

CITY MULTI® Outdoor Unit: 14-TON PUHY-P168TSJMU-A-BS

(Consists of One PUHY-P96TJMU-A-BS, One PUHY-P72TJMU-A-BS, and One CMY-Y100VBK2 Twinning Kit)



Job Name:

Location:

Drawing Reference:

Schedule No.

System No.:

Date:

OUTDOOR VRFZ HEAT PUMP SYSTEM FEATURES

- 3-phase, 208/230V
- Modular variable refrigerant flow zoning (VRFZ) systems; smaller capacity units can be piped together to form a single, large-capacity two-pipe system
- Required Twinning Kit allows for easy field piping connection
- Selectable fan static, 0.12 or 0.24"WG external static pressure; factory set to 0"WG
- Maximum Total Refrigerant Piping Length: 3,280'; Maximum Refrigerant Line Length: 541'; Maximum Control Wiring Length: 1,650'
- Connects to CITY MULTI indoor units; controlled via CITY MULTI Controls Network (CMCN)
- External finish: Pre-coated Galvanized-steel Sheets with thermoset polyester-resin
- Operating Temperature Range
 - Cooling (Outdoor): 23° ~ 115°F (-5° ~ +46°C) DB
 - Heating (Outdoor): -4° ~ +60°F (-20° ~ +16°C) WB



PUHY-P96TJMU-A-BS PUHY-P72TJMU-A-BS

INVERTER



OPTIONAL PARTS

- ☐ Twinning Kit*.....CMY-Y100VBK2
- ☐ T-Branch Joint (≤ 72,000 Btu/h).....CMY-Y102S-G2
- ☐ T-Branch Joint (≤ 144,000 Btu/h).....CMY-Y102L-G2
- ☐ T-Branch Joint (≤ 234,000 Btu/h).....CMY-Y202-G2
- ☐ Header (4-Branch; ≤ 72,000 Btu/h).....CMY-Y104-G
- ☐ Header (8-Branch; ≤ 144,000 Btu/h).....CMY-Y108-G
- ☐ Header (10-Branch; ≤ 234,000 Btu/h).....CMY-Y1010-G

* Twinning Kit is necessary to combine the refrigerant flows of the modules and is included in the outdoor unit set.

Specifications		System	Module 1	Module 2
Unit Type		PUHY-P168TSJMU-A-BS	PUHY-P96TJMU-A-BS	PUHY-P72TJMU-A-BS
Nominal Cooling Capacity	Btu/h	168,000	96,000	72,000
Nominal Heating Capacity	Btu/h	188,000	108,000	80,000
External Dimensions (H x W x D)	In. / mm	Refer to Module Data	65 x 48-1/16 x 29-15/16 / 1,650 x 1,220 x 760	65 x 36-1/4 x 29-15/16 / 1,650 x 920 x 760
Net Weight	Lbs. / kg	938 / 425	497 / 225	441 / 200
Electrical Power Requirements	Voltage, Phase, Hertz	Refer to Module Data**	208 / 230V, 3-phase, 60Hz**	
Cooling Power Input	kW	13.62	Refer to System Data	
Heating Power Input	kW	14.65		
Cooling Current (208/230V)	R.L.A.	42.0 / 37.9		
Heating Current (208/230V)	R.L.A.	45.1 / 40.8	Refer to System Data	
Minimum Circuit Ampacity (MCA)**	A	Refer to Module Data**	36 / 34**	25 / 24**
Recommended Fuse/Breaker Size**	A	Refer to Module Data**	40**	30**
Maximum Fuse Size**	A	Refer to Module Data**	50 / 50**	30 / 30**
Piping Diameter			Refer to System Data	
From Twinning Kit to Indoor Units (Brazed) (In. / mm)	Liquid (High Pressure)	5/8 / 15.88		
	Gas (Low Pressure)	1-1/8 / 28.58		
From Modules to Twinning Kit (Brazed) (In. / mm)	Liquid (High Pressure)	Refer to Module Data	3/8 / 9.52	3/8 / 9.52
	Gas (Low Pressure)		7/8 / 22.2	3/4 / 19.05
Indoor Unit	Total Capacity	50 to 130% of ODUs	Refer to System Data	
	Model / Quantity	P06 ~ P96 / 1 to 36		
Sound Pressure Levels	dB(A)	61.0	58.0	58.0
Fan		Refer to Module Data		
Type x Quantity				
Airflow Rate	CFM		Propeller Fan x 1	
Direct-drive Inverter Motor Output	kW		Propeller Fan x 1	
			6,180	6,180
			0.92	0.92
Compressor Operating Range		8% to 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		6.8	5.1
Compressor Crankcase Heater	kW		0.045	0.035
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 / Thermal Switch	Overheat Protection / Thermal Switch
Inverter Protection Device			Overheat / Overcurrent Protection	Overheat / Overcurrent Protection

