



**GD Midea Air-conditioning Equipment Co., Ltd.**

Add: Midea Industrial City, Shunde, Foshan, Guangdong 528311 China

Tel: +86-757-26338535 Fax: +86-757-26338232

E-mail: mdaircon@midea.com.cn

<http://www.midea.com.cn>

<http://www.mideaircon.com> (customer service)

Midea Air Conditioners 2008 | New Refrigerant

# MIDEA

## AIR CONDITIONERS 2008



**New Refrigerant 50Hz**



# Midea Creates A Better Life



## Foreword

Midea has been a world leader in Air Conditioners since its establishment in 1985.

Midea has been exporting Air Conditioners for the last 16 years and has firmly established its footprint worldwide and developed strong partnerships with multinationals. Midea's vertically integrated supply chain enables it to achieve maximum efficiency in production and product development, giving it a competitive edge over other brands.

With over 1000 engineers working round the clock and over 300 new products being developed and 100 new patents filed, Midea is dedicated to continuous improve product quality and excel customer satisfaction. New products account for 30% of total sales volume and 35% of gross profit.

Additionally, Midea provides comprehensive technical training and online customer service to help cater to its clientele worldwide.





## Creates a better life

Midea has established an environmental management system (EMS) for our manufacturing sites based on the internationally recognized ISO 14001 standards. The intention is to further reduce the environmental impact of our activities. But achieving the ISO 14001 certification is not the end of Midea's environmental efforts, we will take all necessary steps to maintain and do better for the environment in the future.

## Comfortable life

Midea products are compliant with the European Directive on the Restriction of the Use of Hazardous Substances in Electrical and Electronic Equipment, also known as the RoHS directive. Besides, Midea established systems for the collection and recycling of waste electrical and electronic products to comply with the WEEE Directive, the directive on Waste Electrical and Electronic Equipment.

Midea also recognizes the importance of energy saving. Therefore, we always promote the use of high efficiency refrigerants. In 2007, Midea acquired the R410A certification, which R410A is a leading ozone-friendly and highly energy saving refrigerant for residential air conditioning.

To create a better life, Midea constantly improve its products to ensure they achieve their highest performance under all situations.



# Energy Labeling

The label aims at communicating information about the relative efficiency performance of different appliances to consumers, retailers and manufacturers mainly through the use of a categorical efficiency scale (from A to G), thus facilitating the comparison of efficiency between many products by consumers.

The energy label is particularly effective in giving the consumer correct and well-balanced information about the appliance's consumption/performance ratio in an easy to read and understandable format. Indirectly, it spurs the manufacturer to update the product to bring it as far as possible into line with the consumer's motivated choices.



Energy		Air-conditioner
Manufacturer		
Outside unit		
Inside unit		
<b>More efficient</b>		
A		
B		
C		
D		
E		
F		
G		
<b>Less efficient</b>		
<b>Annual energy consumption, kWh in cooling mode</b>		
<small>(Actual consumption will depend on how the appliance is used and climate)</small>		
<b>Cooling output</b>	<b>kW</b>	
<b>Energy efficiency ratio</b>		
<small>Full load (the higher the better)</small>		
<b>Type</b>	Cooling only	—
	Cooling + Heating	—
	Air cooled	—
	Water cooled	—
<b>Heat output</b>		<b>kW</b>
<b>Heating performance</b>		
<small>A: higher G: lower</small>		
<b>Noise</b>		
<small>(dB(A) re 1 pW)</small>		
<small>Further information is contained in product brochures</small>		
<small>Air-conditioner Energy Label Directive 2002/31/EC</small>		

"A" is the most efficient, "G" the least. The more energy efficient an appliance is, the more money you can save, and the more you help the environment.

<b>A</b>	EER > 3.20	<b>A</b>	COP > 3.60
<b>B</b>	3.20 ≥ EER > 3.00	<b>B</b>	3.60 ≥ COP > 3.40
<b>C</b>	3.00 ≥ EER > 2.80	<b>C</b>	3.40 ≥ COP > 3.20
<b>D</b>	2.80 ≥ EER > 2.60	<b>D</b>	3.20 ≥ COP > 2.80
<b>E</b>	2.60 ≥ EER > 2.40	<b>E</b>	2.80 ≥ COP > 2.60
<b>F</b>	2.40 ≥ EER > 2.20	<b>F</b>	2.60 ≥ COP > 2.40
<b>G</b>	2.20 ≥ EER	<b>G</b>	2.40 ≥ COP

EER: Energy efficiency class in cooling mode  
COP: Energy efficiency class in heating mode

Midea's **Fresco Tech** brings you clean and refreshing air and fills your room with the soothing scent of nature.

### Silver Ion Filter

The Silver ion can kill bacteria or prevent their activity at very low density by destroying their inner-configuration and absorbing their elements in cells. Meanwhile, the Nano Silver attached on the filter release the Silver ion constantly to eliminate bacteria effectively and continuously.



### Active Carbon

Active Carbon Electrostatic Fiber Filter is made of Active Carbon and Electrostatic Fiber Filter. Active Carbon Filter eliminates certain kinds of odors such as ammonia (NH3) and deactivates harmful chemical gas such as formaldehyde(HCHO). By forming positive positions on the filter surface, Electrostatic Fiber Filter traps small dust particles, smoke and pet fur to prevent allergic reactions.

Time (min)	Density of NH3 (mg/m <sup>3</sup> )	NH3 Removal Ratio (mg/m <sup>3</sup> )
0	3.17	-
30	0.51	83.91
60	0.28	91.17
120	0.22	93.06

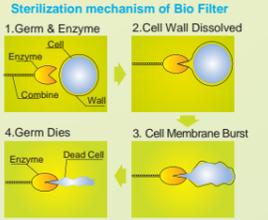


### Bio Filter

Bio Filter consists of a specialized biological enzyme and Eco filter. The Eco filter catches very small airborne dust particles and neutralities bacteria, fungi and microbes. Biological enzyme eliminates bacteria by dissolving their cell wall thus eliminating the problem of re-pollution seen in traditional air conditioners.

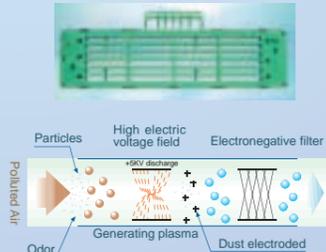
**Sterilization mechanism of Bio Filter**

1. Germ & Enzyme
2. Cell Wall Dissolved
3. Cell Membrane Burst
4. Germ Dies




### Plasma Duct collector

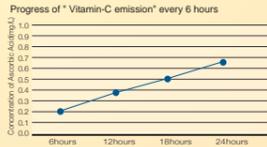
The Plasma Dust Collector can generate an ionization zone. The air is converted to plasma as it passes the high voltage ion generator. 95% of the dust, smoke, and pollen particles are attracted to the electrostatic filter.



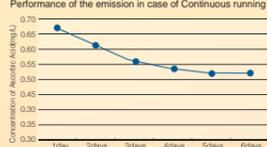

### Vitamin C Filter

The Vitamin C filter fills the air with vitamin C, which softens the skin and reduces stress. The lifetime of the Vitamin C filter is approximately two years.

Progress of "Vitamin-C emission" every 6 hours



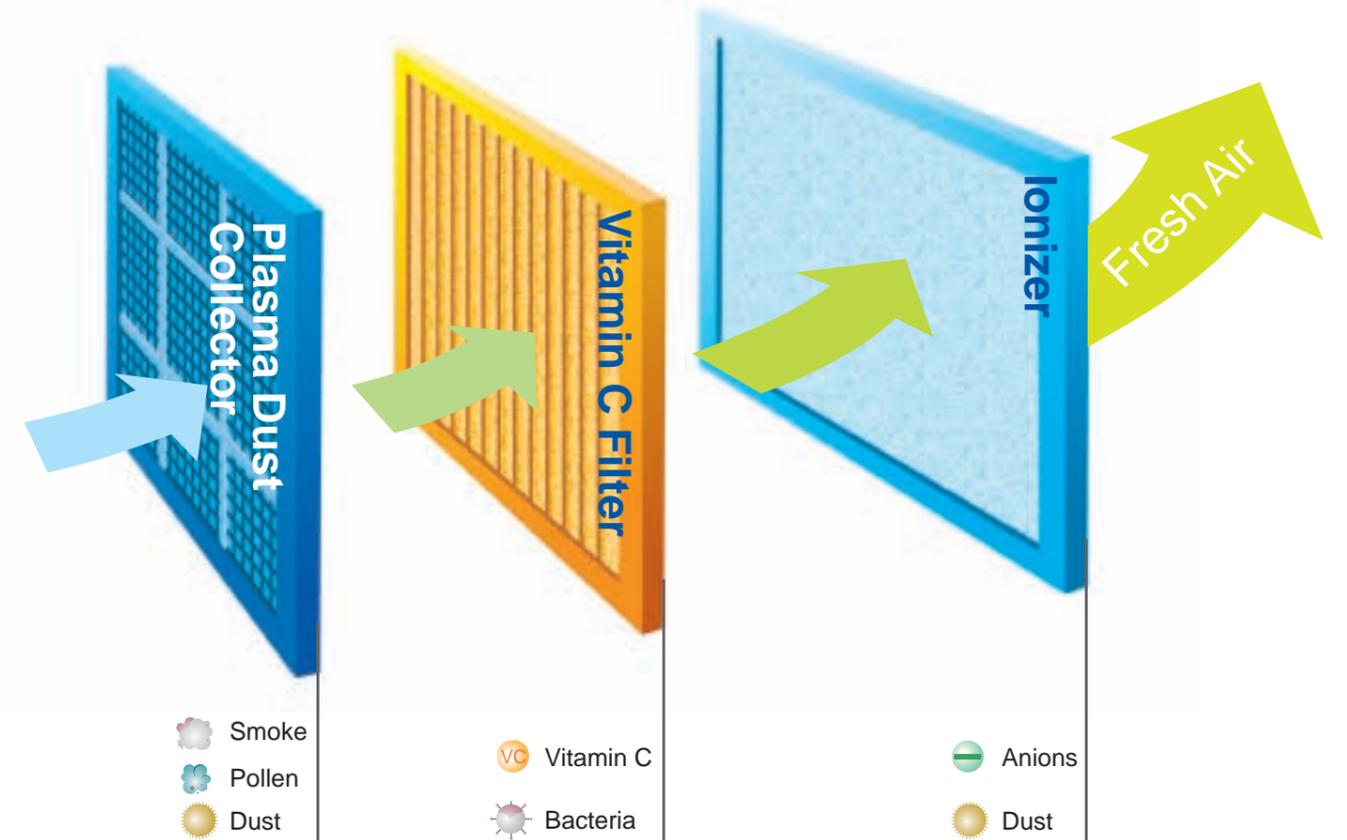
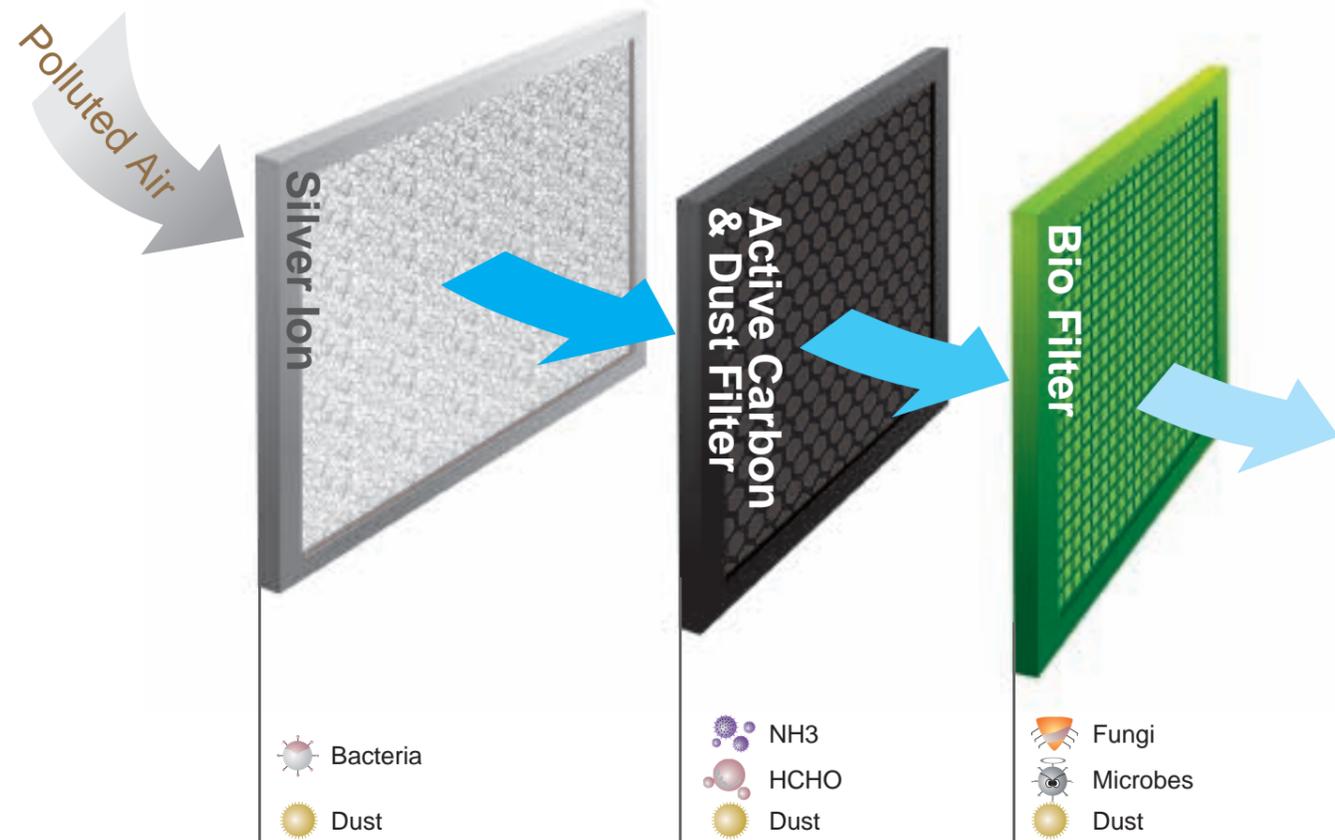
Performance of the emission in case of Continuous running




### Ionizer

**Anions can take care of your body**  
Anions can stimulate the blood circulation system, improve lung function and effectively prevent respiratory passage illnesses (Such as asthma and pneumonia).

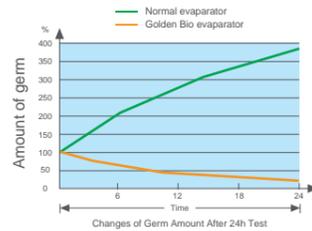
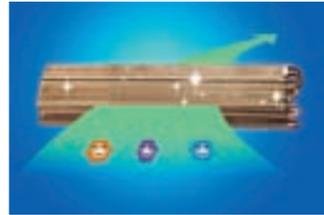
**Anions Eliminate Dust and Smoke:**  
When air passes through the ionizer brush, Anions are automatically generated by ionization (3400V high static field). The amount of anions can reach as high as 1,000,000/cm<sup>3</sup>. The anions deactivate the airborne chemical vapors and dust particles.

# Golden Tech

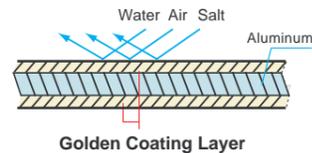
## Golden Bio Evaporator

It can efficiently prevent bacteria from breeding and spreading. It helps create a health and comfortable environment.



## Golden Anti-corrosive Condenser

The Golden hydrophilic condenser can improve the heating efficiency by accelerating the defrosting process. The unique anti-corrosive golden coating on the condenser can withstand the salty air, rain and other corrosive elements.



### Corrosion test results



Golden condenser



Conventional condenser

# Tele Remote Tech

Midea's Tele Remote Control Technology enables you to control your A/C at anytime and anywhere by telephone.

Automatic tone instruction makes it simple for the A/C setting such as the mode setting, temperature setting and fan speed setting.

Password setting ensures a safe operation.



# Features



### Anti-Cold Air Function (Heat Pump Only)

When the evaporator temperature is warm enough, the fan begins to operate, preventing any cold blasting.



### Anti-Rust Cabinet

Made from electrolytic zinc steel sheet and anti-rust coated components.



### Auto-Restart Function

When the power is off and then on, the unit automatically restores the previous function setting.



### DSP High-speed Chip

Midea inverter air-conditioner use the high speed chip by Texas Instruments, it makes response time of air-conditioner 20 times faster than ordinary MCU, and indoor temperature precisely controlled at  $\pm 0.5^{\circ}\text{C}$ .



### Easy-cleaned Panel

The front panel may be easily removed for periodic cleaning.



### Fresh Air

Midea air conditioner have a pump in the indoor unit, when press the "Fresh Air" button, the pump suck the fresh air from outside, and the indoor polluted air flow out of the room via the air pressure.



### Flexible Wiring Connection

Terminal block makes the cable connecting between indoor and outdoor unit much more flexible.



### Follow Me

With this technology, a temperature sensor is built in the remote controller. When you stay close to the remote controller, the unit will automatically change the operation mode to supply more comfortable temperature just like the air conditioner is following you.



### Free EER Upgrading

Most products in the line-up may be freely upgraded to higher class (from "E" up to "A")



### Hydrophilic Aluminium Fin

In the indoor unit, it improves the cooling efficiency by enabling the unrestricted flow of condensate between the heat exchange fins. In the outdoor unit, it improves the heating efficiency by accelerating the defrosting process.



### Independent Dehumidification

The unit will alternately operate in cooling mode or fan only mode, which assures strong dehumidification while not lowering room temperature.



### Intelligence Eye

The infrared ray caused by heat-radiancy is released by human body every time. This ray can be perceived by the sensor in the air-conditioner. The system can be started and turned off automatically by judging the heat-radiancy changing.



### LCD Display

Control panel adopt LCD display.



### Low Ambient Kit

The unit can operate in cooling mode at low ambient temperature conditions.



### Low Noise Air Flow System

**Large Diameter Cross Flow Fan**  
Without decreasing the flow volume, large diameter cross flow fan can greatly reduce the indoor unit's noise level by lowering the fan speed.



### Multi-Bend Heat Exchanger

Compared with conventional models, Midea's air-conditioners adopt multi-bend heat exchangers. It helps increase the heat-exchange surface so that it improves efficiency.



### Mutually Exchange system

Alternation operation mode can be realized via computer, extending the compressor.



### Operating at Full Range Voltage

Air Conditioner can run when the voltage is 250V or 160V.



### Oxygen Generating Mechanism

The oxygen enrichment membrane in the outdoor unit can increase the oxygen density.



### PTC Heater

Safety PTC heating element.



### Self-cleaning

This function can be selected by remote controller. When the "CLEAN" button is pressed, the indoor unit will automatically clean the evaporator. This function can restrict the breeding of bacteria in the unit and keep the air fresh.



### Self-diagnosis and Auto-protection Function

This function can electronically detect the errors and display the diagnosis by a series of flashing LEDs on the indoor unit. Then the unit will automatically switch to protection mode.



### Sleep Mode

This function enables the unit to automatically increase (cooling) or decrease (heating)  $1^{\circ}\text{C}$  per hour for the first two hours, then hold steady for the next 5 hours, after that the unit will stop operation. It can maintain the most comfortable temperature and save energy.



### Soft-starter Kit

It can keep the starting current within the limit of 45A, which is suitable for some countries such as Australia, and the North European countries.



### Temp. Compensation (Optional)

The ceiling temperature is often higher than the floor temperature. This function can automatically eliminate the temperature difference between them.



### Trapeziform Innergroove Copper

Compared with the triangular innergroove copper, it allows more adequate refrigerant to go through, improving heat exchange efficiency and lowers power consumption.



### Turbo Mode

This function enables the unit to reach the preset temperature in the shortest time.



