



COMMERCIAL AIR CONDITIONERS

## R410A All DC Inverter VRF V5 X Series 50/60Hz





Factory

Testing room

Customer training

Reference project



Certificate No.: CC-454

Certificate No.: CC1417

# 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.

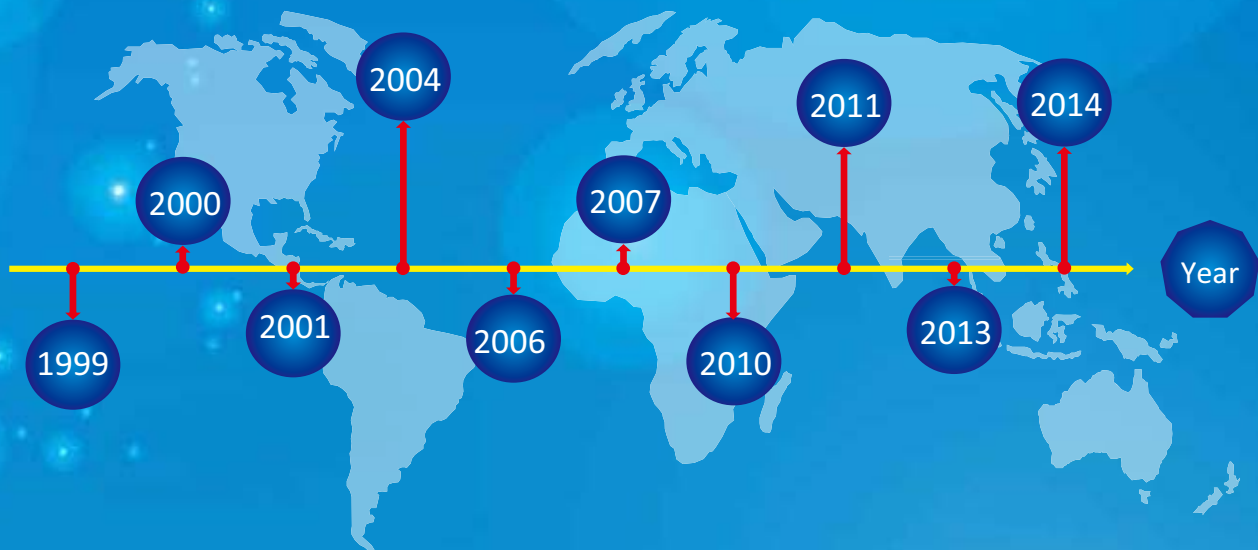
At present, MCAC is one of the globally leading product suppliers, underpinned by a mature marketing, sales, and project design framework.

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 3<sup>rd</sup> 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

# V5 X Series

Midea is proud to introduce its V5 X SERIES VRF. Designed to optimize the system and better meet market needs.

V5 X SERIES VRF offers a large capacity from 8HP up to 88HP in 2HP increments by combining 4 outdoor units. It also incorporates a range of outstanding features, wide-range outdoor and indoor units, high external static pressure, and energy saving technologies. It supports an incredible piping length of 1,000m and a level difference of 110m, making it perfect for large high-rise buildings.

Features

Specifications

Indoor units lineup

Control system

HRV

Branch pipes

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# Features

## Wide Application Range

### Large capacity for big sized building

The outdoor units capacity range from 8HP up to 88HP in 2HP increment, max. combination of 4 basic models.

8,10,12HP



14,16,18,20,22HP



24~44HP



46~66HP

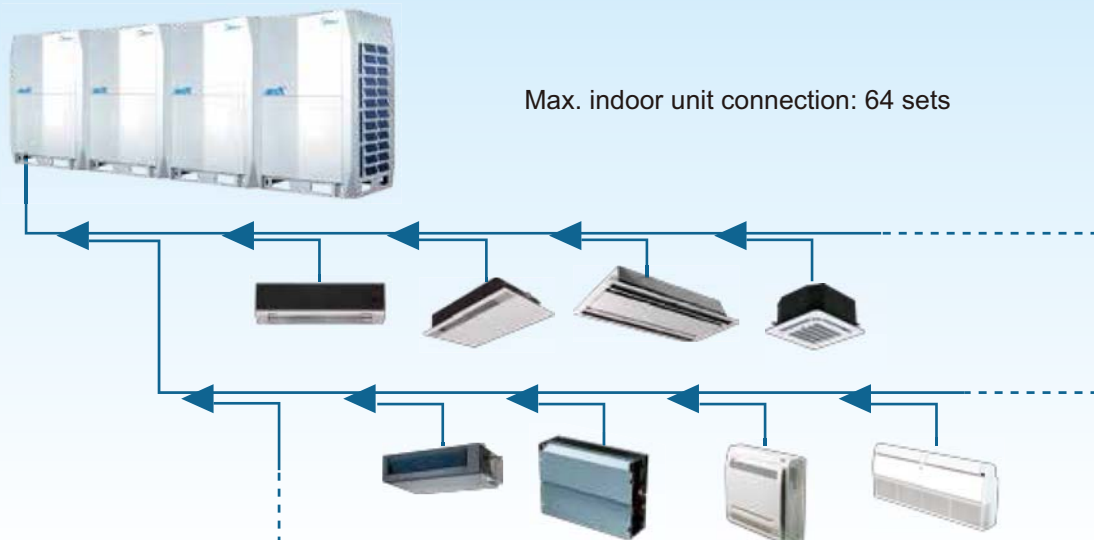


68~88HP

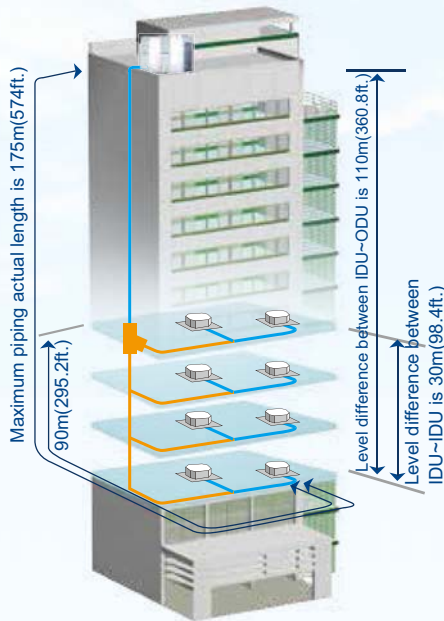


### Wide choices of locations

Maximum 64 indoor units with capacity up to 130% of total outdoor units' can be connected in one refrigeration system. It is especially suitable for office buildings, hotels, apartments, waiting rooms, hospitals, and so on.



## Long piping length



The solution supports an incredible piping length of 1,000m(3280ft.) and level difference of 110m(360.8ft.), making it perfect for large projects.

