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	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	0.045		0.045	
	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	Water volume in plate		plate type		plate type	
			G	1.22	1.22	
	Water pressure Max.		I	4.6	4.6	
			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) Braze		7/8 (22.2) Braze	
	Low pressure	in. (mm)	-		1-1/8 (28.58) Braze	
Drawing	External		KB94C7PV			
	Wiring		KE94L342		KE94L342	
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-R160-J1,CMY-R201,202,203,204,205,306S-G,CMY-R302,303,304,305S-G1 Main BC controller: CMB-P108,1012,1016NU-JA2,CMB-P1016NU-KA2 Sub BC controller: CMB-P104,108NU-KB2			
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.Nominal cooling conditions (Test conditions are based on AHRI 1230)			BTU/h =kW x 3,412		
Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)			cfm =m³/min x 35.31		
Brine concentration 0%			lbs =kg/0.4536		
2.Nominal heating conditions (Test conditions are based on AHRI 1230)			*Above specification data is subject to rounding variation.		
Indoor: 68°F D.B. (20°C D.B.), Inlet water temperature: 68°F (20°C)			*Above specification data is subject to rounding variation.		
Brine concentration 0%			*Above specification data is subject to rounding variation.		
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).			*Above specification data is subject to rounding variation.		
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)			*Above specification data is subject to rounding variation.		
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)			*Above specification data is subject to rounding variation.		
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1. SPECIFICATIONS

WR2-Series

Heat Source Model			PQRY-P336TSLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 208-230 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	336,000		
		kW	98.5		
		Power input	26.84		
		Current input	82.7-74.8		
	(Rated)	BTU/h	320,000		
		kW	93.8		
		Power input	25.14		27.11
		Current input	77.5-70.1		83.6-75.6
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)	*2	BTU/h	378,000		
		kW	110.8		
		Power input	20.77		
		Current input	64.0-57.9		
	(Rated)	BTU/h	360,000		
		kW	105.5		
		Power input	18.49		19.10
		Current input	57.0-51.5		58.9-53.2
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~P96/2~50 (Connectable branch pipe number is max. 48.)		
Sound power level (measured in anechoic room) *3		dB <A>	73.0		
Refrigerant piping diameter	High pressure	in. (mm)	1-1/8 (28.58) Braze		
	Low pressure	in. (mm)	1-5/8 (41.28) Braze		

Set Model			PQRY-P168TLMU-A2 < For Ground source >		PQRY-P168TLMU-A2 < For Ground source >	
Model			50-48		50-48	
Minimum Circuit Ampacity		A	90-80		90-80	
Maximum Overcurrent Protection		A				
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min	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		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	0.045		0.045	
	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	1.22		1.22	
		L	4.6		4.6	
	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		KB94C7PV			
	Wiring		KF94L 342		KF94L 342	
Standard attachment	Document		Installation Manual			
	Accessory		Details refer to External Dwg			
Optional parts			Heat Source Twinning kit: CMY-Q200CBK joint: CMY-Y102SS-G2,CMY-Y102LS-G2,CMY-R160-J1,CMY-R201,202,203,204,205,306S-G,CMY-R302,303,304,305S-G1 Main BC controller: CMB-P108,1012,1016NU-JA2,CMB-P1016NU-KA2 Sub BC controller: CMB-P104,108NU-KB2			
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm =m ³ /min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs =kg/0.4536
		*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P72YLMU-A2 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1	BTU/h	72,000			
		kW	21.1			
	(460)	Power input	kW	3.61		
		Current input	A	5.0		
	(Rated)	BTU/h	69,000			
		kW	20.2			
	(460)	Power input	kW	3.60	3.59	
		Current input	A	5.0	5.0	
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)	*2	BTU/h	80,000			
		kW	23.4			
	(460)	Power input	kW	4.04		
		Current input	A	5.6		
	(Rated)	BTU/h	76,000			
		kW	22.3			
	(460)	Power input	kW	3.78	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		50~150% of heat source unit capacity			
	Model/Quantity		P04~P96/1~18			
Sound power level (measured in anechoic room) *3		dB <A>	60.5			
Refrigerant	High pressure	in. (mm)	5/8 (15.88) Brazed			
piping diameter	Low pressure	in. (mm)	3/4 (19.05) Brazed			
Minimum Circuit Ampacity		A	8			
Maximum Overcurrent Protection		A	15			
Circulating water	Water flow rate	G/h	1,440			
		G/min	24			
		m ³ /h	5.45			
		L/min	91			
		cfm	3.2			
	Pressure drop	psi	3.48			
		kPa	24			
	Operating volume range	G/h	793 ~ 1,902			
		G/min	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	4.3			
	Case heater	kW	0.035			
	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			plate type			
	Water volume in plate	G	1.22			
		l	4.6			
	Water pressure Max.	psi	290			
		MPa	2.0			
HIC circuit (HIC: Heat Inter-Changer)			-			
Drawing	External		KB94C8BX			
	Wiring		KE94L344			
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, 301, 306S-G, CMY-R302, 303, 304, 305S-G1 BC controller: CMB-P104, 106, 108, 1012, 1016NU-J2 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2			
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back on. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.			

Notes:

- 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%
- 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%
- The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Unit converter

BTU/h	=kW x 3.412
cfm	=m³/min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series

Heat Source Model			PQRY-P96YLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	96,000		
		kW	28.1		
	Power input	kW	5.21		
		(460) Current input	A	7.2	
	(Rated)	BTU/h	92,000		
		kW	27.0		
	Power input	kW	5.22	5.45	
		(460) Current input	A	7.2	7.6
	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)	*2	BTU/h	108,000		
		kW	31.7		
	Power input	kW	5.64		
		(460) Current input	A	7.8	
	(Rated)	BTU/h	103,000		
		kW	30.2		
	Power input	kW	4.49	4.48	
		(460) Current input	A	6.2	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 power level (measured in anechoic room) *3			dB <A>	65.0	
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	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	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	0.035		
	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			plate type		
	Water volume in plate	G	1.22		
		l	4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			-		
Drawing	External		KB94C8BX		
	Wiring		KE94L344		
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-P104,106,108,1012,1016NU-J2 Main BC controller: CMB-P108,1012,1016NU-JA2,CMB-P1016NU-KA2 Sub BC controller: CMB-P104,108NU-KB2		
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%	cfm = m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs = kg/0.4536
	*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P120YLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	120,000		
		kW	35.2		
		Power input	kW	7.51	
		(460) Current input	A	10.4	
	(Rated)	BTU/h	115,000		
		kW	33.7		
		Power input	kW	7.38	7.77
		(460) Current input	A	10.2	10.8
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)	*2	BTU/h	135,000		
		kW	39.6		
		Power input	kW	7.09	
		(460) Current input	A	9.8	
	(Rated)	BTU/h	129,000		
		kW	37.8		
		Power input	kW	5.78	5.89
		(460) Current input	A	8.0	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 power level (measured in anechoic room) *3			dB <A>	71.0	
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	16	
Maximum Overcurrent Protection			A	25	
Circulating water	Water flow rate	G/h	1,522		
		G/min	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		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	0.035		
	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			plate type		
	Water volume in plate	G	1.22		
		l	4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			-		
Drawing	External		KB94C8BX		
	Wiring		KE94L344		
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, 106, 108, 1012, 1016NU-J2 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2		
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.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.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%	cfm =m³/min x 35.31
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series

Heat Source Model			PQRY-P144YLMU-A2 < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 460 V ±10% 60 Hz	
Cooling capacity (Nominal)	*1	BTU/h	144,000	
		kW	42.2	
		Power input	8.78	
		(460) Current input	12.2	
	(Rated)	BTU/h	138,000	
		kW	40.4	
		Power input	9.44	10.12
		(460) Current input	13.1	14.1
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)	*2	BTU/h	160,000	
		kW	46.9	
		Power input	8.11	
		(460) Current input	11.3	
	(Rated)	BTU/h	152,000	
		kW	44.5	
		Power input	7.29	7.92
		(460) Current input	10.1	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 power level (measured in anechoic room) *3		dB <A>	68.0	
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	19	
Maximum Overcurrent Protection		A	30	
Circulating water	Water flow rate	G/h	1,902	
		G/min	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	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	0.045	
	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	1.22	
		l	4.6	
	Water pressure Max.	psi	290	
		MPa	2.0	
HIC circuit (HIC: Heat Inter-Changer)			-	
Drawing	External		KB94C8BY	
	Wiring		KE94L344	
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, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2	
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%	cfm = m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs = kg/0.4536
	*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P168YLMU-A2 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1	BTU/h	168,000			
		kW	49.2			
	(460)	Power input	kW	12.05		
		Current input	A	16.8		
	(Rated)	BTU/h	160,000			
		kW	46.9			
	(460)	Power input	kW	11.98	12.47	
		Current input	A	16.7	17.3	
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)	*2	BTU/h	188,000			
		kW	55.1			
	(460)	Power input	kW	9.86		
		Current input	A	13.7		
	(Rated)	BTU/h	178,000			
		kW	52.2			
	(460)	Power input	kW	8.86	9.66	
		Current input	A	12.3	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~P96/1~42			
Sound power level (measured in anechoic room) *3		dB <A>	70.0			
Refrigerant	High pressure	in. (mm)	7/8 (22.2) Brazed			
piping diameter	Low pressure	in. (mm)	1-1/8 (28.58) Brazed			
Minimum Circuit Ampacity		A	26			
Maximum Overcurrent Protection		A	45			
Circulating water	Water flow rate	G/h	1,902			
		G/min	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	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	11.0			
	Case heater	kW	0.045			
	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	1.22			
		l	4.6			
	Water pressure Max.	psi	290			
		MPa	2.0			
HIC circuit (HIC: Heat Inter-Changer)			-			
Drawing	External		KB94C8BY			
	Wiring		KE94L344			
Standard attachment	Document		Installation Manual			
		Accessory	Details refer to External Drw			
Optional parts			joint: CMY-Y102SS-G2,CMY-Y102LS-G2,CMY-R160-J1,CMY-R201,202,203,204,306S-G,CMY-R302,303,304,305S-G1			
			Main BC controller: CMB-P108,1012,1016NU-JA2,CMB-P1016NU-KA2 Sub BC controller: CMB-P104,108NU-KB2			
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back on. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.			

Notes:

- 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%
- 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%
- The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Unit converter

BTU/h	=kW x 3.412
cfm	=m³/min x 35.31
lbs	=kg/0.4536

*Above specification data is
subject to rounding variation.

Heat Source Model			PQRY-P192YLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	192,000		
		kW	56.3		
	Power input	kW	15.05		
		(460) Current input	A	20.9	
	(Rated)	BTU/h	184,000		
		kW	53.9		
	Power input	kW	15.17	15.00	
		(460) Current input	A	21.1	20.9
	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)	*2	BTU/h	215,000		
		kW	63.0		
	Power input	kW	11.90		
		(460) Current input	A	16.5	
	(Rated)	BTU/h	204,000		
		kW	59.8		
	Power input	kW	10.78	11.53	
		(460) Current input	A	15.0	16.0
	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~P96/1~48			
Sound power level (measured in anechoic room) *3			dB <A>	72.0	
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	27		
Maximum Overcurrent Protection		A	45		
Circulating water	Water flow rate	G/h	1,902		
		G/min	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	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	0.045		
	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	1.22		
		l	4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			-		
Drawing	External		KB94C8BY		
	Wiring		KE94L344		
Standard attachment	Document		Installation Manual		
	Accessory		Details refer to External Drw		
Optional parts			joint: CMY-Y102SS-G2,CMY-Y102LS-G2,CMY-R160-J1,CMY-R201,202,203,204,306S-G,CMY-R302,303,304,305S-G1 Main BC controller: CMB-P108,1012,1016NU-JA2,CMB-P1016NU-KA2 Sub BC controller: CMB-P104,108NU-KB2		
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back on. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.		

Notes:

- 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%
- 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%
- The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Unit converter

BTU/h	=kW x 3.412
cfm	=m³/min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series

PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

Heat Source Model			PQRY-P216YLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	216,000		
		kW	63.3		
		Power input	kW	19.23	
		Current input	A	26.8	
	(460) (Rated)	BTU/h	206,000		
		kW	60.4		
		Power input	kW	18.12	17.22
		Current input	A	25.2	24.0
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)	*2	BTU/h	243,000		
		kW	71.2		
		Power input	kW	13.04	
		Current input	A	18.1	
	(460) (Rated)	BTU/h	232,000		
		kW	68.0		
		Power input	kW	11.78	12.07
		Current input	A	16.4	16.8
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			
		Model/Quantity			
		50~150% of heat source unit capacity			
		P04~P96/2~50 (Connectable branch pipe number is max. 48.)			
Sound power level (measured in anechoic room) *3		dB <A>	72.5		
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	37		
Maximum Overcurrent Protection		A	60		
Circulating water	Water flow rate	G/h	3,044		
		G/min	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	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		
	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)	565 (256)		
Heat exchanger			plate type		
	Water volume in plate	G	2.43		
		l	9.2		
		psi	290		
	Water pressure Max.	MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			-		
Drawing	External		KB94C8BZ		
	Wiring		KE94L344		
Standard attachment	Document		Installation Manual		
	Accessory		Details refer to External Drw		
Optional parts			joint: CMY-Y102SS-G2,CMY-Y102LS-G2,CMY-R160-J1,CMY-R201,202,203,204,306S-G,CMY-R302,303,304,305S-G1		
			Main BC controller: CMB-P108,1012,1016NU-JA2,CMB-P1016NU-KA2		
			Sub BC controller: CMB-P104,108NU-KB2		
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. 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. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back on. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.		

Notes:

- 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%
- 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%
- The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Unit converter

BTU/h	=kW x 3.412
cfm	=m ³ /min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P240YLMU-A2 < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 460 V ±10% 60 Hz	
Cooling capacity (Nominal)	*1	BTU/h	224,000	
		kW	65.7	
		Power input	21.14	
		(460) Current input	29.4	
		(Rated)	214,000	
	(460)	kW	62.7	
		Power input	18.67	18.61
		Current input	26.0	25.9
		Indoor	W.B.	
		Inlet water	°F	
Heating capacity (Nominal)	*2	BTU/h	270,000	
		kW	79.1	
		Power input	15.12	
		(460) Current input	21.0	
		(Rated)	258,000	
	(460)	kW	75.6	
		Power input	13.75	14.48
		Current input	19.1	20.1
		Indoor	D.B.	
		Inlet water	°F	
Temp. range of heating		59~81°F (15~27°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 power level (measured in anechoic room) *3		dB <A>		
Refrigerant piping diameter		7/8 (22.2) Braze (1-1/8 (28.58) Braze for the part that exceeds 65 m)		
Minimum Circuit Ampacity		A		
Maximum Overcurrent Protection		A		
Circulating water	Water flow rate	G/h	3,044	
		G/min	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	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	
	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)	565 (256)	
Heat exchanger	Water volume in plate		plate type	
			G	
	I		2.43	
	Water pressure Max.		psi	
			MPa	
HIC circuit (HIC: Heat Inter-Changer)			-	
Drawing	External		KB94C8BZ	
	Wiring		KE94L344	
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, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2	
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. 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. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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 cfm = m³/min x 35.31 lbs = kg/0.4536
2. 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%	
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	
	*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series

Heat Source Model			PQRY-P144YSLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	144,000		
		kW	42.2		
		Power input	7.11		
	(Rated)	(460) Current input	A	9.9	
		BTU/h	138,000		
		kW	40.4		
(460)	Power input	kW	6.96	8.17	
	Current input	A	9.7	11.3	
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)	*2	BTU/h	160,000		
		kW	46.9		
		Power input	7.45		
	(460)	Current input	A	10.3	
		BTU/h	152,000		
		kW	44.5		
(460)	Power input	kW	6.50	7.29	
	Current input	A	9.0	10.1	
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 power level (measured in anechoic room) *3		dB <A>	63.5		
Refrigerant	High pressure	in. (mm)	7/8 (22.2) Braze		
piping diameter	Low pressure	in. (mm)	1-1/8 (28.58) Braze		
Set Model					
Model			PQRY-P72YLMU-A2 < For Ground source >		PQRY-P72YLMU-A2 < For Ground source >
Minimum Circuit Ampacity		A	8		8
Maximum Overcurrent Protection		A	15		15
Circulating water	Water flow rate	G/h	1,522 + 1,522		
		G/min	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	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	0.035		0.035
	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 RC controller		
Net weight		lbs (kg)	406 (184)		406 (184)
Heat exchanger	Water volume in plate	G	plate type		plate type
		I	1.22		1.22
			4.6		4.6
	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)	5/8 (15.88) Braze		5/8 (15.88) Braze
	Low pressure	in. (mm)	-		3/4 (19.05) Braze
Drawing	External		KB94C7PW		
	Wiring		KE94L344		KE94L344
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-R160-J1, CMY-R201, 202, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2		
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm = m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs = kg/0.4536
		*Above specification data is subject to rounding variation.

Heat Source Model				PQRY-P168YSLMU-A2 < For Ground source >				
Indoor Model				Non-Ducted		Ducted		
Power source				3-phase 3-wire 460 V ±10% 60 Hz				
Cooling capacity (Nominal)	*1	BTU/h		168,000				
		kW		49.2				
		Power input		kW		9.33		
	(460)	Current input		A		13.0		
		(Rated)	BTU/h		160,000			
			kW		46.9			
	(460)		Power input		kW		8.87	
		Current input		A		12.3		
		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)	*2	BTU/h		188,000				
		kW		55.1				
		Power input		kW		9.34		
	(460)	Current input		A		13.0		
		(Rated)	BTU/h		178,000			
			kW		52.2			
	(460)		Power input		kW		8.05	
		Current input		A		11.2		
		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				
		Model/Quantity		P04~P96/1~42				
Sound power level (measured in anechoic room) *3				dB <A>		66.5		
Refrigerant		High pressure		in. (mm)		7/8 (22.2) Braze		
piping diameter		Low pressure		in. (mm)		1-1/8 (28.58) Braze		

Set Model			PQRY-P96YLMU-A2 < For Ground source >		PQRY-P72YLMU-A2 < For Ground source >	
Minimum Circuit Ampacity		A	11		8	
Maximum Overcurrent Protection		A	15		15	
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min	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	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	0.035		0.035	
	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			plate type		plate type	
			1.22		1.22	
	Water volume in plate	G	4.6		4.6	
		L	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		KB94C7PW			
	Wiring		KE94L344		KE94L344	
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-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2			
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm = m ³ /min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs = kg/0.4536
		*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series

Heat Source Model			PQRY-P192YSLMU-A2 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)		*1	BTU/h	192,000		
			kW	56.3		
	(460)	Power input	kW	11.30		
			Current input	A	15.7	
	(Rated)		BTU/h	184,000		
			kW	53.9		
	(460)	Power input	kW	10.57	11.54	
			Current input	A	14.7	16.0
	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)		*2	BTU/h	215,000		
			kW	63.0		
	(460)	Power input	kW	11.02		
			Current input	A	15.3	
	(Rated)		BTU/h	204,000		
			kW	59.8		
	(460)	Power input	kW	9.53	8.82	
			Current input	A	13.2	12.3
	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~P96/1~48			
Sound power level (measured in anechoic room) *3			dB <A>	68.0		
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-A2 < For Ground source >		PQRY-P96YLMU-A2 < For Ground source >		
Model			11		11		
Minimum Circuit Ampacity		A	15		15		
Maximum Overcurrent Protection		A	15		15		
Circulating water	Water flow rate	G/h	1,522 + 1,522				
		G/min	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		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	0.035		0.035		
	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		plate type		plate type		
			G	1.22		1.22	
	Water pressure Max.		I	4.6		4.6	
			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		KB94C7PW				
	Wiring		KE94L344		KE94L344		
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-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2					
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm =m³/min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs =kg/0.4536
		*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series

Heat Source Model			PQRY-P216YSLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	216,000		
		kW	63.3		
		Power input	14.03		
		Current input	19.5		
		(460)			
	(Rated)	BTU/h	206,000		
		kW	60.4		
		Power input	13.09		
		Current input	18.2		
		(460)	13.88		
Temp. range of cooling	Indoor	W.B.			
	Inlet water	59~75°F (15~24°C)			
Heating capacity (Nominal)	*2	BTU/h	243,000		
		kW	71.2		
		Power input	12.88		
		Current input	17.9		
		(460)			
	(Rated)	BTU/h	232,000		
		kW	68.0		
		Power input	11.11		
		Current input	15.4		
		(460)	10.04		
Temp. range of heating	Indoor	D.B.			
	Inlet water	59~81°F (15~27°C)			
Indoor unit connectable	Total capacity	23~113°F (-5~45°C)			
	Model/Quantity	50~150% of heat source unit capacity			
Sound power level (measured in anechoic room) *3			P04~P96/2~50 (Connectable branch pipe number is max. 48.)		
			72.0		
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	1-1/8 (28.58) Brazed			

Model			PQRY-P120YI MU-A2 < For Ground source >		PQRY-P96YI MU-A2 < For Ground source >	
Minimum Circuit Ampacity		A	16		11	
Maximum Overcurrent Protection		A	25		15	
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min	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	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	0.035		0.035	
	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		plate type		plate type	
			G	1.22		
	L	4.6				
	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		KB94C7PW			
	Wiring		KF94I 344		KF94I 344	
Standard attachment	Document		Installation Manual			
	Accessory		Details refer to External Dwg			
Optional parts			Heat Source Twinning kit: CMY-Q100CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2			
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. 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. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm =m ³ /min x 35.31	
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs =kg/0.4536	
		*Above specification data is subject to rounding variation.	

1. SPECIFICATIONS

WR2-Series

Heat Source Model			PQRY-P240YSLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	240,000		
		kW	70.3		
		(460) Power input kW	16.89		
		(460) Current input A	23.5		
	(Rated)	BTU/h	230,000		
		kW	67.4		
		(460) Power input kW	15.73	16.79	
		(460) Current input A	21.9	23.4	
Temp. range of cooling	Indoor	W.B.			
	Inlet water	°F			
Heating capacity (Nominal)	*2	BTU/h	270,000		
		kW	79.1		
		(460) Power input kW	14.58		
		(460) Current input A	20.3		
	(Rated)	BTU/h	258,000		
		kW	75.6		
		(460) Power input kW	12.83	11.67	
		(460) Current input A	17.8	16.2	
Temp. range of heating	Indoor	D.B.			
	Inlet water	°F			
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 power level (measured in anechoic room) *3	dB <A>		74.0		
Refrigerant	High pressure	in. (mm)	7/8 (22.2) Braze (1-1/8 (28.58) Braze for the part that exceeds 65 m)		
piping diameter	Low pressure	in. (mm)	1-3/8 (34.93) Braze		
Set Model					
Model			PQRY-P120YI MU-A2 < For Ground source >		PQRY-P120YI MU-A2 < For Ground source >
Minimum Circuit Ampacity	A		16		16
Maximum Overcurrent Protection	A		25		25
Circulating water	Water flow rate	G/h	1,522 + 1,522		
		G/min	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		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	0.035	0.035	
	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	1.22		1.22
		I	4.6		4.6
	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) Braze		3/4 (19.05) Braze
	Low pressure	in. (mm)	-		7/8 (22.2) Braze
Drawing	External	KB94C7PW			
	Wiring	KF94I 344		KF94I 344	
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-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2		
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. 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. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%	cfm =m ³ /min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)	lbs =kg/0.4536
	*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P288YSLMU-A2 < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 460 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1	BTU/h	288,000			
		kW	84.4			
		Power input	20.42			
	(460)	Current input	28.4			
		(Rated)	BTU/h	276,000		
			kW	80.9		
	Power input		kW	20.11	22.67	
	(460)	Current input	A	28.0	31.6	
		Temp. range of cooling	Indoor	W.B.		
	Inlet water		°F			
Heating capacity (Nominal)	*2	BTU/h	323,000			
		kW	94.7			
		Power input	17.50			
	(460)	Current input	24.4			
		(Rated)	BTU/h	304,000		
			kW	89.1		
	Power input		kW	15.48	15.36	
	(460)	Current input	A	21.5	21.4	
		Temp. range of heating	Indoor	D.B.		
	Inlet water		°F			
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 power level (measured in anechoic room) *3	dB <A>	71.0			
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-A2 < For Ground source >		PQRY-P144YLMU-A2 < For Ground source >	
Minimum Circuit Ampacity		A	19		19	
Maximum Overcurrent Protection		A	30		30	
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min	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		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	0.045		0.045	
	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		plate type		plate type	
			G	1.22		1.22
	I	4.6		4.6		
	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		KB94C7PX			
	Wiring		KF94L344		KF94L344	
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-R160-J1,CMY-R201,202,203,204,205,306S-G,CMY-R302,303,304,305S-G1 Main BC controller: CMB-P108,1012,1016NU-JA2,CMB-P1016NU-KA2 Sub BC controller: CMB-P104,108NU-KB2			
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm = m ³ /min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs = kg/0.4536
		*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P312YSLMU-A2 < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 460 V ±10% 60 Hz	
Cooling capacity (Nominal)	*1	BTU/h	312,000	
		kW	91.4	
		Power input	23.41	
	(Rated)	Current input	32.6	
		BTU/h	298,000	
		kW	87.3	
Heating capacity (Nominal)	(460)	Power input	22.45	24.98
		Current input	31.3	34.8
		A		
	(Rated)	BTU/h	350,000	
		kW	102.6	
		Power input	19.11	
Temp. range of cooling	Indoor	W.B.	59~75°F (15~24°C)	
		°F	23~113°F (-5~45°C)	
		Inlet water		
	(460)	BTU/h	350,000	
		kW	102.6	
		Power input	19.11	
Heating capacity (Nominal)	(460)	Current input	26.6	
		A		
		BTU/h	334,000	
	(Rated)	kW	97.9	
		Power input	17.09	
		Current input	23.8	23.8
Temp. range of heating	Indoor	D.B.	59~81°F (15~27°C)	
		°F	23~113°F (-5~45°C)	
		Total capacity	50~150% of heat source unit capacity	
	(460)	Model/Quantity	P04~P96/2~50 (Connectable branch pipe number is max. 48.)	
		dB <A>	72.5	
		Refrigerant	1-1/8 (28.58) Braze	
Sound power level (measured in anechoic room) *3	High pressure	in. (mm)	1-1/8 (28.58) Braze	
		in. (mm)	1-3/8 (34.93) Braze	
		Low pressure		
	(460)	Model/Quantity	P04~P96/2~50 (Connectable branch pipe number is max. 48.)	
		dB <A>	72.5	
		Refrigerant	1-1/8 (28.58) Braze	

Set Model			PQRY-P168YLMU-A2 < For Ground source >		PQRY-P144YLMU-A2 < For Ground source >	
Minimum Circuit Ampacity			A		19	
Maximum Overcurrent Protection			A		30	
Circulating water	Water flow rate	G/h	1,902 ± 1,902		1,902 ± 1,902	
		G/min	31.7 ± 31.7		31.7 ± 31.7	
		m ³ /h	7.20 ± 7.20		7.20 ± 7.20	
		L/min	120 ± 120		120 ± 120	
		cfm	4.2 ± 4.2		4.2 ± 4.2	
	Pressure drop	psi	6.38		6.38	
Compressor	Type x Quantity	psi	44		44	
		kPa	44		44	
		G/h	1,189 ± 1,189 ~ 3,054 ± 3,054		1,189 ± 1,189 ~ 3,054 ± 3,054	
		G/min	19.8 ± 19.8 ~ 50.9 ± 50.9		19.8 ± 19.8 ~ 50.9 ± 50.9	
		m ³ /h	4.5 ± 4.5 ~ 11.6 ± 11.6		4.5 ± 4.5 ~ 11.6 ± 11.6	
	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)	
Net weight			Indoor LEV and RC controller			
			lbs (kg)		508 (230)	
Heat exchanger	Water volume in plate	G	plate type		plate type	
		L	1.22		1.22	
		MPa	2.0		2.0	
	Water pressure Max.	psi	290		290	
HIC circuit (HIC: Heat Inter-Changer)			-		-	
Pipe between unit and distributor	High pressure	in. (mm)	7/8 (22.2) Braze		7/8 (22.2) Braze	
	Low pressure	in. (mm)	-		1-1/8 (28.58) Braze	
Drawing	External		KB94C7PX			
	Wiring		KE94L344		KE94L344	
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-R160-J1, CMY-R201, 202, 203, 204, 205, 306S-G, CMY-R302, 303, 304, 305S-G1			
			Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2			
			Sub BC controller: CMB-P104, 108NU-KB2			
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).			
			When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. Nominal cooling conditions (Test conditions are based on AHRI 1230)		BTU/h = kW x 3,412
Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		cfm = m ³ /min x 35.31
Brine concentration 0%		lbs = kg/0.4536
2. 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%		
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).		
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		
		*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P336YSLMU-A2 < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 460 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	336,000		
		kW	98.5		
		Power input	26.84		
	(Rated)	Current input	37.4		
		BTU/h	320,000		
		kW	93.8		
(460)	Power input	kW	25.14		27.11
		Current input	35.0		37.8
		A			
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)	*2	BTU/h	378,000		
		kW	110.8		
		Power input	20.77		
	(460)	Current input	28.9		
		BTU/h	360,000		
		kW	105.5		
(460)	Power input	kW	18.49		19.10
		Current input	25.7		26.6
		A			
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 power level (measured in anechoic room) *3			73.0		
Refrigerant piping diameter	High pressure	in. (mm)	1-1/8 (28.58) Braze		
	Low pressure	in. (mm)	1-5/8 (41.28) Braze		

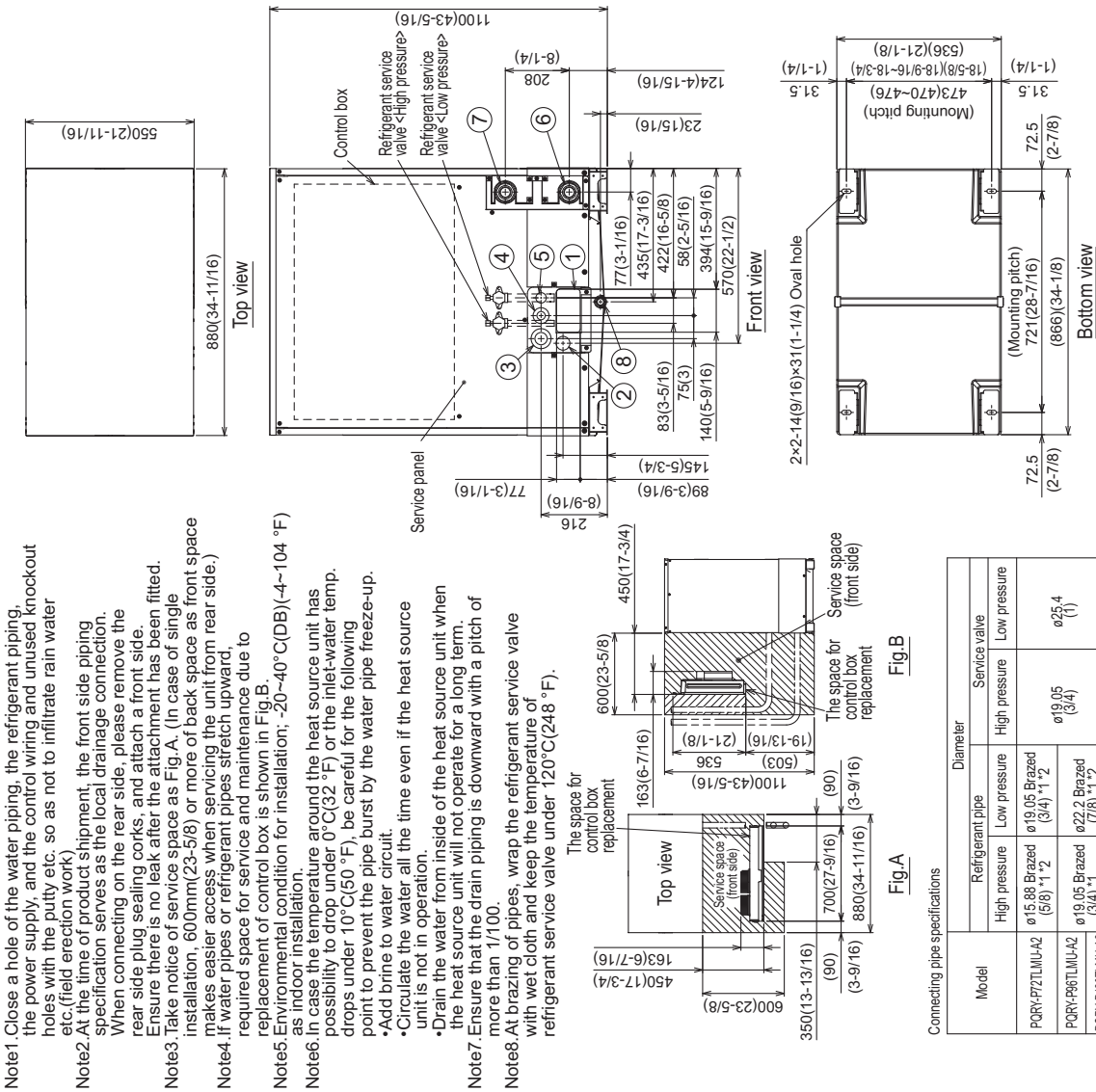
Set Model			PQRY-P168YLMU-A2 < For Ground source >		PQRY-P168YLMU-A2 < For Ground source >	
Minimum Circuit Ampacity		A	26		26	
Maximum Overcurrent Protection		A	45		45	
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min	31.7 + 31.7			
		m ³ /h	7.20 + 7.20			
		L/min	120 + 120			
		cfm	4.2 + 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		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	0.045		0.045	
	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	1.22		1.22	
		L	4.6		4.6	
	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		KB94C7PX			
	Wiring		KF94L344		KF94L344	
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-R160-J1,CMY-R201,202,203,204,205,306S-G,CMY-R302,303,304,305S-G1 Main BC controller: CMB-P108,1012,1016NU-JA2,CMB-P1016NU-KA2 Sub BC controller: CMB-P104,108NU-KB2			
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm = m ³ /min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs = kg/0.4536
		*Above specification data is subject to rounding variation.

PQRY-P72, 96, 120TLMU-A2

Unit: mm(in)

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



- 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 wiring kit (optional parts) is mounted.)
③	For wires	Front through hole (1-13/16)
④	For transmission cables	Front through hole (2-1/2) (1-3/8)
⑤	For transmission cables	Front through hole (2-1/2) (1-3/8)
⑥	Water pipe inlet	Front through hole (1-3/4) (7/8)
⑦	Water pipe outlet	Front through hole (1-3/4) (7/8)
⑧	Drain pipe	Front through hole (1-3/4) (7/8)

Model	Refrigerant pipe	Service valve
	High pressure	High pressure
	Low pressure	Low pressure
PQRY-P72TLMU-A2	ø15.88 Braze (5/8)" 1/2	ø19.05 Braze (3/4)" 1/2
PQRY-P96TLMU-A2	ø19.05 Braze (3/4)" 1/2	ø25.4 (1)
PQRY-P120TLMU-A2	ø22.2 Braze (7/8)" 1/2	ø25.4 (1)

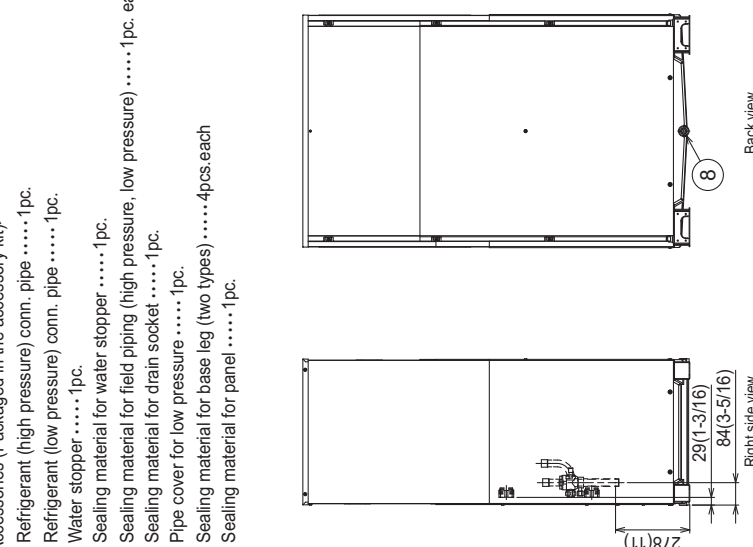
*1 Connect by using the connecting pipes and elbow that are supplied.

*2 Use the pipe joint(field supply) and connect to the refrigerant service valve piping.

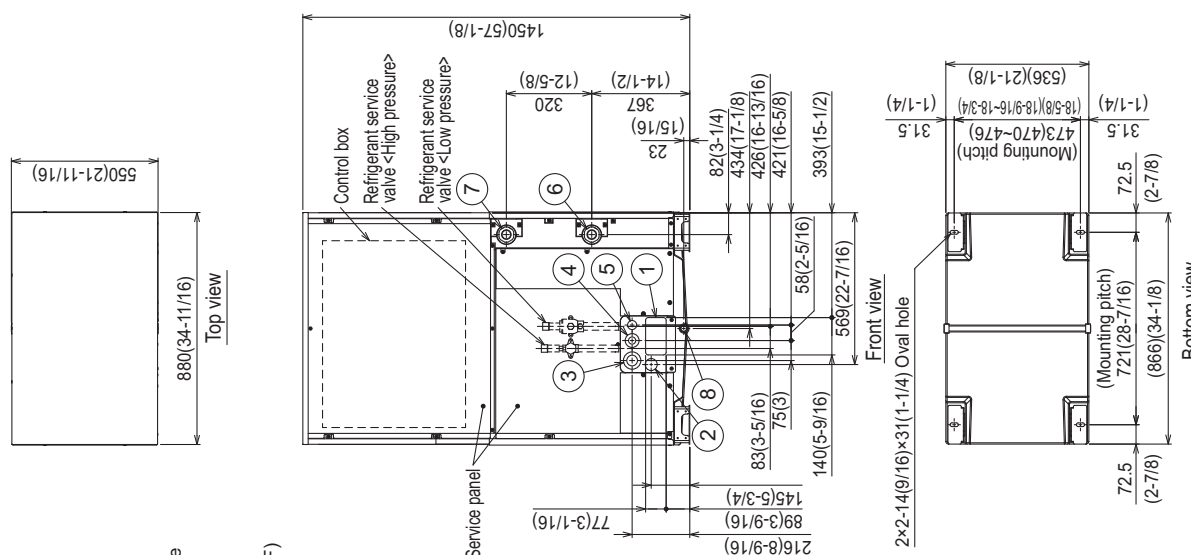
PQRY-P144, 168, 192TLMU-A2

Unit: mm(in)

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



NO.	Usage	Specifications
①	Front through hole	140 × 77 Knockout hole (5-9/16) (3-1/16)
②	For pipes	Front through hole (Uses when winning kit (optional parts) is mounted.)
③		ø45 Knockout hole (1-13/16)
④	For wires	Front through hole
⑤		ø62.7 or ø34.5 Knockout hole (2-1/2) (1-3/8)
⑥	For transmission cables	Front through hole
⑦	Water pipe	ø34 Knockout hole (1-3/8)
⑧	Inlet outlet	NPT1-1/2 Screw NPT1-1/2 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.

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.)

Note 4. If water pipes or refrigerant pipes stretch upward, it makes easier access when servicing the unit from below.

required space for service and maintenance and 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.

- 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).

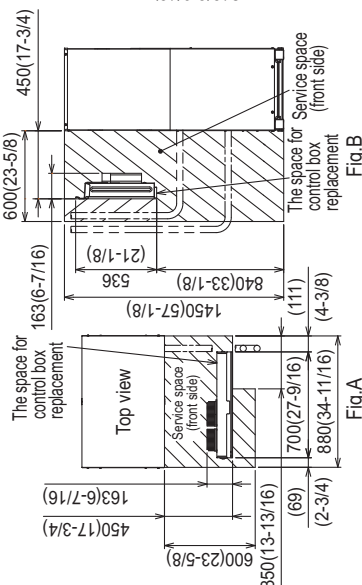


Fig. B

Fig. A

Connecting pipe specifications

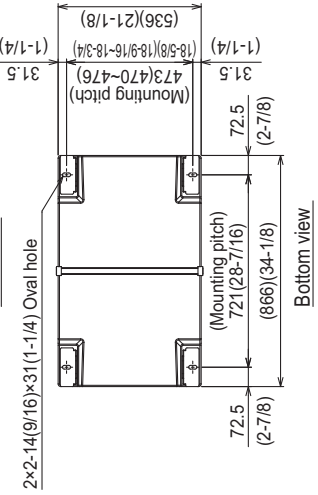
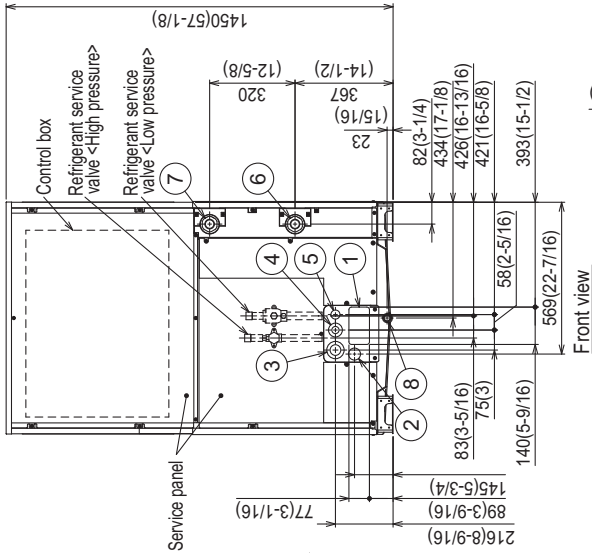
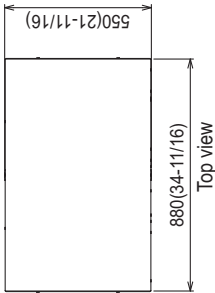
Model		Diameter			
		Refrigerant pipe		Service valve	
		High pressure	Low pressure	High pressure	Low pressure
PQR-P144TLMU-A2					
PQR-P165TLMU-A2		ø22.2 Brazed (7/8) *1	ø28.58 Brazed (1-1/8) *1	ø25.4 (1)	ø28.58 (1-1/8)
PQR-P192TLMU-A2					

1. Connect by using the connecting pipes that are supplied.

PQRY-P216, 240TLMU-A2

Unit: mm(in)

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

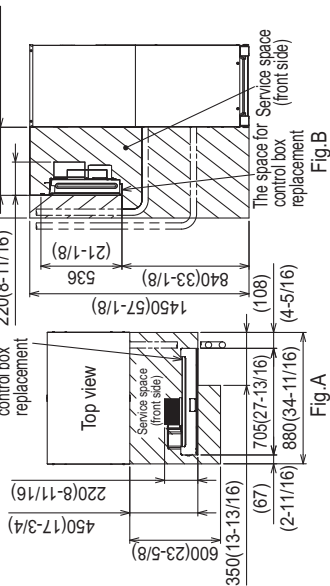


NO.	Usage		Specifications
	For pipes		
①	Front through hole	140 x 77 Knockout hole (5-9/16) (3-1/16)	
②	Front through hole (Uses when winning kit (optional parts) is mounted.)	ø45 Knockout hole (1-13/16)	
③	Front through hole	ø62.7 or ø34.5 Knockout hole (2-1/2) (1-3/8)	
④	Front through hole	ø43.7 or ø22.2 Knockout hole (1-3/4) (7/8)	
⑤	Front through hole	ø34 Knockout hole (1-3/8)	
⑥	inlet	NPT1-1/2 Screw	
⑦	outlet	NPT1-1/2 Screw	
⑧	Drain pipe	Rc3/4 Screw	

Back view

Right side 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 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).

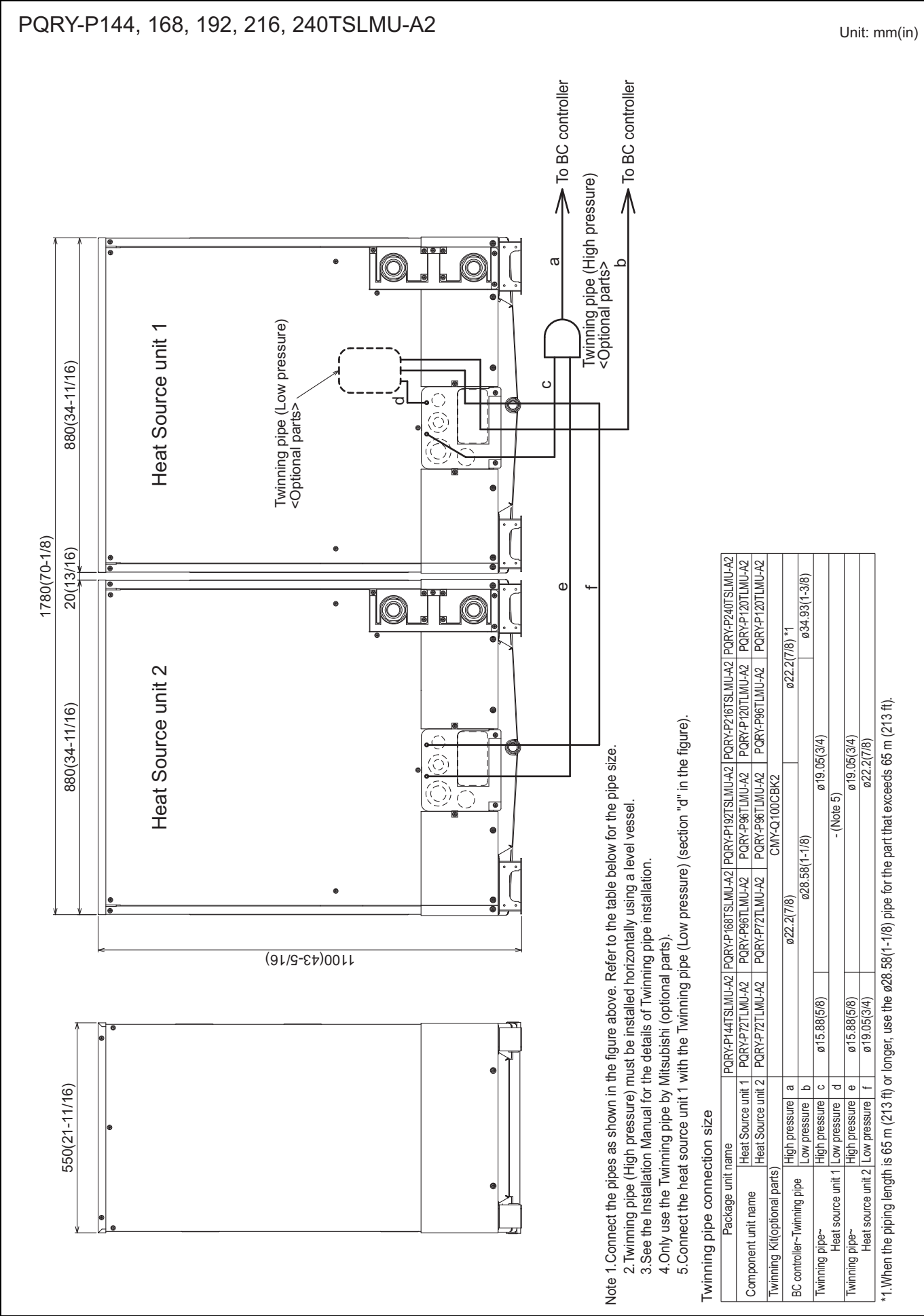


Model	Refrigerant pipe			Service valve	
	High pressure	Low pressure		High pressure	Low pressure
PQRY-P216TLMU-A2	ø28.58 Braze (1-1/8) *1	ø25.4 (1)	ø28.58 (1-1/8)		
PQRY-P240TLMU-A2	ø22.2 Braze (7/8) *1 *2	ø34.93 Braze (1-3/8) *1 *3			

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

*2. When the piping length is 65m(213ft) or longer, use the ø28.58(1-1/8) pipe for the part that exceeds 65m(213ft).

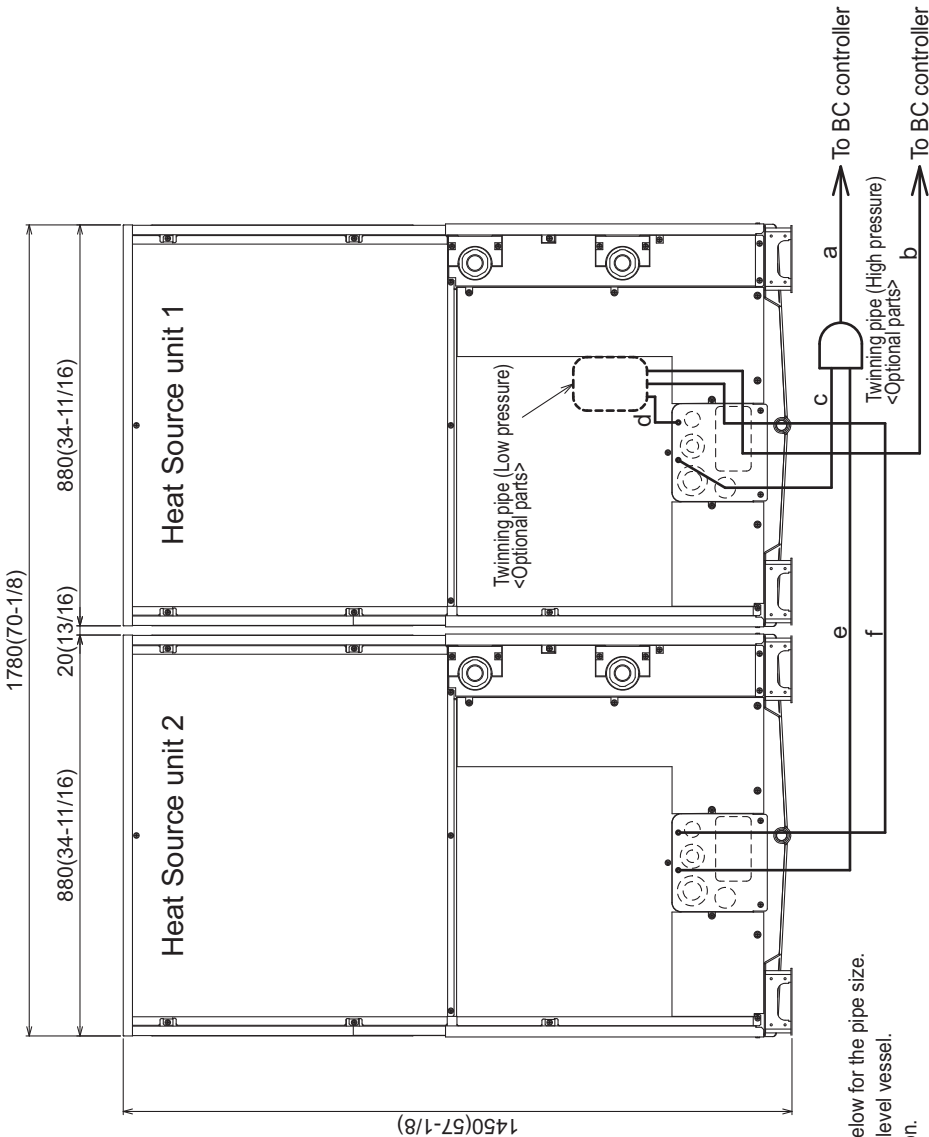
*3. Use the pipe joint(field supply) and connect to the refrigerant service valve piping.



PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

PQRY-P288, 312, 336TSLMU-A2

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) must be installed horizontally using a level vessel.
3. See the Installation Manual for the details of Twinning pipe installation.
4. Only use the Twinning pipe by Mitsubishi (optional parts).
5. Connect the heat source unit 1 with the Twinning pipe (Low pressure) (section "d" in the figure).

Twinning pipe connection size

Package unit name	PQRY-P288TSLMU-A2	PQRY-P312TSLMU-A2	PQRY-P336TSLMU-A2
Heat Source unit 1	PQRY-P144TLMU-A2	PQRY-P168TLMU-A2	PQRY-P168TLMU-A2
Heat Source unit 2	PQRY-P144TLMU-A2	PQRY-P144TLMU-A2	PQRY-P168TLMU-A2
Twinning Kit (optional parts)	CMY-Q200CBK		
BC controller~Twinning pipe	High pressure a	Low pressure b	Low pressure c
Twinning pipe~	Heat source unit 1	Heat source unit 2	Heat source unit 2
Twinning pipe~	Heat source unit 1	Heat source unit 2	Heat source unit 2
Twinning pipe~	Heat source unit 1	Heat source unit 2	Heat source unit 2
Twinning pipe~	Heat source unit 1	Heat source unit 2	Heat source unit 2

Unit: mm(in)

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.

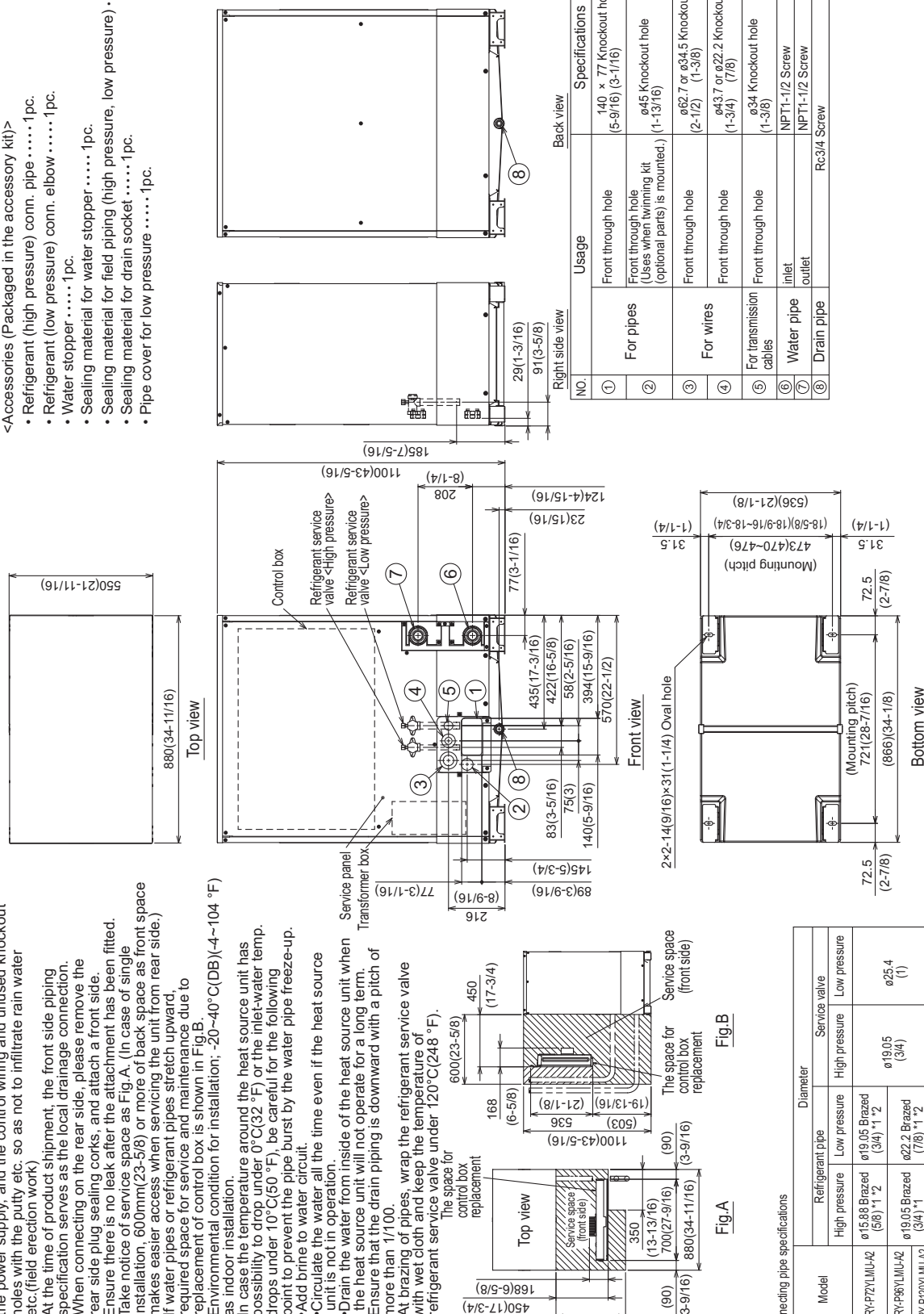
Note5:Environmental condition for installation; -20°C (DB)($-4^{\circ}\text{ to }104^{\circ}\text{F}$) as indoor installation.

Note6:In case the temperature around the heat source unit has possibility to drop under 0°C (32 $^{\circ}\text{F}$) or the inlet-water temp. drops under 10°C (50 $^{\circ}\text{F}$), 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 $^{\circ}\text{F}$).



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	Front through hole	ø62.7 or ø34.5 Knockout hole (2-1/2) (1-3/8)
④	For wires 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	Drain pipe outlet	NPT1-1/2 Screw
		Rc3/4 Screw

Connecting pipe specifications

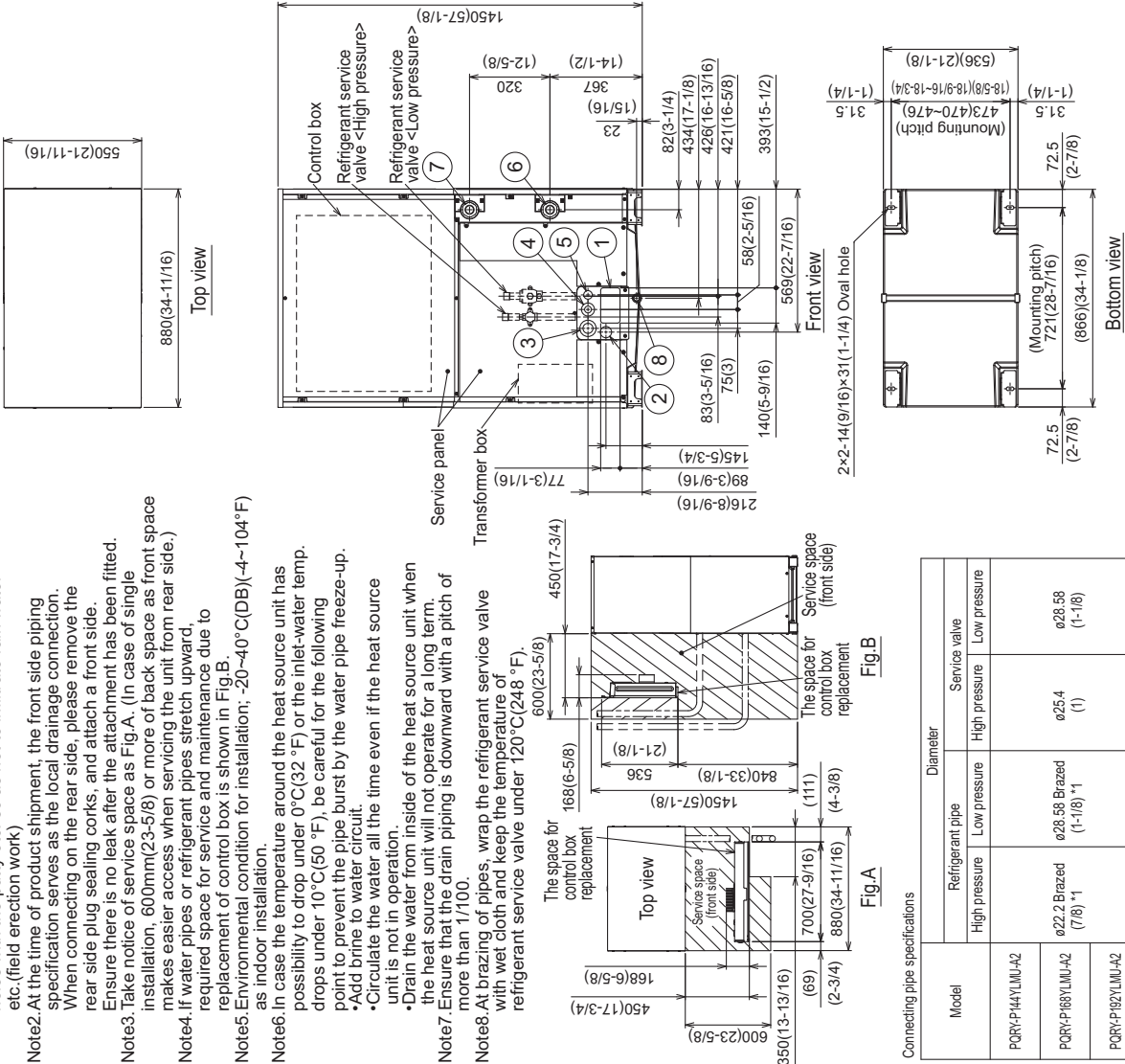
Model	Refrigerant pipe			Diameter		Service valve
	High pressure	Low pressure		High pressure	Low pressure	
PQR-P77Y1MU-A2	ø15.88 Braze (5/8)" x 1/2"	ø19.05 Braze (3/4)" x 1/2"		ø19.05 (3/4)"	ø25.4 (1")	
PQR-P98Y1MU-A2	ø19.05 Braze (3/4)" x 1/2"	ø22.2 Braze (7/8)" x 1/2"				
PQR-P120Y1MU-A2						

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

PQRY-P144, 168, 192YLMU-A2

Unit: mm(in)

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

NO.	Usage		Specifications
	For pipes	Front through hole (Uses when twinning kit (optional parts) is mounted.)	
①		Front through hole	140 x 77 Knockout hole (5-9/16) (3-1/16)
②		Front through hole	ø45 Knockout hole (1-13/16)
③		Front through hole	ø27 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 wires	Front through hole	ø34 Knockout hole (1-3/8)
⑥	For transmission cables	Front through hole	ø34 Knockout hole (1-3/8)
⑦	Water pipe inlet	Front through hole	NPT1-1/2 Screw
⑧	Drain pipe outlet	Front through hole	NPT1-1/2 Screw

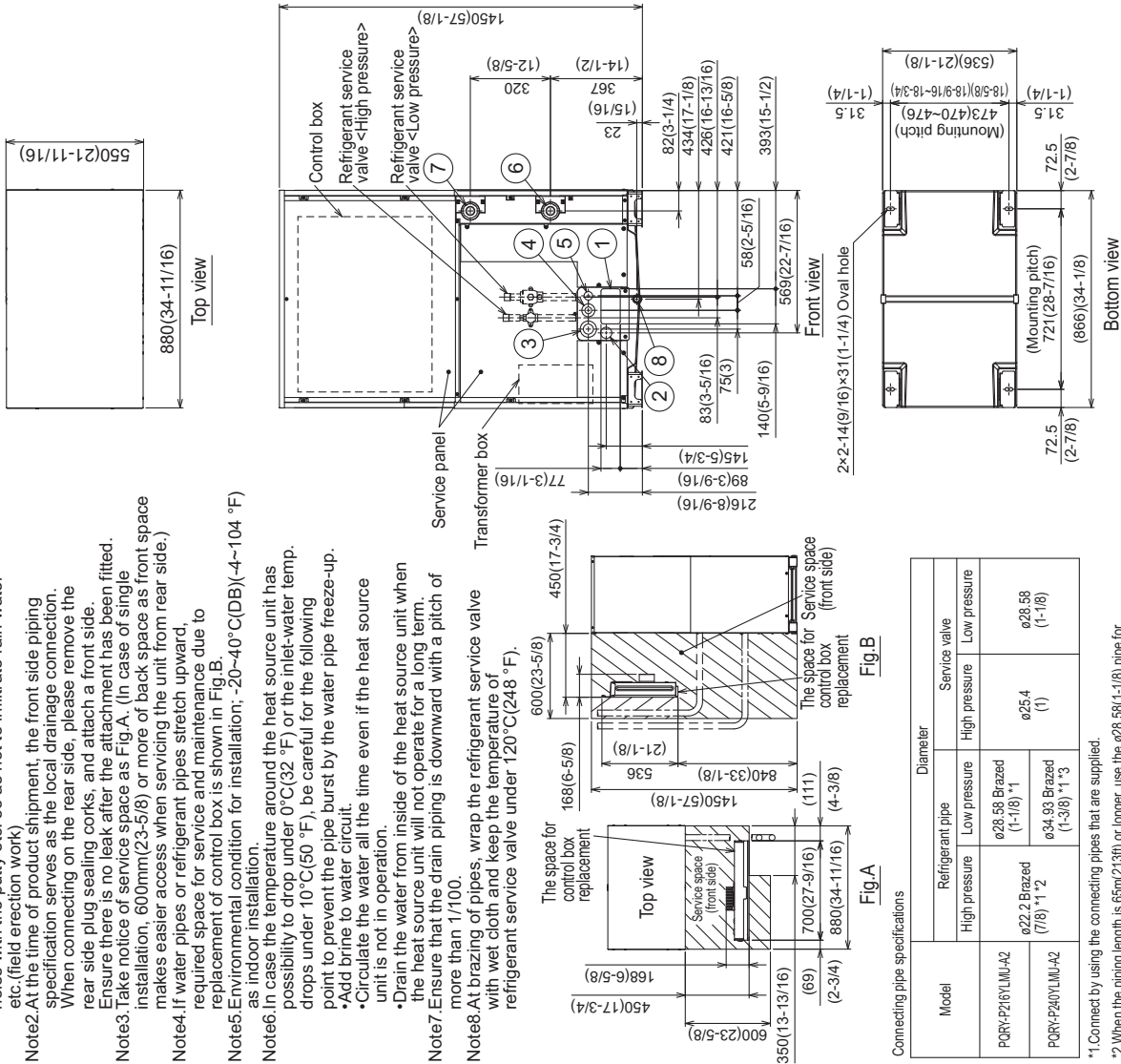
Model	Diameter		
	Refrigerant pipe	Service valve	
PQRY-P144YLMU-A2	High pressure	High pressure	Low pressure
PQRY-P168YLMU-A2	ø22.2 Braze (7/8) *1	ø25.4 (1)	ø28.58 (1-1/8)
PQRY-P192YLMU-A2	ø22.2 Braze (7/8) *1	ø25.4 (1)	ø28.58 (1-1/8)

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

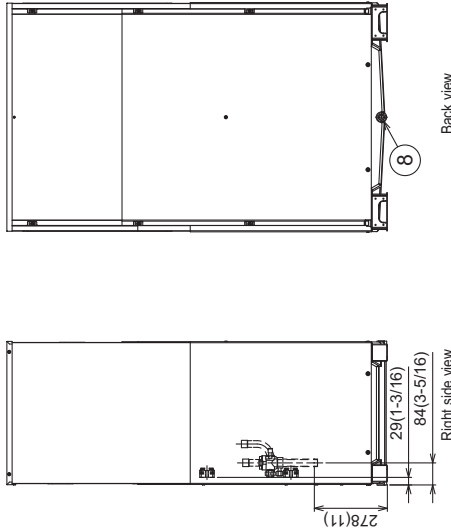
PQRY-P216, 240YLMU-A2

Unit: mm(in)

- 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.
- Note7. Drain the water from inside of the heat source unit when the heat source unit will not operate for a long term.
- Note8. Ensure that the drain piping is downward with a pitch of more than 1/100.
- Note9. 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 (Packaged in the accessory kit)>
- Refrigerant (high pressure) conn. pipe 1pc.
 - Refrigerant (low pressure) conn. pipe 1pc.
 - Water stopper 1pc.
 - Sealing material for water stopper 1pc.
 - Sealing material for field piping (high pressure, low pressure) 1pc. each
 - Sealing material for drain socket 1pc.
 - Pipe cover for low pressure 1pc.
 - Sealing material for base leg (two types) 4 pcs each
 - Sealing material for panel 1pc.



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

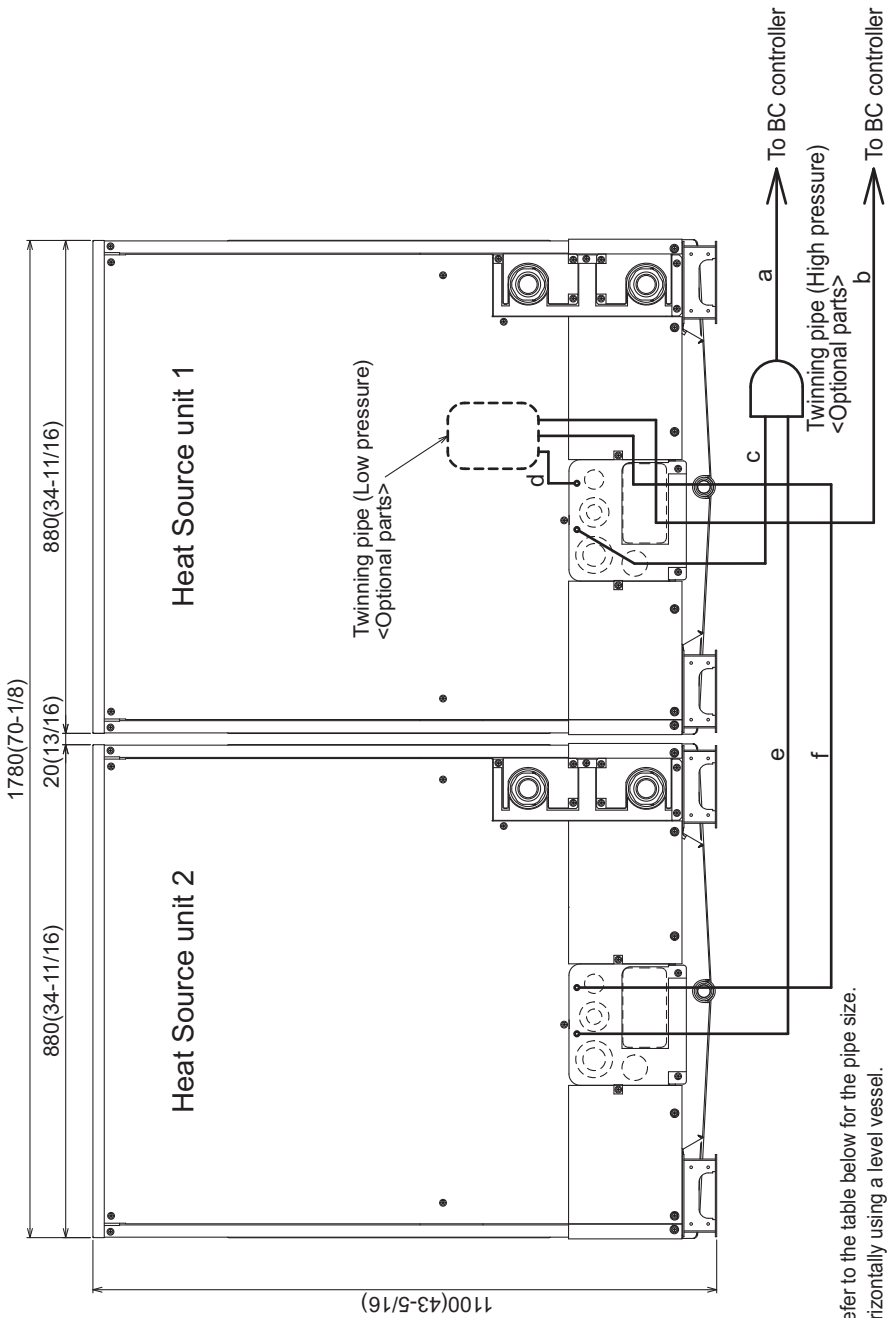
Model	Diameter		
	Refrigerant pipe	Service valve	
PQRY-P216YLMU-A2	High pressure	High pressure	Low pressure
PQRY-P240YLMU-A2	ø22.2 Braze (7/8) *1 *2	ø25.4 (1)	ø28.58 (1-1/8)
	ø34.93 Braze (1-3/8) *1 *3		

- *1. Connect by using the connecting pipes that are supplied.
- *2. When the piping length is 65m(213ft) or longer, use the ø28.58(1-1/8) pipe for the part that exceeds 65m(213ft).
- *3. Use the pipe joint(field supply) and connect to the refrigerant service valve piping.

PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

PQRY-P144, 168, 192, 216, 240YSLMU-A2

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) must be installed horizontally using a level vessel.
3. See the Installation Manual for the details of Twinning pipe installation.
4. Only use the Twinning pipe by Mitsubishi (optional parts).
5. Connect the heat source unit 1 with the Twinning pipe (Low pressure) (section "d" in the figure).

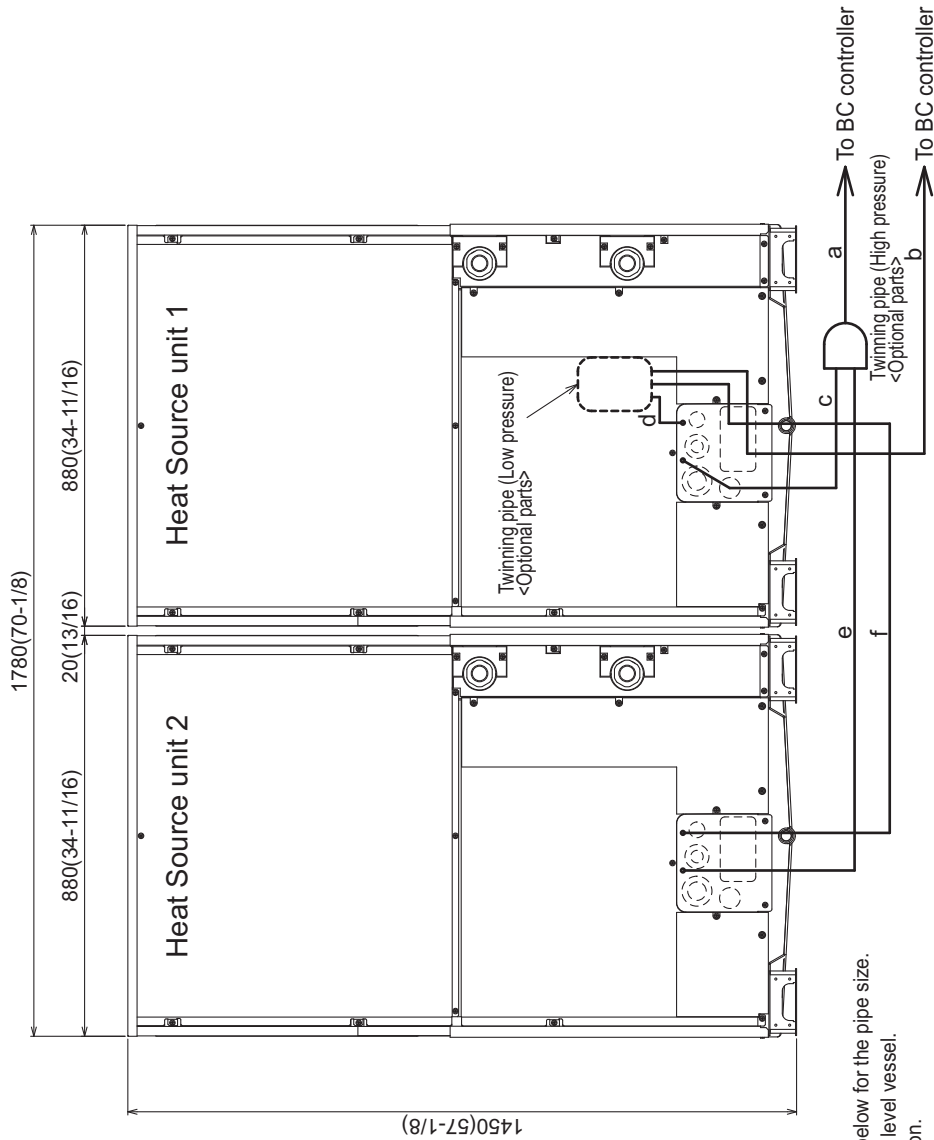
Twinning pipe connection size

Package unit name	PQRY-P144YSLMU-A2	PQRY-P168YSLMU-A2	PQRY-P192YSLMU-A2	PQRY-P216YSLMU-A2	PQRY-P240YSLMU-A2
Heat Source unit 1	PQRY-P72YLMU-A2	PQRY-P96YLMU-A2	PQRY-P120YLMU-A2	PQRY-P144YLMU-A2	PQRY-P168YLMU-A2
Heat Source unit 2	PQRY-P72YLMU-A2	PQRY-P96YLMU-A2	PQRY-P120YLMU-A2	PQRY-P144YLMU-A2	PQRY-P168YLMU-A2
Twinning Kit(optional parts)	CMY-Q100CBK2				
BC controller~Twinning pipe	High pressure	a	ø22.2(7/8)	ø22.2(7/8) *1	
	Low pressure	b	ø28.58(1-1/8)	ø34.93(1-3/8)	
Twinning pipe~	High pressure	c	ø15.88(5/8)	ø19.05(3/4)	
	Heat source unit 1	d	- (Note 5)		
Twinning pipe~	High pressure	e	ø15.88(5/8)	ø19.05(3/4)	
	Heat source unit 2	f	ø19.05(3/4)	ø22.2(7/8)	

*1. When the piping length is 65 m (213 ft) or longer, use the ø28.58(1-1/8) pipe for the part that exceeds 65 m (213 ft).

PQRY-P288, 312, 336YSLMU-A2

Unit: mm(in)



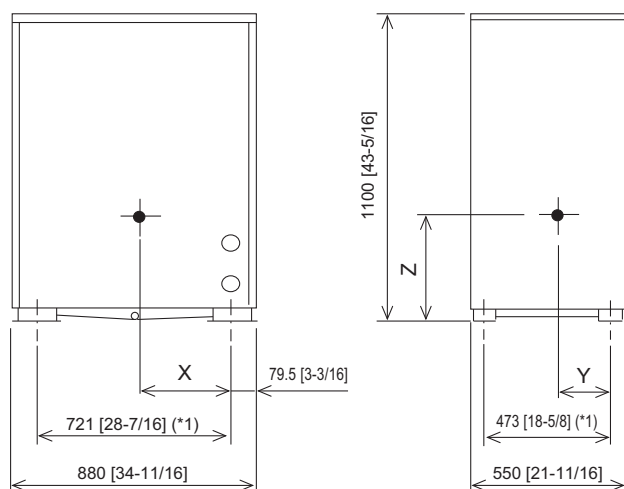
- Note 1. Connect the pipes as shown in the figure above. Refer to the table below for the pipe size.
2. Twinning pipe (High pressure) must be installed horizontally using a level vessel.
3. See the Installation Manual for the details of Twinning pipe installation.
4. Only use the Twinning pipe by Mitsubishi (optional parts).
5. Connect the heat source unit 1 with the Twinning pipe (Low pressure) (section "d" in the figure).

Twinning pipe connection size

Package unit name	PQRY-P288YSLMU-A2	PQRY-P312YSLMU-A2	PQRY-P336YSLMU-A2
Heat Source unit 1	PQRY-P144YLMU-A2	PQRY-P168YLMU-A2	PQRY-P168YLMU-A2
Heat Source unit 2	PQRY-P144YLMU-A2	PQRY-P144YLMU-A2	PQRY-P168YLMU-A2
Twinning Kit(optional parts)			
BC controller~Twinning pipe	High pressure	CMY-Q200CBK	
	Low pressure	ø28.58(1-1/8)	ø41.28(1-5/8)
Twinning pipe~	High pressure	ø22.2(7/8)	
	Low pressure	- (Note 5)	
Heat source unit 1	High pressure	ø22.2(7/8)	
	Low pressure	ø28.58(1-1/8)	

PQRY-P72, 96, 120TLMU-A2/YLMU-A2

Unit: mm [in.]

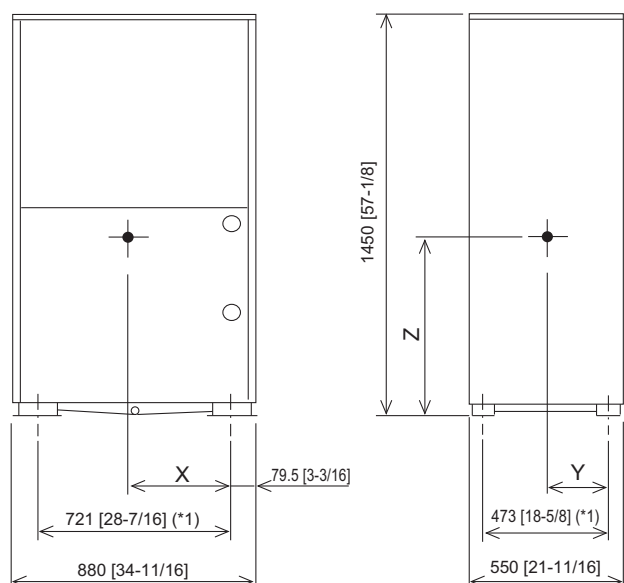


Model	X	Y	Z
PQRY-P72TLMU-A2	346 [13-5/8]	241 [9-1/2]	443 [17-1/2]
PQRY-P96TLMU-A2	346 [13-5/8]	241 [9-1/2]	443 [17-1/2]
PQRY-P120TLMU-A2	346 [13-5/8]	241 [9-1/2]	443 [17-1/2]
PQRY-P72YLMU-A2	374 [14-3/4]	228 [9]	430 [16-15/16]
PQRY-P96YLMU-A2	374 [14-3/4]	228 [9]	430 [16-15/16]
PQRY-P120YLMU-A2	374 [14-3/4]	228 [9]	430 [16-15/16]

*1 Mounting Pitch

PQRY-P144, 168, 192, 216, 240TLMU-A2/YLMU-A2

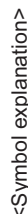
Unit: mm [in.]



