

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
- Max. Total Refrigerant Line Length: 3,280'; Max. Refrigerant Line Length: 541'; Max. Control Wiring Length: 1,640'
- Connects to CITY MULTI indoor units; controlled via CITY MULTI Controls Network
- External finish: Pre-coated Galvanized-steel Sheets
- Operating Temperature Range
 - Cooling (Outdoor): 23° ~ 115°F (-5° ~ +46°C) DB
 - Heating (Outdoor): -4° ~ +60°F (-20° ~ +16°C) WB



INVERTER



PUHY-P120TJMU-A PUHY-P120TJMU-A PUHY-P72TJMU-A

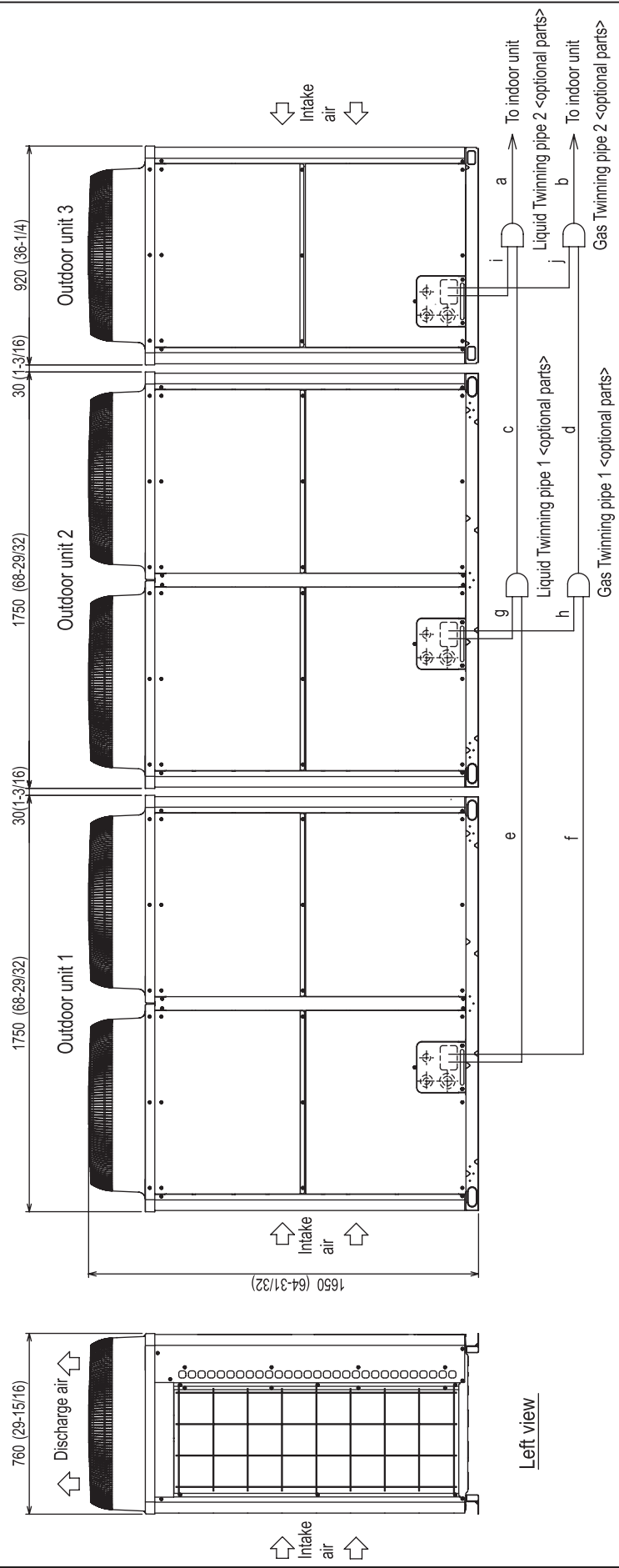
OPTIONAL PARTS

- ☐ Twinning Kit* CMY-Y300VBK2
 - ☐ T-Branch Joint (≤ 72,000 Btu/h) CMY-Y102S-G2
 - ☐ T-Branch Joint (73,000-144,000 Btu/h) CMY-Y102L-G2
 - ☐ T-Branch Joint (145,000 - 234,000 Btu/h) CMY-Y202-G2
 - ☐ T-Branch Joint (≥ 235,000 Btu/h) CMY-Y302-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
- * 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	Module 3
Unit Type		PUHY-P312TSJMU-A	PUHY-P120TJMU-A	PUHY-P120TJMU-A	PUHY-P72TJMU-A
Nominal Cooling Capacity	Btu/h	312,000	120,000	120,000	72,000
Nominal Heating Capacity	Btu/h	350,000	135,000	135,000	80,000
External Dimensions (H x W x D)	In. / mm	Refer to Module Data	65 x 68-15/16 x 29-15/16 / 1,650 x 1,750 x 760	65 x 68-15/16 x 29-15/16 / 1,650 x 1,750 x 760	65 x 36-1/4 x 29-15/16 / 1,650 x 920 x 760
Net Weight	Lbs. / kg	1,699 / 815	629 / 285	629 / 285	441 / 200
Electrical Power Requirements	Voltage, Phase, Hertz	Refer to Module Data**	208 / 230V, 3-phase, 60Hz		
Cooling Power Input	kW	25.82	Refer to System Data		
Heating Power Input	kW	27.30			
Cooling Current (208/230V)	R.L.A.	79.6 / 72.0			
Heating Current (208/230V)	R.L.A.	84.1 / 76.1			
Minimum Circuit Ampacity (MCA)**	A	Refer to Module Data**	49 / 46**	49 / 46**	25 / 24**
