

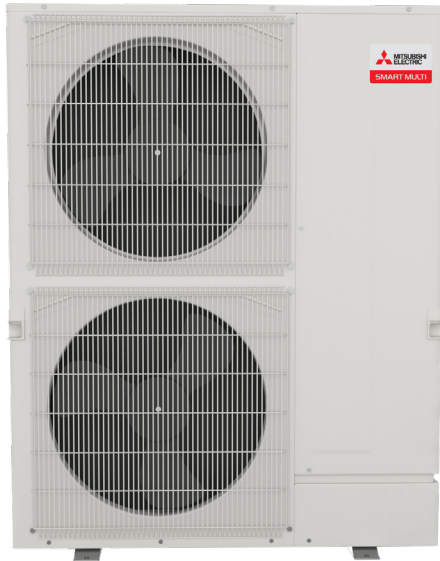
MXZ-SM48NAM-U1 4-TON MULTI-ZONE INVERTER HEAT-PUMP SYSTEM



Job Name:

System Reference:

Date:



FEATURES

- Compatible with M- and P-Series and CITY MULTI indoor units. Branch box required for connection with M- and P-Series
- Variable speed INVERTER-driven compressor
- Seacoast protection on heat exchanger and base panel (rated for 2,000 hrs in accordance with ASTM B117 testing)
- Thermal Differential 1°F (with PAC-MKA32/52BC only)
- Optional base pan heater
- Quiet outdoor unit operation, rated sound pressure as low as 51 dB(A)
- High pressure protection
- Compressor thermal protection
- Compressor overcurrent detection
- Fan motor overheating/voltage protection

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Specifications are subject to change without notice.

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SPECIFICATIONS: MXZ-SM48NAM-U1