		Permitted value		
		m	ft.	
Piping length	Total pipe length*(Actual)	1000	3280	
	Maximum piping(L)	Actual length	175	574
		Equivalent length	200	656
	Piping (From the first IDU branch to the farthest IDU ) equivalent length		40/90*	131.2/295.2*
Level difference	Level difference between IDU~ODU	Outdoor unit up	90	295.2
		Outdoor unit down	110	360.8
	Level difference between IDU~IDU	30	98.4	

\*Total pipe length is equal to two times orange pipe length plus blue pipe length.

\*When the fastest pipe length is more than 40m(131.2ft.). It needs to meet the specific condition according to the installation part of the technical service manual.

## High external static pressure

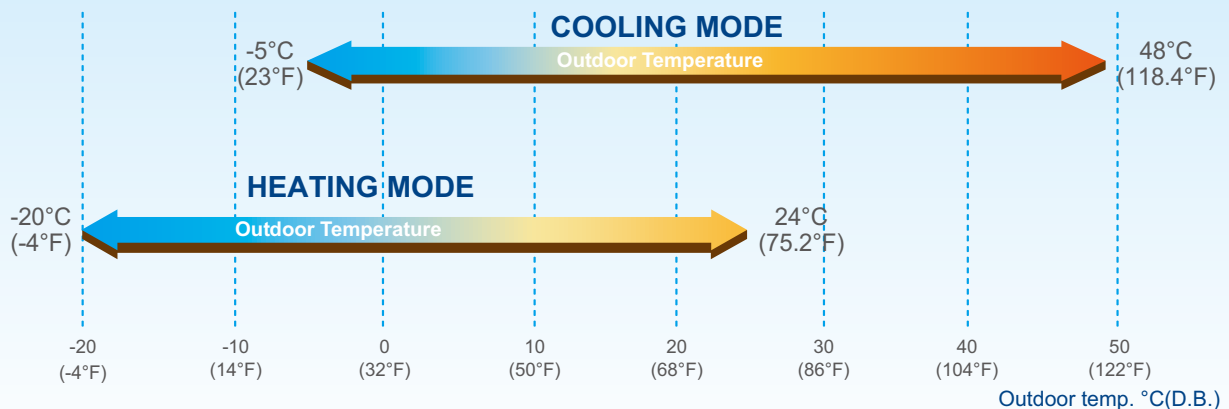
The high-static pressure propeller and optimized fan guard can adapt to various installation environments.

Midea now offers up to 60Pa(0.24"W.G.)\* external static pressure units for customized applications. A standard 0-20Pa(0-0.08"W.G.) function is equipped by default.

\*You need to consult Midea if you require over 60Pa(0.24"W.G.).



## Wide operation range



The V5 X series system operates stably at extreme temperatures ranging from -20°C(-4°F) to 48°C(118.4°F).

# Higher Reliability

## Duty cycling

In one combination, any outdoor unit can run as the master outdoor unit to equalize the service life of all units.



## Back-up function

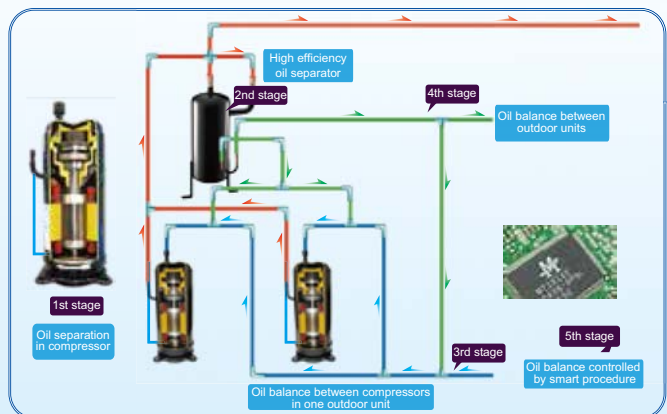
In a multiple system, when the master unit failed, any single unit can be set as the master unit, then the remaining units can keep on working. This can be set on PCB by DIP switches at site.



## High efficiency oil balance and oil return technology

5 stages oil control technology ensures every outdoor unit & compressor's oil always keep in the safe level, completely solve the compressor oil shortage problem.

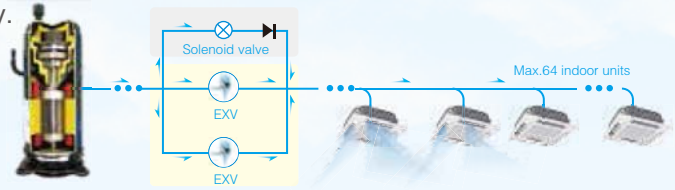
- **1st stage:** compressor internal oil separate.
- **2nd stage:** high efficiency centrifugal oil separator (separation efficiency up to 99%) makes oil separate from discharge gas and go back to compressors.
- **3rd stage:** oil balance pipes between compressors ensure even oil distribution to keep compressors running normally.
- **4th stage:** oil balance pipes among modules ensure even oil distribution among modules.
- **5th stage:** Auto oil return program by monitoring the running time and state of system ensures reliable oil return.





## Accurate control technology

- Double EXV and liquid side by pass solenoid valve in one system, each EXV part achieves 480 pulse to adjust flow precisely, total 960 pulse. All the solenoid valves equipped in the unit ensure temperature-control precisely, system running steadily and economically.
- 2000 pulses EXV is used in some indoor units to ensure precise refrigerant control and less temperature fluctuation for comfortable room environment.



## Real-time pressure control technology

- The pressure sensor can monitor the high pressure of the system and send it to the mainboard all the time.
- The system controls the speed of DC fan motor according to the load and the high pressure, so that the pressure can be regulated precisely.
- The system can operate in the best pressure status under different working environment, the reliability will be higher and the lifespan of the system will be longer.



## Temperature protection for electricity device



- Professional air outlet grille design, cool down control box temperature around 8°C(14.4°F).
- High temperature protection for PCB box, auto recover when temperature back to normal.

## Various kinds of protect function



Ground protection



Phase sequence protection



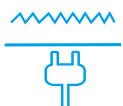
Default phase protection



High-voltage protection



Low-voltage protection



Current protection



Fan motor Temp. protection



Compressor overload protection



Compressor Temp. protection



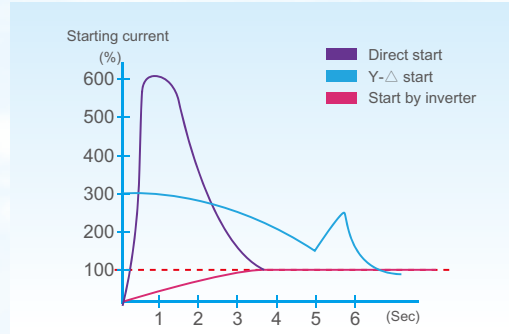
Pressure protection

# Enhanced Comfort

## Intelligent soft start technology

All DC inverter compressor and soft start function reduce strike to the electric network. This high-performance and low noise DC inveter 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.

