CITY MULTI

Model: 18-Ton PQRY-P216TSLMU-A1

(Consisting of One PQRY-P120TLMU-A1, One PQRY-P96TLMU-A1 and One CMY-Q100CBK2 Twinning Kit)

MITSUBISHI ELECTRIC
Changes for the Better

Job Name:

Schedule Reference: | Date:

VRF HEAT PUMP WITH HEAT RECOVERY SYSTEM

UNIT OPTION

☐ Standard Model PQRY-P216TSLMU-A1

ACCESSORIES

- ☐ Twinning Kit (Required - sold separately)..... CMY-Q100CBK2
- ☐ BC Controller Main CMB-P108,1012,1016NU-JA1, CMB-P1016NU-KA1
- ☐ BC Controller Sub CMB-P104,108NU-KB1
- ☐ Joint Adapter (Port Connector > 54,0000 Btu//h).....CMY-R160-J1
- ☐ Branch Joint (Downstream capacity ≤72,000 Btu/h)..... CMY-Y102SS-G2
- ☐ Branch Joint (Downstream capacity 73,000-96,000 Btu/h).....CMY-Y102LS-G2
- ☐ T-Branch Joint (145,000 - 234,000 Btu/h) CMY-Y202S-G2
- ☐ T-Branch Joint (≥ 235,000 Btu/h) CMY-Y302S-G2
- ☐ Branch Joint (Downstream capacity ≤126,000 Btu/h) CMY-R201S-G
- ☐ Branch Joint (Downstream capacity 127,000-216,000 Btu/h).....CMY-R202S-G
- ☐ Branch Joint (Downstream capacity 217,000-234,000 Btu/h)..... CMY-R203S-G
- ☐ Branch Joint (Downstream capacity 235,000-360,000 Btu/h)..... CMY-R204S-G
- ☐ Reducer (Between ODU and BC) CMY-R302S-G1
- ☐ Reducer (Between Main and Sub BC).....CMY-R303S-G1
- ☐ Reducer (Between Main and Sub BC)..... CMY-R304S-G1
- ☐ Reducer (Between Main and Sub BC)..... CMY-R305S-G1
- ☐ Reducer (Between Main and Sub BC)..... CMY-R306S-G

Unit Type		PQRY-P1216TSLMU-A1	PQRY-P120TLMU-A1	PQRY-P96TLMU-A1
Nominal Cooling Capacity	**Btu/h**	216,000	120,000	96,000
Nominal Heating Capacity	**Btu/h**	243,000	135,000	108,000
External Dimensions (H x W x D)	**In. / mm**	Refer to Module Data	43-5/16 x 34-11/16 x 21-11/16 / 1,100 x 880 x 550	43-5/16 x 34-11/16 x 21-11/16 / 1,100 x 880 x 550
Net Weight	**Lbs. / kg**	760 / 344	380 / 172	380 / 172
Electrical Power Requirements	**Voltage, Phase, Hertz**	Refer to Module Data**	208/230V, 3-phase, 60Hz	
Cooling Power Input	**kW**	14.03	Refer to System Data	
Heating Power Input	**kW**	12.88		
Cooling Current (208/230V)	**A**	43.2 / 39.1	Refer to System Data	
Heating Current (208/230V)	**A**	39.7 / 35.9		
Minimum Circuit Amp. (MCA) (*)**	**A**	Refer to Module Data**	29 / 26**	19 / 17**
Maximum Fuse Size**	**A**	Refer to Module Data**	50 / 45**	30 / 25**
Circulating Water (quality must meet regulations)				
Flow Rate	**GPM / L/s**	50.8 / 3.2	25.4 / 1.6	25.4 / 1.6
Pressure Drop	**psi**	6.96	3.48	3.48
Operation Volume Range	**GPM / L/s**	26.4 - 63.4 / 1.6 - 4	13.2 - 31.7 / 0.8 - 2	13.2 - 31.7 / 0.8 - 2
Maximum Water Pressure	**MPa / psi**	4 / 580	2 / 290	2 / 290
Water-source Connections (Each for Inlet and Outlet)	**In.**	Refer to Module Data**	NPT1-1/2 Screw (Install strainer (more than 50 meshes) at water inlet piping of the unit)	
Piping Diameter			Refer to System Data	
From Twinning Kit to Indoor Units (Brazed) (In. / mm)	**Liquid (High Pressure)**	7/8 / 22.2(1-1/8 / 28.58)		
	Gas (Low Pressure)	1-1/8 / 28.58		
From Modules to Twinning Kit (Brazed) (In. / mm)	**Liquid (High Pressure)**	Refer to Module Data	3/4 /19.05	3/4 / 19.05
	Gas (Low Pressure)			7/8 / 22.2
Indoor Unit	**Total Capacity**	50 to 150% of WSUs	Refer to System Data	
	Model / Quantity	P06 ~ P96 / 2 to 50		
Sound Pressure Levels	**dB(A)**	55	54	48
Compressor Operating Range		8 - 100%	Refer to System Data	
Compressor Type x Quantity		Refer to Module Data	Inverter-driven Scroll Hermetic x 1	Inverter-driven Scroll Hermetic x 1
Compressor Motor Output	**kW**		7.7	6.0
Compressor Crankcase Heater	**kW**		-	-
Refrigerant		Refer to Module Data	R410A	
Lubricant			MEL32	
High-pressure Protection Device		Refer to Module Data	601 psi / 4.15 MPa	601 psi / 4.15 MPa
Compressor / Fan Protection Device			Overheat Protection	Overheat Protection
Inverter Protection Device			Overheat / Overcurrent Protection	Overheat / Overcurrent Protection

