MSZ-L SERIES

R32 Single / MXZ, PUMY

R410A PUMY

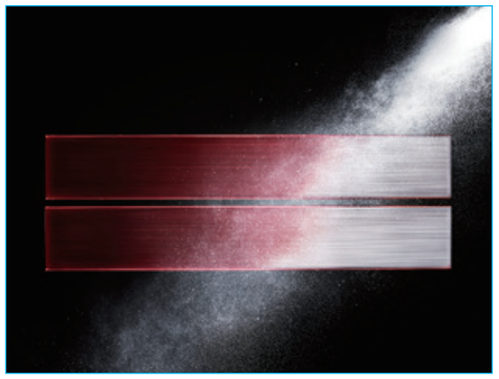
MSZ-LN18/25/35/50/60VG2

GOOD DESIGN AWARD 2016 BEST 100

Developed to complement modern interior room décor, the LN Series is available in four colours specially chosen to blend in naturally wherever installed. Not only the sophisticated design, but also the optimum energy efficiency and operational comfort add even more value to this series.

Luminous and Luxurious Design

Natural White, Pearl White, Ruby Red, and Onyx Black. LN Series indoor units are available in four colours to match various lifestyles. The appearance of the indoor unit differs depending on the lighting in the room, attracting the attention of everyone that enters the room.



Master craftsmanship painting technology has resulted in a refined design, giving the finish deep colour and a premium quality feel.

Pearl White blends in with any interior.

Ruby Red gives an accent to the room, affording timeless elegance to sophisticated interiors.

Onyx Black matches darker interiors, creating a comfortable environment.

LED Backlight Remote Controller

Not only the indoor units, but the wireless remote controllers come in four colours as well. Each remote controller matches the indoor unit. Even the textures are the same.

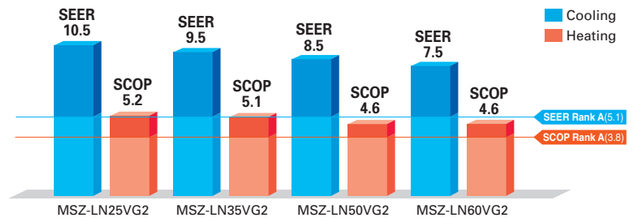
The setting can be easily checked in the dark thanks to LED backlight.

Pearl White　Ruby Red　Onyx Black　Natural White

High Energy Efficiency

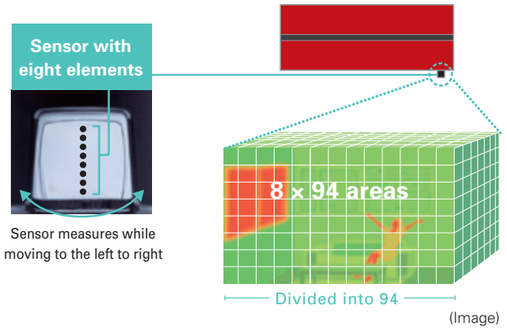
DC Inverter　25/35/50 SEER A+++　25/35 SCOP A+++

Optimum cooling/heating performance is another feature for the LN series. Models from capacities 25 to 50 have achieved the "Rank A^{+++}" for SEER, and models for capacities 25 and 35 have achieved the "Rank A^{+++}" for SCOP as well.



3D i-see Sensor

The LN Series is equipped with 3D i-see Sensor, an infrared-ray sensor that measures the temperature at distant positions. While moving to the left and right, eight vertically arranged sensor elements analyze the room temperature in three dimensions. This detailed analysis makes it possible to judge where people are in the room, thus allowing creation of features such as "Indirect airflow," to avoid airflow hitting people directly, and "direct airflow" to deliver airflow to where people are.

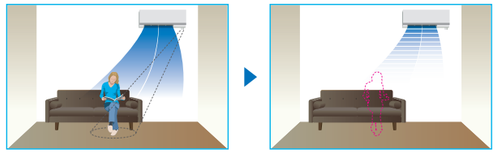


Sensor measures while moving to the left to right

(Image)

No occupancy energy-saving mode

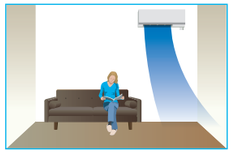
The sensors detect whether there are people in the room. When no-one is in the room, the unit automatically switches to energy-saving mode.



