# **M-SERIES**

#### Job Name:

System Reference:

SUBMITTAL DATA: MXZ-2B20NA-1

MULTI-INDOOR INVERTER HEAT-PUMP SYSTEM



Date:

#### **GENERAL FEATURES**

- Compact side discharge outdoor unit
- Wireless or wired remote controller, indoor unit dependent
- Quiet operation
- Automatic fan speed control
- · Auto restart following power outage
- Self-check function—integrated diagnostics
- Advanced microprocessor control
- · Limited warranty: five years parts and seven years compressors

#### ACCESSORIES

- Air Outlet Guide (MAC-856SG)
  3/8" x 1/2" Port Adapter (MAC-A454JP; for use with 15,000 Btu/h Indoor units)



Outdoor Unit: MXZ-2B20NA-1

|                                                                   | Specifications                       |                          | Model Name                                |  |  |
|-------------------------------------------------------------------|--------------------------------------|--------------------------|-------------------------------------------|--|--|
|                                                                   | Unit Type                            |                          | MXZ-2B20NA-1                              |  |  |
|                                                                   | Rated Capacity                       | Btu/h                    | 18,000 / 20,000                           |  |  |
| Cooling*<br>(Non-ducted/Ducted)                                   | Maximum Capacity                     | Btu/h                    | 20,000 / 20,000                           |  |  |
| (non adolod Duolod)                                               | Total Input                          | w                        | 1,440 / 2,190                             |  |  |
|                                                                   | Rated Capacity                       | Btu/h                    | 22,000 / 22,000                           |  |  |
| Heating at 47°F*<br>(Non-ducted/Ducted)                           | Maximum Capacity                     | Btu/h                    | 25,500 / 25,500                           |  |  |
| (1011 ddotod) 2 dotod)                                            | Total Input                          | w                        | 1,650 / 1,780                             |  |  |
| Heating at 17°F*                                                  | Rated Capacity                       | Btu/h                    | 12,500 / 12,500                           |  |  |
| (Non-ducted/Ducted)                                               | Total Input                          | w                        | 1,350 / 1,430                             |  |  |
|                                                                   | Power Supply                         | Voltage,<br>Phase, Hertz | 208 / 230V, 1-Phase, 60 Hz                |  |  |
| Electrical Requirements                                           | Recommended Fuse/Breaker Size        | Α                        | 20                                        |  |  |
|                                                                   | MCA                                  | Α                        | 15                                        |  |  |
| Valtaria                                                          | Indoor - Outdoor S1-S2               | V                        | AC 208 / 230                              |  |  |
| Voltage                                                           | Indoor - Outdoor S2-S3               | V                        | DC ±24                                    |  |  |
| Compressor                                                        | •                                    |                          | DC Inverter-driven Twin Rotary            |  |  |
| Blower Motor (ECM)                                                |                                      | F.L.A.                   | 0.96                                      |  |  |
| Sound Pressure Level                                              | Cooling                              |                          | 49                                        |  |  |
| (Non-ducted/Ducted)                                               | Heating                              | dB(A)                    | 51                                        |  |  |
| External Dimensions (H x W x                                      | D)                                   | In. / mm                 | 27-15/16 x 33-1/16 x 13 / 710 x 840 x 330 |  |  |
| Net Weight                                                        |                                      | Lbs. / kg                | 130 (59)                                  |  |  |
| External Finish                                                   |                                      |                          | Munsell No. 3Y 7.8 / 1.1                  |  |  |
| Refrigerant Pipe Size O.D.                                        | Liquid (High Pressure)               | (In. / mm)               | 1/4 / 6.35                                |  |  |
| Kenngerant Fipe Size O.D.                                         | Gas (Low Pressure)                   |                          | A,B: 3/8 / 9.52                           |  |  |
| Max. Refrigerant Line Length                                      |                                      | Ft.                      | 164                                       |  |  |
| Max. Piping Length for Each Indoor Unit                           |                                      | Ft.                      | 82                                        |  |  |
| Max. Refrigerant Pipe Height   If Indoor Unit is Above Outdoor Un |                                      | Ft.                      | 49                                        |  |  |
| Difference                                                        | If Indoor Unit is Below Outdoor Unit | Г                        | 33                                        |  |  |
| Connection Method                                                 |                                      |                          | Flared                                    |  |  |
| Refrigerant                                                       |                                      |                          | R410A                                     |  |  |