| | | | | |
|--|---|-------------|--|-----------------|
| Cooling ¹ (Non-Ducted // Mix // Ducted) | Maximum Capacity | BTU/H | 48,000 // 48,000 // 48,000 | |
| | Rated Capacity | BTU/H | 48,000 // 48,000 // 48,000 | |
| | Minimum Capacity | BTU/H | 16,000 // 16,000 // 16,000 | |
| | Maximum Power Input | W | 3,665 // 3,930 // 4,245 | |
| | Rated Power Input | W | 3,665 // 3,930 // 4,245 | |
| | Power Factor (208V, 230V) | % | 98.5, 98.5 // 98.5, 98.5 // 98.5, 98.5 | |
| Heating at 47°F ² (Non-Ducted // Mix // Ducted) | Maximum Capacity | BTU/H | 54,000 // 54,000 // 54,000 | |
| | Rated Capacity | BTU/H | 54,000 // 54,000 // 54,000 | |
| | Minimum Capacity | BTU/H | 27,000 // 27,000 // 27,000 | |
| | Maximum Power Input | W | 3,955 // 4,335 // 4,795 | |
| | Rated Power Input | W | 3,955 // 4,335 // 4,795 | |
| | Power Factor (208V, 230V) | % | 98.5, 98.5 // 98.5, 98.5 // 98.5, 98.5 | |
| Heating at 17°F ³ (Non-Ducted // Mix // Ducted) | Maximum Capacity | BTU/H | 37,800 // 37,800 // 37,800 | |
| | Rated Capacity | BTU/H | 31,400 // 31,400 // 31,400 | |
| | Maximum Power Input | W | 5,200 // 5,650 // 3,665 | |
| | Rated Power Input | W | 3,410 // 3,840 // 4,270 | |
| Heating at 5°F ⁴ (Non-Ducted // Mix // Ducted) | Maximum Capacity | BTU/H | 32,400 // 32,400 // 32,400 | |
| | Maximum Power Input | W | 4,530 // 4,650 // 4,770 | |
| Efficiency (Non-Ducted // Mix // Ducted) | SEER | | 23.0 // 19.75 // 16.5 | |
| | EER ¹ | | 13.1 // 12.2 // 11.3 | |
| | HSPF (IV) | | 12.0 // 11.5 // 11.0 | |
| | COP at 47°F ² | | 4.0 // 3.65 // 3.3 | |
| | COP at 17°F at Maximum Capacity ³ | | 2.1 // 1.96 // 1.7 | |
| | COP at 5°F at Maximum Capacity ⁴ | | 2.0 // 2.05 // 2.0 | |
| | ENERGY STAR [®] Certified | | Yes // No // No | |
| Electrical | Voltage, Phase, Frequency | | 208/230, 1, 60 | |
| | Guaranteed Voltage Range | V AC | 187-253 | |
| | 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 if Branch Box Powered by Outdoor Unit | A | 40 | |
| | Recommended Fuse/Breaker Size without Branch Box or Branch Box Powered Separate | A | 30 | |
| | Recommended Wire Size (Indoor - Outdoor) | AWG | 16 | |
| | MCA if Branch Box Powered by Outdoor Unit | A | 35.0 | |
| | MCA without Branch Box or Branch Box Powered Separate | A | 29 | |
| | MOCP if Branch Box Powered by Outdoor Unit | A | 50 | |
| | MOCP without Branch Box or Branch Box Powered Separate | A | 40 | |
| | Fan Motor Full Load Amperage | A | 0.6+0.6 | |
| | Fan Motor Output | W | 74 | |
| Outdoor unit | Airflow Rate (Cooling / Heating) | CFM | 3,885 / 3,885 | |
| | Refrigerant Control | | LEV | |
| | Defrost Method | | Reverse Cycle | |
| | Heat Exchanger Type | | Plate fin coil | |
| | Heat Exchanger Coating | | Blue Fin Coating | |
| | Sound Pressure Level, Cooling ¹ | dB(A) | 51 | |
| | Sound Pressure Level, Heating ² | dB(A) | 54 | |
| | Compressor Type | | Hermetic | |
| | Compressor Model | | ANB33FNHMT | |
| | Compressor Motor Output | kW | 3.4 | |
| | Compressor Rated Load Amps | A | 19 | |
| | Compressor Locked Rotor Amps | A | 22.0 | |
| | Compressor Oil Type // Charge | oz. | FV50S // 78 | |
| | Base Pan Heater | | Optional (PAC-SJ20BH-E) | |
| | Unit Dimensions | W: In. [mm] | | 41-11/32[1,050] |
| | | D: In. [mm] | | 13[330] |
| | | H: In. [mm] | | 52-11/16[1,338] |
| | Package Dimensions | W: In. [mm] | | 43 [1,090] |
| | | D: In. [mm] | | 18 [450] |
| | | H: In. [mm] | | 57 [1,430] |
| Unit Weight | Lbs.[kg] | | 271 [123] | |
| Package Weight | Lbs.[kg] | | 295 [134] | |

NOTES:

AHRI Rated Conditions
 (Rated data is determined at a fixed compressor speed)

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

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

*Applications should be restricted to comfort cooling only; equipment cooling applications are not recommended for low ambient temperature conditions.

^A when 1 or more PLA-A-EA7 connected

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

^C 5°F DB - 115°F DB when optional wind baffles are installed

For actual capacity performance based on indoor unit type and number of indoor units connected, please refer to MXZ Operational Performance.

Although the maximum connectable capacity is 130%, the outdoor unit cannot provide more than 100% of the rated capacity. Please utilize this over capacity capability for load shedding or applications where it is known that all connected units will NOT be operating at the same time.

