SMART MULTI

MXZ-SM72TAM-U1 6-TON THREE-PHASE MULTI-ZONE INVERTER HEAT PUMP SYSTEM



ı	_	h	N	_	m	_	
J	Ю	D	IN	а	m	е	

System Reference: Date:



Features

- Three-phase 208/230V operation for use in light commercial applications
- · Connect up to 23 indoor units
- Outdoor unit fan can be adjusted to allow 0.12 in.w.g. static pressure by dip switch setting change
- Compatible with M- and P-Series and CITY MULTI[®] indoor units (branch box required for connection with M- and P-Series)
- Seacoast protection on heat exchanger and base panel (rated for 2,000 hrs in accordance with ASTM B117 testing)
- High pressure protection
- · Compressor thermal protection
- · Compressor over current detection
- Fan motor overheating/voltage protection

	IDU		Non ducted	Mixed	Ducted
	ODU		MXZ-SM72TAM-U1	MXZ-SM72TAM-U1	MXZ-SM72TAM-U1
	Maximum Capacity	Btu/h	72,000	72,000	72,000
	Rated Capacity	Btu/h	69,000	69,000	69,000
0 1: 1	Rated Power Input	W	5,609	5,679	5,750
Cooling ¹	SHF at 100% Capacity (Rated)		0.82	-	0.82
	SHF at 100% Capacity ¹		0.78	-	0.75
	SHF at 75% Capacity (Rated)		0.85	9,000 69,000 69,000 5,609 5,679 5,750 0.82 - 0.82 0.75 0.85 - 0.85 0,000 80,000 80,000 80,000 6,000 76,000 76,000 76,000 5,180 5,303 5,432 6,000 56,000 56,000 3,078 6,147 6,193 24.2 22.85 21.5 12.3 12.15 12 4.30 4.20 4.10 2.7 2.67 2.65 Yes Yes 30,3,60 208/230,3,60 208/230,3,60 3-253V 198-253V 198-253V 198-253V	0.85
	Maximum Capacity		80,000	U1	80,000
Heating at 47°F 2	Rated Capacity	Btu/h	76,000	76,000	76,000
	Rated Power Input	W	5,180	5,303	5,432
II 1: 1 479E	Rated Capacity	Btu/h	56,000	56,000	56,000
Heating at 17°F	Rated Power Input	W	6,078	6,147	6,193
	IEER		24.2	22.85	21.5
	EER		12.3	12.15	12
Efficiency	COP at 47F		4.30	4.20	4.10
	COP at 17F		2.7	2.67	2.65
	Energy Star		Yes	Yes	Yes
	Electrical Power Requirements	Voltage, Phase, Frequency	208/230, 3, 60	208/230, 3, 60	208/230, 3, 60
	Guaranteed Voltage Range	V AC	198-253V	198-253V	198-253V
	Short-circuit Current Rating (SCCR)	kA	5	5	5
	MCA if Branch Box Powered by Outdoor Unit	A	50	50	50
Electrical	MCA without Branch Box or Branch Box Powered Separate	A	32	32	32
Electrical	MOCP if Branch Box Powered by Outdoor Unit	A	76	76	76
	MOCP without Branch Box or Branch Box Powered Separate	A	58	58	58
	Recommended Fuse/Breaker Size if Branch Box Powered by Outdoor Unit	А	60	60	60
	Recommended Fuse/Breaker Size without Branch Box or Branch Box Powered Separately	A	40	40	40

- 1. Cooing test conditions are based on AHRI 1230
- Indoor: 80°FD.B./67°FW.B. (26.7°CD.B./19.4°CW.B.)
- Outdoor: 95°FD.B. (35°CD.B.)
- Heating test conditions are based on AHRI 1230
- Indoor: 70°FD.B. (21.1°CD.B.)
- Outdoor: 47°FD.B./43°FW.B. (8.3°CD.B./6.1°CW.B.)
- 3.5°F DB 115°F DB when optional wind baffles are installed. 50F to 115°F DB when connecting PKFY-P06NBMU, PKFY-P08NHMU, PKFY-P04/06/08/12NLMU, PFFY-P06/08/12NLMU and PFFY-P06/08/12NLMU type indoor units. Applications should be restricted to comfort cooling only, equipment cooling applications are not recommended for low ambient temperature conditions. When the temperature is below 50°F D.B with the branch box system, noise could potentially occur.
- 4. For actual capacity performance based on indoor unit type and number of indoor units connected, please refer to MXZ Operational Performance type and number of indoor units connected, please refer to MXZ Operational Performance.

