

Submission Data: PUMY-HP42NKMU2

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
- Base pan heater included

Performance:

Power supply		1-phase 208/230 V, 60 Hz				
Indoor type		Non-Ducted	Mixed	Ducted		
Cooling	Capacity Rated ¹	Btu/h	42,000	42,000	42,000	
	Rated power consumption ¹	W	3,135	3,500	3,965	
	Current input (208/230V)	A	15.3/13.8	17.1/15.4	19.4/17.5	
Heating	Capacity Rated 47°F ¹	Btu/h	48,000	48,000	48,000	
	Capacity Max. 17°F ²	Btu/h	48,000	48,000	48,000	
	Capacity Max. 5°F	Btu/h	44,000	44,000	44,000	
	Rated power consumption 47°F ¹	W	3,435	3,805	4,265	
	Current input (208/230V)	A	16.8/15.2	18.6/16.8	20.8/18.8	
Breaker Size		40 A - When power is supplied separately 45 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 ³	CITY MULTI	04 - 54/12			
		Branch box	06 - 36/5			
Sound pressure level (measured in anechoic room)		dB <A>	50/54			
Refrigerant piping diameter	Liquid pipe	inch (mm)	3/8 (ø9.52)			
	Gas pipe	inch (mm)	5/8 (ø15.88)			
Fan	Type × Quantity	Propeller fan × 2				
	Airflow rate	m ³ /min	110			
		cfm	3,885			
	Control, Driving mechanism	DC control				
Motor output	kW	0.074 × 2				
Compressor	Type × Quantity	Scroll hermetic compressor x 1				
	Manufacture	Mitsubishi Electric Corporation				
	Starting method	Inverter				
	Motor output	kW	2.9			
	Lubricant	FV50S 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 10 lbs. 9 oz. (4.8kg)				
	Control	Linear Expansion Valve				
Net weight	lb (kg)	278 (126)				
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] ^{4,5,6}		
		Heating		D.B.-13 to 70°F [D.B. -25 to 21°C]		
PUMY-HP42NKMU2		Non-ducted	Ducted (Mid-static)	Mixed (Mid-static)	Ducted (High-static)	Mixed (High-static)
Energy Rating Non-ducted / Mixed (Mid-static) / Ducted (Mid-static) / Mix (High static) / Ducted (High static)	EER2	13.4	10.6	12	10.6	12
	SEER2	21.5	18	19.75	16.2	18.85
	HSPF (Region IV)	11.1	10	10.55	9.1	10.1
	HSPF (Region V)	9.8	8.8	9.3	8.8	9.3

NOTES:

1 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]

2 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]

3 It cannot be connected mixed CITY MULTI indoor unit and branch box indoor unit.
4 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.
5 50 to 115°F (10 to 46°C) D.B.: When connecting PKFY-P04/06/08/12NLMU, PFFY-P06/08/12NEMU, and PFFY-P06/08/12NRMU type indoor unit.
6 When the temperature is below D.B. 50°F [D.B. 10°C] with branch box system, noise could potentially occur.

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

PUMY-HP42NKMU2	Capacity (Btu/hr)	COP
NEEP	-25°C / -13°F	-25°C / -13°F
Non-ducted	37,800	1.4
Mixed	37,800	1.44
Ducted	37,800	1.4

Piping

Liquid Pipe Size O.D. (Flared)	In. [mm]	3/8 [9.52]
Gas Pipe Size O.D. (Flared)	In. [mm]	5/8 [15.88]
Total Piping Length when using Branch Box	Ft. [m]	492 [150]
Total Piping Length without Branch Box	Ft. [m]	984 [300]
Maximum Height Difference ^A , ODU above IDU	Ft. [m]	164 [50]
Maximum Height Difference ^A , ODU below IDU	Ft. [m]	131 [40]
Maximum Height Difference ^A , 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]	492 [150]
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

^AA Branch box should be placed within the level between the outdoor unit and indoor units.

The outdoor unit is lower: 131ft [40m] or less (98ft [30.] or less if PKFY-P04/06/08/12NLMU, PFFY-P06/08/12NEMU, and PFFY-P06/08/12NRMU are included.)

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
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.

