CITYMULTI®

34-TON PUHY-P408YSNU-A(-BS)

MITSUBISHI ELECTRIC
HEATING & AIR CONDITIONING

Job Name:

System Reference: Date:

460V OUTDOOR VRF HEAT PUMP SYSTEM



UNIT OPTION

☑ Standard Model PUHY-P408YSNU-A

☑ Seacoast (BS) Model PUHY-P408YSNU-A-BS

ACCESSORIES

☑ Big Foot Stand ..... for details see Big Foot Stands submittals

☑ Twinning Kit (Required) CMY-Y300CBK2

☑ Header Kit ..... for details see Pipe Accessories Submittal

☑ Joint Kit ..... for details see Pipe Accessories Submittal

☑ Low Ambient Kit ..... for details see Low Ambient Kit 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			PUHY-P408YSNU-A(-BS)
Cooling Capacity (Nominal)		BTU/H	408,000
Heating Capacity (Nominal)		BTU/H	455,000
Net Weight		Lbs. [kg]	2,008 [910]
Refrigerant Piping Diameter	Liquid (High Pressure)	In. [mm]	3/4 [19.05] Brazed
	Gas (Low Pressure)	In. [mm]	1-5/8 [41.28] Brazed
Max. Total Refrigerant Line Length		Ft.	3,280
Max. Refrigerant Line Length (Between ODU & IDU)		Ft.	541
Max. Control Wiring Length		Ft.	1,640
Indoor Unit Connectable	Total Capacity		50.0~130.0% of outdoor unit capacity
	Model/Quantity		P04~P96/3.0~50.0
Sound Pressure Levels		dB(A)	67.0/69.0
Sound Power Levels		dB(A)	87.0/88.0
Compressor Operating Range			5.0% to 100.0%
AHRI Ratings (Ducted/Non-ducted)	EER		9.7/9.1
	IEER		17.2/16.4
	COP		3.35/3.38

Specifications			Module 1	Module 2	Module 3
Unit Type			PUHY-P144YNU-A(-BS)	PUHY-P144YNU-A(-BS)	PUHY-P120YNU-A(-BS)
Cooling Capacity (Nominal)		BTU/H	144,000	144,000	120,000
Heating Capacity (Nominal)		BTU/H	160,000	160,000	135,000
Guaranteed Operating Range[1]	Cooling[2]	ºF [ºC]	23~126 [-5.0~52.0]	23~126 [-5.0~52.0]	23~126 [-5.0~52.0]
Guaranteed Operating Range	Heating	ºF [ºC]	-13~60 [-25.0~15.5]	-13~60 [-25.0~15.5]	-13~60 [-25.0~15.5]
Extended Operating Range	Heating	ºF [ºC]	-18.0~60 [-28.0~15.5]	-18.0~60 [-28.0~15.5]	-18.0~60 [-28.0~15.5]
External Dimensions (H x W x D)		In. [mm]	71-5/8 x 48-7/8 x 29-3/16 [1,818 x 1,240 x 740]	71-5/8 x 48-7/8 x 29-3/16 [1,818 x 1,240 x 740]	71-5/8 x 48-7/8 x 29-3/16 [1,818 x 1,240 x 740]
Net Weight		Lbs. [kg]	684 [310]	684 [310]	640 [290]
External Finish			Pre-coated galvanized steel sheet (+powder coating for -BS type) [MUNSELL 3Y 7.8/1.1 or similar]	Pre-coated galvanized steel sheet (+powder coating for -BS type) [MUNSELL 3Y 7.8/1.1 or similar]	Pre-coated galvanized steel sheet (+powder coating for -BS type) [MUNSELL 3Y 7.8/1.1 or similar]
Electrical Power Requirements	Voltage, Phase, Hertz, Power Tolerance		460V, 3-phase, 60 Hz, ±10%	460V, 3-phase, 60 Hz, ±10%	460V, 3-phase, 60 Hz, ±10%
Minimum Circuit Ampacity		A	27.0	27.0	25.0
Maximum Overcurrent Protection		A	45	45	40
Recommended Fuse Size		A	30	30	25
Recommended Minimum Wire Size		AWG [mm]	10 [5.3]	10 [5.3]	10 [5.3]
SCCR		kA	5	5	5
FAN[4]	Type x Quantity		Propeller fan x 2	Propeller fan x 2	Propeller fan x 2
	Airflow Rate	CFM	9,200	9,200	7,750
	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	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	Inverter scroll hermetic compressor x 1
Refrigerant	Type x Original Charge		R410A x 23.0 lbs + 12.0 oz [10.8 kg]	R410A x 23.0 lbs + 12.0 oz [10.8 kg]	R410A x 21.0 lbs + 9.0 oz [9.8 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)	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter Circuit (Comp./Fan)		Over-current protection	Over-current protection	Over-current protection

