

**PVA-A42AA7 & PUZ-HA42NKA1**  
**42,000 BTU/H MULTI-POSITION AIR HANDLER**  
**42,000 BTU/H HYPER-HEATING UNIVERSAL OUTDOOR**



Job Name:

System Reference:

Date:

Indoor Unit.....PVA-A42AA7

Outdoor Unit.....PUZ-HA42NKA1



**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
- Multiple control options available:
  - kumo cloud® smart device app for remote access
  - Third-party interface options
  - Wired or wireless controllers

**OUTDOOR UNIT FEATURES**

- Variable speed INVERTER-driven compressor
- Wide heating range: heating performance down to -13°F (average of 80% heating capacity)
- High speed heating at start up: Hyper-Heating INVERTER® reduces the time for heating at start up by about half compared to standard models
- Power receiver pre-charged with refrigerant volume for piping length up to 100 ft.
- High pressure/temperature protection
- Built-in base pan heater
- Flash injection circuit provides efficient high heating capacities at low ambient temperatures

# SPECIFICATIONS: PVA-A42AA7 & PUZ-HA42NKA1

Cooling at 95°F <sup>1</sup>	Maximum Capacity	BTU/H	42,000
	Rated Capacity	BTU/H	42,000
	Minimum Capacity	BTU/H	17,000
	Maximum Power Input	W	3,960
	Rated Power Input	W	3,960
	Moisture Removal	Pints/h	5.3
	Sensible Heat Factor		0.86
Heating at 47°F <sup>2</sup>	Maximum Capacity	BTU/H	54,000
	Rated Capacity	BTU/H	48,000
	Minimum Capacity	BTU/H	23,900
	Maximum Power Input	W	4,570
	Rated Power Input	W	3,850
	Power Factor	%	92.0/92.0
Heating at 17°F <sup>3</sup>	Maximum Capacity	BTU/H	48,000
	Rated Capacity	BTU/H	38,500
	Maximum Power Input	W	6,635
	Rated Power Input	W	4,925
Heating at 5°F <sup>4</sup>	Maximum Capacity	BTU/H	48,000
Maximum Power Input	W	6,865	
Heating at -13°F <sup>7</sup>	Maximum Capacity	BTU/H	38,400
Efficiency	SEER		15.4
	EER <sup>1</sup>		10.6
	HSPF [IV]		10.0
	COP at 47°F <sup>2</sup>		3.7
	COP at 17°F at Maximum Capacity <sup>3</sup>		2.1
	COP at 5°F at Maximum Capacity <sup>4</sup>		1.9
	COP at -13°F at Maximum Capacity <sup>7</sup>		1.6
ENERGY STAR <sup>®</sup> Certified		No	
Electrical	Voltage, Phase, Frequency		208/230, 1, 60
	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	5
	Recommended Fuse/Breaker Size (Outdoor)	A	40
	Recommended Wire Size [Indoor - Outdoor]	AWG	14
Power Supply		Indoor unit is powered by the outdoor unit	
Indoor Unit	MCA	A	5.63
	Fan Motor Full Load Amperage	A	4.50
	Fan Motor Output	W	430
	Fan Motor Type		DC Motor
	Airflow Rate at Cooling, Dry	CFM	1040-1262-1485
	Airflow Rate at Heating, Dry	CFM	1040-1262-1485
	Sound Pressure Level [Cooling]	dB[A]	36-40-44
	Sound Pressure Level [Heating]	dB[A]	36-40-44
	External Static Pressure	in.WG	0.30-0.5-0.8
	Drain Pipe Size	In. [mm]	3/4 FPT [19.05]
	Coating on Heat Exchanger		—
	External Finish Color		Galvanized steel cabinet-Powder coated Slate Gray
	Unit Dimensions	W x D x H: [mm]	25 x 21-5/8 x 59-1/2 [635 x 548 x 1511]
Package Dimensions	W x D x H: In. [mm]	13-7/16 x 34-11/16 x 65 [340 x 880 x 1,650]	
Unit Weight	Lbs. [kg]	172 [78]	
Indoor Unit Operating Temperature Range	Cooling Intake Air Temp [Maximum / Minimum]*	°F	90 DB, 72 WB / 66 DB, 61 WB
	Heating Intake Air Temp [Maximum / Minimum]	°F	77 DB / 59 DB

**NOTES:**

AHRI Rated Conditions

(Rated data is determined at a fixed compressor speed)

<sup>1</sup> Cooling (Indoor // Outdoor)	°F	80 DB, 67 WB // 95 DB, 75 WB
<sup>2</sup> Heating at 47°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 47 DB, 43 WB
<sup>3</sup> Heating at 17°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 17 DB, 15 WB

