



# Midea Building Technologies Division Midea Group

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mbt.midea.com www.midea-group.com

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# Midea MBT

Midea MBT (Midea Building Technologies) is a key division of the Midea Group, a leading provider of comprehensive solutions of intelligent building, involving energy sources, elevators, control systems, and heating, ventilation & air conditioning. Midea MBT has continued with the tradition of innovation upon which it was founded and emerged as a global leader in the HVAC and building management industry. A strong drive for advancement

3 businesses constitute the significant components of Midea intelligent building solutions



Over 100 testing labs cover all different real application sceneries



Security construction



Noise

Environmental Reliable & Simulation long-lasting operation



Performance

at the forefront of a competitive edge. Through these independent projects and joint-cooperation with other global enterprises, Midea has supplied thousands of innovative solutions to customers worldwide.

has resulted in an extensive R&D

department that has placed Midea MBT

4 production bases can achieve fast delivery



All products can be visualized and digitalized throughout entire process



# **Midea VRF History**



- Launched V3 Series VRF AC inverter + fixed
- compressor • Cooperated Maximum with Toshiba capacity of in inverter single unit is technologies
- **D4** Series VRF Complete
- product line with heat pump series, heat recovery series and water cooled series.
- Maximum capacity of single unit is



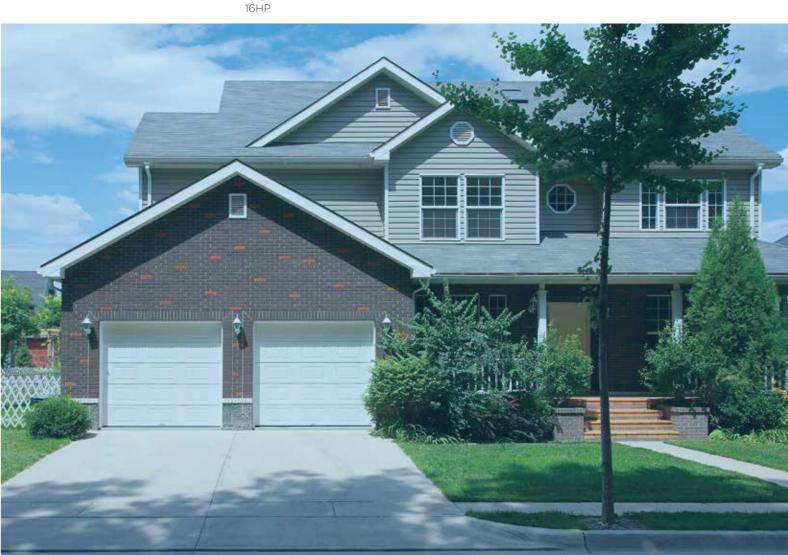


- Launching the 8<sup>th</sup> generation V8 Series, Including V8 Mini VRF
- Full DC inverter technology
- Capacity of V8 Mini is from 8kW to 16kW

- Full DC inverter technology
- Maximum capacity of single unit is 22HP



- inverter technology Maximum
  - capacity of single unit is 32HP



# **Benefits of Midea VRF**









# **Application Solutions**

# Villas

## Enjoy high quality of life

The fashionable and simple appearance perfectly matches all kinds of villa styles, and the concealed indoor unit provides you with high-quality air while perfectly integrating into all kinds of interior decoration.



# Offices

## Enjoy comfort while working

Midea VRF provides solution for small to medium-sized office buildings and its smart control solutions makes the management of VRF simple and easy whereas the wide variety of indoor units are suitable for all designs.



# **Residential Apartments**

### One for every home

The compact size and high efficiency make Midea VRF suitable for all residential homes.