 5. Although the maximum connectible 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
- 6. Both CITY MULTI indoor units and branch box indoor units cannot be utilized on the same system.
- *7. Refer to piping diagrams in the installation manuals for requirements related to piping lengths greater than 295ft and PEFY-P72 or P96 are installed.
- 8. A dip switch setting can be changed to allow the fan to operate with an external static pressure of 0.12 in.w.g. (30 Pa).

OUTDOOR UNIT: MXZ-SM72TAM-U1 – SPECIFICATIONS

			Non ducted	Mixed	Ducted
	Airflow Rate (Cooling)	CFM	5,260	5,260	5,260
	Airflow Rate (Heating)	CFM	5,260	5,260	5,260
	Outdoor Fan Motor Output	W	285 + 285	285 + 285	285 + 285
	Outdoor Fan Motor Drive	''	DC control	DC control	DC control
	External Static Pressure 8	in. w.g.	0 / 0.12	0 / 0.12	0 / 0.12
	Sound Pressure Level, Cooling	dB(A)	53	53	53
	Sound Pressure Level, Heating	dB(A)	54	54	54
	Refrigerant Control	ub(A)	LEV	LEV	LEV
	Defrost Method		Reverse Cycle	Reverse Cycle	Reverse Cycle
			Plate Fin Coil	Plate Fin Coil	Plate Fin Coil
	Heat Exchanger Type			Blue Fin Coating	
	Heat Exchanger Coating		Blue Fin Coating	•	Blue Fin Coating ANB78FSEMT
	Compressor Model		ANB78FSEMT	ANB78FSEMT Hermetic	
Outdoor	Compressor Type		Hermetic	Hermetic 4.1	Hermetic 4.1
	Compressor Motor Output kW		4.1		
	Refrigerant Oil Name		FVC68D	FVC68D	FVC68D
	Refrigerant Oil Charge oz		101	101	101
	External Finish		Munsell 3.0Y 7.8/1.1	Munsell 3.0Y 7.8/1.1	Munsell 3.0Y 7.8/1.1
	Base Pan Heater		Optional	Optional	Optional
		D: In.	25	25	25
	Package Dimensions	H: In.	73	73	73
		W: In.	45	45	45
		D: In.	18-7/64	18-7/64	18-7/64
	Unit Dimensions	H: In.	65-7/16	65-7/16	65-7/16
		W: In.	41-11/32	41-11/32	41-11/32
	Package Weight	lbs	483	483	483
	Unit Weight	lbs	433	433	433
	Maximum Number of Branch Boxes ⁶		3	3	3
	Minimum Number of Connected IDU		2	2	2
	Maximum Number of Connected IDU with Branch Box		12	12	12
Indoor Unit	Maximum Number of Connected IDU without Branch Box		23	23	23
Connection	Allowable Connected Capacity (of cooling rated capacity) 5		50% - 130%	50% - 130%	50% - 130%
	Minimum Connected Capacity ⁴	Btu/h	36,000	36,000	36,000
	Maximum Connected Capacity ⁴	Btu/h	93,000	93,000	93,000
	Gas Pipe Size O.D. (Flared)	in.	7/8	7/8	7/8
	Liquid Pipe Size O.D. (Flared)	in.	3/8	3/8	3/8
	Total Piping Length when using Branch Box	111.	787	787	787
			262	262	262
	7 3 4 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		49	49	49
D: :	Maximum Height Difference*B, between branch boxes Vertical piping length between Branch box and Indoor Units	ft	49	49	49
Piping specification		ıı.	1,016	1,016	1,016
specification	Total Piping Length w/o Branch Box		·	·	·
	Farthest Piping Length from ODU to IDU w/o Branch Box		426	426	426
	Maximum Height Difference*B, ODU above IDU		164	164	164
	Maximum Height Difference*B, ODU below IDU		131	131	131
	Maximum Height Difference between IDU and IDU w/o Branch box		49	49	49
	Max # of Bends		23	23	23
	Chargeless Piping Length	ft	0	0	0
	Туре		R410A	R410A	R410A
Refrigerant	Charge	0Z	328	328	328
·	Additional Refrigerant Charge Per Additional Piping Length	oz/5ft	φ6.35: 1.05oz/5ft φ9.52: 2.75oz/5ft φ12.7:4.95oz/5ft	φ6.35: 1.05oz/5ft φ9.52: 2.75oz/5ft φ12.7:4.95oz/5ft	φ6.35: 1.05oz/5ft φ9.52: 2.75oz/5ft φ12.7:4.95oz/5ft
	Cooling Intake Air Temp (Maximum)	FDB	115	115	115
Outdoor unit	Cooling Intake Air Temp (Minimum) ³	FDB	23	23	23
operating	Heating Intake Air Temp (Maximum)	WDB	59	59	59
emperature	Heating Intake Air Temp (Minimum)	WDB	-4	-4	-4
ange	Heating Thermal Lock-out Temperature	F	-24	-24	-24
	Heating Thermal Re-start Temperature	F	-14	-14	-14
	Heating Capacity at 50F	Btu/h	76,000	76,000	76,000
					76,000
	Heating Capacity at 41F Btu/h		76,000	76,000	
ow ambient	Heating Capacity at 32F	Btu/h	74,480	74,480	74,480
neating capacity	Heating Capacity at 23F	Btu/h	63,080	63,080	63,080
(vs. Rated)	Heating Capacity at 14F	Btu/h	50,920	50,920	50,920
	Heating Capacity at 5F	Btu/h	45,600	45,600	45,600
	Heating Capacity at -4F	Btu/h	40,280	40,280	40,280

