

INVERTER Technology for Superior Year-round Comfort and Performance

INVERTER Technology

Select straight-cool and all heat pump outdoor units employ Mitsubishi Electric's INVERTER-driven compressor technology (Variable Frequency Drive) to provide exceptional, high-speed cooling and heating performance. Thanks to high rotation speeds, desired temperatures are reached more quickly than with conventional systems. So you can enjoy your ideal level of comfort without delay.

High-speed Cooling and Heating

High rotation compressor speeds also cool and heat a room quickly, saving both energy and cash. The compressor speed is controlled to maximize efficiency, changing speeds according to the cooling and heating load of a room.

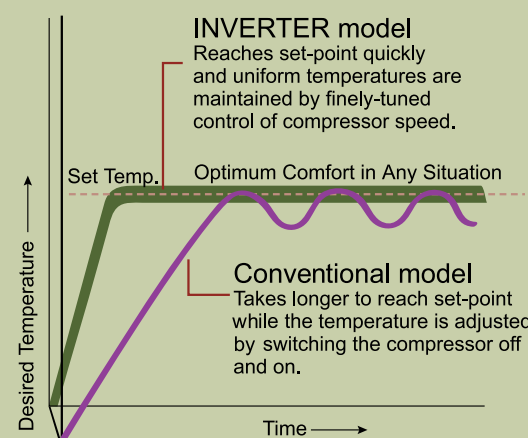
Optimum Comfort Year-round

Conventional units start and stop repetitively, unlike INVERTER units that detect subtle changes in temperature and adjust compressor speed automatically. Low rotation speed efficiently maintains desired temperature to reduce temperature swings and provide a more comfortable climate.

Extra Energy Savings

For optimum performance INVERTER technology delivers only the energy needed to satisfy the cooling and heating load of a room, thereby reducing energy consumption.

Our CITY MULTI® product line also employs INVERTER technology. Find out how the Mr. Slim® and the CITY MULTI INVERTER systems give you even greater performance capabilities and design flexibility, making Mitsubishi Electric products the best choice for any of your cooling and heating applications by visiting www.mehvac.com.



Wireless Remote Controller



Mr. SLIM®
Split-ductless A/C and Heat Pumps



Mitsubishi Electric Shizuoka Works acquired ISO 9001 certification under Series 9000 of the International Standard Organization (ISO), based on a review of quality warranties for the production of air-conditioning equipment. The plant also acquired environmental management system standard ISO 14001 certification.

Choose the Mr. Slim® Product Size That's Right for You

Room Size	Performance
100 - 350 Sq. Ft.	<9,500 BTU/H
350 - 440 Sq. Ft.	9,500 - 12,000 BTU/H
440 - 550 Sq. Ft.	12,000 - 15,000 BTU/H
550 - 600 Sq. Ft.	15,000 - 16,200 BTU/H
600 - 800 Sq. Ft.	16,200 - 22,000 BTU/H
800 - 1,100 Sq. Ft.	22,000 - 30,000 BTU/H

This table is for general guidance only. Additional conditions may factor into your actual cooling or heating needs. Please contact your contractor or Mitsubishi Electric for a more accurate determination of your specific cooling or heating needs.

Efficient. Quiet. Secure. Pick All Three.

That's right. Reliable Mr. Slim units deliver all of these. First its small design, smart functionality, and lack of ductwork plus INVERTER technology make it energy-efficient. Second, the unit's fan is designed to deliver air quietly and continuously with only a gentle whoosh for constant circulation and filtration. (That's why Mr. Slim systems were the first choice for thousands of churches, schools, and libraries across the U.S. *Shhh!*) Third, because each system installs with only a three-inch opening for connecting the indoor and outdoor units, you don't have to worry about thieves gaining access through an easy-to-remove window unit. With Mr. Slim systems you can sleep in quiet comfort with a sense of security.



Features Benefits

Features	Benefits
EFFICIENT, QUIET OPERATION	Mr. Slim products are designed to be quieter and more efficient than old window units, so you'll sleep easier with less worry about operating costs.
NO DUCTWORK AND EASY TO INSTALL	Mr. Slim systems install without ductwork, requiring only a three-inch opening in the wall or ceiling. This design allows you to retain the original aesthetics of a room. Because no ductwork is involved, the installation can be quick and simple, which means little or no disruption to your home or business.
VERSATILE	From living rooms to kitchens to cafeterias, there's a Mr. Slim system to fit any cooling or heating need.
WIRELESS REMOTE CONTROLLER	Mr. Slim M-Series systems come with a convenient wireless remote controller that puts you in control of your own comfort. (Optional wired remote controller available)
ENVIRONMENTALLY FRIENDLY	Mr. Slim systems use an environmentally-friendly refrigerant.
INVERTER TECHNOLOGY	You will enjoy high-speed cooling and heating, and consistent delivery of comfort year-round.