NOTES:
Nominal cooling conditions (Test conditions are based on AHRI 1230-2023)
Indoor: 80°FD.B./67°FW.B. (26.7°CD.B./19.4°CW.B.), Outdoor: 95°FD.B. (35°CD.B.)
Nominal heating conditions (Test conditions are based on AHRI 1230-2023)
Indoor: 70°FD.B. (21.1°CD.B.), Outdoor: 47°FD.B./43°FW.B. (8.3°CD.B./6.1°CW.B.)

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

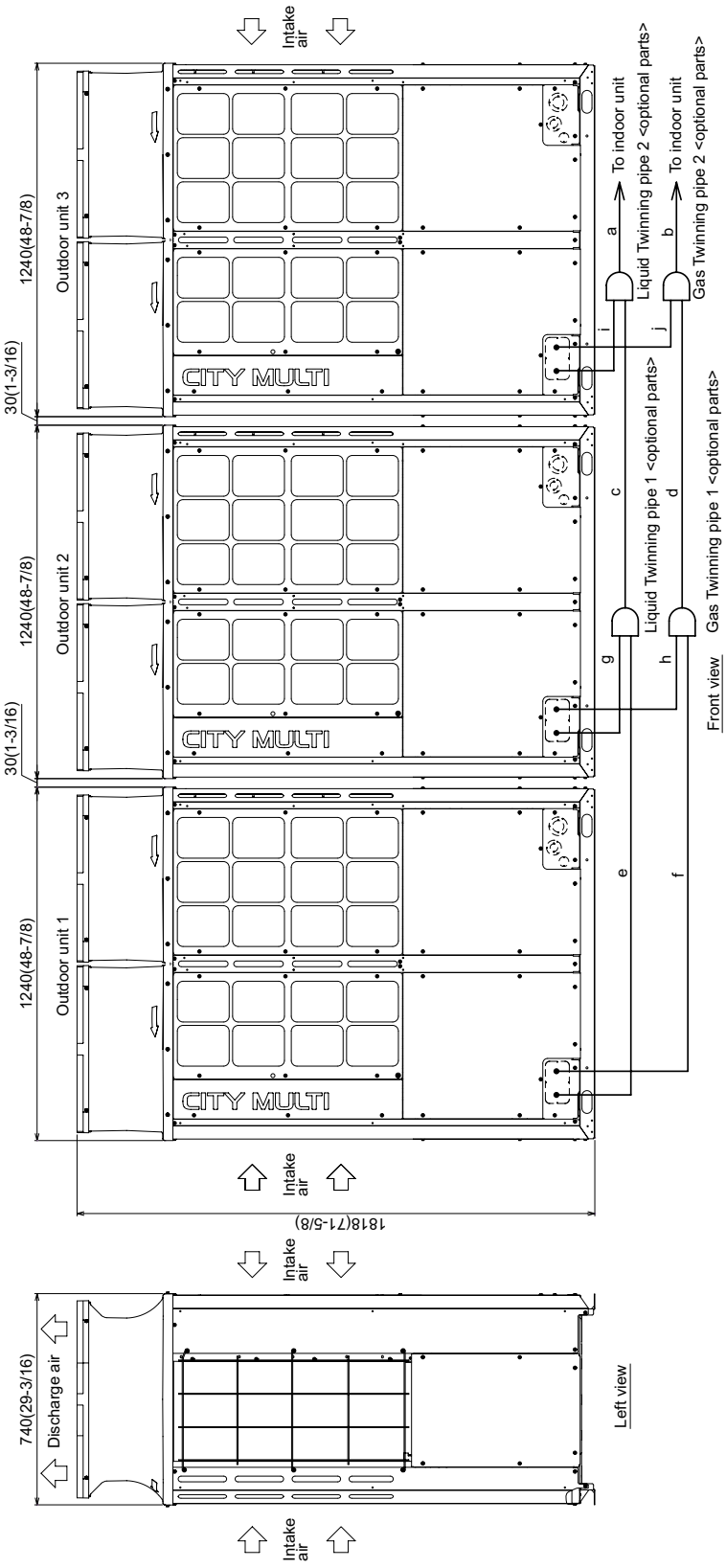
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OUTDOOR UNIT: PUHY-P408YSNU-A(-BS) – DIMENSIONS

