MITSUBISHI ELECTRIC Heating and Cooling — VRF, Split Systems, and Ventilation
AERMEC — Chillers, Heat Pumps, and Fan Coils
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Barrie Branch
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Head Office: Mississauga
1608 Bonhill Road, Mississauga, ON L5T 1C7
1 (800) 567-2221 • info@mitsair.com

London / Windsor Branch
90 Towerline Place, London, ON N6E 2T1
1 (519) 914-9000 • london@mitsair.com

SUBMITTALS

JOB NAME: POD INN HOTEL
QUOTE NO: Q0049638-0
Mech. Consultant:
Salesperson: MAHMUD FAISAL

Project comprises the supply of the following Equipment:

Qty	Model	Description	Tag
2	PUHY-P96TNU-A1	R410A Y Series Outdoor Unit	CU-1 & 2
4	PEFY-P48NMAU-E4	Ceiling Concealed type Indoor Unit	VRF-6T
2	PAR-41MAA	MA remote controller	For VRF-6T
4	PAC-YU25HT-G	Adaptor for External Heater	
4	PAM-4	12V DC Input Relay	
2	EFMD5	Ecofoot for Model P96 (EFMD5-PB5CB482)	FOR CU-1 & 2
1	COOLMASTER	Central controller	
1	HE10-JINH-S11AA--GNT--L	Renewaire ERV	ERV-730
1	TC7D-W	Renewaire – Digital Time Clock	
2	BD12	Renewaire – 12” Backdraft Damper	
		Piping Schematic	
		Ref Piping Critical Info	

Note: Lead times
MITS UNITS: 14-16 weeks
ERV: 6-7 weeks

B K
CONSULTING INC.

Date: 1/23/2025 By: jwaring

Project Name: Pod Inn Hotel

☑ REVIEWED ☐ REJECTED ☐ REVISE

Comments

CITY MULTI

Model: PUHY-P96TNU-A1(-BS)

Job Name: POD INN HOTEL

Schedule Reference:

Date: JANUARY 20,2025

COR CU-1 & 2 (QTY:2)

UNIT OPTION

- [x] Standard Model PUHY-P96TNU-A1
- [ ] Seacoast (BS) Model PUHY-P96TNU-A1-BS

Minimum Operating Temperature
Heating (Outdoor): -25°F (-32°C) WB
Below -22°F (-30°C) WB, an auxiliary heating source is highly recommended.

ACCESSORIES

- [ ] Snow/Wind Guards - (See seperate submittal)
- [ ] Panel Heater - (PAC-PH02EHYU-E) (x1)

Note: Mitsubishi Electric (MESCA) supports the use of only MESCA supplied and approved Snow Guard / Wind Deflectors / Windscreens and accessories for proper functioning of the unit(s). Use of non-MESCA supported Snow Guard / Wind Deflectors / Windscreens and accessories will affect warranty coverage.

Outdoor Model				PUHY-P96TNU-A1 (-BS)	
Indoor Model				Non-Ducted	Ducted
Power source				3-phase 3-wire 208-230 V ±10% 60 Hz	
Cooling capacity *1			BTU/h	96,000	
(Nominal)			kW	28.1	
		Power input	kW	6.46	
	(208-230)	Current input	A	19.9-18.0	
	(Rated)		BTU/h	92,000	
			kW	27.0	
		Power input	kW	7.82	7.93
	(208-230)	Current input	A	24.1-21.8	24.4-22.1
Temp. range of		Indoor	W.B.	59~75°F (15~24°C)	
cooling		Outdoor	D.B.	23~126°F (-5~52°C)	
Heating capacity *2			BTU/h	108,000	
(Nominal)			kW	31.7	
		Power input	kW	7.37	
	(208-230)	Current input	A	22.7-20.5	
	(Rated)		BTU/h	103,000	
			kW	30.2	
		Power input	kW	6.67	6.90
	(208-230)	Current input	A	20.5-18.6	21.2-19.2
Temp. range of		Indoor	D.B.	59~81°F (15~27°C)	
heating *3		Outdoor	W.B.	-13~60°F (-25~15.5°C)	
Indoor unit		Total capacity		50~130% of outdoor unit capacity	
connectable		Model/Quantity		P04~P96/1~24	
Sound power level (measured in anechoic room) *4			dB <A>	75.5/77.5	
Refrigerant		Liquid pipe	in. (mm)	3/8 (9.52) Brazed (1/2 (12.7) Brazed, the farthest pipe length >= 90 m)	
piping diameter		Gas pipe	in. (mm)	7/8 (22.2) Brazed	
Minimum Circuit Ampacity (*)			A	40-36	
Maximum Overcurrent Protection (*)			A	60-50	
FAN		Type x Quantity		Propeller fan x 2	
		Airflow rate	cfm	6,700	
			m3/min	190	
		Control, Driving mechanism		Inverter-control, Brushless DC motor	
		Motor output	kW	0.46+0.46	
	*5	External static press.		0 in.WG (0 Pa)	
Compressor		Type x Quantity		Inverter scroll hermetic compressor x 1	
		Starting method		Inverter	
		Motor output	kW	5.5 x 1	
		Case heater	kW	0.035	
		Lubricant		MEL32	
External finish				Pre-coated galvanized steel sheet (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	
External dimension H x W x D			in.	71-5/8 x 48-7/8 x 29-3/16	
			mm	1,818 x 1,240 x 740	
Protection devices		High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
		Inverter circuit (COMP./FAN)		Over-current protection	
		Fan motor		-	
Refrigerant		Type x original charge		R410A x 21 lbs + 9 oz (9.8 kg)	
		Control		LEV and HIC circuit	
Net weight			lbs (kg)	580 (263)	
Heat exchanger				Salt-resistant cross fin & copper tube	
HIC circuit (HIC: Heat Inter-Changer)				Copper pipe, tube-in-tube structure	
Defrosting method				Auto-defrost mode (Reversed refrigerant cycle)	
Optional parts				Joint: CMY-Y102SS/102LS-G2 Header: CMY-Y104/108/1010C-G	

Notes:
1. Nominal cooling conditions (Test conditions are based on AHRI 1230)
   Indoor: 80°FD.B./67°FW.B. (26.7°CD.B./19.4°CW.B.), Outdoor: 95°FD.B. (35°CD.B.)
2. Nominal heating conditions (Test conditions are based on AHRI 1230)
   Indoor: 70°FD.B. (21.1°CD.B.), Outdoor: 47°FD.B./43°FW.B. (8.3°CD.B./6.1°CW.B.)
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. Cooling mode/Heating mode
5. External static pressure option is available (0.12 in.WG, 0.24 in.WG, 0.32 in.WG/30 Pa, 60 Pa, 80 Pa).

* Due to continuing improvement, above specifications may be subject to change without notice.

Specifications are subject to change without notice.

* All electrical work shall comply with National (CEC) and local codes and regulations.

Should this document be altered or changed without MESCA's permission, it becomes null and void. MESCA assumes no responsibility for any consequences in such cases.

Module: PUHY-P96TNU-A1(-BS) - DIMENSIONS

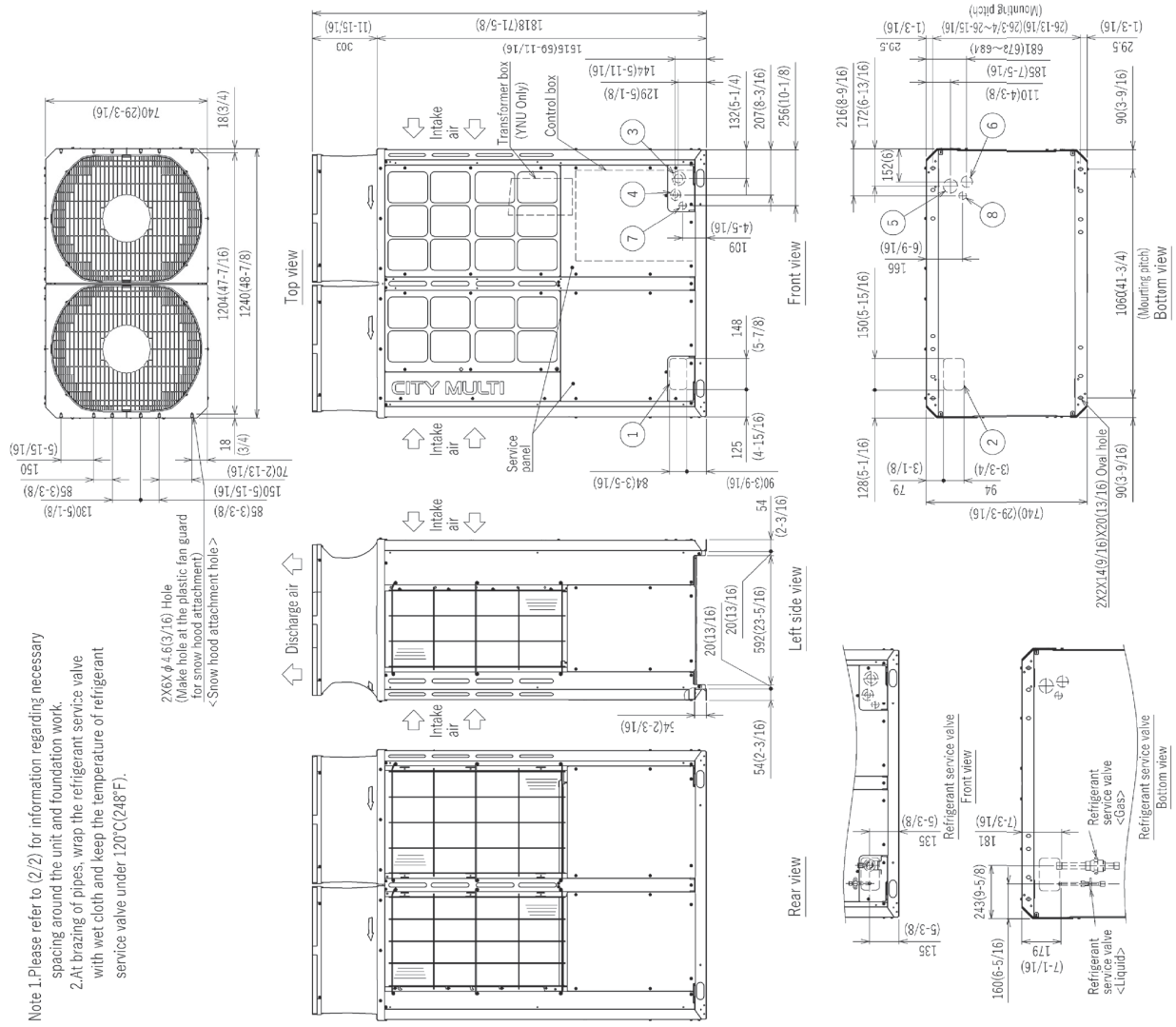
Unit: mm (in.)

