P-SERIES

SUBMITTAL DATA: PVA-A12AA7 & PUZ-A12NKA7(-BS)

12,000 BTU/H AIR HANDLER HEAT PUMP SYSTEM

MITSUBISHI ELECTRIC

Job Name:	
System Reference:	Date:

Indoor Unit:	Outdoor Unit:
PVA-A12AA7	□ PUZ-A12NKA7 □ PUZ-A12NKA7-BS
	

INDOOR UNIT FEATURES

- Ducted air handler provides a solution to cool and heat large zones
- Highly efficient totally enclosed ECM motor
- Selectable external static pressure: 0.30, 0.50 and 0.80 in.WG with 3 fan speeds at each static setting
- 1 inch R4.2 fiberglass free insulation reduces condensation and boosts efficiency
- Positive pressure cabinet with air leakage of less than 1.0% at 1.0 in.WG
- Unique blow through design allows simple coil cleaning when the blower is removed
- Multi-position installation: horizontal (left or right), vertical (up or down). For downflow configurations, the CMA-1 is recommended for proper management of condensate to prevent water blow-off in certain conditions
- Optional electric heat kit for additional heat capacity
- Optional humidifier control and ERV control

OUTDOOR UNIT FEATURES

- Variable speed INVERTER-driven compressor
- Suction accumulator pre-charged with refrigerant volume for piping length up to 100 ft (70 ft. for A12/18/24/30)
- 24-hour continuous operation (cooling mode)
- High pressure protection
- Fast restart due to bypass valve make it ideal for equipment cooling applications, such as data centers
- Superior energy and operational efficiency

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SPECIFICATIONS: PVA-A12AA7 & PUZ-A12NKA7(-BS)

Cooling[1]	Maximum Capacity	BTU/H	12,000
	Rated Capacity	BTU/H	12,000
	Minimum Capacity	BTU/H	4,800
	Maximum Power Input	W	890
	Rated Power Input	W	890
	Moisture Removal	Pints/h	1.20
	Sensible Heat Factor		0.77
	Power factor	%	87.90
Heating at 47° F[2]	Maximum Capacity	BTU/H	19,000
	Rated Capacity	BTU/H	14,000
	Minimum Capacity	BTU/H	5,700
	Maximum Power Input	W	1,730
	Rated Power Input	W	1,070
	Power factor	%	96.40
Heating at 17° F[3]	Maximum Capacity	BTU/H	12,000
	Rated Capacity	BTU/H	9,900
	Maximum Power Input	W	1,440
	Rated Power Input	W	1,400
Efficiency	SEER		21.40
	EER[1]		13.40
	HSPF (IV)		10.30
	COP at 47° F[2]		3.82
	COP at 17° F[3]		2.06
	ENERGY STAR® Certified (ENERGY STAR products are third-party certified by an EPA-recognized Certification Body)		Yes
Electrical	Voltage, Phase, Frequency		208 / 230V, 1-phase,60 Hz
	Guaranteed Voltage Range	V AC	198 – 253
	Voltage: Indoor - Outdoor, S1-S2	V AC	208 / 230
	Voltage: Indoor - Outdoor, S2-S3	V DC	24
	Short-circuit Current Rating (SCCR)	kA	12
	Recommended Fuse/Breaker Size (Outdoor)	A	15
	Recommended Wire Size (Indoor - Outdoor)	AWG	14
Indoor unit	MCA	A	3.00
	Fan Motor Full Load Amperage	A	2.40
	Fan Motor Output	W	121
	Airflow Rate, Dry	CFM	280-340-400
	Airflow Rate, Wet	CFM	n/a
	External Static Pressure	in.WG	0.30-0.50-0.80
	Sound Pressure Level	dB(A)	24-28-32
	Drain Pipe Size	In. (mm)	3/4 FPT (19.05)
	Condensate Lift Mechanism, Max. Distance	In. (mm)	n/a

