Commercial Air Conditioners **2016**

VRF Mini Series
50Hz

GD Midea Heating & Ventilating Equipment Co., Ltd.
Is certified under the ISO 14001 International standard
for environmental management.
Certificate No.15912E10020R0L

GD Midea Heating & Ventilating Equipment Co., Ltd.
Is certified under the ISO 9001 International standard
for quality assurance.
NO.01 100 019209

GD Midea Heating & Ventilating Equipment Co., Ltd.
Certificate of Occupational Health and Safety Management System
Certificate No. 15912S20006R0L-1.

Midea CAC After-service Application

iOS Version

Android Version

Midea CAC News Application

iOS Version

Commercial Air Conditioner Division
Midea Group

Add.: West Region of Midea Commercial Air Conditioner Department, Industry Avenue,
Beijiao, Shunde, Foshan, Guangdong, P. R. China

Postal code: 528311

Tel: +86-757-26338346 Fax: +86-757-22390205

cac.midea.com global.midea.com

Midea CAC

Midea CAC is a key division of the Midea Group, a leading producer of consumer appliances and provider of heating, ventilation and air conditioning solutions. Midea CAC has continued with the tradition of innovation upon which it was founded, and emerged as a global leader in the HVAC industry. A strong drive for advancement has created a groundbreaking R&D department that has placed Midea CAC at the forefront of a competitive field. Through these independent efforts and joint cooperation with other global enterprises, Midea has supplied thousands of innovative solutions to customers worldwide.

There are three production bases: Shunde, Chongqing and Hefei.

MCAC Shunde: 38 product lines focusing on VRF, Split Products, Heat Pump Water Heaters, and AHU/FCU.

MCAC Chongqing: 14 product lines focusing on Water Cooled Centrifugal/Screw/Scroll Chillers, Air Cooled Screw/Scroll Chillers, and AHU/FCU.

MCAC Hefei: 11 product lines focusing on VRF, Chillers, and Heat Pump Water Heaters.

2014-2015 » Win FIFA World Cup Stadiums project in Brazil Beira Rio, Olympic Games Stadiums project in Brazil Rio de Janeiro and Africa games Stadiums project in Congo Brazzaville successively

2014 » Launched the All DC Inverter V5X globally, outstanding product performance helps Midea leading VRF market

2011-2014 » Launched the DC Inverter V4 Plus Series successively, complete product lines help Midea successfully enter the mainstream VRF market