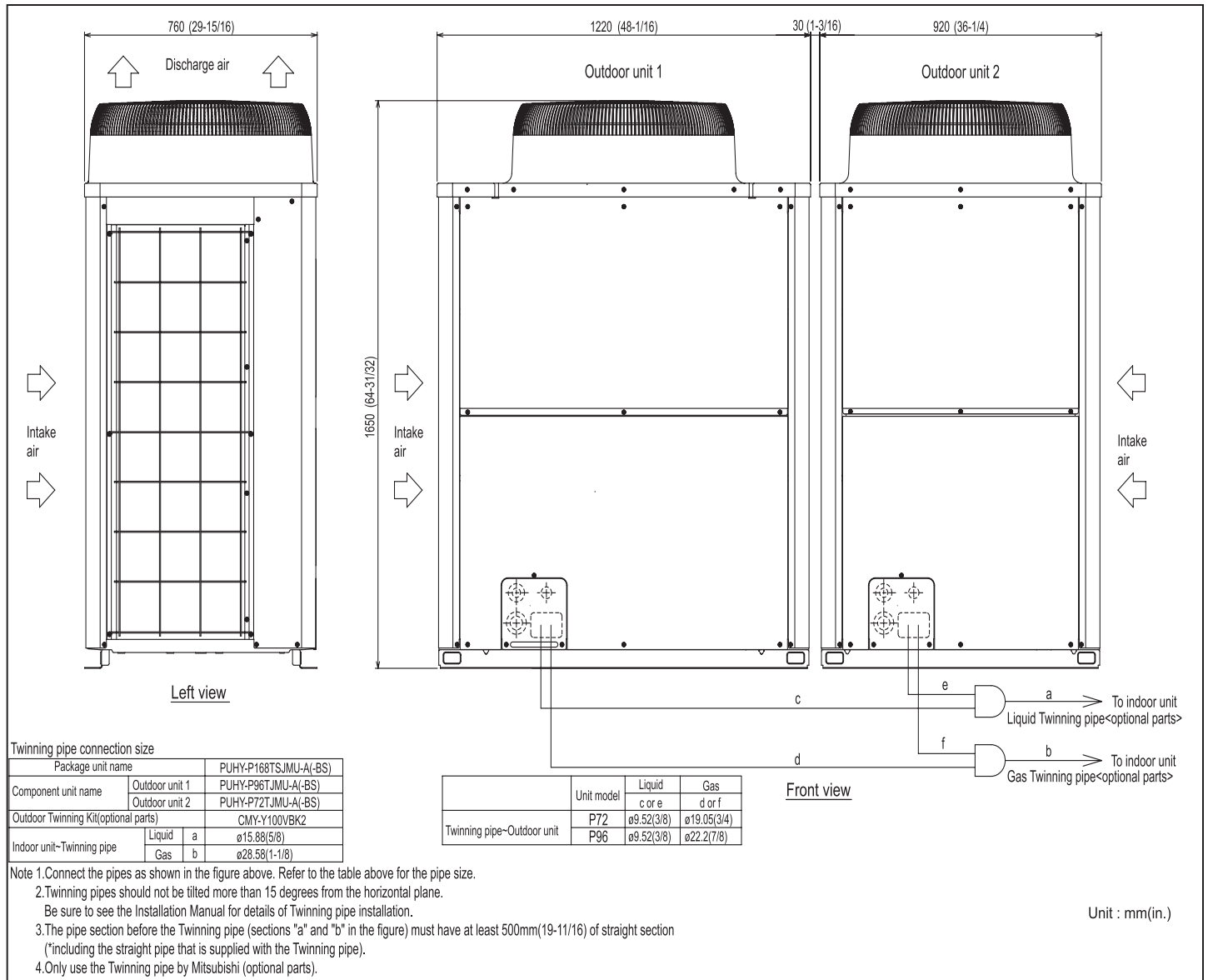
Blue Fin Anti-corrosion Protection: Cellulose- and polyurethane-resin coating treatment applied to condenser coil that protects it from air contaminants; ≥1μm thick; Salt Spray Test Method - no unusual rust development to 960 hours.

