# PVA-A42AA7 & PUY-A42NKA7
## 42,000 BTU/H MULTI-POSITION AIR HANDLER
## 42,000 BTU/H COOLING ONLY OUTDOOR

| | |
|---|---|
| Job Name: | |
| System Reference: | Date: |

Indoor Unit ..... PVA-A42AA7

Outdoor Unit ..... PUY-A42NKA7

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
- Pre-charged with refrigerant volume for piping length up to 100 ft
- Low ambient cooling down to -40°F providing 100% capacity (with wind baffles)
- 24-hour continuous operation (cooling mode)
- High pressure protection
- Fast restart
- Superior energy and operational efficiency
- 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 Heat exchanger coil to protect it against airborne contaminants.
  - Heat exchanger coil and base panel rated for 2,000 hours in accordance with ASTM B117 testing

*Seacoast protection standard from 2022 production


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# SPECIFICATIONS: PVA-A42AA7 & PUY-A42NKA7

| | | | |
|---|---|---|---|
| Cooling at 95°F[1] | Maximum Capacity | BTU/H | 42,000 |
| | Rated Capacity | BTU/H | 42,000 |
| | Minimum Capacity | BTU/H | 15,000 |
| | Maximum Power Input | W | 4,150 |
| | Rated Power Input | W | 4,150 |
| | Moisture Removal | Pints/h | 7.9 |
| | Sensible Heat Factor | | 0.81 |
| | Power Factor [208V / 230V] | % | 87.6 / 87.6 |
| Efficiency | SEER2 | | 18.7 |
| | EER2[1] | | 10.1 |
| | HSPF2 [IV] | | — |
| | ENERGY STAR® 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 | 30 |
| | Recommended Wire Size [Indoor - Outdoor] | AWG | 14 |
| | Power Supply | | Indoor unit is powered by the outdoor unit |
| Indoor Unit | MCA | A | 5.5 |
| | Fan Motor Full Load Amperage | A | 4.50 |
| | Fan Motor Type | | DC Motor |
| | Airflow Rate at Cooling, Dry | CFM | 1,040–1,262–1,485 |
| | Airflow Rate at Heating, Dry | CFM | 1,040–1,262–1,485 |
| | 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: In. [mm] | 25 x 21-5/8 x 59-1/2 [635 x 548 x 1,511] |
| | 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 |
| 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 [Cooling / Heating] | CFM | 3880 |
| | Refrigerant Control | | LEV |
| | Defrost Method | | Reverse Cycle |
| | Coating on Heat Exchanger | | Blue Fin Coating*** |
| | Sound Pressure Level, Cooling[1] | dB(A) | 52 |
| | Compressor Type | | INVERTER-driven twin rotary |
| | Compressor Model | | MNB33FBRMC-L |
| | Compressor Rated Load Amps | A | 8 |
| | 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 |
| | Pre-Charged Refrigerant Amount | Lbs, oz | 10.0, 6.0 |
| | Maximum Pre-Charged Piping Length | Ft. [m] | 100.0 [30.0] |
| | Additional Refrigerant Charge Per Additional Piping Length | oz./Ft. [g/m] | 0.3 [22.5] |

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

*Indoor/Outdoor Unit Operating Temperature Range (Cooling Air Temp [Maximum / Minimum]):
- Wind baffles required to operate below 23°F DB in cooling mode.
- Cooling-only system with advanced wind baffle: -40°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.

***Blue Fin Coating Standard from 2022 production:
- PU(Y/Z)-A(12/18)NKA7 - Beginning with serial number 12U*****
- PU(Y/Z)-A(24/30/36/42)NKA7 - Beginning with serial number 1ZU*****

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# SPECIFICATIONS: PVA-A42AA7 & PUY-A42NKA7

| | | | |
|---|---|---|---|
| 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 |

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(Rated data is determined at a fixed compressor speed) [1]Cooling (Indoor // Outdoor) °F 80 DB, 67 WB // 95 DB, 75 WB

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# INDOOR UNIT ACCESSORIES: PVA-A42AA7

| | | |
|---|---|---|
| Control Interface | 3-Pin Connector | ☐ PAC-715AD |
| | Airzone ZBS Wired Blueface Principal Controller White | ☐ AZZBSBLUEFACECB |
| | Airzone ZBS Wired Blueface Principal Controller White | ☐ AZZBSBLUEZEROCB |
| | Airzone ZBS Wired Lite Controller White | ☐ AZZBSLITECB |
| | Airzone ZBS Wireless Lite Controller White | ☐ AZZBSLITERB |
| | Airzone ZBS Wireless Think Controller White | ☐ AZZBSTHINKRB |
| | 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 |
| | Procon BACnet® and Modbus® Interface | ☐ PAC-UKPRC001-CN-1 |
| | Remote Operation Adapter‡ | ☐ PAC-SF40RM-E |
| | Thermostat Interface | ☐ PAC-US444CN-1 |
| | Thermostat Interface | ☐ PAC-US445CN-1 |
| | USNAP Adapter | ☐ PAC-WHS01UP-E |
| Remote Sensor | Flush Mount Remote Temperature Sensor | ☐ PAC-USSEN002-FM-1 |
| | 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 | Deluxe Wired MA Remote Controller† | ☐ PAR-40MAAU |
| | Simple Ductless Wired Remote Controller | ☐ PAC-SDW01RC-1 |
| | Simple MA Remote Controller† | ☐ PAC-YT53CRAU-J |
| | Touch MA Controller† | ☐ PAR-CT01MAU-SB |
| Wireless Remote Controller | kumo touch™ RedLINK™ Wireless Controller | ☐ MHK2 |
| | Lockdown bracket for remote controller | ☐ RCMKP1CB |
| | Wireless MA Receiver | ☐ PAR-FA32MA-W |
| | 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 |
| | Refco Condensate Pump (100-240 VAC) up to 120,000 BTU/H | ☐ COMBI |
| 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-211020-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)


