

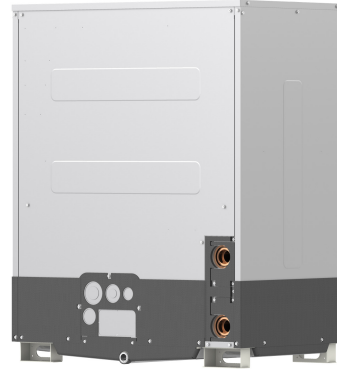
Job Name: \_\_\_\_\_ Location: \_\_\_\_\_

Engineer Name: \_\_\_\_\_ Contractor: \_\_\_\_\_

System No.: \_\_\_\_\_ Date: \_\_\_\_\_

### MODULAR WATER-SOURCE VRF HEAT RECOVERY SYSTEM FEATURES

- 3-phase, 575V, 60Hz
- Modular variable refrigerant flow (VRF) systems; smaller capacity units can be piped together to form a single, large-capacity two-pipe system
- Designed for closed water loops; water quality must meet regulations
- Self-cooling cabinet design
- Compact size for each water-source module
- Max. Total Refrigerant Piping Length: 1,804' (P72,96,120), 2,461' (P144,168,192,216,240); Max. Refrigerant Line Length: 541'; Max. Control Wiring Length: 1,640'
- Connects to CITY MULTI indoor units; controlled via CITY MULTI Controls Network (CMCN)
- External finish: Galvanized Steel Sheets
- Operating Indoor Temperature Range  
Cooling: 59° ~ 75°F (15° ~ 24°C) WB  
Heating: 59° ~ 81°F (15° ~ 27°C) DB
- Operating Water Temperature Range  
Cooling: 50° ~ 113°F (10° ~ 45°C)  
Heating: 50° ~ 95°F (10° ~ 35°C)



PQRV-P120ZKMU-A

### OPTIONAL PARTS

- Branch Joint (T-Branch: ≤ 72,000 Btu/h).....CMY-Y102SS-G2
- Branch Joint (T-Branch: 73,000-144,000 Btu/h).....CMY-Y102LS-G2
- Branch Joint (T-Branch: 145,000 - 240,000 Btu/h).....CMY-Y202S-G2
- Joint Adapter (Port Connector: > 54,000 Btu/h).....CMY-R160C-J
- BC Controller.....CMB-P104/105/106/108/1010/1013/1016NU-G
- Main BC Controller.....CMB-P108/1010/1013/1016NU-GA/NU-HA
- Sub BC Controller.....CMB-P104/108NU-GB/P1016NU-HB

