

Job Name:

Location:

Drawing Reference:

Schedule No.

System No.:

Date:

### OUTDOOR VRFZ HEAT PUMP SYSTEM FEATURES

- 3-phase, 208/230V systems
- Modular variable refrigerant flow zoning (VRFZ) systems; smaller capacity units can be piped together to form a single, large-capacity two-pipe system
- Compact size for each outdoor module; components can be transported through standard-sized doorways for installation
- Selectable fan static, 0.12 or 0.24"WG external static pressure; factory set to 0"WG
- Max. Total Refrigerant Line Length: 3,280'; Max. Refrigerant Line Length: 541'; Max. Control Wiring Length: 1,650'
- Connects to CITY MULTI indoor units; controlled via CITY MULTI Controls Network
- External finish: Pre-coated Galvanized-steel Sheets with thermoset polyester-resin
- Operating Temperature Range
  - Cooling (Outdoor): 23° ~ 109°F (-5° ~ +43°C) DB
  - Heating (Outdoor): -4° ~ +60°F (-20° ~ +16°C) WB



PUHY-P120THMU-A-BS

# INVERTER



### OPTIONAL PARTS

- ☐ Branch Joint (T-Branch: ≤ 72,000 Btu/h).....CMY-Y102S-G2
- ☐ Branch Joint (T-Branch: 73,000-144,000 Btu/h).....CMY-Y102L-G2
- ☐ Header - 4-Branch (Capacity: ≤ 72,000 Btu/h).....CMY-Y104-G
- ☐ Header - 8-Branch (Capacity: ≤ 144,000 Btu/h).....CMY-Y108-G
- ☐ Header - 10-Branch (Capacity: ≤ 234,000 Btu/h).....CMY-Y1010-G

