PEAD-A42AA7 & PUY-A42NKA7(-BS)
MID STATIC HORIZONTAL-DUCTED INDOOR UNIT
42,000 BTU/H COOLING ONLY OUTDOOR

American Standard HEATING & AIR CONDITIONING

MITSUBISHI ELECTRIC

Job Name:

System Reference: Date:

Indoor Unit PEAD-A42AA7

Outdoor Unit

- ☐ Standard Model PUY-A42NKA7
- ☐ Seacoast Model PUY-A42NKA7-BS

INDOOR UNIT FEATURES

- Unobtrusive ceiling-concealed design for short-run ductwork
- Wide ranging external static pressure (0.14-0.60 in. WG)
- Built-in condensate lift mechanism (up to 27-9/16”)
- Auto fan speed mode
- Optional FB Series filter boxes for easy access and service
- Ideal for residential homes, retail shopping centers, larger classrooms, office complexes, conference rooms, ballrooms, fitness centers, and more
- 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
- Power receiver pre-charged with refrigerant volume for piping length up to 100 ft
- Low ambient cooling down to -40°F providing 100% capacity (only for PUY models with wind baffles installed)
- 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

Specifications are subject to change without notice.

© 2021 Mitsubishi Electric Trane HVAC US LLC. All rights reserved.

SPECIFICATIONS: PEAD-A42AA7 & PUY-A42NKA7(-BS)

Cooling at 95°F[1]	Maximum Capacity	BTU/H	42,000
	Rated Capacity	BTU/H	42,000
	Minimum Capacity	BTU/H	16,000
	Maximum Power Input	W	3,920
	Rated Power Input	W	3,920
	Moisture Removal	Pints/h	9.0
	Sensible Heat Factor		0.76
	Power Factor	%	93.6/93.6
Efficiency	SEER		16.1
	EER[1]		10.7
	ENERGY STAR® Certified		No
Electrical	Voltage, Phase, Frequency		208/230, 1, 60
	Guaranteed Voltage Range	V AC	198,198 - 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 (Oudoor)	A	30
	Recommended Wire Size [Indoor - Outdoor]	AWG	14
	Power Supply		Indoor unit is powered by the outdoor unit
Indoor Unit	MCA	A	3.5
	Fan Motor Full Load Amperage	A	2.8
	Fan Motor Output	W	244
	Fan Motor Type		DC Motor
	Airflow Rate at Cooling, Dry	CFM	1042–1254–1483
	Airflow Rate at Cooling, Wet	CFM	1002–1214–1443
	Airflow Rate at Heating, Dry	CFM	1042–1254–1483
	Sound Pressure Level [Cooling]	dB[A]	36–40–44
	Sound Pressure Level [Heating]	dB[A]	36–40–44
	External Static Pressure	in.WG	0.14–0.2–0.28–0.4–0.6
	Drain Pipe Size	In. [mm]	1-1/4 [32]
	Condensate Lift Mechanism, Maximum Distance	In. [mm]	27-9/16 [700]
	Coating on Heat Exchanger		—
	External Finish Color		Galvanized
	Unit Dimensions	W x D x H: In. [mm]	55-1/8 x 28-7/8 x 9-7/8 [1400 x 732 x 250]
	Package Dimensions	W x D x H: In. [mm]	65 x 34-11/16 x 13-7/16 [1650 x 880 x 341]
	Unit Weight	Lbs. [kg]	91 [41]
	Package Weight	Lbs. [kg]	106 [48]
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)	[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
Conditions	[4]Heating at 5°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 5 DB, 4 WB
	[5]Heating at -4°F (Indoor // Outdoor)	°F	70 DB, 60 WB // -4 DB, -5 WB
	[6]Heating at -5°F (Indoor // Outdoor)	°F	70 DB, 60 WB // -5 DB, -6 WB
	[7]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)):
- Applications should be restricted to comfort cooling only; equipment cooling applications are not recommended for low ambient temperature conditions.
- Applications should be restricted to comfort cooling only; equipment cooling applications are not recommended for low ambient temperature conditions.
  - » Wind baffles required to operate below 23°F DB in cooling mode.
  - » Cooling-only system with wind baffle: -40°F - 115°F.
  - » Heat pump system with wind baffle: 0°F - 115°F.
  - » 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.

SEACOAST PROTECTION (-BS MODELS)
- 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.

© 2021 Mitsubishi Electric Trane HVAC US LLC. All rights reserved.