SPECIFICATIONS: MXZ-SM48NAM-U1

| | | | |
|--|---|---------|--------------------|
| Outdoor unit operating temperature range | Cooling Intake Air Temp (Maximum / Minimum) | °FDB | 115 / 23 |
| | Cooling Thermal Lock-out / Re-start Temperatures | °FDB | N/A / N/A |
| | Heating Intake Air Temp (Maximum / Minimum) | °FWB | 59 / -13 |
| | Heating Thermal Lock-out / Re-start Temperatures | °FDB | -24 / -14 |
| Refrigerant | Type | | R410A |
| | Charge | Lbs, oz | 10, 9.0 |
| Indoor unit connection | Maximum Number of Connected IDU with Branch Box | | 8 (6) ^A |
| | Maximum Number of Connected IDU without Branch Box | | 12 |
| | Minimum Number of Connected IDU with Branch Box | | 2 |
| | Minimum Number of Connected IDU without Branch Box | | 1 |
| | Minimum Connected Capacity with Branch Box | BTU/H | 12,000 |
| | Maximum Connected Capacity | BTU/H | 62,000 |
| 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 ^B , ODU above IDU | Ft. [m] | 164 [50] |
| | Maximum Height Difference ^B , ODU below IDU | Ft. [m] | 131 [40] |
| | Maximum Height Difference ^B , between branch boxes | Ft. [m] | 49 [15] |
| | Maximum Height Difference ^B , between branch boxes and IDU | Ft. [m] | 49 [15] |
| | Maximum Height Difference between IDU and IDU without branch box | Ft. [m] | 49 [15] |
| | Max. 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 | | 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 ⁴Heating at 5°F (Indoor // Outdoor) °F 70 DB, 60 WB // 5 DB, 4 WB

^AApplications should be restricted to comfort cooling only; equipment cooling applications are not recommended for low ambient temperature conditions.

^A when 1 or more PLA-A-EA7 connected

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

^C 5°F DB - 115°F DB when optional wind baffles are installed

For actual capacity performance based on indoor unit type and number of indoor units connected, please refer to MXZ Operational Performance.

Although the maximum connectable capacity is 130%, the outdoor unit cannot provide more than 100% of the rated capacity. Please utilize this over capacity capability for load shedding or applications where it is known that all connected units will NOT be operating at the same time.

OUTDOOR UNIT ACCESSORIES: MXZ-SM48NAM-U1

| | | |
|-------------------------|--|--|
| Air Deflector | Vertical Air Deflector | ADV-1 |
| Air Outlet Guide | Air Outlet Guide (1 Piece) | PAC-SH96SG-E (two pieces are required) |
| Ball Valve | Refrigeration Ball Valve - 1/2" | BV12FFSI2 |
| | Refrigeration Ball Valve - 1/4" | BV14FFSI2 |
| | Refrigeration Ball Valve - 3/8" | BV38FFSI2 |
| | Refrigeration Ball Valve - 5/8" | BV58FFSI2 |
| Branch Box | Branch Box | PAC-MKA32BC |
| | Branch Box | PAC-MKA52BC |
| | Branch Box Enclosure | BBE-1 |
| Centralized Drain Pan | Central Drain Pan | PAC-SH97DP-E |
| Control Wire | M-Net Control Wire, 1,000' Roll (16-AWG, Standard, Twisted Pair, Shielded, Jacketed- Plenum rated) | CW162S-1000 |
| | M-Net Control Wire, 250' Roll (16-AWG, Standard, Twisted Pair, Shielded, Jacketed- Plenum rated) | CW162S-250 |
| 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-SH71DS-E |
| Hail Guards | Hail Guard | HG-A2 |
| 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 |
| | Outdoor Unit 3-1/4 inch Mounting Base (Pair) - Plastic | DSD-400P |
| Optional Defrost Heater | Optional Defrost Heater | PAC-SJ20BH-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 |
| 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) |

MODEL: PAC-MKA30BC, PAC-MKA31BC, PAC-MKA32BC PAC-MKA50BC, PAC-MKA51BC, AND PAC-MKA52BC BRANCH BOX



Job Name:

System Reference:

Date:



PAC-MKA30BC
PAC-MKA31BC
PAC-MKA32BC



PAC-MKA50BC
PAC-MKA51BC
PAC-MKA52BC

DESCRIPTIONS

- The PAC-MKA32/52 have a thermal differential from set point of 1F regardless of which MXZ outdoor unit generation they are connected to.