### Two-direction Air Vane Technology

In cooling mode, the air vane opens counterclockwise, which directs the air horizontally. It allows for rapid and evenly distributed temperature fall. In heating mode, the air vane opens clockwise, which directs the air towards the floor. It allows for rapid and evenly distributed temperature rise.



### Two-speed outdoor fan (applicable to models > 21000Btu/h)

With 2-speed fan motor, the outdoor unit can operate powerfully at high speed or can be adjusted to quiet and low speed operation at night.



### Valve Protection Cover

It protects the valves and prevents water from dripping.

# How to Read the Models?

M S H I-12 H R D N1-Q D2 F

## Special Function

**F** Ionizer      **H** Fresh Air      **J** Plasma  
**L** Low Ambient Kit      **O** Oxygen Generator      **P** Soft-starter Kit  
**Q** Quicker Connect      **U** UV Generator

## EER Code

A0-A9      1.0-1.9  
 B0-B9      2.0-2.9  
 C0-C9      3.0-3.9  
 D0-D9      4.0-4.9

## Power Code

**Q**      **Power Supply (V-Hz-Ph)**  
 220-240V~, 50Hz, 1Phase  
**R**      380-420V~, 50Hz, 3Phase  
**S**      380V~, 50Hz, 3Phase

## Refrigerant

**N1** R410A      **N2** R407C  
**N3** R134a      - R22

## Inverter Type

**I** AC Inverter      **D** DC Inverter  
 - Constant Speed

## Control Mode

**W** Wire Control      **E** Electric Control  
**M** Mechanical Control      **R** Remote Control

## Function Code

**C** Cooling Only  
**H** Heat Pump  
**A** Heat Pump with Auxiliary Electric Heater  
**E** Cooling & Electric Heater

## Capacity

Air Conditioner: Cooling/Heating Capacity (x1000Btu/h)  
 Dehumidifier: Moisture Removal Volume (L/day)

## Connection Type

**I** Multi Type  
 - Single Type

## Product Series

**Residential**  
**C** Corona Split      **E** Elite Split  
**G** Glory Split      **H** Alfa Split  
**B** Bright Split      **P** Castle Split

## Unit Type

**Residential**  
**S** Split Wall-mounted  
**W** Window  
**P** Portable  
**D** Dehumidifier  
**O** Outdoor unit

## Midea

# Remote Control

On/Off Button

Mode Setting

COOL / HEAT / DRY / FAN / AUTO

Automatic Swing

Lock Pinhole Button

Reset Pinhole Button

Fan Speed Adjustment

HIGH / MED / LOW / AUTO

Air Flow Direction Setting

Temperature Setting  
(Time Adjustment)

Timer Setting

TIMER / CANCEL

Clock Setting

LED Display

Sleep Mode

Turbo

Sliding Cover

- Applicable to most of Midea's models.
- Button design might be slightly different from the actual one depending on individual models.

# Midea Aircon Model Line Up 2008

( Btu/h )    **7,000**    **9,000**    **12,000**    **18,000**    **21,000**    **24,000**    **28,000**

Family	Model Type	7,000	9,000	12,000	18,000	21,000	24,000	28,000	Range
Castle Family	DC Inverter								19-21
	DC Inverter Multi								
Vertu Family	DC Inverter								22-28
	DC Inverter Multi								
	AC Inverter Multi								
	Single (ON/OFF)								
	Multi (ON/OFF)								
Alfa Family	DC Inverter								29-36
	DC Inverter								
	DC Inverter Multi								
	AC Inverter Multi								
	Single (ON/OFF)								
	Multi (ON/OFF)								
Corona Family	DC Inverter								37-44
	DC Inverter								
	DC Inverter Multi								
	AC Inverter Multi								
	Single (ON/OFF)								
	Multi (ON/OFF)								
Dorado Family	DC Inverter								45-47
	Single (ON/OFF)								
Elite Eco Family	Single (ON/OFF)								48-53
	Multi (ON/OFF)								
	AC Inverter								
	AC Inverter Multi								
Glory Plus Family	Single (ON/OFF)								54-59
	Multi (ON/OFF)								
	AC Inverter								
	AC Inverter Multi								

# Midea Aircon Model Line Up 2008

( Btu/h )

7,000

9,000

12,000

18,000

21,000

24,000

28,000

Aqua



Vita



Helit



Floor Standing



Floor Standing ( J )



Floor Standing ( S2 )

Portable



M3 Portable



M1 Portable



K1 Portable



K/K2 Portable



Mini Portable

Dehumidifier



F2 Dehumidifier



F Dehumidifier



T Dehumidifier



B Dehumidifier

Window



61-62

63-64

65-66

67-68

70-78

79-82

83-84



## Midea Creates A Better Life

# Family Resident ( Page 19 ~ Page 59 )

### Features

- Silver Ion Filter
- Bio Filter
- Plasma Duct Collector
- Vitamin C Filter
- Ionizer
- Anti-Rust Cabinet
- Auto-Restart Function
- DSP High-speed Chip
- Easy-cleaned Panel
- Follow Me
- Free EER Upgrading
- Golden Tech
- Hydrophilic Aluminium Fin
- Intelligence Eye
- LCD Display
- Low Ambient Kit
- Multi-Bend Heat Exchanger
- Mutually Exchange System
- Operating at Full Range Voltage
- Oxygen Generating Mechanism
- PTC Heater
- Self-clean
- Self-diagnosis and Auto-protection Function
- Sleep Mode
- Temp. Compensation
- Trapeziform Innergroove Copper
- Turbo Mode
- Two-direction Air Vane Technology
- Two-speed Outdoor Fan (applicable to models > 21000Btu/h)

# Midea Aircon Family



With full experience in the air conditioning field, Midea constantly devotes itself into breakthrough of new technology research and development. All family products meet the residential customer demand by possessing of high energy efficiency ratio and it offers a better solution for energy saving and environment protection by using new refrigerant.

Midea releases the concept of Family Product by controlling the international standard production process and managing system. The family which meets each panel can be arranged to five types products: single on/off, DC Inverter, DC Inverter Multi, AC Inverter Multi and Multi on/off.



## Family Combinations

The indoor units of DC type can be matched freely when it is demanded if their capacities match. Midea indoor unit has strong flexibility. Any quantities of indoor unit, even coming from different family, can be droved in one outdoor unit.



# Castle Family

220-240V~,50Hz



## DC Inverter



## DC Inverter

- MSP-07HRDN1-QD5
- MSP-09HRDN1-QD5
- MSP-12HRDN1-QD0

## DC Inverter Multi

## DC Inverter

- M20B-18HRDN1
- M30A-27HRDN1
- M40A-27HRDN1



## Castle Family\_DC Inverter

### Features:



MSP-07/09HRDN1-QD5	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MSP-12HRDN1-QD0	•	•	•	•	•	•	•	•	•	•	•	•	•	•

• Standard • Optional

### Specification:

■ Cooling Only ■ Cooling & Heating

■ MSP-07HRDN1-QD5 ■ MSP-09HRDN1-QD5 ■ MSP-12HRDN1-QD0  
 ■ MOC-07HDN1-QD5 ■ MOC-09HDN1-QD5 ■ MOL-12HDN1-QD0

Model			MSP-07HRDN1-QD5 MOC-07HDN1-QD5	MSP-09HRDN1-QD5 MOC-09HDN1-QD5	MSP-12HRDN1-QD0 MOL-12HDN1-QD0
<b>Capacity</b>					
Cooling	Btu/h		7000(2400-9100)	8500(2600-10500)	11000(3400-13600)
	kW		2.1(0.7-2.7)	2.5(0.8-3.1)	3.2(1.0-4.0)
Heating	Btu/h		8000(2500-9600)	9000(2700-11100)	11500(3500-14800)
	kW		2.3(0.7-2.8)	2.6(0.8-3.3)	3.4(1.0-4.3)
<b>Electrical Parts</b>					
Voltage,Frequency,Phase		V~,Hz,Ph	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1
Power Input	Cooling	W	450(190-700)	550(210-740)	800(300-1160)
	Heating	W	520(200-720)	580(220-800)	840(320-1260)
Operating Current	Cooling	A	2.0(0.9-3.2)	2.5(1.0-3.2)	3.7(1.3-5.0)
	Heating	A	2.3(0.9-3.3)	2.6(1.1-3.5)	4.0(1.4-5.5)
<b>Performance</b>					
EER	Btu/W.h, W/W		15.6,4.56	15.5,4.53	13.7, 4.02
COP	W/W		4.51	4.55	4.01
Energy Rate			A	A	A
Air Flow Volume	Indoor	m <sup>3</sup> /h	620	620	640
Noise Level	Indoor(Hi/Med/Lo)	dB(A)	37/33/28	37/33/28	39/34/29
	Outdoor	dB(A)	52	52	52
<b>Net Dimension &amp; Weight</b>					
Indoor unit	WxHxD	mm	855x296x177	855x296x177	855x296x177
Outdoor unit	WxHxD	mm	760x590x285	760x590x285	848x650x358
Net Weight	Indoor/Outdoor	kg	11/40	11/40	11/50
<b>Packing Dimension &amp; Gross Weight</b>					
Indoor unit	WxHxD	mm	935x380x260	935x380x260	935x380x260
Outdoor unit	WxHxD	mm	887x655x355	887x655x355	968x695x425
Gross Weight	Indoor/Outdoor	kg	13/44	13/44	14/56
<b>Piping Connection</b>					
Liquid Side		mm(inch)	Ø6.35	Ø6.35	Ø6.35
Gas Side		mm(inch)	Ø9.53	Ø9.53	Ø12.7
<b>Applicable Area</b>					
		m <sup>2</sup>	12-18	16-24	20-30
<b>Stuffing Quantity</b>					
20'/40'/40'HQ		Set	96/186/236	96/186/236	80/160/190

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
 2.The values given in the table for the noise level reflect the levels in anechoic chamber.







## Vertu Family\_AC Inverter Multi

Features:



Model	Icon 1	Icon 2	Icon 3	Icon 4	Icon 5	Icon 6	Icon 7	Icon 8	Icon 9	Icon 10	Icon 11	Icon 12
MSV11-07HRDN1	•	•	•	•	•	•	•	•	•	•	•	•
MSV11-09HRDN1	•	•	•	•	•	•	•	•	•	•	•	•
MSV11-12HRDN1	•	•	•	•	•	•	•	•	•	•	•	•
MSV11-18HRDN1	•	•	•	•	•	•	•	•	•	•	•	•

• Standard • Optional

### Types of Indoor Unit Combinations

Remarks: One outdoor unit can drive 4 free-matched indoor units at most.

13 Types				23 Types				40 Types													
One Unit	Two Units			One Unit	Two Units			Three Units			One Unit	Two Units			Three Units			Four Units			
7	7+7	9+9	12+12	7	7+7	9+9	12+12	7+7+7	7+9+9	7+12+12	7	7+7	9+9	12+12	7+7+7	7+9+9	7+12+12	9+12+12	7+7+7+7	7+7+9+9	9+9+9+9
9	7+9	9+12	12+18	9	7+9	9+12	12+18	7+7+9	7+9+12	7+9+18	9	7+9	9+12	12+18	7+7+9	7+9+12	9+9+18	9+12+18	7+7+7+9	7+7+9+12	9+9+9+12
12	7+12	9+18		12	7+12	9+18		7+7+12	7+9+12	7+12+12	12	7+12	9+18		7+7+12	7+9+12	9+9+12	12+12+12	7+7+7+12	7+9+9+12	7+7+12+12
18	7+18			18	7+18			7+7+18	9+9+18		18	7+18			7+7+18	7+12+12	9+9+18		7+7+7+18	7+9+9+12	7+9+12+12

• Standard • Optional

### Specification:

■ Cooling Only ■ Cooling & Heating

Indoor Unit

Model			■ MSV11-07HRDN1	■ MSV11-09HRDN1	■ MSV11-12HRDN1	■ MSV11-18HRDN1
Capacity	Cooling/Heating	Btu/h	7000/8500	9000/10000	12000/14000	18000/19000
Air Flow		m³/h	570	570	700	800
Dimension	WxHxD	mm	795x270x165	795x270x165	845x286x165	995x292x194
Packing	WxHxD	mm	850x340x285	850x340x285	905x355x285	1100x415x290
Net/Gross Weight		kg	10.0/11.5	10.0/11.5	10.5/12.0	12.5/15.5
Indoor noise level (Hi/Mi/Lo)		dB(A)	37	37	40	42
Liquid side/Gas side		mm	Ø6.35/Ø9.53	Ø6.35/Ø9.53	Ø6.35/Ø12.7	Ø6.35/Ø12.7

Outdoor Unit

Model				■ M20A-18HRIN1	■ M30A-27HRIN1	■ M40A-27HRIN1			
Power		V-,Hz,Ph		220-240,50,1		220-240,50,1			
Voltage, Frequency,Phase		V-,Hz,Ph		220-240,50,1		220-240,50,1			
Capacity									
Cooling	min.-nom.-max.	Btu/h	7000 - 18000 - 26600		7000 - 27000 - 31700		7000 - 27000 - 37200		
	min.-nom.-max.	kW	2.0 - 5.3 - 7.8		2.0 - 7.8 - 9.3		2.0 - 8.0 - 10.9		
Heating	min.-nom.-max.	Btu/h	7500 - 23500 - 28600		7500 - 30700 - 36900		7500 - 32000 - 38200		
	min.-nom.-max.	kW	2.2 - 6.9 - 8.4		2.2 - 9.0 - 10.8		2.2 - 9.3 - 11.2		
Electrical Data									
Power Input	Cooling	min.-nom.-max.	kW	0.75 - 1.87 - 3.07		0.84 - 2.77 - 3.40		0.86 - 2.80 - 4.36	
	Heating	min.-nom.-max.	kW	0.75 - 2.15 - 3.17		0.82 - 2.80 - 3.72		0.85 - 2.89 - 4.27	
Operating Current	Cooling	min.-nom.-max.	A	3.4 - 11.5 - 14.1		4.0 - 13.5 - 17.0		4.1 - 14.8 - 20.6	
	Heating	min.-nom.-max.	A	3.4 - 11.0 - 14.8		3.6 - 13.2 - 17.2		4.0 - 13.9 - 20.2	
Performance									
EER		W/W	2.83-C		2.82-C		2.85-C		
COP		W/W	3.21-C		3.21-C		3.22-C		
Dimension	WxHxD	mm	845x695x335		845x695x335		895x860x330		
Packing	WxHxD	mm	975x772x405		975x772x405		1043x915x395		
Net/Gross Weight		kg	68/72		72/76		80/84		
Outdoor air flow		m³/h	2500		2500		3500		
Outdoor noise level		dB(A)	59		59		61		

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

## Vertu Family\_Single

Features:



Model	Icon 1	Icon 2	Icon 3	Icon 4	Icon 5	Icon 6	Icon 7	Icon 8	Icon 9	Icon 10	Icon 11	Icon 12
MSV1-07/09/12CRN1	•	•	•	•	•	•	•	•	•	•	•	•
MSV1-07/09/12HRN1	•	•	•	•	•	•	•	•	•	•	•	•
MSV1-18CRN1-QC0F	•	•	•	•	•	•	•	•	•	•	•	•
MSV1-18HRN1-QC0F	•	•	•	•	•	•	•	•	•	•	•	•
MSV1-21/24CRN1-QB8FW	•	•	•	•	•	•	•	•	•	•	•	•
MSV1-21/24HRN1-QB8FW	•	•	•	•	•	•	•	•	•	•	•	•

• Standard • Optional

### Specification:

■ Cooling Only ■ Cooling & Heating

Model			■ MSV1-07CRN1	■ MSV1-07HRN1	■ MSV1-09CRN1	■ MSV1-09HRN1	■ MSV1-12CRN1	■ MSV1-12HRN1
Capacity								
Cooling	Btu/h		7000	7000	9000	9000	12000	12000
	kW		2.1	2.1	2.6	2.6	3.5	3.5
Heating	Btu/h		-	8000	-	10300	-	13000
	kW		-	2.3	-	3.0	-	3.8
Electrical Parts								
Voltage, Frequency,Phase		V-,Hz,Ph	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1
Power Input	Cooling	W	640	640	820	820	1090	1090
	Heating	W	-	650	-	840	-	1050
Operating Current	Cooling	A	2.8	2.8	3.6	3.6	4.8	4.8
	Heating	A	-	2.9	-	3.7	-	4.6
Performance								
EER	Btu/W.h, W/W		10.9,3.21	10.9,3.21	11.0,3.22	11.0,3.22	11.0,3.22	11.0,3.22
COP	W/W		-	3.61	-	3.61	-	3.63
Energy Rate		A	A	A	A	A	A	A
Air Flow Volume	Indoor	m³/h	450	450	550	550	650	650
Noise Level	Indoor(Hi/Me/Lo)	dB(A)	36/33/30	36/33/30	38/35/32	38/35/32	40/37/34	40/37/34
	Outdoor	dB(A)	54	54	54	54	55	55
Net Dimension & Weight								
Indoor unit	WxHxD	mm	795x270x165	795x270x165	795x270x165	795x270x165	845x286x165	845x286x165
Outdoor unit	WxHxD	mm	700x535x235	700x535x235	780x540x250	780x540x250	780x540x250	780x540x250
Net Weight	Indoor/Outdoor	kg	10/27	10/28.5	10/30	10/31	10.5/34	10.5/34
Packing Dimension & Gross Weight								
Indoor unit	WxHxD	mm	850x285x335	850x285x335	850x285x335	850x285x335	905x350x285	905x350x285
Outdoor unit	WxHxD	mm	815x580x325	815x580x325	910x575x335	910x575x335	910x575x335	910x575x335
Gross Weight	Indoor/Outdoor	kg	12.5/30	12.5/30.5	12.5/33	12.5/34	13.5/37	13.5/37
Piping Connection								
Liquid Side	mm(inch)		Ø6.35(1/4")	Ø6.35(1/4")	Ø6.35(1/4")	Ø6.35(1/4")	Ø6.35(1/4")	Ø6.35(1/4")
Gas Side	mm(inch)		Ø9.53(3/8")	Ø9.53(3/8")	Ø9.53(3/8")	Ø9.53(3/8")	Ø12.7(1/2")	Ø12.7(1/2")
Applicable Area								
	m²		10-14	10-14	14-21	14-21	18-26	18-26
Stuffing Quantity								
20/40/40HQ	Set		120/258/292	120/258/292	115/226/268	115/226/268	108/220/258	108/220/258

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.