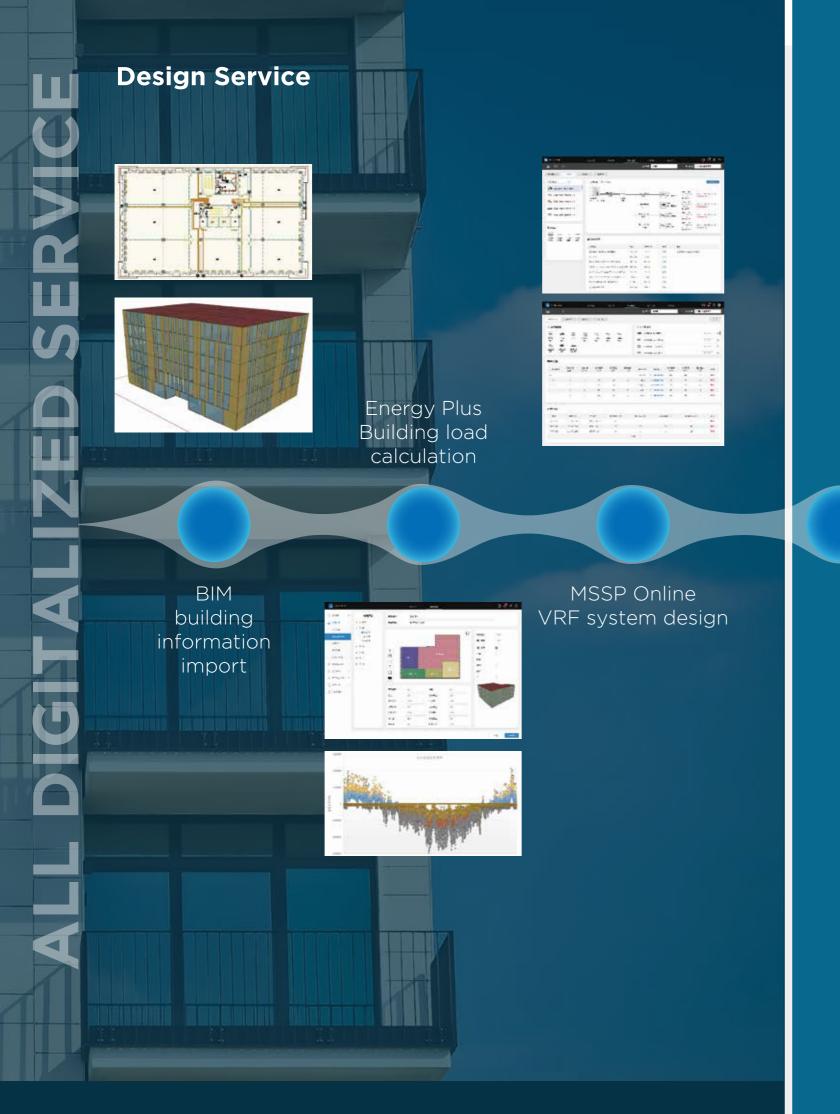
# Convenience Stores / Restaurants

## Meeting all expectations

The innovative design and a variety of indoor unit choices makes Midea Mini VRF suitable for different applications.







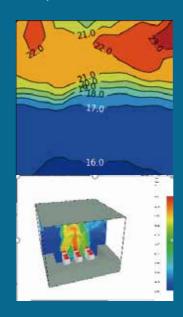
# Installation service





Automatic commissioning report





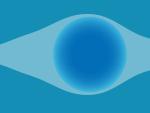
# Management service



The probability of Filth blockage 80%



Degradation of energy efficiency 25%



Continuous energy saving service



# After-sales service



Intelligent maintenance tool



Cloud-based big data analytics



2 +10 +N Spare Parts Layout can ensure the timely supply of global after-sales spare parts.



# **Technical Support Platform (TSP)**

TSP is a platform for customers to provide professional technical support. Through TSP, you can inquire product information, documentation, spare parts and troubleshooting, initiate technical questions and quality complaint process, and also support self-service spare parts order.

Website address: https://tsp.midea.com/





#### My order

Inquire spare parts from exploded view and place spare parts order directly in

#### **Document inquiry and download**

View or download product technical documentation online, such as catalogs, images, training PPTs, etc.

### **Technical inquiry & FAQ**

Initiate technical questions online, and our technicians answer them online in time. Find a quick solution in the FAQ.

#### **Troubleshooting**

Query the error code and solution by SN, model name, error code or product type.

#### Complain

Initiate the product quality complaint process online, and our after-sales engineers handle related complaints in time.

# **Mobile Intelligence Service App (MISA)**

MISA is the mobile terminal of TSP, with the same functions as TSP. The mobile service makes technical support more timely and convenient.

https://link.midea.com





**FAQ** 

Scan SN

Product Info

8

FAQ

0

Complain

Help Center

Complain



**Technical** Enquiry



Trouble



shooting



Download



Scan above to download the mobile app



Trouble shooting

**Technical Enquiry** 

(2)