The "3D i-see Sensor" detects people's absence and the power consumption is automatically reduced approximately 10% after 10 minutes and 20% after 60 minutes.

Indirect Airflow

The indirect airflow setting can be used when the flow of air feels too strong or direct. For example, it can be used during cooling to avert airflow and prevent body temperature from becoming excessively cooled.

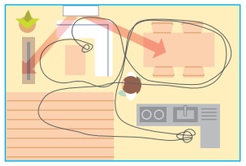


Direct Airflow

This setting can be used to directly target airflow at people such as for immediate comfort when coming indoors on a hot (cold) day.

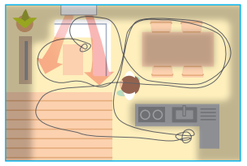
Even Airflow *LN Series only

Normal swing mode



The airflow is distributed equally throughout the room, even to spaces where there is no human movement.

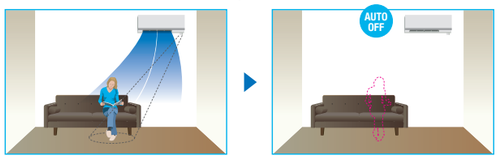
Even airflow mode



The 3D i-see sensor memorizes human movement and furniture positions, and efficiently distributes airflow.

No occupany Auto-OFF mode *LN Series only

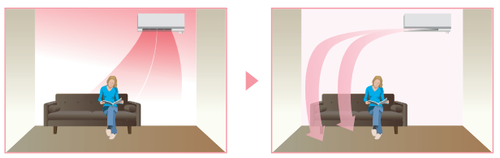
The sensors detect whether or not there are people in the room. When there is no one in the room, the unit turns off automatically.



Circulator Operation

(MSZ-LN18/25/35/50/60VG-SC Scandinavian model)

In case the indoor temperature reaches the setting temperature, the outdoor unit stops and the indoor unit starts FAN operation to circulate the indoor air.
The outdoor unit starts operation automatically when the indoor temperature drops below the setting temperature.



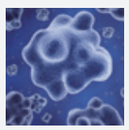
If the heating operation is continued, the warm air is formed around ceiling.

This operating can help to circulate and rense warm air.

Plasma Quad Plus

Plasma Quad Plus is a plasma-based filter system that effectively removes six kinds of air pollutants. Plasma Quad Plus captures mold and allergens more effectively than Plasma Quad. It can also capture PM2.5 and particles smaller than 2.5μm, creating healthy living spaces for all.

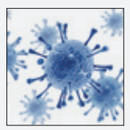
Bacteria



Test results have confirmed that Plasma Quad Plus neutralizes 99% of bacteria in 162 minutes in a 25m^3 test space.

<Test No.> KRCES-Bio. Test Report No. 2016-0118

Viruses



Test results have confirmed that Plasma Quad Plus neutralizes 99% of virus particles in 72 minutes in a 25m^3 test space.

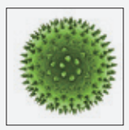
<Test No.> vrc.center, SMC No. 28-002

Molds

Test results have confirmed that Plasma Quad Plus neutralizes 99% of mold in 135 minutes in a 25m^3 test space.

<Test No.> Japan Food Research Laboratories Test Report No. 16069353001-0201

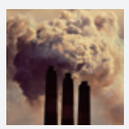
Allergens



In a test, air containing cat fur and pollen was passed through the air cleaning device at the low airflow setting. Before and after measurements confirm that Plasma Quad Plus neutralizes 98% of cat fur and pollen.

<Test No.> ITEA Report No. T1606028

PM2.5



Test results have confirmed that Plasma Quad Plus removes 99% of PM2.5 in 145 minutes in a 28m^3 test space.

<In-company investigation>

Dust

Test results have confirmed that Plasma Quad Plus removes 99.7% of dust and mites.

