

**Submission Data: MXZ-2C20NAHZ3-U1**  
**Multi-Split Cold Climate Air Source Heat Pump System**

Job Name:	Location:
Purchaser:	Submitted By:
Submitted To:	Reference:                      Approval:                      Construction:
Engineer:	Date:                                      Application:



Images provided for reference purposes only

- Variable speed INVERTER-driven compressor
- M-NET connection optional through outdoor unit (Part # listed below)
- Quiet outdoor unit operation as low as 54 dB(A)
- High pressure switch for additional protection
- Built-in base pan heater

Performance:		Non-Ducted	Mixed	Ducted	
Cooling at 95°F <sup>1</sup>	Rated Capacity	Btu/h	18,000	19,000	20,000
	Capacity Range	Btu/h	12,600 - 20,000	12,600 - 20,000	12,600 - 12,600
	Rated Power Input	W	1,258	1,576	1,819
	Power Input Range	W	530 - 2,680	530 - 2,680	530 - 2,680
	Moisture Removal	pints/h	NA	NA	NA
Heating at 47°F <sup>2</sup>	Sensible Heat Factor		NA	NA	NA
	Rated Capacity	Btu/h	22,000	22,000	22,000
	Capacity Range	Btu/h	11,400 - 25,500	11,400 - 25,500	11,400 - 25,500
	Rated Power Input	W	1,475	1,680	1,748
	Power Input Range	W	850 - 3,650	850 - 3,650	850 - 3,650
Heating at 17°F <sup>3</sup>	Maximum Capacity	Btu/h	22,000	22,000	22,000
	Rated Capacity	Btu/h	13,700	13,700	13,700
	Capacity Range	Btu/h	13,000 - 22,000	12,900 - 22,000	12,800 - 22,000
	Maximum Power Input	W	3,071	3,146	3,224
	Rated Power Input	W	1,322	1,519	1,588
	Power Input Range	W	1,322 - 3,071	1,417 - 3,146	1,620 - 3,224
Heating at 5°F <sup>4</sup>	Maximum Capacity	Btu/h	22,000	22,000	22,000
	Maximum Power Input	W	3,410	3,630	3,850
Heating at -13°F <sup>5</sup>	Maximum Capacity	Btu/h	20,500	NA	20,500
	Maximum Power Input	W	3,900	NA	4,200

Efficiency:	Non-Ducted	Mixed	Ducted	
SEER	17.10	16.00	15.00	
EER <sup>1</sup>	14.30	12.25	11.00	
HSPF (IV)	10.10	9.60	9.50	
COP at 47°F <sup>2</sup>	Rated Capacity	4.37	3.84	3.69
COP at 17°F <sup>3</sup>	Maximum Capacity	2.10	2.05	2.00
COP at 5°F <sup>4</sup>	Maximum Capacity	1.89	1.78	1.67

Outdoor Operating Temperature Range:		
Cooling Operation Air Temp (Maximum / Minimum)* (Comfort cooling only applications)	°F (°C)	* 115 to 14 (46 to -10)
Cooling Operation Thermal Lock-out / Re-start Temperatures	°F (°C)	10.4 / 14 (-12 / -10)
Heating Operation Air Temp (Maximum / Minimum)	°F (°C)	65 to -13 (18 to -25)
Heating Operation Thermal Lock-out / Re-start Temperatures	°F (°C)	-18 / -14 (-28 / -26)

AHRI Rated Conditions (Rated data is determined at a fixed compressor speed) (\* Windscreens required for cooling operations below 23°F (-5°C))

<sup>1</sup>Cooling (Indoor // Outdoor) 80°F (26.6°C) DB, 67°F (19.4°C) WB // 95°F (35°C) DB, 75°F (23.9°C) WB

<sup>2</sup>Heating at 47°F (8.3°C) (Indoor // Outdoor) 70°F (21.1°C) DB, 60°F (15.6°C) WB // 47°F (8.3°C) DB, 43°F (6.1°C) WB

<sup>3</sup>Heating at 17°F (-8.3°C) (Indoor // Outdoor) 70°F (21.1°C) DB, 60°F (15.6°C) WB // 17°F (-8.3°C) DB, 15°F (-9.4°C) WB

Rated conditions:

<sup>4</sup>Heating at 5°F (-15°C) (Indoor // Outdoor) 70°F (21.1°C) DB, 60°F (15.6°C) WB // 5°F (-15°C) DB, 4°F (-15.6°C) WB

<sup>5</sup>Heating at -13°F (-25°C) (Indoor // Outdoor) 70°F (21.1°C) DB, 60°F (15.6°C) WB // -13°F (-25°C) DB, -15°F (-26.1°C) WB

Note:

- Mitsubishi Electric Sales Canada Inc. (MESCA) supports the use of only MESCA supplied and approved components and accessories for proper functioning of the unit(s). Use of non - MESCA supported components and accessories will affect warranty coverage. MESCA recommends (A) consideration of all applicable design and application parameters and requirements specific to any project.
- Should any person change this document in any manner whatsoever without MESCA's written permission, the document shall be of no force and effect and any change shall be deemed to be a representation and warranty made by that person and not MESCA. That person, and not MESCA, shall assume full responsibility for the consequences of such changes. MESCA assumes no responsibility for any consequences in such cases.