** Each individual module requires a separate electrical connection. Reference electrical data for each individual module.

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

Outdoor Unit: PUHY-P168TSJMU-A-BS – DIMENSIONS

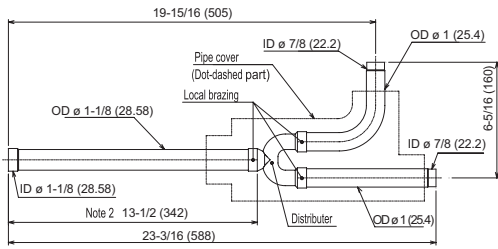


Twinning Kit: CMY-Y100VBK2

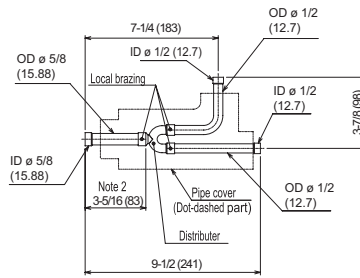
Ref.: CMY_Y100VBK2_EXD_EUDB_SI
Inches (mm)

CMY-Y100VBK2

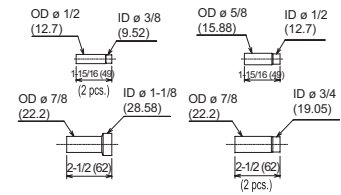
For Gas pipe:



For Liquid pipe:

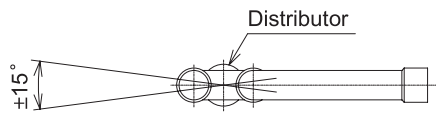


<Reducer Pipe (Accessory)>



ID: Inner Diameter OD: Outer Diameter

Note 1. Reference the angle of the branch pipe below the fig.

