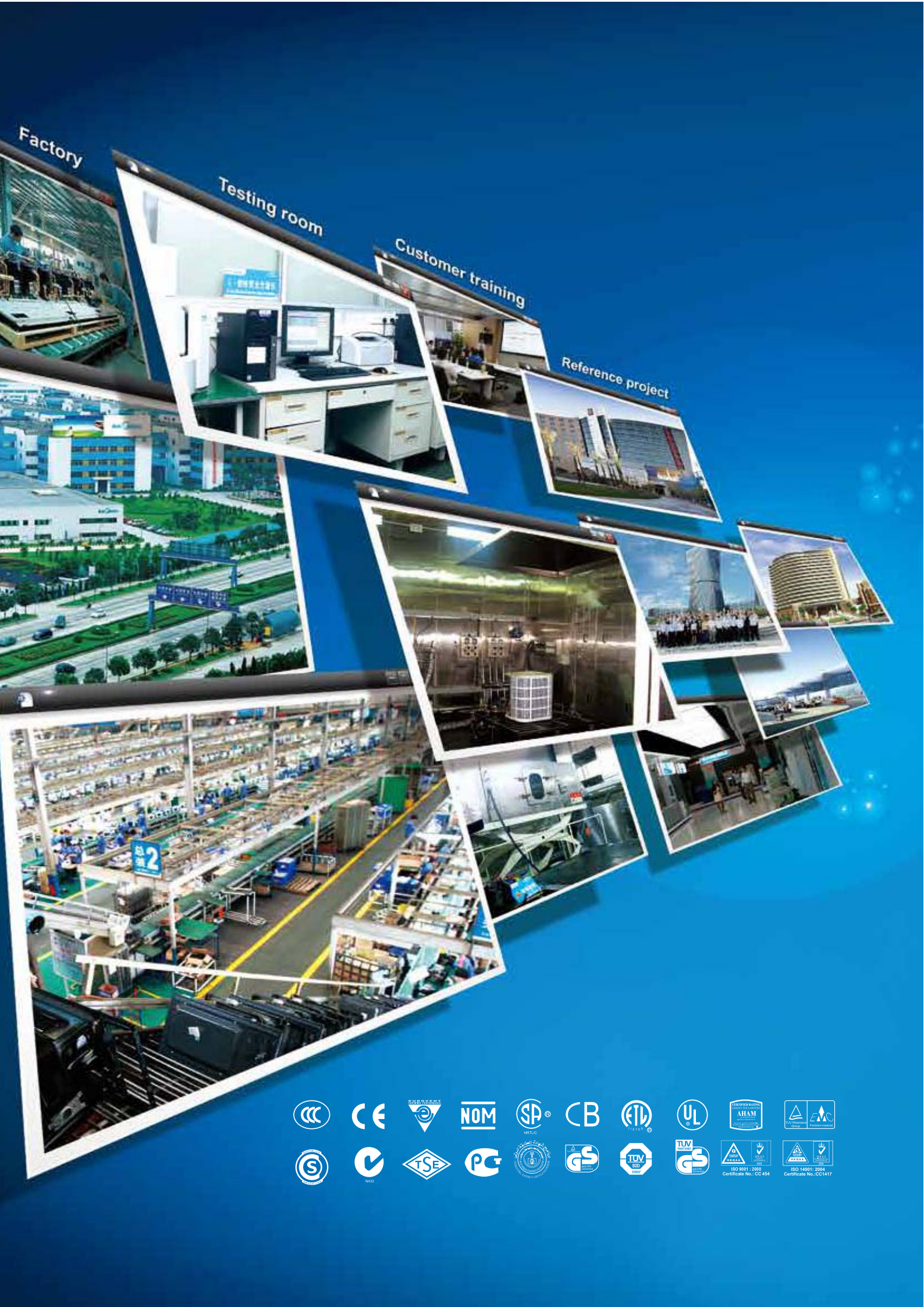
Midea

COMMERCIAL AIR CONDITIONERS

R410A DC Inverter VRF V4 Plus Series 50Hz

V4+K / V4+S / V4+R / V4+W / V4+I / Mini VRF

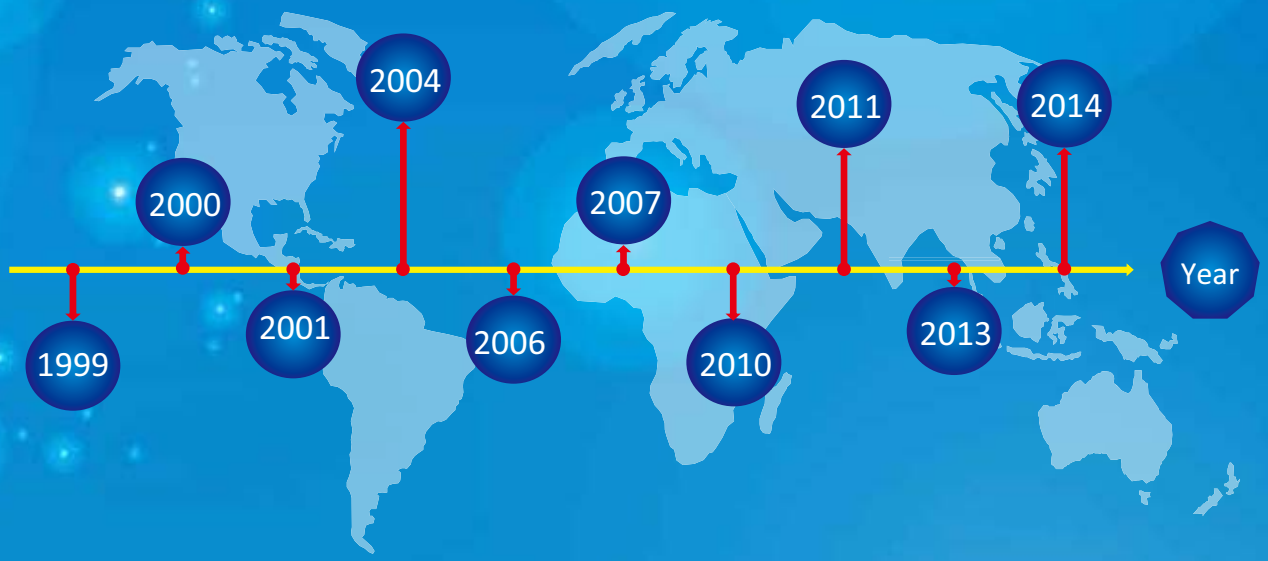

Factory
Testing room
Customer training
Reference project

Midea CAC (MCAC)

As a key subsidiary of Midea Group, the Midea Central Air Conditioner (MCAC) business unit has emerged as a leading supplier of commercial solutions. Since 1999 MCAC has contributed to the R&D and innovation of technologically-based commercial solutions. Cooperation with leading global enterprises coupled with independent R&D has enabled MCAC to implement thousands of commercial air-conditioning projects worldwide.

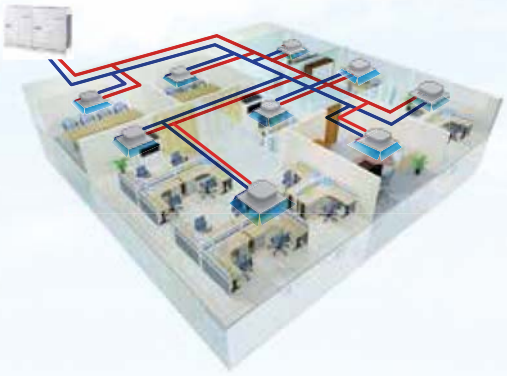
At present, MCAC is one of the globally leading product suppliers, underpinned by a mature marketing, sales, and project design framework.

There are three production bases in Shunde, Chongqing and Hefei.
MCAC Shunde: 38 product lines focusing on VRF (DC inverters and digital scroll products), 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 Launched the All DC Inverter V5X globally
2013 Launched the super high efficiency centrifugal chiller with full falling film technology
2011 Launched the DC Inverter V4 Plus globally
2010 Built the 3rd manufacturing base in Hefei
2007 Won the first Midea centrifugal chiller project oversea
2006 Launched the first VSD centrifugal chiller
2004 Acquired MGRE entered the chiller industry
2001 Partnered with Copeland to develop the digital scroll VRF system
2000 Developed the first inverter VRF With Toshiba
1999 Entered the CAC field

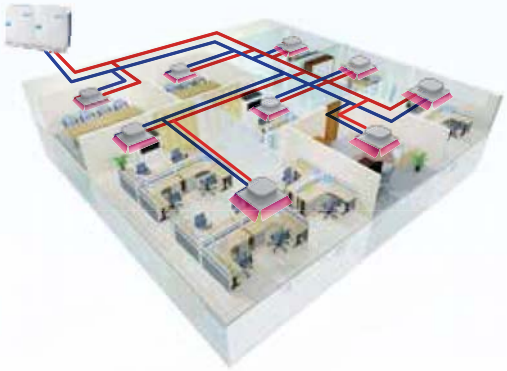
The VRF V4 Plus System



V4+K

VRF V4 Plus King Series

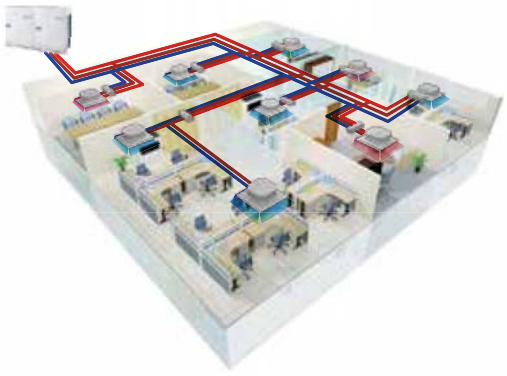
- *Heat pump system*
- *Large capacity DC inverter compressor contribute to higher energy efficiency greatly*
- *Up to 64 indoor units can be operated in one system*
- *Extensive capacity range from 8HP to 72HP in 2HP increments, meets all customer requirement concerning small to large buildings*



V4+S

VRF V4 Plus Super Series

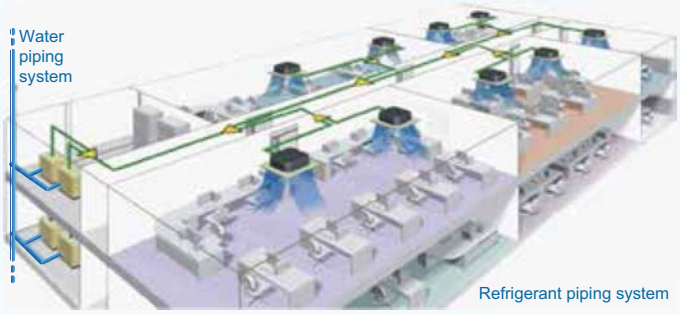
- *Heat pump system*
- *All DC inverter technology with all DC inverter compressors and all DC fan motors makes high energy efficiency*
- *Up to 64 indoor units can be operated in one system*
- *Extensive capacity range from 8HP to 72HP in 2HP increments, meets all customer requirement concerning small to large buildings*



V4+R

VRF V4 Plus Heat Recovery Series

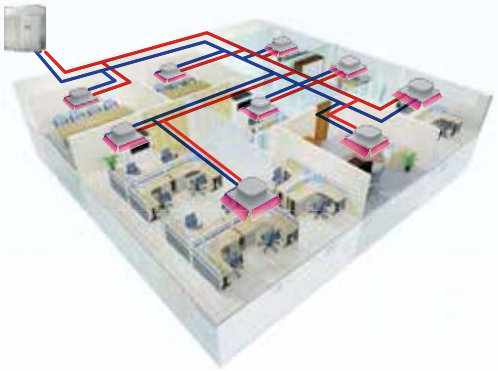
- *For simultaneous cooling and heating operation in one system*
- *Up to 64 indoor units can be operated in one system*
- *Extensive capacity range from 8HP to 64HP in 2HP increments, meets all customer requirement concerning small to large buildings*
- *Heat recovery is achieved by diverting exhaust heat from indoor units in cooling mode to areas requiring heating*
- *The MS equipment switches the system between cooling and heating modes*



V4+W

VRF V4 Plus Water Cooled Series

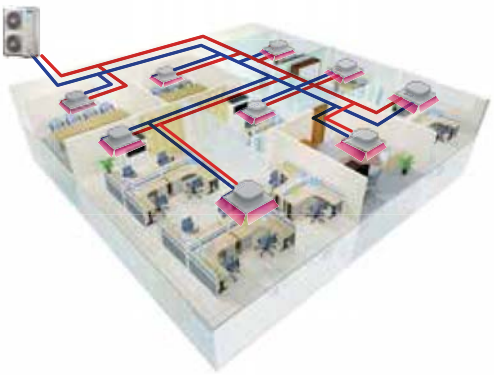
- *Perfect combination of water and refrigerant system*
- *Up to 59 indoor units can be operated in one system*
- *Extensive capacity range from 8HP to 36HP in 2HP increments, meets all customer requirement concerning small to large buildings*
- *Heat recovery is achieved by diverting exhaust heat from cooling areas to areas requiring heating*



V4+I

VRF V4 Plus Individual Series

- *Heat pump system*
- *Maximum 53 indoor units can be operated in one system*
- *Extensive capacity range from 20kW to 90kW, making it perfect for middle and small commercial and residential application.*



Mini VRF

Mini VRF Series

- *Heat pump system*
- *All DC inverter technology with all DC inverter compressors and all DC fan motors makes high energy efficiency*
- *Maximum 9 indoor units can be operated in one system*
- *Extensive capacity range from 8kW to 18kW, making it particularly suitable for small offices, villas, shops, etc.*

Products Lineup

VRF V4 Plus K Series

Capacity Range	HP	8	10	12	14	16	18
	kW	25.2	28.0	33.5	40.0	45.0	50.0
Appearance							

VRF V4 Plus S Series

Capacity Range	HP	8	10	12	14	16	18
	kW	25.2	28.0	33.5	40.0	45.0	50.0
Appearance							

VRF V4 Plus R Series

Capacity Range	HP	8	10	12	14	16
	kW	25.2	28.0	33.5	40.0	45.0
Appearance						

VRF V4 Plus W Series

Capacity Range	HP	8	10	12
	kW	25.2	28.0	33.5
Appearance				

VRF V4 Plus I Series

Capacity Range (kW)	20/22.4/26/40/45	25.2/28	33.5/40/45	56/61.5/67	73/78.5/85/90
Appearance					

Mini VRF Series

Capacity Range (kW)	8	10.5	12	14	16	18
Appearance						

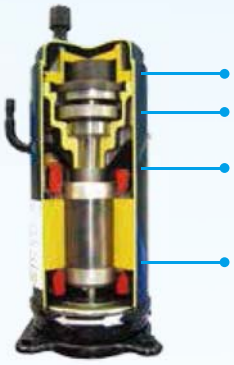
Contents

Overview

Midea VRF Air Conditioner has a number of key technologies which improve performance and save energy. Here are the main technologies which create the perfect cooling/heating performance, enhance comfort and reliability and easy installation.

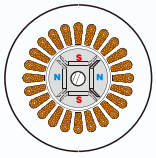
High efficiency DC inverter compressor

Midea VRF Air Conditioner achieves the industry's top class energy efficiency of cooling EER and heating COP by utilizing the Brushless Reluctance DC compressor control, improved performance heat exchanger by innovative design and numerous high performance key parts. High efficiency DC inverter compressor reduces power consumption by 25%.

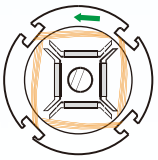


- New structure enhances mid-frequency performance
- Specially designed scroll profile for R410A
- More compact, weight reduced by 50%
- Advanced permanent magnet DC motor improves low-frequency band performance

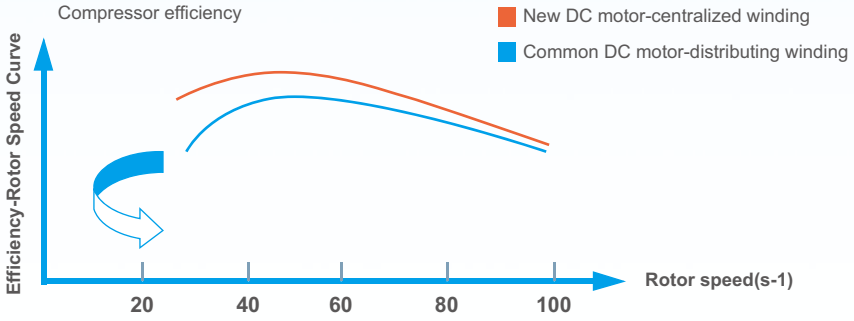
Powerful magnets provide high torque and efficiency and achieve 70% reduction in volume.



Centralizing winding

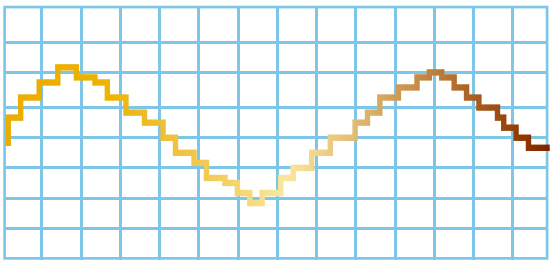


Distributing winding

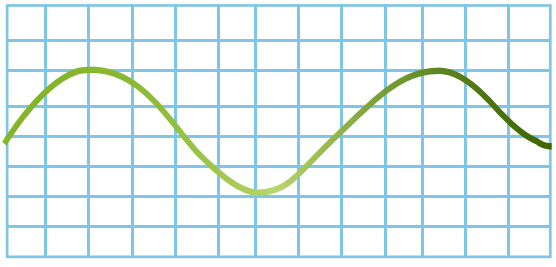


Smooth 180° sine wave DC inverter

Adopting the 180° Sine Wave Inverter to smooth motor rotation greatly improves operating efficiency compared with traditional sawtooth wave.



Common Sawtooth Wave

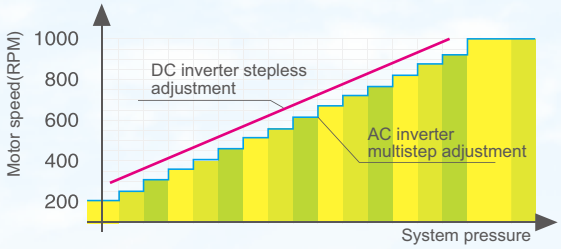


180° Sine Wave DC Inverter

High efficiency DC fan motor

According to the running load and system pressure, the system controls the speed of DC fan to achieve the minimum energy consumption and best performance.

DC motor

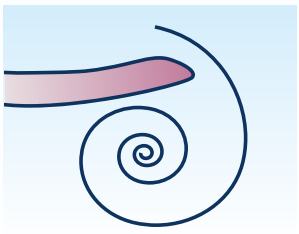


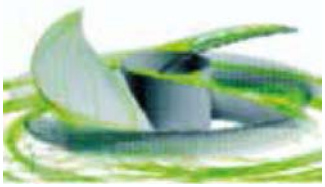
Optimized fan grille

Optimized fan blade shape with new air outlet grille enhanced air flow volume which greatly improves fan performance and decreases noise.
Also, a higher external static pressure has been achieved up to 40Pa. (0-20Pa is standard, 20~40Pa should be customized.)

New profile fan blade

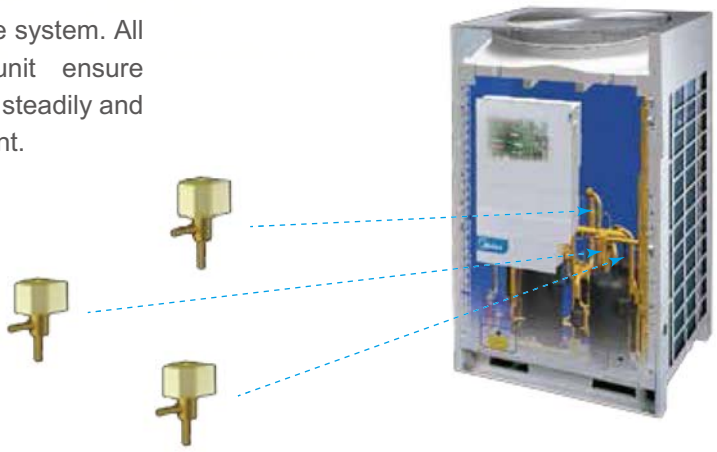
A new blade with sharp edges and a slight curve increases the airflow rate and lowers vibration and airflow resistance.





Multi solenoid valves control technology

Multi solenoid valves control technology in one system. All the solenoid valves equipped in the unit ensure temperature-control precisely, system running steadily and economic to provide a comfortable environment.



Cycle duty operation

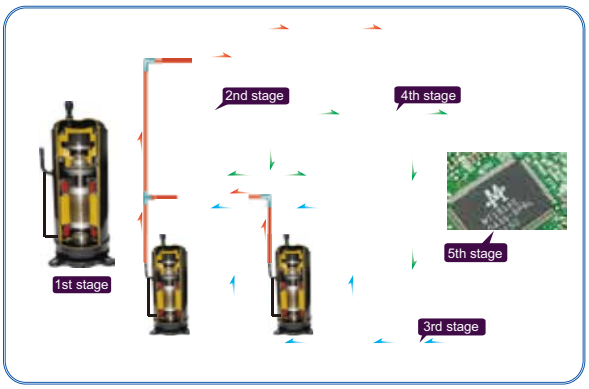
In one combination, any of the outdoor unit can run as the master unit and master unit can cycle in a period, to realize the equal lifespan among the outdoor units. As a result extend the system lifespan significantly.

Backup operation

In a multiple system, if one module is failed, other modules can be backup instead of the failed one for continuing operation.

Precise oil control technology

5 stage oil control technology ensures every outdoor unit & compressor's oil always keep in the safe level, completely solve the compressor oil lack problem.
1st stage: compressor internal oil separate
2nd stage: high efficiency oil separator (separation efficiency up to 99%)
3rd stage: oil balance technology between compressors
4th stage: oil balance technology between modules
5th stage: intelligent system oil return program

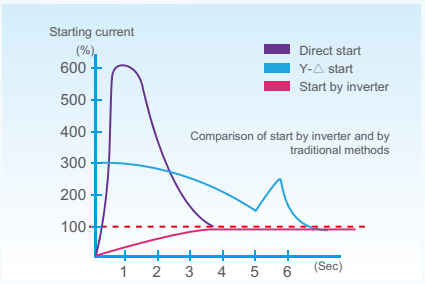


Double EXV control technology

Double EXV Control Technology in one system, each EXV part achieves 480 pulse to adjust flow precisely. Ensure the temperature-control precisely and steadily to provide a comfortable envrionment.

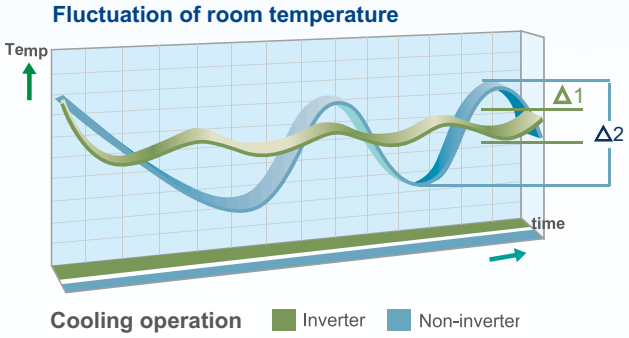
Intelligent soft start technology

DC inverter compressor soft start function reduces strike to the electric network. This kind of high-performance and low sound scroll compressor operates at a faster rate when starting, reducing start-up time. It also helps the unit to quickly adjust the room temperature to the set level.

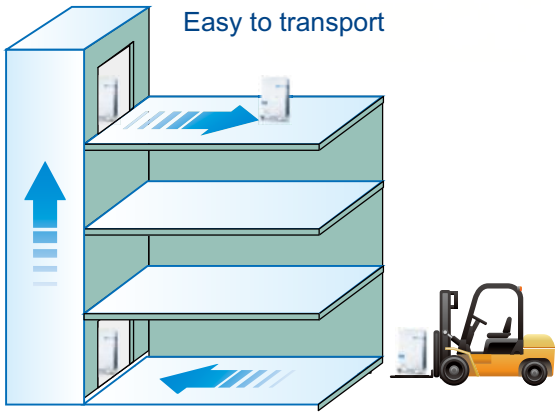


Quick warm-up & cool-down design

By utilizing the benefits of the inverter compressor, the system can reach full load quickly and shorten the warm-up and cool-down times to provide an immediate and comfortable air solution.
Less temperature fluctuation will create a better living environment.



Compact design for effective use of space



Compact size and light weight design minimizes the installation footprint, reduces the installation floor load, and is easier for transportation. For some projects the units can even be transported through the elevator or forklift, reduce access problem at the jobsite.

V4 PLUS K Series

V4 PLUS K series incorporates numerous outstanding features, including large-capacity outdoor and indoor units and high external static pressure.The 8HP and 10HP units use only one DC Inverter Compressor, 12HP to 18HP units feature higher capacity DC inverter compressors, and adopt energy-saving technologies. This series provides an incredible piping length of 1,000m and a level difference of 110m, making it perfect for large high-rise buildings.

Recommended combination table

Model	N°of Outdoor Units	N°of Compressors	Outdoor Unit Combination						Maximum N° of Connectable Indoor Units	Capacity	
			8HP	10HP	12HP	14HP	16HP	18HP		Cooling	Heating
MDV-252(8)W/DRN1(C)	1	1	1						13	25.2	27
MDV-280(10)W/DRN1(C)	1	1		1					16	28	31.5
MDV-335(12)W/DRN1(C)	1	2			1				20	33.5	37.5
MDV-400(14)W/DRN1(C)	1	2				1			23	40	45
MDV-450(16)W/DRN1(C)	1	2					1		26	45	50
MDV-500(18)W/DRN1(C)	1	2						1	29	50	56
MDV-560(20)W/DRN1(C)	2	2		2					33	56	63
MDV-615(22)W/DRN1(C)	2	3		1	1				36	61.5	69
MDV-680(24)W/DRN1(C)	2	3		1		1			39	68	76.5
MDV-730(26)W/DRN1(C)	2	3		1			1		43	73	81.5
MDV-780(28)W/DRN1(C)	2	3		1				1	46	78	87.5
MDV-850(30)W/DRN1(C)	2	4				1	1		50	85	95
MDV-900(32)W/DRN1(C)	2	4				1		1	53	90	101
MDV-950(34)W/DRN1(C)	2	4					1	1	56	95	106
MDV-1000(36)W/DRN1(C)	2	4						2	59	100	112
MDV-1060(38)W/DRN1(C)	3	4		2				1	63	106	119
MDV-1130(40)W/DRN1(C)	3	5		1		1	1		64	113	126.5
MDV-1180(42)W/DRN1(C)	3	5		1			2		64	118	131.5
MDV-1230(44)W/DRN1(C)	3	5		1			1	1	64	123	137.5
MDV-1280(46)W/DRN1(C)	3	5		1				2	64	128	143.5
MDV-1350(48)W/DRN1(C)	3	6				1	1	1	64	135	151
MDV-1400(50)W/DRN1(C)	3	6				1		2	64	140	157
MDV-1450(52)W/DRN1(C)	3	6					1	2	64	145	162
MDV-1500(54)W/DRN1(C)	3	6						3	64	150	168
MDV-1560(56)W/DRN1(C)	4	6		2				2	64	156	175
MDV-1630(58)W/DRN1(C)	4	7		1		1	1	1	64	163	182.5
MDV-1680(60)W/DRN1(C)	4	7		1		1		2	64	168	188.5
MDV-1730(62)W/DRN1(C)	4	7		1			1	2	64	173	193.5
MDV-1780(64)W/DRN1(C)	4	7		1				3	64	178	199.5
MDV-1850(66)W/DRN1(C)	4	8				1	1	2	64	185	207
MDV-1900(68)W/DRN1(C)	4	8				1		3	64	190	213
MDV-1950(70)W/DRN1(C)	4	8					1	3	64	195	218
MDV-2000(72)W/DRN1(C)	4	8						4	64	200	224

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length 7.5m, level difference of zero.
The above models combination are factory-recommended models.

Features

Wide Application Range

Large capacity for big sized building

The outdoor units capacity range from 8HP up to 72HP in 2HP increment. Maximum 64 indoor units with capacity up to 130% of total outdoor units can be connected as one refrigeration system.

8, 10HP

12, 14, 16HP

18HP

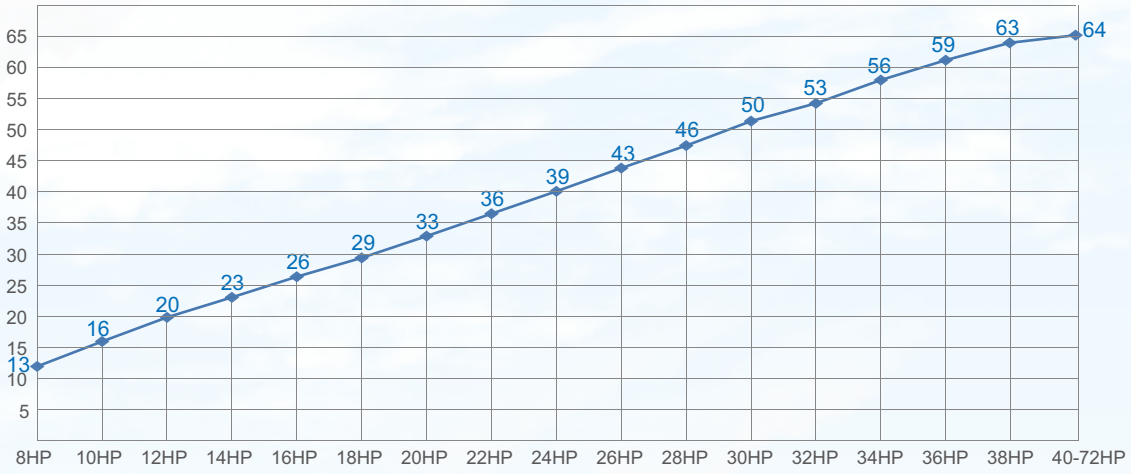
20, 22, 24, 26, 28, 30, 32, 34, 36HP

38, 40, 42, 44, 46, 48, 50, 52, 54HP

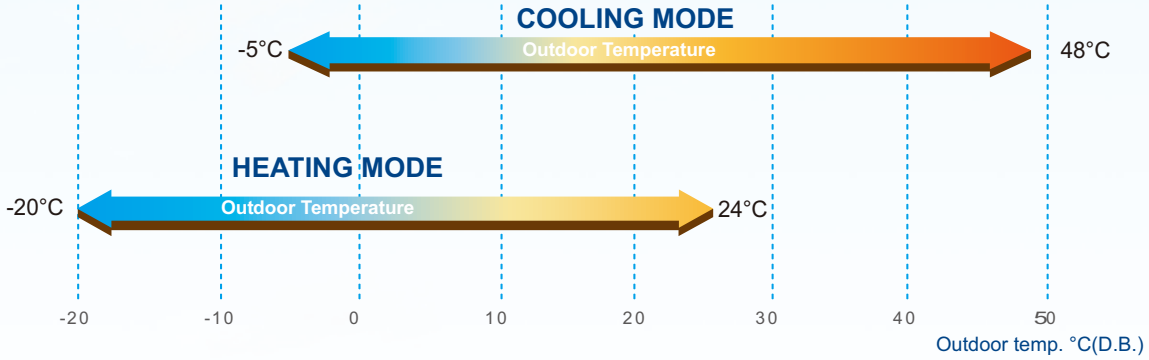
56, 58, 60, 62, 64, 66, 68, 70, 72HP

Large connectable indoor units quantity

The large quantity of connectable units is suitable for large buildings and projects.

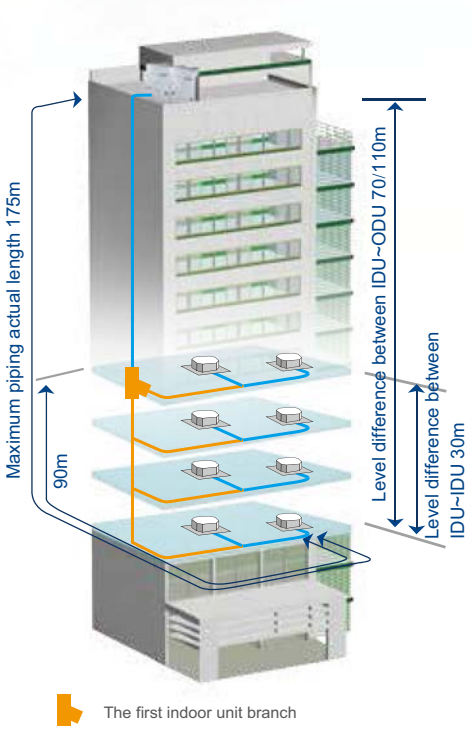


Wide operation range



The V4 Plus K Series system operates stably at extreme temperatures ranging from minus 20°C to 48°C.

Long piping length



The solution supports an incredible piping length of 1,000m and level difference of 110m, making it perfect for large projects.

			Permitted value(m)
Piping length	Total pipe length*(Actual)		1000
	Maximum piping(L)	Actual length	175
		Equivalent length	200
Level difference	Equivalent piping length from the farthest IDU to the first indoor branch joint		40/90*
	Level difference between IDU~ODU	Outdoor unit up	70
		Outdoor unit down	110
	Level difference between IDU~IDU		30

*Total pipe length is equal to two times pipe length plus pipe length.
*When the farthest pipe length is more than 40m. It needs to meet the specific condition according to the installation part of the technical manual.

Extra high static pressure – Max. 60Pa and air volume increased by 10%

The high static pressure propeller and optimized fan guard can adapt to various installation environments.

Midea now offers up to 60Pa* external static pressure units for customized applications (60Pa is available for the 12HP model, 40Pa is available for other models).

A standard 0-20Pa function is equipped by default.

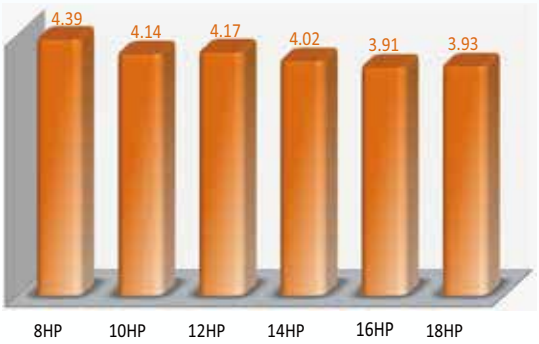
High Efficiency

V4 Plus K Series with high efficiency DC compressors, DC motors and high efficient heat exchanger. The cooling EER up to 4.29 and the heating COP up to 4.39 in the 8HP category.

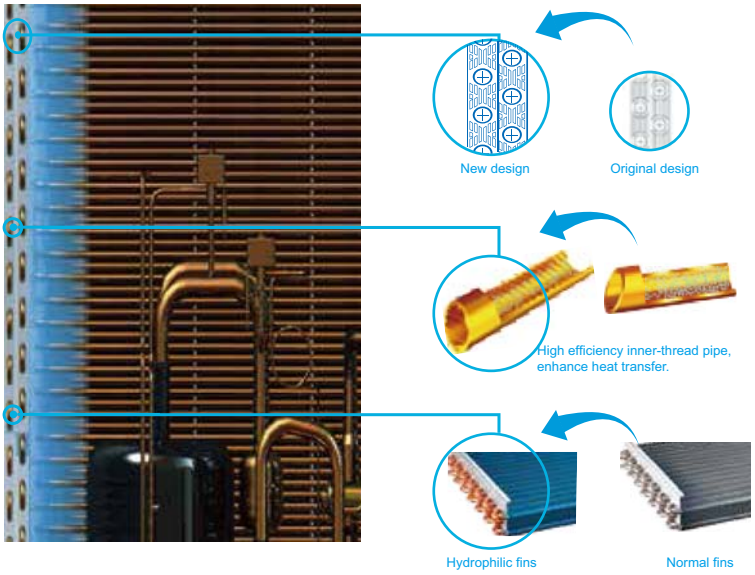
Enhanced rated heat capacity

EER

COP



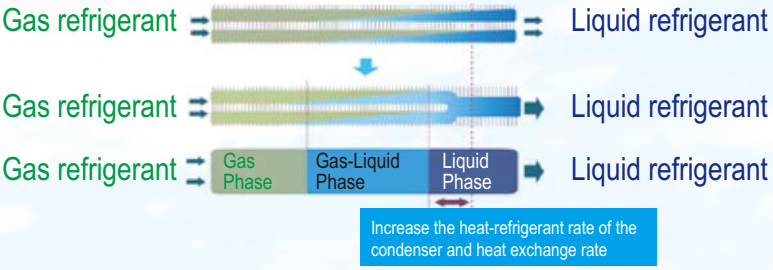
High performance heat exchanger

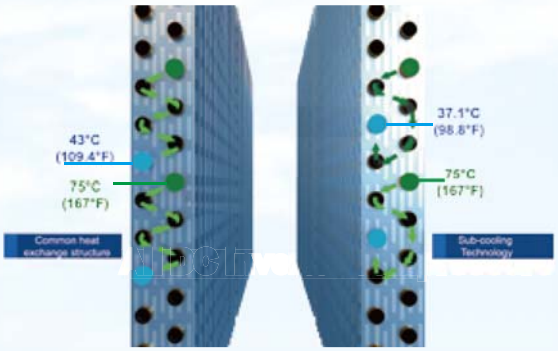


The new designed window fins enlarge the heat-exchanging area, decrease the air resistance, save more power and enhance heat exchange performance.

Hydrophilic fins and inner-threaded copper pipes optimize heat exchange efficiency.

12℃ sub cooling





Innovative designed outdoor unit high efficiency heat exchanger, one time can reach up to 12°C subcooling degree, reduces the system resistance and improves reliability.
When the outdoor temperature is 35° C, the refrigerant can be cooled to 37.1° C, thus achieving high efficiency heat exchange with only 2.1°C temperature difference.

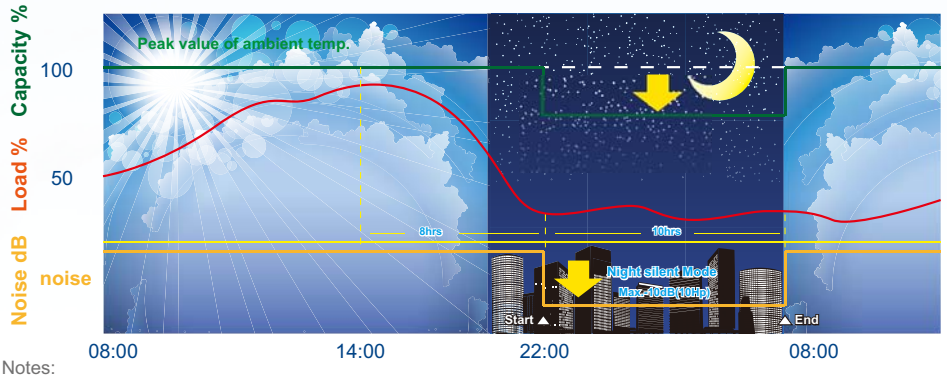
Enhanced Comfort

Night silent operation mode

High comfort outdoor unit's multi-choice of silent mode during the night.
Super silent operation mode can reduce sound level further, minimum 46.8dB (A).

Night silent operation will be activated X hours after the peak temperature during daytime, and it will go back to normal operation after Y hours.

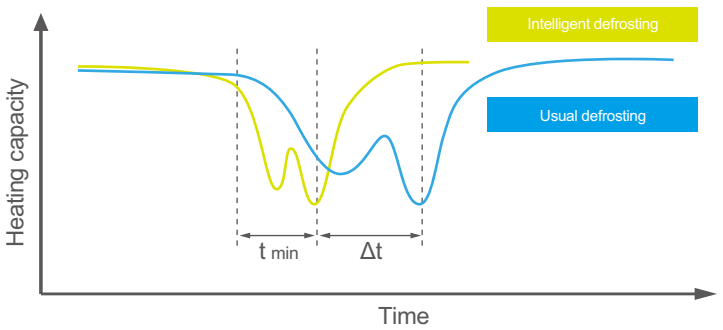
-Mode 1→X: 6 hours, Y: 10 hours
-Mode 2→X: 8 hours, Y: 10 hours
-Mode 3→X: 6 hours, Y: 12 hours
-Mode 4→X: 8 hours, Y: 8 hours



Notes:
This function can be activated by setting at site. Temperature(load) curve shown in the graph is just an example.

Intelligent defrosting technology

Intelligent defrosting program will judge the defrosting time according to the system real requirement, reduce the heating loss by unnecessary defrosting and make the indoor side more comfortable.
Defrosting time can be shortened to 4 min. due to the specialized defrosting valve.



Easier Installation and Service

Simple signal line connection

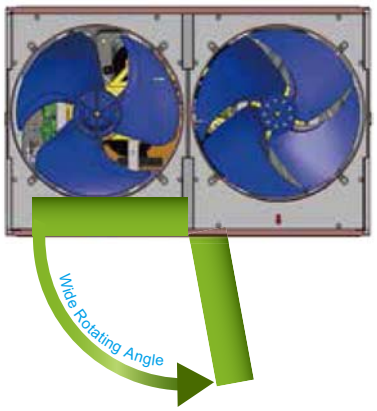
Centralized controller (CCM03 or CCM30) can be connected from indoor side or outdoor side (XYE terminals) at will. Only one group of communication wire of PQE, achieved both of communication for indoor & outdoor unit. It's more convenient for communication wiring.

Auto addressing

Outdoor unit can distribute addresses for indoor unit automatically.

Wireless and wired controllers can query and modify each indoor unit's address.

Easy maintainence



Newly designed rotating control box is so excellent that it can rotate in a wide angle. It is convenient for inspection and maintenance of the pipeline system and greatly reduces the time of dismount the electric control box.

* Rotating Control box is available for 18HP model which with G-shape Condenser.

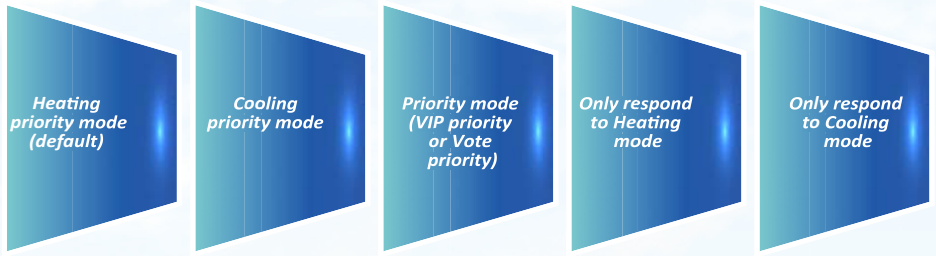
Reserved checking window on electric control box for convenient spot checking and status enquiry.

Compressor is located near the door, which simplifies checks and enables valve or compressor parts to be replaced easily.

88 88 Self-diagnosis function helps service engineers locate faults quickly and easily.

Various locking modes

Various locking modes enhance convenience for users.
In VIP priority or vote priority mode, the address of the VIP unit should be set as 63. If there is no named 63 unit, it will respond to vote priority.



Integrated solution for control and management

Intelligent Manager of Midea, designed specifically to control VRF systems, is based around a centralized format and dedicated to the complete control and monitoring of all the system’ s functions. It can be used as a flexible multi-purpose system and applied to a variety of needs, according to the scale, purpose and control method of each building.

Outdoor Unit

V4+K

Model			MDV-252(8)W/DRN1(C)	MDV-280(10)W/DRN1(C)	MDV-335(12)W/DRN1(C)
Power supply		V/Ph/Hz	380-415/3/50		
Cooling	Capacity	kW	25.2	28.0	33.5
		RT	7.2	8.0	9.5
	Power input	kW	5.88	7.20	9.05
	EER	kW/kW	4.29	3.89	3.70
Heating	Capacity	kW	27.0	31.5	37.5
		RT	7.7	9.0	10.7
	Power input	kW	6.15	7.61	8.99
	COP	kW/kW	4.39	4.14	4.17
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130
	Max. quantity		13	16	20
Sound pressure level		dB(A)	57	57	59
Pipe connections	Liquid pipe	mm	Φ9.53	Φ9.53	Φ12.7
	Gas pipe	mm	Φ22.2	22.2	Φ25.4
	Oil balance pipe	mm	Φ6	Φ6	Φ6
Fan motor	Type		DC	DC	DC+AC
	Quantity		1	1	1+1
	Air flow rate	m^3/h	11,500	11,500	15,100
	Motor output	W	750	750	560+380
	ESP	Pa	0-20(default)	0-20(default)	0-20(default)
		Pa	20-40(customized)	20-40(customized)	20-60(customized)
DC inverter compressor	Quantity		1	1	1
	Capacity	kW	31.59	31.59	11.8
	Crankcase heater	W	27.6×2	27.6×2	27.6×2
	Oil type		FVC68D	FVC68D	FVC68D
	Oil charge	ml	500	500	500
Fixed scroll compressor	Quantity		-	-	1
	Capacity	kW	-	-	17.1
	Crankcase heater	W	-	-	27.6
	Oil type		-	-	FVC68D
	Oil charge	ml	-	-	500
Refrigerant	Type		R410A	R410A	R410A
	Factory charging		9	9	11
Design pressure (High/Low)		MPa	4.4/2.6	4.4/2.6	4.4/2.6
Net dimension (W×H×D)		mm	960×1615×765	960×1615×765	1250×1615×765
Packing size (W×H×D)		mm	1025×1790×830	1025×1790×830	1305×1790×820
Net weight		kg	198	198	268
Gross weight		kg	213	213	288
Operating temperature range	Cooling	°C	-5-48		
	Heating	°C	-20-24		

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
Connection piping diameter is based on the condition that the total equivalent liquid length is less than 90m. When the total equivalent liquid length is more than 90m, please refer to technical manual to choose the connection piping diameter.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1.3m above the floor.

