

Job Name:

System Reference:

Date:

**FEATURES**

- Single modules up to 20 tons with the ability to combine single modules for systems up to 30 tons
- 208/230V, 3-Phase, 60Hz and 460V, 3-Phase, 60Hz options
- Designed for closed water loops
- Dual heat recovery - from water loop and refrigerant circuit
- 0-10V output signal to modulate water flow for compliance with energy codes
- Features Variable Evaporating Temperature (VET) technology, which enables the outdoor unit to raise the target evaporation temperature based on the difference between set point and return air temperature, saving energy.
- Water flow can be stopped while the unit is in a thermo-off state, saving on pump energy consumption. For twinned systems, both modules must be thermo-off to stop water flow.
- Enhanced water-side heat exchanger design for improved efficiency and reduced risk of clogging
- Self-cooling cabinet design
- Inlet water temperature range: 23-113° F
- Max. Total Refrigerant Piping Length: up to 2,460 feet based on model
- Connects to CITY MULTI® indoor units; controlled via CITY MULTI® Controls Network (CMCN)
- External finish: Acrylic-painted steel
- Stack multiple units on a field-supplied rack to take advantage of vertical space when available
- Extended 10-year parts and compressor warranty available

ACCESSORIES

- Joint Kit (for details see Pipe Accessories Submittal)
- BC Controller (for details see BC Controller Submittal)

SPECIFICATIONS: PQRV-P144YLMU-A1

| Specifications | | Model Name | |
|--|------------------------|---|--------------------------------------|
| Unit Type | | PQRV-P144YLMU-A1 | |
| Nominal Cooling Capacity (460V) | | Btu/h | 144,000 |
| Nominal Heating Capacity (460V) | | Btu/h | 160,000 |
| Operating Temperature Range | Cooling (Indoor) | W.B. | 59~75°F (15~24°C) |
| | Heating (Indoor) | D.B. | 59~81°F (15~27°C) |
| Operating Water Temperature Range | Circulating water | °F | 50~113°F (10~45°C) |
| | Circulating water | °F | 50~113°F (10~45°C) |
| 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 |
| Net weight | | lbs. (kg) | 508 (230) |
| External finish | | Galvanized steel sheets | |
| Electrical Power Requirements | Voltage, Phase, Hertz | | 460V, 3-phase, 60Hz |
| Minimum Circuit Ampacity | | A | 16 |
| Maximum Overcurrent Protection | | A | 25 |
| Circulating Water (quality must meet regulations) | | | |
| Flow Rate | | G/min (gpm) | 31.7 |
| | | L/s | 2 |
| Pressure Drop | | Ft. | 14.7 |
| | | psi | 6.38 |
| Operation Volume Range | | G/min (gpm) | 19.8 ~ 50.9 |
| | | L/m | 70 ~ 193 |
| Maximum Water Pressure | | MPa | 2 |
| | | psi | 290 |
| Water-source Connection for Inlet and Outlet | | In. | 1-1/2 NPT |
| Piping Diameter (Brazed) | Liquid (High Pressure) | In. (mm) | 7/8 (22.2) |
| | Gas (Low Pressure) | In. (mm) | 1-1/8 (28.58) |
| Max. Total Refrigerant Line Length | | Ft. | 2,460 |
| Max. Refrigerant Line Length (Between ODU & IDU) | | Ft. | 541 |
| Max. Control Wiring Length | | Ft. | 1,640 |
| Indoor Unit | Total capacity | | 50~150% of heat source unit capacity |
| | Model/Quantity | | P06~P96/1~36 |
| Sound pressure level (measured in anechoic room) | | dB(A) | 54 |
| Compressor Operating Range | | 19% - 100% | |
| Compressor Type x Quantity | | Inverter scroll hermetic compressor x 1 | |
| Motor output | | kW | 9.5 |
| Lubricant | | MEL32 | |
| Refrigerant | | R410A x 13 lbs. + 4 oz. (6.0 kg) | |

SPECIFICATIONS: PQRY-P144YLMU-A1

| Specifications | | Model Name |
|-----------------------------------|--------------------------|--|
| Unit Type | | PQRY-P144YLMU-A1 |
| 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 |
| AHRI Ratings (Ducted/Non-Ducted) | EER | 12.1 / 15.4 |
| | IEER | 19.5 / 23.1 |
| | COP | 4.90 / 5.50 |
| | SCHE | 20.1 / 20.1 |