PUHY-P336, 360, 384, 408, 432YSNU-A(-BS)

Unit: mm (in.)



	Unit model	Liquid e or g or i	Gas f or h or j
Twinning pipe~Outdoor unit	P96	ø9.52(3/8)	ø22.2(7/8)
	P120	ø12.7(1/2)	ø28.58(1-1/8)
	P144	ø12.7(1/2)	ø28.58(1-1/8)

Twinning pipe connection size

Package unit name			PUHY-P336Y*NU-A(-BS)	PUHY-P360Y*NU-A(-BS)	PUHY-P384Y*NU-A(-BS)	PUHY-P408Y*NU-A(-BS)	PUHY-P432Y*NU-A(-BS)
Component unit name	Outdoor unit 1		PUHY-P120Y*NU-A(-BS)	PUHY-P120Y*NU-A(-BS)	PUHY-P144Y*NU-A(-BS)	PUHY-P144Y*NU-A(-BS)	PUHY-P144Y*NU-A(-BS)
	Outdoor unit 2		PUHY-P120Y*NU-A(-BS)	PUHY-P120Y*NU-A(-BS)	PUHY-P144Y*NU-A(-BS)	PUHY-P144Y*NU-A(-BS)	PUHY-P144Y*NU-A(-BS)
	Outdoor unit 3		PUHY-P96Y*NU-A(-BS)	PUHY-P120Y*NU-A(-BS)	PUHY-P120Y*NU-A(-BS)	PUHY-P120Y*NU-A(-BS)	PUHY-P144Y*NU-A(-BS)
Outdoor Twinning Kit(optional parts)			CMY-Y300CBK2				
Indoor unit~Twinning pipe 2	Liquid	a	ø19.05(3/4)				
	Gas	b	ø41.28(1-5/8)				
Twinning pipe 1~Twinning pipe 2	Liquid	c	ø19.05(3/4)				
	Gas	d	ø34.93(1-3/8)				

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.

Specifications are subject to change without notice.

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MODULE 1: PUHY-P144YNU-A(-BS) – DIMENSIONS

PUHY-P96, 120, 144YNU-A(-BS)

Unit: mm (in.)