Outdoor Unit

V4+K

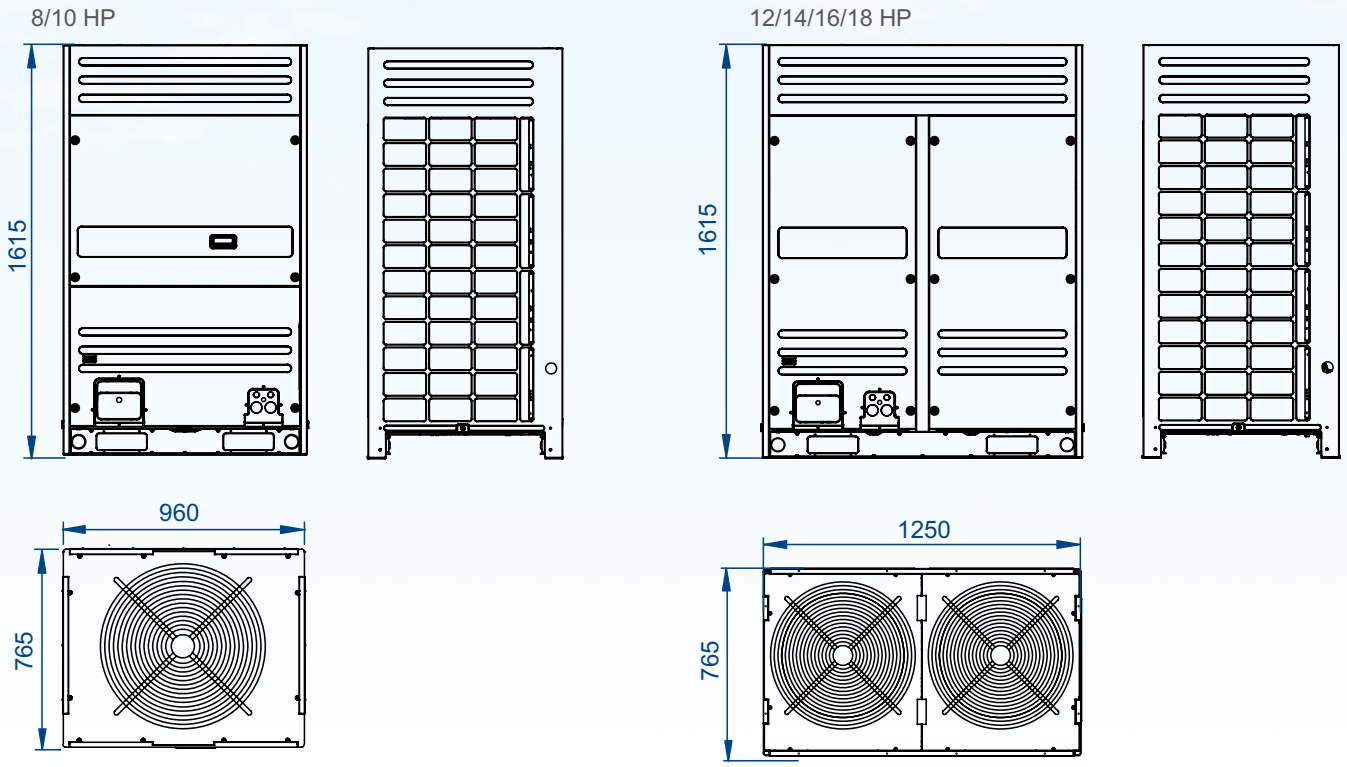
Model			MDV-400(14)W/DRN1(C)	MDV-450(16)W/DRN1(C)	MDV-500(18)W/DRN1(C)
Power supply		V/Ph/Hz	380-415/3/50		
Cooling	Capacity	kW	40.0	45.0	50.0
		RT	11.4	12.8	14.2
	Power input	kW	12.31	14.02	15.20
	EER	kW/kW	3.25	3.21	3.29
Heating	Capacity	kW	45.0	50.0	56.0
		RT	12.8	14.2	15.9
	Power input	kW	11.19	12.79	14.25
	COP	kW/kW	4.02	3.91	3.93
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130
	Max. quantity		23	26	29
Sound pressure level		dB(A)	60	60	61
Pipe connections	Liquid pipe	mm	Φ12.7	Φ12.7	Φ15.9
	Gas pipe	mm	Φ25.4	Φ28.6	Φ28.6
	Oil balance pipe	mm	Φ6	Φ6	Φ6
Fan motor	Type		DC+AC	DC+AC	DC+AC
	Quantity		1+1	1+1	1+1
	Air flow rate	m³/h	15,100	15,100	15,250
	Motor output	W	560+380	560+380	560+380
	ESP	Pa	0-20(default)	0-20(default)	0-20(default)
		Pa	20-40(customized)	20-40(customized)	20-40(customized)
DC inverter compressor	Quantity		1	1	1
	Capacity	kW	31.59	31.59	11.8
	Crankcase heater	W	27.6×2	27.6×2	27.6×2
	Oil type		FVC68D	FVC68D	FVC68D
	Oil charge	ml	500	500	500
Fixed scroll compressor	Quantity		1	1	1
	Capacity	kW	13.39	13.39	20.9
	Crankcase heater	W	27.6	27.6	27.6
	Oil type		FVC68D	FVC68D	FVC68D
	Oil charge	ml	500	500	500
Refrigerant charge	Type		R410A	R410A	R410A
	Original charge	kg	13	13	16
Design pressure (High/Low)		MPa	4.4/2.6	4.4/2.6	4.4/2.6
Net dimension (W×H×D)		mm	1250×1615×765	1250×1615×765	1250×1615×765
Packing size (W×H×D)		mm	1305×1790×820	1305×1790×820	1305×1790×820
Net weight		kg	280	280	300
Gross weight		kg	300	300	320
Operating temperature range	Cooling	°C	-5-48		
	Heating	°C	-20-24		

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
Connection piping diameter is based on the condition that the total equivalent liquid length is less than 90m. When the total equivalent liquid length is more than 90m, please refer to technical manual to choose the connection piping diameter.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1.3m above the floor.

Outdoor Unit Dimensions

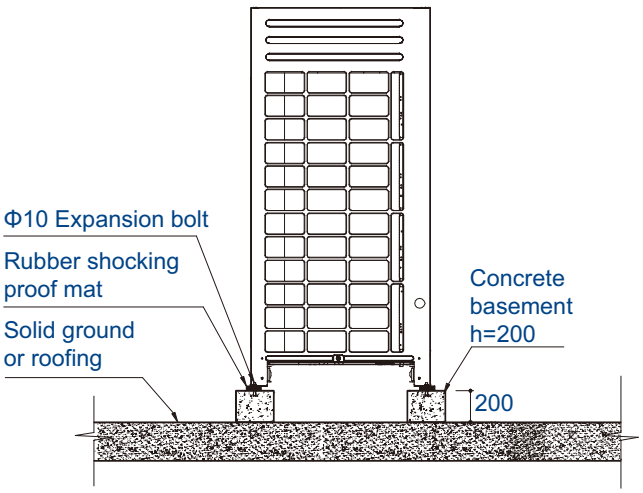
Body dimension

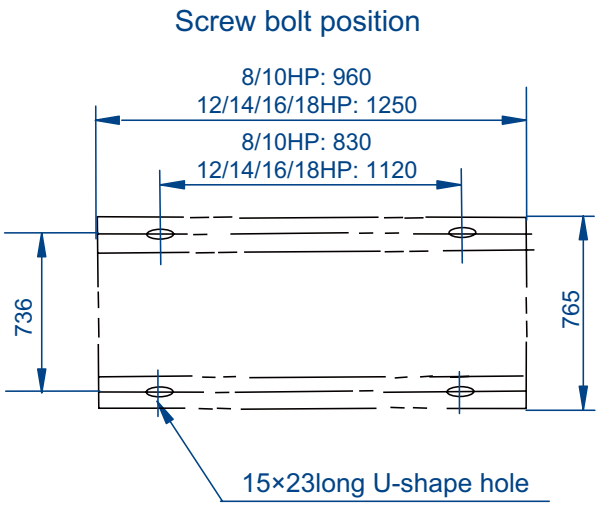
Unit: mm



Installation dimension

Unit: mm





V4 PLUS S Series

V4 Plus S outdoor units achieve world's largest capacity of 72HP with the industry's top class energy efficiency of cooling and heating. It supports an incredible piping length of 1000m and a longer level difference of 110m, making it perfect for big-sized and high-rise buildings for wide application.

Recommended combination table

Model	N° of Outdoor Units	N° of Compressors	Outdoor Unit Combination						Maximum N° of Connectable Indoor Units	Capacity (kW)	
			8HP	10HP	12HP	14HP	16HP	18HP*		Cooling	Heating
8HP	1	1	1						13	25.2	27
10HP	1	1		1					16	28	31.5
12HP	1	2			1				20	33.5	37.5
14HP	1	2				1			23	40	45
16HP	1	2					1		26	45	50
18HP	1	2						1	29	50	56
20HP	2	2		2					33	56	63
22HP	2	3		1	1				36	61.5	69
24HP	2	3		1		1			39	68	76.5
26HP	2	3		1			1		43	73	81.5
28HP	2	3		1				1	46	78	87.5
30HP	2	4				1	1		50	85	95
32HP	2	4				1		1	53	90	101
34HP	2	4					1	1	56	95	106
36HP	2	4						2	59	100	112
38HP	3	4		2				1	63	106	119
40HP	3	5		1		1	1		64	113	126.5
42HP	3	6				3			64	120	135
44HP	3	5		1			1	1	64	123	137.5
46HP	3	5		1				2	64	128	143.5
48HP	3	6				1	1	1	64	135	151
50HP	3	6				1		2	64	140	157
52HP	3	6					1	2	64	145	162
54HP	3	6						3	64	150	168
56HP	4	6		2				2	64	156	175
58HP	4	7		1		1	1	1	64	163	182.5
60HP	4	7		1		1		2	64	168	188.5
62HP	4	7		1			1	2	64	173	193.5
64HP	4	7		1				3	64	178	199.5
66HP	4	8				1	1	2	64	185	207
68HP	4	8				1		3	64	190	213
70HP	4	8					1	3	64	195	218
72HP	4	8						4	64	200	224

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
The above combination models are factory-recommended models.
*18HP model can be customized.

Features

Wide Application Range

Wide range of outdoor units

The outdoor units capacity range from 8HP up to 72HP in 2HP increment. Maximum 64 indoor units with capacity up to 130% of total outdoor units can be connected in one refrigeration system.

8, 10HP

12, 14, 16HP

18HP

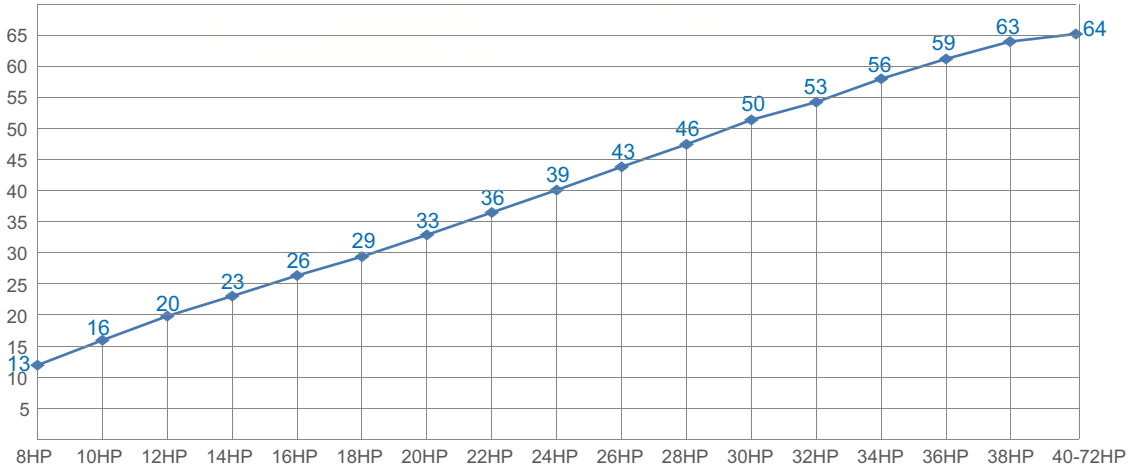
20, 22, 24, 26, 28, 30, 32, 34, 36HP

38, 40, 42, 44, 46, 48, 50, 52, 54HP

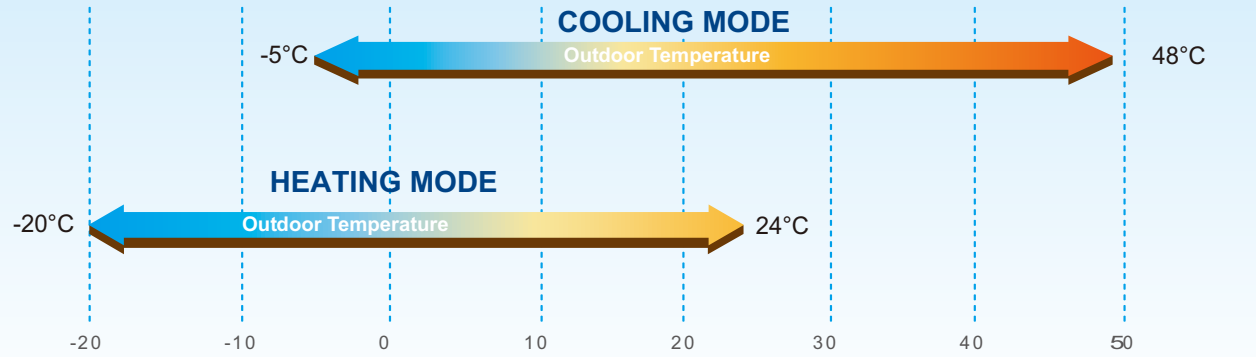
56, 58, 60, 62, 64, 66, 68, 70, 72HP

Large connectable indoor units quantity

The large quantity of connectable units is suitable for large buildings and projects.

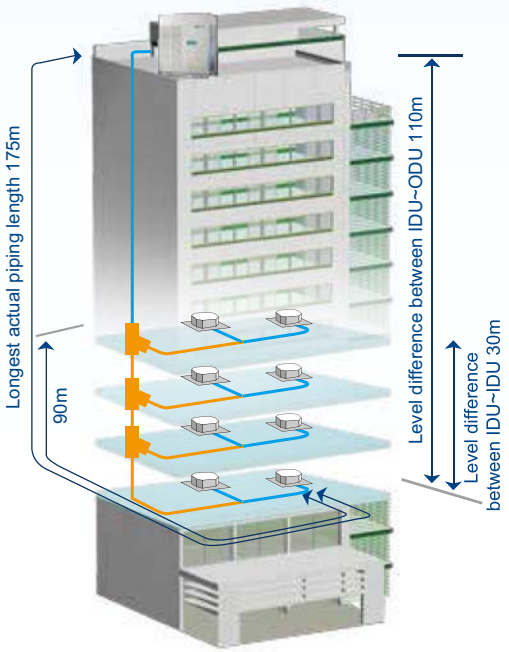


Wide operation range



The V4+S series system operates stably at extreme temperatures ranging from -20°C to 48°C.

Long piping length



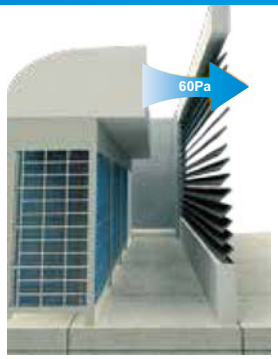
			Permitted value (m)
Piping length	Actual total piping length		1000*
	Longest piping	Actual length	175
		Equivalent length	200
	Equivalent piping length from the farthest IDU to the first indoor branch joint		40/90*
Level difference	Level difference between indoor and outdoor units	Outdoor unit up	70
		Outdoor unit down	110
	Level difference between indoor units		30

*Total pipe length is equal to two times — pipe length plus — pipe length.
*When the piping length from the farthest IDU to the first indoor branch joint is more than 40m, it needs to meet specific conditions according to the installation part of the technical manual to achieve 90m.

High external static pressure

Max. 60Pa external static pressure can be customized for the outdoor unit, flexible to build-in installation.

A standard 0-20Pa external static pressure is equipped by default for all outdoor units. 20-60Pa can be customized for 12HP model, 20-40Pa can be customized for other modules.

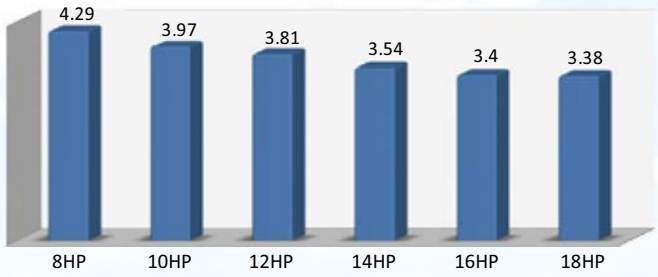


High Efficiency

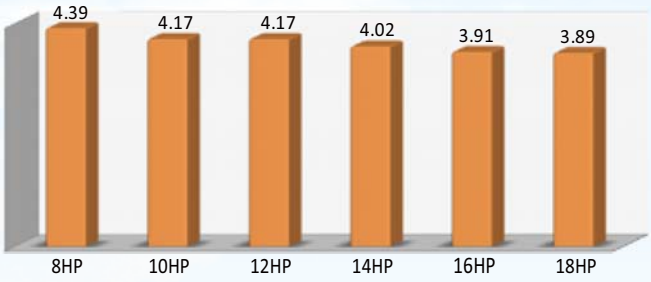
High COP/EER values

The cooling EER up to 4.29 and the heating COP up to 4.39 in the 8HP catagory.

EER



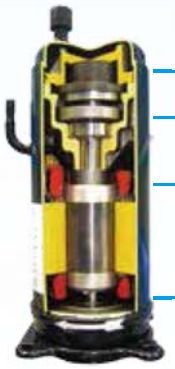
COP



All DC inverter technology

All DC inverter compressors make the capacity output better distributed, and always work at 60-140Hz which is the most efficient range. It makes the efficiency more than 30% higher than the normal.

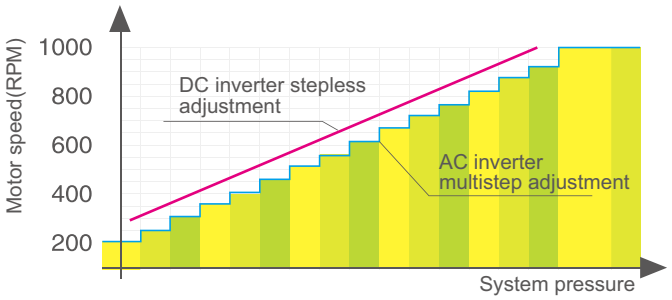
All DC Inverter Compressors



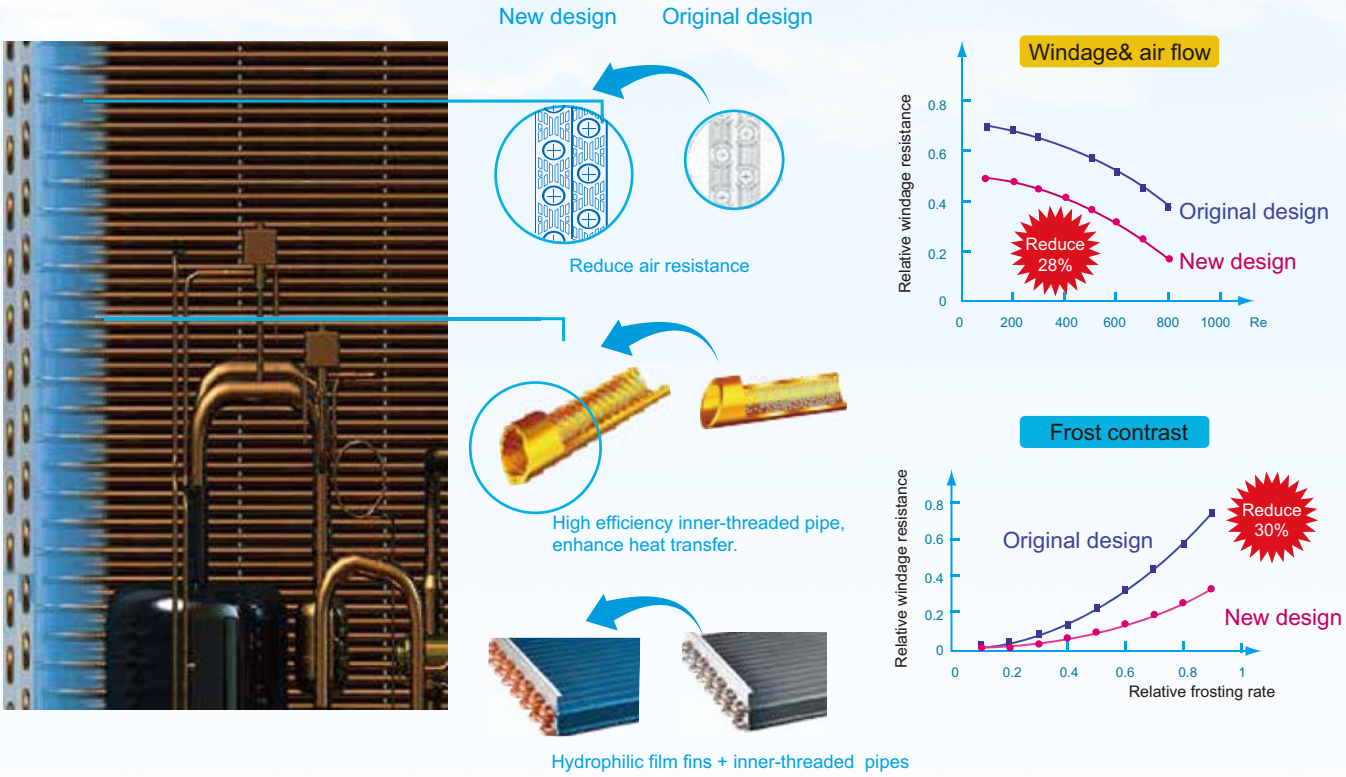
- New structure enhances mid-frequency performance
- Specially designed scroll profile for R410A
- More compact, weight reduced by 50%
- Advanced permanent magnet DC motor improves the low frequency band performance

All DC Fan Motors

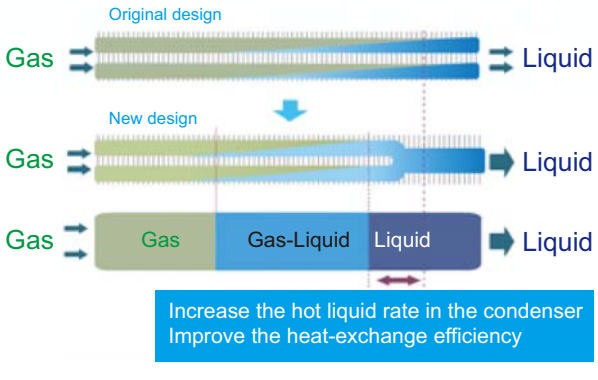
According to the running load and system pressure, the system controls the speed of DC fan to achieve the minimum energy consumption and best performance.

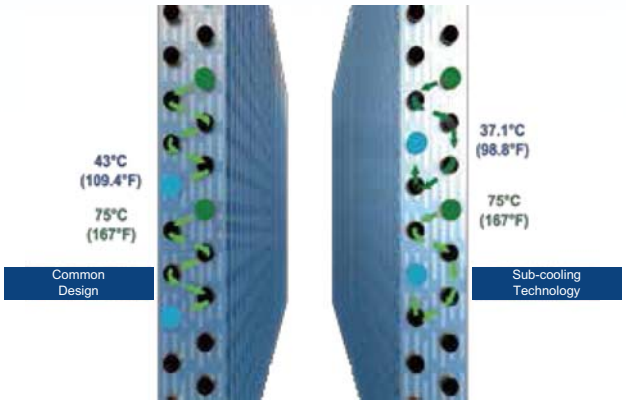


High performance heat exchanger



- The new designed window fins enlarge the heat-exchanging area , decrease the air resistance, save more power and enhance heat exchange performance.
- Hydrophilic film fins and inner-threaded copper pipes optimize heat exchange efficiency.





- Innovative designed high efficiency heat exchanger, which can reach up to 12°C subcooling degree, reduces the system resistance and improves reliability.
- When the outdoor temperature is 35°C, the refrigerant can be cooled down to 37.1°C, thus achieving high heat-exchanging efficiency with only 2.1°C temperature difference.

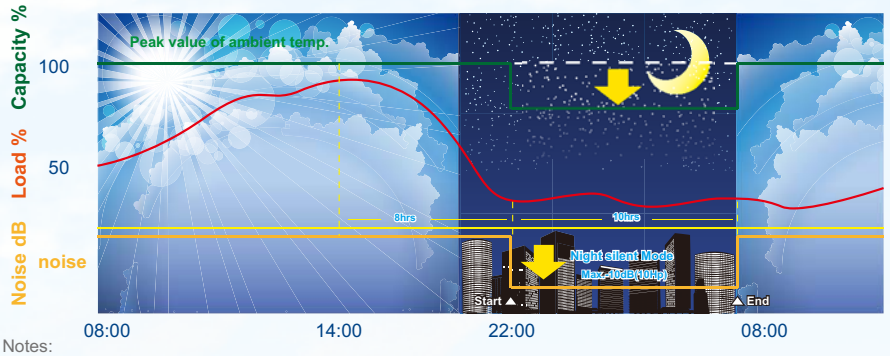
Enhanced Comfort

Night silent operation mode

High comfort outdoor unit's multi-choice of silent mode during the night.
Super silent operation mode can reduce sound level further, minimum 45dB (A).

Night silent operation will be activated X hours after the peak temperature during daytime, and it will go back to normal operation after Y hours.

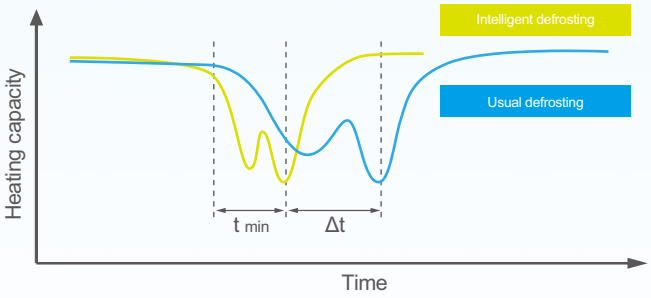
-Mode 1→X: 6 hours, Y: 10 hours
-Mode 2→X: 8 hours, Y: 10 hours
-Mode 3→X: 6 hours, Y: 12 hours
-Mode 4→X: 8 hours, Y: 8 hours



Notes:
This function can be activated by setting at site. Temperature(load) curve shown in the graph is just an example.

Intelligent defrosting technology

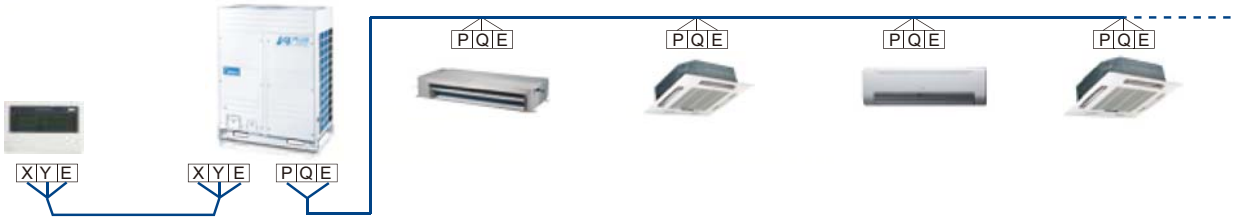
Intelligent defrosting program will judge the defrosting time according to the system real requirement, reduce the heating loss by unnecessary defrosting and make the indoor side more comfortable.
Defrosting time can be shortened to 4 min. due to the specialized defrosting valve.



Easier Installation and Service

Simple signal line connection

Centralized controller (CCM03 or CCM30) can be connected from indoor side or outdoor side (XYE terminals) at will. Only one group of communication wire of PQE, achieved both of communication for indoor & outdoor unit. It's more convenient for communication wiring.



Auto addressing

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

Outdoor Unit Specifications

V4+S

Model			MDV-252(8)W/D2RN1(B)	MDV-280(10)W/D2RN1(B)	MDV-335(12)W/D2RN1(B)
Power supply		V/Ph/Hz	380-415/3/50		
Cooling	Capacity	kW	25.2	28.0	33.5
		RT	7.2	8.0	9.5
	Power input	kW	5.88	7.05	8.79
	EER	kW/kW	4.29	3.97	3.81
Heating	Capacity	kW	27	31.5	37.5
		RT	7.7	9.0	10.7
	Power input	kW	6.15	7.55	8.99
	COP	kW/kW	4.39	4.17	4.17
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130
	Max. quantity		13	16	20
Sound pressure level		dB(A)	57		59
Pipe connections	Liquid pipe	mm	Φ9.53		Φ12.7
	Gas pipe	mm	Φ22.2		Φ25.4
	Oil balance pipe	mm	Φ6		Φ6
Fan motor	Type		DC		DC
	Quantity		1		2
	Outdoor air flow	m^3/h	11,242		13,000
	Motor output	W	750		560+380
	ESP	Pa	0-20 (default)		0-20 (default)
		Pa	20-40 (customized)		20-60 (customized)
DC inverter compressor	Quantity		1		2
	Capacity	kW	31.59		31.59+11.80
	Crankcase heater	W	27.6×2		27.6×4
	Oil type		FVC68D		FVC68D
	Oil charge	ml	500		500+500
Refrigerant	Type		R410A		R410A
	Factory charging	kg	10		12
Design pressure (High/Low)		MPa	4.4/2.6		4.4/2.6
Net dimension (W×H×D)		mm	960×1,615×765		1,250×1,615×765
Packing size (W×H×D)		mm	1,025×1,790×830		1,305×1,790×820
Net weight		kg	212		288
Gross weight		kg	227		308
Operating temperature range	Cooling	°C	-5~48		
	Heating	°C	-20~24		

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
Connection piping diameter is based on the condition that the total equivalent liquid length is less than 90m. When the total equivalent liquid length is more than 90m, please refer to technical manual to choose the connection piping diameter.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1.3m above the floor.

Outdoor Unit Specifications

V4+S

Model			MDV-400(14)W/D2RN1(B)	MDV-450(16)W/D2RN1(B)	MDV-500(18)W/D2RN1(B)*
Power supply		V/Ph/Hz	380-415/3/50		
Cooling	Capacity	kW	40.0	45.0	50.0
		RT	11.4	12.8	14.2
	Power input	kW	11.30	13.25	14.79
	EER	kW/kW	3.54	3.40	3.38
Heating	Capacity	kW	45.0	50.0	56.0
		RT	12.8	14.2	15.9
	Power input	kW	11.19	12.79	14.40
	COP	kW/kW	4.02	3.91	3.89
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130
	Max. quantity		23	26	29
Sound pressure level		dB(A)	61	62	62
Pipe connections	Liquid pipe	mm	Φ12.7	Φ12.7	Φ15.9
	Gas pipe	mm	Φ25.4	Φ28.6	Φ28.6
	Oil balance pipe	mm	Φ6	Φ6	Φ6
Fan motor	Type		DC		
	Quantity		2		
	Outdoor air flow	m^3/h	15,620		
	Motor output	W	560+380		
	ESP	Pa	0-20 (default)		
		Pa	20-40 (customized)		
DC inverter compressor	Quantity		2		
	Capacity	kW	31.59+11.80		
	Crankcase heater	W	27.6×4		
	Oil type		FVC68D		
	Oil charge	ml	500+500		
Refrigerant	Type		R410A		
	Factory charging	kg	15	15	17
Design pressure (High/Low)		MPa	4.4/2.6		
Net dimension (W×H×D)		mm	1,250×1,615×765		
Packing size (W×H×D)		mm	1,305×1,790×820		
Net weight		kg	288	288	310
Gross weight		kg	308	308	330
Operating temperature range	Cooling	°C	-5~48		
	Heating	°C	-20~24		

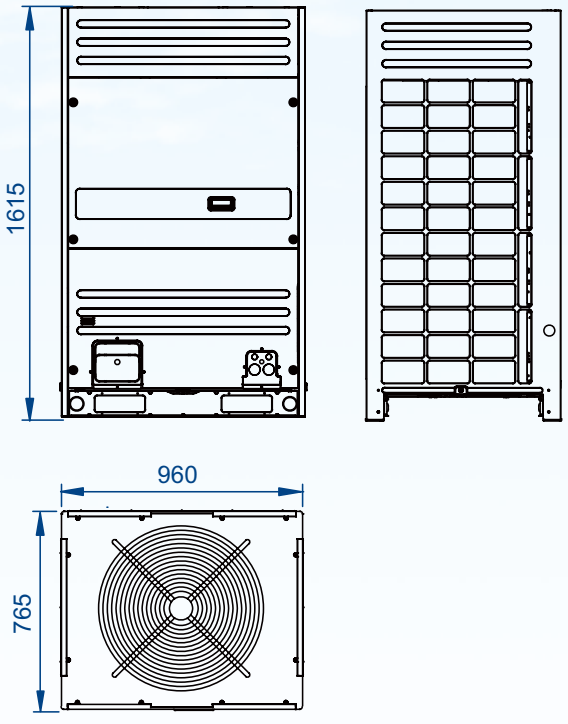
Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
Connection piping diameter is based on the condition that the total equivalent liquid length is less than 90m. When the total equivalent liquid length is more than 90m, please refer to technical manual to choose the connection piping diameter.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1.3m above the floor.
*18HP can be customized.

Outdoor Unit Dimensions

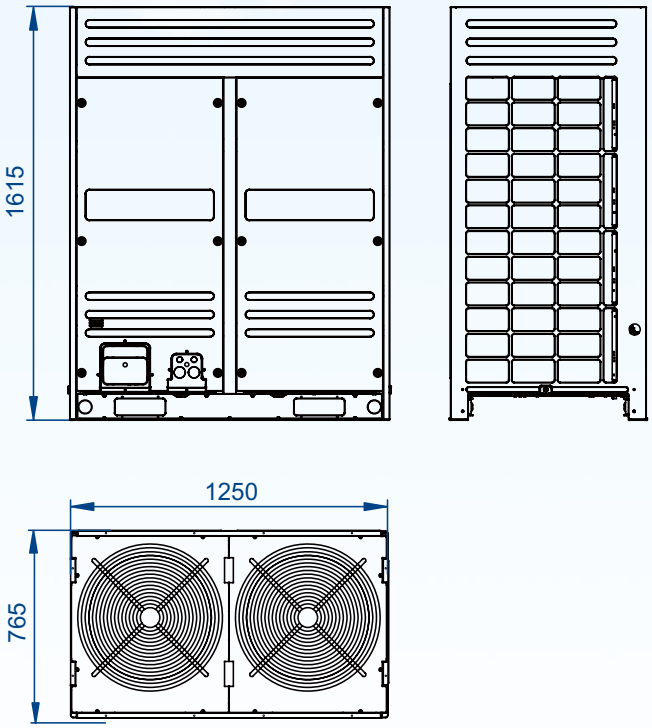
Body dimension

Unit: mm

8/10HP

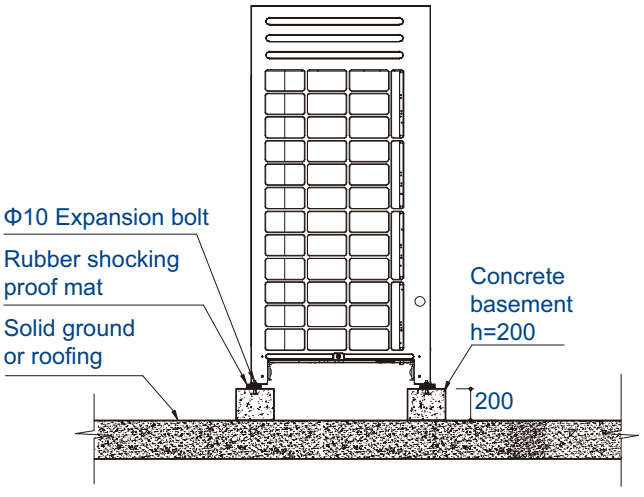


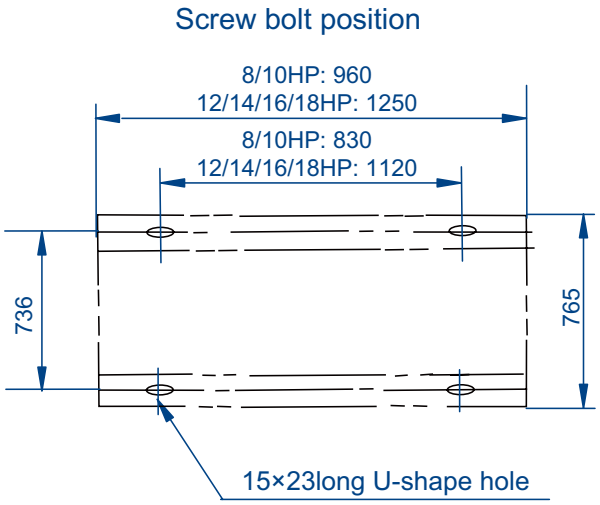
12/14/16/18HP



Installation dimension

Unit: mm

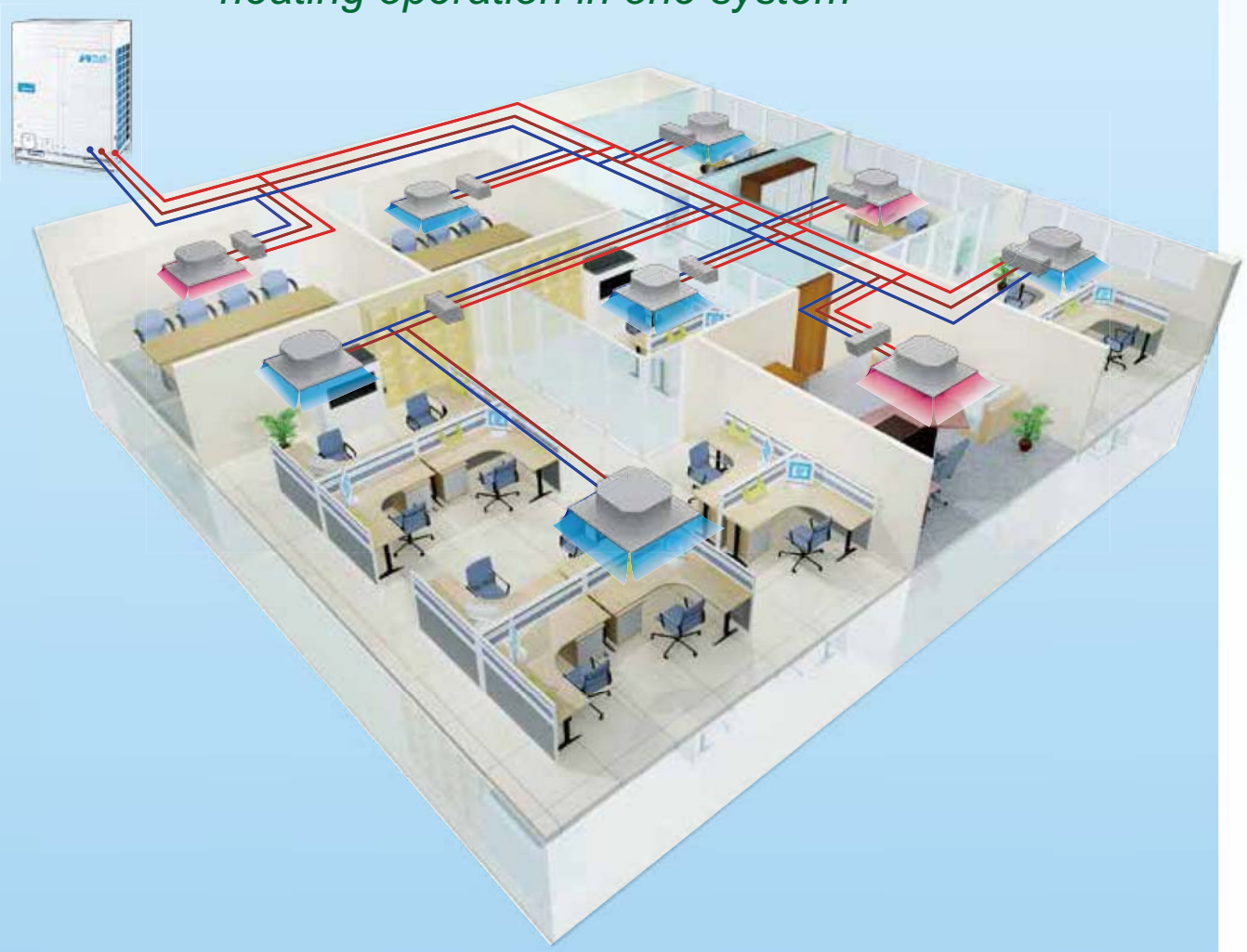




V4 PLUS R Series

The all DC inverter V4 Plus heat recovery series, which can offers simultaneous cooling and heating operation in one system. The energy by-product from cooling or heating is transferred to where it is required by using the balanced heat exchanger function, which saves up to 50% in costs compared with a conventional heat pump system.

Offers simultaneous cooling and heating operation in one system



Recommended combination table

Model	Nº of Outdoor Units	Nº of Compressors	Outdoor Unit Combination					Maximum Nº of Connectable Indoor Units	Capacity (kW)	
			8HP	10HP	12HP	14HP	16HP		Cooling	Heating
8HP	1	1	1					13	25.2	27
10HP	1	1		1				16	28	31.5
12HP	1	1			1			20	33.5	37.5
14HP	1	2				1		23	40	45
16HP	1	2					1	26	45	50
18HP	2	2	1	1				29	53.2	58.5
20HP	2	2		2				33	56	63
22HP	2	2		1	1			36	61.5	69
24HP	2	3		1		1		39	68	76.5
26HP	2	3		1			1	43	73	81.5
28HP	2	4				2		46	80	90
30HP	2	4				1	1	50	85	95
32HP	2	4					2	53	90	100
34HP	3	4		2		1		56	96	108
36HP	3	4		2			1	59	101	113
38HP	3	4		1	1		1	63	106.5	119
40HP	3	5		1		1	1	64	113	126.5
42HP	3	6				3		64	120	135
44HP	3	6				2	1	64	125	140
46HP	3	6				1	2	64	130	145
48HP	3	6					3	64	135	150
50HP	4	6	1	1			2	64	143.2	158.5
52HP	4	6		2			2	64	146	163
54HP	4	6		1	1		2	64	151.5	169
56HP	4	7		1		1	2	64	158	176.5
58HP	4	8				3	1	64	165	185
60HP	4	8				2	2	64	170	190
62HP	4	8				1	3	64	175	195
64HP	4	8					4	64	180	200

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
The above combination models are factory-recommended models.

Features

Wide Application Range

Wide range of outdoor units

The outdoor units' capacity range from 8HP up to 64HP in 2HP increment. Maximum 64 indoor units with capacity up to 130% of total outdoor units can be connected as one refrigeration system.

8, 10, 12, 14, 16HP

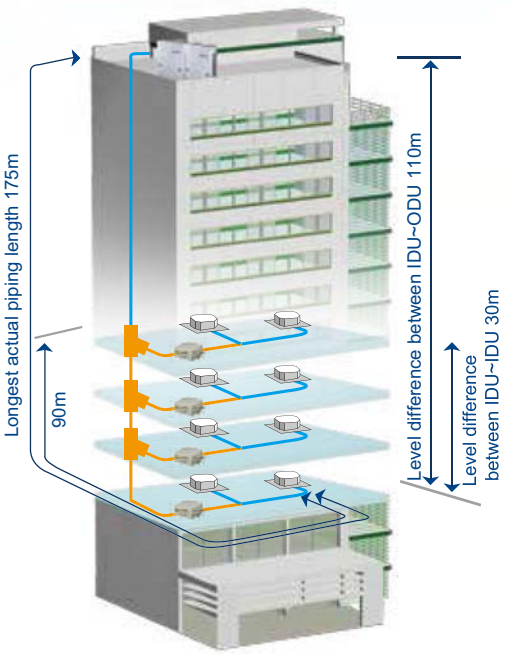
18-32HP

34-48HP

50-64HP

Long piping length

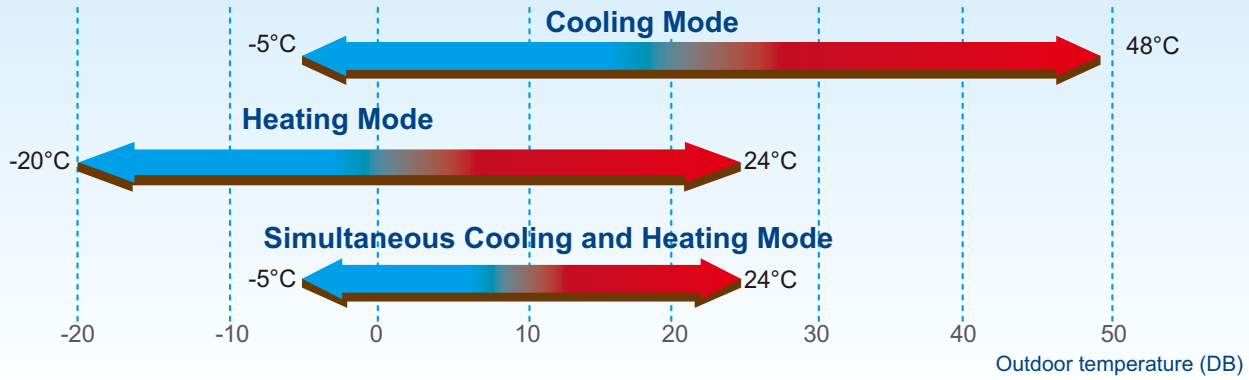
The solution supports an incredible piping length of 1,000m and level difference of 110m, making it perfect for large projects.



			Permitted value (m)
Piping length	Actual total piping length		1000*
	Longest piping	Actual length	175
		Equivalent length	200
	Equivalent piping length from the farthest IDU to the first indoor branch joint		40/90*
	Equivalent piping length from MS to its downstream indoor unit		40
Level difference	Level difference between indoor and outdoor units	Outdoor unit up	70
		Outdoor unit down	110
	Level difference between indoor units		30

*Total pipe length is equal to two times — pipe length plus — pipe length.
*When the piping length from the farthest IDU to the first indoor branch joint is more than 40m, it needs to meet specific conditions according to the installation part of the technical manual to achieve 90m.