SPECIFICATIONS

| Model Name | | | PAC-MKA50BC PAC-MKA51BC PAC-MKA52BC | | PAC-MKA30BC PAC-MKA31BC PAC-MKA32BC | | |
|------------------------------------|-----------------------|-----------|---|---|---|-------------------------|--|
| Connectable number of indoor units | | | Maximum 5 | | Maximum 3 | | |
| Power supply | | | Single phase, 208/230 V, 60 Hz | | | | |
| Input | | kW | 0.003 | | | | |
| Running current | | A | 0.05 | | | | |
| External finish | | | Galvanized steel | | | | |
| Dimensions | Width | Inch (mm) | 17-23/32 (450) | | | | |
| | Depth | Inch (mm) | 11-1/32 (280) | | | | |
| | Height | Inch (mm) | 6-11/16 (170) | | | | |
| Package Dimensions | Width | Inch (mm) | 20.1 (511) | | | | |
| | Depth | Inch (mm) | 24.4 (620) | | | | |
| | Height | Inch (mm) | 8.3 (211) | | | | |
| Weight | | lb (kg) | 23.4 (10.6) | | 21.8 (9.9) | | |
| Piping Connection (Flare) | Branch (indoor side)* | Liquid | Inch (mm) | ø1/4 (6.35) x 5 {A,B,C,D,E} | | ø1/4 (6.35 x 3 {A,B,C} | |
| | | Gas | Inch (mm) | ø3/8 (9.52) x 4 {A,B,C,D}, ø1/2 (12.7) x 1{E} | | ø3/8 (9.52) x 3 {A,B,C} | |
| | Main (outdoor side) | Liquid | Inch (mm) | ø3/8 (9.52) | | | |
| | | Gas | Inch (mm) | ø5/8 (15.88) | | | |

*The piping connection size differs according to the type of and capacity of indoor units. Match the piping connection size for indoor and branch box. If the piping connection size of the branch does not match the piping connection size of the indoor units, use optional different-diameter (deformed) joints to the branch box side. (Connect deformed joint directly to the branch box side.)

ACCESSORIES

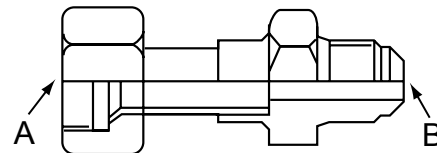
| | |
|--------------|-------------------------------------|
| BBE-1 | Branch Box Enclosure |
| MAC-A454JP-E | Port Adapter |
| MAC-A455JP-E | Port Adapter |
| MAC-A456JP-E | Port Adapter |
| PAC-493PI | Port Adapter |
| PAC-SG76RJ-E | Port Adapter |
| ADP5834 | Port Adapter |
| MSDD-50AR-D | Flare connection distribution pipe |
| MSDD-50BR-E | Brazed connection distribution pipe |

NOTES:

For the MXZ-8C60 outdoor unit:

- When connecting the outdoor unit to the branch box directly, the reduction in pipe size must be made at the branch box using the port adaptor: ADP5834 (5/8" F x 3/4" M).
- When connecting the outdoor unit to the distribution pipe (MSDD-50AR-D, for using 2 branch boxes), the reduction in pipe size must be made at the distribution pipe using the port adaptor: ADP5834 (5/8" F x 3/4" M).

OPTIONAL PORT ADAPTORS



| Model name | Connected pipes diameter | Diameter A | Diameter B |
|--------------|---------------------------|-------------|-------------|
| | Inch, mm | Inch, mm | Inch, mm |
| MAC-A454JP-E | 3/8, ø9.52 → 1/2, ø12.7 | 3/8, ø9.52 | 1/2, ø12.7 |
| MAC-A455JP-E | 1/2, ø12.7 → 3/8, ø9.52 | 1/2, ø12.7 | 3/8, ø9.52 |
| MAC-A456JP-E | 1/2, ø12.7 → 5/8, ø15.88 | 1/2, ø12.7 | 5/8, ø15.88 |
| PAC-493PI | 1/4, ø6.35 → 3/8, ø9.52 | 1/4, ø6.35 | 3/8, ø9.52 |
| PAC-SG76RJ-E | 3/8, ø9.52 → 5/8, ø15.88 | 3/8, ø9.52 | 5/8, ø15.88 |
| ADP5834 | 5/8, ø15.88 → 3/4, ø19.05 | 5/8, ø15.88 | 3/4, ø19.05 |

DIMENSIONS: PAC-MKA30BC, PAC-MKA31BC, AND PAC-MKA32BC

PAC-MKA30BC, PAC-MKA31BC, AND PAC-MKA32BC (3-BRANCHES TYPE)

