# **M-SERIES**

### SUBMITTAL DATA: MLZ-KP12NA & SUZ-KA12NAHZ

12.000 BTU/H EZ FIT® RECESSED CASSETTE HEAT PUMP SYSTEMS



Job Name:	
System Reference:	Date:



#### INDOOR UNIT FEATURES

- Fits between 16" joists spacing
- · Stylish, square design panel
- Built-in condensate lift mechanism (19.6")
- Serviceable from the bottom (electrical and flare connections)
- · Adjustable fan speeds and vane directions
- Washable antibacterial and deodorizing filter
- · Multiple control options available:
- Hand-held Remote Controller (provided with unit)
- kumo cloud® smart device app for remote access
- Third-party interface options
- Wired or wireless controllers
- Pocket inside the access panel for kumo cloud<sup>®</sup> Wireless Interface

#### **OUTDOOR UNIT FEATURES**

- The outdoor unit powers the indoor unit, and should a power outage occur, the system is automatically restarted when power returns
- INVERTER-driven compressor and LEV provide high efficiency and comfort while using only the energy needed to maintain maximum performance
- H2i® hyper heat performance offers 100% heating capacity at 5°F
- Hot-Start Technology: no cold air rush at equipment startup or when restarting after Defrost Cycle
- · Quiet operation
- Blue Fin anti-corrosion treatment applied to the outdoor unit heat exchanger for increased coil protection and longer life
- · Built-in base pan heater
- Innovative Joint Lap DC Motor leads to high efficiency and reliability
- Pulse Amplitude Modulation technology

