CITYMULTI®

Outdoor Unit: 12-TON PURY-P144YSKMU-U (-BS)

(Consists of Two PURY-P72YKMU-U (-BS) and One CMY-R100CBK2 Twinning Kit)

MITSUBISHI ELECTRIC

Job Name:	
System Reference:	Date:

OUTDOOR VRF HEAT PUMP WITH HEAT RECOVERY SYSTEM FEATURES

- Assembled in USA
- INVERTER-driven compressor
- Air-source, simultaneous cooling and heating
- Long line lengths - for details see Engineering Manual
- Connects to CITY MULTI indoor units
- Controlled via CITY MULTI Controls Network

UNIT OPTION

- □ Standard Model……PURY-P144YSKMU-U
- □ Seacoast (BS) Model……PURY-P144YSKMU-U-BS

OPTIONAL PARTS

- ■ Twinning Kit (required)……CMY-R100CBK2
- □ Joint Kit……for details see Pipe Accesories Submittal
- ■ BC Controller (required)……for details see BC Controller Submittals
- □ Low Ambient Kit ……for details see Low Ambient Kit Submittal
- □ Snow/Hail Guards Kit……for details see Snow/Hail Guards Kit Submittal

Specifications		System	Module 1	Module 2
Unit Type		PURY-P144YSKMU-U (-BS)	PURY-P72YKMU-U (-BS)	PURY-P72YKMU-U (-BS)
Nominal Cooling Capacity (460V)	Btu/h	144,000	72,000	72,000
Nominal Heating Capacity (460V)	Btu/h	160,000	80,000	80,000
Operating Temperature Range *1	Cooling (Outdoor) *2	Refer to Module Data	23~115° F (-5~46° C) DB	
	Heating (Outdoor)		-13~60° F (-25~15.5° C) WB	
External Dimensions (H x W x D)	In. (mm)	Refer to Module Data	64-31/32 x 48-1/16 x 29-5/32 (1,650 x 1,220 x 740)	64-31/32 x 48-1/16 x 29-5/32 (1,650 x 1,220 x 740)
Net Weight	Lbs. (kg)	1,068 (484)	534 (242)	534 (242)
External Finish		Refer to Module Data	Pre-coated galvanized steel sheet	
Electrical Power Requirements	Voltage, Phase, Hertz	Refer to Module Data**	460V, 3-Phase, 60Hz	
Minimum Circuit Ampacity (MCA)	A	Refer to Module Data**	11	11
Maximum Fuse Size	A	Refer to Module Data**	15	15
Piping Diameter				
From Twinning Kit to Indoor Units (Brazed) (In. / mm)	Liquid (High Pressure)	7/8 (22.2) Brazed	Refer to System Data	
	Gas (Low Pressure)	1-1/8 (28.58) Brazed		
Max. Total Refrigerant Line Length	Ft.	1,969	Refer to System Data	
Max. Refrigerant Line Length (Between ODU & IDU)	Ft.	541		
Max. Control Wiring Length	Ft.	1,650		
Indoor Unit	Total Capacity	50~150% of ODUs	Refer to System Data	
	Model / Quantity	P06~P96/1~36	Refer to System Data	
Sound Pressure Level	dB(A)	64	Refer to System Data	
Fan				
Type x Quantity		Refer to Module Data	Propeller fan x 1	Propeller fan x 1
Airflow Rate	CFM		6,200	6,200
External Static Pressure	In. WG	Refer to Module Data	Selectable; 0, 0.12 or 0.24"WG; factory set to 0"W.G.	
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
Refrigerant		Refer to Module Data	R410A x 26 lbs + 1 oz (11.8 kg)	R410A x 26 lbs + 1 oz (11.8 kg)
Protection Devices	High Pressure	Refer to Module Data	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
	Fan Motor		Thermal switch	Thermal switch
AHRI Ratings (Ducted/Non-Ducted)	EER	12.0 / 14.4	Refer to System Data	
	IEER	18.8 / 20.6		
	COP	3.54 / 3.65		
	SCHE	21.79 / 24.01		

Blue Fin Anti-corrosion Protection: Cellulose- and polyurethane-resin coating treatment applied to condenser coil that protects it from air contaminants
Standard: ≥1µm thick; Salt Spray Test Method - no unusual rust development to 480 hours.
Seacoast (BS): ≥1µm thick; Salt Spray Test Method - no unusual rust development to 960 hours.