Conditions

<sup>4</sup> Heating at 5°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 5 DB, 4 WB
<sup>5</sup> Heating at -4°F (Indoor // Outdoor)	°F	70 DB, 60 WB // -4 DB, -5 WB
<sup>6</sup> Heating at -5°F (Indoor // Outdoor)	°F	70 DB, 60 WB // -5 DB, -6 WB
<sup>7</sup> Heating at -13°F (Indoor // Outdoor)	°F	70 DB, 60 WB // -13 DB, -14 WB

\*Outdoor Unit Operating Temperature Range (Cooling Air Temp (Maximum / Minimum)):

- Wind baffles required to operate below 23°F DB in cooling mode.
- Refer to wind baffle documentation for further information.

\*\*Outdoor Unit Operating Temperature Range (Cooling Thermal Lock-out / Re-start Temperatures; Heating Thermal Lock-out / Re-start Temperatures):

- System cuts out in heating mode to avoid thermistor error and automatically restarts at these temperatures.

# SPECIFICATIONS: PVA-A42AA7 & PUZ-HA42NKA1

Outdoor Unit	MCA	A	36.0
	MOCP	A	44
	Fan Motor Output	W	74
	Airflow Rate	CFM	3319/3319
	Refrigerant Control		LEV
	Defrost Method		Reverse Cycle
	Sound Pressure Level, Cooling <sup>1</sup>	dB(A)	49
	Sound Pressure Level, Heating <sup>2</sup>	dB(A)	51
	Compressor Type		Scroll
	Compressor Model		ANB42FJTMT
	Compressor Rated Load Amps	A	19
	Compressor Locked Rotor Amps	A	28.0
	Compressor Oil Type // Charge	oz.	FVC68D // 1.7,57
	External Finish Color		Ivory Munsell 3Y 7.8/1.1
	Base Pan Heater		Built-in
	Unit Dimensions	W x D x H: In. [mm]	41-5/16 x 14-3/16 x 52-11/16 [1050 x 360 x 1338]
	Package Dimensions	W x D x H: In. [mm]	43 x 18 x 57 [1110 x 480 x 1440]
	Unit Weight	Lbs. [kg]	283 [128]
	Package Weight	Lbs. [kg]	307 [139]
	Outdoor Unit Operating Temperature Range	Cooling Air Temp [Maximum / Minimum]*	°F
Heating Air Temp [Maximum / Minimum]		°F	70 DB, 59 WB / -13 DB, -13 WB
Heating Thermal Lock-out / Re-start Temperatures**		°F	-22 / -13
Refrigerant	Type		R410A
	Charge	Lbs, oz	13, 4.0
	Chargeless Piping Length	Ft. [m]	0.0 [30.0]
	Additional Refrigerant Charge Per Additional Piping Length	oz./Ft. [g/m]	0.6 [56]
Piping	Gas Pipe Size O.D. [Flared]	In.[mm]	5/8 [15.88]
	Liquid Pipe Size O.D. [Flared]	In.[mm]	3/8 [9.52]
	Maximum Piping Length	Ft. [m]	245 [75]
	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)

<sup>1</sup>Cooling (Indoor // Outdoor) °F 80 DB, 67 WB // 95 DB, 75 WB

<sup>2</sup>Heating at 47°F (Indoor // Outdoor) °F 70 DB, 60 WB // 47 DB, 43 WB

<sup>3</sup>Heating at 17°F (Indoor // Outdoor) °F 70 DB, 60 WB // 17 DB, 15 WB

Conditions

<sup>4</sup>Heating at 5°F (Indoor // Outdoor) °F 70 DB, 60 WB // 5 DB, 4 WB

<sup>5</sup>Heating at -4°F (Indoor // Outdoor) °F 70 DB, 60 WB // -4 DB, -5 WB

<sup>6</sup>Heating at -5°F (Indoor // Outdoor) °F 70 DB, 60 WB // -5 DB, -6 WB

<sup>7</sup>Heating at -13°F (Indoor // Outdoor) °F 70 DB, 60 WB // -13 DB, -14 WB

\*Outdoor Unit Operating Temperature Range (Cooling Air Temp (Maximum / Minimum)):

- Wind baffles required to operate below 23°F DB in cooling mode.
- Refer to wind baffle documentation for further information.

\*\*Outdoor Unit Operating Temperature Range (Cooling Thermal Lock-out / Re-start Temperatures; Heating Thermal Lock-out / Re-start Temperatures):

- System cuts out in heating mode to avoid thermistor error and automatically restarts at these temperatures.