2011-2012 » J.V. with Carrier LA and Carrier India successively

2009 » Launched the DC Inverter V4 globally

2008 » Developed DC inverter technology with Toshiba

2000-2001 » Cooperated with Toshiba and Copeland, enter VRF field

1999 » Entered the CAC field

ISO 9001 : 2000
Certificate No.: CC 454

ISO 14001: 2004
Certificate No.:CC1417

Midea Company Introduction

Midea CAC Introduction

OUTDOOR UNIT LINEUP

Capacity Range	kW	7.2(1.5~8)	9.0(2~10)	12.3	14	15.5	17.5
Appearance							

Capacity Range	kW	20	22.4	26	40	45
Appearance						

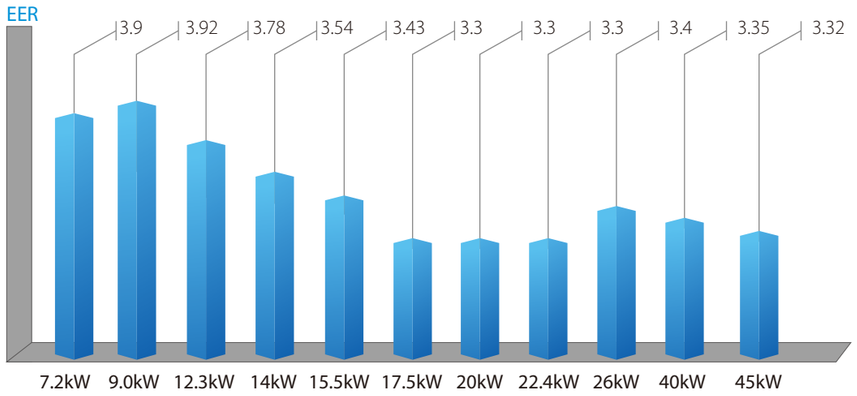
»OUTDOOR UNITS

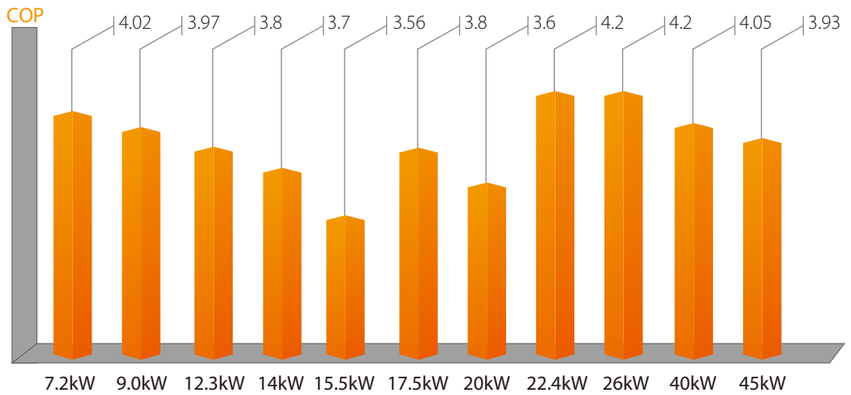
VRF Mini Series

High Efficiency
Wide Application Range
Easy Installation and Service
Specifications

High Efficiency

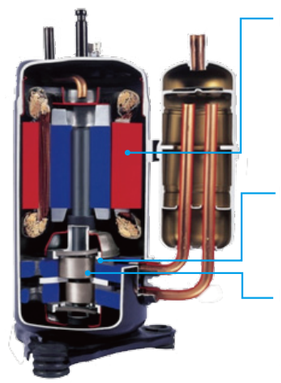
High EER and COP Values »





All DC Inverter Compressors »

The DC inverter compressor adopts innovative design and numerous high performance key parts which can reduce power consumption by 25%.



Compressor
(Twin Rotary) structure

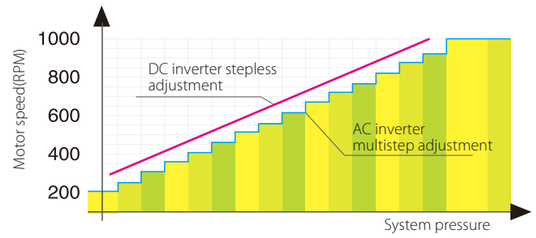
Highly Efficient DC Motor:
- Creative motor core design
- High density neodymium magnet
- Concentrated type stator
- Wider operating frequency range

Better balance and Extremely Low Vibration:
- Twin eccentric cams
- 2 balance weights

Highly Stable Moving Parts:
- Optimal material matching rollers and vanes
- Optimize compressor drive technology
- Highly robust bearings
- Compact structure

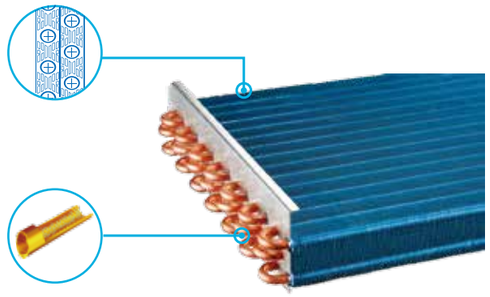
All DC Fan Motors »

The system controls the speed of the fan motor according to the system pressure and system load achieving the minimum power consumption.



High Efficiency Heat Exchanger »

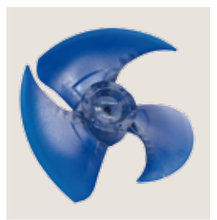
Newly designed window type fins enlarge the heat exchange area and decrease air resistance, enhance heat exchange performance and save more energy. Hydrophilic fins and internally threaded copper pipes optimize heat exchange efficiency.



New grill design »

Optimally designed fan shape and newly designed grill ensure both safety and air volume.

Newly designed grill



Powerful Large Propeller

Wide Application Range

Wide Capacity Range »

The outdoor units' capacity range from 7.2kW to 45kW which is ideal for small offices, villas, apartment and shops, making it perfect for commercial and residential application.