Wide operation temperature range

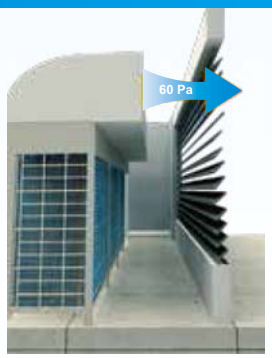


The V4+R series system operates stably at extreme temperatures ranging from -20°C to 48°C.

High external static pressure

Max. 60Pa external static pressure can be customized for the outdoor unit, flexible to build-in installation.

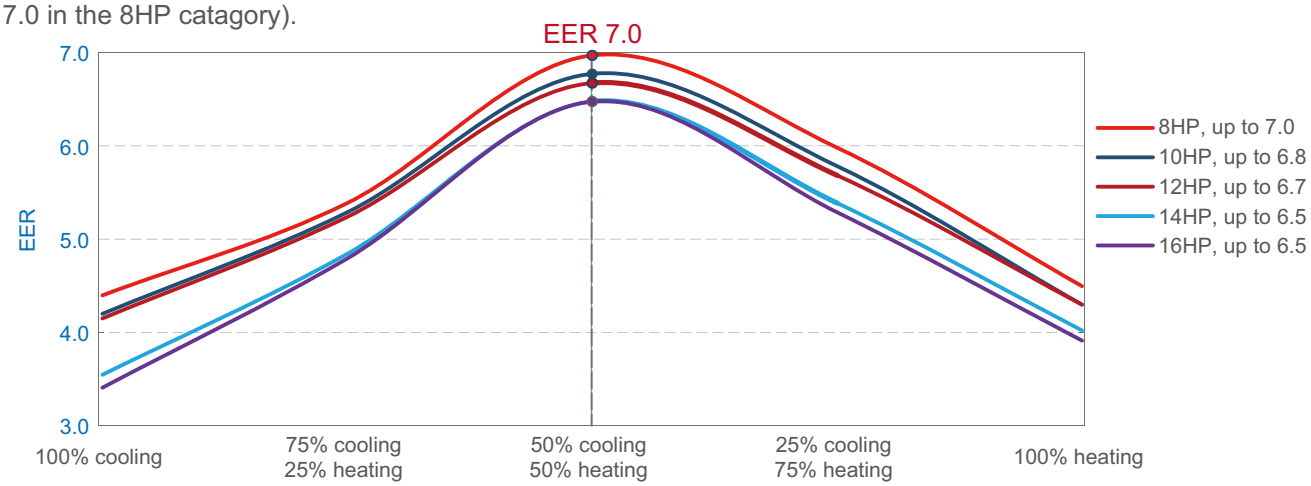
A standard 0-20Pa external static pressure is equipped by default for all outdoor units. 20-40Pa external static pressure can be customized for 14, 16HP outdoor units, and 20-60Pa can be customized for 8, 10, 12HP outdoor unit.



High Efficiency

High EER

Heat recovery is achieved by diverting exhaust heat from indoor units in cooling mode to areas requiring heating, maximising energy efficiency, reducing electricity costs and leading to high partload efficiencies (up to 7.0 in the 8HP catagory).



EER in simultaneous cooling and heating mode are based on the following condition:
Outdoor temperature 7°CDB/6°CWB, indoor temperature 27°CDB/19°CWB for cooling, indoor temperature 20°CDB for heating.

All DC inverter technology

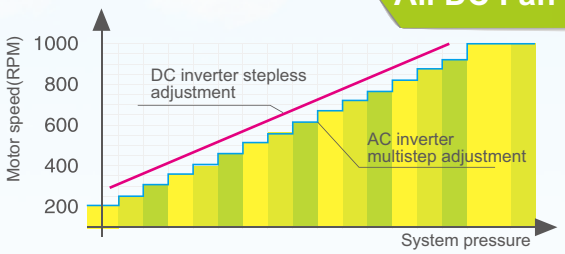
All DC inverter compressors make the capacity output better distributed, and always work at 60-140Hz which is the most efficient range. It makes the efficiency more than 30% higher than the normal.

All DC Inverter Compressors

- New structure enhances mid-frequency performance
- Specially designed scroll profile for R410A
- More compact, weight reduced by 50%
- Advanced permanent magnet DC motor improves the low frequency band performance

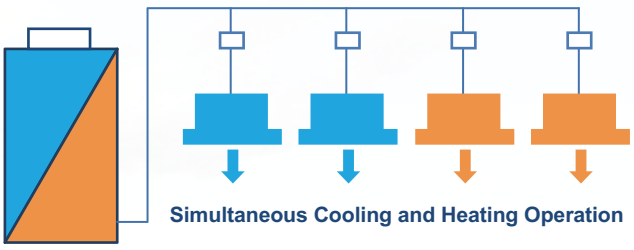
According to the running load and system pressure, the system controls the speed of DC fan to achieve the minimum energy consumption and best performance.

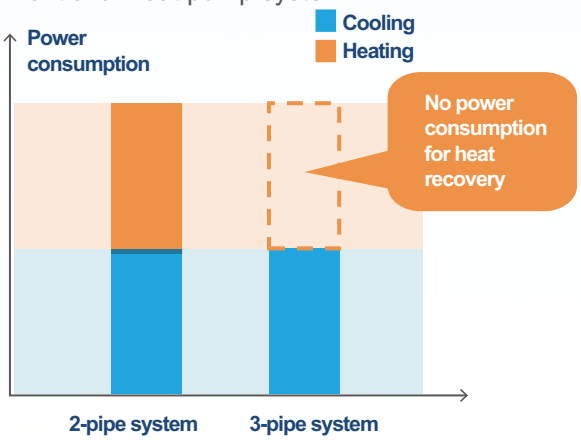
All DC Fan Motors



Heat recovery, more efficiency

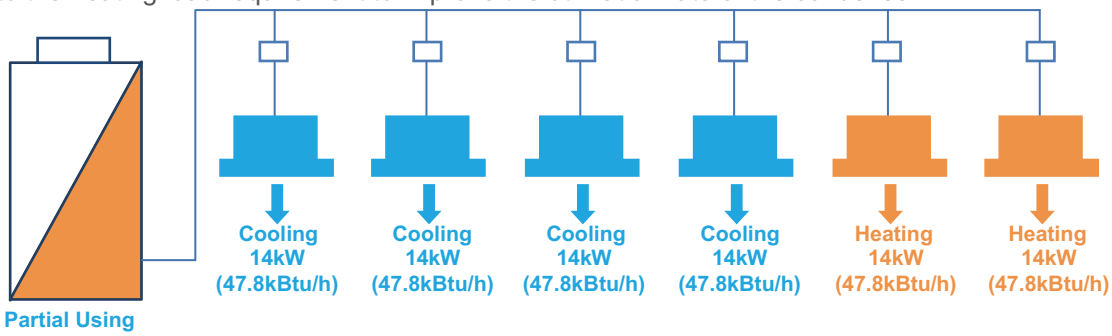
Simultaneous heating and cooling in different zones, more energy saving by heat recovery from one space to another which saves up to 50% in costs compared with a conventional heat pump system.





Heating capacity automatic adjustment

Two parts condenser individual design, the unit can distribute a part of evaporator to be as condensing area according to the heating load requirement to improve the utilization rate of the condenser.



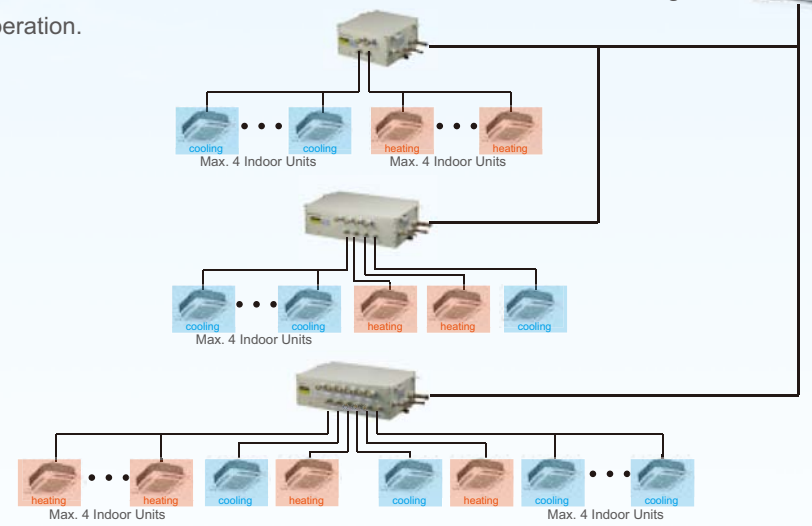
Enhanced Comfort

Cooling and heating simultaneous

Simultaneous cooling and heating achieved for new designed MS (Mode Switch) equipment.

The outdoor unit individual controls the operation mode of each group indoor unit to achieve simultaneous heating and cooling in one system under the MS equipment which adopts solenoid valve to precise control refrigerant flow rate.

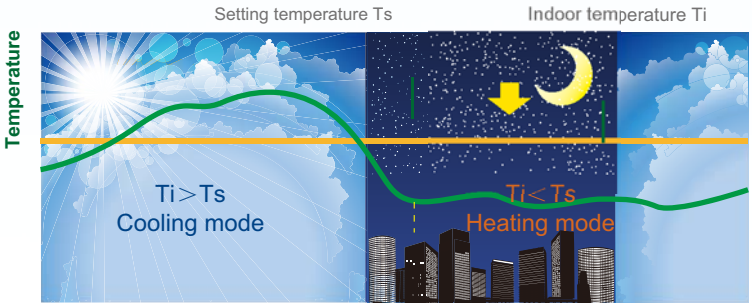
The indoor units connect to the same MS can realize simultaneous cooling and heating operation.



Auto mode control

At the auto mode, the indoor unit can change the operation mode, to control the indoor side temperature at a constant temperature demanded.

Unit change to cooling mode at daytime, when indoor temperature is higher than setting temperature, and change to heating mode at nighttime, when indoor temperature is lower than setting temp.

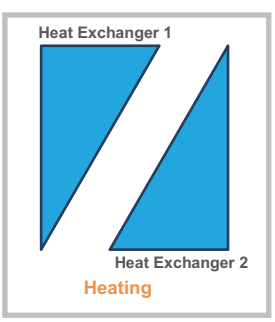


Mode change automatically

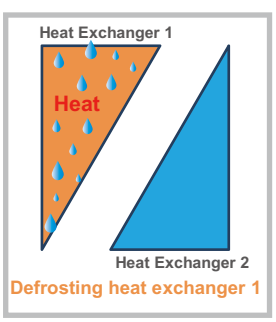
Continuous heating during defrost operation

Each heat exchanger is defrosted by using heat transferred from one heat exchanger to the other in the outdoor unit. Defrost has no impact on the indoor unit on heating mode.

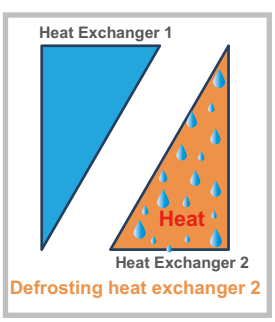
Outdoor Unit



Outdoor Unit



Outdoor Unit



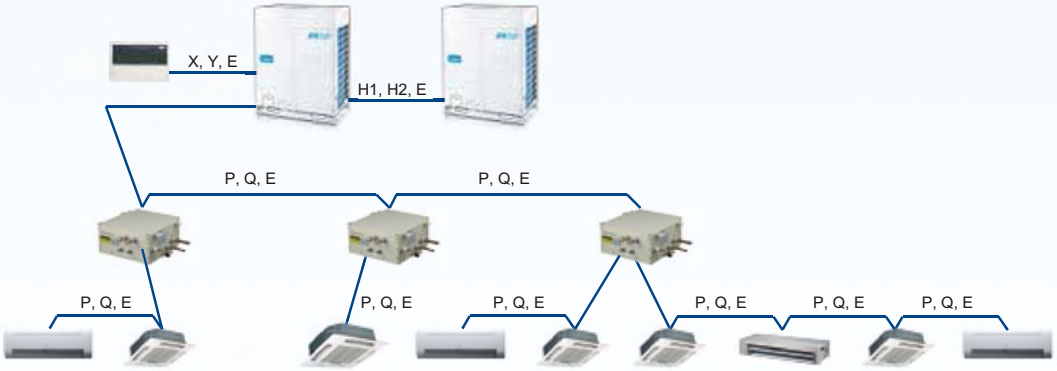
Easier Installation and Service

Remote addressing

Addressing indoor units are able to be done just by pressing the button of the controller.
No need to set the address by the DIP switch one by one.
Wired controller and wireless controller can enquire and modify every indoor units address.

Simple communication wiring

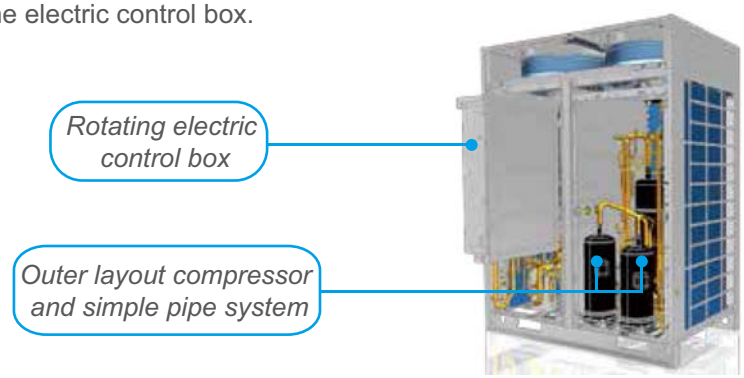
Centralized controller (CCM03) can connect from indoor side or outdoor side (XYE terminals) at will. Only one group of communication wire of PQE, achieved both of communication for indoor & outdoor unit and network. It's more convenient for communication wiring.



Professional structure design for easy maintainence

The check window reserved on electric control box provides a convenient spot checking and status enquiry. With the 4 bits digital tube LED display, it is very convenient to show the data of the system, such as pressure, compressor frequency, error code, discharge temperature etc., which can make the maintenance, installation and commissioning easier.

Compressor is near the outside, and there is simple pipe system for convenient maintenance.
The newly designed rotating control box is so excellent that it can rotate in a wide angle.
It is convenient for the inspection and maintenance of the pipeline system and greatly reduced the time of dismount the electric control box.



Outdoor Unit Specifications

V4+R

Model			MDV-252(8)W/D2RN1T(C)	MDV-280(10)W/D2RN1T(C)	MDV-335(12)W/D2RN1T(C)	MDV-400(14)W/D2RN1T(C)	MDV-450(16)W/D2RN1T(C)
Power supply		V/Ph/Hz	380-415/3/50				
Cooling	Capacity	kW	25.2	28.0	33.5	40.0	45.0
		RT	7.2	8.0	9.5	11.4	12.8
	Power input	kW	5.73	6.67	8.07	11.30	13.24
	EER	kW/kW	4.40	4.20	4.15	3.54	3.40
Heating	Capacity	kW	27.0	31.5	37.5	45.0	50.0
		RT	7.7	8.9	10.7	12.8	14.2
	Power input	kW	6.00	7.33	8.72	11.19	12.79
	COP	kW/kW	4.50	4.30	4.30	4.02	3.91
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130	50-130	50-130
	Max. quantity		13	16	20	23	26
Sound pressure level		dB(A)	57	57	58	60	60
Pipe connections	Liquid pipe	mm	Φ9.53	Φ12.7	Φ12.7	Φ15.9	Φ15.9
	Low pressure gas pipe	mm	Φ22.2	Φ22.2	Φ25.4	Φ28.6	Φ28.6
	High pressure gas pipe	mm	Φ19.1	Φ19.1	Φ19.1	Φ22.2	Φ22.2
	High pressure gas balance pipe	mm	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1
	Oil balance pipe	mm	Φ6	Φ6	Φ6	Φ6	Φ6
Fan motor	Type		DC	DC	DC	DC	DC
	Quantity		2	2	2	2	2
	Air flow rate	m^3/h	12,000	12,000	13,000	15,000	15,000
	Motor output	W	420	420	420	750	750
	ESP	Pa	0-20 (default)			0-20 (default)	
		Pa	20-60 (customized)			20-40 (customized)	
DC inverter compressor	Quantity		1	1	1	2	2
	Capacity	kW	31.59	31.59	31.59	31.59+11.8	31.59+11.8
	Crankcase heater	W	30×2	30×2	30×2	30×4	30×4
	Oil type		FVC68D	FVC68D	FVC68D	FVC68D	FVC68D
	Oil charge	ml	500	500	500	500+500	500+500
Refrigerant	Type		R410A	R410A	R410A	R410A	R410A
	Factory charging	kg	10	10	10	13	13
Design pressure (High/Low)		MPa	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6
Net dimension (W×H×D)		mm	1,250×1,615×765				
Packing size (W×H×D)		mm	1,305×1,790×820				
Net weight		kg	255	255	255	303	303
Gross weight		kg	273	273	273	322	322
Operating temperature range	Cooling	°C	-5-48				
	Heating	°C	-20-24				
	Simultaneous cooling and heating	°C	-5~24				

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
Connection piping diameter is based on the condition that the total equivalent liquid length is less than 90m. When the total equivalent liquid length is more than 90m, please refer to technical manual to choose the connection piping diameter.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1.3m above the floor.

MS Specifications

MS equipment which can be connected multiple indoor units

Model				MS01/N1-C	MS02/N1-C	MS04/N1-C	MS06/N1-C
Max. indoor unit groups				1	2	4	6
Max. number of each group indoor units				4	4	4	4
Max. number of all downstream indoor units				4×1=4	4×2=8	4×4=16	4×6=24
Max. capacity of each group indoor units			kW	16	16	16	16
Total capacity of all downstream indoor units			kW	≤16	≤28	≤45	≤45
Piping connections	Connect to outdoor unit	Liquid pipe	mm	Φ9.53	Φ12.7	Φ15.9	Φ15.9
		High pressure gas pipe	mm	Φ15.9	Φ19.1	Φ22.2	Φ22.2
		Low pressure gas pipe	mm	Φ19.1	Φ25.4	Φ31.8	Φ31.8
	Connect to indoor unit	Liquid pipe	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53
		Gas pipe	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9
Sound pressure level			dB(A)	33	33	33	40
Net dimension (W×H×D)			mm	630×225×600	630×225×600	960×225×600	960×225×600
Packing size (W×H×D)			mm	725×325×685	725×325×685	1055×325×685	1055×325×685
Net weight			kg	18	19.5	31	35
Gross weight			kg	25	27	40	44.5

MS equipment which can be connected only one indoor unit

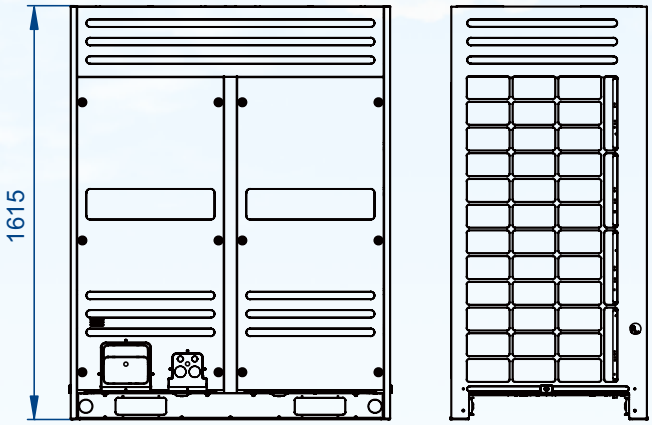
Model				MS02E/N1-C	MS04E/N1-C
Max. number of all downstream indoor units				1	1
Capacity of downstream indoor unit			kW	20~28	40~56
Piping connections	Connect to outdoor unit	Liquid pipe	mm	Φ12.7	Φ15.9
		High pressure gas pipe	mm	Φ19.1	Φ22.2
		Low pressure gas pipe	mm	Φ25.4	Φ31.8
	Connect to indoor unit	Liquid pipe	mm	Φ9.53	Φ9.53
		Gas pipe	mm	Φ15.9	Φ15.9
Sound pressure level			dB(A)	33	33
Net dimension (W×H×D)			mm	630×225×600	960×225×600
Packing size (W×H×D)			mm	725×325×685	1055×325×685
Net weight			kg	19.5	31
Gross weight			kg	27	40

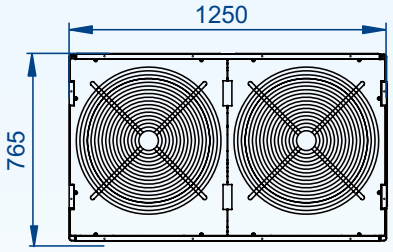
Note:
Sound values are measured in a semi-anechoic room, at a position 1m below the MS equipment in mode switch condition.
It is not recommended to install in the place where high noise performance is required.

Dimensions

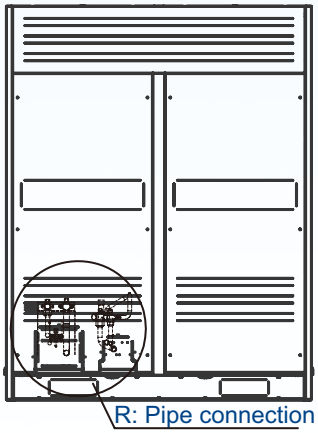
Unit: mm

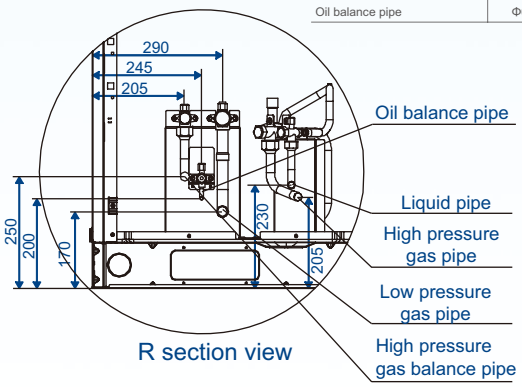
Body dimension



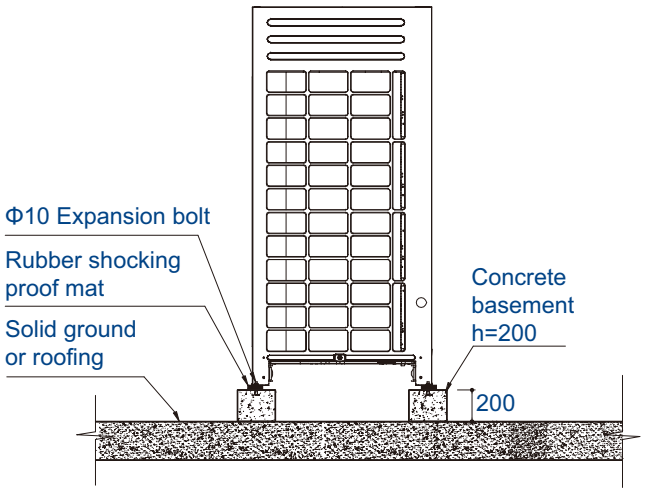


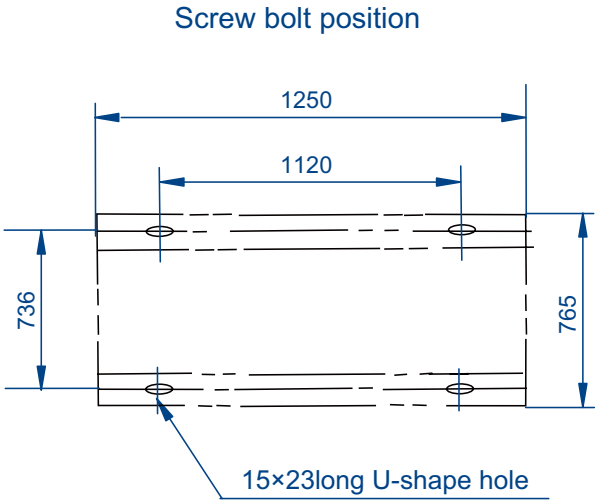
Piping \ HP	8/10	12	14/16
Liquid pipe	Φ12.7	Φ15.9	Φ15.9
Low pressure gas pipe	Φ22.2	Φ25.4	Φ28.6
High pressure gas pipe	Φ19.1	Φ19.1	Φ22.2
High pressure gas balance pipe	Φ19.1	Φ19.1	Φ19.1
Oil balance pipe	Φ6	Φ6	Φ6





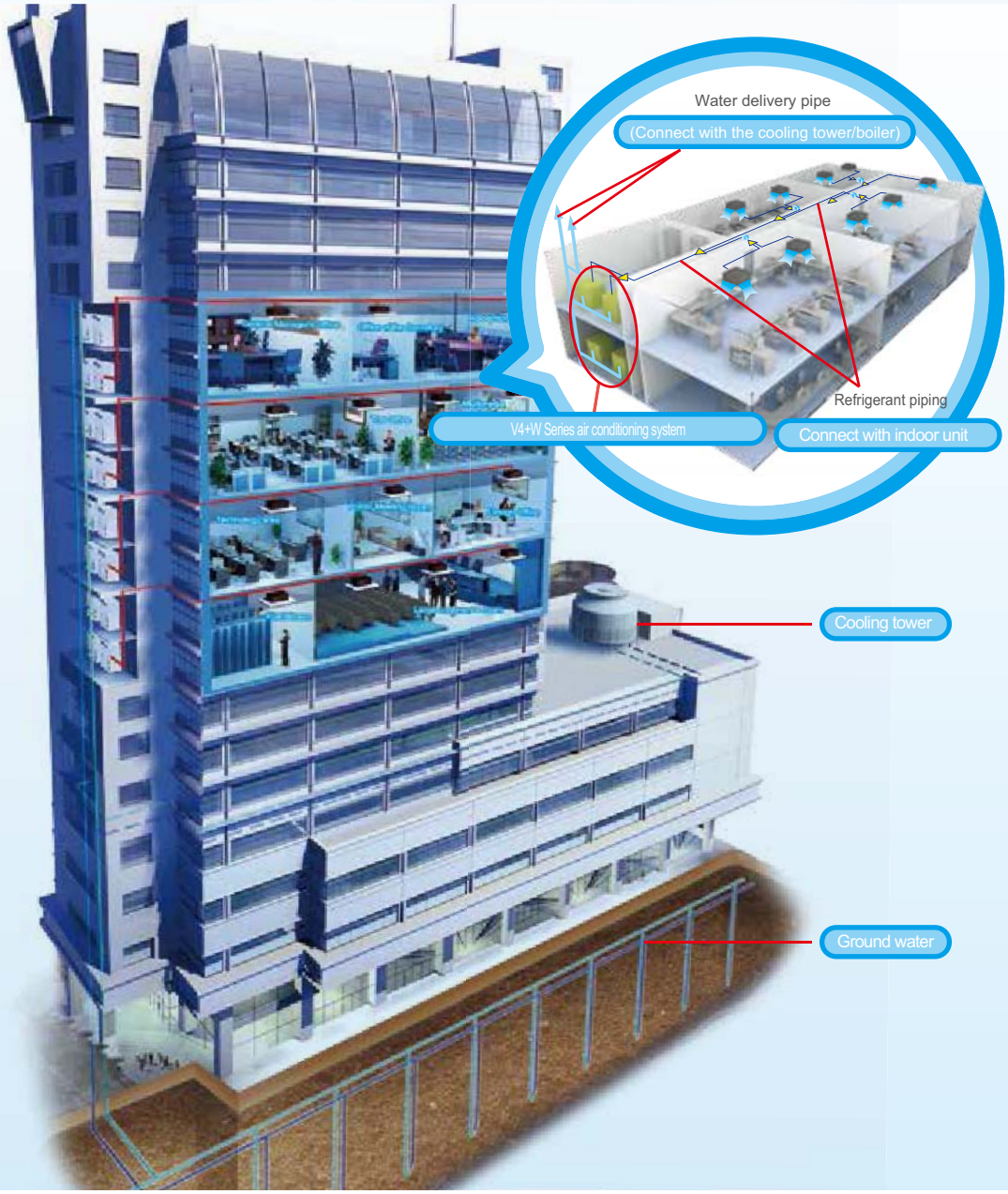
Installation dimension





V4 PLUS W Series

The Midea V4 Plus W series is the perfect combination of water and refrigerant systems. The main unit achieves the world's largest capacity of 36HP and provide the highest energy efficiency for cooling and heating. The series boasts excellent energy saving features, flexible system design and maximized comfort. In addition to traditional cooling towers / boilers, there are more water source options including river water, soil, solar energy, sea water, lake water, ground water, waste heat from production, sewage or waste water.



Recommended combination table

Model	Nº of Outdoor Units	Nº of Compressors	Outdoor Unit Combination			Maximum Nº of Connectable Indoor Units	Capacity (kW)	
			8HP	10HP	12HP		Cooling	Heating
8HP	1	1	1			13	25.2	27
10HP	1	1		1		16	28	31.5
12HP	1	1			1	20	33.5	37.5
16HP	2	2	2			26	50.4	54
18HP	2	2	1	1		29	53.2	58.5
20HP	2	2		2		33	56	63
22HP	2	2		1	1	36	61.5	69
24HP	2	2			2	39	67	75
26HP	3	3	2	1		43	78.4	85.5
28HP	3	3	1	2		46	81.2	90
30HP	3	3		3		50	84	94.5
32HP	3	3		2	1	53	89.5	100.5
34HP	3	3		1	2	56	95	106.5
36HP	3	3			3	59	100.5	112.5

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27ºC DB/19ºC WB; Main unit ambient temperature 35ºC DB/24ºC WB; Water inlet temperature 30°C.
Heating: Indoor temperature 20ºC DB/15ºC WB; Main unit ambient temperature 7ºC DB/6ºC WB; Water inlet temperature 20°C.
Piping length: Interconnecting piping length is 5m, level difference is zero.
The above combination models are factory-recommended models.

Features

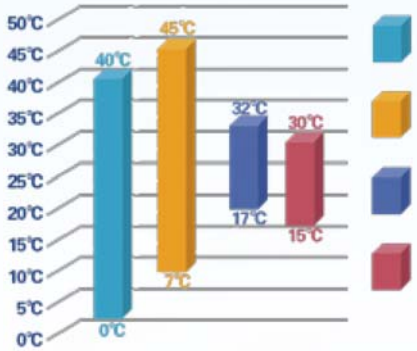
Wide Application Range

Wide range of outdoor units

The main units capacity range from 8HP up to 36HP. Maximum 59 indoor units with capacity up to 130% of total main units can be connected in one refrigeration system.

8, 10,12HP	16, 18, 20, 22, 24HP	26, 28, 30, 32, 34, 36HP
		

Wide operation temperature range



Main unit ambient temperature: 0°C~40°C

Main unit water inlet temperature: 7°C~45°C

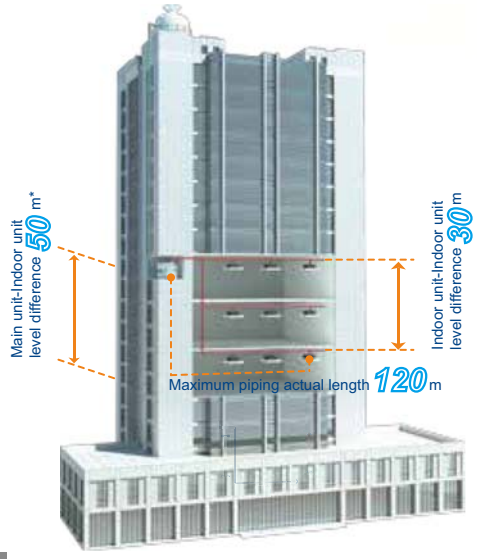
Indoor temperature in cooling mode: 17°C~32°C

Indoor temperature in heating mode: 15°C~30°C

Main unit water inlet flow: 8HP: 2.7~8.1m³/h; 10HP: 3~9m³/h; 12HP: 3.6~10.8m³/h.

Long piping length

In the refrigerant piping system, total piping length can extend up to 300m with a longest piping actual length of 120m and a level difference between indoor and main unit of 50m. The maximum pressure at the water side can be as high as 1.96MPa, enabling a flexible design in high-rise buildings.
Water piping does not enter occupied spaces, so there is little chance of water leaks.

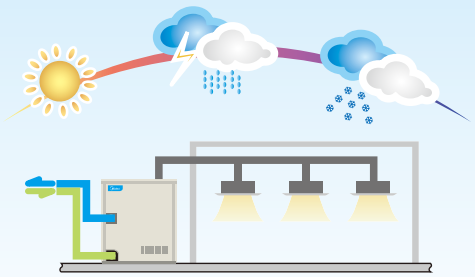


			Permitted value (m)
Piping length	Actual total piping length		300
	Longest piping	Actual length	120
		Equivalent length	150
Level difference	Equivalent piping length from the farthest IDU to the first indoor branch joint		40*
	Level difference between indoor and main unit	Main unit up	50
		Main unit down	40
	Level difference between indoor units		30

*The allowable length can extend to 90m under certain conditions.
Please refer to the service manual for details.

High Reliability

Climate-resistant units

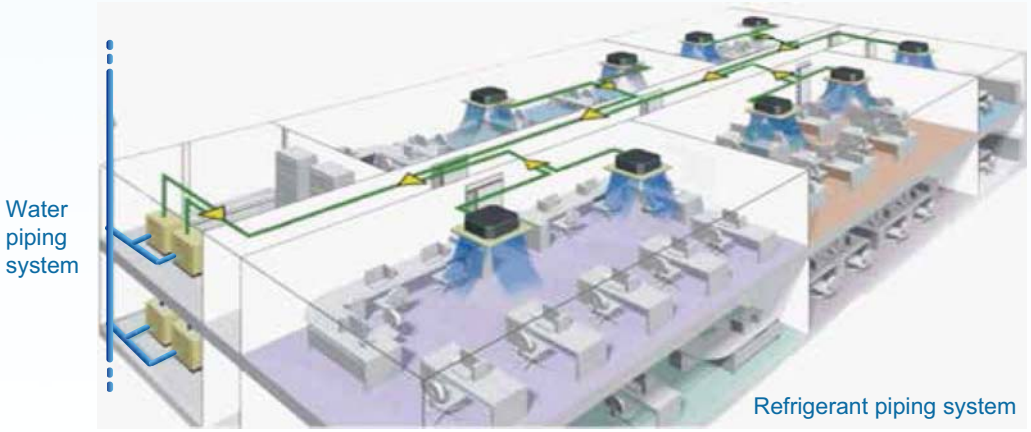


Due to the stable source of water as the cold/heat source of the system, the air conditioning capacity is not affected by environmental temperature.

When heating in winter, the unit does not implement the frost/defrosting process, which stabilizes and strengthens the heating effect.

No water leakage

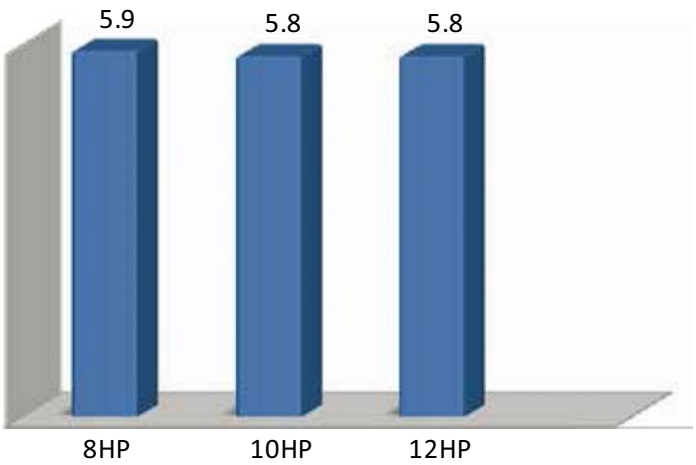
No water pipe installed indoors, no water leakage risks.



High Efficiency

High IPLV

Midea V4 Plus W Series System combines water system and refrigerant system perfectly. IPLV(C) reaches as high as 5.9. Compared with air-cooled VRF, it saves much energy.

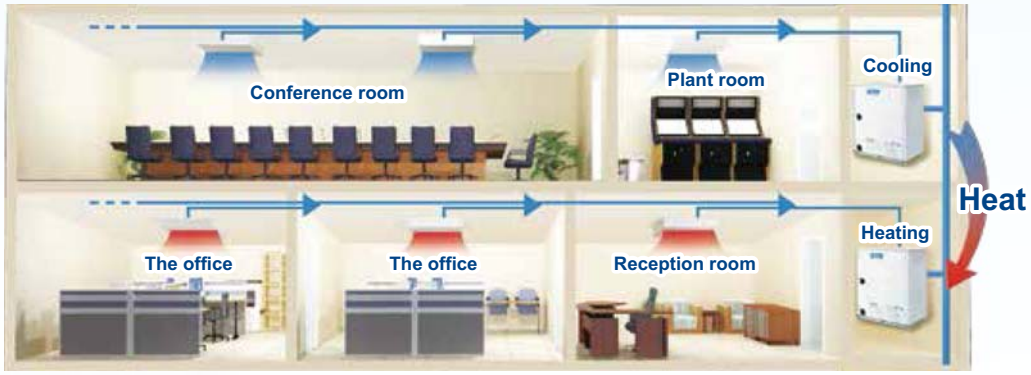


High efficiency double-pipe heat exchanger

With the innovative designed double-pipe heat exchanger, the water quality required is low. The water side has large circulation area, and it is not easy to get stuck, higher reliability, easy to clean and maintain.

Water side heat recovery function

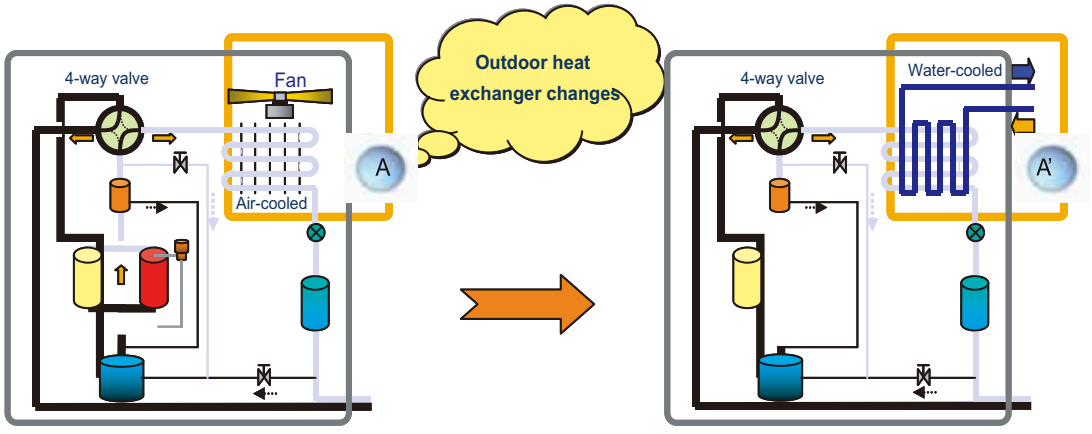
In the modern large-scale buildings, the load between the internal and external areas is different. It may occur situations that both cooling and heating are required. The V4 PLUS W series modular design, not only can realize meticulous system division in different areas but also can realize heat recovery at the same time, significantly improved energy efficiency.



Enhanced Comfort

Low noise

Without outdoor units fan noise and fully enclosed design which realize lower noise.

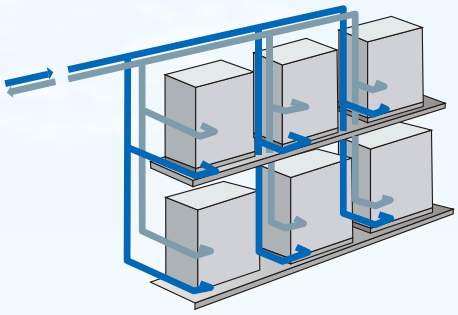


Modular design

The three basic models, 8,10 and 12HP have the same size and weight.

The modular design enables one main unit to be installed above another, which greatly saves space.

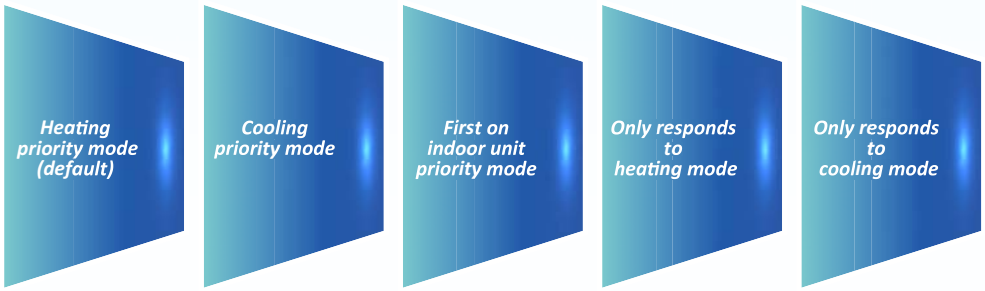
Various installation environments include warehouses, basements, closed balconies, corridors, and factories.



More intelligent

Various locking modes

A range of available modes can meet a wide variety of user needs.



Easier installation and service

Easy access

The checking window on electric control box for convenient spot checking and status enquiry.

Compressor is located near the door, which simplifies checks and enables valve or compressor parts to be replaced easily.

Outdoor Unit Specifications

V4+W

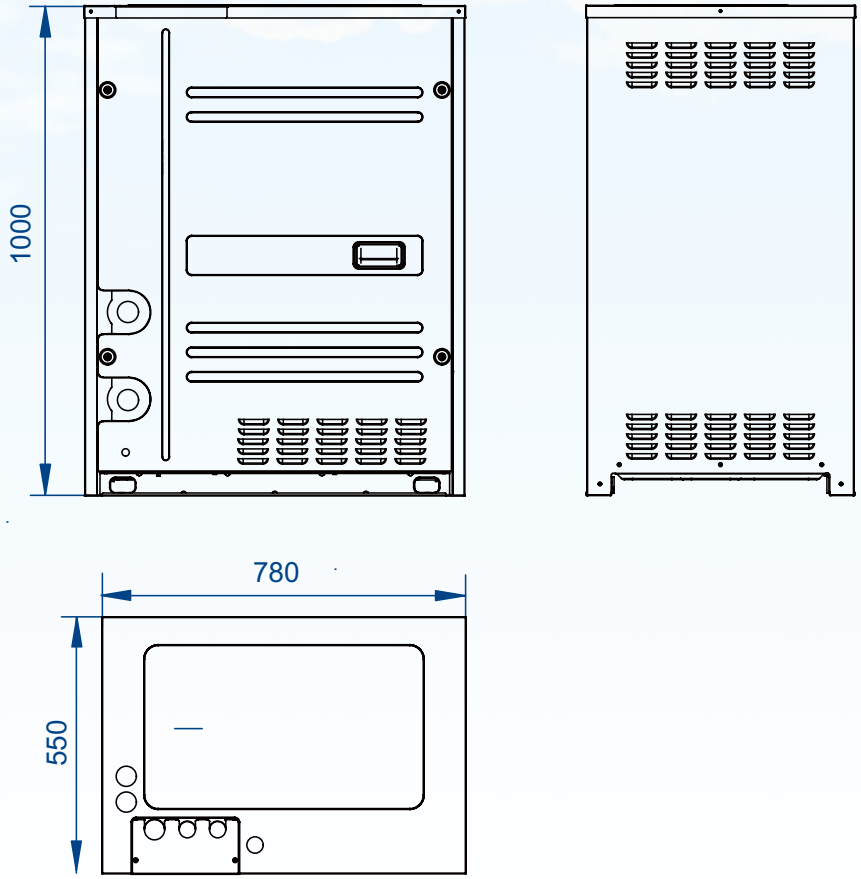
Model			MDVS-252(8)W/DRN1	MDVS-280(10)W/DRN1	MDVS-335(12)W/DRN1
Power supply		V/Ph/Hz	380-415/3/50		
Cooling	Capacity	kW	25.2	28.0	33.5
		RT	7.2	8.0	9.5
	Power input	kW	4.8	6.10	8.00
	EER	kW/kW	5.25	4.59	4.19
Heating	Capacity	kW	27.0	31.5	37.5
		RT	7.7	8.9	10.7
	Power input	kW	4.45	5.83	7.80
	COP	kW/kW	6.07	5.40	4.81
IPLV©			5.90	5.80	5.80
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130
	Max. quantity		13	16	20
Sound pressure level		dB(A)	51	52	52
Refrigerant pipe connections	Liquid pipe	mm	Φ9.53	Φ9.53	Φ12.7
	Gas pipe	mm	Φ22.2	Φ22.2	Φ25.4
	Oil blance pipe	mm	Φ6.35	Φ6.35	Φ6.35
Drainage pipe outside diameter		mm	Φ10		
Water side connecting pipe		mm	Φ31.8		
DC inverter compressor	Quantity		1		
	Capacity	kW	31.59		
	Crankcase heater	W	40-80		
	Oil type		FVC68D		
	Oil charge	ml	500		
Heat exchanger	Type		Double-pipe heat exchanger		
	Rated water flow volume	m^3/h	5.4	6	7.2
	Pressure drop	kPa	35	40	48
	Max.pressure of water pipe side	MPa	1.98		
Refrigerant	Type		R410A		
	Factory charging	kg	2		
Design pressure (High/Low)		MPa	4.4/2.6		
Net dimension (W×H×D)		mm	780×1,000×550		
Packing size (W×H×D)		mm	845×1,170×600		
Net weight		kg	146	146	147
Gross weight		kg	155	155	156
Water inelt temperature		°C	7-45		
Ambient temperature range		°C	0-40		
Ambient humidity range			Below 80%		

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Main unit ambient temperature 35°C DB/24°C WB; Water inlet temperature 30°C.
Heating: Indoor temperature 20°C DB/15°C WB; Main unit ambient temperature 7°C DB/6°C WB; Water inlet temperature 20°C.
Piping length: Interconnecting piping length is 5m, level difference is zero.
Connection piping diameter is based on the condition that the total equivalent liquid length is less than 90m. When the total equivalent liquid length is more than 90m, please refer to technical manual to choose the connection piping diameter.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1m above the floor.