# SPECIFICATIONS: MLZ-KP12NA & SUZ-KA12NAHZ

Maximum Capacity   BTUM   12,000
Minimum Capacity
Maximum Power Input
Rated Power Input   W   940
Moisture Removal   Pintsh   3.10
Sensible Heat Factor
Power Factor (208/230V)
Heating at 47°F2   Rated Capacity   BTUH   18,000
Rated Capacity
Heating at 47°F2   Heating at 47°F2   Rated Power Input
Heating at 47°F2
Maximum Power Input   W   1,630
Power Factor
Heating at 17°F3   Rated Capacity   BTU/H   15,000     Rated Capacity   BTU/H   9,100     Maximum Power Input   W   1,740     Rated Power Input   W   1,050     Heating at 5°F4   Maximum Capacity   BTU/H   15,000     Maximum Power Input   W   2,800     Rated Power Input   W   2,800     Maximum Power Input   W   2,800     SEER   19,00     EER¹   12,70     HSPF (IV)   10,20     COP at 47°F²   3,80     COP at 17°F in Maximum Capacity³   2,54     COP at 17°F in Maximum Capacity³   2,54     COP at 5°F in Maximum Capacity³   1,57     ENERGY STAR® certified units (ENERGY STAR products are third-party certified by an EPA-recognized   Yes     Certification Body.)   Voltage, Phase, Frequency   208/230V, 1 phase, 60Hz     Guaranteed Voltage Range   V AC   187-253     Voltage: Indoor - Outdoor, S1-S2   V AC   208/230     Electrical   Voltage: Indoor - Outdoor, S2-S3   V DC   24     Short-circuit Current Rating (SCCR)   KA   5     Recommended Fuse/Breaker Size (Outdoor)   A   15
Rated Capacity   BTU/H   9,100
Heating at 17°F3   Maximum Power Input   W   1,740     Rated Power Input   W   1,050     Heating at 5°F4   Maximum Capacity   BTU/H   15,000     Maximum Power Input   W   2,800     SEER   19,00     EER¹   12,70     HSPF (IV)   10,20     COP at 47°F2   3,80     COP at 17°F in Maximum Capacity³   2,54     COP at 5°F in Maximum Capacity⁴   1,57     ENERGY STAR® certified units (ENERGY STAR products are third-party certified by an EPA-recognized Certification Body.)   VAC   187-253     Voltage. Phase, Frequency   VAC   187-253     Voltage: Indoor - Outdoor, S1-S2   VAC   208/230     Voltage: Indoor - Outdoor, S2-S3   V DC   24     Short-circuit Current Rating (SCCR)   Recommended Fuse/Breaker Size (Outdoor)   A   15
Maximum Power Input   W   1,740
Heating at 5°F4   Maximum Capacity
Heating at 5°F4
Maximum Power Input   W   2,800
EER1
HSPF (IV)
Efficiency         COP at 47°F2         3.80           COP at 17°F in Maximum Capacity³         2.54           COP at 5°F in Maximum Capacity⁴         1.57           ENERGY STAR® certified units (ENERGY STAR products are third-party certified by an EPA-recognized Certification Body.)         Yes           Voltage, Phase, Frequency         208/230V, 1 phase, 60Hz           Guaranteed Voltage Range         V AC         187-253           Voltage: Indoor - Outdoor, S1-S2         V AC         208/230           Electrical         Voltage: Indoor - Outdoor, S2-S3         V DC         24           Short-circuit Current Rating (SCCR)         kA         5           Recommended Fuse/Breaker Size (Outdoor)         A         15
Efficiency         3.80           COP at 17°F in Maximum Capacity³         2.54           COP at 5°F in Maximum Capacity⁴         1.57           ENERGY STAR® certified units (ENERGY STAR products are third-party certified by an EPA-recognized Certification Body.)         Yes           Voltage, Phase, Frequency         208/230V, 1 phase, 60Hz           Guaranteed Voltage Range         V AC         187-253           Voltage: Indoor - Outdoor, S1-S2         V AC         208/230           Electrical         Voltage: Indoor - Outdoor, S2-S3         V DC         24           Short-circuit Current Rating (SCCR)         KA         5           Recommended Fuse/Breaker Size (Outdoor)         A         15
COP at 17°F in Maximum Capacity³   2.54
COP at 5°F in Maximum Capacity <sup>4</sup> ENERGY STAR® certified units (ENERGY STAR products are third-party certified by an EPA-recognized Certification Body.)  Voltage, Phase, Frequency  Guaranteed Voltage Range  VAC  187-253  Voltage: Indoor - Outdoor, S1-S2  Voltage: Indoor - Outdoor, S2-S3  Voltage: Indoor - Outdoor, S2-S3  Short-circuit Current Rating (SCCR)  Recommended Fuse/Breaker Size (Outdoor)  A  1.57  1.5
ENERGY STAR® certified units (ENERGY STAR products are third-party certified by an EPA-recognized Certification Body.)  Voltage, Phase, Frequency  Guaranteed Voltage Range  V AC  Voltage: Indoor - Outdoor, S1-S2  Voltage: Indoor - Outdoor, S2-S3  V DC  Short-circuit Current Rating (SCCR)  Recommended Fuse/Breaker Size (Outdoor)  ENERGY STAR products are third-party certified by an EPA-recognized  Yes  208/230V, 1 phase, 60Hz  V AC  187-253  V AC  208/230  V AC  208/230  A  5
Guaranteed Voltage Range
Voltage: Indoor - Outdoor, S1-S2
Voltage: Indoor - Outdoor, S2-S3
Short-circuit Current Rating (SCCR) kA 5 Recommended Fuse/Breaker Size (Outdoor) A 15
Recommended Fuse/Breaker Size (Outdoor)  A 15
Recommended Fuse/Breaker Size (Outdoor)  A 15
Recommended Wire Size (Indoor - Outdoor)  AWG  14
MCA A 1
Fan Motor Full Load Amperage A 0.76
Fan Motor Output W 30
Airflow Rate at Cooling, Dry CFM 332-297-258-212
Airflow Rate at Cooling, Wet CFM 282-252-219-180
Sound Pressure Level (Cooling)  dB(A)  40-36-32-27
Sound Pressure Level (Heating)  Indoor Unit  Sound Pressure Level (Heating)  dB(A)  40-36-32-26
Drain Pipe Size         In. (mm)         1-1/4 (32)
Condensate Lift Mechanism, Maximum Distance In. (mm) 19-11/16 (500)
Heat Exchanger Type Plate fin coil
External Finish Color White
External Finish Color         White           W: In. (mm)         43-3/8 (1,102)
W: In. (mm) 43-3/8 (1,102)