7.2kW(1.5~8kW), 9.0kW(2~10kW)

12.3kW, 14kW, 15.5kW, 17.5kW

20kW, 22.4kW, 26kW

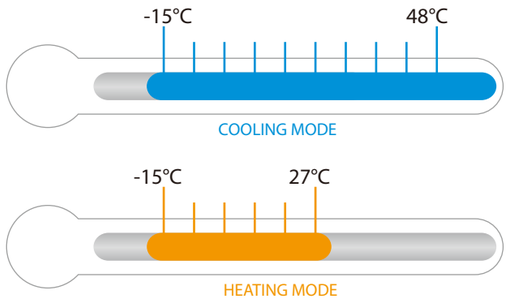
40kW, 45kW

Wide Range of Indoor Units »

Midea provides 12 types and more than 100 models of VRF indoor units maximum meeting varied customer requirements. It is widely applied in market, hospital, office building, hotel, airport, etc..

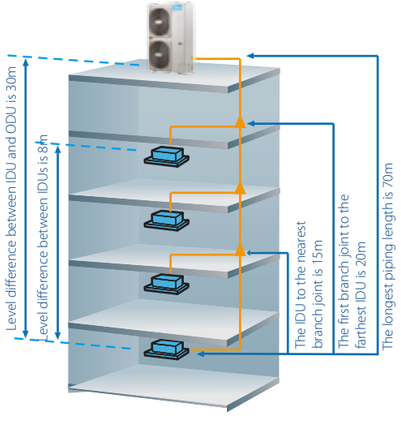
Wide Operation Range »

Mini VRF Series operates stably under extreme conditions, ranging from minus 15°C to 48°C.



Long Piping Length »

The Mini VRF provides a total piping length possibility of 120m, a maximum height difference between outdoor and indoor units of 30m. The height difference between indoor units can be up to 8m. These generous allowances facilitate an extensive array of system designs.

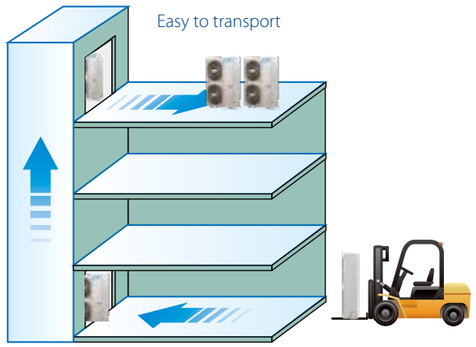


	Permitted value(m)		7.2/9kW	12.3/14/15.5/17.5kW	20/22.4/26kW	40/45kW
Piping length	Total piping length (Actual)		100	100	120	250
	Longest piping (L)	Actual length	45	60	60	100
		Equivalent length	50	70	70	120
Level difference	Equivalent piping length (from the farthest IDU to the first indoor branch joint)		20	20	20	40
	Level difference between IDU~ODU	Outdoor unit up	30	30	30	30
		Outdoor unit down	20	20	20	20
	Level difference between IDU~IDU		8	8	8	8

1 Total pipe length is equal to all the liquid pipe or all the gas pipe length.
2 When the total equivalent pipe length of liquid side plus gas side is more than 90m, it needs to meet the specific conditions according to the installation part of the technical manual.

Easy Installation and Service

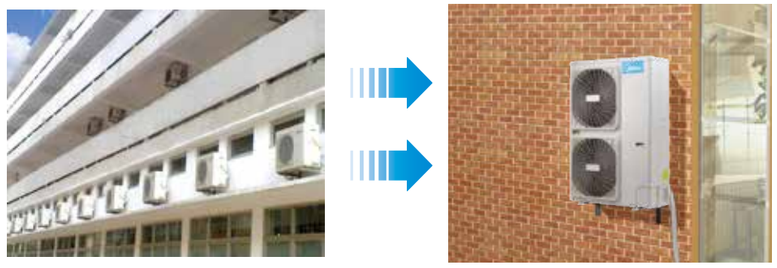
Easy installation »



Easy installation: No special area is required for outdoor units.
Easy transportaion: All outdoor units can be transported by elevator, which greatly simplifies installation and reduces time and labor.
The Mini VRF system's indoor and outdoor units are almost as easy to install as residential airconditioning systems, making them ideal for small offices and shops.