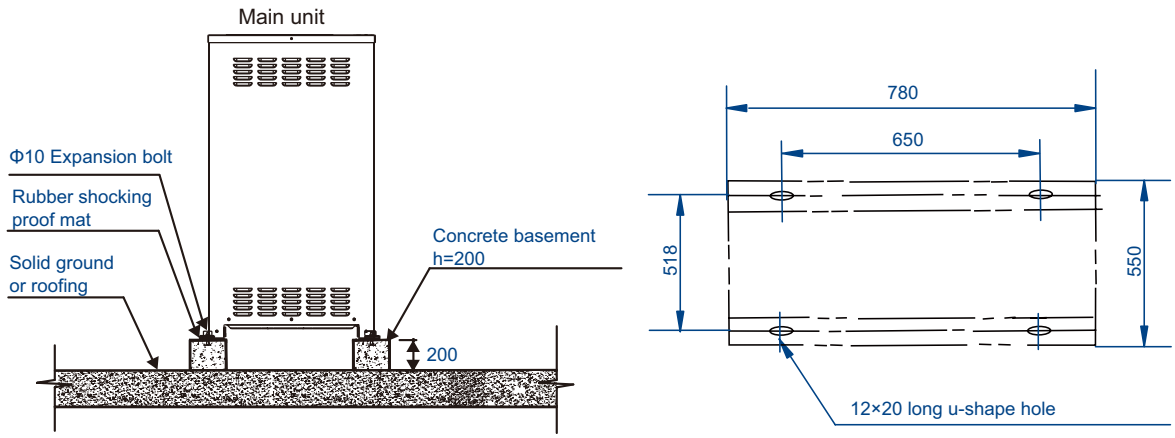
Outdoor Unit Dimensions

Unit: mm

Body dimension



Installation dimension



V4 Plus Individual Series

Perfect for small and middle-sized buildings

Based on strong R&D strength and years of experience in commercial air conditioning industry, as well as our consistent concern on environment and global warming, Midea proudly introduces the V4 Plus VRF product, which is designed to optimize performance and better match varieties of application requirement.
Especially, the integrated designed V4 Plus Individual Type is focus on provide better air conditioning system solution for the small and middle-sized buildings in the global market.

Features

Wide Application Range

Wide range of outdoor units

The capacity range of outdoor unit is from 20kW to 90kW with two discharge type (side discharge and top discharge). The capacity of side discharge type is from 20kW to 45kW and top discharge type is from 25.2kW to 90kW.

20/22.4/26kW

40/45kW

25.2/28kW

33.5/40/45kW

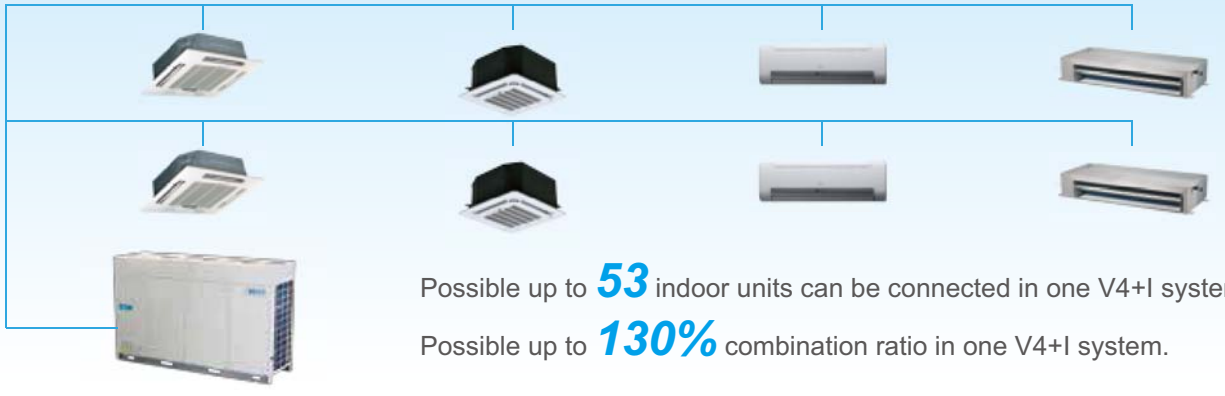
56kW

61.5/67kW

73/78.5/85/90kW

Flexible indoor units connection

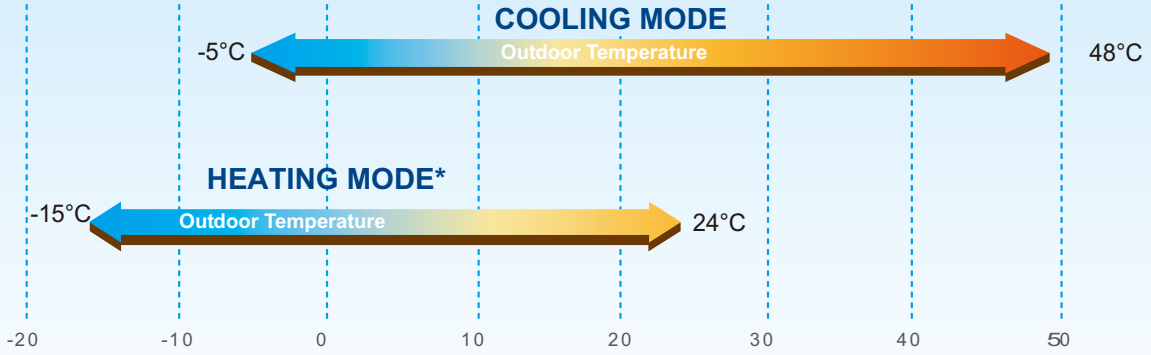
Maximum 53 indoor units with capacity up to 130% of total outdoor units can be connected in one refrigeration system.



Possible up to ***53*** indoor units can be connected in one V4+I system.

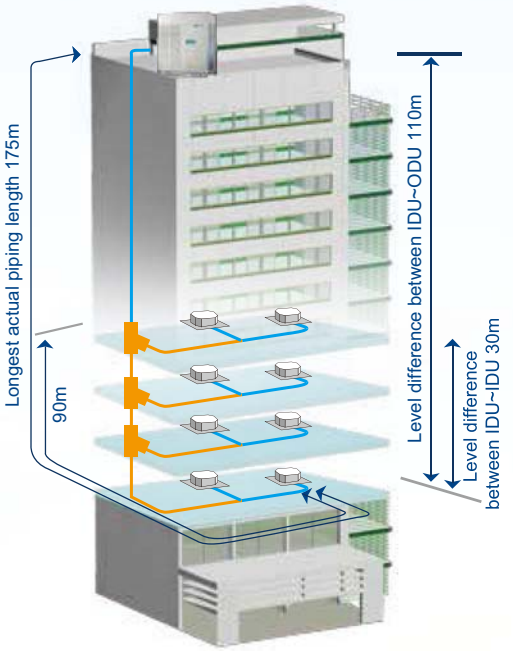
Possible up to ***130%*** combination ratio in one V4+I system.

Wide operation range



The V4 Plus Individual series system operates stably at extreme temperatures ranging from -15°C to 48°C.

Long piping length



Piping length		Permitted value				
		Side discharge type		Top discharge type		
		20-26kW	40-45kW	25.2-45kW	56-67kW	73-90kW
Total piping length (Actual)		120	250	350	1000*1	1000*1
Longest piping	Actual length	60	100	150	175	165
	Equivalent length	70	120	175	200	190
Equivalent piping length from the farthest IDU to the first indoor branch joint		20	40	40	40/90*2	40/90*2
Level difference between IDU~ODU	Outdoor unit up	30	30	70	70	50
	Outdoor unit down	20	20	70	110	90
Level difference between IDU~IDU		8	8	15	30	30

*1: Total pipe length is equal to two times pipe length plus pipe length.
*2: When the piping length from the farthest IDU to the first indoor branch joint is more than 40m, it needs to meet specific conditions according to the installation part of the technical manual to achieve 90m.

High external static pressure

Max. 40Pa external static pressure can be customized for the top discharge outdoor unit type, flexible to build-in installation.

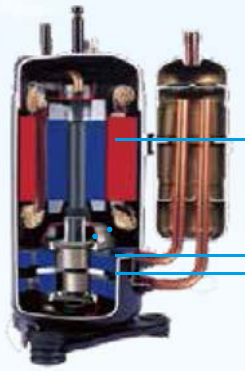
A standard 0-20Pa external static pressure is equipped by default for the top discharge outdoor unit type. 20-40Pa external static pressure can be customized.

High Efficiency

High efficiency DC inverter compressor

Midea V4 Plus Individual Series adopt two type high efficiency DC inverter compressor. Side discharge type adopts high efficiency DC twin rotary compressor, top discharge type adopts high efficiency DC scroll compressor.

High efficiency DC inverter twin rotary compressor (available for side discharge type)



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

High efficiency DC inverter scroll compressor (available for top discharge type)

Powerful magnets provide high torque and efficiency and achieve 70% reduction in volume.

New structure enhances mid-frequency performance

Specially designed scroll profile for R410A

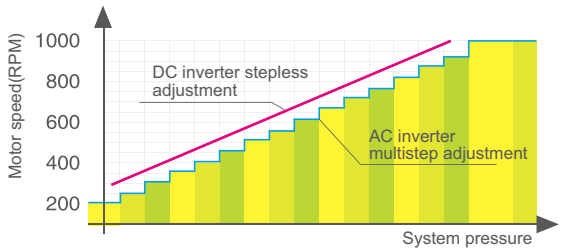
More compact, weight reduced by 50%

Advanced permanent magnet DC motor improves low-frequency band performance

High efficiency DC fan motor

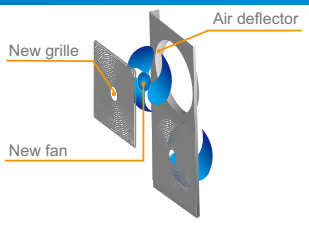
According to the running load and system pressure, the system controls the speed of DC fan to achieve the minimum energy consumption and best performance.

DC motor



Optimized fan shape and fan grille

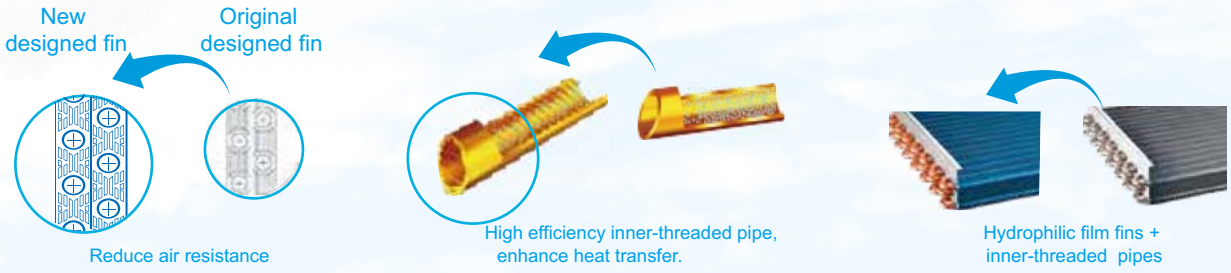
Optimized fan blade shape with new air outlet grille enhanced air flow volume which greatly improves fan performance and decreases noise.



Side air discharge type

Top air discharge type

High performance heat exchanger



- The new designed window fins enlarge the heat-exchanging area , decrease the air resistance, save more power and enhance heat exchange performance.
- Hydrophilic film fins and inner-threaded copper pipes optimize heat exchange efficiency.

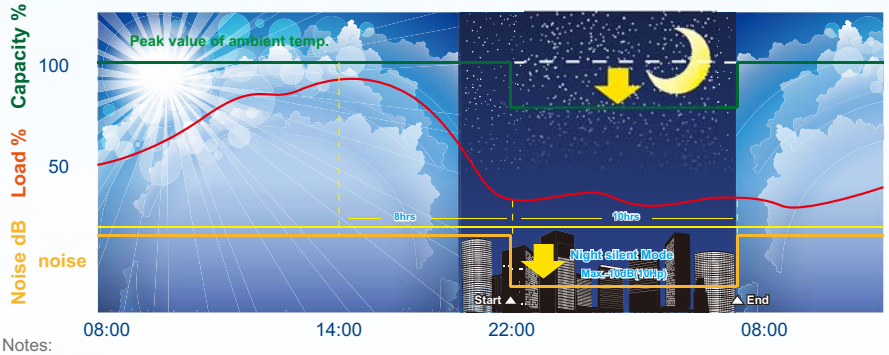
Enhanced Comfort

Night silent operation mode

High comfort outdoor unit's multi-choice of silent mode during the night.
Night silent operation mode can reduce sound level further, minimum 46.8dB (A).

Night silent operation will be activated X hours after the peak temperature during daytime, and it will go back to normal operation after Y hours.

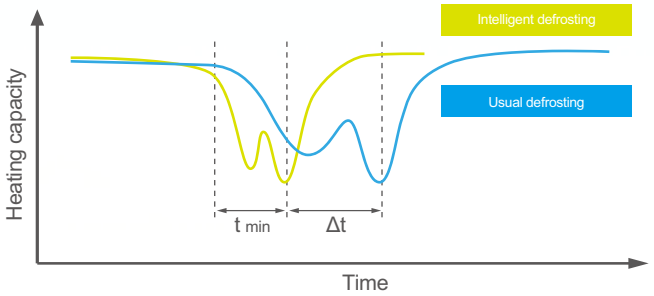
-Mode 1→X: 6 hours, Y: 10 hours
-Mode 2→X: 8 hours, Y: 10 hours
-Mode 3→X: 6 hours, Y: 12 hours
-Mode 4→X: 8 hours, Y: 8 hours



Notes:
This function can be activated by setting at site. Temperature(load) curve shown in the graph is just an example.

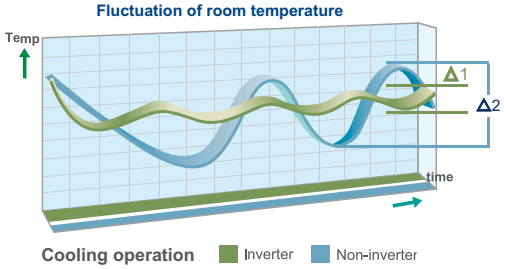
Intelligent defrosting technology

Intelligent defrosting program will judge the defrosting time according to the system real requirement, reduce the heating loss by unnecessary defrosting and make the indoor side more comfortable.
Defrosting time can be shortened to 4 min. due to the specialized defrosting valve.



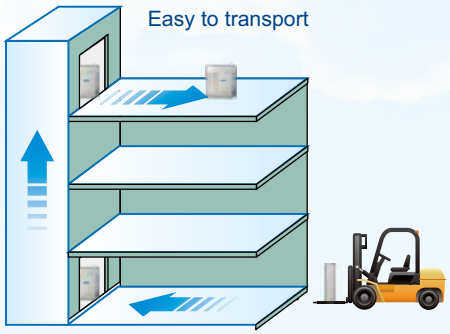
Quick warm-up & cool-down design and less temperature fluctuation

By utilizing the benefits of the inverter compressor, the system can reach full load quickly and shorten the warm-up and cool-down times to provide an immediate and comfortable air solution.
Less temperature fluctuation will create a better living environment.



Easier Installation and Service

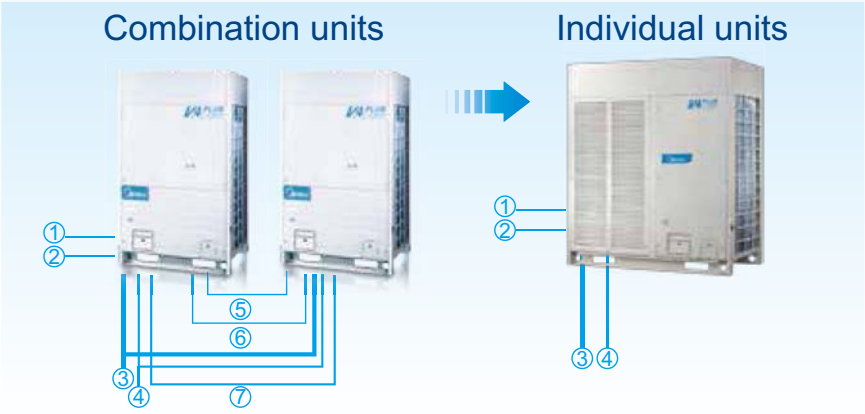
Compact design for effective use of space



Compact size and light weight design minimizes the installation footprint, reduces the installation floor load, and is easier for transportation. For some projects the units can even be transported through the elevator or forklift, reduce access problem at the jobsite.

Integrated design enhance installation efficiency and quality

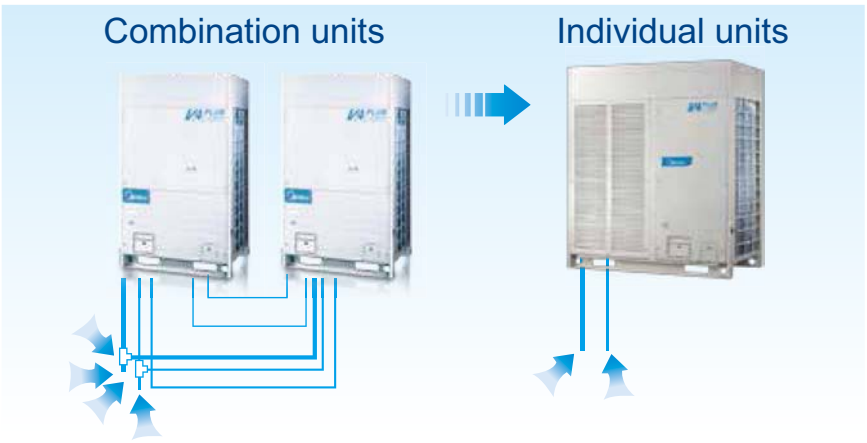
Compare with combination units, the individual units don't need complicated piping and wiring in the jobsite. It eliminates the communication wire, power wire, oil balance pipe, and refrigerant distributors between units.



① Power wire and grounding wire
② Communication wire
③ Main gas pipe
④ Main liquid pipe
⑤ Power wire and grounding wire
⑥ Communication wire
⑦ Oil balance pipe

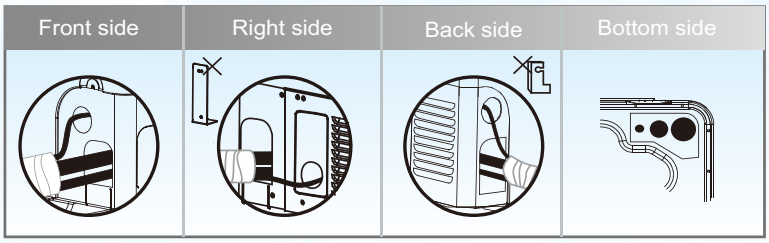
Less possibility of vapor and moisture enter the system

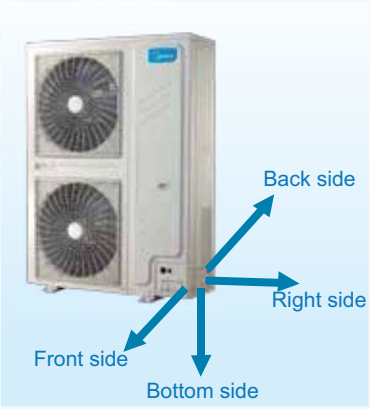
There are more brazing joint in the combination system, therefore vapor and moisture is easy to enter the system. Thanks to the reduced joint in the individual system, it minimize the possibility of moisture enter the system.



Easy piping connection

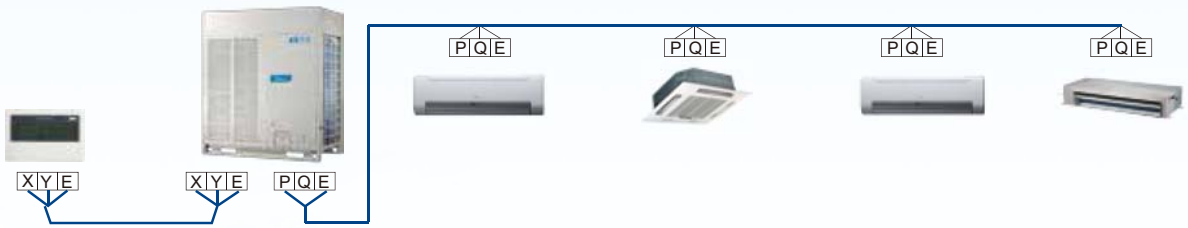
The side air discharge type offering four directions to connect pipes and wirings for meet a variety installation request.





Simple signal line connection

Centralized controller (CCM03 or CCM30) can be connected from indoor side or outdoor side (XYE terminals) at will. Only one group of communication wire of PQE, achieved both of communication for indoor & outdoor unit. It's more convenient for communication wiring.



Auto addressing

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

Easy access

Reserved checking window on electric control box for convenient spot checking and status enquiry.

Compressors locate at near door position which is convenient for checking or replacing the valves or compressor parts.

Outdoor Unit Specifications

V4+I

Model			MDV-V200W/DRN1	MDV-V224W/DRN1	MDV-V260W/DRN1	MDV-V400W/DRN1	MDV-V450W/DRN1
Power supply		V/Ph/Hz	380-415/3/50				
Cooling	Capacity	kW	20.0	22.4	26.0	40.0	45.0
		RT	5.7	6.4	7.4	11.4	12.8
	Power input	kW	6.1	6.8	7.6	11.9	13.6
	EER	kW/kW	3.28	3.29	3.42	3.35	3.32
Heating	Capacity	kW	22.0	24.5	28.5	45.0	50.0
		RT	6.3	7	8.1	12.8	14.2
	Power input	kW	6.1	5.9	6.8	11.1	12.7
	COP	kW/kW	3.61	4.15	4.19	4.05	3.93
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130	50-130	50-130
	Max. quantity		10	11	12	14	15
Sound pressure level		dB(A)	59	59	60	62	62
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
Fan motor	Type		DC			DC+AC	
	Quantity		2			2	
	Air flow rate	m^3/h	10,999	10,494	10,494	16,575	16,575
	Motor output	W	210+160	200+150	200+150	560+320	560+320
Rotary compressor	Quantity		1	1	1	2	2
	Capacity	kW	13.98	16.86	16.86	13.98×2	16.86×2
	Crankcase heater	W	25	25	25	25×2	25×2
	Oil type		FV50S	FV50S	FV50S	FV50S	FV50S
	Oil charge	ml	1400	1700	1700	1400×2	1700×2
Refrigerant	Type		R410A	R410A	R410A	R410A	R410A
	Factory charging	kg	4.8	6.2	6.2	9	12
Design pressure (High/Low)		MPa	4.4/2.6				
Net dimension (W×H×D)		mm	1,120×1,558×528			1360×1650×540	1460×1650×540
Packing size (W×H×D)		mm	1,270×1,720×565			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	°C	-15~46			-5~48	
	Heating	°C	-15~24			-15~24	

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C 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 1.3m above the floor.

Outdoor Unit Specifications

V4+I

Model			MDV-252W/ DRN1-i(B)	MDV-280W/ DRN1-i(B)	MDV-335W/ DRN1-i(B)	MDV-400W/ DRN1-i(B)	MDV-450W/ DRN1-i(B)
Power supply		V/Ph/Hz	380-415/3/50				
Cooling	Capacity	kW	25.2	28.0	33.5	40.0	45.0
		RT	7.2	8.0	9.5	11.4	12.8
	Power input	kW	5.9	7.2	9.1	12.3	14.0
	EER	kW/kW	4.29	3.89	3.70	3.25	3.21
Heating	Capacity	kW	27.0	31.5	37.5	45.0	50.0
		RT	7.7	9.0	10.7	12.8	14.2
	Power input	kW	6.2	7.6	9.0	11.2	12.8
	COP	kW/kW	4.39	4.14	4.17	4.02	3.91
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130	50-130	50-130
	Max. quantity		13	16	16	16	20
Sound pressure level		dB(A)	57	57	58	60	60
Pipe connections	Liquid pipe	mm	Φ12.7		Φ15.9		
	Gas pipe	mm	Φ25.4		Φ31.8		
Fan motor	Type		DC		DC		
	Quantity		1		2		
	Air flow rate	m^3/h	11,000		15,000		
	Motor output	W	560		450×2		
	ESP	Pa	0~20 (default)				
		Pa	20~40 (customized)				
DC inverter compressor	Quantity		1		1		
	Capacity	kW	31.59		11.8		
	Crankcase heater	W	27.6×2		27.6×2		
	Oil type		FVC68D		FVC68D		
	Oil charge	ml	500		500		
Fixed inverter scroll compressor	Quantiy		/		1	2	2
	Capacity	kW	/		17.1	15.39	17.1
	Crankcase heater	W	/		27.6	27.6×2	27.6×2
	Oil type		/		FVC68D	FVC68D	FVC68D
	Oil charge	ml	/		500	500×2	500×2
Refrigerant	Type		R410A		R410A	R410A	R410A
	Factory charging	kg	10		12	15	15
Design pressure (High/Low)		MPa	4.4/2.6				
Net dimension (W×H×D)		mm	960×1,615×765		1,250×1,615×765		
Packing size (W×H×D)		mm	1,025×1,790×830		1,305×1,790×820		
Net weight		kg	205		275	325	325
Gross weight		kg	220		295	345	345
Operating temperature range	Cooling	°C	-5~48				
	Heating	°C	-15~24				

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
Connection piping diameter is based on the condition that the total equivalent liquid length is less than 90m. When the total equivalent liquid length is more than 90m, please refer to technical manual to choose the connection piping diameter.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1.3m above the floor.

Outdoor Unit Specifications

V4+I

Model			MDV-560W/DRN1-i(C)	MDV-615W/DRN1-i(C)	MDV-670W/DRN1-i(C)
Power supply		V/Ph/Hz	380-415/3/50		
Cooling	Capacity	kW	56.0	61.5	67.0
		RT	15.9	17.5	19.0
	Power input	kW	17.0	18.8	20.8
	EER	kW/kW	3.30	3.27	3.22
Heating	Capacity	kW	63.0	69.0	75.0
		RT	17.9	19.6	21.3
	Power input	kW	16.0	17.9	19.8
	COP	kW/kW	3.94	3.86	3.79
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130
	Max. quantity		33	36	39
Sound pressure level		dB(A)	62	63	63
Pipe connections	Liquid pipe	mm	Φ19.1		
	Gas pipe	mm	Φ31.8		
Fan motor	Type		DC+AC		
	Quantity		2		
	Air flow rate	m^3/h	20,000	23,000	23,000
	Motor output	W	340+450	625+450	625+450
	ESP	Pa	0~20 (default)		
		Pa	20~40 (customized)		
DC inverter compressor	Quantity		1		
	Capacity	kW	31.59		
	Crankcase heater	W	30×2		
	Oil type		FVC68D		
	Oil charge	ml	500		
Fixed inverter scroll compressor	Quantiy		2	2	2
	Capacity	kW	15.39×2	17.1×2	20.9×2
	Crankcase heater	W	33×2	33×2	33×2
	Oil type		FVC68D	FVC68D	FVC68D
	Oil charge	ml	500×2	500×2	1100×2
Refrigerant	Type		R410A	R410A	R410A
	Factory charging	kg	17	18.5	18.5
Design pressure (High/Low)		MPa	4.4/2.6		
Net dimension (W×H×D)		mm	1,390×1,615×765	1,585×1,615×765	
Packing size (W×H×D)		mm	1,455×1,790×830	1,650×1,810×840	
Net weight		kg	360	385	390
Gross weight		kg	375	400	405
Operating temperature range	Cooling	°C	-5~48		
	Heating	°C	-15~24		

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
Connection piping diameter is based on the condition that the total equivalent liquid length is less than 90m. When the total equivalent liquid length is more than 90m, please refer to technical manual to choose the connection piping diameter.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1.3m above the floor.

Outdoor Unit Specifications

V4+I

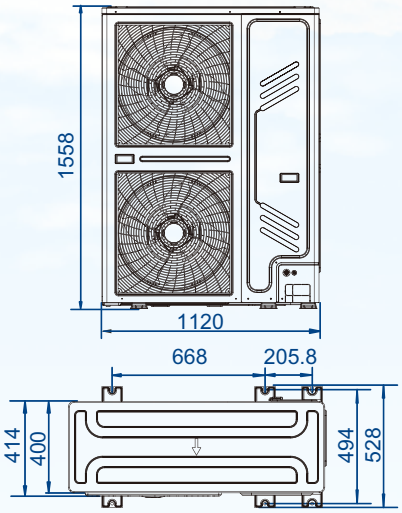
Model			MDV-730W/DRN1-i(C)	MDV-785W/DRN1-i(C)	MDV-850W/DRN1-i(C)	MDV-900W/DRN1-i(C)
Power supply		V/Ph/Hz	380-415/3/50			
Cooling	Capacity	kW	73.0	78.5	85	90
		RT	20.7	22.3	24.1	25.6
	Power input	kW	22.3	24.2	28.3	28.5
	EER	kW/kW	3.27	3.24	3.00	3.16
Heating	Capacity	kW	81.5	87.5	95.0	100.0
		RT	23.1	24.9	27.0	28.4
	Power input	kW	20.6	22.4	26.0	26.5
	COP	kW/kW	3.96	3.91	3.65	3.77
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130	50-130
	Max. quantity		43	46	50	53
Sound pressure level		dB(A)	64	64	65	65
Pipe connections	Liquid pipe	mm	Φ22.2			
	Gas pipe	mm	Φ38.1			
Fan motor	Type		AC			
	Quantity		4			
	Air flow rate	m^3/h	27,900			
	Motor output	W	520×2+380×2			
	ESP	Pa	0~20 (default)			
		Pa	20~40 (customized)			
DC inverter compressor	Quantity		1			
	Capacity	kW	31.59			
	Crankcase heater	W	30×2			
	Oil type		FVC68D			
	Oil charge	ml	500			
Fixed inverter scroll compressor	Quantiy		3	3	4	4
	Capacity	kW	17.1×3	17.1×3	17.1×4	17.1×4
	Crankcase heater	W	30×2+33	30×2+33	27.6×2+33+30	27.6×2+33+30
	Oil type		FVC68D	FVC68D	FVC68D	FVC68D
	Oil charge	ml	500×3	500×3	500×4	500×4
Refrigerant	Type		R410A			
	Factory charging	kg	27			
Design pressure (High/Low)		MPa	4.4/2.6			
Net dimension (W×H×D)		mm	2,540×1,615×765			
Packing size (W×H×D)		mm	2,600×1,800×825			
Net weight		kg	555	555	600	600
Gross weight		kg	590	590	635	635
Operating temperature range	Cooling	°C	-5~48			
	Heating	°C	-15~24			

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
Connection piping diameter is based on the condition that the total equivalent liquid length is less than 90m. When the total equivalent liquid length is more than 90m, please refer to technical manual to choose the connection piping diameter.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1.3m above the floor.

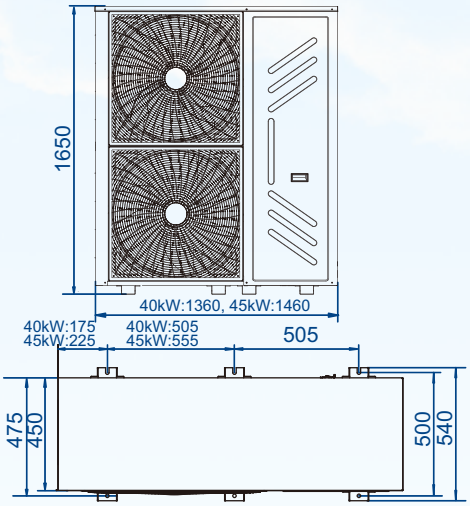
Outdoor Unit Dimensions

Unit: mm

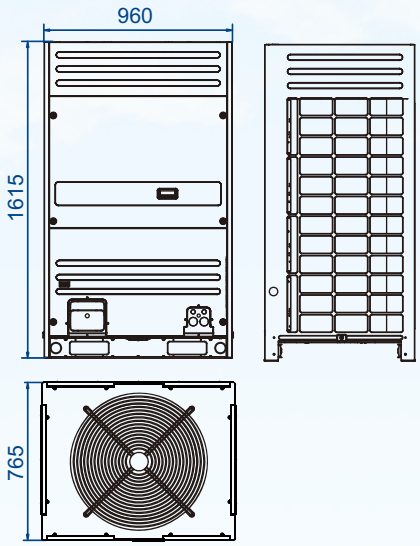
20/22.4/26kW



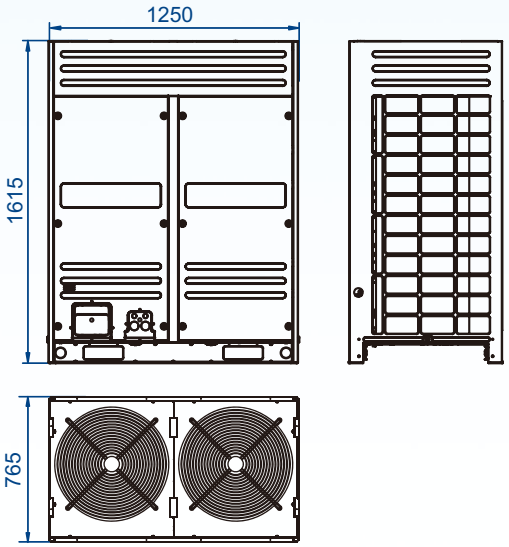
40/45kW



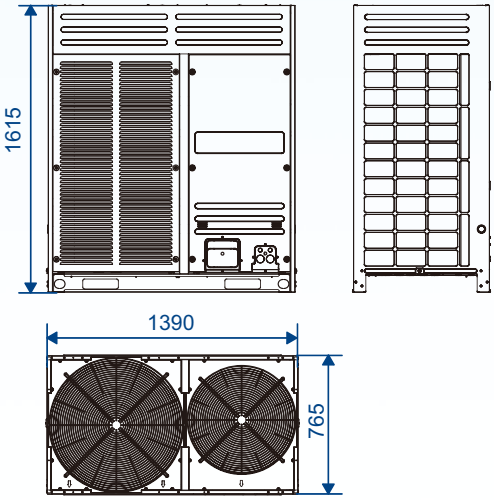
25.2/28kW



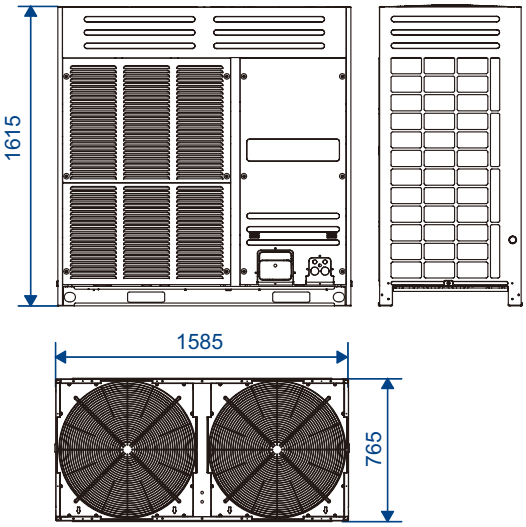
33.5/40/45kW



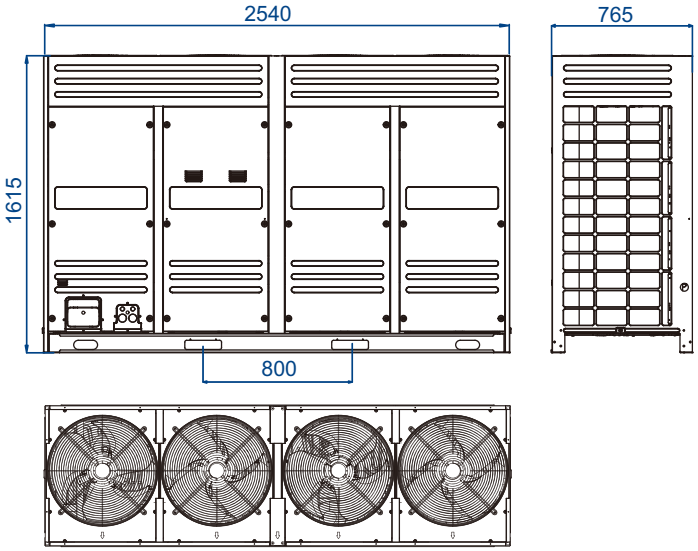
56kW



61.5/67kW



73/78.5/85/90kW



Full DC Inverter Mini VRF

Full DC Inverter Mini VRF with DC inverter compressor and DC fan motor delivers a highly efficient solution for small commercial buildings. Four to nine rooms require only one outdoor unit, and individual control is enabled in each room.

NEW Fashion Design

R-410A

DC Inverter

Features

Wide Application Range

Wide range of outdoor units

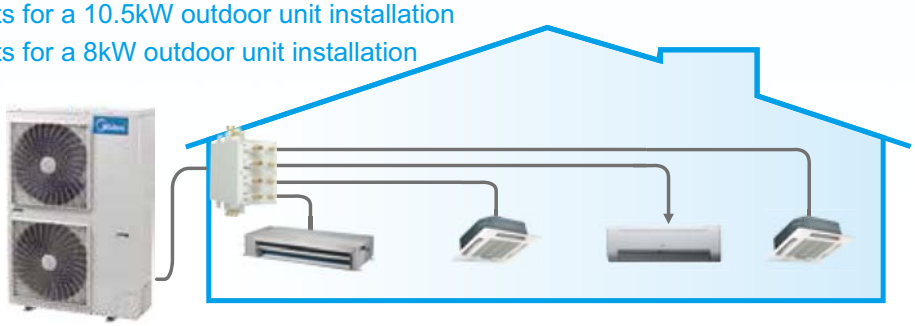
The outdoor units capacity range from 8kW to 18kW which is ideal for small offices, villas, apartment and shops, making it perfect for commercial and residential application.

8/10.5kW	12/14/16/18kW
	

Flexible indoor units connection

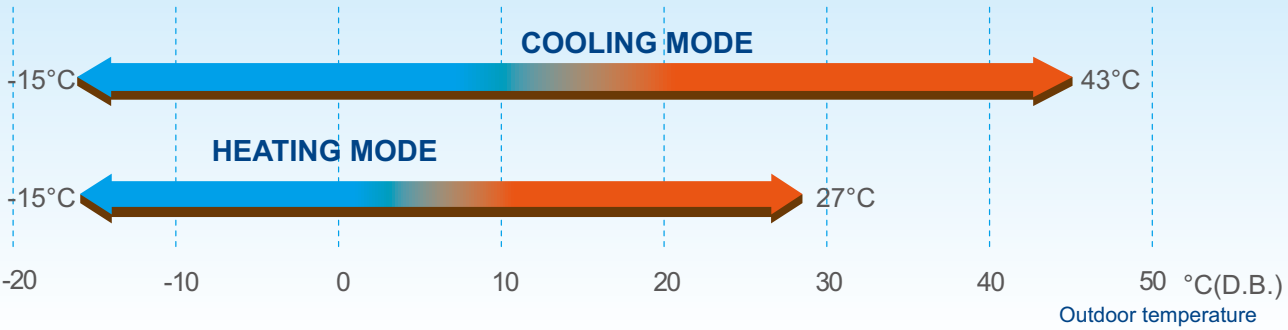
Mini VRF with intelligent control gives you independent zoning control with maximum flexibility.
A single outdoor unit supports up to nine indoor units, freeing up considerable space outside. Use your backyard more wisely with much more space available created by less number of outdoor units.

- Max. 9 indoor units for a 18kW outdoor unit installation
- Max. 7 indoor units for a 16kW outdoor unit installation
- Max. 6 indoor units for a 14kW outdoor unit installation
- Max. 6 indoor units for a 12kW outdoor unit installation
- Max. 5 indoor units for a 10.5kW outdoor unit installation
- Max. 4 indoor units for a 8kW outdoor unit installation



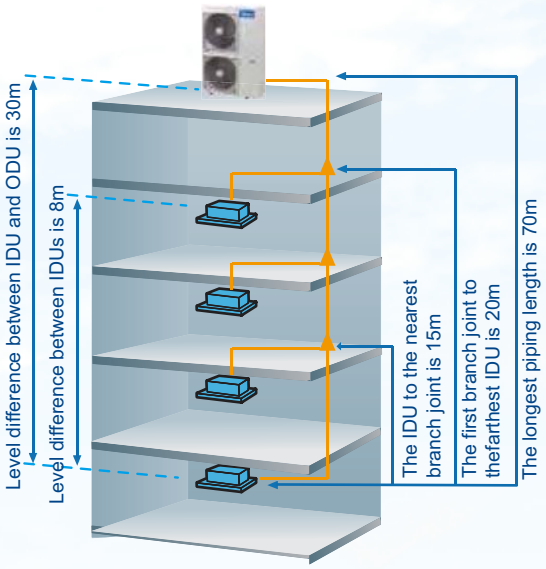
Wide operation temperature range

Mini VRF system operates stably at extreme temperature range from minus 15°C to 43°C.



Flexible piping design

The Mini VRF provides a total piping length possibility of 100m, a maximum height difference between outdoor and indoor units of 30m. The height difference between indoors unit can be up to 8m. These generous allowances facilitate an extensive array of system designs.



			Permitted value (m)	
			8/10.5kW	12/14/16/18kW
Piping length	Actual total piping length*1		100	100
	Longest piping	Actual length	45	60
		Equivalent length	50	70
	Equivalent piping length from the farthest IDU to the first indoor branch joint		20	20
Level difference	Level difference between indoor and outdoor units	Outdoor unit up	30	30
		Outdoor unit down	20	20
	Level difference between indoor units		8	8

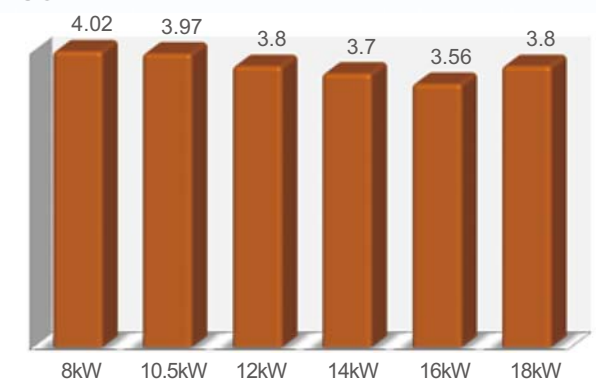
*1: Total pipe length is equal to all the liquid pipe or all the gas pipe length.

High Efficiency

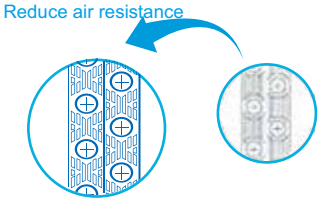
High COP and EER values

EER

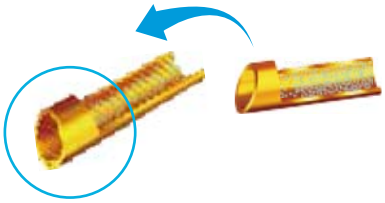
COP



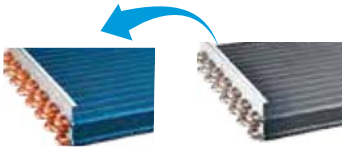
High performance heat exchanger



New design Original design



High efficiency inner-threaded pipe, enhance heat transfer.

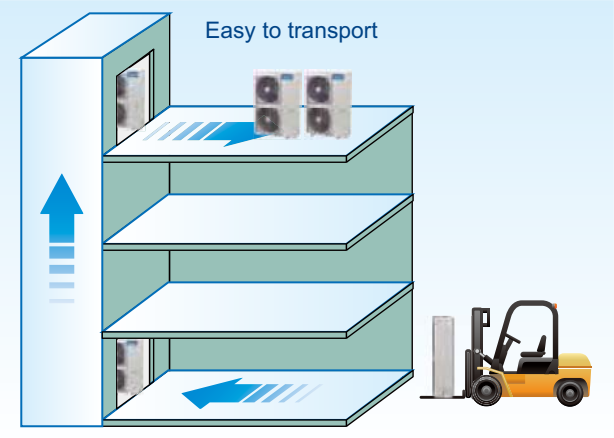


Hydrophilic fins + inner-threaded pipes

- The new designed window fins enlarge the heat-exchanging area , decrease the air resistance, save more power and enhance heat exchange performance.
- Hydrophilic film fins and inner-threaded copper pipes optimize heat exchange efficiency.
- The specially coated blue fins enhance durability and protect against corrosion from air, water and other corrosive agents, assures a longer coil service life.

Easier Installation and Service

Easy installation



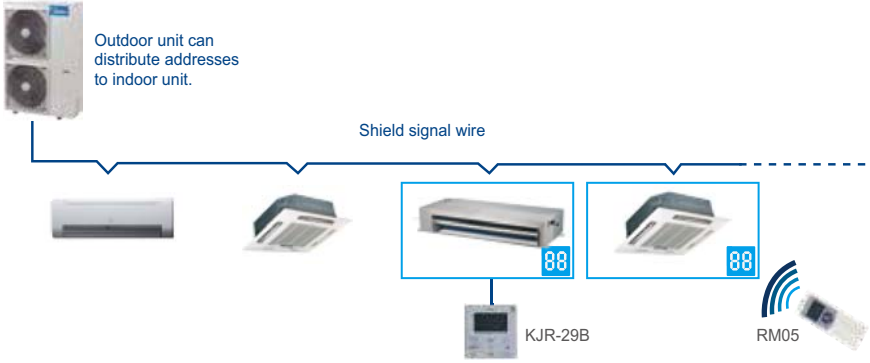
Easy installation: No special area is required for outdoor units.
Easy transportaion: All outdoor units can be transported by elevator, which greatly simplifies installation and reduces time and labor.
The Mini VRF indoor and outdoor units are almost as easy to install as residential air conditioning 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.