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# OUTDOOR UNIT ACCESSORIES: PUY-A42NKA7

| | | |
|---|---|---|
| Air Outlet Guide | Air Outlet Guide (1 Piece) | ☐ PAC-SH96SG-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 |
| 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 |


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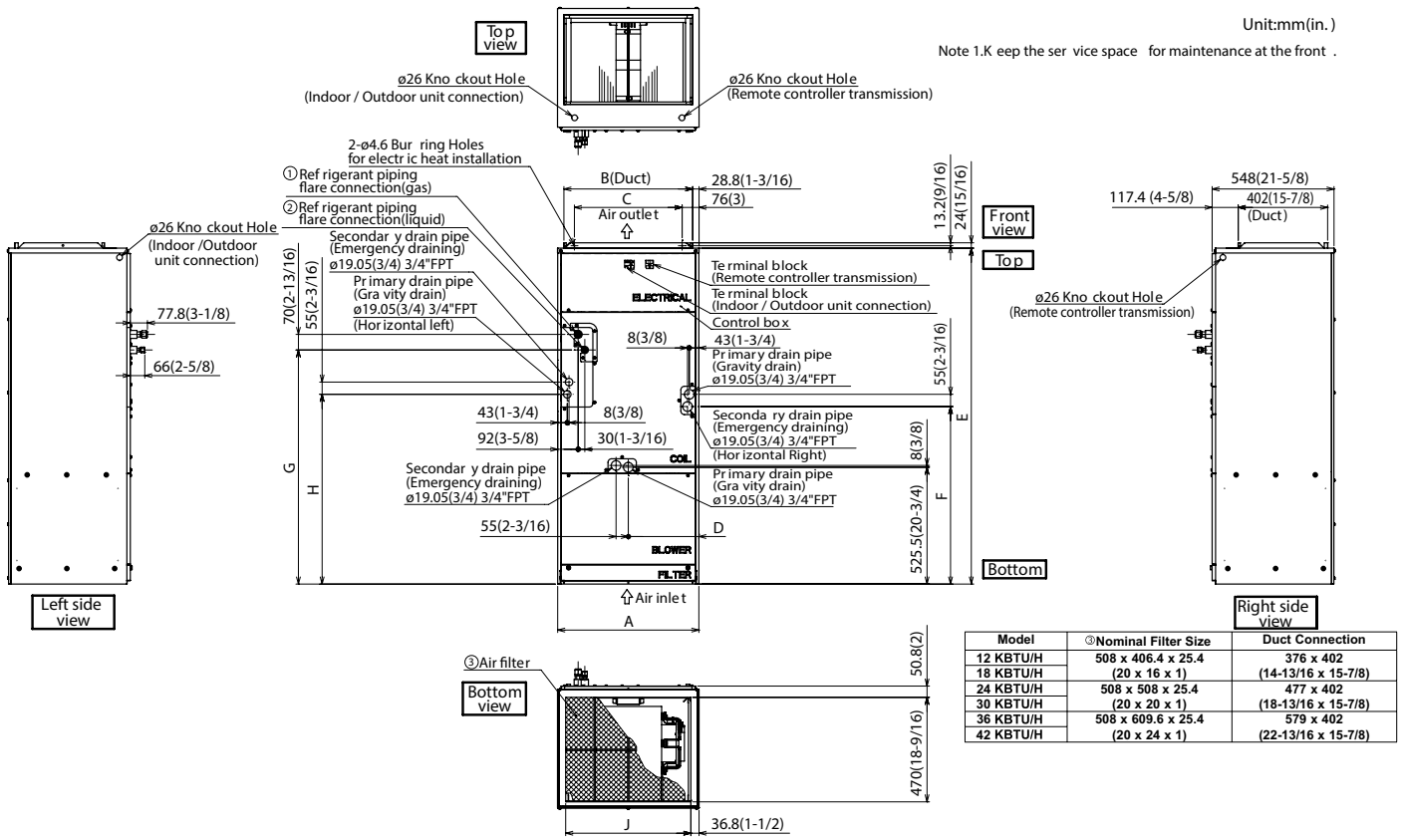
# INDOOR UNIT DIMENSIONS: PVA-A42AA7




| Model | ③Nominal Filter Size | Duct Connection |
|---|---|---|
| 12 KBTU/H<br>18 KBTU/H | 508 x 406.4 x 25.4<br>(20 x 16 x 1) | 376 x 402<br>(14-13/16 x 15-7/8) |
| 24 KBTU/H<br>30 KBTU/H | 508 x 508 x 25.4<br>(20 x 20 x 1) | 477 x 402<br>(18-13/16 x 15-7/8) |
| 36 KBTU/H<br>42 KBTU/H | 508 x 609.6 x 25.4<br>(20 x 24 x 1) | 579 x 402<br>(22-13/16 x 15-7/8) |

