

Submittal

Job: 1504
Anderson Apartments

Spec Section No: M6.1
Submittal No: 2
Revision No: 0
Sent Date: 10/12/2015
Due Date: 10/19/2015

Spec Section Title:

Submittal Title: Multi-Splits

Contractor:
Ranor Mechanical

Contractor's Stamp

Allied / Cook Construction

Architect's Stamp

Engineer's Stamp

Model	Configuration	Rated Capacity (Cooling/Heating)	Max Capacity @ 17° F	Max Capacity @ 5° F	SEER	EER	HSPF	COP @ 47° F	COP @ 17° F
MXZ-B Models									
MXZ-2B20NA-1	Non-Ducted	18,000 / 22,000	12,500	11,113	18.0	12.5	8.9	3.91	2.71
	Ducted	20,000 / 22,000	12,500		15.5	9.1	8.5	3.62	2.56
MXZ-3B24NA-1	Non-Ducted	22,000 / 25,000	14,000	13,336	17.5	12.5	9.3	4.20	2.97
	Ducted	23,600 / 24,600	14,000		15.0	9.6	8.5	3.80	2.61
MXZ-3B30NA-1	Non-Ducted	22,000 / 25,000	18,800	15,704	17.5	9.1	10.5	3.90	2.78
	Ducted	23,600 / 24,600	17,000		14.5	8.2	9.5	3.64	
MXZ-4B36NA-1	Non-Ducted	35,400 / 36,000	22,200	18,671	18.0	9.4	9.3	3.50	2.68
	Ducted	34,400 / 34,400	20,300		15.0	8.7	9.0	3.25	2.54
MXZ-5B42NA	Non-Ducted	40,800 / 45,200	23,100	26,000	18.4	8.5	9.8	3.51	2.46
	Ducted	37,200 / 41,200	24,000		14.5	9.4	8.7	3.30	2.53
MXZ-8B48NA	Non-Ducted	48,000 / 54,000	33,000	32,400	15.0	8.3	8.7	3.32	2.30
	Ducted		34,700		14.7	7.4	8.9	3.00	2.20
MXZ-C H2i Models									
MXZ-2C20NAHZ	Non-Ducted	18,000 / 22,000	22,000	22,000	17.0	13.50	9.8	4.00	2.77
	Ducted				15.0	11.00	9.5	3.69	2.53
MXZ-3C24NAHZ	Non-Ducted	22,000 / 25,000	25,000	25,000	19.0	13.50	10.0	4.25	2.53
	Ducted		24,600		15.5	10.00	9.0	3.80	2.51
MXZ-3C30NAHZ	Non-Ducted	28,400 / 28,600	28,600	28,600	18.0	12.50	11.0	4.00	2.65
	Ducted		27,600		16.0	10.30	9.8	3.70	2.50
MXZ-4C36NAHZ	Non-Ducted	36,000 / 45,000	45,000	45,000	19.1	14.01	11.3	3.95	2.85
	Ducted				15.8	11.32	10.1	3.10	2.30
MXZ-5C42NAHZ	Non-Ducted	42,000 / 48,000	48,000	48,000	19.0	13.42	11.0	4.10	2.85
	Ducted				15.0	10.80	10.1	3.23	2.50
MXZ-8C48NAHZ	Non-Ducted	48,000 / 54,000	54,000	54,000	18.9	10.00	11.0	3.75	2.70
	Ducted				14.7	9.5	10	3.17	2.40



Submittal Transmittal

Submittal # 1-001

To:	Ranor
From:	Homans Associates 250 Ballardvale Street Wilmington, MA 01887

Date:	9-30-15
Transmitted By:	Kevin Faria
Copied To:	Nick St. Ours

Project	89 Anderson Street	Architect	
Order #		Engineer	
Purchaser			

Submittal Name: **Equipment List**

Submitted For :	Via:	The Following:
<input checked="" type="checkbox"/> Approval/Action <input type="checkbox"/> Information <input type="checkbox"/> Distribution <input type="checkbox"/> Record <input type="checkbox"/> Revised/Resubmit	<input type="checkbox"/> Overnight Delivery <input type="checkbox"/> Mail <input checked="" type="checkbox"/> E-Mail <input type="checkbox"/> Courier <input type="checkbox"/> Fax <input type="checkbox"/> Other	<input type="checkbox"/> Drawings <input type="checkbox"/> Digital Files <input checked="" type="checkbox"/> Submittals <input type="checkbox"/> O & M Manuals <input type="checkbox"/> Other
		<input type="checkbox"/> Specifications

Includes the following:

Unit Tag #	Model	Description	Format	Item Action	Copies	QTY
Studio Apartments	MUZFH15NA	Single Zone Hyper-Heat	PDF	For Approval	1	10
1 BR Apartments/ Commercial 3	MXZ3C24NAHZ	Multi Zone Hyper Heat Pump	PDF	For Approval	1	35
2BR Apartments/Lobby & Mail Room	MXZ3C30NAHZ	Multi Zone Hyper Heat Pump	PDF	For Approval	1	10
Commercial 2	MXZ4C36NAHZ	Multi Zone Hyper Heat Pump	PDF	For Approval	1	1
Corridors	MXZ8C48NAHZ	Multi Zone Hyper Heat Pump	PDF	For Approval	1	1
Elevator Machine Room	PUYA12NHA4	Single Zone Cooling Only	PDF	For Approval	1	1
Bedrooms (1 BR & 2 BR Apartments)	MSZGE06NA-8	Wall Mounted Heat Pump	PDF	For Approval	1	52
Living Room (1 BR Apartments)	MSZGE15NA-8	Wall Mounted Heat Pump	PDF	For Approval	1	34
Living Room (2 BR Apartments)	MSZGE18NA-8	Wall Mounted Heat Pump	PDF	For Approval	1	9
Studio Apartments	MSZFH15NA	Wall Mounted Hyper-Heating	PDF	For Approval	1	10
Corridors/Mail	SLZKA09NA	Ceiling Cassette Heat Pump	PDF	For Approval	1	7

Room/Commercial 3						
Corridors/Lobby	SLZKA12NA	Ceiling Cassette Heat Pump	PDF	For Approval	1	4
Commercial 2	SLZKA15NA	Ceiling Cassette Heat Pump	PDF	For Approval	1	2
Elevator Machine Room	PKAA12HA4	Wall Mounted	PDF	For Approval	1	1
Corridors/Commercial 2	PAC-MKA30BC	Branch Box MXZ "C", 3 Zone	PDF	For Approval	1	3
Corridors/Commercial 2 & 3/Lobby/Mail Room/Elevator Machine Room	PAC-YT53CRAU-J	Simple MA Remote Controller	PDF	For Approval	1	11
Elevator Machine Room	WB-PA1	Wind baffle	PDF	For Approval	1	1
Studio Apartments	MAC-642BH-U	Drain pan heater	PDF	For Approval	1	10
	MAC-A454JP-E	Adaptor: 3/8" X 1/2"	PDF	For Approval	1	36
	MAC-A455JP-E	Adaptor: 1/2" X 3/8"	PDF	For Approval	1	1
	MSDD-50AR-E	Flare Connection between two branch boxes	PDF	For Approval	1	1

Comments:

SUBMITTAL DATA: MSZ-FH15NA & MUZ-FH15NA
15,000 BTU/H WALL-MOUNTED HEAT PUMP SYSTEM

Job Name: 89 Anderson Street

System Reference: Studio Apartments

Date: 9-30-15



GENERAL FEATURES

- Highly energy-efficient system that features 100% heating capacity at 5°F, 82% at -4°F, and 62% at -13°F
- Updated sleek, compact indoor unit design
- Includes Standard, Platinum Deodorizing, and Anti-allergy Enzyme filters for a complete air purifying system
- "Powerful Mode" function permits system to temporarily run at a lower/higher temperature with an increased fan speed, which quickly brings the room to the optimum comfort level
- Integrated i-see Sensor automatically adjusts the unit's operation according to temperature differences detected between the floor and the intake air, ensuring optimum comfort and energy usage
- Hand-held Wireless Remote Controller
- Base Pan Heater is available as an option
- Limited warranty: five years parts and seven years compressors

ACCESSORIES

Outdoor Unit

- Base Pan Heater (MAC-642BH-U)
- Three-pole Disconnect Switch (TAZ-MS303)
- Air Outlet Guide (MAC-886SG-E)
- Mounting Base (DSD-400N)
- Mounting Pad (ULTRILITE1)
- Drain Socket Assembly (MAC-851DS)

Indoor Unit

- Condensate Pump (BlueDiamond X87-711/721; 115/230V)
- Condensate Pump (Saueremann SI30-115/230; 115/230V)
- Replacement Platinum Deodorizing Filter (MAC-3000FT-E)
- Replacement Anti-allergy Enzyme Filter (MAC-2330FT-E)

Controller Options

- Wireless Wall-mounted Remote Controller Kit (MHK1)*
- Portable Central Controller (MCCH1)*
- Outdoor Air Sensor (MOS1)*
- Wired Wall-mounted Controller (PAR-31MAA requires MAC-333IF)*
- Simple MA Remote Controller (PAC-YT53CRAU requires MAC-333IF)*

*See Submittal for information on each option

- System Control Interface (MAC-333IF)
- Remote Temperature Sensor (M21-JKO-307)
- Lockdown Bracket for Hand-held Controller (RCMKP1CB)



SUBMITTAL DATA: MXZ-3C24NAHZ
 MULTI-INDOOR INVERTER HEAT-PUMP SYSTEM

Job Name:

System Reference:

Date:

GENERAL FEATURES

- Highly energy-efficient system that features 100% heating capacity at 5° F with guaranteed capacity down to -13° F
- Quiet operation
- Built-in base pan heater to prevent ice in drain pan
- Limited warranty: five years parts and seven years compressors




Outdoor Unit: MXZ-3C24NAHZ

ACCESSORIES

- 3/8" x 1/2" Port Adapter (MAC-A454JP-E)
- 1/2" x 3/8" Port Adapter (MAC-A455JP-E)
- 1/2" x 5/8" Port Adapter (MAC-A456JP-E)
- M-NET Adapter (PAC-IF01MNT-E)
- Drain Socket (PAC-SG60DS-E)
- Airflow Guide (PAC-SH96SG-E)

(For data on specific indoor units, see the MXZ-C Technical and Service Manual.)

Specifications			Model Name
Unit Type			MXZ-3C24NAHZ
Cooling* (Non-ducted / Ducted)	Rated Capacity	Btu/h	22,000 / 23,600
	Capacity Range	Btu/h	6,000 - 23,600
	Rated Total Input	W	1,630 / 2,360
Heating at 47°F* (Non-ducted / Ducted)	Rated Capacity	Btu/h	25,000 / 24,600
	Capacity Range	Btu/h	7,200 - 30,600
	Rated Total Input	W	1,725 / 1,871
Heating at 17°F* (Non-ducted/Ducted)	Rated Capacity	Btu/h	14,000 / 14,000
	Maximum Capacity	Btu/h	25,000 / 24,600
	Rated Total Input	W	1,622 / 1,635
Heating at 5°F*	Maximum Capacity	Btu/h	25,000
Electrical Requirements	Power Supply	Voltage, Phase, Hertz	208 / 230V, 1-Phase, 60 Hz
	Recommended Fuse/Breaker Size	A	40
	MCA	A	30
Voltage	Indoor - Outdoor S1-S2	V	AC 208 / 230
	Indoor - Outdoor S2-S3	V	DC ±24
Compressor			DC INVERTER-driven Twin Rotary
Fan Motor (ECM)			F.L.A.
Sound Pressure Level (Non-ducted/Ducted)	Cooling		1.9
	Heating		54
External Dimensions (H x W x D)			41-9/32 x 37-13/32 x 13
			1048 x 950 x 330
Net Weight			Lbs / kg
		189 / 86	
External Finish			Munsell No. 3Y 7.8/11
Refrigerant Pipe Size O.D. — Eight Ports	Liquid (High Pressure)	In / mm	1/4 / 6.35
	Gas (Low Pressure)		A:1/2 / 12.7 ; B,C: 3/8 / 9.52
Max. Refrigerant Line Length			Ft / m
		230 / 70	
Max. Piping Length for Each Indoor Unit			Ft / m
		82 / 25	
Max. Refrigerant Pipe Height Difference	If IDU is Above ODU	Ft / m	49 / 15
	If IDU is Below ODU	Ft / m	49 / 15
Connection Method			Flared/Flared
Refrigerant			R410A

* Rating Conditions per AHRI Standard:

 Cooling | Indoor: 80° F (27° C) DB / 67° F (19° C) WB
 Cooling | Outdoor: 95° F (35° C) DB / W.B. 23.9° C (75° F)

 Heating at 47°F | Indoor: 70° F (21° C) DB / 60° F (16° C) WB
 Heating at 47°F | Outdoor: 47° F (8° C) DB / 43° F (6° C) WB

 Heating at 17° F | Indoor: 70° F (21° C) DB
 Heating at 17° F | Outdoor: 17° F (-8° C) DB / 15° F (-9° C) WB

SPECIFICATIONS: MXZ-3C24NAHZ

Operating Range:

Outdoor	
Cooling	D.B. 23 to 115° F [D.B. -5 to 46° C]*1
Heating	D.B. -13 to 70° F [D.B. -25 to 21° C]

*1. D.B. 5 to 115° F [D.B. -15 to 46° C],
when an optional Air Outlet Guide is installed.

Energy Efficiencies:

Indoor Unit Type	SEER	EER	HSPF	COP @ 47°F	COP @ 17°F
Non-ducted (06 + 06 + 09)	19.0	13.5	10.0	4.25	2.53
Ducted and Non-ducted	17.3	11.75	9.5	4.03	2.52
Ducted (09 + 09 + 09)	15.5	10.0	9.0	3.80	2.51

Multi-zone Indoor/Outdoor Combination Table

	MSZ-FH*	MSZ-GE*	MFZ*	MVZ*	SEZ-KD*	SLZ*	PCA (A24)*	PLA*	PEAD*
MXZ-3C24NAHZ	OK	6,9,12,15,18 OK 24 NO	OK	12,18 OK 24,30,36 NO	OK	OK	NO	18 OK 12,24 NO	NO

* Refer to indoor unit submittal.

Notes:

- Minimum of two Indoor Units must be connected to the MXZ-3C24NAHZ.
- Minimum installed capacity cannot be less than 12,000 Btu/h.
- System can operate with only one Indoor Unit turned on.
- May connect to any style indoor unit or combination.
- Information provided at 208/230V.
Refer to the MXZ-C Technical & Service Manual for detailed specifications and additional information per Indoor Unit Combination.

MVZ CONNECTION RULES:

- Only 1 MVZ may be used on any system.
- When an MVZ is connected, total connected capacity must be 100% or less.
- When an MVZ is connected, no P-Series indoor units can be used (PCA, PLA, or PEAD).

Notes:

SUBMITTAL DATA: MXZ-3C30NAHZ
 MULTI-INDOOR INVERTER HEAT-PUMP SYSTEM

Job Name: 89 Anderson Street

System Reference: 2 BR Apartments/Lobby & Mail Room

Date: 9-30-15

GENERAL FEATURES

- Highly energy-efficient system that features 100% heating capacity at 5° F with guaranteed capacity down to -13° F
- Quiet operation
- Built-in base pan heater to prevent ice in drain pan
- Limited warranty: five years parts and seven years compressors

ACCESSORIES

- 3/8" x 1/2" Port Adapter (MAC-A454JP-E)
- 1/2" x 3/8" Port Adapter (MAC-A455JP-E) (Mail Room/Lobby System)
- 1/2" x 5/8" Port Adapter (MAC-A456JP-E)
- 1/4" x 3/8" Port Adapter (PAC-493PI)
- 3/8" x 5/8" Port Adapter (PAC-SG76RJ-E)
- M-NET Adapter (PAC-IF01MNT-E)
- Drain Socket (PAC-SG60DS-E)
- Airflow Guide (PAC-SH96SG-E)



Outdoor Unit: MXZ-3C30NAHZ




(For data on specific indoor units, see the MXZ-C Technical and Service Manual.)