Model	X	Y	Z
PQRY-P144TLMU-A2	385 [15-3/16]	243 [9-5/8]	627 [24-11/16]
PQRY-P168TLMU-A2	385 [15-3/16]	243 [9-5/8]	627 [24-11/16]
PQRY-P192TLMU-A2	385 [15-3/16]	243 [9-5/8]	627 [24-11/16]
PQRY-P216TLMU-A2	370 [14-5/8]	239 [9-7/16]	658 [25-15/16]
PQRY-P240TLMU-A2	370 [14-5/8]	239 [9-7/16]	658 [25-15/16]
PQRY-P144YLMU-A2	396 [15-5/8]	232 [9-3/16]	607 [23-15/16]
PQRY-P168YLMU-A2	396 [15-5/8]	232 [9-3/16]	607 [23-15/16]
PQRY-P192YLMU-A2	396 [15-5/8]	232 [9-3/16]	607 [23-15/16]
PQRY-P216YLMU-A2	380 [15]	228 [9]	626 [24-11/16]
PQRY-P240YLMU-A2	380 [15]	228 [9]	626 [24-11/16]

*1 Mounting Pitch

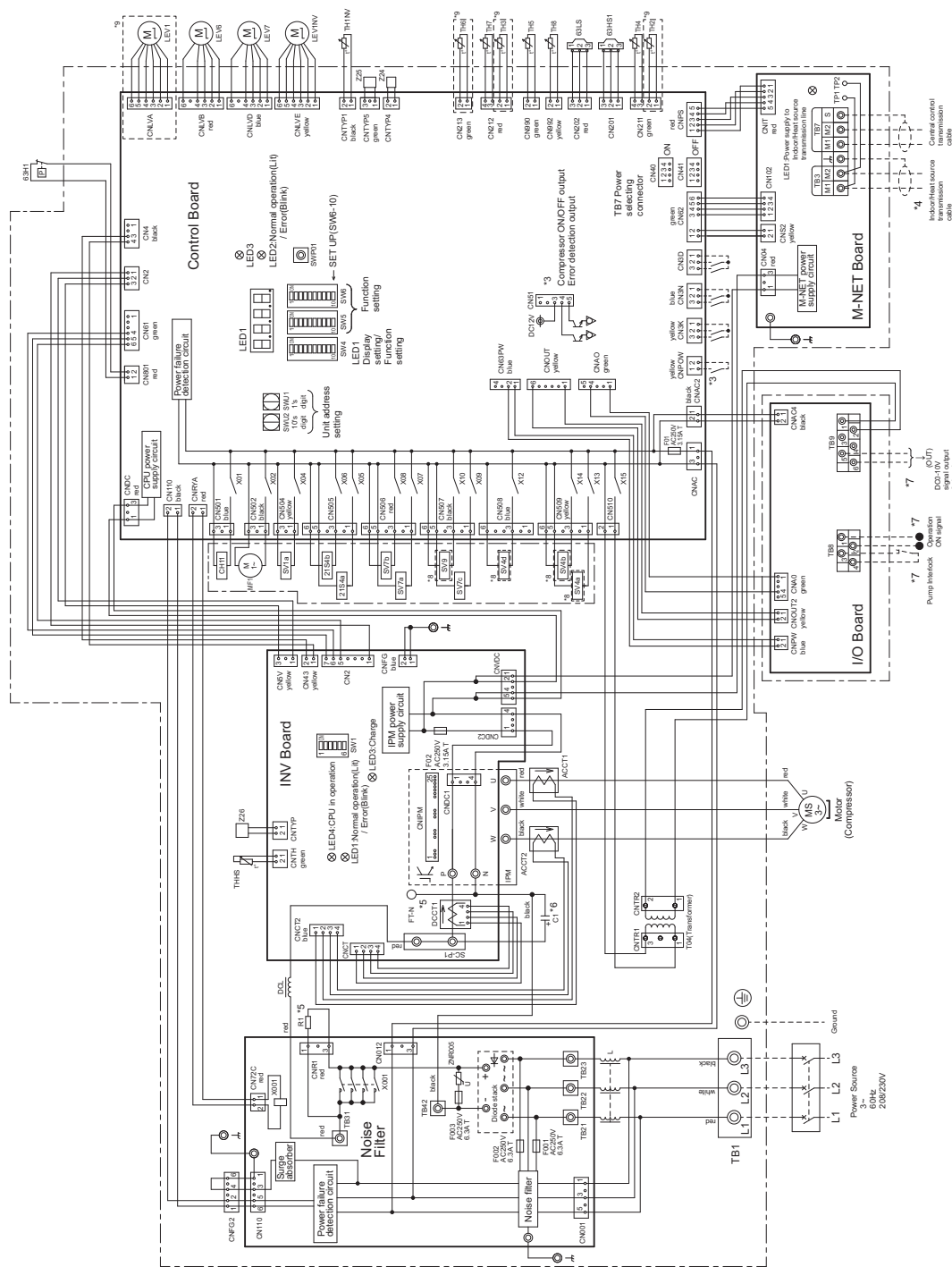
PARRY-P-T(S)LMU-A2, Y(S)LMU-A2



Symbol	Explanation	Symbol	Explanation
4-way valve	Cooling/Heating switching	SV7a,b	Heat exchanger capacity control
Pressure switch	High pressure protection for the heat source unit	SV9	For opening/closing the bypass circuit
Pressure sensor	High pressure	TB1	Power supply
Pressure sensor	Low pressure	TB3	Indoor/Heat source transmission cable
Magnetic relay (inverter main circuit)		Terminal block	
CM1~CM16		TB7	Central control transmission
CM17~CM20	Capacitor (inverter main circuit)		
CM21~CM24	Capacitor (for heating the compressor)	TB8	Operation ON signal
CM25~CM28	Current sensor (AC)		Pump interlock
CM29~CM32	DC reactor	TB9	Power input and signal output for variable water flow valve
Choke coil (for high frequency noise reduction)			
Linear expansion valve	H/C bypass/Controls refrigerant flow in H/C circuit	TH2	Subcooled refrigerant outlet temperature
LEV6	Heat exchanger capacity control	TH4	Discharge pipe temperature
LEV7	Heat exchanger capacity control	TH5	A/C inlet pipe temperature
LEV8	Heat exchanger capacity control	TH6	Refrigerant gas liquid refrigerant temperature
LEV9	Heat exchanger capacity control		
LEV10	Fan motor (Radiator panel)	TH7	Water inlet temperature
LEV11	For inrush current prevention		
LEV12	For current detection	TH8	Water outlet temperature
LEV13	For opening/closing the bypass circuit under the OS	TH9	Outlet temp. detect of heat exchanger for inverter
SV5/a	Solenoid valve	THS	IPM temperature
SV4a,b,d	Heat exchanger capacity control		

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

PQRY-P-T(S)LMU-A2, Y(S)LMU-A2



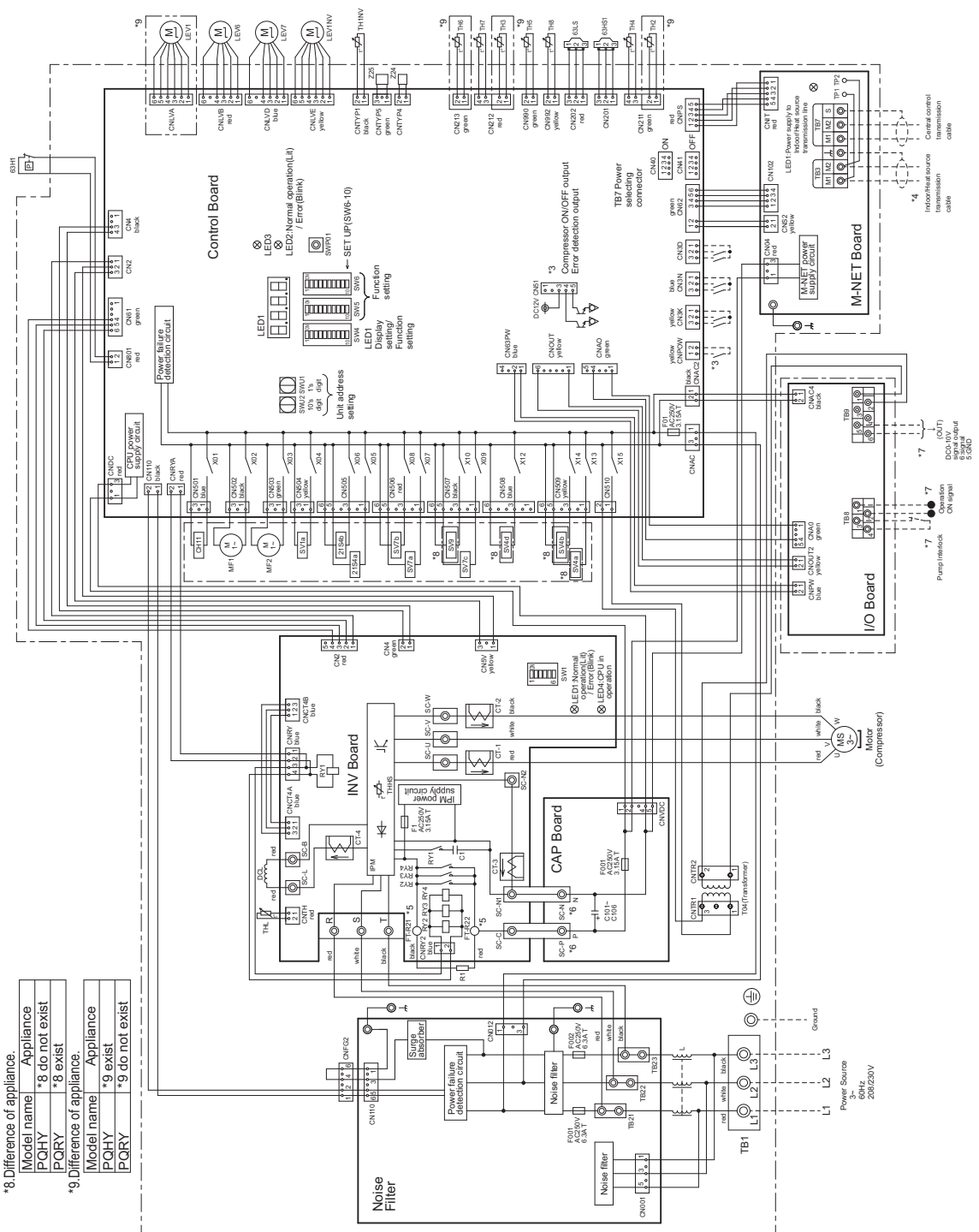
1. Single-dotted lines indicate wiring not supplied with the unit.
2. Dot-dash lines indicate the control box boundaries.
3. Refer to the Data book for connecting input/output signal connectors.
4. Daisy-chain terminals (TB3) on the heat source units in the same refrigerant system together.
5. Faston 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 at both ends of the main capacitor (C-1) has dropped to DC20V or less.
7. Refer to the Data book for wiring terminal block for Pump Inverter Operation ON signal and DCO-10V signal output.
8. Difference of appliance.

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

<Symbol explanation>

Symbol	Extension
2154a	Cooling/Heating switching
2154b	Heat exchanger capacity control
6341	High pressure protection for the heat source unit
6341S1	High pressure
6341S	Low pressure
X001	Magnetic relay (inverter main circuit)
C11	Capacitor (inverter main circuit)
C11-1	Capacitor (for preheating the compressor)
ACCT1.2	Current sensor (AC)
DCCT1	Current sensor (DC)
DCCL	DC reactor
L	Choke coil (for high frequency noise reduction)
LEV1	Linear expansion valve
LEV6	Heat exchanger capacity control valve
LEV6V	Heat exchanger capacity control valve
THNV	Heat exchanger for inverter
MF1	Fan motor (Evaporator panel)
R1	Resistor
SV1a	For mutual current prevention circuit under the O/S
SV1a,b,c	Heat exchanger capacity control
SV1a,b	Heat exchanger capacity control
SV9	For opening/closing the bypass circuit
TB1	Power supply
TB3	Power source transmission cable
TB7	Control cable transmission cable
TB9	Operation ON signal
TB9	Power input and signal output for variable water flow valve
TH2	Subcool bypass control temperature
TH3	Subcool bypass control temperature
TH5	Subcool bypass control temperature
TH5	ACCC inlet pipe temperature
TH6	Subcooled liquid refrigerant temperature
TH7	Water inlet temperature
TH8	Water outlet temperature
THNV	Outlet temp. detect of heat exchanger for inverter
THMS	IPX1 temperature

PQRY-P216, 240TLMU-A2



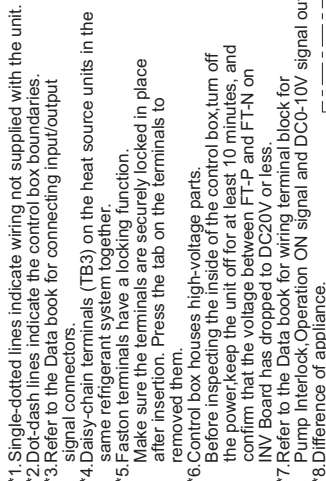
- *8. Difference of appliance.
Model name Appliance
PQHY *8 do not exist
PQRY *8 exist
- *9. Difference of appliance.
Model name Appliance
PQHY *9 exist
PQRY *9 do not exist

- *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 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 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>

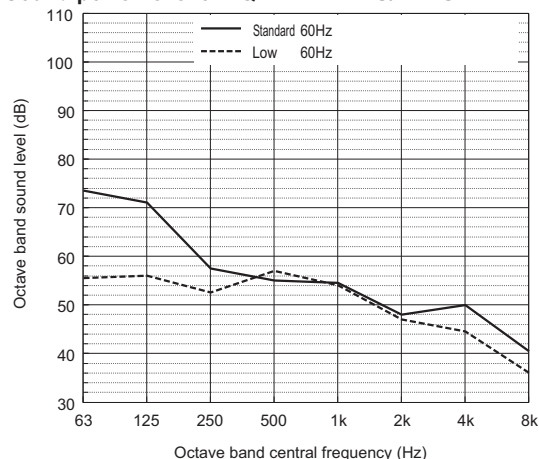
Symbol	Explanation
2TS4a	Cooling/Heating switching
2TS4b	Heat exchanger capacity control
63H1	High pressure protection for the pressure sensor
63LS1	Low pressure protection for the pressure sensor
C1	Capacitor
G101-C106	Inverter main circuit
G111	Crankcase heater (for heating the compressor)
CT-1, CT-2	Current sensor (AC)
CT-3, CT-4	Current sensor (DC)
DCL	DC reactor
L	Choke coil (for high frequency noise reduction)
LEV1	HIC bypass (Controls refrigerant flow in HIC circuit)
LEV6	Heat exchanger capacity control
LEV7	Heat exchanger capacity control
LEVNV	Heat exchanger for inverter
MF1, MF2	Fan motor (Radiator panel)
R1	Resistor (For inrush current prevention)
RY1	Magnetic relay
RY2, RY3, RY4	Inverter main circuit (72C)
SV1a	Solenoid valve
SV4a, b, d	For opening/closing the bypass
SV7a, b, c	Heat exchanger capacity control
SV9	Heat exchanger capacity control
SV9	For opening/closing the bypass circuit
TB1	Terminal block
TB3	Indoor/Heat source transmission cable
TB7	Central control transmission cable
TB8	Outdoor ON signal, Pump Interlock
TB9	Power input and signal output for variable water flow valve
TH2	Thermistor
TH3	Subcool pipe temperature
TH4	Discharge pipe temperature
TH5	ACC inlet pipe temperature
TH6	Subcooled liquid refrigerant temperature
TH7	Water inlet temperature
TH8	Water outlet temperature
THNV	Outlet temp. derived of heat exchanger for inverter
THS	IPM temperature
THL	DCL temperature
Z24, 25	Function setting connector

PQRY-P-T(S)LMU-A2, Y(S)LMU-A2



Model name		Appliance	
P72/96/120		*8 do not exist	
P144/168/192/216/240		*8 exist	
B. Difference of appliance.			
Model name		Appliance	
POHY		*9 do not exist	
PORY		*9 exist	
10. Difference of appliance.			
Model name		Appliance	
POHY		*10 exist	
PORY		*10 do not exist	
>Symbol explanation<			
Symbol	Explanation		
4-way valve	Cooling/Heating switching		
15Sa	Heat exchanger capacity control		
15Sb	High pressure protection for the heat source unit		
3H41	Pressure switch		
3H41	Pressure sensor		
3H41	Magnetic relay (inverter main circuit)		
3H41	Capacitor (inverter main circuit)		
3H41	Crankcase heater (for heating the compressor)		
3H41	Current sensor (AC)		
3H41	Choke coil (for high frequency noise reduction)		
LEV1	HIC bypass control: refrigerant flow in HIC circuit		
LEV6	Heat exchanger capacity control		
LEV7	Heat exchanger capacity control		
LEV10	Heat exchanger for inverter		
LEV11	Fan motor (Radiator panel)		
LEV12	For frost: current prevention		
LEV13	For current detection		
LEV14	For opening/closing the bypass control: ON/OFF		
LEV15	Heat exchanger capacity control		
LEV16	Heat exchanger capacity control		
LEV17	Heat exchanger capacity control		
LEV18	For opening/closing the bypass circuit		
LEV19	Power supply		
LEV20	Indoor/Heat source transmission cable		
LEV21	Control control transmission cable		
LEV22	Operation ON signal		
LEV23	Signal interlock		
LEV24	Signal output for variable water flow valve		
LEV25	Subcool bypass control temperature		
LEV26	Pipe temperature		
LEV27	Discharge pipe temperature		
LEV28	ACC net pipe temperature		
LEV29	Subcooled liquid refrigerant temperature		
LEV30	Water inlet temperature		
LEV31	Water outlet temperature		
LEV32	Cullet temp detect of heat exchanger		
LEV33	Water inlet temperature		
LEV34	Water outlet temperature		
LEV35	Function setting compressor		

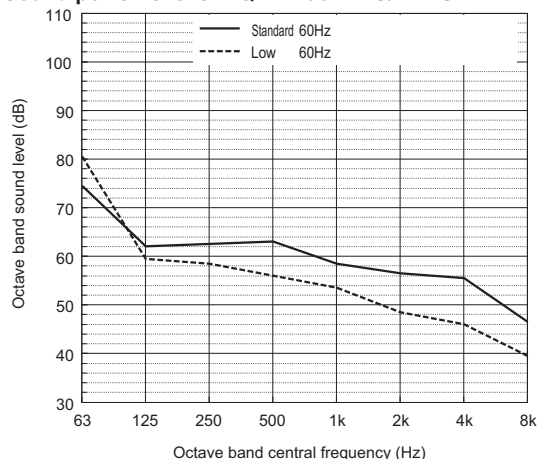
Sound power level of PQRYP72TLMU/YLMU-A2



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	73.5	71.0	57.5	55.0	54.5	48.0	50.0	40.5	60.5
Low noise mode	60Hz	55.5	56.0	52.5	57.0	54.0	47.0	44.5	36.0	58.0

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.

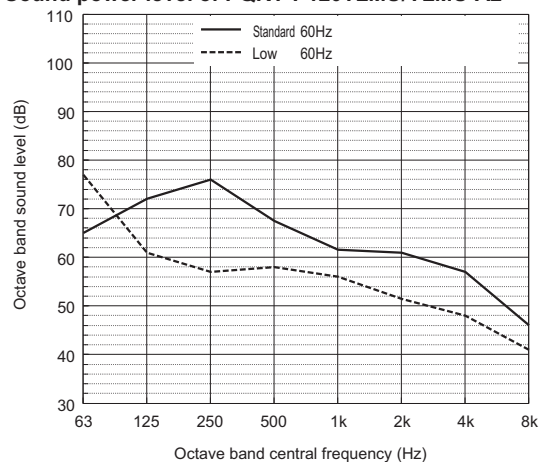
Sound power level of PQRYP96TLMU/YLMU-A2



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	74.5	62.0	62.5	63.0	58.5	56.5	55.5	46.5	65.0
Low noise mode	60Hz	80.5	59.5	58.5	56.0	53.5	48.5	46.0	39.5	60.0

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.

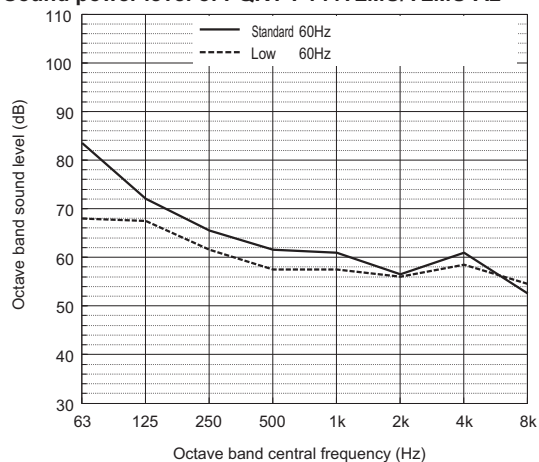
Sound power level of PQRYP120TLMU/YLMU-A2



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	65.0	72.0	76.0	67.5	61.5	61.0	57.0	46.0	71.0
Low noise mode	60Hz	77.0	61.0	57.0	58.0	56.0	51.5	48.0	41.0	61.0

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.

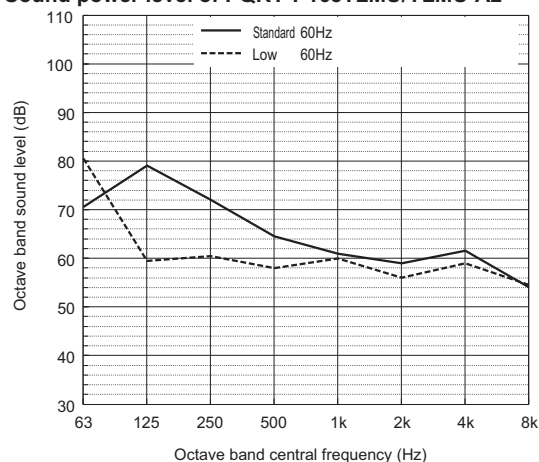
Sound power level of PQRYP144TLMU/YLMU-A2



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	83.5	72.0	65.5	61.5	61.0	56.5	61.0	52.5	68.0
Low noise mode	60Hz	68.0	67.5	61.5	57.5	57.5	56.0	58.5	54.5	64.5

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.

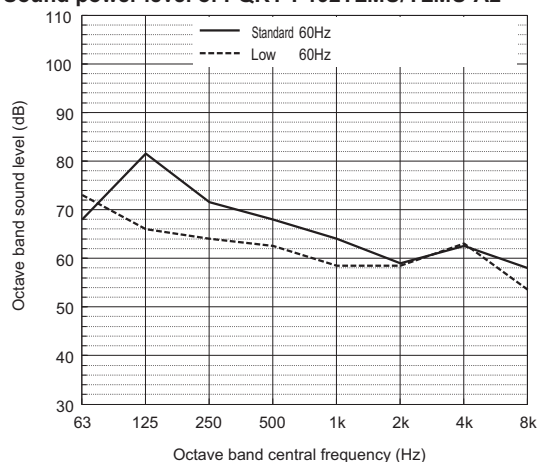
Sound power level of PQRYP168TLMU/YLMU-A2



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	70.5	79.0	72.0	64.5	61.0	59.0	61.5	54.0	70.0
Low noise mode	60Hz	80.5	59.5	60.5	58.0	60.0	56.0	59.0	54.5	65.5

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 power level of PQRYP192TLMU/YLMU-A2

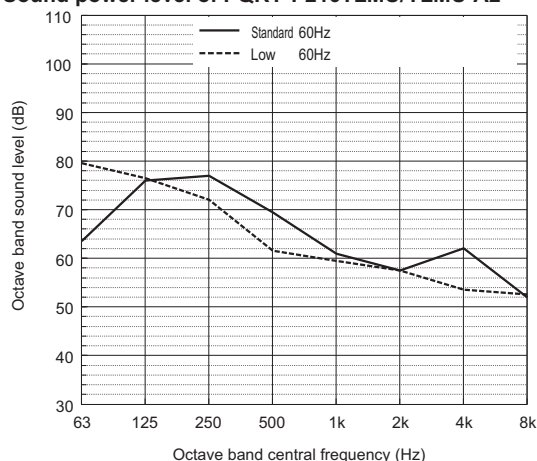


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	68.0	81.5	71.5	68.0	64.0	59.0	62.5	58.0	72.0
Low noise mode	60Hz	73.0	66.0	64.0	62.5	58.5	58.5	63.0	53.5	68.0

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.
- The sound values are sound power level (PWL) based on ISO 3744:2010 ($r = 3.5$ m).
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

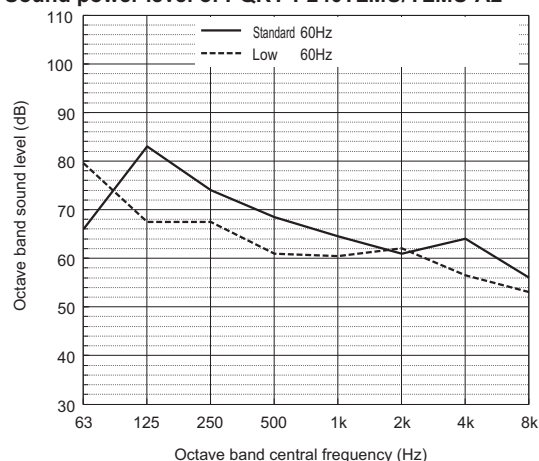
Sound power level of PQRY-P216TLMU/YLMU-A2



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	63.5	76.0	77.0	69.5	61.0	57.5	62.0	52.0	72.5
Low noise mode	60Hz	79.5	76.5	72.0	61.5	59.5	57.5	53.5	52.5	68.0

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.

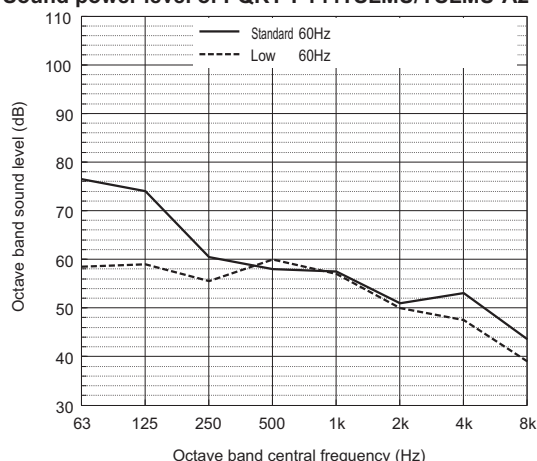
Sound power level of PQRY-P240TLMU/YLMU-A2



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	66.0	83.0	74.0	68.5	64.5	61.0	64.0	56.0	73.0
Low noise mode	60Hz	79.5	67.5	67.5	61.0	60.5	62.0	56.5	53.0	68.0

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.

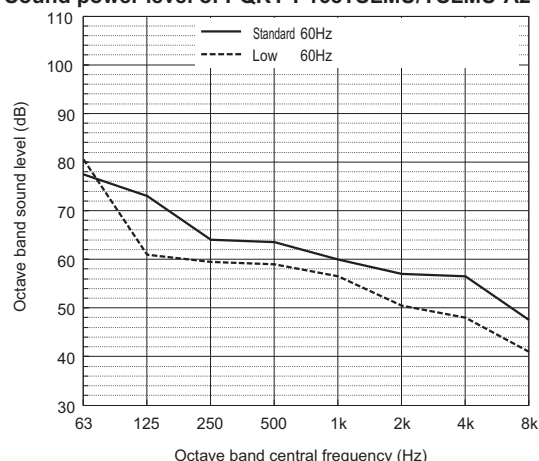
Sound power level of PQRY-P144TSLMU/YSLMU-A2



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	76.5	74.0	60.5	58.0	57.5	51.0	53.0	43.5	63.5
Low noise mode	60Hz	58.5	59.0	55.5	60.0	57.0	50.0	47.5	39.0	61.0

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.

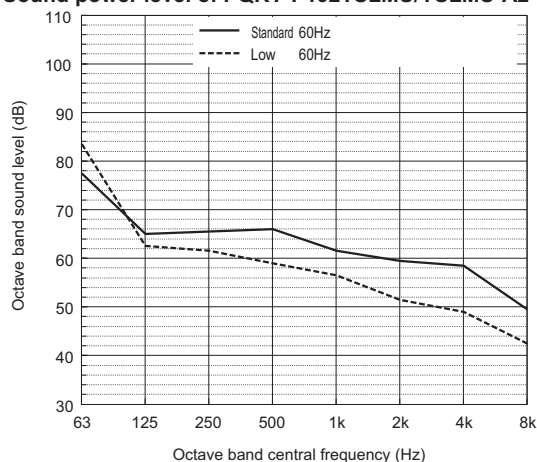
Sound power level of PQRY-P168TSLMU/YSLMU-A2



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	77.5	73.0	64.0	63.5	60.0	57.0	56.5	47.5	66.5
Low noise mode	60Hz	80.5	61.0	59.5	59.0	56.5	50.5	48.0	41.0	62.0

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.

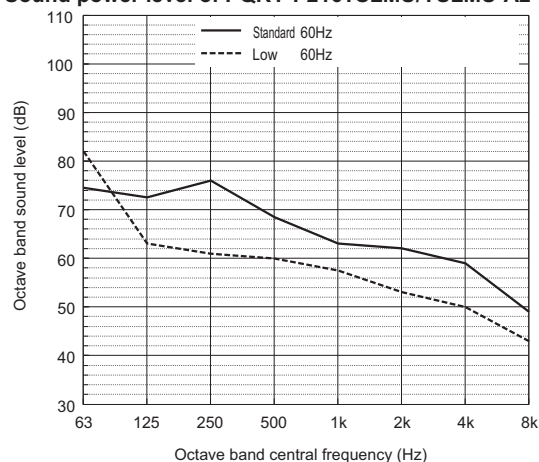
Sound power level of PQRY-P192TSLMU/YSLMU-A2



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	77.5	65.0	65.5	66.0	61.5	59.5	58.5	49.5	68.0
Low noise mode	60Hz	83.5	62.5	61.5	59.0	56.5	51.5	49.0	42.5	63.0

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 power level of PQRY-P216TSLMU/YSLMU-A2



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	74.5	72.5	76.0	68.5	63.0	62.0	59.0	49.0	72.0
Low noise mode	60Hz	82.0	63.0	61.0	60.0	57.5	53.0	50.0	43.0	63.5

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.

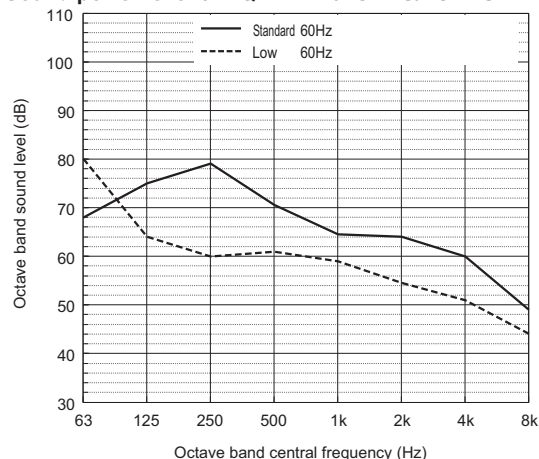
• Depending on the operation conditions, the unit generates noise caused by valve actuation, refrigerant flow, and pressure changes when operating normally. Please consider to avoid location where quietness is required.

For BC controller, it is recommended to be installed in places such as ceilings of corridor, rest rooms and plant rooms.

• The sound values are sound power level (PWL) based on ISO 3744:2010 ($r = 3.5$ m).

Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

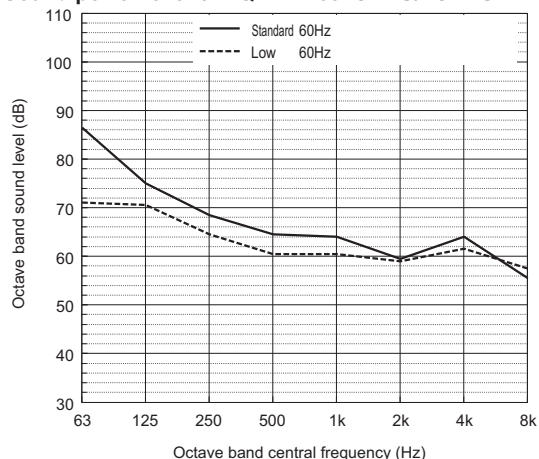
Sound power level of PQRYP240TSLMU/YSLMU-A2



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	68.0	75.0	79.0	70.5	64.5	64.0	60.0	49.0	74.0
Low noise mode	60Hz	80.0	64.0	60.0	61.0	59.0	54.5	51.0	44.0	64.0

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.

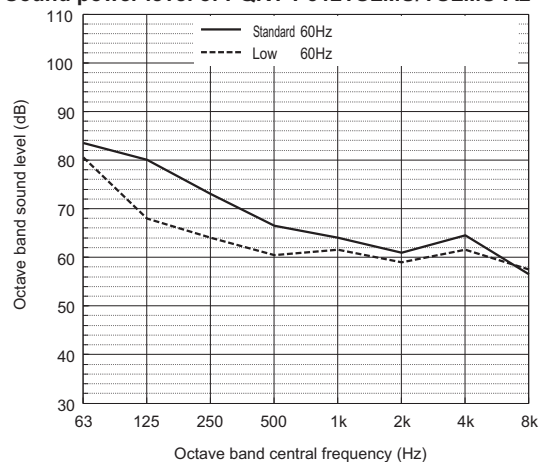
Sound power level of PQRYP288TSLMU/YSLMU-A2



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	86.5	75.0	68.5	64.5	64.0	59.5	64.0	55.5	71.0
Low noise mode	60Hz	71.0	70.5	64.5	60.5	60.5	59.0	61.5	57.5	67.5

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.

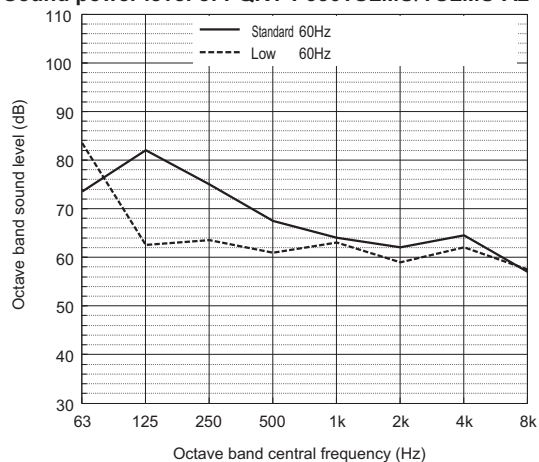
Sound power level of PQRYP312TSLMU/YSLMU-A2



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	83.5	80.0	73.0	66.5	64.0	61.0	64.5	56.5	72.5
Low noise mode	60Hz	80.5	68.0	64.0	60.5	61.5	59.0	61.5	57.5	68.0

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 power level of PQRYP336TSLMU/YSLMU-A2

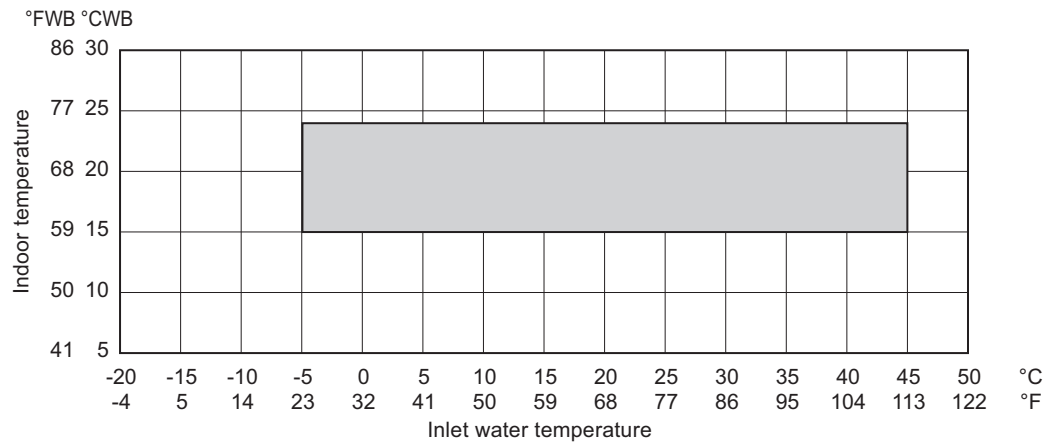


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	73.5	82.0	75.0	67.5	64.0	62.0	64.5	57.0	73.0
Low noise mode	60Hz	83.5	62.5	63.5	61.0	63.0	59.0	62.0	57.5	68.5

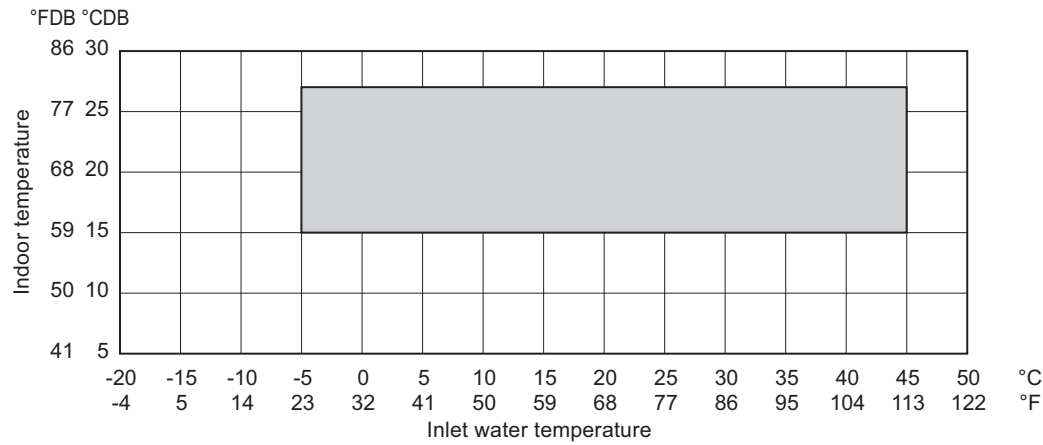
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

- 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.
- The sound values are sound power level (PWL) based on ISO 3744:2010 ($r = 3.5$ m).
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Cooling



Heating



Combination of cooling/heating operation (Cooling main or Heating main)

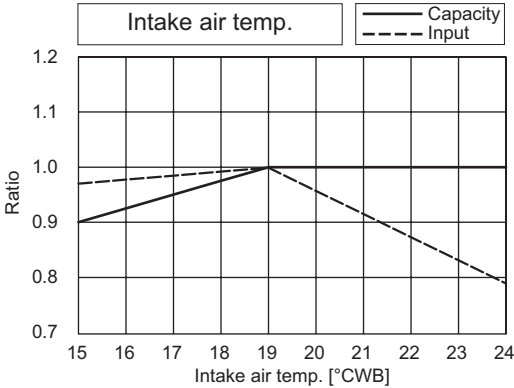
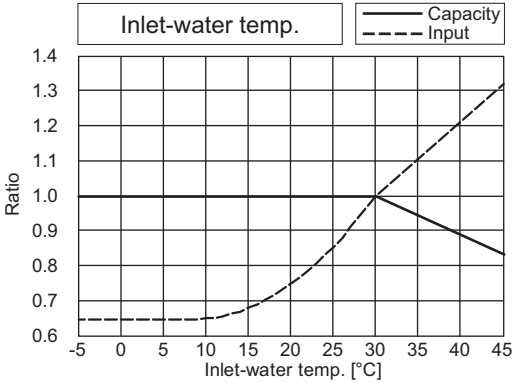
Inlet water temperature	Indoor temperature	
	Cooling	Heating
-5 to 45°C (23 to 113°F)	15 to 24°CWB (59 to 75°FWB)	15 to 27°CDB (59 to 81°FDB)

* 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.

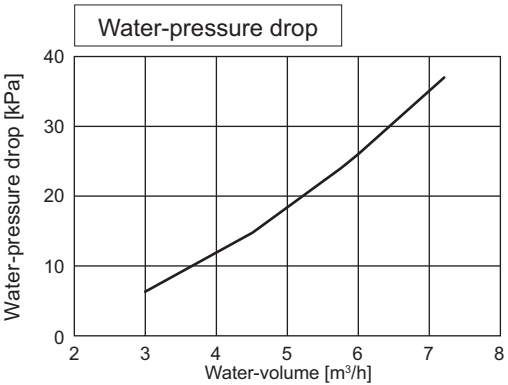
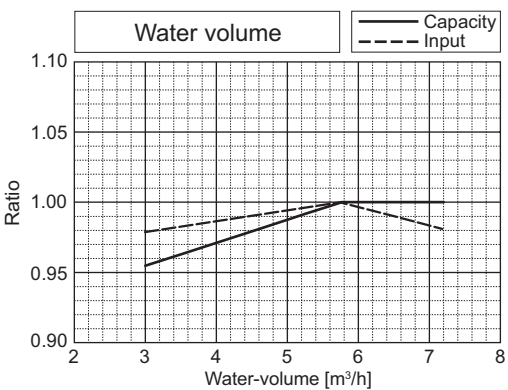
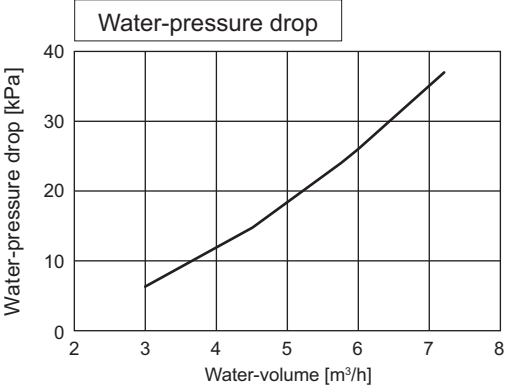
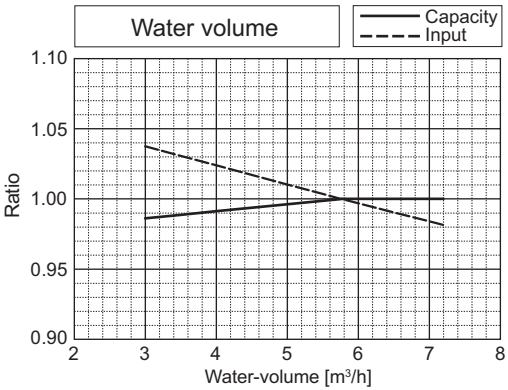
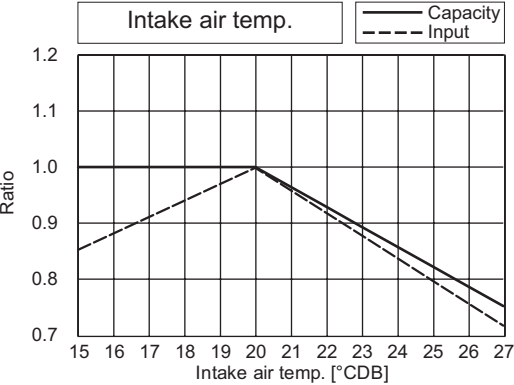
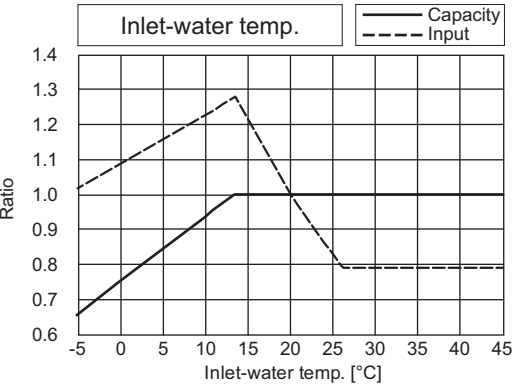
7-1. Correction by temperature

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
	BTU/h	72,000
Input	kW	3.61

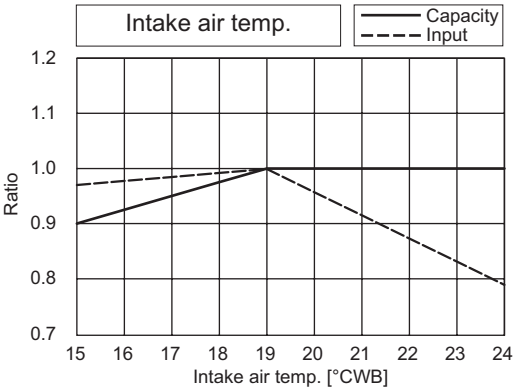
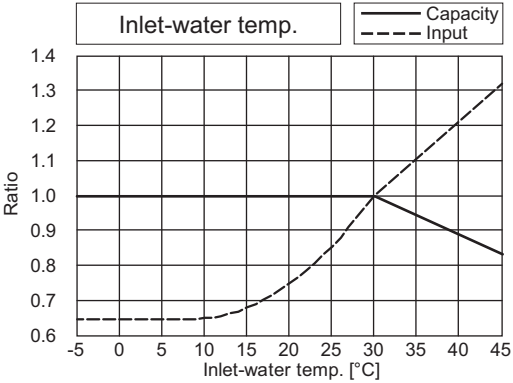


PQRY-		P72TLMU/YLMU
Nominal Heating Capacity	kW	23.4
	BTU/h	80,000
Input	kW	4.04

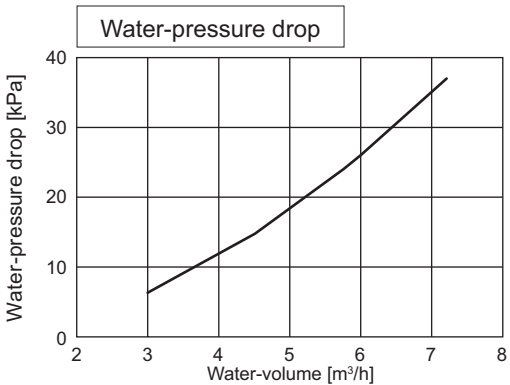
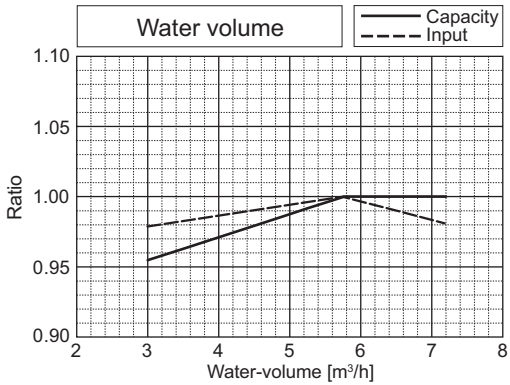
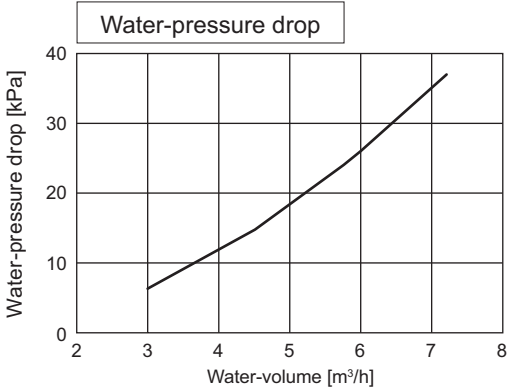
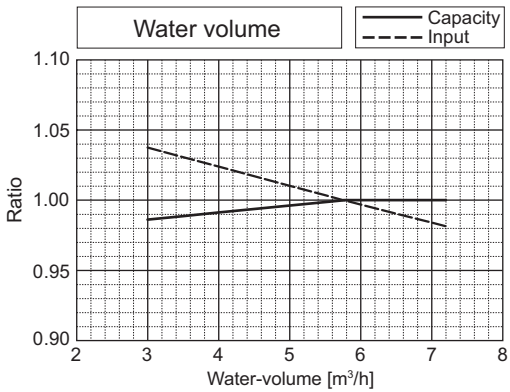
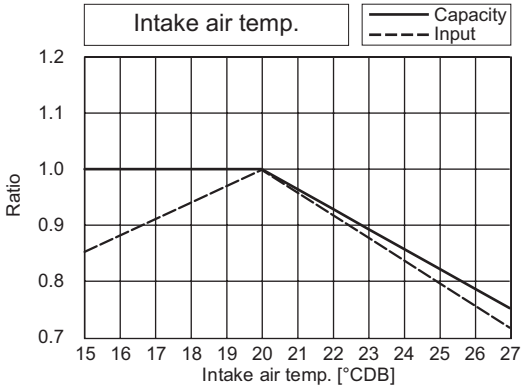
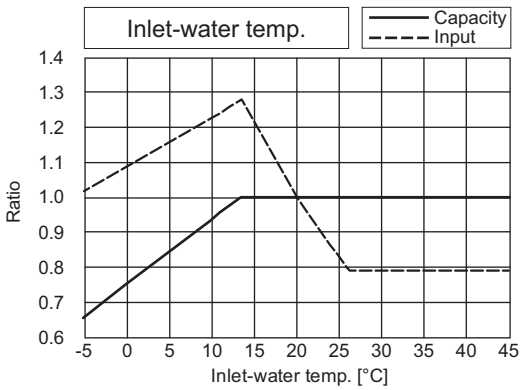


PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

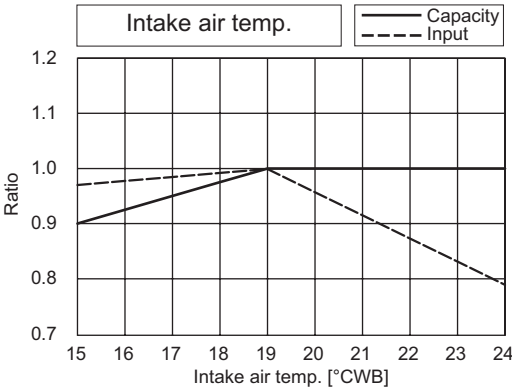
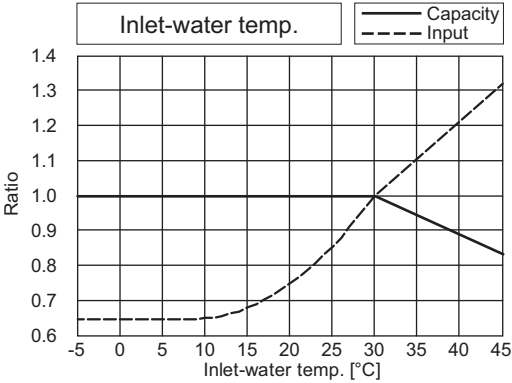
PQRY-		P96TLMU/YLMU
Nominal Cooling Capacity	kW	28.1
	BTU/h	96,000
Input	kW	5.21



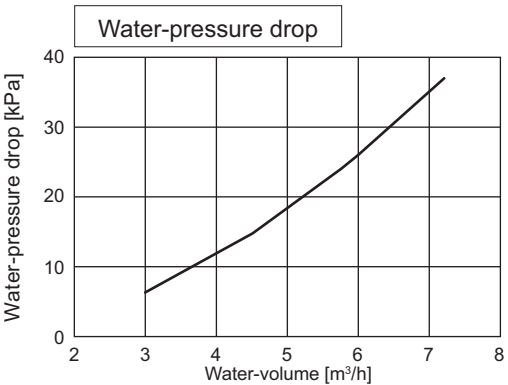
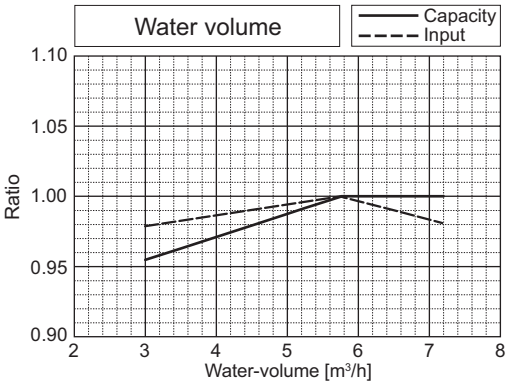
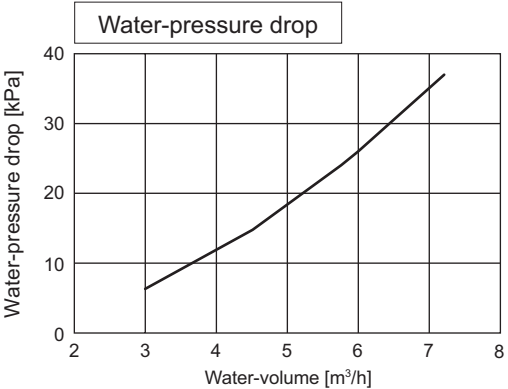
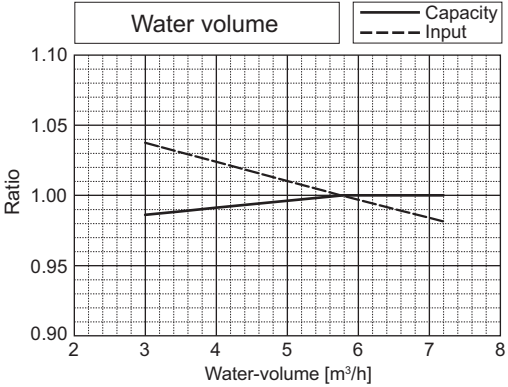
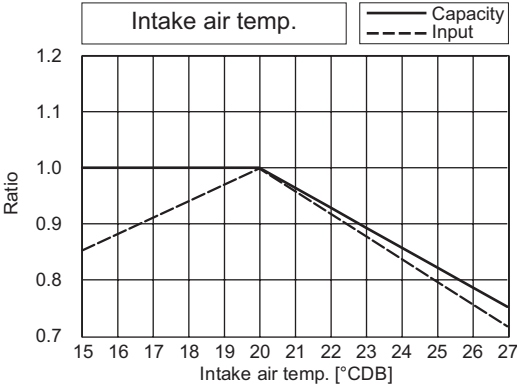
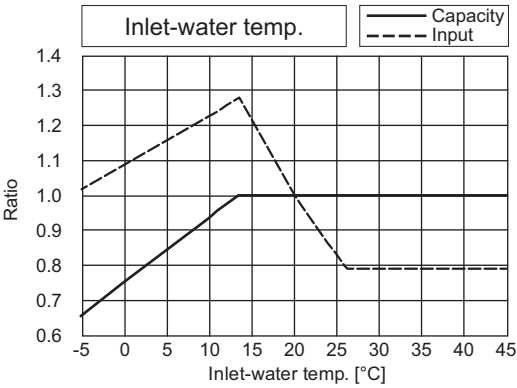
PQRY-		P96TLMU/YLMU
Nominal Heating Capacity	kW	31.7
	BTU/h	108,000
Input	kW	5.64



PQRY-		P120TLMU/YLMU
Nominal Cooling Capacity	kW	35.2
	BTU/h	120,000
Input	kW	7.51

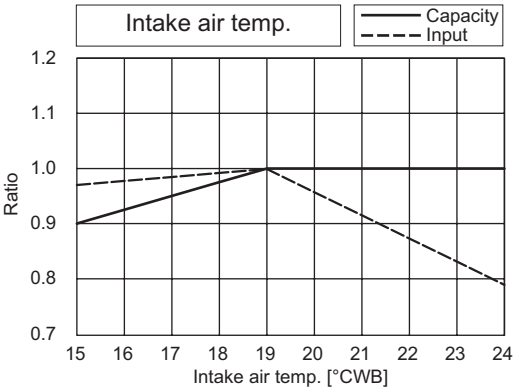
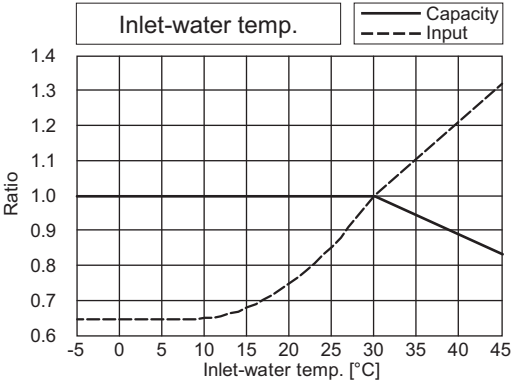


PQRY-		P120TLMU/YLMU
Nominal Heating Capacity	kW	39.6
	BTU/h	135,000
Input	kW	7.09

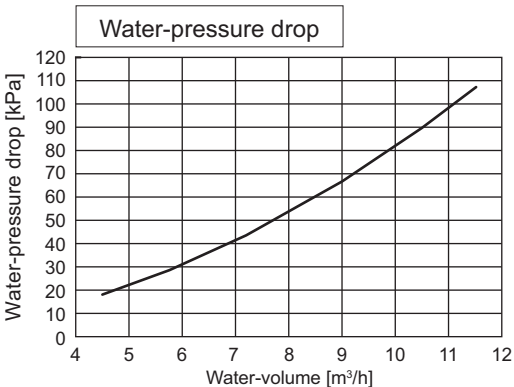
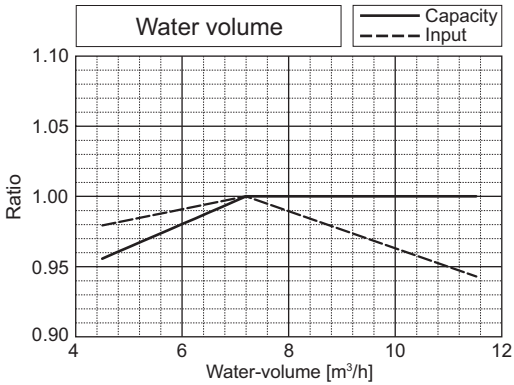
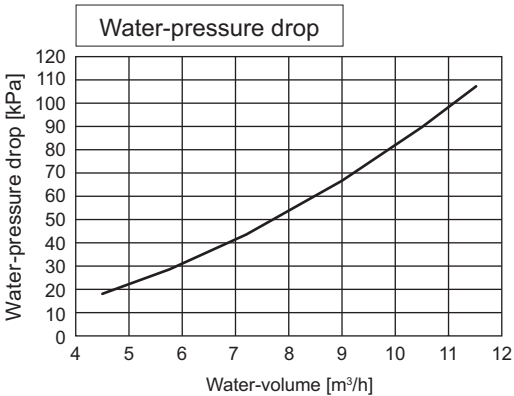
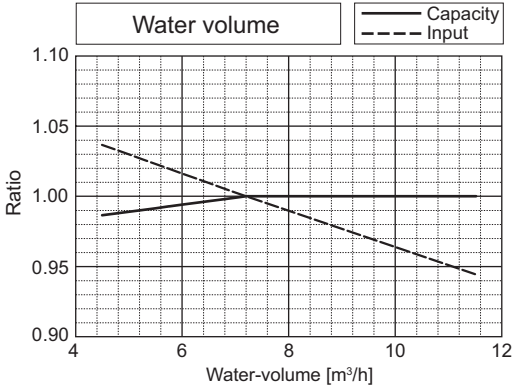
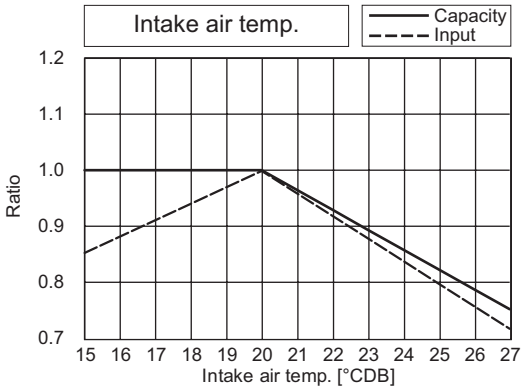
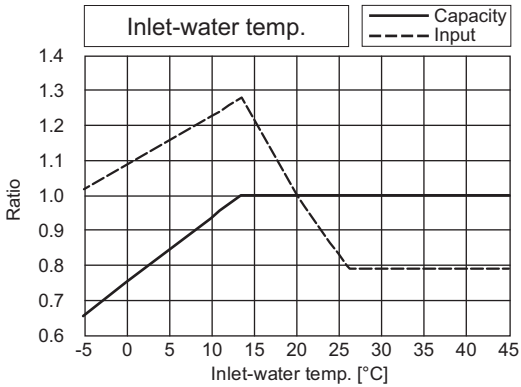


PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

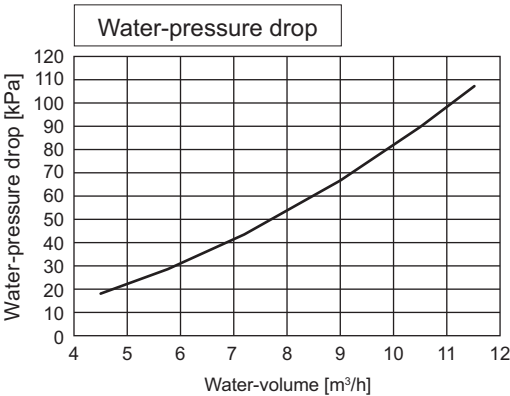
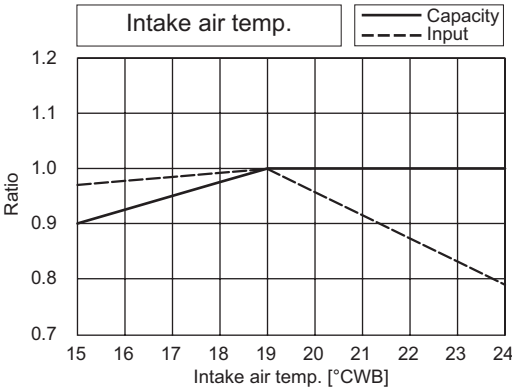
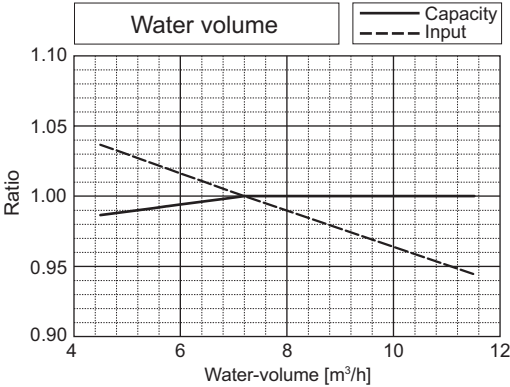
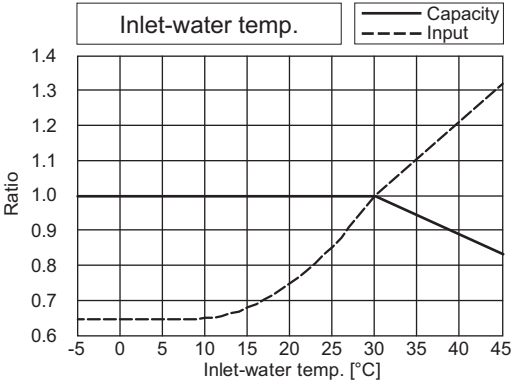
PQRY-		P144TLMU/YLMU
Nominal Cooling Capacity	kW	42.2
	BTU/h	144,000
Input	kW	8.78



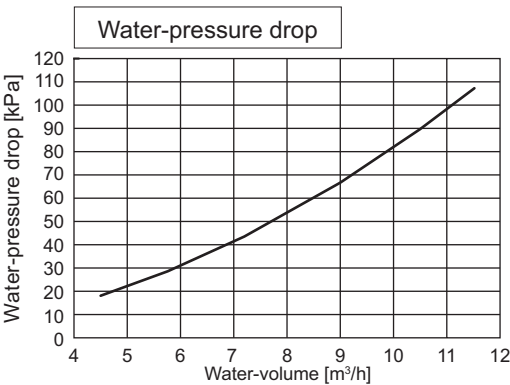
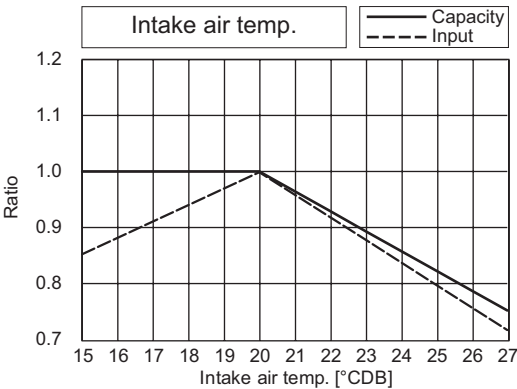
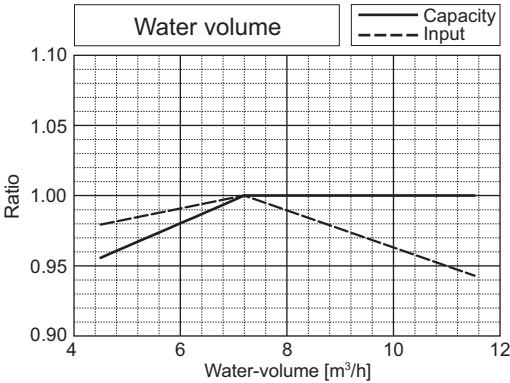
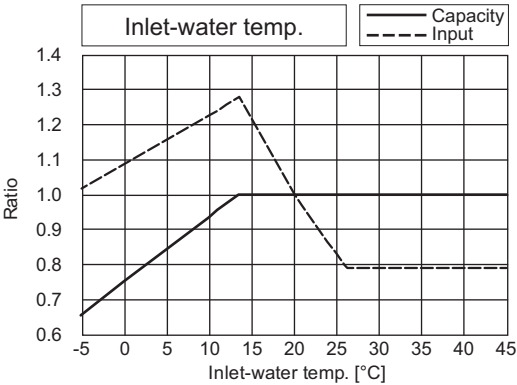
PQRY-		P144TLMU/YLMU
Nominal Heating Capacity	kW	46.9
	BTU/h	160,000
Input	kW	8.11



PQRY-		P168TLMU/YLMU
Nominal Cooling Capacity	kW	49.2
	BTU/h	168,000
Input	kW	12.05

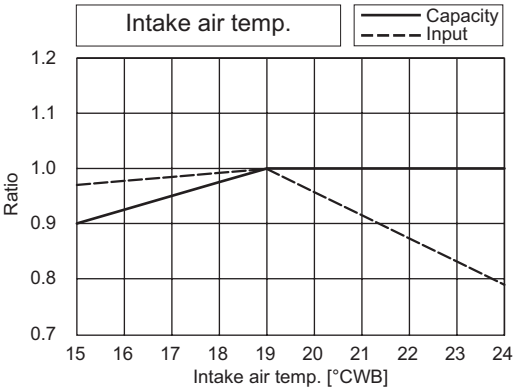
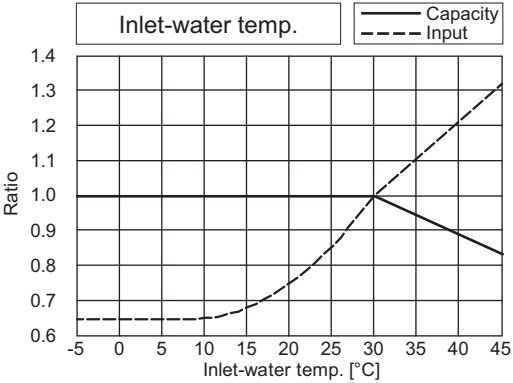


PQRY-		P168TLMU/YLMU
Nominal Heating Capacity	kW	55.1
	BTU/h	188,000
Input	kW	9.86

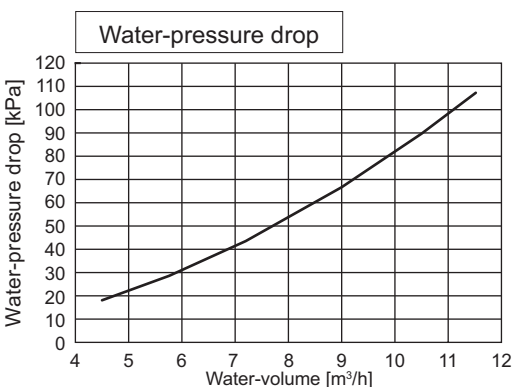
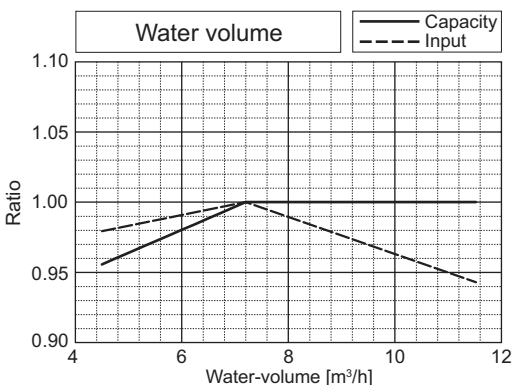
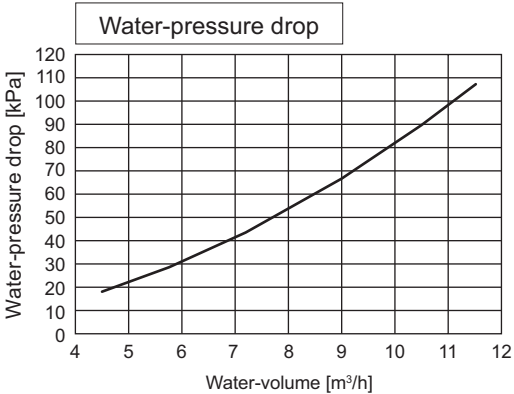
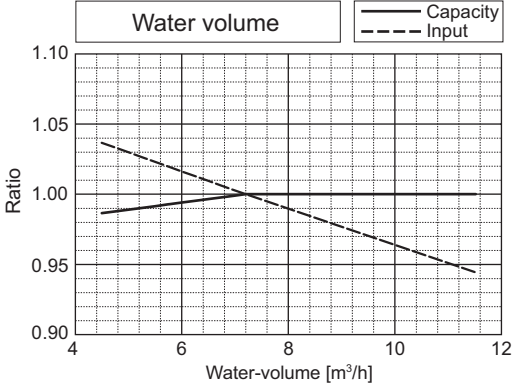
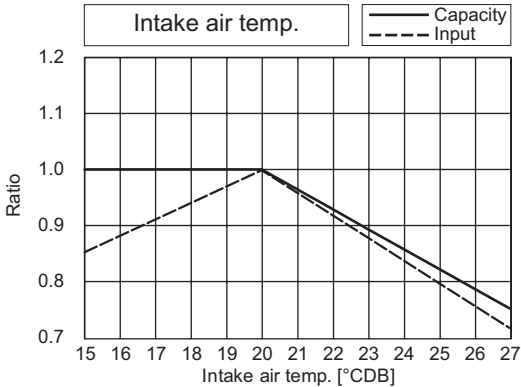
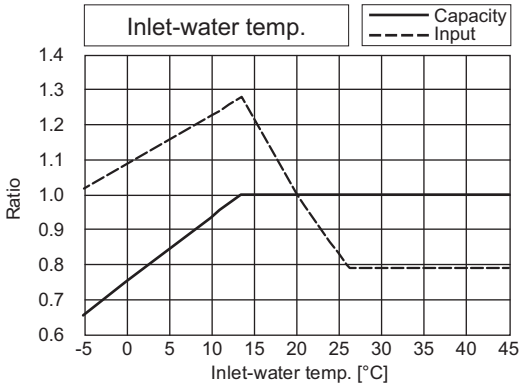


PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

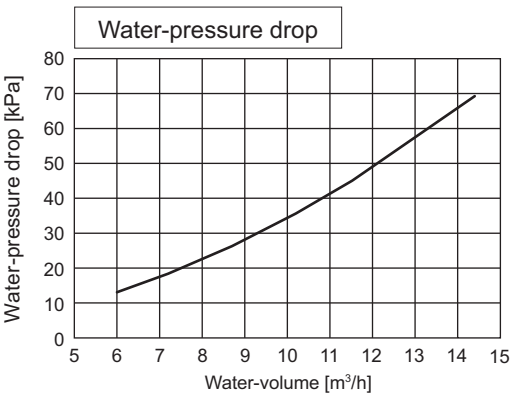
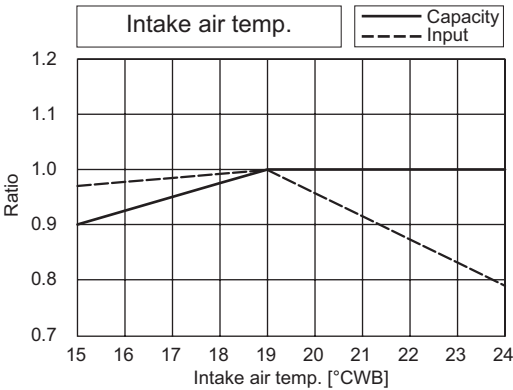
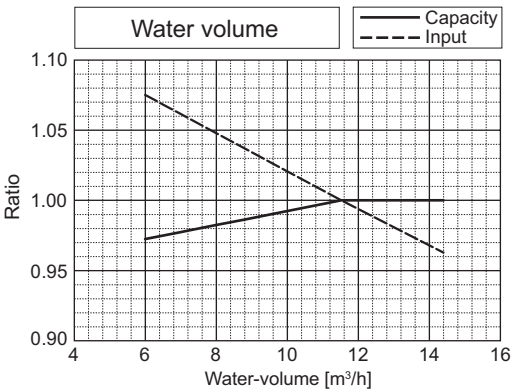
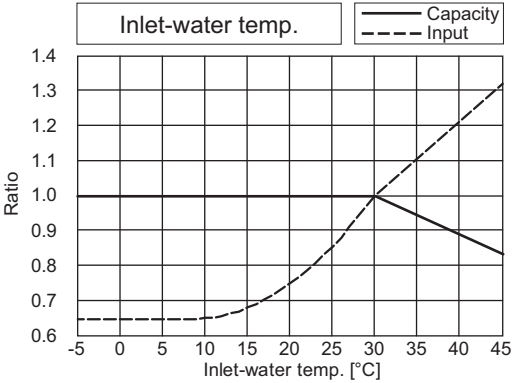
PQRY-		P192TLMU/YLMU
Nominal Cooling Capacity	kW	56.3
	BTU/h	192,000
Input	kW	15.05



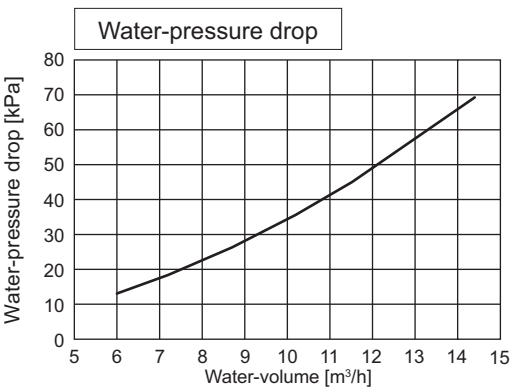
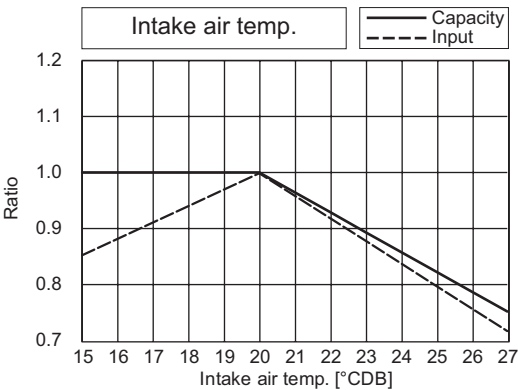
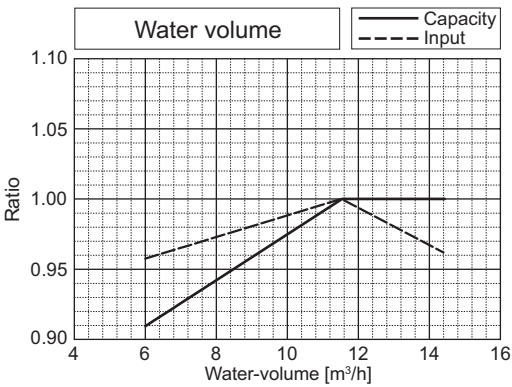
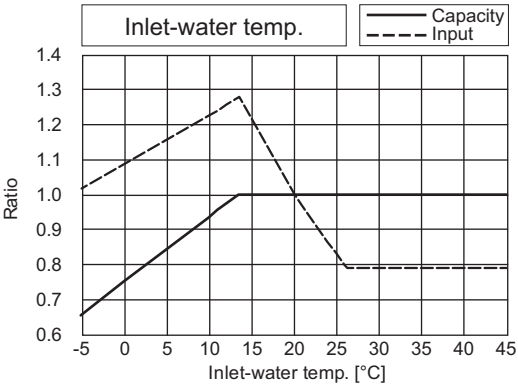
PQRY-		P192TLMU/YLMU
Nominal Heating Capacity	kW	63.0
	BTU/h	215,000
Input	kW	11.90



PQRY-		P216TLMU/YLMU
Nominal Cooling Capacity	kW	63.3
	BTU/h	216,000
Input	kW	19.23

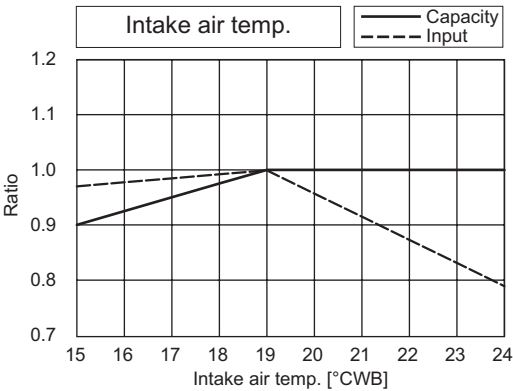
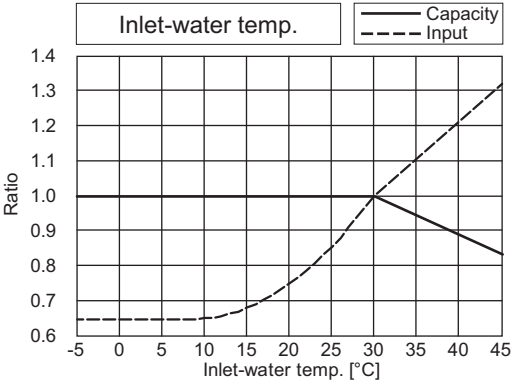


PQRY-		P216TLMU/YLMU
Nominal Heating Capacity	kW	71.2
	BTU/h	243,000
Input	kW	13.04

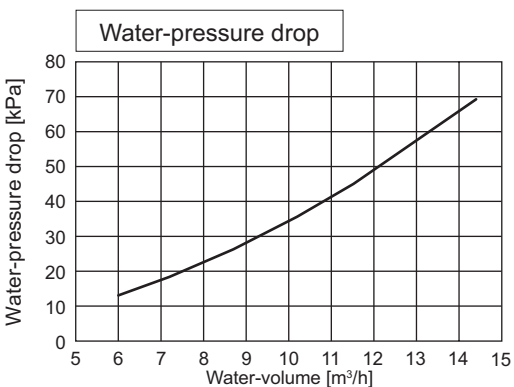
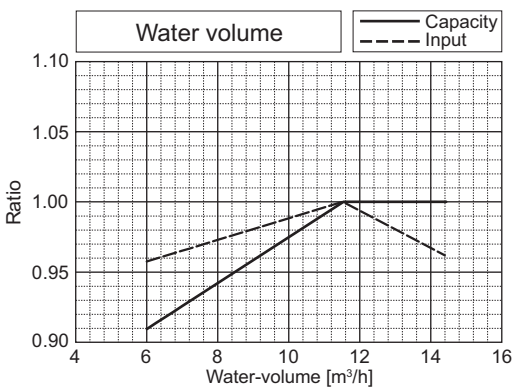
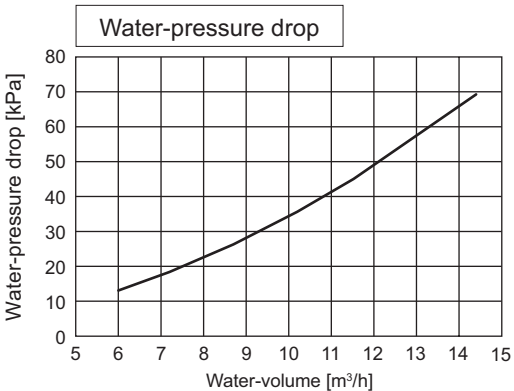
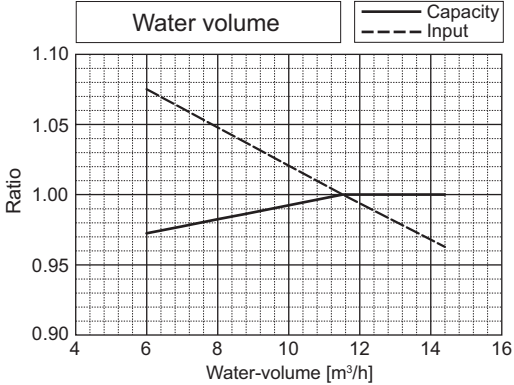
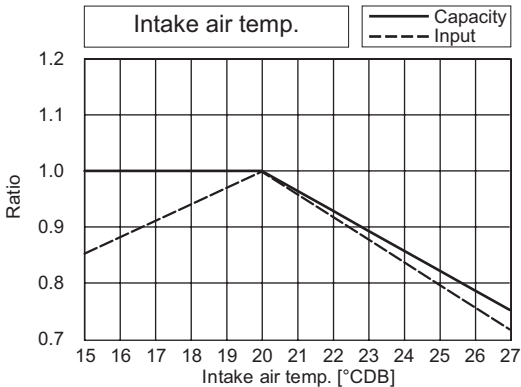
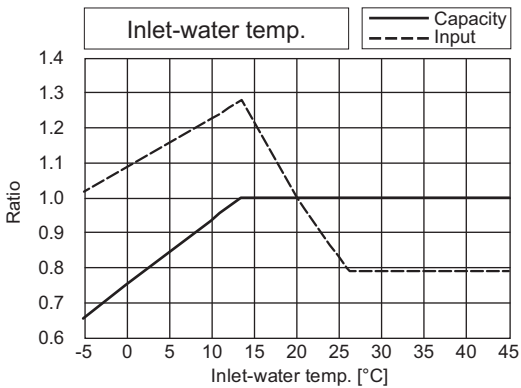


PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

PQRY-		P240TLMU/YLMU
Nominal Cooling Capacity	kW	65.7
	BTU/h	224,000
Input	kW	21.14

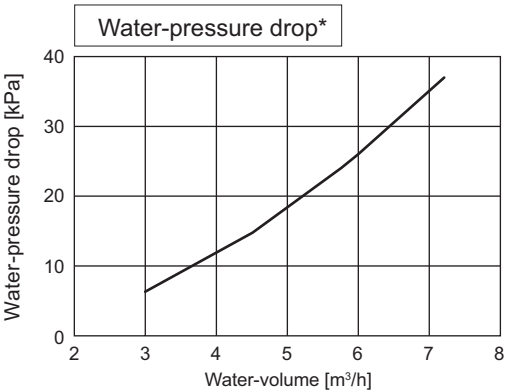
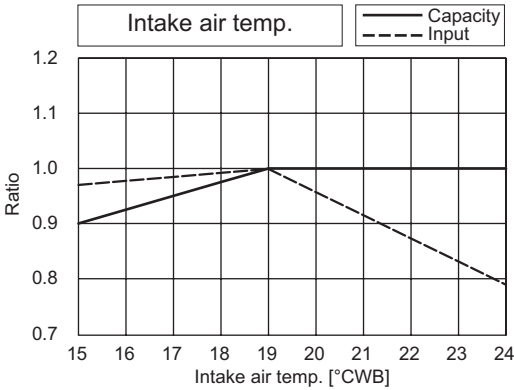
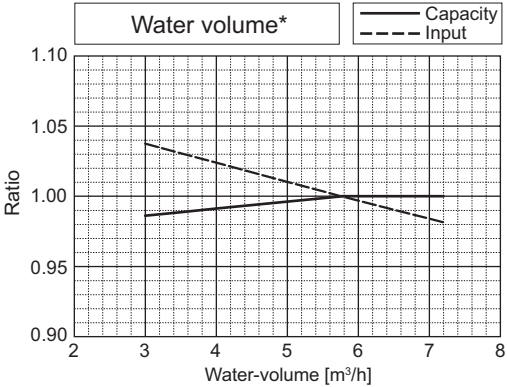
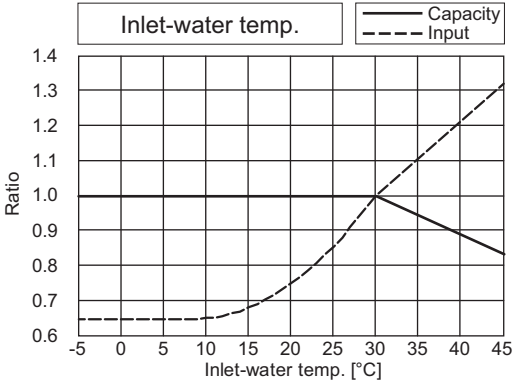


PQRY-		P240TLMU/YLMU
Nominal Heating Capacity	kW	79.1
	BTU/h	270,000
Input	kW	15.12

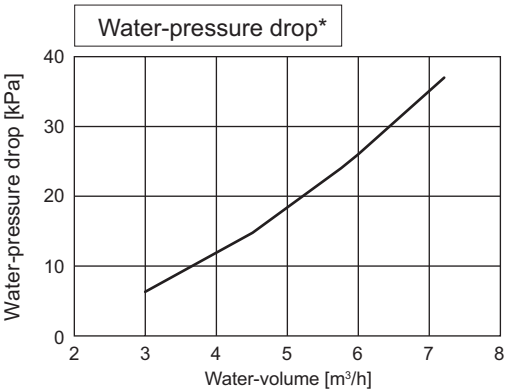
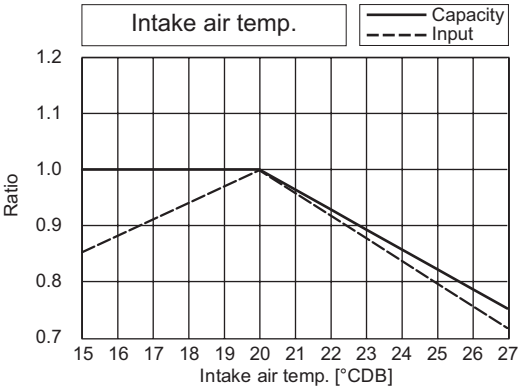
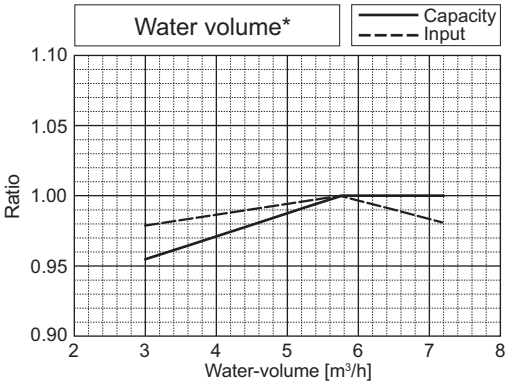
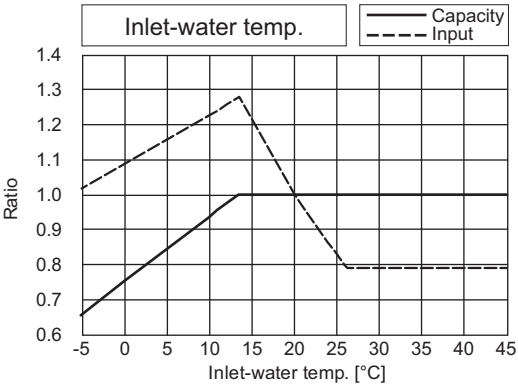


PQRY-		P144TSLMU/YSLMU
Nominal Cooling Capacity	kW	42.2
	BTU/h	144,000
Input	kW	7.11

*The drawing indicates characteristic per unit.