Unit: mm (in.)

| Model | A | B | C | D | E | F | G | H | J | ①Gas Pipe | ②Liquid Pipe |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 KBTU/H<br>18 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) | Φ 12.7 (1/2) | Φ 6.35 (1/4) |
| 24 KBTU/H<br>30 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) | Φ 15.88 (5/8) | Φ 9.52 (3/8) |
| 36 KBTU/H<br>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) | | |

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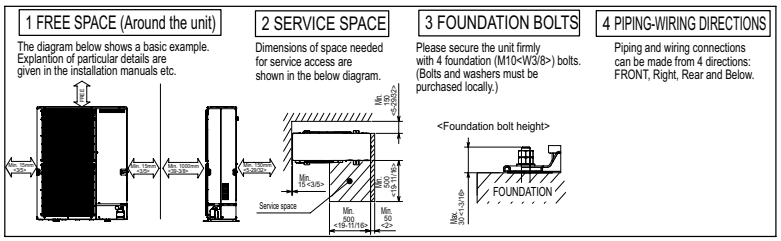
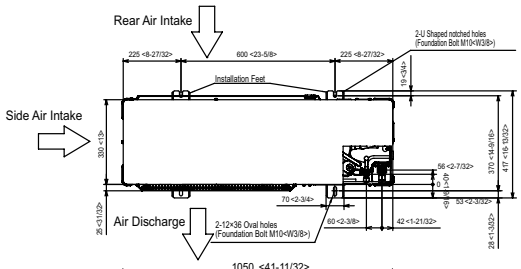
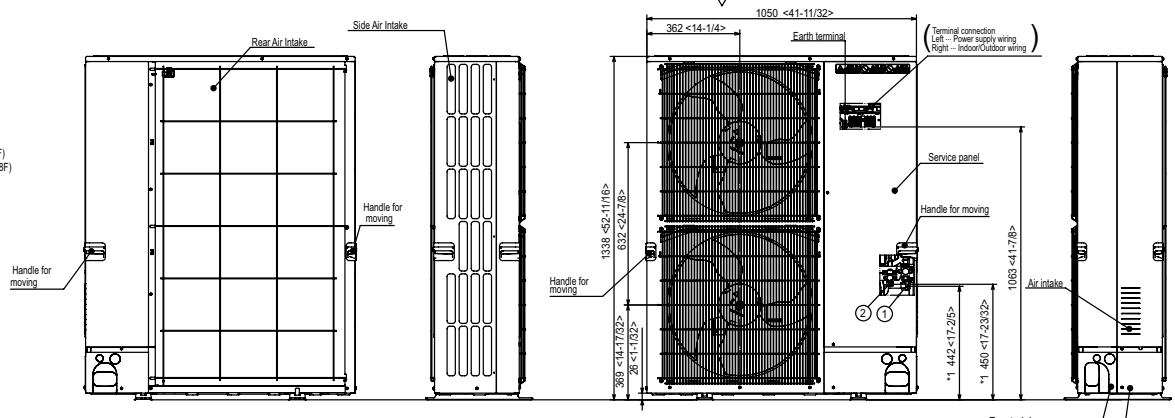
# OUTDOOR UNIT DIMENSIONS: PUY-A42NKA7

Unit: mm<in>



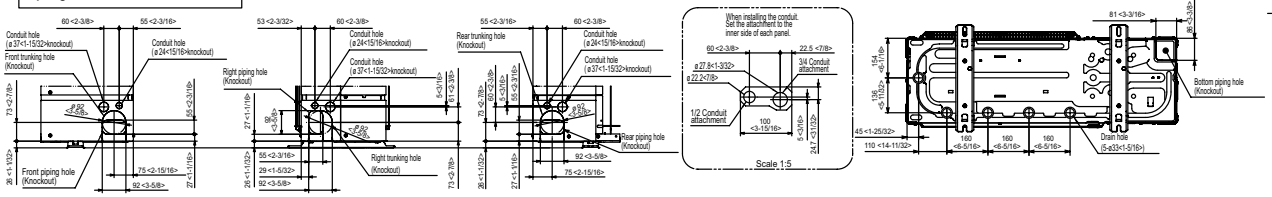




## Example of Notes

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





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FORM# PVA-A42AA7 & PUY-A42NKA7 - 202310



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