Connecting pipe specifications

Model	Diameter					
	Refrigerant pipe *1				Service valve	
	Liquid		Gas		Liquid	Gas
(E)P96	φ9.52(3/8)	Brazed	φ22.2(7/8)	Brazed	φ12.7(1/2)	φ28.58(1-1/8)
(E)P96	φ12.7(1/2)	Brazed *3	φ22.2(7/8)	Brazed	φ12.7(1/2)	φ28.58(1-1/8)
(E)P120	φ9.52(3/8)	Brazed	φ28.58(1-1/8)	Brazed	φ12.7(1/2)	φ28.58(1-1/8)
(E)P120	φ12.7(1/2)	Brazed *2,4	φ28.58(1-1/8)	Brazed	φ12.7(1/2)	φ28.58(1-1/8)
(E)P144	φ12.7(1/2)	Brazed	φ28.58(1-1/8)	Brazed	φ12.7(1/2)	φ28.58(1-1/8)

*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 n combination with other outdoor units.
*3 Furthest piping length (OU from IU) ≦ 90m (295ft)
*4 Furthest piping length (OU from IU) ≧ 40m (131ft)

NO.	Usage		Specifications
①	For pipes	Front through hole	148(5-7/8) X 84(3-5/16) Knockout hole
②		Bottom through hole	150(5-15/16) X 94(3-3/4) Knockout hole
③	For wires	Front through hole	φ62.7(2-1/2) or φ34.5(1-3/8) Knockout hole
④		Front through hole	φ43.7(1-3/4) or φ22.2(7/8) Knockout hole
⑤		Bottom through hole	φ65(2-9/16) Knockout hole
⑥		Bottom through hole	φ52(2-1/16) Knockout hole
⑦	For transmission cables	Front through hole	φ34(1-3/8) Knockout hole
⑧		Bottom through hole	φ34(1-3/8) Knockout hole



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).

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MITSUBISHI ELECTRIC
Heating and Cooling

Submittal Data: PEFY-P48NMAU-E4

48,000 BTU/H Medium Static Ceiling-Concealed Ducted

CITY MULTI

Job Name: PODD INN HOTEL	Location:	
Schedule Reference:	Submitted By: MAHMUD FAISAL	
Submitted To: CONSULT MECHANICAL	Reference: ☐ Approval: ☑ Construction: ☐	
Engineer:	Date: JANUARY 20,2025	Application:

VRF-6T(QTY:4)

Images provided for reference purposes only

- Designed specifically for use with CITY MULTI outdoor units
- Choice of three fan speeds for optimum comfort
- Built-in condensate lift; lifts to 27-9/16" (700mm)
- 9-7/8" (250mm) high for low ceiling heights
- Highly efficient DC motor
- Dual setpoint functionality [7]
- IT Terminal (CN105)

Rated Capacity: (Cooling / Heating capacity indicated at the maximum value at operation under the following conditions Note: [1, 2])		
Cooling [1]	Btu/h	48,000
Heating [2]	Btu/h	54,000
Specifications:		
Power Supply		208/230V, 1Ph, 60Hz
Minimum Circuit Ampacity (MCA) [3]	A	4.38
Maximum Fuse/Breaker Size	A	15
Fan Type x Quantity		Sirocco fan x 3
Motor Type x Quantity		DC motor x 1
Airflow Rate	CFM	918 - 1,112 - 1,306
External Static Pressure (Selectable)	In. WG	<0.14> - 0.20 - <0.28> - <0.40> - <0.60>
Sound Pressure Level (measured in anechoic room)	dB(A)	35-40-44
Drain Pipe Size	In. (mm)	O.D.1-1/4 (32)
External Finish		Galvanized steel plate
Coil Type		Cross fin (Aluminum fin and copper tube)
Air Filter		PP honeycomb fabric.
Unit Dimensions	H: In. (mm)	9-7/8 (250)
	W: In. (mm)	55-1/8 (1,400)
	D: In. (mm)	28-7/8 (732)
Net Weight	Lbs. (kg)	86 (39)
Refrigerant Pipe Diameter (gas) (Brazed)	In. (mm)	5/8 (15.88)
Refrigerant Pipe Diameter (liquid) (Brazed)	In. (mm)	3/8 (9.52)

Model No.	**Description: (Optional Accessories)**
PAC-YU25HT ☐	External Heater Adapter
FBM2-4-A ☐	Filter Box and Filter(s) (MERV13)
PAC-KE94TB-E ☐	Filter Box

Notes:

Note:

1. Cooling (Indoor // Outdoor) 80°F (26.7°C) DB, 67°F (19.4°C) WB // 95°F (35°C) DB

2. Heating (Indoor // Outdoor) 70°F (21.1°C) DB // 47°F (8.3°C) DB, 43°F (6.1°C) WB

3. All electrical work shall comply with National (CEC) and local codes and regulations.

4. Ventilation air to be introduced independent of or in series with VRF indoor units. Please refer to local codes for the required ventilation rates specific to the application.

5. Applications should be restricted to comfort heating and cooling only; process/equipment heating and cooling applications are not recommended.

6. Mitsubishi Electric Sales Canada Inc. (MESCA) supports the use of only MESCA supplied and approved components and accessories for proper functioning of the unit(s). Always consult relevant technical product documentation at mitsubishitechinfo.ca, your local distributor or MESCA BC sales office as applicable. Use of non - MESCA supported components and accessories will affect warranty coverage. MESCA recommends (A) consideration of all applicable design and application parameters and requirements specific to any project; and (B) implementation of any countermeasures needed to address those parameters and requirements, including the provision of antifreeze solution in water based systems used in conjunction with ducted indoor units.

7. All components of the system must be compatible. For more details on system control compatibility, please refer to Technical Bulletin 100-151 available on our website.

8. Should any person change this document in any manner whatsoever without MESCA's written permission, the document shall be of no force and effect and any change shall be deemed to be a representation and warranty made by that person and not MESCA. That person, and not MESCA, shall assume full responsibility for the consequences of such changes. MESCA assumes no responsibility for any consequences in such cases.

Indoor Unit Outline and Dimensions:

Note 1. Use an M10 screw for the suspension bolt (field supply).
2. Keep the service space for maintenance at the bottom.
3. This drawing is for PEFY-P24·27·30NMAU-E4 models, which have 2 fans. PEFY-P06·08·12NMAU-E4 models have 1 fan. PEFY-P15·18NMAU-E4 models have 2 fans. PEFY-P36·48·54NMAU-E4 models have 3 fans.
4. If the inlet duct is used, remove the air filter (supplied with the unit), then install the filter (field supply) at the suction side.
5. Heat air to 0°C (32°F) or higher when taking fresh air with a fresh air intake.

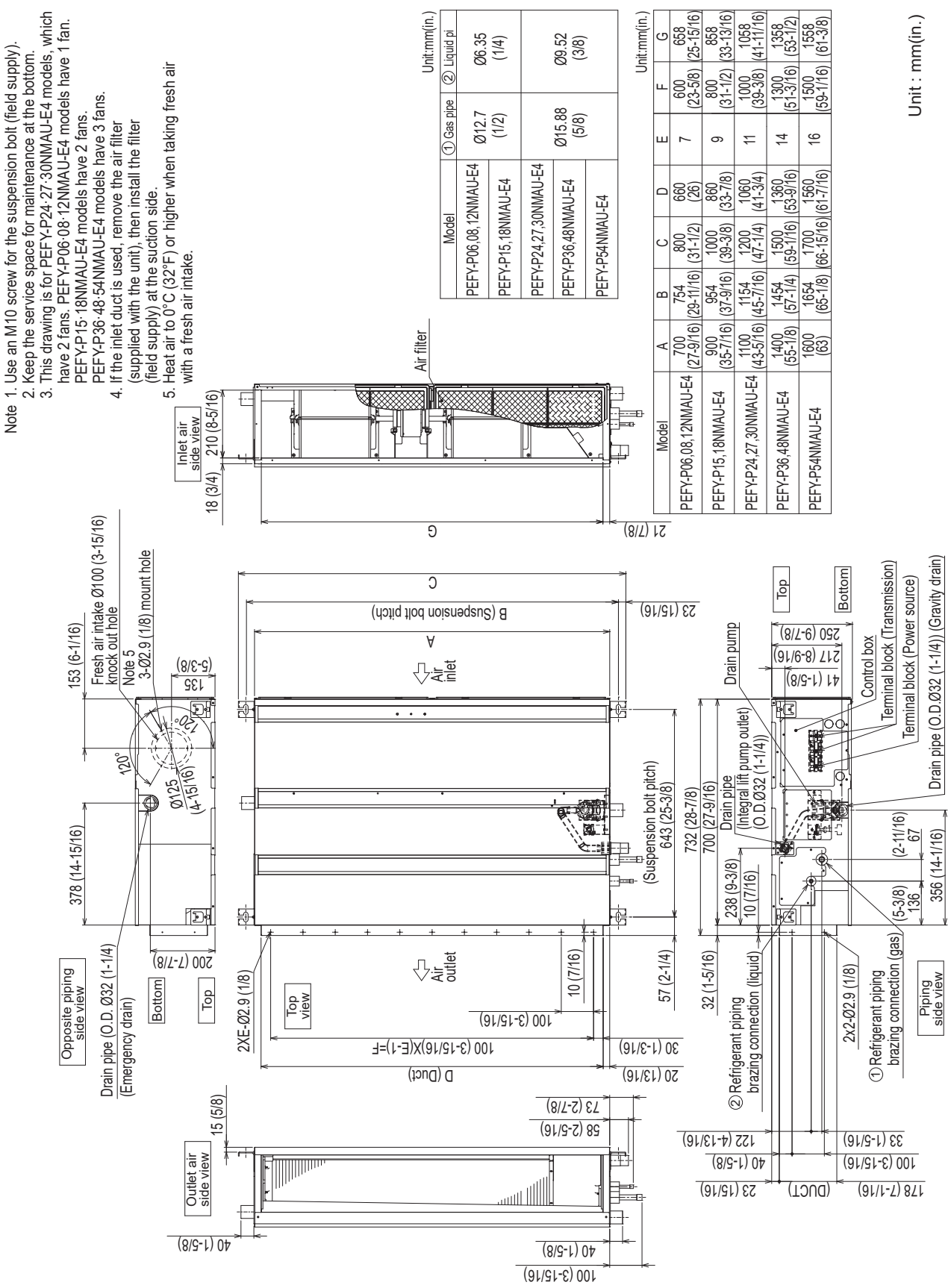
Unit:mm(in.)