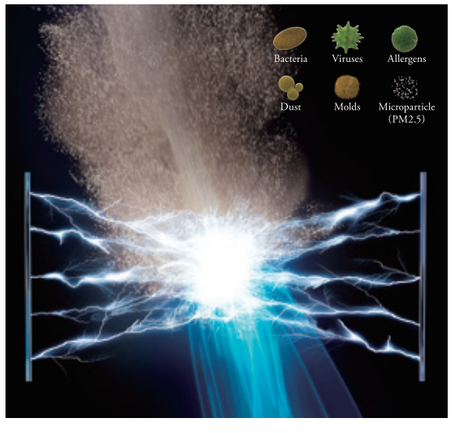
<Test No.> ITEA Report No. T1606028

Model	Name	Method	Bacteria	Viruses	Molds	Allergens	Dust	PM2.5*
FH Series	Plasma Quad	One-Stage Plasma	A	A	B	B	C	
LN Series	Plasma Quad Plus	Two-Stage Plasma	A	A	A	A	A	A

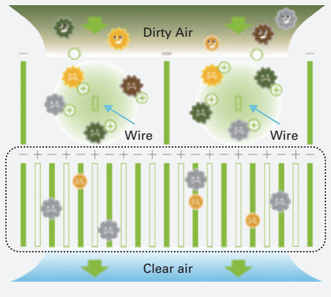
A: Highly effective
B: Effective
C: Partially effective

*PM2.5:
Particles smaller than 2.5μm

Image of Plasma Quad Plus



Principle of Plasma Quad Plus



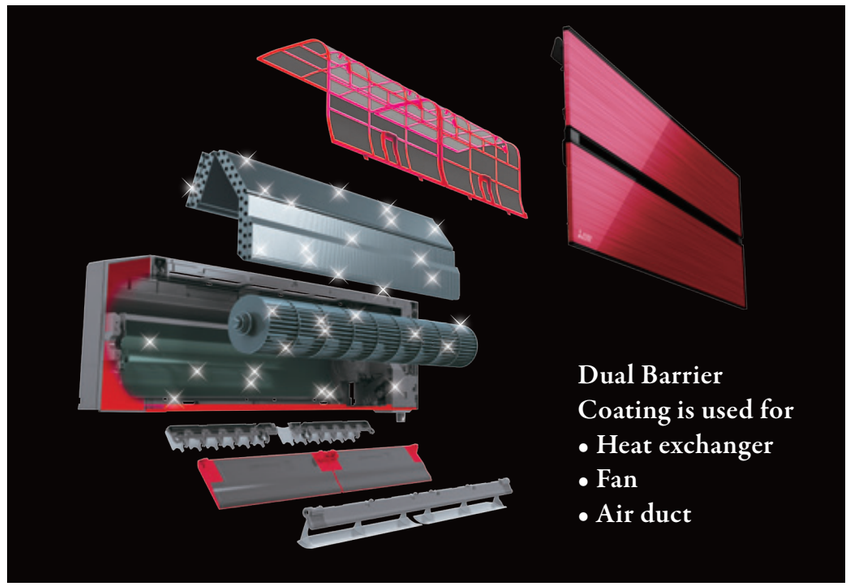
Dust, PM2.5
Viruses
Bacteria
Mold
Allergens

1st stage
- Make plasma.
- Break mold and allergens. Inhibit viruses.
- Dust and PM2.5 given an electrical charge (+).

2nd stage
- Make a strong electrical field.
- The charged dust and PM2.5 (+) are absorbed in the strong electrical field (–).

Dual Barrier Coating

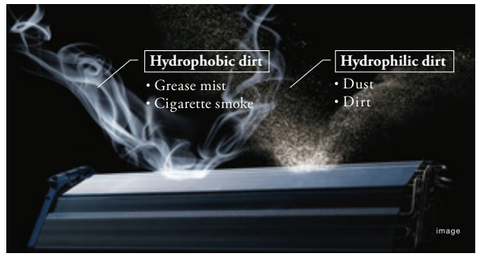
A two-barrier coating prevents dust and greasy dirt from getting into the air conditioner.