### SPECIFICATIONS: MLZ-KP12NA & SUZ-KA12NAHZ

		D: In. (mm)	15-3/4 (400)	
		H: In. (mm)	11 (280)	
	Unit Weight	Lbs. (kg)	34 (15.5)	
	Package Weight	Lbs. (kg)	41 (18)	
Indoor Unit Operating	Cooling Intake Air Temp (Maximum / Minimum)*	°F	90F D.B / 73F W.B // 67F D.B / 57F W.B	
Temperature Range	Heating Intake Air Temp (Maximum / Minimum)	°F	80F D.B // 70F D.B	
	MCA	A	14.0	
	MOCP	A	24.0	
	Fan Motor Full Load Amperage	A	0.7	
	Fan Motor Output	W	77.0	
	Airflow Rate	CFM	1,691 / 1,691	
	Refrigerant Control		LEV	
	Defrost Method		Reverse Cycle	
	Heat Exchanger Type		Plate Fin Coil	
	Blue Fin Coating on Heat Exchanger		Yes	
	Sound Pressure Level, Cooling <sup>1</sup>	dB(A)	54	
	Sound Pressure Level, Heating <sup>2</sup>	dB(A)	55	
	Compressor Type		DC INVERTER-driven Twin Rotary	
	Compressor Model		SNB130FHBM2T	
Outdoor Unit	Compressor Rated Load Amps	A	13	
	Compressor Locked Rotor Amps	A	10	
	Compressor Oil Type // Charge	OZ.	FV50S // 22	
	External Finish Color		Ivory Munsell 3Y 7.8/1.1	
	Base Pan Heater			
		W: In. (mm)	38-9/16 (840)	
	Unit Dimensions	D: In. (mm)	13 (330)	
		H: In. (mm)	34-5/8 (880)	
	Package Dimensions	W: In. (mm)	38-9/16 (980)	
		D: In. (mm)	16-9/16 (420)	
		H: In. (mm)	39 (990)	
	Unit Weight	Lbs. (kg)	129 (58.5)	
	Package Weight	Lbs. (kg)	148 (67)	
	Cooling Air Temp (Maximum / Minimum)*	°F	115 / 14	
Outdoor Unit Operating Temperature Range	Cooling Thermal Lock-out / Re-start Temperatures**	°F	-1/3	
	Heating Air Temp (Maximum / Minimum)	°F	75 / -13	
		°F		
	Heating Thermal Lock-out / Re-start Temperatures**	Г	-18 / -14 P410A	
Refrigerant	Type	Lh	R410A	
	Charge	Lbs, oz	3, 9	
	Gas Pipe Size O.D. (Flared)	In.(mm)	3/8 (9.52)	
	Liquid Pipe Size O.D. (Flared)	In.(mm)	1/4 (6.35)	
Piping	Maximum Piping Length	Ft. (m)	65	
	Maximum Height Difference	Ft. (m)	40	
	Maximum Number of Bends		10	

#### Notes

AHRI Rated Conditions (Rated	¹Cooling (Indoor // Outdoor)	°F	80 DB, 67 WB // 95 DB, 75 WB		
data is determined at a fixed compressor speed)	<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 law ambient temperature conditions					

<sup>\*</sup>Applications should be restricted to comfort cooling only; equipment cooling applications are not recommended for low ambient temperature conditions.

<sup>\*\*</sup>System cuts out in heating mode to avoid thermistor error and automatically restarts at these temperatures.