Specifications			Model Name
Unit Type			MXZ-3C30NAHZ
Cooling* (Non-ducted / Ducted)	Rated Capacity	Btu/h	28,400 / 27,400
	Capacity Range	Btu/h	6,000 - 28,400
	Rated Total Input	W	2,272 / 2,661
Heating at 47°F* (Non-ducted / Ducted)	Rated Capacity	Btu/h	28,600 / 27,600
	Capacity Range	Btu/h	7,200 - 36,000
	Rated Total Input	W	2,096 / 2,187
Heating at 17°F* (Non-ducted/Ducted)	Rated Capacity	Btu/h	18,000 / 16,500
	Maximum Capacity	Btu/h	28,600 / 27,600
	Rated Total Input	W	1,991 / 1,993
Heating at 5°F*	Maximum Capacity	Btu/h	28,600
Electrical Requirements	Power Supply	Voltage, Phase, Hertz	208 / 230V, 1-Phase, 60 Hz
	Recommended Fuse/Breaker Size	A	40
	MCA	A	30
Voltage	Indoor - Outdoor S1-S2	V	AC 208 / 230
	Indoor - Outdoor S2-S3	V	DC ±24
Compressor			DC INVERTER-driven Twin Rotary
Fan Motor (ECM)			F.L.A. 1.9
Sound Pressure Level	Cooling	54	
	Heating	58	
External Dimensions (H x W x D)	In / mm		41-9/32 x 37-13/32 x 13 1048 x 950 x 330
Net Weight	Lbs / kg		189 / 86
External Finish			Munsell No. 3Y 7.8/11
Refrigerant Pipe Size O.D. — Eight Ports	Liquid (High Pressure)	In / mm	1/4 / 6.35
	Gas (Low Pressure)	A: 1/2 / 12.7 ; B, C: 3/8 / 9.52	
Max. Refrigerant Line Length	Ft / m		230 / 70
Max. Piping Length for Each Indoor Unit	Ft / m		82 / 25
Max. Refrigerant Pipe Height Difference	If IDU is Above ODU	49 / 15	
	If IDU is Below ODU	49 / 15	
Connection Method			Flared/Flared
Refrigerant			R410A

*** Rating Conditions per AHRI Standard:**

 Cooling | Indoor: 80° F (27° C) DB / 67° F (19° C) WB
 Cooling | Outdoor: 95° F (35° C) DB / WB, 23.9° C (75° F)

 Heating at 47° F | Indoor: 70° F (21° C) DB / 60° F (16° C) WB
 Heating at 47° F | Outdoor: 47° F (8° C) DB / 43° F (6° C) WB

 Heating at 17° F | Indoor: 70° F (21° C) DB
 Heating at 17° F | Outdoor: 17° F (-8° C) DB / 15° F (-9° C) WB

SPECIFICATIONS: MXZ-3C30NAHZ, contd.

Operating Range:

	Outdoor
Cooling	D.B. 23 to 115° F [D.B. -5 to 46° C]*1
Heating	D.B. -13 to 70° F [D.B. -25 to 21° C]

*1. D.B. 5 to 115° F [D.B. -15 to 46° C],
when an optional Air Outlet Guide is installed.

Energy Efficiencies:

Indoor Unit Type	SEER	EER	HSPF	COP @ 47°F	COP @ 17°F
Non-ducted (06 + 06 + 09)	18.0	12.5	11.0	4.00	2.65
Ducted and Non-ducted	17.00	11.40	10.40	3.85	2.58
Ducted (09 + 09 + 09)	16.0	10.3	9.8	3.70	2.50

Multi-zone Indoor/Outdoor Combination Table

	MSZ-FH*	MSZ-GE*	MFZ*	MVZ*	SEZ-KD*	SLZ*	PCA (A24)*	PLA*	PEAD*
MXZ-3C30NAHZ	OK	OK	OK	12,18,24 OK 30,36 NO	OK	OK	OK	18,24 OK 12,30 NO	24 OK 30, 36 NO

* Refer to indoor unit submittal.

Notes:

- Minimum of two Indoor Units must be connected to the MXZ-3C30NAHZ.
- Minimum installed capacity cannot be less than 12,000 Btu/h.
- System can operate with only one Indoor Unit turned on.
- May connect to any style indoor unit or combination.
- Information provided at 208/230V.
Refer to the MXZ-C Technical & Service Manual for detailed specifications and additional information per Indoor Unit Combination.

MVZ CONNECTION RULES:

- Only 1 MVZ may be used on any system.
- When an MVZ is connected, total connected capacity must be 100% or less.
- When an MVZ is connected, no P-Series indoor units can be used (PCA, PLA, or PEAD).

Notes:

SUBMITTAL DATA: MXZ-4C36NAHZ

MULTI-INDOOR INVERTER HEAT-PUMP SYSTEM

Job Name: 89 Anderson Street

System Reference: Commercial 2

Date: 9-30-15

GENERAL FEATURES

- Quiet operation
- Built-in base pan heater to prevent ice in drain pan
- Limited warranty: five years parts and seven years compressors

ACCESSORIES

- Three-port Branch Box (PAC-MKA30BC)
- Five-port Branch Box (PAC-MKA50BC)
- Distribution Pipe for Flare Connection (MSDD-50AR; necessary for installing two branch boxes)
- Distribution Pipe for Braze Connection (MSDD-50BR; necessary for installing two branch boxes)
- 3/8" x 1/2" Port Adapter (MAC-A454JP)
- 1/2" x 3/8" Port Adapter (MAC-A455JP)
- 1/2" x 5/8" Port Adapter (MAC-A456JP)
- 1/4" x 3/8" Port Adapter (PAC-493PI)
- 3/8" x 5/8" Port Adapter (PAC-SG76RJ)
- Drain Socket (PAC-SH71DS-E)
- Airflow Guide (PAC-SH96SG-E)



Outdoor Unit: MXZ-4C36NAHZ




(For data on specific indoor units, see the MXZ-C Technical and Service Manual.)

Specifications		Model Name	
Unit Type		MXZ-4C36NAHZ	
Cooling* (Non-ducted / Ducted)	Rated Capacity	Btu/h	36,000 / 36,000
	Capacity Range	Btu/h	6,000 - 36,000
	Rated Total Input	W	2,570 / 3,180
Heating at 47°F* (Non-ducted / Ducted)	Rated Capacity	Btu/h	45,000 / 45,000
	Capacity Range	Btu/h	7,200 - 45,000
	Rated Total Input	W	3,340 / 4,250
Heating at 17°F* (Non-ducted/Ducted)	Rated Capacity	Btu/h	34,000 / 36,000
	Maximum Capacity	Btu/h	45,000 / 45,000
	Rated Total Input	W	3,500 / 4,590
Heating at 5°F*	Maximum Capacity	Btu/h	45,000
Electrical Requirements	Power Supply	Voltage, Phase, Hertz	208 / 230V, 1-Phase, 60 Hz
	Recommended Fuse/Breaker Size	A	50
	MCA	A	42
Voltage	Indoor - Outdoor S1-S2	V	AC 208 / 230
	Indoor - Outdoor S2-S3	V	DC ±24
Compressor		Hermetic	
Fan Motor (ECM)		F.L.A.	0.4+0.4
Sound Pressure Level	Cooling	dB(A)	49
	Heating	dB(A)	53
External Dimensions (H x W x D)		In / mm	52-11/16 x 41-11/32 x 13+1 1338 x 1050 x 330+25
Net Weight		Lbs / kg	276 / 125
External Finish		Munsell No. 3Y 7.8/11	
Refrigerant Pipe Size O.D. — Eight Ports	Liquid (High Pressure)	In / mm	3/8 / 9.52
	Gas (Low Pressure)	In / mm	5/8 / 15.88
Max. Refrigerant Line Length		Ft / m	492 (150)
Max. Piping Length for Each Indoor Unit		Ft / m	262 (80)
Max. Refrigerant Pipe Height Difference	If IDU is Above ODU	Ft / m	131 (40)
	If IDU is Below ODU	Ft / m	164 (50)
Connection Method		Flared/Flared	
Refrigerant		R410A	

* Rating Conditions per AHRI Standard:

 Cooling | Indoor: 80° F (27° C) DB / 67° F (19° C) WB
 Cooling | Outdoor: 95° F (35° C) DB / 75° F (24° C) WB

 Heating at 47° F | Indoor: 70° F (21° C) DB
 Heating at 47° F | Outdoor: 47° F (8° C) DB / 43° F (6° C) WB

 Heating at 17° F | Indoor: 70° F (21° C) DB
 Heating at 17° F | Outdoor: 17° F (-8° C) DB / 15° F (-9° C) WB

SPECIFICATIONS: MXZ-4C36NAHZ, contd.

Operating Range:

Outdoor	
Cooling	D.B 23 to 115°F . [D.B.-5 to 46°C]*1
Heating	D.B. -13 to 70° F [D.B. -25 to 21° C]

*1. D.B. 5 to 115° F [D.B. -15 to 46° C],
when an optional Air Outlet Guide is installed.

Energy Efficiencies:

Indoor Unit Type	SEER	EER	HSPF	COP @ 47°F	COP @ 17°F
Non-ducted	19.10	14.00	11.30	3.95	2.85
Ducted and Non-ducted	17.45	12.67	10.70	3.53	2.58
Ducted	15.80	11.30	10.10	3.10	2.30

Multi-zone Indoor/Outdoor Combination Table

	MSZ-FH*	MSZ-GE*	MFZ*	MVZ*	SEZ-KD*	SLZ*	PCA (A24)*	PLA*	PEAD*
MXZ-4C36NAHZ	OK	OK	OK	OK	OK	OK	NO	OK	24, 30, 36 OK

* Refer to indoor unit submittal.

Notes:

- Minimum of two Indoor Units must be connected to the MXZ-4C36NAHZ.
- Minimum installed capacity cannot be less than 12,000 Btu/h.
- System can operate with only one Indoor Unit turned on.
- May connect to any style indoor unit or combination.
- Information provided at 208/230V.
Refer to the MXZ-C Technical & Service Manual for detailed specifications and additional information per Indoor Unit Combination.

MVZ CONNECTION RULES:

- Up to 2 MVZ's may be connected to this system.
- When 2 MVZ's are connected, no additional indoor units can be used.
- When 1 MVZ is connected, additional indoor units can be connected.
- When 1 MVZ is connected, total connected capacity must be 130% or less.
- Connection limitations are altered with the use of the SPTB1 accessory. Refer to the SPTB1 documentation for more details.

Notes:

MXZ-4C36NAHZ SYSTEM DESIGN

Outdoor unit			MXZ-4C36NAHZ	
			4HP	
	Rated capacity (kBTU/h)	Cooling	36	
		Heating	45	
Refrigerant			R410A	
Connectable indoor unit	Capacity		Type 06 to Type 36	
			Caution: The indoor unit which rated capacity exceeds 36 kBTU/ h (Type 36) can NOT be connected.	
	Number of units		2 to 4 units	
Total system wide capacity		33 to 130% of outdoor unit capacity (12 to 46.8 kBTU/h)		
Connectable branch box	Number of units		1 or 2 units	



Connectable indoor unit lineups (Heat pump inverter type)			Capacity class [kBTU/h]						
Model type	Model name	Capacity class [kBTU/h]							
		06	09	12	15	18	24	30	36
Wall mounted	Deluxe	MSZ-FE09/12/18NA	●	●	●	●			
		MSZ-FH09/12/15NA	●	●	●				
	Standard	MSZ-GE06/09/12/15/18/24NA	●	●	●	●	●		
Ceiling concealed	Low static pressure	SEZ-KD09/12/15/18NA		●	●	●			
	Middle static pressure	PEAD-A24/30/36AA4					●	●	●
4-way ceiling cassette	2 by 2 type	SLZ-KA09/12/15NA		●	●				
	Standard	PLA-A12/18/24/30/36BA4			●	●	●	●	●
Floor standing		MFZ-KA09/12/18NA		●	●		●		
Multi-position		MVZ-A12/18/24/30/36AA4			●		●	●	●

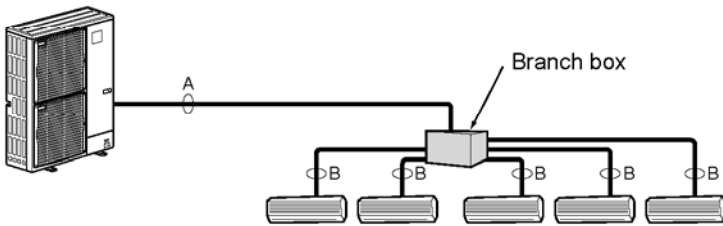


Branch box	PAC-MKA50BC	PAC-MKA30BC
Number of branches (Indoor unit that can be connected)	5 branches (MAX. 5 units)	3 branches (MAX. 3 units)

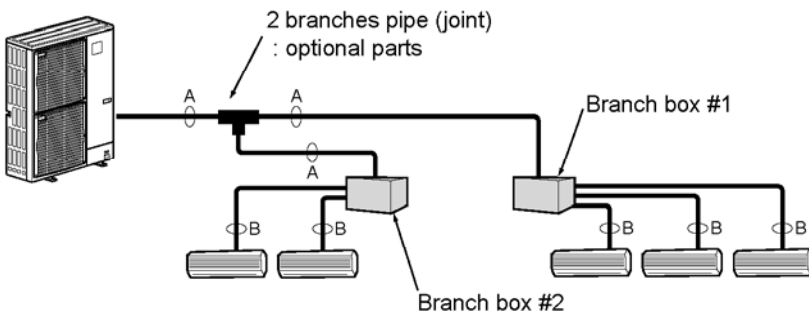
Note: A maximum of 2 branch boxes can be connected to 1 outdoor unit.

Branch Box Combinations	
Three-port	Five-port
1	0
0	1
1	1
2	0
0	2 (Up to 8 IDU)

- If Using One Branch Box
Flare connection employed (No brazing)



- If Using Two Branch Boxes



- Installation procedure (2 branches pipe (joint))
Refer to the installation manuals of MSDD-50AR-E and MSDD-50BR-E.

Piping connection size

	A	B
Liquid	$\phi 9.52$ mm (3/8 inch)	The piping connection size differs according to the type and capacity of indoor units. Match the piping connection size of branch box with indoor unit. If the piping connection size of branch box does not match the piping connection size of indoor unit, use optional different-diameter (deformed) joints to the branch box side. (Connect deformed joint directly to the branch box side.)
Gas	$\phi 15.88$ mm (5/8 inch)	

MXZ-4C36NAHZ COOLING AND HEATING CAPACITY AND CHARACTERISTICS

1. Method for obtaining system cooling and heating capacity:

To obtain the system cooling and heating capacity and the electrical characteristics of the outdoor unit, first add up the ratings of all the indoor units connected to the outdoor unit (see table below). For Standard Capacity Diagram, please refer to the MXZ-C Technical & Service Manual.

(1) Capacity of indoor unit

	Model Number for indoor unit	Model 06	Model 09	Model 12	Model 15	Model 18	Model 24	Model 30	Model 36
M series	Model Capacity [kBTU/h]	6.0	9.0	12.0	14.0* ¹ 15.0* ²	17.2* ³ 18.0* ⁴	22.5	—	—
P series		—	—	12.0	—	18.0	24.0	30.0	35.0
SEZ		—	8.1	11.5	14.1	17.2	—	—	—
SLZ		—	8.4	11.1	15.0	—	—	—	—
MVZ		—	—	12.0	—	18.0	24.0	30.0	36.0

*¹ The value is for MSZ-GE15NA.

*² The value is for MSZ-FH15NA.

*³ The value is for MSZ-GE/FH18NA.

*⁴ The value is for MSZ-FE18NA or MFZ-KA18NA.

(2) Sample calculation

1 System assembled from indoor and outdoor unit (in this example the total capacity of the indoor units is greater than that of the outdoor unit)

- Outdoor unit MXZ-5C42NAHZ
- Indoor unit MSZ-GE09NA × 2 + MSZ-FH15NA × 2

2 According to the conditions in 1, the total capacity of the indoor unit will be: 9.0 × 2 + 15.0 × 2 = 48.0

3 The following figures are obtained from the 16.8 total capacity of indoor units, referring the standard capacity diagram in "4-3-3. MXZ-5C42NAHZ <cooling>" and "4-3-4. MXZ-5C42NAHZ <heating>".