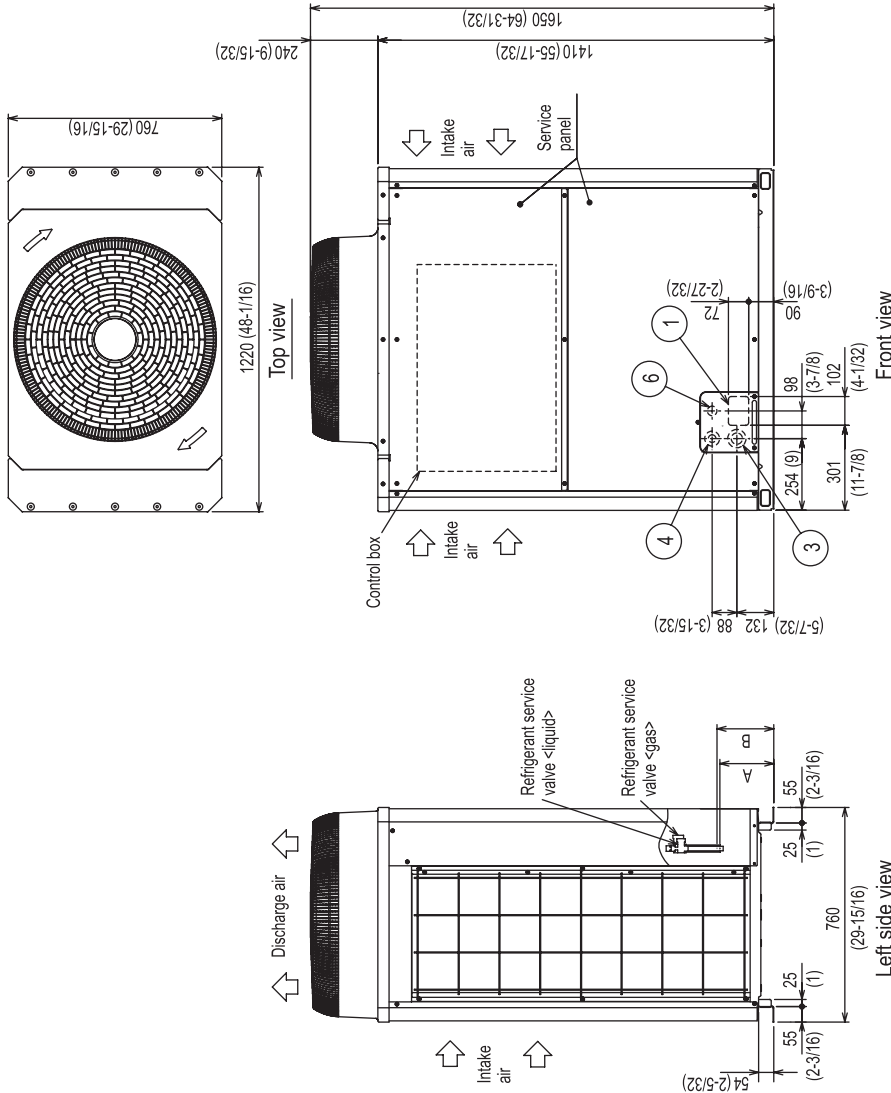


The angle of the branch pipe is within $\pm 15^\circ$ against the ground.

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

For instructions on piping the units together using the twinning kit, see the Installation Manual.

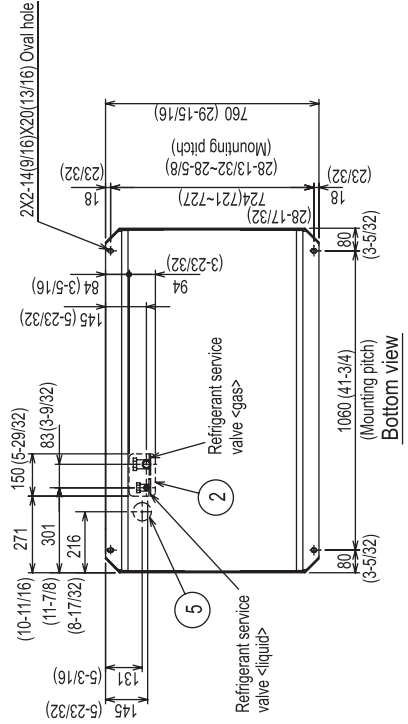
Module 1: PUHY-P96TJMU-A-BS – DIMENSIONS



- <Optional parts>
 ● Connecting pipe
 <Gas>
 - Elbow (Dø25.4(1)XODø25.4(1)) 1pc.
 - Pipe (Dø25.4(1)XODø22.2(7/8)) 1pc.
 <Liquid>
 - Pipe (Dø9.52(3/8)XODø9.52(3/8)) 1pc.
 - Pipe (Dø9.52(3/8)XODø12.7(1/2)) 1pc.

Note 1. Please refer to (2/2) for information regarding necessary spacing around the unit and foundation work.
 2. 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).