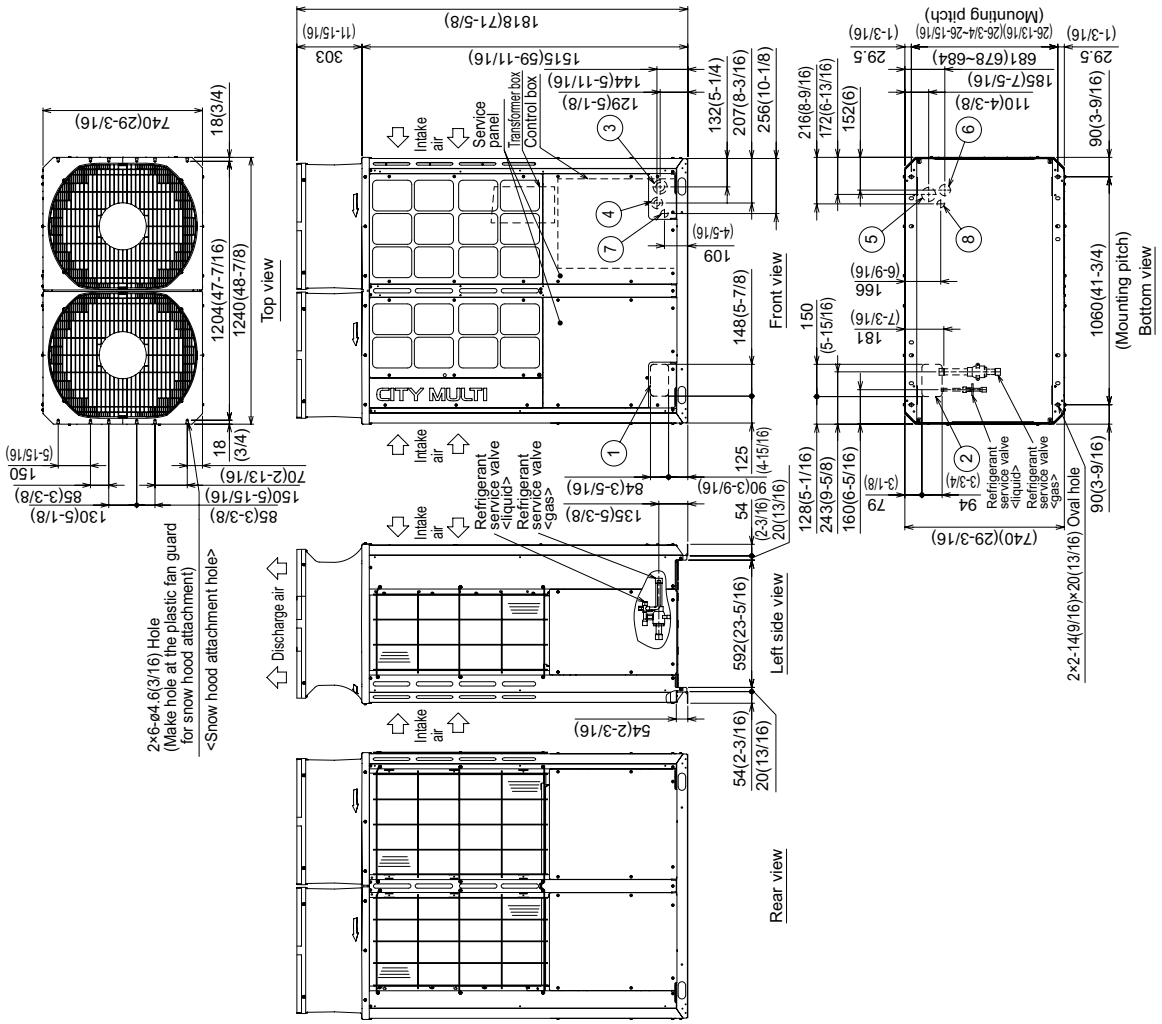
Note 1. At brazing of pipes, wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248°F).

Connecting pipe specifications

Model	Diameter			
	Refrigerant pipe		Service valve	
	Liquid	Gas	Liquid	Gas
P96	ø9.52(3/8) Brazed (ø12.7(1/2) Brazed)*1,*3	ø22.2(7/8) Brazed*1,*2	ø12.7(1/2)	ø28.58(1-1/8)
P120	ø9.52(3/8) Brazed (ø12.7(1/2) Brazed)*1,*2,*4			
P144	ø12.7(1/2) Brazed	ø28.58(1-1/8) Brazed		

*1 Connect the refrigerant pipe to the service valve according to the Installation Manual.
*2 indicates dimensions and connection specifications in the case the unit is used in combination with other outdoor units.
*3 Furthest piping length (OU from IU)≥90m
*4 Furthest piping length (OU from IU)≥40m

NO	Usage	Specifications
①	For pipes	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	For wires	Front through hole: ø62.7(2-1/2) or ø34.5(1-3/8) Knockout hole
④		Front through hole: ø43.7(1-3/4) or ø22.2(7/8) Knockout hole
⑤		Bottom through hole: ø65(2-9/16) Knockout hole
⑥		Bottom through hole: ø52(2-1/16) Knockout hole
⑦	For transmission cables	Front through hole: ø34(1-3/8) Knockout hole
⑧		Bottom through hole: ø34(1-3/8) Knockout hole



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.

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MODULE 2: PUHY-P144YNU-A(-BS) – DIMENSIONS

PUHY-P96, 120, 144YNU-A(-BS)

Unit: mm (in.)

