

CITYMULTI® Outdoor Unit: 14-TON PURY-P168TSKMU-A (-BS) MITSUBISHI ELECTRIC

(Consists of One PURY-P96TKMU-A (-BS), One PURY-P72TKMU-A (-BS), and One CMY-R100CBK2 Twinning Kit)

Job Name:

Schedule Reference:

Date:

OUTDOOR VRF HEAT PUMP WITH HEAT RECOVERY SYSTEM FEATURES

- 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-P168TSKMU-A
- Sea Coast (BS) Model.....PURY-P168TSKMU-A-BS

OPTIONAL PARTS

- Twinning Kit (required).....CMY-R100CBK2
- Joint Kit.....for details see Pipe Accessories Submittal
- BC Controller.....for details see BC Controller Submittals
- Low Ambient Kitfor details see Low Ambient Kit Submittal
- Snow/Hail Guards Kit.....for details see Snow/Hail Guards Kit Submittal
- Base Pan Heater Kit.....for details see Base Pan Heater Kit Submittal

Specifications		System	Module 1	Module 2
Unit Type		PURY-P168TSKMU-A (-BS)	PURY-P96TKMU-A (-BS)	PURY-P72TKMU-A (-BS)
Nominal Cooling Capacity (208/230V)	Btu/h	168,000	96,000	72,000
Nominal Heating Capacity (208/230V)	Btu/h	188,000	108,000	80,000
Operating Temperature Range *1	Cooling (Outdoor) *2	Refer to Module Data	23~115° F (-5~46° C) DB	
	Heating (Outdoor)		-4~60° F (-20~15.5° 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	1,041 (472)	538 (244)	503 (228)
External Finish		Refer to Module Data	Pre-coated galvanized steel sheet	
Electrical Power Requirements	Voltage, Phase, Hertz	Refer to Module Data**	208 / 230V, 3-Phase, 60Hz	
Minimum Circuit Ampacity (MCA)	A	Refer to Module Data**	34 / 31	23 / 21
Maximum Fuse Size	A	Refer to Module Data**	40	30
Piping Diameter				
From Twinning Kit to Indoor Units (Braze) (In. / mm)	Liquid (High Pressure)	7/8 (22.2) Braze	Refer to System Data	
	Gas (Low Pressure)	1-1/8 (28.58) Braze		
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~P96/1~42	Refer to System Data	
Sound Pressure Level	dB(A)	61	Refer to System Data	
Fan				
Type x Quantity		Refer to Module Data	Propeller fan x 1	Propeller fan x 1
Airflow Rate	CFM	Refer to Module Data	6,200	6,200
External Static Pressure	In. WG (Pa)	Refer to Module Data	Selectable; 0, 0.12 or 0.24" WG; factory set to 0"W.G.	
Compressor Operating Range		7% 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	12.1 / 12.9	Refer to System Data	
	IEER	19.4 / 19.1		
	COP	3.63 / 3.52		
Simultaneous Rating (Ducted/Non-Ducted)	SCHE *3	19.96 / 22.60	Refer to System Data	

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.
Sea Coast (BS): ≥1µm thick; Salt Spray Test Method - no unusual rust development to 960 hours.

