

Job Name:

System Reference:

Date:

208/230V OUTDOOR VRF HEAT RECOVERY SYSTEM



UNIT OPTION

Standard Model.....PURY-P312TSNU-A
 Seacoast (BS) Model.....PURY-P312TSNU-A-BS

ACCESSORIES

Twining Kit (Required).....CMY-R300NCBK
 BC Controller (Required).....for details see BC Controller Submittals
 Joint Kit.....for details see Pipe Accessories Submittal
 Panel Heater Kit.....for details see Panel Heater Kit Submittal
 Snow/Hail Guards Kit.....for details see Snow/Hail Guards Kit Submittal

| Specifications | | System | |
|--|------------------------|--------------------------------------|----------------------|
| Unit Type | | PURY-P312TSNU-A(-BS) | |
| Cooling Capacity (Nominal) | BTU/H | 312,000 | |
| Heating Capacity (Nominal) | BTU/H | 350,000 | |
| Net Weight | Lbs. [kg] | 1385 [628] | |
| Refrigerant Piping Diameter | Liquid (High Pressure) | In. [mm] | 1-1/8 [28.58] Brazed |
| | Gas (Low Pressure) | In. [mm] | 1-5/8 [41.28] Brazed |
| Max. Total Refrigerant Line Length | Ft. | 3116 | |
| Max. Refrigerant Line Length (Between ODU & IDU) | Ft. | 541 | |
| Max. Control Wiring Length | Ft. | 1640 | |
| Indoor Unit Connectable | Total Capacity | 50.0~150.0% of outdoor unit capacity | |
| | Model/Quantity | P05~P96/2.0~50.0 | |
| Sound Pressure Levels | dB(A) | 67.0~69.0 | |
| Sound Power Levels | dB(A) | 87.0/88.5 | |
| Compressor Operating Range | | 7.5% to 100.0% | |
| AHRI Ratings (Ducted/Non-ducted) | EER | 10.1/10.2 | |
| | IEER | 21.4/24.6 | |
| | COP | 3.2/3.36 | |
| | SCHE | 20.6/23.8 | |

| Specifications | | | Module 1 | | Module 2 | |
|---|--|---------|--|--|--|--|
| Unit Type | | | PURY-P168TNU-A(-BS) | | PURY-P144TNU-A(-BS) | |
| Cooling Capacity (Nominal) | BTU/H | | 168,000 | | 144,000 | |
| Heating Capacity (Nominal) | BTU/H | | 188,000 | | 160,000 | |
| Guaranteed Operating Range ¹ | Cooling ² | °F [°C] | 23~126 [-5.0~52.0] | | 23~126 [-5.0~52.0] | |
| | Heating ³ | °F [°C] | -4~60 [-20.0~15.5] | | -4~60 [-20.0~15.5] | |
| Extended Operating Range | Heating | °F [°C] | -18~60 [-18.0~15.5] | | -18~60 [-18.0~15.5] | |
| External Dimensions (H x W x D) | In. [mm] | | 71-5/8 x 68-29/32 x 29-5/32 [1,818 x 1,750 x 740] | | 71-5/8 x 48-7/8 x 29-5/32 [1,818 x 1,240 x 740] | |
| Net Weight | Lbs. [kg] | | 739 [335] | | 646 [293] | |
| External Finish | | | Pre-coated galvanized steel sheet (+powder coating for -BS type) | | Pre-coated galvanized steel sheet (+powder coating for -BS type) | |
| Electrical Power Requirements | Voltage, Phase, Hertz, Power Tolerance | | 208/230V, 3-phase, 60 Hz, ±10% | | 208/230V, 3-phase, 60 Hz, ±10% | |
| Minimum Circuit Ampacity | A | | 61.0/57.0 | | 52.0/48.0 | |
| Maximum Overcurrent Protection | A | | 100/90 | | 80/70 | |
| Recommended Fuse Size | A | | 70/70 | | 60/60 | |
| Recommended Minimum Wire Size | AWG [mm] | | 4/4 [21.2/21.2] | | 4/4 [21.2/21.2] | |
| SCCR | kA | | 5 | | 5 | |
| FAN ⁴ | Type x Quantity | | Propeller fan x 2 | | Propeller fan x 2 | |
| | Airflow Rate | CFM | 14850 | | 9550 | |
| | External Static Pressure | In. WG | Selectable; 0.00, 0.12, 0.24, 0.32 In. WG; factory set to 0 In. WG | | Selectable; 0.00, 0.12, 0.24, 0.32 In. WG; factory set to 0 In. WG | |
| Compressor | Type x Quantity | | Inverter scroll hermetic compressor x 1 | | Inverter scroll hermetic compressor x 1 | |
| Refrigerant | Type x Original Charge | | R410A x 23 lbs + 12.0 oz [10.8 kg] | | R410A x 23 lbs + 12.0 oz [18.8 kg] | |
| Protection Devices | High Pressure Protection | | High pressure sensor, High pressure switch at 4.15 MPa (601 psi) | | High pressure sensor, High pressure switch at 4.15 MPa (601 psi) | |
| | Inverter Circuit (Comp./Fan) | | Over-heat protection, Over-current protection | | Over-heat protection, Over-current protection | |
| | Fan Motor | | Over-current protection | | Over-current protection | |