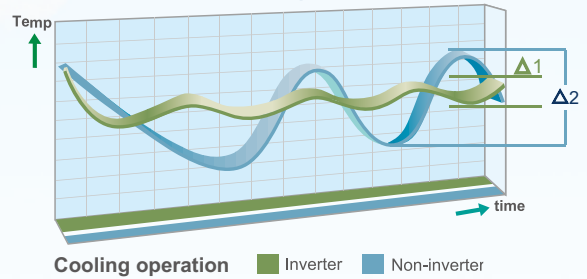
Comparison of start by inverter and by traditional methods



## Quick warm-up and cool-down design

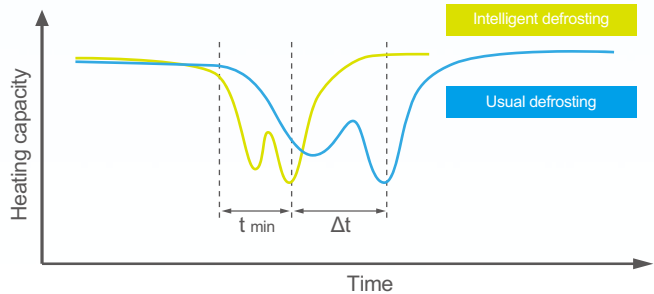
By utilizing the benefits of all DC inverter compressors, the system can reach full load quickly and shorten the warm-up and cool-down times to provide an immediate and comfortable air solution. Less temperature fluctuation will create a better living environment.

Fluctuation of room temperature



## 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.



## Optional operation mode

5 operation modes to be chosen:

- Heating priority mode (default)
- Cooling priority mode
- Heating only mode
- Cooling only mode
- VIP or Voting priority mode (No. 63 IDU or majority requirement priority)



Heating priority (default)



Cooling only



Vote priority



Cooling priority



Heating only



VIP priority

# Advanced silence technology

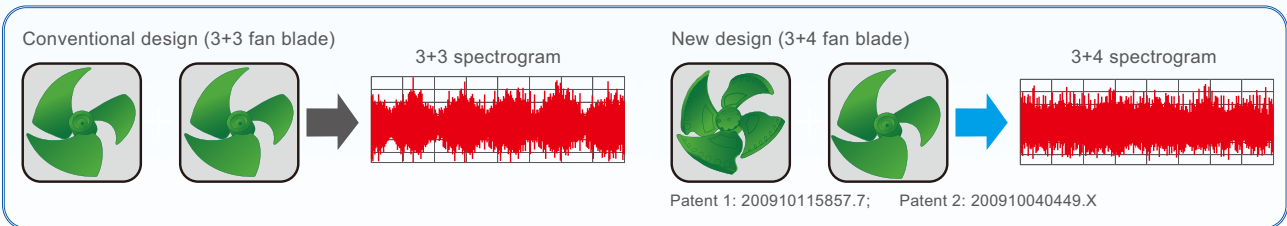
- Improved air outlet grille
- Anti vibration motor mounting frame
- All DC inverter compressor
- Compressor noise enclosure
- CFD designed new shape fan blade
- 3+4 fan blade design



- All DC inverter fan motor
- Night silent mode

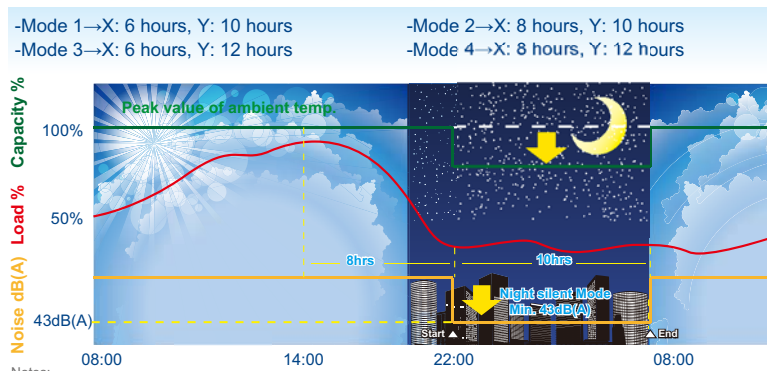
Features

## 3+4 fan blade, patent design



## Outdoor unit night silent mode

- Midea's Night Silent Mode feature which is easily set on the PCB board allows the unit to be set to varies time options during Non-peak and Peak operation time optimizing the units noise output. Extra silent operation mode can reduce sound level further, minimum 43dB (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.



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

## Indoor unit silent mode

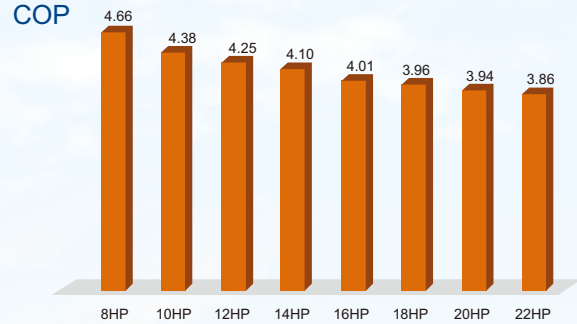


According to users' needs real time or the room temperature, users can set the SILENT MODE through the indoor wired controller KJR-29B (optional). The minimum noise degree is 22.5dB(A) (for the 1.5kW compact four-way cassette).

# High Efficiency

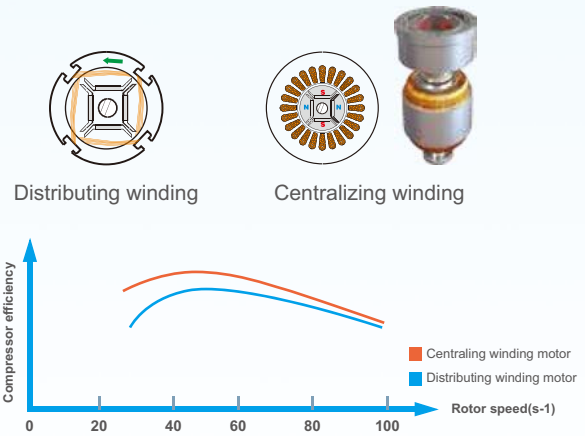
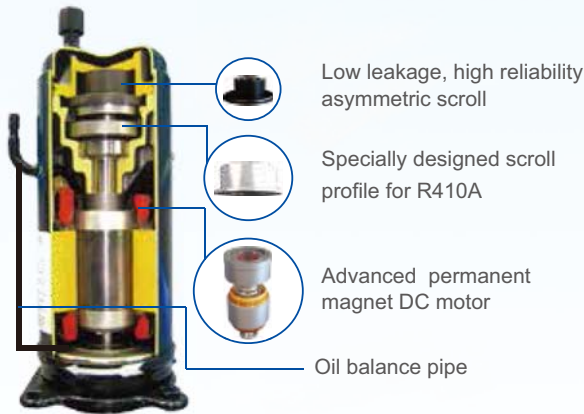
V5 X Series achieves the industry's top class energy efficiency of cooling and heating by utilizing DC compressor control, DC Fan motor, and improved performance heat exchanger.