# Vertu Family\_Single

## Specification:

■ Cooling Only ■ Cooling & Heating

Model		■ MSV1-18CRN1-QC0F	■ MSV1-18HRN1-QC0F	■ MSV1-21CRN1-QB8FW	■ MSV1-21HRN1-QB8FW	■ MSV1-24CRN1-QB8FW	■ MSV1-24HRN1-QB8FW
<b>Capacity</b>							
Cooling	Btu/h	18000	18000	21000	21000	24000	24000
	kW	5.3	5.3	6.2	6.2	7.0	7.0
Heating	Btu/h	-	19000	-	24000	-	27000
	kW	-	5.6	-	7.0	-	7.9
<b>Electrical Parts</b>							
Voltage, Frequency, Phase		V~, Hz, Ph	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1
Power Input	Cooling	W	1720	1720	2190	2190	2500
	Heating	W	-	1730	-	2190	-
Operating Current	Cooling	A	7.5	7.5	9.5	9.5	10.9
	Heating	A	-	7.5	-	9.5	-
<b>Performance</b>							
EER	Btu/W.h, W/W		10.5, 3.07	10.5, 3.07	9.6, 2.81	9.6, 2.81	9.6, 2.81
COP	W/W		-	3.22	-	3.21	-
Energy Rate			B	B	C	C	C
Air Flow Volume	Indoor	m³/h	800	800	920	920	990
Noise Level	Indoor(Hi/Med/Lo)	dB(A)	42/38/35	42/38/35	46/42/39	46/42/39	49/45/42
	Outdoor	dB(A)	54	54	55	55	57
<b>Net Dimension &amp; Weight</b>							
Indoor unit	WxHxD	mm	995x292x194	995x292x194	1180x330x210	1180x330x210	1180x330x210
Outdoor unit	WxHxD	mm	845x695x335	845x695x335	845x695x335	845x695x335	845x695x335
Net Weight	Indoor/Outdoor	kg	12.5/52	12.5/52	17/58	17/58	17/62
<b>Packing Dimension &amp; Gross Weight</b>							
Indoor unit	WxHxD	mm	1100x415x290	1100x415x290	1265x445x305	1265x445x305	1265x445x305
Outdoor unit	WxHxD	mm	965x755x395	965x755x395	965x755x395	965x755x395	965x755x395
Gross Weight	Indoor/Outdoor	kg	16/56	16/56	21/62	21/62	21/65
<b>Piping Connection</b>							
Liquid Side	mm(inch)		Ø6.35(1/4")	Ø6.35(1/4")	Ø9.53(3/8")	Ø9.53(3/8")	Ø9.53(3/8")
Gas Side	mm(inch)		Ø12.7(1/2")	Ø12.7(1/2")	Ø16.0(5/8")	Ø16.0(5/8")	Ø16.0(5/8")
<b>Applicable Area</b>							
	m²		28-40	28-40	34-49	34-49	45-56
<b>Stuffing Quantity</b>							
20/40/40HQ	Set		69/140/166	69/140/166	59/124/143	59/124/143	59/124/143

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

# Vertu Family\_Multi

## Features:



Model	Feature 1	Feature 2	Feature 3	Feature 4	Feature 5	Feature 6	Feature 7	Feature 8	Feature 9	Feature 10	Feature 11	Feature 12
MSV11-09HRN1	●	●	●	●	●	●	●	●	●	●	●	●
MSV11-12HRN1	●	●	●	●	●	●	●	●	●	●	●	●

● Standard ● Optional

## Specification:

■ Cooling Only ■ Cooling & Heating

Indoor Unit			■ MSV11-09HRN1	■ MSV11-12HRN1
Model				
Capacity	Cooling/Heating	Btu/h	9000/10000	12000/13000
Air Flow		m³/h	550	650
Dimension	WxHxD	mm	795x270x165	845x286x165
Packing	WxHxD	mm	850x340x285	905x355x285
Net/Gross Weight		kg	10/12.5	10.5/13.5
Indoor noise level (Hi/Mi/Lo)		dB(A)	38	40
Liquid side/Gas side		mm	Ø6.35/Ø9.53	Ø6.35/Ø12.7

## Outdoor Unit

Model		■ M20A-18HRN1	■ M20A-21HRN1	■ M30A-27HRN1	■ M30A-30HRN1
<b>Capacity</b>					
Cooling/Heating	Btu/h	9000x2/10000x2	9000+12000/10000+14000	9000x3/10000x3	9000x2+12000/10000x2+14000
	kW	2.6x2/2.9x2	2.6+3.5/2.9+4.1	2.6x3/2.9x3	2.6x2+3.5/2.9x2+4.1
<b>Electrical Data</b>					
Voltage, Frequency, Phase		V~, Hz, Ph	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1
Power Input	Cooling/Heating	W	840x2/840x2	850+1150/860+1190	1600+970/1700+1000
Operating Current	Cooling/Heating	A	4.0x2/4.0x2	4.0+5.7/4.1+5.7	8.0+5.1/8.1+5.2
<b>Performance</b>					
EER	W/W		3.10-B	3.04-B	3.03-B
COP	W/W		3.45-B	3.42-B	3.22-C
Dimension	WxHxD	mm	895x655x345	895x655x345	860x830x330
Packing	WxHxD	mm	1045x700x470	1045x700x470	1000x985x425
Net/Gross Weight		kg	76/82	76/82	81/90
Outdoor air flow		m³/h	2200	2200	3200
Outdoor noise level		dB(A)	56	56	58

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.



# Alfa Family\_DC Inverter

Features:

MSH-07/09/12HRDN1-QC2(A)	•	•	•	•	•	•	•	•	•	•	•	•
MSH-18HRDN1-QC2	•	•	•	•	•	•	•	•	•	•	•	•
MSH-24HRDN1-QC0	•	•	•	•	•	•	•	•	•	•	•	•

• Standard • Optional

## Specification:

■ Cooling Only ■ Cooling & Heating

Model		■ MSH-07HRDN1-QC2(A)	■ MSH-09HRDN1-QC2(A)	■ MSH-12HRDN1-QC2(A)	■ MSH-18HRDN1-QC2	■ MSH-24HRDN1-QC0
Capacity		■ MOC-07HDN1-QC2	■ MOC-09HDN1-QC2	■ MOC-12HDN1-QC2	■ MOC-18HDN1-QC2	■ MOC-24HDN1-QC0
Cooling	Btu/h	7000(2500-9000)	9000(3100-11400)	12000(4000-13800)	17500(5300-23000)	24000(7500-30000)
	kW	2.1(0.8-2.6)	2.6(0.9-3.3)	3.5(1.2-4.0)	5.1(1.6-6.7)	7.0(2.2-8.8)
Heating	Btu/h	8000(2500-10500)	10000(3200-13500)	13000(4100-14500)	17000(5100-22000)	25000(7800-32000)
	kW	2.3(0.8-3.0)	2.9(0.9-4.0)	3.8(1.2-4.2)	5.0(1.5-6.4)	7.3(2.3-9.4)
<b>Electrical Parts</b>						
Voltage, Frequency, Phase		V~, Hz, Ph				
Power Input		W				
Cooling		620(210-840)				
Heating		800(230-1080)				
Operating Current		A				
Cooling		2.8(0.9-3.7)				
Heating		3.7(1.2-5.4)				
<b>Performance</b>						
EER		Btu/W.h, W/W				
Cooling		11.3, 3.31				
Heating		11.2, 3.30				
COP		W/W				
Cooling		3.61				
Heating		3.62				
Energy Rate		A				
Cooling		A				
Heating		B				
Air Flow Volume		Indoor m³/h				
Cooling		570				
Heating		570				
Noise Level		Indoor (Hi/Mid/Lo) dB(A)				
Cooling		39/35/29				
Heating		39/35/29				
Outdoor		dB(A)				
Cooling		52				
Heating		52				
<b>Net Dimension &amp; Weight</b>						
Indoor unit		WxHxD mm				
Cooling		750x250x205				
Heating		750x250x205				
Outdoor unit		WxHxD mm				
Cooling		760x590x285				
Heating		760x590x285				
Net Weight		Indoor/Outdoor kg				
Cooling		8.0/39.5				
Heating		8.0/39.5				
<b>Packing Dimension &amp; Gross Weight</b>						
Indoor unit		WxHxD mm				
Cooling		830x335x285				
Heating		830x335x285				
Outdoor unit		WxHxD mm				
Cooling		887x655x355				
Heating		887x655x355				
Gross Weight		Indoor/Outdoor kg				
Cooling		10.0/42.5				
Heating		10.0/42.5				
<b>Piping Connection</b>						
Liquid Side		mm(inch)				
Cooling		Ø6.35				
Heating		Ø6.35				
Gas Side		mm(inch)				
Cooling		Ø9.53				
Heating		Ø9.53				
<b>Applicable Area</b>						
		m²				
Cooling		12-18				
Heating		16-24				
<b>Stuffing Quantity</b>						
20'/40'/40'HQ		Set				
Cooling		102/207/255				
Heating		102/207/255				
Outdoor		94/199/232				
Cooling		74/148/180				
Heating		56/128/140				

Remarks: 1. The above design and specifications are subject to change without prior notice for product improvement.  
2. The values given in the table for the noise level reflect the levels in anechoic chamber.

# Alfa Family\_DC Inverter Multi

Features:

MSHI-07HRIN1	•	•	•	•	•	•	•	•	•	•	•	•
MSHI-09HRIN1	•	•	•	•	•	•	•	•	•	•	•	•
MSHI-12HRIN1	•	•	•	•	•	•	•	•	•	•	•	•
MSHI-18HRDN1	•	•	•	•	•	•	•	•	•	•	•	•

• Standard • Optional

## Types of Indoor Unit Combinations

Remarks: One outdoor unit can drive 4 free-matched indoor units at most.

### 8 Types

One Unit	Two Units
7	7+7
9	7+9
12	7+12

### 17 Types

One Unit	Two Units	Three Units
7	7+7	9+9
9	7+9	7+7+7
12	7+12	7+9+9
		9+9+9
		7+7+9
		7+9+12
		9+9+12

### 40 Types

One Unit	Two Units	Three Units	Four Units
7	7+7	9+9	12+12
9	7+9	9+12	12+18
12	7+12	9+18	7+7+7
18	7+18		7+7+9
			7+7+12
			7+9+9
			7+9+12
			7+9+18
			9+9+12
			9+12+12
			7+7+7+7
			7+7+9+9
			7+7+9+12
			7+7+12+12
			7+9+9+9
			7+9+9+12
			7+9+12+12

## Specification:

■ Cooling Only ■ Cooling & Heating

### Indoor Unit

Model		■ MSHI-07HRIN1	■ MSHI-09HRIN1	■ MSHI-12HRIN1	■ MSHI-18HRDN1
Capacity	Cooling/Heating	Btu/h	7000/8500	9000/11000	12000/14000
Air Flow		m³/h	570	570	675
Dimension	WxHxD	mm	750x250x205	750x250x205	815x280x215
Packing	WxHxD	mm	830x336x285	830x336x285	915x360x290
Net/Gross Weight		kg	8.0/10.0	8.5/10.0	10.0/12.0
Indoor noise level (Hi/Mi/Lo)		dB(A)	40	40	41
Liquid side/Gas side		mm	Ø6.35/Ø9.53	Ø6.35/Ø9.53	Ø6.35/Ø12.7

### Outdoor Unit

Model		■ M2OB-18HRDN1	■ M3OA-27HRDN1	■ M4OA-27HRDN1
Power				
Voltage, Frequency, Phase		V-, Hz, Ph		
		220-240, 50, 1		
<b>Capacity</b>				
Cooling	min.-nom.-max.	Btu/h	7000 - 18000 - 21200	7000 - 27000 - 31400
		kW	2.0 - 5.2 - 6.2	2.0 - 7.8 - 9.2
Heating	min.-nom.-max.	Btu/h	7500 - 21000 - 24200	7500 - 30700 - 36900
		kW	2.2 - 6.1 - 7.1	2.2 - 9.0 - 10.8
<b>Electrical Data</b>				
Power Input	Cooling	min.-nom.-max.	kW	0.65 - 1.60 - 2.28
	Heating	min.-nom.-max.	kW	0.77 - 2.39 - 3.13
Operating Current	Cooling	min.-nom.-max.	A	0.82 - 2.47 - 3.85
	Heating	min.-nom.-max.	A	0.62 - 1.69 - 2.30
	Cooling	min.-nom.-max.	A	0.81 - 2.47 - 3.15
	Heating	min.-nom.-max.	A	0.80 - 2.48 - 3.97
Performance	Cooling	min.-nom.-max.	A	2.9 - 7.0 - 10.1
	Heating	min.-nom.-max.	A	3.6 - 12.0 - 14.8
EER		W/W	2.9 - 8.5 - 10.2	3.5 - 10.5 - 13.9
		W/W	3.25-A	3.26-A
COP		W/W	3.61-A	3.62-A
		W/W	3.61-A	3.62-A
Dimension	WxHxD	mm	845x695x335	845x695x335
Packing	WxHxD	mm	975x772x405	975x772x405
Net/Gross Weight		kg	61/65	68/72
Outdoor air flow		m³/h	2500	2500
Outdoor noise level		dB(A)	57	58

Remarks: 1. The above design and specifications are subject to change without prior notice for product improvement.  
2. The values given in the table for the noise level reflect the levels in anechoic chamber.



# Alfa Family\_AC Inverter Multi

Features:



MSHI-07HRIN1	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MSHI-09HRIN1	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MSHI-12HRIN1	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MSHI-18HRDN1	•	•	•	•	•	•	•	•	•	•	•	•	•	•

• Standard • Optional

## Types of Indoor Unit Combinations

Remarks: One outdoor unit can drive 4 free-matched indoor units at most.

13 Types				23 Types				40 Types						
One Unit	Two Units			One Unit	Two Units			Three Units			Four Units			
7	7+7	9+9	12+12	7	7+7	9+9	12+12	7+7+7	7+9+9	7+12+12	9+12+12	7+7+7+7	7+7+9+9	9+9+9+9
9	7+9	9+12	12+18	9	7+9	9+12	12+18	7+7+9	7+9+12	7+9+9+9	9+12+18	7+7+7+9	7+7+9+12	9+9+9+12
12	7+12	9+18		12	7+12	9+18		7+7+12	7+9+18	9+9+12	12+12+12	7+7+7+12	7+9+9+9	7+7+12+12
18	7+18			18	7+18			7+7+18	7+12+12	9+9+18		7+7+7+18	7+9+9+12	7+9+12+12

## Specification:

■ Cooling Only ■ Cooling & Heating

### Indoor Unit

Model			■ MSHI-07HRIN1	■ MSHI-09HRIN1	■ MSHI-12HRIN1	■ MSHI-18HRDN1
Capacity	Cooling/Heating	Btu/h	7000/8500	9000/11000	12000/14000	18000/19000
Air Flow		m³/h	570	570	675	850
Dimension	WxHxD	mm	750x250x205	750x250x205	815x280x215	920x292x224
Packing	WxHxD	mm	830x336x285	830x336x285	915x360x290	1020x385x320
Net/Gross Weight		kg	8.0/10.0	8.5/10	10.0/12.0	11.5/14.5
Indoor noise level (Hi/Mi/Lo)		dB(A)	40	40	41	43
Liquid side/Gas side		mm	Ø6.35/Ø9.53	Ø6.35/Ø9.53	Ø6.35/Ø12.7	Ø6.35/Ø12.7

### Outdoor Unit

Model				■ M20A-18HRIN1	■ M30A-27HRIN1	■ M40A-27HRIN1
Power		V-,Hz,Ph		220-240,50,1	220-240,50,1	220-240,50,1
Capacity		min.-nom.-max.				
Cooling	Btu/h	7000 - 18000 - 26600	7000 - 27000 - 31700	7000 - 27000 - 37200		
	kW	2.0 - 5.3 - 7.8	2.0 - 7.8 - 9.3	2.0 - 8.0 - 10.9		
Heating		min.-nom.-max.				
Btu/h	7500 - 23500 - 28600	7500 - 30700 - 36900	7500 - 32000 - 38200			
	kW	2.2 - 6.9 - 8.4	2.2 - 9.0 - 10.8	2.2 - 9.3 - 11.2		
Electrical Data		min.-nom.-max.				
Power Input	Cooling	kW	0.75 - 1.87 - 3.07	0.84 - 2.77 - 3.40	0.86 - 2.80 - 4.36	
	Heating	kW	0.75 - 2.15 - 3.17	0.82 - 2.80 - 3.72	0.85 - 2.89 - 4.27	
Operating Current	Cooling	A	3.4 - 11.5 - 14.1	4.0 - 13.5 - 17.0	4.1 - 14.8 - 20.6	
	Heating	A	3.4 - 11.0 - 14.8	3.6 - 13.2 - 17.2	4.0 - 13.9 - 20.2	
Performance		W/W				
EER	2.83-C	2.82-C	2.85-C			
COP	3.21-C	3.21-C	3.22-C			
Dimension	WxHxD	mm	845x695x335	845x695x335	895x860x330	
Packing	WxHxD	mm	975x772x405	975x772x405	1043x915x395	
Net/Gross Weight	kg	68/72	72/76	80/84		
Outdoor air flow	m³/h	2500	2500	3500		
Outdoor noise level	dB(A)	59	59	61		

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

# Alfa Family\_Single

Features:



MSH-07/09/12/18CRN1	•	•	•	•	•	•	•	•	•
MSH-07HRN1	•	•	•	•	•	•	•	•	•
MSH-09/12/18HRN1	•	•	•	•	•	•	•	•	•
MSH-21/24CRN1-QB8W	•	•	•	•	•	•	•	•	•
MSH-21/24HRN1-QB8W	•	•	•	•	•	•	•	•	•

• Standard • Optional

## Specification:

■ Cooling Only ■ Cooling & Heating

Model		■ MSH-07CRN1	■ MSH-07HRN1	■ MSH-09CRN1	■ MSH-09HRN1	■ MSH-12CRN1	■ MSH-12HRN1
Capacity							
Cooling	Btu/h	7000	7000	9000	9000	12000	12000
	kW	2.1	2.1	2.6	2.6	3.5	3.5
Heating	Btu/h	-	8500	-	11000	-	13000
	kW	-	2.5	-	3.2	-	3.8
Electrical Parts							
Voltage, Frequency, Phase	V-,Hz,Ph	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1
Power Input	Cooling	W	640	640	820	820	1090
	Heating	W	-	690	-	890	-
Operating Current	Cooling	A	2.8	2.8	3.8	3.8	4.8
	Heating	A	-	3.0	-	4.0	-
Performance							
EER	Btu/W.h, W/W	10.9,3.21	10.9,3.21	11.0,3.22	11.0,3.22	11.0,3.22	11.0,3.22
COP	W/W	-	3.61	-	3.62	-	3.63
Energy Rate		A	A	A	A	A	A
Air Flow Volume	Indoor	m³/h	450	450	500	500	680
Noise Level	Indoor(Hi/Med/Lo)	dB(A)	34/32/30	34/32/30	36/34/32	36/34/32	39/36/33
	Outdoor	dB(A)	50	50	52	52	53
Net Dimension & Weight							
Indoor unit	WxHxD	mm	750x250x205	750x250x205	750x250x205	750x250x205	815x280x215
Outdoor unit	WxHxD	mm	700x535x235	700x535x235	780x540x250	780x540x250	760x590x285
Net Weight	Indoor/Outdoor	kg	8/31	8/32	8/36	8/37	10/40
Packing Dimension & Gross Weight							
Indoor unit	WxHxD	mm	830x336x285	830x336x285	830x336x285	830x336x285	915x360x290
Outdoor unit	WxHxD	mm	815x580x325	815x580x325	910x575x335	910x575x335	887x655x355
Gross Weight	Indoor/Outdoor	kg	10/34	10/35	10/39	10/40	12/45
Piping Connection							
Liquid Side	mm(inch)	Ø6.35(1/4")	Ø6.35(1/4")	Ø6.35(1/4")	Ø6.35(1/4")	Ø6.35(1/4")	Ø6.35(1/4")
Gas Side	mm(inch)	Ø9.53(3/8")	Ø9.53(3/8")	Ø9.53(3/8")	Ø9.53(3/8")	Ø12.7(1/2")	Ø12.7(1/2")
Applicable Area							
	m²	10-14	10-14	14-21	14-21	18-26	18-26
Stuffing Quantity							
20/40/40HQ	Set	128/268/296	128/268/296	113/238/274	113/238/274	92/195/228	92/195/228

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.