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	Heat Exchanger Type		Plate fin coil
	External finish color		Galvanized steel cabinet-Powder coated Slate Gray
	Unit Dimensions	W: In. (mm)	17 (432)
		D: In. (mm)	21-5/8 (548)
		H: In. (mm)	50-1/4 (1,275)
	Unit Weight	Lbs. (kg)	51 (113)
Indoor unit operating temperature range	Cooling Intake Air Temp (Maximum / Minimum)	°F	90 DB, 73 WB / 66 DB,59 WB
	Heating Intake Air Temp (Maximum / Minimum)	°F	82 DB / 50 DB
Outdoor unit	MCA	A	11
	MOCP	A	28
	Fan Motor Full Load Amperage	A	0.50
	Fan Motor Output	W	46
	Airflow Rate	CFM	1,590
	Refrigerant Control		Electronic Expansion Valve
	Defrost Method		Reverse Cycle
	Heat Exchanger Type		Cross fin
	Sound Pressure Level, Cooling[1]	dB(A)	44
	Sound Pressure Level, Heating[2]	dB(A)	46
	Compressor Type		INVERTER-driven twin rotary
	Compressor Model		SNB092FNCM
	Compressor Rated Load Amps	A	7
	Compressor Locked Rotor Amps	A	12
	Compressor Oil Type // Charge	oz.	FV50S // 12
	External finish color		Ivory Munsell 3Y 7.8/1.1
	Base pan heater		n/a
	Unit Dimensions	W: In. (mm)	31-13/16 + 7/16 (809+62)
		D: In. (mm)	11-3/16 (300)
		H: In. (mm)	24-13/16 (630)
	Package Dimensions	W: In.	37-1/16
		D: In.	16-3/16
		H: In.	27-7/16
	Unit Weight	Lbs.	93 (42)
	Package Weight	Lbs.	104 (47)
Outdoor unit operating temperature range	Cooling Intake Air Temp (Maximum / Minimum)	°F	115 DB / 0* DB
	Heating Intake Air Temp (Maximum / Minimum)	°F	70 DB, 59 WB / 12 DB,10 WB
	Thermal Lock-out / Re-start Temperatures**	°F	8 / 12 DB
Refrigerant	Type		R410A
	Charge	Lbs, oz	4 lbs, 7 oz
Piping	Gas Pipe Size O.D. (Flared)	In.(mm)	1/2 (12.7)
	Liquid Pipe Size O.D. (Flared)	In.(mm)	1/4 (6.35)
	Maximum Piping Length	Ft. (m)	100 (30)

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	Maximum Height Difference	Ft. (m)	100 (30)
	Maximum Number of Bends		15

Notes

AHRI Rated Conditions (Rated data is determined at a fixed compressor speed)	[1]Cooling (Indoor // Outdoor)	°F	80 DB, 67 WB // 95 DB, 75 WB
	[2]Heating at 47°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 47 DB, 43 WB
	[3]Heating at 17°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 17 DB, 15 WB

Notes
*Wind baffles required to operate below 23°F DB in cooling mode. PUZ with wind baffle: 0°F - 115°F.
**System cuts out in heating mode to avoid thermistor error and automatically restarts at these temperatures.

SEACOAST PROTECTION
- External Outer Panel: Phosphate coating + Acrylic-Enamel coating
- Fan Motor Support: Epoxy resin coating (at edge face)
- Separator Assembly; Valve Bed: Epoxy resin coating (at edge face)
- “Blue Fin” treatment is an anti-corrosion treatment that is applied to the condenser coil to protect it against airborne contaminants.