NOTES:
 Nominal cooling conditions (Test conditions are based on AHRI 1230)
 Indoor: 80°F D.B./67°F W.B. (26.7°C D.B./19.4°C W.B.), Outdoor: 95°F D.B. (35°C D.B.)
 Nominal heating conditions (Test conditions are based on AHRI 1230)
 Indoor: 70°F D.B. (21.1°C D.B.), Outdoor: 47°F D.B./43°F W.B. (8.3°C D.B./6.1°C W.B.)

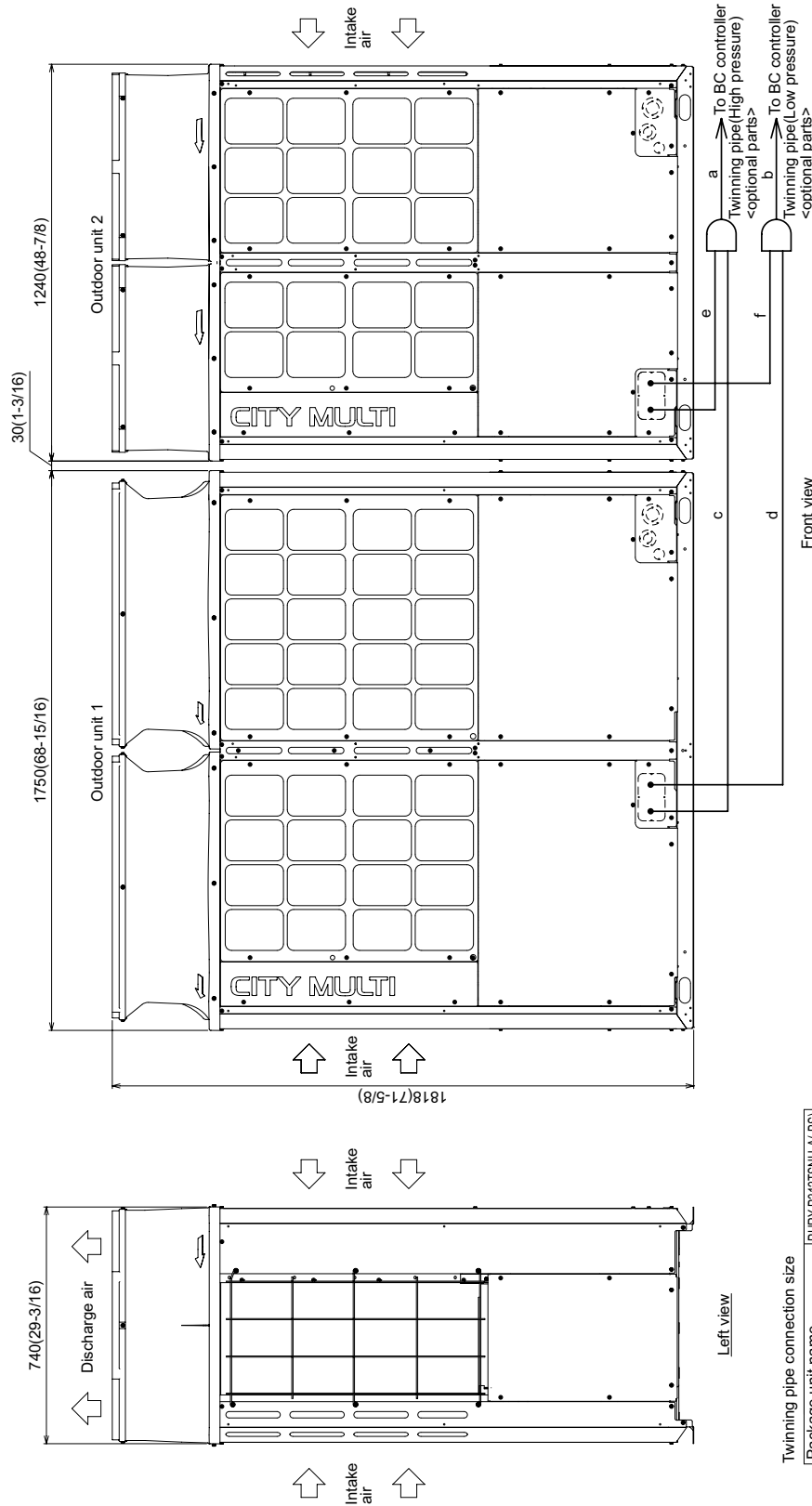
¹Harsh weather environments may demand performance enhancing equipment. Ask your Mitsubishi Electric representative for more details about your region
²For details on extended cooling operation range down to -10° F DB, see Low Ambient Kit Submittal
³When applying product below -4°F, consult your design engineer for cold climate application best practices, including the use of a backup source for heating
⁴Unit will continue to operate in extended operating range, but capacity is not guaranteed