* All electrical work shall comply with National (CEC) and local codes and regulations.

Note: Mitsubishi Electric (MESCA) supports the use of only MESCA supplied and approved accessories for proper functioning of the unit(s). Use of non-MESCA supported accessories will affect warranty coverage.

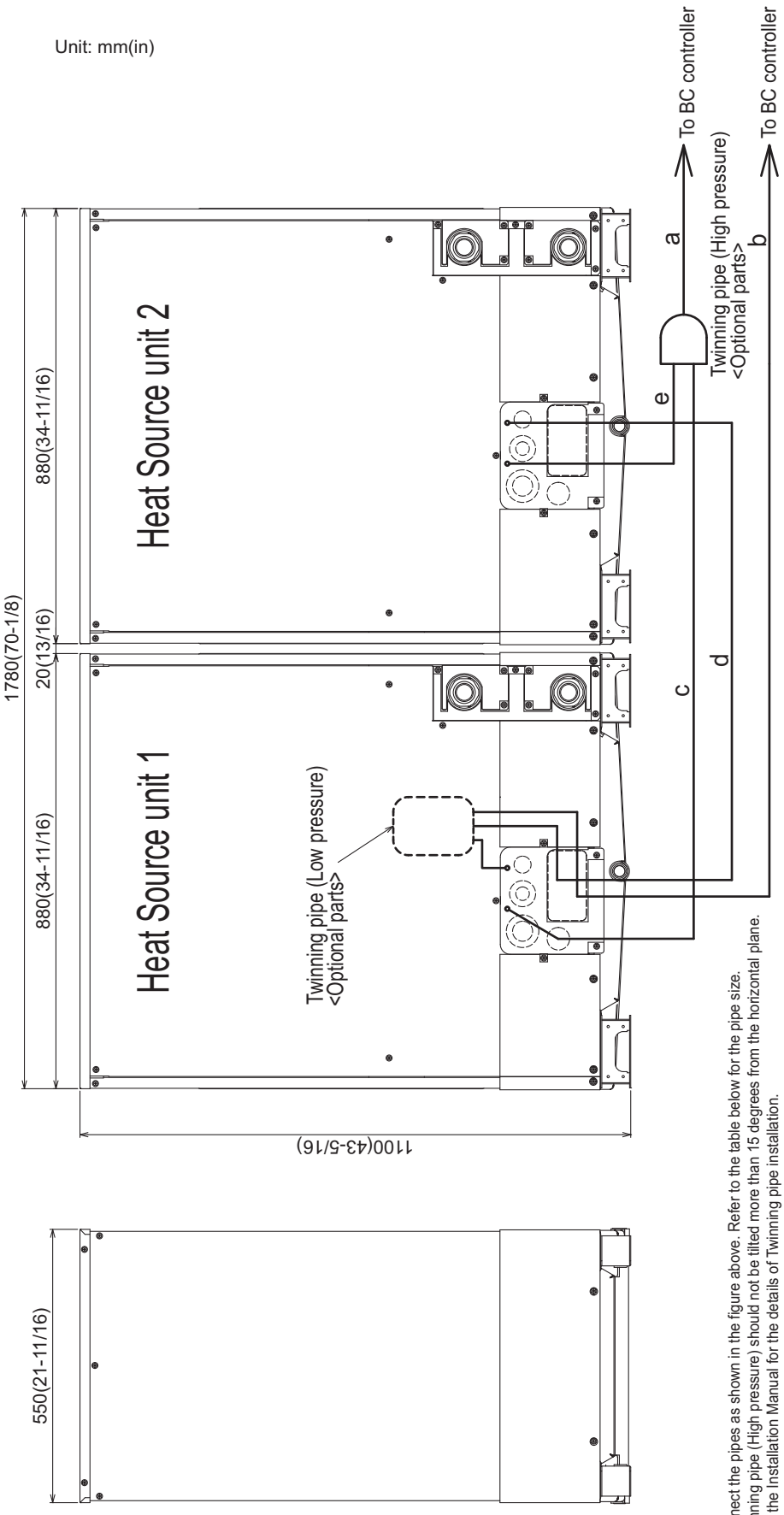
R-410A OZONE-FRIENDLY REFRIGERANT

MITSUBISHI ELECTRIC thinks green

Specifications are subject to change without notice.

Module: PQRY-P216TSLMU-A1 - DIMENSIONS

Unit: mm(in)



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

Twinning pipe connection size

Package unit name			PQRY-P144TSLMU-A1	PQRY-P168TSLMU-A1	PQRY-P192TSLMU-A1	PQRY-P216TSLMU-A1	PQRY-P240TSLMU-A1
Component unit name	Heat Source unit 1		PQRY-P72TLMU-A1	PQRY-P96TLMU-A1	PQRY-P96TLMU-A1	PQRY-P120TLMU-A1	PQRY-P120TLMU-A1
	Heat Source unit 2		PQRY-P72TLMU-A1	PQRY-P72TLMU-A1	PQRY-P96TLMU-A1	PQRY-P96TLMU-A1	PQRY-P120TLMU-A1
Twinning pipe 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)	

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

*1.When the piping length is 65 m or longer, use the ø28.58(1-1/8) pipe for the part that exceeds 65 m.
*2.When the package unit name"PQRY-P168TSLMU-A1", use the ø19.05(3/4) pipe for high pressure and the ø22.2(7/8) pipe for low pressure.

Specifications are subject to change without notice.

Unit: mm(in)

Specifications are subject to change without notice.

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), 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.
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).