Capacity (kBTU/h)		Outdoor unit power consumption (kW)		Outdoor unit current (A)/ 230 V	
Cooling	Heating	Cooling	Heating	Cooling	Heating
A 42.0	B 48.0	3.46	4.37	15.26	19.31

2. Method for obtaining the heating and cooling capacity of an indoor unit:

(1) The capacity of each indoor unit (kW) = the capacity A (or B) × $\frac{\text{model capacity}}{\text{total model capacity of all indoor units}}$

(2) Sample calculation (using the system described above in 4-1-1. (2)):

During cooling:

- The total model capacity of the indoor unit is:
9.0 × 2 + 15.0 × 2 = 48.0 kBTU/h
Therefore, the capacity of MSZ-GE09NA and MSZ-FH15NA will be calculated as follows by using the formula in 4-1-2. (1):

$$\text{Model 09} = 42.0 \times \frac{9.0}{48.0} = 7.88 \text{ kBTU/h}$$

$$\text{Model 15} = 42.0 \times \frac{15.0}{48.0} = 13.13 \text{ kBTU/h}$$

During heating:

- The total model capacity of indoor unit is:
10.9 × 2 + 18.0 × 2 = 57.8 kBTU/h
Therefore, the capacity of MSZ-GE09NA and MSZ-FH15NA will be calculated as follows by using the formula in 4-1-2. (1):

$$\text{Model 25} = 48.0 \times \frac{10.9}{57.8} = 9.05 \text{ kBTU/h}$$

$$\text{Model 50} = 48.0 \times \frac{18.0}{57.8} = 14.95 \text{ kBTU/h}$$

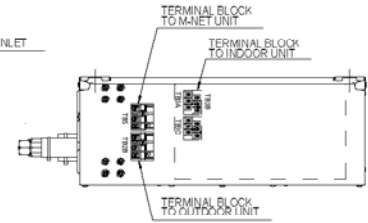
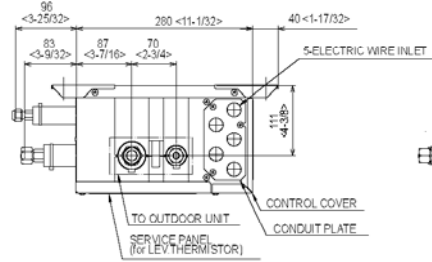
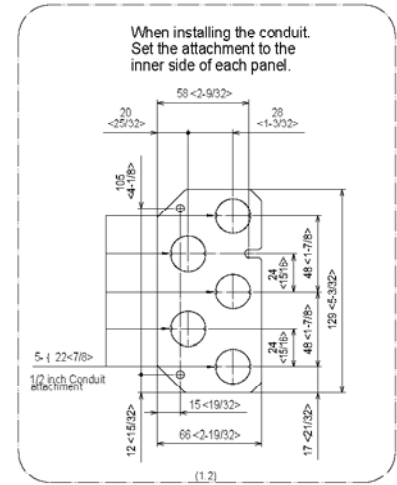
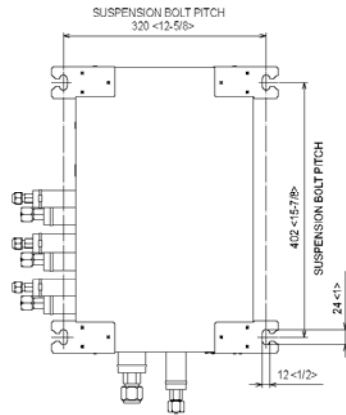
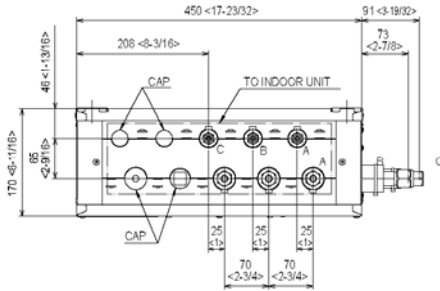
DIMENSIONS: PAC-MKA30BC AND PAC-MKA50BC BRANCH BOXES

PAC-MKA30BC

Unit: mm <in>

SUSPENSION BOLT : W3/8(M10)
REFRIGERANT PIPE FLARED CONNECTION

	A	B	C		TO OUTDOOR UNIT
LIQUID PIPE	1/4F	1/4F	1/4F		3/8F
GAS PIPE	3/8F	3/8F	3/8F		5/8F

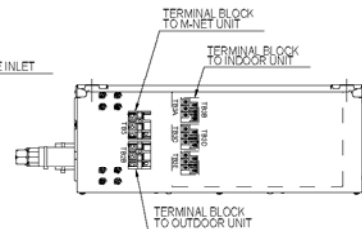
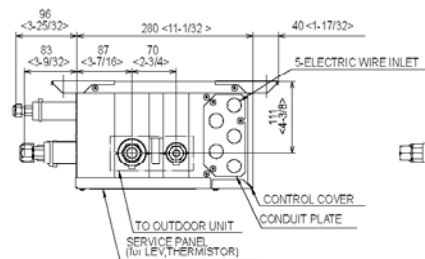
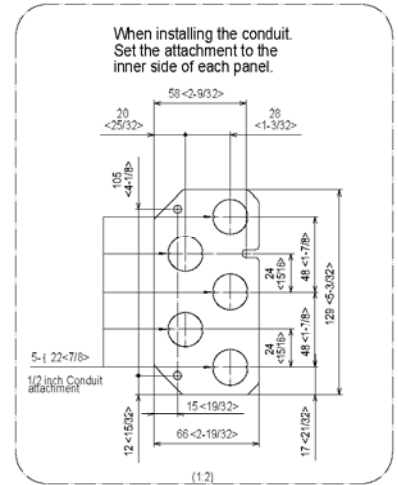
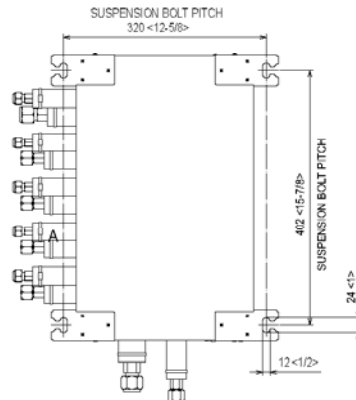
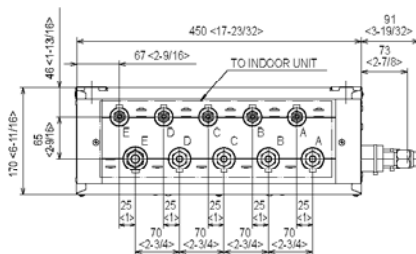


PAC-MKA50BC

Unit: mm <in>

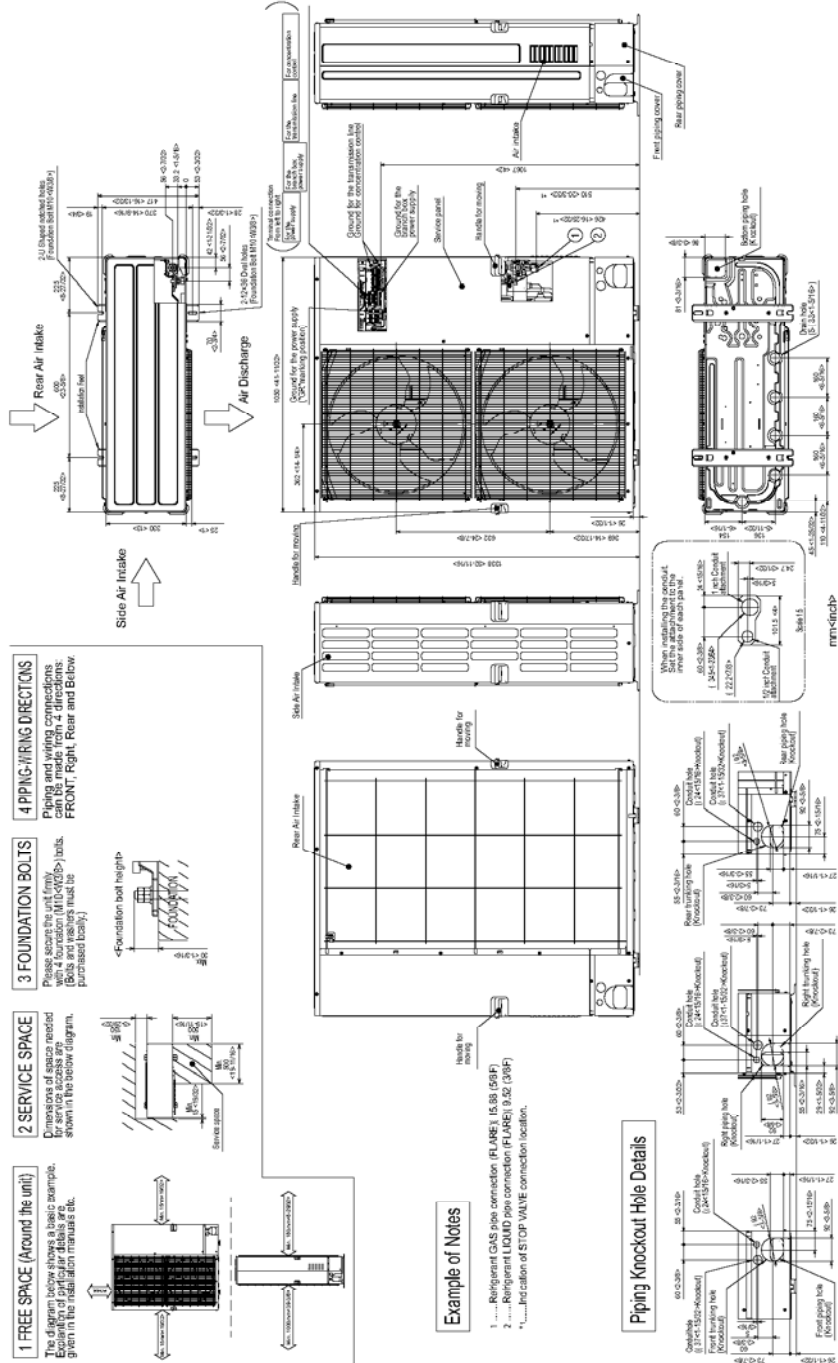
SUSPENSION BOLT : W3/8(M10)
REFRIGERANT PIPE FLARED CONNECTION

	A	B	C	D	E	TO OUTDOOR UNIT
LIQUID PIPE	1/4F	1/4F	1/4F	1/4F	1/4F	3/8F
GAS PIPE	3/8F	3/8F	3/8F	3/8F	1/2F	5/8F



DIMENSIONS: MXZ-4C36NAHZ

Unit: mm <in>



1340 Satellite Boulevard
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SUBMITTAL DATA: MXZ-8C48NAHZ
 4-TON MULTI-INDOOR INVERTER HEAT-PUMP SYSTEM

Job Name: 89 Anderson Street

System Reference: Corridors

Date: 9-30-15

GENERAL FEATURES

- Quiet operation
- Built-in base pan heater to prevent ice in drain pan
- Limited warranty: five years parts and seven years compressors

ACCESSORIES

- Three-port Branch Box (PAC-MKA30BC)
- Five-port Branch Box (PAC-MKA50BC)
- Distribution Pipe for Flare Connection (MSDD-50AR; necessary for installing two branch boxes)
- Distribution Pipe for Brazed Connection (MSDD-50BR; necessary for installing two branch boxes)
- 3/8" x 1/2" Port Adapter (MAC-A454JP)
- 1/2" x 3/8" Port Adapter (MAC-A455JP)
- 1/2" x 5/8" Port Adapter (MAC-A456JP)
- 1/4" x 3/8" Port Adapter (PAC-493PI)
- 3/8" x 5/8" Port Adapter (PAC-SG76RJ)
- Drain Socket (PAC-SH71DS-E)
- Airflow Guide (PAC-SH96SG-E)



Outdoor Unit: MXZ-8C48NAHZ




(For data on specific indoor units, see the MXZ-C Technical and Service Manual.)

Specifications			Model Name
Unit Type			MXZ-8C48NAHZ
Cooling* (Non-ducted / Ducted)	Rated Capacity	Btu/h	48,000 / 48,000
	Capacity Range	Btu/h	6,000 - 48,000
	Rated Total Input	W	4,000 / 5,050
Heating at 47°F* (Non-ducted / Ducted)	Rated Capacity	Btu/h	54,000 / 54,000
	Capacity Range	Btu/h	7,200 - 54,000
	Rated Total Input	W	4,220 / 4,990
Heating at 17°F* (Non-ducted/Ducted)	Rated Capacity	Btu/h	40,000 / 43,000
	Maximum Capacity	Btu/h	54,000 / 54,000
	Rated Total Input	W	4,340 / 5,250
Heating at 5°F*	Maximum Capacity	Btu/h	54,000
Electrical Requirements	Power Supply	Voltage, Phase, Hertz	208 / 230V, 1-Phase, 60 Hz
	Recommended Fuse/Breaker Size	A	50
	MCA	A	42
Voltage	Indoor - Outdoor S1-S2	V	AC 208 / 230
	Indoor - Outdoor S2-S3	V	DC ±24
Compressor			Hermetic
Fan Motor (ECM)		F.L.A.	0.4+0.4
Sound Pressure Level	Cooling	dB(A)	51
	Heating	dB(A)	54
External Dimensions (H x W x D)		In / mm	52-11/16 x 41-11/32 x 13+1 1338 x 1050 x 330+25
Net Weight		Lbs / kg	276 / 125
External Finish			Munsell No. 3Y 7.8/11
Refrigerant Pipe Size O.D. — Eight Ports	Liquid (High Pressure)	In / mm	3/8 / 9.52
	Gas (Low Pressure)	In / mm	5/8 / 15.88
Max. Refrigerant Line Length		Ft / m	492 (150)
Max. Piping Length for Each Indoor Unit		Ft / m	262 (80)
Max. Refrigerant Pipe Height Difference	If IDU is Above ODU	Ft / m	131 (40)
	If IDU is Below ODU	Ft / m	164 (50)
Connection Method			Flared/Flared
Refrigerant			R410A

* Rating Conditions per AHRI Standard:

 Cooling | Indoor: 80° F (27° C) DB / 67° F (19° C) WB
 Cooling | Outdoor: 95° F (35° C) DB / 75° F (24° C) WB

 Heating at 47° F | Indoor: 70° F (21° C) DB
 Heating at 47° F | Outdoor: 47° F (8° C) DB / 43° F (6° C) WB

 Heating at 17° F | Indoor: 70° F (21° C) DB
 Heating at 17° F | Outdoor: 17° F (-8° C) DB / 15° F (-9° C) WB

SPECIFICATIONS: MXZ-8C48NAHZ, contd.

Operating Range:

Outdoor	
Cooling	D.B. 23 to 115° F [D.B. -5 to 46° C]*1
Heating	D.B. -13 to 70° F [D.B. -25 to 21° C]

*1. D.B. 5 to 115° F [D.B. -15 to 46° C],
when an optional Air Outlet Guide is installed.

Energy Efficiencies:

Indoor Unit Type	SEER	EER	HSPF	COP @ 47°F	COP @ 17°F
Non-ducted	18.9	12.0	11.0	3.75	2.70
Ducted and Non-ducted	16.80	10.75	10.50	3.46	2.55
Ducted	14.7	9.5	10.0	3.17	2.40

Multi-zone Indoor/Outdoor Combination Table

	MSZ-FH*	MSZ-GE*	MFZ*	MVZ*	SEZ-KD*	SLZ*	PCA (A24)*	PLA*	PEAD*
MXZ-8C48NAHZ	OK	OK	OK	OK	OK	OK	NO	OK	24, 30, 36 OK

* Refer to indoor unit submittal.

Notes:

- Minimum of two Indoor Units must be connected to the MXZ-8C48NAHZ.
- Minimum installed capacity cannot be less than 12,000 Btu/h.
- System can operate with only one Indoor Unit turned on.
- May connect to any style indoor unit or combination.
- Information provided at 208/230V.
Refer to the MXZ-C Technical & Service Manual for detailed specifications and additional information per Indoor Unit Combination.

MVZ CONNECTION RULES:

- Up to 2 MVZ's may be connected to this system.
- When 2 MVZ's are connected, no additional indoor units can be used.
- When 1 MVZ is connected, additional indoor units can be connected.
- When 1 MVZ is connected, total connected capacity must be 130% or less.
- Connection limitations are altered with the use of the SPTB1 accessory. Refer to the SPTB1 documentation for more details.

Notes:

MXZ-8C48NAHZ SYSTEM DESIGN

Outdoor unit		MXZ-8C48NAHZ	
		5HP	
	Rated capacity (kBTU/h)	Cooling	48
		Heating	54
		Refrigerant	R410A
Connectable indoor unit	Capacity		Type 06 to Type 36
	Caution: The indoor unit which rated capacity exceeds 36 kBTU/h (Type 36) can NOT be connected.		
	Number of units		2 to 8 units
Total system wide capacity		25 to 130% of outdoor unit capacity (12 to 62.4 kBTU/h)	
Connectable branch box	Number of units		1 or 2 units



Connectable indoor unit lineups (Heat pump inverter type)			Capacity class [kBTU/h]						
Model type	Model name	Capacity class [kBTU/h]							
		06	09	12	15	18	24	30	36
Wall mounted	Deluxe	MSZ-FE09/12/18NA							
		MSZ-FH09/12/15NA							
	Standard	MSZ-GE06/09/12/15/18/24NA							
Ceiling concealed	Low static pressure	SEZ-KD09/12/15/18NA							
	Middle static pressure	PEAD-A24/30/36AA4							
4-way ceiling cassette	2 by 2 type	SLZ-KA09/12/15NA							
	Standard	PLA-A12/18/24/30/36BA4							
Floor standing	MFZ-KA09/12/18NA								
Multi-position	MVZ-A12/18/24/30/36AA4								

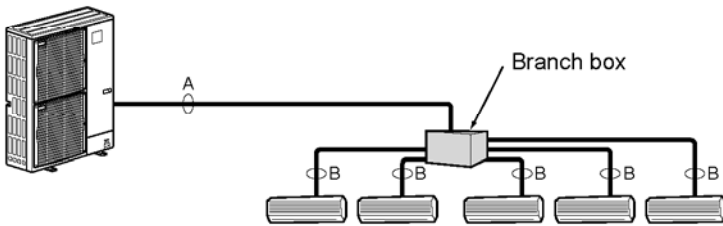


Branch box	PAC-MKA50BC	PAC-MKA30BC
Number of branches (Indoor unit that can be connected)	5 branches (MAX. 5 units)	3 branches (MAX. 3 units)

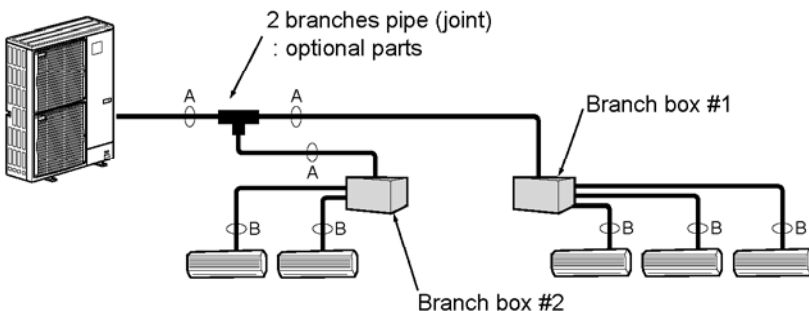
Note: A maximum of 2 branch boxes can be connected to 1 outdoor unit.