Lifestyle photo courtesy of Mitsubishi Digital Electronics America, Inc. Plasma TV Model PD-5065 shown. Visit mitsubishity.com for details.

System Control in the Palm of Your Hand

Mr. Slim's M-Series offers a comprehensive remote controller that controls more than temperature and fan speed. It provides four modes: COOL, HEAT, AUTO, and DRY and has a 12-hour ON/OFF timer, giving you one-button control over your personal comfort. Our MSY(Z)-A24NA model adds the WIDE VANE button to distribute airflow to a wider angle (150 deg.) evenly from right to left to ensure a more comfortable temperature is maintained over a wider area. The M-Series INVERTER models can tie into the P-Series wired controller and CITY MULTI® M-Net with adapter.

Mr. SLIM®
Split-ductless A/C and Heat Pumps



www.mrslim.com

Mr. Slim® Systems: Redefining Comfort

Comfort is a concept many of us notice only when we're either uncomfortable or extremely comfy. At Mitsubishi Electric HVAC Advanced Products Division comfort is all we think about, and our industry-leading Mr. Slim split-ductless cooling and heating systems reflect that thinking. At home or at work our Mr. Slim systems are designed to make any space inviting. Maybe your home has a room that's always too hot or too cold. Or perhaps you're looking for a way to control the climate effectively in multiple rooms in your office building, such as the conference room. No matter what your cooling and heating needs may be, Mr. Slim systems are the perfect way to make rooms in your home or workplace as comfortable as possible.

What is Mr. Slim Ductless Technology?

For decades split-ductless air-conditioning systems have been the quiet solution for cooling and heating problems around the world. Our quiet and powerful Mr. Slim systems have three main components: an indoor unit, outdoor unit, and remote controller. These indoor and outdoor units are easily connected by refrigerant lines running through a small three-inch opening in the wall or ceiling. The outdoor unit cycles the refrigerant through the lines to and from the indoor unit, where the air is conditioned and distributed into the indoor space. Installation is as simple as mounting the indoor and outdoor units, connecting the refrigerant lines, and making a few electrical connections. An easy installation for your authorized contractor means you quickly will be enjoying the comfort Mr. Slim systems provide.

Why Mr. Slim Systems?

Mitsubishi Electric is the industry leader in split-ductless air-conditioning technology, period. Our innovations have defined cutting-edge technology for over 25 years. Compare and you'll see no one surpasses the Mr. Slim brand's performance for quiet, easy-to-use, and energy-efficient operation. And since our split-ductless technology

carries the Mitsubishi Electric name, you know every system is built to last. The bottom line is that the Mr. Slim product delivers ultimate comfort control for your home or office. It's true today and will be comfortably evident for years to come.

Small Size, Big Performance

While all of our Mr. Slim units are compact and lightweight, the M-Series is designed specifically for tight spaces. But don't be fooled. The powerful M-Series delivers plenty of cool or warm air to almost any size room. And unlike window units, the Mr. Slim indoor unit's small size, neutral color, and mounting position mean it blends in well.

No Ductwork Required

Mr. Slim systems need no ductwork. There's only a small, three-inch opening connecting the indoor and outdoor units. This means quicker installation, less mess, and a better looking and more comfortable home.



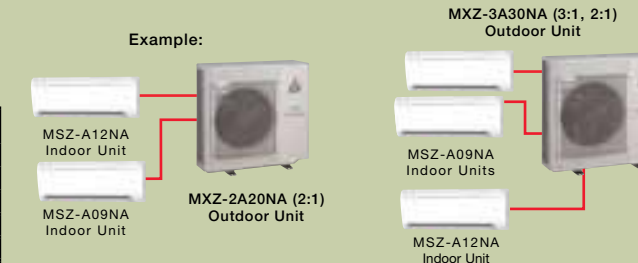
MXZ Multi INVERTER Heat Pump Specifications