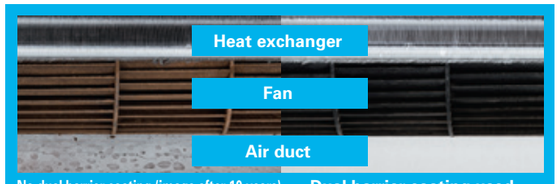
SIAA Anti Fungus *1
JP0512075X0001C
(Fan, Air duct)

State-of-the-art coating technology

Dirt is generally classified into two groups: hydrophilic dirt such as fiber dust and sand dust, and hydrophobic dirt such as oil and cigarette smoke. Mitsubishi Electric's dual barrier coating works as a two-barrier coating with blended "fluorine particles" that prevent hydrophilic dirt penetration and "hydrophilic particles" that prevent hydrophobic dirt from getting into the air conditioner. This dual coating on the inner surface keeps the air conditioner clean year-round.



Comparison of dirt on heat exchanger, fan and air duct (in-house comparison)



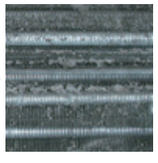
No dual barrier coating (image after 10 years) **Dual barrier coating used**

The inside of the indoor unit gets dirty after many years of usage.

Heat exchanger

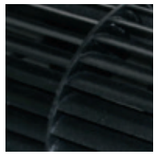
New

10 years later (image)

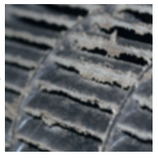


Fan

New



10 years later (image)



Consequences when the inside of the indoor unit is left dirty.

- Deterioration in energy efficiency.
- Musty smell from the unit.

*1 Verified by SIAA test method (JIS Z 2911) with No. JP0501014A0002O on SIAA antifungal agent positive list. Antifungal effect depends on the working environment. Fungicides comply with the SIAA safety criteria.
What is SIAA? *https://www.kohkin.net/en_index/en_siaa.html*

Double Flap

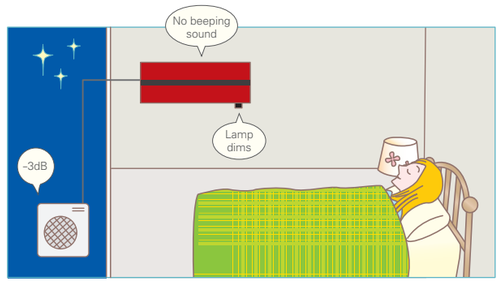
The vanes create various airflows to make each person in the room comfortable. Not only the horizontal vanes, but also the vertical vanes move independently, eliminating hot spots or cold spots throughout the room.

Night Mode

When Night Mode is activated using the wireless remote controller, air conditioner operation will switch to the following settings.

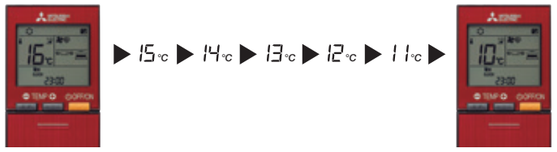
- The brightness of the operation indicator lamp will become dimmer.
- The beeping sound will be disabled.
- The outdoor operating noise will drop to 3dB lower than the rated operating noise specification.

*The cooling/heating capacity may drop.



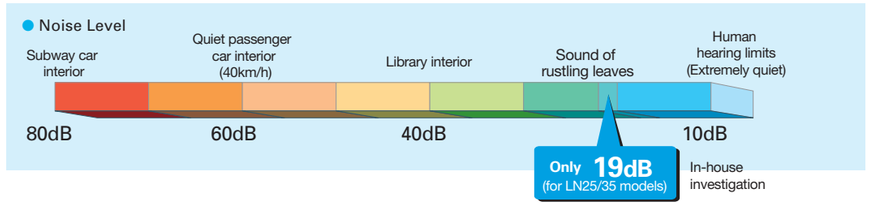
10°C Heating

During heating operation, the temperature can be set in 1°C increments down to 10°C.
This function can also be used with the Weekly Timer setting.