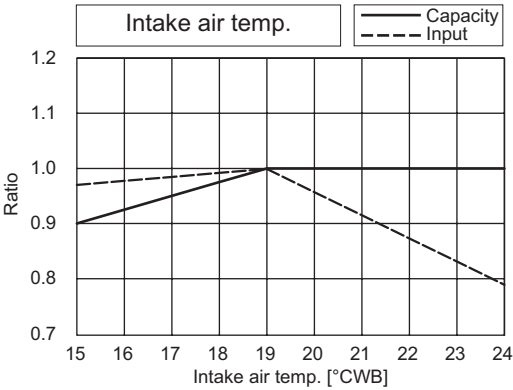
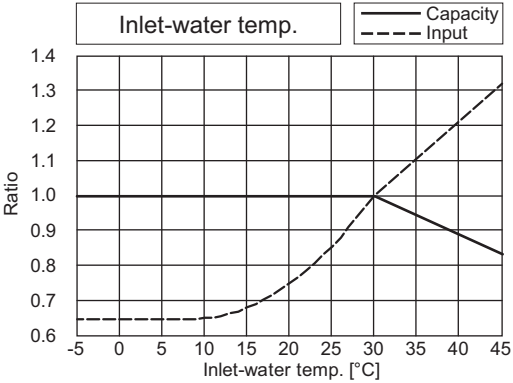


PQRY-		P144TSLMU/YSLMU
Nominal Heating Capacity	kW	46.9
	BTU/h	160,000
Input	kW	7.45

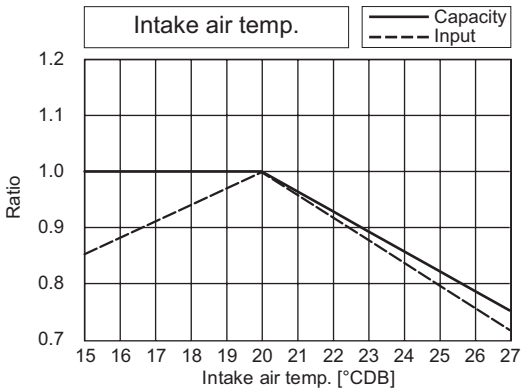
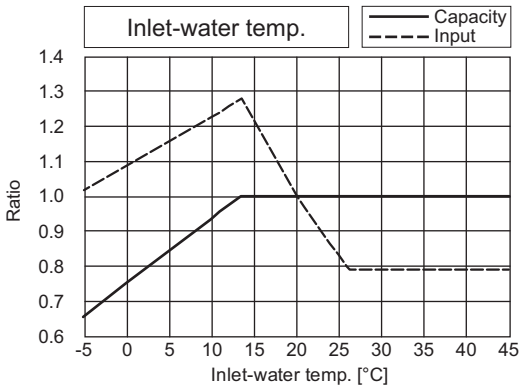


PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

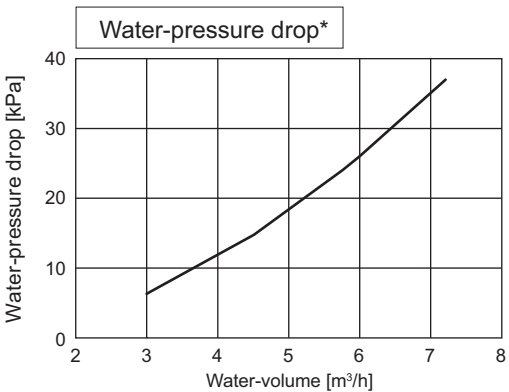
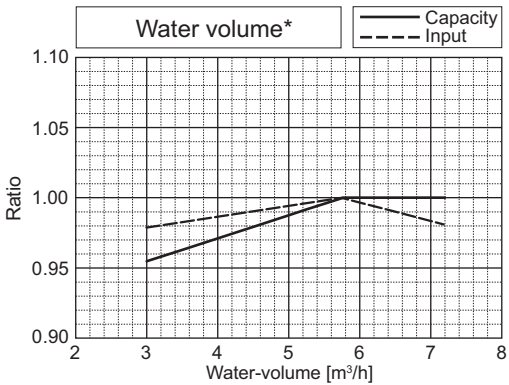
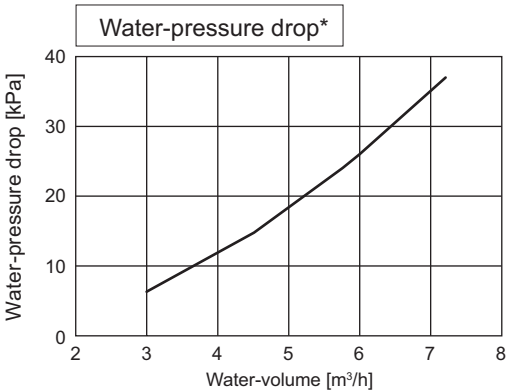
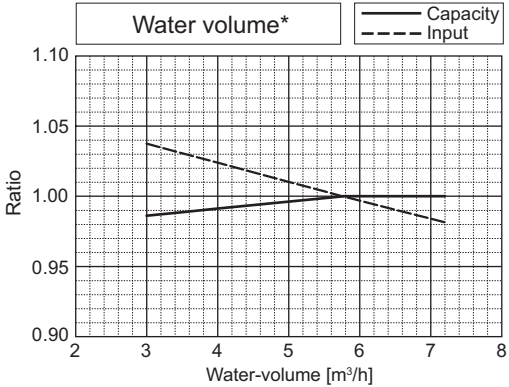
PQRY-		P168TSLMU/YSLMU
Nominal Cooling Capacity	kW	49.2
	BTU/h	168,000
Input	kW	9.33



PQRY-		P168TSLMU/YSLMU
Nominal Heating Capacity	kW	55.1
	BTU/h	188,000
Input	kW	9.34

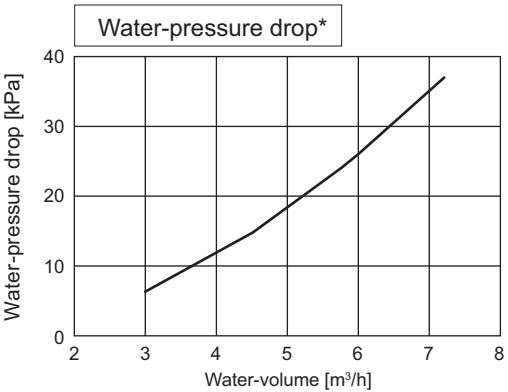
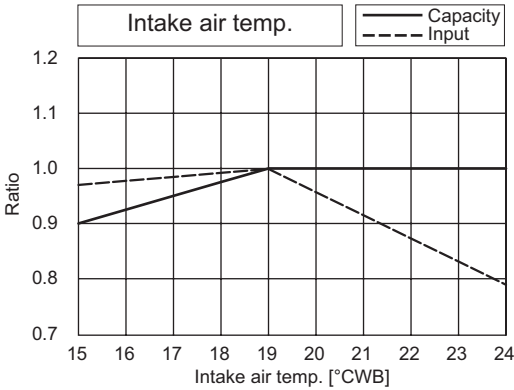
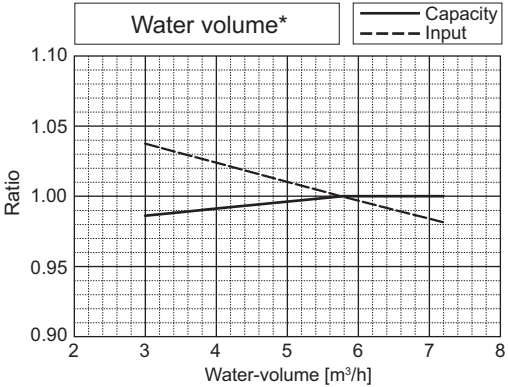
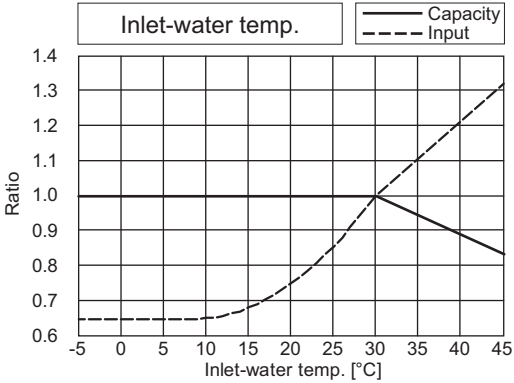


*The drawing indicates characteristic per unit.

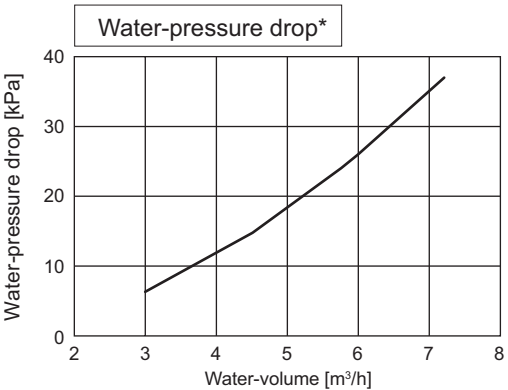
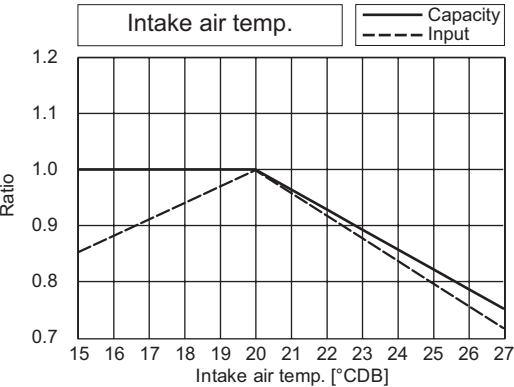
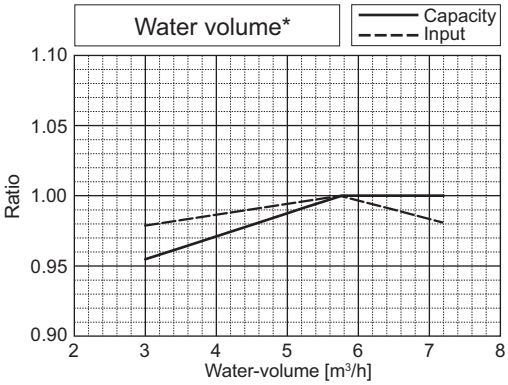
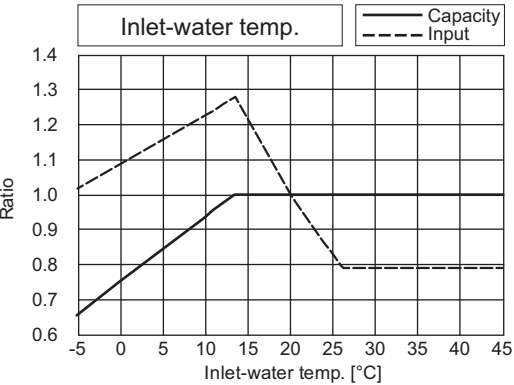


PQRY-		P192TSLMU/YSLMU
Nominal Cooling Capacity	kW	56.3
	BTU/h	192,000
Input	kW	11.30

*The drawing indicates characteristic per unit.

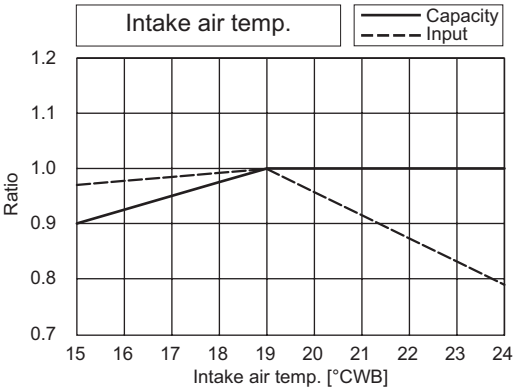
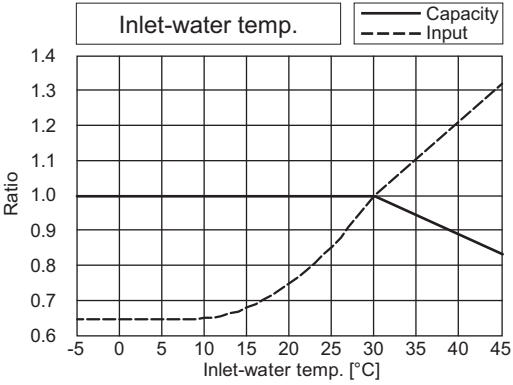


PQRY-		P192TSLMU/YSLMU
Nominal Heating Capacity	kW	63.0
	BTU/h	215,000
Input	kW	11.02

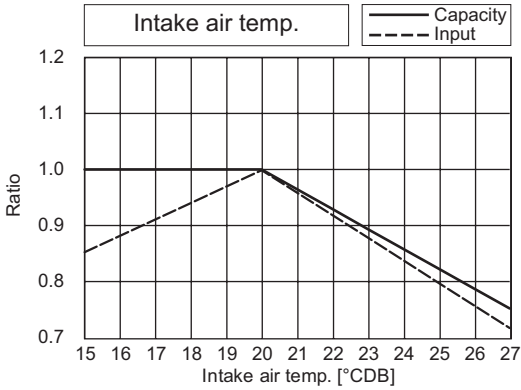
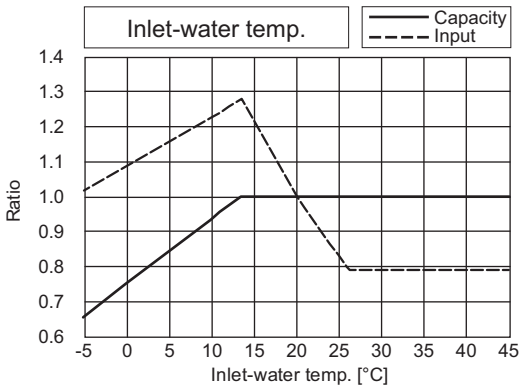


PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

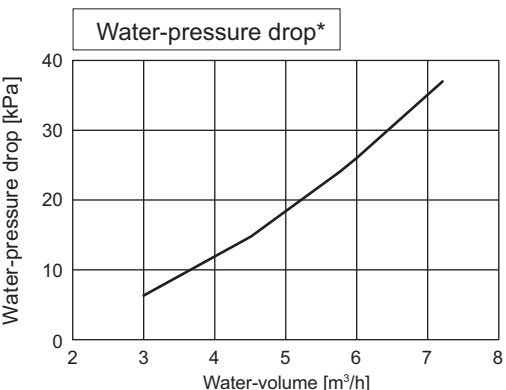
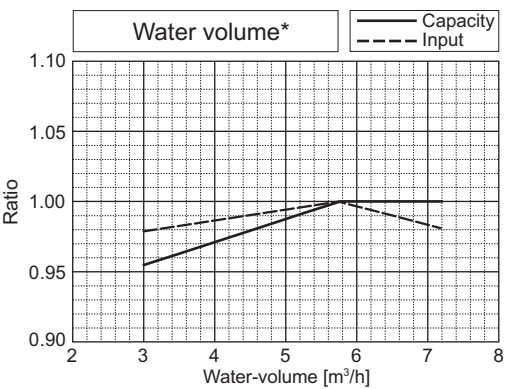
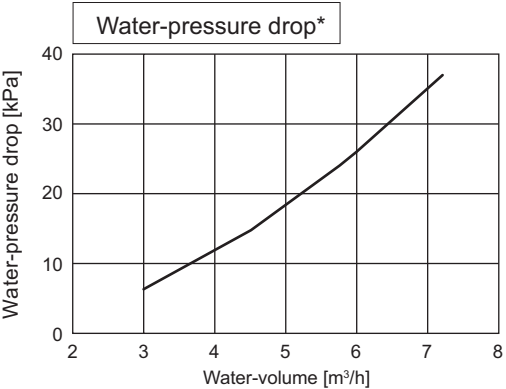
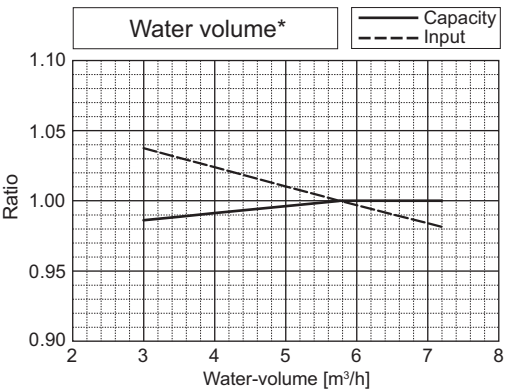
PQRY-		P216TSLMU/YSLMU
Nominal Cooling Capacity	kW	63.3
	BTU/h	216,000
Input	kW	14.03



PQRY-		P216TSLMU/YSLMU
Nominal Heating Capacity	kW	71.2
	BTU/h	243,000
Input	kW	12.88

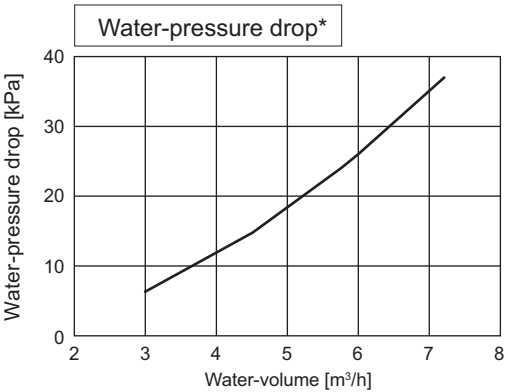
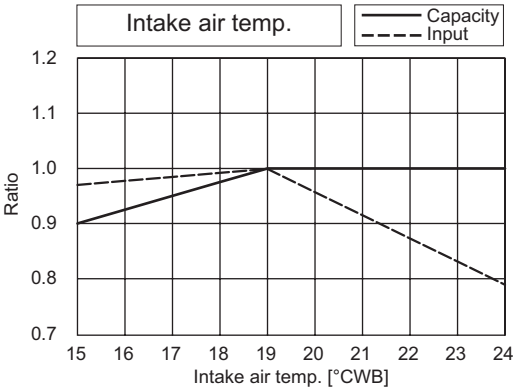
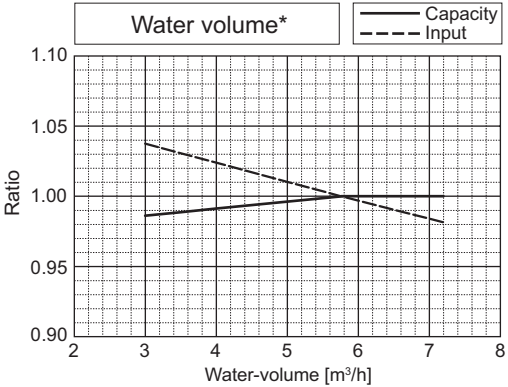
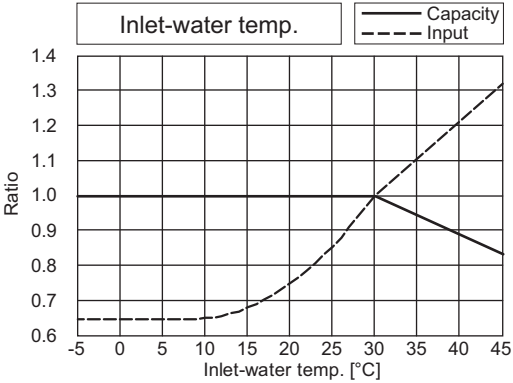


*The drawing indicates characteristic per unit.

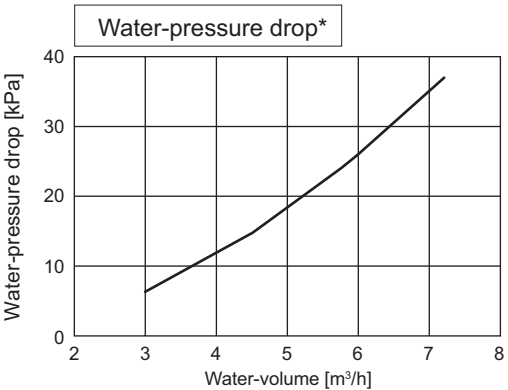
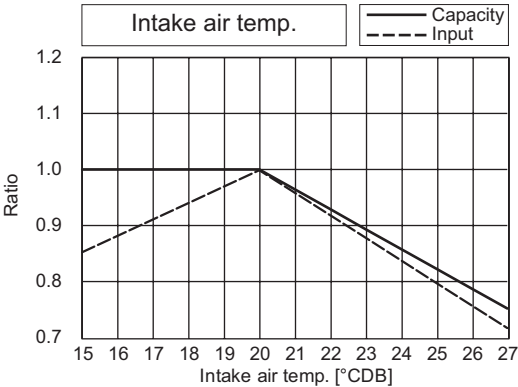
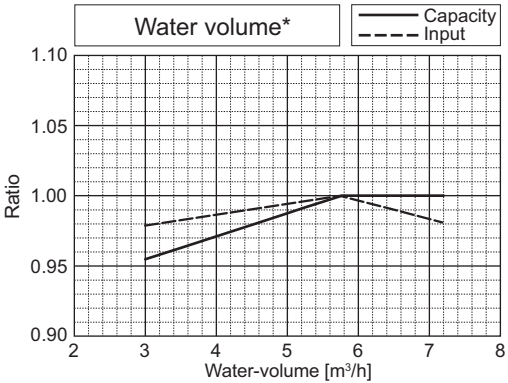
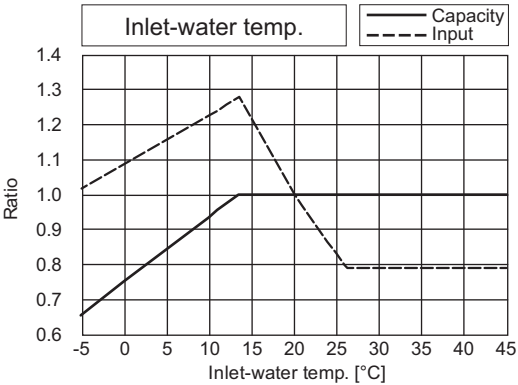


PQRY-		P240TSLMU/YSLMU
Nominal Cooling Capacity	kW	70.3
	BTU/h	240,000
Input	kW	16.89

*The drawing indicates characteristic per unit.

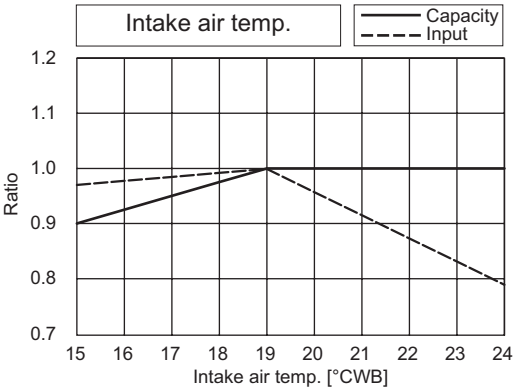
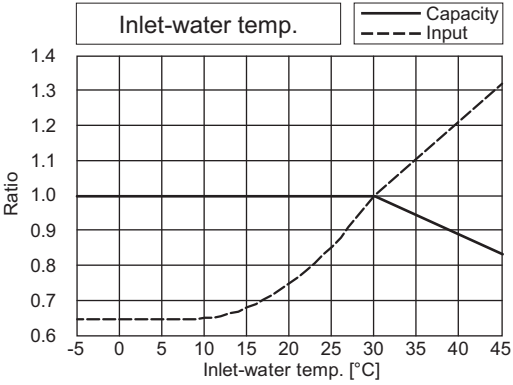


PQRY-		P240TSLMU/YSLMU
Nominal Heating Capacity	kW	79.1
	BTU/h	270,000
Input	kW	14.58

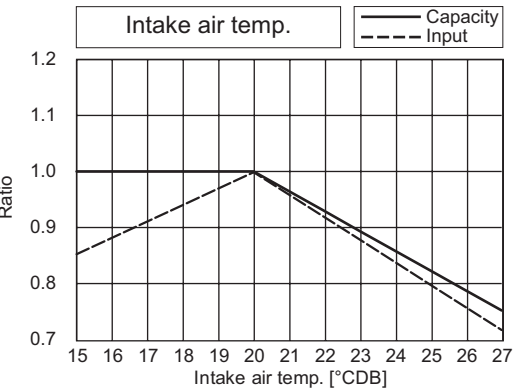
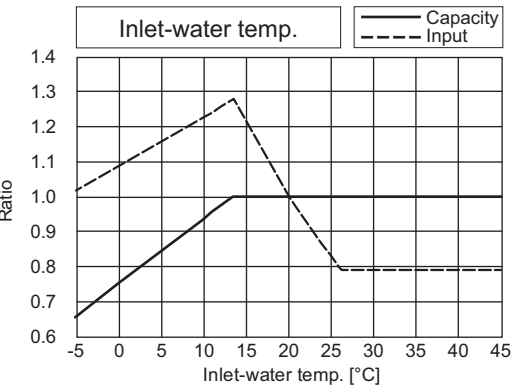


PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

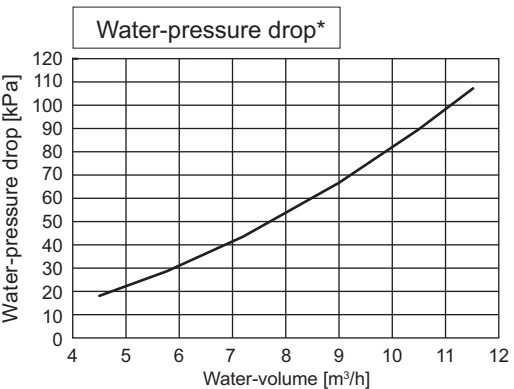
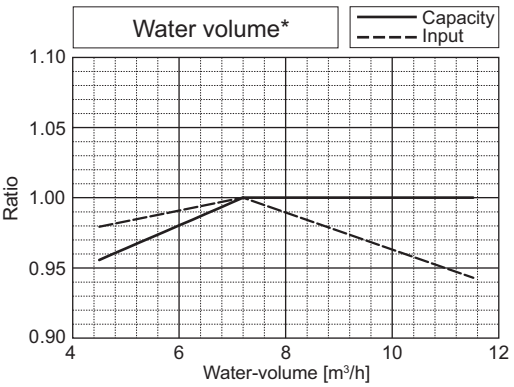
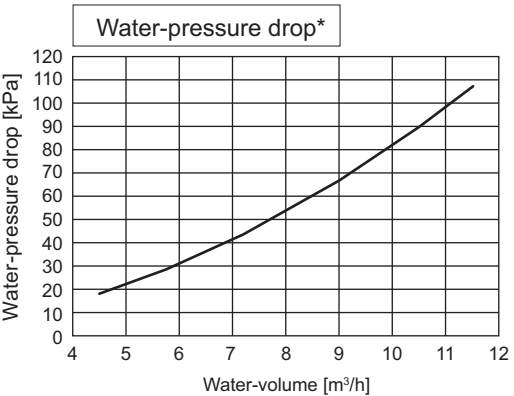
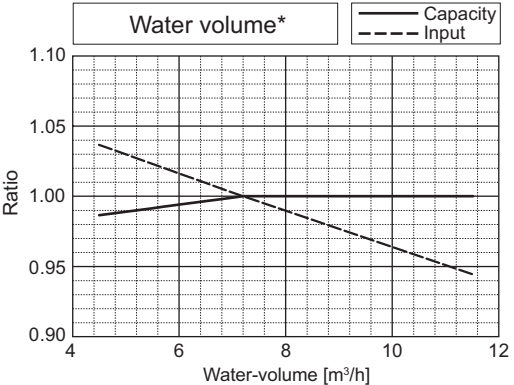
PQRY-		P288TSLMU/YSLMU
Nominal Cooling Capacity	kW	84.4
	BTU/h	288,000
Input	kW	20.42



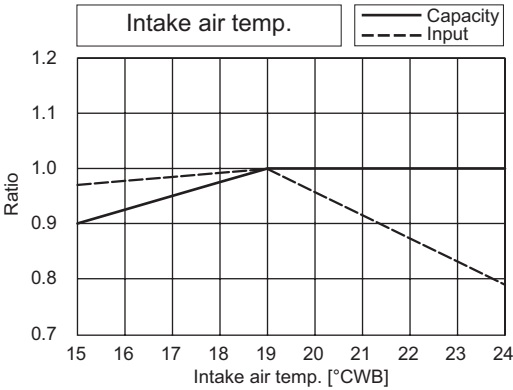
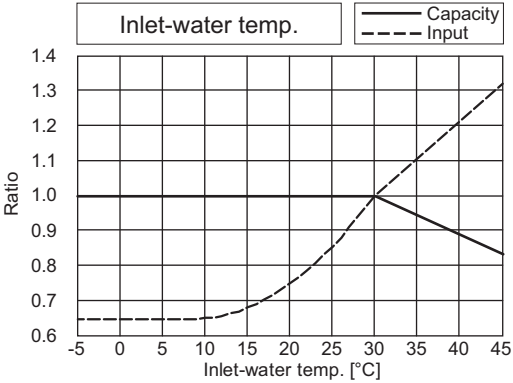
PQRY-		P288TSLMU/YSLMU
Nominal Heating Capacity	kW	94.7
	BTU/h	323,000
Input	kW	17.50



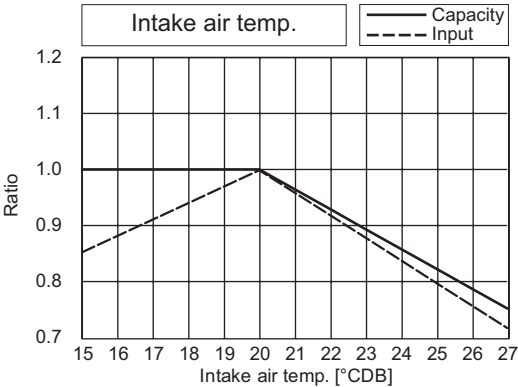
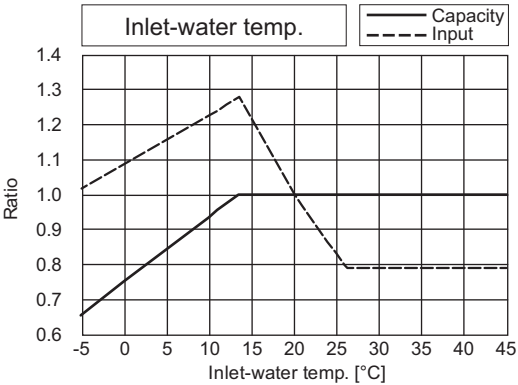
*The drawing indicates characteristic per unit.



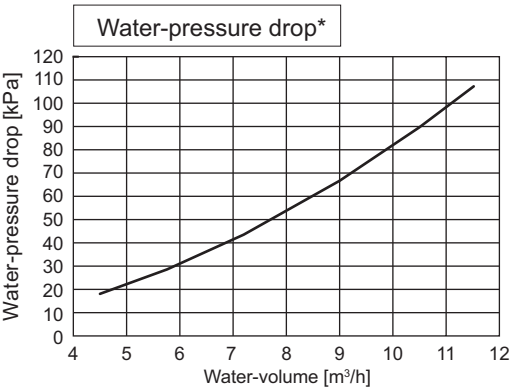
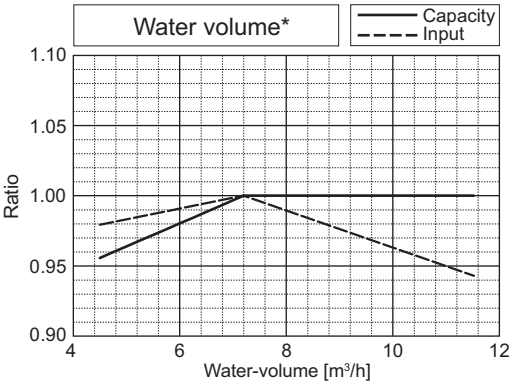
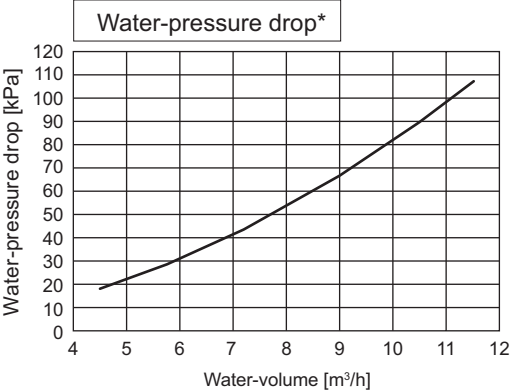
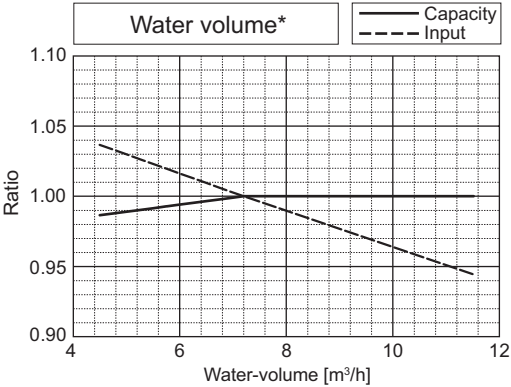
PQRY-		P312TSLMU/YSLMU
Nominal Cooling Capacity	kW	91.4
	BTU/h	312,000
Input	kW	23.41



PQRY-		P312TSLMU/YSLMU
Nominal Heating Capacity	kW	102.6
	BTU/h	350,000
Input	kW	19.11

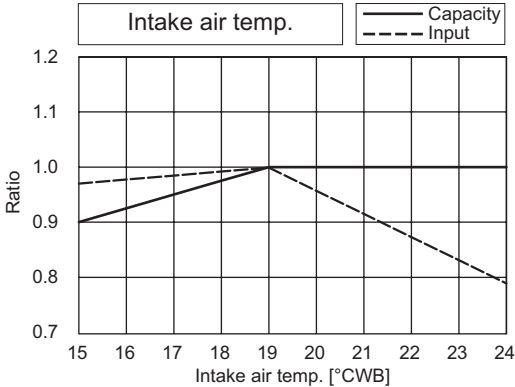
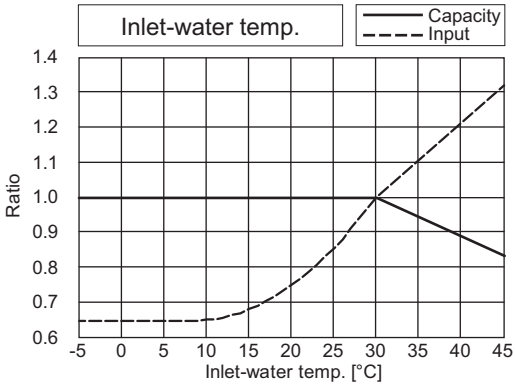


*The drawing indicates characteristic per unit.

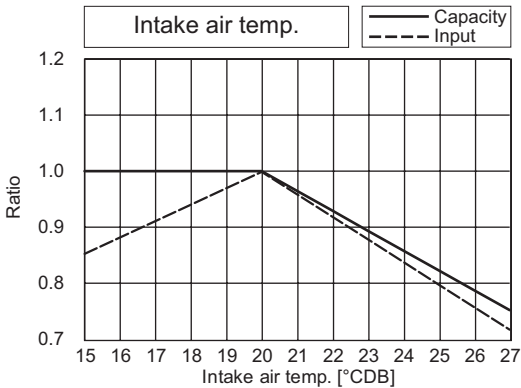
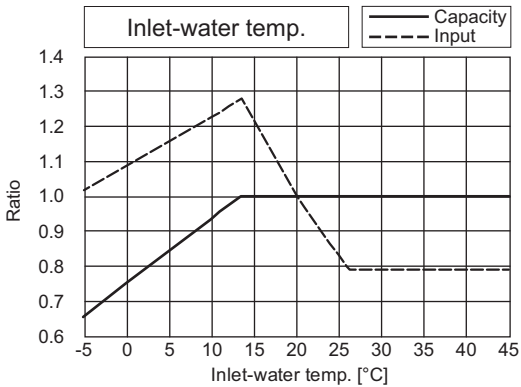


PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

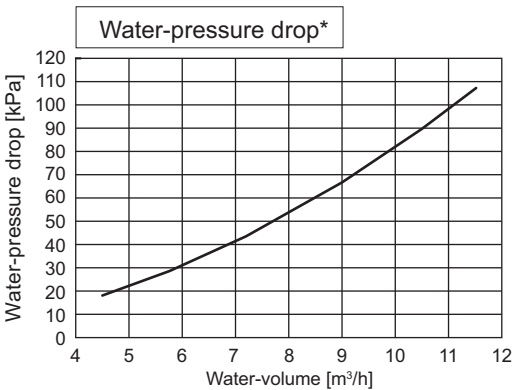
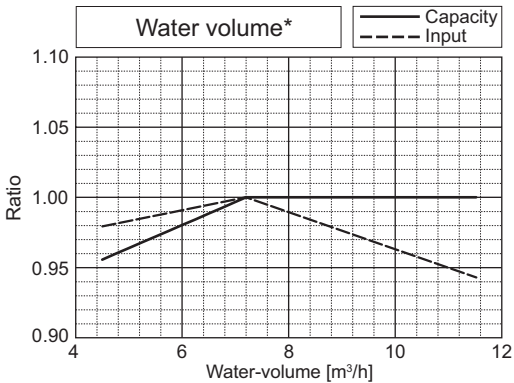
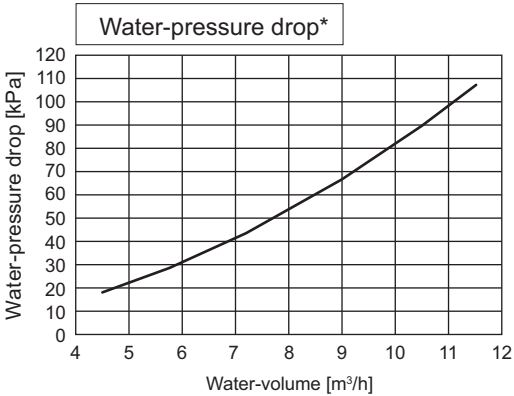
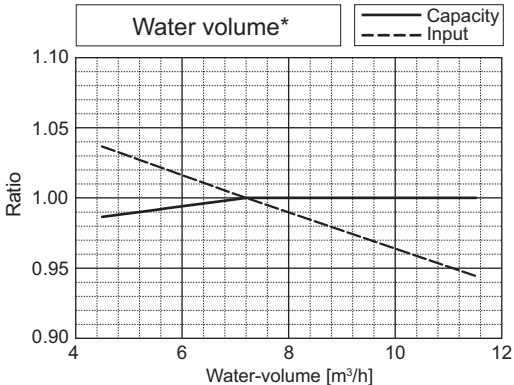
PQRY-		P336TSLMU/YSLMU
Nominal Cooling Capacity	kW	98.5
	BTU/h	336,000
Input	kW	26.84



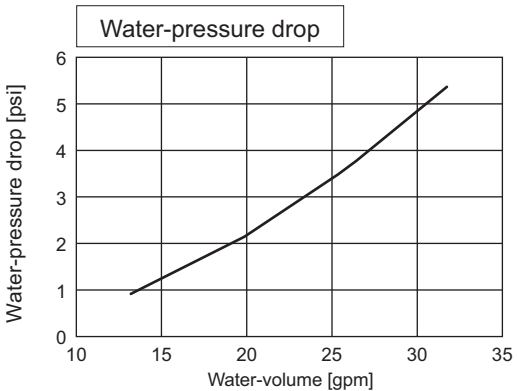
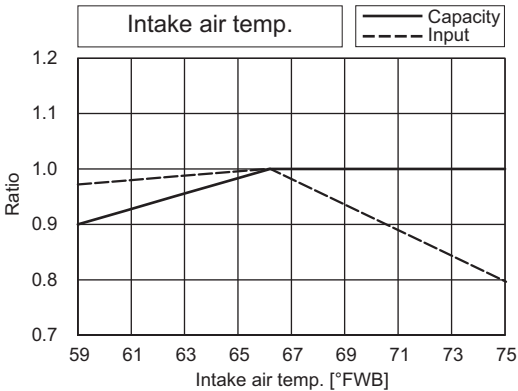
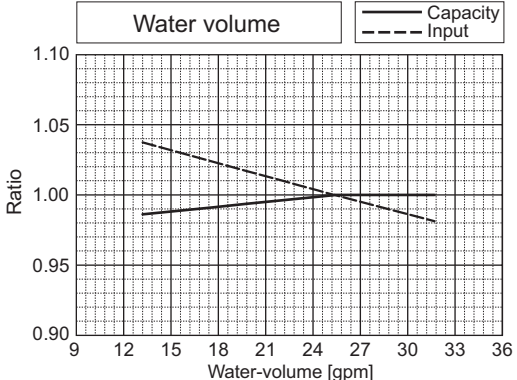
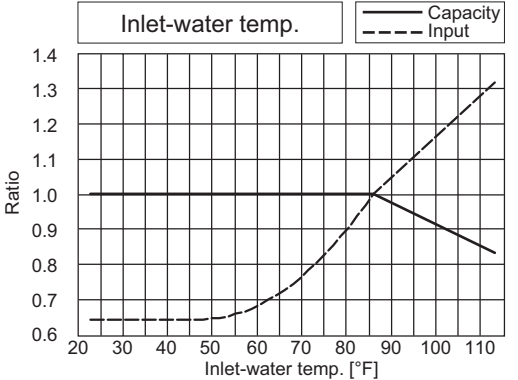
PQRY-		P336TSLMU/YSLMU
Nominal Heating Capacity	kW	110.8
	BTU/h	378,000
Input	kW	20.77



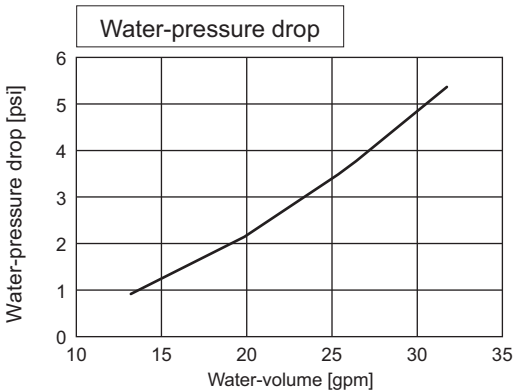
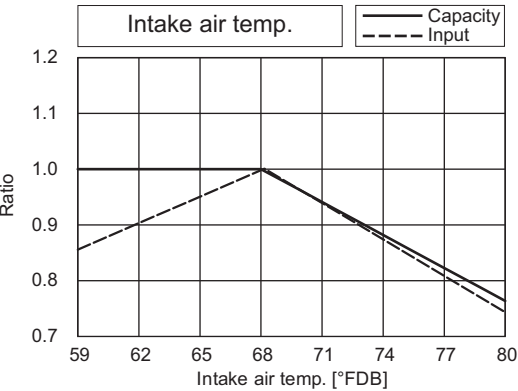
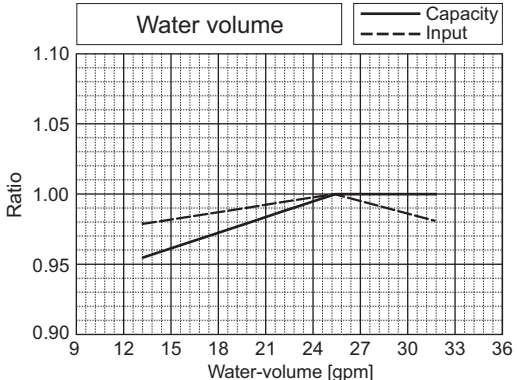
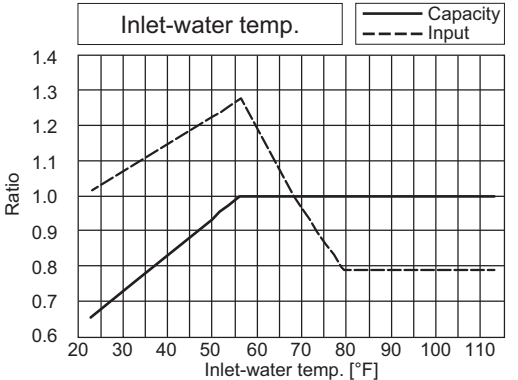
*The drawing indicates characteristic per unit.



PQRY-		P72TLMU/YLMU
Nominal Cooling Capacity	kW	21.1
	BTU/h	72,000
Input	kW	3.61



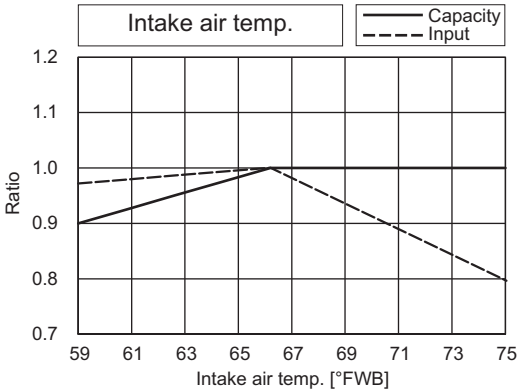
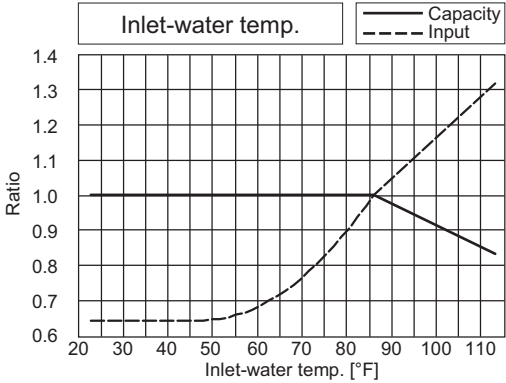
PQRY-		P72TLMU/YLMU
Nominal Heating Capacity	kW	23.4
	BTU/h	80,000
Input	kW	4.04



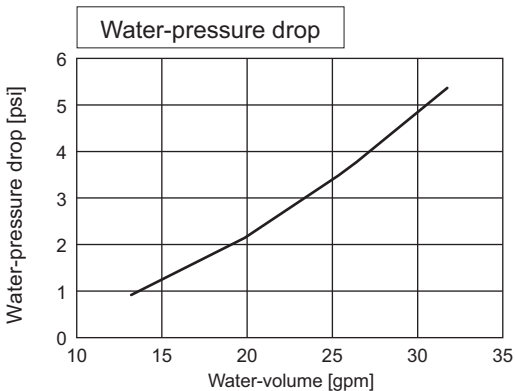
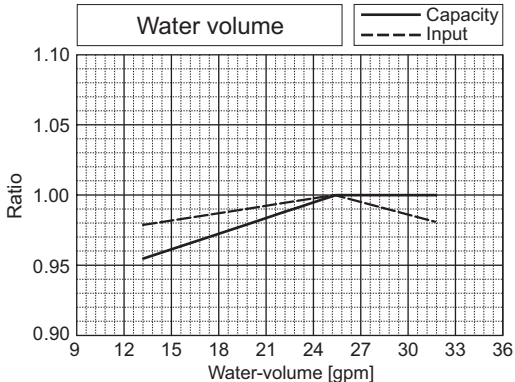
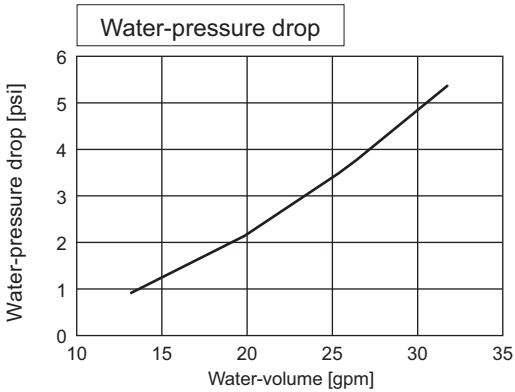
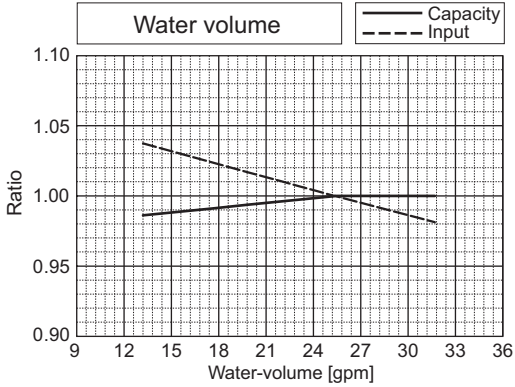
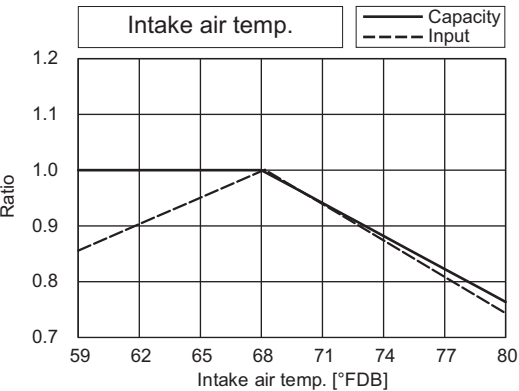
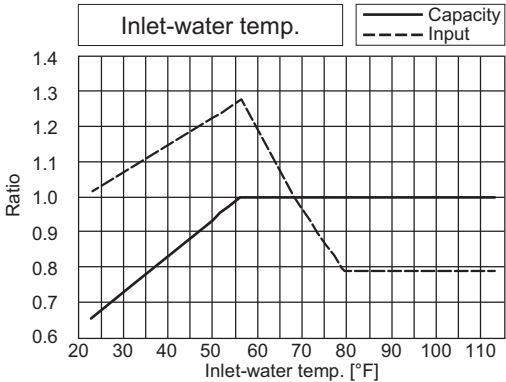
PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

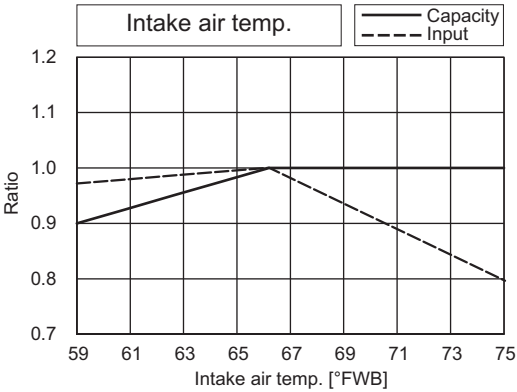
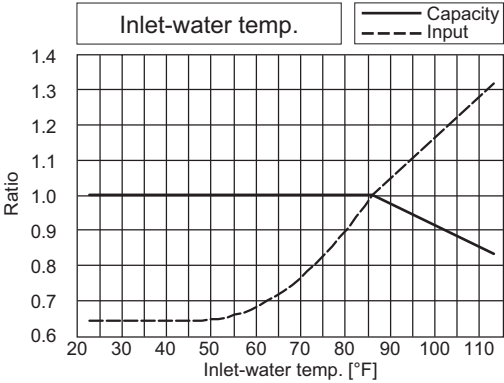
PQRY-		P96TLMU/YLMU
Nominal Cooling Capacity	kW	28.1
	BTU/h	96,000
Input	kW	5.21



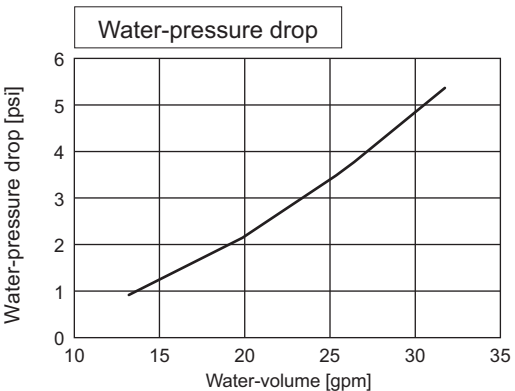
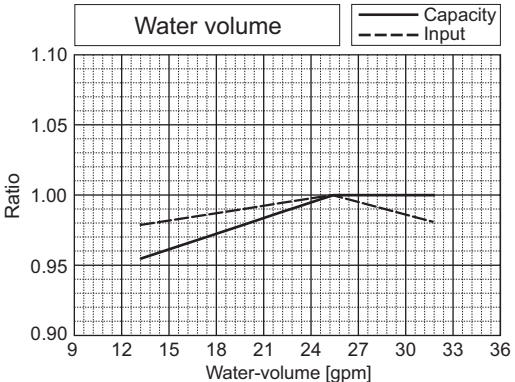
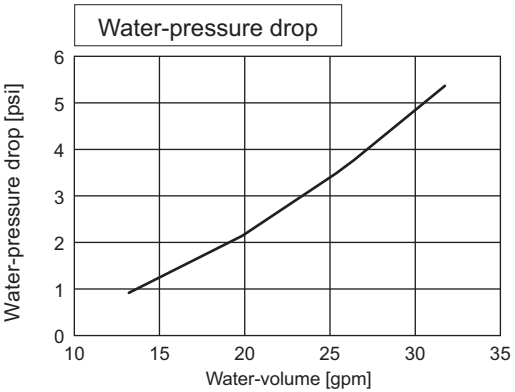
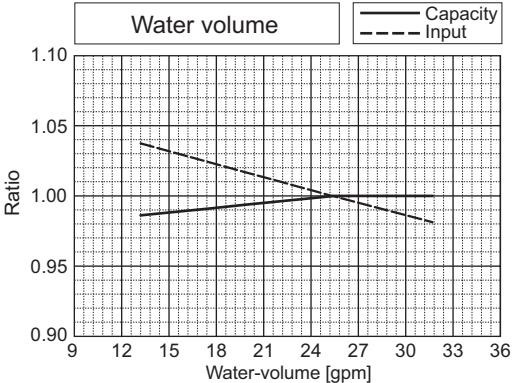
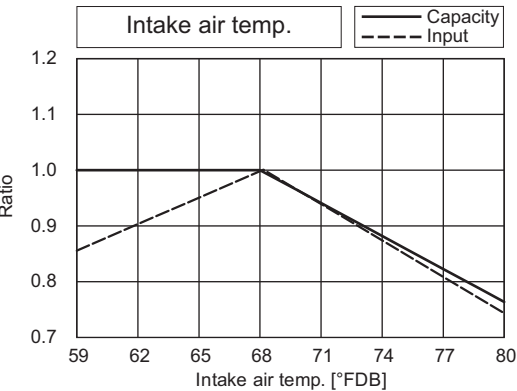
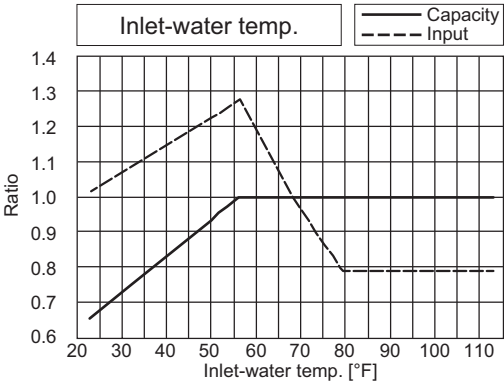
PQRY-		P96TLMU/YLMU
Nominal Heating Capacity	kW	31.7
	BTU/h	108,000
Input	kW	5.64



PQRY-		P120TLMU/YLMU
Nominal Cooling Capacity	kW	35.2
	BTU/h	120,000
Input	kW	7.51

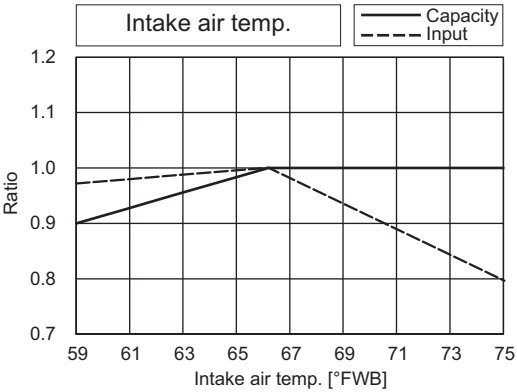
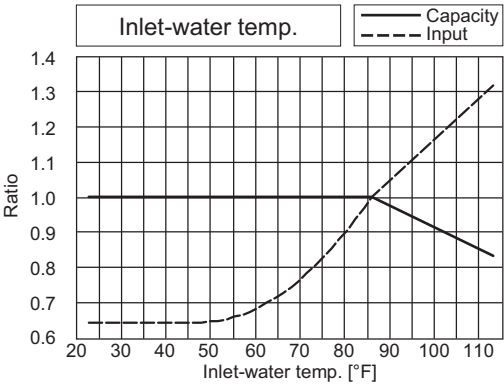


PQRY-		P120TLMU/YLMU
Nominal Heating Capacity	kW	39.6
	BTU/h	135,000
Input	kW	7.09

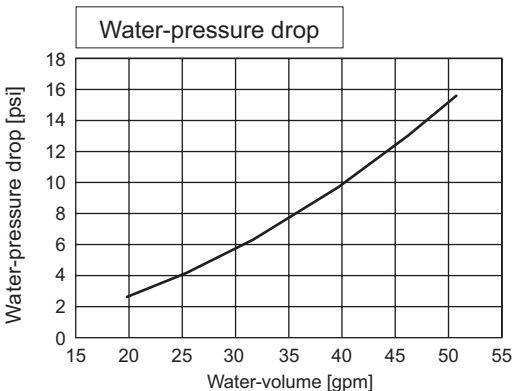
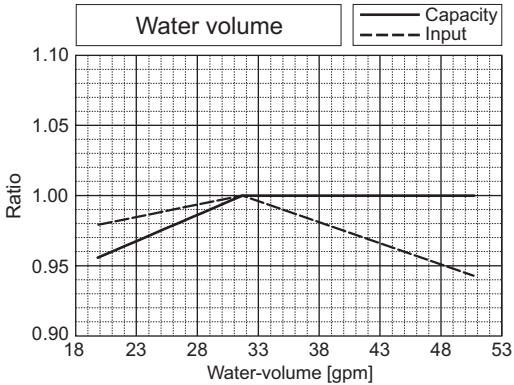
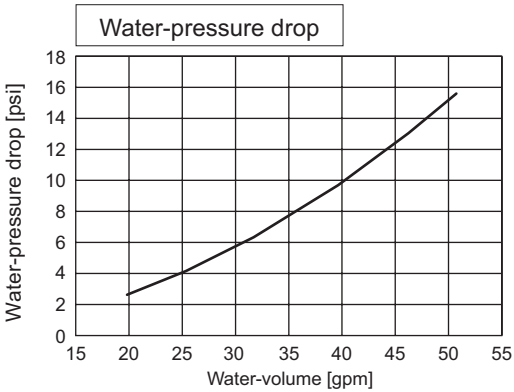
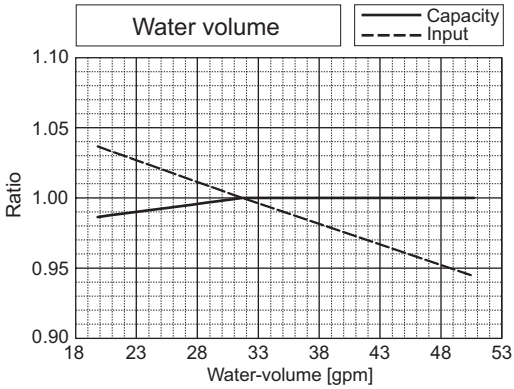
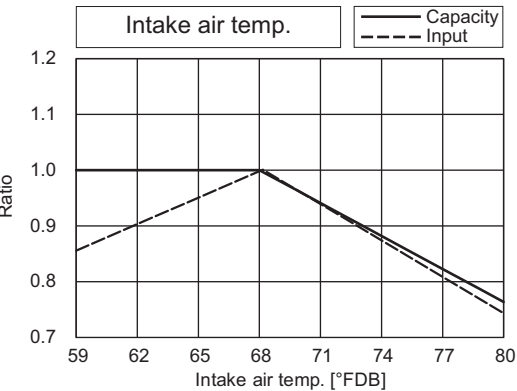
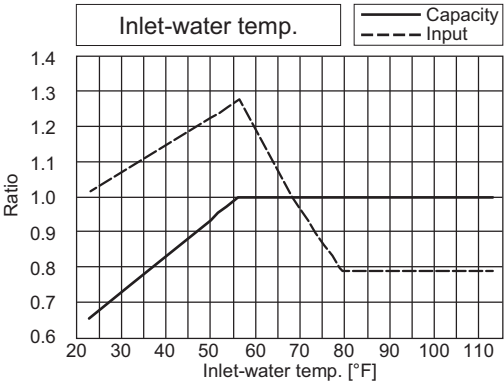


PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

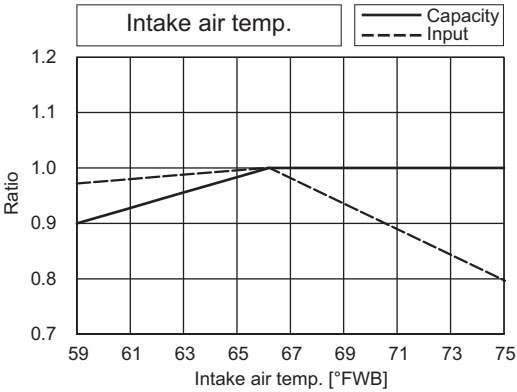
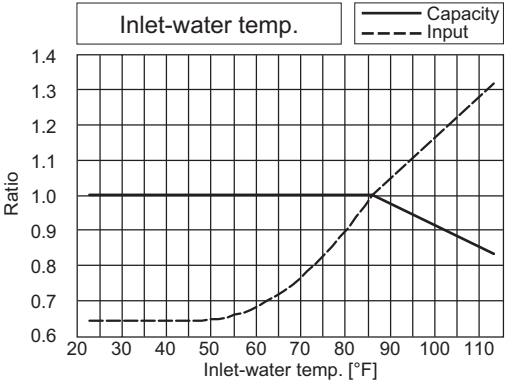
PQRY-		P144TLMU/YLMU
Nominal Cooling Capacity	kW	42.2
	BTU/h	144,000
Input	kW	8.78



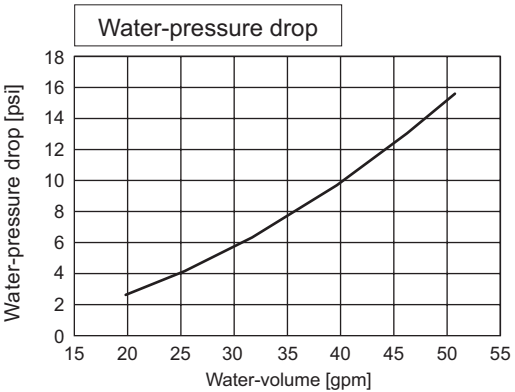
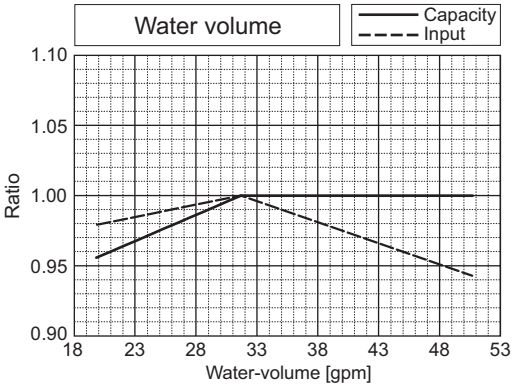
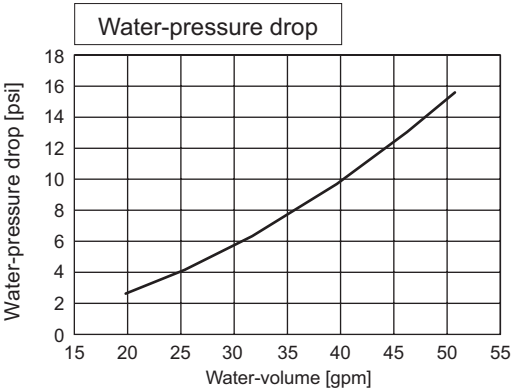
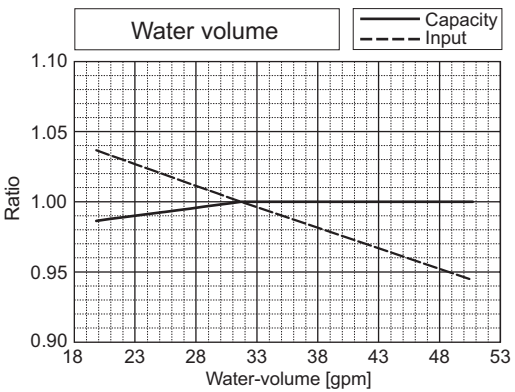
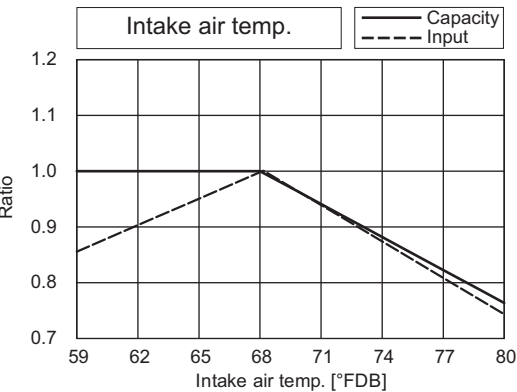
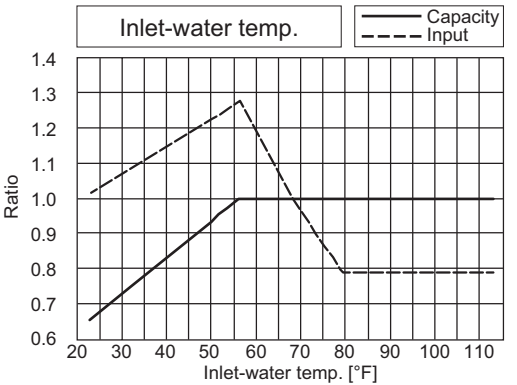
PQRY-		P144TLMU/YLMU
Nominal Heating Capacity	kW	46.9
	BTU/h	160,000
Input	kW	8.11



PQRY-		P168TLMU/YLMU
Nominal Cooling Capacity	kW	49.2
	BTU/h	168,000
Input	kW	12.05

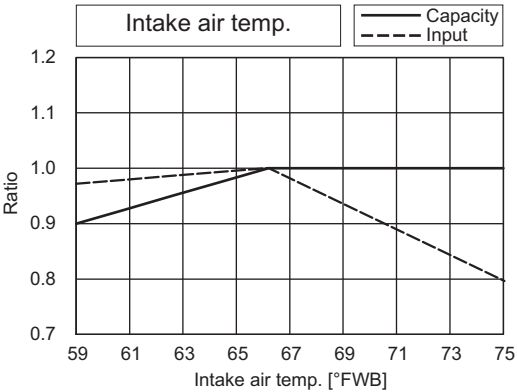
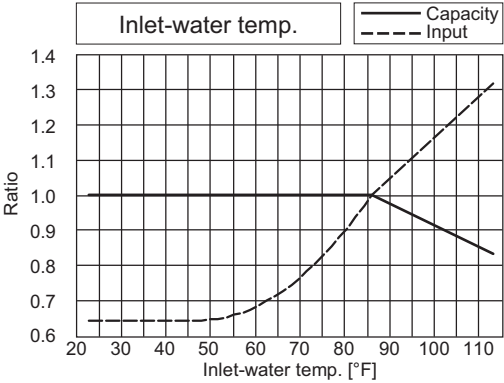


PQRY-		P168TLMU/YLMU
Nominal Heating Capacity	kW	55.1
	BTU/h	188,000
Input	kW	9.86

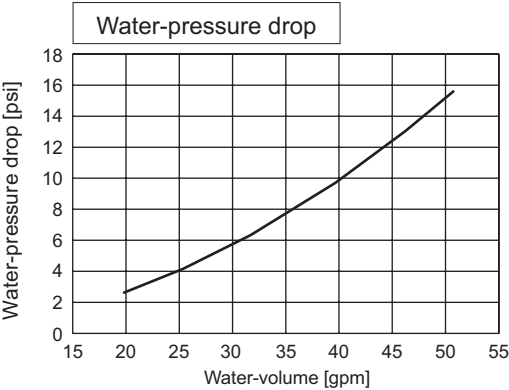
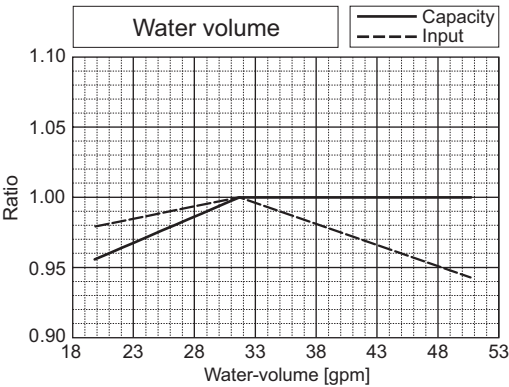
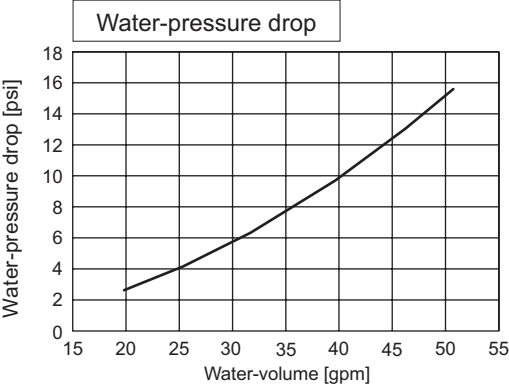
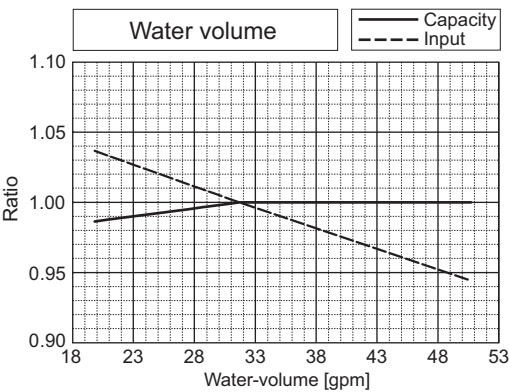
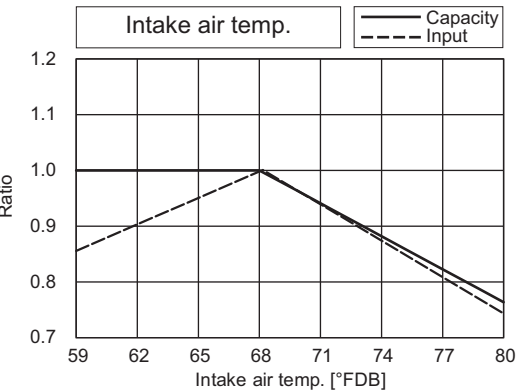
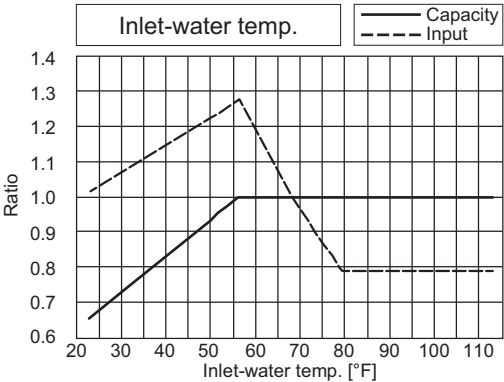


PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

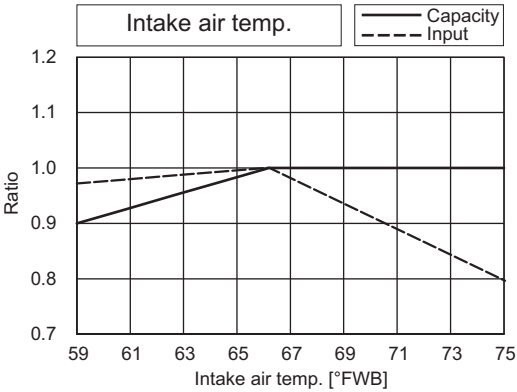
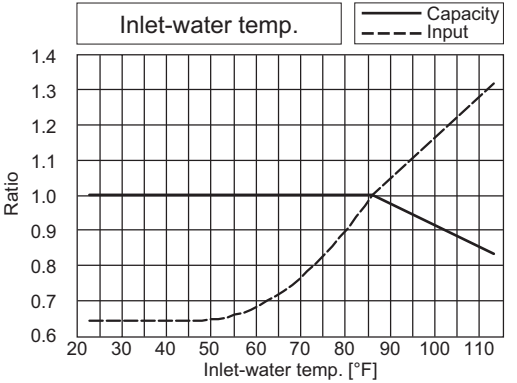
PQRY-		P192TLMU/YLMU
Nominal Cooling Capacity	kW	56.3
	BTU/h	192,000
Input	kW	15.05



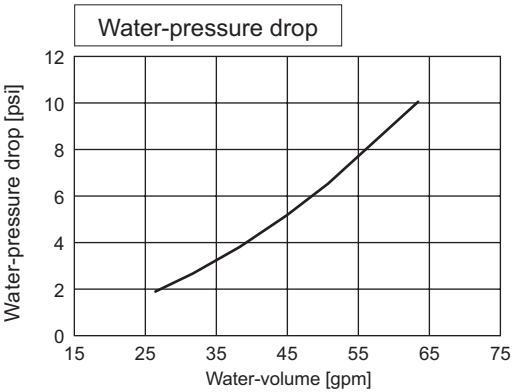
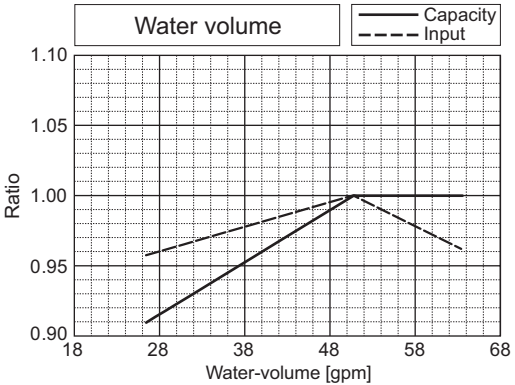
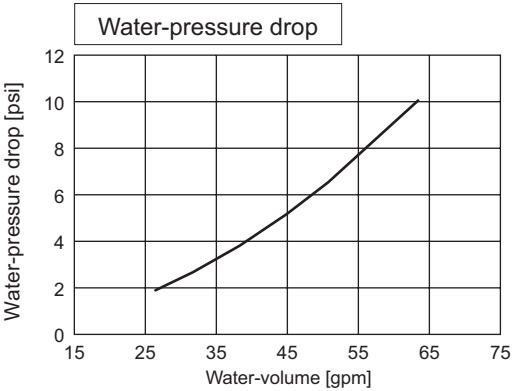
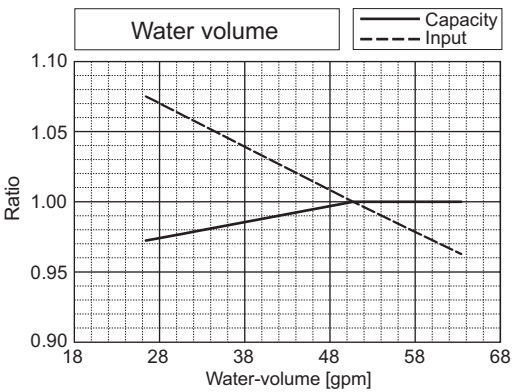
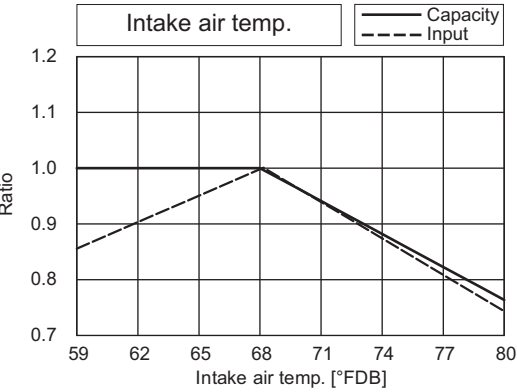
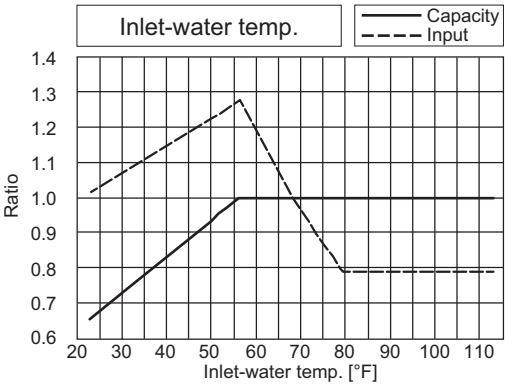
PQRY-		P192TLMU/YLMU
Nominal Heating Capacity	kW	63.0
	BTU/h	215,000
Input	kW	11.90



PQRY-		P216TLMU/YLMU
Nominal Cooling Capacity	kW	63.3
	BTU/h	216,000
Input	kW	19.23

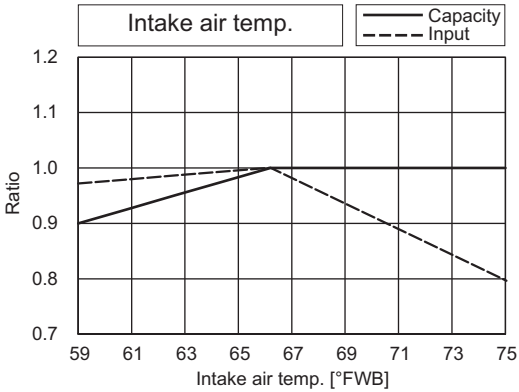
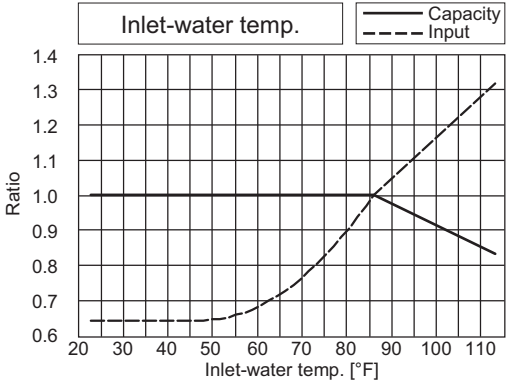


PQRY-		P216TLMU/YLMU
Nominal Heating Capacity	kW	71.2
	BTU/h	243,000
Input	kW	13.04

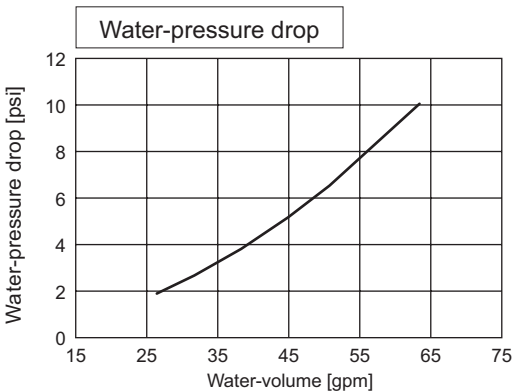
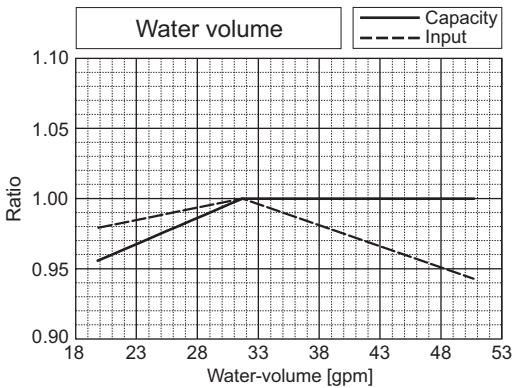
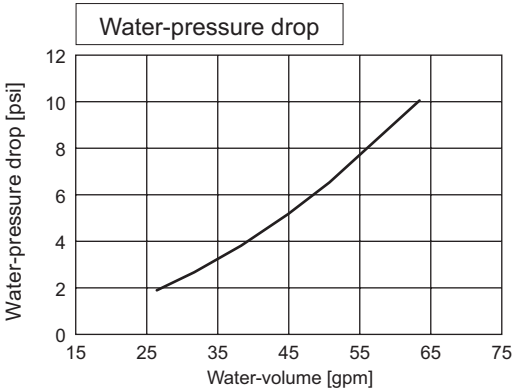
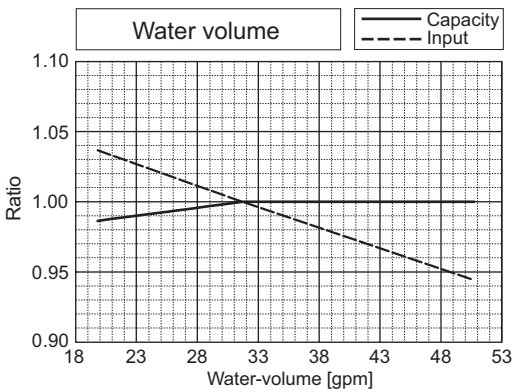
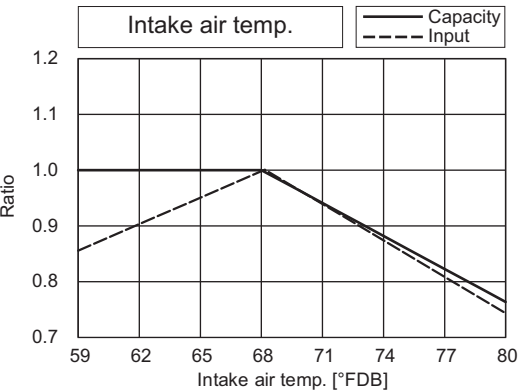
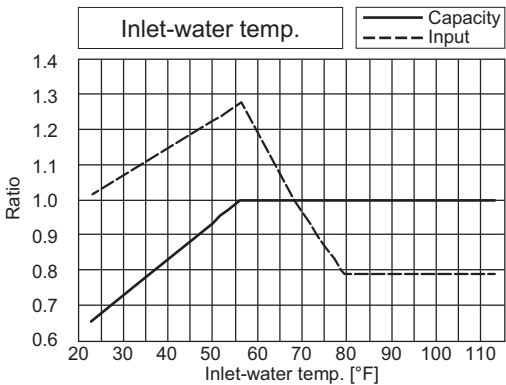


PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

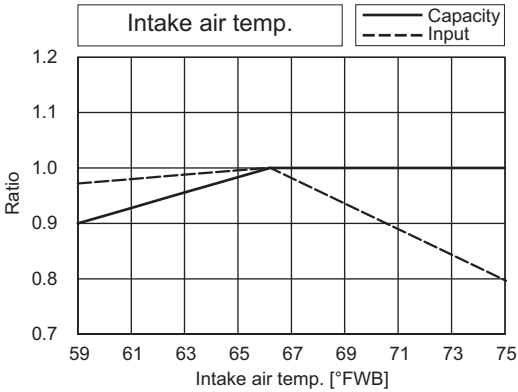
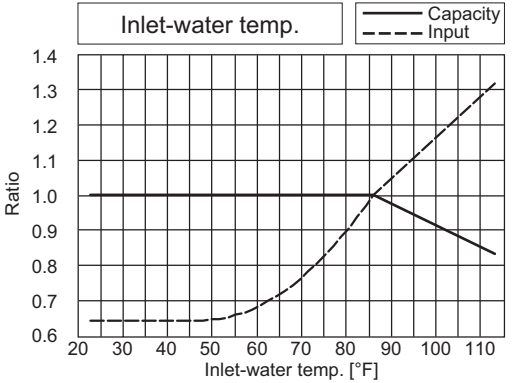
PQRY-		P240TLMU/YLMU
Nominal Cooling Capacity	kW	65.7
	BTU/h	224,000
Input	kW	21.14



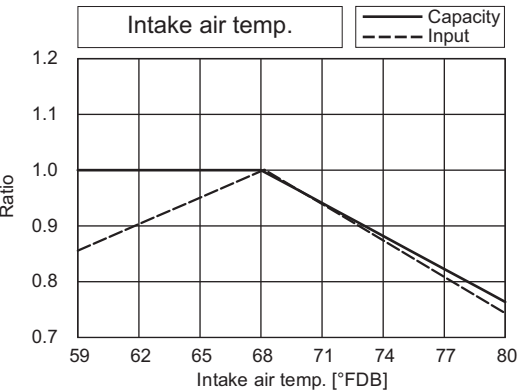
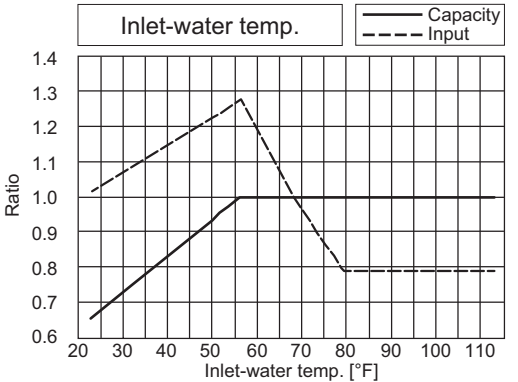
PQRY-		P240TLMU/YLMU
Nominal Heating Capacity	kW	79.1
	BTU/h	270,000
Input	kW	15.12



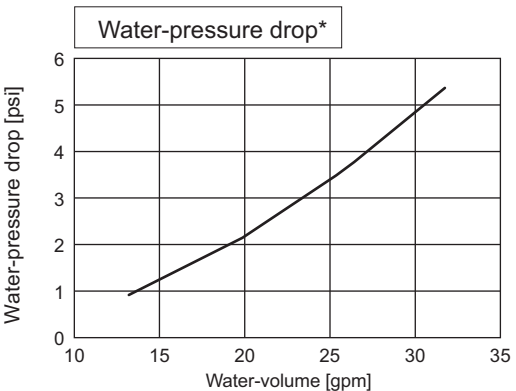
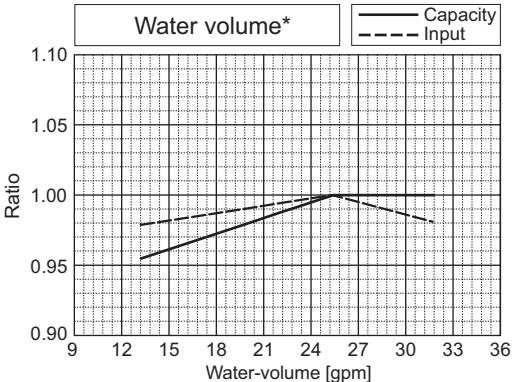
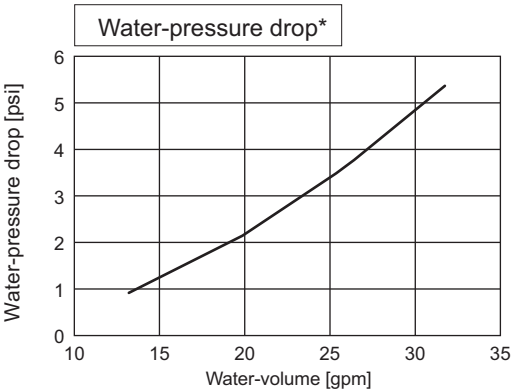
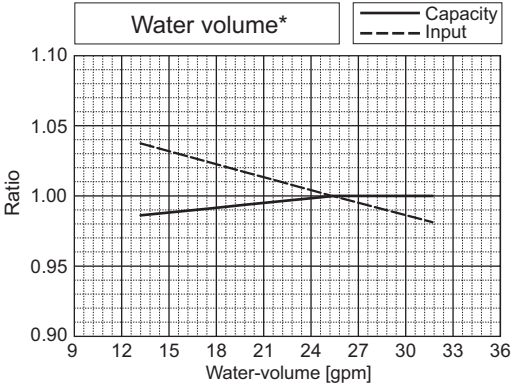
PQRY-		P144TSLMU/YSLMU
Nominal Cooling Capacity	kW	42.2
	BTU/h	144,000
Input	kW	7.11



PQRY-		P144TSLMU/YSLMU
Nominal Heating Capacity	kW	46.9
	BTU/h	160,000
Input	kW	7.45

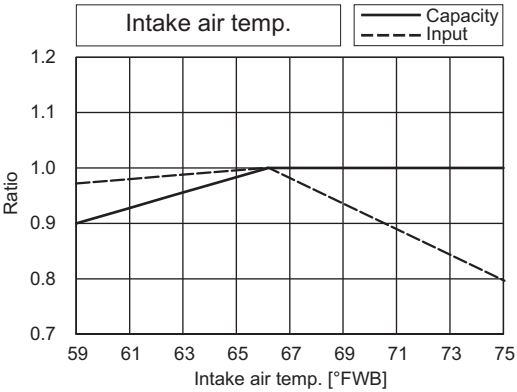
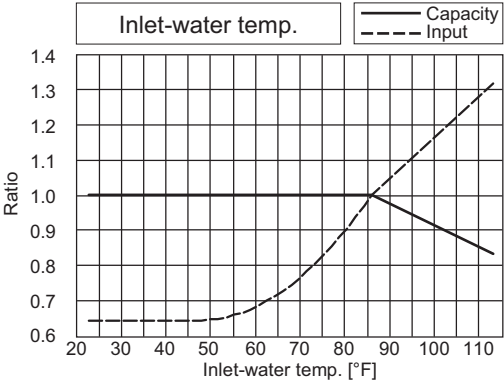


*The drawing indicates characteristic per unit.