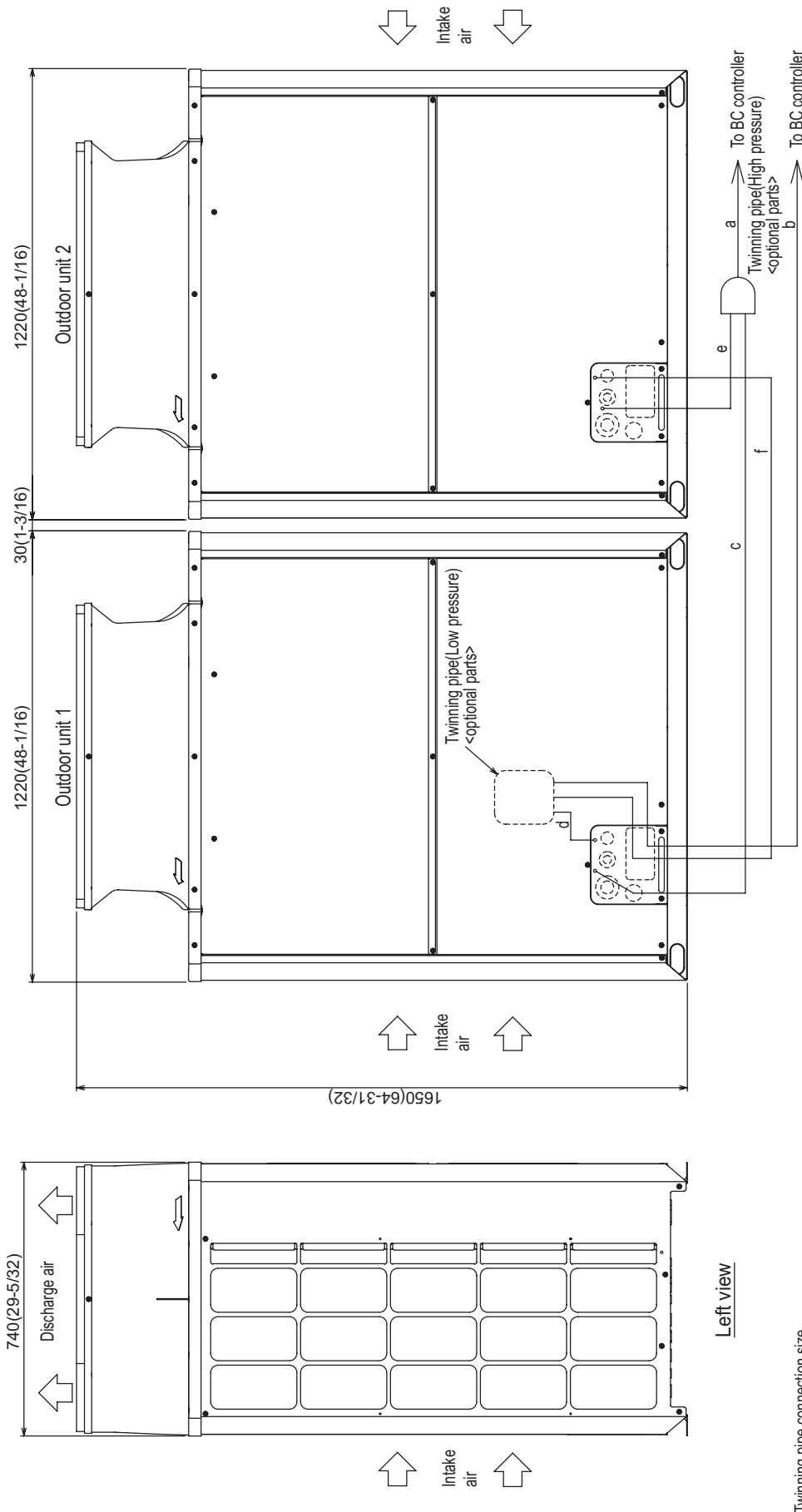
NOTES:

*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. Simultaneous Cooling and Heating Efficiency
 ** Each individual module requires a separate electrical connection.
 Refer to electrical data for each individual module.

Outdoor Unit: PURY-P168TSKMU-A (-BS) – DIMENSIONS

Unit : mm(in.)



Front view

Twinning pipe connection size		PURY-P168TSKMU-A(-BS)	
Package unit name	Outdoor unit 1	PURY-P168TSKMU-A(-BS)	PURY-P192TSKMU-A(-BS)
Component unit name	Outdoor unit 2	PURY-P96TKMU-A(-BS)	PURY-P96TKMU-A(-BS)
Outdoor Twinning Kit(optional parts)		PURY-P72TKMU-A(-BS)	PURY-P96TKMU-A(-BS)
BC controller~Twinning pipe	High pressure	CMY-R100CBK2	
	Low pressure	ø22.2(7/8)	ø22.2(7/8)

Twinning Kit ~Outdoor unit		P168		P192	
High pressure	Low pressure	c	d	e	f
ø19.05(3/4)	- (Note 5)	ø15.88(5/8)	ø19.05(3/4)	ø19.05(3/4)	ø19.05(3/4)
- (Note 5)	- (Note 5)	ø19.05(3/4)	ø19.05(3/4)	- (Note 5)	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).