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ACCESSORIES: PVA-A12AA7

Wireless Signal Receiver	□ PAR-SA9CA-E
Wireless Signal Receiver	□ PAR-FA32MA-W
Wireless Remote Controller	□ PAR-SL100A-E
Wireless Remote Controller	□ PAR-FL32MA-E
Controller Kit with i-see Sensor™	□ PAR-SA92MW-E
kumo touch™ RedLINK™ Wireless Controller	□ MHK2
Deluxe MA Remote Controller	□ PAR-40MAAU
Simple MA Controller	□ PAC-YT53CRAU-J
Touch MA Controller	□ PAR-CT01MAU-SB
Airzone ZBS Wired Blueface Principal Controller White	□ AZZBSBLUEFACECB
Airzone ZBS Wired Think Controller White	□ AZZBSTHINKCB
Airzone ZBS Wireless Think Controller White	□ AZZBSTHINKRB
Airzone ZBS Wired Lite Controller White	□ AZZBSLITECB
Airzone ZBS Wireless Lite Controller White	□ AZZBSLITERB
Wired Remote Sensor	□ PAC-SE41TS-E
Wireless Temperature and Humidity Sensor	□ PAC-USWHS003-TH-1
Flush Mount Remote Temperature Sensor	□ PAC-USSEN001-FM-1
Wireless Interface 2	□ PAC-USWHS002-WF-2
Thermostat Interface	□ PAC-US444CN-1
kumo station®	□ PAC-WHS01HC-E
USNAP Interface	□ PAC-WHS01UP-E
IT Extender	□ PAC-WHS01IE-E
BACnet® and MODBUS® Interface	□ PAC-UKPRC001-CN-1
External Fan / Heater Control Relay Adapter	□ CN24RELAY-KIT-CM3
Connector cable for remote display	□ PAC-SA88HA-EP
Connector for CN32 (remote on/off)	□ PAC-SE55RA-E
Remote Operation Adapter[1]	□ PAC-SF40RM-E
Blue Diamond Sensor Extension Cable — 15 Ft.	□ C13-103
MegaBlue Advanced Blue Diamond Condensate Pump w/ Reservoir & Sensor	□ X87-835 - 110 to 250V
Advanced Blue Diamond Mini Condensate Pump w/ Reservoir & Sensor (208/230V) [recommended]	□ X87-721 - 208/230V
(30A/600V/UL) [fits 2" X 4" utility box] - Black	□ TAZ-MS303
(30A/600V/UL) [fits 2" X 4" utility box] - White	□ TAZ-MS303W
Separate Power Terminal Block Kit	□ SPTB1
Electric Heat Lockout Control	□ ETC-211000-MIT
Condensate Management Kit for downflow installation	□ CMA-1
3kW Electric Heater	□ EH03-MPA-S(B)
5kW Electric Heater	□ EH05-MPA-S(B)

[1] Unable to use with wireless remote controller

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ACCESSORIES: PUZ-A12NKA7(-BS)

Air Outlet Guide	□ PAC-SJ07SG-E
Front Wind Baffle	□ WB-PA4
Side Advanced Wind Baffle	□ WB-SD4
Rear Advanced Wind Baffle	□ WB-RE4
Drain Socket	□ PAC-SJ08DS-E
Centralized Drain Pan	□ PAC-SG63DP-E
M-NET Converter	□ PAC-SJ19MA-E
M-NET Converter	□ PAC-SJ96MA-E
Control/Service Tool	□ PAC-SK52ST
Hail Guard	□ HG-A5
Condensing Unit Mounting Pad 16" x 36" x 3"	□ ULTRILITE1
Outdoor Unit Stand—12" High	□ QSMS1201M
Outdoor Unit Stand—18" High	□ QSMS1801M
Outdoor Unit Stand—24" High	□ QSMS2401M
Heavy Duty Wall Mounting Bracket for Outdoor Units—Coated Steel	□ QSWB2000M-1
Heavy Duty Wall Mounting Bracket for Outdoor Units—316 Series Stainless Steel	□ QSWBSS
1/4" x 1/2" x 15' / 1/2" Lineset (Twin-Tube Insulation)	□ MLS141212T-15
1/4" x 1/2" x 30' / 1/2" Lineset (Twin-Tube Insulation)	□ MLS141212T-30
1/4" x 1/2" x 50' / 1/2" Lineset (Twin-Tube Insulation)	□ MLS141212T-50
1/4" x 1/2" x 65' / 1/2" Lineset (Twin-Tube Insulation)	□ MLS141212T-65
1/4" x 1/2" x 100' / 1/2" Lineset (Twin-Tube Insulation)	□ MLS141212T-100