^{1.} Cooing test conditions are based on AHRI 1230

⁻ Indoor: 80°FD.B./67°FW.B. (26.7°CD.B./19.4°CW.B.)

⁻ Outdoor: 95°FD.B. (35°CD.B.)

^{2.} Heating test conditions are based on AHRI 1230 - Indoor: 70°FD.B. (21.1°CD.B.)

⁻ Outdoor: 47°FD.B./43°FW.B. (8.3°CD.B./6.1°CW.B.)

^{3.5°}F DB - 115°F DB when optional wind baffles are installed. 50F to 115°F DB when connecting PKFY-P06NBMU, PKFY-P08NHMU, PKFY-P04/06/08/12NLMU, PFFY-P06/08/12NLMU and PFFY-P06/08/12NLMU type indoor units. Applications

should be restricted to comfort cooling only; equipment cooling applications are not recommended for low ambient temperature conditions. When the temperature is below 50°F D.B with the branch box system, noise could potentially occur.

4. For actual capacity performance based on indoor unit type and number of indoor unit syne and number of NOT be operating at the same time
6. Both CITY MULTI indoor units and branch box indoor units cannot be utilized on the same system.

^{*7.} Refer to piping diagrams in the installation manuals for requirements related to piping lengths greater than 295ft and PEFY-P72 or P96 are installed.

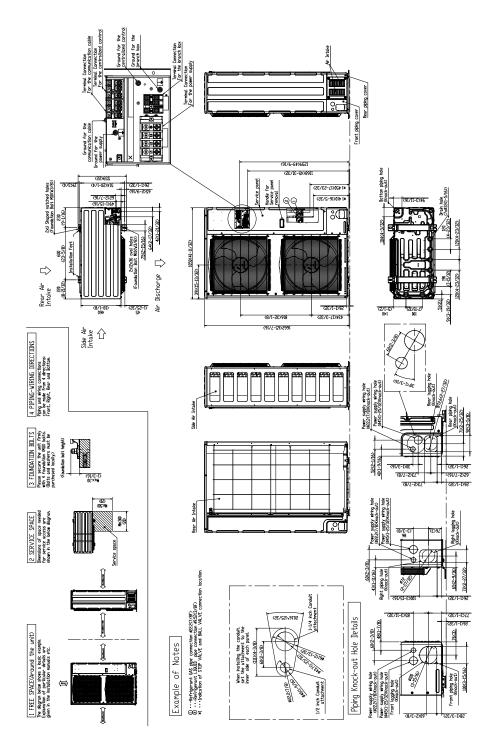
^{8.} A dip switch setting can be changed to allow the fan to operate with an external static pressure of 0.12 in.w.g. (30 Pa).