Spare **Parts list** 



Thank you very much for your attention and advice

# **Midea Global Spare Parts Center**

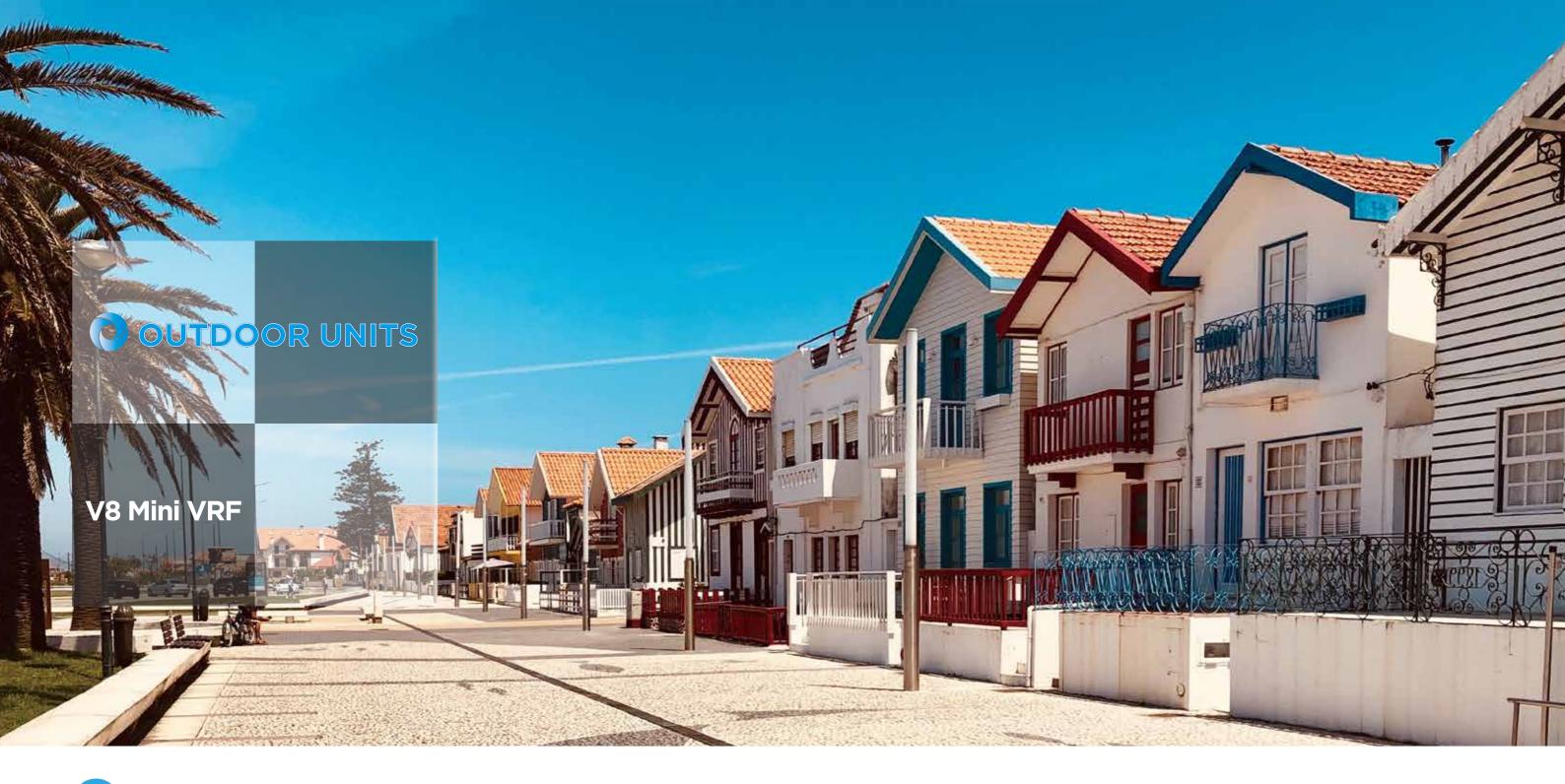
Mexico

Brazil

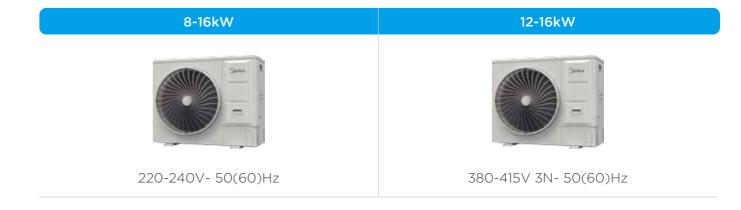
The global spare parts center provides high quality and fast spare parts supply. Midea online system (https://tsp.midea.com) can query and purchase spare parts with one click, further shortening the supply time of spare parts.

The "2 (HQ Spare parts center) + 10 (Regional Spare parts center) + 10 (Country Spare parts inventory)" Spare Parts Layout can ensure the timely supply of global after-sales spare parts.





The V8 Mini Series VRF uses a variety of algorithms and self-learning technology to monitor the operation of the equipment through operating parameters and timely maintenance, so that the equipment always runs in optimal condition throughout its life cycle.



# **Outdoor Unit Functions**

		Functions	V8 Mini			
	•: equipped as standard; O: customization option					
	HyperLink	Midea original communication bus chip greatly simplifies installation and saves installation cost	•			
jies	SuperSense	13 sensors achieves the state of each part of the refrigerant pipeline can be known in the whole process	•			
Key Technologies	Meta 2.0	Triple variable control to maximize the comfort and energy efficiency	•			
Ke	Zen air 2.0	Provides comfort and healthy air supply	•			
	Doctor M 2.0	Intelligent diagnostic technology makes maintenance easier and more efficient	•			
	Full DC inverter technology	All electrical components of outdoor and indoor units are DC power supply, improving electrical efficiency and achieving energy saving	•			
High Efficiency	Advanced subcooling technology	The refrigerant system can achieve 15°C refrigerant subcooling, which can further improve the refrigerant heat transfer efficiency while reducing the sound	•			
High Ef	Low standby power consumption	The standby power consumption is as low as 3.5W	•			
	60-step energy manage- ment	The system can be set 40% to 100% capacity output in 1% increments	•			
	Sensor backup	If one sensor fails, the virtual sensor provide backup so that the system can continue operating	•			

	Functions				
	●: equ	ipped as standard; O: customization option	V8 Mini		
	Precise oil control	Ensures all outdoor compressor oil is at a safe level, eliminating any compressor oil shortage problems.	•		
	Heavy anti-corrosion protection	Can be customized with heavy anti-corrosion treatment for surface protection against corrosive air, acid rain and saline air (for installations in coastal regions) to extend overall useful life	0		
iţ	UL anti-corrosion certificate	It has been certified by UL that our VRF outdoor unit can withstand 27 years of simulated severe corrosion under a salt contaminated traffic environment	0		
High Reliability	Refrigerant cooling PCB	Guarantees stable and safe operation of the control system	•		
Ī	Chassis electrical heater	Prevents condensation on the chassis from freezing in winter	0		
	Alarm output	In case of system malfunction, remote output error information, remind maintenance personnel timely maintenance	•		
	Fire alarm input	In case of fire, receive fire information in time and stop the system immediately to avoid serious problems	•		
	Silent mode	5-step silent mode selections provide more freedom and convenience to match the customer needs	•		
	Intelligent defrosting technology	Calculates the time required for defrosting according to the actual system status, eliminating heat losses from unnecessary defrosting	•		
	Auto cooling-heating changeover	Automatically selects cooling or heating mode to achieve the set temperature (available in changeover priority mode)	•		



# **Outdoor Unit Functions**

	Functions				
	●: equ	ipped as standard; O: customization option	V8 Mini		
ıfort	Additional ambient temperature sensor	The additional external ambient temperature sensor can detect the true outdoor ambient temperature, correctly judge whether the system is running in cooling or heating in auto priority mode, ensuring indoor comfort	0		
Enhanced Comfort	0.1 °C control precision	Control precision of the sensor can reach 0.1°C, ensuring less room temperature fluctuation	•		
Enh	Multiple priority modes	10 priority modes meet the requirements of all scenarios	•		
e B	Wide capacity range	Meets the requirements of some residential and light business scenarios	8-16kW		
Wide Application Range	Wide range of indoor units	Provides a variety of types of VRF indoor units to meet different application scenarios	•		
ide Applic	Wide operation range	Operates stably under extreme conditions	-15-52°C (C) -20-30°C (H)		
}	Long piping capability	Benefits for the system design, installation flexibility, as well as the less installation cost	•		
	Auto addressing	Distributes addresses to indoor units automatically, simplifying the installation	•		
	Automatic refrigerant recycling	Refrigerant can recycle to ODUs or IDUs, making the maintenance easier and more efficient	•		
	Bluetooth module	It can be used for fault information storage, operation parameter enquiry, system parameter setting, quick after-sales PCB replacement, indoor and outdoor units programme upgrade, etc., simplifying installation and maintenance.	0		
	Digit display	4 digit 7-segment display can be intuitive for parameter setting, parameter check and error check	•		