## High EER and COP values



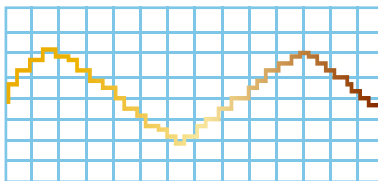
Features

## High efficiency DC inverter compressor

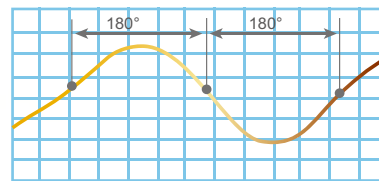


## Smooth 180° sine wave DC inverter

Smooth the rotation of the compressor motor, improve the compressor operation efficiency sharply. Effectively control the harmonic current and electromagnetic noise, and fully pass the international EMC test.



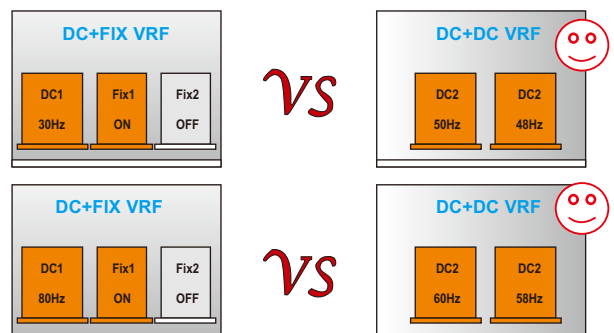
Common Sawtooth Wave



180° Sine Wave DC Inverter

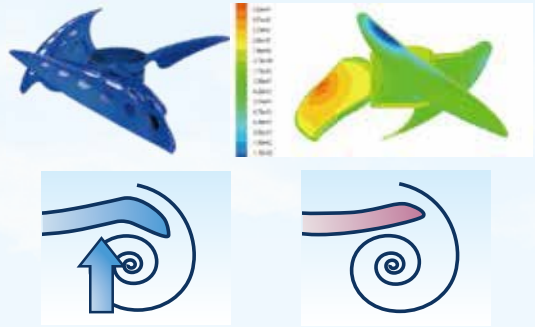
## All DC inverter compressor, auto energy allocation

Thanks to the all DC inverter compressors technology, the running unit's output will automatically adjust according to the real time load demands. Units are always running at 40-70Hz which is the most efficient range. It makes units cost less energy and keep in good condition.



## New profile fan blade

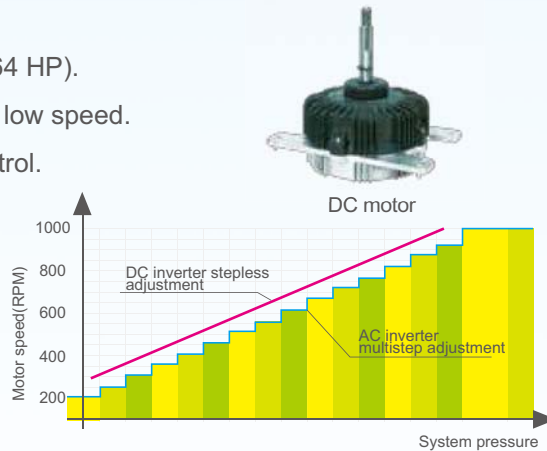
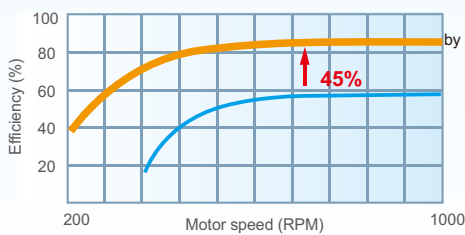
- A new CFD designed blade with concave suction surface changes the distribution of surface pressure.
- Through restraining the development of secondary currents, decreases the drop loss of wall air current.
- A new blade with sharp edges and a slight curve increases the airflow rate and lowers vibration and airflow resistance.



## DC fan motor

According to the running load and pressure, it controls the speed of DC fan to achieve the minimum power consumption.

- Used across entire range of models (from 8 to 64 HP).
- Efficiency improvement up to 45% especially at low speed.
- Wide speed adjustment with 18 steps vector control.



## High performance heat exchanger

**New design**      **Original design**

Reduce air resistance

High efficiency inner-threaded pipe, enhance heat transfer.

Hydrophilic film fins + inner-threaded pipes

**Common Design**      **Sub-cooling Technology**

43°C (109.4°F)      37.1°C (98.8°F)

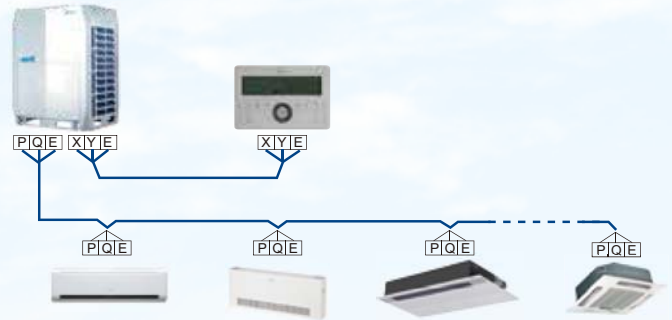
75°C (167°F)      75°C (167°F)

- 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.
- When the outdoor temperature is 35°C(95°F), the refrigerant can be cooled down to 37.1°C(98.8°F), thus achieving high heat-exchanging efficiency with only 2.1°C(3.8°F) temperature difference.

# Easier Installation and Service

## Simple communication wiring

Centralized controller (CCM30) can connect from indoor side or outdoor side (XYE terminals) at will. With one group of wires, we can realize the network communication and system communication. Such simple wiring is more convenient for installation work at site.



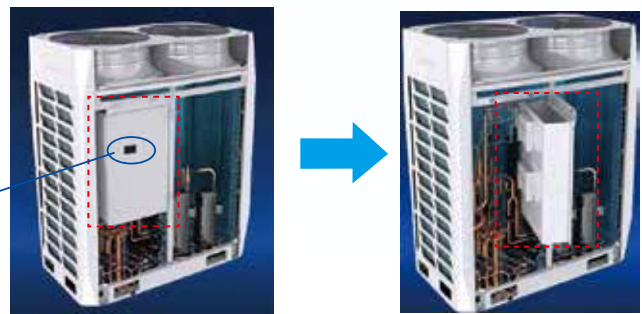
## Auto-test operation and auto-addressing function

- Just simply press the test operation button, the unit will perform an automatic system check, including wiring, shutoff valves, and sensors. The results are returned automatically after the check is finished.
- Outdoor unit can distribute addresses for indoor unit automatically. Wireless and wired controllers can query and modify each indoor unit's address.



## Rotatable electric control box

- The newly designed rotating control box is so excellent that it can rotate in maximum 150 degree. It is convenient for the inspection and maintenance of the pipeline system and greatly reduced the time of dismount the electric control box.
- Checking window for quick inspection of system status.