INVERTER

Model Name	Outdoor Unit	MXZ-2A20NA *4	MXZ-3A30NA *5	
Indoor Unit	Cooling *1	Rated Capacity Btu/h	20,000	28,400
		Capacity Range Btu/h	7,800-20,000	12,600-28,400
		Total Input W	2,150 (630-2,150)	3,250 (1,000-3,250)
	Heating 47° *2	Rated Capacity Btu/h	22,000	28,600
		Capacity Range Btu/h	8,500-22,000	11,400-36,000
		Total Input W	1,780 (520-1,780)	2,180 (740-2,880)
Heating at 17° *3	Capacity Btu/h	14,500	18,800	
	Total Input W	1,500	2,120	
Power supply	Phase, Cycle, Voltage	1 Phase, 60Hz, 208/230V		
Voltage	Indoor - Outdoor S1-S2	AC 208/230V		
	Indoor - Outdoor S2-S3	DC12-24V		
Outdoor Unit	MCA	A	15	15
	Max. Fuse Size	(Time Delay) A	20	20
	Fan Motor	F.L.A.	0.96	0.93
	Compressor	Model (Type)	SNB130FPDH1	TNB220FMCH
		R.L.A.	10.1	11
	L.R.A.	15	15	
	Airflow (Cooling/Heating) *1/*2	CFM	1,485/1,640	1,365/1,605
	Refrigerant Control	Linear Expansion Valve		
	Defrost Method	Reverse Cycle		
	Sound Level (Cooling/Heating) *1/*2	dB(A) *1	49/51	49/49
	External Finish Color	Munsell 5Y 8/1		
	Dimensions	W: inch	33-1/16	35-7/16
		D: inch	13 (+1-3/16)	12-19/32 (+1-3/16)
		H: inch	27-15/16	35-7/16
	Weight	lbs.	130	158
Remote Controller	Type	Wireless Remote		
	Type	R410A		
Refrigerant	Charge	lbs., oz.	5.15	7.11
	Oil	Type (fl. oz.)	NE022 (20.3)	NE022 (29.4)
Refrigerant Pipe	Gas Side O.D.	inch	A, B: 3/8	A: 1/2; B, C: 3/8
	Liquid Side O.D.	inch	1/4	1/4
	Height Difference (Max.)	feet	33	33
	Length (Max.) (a + b or a + b + c)	feet	164	230
Connection Method	Indoor/Outdoor	Flared/Flared		

MXZ-3A30NA Combinations

Indoor Unit Combinations (Unit A + Unit B + Unit C)	Cooling Capacity (Btu/h)				Power Usage (W)	Energy Efficiency		Current (A)		Port Adapter Requirements	
	Heating Capacity (Btu/h)					SEER	HSPF	208V	230V	Size	Qty. and Joint Pipe Part No.
	Unit A	Unit B	Unit C	Total							
MSZ-A09NA + MSZ-A09NA	9,000	9,000	--	18,000	1,800	13.0	7.7	8.92	8.07	3/8 X 5/8" or 1/2 X 5/8"	(1) PAC-SG76RJ-E or (1) MAC-A456JP-E
MSZ-A09NA + MSZ-A12NA	10,900	10,900	--	21,800	1,700		8.43	7.62			
MSZ-A09NA + MSZ-A12NA	9,000	12,000	--	21,000	2,000	13.0	7.7	9.91	8.96	3/8 X 5/8"	N.A.
MSZ-A09NA + MSZ-A15NA	10,900	13,600	--	24,500	1,980		9.81	8.87			
MSZ-A09NA + MSZ-A17NA	9,000	15,000	--	24,000	2,500	13.0	7.7	12.39	11.21	3/8 X 5/8"	N.A.
MSZ-A09NA + MSZ-A17NA	10,100	16,900	--	27,000	2,200		10.90	9.86			
MSZ-A09NA + MSZ-A17NA	9,000	16,200	--	25,200	2,700	13.0	7.7	13.38	12.10	3/8 X 1/2"	(1) MAC-A454JP-E
MSZ-A09NA + MSZ-A24NA	9,300	17,700	--	27,000	2,200		10.90	9.86			
MSZ-A12NA + MSZ-A12NA	7,600	20,400	--	28,000	3,200	13.0	7.7	15.86	14.34	3/8 X 1/2"	(1) MAC-A454JP-E
MSZ-A12NA + MSZ-A12NA	7,300	19,700	--	27,000	1,980		9.81	8.87			
MSZ-A12NA + MSZ-A12NA	12,000	12,000	--	24,000	2,500	13.0	7.7	12.39	11.21	3/8 X 1/2"	(1) MAC-A454JP-E
MSZ-A12NA + MSZ-A15NA	13,500	13,500	--	27,000	2,200		10.90	9.86			
MSZ-A12NA + MSZ-A15NA	11,500	14,500	--	26,000	2,800	13.0	7.7	13.88	12.55	3/8 X 1/2"	(1) MAC-A454JP-E
MSZ-A12NA + MSZ-A17NA	12,000	15,000	--	27,000	2,160		10.71	9.68			
MSZ-A15NA + MSZ-A15NA	10,800	15,200	--	26,000	2,800	13.0	7.7	13.88	12.55	3/8 X 1/2"	(1) MAC-A454JP-E
MSZ-A15NA + MSZ-A17NA	11,200	15,800	--	27,000	2,140		10.61	9.59			
MSZ-A17NA + MSZ-A17NA	13,000	13,000	--	26,000	2,800	13.0	7.7	13.88	12.55	1/2 X 3/8"	(1) MAC-A455JP-E
MSZ-A17NA + MSZ-A17NA	13,500	13,500	--	27,000	2,100		10.80	9.77			
MSZ-A09NA + MSZ-A09NA + MSZ-A09NA	9,000	9,000	9,000	27,000	2,860	13.0	7.7	14.18	12.82	1/2 X 3/8"	(1) MAC-A455JP-E
MSZ-A09NA + MSZ-A09NA + MSZ-A12NA	9,500	9,500	9,500	28,500	2,180		10.80	9.77			
MSZ-A09NA + MSZ-A09NA + MSZ-A15NA	8,500	8,500	11,400	28,400	3,250	16.0	10.0	16.11	14.57	N.A.	
MSZ-A09NA + MSZ-A09NA + MSZ-A17NA	8,600	8,600	11,400	28,600	2,180		10.80	9.77			
MSZ-A09NA + MSZ-A09NA + MSZ-A17NA	7,750	7,750	12,900	28,400	3,250	13.0	7.7	16.11	14.57	N.A.	
MSZ-A09NA + MSZ-A09NA + MSZ-A17NA	7,800	7,800	13,000	28,600	2,180		10.80	9.77			
MSZ-A09NA + MSZ-A09NA + MSZ-A17NA	7,300	7,300	13,800	28,400	3,250	13.0	7.7	16.11	14.57	N.A.	
MSZ-A09NA + MSZ-A09NA + MSZ-A17NA	7,350	7,350	13,900	28,600	2,180		10.80	9.77			