Model: PURY-P96TKMU-A (-BS) – DIMENSIONS

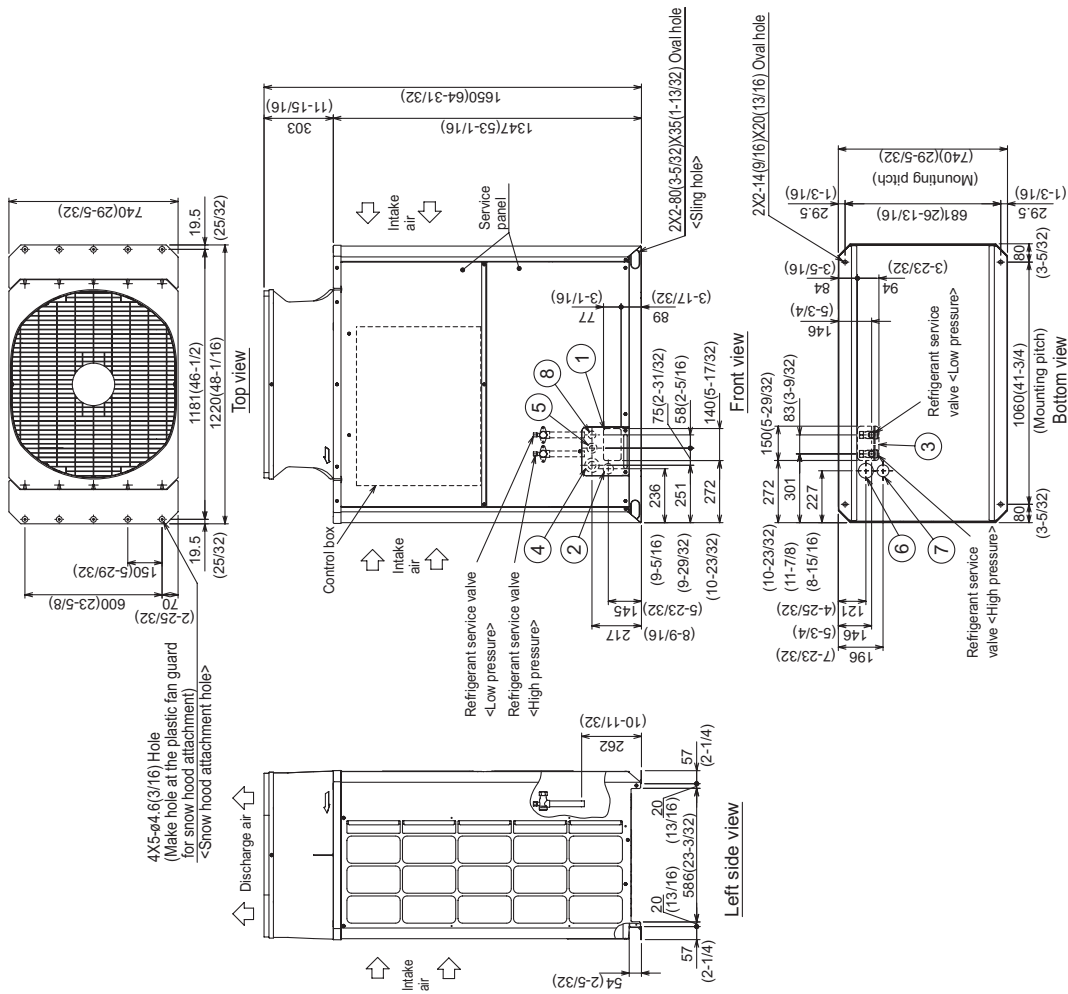
Unit : mm(in.)