# Alfa Family\_Single

## Specification:

■ Cooling Only ■ Cooling & Heating

Model		■ MSH-18CRN1	■ MSH-18HRN1	■ MSH-21CRN1-QB8W	■ MSH-21HRN1-QB8W	■ MSH-24CRN1-QB8W	■ MSH-24HRN1-QB8W
<b>Capacity</b>							
Cooling	Btu/h	18000	18000	21000	21000	24000	24000
	kW	5.3	5.3	6.2	6.2	7.0	7.0
Heating	Btu/h	-	19000	-	24000	-	27000
	kW	-	5.6	-	6.7	-	7.9
<b>Electrical Parts</b>							
Voltage, Frequency, Phase		V-, Hz, Ph	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1
Power Input	Cooling	W	1720	1720	2190	2190	2500
	Heating	W	-	1630	-	2190	-
Operating Current	Cooling	A	7.5	7.5	9.5	9.5	10.9
	Heating	A	-	7.1	-	9.5	-
<b>Performance</b>							
EER	Btu/W.h, W/W	10.5, 3.07	10.5, 3.07	9.6, 2.81	9.6, 2.81	9.6, 2.81	9.6, 2.81
COP	W/W	-	3.42	-	3.21	-	3.21
Energy Rate		B	B	C	C	C	C
Air Flow Volume	Indoor	m³/h	850	850	920	920	990
	Indoor(Hi/Med/Lo)	dB(A)	43/40/37	43/40/37	47/43/41	47/43/41	49/46/43
Noise Level	Outdoor	dB(A)	54	54	57	57	59
<b>Net Dimension &amp; Weight</b>							
Indoor unit	WxHxD	mm	920x293x224	920x293x224	1080x330x235	1080x330x235	1080x330x235
Outdoor unit	WxHxD	mm	845x695x335	845x695x335	845x695x335	845x695x335	845x695x335
Net Weight	Indoor/Outdoor	kg	13.5/52	13.5/52	17/58	17/58	17/62
<b>Packing Dimension &amp; Gross Weight</b>							
Indoor unit	WxHxD	mm	1020x385x320	1020x385x320	1165x445x320	1165x445x320	1165x445x320
Outdoor unit	WxHxD	mm	965x755x395	965x755x395	965x755x395	965x755x395	965x755x395
Gross Weight	Indoor/Outdoor	kg	15.5/56	15.5/56	21/62	21/62	21/65
<b>Piping Connection</b>							
Liquid Side	mm(inch)		Ø6.35(1/4")	Ø6.35(1/4")	Ø9.53(3/8")	Ø9.53(3/8")	Ø9.53(3/8")
Gas Side	mm(inch)		Ø12.7(1/2")	Ø12.7(1/2")	Ø16.0(5/8")	Ø16.0(5/8")	Ø16.0(5/8")
<b>Applicable Area</b>							
	m²		28-40	28-40	34-49	34-49	45-56
<b>Stuffing Quantity</b>							
20/40/40HQ	Set		68/141/166	68/141/166	60/132/142	60/132/142	60/132/142

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

# Alfa Family\_Multi

## Features:



Model	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
MSHI-09HRN1	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MSHI-12HRN1	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

• Standard • Optional

## Specification:

■ Cooling Only ■ Cooling & Heating

### Indoor Unit

Model		■ MSHI-09HRN1	■ MSHI-12HRN1	
Capacity	Cooling/Heating	Btu/h	9000/10000	12000/14000
Air Flow		m³/h	500	680
Dimension	WxHxD	mm	750x250x205	815x280x215
Packing	WxHxD	mm	830x336x285	915x360x295
Net/Gross Weight		kg	8.5/10.0	10.0/12.0
Indoor noise level (Hi/Mi/Lo)		dB(A)	36	39
Liquid side/Gas side		mm	Ø6.35/Ø9.53	Ø6.35/Ø12.7

### Outdoor Unit

Model		■ M20A-18HRN1	■ M20A-21HRN1	■ M30A-27HRN1	■ M30A-30HRN1
<b>Capacity</b>					
Cooling/Heating	Btu/h	9000x2/10000x2	9000+12000/10000+14000	9000x3/10000x3	9000x2+12000/10000x2+14000
	kW	2.6x2/2.9x2	2.6+3.5/2.9+4.1	2.6x3/2.9x3	2.6x2+3.5/2.9x2+4.1
<b>Electrical Data</b>					
Voltage, Frequency, Phase		V-, Hz, Ph	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1
Power Input	Cooling/Heating	W	840x2/840x2	850+1150/860+1190	1600+970/1700+1000
	Cooling/Heating	A	4.0x2/4.0x2	4.0+5.7/4.1+5.7	8.0+5.1/8.1+5.2
<b>Performance</b>					
EER	W/W	3.10-B	3.04-B	3.03-B	3.02-B
COP	W/W	3.45-B	3.42-B	3.22-C	3.22-C
Dimension	WxHxD	mm	895x655x345	895x655x345	860x830x330
Packing	WxHxD	mm	1050x700x470	1050x700x470	1000x985x425
Net/Gross Weight		kg	76/82	76/82	81/90
Outdoor air flow		m³/h	2200	2200	3200
Outdoor noise level		dB(A)	56	56	58

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

# Corona Family

220-240V~,50Hz



## DC Inverter



## DC Inverter

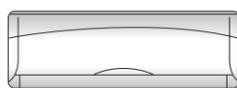
- MSC-07HRDN1-QD0
- MSC-09HRDN1-QD0
- MSC-12HRDN1-QC6



## DC Inverter

## DC Inverter

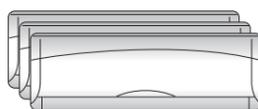
- MSC-07HRDN1-QC2(A)
- MSC-09HRDN1-QC2(A)
- MSC-12HRDN1-QC2(A)
- MSC-18HRDN1-QC2
- MSC-24HRDN1-QC0



## DC Inverter Multi

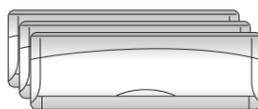
## DC Inverter

- M20B-18HRDN1
- M40A-27HRDN1
- M30A-27HRDN1



## AC Inverter Multi

- M20A-18HRIN1
- M40A-27HRIN1
- M30A-27HRIN1



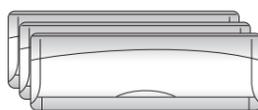
## Single ( ON/OFF )

- MSC-07CRN1
- MSC-07HRN1
- MSC-21CRN1
- MSC-21HRN1
- MSC-09CRN1
- MSC-09HRN1
- MSC-24CRN1
- MSC-24HRN1
- MSC-12CRN1
- MSC-12HRN1
- MSC-28CRN1
- MSC-28HRN1
- MSC-18CRN1
- MSC-18HRN1



## Multi ( ON/OFF )

- M20A-18HRN1
- M30A-27HRN1
- M20A-21HRN1
- M30A-30HRN1



DC Inverter



## Corona Family\_DC Inverter

Features:



MSC-07/09HRDN1-QD0	●	●	●	●	●	●	●	●	●	●	●	●	●	●
MSC-12HRDN1-QC6	●	●	●	●	●	●	●	●	●	●	●	●	●	●

● Standard ● Optional

## Specification:

Model		■ Cooling Only	■ Cooling & Heating
Model		■ MSC-07HRDN1-QD0 ■ MOC-07HDN1-QD0	■ MSC-09HRDN1-QD0 ■ MOC-09HDN1-QD0
Model		■ MSC-12HRDN1-QC6 ■ MOC-12HDN1-QC6	
<b>Capacity</b>			
Cooling	Btu/h	7000(2300-9500)	9000(3100-11200)
	kW	2.1(0.7-2.8)	2.6(0.9-3.3)
Heating	Btu/h	9000(2500-9600)	10000(3300-12300)
	kW	2.6(0.9-3.6)	2.9(1.0-3.6)
<b>Electrical Parts</b>			
Voltage,Frequency,Phase		V~,Hz,Ph	220-240, 50, 1
Power Input	Cooling	W	510(190-700)
	Heating	W	620(230-820)
Operating Current	Cooling	A	2.2(0.9-3.1)
	Heating	A	2.7(1.0-3.6)
<b>Performance</b>			
EER	Btu/W.h, W/W	13.6,4.0	13.6,4.0
COP	W/W	4.2	4.2
Energy Rate	A	A	A
Air Flow Volume	Indoor	m³/h	590
Noise Level	Indoor(Hi/Med/Lo)	dB(A)	39/33/27
	Outdoor	dB(A)	52
<b>Net Dimension &amp; Weight</b>			
Indoor unit	WxHxD	mm	790x265x195
Outdoor unit	WxHxD	mm	760x590x285
Net Weight	Indoor/Outdoor	kg	9/40.5
<b>Packing Dimension &amp; Gross Weight</b>			
Indoor unit	WxHxD	mm	875x375x285
Outdoor unit	WxHxD	mm	887x655x355
Gross Weight	Indoor/Outdoor	kg	11/43
<b>Piping Connection</b>			
Liquid Side	mm(inch)	Ø6.35	Ø6.35
Gas Side	mm(inch)	Ø9.53	Ø9.53
<b>Applicable Area</b>			
	m²	12-18	16-24
<b>Stuffing Quantity</b>			
20'/40'/40'HQ	Set	92/184/225	92/184/225

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

## Corona Family\_DC Inverter

Features:



MSC-07/09/12HRDN1-QC2(A)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MSC-18HRDN1-QC2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MSC-24HRDN1-QC0	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

• Standard • Optional

### Specification:

■ Cooling Only ■ Cooling & Heating

Model		■ MSC-07HRDN1-QC2(A) ■ MOC-07HDN1-QC2	■ MSC-09HRDN1-QC2(A) ■ MOC-09HDN1-QC2	■ MSC-12HRDN1-QC2(A) ■ MOC-12HDN1-QC2	■ MSC-18HRDN1-QC2 ■ MOC-18HDN1-QC2	■ MSC-24HRDN1-QC0 ■ MOC-24HDN1-QC0	
<b>Capacity</b>							
Cooling	Btu/h	7000(2500-9000)	9000(2050-11200)	12000(4000-13800)	17500(5300-23000)	24000(7500-30000)	
	kW	2.1(0.7-2.6)	2.6(0.6-3.3)	3.5(1.2-4.0)	5.1(1.6-6.7)	7.0(2.2-8.8)	
Heating	Btu/h	9000(3400-11000)	10000(3200-13200)	13000(4100-14500)	17000(5100-22000)	25000(7800-32000)	
	kW	2.6(1.0-3.2)	2.9(0.9-3.9)	3.8(1.2-4.2)	5.0(1.5-6.4)	7.3(2.3-9.4)	
<b>Electrical Parts</b>							
Voltage, Frequency, Phase		V-, Hz, Ph 220-240, 50, 1					
Power Input	Cooling	W 630(210-860)	W 810(240-1080)	W 1080(350-1400)	W 1600(400-2300)	W 2330(650-2830)	
	Heating	W 730(250-1050)	W 810(240-1340)	W 1050(360-1420)	W 1460(360-2100)	W 2150(620-2780)	
Operating Current	Cooling	A 2.8(0.9-3.9)	A 3.8(1.2-5.4)	A 4.9(1.7-6.5)	A 7.0(1.8-10.4)	A 10.3(2.9-12.5)	
	Heating	A 3.2(1.1-4.6)	A 3.8(1.2-6.1)	A 4.7(1.8-6.6)	A 6.5(1.6-9.5)	A 9.5(2.7-12.3)	
<b>Performance</b>							
EER	Btu/W.h, W/W	11.1, 3.26	11.1, 3.26	11.1, 3.26	10.9, 3.21	10.3, 3.01	
COP	W/W	3.61	3.62	3.63	3.41	3.41	
Energy Rate		A	A	A	A	B	
Air Flow Volume	Indoor	m³/h 570	m³/h 570	m³/h 620	m³/h 800	m³/h 1080	
Noise Level	Indoor(Hi/Med/Lo)	dB(A) 38/33/29	dB(A) 38/33/29	dB(A) 42/36/30	dB(A) 44/40/37	dB(A) 45/42/39	
	Outdoor	dB(A) 52	dB(A) 52	dB(A) 54	dB(A) 56	dB(A) 58	
<b>Net Dimension &amp; Weight</b>							
Indoor unit	WxHxD	mm 710x250x195	mm 710x250x195	mm 790x265x195	mm 920x292x225	mm 1080x330x225	
Outdoor unit	WxHxD	mm 760x590x285	mm 760x590x285	mm 760x590x285	mm 845x695x335	mm 895x860x330	
Net Weight	Indoor/Outdoor	kg 9.0/39.5	kg 9.0/39.5	kg 9.0/39.5	kg 11.5/52	kg 17/64	
<b>Packing Dimension &amp; Gross Weight</b>							
Indoor unit	WxHxD	mm 800x340x270	mm 800x340x270	mm 875x375x285	mm 1015x368x295	mm 1165x445x320	
Outdoor unit	WxHxD	mm 887x655x355	mm 887x655x355	mm 887x655x355	mm 965x755x395	mm 1043x915x395	
Gross Weight	Indoor/Outdoor	kg 11.0/42.5	kg 11.0/42.5	kg 11.0/42.5	kg 15/56	kg 21/68	
<b>Piping Connection</b>							
Liquid Side	mm(inch)	Ø6.35	Ø6.35	Ø6.35	Ø6.35	Ø9.53	
Gas Side	mm(inch)	Ø9.53	Ø9.53	Ø12.7	Ø12.7	Ø16.0	
<b>Applicable Area</b>							
	m²	12-18	16-24	20-30	28-40	40-56	
<b>Stuffing Quantity</b>							
20/40/40/HQ	Set	105/207/256	105/207/256	92/184/225	75/154/182	56/128/140	

Remarks: 1. The above design and specifications are subject to change without prior notice for product improvement.  
2. The values given in the table for the noise level reflect the levels in anechoic chamber.

## Corona Family\_DC Inverter Multi

Features:



MSCI-07HRIN1	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MSCI-09HRIN1	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MSCI-12HRIN1	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MSCI-18HRDN1	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

• Standard • Optional

### Types of Indoor Unit Combinations

Remarks: One outdoor unit can drive 4 free-matched indoor units at most.

8 Types			17 Types				40 Types														
One Unit	Two Units		One Unit	Two Units	Three Units		One Unit	Two Units	Three Units	Four Units											
7	7+7	9+9	7	7+7	9+9	7+7+7	7+9+9	9+9+9	7	7+7	9+9	12+12	7+7+7	7+9+9	7+12+18	9+12+18	7+7+7+7	7+7+9+9	9+9+9+9		
9	7+9	9+12	9	7+9	9+12	7+7+9	7+9+12	9+9+12	9	7+9	9+12	12+18	7+7+9	7+9+12	9+9+12	9+12+18	7+7+7+9	7+7+9+12	9+9+9+12		
12	7+12		12	7+12	12+12	7+7+12	7+12+12		12	7+12	9+18		7+7+12	7+9+18	9+9+12	12+12+12	7+7+7+12	7+9+9+9	7+7+12+12		
									18	7+18			7+7+18	7+12+12	9+9+18		7+7+7+18	7+9+9+12	7+9+12+12		

### Specification:

■ Cooling Only ■ Cooling & Heating

#### Indoor Unit

Model		■ MSCI-07HRIN1	■ MSCI-09HRIN1	■ MSCI-12HRIN1	■ MSCI-18HRDN1
Capacity	Cooling/Heating	Btu/h 7000/8500	9000/11000	12000/14000	18000/19000
Air Flow		m³/h 570	570	620	800
Dimension	WxHxD	mm 710x250x195	710x250x195	790x265x195	920x292x225
Packing	WxHxD	mm 800x340x270	800x340x270	875x375x285	1015x368x295
Net/Gross Weight		kg 8.0/9.5	8.0/9.5	9.0/11.0	11.5/15
Indoor noise level (Hi/Mi/Lo)		dB(A) 38	38	42	44
Liquid side/Gas side		mm Ø6.35/Ø9.53	Ø6.35/Ø9.53	Ø6.35/Ø12.7	Ø6.35/Ø12.7

#### Outdoor Unit

Model		■ M2OB-18HRDN1	■ M3OA-27HRDN1	■ M4OA-27HRDN1
Power				
Voltage, Frequency, Phase		V-, Hz, Ph 220-240, 50, 1		
<b>Capacity</b>				
Cooling	min.-nom.-max.	Btu/h 7000 - 18000 - 21200	7000 - 27000 - 31400	7000 - 27000 - 38200
		kW 2.0 - 5.2 - 6.2	2.0 - 7.8 - 9.2	2.0 - 8.0 - 11.2
Heating	min.-nom.-max.	Btu/h 7500 - 21000 - 24200	7500 - 30700 - 36900	7500 - 30700 - 39600
		kW 2.2 - 6.1 - 7.1	2.2 - 9.0 - 10.8	2.2 - 9.0 - 11.6
<b>Electrical Data</b>				
Power Input	Cooling	min.-nom.-max. kW 0.65 - 1.60 - 2.28	0.77 - 2.39 - 3.13	0.82 - 2.47 - 3.85
	Heating	min.-nom.-max. kW 0.62 - 1.69 - 2.30	0.81 - 2.47 - 3.15	0.80 - 2.48 - 3.97
Operating Current	Cooling	min.-nom.-max. A 2.9 - 7.0 - 10.1	3.6 - 12.0 - 14.8	3.7 - 11.0 - 17.6
	Heating	min.-nom.-max. A 2.9 - 8.5 - 10.2	3.5 - 10.5 - 13.9	3.7 - 14.5 - 18.5
<b>Performance</b>				
EER	W/W	3.25-A	3.26-A	3.24-A
COP	W/W	3.61-A	3.64-A	3.62-A
Dimension	WxHxD	mm 845x695x335	845x695x335	895x860x330
Packing	WxHxD	mm 975x772x405	975x772x405	1043x915x395
Net/Gross Weight		kg 61/65	68/72	80/84
Outdoor air flow		m³/h 2500	2500	3500
Outdoor noise level		dB(A) 57	58	61

Remarks: 1. The above design and specifications are subject to change without prior notice for product improvement.  
2. The values given in the table for the noise level reflect the levels in anechoic chamber.