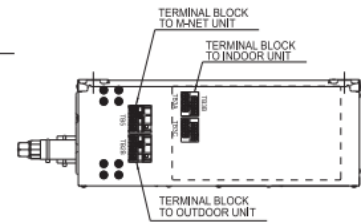
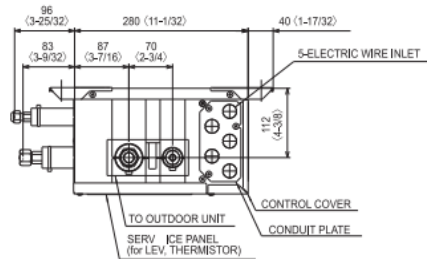
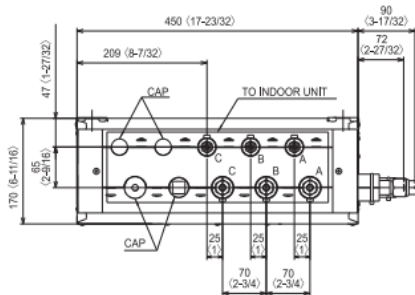
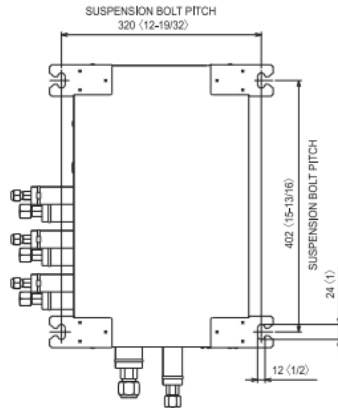
Suspension bolt: W3/8 (M10)
Refrigerant pipe flared connection

inch, mm

| | To indoor unit | | | To outdoor unit |
|-------------|----------------|------------|------------|-----------------|
| | A | B | C | |
| Liquid pipe | 1/4, ø6.35 | 1/4, ø6.35 | 1/4, ø6.35 | 3/8, ø9.52 |
| Gas pipe | 3/8, ø9.52 | 3/8, ø9.52 | 3/8, ø9.52 | 5/8, ø15.88 |

| Conversion formula | |
|--------------------|--------|
| 3/8F | ø9.52 |
| 5/8F | ø15.88 |

Unit: mm (inch)



DIMENSIONS: PAC-MKA50BC, PAC-MKA51BC, AND PAC-MKA52BC

PAC-MKA50BC, PAC-MKA51BC, AND PAC-MKA52BC (5-BRANCHES TYPE)

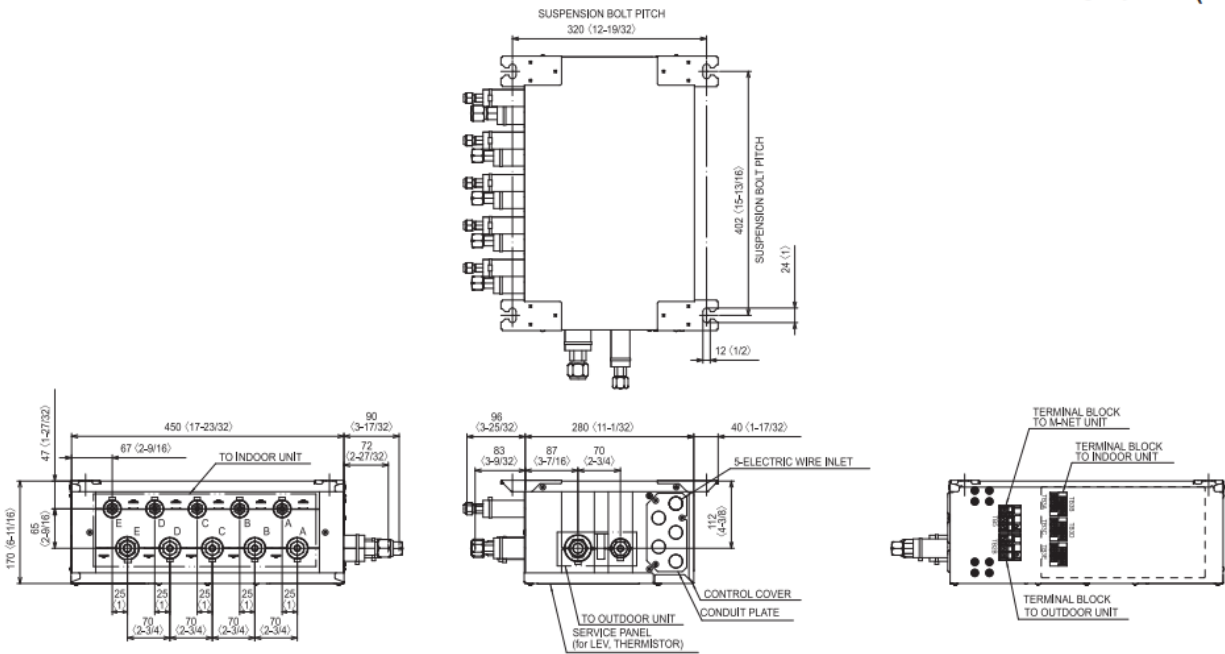
Suspension bolt: W3/8 (M10)
Refrigerant pipe flared connection