Branch Box Combinations	
Three-port	Five-port
1	0
0	1
1	1
2	0
0	2 (Up to 8 IDU)

- If Using One Branch Box
Flare connection employed (No brazing)



- If Using Two Branch Boxes



- Installation procedure (2 branches pipe (joint))
Refer to the installation manuals of MSDD-50AR-E and MSDD-50BR-E.

Piping connection size

	A	B
Liquid	φ9.52 mm (3/8 inch)	The piping connection size differs according to the type and capacity of indoor units. Match the piping connection size of branch box with indoor unit. If the piping connection size of branch box does not match the piping connection size of indoor unit, use optional different-diameter (deformed) joints to the branch box side.
Gas	φ15.88 mm (5/8 inch)	(Connect deformed joint directly to the branch box side.)

MXZ-8C48NAHZ COOLING AND HEATING CAPACITY AND CHARACTERISTICS

1. Method for obtaining system cooling and heating capacity:

To obtain the system cooling and heating capacity and the electrical characteristics of the outdoor unit, first add up the ratings of all the indoor units connected to the outdoor unit (see table below). For Standard Capacity Diagram, please refer to the MXZ-C Technical & Service Manual.

(1) Capacity of indoor unit

	Model Number for indoor unit	Model 06	Model 09	Model 12	Model 15	Model 18	Model 24	Model 30	Model 36
M series	Model Capacity [kBTU/h]	6.0	9.0	12.0	14.0* ¹ 15.0* ²	17.2* ³ 18.0* ⁴	22.5	—	—
P series		—	—	12.0	—	18.0	24.0	30.0	35.0
SEZ		—	8.1	11.5	14.1	17.2	—	—	—
SLZ		—	8.4	11.1	15.0	—	—	—	—
MVZ		—	—	12.0	—	18.0	24.0	30.0	36.0

*¹ The value is for MSZ-GE15NA.

*² The value is for MSZ-FH15NA.

*³ The value is for MSZ-GE/FH18NA.

*⁴ The value is for MSZ-FE18NA or MFZ-KA18NA.

(2) Sample calculation

1 System assembled from indoor and outdoor unit (in this example the total capacity of the indoor units is greater than that of the outdoor unit)

- Outdoor unit MXZ-5C42NAHZ
- Indoor unit MSZ-GE09NA × 2 + MSZ-FH15NA × 2

2 According to the conditions in 1, the total capacity of the indoor unit will be: 9.0 × 2 + 15.0 × 2 = 48.0

3 The following figures are obtained from the 16.8 total capacity of indoor units, referring the standard capacity diagram in "4-3-3. MXZ-5C42NAHZ <cooling>" and "4-3-4. MXZ-5C42NAHZ <heating>".

Capacity (kBTU/h)		Outdoor unit power consumption (kW)		Outdoor unit current (A)/ 230 V	
Cooling	Heating	Cooling	Heating	Cooling	Heating
A 42.0	B 48.0	3.46	4.37	15.26	19.31

2. Method for obtaining the heating and cooling capacity of an indoor unit:

(1) The capacity of each indoor unit (kW) = the capacity A (or B) × $\frac{\text{model capacity}}{\text{total model capacity of all indoor units}}$

(2) Sample calculation (using the system described above in 4-1-1. (2)):

During cooling:

- The total model capacity of the indoor unit is:
9.0 × 2 + 15.0 × 2 = 48.0 kBTU/h
Therefore, the capacity of MSZ-GE09NA and MSZ-FH15NA will be calculated as follows by using the formula in 4-1-2. (1):

$$\text{Model 09} = 42.0 \times \frac{9.0}{48.0} = 7.88 \text{ kBTU/h}$$

$$\text{Model 15} = 42.0 \times \frac{15.0}{48.0} = 13.13 \text{ kBTU/h}$$

During heating:

- The total model capacity of indoor unit is:
10.9 × 2 + 18.0 × 2 = 57.8 kBTU/h
Therefore, the capacity of MSZ-GE09NA and MSZ-FH15NA will be calculated as follows by using the formula in 4-1-2. (1):

$$\text{Model 25} = 48.0 \times \frac{10.9}{57.8} = 9.05 \text{ kBTU/h}$$

$$\text{Model 50} = 48.0 \times \frac{18.0}{57.8} = 14.95 \text{ kBTU/h}$$

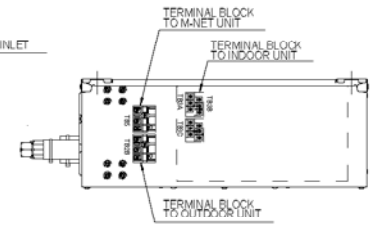
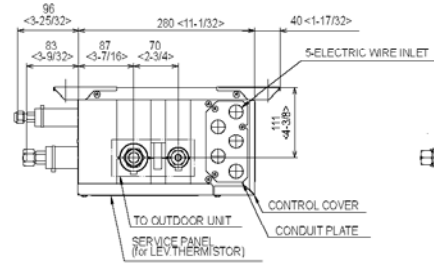
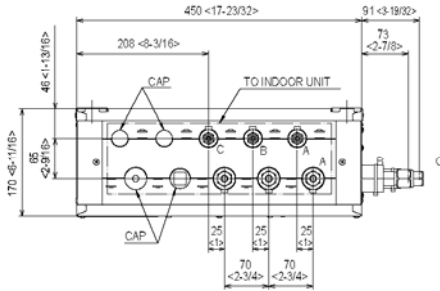
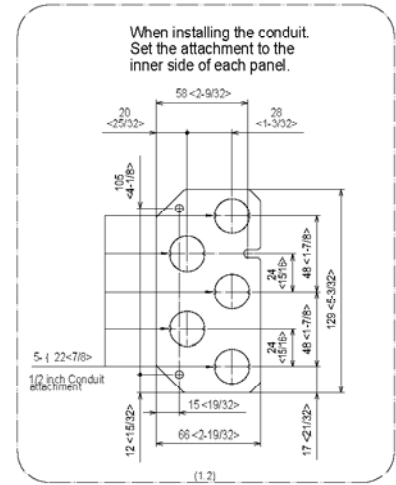
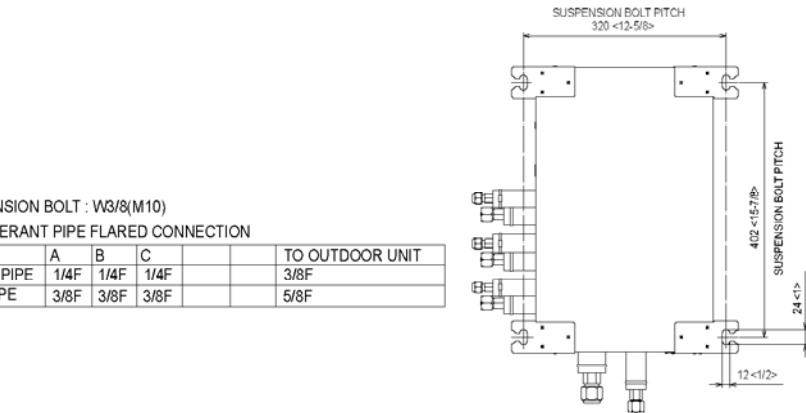
DIMENSIONS: PAC-MKA30BC AND PAC-MKA50BC BRANCH BOXES

PAC-MKA30BC

Unit: mm <in>

SUSPENSION BOLT : W3/8(M10)
REFRIGERANT PIPE FLARED CONNECTION

	A	B	C		TO OUTDOOR UNIT
LIQUID PIPE	1/4F	1/4F	1/4F		3/8F
GAS PIPE	3/8F	3/8F	3/8F		5/8F

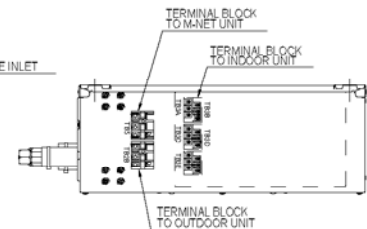
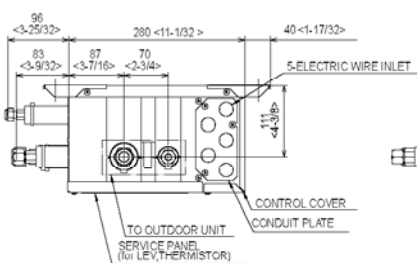
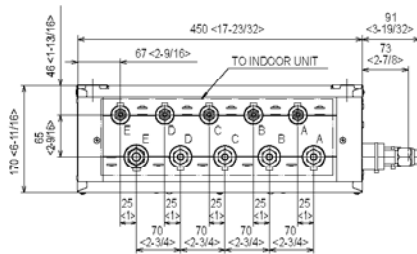
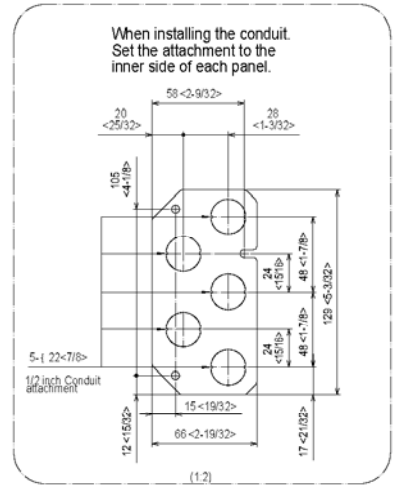
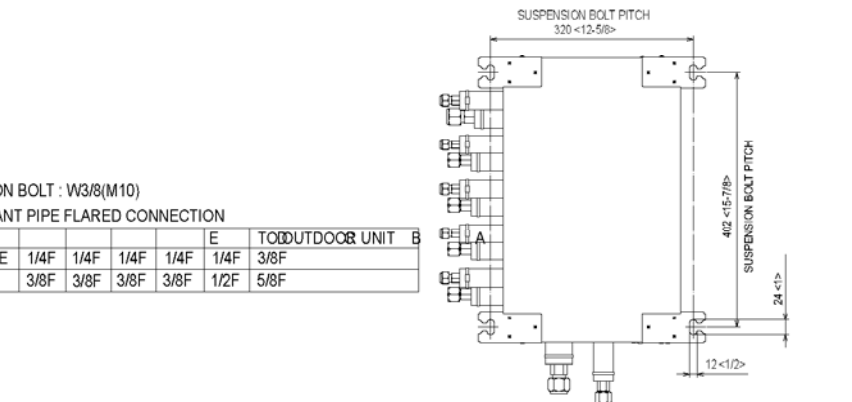


PAC-MKA50BC

Unit: mm <in>

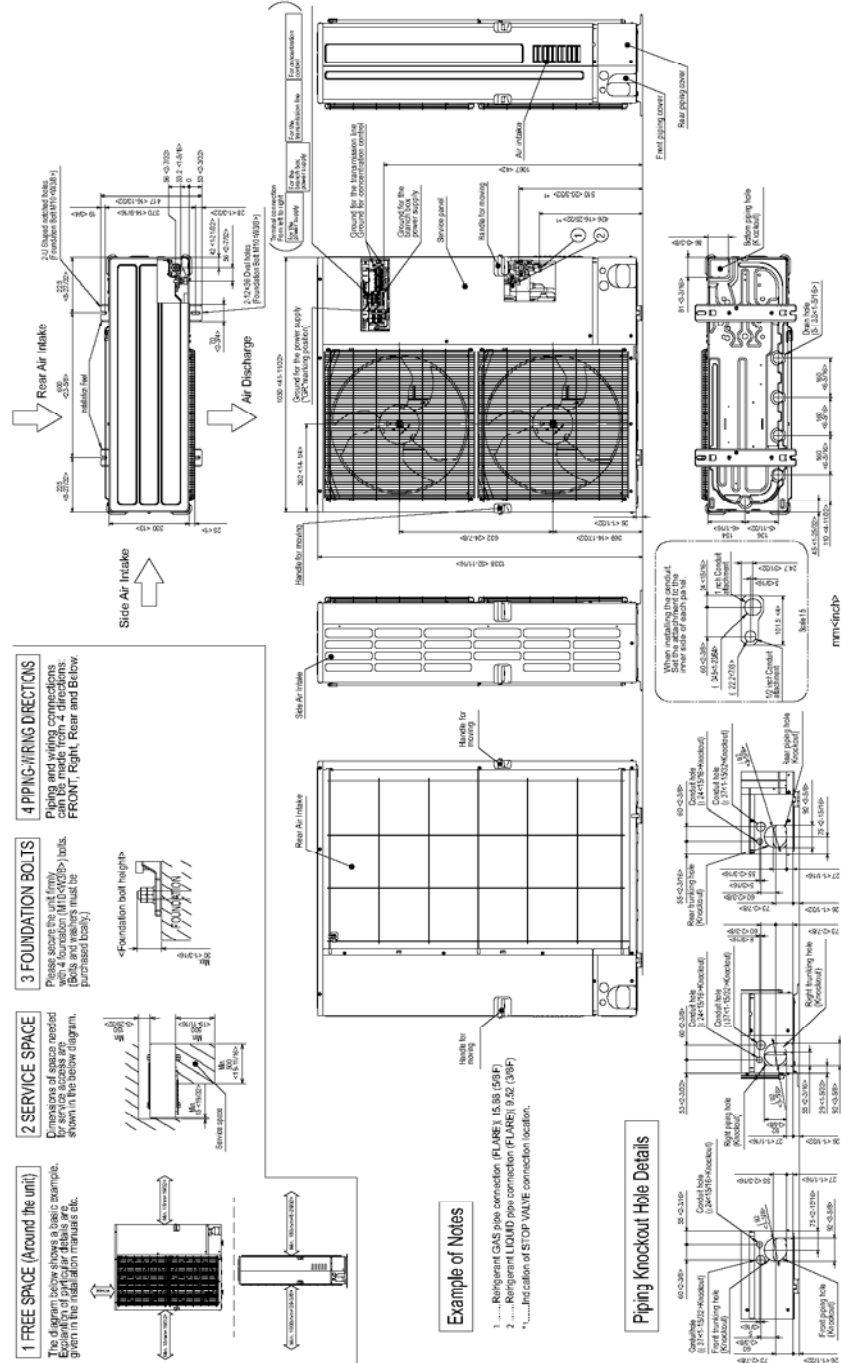
SUSPENSION BOLT : W3/8(M10)
REFRIGERANT PIPE FLARED CONNECTION