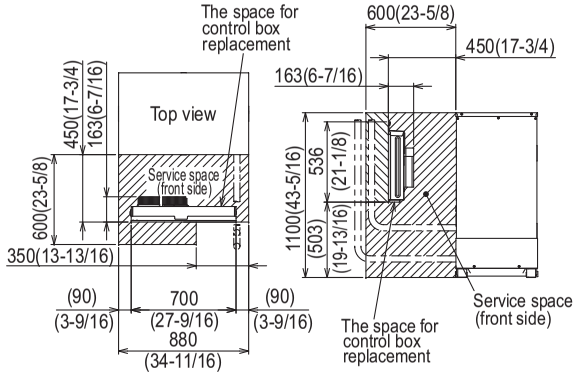


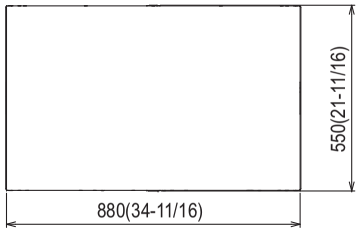
Fig.A

Fig.B

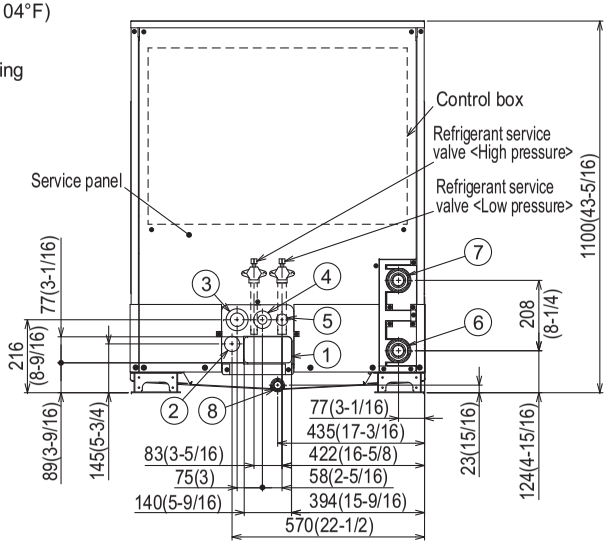
Connecting pipe specifications

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

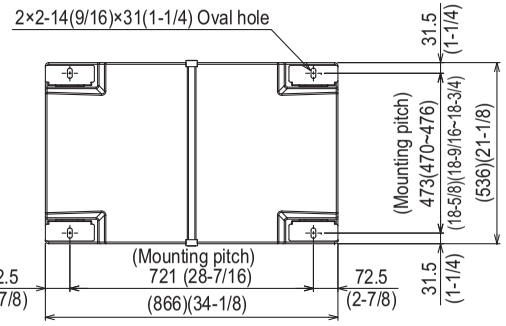
*1.Connect by using the connecting pipes and elbow that are supplied.
*2.Use the pipe joint(field supply) and connect to the refrigerant service valve piping.



Top view

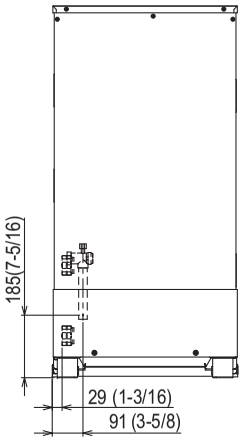


Front view

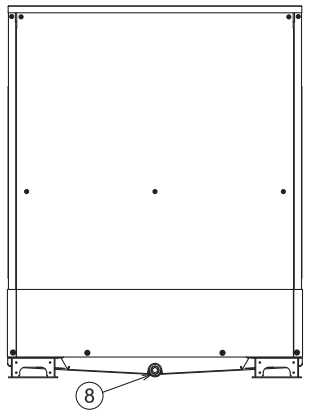


Bottom view

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



Right side view


Back view

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