SPECIFICATIONS: PEAD-A42AA7 & PUY-A42NKA7(-BS)

Outdoor Unit	MCA	A	25.0
	MOCP	A	31
	Fan Motor Full Load Amperage	A	0.5 + 0.5
	Fan Motor Output	W	74
	Airflow Rate	CFM	3880
	Refrigerant Control		LEV
	Defrost Method		Reverse Cycle
	Coating on Heat Exchanger		Blue Fin Coating (BS Model only)
	Sound Pressure Level, Cooling[1]	dB(A)	52
	Compressor Type		INVERTER-driven twin rotary
	Compressor Model		MNB33FBRMC-L
	Compressor Rated Load Amps	A	8.0
	Compressor Locked Rotor Amps	A	13.0
	Compressor Oil Type // Charge	oz.	FV50S // 45
	External Finish Color		Ivory Munsell 3Y 7.8/1.1
	Base Pan Heater		N/A
	Unit Dimensions	W x D x H: In. [mm]	41-5/16 x 13 (+1-3/16) x 52-11/16 [1050 x 330 (+30) x 1338]
	Package Dimensions	W x D x H: In. [mm]	42-15/16 x 17-11/16 x 56-4/16 [1091 x 450 x 1429]
	Unit Weight	Lbs. [kg]	211 [96]
	Package Weight	Lbs. [kg]	243 [110]
Outdoor Unit Operating Temperature Range	Cooling Air Temp [Maximum / Minimum]*	°F	115 DB / -40 DB
Refrigerant	Type		R410A
	Charge	Lbs, oz	10, 6.0
	Chargeless Piping Length	Ft. [m]	0.0 [30.0]
	Additional Refrigerant Charge Per Additional Piping Length	oz./Ft. [g/m]	0.3 [22.5]
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]	225 [68]
	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
Conditions	[4]Heating at 5°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 5 DB, 4 WB
	[5]Heating at -4°F (Indoor // Outdoor)	°F	70 DB, 60 WB // -4 DB, -5 WB
	[6]Heating at -5°F (Indoor // Outdoor)	°F	70 DB, 60 WB // -5 DB, -6 WB
	[7]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)):
- Applications should be restricted to comfort cooling only; equipment cooling applications are not recommended for low ambient temperature conditions.
- Applications should be restricted to comfort cooling only; equipment cooling applications are not recommended for low ambient temperature conditions.
  - » Wind baffles required to operate below 23°F DB in cooling mode.
  - » Cooling-only system with wind baffle: -40°F - 115°F.
  - » Heat pump system with wind baffle: 0°F - 115°F.
  - » 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.

SEACOAST PROTECTION (-BS MODELS)
- 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.

© 2021 Mitsubishi Electric Trane HVAC US LLC. All rights reserved.

INDOOR UNIT ACCESSORIES: PEAD-A42AA7

Control Interface	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®	☐ TAC-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 humitity 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†	☐ AAR-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 Receiver	☐ PAR-SR32MA-E
	Wireless MA Remote Controller	☐ PAR-FL32MA-E
Condensate	Blue Diamond (Advanced) Mini Condensate Pump w/ Reservoir & Sensor (208/230V) [recommended]	☐ X87-721
	Blue Diamond (MegaBlue Advanced) Condensate Pump w/ Reservoir & Sensor	☐ X87-835
	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
Filter Box	Filter Box with MERV 13 Filter	☐ FBM2-4-A
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

NOTES:
‡PAC-SF40RM-E (Unable to use with wireless remote controller)