	A	B	C	D	E	TO OUTDOOR UNIT
LIQUID PIPE	1/4F	1/4F	1/4F	1/4F	1/4F	3/8F
GAS PIPE	3/8F	3/8F	3/8F	3/8F	1/2F	5/8F



DIMENSIONS: MXZ-8C48NAHZ

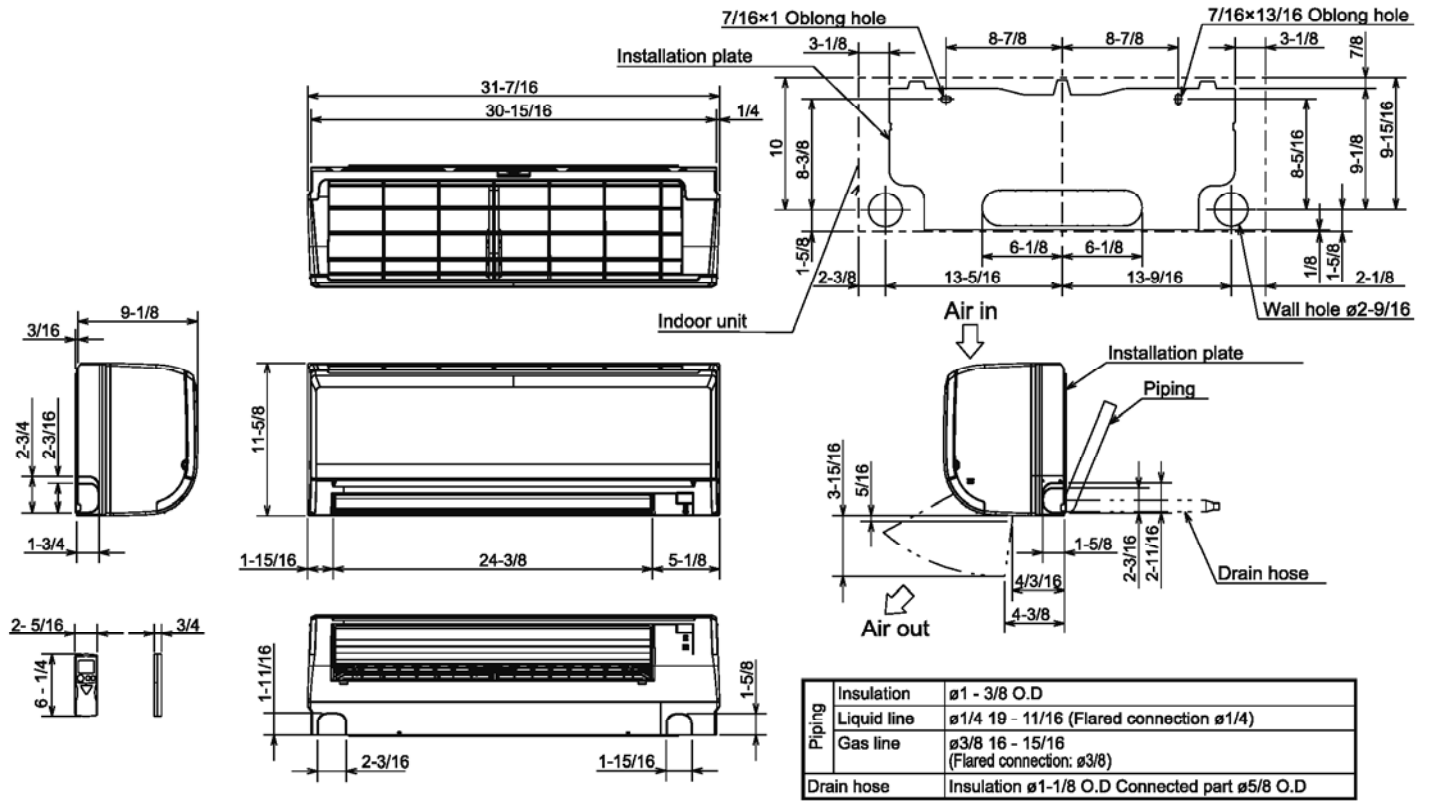
Unit: mm <in>



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DIMENSIONS: MSZ-GE06NA-8

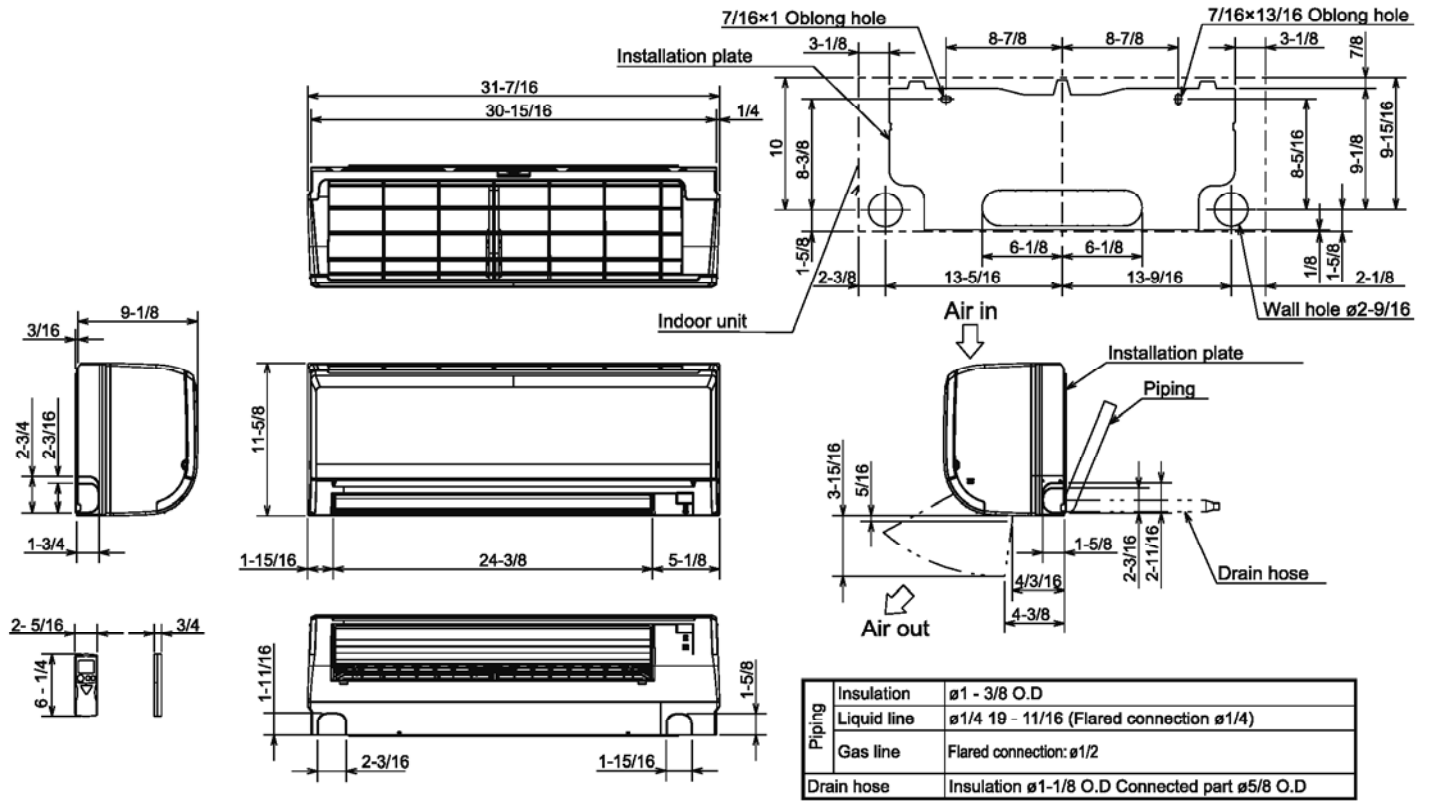
Unit: inch



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DIMENSIONS: MSZ-GE15NA

Unit: inch



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SUBMITTAL DATA: SLZ-KA09NA

9,000 BTU/H CEILING-CASSETTE INDOOR UNIT FOR MXZ-B MULTI-ZONE HEAT-PUMP SYSTEMS

Job Name: 89 Anderson Street	Location:	Date: 9-30-15
Purchaser:	Engineer:	
Submitted to:	For <input type="checkbox"/> Reference <input type="checkbox"/> Approval <input type="checkbox"/> Construction	
System Designation: Corridors/Mail Room/Commercial 3	Schedule No.:	



SLZ-KA09NA

GENERAL FEATURES

- Four-way 2'x2' ceiling-cassette indoor unit for ceiling recessed applications
- Built-in drain mechanism for condensate removal; lifts to 19-11/16"
- Wide air-flow pattern for better air distribution
- Design features ventilation air intake knockout
- Long-life air filter included with indoor unit
- Indoor unit powered from outdoor unit using A-Control
- Choice of fan speed: Low, Medium, High
- Automatic restart following a power outage
- Limited warranty: five years parts and seven years compressors

ACCESSORIES

Indoor Unit

- Grille (SLP-15AAUW; required - shipped with unit)

Controller Options

- Wireless Wall-mounted Remote Controller Kit (MHK1)*
 - Portable Controller (MCCH1)*
 - Outdoor Air Sensor (MOS1)*
- *See Submittal for information on each option.
- Wired Wall-mounted Controller (PAR-21MAAU)
 - System Control Interface (MAC-333IF)
 - Remote Temperature Sensor (M21-JKO-307)
 - Hand-held Wireless Remote Controller (PAR-FL32MA; req. PAR-FA32MA-E)
 - Wireless Signal Receiver PAR-FA32MA (for PAR-FL32MA)
 - Lockdown Bracket for Hand-held Controller (RCMKP1CB)

SPECIFICATIONS

Cooling Capacity* 8,400 Btu/h
 Heating Capacity at 47°F* 10,900 Btu/h

* Rating Conditions per AHRI Standard

Cooling | Indoor: 80° F (27° C) DB / 67° F (19° C) WB
 Cooling | Outdoor: 95° F (35° C) DB / 75° F (24° C) WB
 Heating at 47°F | Indoor: 70° F (21° C) DB / 60° F (16° C) WB
 Heating at 47°F | Outdoor: 47° F (8° C) DB / 43° F (6° C) WB

(For data on specific indoor units [all ducted, all non-ducted, and both ducted and non-ducted] combinations, see the MXZ-B Technical and Service Manual.)

Electrical Requirements

Power Supply 208 / 230V, 1-Phase, 60 Hz
 MCA 1 A

Voltage

Indoor - Outdoor S1-S2 AC 208 / 230V
 Indoor - Outdoor S2-S3 DC ±24V
 Fan Motor (ECM) 0.23 F.L.A.

Airflow (Lo - Med - Hi) 280 - 320 - 350 Dry CFM
 250 - 290 - 320 Wet CFM

Air Filter Polypropylene Honeycomb

Sound Pressure Level (Lo - Med - Hi)29 - 32 - 38 dB(A)

DIMENSIONS	UNIT INCHES / MM	GRILLE INCHES / MM
W	22-7/16 / 570	25-5/8 / 650
D	22-7/16 / 570	25-5/8 / 650
H	9-1/4 / 235	13/16 / 20

Weight (Unit/Grille)

Lbs..... 36 / 7
 kg..... 16.5 / 3

External Finish (Unit/Grille) Galvanized-steel Sheets /
 Munsell 6.4Y 8.9 / 0.4

Field Drainpipe Size O.D..... 1-1/4" / 32 mm

Refrigerant Type R410A

Refrigerant Pipe Size O.D.

Gas Side 3/8" / 9.52 mm

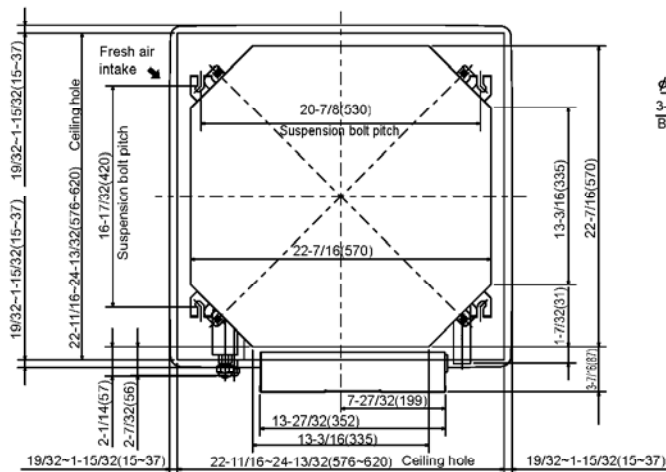
Liquid Side 1/4" / 6.35 mm

Connection Method Flared

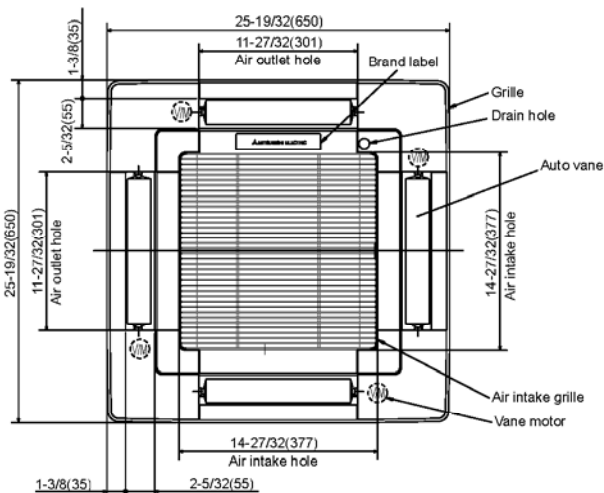
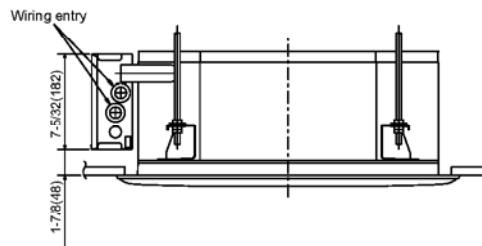
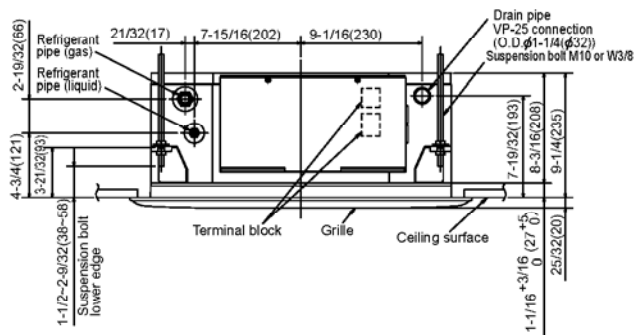
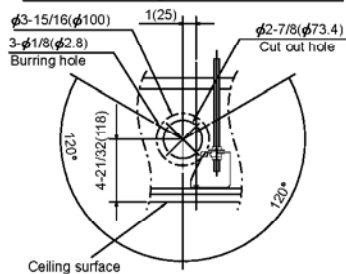


DIMENSIONS: SLZ-KA09NA

Unit : inch (mm)



Detail drawing of fresh air intake



Models	Refrigerant pipe (liquid)	Refrigerant pipe (gas)
SLZ-KA09NA	1/4 inch (ϕ 6.35mm) flared connection	3/8 inch (ϕ 9.52mm) flared connection
SLZ-KA12NA	1/4 inch (ϕ 6.35mm) flared connection	3/8 inch (ϕ 9.52mm) flared connection
SLZ-KA15NA	1/4 inch (ϕ 6.35mm) flared connection	1/2 inch (ϕ 12.7mm) flared connection



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Cooling*

Rated Capacity 15,000 Btu/h
 Minimum to Maximum Capacity Range 3,800 - 17,700 Btu/h
 SEER 16.0 Btu/h/W
 EER 10.2 Btu/h/W
 Total Input 1,460 W

Heating at 47°F*

Rated Capacity 18,000 Btu/h
 Minimum to Maximum Capacity Range 3,100 - 22,200 Btu/h
 HSPF 9.6 Btu/h/W
 COP 2.71
 Total Input 1,950 W

Heating at 17°F*

Rated Capacity 10,200 Btu/h
 Rated Total Input 1,310 W
 COP 1.99
 Maximum Capacity** 12,000 Btu/h
 Maximum Total Input 1,970 W

*** Rating Conditions per AHRI Standard**

Cooling | Indoor: 80° F (27° C) DB / 67° F (19° C) WB
 Cooling | Outdoor: 95° F (35° C) DB / 75° F (24° C) WB
 Heating at 47°F | Indoor: 70° F (21° C) DB / 60° F (16° C) WB
 Heating at 47°F | Outdoor: 47° F (8° C) DB / 43° F (6° C) WB
 Heating at 17° F | Indoor: 70° F (21° C) DB / 60° F (16° C) WB
 Heating at 17° F | Outdoor: 17° F (-8° C) DB / 15° F (-9° C) WB

**** Maximum Capacity is at full speed and performance for INVERTER-driven System.**

Electrical Requirements

Power Supply 208 / 230V, 1-Phase, 60 Hz
 Recommended Fuse/Breaker Size 15 A

Voltage

Indoor - Outdoor S1-S2 AC 208 / 230V
 Indoor - Outdoor S2-S3 DC ±24V

OPERATING CONDITIONS

		Indoor Intake Air Temp.	Outdoor Intake Air Temp.
Cooling	Maximum	95°F (35° C) DB 71° F (22° C) WB	115°F (46° C) DB
	Minimum	67° F (19° C) DB 57° F (14° C) WB	14°F (-10° C) DB
Heating	Maximum	80° F (27° C) DB 67° F (19° C) WB	75°F (24° C) DB 65°F (18° C) WB
	Minimum	70° F (21° C) DB 60° F (16° C) WB	-4°F (-20° C) DB -5°F (-21° C) WB