Space saving design »

The Mini VRF units are slimmer and more compact, resulting in significant savings in installation space.
In some large residential and light commercial areas, such as villas, restaurants, usually it need more than one indoor unit, which in turn requires multiple outdoor units.
Midea's Mini VRF system solves this problem, and retains buildings' original aesthetics.



Auto Addressing »

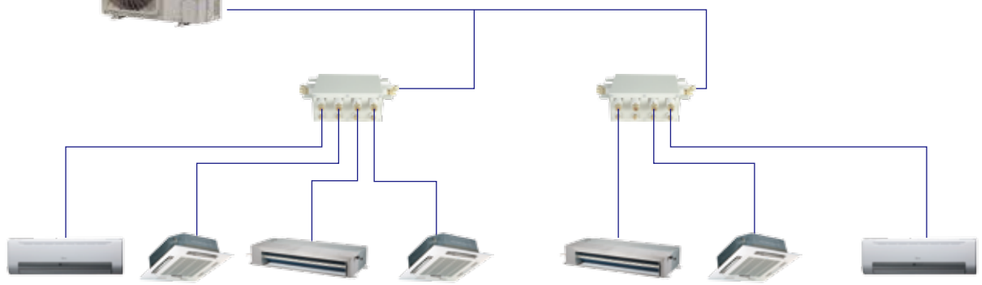
Outdoor unit can distribute addresses for indoor units automatically.
Wireless and wired controllers can query and modify each indoor unit's address.

More convenient piping connector - branch box »

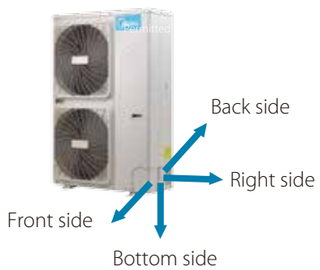
Easier and safer installation thanks to a branch box that simplifies piping work and the adoption of screw connection.
Both left and right pipe flare connectin from outdoor unit to branch box is reserved, which greatly simplifies field installation.

More Convenient Piping Connector – Branch Box »

Easier and safer installation thanks to a branch box that simplifies piping work greatly.



Four-Way Piping Connection »



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

Specifications

Full DC Inverter Mini VRF - Heat Pump

Model MDV-			V80W/DN1	V105W/DN1	V120W/DN1	V140W/DN1	V160W/DN1(B)
Power supply		V/Ph/Hz	220-240/1/50				
Cooling	Capacity	kW	7.2(1.5~8.0)	9.0(2.0~10.0)	12.5	14.0	15.5
	Power input	kW	1.85	2.30	3.31	3.95	4.52
	EER		3.90	3.92	3.78	3.54	3.43
	ESEER		7.36	7.4	7.1	6.68	6.42
Heating	Capacity	kW	7.2(1.6~8.4)	9.0(2.1~10.5)	14.0	16.0	17
	Power input	kW	1.79	2.27	3.68	4.32	4.77
	COP		4.02	3.97	3.80	3.70	3.56
Connectable indoor unit	Total capacity		45~130% of outdoor unit capacity				
	Max. quantity		4	5	7	8	9
Compressor	Type		Rotary				
	Quantity		1	1	1	1	1
Fan motor	Type		DC Motor				
	Quantity		1	1	2	2	2
Refrigerant	Type		R410A				
	Factory charging	kg	2.95	2.95	2.8	3.2	3.8
Pipe connections	Liquid pipe	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	Gas pipe	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ19.1
Air flow rate		m^3/h	5500	5500	6000	6000	6000
Sound pressure level		dB(A)	56	57	57	57	57
Sound power level		dB(A)	67	68	70	71	72
Net dimension (W×H×D)		mm	1075 × 966 × 396		900 × 1327 × 400		
Packing size (W×H×D)		mm	1120 × 1100 × 435		1030 × 1456 × 435		
Net weight		kg	75.5	75.5	95	99	100
Gross weight		kg	85.5	85.5	105	109	110
Operating temperature range		℃	Cooling: -15~43; Heating: -15~27				

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27℃ DB/19℃ WB; Outdoor temperature 35℃ DB/24℃ WB; Heating: Indoor temperature 20℃ DB/15℃ WB; Outdoor temperature 7℃ DB/6℃ WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1m above the floor.