Each individual module requires a separate electrical connection. Refer to electrical data for each individual module.

OUTDOOR UNIT: PURY-P312TSNU-A(-BS) – DIMENSIONS

PURY-P312TSNU-A(-BS)

Unit: mm(in)



| High pressure | Low pressure |
|---------------|---------------|
| c or e | d or f |
| ø22.2(7/8) | ø28.58(1-1/8) |
| ø22.2(7/8) | ø28.58(1-1/8) |

| Package unit name | PURY-P312TSNU-A(-BS) |
|--------------------------------------|----------------------|
| Outdoor unit 1 | PURY-P168TNU-A(-BS) |
| Outdoor unit 2 | PURY-P144TNU-A(-BS) |
| Outdoor Twinning kit(optional parts) | CNY-R30JNCBK |
| BC controller | ø28.58(1-1/8) |
| -Twinning pipe | ø41.28(1-5/8) |

Note 1. Connect the pipes as shown in the figure above. Refer to the table above for the pipe size.

2. Twinning pipes should not be tilted more than 15 degrees from the horizontal plane.

Be sure to see the Installation Manual for details of Twinning pipe installation.

3. The pipe section before the Twinning pipe (section "a" and "b" in the figure) must have at least 500mm(19-11/16) of straight section

(*including the straight pipe that is supplied with the Twinning pipe).