Indoor Unit

MCA 1 A
 Fan Motor Output 20 W
 Fan Motor (ECM) 0.28 F.L.A.
 Airflow (Lo - Med - Hi) 280 - 320 - 390 Dry CFM
 250 - 290 - 350 Wet CFM
 Air Filter Polypropylene Honeycomb
 Sound Pressure Level (Lo - Med - Hi) 31 - 35 - 40 dB(A)

DIMENSIONS	UNIT INCHES / MM	GRILLE INCHES / MM
W	22-7/16 / 570	25-5/8 / 650
D	22-7/16 / 570	25-5/8 / 650
H	9-1/4 / 235	13/16 / 20

Weight (Unit/Grille)
 Lbs..... 36 / 7
 kg 16.5 / 3
 External Finish (Unit/Grille) Galvanized-steel Sheets / Munsell 6.4Y 8.9 / 0.4
 Field Drainpipe Size O.D..... 1-1/4" / 32 mm

Outdoor Unit

Compressor DC Inverter-driven Twin Rotary
 MCA 12 A
 MOCPS 15 A
 Fan Motor (ECM) 0.50 F.L.A.
 Sound Pressure Level
 Cooling 49 dB(A)
 Heating 51 dB(A)

DIMENSIONS	INCHES / MM
W	31-1/2 / 800
D	11-1/4 / 285
H	21-5/8 / 550

Weight 80 lbs. / 36 kg
 External Finish Munsell No. 3Y 7.8 / 1.1
 Refrigerant Type R410A
 Refrigerant Pipe Size O.D.
 Gas Side 1/2" / 12.7 mm
 Liquid Side 1/4" / 6.35 mm
 Max. Refrigerant Pipe Length 65' / 19.8 m
 Max. Refrigerant Pipe Height Difference 40' / 12.2 m
 Connection Method Flared

Notes:

SUBMITTAL DATA: SLZ-KA12NA

12,000 BTU/H CEILING-CASSETTE INDOOR UNIT FOR MXZ-B MULTI-ZONE HEAT-PUMP SYSTEMS

Job Name: 89 Anderson Street	Location:	Date: 9-30-15
Purchaser:	Engineer:	
Submitted to:	For <input type="checkbox"/> Reference <input type="checkbox"/> Approval <input type="checkbox"/> Construction	
System Designation: Corridors/Lobby	Schedule No.:	



SLZ-KA12NA

GENERAL FEATURES

- Four-way 2'x2' ceiling-cassette indoor unit for ceiling recessed applications
- Built-in drain mechanism for condensate removal; lifts to 19-11/16"
- Wide air-flow pattern for better air distribution
- Design features ventilation air intake knockout
- Long-life air filter included with indoor unit
- Indoor unit powered from outdoor unit using A-Control
- Choice of fan speed: Low, Medium, High
- Automatic restart following a power outage
- Limited warranty: five years parts and seven years compressors

ACCESSORIES

Indoor Unit

- Grille (SLP-15AAUW; required - shipped with unit)

Controller Options

- Wireless Wall-mounted Remote Controller Kit (MHK1)*
 - Portable Controller (MCCH1)*
 - Outdoor Air Sensor (MOS1)*
- *See Submittal for information on each option.
- Wired Wall-mounted Controller (PAR-21MAAU)
 - System Control Interface (MAC-333IF)
 - Remote Temperature Sensor (M21-JKO-307)
 - Hand-held Wireless Remote Controller (PAR-FL32MA; req. PAR-FA32MA-E)
 - Wireless Signal Receiver PAR-FA32MA (for PAR-FL32MA)
 - Lockdown Bracket for Hand-held Controller (RCMKP1CB)

SPECIFICATIONS

Cooling Capacity* 11,100 Btu/h
 Heating Capacity at 47°F* 13,600 Btu/h

* Rating Conditions per AHRI Standard

Cooling | Indoor: 80° F (27° C) DB / 67° F (19° C) WB
 Cooling | Outdoor: 95° F (35° C) DB / 75° F (24° C) WB
 Heating at 47°F | Indoor: 70° F (21° C) DB / 60° F (16° C) WB
 Heating at 47°F | Outdoor: 47° F (8° C) DB / 43° F (6° C) WB

(For data on specific indoor units [all ducted, all non-ducted, and both ducted and non-ducted] combinations, see the MXZ-B Technical and Service Manual.)

Electrical Requirements

Power Supply 208 / 230V, 1-Phase, 60 Hz
 MCA 1 A

Voltage

Indoor - Outdoor S1-S2 AC 208 / 230V
 Indoor - Outdoor S2-S3 DC ±24V

Fan Motor (ECM) 0.28 F.L.A.

Airflow (Lo - Med - Hi) 280 - 320 - 390 Dry CFM
 250 - 290 - 350 Wet CFM

Air Filter Polypropylene Honeycomb

Sound Pressure Level (Lo - Med - Hi)30 - 34 - 39 dB(A)

DIMENSIONS	UNIT INCHES / MM	GRILLE INCHES / MM
W	22-7/16 / 570	25-5/8 / 650
D	22-7/16 / 570	25-5/8 / 650
H	9-1/4 / 235	13/16 / 20

Weight (Unit/Grille)

Lbs. 36 / 7
 kg. 16.5 / 3

External Finish (Unit/Grille) Galvanized-steel Sheets /
 Munsell 6.4Y 8.9 / 0.4

Field Drainpipe Size O.D. 1-1/4" / 32 mm

Refrigerant Type R410A

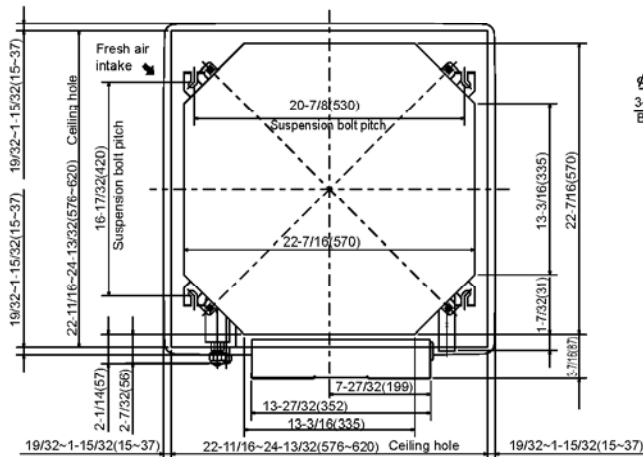
Refrigerant Pipe Size O.D.

Gas Side 3/8" / 9.52 mm
 Liquid Side 1/4" / 6.35 mm
 Connection Method Flared

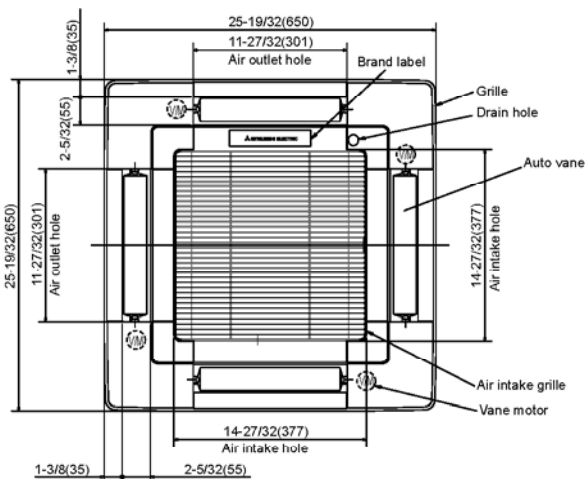
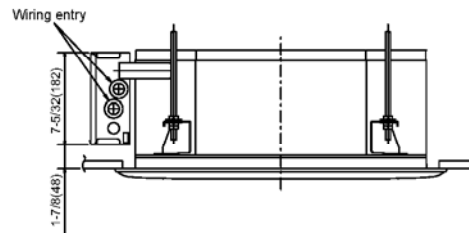
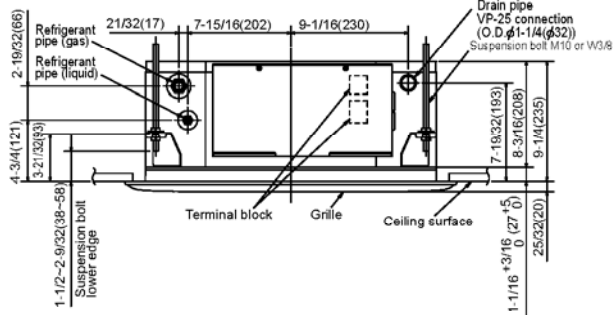
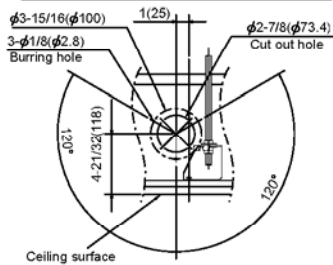


DIMENSIONS: SLZ-KA12NA

Unit : inch (mm)



Detail drawing of fresh air intake



Models	Refrigerant pipe (liquid)	Refrigerant pipe (gas)
SLZ-KA09NA	1/4 inch (ϕ 6.35mm) flared connection	3/8 inch (ϕ 9.52mm) flared connection
SLZ-KA12NA	1/4 inch (ϕ 6.35mm) flared connection	3/8 inch (ϕ 9.52mm) flared connection
SLZ-KA15NA	1/4 inch (ϕ 6.35mm) flared connection	1/2 inch (ϕ 12.7mm) flared connection



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Cooling*

Rated Capacity 15,000 Btu/h
 Minimum to Maximum Capacity Range 3,800 - 17,700 Btu/h
 SEER 16.0 Btu/h/W
 EER 10.2 Btu/h/W
 Total Input 1,460 W

Heating at 47°F*

Rated Capacity 18,000 Btu/h
 Minimum to Maximum Capacity Range 3,100 - 22,200 Btu/h
 HSPF 9.6 Btu/h/W
 COP 2.71
 Total Input 1,950 W

Heating at 17°F*

Rated Capacity 10,200 Btu/h
 Rated Total Input 1,310 W
 COP 1.99
 Maximum Capacity** 12,000 Btu/h
 Maximum Total Input 1,970 W

*** Rating Conditions per AHRI Standard**

Cooling | Indoor: 80° F (27° C) DB / 67° F (19° C) WB
 Cooling | Outdoor: 95° F (35° C) DB / 75° F (24° C) WB
 Heating at 47°F | Indoor: 70° F (21° C) DB / 60° F (16° C) WB
 Heating at 47°F | Outdoor: 47° F (8° C) DB / 43° F (6° C) WB
 Heating at 17° F | Indoor: 70° F (21° C) DB / 60° F (16° C) WB
 Heating at 17° F | Outdoor: 17° F (-8° C) DB / 15° F (-9° C) WB

**** Maximum Capacity is at full speed and performance for INVERTER-driven System.**

Electrical Requirements

Power Supply 208 / 230V, 1-Phase, 60 Hz
 Recommended Fuse/Breaker Size 15 A

Voltage

Indoor - Outdoor S1-S2 AC 208 / 230V
 Indoor - Outdoor S2-S3 DC ±24V

OPERATING CONDITIONS

		Indoor Intake Air Temp.	Outdoor Intake Air Temp.
Cooling	Maximum	95°F (35° C) DB 71° F (22° C) WB	115°F (46° C) DB
	Minimum	67° F (19° C) DB 57° F (14° C) WB	14°F (-10° C) DB
Heating	Maximum	80° F (27° C) DB 67° F (19° C) WB	75°F (24° C) DB 65°F (18° C) WB
	Minimum	70° F (21° C) DB 60° F (16° C) WB	-4°F (-20° C) DB -5°F (-21° C) WB

Indoor Unit

MCA 1 A
 Fan Motor Output 20 W
 Fan Motor (ECM) 0.28 F.L.A.
 Airflow (Lo - Med - Hi) 280 - 320 - 390 Dry CFM
 250 - 290 - 350 Wet CFM
 Air Filter Polypropylene Honeycomb
 Sound Pressure Level (Lo - Med - Hi) 31 - 35 - 40 dB(A)

DIMENSIONS	UNIT INCHES / MM	GRILLE INCHES / MM
W	22-7/16 / 570	25-5/8 / 650
D	22-7/16 / 570	25-5/8 / 650
H	9-1/4 / 235	13/16 / 20

Weight (Unit/Grille)
 Lbs..... 36 / 7
 kg 16.5 / 3
 External Finish (Unit/Grille) Galvanized-steel Sheets / Munsell 6.4Y 8.9 / 0.4
 Field Drainpipe Size O.D..... 1-1/4" / 32 mm

Outdoor Unit

Compressor DC Inverter-driven Twin Rotary
 MCA 12 A
 MOCPS 15 A
 Fan Motor (ECM) 0.50 F.L.A.
 Sound Pressure Level
 Cooling 49 dB(A)
 Heating 51 dB(A)

DIMENSIONS	INCHES / MM
W	31-1/2 / 800
D	11-1/4 / 285
H	21-5/8 / 550

Weight 80 lbs. / 36 kg
 External Finish Munsell No. 3Y 7.8 / 1.1
 Refrigerant Type R410A
 Refrigerant Pipe Size O.D.
 Gas Side 1/2" / 12.7 mm
 Liquid Side 1/4" / 6.35 mm
 Max. Refrigerant Pipe Length 65' / 19.8 m
 Max. Refrigerant Pipe Height Difference 40' / 12.2 m
 Connection Method Flared

Notes:

SUBMITTAL DATA: SLZ-KA15NA

15,000 BTU/H CEILING-CASSETTE INDOOR UNIT FOR MXZ MULTI-ZONE HEAT-PUMP SYSTEMS

Job Name: 89 Anderson Street

System Reference: Commercial 2

Date: 9-30-15



SLZ-KA15NA

GENERAL FEATURES

- Four-way 2'x2' ceiling-cassette indoor unit for ceiling recessed applications
- Built-in drain mechanism for condensate removal; lifts to 19-11/16"
- Wide air-flow pattern for better air distribution
- Design features ventilation air intake knockout
- Long-life air filter included with indoor unit
- Indoor unit powered from outdoor unit using A-Control
- Choice of fan speed: Low, Medium, High
- Automatic restart following a power outage
- Limited warranty: five years parts and seven years compressors

ACCESSORIES

Indoor Unit

- Grille (SLP-15AAUW; required - shipped with unit)

Outdoor Unit

- Drain Pan Heater (MAC-640BH-U)
- Drain Socket (MAC-860DS)
- Three-pole Disconnect Switch (TAZ-MS303)
- Air Outlet Guide (MAC-856SG)
- Mounting Base (DSD-400N)
- Mounting Pad (ULTRILITE1)

Controller Options

- Wireless Wall-mounted Remote Controller Kit (MHK1)*
 - Portable Central Controller (MCCH1)*
 - Outdoor Air Sensor (MOS1)*
 - Wired Wall-mounted Controller (PAR-31MAA)*
 - Simple MA Remote Controller (PAC-YT53CRAU)*
- *See Submittal for information on each option.
- Remote Temperature Sensor (M21-JKO-307)
 - Hand-held Wireless Remote Controller (PAR-FL32MA; req.PAR-FA32MA-E)
 - Wireless Signal Receiver PAR-FA32MA (for PAR-FL32MA)
 - Lockdown Bracket for Hand-held Controller (RCMKP1CB)

SPECIFICATIONS

Cooling Capacity* 15,000 Btu/h
 Heating Capacity at 47°F* 18,000 Btu/h

* Rating Conditions per AHRI Standard

Cooling | Indoor: 80° F (27° C) DB / 67° F (19° C) WB
 Cooling | Outdoor: 95° F (35° C) DB / 75° F (24° C) WB
 Heating at 47°F | Indoor: 70° F (21° C) DB / 60° F (16° C) WB
 Heating at 47°F | Outdoor: 47° F (8° C) DB / 43° F (6° C) WB

(For data on specific indoor units [all ducted, all non-ducted, and both ducted and non-ducted] combinations, see the MXZ Technical and Service Manual.)

Electrical Requirements

Power Supply 208 / 230V, 1-Phase, 60 Hz
 MCA 1 A

Voltage

Indoor - Outdoor S1-S2 AC 208 / 230V
 Indoor - Outdoor S2-S3 DC ±24V

Fan Motor (ECM) 0.28 F.L.A.

Airflow (Lo - Med - Hi) 280 - 320 - 390 Dry CFM
 250 - 290 - 350 Wet CFM

Air Filter Polypropylene Honeycomb

Sound Pressure Level (Lo - Med - Hi) 31 - 35 - 40 dB(A)

DIMENSIONS	UNIT INCHES / MM	GRILLE INCHES / MM
W	22-7/16 / 570	25-5/8 / 650
D	22-7/16 / 570	25-5/8 / 650
H	9-1/4 / 235	13/16 / 20

Weight (Unit/Grille)

Lbs..... 36 / 7
 kg..... 16.5 / 3

External Finish (Unit/Grille) Galvanized-steel Sheets /
 Munsell 6.4Y 8.9 / 0.4

Field Drainpipe Size O.D..... 1-1/4" / 32 mm

Refrigerant Type R410A

Refrigerant Pipe Size O.D.

