

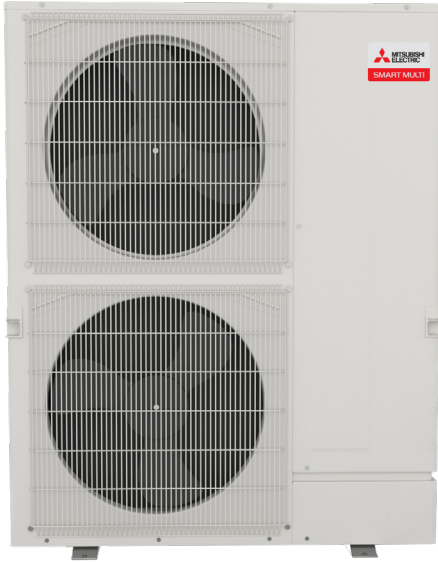
MXZ-SM48NAM 4-TON MULTI-ZONE INVERTER HEAT-PUMP SYSTEM



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

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

Specifications are subject to change without notice.

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SPECIFICATIONS: MXZ-SM48NAM

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	43,000 // 43,000 // 43,000	
	Rated Capacity	BTU/H	31,400 // 31,400 // 31,400	
	Maximum Power Input	W	5,200 // 5,650 // 6,350	
	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		2.1 // 2.05 // 2.0	
	ENERGY STAR [®] 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	30 (40)	
	Recommended Fuse/Breaker Size without Branch Box or Branch Box Powered Separate	A	30	
	Recommended Wire Size	AWG	8	
	MCA if Branch Box Powered by Outdoor Unit	A	35.0	
	MOCP if Branch Box Powered by Outdoor Unit	A	50	
	MCA without Branch Box or Branch Box Powered Separate	A	29	
	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 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

Outdoor unit operating temperature range	Cooling Intake Air Temp (Maximum / Minimum) ¹	°FDB	115 / 23 ^c
	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) ^A
	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 ^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 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)	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	⁴ Heating at 5°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 5 DB, 4 WB
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^A when 1 or more PLA-A-EA7 connected

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^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.