4. Only use the Twinning pipe by Mitsubishi (optional parts).

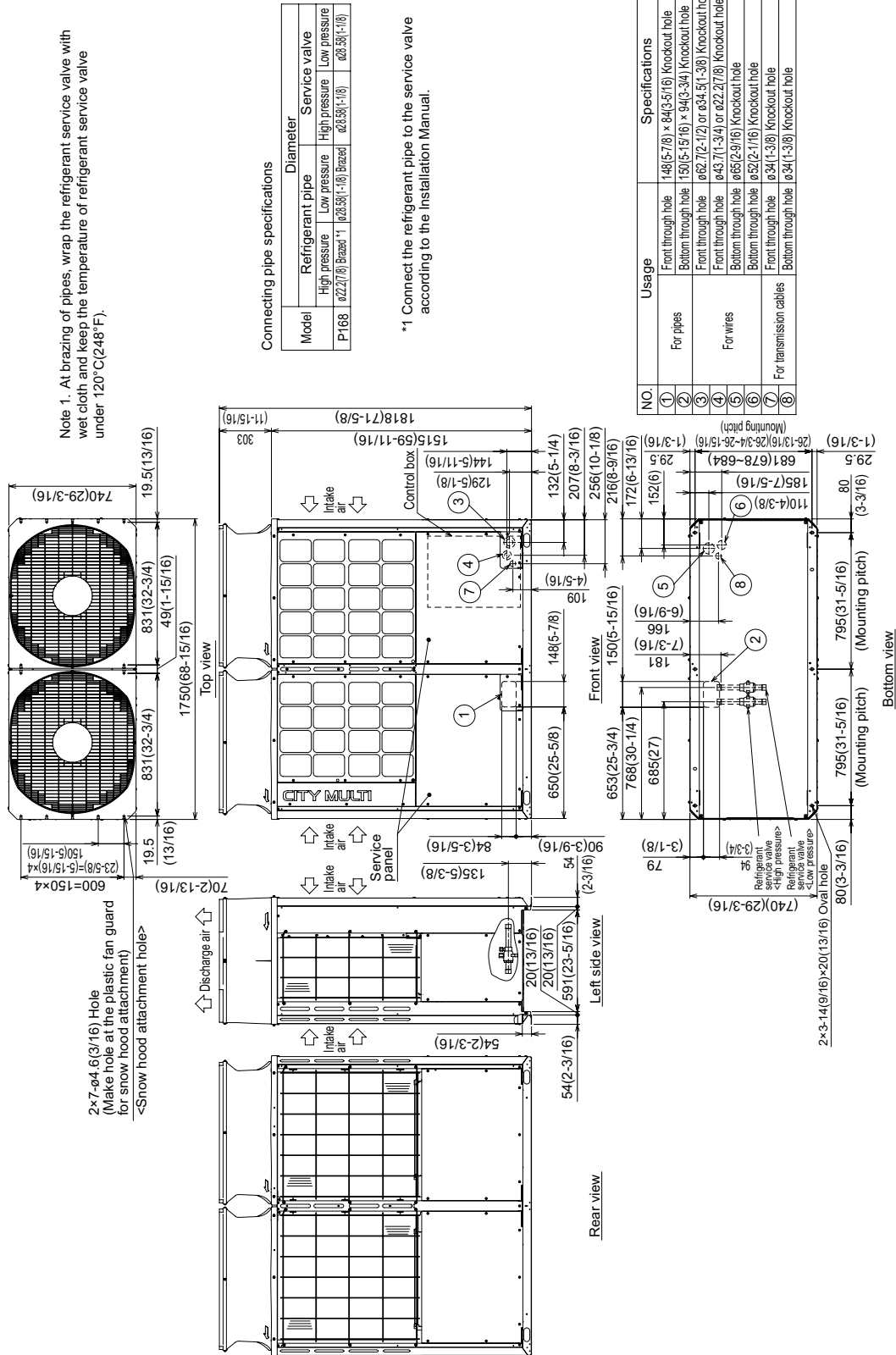
NOTES:
SEACOAST PROTECTION

Anti-corrosion Protection: A coating treatment is applied to condenser coil for protection from air contaminants.
Standard: Salt Spray Test Method - no unusual rust development to 480 hours.
Sea Coast (BS): Salt Spray Test Method (JRA 9002) - no unusual rust development to 960 hours.

MODULE 1: PURY-P168TNU-A(-BS) – DIMENSIONS

PURY-P168TNU-A(-BS)

Unit: mm(in)



NOTES:
SEACOAST PROTECTION

Anti-corrosion Protection: A coating treatment is applied to condenser coil for protection from air contaminants.
Standard: Salt Spray Test Method - no unusual rust development to 480 hours.
Sea Coast (BS): Salt Spray Test Method (JRA 9002) - no unusual rust development to 960 hours.