Model	① Gas pipe	② Liquid pi
PEFY-P06,08,12NMAU-E4	Ø12.7 (1/2)	Ø6.35 (1/4)
PEFY-P15,18NMAU-E4		
PEFY-P24,27,30NMAU-E4	Ø15.88 (5/8)	Ø9.52 (3/8)
PEFY-P36,48NMAU-E4		
PEFY-P54NMAU-E4		

Unit:mm(in.)

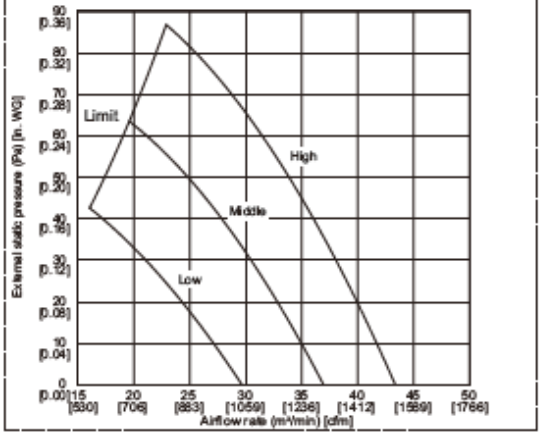
Model	A	B	C	D	E	F	G
PEFY-P06,08,12NMAU-E4	700 (27-9/16)	754 (29-11/16)	800 (31-1/2)	680 (26)	7	600 (23-5/8)	658 (25-15/16)
PEFY-P15,18NMAU-E4	900 (35-7/16)	954 (37-9/16)	1000 (39-3/8)	860 (33-7/8)	9	800 (31-1/2)	858 (33-13/16)
PEFY-P24,27,30NMAU-E4	1100 (43-5/16)	1154 (45-7/16)	1200 (47-1/4)	1060 (41-3/4)	11	1000 (39-3/8)	1058 (41-11/16)
PEFY-P36,48NMAU-E4	1400 (55-1/8)	1454 (57-1/4)	1500 (59-1/16)	1360 (53-9/16)	14	1300 (51-3/16)	1358 (53-1/2)
PEFY-P54NMAU-E4	1600 (63)	1654 (65-1/8)	1700 (66-15/16)	1560 (61-7/16)	16	1500 (59-1/16)	1558 (61-3/8)

Unit : mm(in.)

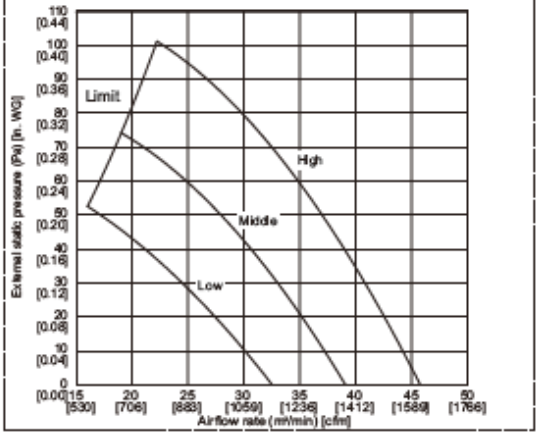


Fan Characteristics Curves:

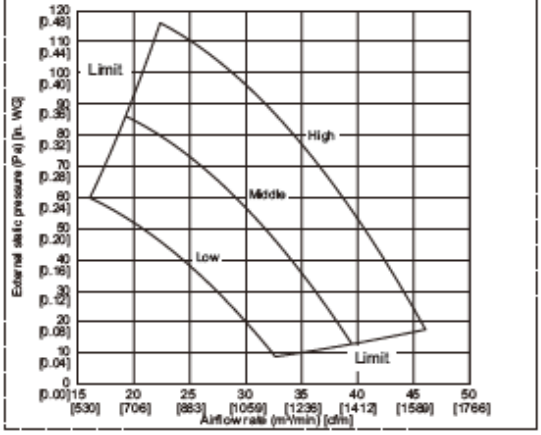
PEFY-P48NMAU-E4
External static pressure : 35Pa [0.14in.WG]
Power source : 208-230V



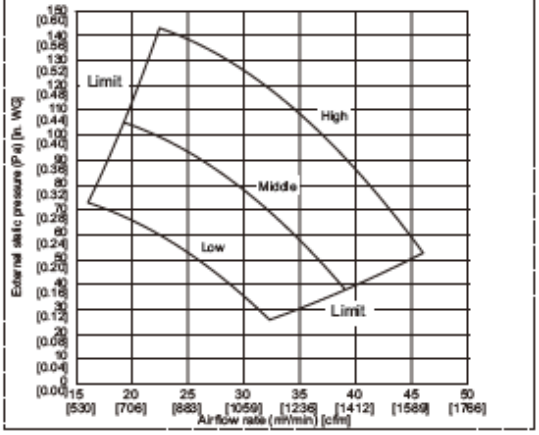
PEFY-P48NMAU-E4
External static pressure : 50Pa [0.20in.WG]
Power source : 208-230V



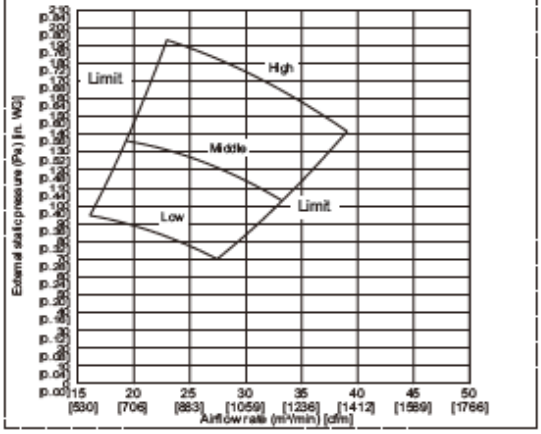
PEFY-P48NMAU-E4
External static pressure : 70Pa [0.28in.WG]
Power source : 208-230V



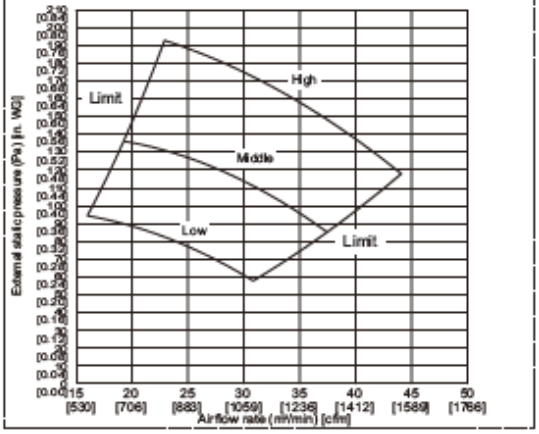
PEFY-P48NMAU-E4
External static pressure : 100Pa [0.40in.WG]
Power source : 208-230V



PEFY-P48NMAU-E4
External static pressure : 150Pa [0.60in.WG]
Power source : 208V



PEFY-P48NMAU-E4
External static pressure : 150Pa [0.60in.WG]
Power source : 230V



Note: MERV13 filter Box & Filter is not reflected in these displayed curves, reference Form # SB_FBM2-Series_Filter_Boxes for full details.

Model PAR-41MAAU

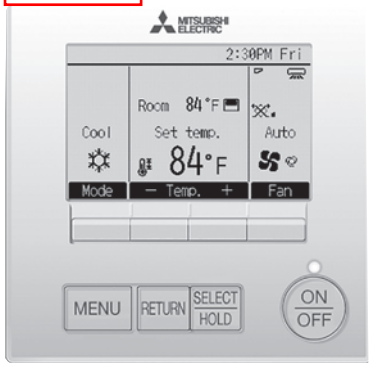
MITSUBISHI ELECTRIC
Heating and Cooling

Job Name: PODD INN HOTEL

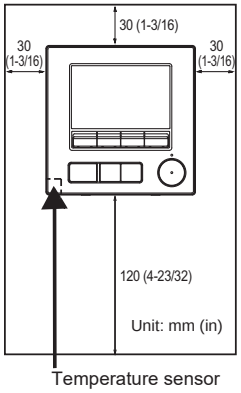
Schedule Reference:

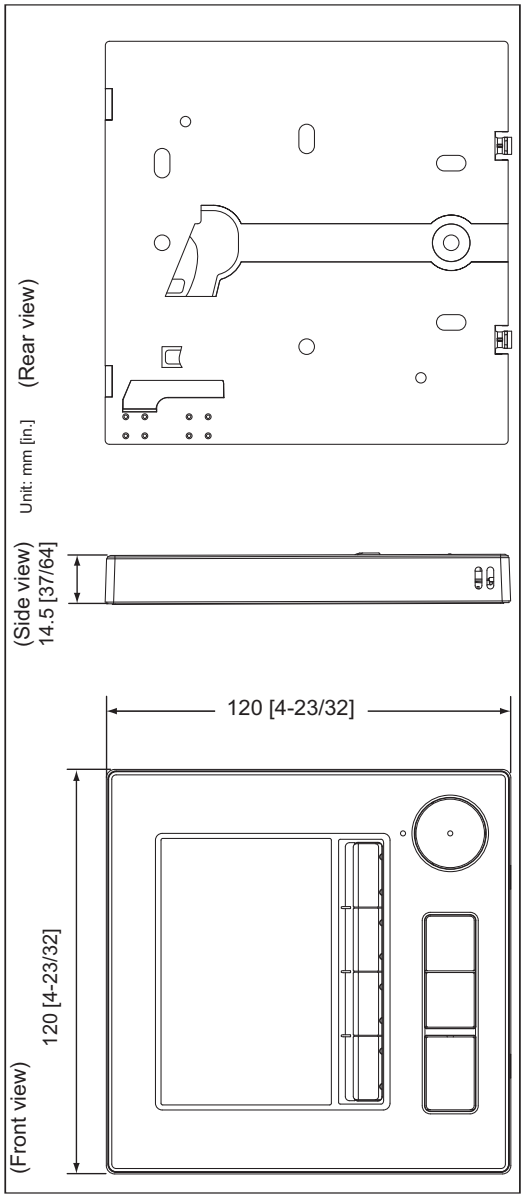
Date: JANUARY 20,2025

QTY:2



Minimum required space around the remote controller





Functions List:

○ : Supported × : Unsupported

	Function	CITY MULTI	M/P-series	Required password
Power	Power ON/OFF	○	○	-
Settings	Operation mode	○	○	-
	Auto (dual set point) mode	○	○	-
	Preset temperature	○	○	-
	Fan speed	○	○	-
	HOLD	○	○	-
Operation menu	Vane•3D i-See•Vent. (Lossnay)	○	○	-
	High power	×	○	-
	Manual vane angle	○	○	-
	3D i-See sensor	○	○	-
Timer menu	Timer (On/Off timer)	○	○	administrator
	Timer (Auto-Off timer)	○	○	administrator
	Weekly timer	○	○	administrator
	OU silent mode	○	○	administrator
Energy saving menu	Temperature range restriction	○	○	administrator
	Operation lock function	○	○	administrator
	Auto return	○	○	administrator
	Schedule	×	○	administrator
Energy data	Energy data (Unit time, month/day)	×	○	-
	Data reset	×	○	administrator
Initial setting menu	Main/Sub	○	○	administrator
	Clock	○	○	administrator
	Clock display format setting	○	○	administrator
	Daylight saving time	○	○	administrator
	Main display	○	○	administrator
	Black and white inversion	○	○	administrator
	Contrast•Brightness	○	○	administrator
	Language selection	○	○	administrator
	Administrator password	○	○	administrator
	Operation setting	○	○	administrator
Service menu	Initialize remote controller	○	○	maintenance
	Remote controller information	○	○	maintenance
	Test run	○	○	maintenance
	Collect model names and serial No.	×	○	maintenance
	Model information input	○	○	maintenance
	Dealer information input	○	○	maintenance
	Function setting	○	○	maintenance
	Rotation setting	×	○	maintenance
	RC operation setting	○	○	maintenance
	CN24 settings	×	○	maintenance
	Smooth maintenance	×	○	maintenance
	Maintenance password	○	○	maintenance
Maintenance menu	Auto descending panel	○	○	-
	Error information	○	○	-
	Filter information	○	○	-

* The supported functions vary depending on the unit model.

List of functions that can/cannot be used in combination:

	High power	On/Off timer	Auto-off timer	Weekly timer	OU silent mode	Temperature range	Operation lock	Auto return	Energy saving schedule	Setback
High power		○	○	○	△1	○	△2	○	△1	×3
On/Off timer	○		○	×1	○	○	○	○	○	○
Auto-off timer	○	○		○	○	○	○	○	○	○
Weekly timer	○	×1	○		○	○	○	○	○	○
OU silent mode	△1	○	○	○		○	○	○	○	○
Temperature range	○	○	○	○	○		○	×2	○	△3
Operation lock	△2	○	○	○	○	○		○	○	△2
Auto return	○	○	○	○	○	×2	○		○	△4
Energy saving schedule	△1	○	○	○	○	○	○	○		○
Setback	×3	○	○	○	○	△3	△2	△4	○	

○ : Can be used in combination × : Cannot be used in combination △ : Restricted

△1: This function is enabled after completing the high power operation because the high power operation has the higher priority.
△2: This function cannot be operated if some operation is locked.
△3: Temperature range setting cannot be used for Setback operation.
△4: Auto return function cannot be used for Setback operation.

×1: Weekly timer setting is not effective because On/Off timer has the higher priority.
×2: Auto return function cannot be used because Temperature range setting has the higher priority.
×3: When the unit is operated in the Setback mode, High power operation cannot be used. High power operation can be used only when the unit is operated in the Cool, Heat, or Auto mode.

Form # SB_PAR-41MAAU_202309
Specifications are subject to change without notice.
www.MitsubishiElectric.ca

MITSUBISHI ELECTRIC
Heating and Cooling

CITY MULTI **Model: PAC-YU25HT - External Heater Adaptor**

MITSUBISHI ELECTRIC *Changes for the Better*

Job Name: POD INN HOTEL

Schedule Referenece: | Date: JANUARY 20,2025

Optional Part: QTY:4

☑ PAM-4 Relay

EXTERNAL HEATER ADAPTOR (**PAC-YU25HT*1**) SPECIFICATIONS

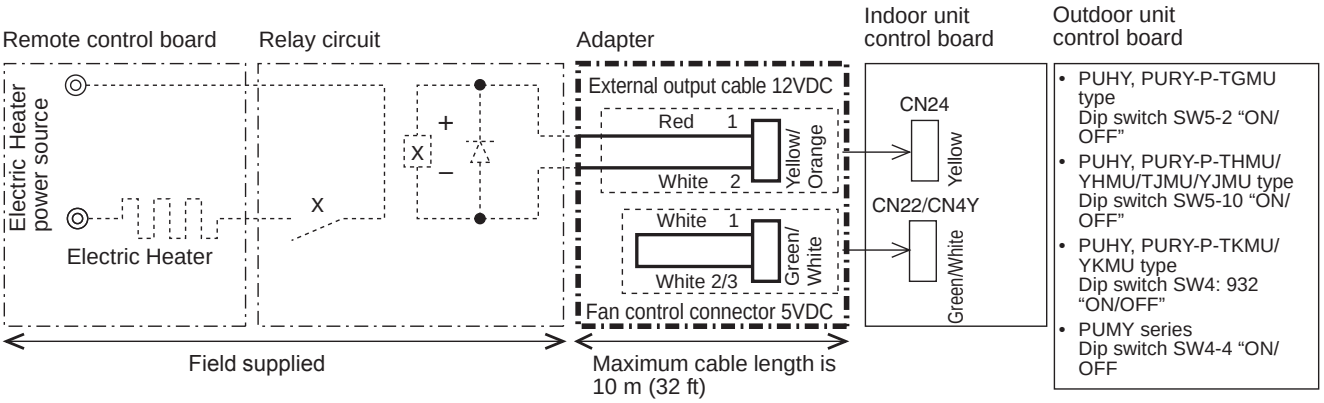
- Coil Voltage: 12 Vdc
- Power Consumption: 0.9 W or less
- Maximum Distance: 32 feet (10 meters)
- Wire Size: 16 to 22 AWG

- The external header adaptor (PAC-YU25HT) connects to CN24 on the indoor unit for control of external heat by the CITY MULTI Controls Network

PAC-YU25HT*1 = For models PKFY-P06_08NBMU-E you require external output cable PAC-SE88HA-E (PAR-725AD), cable connects into Indoor board CN52 while Brown and Red wires are used in place of wiring shown below. (Same control operation apply see PKFY_SH for full details)

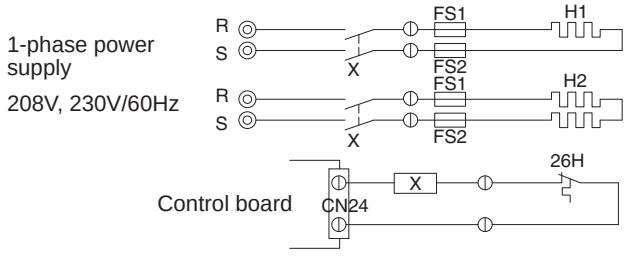
- For full control sequence specifications as well field DIP switch setting reference IM_PAC-YU25HT_WT05383X04
- PAC-YU25HT adapter only enables/disables a 12vdc interlock relay for a third party auxiliary heater control circuit. Third party control circuit must be capable to operate via an on/off dry contact only
- Operational, high limit and all other safety controls should be integral to the third party auxiliary heater

Locally Procured Wiring
(1) Basic wiring



Use X relay having the following specifications
Rated voltage : 12VDC
Power consumption : 0.9W or less
* Always insert a diode on both ends the relay coil.
The length of the electrical wiring for the PAC-YU25HT is 2 meters (6-1/2 ft).
For longer lengths, up to no more than 10 m (32ft), use sheathed 2-core cable.
Control cable type : CVV, CVS, CPEV or equivalent.
Cable size : 0.5 mm² ~ 1.25 mm2 (16 to 22 AWG)

(2) Recommended circuit



FS1, 2 ------Thermal fuse
H1, H2------Electric heater
26H----------Overheat protection thermostat
X ------------Relay (Electromagnetic contactor)

Notes:

R-410A OZONE-FRIENDLY REFRIGERANT

MITSUBISHI ELECTRIC thinks green

Specifications are subject to change without notice.

PAM-1, PAM-2, and PAM-4

Multi-Voltage Relay Modules

QTY:4

FIRE-LITE ALARMS by Honeywell

Relays

General

Air Products & Controls, Inc. PAM-1, PAM-2, and PAM-4 Multi-Voltage Relay Modules are encapsulated multi-voltage devices. The PAM-1 relay provides 10.0 Amp Form-C contacts and may be energized by one of three input voltages: 24 VAC, 24 VDC, or 115 VAC. The PAM-2 relay provides 7.0 Amp Form-C contacts and may be energized by one of two input voltages: 12 VDC or 24 VDC. The PAM-4 relay provides 10.0 Amp Form-C contacts and may be energized by a wide voltage range from 9 VDC to 40 VDC.