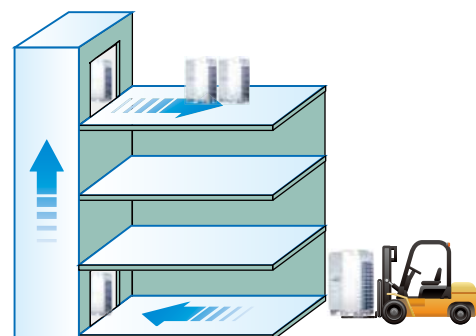
## 360° pipe connection

Pipes can be connected in multi directions: front, left, right and rear.



## Compact size for saving space

Compact size design minimizes the installation footprint, and is easier for transportation. The units can even be transported through elevator or forklift at the jobsite.



# Specifications

## Outdoor units' lineup

Model	HP	No. of compressors	Outdoor unit combination								Max. Qty. of indoor unit	Capacity kW	
			8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP		Cooling	Heating
MV5-X252W/V2GN1	8	1	1								13	25.2	27
MV5-X280W/V2GN1	10	1		1							16	28	31.5
MV5-X335W/V2GN1	12	1			1						20	33.5	37.5
MV5-X400W/V2GN1	14	2				1					23	40	45
MV5-X450W/V2GN1	16	2					1				26	45	50
MV5-X500W/V2GN1	18	2						1			29	50	56
MV5-X560W/V2GN1	20	2							1		33	56	63
MV5-X615W/V2GN1	22	2								1	36	61.5	69
MV5-X670W/V2GN1	24	2			2						39	67	75
MV5-X730W/V2GN1	26	3		1			1				43	73	81.5
MV5-X780W/V2GN1	28	3		1				1			46	78	87.5
MV5-X840W/V2GN1	30	3		1					1		50	84	94.5
MV5-X895W/V2GN1	32	3		1						1	53	89.5	100.5
MV5-X950W/V2GN1	34	3			1					1	56	95	106.5
MV5-X1000W/V2GN1	36	4						2			59	100	112
MV5-X1065W/V2GN1	38	4					1			1	63	106.5	119
MV5-X1115W/V2GN1	40	4						1		1	64	111.5	125
MV5-X1175W/V2GN1	42	4							1	1	64	117.5	132
MV5-X1230W/V2GN1	44	4								2	64	123	138
MV5-X1285W/V2GN1	46	4			2					1	64	128.5	144
MV5-X1345W/V2GN1	48	5		1			1			1	64	134.5	150.5
MV5-X1395W/V2GN1	50	5		1				1		1	64	139.5	156.5
MV5-X1455W/V2GN1	52	5		1					1	1	64	145.5	163.5
MV5-X1510W/V2GN1	54	5		1						2	64	151	169.5
MV5-X1565W/V2GN1	56	5			1					2	64	156.5	175.5
MV5-X1615W/V2GN1	58	6						2		1	64	161.5	181
MV5-X1680W/V2GN1	60	6					1			2	64	168	188
MV5-X1730W/V2GN1	62	6						1		2	64	173	194
MV5-X1790W/V2GN1	64	6							1	2	64	179	201
MV5-X1845W/V2GN1	66	6								3	64	184.5	207
MV5-X1900W/V2GN1	68	6			2					2	64	190	213
MV5-X1960W/V2GN1	70	7		1			1			2	64	196	219.5
MV5-X2010W/V2GN1	72	7		1				1		2	64	201	225.5
MV5-X2070W/V2GN1	74	7		1					1	2	64	207	232.5
MV5-X2125W/V2GN1	76	7		1						3	64	212.5	238.5
MV5-X2180W/V2GN1	78	7			1					3	64	218	244.5
MV5-X2230W/V2GN1	80	8						2		2	64	223	250
MV5-X2295W/V2GN1	82	8					1			3	64	229.5	257
MV5-X2345W/V2GN1	84	8						1		3	64	234.5	263
MV5-X2405W/V2GN1	86	8							1	3	64	240.5	270
MV5-X2460W/V2GN1	88	8								4	64	246	276

### Notes:

1. Capacities are based on the following conditions:

Cooling: Indoor temperature 27°C(80.6°F) DB/19°C(66.2°F) WB; Outdoor temperature 35°C(95°F) DB/24°C(75.2°F) WB

Heating: Indoor temperature 20°C(68°F) DB/15°C(59°F) WB; Outdoor temperature 7°C(44.6°F) DB/6°C(42.8°F) WB

2. Piping length: Interconnecting piping length is 7.5m, level difference is zero.

3. The above combination models are factory-recommended models.

# Outdoor specifications

Model			MV5-X252W/V2GN1	MV5-X280W/V2GN1	MV5-X335W/V2GN1	MV5-X400W/V2GN1
Power source		V-Ph-Hz	380~415V 3N 50Hz/60Hz			
Cooling	Capacity	kW	25.2	28.0	33.5	40.0
		RT	7.2	8.0	9.5	11.4
		kBtu/h	86.0	95.5	114.3	136.5
		kcal/h	21,672	24,080	28,810	34,400
	Power input	kW	5.79	7.02	8.71	10.81
EER	kW/kW	4.35	3.99	3.85	3.70	
Heating	Capacity	kW	27.0	31.5	37.5	45.0
		RT	7.7	8.9	10.7	12.8
		kBtu/h	92.1	107.5	128.0	153.5
		kcal/h	23,220	27,090	32,250	38,700
	Power input	kW	5.79	7.19	8.82	10.98
COP	kW/kW	4.66	4.38	4.25	4.10	
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130	50-130
	Max. quantity		13	16	20	23
Sound pressure level		dB(A)	43~58	43~59	43~60	43~62
Pipe connections	Liquid pipe	in.(mm)	Φ3/8(Φ9.53)	Φ3/8(Φ9.53)	Φ1/2(Φ12.7)	Φ1/2(Φ12.7)
	Gas pipe	in.(mm)	Φ7/8(Φ22.2)	Φ7/8(Φ22.2)	Φ1(Φ25.4)	Φ1(Φ25.4)
	Oil balance pipe	in.(mm)	Φ1/4(Φ6)	Φ1/4(Φ6)	Φ1/4(Φ6)	Φ1/4(Φ6)
Fan motor	Type		DC motor	DC motor	DC motor	DC motor
	Quantity		1	1	1	2
	Air flow rate	m3/h	12,000	12,000	12,000	14,000
		CFM	7,060	7,060	7,060	8,240
	Motor output	W	465	465	465	290+230
	ESP	in.WG(Pa)	0~0.08(0~20) (default)			
in.WG(Pa)		0.08~0.24(20~60) (customized)				
DC inverter compressor	Quantity		1	1	1	2
	Capacity	kW	21.06	21.06	23.25	13.8×2
		kBtu/h	71.9	71.9	79.3	47.1×2
	Crankcase heater	W	27.6×2	27.6×2	27.6×2	27.6×4
	Oil type		FVC68D	FVC68D	FVC68D	FVC68D
Oil charge	gal.(ml)	0.132(500)	0.132(500)	0.132(500)	0.132 (500) ×2	
Refrigerant	Type		R410A	R410A	R410A	R410A
	Factory charging	lbs.(kg)	20(9)	20(9)	24(11)	29(13)
Design pressure (High/Low)	psi	640/380	640/380	640/380	640/380	
	MPa	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6	
Net dimension (W×H×D)	inch	39×64-3/8×31-1/8				52-3/4×64-3/8×31-1/8
	mm	990×1635×790				1340×1635×790
Packing size (W×H×D)	inch	41-1/2×71-1/16×33-5/8				55-3/8×71-1/16×33-5/8
	mm	1055×1805×855				1405×1805×855
Net weight	lbs.(kg)	483(219)	483(219)	523(237)	655(297)	
Gross weight	lbs.(kg)	516(234)	516(234)	556(252)	695(315)	
Operating temperature range	Cooling	°F(°C)	23~118.4(-5~48)			
	Heating	°F(°C)	-4~75.2(-20~24)			