#### (For data on specific indoor units, see the MXZ-B Technical and Service Manual.)

#### \* Rating Conditions per AHRI Standard:

Cooling | Indoor: 80° F (27° C) DB / 67° F (19° C) WB Cooling | Outdoor: 95° F (35° C) DB / 75° F (24° C) WB Heating at 47°F | Indoor: 70° F (21° C) DB / 60° F (16° C) WB Heating at 47°F | Outdoor: 47° F (8° C) DB / 43° F (6° C) WB

Heating at 17° F | Indoor: 70° F (21° C) DB / 60° F (16° C) WB Heating at 17° F | Outdoor: 17° F (-8° C) DB / 15° F (-9° C) WB

## SPECIFICATIONS: MXZ-2B20NA-1, contd.

#### **Operating Range:**

|         |         | Indoor Intake Air<br>Temp.           | Outdoor Intake Air<br>Temp.          |
|---------|---------|--------------------------------------|--------------------------------------|
| Cooling | Maximum | 95° F (35° C) DB<br>71° F (22° C) WB | 115° F (46° C) DB                    |
|         | Minimum | 67° F (19° C) DB<br>57° F (14° C) WB | 14º F (-10º C) DB                    |
| Heating | Maximum | 80° F (27° C) DB<br>67° F (19° C) WB | 75° F (24° C) DB<br>65° F (18° C) WB |
|         | Minimum | 70° F (21° C) DB<br>60° F (16° C) WB | 6° F (-14° C) DB<br>5° F (-15° C) WB |

#### **Energy Efficiencies:**

| Indoor Unit Type         | SEER  | EER  | HSPF | COP @<br>47°F | COP<br>@ 17°F |
|--------------------------|-------|------|------|---------------|---------------|
| Non-ducted<br>(09 + 09)  | 18.0  | 12.5 | 8.9  | 3.9           | 2.71          |
| Ducted and<br>Non-ducted | 16.75 | 10.8 | 8.7  | 3.77          | 2.64          |
| Ducted<br>(09 + 12)      | 15.5  | 9.10 | 8.5  | 3.62          | 2.56          |

#### Multi-zone Indoor/Outdoor Combination Table

|              | MSZ-FE* | MSZ-GE*                     | MFZ*              | SEZ*                 | SLZ* | PCA<br>(A24)* | PLA (A12/18/24)* | PEAD (A24)* |
|--------------|---------|-----------------------------|-------------------|----------------------|------|---------------|------------------|-------------|
| MXZ-2B20NA-1 | ок      | 06/09/12/15 OK<br>18, 24 NO | 09/12 OK<br>18 NO | 09/12/15 OK<br>18 NO | ОК   | NO            | NO               | NO          |

\* Refer to indoor unit submittal.

#### Notes:

• Minimum of two Indoor Units must be connected to the MXZ-2B20NA-1.

• Minimum installed capacity cannot be less than 12,000 Btu/h.

• There are NO indoor units larger than 24,000 Btu/h that can be connected to MXZ Systems.

PLA-A12BA can NOT be connected with MXZ-2B20NA-1/MXZ-3B24NA-1/MXZ-3B30NA-1/MXZ-4B36NA-1.

• System can operate with only one Indoor Unit turned on. (see Operation Performance Table next page for single Indoor Unit performance).

• May connect to any style indoor unit or combination.

• Information provided at 208/230V. Refer to the MXZ Outdoor Unit Service Manual for detailed specifications and additional information per Indoor Unit Combination.

Notes:

# MXZ-2B20NA-1 OPERATION PERFORMANCE

#### NON-DUCTED:

| indoor | Total Nominal<br>Capacity | Total Indoor Unit | Operational Performance for<br>Indoor Unit Combinations | Cooling Capacity Range (Btu/h)<br>Heating Capacity Range (Btu/h) |        |        |
|--------|---------------------------|-------------------|---------------------------------------------------------|------------------------------------------------------------------|--------|--------|
|        | (x1000 Btu/h)             | Capacity (Btu/h)  | (Unit A + Unit B + Unit C)                              | Unit A                                                           | Unit B | Unit C |
| 1      | 6                         | 6,000             | 6                                                       | 6,000                                                            | -      | -      |
| 1      | ° [                       | 7,400             | -6 -                                                    | 7,400                                                            | -      | -      |
| 1      | 9                         | 9,000             |                                                         | 9,000                                                            | -      | -      |
| '      | 9                         | 11,000            |                                                         | 11,000                                                           | -      | -      |
| 1      | 12                        | 12,000            | - 12 -                                                  | 12,000                                                           | -      | -      |
| '      | 12                        | 13,600            |                                                         | 13,600                                                           | -      | -      |
| 1      | 15                        | 15,000            | - 15                                                    | 15,000                                                           | -      | -      |
| 1      | 15                        | 18,000            |                                                         | 18,000                                                           | -      | -      |
| _      | 12                        | 12,000            | 6 + 6                                                   | 6,000                                                            | 6,000  | -      |
| 2      |                           | 14,800            |                                                         | 7,400                                                            | 7,400  | -      |
| 2      | 15                        | 15,000            | 6 + 9                                                   | 6,000                                                            | 9,000  | -      |
| 2      | 15                        | 18,400            |                                                         | 7,400                                                            | 11,000 | -      |
| 2      | 18                        | 18,000            | 6 + 12                                                  | 6,000                                                            | 12,000 | -      |
| 2      | 10                        | 21,000            |                                                         | 7,400                                                            | 13,600 | -      |
| 0 40   | 18                        | 18,000            | 9+9                                                     | 9,000                                                            | 9,000  | -      |
| 2      | 10                        | 21,000            | 9 + 9                                                   | 10,500                                                           | 10,500 | -      |
| 2      | 21                        | 20,000            | 6 + 15                                                  | 5,700                                                            | 14,300 | -      |
| 2      | 21                        | 22,000            |                                                         | 6,400                                                            | 15,600 | -      |
| 2      | 21                        | 20,000            | 9 + 12                                                  | 8,600                                                            | 11,400 | -      |
| 2      | 21                        | 22,000            | 9 + 12                                                  | 9,800                                                            | 12,200 | -      |
| 2      | 24                        | 20,000            | 0 + 15                                                  | 7,500                                                            | 12,500 | -      |
|        | 24                        | 22,000            | 9 + 15                                                  | 8,300                                                            | 13,700 | -      |
| 2      | 24                        | 20,000            | 12 + 12                                                 | 10,000                                                           | 10,000 | -      |
| 2 2    | 24                        | 22,000            | 12 + 12                                                 | 11,000                                                           | 11,000 | -      |

#### DUCTED:

| indoor | Total Nominal<br>Capacity | Total Indoor Unit | Operational Performance for<br>Indoor Unit Combinations | Cooling Capacity Range (Btu/h)<br>Heating Capacity Range (Btu/h) |        |        |
|--------|---------------------------|-------------------|---------------------------------------------------------|------------------------------------------------------------------|--------|--------|
|        | (x1000 Btu/h)             | Capacity (Btu/h)  | (Unit A + Unit B + Unit C)                              | Unit A                                                           | Unit B | Unit C |
| 1      | 9                         | 9,000             | 0                                                       | 9,000                                                            | -      | -      |
| I      | 9                         | 10,900            | 9                                                       | 10,900                                                           | -      | -      |
| 1      | 12                        | 12,000            | 12                                                      | 12,000                                                           | -      | -      |
| 1 12   | 12                        | 13,600            |                                                         | 13,600                                                           | -      | -      |
| 1 15   | 15                        | 15,000            | - 15                                                    | 15,000                                                           | -      | -      |
|        | 15                        | 18,000            |                                                         | 18,000                                                           | -      | -      |
| 2 18   | 10                        | 18,000            | 9 + 9                                                   | 9,000                                                            | 9,000  | -      |
|        | 10                        | 21,800            |                                                         | 10,900                                                           | 10,900 | -      |
| 2 21   | 21                        | 20,000            | 9 + 12                                                  | 8,600                                                            | 11,400 | -      |
|        | 21                        | 22,000            |                                                         | 9,800                                                            | 12,200 | -      |
| 2      | 24                        | 20,000            | 9 + 15                                                  | 7,500                                                            | 12,500 | -      |
| 2 24   | 24                        | 22,000            |                                                         | 8,300                                                            | 13,700 | -      |
| 2 24   | 24                        | 20,000            | 12 + 12                                                 | 10,000                                                           | 10,000 | -      |
|        | 24                        | 22,000            | 712 + 12                                                | 11,000                                                           | 11,000 | -      |

## DIMENSIONS: MXZ-2B20NA-1





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