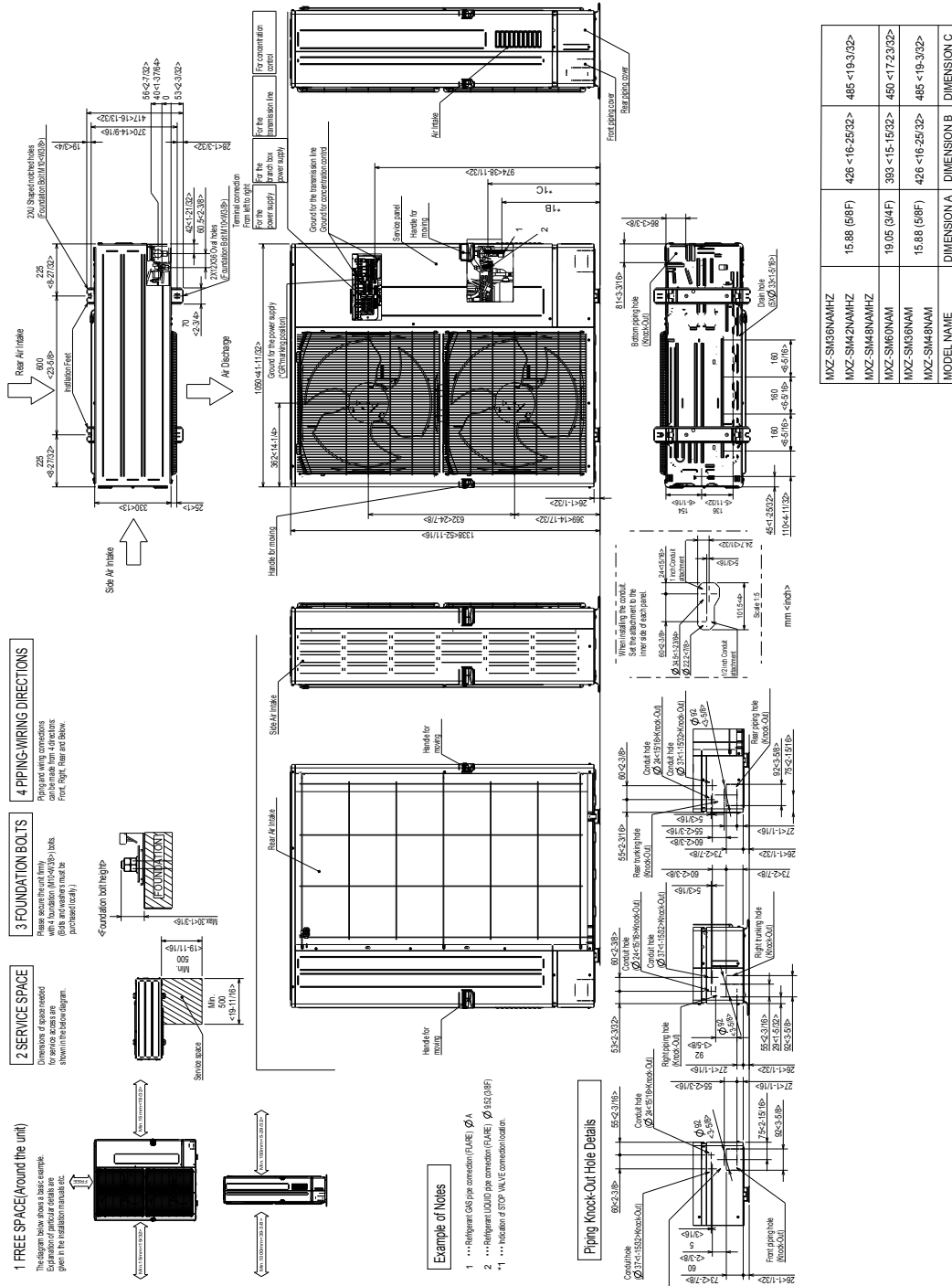
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OUTDOOR UNIT ACCESSORIES: MXZ-SM48NAM

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
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)

OUTDOOR UNIT DIMENSIONS: MXZ-SM48NAM

Unit: mm
<inch>



4 PIPING-WIRING DIRECTIONS

Pipings with connections
to the unit are shown in
this diagram. For details,
see the wiring diagram.

3 FOUNDATION BOLTS

Please see the unit firm
data for the foundation bolt
specifications. The bolts
and washers must be
purchased locally.

2 SERVICE SPACE

Dimensions of space needed
around the unit are shown
in this diagram.

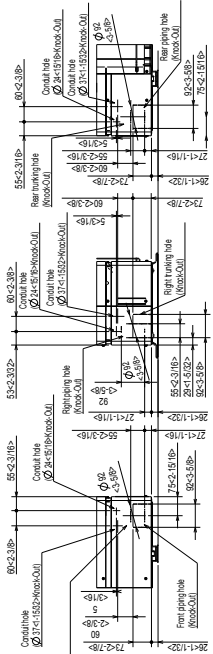
1 FREE SPACE (Around the unit)

The diagram below shows a basic example
of the free space around the unit.
Please refer to the installation manual for
more details.

Example of Notes

- 1 ... Refrigerant GAS pipe connection (FLARE) \varnothing 4A
- 2 ... Refrigerant LIQUID pipe connection (FLARE) \varnothing 4.53 (3/8F)
- * ... Indication of STOP VALVE connection location.

Piping Knock-Out Hole Details



MODEL NAME	DIMENSION A	DIMENSION B	DIMENSION C
MXZ-SM6NAMHZ	15.88 (5/8F)	426 <16-25/32>	486 <19-3/32>
MXZ-SM42NAMHZ	15.88 (5/8F)	426 <16-25/32>	486 <19-3/32>
MXZ-SM48NAMHZ	19.05 (3/4F)	383 <15-15/32>	450 <17-23/32>
MXZ-SM6NAM	15.88 (5/8F)	426 <16-25/32>	486 <19-3/32>
MXZ-SM48NAM	15.88 (5/8F)	426 <16-25/32>	486 <19-3/32>