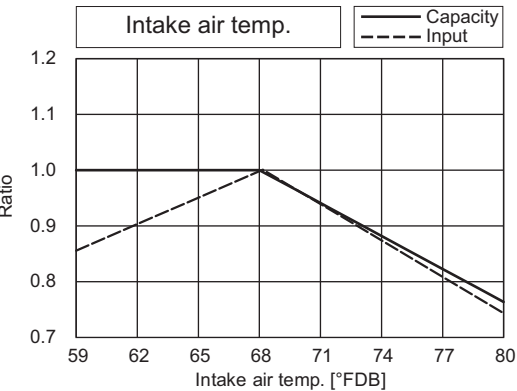
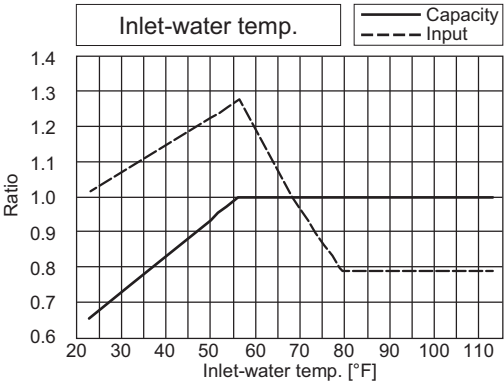


PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

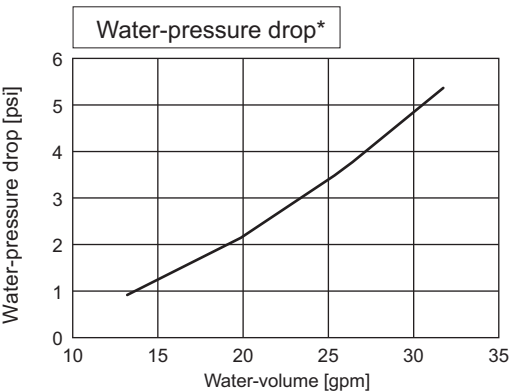
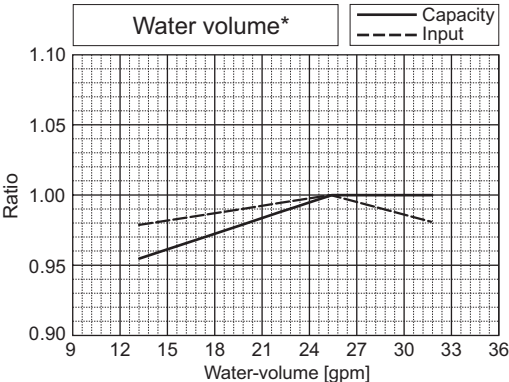
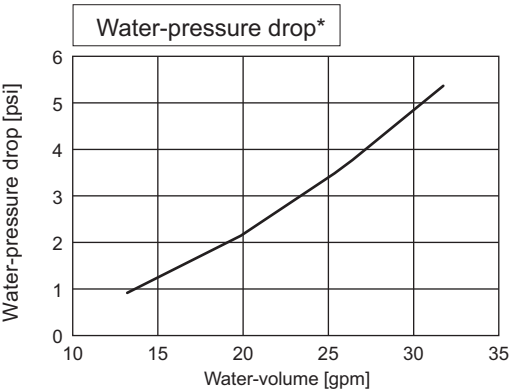
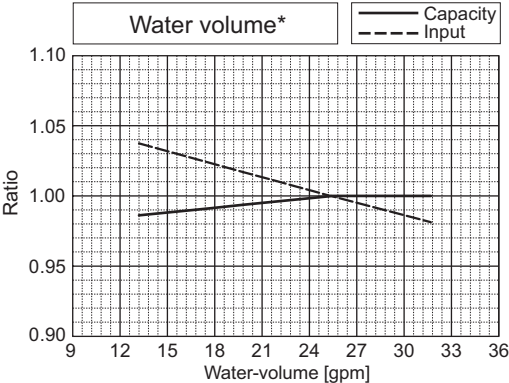
PQRY-		P168TSLMU/YSLMU
Nominal Cooling Capacity	kW	49.2
	BTU/h	168,000
Input	kW	9.33



PQRY-		P168TSLMU/YSLMU
Nominal Heating Capacity	kW	55.1
	BTU/h	188,000
Input	kW	9.34

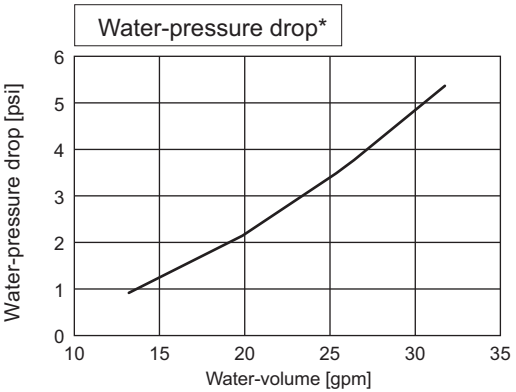
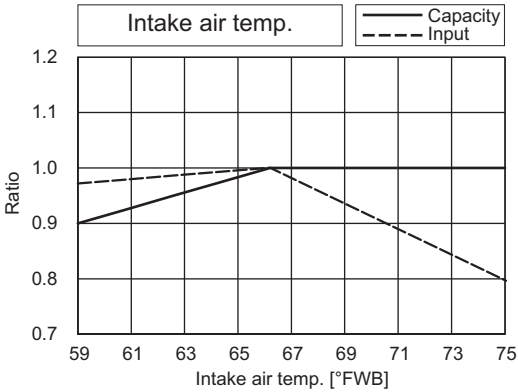
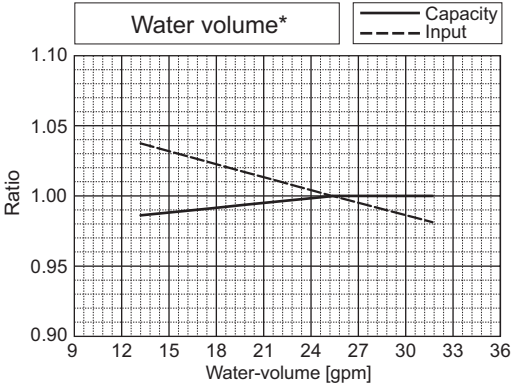
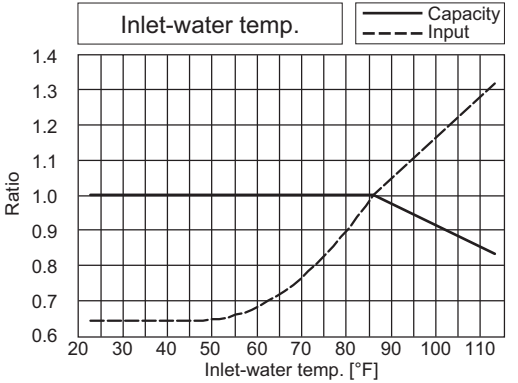


*The drawing indicates characteristic per unit.

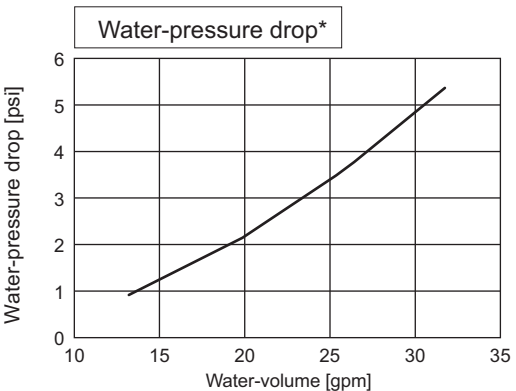
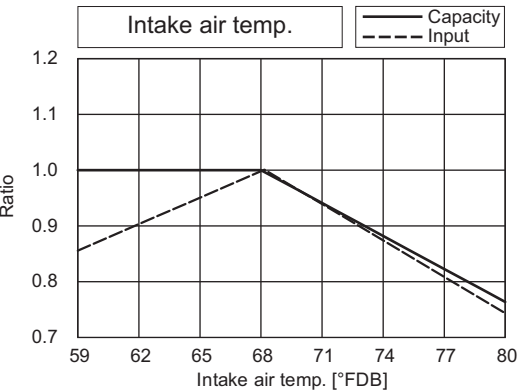
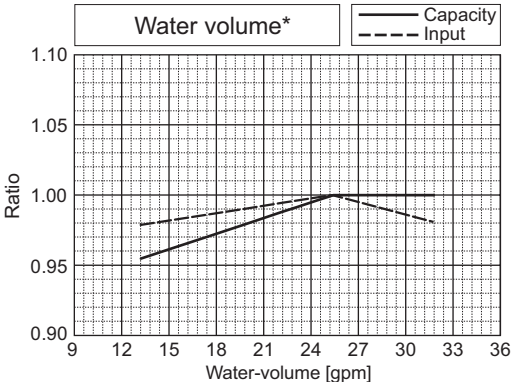
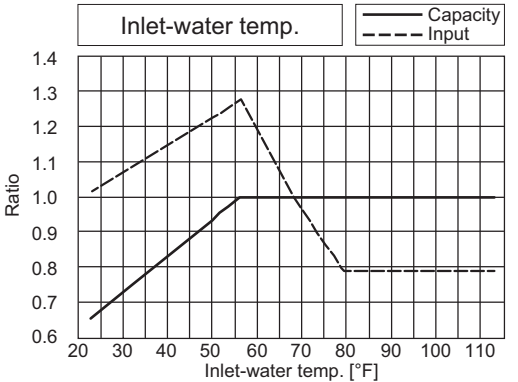


PQRY-		P192TSLMU/YSLMU
Nominal Cooling Capacity	kW	56.3
	BTU/h	192,000
Input	kW	11.30

*The drawing indicates characteristic per unit.



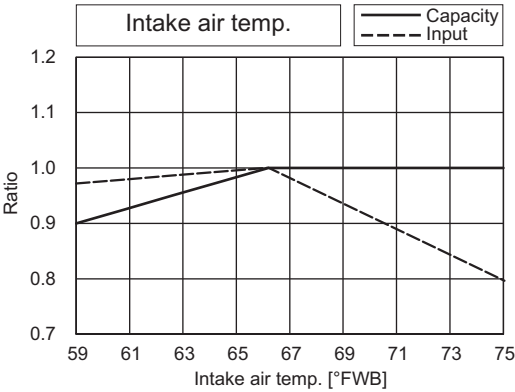
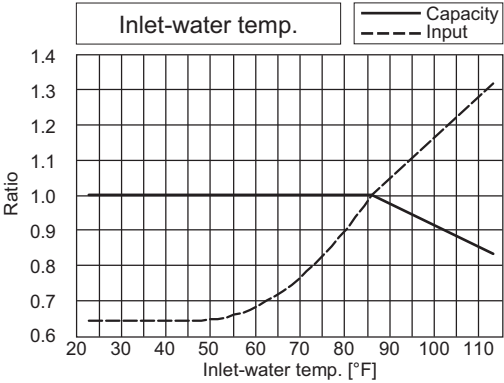
PQRY-		P192TSLMU/YSLMU
Nominal Heating Capacity	kW	63.0
	BTU/h	215,000
Input	kW	11.02



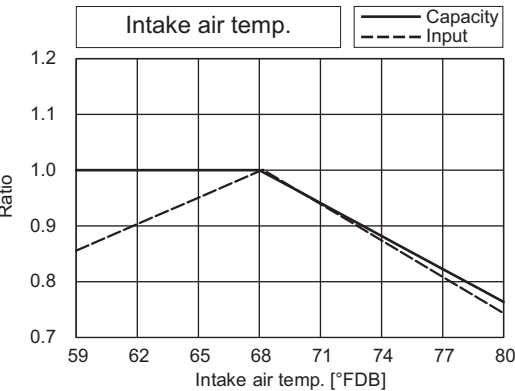
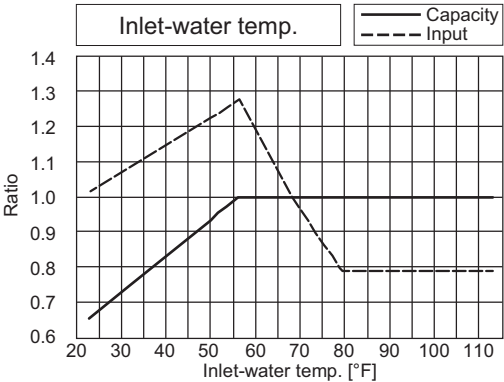
PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

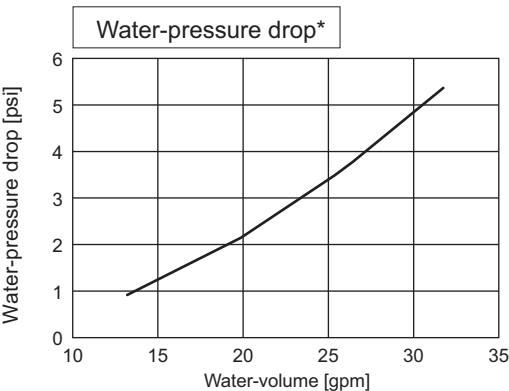
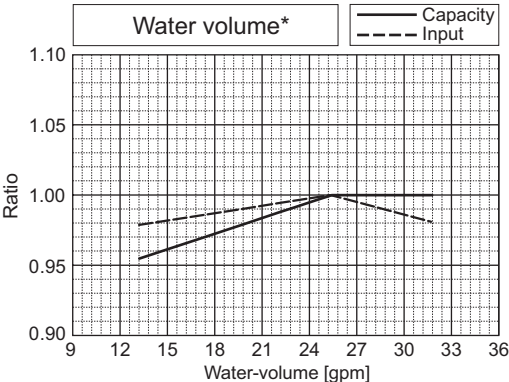
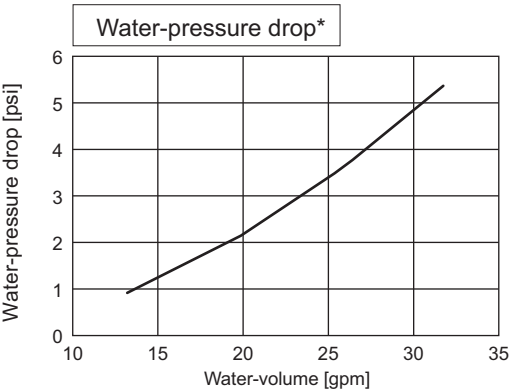
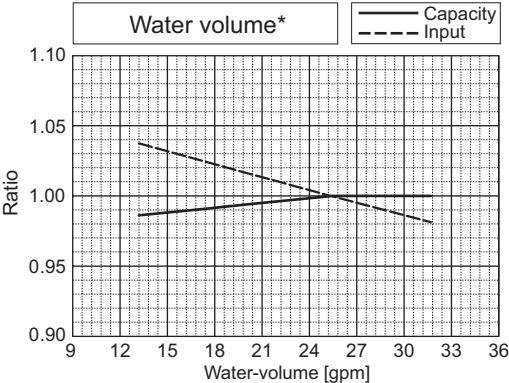
PQRY-		P216TSLMU/YSLMU
Nominal Cooling Capacity	kW	63.3
	BTU/h	216,000
Input	kW	14.03



PQRY-		P216TSLMU/YSLMU
Nominal Heating Capacity	kW	71.2
	BTU/h	243,000
Input	kW	12.88

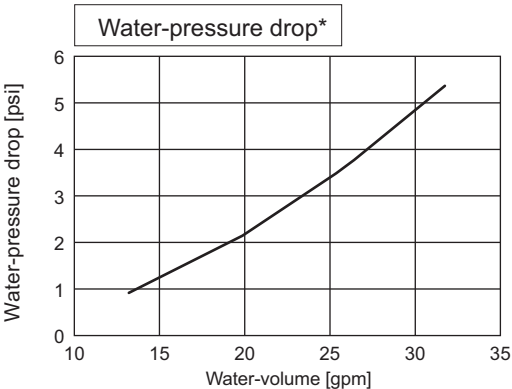
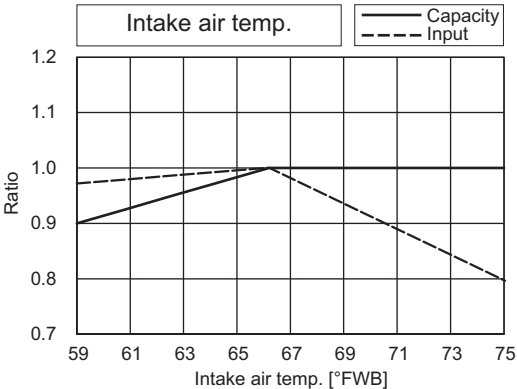
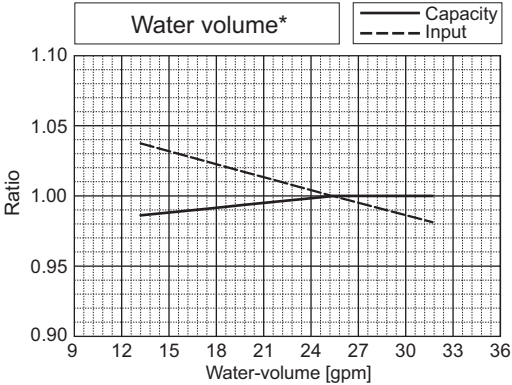
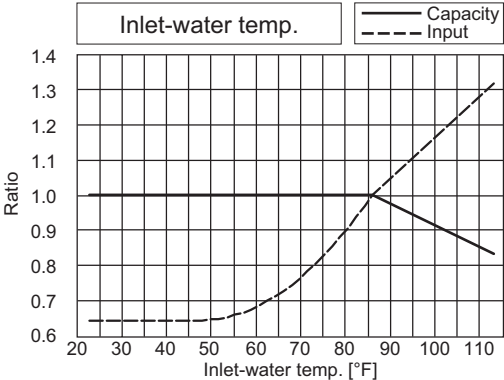


*The drawing indicates characteristic per unit.

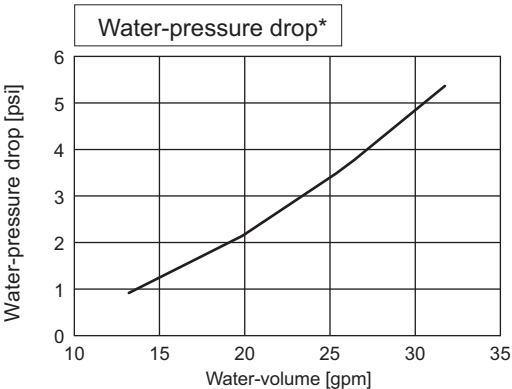
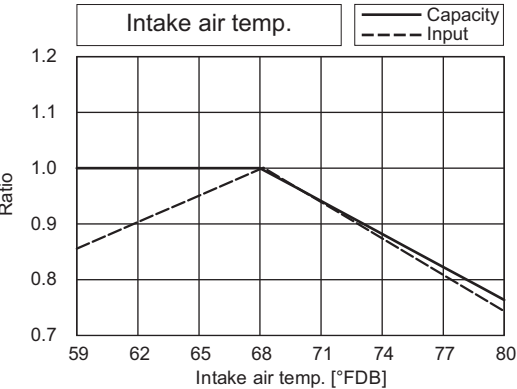
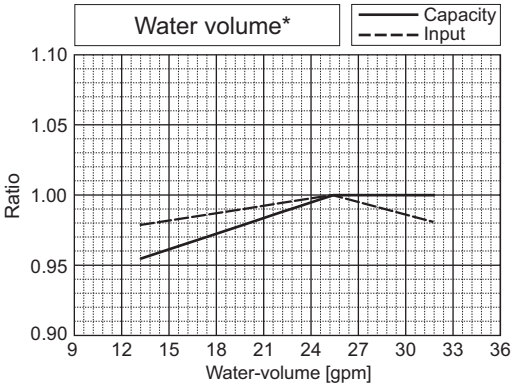
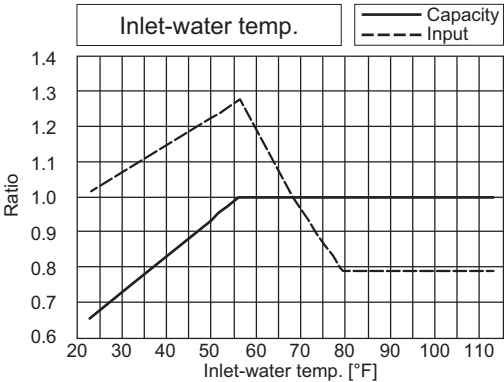


PQRY-		P240TSLMU/YSLMU
Nominal Cooling Capacity	kW	70.3
	BTU/h	240,000
Input	kW	16.89

*The drawing indicates characteristic per unit.

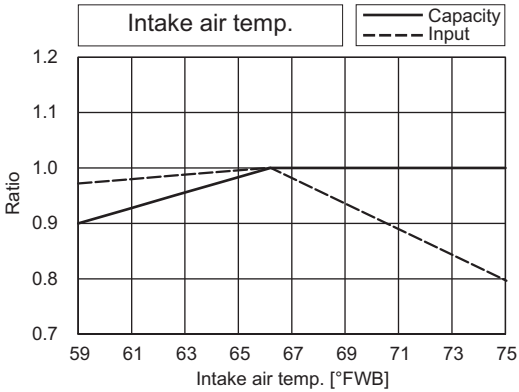
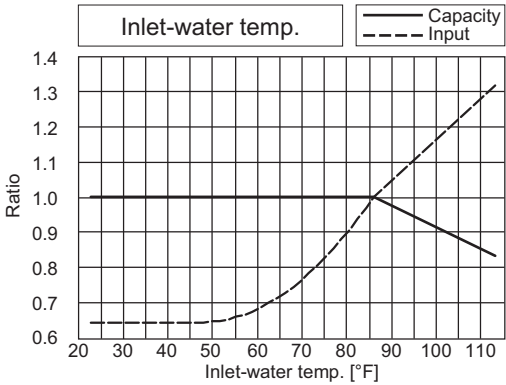


PQRY-		P240TSLMU/YSLMU
Nominal Heating Capacity	kW	79.1
	BTU/h	270,000
Input	kW	14.58

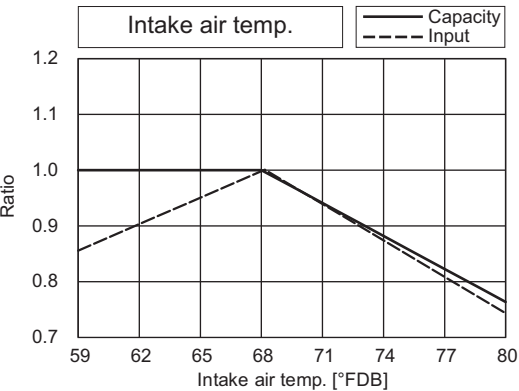
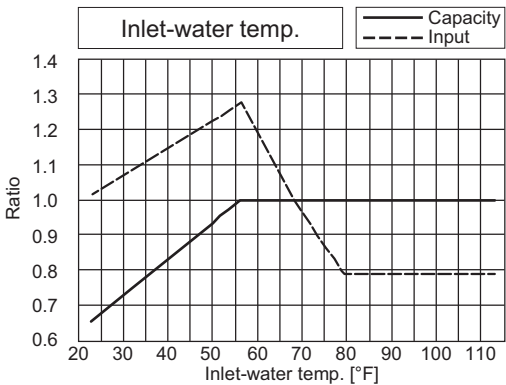


PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

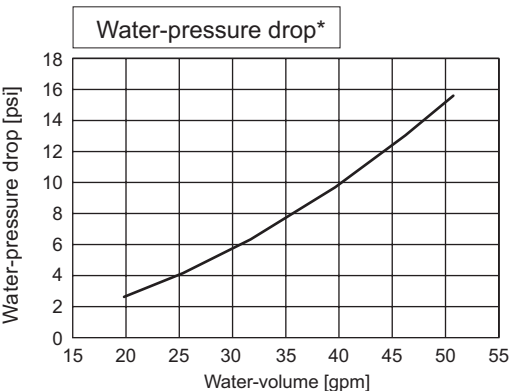
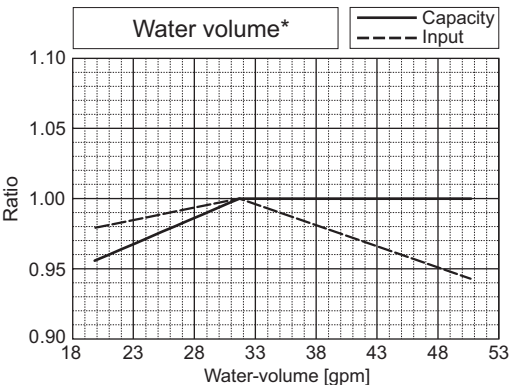
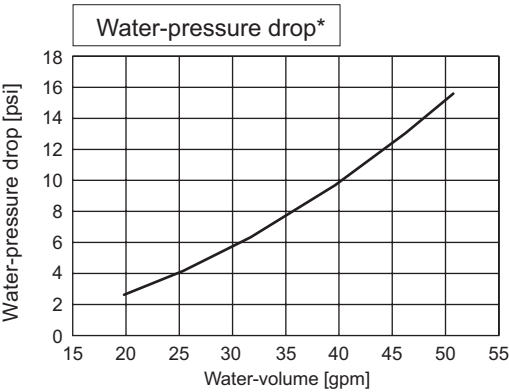
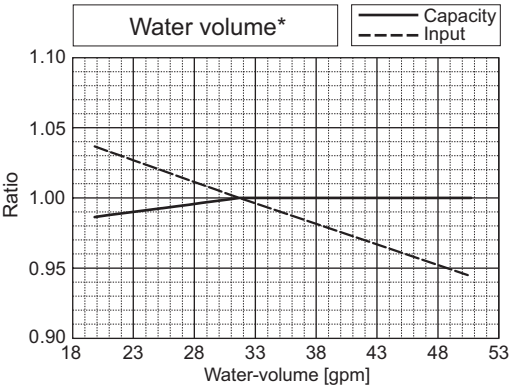
PQRY-		P288TSLMU/YSLMU
Nominal Cooling Capacity	kW	84.4
	BTU/h	288,000
Input	kW	20.42



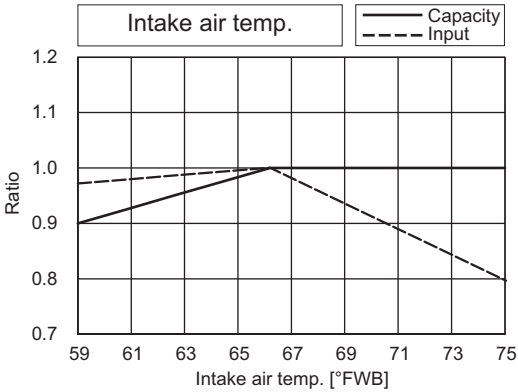
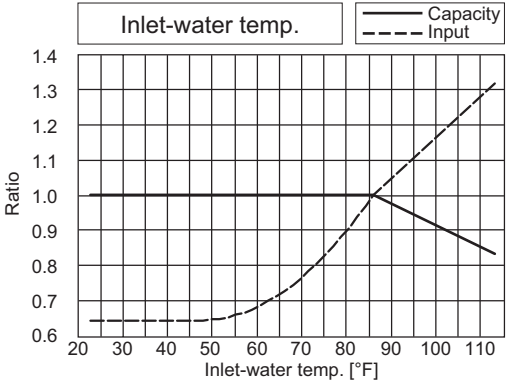
PQRY-		P288TSLMU/YSLMU
Nominal Heating Capacity	kW	94.7
	BTU/h	323,000
Input	kW	17.50



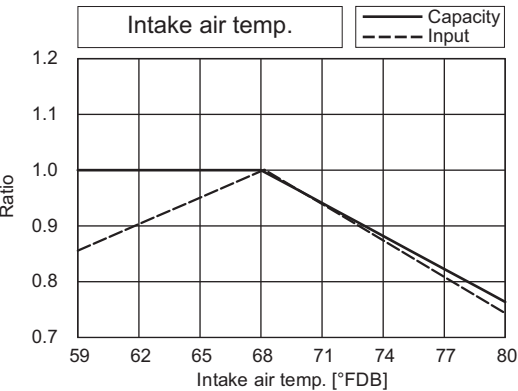
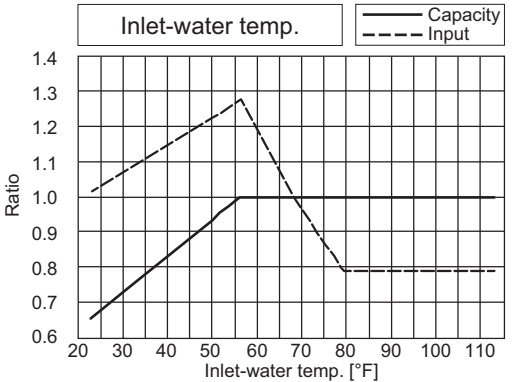
*The drawing indicates characteristic per unit.



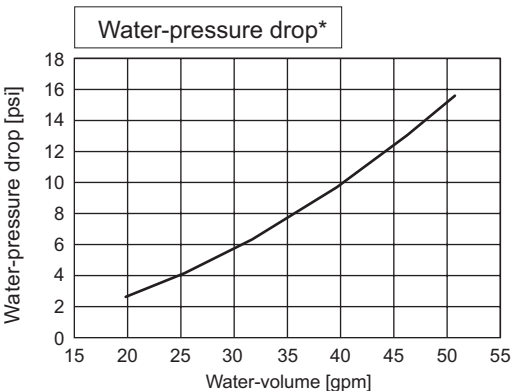
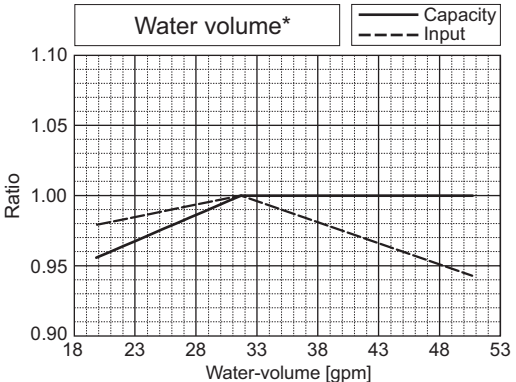
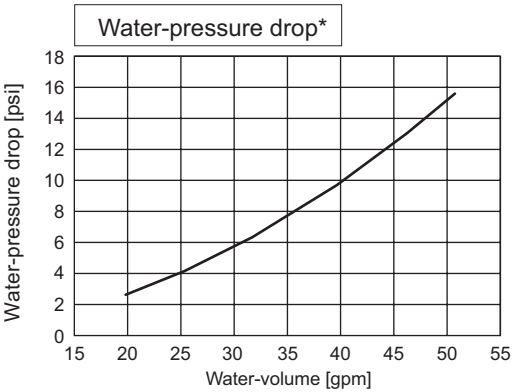
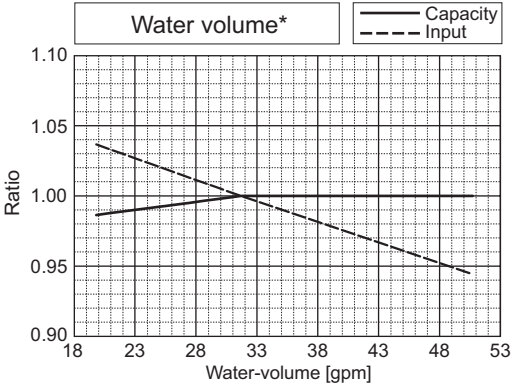
PQRY-		P312TSLMU/YSLMU
Nominal Cooling Capacity	kW	91.4
	BTU/h	312,000
Input	kW	23.41



PQRY-		P312TSLMU/YSLMU
Nominal Heating Capacity	kW	102.6
	BTU/h	350,000
Input	kW	19.11



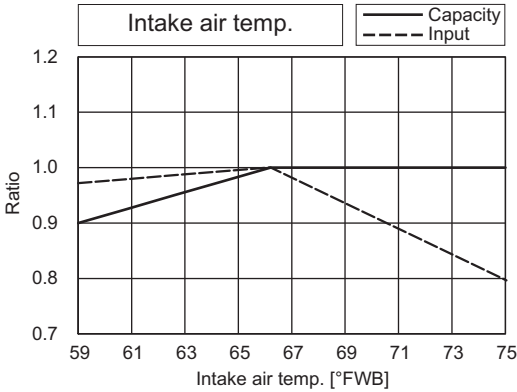
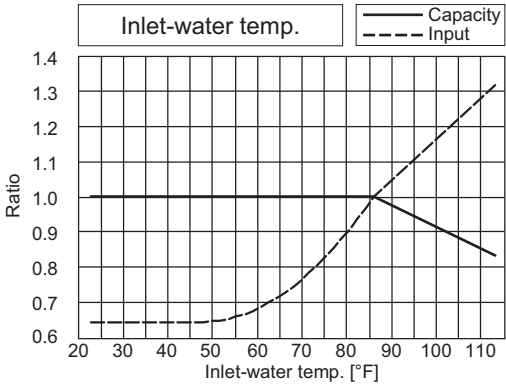
*The drawing indicates characteristic per unit.



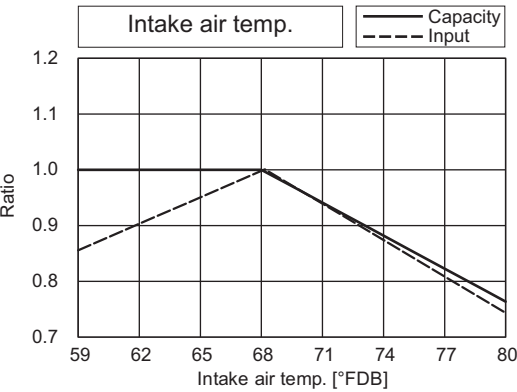
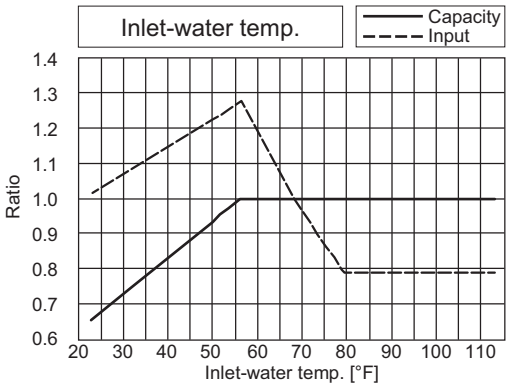
PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

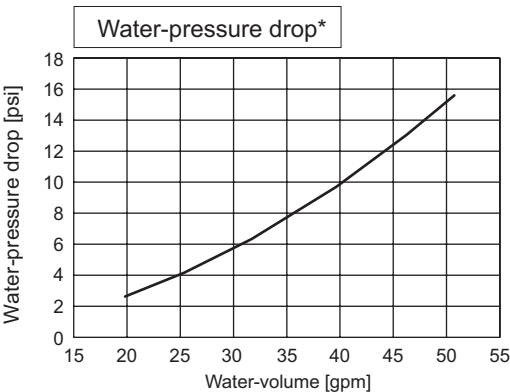
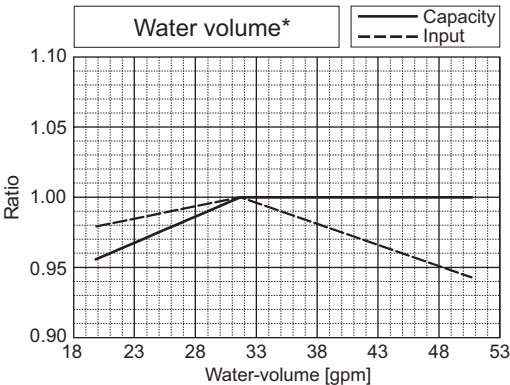
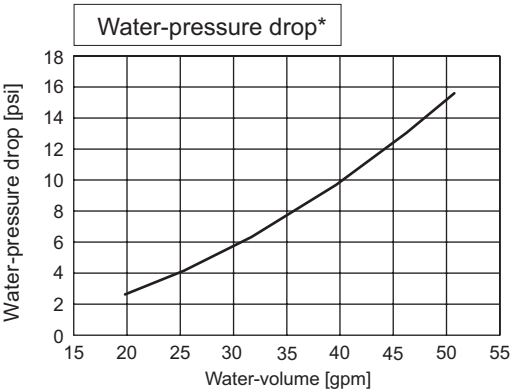
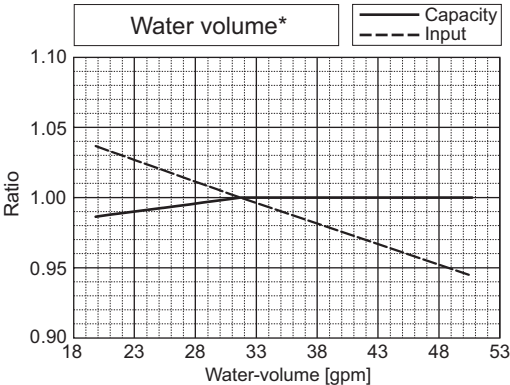
PQRY-		P336TSLMU/YSLMU
Nominal Cooling Capacity	kW	98.5
	BTU/h	336,000
Input	kW	26.84



PQRY-		P336TSLMU/YSLMU
Nominal Heating Capacity	kW	110.8
	BTU/h	378,000
Input	kW	20.77



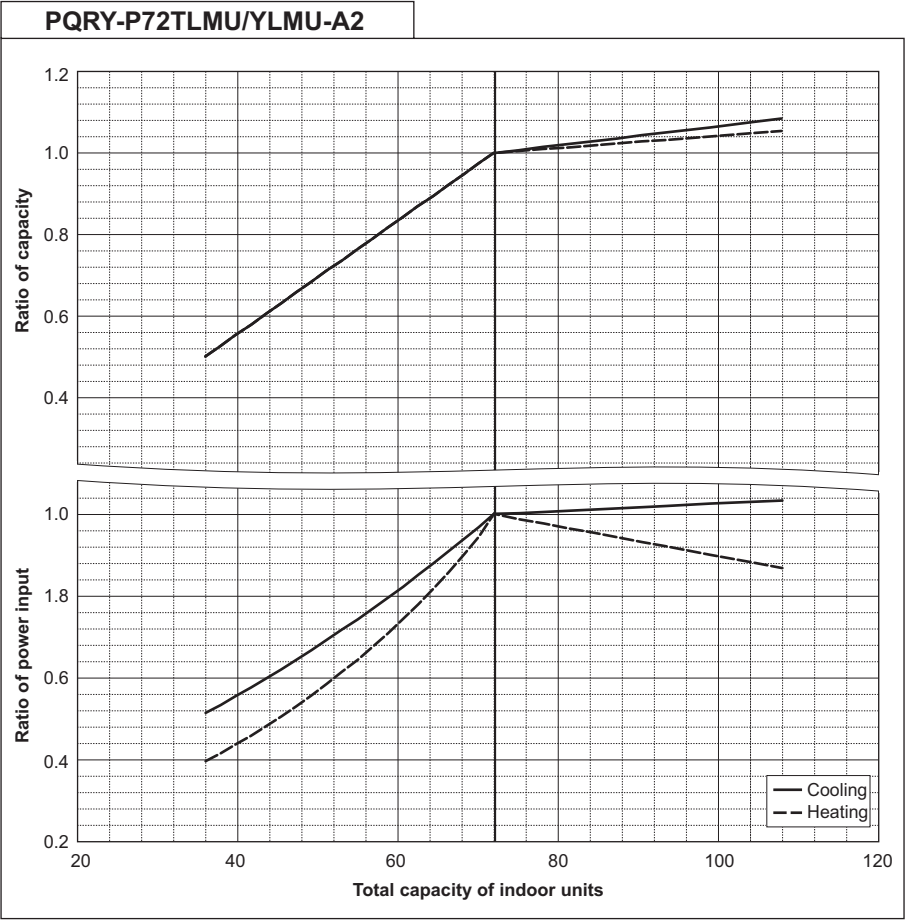
*The drawing indicates characteristic per unit.



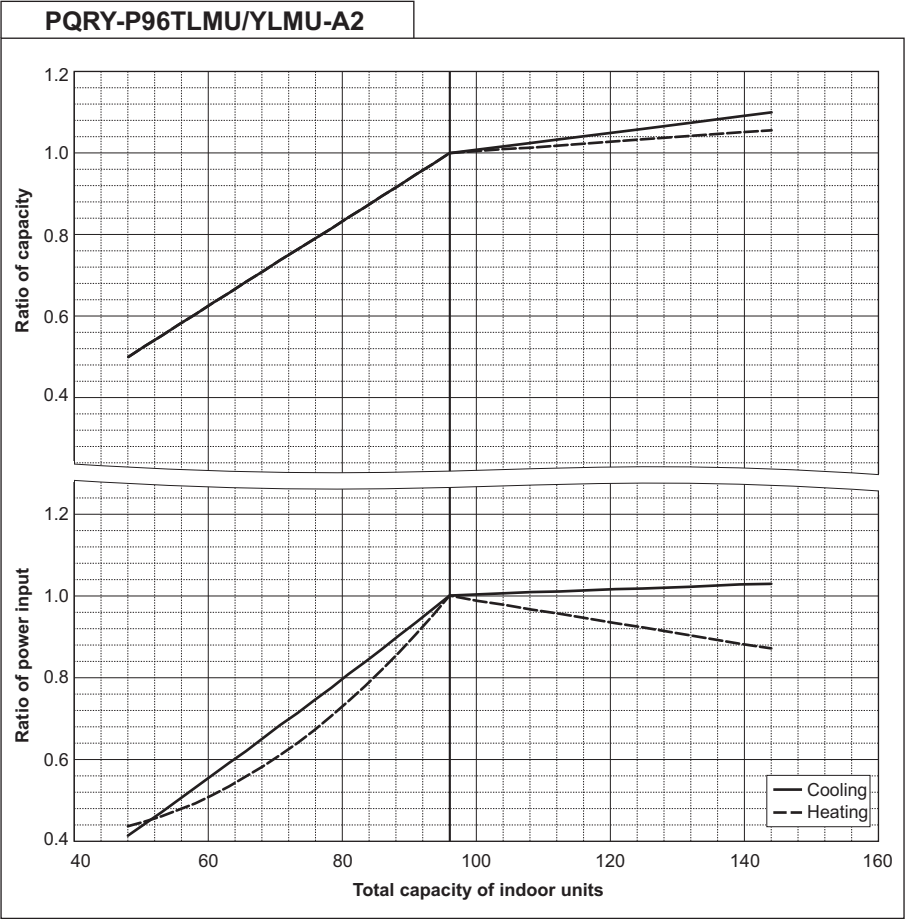
7-2. Correction by total indoor

CITY MULTI system has 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
Nominal cooling capacity	BTU/h	72,000
	kW	21.1
	Input kW	3.61
PQRY-		P72TLMU/YLMU
Nominal Heating capacity	BTU/h	80,000
	kW	23.4
	Input kW	4.04



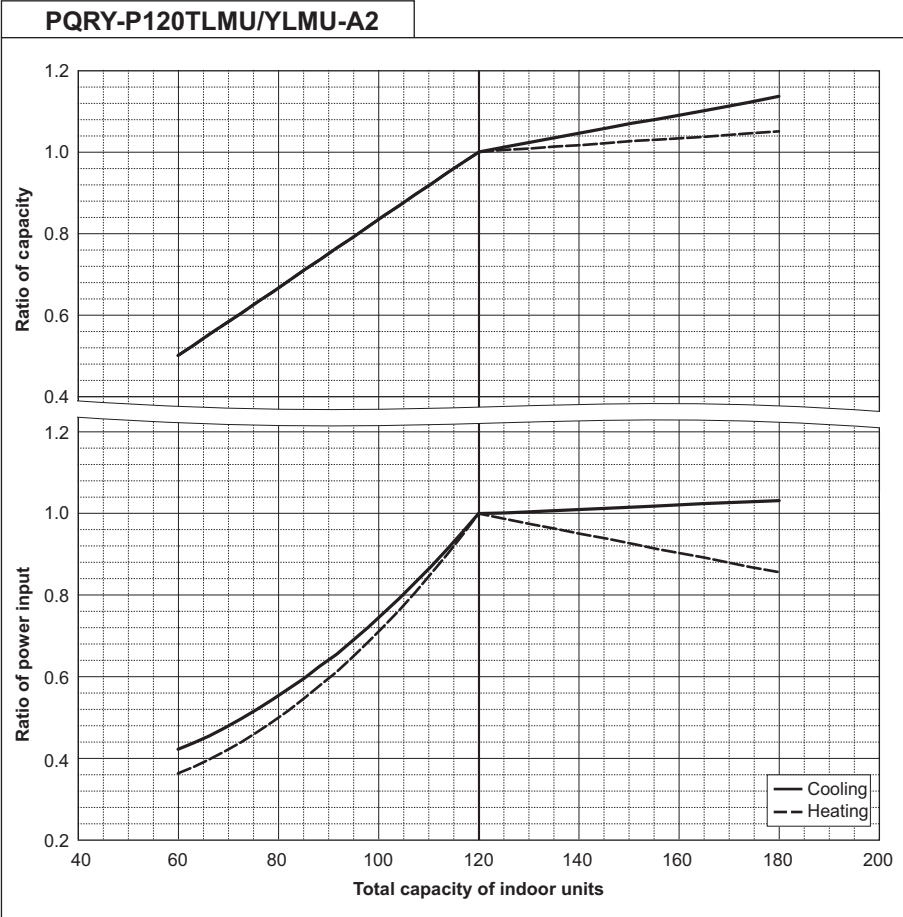
PQRY-		P96TLMU/YLMU
Nominal cooling capacity	BTU/h	96,000
	kW	28.1
	Input kW	5.21
PQRY-		P96TLMU/YLMU
Nominal Heating capacity	BTU/h	108,000
	kW	31.7
	Input kW	5.64



PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

PQRY-		P120TLMU/YLMU
Nominal cooling capacity	BTU/h	120,000
	kW	35.2
	Input kW	7.51

PQRY-		P120TLMU/YLMU
Nominal Heating capacity	BTU/h	135,000
	kW	39.6
	Input kW	7.09

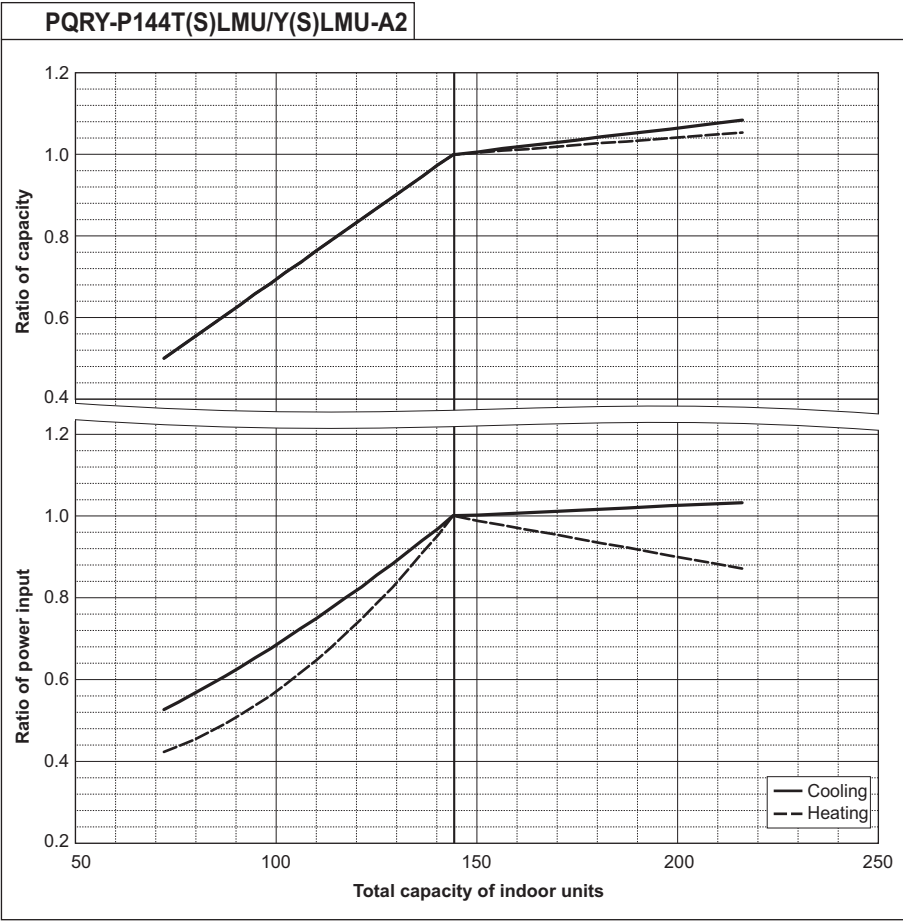


PQRY-		P144TLMU/YLMU
Nominal cooling capacity	BTU/h	144,000
	kW	42.2
	Input kW	8.78

PQRY-		P144TLMU/YLMU
Nominal Heating capacity	BTU/h	160,000
	kW	46.9
	Input kW	8.11

PQRY-		P144TSLMU/YSLMU
Nominal cooling capacity	BTU/h	144,000
	kW	42.2
	Input kW	7.11

PQRY-		P144TSLMU/YSLMU
Nominal Heating capacity	BTU/h	160,000
	kW	46.9
	Input kW	7.45



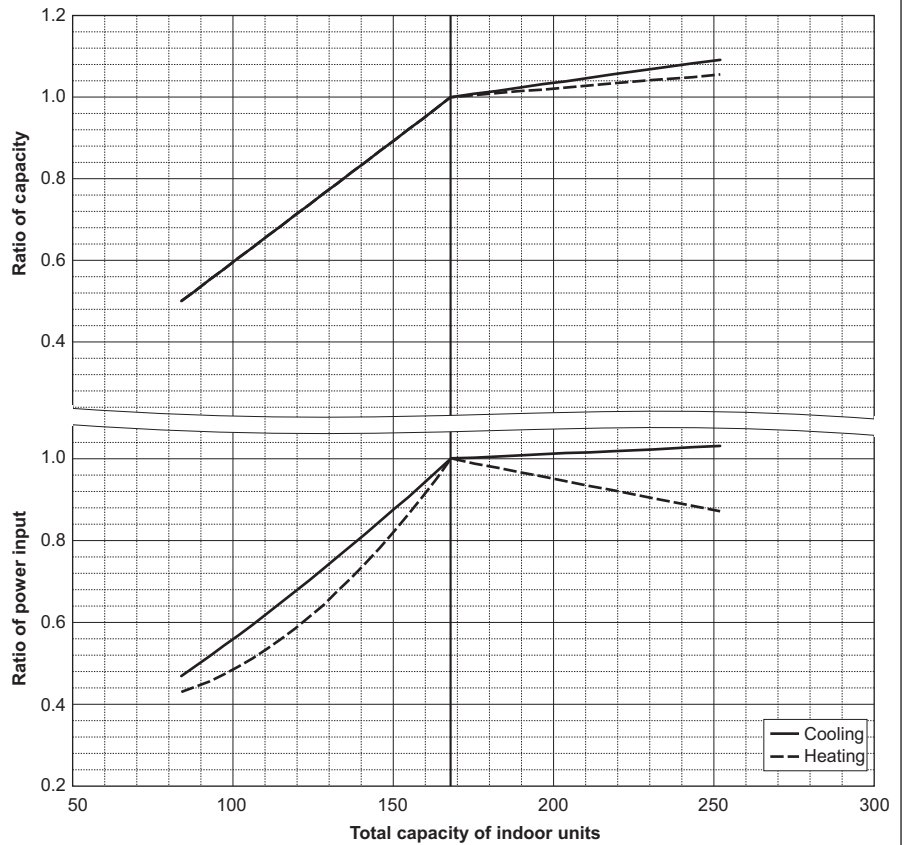
PQRY-		P168TLMU/YLMU
Nominal cooling capacity	BTU/h	168,000
	kW	49.2
Input	kW	12.05

PQRY-		P168TLMU/YLMU
Nominal Heating capacity	BTU/h	188,000
	kW	55.1
Input	kW	9.86

PQRY-		P168TSLMU/YSLMU
Nominal cooling capacity	BTU/h	168,000
	kW	49.2
Input	kW	9.33

PQRY-		P168TSLMU/YSLMU
Nominal Heating capacity	BTU/h	188,000
	kW	55.1
Input	kW	9.34

PQRY-P168T(S)LMU/Y(S)LMU-A2



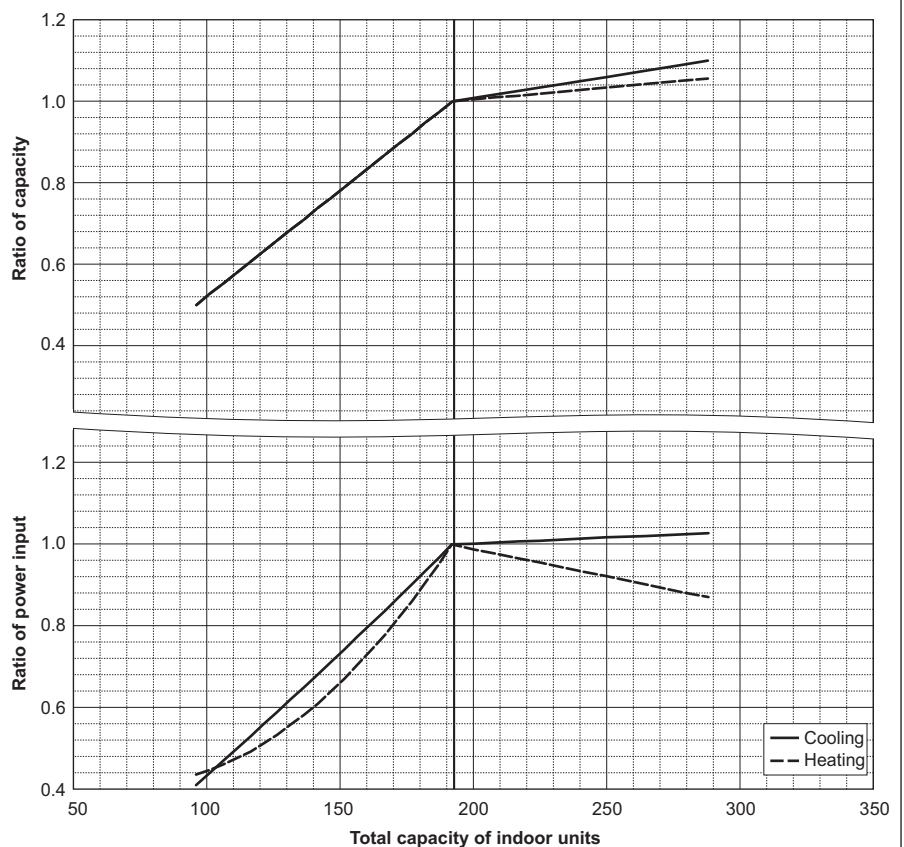
PQRY-		P192TLMU/YLMU
Nominal cooling capacity	BTU/h	192,000
	kW	56.3
Input	kW	15.05

PQRY-		P192TLMU/YLMU
Nominal Heating capacity	BTU/h	215,000
	kW	63.0
Input	kW	11.90

PQRY-		P192TSLMU/YSLMU
Nominal cooling capacity	BTU/h	192,000
	kW	56.3
Input	kW	11.30

PQRY-		P192TSLMU/YSLMU
Nominal Heating capacity	BTU/h	215,000
	kW	63.0
Input	kW	11.02

PQRY-P192T(S)LMU/Y(S)LMU-A2



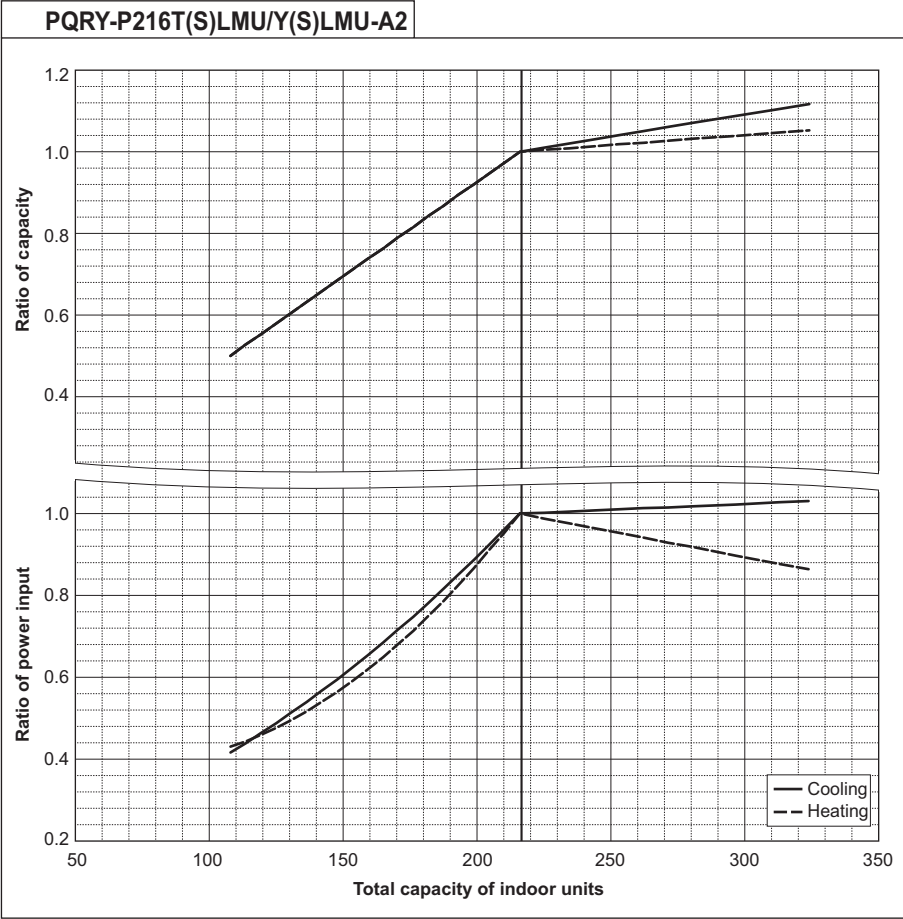
PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

PQRY-		P216TLMU/YLMU
Nominal cooling capacity	BTU/h	216,000
	kW	63.3
	Input kW	19.23

PQRY-		P216TLMU/YLMU
Nominal Heating capacity	BTU/h	243,000
	kW	71.2
	Input kW	13.04

PQRY-		P216TSLMU/YSLMU
Nominal cooling capacity	BTU/h	216,000
	kW	63.3
	Input kW	14.03

PQRY-		P216TSLMU/YSLMU
Nominal Heating capacity	BTU/h	243,000
	kW	71.2
	Input kW	12.88

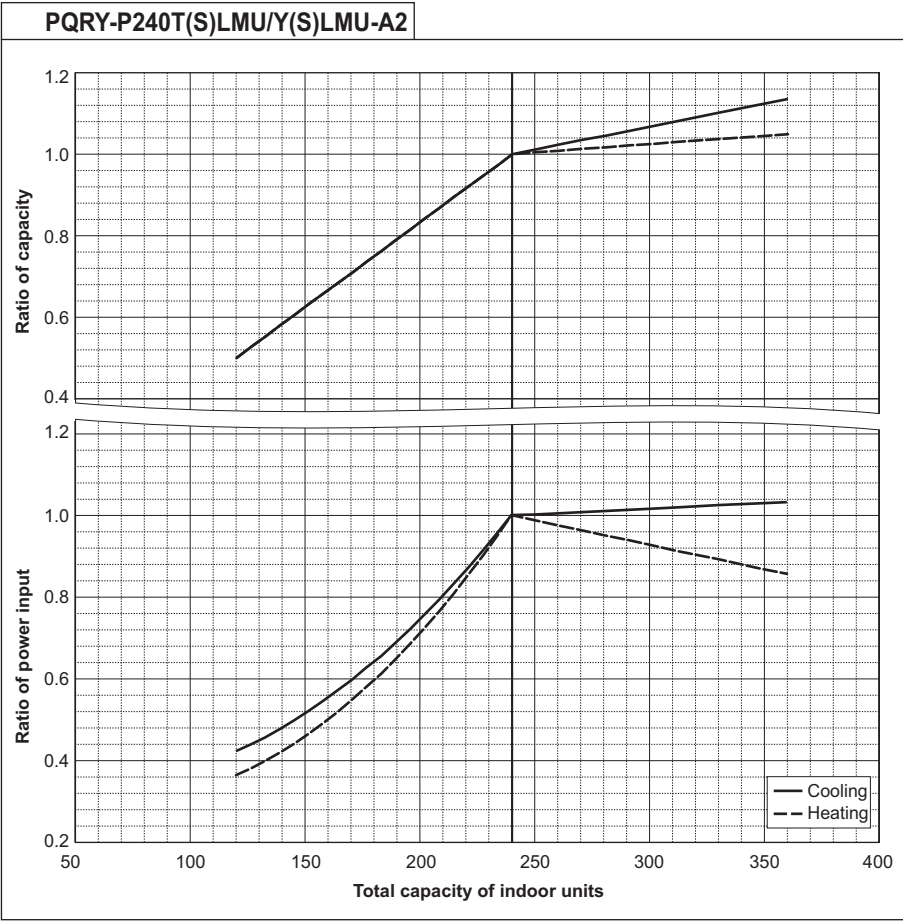


PQRY-		P240TLMU/YLMU
Nominal cooling capacity	BTU/h	224,000
	kW	65.7
	Input kW	21.14

PQRY-		P240TLMU/YLMU
Nominal Heating capacity	BTU/h	270,000
	kW	79.1
	Input kW	15.12

PQRY-		P240TSLMU/YSLMU
Nominal cooling capacity	BTU/h	240,000
	kW	70.3
	Input kW	16.89

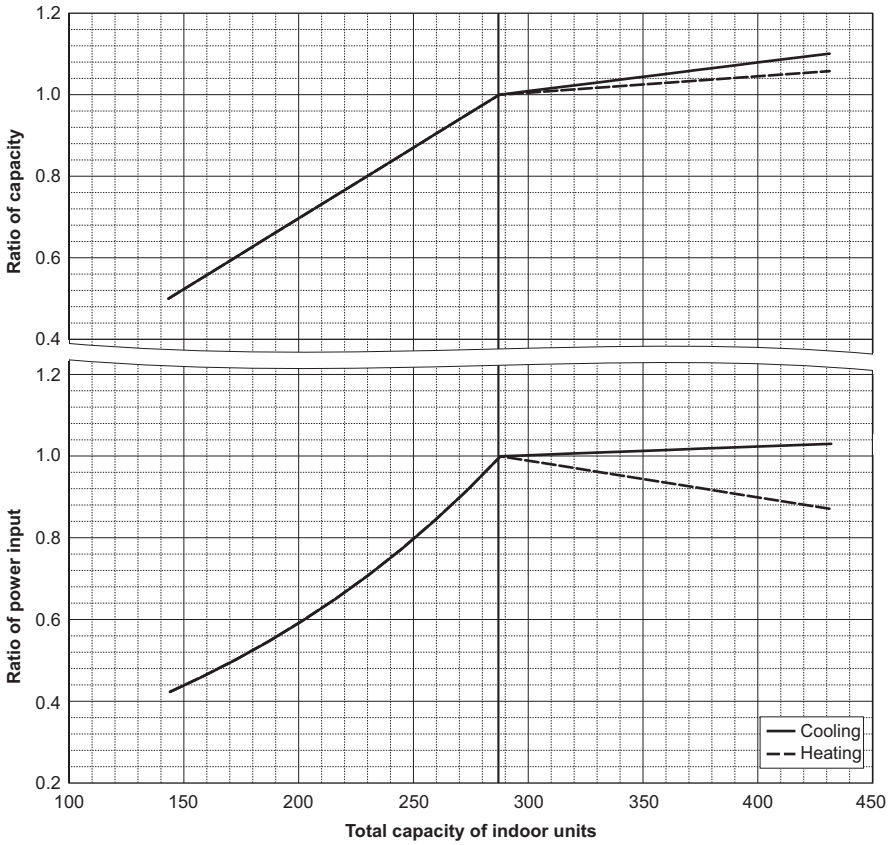
PQRY-		P240TSLMU/YSLMU
Nominal Heating capacity	BTU/h	270,000
	kW	79.1
	Input kW	14.58



PQRY-		P288TSLMU/YSLMU
Nominal cooling capacity	BTU/h	288,000
	kW	84.4
	Input kW	20.42

PQRY-		P288TSLMU/YSLMU
Nominal Heating capacity	BTU/h	323,000
	kW	94.7
	Input kW	17.50

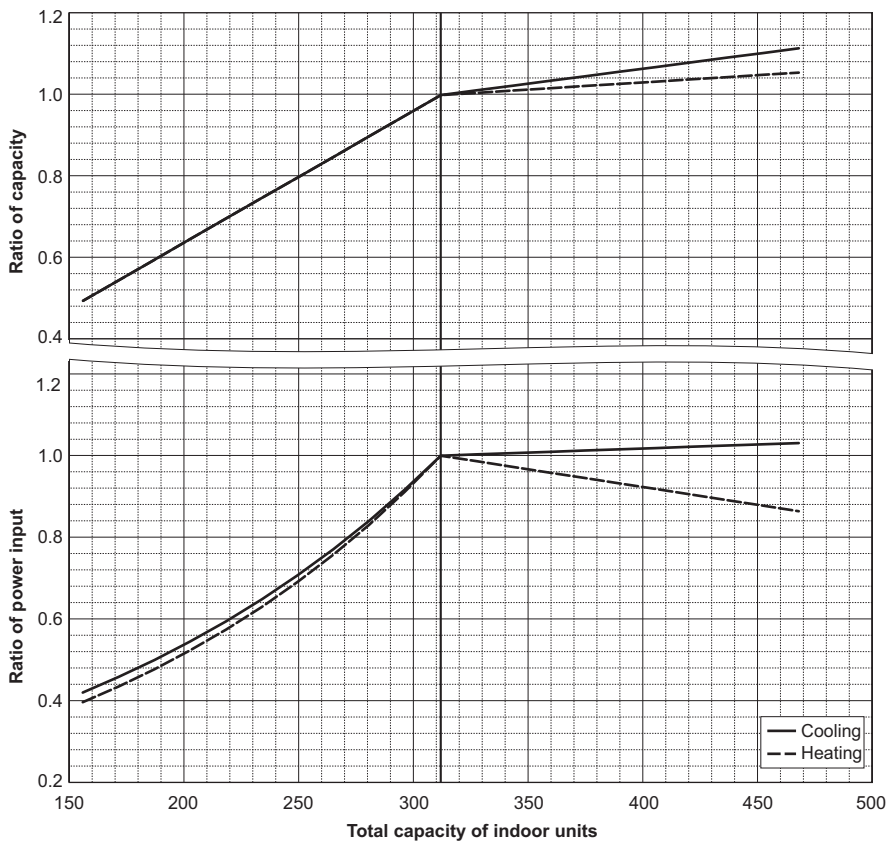
PQRY-P288TSLMU/YSLMU-A2



PQRY-		P312TSLMU/YSLMU
Nominal cooling capacity	BTU/h	312,000
	kW	91.4
	Input kW	23.41

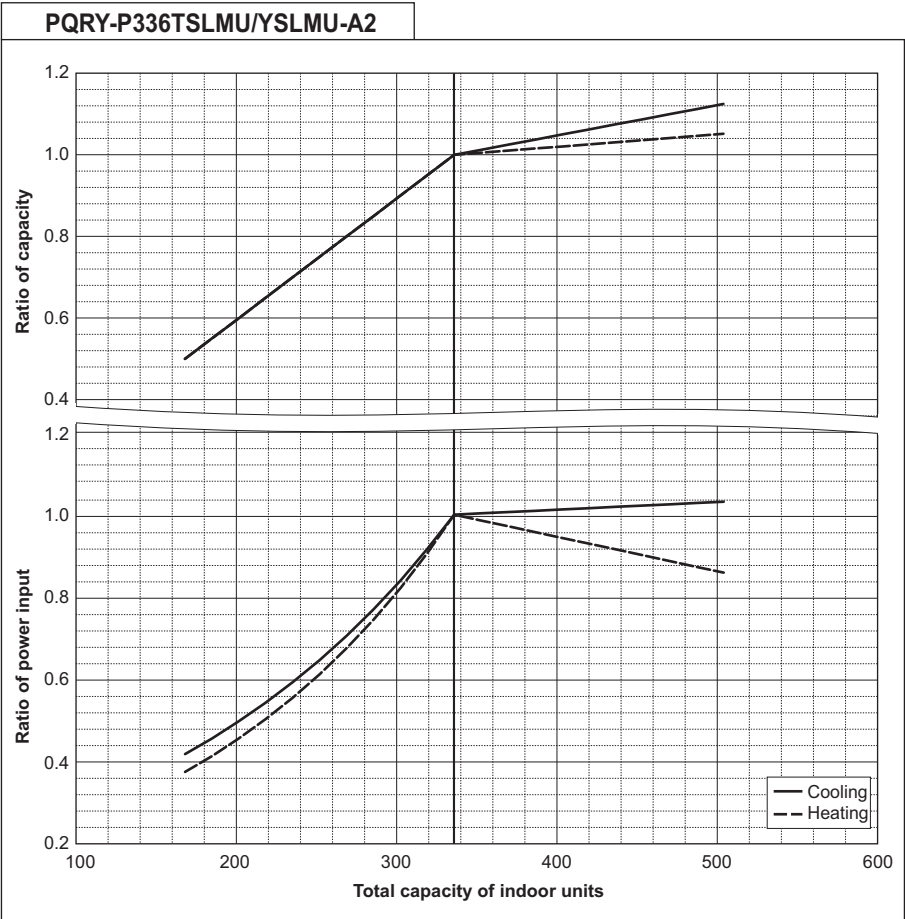
PQRY-		P312TSLMU/YSLMU
Nominal Heating capacity	BTU/h	350,000
	kW	102.6
	Input kW	19.11

PQRY-P312TSLMU/YSLMU-A2



PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

PQRY-		P336TSLMU/YSLMU
Nominal cooling capacity	BTU/h	336,000
	kW	98.5
	Input kW	26.84
PQRY-		P336TSLMU/YSLMU
Nominal Heating capacity	BTU/h	378,000
	kW	110.8
	Input kW	20.77

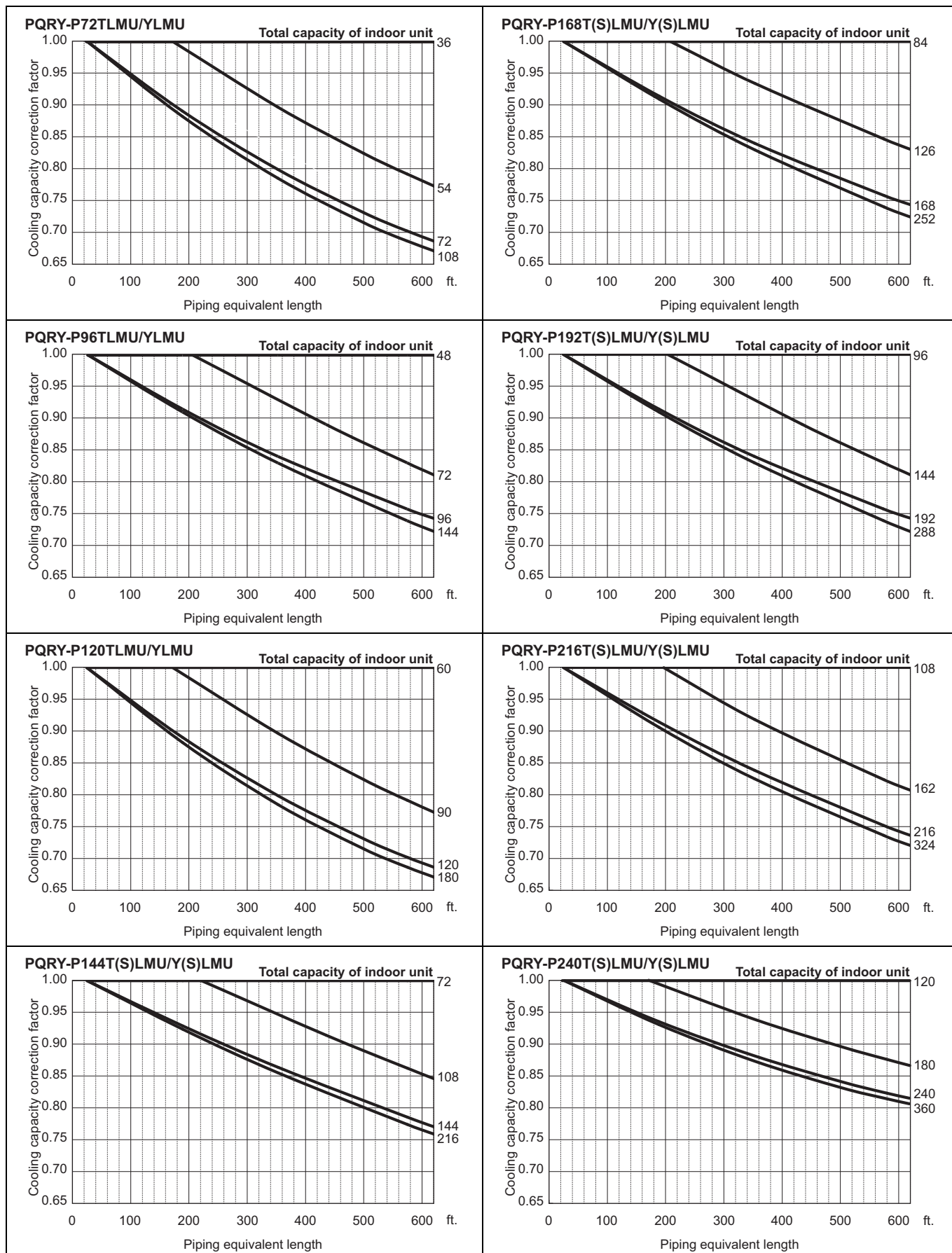


PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

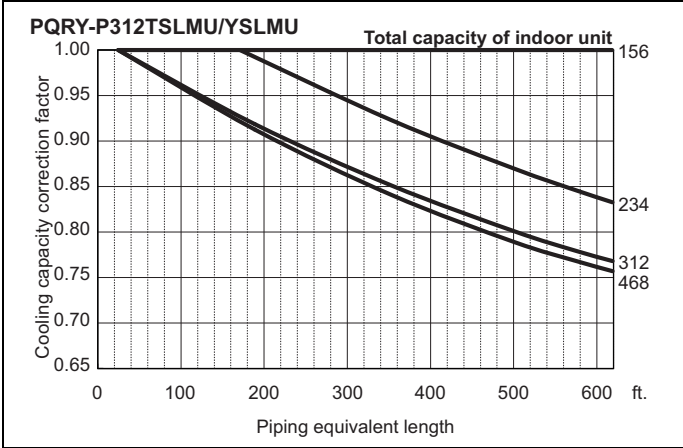
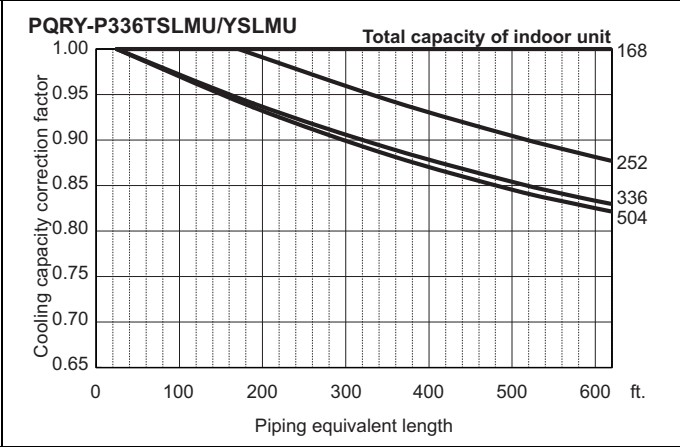
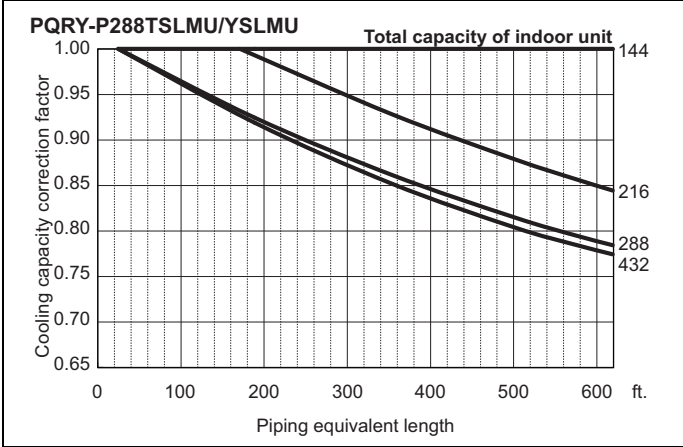
7-3. Correction by refrigerant piping length

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.

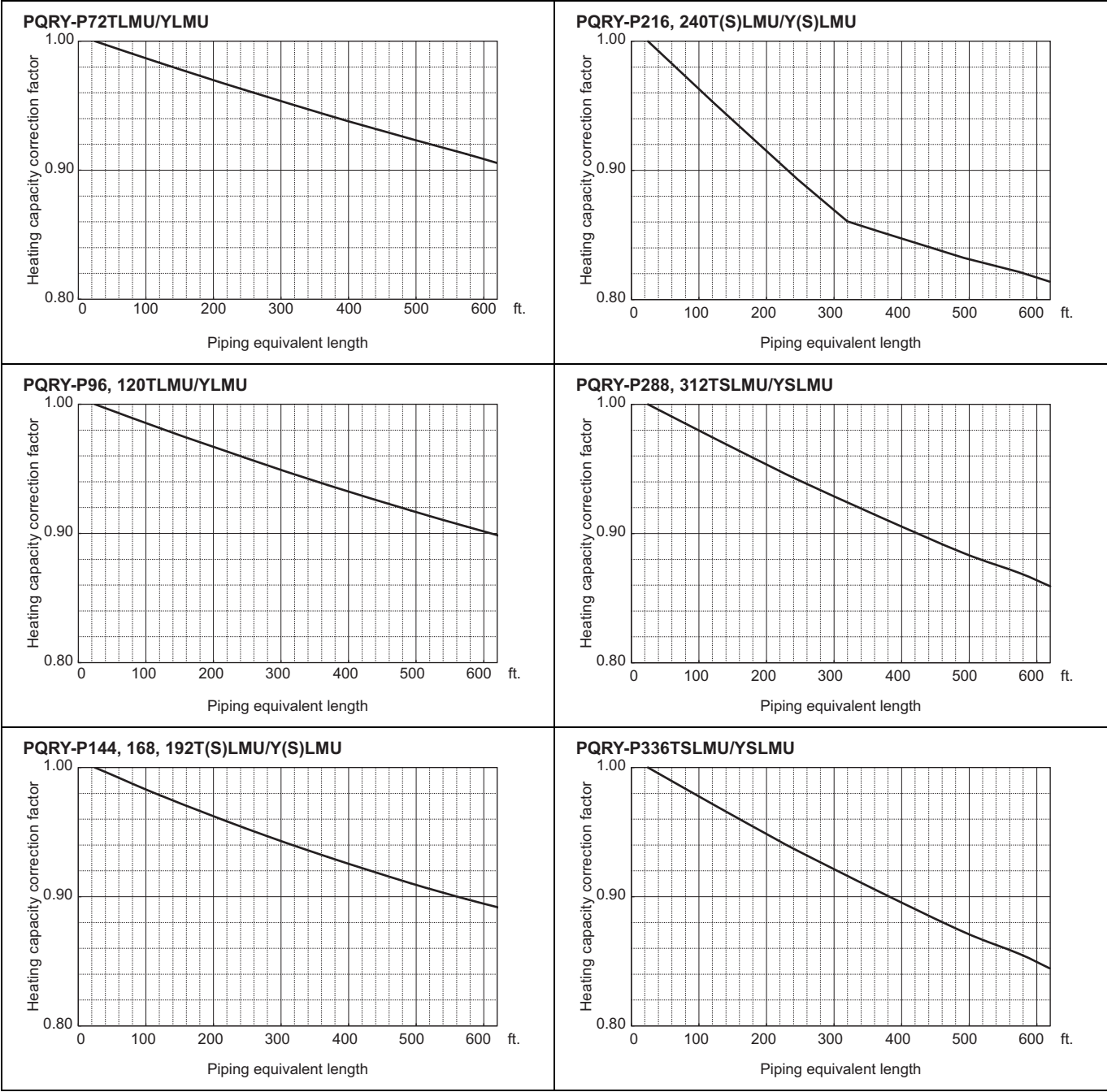
7-3-1. Cooling capacity correction



PQRY-P-T(S)LMU-A2, Y(S)LMU-A2



7-3-2. Heating capacity correction



PQRY-P-T(S)LMU-A2, Y(S)LMU-A2

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

1. PQRYP72TLMUYLMU

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. PQRYP96TLMUYLMU

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. PQRYP120TLMUYLMU

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)LMUY(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]

PQRYP-P-T(S)LMU-A2, Y(S)LMU-A2

PQRY-P-Z(S)LMU-B

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Heat Source Model			PQRY-P72ZLMU-B < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1	BTU/h	72,000			
		kW	21.1			
	(575)	Power input	3.61			
		Current input	4.0			
	(Rated)	BTU/h	69,000			
		kW	20.2			
	(575)	Power input	3.60	3.59		
		Current input	4.0	4.0		
	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)	*2	BTU/h	80,000			
		kW	23.4			
	(575)	Power input	4.04			
		Current input	4.5			
	(Rated)	BTU/h	76,000			
		kW	22.3			
	(575)	Power input	3.78	3.36		
		Current input	4.2	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 power level (measured in anechoic room) *3		dB <A>	60.5			
Refrigerant	High pressure	in. (mm)	5/8 (15.88) Brazed			
piping diameter	Low pressure	in. (mm)	3/4 (19.05) Brazed			
Minimum Circuit Ampacity		A	6			
Maximum Overcurrent Protection		A	15			
Circulating water	Water flow rate	G/h	1,440			
		G/min	24			
		m ³ /h	5.45			
		L/min	91			
		cfm	3.2			
	Pressure drop	psi	3.48			
		kPa	24			
	Operating volume range	G/h	793 ~ 1,902			
		G/min	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	4.3			
	Case heater	kW	0.035			
	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			plate type			
	Water volume in plate	G	1.22			
		l	4.6			
		psi	290			
		MPa	2.0			
HIC circuit (HIC: Heat Inter-Changer)			-			
Drawing	External		KB94C8C8			
	Wiring		KE94L345			
Standard attachment	Document		Installation Manual			
	Accessory		Details refer to External Drw			
Optional parts			joint: CMY-Y102SS-G2,CMY-Y102LS-G2,CMY-R160-J1,CMY-R201,301,306S-G,CMY-R302,303,304,305S-G1 BC controller: CMB-P104,106,108,1012,1016NU-J2 Main BC controller: CMB-P108,1012,1016NU-JA2,CMB-P1016NU-KA2 Sub BC controller: CMB-P104,108NU-KB2			
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back on. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.			

Notes:

- 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%
- 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%
- The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Unit converter

BTU/h	=kW x 3.412
cfm	=m ³ /min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P96ZLMU-B < For Ground source >		
Indoor Model			Non-Ducted	Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	96,000		
		kW	28.1		
	(575)	Power input	5.21		
		Current input	5.8		
	(Rated)	BTU/h	92,000		
		kW	27.0		
	(575)	Power input	5.22	5.45	
		Current input	5.8	6.0	
	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)	*2	BTU/h	108,000		
		kW	31.7		
	(575)	Power input	5.64		
		Current input	6.2		
	(Rated)	BTU/h	103,000		
		kW	30.2		
	(575)	Power input	4.49	4.48	
		Current input	5.0	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			
	Model/Quantity	P04~P96/1~24			
Sound power level (measured in anechoic room) *3		dB <A>	65.0		
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	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	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	0.035		
	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			plate type		
	Water volume in plate	G	1.22		
		l	4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			-		
Drawing	External		KB94C8C8		
	Wiring		KE94L345		
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, 106, 108, 1012, 1016NU-J2 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2		
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back on. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.		

Notes:

- 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%
- 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%
- The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Unit converter

BTU/h	=kW x 3.412
cfm	=m³/min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P120ZLMU-B < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	120,000		
		kW	35.2		
		Power input	kW	7.51	
		(575) Current input	A	8.3	
	(Rated)	BTU/h	115,000		
		kW	33.7		
		Power input	kW	7.38	7.77
		(575) Current input	A	8.2	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)	*2	BTU/h	135,000		
		kW	39.6		
		Power input	kW	7.09	
		(575) Current input	A	7.9	
	(Rated)	BTU/h	129,000		
		kW	37.8		
		Power input	kW	5.78	5.89
		(575) Current input	A	6.4	6.5
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 power level (measured in anechoic room) *3		dB <A>	71.0		
Refrigerant	High pressure	in. (mm)	3/4 (19.05) Brazed		
piping diameter	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	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	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	7.7		
	Case heater	kW	0.035		
	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			plate type		
	Water volume in plate	G	1.22		
		l	4.6		
	Water pressure Max.	psi	290		
		MPa	2.0		
HIC circuit (HIC: Heat Inter-Changer)			-		
Drawing	External		KB94C8C8		
	Wiring		KE94L345		
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-P104,106,108,1012,1016NU-J2 Main BC controller: CMB-P108,1012,1016NU-JA2,CMB-P1016NU-KA2 Sub BC controller: CMB-P104,108NU-KB2		
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back on. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.		