Recommended Fuse/Breaker Size**	A	Refer to Module Data**	50**	50**	30**
Maximum Fuse Size**	A	Refer to Module Data**	70 / 60**	70 / 60**	30 / 30**
Piping Diameter					
From Twinning Kit to Indoor Units (Brazed) (In. / mm)	Liquid (High Pressure)	3/4 / 19.05	Refer to System Data		
	Gas (Low Pressure)	1-3/8 / 34.93			
From Modules to Twinning Kit (Brazed) (In. / mm)	Liquid (High Pressure)	Refer to Module Data	1/2 / 12.7	1/2 / 12.7	3/8 / 9.52
	Gas (Low Pressure)		7/8 / 22.2	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 / 2 to 50			
Sound Pressure Levels	dB(A)	64.5	60.0	60.0	58.0
Fan		Refer to Module Data	Refer to System Data		
Type x Quantity					
Airflow Rate	CFM				
Direct-drive Inverter Motor Output	kW				
Compressor Operating Range		4 to 100%	Refer to System Data		
Compressor Type x Quantity		Refer to Module Data	Inverter-driven Scroll Hermetic x 1 for Each Module		
Compressor Motor Output	kW		8.1	8.1	5.1
Compressor Crankcase Heater	kW		0.045	0.045	0.035
Refrigerant			R410A		
Lubricant		Refer to Module Data	MEL32		
High-pressure Protection Device		Refer to Module Data	601 psi / 4.15 MPa	601 psi / 4.15 MPa	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 thick; Salt Spray Test Method - no unusual rust development to 480 hours.					

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

Outdoor Unit: PUHY-P312TSJMU-A – DIMENSIONS



Front view

Left view

Twinning pipe connection size

Package unit name		PUHY-P312TSJMU-A(-BS)	
Component unit name	Outdoor unit 1	PUHY-P120TJMU-A(-BS)	
	Outdoor unit 2	PUHY-P120TJMU-A(-BS)	
	Outdoor unit 3	PUHY-P72TJMU-A(-BS)	
Outdoor Twinning Kit(optional parts)		CMY-Y300V/BK2	
Indoor unit~ Twinning pipe 2	Liquid	a	ø19.05(3/4)
	Gas	b	ø34.93(1-3/8)
Twinning pipe 1~ Twinning pipe 2	Liquid	c	ø19.05(3/4)
	Gas	d	ø34.93(1-3/8)