Full DC Inverter Mini VRF - Heat Pump

Model MDV-			V120W/DRN1	V140W/DRN1	V160W/DRN1	V180W/DRN1
Power supply		V/Ph/Hz	380-415/3/50			
Cooling	Capacity	kW	12.5	14.0	16.0	17.5
	Power input	kW	3.31	3.95	4.66	5.3
	EER		3.78	3.54	3.43	3.3
	ESEER		7.1	6.68	6.42	6.21
Heating	Capacity	kW	14.0	16.0	17.5	19
	Power input	kW	3.68	4.32	4.92	5
	COP		3.80	3.70	3.56	3.8
Connectable indoor unit	Total capacity		45~130% of outdoor unit capacity			
	Max. quantity		7	8	9	9
Compressor	Type		Rotary			
	Quantity		1	1	1	1
Fan motor	Type		DC motor			
	Quantity		2	2	2	2
Refrigerant	Type		R410A			
	Factory charging	kg	2.8	3.2	3.8	4.5
Pipe connections	Liquid pipe	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	Gas pipe	mm	Φ15.9	Φ15.9	Φ19.1	Φ19.1
Air flow rate		m^3/h	6000	6000	6000	6800
Sound pressure level		dB(A)	57	57	57	59
Sound power level		dB(A)	70	71	72	74
Net dimension (W×H×D)		mm	900 x 1327 x 400			
Packing size (W×H×D)		mm	1030 x 1456 x 435			
Net weight		kg	95	99	100	107
Gross weight		kg	106	109	110	118
Operating temperature range		℃	Cooling: -15~43; Heating: -15~27			

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27℃ DB/19℃ WB; Outdoor temperature 35℃ DB/24℃ WB; Heating: Indoor temperature 20℃ DB/15℃ WB; Outdoor temperature 7℃ DB/6℃ WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1m above the floor.

Full DC Inverter Mini VRF - Heat Pump

Model MDV-			V200W/DRN1	V224W/DRN1	V260W/DRN1	V400W/DRN1	V450W/DRN1
Power supply		V/Ph/Hz	380-415/3/50				
Cooling	Capacity	kW	20	22.4	26	40	45
	Power input	kW	6.1	6.8	7.6	11.9	13.6
	EER		3.28	3.29	3.42	3.35	3.32
	ESEER		6.19	6.21	6.42	6.26	6.2
Heating	Capacity	kW	22	24.5	28.5	45	50
	Power input	kW	6.1	5.9	6.8	11.1	12.7
	COP		3.61	4.15	4.19	4.05	3.93
Connectable indoor unit	Total capacity		50~130% of outdoor unit capacity				
	Max. quantity		10	11	12	14	15
Compressor	Type		DC inverter				
	Quantity		1	1	1	2	2
Fan motor	Type		DC motor + AC motor			DC motor	
	Quantity		2	2	2	2	2
Refrigerant	Type		R410A				
	Factory charging	kg	4.8	6.2	6.2	9	12
Pipe connections	Liquid pipe	mm	Φ9.53	Φ9.53	Φ9.53	Φ12.7	Φ12.7
	Gas pipe	mm	Φ19.1	Φ19.1	Φ22.2	Φ22.2	Φ25.4
Air flow rate		m^3/h	10999	10494	10494	16575	16575
Sound pressure level		dB(A)	59	59	60	62	62
Sound power level		dB(A)	73	73	74	76	76
Net dimension (W×H×D)		mm	1120×1558×528	1120×1558×528	1120×1558×528	1360×1650×540	1460×1650×540
Packing size (W×H×D)		mm	1270×1720×565	1270×1720×565	1270×1720×565	1450×1785×560	1550×1785×560
Net weight		kg	137	146.5	147	240	275
Gross weight		kg	153	162.5	163	260	290
Operating temperature range		℃	Cooling: -15~46; Heating: -15~24			Cooling: -5~48; Heating: -15~24	

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27℃ DB/19℃ WB; Outdoor temperature 35℃ DB/24℃ WB; Heating: Indoor temperature 20℃ DB/15℃ WB; Outdoor temperature 7℃ DB/6℃ WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1m above the floor.