	Functions V8 Mini							
	equipped as standard; O: customization option							
	High external static pressure	Up to 35Pa ESP allows easy handling in a variety of installation environments	•					
	Arbitrary topology of communication wire	Supports any communication topology, greatly simplifies installation and reduces installation cost	•					
	2-core non-polarity communication wiring between the indoor and outdoor units	Simplifies installation and reduces wiring failures	•					
	Long communication wiring	Communication wiring up to 2000m makes installation more flexible	•					
Easy Installation And Service	Wide combination ratio	Combination ration can be extended to 50%-160% under certain conditions which can meet different project requirements	•					
	Supports manual and automatic defrosting	Improves maintenance efficiency	•					
	Supports manual and automatic oil return	Improves maintenance efficiency	•					
	Easy software program upgrade	The software program can be upgraded via on-site USB and burning, or remotely via the web	•					
	Flexible controller connection	Central controller and BMS gateway can connect to ODU at the same time, central controller can connect to ODU or IDU	•					
	Easy system commissioning and checking	System commissioning and checking can easily be done on-site or remotely via the web	•					
	Intelligent maintenance tool	Intelligent bluetooth after-sales kit can simplify maintenance and improve maintenance efficiency	0					

Note:
\*: The web function needs to be realized through the data cloud gateway, and the data cloud gateway needs to be purchased separately.



**TECHNOLOGIES** 



SuperSonse New Lunique

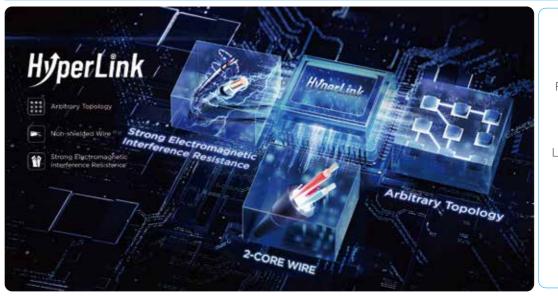




**DOCTOR m. 2.0** 

## **MyperLink**

Midea original communication bus chip greatly simplifies installation and saves installation cost.



#### **Benefits**



Flexible installation



Low installation cost



High reliability



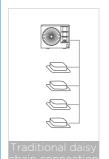
Stable operation

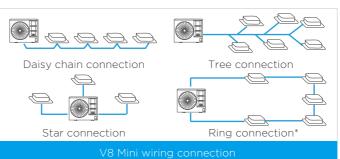
HyperLink communication technology supports any wiring pattern rather than just daisy chain connection, reducing the installation cost and the possibility of incorrect connection. It has stronger anti-interference ability, achieving communication distance up to 2000m.

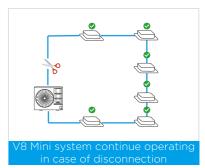
#### Arbitrary Topology Communication



In addition to the traditional daisy chain connection, the communication wire supports tree connection, star connection, ring connection and so on. The wring is flexible, which greatly reduces the installation cost and has no possibility of wrong connection on site.







\*In ring connection, the communication wire must be connected polarized (M1 port to M1 port and M2 port to M2 port).

#### Super Anti-interference Capability

Special waveform restoration technology enhances anti-interference performance for more stable communication.







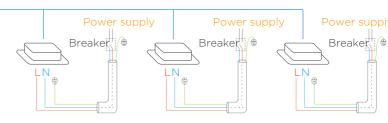


of radio

of high voltage

#### Flexible Power Supply for Indoor Units

HyerLink 's unique communication method allows the indoor units to be powered not only by a uniform power supply, but also by individual and zone power supplies, making it particularly suitable for each shop in a large complex building, which can independently power on and off its own indoor units.



### SuperSense

The status of the refrigerant is known anywhere throughout the process, ensuring high **RELIABILITY** and **COMFORT**.



#### **Benefits**



High reliability



Stable operation



Enhanced comfort

Up to 13 sensors are distributed throughout the refrigerant system, and the status of the refrigerant is known anywhere throughout the process, ensuring stable operation. At the same time, combined with the digital twin technology of the refrigerant system, a virtual sensor can be created in the event of a physical sensor failure, so that the system does not shut down in the event of a sensor failure, ensuring comfort.

#### Complete Sensors

The V8 Mini VRF has up to 13 condition sensors with built-in data models for compressors, heat exchangers, throttling components and more. By analyzing sensor data in real time, it can sense the status of the refrigerant anywhere in the system.



#### Virtual Sensor Backup

In the event of a sensor failure, other sensors can automatically simulate a virtual backup sensor, so that the VRF system can continue to operate without stopping.





#### Midea ETA (META) 2.0

META is the abbreviation of Midea Evaporating Temperature Alteration Further upgraded META technology to maximize **ENERGY SAVING**.







#### **Benefits**



Energy saving



Enhanced comfort



Fast cooling/heating

Built-in professional operation and maintenance algorithm, so that the annual operation energy efficiency of each set of systems increased by more than 28%.



Variable Refrigerant Flow

# **STEP 1:** Architectural space feature recognition

The indoor unit automatically recognizes the size of the building space and the effectiveness of the insulation according to the rate of temperature drop.



Refrigerant flow coordination



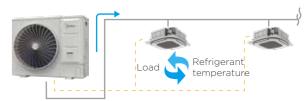
Automatic calculation of the building load and the required refrigerant quantity based on the sensor parameters.



Variable Refrigerant Temperature

# **STEP 2:** System refrigerant temperature determination

The system automatically matches the evaporating temperature (in cooling) or condensing temperature (in heating) to the room load to maximize comfort and energy efficiency.