# Corona Family\_Single

## Specification:

■ Cooling Only ■ Cooling & Heating

Model			■ MSC-21CRN1	■ MSC-21HRN1	■ MSC-24CRN1	■ MSC-24HRN1	■ MSC-28CRN1	■ MSC-28HRN1
<b>Capacity</b>								
Cooling	Btu/h		21000	21000	23000	23000	26000	26000
	kW		6.2	6.2	6.7	6.7	7.6	7.6
Heating	Btu/h		-	24000	-	27000	-	29000
	kW		-	6.7	-	7.9	-	8.5
<b>Electrical Parts</b>								
Voltage, Frequency, Phase		V~, Hz, Ph	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1
Power Input	Cooling	W	2190	2190	2400	2400	2710	2710
	Heating	W	-	2190	-	2470	-	2650
Operating Current	Cooling	A	9.5	9.5	10.4	10.4	11.8	11.8
	Heating	A	-	9.5	-	10.7	-	11.5
<b>Performance</b>								
EER	Btu/W.h, W/W		9.6,2.81	9.6,2.81	9.6,2.81	9.6,2.81	9.6,2.81	9.6,2.81
COP	W/W		-	3.21	-	3.21	-	3.21
Energy Rate			C	C	C	C	C	C
Air Flow Volume	Indoor	m³/h	1020	1020	1020	1020	1080	1080
Noise Level	Indoor(Hi/Med/Lo)	dB(A)	45/42/39	45/42/39	45/42/39	45/42/39	47/44/41	47/44/41
	Outdoor	dB(A)	55	55	55	55	59	59
<b>Net Dimension &amp; Weight</b>								
Indoor unit	WxHxD	mm	1080x330x225	1080x330x225	1080x330x235	1080x330x235	1080x330x235	1080x330x235
Outdoor unit	WxHxD	mm	845x695x335	845x695x335	845x695x335	845x695x335	845x695x335	845x695x335
Net Weight	Indoor/Outdoor	kg	17/59	17/60	17/59	17/60	17/60	17/61
<b>Packing Dimension &amp; Gross Weight</b>								
Indoor unit	WxHxD	mm	1165x445x320	1165x445x320	1165x445x320	1165x445x320	1165x445x320	1165x445x320
Outdoor unit	WxHxD	mm	965x755x395	965x755x395	965x755x395	965x755x395	965x755x395	965x755x395
Gross Weight	Indoor/Outdoor	kg	21/63	21/64	21/63	21/64	21/64	21/65
<b>Piping Connection</b>								
Liquid Side	mm(inch)		Ø9.53(3/8")	Ø9.53(3/8")	Ø9.53(3/8")	Ø9.53(3/8")	Ø9.53(3/8")	Ø9.53(3/8")
Gas Side	mm(inch)		Ø16.0(5/8")	Ø16.0(5/8")	Ø16.0(5/8")	Ø16.0(5/8")	Ø16.0(5/8")	Ø16.0(5/8")
<b>Applicable Area</b>								
	m²		34-49	34-49	45-56	45-56	50-68	50-68
<b>Stuffing Quantity</b>								
20/40/40HQ	Set		64/126/148	64/126/148	64/126/148	64/126/148	64/126/148	64/126/148

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

# Corona Family\_Multi

## Features:



Model	Turbo	Inverter	Star	253V/168V	Temp	Wi-Fi	Bluetooth	Other 1	Other 2	Other 3	Other 4	Other 5
MSCI-09HRN1	●	●	●	●	●	●	●	●	●	●	●	●
MSCI-12HRN1	●	●	●	●	●	●	●	●	●	●	●	●

● Standard ● Optional

## Specification:

■ Cooling Only ■ Cooling & Heating

Indoor Unit			■ MSCI-09HRN1	■ MSCI-12HRN1	
Capacity		Cooling/Heating	Btu/h	9000/10000	12000/14000
Air Flow			m³/h	500	580
Dimension		WxHxD	mm	710x250x195	790x265x195
Packing		WxHxD	mm	800x340x270	875x375x285
Net/Gross Weight			kg	8.0/9.5	9.0/11.0
Indoor noise level (Hi/Mi/Lo)			dB(A)	37	40
Liquid side/Gas side			mm	Ø6.35/Ø9.53	Ø6.35/Ø12.7

## Outdoor Unit

Model			■ M20A-18HRN1	■ M20A-21HRN1	■ M30A-27HRN1	■ M30A-30HRN1
<b>Capacity</b>						
Cooling/Heating	Btu/h		9000x2/10000x2	9000+12000/10000+14000	9000x3/10000x3	9000x2+12000/10000x2+14000
	kW		2.6x2/2.9x2	2.6+3.5/2.9+4.1	2.6x3/2.9x3	2.6x2+3.5/2.9x2+4.1
<b>Electrical Data</b>						
Voltage, Frequency, Phase		V~, Hz, Ph	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1
Power Input	Cooling/Heating	W	840x2/840x2	850+1150/860+1190	1600+970/1700+1000	1800+1080/1900+1170
Operating Current	Cooling/Heating	A	4.0x2/4.0x2	4.0+5.7/4.1+5.7	8.0+5.1/8.1+5.2	8.3+5.4/8.6+5.6
<b>Performance</b>						
EER	W/W		3.10-B	3.04-B	3.03-B	3.02-B
COP	W/W		3.45-B	3.42-B	3.22-C	3.22-C
Dimension	WxHxD	mm	895x655x345	895x655x345	860x830x330	860x830x330
Packing	WxHxD	mm	1050x700x470	1050x700x470	1000x985x425	1000x985x425
Net/Gross Weight		kg	76/82	76/82	81/90	81/90
Outdoor air flow		m³/h	2200	2200	3200	3200
Outdoor noise level		dB(A)	56	56	58	58

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

# Dorado Family

220-240V~,50Hz



## DC Inverter



- MSJ-07HRDN1-QC2
- MSJ-09HRDN1-QC2
- MSJ-12HRDN1-QC2

## Single



- MSJ-07CRN1-QB8
- MSJ-09CRN1-QB8
- MSJ-12CRN1-QB8
- MSJ-18CRN1-QB8
- MSJ-07HRN1-QB8
- MSJ-09HRN1-QB8
- MSJ-12HRN1-QB8
- MSJ-18HRN1-QB8



## Dorado Family\_DC Inverter

Features:



MSJ-07HRDN1-QC2	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MSJ-09HRDN1-QC2	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MSJ-12HRDN1-QC2	•	•	•	•	•	•	•	•	•	•	•	•	•	•

• Standard • Optional

## Specification:

■ Cooling Only ■ Cooling & Heating

Model		■ MSJ-07HRDN1-QC2 ■ MOC-07HDN1-QC2	■ MSJ-09HRDN1-QC2 ■ MOC-09HDN1-QC2	■ MSJ-12HRDN1-QC2 ■ MOC-12HDN1-QC2
<b>Capacity</b>				
Cooling	Btu/h	7000(2500-9000)	9000(3100-11200)	12000(4000-15400)
	kW	2.1(0.7-2.6)	2.6(0.9-3.3)	3.5(1.2-4.5)
Heating	Btu/h	8000(2800-10000)	10000(3300-12400)	13000(4100-16600)
	kW	2.3(0.9-2.9)	2.9(1.1-3.6)	3.8(1.2-4.9)
<b>Electrical Parts</b>				
Voltage,Frequency,Phase		V~,Hz,Ph		
Power Input		W		
	Cooling	630(260-880)	820(290-1080)	1090(400-1360)
	Heating	650(270-930)	810(280-1110)	1050(390-1400)
Operating Current	Cooling	2.9(1.2-4.2)	4.0(1.5-5.2)	5.0(2.0-6.2)
	Heating	3.0(1.2-4.4)	4.0(1.5-5.3)	4.8(2.0-6.3)
<b>Performance</b>				
EER	Btu/W.h, W/W	11.1,3.26	11.0,3.22	11.0,3.23
COP	W/W	3.61	3.62	3.63
Energy Rate		A		
Air Flow Volume	Indoor	m³/h		
Noise Level	Indoor(Hi/Med/Lo)	dB(A)		
	Outdoor	dB(A)		
<b>Net Dimension &amp; Weight</b>				
Indoor unit	WxHxD	mm		
Outdoor unit	WxHxD	mm		
Net Weight	Indoor/Outdoor	kg		
<b>Packing Dimension &amp; Gross Weight</b>				
Indoor unit	WxHxD	mm		
Outdoor unit	WxHxD	mm		
Gross Weight	Indoor/Outdoor	kg		
<b>Piping Connection</b>				
Liquid Side	mm(inch)	Ø6.35		
Gas Side	mm(inch)	Ø9.53		
<b>Applicable Area</b>				
	m²	12-18		
<b>Stuffing Quantity</b>				
20'/40'/40'HQ	Set	99/216/256		

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

# Dorado Family\_Single

## Features:



MSJ-07/09/12 /18CRN1-QB8	•	•	•	•	•	•	•	•	•	•	•	•	•
MSJ-07/09/12 /18HRN1-QB8	•	•	•	•	•	•	•	•	•	•	•	•	•

• Standard • Optional

## Specification:

■ Cooling Only ■ Cooling & Heating

Model		■ MSJ-07CRN1-QB8	■ MSJ-07HRN1-QB8	■ MSJ-09CRN1-QB8	■ MSJ-09HRN1-QB8	■ MSJ-12CRN1-QB8	■ MSJ-12HRN1-QB8	■ MSJ-18CRN1-QB8	■ MSJ-18HRN1-QB8	
<b>Capacity</b>										
Cooling	Btu/h	7000	7000	9000	9000	12000	12000	17000	17000	
	kW	2.1	2.1	2.6	2.6	3.5	3.5	5.0	5.0	
Heating	Btu/h	-	8000	-	10000	-	13000	-	18500	
	kW	-	2.3	-	2.9	-	3.8	-	5.4	
<b>Electrical Parts</b>										
Voltage, Frequency, Phase		V-, Hz, Ph	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	
Power Input	Cooling	W	700	700	920	920	1200	1200	1770	
	Heating	W	-	700	-	910	-	1150	-	1690
Operating Current	Cooling	A	3.1	3.1	4.0	4.0	5.5	5.5	8.0	
	Heating	A	-	3.1	-	4.0	-	5.0	-	7.3
<b>Performance</b>										
EER	Btu/W.h, WW	10.0, 2.93	10.0, 2.93	9.8, 2.87	9.8, 2.87	10.0, 2.93	10.0, 2.93	9.6, 2.81	9.6, 2.81	
COP	WW	-	3.35	-	3.21	-	3.44	-	3.21	
Energy Rate		C	C	C	C	C	C	C	C	
Air Flow Volume	Indoor	m³/h	370	370	420	420	600	600	850	
Noise Level	Indoor(Hi/Med/Lo)	dB(A)	36/32/29	36/32/29	37/32/29	37/32/29	40/35/32	40/35/32	44/41/38	
	Outdoor	dB(A)	53	53	54	54	55	55	58	
<b>Net Dimension &amp; Weight</b>										
Indoor unit	WxHxD	mm	750x250x198	750x250x198	750x250x198	750x250x198	790x265x204	790x265x204	920x293x227	
Outdoor unit	WxHxD	mm	700x535x235	700x535x235	700x535x235	700x535x235	780x540x250	780x540x250	760x590x285	
Net Weight	Indoor/Outdoor	kg	8/26	8/27	8/27	8/28	9.5/34	9.5/35	11.5/41	
<b>Packing Dimension &amp; Gross Weight</b>										
Indoor unit	WxHxD	mm	840x340x270	840x340x270	840x340x270	840x340x270	875x375x285	875x375x285	1005x305x370	
Outdoor unit	WxHxD	mm	815x580x325	815x580x325	815x580x325	815x580x325	910x575x335	910x575x335	872x640x340	
Gross Weight	Indoor/Outdoor	kg	10/28	10/29	10/29	10/30	11.5/36	11.5/37	15/44	
<b>Piping Connection</b>										
Liquid Side	mm(inch)	Ø6.35(1/4")								
Gas Side	mm(inch)	Ø9.53(3/8")	Ø9.53(3/8")	Ø9.53(3/8")	Ø9.53(3/8")	Ø12.7(1/2")	Ø12.7(1/2")	Ø12.7(1/2")	Ø12.7(1/2")	
<b>Applicable Area</b>										
	m²	10-14	10-14	14-21	14-21	18-26	18-26	28-40	28-40	
<b>Stuffing Quantity</b>										
20'/40'/40'HQ	Set	132/250/292	132/250/292	132/250/292	132/250/292	108/218/270	108/218/270	83/179/215	83/179/215	

Remarks: 1. The above design and specifications are subject to change without prior notice for product improvement.  
2. The values given in the table for the noise level reflect the levels in anechoic chamber.

# Elite Eco Family

220-240V~, 50Hz

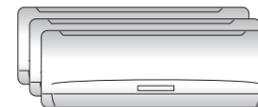


## Single (ON/OFF)



- MSE-07CRN2
- MSE-07HRN2
- MSE-09CRN2
- MSE-09HRN2
- MSE-12CRN2
- MSE-12HRN2
- MSE-18CRN2
- MSE-18HRN2
- MSE-21CRN2
- MSE-21HRN2
- MSE-24CRN2
- MSE-24HRN2
- MSE-28CRN2
- MSE-28HRN2

## Multi (ON/OFF)



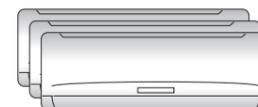
- M20A-18HRN2
- M30A-27HRN2
- M20A-21HRN2
- M30A-30HRN2

## AC Inverter



- MSE-07HRIN2
- MSE-09HRIN2
- MSE-12HRIN2

## AC Inverter Multi



- M20A-18HRIN2
- M30A-27HRIN2





## Elite Eco Family\_Multi

Features:              

MSEI-09HRN2	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MSEI-12HRN2	•	•	•	•	•	•	•	•	•	•	•	•	•	•

• Standard • Optional

### Specification:

■ Cooling Only ■ Cooling & Heating

#### Indoor Unit

Model			■	■
Capacity	Cooling/Heating	Btu/h	9000/10000	12000/14000
Air Flow		m³/h	450	580
Dimension	WxHxD	mm	710x250x190	790x265x195
Packing	WxHxD	mm	800x340x270	875x375x285
Net/Gross Weight		kg	8.0/9.5	9.0/11.5
Indoor noise level (Hi/Mi/Lo)		dB(A)	37	37
Liquid side/Gas side		mm	Ø6.35/Ø9.53	Ø6.35/Ø12.7

#### Outdoor Unit

Model			■	■	■	■
Capacity						
Cooling/Heating		Btu/h	9000x2/10000x2	9000+12000/10000+13000	9000x3/10000x3	9000x2+12000/10000x2+13000
		kW	2.6x2/2.9x2	2.6+3.5/2.9+3.8	2.6x3/2.9x3	2.6x2+3.5/2.9x2+3.8
Electrical Data						
Voltage, Frequency, Phase		V~, Hz, Ph	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1
Power Input	Cooling/Heating	W	990x2/1000x2	980+1320/1000+1350	1940+1050/1950+1100	2000+1320/2020+1340
Operating Current	Cooling/Heating	A	4.8x2/4.9x2	4.8+6.4/4.9+6.6	9.4+5.1/9.5+5.4	9.7+6.4/9.8+6.5
Performance						
EER		W/W	2.63-D	2.68-D	2.61-D	2.62-D
COP		W/W	2.90-D	2.85-D	2.85-D	2.86-D
Dimension	WxHxD	mm	895x655x345	895x655x345	860x830x330	860x830x330
Packing	WxHxD	mm	1050x780x470	1050x780x470	1000x985x425	1000x985x425
Net/Gross Weight		kg	73/77	79/83	90/94	90/94
Outdoor air flow		m³/h	2000	2000	2900	2900
Outdoor noise level		dB(A)	55	55	58	58

Remarks: 1. The above design and specifications are subject to change without prior notice for product improvement.  
2. The values given in the table for the noise level reflect the levels in anechoic chamber.

## Elite Eco Family\_AC Inverter

Features:             

MSE-07HRN2	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MSE-09HRN2	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MSE-12HRN2	•	•	•	•	•	•	•	•	•	•	•	•	•	•

• Standard • Optional

### Specification:

■ Cooling Only ■ Cooling & Heating

Model			■	■	■
Capacity					
Cooling		Btu/h	7000(2300-9000)	9000(2900-10600)	12000(3400-14100)
		kW	2.1(0.7-2.6)	2.6(0.8-3.1)	3.5(1.0-4.1)
Heating		Btu/h	9000(2700-11100)	12000(3300-14000)	15000(4200-17600)
		kW	2.6(0.8-3.3)	3.5(1.0-4.1)	4.4(1.2-5.2)
Electrical Parts					
Voltage, Frequency, Phase		V~, Hz, Ph	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1
Power Input	Cooling	W	780(310-1010)	1010(350-1220)	1350(380-1590)
	Heating	W	940(320-1180)	1240(360-1490)	1560(440-1830)
Operating Current	Cooling	A	3.6(1.5-4.8)	4.6(1.5-5.6)	6.2(1.8-7.5)
	Heating	A	4.3(1.5-5.6)	5.7(1.7-7.2)	7.1(2.1-8.6)
Performance					
EER		Btu/W.h, W/W	9.0, 2.63	8.1, 2.61	8.1, 2.61
COP		W/W	2.81	2.82	2.81
Energy Rate		D		D	D
Air Flow Volume	Indoor	m³/h	450	500	580
Noise Level	Indoor(Hi/Med/Lo)	dB(A)	36/33/29	36/33/29	38/34/30
	Outdoor	dB(A)	52	52	53
Net Dimension & Weight					
Indoor unit	WxHxD	mm	710x250x195	710x250x195	790x265x195
Outdoor unit	WxHxD	mm	780x540x250	780x540x250	780x540x250
Net Weight	Indoor/Outdoor	kg	8/35	8/35	9/39
Packing Dimension & Gross Weight					
Indoor unit	WxHxD	mm	800x340x270	800x340x270	875x375x285
Outdoor unit	WxHxD	mm	910x575x325	910x575x325	910x575x325
Gross Weight	Indoor/Outdoor	kg	9.5/38	9.5/38	11/42
Piping Connection					
Liquid Side		mm(inch)	Ø6.35(1/4")	Ø6.35(1/4")	Ø6.35(1/4")
Gas Side		mm(inch)	Ø9.53(3/8")	Ø9.53(3/8")	Ø12.7(1/2")
Applicable Area					
		m²	10-14	14-21	18-26
Stuffing Quantity					
20'/40'/40'HQ		Set	120/252/288	120/252/288	111/228/265

Remarks: 1. The above design and specifications are subject to change without prior notice for product improvement.  
2. The values given in the table for the noise level reflect the levels in anechoic chamber.





# Glory Family\_Single

## Features:



MSG-07/09/12CRN2	•	•	•	•	•	•	•	•	•	•	•	•
MSG-07/09/12HRN2	•	•	•	•	•	•	•	•	•	•	•	•
MSG-18/21/24/30/36CRN2	•	•	•	•	•	•	•	•	•	•	•	•
MSG-18/21/24/30/36HRN2	•	•	•	•	•	•	•	•	•	•	•	•

• Standard • Optional

## Specification:

■ Cooling Only ■ Cooling & Heating

Model		■ MSG-07CRN2	■ MSG-07HRN2	■ MSG-09CRN2	■ MSG-09HRN2	■ MSG-12CRN2	■ MSG-12HRN2	■ MSG-18CRN2	■ MSG-18HRN2	
<b>Capacity</b>										
Cooling	Btu/h	7000	7000	9000	9000	12000	12000	17000	17000	
	kW	2.1	2.1	2.6	2.6	3.5	3.5	5.0	5.0	
Heating	Btu/h	-	8000	-	11000	-	14000	-	19000	
	kW	-	2.3	-	3.2	-	4.1	-	5.6	
<b>Electrical Parts</b>										
Voltage, Frequency, Phase		V-, Hz, Ph	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	
Power Input	Cooling	W	780	780	1000	1000	1330	1330	1890	
	Heating	W	-	800	-	1100	-	1400	-	
Operating Current	Cooling	A	3.5	3.5	4.4	4.4	6.0	6.0	8.6	
	Heating	A	-	3.6	-	4.9	-	6.3	-	
<b>Performance</b>										
EER	Btu/W.h, W/W	9.0, 2.63	9.0, 2.63	9.0, 2.64	9.0, 2.64	9.0, 2.64	9.0, 2.64	9.0, 2.63	9.0, 2.63	
COP	W/W	-	2.93	-	2.93	-	2.93	-	2.93	
Energy Rate		D	D	D	D	D	D	D	D	
Air Flow Volume	Indoor	m³/h	430	430	470	470	500	500	800	
Noise Level	Indoor(Hi/Med/Lo)	dB(A)	35/32/30	35/32/30	36/32/30	36/32/30	40/36/34	40/36/34	42/40/38	
	Outdoor	dB(A)	50	50	51	51	52	52	53	
<b>Net Dimension &amp; Weight</b>										
Indoor unit	WxHxD	mm	750x250x188	750x250x188	750x250x188	750x250x188	750x250x188	906x286x235	906x286x235	
Outdoor unit	WxHxD	mm	700x535x235	700x535x235	700x535x235	700x535x235	780x540x250	780x540x250	760x590x285	
Net Weight	Indoor/Outdoor	kg	8.5/29	8.5/30	8.5/31	8.5/32	11/34	11/36	13.5/41	
<b>Packing Dimension &amp; Gross Weight</b>										
Indoor unit	WxHxD	mm	830x336x280	830x336x280	830x336x280	830x336x280	830x336x280	1020x380x328	1020x380x328	
Outdoor unit	WxHxD	mm	815x580x325	815x580x325	815x580x325	815x580x325	910x575x335	910x575x335	965x770x395	
Gross Weight	Indoor/Outdoor	kg	10.5/33	10.5/33	10.5/35	10.5/36	10/37	10/39	16.5/45	
<b>Piping Connection</b>										
Liquid Side	mm(inch)	Ø6.35(1/4")	Ø6.35(1/4")	Ø6.35(1/4")	Ø6.35(1/4")	Ø6.35(1/4")	Ø6.35(1/4")	Ø6.35(1/4")	Ø6.35(1/4")	
Gas Side	mm(inch)	Ø9.53(3/8")	Ø9.53(3/8")	Ø9.53(3/8")	Ø9.53(3/8")	Ø12.7(1/2")	Ø12.7(1/2")	Ø12.7(1/2")	Ø12.7(1/2")	
<b>Applicable Area</b>										
	m²	10-14	10-14	14-21	14-21	18-26	18-26	28-40	28-40	
<b>Stuffing Quantity</b>										
20/40/40HQ	Set	130/270/295	130/270/295	130/270/295	130/270/295	116/244/270	116/244/270	80/178/208	80/178/208	