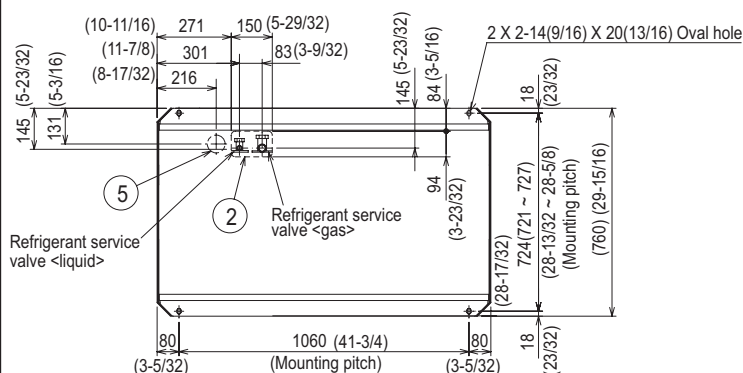
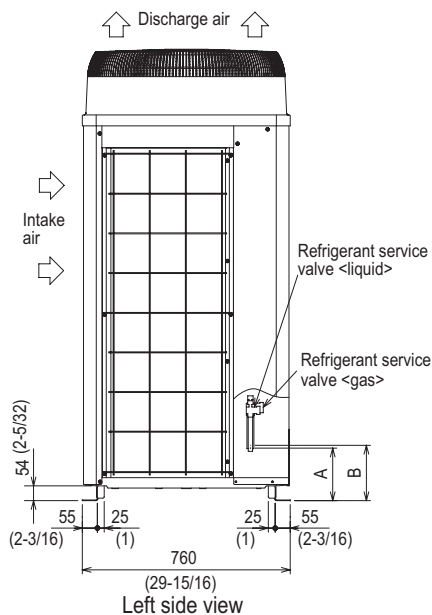
| Specifications                                                                                                                                                                                                                                    |                        | Model Name                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------------------------------------------------------------------------------------|
| Unit Type                                                                                                                                                                                                                                         |                        | PUHY-P120THMU-A-BS                                                                                       |
| Nominal Cooling Capacity                                                                                                                                                                                                                          | Btu/h                  | 120,000                                                                                                  |
| Nominal Heating Capacity                                                                                                                                                                                                                          | Btu/h                  | 120,000                                                                                                  |
| External Dimensions (H x W x D)                                                                                                                                                                                                                   | In. / mm               | 65 x 48-1/16 x 29-15/16 / 1,650 x 1,220 x 760                                                            |
| Net Weight                                                                                                                                                                                                                                        | Lbs. / kg              | 541 / 245                                                                                                |
| Electrical Power Requirements                                                                                                                                                                                                                     | Voltage, Phase, Hertz  | 208/230V, 3-phase, 60Hz                                                                                  |
| Cooling Power Input                                                                                                                                                                                                                               | kW                     | 10.11                                                                                                    |
| Heating Power Input                                                                                                                                                                                                                               | kW                     | 9.26                                                                                                     |
| Cooling Current (208/230V)                                                                                                                                                                                                                        | A                      | 31.1 / 28.1                                                                                              |
| Heating Current (208/230V)                                                                                                                                                                                                                        | A                      | 28.5 / 25.8                                                                                              |
| Minimum Circuit Ampacity (MCA)                                                                                                                                                                                                                    | A                      | 41 / 38                                                                                                  |
| Maximum Overcurrent Protection (MOCP)                                                                                                                                                                                                             | A                      | 50 / 50                                                                                                  |
| Piping Diameter (Brazed) (In. / mm)                                                                                                                                                                                                               | Liquid (High Pressure) | 3/8 / 9.52 (1/2 / 12.7 if total length ≥ 131' / 40 m or if used in combination with other outdoor units) |
|                                                                                                                                                                                                                                                   | Gas (Low Pressure)     | 7/8 / 22.2                                                                                               |
| Indoor Unit                                                                                                                                                                                                                                       | Total Capacity         | 50 to 130% of Outdoor Unit Capacity                                                                      |
|                                                                                                                                                                                                                                                   | Model / Quantity       | P06 to P96 / 1 to 26                                                                                     |
| Sound Pressure Levels                                                                                                                                                                                                                             | dB(A)                  | 60.0                                                                                                     |
| Fan                                                                                                                                                                                                                                               |                        |                                                                                                          |
| Type x Quantity                                                                                                                                                                                                                                   |                        | Propeller Fan x 1                                                                                        |
| Airflow Rate                                                                                                                                                                                                                                      | CFM                    | 7,950                                                                                                    |
| Direct-drive Inverter Motor Output                                                                                                                                                                                                                | kW                     | 0.92                                                                                                     |
| Compressor Operating Range                                                                                                                                                                                                                        |                        | 18% to 100%                                                                                              |
| Compressor Type x Quantity                                                                                                                                                                                                                        |                        | Inverter-driven Scroll Hermetic x 1                                                                      |
| Compressor Motor Output                                                                                                                                                                                                                           | kW                     | 8.8                                                                                                      |
| Compressor Crankcase Heater                                                                                                                                                                                                                       | kW                     | 0.057                                                                                                    |
| Refrigerant                                                                                                                                                                                                                                       |                        | R410A                                                                                                    |
| Lubricant                                                                                                                                                                                                                                         |                        | MEL32                                                                                                    |
| High-pressure Protection Device                                                                                                                                                                                                                   |                        | 601 psi / 4.15 MPa                                                                                       |
| Compressor / Fan Protection Device                                                                                                                                                                                                                |                        | Overheat Protection / Thermal Switch                                                                     |
| Inverter Protection Device                                                                                                                                                                                                                        |                        | Overheat / Overcurrent Protection                                                                        |
| Blue Fin Anti-corrosion Protection: Cellulose- and polyurethane-resin coating treatment applied to condenser coil that protects it from air contaminants; ≥1µm to 1.5µm thick; Salt Spray Test Method - no unusual rust development to 960 hours. |                        |                                                                                                          |

### SEACOAST PROTECTION

- External Panel Base, External Front Panel, Pillar: Alloyed galvanized-steel sheets with thermoset polyester-resin coating on internal and external surfaces
- Compressor Cover: Galvanized-aluminum sheets with thermoset polyester-resin coating on internal and external surfaces
- Electrical Parts Box: Galvanized-aluminum sheets with thermoset polyester-resin coating on external surface
- Fan Motor Support: Galvanized-steel sheets with thermoset polyester-resin coating on internal and external surfaces
- Printed Circuit Board: Epoxy resin with polyurethane-coating on external surface

# Model: PUHY-P120THMU-A-BS – DIMENSIONS

Unit : mm(in)