Automatic matching of the corresponding refrigerant temperature to the load.



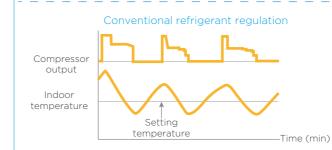
Variable Indoor Airflow

# **STEP 3:** Adaptive indoor airflow and refrigerant flow

Each indoor unit automatically adjusts the corresponding indoor airflow and refrigerant flow according to the evaporating/condensing temperature, enabling precise temperature control.



Automatic matching of the corresponding indoor airflow to the load and refrigerant temperature.



Compressor output Indoor temperature Setting temperature Time (n

#### **Zen Air 2.0**

Further upgraded ZEN AIR technology to maximize COMFORT.





#### **Benefits**



Quiet



Enhanced comfort



Healthy

0.5°C temperature adjustment, 7 fan speeds selection, sleep mode, silent mode, windless technology, high efficiency filter, a variety of sterilization device and other advanced technologies used in V8 Mini Series VRF are dedicated to creating a quiet, comfortable and healthy indoor environment.

#### 360° Airflow

New design, round air flow path ensures uniform air flow and temperature distribution.





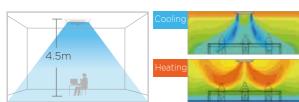
#### Individual Louver Control

The Individual louver control can control the motors separately, making it possible to control all four louvers independently.



#### Long Distance Air Delivery\*

The Four-way Cassette has an additional 50Pa static pressure for long airflow delivery and is capable of being used in spaces up to 4.5m in floor height.



\*This function is available as a customization option

#### 7 Fan Speeds

7 indoor fan speed options to meet the needs of different indoor conditions.



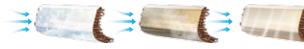
# Sleep Mode

The smart sleep mode provides a comfortable sleep period and a refreshing wake up time.



#### Heat Exchanger Self-cleaning

Wash the dirt on the heat exchanger through freezing frost, and then high temperature sterilization.



#### Frosting

Frost makes the surface of heat exchanger dirt stripping

# Defrosting

Water flow flushes dirt from heat exchanger

# Drying

55°C high temperature drying water, effective sterilization

#### **Doctor M 2.0**

Further upgraded DOCTOR M technology to maximize EASY SERVICE.



#### **Benefits**



Easy maintenance



Fast maintenance



Based on a cloud-based platform of big data and artificial intelligence, the V8 Mini Series VRF can monitor the operation status of each unit in real time, predict system faults in advance and provide data analysis for system maintenance. Intelligent Bluetooth module and special Bluetooth after-sales kit can further simplify maintenance and improve maintenance efficiency.

#### Intelligent Maintenance Tool

With intelligent Bluetooth module or special Bluetooth after-sales kit, the data of the outdoor unit can be directly read and written on your smart phone without the needs of connecting PC or opening cabinet.



Bluetooth after-sales kit

#### Real-time Monitoring of Operating Parameters

The V8 Mini Series VRF synchronizes and stores all the unit parameters to the cloud through the data cloud gateway, including the running status, locking status, dirty blocking rate, all spot inspection parameters and so on. Users can query real-time and historical parameters on computers, tablets and mobile phones at any time.



# Cloud-based Big Data Analytics

Midea V8 Mini Series VRF transmits the system operation data to the cloud in real time through the data cloud gateway, and timely reminds the system of abnormal conditions through big data analysis, helping users to proactively avoid the risk of failure that has not yet occurred and minimize hidden problems.



<sup>\*</sup> Bluetooth module is available as a customization option

<sup>\*</sup>The data cloud gateway is still under development and needs to be purchased separately.

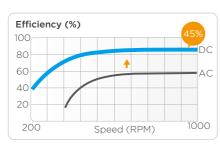
# **High Efficiency**

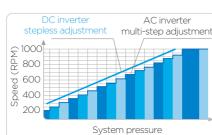
# **Inverter Technology**

#### Full DC Inverter for Outdoor Components

The V8 Mini VRF uses full DC inverter compressor and fan motor to achieve high precision stepless speed adjustment according to system operation, and ensures that the system is always in optimum condition, operating more efficiently, more consistently and with less noise.









All power devices such as indoor fan motor, drain pump and electric control board are fully DC, which

#### Full DC Inverter for Indoor Components

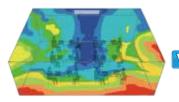
increases electrical efficiency by 20% and results in more accurate temperature control, a more constant indoor temperature and higher energy efficiency.





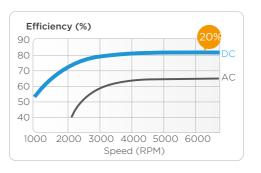






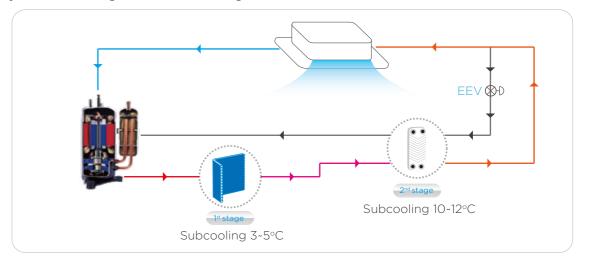
Uneven temperature distribution

Uniform temperature distribution



# Advanced Subcooling Technology

The V8 Mini VRF uses a plate heat exchanger to further cool the refrigerant and the refrigerant system can achieve 15°C refrigerant subcooling, which can further improve the refrigerant heat transfer efficiency while reducing the sound of refrigerant flow.



# **W** Low Standby Power Consumption

Compared to the standby power consumption of traditional VRF of about 30W, the V8 Mini VRF uses optimized control scheme to further reduce standby power consumption to as low as 3.5W.