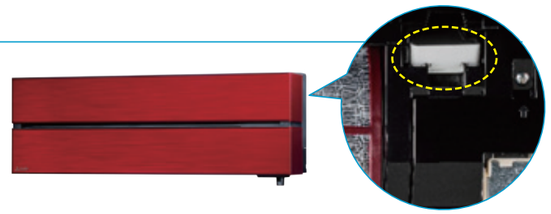
Quiet Operation

The indoor unit noise level is as low as 19dB for LN25/35 models, offering a peaceful inside environment.



Built-in Wi-Fi Interface

The indoor unit is equipped with a Wi-Fi Interface inside an exclusive pocket in the unit.
This eliminates the need to install a Wi-Fi interface, and also contributes to the beautiful appearance since the interface is hidden.



MSZ-L SERIES

DC Inverter · Joint Lap · DC Fan Motor · PAM · Grooved Piping · SEER A+++ (25 / 35 / 50) · SCOP A+++ (25 / 35)

Indoor Unit / Remote Controller

R32 · PUMY R410A

GOOD DESIGN AWARD 2016 BEST 100

<Pearl White>

MSZ-LN18/25/35/50/60VG2V

<Ruby Red>

MSZ-LN18/25/35/50/60VG2R

<Natural White>

MSZ-LN18/25/35/50/60VG2W

<Onyx Black>

MSZ-LN18/25/35/50/60VG2B

Outdoor Unit

R32

MUZ-LN25/35VG2

MUZ-LN50VG2

MUZ-LN60VG

3D i-see Sensor · AREA · HUMAN · Econo Cool · AUTO VANE · Plasma Quad Plus · V Blocking Filter (Optional) · Dual Barrier Coating · Deodorising Filter · Double Vane · SWING · SWING · AUTO · Weekly Timer · i save

ACO · Auto Restart · Low Temp Cooling · Optional · Group Control (Optional) · M-NET connection (Optional) · Wi-Fi Interface · MXZ connection (18 / 25 / 35 / 50) · 10°C · Indoor · Night · Back Light Remote · Cleaning-free pipe route · Flare connection · Self Diagnosis · Failure Recall