Note: Test conditions are based on ARI 210/240
 *1 Rating conditions (cooling) - Indoor: 80° FDB, 67° FWB, Outdoor: 95° FDB, 75° FWB.
 *2 Rating conditions (heating) - Indoor: 70° FDB, 60° FWB, Outdoor: 47° FDB, 43° FWB.
 *3 Rating conditions (heating) - Indoor: 70° FDB, 60° FWB, Outdoor: 17° FDB, 15° FWB.
 *4 Data from combination of Indoor Units MSZ-A09NA and MSZ-A12NA.
 *5 Data from combination of Indoor Units MSZ-A09NA, MSZ-A09NA, and MSZ-A12NA.
 Power factor equals 97%.
 Specifications are subject to change without notice.

LIMITED WARRANTY | Six-year warranty on compressor. One-year warranty on parts.

MXZ-2A20NA Combinations

Indoor Unit (Unit A + Unit B) Combinations	Cooling Capacity (Btu/h)			Power Usage (W)	Energy Efficiency		Current (A)	
	Unit A	Unit B	Total		SEER	HSPF	208V	230V
MSZ-A09NA + MSZ-A09NA	9,000	9,000	18,000	1,740	13.0	7.7	8.62	7.8
MSZ-A09NA + MSZ-A12NA	10,900	10,900	21,800	1,820			9.02	8.16
MSZ-A09NA + MSZ-A12NA	9,500	12,500	22,000	1,780	16.0	9.0	10.66	9.64
MSZ-A09NA + MSZ-A15NA*	7,500	12,500	20,000	2,150	13.0	7.7	10.66	9.64
MSZ-A12NA + MSZ-A12NA	10,000	10,000	20,000	2,150	13.0	7.7	10.66	9.64
MSZ-A12NA + MSZ-A12NA	11,000	11,000	22,000	1,780			8.82	7.98

