霧ヶ峰
KIRIGAMINE

# MSZ-F SERIES

R410A
Single / Multi

MSZ-FH25/35/50VE2

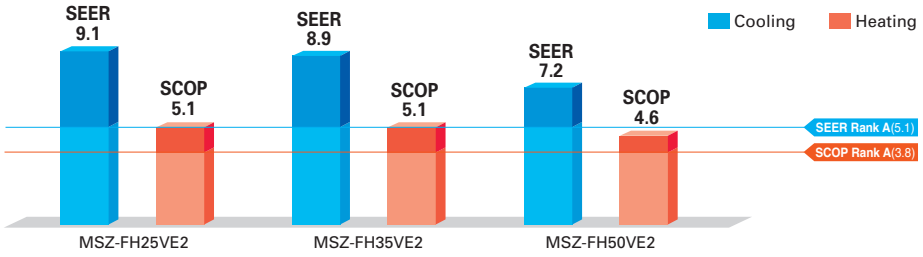
GOOD DESIGN

The F Series is designed for optimum cooling/heating performance as well as operational comfort. Quiet, energy-saving operation is supported by some of Mitsubishi Electric's latest technologies. Advanced functions such as "3D i-see Sensor" temperature control and the Plasma Quad air purification system raise room comfort levels to new heights.

## High Energy Efficiency

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

Power consumption has been reduced for the cooling and heating modes thanks to the incorporation of our newest inverter technologies. The high energy efficiency of the Size 25 units has obtained a rating of more than 5.0 for both seasonal coefficient of performance (SCOP) and seasonal energy efficiency rating (SEER).

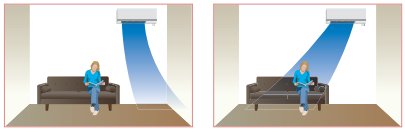



## 3D i-see Sensor

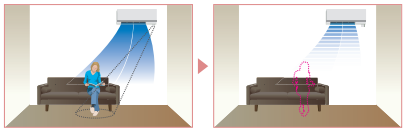
The FH Series is equipped with 3D i-see Sensor, an infrared-ray sensor that measures the temperature at distant positions. While moving to the left and right, eight vertically arranged sensor elements analyze the room temperature in three dimensions. This detailed analysis makes it possible to judge 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.

**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.



**Absence Detection**
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.

## Plasma Quad

Air, like water, is something we use everyday unconsciously. Yet, clean, fresh air is a vital part of creating a healthy space for humans. Achieving this healthy air is Plasma Quad, a plasma-based filter system that effectively removes four kinds of air pollutants; namely, bacteria, viruses, allergens and dust, which the air contains countless particles of.

**Bacteria**
Test results have confirmed that Plasma Quad neutralizes 99% of bacteria in 115 minutes in a 25m³ test space.

Plasma Quad off / Plasma Quad on

<Test No.> KRCES-Bio.Test Report No.23_0317

**Viruses**
Test results have confirmed that Plasma Quad neutralizes 99% of virus particles in 65 minutes in a 25m³ test space.

Without Plasma Quad / With Plasma Quad

* Hepatic cells turn transparent when affected by a virus.

<Test No.> vrc.center, SMC No.23-002




(Image)

**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 neutralizes 94% of cat fur and 98% of pollen.

<Test No.> ITEA No.12M-RPTFEBO22

**Dust**
In a test, air containing dust and ticks was passed through the air cleaning device at the low airflow setting. Before and after measurements confirm that Plasma Quad removes 88.6% of dust and ticks.

<Test No.> ITEA No.12M-RPTFEBO22

# MSZ-F SERIES

EUROVENT CERTIFIED PERFORMANCE

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

## Indoor Unit R410A

GOOD DESIGN

MSZ-FH25/35/50VE2

## Outdoor Unit R410A

MUZ-FH25/35VE

MUZ-FH50VE

## Remote Controller

3D i-see Sensor · AREA · HUMAN · Econo Cool · Pure White · AUTO VANE · Plasma Quad · Silver-ion · Double Vane · SWING HORIZONTAL · SWING VERTICAL · Natural Flow · AUTO · i save · Weekly Timer