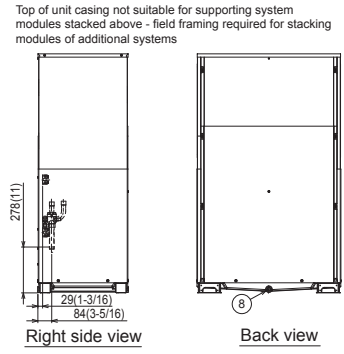
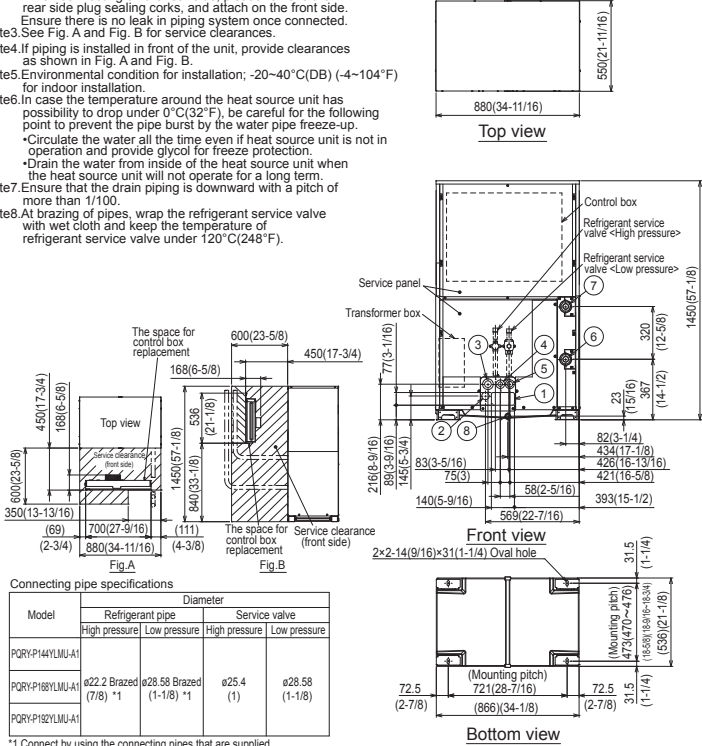
Notes:

DIMENSIONS: PQRY-P144YLMU-A1

- Note1. Seal around the water piping, the refrigerant piping, the power supply, and the control wiring and plug unused knockout holes with putty, etc., to prevent moisture or dirt from entering cabinet.
- Note2. At the time of product shipment, the front side piping serves as the local drainage connection.
When connecting on the rear side, please remove the rear side plug sealing corks, and attach on the front side. Ensure there is no leak in piping system once connected.
- Note3. See Fig. A and Fig. B for service clearances.
- Note4. If piping is installed in front of the unit, provide clearances as shown in Fig. A and Fig. B.
- Note5. Environmental condition for installation: -20~40°C(DB) (-4~104°F) for 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 heat source unit is not in operation and provide glycol for freeze protection.
*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).

Unit : mm(in)

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



Connecting pipe specifications

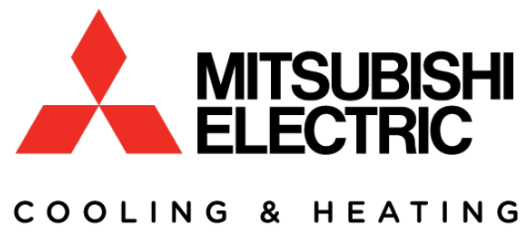
| Model | Refrigerant pipe | | Service valve | |
|------------------|-------------------------|----------------------------|---------------|-------------------|
| | High pressure | Low pressure | High pressure | Low pressure |
| PQRY-P144YLMU-A1 | ø22.2 Braze (7/8) *1 | ø28.58 Braze (1-1/8) *1 | ø25.4 (1) | ø28.58 (1-1/8) |

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

| 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 leveling kit (optional parts) is mounted.) |
| ③ | For wires | Front through hole (2-1/2) (1-3/8) |
| ④ | For transmission cables | Front through hole (1-3/4) (7/8) |
| ⑤ | Water pipe inlet | ø34 Knockout hole (1-3/8) |
| ⑥ | Water pipe outlet | NPT1-1/2 Screw |
| ⑦ | Drain pipe | NPT1-1/2 Screw |

FORM# PQRY-P120YLMU-A1 - 201710

Specifications are subject to change without notice.



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