## INDOOR UNIT ACCESSORIES: PVA-A42AA7

Control Interface	3-Pin Connector	PAC-715AD
	BACnet® and Modbus® Interface	PAC-UKPRC001-CN-1
	CN24 Relay Kit	CN24RELAY-KIT-CM3
	Connector cable for remote display	PAC-SA88HA-EP
	IT Extender	PAC-WHS01IE-E
	kumo station® for kumo cloud®	PAC-WHS01HC-E
	Lockdown bracket for remote controller	RCMKP1CB
	Remote Operation Adapter†	PAC-SF40RM-E
	Thermostat Interface	PAC-US444CN-1
	USNAP Adapter	PAC-WHS01UP-E
Remote Sensor	Flush Mount Temperature Sensor	PAC-USSEN001-FM-1
	Remote Temperature Sensor	PAC-SE41TS-E
	Wireless temperature and humidity sensor for kumo cloud®	PAC-USWHS003-TH-1
Wired Remote Controller	Airzone ZBS Wired Blueface Principal Controller White	AZZBSBLUEFACECB
	Airzone ZBS Wired Lite Controller White	AZZBSLITECB
	Airzone ZBS Wired Think Controller White	AZZBSTHINKCB
	Airzone ZBS Wireless Lite Controller White	AZZBSLITERB
	Airzone ZBS Wireless Think Controller White	AZZBSTHINKRB
	Deluxe Wired MA Remote Controller†	PAR-40MAAU
	Simple MA Remote Controller†	PAC-YT53CRAU-J
	Touch MA Controller†	PAR-CT01MAU-SB
Wireless Remote Controller	kumo touch™ RedLINK™ Wireless Controller	MHK2
	Wireless MA Controller	PAR-FA32MA-W
	Wireless MA Remote Controller	PAR-FL32MA-E
	Wireless Remote Controller	PAR-SL100A-E
Condensate	Blue Diamond Sensor Extension Cable — 15 Ft.	C13-103
Control Wire	20/2PR, 1PR shielded + 1PR plenum wire for Airzone, 100 ft reel	CW2042S2-100
	20/2PR, shielded + 1PR plenum wire for Airzone, 500 ft reel	CW2042S2-500
Disconnect Switch	(30A/600V/UL) [fits 2" X 4" utility box] - Black	TAZ-MS303
	(30A/600V/UL) [fits 2" X 4" utility box] - White	TAZ-MS303W
Downflow Kit	Condensate Management Kit for downflow installation	CMA-1
Electric Heat Lockout	Electric Heat Lockout	ETC-211000-MIT
Electric Kit Heats	10kW Electric Heater	EH10-MPA-LB
	15kW Electric Heater	EH15-MPAS-LB
	17kW Electric Heater	EH17-MPAS-LB
Lineset	10' x 3/8" x 10' x 5/8" Lineset (Twin-Tube Insulation)††	MPLS385812T-10
	100' x 3/8" x 100' x 5/8" Lineset (Twin-Tube Insulation)††	MPLS385812T-100
	15' x 3/8" x 15' x 5/8" Lineset (Twin-Tube Insulation)††	MPLS385812T-15
	30' x 3/8" x 30' x 5/8" Lineset (Twin-Tube Insulation)††	MPLS385812T-30
	50' x 3/8" x 50' x 5/8" Lineset (Twin-Tube Insulation)††	MPLS385812T-50
	65' x 3/8" x 65' x 5/8" Lineset (Twin-Tube Insulation)††	MPLS385812T-65
Terminal Block	Separate Terminal Power Block	SPTB1