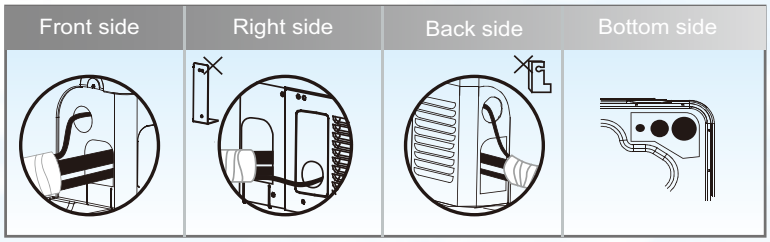
Auto addressing

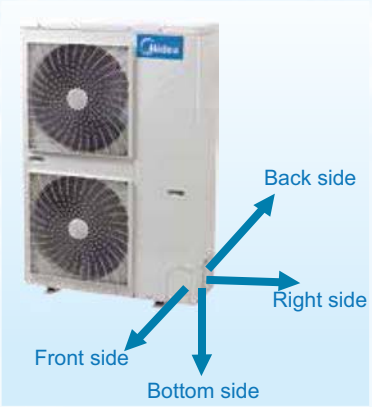
Addresses of indoor units can be set automatically by outdoor units.
Wireless controller can inquire and modify every indoor units address.



More convenience in installation

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





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.

Two sets of pipe size converter are packed with branch box to transfer the pipe size from Φ6.35mm to Φ9.53mm and from Φ12.7mm to Φ15.9mm.

Low noise

The branch pipe is linear expansion design regulates the flow of refrigerant and reduces the noise. By locating the branch box in the ceiling or outside, noise generated by the branch box can be kept clear of living spaces, thus makes noise level to a minimum.

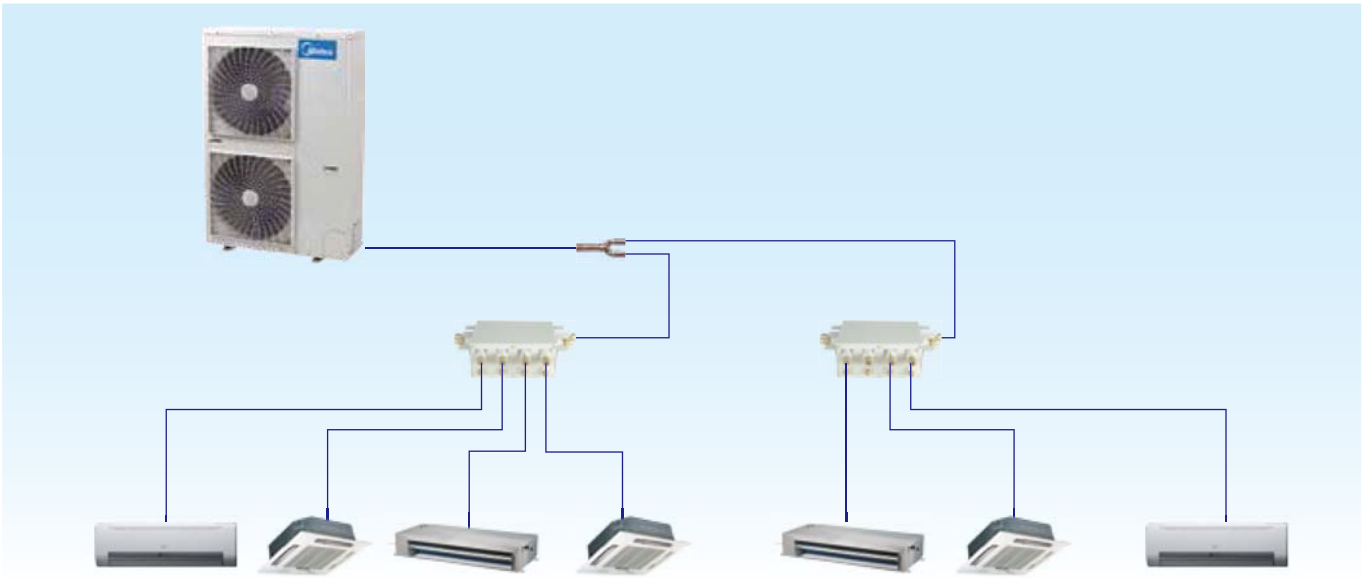
Brazing-free quick installation

All the piping leading to and from the branch box is connected using screw joints,which can be installed quickly and easily.

Indoor installation

The branch box can be installed in the ceiling rather than outside. Removing the side and bottom covers provides easy access for maintaining inner components such as circuit boards.

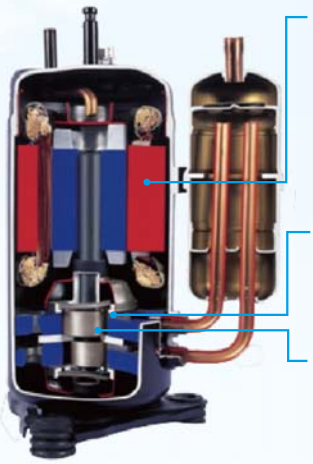
New piping connection design



Advanced Technologies

Full DC inverter technology

At the heart of our system is a highly intelligent inverter driven compressor. This advanced technology enables the output of the outdoor unit to be modulated by the cooling or heating demands of the zone that it controls. This advanced system ensures precise temperature regulation and highly efficient energy usage, making a significant contribution to the limiting the impact on the environment.



Compressor
(Twin Rotary) structure

Highly Efficient DC Motor:

- Creative motor core design
- High density neodymium magnet
- Concentrated type stator
-Wider operating frequency range

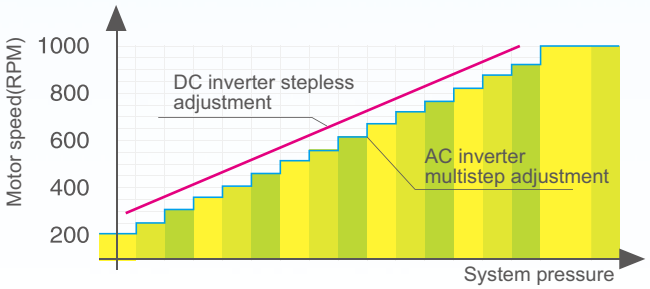
Better balance and Extremely Low Vibration:

- Twin eccentric cams
- 2 balance weights

Highly Stable Moving Parts:

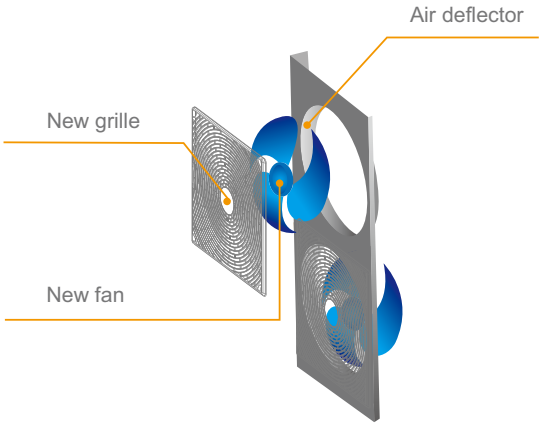
- Optimal material matching rollers and vanes
-Optimize compressor drive technology
- Highly robust bearings
-Compact structure

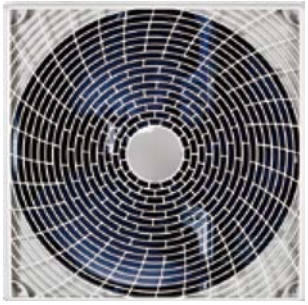
High efficiency DC fan motor saved power up to 50%.



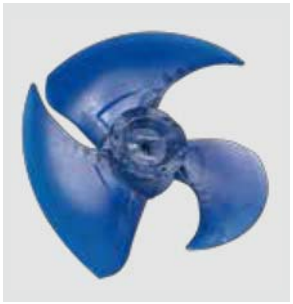
Noise reducing design

Optimally designed fan shape and air discharge grille increases air volume and reduces running noise.





Newly Designed Fan Guard



Powerful Large Propeller

Outdoor Unit Specifications

Mini VRF

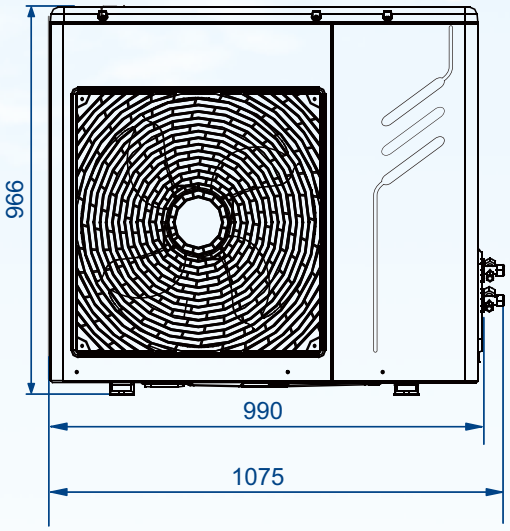
Model			MDV-V80W/DN1	MDV-V105W/DN1	MDV-V120W/D*N1	MDV-V140W/D*N1	MDV-V160W/D*N1	MDV-V180W/D*N1
Power supply		V/Ph/Hz	220-240/1/50		220-240/1/50 380-415/3/50			
Cooling	Capacity	kW	8	10.5	12.3	14	15.5	17.5
		RT	2.3	2.9	3.4	3.9	4.3	5.0
	Input	kW	2.05	2.68	3.25	3.95	4.52	5.30
	EER	kW/kW	3.90	3.92	3.78	3.54	3.43	3.30
Heating	Capacity	kW	9	11.5	13.2	15.4	17.0	19.0
		RT	2.6	3.2	3.7	4.3	4.8	5.4
	Input	kW	2.24	2.90	3.47	4.16	4.77	5.00
	COP	kW/kW	4.02	3.97	3.80	3.70	3.56	3.80
Connectable indoor unit	Total capacity	%	45-130	45-130	45-130	45-130	45-130	45-130
	Max. quantity		4	5	6	6	7	9
Sound pressure level		dB(A)	56	57	57	57	57	59
Pipe connections	Liquid pipe	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	Gas pipe	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ19.1	Φ19.1
Fan motor	Type		DC	DC	DC	DC	DC	DC
	Quantity		1	1	2	2	2	2
	Air flow rate	m^3/h	5,500	5,500	6,000	6,000	6,000	6,800
	Motor output	W	170	170	85x2	85x2	85x2	85x2
Rotary compressor	Quantity		1	1	1	1	1	1
	Capacity	kW	7	7	10	10	14	14
	Crankcase heater	W	25	25	25	25	25	25
	Oil type		FV50S	FV50S	FV50S	FV50S	FV50S	FV50S
	Oil charge	ml	670+200	670+200	870+630	870+630	1400+250	1400+250
Refrigerant	Type		R410A	R410A	R410A	R410A	R410A	R410A
	Factory charging	kg	2.8	2.95	3.3	3.9	3.9	4.5
Design pressure (High/Low)		MPa	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6
Net dimension (W×H×D)		mm	1,075×966×396		900×1,327×400			
Packing size (W×H×D)		mm	1,120×1,100×435		1,030×1,456×435			
Net weight		kg	75.5	75.5	95	95	100/102	107
Gross weight (220V/380V)		kg	85.5	85.5	106	106	111/113	118
Operating temperature range	Cooling	°C	-15~43					
	Heating	°C	-15~27					

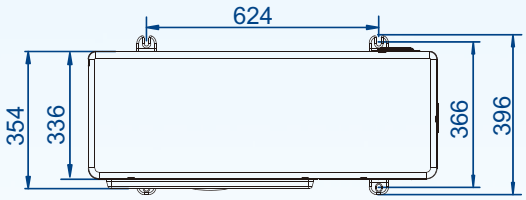
Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB.
Heating: Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB.
Piping length: Interconnecting piping length is 5m, level difference is zero.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1m above the floor.
*: When the * is omit, the model stands for 220-240V/1ph/50Hz unit.
When the * is R, the model stands for 380-415V/3ph/50Hz unit.

Outdoor Unit Dimensions

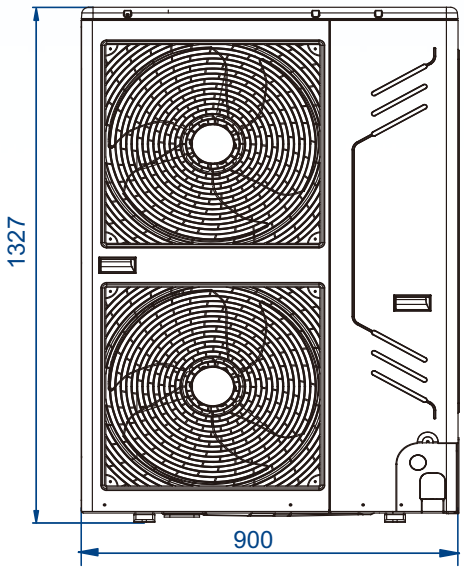
Unit: mm

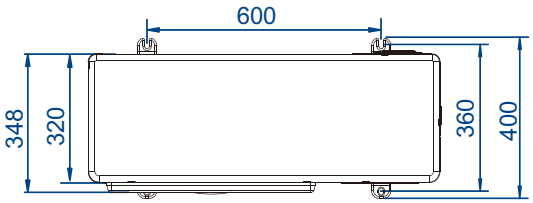
8/10.5kW





12/14/16/18kW





Indoor Units Lineup

Indoor Units Lineup

- One-way Cassette
- Two-way Cassette
- Compact Four-way Cassette
- Four-way Cassette
- Low Static Pressure Duct
- Concealed Duct Unit (A5 Type)
- High Static Pressure Duct
- Ceiling & Floor
- Wall-mounted
- Floor Standing
- Console
- Fresh Air Processing Unit

Type	kW	1.5	1.8	2.2	2.8	3.6	4.5	5.6	7.1	8.0
One-way Cassette			●	●	●	●				
							●	●		
Two-way Cassette				●	●	●	●	●	●	
Compact Four-way Cassette		●		●	●	●	●			
Four-way Cassette					●	●	●	●	●	●
Low Static Pressure Duct			●	●	●	●	●	●	●	
Concealed Duct Unit (A5 Type)		●		●	●	●	●	●	●	
										●
High Static Pressure Duct									●	●
										
										
										
Ceiling & Floor						●	●	●	●	●
Wall-mounted		●		●	●	●	●	●		
				●	●	●	●	●		
									●	●
Floor Standing				●	●	●	●	●	●	●
Console				●	●	●	●			
Fresh Air Processing Unit										
										

More than 100 models are available to meet varied customer requirements,1.5kW model is only available for MINI VRF system.

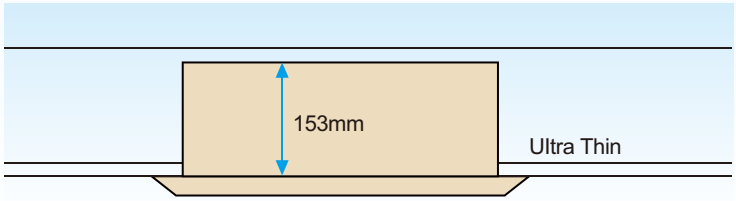
	9.0	10.0	11.2	12.5	14.0	16.0	20.0	25.0	28.0	40.0	45.0	56.0
	●	●	●		●							
	●		●		●							
	●		●									
					●	●						
							●	●	●			
										●	●	●
	●		●		●	●						
	●											
				●	●							
							●	●	●			

One-way Cassette

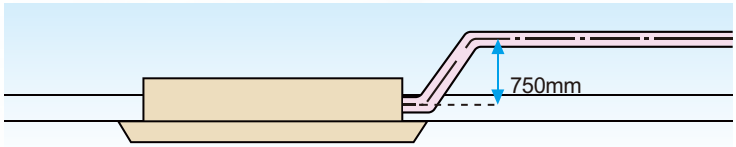
- Auto Restart
- Fresh Air
- Auto Addressing
- Cleanable Panel
- Follow Me
- Anti-Cold Air Function
- LED Display
- Built-in Drain Pump

Only 153mm thickness

Compact design,ultra slim body with a minimum thickness of 153mm for model 18-36,especially suitable for narrow ceiling , such as in lobbies and small meeting rooms.

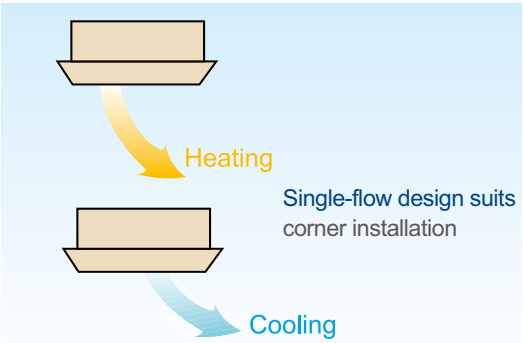


Standard built-in drain pump with 750mm pump head.



Auto swing

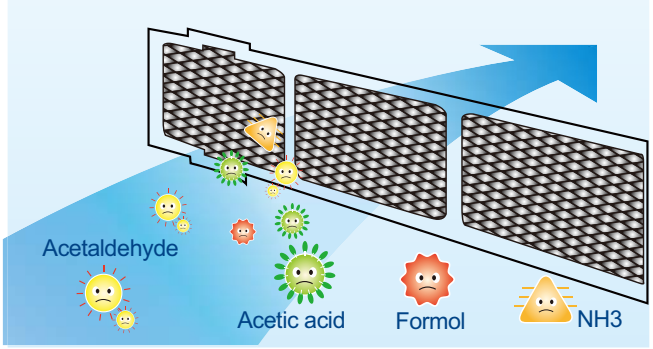
Auto swing mechanism guarantees even airflow distribution and a better room temperature balance.



Fresh air, improved air quality

Reserved fresh air intake port for high quality air creates a comfortable and healthy environment.

Special enzyme sterilization and filtering technologies filter bacteria, smog, and pollen. Provide a clean, healthy and natural air supply.



Model			MDV-D18Q1 /N1-D	MDV-D22Q1 /N1-D	MDV-D28Q1 /N1-D	MDV-D36Q1 /N1-D	MDV-D45Q1 /N1-C	MDV-D56Q1 /N1-C
Power supply			1-phase,220-240V,50Hz					
Cooling capacity		kW	1.8	2.2	2.8	3.6	4.5	5.6
		kcal/h	1500	1900	2400	3100	3900	4800
		Btu/h	6100	7500	9600	12300	15400	19100
Heating capacity		kW	2.2	2.6	3.2	4	5	6.3
		kcal/h	1900	2200	2800	3400	4300	5400
		Btu/h	7500	8900	10900	13600	17100	21500
Rated input	Cooling	W	41	41	41	41	80	85
	Heating		41	41	41	41	80	85
Rated current	Cooling	A	0.24	0.24	0.25	0.25	0.37	0.39
	Heating		0.24	0.24	0.25	0.25	0.37	0.39
Airflow rate(H/M/L)		m^3/h	523/404/275	523/404/275	573/456/315	573/456/315	704/630/503	860/810/702
		CFM	308/238/162	308/238/162	337/268/185	337/268/185	414/370/296	506/476/413
Sound pressure level(H/M/L)		dB(A)	37/34/30	38/34/30	39/37/34	40/38/34	41/39/35	42/40/36
Refrigerant		Type	R410A					
		Control method	EXV					
Indoor Unit	Net dim.(W×H×D)	mm	1054×169×425				1147×200×640	
	Gross dim.(W×H×D)		1155×245×490				1380×265×775	
	Net/Gross	kg	12.5/16		13/16.5		31.5/37.2	
Panel	Net dim.(W×H×D)	mm	1180×36.5×465		1180×36.5×465		1425×10×755	
	Gross dim.(W×H×D)		1232×107×517		1232×107×517		1500×110×870	
	Net/Gross	kg	3.5/5.2		3.5/5.2		9/12	
Piping connections	L(flare)	mm	Φ6.35		Φ6.35		Φ6.35	Φ9.53
	G(flare)	mm	Φ12.7		Φ12.7		Φ12.7	Φ15.9
	Drain piping	mm	OD Φ25		OD Φ25		OD Φ25	
Standard Controller			Wireless remote controller RM05/BG(T)E-A/E)					

Notes:
1. Nominal cooling capacities are based on the following conditions: return air temperature. : 27°CDB,19°CWB,outdoor temperature.:35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature.: 20°CDB,outdoor temperature.: 7°CDB, 6°CWB,equivalent ref. Piping: 8m(horizontal)
3. Sound level is measured at 1.4m below the unit.

Two-way Cassette

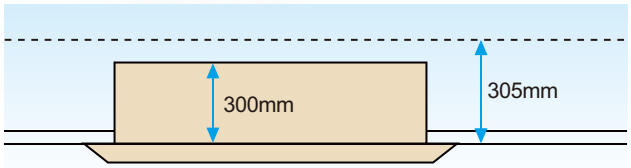
- Auto Restart
- Fresh Air
- Auto Addressing
- Cleanable Panel
- Follow Me
- Anti-Cold Air Function
- LED Display
- Built-in Drain Pump

Quiet operation

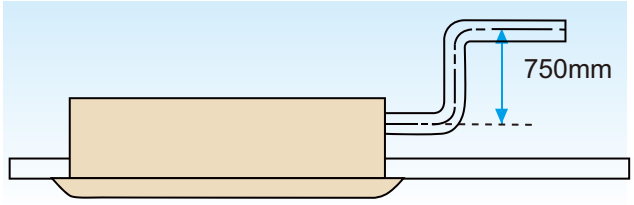
Optimized airflow duct with low resistance greatly reduces noise, minimum down to 24dB(A).

Stylish design and slim body

Thanks to the stylish appearance and slim body, the unit suits any room's decor and ambience. At only 300mm high, the unit requires only a small suspended ceiling space. Installation has no height limitations, which makes overall design features much more flexible.



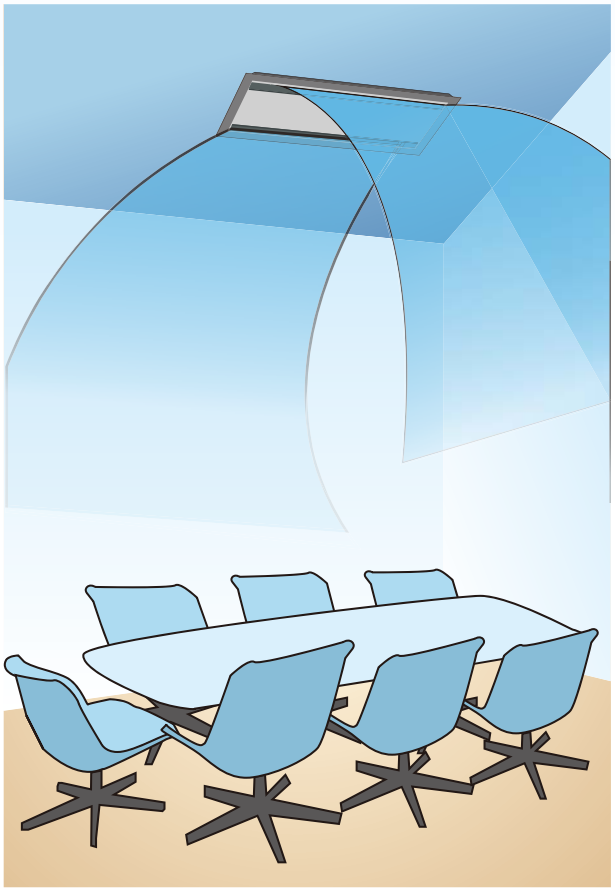
Standard built-in drain pump with 750mm pump head (higher pump head can be customized).



Flat-type suction grille design greatly simplifies maintenance work.

High airflow

High airflow for high ceiling application guarantees comfort in large space. It makes every person in the room get even distribution of airflow and temperature.



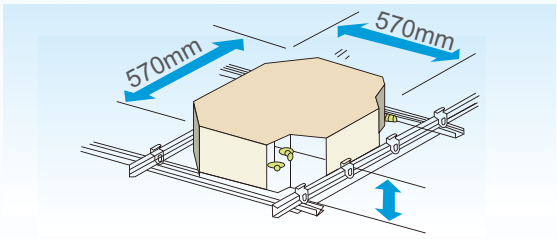
Model			MDV-D22Q2/N1	MDV-D28Q2/N1	MDV-D36Q2/N1	MDV-D45Q2/N1	MDV-D56Q2/N1	MDV-D71Q2/N1
Power supply			1-phase, 220-240V, 50Hz					
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1
		kcal/h	1,900	2,400	3,100	3,900	4,800	6,100
		Btu/h	7,500	9,600	12,300	15,400	19,100	24,200
Heating capacity		kW	2.6	3.2	4.0	5.0	6.3	8.0
		kcal/h	2,200	2,800	3,400	4,300	5,400	6,900
		Btu/h	8,900	10,900	13,600	17,100	21,500	27,300
Power input	Cooling	W	57	57	60	92	108	154
	Heating		57	57	60	92	108	154
Rated current	Cooling	A	0.35	0.45	0.45	0.55	0.55	0.75
	Heating		0.35	0.45	0.45	0.55	0.55	0.75
Airflow rate(H/M/L)		m^3/h	654/530/410	654/530/410	725/591/458	850/670/550	980/800/670	1,200/1,000/770
		CFM	385/312/241	385/312/241	427/348/270	500/394/324	577/471/394	706/589/453
Sound pressure level(H/M/L)		dB(A)	33/29/24	36/32/29	36/32/29	39/35/30	39/35/30	44/40/34
Refrigerant		Type	R410A					
		Control method	EXV					
Body	Net dim.(W×H×D)	mm	1,172×299×591	1,172×299×591	1,172×299×591	1,172×299×591	1,172×299×591	1,172×299×591
	Gross dim.(W×H×D)		1,355×400×675	1,355×400×675	1,355×400×675	1,355×400×675	1,355×400×675	1,355×400×675
	Net/gross	kg	34/42.5	34/42.5	34/42.5	36/44.5	36/44.5	36/44.5
Panel	Net dim.(W×H×D)	mm	1,430×53×680	1,430×53×680	1,430×53×680	1,430×53×680	1,430×53×680	1,430×53×680
	Gross dim.(W×H×D)		1,525×130×765	1,525×130×765	1,525×130×765	1,525×130×765	1,525×130×765	1,525×130×765
	Net/gross	kg	10.5/15	10.5/15	10.5/15	10.5/15	10.5/15	10.5/15
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9
	Drain piping	mm	OD Φ32	OD Φ32	OD Φ32	OD Φ32	OD Φ32	OD Φ32
Standard Controller		-	Wireless remote controller(RM05/BG(T)E-A)					

Notes:
1. Nominal cooling capacities are based on the following conditions: return air temperature. : 27°CDB,19°CWB,outdoor temperature.:35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature.: 20°CDB,outdoor temperature.: 7°CDB, 6°CWB,equivalent ref. Piping: 8m(horizontal)
3. Sound level is measured at 1.4m below the unit.

Compact Four-way Cassette

- Auto Restart
- Fresh Air
- Auto Addressing
- Cleanable Panel
- Follow Me
- Anti-Cold Air Function
- Built-in Drain Pump
- LED Display
- Super High Air Flow

Compact design, easy installation

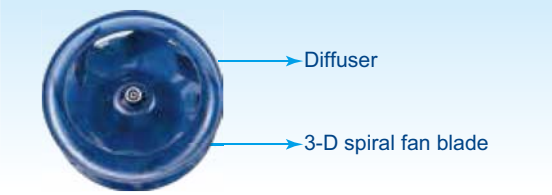


Extremely compact casing suits any room's decor and requires little space for installation on a low ceiling. Due to the compact body and light weight, all models can be installed without a hoist.

Fresh air intake

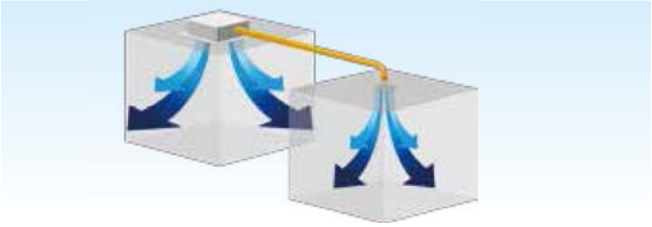
Fresh air can enter through the cassette unit so you can enjoy even fresher air in your room.

Quiet operation, gentle air supply



Streamline plate ensures quiet operation. Advanced 3-D spiral fan design reduces air resistance and operation noise.

Sub duct

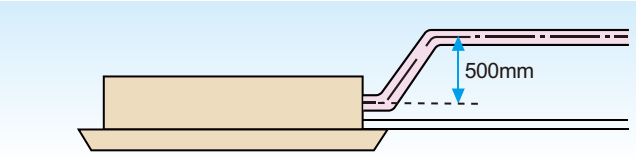


Sub duct enables you to use the same air conditioner unit to cool an additional smaller space nearby.

360°Airflow outlet

360° air outlet provides strong air flow circulation to cool or heat every corner of a room and evenly distribute temperature.

High-lift drain pump



Drain pump with a 500mm pump head is fitted as standard; maximum 600mm pump head is available.

Model			MDV-D15Q4/N1-A3	MDV-D22Q4/N1-A3	MDV-D28Q4/N1-A3	MDV-D36Q4/N1-A3	MDV-D45Q4/N1-A3
Power supply			1-phase,220-240V,50Hz				
Cooling capacity		kW	1.5	2.2	2.8	3.6	4.5
		kcal/h	1300	1900	2400	3100	3900
		Btu/h	5100	7500	9600	12300	15400
Heating capacity		kW	1.7	2.4	3.2	4	5
		kcal/h	1500	2100	2700	3400	4300
		Btu/h	5800	8200	10900	13600	17100
Rated input	Cooling	W	36	50	50	56	56
	Heating		36	50	50	56	56
Rated current	Cooling	A	0.22	0.22	0.22	0.25	0.25
	Heating		0.22	0.22	0.22	0.25	0.25
Airflow rate(SH/H/M/L)		m^3/h	501/435/283/208	522/414/313/238	522/414/313/238	610/521/409/314	610/521/409/314
		CFM	295/256/167/98	307/244/184/140	307/244/184/140	359/307/241/185	359/307/241/185
Sound pressure level(H/M/L)		dB(A)	34.9/32.5/22.5	35.8/33.4/23.4	35.8/33.4/23.4	41.5/35.6/28.8	41.5/35.6/28.8
Refrigerant		Type	R410A				
		Control method	EXV				
Indoor Unit	Net dim.(W×H×D)	mm	570×260×570	570×260×570	570×260×570	570×260×570	570×260×570
	Gross dim.(W×H×D)		675×285×675	675×285×675	675×285×675	675×285×675	675×285×675
	Net/Gross weight	kg	16/19.5	16/20	16/20	18/22	18/22
Panel	Net dim.(W×H×D)	mm	647×50×647	647×50×647	647×50×647	647×50×647	647×50×647
	Gross dim.(W×H×D)		715×123×715	715×123×715	715×123×715	715×123×715	715×123×715
	Net/Gross weight	kg	2.4/4.5	2.4/4.5	2.4/4.5	2.4/4.5	2.4/4.5
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ12.7
	Drain piping	mm	OD Φ25	OD Φ25	OD Φ25	OD Φ25	OD Φ25
Standard Controller			Wireless remote controller (RM05/BG(T)E-A)				

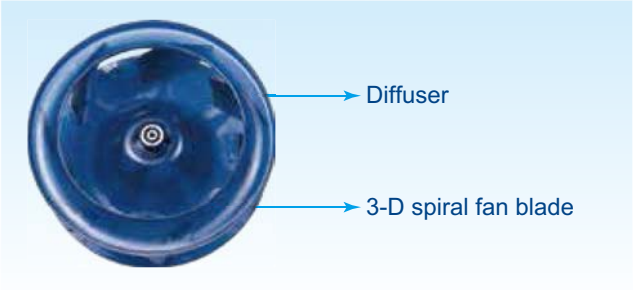
Notes:
1. Nominal cooling capacities are based on the following conditions: return air temperature. : 27°CDB,19°CWB,outdoor temperature.:35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature.: 20°CDB,outdoor temperature.: 7°CDB, 6°CWB,equivalent ref. Piping: 8m(horizontal)
3. Sound level is measured at 1.4m below the unit.

Four-way Cassette

- Auto Restart
- Fresh Air
- Auto Addressing
- Cleanable Panel
- Follow Me
- Anti-Cold Air Function
- Built-in Drain Pump
- LED Display
- Super High Air Flow

Quiet operation, gentle air supply

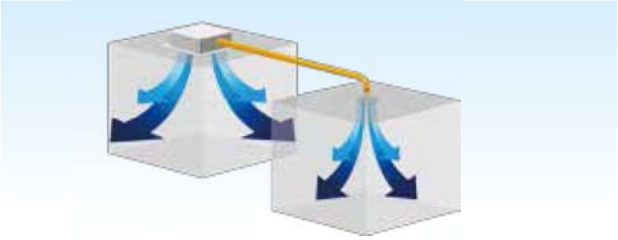
- Streamline plate ensures quiet operation.
- Advanced 3-D spiral fan design reduces air resistance and operation noise.



Fresh air intake

Fresh air can enter through the cassette unit so you can enjoy even fresher air in your room.

Sub duct

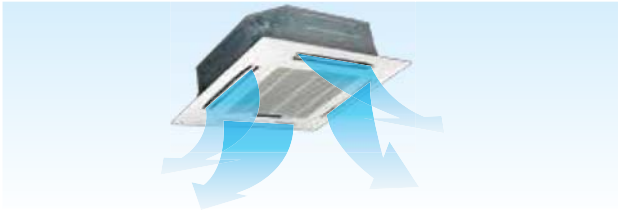


Sub duct enables you to use the same air conditioner unit to cool an additional smaller space nearby.

Easy troubleshooting

By adding digital tube on the display board, Error Codes can be displayed directly for troubleshooting.

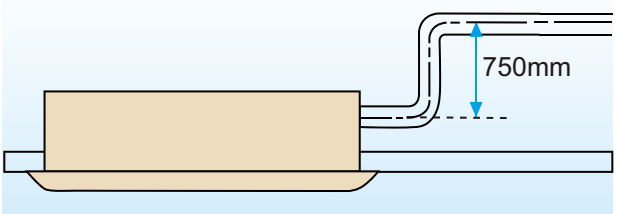
Four-way uniform airflow



Four air discharge ports provide strong air flow circulation to cool or heat every corner of a room and evenly distribute temperature. High airflow mode can maximize the conditioning effect in rooms that are over 3m high.

High-lift drain pump

Drain pump can take condenser water up to 750mm, which simplifies installation of the drain piping system.



Model			MDV-D28Q4/N1-D	MDV-D36Q4/N1-D	MDV-D45Q4/N1-D	MDV-D56Q4/N1-D	MDV-D71Q4/N1-D
Power supply			1-phase, 220-240V, 50Hz				
Cooling capacity		kW	2.8	3.6	4.5	5.6	7.1
		kcal/h	2,400	3,100	3,900	4,800	6,100
		Btu/h	9,600	12,300	15,400	19,100	24,200
Heating capacity		kW	3.2	4.0	5.0	6.3	8.0
		kcal/h	2,800	3,400	4,300	5,400	6,900
		Btu/h	10,900	13,600	17,100	21,500	27,300
Power input	Cooling	W	65	65	75	75	82
	Heating		65	65	75	75	82
Rated current	Cooling	A	0.4	0.4	0.4	0.4	0.5
	Heating		0.4	0.4	0.4	0.4	0.5
Airflow rate(SH/H/M/L)		m^3/h	1,187/847/766/640	1,187/847/766/640	1,121/864/755/658	1,121/864/755/658	1,385/1,157/955/749
		CFM	699/498/450/376	699/498/450/376	660/508/444/387	660/508/444/387	815/680/562/440
Sound pressure level(H/M/L)		dB(A)	42/38/35	42/38/35	42/38/35	42/38/35	45/42/39
Refrigerant		Type	R410A				
		Control method	EXV				
Body	Net dim.(W×H×D)	mm	904×230×840	904×230×840	904×230×840	904×230×840	904×230×840
	Gross dim.(W×H×D)		955×260×955	955×260×955	955×260×955	955×260×955	955×260×955
	Net/gross	kg	24/28	24/28	26/30	26/30	26/30
Panel	Net dim.(W×H×D)	mm	950×54.5×950	950×54.5×950	950×54.5×950	950×54.5×950	950×54.5×950
	Gross dim.(W×H×D)		1035×90×1035	1035×90×1035	1035×90×1035	1035×90×1035	1035×90×1035
	Net/gross	kg	6/9	6/9	6/9	6/9	6/9
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ9.53	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9
	Drain piping	mm	OD Φ32	OD Φ32	OD Φ32	OD Φ32	OD Φ32
Standard Controller		-	Wireless remote controller(RM05/BG(T)E-A)				

Model			MDV-D80Q4/N1-D	MDV-D90Q4/N1-D	MDV-D100Q4/N1-D	MDV-D112Q4/N1-D	MDV-D140Q4/N1-D
Power supply			1-phase, 220-240V, 50Hz				
Cooling capacity		kW	8.0	9.0	10.0	11.2	14.0
		kcal/h	6,900	7,700	8,600	9,600	12,000
		Btu/h	27,300	30,700	34,100	38,200	47,800
Heating capacity		kW	9.0	10.0	11.1	12.5	15.0
		kcal/h	7,700	8,600	9,500	10,800	12,900
		Btu/h	30,700	34,100	37,900	42,700	51,200
Power input	Cooling	W	97	160	160	160	170
	Heating		97	160	160	160	170
Rated current	Cooling	A	0.5	0.7	0.7	0.7	0.8
	Heating		0.5	0.7	0.7	0.7	0.8
Airflow rate(SH/H/M/L)		m^3/h	1,431/1,236/973/729	1,758/1,540/1,300/1,120	1,758/1,540/1,300/1,120	1,758/1,540/1,300/1,120	1,843/1,800/1,500/1,280
		CFM	842/727/572/429	1,035/906/765/659	1,035/906/765/659	1,035/906/765/659	1,085/1,059/883/753
Sound pressure level(H/M/L)		dB(A)	45/42/39	48/45/43	48/45/43	48/45/43	50/47/44
Refrigerant		Type	R410A				
		Control method	EXV				
Body	Net dim.(W×H×D)	mm	904×230×840	904×300×840	904×300×840	904×300×840	904×300×840
	Gross dim.(W×H×D)		955×260×955	955×330×955	955×330×955	955×330×955	955×330×955
	Net/gross	kg	26/30	32/37	32/37	32/37	32/37
Panel	Net dim.(W×H×D)	mm	950×54.5×950	950×54.5×950	950×54.5×950	950×54.5×950	950×54.5×950
	Gross dim.(W×H×D)		1035x90x1035	1035×90×1035	1035×90×1035	1035×90×1035	1035×90×1035
	Net/gross	kg	6/9	6/9	6/9	6/9	6/9
Piping connections	L(flare)	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	G(flare)	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	OD Φ32	OD Φ32	OD Φ32	OD Φ32	OD Φ32
Standard Controller		-	Wireless remote controller(RM05/BG(T)E-A)				

Notes:
1. Nominal cooling capacities are based on the following conditions: return air temperature. : 27°CDB,19°CWB,outdoor temperature.:35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature.: 20°CDB,outdoor temperature.: 7°CDB, 6°CWB,equivalent ref. Piping: 8m(horizontal)
3. Sound level is measured at 1.4m below the unit.

Four-way Cassette - Silent Type

- Auto Restart
- Fresh Air
- Auto Addressing
- Cleanable Panel
- Follow Me
- Anti-Cold Air Function
- Built-in Drain Pump
- LED Display
- Super High Air Flow

Lower operating sound

The new designed fan blade, air deflector and the built-in throttling part make the noise reduced greatly.

The former fan blade

Optimized fan blade

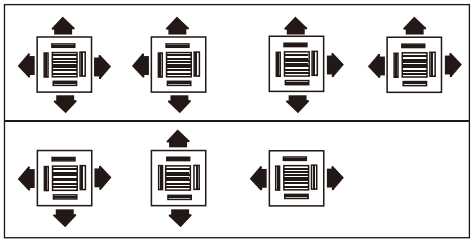
More reliable

- The connection of drainage pan adopts foaming technology which can further improve the connection tightness.
- Capacitor is isolated by a sheet metal box making it safer and even more reliable.

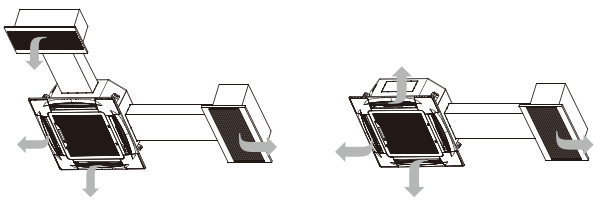
- The high voltage and low voltage electricity wires are separated in electronic control box making the interference decreased greatly.

Flexible air distribution type

- 7 discharge patterns in 2 to 4 directions can be selected to suit the requirements of installation site or the shape of the room.



- Duct connection is possible.



Model			MDV-D28Q4/N1-E	MDV-D36Q4/N1-E	MDV-D45Q4/N1-E	MDV-D56Q4/N1-E	MDV-D71Q4/N1-E
Power supply			1-phase, 220-240V, 50Hz				
Cooling capacity		kW	2.8	3.6	4.5	5.6	7.1
		kcal/h	2,400	3,100	3,900	4,800	6,100
		Btu/h	9,600	12,300	15,400	19,100	24,200
Heating capacity		kW	3.2	4	5	6.3	8
		kcal/h	2,800	3,400	4,300	5,400	6,900
		Btu/h	10,900	13,600	17,100	21,500	27,300
Power input	Cooling	W	80	80	88	88	88
	Heating	W	80	80	88	88	88
Rated current	Cooling	A	0.31	0.31	0.41	0.41	0.41
	Heating	A	0.31	0.31	0.41	0.41	0.41
Airflow rate (SH/H/M/L)		m^3/h	920/764/638//554	920/764/638//554	1090/905/740//651	1090/905/740//651	1140/950/767//663
		CFM	541/450/375/326	541/450/375/326	641/532/435/383	641/532/435/383	670/560/451/390
Sound pressure level (H/M/L)		dB(A)	32/31/30	32/31/30	36/34/33	36/34/33	38/36/35
Refrigerant	Type		R410A				
	Control method		EXV				
Body	Net dim. (W×H×D)	mm	840×230×840				
	Gross dim. (W×H×D)	mm	955×260×955				
	Net/Gross weight	kg	21.5/26.7	21.5/26.7	23.7/28.9	23.7/28.9	23.7/28.9
Panel	Net dim. (W×H×D)	mm	950×54.5×950				
	Gross dim. (W×H×D)	mm	1035×90×1035				
	Net/Gross weight	kg	6/9				
Piping connections	L (flare)	mm	Φ6.35			Φ9.53	
	G (flare)	mm	Φ12.7			Φ15.9	
	Drain piping	mm	Φ32				
Standard controller			Wireless remote controller (RM05/BG(T)E-A)				

Model			MDV-D80Q4/N1-E	MDV-D90Q4/N1-E	MDV-D100Q4/N1-E	MDV-D112Q4/N1-E	MDV-D140Q4/N1-E
Power supply			1-phase, 220-240V, 50Hz				
Cooling capacity		kW	8.0	9.0	10.0	11.2	14.0
		kcal/h	6,900	7,700	8,600	9,600	12,000
		Btu/h	27,300	30,700	34,100	38,200	47,800
Heating capacity		kW	9.0	10.0	11.1	12.5	16.0
		kcal/h	7,700	8,600	9,500	10,800	13,800
		Btu/h	30,700	34,100	37,900	42,700	54,600
Power input	Cooling	W	110	140	165	165	176
	Heating	W	110	140	165	165	176
Rated current	Cooling	A	0.48	0.67	0.72	0.72	0.75
	Heating	A	0.48	0.67	0.72	0.72	0.75
Airflow rate (SH/H/M/L)		m^3/h	1380/1200/1021/789	1598/1332/1129/908	1750/1651/1304/1127	1750/1651/1304/1127	1774/1658/1335/1130
		CFM	812/706/600/464	940/784/664/534	1029/971/767/663	1029/971/767/663	1044/975/785/665
Sound pressure level (H/M/L)		dB(A)	42/39/37	43/39/38	45/42/40	45/42/40	46/41/39
Refrigerant	Type		R410A				
	Control method		EXV				
Body	Net dim. (W×H×D)	mm	840×230×840	840×300×840			
	Gross dim. (W×H×D)	mm	955×260×955	955×330×955			
	Net/Gross weight	kg	23.7/28.9	28.7/34.1	28.7/34.1	28.7/34.1	30.9/36.3
Panel	Net dim. (W×H×D)	mm	950×54.5×950				
	Gross dim. (W×H×D)	mm	1035×90×1035				
	Net/Gross weight	kg	6/9				
Piping connections	L (flare)	mm	Φ9.53				
	G (flare)	mm	Φ15.9				
	Drain piping	mm	Φ32				
Standard controller			Wireless remote controller (RM05/BG(T)E-A)				

Notes:
1. Nominal cooling capacities are based on the following conditions: return air temperature. : 27°CDB,19°CWB,outdoor temperature.:35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature.: 20°CDB,outdoor temperature.: 7°CDB, 6°CWB,equivalent ref. Piping: 8m(horizontal)
3. Sound level is measured at 1.4m below the unit.

Low Static Pressure Duct

- Auto Restart
- Anti-Cold Air Function
- Auto Addressing
- Wireless remote controller
- Follow Me
- Super High Air Flow

Low sound level

Utilizes the centrifugal type blower, provides a minimum noise level of 24dB (A), an excellent choice for hotels and other sound-sensitive places.