NOTES:

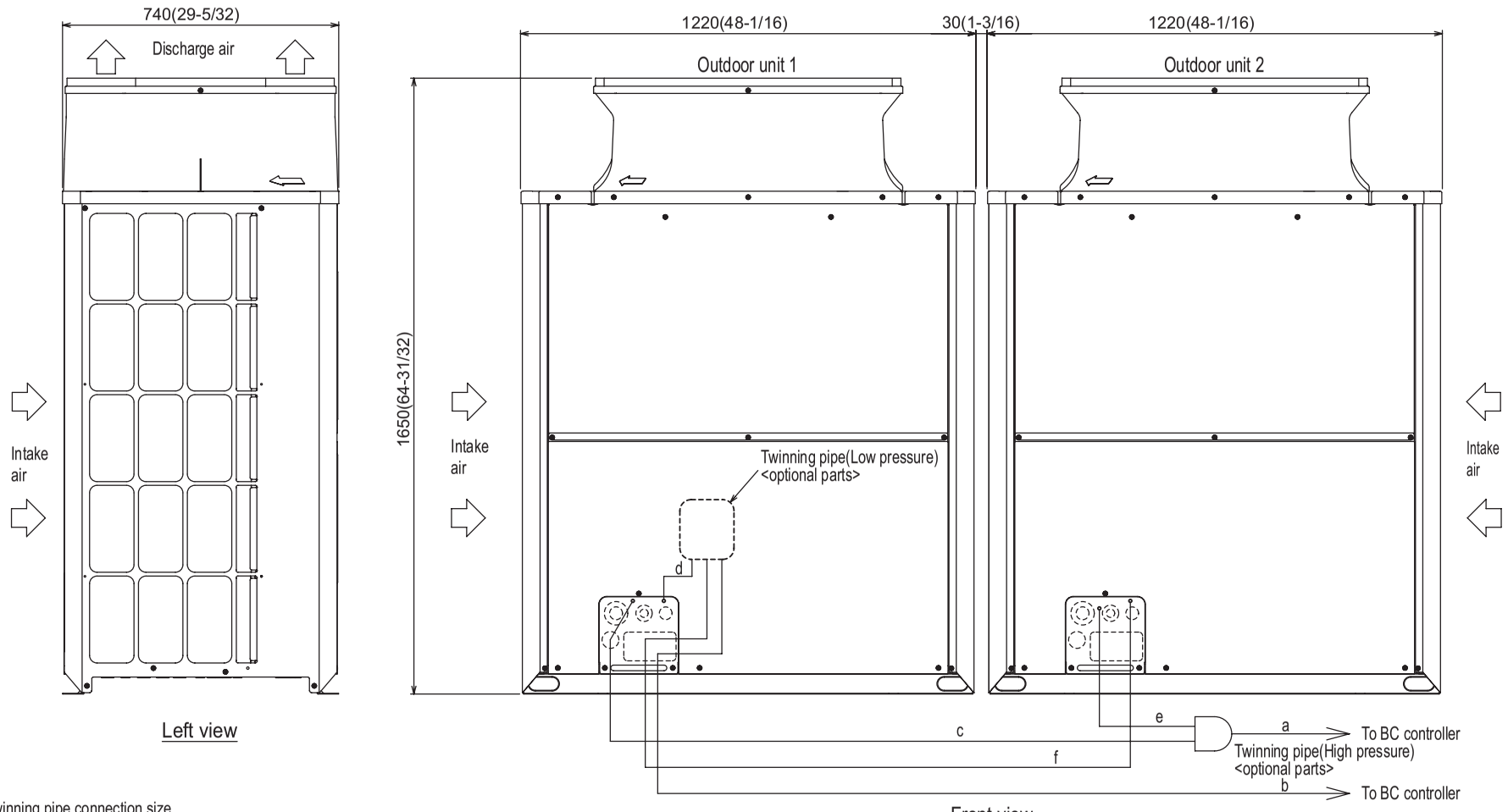
*1. When applying product below -4° F, consult your design engineer for cold climate application best practices, including the use of a backup source for heating.

*2. For details on extended cooling operation range down to -10° F DB, see Low Ambient Kit Submittal.