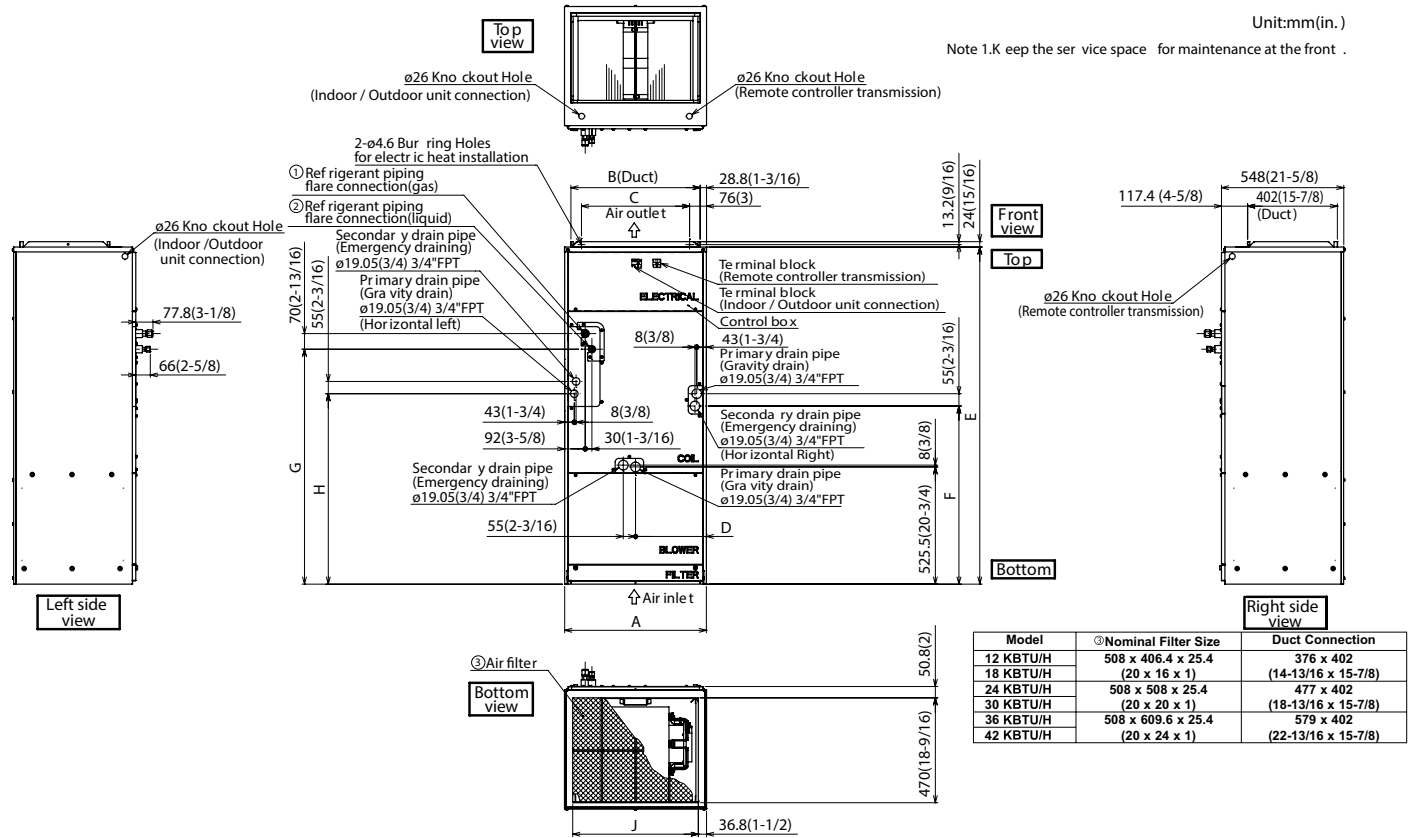
**NOTES:**

†PAC-SF40RM-E (Unable to use with wireless remote controller)

## OUTDOOR UNIT ACCESSORIES: PUZ-HA42NKA1

Air Outlet Guide	Air Outlet Guide (1 Piece)	PAC-SH96SG-E (two pieces are required)
Centralized Drain Pan	Central Drain Pan	PAC-SH97DP-E
Control/Service Tool	Control/Service Tool	PAC-SK52ST
Drain Socket	Drain Socket	PAC-SG61DS-E
Hail Guards	Hail Guard	HG-A2
M-NET Converter	M-NET Converter	PAC-SJ85MA-E
	M-NET Converter	PAC-SJ95MA-E
Mounting Pad	Condensing Unit Mounting Pad: 24" x 42" x 3"	ULTRILITE2
Optional Defrost Heater	Optional Defrost Heater	PAC-SJ20BH-E
Stand	18" Dual Fan Stand	QSMS1802M
	24" Dual Fan Stand	QSMS2402M
	Condenser Wall Bracket	QSWB2000M-1
	Condenser Wall Bracket -Stainless Steel Finish	QSWBSS
	Outdoor Unit Stand — 12" High	QSMS1202M
Wind Baffle	Front Wind Baffle	WB-PA3 (two pieces are required)