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

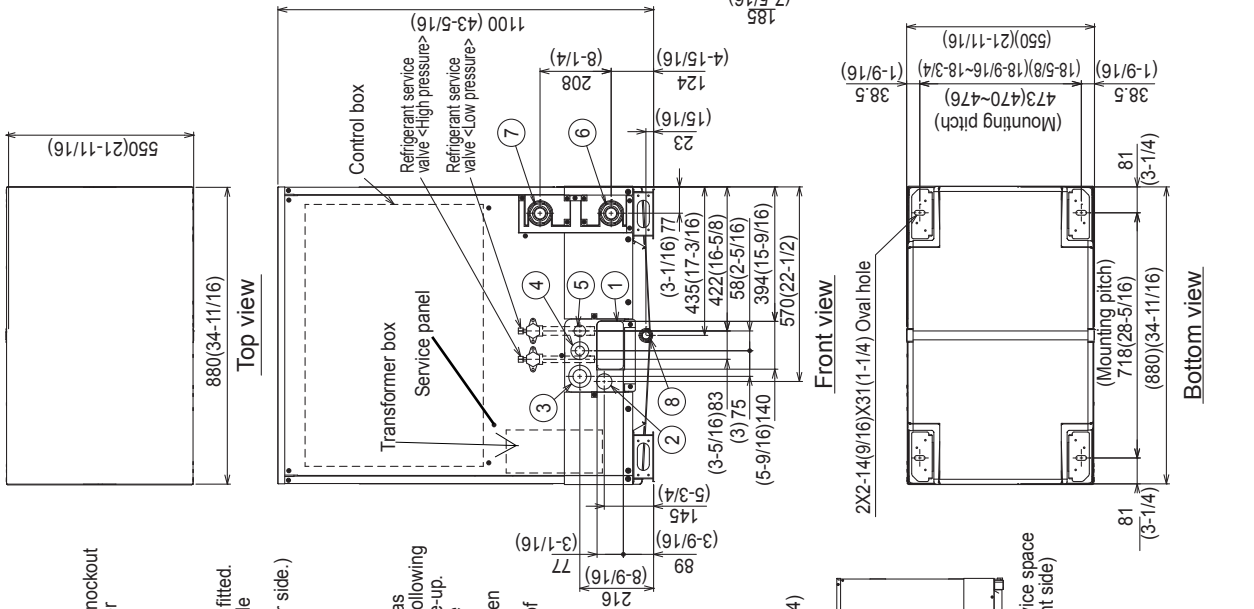
Specifications		Model Name
Unit Type		PQRV-P120ZKMU-A
Nominal Cooling Capacity	Btu/h	120,000
Nominal Heating Capacity	Btu/h	135,000
External Dimensions (H x W x D)	In. / mm	43-5/16 x 34-11/16 x 21-11/16 / 1,100 x 880 x 550
Net Weight	Lbs. / kg	404 / 183
Electrical Power Requirements	Voltage, Phase, Hertz	575V, 3-phase, 60Hz
Cooling Power Input	kW	7.90
Heating Power Input	kW	7.99
Cooling Current (575V)	A	8.8
Heating Current (575V)	A	8.9
Minimum Circuit Ampacity (MCA) *	A	13
Maximum Circuit Breaker Size	A	20
<b>Circulating Water (quality must meet regulations)</b>		
Flow Rate	GPM	25.4
Pressure Drop	psi	3.48
Operation Volume Range	GPM	20~32
Maximum Water Pressure	MPa / psi	2 / 290
Water-source Connections (Each for Inlet and Outlet)	In.	Rc1-1/2 Screw (Install strainer (more than 50 meshes) at water inlet piping of the unit)
Piping Diameter (Brazed) (In. / mm)	Liquid (High Pressure)	3/4 / 19.05
	Gas (Low Pressure)	7/8 / 22.2
Indoor Unit	Total Capacity	50 to 150% of Water-source Unit Capacity
	Model / Quantity	P06 to P96 / 1 to 30
Sound Pressure Level	dB(A)	54
Compressor Operating Range		Cooling: 14 -100%, Heating: 16 - 100%
Compressor Type x Quantity		Inverter-driven Scroll Hermetic x 1
Compressor Motor Output	kW	7.7
Compressor Crankcase Heater	kW	-
Refrigerant		R410A
Lubricant		MEL32
High-pressure Protection Device		601 psi / 4.15 MPa
Compressor / Fan Protection Device		Overheat Protection
Inverter Protection Device		Overheat / Overcurrent Protection

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# Model: PQRYP120ZKMU-A – DIMENSIONS

Unit : mm(in)

<Accessories>  
 ·Refrigerant (low pressure) conn. pipe.....1pc.  
 (P72 ; Packaged in the accessory kit)  
 ·Refrigerant (low pressure) conn. elbow.....1pc.  
 (P72/P96/P120 ; Packaged in the accessory kit)



Note1 Close a hole of the water piping, the refrigerant piping, the power supply, and the control wiring and unused knockout holes with the putty etc. so as not to infiltrate rain water etc.(field erection work)  
 Note2 At the time of product shipment, the front side piping specification serves as the local drainage connection. When connecting on the rear side, please remove the rear side plug, sealing corks, and attach a front side. Ensure there is no leak after the attachment has been fitted.  
 Note3 Take notice of service space as Fig.A. (In case of single

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.

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).

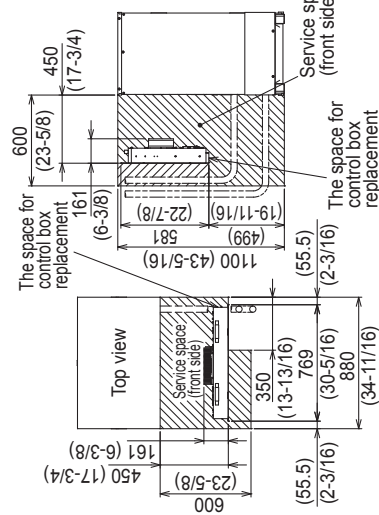


Fig.A

Fig.B

### Connecting pipe specifications

Model	High pressure	Low pressure
PQRYP7ZKMU-A	ø15.88 Brazed (5/8)	ø19.05 Brazed *1 (3/4)
PQRYP9ZKMU-A	ø19.05 Brazed (3/4)	ø22.2 Brazed *1 (7/8)
PQRYP120ZKMU-A		

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

NO.	Usage	Specifications
①	For pipes	140 x 77 Knockout hole (5-9/16) (3-1/16)
②	Front through hole (Uses when twinning kit (optional parts) is mounted.)	ø45 Knockout hole (1-13/16)
③	For wires	ø62.7 or ø44.5 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	ø34 Knockout hole (1-3/8)
⑥	Water pipe inlet	Rc1-1/2 Screw
⑦	Water pipe outlet	Rc1-1/2 Screw
⑧	Drain pipe	Rc3/4 Screw

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