A red LED is provided on both models. When illuminated, it indicates the relay coil is energized.

Either model may be mounted by using the double-sided adhesive tape, the self-drilling screw, or by placing loosely in a backbox.

PAM-1, PAM-2, and PAM-4 Relay Modules are ideal for applications where remote relays are required for control or status feedback. They are suitable for use with HVAC, temperature control, fire alarm, security, energy management, and lighting control systems.

Specifications

Power requirements:

- PAM-1: 0.015 Amps per position @ 24 VDC, 24 VAC, 115 VAC.
- PAM-2: 0.015 Amps per position @12 VDC or 24 VDC.
- PAM-4: 0.015 Amps per position @ 24 VDC or 12 VDC.

Relay: UL-recognized SPDT.

Contact Rating:

- PAM-1: 10.0 A @ 115 VAC, 7.0 A @ 28 VDC, 250uA @ 5 VDC.
- PAM-2: 7.0 A @ 115 VAC, 7.0 A @ 28 VDC, 250uA @ 5 VDC.
- PAM-4: 10.0 A @ 120 VAC, 7.0 A @ 24 VDC, 250uA @ 5 VDC.

Ambient Temperature Range: -58°F to 185°F (-50°C to 85°C).

Dimensions: 1.5” (3.81 cm) high x 1.0” (2.54 cm) wide x 0.875” (2.223 cm) deep, with 12” (30.48 cm) wire leads @ 18 AWG (0.75 mm^2).

6755pho1.jpg

PAM-1

Agency Listings and Approvals

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL Listed:** S3403
- **MEA:** 73-92-E, Volume XXI
- **CSFM:** 7300-1004:101

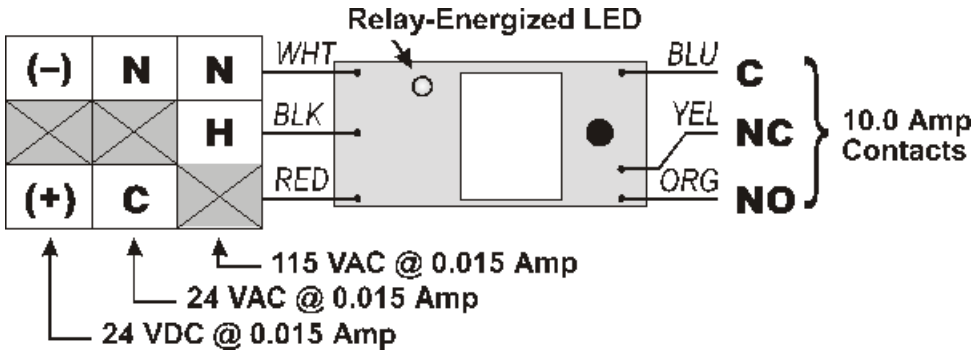
Product Line Information

PAM-1: Single SPDT relay with LED, double-sided adhesive tape, mounting screw, 12” (30.48 cm) leads, and six wire nuts.

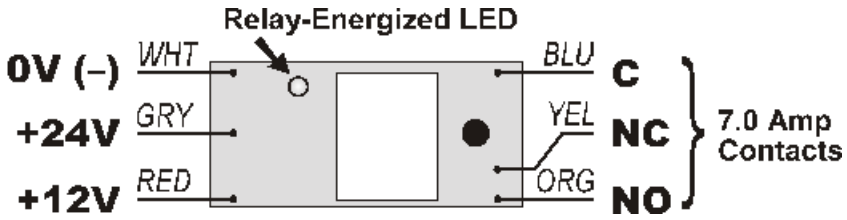
PAM-2: Single SPDT relay with LED, double-sided adhesive tape, mounting screw, 12” (30.48 cm) leads, and six wire nuts.

PAM-4: Single SPDT relay with LED, double-sided adhesive tape, mounting screw, 12” (30.48 cm) leads, and six wire nuts.

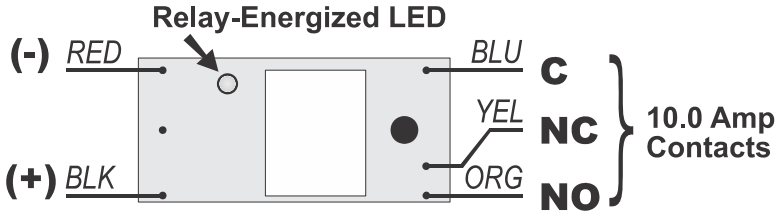
Wiring Diagrams



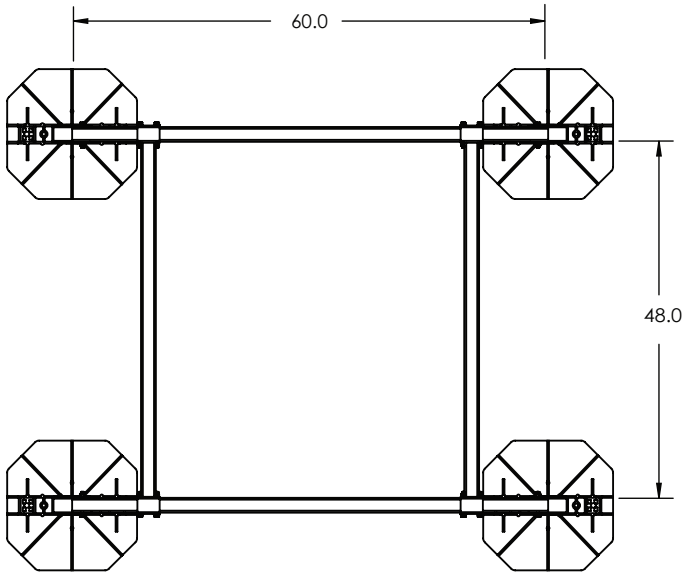
PAM-1

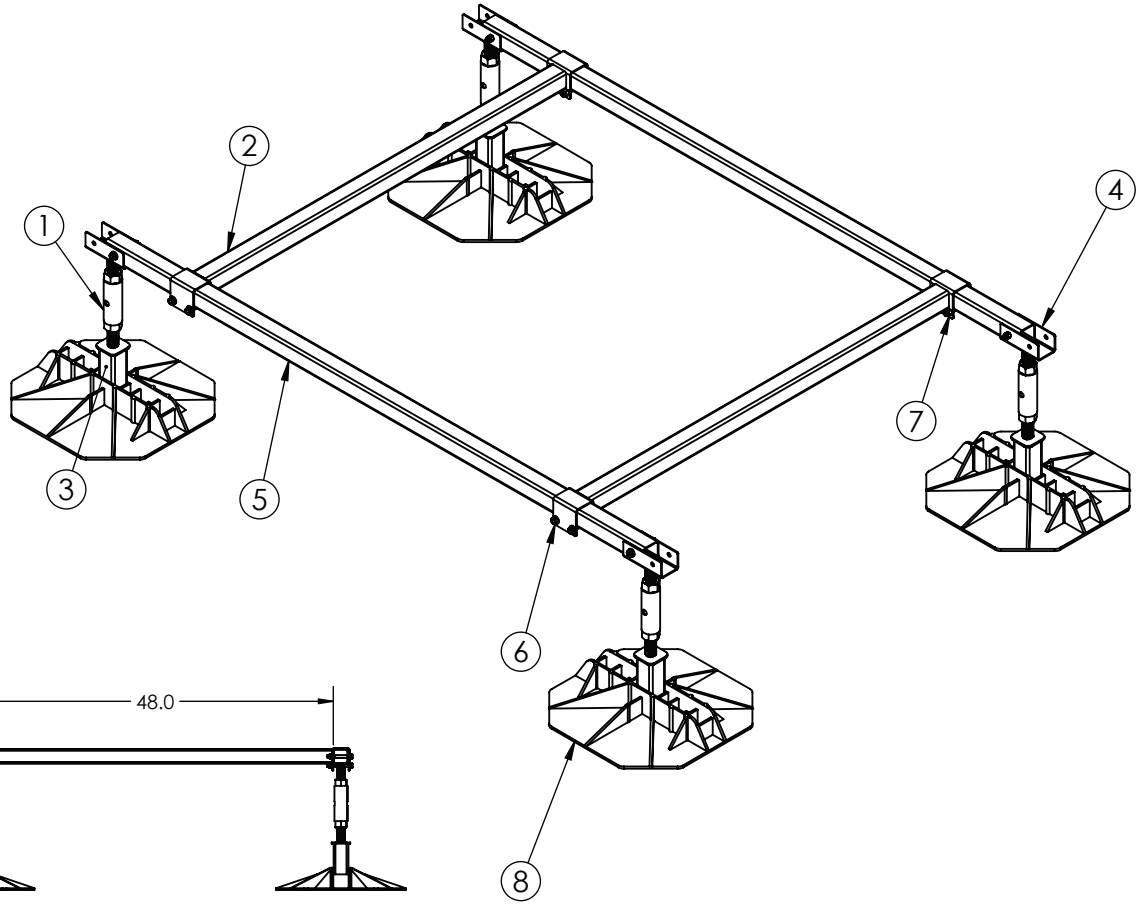


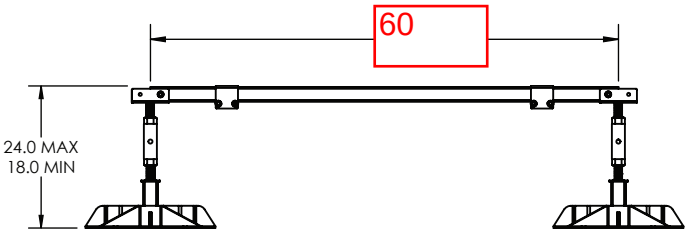
PAM-2

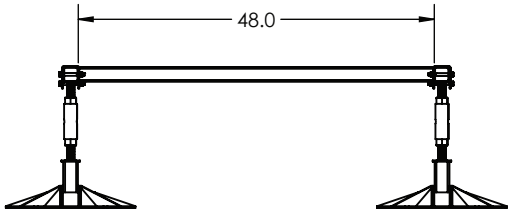


PAM-4









Item No.	Description	Qty
1	leveling jack weldment	4
2	48" cross rail	2
3	foot levelling weldment	4
4	EcoFrame saddle	4
5	60" straight bar	2
6	3/8"- 16 nylock x 3" flange head cap screw	12
7	3/8" nylock nut	12
8	EcoFoot base	4