# **ACCESSORIES: MLZ-KP12NA**

Grille (required)	□ MLP-444WU
Anti-allergy Enzyme Filter	□ MAC-408FT-E
kumo touch™ RedLINK™ Wireless Controller	□ MHK2
Deluxe MA Remote Controller <sup>1</sup>	□ PAR-40MAAU
Simple MA Controller <sup>1</sup>	□ PAC-YT53CRAU-J
Touch MA Controller <sup>1</sup>	□ PAR-CT01MAU-SB
Wired Remote Sensor	□ M21EAA307
Wireless Temperature and Humidity Sensor	□ PAC-USWHS003-TH-1
System Control Interface <sup>2</sup>	□ MAC-334IF-E
External Fan / Heater Control Relay Adapter	□ CN24RELAY-KIT-CM3
Wireless Interface 2	□ PAC-USWHS002-WF-2
Thermostat Interface	□ PAC-US444CN-1
kumo station <sup>®</sup>	□ PAC-WHS01HC-E
USNAP Interface	□ PAC-WHS01UP-E
IT Extender	□ PAC-WHS01IE-E
BACnet® and MODBUS® Interface	□ PAC-UKPRC001-CN-1
External Fan / Heater Control Relay Adapter	□ CN24RELAY-KIT-CM3
Lockdown Bracket for Hand-held Remote Controllers	□ RCMKP1CB
Advanced Blue Diamond Mini Condensate Pump w/ Reservoir & Sensor (208/230V) [recommended]	□ X87-721 - 208/230V
MicroBlue Blue Diamond Mini Condensate Pump (110/208/230V) up to 18,000 BTU/H	□ X85-003
(30A/600V/UL) [fits 2" X 4" utility box] - Black	□ TAZ-MS303
(30A/600V/UL) [fits 2" X 4" utility box] - White	□ TAZ-MS303W

<sup>&</sup>lt;sup>1</sup> Requires MAC-334IF-E

<sup>&</sup>lt;sup>2</sup> Allows indoor units to connect to an MA Controller

# **ACCESSORIES: SUZ-KA12NAHZ**

Air Outlet Guide	□ MAC-881SG
Optional Defrost Heater	□ MAC-640BH-U
Hail Guard	□ HG-A7
Outdoor Unit 3-1/4 inch Mounting Base (Pair) - Plastic	□ DSD-400P
Condensing Unit Mounting Pad 16" x 36" x 3"	□ ULTRILITE1
Outdoor Unit Stand — 12" High	□ QSMS1201M
Outdoor Unit Stand — 18" High	□ QSMS1801M
Outdoor Unit Stand — 24" High	□ QSMS2401M
Heavy Duty Wall Mounting Bracket—Coated Steel	□ QSWB2000M-1
Heavy Duty Wall Mounting Bracket — 316 Series Stainless Steel	□ QSWBSS
15' x 1/4" x 15' / 3/8" Lineset (Twin-Tube Insulation)	□ MLS143812T-15
30' x 1/4" x 30' / 3/8" Lineset (Twin-Tube Insulation)	□ MLS143812T-30
50' x 1/4" x 50' / 3/8" Lineset (Twin-Tube Insulation)	□ MLS143812T-50
65' x 1/4" x 65' / 3/8" Lineset (Twin-Tube Insulation)	□ MLS143812T-65