Twinning pipe-Outdoor unit	Unit model	Liquid		Gas	
		e or g or i	f or h or j	ø19.05(3/4)	
P72	P72	ø9.52(3/8)	ø19.05(3/4)	ø22.2(7/8)	
P120	P120	ø12.7(1/2)	ø22.2(7/8)		

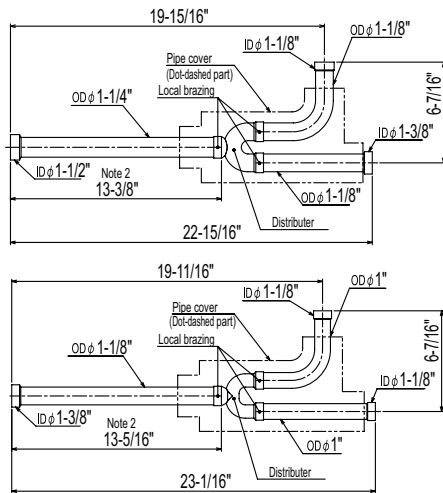
- Note 1. Connect the pipes as shown in the figure above. Refer to the table above for the pipe size.
2. Twinning pipes should not be tilted more than 15 degrees from the horizontal plane.
- Be sure to see the Installation Manual for details of Twinning pipe installation.
3. The pipe section before the Twinning pipe (sections "a", "b", "c" and "d" 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).

Unit : mm(in.)

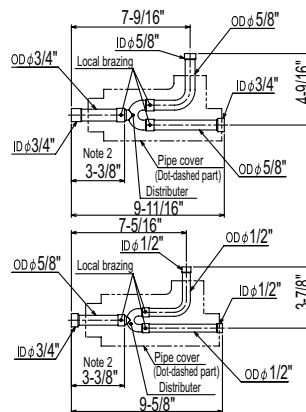
Twinning Kit: CMY-Y300VBK2

CMY-Y300VBK2 Twinning Kit

For Gas pipe:

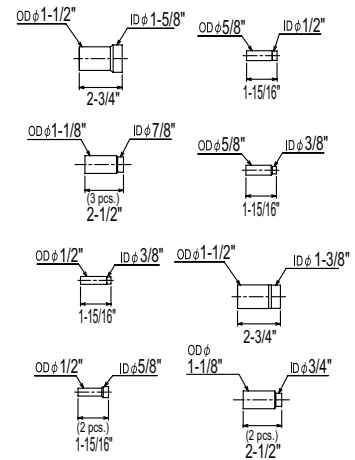


For Liquid pipe:



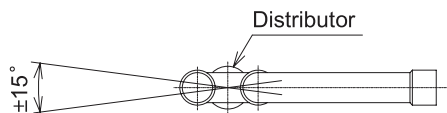
Reducer (Accessory)