OUTDOOR UNIT ACCESSORIES: MXZ-SM72TAM-U1

	Refrigeration Ball Valve - 1/2"	BV12FFSI2		
Ball Valve	Refrigeration Ball Valve - 1/4"	BV14FFSI2		
	Refrigeration Ball Valve - 3/8"	BV38FFSI2		
	Refrigeration Ball Valve - 5/8"	BV58FFSI2		
	3 Port Branch Box	PAC-MKA32BC		
Branch Box	5 Port Branch Box	PAC-MKA52BC		
	Branch Box Enclosure	BBE-1		
Control Wire	M-Net Control Wire, 1,000' Roll (16-AWG, Standard, Twisted Pair, Shielded, Jacketed- Plenum rated)	CW162S-1000		
Control Time	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		
	Brazed Connection	MSDD-50BR-E		
	Flare Connection	MSDD-50AR-E		
	Drain Socket Drain Socket	PAC-SG60DS-E		
Distribution pine	Distribution Pipe Brazed Conn	CMY-Y62-GA-E		
Distribution pipe	Distribution Pipe Brazed Conn	CMY-Y64-GA-E		
	Distribution Pipe Brazed Conn	CMY-Y68-GA-E		
	Joint connectors	PAC-SG71RJ-E		
	Joint connectors	PAC-SG75RJ-E		
	14 Gauge, 4 wire MiniSplit Cable—250 ft. roll	\$144-250		
	14 Gauge, 4 wire MiniSplit Cable—250 ft. roll	SW144-250		
	14 Gauge, 4 wire MiniSplit Cable—50 ft. roll	S144-50		
A.C. 10 F. 145	14 Gauge, 4 wire MiniSplit Cable—50 ft. roll	SW144-50		
Mini-Split Wire	16 Gauge, 4 wire MiniSplit Cable—250 ft. roll	\$164-250		
	16 Gauge, 4 wire MiniSplit Cable—250 ft. roll	SW164-250		
	16 Gauge, 4 wire MiniSplit Cable—50 ft. roll	\$164-50		
	16 Gauge, 4 wire MiniSplit Cable—50 ft. roll	SW164-50		
	Condensing Unit Mounting Pad: 24" x 42" x 3"	ULTRILITE2		
Mounting Pad	Outdoor Unit 3-1/4 inch Mounting Base (Pair) - Plastic	DSD-400P		
Optional Defrost Heater	Optional Defrost Heater	PAC-SJ20BH-E		
	Adaptor (5/8 To 1-1/8)	PAC-SL02RJ-E		
	Adaptor (7/8 To 1-1/8)	PAC-SL03RJ-E		
	Adaptor (3/8 To 5/8)	PAC-SG76RJ-E		
Port Adaptor	Joint Pipe (Connected 3/8 -> 1/2, A 3/8, B 1/2)	MAC-454JP-E		
	Joint Pipe (Connected 1/2 -> 3/8, A 1/2, B 3/8)	MAC-455JP-E		
	Joint Pipe (Connected 1/2 -> 5/8, A 1/2, B 5/8)	MAC-456JP-E		
	Joint Pipe (Connected 1/4 -> 3/8, A 1/4, B 3/8)	PAC-493PI		
	18" Dual Fan Stand	QSMS1802M		
	24" Dual Fan Stand	QSMS2402M		
Stand	Condenser Wall Bracket	QSWB2000M-1		
	Condenser Wall Bracket - Stainless Steel Finish	QSWBSS		
	Outdoor Unit Stand — 12" High	QSMS1202M		
Wind Baffle	Front Wind Baffle			
vind Bame Profit Wind Bame WB-PA6 (Two pieces are required)				

OUTDOOR UNIT: MXZ-SM72TAM-U1 - DIMENSIONS

Unit: mm <inch>



NOTES:

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