MODULE 2: PURY-P144TNU-A(-BS) – DIMENSIONS

PURY-P96,120,144TNU-A(-BS)

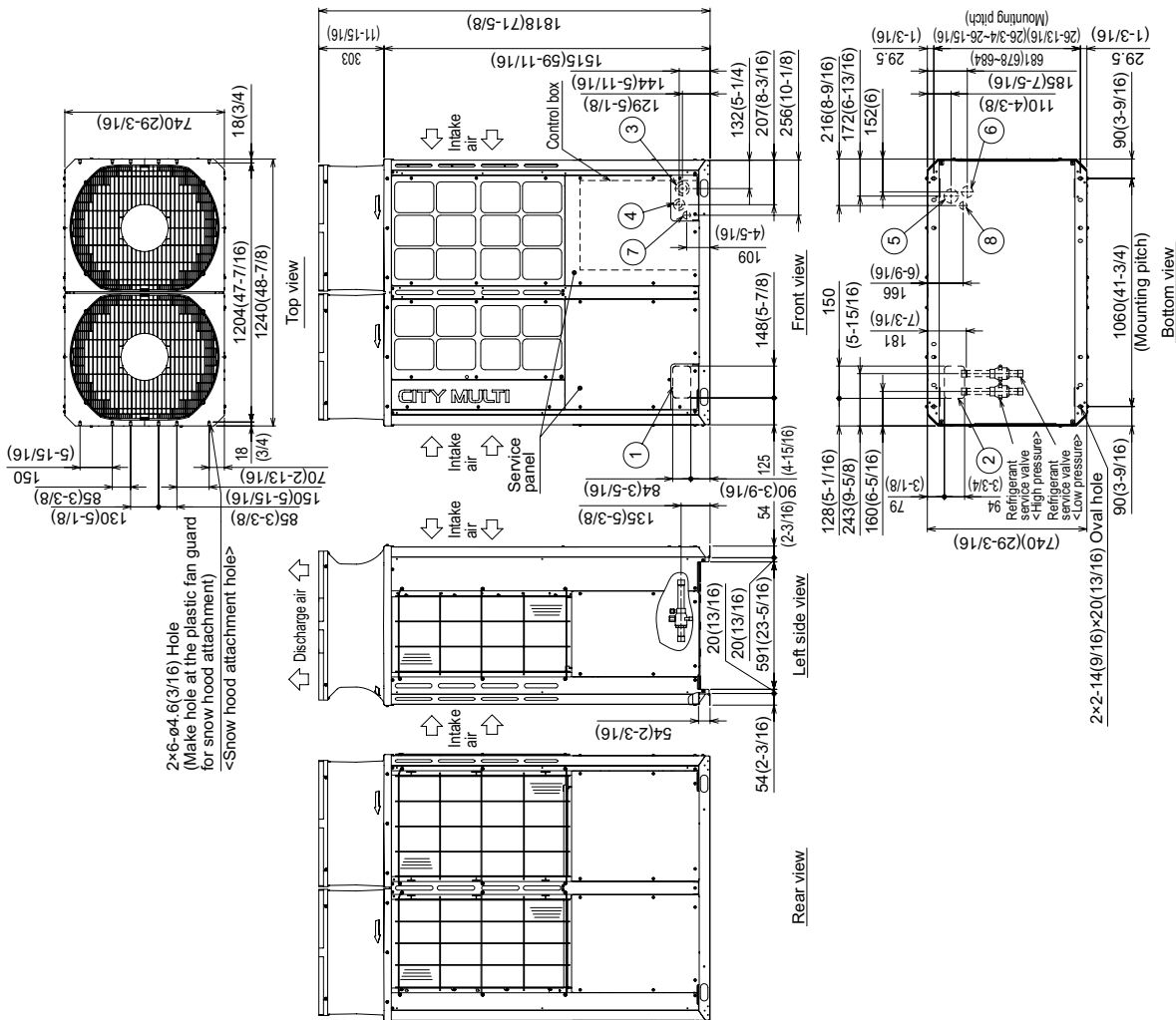
Unit: mm(in)