Unit: mm(in)

Specifications are subject to change without notice.

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.
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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).

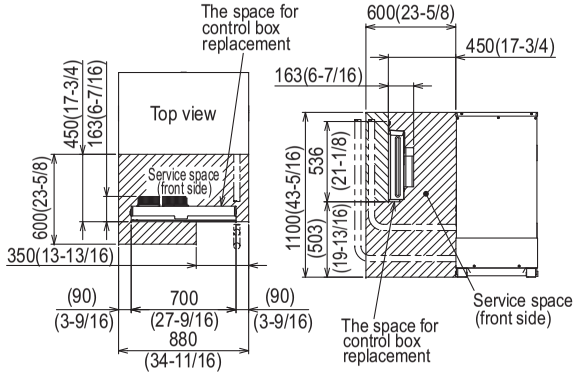
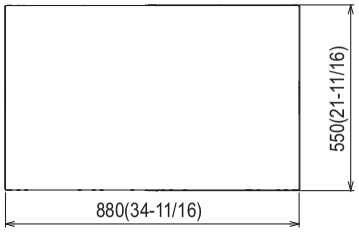


Fig.A Fig.B

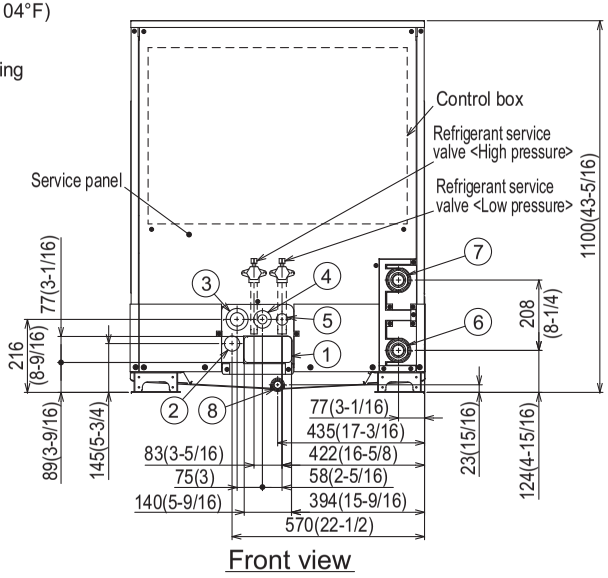
Connecting pipe specifications

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

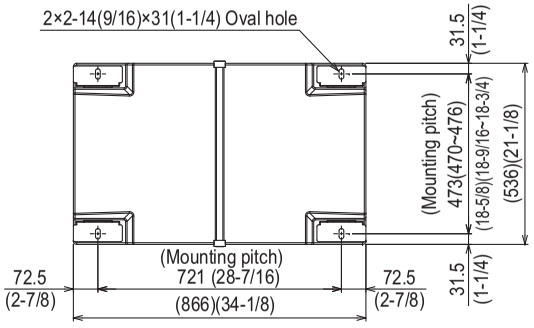
*1.Connect by using the connecting pipes and elbow that are supplied.
*2.Use the pipe joint(field supply) and connect to the refrigerant service valve piping.



