



HELIX ENERGY PARTNERS LLC

**CONSULTING ENGINEERS**  
Mechanical - Plumbing - Controls

HELIX-ENGINEERS.NET

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October 9, 2025

Esteemed Energy Modelers,

Please find within guidance and notes regarding the use of these Mitsubishi energy model objects. We are continually adding more models as the need arises. Should you not find the model you are looking for, please contact us and we would be glad to provide them to you.

Sincerely

Mike Lovejoy, PE

## **Bookmark Summary**

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PEFY-P06NMSU-ER2  
PEFY-P30NMAU-E5  
PKFY-P30NKMU-E2R1.TH  
PLFY-P05NFMU\_ER1\_TH  
PLFY-P08NFMU\_ER1\_TH  
PLFY-P12NFMU\_ER1\_TH  
PLFY-P15NFMU\_ER1\_TH  
PLFY-P18NFMU\_ER1\_TH  
PLFY-EP06NEMU1-E.TH  
PLFY-EP08NEMU1-E.TH  
PLFY-EP12NEMU1-E.TH  
PLFY-EP15NEMU1-E.TH  
PLFY-EP18NEMU1-E.TH  
PLFY-EP24NEMU1-E.TH  
PLFY-EP30NEMU1-E.TH  
PLFY-EP36NEMU1-E.TH  
PLFY-EP48NEMU1-E.TH  
PUHY\_EP72TNUYNU\_A1  
PUHY\_EP96TNUYNU\_A1  
PUHY\_EP120TNUYNU\_A1  
PUHY\_EP144TNUYNU\_A1  
PUHY\_EP168TNU\_YNU\_A1  
PUHY\_EP192TNU\_YNU\_A1  
PUHY\_EP192TSNU\_YSNU\_A1



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### Mitsubishi PEFY\_P06NMSU-ER2 NDUCTED VRF-TU,!- Name

#### Energy Modeling Assumptions and Comments

#### Applicable Field

1	Outdoor air flow is set to autosize. This field may need to be modified for specific conditions. Outdoor airflow coil inlet temperature (based on mixing with return air) should be within the following mitsubishi limits:	I- Outdoor Air Flow Rate During Cooling Operation {m3/s} I- Outdoor Air Flow Rate During Heating Operation {m3/s} I- Outdoor Air Flow Rate When No Cooling or Heating is Needed {m3/s}
	Cooling:	15-24°C / 59-75.2°F (Wet Bulb)
	Heating:	15-27°C / 59-80.6°F (Dry Bulb)
2	Default static pressure is assumed to be maximum of equipment capability and maximum airflow capability. Actual ducting configuration may be less. Consult the design documents, engineer, or testing and balance report for actual pressure.	OS:Fan:SystemModel I- Design Maximum Air Flow Rate {m3/s} I- Design Pressure Rise {Pa}
3	These fields may produce a Warning: "Rated air volume flow rate per watt of rated total cooling capacity is out of range.". This warning is only a guideline put in place by EnergyPlus. AHRI 1230 does not have these limitations on this range of performance.	OS:Coil:Cooling:DX:VariableRefrigerantFlow I- Rated Air Flow Rate {m3/s} I- Rated Total Cooling Capacity {W}
4	These fields may produce a Warning: "Rated air volume flow rate per watt of rated total heating capacity is out of range.". This warning is only a guideline put in place by EnergyPlus. AHRI 1230 does not have these limitations on this range of performance.	OS:Coil:Heating:DX:VariableRefrigerantFlow I- Rated Air Flow Rate {m3/s} I- Rated Total Heating Capacity {W}
5	As of this version, EnergyPlus crashes with speed control set to discrete, so this model uses continuously variable speed instead of discrete speed settings.	I- Speed Control Method

**CITYMULTI®** Model: **PEFY-P06NMSU-ER2**

Job Name: \_\_\_\_\_

Schedule Reference: \_\_\_\_\_ Date: \_\_\_\_\_



**GENERAL FEATURES**

- Dual set point functionality
- Multiple fan speed settings
- Auto fan mode
- Built-in condensate lift; lifts to 21-11/16" (550 mm)
- 7-7/8" (200 mm) high for low ceiling heights

**OPTIONS**

- External Heater Adapter.....CN24RELAY-KIT-CM3
- Filter Box (Includes 1" MERV 8 filter).....FBL1-1
- Bottom Return Adapter Plate.....BRP-1

**SPECIFICATIONS**

**Capacity\***

Cooling.....	6,000 Btu/h
Heating.....	6,700 Btu/h

**Power**

Power Source.....	208 / 230V, 1-phase, 60Hz
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**Power Consumption**

Cooling.....	0.05 kW
Heating.....	0.03 kW

**Current**

Cooling (208/230V).....	0.42 / 0.41A
Heating (208/230V).....	0.32 / 0.31A

Minimum Circuit Ampacity (MCA) (208/230V).....0.47 / 0.50 A

Maximum Overcurrent Protection (MOCP) Fuse.....15 A

**External Finish**.....Galvanized Steel Sheets

**External Dimensions**

Inches.....	7-7/8 h x 31-1/8 w x 27-9/16 d
mm.....	200 h x 790 w x 700 d

**Net Weight**.....42 lbs / 19 kg

**Coil Type**.....CrossFin  
(Aluminum Fin and Copper Tube)

**Fan**

Type x Quantity.....	Sirocco Fan x 2
Airflow Rate (Low - Mid - High).....	176 - 212 - 247 CFM
External Static Pressure.....	0.02 - 0.06 - 0.14 - 0.20 WG
Motor Type.....	DC Motor

**Air Filter**.....Polypropylene Honeycomb

**Refrigerant Piping Dimensions**

Liquid (High Pressure).....	1/4" / 6.35 mm Brazed
Gas (Low Pressure).....	1/2" / 12.7 mm Brazed

**Drainpipe Dimension**.....O.D. 1-1/4" / 32 mm

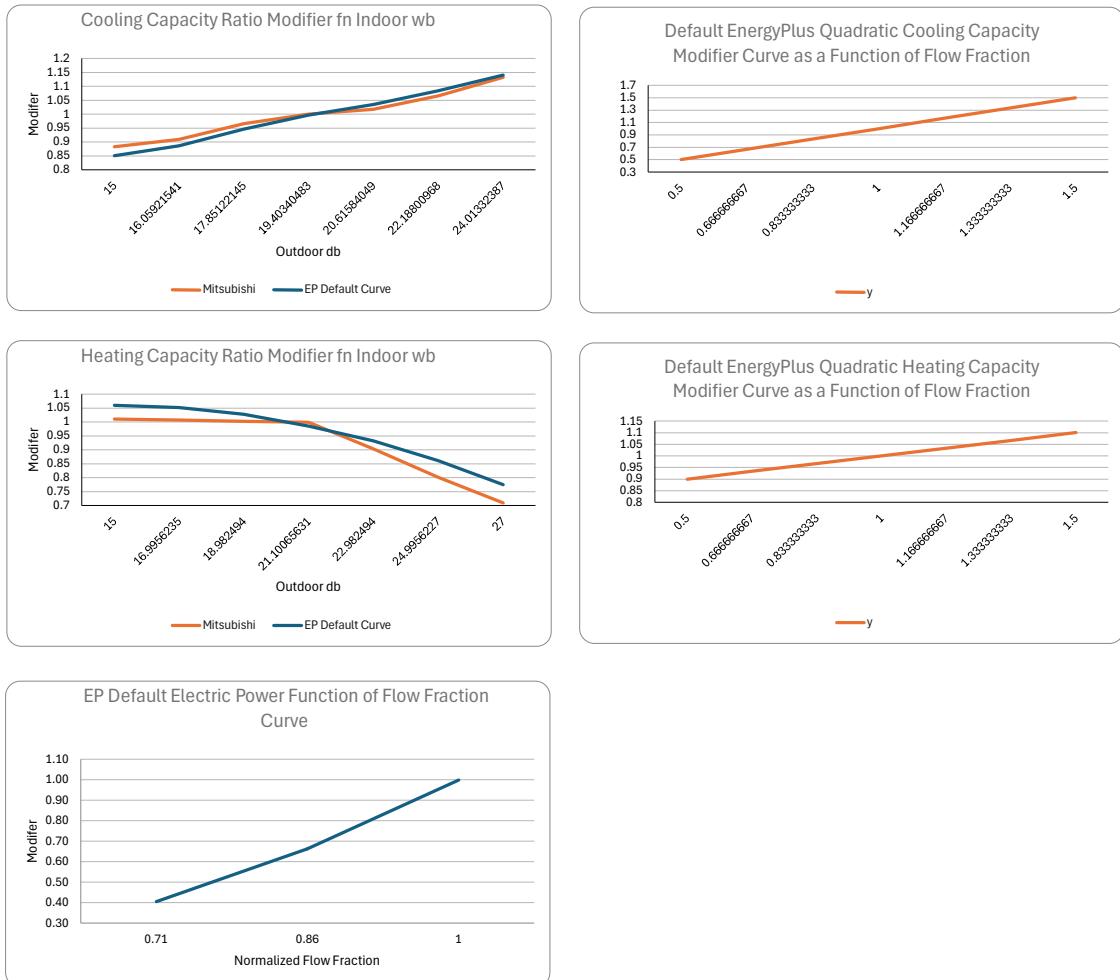
**Sound Pressure Levels**

Low - Mid - High.....	22 - 24 - 28 dB(A)
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\* Cooling / Heating capacity indicated at the maximum value at operation under the following conditions:  
Cooling | Indoor: 80° F (27° C) DB / 67° F (19° C) WB, Outdoor 95° F (35° C) DB  
Heating | Indoor: 70° F (21° C) DB, Outdoor 47° F (8° C) DB / 43° F (6° C) WB

Notes:







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### Mitsubishi PEFY\_P30NMAU-E5 NONDUCTED VRF-TU,!- Name

#### Energy Modeling Assumptions and Comments

#### Applicable Field

1	Outdoor air flow is set to autosize. This field may need to be modified for specific conditions.	!- Outdoor Air Flow Rate During Cooling Operation {m3/s}
	Outdoor airflow coil inlet temperature (based on mixing with return air) should be within the following mitsubishi limits:	!- Outdoor Air Flow Rate During Heating Operation {m3/s}
		!- Outdoor Air Flow Rate When No Cooling or Heating is Needed {m3/s}
	Cooling:	15-24°C / 59-75.2°F (Wet Bulb)
	Heating:	15-27°C / 59-80.6°F (Dry Bulb)
2	Default static pressure is assumed to be factory setting of equipment and maximum airflow capability. Actual ducting configuration may be less. Consult the design documents, engineer, or testing and balance report for actual pressure.	OS:Fan:SystemModel !- Design Maximum Air Flow Rate {m3/s} !- Design Pressure Rise {Pa}
3	These fields may produce a Warning: "Rated air volume flow rate per watt of rated total cooling capacity is out of range.". This warning is only a guideline put in place by EnergyPlus. AHRI 1230 does not have these limitations on this range of performance.	OS:Coil:Cooling:DX:VariableRefrigerantFlow !- Rated Air Flow Rate {m3/s} !- Rated Total Cooling Capacity {W}
4	These fields may produce a Warning: "Rated air volume flow rate per watt of rated total heating capacity is out of range.". This warning is only a guideline put in place by EnergyPlus. AHRI 1230 does not have these limitations on this range of performance.	OS:Coil:Heating:DX:VariableRefrigerantFlow !- Rated Air Flow Rate {m3/s} !- Rated Total Heating Capacity {W}
5	As of this version, EnergyPlus crashes with speed control set to discrete, so this model uses continuously variable speed instead of discrete speed settings.	!- Speed Control Method



Job Name:  
System Reference:

Date:



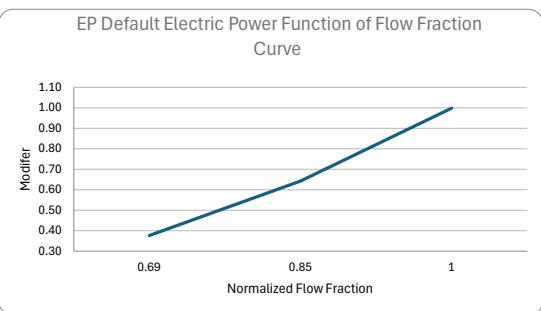
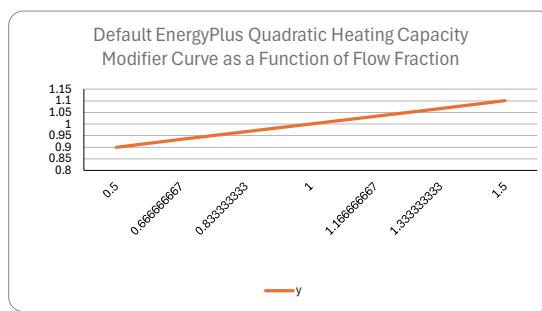
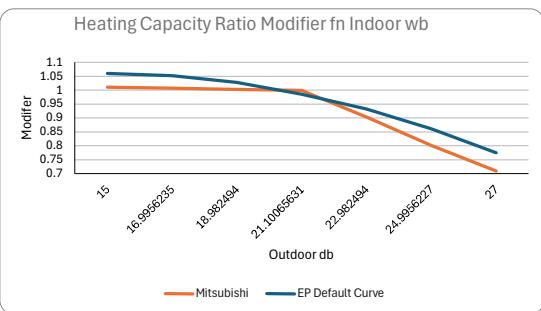
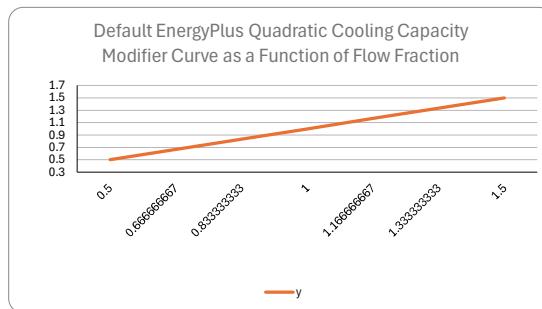
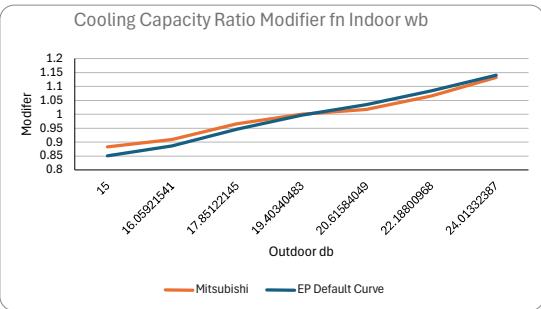
- GENERAL FEATURES**
- Dual set point functionality
  - Multiple fan speed settings
  - Auto fan mode
  - 9-7/8" (250mm) high for low ceiling heights
  - Built-in condensate lift; lifts to 27-9/16" (700 mm)
  - Ducted fan coil supporting multiple configurations for flexible installation

Specifications		System	
Unit Type		PEFY-P30NMAU-E5	
Cooling capacity (Nominal) <sup>1</sup>	BTU/H	30,000	
Heating capacity (Nominal) <sup>1</sup>	BTU/H	34,000	
Power source	Voltage, Phase, Hertz	208/230V, 1-phase, 60 Hz	
Power Consumption	kW	0.222	
Cooling	kW	0.22	
Heating	A	2.01/1.82	
Current	A	2.01/1.82	
MCA	A	4.25	
Maximum Overcurrent Protection (MOPC)	A	15	
External finish		Galvanized steel sheet	
External Dimensions	In. [mm]	55-1/8 x 26-7/8 x 9-7/8 [1,400 x 732 x 250]	
Net weight	Lbs [kg]	64 [38]	
Heat exchanger		Cross fin (Aluminum fin and copper tube)	
		Sirocco fan x 3	
Fan	Type x quantity	PP Honeycomb fabric	
	External Static pressure	R410A	
	in.WG		
Airflow rate	CFM	0.14, 0.2, 0.28, 0.4, 0.6 factory set to 0.2 in. WG	
Motor type		883-1.077-1.271	
Motor Output	kW	DC Motor	
Motor FLA	A	0.3	
Sound pressure level (Measured in anechoic room)	dBA	3.4	
Air filter		35-39-43	
Refrigerant	Type		
Diameter of refrigerant pipe (O.D.)	Liquid (High Pressure)	In. [mm]	
	Gas (Low Pressure)	In. [mm]	
Diameter of drain pipe		In. [mm]	

#### NOTES

Cooling | Indoor: 81° F (27° C) DB / 66° F (19°C) WB; Outdoor: 95° F (35° C) DB

Heating | Indoor: 68° F (20° C) DB; Outdoor: 45° F (7° C) DB / 43° F (6° C) WB





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### Mitsubishi PKFY-P30NKMU-E2R1\_TH NDUCTED VRF-TU,- Name

#### Energy Modeling Assumptions and Comments

#### Applicable Field

1	Outdoor air flow is set to 0. There are not connections for outdoor/ventilation air. Keep in mind coil inlet (return air) temperature should be within the following mitsubishi limits:	I- Outdoor Air Flow Rate During Cooling Operation {m3/s} I- Outdoor Air Flow Rate During Heating Operation {m3/s} I- Outdoor Air Flow Rate When No Cooling or Heating is Needed {m3/s}
	Cooling	15-24°C / 59-75.2°F (Wet Bulb)
	Heating	15-27°C / 59-80.6°F (Dry Bulb)
2	These fields may produce a Warning: "Rated air volume flow rate per watt of rated total cooling capacity is out of range.". This warning is only a guideline put in place by EnergyPlus. AHRI 1230 does not have these limitations on this range of performance.	OS:Coil:Cooling:DX:VariableRefrigerantFlow I- Rated Air Flow Rate {m3/s} I- Rated Total Cooling Capacity {W}
3	These fields may produce a Warning: "Rated air volume flow rate per watt of rated total heating capacity is out of range.". This warning is only a guideline put in place by EnergyPlus. AHRI 1230 does not have these limitations on this range of performance.	OS:Coil:Heating:DX:VariableRefrigerantFlow I- Rated Air Flow Rate {m3/s} I- Rated Total Heating Capacity {W}
4	As of this version, EnergyPlus crashes with speed control set to discrete, so this model uses continuously variable speed instead of discrete speed settings.	I- Speed Control Method

CITYMULTI®

**PKFY-P30NKMU-E2R1.TH**  
30,000 BTU/H WALL MOUNT



Job Name:

System Reference:

Date:

#### GENERAL FEATURES



- Dual set point functionality
- Compact, lightweight, flat-white, flat-panel, modern design
- Quiet operation
- Multiple fan speed settings
- Easily removed intake grille filter for cleaning
- Back and right-side wiring take-out
- Wireless receiver on board

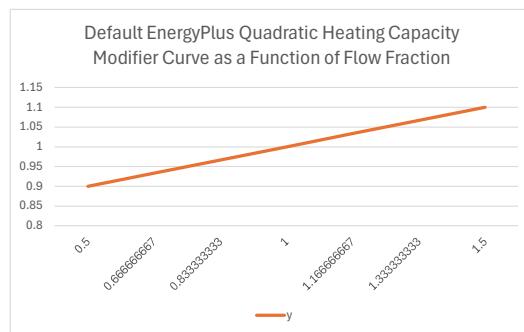
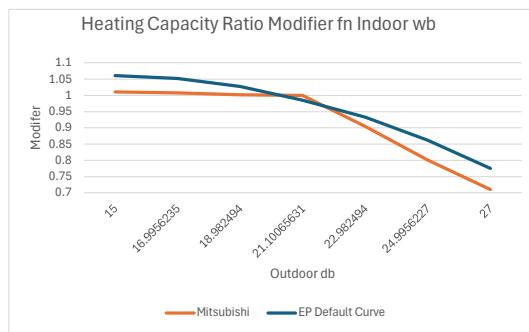
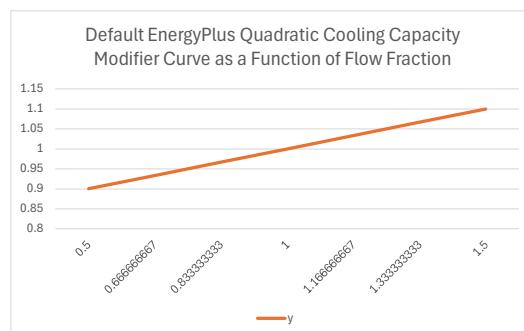
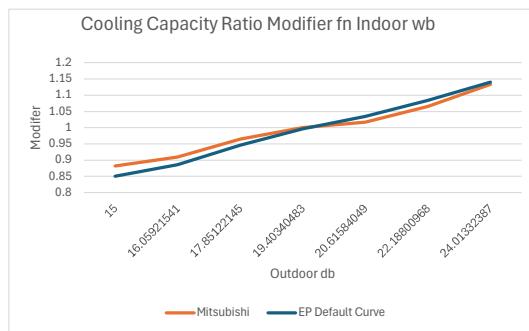
Specifications		System	
Unit Type		PKFY-P30NKMU-E2R1.TH	
Cooling capacity (Nominal) <sup>1</sup>	BTU/H	30,000	
Heating capacity (Nominal) <sup>1</sup>	BTU/H	34,000	
Power source	Voltage, Phase, Hertz	208/230V, 1-phase, 60 Hz	
Power Consumption	kW	0.07	
	kW	0.07	
Current	A	0.5	
	A	0.5	
MCA	A	0.63	
Maximum Overcurrent Protection (MOCP)	A	15	
External finish	Plastic, MUNSELL (1.0Y 9.2/0.2)		
External Dimensions	In. [mm]	46-1/16 x 11-5/8 x 14-3/8 [1,170 x 295 x 365]	
Net weight	Lbs [kg]	46 [21]	
Heat exchanger	Cross fin (Aluminum fin and copper tube)		
Fan	Type x quantity	Line flow fan x 1	
	Airflow rate	710-850	
	Motor type	DC motor	
	Motor Output	kW	.056
Sound pressure level (Measured in anechoic room)	dB(A)	43-49	
Air filter	PP honeycomb		
Refrigerant	Type	R410A	
Diameter of refrigerant pipe (O.D.)	Liquid (High Pressure)	In. [mm]	3/8 [9.52] Flare
	Gas (Low Pressure)	In. [mm]	5/8 [15.88] Flare
Diameter of drain pipe		In. [mm]	I.D. 5/8 [16]

#### NOTES:

Cooling | Indoor: 81° F (27° C) DB / 68° F (19°C) WB; Outdoor 95° F (35° C) DB  
Heating | Indoor: 68° F (20° C) DB; Outdoor 45° F (7° C) DB / 43° F (6° C) WB

Specifications are subject to change without notice.

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### Mitsubishi PLFY\_P05NFMU\_ER1\_TH NDUCTED VRF-TU,!- Name

#### Energy Modeling Assumptions and Comments

		Applicable Field
1	Outdoor air flow is set to autosize. This field may need to be modified for specific conditions. Outdoor airflow coil inlet temperature (based on mixing with return air) should be within the following mitsubishi limits:	I- Outdoor Air Flow Rate During Cooling Operation {m3/s} I- Outdoor Air Flow Rate During Heating Operation {m3/s} I- Outdoor Air Flow Rate When No Cooling or Heating is Needed {m3/s}
	Cooling:	15-24°C / 59-75.2°F (Wet Bulb)
	Heating:	15-27°C / 59-80.6°F (Dry Bulb)
2	Default static pressure accounts for internal losses only (250Pa). Additional pressure drop may be required if the cassette is connected to outside air ducting. This will also inversely affect supply airflow.	OS:Fan:SystemModel I- Design Maximum Air Flow Rate {m3/s} I- Design Pressure Rise {Pa}
3	These fields may produce a Warning: "Rated air volume flow rate per watt of rated total heating capacity is out of range.". This warning is only a guideline put in place by EnergyPlus. AHRI 1230 does not have these limitations on this range of performance.	OS:Coil:Heating:DX:VariableRefrigerantFlow I- Rated Air Flow Rate {m3/s} I- Rated Total Heating Capacity {W}
4	As of EP version 1.10, EnergyPlus speed control set to discrete operates correctly.	I- Speed Control Method

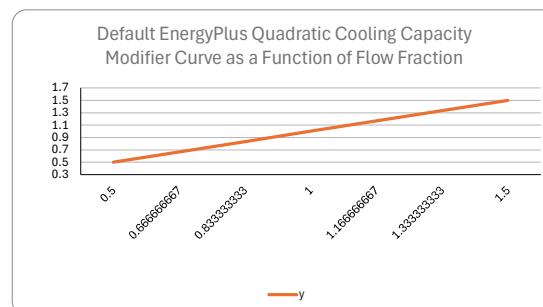
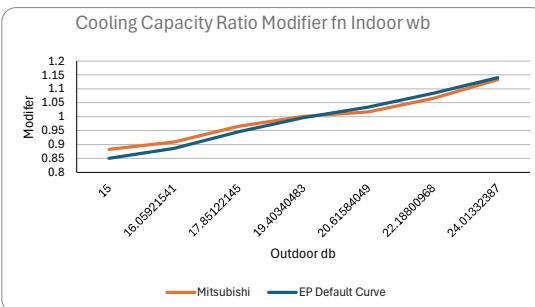
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**PLFY-P05NFMU-ER1.TH**  
5,000 BTU/H 22" X 22" 4-WAY CEILING CASSETTE

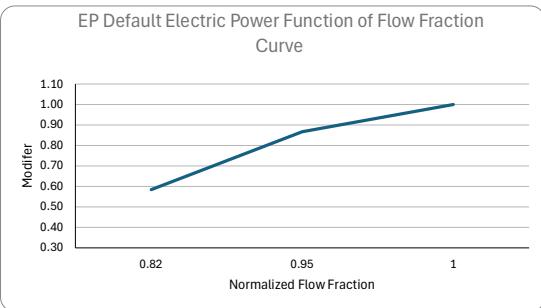
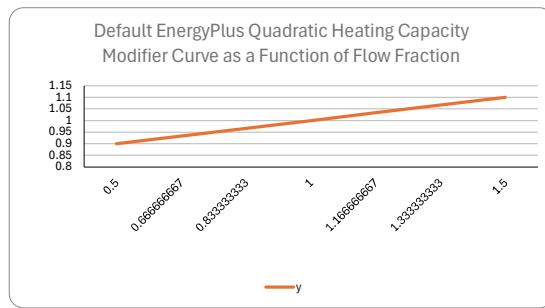
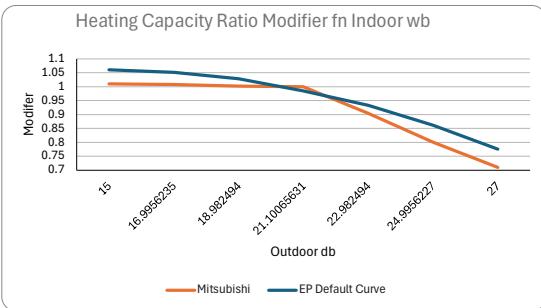
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ELECTRIC  
HEATING & AIR CONDITIONING

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System Reference:																																																																																														
																																																																																														
<b>GENERAL FEATURES</b> <ul style="list-style-type: none"> <li>Square edge, sleek design</li> <li>3D i-see Sensor™ available as an option</li> <li>Improved installation features*</li> <li>Occupancy detection</li> <li>Energy saving features*</li> <li>Improved occupant comfort</li> <li>Four fan speed settings including auto-fan</li> <li>Individual vane settings</li> <li>2 x 2 size matches size of many ceiling tiles</li> <li>Corner-pocket design for simplified installation</li> <li>Built-in condensate lift mechanism designed to provide up to 33° of lift</li> <li>Ventilation air intake supported</li> </ul> <p>*Requires a PAR-41MAAU controller</p>																																																																																														
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CFM: 230-260  
In. [mm]: 22-7/16 x 22-7/16 x 8-3/16 [570 x 570 x 208]  
Lbs [kg]: 28.9 [13.1]  
Turbo fan x 1: 230-260 CFM  
DC motor: 0.05 kW  
0.19 A  
26-28-30 dB(A): PP honeycomb fabric (long life type)  
R410A: O.D. 1-1/4 [32]

NOTES:  
Cooling | Indoor: 81° F (27° C) DB / 66° F (19° C) WB; Outdoor 95° F (35° C) DB  
Heating | Indoor: 68° F (20° C) DB; Outdoor 45° F (7° C) DB / 43° F (6° C) WB







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### Mitsubishi PLFY\_P08NFMU\_ER1\_TH NDUCTED VRF-TU,-! Name

#### Energy Modeling Assumptions and Comments

		Applicable Field
1	Outdoor air flow is set to autosize. This field may need to be modified for specific conditions. Outdoor airflow coil inlet temperature (based on mixing with return air) should be within the following mitsubishi limits:	I- Outdoor Air Flow Rate During Cooling Operation {m3/s} I- Outdoor Air Flow Rate During Heating Operation {m3/s} I- Outdoor Air Flow Rate When No Cooling or Heating is Needed {m3/s}
	Cooling:	15-24°C / 59-75.2°F (Wet Bulb)
	Heating:	15-27°C / 59-80.6°F (Dry Bulb)
2	Default static pressure accounts for internal losses only (250Pa). Additional pressure drop may be required if the cassette is connected to outside air ducting. This will also inversely affect supply airflow.	OS:Fan:SystemModel I- Design Maximum Air Flow Rate {m3/s} I- Design Pressure Rise {Pa}
3	These fields may produce a Warning: "Rated air volume flow rate per watt of rated total heating capacity is out of range.". This warning is only a guideline put in place by EnergyPlus. AHRI 1230 does not have these limitations on this range of performance.	OS:Coil:Heating:DX:VariableRefrigerantFlow I- Rated Air Flow Rate {m3/s} I- Rated Total Heating Capacity {W}
4	As of EP version 1.10, EnergyPlus speed control set to discrete operates correctly.	I- Speed Control Method

### CITYMULTI® PLFY-P08NFMU-ER1.TH 8,000 BTU/H 22" X 22" 4-WAY CEILING CASSETTE



Job Name: \_\_\_\_\_ System Reference: \_\_\_\_\_ Date: \_\_\_\_\_

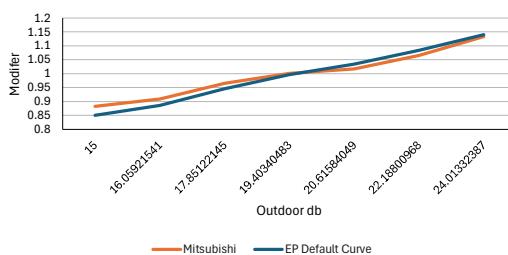


- GENERAL FEATURES**
- Square edge, sleek design
  - 3D i-sensor™ available as an option
  - Improved installation features\*
  - Occupancy detection\*
  - Energy saving features\*
  - Improved occupant comfort
  - Four fan speed settings including auto-fan
  - Individual vane settings
  - 2' x 2' size matches size of many ceiling tiles
  - Corner-pocket design for simplified installation
  - Built-in condensate lift mechanism designed to provide up to 33° of lift
  - Ventilation air intake supported
- \*Requires a PAR-41MAAU controller

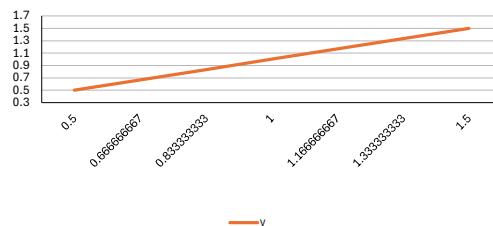
Specifications	Unit Type	System
Cooling capacity (Nominal)*	BTU/H	PLFY-P08NFMU-ER1.TH
Heating capacity (Nominal)*	BTU/H	9,000
Power source	Voltage, Phase, Hertz	208/230V, 1-phase, 60 Hz
Power Consumption	kW	0.02
Cooling	kW	0.02
Heating	A	22
Current	A	0.17
Cooling	A	0.28
Heating	A	15
MCA		Galvanized steel sheet
Maximum Overcurrent Protection (MOPC)		22-7/16 x 22-7/16 x 8-3/16 [570 x 570 x 208]
External finish	In. [mm]	28.9 [730]
External Dimensions	Lbs [kg]	Cross fin (Aluminum fin and copper tube)
Net weight		Turbo fan x 1
Heat exchanger		230-280-315
Fan	Type x quantity	DC motor
	Airflow rate	0.05
	CFM	0.22
	kW	26-30-33
	A	PP honeycomb fabric (long life type)
Sound pressure level (Measured in anechoic room)	dBA	R4151
Air filter		1/4 [8.0] Flare
Refrigerant	Type	1/2 [12.7] Flare
	Liquid (High Pressure)	1/2 [12.7] Flare
Diameter of refrigerant pipe (O.D.)	in. [mm]	O.D. 1-1/4 [32]
Gas (Low Pressure)	in. [mm]	
Diameter of drain pipe	in. [mm]	

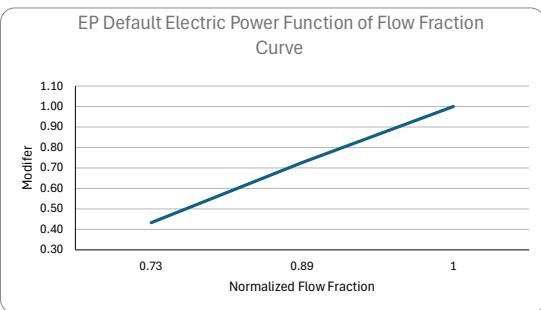
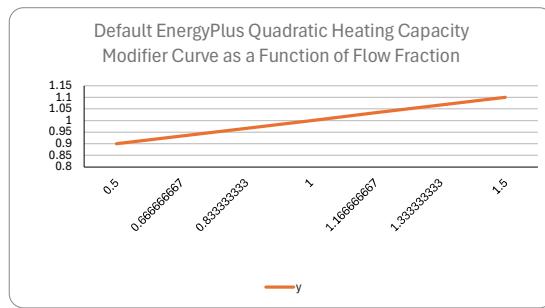
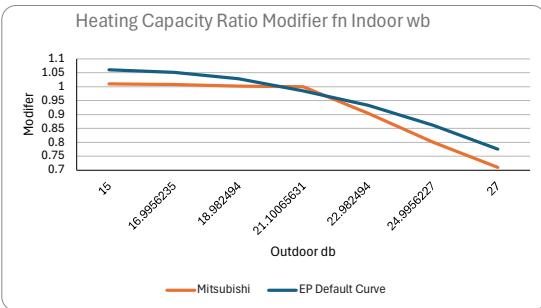
NOTES:  
Cooling | Indoor: 81° F (27° C) DB / 66° F (19°C) WB; Outdoor 95° F (35° C) DB  
Heating | Indoor: 68° F (20° C) DB; Outdoor 45° F (7° C) DB / 43° F (6° C) WB

Cooling Capacity Ratio Modifier fn Indoor wb



Default EnergyPlus Quadratic Cooling Capacity Modifier Curve as a Function of Flow Fraction







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### Mitsubishi PLFY\_P12NFMU\_ER1\_TH NDUCTED VRF-TU,-! Name

#### Energy Modeling Assumptions and Comments

		Applicable Field
1	Outdoor air flow is set to autosize. This field may need to be modified for specific conditions. Outdoor airflow coil inlet temperature (based on mixing with return air) should be within the following mitsubishi limits:	I- Outdoor Air Flow Rate During Cooling Operation {m3/s} I- Outdoor Air Flow Rate During Heating Operation {m3/s} I- Outdoor Air Flow Rate When No Cooling or Heating is Needed {m3/s}
	Cooling:	15-24°C / 59-75.2°F (Wet Bulb)
	Heating:	15-27°C / 59-80.6°F (Dry Bulb)
2	Default static pressure accounts for internal losses only (250Pa). Additional pressure drop may be required if the cassette is connected to outside air ducting. This will also inversely affect supply airflow.	OS:Fan:SystemModel I- Design Maximum Air Flow Rate {m3/s} I- Design Pressure Rise {Pa}
3	These fields may produce a Warning: "Rated air volume flow rate per watt of rated total heating capacity is out of range.". This warning is only a guideline put in place by EnergyPlus. AHRI 1230 does not have these limitations on this range of performance.	OS:Coil:Heating:DX:VariableRefrigerantFlow I- Rated Air Flow Rate {m3/s} I- Rated Total Heating Capacity {W}
4	As of EP version 1.10, EnergyPlus speed control set to discrete operates correctly.	I- Speed Control Method

### CITY MULTI® PLFY-P12NFMU-ER1.TH 12,000 BTU/H 22" X 22" 4-WAY CEILING CASSETTE



Job Name: \_\_\_\_\_ System Reference: \_\_\_\_\_ Date: \_\_\_\_\_



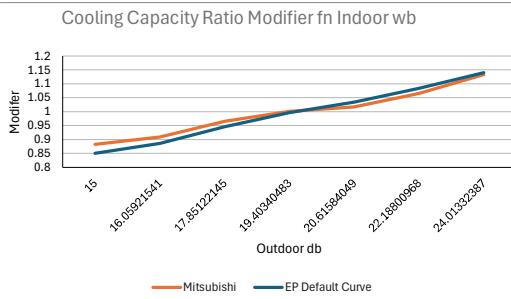
#### GENERAL FEATURES

- Square edge, sleek design
- 3D i-see Sensor™ available as an option
- Improved installation features\*
- Occupancy detection\*
- Energy saving features\*
- Improved occupant comfort
- Four fan speed settings including auto-fan
- Individual vane settings
- 2' x 2' size matches size of many ceiling tiles
- Corner-pocket design for simplified installation
- Built-in condensate lift mechanism designed to provide up to 33' of lift
- Ventilation air intake supported

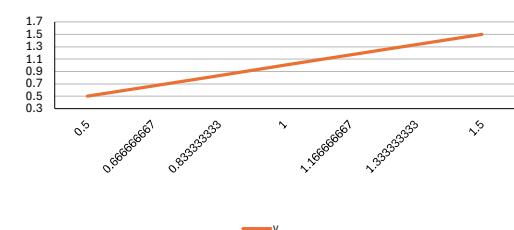
\*Requires a PAR-41MAAU controller

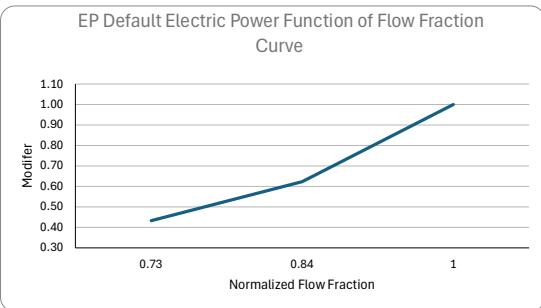
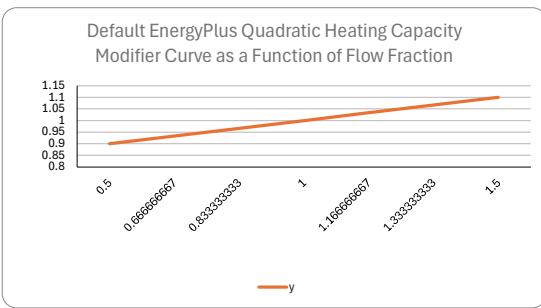
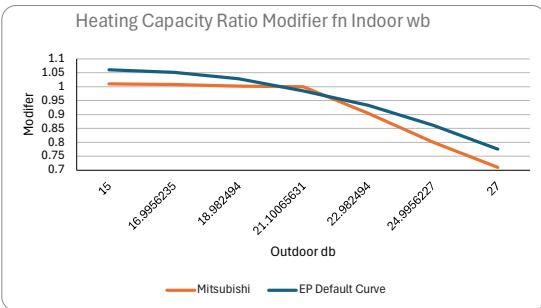
Specifications	Unit Type	System
Cooling capacity (Nominal)*	BTU/H	PLFY-P12NFMU-ER1.TH
Heating capacity (Nominal)*	BTU/H	12,000
Power source	Voltage, Phase, Herz	13,500 208/230V, 1-phase, 60 Hz
Power Consumption	kW	0.02
Cooling	kW	0.02
Heating	A	0.23
Current	A	0.18
MCA	A	0.30
Maximum Overcurrent Protection (MOPP)	A	15
External finish		Galvanized steel sheet
External Dimensions	In. [mm]	22-7/16 x 22-7/16 x 3-3/16 (570 x 570 x 208)
Net weight	Lbs [kg]	31.3 [14.2]
Heat exchanger		Cross fin (Aluminum fin and copper tube)
Fan	Type	Turbo fan x 1
Airflow rate	CFM	245-280-335
Motor type		DC motor
Motor Output	kW	0.05
Motor FLA	A	0.32
Sound pressure level (Measured in anechoic room)	dB(A)	26-30-34
Air filter		PP honeycomb fabric (long life type)
Refrigerant	Type	R410A
Diameter of refrigerant pipe (O.D.)	Liquid (High Pressure)	1/4 [6.35] Flare
Diameter of drain pipe	Gas (Low Pressure)	1/2 [12.7] Flare
NOTES: Cooling   Indoor: 81° F (27° C) DB / 66° F (19°C) WB; Outdoor 95° F (35° C) DB Heating   Indoor: 68° F (20° C) DB; Outdoor 45° F (7° C) DB / 43° F (6° C) WB		O.D. 1-1/4 [32]

16.05921541 17.85122145 19.40340483 20.61524049 22.18900968 24.01322387



#### Default EnergyPlus Quadratic Cooling Capacity Modifier Curve as a Function of Flow Fraction







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### Mitsubishi PLFY\_P15NFMU\_ER1\_TH NDUCTED VRF-TU,-! Name

#### Energy Modeling Assumptions and Comments

		Applicable Field
1	Outdoor air flow is set to autosize. This field may need to be modified for specific conditions. Outdoor airflow coil inlet temperature (based on mixing with return air) should be within the following mitsubishi limits:	I- Outdoor Air Flow Rate During Cooling Operation {m3/s} I- Outdoor Air Flow Rate During Heating Operation {m3/s} I- Outdoor Air Flow Rate When No Cooling or Heating is Needed {m3/s}
	Cooling:	15-24°C / 59-75.2°F (Wet Bulb)
	Heating:	15-27°C / 59-80.6°F (Dry Bulb)
2	Default static pressure accounts for internal losses only (250Pa). Additional pressure drop may be required if the cassette is connected to outside air ducting. This will also inversely affect supply airflow.	OS:Fan:SystemModel I- Design Maximum Air Flow Rate {m3/s} I- Design Pressure Rise {Pa}
3	These fields may produce a Warning: "Rated air volume flow rate per watt of rated total heating capacity is out of range.". This warning is only a guideline put in place by EnergyPlus. AHRI 1230 does not have these limitations on this range of performance.	OS:Coil:Heating:DX:VariableRefrigerantFlow I- Rated Air Flow Rate {m3/s} I- Rated Total Heating Capacity {W}
4	As of EP version 1.10, EnergyPlus speed control set to discrete operates correctly.	I- Speed Control Method

### CITY MULTI® PLFY-P15NFMU-ER1.TH 15,000 BTU/H 22" X 22" 4-WAY CEILING CASSETTE



Job Name: System Reference: Date:

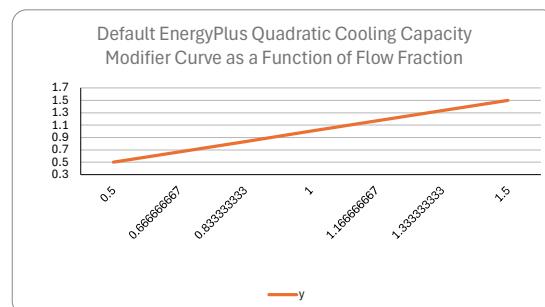
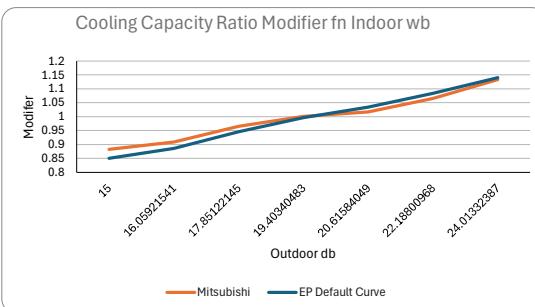


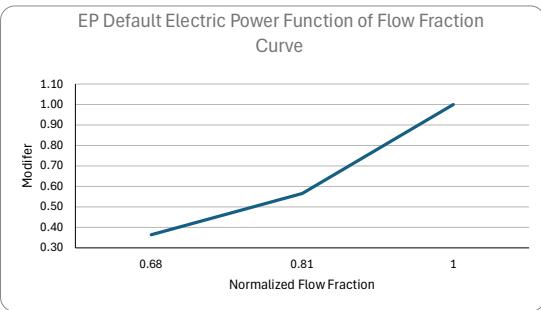
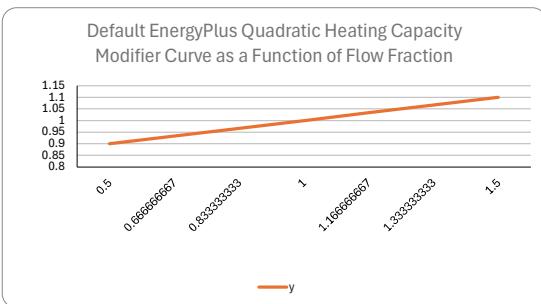
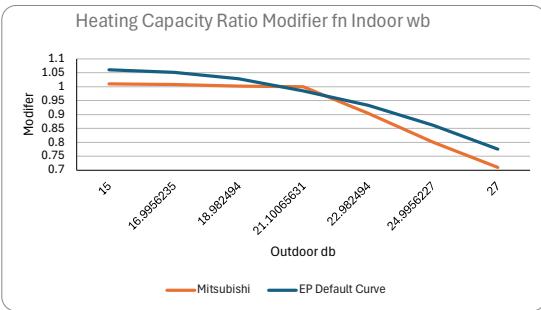
#### GENERAL FEATURES

- Square edge, sleek design
- 3D i-Sensor™ available as an option
- Improved installation features\*
- Occupancy detection\*
- Energy saving features\*
- Improved occupant comfort
- Four fan speed settings including auto-fan
- Individual vane settings
- 2' x 2' size matches size of many ceiling tiles
- Corner-pocket design for simplified installation
- Built-in condensate lift mechanism designed to provide up to 33° of lift
- Ventilation air intake supported
- Requires a PAR-41MAAU controller

Specifications	Unit Type	System
Cooling capacity (Nominal) <sup>1</sup>	BTU/H	PLFY-P15NFMU-ER1.TH
Heating capacity (Nominal) <sup>1</sup>	BTU/H	17,000
Power source	Voltage, Phase, Hertz	208/230V, 1-phase, 60 Hz
Power Consumption	kW	0.60
Cooling	kW	0.03
Heating	A	0.28
Current	A	0.23
MCA	A	0.35
Maximum Overcurrent Protection (MOCP)	A	15
External finish		Galvanized steel sheet
External Dimensions	In. [mm]	22-7/16 x 22-7/16 x 8-3/16 [570 x 570 x 208]
Net weight	Lbs [kg]	31.3 [14.2]
Heat exchanger		Cross fin (Aluminum and copper tube)
Fan	Type & quantity	Turbo fan x 1
	Airflow rate	265-315-390
	CFM	DC motor
	Motor type	0.05
	Motor Output	0.28
	Motor FLA	28-33-39
	dBA(A)	PP honeycomb fabric (long life type)
Sound pressure level (Measured in anechoic room)		R410A
Air filter		1/4 [6.35] Flare
Refrigerant	Type	1/2 [12.7] Flare
Diameter of refrigerant pipe (O.D.)	Liquid (High Pressure)	In. [mm]
Diameter of drain pipe	Gas (Low Pressure)	In. [mm]
		O.D. 1-1/4 [32]

NOTES:  
Cooling | Indoor: 81° F (27° C) DB / 66° F (19°C) WB; Outdoor 95° F (35° C) DB  
Heating | Indoor: 68° F (20° C) DB; Outdoor 45° F (7° C) DB / 43° F (6° C) WB







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### Mitsubishi PLFY\_P18NFMU\_ER1\_TH NDUCTED VRF-TU,-! Name

#### Energy Modeling Assumptions and Comments

		Applicable Field
1	Outdoor air flow is set to autosize. This field may need to be modified for specific conditions. Outdoor airflow coil inlet temperature (based on mixing with return air) should be within the following mitsubishi limits:	I- Outdoor Air Flow Rate During Cooling Operation {m3/s} I- Outdoor Air Flow Rate During Heating Operation {m3/s} I- Outdoor Air Flow Rate When No Cooling or Heating is Needed {m3/s}
	Cooling:	15-24°C / 59-75.2°F (Wet Bulb)
	Heating:	15-27°C / 59-80.6°F (Dry Bulb)
2	Default static pressure accounts for internal losses only (250Pa). Additional pressure drop may be required if the cassette is connected to outside air ducting. This will also inversely affect supply airflow.	OS:Fan:SystemModel I- Design Maximum Air Flow Rate {m3/s} I- Design Pressure Rise {Pa}
3	These fields may produce a Warning: "Rated air volume flow rate per watt of rated total heating capacity is out of range.". This warning is only a guideline put in place by EnergyPlus. AHRI 1230 does not have these limitations on this range of performance.	OS:Coil:Heating:DX:VariableRefrigerantFlow I- Rated Air Flow Rate {m3/s} I- Rated Total Heating Capacity {W}
4	As of EP version 1.10, EnergyPlus speed control set to discrete operates correctly.	I- Speed Control Method

### CITYMULTI® PLFY-P18NFMU-ER1.TH 18,000 BTU/H 22" X 22" 4-WAY CEILING CASSETTE



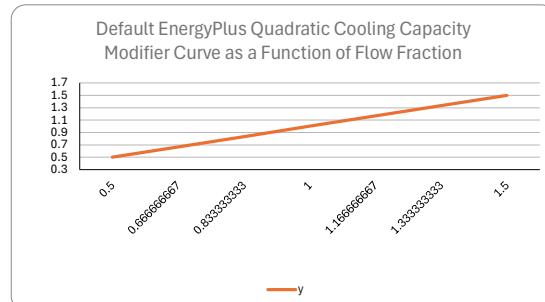
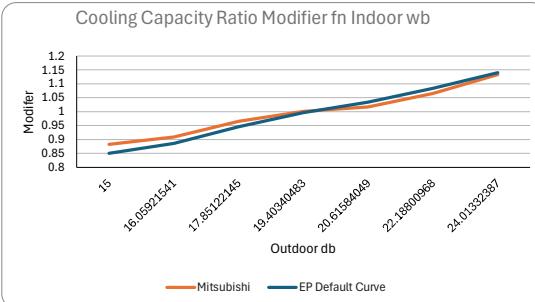
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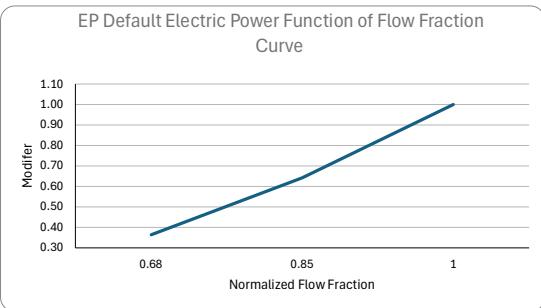
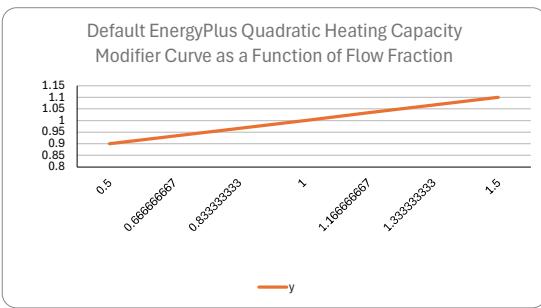
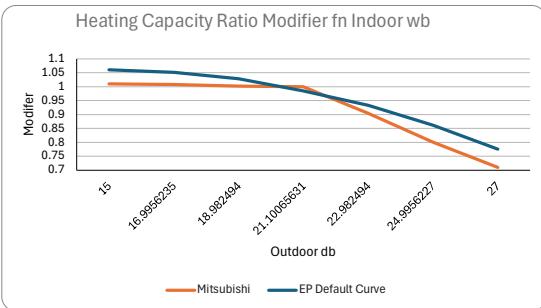


- Square edge, sleek design
- 3D i-see Sensor™ available as an option
- Improved installation features\*
- Occupancy detection\*
- Energy saving features\*
- Improved occupant comfort
- Four fan speed settings including auto-fan
- Individual vane settings
- 2' x 2' size matches size of many ceiling tiles
- Corner-pocket design for simplified installation
- Built-in condensate lift mechanism designed to provide up to 33° of lift
- Ventilation air intake supported
- Requires a PAR-41MAAU controller

Specifications	Unit Type	System
Cooling capacity (Nominal)*	BTU/H	PLFY-P18NFMU-ER1.TH
Heating capacity (Nominal)*	BTU/H	18,000
Power source	Voltage, Phase, Hertz	208/230V, 1-phase, 60 Hz
Power Consumption	kW	0.04
Cooling	kW	0.04
Heating	A	0.4
Current	A	0.35
Cooling	A	0.5
Heating	A	15
MCA		
Maximum Overcurrent Protection (MOCP)		
External finish		Galvanized steel sheet
External Dimensions	In. [mm]	22.716 x 22.716 x 8.316 [570 x 570 x 208]
Net weight	Lbs [kg]	31.3 [14.2]
Heat exchanger		Cross fin (Aluminum fin and copper tube)
		Tube side x 1
Fan	Type	CFM
	Type	315-390-460
Airflow rate		DC motor
Motor type		
Motor Output	kW	0.05
Motor FLA	A	0.4
Sound pressure level (Measured in anechoic room)	dBA(A)	33-39-43
Air filter		PP honeycomb fabric (long life type)
Refrigerant		R410A
Diameter of refrigerant pipe (O.D.)	In. [mm]	1/4 [6.35] Flare
Liquid (High Pressure)		
Gas (Low Pressure)	In. [mm]	1/2 [12.7] Flare
Diameter of drain pipe	In. [mm]	O.D. 1-1/4 [32]

NOTES:  
Cooling | Indoor: 81°F (27°C) DB / 66°F (19°C) WB; Outdoor 95°F (35°C) DB  
Heating | Indoor: 68°F (20°C) DB; Outdoor 45°F (7°C) DB / 42°F (6°C) WB







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### Mitsubishi PLFY\_EP06NEMU1-E\_TH NDUCTED VRF-TU,-! Name

#### Energy Modeling Assumptions and Comments

		Applicable Field
1	Outdoor air flow is set to autosize. This field may need to be modified for specific conditions. Outdoor airflow coil inlet temperature (based on mixing with return air) should be within the following mitsubishi limits:	I- Outdoor Air Flow Rate During Cooling Operation {m3/s} I- Outdoor Air Flow Rate During Heating Operation {m3/s} I- Outdoor Air Flow Rate When No Cooling or Heating is Needed {m3/s}
	Cooling:	15-24°C / 59-75.2°F (Wet Bulb)
	Heating:	15-27°C / 59-80.6°F (Dry Bulb)
2	Default static pressure accounts for internal losses only (250Pa). Additional pressure drop may be required if the cassette is connected to outside air ducting. This will also inversely affect supply airflow.	OS:Fan:SystemModel I- Design Maximum Air Flow Rate {m3/s} I- Design Pressure Rise {Pa}
3	These fields may produce a Warning: "Rated air volume flow rate per watt of rated total heating capacity is out of range.". This warning is only a guideline put in place by EnergyPlus. AHRI 1230 does not have these limitations on this range of performance.	OS:Coil:Heating:DX:VariableRefrigerantFlow I- Rated Air Flow Rate {m3/s} I- Rated Total Heating Capacity {W}
4	As of EP version 1.10, EnergyPlus speed control set to discrete operates correctly.	I- Speed Control Method



Job Name:  
System Reference:  
Date:

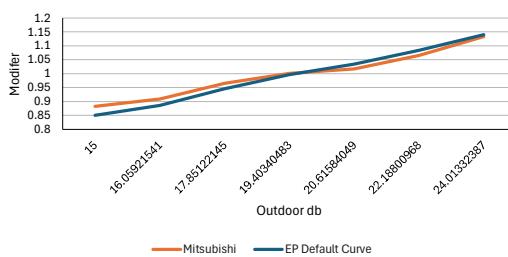


- GENERAL FEATURES**
- Square edge, sleek design
  - 3D turbo fan enabling increased airflow
  - Built-in 3D i-see Sensor\*\*
  - Improved installation features\*
  - Occupancy detection\*
  - Energy saving features\*
  - Improved occupant comfort
  - Four fan speed settings including auto-fan
  - Corner pocket design for simplified installation
  - Built-in condensate lift mechanism designed to provide up to 33-7/16" of lift
  - Ventilation air intake supported
- \*\*3D i-See sensor\* settings requires the PAR-41MAAU controller

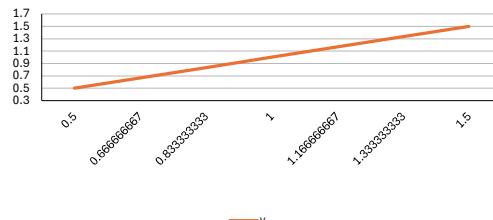
Specifications		System
Unit Type		PLFY-EP06NEMU1-E-TR
Cooling capacity (Nominal)*	BTU/h	6,000
Heating capacity (Nominal)*	BTU/h	6,100
Power source	Voltage, Phase, Hertz	208/230V, 1-phase, 60 Hz
Power Consumption	kW	0.02
Cooling	kW	0.02
Heating	A	0.2
Current	A	0.1
Heating	A	0.24
MCA	A	15
Maximum Overcurrent Protection (MOCP)		
External finish		Galvanized steel sheet
External Dimensions	In. [mm]	33-3/32 x 33-3/32 x 10-3/16 [849 x 849 x 258]
Net weight	Lbs [kg]	46 [21]
Heat exchanger		Cross fin (Aluminum fin and copper tube)
		Turbo fan x 1
Fan	CFM	300-424-456-494
Type	DC motor	
Airflow rate	kW	0.05
Motor type	A	0.19
Motor Output		19-23-25-27
Motor FLA	dB(A)	
Sound pressure level (Measured in anechoic room)		PP honeycomb (long life filter, anti-bacterial type)
Air filter		R410A
Refrigerant	Type	
Diameter of refrigerant pipe (O.D.)	Liquid (High Pressure)	In. [mm]
	Gas (Low Pressure)	1/4 [6.35] Flare
Diameter of drain pipe		In. [mm]
		1/2 [12.7] Flare
		In. [mm]
		0.0 1-1/4 [32]

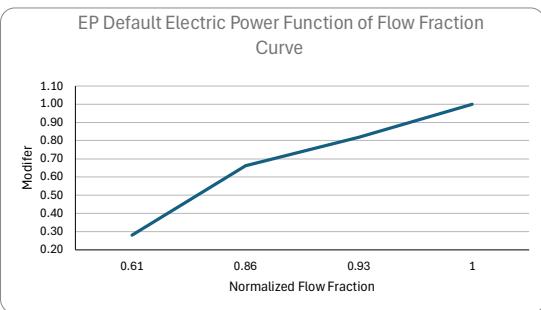
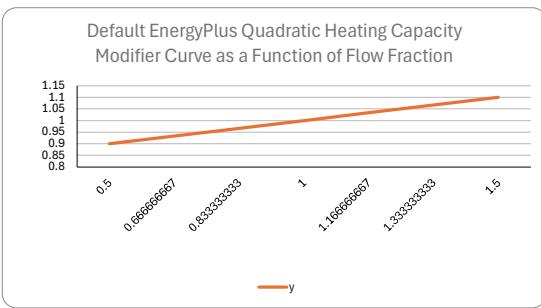
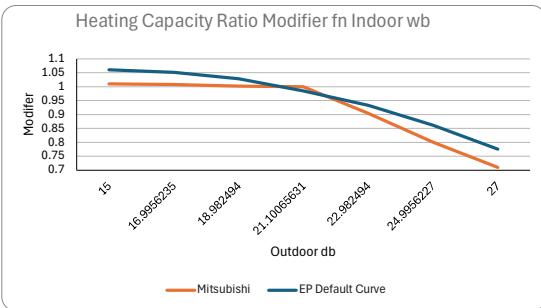
NOTES:  
Cooling | Indoor: 81°F (27°C) DB / 66°F (19°C) WB; Outdoor 95°F (35°C) DB  
Heating | Indoor: 68°F (20°C) DB; Outdoor 45°F (7°C) DB / 43°F (6°C) WB

Cooling Capacity Ratio Modifier fn Indoor wb



Default EnergyPlus Quadratic Cooling Capacity Modifier Curve as a Function of Flow Fraction







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### Mitsubishi PLFY\_EP08NEMU1\_E\_TH NDUCTED VRF-TU,-! Name

#### Energy Modeling Assumptions and Comments

		Applicable Field
1	Outdoor air flow is set to autosize. This field may need to be modified for specific conditions. Outdoor airflow coil inlet temperature (based on mixing with return air) should be within the following mitsubishi limits:	I- Outdoor Air Flow Rate During Cooling Operation {m3/s} I- Outdoor Air Flow Rate During Heating Operation {m3/s} I- Outdoor Air Flow Rate When No Cooling or Heating is Needed {m3/s}
	Cooling:	15-24°C / 59-75.2°F (Wet Bulb)
	Heating:	15-27°C / 59-80.6°F (Dry Bulb)
2	Default static pressure accounts for internal losses only (250Pa). Additional pressure drop may be required if the cassette is connected to outside air ducting. This will also inversely affect supply airflow.	OS:Fan:SystemModel I- Design Maximum Air Flow Rate {m3/s} I- Design Pressure Rise {Pa}
3	These fields may produce a Warning: "Rated air volume flow rate per watt of rated total heating capacity is out of range.". This warning is only a guideline put in place by EnergyPlus. AHRI 1230 does not have these limitations on this range of performance.	OS:Coil:Heating:DX:VariableRefrigerantFlow I- Rated Air Flow Rate {m3/s} I- Rated Total Heating Capacity {W}
4	As of EP version 1.10, EnergyPlus speed control set to discrete operates correctly.	I- Speed Control Method



Job Name:	Date:
System Reference:	



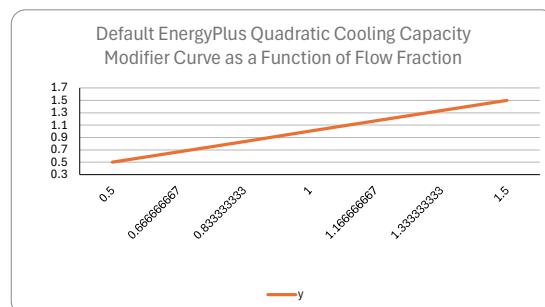
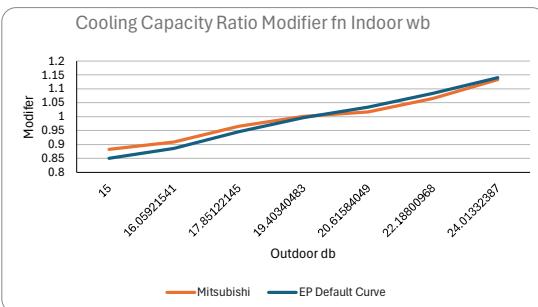
#### GENERAL FEATURES

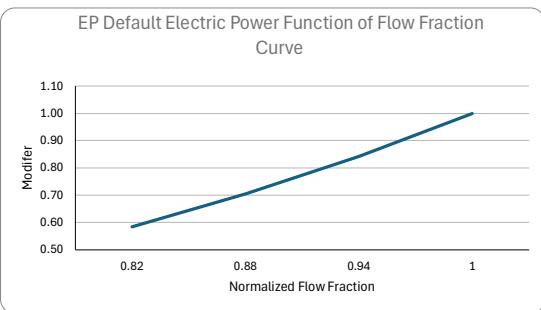
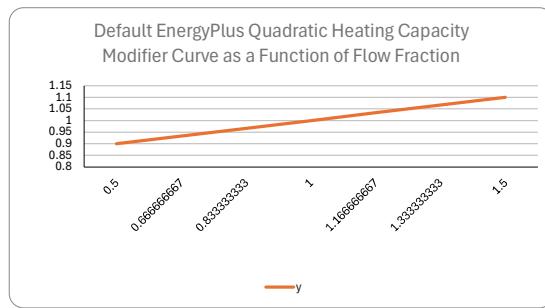
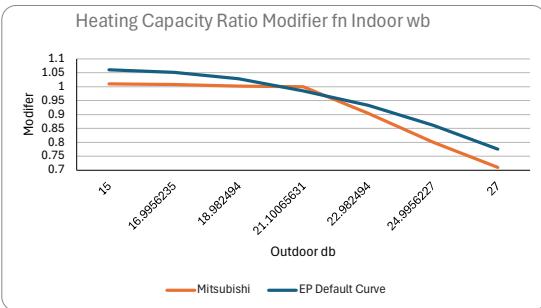
- Square edge, sleek design
- 3D turbo fan enabling increased airflow
- Built-in 3D i-see Sensor\*
- Improved installation features\*
- Occupancy detection\*
- Energy saving features\*
- Improved occupant comfort
- Four fan speed settings including auto-fan
- Corner pocket design for simplified installation
- Built-in condensate lift mechanism designed to provide up to 33-7/16" of lift
- Ventilation air intake supported

\*3D i-See sensor<sup>®</sup> settings requires the PAR-41MAAU controller

Specifications	Unit Type	System
Cooling capacity (Nominal) <sup>1</sup>	BTU/H	8,000
Heating capacity (Nominal) <sup>1</sup>	BTU/H	9,000
Power source	Voltage, Phase, Hertz	208/230V, 1-phase, 60 Hz
Power Consumption	kW	
Cooling	kW	0.02
Heating	kW	0.3
Current	A	0.3
Cooling	A	0.39
Heating	A	15
MCA		
Maximum Overcurrent Protection (MOCP)		
External finish		Galvanized steel sheet
External Dimensions	In. [mm]	33-3/32 x 33-3/32 x 10-3/16 [840 x 840 x 258]
Net weight	Lbs [kg]	46 [21]
Heat exchanger		Cross fin (Aluminum fin and copper tube)
Fan	Type x quantity	Turbo fan x 1
	Airflow rate	494-532-565-600
	CFM	
	Motor type	DC motor
	kW	0.08
	Motor Output	0.31
	A	
	Motor FLA	
Sound pressure level (Measured in anechoic room)	dB(A)	27-29-30-31
Air filter		PP honeycomb (long life filter, anti-bacterial type)
Refrigerant	Type	R410A
Diameter of refrigerant pipe (O.D.)	Liquid (High Pressure)	1/4 [6.35] Flare
	Gas (Low Pressure)	1/2 [12.7] Flare
Diameter of drain pipe	In. [mm]	O.D. 1-1/4 [32]

NOTES:  
Cooling | Indoor: 81°F (27°C) DB / 66°F (19°C) WB; Outdoor 95°F (35°C) DB  
Heating | Indoor: 88°F (20°C) DB; Outdoor 45°F (7°C) DB / 43°F (6°C) WB







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### Mitsubishi PLFY\_EP12NEMU1-E\_TH NDUCTED VRF-TU,-! Name

#### Energy Modeling Assumptions and Comments

		Applicable Field
1	Outdoor air flow is set to autosize. This field may need to be modified for specific conditions. Outdoor airflow coil inlet temperature (based on mixing with return air) should be within the following mitsubishi limits:	I- Outdoor Air Flow Rate During Cooling Operation {m3/s} I- Outdoor Air Flow Rate During Heating Operation {m3/s} I- Outdoor Air Flow Rate When No Cooling or Heating is Needed {m3/s}
	Cooling:	15-24°C / 59-75.2°F (Wet Bulb)
	Heating:	15-27°C / 59-80.6°F (Dry Bulb)
2	Default static pressure accounts for internal losses only (250Pa). Additional pressure drop may be required if the cassette is connected to outside air ducting. This will also inversely affect supply airflow.	OS:Fan:SystemModel I- Design Maximum Air Flow Rate {m3/s} I- Design Pressure Rise {Pa}
3	These fields may produce a Warning: "Rated air volume flow rate per watt of rated total heating capacity is out of range.". This warning is only a guideline put in place by EnergyPlus. AHRI 1230 does not have these limitations on this range of performance.	OS:Coil:Heating:DX:VariableRefrigerantFlow I- Rated Air Flow Rate {m3/s} I- Rated Total Heating Capacity {W}
4	As of EP version 1.10, EnergyPlus speed control set to discrete operates correctly.	I- Speed Control Method

### CITYMULTI® PLFY-EP12NEMU1-E.TH 12,000 BTU/H 33" X 33" 4-WAY CEILING CASSETTE



Job Name: \_\_\_\_\_ System Reference: \_\_\_\_\_ Date: \_\_\_\_\_



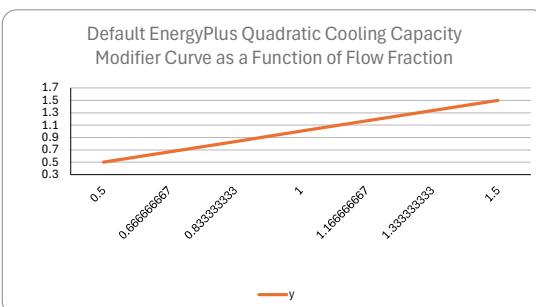
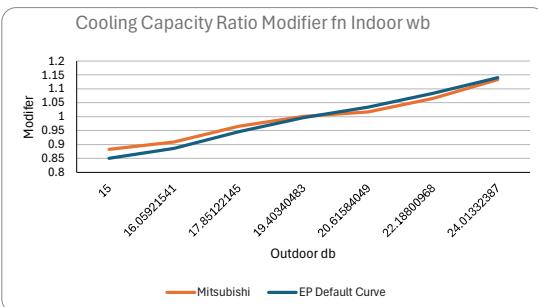
#### GENERAL FEATURES

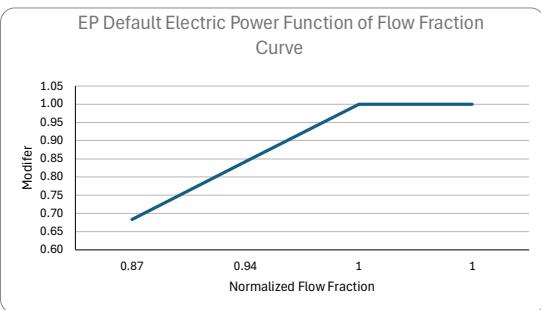
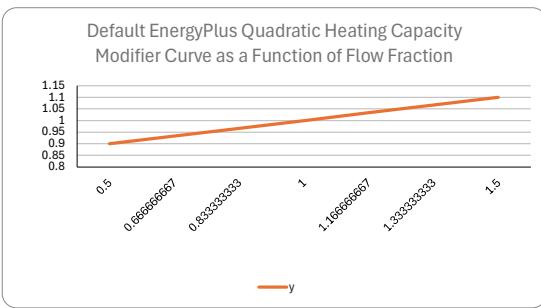
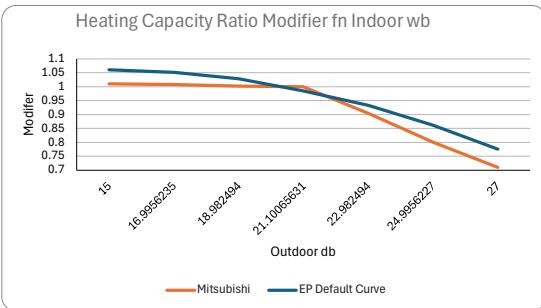
- Square edge, sleek design
  - 3D turbo fan enabling increased airflow
  - Built-in 3D i-See Sensor™
  - Improved installation features\*
  - Occupancy detection\*
  - Energy saving features\*
  - Improved occupant comfort
  - Four fan speed settings including auto-fan
  - Corner pocket design for simplified installation
  - Built-in condensate lift mechanism designed to provide up to 33-7/16" of lift
  - Ventilation air intake supported
- \*3D i-See sensor™ settings requires the PAR-41MAAU controller

Specifications	Unit Type	System
Cooling capacity (Nominal)*	BTU/H	PLFY-EP12NEMU1-E.TH
Heating capacity (Nominal)*	BTU/H	13,500
Power source	Voltage, Phase, Hertz	208/230V, 1-phase, 60 Hz
Power Consumption	kW	0.02
Cooling	kW	0.02
Heating	A	0.3
Current	A	0.3
MCA	A	0.39
Maximum Overcurrent Protection (MOCP)	A	15
External finish		Galvanized steel sheet
External Dimensions	in. [mm]	33-3/32 x 33-3/32 x 10-3/16 [840 x 840 x 258]
Net weight	Lbs [kg]	46 lbs [21 kg]
Heat exchanger		Cross fin (Aluminum fin and copper tube)
Fan	Type x quantity	Turbo fan x 1
	Airflow rate	494-630-665-665 CFM
	Motor type	DC motor
	Motor Output	kW
	Motor FLA	A
	Sound pressure level (Measured in anechoic room)	dB(A)
Air filter		27-29-30-31
Refrigerant	Type	PP honeycomb (long life filter, anti-bacterial type)
Diameter of refrigerant pipe (O.D.)	Liquid (High Pressure)	1/4 [6.35] Flare
Diameter of drain pipe	Gas (Low Pressure)	1/2 [12.7] Flare
NOTES		O.D. 1-1/4 [32]

Cooling | Indoor: 81° F (27° C) DB / 66° F (19° C) WB; Outdoor: 95° F (35° C) DB

Heating | Indoor: 68° F (20° C) DB; Outdoor: 45° F (7° C) DB / 43° F (6° C) WB







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### Mitsubishi PLFY\_EP15NEMU1\_E\_TH NDUCTED VRF-TU,-! Name

#### Energy Modeling Assumptions and Comments

		Applicable Field
1	Outdoor air flow is set to autosize. This field may need to be modified for specific conditions. Outdoor airflow coil inlet temperature (based on mixing with return air) should be within the following mitsubishi limits:	I- Outdoor Air Flow Rate During Cooling Operation {m3/s} I- Outdoor Air Flow Rate During Heating Operation {m3/s} I- Outdoor Air Flow Rate When No Cooling or Heating is Needed {m3/s}
	Cooling:	15-24°C / 59-75.2°F (Wet Bulb)
	Heating:	15-27°C / 59-80.6°F (Dry Bulb)
2	Default static pressure accounts for internal losses only (250Pa). Additional pressure drop may be required if the cassette is connected to outside air ducting. This will also inversely affect supply airflow.	OS:Fan:SystemModel I- Design Maximum Air Flow Rate {m3/s} I- Design Pressure Rise {Pa}
3	These fields may produce a Warning: "Rated air volume flow rate per watt of rated total heating capacity is out of range.". This warning is only a guideline put in place by EnergyPlus. AHRI 1230 does not have these limitations on this range of performance.	OS:Coil:Heating:DX:VariableRefrigerantFlow I- Rated Air Flow Rate {m3/s} I- Rated Total Heating Capacity {W}
4	As of EP version 1.10, EnergyPlus speed control set to discrete operates correctly.	I- Speed Control Method



Job Name:	Date:
System Reference:	



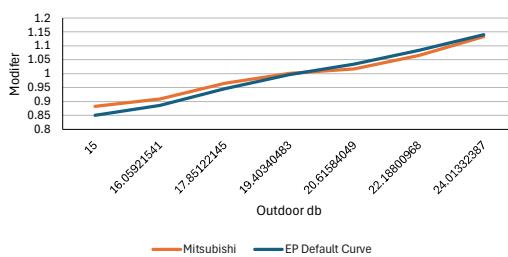
- GENERAL FEATURES
    - Square edge, sleek design
    - 3D turbo fan enabling increased airflow
    - Built-in 3D i-See Sensor®\*
    - Improved installation features\*
    - Occupancy detection\*
    - Energy saving features\*
    - Improved occupant comfort
    - Four fan speed settings including auto-fan
    - Corner pocket design for simplified installation
    - Built-in condensate lift mechanism designed to provide up to 33-7/16" of lift
    - Ventilation air intake supported
- \*3D i-See sensor® settings requires the PAR-41MAAU controller

Specifications	Unit Type	System
Cooling capacity (Nominal)*	BTU/H	15,000
Heating capacity (Nominal)*	BTU/H	17,000
Power source	Voltage, Phase, Hertz	208/230V, Single phase, 60 Hz
Power Consumption	kW	0.03
Cooling	kW	0.02
Heating	A	0.3
Current	A	0.3
MCA	A	0.39
Maximum Overcurrent Protection (MOPP)	A	15
External finish		Galvanized steel sheet
External Dimensions	In [mm]	33-3/32 x 33-3/32 x 10-3/16 [840 x 840 x 258]
Net weight	Lbs [kg]	46 [21]
Heat exchanger		Cross fin (Aluminum fin and copper tube)
Fan	Type x quantity	Turbo fan x 1
	Airflow rate	530-547-565-500
	CFM	DC motor
	Motor size	0.05
	Motor Output	0.31
	Motor FLA	dB(A)
		28-29-30-31
Sound pressure level (Measured in anechoic room)		PP honeycomb (long life filter, anti-bacterial type)
Air filter	Type	R410A
Refrigerant	Liquid (High Pressure)	1/4 [8.35] Flare
	Gas (Low Pressure)	1/2 [12.7] Flare
Diameter of refrigerant pipe (O.D.)	In [mm]	1/4 [6.35] Flare
Diameter of drain pipe	In [mm]	1/2 [12.7] Flare
NOTES:		O.D. 1-1/4 [32]
Cooling: Indoor: 81°F (27°C) DB / 66°F (19°C) WB; Outdoor: 95°F (35°C) DB / 80°F (27°C) WB		
Heating: Indoor: 68°F (20°C) DB; Outdoor: 45°F (7°C) DB / 43°F (6°C) WB		

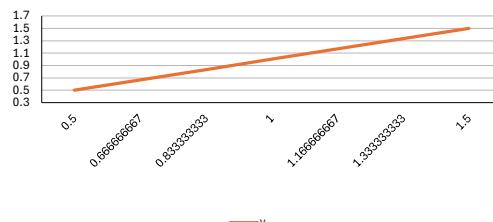
COOLING: Indoor: 81°F (27°C) DB / 66°F (19°C) WB; Outdoor: 95°F (35°C) DB / 80°F (27°C) WB

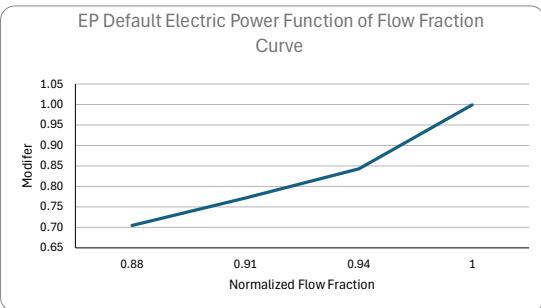
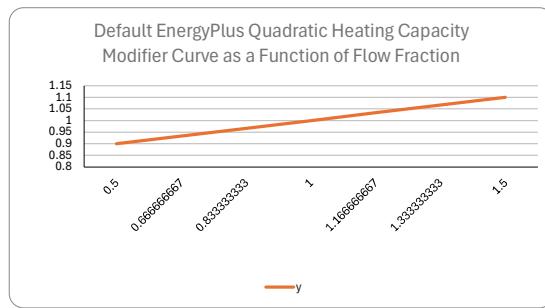
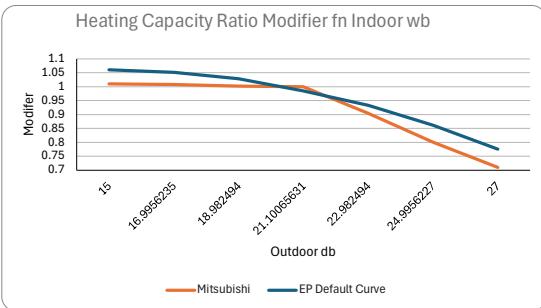
HEATING: Indoor: 68°F (20°C) DB; Outdoor: 45°F (7°C) DB / 43°F (6°C) WB

Cooling Capacity Ratio Modifier fn Indoor wb



Default EnergyPlus Quadratic Cooling Capacity Modifier Curve as a Function of Flow Fraction







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### Mitsubishi PLFY\_EP18NEMU1\_E\_TH NDUCTED VRF-TU,-! Name

#### Energy Modeling Assumptions and Comments

		Applicable Field
1	Outdoor air flow is set to autosize. This field may need to be modified for specific conditions. Outdoor airflow coil inlet temperature (based on mixing with return air) should be within the following mitsubishi limits:	I- Outdoor Air Flow Rate During Cooling Operation {m3/s} I- Outdoor Air Flow Rate During Heating Operation {m3/s} I- Outdoor Air Flow Rate When No Cooling or Heating is Needed {m3/s}
	Cooling:	15-24°C / 59-75.2°F (Wet Bulb)
	Heating:	15-27°C / 59-80.6°F (Dry Bulb)
2	Default static pressure accounts for internal losses only (250Pa). Additional pressure drop may be required if the cassette is connected to outside air ducting. This will also inversely affect supply airflow.	OS:Fan:SystemModel I- Design Maximum Air Flow Rate {m3/s} I- Design Pressure Rise {Pa}
3	These fields may produce a Warning: "Rated air volume flow rate per watt of rated total heating capacity is out of range.". This warning is only a guideline put in place by EnergyPlus. AHRI 1230 does not have these limitations on this range of performance.	OS:Coil:Heating:DX:VariableRefrigerantFlow I- Rated Air Flow Rate {m3/s} I- Rated Total Heating Capacity {W}
4	As of EP version 1.10, EnergyPlus speed control set to discrete operates correctly.	I- Speed Control Method

### CITYMULTI® PLFY-EP18NEMU1-E.TH 18,000 BTU/H 33" X 33" 4-WAY CEILING CASSETTE



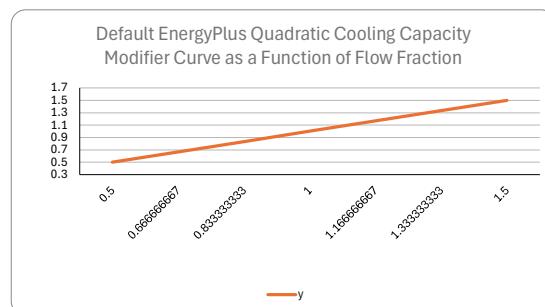
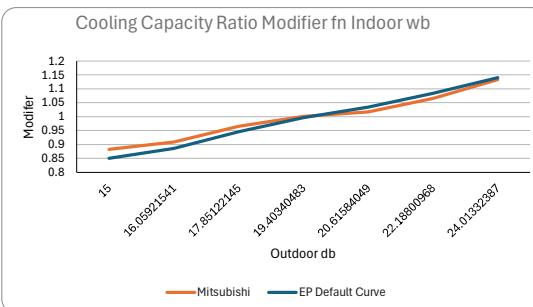
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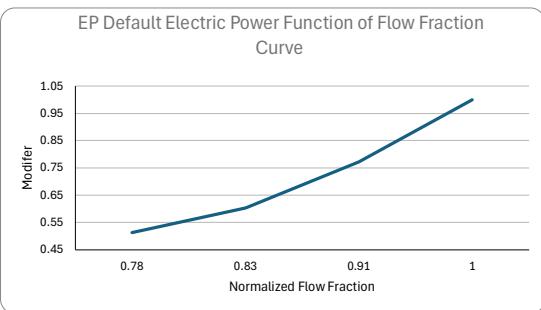
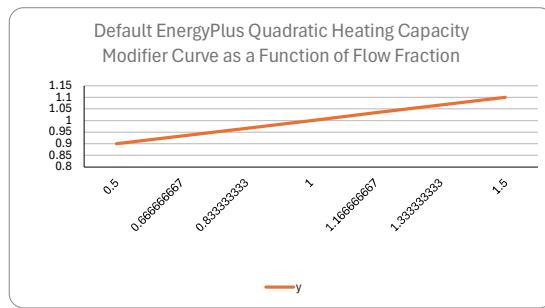
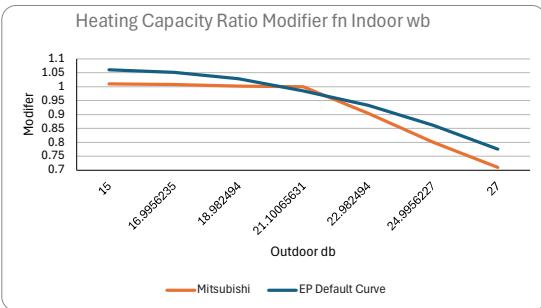


- GENERAL FEATURES**
- Square edge, sleek design
  - 3D turbo fan enabling increased airflow
  - Built-in 3D i-see Sensor\*
  - Improved installation features\*
  - Occupancy detection\*
  - Energy saving features\*
  - Improved occupant comfort
  - Four fan speed settings including auto-fan
  - Corner pocket design for simplified installation
  - Built-in condensate lift mechanism designed to provide up to 33-7/16" of lift
  - Ventilation air intake supported
- \*3D i-see sensor\* settings requires the PAR-41MAAU controller

Specifications		System
Unit	Type	PLFY-EP18NEMU1-E.TH
Cooling capacity (Nominal)*	BTU/H	18,000
Heating capacity (Nominal)*	BTU/H	20,000
Power source	Voltage, Phase, Hertz	208/230V, 1-phase, 60 Hz
Power Consumption	kW	0.04
Cooling	kW	0.04
Heating	A	0.4
Current	A	0.4
MCA	A	0.54
Maximum Overcurrent Protection (MOPC)	A	15
External finish		Galvanized steel sheet
External Dimensions	In. [mm]	33-3/32 x 33-3/32 x 11-3/4 [840 x 840 x 258]
Net weight	Lbs [kg]	55 [25]
Heat exchanger		Cross fin [Aluminum fin and copper tube]
Fan	Type x quantity	Turbine x 1
Airflow rate	CFM	636-671-742-812
Motor type	kW	DC motor
Motor Output	A	0.12
Motor FLA	dB(A)	0.43
Sound pressure level (Measured in anechoic room)		28-30-32-34
Air filter		PP honeycomb (long life filter, anti-bacterial type)
Refrigerant	Type	R410A
Diameter of refrigerant pipe (O.D.)	Liquid (High Pressure)	In. [mm]
	Gas (Low Pressure)	In. [mm]
Diameter of drain pipe		In. [mm]
		O.D. 1-1/4 [32]

NOTES:  
Cooling: Indoor: 61°F (22°C) DB / 60°F (19°C) WB;  
Heating: Indoor: 68°F (20°C) DB; Outdoor: 45°F (7°C) DB / 43°F (6°C) WB







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### Mitsubishi PLFY\_EP24NEMU1\_E\_TH NDUCTED VRF-TU,-! Name

#### Energy Modeling Assumptions and Comments

		Applicable Field
1	Outdoor air flow is set to autosize. This field may need to be modified for specific conditions. Outdoor airflow coil inlet temperature (based on mixing with return air) should be within the following mitsubishi limits:	I- Outdoor Air Flow Rate During Cooling Operation {m3/s} I- Outdoor Air Flow Rate During Heating Operation {m3/s} I- Outdoor Air Flow Rate When No Cooling or Heating is Needed {m3/s}
	Cooling:	15-24°C / 59-75.2°F (Wet Bulb)
	Heating:	15-27°C / 59-80.6°F (Dry Bulb)
2	Default static pressure accounts for internal losses only (250Pa). Additional pressure drop may be required if the cassette is connected to outside air ducting. This will also inversely affect supply airflow.	OS:Fan:SystemModel I- Design Maximum Air Flow Rate {m3/s} I- Design Pressure Rise {Pa}
3	These fields may produce a Warning: "Rated air volume flow rate per watt of rated total heating capacity is out of range.". This warning is only a guideline put in place by EnergyPlus. AHRI 1230 does not have these limitations on this range of performance.	OS:Coil:Heating:DX:VariableRefrigerantFlow I- Rated Air Flow Rate {m3/s} I- Rated Total Heating Capacity {W}
4	As of EP version 1.10, EnergyPlus speed control set to discrete operates correctly.	I- Speed Control Method

### CITY MULTI® PLFY-EP24NEMU1-E.TH 24,000 BTU/H 33" X 33" 4-WAY CEILING CASSETTE



Job Name: \_\_\_\_\_ System Reference: \_\_\_\_\_ Date: \_\_\_\_\_

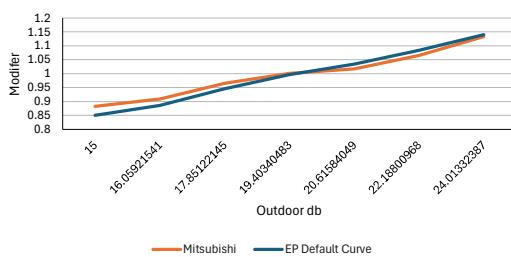


- GENERAL FEATURES**
- Square edge, sleek design
  - 3D turbo fan enabling increased airflow
  - Built-in 3D i-See Sensor<sup>\*\*</sup>
  - Improved installation features\*
  - Occupancy detection\*
  - Energy saving features\*
  - Improved occupant comfort
  - Four fan speed settings including auto-fan
  - Corner pocket design for simplified installation
  - Built-in condensate lift mechanism designed to provide up to 33-7/16" of lift
  - Ventilation air intake supported
- \*\*3D i-See sensor<sup>\*\*</sup> settings requires the PAR-41MAAU controller

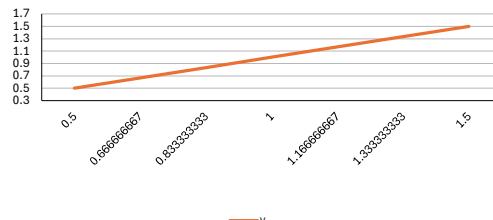
Specifications	Unit Type	System
Cooling capacity (Nominal)*	BTU/H	PLFY-EP24NEMU1-E.TH
Heating capacity (Nominal)*	BTU/H	24,000
Power source	Voltage, Phase, Hertz	208/230V, 1-phase, 60 Hz
Power Consumption	kW	0.04
Cooling	kW	0.04
Heating	A	0.4
Current	A	0.4
MCA	A	0.54
Maximum Overcurrent Protection (MOPC)	A	15
External finish		Galvanized steel sheet
External Dimensions	In. [mm]	33-3/32 x 33-3/32 x 11-3/4 [840 x 840 x 298]
Net weight	Lbs [kg]	55 [25]
Heat exchanger		Cross fin (Aluminum fin and copper tube)
	Type x quantity	Tubes: 100 x 1
Fan	Airflow rate	636-671-742-B12
	CFM	DC motor
	kW	0.12
	A	0.43
	dBi(A)	28-30-32-34
Sound pressure level (Measured in anechoic room)		PP honeycomb (long life filter, anti-bacterial type)
Air filter		R410A
Refrigerant	Type	
Diameter of refrigerant pipe (O.D.)	Liquid (High Pressure)	In. [mm]
	Gas (Low Pressure)	3/8 [9.52] Flare
Diameter of drain pipe		5/8 [15.88] Flare
		O.D. 1-1/4 [32]

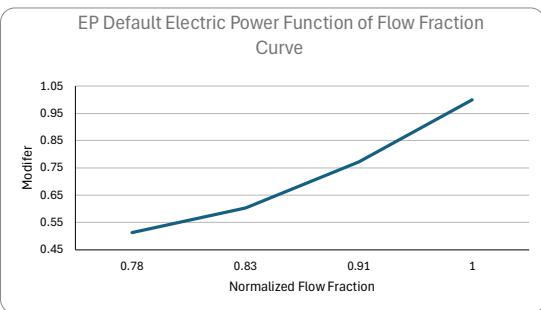
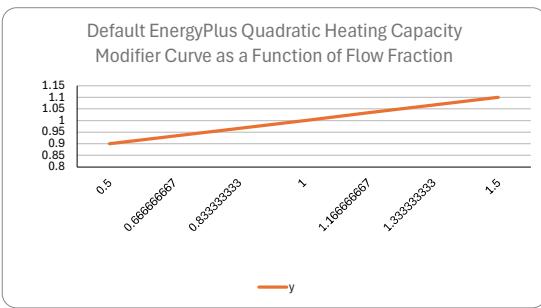
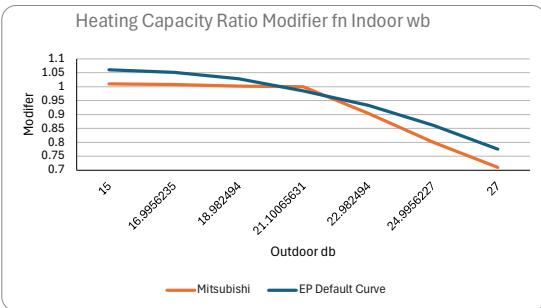
NOTES:  
Cooling: Indoor: 81° F (27° C) DB / 68° F (19° C) WB; Outdoor 95° F (35° C) DB  
Heating: Indoor: 68° F (20° C) DB; Outdoor 45° F (7° C) DB / 43° F (6° C) WB

Cooling Capacity Ratio Modifier fn Indoor wb



Default EnergyPlus Quadratic Cooling Capacity Modifier Curve as a Function of Flow Fraction







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### Mitsubishi PLFY\_EP30NEMU1-E\_TH NDUCTED VRF-TU,-! Name

#### Energy Modeling Assumptions and Comments

#### Applicable Field

1	Outdoor air flow is set to autosize. This field may need to be modified for specific conditions. Outdoor airflow coil inlet temperature (based on mixing with return air) should be within the following mitsubishi limits:	I- Outdoor Air Flow Rate During Cooling Operation {m3/s} I- Outdoor Air Flow Rate During Heating Operation {m3/s} I- Outdoor Air Flow Rate When No Cooling or Heating is Needed {m3/s}
	Cooling:	15-24°C / 59-75.2°F (Wet Bulb)
	Heating:	15-27°C / 59-80.6°F (Dry Bulb)
2	Default static pressure accounts for internal losses only (250Pa). Additional pressure drop may be required if the cassette is connected to outside air ducting. This will also inversely affect supply airflow.	OS:Fan:SystemModel I- Design Maximum Air Flow Rate {m3/s} I- Design Pressure Rise {Pa}
3	These fields may produce a Warning: "Rated air volume flow rate per watt of rated total heating capacity is out of range.". This warning is only a guideline put in place by EnergyPlus. AHRI 1230 does not have these limitations on this range of performance.	OS:Coil:Heating:DX:VariableRefrigerantFlow I- Rated Air Flow Rate {m3/s} I- Rated Total Heating Capacity {W}
4	As of EP version 1.10, EnergyPlus speed control set to discrete operates correctly.	I- Speed Control Method

### CITYMULTI® PLFY-EP30NEMU1-E.TH 30,000 BTU/H 33" X 33" 4-WAY CEILING CASSETTE



Job Name:	Date:
System Reference:	

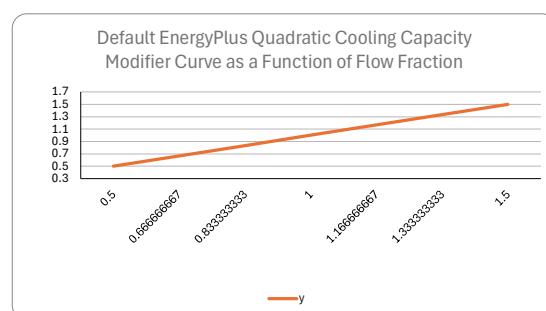
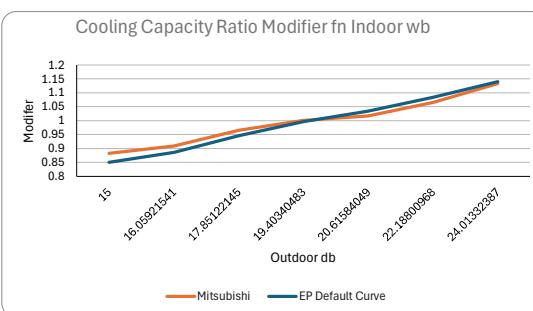


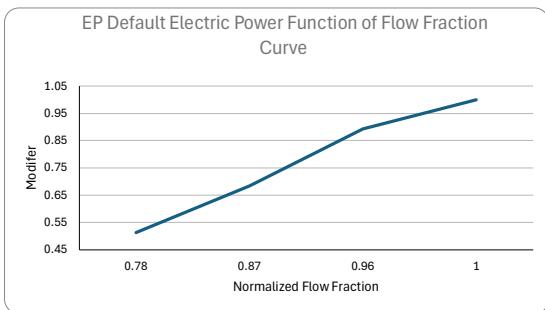
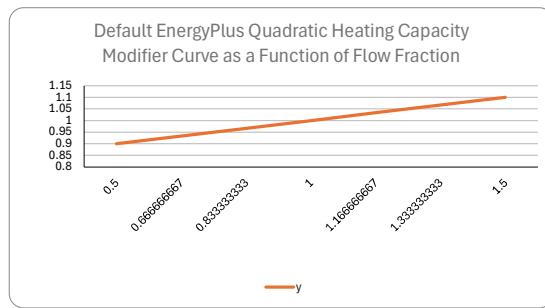
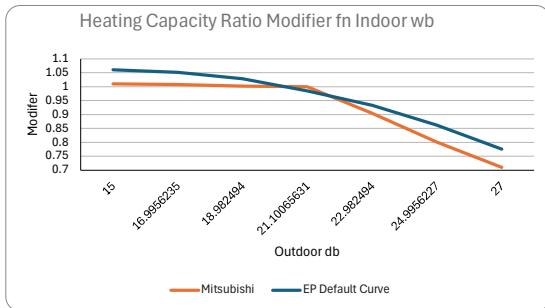
#### GENERAL FEATURES

- Square edge, sleek design
  - 3D turbo fan enabling increased airflow
  - Built-in 3D i-see Sensor®\*
  - Improved installation features\*
  - Occupancy detection\*
  - Energy saving features\*
  - Improved occupant comfort
  - Four fan speed settings including auto-fan
  - Corner pocket design for simplified installation
  - Built-in condensate lift mechanism designed to provide up to 33-7/16" of lift
  - Ventilation air intake supported
- \*3D i-See sensor® settings requires the PAR-41MAAU controller

Specifications	Unit Type	PLFY-EP30NEMU1-E.TH
Cooling capacity (Nominal)*	BTU/H	30,000
Heating capacity (Nominal)*	BTU/H	34,000
Power source	Voltage, Phase, Hertz	208/230V, 1-phase, 60 Hz
Power Consumption	kW	0.04
Cooling	kW	0.04
Heating	A	0.5
Current	A	0.4
Cooling	A	0.57
Heating	A	15
MCA		
Maximum Overcurrent Protection (MOCP)		
External finish		Galvanized steel sheet
External Dimensions	In. [mm]	33-3/32 x 33-3/32 x 11-3/4 [840 x 840 x 298]
Net weight	Lbs [kg]	55 [25]
Heat exchanger		Cross fin (Aluminum fin and copper tube)
Fan	Type x quantity	Turbo fan x 1
	Airflow rate	636-706-777-812
	CFM	DC motor
	Motor type	0.12
	Motor Output	0.45
	Motor FLA	dB(A)
		28-31-33-35
Sound pressure level (Measured in anechoic room)		PP honeycomb (long life filter, anti-bacterial type)
Air filter		R410A
Refrigerant	Type	
Diameter of refrigerant pipe (O.D.)	Liquid (High Pressure)	In. [mm]
	Gas (Low Pressure)	3/8 [9.52] Flare
Diameter of drain pipe		In. [mm]
		5/8 [15.88] Flare
		O.D. 1-1/4 [32]

NOTES:  
Cooling | Indoor: 81°F (27°C) DB / 66°F (19°C) WB; Outdoor 95°F (35°C) DB  
Heating | Indoor: 68°F (20°C) DB; Outdoor 45°F (7°C) DB / 43°F (6°C) WB







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### Mitsubishi PLFY\_EP36NEMU1-E\_TH NDUCTED VRF-TU,-! Name

#### Energy Modeling Assumptions and Comments

		Applicable Field
1	Outdoor air flow is set to autosize. This field may need to be modified for specific conditions. Outdoor airflow coil inlet temperature (based on mixing with return air) should be within the following mitsubishi limits:	I- Outdoor Air Flow Rate During Cooling Operation {m3/s} I- Outdoor Air Flow Rate During Heating Operation {m3/s} I- Outdoor Air Flow Rate When No Cooling or Heating is Needed {m3/s}
	Cooling:	15-24°C / 59-75.2°F (Wet Bulb)
	Heating:	15-27°C / 59-80.6°F (Dry Bulb)
2	Default static pressure accounts for internal losses only (250Pa). Additional pressure drop may be required if the cassette is connected to outside air ducting. This will also inversely affect supply airflow.	OS:Fan:SystemModel I- Design Maximum Air Flow Rate {m3/s} I- Design Pressure Rise {Pa}
3	These fields may produce a Warning: "Rated air volume flow rate per watt of rated total heating capacity is out of range.". This warning is only a guideline put in place by EnergyPlus. AHRI 1230 does not have these limitations on this range of performance.	OS:Coil:Heating:DX:VariableRefrigerantFlow I- Rated Air Flow Rate {m3/s} I- Rated Total Heating Capacity {W}
4	As of EP version 1.10, EnergyPlus speed control set to discrete operates correctly.	I- Speed Control Method

### CITYMULTI® PLFY-EP36NEMU1-E.TH 36,000 BTU/H 33" X 33" 4-WAY CEILING CASSETTE



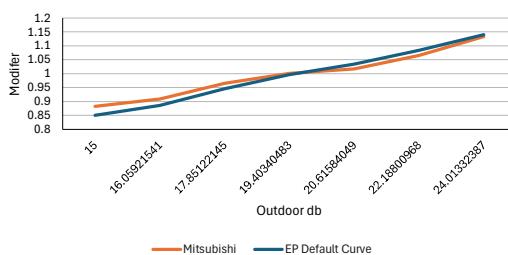
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System Reference: \_\_\_\_\_



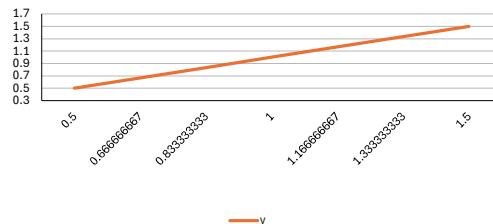
- GENERAL FEATURES**
- Square edge, sleek design
  - 3D turbo fan enabling increased airflow
  - Built-in 3D i-see Sensor™
  - Improved installation features\*
  - Occupancy detection\*
  - Energy saving features\*
  - Improved occupant comfort
  - Four speed settings including auto-fan
  - Corner pocket design for simplified installation
  - Built-in condensate lift mechanism designed to provide up to 33-7/16" of lift
  - Ventilation air intake supported
- \*\*3D i-See sensor™ settings requires the PAR-41MAAU controller

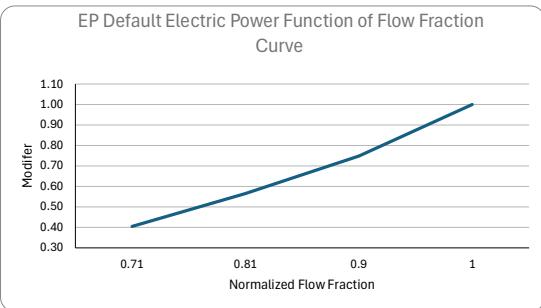
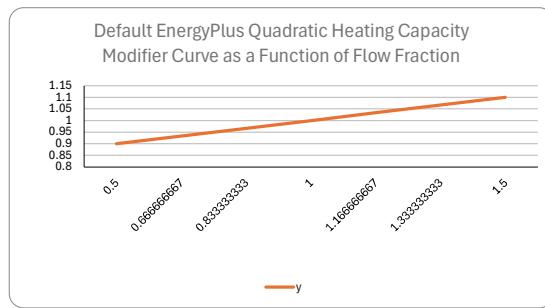
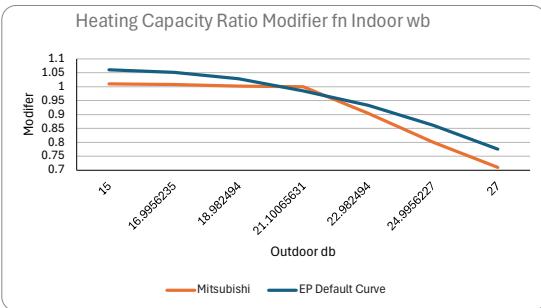
Specifications	Unit Type	System
Cooling capacity (Nominal)*	BTU/H	36,000
Heating capacity (Nominal)*	BTU/H	40,000
Power source	Voltage, Phase, Hertz	208/230V, 1-phase, 60 Hz
Power Consumption	kW	0.07
Cooling	kW	0.07
Heating	A	0.7
Current	A	0.7
Cooling	A	0.82
Heating	A	15
MCA		
Maximum Overcurrent Protection (MOPC)		
External finish		Galvanized steel sheet
External Dimensions	In. [mm]	33-3/32 x 33-3/32 x 11-7/16 [840 x 840 x 298]
Net weight	Lbs [kg]	55 [25]
Heat exchanger		Cross fin (Aluminum fin and copper tube)
Fan	Type x quantity	Turbo fan x 1
	Airflow rate	777-883-989-1,095
	CFM	DC motor
	Motor type	0.12
	Motor Output	0.73
	Motor FLA	
Sound pressure level (Measured in anechoic room)	dB(A)	35-37-39-41
Air filter		PP honeycomb (long life filter, anti-bacterial type)
Refrigerant	Type	R410A
Diameter of refrigerant pipe (O.D.)	Liquid (High Pressure)	In. [mm]
	Gas (Low Pressure)	3/8 [9.52] Flare
Diameter of drain pipe	In. [mm]	5/8 [15.88] Flare
NOTES:		O.D. 1-1/4 [32]
Cooling: Indoor: 81° F (27° C) DB / 68° F (19° C) WB; Outdoor: 95° F (35° C) DB		
Heating: Indoor: 68° F (20° C) DB; Outdoor: 45° F (7° C) DB / 43° F (6° C) WB		

Cooling Capacity Ratio Modifier fn Indoor wb



Default EnergyPlus Quadratic Cooling Capacity Modifier Curve as a Function of Flow Fraction







HELIX ENERGY PARTNERS LLC, PO BOX 418, HELIX, OREGON 97835

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### Mitsubishi PLFY\_EP48NEMU1\_E\_TH NDUCTED VRF-TU,-! Name

#### Energy Modeling Assumptions and Comments

#### Applicable Field

1	Outdoor air flow is set to autosize. This field may need to be modified for specific conditions. Outdoor airflow coil inlet temperature (based on mixing with return air) should be within the following mitsubishi limits:	I- Outdoor Air Flow Rate During Cooling Operation {m3/s} I- Outdoor Air Flow Rate During Heating Operation {m3/s} I- Outdoor Air Flow Rate When No Cooling or Heating is Needed {m3/s}
	Cooling:	15-24°C / 59-75.2°F (Wet Bulb)
	Heating:	15-27°C / 59-80.6°F (Dry Bulb)
2	Default static pressure accounts for internal losses only (250Pa). Additional pressure drop may be required if the cassette is connected to outside air ducting. This will also inversely affect supply airflow.	OS:Fan:SystemModel I- Design Maximum Air Flow Rate {m3/s} I- Design Pressure Rise {Pa}
3	These fields may produce a Warning: "Rated air volume flow rate per watt of rated total heating capacity is out of range.". This warning is only a guideline put in place by EnergyPlus. AHRI 1230 does not have these limitations on this range of performance.	OS:Coil:Heating:DX:VariableRefrigerantFlow I- Rated Air Flow Rate {m3/s} I- Rated Total Heating Capacity {W}
4	As of EP version 1.10, EnergyPlus speed control set to discrete operates correctly.	I- Speed Control Method



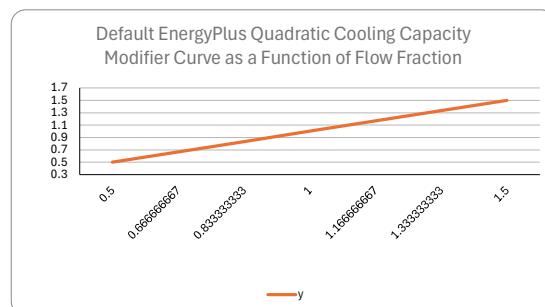
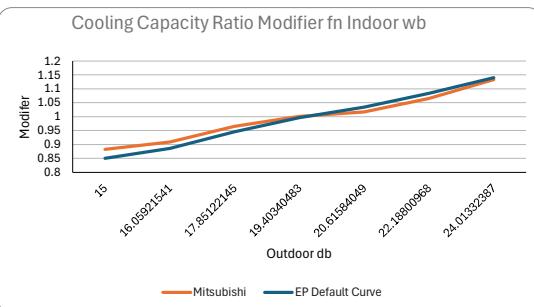
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System Reference:	

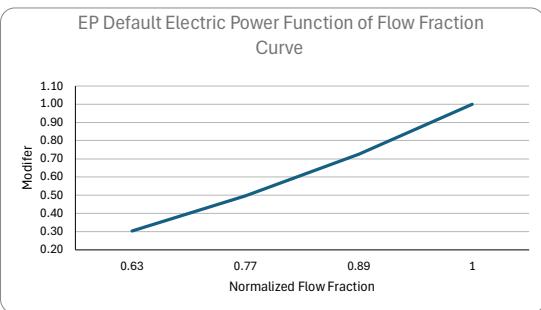
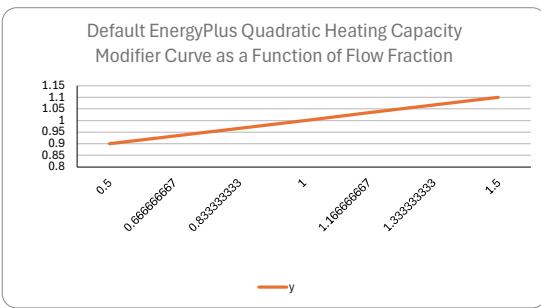
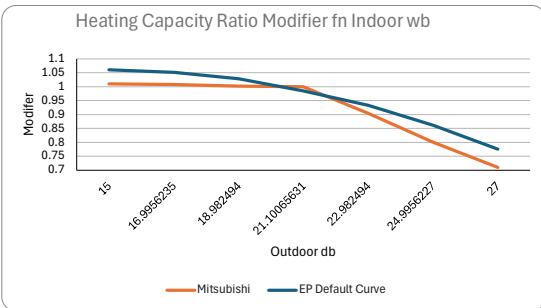


- GENERAL FEATURES
    - Square edge, sleek design
    - 3D turbo fan enabling increased airflow
    - Built-in 3D i-see Sensor®\*
    - Improved installation features\*
    - Occupancy detection\*
    - Energy saving features\*
    - Improved occupant comfort
    - Four fan speed settings including auto-fan
    - Corner pocket design for simplified installation
    - Built-in condensate lift mechanism designed to provide up to 33-7/16" of lift
    - Ventilation air intake supported
- \*3D I-See sensor® settings requires the PAR-41MAAU controller

Specifications		System	
Unit Type		PLFY-EP48NEMU1-E.TH	
Cooling capacity (Nominal)*	BTU/H	48,000	
Heating capacity (Nominal)*	BTU/H	54,000	
Power source	Voltage, Phase, Hertz	208/230V, 1-phase, 60 Hz	
Power Consumption	kW	0.11	
Cooling	kW	0.11	
Heating	A	1.0	
Current	A	1.0	
MCA	A	1.27	
Maximum Overcurrent Protection (MOCP)	A	15	
External finish		Galvanized steel sheet	
External Dimensions	In. [mm]	33-3/32 x 33-3/32 x 11-3/4 [840 x 840 x 298]	
Net weight	Lbs [kg]	55 [25]	
Heat exchanger		Cross fin (Aluminum fin and copper tube)	
Fan	Type & quantity	Turbo fan x 1	
	Airflow rate	777-954-1-095-1-236	
	CFM	DC motor	
	Motor type	0.12	
	Motor Output	1.01	
	Motor FLA	36-38-40-45	
Sound pressure level (Measured in anechoic room)	dBA(A)	PP honeycomb (long life filter, anti-bacterial type)	
Air filter		R410A	
Refrigerant	Type	3/8 [9.52] Flare	
Diameter of refrigerant pipe (O.D.)	Liquid (High Pressure)	5/8 [15.88] Flare	
Diameter of drain pipe	Gas (Low Pressure)	D.O. 1-1/4 [32]	
NOTES:			
Cooling   Indoor: 81° F (27° C) DB / 68° F (19° C) WB; Outdoor 95° F (35° C) DB			
Heating   Indoor: 88° F (20° C) DB; Outdoor 45° F (7° C) DB / 43° F (6° C) WB			

16.05921541 17.85122145 19.40340483 20.61524049 22.18900968 24.01322387







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**Mitsubishi PUHY-EP72TNU/YNU-A1 NONDUCTED-VRF-OU,!- Name****Mitsubishi PUHY-EP72TNU/YNU-A1 DUCTED-VRF-OU,!- Name****Mitsubishi PUHY-EP72TNU/YNU-A1 NONDUCTED-HIGHHEAT-VRF-OU,!- Name****Mitsubishi PUHY-EP72TNU/YNU-A1 DUCTED-HIGHHEAT-VRF-OU,!- Name****Energy Modeling Assumptions and Comments****Applicable Field**

1	Coefficient of Performance is calculated assuming either Ducted or Non-Ducted indoor units, as specified in the field <b>I- Name</b> . If the project has a mix of ducted and non-ducted indoor units, it is recommended to modify these parameters to suit the project. A proportional calculation based on the ratio of ducted to non-ducted equipment is a good approximation.	I- Gross Rated Cooling COP {W/W} I- Rated Heating COP {W/W}
2	Outdoor unit is installed in location above indoor units (this affects cooling operating outdoor temperature range). If the outdoor unit will be installed below the indoor units, adjust the fields: <b>I- Minimum Outdoor Temperature in Cooling Mode {C} = 0°C</b> <b>I- Maximum Outdoor Temperature in Cooling Mode {C} = 43°C</b>	I- Maximum Outdoor Temperature in Cooling Mode {C}
3	Standard performance mode: Dip switch toggle is off (it will not allow for high heating performance mode). For high heating performance, select the object with field <b>I- Name with HIGHHEAT</b>	I- Heating Capacity Ratio Modifier Function of Low Temperature Curve Name I- Heating Energy Input Ratio Modifier Function of Low Temperature Curve Name
4	Mitsubishi does not publish information on operation below part load. EPLUS default is used. EPLUS Default curve has output of 1: It does not account for operational inefficiencies below minimum plr (compressor cycling).	I- Cooling Part-Load Fraction Correlation Curve Name
5	Mitsubishi does not publish information on operation below part load. EPLUS default is used. EPLUS Default curve has output of 1: It does not account for operational inefficiencies below minimum plr (compressor cycling).	I- Heating Part-Load Fraction Correlation Curve Name
6	No waste heat recovery for this model	I- Heat Pump Waste Heat Recovery
7	30 meters. Adjust this parameter to suit your project conditions	I- Equivalent Piping Length used for Piping Correction Factor in Cooling Mode {m}
8	10 meters: This is not used, see next...↓	I- Vertical Height used for Piping Correction Factor {m}
9	No published derate for height between IDU and ODU, used EPLUS default essentially zero (-0.00036)	I- Piping Correction Factor for Height in Cooling Mode Coefficient {1/m}
10	Mitsubishi docs do not indicate any crank case heater. Mitsubishi has an optional drain pan heater. However, this is currently only for Evaporative condensers in EP. Neither are modeled for this Mitsubishi equipment.	I- Crankcase Heater Power per Compressor {W}
11	Mitsubishi docs do not indicate any dependence on indoor wetbulb temperature.	I- Defrost Energy Input Ratio Modifier Function of Temperature Curve Name
12	Default (null value) for this field will use the weatherfile outdoor conditions. If condenser is located up high, another file may be necessary.	I- Condenser Inlet Node
13	No heat recovery for this model	I- Minimum Outdoor Temperature in Heat Recovery Mode {C} I- Maximum Outdoor Temperature in Heat Recovery Mode {C} I- Heat Recovery Cooling Capacity Modifier Curve Name I- Initial Heat Recovery Cooling Capacity Fraction {W/W} I- Heat Recovery Cooling Capacity Time Constant {hr} I- Heat Recovery Cooling Energy Modifier Curve Name I- Initial Heat Recovery Cooling Energy Fraction {W/W} I- Heat Recovery Cooling Energy Time Constant {hr} I- Heat Recovery Heating Capacity Modifier Curve Name I- Initial Heat Recovery Heating Capacity Fraction {W/W} I- Heat Recovery Heating Capacity Time Constant {hr} I- Heat Recovery Heating Energy Modifier Curve Name I- Initial Heat Recovery Heating Energy Fraction {W/W} I- Heat Recovery Heating Energy Time Constant {hr}

CITYMULTI®

6-TON PUHY-EP72TNU-A1



Job Name:

System Reference:

Date:

## 208/230V OUTDOOR VRF HEAT PUMP SYSTEM



## UNIT OPTION

 Standard Model..... PUHY-EP72TNU-A1

## ACCESSORIES

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

## Unit Type

## System

PUHY-EP72TNU-A1

Cooling Capacity (Nominal)	BTU/H	72,000
Heating Capacity (Nominal)	BTU/H	80,000
Guaranteed Operating Range	Cooling Heating	23~126 [-5.0~52.0] -13~60 [-25.0~15.5]
Extended Operating Range	Heating	-27.4~60 [-33.0~15.5]
External Dimensions (H x W x D)	In. [mm]	71.5/8 x 36.1/4 x 29.3/16 [1,818 x 920 x 740]
Net Weight	Lbs. [kg]	512 [232]
External Finish		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	208/230V, 3-phase, 60 Hz, ±10%
Minimum Circuit Ampacity	A	32.0/29.0
Maximum Overcurrent Protection	A	50/45
Recommended Fuse Size	A	35/30
Recommended Minimum Wire Size	AWG [mm]	8/10 [8.4/5.3]
SCCR	kA	5

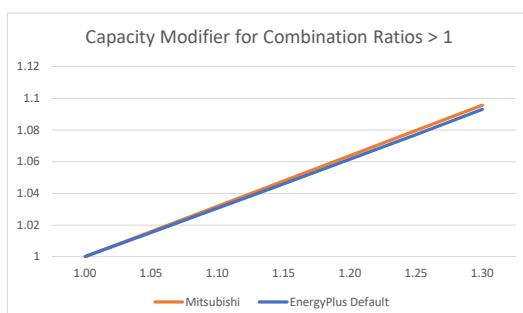
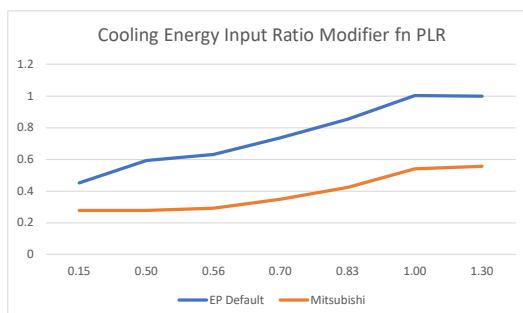
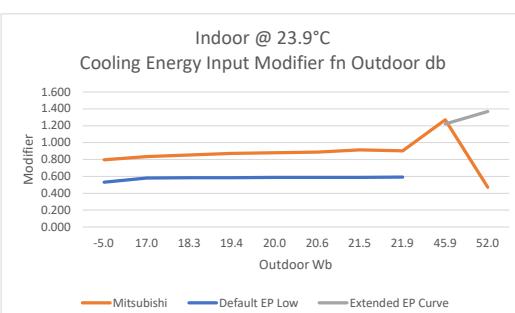
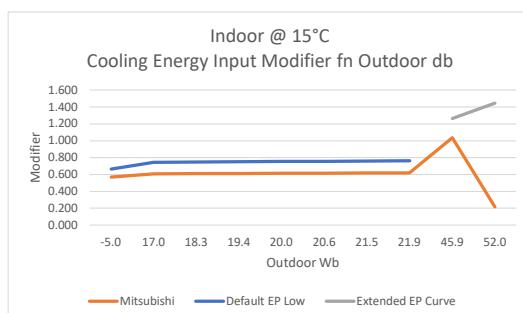
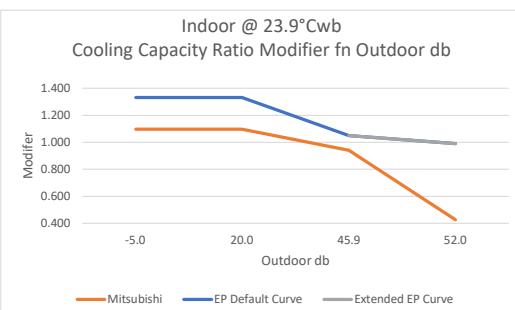
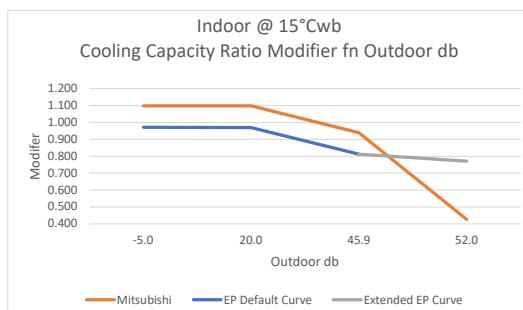
Refrigerant Piping Diameter	Liquid (High Pressure) Gas (Low Pressure)	In. [mm] In. [mm]	3/8 [9.52] Braze 7/8 [22.2] Braze
Max. Total Refrigerant Line Length		FT.	3,280 [1,000]
Max. Refrigerant Line Length (Between ODU & IDU)		FT.	541 [165]
Max. Control Wiring Length		FT.	1,640 [500]
Indoor Unit Connectable	Total Capacity Model/Quantity		50.0~130.0% of outdoor unit capacity P04~P72/1.0~18.0
Sound Pressure Levels		dB(A)	55.0/57.0
Sound Power Levels		dB(A)	74.5/76.0
FAN <sup>1</sup>	Type x Quantity Fan Motor Output Airflow Rate	kW CFM	Propeller fan x 1 0.92 6,000
	External Static Pressure	In. WG	Selectable: 0.00, 0.12, 0.24, 0.32, In. WG; factory set to 0 In. WG
Compressor Operating Range			15.0% to 100.0%
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1
Refrigerant	Type x Original Charge		R410A x 14.0 lbs + 5.0 oz (6.5 kg)
Protection Devices	High Pressure Protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter Circuit (Comp./Fan)		Over-current protection
AHRI Ratings (Ducted/Non-ducted)	EER IEER COP		12.2/13.7 22.2/27.1 4.05/4.57

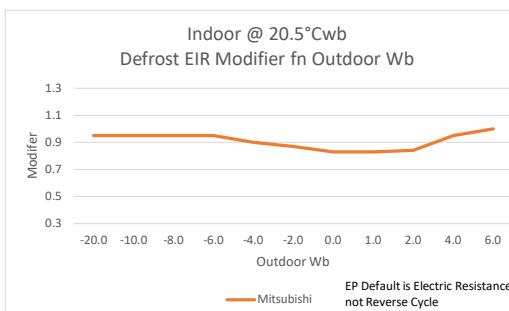
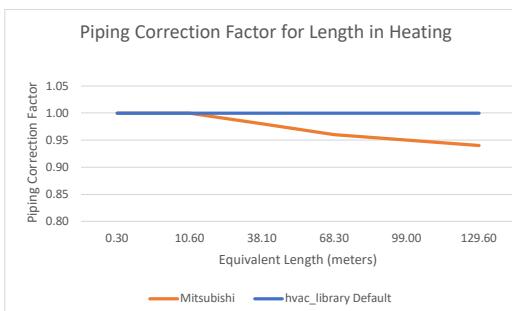
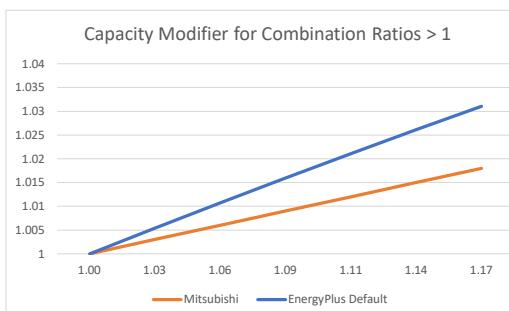
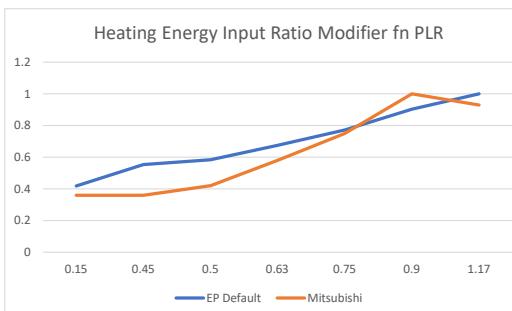
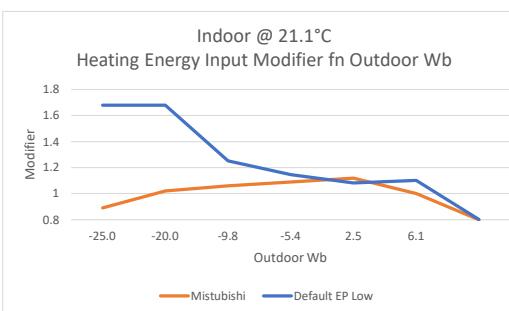
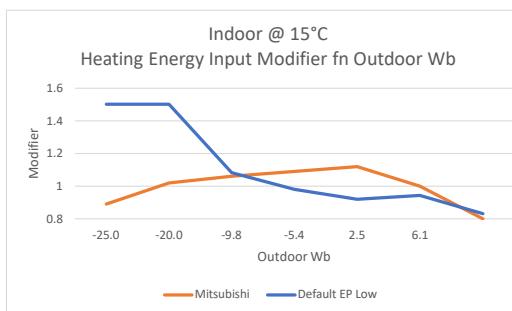
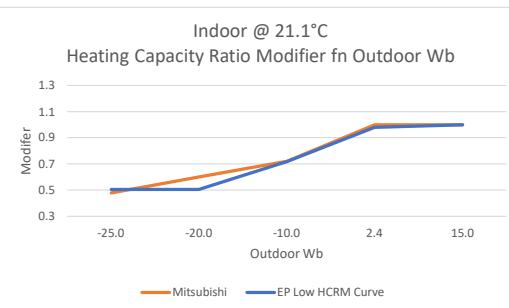
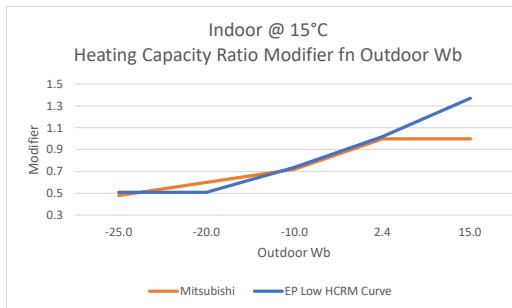
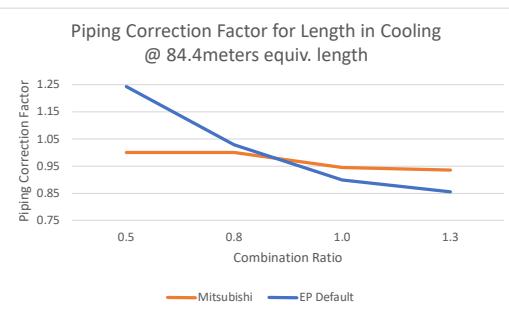
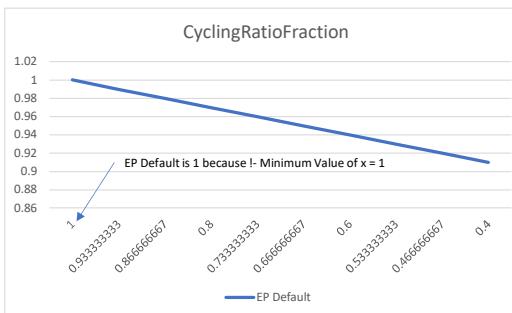
NOTES:  
Nominal cooling conditions (Test conditions are based on AHRI 1230-2023)  
Indoor: 80°FDB/67°FWB, (28.7°CDB/19.4°CWB), Outdoor: 95°FDB, (35°CDB).  
Nominal heating conditions (Test conditions are based on AHRI 1230-2023)  
Indoor: 70°FDB, (21.1°CDB), Outdoor: 47°FDB/43°FWB, (8.3°CDB/6.1°CWB).

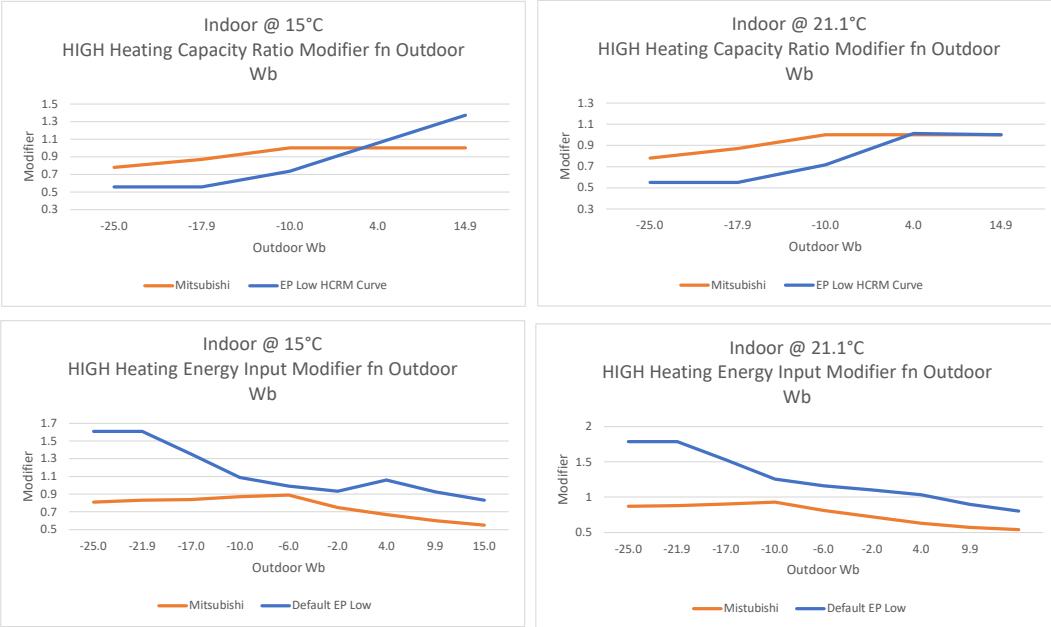
<sup>1</sup>Harsh weather environments may demand performance enhancing equipment. Ask your Mitsubishi Electric representative for more details about your region.  
For details on extended cooling operation range down to -10° F DB, see Low Ambient Kit Submittal.  
When applying product below 4°F, consult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

Specifications are subject to change without notice.

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### Mitsubishi PUHY-EP96TNU/YNU-A1 NONDUCTED-VRF-OU,!- Name

### Mitsubishi PUHY-EP96TNU/YNU-A1 DUCTED-VRF-OU,!- Name

### Mitsubishi PUHY-EP96TNU/YNU-A1 NONDUCTED-HIGHHEAT-VRF-OU,!- Name

### Mitsubishi PUHY-EP96TNU/YNU-A1 DUCTED-HIGHHEAT-VRF-OU,!- Name

#### Energy Modeling Assumptions and Comments

#### Applicable Field

1	Coefficient of Performance is calculated assuming either Ducted or Non-Ducted indoor units, as specified in the field <b>I- Name</b> . If the project has a mix of ducted and non-ducted indoor units, it is recommended to modify these parameters to suit the project. A proportional calculation based on the ratio of ducted to non-ducted equipment is a good approximation.	I- Gross Rated Cooling COP {W/W}
2	Outdoor unit is installed in location above indoor units (this affects cooling operating outdoor temperature range). If the outdoor unit will be installed below the indoor units, adjust the fields: <b>I- Minimum Outdoor Temperature in Cooling Mode (C) = 0°C</b> <b>I- Maximum Outdoor Temperature in Cooling Mode (C) = 43°C</b>	I- Maximum Outdoor Temperature in Cooling Mode {C}
3	Standard performance mode: Dip switch toggle is off (it will not allow for high heating performance mode). For high heating performance, select the object with field <b>I- Name with HIGHHEAT</b>	I- Heating Capacity Ratio Modifier Function of Low Temperature Curve Name I- Heating Energy Input Ratio Modifier Function of Low Temperature Curve Name
4	Mitsubishi does not publish information on operation below part load. EPLUS default is used. EPLUS Default curve has output of 1: It does not account for operational inefficiencies below minimum plr (compressor cycling).	I- Cooling Part-Load Fraction Correlation Curve Name
5	Mitsubishi does not publish information on operation below part load. EPLUS default is used. EPLUS Default curve has output of 1: It does not account for operational inefficiencies below minimum plr (compressor cycling).	I- Heating Part-Load Fraction Correlation Curve Name
6	No waste heat recovery for this model	I- Heat Pump Waste Heat Recovery
7	30 meters. Adjust this parameter to suit your project conditions	I- Equivalent Piping Length used for Piping Correction Factor in Cooling Mode {m}
8	10 meters: This is not used, see next...↓	I- Vertical Height used for Piping Correction Factor {m}
9	No published derate for height between IDU and ODU, used EPLUS default essentially zero (-0.00036)	I- Piping Correction Factor for Height in Cooling Mode Coefficient {1/m}
10	Mitsubishi docs do not indicate any crank case heater. Mitsubishi has an optional drain pan heater. However, this is currently only for Evaporative condensers in EP. Neither are modeled for this Mitsubishi equipment.	I- Crankcase Heater Power per Compressor {W}
11	Mitsubishi docs do not indicate any dependence on indoor wetbulb temperature.	I- Defrost Energy Input Ratio Modifier Function of Temperature Curve Name
12	Default (null value) for this field will use the weatherfile outdoor conditions. If condenser is located up high, another file may be necessary.	I- Condenser Inlet Node
13	No heat recovery for this model	I- Minimum Outdoor Temperature in Heat Recovery Mode {C} I- Maximum Outdoor Temperature in Heat Recovery Mode {C} I- Heat Recovery Cooling Capacity Modifier Curve Name I- Initial Heat Recovery Cooling Capacity Fraction {W/W} I- Heat Recovery Cooling Capacity Time Constant {hr} I- Heat Recovery Cooling Energy Modifier Curve Name I- Initial Heat Recovery Cooling Energy Fraction {W/W} I- Heat Recovery Cooling Energy Time Constant {hr} I- Heat Recovery Heating Capacity Modifier Curve Name I- Initial Heat Recovery Heating Capacity Fraction {W/W} I- Heat Recovery Heating Capacity Time Constant {hr} I- Heat Recovery Heating Energy Modifier Curve Name I- Initial Heat Recovery Heating Energy Fraction {W/W} I- Heat Recovery Heating Energy Time Constant {hr}

CITYMULTI®

8-TON PUHY-EP96TNU-A1



Job Name:

System Reference:

Date:

208/230V OUTDOOR VRF HEAT PUMP SYSTEM



#### UNIT OPTION

Standard Model ..... PUHY-EP96TNU-A1

#### ACCESSORIES

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

##### Unit Type

#### System

PUHY-EP96TNU-A1

Cooling Capacity (Nominal)	BTU/H	96,000
Heating Capacity (Nominal)	BTU/H	108,000
Guaranteed Operating Range	Cooling Heating	°F [°C] °F [°C]
Extended Operating Range	Heating	°F [°C]
External Dimensions (H x W x D)	In. [mm]	23-126 [-5.0-52.0] -13-60 [-25.0-15.5] -27.4-60 [-33.0-15.5] 71-56 x 48-7/8 x 29-3/16 [1,816 x 1,240 x 740]
Net Weight	Lbs. [kg]	622 [282]
External Finish		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	208/230V, 3-phase, 60 Hz, ±10%
Minimum Circuit Ampacity	A	44.0/40.0
Maximum Overcurrent Protection	A	70/60
Recommended Fuse Size	A	45/40

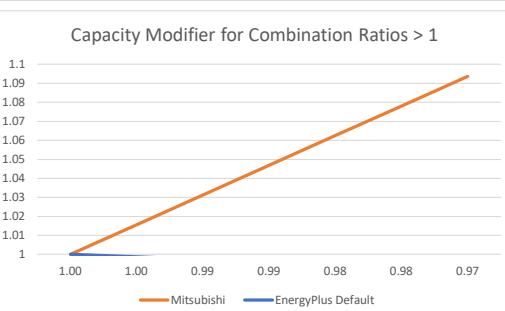
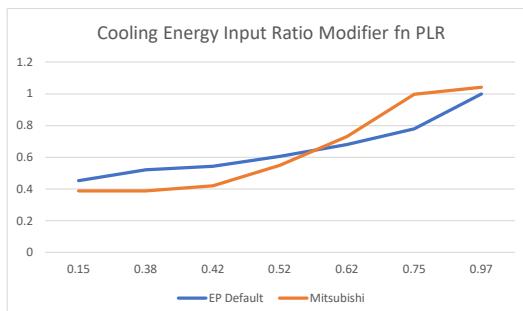
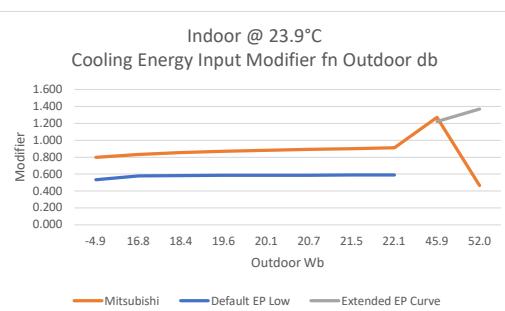
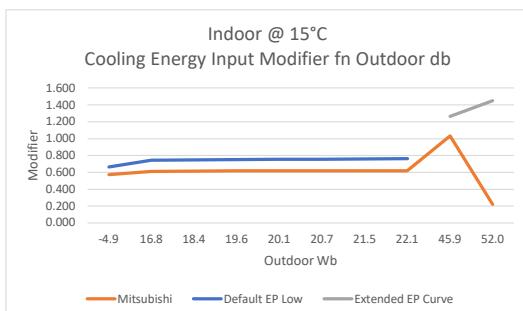
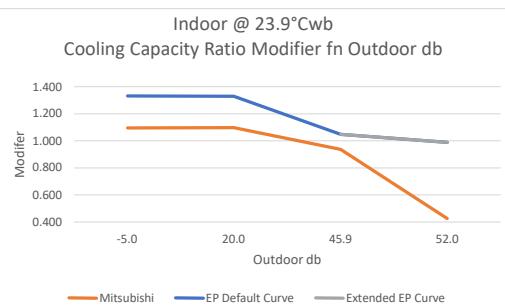
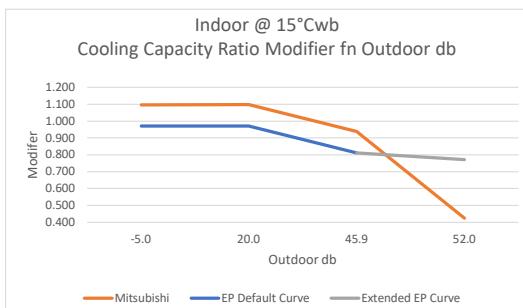
Recommended Minimum Wire Size	AWG [mm]	6/8 [13.3/8.4]
SCCR	kA	5
Refrigerant Piping Diameter	In. [mm]	3/8 [9.52] Brazed (Pipe Size Dependent on Piping Length)
	Gas (Low Pressure)	7/8 [22.2] Brazed
Max. Total Refrigerant Line Length	ft.	3,280 [1,000]
Max. Refrigerant Line Length (Between ODU & IDU)	ft.	541 [165]
Max. Control Wiring Length	ft.	1,640 [500]
Indoor Unit Connectable	Total Capacity	50.0–130.0% of outdoor unit capacity
	Model/Quantity	P04–P96/1.0–24.0
Sound Pressure Levels	dB(A)	56.0/58.5
Sound Power Levels	dB(A)	75.0/77.5
FAN <sup>1</sup>	Type x Quantity	Propeller fan x 2
	Fan Motor Output	0.46+0.46
	Airflow Rate	6,700
	External Static Pressure	In. WG
Compressor Operating Range		Selectable: 0.00, 0.12, 0.24, 0.32, In. WG; factory set to 0 In. WG
Compressor	Type x Quantity	15.0% to 100.0% Inverter scroll hermetic compressor x 1
Refrigerant	Type x Original Charge	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)
	Inverter Circuit (Comp./Fan)	Over-current protection
AHRI Ratings (Ducted/Non-ducted)	EER	11.9/12.3
	IEER	23.5/26.5
	COP	4.0/4.4/4.39

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

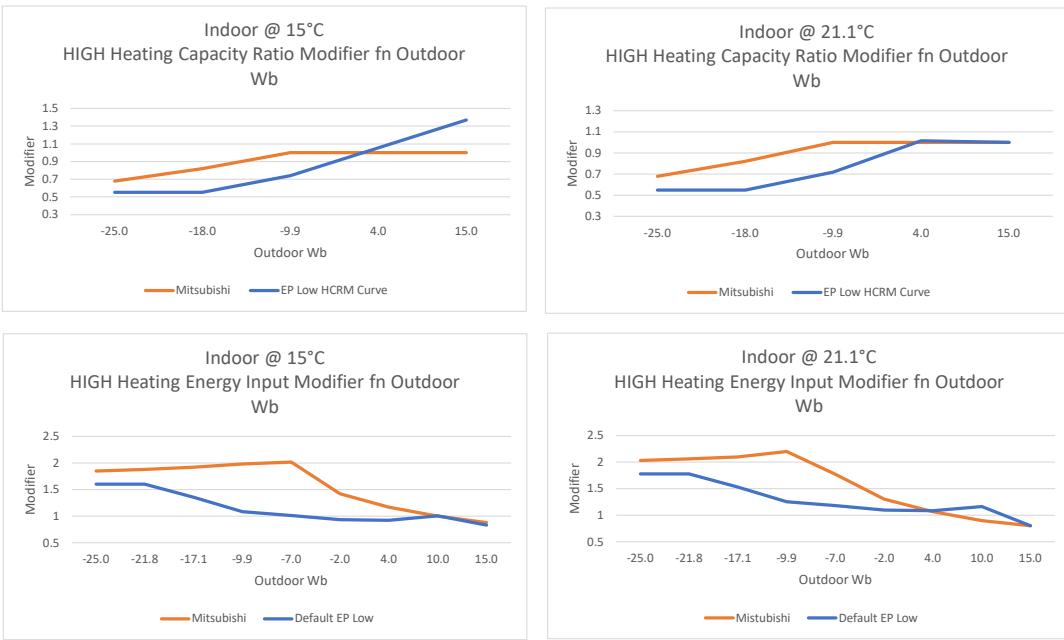
<sup>1</sup>Harsh weather environments may demand performance enhancing equipment. Ask your Mitsubishi Electric representative for more details about your region  
<sup>2</sup>For details on extended cooling operation range down to -10° F DB, see Low Ambient Kit Submittal  
<sup>3</sup>When applying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

Specifications are subject to change without notice.

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**Mitsubishi PUHY-EP120TNU/YNU-A1 NONDUCTED-VRF-OU,!- Name****Mitsubishi PUHY-EP120TNU/YNU-A1 DUCTED-VRF-OU,!- Name****Mitsubishi PUHY-EP120TNU/YNU-A1 NONDUCTED-HIGHHEAT-VRF-OU,!- Name****Mitsubishi PUHY-EP120TNU/YNU-A1 DUCTED-HIGHHEAT-VRF-OU,!- Name****Energy Modeling Assumptions and Comments****Applicable Field**

1	Coefficient of Performance is calculated assuming either Ducted or Non-Ducted indoor units, as specified in the field <b>I- Name</b> . If the project has a mix of ducted and non-ducted indoor units, it is recommended to modify these parameters to suit the project. A proportional calculation based on the ratio of ducted to non-ducted equipment is a good approximation.	I- Gross Rated Cooling COP {W/W}
2	Outdoor unit is installed in location above indoor units (this affects cooling operating outdoor temperature range). If the outdoor unit will be installed below the indoor units, adjust the fields: <b>I- Minimum Outdoor Temperature in Cooling Mode {C} = 0°C</b> <b>I- Maximum Outdoor Temperature in Cooling Mode {C} = 43°C</b>	I- Maximum Outdoor Temperature in Cooling Mode {C}
3	Standard performance mode: Dip switch toggle is off (it will not allow for high heating performance mode). For high heating performance, select the object with field <b>I- Name with HIGHHEAT</b>	I- Heating Capacity Ratio Modifier Function of Low Temperature Curve Name I- Heating Energy Input Ratio Modifier Function of Low Temperature Curve Name
4	Mitsubishi does not publish information on operation below part load. EPLUS default is used. EPLUS Default curve has output of 1: It does not account for operational inefficiencies below minimum plr (compressor cycling).	I- Cooling Part-Load Fraction Correlation Curve Name
5	Mitsubishi does not publish information on operation below part load. EPLUS default is used. EPLUS Default curve has output of 1: It does not account for operational inefficiencies below minimum plr (compressor cycling).	I- Heating Part-Load Fraction Correlation Curve Name
6	No waste heat recovery for this model	I- Heat Pump Waste Heat Recovery
7	30 meters. Adjust this parameter to suit your project conditions	I- Equivalent Piping Length used for Piping Correction Factor in Cooling Mode {m}
8	10 meters: This is not used, see next...↓	I- Vertical Height used for Piping Correction Factor {m}
9	No published derate for height between IDU and ODU, used EPLUS default essentially zero (-0.00036)	I- Piping Correction Factor for Height in Cooling Mode Coefficient {1/m}
10	Mitsubishi docs do not indicate any crank case heater. Mitsubishi has an optional drain pan heater. However, this is currently only for Evaporative condensers in EP. Neither are modeled for this Mitsubishi equipment.	I- Crankcase Heater Power per Compressor {W}
11	Mitsubishi docs do not indicate any dependence on indoor wetbulb temperature.	I- Defrost Energy Input Ratio Modifier Function of Temperature Curve Name
12	Default (null value) for this field will use the weatherfile outdoor conditions. If condenser is located up high, another file may be necessary.	I- Condenser Inlet Node
13	No heat recovery for this model	I- Minimum Outdoor Temperature in Heat Recovery Mode {C} I- Maximum Outdoor Temperature in Heat Recovery Mode {C} I- Heat Recovery Cooling Capacity Modifier Curve Name I- Initial Heat Recovery Cooling Capacity Fraction {W/W} I- Heat Recovery Cooling Capacity Time Constant {hr} I- Heat Recovery Cooling Energy Modifier Curve Name I- Initial Heat Recovery Cooling Energy Fraction {W/W} I- Heat Recovery Cooling Energy Time Constant {hr} I- Heat Recovery Heating Capacity Modifier Curve Name I- Initial Heat Recovery Heating Capacity Fraction {W/W} I- Heat Recovery Heating Capacity Time Constant {hr} I- Heat Recovery Heating Energy Modifier Curve Name I- Initial Heat Recovery Heating Energy Fraction {W/W} I- Heat Recovery Heating Energy Time Constant {hr}

CITYMULTI®

10-TON PUHY-EP120TNU-A1



Job Name:

System Reference:

Date:

208/230V OUTDOOR VRF HEAT PUMP SYSTEM

**UNIT OPTION** Standard Model..... PUHY-EP120TNU-A1**ACCESSORIES**

- Big Foot Stand..... for details see Big Foot Stands submittals
- 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****Unit Type****System**

PUHY-EP120TNU-A1

Cooling Capacity (Nominal)	BTU/H	120,000
Heating Capacity (Nominal)	BTU/H	135,000
Guaranteed Operating Range	Cooling °F [°C]	23-126 [-5.0-52.0]
Heating °F [°C]		-13-60 [-25.0-15.5]
Extended Operating Range	Heating °F [°C]	27.4-60 [-33.0-15.5]
External Dimensions (H x W x D)	In. [mm]	71.5-6 x 48.78 x 29.3/16 (1,818 x 1,240 x 740)
Net Weight	Lbs. [kg]	633 (287)
External Finish		Pre-coated galvanized steel sheet (+powder coating for -BS type) [MUNSELL 3Y 7.8/11 or similar]
Electrical Power Requirements	Voltage, Phase, Hertz, Power Tolerance	208/230V, 3-phase, 60 Hz, ±10%
Minimum Circuit Ampacity	A	55.049.0
Maximum Overcurrent Protection	A	90/80
Recommended Fuse Size	A	60/50
Recommended Minimum Wire Size	AWG [mm]	4/6 [21.2/13.3]
SCCR	kA	5

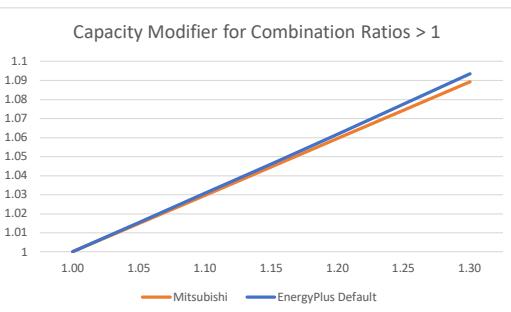
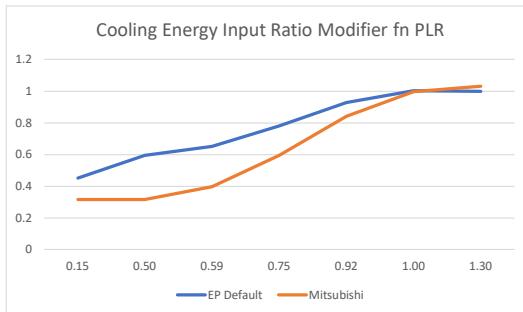
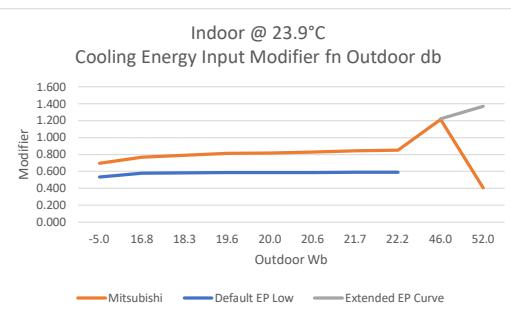
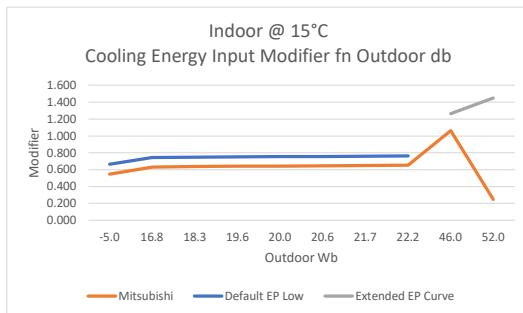
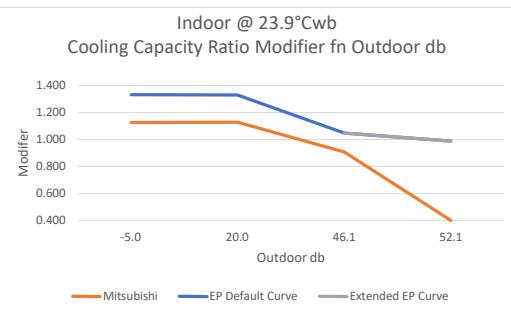
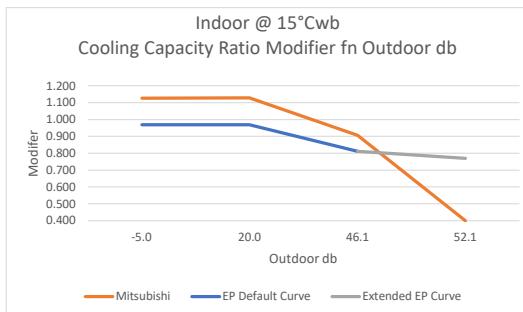
Refrigerant Piping Diameter	Liquid (High Pressure) Gas (Low Pressure)	In. [mm]	3/8 [9.52] Braze (Pipe Size Dependent on Piping Length)
Max. Total Refrigerant Line Length		In. [mm]	1-1/8 [28.58] Braze
Max. Refrigerant Line Length (Between ODU & IDU)		ft.	3,280 [1,000]
Max. Control Wiring Length		ft.	541 [165]
Indoor Unit Connectable	Total Capacity Model/Quantity		50.0~130.0% of outdoor unit capacity P04-P96/1.0~30.0
Sound Pressure Levels		dB(A)	59.5/61.5
Sound Power Levels		dB(A)	79.5/81.0
FAN <sup>1</sup>	Type x Quantity Fan Motor Output Airflow Rate External Static Pressure	kW CFM In. WG	Propeller fan x 2 0.46±0.46 7,750 Selectable: 0.00, 0.12, 0.24, 0.32, In. WG; factory set to 0 In. WG 15.0% to 100.0%
Compressor Operating Range			Inverter scroll hermetic compressor x 1 R410A x 21.0 lbs + 9.0 oz (9.8 kg)
Refrigerant	Type x Original Charge		High pressure protection High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
Protection Devices	High Pressure Protection Inverter Circuit (Comp./Fan)		Over-current protection
AHRI Ratings (Ducted/Non-ducted)	EER IEER COP		10.7/10.9 21.9/24.8 3.8/4.21

NOTES:  
Nominal cooling conditions (Test conditions are based on AHRI 1230-2023)  
Indoor: 80°FDB, 67°FWB, (26.7°CDB, 19.4°CWB), Outdoor: 95°FDB, (35°CDB)  
Nominal heating conditions (Test conditions are based on AHRI 1230-2023)  
Indoor: 70°FDB, (21.1°CDB), Outdoor: 47°FDB, 43°FWB, (8.3°CDB, 6.1°CWB)

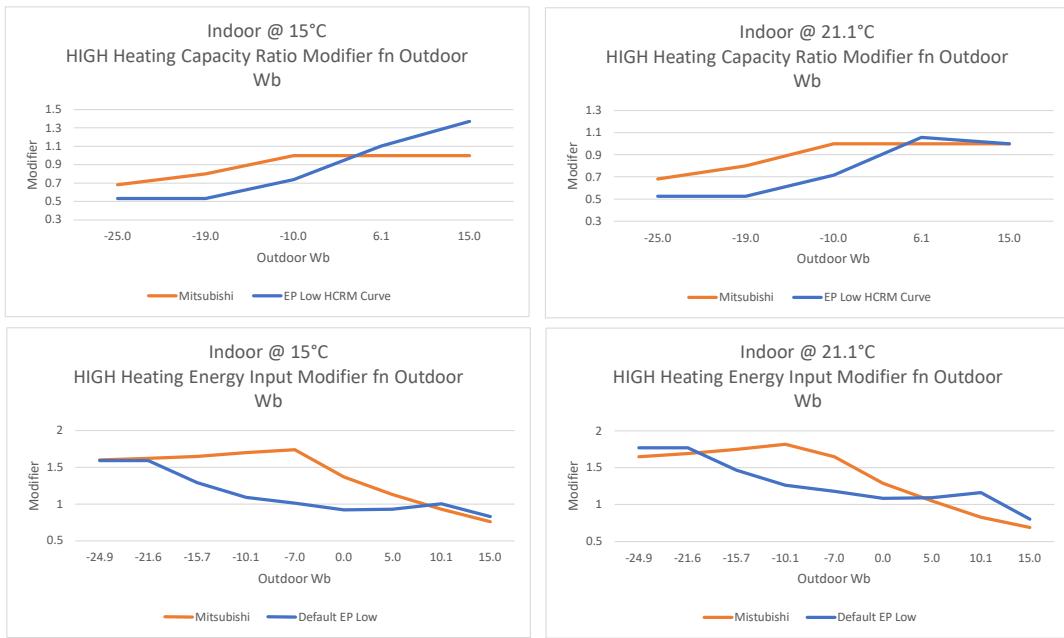
'Harsh weather environments may demand performance enhancing equipment. Ask your Mitsubishi Electric representative for more details about your region.  
<sup>1</sup>For details on extended cooling operation range down to -10°F DB, see Low Ambient Kit Submittal.  
<sup>2</sup>When applying product below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

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**Mitsubishi PUHY-EP144TNU/YNU-A1 NONDUCTED-VRF-OU,!- Name****Mitsubishi PUHY-EP144TNU/YNU-A1 DUCTED-VRF-OU,!- Name****Mitsubishi PUHY-EP144TNU/YNU-A1 NONDUCTED-HIGHHEAT-VRF-OU,!- Name****Mitsubishi PUHY-EP144TNU/YNU-A1 DUCTED-HIGHHEAT-VRF-OU,!- Name****Energy Modeling Assumptions and Comments****Applicable Field**

1	Coefficient of Performance is calculated assuming either Ducted or Non-Ducted indoor units, as specified in the field <b>I- Name</b> . If the project has a mix of ducted and non-ducted indoor units, it is recommended to modify these parameters to suit the project. A proportional calculation based on the ratio of ducted to non-ducted equipment is a good approximation.	I- Gross Rated Cooling COP {W/W}
2	Outdoor unit is installed in location above indoor units (this affects cooling operating outdoor temperature range). If the outdoor unit will be installed below the indoor units, adjust the fields: <b>I- Minimum Outdoor Temperature in Cooling Mode {C} = 0°C</b> <b>I- Maximum Outdoor Temperature in Cooling Mode {C} = 43°C</b>	I- Maximum Outdoor Temperature in Cooling Mode {C}
3	Standard performance mode: Dip switch toggle is off (it will not allow for high heating performance mode). For high heating performance, select the object with field <b>I- Name with HIGHHEAT</b>	I- Heating Capacity Ratio Modifier Function of Low Temperature Curve Name I- Heating Energy Input Ratio Modifier Function of Low Temperature Curve Name
4	Mitsubishi does not publish information on operation below part load. EPLUS default is used. EPLUS Default curve has output of 1: It does not account for operational inefficiencies below minimum plr (compressor cycling).	I- Cooling Part-Load Fraction Correlation Curve Name
5	Mitsubishi does not publish information on operation below part load. EPLUS default is used. EPLUS Default curve has output of 1: It does not account for operational inefficiencies below minimum plr (compressor cycling).	I- Heating Part-Load Fraction Correlation Curve Name
6	No waste heat recovery for this model	I- Heat Pump Waste Heat Recovery
7	30 meters. Adjust this parameter to suit your project conditions	I- Equivalent Piping Length used for Piping Correction Factor in Cooling Mode {m}
8	10 meters: This is not used, see next...↓	I- Vertical Height used for Piping Correction Factor {m}
9	No published derate for height between IDU and ODU, used EPLUS default essentially zero (-0.00036)	I- Piping Correction Factor for Height in Cooling Mode Coefficient {1/m}
10	Mitsubishi docs do not indicate any crank case heater. Mitsubishi has an optional drain pan heater. However, this is currently only for Evaporative condensers in EP. Neither are modeled for this Mitsubishi equipment.	I- Crankcase Heater Power per Compressor {W}
11	Mitsubishi docs do not indicate any dependence on indoor wetbulb temperature.	I- Defrost Energy Input Ratio Modifier Function of Temperature Curve Name
12	Default (null value) for this field will use the weatherfile outdoor conditions. If condenser is located up high, another file may be necessary.	I- Condenser Inlet Node
13	No heat recovery for this model	I- Minimum Outdoor Temperature in Heat Recovery Mode {C} I- Maximum Outdoor Temperature in Heat Recovery Mode {C} I- Heat Recovery Cooling Capacity Modifier Curve Name I- Initial Heat Recovery Cooling Capacity Fraction {W/W} I- Heat Recovery Cooling Capacity Time Constant {hr} I- Heat Recovery Cooling Energy Modifier Curve Name I- Initial Heat Recovery Cooling Energy Fraction {W/W} I- Heat Recovery Cooling Energy Time Constant {hr} I- Heat Recovery Heating Capacity Modifier Curve Name I- Initial Heat Recovery Heating Capacity Fraction {W/W} I- Heat Recovery Heating Capacity Time Constant {hr} I- Heat Recovery Heating Energy Modifier Curve Name I- Initial Heat Recovery Heating Energy Fraction {W/W} I- Heat Recovery Heating Energy Time Constant {hr}

CITYMULTI®

12-TON PUHY-EP144TNU-A1

Job Name:  
System Reference:

Date:

208/230V OUTDOOR VRF HEAT PUMP SYSTEM

**UNIT OPTION** Standard Model.....PUHY-EP144TNU-A1**ACCESSORIES**

- Big Foot Stand.....for details see Big Foot Stands submittal
- 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****Unit Type****System**

PUHY-EP144TNU-A1

Cooling Capacity (Nominal)	BTU/H	144,000
Heating Capacity (Nominal)	BTU/H	160,000
Guaranteed Operating Range	Cooling Heating	-9°F [-5.0°-52.0] °F [°C] -13°-60 [25.0°-15.5] °F [°C]
Extended Operating Range	Heating	-27.4°-60 [-33.0°-15.5] °F [°C]
External Dimensions (H x W x D)	In. [mm]	71-5/8 x 45-1/2 x 29-3/16 [1,818 x 1,146 x 740] mm [308]
Net Weight	Lbs. [kg]	
External Finish		Pre-coated galvanized steel sheet (+powder coating for -BS type) [MUNSELL 3Y 7.8L 1.0 or similar]
Electrical Power Requirements	Voltage, Phase, Hertz, Power Tolerance	208/230V, 3-phase, 60 Hz, ±10% 60/60.0
Minimum Circuit Ampacity	A	100/100
Maximum Overcurrent Protection	A	60/60
Recommended Fuse Size	AWG [mm]	4/4 [21.2/21.2]
Recommended Minimum Wire Size	kA	5
SCCR	In. /mm	1/2 [12.7] Braze
Liquid (High Pressure)		

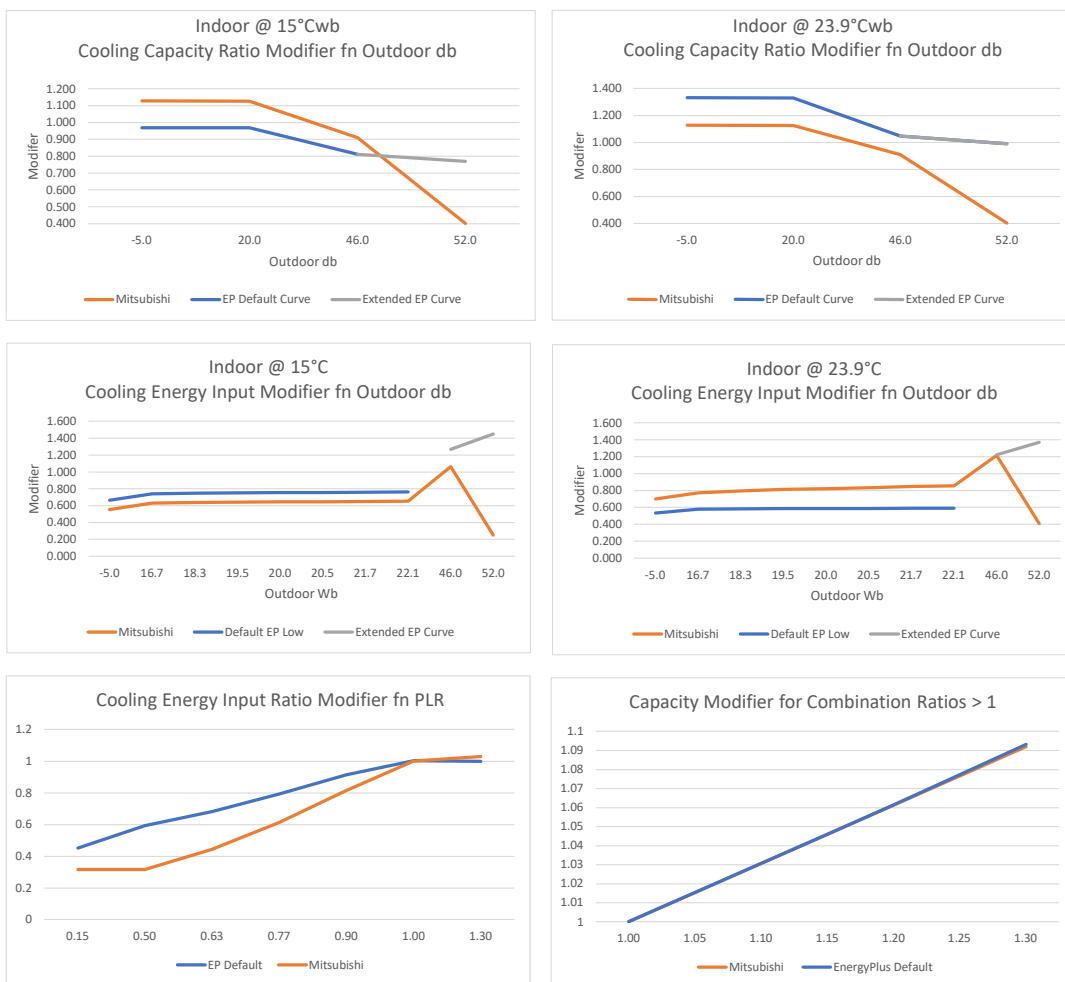
Refrigerant Piping Diameter	Gas (Low Pressure)	In. [mm]	1-1/8 [28.58] Brazed
Max. Total Refrigerant Line Length		FL	3,280 [1,000]
Max. Refrigerant Line Length (Between ODU & IDU)		FL	541 [165]
Max. Control Wiring Length		FL	1,640 [500]
Indoor Unit Connectable	Total Capacity Model/Quantity		50.0-130.0% of outdoor unit capacity P04-P961.0-36.0
Sound Pressure Levels	dB(A)		62.0/64.5
Sound Power Levels	dB(A)		84.0/83.5
FAN <sup>i</sup>	Type x Quantity Fan Motor Output Airflow Rate	kW CFM	Propeller fan x 2 0.46±0.46 9,200
	External Static Pressure	In. WG	Selectable: 0.00, 0.12, 0.24, 0.32 In. WG; factory set to 0 In. WG; 15.0% to 100.0%
Compressor Operating Range	Type x Quantity		Inverter scroll hermetic compressor x 1
Compressor	Type x Original Charge		R410A x 23.0 lbs + 12.0 oz [10.8 kg]
Refrigerant	High Pressure Protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
Protection Devices	Inverter Circuit (Comp./Fan)		Over-current protection
EER			10.5±10.7
IEER			21.2/23.2
AHRI Ratings (Ducted/Non-ducted)	COP		3.66/4.01

NOTES:  
Nominal cooling conditions (Test conditions are based on AHRI 1230-2023)  
Indoor: 80°F D.B./67°F W.B. (28.7°C D.B./19.4°C W.B.), Outdoor: 95°F D.B. (35°C D.B.)  
Nominal heating conditions (Test conditions are based on AHRI 1230-2023)  
Indoor: 70°F D.B. (21.1°C D.B.), Outdoor: 47°F D.B./43°F W.B. (8.3°C D.B./6.1°C W.B.)

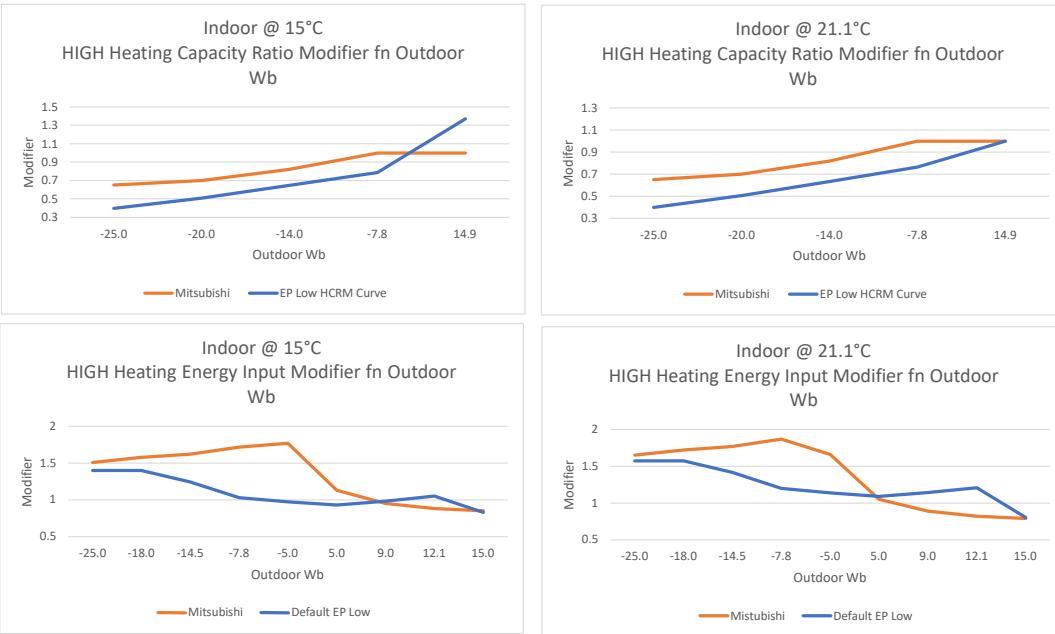
<sup>i</sup>Harsh weather environments may demand performance enhancing equipment. Ask your Mitsubishi Electric representative for more details about your region.  
<sup>j</sup>For details on extended cooling operation range down to -10° F DB, see Low Ambient Kit Submittal.  
<sup>k</sup>When applying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

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### Mitsubishi PUHY-EP168TNU/YNU-A1 NONDUCTED-VRF-OU,!- Name

### Mitsubishi PUHY-EP168TNU/YNU-A1 DUCTED-VRF-OU,!- Name

### Mitsubishi PUHY-EP168TNU/YNU-A1 NONDUCTED-HIGHHEAT-VRF-OU,!- Name

### Mitsubishi PUHY-EP168TNU/YNU-A1 DUCTED-HIGHHEAT-VRF-OU,!- Name

#### Energy Modeling Assumptions and Comments

#### Applicable Field

1	Coefficient of Performance is calculated assuming either Ducted or Non-Ducted indoor units, as specified in the field I- Name . If the project has a mix of ducted and non-ducted indoor units, it is recommended to modify these parameters to suit the project. A proportional calculation based on the ratio of ducted to non-ducted equipment is a good approximation.	I- Gross Rated <u>Cooling/Heating COP (W/W)</u>
2	Outdoor unit is installed in location above indoor units (this affects cooling operating outdoor temperature range). If the outdoor unit will be installed below the indoor units, adjust the fields: I- Minimum Outdoor Temperature in Cooling Mode {C} = 0°C I- Maximum Outdoor Temperature in Cooling Mode {C} = 43°C	I- Maximum Outdoor Temperature in Cooling Mode {C}
3	Standard performance mode: Dip switch toggle is off (it will not allow for high heating performance mode). For high heating performance, select the object with field I- Name with HIGHHEAT	I- Heating Capacity Ratio Modifier Function of Low Temperature Curve Name I- Heating Energy Input Ratio Modifier Function of Low Temperature Curve Name
4	Mitsubishi does not publish information on operation below part load. EPLUS default is used. EPLUS Default curve has output of 1: It does not account for operational inefficiencies below minimum plr (compressor cycling).	I- Cooling Part-Load Fraction Correlation Curve Name
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6	No waste heat recovery for this model	I- Heat Pump Waste Heat Recovery
7	30 meters. Adjust this parameter to suit your project conditions	I- Equivalent Piping Length used for Piping Correction Factor in Cooling Mode {m}
8	10 meters: This is not used, see next...↓	I- Vertical Height used for Piping Correction Factor {m}
9	No published derate for height between IDU and ODU, used EPLUS default essentially zero (-0.00036)	I- Piping Correction Factor for Height in Cooling Mode Coefficient {1/m}
10	Mitsubishi docs do not indicate any crank case heater. Mitsubishi has an optional drain pan heater. However, this is currently only for Evaporative condensers in EP. Neither are modeled for this Mitsubishi equipment.	I- Crankcase Heater Power per Compressor {W}
11	Mitsubishi docs do not indicate any dependence on indoor wetbulb temperature.	I- Defrost Energy Input Ratio Modifier Function of Temperature Curve Name
12	Default (null value) for this field will use the weatherfile outdoor conditions. If condenser is located up high, another file may be necessary.	I- Condenser Inlet Node
13	No heat recovery for this model	I- Minimum Outdoor Temperature in Heat Recovery Mode {C} I- Maximum Outdoor Temperature in Heat Recovery Mode {C} I- Heat Recovery Cooling Capacity Modifier Curve Name I- Initial Heat Recovery Cooling Capacity Fraction {W/W} I- Heat Recovery Cooling Capacity Time Constant {hr} I- Heat Recovery Cooling Energy Modifier Curve Name I- Initial Heat Recovery Cooling Energy Fraction {W/W} I- Heat Recovery Cooling Energy Time Constant {hr} I- Heat Recovery Heating Capacity Modifier Curve Name I- Initial Heat Recovery Heating Capacity Fraction {W/W} I- Heat Recovery Heating Capacity Time Constant {hr} I- Heat Recovery Heating Energy Modifier Curve Name I- Initial Heat Recovery Heating Energy Fraction {W/W} I- Heat Recovery Heating Time Constant {hr}

CITYMULTI®
14-TON PUHY-EP168TNU-A1

Job Name:		Date:																																						
System Reference:																																								
<b>208/230V OUTDOOR VRF HEAT PUMP SYSTEM</b> <div style="text-align: center; margin-top: 10px;"> </div>																																								
<b>UNIT OPTION</b> <input type="checkbox"/> Standard Model ..... PUHY-EP168TNU-A1																																								
<b>ACCESSORIES</b> <input type="checkbox"/> Big Foot Stand ..... for details see Big Foot Stands submittal <input type="checkbox"/> Header Kit ..... for details see Pipe Accessories Submittal <input type="checkbox"/> Joint Kit ..... for details see Pipe Accessories Submittal <input type="checkbox"/> Low Ambient Kit ..... for details see Low Ambient Kit Submittal <input type="checkbox"/> Panel Heater Kit ..... for details see Panel Heater Kit Submittal <input type="checkbox"/> Snow/Hail Guards Kit ..... for details see Snow/Hail Guards Kit Submittal																																								
<b>Specifications</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Unit Type</th> <th style="width: 40%;">System</th> </tr> </thead> <tbody> <tr> <td>Cooling Capacity (Nominal)</td> <td>BTU/H</td> <td>168,000</td> </tr> <tr> <td>Heating Capacity (Nominal)</td> <td>BTU/H</td> <td>188,000</td> </tr> <tr> <td>Guaranteed Operating Range</td> <td>           Cooling °F [°C]            Heating °F [°C]         </td> <td>           23-126 [-5.0-52.0]            -13-60 [-25.0-15.5]         </td> </tr> <tr> <td>Extended Operating Range</td> <td>Heating °F [°C]</td> <td>-27.4-60 [-33.0-15.5]</td> </tr> <tr> <td>External Dimensions (H x W x D)</td> <td>In. [mm]</td> <td>71.5/8 x 68-15/16 x 29-3/16 [1,816 x 1,750 x 740]</td> </tr> <tr> <td>Net Weight</td> <td>Lbs. [kg]</td> <td>757 [343]</td> </tr> <tr> <td>External Finish</td> <td colspan="2">Pre-coated galvanized steel sheet (+powder coating for -BS type) [MUNSELL 3Y 7.8/1.1 or similar]</td> </tr> <tr> <td>Electrical Power Requirements</td> <td colspan="2">Voltage, Phase, Hertz, Power Tolerance 208/230V, 3-phase, 60 Hz, ±10%</td> </tr> <tr> <td>Minimum Circuit Ampacity</td> <td colspan="2">A 70.0/7.0</td> </tr> <tr> <td>Maximum Overcurrent Protection</td> <td colspan="2">A 110/10</td> </tr> <tr> <td>Recommended Fuse Size</td> <td colspan="2">A 70/70</td> </tr> <tr> <td>Recommended Minimum Wire Size</td> <td colspan="2">AWG [mm] 4/4 [21.2/21.2]</td> </tr> </tbody> </table>			Unit Type	System	Cooling Capacity (Nominal)	BTU/H	168,000	Heating Capacity (Nominal)	BTU/H	188,000	Guaranteed Operating Range	Cooling °F [°C] Heating °F [°C]	23-126 [-5.0-52.0] -13-60 [-25.0-15.5]	Extended Operating Range	Heating °F [°C]	-27.4-60 [-33.0-15.5]	External Dimensions (H x W x D)	In. [mm]	71.5/8 x 68-15/16 x 29-3/16 [1,816 x 1,750 x 740]	Net Weight	Lbs. [kg]	757 [343]	External Finish	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 208/230V, 3-phase, 60 Hz, ±10%		Minimum Circuit Ampacity	A 70.0/7.0		Maximum Overcurrent Protection	A 110/10		Recommended Fuse Size	A 70/70		Recommended Minimum Wire Size	AWG [mm] 4/4 [21.2/21.2]	
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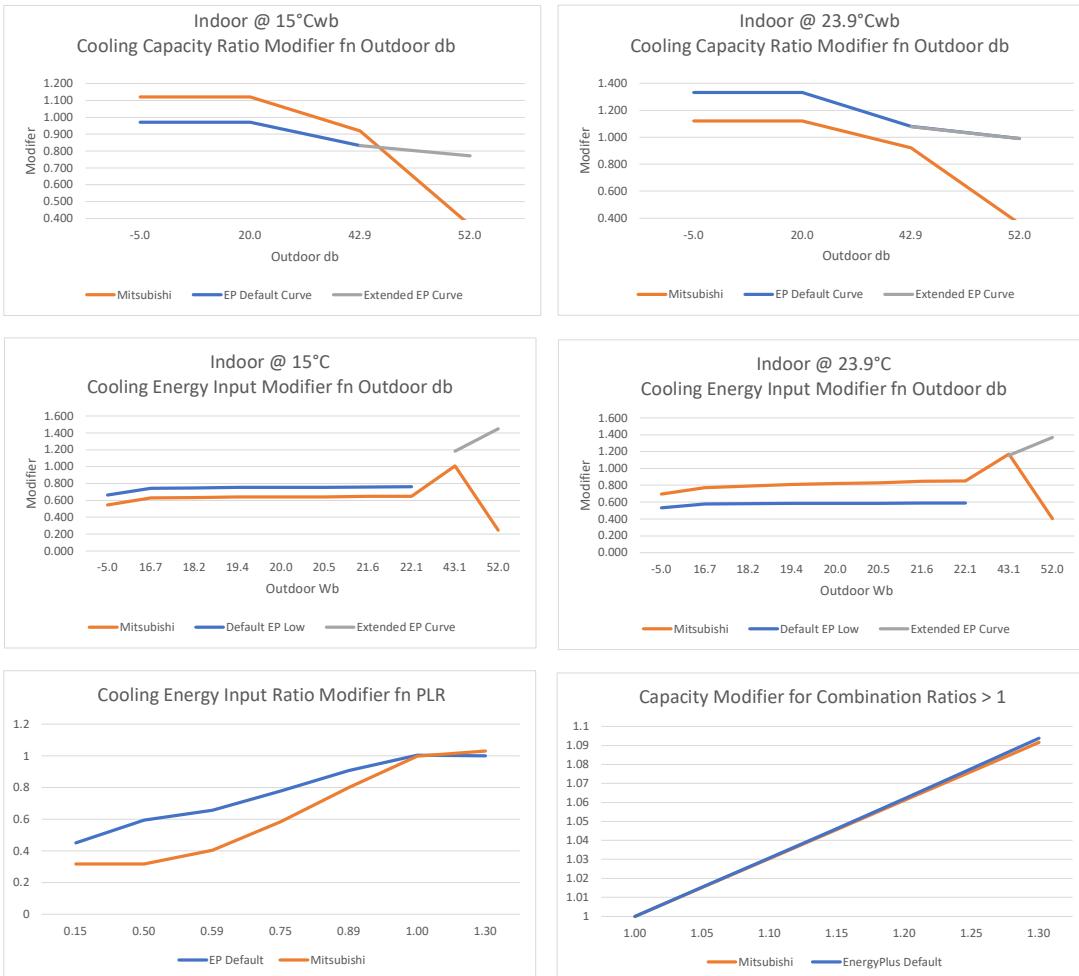
SCCR		kA	5
Refrigerant Piping Diameter	Liquid (High Pressure) Gas (Low Pressure)	In. [mm] In. [mm]	5/8 [15.88] Brazed 1-1/8 [28.58] Brazed
Max. Total Refrigerant Line Length		FL	3,280 [1,000]
Max. Refrigerant Line Length (Between ODU & IDU)		FL	541 [165]
Max. Control Wiring Length		FL	1,640 [500]
Indoor Unit Connectable	Total Capacity Model/Quantity		50.0~130.0% of outdoor unit capacity P04~P96 1.0~42.0
Sound Pressure Levels		dB(A)	60.0/81.5
Sound Power Levels		dB(A)	81.0/80.5
FAN <sup>1</sup>	Type x Quantity Fan Motor Output Airflow Rate External Static Pressure	kW CFM In. WG	Propeller fan x 2 0.92±0.92 10,600 Selectable: 0.00, 0.12, 0.24, 0.32, In. WG; factory set to 0 in. WG 15.0% to 100.0%
Compressor Operating Range			Inverter scroll hermetic compressor x 1
Compressor	Type x Quantity		R410A x 23.0 lbs + 12.0 oz (10.8 kg)
Refrigerant	Type x Original Charge		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
Protection Devices	High Pressure Protection Inverter Circuit (Comp./Fan)		Over-current protection
AHRI Ratings (Ducted/Non-ducted)	EER IIEER COP		10.1/10.1 20.4/23.2 3.6/4.11

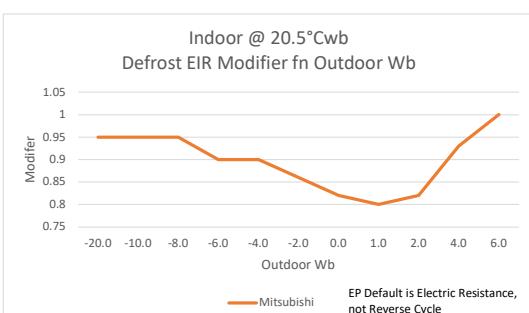
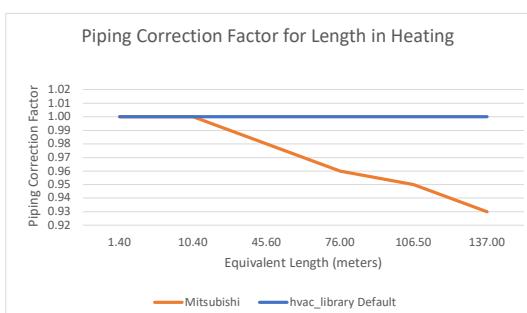
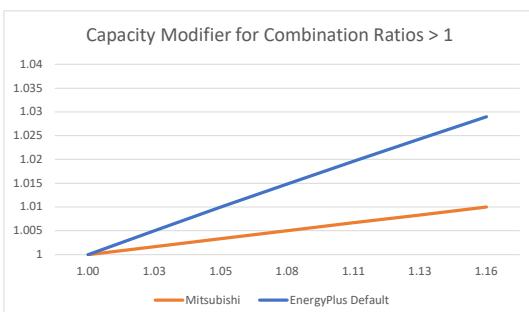
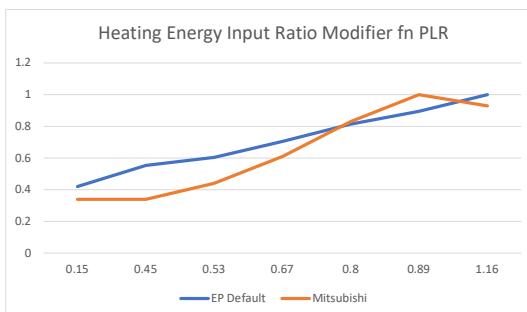
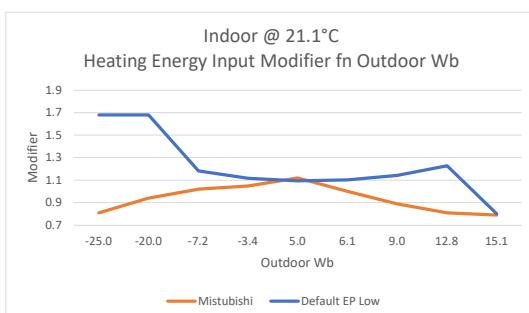
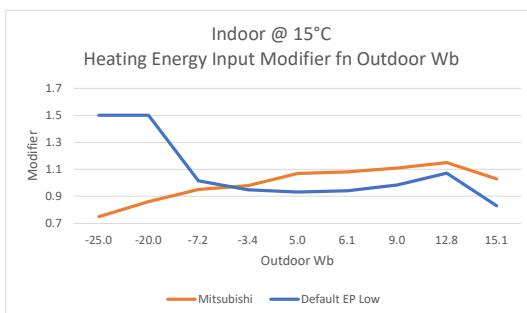
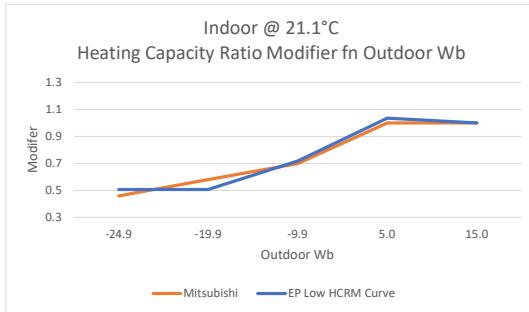
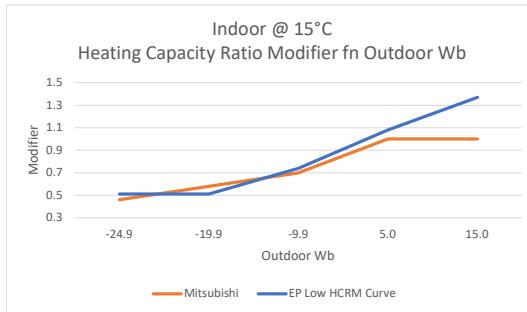
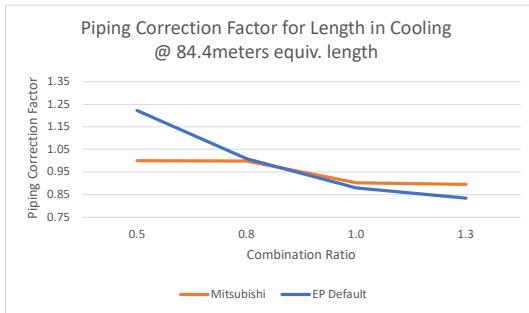
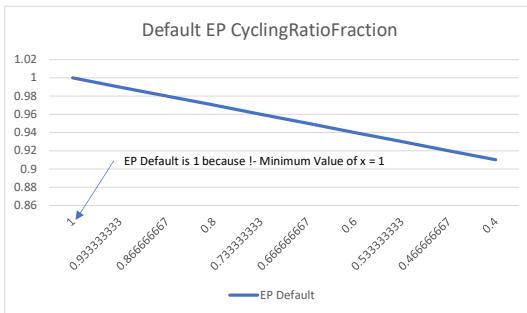
NOTES:  
Nominal cooling conditions (Test conditions are based on AHRI 1230-2023)  
Indoor: 80°FDB, 67°FWB, (26.7°CDB, 19.4°CWB), Outdoor: 95°FDB, (35°CDB)  
Nominal heating conditions (Test conditions are based on AHRI 1230-2023)  
Indoor: 70°FDB, (21.1°CDB), Outdoor: 47°FDB, 43°FWB, (8.3°CDB, 6.1°CWB)

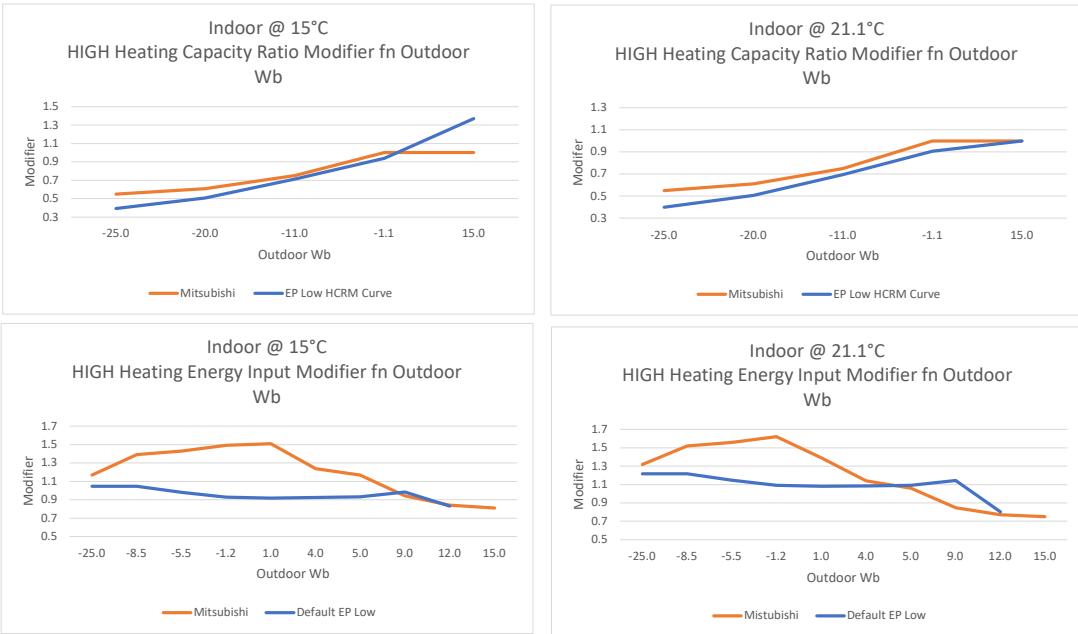
<sup>1</sup>Harsh weather environments may demand performance enhancing equipment. Ask your Mitsubishi Electric representative for more details about your region.  
<sup>2</sup>For details on extended cooling operation range down to -10°F DB, see Low Ambient Kit Submittal.  
<sup>3</sup>When applying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

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**Mitsubishi PUHY-EP192TNU/YNU-A1 NONDUCTED-VRF-OU,!- Name****Mitsubishi PUHY-EP192TNU/YNU-A1 DUCTED-VRF-OU,!- Name****Mitsubishi PUHY-EP192TNU/YNU-A1 NONDUCTED-HIGHHEAT-VRF-OU,!- Name****Mitsubishi PUHY-EP192TNU/YNU-A1 DUCTED-HIGHHEAT-VRF-OU,!- Name****Energy Modeling Assumptions and Comments****Applicable Field**

1	Coefficient of Performance is calculated assuming either Ducted or Non-Ducted indoor units, as specified in the field I- Name . If the project has a mix of ducted and non-ducted indoor units, it is recommended to modify these parameters to suit the project. A proportional calculation based on the ratio of ducted to non-ducted equipment is a good approximation.	I- Gross Rated <u>Cooling/Heating COP (W/W)</u>
2	Outdoor unit is installed in location above indoor units (this affects cooling operating outdoor temperature range). If the outdoor unit will be installed below the indoor units, adjust the fields: I- Minimum Outdoor Temperature in Cooling Mode {C} = 0°C I- Maximum Outdoor Temperature in Cooling Mode {C} = 43°C	I- Maximum Outdoor Temperature in Cooling Mode {C}
3	Standard performance mode: Dip switch toggle is off (it will not allow for high heating performance mode). For high heating performance, select the object with field I- Name with HIGHHEAT	I- Heating Capacity Ratio Modifier Function of Low Temperature Curve Name I- Heating Energy Input Ratio Modifier Function of Low Temperature Curve Name
4	Mitsubishi does not publish information on operation below part load. EPLUS default is used. EPLUS Default curve has output of 1: It does not account for operational inefficiencies below minimum plr (compressor cycling).	I- Cooling Part-Load Fraction Correlation Curve Name
5	Mitsubishi does not publish information on operation below part load. EPLUS default is used. EPLUS Default curve has output of 1: It does not account for operational inefficiencies below minimum plr (compressor cycling).	I- Heating Part-Load Fraction Correlation Curve Name
6	No waste heat recovery for this model	I- Heat Pump Waste Heat Recovery
7	30 meters. Adjust this parameter to suit your project conditions	I- Equivalent Piping Length used for Piping Correction Factor in Cooling Mode {m}
8	10 meters: This is not used, see next...↓	I- Vertical Height used for Piping Correction Factor {m}
9	No published derate for height between IDU and ODU, used EPLUS default essentially zero (-0.00036)	I- Piping Correction Factor for Height in Cooling Mode Coefficient {1/m}
10	Mitsubishi docs do not indicate any crank case heater. Mitsubishi has an optional drain pan heater. However, this is currently only for Evaporative condensers in EP. Neither are modeled for this Mitsubishi equipment.	I- Crankcase Heater Power per Compressor {W}
11	Mitsubishi docs do not indicate any dependence on indoor wetbulb temperature.	I- Defrost Energy Input Ratio Modifier Function of Temperature Curve Name
12	Default (null value) for this field will use the weatherfile outdoor conditions. If condenser is located up high, another file may be necessary.	I- Condenser Inlet Node
13	No heat recovery for this model	I- Minimum Outdoor Temperature in Heat Recovery Mode {C} I- Maximum Outdoor Temperature in Heat Recovery Mode {C} I- Heat Recovery Cooling Capacity Modifier Curve Name I- Initial Heat Recovery Cooling Capacity Fraction {W/W} I- Heat Recovery Cooling Capacity Time Constant {hr} I- Heat Recovery Cooling Energy Modifier Curve Name I- Initial Heat Recovery Cooling Energy Fraction {W/W} I- Heat Recovery Cooling Energy Time Constant {hr} I- Heat Recovery Heating Capacity Modifier Curve Name I- Initial Heat Recovery Heating Capacity Fraction {W/W} I- Heat Recovery Heating Capacity Time Constant {hr} I- Heat Recovery Heating Energy Modifier Curve Name I- Initial Heat Recovery Heating Energy Fraction {W/W} I- Heat Recovery Heating Time Constant {hr}

CITYMULTI®

16-TON PUHY-EP192TNU-A1



Job Name:

System Reference:

Date:

208/230V OUTDOOR VRF HEAT PUMP SYSTEM

**UNIT OPTION**

- Standard Model
- Big Foot Stand
- Header Kit
- Joint Kit
- Low Ambient Kit
- Panel Heater Kit
- Snow/Hail Guards Kit

PUHY-EP192TNU-A1

for details see Big Foot Stands submittals  
 for details see Pipe Accessories Submittal  
 for details see Pipe Accessories Submittal  
 for details see Low Ambient Kit Submittal  
 for details see Panel Heater Kit Submittal  
 for details see Snow/Hail Guards Kit Submittal

**Specifications****Unit Type****System****PUHY-EP192TNU-A1**

Cooling Capacity (Nominal)	BTU/H	192,000
Heating Capacity (Nominal)	BTU/H	215,000
Guaranteed Operating Range	Cooling Heating	23–126 [-5.0–52.0] -13–60 [-25.0–15.5]
Extended Operating Range	Heating	-27.4–60 [-33.0–15.5]
External Dimensions (H x W x D)	In. [mm]	71.5/8 x 68-15/16 x 29-3/16 [1,818 x 1,750 x 740]
Net Weight	Lbs. [kg]	757 [343]
External Finish		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	208/230V, 3-phase, 60 Hz, ±10%
Minimum Circuit Ampacity	A	80/74.0
Maximum Overcurrent Protection	A	125/125
Recommended Fuse Size	A	80/80
Recommended Minimum Wire Size	AWG [mm]	2/2 [33.6/33.6]

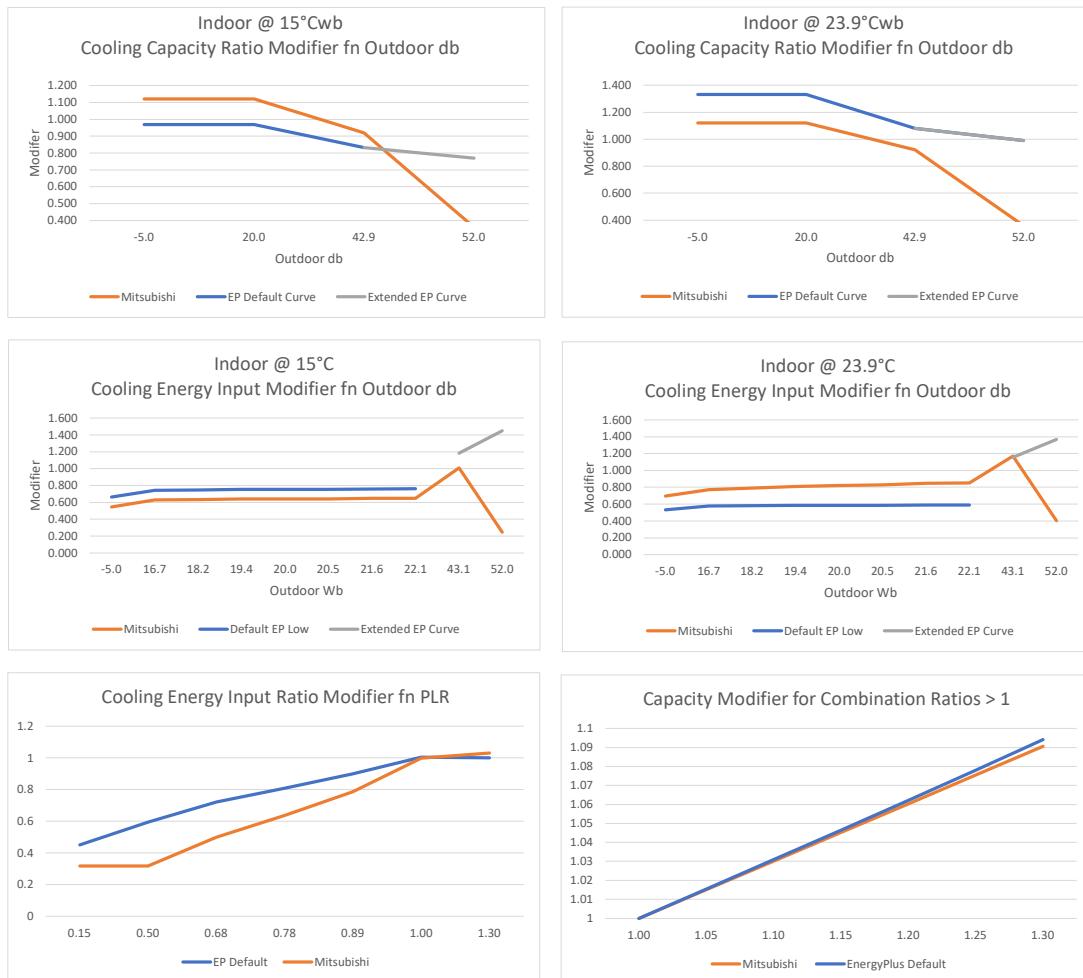
SCCR		kA	5
Refrigerant Piping Diameter	Liquid (High Pressure) Gas (Low Pressure)	In. [mm] In. [mm]	5/8 [15.88] Braze 1-1/8 [28.58] Braze
Max. Total Refrigerant Line Length		Ft.	3,280 [1,000]
Max. Refrigerant Line Length (Between ODU & IDU)		Ft.	541 [165]
Max. Control Wiring Length		Ft.	1,640 [500]
Indoor Unit Connectable	Total Capacity Model/Quantity		50.0-130.0% of outdoor unit capacity P04-P96/1.0-48.0
Sound Pressure Levels		dB(A)	61.5/63.5
Sound Power Levels		dB(A)	81.0/80.5
FAN <sup>a</sup>	Type x Quantity Fan Motor Output Airflow Rate	kW CFM	Propeller fan x 2 0.92+0.92 12,700
	External Static Pressure	In. WG	Selectable: 0.00, 0.12, 0.24, 0.32, In. WG; factory set to 0 In. WG; 15.0% to 100.0%
Compressor Operating Range			Inverter scroll hermetic compressor x 1
Compressor	Type x Quantity		R410A x 26.0 lbs + 1.0 oz [11.8 kg]
Refrigerant	Type x Original Charge		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
Protection Devices	High Pressure Protection Inverter Circuit (Comp./Fan)		Over-current protection
EER			10.2/10.3
IIEER			21.0/22.4
COP			3.51/4.04

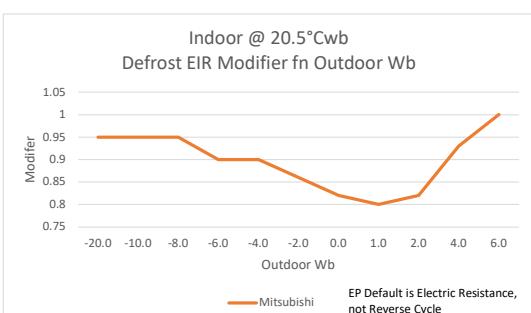
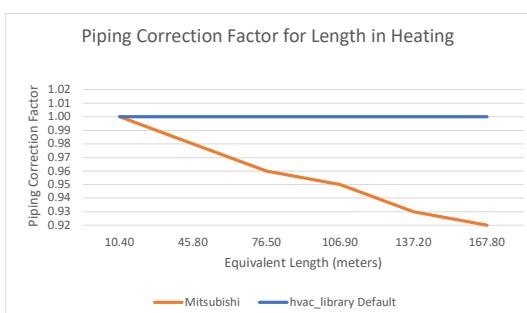
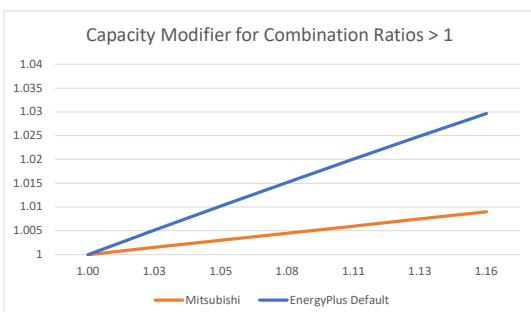
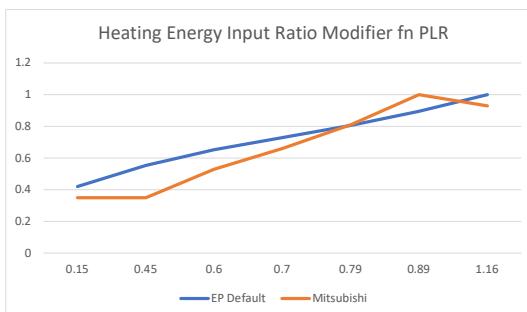
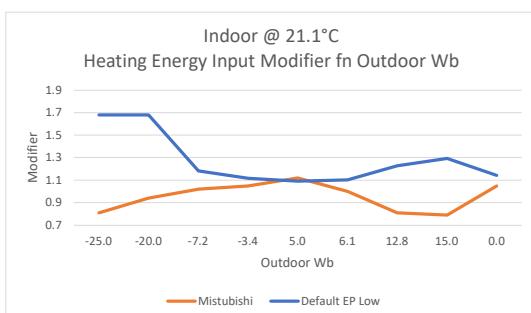
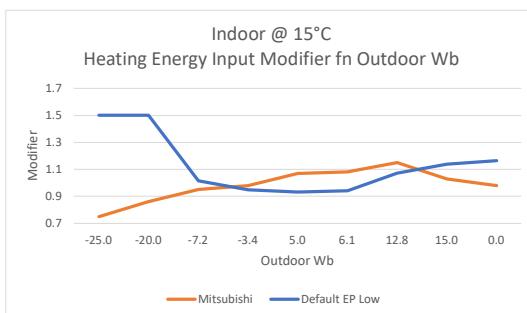
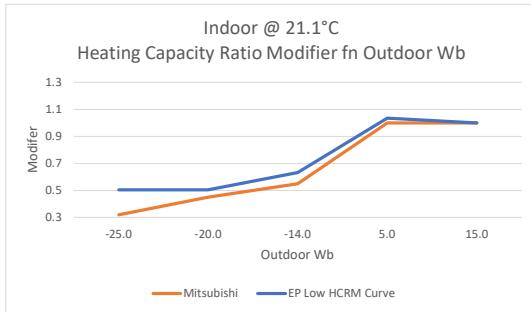
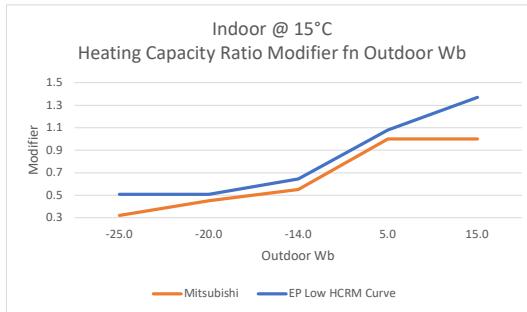
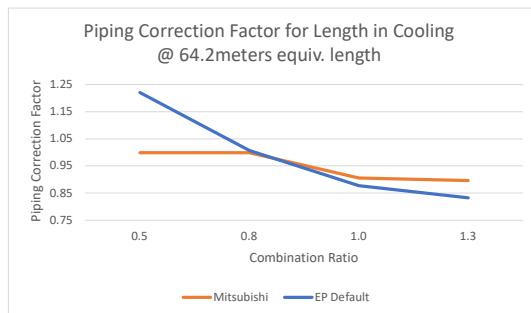
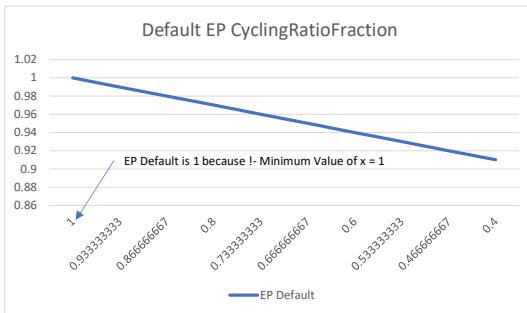
NOTES:  
Nominal cooling conditions (Test conditions are based on AHRI 1230-2023)  
Indoor: 80°FD.B./67°FW.B. (26.7°CDB./19.4°CWB.), Outdoor: 95°FD.B. (35°CDB.)  
Nominal heating conditions (Test conditions are based on AHRI 1230-2023)  
Indoor: 70°FD.B. (21.1°CDB.), Outdoor: 47°FD.B./43°FW.B. (8.3°CDB./6.1°CWB.)

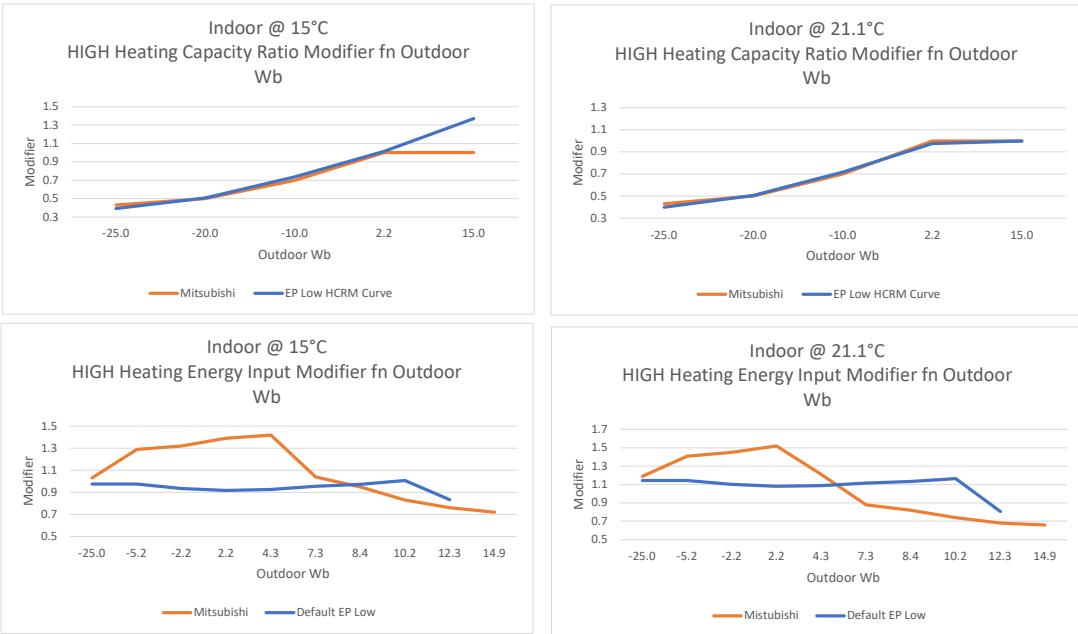
<sup>a</sup>Harsh weather environments may demand performance enhancing equipment. Ask your Mitsubishi Electric representative for more details about your region.  
<sup>b</sup>For details on extended cooling operation range down to -10° F DB, see Low Ambient Kit Submittal  
<sup>c</sup>When applying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

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### Mitsubishi PUHY-EP192TSNU/YSNU-A1 NONDUCTED-VRF-OU,!- Name

### Mitsubishi PUHY-EP192TSNU/YSNU-A1 DUCTED-VRF-OU,!- Name

### Mitsubishi PUHY-EP192TSNU/YSNU-A1 NONDUCTED-HIGHHEAT-VRF-OU,!- Name

### Mitsubishi PUHY-EP192TSNU/YSNU-A1 DUCTED-HIGHHEAT-VRF-OU,!- Name

#### Energy Modeling Assumptions and Comments

#### Applicable Field

1	Coefficient of Performance is calculated assuming either Ducted or Non-Ducted indoor units, as specified in the field I- Name . If the project has a mix of ducted and non-ducted indoor units, it is recommended to modify these parameters to suit the project. A proportional calculation based on the ratio of ducted to non-ducted equipment is a good approximation.	I- Gross Rated <u>Cooling/Heating COP (W/W)</u>
2	Outdoor unit is installed in location above indoor units (this affects cooling operating outdoor temperature range). If the outdoor unit will be installed below the indoor units, adjust the fields: I- Minimum Outdoor Temperature in Cooling Mode {C} = 0°C I- Maximum Outdoor Temperature in Cooling Mode {C} = 43°C	I- Maximum Outdoor Temperature in Cooling Mode {C}
3	Standard performance mode: Dip switch toggle is off (it will not allow for high heating performance mode). For high heating performance, select the object with field I- Name with HIGHHEAT	I- Heating Capacity Ratio Modifier Function of Low Temperature Curve Name I- Heating Energy Input Ratio Modifier Function of Low Temperature Curve Name
4	Mitsubishi does not publish information on operation below part load. EPLUS default is used. EPLUS Default curve has output of 1: It does not account for operational inefficiencies below minimum plr (compressor cycling).	I- Cooling Part-Load Fraction Correlation Curve Name
5	Mitsubishi does not publish information on operation below part load. EPLUS default is used. EPLUS Default curve has output of 1: It does not account for operational inefficiencies below minimum plr (compressor cycling).	I- Heating Part-Load Fraction Correlation Curve Name
6	No waste heat recovery for this model	I- Heat Pump Waste Heat Recovery
7	30 meters. Adjust this parameter to suit your project conditions	I- Equivalent Piping Length used for Piping Correction Factor in Cooling Mode {m}
8	10 meters: This is not used, see next...↓	I- Vertical Height used for Piping Correction Factor {m}
9	No published derate for height between IDU and ODU, used EPLUS default essentially zero (-0.00036)	I- Piping Correction Factor for Height in Cooling Mode Coefficient {1/m}
10	Mitsubishi docs do not indicate any crank case heater. Mitsubishi has an optional drain pan heater. However, this is currently only for Evaporative condensers in EP. Neither are modeled for this Mitsubishi equipment.	I- Crankcase Heater Power per Compressor {W}
11	Mitsubishi docs do not indicate any dependence on indoor wetbulb temperature.	I- Defrost Energy Input Ratio Modifier Function of Temperature Curve Name
12	Default (null value) for this field will use the weatherfile outdoor conditions. If condenser is located up high, another file may be necessary.	I- Condenser Inlet Node
13	No heat recovery for this model	I- Minimum Outdoor Temperature in Heat Recovery Mode {C} I- Maximum Outdoor Temperature in Heat Recovery Mode {C} I- Heat Recovery Cooling Capacity Modifier Curve Name I- Initial Heat Recovery Cooling Capacity Fraction {W/W} I- Heat Recovery Cooling Capacity Time Constant {hr} I- Heat Recovery Cooling Energy Modifier Curve Name I- Initial Heat Recovery Cooling Energy Fraction {W/W} I- Heat Recovery Cooling Energy Time Constant {hr} I- Heat Recovery Heating Capacity Modifier Curve Name I- Initial Heat Recovery Heating Capacity Fraction {W/W} I- Heat Recovery Heating Capacity Time Constant {hr} I- Heat Recovery Heating Energy Modifier Curve Name I- Initial Heat Recovery Heating Energy Fraction {W/W} I- Heat Recovery Heating Time Constant {hr}

CITYMULTI®

16-TON PUHY-EP192TSNU-A1



Job Name:  
System Reference:

Date:

#### 208/230V OUTDOOR VRF HEAT PUMP SYSTEM



#### UNIT OPTION

Standard Model ..... PUHY-EP192TSNU-A1

#### ACCESSORIES

- Big Foot Stand ..... for details see Big Foot Stands submittals
- Twinning Kit (Required) ..... CMY-Y100CBK3R1
- 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 Unit Type

#### System PUHY-EP192TSNU-A1

Cooling Capacity (Nominal)	BTU/H	192,000
Heating Capacity (Nominal)	BTU/H	216,000
Net Weight	Lbs. [kg]	1,244 [564]
Refrigerant Piping Diameter	Liquid (High Pressure) Gas (Low Pressure)	In. [mm] In. [mm]
Max. Total Refrigerant Line Length		5/8 [15.88] Braze
Max. Refrigerant Line Length (Between ODU & IDU)		1-1/8 [28.58] Braze
Max. Control Wiring Length		3,280 [1,000]
Indoor Unit Connectable	Total Capacity Model/Quantity	Ft. Ft. Ft.
Sound Pressure Levels		50.0–130.0% of outdoor unit capacity
Sound Power Levels	dB(A)	59.5/62.0
Compressor Operating Range		79.5/81.0
		7.5% to 100.0%

AHRI Ratings (Ducted/Non-ducted)	EER	11.2/11.4
	IЕЕR	22.4/24.5
	COP	3.75/4.11

Specifications		Module 1 PUHY-EP967NU-A1	Module 2 PUHY-EP967NU-A1
Unit Type			
Cooling Capacity (Nominal)	BTU/H	96,000	96,000
Heating Capacity (Nominal)	BTU/H	108,000	108,000
Guaranteed Operating Range <sup>1</sup> Cooling <sup>2</sup>	°F [°C]	23~126 [-5.0~52.0]	23~126 [-5.0~52.0]
Guaranteed Operating Range Heating	°F [°C]	-13~60 [-25.0~15.5]	-13~60 [-25.0~15.5]
Extended Operating Range Heating	°F [°C]	-27.4~60 [-33.0~15.5]	-27.4~60 [-33.0~15.5]
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 ]
Net Weight	Lbs. [kg]	622 [282]	622 [282]
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]
Electrical Power Requirements	Voltage, Phase, Hertz, Power Tolerance	208/230V, 3-phase, 60 Hz, ±10%	208/230V, 3-phase, 60 Hz, ±10%
Minimum Circuit Ampacity	A	44.0/40.0	44.0/40.0
Maximum Overcurrent Protection	A	70/60	70/60
Recommended Fuse Size	A	45/40	45/40
Recommended Minimum Wire Size	AWG [mm]	6/8 [13/38.4]	6/8 [13/38.4]
SCCR	kA	5	5
FAN <sup>4</sup>	Type x Quantity	Propeller fan x 2	Propeller fan x 2
	Airflow Rate CFM	6,700	6,700
	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
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1	Inverter scroll hermetic compressor x 1
Refrigerant	Type x Original Charge	R410A x 21.0 lbs + 9.0 oz [9.8 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)
	Inverter Circuit (Comp./Fan)	Over-current protection	Over-current protection

NOTES:  
 Nominal cooling conditions (Test conditions are based on AHRI 1230-2023)  
 Indoor: 80°FDB. 48°FWB. (67°FDB.184°FWB.), Outdoor: 95°FDB. (35°CDB.)  
 Nominal heating conditions (Test conditions are based on AHRI 1230-2023)  
 Indoor: 70°FDB. (21.1°CDB.), Outdoor: 47°FDB.43°FWB. (8.3°CDB.6.1°CWB.)

Harsh weather environments may demand performance enhancing equipment. Ask your Mitsubishi Electric representative for more details about your region.  
 For details on extended cooling operation range down to -10°F DB, see Low Ambient Kit Submittal  
 \*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  
<sup>4</sup>Unit will continue to operate in extended operating range, but capacity is not guaranteed

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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