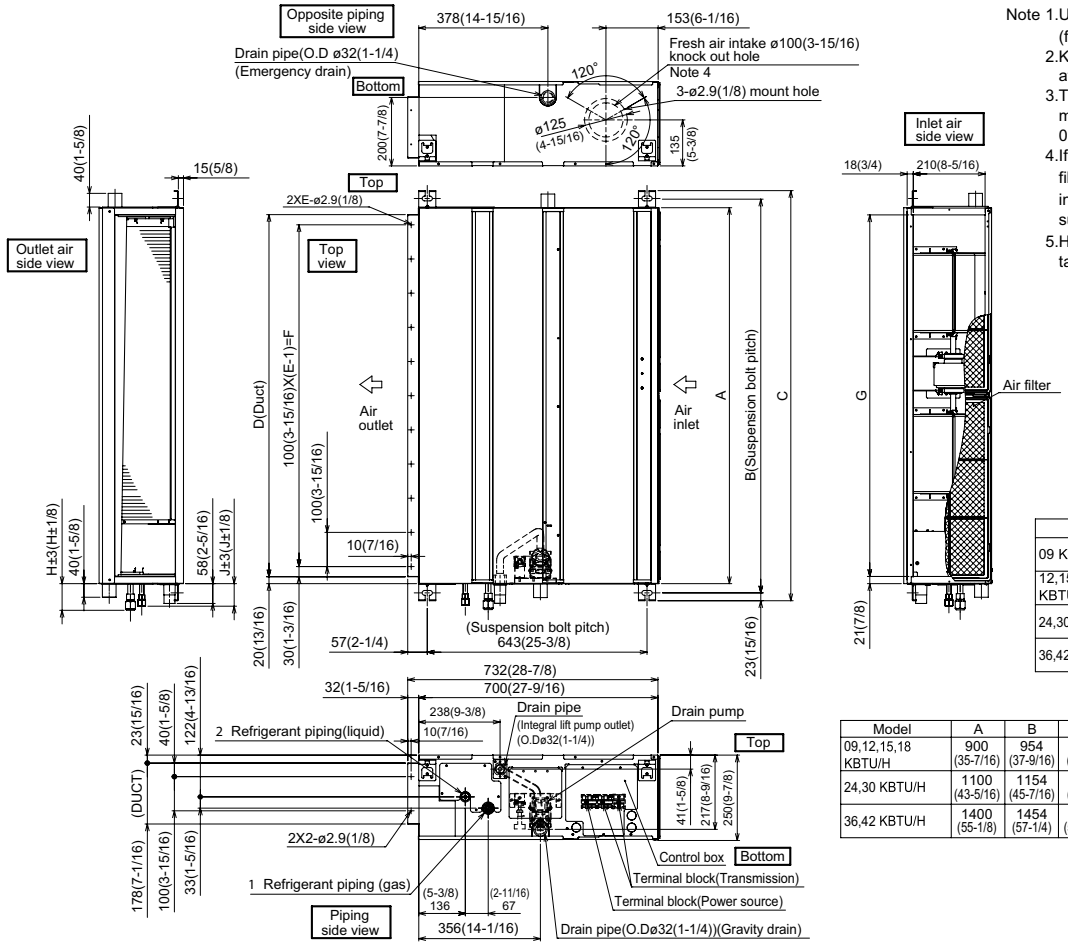
© 2021 Mitsubishi Electric Trane HVAC US LLC. All rights reserved.

OUTDOOR UNIT ACCESSORIES: PUY-A42NKA7(-BS)

Air Outlet Guide	Air Outlet Guide (1 Piece)	☐ PAC-ADG096AA-E (two pieces are required)
Control/Service Tool	Control/Service Tool	☐ PAC-SK52ST
	M- & P-Series Maintenance Tool Cable Set	☐ M21EC0397
	USB/UART Conversion Cable (Required for all laptop connection)	☐ M21EC1397
Drain Socket	Drain Socket	☐ PAC-SG61DS-E
M-NET Converter	M-NET Converter	☐ PAC-SJ85MA-E
	M-NET Converter	☐ PAC-SJ95MA-E
Mini-Split Wire	14 Gauge, 4 wire MiniSplit Cable—250 ft. roll	☐ S144-250
	14 Gauge, 4 wire MiniSplit Cable—50 ft. roll	☐ S144-50
	16 Gauge, 4 wire MiniSplit Cable—250 ft. roll	☐ S164-250
	16 Gauge, 4 wire MiniSplit Cable—50 ft. roll	☐ S164-50
Mounting Pad	Condensing Unit Mounting Pad: 24” x 42” x 3”	☐ ULTRILITE2
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)
	Rear Wind Baffle	☐ WB-RE6
	Side Advanced Wind Baffle	☐ WB-SD6

© 2021 Mitsubishi Electric Trane HVAC US LLC. All rights reserved.

INDOOR UNIT DIMENSIONS: PEAD-A42AA7



Note 1.Use an M10 screw for the suspension bolt (field supply).
2.Keep the service space for maintenance at the bottom.
3.This drawing is for 24·30·36·42 KBTU/H models,which have 2 fans.
09·12·15·18 KBTU/H models have 1 fan.
4.If the inlet duct is used,remove the air filter (supplied with the unit), then install the filter (field supply) at the suction side.
5.Heat air to 0°C (32°F) or higher when taking fresh air with a fresh air intake.

Unit:mm(in.)

Model	J	1 Gas pipe	2 Liquid pipe
09 KBTU/H	62 (2-1/2)	ø9.52 (3/8)	ø6.35 (1/4)
12,15,18 KBTU/H	62 (2-1/2)	ø12.7 (1/2)	ø6.35 (1/4)
24,30 KBTU/H	66 (2-5/8)	ø15.88 (5/8)	ø9.52 (3/8)
36,42 KBTU/H			

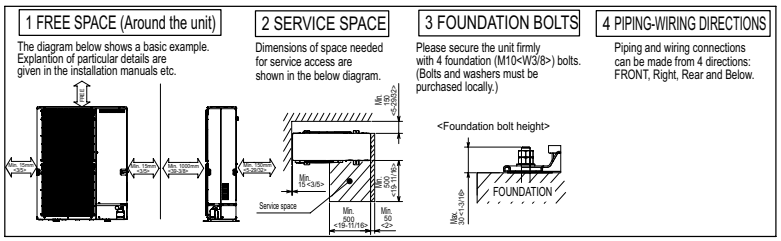
Unit:mm(in.)