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

Specifications are subject to change without notice.

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Twinning pipe connection size

Package unit name				PURY-P144YSKMU	PURY-P168YSKMU	PURY-P192YSKMU
Component unit name	Outdoor unit 1			PURY-P72YKMU	PURY-P96YKMU	PURY-P96YKMU
	Outdoor unit 2			PURY-P72YKMU	PURY-P72YKMU	PURY-P96YKMU
Outdoor Twinning Kit(optional parts)				CMY-R100CBK2		
BC controller~Twinning pipe		High pressure	a	ø22.2(7/8)		
		Low pressure	b	ø28.58(1-1/8)		

	Unit model	P144				P168				P192			
	Component unit model	P72		P72		P96		P72		P96		P96	
Twinning Kit ~Outdoor unit	High pressure	c	ø15.88(5/8)	e	ø15.88(5/8)	c	ø19.05(3/4)	e	ø15.88(5/8)	c	ø19.05(3/4)	e	ø19.05(3/4)
	Low pressure	d	- (Note 5)	f	ø19.05(3/4)	d	- (Note 5)	f	ø19.05(3/4)	d	- (Note 5)	f	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 pipe (High pressure) 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" 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).
5.Connect the outdoor unit 1 with the Twinning pipe (Low pressure) (section "d" in the figure).

Unit : mm(in.)

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Model: PURY-P72YKMU-U (-BS) – DIMENSIONS

Unit : mm(in.)

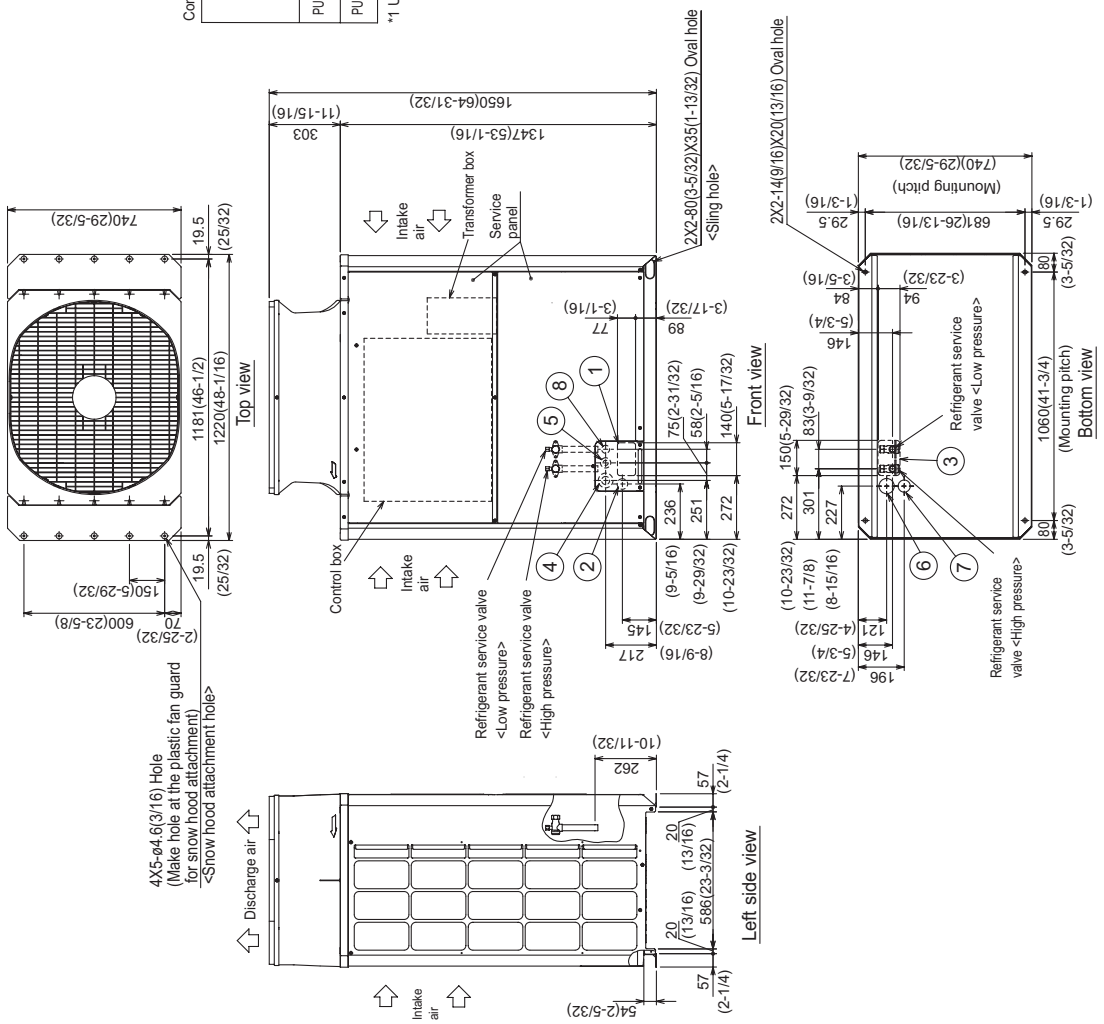
Note 1. Please refer to the engineering manual for information regarding necessary spacing around the unit and foundation work. Outdoor unit must be mounted at least 12" off the ground or 12" above the highest average snow depth, whichever is greater.
2. At brazing of pipes, wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248°F).

