

Job Name:

Schedule Reference:

Date:



VRF HEAT PUMP WITH HEAT RECOVERY SYSTEM

**UNIT OPTION**

- Standard Model ..... PQR-Y-P144TSLMU-A1

**ACCESSORIES**

- Twinning Kit ... (Required - sold separately) ..... CMY-Q100CBK2
- BC Controller Main ..... CMB-P108/1010/1013/16NU-GA1
- BC Controller Main ..... CMB-P108/1010NU-HA1 / 16NU-HA1
- BC Controller Sub ..... CMB-P104/108NU-GB1 / 1016NU-HB1
- Joint Adapter (Port Connector > 54,000 Btu/h) ..... CMY-R160C-J1
- T-Branch Joint (≤ 72,000 Btu/h) ..... CMY-Y102SS-G2
- T-Branch Joint (73,000 - 144,000 Btu/h) ..... CMY-Y102LS-G2
- T-Branch Joint (145,000 - 234,000 Btu/h) ..... CMY-Y202S-G2

Specifications		System	Module 1	Module 2
Unit Type		PQR-Y-P144TSLMU-A1	PQR-Y-P72TLMU-A1	PQR-Y-P72TLMU-A1
Nominal Cooling Capacity	Btu/h	144,400	72,000	72,000
Nominal Heating Capacity	Btu/h	160,000	80,000	80,000
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	7.11	Refer to System Data	
Heating Power Input	kW	7.45		
Cooling Current (208/230V)	A	21.9 / 19.8	Refer to System Data	
Heating Current (208/230V)	A	22.9 / 20.7		
Minimum Circuit Amp. (MCA)** (*)	A	Refer to Module Data**	13 / 12**	13 / 12**
Maximum Fuse Size**	A	Refer to Module Data**	20 / 20**	20 / 20**
<b>Circulating Water (quality must meet regulations)</b>				
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)	
<b>Piping Diameter</b>				
From Twinning Kit to Indoor Units (Brazed) (In. / mm)	Liquid (High Pressure)	7/8 / 22.2	Refer to System Data	
	Gas (Low Pressure)	1-1/8 / 28.58		
From Modules to Twinning Kit (Brazed) (In. / mm)	Liquid (High Pressure)	Refer to Module Data	5/8 / 15.88	5/8 / 15.88
	Gas (Low Pressure)		3/4 19.05	
Indoor Unit	Total Capacity	50 to 150% of WSUs	Refer to System Data	
	Model / Quantity	P06 ~ P96 / 1 to 36		
Sound Pressure Levels	dB(A)	49	46	46
Compressor Operating Range		12 - 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		4.3	4.3
Compressor Crankcase Heater	kW		0.051	0.051
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

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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.



Specifications are subject to change without notice.

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

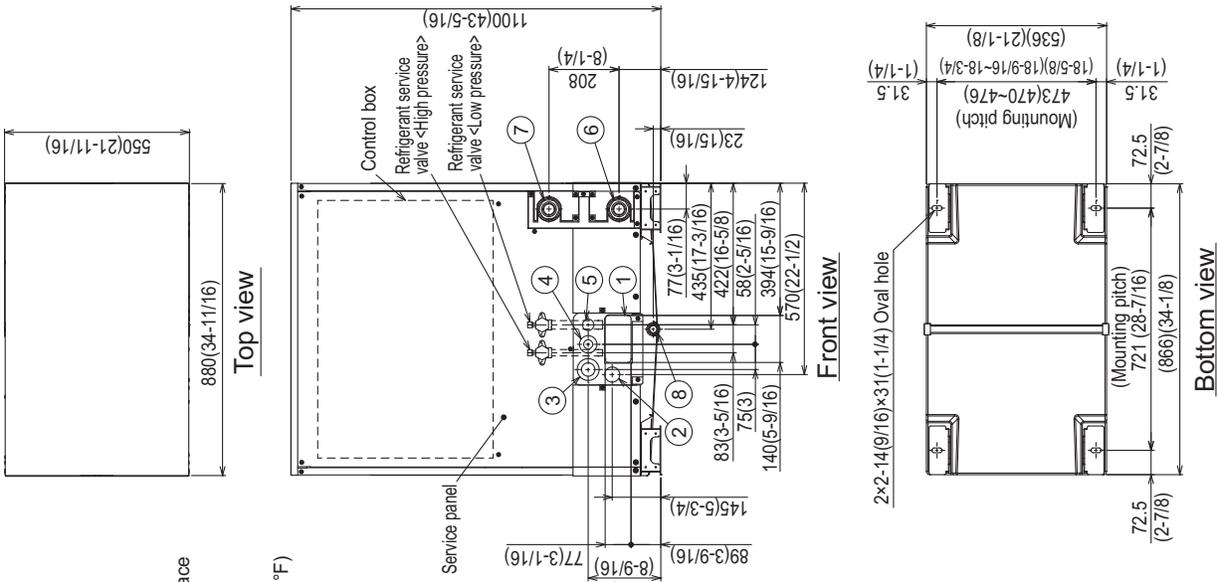


# Modules: 1, 2 : PQRV-P72TLMU-A1 - DIMENSIONS

Unit: mm(in)

<Accessories>

- Refrigerant (high pressure) conn. pipe ..... 1pc. (P72/P96/P120 ; Packaged in the accessory kit)
- Refrigerant (low pressure) conn. elbow ..... 1pc. (P72/P96/P120 ; Packaged in the accessory kit)
- Water stopper ..... 1pc.
- 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)



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 twinning kit (optional parts) is mounted.) (1-13/16)
③	For wires	Front through hole (2-1/2) (1-3/8)
④	For transmission cables	Front through hole (1-3/4) (7/8)
⑤	Water pipe inlet	Front through hole (1-3/8)
⑥	Water pipe outlet	NPT1-1/2 Screw
⑦	Drain pipe	NPT1-1/2 Screw
⑧		Rc3/4 Screw

- Note 1. Close a hole of the water piping, the refrigerant piping, the power supply, and the control wiring and unused knockout holes with the putty etc. so as not to infiltrate rain water etc. (field erection work)
- Note 2. At the time of product shipment, the front side piping specification serves as the local drainage connection. When connecting on the rear side, please remove the rear side plug sealing corks, and attach a front side. Ensure there is no leak after the attachment has been fitted.
- Note 3. Take notice of service space as Fig.A. (In case of single installation, 600mm(23-5/8) or more of back space as front space makes easier access when servicing the unit from rear side.)
- Note 4. If water pipes or refrigerant pipes stretch upward, required space for service and maintenance due to replacement of control box is shown in Fig.B.
- Note 5. Environmental condition for installation; -20~40°C(DB) (-4~104°F) as indoor installation.
- Note 6. In case the temperature around the heat source unit has possibility to drop under 0°C(32°F), 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).

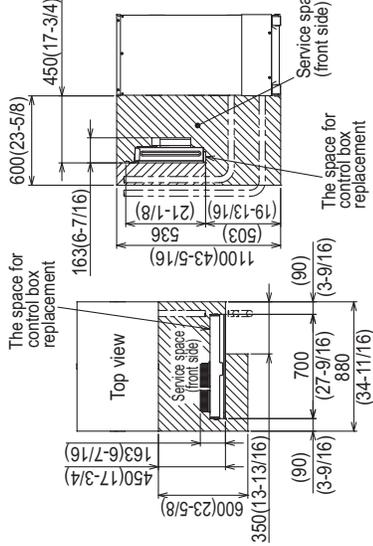


Fig. B

Fig. A

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

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