Notes:

- 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%
- 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%
- The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Unit converter

BTU/h	=kW x 3.412
cfm	=m³/min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P144ZLMU-B < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 575 V ±10% 60 Hz	
Cooling capacity (Nominal)	*1	BTU/h	144,000	
		kW	42.2	
		Power input	8.78	
		(575) Current input	9.7	
	(Rated)	BTU/h	138,000	
		kW	40.4	
		Power input	9.44	10.12
		(575) Current input	10.5	11.2
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)	*2	BTU/h	160,000	
		kW	46.9	
		Power input	8.11	
		(575) Current input	9.0	
	(Rated)	BTU/h	152,000	
		kW	44.5	
		Power input	7.29	7.92
		(575) Current input	8.1	8.8
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~P96/1~36		
Sound power level (measured in anechoic room) *3			dB <A>	68.0
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	15
Maximum Overcurrent Protection			A	25
Circulating water	Water flow rate	G/h	1,902	
		G/min	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	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	0.045	
	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)	510 (231)	
Heat exchanger			plate type	
	Water volume in plate	G	1.22	
		l	4.6	
	Water pressure Max.	psi	290	
		MPa	2.0	
HIC circuit (HIC: Heat Inter-Changer)			-	
Drawing	External		KB94C8C9	
	Wiring		KE94L345	
Standard attachment	Document		Installation Manual	
	Accessory		Details refer to External Drw	
Optional parts			joint: CMY-Y102SS-G2,CMY-Y102LS-G2,CMY-R160-J1,CMY-R201,202,306S-G,CMY-R302,303,304,305S-G1 Main BC controller: CMB-P108,1012,1016NU-JA2,CMB-P1016NU-KA2 Sub BC controller: CMB-P104,108NU-KB2	
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back on. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.	

Notes:

- 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%
- 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%
- The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Unit converter

BTU/h	=kW x 3.412
cfm	=m³/min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P168ZLMU-B < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1	BTU/h	168,000			
		kW	49.2			
		Power input	kW	12.05		
		(575) Current input	A	13.4		
	(Rated)	BTU/h	160,000			
		kW	46.9			
		Power input	kW	11.98	12.47	
		(575) Current input	A	13.3	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)	*2	BTU/h	188,000			
		kW	55.1			
		Power input	kW	9.86		
		(575) Current input	A	11.0		
	(Rated)	BTU/h	178,000			
		kW	52.2			
		Power input	kW	8.86	9.66	
		(575) Current input	A	9.8	10.7	
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~P96/1~42				
Sound power level (measured in anechoic room) *3		dB <A>	70.0			
Refrigerant	High pressure	in. (mm)	7/8 (22.2) Brazed			
piping diameter	Low pressure	in. (mm)	1-1/8 (28.58) Brazed			
Minimum Circuit Ampacity		A	21			
Maximum Overcurrent Protection		A	35			
Circulating water	Water flow rate	G/h	1,902			
		G/min	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	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	11.0			
	Case heater	kW	0.045			
	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)	510 (231)			
Heat exchanger			plate type			
	Water volume in plate	G	1.22			
		l	4.6			
	Water pressure Max.	psi	290			
		MPa	2.0			
HIC circuit (HIC: Heat Inter-Changer)			-			
Drawing	External		KB94C8C9			
	Wiring		KE94L345			
Standard attachment	Document		Installation Manual			
	Accessory		Details refer to External Drw			
Optional parts			joint: CMY-Y102SS-G2,CMY-Y102LS-G2,CMY-R160-J1,CMY-R201,202,203,204,306S-G,CMY-R302,303,304,305S-G1 Main BC controller: CMB-P108,1012,1016NU-JA2,CMB-P1016NU-KA2 Sub BC controller: CMB-P104,108NU-KB2			
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back on. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.			

Notes:

- 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%
- 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%
- The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Unit converter

BTU/h	=kW x 3.412
cfm	=m³/min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P192ZLMU-B < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 575 V ±10% 60 Hz	
Cooling capacity (Nominal)	*1	BTU/h	192,000	
		kW	56.3	
		Power input	15.05	
		(575) Current input	16.7	
	(Rated)	BTU/h	184,000	
		kW	53.9	
		Power input	15.17	15.00
		(575) Current input	16.9	16.7
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)	*2	BTU/h	215,000	
		kW	63.0	
		Power input	11.90	
		(575) Current input	13.2	
	(Rated)	BTU/h	204,000	
		kW	59.8	
		Power input	10.78	11.53
		(575) Current input	12.0	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 power level (measured in anechoic room) *3			dB <A>	72.0
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	26	
Maximum Overcurrent Protection		A	45	
Circulating water	Water flow rate	G/h	1,902	
		G/min	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	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	0.045	
	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)	510 (231)	
Heat exchanger			plate type	
	Water volume in plate	G	1.22	
		l	4.6	
	Water pressure Max.	psi	290	
		MPa	2.0	
HIC circuit (HIC: Heat Inter-Changer)			-	
Drawing	External		KB94C8C9	
	Wiring		KE94L345	
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, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2	
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back on. It is recommended to set the brine concentration to a percentage that will keep the freezing temperature at -15°C or less.	

Notes:

- 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%
- 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%
- The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Unit converter

BTU/h	=kW x 3.412
cfm	=m³/min x 35.31
lbs	=kg/0.4536

*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series-575V

Heat Source Model			PQRY-P144ZSLMU-B < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 575 V ±10% 60 Hz	
Cooling capacity (Nominal)	*1	BTU/h	144,000	
		kW	42.2	
		Power input kW	7.11	
	(Rated)	Current input A	7.9	
		BTU/h	138,000	
		kW	40.4	
(575)		Power input kW	6.96	8.17
		Current input A	7.7	9.1
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)	*2	BTU/h	160,000	
		kW	46.9	
		Power input kW	7.45	
	(Rated)	Current input A	8.3	
		BTU/h	152,000	
		kW	44.5	
(575)		Power input kW	6.50	7.29
		Current input A	7.2	8.1
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 power level (measured in anechoic room) *3		dB <A>	63.5	
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-B < For Ground source >		PQRY-P72ZLMU-B < For Ground source >		
Model							
Minimum Circuit Ampacity		A	6		6		
Maximum Overcurrent Protection		A	15		15		
Circulating water	Water flow rate	G/h	1,522 + 1,522		1,522 + 1,522		
		G/min	25.4 + 25.4		25.4 + 25.4		
		m ³ /h	5.76 + 5.76		5.76 + 5.76		
		L/min	96 + 96		96 + 96		
		cfm	3.4 + 3.4		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		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		4.3		
	Case heater	kW	0.035		0.035		
	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	1.22		1.22		
	Water pressure Max.	psi	4.6		4.6		
			290		290		
		MPa	2.0		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		KB94C7PY				
	Wiring		KE94L345		KE94L345		
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-R160-J1, CMY-R201, 202, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2					
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm = m ³ /min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs = kg/0.4536
		*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P168ZSLMU-B < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	168,000		
		kW	49.2		
		Power input	9.33		
	(Rated)	Current input	10.4		
		BTU/h	160,000		
		kW	46.9		
(575)	Current input	Power input	8.87		9.66
		kW	9.8		10.7
		A			
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)	*2	BTU/h	188,000		
		kW	55.1		
		Power input	9.34		
	(Rated)	Current input	10.4		
		BTU/h	178,000		
		kW	52.2		
(575)	Current input	Power input	8.05		8.04
		kW	8.9		8.9
		A			
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 power level (measured in anechoic room) *3		dB <A>	66.5		
Refrigerant piping diameter	High pressure	in. (mm)	7/8 (22.2) Braze		
	Low pressure	in. (mm)	1-1/8 (28.58) Braze		

Set Model			PQRY-P96ZLMU-B < For Ground source >		PQRY-P72ZLMU-B < For Ground source >	
Model						
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	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	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	0.035		0.035	
	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		plate type		plate type	
			G	1.22		1.22
	L	4.6		4.6		
	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		KB94C7PY			
	Wiring		KE94L345		KE94L345	
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-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2			
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm = m ³ /min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs = kg/0.4536
		*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series-575V

Heat Source Model			PQRY-P192ZSLMU-B < For Ground source >	
Indoor Model			Non-Ducted	Ducted
Power source			3-phase 3-wire 575 V ±10% 60 Hz	
Cooling capacity (Nominal)	*1	BTU/h	192,000	
		kW	56.3	
		Power input kW	11.30	
	(Rated)	Current input A	12.6	
		BTU/h	184,000	
		kW	53.9	
(575)	(Rated)	Power input kW	10.57	11.54
		Current input A	11.7	12.8
		BTU/h	215,000	
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)	*2	BTU/h	215,000	
		kW	63.0	
		Power input kW	11.02	
	(Rated)	Current input A	12.2	
		BTU/h	204,000	
		kW	59.8	
(575)	(Rated)	Power input kW	9.53	8.82
		Current input A	10.6	9.8
		BTU/h	23~113°F (-5~45°C)	
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 power level (measured in anechoic room) *3			68.0	
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-B < For Ground source >		PQRY-P96ZLMU-B < For Ground source >	
Model			PQRY-P96ZLMU-B < For Ground source >		PQRY-P96ZLMU-B < 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		1,522 + 1,522	
		G/min	25.4 + 25.4		25.4 + 25.4	
		m ³ /h	5.76 + 5.76		5.76 + 5.76	
		L/min	96 + 96		96 + 96	
		cfm	3.4 + 3.4		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		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	0.035		0.035	
	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			plate type		plate type	
	Water volume in plate	G	1.22		1.22	
		l	4.6		4.6	
	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		KB94C7PY			
	Wiring		KE94L345		KE94L345	
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-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2			
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.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.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%		cfm =m³/min x 35.31
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs =kg/0.4536
		*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series-575V

Heat Source Model			PQR-P216ZSLMU-B < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	216,000		
		kW	63.3		
		Power input	14.03		
		(575) Current input	15.6		
		(Rated)			
	(575)	BTU/h	206,000		
		kW	60.4		
		Power input	13.09	13.88	
		(575) Current input	14.6	15.4	
		Indoor	W.B.		
Inlet water	°F				
Heating capacity (Nominal)	*2	BTU/h	243,000		
		kW	71.2		
		Power input	12.88		
		(575) Current input	14.3		
		(Rated)			
	(575)	BTU/h	232,000		
		kW	68.0		
		Power input	11.11	10.04	
		(575) Current input	12.3	11.2	
		Indoor	D.B.		
Inlet water	°F				
Temp. range of heating			59~81°F (15~27°C)		
Indoor unit connectable			23~113°F (-5~45°C)		
Total capacity			50~150% of heat source unit capacity		
Model/Quantity			P04~P96/2~50 (Connectable branch pipe number is max. 48.)		
Sound power level (measured in anechoic room) *3			dB <A>		
			72.0		
Refrigerant piping diameter			7/8 (22.2) Brazed (1-1/8 (28.58) Brazed for the part that exceeds 65 m)		
			1-1/8 (28.58) Brazed		

Model			PQRY-P120ZL MU-B <For Ground source >		PQRY-P96ZL MU-B <For Ground source >	
Minimum Circuit Ampacity			13		9	
Maximum Overcurrent Protection			20		15	
Circulating water	Water flow rate	G/h	1,522 + 1,522			
		G/min	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	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	0.035		0.035	
	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	1.22		1.22	
		I	4.6		4.6	
	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		KB94C7PY			
	Wiring		KF94I 345		KF94I 345	
Standard attachment	Document		Installation Manual			
	Accessory		Details refer to External Dwg			
Optional parts			Heat Source Twinning kit: CMY-Q100CBK2 joint: CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-R160-J1, CMY-R201, 202, 203, 204, 306S-G, CMY-R302, 303, 304, 305S-G1 Main BC controller: CMB-P108, 1012, 1016NU-JA2, CMB-P1016NU-KA2 Sub BC controller: CMB-P104, 108NU-KB2			
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. 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. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm =m ³ /min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs =kg/0.4536
		*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series-575V

Heat Source Model			PQRY-P240ZSLMU-B < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	240,000		
		kW	70.3		
		(575) Power input kW	16.89		
		(575) Current input A	18.8		
	(Rated)	BTU/h	230,000		
		kW	67.4		
		(575) Power input kW	15.73	16.79	
		(575) Current input A	17.5	18.7	
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)	*2	BTU/h	270,000		
		kW	79.1		
		(575) Power input kW	14.58		
		(575) Current input A	16.2		
	(Rated)	BTU/h	258,000		
		kW	75.6		
		(575) Power input kW	12.83	11.67	
		(575) Current input A	14.3	13.0	
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 power level (measured in anechoic room) *3		dB <A>	74.0		
Refrigerant	High pressure	in. (mm)	7/8 (22.2) Brazed (1-1/8 (28.58) Brazed for the part that exceeds 65 m)		
piping diameter	Low pressure	in. (mm)	1-3/8 (34.93) Brazed		

Set Model			PQRY-P120ZLMU-B < For Ground source >		PQRY-P120ZLMU-B < For Ground source >		
Model			13		13		
Minimum Circuit Ampacity		A	20		20		
Maximum Overcurrent Protection		A	20		20		
Circulating water	Water flow rate	G/h	1,522 + 1,522				
		G/min	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	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	0.035		0.035		
	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	1.22		1.22		
	Water pressure Max.	psi	4.6		4.6		
		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		KB94C7PY				
	Wiring		KF94I.345		KF94I.345		
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-R160-J1,CMY-R201,202,203,204,306S-G,CMY-R302,303,304,305S-G1 Main BC controller: CMB-P108,1012,1016NU-JA2,CMB-P1016NU-KA2 Sub BC controller: CMB-P104,108NU-KB2					
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. 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. The cooling tower and the water circuit must be a closed circuit (water is not exposed to the atmosphere). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.Nominal cooling conditions (Test conditions are based on AHRI 1230)		BTU/h =kW x 3,412
Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		cfm =m ³ /min x 35.31
Brine concentration 0%		lbs =kg/0.4536
2.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%		
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m).		
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		
		*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P288ZSLMU-B < For Ground source >		
Indoor Model			Non-Ducted		Ducted
Power source			3-phase 3-wire 575 V ±10% 60 Hz		
Cooling capacity (Nominal)	*1	BTU/h	288,000		
		kW	84.4		
		Power input	20.42		
	(Rated)	Current input	22.7		
		BTU/h	276,000		
		kW	80.9		
(575)	Current input	Power input	20.11	22.67	
		kW	22.4		25.2
		A			
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)	*2	BTU/h	323,000		
		kW	94.7		
		Power input	17.50		
	(Rated)	Current input	19.5		
		BTU/h	304,000		
		kW	89.1		
(575)	Current input	Power input	15.48	15.36	
		kW	17.2		17.1
		A			
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 power level (measured in anechoic room) *3			71.0		
Refrigerant piping diameter	High pressure	in. (mm)	1-1/8 (28.58) Braze		
	Low pressure	in. (mm)	1-3/8 (34.93) Braze		

Set Model			PQRY-P144ZLMU-B < For Ground source >		PQRY-P144ZLMU-B < For Ground source >	
Minimum Circuit Ampacity		A	15		15	
Maximum Overcurrent Protection		A	25		25	
Circulating water	Water flow rate	G/h	1,902 ± 1,902			
		G/min	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		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	0.045		0.045	
	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)	510 (231)		510 (231)	
Heat exchanger			plate type		plate type	
	Water volume in plate	G	1.22		1.22	
		L	4.6		4.6	
	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) Braze		7/8 (22.2) Braze	
	Low pressure	in. (mm)	-		1-1/8 (28.58) Braze	
Drawing	External		KB94C7PZ			
	Wiring		KE94L345		KE94L345	
Standard attachment	Document		Installation Manual			
	Accessory		Details refer to External Dwg			
Optional parts			Heat Source Twinning kit: CMY-Q200CBK Joint: CMY-Y102SS-G2,CMY-Y102LS-G2,CMY-R160-J1,CMY-R201,202,203,204,205,306S-G,CMY-R302,303,304,305S-G1 Main BC controller: CMB-P108,1012,1016NU-JA2,CMB-P1016NU-KA2 Sub BC controller: CMB-P104,108NU-KB2			
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm = m ³ /min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs = kg/0.4536
		*Above specification data is subject to rounding variation.

1. SPECIFICATIONS

WR2-Series-575V

Heat Source Model			PQRY-P312ZSL MU-B < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)		*1	BTU/h	312,000		
			kW	91.4		
	(575)	Power input	kW	23.41		
		Current input	A	26.1		
	(Rated)		BTU/h	298,000		
			kW	87.3		
	(575)	Power input	kW	22.45	24.98	
		Current input	A	25.0	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)		*2	BTU/h	350,000		
			kW	102.6		
	(575)	Power input	kW	19.11		
		Current input	A	21.3		
	(Rated)		BTU/h	334,000		
			kW	97.9		
	(575)	Power input	kW	17.09	17.12	
		Current input	A	19.0	19.0	
	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			50~150% of heat source unit capacity			
			P04~P96/2~50 (Connectable branch pipe number is max. 48.)			
Sound power level (measured in anechoic room) *3			dB <A>		72.5	
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-B < For Ground source >		PQRY-P144ZLMU-B < For Ground source >	
Model			21		15	
Minimum Circuit Ampacity			A		15	
Maximum Overcurrent Protection			A		25	
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min	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		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	0.045		0.045	
	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)	510 (231)		510 (231)	
Heat exchanger	Water volume in plate	G	plate type		plate type	
		l	1.22		1.22	
			4.6		4.6	
	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		KB94C7PZ			
	Wiring		KE94L345		KE94L345	
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-R160-J1,CMY-R201,202,203,204,205,306S-G,CMY-R302,303,304,305S-G1 Main BC controller: CMB-P108,1012,1016NU-JA2,CMB-P1016NU-KA2 Sub BC controller: CMB-P104,108NU-KB2			
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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.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.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%		cfm =m ³ /min x 35.31
3.The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs =kg/0.4536
		*Above specification data is subject to rounding variation.

Heat Source Model			PQRY-P336ZSLMU-B < For Ground source >			
Indoor Model			Non-Ducted		Ducted	
Power source			3-phase 3-wire 575 V ±10% 60 Hz			
Cooling capacity (Nominal)	*1	BTU/h	336,000			
		kW	98.5			
		Power input	26.84			
	(575)	Current input	29.9			
		(Rated)	BTU/h	320,000		
			kW	93.8		
	Power input		kW	25.14	27.11	
	(575)	Current input	A	28.0	30.2	
		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)	*2	BTU/h	378,000			
		kW	110.8			
		Power input	20.77			
	(575)	Current input	23.1			
		(Rated)	BTU/h	360,000		
			kW	105.5		
	(575)		Power input	kW	18.49	19.10
		Current input	A	20.6	21.3	
	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 power level (measured in anechoic room) *3			dB <A>		73.0	
Refrigerant piping diameter	High pressure	in. (mm)	1-1/8 (28.58) Braze			
	Low pressure	in. (mm)	1-5/8 (41.28) Braze			

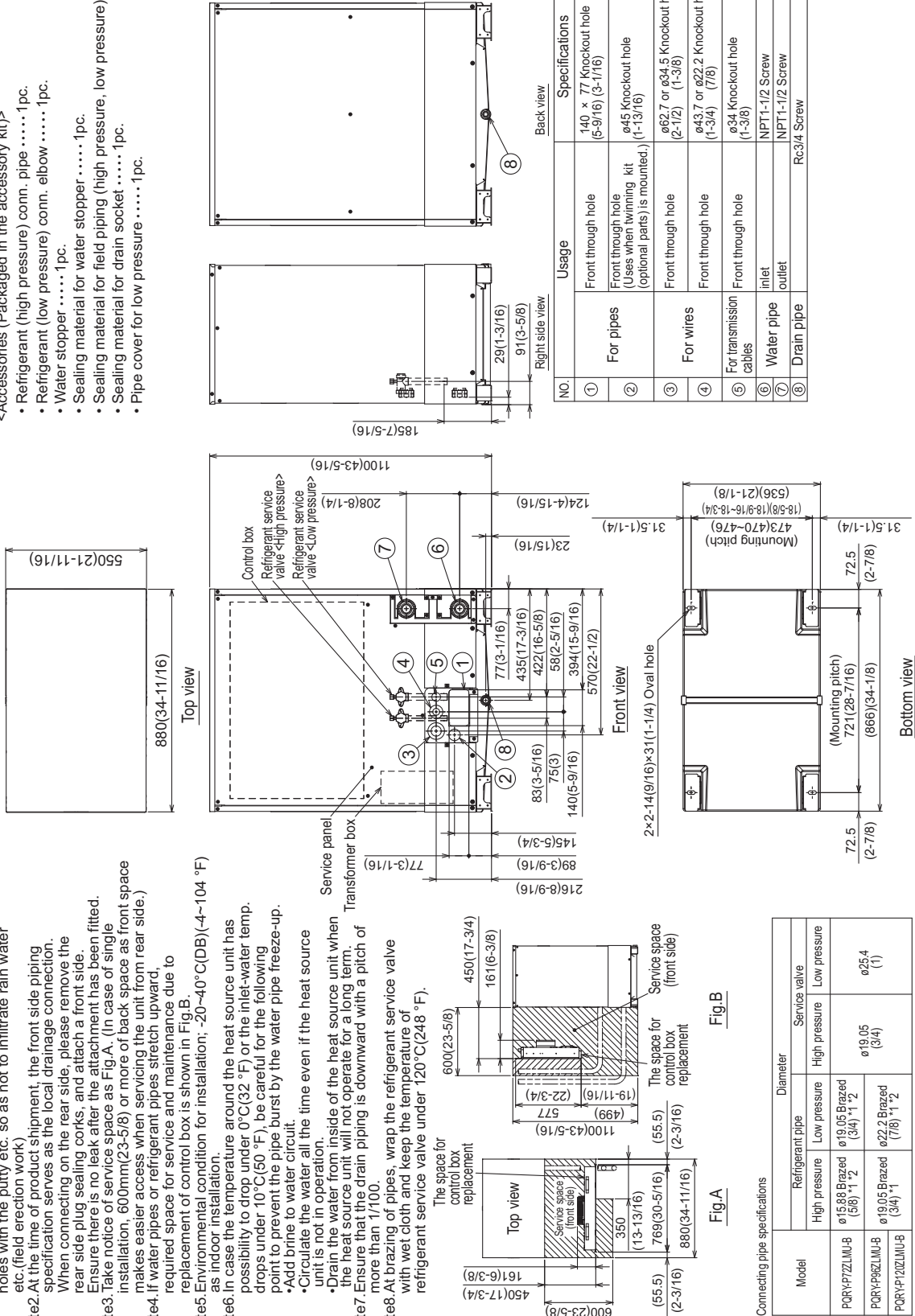
Set Model			PQRY-P168ZLMU-B < For Ground source >		PQRY-P168ZLMU-B < For Ground source >	
Model			21		21	
Minimum Circuit Ampacity		A	35		35	
Maximum Overcurrent Protection		A				
Circulating water	Water flow rate	G/h	1,902 + 1,902			
		G/min	31.7 + 31.7			
		m ³ /h	7.20 + 7.20			
		L/min	120 + 120			
		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		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	0.045		0.045	
	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)	510 (231)		510 (231)	
Heat exchanger	Water volume in plate		plate type		plate type	
			G	1.22		1.22
	L	4.6		4.6		
	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		KB94C7PZ			
	Wiring		KF94L 345		KF94L 345	
Standard attachment	Document		Installation Manual			
	Accessory		Details refer to External Dwg			
Optional parts			Heat Source Twinning kit: CMY-Q200CBK joint: CMY-Y102SS-G2,CMY-Y102LS-G2,CMY-R160-J1,CMY-R201,202,203,204,205,306S-G,CMY-R302,303,304,305S-G1 Main BC controller: CMB-P108,1012,1016NU-JA2,CMB-P1016NU-KA2 Sub BC controller: CMB-P104,108NU-KB2			
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). When the unit is operating at water temperature below 50°F (10°C), add brine to circulating water, turn DipSW4 (773) to ON, and then turn the power back 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. 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. 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%		cfm = m ³ /min x 35.31
3. The sound values are sound power level (PWL) based on ISO 3744:2010 (r=3.5m). Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)		lbs = kg/0.4536
		*Above specification data is subject to rounding variation.

PQRY-P72, 96, 120ZLMU-B

Unit: mm(in)

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



- 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).

Model	Refrigerant pipe			Service valve	
	High pressure	Low pressure		High pressure	Low pressure
PQRY-P72ZLMU-B	ø15.88 Braze (3/4)" *2	ø19.05 Braze (3/4)" *2		ø19.05 (3/4)	ø25.4 (1)
PQRY-P96ZLMU-B	ø19.05 Braze (3/4)" *1	ø22.2 Braze (7/8)" *2			
PQRY-P120ZLMU-B					

*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.

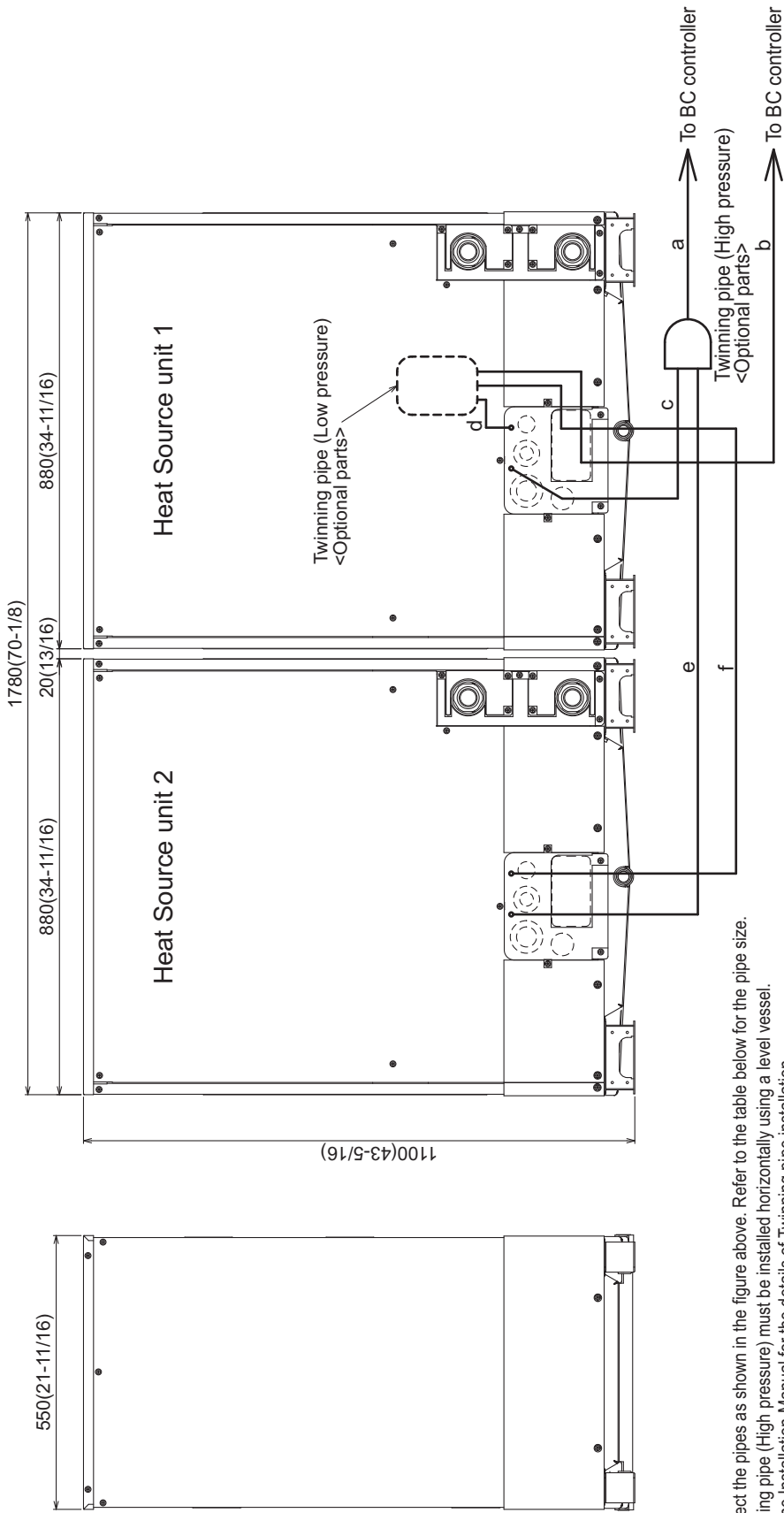
Unit: mm(in)

- Sealing material for panel 1pc.



PQRY-P144, 168, 192, 216, 240ZSLMU-B

Unit: mm(in)



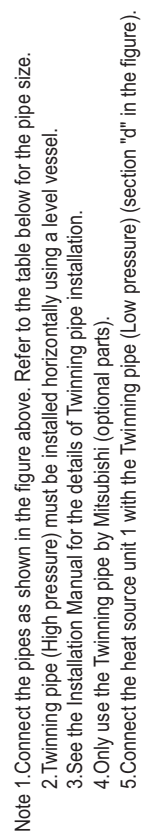
- Note 1. Connect the pipes as shown in the figure above. Refer to the table below for the pipe size.
2. Twinning pipe (High pressure) must be installed horizontally using a level vessel.
3. See the Installation Manual for the details of Twinning pipe installation.
4. Only use the Twinning pipe by Mitsubishi (optional parts).
5. Connect the heat source unit 1 with the Twinning pipe (Low pressure) (section "d" in the figure).

Twinning pipe connection size

Package unit name		PQRY-P144ZSLMU-B	PQRY-P168ZSLMU-B	PQRY-P192ZSLMU-B	PQRY-P216ZSLMU-B	PQRY-P240ZSLMU-B
Component unit name	Heat Source unit 1	PQRY-P72ZLMU-B	PQRY-P96ZLMU-B	PQRY-P120ZLMU-B	PQRY-P144ZLMU-B	PQRY-P168ZLMU-B
	Heat Source unit 2	PQRY-P72ZLMU-B	PQRY-P96ZLMU-B	PQRY-P120ZLMU-B	PQRY-P144ZLMU-B	PQRY-P168ZLMU-B
Twinning Kit(optional parts)		CMY-Q100CBK2				
BC controller~ Twinning pipe	High pressure	ø22.2(7/8)				
	Low pressure	ø28.58(1-1/8)				
Twinning pipe~	High pressure	ø15.88(5/8)				
	Low pressure	ø19.05(3/4)				
Twinning pipe~	High pressure	ø15.88(5/8)				
	Low pressure	ø19.05(3/4)				

*1. When the piping length is 65 m (213 ft) or longer, use the ø28.58(1-1/8) pipe for the part that exceeds 65 m (213 ft).

Unit: mm(in)



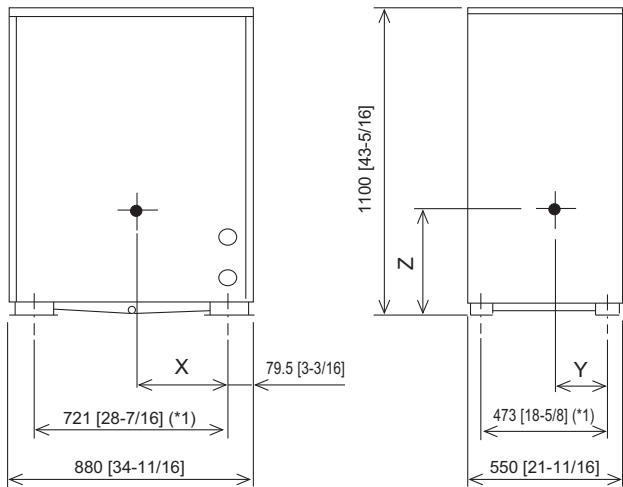
Twinning pipe connection size

Package unit name		PQRY-P288ZLMU-B	PQRY-P312ZLMU-B	PQRY-P336ZLMU-B
Component unit name	Heat Source unit 1	PQRY-P144ZLMU-B	PQRY-P168ZLMU-B	PQRY-P168ZLMU-B
	Heat Source unit 2	PQRY-P144ZLMU-B	PQRY-P168ZLMU-B	PQRY-P168ZLMU-B
	Twinning Kit(optional parts)			
	High pressure a		ø28.58(1-1/8)	
BC controller~ Twinning pipe	Low pressure b	ø34.93(1-3/8)		ø41.28(1-5/8)
	Twinning pipe~	High pressure c	ø22.2(7/8)	
Heat source unit 1	Low pressure d	- (Note 5)		
	Twinning pipe~	High pressure e	ø22.2(7/8)	
Heat source unit 2	Low pressure f		ø28.58(1-1/8)	
	Twinning pipe~	High pressure g	ø28.58(1-1/8)	

PQRY-P-Z(S)LMU-B

PQRY-P72, 96, 120ZLMU-B

Unit: mm [in.]

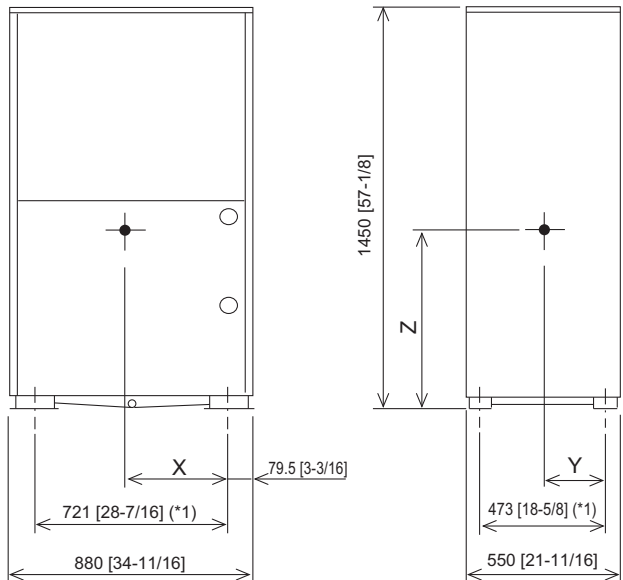


Model	X	Y	Z
PQRY-P72ZLMU-B	370 [14-5/8]	231 [9-1/8]	432 [17-1/16]
PQRY-P96ZLMU-B	370 [14-5/8]	231 [9-1/8]	432 [17-1/16]
PQRY-P120ZLMU-B	370 [14-5/8]	231 [9-1/8]	432 [17-1/16]

*1 Mounting Pitch

PQRY-P144, 168, 192ZLMU-B

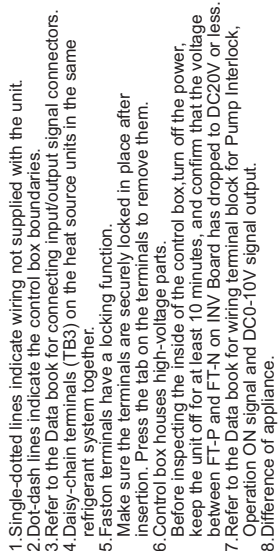
Unit: mm [in.]



Model	X	Y	Z
PQRY-P144ZLMU-B	399 [15-3/4]	236 [9-5/16]	613 [24-3/16]
PQRY-P168ZLMU-B	399 [15-3/4]	236 [9-5/16]	613 [24-3/16]
PQRY-P192ZLMU-B	399 [15-3/4]	236 [9-5/16]	613 [24-3/16]

*1 Mounting Pitch

PARRY-P-Z(S)LMU-B



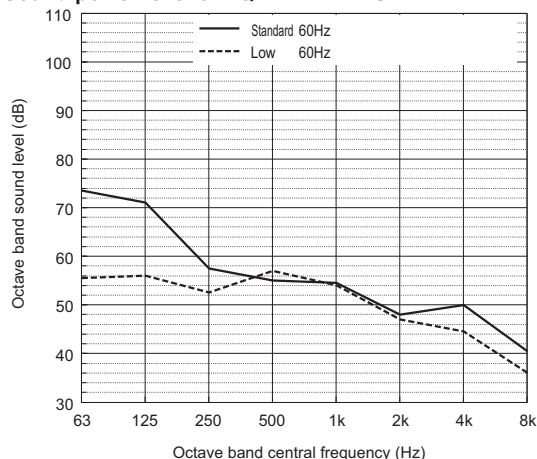
Model name	Appliance
P72/96/120	*8 do not exist
P144/168/192	*8 exist

11. The figure below shows the PQHY model.

<Symbol explanation>

Symbol	Explanation
2154a	Cooling/Heating switching
2154b	High pressure capacity control for the heat exchanger
6341	High pressure capacity control for the heat exchanger
6342	High pressure
6343	Low pressure
52C	Magnetic control (inverter main circuit)
C1.2	Capacitor (inverter main circuit)
CH11	Crankcase heater (for the compressor)
CT12.2.3	Crankcase heater (for heating the compressor)
CT12.2.3	Current sensor (AC)
DC reactor	
L	Inductor (for high frequency noise)
LEV1	Linear expansion valve
LEV6	Heat exchanger capacity control
LEV7	Heat exchanger capacity control
LEVIN/V	Heat exchanger for inverter
MF1	Radiator panel
F motor	For fresh current prevention
R1.5	For current detection
RS11	Refrigerant bypass control
SV1a	Heat exchanger capacity control under the O/S
SV4a,b,d	Heat exchanger capacity control
SV7a,b,c	Heat exchanger capacity control
SV9	For opening/closing the bypass circuit
Terminal block	Power supply
TB1	Indoor/Heat source transmission cable
TB3	Outdoor control transmission cable
TB8	Operation ON signal, Pump interlock
TB9	Power input and signal output for variable bypass water flow valve
TH2	Subcool bypass outlet temperature
TH3	Pipe temperature
TH4	High temperature pipe temperature
TH5	Subcool liquid temperature
TH6	Subcooled liquid refrigerant temperature
TH7	Water inlet temperature
TH8	Water outlet temperature
TH15	Compressor shell bottom temperature

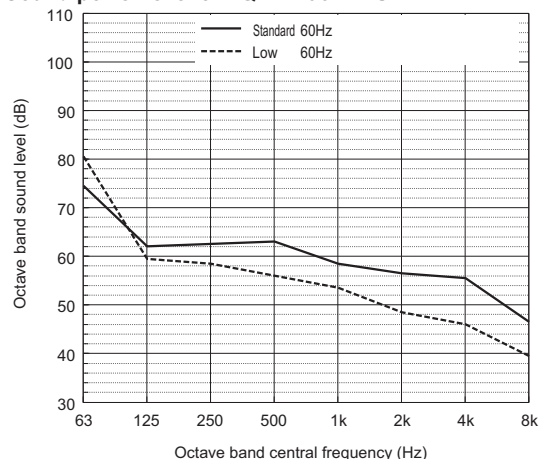
Sound power level of PQRYP72ZLMU-B



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	73.5	71.0	57.5	55.0	54.5	48.0	50.0	40.5	60.5
Low noise mode	60Hz	55.5	56.0	52.5	57.0	54.0	47.0	44.5	36.0	58.0

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.

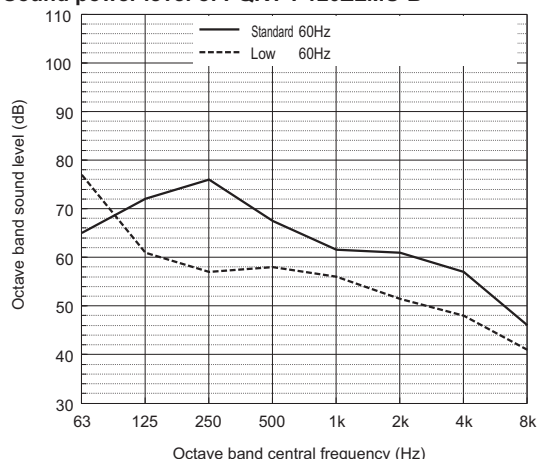
Sound power level of PQRYP96ZLMU-B



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	74.5	62.0	62.5	63.0	58.5	56.5	55.5	46.5	65.0
Low noise mode	60Hz	80.5	59.5	58.5	56.0	53.5	48.5	46.0	39.5	60.0

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.

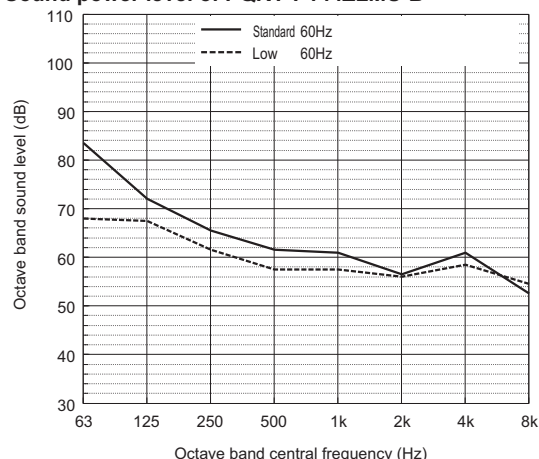
Sound power level of PQRYP120ZLMU-B



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	65.0	72.0	76.0	67.5	61.5	61.0	57.0	46.0	71.0
Low noise mode	60Hz	77.0	61.0	57.0	58.0	56.0	51.5	48.0	41.0	61.0

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.

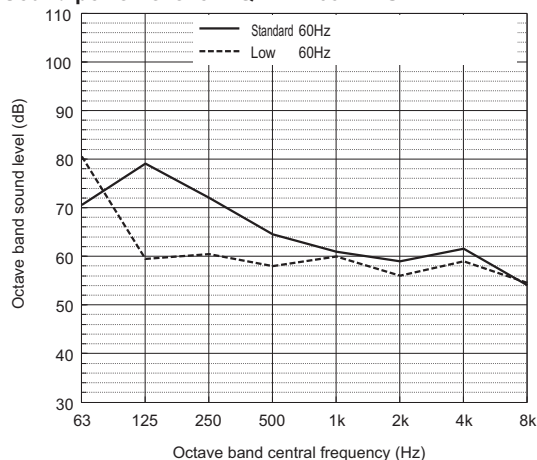
Sound power level of PQRYP144ZLMU-B



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	83.5	72.0	65.5	61.5	61.0	56.5	61.0	52.5	68.0
Low noise mode	60Hz	68.0	67.5	61.5	57.5	57.5	56.0	58.5	54.5	64.5

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.

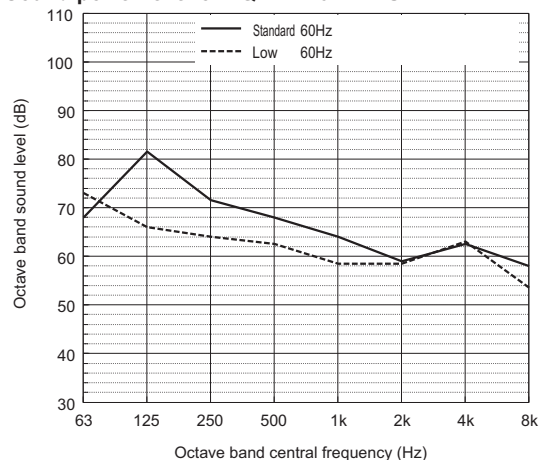
Sound power level of PQRYP168ZLMU-B



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	70.5	79.0	72.0	64.5	61.0	59.0	61.5	54.0	70.0
Low noise mode	60Hz	80.5	59.5	60.5	58.0	60.0	56.0	59.0	54.5	65.5

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 power level of PQRYP192ZLMU-B

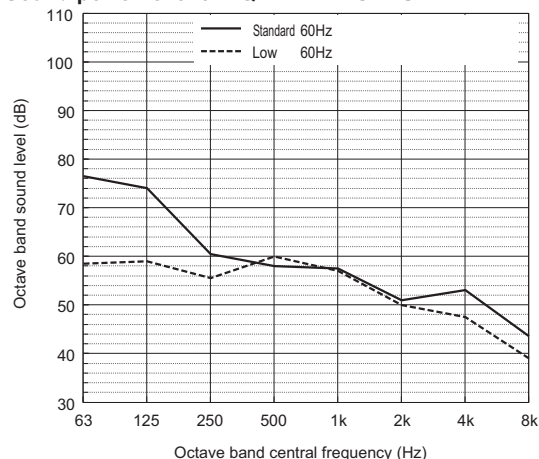


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	68.0	81.5	71.5	68.0	64.0	59.0	62.5	58.0	72.0
Low noise mode	60Hz	73.0	66.0	64.0	62.5	58.5	58.5	63.0	53.5	68.0

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.
- The sound values are sound power level (PWL) based on ISO 3744:2010 ($r = 3.5$ m).
- Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

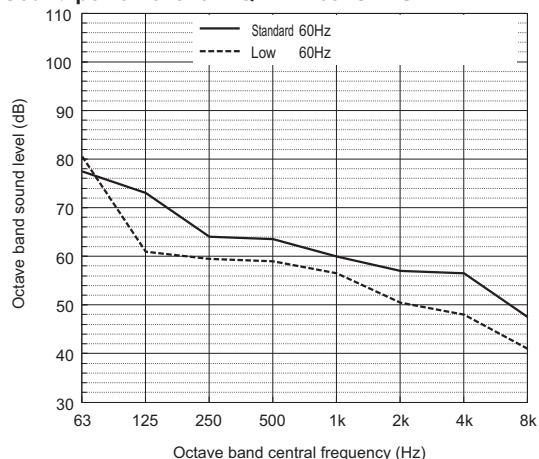
Sound power level of PQRYP144ZSLMU-B



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	76.5	74.0	60.5	58.0	57.5	51.0	53.0	43.5	63.5
Low noise mode	60Hz	58.5	59.0	55.5	60.0	57.0	50.0	47.5	39.0	61.0

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.

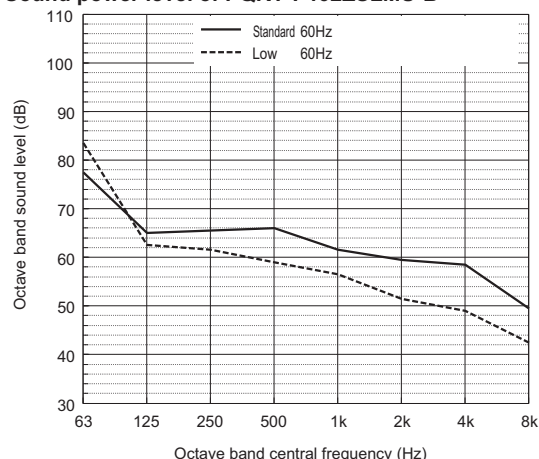
Sound power level of PQRYP168ZSLMU-B



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	77.5	73.0	64.0	63.5	60.0	57.0	56.5	47.5	66.5
Low noise mode	60Hz	80.5	61.0	59.5	59.0	56.5	50.5	48.0	41.0	62.0

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.

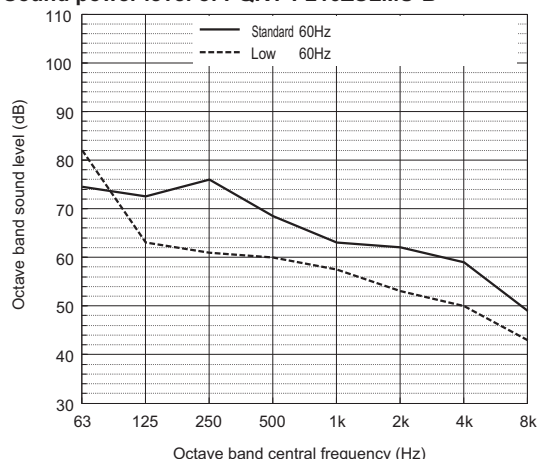
Sound power level of PQRYP192ZSLMU-B



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	77.5	65.0	65.5	66.0	61.5	59.5	58.5	49.5	68.0
Low noise mode	60Hz	83.5	62.5	61.5	59.0	56.5	51.5	49.0	42.5	63.0

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.

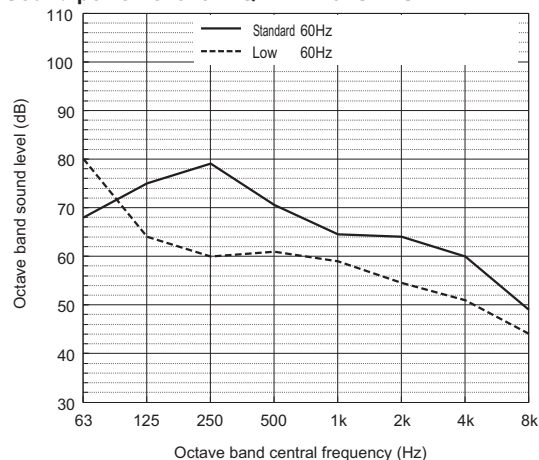
Sound power level of PQRYP216ZSLMU-B



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	74.5	72.5	76.0	68.5	63.0	62.0	59.0	49.0	72.0
Low noise mode	60Hz	82.0	63.0	61.0	60.0	57.5	53.0	50.0	43.0	63.5

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.

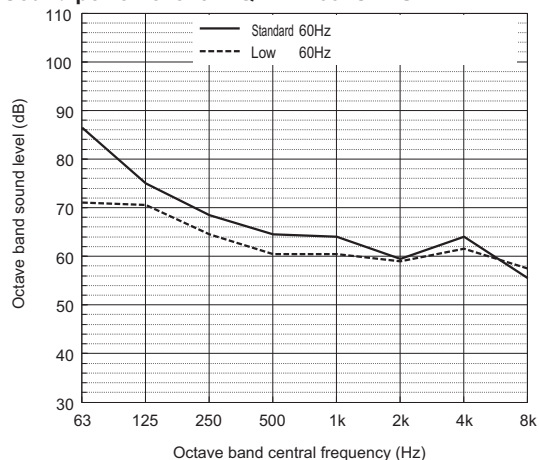
Sound power level of PQRYP240ZSLMU-B



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	68.0	75.0	79.0	70.5	64.5	64.0	60.0	49.0	74.0
Low noise mode	60Hz	80.0	64.0	60.0	61.0	59.0	54.5	51.0	44.0	64.0

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 power level of PQRYP288ZSLMU-B



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	86.5	75.0	68.5	64.5	64.0	59.5	64.0	55.5	71.0
Low noise mode	60Hz	71.0	70.5	64.5	60.5	60.5	59.0	61.5	57.5	67.5

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.

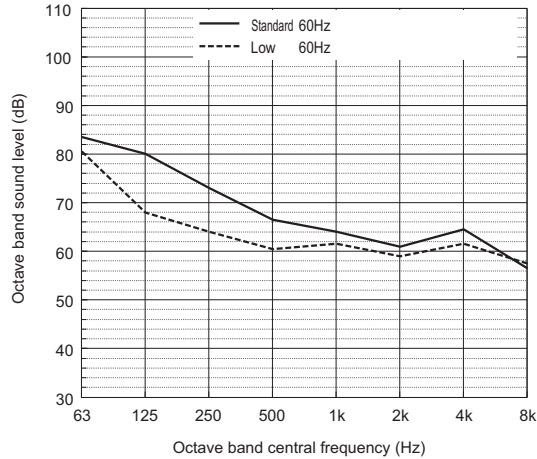
For BC controller, it is recommended to be installed in places such as ceilings of corridor, rest rooms and plant rooms.

• The sound values are sound power level (PWL) based on ISO 3744:2010 (r = 3.5 m).

Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

PQRY-P-Z(S)LMU-B

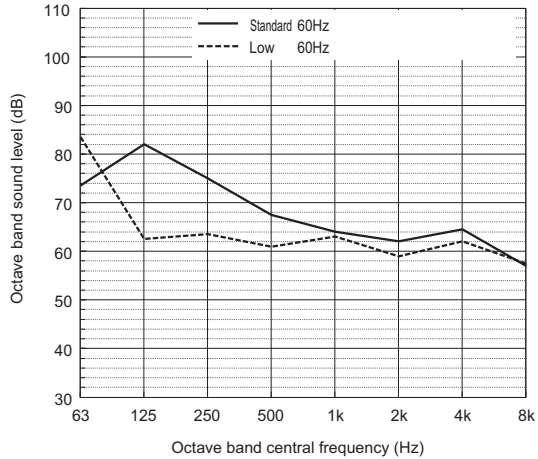
Sound power level of PQRY-P312ZSLMU-B



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	83.5	80.0	73.0	66.5	64.0	61.0	64.5	56.5	72.5
Low noise mode	60Hz	80.5	68.0	64.0	60.5	61.5	59.0	61.5	57.5	68.0

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 power level of PQRY-P336ZSLMU-B

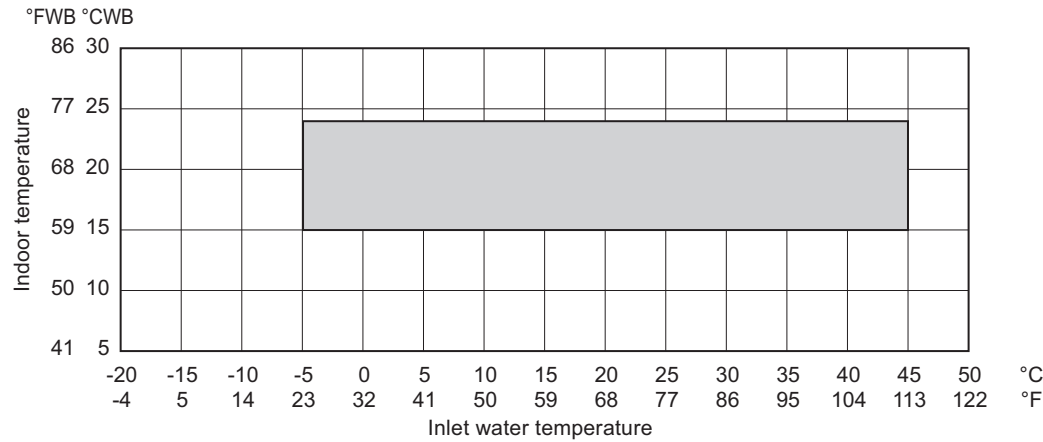


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	73.5	82.0	75.0	67.5	64.0	62.0	64.5	57.0	73.0
Low noise mode	60Hz	83.5	62.5	63.5	61.0	63.0	59.0	62.0	57.5	68.5

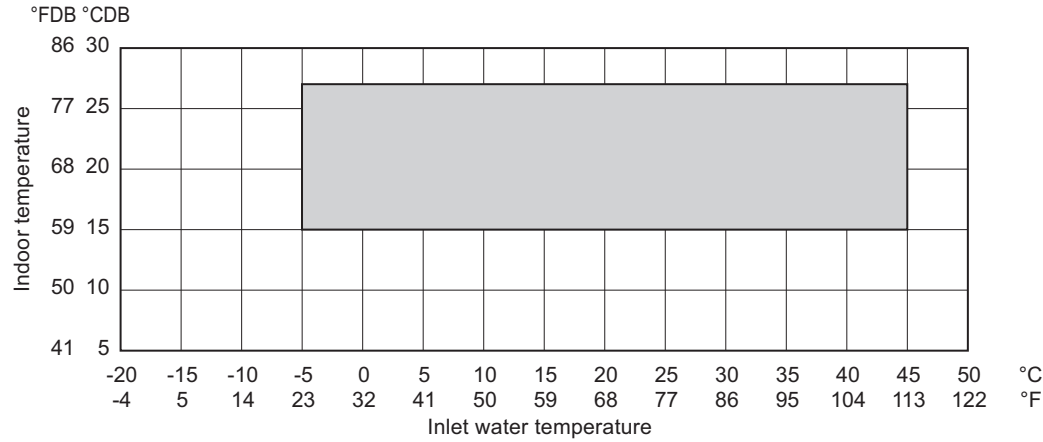
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

- 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.
- The sound values are sound power level (PWL) based on ISO 3744:2010 (r = 3.5 m).
Test conditions: Indoor: 81°F D.B./66°F W.B. (27°C D.B./19°C W.B.), Inlet water temperature: 86°F (30°C)

Cooling



Heating



Combination of cooling/heating operation (Cooling main or Heating main)

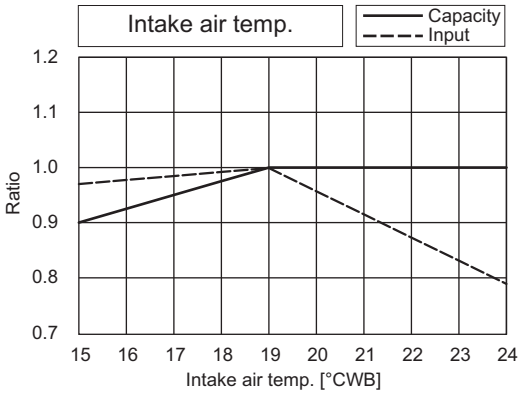
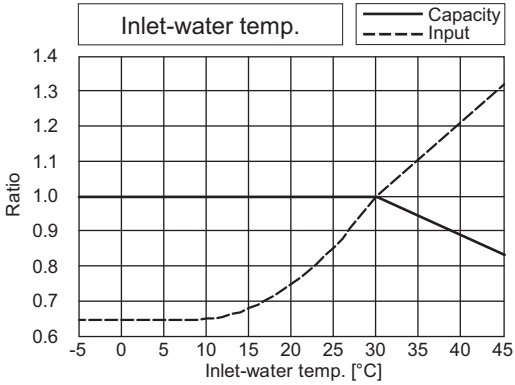
Inlet water temperature	Indoor temperature	
	Cooling	Heating
-5 to 45°C (23 to 113°F)	15 to 24°CWB (59 to 75°FWB)	15 to 27°CDB (59 to 81°FDB)

* 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.

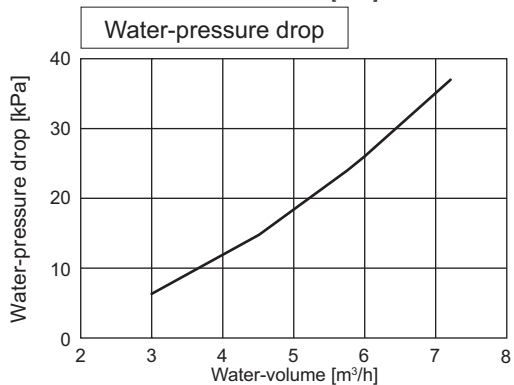
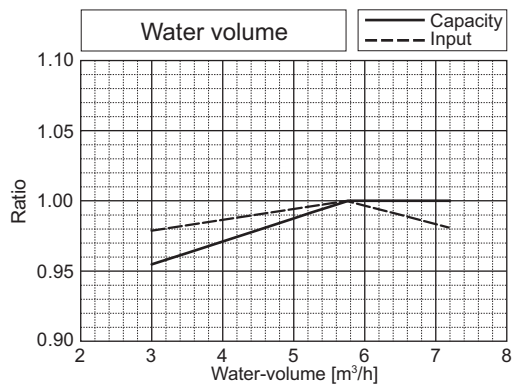
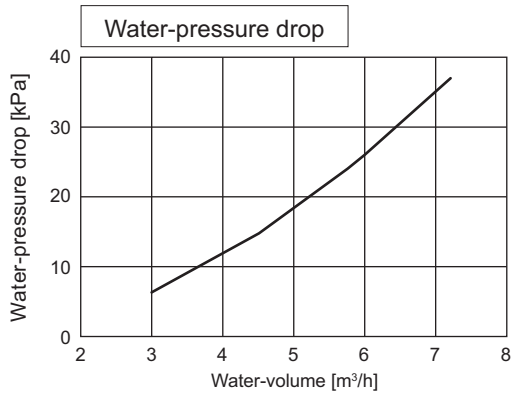
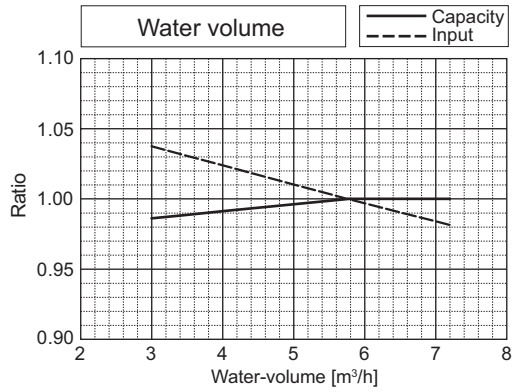
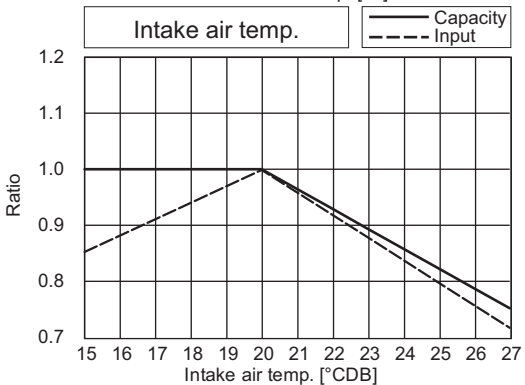
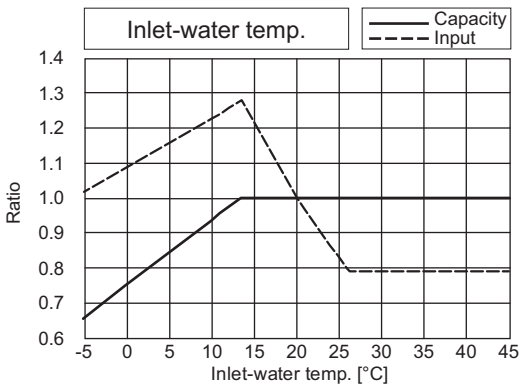
7-1. Correction by temperature

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.

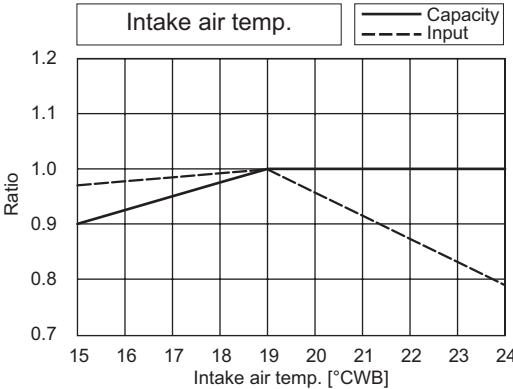
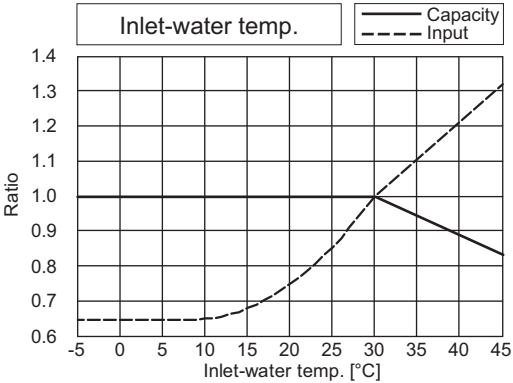
PQRY-		P72ZLMU
Nominal Cooling Capacity	kW	21.1
	BTU/h	72,000
Input	kW	3.61



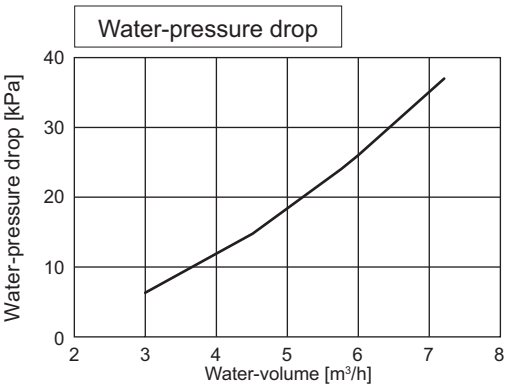
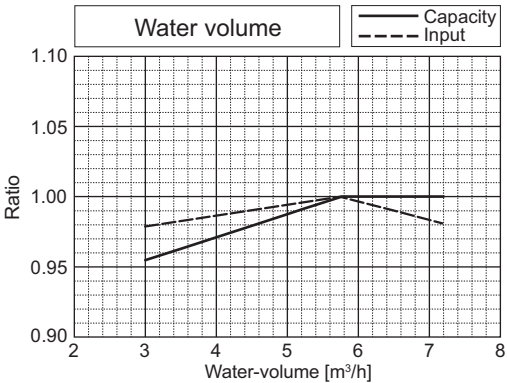
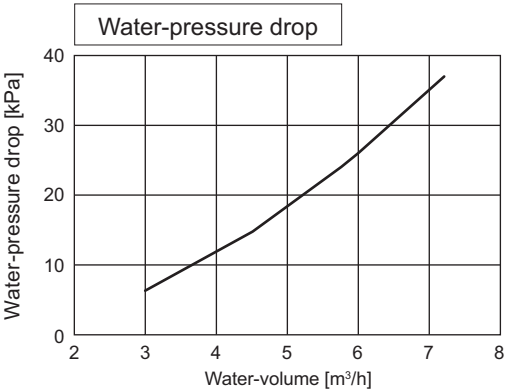
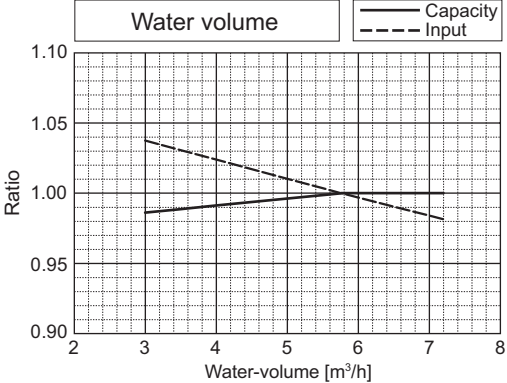
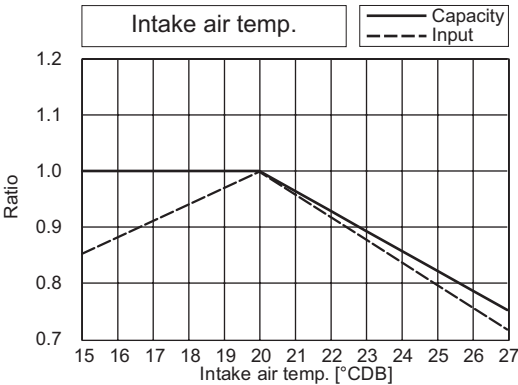
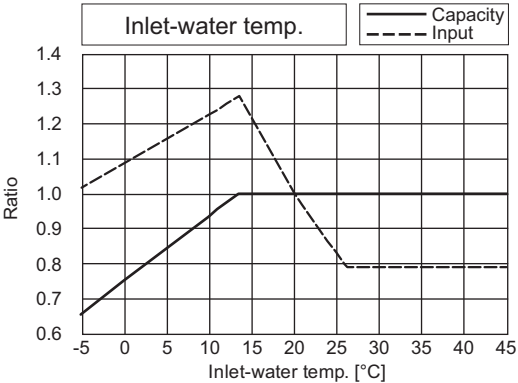
PQRY-		P72ZLMU
Nominal Heating Capacity	kW	23.4
	BTU/h	80,000
Input	kW	4.04



PQRY-		P96ZLMU
Nominal Cooling Capacity	kW	28.1
	BTU/h	96,000
Input	kW	5.21

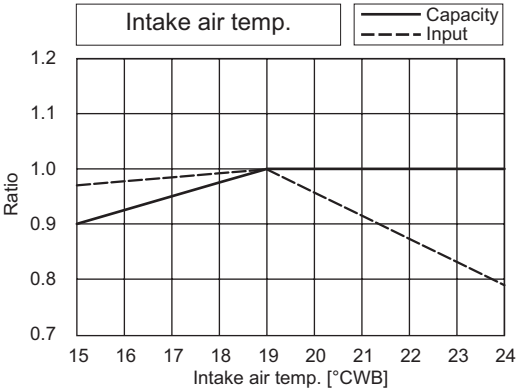
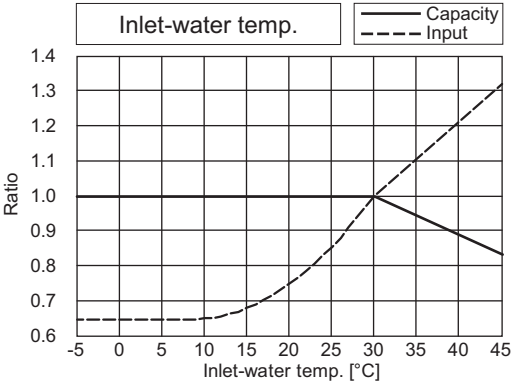


PQRY-		P96ZLMU
Nominal Heating Capacity	kW	31.7
	BTU/h	108,000
Input	kW	5.64

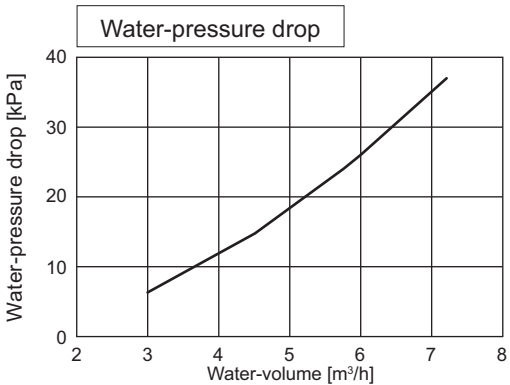
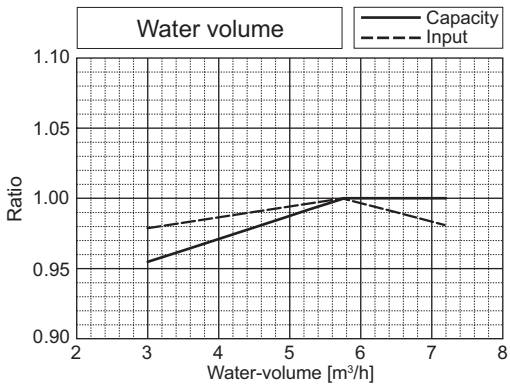
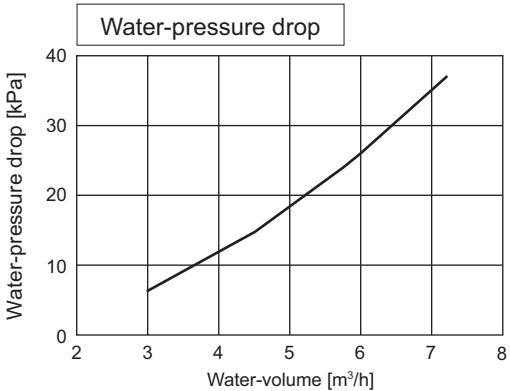
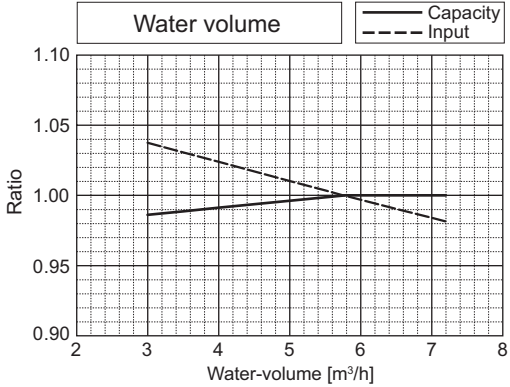
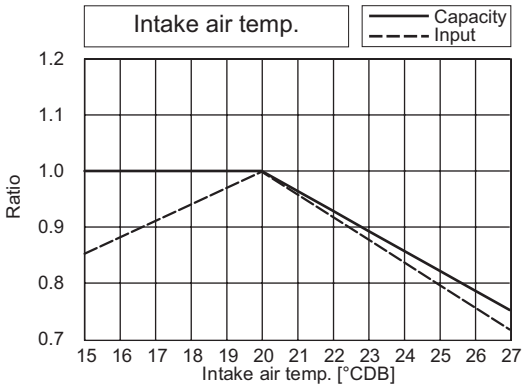
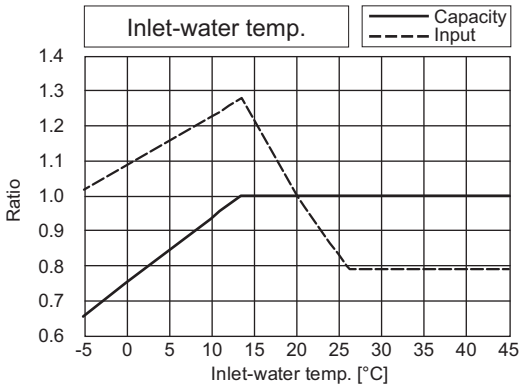


PQRY-P-Z(S)LMU-B

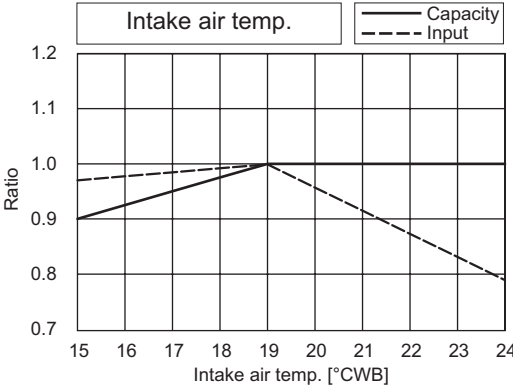
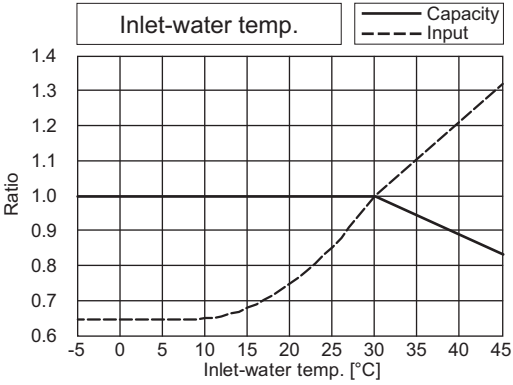
PQRY-		P120ZLMU
Nominal Cooling Capacity	kW	35.2
	BTU/h	120,000
Input	kW	7.51



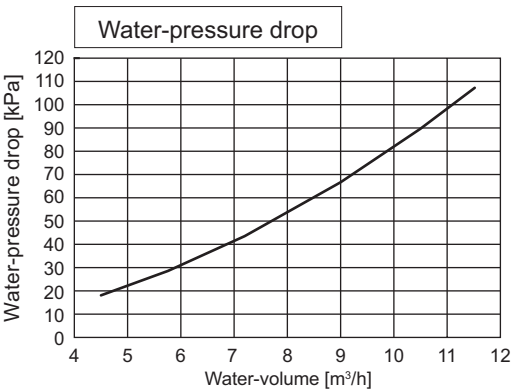
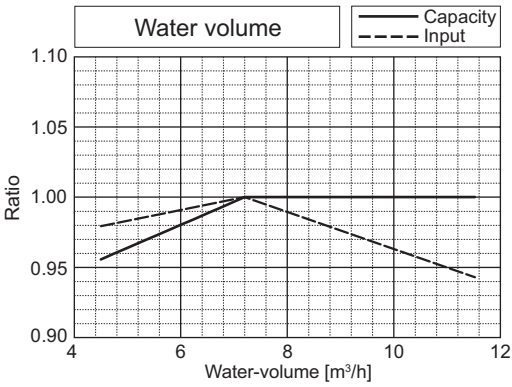
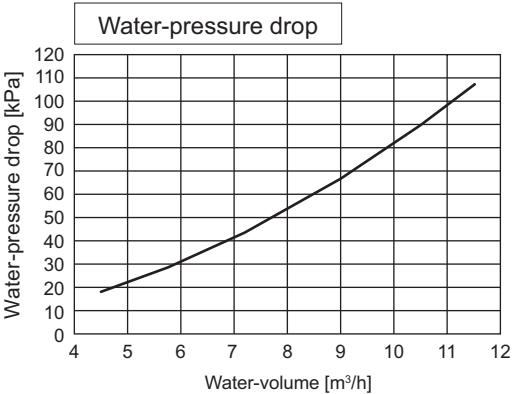
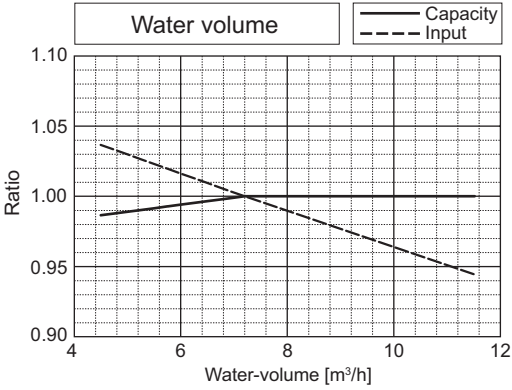
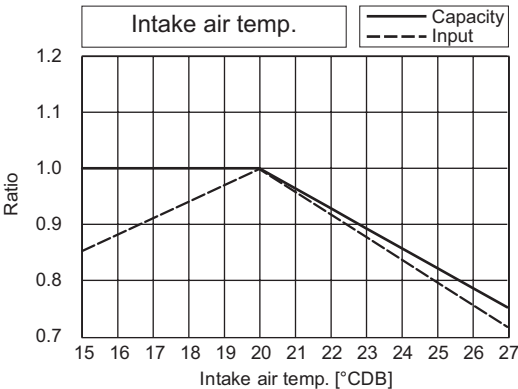
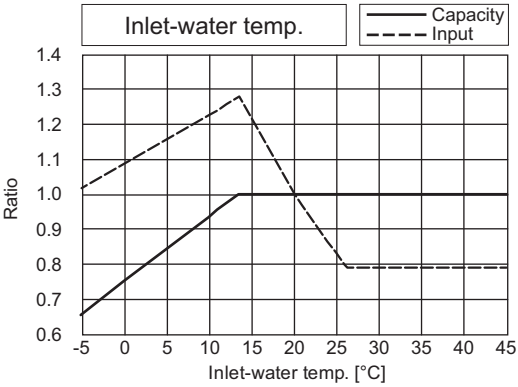
PQRY-		P120ZLMU
Nominal Heating Capacity	kW	39.6
	BTU/h	135,000
Input	kW	7.09



PQRY-		P144ZLMU
Nominal Cooling Capacity	kW	42.2
	BTU/h	144,000
Input	kW	8.78

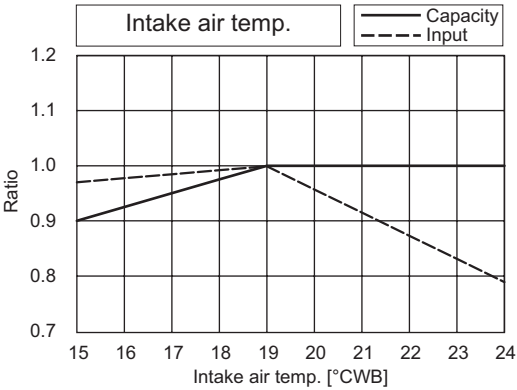
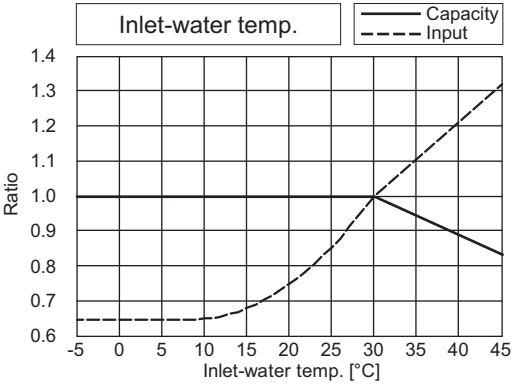


PQRY-		P144ZLMU
Nominal Heating Capacity	kW	46.9
	BTU/h	160,000
Input	kW	8.11

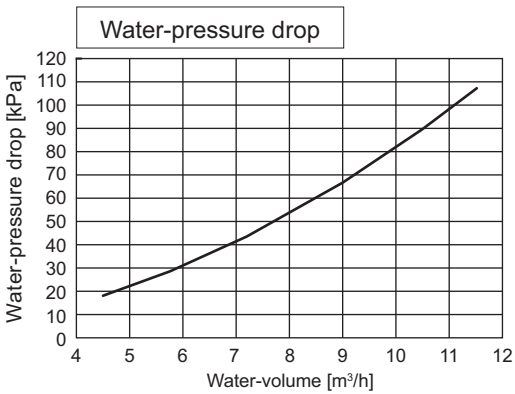
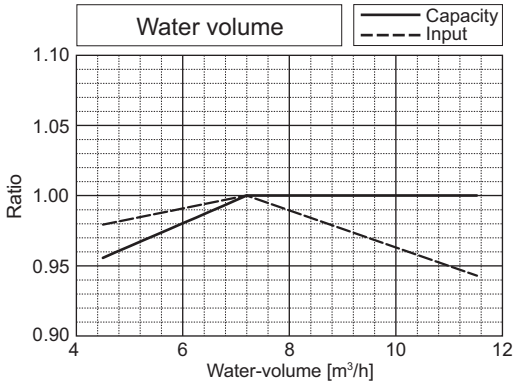
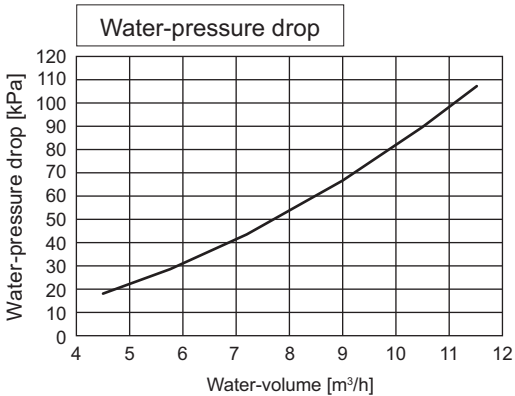
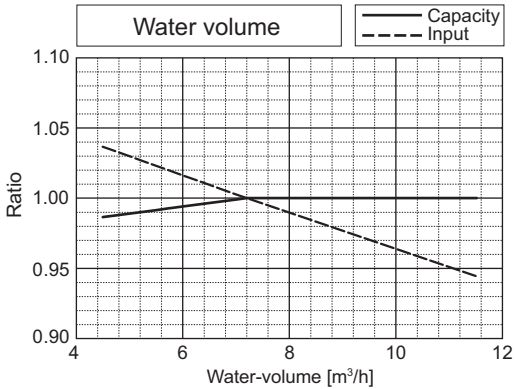
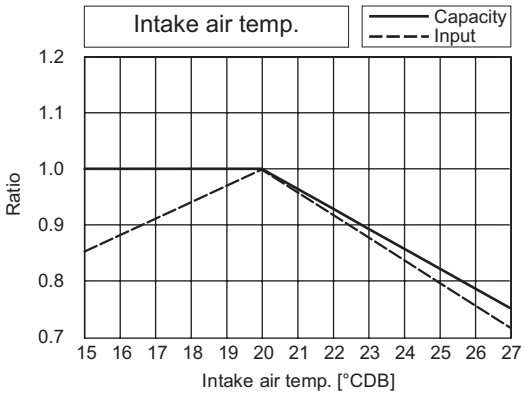
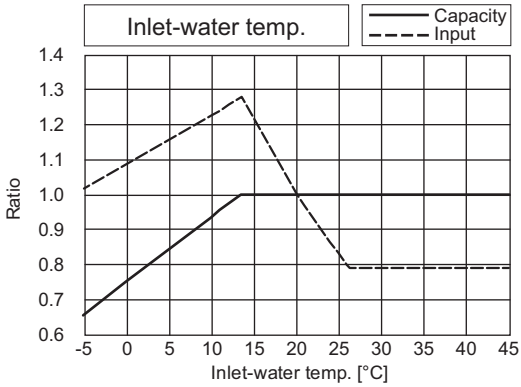


PQRY-P-Z(S)LMU-B

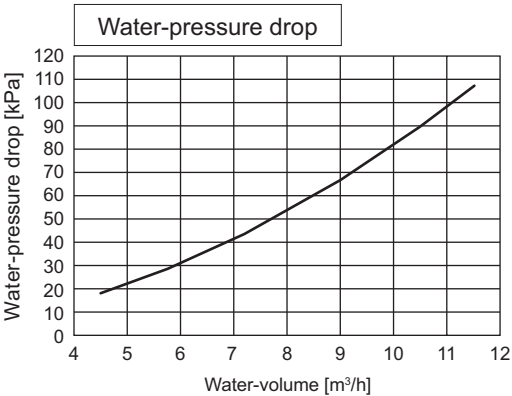
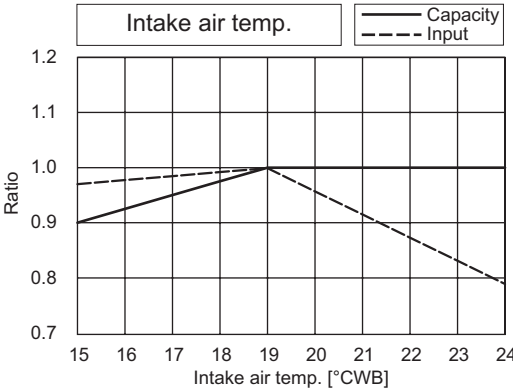
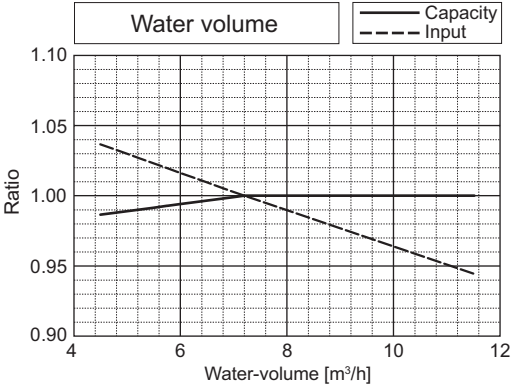
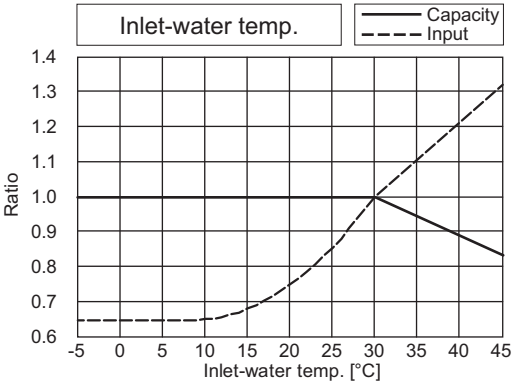
PQRY-		P168ZLMU
Nominal Cooling Capacity	kW	49.2
	BTU/h	168,000
Input	kW	12.05



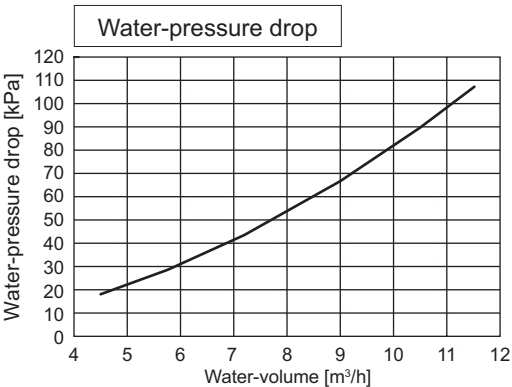
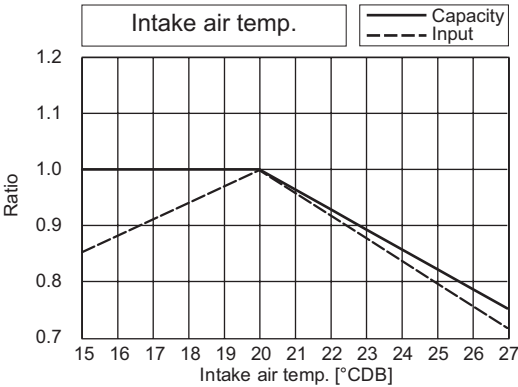
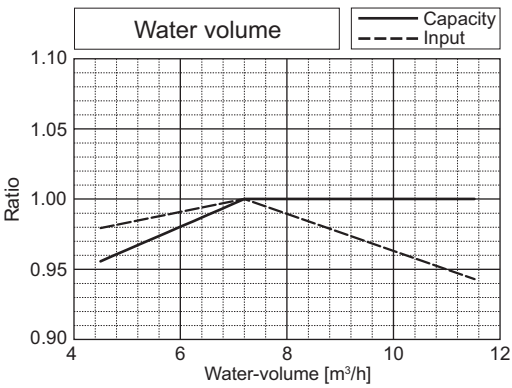
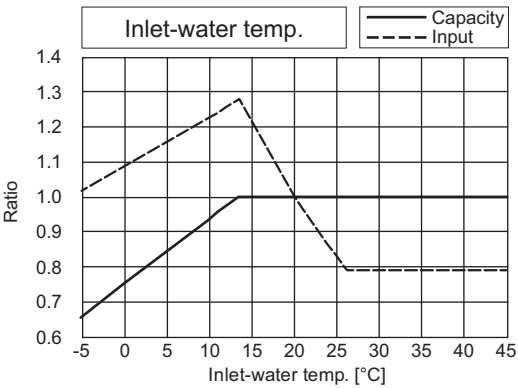
PQRY-		P168ZLMU
Nominal Heating Capacity	kW	55.1
	BTU/h	188,000
Input	kW	9.86



PQRY-		P192ZLMU
Nominal Cooling Capacity	kW	56.3
	BTU/h	192,000
Input	kW	15.05

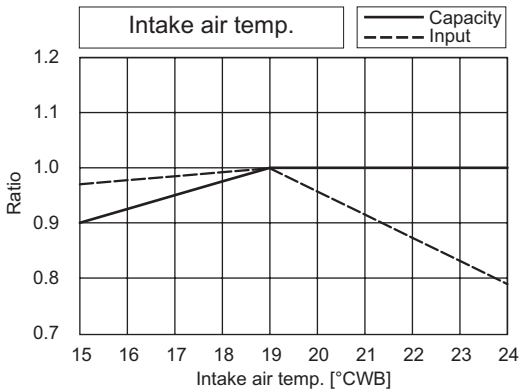
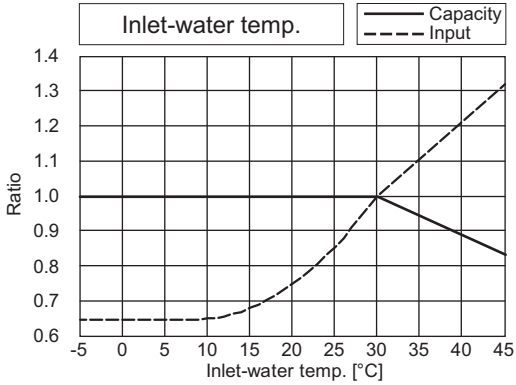


PQRY-		P192ZLMU
Nominal Heating Capacity	kW	63.0
	BTU/h	215,000
Input	kW	11.90

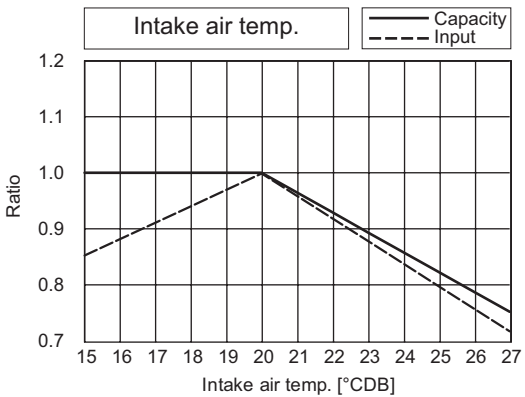
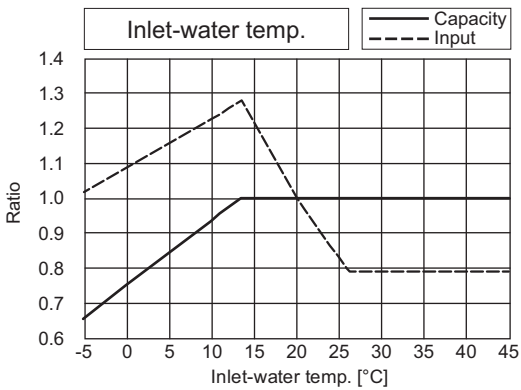


PQRY-P-Z(S)LMU-B

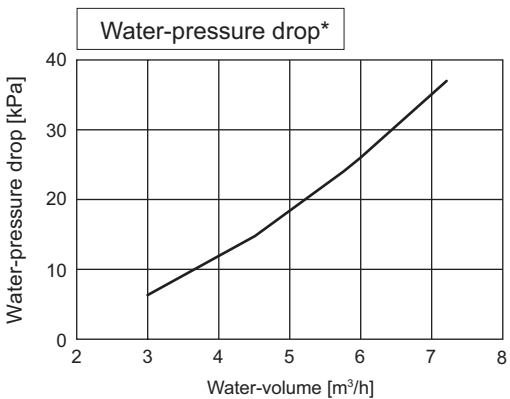
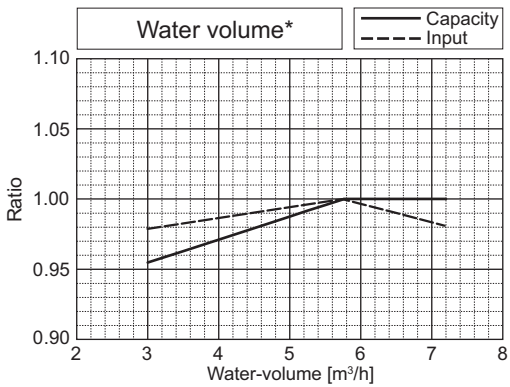
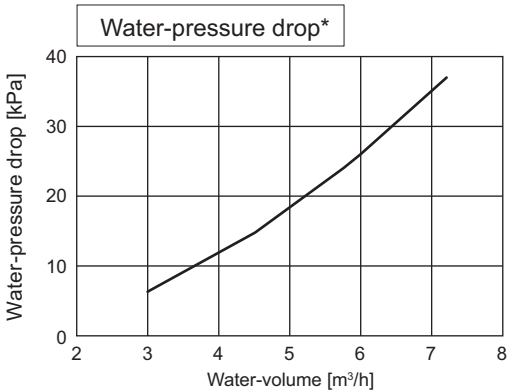
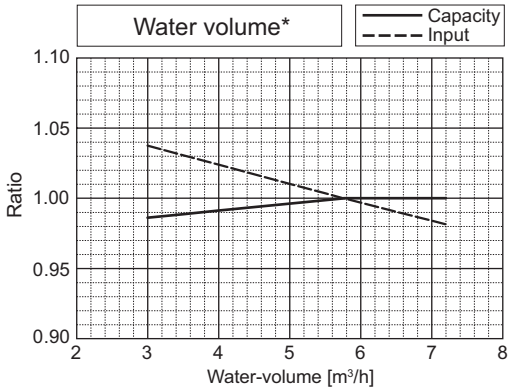
PQRY-		P144ZSLMU
Nominal Cooling Capacity	kW	42.2
	BTU/h	144,000
Input	kW	7.11



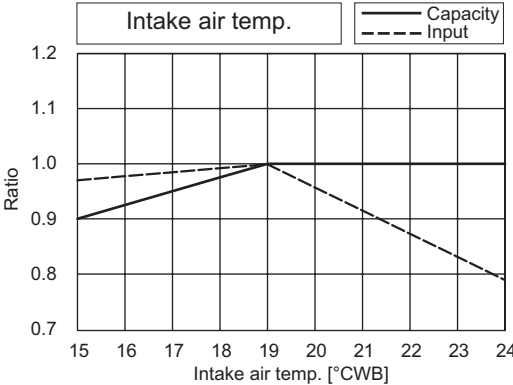
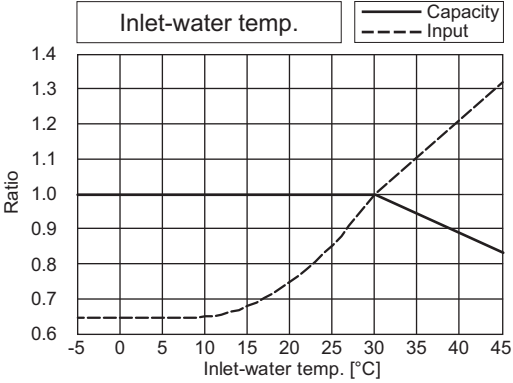
PQRY-		P144ZSLMU
Nominal Heating Capacity	kW	46.9
	BTU/h	160,000
Input	kW	7.45



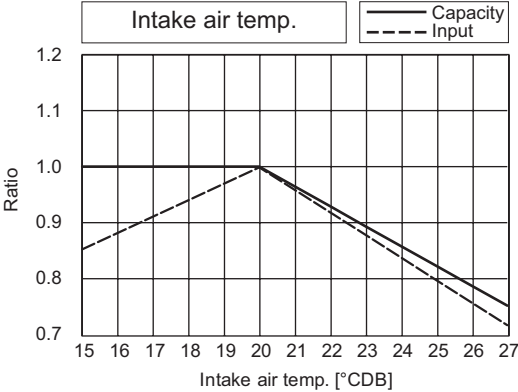
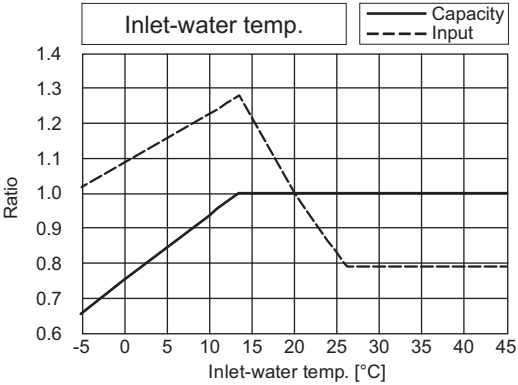
*The drawing indicates characteristic per unit.