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

# Glory Family\_Single

## Specification:

■ Cooling Only ■ Cooling & Heating

Model		■ MSG-21CRN2	■ MSG-21HRN2	■ MSG-24CRN2	■ MSG-24HRN2	■ MSG-30CRN2	■ MSG-30HRN2	■ MSG-30CRN2	■ MSG-30HRN2	
<b>Capacity</b>										
Cooling	Btu/h	18000	18000	23000	23000	27000	27000	28000	28000	
	kW	5.3	5.3	6.7	6.7	7.9	7.9	8.2	8.2	
Heating	Btu/h	-	23000	-	26000	-	32000	-	33000	
	kW	-	6.7	-	7.6	-	9.4	-	9.7	
<b>Electrical Parts</b>										
Voltage, Frequency, Phase		V-, Hz, Ph	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	380-420, 50, 3	
Power Input	Cooling	W	2080	2080	2650	2650	3230	3230	3300	
	Heating	W	-	2350	-	2570	-	3290	-	
Operating Current	Cooling	A	9.6	9.6	12.1	12.1	14.8	14.8	5.8	
	Heating	A	-	10.7	-	11.7	-	15.1	-	
<b>Performance</b>										
EER	Btu/W.h, W/W	8.7, 2.54	8.7, 2.54	8.7, 2.54	8.7, 2.54	8.4, 2.45	8.4, 2.45	8.5, 2.49	8.5, 2.49	
COP	W/W	-	2.87	-	2.96	-	2.85	-	2.93	
Energy Rate		E	E	E	E	E	E	E	E	
Air Flow Volume	Indoor	m³/h	800	800	1050	1050	1150	1150	1080	
Noise Level	Indoor(Hi/Med/Lo)	dB(A)	41/37/35	41/37/35	43/40/37	43/40/37	45/42/39	45/42/39	47/44/41	
	Outdoor	dB(A)	54	54	56	56	57	57	57	
<b>Net Dimension &amp; Weight</b>										
Indoor unit	WxHxD	mm	906x286x235	906x286x235	1080x330x222	1080x330x222	1080x330x222	1080x330x222	1080x330x222	
Outdoor unit	WxHxD	mm	845x695x335							
Net Weight	Indoor/Outdoor	kg	13.5/52	13.5/55	17/61	17/62	17/63	17/64	17/64	
<b>Packing Dimension &amp; Gross Weight</b>										
Indoor unit	WxHxD	mm	1020x380x328	1020x380x328	1165x445x320	1165x445x320	1165x445x320	1165x445x320	1165x445x320	
Outdoor unit	WxHxD	mm	970x770x395							
Gross Weight	Indoor/Outdoor	kg	16.5/57	16.5/60	21/66	21/67	22/68	22/69	22/69	
<b>Piping Connection</b>										
Liquid Side	mm(inch)	Ø9.53(3/8")	Ø9.53(3/8")	Ø9.53(3/8")	Ø9.53(3/8")	Ø9.53(3/8")	Ø9.53(3/8")	Ø9.53(3/8")	Ø9.53(3/8")	
Gas Side	mm(inch)	Ø16.0(5/8")	Ø16.0(5/8")	Ø16.0(5/8")	Ø16.0(5/8")	Ø16.0(5/8")	Ø16.0(5/8")	Ø16.0(5/8")	Ø16.0(5/8")	
<b>Applicable Area</b>										
	m²	34-49	34-49	45-56	45-56	50-68	50-68	50-68	50-68	
<b>Stuffing Quantity</b>										
20/40/40HQ	Set	66/142/163	66/142/163	60/127/142	60/127/142	60/127/142	60/127/142	60/127/142	60/127/142	

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

## Glory Family\_Multi

Features:



Model	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MSGI-09HRN2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MSGI-12HRN2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

• Standard • Optional

### Specification:

■ Cooling Only ■ Cooling & Heating

#### Indoor Unit

Model			■ MSGI-09HRN2	■ MSGI-12HRN2
Capacity	Cooling/Heating	Btu/h	9000/10000	12000/14000
Air Flow		m³/h	470	500
Dimension	WxHxD	mm	750x250x188	750x250x188
Packing	WxHxD	mm	830x336x280	830x336x280
Net/Gross Weight		kg	8.0/9.5	9.0/11.5
Indoor noise level (Hi/Mi/Lo)		dB(A)	36	38
Liquid side/Gas side		mm	Ø6.35/Ø9.53	Ø6.35/Ø12.7

#### Outdoor Unit

Model			■ M20A-18HRN2	■ M20A-21HRN2	■ M30A-27HRN2	■ M30A-30HRN2
<b>Capacity</b>						
Cooling/Heating		Btu/h	9000x2/10000x2	9000+12000/10000+13000	9000x3/10000x3	9000x2+12000/10000x2+13000
		kW	2.6x2/2.9x2	2.6+3.5/2.9+3.8	2.6x3/2.9x3	2.6x2+3.5/2.9x2+3.8
<b>Electrical Data</b>						
Voltage,Frequency,Phase		V~,Hz,Ph	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1
Power Input	Cooling/Heating	W	990x2/1000x2	980+1320/1000+1350	1940+1050/1950+1100	2000+1320/2020+1340
Operating Current	Cooling/Heating	A	4.8x2/4.9x2	4.8+6.4/4.9+6.6	9.4+5.1/9.5+5.4	9.7+6.4/9.8+6.5
<b>Performance</b>						
EER		W/W	2.63-D	2.68-D	2.61-D	2.62-D
COP		W/W	2.9-D	2.85-D	2.85-D	2.86-D
Dimension	WxHxD	mm	895x655x345	895x655x345	860x830x330	860x830x330
Packing	WxHxD	mm	1050x780x470	1050x780x470	1000x985x425	1000x985x425
Net/Gross Weight		kg	73/77	79/83	90/94	90/94
Outdoor air flow		m³/h	2000	2000	2900	2900
Outdoor noise level		dB(A)	55	55	58	58

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.



## Glory Family\_AC Inverter

Features:



Model	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MSG-07HRIN2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MSG-09HRIN2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MSG-12HRIN2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

• Standard • Optional

### Specification:

■ Cooling Only ■ Cooling & Heating

Model			■ MSG-07HRIN2	■ MSG-09HRIN2	■ MSG-12HRIN2
<b>Capacity</b>					
Cooling	Btu/h		7000(2500-9000)	9000(2900-10600)	12000(3400-14100)
	kW		2.1(0.7-2.6)	2.6(0.8-3.1)	3.5(1.0-4.1)
Heating	Btu/h		9000(2700-11100)	12000(3300-14000)	15000(4200-17600)
	kW		2.6(0.8-3.3)	3.5(1.0-4.1)	4.4(1.2-5.2)
<b>Electrical Parts</b>					
Voltage,Frequency,Phase		V~,Hz,Ph	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1
Power Input	Cooling	W	780(310-1010)	1010(350-1220)	1350(380-1590)
	Heating	W	940(320-1180)	1240(360-1490)	1560(440-1830)
Operating Current	Cooling	A	3.6(1.5-4.8)	4.6(1.5-5.6)	6.2(1.8-7.5)
	Heating	A	4.3(1.5-5.6)	5.7(1.7-7.2)	7.1(2.1-8.6)
<b>Performance</b>					
EER		Btu/W.h, W/W	9.0, 2.63	8.1, 2.61	8.1, 2.61
COP		W/W	2.81	2.82	2.81
Energy Rate		D	D	D	D
Air Flow Volume	Indoor	m³/h	450	500	580
Noise Level	Indoor(Hi/Med/Lo)	dB(A)	36/33/30	36/33/30	37/34/31
	Outdoor	dB(A)	51	51	53
<b>Net Dimension &amp; Weight</b>					
Indoor unit	WxHxD	mm	750x250x188	750x250x188	815x280x195
Outdoor unit	WxHxD	mm	780x540x250	780x540x250	780x540x250
Net Weight	Indoor/Outdoor	kg	8.5/37	8.5/37	11/40
<b>Packing Dimension &amp; Gross Weight</b>					
Indoor unit	WxHxD	mm	830x336x280	830x336x280	915x360x275
Outdoor unit	WxHxD	mm	910x575x325	910x575x325	910x575x325
Gross Weight	Indoor/Outdoor	kg	11/40	11/40	14/43
<b>Piping Connection</b>					
Liquid Side		mm(inch)	Ø6.35(1/4")	Ø6.35(1/4")	Ø6.35(1/4")
Gas Side		mm(inch)	Ø9.53(3/8")	Ø9.53(3/8")	Ø12.7(1/2")
<b>Applicable Area</b>					
		m²	10-14	14-21	18-26
<b>Stuffing Quantity</b>					
20'/40'/40'HQ		Set	113/238/274	113/238/274	108/226/264

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

# Glory Family\_AC Inverter Multi

Features: 

MSGI-07HRIN2	•	•	•	•	•	•	•	•	•	•	•	•
MSGI-09HRIN2	•	•	•	•	•	•	•	•	•	•	•	•
MSGI-12HRIN2	•	•	•	•	•	•	•	•	•	•	•	•

• Standard • Optional

## Types of Indoor Unit Combinations

Remarks: One outdoor unit can drive 3 free-matched indoor units at most.

### 9 Types

One Unit	Two Units
7	7+7 9+9
9	7+9 9+12
12	7+12 12+12

### 18 Types

One Unit	Two Units	Three Units
7	7+7 9+9	7+7+7 7+9+9 9+9+9
9	7+9 9+12	7+7+9 7+9+12 9+9+12
12	7+12 12+12	7+7+12 7+12+12 9+12+12

## Specification:

■ Cooling Only ■ Cooling & Heating

### Indoor Unit

Model			■	■	■
Capacity	Cooling/Heating	Btu/h	7000/8500	9000/11000	12000/14000
Air Flow		m³/h	500	520	560
Dimension	WxHxD	mm	750x250x188	750x250x188	815x280x195
Packing	WxHxD	mm	830x336x280	830x336x280	915x360x275
Net/Gross Weight		kg	8.5/11.0	8.5/11.0	11.0/14.0
Indoor noise level (Hi/Mi/Lo)		dB(A)	35	36	37
Liquid side/Gas side		mm	Ø6.35/Ø9.53	Ø6.35/Ø9.53	Ø6.35/Ø12.7

### Outdoor Unit

Model				■	■
Power					
Voltage, Frequency, Phase		V-, Hz, Ph	220-240, 50, 1		
<b>Capacity</b>					
Cooling	min.-nom.-max.	Btu/h	5459 - 18084 - 22519		
	min.-nom.-max.	kW	1.6 - 5.3 - 6.6		
Heating	min.-nom.-max.	Btu/h	7848 - 23543 - 25249		
	min.-nom.-max.	kW	2.3 - 6.9 - 7.4		
<b>Electrical Data</b>					
Power Input	Cooling	min.-nom.-max.	kW	0.65 - 2.02 - 2.73	
	Heating	min.-nom.-max.	kW	0.78 - 2.44 - 3.30	
Operating Current	Cooling	min.-nom.-max.	A	3.08 - 9.56 - 12.93	
	Heating	min.-nom.-max.	A	3.40 - 10.65 - 14.40	
<b>Performance</b>					
EER		W/W	2.62-D		
COP		W/W	2.83-D		
Dimension	WxHxD	mm	845x695x335		
Packing	WxHxD	mm	975x772x405		
Net/Gross Weight		kg	71/74		
Outdoor air flow		m³/h	2500		
Outdoor noise level		dB(A)	56		

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.



Midea Creates A Better Life

Split Classic ( Page 61 ~ Page 68 )

# Aqua

220-240V~,50Hz



- MSQ3-07HRDN1-QC2 ■ MSQ3-09HRDN1-QC2 ■ MSQ3-12HRDN1-QC2
- MOC-07HDN1-QC2 ■ MOC-09HDN1-QC2 ■ MOC-12HDN1-QC2



## Fresh Air

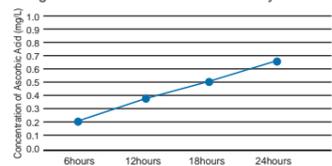
Midea air conditioner have a pump in the indoor unit, when press the "Fresh Air" button, the pump suck the fresh air from outside, and the indoor polluted air flow out of the room via the air pressure.



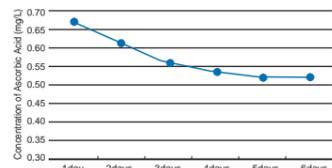
## Temp. Compensation (Optional)

The ceiling temperature is often higher than the floor temperature. For example, floor temp. is 21°C, while ceiling temp may be 25°C. By adopting temp. compensation function, the temperature difference can be eliminated. So if you set temp for 21°C, the air-conditioner may make intelligent temp compensation, setting the ceiling temp for 25°C, to ensure the floor temp of 21°C.

Progress of "Vitamin-C emission" every 6 hours



Performance of the emission in case of continuous running



## Vitamin C Filter (Optional)

Vitamin C is one of necessary material for human being, and it is also good for human skin. Vitamin C Filter is made of Vitamin C Emission material. When the air flows through it, the Vitamin C will be taken everywhere in the room.

## Features:



Model	1	2	3	4	5	6	7	8	9	10	11	12
MSQ3-07/09/12HRDN1-QC2	•	•	•	•	•	•	•	•	•	•	•	•
MOC-07/09/12HDN1-QC2	•	•	•	•	•	•	•	•	•	•	•	•

• Standard • Optional

## Specification:

- Cooling Only ■ Cooling & Heating
- MSQ3-07HRDN1-QC2 ■ MSQ3-09HRDN1-QC2 ■ MSQ3-12HRDN1-QC2
- MOC-07HDN1-QC2 ■ MOC-09HDN1-QC2 ■ MOC-12HDN1-QC2

Model		MSQ3-07HRDN1-QC2 MOC-07HDN1-QC2	MSQ3-09HRDN1-QC2 MOC-09HDN1-QC2	MSQ3-12HRDN1-QC2 MOC-12HDN1-QC2
<b>Capacity</b>				
Cooling	Btu/h	7000(2500-9100)	9000(3100-11200)	12000(4000-15500)
	kW	2.1(0.7-2.6)	2.6(0.9-3.3)	3.5(1.2-4.5)
Heating	Btu/h	8000(2700-10000)	10000(3200-12400)	13000(4100-16700)
	kW	2.3(0.9-2.9)	2.9(0.9-3.6)	3.8(1.2-4.9)
<b>Electrical Parts</b>				
Voltage, Frequency, Phase		V~, Hz, Ph	220-240, 50, 1	220-240, 50, 1
Power Input	Cooling	W	630(250-870)	810(290-1080)
	Heating	W	650(270-920)	800(280-1110)
Operating Current	Cooling	A	2.9(1.2-4.3)	4.0(1.3-5.2)
	Heating	A	3.0(1.2-4.4)	4.0(1.3-5.3)
<b>Performance</b>				
EER	Btu/W.h, W/W	11.1, 3.26	11.0, 3.26	11.0, 3.23
COP	W/W	3.61	3.66	3.63
Energy Rate		A	A	A
Air Flow Volume	Indoor	m³/h	520	620
Noise Level	Indoor (Hi/Med/Lo)	dB(A)	36/33/29	38/35/30
	Outdoor	dB(A)	52	52
<b>Net Dimension &amp; Weight</b>				
Indoor unit	WxHxD	mm	805x270x205	855x285x205
Outdoor unit	WxHxD	mm	760x590x285	760x590x285
Net Weight	Indoor/Outdoor	kg	10.5/35	12/38
<b>Packing Dimension &amp; Gross Weight</b>				
Indoor unit	WxHxD	mm	900x385x305	955x385x305
Outdoor unit	WxHxD	mm	887x655x355	887x655x355
Gross Weight	Indoor/Outdoor	kg	12.5/37.5	14/40
<b>Piping Connection</b>				
Liquid Side	mm(inch)	Ø6.35	Ø6.35	Ø6.35
Gas Side	mm(inch)	Ø9.53	Ø9.53	Ø12.7
<b>Applicable Area</b>				
	m²	12-18	16-24	20-30
<b>Stuffing Quantity</b>				
20'/40'/40'HQ	Set	90/191/230	90/191/230	90/189/221

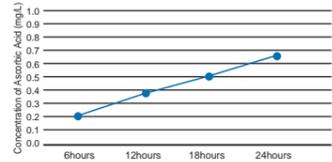
Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

220-240V~,50Hz

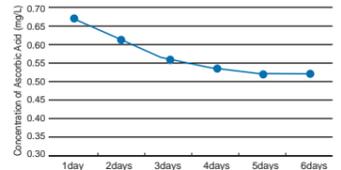


- CSU-09YHR3BA
- CSU-12YHR3BA
- CSU-18YHR3AB
- CSU-21YHR3AA
- CSU-24YHR3AA

Progress of "Vitamin-C emission" every 6 hours



Performance of the emission in case of continuous running



### Vitamin C Filter (Optional)

Vitamin C is one of necessary material for human being, and it is also good for human skin. Vitamin C Filter is made of Vitamin C Emission material. When the air flows through it, the Vitamin C will be taken everywhere in the room.

### Silver Ion Filter (Optional)

The Silver ion can kill bacteria or prevent their activity at very low density by destroying their inner- configuration and absorbing their elements in cells. Meanwhile, the Nano Silver attached on the filter release the Silver ion constantly to eliminate bacteria effectively and continuously.

Features:



Model	Icon 1	Icon 2	Icon 3	Icon 4	Icon 5	Icon 6	Icon 7	Icon 8	Icon 9	Icon 10	Icon 11	Icon 12
CSU-09/12YHR3BA	•	•	•	•	•	•	•	•	•	•	•	•
CSU-18YHR3AB	•	•	•	•	•	•	•	•	•	•	•	•
CSU-21/24YHR3AA	•	•	•	•	•	•	•	•	•	•	•	•

• Standard • Optional

### Specification:

■ Cooling Only ■ Cooling & Heating

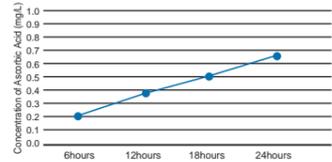
Model			■ CSU-09YHR3BA	■ CSU-12YHR3BA	■ CSU-18YHR3AB	■ CSU-21YHR3AA	■ CSU-24YHR3AA
<b>Capacity</b>							
Cooling	Btu/h		9000	12000	17000	19000	21000
	kW		2.6	3.5	5.0	5.6	6.1
Heating	Btu/h		10000	13000	18000	20000	21000
	kW		2.9	3.8	5.3	5.9	6.1
<b>Electrical Parts</b>							
Voltage, Frequency, Phase		V~, Hz, Ph	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1
Power Input	Cooling	W	760	1060	1580	1930	2110
	Heating	W	810	1000	1510	1840	1920
Operating Current	Cooling	A	3.6	5.0	7.4	8.8	9.7
	Heating	A	3.9	4.5	7.3	8.4	8.8
<b>Performance</b>							
EER	Btu/W.h, W/W		11.3, 3.30	11.3, 3.30	10.5, 3.10	9.9, 2.90	9.9, 2.90
COP	W/W		3.50	3.50	3.30	3.20	3.10
Energy Rate		A	A	B	C	C	
Air Flow Volume	Indoor	m <sup>3</sup> /h	480	480	700	700	750
	Outdoor	m <sup>3</sup> /h					
Noise Level	Indoor (Hi/Med/Lo)	dB(A)	37/32/28	37/32/28	43/38/34	43/38/34	46/39/35
	Outdoor	dB(A)	52	52	53	53	58
<b>Net Dimension &amp; Weight</b>							
Indoor unit	WxHxD	mm	815x290x203	815x290x203	1015x320x190	1015x320x190	1015x320x190
Outdoor unit	WxHxD	mm	780x540x255	780x540x255	780x540x255	850x605x290	850x605x290
Net Weight	Indoor/Outdoor	kg	9/35	9/39	14/40	14/47	14/53
<b>Packing Dimension &amp; Gross Weight</b>							
Indoor unit	WxHxD	mm	850x345x300	850x345x300	1050x370x290	1050x370x290	1050x370x290
Outdoor unit	WxHxD	mm	920x615x390	920x615x390	920x615x390	1010x695x430	1010x695x430
Gross Weight	Indoor/Outdoor	kg	12/39	12/44	17/44	17/51	17/58
<b>Piping Connection</b>							
Liquid Side	mm(inch)		Ø6.35(1/4")	Ø6.35(1/4")	Ø6.35(1/4")	Ø9.53(3/8")	Ø9.53(3/8")
Gas Side	mm(inch)		Ø9.53(3/8")	Ø12.7(1/2")	Ø12.7(1/2")	Ø16.0(5/8")	Ø16.0(5/8")
<b>Applicable Area</b>							
	m <sup>2</sup>		14-21	18-26	28-40	34-49	45-56
<b>Stuffing Quantity</b>							
20'/40'/40'HQ	Set		90/188/210	90/188/210	84/186/205	70/140/170	70/140/170

Remarks: 1. The above design and specifications are subject to change without prior notice for product improvement.  
2. The values given in the table for the noise level reflect the levels in anechoic chamber.