*Port Adapter size = 3/8" x 1/2", Qty = 1, Part No. = MAC-A454JP-E

M-Series Air-conditioning and Heat Pump Specifications



MS/MSY/MSZ Systems

Model Name	Indoor Unit	MS-A09WA	MS-A12WA	MSY-A15NA	MSY-A17NA	MSY-A24NA	MSZ-A09NA	MSZ-A12NA	MSZ-A15NA	MSZ-A17NA	MSZ-A24NA			
												Outdoor Unit	MU-A09WA	MU-A12WA
Cooling *1	Rated Capacity	Btu/h	9,500	12,000	15,000	16,200	22,000	9,000	12,000	15,000	16,200	22,000		
	Capacity Range	Btu/h	N.A.	N.A.	3,000-15,000	3,100-15,000	4,400-22,000	5,500-9,000	5,700-12,000	3,100-15,000	3,100-16,200	4,400-22,000		
	Energy Efficiency	SEER	13			16			17			16		
	Moisture Removal	Pints/h	2.7	3.2	4.7	5.1	7.3	2.3	3.2	4.7	5.1	7.3		
	Sensible Heat Factor		0.68	0.70	0.65	0.65	0.63	0.71	0.70	0.65		0.63		
	Heating at 47° *2	Rated Capacity	Btu/h	N.A.			N.A.			10,900	13,600	18,000	20,100	23,200
Capacity Range		Btu/h	N.A.			N.A.			5,200-12,600	5,200-13,600	3,400-20,900	3,600-24,400		
HSPF (Region IV)		Btu/h/W	N.A.			N.A.			8.2					
Heating at 17° *3	Capacity	Btu/h	N.A.			N.A.			7,700	8,300	13,000	15,200		
	Total Input	W	N.A.			N.A.			880	930	1,740	1,960		
Power Supply	Phase, Cycle, Voltage	1 Phase, 60Hz, 115V					1 Phase, 60Hz, 208/230V							
Voltage	Indoor - Outdoor S1-S2	AC 115V					AC 208/230V							
	Indoor - Outdoor S2-S3	DC12-24V					DC12-24V							
	Indoor - Remote Controller	Wireless Type					Wireless Type (Optional Wired Controller: DC12V)							
Indoor Unit	MCA	A	1.2			1.0			1.2			1.0		
	Max. Fuse Size	(Time Delay) A	15			15								
	Airflow (Cool) (Lo-Med-Hi)	DRY (CFM)	183-261-335	222-286-408	268-328-381		296-431-568	152-229-307	152-240-353	268-328-381		296-431-568		
	WET (CFM)	162-233-300	198-254-363	240-293-342		265-385-508	134-205-275	134-215-318	240-293-342		265-385-508			
	Airflow (Heat) (Lo-Med-Hi)	DRY (CFM)	N.A.	N.A.	N.A.	N.A.	N.A.	159-222-307	159-240-353	254-314-381		296-486-568		
	Sound Level (Cooling) (Lo-Med-Hi) *1	dB(A)	26-32-42	33-38-46	34-40-45	34-40-46	34-40-49	22-33-38	22-34-48	34-40-45	34-40-46	34-40-49		
	Sound Level (Heating) (Lo-Med-Hi) *2	dB(A)	N.A.			N.A.			22-33-38	22-34-42	34-38-44	34-38-44	34-40-49	
	External Finish Color	Munsell 1.0Y 9.2/0.2					Munsell 1.0Y 9.2/0.2							
	Dimension Unit	W: inch	30-11/16			30-11/16		43-5/16	30-11/16			43-5/16		
		D: inch	8-1/4			8-1/4		10-1/4	8-1/4			10-1/4		
		H: inch	11-3/4			11-3/4		12-13/16	11-3/4			12-13/16		
	Weight Unit	lbs.	23			23		37	23			37		
	MCA	A	14	16	14		17	12		14		17		
	Max. Fuse Size	(Time Delay) A	15	20	15		20	48		15		20		
	Sound Level	dB(A) *1	47	52	50	52	55	48		51	53	55		
External Finish Color	Munsell 3Y 7.8/1.1					Munsell 3Y 7.8/1.1								
Dimensions	W: inch	31-1/2	33-7/16	31-1/2		33-1/16	31-1/2			33-1/16				
	D: inch	11-1/4			11-1/4		13	11-1/4			13			
	H: inch	21-5/8	23-13/16	21-5/8		33-7/16	21-5/8			33-7/16				
Weight	lbs.	78			96		88		82		88			
Remote Controller	Type	Wireless Remote					Wireless Remote (Optional Wired Controller)							
Refrigerant	Type	R410A					R410A							
	Charge	lbs., oz.	2.5	3.1	2.7		4	2.5		2.7		4		
Refrigerant Pipe	Oil	Type (fl. oz.)	NE022 (10.8)			NE022 (15.2)			NE022 (10.8)			NE022 (15.2)		
	Gas Side O.D.	inch	3/8	1/2	1/									