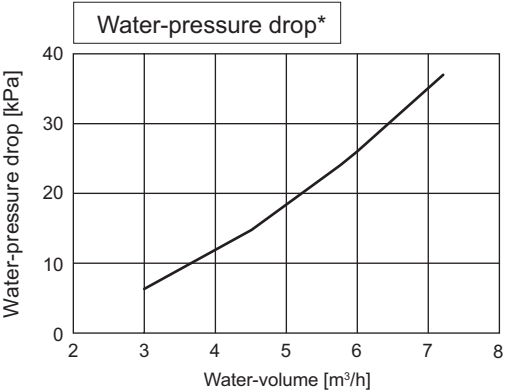
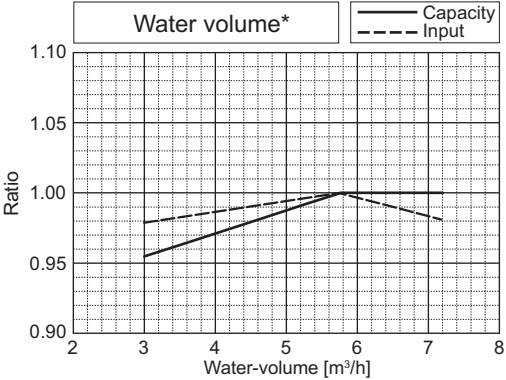
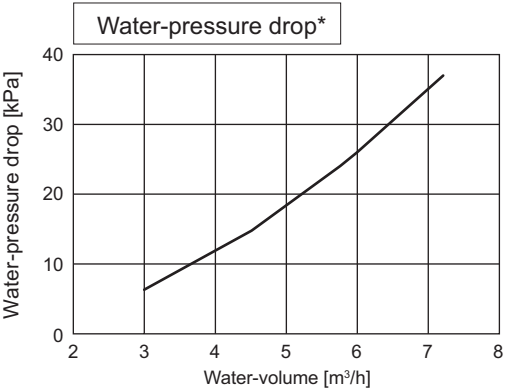
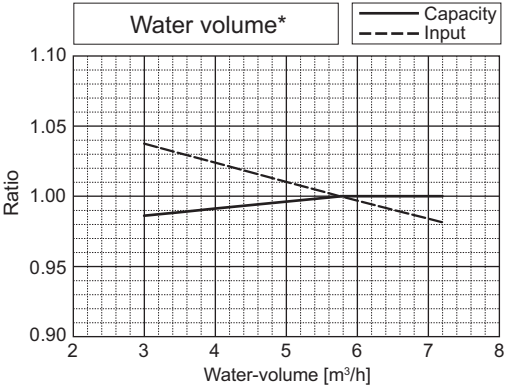
PQRY-		P168ZSLMU
Nominal Cooling Capacity	kW	49.2
	BTU/h	168,000
Input	kW	9.33



PQRY-		P168ZSLMU
Nominal Heating Capacity	kW	55.1
	BTU/h	188,000
Input	kW	9.34



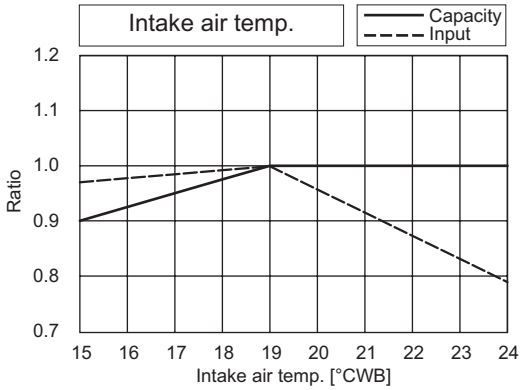
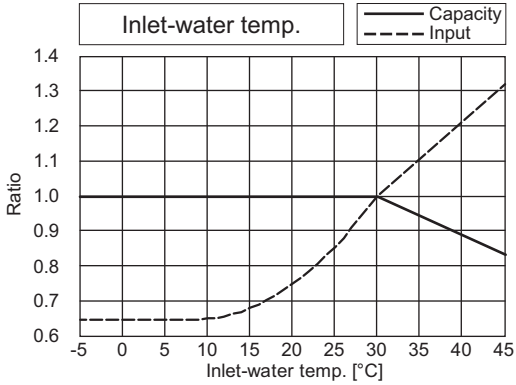
*The drawing indicates characteristic per unit.



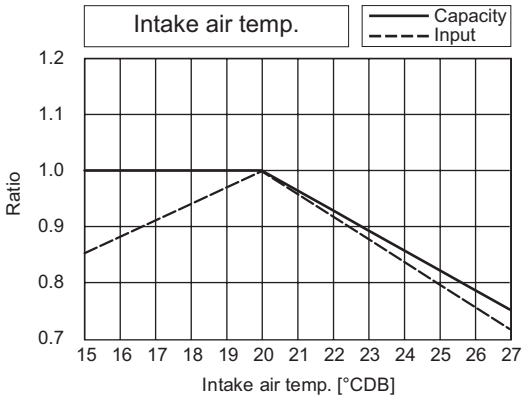
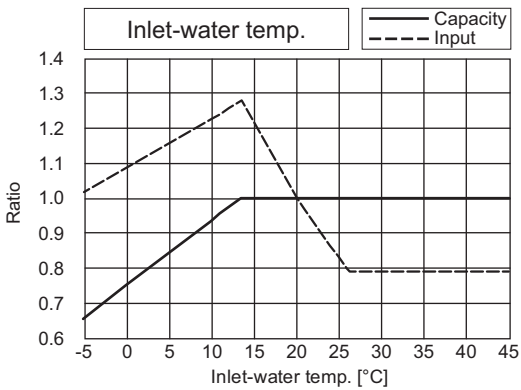
PQRY-P-Z(s)LMU-B

PQRY-P-Z(S)LMU-B

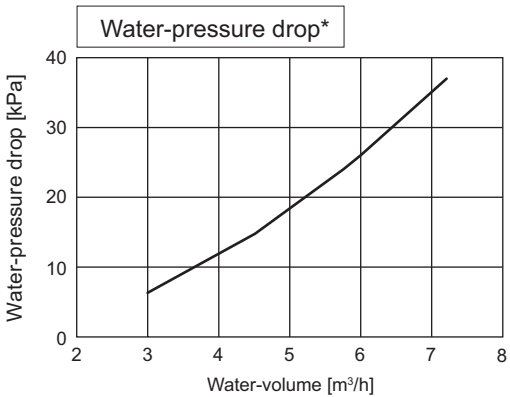
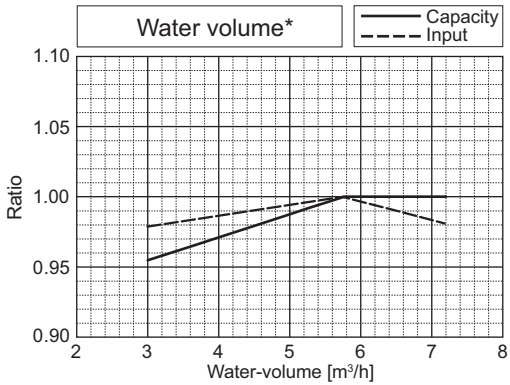
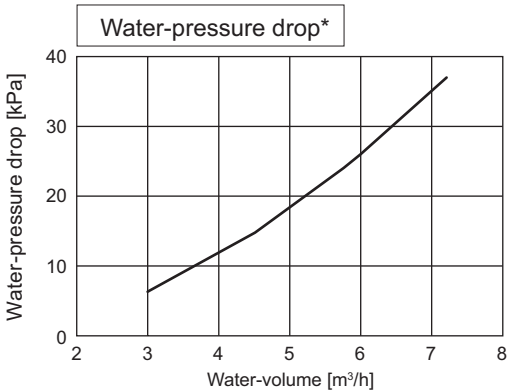
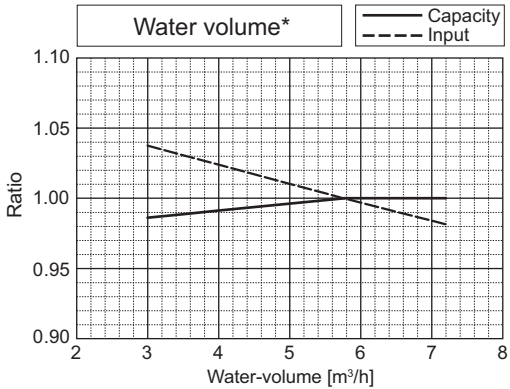
PQRY-		P192ZSLMU
Nominal Cooling Capacity	kW	56.3
	BTU/h	192,000
Input	kW	11.30



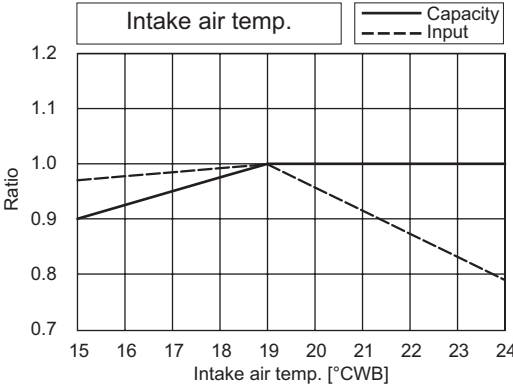
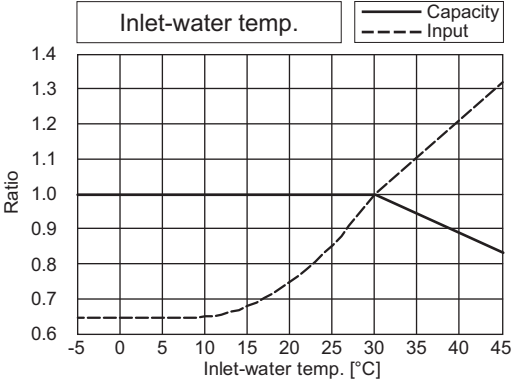
PQRY-		P192ZSLMU
Nominal Heating Capacity	kW	63.0
	BTU/h	215,000
Input	kW	11.02



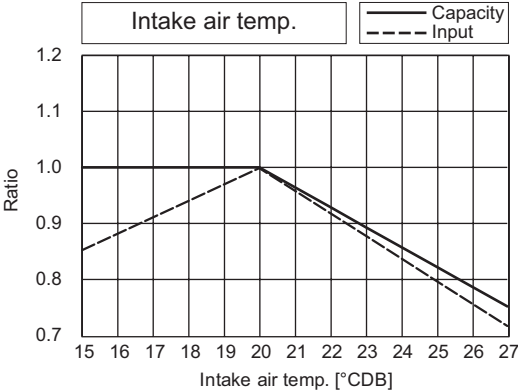
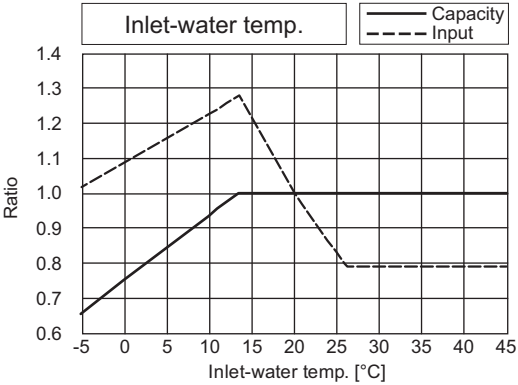
*The drawing indicates characteristic per unit.



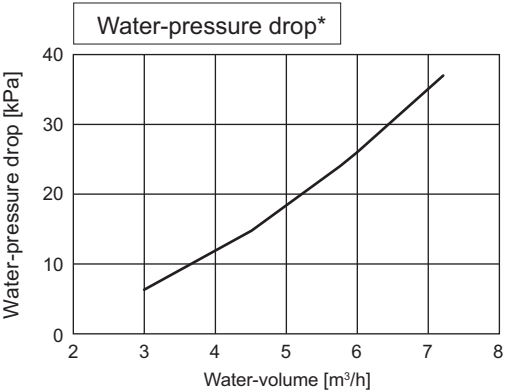
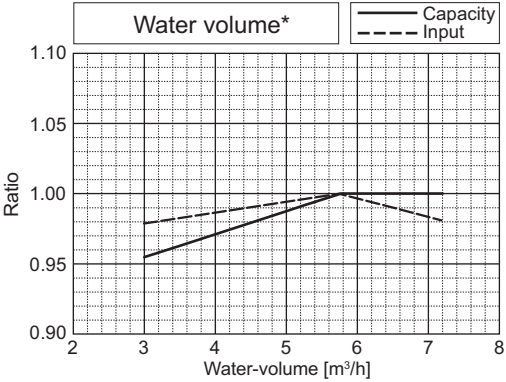
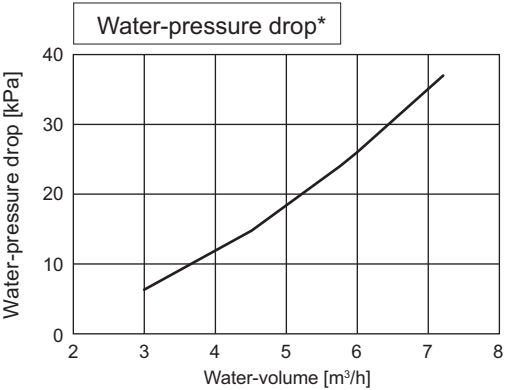
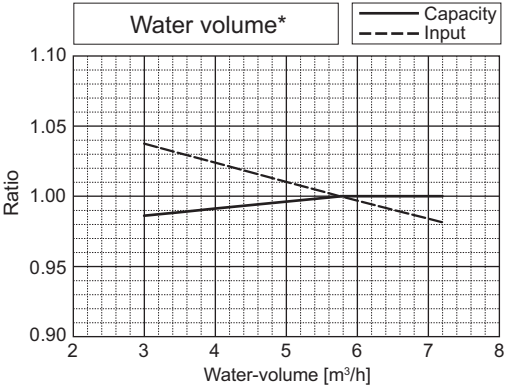
PQRY-		P216ZSLMU
Nominal Cooling Capacity	kW	63.3
	BTU/h	216,000
Input	kW	14.03



PQRY-		P216ZSLMU
Nominal Heating Capacity	kW	71.2
	BTU/h	243,000
Input	kW	12.88

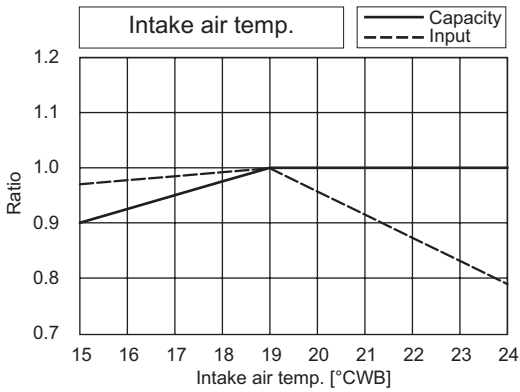
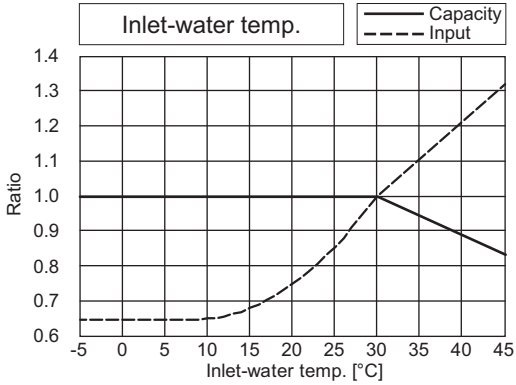


*The drawing indicates characteristic per unit.

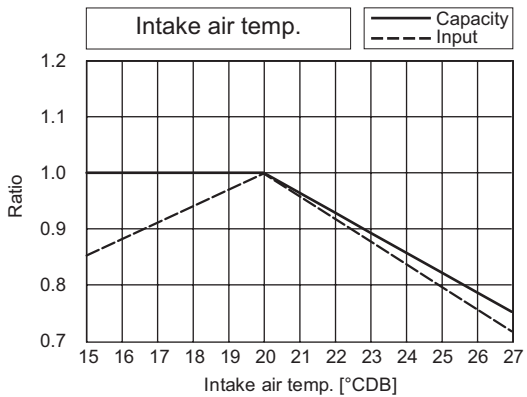
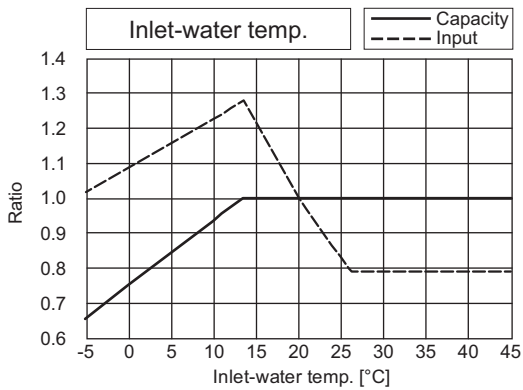


PQRY-P-Z(S)LMU-B

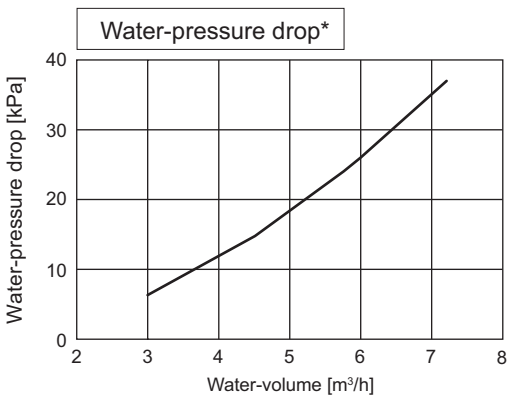
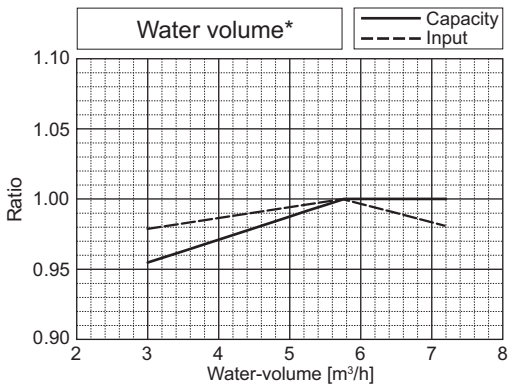
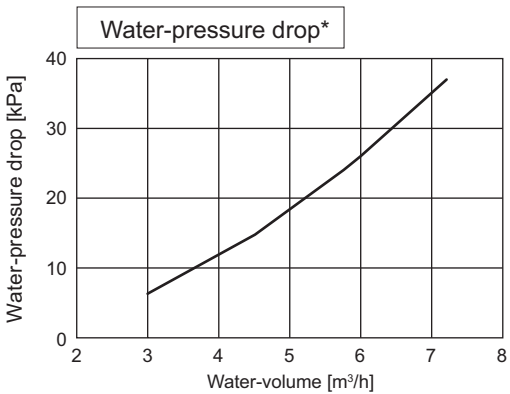
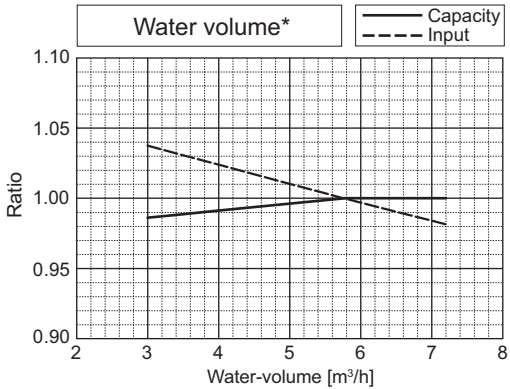
PQRY-		P240ZSLMU
Nominal Cooling Capacity	kW	70.3
	BTU/h	240,000
Input	kW	16.89



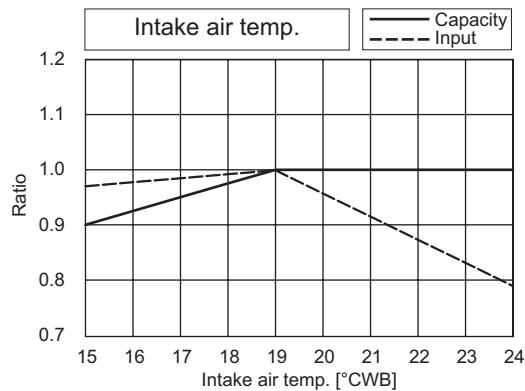
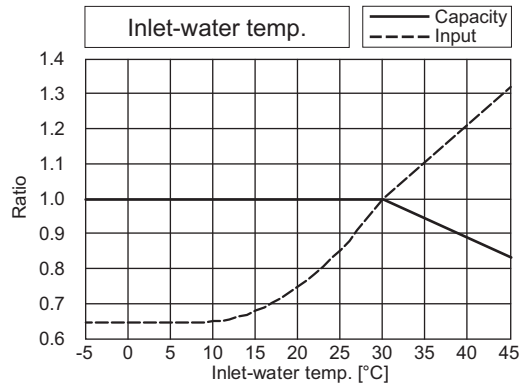
PQRY-		P240ZSLMU
Nominal Heating Capacity	kW	79.1
	BTU/h	270,000
Input	kW	14.58



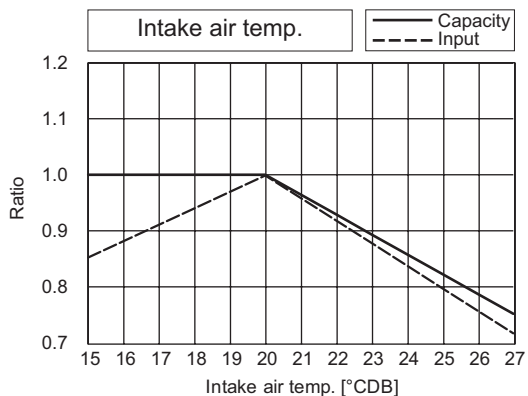
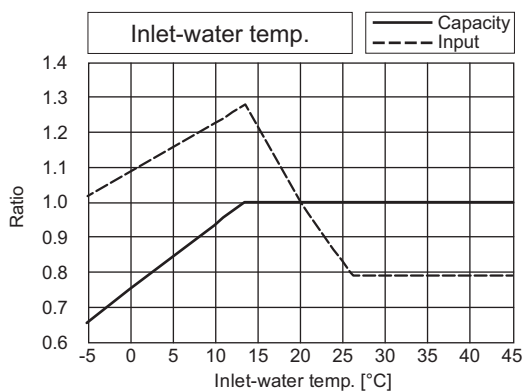
*The drawing indicates characteristic per unit.



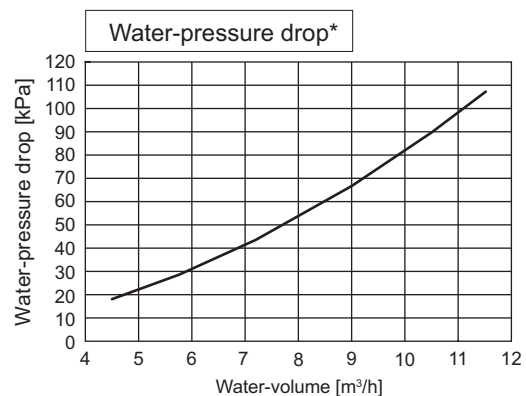
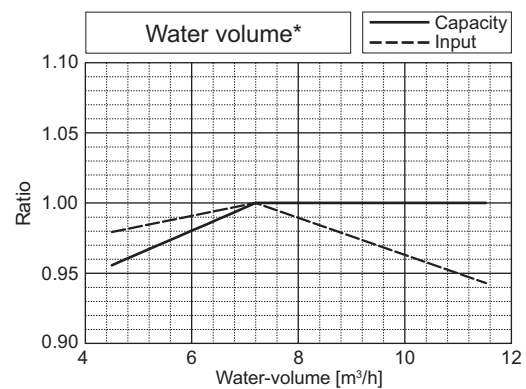
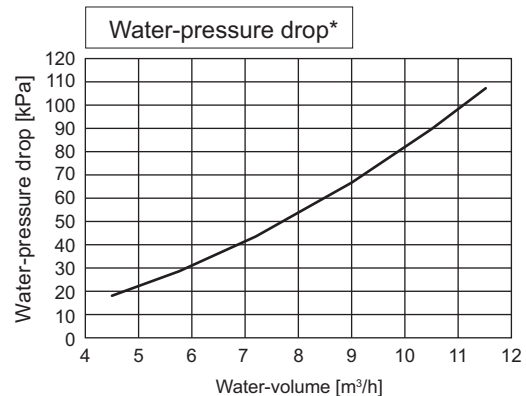
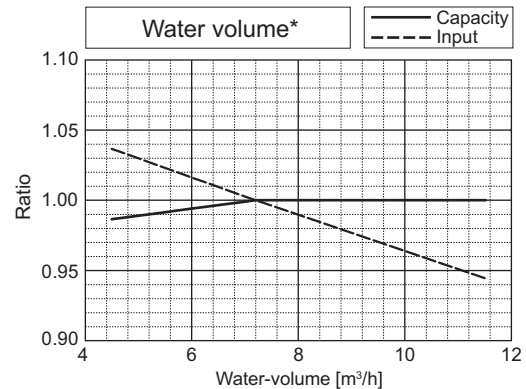
PQRY-		P288ZSLMU
Nominal Cooling Capacity	kW	84.4
	BTU/h	288,000
Input	kW	20.42



PQRY-		P288ZSLMU
Nominal Heating Capacity	kW	94.7
	BTU/h	323,000
Input	kW	17.50

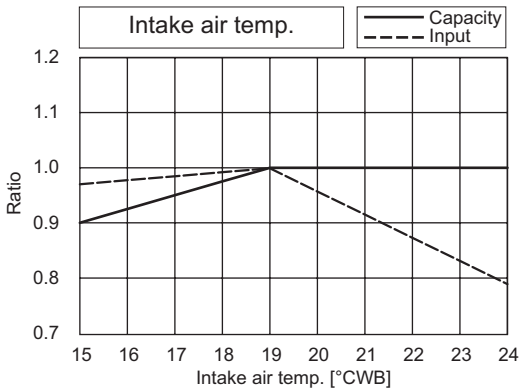
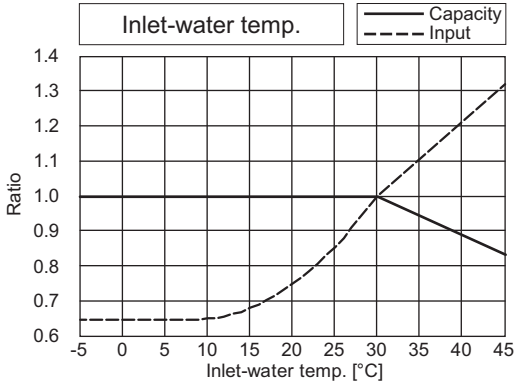


*The drawing indicates characteristic per unit.

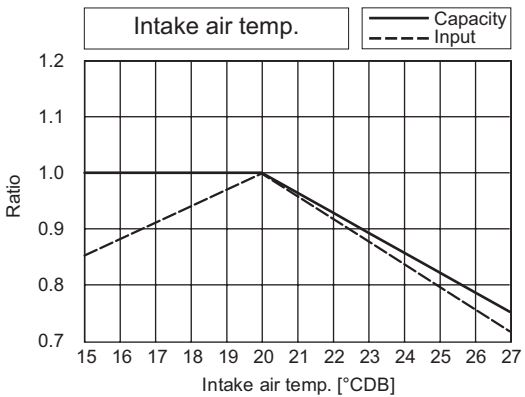
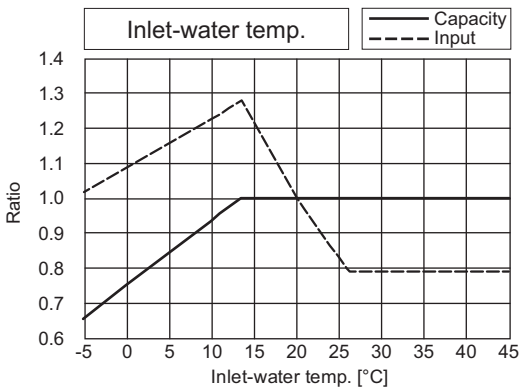


PQRY-P-Z(S)LMU-B

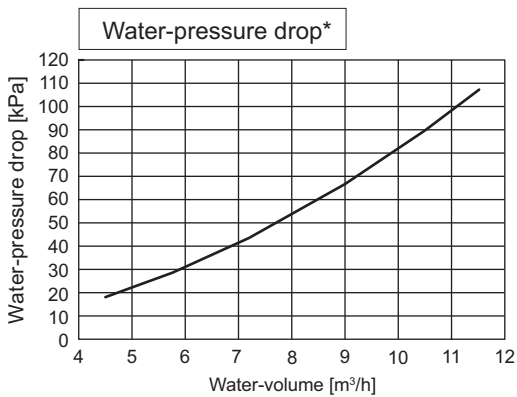
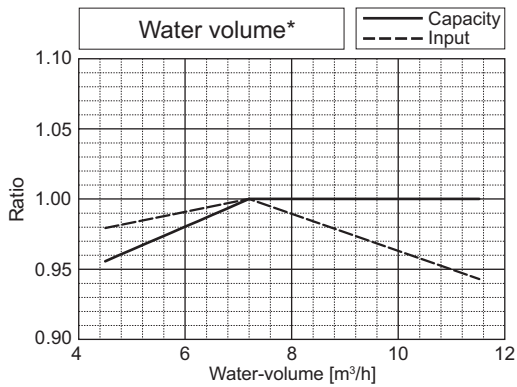
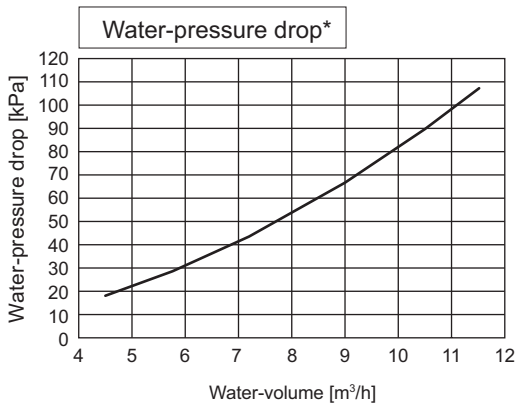
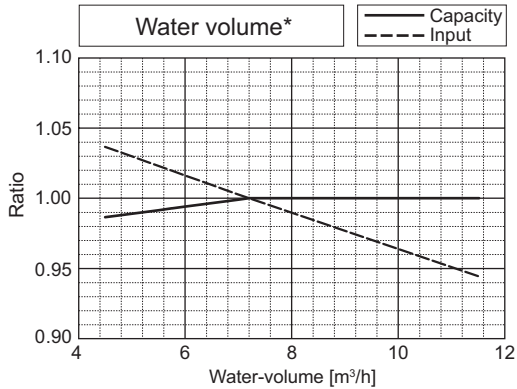
PQRY-		P312ZSLMU
Nominal Cooling Capacity	kW	91.4
	BTU/h	312,000
Input	kW	23.41



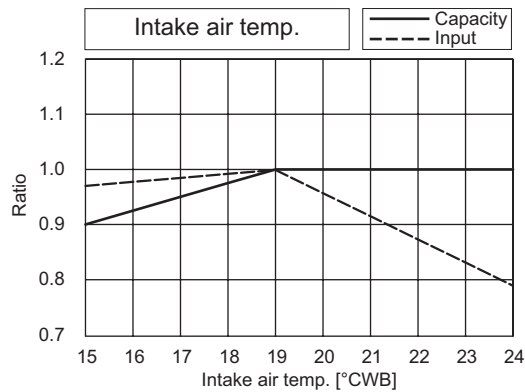
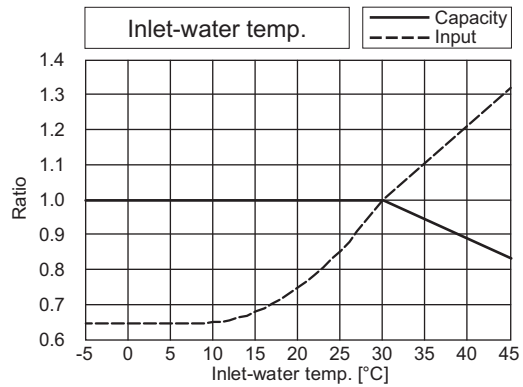
PQRY-		P312ZSLMU
Nominal Heating Capacity	kW	102.6
	BTU/h	350,000
Input	kW	19.11



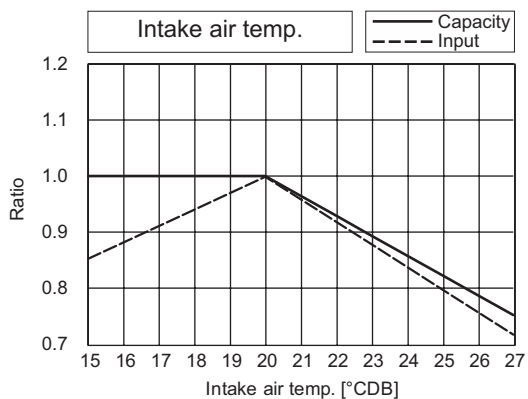
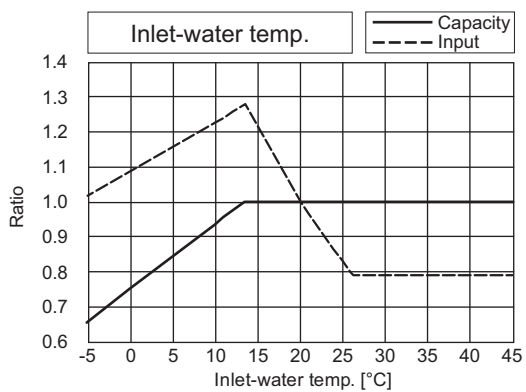
*The drawing indicates characteristic per unit.



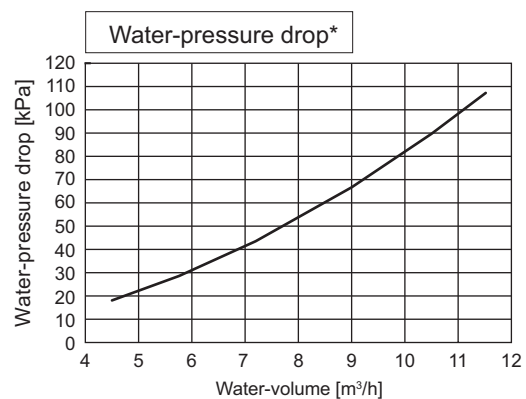
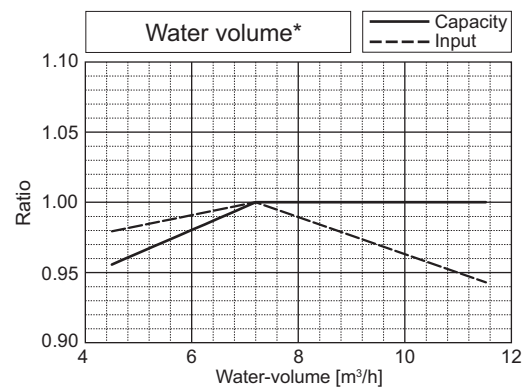
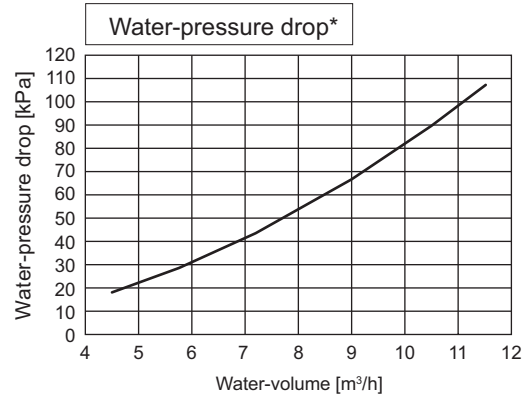
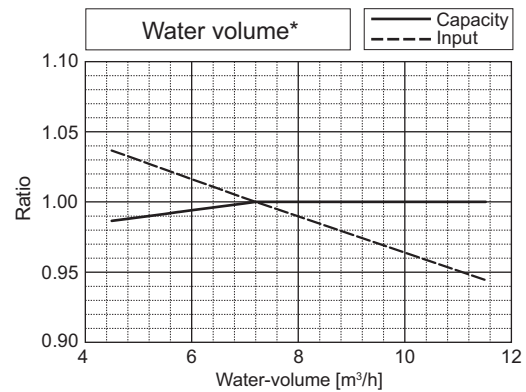
PQRY-		P336ZSLMU
Nominal Cooling Capacity	kW	98.5
	BTU/h	336,000
Input	kW	26.84



PQRY-		P336ZSLMU
Nominal Heating Capacity	kW	110.8
	BTU/h	378,000
Input	kW	20.77

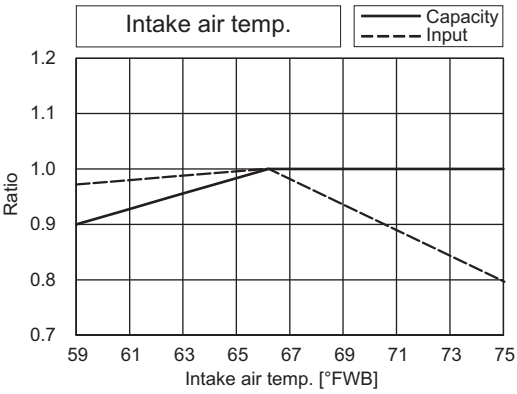
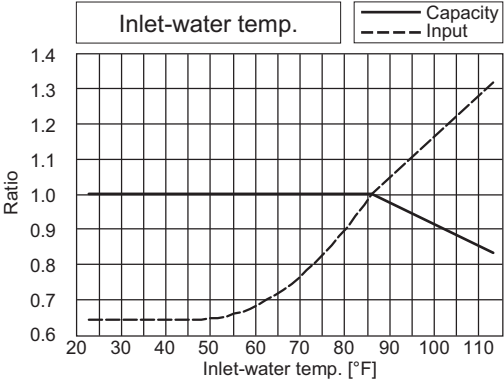


*The drawing indicates characteristic per unit.

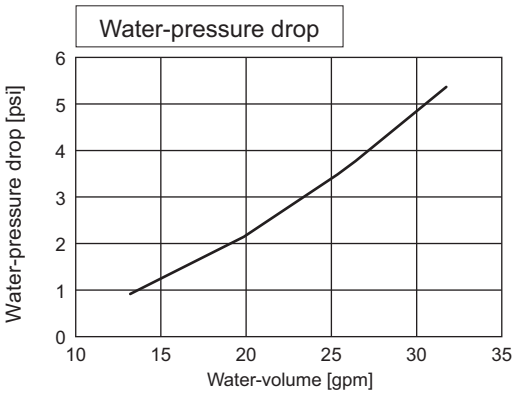
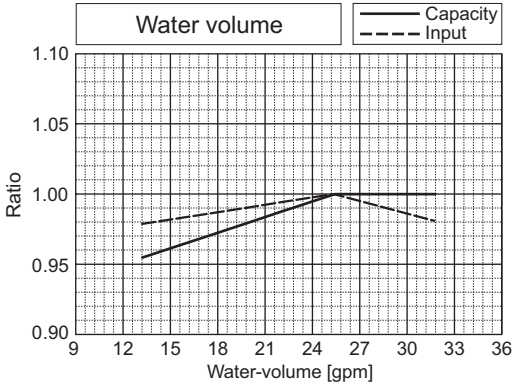
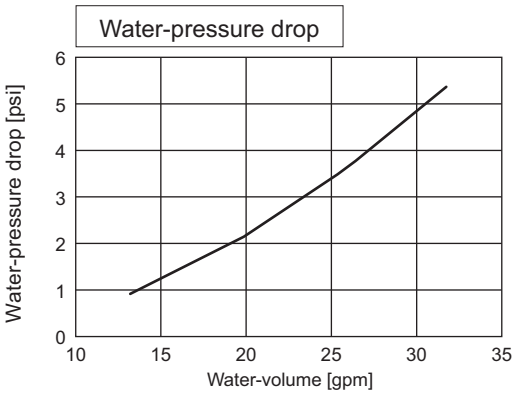
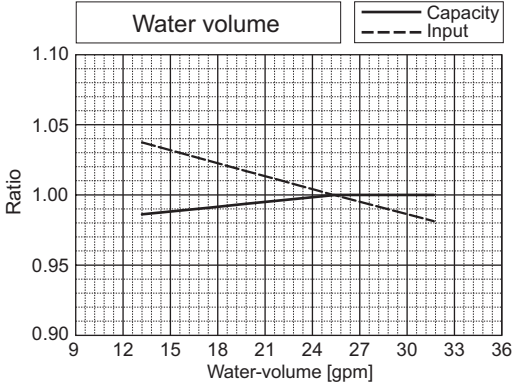
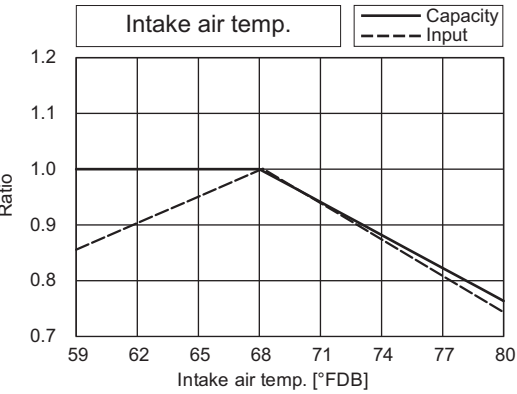
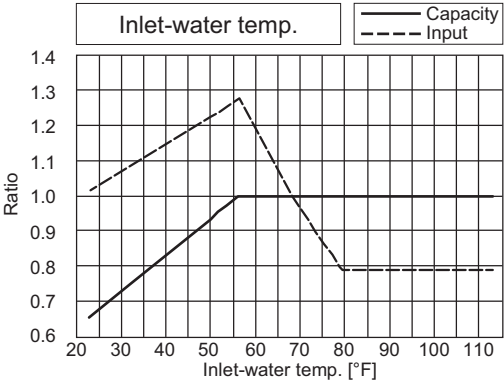


PQRY-P-Z(S)LMU-B

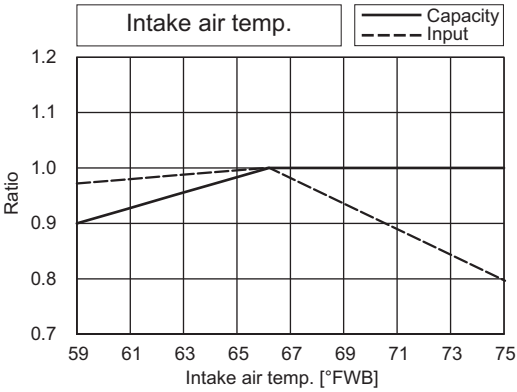
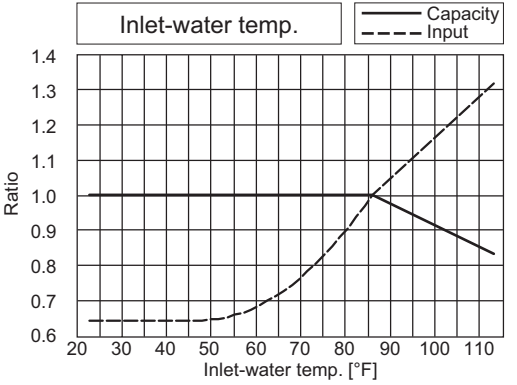
PQRY-		P72ZLMU
Nominal Cooling Capacity	kW	21.1
	BTU/h	72,000
Input	kW	3.61



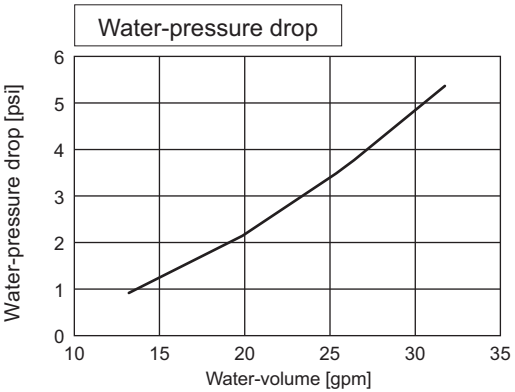
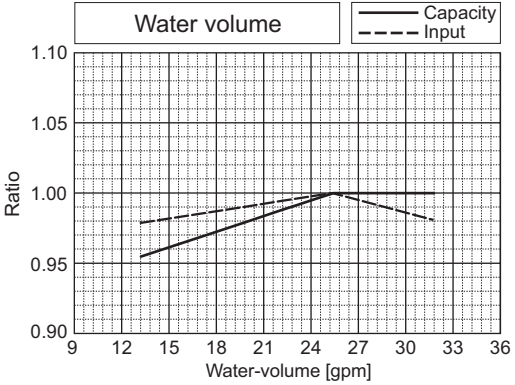
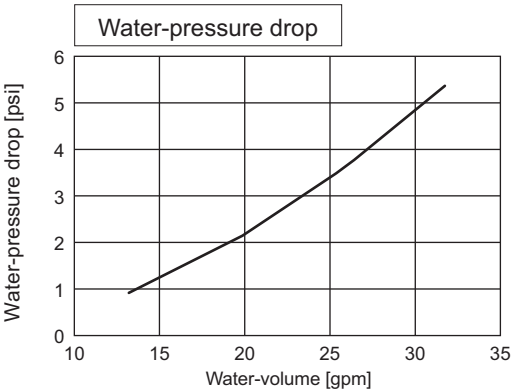
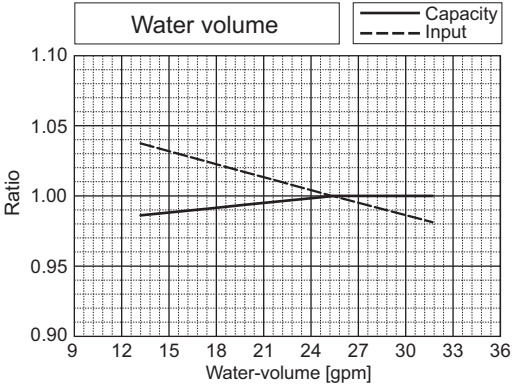
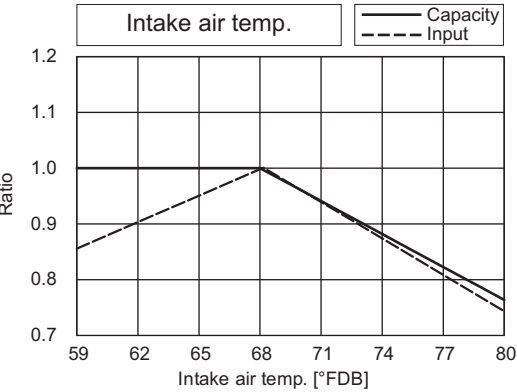
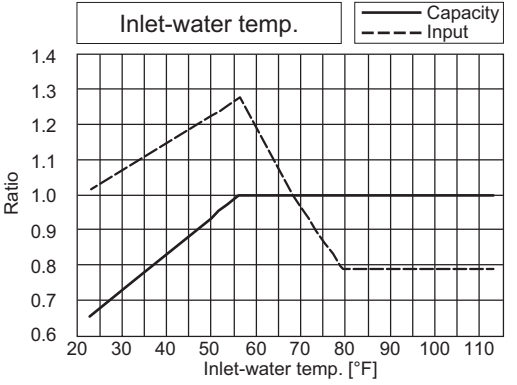
PQRY-		P72ZLMU
Nominal Heating Capacity	kW	23.4
	BTU/h	80,000
Input	kW	4.04



PQRY-		P96ZLMU
Nominal Cooling Capacity	kW	28.1
	BTU/h	96,000
Input	kW	5.21

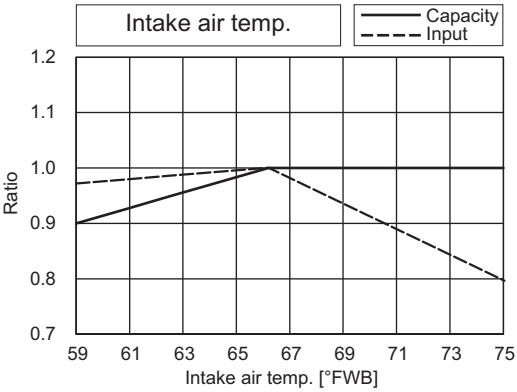
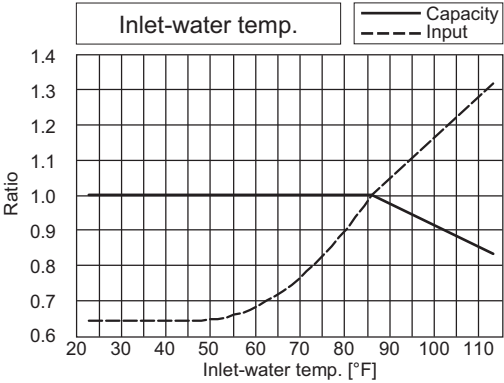


PQRY-		P96ZLMU
Nominal Heating Capacity	kW	31.7
	BTU/h	108,000
Input	kW	5.64

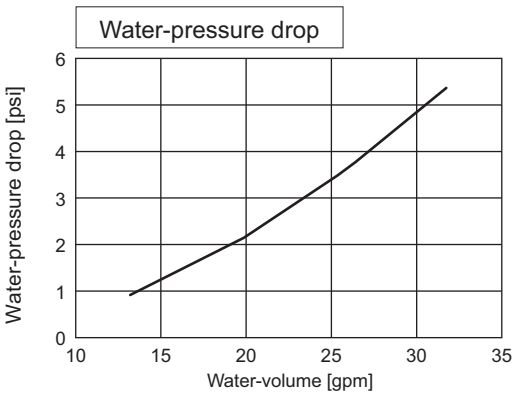
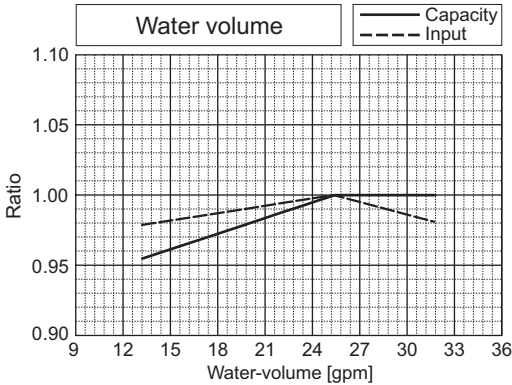
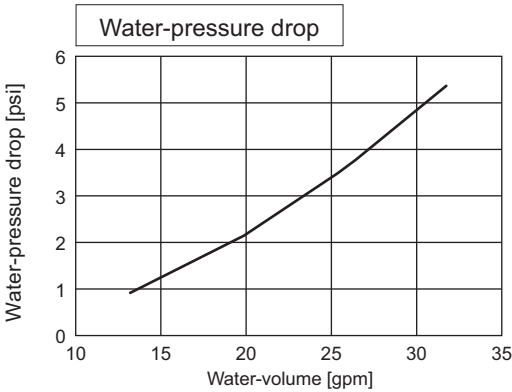
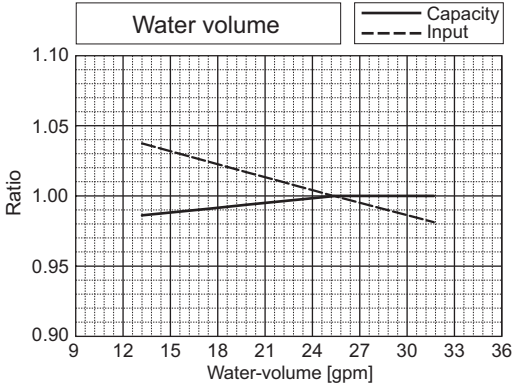
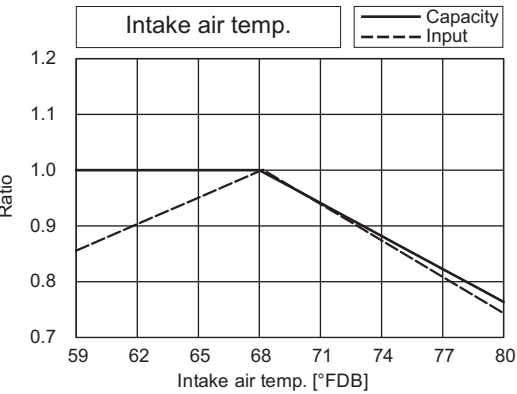
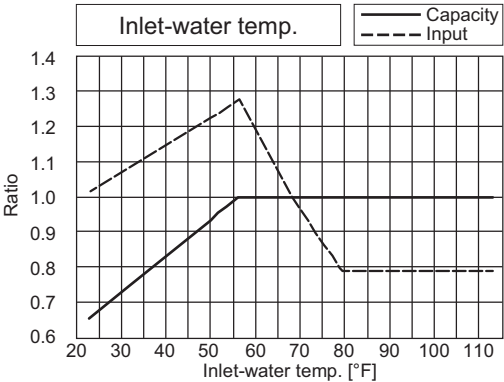


PQRY-P-Z(S)LMU-B

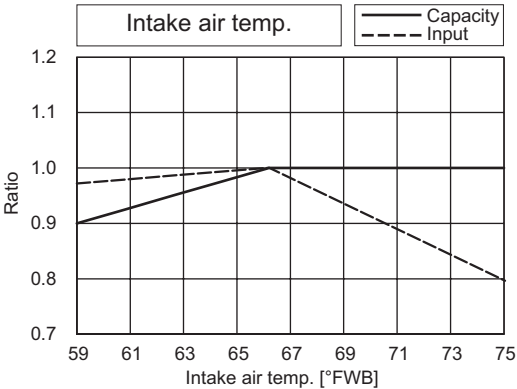
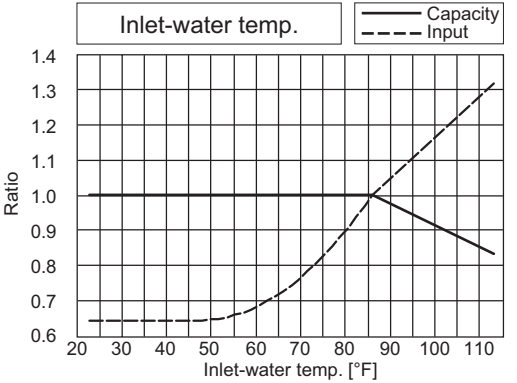
PQRY-		P120ZLMU
Nominal Cooling Capacity	kW	35.2
	BTU/h	120,000
Input	kW	7.51



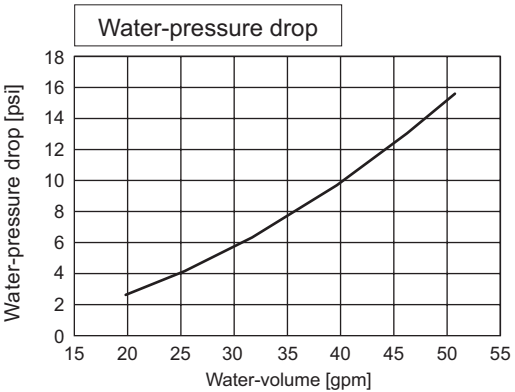
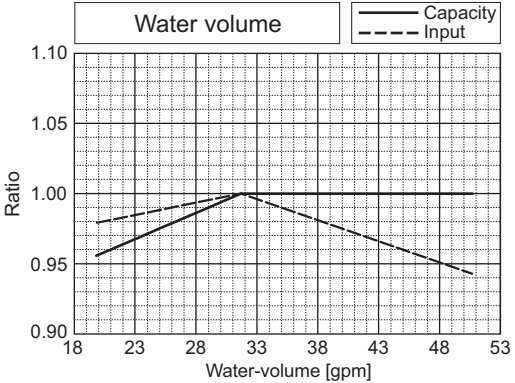
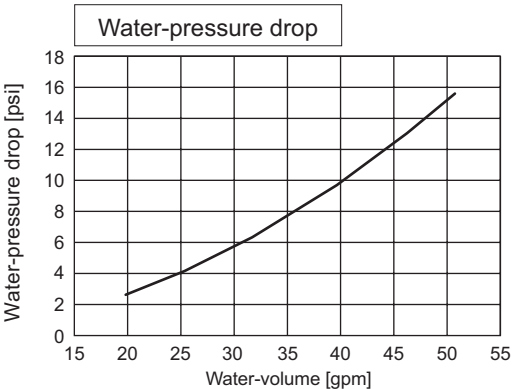
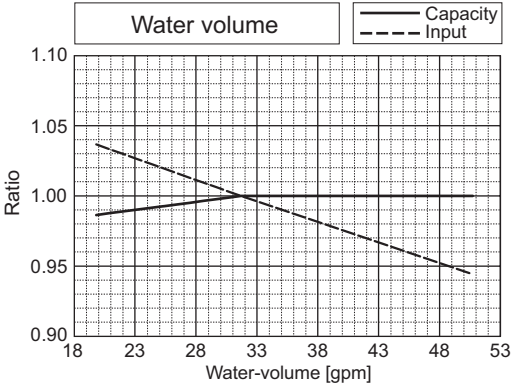
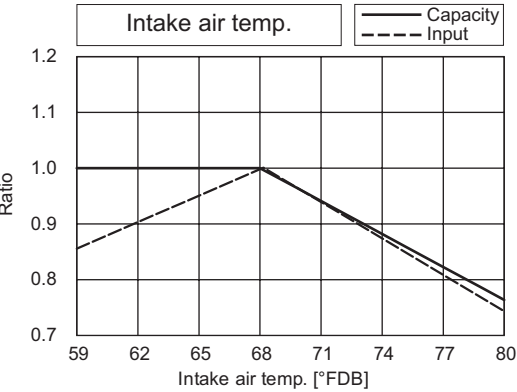
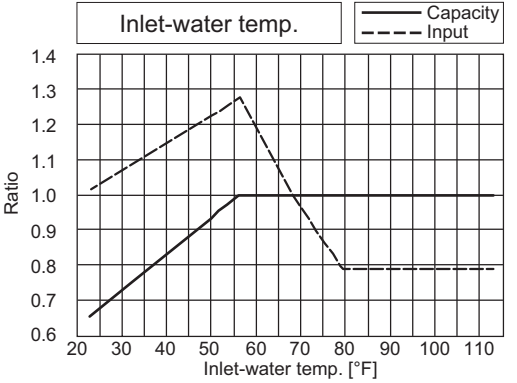
PQRY-		P120ZLMU
Nominal Heating Capacity	kW	39.6
	BTU/h	135,000
Input	kW	7.09



PQRY-		P144ZLMU
Nominal Cooling Capacity	kW	42.2
	BTU/h	144,000
Input	kW	8.78

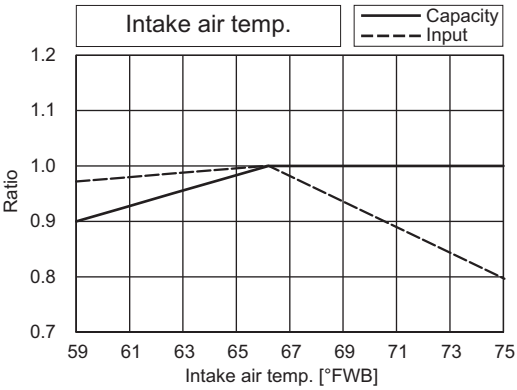
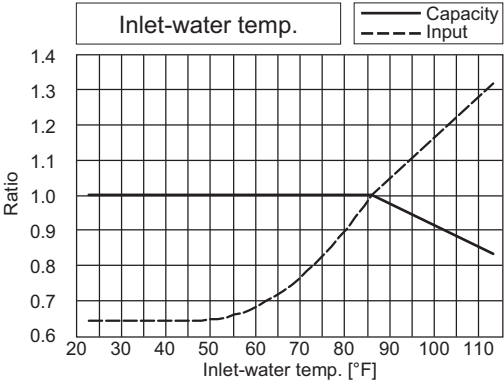


PQRY-		P144ZLMU
Nominal Heating Capacity	kW	46.9
	BTU/h	160,000
Input	kW	8.11

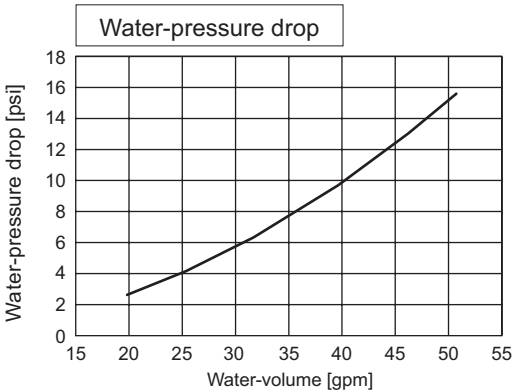
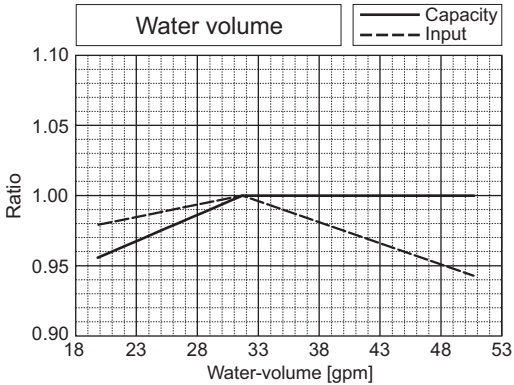
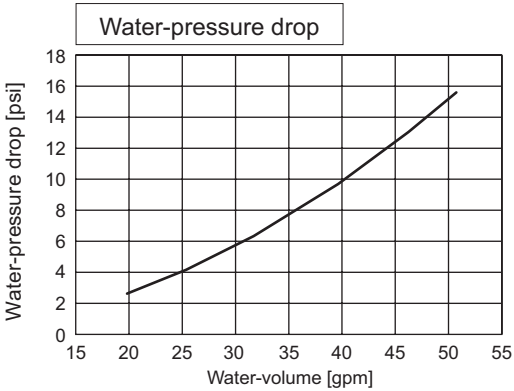
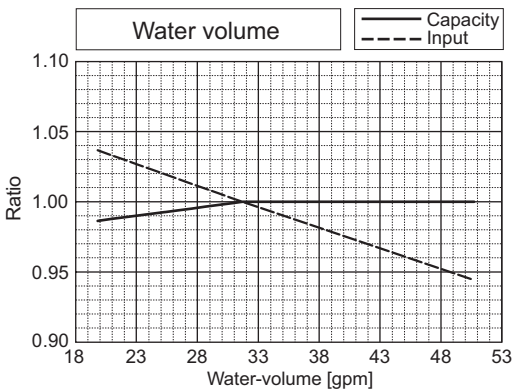
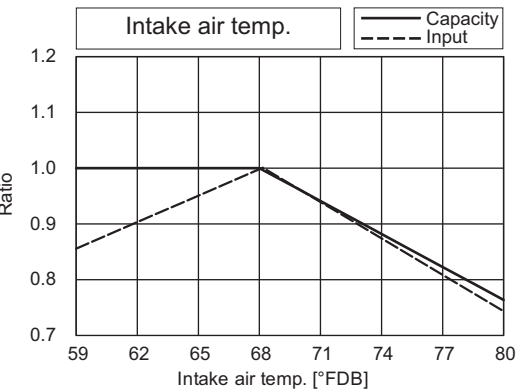
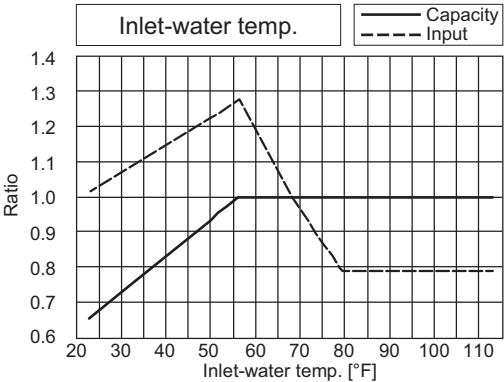


PQRY-P-Z(S)LMU-B

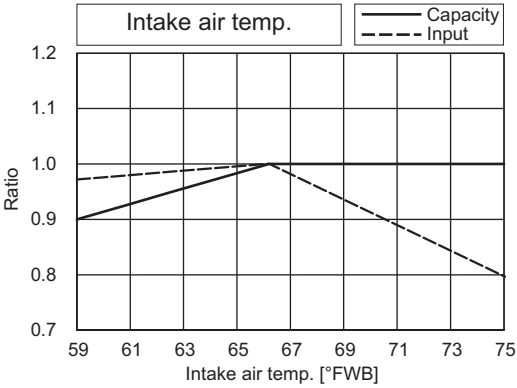
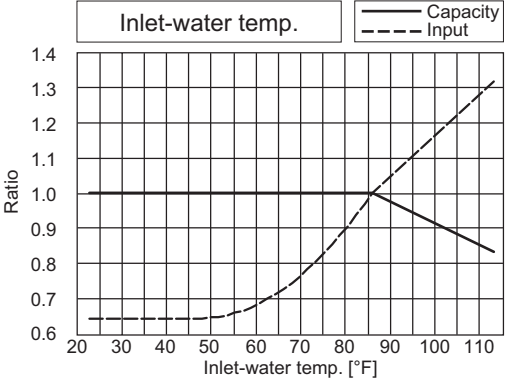
PQRY-		P168ZLMU
Nominal Cooling Capacity	kW	49.2
	BTU/h	168,000
Input	kW	12.05



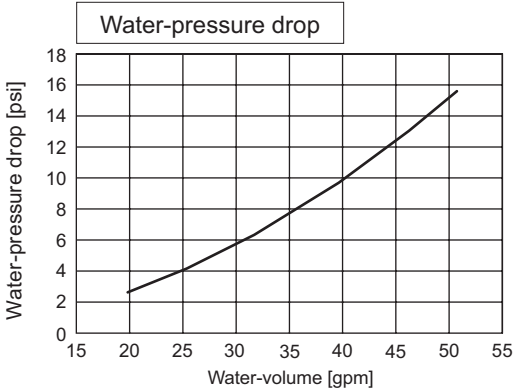
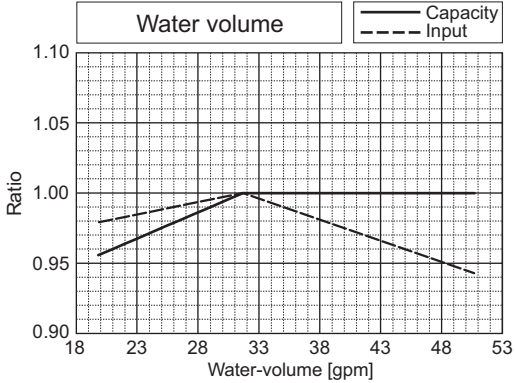
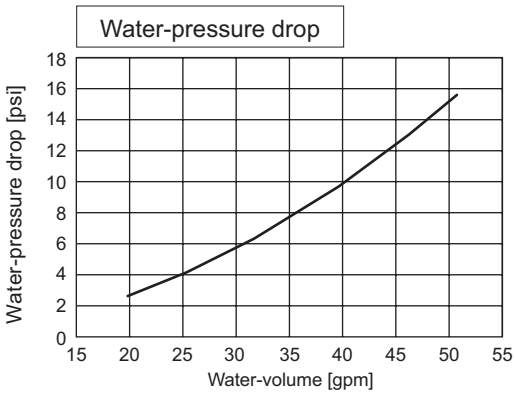
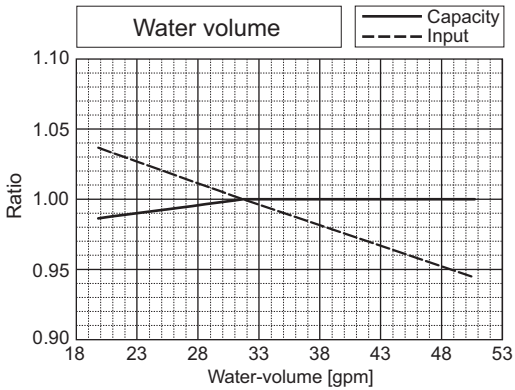
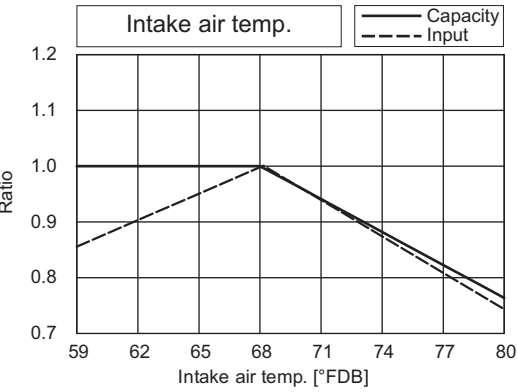
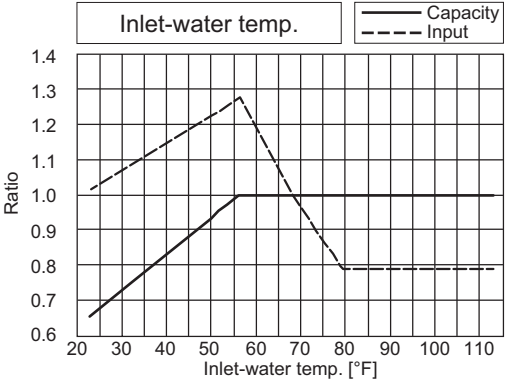
PQRY-		P168ZLMU
Nominal Heating Capacity	kW	55.1
	BTU/h	188,000
Input	kW	9.86



PQRY-		P192ZLMU
Nominal Cooling Capacity	kW	56.3
	BTU/h	192,000
Input	kW	15.05

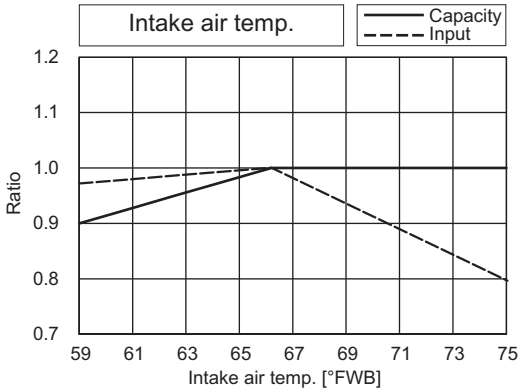
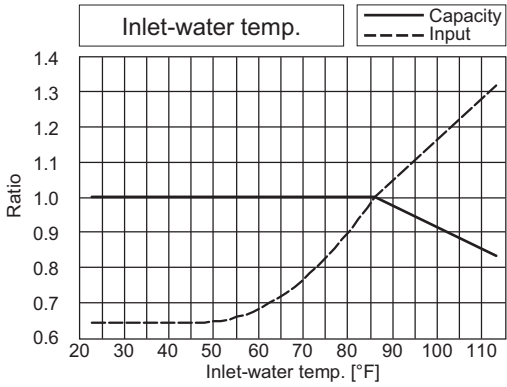


PQRY-		P192ZLMU
Nominal Heating Capacity	kW	63.0
	BTU/h	215,000
Input	kW	11.90

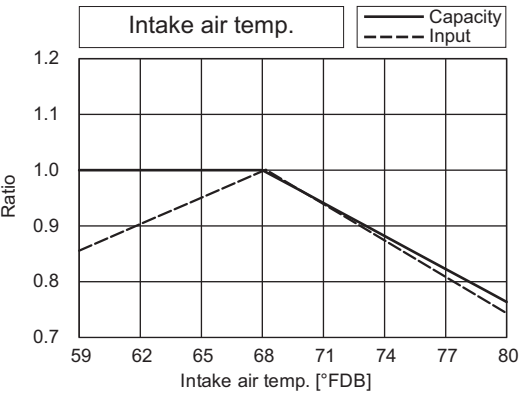
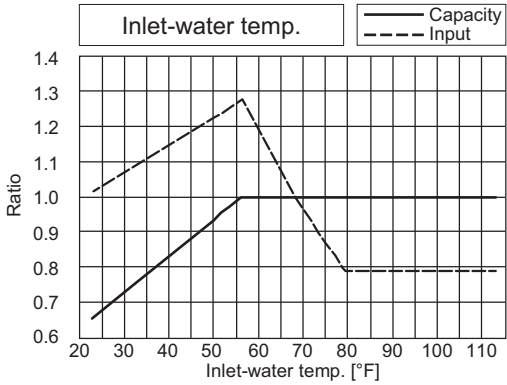


PQRY-P-Z(S)LMU-B

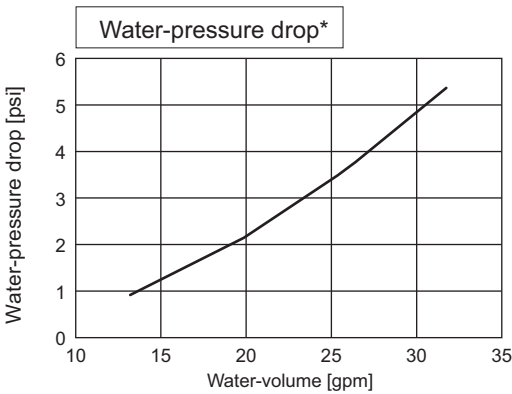
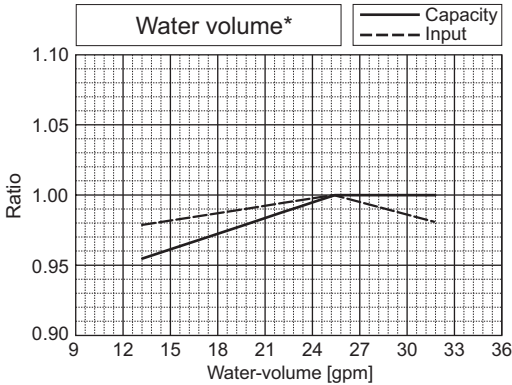
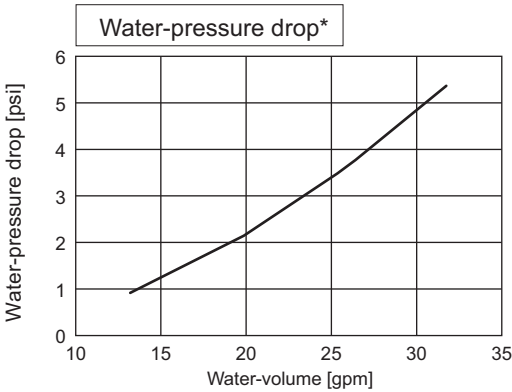
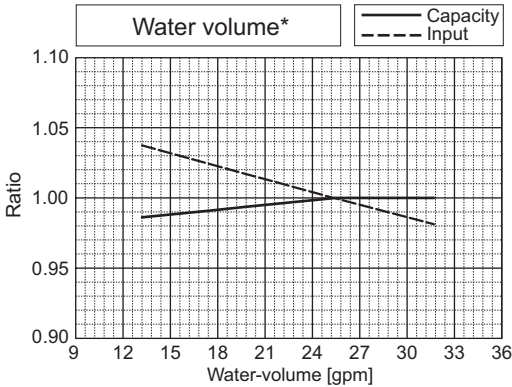
PQRY-		P144ZSLMU
Nominal Cooling Capacity	kW	42.2
	BTU/h	144,000
Input	kW	7.11



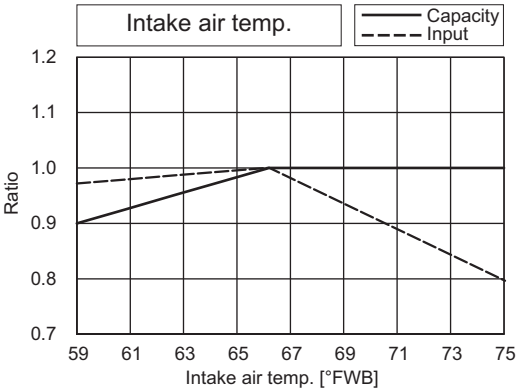
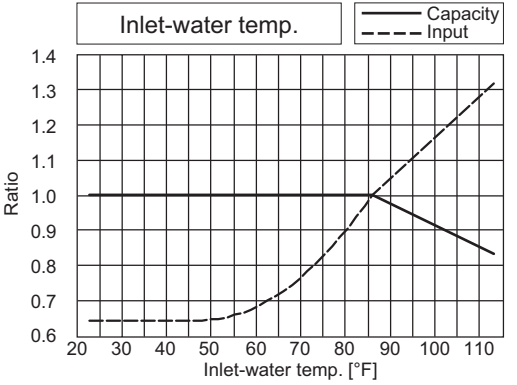
PQRY-		P144ZSLMU
Nominal Heating Capacity	kW	46.9
	BTU/h	160,000
Input	kW	7.45



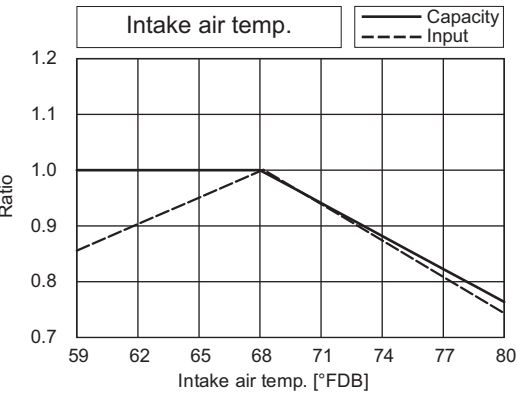
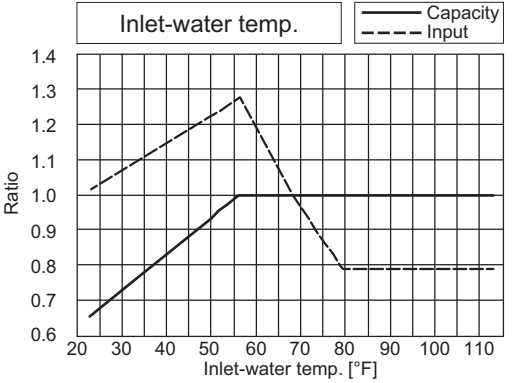
*The drawing indicates characteristic per unit.