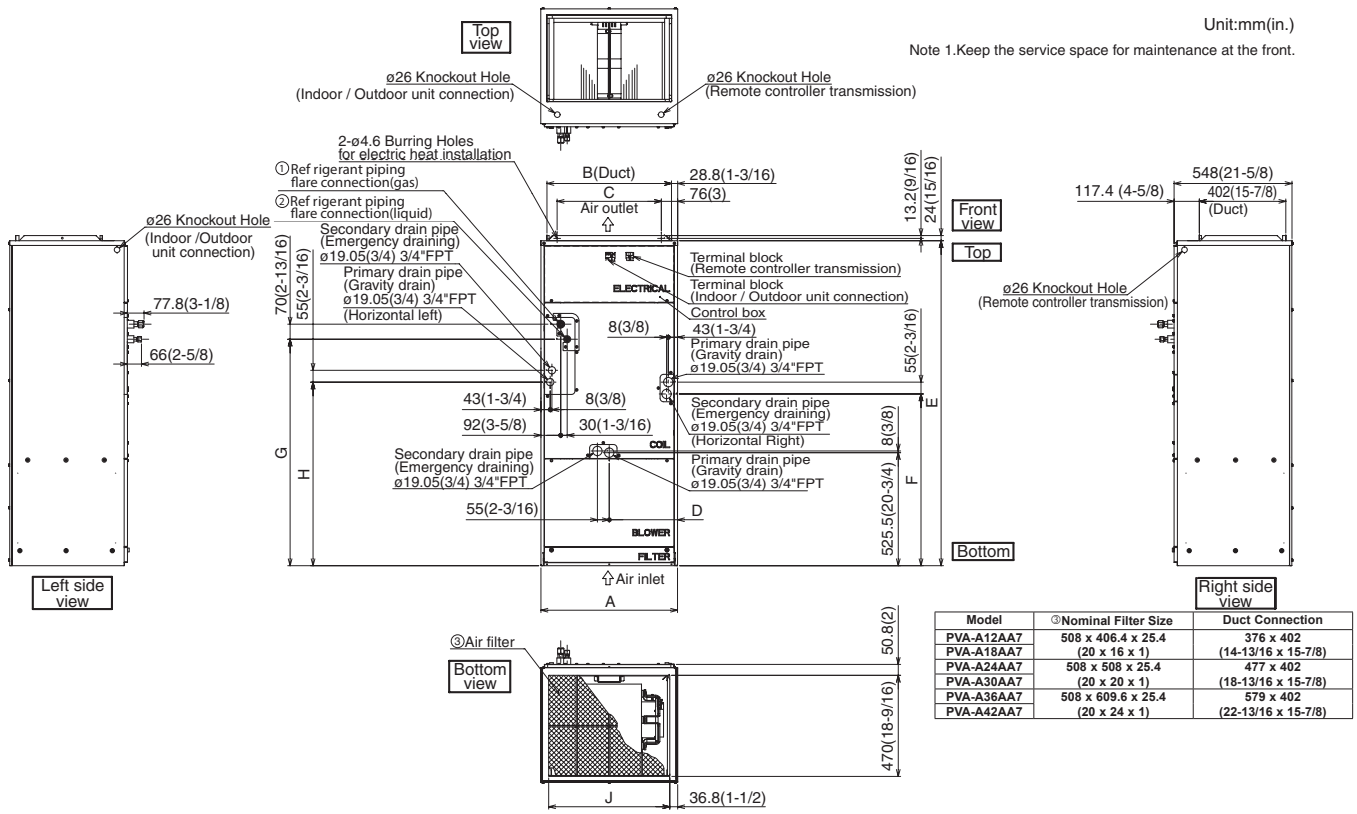
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DIMENSIONS: PVA-A12AA7

Unit:mm(in.)

Note 1.Keep the service space for maintenance at the front.



Model	③Nominal Filter Size	Duct Connection
PVA-A12AA7	508 x 406.4 x 25.4 (20 x 16 x 1)	376 x 402 (14-13/16 x 15-7/8)
PVA-A18AA7		
PVA-A24AA7	508 x 508 x 25.4 (20 x 20 x 1)	477 x 402 (18-13/16 x 15-7/8)
PVA-A30AA7		
PVA-A36AA7	508 x 609.6 x 25.4 (20 x 24 x 1)	579 x 402 (22-13/16 x 15-7/8)
PVA-A42AA7		

Unit: mm (in.)