### **DIMENSIONS: MLZ-KP12NA**

Unit: inch INDOOR UNIT OUTLINE DRAWING CENTER OF CELLING OPENING HOLE/SUSPENSION PITCH/GRILLE IS THE SAME REMOTE CONTROLLER OUTLINE DRAWING (TOP VIEW) <u>2-3/</u>8 1/16 THE METHOD FOR STANDING DRAIN FROM INDOOR UNIT \*\* CUT THE DRAIN HOSE (ACCESSORY) FOR USE, IF NECESSARY. 12-1/8 BOLT PITCH 1/16년 9-1/16 DRAIN PIPE CONNECTION RIGID PVC PIPE O.D.Ø1 (26mm) AIR OUTLET (UNDERSIDE) CONNECTION PART OF ATTACHING DRAIN HOSE (RIGHT SIDE VIEW) 2-1/16 9/16 PIPE CONNECTION (GAS PIPE) 14-3/16 41-3/8 SUSPENSION BOLT PITCH 5/8 5/8 CONNECTION PART OF ATTACHING DRAIN HOSE , 09,12:ø3/8 18:ø1/2 -6-11/16 4-5/16 MIN. 1/100 DOWNWARD SLOPE ¥9-5/8 (FRONT VIEW) ATTACHING DRAIN HOSE PIPE CONNECTION (LUQUID PIPE) DRAIN PIPE CONNECTION
RIGID PVC PIPE (0.D.Ø1 (26mm) 19-11/16 43-3/8 37-13/16 <sub>x</sub>7-5/16 5/16 4-13/16 4-3/4 <u>2-3/8</u>0-CEILLING SURFACE √(15/16) 1-7/8 AIR OUTLET AREA △ AIR OUTLET ELECTRIC BOX 57.3 sq in THE BOTTOM OF CELLING AND FIXING SECTION OF GRILLE IS IN THE SAME SURFACE CEILLING SURFACE Ø2-5/16 DRAIN PAN PIPE COVER GRILLE OUTLINE DRAWING 38-1/16 (MLP-444W) MAX PROTRUSION DIMENSION OF FLAP 09/12 KBTU/H 18 KBTU/H RECEPTION WINDOW 1-5/16 15/16 1/2 LIQUID PIPE O.D. Ø1/4 CL EXTENSION PIPE 6-13/16 GAS PIPE 6-9/16 Ø3/8 3-5/16 11/16 FLARED CONNECTION Ø1/4 LIQUID PIPE CL 13/ ONNECTIONS 0 FLARED CONNECTION Ø3/8 FLARED CONNECTION Ø1/2 6 GAS PIPE HEAT INSULATER O.D. CONNECTION I.D. EFFECTIVE LENGTH 6-9/16 RAIN HOSE 18-7/8 6-13/16₺

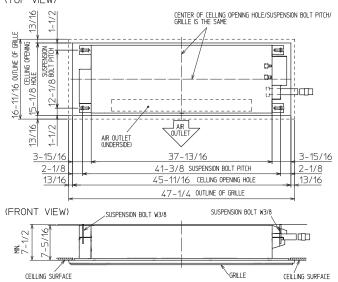
HOLE POSITION FOR PANEL INSTALLATION (7 PLACES)

DRAIN PIPE CONNECTION



2)

3/8

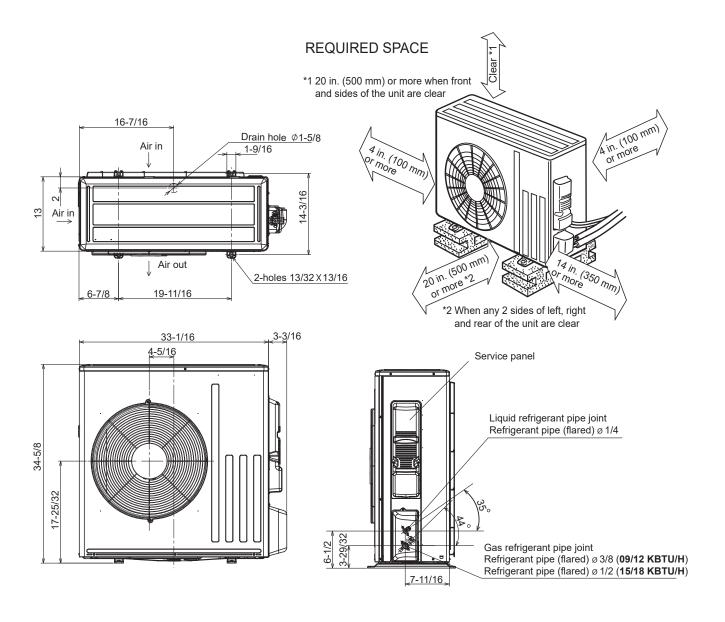


3/8

RIGID PVC PIPE O.D. Ø1 (26mm)

NOTE1. CUT THE DRAIN HOSE (ACCESSORY) FOR USE, IF NECESSARY.

Unit: inch



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