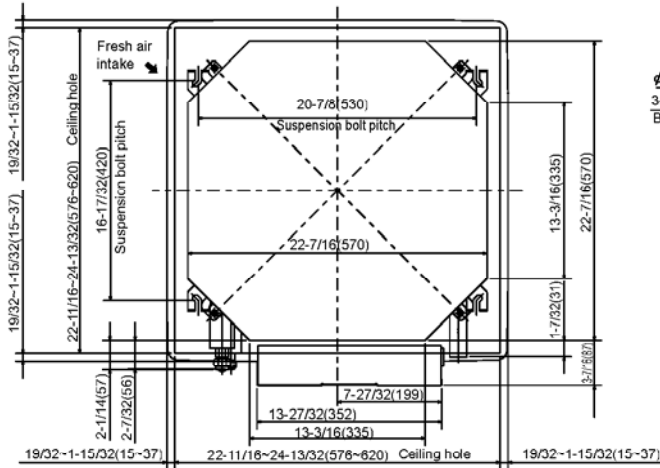
Gas Side 1/2" / 12.7 mm
 Liquid Side..... 1/4" / 6.35 mm

Connection Method Flared

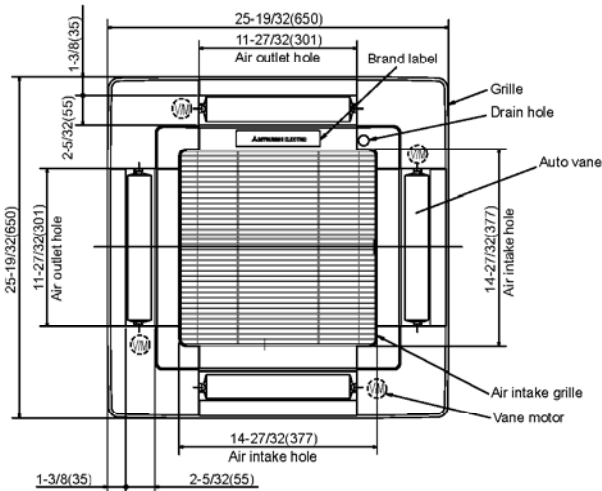
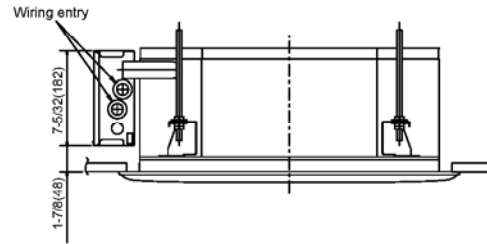
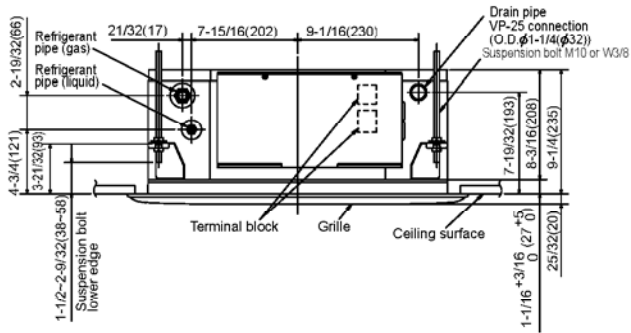
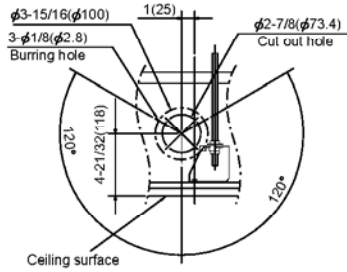


DIMENSIONS: SLZ-KA15NA

Unit : inch (mm)



Detail drawing of fresh air intake



Models	Refrigerant pipe (liquid)	Refrigerant pipe (gas)
SLZ-KA09NA	1/4 inch (ϕ 6.35mm) flared connection	3/8 inch (ϕ 9.52mm) flared connection
SLZ-KA12NA	1/4 inch (ϕ 6.35mm) flared connection	3/8 inch (ϕ 9.52mm) flared connection
SLZ-KA15NA	1/4 inch (ϕ 6.35mm) flared connection	1/2 inch (ϕ 12.7mm) flared connection



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Toll Free: 800-433-4822
www.mehvac.com

Job Name: 89 Anderson Street

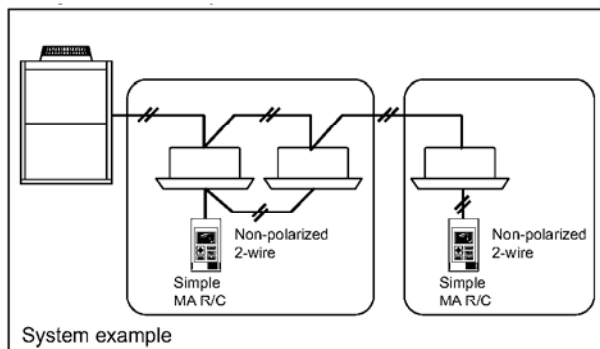
Schedule Reference: Corridors/Commercial 2 & 3/Lobby/Mail Room/Elevator Machine Room

Date: 9-30-15



SIMPLE MA REMOTE CONTROLLER (PAC-YT53CRAU) SPECIFICATIONS

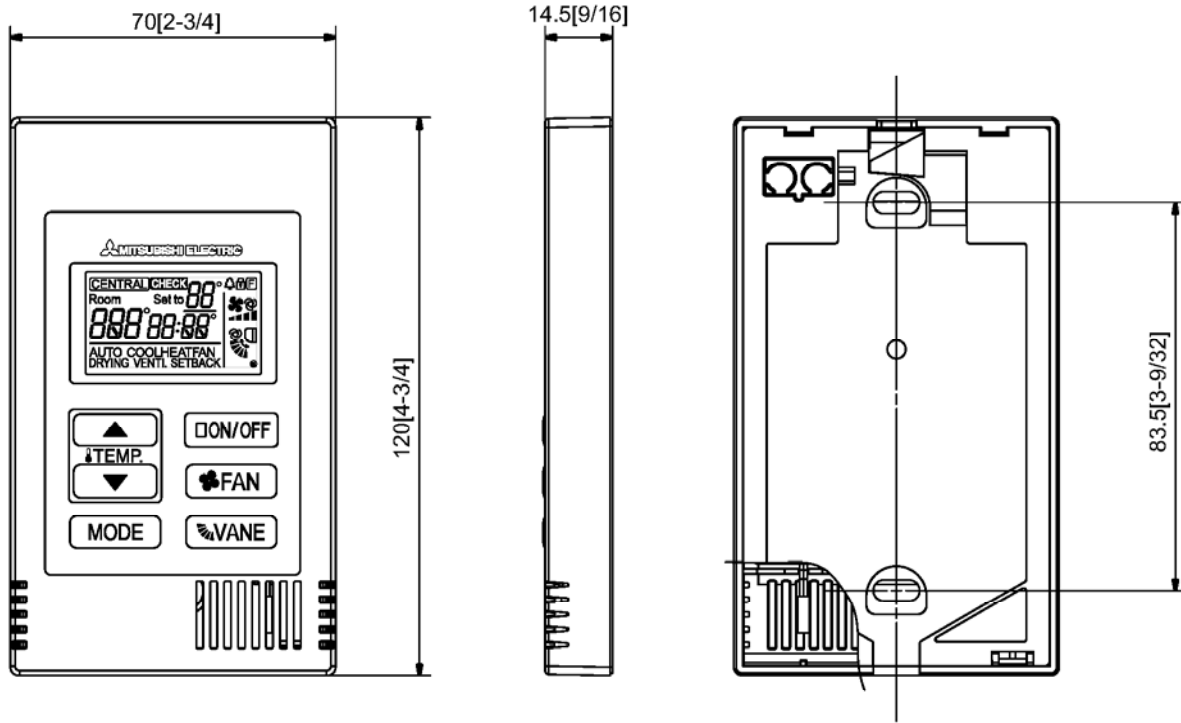
- Controls group operation for up to 16 indoor units in a single group
- Supports both Fahrenheit and Celsius
- User defined functions:
 - ON/OFF
 - Operation mode: AUTO (R2-Series only), COOL, HEAT, FAN, DRYING, or SETBACK
 - Set temperature
 - Fan speed setting
 - Air flow direction
 - Set temperature range: 40°F - 95°F depending on operation mode and indoor unit connected.
- Set temperature range limit: Simple MA allowable set temperature range can be reduced for cool and heat modes.
- LOSSNAY: Simple MA for interlocked system can set high/low/Stop on LOSSNAY.
- Room temperature can be sensed either at the indoor unit (default) or at the remote controller.
- Diagnostics: Displays four-digit error code and error unit address.
- Grouping: Same group use only with other PAC-YT53CRAU Simple MA Controllers, PAR-21MAAU Deluxe MA Remote Controllers, and PAR-FL/A32MA Wireless MA Remote Controllers with up to two remote controllers per group.
- Addressing: No addressing required.
- Wiring: Uses two-wire, stranded, non-polar control wire for connecting TB15 connection terminal on the indoor unit. Requires crossover wiring for grouping across indoor units.
- Dimensions: 2-3/4 x 9/16 x 4-3/4" (70 x 14.5 x 120mm).



Notes:

Model: PAC-YT53CRAU – DIMENSIONS

Unit:mm[in.]



WIND BAFFLE WB-PA1 / WB-PA2 / WB-PA3

Manufactured for MITSUBISHI ELECTRIC US, INC.
DESIGNED FOR P-SERIES AND PUMY OUTDOOR UNITS ONLY

Job Name: 89 Anderson Street

Schedule Reference:

Date: 9-30-15

GENERAL FEATURES

- Allows P-Series outdoor units to operate to 0° F DB cooling.
- Allows PUMY outdoor units to operate to 23° F DB cooling.
- Prevents wind from reversing outdoor fan rotation.
- Durable, low maintenance construction.

PLEASE NOTE

- Install outdoor units with the back surface facing wall side to eliminate the effects of external wind.
- Outdoor units should not be installed in an orientation or site where the wind blows directly at the back of the unit.
- Wind baffle should not be used where there is any obstacle at either side or above the outdoor unit as the discharged air will be blocked.

MODEL REQUIRED PER OUTDOOR UNIT

UNIT MODEL	Type and Quantity		
	WB-PA1	WB-PA2	WB-PA3
PUY/Z-A12NHA4	1		
PUY/Z-A18NHA4	1		
PUY/Z-A24NHA4		1	
PUY/Z-A30NHA4		1	
PUY/Z-A36NHA4		1	
PUY/Z-A42NHA4		2	
PUY/Z-A42NHA5		2	
PUZ-HA30NHA4		2	
PUZ-HA36NHA4		2	
PUMY-P36NHMU		2	
PUMY-P48NHMU		2	
PUMY-P60NKMU			2



WB-PA1



WB-PA2 / WB-PA3

SPECIFICATIONS

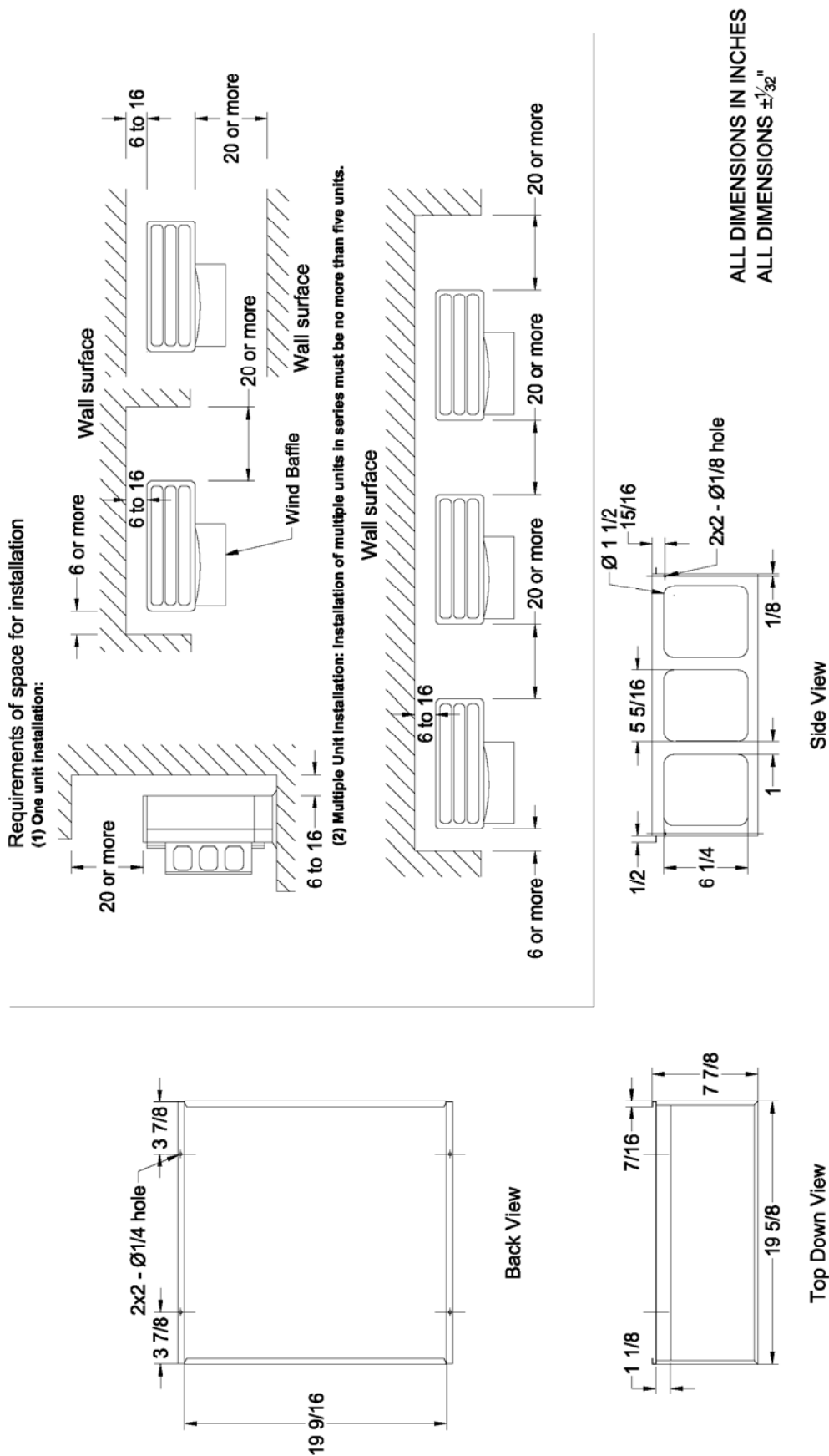
		WB-PA1
Exterior	Color	Ivory
	Surface Treatment	Polyester Powder Paint
	Material	Alloy hot-dip zinc coated carbon steel sheet
Weight		7 lb 7.9 oz

		WB-PA2
Exterior	Color	Ivory
	Surface Treatment	Acrylic resin coating
	Material	Alloy hot-dip zinc coated carbon steel sheet
Weight		8 lb 4.4 oz

		WB-PA3
Exterior	Color	Ivory
	Surface Treatment	Acrylic resin coating
	Material	Alloy hot-dip zinc coated carbon steel sheet
Weight		8 lb 8 oz

Notes:

DIMENSIONS: WB-PA1



DRAIN PAN HEATERS

LOW AMBIENT BASE PAN HEATERS

Job Name: 89 Anderson Street

System Reference:

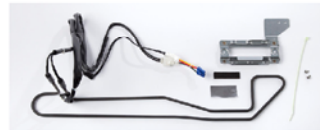
Date: 9-30-15

GENERAL FEATURES

- Prevents ice from building up on the outdoor unit base when operating in heating mode for an extended period of time in a very low temperature, high humidity condition
- Controlled by outdoor unit
- Works during defrost operation and energizes when outdoor temperature drops below 36° F
- Connects to CN722 on control board of MUZ-GE/FE/FH and SUZ models

INSTALLATION NOTES

- For MUZ-A models, the power board needs to be replaced with board included with pan heater
- Use of drain pan heaters is recommended when ambient temperatures are expected to be below freezing for periods longer than 72 hours straight; or when continuous sub-zero outdoor ambient conditions are expected to last longer than 24 hours
- Outdoor unit must not be installed directly on the ground, but on a raised platform, such as on racks, to suppress freezing
- Recommended installation of a Ground Fault Interrupt (GFI) circuit breaker, depending on installation area to prevent electric shock
- See corresponding installation instructions, and outdoor unit technical service manual for further details on installation