# **%** 60-step Energy Management

For projects with temporary electricity supply restrictions, the outdoor unit supports 60-step energy management which can be set to output 40-100% capacity in 1% increments. It prevents tripping during electricity supply restriction conditions and remains system continue to operate.



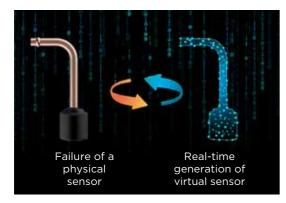
# **High Reliability**



# Sensor Backup New Unique



Through digital algorithms, each physical sensor generates a corresponding virtual sensor that acts as a backup to each other, ensuring that the failure of one sensor does not affect the normal operation of the system.



# SuperSense

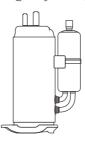
V8 Mini VRF uses up to 13 sensors for each outdoor unit and 4 sensors for each indoor unit. The operating status of the system refrigerant is clearly visible, which can realize intelligent analysis of operation parameters, intelligent error diagnosis and forecasting, and visualized energy saving.



## **Precise Oil Control**

Three stages of oil control technology ensure all outdoor compressor oil is always kept at a safe level, eliminating any compressor oil shortage problems.





Compressor internal oil separation.





High-efficiency centrifugal oil separator (with separation efficiency of up to 99%) ensures that oil is separated from the discharge gas and returned to the compressors in a timely fashion.





The automatic oil return program determines the oil return through the running time and the oil discharge amount, enabling precise oil return.

# Meavy Anti-corrosion Protection\*

Outdoor units are given anti-corrosion treatment for non-extreme conditions as standard and can also be customized with heavy anti-corrosion treatment on main components for surface protection against corrosive air, acid rain and saline air (for installations in coastal regions) to extend overall useful life. The integrity of the anti-corrosion treatment is ensured by subjecting major components and parts to salt mist testing, moisture and heating testing and light aging testing.



Exclusively 1500h neutral salt spray test Super anti-sulphuration corrosio 240h SO2 test Testingno. caez.mcx-ccz-ez-eccess www.intertek.com.on/Tick-Mark

\*Heavy anti-corrosion treatment is available as a customization option.

#### UL Anti-Corrosion Certificate\*

It has been certified by UL that our VRF outdoor unit can withstand 27 years of simulated severe corrosion under a salt contaminated traffic environment.

\*UL anti-corrosion certificate is available for heavy anti-corrosion treatment units.

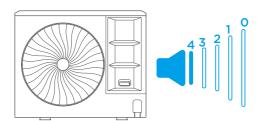
Outdoor Unit can resist 27 years of simulated severe corrosion under a salt contaminated traffic environment



# Enhanced Comfort

# Advanced Silent Technology

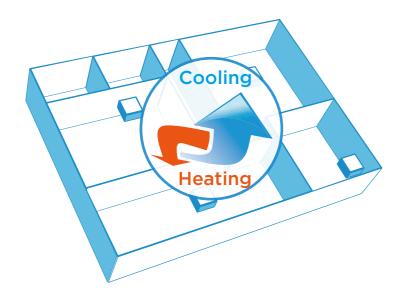
5-step silent mode provides more freedom and convenience to match the customer needs.



5 silent options

# **M** Auto Cooling-heating Changeover

Automatically selects cooling or heating mode to achieve the set temperature.



# **10 Priority Modes**

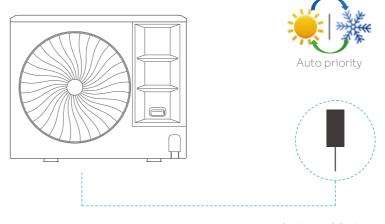
10 priority mode options provide more freedom and convenience to match the customer needs.



# Additional Ambient Temperature Sensor\*

The V8 Mini VRF can be equipped with an additional external ambient temperature sensor to determine whether the system is operating in cooling or heating in auto priority mode. For some installations, the ambient temperature sensor fixed on the unit cannot detect the true ambient temperature, resulting in the system operating in an inappropriate mode and affecting indoor comfort. The external ambient temperature sensor can detect the true outdoor ambient temperature, correctly judge whether the system is running in cooling or heating, ensuring indoor comfort.

\*This function is available as a customization option.



Additional Ambient Temperature Sensor

# Wide Application Range

# **Wide Capacity Range**

The capacity of V8 Mini VRF is from 8kW to 16kW with two power supply options, which are perfectly suitable for all kinds of small and medium-sized buildings.

8-16kW	12-16kW
220-240V~ 50(60)Hz	380-415V 3N~ 50(60)Hz

# **Wide Range of Indoor Units**

The V8 Mini VRF offers a variety of types of indoor units to meet different scenarios of applications such as offices, villas, restaurants, etc.



# **Wide Operation Range**

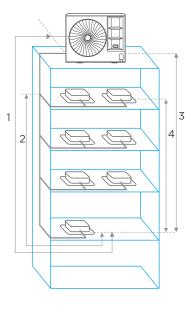
Thanks to the refrigerant cooling technology, the electronic components are always working in a safe temperature range. The system can operate stably at extreme temperature range from -20°C to 52°C.



# **M** Long Piping Capability

The total piping length of the V8 Mini VRF can be up to 300m, the level difference between indoor and outdoor units can be up to 50m and the level difference between indoor units can be up to 15m, making the V8 Mini VRF perfectly suitable for small and medium-sized buildings.

Piping length /	Capability (m)		
Height difference	8-10kW	12-16kW	
Total piping length	150	300	
1. Longest	Actual	50	100
piping length	Equivalent	60	120
2. Longest piping leng	30	40	
Largest level     difference between	ODU up	30	50
IDUs and ODU	ODU down	20	40
4. Largest level difference between IDUs	15	15	



# Easy Installation and Service

# Free Wiring

HyperLink communication technology supports any wiring pattern rather than just daisy chain connection, reducing the installation cost and the possibility of incorrect connection. It has stronger anti-interference ability, achieving communication distance up to 2000m.