ACO · Auto Restart · Low Temp Cooling · HOME LEAVE (Optional) · Group Control (Optional) · M-NET connection (Optional) · Wi-Fi Interface (Optional) · MXZ connection · Cleaning-free pipe system · Flare connection · Self Diagnosis · Failure Recall

| Type | | | | Inverter Heat Pump | | |
|---|---|---|---|---|---|---|
| Indoor Unit | | | | MSZ-FH25VE2 | MSZ-FH35VE2 | MSZ-FH50VE2 |
| Outdoor Unit | | | | MUZ-FH25VE | MUZ-FH35VE | MUZ-FH50VE |
| Refrigerant | | | | R410A(*1) | | |
| Power Supply | Source | | | Outdoor Power supply | | |
| | Outdoor ( V / Phase / Hz ) | | | 230/Single/50 | | |
| Cooling | Design load | | kW | 2.5 | 3.5 | 5.0 |
| | Annual electricity consumption (*2) | | kWh/a | 96 | 138 | 244 |
| | SEER (*4) | | | 9.1 | 8.9 | 7.2 |
| | | Energy efficiency class | | A+++ | A+++ | A++ |
| | Capacity | Rated | kW | 2.5 | 3.5 | 5.0 |
| | | Min-Max | kW | 1.4-3.5 | 0.8-4.0 | 1.9-6.0 |
| | Total Input | Rated | kW | 0.485 | 0.820 | 1.380 |
| Heating (Average Season)(*5) | Design load | | kW | 3.0(-10°C) | 3.6(-10°C) | 4.5(-10°C) |
| | Declared Capacity | at reference design temperature | kW | 3.0(-10°C) | 3.6(-10°C) | 4.5(-10°C) |
| | | at bivalent temperature | kW | 3.0(-10°C) | 3.6(-10°C) | 4.5(-10°C) |
| | | at operation limit temperature | kW | 2.5(-15°C) | 3.2(-15°C) | 5.2(-15°C) |
| | Back up heating capacity | | kW | 0.0(-10°C) | 0.0(-10°C) | 0.0(-10°C) |
| | Annual electricity consumption (*2) | | kWh/a | 819 | 986 | 1372 |
| | SCOP (*4) | | | 5.1 | 5.1 | 4.6 |
| | | Energy efficiency class | | A+++ | A+++ | A++ |
| | Capacity | Rated | kW | 3.2 | 4.0 | 6.0 |
| | | Min-Max | kW | 1.8-5.5 | 1.0-6.3 | 1.7-8.7 |
| | Total Input | Rated | kW | 0.580 | 0.800 | 1.480 |
| Operating Current (Max) | | | A | 9.6 | 10.0 | 14.0 |
| Indoor Unit | Input | Rated | kW | 0.029 | 0.029 | 0.031 |
| | Operating Current(Max) | | A | 0.4 | 0.4 | 0.4 |
| | Dimensions | H*W*D | mm | 305(+17)-925-234 | 305(+17)-925-234 | 305(+17)-925-234 |
| | Weight | | kg | 13.5 | 13.5 | 13.5 |
| | Air Volume (SLo-Lo-Mid-Hi-SHi(*3))(Dry/Wet)) | Cooling | $m^3$/min | 3.9-4.7-6.3-8.6-11.6 | 3.9-4.7-6.3-8.6-11.6 | 6.4-7.4-8.6-10.1-12.4 |
| | | Heating | $m^3$/min | 4.0-4.7-6.4-9.2-13.2 | 4.0-4.7-6.4-9.2-13.2 | 5.7-7.2-9.0-11.2-14.6 |
| | Sound Level (SPL) (SLo-Lo-Mid-Hi-SHi(*3)) | Cooling | dB(A) | 20-23-29-36-42 | 21-24-29-36-42 | 27-31-35-39-44 |
| | | Heating | dB(A) | 20-24-29-36-44 | 21-24-29-36-44 | 25-29-34-39-46 |
| | Sound Level (PWL) | Cooling | dB(A) | 58 | 58 | 60 |
| Outdoor Unit | Dimensions | H*W*D | mm | 550-800-285 | 550-800-285 | 880-840-330 |
| | Weight | | kg | 37 | 37 | 55 |
| | Air Volume | Cooling | $m^3$/min | 31.3 | 33.6 | 48.8 |
| | | Heating | $m^3$/min | 31.3 | 33.6 | 51.3 |
| | Sound Level (SPL) | Cooling | dB(A) | 46 | 49 | 51 |
| | | Heating | dB(A) | 49 | 50 | 54 |
| | Sound Level (PWL) | Cooling | dB(A) | 60 | 61 | 64 |
| | Operating Current (Max) | | A | 9.2 | 9.6 | 13.6 |
| | Breaker Size | | A | 10 | 10 | 16 |
| Ext. Piping | Diameter | Liquid/Gas | mm | 6.35/9.52 | 6.35/9.52 | 6.35 / 12.7 |
| | Max.Length | Out-In | m | 20 | 20 | 30 |
| | Max.Height | Out-In | m | 12 | 12 | 15 |
| Guaranteed Operating Range (Outdoor) | | Cooling | ℃ | -10 ~ +46 | -10 ~ +46 | -10 ~ +46 |
| | | Heating | ℃ | -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 1975. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 1975 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 R410A is 2088 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 63 for heating (warmer season) specifications.