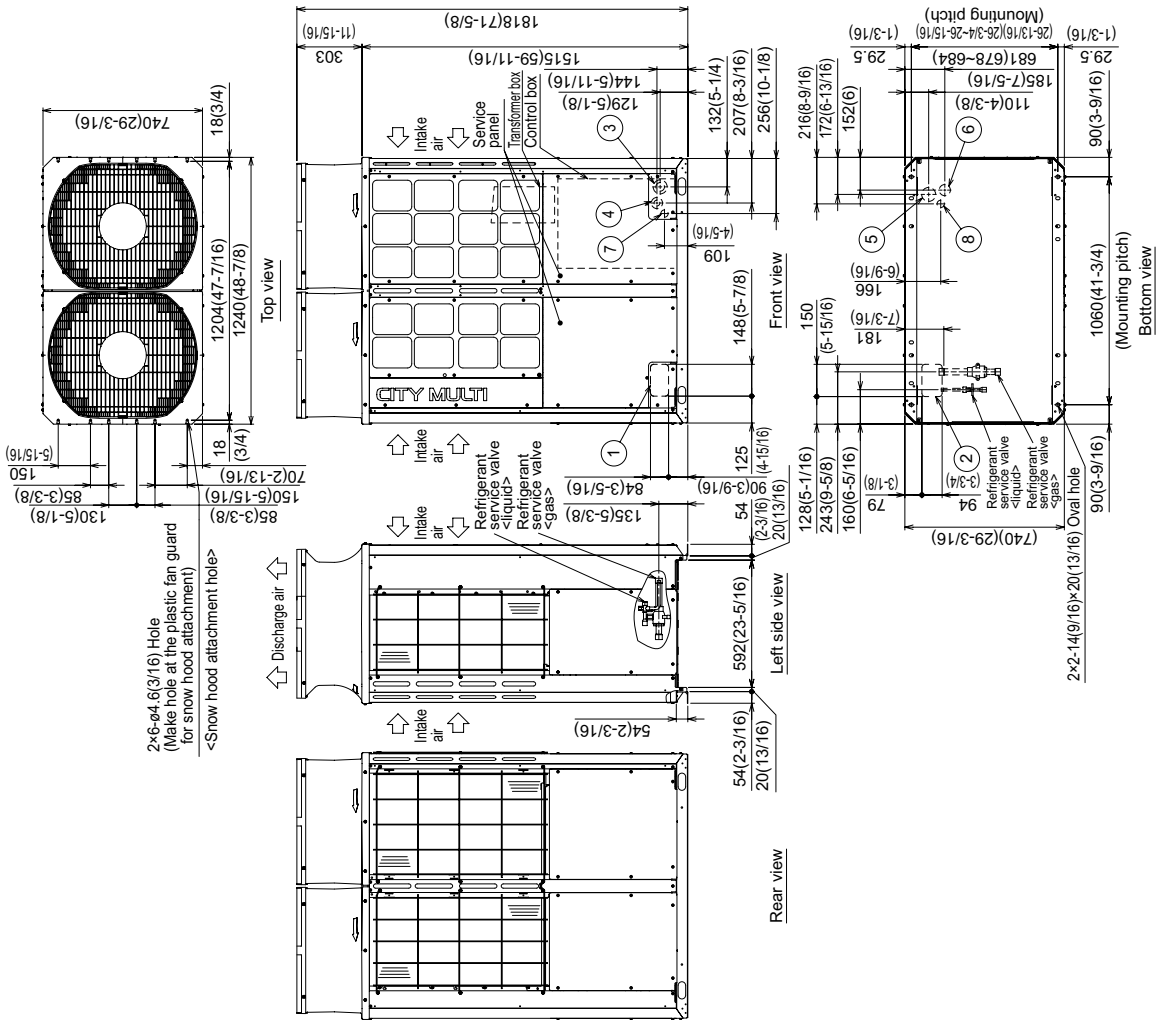
Note 1. At brazing of pipes, wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248°F).