# Space Saving

One Mini VRF outdoor unit can connect 1 to 11 indoor units, which greatly saves the installation space of outdoor units and retains buildings' original aesthetics. compared to the traditional split AC. It is very suitable for use in residential and light commercial scenarios, such as villas, restaurants, small and medium-sized supermarkets, etc.





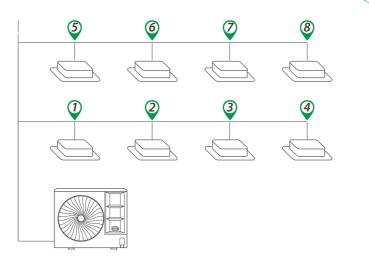






# Auto Addressing

Addresses for all indoor units can be assigned automatically by the V8 Mini system, further simplifying installation.



# **7** Flexible Pipe Connection

A four-direction space is available for connecting pipes and wiring in various installation sites.



#### **35Pa External Static Pressure**

The 35Pa static pressure increases flexibility in the choice of the unit's installation point. Strong heat dissipation can be maintained even when the outdoor unit is covered.



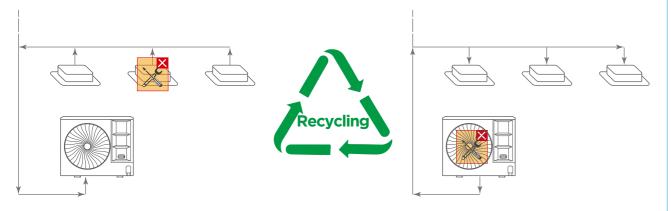
# **Z** Easy Transportation

V8 Mini can be transported by elevator which makes installation dramatically easy, and effectively reduces time and labor thanks to the small size.



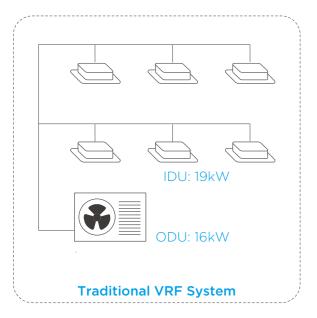
# **M** Automatic Refrigerant Recycling

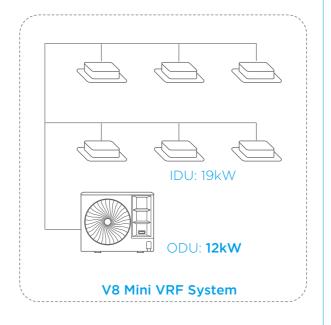
When an indoor unit fails, the refrigerant can be recycled into the outdoor unit. When the outdoor unit fails, the refrigerant can be recycled into the indoor units. Two types of refrigerant recycling make the maintenance easier and more efficient.



#### **Wide Combination Ratio**

Compared to traditional Mini VRF with combination ratio of 50-130%, the V8 Mini VRF can be extended to 50-160%, and the wider combination ratio allows for more flexible system configuration. The larger combination ratio can be applied to long-term part-load operation scenarios, allowing for further reduction in installation costs.





# **Zeros Software Program Upgrade**

In addition to upgrading the program of outdoor and indoor units through USB and burner, the new product can also remotely upgrade all the programs of indoor and outdoor units through data cloud gateway, making system upgrades very convenient and ensuring that the system program is always up to date.

\*The data cloud gateway is still under development and needs to be purchased separately.

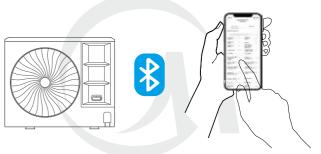


# **Maintenance Tool**

With the newly developed smart tool (Bluetooth module and special Bluetooth after-sales kit), system settings, operating parameter queries, trial runs and programme upgrades are all possible without opening the cabinet.

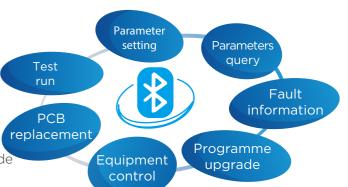
#### Useful in the following situations:

- Installation
- Service maintenance



#### Main functions:

- Fault information storage
- Operating parameters query
- Start commissioning test run
- System parameter setting
- Quick after-sales PCB replacement
- Equipment control
- Indoor and outdoor units programme upgrade



#### **Specifications**

## V8 Mini 220-240V~ 50Hz

Model			MV8M-80WV2HN1	MV8M-100WV2HN1	MV8M-120WV2HN1
Power supply		V/N/Hz	220-240/1/50(60)	220-240/1/50(60)	220-240/1/50(60)
	G :	kW	8.0	10.0	12.0
Caplinal	Capacity	kBtu/h	27	34	40
Cooling <sup>1</sup>	Power input	kW	1.90	2.43	2.95
	EER		4.20	4.12	4.06
	Compositu	kW	9.0	12.0	14.0
1 2	Capacity	kBtu/h	30	40	47
Heating <sup>2</sup>	Power input	kW	1.88	2.82	3.22
	COP		480	4.25	4.35
Connected	Total capacity			50%-160% of ODU capacity	
ndoor unit	Maximum quantit	:y	5	6	8
	Type		DC inverter	DC inverter	DC inverter
Compressor	Quantity		1	1	1
	Type		DC	DC	DC
an motor	Quantity		1	1	1
-an motor	Airflow rate	m³/h	5200	5200	5000
	Static pressure	Pa	0-35 (standard)	0~35 (standard)	0-35 (standard)
Refrigerant	Туре		R410A	R410A	R410A
Reirigerani	Factory charge	kg	3.1	3.1	4.1
Pipe	Gas pipe	mm	15.9	15.9	15.9
connections <sup>3</sup>	Liquid pipe	mm	9.52	9.52	9.52
Sound pressure le	evel <sup>4</sup>	dB(A)	53	53	55
Sound power level <sup>4</sup>		dB(A)	70	72	72
Net dimensions (W×H×D)		mm	1073×864×523	1073×864×523	1073×864×523
Packed dimensions (W×H×D)		mm	1120×980×560	1120×980×560	1120×980×560
Net weight		kg	80	80	94
Gross weight		kg	90	90	104
Ambient temp.	Cooling	°C (DB)	-15~52	-15~52	-15~52
operation range Heating		°C (DB)	-20~30	-20~30	-20~30