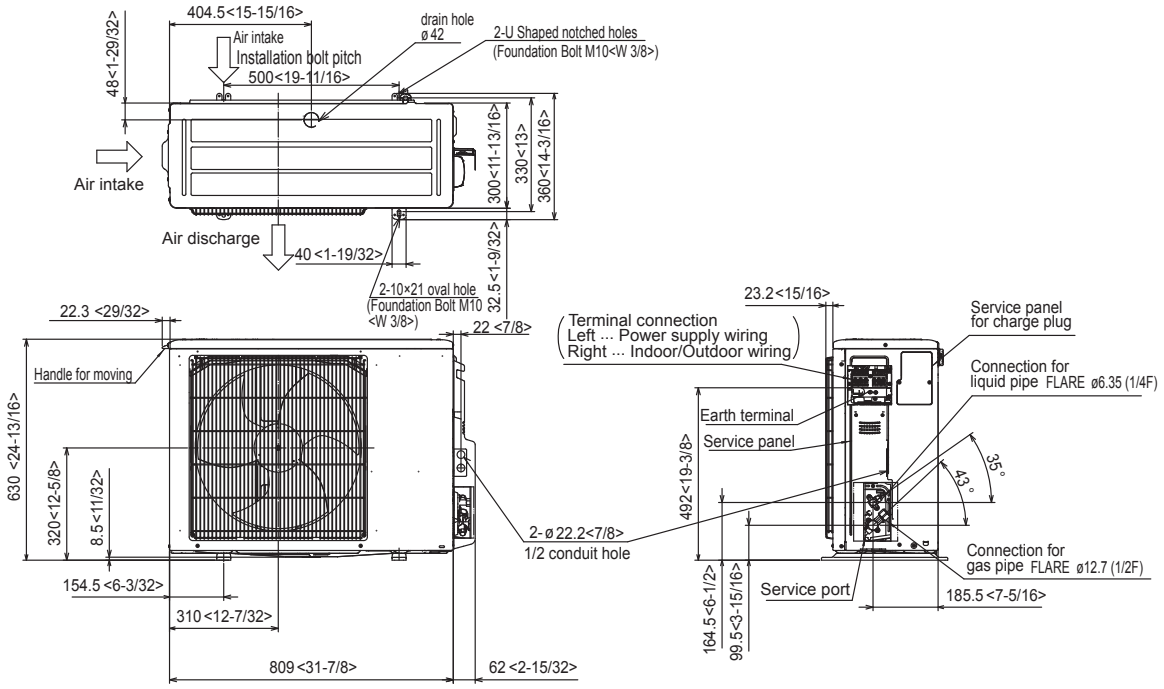
Model	A	B	C	D	E	F	G	H	J	①Gas Pipe	②Liquid Pipe
PVA-A12AA7	432 (17)	376 (14-13/16)	281 (11-1/8)	224 (8-7/8)	1275 (50-1/4)	680 (26-13/16)	823 (32-7/16)	735.5 (29)	360 (14-3/16)	Φ 12.7 (1/2)	Φ 6.35 (1/4)
PVA-A18AA7											
PVA-A24AA7	534 (21)	477 (18-13/16)	382.6 (15-1/8)	266.5 (10-1/2)	1378 (54-1/4)	737 (29-1/16)	953.5 (37-9/16)	792 (31-3/16)	461 (18-3/16)	Φ 15.88 (5/8)	Φ 9.52 (3/8)
PVA-A30AA7											
PVA-A36AA7	635 (25)	579 (22-13/16)	484.6 (19-1/8)	317.5 (12-1/2)	1511 (59-1/2)	798.5 (31-7/16)	1053 (41-1/2)	853.5 (33-5/8)	563 (22-3/16)		
PVA-A42AA7											

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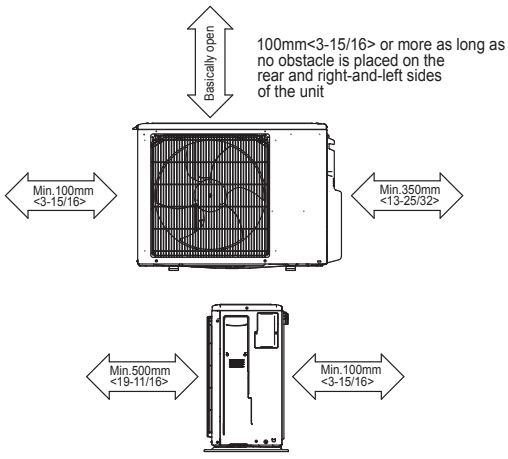
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DIMENSIONS: PUZ-A12NKA7(-BS)

Unit: mm<in>



Free space around the outdoor unit (basic example)

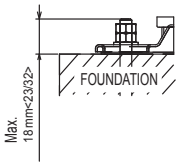


2 sides should be open in the right, left and rear side.

FOUNDATION BOLTS

Please secure the unit firmly with 4 foundation (M10<W3/8>) bolts. (Bolts, washers and nut must be purchased locally).

<Foundation bolt height>



PIPING-WIRING DIRECTION

Piping and wiring connection can be made from the rear direction only.

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

FORM# PVA-A12AA7 / PUZ-A12NKA7(-BS) - 202003

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