Bottom view

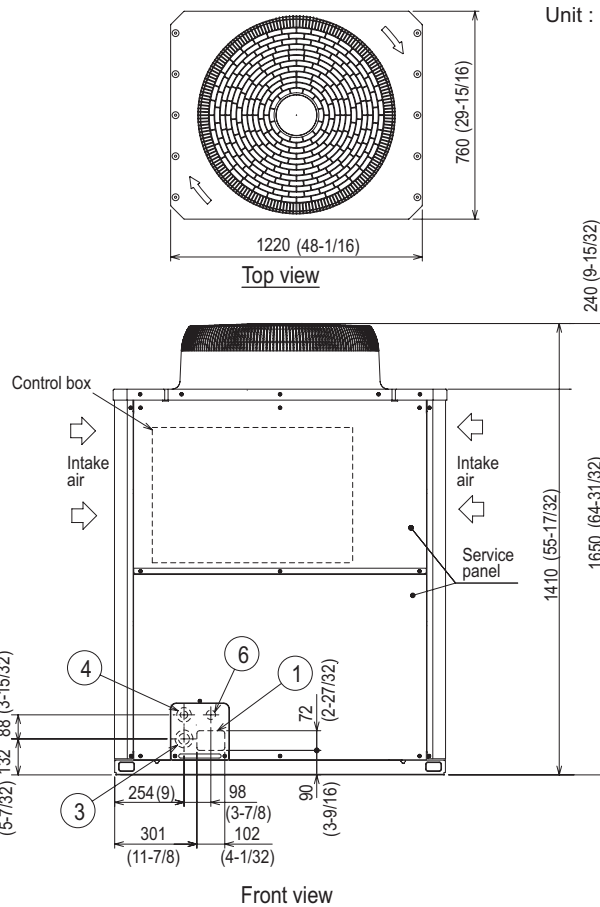
## Connecting pipe specifications

| Model              | Position dimensions for the refrigerant service valve |               | Connection specifications for the refrigerant service valve *1 |                   |
|--------------------|-------------------------------------------------------|---------------|----------------------------------------------------------------|-------------------|
|                    | Liquid                                                | Gas           | Liquid                                                         | Gas               |
|                    | A                                                     | B             |                                                                |                   |
| PUHY-P120THMU (BS) | 158 (6-1/4)                                           | 172 (6-25/32) | ø9.52 Braze (3/8)<br>(ø12.7 Braze (1/2) *2 *3)                 | ø22.2 Braze (7/8) |

\*1 Use the connecting pipes (for bottom and front pipes) that are supplied.

\*2 Indicates dimensions and connection specifications if the unit is used in combination with other outdoor units.

\*3 Total length ≥ 40m (131')



Front view

## Accessories

- Connecting pipe
  - Gas
    - Elbow (IDø25.4 [1] X ODø25.4 [1]) 1 pc.
    - Pipe (IDø25.4 [1] X ODø22.2 [7/8]) 1 pc.
  - Liquid
    - Pipe (IDø15.88 [5/8] X ODø9.52 [3/8]) 1 pc.
    - Pipe (IDø15.88 [5/8] X ODø12.7 [1/2]) 1 pc.

- Note 1. Refer to the Engineering or Installation manual for information regarding necessary clearance around the unit, and installation site requirements.
- Note 2. When brazing the pipes, protect the refrigerant service valve by wrapping it with a wet cloth to keep its temperature under 120°C (248°F).

| NO. | Usage                   | Specifications                                                   |
|-----|-------------------------|------------------------------------------------------------------|
| ①   | For pipes               | Front access hole 102 X 72 Knockout hole (4-1/32) (2-27/32)      |
| ②   |                         | Bottom access hole 150 X 94 Knockout hole (5-29/32) (3-23/32)    |
| ③   | For wires               | Front access hole ø62.7 or ø34.5 Knockout hole (2-15/32) (1-3/8) |
| ④   |                         | Front access hole ø43.7 or ø22.2 Knockout hole (1-3/4) (7/8)     |
| ⑤   | For transmission cables | Bottom access hole ø65 Knockout hole (2-9/16)                    |
| ⑥   |                         | Front access hole ø34 Knockout hole (1-11/32)                    |



Certificate Number FM33568

Mitsubishi Electric Air Conditioning & Refrigeration Systems Works acquired ISO 9001 certification under Series 9000 of the International Standard Organization (ISO) based on a review of quality warranties for the production of refrigeration and air conditioning equipment.

## ISO Authorization System

The ISO 9000 series is a plant authorization system relating to quality warranties as stipulated by the ISO. ISO 9001 certifies quality warranties based on the "design, development, production, installation and auxiliary services" for products built at an authorized plant.

Mitsubishi Electric Air Conditioning & Refrigeration Systems Works acquired environmental management system standard ISO 14001 certification.

The ISO 14000 series is a set of standards applying to environmental protection set by the International Standard Organization (ISO).



**MITSUBISHI ELECTRIC**

## HVAC Advanced Products Division

Mitsubishi Electric & Electronics USA, Inc.

3400 Lawrenceville Suwanee Rd.

Suwanee, GA 30024

Tele: 678-376-2900 • Fax: 800-889-9904

Toll Free: 800-433-4822 (#4)

www.mehvac.com

Specifications are subject to change without notice.



Certificate Number EC97J1227