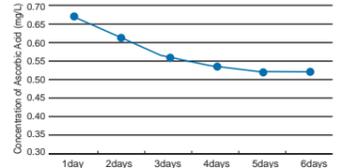


- CSU-07HHR3AA
- CSU-09HHR3AB
- CSU-12HHR3AB
- CSU-18HHR3AB
- CSU-21HHR3AA
- CSU-24HHR3AA

Progress of "Vitamin-C emission" every 6 hours



Performance of the emission in case of continuous running



### Vitamin C Filter (Optional)

Vitamin C is one of necessary material for human being, and it is also good for human skin. Vitamin C Filter is made of Vitamin C Emission material. When the air flows through it, the Vitamin C will be taken everywhere in the room.

### Silver Ion Filter (Optional)

The Silver ion can kill bacteria or prevent their activity at very low density by destroying their inner- configuration and absorbing their elements in cells. Meanwhile, the Nano Silver attached on the filter release the Silver ion constantly to eliminate bacteria effectively and continuously.

### Features:



Model	Water	Medical	Lightning	Moon	Turbo	Snowflake	Factory	Power	Remote	PTC	Fan	Refresh
CSU-07HHR3AA	•	•	•	•	•	•	•	•	•	•	•	•
CSU-09/12/18HHR3AB	•	•	•	•	•	•	•	•	•	•	•	•
CSU-21/24HHR3AA	•	•	•	•	•	•	•	•	•	•	•	•

• Standard • Optional

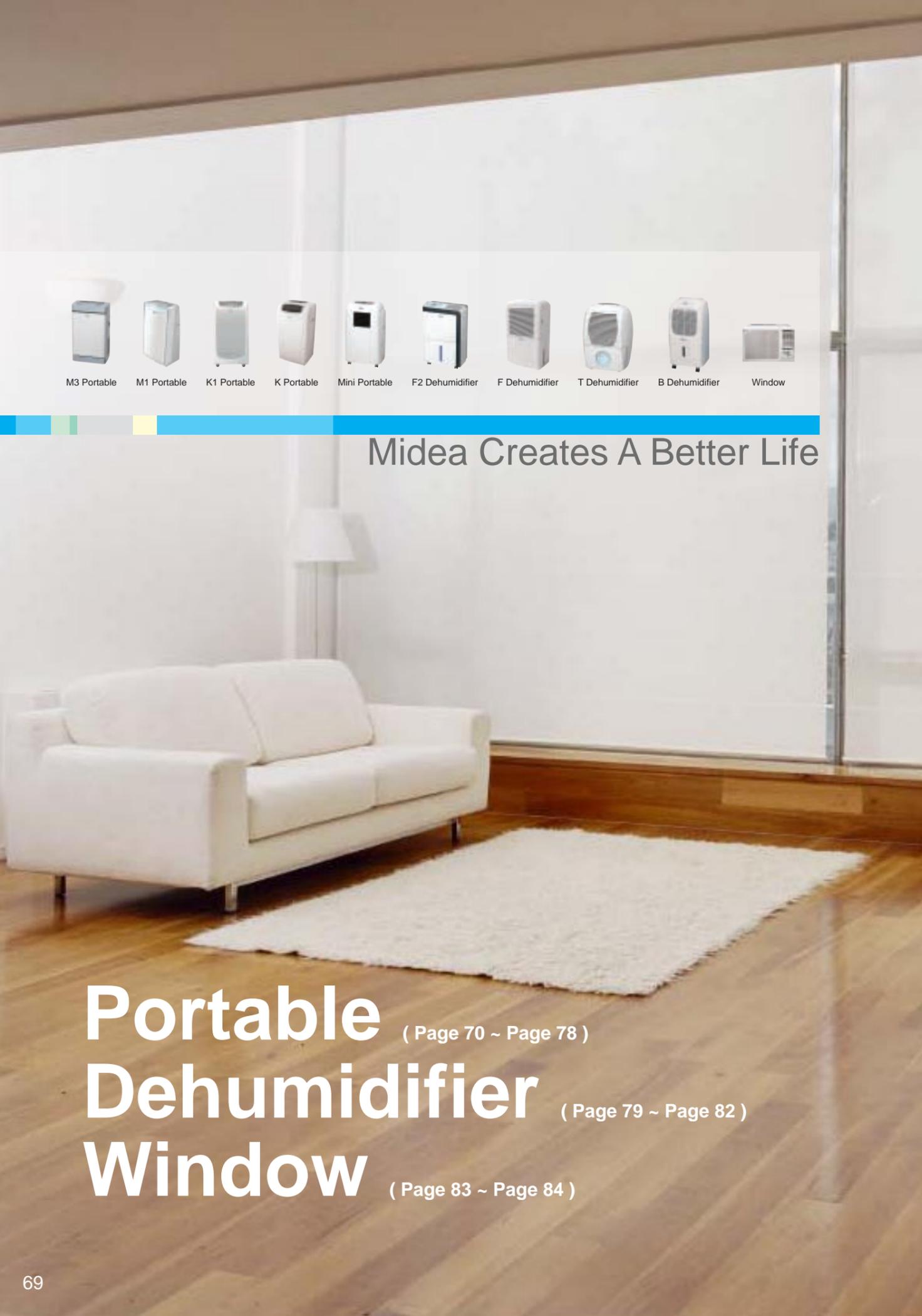
### Specification:

■ Cooling Only ■ Cooling & Heating

Model			■ CSU-07HHR3AA	■ CSU-09HHR3AB	■ CSU-12HHR3AB	■ CSU-18HHR3AB	■ CSU-21HHR3AA	■ CSU-24HHR3AA
<b>Capacity</b>								
Cooling	Btu/h		7000	9000	12000	17000	19000	21000
	kW		2.1	2.6	3.5	5.0	5.6	6.1
Heating	Btu/h		7500	10000	13000	18000	20000	21000
	kW		2.2	2.9	3.8	5.3	5.9	6.1
<b>Electrical Parts</b>								
Voltage, Frequency, Phase		V-, Hz, Ph	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1	220-240, 50, 1
Power Input	Cooling	W	610	800	1080	1650	1960	2160
	Heating	W	630	830	1070	1560	1940	2100
Operating Current	Cooling	A	2.9	3.6	5.1	7.3	8.9	9.8
	Heating	A	3.1	3.7	5.2	7.1	8.8	9.6
<b>Performance</b>								
EER	Btu/W.h, W/W		11.2, 3.30	11.2, 3.30	11.2, 3.30	10.4, 3.05	9.7, 2.86	9.6, 2.83
COP	W/W		3.50	3.45	3.45	3.20	3.05	2.90
Energy Rate			A	A	A	B	C	C
Air Flow Volume	Indoor	m <sup>3</sup> /h	410	430	500	700	700	750
Noise Level	Indoor(Hi/Med/Lo)	dB(A)	35/32/26	37/32/26	39/34/29	43/38/34	43/38/34	45/39/35
	Outdoor	dB(A)	52	52	52	53	53	53
<b>Net Dimension &amp; Weight</b>								
Indoor unit	WxHxD	mm	740x243x200	740x243x200	815x275x200	1015x320x190	1015x320x190	1015x320x190
Outdoor unit	WxHxD	mm	600x502x232	710x540x255	780x540x255	780x540x255	850x605x290	850x605x290
Net Weight	Indoor/Outdoor	kg	7/23	7/25	9/35	14/40	14/47	14/53
<b>Packing Dimension &amp; Gross Weight</b>								
Indoor unit	WxHxD	mm	785x295x260	785x295x260	838x326x260	1050x370x290	1050x370x290	1050x370x290
Outdoor unit	WxHxD	mm	735x565x370	825x607x375	920x615x390	920x615x390	1010x695x430	1010x695x430
Gross Weight	Indoor/Outdoor	kg	9/26	9/31	12/39	17/44	17/51	17/58
<b>Piping Connection</b>								
Liquid Side	mm(inch)		Ø6.35(1/4")	Ø6.35(1/4")	Ø6.35(1/4")	Ø6.35(1/4")	Ø9.53(3/8")	Ø9.53(3/8")
Gas Side	mm(inch)		Ø9.53(3/8")	Ø9.53(3/8")	Ø12.7(1/2")	Ø12.7(1/2")	Ø16.0(5/8")	Ø16.0(5/8")
<b>Applicable Area</b>								
	m <sup>2</sup>		10-14	14-21	18-26	28-40	34-49	45-56
<b>Stuffing Quantity</b>								
20/40/40HQ	Set		126/270/322	116/232/264	108/220/250	84/186/205	70/140/170	70/140/170

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.





Midea Creates A Better Life

# Portable Dehumidifier Window

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# M3 Portable

220-240V~,50Hz



LED display



## Electronic Control

- MPM3-09CEN1-QB6
- MPM3-09EEN1-QB6
- MPM3-12CEN1-QB4
- MPM3-12EEN1-QB4

## Remote Control

- MPM3-09CRN1-QB6
- MPM3-09ERN1-QB6
- MPM3-12CRN1-QB4
- MPM3-12ERN1-QB4

## Features:



## Specification:

■ Cooling Only    ■ Cooling & Electric Heater

Model			■ MPM3-09CEN1-QB6	■ MPM3-09EEN1-QB6	■ MPM3-12CEN1-QB4	■ MPM3-12EEN1-QB4
			■ MPM3-09CRN1-QB6	■ MPM3-09ERN1-QB6	■ MPM3-12CRN1-QB4	■ MPM3-12ERN1-QB4
<b>Capacity</b>						
Cooling/Heater		Btu/h	9000	9000/6000	12000	12000/6000
		kW	2.6	2.6/1.7	3.5	3.5/1.7
<b>Electrical Data</b>						
Power Supply		V~,Hz,Ph	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1
Power Input	Cooling/Heater	W	950	950/1800	1380	1350/1800
Operating Current	Cooling/Heater	A	4.3	4.3/7.8	6.1	6.1/7.8
<b>Performance</b>						
EER		Btu/W.h	9.5	9.5	8.7	8.7
		W/W	2.77	2.77	2.54	2.54
Energy Rate			A	A	B	B
Moisture Removal		l/h	1.6	1.6	1.8	1.8
Air Flow Volume	Indoor	m³/h	460	460	520	520
Noise Level	Hi/Med/Lo	dB(A)	54/51/49	54/51/49	56/52/50	56/52/50
<b>Dimension &amp; Weight</b>						
Net Dimension	WxHxD	mm	480/836/385	480/836/385	480/836/385	480/836/385
Packing Dimension	WxHxD	mm	725x885x460	725x885x460	725x885x460	725x885x460
Net/Gross Weight		kg	40/52	40/52	43/55	43/55
<b>Applicable Area</b>						
		m²	14-21	14-21	18-26	18-26
<b>Stuffing Quantity</b>						
20'/40'/HQ		Set	80/245	80/245	80/245	80/245

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

# M1 Portable

220-240V~,50Hz



LED display



## Electronic Control

- MPM1-07CEN1-QB6    ■ MPM1-12CEN1-QB4
- MPM1-07EEN1-QB6    ■ MPM1-12EEN1-QB4
- MPM1-09CEN1-QB6
- MPM1-09EEN1-QB6

## Remote Control

- MPM1-07CRN1-QB6    ■ MPM1-12CRN1-QB4
- MPM1-07ERN1-QB6    ■ MPM1-12ERN1-QB4
- MPM1-09CRN1-QB6
- MPM1-09ERN1-QB6

## Features:



## Specification:

■ Cooling Only    ■ Cooling & Electric Heater

Model			■ MPM1-07CEN1-QB6	■ MPM1-07EEN1-QB6	■ MPM1-09CEN1-QB6	■ MPM1-09EEN1-QB6	■ MPM1-12CEN1-QB4	■ MPM1-12EEN1-QB4
<b>Capacity</b>								
Cooling/Heater	Btu/h		7000	7000/6000	9000	9000/6000	12000	12000/6000
	kW		2.0	2.0/1.7	2.6	2.6/1.7	3.5	3.5/1.7
<b>Electrical Data</b>								
Power Supply	V~,Hz,Ph		220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1
Power Input	Cooling/Heater	W	750	750/1800	950	950/1800	1380	1380/1800
Operating Current	Cooling/Heater	A	3.3	3.3/7.8	4.2	4.2/7.8	6.1	6.1/7.8
<b>Performance</b>								
EER	Btu/W.h		9.3	9.3	9.47	9.47	8.9	8.9
	W/W		2.73	2.73	2.77	2.77	2.6	2.6
Energy Rate		A	A	A	A	B	B	
Moisture Removal	l/h		1.5	1.5	1.6	1.6	1.8	1.8
Air Flow Volume	Indoor	m <sup>3</sup> /h	410	410	460	460	520	520
Noise Level	Hi/Med/Lo	dB(A)	53/50/48	53/50/48	54/51/49	54/51/49	56/52/50	56/52/50
<b>Dimension &amp; Weight</b>								
Net Dimension	WxHxD	mm	480x836x385	480x836x385	480x836x385	480x836x385	480x836x385	480x836x385
Packing Dimension	WxHxD	mm	725x885x460	725x885x460	725x885x460	725x885x460	725x885x460	725x885x460
Net/Gross Weight		kg	38/50	38/50	40/52	40/52	43/55	43/55
<b>Applicable Area</b>								
		m <sup>2</sup>	10-14	10-14	14-21	14-21	18-26	18-26
<b>Stuffing Quantity</b>								
20'/40'HQ	Set		80/245	80/245	80/245	80/245	80/245	80/245

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

# K1 Portable

220-240V~,50Hz



## Electronic Control

- MPK1-07CEN1-QB6    ■ MPK1-10CEN1-QB6
- MPK1-07EEN1-QB6    ■ MPK1-10EEN1-QB6
- MPK1-09CEN1-QB4    ■ MPK1-12CEN1-QB4
- MPK1-09EEN1-QB4    ■ MPK1-12EEN1-QB4
- MPK1-09CEN1-QB6
- MPK1-09EEN1-QB6

## Remote Control

- MPK1-07CRN1-QB6    ■ MPK1-10CRN1-QB6
- MPK1-07ERN1-QB6    ■ MPK1-10ERN1-QB6
- MPK1-09CRN1-QB4    ■ MPK1-12CRN1-QB4
- MPK1-09ERN1-QB4    ■ MPK1-12ERN1-QB4
- MPK1-09CRN1-QB6
- MPK1-09ERN1-QB6

## Features:



## Specification:

■ Cooling Only    ■ Cooling & Electric Heater

Model			■ MPK1-07CEN1-QB6	■ MPK1-07EEN1-QB6	■ MPK1-09CEN1-QB4	■ MPK1-09EEN1-QB4	■ MPK1-09CEN1-QB6	■ MPK1-09EEN1-QB6
<b>Capacity</b>								
Cooling/Heater	Btu/h		7000	7000/6000	9000	9000/6000	9000	9000/6000
	kW		2.0	2.0/1.7	2.6	2.6/1.7	2.6	2.6/1.7
<b>Electrical Data</b>								
Power Supply	V~,Hz,Ph		220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1
Power Input	Cooling/Heater	W	770	770/1800	1030	1030/1800	950	950/1800
Operating Current	Cooling/Heater	A	3.3	3.3/7.8	4.5	4.5/7.8	4.2	4.2/7.8
<b>Performance</b>								
EER	Btu/W.h		9.1	9.1	8.7	8.7	9.5	9.5
	W/W		2.66	2.66	2.54	2.54	2.77	2.77
Energy Rate		A	A	B	B	A	A	
Moisture Removal	l/h		1.5	1.5	1.6	1.6	1.6	1.6
Water Tank Volume	L		3.5	3.5	3.5	3.5	3.5	3.5
Air Flow Volume	Indoor	m <sup>3</sup> /h	360	360	360	360	460	460
Noise Level	Hi/Med/Lo	dB(A)	52/50/48	52/50/48	52/50/48	52/50/48	52/50/48	52/50/48
<b>Dimension &amp; Weight</b>								
Net Dimension	WxHxD	mm	460x840x325	460x840x325	460x840x325	460x840x325	460x840x370	460x840x370
Packing Dimension	WxHxD	mm	680x880x400	680x880x400	680x880x400	680x880x400	705x885x455	705x885x455
Net/Gross Weight		kg	33/44	33/44	34/45	34/45	38/50	38/50
<b>Applicable Area</b>								
		m <sup>2</sup>	10-14	10-14	14-21	14-21	14-21	14-21
<b>Stuffing Quantity</b>								
20'/40'HQ	Set		96/295	96/295	96/295	96/295	82/250	82/250

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

# K Portable

220-240V~,50Hz



## Electronic Control

- MPK-07CEN1-QB6    ■ MPK2-09CEN1-QB6
- MPK-07EEN1-QB6    ■ MPK2-09EEN1-QB6
- MPK-09CEN1    ■ MPK2-10CEN1-QB6
- MPK-09EEN1    ■ MPK2-10EEN1-QB6
- MPK2-12CEN1-QB4
- MPK2-12EEN1-QB4

## Remote Control

- MPK-07CRN1-QB6    ■ MPK2-09CRN1-QB6
- MPK-07ERN1-QB6    ■ MPK2-09ERN1-QB6
- MPK-09CRN1    ■ MPK2-10CRN1-QB6
- MPK-09ERN1    ■ MPK2-10ERN1-QB6
- MPK2-12CRN1-QB4
- MPK2-12ERN1-QB4

## Specification:

■ Cooling Only    ■ Cooling & Electric Heater

- MPK1-10CEN1-QB6    ■ MPK1-10EEN1-QB6    ■ MPK1-12CEN1-QB4    ■ MPK1-12EEN1-QB4
- MPK1-10CRN1-QB6    ■ MPK1-10ERN1-QB6    ■ MPK1-12CRN1-QB4    ■ MPK1-12ERN1-QB4

