

# MXZ-SM48NAMHZ 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)
- Built-in 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
- Hyper-heating performance offers 100% heating capacity at 5°F and 75% heating capacity at -13°F

ENERGY STAR products are third-party certified by an EPA-recognized Certification Body.

Specifications are subject to change without notice.

© 2022 Mitsubishi Electric Trane HVAC US LLC. All rights reserved.

# SPECIFICATIONS: MXZ-SM48NAMHZ

Cooling <sup>1</sup> (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 <sup>2</sup> (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 <sup>3</sup> (Non-Ducted // Mix // Ducted)	Maximum Capacity	BTU/H	54,000 // 54,000 // 54,000	
	Rated Capacity	BTU/H	39,000 // 39,000 // 39,000	
	Maximum Power Input	W	6,330 // 7,750 // 8,600	
	Rated Power Input	W	4,230 // 4,680 // 5,130	
Heating at 5°F <sup>4</sup> (Non-Ducted // Mix // Ducted)	Maximum Capacity	BTU/H	54,000 // 54,000 // 54,000	
	Maximum Power Input	W	7,915 // 8,120 // 8,330	
Efficiency (Non-Ducted // Mix // Ducted)	SEER		23.0 // 19.75 // 16.5	
	EER <sup>1</sup>		13.1 // 12.2 // 11.3	
	HSPF (IV)		12.0 // 11.5 // 11.0	
	COP at 47°F <sup>2</sup>		4.0 // 3.65 // 3.3	
	COP at 17°F at Maximum Capacity <sup>3</sup>		2.5 // 2.0 // 1.8	
	COP at 5°F at Maximum Capacity <sup>4</sup>		2.1 // 1.95 // 1.9	
	ENERGY STAR <sup>®</sup> Certified		Yes // No // No	
Electrical	Electrical Power Requirements	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 (45)	
	Recommended Fuse/Breaker Size without Branch Box or Branch Box Powered Separate	A	40	
	Recommended Wire Size	AWG	6	
	MCA if Branch Box Powered by Outdoor Unit	A	42.0	
	MOCP if Branch Box Powered by Outdoor Unit	A	50	
	MCA without Branch Box or Branch Box Powered Separate	A	36	
	MOCP without Branch Box or Branch Box Powered Separate	A	40	
	Fan Motor Full Load Amperage	A	0.6+0.6	
	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 <sup>1</sup>		dB(A)	51	
Sound Pressure Level, Heating <sup>2</sup>		dB(A)	54	
Compressor Type			Hermetic	
Compressor Model			ANB33FJSMT	
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 // 73	
Base Pan Heater			Built-in	
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]
		H: In. [mm]		18 [450]
Unit Weight		Lbs.[kg]		278 [126]
	Package Weight	Lbs.[kg]	302 [137]	

**NOTES:**

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

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

Conditions <sup>4</sup>Heating 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.

<sup>A</sup> when 1 or more PLA-A-EA7 connected

<sup>B</sup> Branch box should be placed within the level between the outdoor unit and indoor units

<sup>C</sup> 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-SM48NAMHZ

Outdoor unit operating temperature range	Cooling Intake Air Temp (Maximum / Minimum)	°FDB	115 / 23 <sup>c</sup>
	Cooling Thermal Lock-out / Re-start Temperatures	°FDB	N/A / N/A
	Heating Intake Air Temp (Maximum / Minimum)	°FDB	59 / -13
	Heating Thermal Lock-out / Re-start Temperatures	°FDB	-24 / -14
Refrigerant	Maximum Charge Quantity	Lbs, oz	10.0, 9.0
Indoor unit connection	Maximum Number of Connected IDU with Branch Box		8 (6) <sup>A</sup>
	Maximum Number of Connected IDU without Branch Box		12
	Minimum Number of Connected IDU with Branch Box		12,000
	Minimum Number of Connected IDU without Branch Box		24,000
	Maximum connected capacity		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 <sup>B</sup> , ODU above IDU	Ft. [m]	164 [50]
	Maximum Height Difference <sup>B</sup> , ODU below IDU	Ft. [m]	131 [40]
	Maximum Height Difference <sup>B</sup> , between branch boxes	Ft. [m]	49 [15]
	Maximum Height Difference between IDU and IDU without branch box	Ft. [m]	49 [15]
		Ft. [m]	49 [15]
	Maximum 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)	<sup>1</sup> Cooling (Indoor // Outdoor)	°F	80 DB, 67 WB // 95 DB, 75 WB
	<sup>2</sup> Heating at 47°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 47 DB, 43 WB
	<sup>3</sup> Heating at 17°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 17 DB, 15 WB

Conditions	<sup>4</sup> Heating 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.

<sup>A</sup> when 1 or more PLA-A-EA7 connected

<sup>B</sup> Branch box should be placed within the level between the outdoor unit and indoor units

<sup>C</sup> 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-SM48NAMHZ

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	3 Port Branch Box	PAC-MKA32BC
	5 Port 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-SG60DS-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—250 ft. roll	SW144-250
	14 Gauge, 4 wire MiniSplit Cable—50 ft. roll	S144-50
	14 Gauge, 4 wire MiniSplit Cable—50 ft. roll	SW144-50
	16 Gauge, 4 wire MiniSplit Cable—250 ft. roll	S164-250
	16 Gauge, 4 wire MiniSplit Cable—250 ft. roll	SW164-250
	16 Gauge, 4 wire MiniSplit Cable—50 ft. roll	S164-50
	16 Gauge, 4 wire MiniSplit Cable—50 ft. roll	SW164-50
Mounting Pad	Condensing Unit Mounting Pad: 24" x 42" x 3"	ULTRILITE2
	Outdoor Unit 3-1/4 inch Mounting Base (Pair) - Plastic	DSD-400P
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)