## Notes:

1. 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.

2. 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.

3. Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1.3m above the floor.

4. The above data may be changed without notice for further improvement on quality and performance.



# Outdoor specifications

Model			MV5-X450W/V2GN1	MV5-X500W/V2GN1	MV5-X560W/V2GN1	MV5-X615W/V2GN1
Power source		V-Ph-Hz	380~415V 3N 50Hz/60Hz			
Cooling	Capacity	kW	45.0	50.0	56.0	61.5
		RT	12.8	14.3	16.0	17.6
		kBtu/h	153.5	170.6	191.1	209.8
		kcal/h	38,700	43,000	48,160	52,890
	Power input	kW	12.83	14.47	16.67	18.77
EER	kW/kW	3.51	3.46	3.36	3.28	
Heating	Capacity	kW	50.0	56.0	63.0	69.0
		RT	14.2	16.0	18.0	19.7
		kBtu/h	170.6	191.1	214.9	235.4
		kcal/h	43,000	48,160	54,180	59,340
	Power input	kW	12.47	14.15	15.98	17.86
COP	kW/kW	4.01	3.96	3.94	3.86	
Connectable indoor unit	Total capacity	%	50-130	50-130	50-130	50-130
	Max. quantity		26	29	33	36
Sound pressure level		dB(A)	43~62	43~63	43~63	43~63
Pipe connections	Liquid pipe	in.(mm)	Φ1/2(Φ12.7)	Φ5/8(Φ15.9)	Φ5/8(Φ15.9)	Φ5/8(Φ15.9)
	Gas pipe	in.(mm)	Φ1-1/8(Φ28.6)	Φ1-1/8(Φ28.6)	Φ1-1/8(Φ28.6)	Φ1-1/8(Φ28.6)
	Oil balance pipe	in.(mm)	Φ1/4(Φ6)	Φ1/4(Φ6)	Φ1/4(Φ6)	Φ1/4(Φ6)
Fan motor	Type		DC motor	DC motor	DC motor	DC motor
	Quantity		2	2	2	2
	Air flow rate	m3/h	14,000	16,000	16,000	16,000
		CFM	8,240	9,410	9,410	9,410
	Motor output	W	290+230	420+350	440+350	440+350
	ESP	in.WG(Pa)	0~0.08(0~20) (default)			
in.WG(Pa)		0.08~0.24(20~60) (customized)				
DC inverter compressor	Quantity		2	2	2	2
	Capacity	kW	13.8×2	11.8+23.25	23.25×2	23.25×2
		kBtu/h	47.1×2	40.3+79.3	79.3×2	79.3×2
	Crankcase heater	W	27.6×4	27.6×4	27.6×4	27.6×4
	Oil type		FVC68D	FVC68D	FVC68D	FVC68D
Oil charge	gal.(ml)	0.132 (500) ×2	0.132(500)×2	0.132(500)×2	0.132(500)×2	
Refrigerant	Type		R410A	R410A	R410A	R410A
	Factory charging	lbs.(kg)	29(13)	29(13)	35(16)	35(16)
Design pressure (High/Low)	psi		640/380	640/380	640/380	640/380
	MPa		4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6
Net dimension (W×H×D)	inch		52-3/4×64-3/8×31-1/8			
	mm		1340×1635×790			
Packing size (W×H×D)	inch		55-3/8×71-1/16×33-5/8			
	mm		1405×1805×855			
Net weight	lbs.(kg)		655(297)	673(305)	750(340)	750(340)
Gross weight	lbs.(kg)		695(315)	712(323)	790(358)	790(358)
Operating temperature range	Cooling	°F(°C)	23~118.4(-5~48)			
	Heating	°F(°C)	-4~75.2(-20~24)			

## Notes:

1. 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.

2. 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.

3. Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1.3m above the floor.

4. The above data may be changed without notice for further improvement on quality and performance.

# 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	1.8	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.

● : Available for 50&60Hz.

● : Only available for 50Hz.



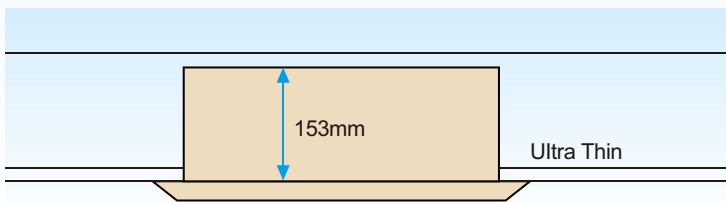
# One-way Cassette



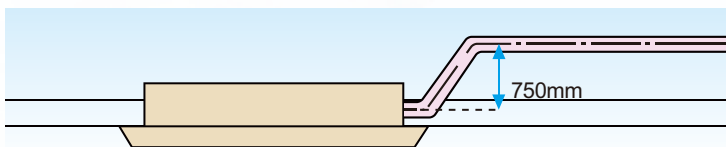
- Auto Restart
- Auto Addressing
- Follow Me
- LED Display
- Built-in Drain Pump
- Fresh Air
- Cleanable Panel
- Anti-Cold Air Function

## 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.

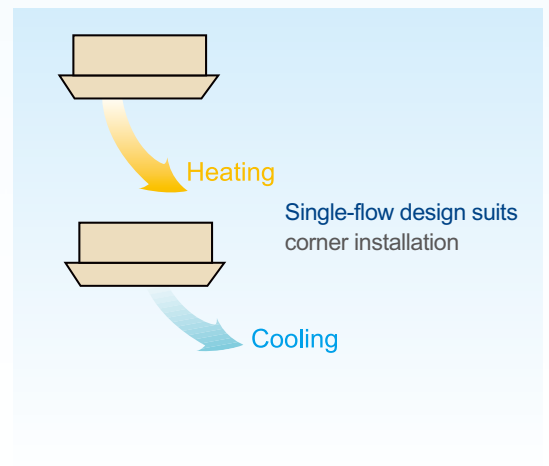


Standard built-in drain pump with 750mm pump head.