Model						
<b>Capacity</b>						
Cooling/Heater		Btu/h	10000	10000/6000	12000	12000/6000
		kW	3.0	3.0/1.7	3.5	3.5/1.7
<b>Electrical Data</b>						
Power Supply		V~,Hz,Ph	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1
Power Input	Cooling/Heater	W	1040	1040/1800	1380	1380/1800
Operating Current	Cooling/Heater	A	4.6	4.6/7.8	6.1	6.1/7.8
<b>Performance</b>						
EER		Btu/W.h	9.6	9.6	8.7	8.7
		W/W	2.81	2.81	2.54	2.54
Energy Rate			A	A	B	B
Moisture Removal		l/h	1.7	1.7	1.8	1.8
Water Tank Volume		L	3.5	3.5	3.5	3.5
Air Flow Volume	Indoor	m³/h	460	460	520	520
Noise Level	Hi/Med/Lo	dB(A)	53/50/48	53/50/48	54/51/49	54/51/49
<b>Dimension &amp; Weight</b>						
Net Dimension	WxHxD	mm	460x840x370	460x840x370	460x840x370	460x840x370
Packing Dimension	WxHxD	mm	705x885x455	705x885x455	705x885x455	705x885x455
Net/Gross Weight		kg	39/50	39/50	41/52	41/52
<b>Applicable Area</b>						
		m²	15-25	15-25	18-26	18-26
<b>Stuffing Quantity</b>						
20'/40'HQ		Set	82/250	82/250	82/250	82/250

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

## Features:



## Specification:

■ Cooling Only    ■ Cooling & Electric Heater

- MPK-07CEN1-QB6    ■ MPK-07EEN1-QB6    ■ MPK-09CEN1    ■ MPK-09EEN1
- MPK-07CRN1-QB6    ■ MPK-07ERN1-QB6    ■ MPK-09CRN1    ■ MPK-09ERN1

Model						
<b>Capacity</b>						
Cooling/Heater		Btu/h	7000	7000/6000	9000	9000/6000
		kW	2.0	2.0/1.7	2.6	2.6/1.7
<b>Electrical Data</b>						
Power Supply		V~,Hz,Ph	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1
Power Input	Cooling/Heater	W	770	770/1800	1040	1040/1800
Operating Current	Cooling/Heater	A	3.3	3.3/7.8	4.5	4.5/7.8
<b>Performance</b>						
EER		Btu/W.h	9.1	9.1	8.7	8.7
		W/W	2.66	2.66	2.53	2.53
Energy Rate			A	A	B	B
Moisture Removal		l/h	1.5	1.5	1.6	1.6
Water Tank Volume		L	3.5	3.5	3.5	3.5
Air Flow Volume	Indoor	m³/h	360	360	360	360
Noise Level	Hi/Med/Lo	dB(A)	52/50/48	52/50/48	52/50/48	52/50/48
<b>Dimension &amp; Weight</b>						
Net Dimension	WxHxD	mm	460x840x325	460x840x325	460x840x325	460x840x325
Packing Dimension	WxHxD	mm	680x880x400	680x880x400	680x880x400	680x880x400
Net/Gross Weight		kg	33/44	33/44	33/44	33/44
<b>Applicable Area</b>						
		m²	10-14	10-14	14-21	14-21
<b>Stuffing Quantity</b>						
20'/40'HQ		Set	96/295	96/295	96/295	96/295

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

# K Portable

220-240V~,50Hz



## Electronic Control

- MPK-10CEN2
- MPK-10EEN2

## Remote Control

- MPK-10CRN2
- MPK-10ERN2

## Features:



## Specification:

■ Cooling Only    ■ Cooling & Electric Heater

■ MPK2-09CEN1-QB6   ■ MPK2-09EEN1-QB6   ■ MPK2-10CEN1-QB6   ■ MPK2-10EEN1-QB6   ■ MPK2-12CEN1-QB4   ■ MPK2-12EEN1-QB4  
 ■ MPK2-09CRN1-QB6   ■ MPK2-09ERN1-QB6   ■ MPK2-10CRN1-QB6   ■ MPK2-10ERN1-QB6   ■ MPK2-12CRN1-QB4   ■ MPK2-12ERN1-QB4

Model			■	■	■	■	■
<b>Capacity</b>							
Cooling/Heater	Btu/h		9000	9000/6000	10000	10000/6000	12000
	kW		2.6	2.6/1.7	3.0	3.0/1.7	3.5
<b>Electrical Data</b>							
Power Supply	V~,Hz,Ph		220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1
Power Input	Cooling/Heater	W	950	950/1800	1040	1040/1800	1380
	Cooling/Heater	A	4.2	4.2/7.8	4.6	4.6/7.8	6.1
<b>Performance</b>							
EER	Btu/W.h		9.5	9.5	9.6	9.6	8.7
	W/W		2.77	2.77	2.81	2.81	2.54
Energy Rate			A	A	A	A	B
Moisture Removal	l/h		1.7	1.7	1.8	1.8	2.0
Water Tank Volume	L		3.5	3.5	3.5	3.5	3.5
Air Flow Volume	Indoor	m³/h	460	460	460	460	520
Noise Level	Hi/Med/Lo	dB(A)	53/50/48	53/50/48	53/50/48	53/50/48	54/50/48
<b>Dimension &amp; Weight</b>							
Net Dimension	WxHxD	mm	460x840x370	460x840x370	460x840x370	460x840x370	460x840x370
Packing Dimension	WxHxD	mm	705x885x455	705x885x455	705x885x455	705x885x455	705x885x455
Net/Gross Weight		kg	38/50	38/50	38/50	38/50	40/51
<b>Applicable Area</b>							
		m²	14-21	14-21	15-25	15-25	18-26
<b>Stuffing Quantity</b>							
20/40'HQ	Set		82/250	82/250	82/250	82/250	82/250

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
 2.The values given in the table for the noise level reflect the levels in anechoic chamber.

## Features:



## Specification:

■ Cooling Only    ■ Cooling & Electric Heater

■ MPK-10CEN2    ■ MPK-10EEN2  
 ■ MPK-10CRN2    ■ MPK-10ERN2

Model			■	■
<b>Capacity</b>				
Cooling/Heater	Btu/h		10000	10000/6000
	kW		3.0	3.0/1.7
<b>Electrical Data</b>				
Power Supply	V~,Hz,Ph		220-240,50,1	220-240,50,1
Power Input	Cooling/Heater	W	1160	1160/1800
	Cooling/Heater	A	5.1	5.1/7.8
<b>Performance</b>				
EER	Btu/W.h		8.6	8.6
	W/W		2.52	2.52
Energy Rate			C	C
Moisture Removal	l/h		1.6	1.6
Water Tank Volume	L		3.5	3.5
Air Flow Volume	Indoor	m³/h	380	380
Noise Level	Hi/Med/Lo	dB(A)	52/50/48	52/50/48
<b>Dimension &amp; Weight</b>				
Net Dimension	WxHxD	mm	460x840x325	460x840x325
Packing Dimension	WxHxD	mm	680x880x400	680x880x400
Net/Gross Weight		kg	34/41	34/41
<b>Applicable Area</b>				
		m²	34/41	34/41
<b>Stuffing Quantity</b>				
20/40'HQ	Set		96/295	96/295

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
 2.The values given in the table for the noise level reflect the levels in anechoic chamber.

# Mini Portable

220-240V~,50Hz



## Electronic Control

- MPM-07CEN1-QB4
- MPT-09CEN1-QB6

## Remote Control

- MPM-07CRN1-QB4
- MPT-09CRN1-QB6

# Mini Portable

220-240V~,50Hz



## Electronic Control

- MPM-07CEN2-QB2
- MPT-09CEN2-QB4

## Remote Control

- MPM-07CRN2-QB2
- MPT-09CRN2-QB4

## Features:



## Features:



## Specification:

■ Cooling Only    ■ Cooling & Electric Heater

Model			■ MPM-07CEN1-QB4 ■ MPM-07CRN1-QB4	■ MPT-09CEN1-QB6 ■ MPT-09CRN1-QB6
<b>Capacity</b>				
Cooling/Heater	Btu/h		7000	9000
	kW		2.0	2.6
<b>Electrical Data</b>				
Power Supply	V~,Hz,Ph		220-240,50,1	220-240,50,1
Power Input	Cooling/Heater	W	800	1000
Operating Current	Cooling/Heater	A	3.5	4.4
<b>Performance</b>				
EER	Btu/W.h		8.6	9.0
	W/W		2.56	2.63
Energy Rate			B	A
Moisture Removal	l/h		1.5	1.6
Water Tank Volume	L		3	4
Air Flow Volume	Indoor	m³/h	280	380
Noise Level	Hi/Med/Lo	dB(A)	52/49/47	54/51/49
<b>Dimension &amp; Weight</b>				
Net Dimension	WxHxD	mm	454x739x339	462x778x362
Packing Dimension	WxHxD	mm	515x880x390	680x855x400
Net/Gross Weight		kg	29/35	34/45
<b>Applicable Area</b>				
		m²	10-14	14-21
<b>Stuffing Quantity</b>				
20'/40'HQ		Set	134/400	96/300

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

## Specification:

■ Cooling Only    ■ Cooling & Electric Heater

Model			■ MPM-07CEN2-QB2 ■ MPM-07CRN2-QB2	■ MPT-09CEN2-QB4 ■ MPT-09CRN2-QB4
<b>Capacity</b>				
Cooling/Heater	Btu/h		7000	9000
	kW		2.0	2.6
<b>Electrical Data</b>				
Power Supply	V~,Hz,Ph		220-240,50,1	220-240,50,1
Power Input	Cooling/Heater	W	890	1100
Operating Current	Cooling/Heater	A	3.9	4.8
<b>Performance</b>				
EER	Btu/W.h		7.9	8.2
	W/W		2.3	2.4
Energy Rate			C	B
Moisture Removal	l/h		1.5	1.6
Water Tank Volume	L		3	4
Air Flow Volume	Indoor	m³/h	280	380
Noise Level	Hi/Med/Lo	dB(A)	52/49/47	54/51/49
<b>Dimension &amp; Weight</b>				
Net Dimension	WxHxD	mm	454x739x339	462x778x362
Packing Dimension	WxHxD	mm	515x880x390	680x855x400
Net/Gross Weight		kg	29/35	34/45
<b>Applicable Area</b>				
		m²	10-14	14-21
<b>Stuffing Quantity</b>				
20'/40'HQ		Set	134/400	96/300

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

# F2 Dehumidifier

220-240V~,50Hz



## Electronic Control

- MDF2-08DEN3
- MDF2-10DEN3
- MDF2-16DEN3
- MDF2-20DEN3

# F Dehumidifier

220-240V~,50Hz



## Mechanical Control

- MDF-09DMN3
- MDF-12DMN3

## Electronic Control

- MDF-09DEN3
- MDF-12DEN3

## Features:



## Features:



## Specification:

Model			MDF2-08DEN3	MDF2-10DEN3	MDF2-16DEN3	MDF2-20DEN3
Moisture Removal	30°C, RH80%	L/day	8	10	16	20
Power Supply		V~,Hz,Ph	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1
Power Input	30°C, RH80%	W	220	260	300	370
Operating Current	30°C, RH80%	A	1	1.2	1.3	1.7
Air Flow Volume		m³/h	100	100	200	200
Water Tank Volume		L	2.9	2.9	3.1	3.1
Noise Level		dB(A)	43	43	48	50
Net Dimension	WxHxD	mm	325x480x225	325x480x225	340x480x235	340x480x235
Packing Dimension	WxHxD	mm	405x535x290	405x535x290	405x535x290	405x535x290
Net/Gross Weight		kg	11/13	11/13	12/14	12/14
Applicable Area		m²	8~14	10~17	15~26	18~30
Stuffing Quantity	20'/40'HQ	Set	440/1160	440/1160	440/1160	440/1160

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

## Specification:

Model			MDF-09DMN3	MDF-09DEN3	MDF-12DMN3	MDF-12DEN3
Moisture Removal	30°C, RH80%	L/day	9	9	12	12
Power Supply		V~,Hz,Ph	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1
Power Input	30°C, RH80%	W	210	210	240	240
Operating Current	30°C, RH80%	A	1.3	1.3	1.4	1.4
Air Flow Volume		m³/h	100	100	120	120
Water Tank Volume		L	2.7	2.7	2.7	2.7
Noise Level		dB(A)	40	40	40	40
Net Dimension	WxHxD	mm	315x505x235	315x505x235	315x505x235	315x505x235
Packing Dimension	WxHxD	mm	385x590x315	385x590x315	385x590x315	385x590x315
Net/Gross Weight		kg	13.5/15	13.5/15	15.5/17	15.5/17
Applicable Area		m²	9~15	9~15	12~20	12~20
Stuffing Quantity	20'/40'HQ	Set	440/905	440/905	440/905	440/905

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

# T Dehumidifier

220-240V~,50Hz



## Knob Control

MDT-08DKN3  
MDT-10DKN3

## Electronic Control

MDT-08DEN3  
MDT-10DEN3

# B Dehumidifier

220-240V~,50Hz



## Mechanical Control

MDB-14DMN3  
MDB-20DMN3

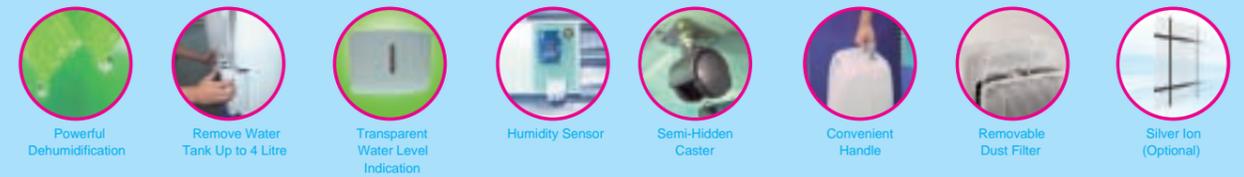
## Electronic Control

MDB-14DEN3  
MDB-20DEN3

## Features:



## Features:



## Specification:

Model			MDT-08DKN3	MDT-08DEN3	MDT-10DKN3	MDT-10DEN3
Moisture Removal	30°C, RH80%	L/day	8	8	10	10
Power Supply		V~,Hz,Ph	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1
Power Input	30°C, RH80%	W	220	220	230	230
Operating Current	30°C, RH80%	A	1.2	1.2	1.3	1.3
Air Flow Volume		m³/h	100	100	120	120
Water Tank Volume		L	1.5	1.5	1.5	1.5
Noise Level		dB(A)	45	45	45	45
Net Dimension	WxHxD	mm	330x420x260	330x420x260	330x420x260	330x420x260
Packing Dimension	WxHxD	mm	360x525x300	360x525x300	370x525x310	370x525x310
Net/Gross Weight		kg	12/15	12/15	13/16	13/16
Applicable Area		m²	8~14	8~14	10~17	10~17
Stuffing Quantity	20/40'HQ	Set	485/1280	485/1280	480/1220	480/1220

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

## Specification:

Model			MDB-14DMN3	MDB-14DEN3	MDB-20DMN3	MDB-20DEN3
Moisture Removal	30°C, RH80%	L/day	14	14	20	20
Power Supply		V~,Hz,Ph	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1
Power Input	30°C, RH80%	W	300	300	400	400
Operating Current	30°C, RH80%	A	1.8	1.8	2	2
Air Flow Volume		m³/h	130	130	150	150
Water Tank Volume		L	4	4	4	4
Noise Level		dB(A)	43	43	44	44
Net Dimension	WxHxD	mm	320x620x280	320x620x280	320x620x280	320x620x280
Packing Dimension	WxHxD	mm	385x660x350	385x660x350	385x660x350	385x660x350
Net/Gross Weight		kg	20/22	20/22	20/22	20/22
Applicable Area		m²	12~24	12~24	18~30	18~30
Stuffing Quantity	20/40'HQ	Set	288/808	288/808	288/808	288/808

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

# Window



220-240V~,50Hz



- MWF-09CMN2    ■ MWF-09HMN2
- MWF-12CMN2    ■ MWF-12HMN2
- MWF-16CMN2    ■ MWF-16HMN2
- MWF-18CMN2    ■ MWF-18HMN2
- MWF-21CMN2

- MWF-09CRN2    ■ MWF-09HRN2
- MWF-12CRN2    ■ MWF-12HRN2
- MWF-16CRN2    ■ MWF-16HRN2
- MWF-18CRN2    ■ MWF-18HRN2
- MWF-21CRN2

## Features:



Unique Quiet Design



Easy Removed Panel



Fresh Air Switch



Sliding Chassis



Two Drainage Methods



Slinger-Up System



Silver Ion (Optional)

## Specification:

■ Cooling Only    ■ Cooling & Heating

Model			■ MWF-09CMN2 ■ MWF-09CRN2	■ MWF-12CMN2 ■ MWF-12CRN2	■ MWF-16CMN2 ■ MWF-16CRN2	■ MWF-18CMN2 ■ MWF-18CRN2	■ MWF-21CMN2 ■ MWF-21CRN2
<b>Capacity</b>							
Cooling	Btu/h		9000	12000	16000	18000	21000
	kW		2.6	3.5	4.7	5.3	6.2
<b>Electrical Data</b>							
Power Supply	V~,Hz,Ph		220-230,50,1	220-230,50,1	220-230,50,1	220-230,50,1	220-230,50,1
Power Input	Cooling	W	1050	1350	1918	2163	2531
Operating Current	Cooling	A	4.7	5.8	8.34	9.41	11
<b>Performance</b>							
EER		Btu/W.h	8.46	8.84	8.36	8.36	8.36
COP		W/W	2.48	2.59	2.45	2.45	2.45
Energy Rate	Cooling		D	D	D	D	D
Air Flow Volume	Indoor	m <sup>3</sup> /h	420	530	660	660	920
Noise Level	Indoor(Hi/Lo)	dB(A)	51/45	53/47	55/50	55/50	59/55
<b>Dimension &amp; Weight</b>							
Net Dimension	WxHxD	mm	450x346x535	600x380x560	660x435x640	660x435x640	660x430x770
Packing Dimension	WxHxD	mm	495x435x580	690x445x620	750x520x740	750x520x740	775x518x917
Net/Gross Weight		kg	35/39	43/47	55/60	55/60	68/77
<b>Applicable Area</b>							
		m <sup>2</sup>	14-20	18-26	21-35	30-40	35-50
<b>Stuffing Quantity</b>							
20/40HQ		Set	220/572	136/345	94/240	94/240	72/192

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.

## Specification:

■ Cooling Only    ■ Cooling & Heating

Model			■ MWF-09HMN2 ■ MWF-09HRN2	■ MWF-12HMN2 ■ MWF-12HRN2	■ MWF-16HMN2 ■ MWF-16HRN2	■ MWF-18HMN2 ■ MWF-18HRN2
<b>Capacity</b>						
Cooling/Heating	Btu/h		9000/9000	12000/1100	16000/16000	18000/18000
	kW		2.6/2.6	3.5/3.2	4.7/4.7	5.3/5.3
<b>Electrical Data</b>						
Power Supply		V~,Hz,Ph	220-230,50,1	220-230,50,1	220-230,50,1	220-230,50,1
Power Input	Cooling/Heating	W	1050/980	1411/1207	1873/1728	2111/1949
Operating Current	Cooling/Heating	A	4.70/4.26	6.13/5.25	8.17/7.51	9.18/8.47
<b>Performance</b>						
EER		Btu/W.h	8.46/2.48	8.46/2.48	8.56/2.51	8.56/2.51
COP		W/W	2.65	2.65	2.72	2.72
Energy Rate	Cooling/Heating		D/D	D/D	D/D	D/D
Air Flow Volume	Indoor	m <sup>3</sup> /h	420	530	660	660
Noise Level	Indoor(Hi/Lo)	dB(A)	51/45	53/47	55/50	55/50
<b>Dimension &amp; Weight</b>						
Net Dimension	WxHxD	mm	450x346x535	600x380x560	660x435x640	660x435x640
Packing Dimension	WxHxD	mm	495x435x580	690x445x620	750x520x740	750x520x740
Net/Gross Weight		kg	36/40	44/48	56/61	56/61
<b>Applicable Area</b>						
		m <sup>2</sup>	14-20	18-26	21-35	30-40
<b>Stuffing Quantity</b>						
20/40HQ		Set	220/572	136/345	94/240	94/240

Remarks: 1.The above design and specifications are subject to change without prior notice for product improvement.  
2.The values given in the table for the noise level reflect the levels in anechoic chamber.