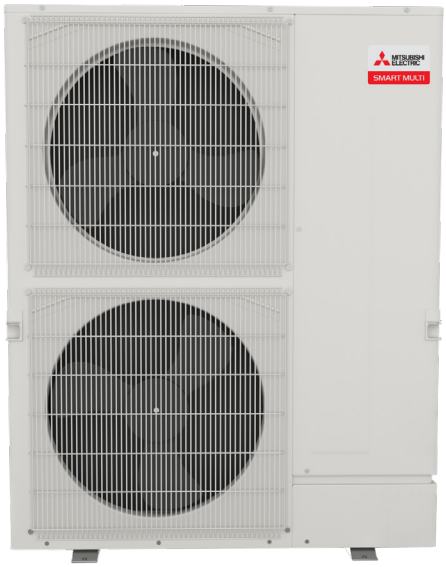
MXZ-SM48NAM-U1
4-TON MULTI-ZONE INVERTER HEAT-PUMP SYSTEM

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

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

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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)

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

Conditions

[*]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.

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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:

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	[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

*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

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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)

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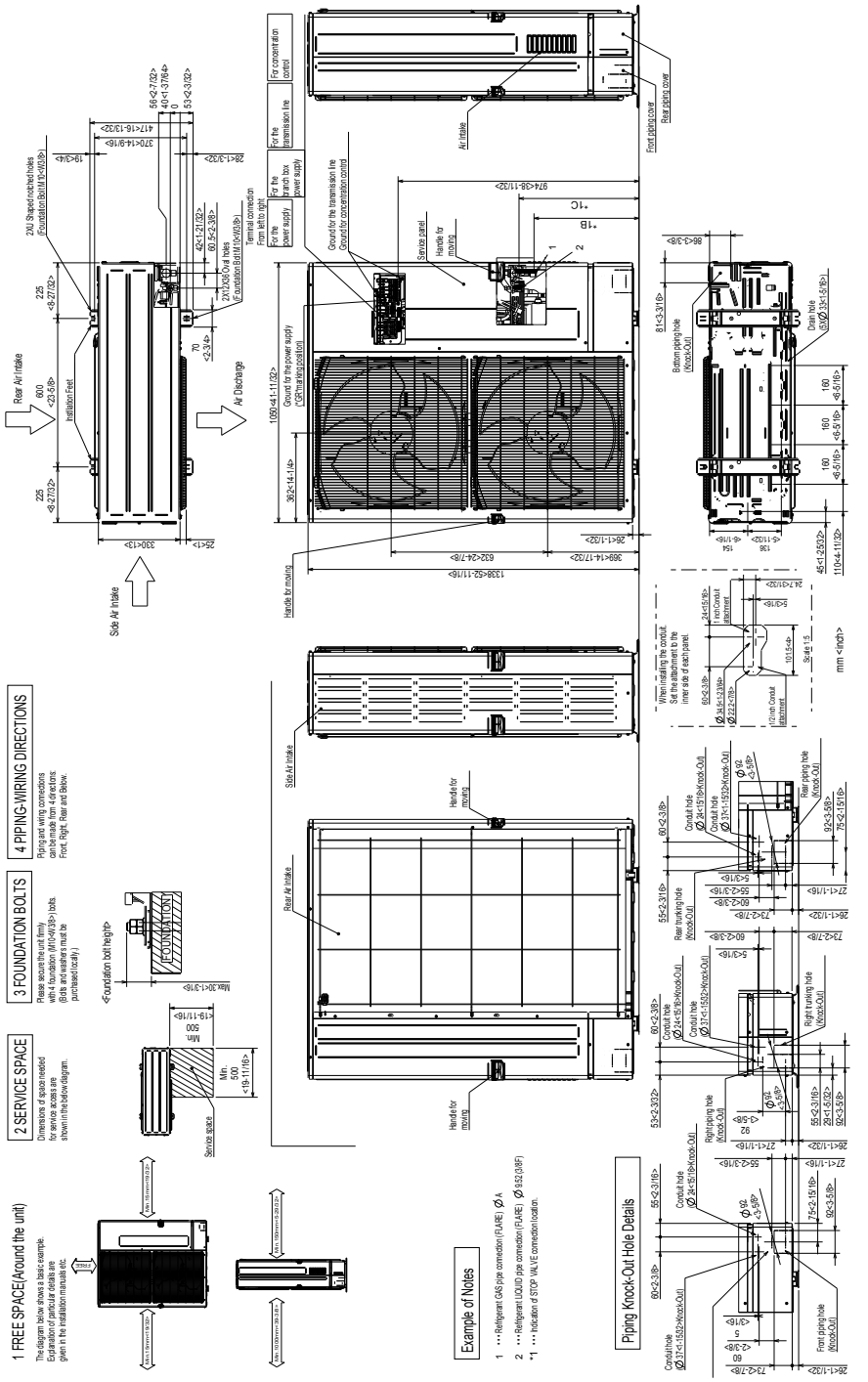
OUTDOOR UNIT DIMENSIONS: MXZ-SM48NAM-U1

Unit: mm
<inch>



MODEL NAME			
MXZ-SM36NAMHZ MXZ-SM42NAMHZ MXZ-SM48NAMHZ	15.88 (5/8F)	426 <16-25/32>	485 <19-3/32>
MXZ-SM60NAM	19.05 (3/4F)	393 <15-15/32>	450 <17-23/32>
MXZ-SM36NAM MXZ-SM48NAM	15.88 (5/8F)	426 <16-25/32>	485 <19-3/32>
MODEL NAME	DIMENSION A	DIMENSION B	DIMENSION C

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