**MSZ-L SERIES**

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.

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### 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.**

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.
High Energy Efficiency

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 SCP 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.

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.

No occupancy Auto-Off mode

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.

R32 Refrigerant

The new R32 refrigerant has a global warming potential approximately \( \frac{1}{3} \) that of our current refrigerant, R410A; thereby dramatically reducing the negative impact more than ever. Actively introducing the new R32 refrigerant to suppress global warming, Mitsubishi Electric continues to promote manufacturing while considering the environment.

Comparison of Global Warming Potential

Global warming potential approx.

\[
\begin{align*}
\text{R410A} & : 2088 \\
\text{R32} & : 675 \\
\end{align*}
\]

* Source: IPCC 4th Assessment Report, global warming potential (GWP) 100-year value, Comparison of 2088 (R410A) and 675 (R32).
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 125 minutes in a 28m² test space.

*Test No.* KRECS-Bio, Test Report No. 20160118

**Viruses**

Test results have confirmed that Plasma Quad Plus neutralizes 99% of virus particles in 72 minutes in a 26m² test space.

*Test No.* Vicenter, SMC No. 28-602

**Molds**

Test results have confirmed that Plasma Quad Plus neutralizes 99% of mold in 135 minutes in a 28m² test space.

*Test No.* Japan Food Research Laboratories Test Report No. 1606853021-0201

**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 99% of cat fur and pollen.

*Test No.* ITEA Report No. T1609028

**PM2.5**

Test results have confirmed that Plasma Quad Plus removes 99% of PM2.5 in 145 minutes in a 28m² test space.

*Test No.* ITEA Report No. T1606028

**Dust**

Test results have confirmed that Plasma Quad Plus removes 98.7% of dust and mites.

*Test No.* ITEA Report No. T1606028

<table>
<thead>
<tr>
<th>Model</th>
<th>Name</th>
<th>Method</th>
<th>Bacteria</th>
<th>Viruses</th>
<th>Molds</th>
<th>Allergens</th>
<th>Dust</th>
<th>PM2.5*</th>
</tr>
</thead>
<tbody>
<tr>
<td>F+ Series</td>
<td>Plasma Quad One-Stage Plasma</td>
<td>A</td>
<td>A</td>
<td>B</td>
<td>B</td>
<td>C</td>
<td>PM2.5*</td>
<td></td>
</tr>
<tr>
<td>LN Series</td>
<td>Plasma Quad Plus Two-Stage Plasma</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>PM2.5*</td>
<td></td>
</tr>
</tbody>
</table>

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**

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.

Dual Barrier Coating is used for
- Heat exchanger
- 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 “hydrophobic 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)

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

<table>
<thead>
<tr>
<th>Heat exchanger</th>
<th>Fan</th>
</tr>
</thead>
<tbody>
<tr>
<td>New</td>
<td>New</td>
</tr>
<tr>
<td>10 years later (image)</td>
<td>10 years later (image)</td>
</tr>
</tbody>
</table>

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

- Deterioration in energy efficiency.
- Musty smell from the unit.
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.
### Indoor Unit / Remote Controller

**<Pearl White>**

MSZ-LN25/35/60/GWGV

**<Ruby Red>**

MSZ-LN25/35/60/GWGRA

**<Natural White>**

MSZ-LN25/35/60/GWGW

**<Onyx Black>**

MSZ-LN25/35/60/GWGB

### Outdoor Unit

**MUZ-LN25/35VG**

**MUZ-LN60VG**

### Table

<table>
<thead>
<tr>
<th>Type</th>
<th>Nucleon Heat Pump</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indoor Unit</td>
<td>MUZ-LN25/35VG (90 to 98 kW)</td>
</tr>
<tr>
<td></td>
<td>MUZ-LN35/60VG (90 to 98 kW)</td>
</tr>
<tr>
<td></td>
<td>MUZ-LN60/80VG (90 to 98 kW)</td>
</tr>
<tr>
<td></td>
<td>MUZ-LN60/80/90VG (90 to 98 kW)</td>
</tr>
<tr>
<td>Outdoor Unit (4 Phase / 1 Phase)</td>
<td>MUZ-LN25/35VG (90 to 98 kW)</td>
</tr>
<tr>
<td></td>
<td>MUZ-LN60VG (90 to 98 kW)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power Supply</th>
<th>Outdoor (4 Phase / 1 Phase)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>230V / 400V</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cooling Design Load</th>
<th>Energy Efficiency Class</th>
<th>Rated 32kW</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Efficiency (EER)</td>
<td>2.7</td>
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<tr>
<td></td>
<td>Efficiency (COP)</td>
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<tr>
<td>230V / 400V</td>
<td>2.7</td>
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<tr>
<td>230V / 208V</td>
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</tbody>
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<tr>
<th>Heating Capacity (Standalone)</th>
<th>Efficiency (EER)</th>
<th>Rated 32kW</th>
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<tr>
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### Notes

1. Refrigerant leakage contributes to climate change, which means that the amount of refrigerant necessary to protect the atmosphere. The appliance contains a refrigerant that has a GWP equal to 150. This means that 3.1 kg of the refrigerant that would be leaked to the atmosphere. The impact on global warming potential is 150 times higher than 3 kg of CO₂ over a period of 100 years. Never to interfere with the refrigerant circuit unless you are a professional.

2. Precautionary measures are in place to ensure safety.

3. The GWP of refrigerant is 0.005. The ASHRAE Standard 34-2009 recommends precautions.

4. The indoor unit is equipped with a temperature sensor.

5. The outdoor unit has a temperature sensor.

6. The indoor unit is equipped with a temperature sensor.

7. The energy consumption is calculated based on the test results. Actual energy consumption may vary depending on the operating conditions, ambient conditions, and usage patterns.

8. The indoor unit is equipped with a temperature sensor.

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10. The indoor unit is equipped with a temperature sensor.

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12. The indoor unit is equipped with a temperature sensor.