Model			MV8M-140WV2HN1	MV8M-160WV2HN1
Power supply		V/N/Hz	220-240/1/50(60)	220-240/1/50(60)
	Cit-	kW	14.0	15.5
	Capacity	kBtu/h	47	52
Cooling <sup>1</sup>	Power input	kW	3.59	4.29
_	EER		3.90	3.61
	Cit	kW	16.0	18.0
	Capacity	kBtu/h	54	61
Heating <sup>2</sup>	Power input	kW	3.76	4.39
	COP		4.25	4.10
Connected	Total capacity		50%-160% of	ODU capacity
ndoor unit	Maximum quantit	:y	10	11
_	Туре		DC inverter	DC inverter
Compressor	Quantity		1	1
	Type		DC	DC
	Quantity		1	1
an motor	Airflow rate	m³/h	5000	5000
	Static pressure	Pa	0-35 (standard)	0-35 (standard)
2 - 6 -:	Type		R410A	R410A
Refrigerant	Factory charge	kg	4.1	4.1
Pipe	Gas pipe	mm	15.9	15.9
connections <sup>3</sup>	Liquid pipe	mm	9.52	9.52
Sound pressure level <sup>4</sup>		dB(A)	56	56
Sound power level <sup>4</sup>		dB(A)	73	74
Net dimensions (W×H×D)		mm	1073×864×523	1073×864×523
Packed dimensions (W×H×D)		mm	1120×980×560	1120×980×560
Net weight		kg	94	94
Gross weight		kg	104	104
Ambient temp. Cooling		°C (DB)	-15~52	-15~52
operation range	Heating	°C (DB)	-20~30	-20-30

- Notes:
  1. Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 5m with zero level difference.
  2. Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 5m with zero level difference.
  3. Diameters given are those of the unit's stop valves.
  4. Sound pressure level is measured at a position 1m in front of the unit and 1m above the floor in a semi-anechoic chamber.

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#### V8 Mini 380-415V 3N~ 50Hz

Model			MV8M-120WV2GN1	MV8M-140WV2GN1
Power supply		V/N/Hz	380-415/3/50(60)	380-415/3/50(60)
	Caracita	kW	12.0	14.0
	Capacity	kBtu/h	40	47
Cooling <sup>1</sup>	Power input	kW	2.96	3.59
Ŭ.	EER		4.06	3.90
	Conneity	kW	14.0	16.0
Llaskin n2	Capacity	kBtu/h	47	54
Heating <sup>2</sup>	Power input	kW	3.22	3.76
	COP		4.35	4.25
Connected	Total capacity		50%~160% of	ODU capacity
indoor unit	Maximum quantity		8	10
C	Туре		DC inverter	DC inverter
Compressor	Quantity		1	1
	Туре		DC	DC
Fan motor	Quantity		1	1
-dri motor	Airflow rate	m³/h	5000	5000
	Static pressure	Pa	0-35 (standard)	0~35 (standard)
Refrigerant	Туре		R410A	R410A
Kerrigerani	Factory charge	kg	4.1	4.1
Pipe	Gas pipe	mm	15.9	15.9
connections <sup>3</sup>	Liquid pipe	mm	9.52	9.52
Sound pressure level <sup>4</sup>		dB(A)	55	56
Sound power level <sup>4</sup>		dB(A)	72	73
Net dimensions (W×H×D)		mm	1073×864×523	1073×864×523
Packed dimensions (W×H×D)		mm	1120×980×560	1120×980×560
Net weight		kg	109	109
Gross weight		kg	119	119
Ambient temp. Cooling °C		°C (DB)	-15~52	-15~52
operation range	Heating	°C (DB)	-20~30	-20~30

Model			MV8M-160WV2GN1
Power supply		V/N/Hz	380-415/3/50(60)
		kW	15.5
Caplinal	Capacity	kBtu/h	52
Cooling <sup>1</sup>	Power input kW		4.29
	EER		3.61
	Capacity	kW	18.0
Lloating?	Capacity	kBtu/h	61
Heating <sup>2</sup>	Power input	kW	4.39
	COP		4.10
Connected	Total capacity		50%-160% of ODU capacity
indoor unit	Maximum quantity		11
Compressor	Type		DC inverter
Compressor	Quantity		1
	Type		DC
Fan motor	Quantity		1
Fallillotol	Airflow rate m <sup>3</sup> /h		5000
	Static pressure Pa		0-35 (standard)
Refrigerant	Туре		R410A
	Factory charge	kg	4.1
Pipe	Gas pipe	mm	15.9
connections <sup>3</sup>	Liquid pipe mm		9.52
Sound pressure lev	vel <sup>4</sup>	dB(A)	56
Sound power level		dB(A)	74
Net dimensions (W×H×D)		mm	1073×864×523
Packed dimensions (W×H×D)		mm	1120×980×560
Net weight		kg	109
Gross weight		kg	119
Ambient temp. Cooling		°C (DB)	-15~52
operation range	Heating	°C (DB)	-20-30

- Notes:
  1. Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 5m with zero level difference.
  2. Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 5m with zero level difference.
  3. Diameters given are those of the unit's stop valves.
  4. Sound pressure level is measured at a position 1m in front of the unit and 1m above the floor in a semi-anechoic chamber.