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	Refrigerant pipe		Diameter	
	High pressure	Low pressure	High pressure	Low pressure
PURY-P72TKMU	φ15.88 Brazed (5/8) *1	φ19.05 Brazed (3/4) *1	φ25.4 (1)	φ25.4 (1)
PURY-P96TKMU	φ19.05 Brazed (3/4) *1	φ22.2 Brazed (7/8) *1	φ25.4 (1)	φ25.4 (1)

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



NO.	Usage	Specifications
①	Front through hole	140 x 77 Knockout hole (5-17/32) (3-1/16)
②	For pipes	Front through hole (Uses when twinning kit (optional parts) is mounted.) φ45 Knockout hole (1-25/32)
③	Bottom through hole	150 x 94 Knockout hole (5-29/32) (3-23/32)
④	Front through hole	φ62.7 or φ64.5 Knockout hole (2-15/32) (1-3/8)
⑤	For wires	Front through hole (φ43.7 or φ22.2 Knockout hole (1-5/4) (7/8))
⑥	Bottom through hole	φ65 Knockout hole (2-9/16)
⑦	Bottom through hole	φ52 Knockout hole (2-1/16)
⑧	For transmission cables	Front through hole (φ34 Knockout hole (1-11/32))

Model: PURY-P72TKMU-A (-BS) – DIMENSIONS

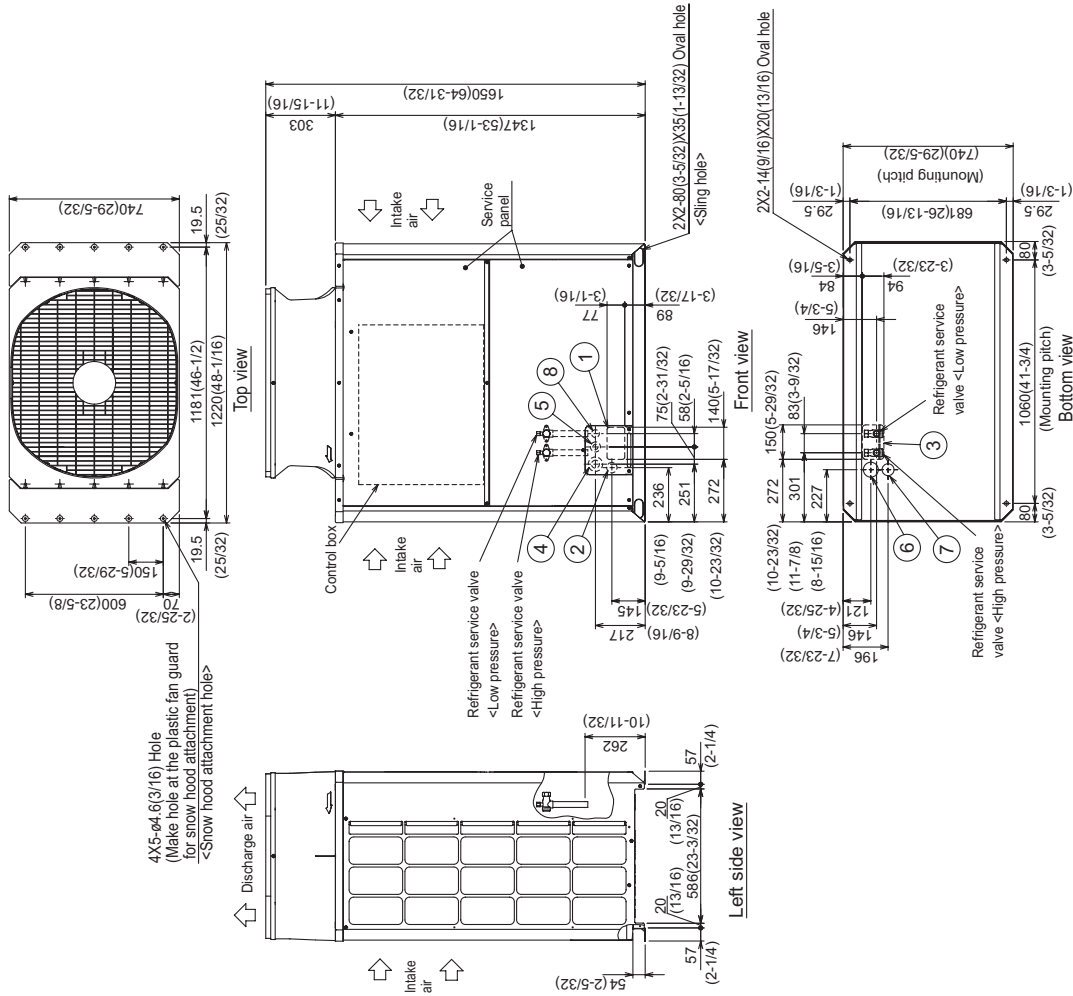
Unit : mm(in.)