QTY:2

WWW.ECO-FOOT.COM

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A			

ECOFOOT
THIS FOOT IS GREEN

CLIENT No.:

CLIENT PART No.:

DESCRIPTION:

ECOFRAME MODEL: EFMD5

DATE: AUG 29 2013

CAD REF. NO. -

APPROVED BY:

DESIGNED BY: -

DRAWN BY:

FSCM NO. | DWG NO. | REV | SHEET

Submittal Data: CoolMaster

Job Name:	POD INN HOTEL	Location:	
Purchaser:			
Engineer:			
Submitted To:	CONSULT MECHANICAL	For:	☐ Reference ☒ Approval ☐ Construction
Submitted By:	MAHMUD FAISAL	Date:	JANUARY 20,2025
Unit Designation: Schedule #:		Model No.:	

Features

- Seamless integration of VRF HVAC systems with all Home Automation / BMS controllers
- Supports any VRF HVAC equipment
- Interfaces
  - RS232 (ASCII),
  - RS485 (MODBUS RTU, BACnet MSTP),
  - Ethernet (ASCII & MODBUS IP, BACnet IP)
- Control and monitor indoor units from the touch screen
- Multi brand support on a single device
- Digital I/O (for all on/all off triggering)
- Configurable I/O's (Future option)
- Cloud App — remote access by Smartphone, Tablet and PC through internet (https://coolautomation.com/products/controlapp/)
- Full control & monitoring of HVAC indoor unit's operation
- HVAC systems diagnostics (optional) – available on Cloud Application for monitoring
- Cloud integration by API (optional)

QTY:1

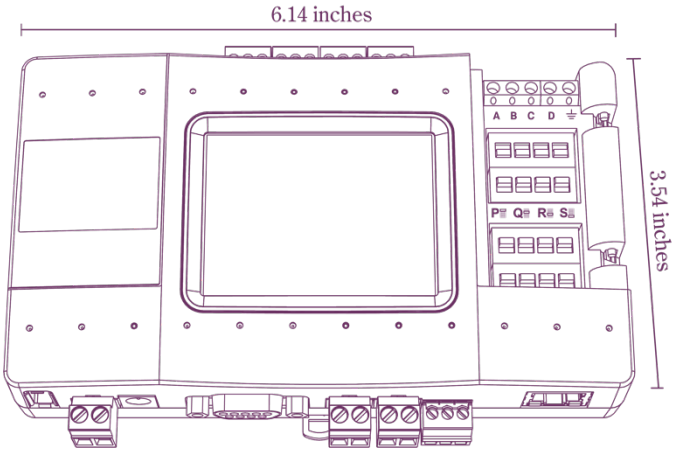
Power Requirements	
Power Supply*: (power adapter included)	120VAC 60 Hz /220VAC 50 Hz
Power Consumption:	1.5Watt

Operating Conditions	
Surrounding Temperature Limit:	-10° C to +60° C +14 F to +140 F
Humidity (%)	0% to 96%
Dimensions (H x W x D) (inches/mm)	3.54 x 6.14 x 1.37 / 90 x 156 x 35
Weight (lbs/Gr)	0.58 / 265
Maximum number outdoor units* *Per HVAC vendor specifications	10-40
Maximum number indoor units* *per HVAC vensor specifications	32
Maximum allowable wiring length to BMS over RS232 (ft)	82
Air-conditioning communication (Brand dependent)	2-3 wired shielded cable

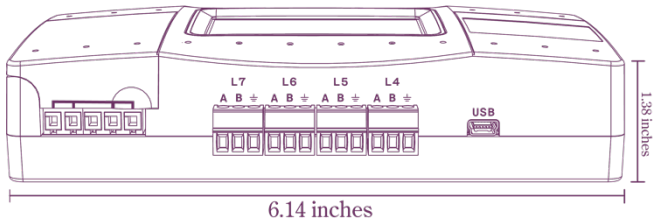
Configuration and engineering for each project are necessary.
Specifications are subject to change without notice.

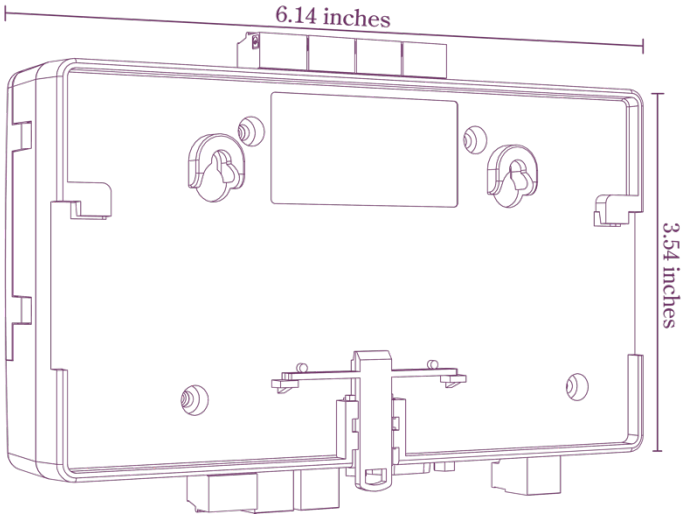
DIMENSIONAL DRAWINGS:

Front View

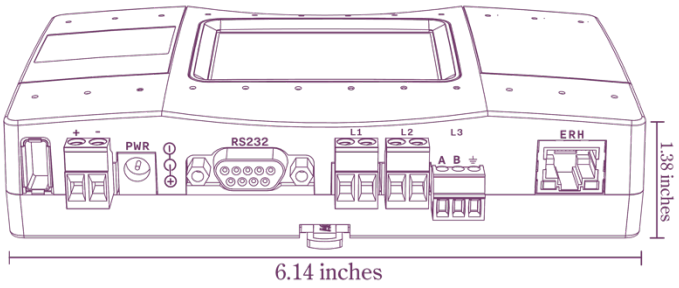


Top View





Back View



Bottom View

RenewAire®
Energy Recovery Ventilation

SUBMITTAL

Date:	10/24/2024
Project Name:	POD INN HOTEL
Project Number:	O-178088
Job Location:	
Engineering Firm:	
Engineer:	
Contractor:	CONSULT MECHANICAL
Submittal Revision:	0

Unit Tags	Model
ERV-730	HE10-JINH-S11AA---GNT---L

Submitted By Name: MAHMUD FAISAL

Date: JANUARY 20,2025

Approved By Name:

Approved By Signature:

Date:

☐ Approved as Submitted

☐ Approved as Noted

☐ Rejected as Noted and Resubmit

Once this submittal is approved or approved "as noted" a complete copy of this document must be returned to the RenewAire rep office before the equipment can be released for fabrication. An approval area has been provided for your convenience. Disapproval or approved "as noted" actions should be indicated on the appropriate individual submittal sheets.

Date: 10/24/2024
Project Number: O-178088
Project Name: POD INN HOTEL
Unit Tag: ERV-730
Model: HE10-JINH-S11AA---GNT---L
Qty: 1

HE10INV shown

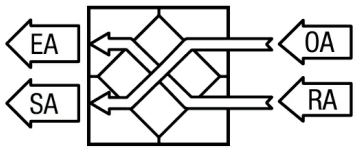
Specifications

Ventilation Type:	Static plate, heat and humidity transfer
Typical Airflow Range:	250-1,100 CFM
AHRI 1060 Certified Core:	One L125-G5
OA Filters:	Total Qty. 1, MERV 8: 20" x 20" x 2"
RA Filters:	Total Qty. 1, MERV 8: 20" x 20" x 2"
Unit Weight:	194-350 lbs. (varies by option)

Configuration

Unit Tag	ERV-730
Model	[HE10-] HE10-
Core Type	[J] G5
Installation Location	[IN] Indoor Unit
Airflow Orientation	[H] Orientation H
Wall	[S] Single (Standard)
Electrical Service	[11] 120V / 1 Phase / 60 HZ
Fresh Air Motor	[A] Advanced EC Direct Drive Motorized Impeller
Exhaust Air Motor	[A] Advanced EC Direct Drive Motorized Impeller
Flow Control	[-] No Dampers (Standard)
Unit Control	[G] Terminal Strip For EC Motors
Shaft Grounding Rings	No
Disconnect	[N] Non Fused (Standard)
Control Option	[T] Transformer with Isolation Relay (Standard)
Filter Monitor	[-] None
Paint	[-] None
Safety Listing	[L] Listed

Airflow Orientation



Unit Accessories and Service Parts

Type	Part Number	Description	Quantity
Accessory	131300	TC7D-W DIGITAL TIME CLOCK WALL MNT	1
Accessory	102403	BD12 12" BACK DRAFT DAMPER 134100	2

AHRI CERTIFIED®
www.ahridirectory.org
Air-to-Air ERV
AHRI Standard 1060
Energy Recovery COMPONENT is certified. Actual performance in packaged equipment may vary.

SUMMER

WINTER

	Outdoor Air	Return Air	Supply Air	Outdoor Air	Return Air	Supply Air
Standard Flow Rate **SCFM**	710*	700	700	710*	700	700
Actual Flow Rate **ACFM**	751*	721	728	628*	712	685
Dry Bulb **°F**	87.7	75.0	78.7	2.4	70.0	50.4
Wet Bulb **°F**	73.5	62.5	67.9	0.6	51.4	39.3
Enthalpy (H) **BTU/lb**	37.2	28.2	32.4	1.1	21.1	14.9
Moisture Ratio (MR) **grains/lb**	103.1	65.5	86.5	3.3	27.4	18.3
Supply Air - External Static Pressure **in w.g.**		0.50			0.50	
Exhaust Air - External Static Pressure **in w.g.**		0.50			0.50	
Sensible effectiveness **%**		71.0			71.0	
Total effectiveness **%**		53.6			69.3	
Enthalpy Recovery Ratio (ERR) **%**		53.5			69.2	
Moisture removed **grains/lb**		16.6			-15.0	
	Sen	**Lat**	**Tot**	**Sen**	**Lat**	**Tot**
Original load **BTUH [Tons]**	9608 [0.8]	18759 [1.6]	28366 [2.4]	51141	11936	63077
Load with RenewAire **BTUH [Tons]**	2786 [0.2]	10392 [0.9]	13178 [1.1]	14831	4591	19422
Total energy saved **BTUH [Tons]**	6822 [0.6]	8366 [0.7]	15188 [1.3]	36310	7345	43655

*Note: OA Flow Rate values are gross airflow, all others are net airflow.
Note: For full certified ERV performance, please see AHRI 1060 Report.
Note: Sensible cooling design conditions were used for the summer performance results.