## Auto swing

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

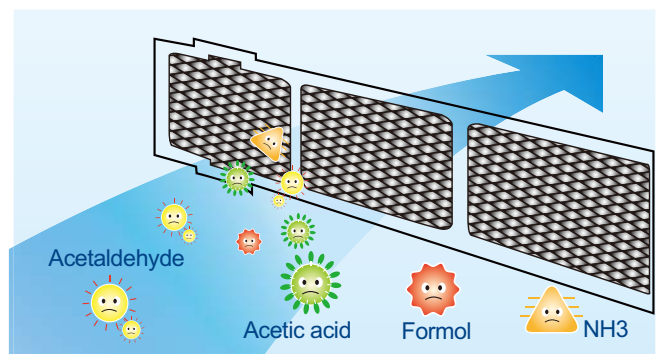


## Fresh air, improved air quality

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.



## 50Hz Specifications

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	W	41	41	41	41	80	85		
Rated current	Cooling	A	0.24	0.24	0.25	0.25	0.37	0.39		
	Heating	A	0.24	0.24	0.25	0.25	0.37	0.39		
Airflow rate(H/M/L)	m³/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				1147×200×640				
	Gross dim.(W×H×D)	mm				1380×265×775				
	Net/Gross weight	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)	mm		1232×107×517		1232×107×517		1500×110×870		
	Net/Gross weight	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		OD Φ25	
Standard controller	Wireless remote controller RM05/BG(T)E-A/E)									

## 60Hz Specifications

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,208-230V,60Hz				1-phase,220-240V,60Hz					
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	W	41	41	41	41	80	85			
Rated current	Cooling	A	0.24	0.24	0.25	0.25	0.37	0.39			
	Heating	A	0.24	0.24	0.25	0.25	0.37	0.39			
Airflow rate (H/M/L)	m³/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)	in.(mm)				41-1/2×6-21/32×16-47/64(1054×169×425)		45-5/32×7-7/8×25-13/64 (1147×200×640)			
	Gross dim.(W×H×D)	in.(mm)				45-15/32×9-41/64×19-19/64(1155×245×490)		54-21/64×10-7/16×30-33/64 (1380×265×775)			
	Net/Gross weight	lbs.(kg)		27.8/35.3(12.5/16)		28.8/36.4(13/16.5)		(69.5/82.1)31.5/37.2			
Panel	Net dim.(W×H×D)	in.(mm)		46-29/64×1-7/16×18-5/16 (1180×36.5×465)		46-29/64×1-7/16×18-5/16 (1180×36.5×465)		56-7/64×25/64×29-23/32 (1425×10×755)			
	Gross dim.(W×H×D)	in.(mm)		48-1/2×4-7/32×20-23/64 (1232×107×517)		48-1/2×4-7/32×20-23/64 (1232×107×517)		59-1/16×4-21/64×34-1/4 (1500×110×870)			
	Net/Gross weight	lbs.(kg)		7.7/11.5(3.5/5.2)		7.7/11.5(3.5/5.2)		19.6/26.5(9/12)			
Piping connections	L(flare)	in.(mm)		1/4(Φ6.35)		1/4(Φ6.35)		1/4(Φ6.35)		3/8(Φ9.53)	
	G(flare)	in.(mm)		1/2(Φ12.7)		1/2(Φ12.7)		1/2(Φ12.7)		5/8(Φ15.9)	
	Drain piping	in.(mm)		OD 63/64(Φ25)		OD 63/64(Φ25)		OD 63/64(Φ25)		OD 63/64(Φ25)	
Standard controller	Wireless remote controller (RM05/BG(T)E-A)										

Notes:

- Nominal cooling capacities are based on the following conditions: return air temp.: 80.6°F(27°C)DB,66.2°F(19°C)WB, and outdoor temp.: 95°F(35°C)DB, equivalent ref. piping: 26.25ft. (8m) (horizontal)
- Nominal heating capacities are based on the following conditions: return air temp.: 68°F(20°C)DB, outdoor temp.: 44.6°F(7°C)DB,42.8°F(6°C)WB, and equivalent ref. Piping: 26.25ft. (8m) (horizontal)
- Sound Level is measured 4.59ft.(1.4m) below the unit

# Two-way Cassette



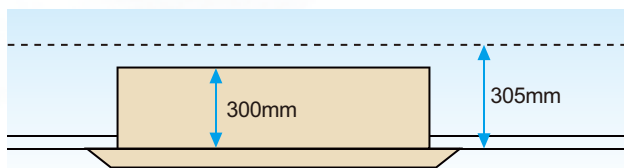
- Auto Restart
- Fresh Air
- Auto Addressing
- Cleanable Panel
- Follow Me
- Anti-Cold Air Function
- LED Display
- Built-in Drain Pump

## Quiet operation

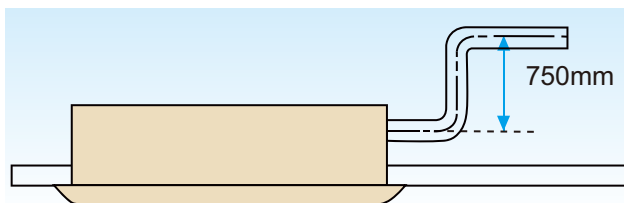
Optimized airflow duct with low resistance greatly reduces noise, minimum down to 24dB(A).

## 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.



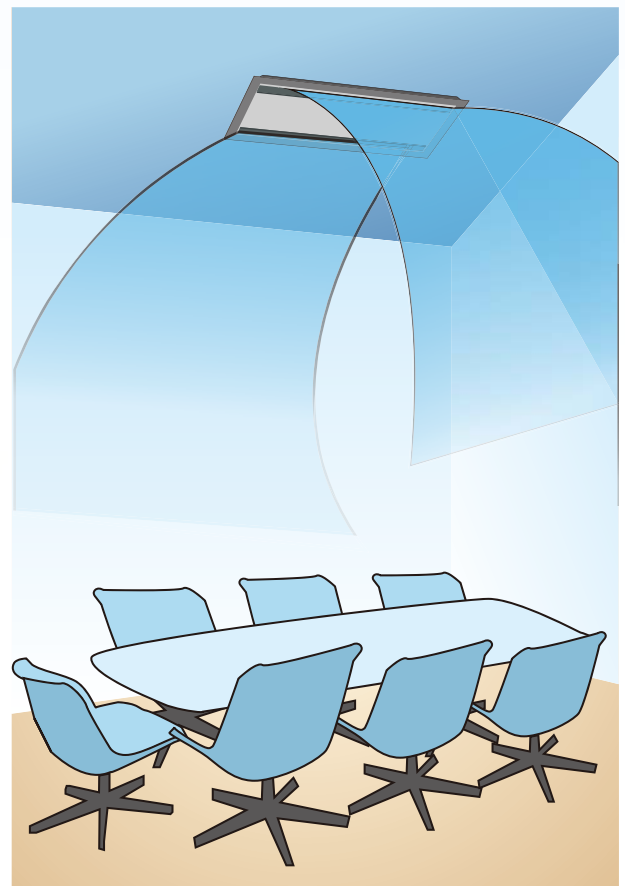
Standard built-in drain pump with 750mm pump head (higher pump head can be customized).