Notes:

## Electrical:

Power Supply		208/230V, 1Ph, 60Hz
Voltage: Indoor - Outdoor, S1-S2	V AC	AC 208/230V
Voltage: Indoor - Outdoor, S2-S3	V DC	DC 12-24V
Short-circuit Current Rating (SCCR)	kA	5
Recommended Fuse/Breaker Size (Outdoor)	A	40
Recommended Wire Size (Indoor - Outdoor)	AWG	14

## Outdoor Unit Specifications:

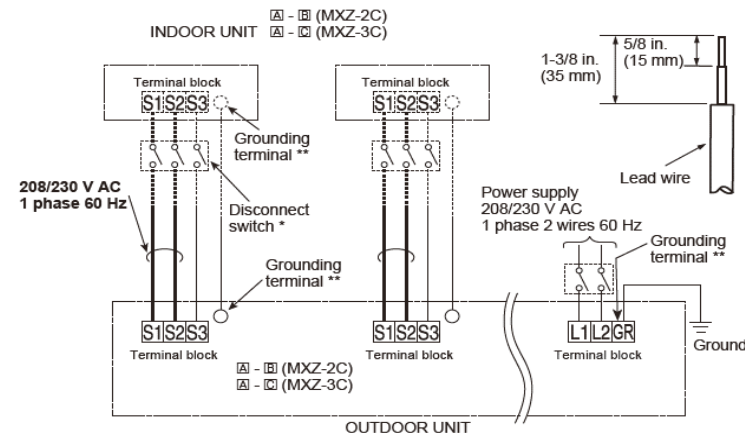
MCA	A	29.5
MOCP	A	40
Fan Motor Output	W	2.43
Airflow Rate (Cooling/Heating)	CFM	2,150 / 2,550
Sound Pressure Level, Cooling1	dB(A)	54
Sound Pressure Level, Heating2	dB(A)	58
Refrigerant Control		LEV
Compressor Oil Type / Refrigerant Charge		FV50S / 8 lbs. 13 oz. (4.0 kg)
External Finish Color		Munsell 3.0Y 7.8/1.1
Unit Weight	Lbs. [kg]	187 [85]
Unit Dimensions	W: In. [mm]	37-13/32 [950]
	D: In. [mm]	13 [330]
	H: In. [mm]	41-17/64 [1,048]
Gas Pipe Size O.D. (Flared)	In. [mm]	A,B: 3/8 [A,B: 9.52]
Liquid Pipe Size O.D. (Flared)	In. [mm]	A,B: 1/4 [A,B: 6.35]
Total Piping Length	Ft. [m]	164 [50]
Maximum Height Difference, ODU above IDU	Ft. [m]	49 [15]
Maximum Height Difference, ODU below IDU	Ft. [m]	49 [15]
Farthest Piping Length from ODU to IDU	Ft. [m]	82 [25]
Maximum Number of Bends for IDU		50

Model No.	Description: (Optional Accessories)
CM-S-FR-NKMU	Front Windscreen
WRE2	Rear Windscreen
WSD2	Side Windscreen
PAC-IF01MNT-E	SYSTEM M-NET CONTROL INTERFACE
MAC-A454JP-E	JOINT PIPE (3/8->1/2)
MAC-A455JP-E	JOINT PIPE (1/2->3/8)
MAC-A456JP-E	JOINT PIPE (1/2->5/8)
PAC-SG76RJ-E	JOINT PIPE (3/8 -> 5/8)

Notes:	SVZ Connections Rules:
Minimum of two Indoor units must be connected	Only 1 SVZ may be used on any system
Minimum installed capacity cannot be less than 12,000 Btu/h	When an SVZ is connected, total connected capacity must be less than 100%
System can operate with only one Indoor unit turned on	When an SVZ is connected, no P-Series Indoor units can be used (PAC, PLA, or PEAD)
May connect to any style Indoor unit or combination	
Information provided at 208/230V	
Refer "MXZ Connection Rules" additional info available within TIC	

### Remark:

- \* A disconnect switch should be required. Check the local code.
- \*\* Use a ring tongue terminal in order to connect a ground wire to terminal.



- Connect wires to the matching numbers of terminals.
- Be sure to attach each screw to its correspondent terminal when securing the cord and/or the wire to the terminal block.

### CONNECTING WIRES AND CONNECTING GROUND WIRE

- Use solid conductor Min. AWG14 or stranded conductor Min. AWG14.
- Use double insulated copper wire with 600 V insulation.
- Use copper conductors only.
- Follow local electrical code.

### POWER SUPPLY CABLE

- Use solid or stranded conductor Min. AWG8.
- Use copper conductors only.
- Follow local electrical code.

### GROUND WIRE

- Use solid or stranded conductor Min. AWG8.
- Use copper conductors only.
- Follow local electrical code.

### WARNING:

- Use the indoor/outdoor unit connecting wire that meets the Standards to connect the indoor and outdoor units and fix the wire to the terminal block securely so that no external force is conveyed to the connecting section of the terminal block. An incomplete connection or fixing of the wire could result in a fire.

For future servicing, give extra length to the connecting wires.

- Turn on the main power when the ambient temperature is -4°F (-20°C) or higher.
- Under conditions of -4°F (-20°C), it needs at least 4hr stand by before the units operate in order to warm the electrical parts.

**Outdoor Unit Outline and Dimensions:**

**Unit: inch (mm)**