inch, mm

| | To indoor unit | | | | | To outdoor unit |
|-------------|----------------|------------|------------|------------|------------|-----------------|
| | A | B | C | D | E | |
| Liquid pipe | 1/4, ø6.35 | 1/4, ø6.35 | 1/4, ø6.35 | 1/4, ø6.35 | 1/4, ø6.35 | 3/8, ø9.52 |
| Gas pipe | 3/8, ø9.52 | 3/8, ø9.52 | 3/8, ø9.52 | 3/8, ø9.52 | 1/2, ø12.7 | 5/8, ø15.88 |

| Conversion formula | |
|--------------------|--------|
| 1/4F | ø6.35 |
| 3/8F | ø9.52 |
| 1/2F | ø12.7 |
| 5/8F | ø15.88 |
| 3/4F | ø19.05 |

Unit: mm (inch)

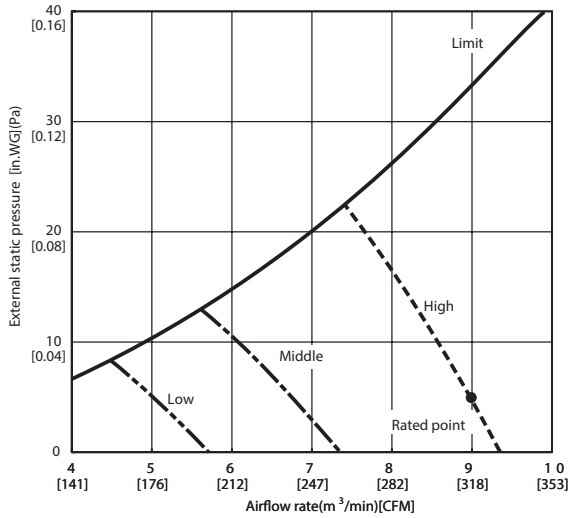


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SEZ-KD09NA4** INDOOR FAN PERFORMANCE AND CORRECTED AIR FLOW CHARTS

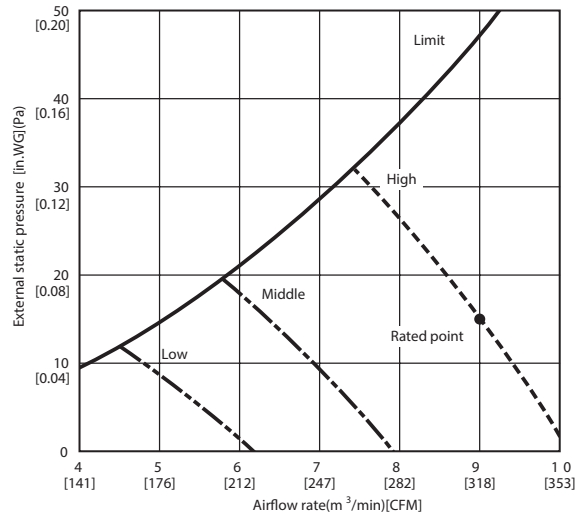
SEZ-KD09NA4**

(External static pressure 0.02[in.WG](5P a) 208/230V 60Hz



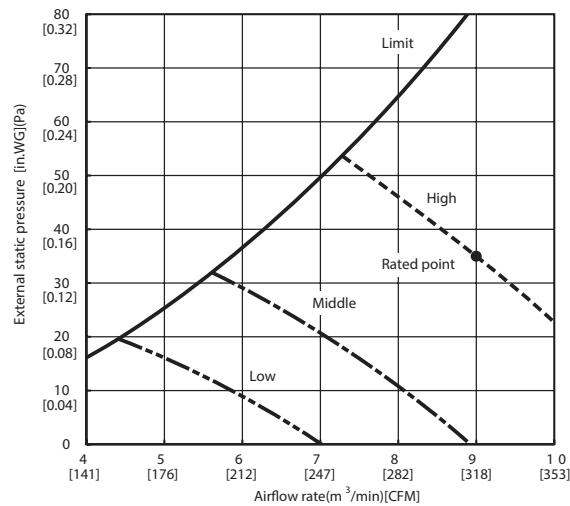
SEZ-KD09NA4**

(External static pressure 0.06[in.WG](15P a) 208/230V 60Hz