# INDOOR UNIT DIMENSIONS: PVA-A42AA7

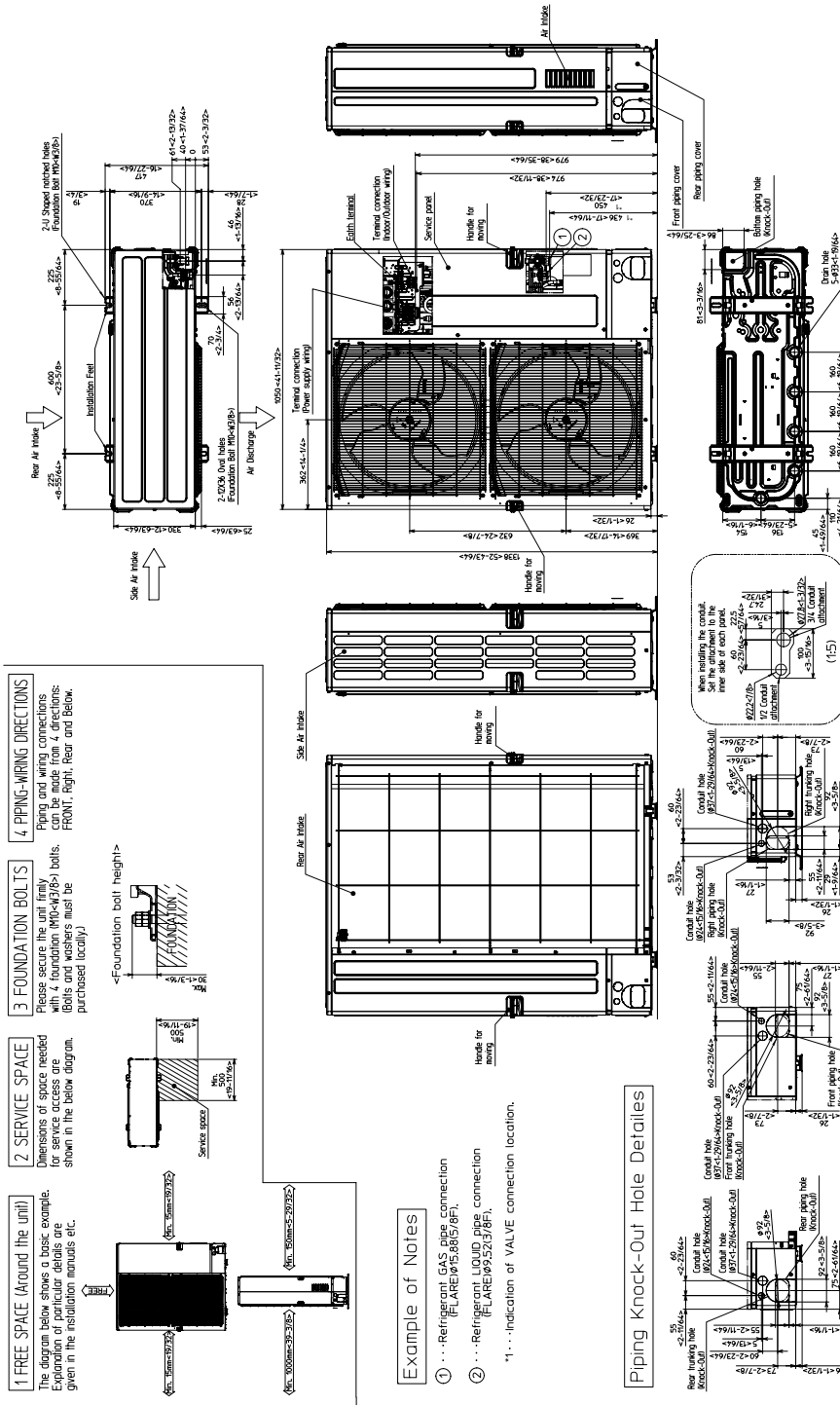


Model	①Nominal Filter Size	Duct Connection
12 KBTU/H	508 x 406.4 x 25.4	376 x 402
18 KBTU/H	(20 x 16 x 1)	(14-13/16 x 15-7/8)
24 KBTU/H	508 x 508 x 25.4	477 x 402
30 KBTU/H	(20 x 20 x 1)	(18-13/16 x 15-7/8)
36 KBTU/H	508 x 609.6 x 25.4	579 x 402
42 KBTU/H	(20 x 24 x 1)	(22-13/16 x 15-7/8)

Model	Unit: mm (in.)									①Gas Pipe	②Liquid Pipe
	A	B	C	D	E	F	G	H	J		
12 KBTU/H	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)	$\Phi$ 12.7 (1/2)	$\Phi$ 6.35 (1/4)
18 KBTU/H											
24 KBTU/H	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)	$\Phi$ 15.88 (5/8)	$\Phi$ 9.52 (3/8)
30 KBTU/H											
36 KBTU/H											
42 KBTU/H	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)		

# OUTDOOR UNIT DIMENSIONS: PUZ-HA42NKA1

Unit: mm<in>



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