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	Refrigerant pipe		Service valve	
	High pressure	Low pressure	High pressure	Low pressure
PURY-P72TKMU	φ15.88 Brazed (5/8) *1	φ19.05 Brazed (3/4) *1	φ25.4 (1)	φ25.4 (1)
PURY-P6TKMU	φ19.05 Brazed (3/4) *1	φ22.2 Brazed (7/8) *1	φ25.4 (1)	φ25.4 (1)

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

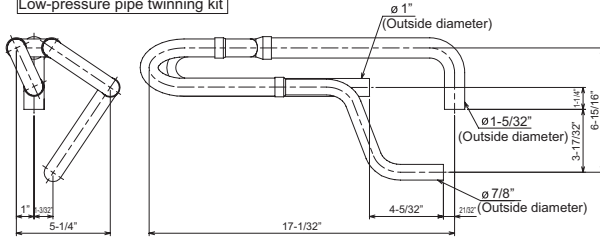


NO.	Usage	Specifications
①	Front through hole	140 × 77 Knockout hole (5-17/32)(3-17/16)
②	Front through hole (Uses when twinning kit (optional parts) is mounted.)	φ45 Knockout hole (1-25/32)
③	Bottom through hole	150 × 94 Knockout hole (5-29/32)(3-23/32)
④	Front through hole	φ63.7 or φ34.5 Knockout hole (2-15/32)(1-3/8)
⑤	Front through hole	φ43.7 or φ22.2 Knockout hole (1-3/4)(7/8)
⑥	Bottom through hole	φ65 Knockout hole (2-9/16)
⑦	Bottom through hole	φ52 Knockout hole (2-1/16)
⑧	For transmission cables	φ34 Knockout hole (1-11/32)

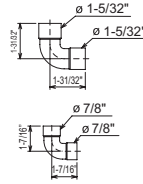
Twinning Kit: CMY-R100CBK2

CMY-R100CBK2

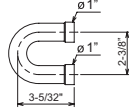
Low-pressure pipe twinning kit



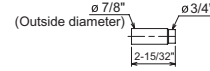
<Elbow pipe(Accessory)>



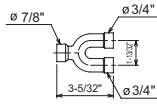
<Low-pressure pipe twinning kit(Accessory)>



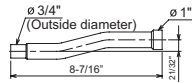
<Deformed pipe(Accessory)>



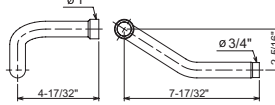
High-pressure twinning pipe



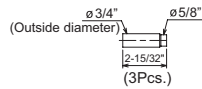
<Pipe for routing through the bottom (Accessory)>



<Pipe for routing through the front (Accessory)>



<Deformed pipe(Accessory)>



Ref: CMY_R100VBK_EXD_EUDB_SI

Notes:



Intertek



COOLING & HEATING

1340 Satellite Boulevard
Suwanee, GA 30024
Toll Free: 800-433-4822
www.mehvac.com

FORM# PURY-P168TSKMU-A (-BS) - 201407
Specifications are subject to change without notice.
© 2014 Mitsubishi Electric US, Inc.