Inches



ID: Inner Diameter OD: Outer Diameter

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

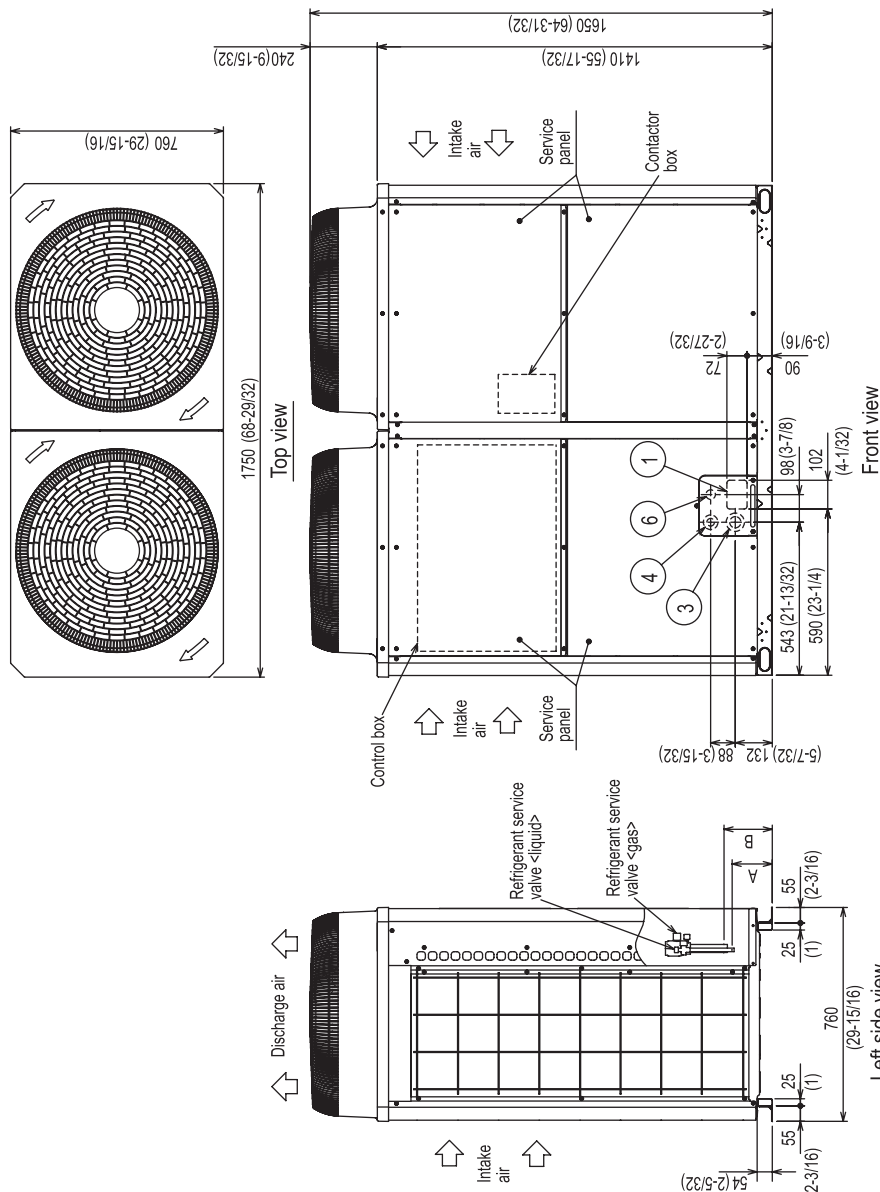


The angle of the branch pipe is within $\pm 15^\circ$ against the ground.

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.

Modules 1 and 2: PUHY-P120TJMU-A – DIMENSIONS



NO.	Usage	Specifications
①	For pipes	Front through hole 102 X 72 Knockout hole (4-1/32) (2-7/32)
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	For wires	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	For transmission cables	Front through hole ø34 Knockout hole (1-11/32)

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

2A) brazing of pipes, wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248°F).

<Optional parts>
 ● Connecting pipe
 <Gas> Elbow (IDø28.58(1-1/8)XODø28.58(1-1/8)).....P120, 144 1pc.
 Pipe (IDø28.58(1-1/8)XODø22.2(7/8)).....P120 1pc.
 <Liquid> Pipe (IDø12.7(1/2)XODø6.52(3/8)).....P120 1pc.
 Pipe (IDø12.7(1/2)XODø12.7(1/2)).....P120, 144 1pc.

Left side view

Model		Position dimensions for the refrigerant service valve		Connection specifications for the refrigerant service valve *1	
		Liquid	Gas	Liquid	Gas
PUHY-P120TJMU	143 (5-21/32)	172 (6-25/32)		ø9.52 Brazed (3/8)	ø22.2 Brazed (7/8)
				ø12.7 Brazed (1/2) *2-3	
PUHY-P144TJMU				ø12.7 Brazed (1/2)	ø28.58 Brazed (1-1/8)

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

*2 Indicates dimensions and connection specifications in the case the unit is that are sold separately.

*3 Total length $\geq 40\text{m}(131\text{ft})$

Unit : mm(in.)