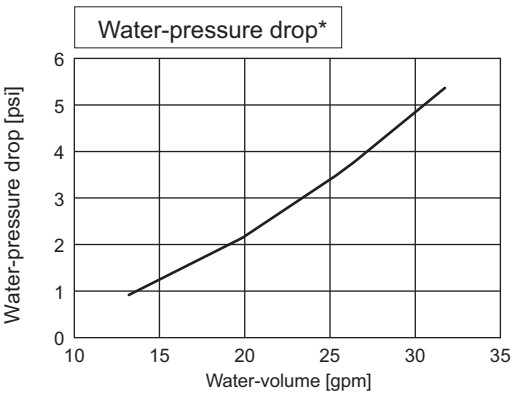
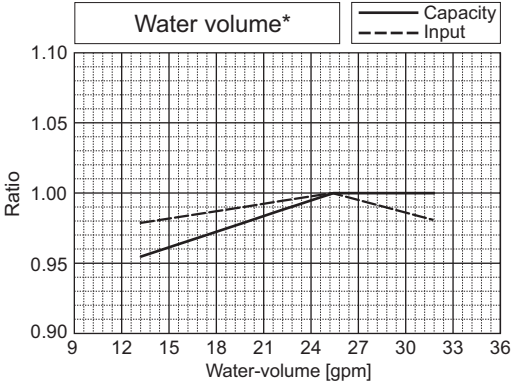
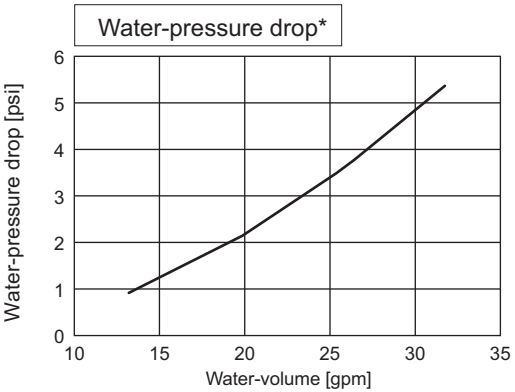
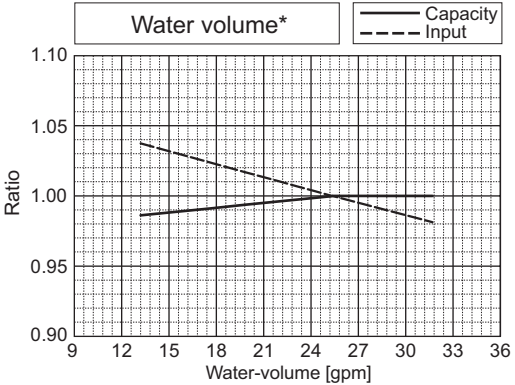
PQRY-		P168ZSLMU
Nominal Cooling Capacity	kW	49.2
	BTU/h	168,000
Input	kW	9.33



PQRY-		P168ZSLMU
Nominal Heating Capacity	kW	55.1
	BTU/h	188,000
Input	kW	9.34

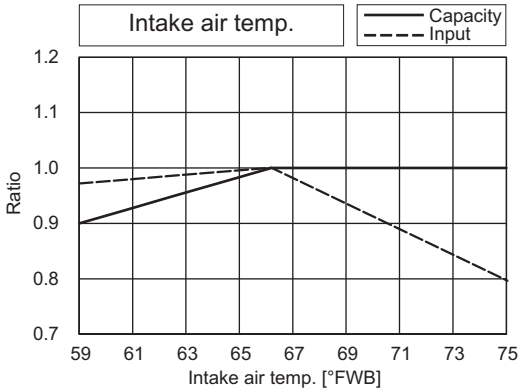
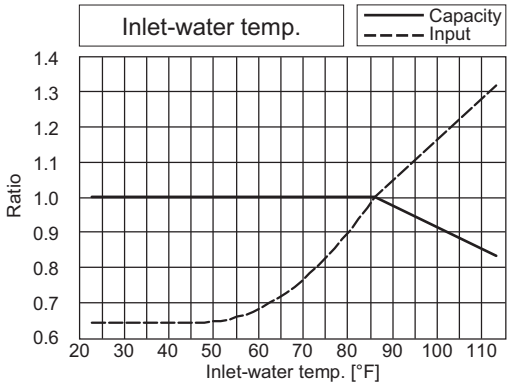


*The drawing indicates characteristic per unit.

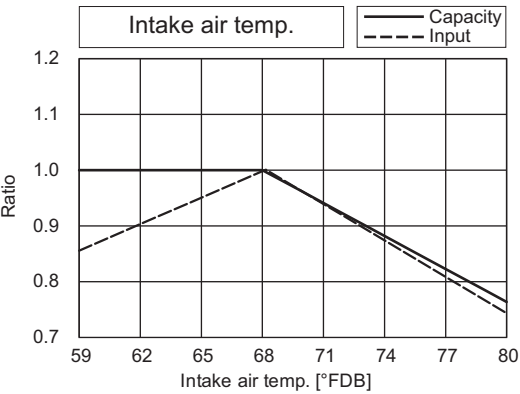
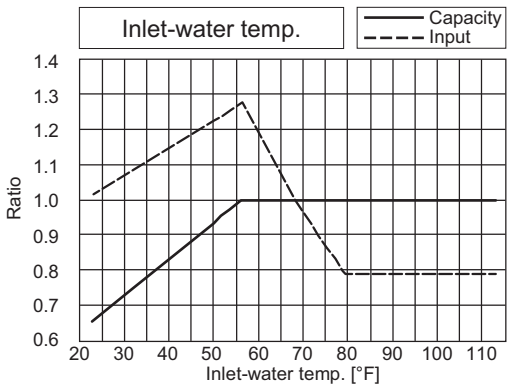


PQRY-P-Z(S)LMU-B

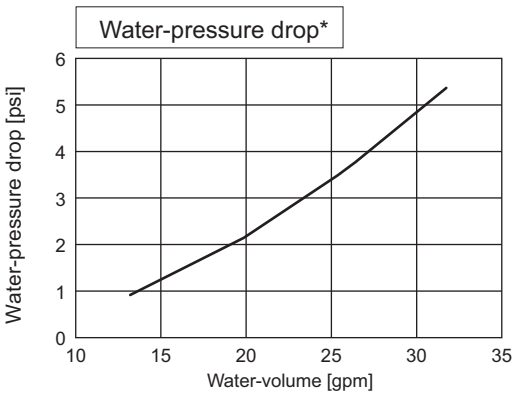
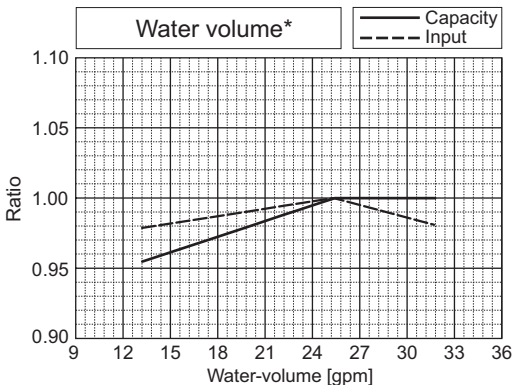
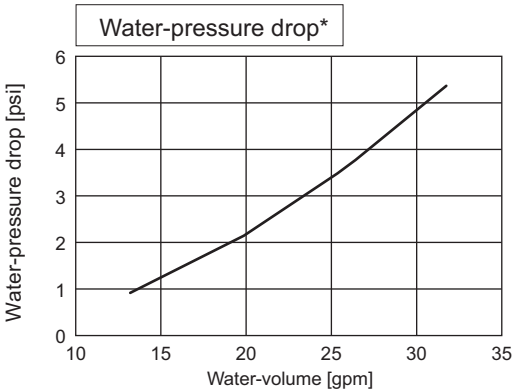
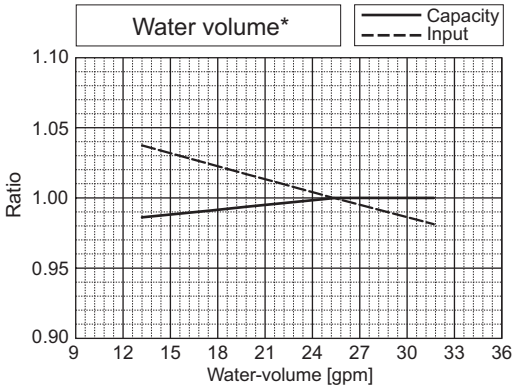
PQRY-		P192ZSLMU
Nominal Cooling Capacity	kW	56.3
	BTU/h	192,000
Input	kW	11.30



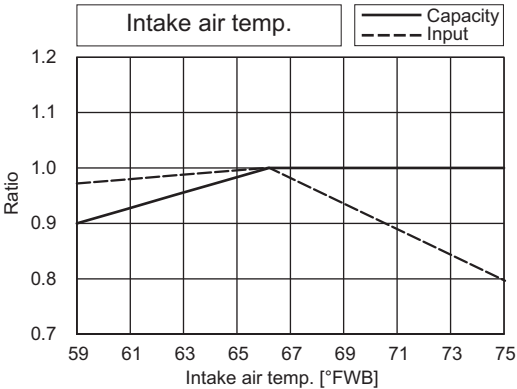
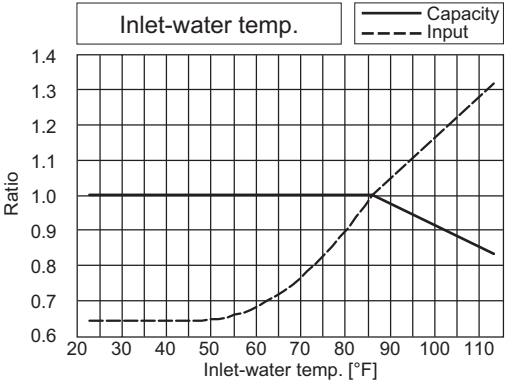
PQRY-		P192ZSLMU
Nominal Heating Capacity	kW	63.0
	BTU/h	215,000
Input	kW	11.02



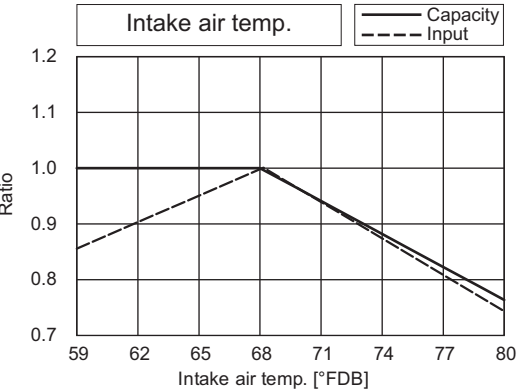
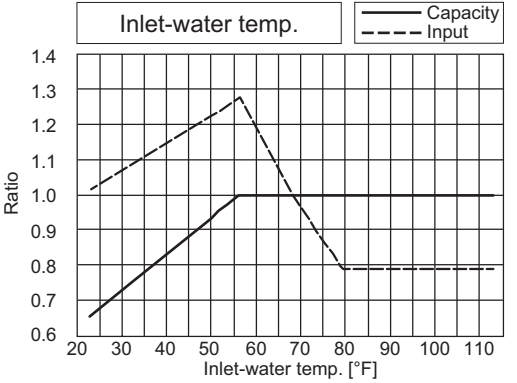
*The drawing indicates characteristic per unit.



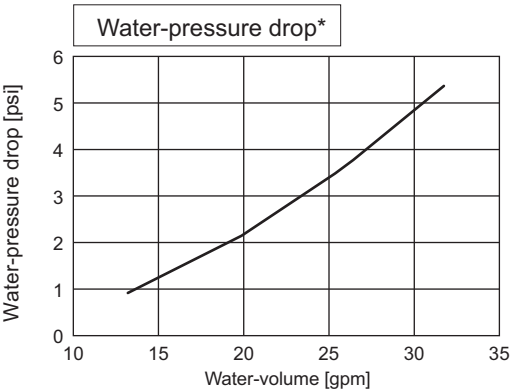
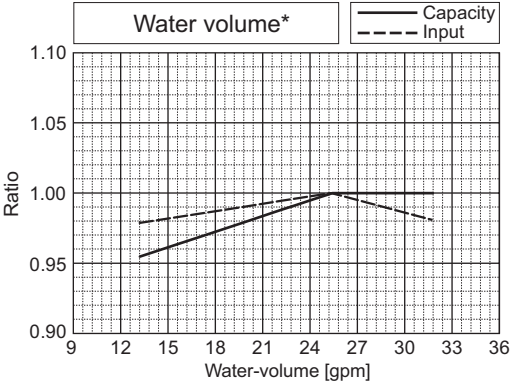
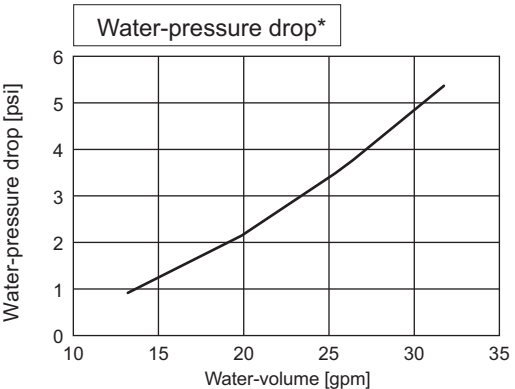
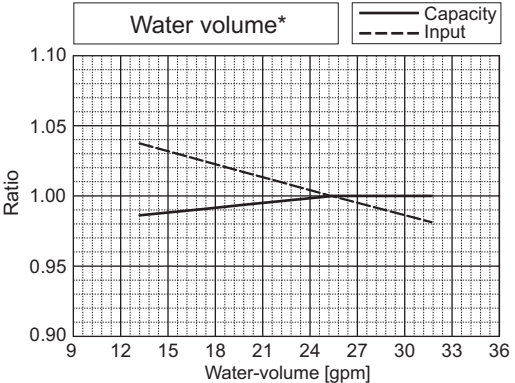
PQRY-		P216ZSLMU
Nominal Cooling Capacity	kW	63.3
	BTU/h	216,000
Input	kW	14.03



PQRY-		P216ZSLMU
Nominal Heating Capacity	kW	71.2
	BTU/h	243,000
Input	kW	12.88

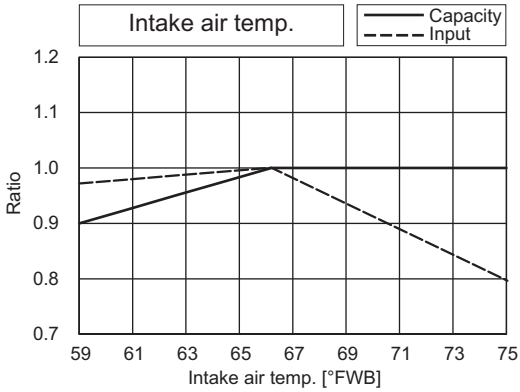
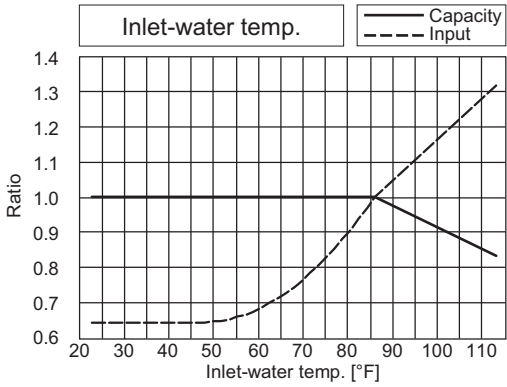


*The drawing indicates characteristic per unit.

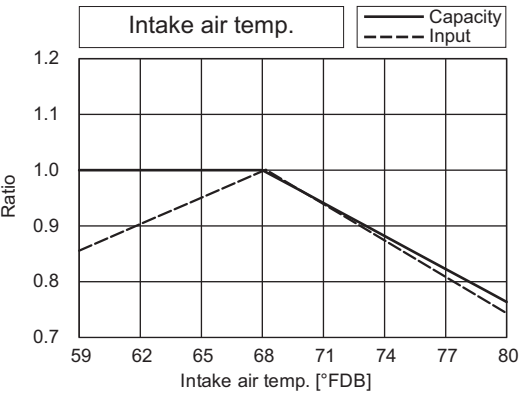
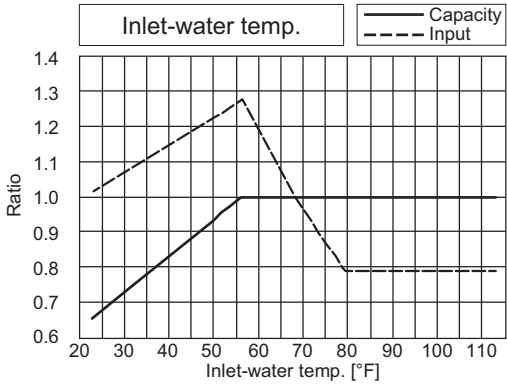


PQRY-P-Z(S)LMU-B

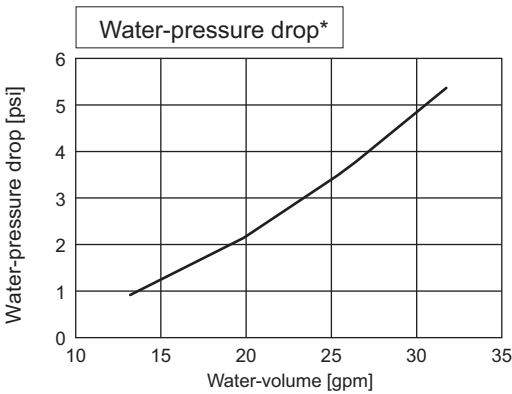
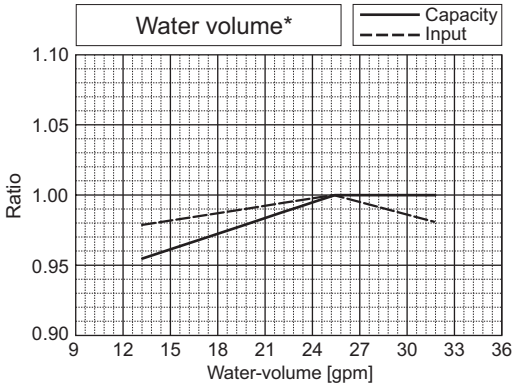
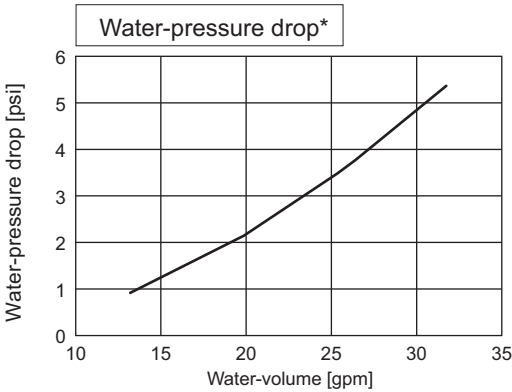
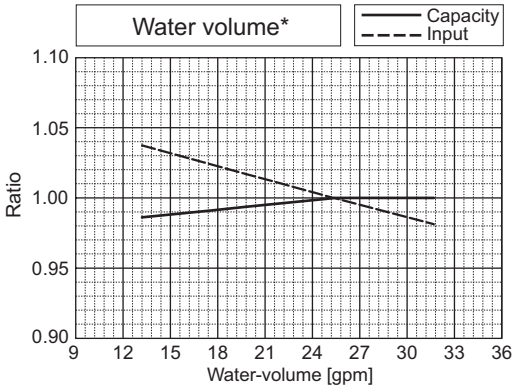
PQRY-		P240ZSLMU
Nominal Cooling Capacity	kW	70.3
	BTU/h	240,000
Input	kW	16.89



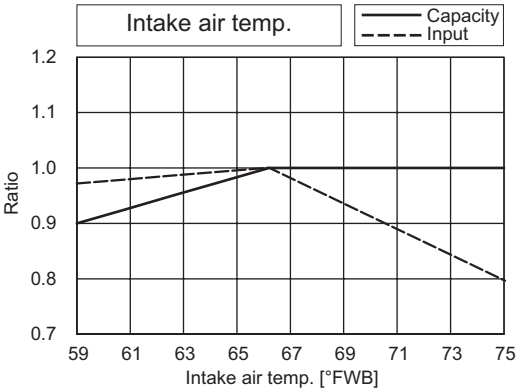
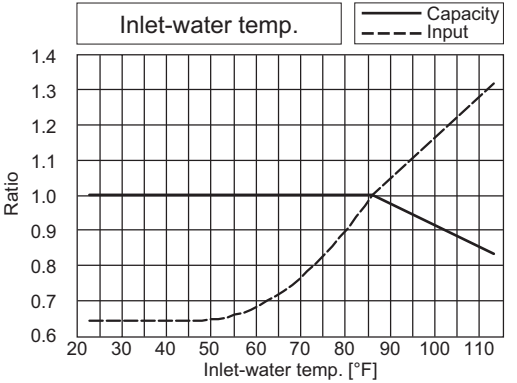
PQRY-		P240ZSLMU
Nominal Heating Capacity	kW	79.1
	BTU/h	270,000
Input	kW	14.58



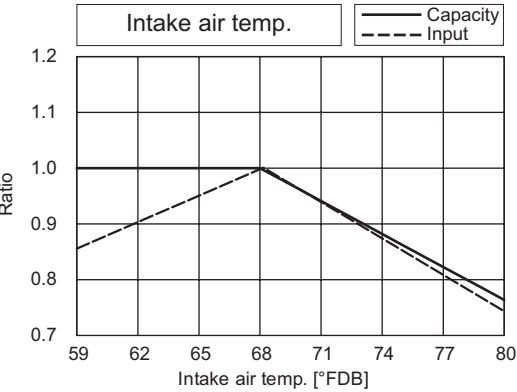
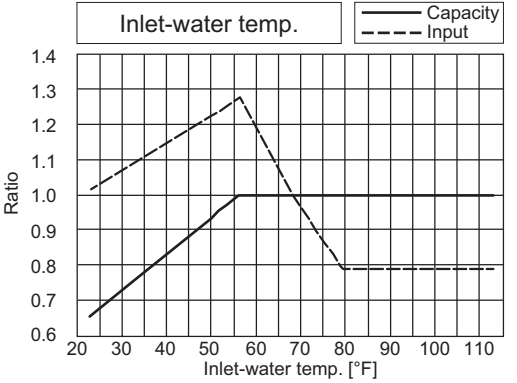
*The drawing indicates characteristic per unit.



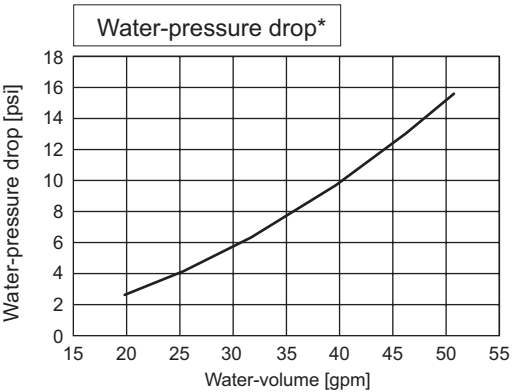
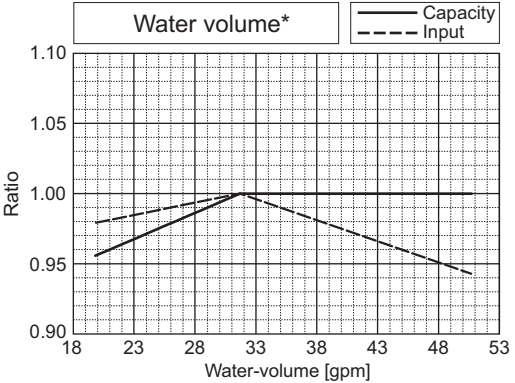
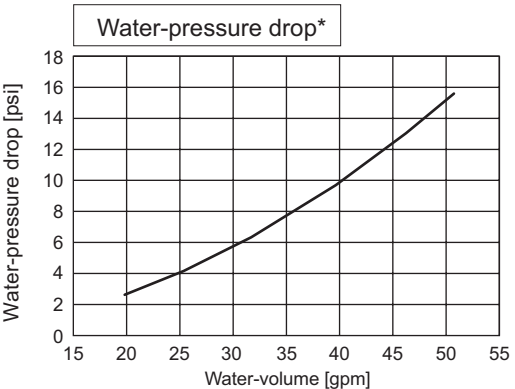
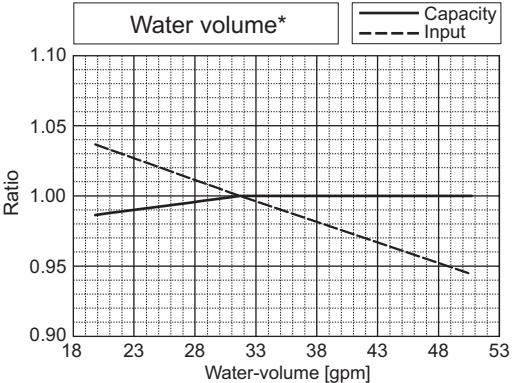
PQRY-		P288ZSLMU
Nominal Cooling Capacity	kW	84.4
	BTU/h	288,000
Input	kW	20.42



PQRY-		P288ZSLMU
Nominal Heating Capacity	kW	94.7
	BTU/h	323,000
Input	kW	17.50

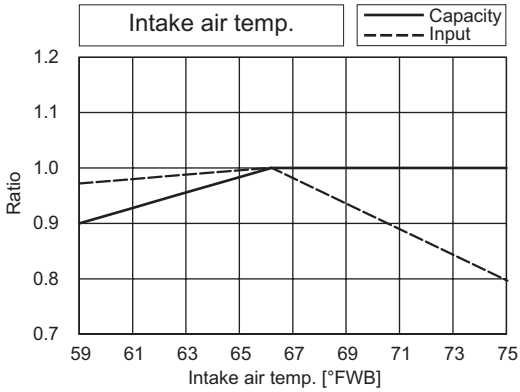
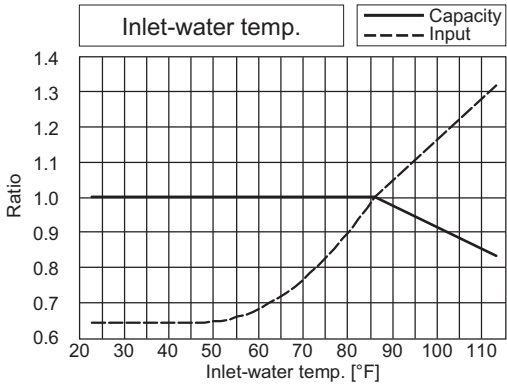


*The drawing indicates characteristic per unit.

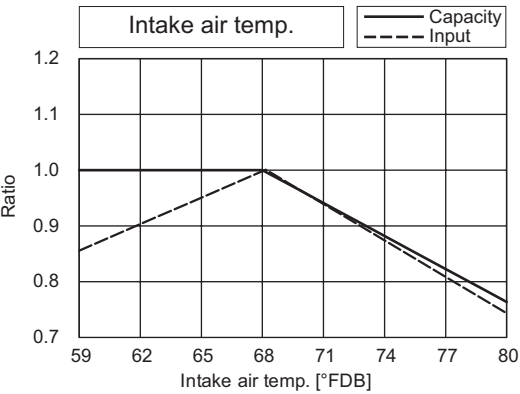
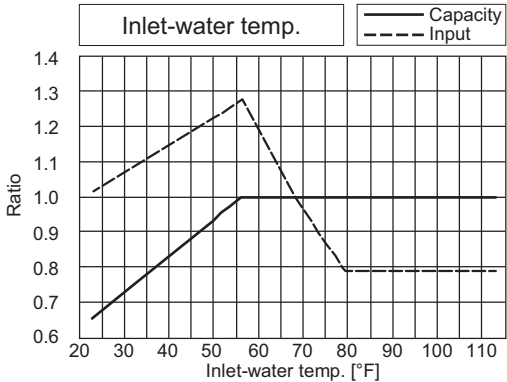


PQRY-P-Z(S)LMU-B

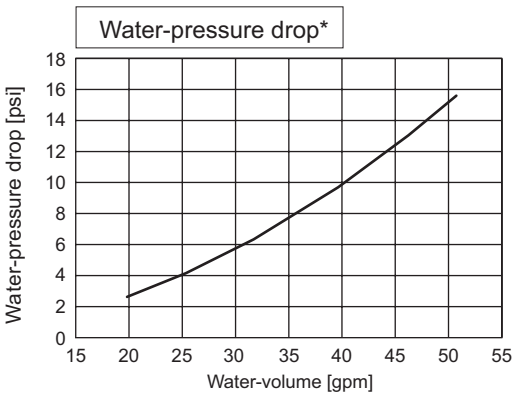
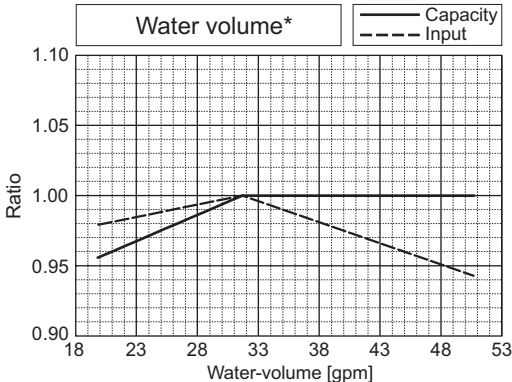
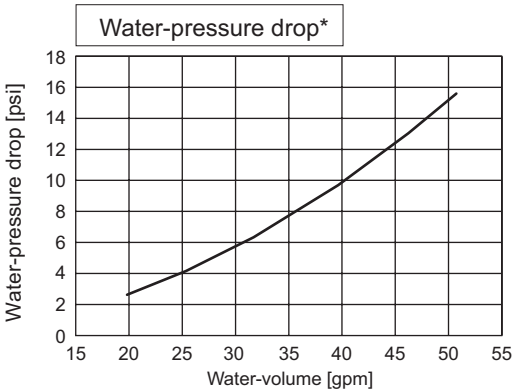
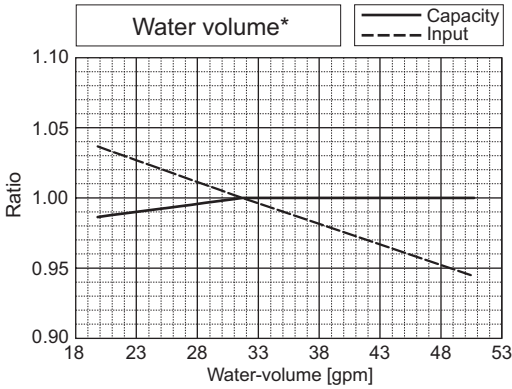
PQRY-		P312ZSLMU
Nominal Cooling Capacity	kW	91.4
	BTU/h	312,000
Input	kW	23.41



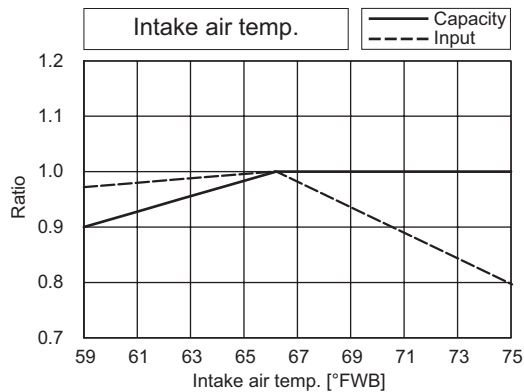
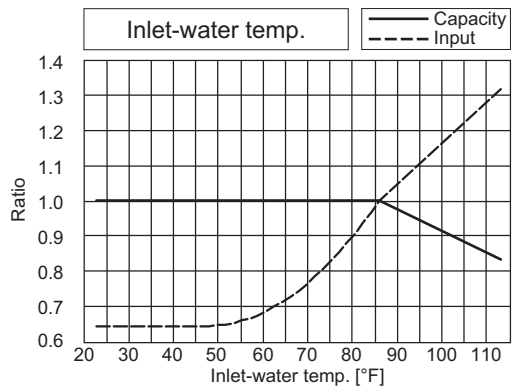
PQRY-		P312ZSLMU
Nominal Heating Capacity	kW	102.6
	BTU/h	350,000
Input	kW	19.11



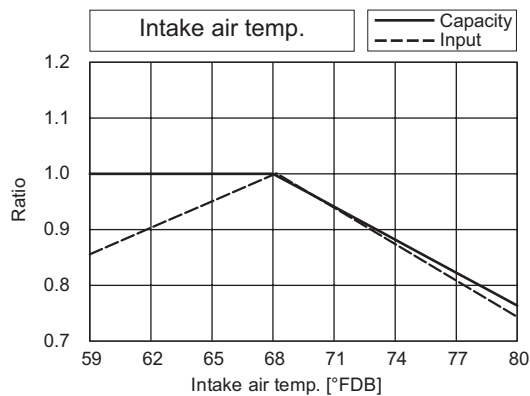
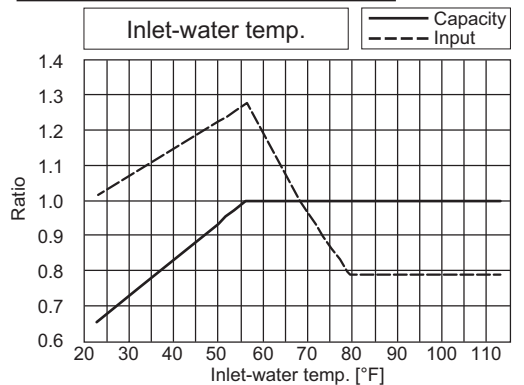
*The drawing indicates characteristic per unit.



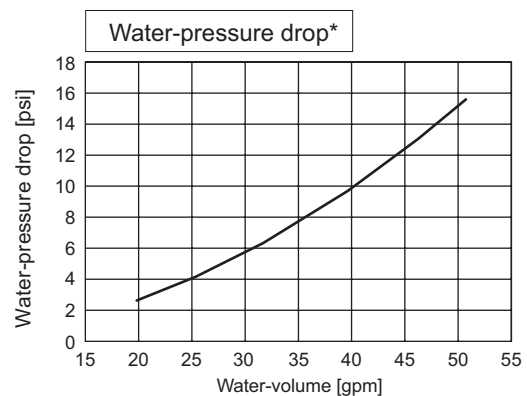
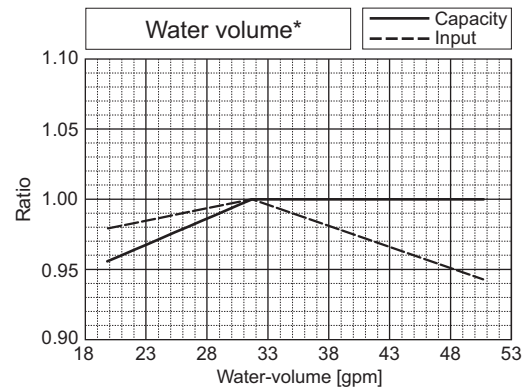
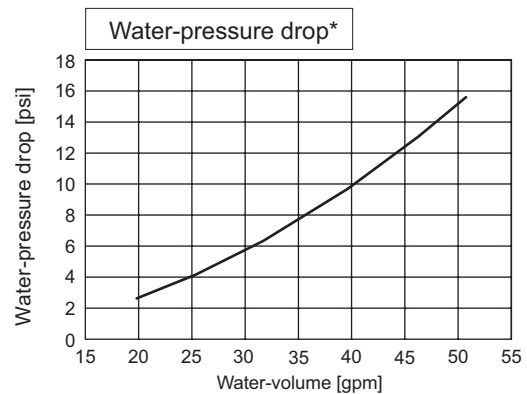
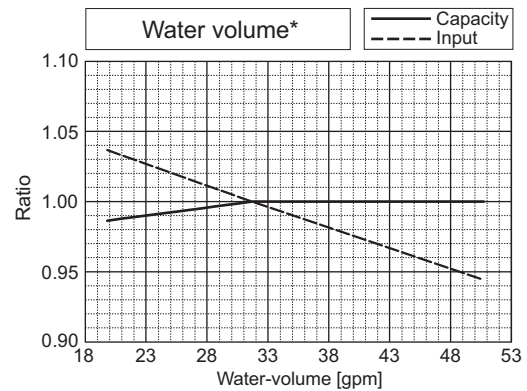
PQRY-		P336ZSLMU
Nominal Cooling Capacity	kW	98.5
	BTU/h	336,000
Input	kW	26.84



PQRY-		P336ZSLMU
Nominal Heating Capacity	kW	110.8
	BTU/h	378,000
Input	kW	20.77



*The drawing indicates characteristic per unit.

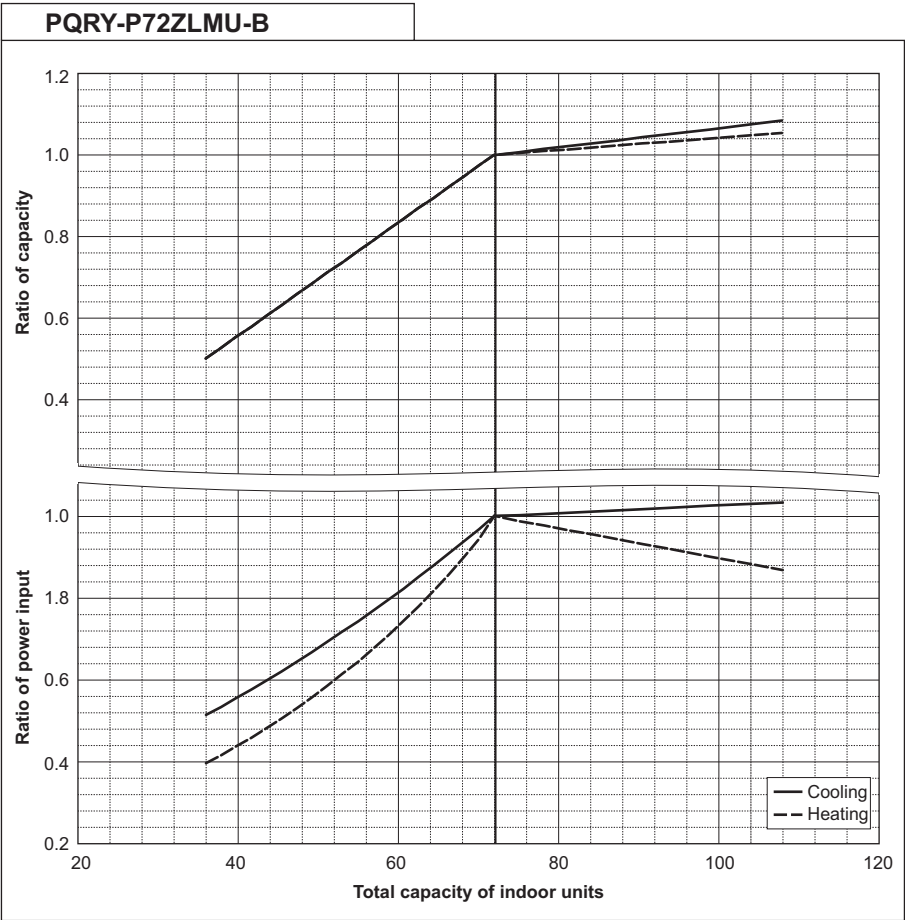


7-2. Correction by total indoor

CITY MULTI system has 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.

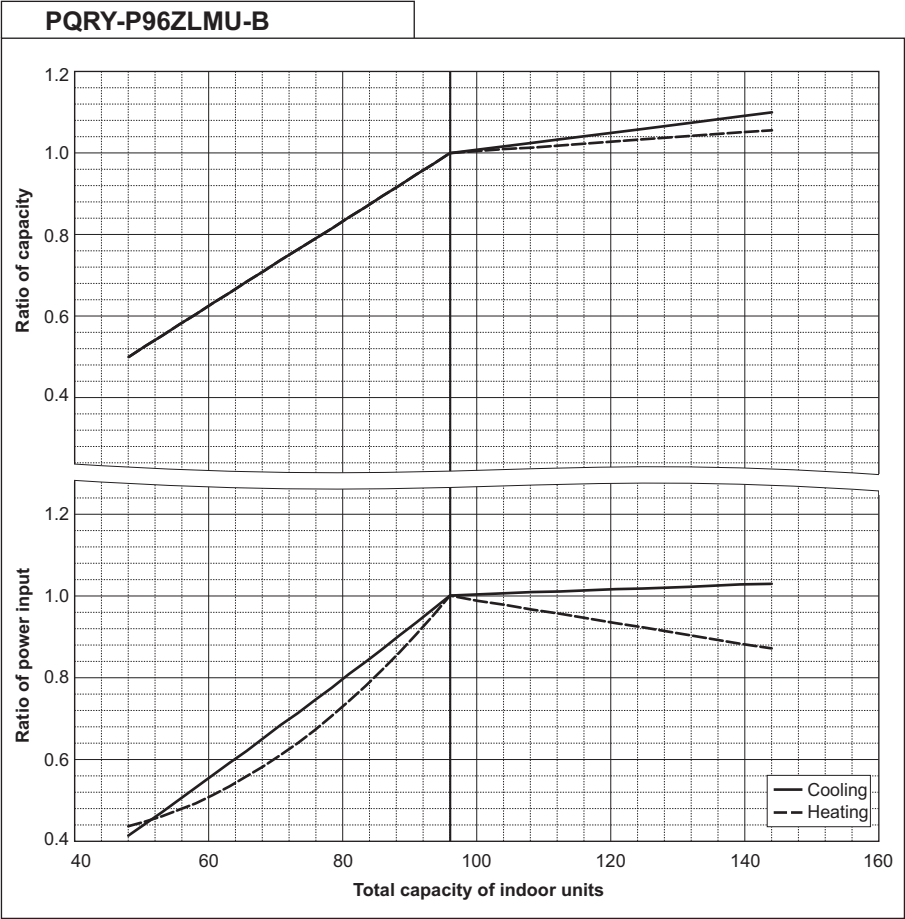
PQRY-		P72ZLMU
Nominal cooling capacity	BTU/h	72,000
	kW	21.1
	Input kW	3.61

PQRY-		P72ZLMU
Nominal Heating capacity	BTU/h	80,000
	kW	23.4
	Input kW	4.04



PQRY-		P96ZLMU
Nominal cooling capacity	BTU/h	96,000
	kW	28.1
	Input kW	5.21

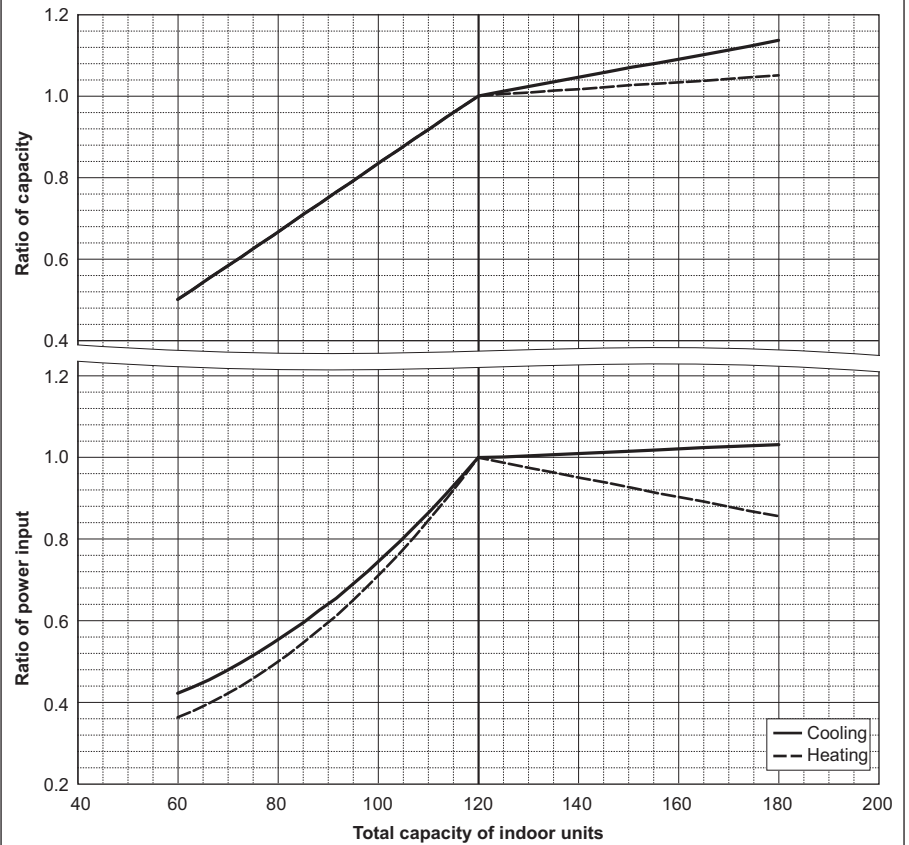
PQRY-		P96ZLMU
Nominal Heating capacity	BTU/h	108,000
	kW	31.7
	Input kW	5.64



PQRY-		P120ZLMU
Nominal cooling capacity	BTU/h	120,000
	kW	35.2
	Input kW	7.51

PQRY-		P120ZLMU
Nominal Heating capacity	BTU/h	135,000
	kW	39.6
	Input kW	7.09

PQRY-P120ZLMU-B



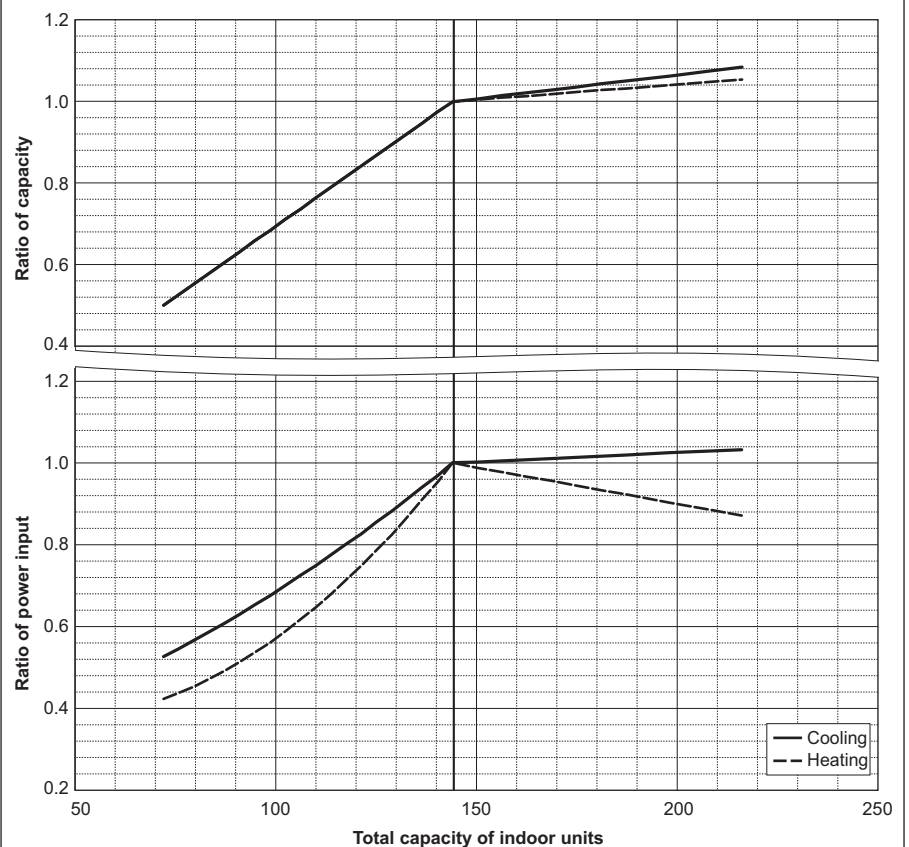
PQRY-		P144ZLMU
Nominal cooling capacity	BTU/h	144,000
	kW	42.2
	Input kW	8.78

PQRY-		P144ZLMU
Nominal Heating capacity	BTU/h	160,000
	kW	46.9
	Input kW	8.11

PQRY-		P144ZSLMU
Nominal cooling capacity	BTU/h	144,000
	kW	42.2
	Input kW	7.11

PQRY-		P144ZSLMU
Nominal Heating capacity	BTU/h	160,000
	kW	46.9
	Input kW	7.45

PQRY-P144Z(S)LMU-B



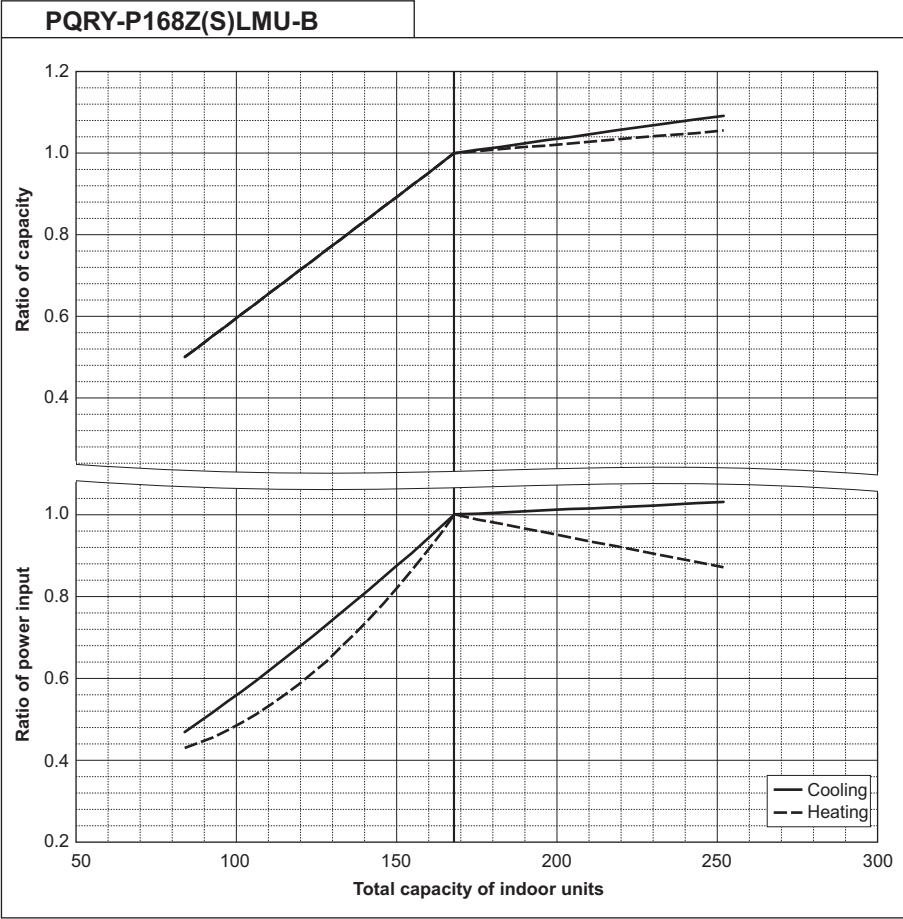
PQRY-P-Z(S)LMU-B

PQRY-		P168ZLMU
Nominal cooling capacity	BTU/h	168,000
	kW	49.2
	Input kW	12.05

PQRY-		P168ZLMU
Nominal Heating capacity	BTU/h	188,000
	kW	55.1
	Input kW	9.86

PQRY-		P168ZSLMU
Nominal cooling capacity	BTU/h	168,000
	kW	49.2
	Input kW	9.33

PQRY-		P168ZSLMU
Nominal Heating capacity	BTU/h	188,000
	kW	55.1
	Input kW	9.34

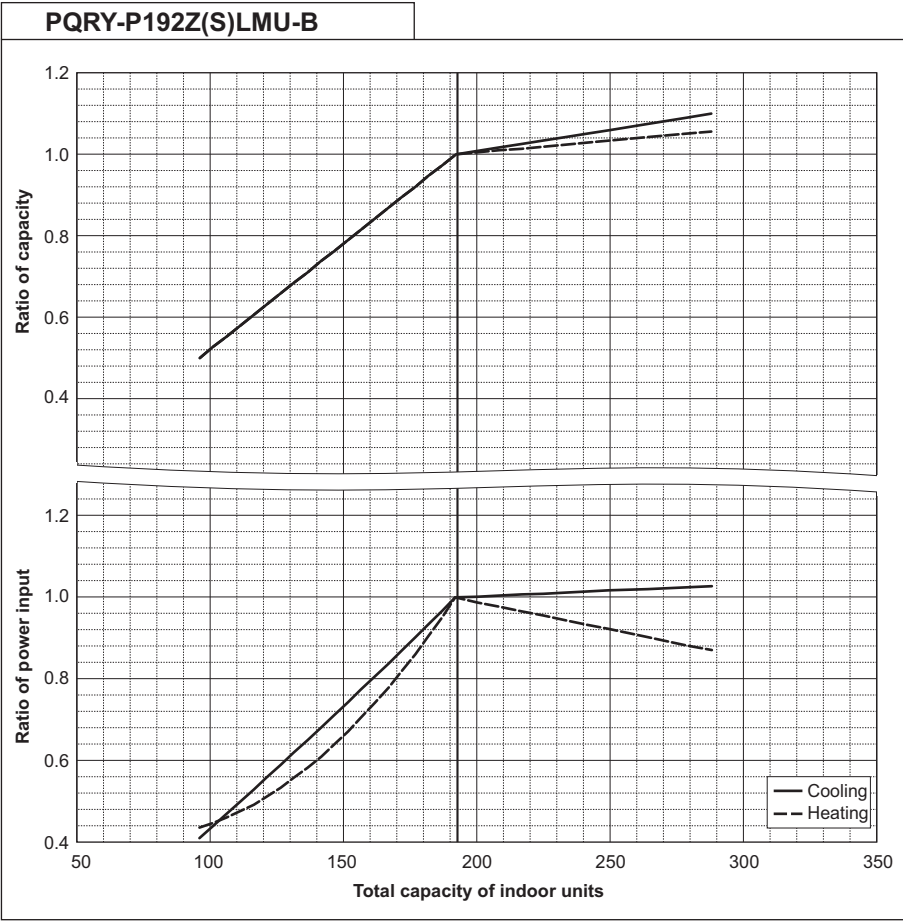


PQRY-		P192ZLMU
Nominal cooling capacity	BTU/h	192,000
	kW	56.3
	Input kW	15.05

PQRY-		P192ZLMU
Nominal Heating capacity	BTU/h	215,000
	kW	63.0
	Input kW	11.90

PQRY-		P192ZSLMU
Nominal cooling capacity	BTU/h	192,000
	kW	56.3
	Input kW	11.30

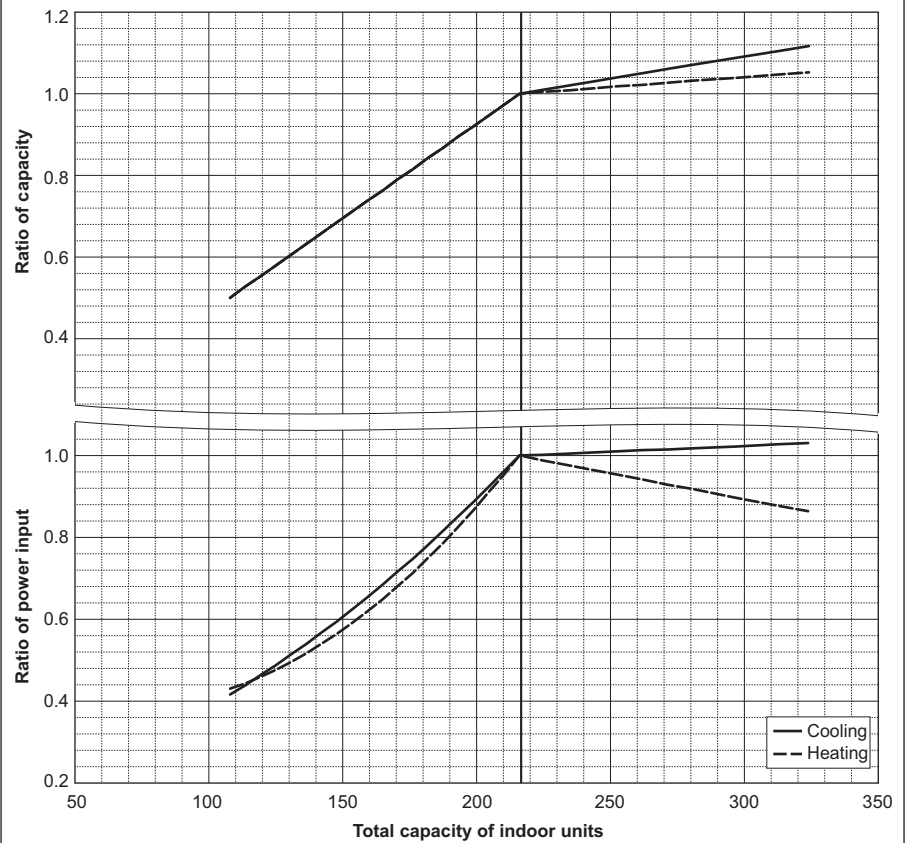
PQRY-		P192ZSLMU
Nominal Heating capacity	BTU/h	215,000
	kW	63.0
	Input kW	11.02



PQRY-		P216ZSLMU
Nominal cooling capacity	BTU/h	216,000
	kW	63.3
	Input kW	14.03

PQRY-		P216ZSLMU
Nominal Heating capacity	BTU/h	243,000
	kW	71.2
	Input kW	12.88

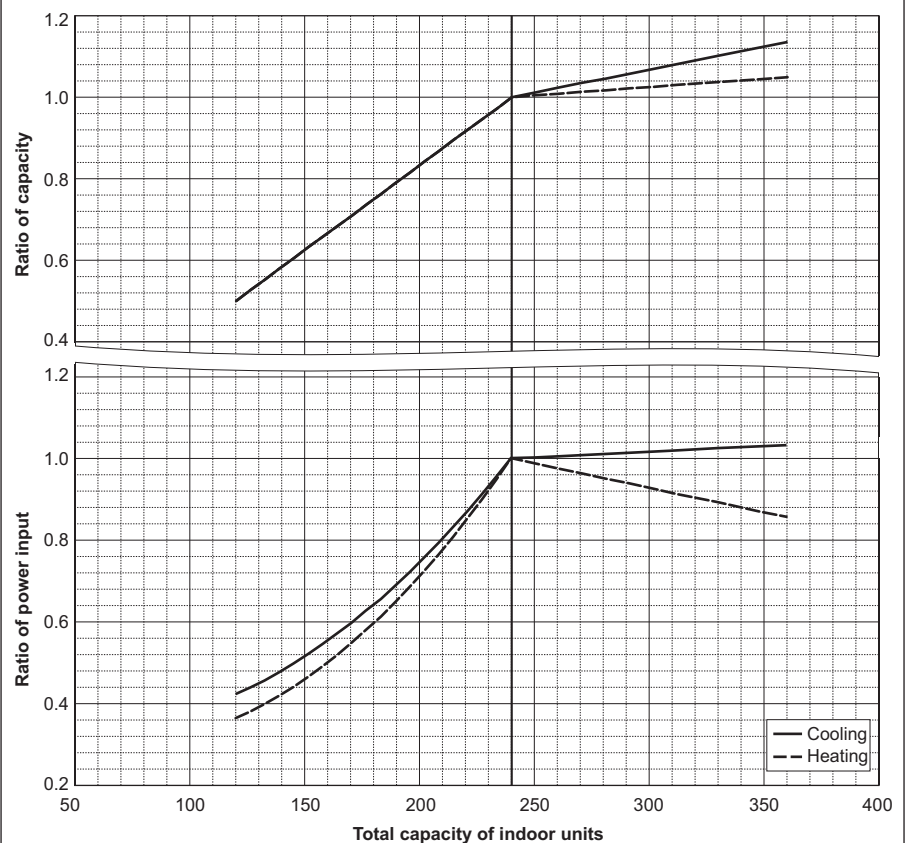
PQRY-P216ZSLMU-B



PQRY-		P240ZSLMU
Nominal cooling capacity	BTU/h	240,000
	kW	70.3
	Input kW	16.89

PQRY-		P240ZSLMU
Nominal Heating capacity	BTU/h	270,000
	kW	79.1
	Input kW	14.58

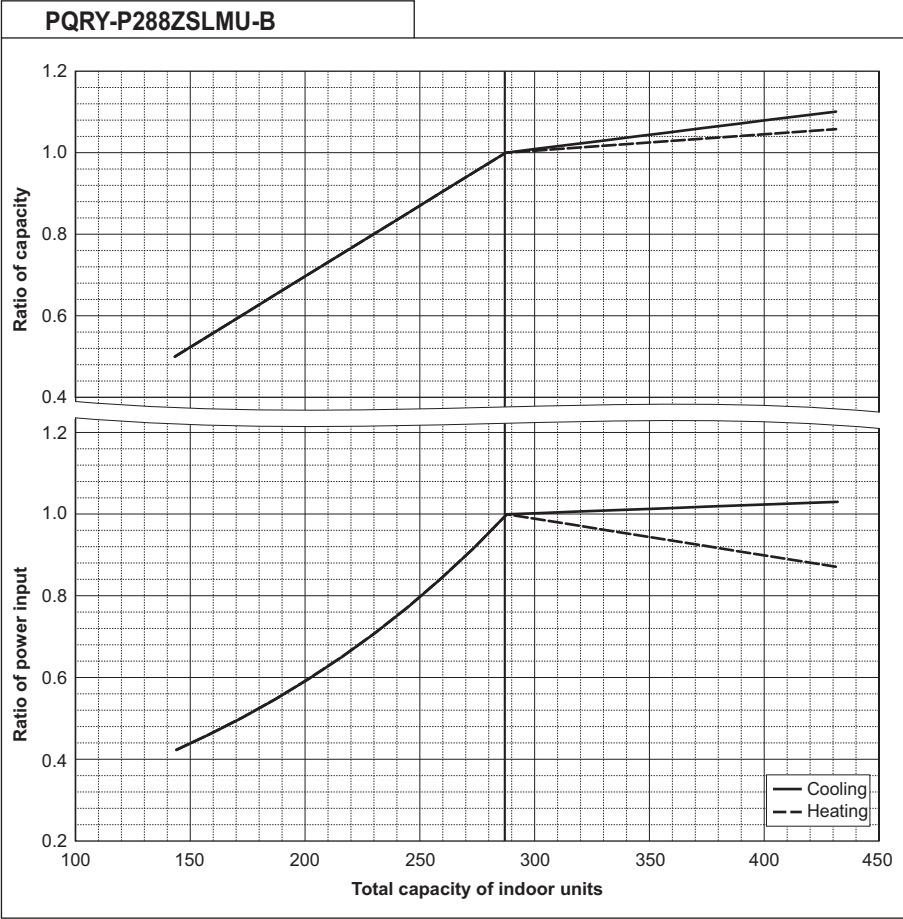
PQRY-P240ZSLMU-B



PQRY-P-Z(S)LMU-B

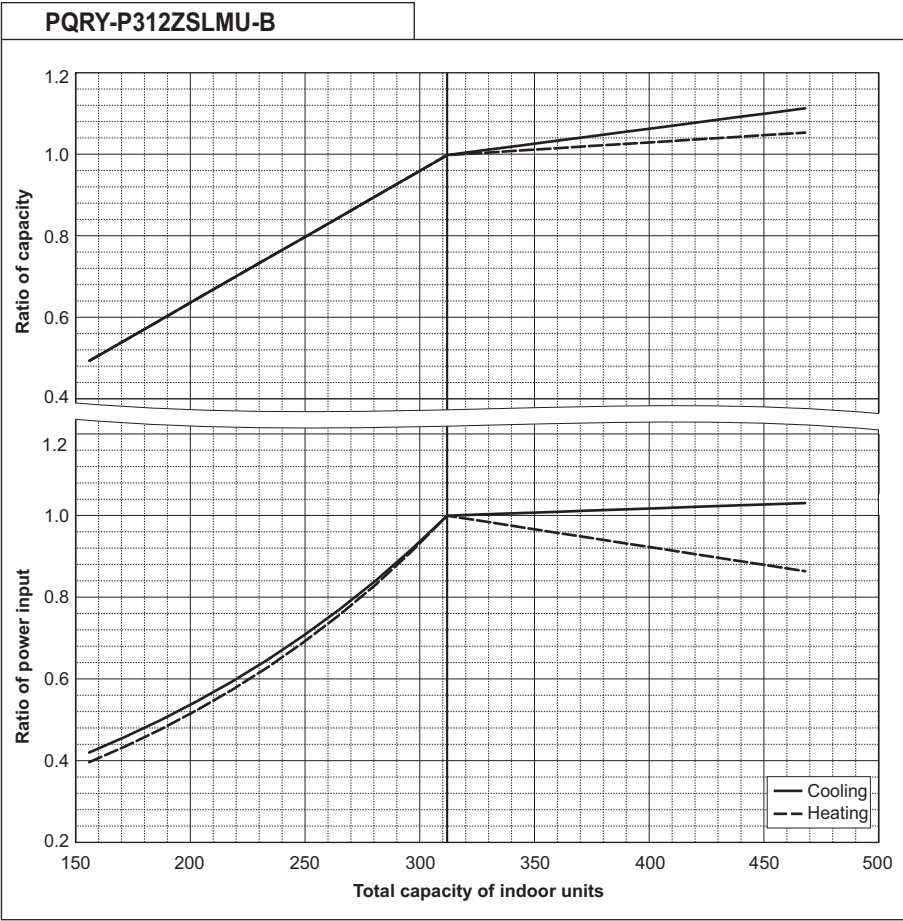
PQRY-		P288ZSLMU
Nominal cooling capacity	BTU/h	288,000
	kW	84.4
	Input kW	20.42

PQRY-		P288ZSLMU
Nominal Heating capacity	BTU/h	323,000
	kW	94.7
	Input kW	17.50



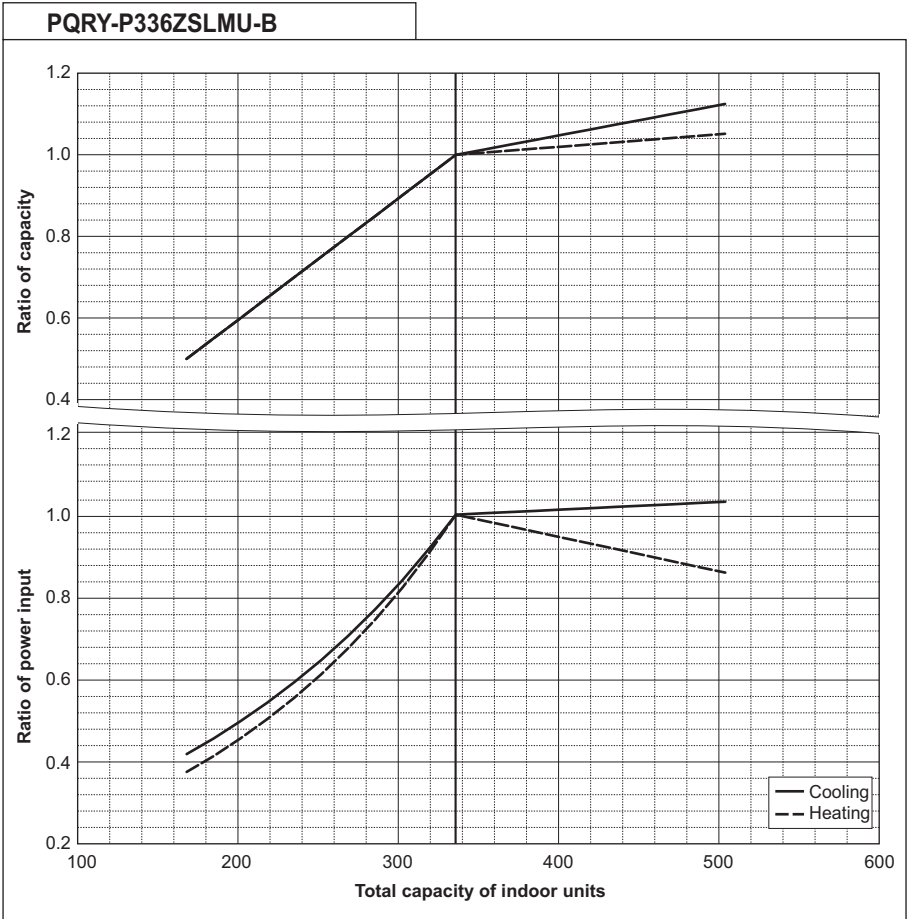
PQRY-		P312ZSLMU
Nominal cooling capacity	BTU/h	312,000
	kW	91.4
	Input kW	23.41

PQRY-		P312ZSLMU
Nominal Heating capacity	BTU/h	350,000
	kW	102.6
	Input kW	19.11



PQRY-		P336ZSLMU
Nominal cooling capacity	BTU/h	336,000
	kW	98.5
	Input kW	26.84

PQRY-		P336ZSLMU
Nominal Heating capacity	BTU/h	378,000
	kW	110.8
	Input kW	20.77

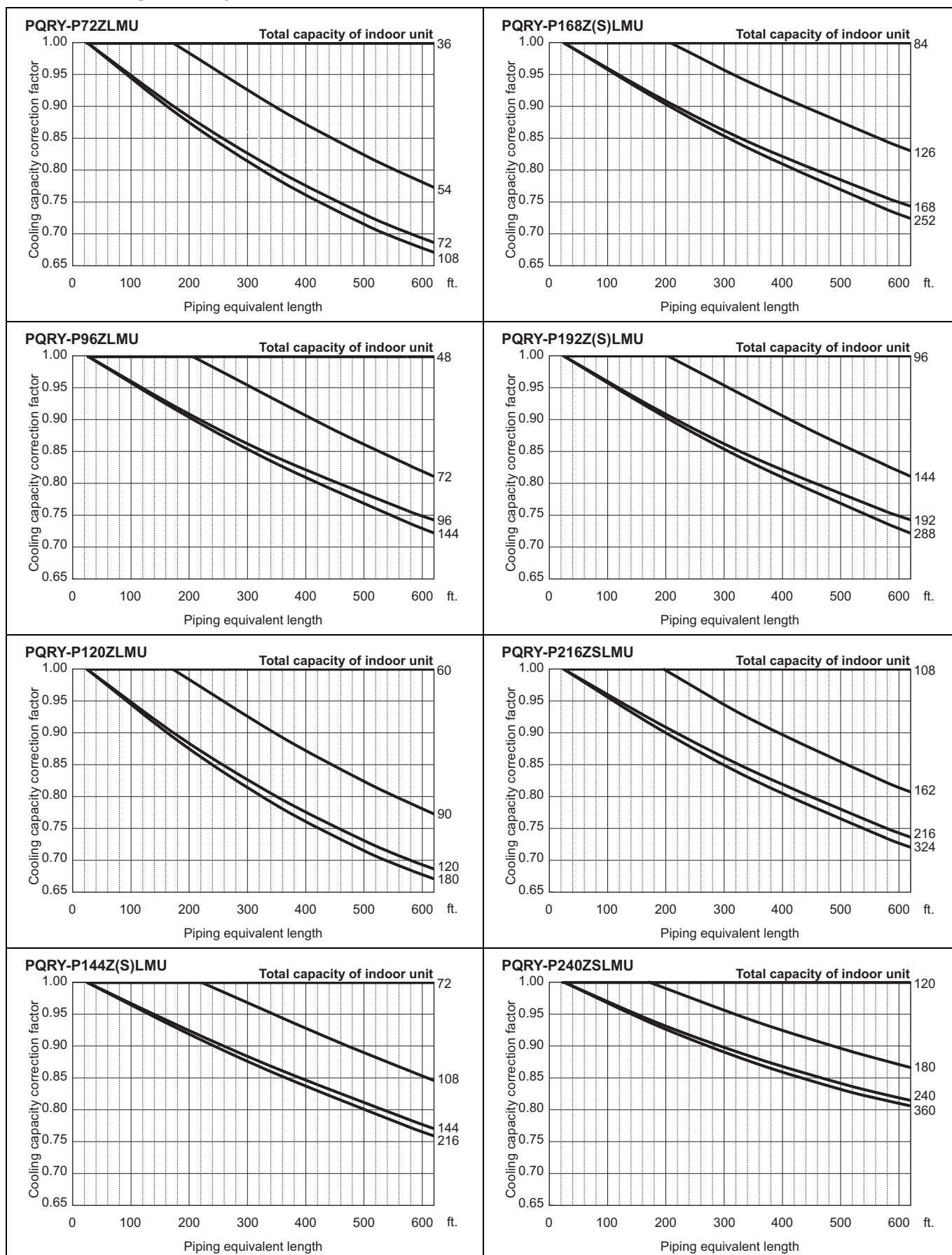


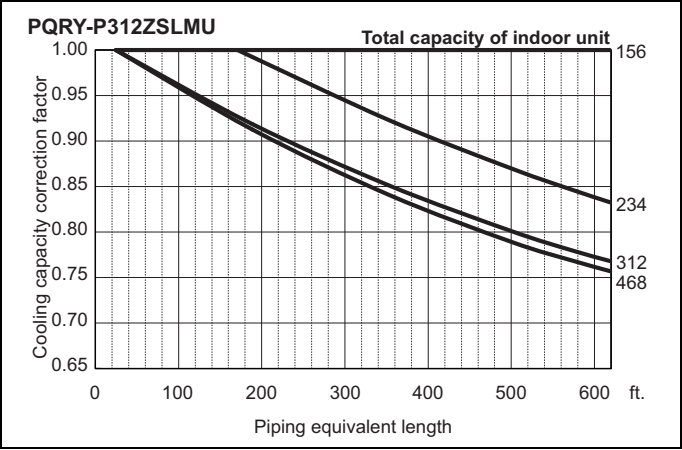
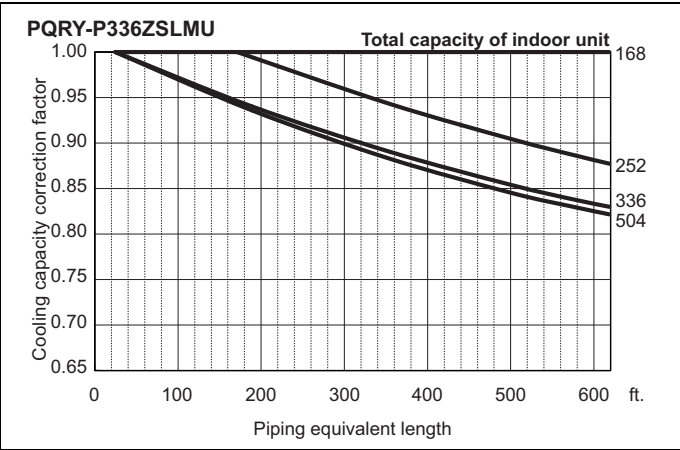
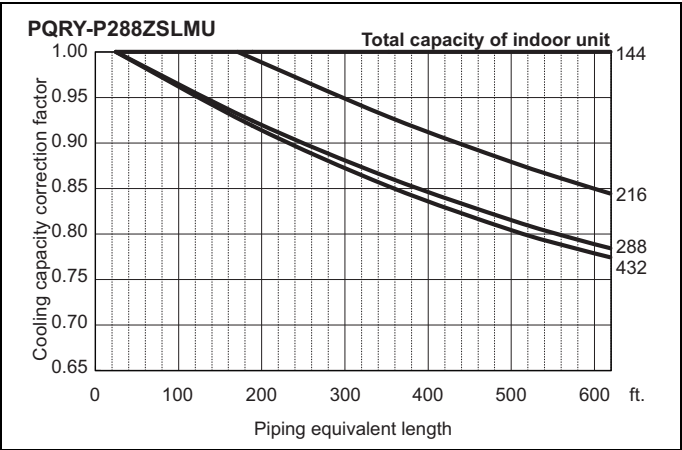
PQRY-P-Z(S)LMU-B

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.

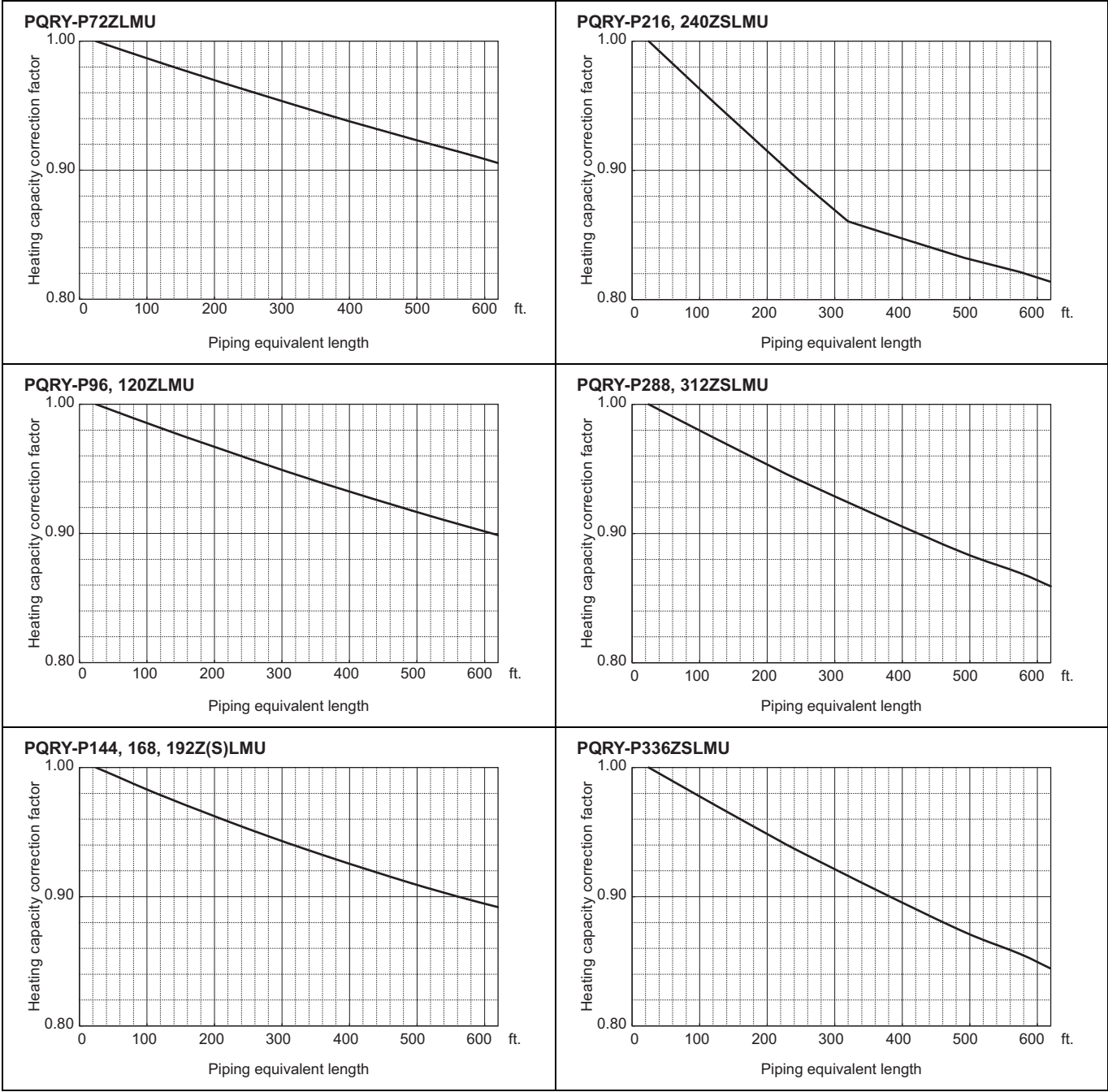
7-3-1. Cooling capacity correction





PQRY-P-Z(s)LMU-B

7-3-2. Heating capacity correction



PQRY-P-Z(S)LMU-B

7-3-3. How to obtain the equivalent piping length**1. PQRYP72ZLMU**

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. PQRYP96ZLMU

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. PQRYP120ZLMU

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, 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. PQRYP288, 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. PQRYP336ZSLMU

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..... 324

 1-1.R410A Piping material..... 324

 1-2.Piping Design 326

 1-3.Refrigerant charging calculation 331

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.

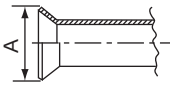
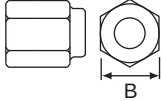
Table 1. Copper pipe size and radial thickness for R410A CITY MULTI.

Size (mm)	Size (in.)	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	

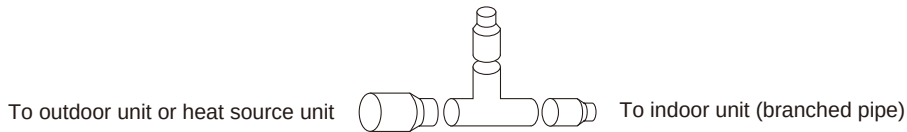
1. Piping Design

Procedures for installing the branched pipes

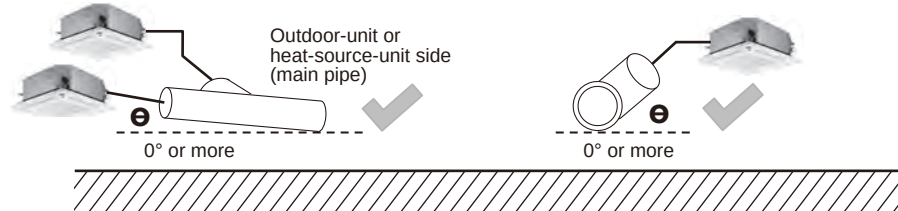
Refer to the instructions that came with the branched pipe kit (separately sold) for details.

[1] Branches on the indoor-unit side

Joint



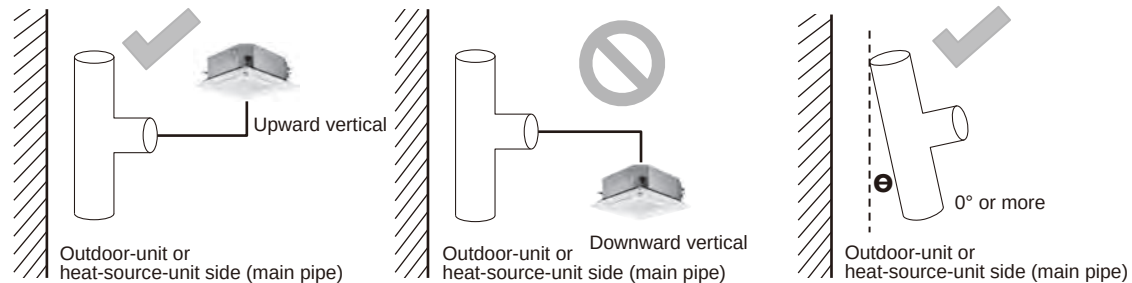
Horizontal installation



Be careful on return oil.