Connecting pipe specifications

Model	Diameter			
	Refrigerant pipe		Service valve	
	Liquid	Gas	Liquid	Gas
P96	ø9.52(3/8) Brazed (ø12.7(1/2) Brazed)*1,*3	ø22.2(7/8) Brazed*1,*2	ø12.7(1/2)	ø28.58(1-1/8)
P120	ø9.52(3/8) Brazed (ø12.7(1/2) Brazed)*1,*2,*4			
P144	ø12.7(1/2) Brazed	ø28.58(1-1/8) Brazed		

*1 Connect the refrigerant pipe to the service valve according to the Installation Manual.
*2 indicates dimensions and connection specifications in the case the unit is used in combination with other outdoor units.
*3 Furthest piping length (OU from IU)≥90m
*4 Furthest piping length (OU from IU)≥40m

NO	Usage		Specifications
①	For pipes	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	For wires	Front through hole	ø62.7(2-1/2) or ø34.5(1-3/8) Knockout hole
④		Front through hole	ø43.7(1-3/4) or ø22.2(7/8) Knockout hole
⑤		Bottom through hole	ø65(2-9/16) Knockout hole
⑥		Bottom through hole	ø52(2-1/16) Knockout hole
⑦	For transmission cables	Front through hole	ø34(1-3/8) Knockout hole
⑧		Bottom through hole	ø34(1-3/8) Knockout hole



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.

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MODULE 3: PUHY-P120YNU-A(-BS) – DIMENSIONS

PUHY-P96, 120, 144YNU-A(-BS)

Unit: mm (in.)

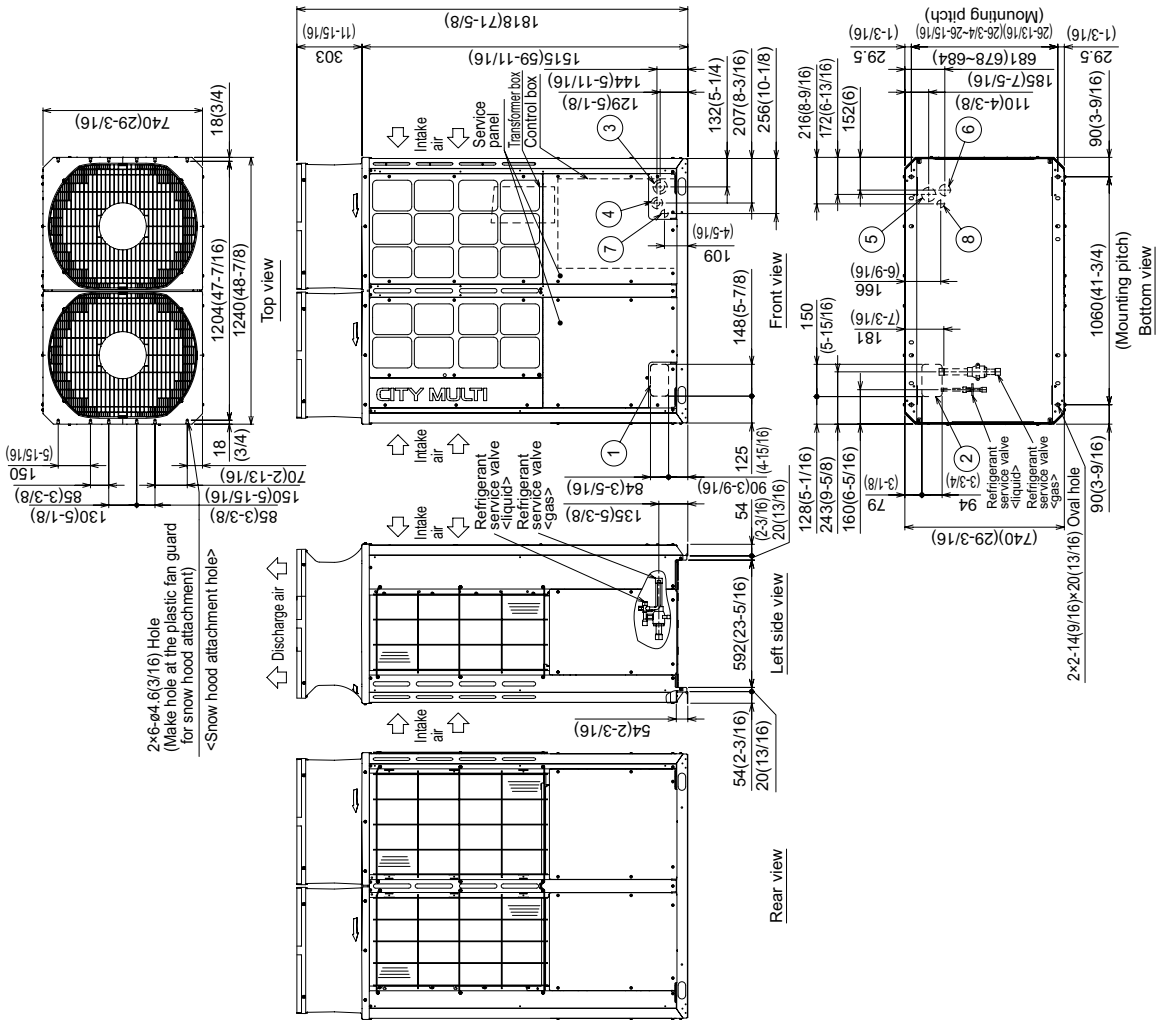
Note 1. At brazing of pipes, wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248°F).