Connecting pipe specifications

Model	Diameter			
	Refrigerant pipe		Service valve	
	High pressure	Low pressure	High pressure	Low pressure
PURY-P72YKMU	ø15.88 Brazed (5/8) *1	ø19.05 Brazed (3/4) *1	ø25.4 (1)	ø25.4 (1)
PURY-P96YKMU	ø19.05 Brazed (3/4) *1	ø22.2 Brazed (7/8) *1	ø25.4 (1)	ø25.4 (1)

*1 Use the pipe joint(field supply) and connect to the refrigerant service valve piping.

NO.	Usage		Specifications
①	For pipes	Front through hole	140 × 77 Knockout hole (5-17/32)(3-1/16)
②		Front through hole (Uses when twinning kit (optional parts) is mounted.)	ø45 Knockout hole (1-25/32)
③		Bottom through hole	150 × 94 Knockout hole (5-29/32)(3-23/32)
④	For wires	Front through hole	ø62.7 or ø34.5 Knockout hole (2-15/32) (1-3/8)
⑤		Front through hole	ø43.7 or ø22.2 Knockout hole (1-3/4) (7/8)
⑥		Bottom through hole	ø65 Knockout hole (2-9/16)
⑦		Bottom through hole	ø52 Knockout hole (2-1/16)
⑧	For transmission cables	Front through hole	ø34 Knockout hole (1-11/32)

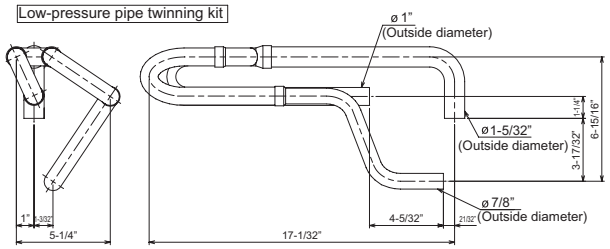


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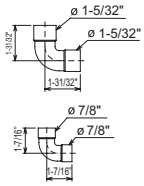
Twinning Kit: CMY-R100CBK2

CMY-R100CBK2

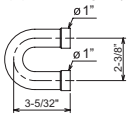
Low-pressure pipe twinning kit



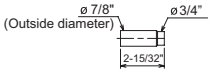
<Elbow pipe(Accessory)>



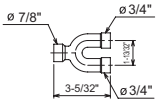
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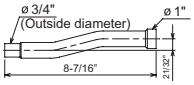
<Deformed pipe(Accessory)>



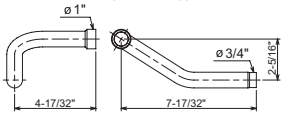
High-pressure twinning pipe



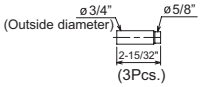
<Pipe for routing through the bottom (Accessory)>



<Pipe for routing through the front (Accessory)>



<Deformed pipe(Accessory)>



(3Pcs.)

Ref: CMY_R100VBK_EXD_EUDB_SI

MITSUBISHI ELECTRIC

COOLING & HEATING

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FORM# PURY-P144YSKMU-U (-BS) - 201605

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