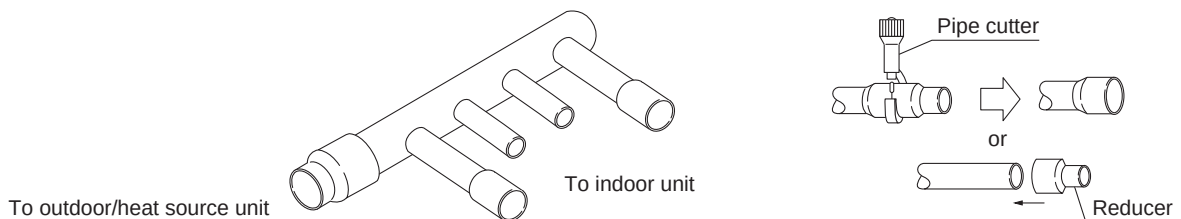


Vertical installation



- Restrictions described here apply to the joint in the gas line. Refer to the installation manual of the joint for details.
- CMY-Y202S-G2 or 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

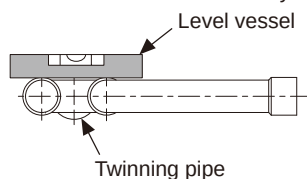


- Restrictions described here apply to the header in the gas line. Refer to the installation manual of the header for details on how to install the header.
- If the size of the refrigerant pipe that is selected by following the instructions under "Piping Design" section does not match the size of the 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.

The Twinning pipe must be installed horizontally using a level vessel to avoid unit damage.

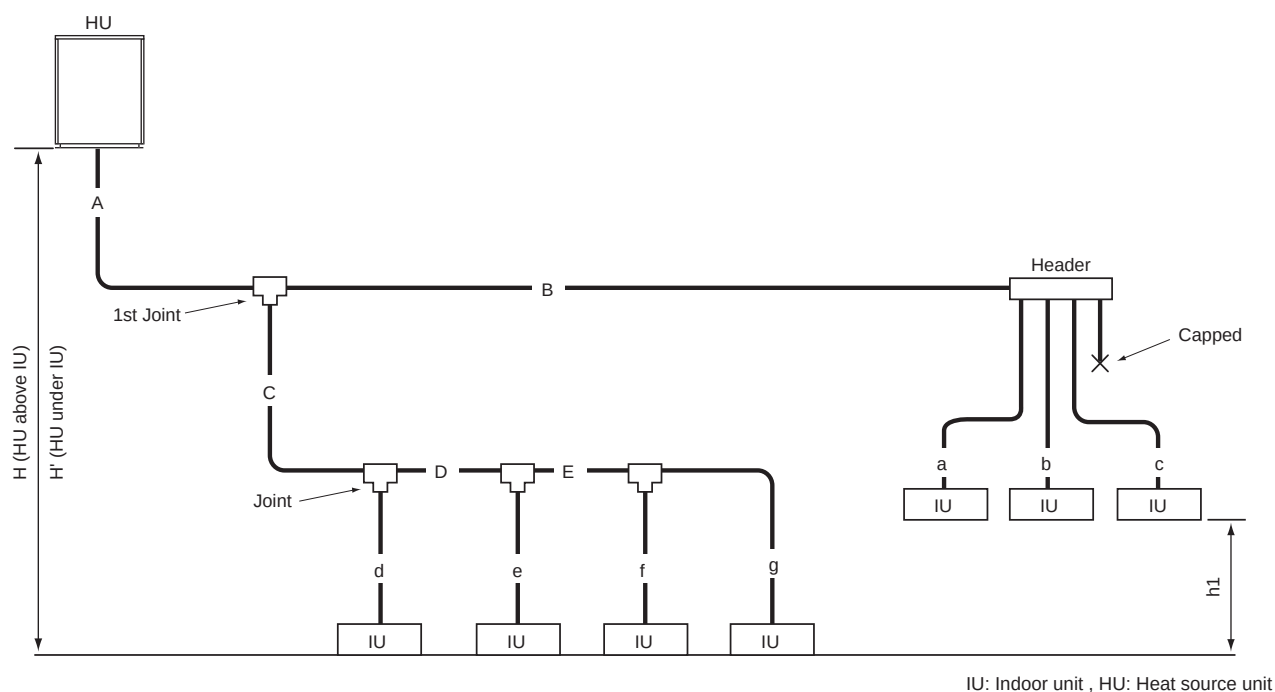


- Minimum length of the straight section of the pipe before the twinning pipes
Always use the pipes supplied in the twinning pipe kit, and make sure the straight section of the pipe immediately before it connects to the twinning pipe is at least 500 mm (19-11/16 in.). Failure to do so may damage the 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

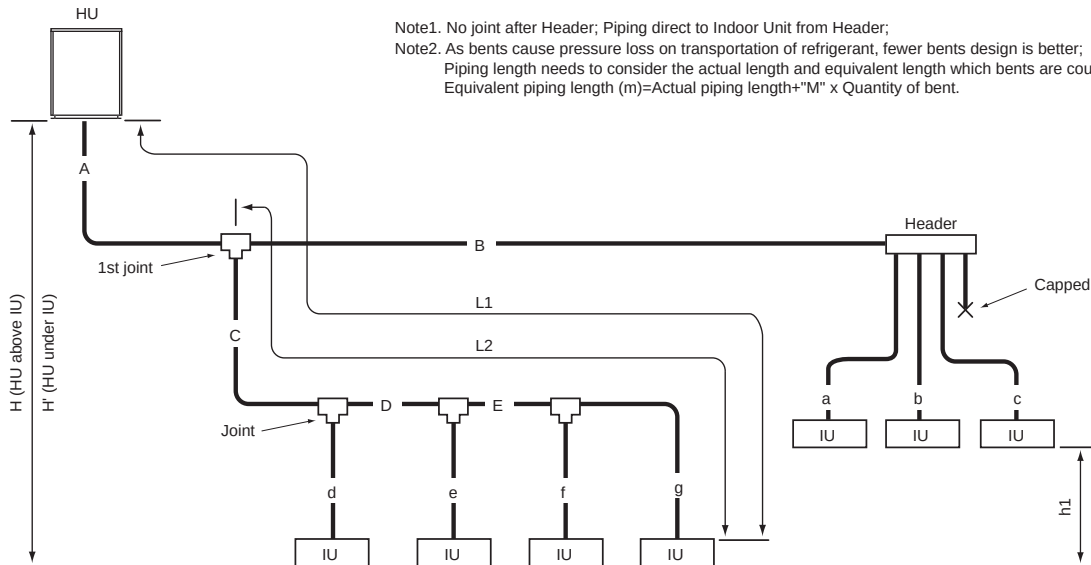


Fig. A Piping scheme

IU : Indoor unit , HU : Heat source unit

Piping length				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 m [984 ft.] for PQHY-P72-120TLMU/YLMU, 500 m [1640 ft.] for PQHY-P144-240TLMU/YLMU

*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

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.]

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]

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

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.

Note3. Indoor capacity is described as its model size;

For example, PEFY-P06NMAU-E**, its capacity is P06;

Note4. Total down-stream Indoor capacity is the summary of the model size of Indoors downstream.

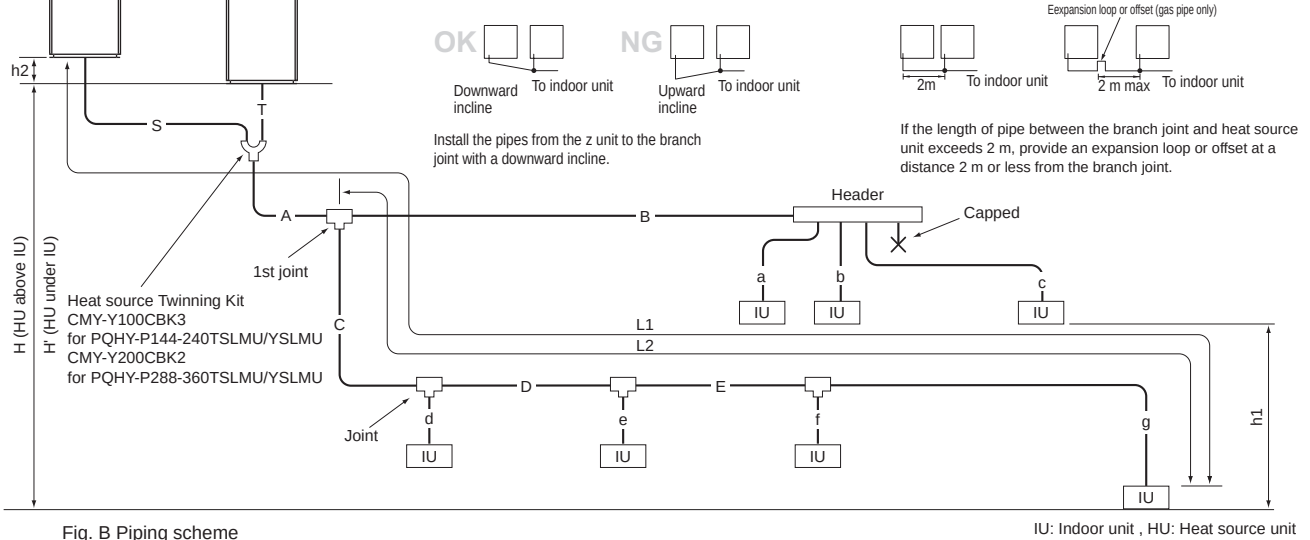
For example, PEFY-P06NMAU-E** + PEFY-P08NMAU-E**: Total Indoor capacity = P06 + P08 = P14

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

1-2-2. PQHY-P144-360TSLMU/YSLMU Piping

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" × Quantity of bent.



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 [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	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.

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]

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]

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

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.

Note3. Indoor capacity is described as its model size;

For example, PEFY-P06NMAU-E**, its capacity is P06;

Note4. Total down-stream Indoor capacity is the summary of the model size of Indoors downstream.

For example, PEFY-P06NMAU-E** + PEFY-P08NMAU-E**: 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

1-2-3. PQHY-P72-192ZLMU Piping

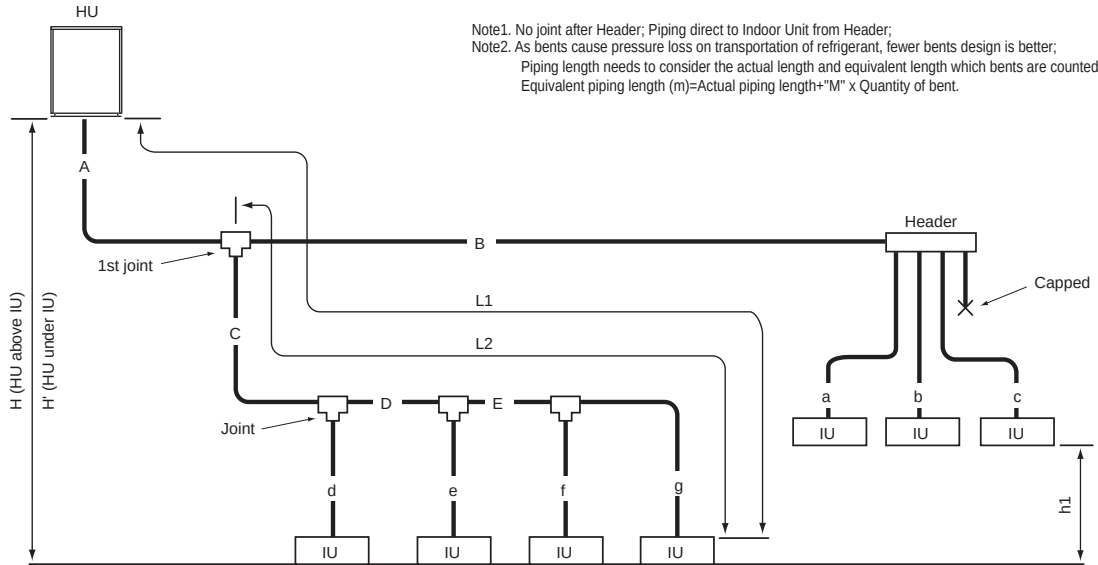


Fig. A Piping scheme

IU : Indoor unit , HU : Heat source unit

Piping length				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-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 m [984 ft.] 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

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.]

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]

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

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.

Note3. Indoor capacity is described as its model size;

For example, PEFY-P06NMAU-E**, its capacity is P06;

Note4. Total down-stream Indoor capacity is the summary of the model size of Indoors downstream.

For example, PEFY-P06NMAU-E** + PEFY-P08NMAU-E**. Total Indoor capacity = P06 + P08 = P14

Note5. Piping sized determined by the Total down-stream indoor capacity is NOT necessary

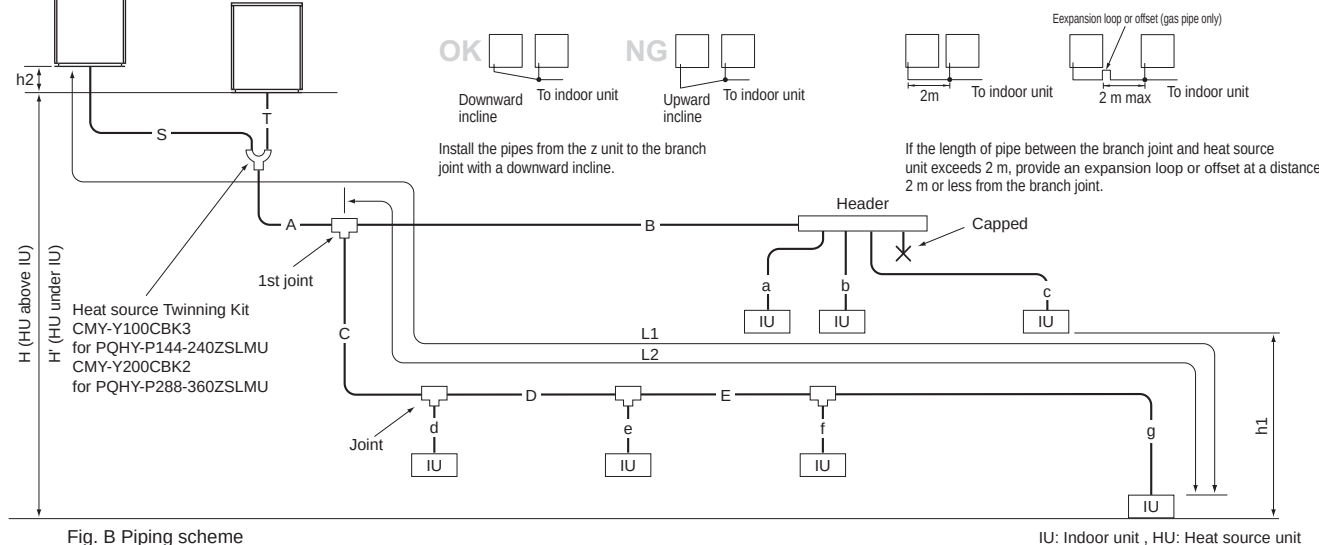
to be bigger than the up-stream one.

i.e. A>=B, A>C>=D

1. Piping Design

1-2-4. PQHY-P144-360ZSLMU Piping

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

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 [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.

Bends equivalent length "M"

Heat source Model	M (m/bent [ft./bent])
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]

Table1. Piping "A" size selection rule

Heat source unit	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.

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

	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-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-E**, its capacity is P06;

Note4. Total down-stream Indoor capacity is the summary of the model size of Indoors downstream.

For example, PEFY-P06NMAU-E** + PEFY-P08NMAU-E**: 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-A2/Y(S)LMU-A2

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.
 - * If the following (1) and (2) are met, add 0.3 kg [11 oz] of refrigerant per indoor unit.
 - (1) When only PEFY-P18NMAU-E**, PEFY-P24NMAU-E**, or PEFY-P30NMAU-E** are connected
 - (2) When the total number of connected indoor units is 6 or less
 - * When connecting PLFY-EP18NEMU**-E**, PLFY-EP24NEMU**-E**, or PLFY-EP36NEMU**-E**, add 0.4 kg [15 oz] of refrigerant per indoor unit.
- If the calculation results in a fraction of less than 0.1 kg [1 oz], round up to the next 0.1 kg [1 oz]. For example, if the result of the calculation was 11.89 kg [420.0 oz], round the result up to 11.9 kg [420 oz].

<Additional Charge>

- Piping length from heat source unit to the farthest indoor unit ≤ 30.5 m [100 ft]: Use table [A].
- Piping length from heat source unit to the farthest indoor unit > 30.5 m [100 ft]: Use 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 [36 oz]																
P240																
1.0 kg [36 oz]																
+ 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	[159 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

Example: PQHY-P144TLMU/YLMU

m [kg]					
Indoor	1: P48	A: ø12.7	40 m	a: ø9.52	10 m
	2: P36	B: ø9.52	10 m	b: ø9.52	5 m
	3: P24	C: ø9.52	15 m	c: ø9.52	10 m
	4: P12	D: ø9.52	10 m	d: ø6.35	10 m
	5: P24			e: ø9.52	10 m
The total length of liquid pipe of each size is as follows:					
ø12.7 : A = 40 = 40 m					
ø9.52 : B + C + D + a + b + c + e = 10 + 15 + 10 + 10 + 5 + 10 + 10 = 70 m					
ø6.35 : d = 10 = 10 m					
Total capacity of connecting Indoor units Pt :					
Pt = P48 + P36 + P24 + P12 + P24 = P144, therefore α = 3.5 kg					

ft. [oz]					
Indoor	1: P48	A: ø1/2"	131 ft.	a: ø3/8"	32 ft.
	2: P36	B: ø3/8"	32 ft.	b: ø3/8"	16 ft.
	3: P24	C: ø3/8"	49 ft.	c: ø3/8"	32 ft.
	4: P12	D: ø3/8"	32 ft.	d: ø1/4"	32 ft.
	5: P24			e: ø3/8"	32 ft.
The total length of liquid pipe of each line is as follows:					
ø1/2" : A = 131 = 131 ft.					
ø3/8" : B + C + D + a + b + c + e = 32 + 49 + 32 + 32 + 16 + 32 + 32 = 225 ft.					
ø1/4" : d = 32 = 32 ft.					
Total capacity of connecting Indoor units Pt :					
Pt = P48 + P36 + P24 + P12 + P24 = P144, therefore α = 124 oz					

m [kg]											
Additional refrigerant charge	=	Total length of liquid pipe sized ø19.05	+	Total length of liquid pipe sized ø15.88	+	Total length of liquid pipe sized ø12.7	+	Total length of liquid pipe sized ø9.52	+	Total length of liquid pipe sized ø6.35	+ 3.5
(kg)		x 0.26 (kg/m)		x 0.18 (kg/m)		x 0.11 (kg/m)		x 0.054 (kg/m)		x 0.021 (kg/m)	
		0 (m) x 0.26 (kg/m)		0 (m) x 0.18 (kg/m)		40 (m) x 0.11 (kg/m)		70 (m) x 0.054 (kg/m)		10 (m) x 0.021 (kg/m)	
	=	0	+	0	+	40 x 0.11	+	70 x 0.054	+	10 x 0.021	+ 3.5
		= 11.9 kg									

ft. [oz]											
Additional refrigerant charge	=	Total length of liquid pipe sized ø3/4"	+	Total length of liquid pipe sized ø5/8"	+	Total length of liquid pipe sized ø1/2"	+	Total length of liquid pipe sized ø3/8"	+	Total length of liquid pipe sized ø1/4"	+ 124
(oz)		x 2.80 (oz/ft.)		x 1.94 (oz/ft.)		x 1.19 (oz/ft.)		x 0.59 (oz/ft.)		x 0.23 (oz/ft.)	
		0 (ft.) x 2.80 (oz/ft.)		0 (ft.) x 1.94 (oz/ft.)		131 (ft.) x 1.19 (oz/ft.)		225 (ft.) x 0.59 (oz/ft.)		32 (ft.) x 0.23 (oz/ft.)	
	=	0	+	0	+	131 x 1.19	+	225 x 0.59	+	32 x 0.23	+ 124
		= 420 [oz]									

■ 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.

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	5.0 kg	5.0 kg	5.0 kg	6.0 kg	6.0 kg	6.0 kg	11.7 kg	11.7 kg	10.0 kg	10.0 kg
	Charged on site	22.0 kg	28.5 kg	29.5 kg	42.0 kg	51.5 kg	53.5 kg	56.0 kg	57.0 kg	42.0 kg	51.5 kg
	Total for system	27.0 kg	33.5 kg	34.5 kg	48.0 kg	57.5 kg	59.5 kg	67.7 kg	68.7 kg	52.0 kg	61.5 kg
	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	48 lbs 9 oz	62 lbs 14 oz	65 lbs 1 oz	92 lbs 10 oz	113 lbs 9 oz	118 lbs 0 oz	123 lbs 8 oz	125 lbs 11 oz	92 lbs 10 oz	113 lbs 9 oz
	Total for system	59 lbs 9 oz	73 lbs 14 oz	76 lbs 1 oz	105 lbs 14 oz	126 lbs 13 oz	131 lbs 3 oz	149 lbs 5 oz	151 lbs 8 oz	114 lbs 11 oz	135 lbs 10 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	P360 T/YSLMU
Maximum refrigerant charge	Factory charged	10.0 kg	10.0 kg	10.0 kg	12.0 kg	12.0 kg	12.0 kg	12.0 kg
	Charged on site	53.5 kg	55.0 kg	56.0 kg	67.5 kg	67.5 kg	67.5 kg	70.0 kg
	Total for system	63.5 kg	65.0 kg	66.0 kg	79.5 kg	79.5 kg	79.5 kg	82.0 kg
	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	26 lbs 8 oz
	Charged on site	118 lbs 0 oz	121 lbs 5 oz	123 lbs 8 oz	148 lbs 13 oz	148 lbs 13 oz	148 lbs 13 oz	154 lbs 6 oz
	Total for system	140 lbs 0 oz	143 lbs 5 oz	145 lbs 9 oz	175 lbs 5 oz	175 lbs 5 oz	175 lbs 5 oz	180 lbs 13 oz

1. Piping Design

■ PQHY-P-Z(S)LMU-B

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.
 - * If the following (1) and (2) are met, add 0.3 kg [11 oz] of refrigerant per indoor unit.
 - (1) When only PEFY-P18NMAU-E**, PEFY-P24NMAU-E**, or PEFY-P30NMAU-E** are connected
 - (2) When the total number of connected indoor units is 6 or less
 - * When connecting PLFY-EP18NEMU**-E**, PLFY-EP24NEMU**-E**, or PLFY-EP36NEMU**-E**, add 0.4 kg [15 oz] of refrigerant per indoor unit.
- If the calculation results in a fraction of less than 0.1 kg [1 oz], round up to the next 0.1 kg [1 oz]. For example, if the result of the calculation was 11.89 kg [420.0 oz], round the result up to 11.9 kg [420 oz].

<Additional Charge>

- Piping length from heat source unit to the farthest indoor unit ≤ 30.5 m [100 ft]: Use table [A].
- Piping length from heat source unit to the farthest indoor unit > 30.5 m [100 ft]: Use table [B].

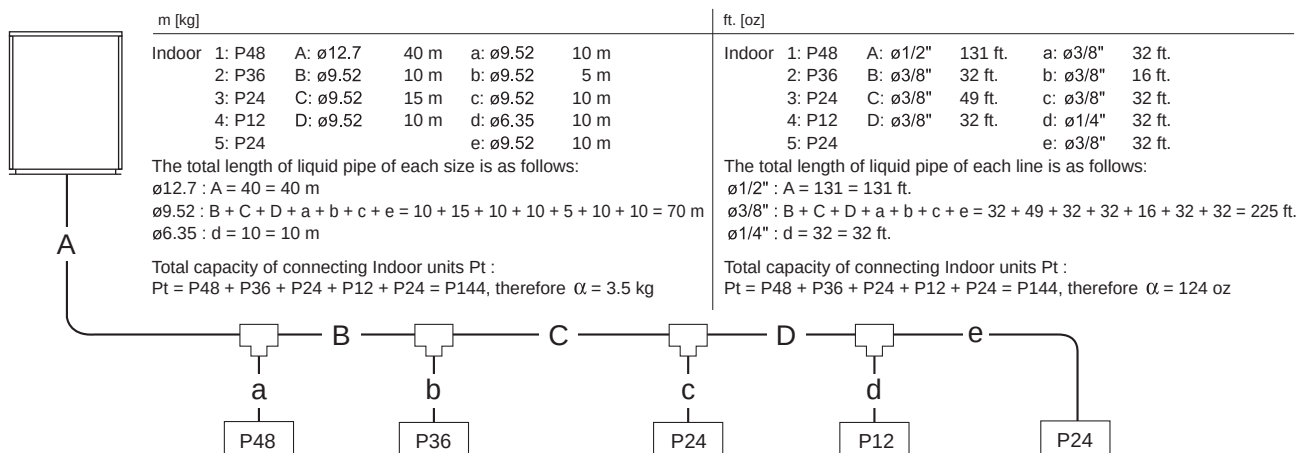
Additional refrigerant charge		+	Liquid Piping Size Total length of ø19.05mm [3/4in]		+	Liquid Piping Size Total length of ø15.88mm [5/8in]		+	Liquid Piping Size Total length of ø12.7mm [1/2in]		+	Liquid Piping Size Total length of ø9.52mm [3/8in]		+	Liquid Piping Size Total length of ø6.35mm [1/4in]		+	α
[A]	(kg) [oz]		[A]	(m) $\times$ 0.29 (kg/m) (ft) $\times$ 3.12 (oz/ft)		[A]	(m) $\times$ 0.2 (kg/m) (ft) $\times$ 2.16 (oz/ft)		[A]	(m) $\times$ 0.12 (kg/m) (ft) $\times$ 1.30 (oz/ft)		[A]	(m) $\times$ 0.06 (kg/m) (ft) $\times$ 0.65 (oz/ft)		[A]	(m) $\times$ 0.024 (kg/m) (ft) $\times$ 0.26 (oz/ft)		
[B]	(kg) [oz]		[B]	(m) $\times$ 0.26 (kg/m) (ft) $\times$ 2.80 (oz/ft)		[B]	(m) $\times$ 0.18 (kg/m) (ft) $\times$ 1.94 (oz/ft)		[B]	(m) $\times$ 0.11 (kg/m) (ft) $\times$ 1.19 (oz/ft)		[B]	(m) $\times$ 0.054 (kg/m) (ft) $\times$ 0.59 (oz/ft)		[B]	(m) $\times$ 0.021 (kg/m) (ft) $\times$ 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	[159 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

Example: PQHY-P144ZLMU



m [kg]	Additional refrigerant charge	=	Total length of liquid pipe sized ø19.05 x 0.26 (kg/m)	+	Total length of liquid pipe sized ø15.88 x 0.18 (kg/m)	+	Total length of liquid pipe sized ø12.7 x 0.11 (kg/m)	+	Total length of liquid pipe sized ø9.52 x 0.054 (kg/m)	+	Total length of liquid pipe sized ø6.35 x 0.021 (kg/m)	+ 3.5
(kg)			0 (m) x 0.26 (kg/m)		0 (m) x 0.18 (kg/m)		40 (m) x 0.11 (kg/m)		70 (m) x 0.054 (kg/m)		10 (m) x 0.021 (kg/m)	
		=	0	+	0	+	40 x 0.11	+	70 x 0.054	+	10 x 0.021	+ 3.5
		=	0	+	0	+	4.4	+	3.78	+	0.21	+ 3.5
		=	0	+	0	+	4.4	+	3.78	+	0.21	+ 3.5
or												
ft. [oz]	Additional refrigerant charge	=	Total length of liquid pipe sized ø3/4"	+	Total length of liquid pipe sized ø5/8"	+	Total length of liquid pipe sized ø1/2"	+	Total length of liquid pipe sized ø3/8"	+	Total length of liquid pipe sized ø1/4"	+ 124
(oz)			x 2.80 (oz/ft.)		x 1.94 (oz/ft.)		x 1.19 (oz/ft.)		x 0.59 (oz/ft.)		x 0.23 (oz/ft.)	
			0 (ft.) x 2.80 (oz/ft.)		0 (ft.) x 1.94 (oz/ft.)		131 (ft.) x 1.19 (oz/ft.)		225 (ft.) x 0.59 (oz/ft.)		32 (ft.) x 0.23 (oz/ft.)	
		=	0	+	0	+	156.49	+	133.75	+	7.36	+ 124
		=	0	+	0	+	156.49	+	133.75	+	7.36	+ 124
		=	0	+	0	+	156.49	+	133.75	+	7.36	+ 124

■ 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.

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	5.0 kg	5.0 kg	5.0 kg	6.0 kg	6.0 kg	6.0 kg	10.0 kg	10.0 kg
	Charged on site	22.0 kg	28.5 kg	29.5 kg	42.0 kg	51.5 kg	53.5 kg	42.0 kg	51.5 kg
	Total for system	27.0 kg	33.5 kg	34.5 kg	48.0 kg	57.5 kg	59.5 kg	52.0 kg	61.5 kg
	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	48 lbs 9 oz	62 lbs 14 oz	65 lbs 1 oz	92 lbs 10 oz	113 lbs 9 oz	118 lbs 0 oz	92 lbs 10 oz	113 lbs 9 oz
	Total for system	59 lbs 9 oz	73 lbs 14 oz	76 lbs 1 oz	105 lbs 14 oz	126 lbs 13 oz	131 lbs 3 oz	114 lbs 11 oz	135 lbs 10 oz

Total index of the heat source units		P192 ZSLMU	P216 ZSLMU	P240 ZSLMU	P288 ZSLMU	P312 ZSLMU	P336 ZSLMU	P360 ZSLMU
Maximum refrigerant charge	Factory charged	10.0 kg	10.0 kg	10.0 kg	12.0 kg	12.0 kg	12.0 kg	12.0 kg
	Charged on site	53.5 kg	55.0 kg	56.0 kg	67.5 kg	67.5 kg	67.5 kg	70.0 kg
	Total for system	63.5 kg	65.0 kg	66.0 kg	79.5 kg	79.5 kg	79.5 kg	82.0 kg
	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	26 lbs 8 oz
	Charged on site	118 lbs 0 oz	121 lbs 5 oz	123 lbs 8 oz	148 lbs 13 oz	148 lbs 13 oz	148 lbs 13 oz	154 lbs 6 oz
	Total for system	140 lbs 0 oz	143 lbs 5 oz	145 lbs 9 oz	175 lbs 5 oz	175 lbs 5 oz	175 lbs 5 oz	180 lbs 13 oz

**CITY MULTI
SYSTEM DESIGN WR2-Series**

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 1-1.R410A Piping material..... 336

 1-2.Piping Design 338

 1-3.Refrigerant charging calculation 350

 1-4.Compatibility 358

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.

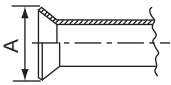
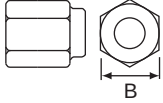
Table 1. Copper pipe size and radial thickness for R410A CITY MULTI.

Size (mm)	Size (in.)	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	

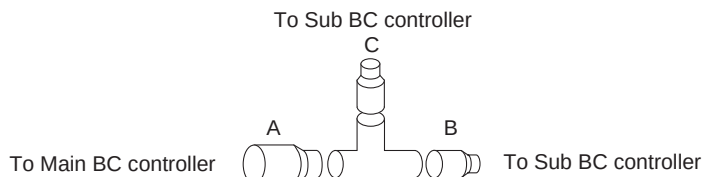
1. Piping Design

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 branch joint between Main BC and Sub BC on the high-pressure piping, low-pressure piping, and liquid piping.

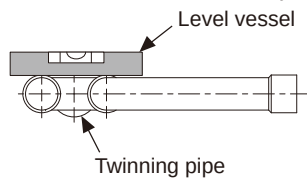


- Regarding the branch joint between Main BC and Sub BC on the high-pressure/low-pressure/liquid piping, A and B must be installed horizontally, and C must be installed upward higher than the horizontal plane of A and B.

[2] Branches on the outdoor/heat source-unit side

Note. Refer to the figure below for the installation position of the twinning pipe.

The Twinning pipe must be installed horizontally using a level vessel to avoid unit damage.



- 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 J2-type, JA2/KA2 type, and KB2 type.

When mixing GA1/HA1/GB1/HB1 type and JA2/KA2/KB2 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-E**, 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-E** + PEFY-P06NMAU-E**: 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."

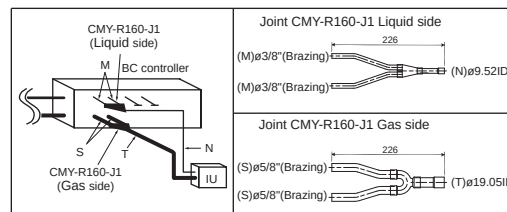


Fig. A

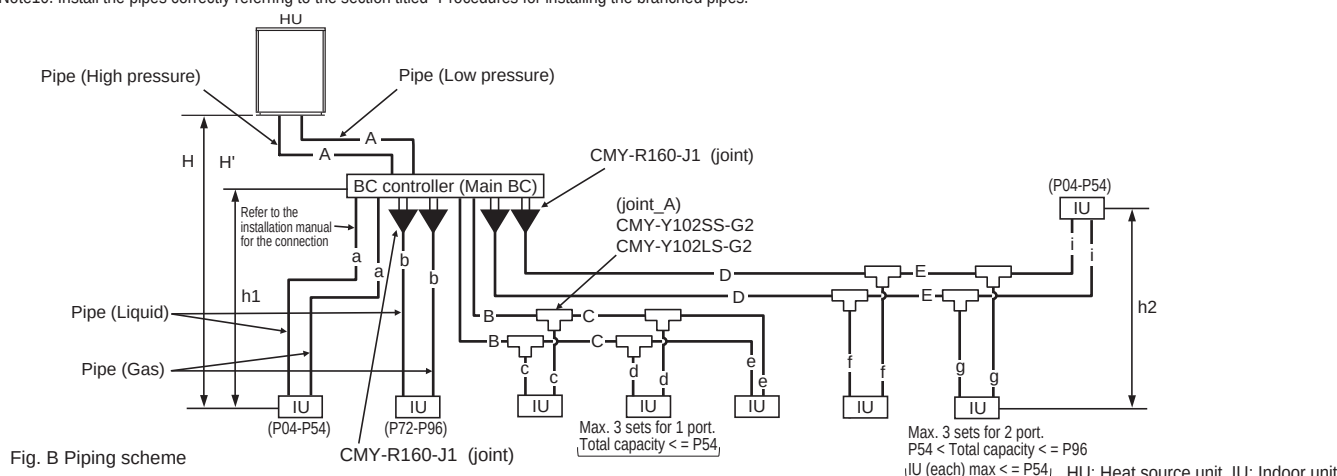


Fig. B Piping scheme

Piping length limitation *6		(m [ft.])	
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]	-
Height between HU and IU (HU under IU)	H'	40 [131]	-
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.

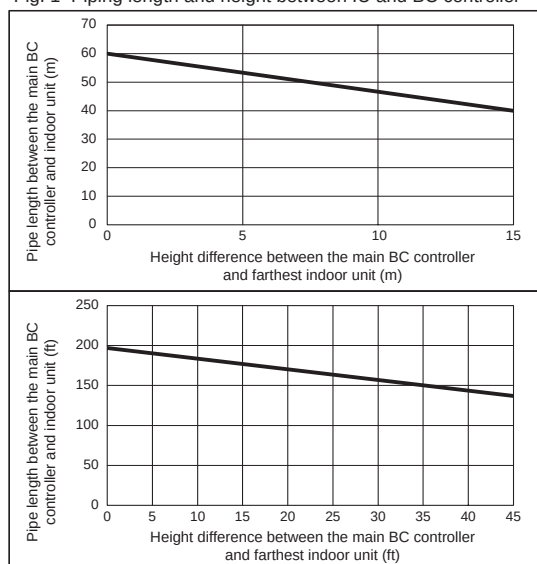
*3. When the P72 or P96 model of indoor units are connected to the system, the maximum distance from the BC controller to the farthest indoor unit indicated as "D + E + i" in the figure is 40 m [131 ft.].

*4. Distance of Indoor sized P72, P96 from BC must be less than 10 m [32 ft.], if any.

*5. Distance of Indoor sized P72, P96 from IU must be less than 20 m [65 ft.], if any.

*6. 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)	
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] *7	ø28.58 [1-1/8]	
P240TLMU, YLMU	ø22.20 [7/8] *7	ø34.93 [1-3/8]	

*7. 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

1-2-2. 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-KB2 is 126.

Note8. Indoor capacity is described as its model size. For example, PEFY-P24NMAU-E**, 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-E** + PEFY-P06NMAU-E** : 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.

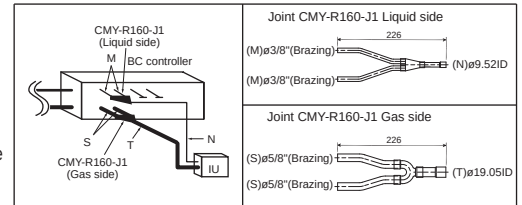


Fig. A

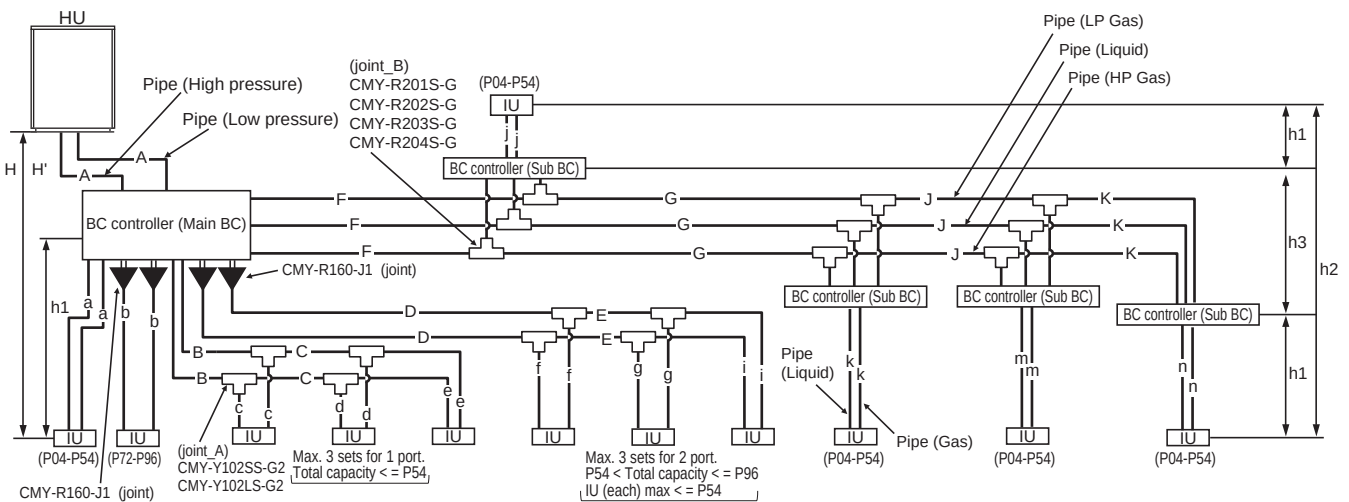


Fig. B Piping scheme

HU: Heat source unit, IU: Indoor unit

Piping length limitation *8

Item	Piping in the figure	Max. length	Max. equivalent length (m [ft.])
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] *7	90 [295] *7
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 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 m [131 ft.].

*4. Distance of Indoor sized P72, P96 from BC must be less than 10 m [32 ft.], if any.

*5. Distance of Indoor sized P72, P96 from IU must be less than 20 m [65 ft.], if any.

*6. When using 2 or more Sub BC controllers, max. height "h3" should be considered.

*7. 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.

*8. 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

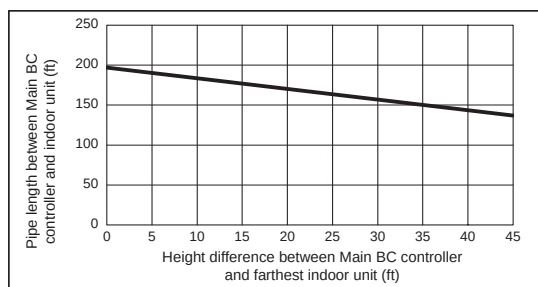


Fig. 2

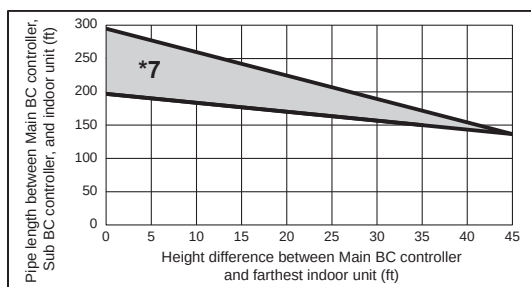
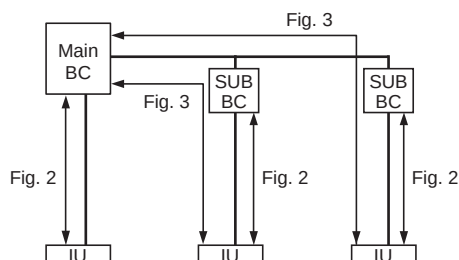


Fig. 3



*7. 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] *9	$\phi 28.58$ [1-1/8]
P240TLMU, YLMU	$\phi 22.20$ [7/8] *9	$\phi 34.93$ [1-3/8]

*9. 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

Selection criteria for joints_B

Total down-stream Indoor capacity	Joint
-P126	CMY-R201S-G
P127-P216	CMY-R202S-G
P217-P234	CMY-R203S-G
P235-P360	CMY-R204S-G

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]

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 P216	$\phi 15.88$ [5/8]	$\phi 22.20$ [7/8]	$\phi 28.58$ [1-1/8]
P217 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 or above	$\phi 19.05$ [3/4]	$\phi 28.58$ [1-1/8]	$\phi 41.28$ [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-KB2 is P126.

Note8. Indoor capacity is described as its model size. For example, PEFY-P24NMAU-E**, 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-E** + PEFY-P06NMAU-E** : 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.

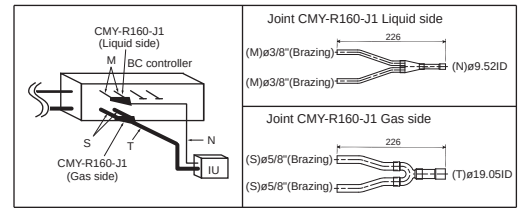


Fig. A

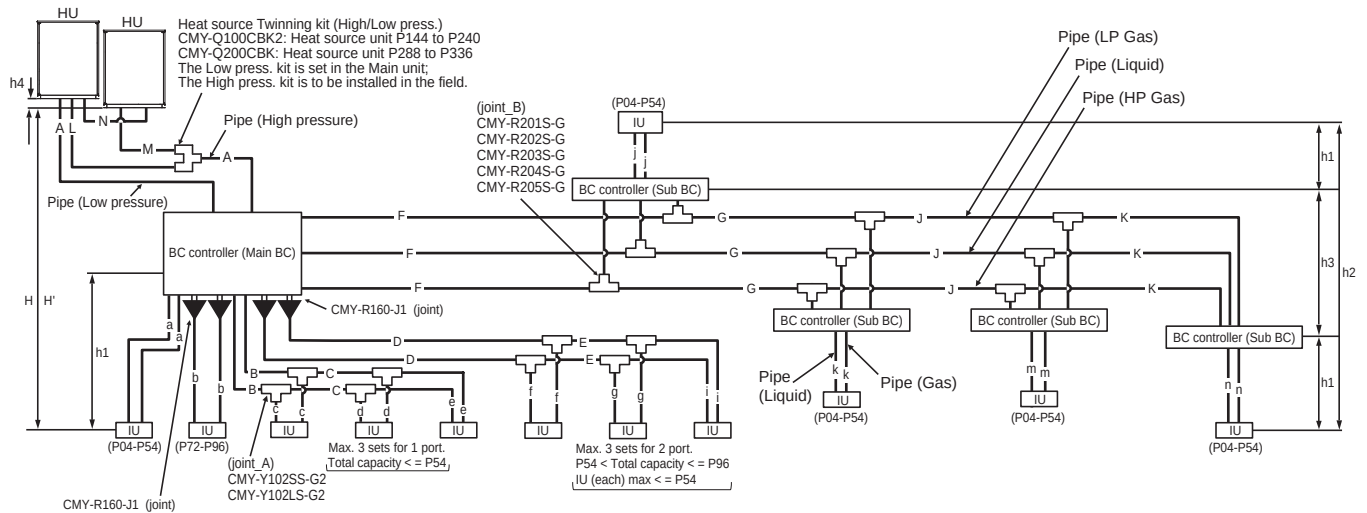


Fig. B Piping scheme

HU: Heat source unit, IU: Indoor unit

Piping length limitation *9

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] *7	90 [295] *7
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 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 m [131 ft.].)

*4. Distance of Indoor sized P72, P96 from BC must be less than 10 m [32 ft.], if any.

*5. Distance of Indoor sized P72, P96 from IU must be less than 20 m [65 ft.], if any.

*6. When using 2 or more Sub BC controllers, max. height "h3" should be considered.

*7. 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.

*8. 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.

*9. 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

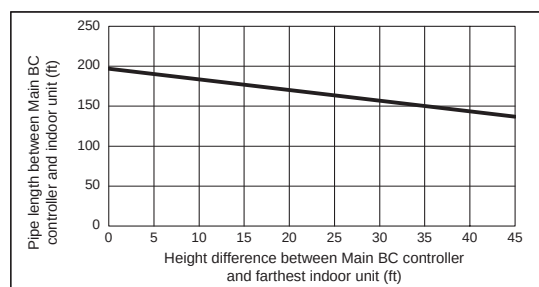


Fig. 2

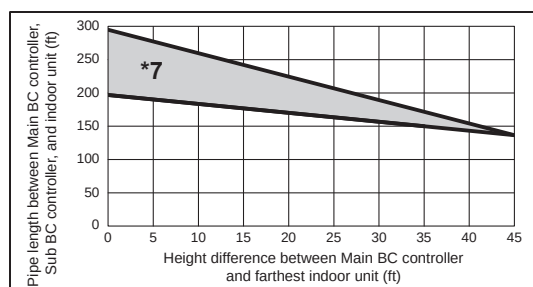
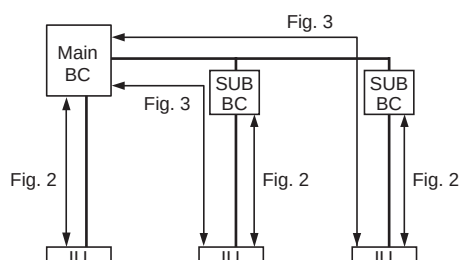


Fig. 3



*7. 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] *10	$\phi 28.58$ [1-1/8]
P240TSLMU, YSLMU	$\phi 22.20$ [7/8] *10	$\phi 34.93$ [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]

*10. 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
-P126	CMY-R201S-G
P127-P216	CMY-R202S-G
P217-P234	CMY-R203S-G
P235-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 P216	$\phi 15.88$ [5/8]	$\phi 22.20$ [7/8]	$\phi 28.58$ [1-1/8]
P217 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 or above	$\phi 19.05$ [3/4]	$\phi 28.58$ [1-1/8]	$\phi 41.28$ [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 J2-type, JA2/KA2 type, and KB2 type.

When mixing GA1/HA1/GB1/HB1 type and JA2/KA2/KB2 type, specifications and restrictions are 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 mode (cooling, heating, stop, and thermo-off). In case of connecting multiple indoor units to the same port, connecting all indoor units to one remote controller and switching SW1-1 ON in the all connected indoor units (switch to thermostat built in the remote controller) are recommended.

Note7. Indoor capacity is described as its model size. For example, PEFY-P24NMAU-E**, 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-E** + PEFY-P06NMAU-E**: 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."

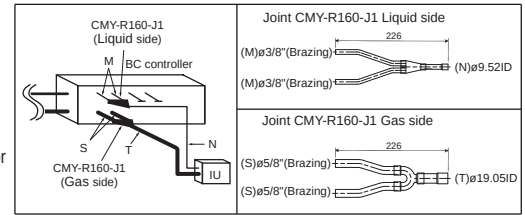


Fig. A

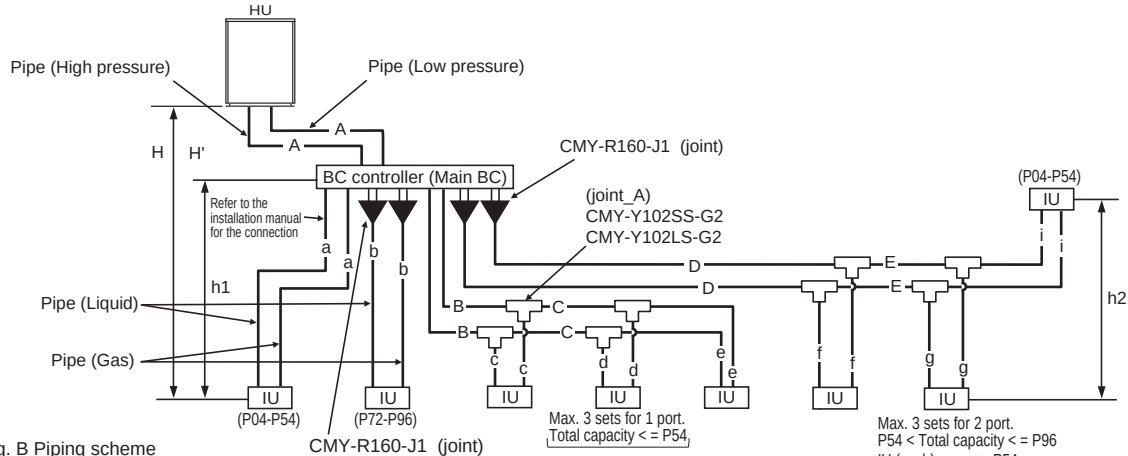


Fig. B Piping scheme

Piping length limitation *6

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]	-
Height between HU and IU (HU under IU)	H'	40 [131]	-
Height between IU and BC	h1	15 [49] (10 [32]) *4	-
Height between IU and IU	h2	30 [98] (20 [65]) *5	-

HU: Heat source unit; IU: Indoor unit; BC: BC controller

*1. Refer to the section 1-2-7.

*2. Details refer to Fig. 1.

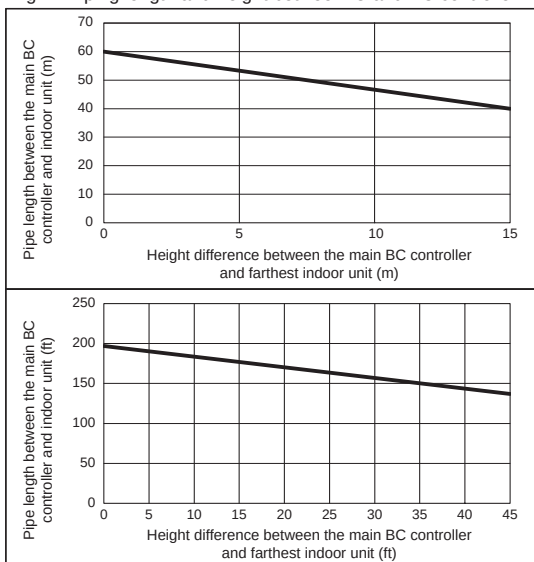
*3. When the P72 or P96 model of indoor units are connected to the system, the maximum distance from the BC controller to the farthest indoor unit indicated as "D + E + i" in the figure is 40 m [131 ft.].

*4. Distance of Indoor sized P72, P96 from BC must be less than 10 m [32 ft.], if any.

*5. Distance of Indoor sized P72, P96 from IU must be less than 20 m [65 ft.], if any.

*6. 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]

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). In case of connecting multiple indoor units to the same port, connecting all indoor units to one remote controller and switching SW1-1 ON in the all connected indoor units (switch to thermostat built in the remote controller) are recommended.

Note7. The maximum total capacity of indoor units that can be connected to each sub BC controller CMB-P*NU-KB2 is 126.

Note8. Indoor capacity is described as its model size. For example, PEFY-P24NMAU-E**, 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-E** + PEFY-P06NMAU-E**: 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.

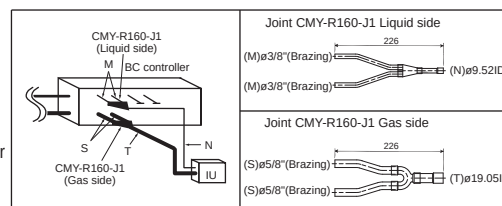


Fig. A

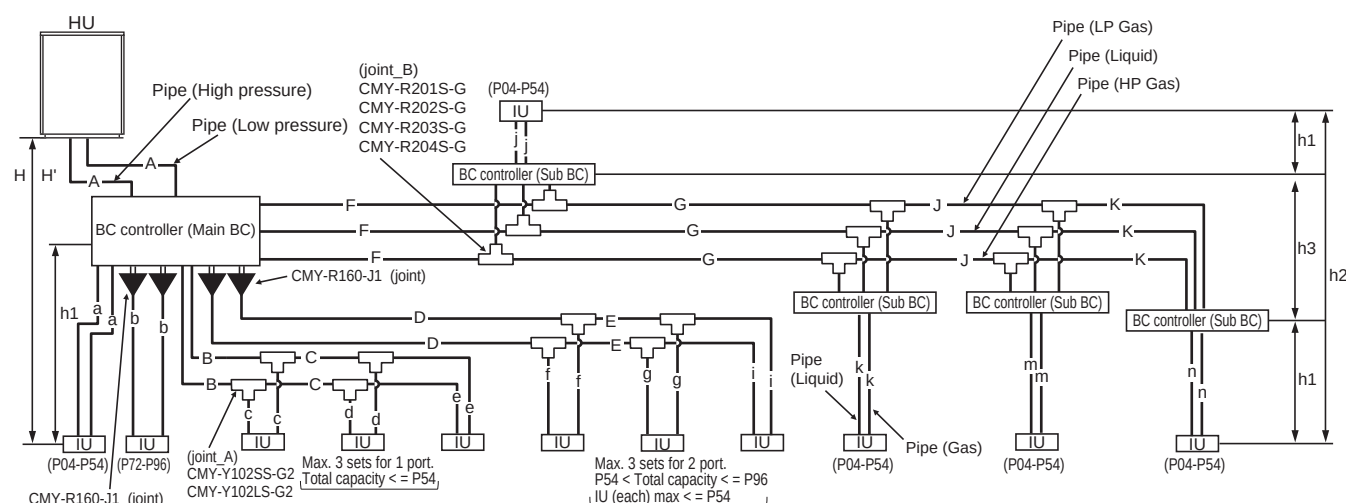


Fig. B Piping scheme

HU: Heat source unit, IU: Indoor unit

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+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] *7	90 [295] *7
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 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 m [131 ft.].

*4. Distance of Indoor sized P72, P96 from BC must be less than 10 m [32 ft.], if any.

*5. Distance of Indoor sized P72, P96 from IU must be less than 20 m [65 ft.], if any.

*6. When using 2 or more Sub BC controllers, max. height "h3" should be considered.

*7. 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.

*8. 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

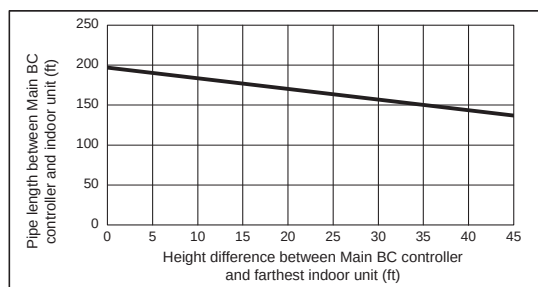


Fig. 2

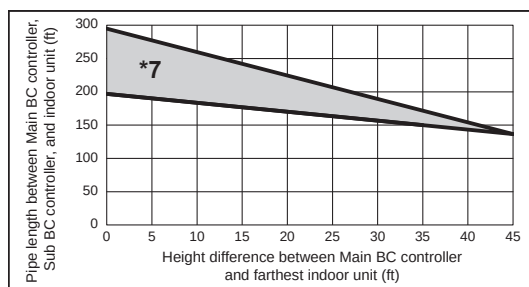
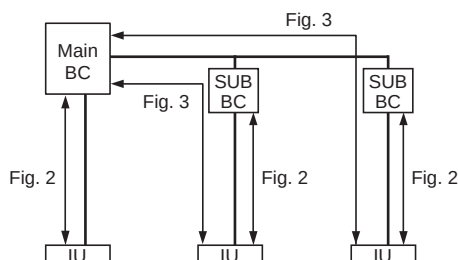


Fig. 3



*7. 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)
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

(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
-P126	CMY-R201S-G
P127-P216	CMY-R202S-G
P217-P234	CMY-R203S-G
P235-P288	CMY-R204S-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 P216	$\phi 15.88$ [5/8]	$\phi 22.20$ [7/8]	$\phi 28.58$ [1-1/8]
P217 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 or above	$\phi 19.05$ [3/4]	$\phi 28.58$ [1-1/8]	$\phi 41.28$ [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). In case of connecting multiple indoor units to the same port, connecting all indoor units to one remote controller and switching SW1-1 ON in the all connected indoor units (switch to thermostat built in the remote controller) are recommended.

Note7. The maximum total capacity of indoor units that can be connected to each sub BC controller CMB-P*NU-KB2 is P126.

Note8. Indoor capacity is described as its model size. For example, PEFY-P24NMAU-E**, 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-E** + PEFY-P06NMAU-E**: 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.

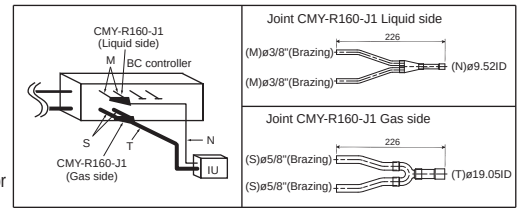
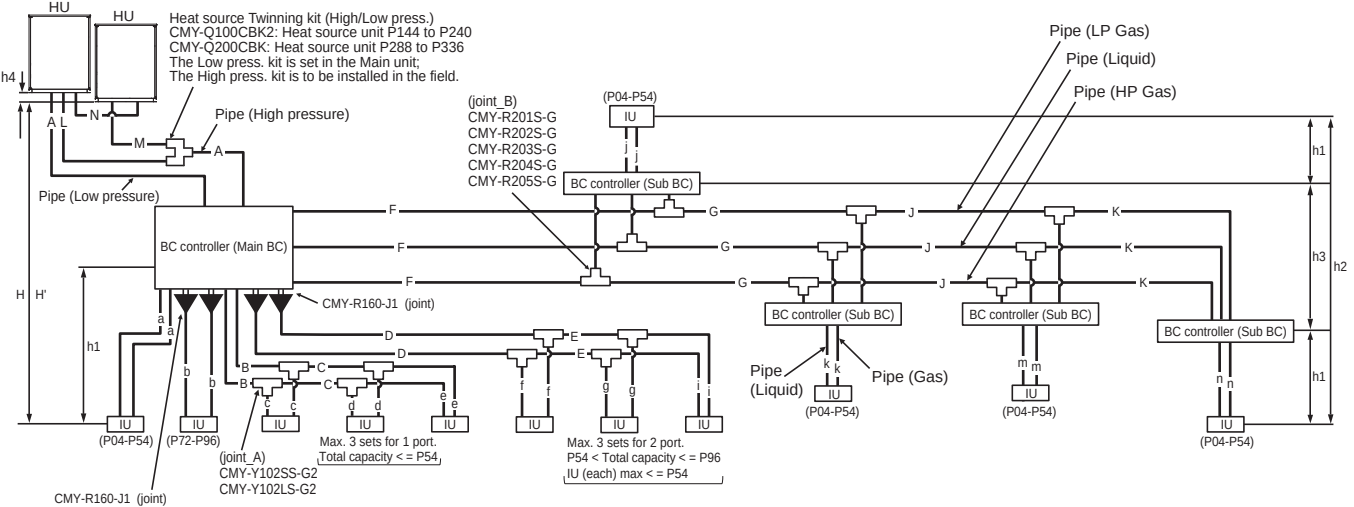


Fig. A



HU: Heat source unit, IU: Indoor unit

Fig. B Piping scheme

Piping length limitation *9

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] *7	90 [295] *7
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 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 m [131 ft.].)

*4. Distance of Indoor sized P72, P96 from BC must be less than 10 m [32 ft.], if any.

*5. Distance of Indoor sized P72, P96 from IU must be less than 20 m [65 ft.], if any.

*6. When using 2 or more Sub BC controllers, max. height "h3" should be considered.

*7. 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.

*8. 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.

*9. 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]

1. Piping Design

Piping length and height between IU and BC controller

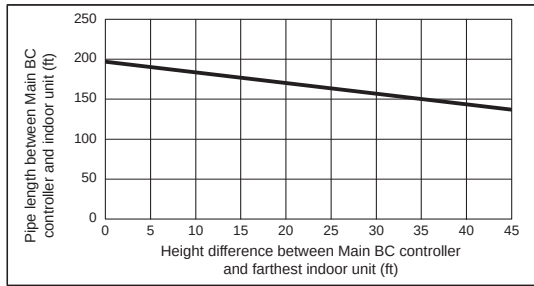


Fig. 2

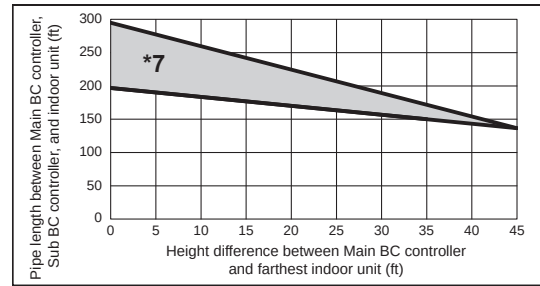
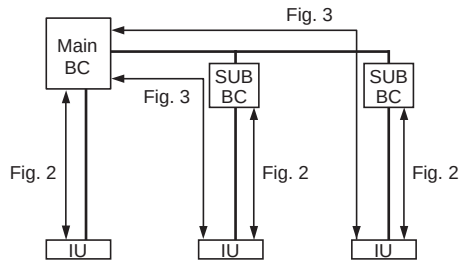


Fig. 3



*7. 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] *10	$\phi 28.58$ [1-1/8]
P240ZSLMU	$\phi 22.20$ [7/8] *10	$\phi 34.93$ [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]

*10. 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
-P126	CMY-R201S-G
P127-P216	CMY-R202S-G
P217-P234	CMY-R203S-G
P235-P360	CMY-R204S-G
P361-	CMY-R205S-G

Piping "F", "G", "J", "K" size selection rule

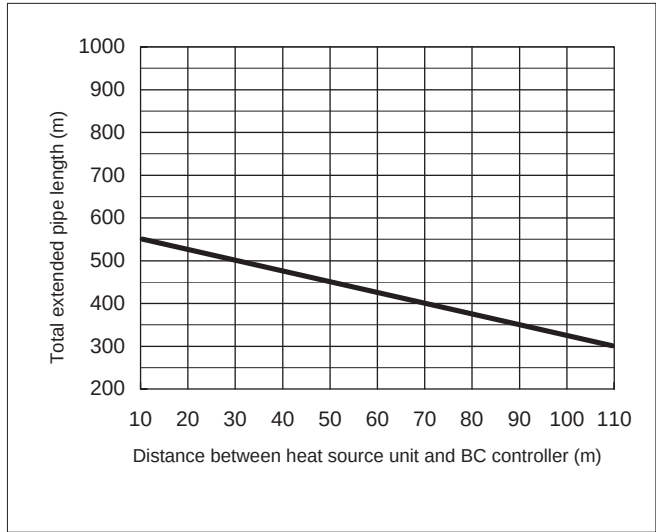
(mm [in.])

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 P216	$\phi 15.88$ [5/8]	$\phi 22.20$ [7/8]	$\phi 28.58$ [1-1/8]
P217 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 or above	$\phi 19.05$ [3/4]	$\phi 28.58$ [1-1/8]	$\phi 41.28$ [1-5/8]

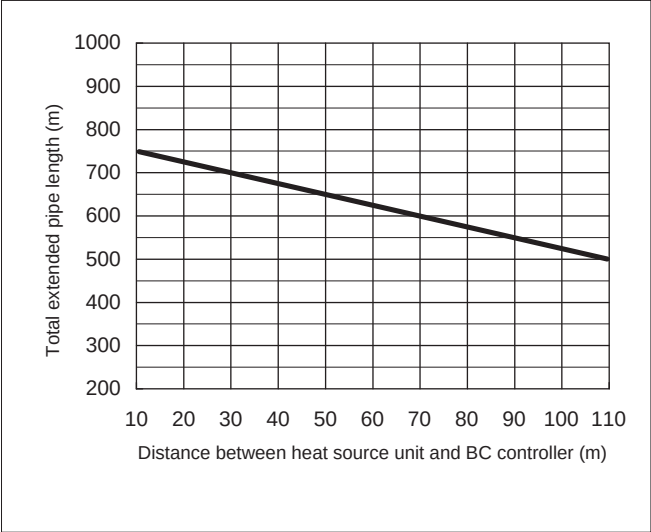
HP: High pressure, LP: Low pressure

1-2-7. Total piping length restrictions (m)

[PQRY-P72, 96, 120TLMU/YLMU]

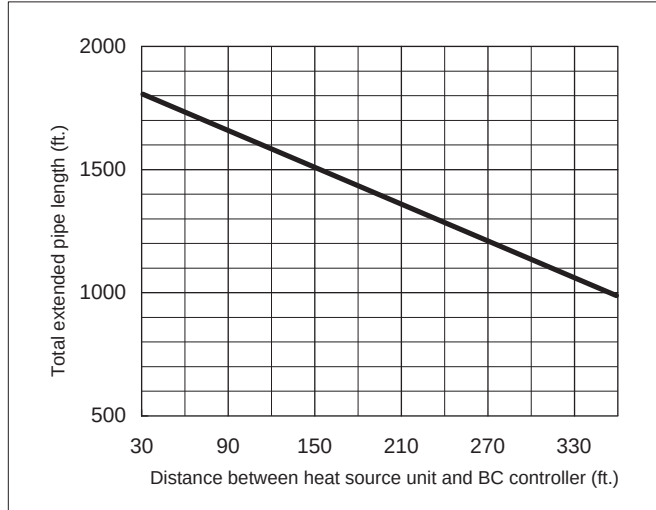


[PQRY-P144, 168, 192, 216, 240TLMU/YLMU]
[PQRY-P144, 168, 192, 216, 240, 288, 312, 336TSLMU/YSLMU]

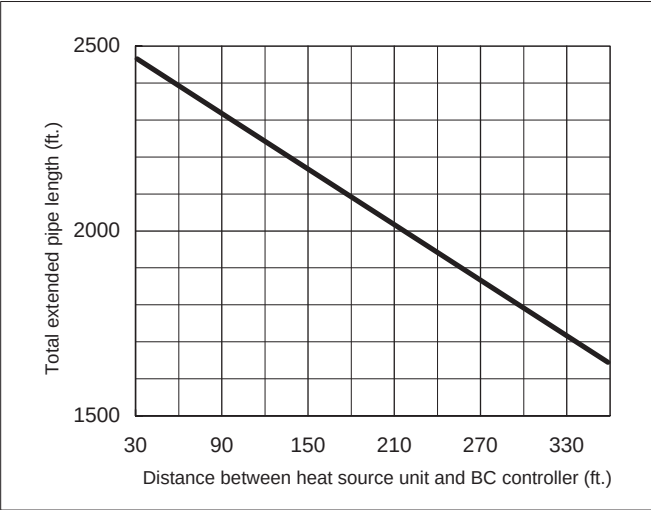


Total piping length restrictions (ft.)

[PQRY-P72, 96, 120TLMU/YLMU]

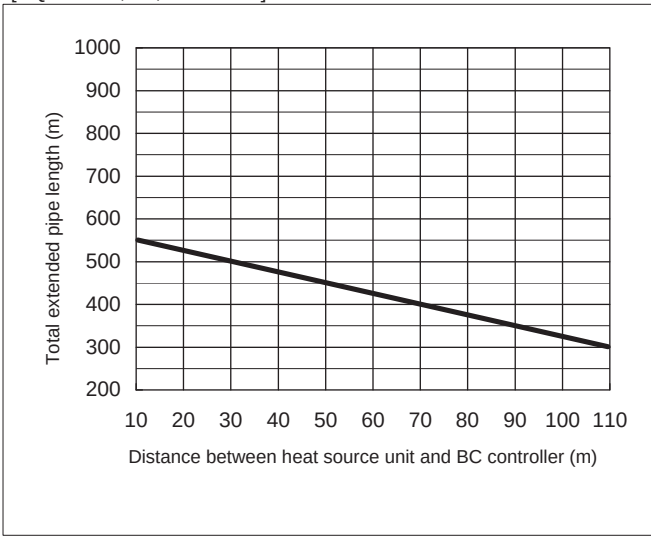


[PQRY-P144, 168, 192, 216, 240TLMU/YLMU]
[PQRY-P144, 168, 192, 216, 240, 288, 312, 336TSLMU/YSLMU]



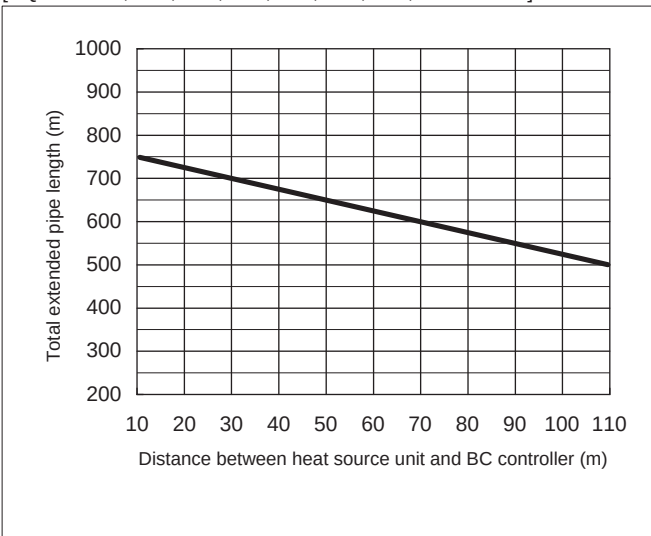
Total piping length restrictions (m)

[PQRY-P72, 96, 120ZLMU]



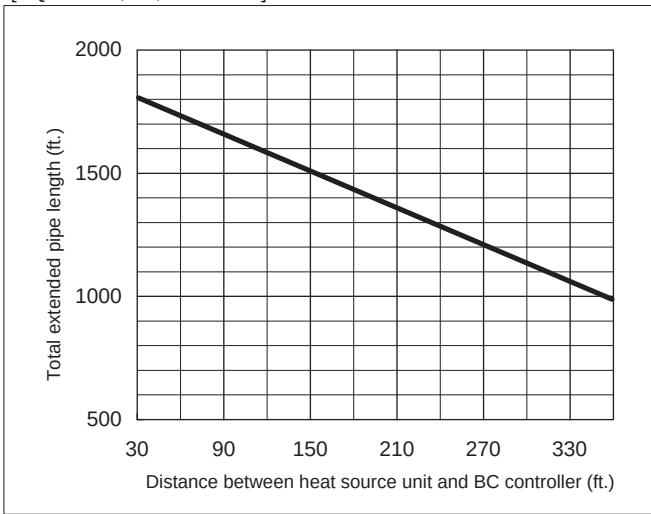
[PQRY-P144, 168, 192ZLMU]

[PQRY-P144, 168, 192, 216, 240, 288, 312, 336ZSLMU]



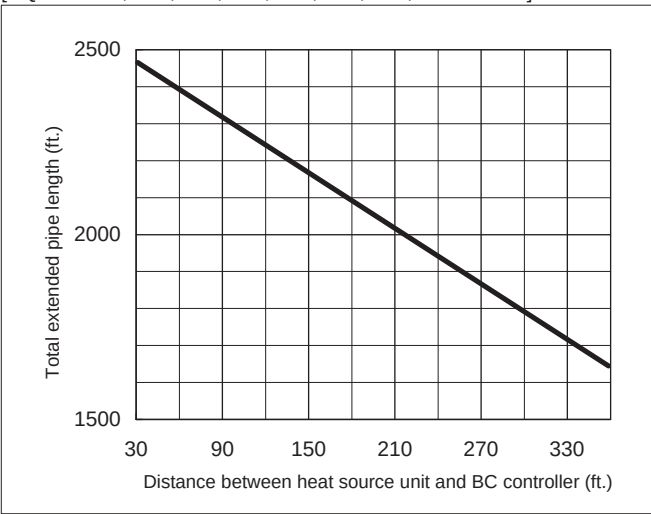
Total piping length restrictions (ft.)

[PQRY-P72, 96, 120ZLMU]



[PQRY-P144, 168, 192ZLMU]

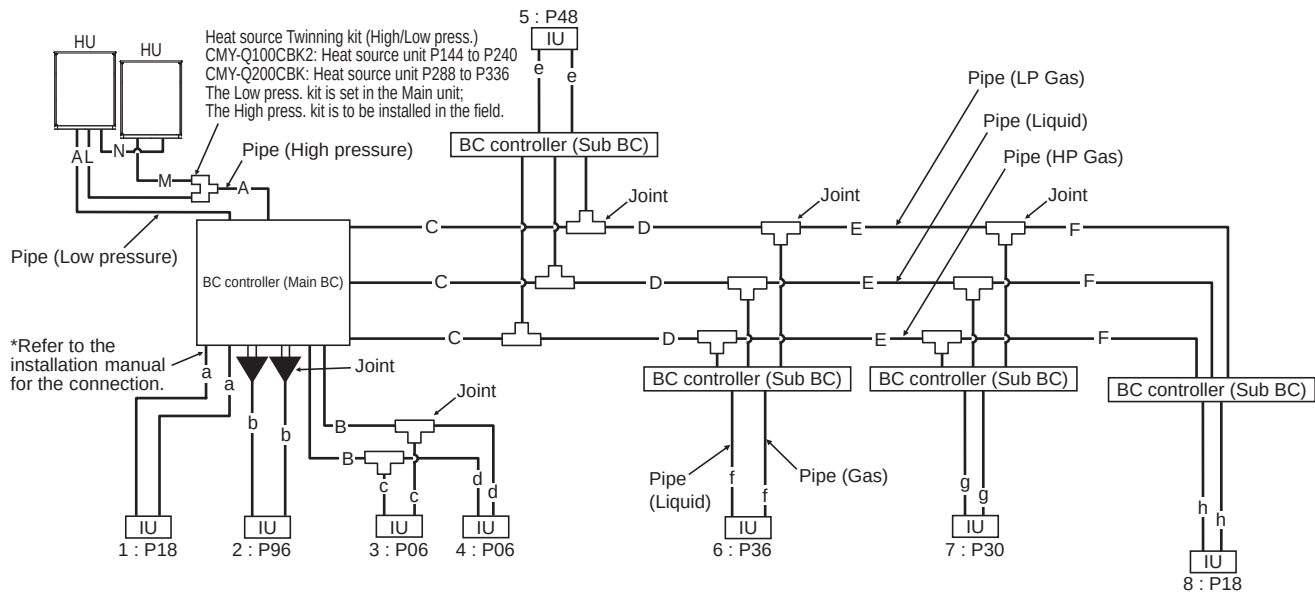
[PQRY-P144, 168, 192, 216, 240, 288, 312, 336ZSLMU]



1-3. Refrigerant charging calculation

■ PQRYP-T(S)LMUA-2/Y(S)LMUA-2

Sample connection (with 5 BC controllers and 8 indoor units) (PQRYP-P288YSLMU)



■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-puressure 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				

* If the following (1) and (2) are met, add 0.55 kg [20 oz] of refrigerant per indoor unit.

(1) When only PEFY-P18NMAU-E**, PEFY-P24NMAU-E**, or PEFY-P30NMAU-E** are connected

(2) When the total number of connected indoor units is 6 or less

* When connecting PLFY-EP18NEMU**-E**, PLFY-EP24NEMU**-E**, or PLFY-EP36NEMU**-E**, add 0.5 kg [18 oz] 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 × 3.55 (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)	+	Liquid pipe ø1/4 total length × 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												

* If the following (1) and (2) are met, add 0.55 kg [20 oz] of refrigerant per indoor unit.

(1) When only PEFY-P18NMAU-E**, PEFY-P24NMAU-E**, or PEFY-P30NMAU-E** are connected

(2) When the total number of connected indoor units is 6 or less

* When connecting PLFY-EP18NEMU**-E**, PLFY-EP24NEMU**-E**, or PLFY-EP36NEMU**-E**, add 0.5 kg [18 oz] 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	40 m	a: ø6.35	10 m
	2: 96	B: ø9.52	10 m	b: ø9.52	10 m
	3: 06	C: ø12.7	20 m	c: ø6.35	5 m
	4: 06	D: ø9.52	5 m	d: ø6.35	5 m
	5: 48	E: ø9.52	5 m	e: ø9.52	5 m
	6: 36	F: ø9.52	5 m	f: ø9.52	5 m
	7: 30	L: ø22.20	3 m	g: ø9.52	5 m
	8: 18	M: ø22.20	1 m	h: ø6.35	10 m

Outdoor P288

Main BC controller CMB-P108NU-JA2

Sub BC controller CMB-P104NU-KB2 × 4

Units "ft" and "oz"

Indoor	1: 18	A: ø1-1/8	131 ft	a: ø1/4	32 ft
	2: 96	B: ø3/8	32 ft	b: ø3/8	32 ft
	3: 06	C: ø1/2	65 ft	c: ø1/4	16 ft
	4: 06	D: ø3/8	16 ft	d: ø1/4	16 ft
	5: 48	E: ø3/8	16 ft	e: ø3/8	16 ft
	6: 36	F: ø3/8	16 ft	f: ø3/8	16 ft
	7: 30	L: ø7/8	9 ft	g: ø3/8	16 ft
	8: 18	M: ø7/8	3 ft	h: ø1/4	32 ft

Outdoor P288

Main BC controller CMB-P108NU-JA2

Sub BC controller CMB-P104NU-KB2 × 4

The total length of each liquid line as follows:

ø28.58: A = 40 m
ø22.20: L + M = 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 × 0.21 + 20 × 0.11 + 50 × 0.054
+ 30 × 0.021 + 3 + 0.4 × 4 + 6
= 30.2 (30.17) kg

The total length of each liquid line as follows:

ø1-1/8: A = 131 ft
ø7/8: L + M = 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 × 3.55 + 12 × 2.26 + 65 × 1.19 + 160 × 0.59
+ 96 × 0.23 + 106 + 15 × 4 + 212
= 1064 oz

1. Piping Design

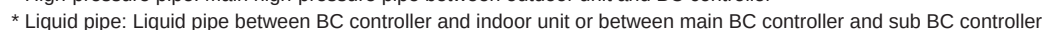
■ Limitation of the amount of refrigerant to be charged

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	5.0 kg	5.0 kg	5.0 kg	6.0 kg	6.0 kg	6.0 kg	11.7 kg	11.7 kg	10.0 kg	10.0 kg
	Charged on site	28.0 kg	30.0 kg	31.0 kg	46.0 kg	47.0 kg	48.0 kg	43.3 kg	44.3 kg	49.0 kg	50.0 kg
	Total for system	33.0 kg	35.0 kg	36.0 kg	52.0 kg	53.0 kg	54.0 kg	55.0 kg	56.0 kg	59.0 kg	60.0 kg
	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	10.0 kg	10.0 kg	10.0 kg	12.0 kg	12.0 kg	12.0 kg
	Charged on site	51.0 kg	52.0 kg	54.0 kg	70.0 kg	70.0 kg	73.0 kg
	Total for system	61.0 kg	62.0 kg	64.0 kg	82.0 kg	82.0 kg	85.0 kg
	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

Sample connection (with 5 BC controllers and 8 indoor units) (PQRY-P288ZSLMU)



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 ø6.35 total length × 0.021 (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)		
	+	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		

* If the following (1) and (2) are met, add 0.55 kg [20 oz] of refrigerant per indoor unit.

(1) When only PEFY-P18NMAU-E**, PEFY-P24NMAU-E**, or PEFY-P30NMAU-E** are connected

(2) When the total number of connected indoor units is 6 or less

* When connecting PLFY-EP18NEMU**-E**, PLFY-EP24NEMU**-E**, or PLFY-EP36NEMU**-E**, add 0.5 kg [18 oz] 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 ø1/4 total length × 0.26 (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)		
	+	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	+	High-pressure pipe	+	High-pressure pipe	+	High-pressure pipe	
		ø1-1/8 total length × 3.55 (oz/ft)		ø7/8 total length × 2.26 (oz/ft)		ø3/4 total length × 1.51 (oz/ft)		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)	+
								Liquid pipe ø1/4 total length × 0.23 (oz/ft)	

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

* If the following (1) and (2) are met, add 0.55 kg [20 oz] of refrigerant per indoor unit.

(1) When only PEFY-P18NMAU-E**, PEFY-P24NMAU-E**, or PEFY-P30NMAU-E** are connected

(2) When the total number of connected indoor units is 6 or less

* When connecting PLFY-EP18NEMU**-E**, PLFY-EP24NEMU**-E**, or PLFY-EP36NEMU**-E**, add 0.5 kg [18 oz] 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

1. Piping Design

■ Amount of factory charged refrigerant

Heat source unit Model	Charged amount
P72	5.0 kg
P96	
P120	
P144	6.0 kg
P168	
P192	

■ Sample calculation

		Indoor			
A: $\varnothing 28.58$ [1-1/8"]	40 m [131 ft.]	1: P18	a: $\varnothing 6.35$ [1/4"]	10 m [32 ft.]	Heat source unit: P288
B: $\varnothing 9.52$ [3/8"]	10 m [32 ft.]	2: P96	b: $\varnothing 9.52$ [3/8"]	10 m [32 ft.]	Total capacity of indoor units: 258
C: $\varnothing 12.70$ [1/2"]	20 m [65 ft.]	3: P06	c: $\varnothing 6.35$ [1/4"]	5 m [16 ft.]	Main BC controller: CMB-P108NU-JA2
D: $\varnothing 9.52$ [3/8"]	5 m [16 ft.]	4: P06	d: $\varnothing 6.35$ [1/4"]	5 m [16 ft.]	Sub BC controller: CMB-P104NU-KB2 × 4
E: $\varnothing 9.52$ [3/8"]	5 m [16 ft.]	5: P48	e: $\varnothing 9.52$ [3/8"]	5 m [16 ft.]	
F: $\varnothing 9.52$ [3/8"]	5 m [16 ft.]	6: P36	f: $\varnothing 9.52$ [3/8"]	5 m [16 ft.]	
L: $\varnothing 22.20$ [7/8"]	3 m [9 ft.]	7: P30	g: $\varnothing 9.52$ [3/8"]	5 m [16 ft.]	
M: $\varnothing 22.20$ [7/8"]	1 m [3 ft.]	8: P18	h: $\varnothing 6.35$ [1/4"]	10 m [32 ft.]	

Total length for each pipe size:	$\varnothing 28.58$ [1-1/8"]	A = 40 m [131 ft.]
	$\varnothing 22.20$ [7/8"]	L + M = 3 + 1 = 4 m [12 ft.]
	$\varnothing 12.70$ [1/2"]	C = 20 m [65 ft.]
	$\varnothing 9.52$ [3/8"]	B + D + E + F + b + e + f + g = 50 m [160 ft.]
	$\varnothing 6.35$ [1/4"]	a + c + d + h = 30 m [96 ft.]
Therefore, additional refrigerant charge		= $40 \times 0.33 + 4 \times 0.21 + 20 \times 0.11 + 50 \times 0.054 + 30 \times 0.021 + 3 + 0.4 \times 4 + 6$
(kg)		= 30.17 kg
		≈ 30.2 kg
or		
Therefore, additional refrigerant charge		= $131 \times 3.55 + 12 \times 2.26 + 65 \times 1.19 + 160 \times 0.59 + 96 \times 0.23 + 106 + 15 \times 4 + 212$
(oz)		= 1064 oz

■ 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	5.0 kg	5.0 kg	5.0 kg	6.0 kg	6.0 kg	6.0 kg	10.0 kg	10.0 kg
	Charged on site	28.0 kg	30.0 kg	31.0 kg	46.0 kg	47.0 kg	48.0 kg	49.0 kg	50.0 kg
	Total for system	33.0 kg	35.0 kg	36.0 kg	52.0 kg	53.0 kg	54.0 kg	59.0 kg	60.0 kg
	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	10.0 kg	10.0 kg	10.0 kg	12.0 kg	12.0 kg	12.0 kg
	Charged on site	51.0 kg	52.0 kg	54.0 kg	70.0 kg	70.0 kg	73.0 kg
	Total for system	61.0 kg	62.0 kg	64.0 kg	82.0 kg	82.0 kg	85.0 kg
	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	J2 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	JA2/KA2 type	GB1/HB1 type	GB1/HB1 type	Compatible
	JA2/KA2 type	KB2 type	GB1/HB1 type	Not compatible
	JA2/KA2 type	GB1/HB1 type		Compatible
	GA1/HA1 type	KB2 type	KB2 type	Compatible
	GA1/HA1 type	KB2 type	GB1/HB1 type	Not compatible
	GA1/HA1 type	KB2 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	JA2/KA2 type	KB2 type	Compatible(*)

*Up to 11 Sub BC controllers can be connected (KB2 type only).

GA1/HA1/GB1/HB1 type and JA2/KA2/KB2 type can be mixed.

The only combination that is not available is mix of GB1/HB1 type and KB2 type.

When mixing GA1/HA1/GB1/HB1 type and JA2/KA2/KB2 type, specifications and restrictions is according to GA1/HA1/GB1/HB1type. (piping length, connectable number of Sub BC)

⚠ 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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