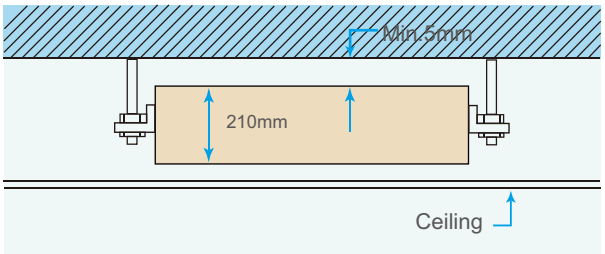
V shape evaporator-- good for heat exchanging

V shape evaporator design enhances heat exchanging efficiency about 22%.

Convenient for installation and maintenance

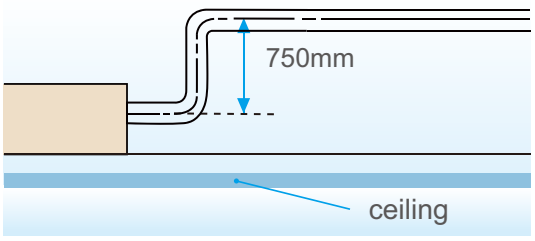
The EXV is fixed inside the indoor unit.

Compact design



Uniform 210mm in height, compact design for easy locate where space ceiling is limited,
The whole body adopts fireproof plastic material, the minimum weight is 14kg.

Options

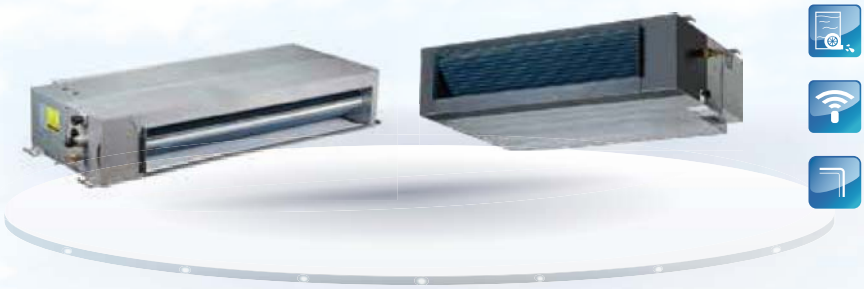


A drain pump with 750mm pumphead is an optional accessory.

Model			MDV-D18T3/N1-C	MDV-D22T3/N1-C	MDV-D28T3/N1-C	MDV-D36T3/N1-C	MDV-D45T3/N1-C	MDV-D56T3/N1-C	MDV-D71T3/N1-C
Power supply			220-240V~1Ph~50Hz						
Cooling capacity		kW	1.8	2.2	2.8	3.6	4.5	5.6	7.1
		kcal/h	1500	1900	2400	3100	3900	4800	6100
		Btu/h	6100	7500	9600	12300	15400	19100	24200
Heating capacity		kW	2.2	2.6	3.2	4	5	6.3	8
		kcal/h	1900	2200	2800	3400	4300	5400	6900
		Btu/h	7500	8900	10900	13600	17100	21500	27300
Rated input	Cooling	W	59	59	59	65	105	105	130
	Heating		59	59	59	65	105	105	130
Rated current	Cooling	A	0.31	0.31	0.31	0.36	0.36	0.36	0.5
	Heating		0.31	0.31	0.31	0.36	0.36	0.36	0.5
Airflow rate(SH/H/M/L)		m³/h	606(30pa)/578/512/409			646(30pa) /617/551/441	803(pa)/824/690/609		1207(30pa) /1060/970/811
		CFM	357/340/301/241			380/363/324/260	473/485/406/358		710/624/571/477
External Static Pressure		Pa	10(10~30)	10(10~30)	10(10~30)	10(10~30)	10(10~30)	10(10~30)	10(10~30)
Sound pressure level (H/M/L)		dB(A)	35/27/24	35/27/24	35/27/24	38/32/28	39/32/29	39/32/29	41/33/30
Refrigerant type		Type	R410A	R410A	R410A	R410A	R410A	R410A	R410A
		Control type	EXV	EXV	EXV	EXV	EXV	EXV	EXV
Indoor unit	Dimension (W×H×D)	mm	740×210×470	740×210×470	740×210×470	740×210×470	960×210×470	960×210×470	1180×210×470
	Packing (W×H×D)	mm	910×230×510	910×230×510	910×230×510	910×230×510	1130×230×510	1130×230×510	1350×230×510
	Net(Gross) weight	kg	14/17.5	14/17.5	14/17.5	14/17.5	17.5/22	17.5/22	21/26.5
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9
	Drain piping	mm	Φ25	Φ25	Φ25	Φ25	Φ25	Φ25	Φ25
Standard Controller			Wireless remote controller (RM05/BG(T)E-A)						

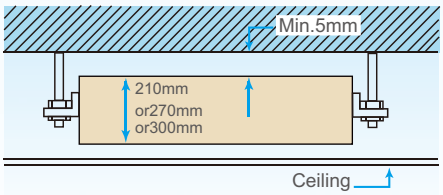
Notes:
1. Nominal cooling capacities are based on the following conditions: return air temperature. : 27°CDB,19°CWB,outdoor temperature.:35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature.: 20°CDB,outdoor temperature.: 7°CDB, 6°CWB,equivalent ref. Piping: 8m(horizontal)
3. Sound level is measured at 1.4m below the air outlet.
External static pressure is based on high speed indoor air flow.

Concealed Duct Unit (A5 Type)



- Auto Restart
- Fresh Air
- Follow Me
- Anti-Cold Air Function
- Built-in Drain Pump
- Wired Controller
- Auto Addressing
- Super High Air Flow
- Connectable To Duct

Compact size



Only 210mm (15~71 models) or 270mm (80 to 112 models) or 300mm (140 model) in height.

External static pressure

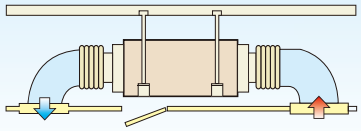
Four speed fan motor (Super high speed is optional)

Change the wiring connection from 'SH' to 'H' to change the ESP.

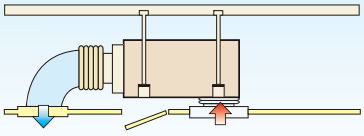
Convenient installation

The EXV is fixed inside of the indoor unit.
Standard filter is housed in an aluminum frame, which is removable from the bottom in the downward direction.
Suction chamber is included as standard equipment.
Fresh air hole, air inlet/outlet flange are standard for easy duct connection.
A rear air inlet is standard and an inlet at the bottom is optional. Both use the same connectable duct.

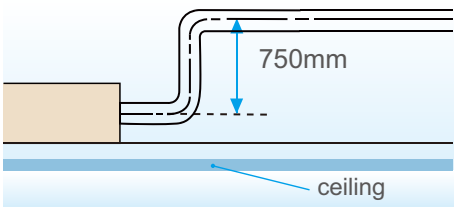
Air intake from back



Air intake from below



drain pump as standard



Flexible control and easy maintenance

Standard wired remote controller KJR-29B1/BK-E.
The electrical control box can be removed 1m away from the unit for easy maintenance access. Customers need to request this service in advance for it is done at Midea CAC factory.
Standard functional ports are included such as Remote On/Off Dry contact switch and Alarm signal output (220V).

Model			MDV-D15T2 /N1-DA5	MDV-D22T2 /N1-DA5	MDV-D28T2 /N1-DA5	MDV-D36T2 /N1-DA5	MDV-D45T2 /N1-DA5	MDV-D56T2 /N1-DA5
Power supply				1-phase,220-240V,50Hz				
Cooling capacity		kW	1.5	2.2	2.8	3.6	4.5	5.6
		kcal/h	1290	1900	2400	3100	3900	4800
		Btu/h	5100	7500	9600	12300	15400	19100
Heating capacity		kW	1.7	2.6	3.2	4	5	6.3
		kcal/h	1500	2200	2800	3400	4300	5400
		Btu/h	5800	8900	10900	13600	17100	21500
Rated input	Cooling	W	56	57	57	61	98	103
	Heating		56	57	57	61	98	103
Rated current	Cooling	A	0.31	0.31	0.31	0.33	0.36	0.36
	Heating		0.31	0.31	0.31	0.33	0.36	0.36
Airflow rate(SH/H/M/L)		m^3/h	588(30pa)/538/456/375			614(30pa)/597 /514/429	763(30pa)/811 /684/575	763(30pa)/811 /684/575
		CFM	346/317/268/221			361/351/303/253	449/477/403/338	449/477/403/338
ESP(external static pressure)		Pa	10(10-30)	10(10-30)	10(10-30)	10(10-30)	10(10-30)	10(10-30)
Sound pressure level(H/M/L)		dB(A)	35.8/34.6/31.4	36/35/32	37/35/32	38.6/37.5/33.8	39/37.9/34	39/37.9/34
Refrigerant		Type	R410A					
		Control method	EXV					
Indoor Unit	Net dim.(W×H×D)	mm	740×210×500	740×210×500	740×210×500	740×210×500	960×210×500	960×210×500
	Gross dim.(W×H×D)		870×285×525	870×285×525	870×285×525	870×285×525	1,115×285×525	1,115×285×525
	NetGross	kg	17.5/20.5	17.5/20	17.5/20	17.5/20	22.5/26	22.5/26
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9
	Drain piping	mm	OD Φ25	OD Φ25	OD Φ25	OD Φ25	OD Φ25	OD Φ25
Standard Controller			Wired controller KJR-29B1/BK-E (6 meters connection wire)					

Model			MDV-D71T2/N1-DA5	MDV-D80T2/N1-BA5	MDV-D90T2/N1-BA5	MDV-D112T2/N1-BA5	MDV-D140T2/N1-BA5
Power Supply			220～240V-1Ph-50Hz				
Capacity	Cooling	kW	7.1	8	9	11.2	14
		kcal/h	6,100	6,900	7,700	9,600	12,000
		btu/h	24,200	27,300	30,700	38,200	47,800
	Heating	kW	8	9	10	12.5	15.5
		kcal/h	6,900	7,700	8,600	10,800	13,300
		Btu/h	27,300	30,700	34,100	42,700	52,900
Power (Cooling)	Input	W	105	198	200	313	274
	Rated Current	A	0.47	1.0	1.0	1.8	1.55
Power (Heating)	Input	W	105	198	200	313	274
	Rated Current	A	0.47	1.0	1.0	1.8	1.55
Indoor air flow (SH/H/M/L)		m^3/h	1127(30pa)/1029/934/781	1388(50pa)/1345/1165/1013	1388(50pa)/1345/1165/1013	1851(80pa)/1800/1556/1400	1745(100pa)/1905/1636/1400
		CFM	663/606/550/460	817/792/686/596	817/792/686/596	1,089/1,059/916/824	1,027/1121/963/824
ESP (external static pressure)		Pa	10(10~30)	20(10~50)	20(10~50)	40(10~80)	40(10~100)
Sound pressure level(H/M/L)		dB(A)	41.4/39/35	45.4/39.8/37	45.4/39.8/37	48.0 /41.9/38	47.7/43.2/39.0
Refrigerant	Type		R410A				
	Control method		EXV				
Net dimension	W×H×D	mm	1,180×210×500	1,180×270×775	1,230×270×775	1,230×270×775	1,290×300×865
Packing dimension	W×H×D	mm	1,335×285×525	1,355×350×795	1,355×350×795	1,355×350×795	1,400×375×925
Net/Gross Weight		kg	28/31.5	38/46.5	40/48	40/48	49/58
Piping Connections	L(flare)	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	G(Flare)	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	OD Φ25	OD Φ25	OD Φ25	OD Φ25	OD Φ25
Standard Controller		-	Wired controller KJR-29B1/BK-E (6 meters connection wire)				

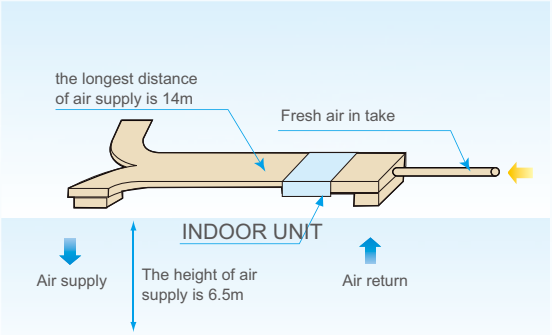
Notes:
1. Nominal cooling capacities are based on the following conditions: return air temperature. : 27°CDB,19°CWB,outdoor temperature.:35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature.: 20°CDB,outdoor temperature.: 7°CDB, 6°CWB,equivalent ref. Piping: 8m(horizontal)
3. Sound level is measured at 1.4m below the air outlet.
External static pressure is based on high speed indoor air flow.

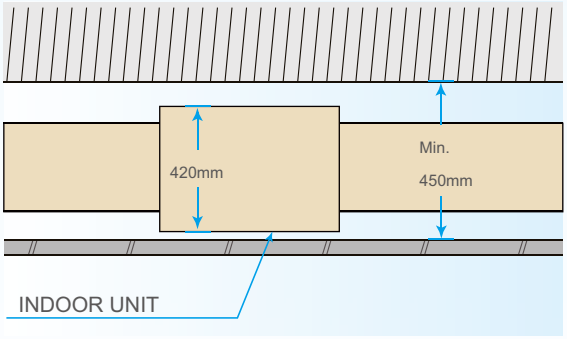
High Static Pressure Duct

- Auto Restart
- Anti-Cold Air Function
- Auto Addressing
- Connectable To Duct
- Follow Me
- Wired Controller

Flexible duct design

External static pressure can be up to 196Pa (models 71 to 160) or 280Pa (models 200 to 560).





The maximum distance for air supply is about 14m at height of 6.5m.
With a 420mm (models 71 to 160) thick body, the minimum distance required above the ceiling is 450mm.

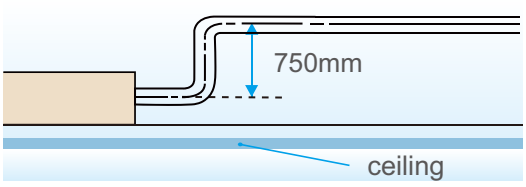
Convenient installation

The EXV is fixed inside the indoor unit (models 70-160), requires no extra connection.
Standard filter is housed in an aluminum frame, which is removable from the bottom in the downward direction.
Flange for air in/outlet duct connection is standard.

Flexible control and convenient for maintenance

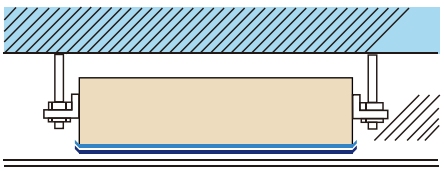
Wired remote controller KJR-29B1/BK-E is as standard, and wireless remote controller RM05/BG(T)E-A is as an option.
The display board is connected to the E-box in factory, easier troubleshooting by LED display.
Easy access filters both at the rear & bottom
Standard functional port such as remote on/off dry contact.

Option



Drain pump with 750mm pump head is optional (models 71 to 160)

Double-skin drainage pan



Double-skin drainage pan provide double protection for ceilings (models 71 to 160 and models 400 to 560)

Model			MDV-D71T1/N1-B	MDV-D80T1/N1-B	MDV-D90T1/N1-B	MDV-D112T1/N1-B	MDV-D140T1/N1-B	MDV-D160T1/N1-B
Power Supply			220～240V-1Ph-50Hz					
Capacity	Cooling	kW	7.1	8	9	11.2	14	16
		kcal/h	6,100	6,900	7,700	9,600	12,000	13,800
		Btu/h	24,200	27,300	30,700	38,200	47,800	54,600
	Heating	kW	8	9	10	12.5	16	17
		kcal/h	6,900	7,700	8,600	10,800	13,800	14,600
		Btu/h	27,300	30,700	34,100	42,700	54,600	58,000
Power (Cooling)	Input	W	263	263	423	524	724	940
	Rated Current	A	1.23	1.23	1.87	2.3	2.85	4.77
Power (Heating)	Input	W	263	263	423	524	724	940
	Rated Current	A	1.23	1.23	1.87	2.3	2.85	4.77
Indoor air flow (H/M/L)		m^3/h	1,443/1,361/1,218	1,416/1,338/1,220	1,951/1,741/1,518	2,116/1,936/1,520	3,000/2,618/2,226	3,620/3,044/2,744
		CFM	849/801/717	883/788/718	1,148/1,025/893	1,246/1,140/895	1,766/1,541/1,310	2,131/1,792/1,615
ESP (external static pressure)		Pa	25(25~ 196)	37(37~ 196)	37(37~ 196)	50(50~ 196)	50(50~ 196)	50(50~ 196)
Sound pressure level(H/M/L)		dB(A)	48/46/44	48/46/44.5	52/49/47	52/49/47	53/50/48	54/52/50
Refrigerant	Type		R410A					
	Control method		EXV					
Net dimension	W×H×D	mm	952×420×690	952×420×690	952×420×690	952×420×690	1,300×420×691	1,300×420×691
Packing dimension	W×H×D	mm	1,090×440×768	1,090×440×768	1,090×440×768	1,090×440×768	1,436×450×768	1,436×450×768
Net/Gross Weight		kg	45/50	45/50	46.5/52.4	50.6/56	68/70	70/77.5
Piping Connections	L(flare)	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	G(flare)	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	ODΦ32	ODΦ32	ODΦ32	ODΦ32	ODΦ32	ODΦ32
Standard Controller		-	Wired controller KJR-29B1/BK-E (6 meters connection wire)					

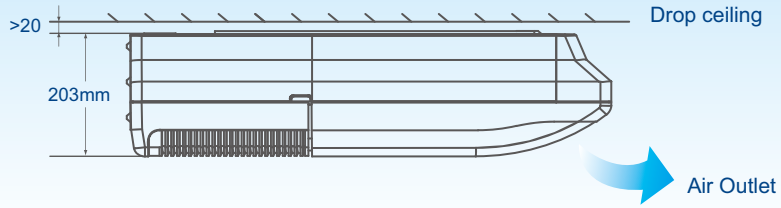
Model			MDV-D200T1/N1-B	MDV-D250T1/N1-B	MDV-D280T1/N1-B	MDV-D400T1/N1	MDV-D450T1/N1	MDV-D560T1/N1
Power Supply			220～240V-1Ph-50Hz					
Capacity	Cooling	kW	20	25	28	40	45	56
		kcal/h	17,200	21,500	24,100	34,400	38,700	48,200
		Btu/h	68,200	85,300	95,500	136,500	153,500	191,100
	Heating	kW	22.5	26	31.5	45	50	63
		kcal/h	19,400	22,400	27,100	38,700	43,000	54,200
		Btu/h	76,800	88,700	107,500	153,500	170,600	214,960
Power (Cooling)	Input	W	1516	1516	1516	2700	2700	3400
	Rated Current	A	8.6	8.6	8.6	12.5	12.5	15.5
Power (Heating)	Input	W	1516	1516	1516	2700	2700	3400
	Rated Current	A	8.6	8.6	8.6	12.5	12.5	15.5
Indoor air flow (H/M/L)		m^3/h	4,700/4,100/3,599	4,700/4,100/3,599	4,700/4,100/3,599	7,472/6,072/4,995	7,472/6,072/4,995	9,550/7,950/6,600
		CFM	2,766/2,413/2,118	2,766/2,413/2,118	2,766/2,413/2,118	4,398/3,574/2,940	4,398/3,574/2,940	5,621/4,679/3,884
ESP (external static pressure)		Pa	200(50~280)	200(50~280)	200(50~280)	200(50~280)	200(50~280)	200(50~280)
Sound pressure level(H/M/L)		dB(A)	59/55/52	59/55/52	59/55/52	61/59/56	61/59/56	63/60/57
Refrigerant	Type		R410A					
	Control method		EXV					
Net dimension	W×H×D	mm	1,443×470×810	1,443×470×810	1,443×470×810	1,970×668×902.5	1,970×668×902.5	1,970×668×902.5
Packing dimension	W×H×D	mm	1,509×550×990	1,509×550×990	1,509×550×990	2,095×800×964	2,095×800×964	2,095×800×964
Net/Gross Weight		kg	115/129	115/129	115/129	232/245	232/245	235/250
Piping Connections	L(flare)	mm	Φ9.53×2	Φ9.53×2	Φ9.53×2	Φ9.53×2	Φ9.53×2	Φ9.53×2
	G(flare)	mm	Φ15.9×2	Φ15.9×2	Φ15.9×2	Φ22.2x2	Φ22.2x2	Φ22.2×2
	Drain piping	mm	ODΦ32	ODΦ32	ODΦ32	ODΦ32	ODΦ32	ODΦ32
Standard Controller		-	Wired controller KJR-29B1/BK-E (6 meters connection wire)					

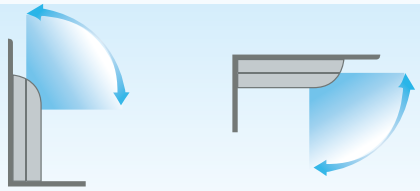
Notes:
1. Nominal cooling capacities are based on the following conditions: return air temperature. : 27°CDB,19°CWB,outdoor temperature.:35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature.: 20°CDB,outdoor temperature.: 7°CDB, 6°CWB,equivalent ref. Piping: 8m(horizontal)
3. Sound level is measured at 1.4m below the air outlet.
External static pressure is based on high speed indoor air flow.

Ceiling & Floor

- Auto Restart
- Cleanable Panel
- Auto Addressing
- Anti-Cold Air Function
- Follow Me
- LED Display

Convenient installation





The unit can be installed either horizontally on the ceiling or vertically against the wall.

- The slim and sleek structure design ensures easy installation.
- It can be installed into a corner of the ceiling even if the ceiling is very narrow.

Auto swing and wide angle air flow

- Two direction auto swing - vertical and horizontal.
- The range of horizontal air discharge is widened which secures wider air flow distribution to provide more comfortable air circulation no matter where the units is set up.
- Three air flow speeds: low, medium and high; double air guides.

More comfortable

- Adopt electrical expansion valve, ensuring precise flow control, lower modulation noise when EXV operating.
- Low noise operations; minimum 36 dB(A).
- Smoother airflow and less turbulence due to the multi-blade fan and the air guide design.

Model			MDV-D36DL/N1-C	MDV-D45DL/N1-C	MDV-D56DL/N1-C	MDV-D71DL/N1-C	MDV-D80DL/N1-C
Power supply			1-phase, 220-240V, 50Hz				
Cooling capacity		kW	3.6	4.5	5.6	7.1	8
		kcal/h	3,100	3,900	4,800	6,100	6,900
		Btu/h	12,300	15,400	19,100	24,200	27,300
Heating capacity		kW	4	5	6.3	8	9
		kcal/h	3,400	4300	5,400	6,800	7,700
		Btu/h	13,600	17,100	21,500	27,300	30,700
Power input	Cooling	W	49	120	122	125	130
	Heating		49	120	122	125	130
Rated current	Cooling	A	0.23	0.67	0.67	0.67	0.83
	Heating		0.23	0.67	0.67	0.67	0.83
Airflow rate(H/M/L)		m^3/h	650/570/500	800/600/500	800/600/500	800/600/500	1,200/900/700
		CFM	383/335/294	471/353/294	471/353/294	471/353/294	706/530/412
Sound pressure level(H/M/L)		dB(A)	40/38/36	43/41/38	43/41/38	43/41/38	45/43/40
Refrigerant		Type	R410A				
		Control method	EXV				
Net dimension(W×H×D)		mm	990×203×660	990×203×660	990×203×660	990×203×660	1,280×203×660
Packing dimension(W×H×D)		mm	1,089×296×744	1,089×296×744	1,089×296×744	1,089×296×744	1,379×296×744
Net weight		kg	26	28	28	28	34.5
Gross weight		kg	32	34	34	34	41
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ9.53	Φ9.53	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	OD Φ25	OD Φ25	OD Φ25	OD Φ25	ODΦ25
Standard Controller		-	Wireless remote controller(RM05/BG(T)E-A)				

Model			MDV-D90DL/N1-C	MDV-D112DL/N1-C	MDV-D140DL/N1-C	MDV-D160DL/N1-C
Power supply			1-phase, 220-240V, 50Hz			
Cooling capacity		kW	9	11.2	14	16
		kcal/h	7,700	9,600	13,300	13,800
		Btu/h	30,700	38,200	47,800	54,600
Heating capacity		kW	10	12.5	15	18
		kcal/h	8,600	10,800	12,900	15,500
		Btu/h	34,100	42,700	51,200	61,400
Power input	Cooling	W	130	182	182	300
	Heating		130	182	182	300
Rated current	Cooling	A	0.83	1.11	1.11	1.41
	Heating		0.83	1.11	1.11	1.41
Airflow rate(H/M/L)		m^3/h	1,200/900/700	1,980/1,860/1,730	1,980/1,860/1,730	1,980/1,860/1,730
		CFM	706/530/412	1,165/1,095/1,018	1,165/1,095/1,018	1,165/1,095/1,018
Sound pressure level(H/M/L)		dB(A)	45/43/40	47/45/42	47/45/42	47/45/42
Refrigerant		Type	R410A			
		Control method	EXV			
Net dimension(W×H×D)		mm	1,280×203×660	1,670×244×680	1,670×244×680	1,670×285×680
Packing dimension(W×H×D)		mm	1,379×296×744	1,764×329×760	1,764×329×760	1,775×377×760
Net weight		kg	34.5	54	54	57.5
Gross weight		kg	41	59	59	63.5
Piping connections	L(flare)	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	G(flare)	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	ODΦ25	ODΦ25	ODΦ25	ODΦ25
Standard Controller		-	Wireless remote controller(RM05/BG(T)E-A)			

Notes:
1. Nominal cooling capacities are based on the following conditions: return air temperature. : 27°CDB,19°CWB,outdoor temperature.:35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature.: 20°CDB,outdoor temperature.: 7°CDB, 6°CWB,equivalent ref. Piping: 8m(horizontal)
3. Floor standing :Sound level is measured 1m from air-outlet in horizontal distance, 1m above the floor in vertical distance.
   Ceiling mounted:Sound level is measured 1m from air-outlet in horizontal distance,1m from air-outlet in vertical distance.

Wall-mounted

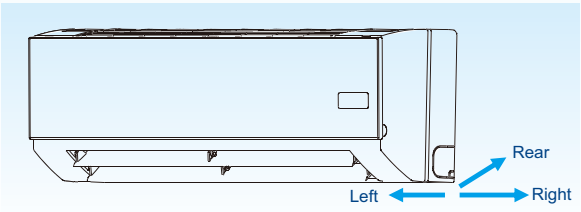
- Auto Restart
- Auto Addressing
- Cleanable Panel
- Anti-Cold Air Function
- Follow Me
- LED Display

Panel with LED display

The front panel and display panel have different colors to choose: white and brown for big panel, blue and brown for small panel.

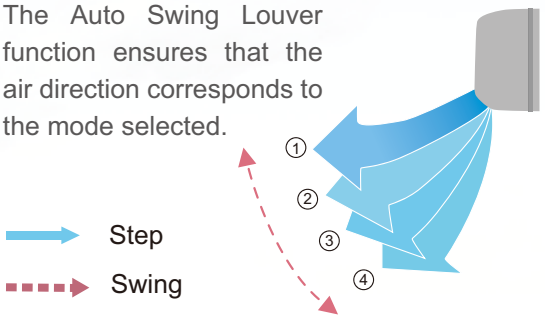
Convenient installation

- Multi-refrigerant outlet pipe method: left\right\rear, more flexible for installation.
- For S panel,R panel & C panel , the EXV is built-in the indoor unit , compact size , longer the connection pipe;gas pipe:468mm;liquid pipe:550mm,more flexible for installation. For D panel, the EXV can be 5m far away from the indoor unit, which lower the noise.
- Adopts new type fixing plate, is easy to install and stable.



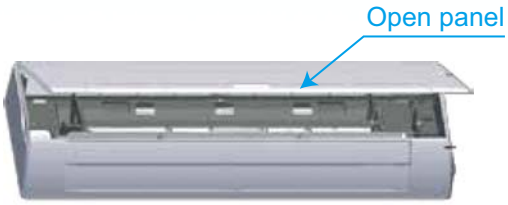
Auto swing louver

The Auto Swing Louver function ensures that the air direction corresponds to the mode selected.



Easy maintenance

The front panel can be removed for easy maintenance access.



Optimal comfort through better flow control and quiet operations

The mechanical expansion valve offers 2,000-stage element positions to ensure precise flow control and less modulation noise when the EXV is operating for a quiet and comfortable environment. Three air flow speeds: low, medium and high; double air guides. Smoother airflow and less turbulence is ensured by the multi-blade fan and the air guide design.

S/C type panel

Model	S panel		MDV-D15G/N1-S	MDV-D22G/N1-S	MDV-D28G/N1-S	MDV-D36G/N1-S	MDV-D45G/N1-S	MDV-D56G/N1-S
	C panel		-	MDV-D22G/N1YB	MDV-D28G/N1YB	MDV-D36G/N1YB	MDV-D45G/N1YB	MDV-D56G/N1YB
Power supply			220~240V-1Ph-50Hz					
Capacity	Cooling	kW	1.5	2.2	2.8	3.6	4.5	5.6
		kcal/h	1,300	1,900	2,400	3,100	3,900	4,800
		Btu/h	5,100	7,500	9,600	12,300	15,400	19,100
	Heating	kW	1.7	2.4	3.2	4.0	5.0	6.3
		kcal/h	1,500	2,100	2,800	3,400	4,300	5,400
		Btu/h	5,800	8,200	10,900	13,600	17,100	21,500
Power input	Cooling	W	28	28	28	28	45	45
	Heating	W	28	28	28	28	45	45
Rated current	Cooling	A	0.12	0.14	0.14	0.14	0.2	0.2
	Heating	A	0.12	0.14	0.14	0.14	0.2	0.2
Indoor air flow (H/M/L)	S panel	m^3/h	427/389/336	525/480/430	525/480/430	590/520/480	860/755/630	925/860/755
		CFM	251/229/198	309/283/253	309/283/253	347/306/283	506/444/371	544/506/444
	C panel	m^3/h	-	520/480/430	520/480/430	520/480/430	860/755/630	925/860/755
		CFM	-	306/283/253	306/283/253	306/283/253	506/444/371	544/506/444
Sound pressure level (H/M/L)		dB(A)	33/31/28	35/32/29	35/32/29	35/32/29	40/38/34	40/38/34
Refrigerant	Type		R410A					
	Control method		EXV					
Net dimension (W×H×D)	S panel	mm	915×290×230				1,072×315×230	
	C panel	mm	915×290×210				1,070×315×210	
Packing size (W×H×D)	S panel	mm	1,020×390×315				1,180×415×315	
	C panel	mm	1,020×385×300				1,180×410×300	
Net weight	S panel	kg	12.4	13	13	13	15.1	15.1
	C panel	kg	-	12	12	12	15	15
Gross weight	S panel	kg	15.9	16.8	16.8	16.8	19.5	19.5
	C panel	kg	-	17.5	17.5	17.5	19	18
Piping connection	L (flare)	mm	Φ6.35				Φ6.35	Φ9.53
	G (flare)	mm	Φ12.7				Φ12.7	Φ15.9
	Drain pipe	mm	OD Φ16.5					
Standard controller			Wireless remote controller (RM05/BG(T)E-A)					

R type panel

Model			MDV-D71G-R3/N1Y	MDV-D80G-R3/N1Y	MDV-D90G-R3/N1Y
Power supply			220~240V-1Ph-50Hz		
Capacity	Cooling	kW	7.1	8	9
		kcal/h	6,100	6,900	7,700
		Btu/h	24,200	27,300	30,700
	Heating	kW	8	9	10
		kcal/h	6,900	7,700	8,600
		Btu/h	27,300	30,700	34,100
Power input	Cooling	W	75	86	86
	Heating	W	75	86	86
Rated current	Cooling	A	0.33	0.39	0.39
	Heating	A	0.33	0.39	0.39
Indoor air flow (H/M/L)		m^3/h	1190/780/580	1,320/840/640	1,320/840/640
		CFM	700/459/341	776/494/376	776/494/376
Sound pressure level (H/M/L)		dB(A)	47/43/42	48/43/38	49/43/38
Refrigerant	Type		R410A		
	Control method		EXV		
Net dimension (W×H×D)		mm	1,250×325×245		
Packing size (W×H×D)		mm	1,345×430×335		
Net weight		kg	19.9		
Gross weight		kg	25		
Piping connection	L (flare)	mm	Φ9.53		
	G (flare)	mm	Φ15.9		
	Drain pipe	mm	OD Φ16.5		
Standard controller			Wireless remote controller (RM05/BG(T)E-A)		

Notes:
1. Nominal cooling capacities are based on the following conditions: return air temperature. : 27°CDB,19°CWB,outdoor temperature.:35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature.: 20°CDB,outdoor temperature.: 7°CDB, 6°CWB,equivalent ref. Piping: 8m(horizontal)
3. Sound level is measured 1m below the air outlet horizontally and vertically.

Floor Standing

- Auto Restart
- Cleanable Panel
- Auto Addressing
- Anti-Cold Air Function
- Follow Me
- LED Display

Easy installation

Floor standing types can be hung on the wall or installed on the floor. The floor type of unit can make cleaning and maintenance much easier. Running the piping from the rear allows the unit to be hung on walls. Cleaning under the unit, where dust tends to accumulate, is considerably easier.

Easy maintenance

Filter is provided as a standard accessory. It can be removed and cleaned easily thanks to Midea's sophisticated design and the product's removable blades.

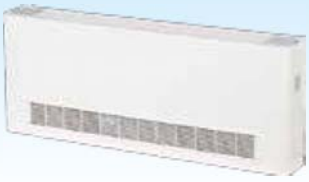
The streamlined appearance harmonizes the unit with a given room's interior decor. All metal parts are made of commercial grade galvanized steel for maximum protection against corrosion.

Optional panel styles

Concealed floor standing type

F3B series concealed type

Concealed type's body is concealed in the skirting board to improve aesthetics. The body is just 212mm deep, and can be installed at the room's perimeter. Special installation methods eliminate noise in the room area. Both air intake from front and air intake from below is optional for exposed floor standing type.



Air intake from front(F4 series)

Air intake from below(F5 series)

Model			MDV-D22Z/N1-F3B	MDV-D28Z/N1-F3B	MDV-D36Z/N1-F3B	MDV-D45Z/N1-F3B	MDV-D56Z/N1-F3B	MDV-D71Z/N1-F3B	MDV-D80Z/N1-F3B
Power supply			1-phase,220-240V,50Hz						
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1	8
		kcal/h	1,900	2,400	3,100	3,900	4,800	6,100	6,900
		Btu/h	7,500	9,600	12,300	15,400	19,100	24,200	27,300
Heating capacity		kW	2.4	3.2	4	5	6.3	8	9
		kcal/h	2,100	2,800	3,400	4,300	5,400	6,900	7,700
		Btu/h	8,200	10,900	13,600	17,100	21,500	27,300	30,700
Rated input	Cooling	W	40	46	46	49	88	130	130
	Heating		40	46	46	49	88	130	130
Rated current	Cooling	A	0.18	0.21	0.22	0.22	0.4	0.56	0.59
	Heating		0.18	0.21	0.22	0.22	0.4	0.56	0.59
Airflow rate(H/M/L)		m^3/h	530/456/400	569/485/421	624/522/375	660/542/440	1,150/970/830	1,380/1,100/870	1,380/1,100/870
		CFM	312/268/235	335/285/248	367/307/221	388/319/259	677/571/489	812/647/512	812/647/512
Sound pressure level (H/M/L)		dB(A)	36/33/29	36/33/29	37/34/30	37/34/30	41/35/31	44/39/33	44/39/33
Refrigerant		Type	R410A						
		Control method	EXV						
Net dimension (W×H×D)		mm	840×545×212	840×545×212	1,040×545×212	1,040×545×212	1,340×545×212	1,340×545×212	1,340×545×212
Gross dimension (W×H×D)			939×639×305	939×639×305	1,139×639×305	1,139×639×305	1,425×639×305	1,425×639×305	1,425×639×305
Net/Gross weight		kg	25/27	25/27	29.5/34	29.5/34	33/39	33/39	36/40
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53	Φ9.53	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	ODΦ25	ODΦ25	ODΦ25	ODΦ25	ODΦ25	ODΦ25	ODΦ25
Standard controller			Wireless remote controller (RM05/BG(T)E-A)						

Model			MDV-D22Z/N1-F4	MDV-D28Z/N1-F4	MDV-D36Z/N1-F4	MDV-D45Z/N1-F4	MDV-D56Z/N1-F4	MDV-D71Z/N1-F4	MDV-D80Z/N1-F4
			MDV-D22Z/N1-F5	MDV-D28Z/N1-F5	MDV-D36Z/N1-F5	MDV-D45Z/N1-F5	MDV-D56Z/N1-F5	MDV-D71Z/N1-F5	MDV-D80Z/N1-F5
Power supply			1-phase, 220-240V, 50Hz						
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1	8
		kcal/h	1,900	2,400	3,100	3,900	4,800	6,100	6,900
		Btu/h	7,500	9,500	12,300	15,400	19,100	242,00	27,300
Heating capacity		kW	2.4	3.2	4	5	6.3	8	9
		kcal/h	2,100	2,800	3,400	4,300	5,400	6,900	7,700
		Btu/h	8,200	10,900	13,600	17,100	21,500	27,300	30,700
Power input	Cooling	W	40	46	46	49	88	130	130
	Heating		40	46	46	49	88	130	130
Rated current	Cooling	A	0.18	0.19	0.22	0.22	0.43	0.63	0.63
	Heating		0.18	0.19	0.22	0.22	0.43	0.63	0.63
Airflow rate(H/M/L)		m^3/h	530/456/400	569/485/421	624/522/375	660/542/440	1,150/970/830	1,380/1,100/870	1,380/1,100/870
		CFM	312/268/235	335/285/248	367/307/221	388/319/259	677/571/489	812/647/512	812/647/512
Sound pressure level(H/M/L)	F4	dB（A）	36/33/29	36/33/29	37/34/30	37/34/30	41/35/31	44/39/33	44/39/33
	F5		36/33/29	36/33/29	37/34/30	37/34/30	41/35/31	44/39/33	44/39/33
Refrigerant	Type		R410A						
	Control method		EXV						
Net dimension (W×H×D)	F4	mm	1,000×596×225	1,000×596×225	1,200×596×225	1,200×596×225	1,500×596×225	1,500×596×225	1,500×596×225
	F5		1,000×677×220	1,000×677×220	1,200×677×220	1,200×677×220	1,500×677×220	1,500×677×220	1,500×677×220
Packing dimension (W×H×D)	F4	mm	1,089×683×312	1,089×683×312	1,289×683×312	1,289×683×312	1,589×683×312	1,589×683×312	1,589×683×312
	F5		1,182×683×312	1,182×683×312	1,382×683×312	1,382×683×312	1,682×683×312	1,682×683×312	1,682×683×312
Net/Gross weight	F4	kg	30/35	30/35	36/44	36/44	41/46.5	41/46.5	42.5/48.5
	F5		30/38	30/38	35.5/41	35.5/41	42/51	42/51	44/53
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53	Φ9.53	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	ODΦ25	ODΦ25	ODΦ25	ODΦ25	ODΦ25	ODΦ25	ODΦ25
Standard controller			Wireless remote controller(RM05/BG(T)E-A)						

Notes:
1. Nominal cooling capacities are based on the following conditions: return air temperature. : 27°CDB,19°CWB,outdoor temperature.:35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature.: 20°CDB,outdoor temperature.: 7°CDB, 6°CWB,equivalent ref. Piping: 8m(horizontal)
3. Sound level is measured 1m from the air out-let in horizontal distance and 1m above the floor in vertical distance.

Console

- Auto Restart
- Cleanable Panel
- Auto Addressing
- Anti-Cold Air Function
- Follow Me
- LED Display

Compact size and stylish

- The elegant and thin unit body complements the existing decor and saves space.
- The EXV is installed inside of the indoor unit for added compactness.

Flexible installation

- Can be installed on the floor or lower wall
- As a floor standing type, it can be semi or fully accessed without losing capacity.

High Comfort

- Flexible air blow: vertical auto swing and wide angle louvers ensure that warm air reaches every corner of the room and increases the air flow coverage.
- Indoor unit adopts DC motor with five fan speeds to meet different requirements.
- Applies the Fujikoki mechanical expansion valve which offers 2,000-stage element positions to ensure precise flow control and lower modulation noise when the EXV is operating.

Powerful mode can be selected for rapid cooling or heating

High efficiency filter

- Built in formaldehyde nemesis filter
- Active-carbon and biological anti-virus filter are optional.

Two air outlets and four air inlets

Four directions of air inlet;
two options of air outlet: Up and Down; or Up only.

Bottom, top, and right/left side, for better ventilation.

Low-noise design

Five-speed indoor unit; low noise; low power consumption.

Low noise operation, lowest to 26dB(A)

Model			MDV-D22Z/DN1-B	MDV-D28Z/DN1-B	MDV-D36Z/DN1-B	MDV-D45Z/DN1-B
Power supply			1-phase, 220-240V, 50Hz			
Cooling capacity		kW	2.2	2.8	3.6	4.5
		kcal/h	1,900	2,400	3,100	3,900
		Btu/h	7,500	9,600	12,300	15,400
Heating capacity		kW	2.6	3.2	4.0	5.0
		kcal/h	2,200	2,800	3,400	4,300
		Btu/h	8,900	10,900	13,600	17,100
Power input	Cooling	W	20	25	25	45
	Heating		20	25	25	45
Rated current	Cooling	A	0.09	0.11	0.15	0.2
	Heating		0.09	0.11	0.15	0.2
Airflow rate(H/M/L)		m^3/h	430/345/229	510/430/229	510/430/229	660/512/400
		CFM	253/203/135	300/253/135	300/253/135	388/300/235
Sound pressure level(H/M/L)		dB(A)	38/32/26	39/33/27	39/33/27	42/39/36
Refrigerant		Type	R410A			
		Control method	EXV			
Net dimension(W×H×D)		mm	700×210×600	700×210×600	700×210×600	700×210×600
Packing dimension(W×H×D)		mm	810×305×710	810×305×710	810×305×710	810×305×710
Net weight		kg	14	15	15	15
Gross weight		kg	19	20	20	20
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7
	Drain piping	-	OD Φ16	OD Φ16	OD Φ16	OD Φ16
Standard Controller		Wireless remote controller(RM05/BG(T)E-A)				

Notes:
1. Nominal cooling capacities are based on the following conditions: return air temperature. : 27°CDB,19°CWB,outdoor temperature.:35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature.: 20°CDB,outdoor temperature.: 7°CDB, 6°CWB,equivalent ref. Piping: 8m(horizontal)
3. Sound level is measured 1m from the air out-let in horizontal distance and 1m above the floor in vertical distance.

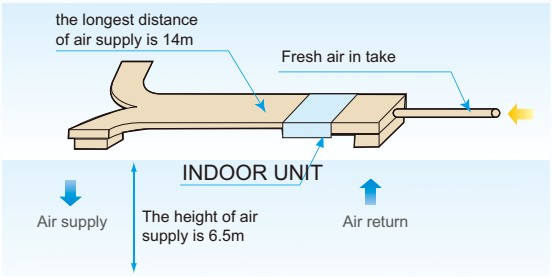
Fresh Air Processing Unit

Healthy and comfortable

Fresh air is imported, provides a healthy and comfortable living environment.

Four speed fan motor(model 125&140)

100% Fresh air processing unit



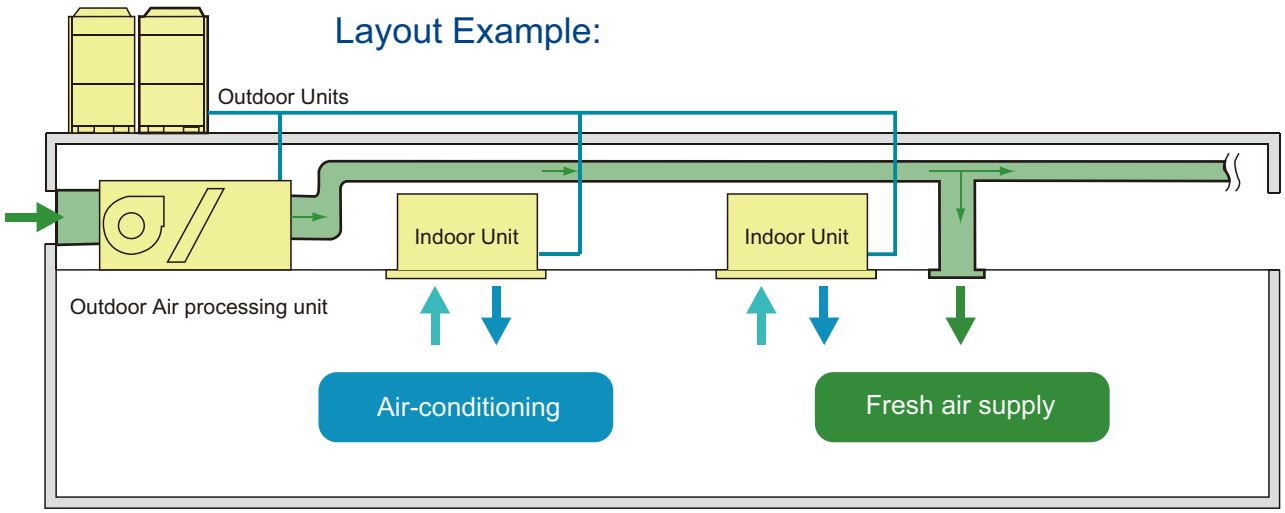
Both fresh air filtration and heating/cooling can be achieved in a single system.

Indoor units and fresh air processing unit can be connected to the same refrigerant system, increasing design flexibility and greatly reducing total system costs.

High external static pressure

External static pressure can be up to 196Pa(models 125 to 140) and 280Pa(models 200 to 280) for more flexible duct applications. The maximum distance of air supply is about 14m and the maximum height of air supply is about 6.5m.