Type				Inverter Heat Pump				
Indoor Unit				MSZ-LN18VG2	MSZ-LN25VG2	MSZ-LN35VG2	MSZ-LN50VG2	MSZ-LN60VG2
Outdoor Unit				for MXZ connection	MUZ-LN25VG2	MUZ-LN35VG2	MUZ-LN50VG2	MUZ-LN60VG
Refrigerant				Single: R32(*1) / Multi: R410A or R32(*1)				
Power Supply	Source			Outdoor Power Supply				
	Outdoor (V / Phase / Hz)			230 / Single / 50				
Cooling	Design load		kW	–	2.5	3.5	5.0	6.1
	Annual electricity consumption (*2)		kWh/a	–	83	129	205	285
	SEER (*4)			–	10.5	9.5	8.5	7.5
		Energy efficiency class		–	A+++	A+++	A+++	A++
	Capacity	Rated	kW	–	2.5	3.5	5.0	6.1
		Min-Max	kW	–	1.0 - 3.5	0.8 - 4.0	1.0 - 6.0	1.4 - 6.9
	Total Input	Rated	kW	–	0.485	0.820	1.380	1.790
Heating (Average Season)(*5)	Design load		kW	–	3.0 (-10°C)	3.6 (-10°C)	4.5 (-10°C)	6.0 (-10°C)
	Declared Capacity	at reference design temperature	kW	–	3.0 (-10°C)	3.6 (-10°C)	4.5 (-10°C)	6.0 (-10°C)
		at bivalent temperature	kW	–	3.0 (-10°C)	3.6 (-10°C)	4.5 (-10°C)	6.0 (-10°C)
		at operation limit temperature	kW	–	2.5 (-15°C)	3.2 (-15°C)	4.2 (-15°C)	6.0 (-15°C)
	Back up heating capacity		kW	–	0.0 (-10°C)	0.0 (-10°C)	0.0 (-10°C)	0.0 (-10°C)
	Annual electricity consumption (*2)		kWh/a	–	807	987	1369	1826
	SCOP (*4)			–	5.2	5.1	4.6	4.6
		Energy efficiency class		–	A+++	A+++	A++	A++
	Capacity	Rated	kW	–	3.2	4.0	6.0	6.8
		Min-Max	kW	–	0.7 - 5.4	0.9 - 6.3	1.0 - 8.2	1.8 - 9.3
	Total Input	Rated	kW	–	0.600	0.820	1.480	1.810
Operating Current (Max)			A	–	7.1	9.9	13.9	15.2
Indoor Unit	Input	Rated	kW	0.027	0.027	0.027	0.034	0.040
	Operating Current(Max)		A	0.3	0.3	0.3	0.4	0.4
	Dimensions	H*W*D	mm	307-890-233	307-890-233	307-890-233	307-890-233	307-890-233
	Weight		kg	14.5 (W) 15.5 (V, R, B)	14.5 (W) 15.5 (V, R, B)	14.5 (W) 15.5 (V, R, B)	15 (W) 16 (V, R, B)	15 (W) 16 (V, R, B)
	Air Volume (SLo-Lo-Mid-Hi-SHi(*3))	Cooling	m³/min	4.7 - 5.9 - 7.1 - 9.2 - 12.4	4.7 - 5.9 - 7.1 - 9.2 - 12.4	4.7 - 5.9 - 7.1 - 9.2 - 13.0	5.7 - 7.6 - 8.8 - 10.6 - 13.9	7.1 - 8.8 - 10.6 - 12.7 - 15.7
		Heating	m³/min	4.5 - 6.6 - 7.5 - 11.0 - 13.9	4.5 - 6.6 - 7.5 - 11.0 - 13.9	4.5 - 6.6 - 7.5 - 11.0 - 13.9	5.4 - 6.4 - 8.5 - 10.7 - 15.7	6.6 - 9.5 - 11.5 - 13.6 - 15.7
	Sound Level (SPL) (SLo-Lo-Mid-Hi-SHi(*3))	Cooling	dB(A)	19 - 23 - 29 - 36 - 42	19 - 23 - 29 - 36 - 42	19 - 24 - 29 - 36 - 43	27 - 31 - 35 - 39 - 46	29 - 37 - 41 - 45 - 49
		Heating	dB(A)	19 - 24 - 29 - 38 - 45	19 - 24 - 29 - 38 - 45	19 - 24 - 29 - 38 - 45	25 - 29 - 34 - 39 - 47	29 - 37 - 41 - 45 - 49
	Sound Level (PWL)	Cooling	dB(A)	58	58	59	60	65
Outdoor Unit	Dimensions	H*W*D	mm	–	550-800-285	550-800-285	714-800-285	880-840-330
	Weight		kg	–	33	34	40	55
	Air Volume	Cooling	m³/min	–	34.3	34.3	40.0	50.1
		Heating	m³/min	–	32.7	32.7	40.5	51.3
	Sound Level (SPL)	Cooling	dB(A)	–	46	49	51	55
		Heating	dB(A)	–	49	50	54	55
	Sound Level (PWL)	Cooling	dB(A)	–	60	61	64	65
	Operating Current (Max)		A	–	6.8	9.6	13.5	14.8
	Breaker Size		A	–	10	10	16	16
Ext. Piping	Diameter	Liquid/Gas	mm	–	6.35/9.52	6.35/9.52	6.35/9.52	6.35/12.7
	Max.Length	Out-In	m	–	20	20	30	30
	Max.Height	Out-In	m	–	12	12	12	15
Guaranteed Operating Range (Outdoor)		Cooling	℃	–	-10 ~ +46	-10 ~ +46	-10 ~ +46	-10 ~ +46
		Heating	℃	–	-15 ~ +24	-15 ~ +24	-15 ~ +24	-15 ~ +24

(*1) Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to 550. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 550 times higher than 1 kg of CO_2, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional.
The GWP of R32 is 675 in the IPCC 4th Assessment Report.
(*2) Energy consumption based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.
(*3) SHi: Super High
(*4) SEER, SCOP and other related description are based on COMMISSION DELEGATED REGULATION (EU) No.626/2011. The temperature conditions for calculating SCOP are based on "Average Season".
(*5) Please see page 53-55 for heating (warmer season) specifications.