Note 1. 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).

| Model | Refrigerant pipe | | Service valve | |
|-------|----------------------|-----------------------|---------------------|--------------|
| | High pressure | Low pressure | High pressure | Low pressure |
| P96 | φ19.05(3/4) Brazed*1 | φ22.2(7/8) Brazed*1 | φ28.5(1-1/8) | φ28.5(1-1/8) |
| P120 | φ19.05(3/4) Brazed*1 | φ22.2(7/8) Brazed*1 | φ28.5(1-1/8) Brazed | φ28.5(1-1/8) |
| P144 | φ22.2(7/8) Brazed*1 | φ28.5(1-1/8) Brazed*1 | φ28.5(1-1/8) Brazed | φ28.5(1-1/8) |

*1 Connect the refrigerant pipe to the service valve according to the Installation Manual.

| NO. | Usage | Specifications |
|-----|---------------------|--|
| ① | Front through hole | 148(5-7/8) × 84(3-5/16) Knockout hole |
| ② | Bottom through hole | 150(5-15/16) × 94(3-3/4) Knockout hole |
| ③ | Front through hole | φ62.7(2-1/2) or φ34.5(1-3/8) Knockout hole |
| ④ | Front through hole | φ43.7(1-3/4) or φ22.2(7/8) Knockout hole |
| ⑤ | Bottom through hole | φ65(2-9/16) Knockout hole |
| ⑥ | Bottom through hole | φ52(2-1/16) Knockout hole |
| ⑦ | Front through hole | φ34(1-3/8) Knockout hole |
| ⑧ | Bottom through hole | φ34(1-3/8) Knockout hole |



NOTES:
SEACOAT PROTECTION

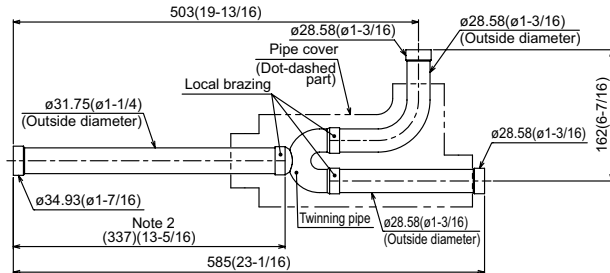
Anti-corrosion Protection: A coating treatment is applied to condenser coil for protection from air contaminants.
Standard: Salt Spray Test Method - no unusual rust development to 480 hours.
Sea Coast (BS): Salt Spray Test Method (JRA 9002) - no unusual rust development to 960 hours.

TWINNING KIT: CMY-R300NCBK – DIMENSIONS

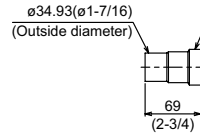
CMY-R300NCBK

Unit: mm (in.)

Low-pressure twinning pipe

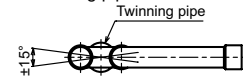


<Deformed pipe(Accessory)>



Note:

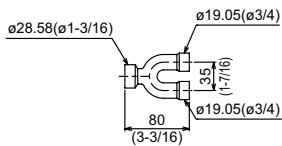
1. Refer to the figure below for the installation position of the twinning pipe.



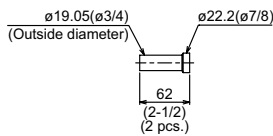
Slope of the twinning pipes are at an angle within $\pm 15^\circ$ to the horizontal plane.

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

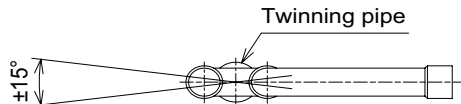
High-pressure twinning pipe



<Deformed pipe(Accessory)>



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



The angle of the twinning pipe is within $\pm 15^\circ$ against the horizontal plane.

2. Use the attached pipe to braze the port-opening of the twinning pipe.
3. Pipe diameter is indicated by inside diameter.
4. Only use the Twinning pipe by Mitsubishi (optional parts) .

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FORM# PURY-P312TSNU-A - 202107