AVAILABLE MODELS


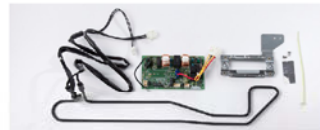
MAC-640BH-U



MAC-641BH-U



MAC-642BH-U



E12 A49 527

Drain Pan Heater Kits	Outdoor Unit Models	Rated Voltage	Power Input
MAC-640BH-U	MUZ-GE09/12/15NA MUZ-FE09/12NA MUZ-FH09/12NA SUZ-KA09/12/15NA	208 / 230 V	106 / 130 W
MAC-641BH-U	MUZ-GE18NA SUZ-KA18NA	208 / 230 V	98 / 120 W
MAC-642BH-U	MUZ-GE24NA MUZ-FE18NA MUZ-FH15NA	208 / 230 V	98 / 120 W
E12 A49 527	MUZ-A09/12/15/17NA	208 / 230 V	106 / 130 W

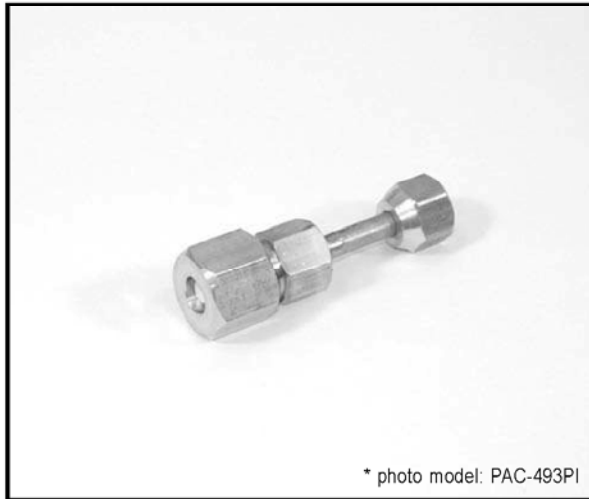


Joint Pipe

Unit $\phi 9.52 \rightarrow$ Pipe $\phi 12.7$

MAC-A454JP-E

Photo



Descriptions

A part to connect refrigerant pipes of the different diameter.
(Unit $\phi 9.52 \rightarrow \phi 12.7$)

Applicable Models

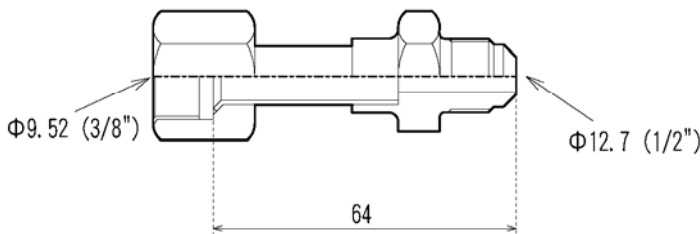
- MXZ-3A54VA ■ MXZ-5A100VA ■ PAC-AK50BC
- MXZ-4A71VA ■ MXZ-8A140VA
- MXZ-4A80VA ■ PAC-AK30BC

Specifications

Pipe diameter	$\phi 9.52$
Pipe material	C 1220T - OL

Dimensions

Unit : mm (inch)



How to Use / How to Install

Make sure that you have all the following parts, in addition to this manual in this box:

- Joint Pipe
- PAC-SG76RJ-E (unit side: $\phi 9.52$ diameter, onsite pipe side: $\phi 15.88$ diameter)
- PAC-493PI (unit side: $\phi 6.35$ diameter, onsite pipe side: $\phi 9.52$ diameter)
- MAC-A454JP-E (unit side: $\phi 9.52$ diameter, onsite pipe side: $\phi 12.7$ diameter)
- MAC-A455JP-E (unit side: $\phi 12.7$ diameter, onsite pipe side: $\phi 9.52$ diameter)
- MAC-A456JP-E (unit side: $\phi 12.7$ diameter, onsite pipe side: $\phi 15.88$ diameter)



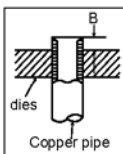
Installation procedure

(carefully read the following before installing.)

This optional part is used to connect indoor/outdoor unit to onsite pipes of different diameters.

※ When installing this optional part, be sure to read "Refrigerant pipe connection" in the installation manual attached to outdoor unit.

- 1) Apply flare processing to onsite pipes to adapt to R410A, according to the table on the right. Use optional accessory flare nut at this time.
- ※ Check the installation manual attached to the outdoor unit for advisability on whether or not onsite (existing) pipes can be used.



Pipe diameter (mm)	B size (mm)	
	R410A flare tool	R22/R407C flare tool
$\phi 6.35$ (1/4")	0~0.5	1.0~1.5
$\phi 9.52$ (3/8")	0~0.5	1.0~1.5
$\phi 12.70$ (1/2")	0~0.5	1.0~1.5
$\phi 15.88$ (5/8")	0~0.5	1.0~1.5

※ When flare processing for refrigerant R410A is applied using current tool, refer to the table above. B size can be secured using copper pipe gauge for margin adjustment.

Outer diameter of copper pipe (mm)	Processing size of flare section (mm)	Flare shape
$\phi 6.35$	8.7~9.1	
$\phi 9.52$	12.8~13.2	
$\phi 12.70$	16.2~16.6	
$\phi 15.88$	19.3~19.7	

- 2) Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerant oil (locally procured) on flare surface.

Refrigerator oil application point

Apply refrigerant oil to entire circumference of flare sheet surface.

※ Do not apply to thread section. (If applied to threads, flare nut can easily be loosened.)

- 3) Securely tighten flare nut using torque wrench according to the table on the right.

(Proper tightening torque using torque wrench)

Outer diameter of copper pipe (mm)	Tightening torque N·m (kgf·cm)
$\phi 6.35$	14~18 (140~180)
$\phi 9.52$	34~42 (340~420)
$\phi 12.70$	49~61 (490~610)
$\phi 15.88$	68~82 (680~820)

- 4) After refrigerant pipe is connected, be sure to perform gas leakage inspection for onsite connection pipes (including this optional part) and indoor/outdoor unit.

- 5) Heat insulation is necessary for this optional part. Wrap heat insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).

- 6) Perform test run according to the installation manual of the unit, making sure to also perform operation check.

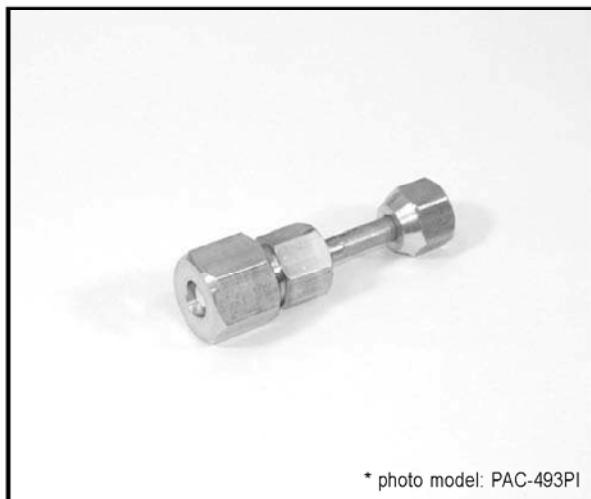
OPTIONAL PARTS

Joint Pipe

Unit $\phi 12.7 \rightarrow$ Pipe $\phi 9.52$

MAC-A455JP-E

Photo



Descriptions

A part to connect the refrigerant pipes of the different diameter.
(Unit $\phi 12.7 \rightarrow \phi 9.52$)

Applicable Models

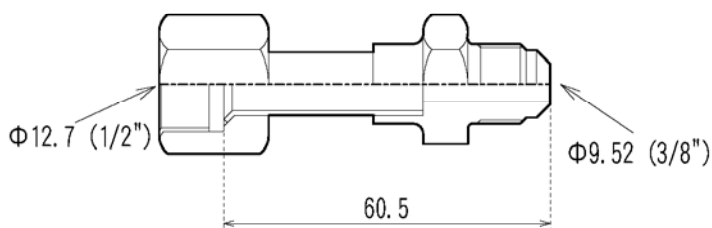
- MXZ-4A71 VA ■ PAC-AK30BC
- MXZ-4A80VA ■ PAC-AK50BC
- MXZ-5A100VA

Specifications

Pipe diameter	$\phi 12.7$
Pipe material	C 1220T - OL

Dimensions

Unit : mm (inch)



How to Use / How to Install

Make sure that you have all the following parts, in addition to this manual in this box:

Joint Pipe
 PAC-SG76RJ-E (unit side: $\phi 9.52$ diameter, onsite pipe side: $\phi 15.88$ diameter)
 PAC-493PI (unit side: $\phi 6.32$ diameter, onsite pipe side: $\phi 9.52$ diameter)
 MAC-A454JP-E (unit side: $\phi 9.52$ diameter, onsite pipe side: $\phi 12.7$ diameter)
 MAC-A455JP-E (unit side: $\phi 12.7$ diameter, onsite pipe side: $\phi 9.52$ diameter)
 MAC-A456JP-E (unit side: $\phi 12.7$ diameter, onsite pipe side: $\phi 15.88$ diameter)

Unit side  Onsite piping side

Installation procedure

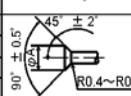
(carefully read the following before installing.)

This optional part is used to connect indoor/outdoor unit to onsite pipes of different diameters.

※ When installing this optional part, be sure to read "Refrigerant pipe connection" in the installation manual attached to outdoor unit.

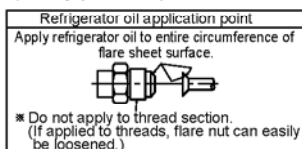
1) Apply flare processing to onsite pipes to adapt to R410A, according to the table on the right. Use optional accessory flare nut at this time.

※ Check the installation manual attached to the outdoor unit for advisability on whether or not onsite (existing) pipes can be used.

Pipe diameter (mm)	B size (mm)		Outer diameter of copper pipe (mm)	Processing size of flare section (mm)	Flare shape
	R410A flare tool R22/R407C flare tool	Clutch type			
$\phi 6.35$ (1/4")	0~0.5	1.0~1.5	$\phi 6.35$	8.7~9.1	
$\phi 9.52$ (3/8")	0~0.5	1.0~1.5	$\phi 9.52$	12.8~13.2	
$\phi 12.70$ (1/2")	0~0.5	1.0~1.5	$\phi 12.70$	16.2~16.6	
$\phi 15.88$ (5/8")	0~0.5	1.0~1.5	$\phi 15.88$	19.3~19.7	

※ When flare processing for refrigerant R410A is applied using current tool, refer to the table above. B size can be secured using copper pipe gauge for margin adjustment.

2) Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerant oil (locally procured) on flare surface.



3) Securely tighten flare nut using torque wrench according to the table on the right.

〈Proper tightening torque using torque wrench〉

Outer diameter of copper pipe (mm)	Tightening torque N·m (kgf·cm)
$\phi 6.35$	14~18 (140~180)
$\phi 9.52$	34~42 (340~420)
$\phi 12.70$	49~61 (490~610)
$\phi 15.88$	68~82 (680~820)

4) After refrigerant pipe is connected, be sure to perform gas leakage inspection for onsite connection pipes (including this optional part) and indoor/outdoor unit.

5) Heat insulation is necessary for this optional part: Wrap heat insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).

6) Perform test run according to the installation manual of the unit, making sure to also perform operation check.

OPTIONAL PARTS

MITSUBISHI ELECTRIC OPTIONAL PARTS

2-BRANCH PIPE(JOINT) (MSDD-50AR-E)



Applicable model
MXZ-8A/8B Series(R410A type)

※In case of 2 branch box connection for flare connection

1 The kit contains following

①Manual	②Liquid pipe (small:φ9.52)	③Gas pipe (large:φ15.88)	④Heat-insulation cover(small)	⑤Heat-insulation cover(large)
This one-sheet manual	X1	X1	X1	X1

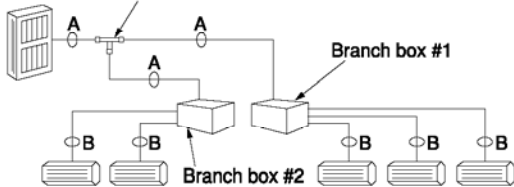
Note: Besides these, please procure the following locally:
 (1) Tape for sealing the heat insulation covers.
 (2) Extension pipes for the refrigerant system.

2 During installation, be careful about the following

- Note the limit length of the refrigerant pipe refer to the installation manual of outdoor unit and branch box.
- Note the limits for installing the indoor units refer to the installation manual of outdoor unit and branch box.
- In connecting pipes, take care not to let any dirt or other foreign matter enter any pipe.
- Put a heat insulator into every refrigerant pipe.

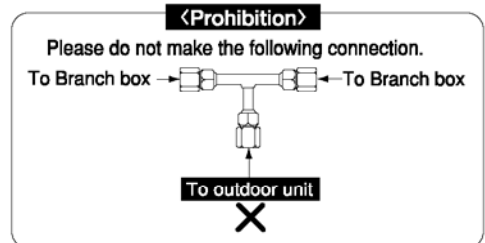
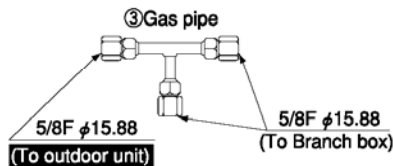
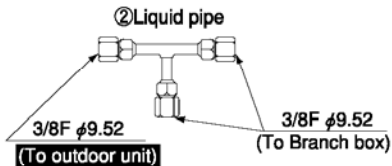
3 Outline of system and pipe size

Outdoor unit 2branches pipe(joint):optional part explained by this manual

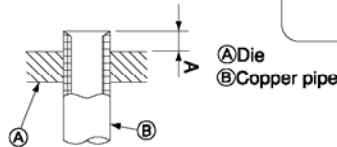
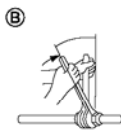
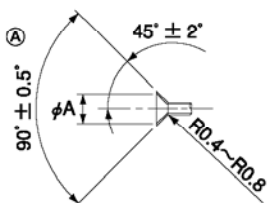


	A	B
Liquid(mm)	φ9.52	Refer to installation manual of outdoor unit and branch box
Gas(mm)	φ15.88	Refer to installation manual of outdoor unit and branch box

4 See the following for the specifications of liquid pipe②, and gas pipe③



5 Installing the refrigerant piping



- When bending the pipes, be careful not to break them. Bend radii of 100mm to 150mm are sufficient.
- Make sure the pipes do not contact the compressor. Abnormal noise or vibration may result.

- ① Pipes must be connected starting from the indoor unit.
 Flare units must be tightened with a torque wrench.

- ② Flare the liquid pipes and gas pipes and apply a thin layer of refrigeration oil (Applied on site).
 • When usual pipe sealing is used, refer to Table 1 for flaring of R410A refrigerant pipes.
 The size adjustment gauge can be used to confirm A measurements.

Copper pipe O.D. (mm)	Flare dimensions φA dimensions (mm)
φ9.52	12.8-13.2
φ15.88	19.3-19.7

Copper pipe O.D. (mm)	Flare nut O.D. (mm)	Tightening torque (N·m)
φ9.52	22	34-32
φ15.88	29	68-82

Table 1

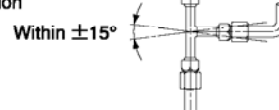
Copper pipe O.D. (mm)	A (mm)	
	Flare tool for R410A	Flare tool for R22-R407C
	Clutch type	
φ9.52(3/8")	0-0.5	1.0-1.5
φ15.88(5/8")	0-0.5	1.0-1.5

6 Installation direction of joint

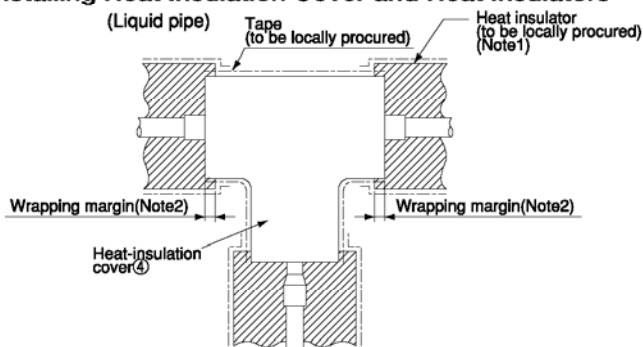
Horizontal direction



Vertical direction



7 Installing Heat Insulation Cover and Heat Insulators



- The liquid pipe (small:φ9.52) ② Make it fit the heat-insulation cover(small)④. Seal the mating of the heat-insulation cover④ with the tape for sealing heat insulators (to be locally procured).

- Do the same with the gas pipe (large:φ15.88) ③, using the heat-insulation cover⑤ (large), as with the liquid pipe (small).

Note 1: Install a heat insulator on every part of the refrigerant pipes (to be locally procured).

If you want to use commercially-available heat insulators, use heat-resistant heat insulators (at least 15mm thick).

Note 2: The pipe covers shrink a little under high heat.

Therefore, allow for some wrapping margin in the heat insulators.