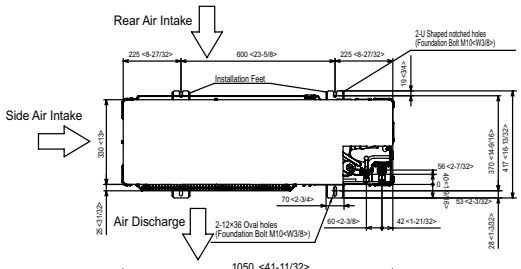
Model	A	B	C	D	E	F	G	H
09,12,15,18 KBTU/H	900 (35-7/16)	954 (37-9/16)	1000 (39-3/8)	860 (33-7/8)	9	800 (31-1/2)	858 (33-13/16)	72 (2-7/8)
24,30 KBTU/H	1100 (43-5/16)	1154 (45-7/16)	1200 (47-1/4)	1060 (41-3/4)	11	1000 (39-3/8)	1058 (41-11/16)	78 (3-1/8)
36,42 KBTU/H	1400 (55-1/8)	1454 (57-1/4)	1500 (59-1/16)	1360 (53-9/16)	14	1300 (51-3/16)	1358 (53-1/2)	

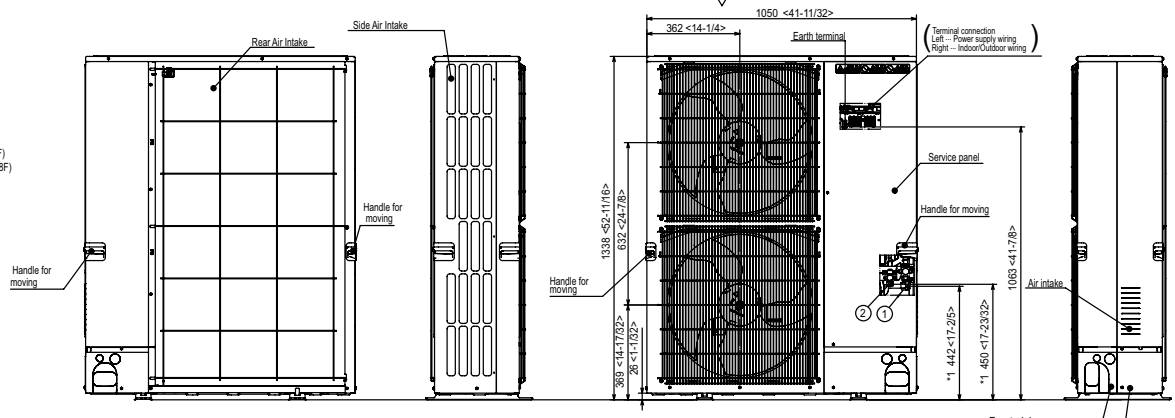
© 2021 Mitsubishi Electric Trane HVAC US LLC. All rights reserved.

OUTDOOR UNIT DIMENSIONS: PUY-A42NKA7(-BS)

Unit: mm<in>



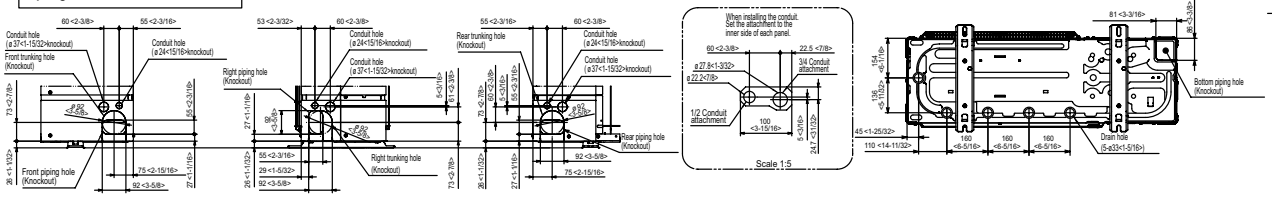




Example of Notes

① -- Refrigerant GAS pipe connection (FLARE) ø15.88(5/8F)
② -- Refrigerant LIQUID pipe connection (FLARE) ø9.52(3/8F)
*1 -- Indication of STOP VALVE connection location.

Piping Knockout Hole Details



FORM# PEAD-A42AA7 & PUY-A42NKA7(-BS) - 202106

Specifications are subject to change without notice.

© 2021 Mitsubishi Electric Trane HVAC US LLC. All rights reserved.