Innovative air supply technology for excellent room temperature control



Model			MDV-D125T1/N1-FA	MDV-D140T1/N1-FA	MDV-D200T1/N1-FA	MDV-D250T1/N1-FA	MDV-D280T1/N1-FA
Power Supply			1-phase, 220-240V, 50Hz				
Capacity	Cooling	kW	12.5	14	20	25	28
		kcal/h	10,800	12,000	17,200	21,500	24,100
		Btu/h	42,700	47,800	68,200	85,300	95,500
	Heating	kW	10.5	12	18	20	22
		kcal/h	9,000	10,300	15,550	17,200	18,900
		Btu/h	35,800	41,000	61,400	68,200	75,100
Power (Cooling)	Input	W	430	430	1063	1,063	1063
	Rated Current	A	2.4	2.4	5.3	5.6	5.6
Power (Heating)	Input	W	461	430	1063	1,063	1,063
	Rated Current	A	2.4	2.4	5.3	5.6	5.6
Air flow (H/M/L)		m^3/h	2,142/1,870/1,611	2,142/1,870/1,611	2,870/2,620/2,150	3,005/2,700/2,250	3,005/2,700/2,250
		CFM	1,261/1,101/948	1,261/1,101/948	1,689/1,542/1,265	1,766/1,589/1,324	1,766/1,589/1,324
ESP (external static pressure)		Pa	50(50~196)	50(50~196)	200(50~280)	200(50~280)	200(50~280)
Sound pressure level(H/M/L)		dB(A)	54/52/50	54/52/50	54/53/51	55/54/52	55/54/52
Refrigerant	Type		R410A				
	Control method		EXV				
Net dimension	W×H×D	mm	1,300×420×690	1,300×420×690	1,443×470×810	1,443×470×810	1,443×470×810
Packing dimension	W×H×D	mm	1,436×450×768	1,436×450×768	1,509×550×990	1,509×550×990	1,509×550×990
Net/Gross Weight		kg	69.5/76	69.5/76	115/125	115/125	115/125
Piping Connections	L(flare)	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	G(flare)	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	OD Φ25	OD Φ25	OD Φ32	OD Φ32	OD Φ32
Standard Controller		-	Wired controller KJR-29B1/BK-E (6 meters connection wire)				

Notes:
1. Nominal cooling capacities are based on the following conditions: outdoor air temperature: 33°CDB, 28°CWB, equivalent ref. piping: 8m(horizontal).
2. Nominal heating capacities are based on the following conditions: outdoor air temperature: 0°CDB, -2.9°CWB,equivalent ref. Piping: 8m(horizontal).
3. Sound level is measured at 1.4m below the air outlet.
External static pressure is based on high speed indoor air flow.

Connection Conditions:
The following restrictions must be observed in order to maintain the indoor units connected to the same system.
* When outdoor-air processing units are connected, the total connection capacity must be within 50% to 100% of that of the outdoor units.
* When outdoor-air processing units and standard indoor units are connected, the total connection capacity of the outdoor-air processing units must not exceed 30% of that of the outdoor units.
* Outdoor-air processing units can be used without indoor units.
* The fresh air processing unit is not available for V4+R system.

Control Systems

Network Control

Data converter
CCM15

iPad

Laptop

Connectable to various sized Gateway

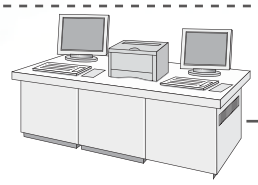
IMM Software

M-interface gateway

LonWorks gateway

LonWorks BMS

MD-LonGW64

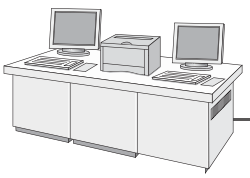


BACnet gateway

BACnet BMS

MD-CCM08

Web monitoring system



Modbus gateway

Modbus BMS

CCM-18A

Centralized Control

Indoor Centralized Controller (Touch key)

X,Y,E

CCM30

Indoor Centralized Controller

X,Y,E

MD-CCM03

Outdoor Centralized Monitor

F1,F2,E

K1,K2,E

MD-CCM02

Note: The wires in the diagram show the signal flows only, while not represent the actual connecting ways.

Individual control

Wired controller

KJR-10B KJR-86C
KJR-12B KJR-120B
KJR-90A KJR-90C
KJR-29B KJR-120C

Remote controller

RM02
RM05
R05
R51
R71

Accessories

Card-key Interface MD-NIM05

MD-NIM05

Card-key

Wired controller

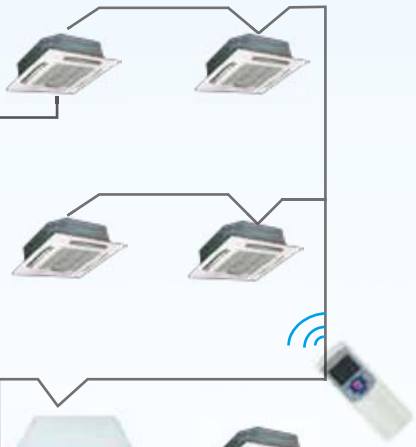
Infrared Sensor MD-NIM09

Infrared control box

Infrared sensor module

Wired controller

Outdoor units



Comparison of Controllers

Item		Remote controller			Wired Controller				Centralized Controller		
Model name		RM05/ RM02	R51/ R71	R05	KJR-10B /KJR-12B	KJR-120B	KJR-90A /KJR-86C	KJR-29B KJR-90C	CCM30/ MD-CCM03	MD-CCM09	KJR-90B
MAX. controllable IDU		/			1	1	1	1	64	64	16
A/C control function	On/Off	●	●	●	●	●	●	●	●	●	●
	Operation mode setting	●	●	●	●	●	●	●	●	●	●
	Fan speed setting	●	●	●	●	●	●	●	●	●	-
	Room temp. setting	●	●	●	●	●	●	●	●	●	-
	Vertical swing	●	●/-	●	-	-	-	-	-	-	-
	Horizontal swing	●	●	●	●	●	●/-	●	●	●	-
	Air direction	●/-	-/●	●	-	-	-	-	-	-	-
	Economic mode	●	●	●	●	●	-	-	-	-	-
	Central setting	-	-	-	-	-	-	-	●	●	●
	Keyboard lock	●	●/-	●	●	●	-	●	●	●	-
	Mode lock	-	-	-	-	-	-	-	●	●	-
	Remote signal receiving	-	-	-	-	-	-	●	-	-	-
	26℃ shortcut setting	-/●	-	-	-	-	-/●	-	-	-	-
	Silent mode	-	-	-	-	●	-	●	-	-	-
Display	Backlight	●	●/-	●	-/●	●	-/●	●	●	●	●
	Current time	●/-	-	●	●/-	●	●/-	-	-	●	-
	RC prohibition	-	-	-	-	-	-	-	●	●	-
	Address	-	-	-	-	-	-	-	●	●	-
	Error code	-	-	-	-	●	-	-	●	●	-
	Room temp.	-	-	-	-	-	-/●	-	●	●	-
Timer	Period	-	-	-	-	-	-	-	-	Week	-
	On/Off per day	-	-	-	-	-	-	-	-	4	-
	On/Off per week	-	-	-	-	-	-	-	-	28	-
	On/Off timer	●	●	●	●	●	●/-	●	●	●	-
Control	FOLLOW ME	-/●	-	-	-/●	-	-	●	-	-	-
	Emergent stop	-	-	-	-	-	-	-	●	-	-
	Emergent start	-	-	-	-	-	-	-	●	-	-
	Address setting	●	-	-	●/-	-	-	●	-	-	-
	BMS access	-	-	-	-	-	-	-	●	-	-
	Control via internet	-	-	-	-	-	-	-	●	-	-
	Air filter cleaning reminding	-	-	-	●/-	●	-	●	●/-	-	-

● : Available controller functions

— : Not available controller functions

Wireless Remote Controller


RM02


RM05


R05


R51


R71

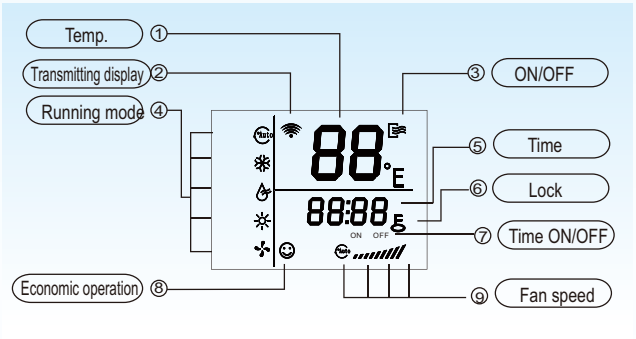
Functions

Portable device

The wireless remote controller is a portable control device that enables users to control the A/C anywhere within a distance of 11m.

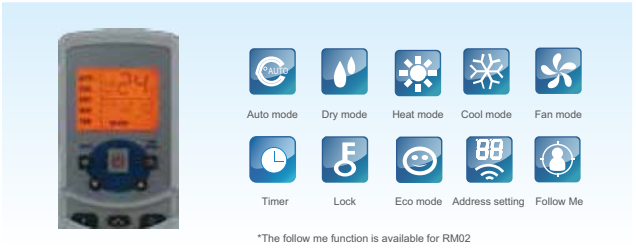
Simplified user interface

Users can synchronize the air conditioners' parameters with the display panel on the wireless remote controller to precisely control a room's environment.



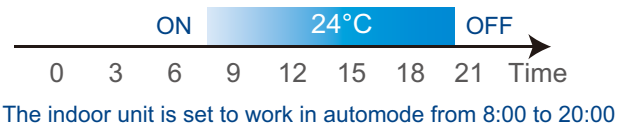
Background light

The background light allows users to operate the device in a dark room. The device lights up when a button is pressed, and turns off when a given operation is completed.



Built-in timer

The built-in daily timer offers the convenience of automatically starting and stopping the system at set times.



The indoor unit is set to work in automode from 8:00 to 20:00

Setting addresses

Besides the machine's auto addressing function, users can set the indoor unit's address on the wireless remote controller RM05/RM02.

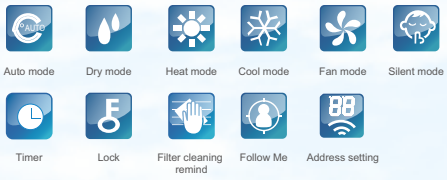
Specifications

Model	RM02	RM05	R05	R51	R71
Dimensions (H×W×D)(mm)	150×60×15	150×65×20	150×65×20	140×60×15	125×42×27
Power (V)	1.5V(LR03/AAA)×2				

Wired Controller

KJR-29B

KJR-90C

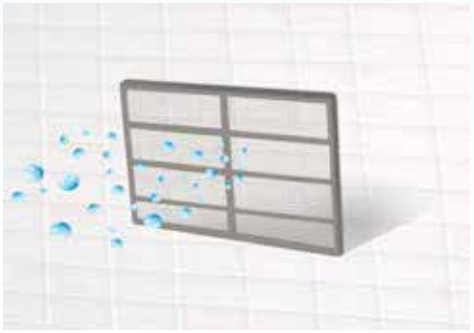


Functions

Air filter cleaning reminding

The wired controller records the total running time of the indoor unit. When the accumulated running time reaches the pre-set value, it will remind users need to clean the air filter of the indoor unit.

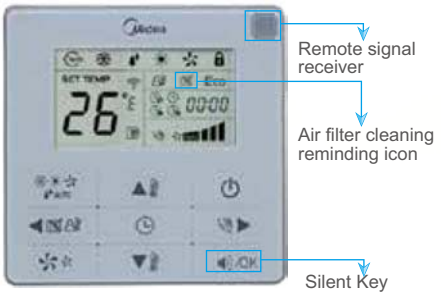
Clean the filter regularly can keep indoor air fresh and clean, good for your health.



*Available for KJR-10B/KJR-29B/KJR-90C model.

Silent mode

Under the cooling, heating and auto mode,when operate the silent mode, it can reduce the running noise through setting the fan speed to low. This will help you bring a quieter environment.



KJR-29B
(Touch key)

Remote signal receiving function

KJR-29B and KJR-90C provide a signal receiver for remote controller. Signal from remote controller can be received by a wired controller, then sent to the indoor unit and it conveniences to control.

Locking wired controller

The locking function can be used to prevent other people from using the controller.

Specifications

Model	29B	90C
Dimensions (H×W×D)(mm)	120×120×20	86×86×16.5
Power (V)	DC 5V	

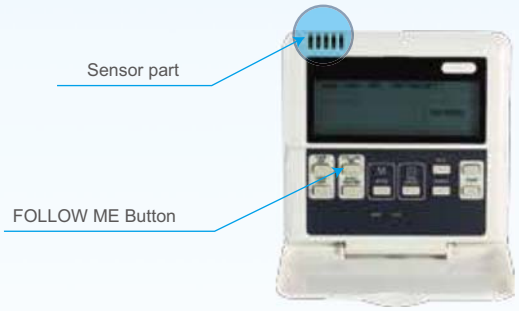
Wired Controller

KJR-10B

KJR-12B

Functions

Follow me

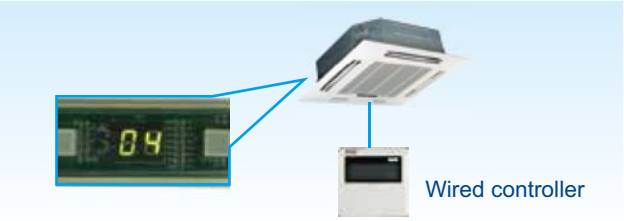


With the FOLLOW ME function, the wired controller can detect the air temperature at the user's altitude instead that of the ceiling or floor. This helps making the room environment comfortable and the temperature accurate.

*Follow me function is available for KJR-12B, KJR-29B and KJR-90C model.

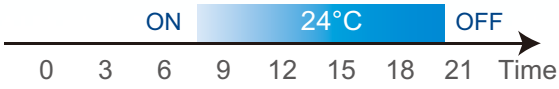
Setting addresses

With the address setting function,and easy for the installation and future service. The service person can set the address for indoor unit by KJR-10B, KJR-29B and KJR-90C.



Built-in timer

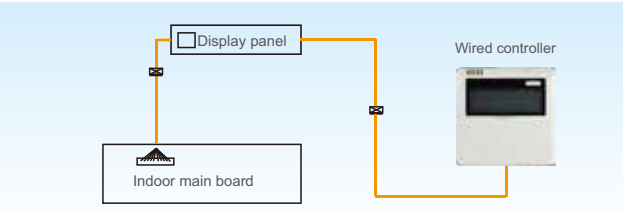
Built-in daily timer offers the convenience of automatically starting and stopping the system at set times.



The indoor unit is set to work in automode from 8:00 to 20:00

Easy connection

The wired controller conveniently connects to the indoor unit's display panel via connecting wire.



Specifications

Model	10B	12B
Dimensions (H×W×D)(mm)	120×120×15	120×120×15
Power (V)	DC 5V	

Wired Controller

KJR-90A

KJR-86C

KJR-120B

Functions

Features

- Small and easy to install
- Suitable for all types of indoor units
- Can be stored in a mounting cabinet

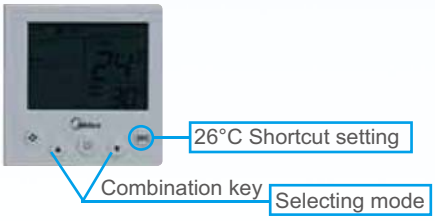
KJR-90A

Built-in timer

Built-in daily timer offers the convenience of automatically starting and stopping the system at set times.

Mode setting

Mode-button hidden controller: Press the temperature buttons "▲" and "▼" simultaneously for 3 seconds to select the operation mode: COOL and HEAT. The design is suitable for hotels, hospitals, schools and other similar types of buildings.



KJR-86C

Auto mode

For V4 plus R series used only. Under the auto mode of V4 plus R system, it can automatically switch to COOL or HEAT mode according to the temperature difference value between Tf(indoor temperature) and Ts(setting temperature)

KJR-120B

Specifications

Model	90A	86C	120B
Dimensions (H×W×D)(mm)	90×86×13	86×86×18	120×120×20
Power (V)	DC 5V		

Wired Controller

HRV Wired Controller

KJR-27B

Functions

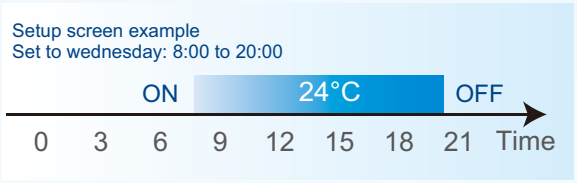
HRV controller

KJR-27B is individually designed for HRV—Heat Recovery Ventilator. The HRV can work in the following modes: exhaust, air supply, bypass, heat exchange, and auto.

AUTO->HEAT EXCHANGE->
EXHAUST->BYPASS->AIR SUPPLY

Built-in timer

Built-in daily timer offers the convenience of automatically starting and stopping the HRV at the set times.



Specifications

Model	KJR-27B
Dimensions(H×W×D)(mm)	120×120×15
Power (V)	198-242V(50/60Hz)

Weekly Schedule Controller

MD-CCM04
KJR-120C

Functions

Simple disign

Weekly schedule wired controller has different appearances to choose. They can query the indoor temperature and the setting parameters of the weekly schedule. They can show the error codes and running state of the indoor unit. With the LCD backlight, and enables users to operation the device in a dark room.

Delay function

The function is specially designed for a person who is working overtime. During the weekly schedule running, press Delay button, then it will delay 1 hour or 2 hours to turn off the air conditioner.

Weekly schedule

With the weekly schedule function, and users can set up 4 periods schedule per day to avoid setting frequently.During operation, can change the mode, fan speed, temperature, and then the next startup will run at the status according to the latest setting.

Specifications

Model	MD-CCM04	KJR-120C
Dimensions (H*W*D)(mm)	120×120×15	120×120×20
Power (V)	DC 5V	DC 12V

Indoor Centralized Controller

MD-CCM03

CCM30


Cool mode


Swing


Filter cleaning remind


Heat mode


Keyboard lock


Remote controller lock


Timer


Fan mode


Cooling lock


Heating lock

Net connection

Functions

Centralized control

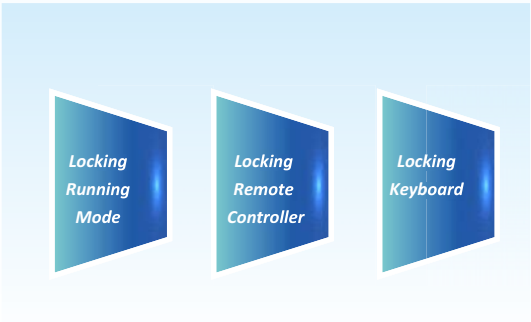
The centralized controller is a multifunctional device that can control up to 64 indoor units within a maximum connection length of 1,200m.

The device connects to the master outdoor units of Midea's newly designed products to simplify and centralize the wiring configuration. The 2 ways of connecting are as follow:

*If it connects to XYE ports of master ODU, ODU must be set to auto addressing mode.

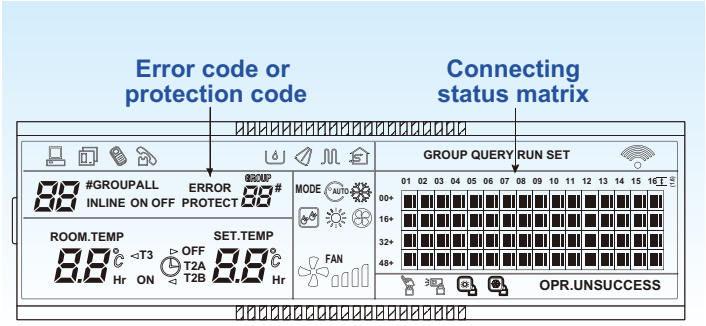
Three lock modes

Centralized controller provides a superior way to manage the indoor units. Users are able to make their own choice from locking the wireless controller, locking the running mode or lock the centralized controller's keyboard as they wish.



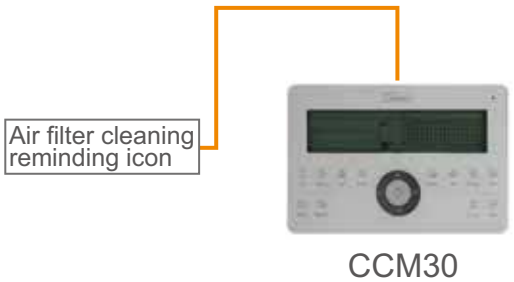
Indoor unit working status display

The centralized controller displays indoor units' working status and error codes so users can easily identify faults via checking the error codes table in the user's manual before contacting a service engineer.



Air filter cleaning reminding function

The air filter cleaning reminder function is only available on the touch-key central controller CCM30. The "FL" icon indicates that the air filter in a given indoor unit needs cleaning.



CCM30

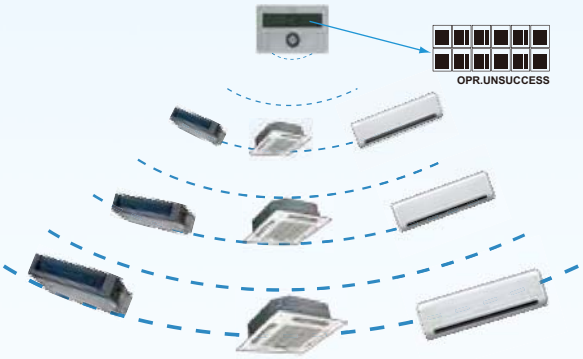
Functions

Stylish design

CCM's stylish design suits high-end environments. The keyboard lock function is used to prevent operational mistakes.

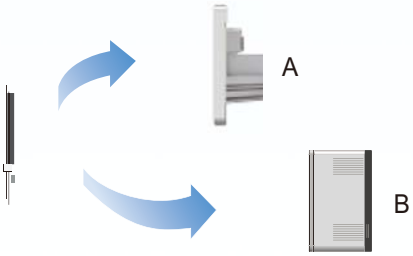
Single/unified control

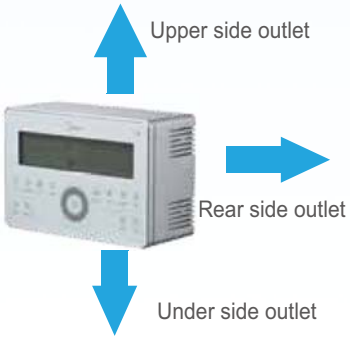
The control object can be either a single unit or all units, which vastly simplifies the control process. Operation signal feedback ensures that all units are working in the correct mode.



Easy installation

Centralized controller offers two different appearances to mostly suit the installation. The A structure must be embedded into the wall and the B structure doesn't need. Both of them are easy to operate.





B structure leading-out mode sketch

Access to network monitoring

The centralized controller is able to bridge up to 64 indoor units on the network monitoring and building management systems.

Specifications

Model	MD-CCM03	CCM30
Dimensions (H*W*D)(mm)	179×119×74	180×122×78 and 180×122×68
Power (V)	198-242V(50/60Hz)	

Centralized Controller

Weekly Schedule Centralized Controller

MD-CCM09

Auto mode


Cool mode


Heat mode


Fan mode


Dry mode


Swing


Keyboard lock


Cooling lock


Heating lock

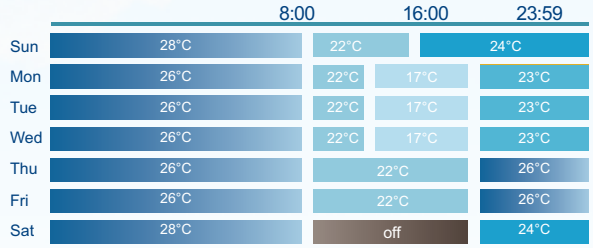

Remote controller lock


Weekly schedule

Functions

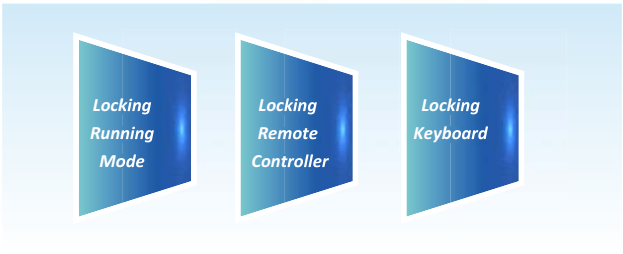
Weekly schedule

MD-CCM09 can include up to 64 indoor units in the weekly schedule. Users can set up to 4 periods per day, and select the desired running mode and room temperature. The operating object can be a single indoor unit or all the indoor units.



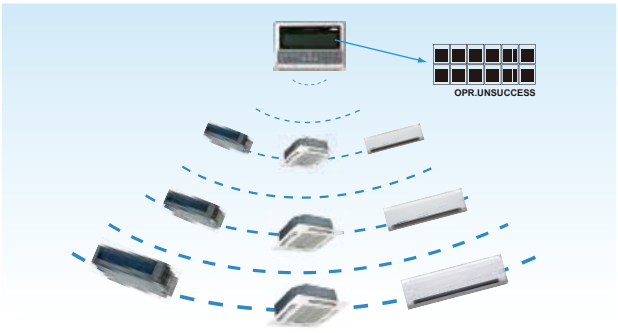
Three lock modes

Centralized controller MD-CCM09 provides a superior way to manage the indoor units. Users are able to make their own choice from locking the wireless controller, locking the running mode or lock the MD-CCM09's keyboard as they wish.



Single/unified control mode

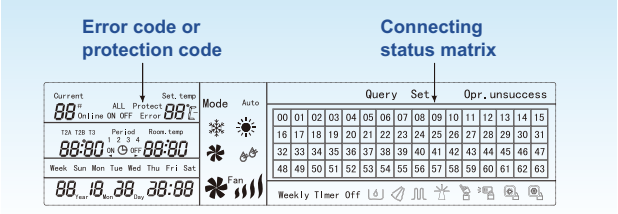
The control object can be either a single unit or all units, which vastly simplifies the control process. Operation signal feedback ensures that all units are working in the correct mode.



Indoor unit working status display

MD-CCM09 displays indoor units' working status and error codes so users can easily identify faults via checking the error codes table in the user's manual before contacting a service engineer.

*If it connects to XYE ports of master ODU, ODU must be set to auto addressing mode.



Specifications

Model	MD-CCM09
Dimensions (H*W*D)(mm)	179×119×74
Power (V)	198-242V(50/60Hz)

Unified On/Off Controller

KJR-90B

Unified controller design with graceful appearance and explicit panel.
Can control single or group indoor units.

Functions

Unified control

KJR-90B offers on/off and heating/cooling functionality for indoor units based on preset temperatures to ensure easy management.

Centralized control

KJR-90B can be used to centrally control up to 16 indoor units.

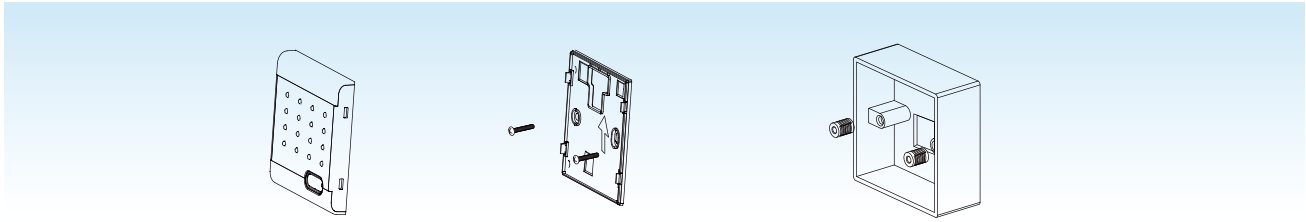
Light indicator

The LEDs on KJR-90B indicate the indoor units' running status for easy fault detection. The lights switch off automatically to save energy once a given operation is complete. The indicators are as follows:

Light	Blue	Red	Flash
Single On/Off key	Cooling/Fan	Heating	IDU Error
Unified On/Off key			EEPROM Error

Easy installation

KJR-90B can be easily mounted on the built-in cabinet:



Specifications

Model	KJR-90B
Dimensions (H*W*D)(mm)	90×86×8
Power (V)	DC 5V

Outdoor Centralized Monitor

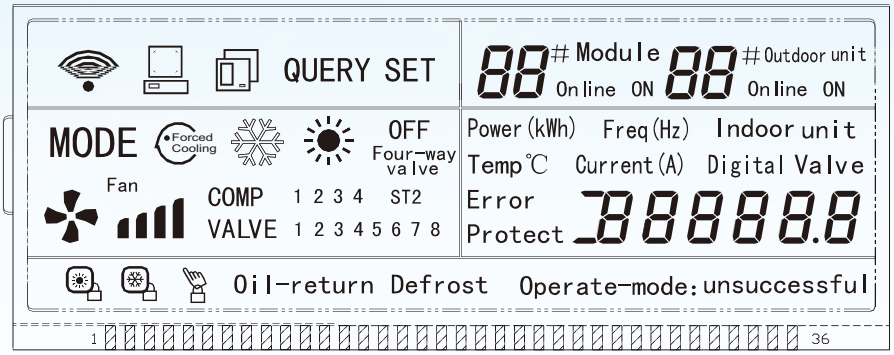
MD-CCM02

Query parameters
4-way/EXV valve
Protection/ Error codes
Power consumption
With the ODU communication
With the PC communication
Forced Cooling

Functions

ODU parameters display

MD-CCM02 enables users to easily check outdoor units' running status, including frequency, temperature, current, pressure, protection codes and error codes.



Graph 2 LCD Screen

Access to network monitoring

MD-CCM02 can connect up to 8 refrigerant systems and 32 outdoor units to the network system.

Specifications

Model	MD-CCM02
Dimensions(H×W×D)(mm)	120×120×15
Power (V)	198-242V(50/60Hz)

Central Control Software

Central Control Software

IMM(Intelligent Manager of Midea)

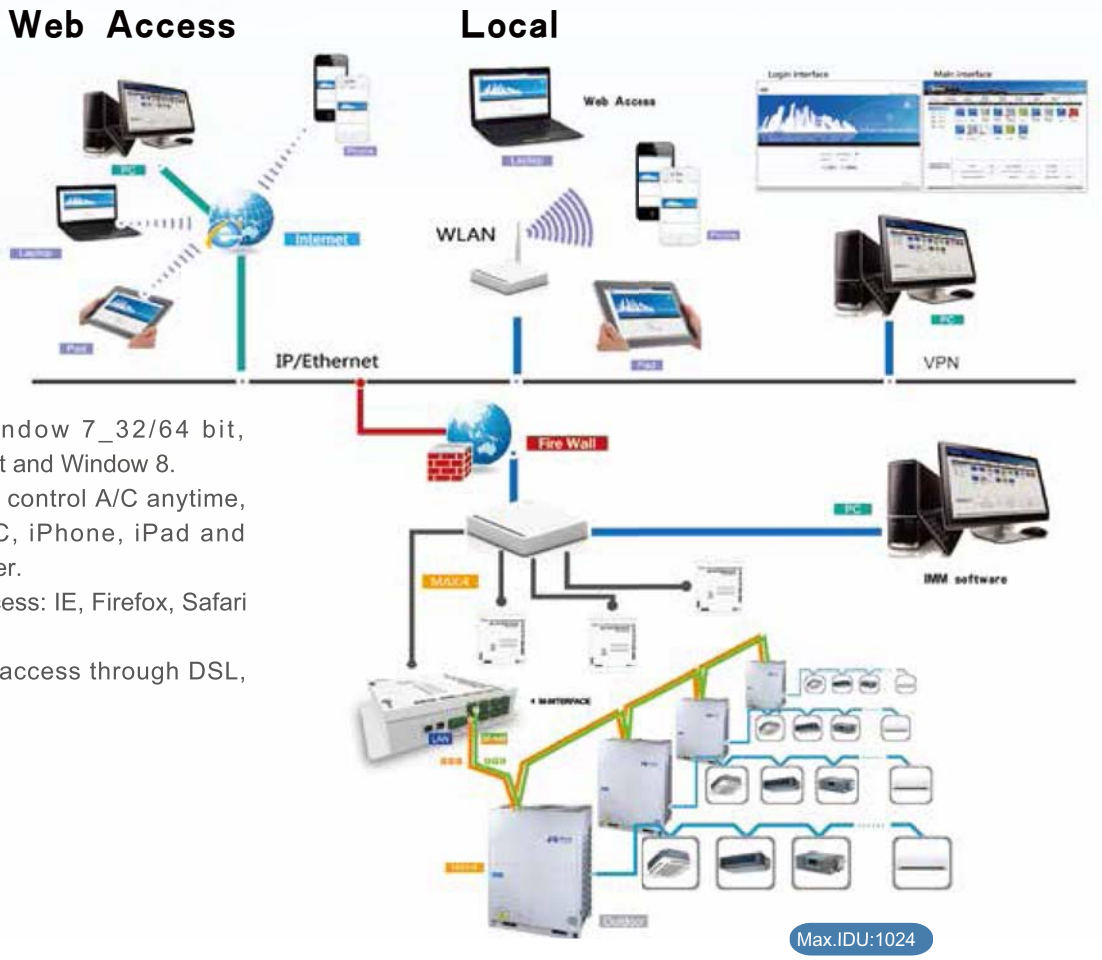
4th Generation Network Control System

Functions

Intelligent Manager of Midea, designed specifically to control VRF systems, is based on a centralized format and dedicated to the complete control and monitoring of all the system's functions. It can be used as a flexible multi-purpose system and applied to a variety of needs, according to the scale, purpose and control method of each building.

- Up to 4 M-interfaces, 64 refrigerant systems, 1,024 indoor units, and 256 outdoor units can be controlled by one PC.
- Web Access
- User friendly operation
- Central building monitoring and control
- Energy saving management
- SMS modem (optional)
- Electricity charge distribution
- Schedule management
- Low-load operation indicate
- Generate operational history reports (daily, weekly, monthly)
- Fault display & Warning message
- Air filter cleaning reminding function
- Emergency stop and Alarm signal output

Network Control Application



- Can run on Window 7_32/64 bit, Window XP_32 bit and Window 8.
- Can monitor and control A/C anytime, anywhere by PC, iPhone, iPad and notebook computer.
- Support WEB access: IE, Firefox, Safari and Chrome.
- Enables remote access through DSL, VPNs and so on.

Various Managements

Simple Operation and Management

Click & Operate, a user-friendly interface allows even non-experts to perform the building management system easily.

Data Management

Operational information of individual indoor units are monitored, allowing for distribution of power consumption at outdoor units.
Stores operation data on multiple systems and displays it in graphical format for visual management.
Uses IMM software to generate tenant reports and help building owners bill for energy use.

Electricity Charge Distribution(Patented)

Provides information on proportional electrical power distribution to optimize electricity consumption management.
Uses software to calculate electric power proportional distribution, output and save electricity consumption data for each indoor unit (or group) which is connected to the intelligent manager.
Applies the patented Midea Calculation Method to calculate consumption rates according to capacity demand which is based on various parameters: setting temperature, room temperature, running mode, rated HP, public areas, unused rooms, and nighttime use; outputs this information on a charge calculation sheet to evenly divide power consumption charges among tenants.

Hightlights

Web Access function

With the web access function, a PC, laptop computer or a smart phone can be used as a remote controller.

Visual Navigation

Clicking the jump button will display a list of all available screens. Clicking the back button will return to the previous screen.

Energy Saving Management

Based on a predetermined schedule, the Intelligent Manager executes capacity control and intermittent operations on all air conditioning units to maintain a high comfort index.

Data Backup

The M-interface will automatically back up data on the installed SD card (2GB) in case system failure occurs, such as: power failure or system dam. IMM software also stores the previous 3 months' operational data on the HDD.

Schedule Control

Automatically performs facility start/stop control, switches the operating mode, sets temperatures and enables/disables the remote control according to the present time schedule. 4 sections and 20 actions per day for each single unit or group.

Multiple Languages

Provides seven language settings:

English	French	Italian
Russian	German	Spanish
Simple Chinese		

Warning Message

The system can receive error messages from air conditioning units in more than one buildings or structures via public phone lines.
*Requires the Midea "SMS Modem" to send automatic warning messages to designated phone numbers.

Electricity Charge Distribution

Electricity charges can be easily divided when billing users for air conditioning power charges; for example, for tenants in a commercial building, offices in a rented building, or rooms in a hotel.

Central Control Software

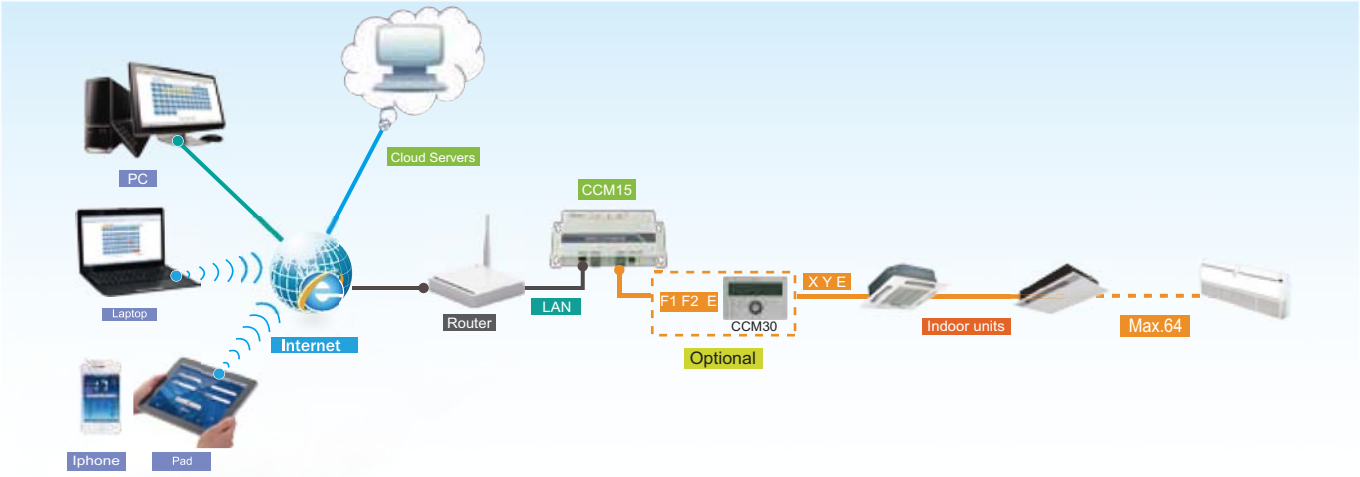
Data converter

CCM15

- Can realize data conversion between TCP/IP protocol and 485 protocol.
- WEB function realizes VRF system's webpage access.
- Through LAN and remote to query and control the air conditioners.
- Providing the TCP / IP port for VRF system of Midea to achieve WEB/HTTP/TCP/IP access.
- Can control and query the A/C systems through computer, iPhone, iPad or other intelligent terminals.

Network example

- Can be directly connected with XYE port of the indoor/outdoor units.
- Up to connect 64 indoor units.
- CCM03/CCM30 is optional and can be connected with CCM15 through F1F2E ports.
- The system consisting A/C system, data converter CCM15, router, cloud server and control terminal.



*If it connects to XYE ports of master ODU, ODU must be set to auto addressing mode.

Simply control interface

- Software control/ Cloud server control (WEB access).
- Click & operate, a user-friendly interface.
- Allows single and group control.
- Simplified user control interface.
- Colour indication and icon makes it easy to recognize unit state.
- Can full screen display and temperature can be adjusted by fingers' sliding.

Weekly schedule control

- With weekly schedule function for iPad and Web function.
- Multiple sections in each day for single unit or group.
- Automatically performs facility start/stop control, operating mode, setting temperatures and according to the present time schedule.

Web features

- Query and control single unit or group.
- Weekly schedule setting: can set multiple sections in each day for single unit or group.
- Group user control : a user can use the same ID to manage hundreds of CCM15, when selecting the "As group user" button on the login page.
- History error: easy service and management with history error function.

Intelligent control

- The air conditioner remote control can be realized by mobile phone or tablet computer.
- You can query and control the running state of the air conditioner any time and any where and even make an appointment in advance.
- Can remotely turn off the air conditioner to avoid the power waste, when you are in a hurry to leave.

Accessories

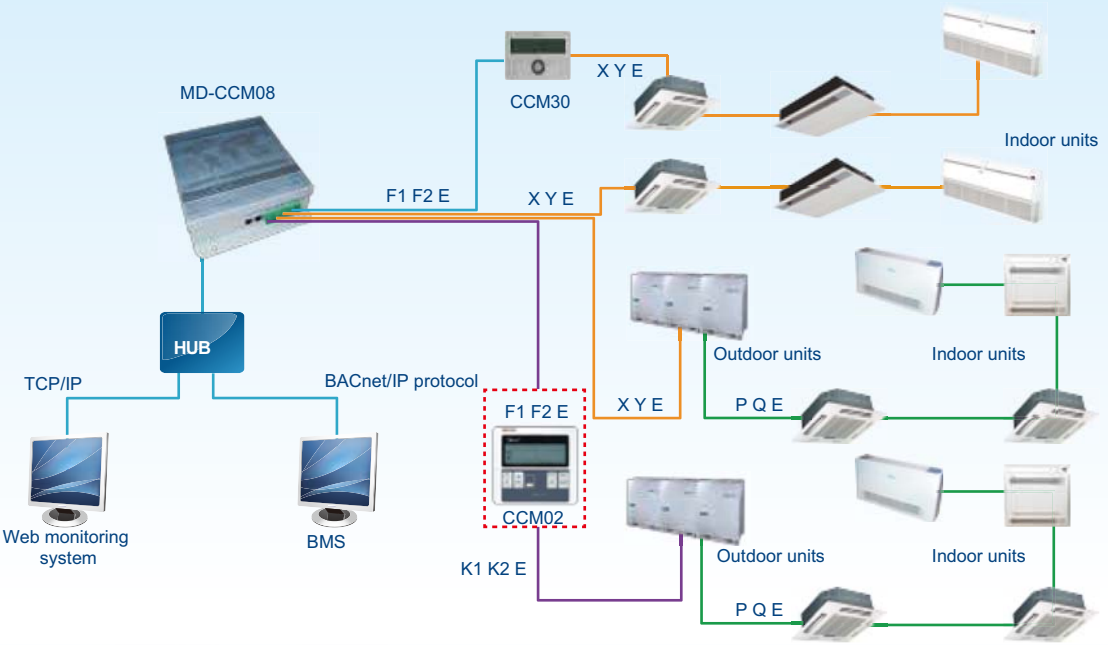
BACnet® BMS Gateway

MD-CCM08

Contains 4 groups of RS485 communication ports and be able to connect up to 256 indoor units or 128 outdoor units to the BMS.
Be free to connect to the BMS or not.
Built-in WEB function.

Network example

Each port can connect to XYE ports of IDU/ODU or the K1K2E ports of the outdoor units.
Each port can also connect to one CCM03 or one CCM02 through F1F2E ports.



*If it connects to XYE ports of master ODU, ODU must be set to auto addressing mode.

Monitoring units online

MD-CCM08 allows users to track units' operational status and change their running parameters on Internet Explorer for maximum control convenience.

Wide compatibility

CCM08 has a wonderful adaptability to the BMS

	Company	BMS software	Brand
1	SIMENS	APOGEE	
2	TRANE	Tracer Summit	
3	Honeywell	Alerton	
4	Schneider	Andover	
5	Johnson	METASYS	

Accessories

Modbus BMS Gateway

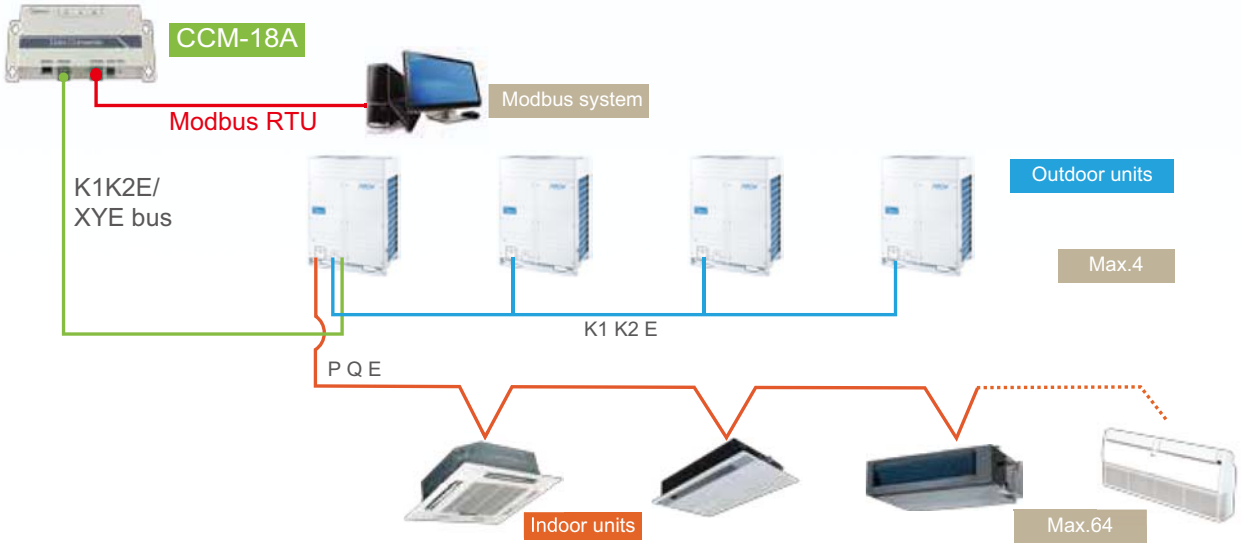
CCM-18A

Supports Modbus protocol networks
Bridges the Midea central A/C system to BMS
Connect up to 64 or 16 indoor units and 4 outdoor units
Built-in WEB server function
*4 outdoor units must be in the same system

Network example

1)TCP connection method

2) RTU connection method



*1. If it connects to XYE ports of master ODU, ODU must be set to auto addressing mode.
2. XYE and K1K2E must be connected hand by hand.

Config A/C System via Web

When the Modbus network is set, users can conveniently configure their A/C network system over the Internet using different TCP/IP browsers.