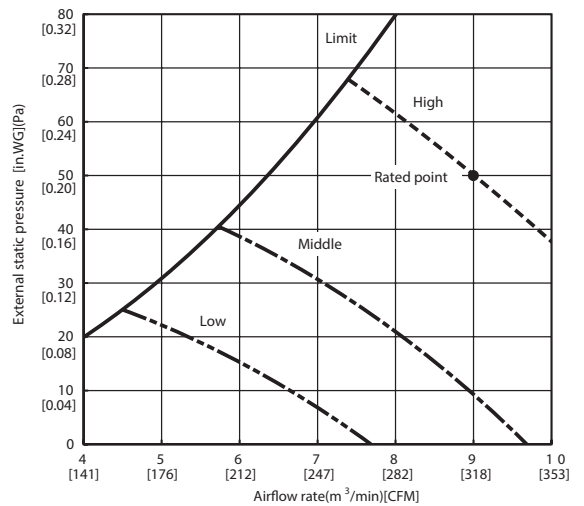
SEZ-KD09NA4**

(External static pressure 0.14[in.WG](35P a) 208/230V 60Hz



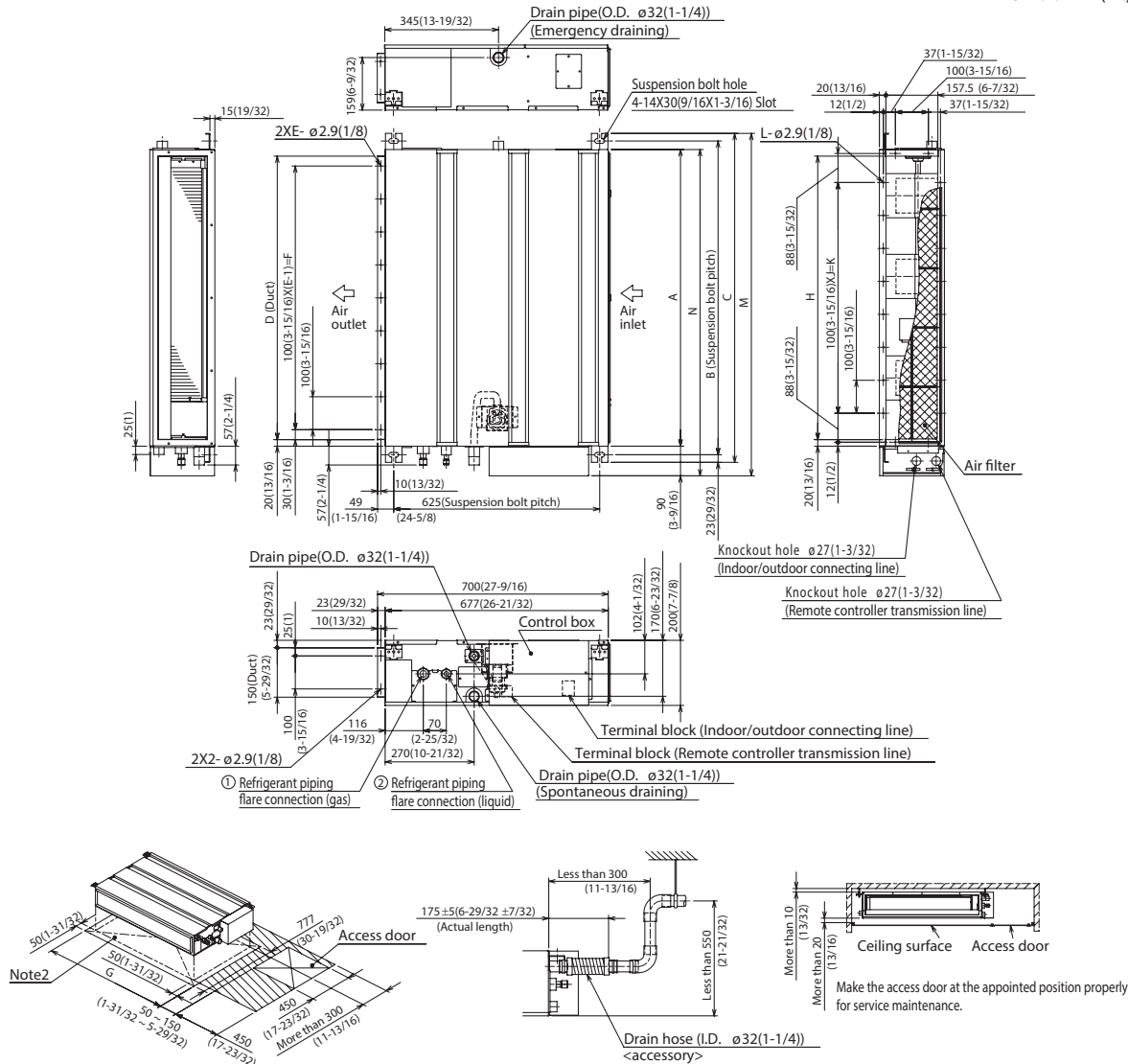
SEZ-KD09NA4**

(External static pressure 0.20[in.WG](50P a) 208/230V 60Hz



DIMENSIONS: SEZ-KD09NA4**

Unit : mm(in.)



Required space for service and maintenance

| Model | mm(in.) | | | | | | | | | | | | | | mm(in.) | |
|---------------|-------------------|------------------|-------------------|------------------|----|------------------|------------------|------------------|---|-------------------|----|--------------------|------------------|------------------|------------------|--|
| | A | B | C | D | E | F | G | H | J | K | L | M | N | ① Gas pipe | ② Liquid pipe | |
| SEZ-KD09NA4** | 700 (27-9/16) | 752 (29-5/8) | 798 (31-7/16) | 660 (26) | 7 | 600 (23-5/8) | 800 (31-1/2) | 660 (26) | 5 | 500 (19-11/16) | 16 | 839 (33-1/16) | 790 (31-1/8) | $\phi 9.52(3/8)$ | $\phi 6.35(1/4)$ | |
| SEZ-KD12NA4** | 900 (35-7/16) | 952 (37-1/2) | 998 (39-5/16) | 860 (33-7/8) | 9 | 800 (31-1/2) | 1000 (39-3/8) | 860 (33-7/8) | 7 | 700 (27-9/16) | 20 | 1039 (40-29/32) | 990 (39) | | | |
| SEZ-KD15NA4** | 1100 (43-5/16) | 1152 (45-3/8) | 1198 (47-3/16) | 1060 (41-3/4) | 11 | 1000 (39-3/8) | 1200 (47-1/4) | 1060 (41-3/4) | 9 | 900 (35-7/16) | 24 | 1239 (48-25/32) | 1190 (46-7/8) | | | |

- Note1. Use M10 screw for the suspension bolt (field supply).
 2. Keep the service space for the maintenance at the bottom.
 3. This chart indicates for SEZ-KD15NA4** model, which has 3 fans.
 SEZ-KD09, 12NA4** models have 2 fans.
 SEZ-KD18NA4** models have 4 fans.
 4. In case an inlet duct is used, remove the air filter (supply with the unit), then install the filter (field supply) at suction side.



COOLING & HEATING

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