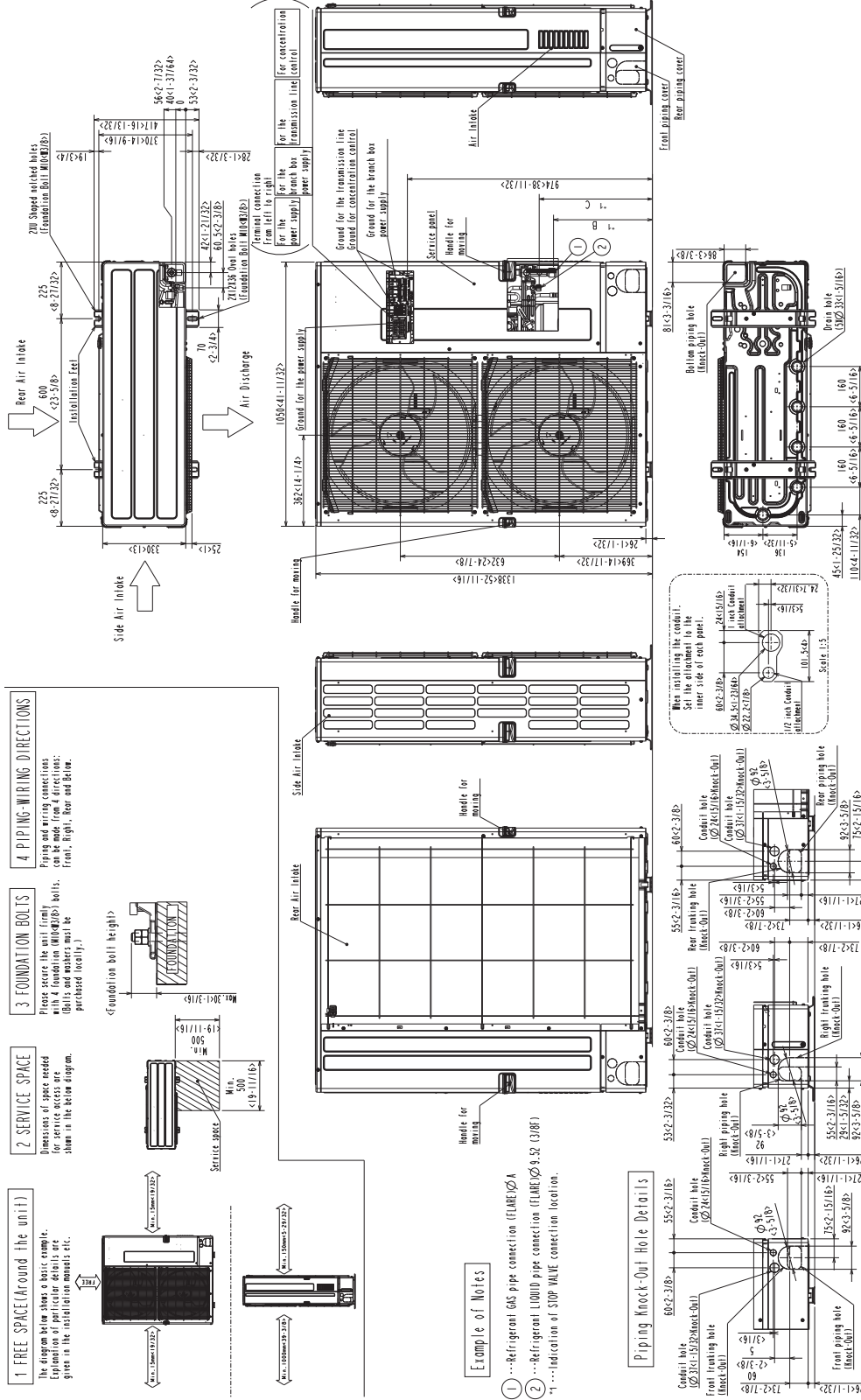
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All electrical work shall comply with National (CEC) and local codes and regulations.

Notes:

Outdoor Unit Outline and Dimensions:

Unit: mm(in)



MODELS	A	B	C
PUMY-HP36NKMU2	15.88(518F)	426<16-25/32>	485<19-31/32>
PUMY-HP42NKMU2	19.05(314F)	393<15-15/32>	450<17-23/32>
PUMY-HP48NKMU2	15.88(518F)	426<16-25/32>	485<19-31/32>
PUMY-P36NKMU4			
PUMY-P48NKMU4			