Accessories

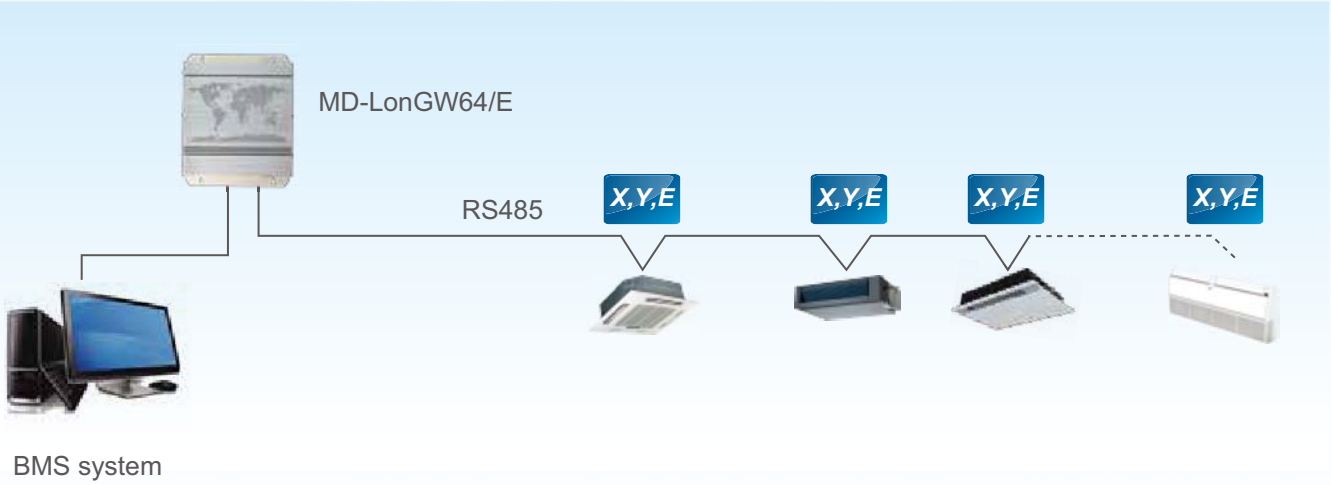
LonWorks® BMS Gateway

MD-LonGW64

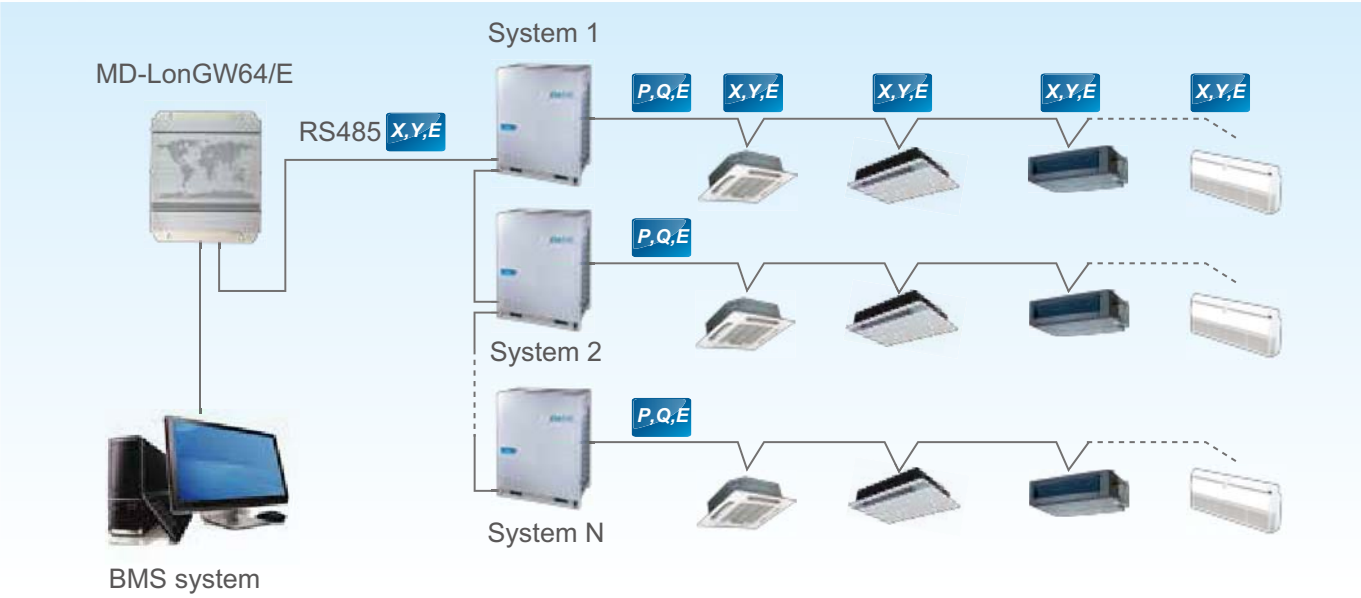
Compliance with LonMark protocol,and realizes the management and control of A/C.
Can connect up to 64 indoor units to the BMS.
Realizes non-polarity communication,and also the application can be download online.

Network example

Connection method 1: Suitable for all of air conditioner systems and connect max.64 indoor units.



Connection method 2: Only suitable for V4 plus system and connect max.64 indoor units.



*If it connects to XYE ports of master ODU, ODU must be set to auto addressing mode.

Specifications

Model	MD-LonGW64
Dimensions (H*W*D)(mm)	319×251×61
Power (V)	177~265V AC(50Hz/60Hz)

Accessories

3-Phase Protector

HWUA/DPB71CM48

Detect the power condition and make the corresponding protecting action.
Protect the compressor from being damaged.
Automatically distinguish the abnormal power supply conditions and automatically recover.

HWUA

DPB71CM48

Excellent reliability

The protector protects the entire system from power supply problems, and auto restart after recovery.

Specifications

Model	With over/under voltage function				Without over/under voltage function
	HWUA	DPA53CM23	HWUA	DPB71CM48	DPA51CM44
Power supply (V-N-Hz)	220~480V-3N 50/60Hz	208~480V-3N 50/60Hz	220~480V-3N 50/60Hz	380~480V-3N 50/60Hz	208~480V-3N 50/60Hz
Temp. range(˚C)	-20 ˚C~50 ˚C	50Hz: -20 ˚C ~60 ˚C 60Hz: -20 ˚C ~50 ˚C	-20 ˚C ~50 ˚C	-20 ˚C~50 ˚C	50Hz: -20 ˚C~60 ˚C 60Hz: -20 ˚C~50 ˚C
Rated operational power(VA)	2.9 VA	7 VA	2.9 VA	13 VA	13 VA
Over voltage	12%	12%	18%	18%	/
Under voltage	-12%	-12%	-12%	-12%	
Phase imbalance	8%	/	8%	8%	
Dimensions(W×H×D)(mm)	90×69×35	81×67.2×17.5	90×69×35	81×67×35	81×67.2×17.5

Digital Power Ammeter

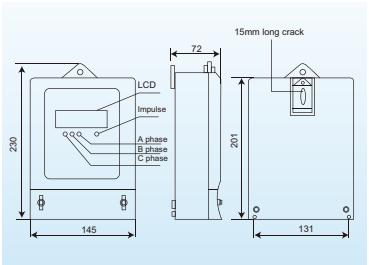
DTS634/DTS636

Calculates power consumption.
Does not need adjusting after long-term use.
Corresponds one outdoor unit to one digital power meter.

Low power consumption

The digital power meter consumes minimal energy.
Voltage circuit: less than 2W/10VA
Current circuit: less than 2.5VA

Indications and installation



The digital power meter is tested after manufacture so it can be immediately deployment and used on-site. The LED indicators and installation schematic are shown in the figure on the left.

Specifications

Model	DTS634/DTS636
Dimensions (H*W*D)(mm)	230×145×72
Power (V)	200V-500V(50/60Hz)

Remote Alarm Controller

KJR-32B

Functions

Simple design

KJR-32B is specially designed for engineering applications. It does not display the ODU's working parameters, but it can connect to the alarm device when ODU is working abnormally, the RUN light will flash.

Specifications

Model	KJR-32B
Dimensions (H*W*D)(mm)	150×85×70
Power (V)	198-242V(50/60Hz)

Indoor Unit Group Controller

KJR-150A

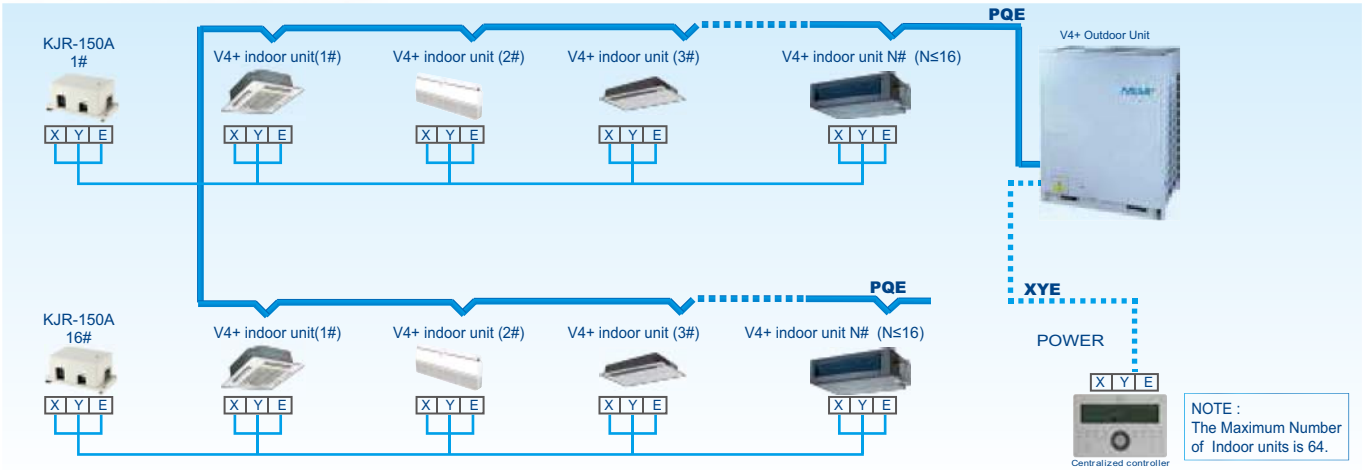
Functions

Simple design

KJR-150A is a indoor group controller, designed specifically for V4 plus indoor units. It can connect up to 16 indoor units through XYE ports.

With a display panel connected to KJR-150A, signal from wired controller and remote controller can control a group of indoor units simultaneously and all indoor units will run at the same setting parameters. You can also control the indoor units separately in each room by remote controller. The indoor unit will run at the state according to the latest setting.

System wiring diagram



* If you need to use a centralized controller, you can connect to the XYE from an outdoor unit.

Specifications

Model	KJR-150A
Dimensions (H*W*D)(mm)	150×85×70
Power (V)	198-242V(50/60Hz)

Accessories

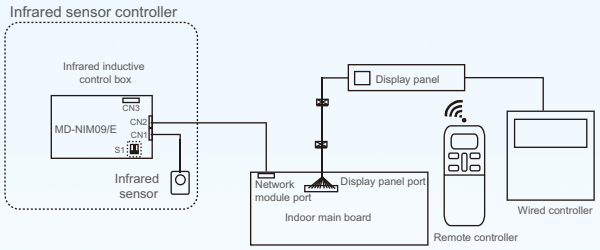
Infrared sensor controller

MD-NIM09

Automatically adjust the room environment.
Automatically extend the shutting down time, avoiding frequent ON/OFF.
Graceful appearance accommodates itself to different buildings.

Installation example

Electrical wiring



Remote controller or wired controller can control indoor unit.

Specifications

Model	MD-NIM09
Dimensions(H×W×D)(mm)	Senor part: 46×30×25.6, Control box: 86×72.8×15.5
Power	DC 5V

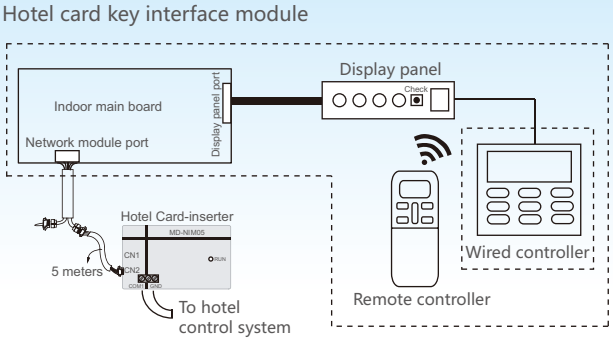
Hotel Card Key Interface Module

MD-NIM05

Cooperate with the wired controller to automate control.
Eliminates the need for high voltage power, making the device safe and steady.
Includes a build-in auto-restart function.
Remote controller or wired controller can control indoor unit.

Installation example

Electrical wiring



Specifications

Model	MD-NIM05
Dimensions (H*W*D)(mm)	86×72.8×15.5
Power (V)	DC 5V

Accessories

AHU Control Box

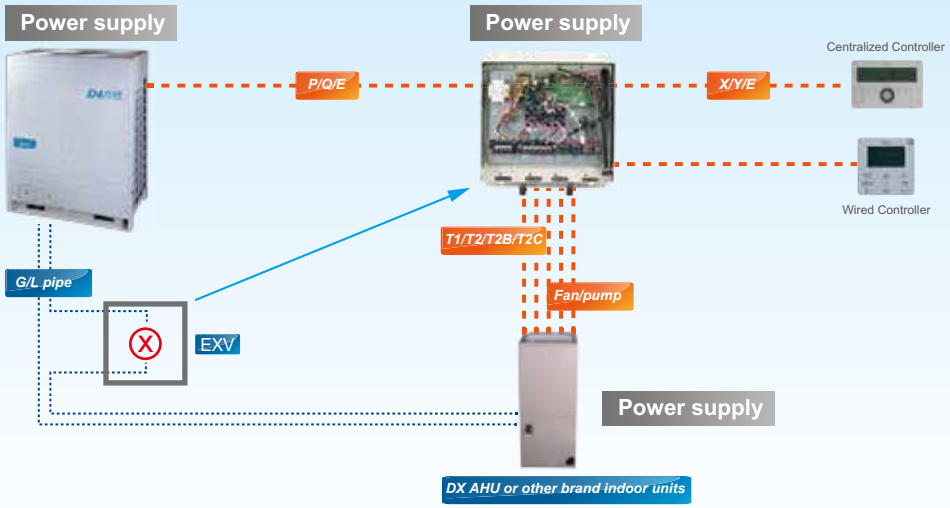
AHUKZ-01A/AHUKZ-02A/AHUKZ-03A

V4+ functions inside.

Can be used to connect VRF outdoor units with DX AHU or other brand indoor units

Introduction

AHUKZ-01A/AHUKZ-02A/AHUKZ-03A is an independent control box that can connect a AHU to V4 plus system to realize centralized control with V4 plus system. Control box wiring is as follows:



Specifications

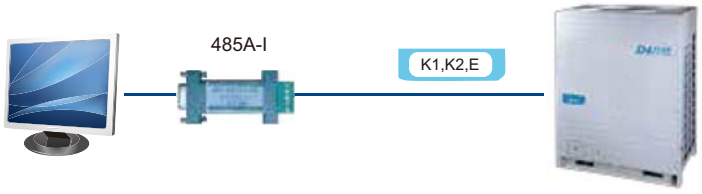
Model	AHUKZ-01A/AHUKZ-02A/AHUKZ-03A
Dimensions(H×W×D)(mm)	335×375×150
Power (V)	220-240V~ 50Hz 208-230V~ 60Hz

Midea Outdoor Unit Diagnosis Software MCAC-DIAG/E

Display the outdoor units' real-time running conditions.
Automatically outputs running status charts.
Supports V3, V4, V4+, D3, D4, V4+S and V4+R outdoor units.

Wiring diagram

The diagnostic software applies to K1, K2, E of the outdoor units. The corresponding wiring diagram is shown in the figure on the right.



■ Recommended config

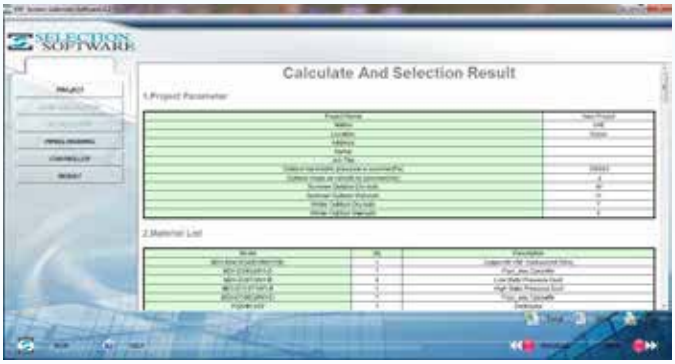
Operating system	WIN XP SP4/WIN 7
CPU	Pentium 4 2G or above
HDD	30G free space
Interface port	RS-232 terminal

Selection software

To meet consultants' and distributors' requirements, Midea has developed an advanced design automation tool that can be used in AutoCAD-based CAD version or Windows-based Sales version. The software provides quick and convenient selectable options for users, supports multiple languages, and greatly improves the selection process.

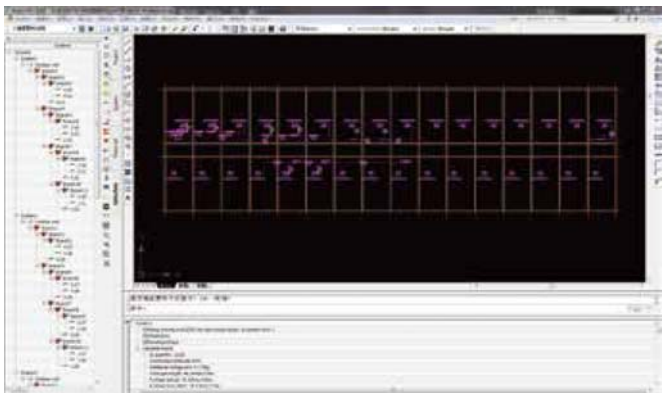
Windows Version

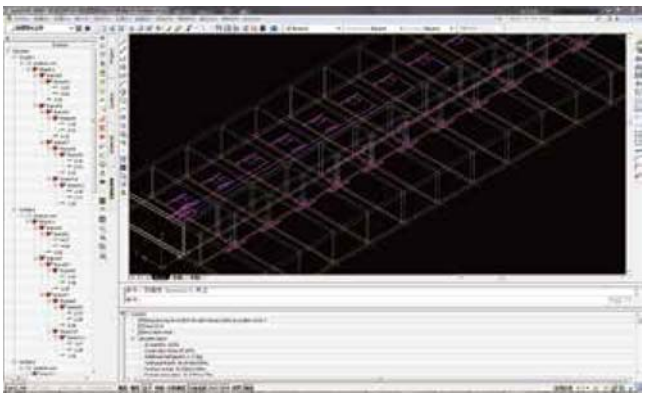
Load calculation： Provides two calculation methods (detailed room load calculation and rough load calculation).
Indoor & outdoor units selection: There are versatile indoor units and different outdoor units for choosing.
Piping drawing: Displays the detailed layout of an A/C system and the parameters for piping and branch distributors.
Controller selection: Provides a selection of controllers for indoor units and outdoor units, including wireless and remote controllers for indoor units.
Report output: Outputs a comprehensive selection report as a Word or PDF document.



CAD Version

AutoCAD add-on software
Automatic Calculation: Refrigerant & drain pipe size
Automatic Selection: Distributor kit & branch joint
System Check: Installation regulation & refrigerant addition
Automatic Report: Piping installation diagram, equipment list & quotation





HRV

Heat recovery ventilator

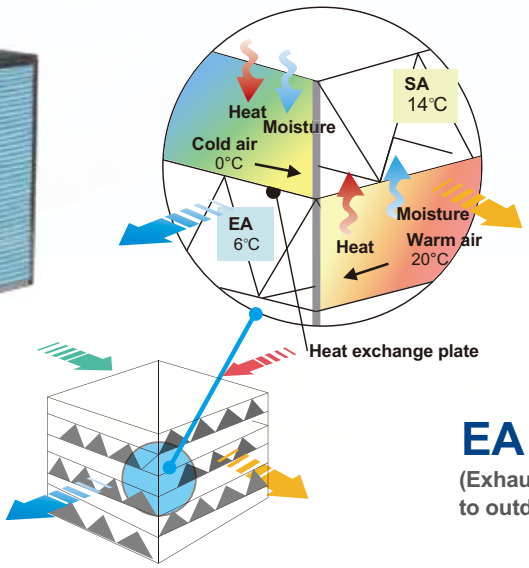
Larger air supply rate
enhanced heat exchange efficiency
enhanced energy saving property

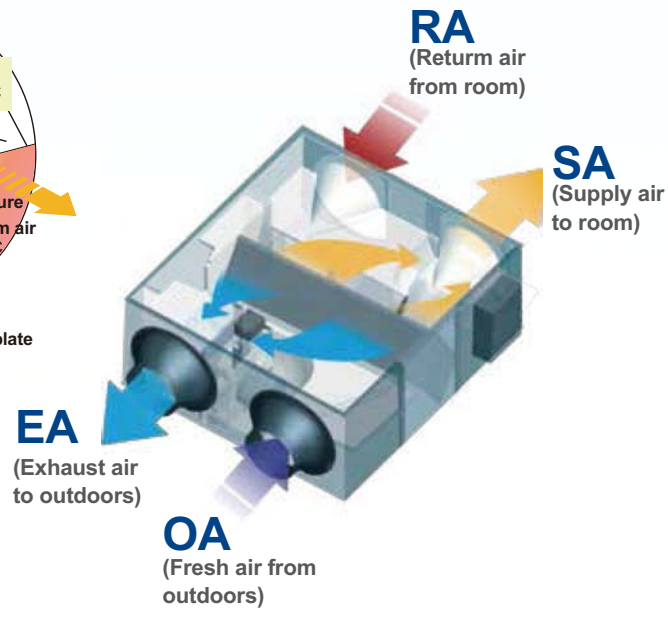
The heat recovery ventilator (HRV) can reclaim heat energy lost through ventilation and reduce the room temperature fluctuation caused by ventilation process. By utilizing the most advanced technology and technics, Midea HRV has extremely good performance. The heat exchanged core is made of special paper processed with chemical treatment, which could realize better temperature and humidity control of the room environment. Temperature exchange efficiency is above 65% and enthalpy exchange efficiency between 50-65%.

Model Names

HRV-200
HRV-300
HRV-400
HRV-500
HRV-800
HRV-1000

HRV-1500
HRV-2000



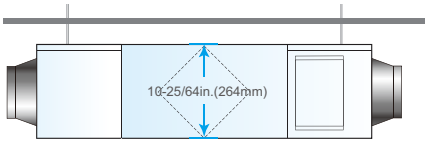


Low noise

Sound proof material is used to guarantee quiet operation.

Compact design, flexible installation and easy maintenance

With a min. height of only 10-25/64in.(264mm) and 50lbs (23kg) weight, the unit provides best convenience and possibility for installation in limited spaces.

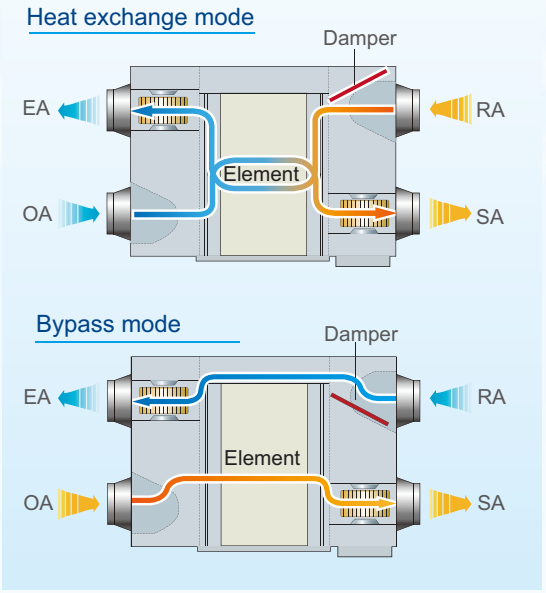


Multi-modes for different situations

Heat exchange mode

When air flow formed by the fans goes through the heat exchanged core in cross way, due to temperature difference between two channels of the core, thermal transmission happens naturally.

In summer days, high temperature outdoor air gets cooled by indoor exhaust air; in winter, low temperature outdoor air gets heated by indoor exhaust air. So the energy contained in exhaust air can be reclaimed and energy efficiency gets improved.



Bypass mode

In mild climate areas or seasons, when temperature and humidity level difference between indoor and outdoor is small, the unit works as conventional ventilation fan. Both supply fan and exhaust fan works at the same speed (Hi/mid/low/auto).

Air supply mode

It is one kind of bypass mode with air supply fan speed higher than exhaust fan speed. It can be used in mild climate area where large amount fresh air is needed.

Exhaust air mode

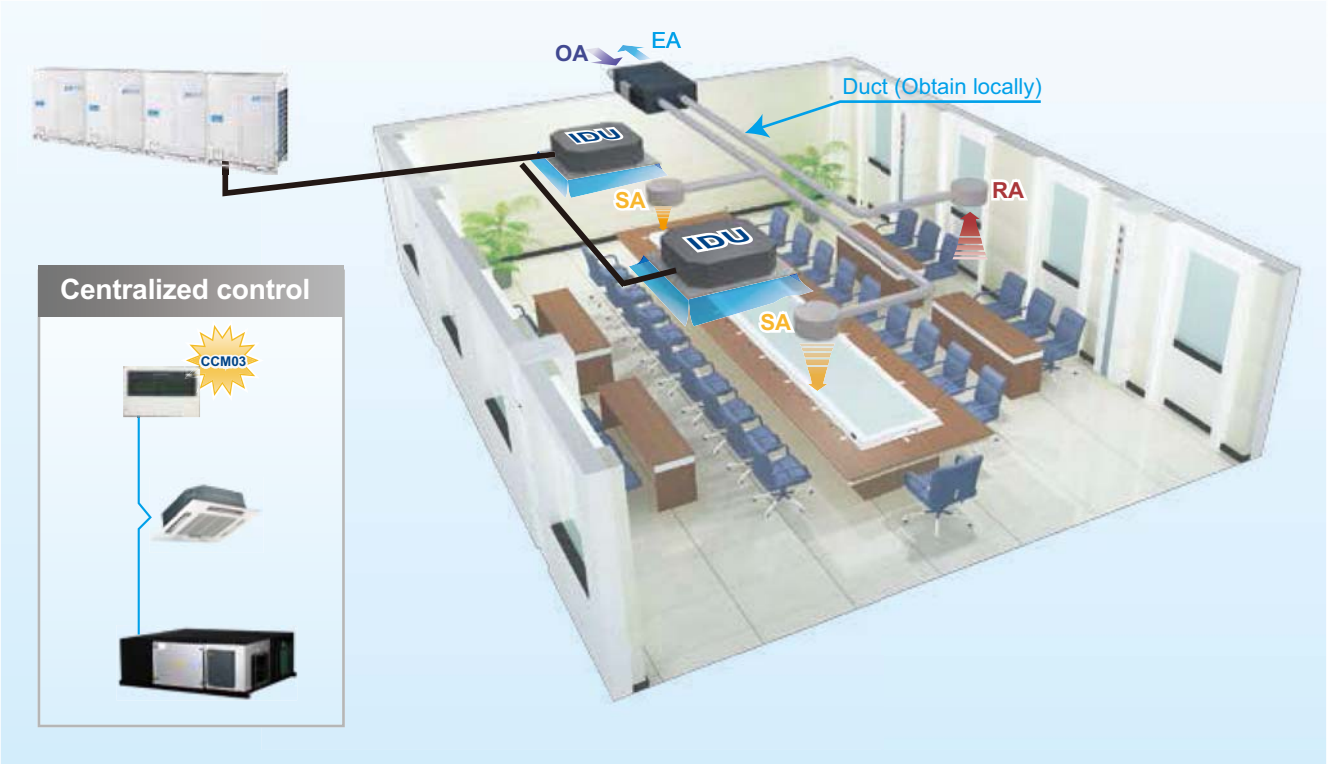
It is also one kind of bypass mode with exhaust fan speed higher than air supply fan speed. It can be used in mild climate area where large amount exhaust air needs to be expelled.

Auto mode

The controller chooses heat exchange mode or bypass mode according to the temperature difference between outdoor and indoor temperature. Both the two fans work at low speed.

Flexible control

Interlocking control with other indoor units by controller is possible.



Specifications

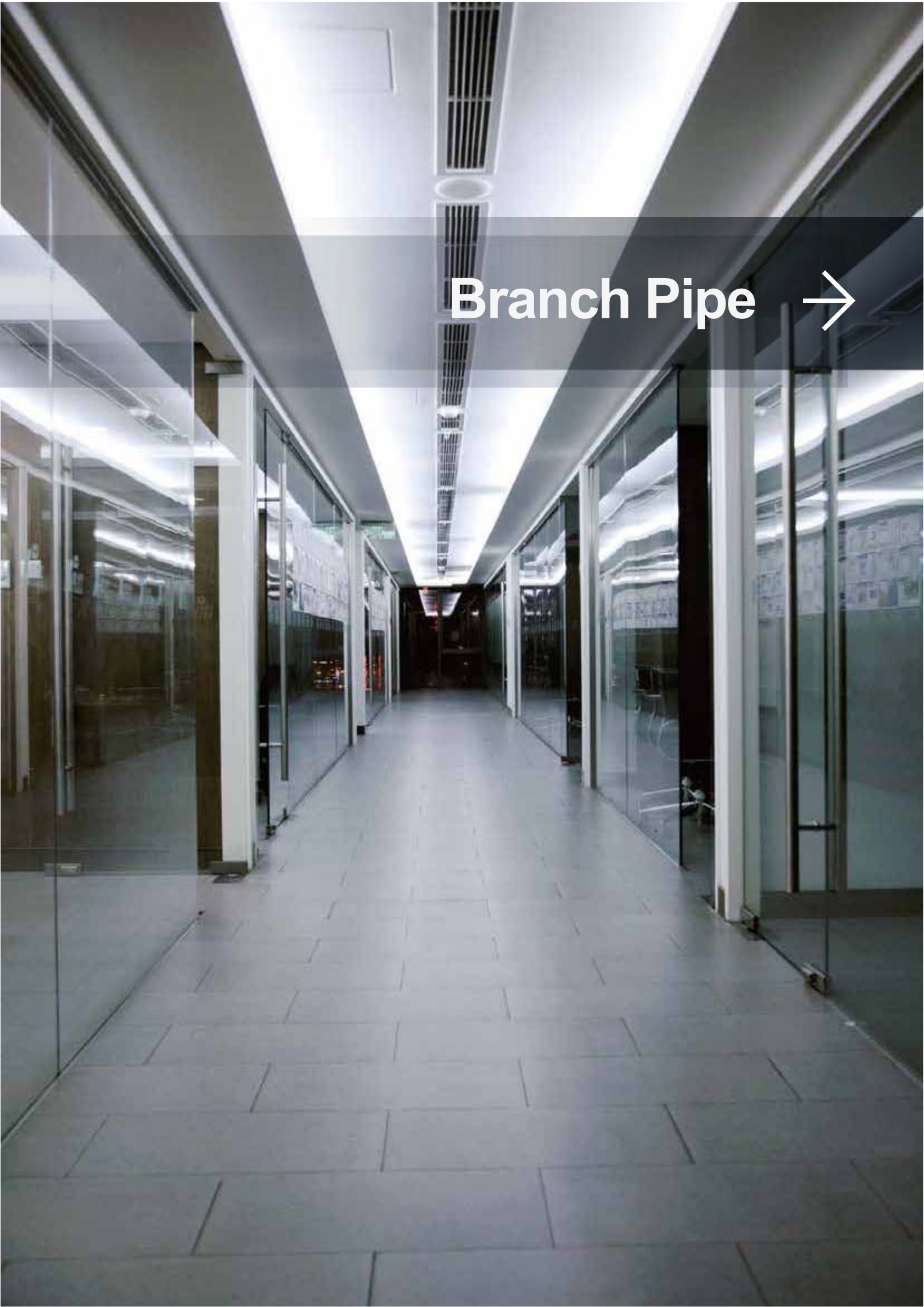
Model				HRV-200	HRV-300	HRV-400	HRV-500
Power supply			V/Ph/Hz	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50
Cooling	Temperature exchange efficiency	High	%	55	55	55	55
		Medium	%	55	55	55	55
		Low	%	60	60	60	60
	Enthalpy exchange efficiency	High	%	50	50	50	50
		Medium	%	50	50	50	50
		Low	%	55	55	55	55
Heating	Temperature exchange efficiency	High	%	60	60	60	65
		Medium	%	60	60	60	65
		Low	%	65	65	65	70
	Enthalpy exchange efficiency	High	%	55	55	60	60
		Medium	%	55	55	60	60
		Low	%	60	60	65	65
Sound pressure level	Heat exchange mode	High	dB(A)	27	30	32	35
		Medium	dB(A)	26	29	31	34
		Low	dB(A)	20	23	25	28
	Bypass mode	High	dB(A)	28	31	33	36
		Medium	dB(A)	27	30	32	35
		Low	dB(A)	22	25	27	30
Net dimension (W×D×H)			mm	866×655×264	944×722×270	944×927×270	1038×1026×270
Packing size (W×D×H)			mm	930×730×445	1010×800×450	1010×1010×450	1120×1120×452
Net/gross weight			kg	23/40	26/44	31/52	41/64
Casing				Galvanized steel plate			
Heat exchange system				Air to air cross flow total heat (sensible heat + latent heat) exchange			
Heat exchange element material				Specially processed nonflammable paper			
Fan	Type			Centrifugal fan			
	Airflow rate	High	m^3/h	200	300	400	500
		Medium	m^3/h	200	300	400	500
		Low	m^3/h	150	225	300	375
	ESP	High	Pa	75	75	80	80
		Medium	Pa	58	60	65	68
		Low	Pa	35	40	43	45
	Motor output		W	20	40	80	120
Duct diameter			mm	Φ144	Φ144	Φ144	Φ194
Operating temperature range			°C	-7~43 DB, 80% RH or less			

Model				HRV-800	HRV-1000	HRV-1500	HRV-2000
Power supply			V/Ph/Hz	220-240/1/50	220-240/1/50	380-415/3/50	380-415/3/50
Cooling	Temperature exchange efficiency	High	%	55	55	55	55
		Medium	%	55	55	/	/
		Low	%	60	60	/	/
	Enthalpy exchange efficiency	High	%	50	50	50	50
		Medium	%	50	50	/	/
		Low	%	55	55	/	/
Heating	Temperature exchange efficiency	High	%	65	65	65	65
		Medium	%	65	65	/	/
		Low	%	70	70	/	/
	Enthalpy exchange efficiency	High	%	60	60	60	60
		Medium	%	60	60	/	/
		Low	%	65	65	/	/
Sound pressure level	Heat exchange mode	High	dB(A)	39	40	51	53
		Medium	dB(A)	38	39	/	/
		Low	dB(A)	32	33	/	/
	Bypass mode	High	dB(A)	40	41	52	54
		Medium	dB(A)	39	40	/	/
		Low	dB(A)	34	35	/	/
Net dimension (W×D×H)			mm	1286×1006×388	1286×1256×388	1600×1270×540	1650×1470×540
Packing size (W×D×H)			mm	1380×1100×573	1390×1350×580	1680×1350×720	1760×1580×720
Net/gross weight			kg	62/88	79/110	163/224	182/247
Casing				Galvanized steel plate			
Heat exchange system				Air to air cross flow total heat (sensible heat + latent heat) exchange			
Heat exchange element material				Specially processed nonflammable paper			
Fan	Type			Centrifugal fan			
	Airflow rate	High	m^3/h	800	1000	1500	2000
		Medium	m^3/h	800	1000	/	/
		Low	m^3/h	600	750	/	/
	ESP	High	Pa	100	100	160	170
		Medium	Pa	82	85	/	/
		Low	Pa	54	58	/	/
	Motor output		W	360	360	450	450
Duct diameter			mm	Φ242	Φ242	346×326	346×326
Operating temperature range			°C	-7~43 DB, 80% RH or less			

Note:

1. For the units model of HRV (200-1000), there are 3-speed adjustable air volume (Hi, Med, Low), but for the units model of HRV (1500-2000), there are only 1-speed which cannot be adjusted.
2. Sound level is measured at 1.4m below the center of the body in an anechoic chamber.
3. Efficiency is measured under the following conditions:

* Cooling Condition: Air Exhaust Temp. 27°C DB,19.5°C WB., Fresh Air Temp. 35°C DB,28°C WB.
* Heating Condition: Air Exhaust Temp. 21°C DB,13°C WB., Fresh Air Temp. 5°C DB,2°C WB.


Branch Pipe

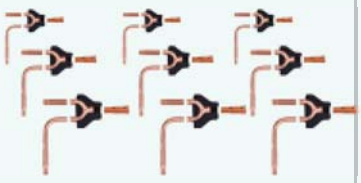
Branch Pipe

Branch joints of two-pipe refrigerant system

Model	Appearance	Model name	Packing Size (mm)/ Gross Weight (kg)	Description
Branch joint for 410A outdoor unit		FQZHW-02N1D	255×150×185/1.5	For two outdoor units connection
		FQZHW-03N1D	345×160×285/3.4	For three outdoor units connection
		FQZHW-04N1D	475×165×300/4.8	For four outdoor units connection
Branch joint for 410A indoor unit		FQZHN-01D	290×105×100/0.4	A*<16.6kW
		FQZHN-02D	290×105×100/0.6	16.6≤A*<33kW
		FQZHN-03D	310×130×125/0.9	33kW≤A*<66kW
		FQZHN-04D	350×180×170/1.5	66kW≤A*<92kW
		FQZHN-05D	365×195×215/1.9	92kW≤A*

A*:The total capacity of indoor units which is connected to this branch joint

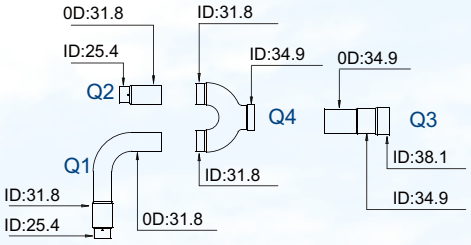
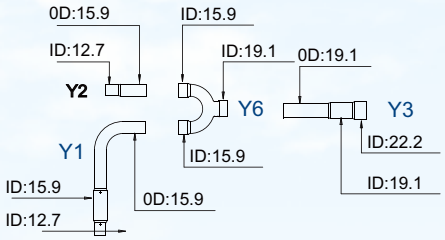
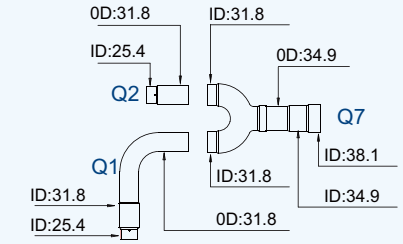
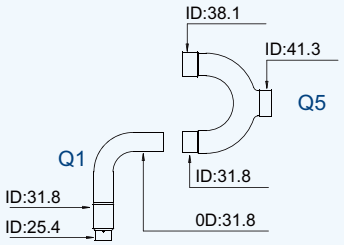
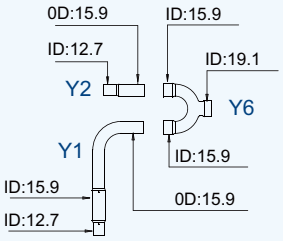
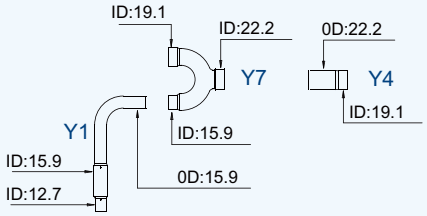
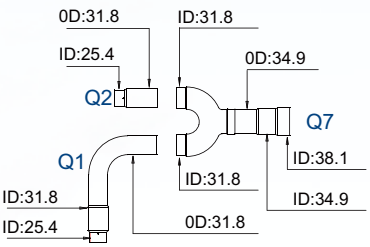
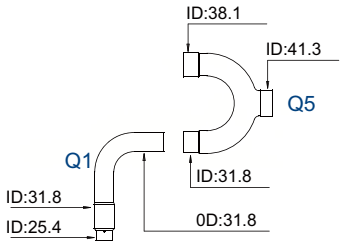
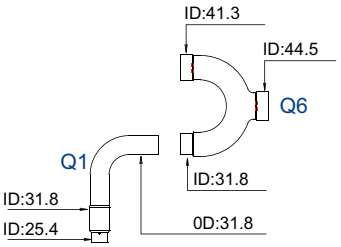
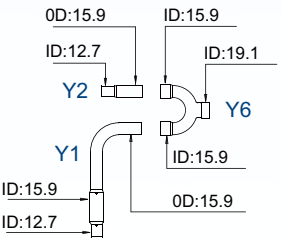
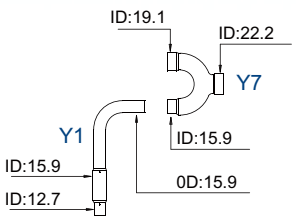
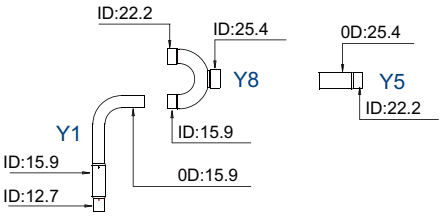
Branch joints of three-pipe refrigerant system

Model	Appearance	Model name	Packing Size (mm)/ Gross Weight (kg)	Description
Branch joint between outdoor unit		FQZHW-02SB	272×167×232/2.2	For two outdoor units connection
		FQZHW-03SB	472×157×312/5.0	For three outdoor units connection
		FQZHW-04SB	745×160×335/7.5	For four outdoor units connection
Branch joint between MS unit and outdoor unit		FQZHN-01SB	257×127×107/0.8	A*<16.6kW
		FQZHN-02SB	287×137×107/0.9	16.6≤A*<33kW
		FQZHN-03SB	297×167×177/1.4	33kW≤A*<66kW
		FQZHN-04SB	372×197×187/2.3	66kW≤A*<92kW
		FQZHN-05SB	432×222×227/3.3	92kW≤A*
Branch joint between MS unit and indoor unit		FQZHN-01D	290×105×100/0.4	A*<16.6kW

A*:The total capacity of indoor units which is connected to this branch joint

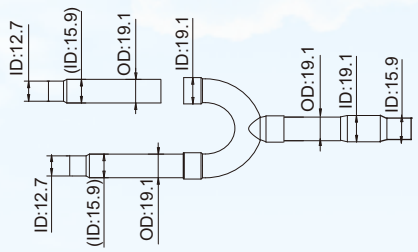
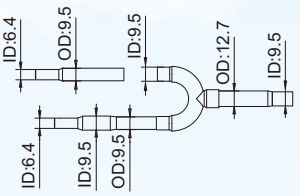
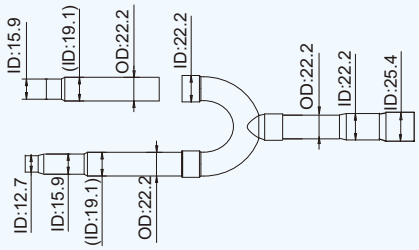
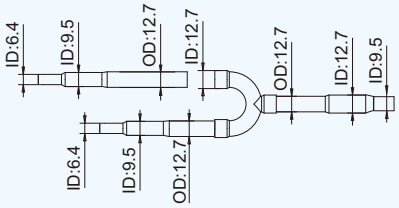
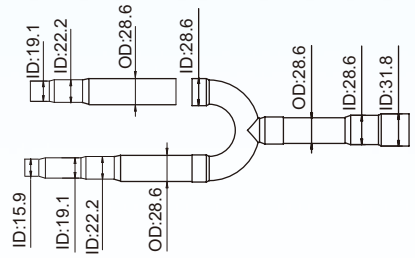
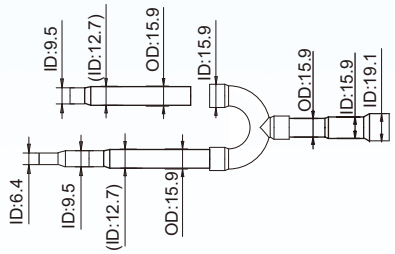
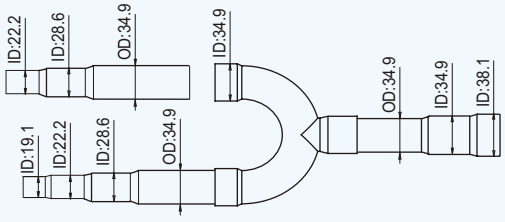
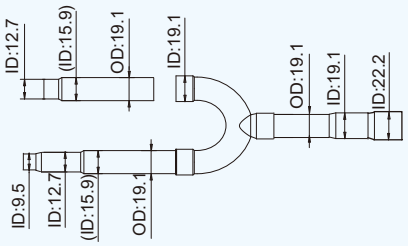
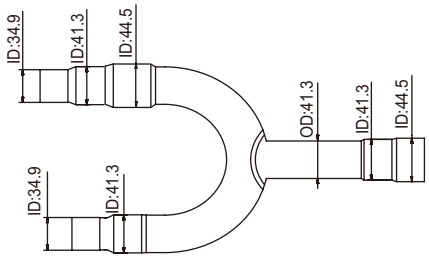
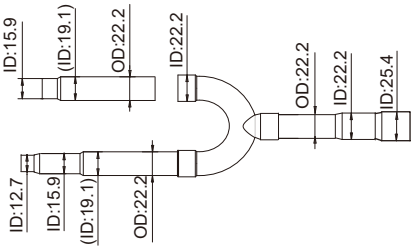
Dimensions

Outdoor branch joints

Branch model	Gas side joints	Liquid side joints
FQZHW-02N1D		
FQZHW-03N1D	 	 
FQZHW-04N1D	  	  

Dimensions

Indoor branch joints

Branch model	Gas side joints	Liquid side joints
FQZHN-01D		
FQZHN-02D		
FQZHN-03D		
FQZHN-04D		
FQZHN-05D		

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Certificate of Occupational Health and Safety Management System
Certificate No. 15912S20006R0L-1.

Dealer information

Commercial Air Conditioner Business Units
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
http://global.midea.com.cn
http://www.midea.com

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