Connecting pipe specifications

Model	Diameter			
	Refrigerant pipe		Service valve	
	Liquid	Gas	Liquid	Gas
P96	ø9.52(3/8) Brazed (ø12.7(1/2) Brazed)*1,*3	ø22.2(7/8) Brazed*1,*2	ø12.7(1/2)	ø28.58(1-1/8)
P120	ø9.52(3/8) Brazed (ø12.7(1/2) Brazed)*1,*2,*4			
P144	ø12.7(1/2) Brazed	ø28.58(1-1/8) Brazed		

*1 Connect the refrigerant pipe to the service valve according to the Installation Manual.
*2 indicates dimensions and connection specifications in the case the unit is used in combination with other outdoor units.
*3 Furthest piping length (OU from IU)≥90m
*4 Furthest piping length (OU from IU)≥40m

NO	Usage		Specifications
①	For pipes	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	For wires	Front through hole	ø62.7(2-1/2) or ø34.5(1-3/8) Knockout hole
④		Front through hole	ø43.7(1-3/4) or ø22.2(7/8) Knockout hole
⑤		Bottom through hole	ø65(2-9/16) Knockout hole
⑥		Bottom through hole	ø52(2-1/16) Knockout hole
⑦	For transmission cables	Front through hole	ø34(1-3/8) Knockout hole
⑧		Bottom through hole	ø34(1-3/8) Knockout hole



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.

Specifications are subject to change without notice.

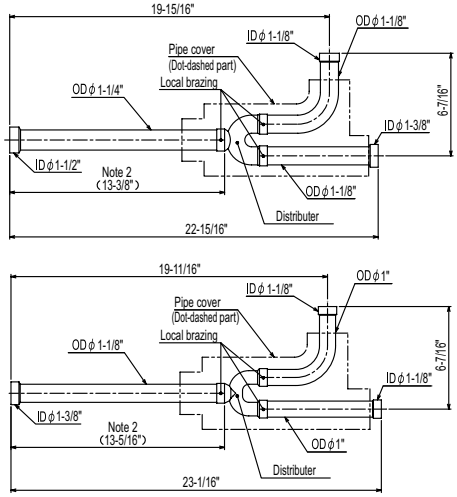
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TWINNING KIT: CMY-Y300CBK2 – DIMENSIONS

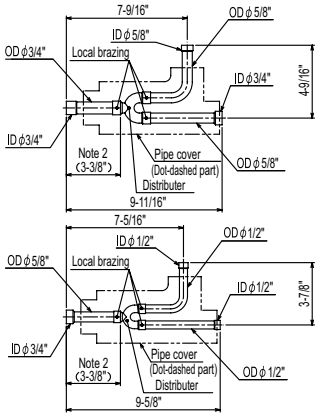
CMY-Y300CBK2

in.

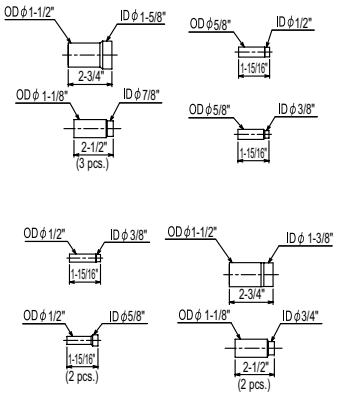
For Gas pipe:



For Liquid pipe:

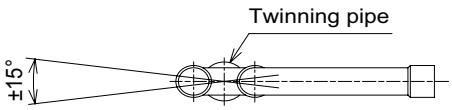


<Reducer(Accessory)>



ID: Inner Diameter OD: Outer Diameter

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



The angle of the twinning pipe is within ±15° 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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