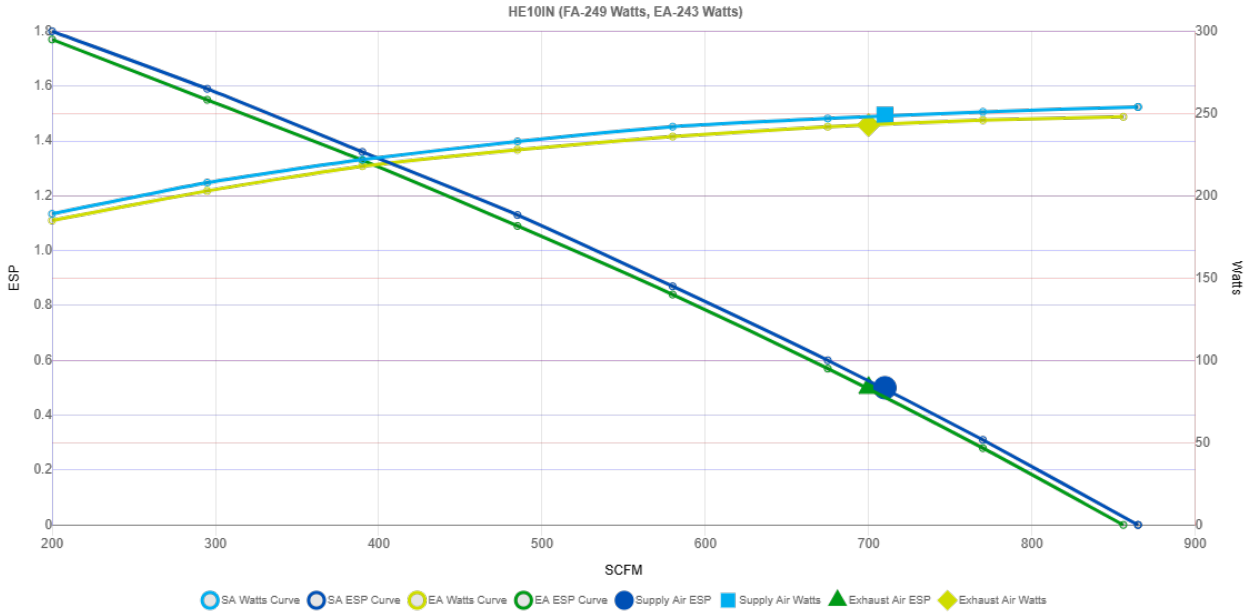
Fans

	Gross CFM	ESP	Filters	Fan Speed (RPM)	Watts	Elevation	Motors Protected by Motor Starters		Motors Protected by VFDs	
							Qty @ W	FLA	Qty @ W	FLA
OA	710	0.50	2" MERV-8	1959	249	371	2@480	6.5	None	-
RA	700	0.50	2" MERV-8	1944	243					

Unit Electrical Data

Volts	Hertz	Phase	MCA	MOP
120	60	1	14.6	20

Fan Curve



System Fan Efficacy

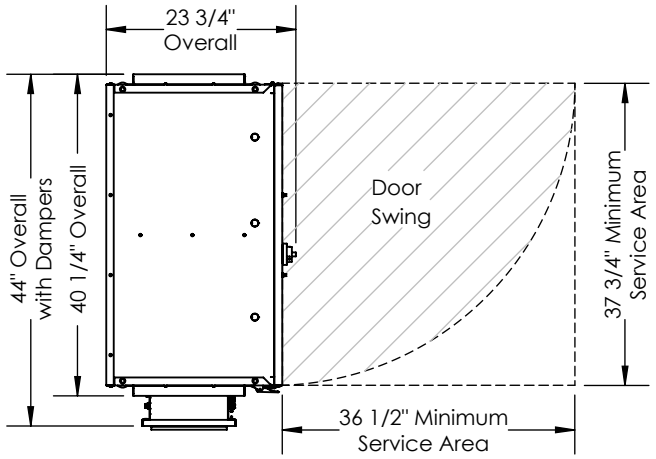
CFM/Watt	Watt/CFM
1.42	0.7

ABBREVIATIONS
EA: Exhaust Air to Outside
OA: Outside Air Intake
RA: Room Air to be Exhausted
SA: Supply Air to Inside

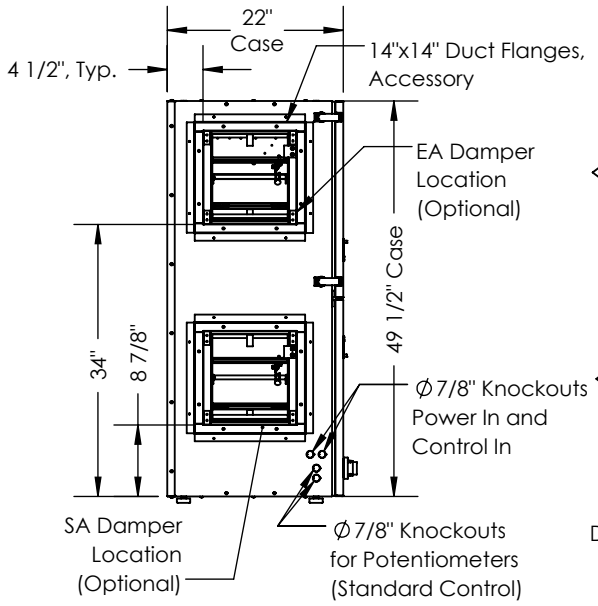
INSTALLATION ORIENTATION
Unit may be installed in any orientation.

NOTE
1. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE ROUNDED TO THE NEAREST EIGHTH OF AN INCH.

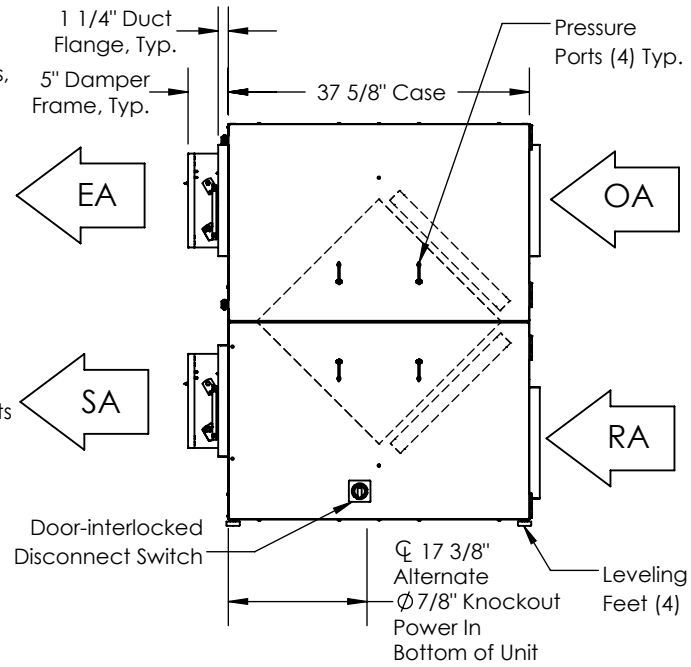
2. SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE.



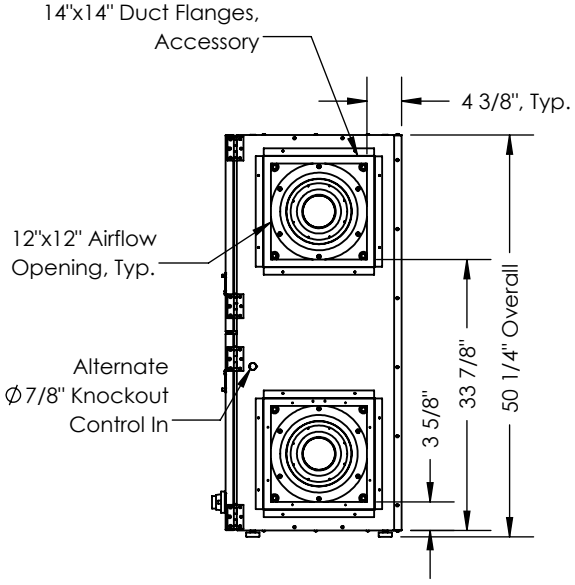
TOP VIEW



LEFT VIEW



FRONT VIEW



RIGHT VIEW

Model: HE10INH
Drawing Type: Unit Dimension
Version: AUG23

RenewAire®
Energy Recovery Ventilation

POD IN HOTEL

DIAGRAM SYMBOL LEGEND	
DISPLAY	DESCRIPTION
-//- -///-	POWER WIRE
———	CONTROL WIRE
- - - - - - -	REF. PIPE / WATER PIPE
———//———	POWER SIGNAL WIRE

CONT.No		PAGE	1 / 1

CITY MULTI

SYSTEM SCHEMATIC DWG.

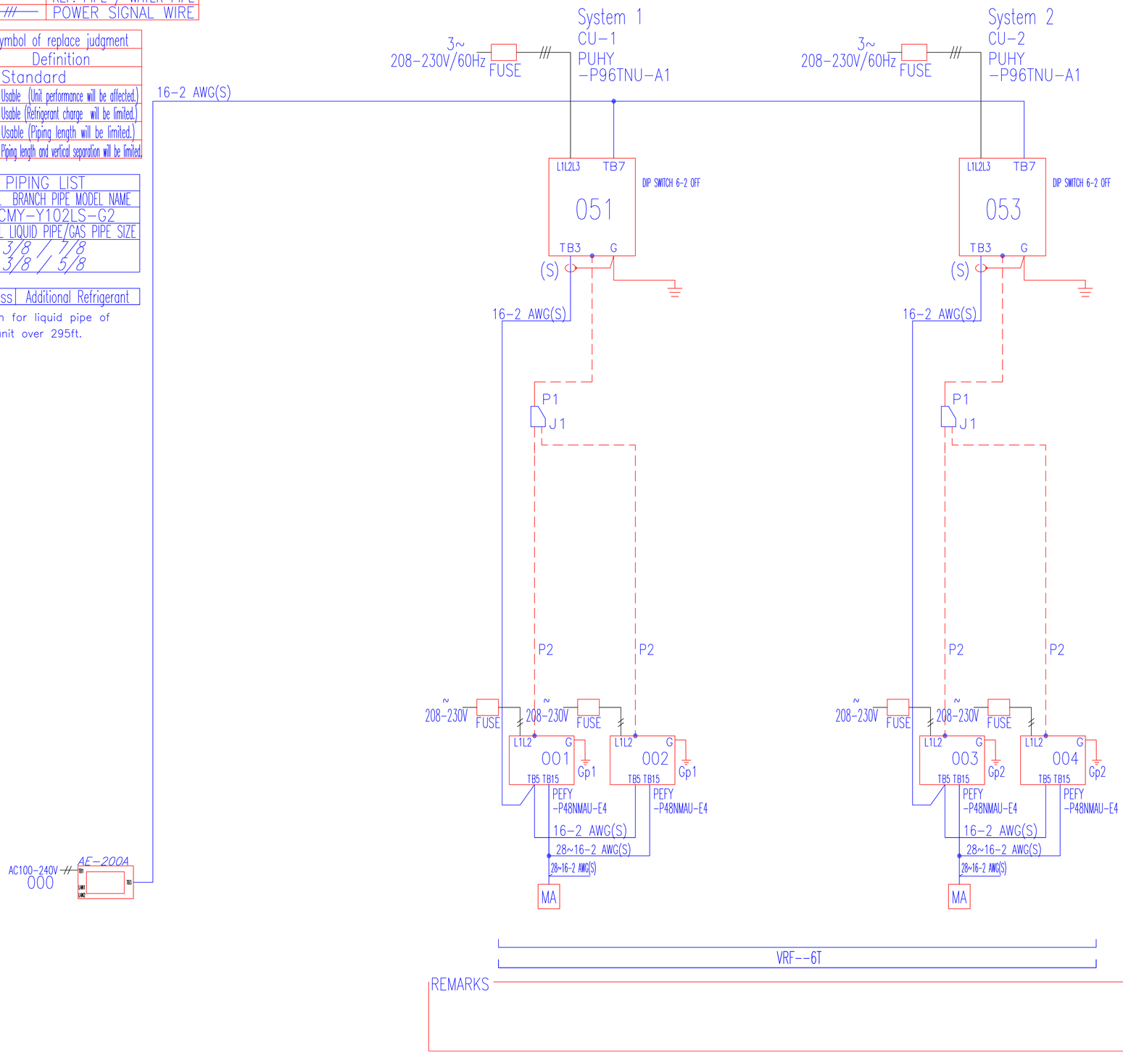
Appropriate Circuit Protection Device in accordance with logal government regulations are mandatory required such as GFI(Inverter type) and WB etc.
Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book.
1.25mm^2 (16 AWG) : 1.25mm^2 (16 AWG) or more. 1.25mm^2 (16 AWG) : 1.25mm^2 (16 AWG) or more.
Warning: HVRF pipe size is dependent on pipe length, please confirm before implementation.

The symbol of replace judgment	
Symbol	Definition
#1	Standard
#2	Usable (Unit performance will be affected.)
#3	Usable (Refrigerant charge will be limited.)
#4	Usable (Piping length will be limited.)
#5	Piping length and vertical separation will be limited.

PIPING LIST
SYMBOL BRANCH PIPE MODEL NAME
J1 CMY-Y102LS-G2
SYMBOL LIQUID PIPE/GAS PIPE SIZE
P1 3/8 / 7/8
P2 3/8 / 5/8

Address	Additional Refrigerant

1/2inch for liquid pipe of P96 unit over 295ft.



REMARKS

MITSUBISHI ELECTRIC CORPORATION

PREPARED ON 2024/10/24

Refrigerant Pipework

Supply, install, test and commission all interconnecting refrigeration pipework between the outdoor and indoor units.

All pipework to be carried out in refrigerant quality ACR copper tubing and complete with the appropriate headers and joints. All pipework must be suitable for R410A.

Longest possible lengths of copper pipe should be utilized to minimize joints on site.

Appropriate refrigeration installation tools must be utilized. Dry Nitrogen must be utilized at all times in the system during brazing.

All pipework (suction and liquid lines) to be insulated with slip on close cell elastomeric pipe insulation (as manufactured by Armaflex or equal and approved) having a wall thickness of not less than ½".

After installation of pipework, and prior to sealing of insulation joints and starting of equipment, pipework should be pressure tested. 44 PSIG test for 3-minutes minimum, then 217 PSIG for 3-minutes minimum, then 478 PSIG for 3-minutes minimum, then strength test to 600 PSIG check the system for leaks and deformation, then lower the pressure back to 478 PSIG and pressure test for 24 hours and checked for leaks. Vacuumed/dehydrated to 300 microns, and hold at that vacuum for 12 hours (minimum)

Refrigerant (R410A) charge weight must be calculated, to the actual installed length of pipe work in accordance to Mitsubishi recommendations.

The charging should be carried out with an appropriate charging station.

Pipework to be properly fixed and supported at a minimum of 1.5 meters (5 feet) or as specified by local code and where required should be run on galvanized trays. All pipework to be labelled with ID number (condensing units ref.) at 3 meter (9 feet) intervals.

Joints in copper pipe shall be brazed. Brazing shall be carried out to the requirements of the local code and as per the Canadian copper & brass development association recommendations.

Condensate Pipework

A condensate line shall be installed to each fan coil unit. This shall be installed and insulated all as per the standard specification. Minimum size of condensate pipes to be 25mm (1 inch) copper or plastic, insulated and pumped or by gravity from each fan coil/cassette, drains to run 1:80 min falls as indicated on drawings.

IMPORTANT:

ALL REFRIGERATION PIPING MUST BE INSTALLED BY A MITSUBISHI ELECTRIC CERTIFIED HVAC CONTRACTOR.

ALL TSSA APPROVALS, DOCUMENTS & COSTS ARE THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR.

SHUT OFF SERVICE VALVES ARE RECOMMENDED FOR ALL BC BOXES & FAN COILS & FUTURE FCU'S.

EXTERNAL REFRIGERATION INSULATED PIPING MUST BE PVC CLAD FOR UV & RODENT PROTECTION.

REFGRIGERANT PIPING INSTALLATION AND BRAZING INSTRUCTION

IMPORTANT NOTES: All Mitsubishi City Multi system refrigeration piping are field assembled and all joints are field brazed. Installer must use best practices and utmost care during the assembly of the piping system to ensure the system components such as valves, oil separators, compressors, various orifices and tubes are not blocked. It is imperative to keep the piping system free of debris and contaminants such as carbon dust, copper burrs or slag during installation.

Storage and Pre-assembly Preparations

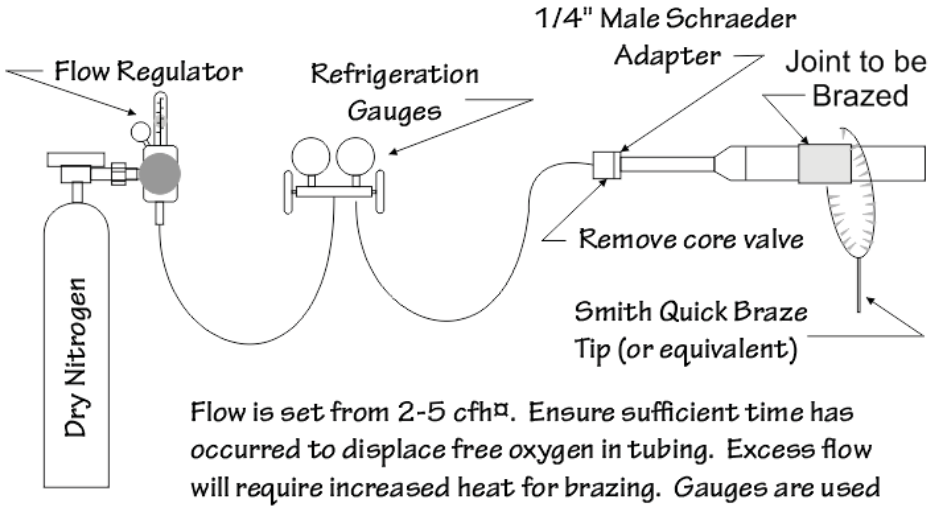
- All pipe stock must be capped, kept clean and stored in a dry place.
- All pipe sections must be blow cleaned with dry nitrogen prior to assembly.

Assembling the Piping System.

- Tubing cutter must be used for cutting pipes, do not use a saw.
- Piping adaptors should be used to assemble various sizes of pipe. Make sure pipe cuts are cleaned and deburred before assembly.
- Non-oxidizing material for brazing must be used. Compressor could be clogged or damaged by accumulated oxidized film when incorrect materials are used.
- Antioxidant agents, flux or solder are not acceptable for brazing. Flux has detrimental effect to refrigerant oil and copper piping.

Brazing Piping Joints.

- Dry nitrogen purge operating at a minimum pressure of 3 psig to be used. A steady flow should be maintained.
- 15% Silver phosphorous copper brazing alloy to be used to produce good flow and avoid overheating.
- Make sure heat sensitive control components such as electronic expansion valves and isolation valves are protected from excessive heat with a wet rag or heat barrier spray.



Flow is set from 2-5 cfh¤. Ensure sufficient time has occurred to displace free oxygen in tubing. Excess flow will require increased heat for brazing. Gauges are used for quick shut-off and pressure check. Minimum pressure must be used to prevent pinhole leaks in braze.

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