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



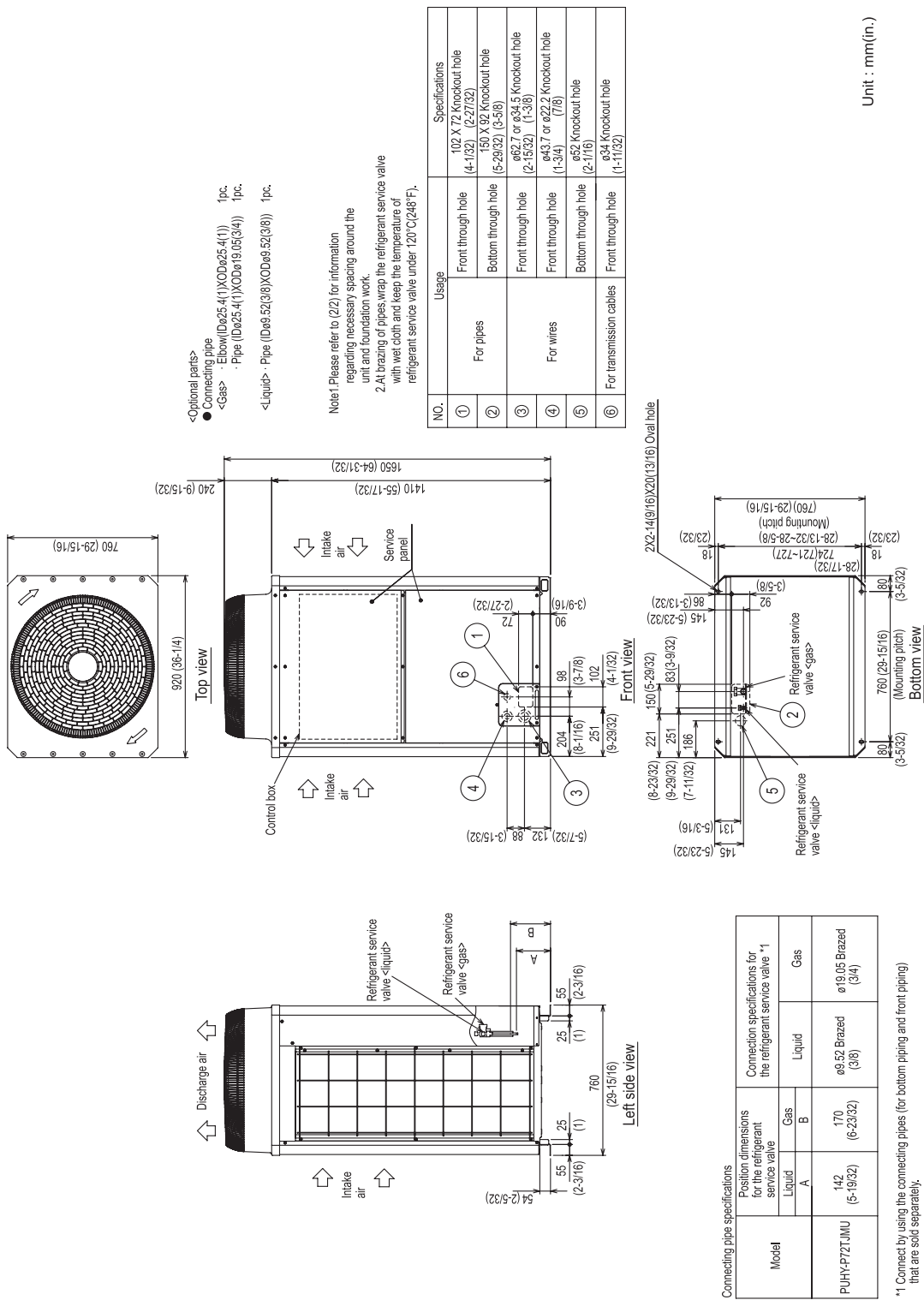
Model	Position dimensions for the refrigerant service valve		Connection specifications for the refrigerant service valve *1	
	Liquid A	Gas B	Liquid	Gas
PUHY-P96TJMU	158 (6-1/4)	172 (6-25/32)	ø9.52 Braze (3/8) (ø12.7 Braze) (1/2) *2	ø22.2 Braze (7/8)

*1 Connect by using the connecting pipes (for bottom piping and front piping) that are sold separately.

*2 Total length ≧ 90m (295ft)

Unit : mm (in.)

Module 2: PUHY-P72TJMU-A-BS – DIMENSIONS



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.



Certificate Number EC97J1227



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Specifications are subject to change without notice.