Top view

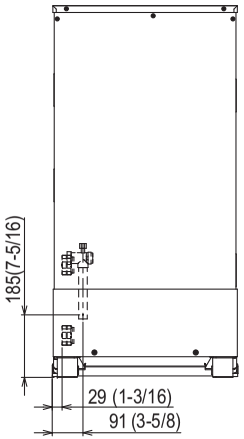


Front view

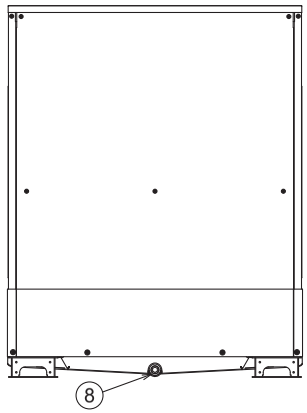


Bottom view

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



Right side view

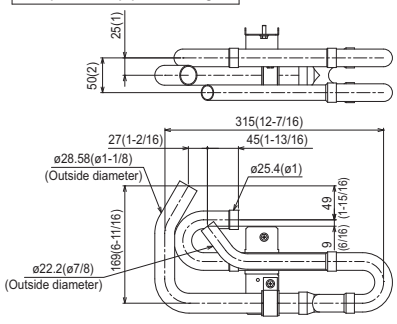


Back view

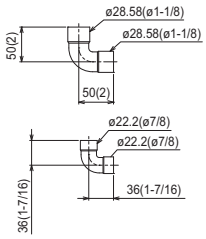
NO.	Usage		Specifications
①	For pipes	Front through hole	140 × 77 Knockout hole (5-9/16) (3-1/16)
②		Front through hole (Uses when twinning kit (optional parts) is mounted.)	ø45 Knockout hole (1-13/16)
③	For wires	Front through hole	ø62.7 or ø34.5 Knockout hole (2-1/2) (1-3/8)
④		Front through hole	ø43.7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

CMY-Q100CBK2

Low-pressure pipe twinning kit



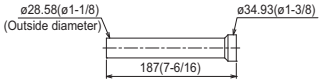
<Elbow pipe(Accessory)>



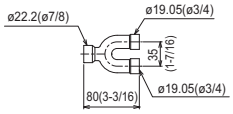
<Accessory>

Fixing screw	• • • 1
Insulation cover	• • • 1
Pipe cover (150mm(5-15/16) Length)	• • • 2
Pipe cover (60mm(2-3/8) Length)	• • • 1
Pipe cover (80mm(3-3/16) Length)	• • • 2
Cable tie	• • • 2
Water stopper	• • • 1
Sealing material (Small)	• • • 1
Sealing material (Large)	• • • 1

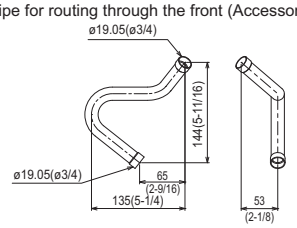
<Pipe for routing through the front (Accessory)>



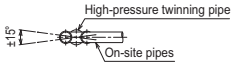
High-pressure twinning pipe



<Pipe for routing through the front (Accessory)>



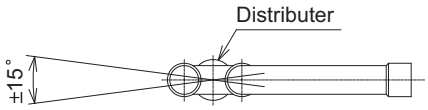
Note 1. Refer to the figure below for the installation position of the high-pressure twinning pipe.



Inclination tolerance of the high-pressure twinning pipe is ±15° relative to the ground.

2. Pipe diameter is indicated by inside diameter.

Note 1. Reference the attitude angle of the branch pipe below the fig.



The angle of the branch pipe for hign pressure is within ±15°

2. Use the attached pipe to braze the port-opening of the distribut .
3. Pipe diameter is indicated by inside diamete

Notes: