

# Submittal Data: PUMY-P60NKMU4

## Air Source Heat Pump System

Job Name:	Location:		
Purchaser:	Submitted By:		
Submitted To:	Reference:	Approval:	Construction:
Engineer:	Date:	Application:	



Images provided for reference purposes only

- Single-phase Outdoor unit with variable refrigerant flow (VRF) zoning technology
- Inverter-driven variable speed compressor
- Uses CITY MULTI indoor units and Control Network
- Compatible with M&P series Indoor Units with Branch Box
- Optional base pan heater (Part # listed below)
- Low ambient cooling down to -40 C. available as an option <sup>7, 8</sup>

### Performance:

Power supply				1-phase 208/230 V, 60 Hz			
Indoor type				Non-Ducted	Mixed	Ducted	
Cooling	Capacity Rated <sup>1</sup>		Btu/h	60,000	60,000	60,000	
	Rated power consumption <sup>1</sup>		W	4,515	5,045	5,660	
	Current input (208/230V)		A	21.9/19.8	24.5/22.2	27.5/24.9	
Heating	Capacity Rated 47°F <sup>1</sup>		Btu/h	66,000	66,000	66,000	
	Capacity Max. 17°F <sup>2</sup>		Btu/h	65,000	65,000	65,000	
	Capacity Max. 5°F		Btu/h	46,500	46,500	46,500	
	Rated power consumption 47°F <sup>1</sup>		W	4,720	5,160	5,690	
	Current input (208/230V)		A	22.9/20.7	25.1/22.7	27.7/25.0	
Breaker Size				40 A - When power is supplied separately 50 A - When power is supplied from the outdoor unit			
Minimum wire size				8.4(8AWG) - When power is supplied separately 13.3(6AWG) - When power is supplied from the outdoor unit			
Indoor unit connectable		Total capacity		50 to 130% of outdoor unit capacity			
		Model/Quantity <sup>3</sup>		CITY MULTI			
		Branch box		04 - 72 /12 06 - 36 / 8			
Sound pressure level (measured in anechoic room)			dB <A>	58/59			
Refrigerant piping diameter		Liquid pipe		3/8 (ø9.52)			
		Gas pipe		3/4 (ø19.05)			
Fan	Type × Quantity			Propeller fan × 2			
	Airflow rate		m³/min	138			
			cfm	4,879			
	Control, Driving mechanism		DC control				
Motor output		kW		0.200 × 2			
Compressor	Type × Quantity		Scroll hermetic compressor x 1				
	Manufacture		Mitsubishi Electric Corporation				
	Starting method		Inverter				
	Motor output		kW		3.9		
	Lubricant		FVC68D 78oz. (2.3L)				
External finish				Galvanized Steel Sheet <Munsell 3Y 7.8/ 1.1>			
External dimension HxWxD			mm	1,338 × 1,050 × 330 (+25)			
			inch	52-11/16 × 41-11/32 × 13 (+1)			
Protection devices	High pressure protection			High pressure switch			
	Inverter circuit (COMP./FAN)			Overcurrent detection, Overheat detection (Heat sink thermistor)			
	Compressor protection			Compressor thermo, Overcurrent detection			
	Fan motor protection			Overheating/Voltage protection			
Refrigerant	Type × original charge			R410A 11 lbs. 4 oz. (5.1kg)			
	Control			Linear Expansion Valve			
Net weight			lb (kg)	300 (136)			
Heat exchanger				Cross fin and tube			
HIC circuit (HIC: Heat Inter-Changer)				HIC circuit			
Operating Temperature Range		Cooling		D.B 23 to 115°F [ D.B.-5 to 46°C ] <sup>4, 5, 6</sup>			
		Heating		D.B.-13 to 70°F [D.B. -25 to 21°C]			
PUMY-P60NKMU4			Non-ducted	Ducted (Mid-static)	Mixed (Mid-static)	Ducted (High-static)	Mixed (High-static)
Efficiency Non-ducted / Mixed (Mid-static) / Ducted (Mid-static) / Mix (High static) / Ducted (High static)		EER2	13.3	11.95	11.95	10.4	11.85
		SEER2	20	18.5	18.5	15.5	17.75
		HSPF (Region IV)	10.5	9.8	9.75	8.6	9.55
		HSPF (Region V)	8.65	8.05	8.05	7.45	8.05

#### NOTES:

- Rating conditions Cooling Indoor : D.B. 80°F/W.B. 67 °F [D.B.26.7°C/W.B. 19.4°C]  
Outdoor : D.B. 95°F [D.B. 35.0°C]  
Heating Indoor : D.B. 70°F [D.B. 21.1°C]  
Outdoor : D.B. 47°F/W.B. 43°F [D.B. 8.3°C/W.B. 6.1°C]
- Conditions Heating Indoor : D.B. 70°F [D.B. 21.1°C]  
Outdoor : D.B. 17°F/W.B. 15°F [D.B. -8.3°C/W.B. -9.4°C]
- It cannot be connected mixed CITY MULTI indoor unit and branch box indoor unit.
- D.B. 5 to 115°F [D.B. -15 to 46°C], when an optional Air Outlet Guide is installed.  
However, this condition does not apply to the indoor units listed in #5.
- 50 to 115°F (10 to 46°C) D.B.: When connecting PKFY-P04/06/08/12NLMU, PFY-P06/08/12NEMU, and PFY-P06/08/12NRMU type indoor unit.
- When the temperature is below D.B. 50°F [D.B. 10°C] with branch box system, noise could potentially occur.
- For - 40°C cooling ONLY operation a low ambient kit is required along with a front wind deflector. Heating operation is not permitted.
- For Low-Ambient Cooling operation, dip switch SW 3 #1 must be switched to the ON position in the indoor unit to disable heating mode.

Note: Refer to the indoor unit's service manual for the indoor units specification.

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### Piping

Liquid Pipe Size O.D. (Flared)	In. [mm]	3/8 [9.52]
Gas Pipe Size O.D. (Flared)	In. [mm]	3/4 [19.05]
Total Piping Length when using Branch Box	Ft. [m]	492 [150]
Total Piping Length without Branch Box	Ft. [m]	492 [150]
Maximum Height Difference <sup>A</sup> , ODU above IDU	Ft. [m]	164 [50]
Maximum Height Difference <sup>A</sup> , ODU below IDU	Ft. [m]	131 [40]
Maximum Height Difference <sup>A</sup> , between branch boxes	Ft. [m]	49 [15]
Maximum Height Difference between IDU and IDU without branch box	Ft. [m]	49 [15]
Maximum Piping Length between ODU and Branch Box	Ft. [m]	180 [55]
Farthest Piping Length from ODU to IDU with Branch Box	Ft. [m]	262 [80]
Farthest Piping Length from ODU to IDU without Branch Box	Ft. [m]	262 [80]
Farthest Piping Length after Branch Box	Ft. [m]	82 [25]
Total Piping Length between Branch Boxes and IDU	Ft. [m]	311 [95]
Maximum Number of Bends for IDU	Ft. [m]	15

<sup>A</sup>A Branch box should be placed within the level between the outdoor unit and indoor units.

Optional Accessories	Description	Model No.
Branch Box	3 Port Branch Box	PAC-MKA32BC
	3 Port Branch Box	PAC-MKA33BC
	5 Port Branch Box	PAC-MKA52BC
	5 Port Branch Box	PAC-MKA53BC
Branch Joint	T-Branch	CMY-Y62-G-E
Header	4 Branch	CMY-Y64-G-E
	8 Branch	CMY-Y68-G-E
Centralized Drain Pan	Central Drain Pan	PAC-SH97DP-E
Control/Service Tool	Maintenance Tool Interface	PAC-USCMS-MN-1
Distribution pipe	Brazed Connection	MSDD-50BR-E
	Flare Connection	MSDD-50AR-E
Drain Socket	Drain Socket	PAC-SG60DS-E
Optional Defrost Heater	Optional Defrost Heater	PAC-SJ20BH-E
Port Adapter	Adaptor: 1/2" x 3/8"	MAC-A455JP-E
	Adaptor: 1/2" x 5/8"	MAC-A456JP-E
	Adaptor: 3/8" x 1/2"	MAC-A454JP-E
	Adaptor: 3/8" x 5/8"	PAC-SG76RJ-E
Snow/Wind Guard	Front	CM-S-FR-NKMU (two pieces are required)
Snow/Wind Guard	Rear	SG-1-RE
Snow/Wind Guard	Side	SG-1-SD
Snow/Wind Guard	Blocker	CM-S-BLK-NKMU

Note: Mitsubishi Electric (MESCA) supports the use of only MESCA supplied and approved Snow Guard / Wind Deflectors / Windscreens and accessories for proper functioning of the unit(s).

Use of non-MESCA supported Snow Guard / Wind Deflectors / Windscreens and accessories will affect warranty coverage.

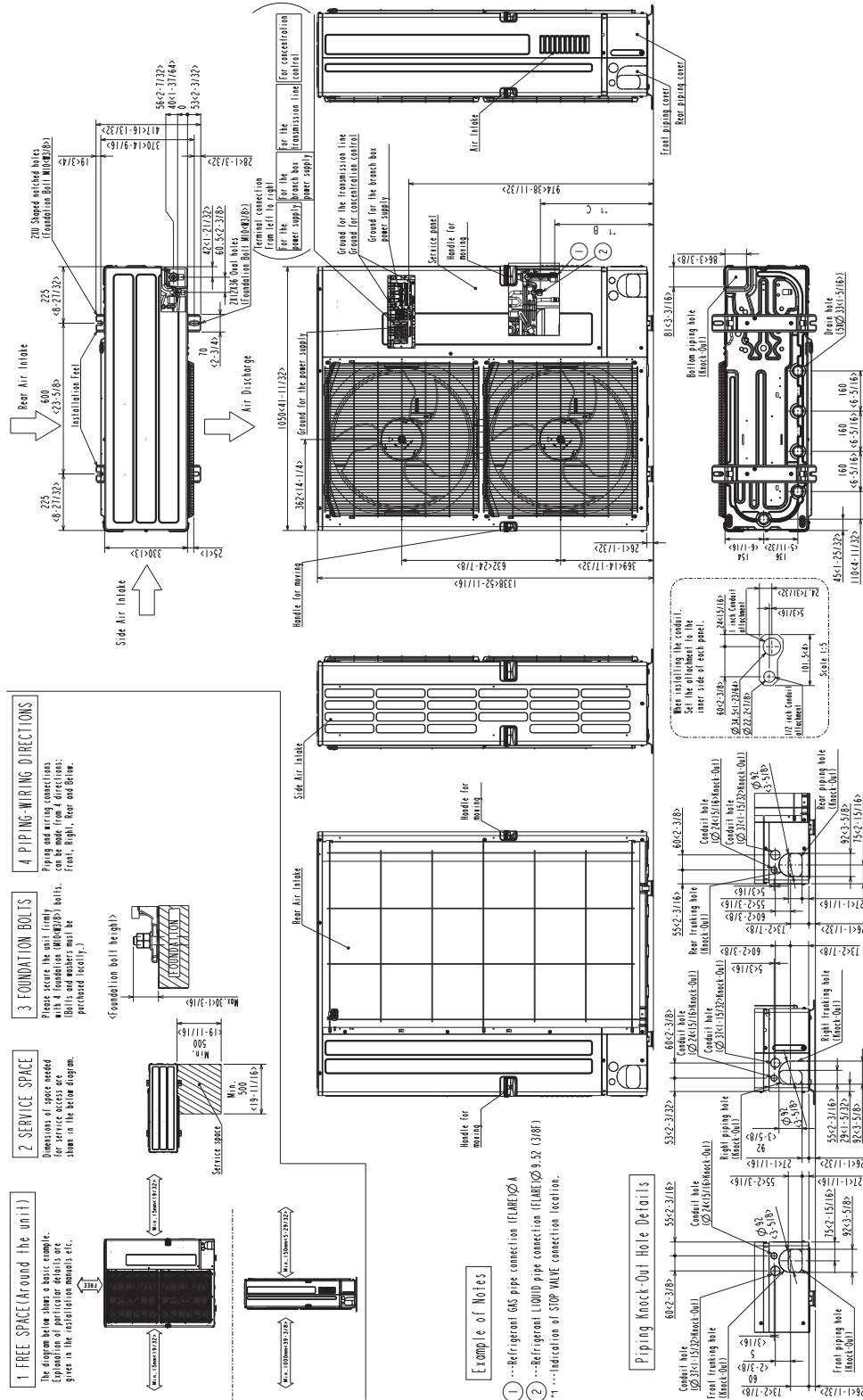
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All electrical work shall comply with National (CEC) and local codes and regulations.

Notes:

**Outdoor Unit Outline and Dimensions:**

Unit: mm(in)



PUMY-HP36NKMU2	15.88(5/8F)	426<16-25/32>	485<19-3/32>
PUMY-HP42NKMU2			
PUMY-HP48NKMU2			
PUMY-P60NKMU4	19.05(3/4F)	393<15-1/5/32>	450<17-23/32>
PUMY-P36NKMU4			
PUMY-P48NKMU4	15.88(5/8F)	426<16-25/32>	485<19-3/32>
MODELS	A	B	C