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.





## 50Hz Specifications

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)		m³/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 weight		kg	34/42.5	34/42.5	34/42.5	36.5/45	36.5/45
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 weight		kg	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)					

## 60Hz Specifications

Model		MDV-D22Q2/VN1	MDV-D28Q2/VN1	MDV-D36Q2/VN1	MDV-D45Q2/VN1	MDV-D56Q2/VN1	MDV-D71Q2/VN1	
Power supply		1-phase, 208-230V, 60Hz						
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	5	6.3	8	
	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	78	78	83	115	133	205
	Heating		78	78	83	115	133	205
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)		m³/h	674/509/381	674/509/381	740/577/435	878/689/561	941/776/654	1,236/1,110/864
		CFM	397/300/224	397/300/224	436/340/256	517/406/330	554/457/385	727/653/509
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)	in.(mm)	46-9/32×11-49/64×23-17/64(1172×299×591)					
	Gross dim.(W×H×D)		53-11/32×15-3/4×26-37/64(1355×400×675)					
	Net/gross weight		lbs.(kg)	75/94(34/42.5)	75/94(34/42.5)	75/94(34/42.5)	80.5/99(36.5/45)	80.5/99(36.5/45)
Panel	Net dim.(W×H×D)	in.(mm)	56-19/64×2-3/32×26-49/64(1430×53×680)					
	Gross dim.(W×H×D)		60-3/64×5-1/8×30-1/8(1525×130×765)					
	Net/gross weight		lbs.(kg)	23/33(10.5/15)	23/33(10.5/15)	23/33(10.5/15)	23/33(10.5/15)	23/33(10.5/15)
Piping connections	L(flare)	in.(mm)	Φ1/4(6.35)	Φ1/4(6.35)	Φ1/4(6.35)	Φ1/4(6.35)	Φ3/8(9.53)	Φ3/8(9.53)
	G(flare)	in.(mm)	Φ1/2(12.7)	Φ1/2(12.7)	Φ1/2(12.7)	Φ1/2(12.7)	Φ5/8(15.9)	Φ5/8(15.9)
	Drain piping	in.(mm)	OD 1-17/64(Φ32)	OD 1-17/64(Φ32)	OD 1-17/64(Φ32)	OD 1-17/64(Φ32)	OD 1-17/64(Φ32)	OD 1-17/64(Φ32)
Standard controller		-	Wireless remote controller (RM05/BG(T)E-A)					

### Notes:

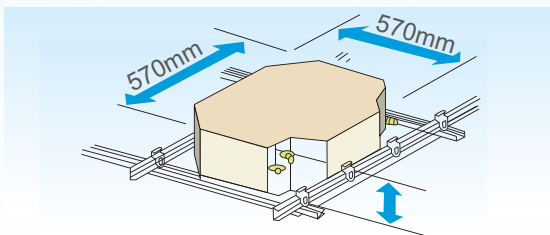
- Nominal cooling capacities are based on the following conditions: return air temp. : 80.6°F(27°C)DB,66.2°F(19°C)WB,and outdoor temp.: 95°F(35°C)DB,equivalent ref. piping: 26.25ft. (8m) (horizontal)
- Nominal heating capacities are based on the following conditions: return air temp.: 68°F(20°C)DB, outdoor temp.: 44.6°F(7°C)DB,42.8°F(6°C)WB, and equivalent ref. Piping: 26.25ft. (8m) (horizontal)
- Sound Level is measured 4.59ft. (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



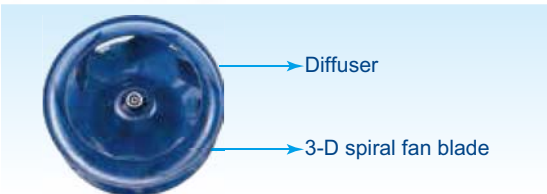
Extremely compact casing suits any room's decor and requires little space for installation on a low ceiling. Due to the compact body and light weight, all models can be installed without a hoist.

## Fresh air intake



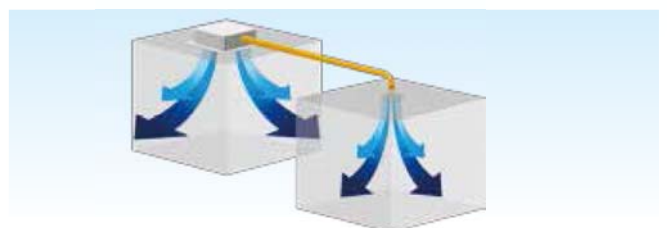
Fresh air can enter through the cassette unit so you can enjoy even fresher air in your room.

## Quiet operation, gentle air supply



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

## Sub duct



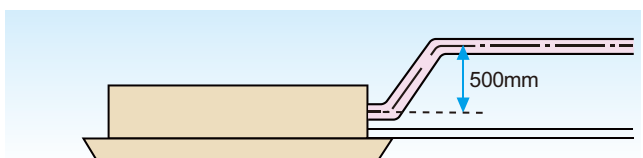
Sub duct enables you to use the same air conditioner unit to cool an additional smaller space nearby.

## 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.

## 50Hz Specifications

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)		m³/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	570x260x570	570x260x570	570x260x570	570x260x570	570x260x570
	Gross dim.(W×H×D)		675x285x675	675x285x675	675x285x675	675x285x675	675x285x675
	Net/Gross weight		kg	16/19.5	16/20	16/20	18/22
Panel	Net dim.(W×H×D)	mm	647x50x647	647x50x647	647x50x647	647x50x647	647x50x647
	Gross dim.(W×H×D)		715x123x715	715x123x715	715x123x715	715x123x715	715x123x715
	Net/Gross weight		kg	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)					

## 60Hz Specifications

Model		MDV-D22Q4/VN1-A3	MDV-D28Q4/VN1-A3	MDV-D36Q4/VN1-A3	MDV-D45Q4/VN1-A3	
Power supply		1-phase, 208-230V 60Hz				
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	2.4	3.2	4	5	
	kcal/h	2,100	2,800	3,400	4,300	
	Btu/h	8,200	10,900	13,600	17,100	
Power input	Cooling	W	51	52	58	58
	Heating		43	44	50	51
Rated current	Cooling	A	0.175	0.175	0.21	0.21
	Heating		0.175	0.175	0.21	0.21
Airflow rate(SH/H/M/L)		m³/h	532/397/292/215	539/408/310/231	632/496/359/263	632/496/359/263
		CFM	313/234/172/127	317/240/182/136	372/292/211/155	372/292/211/155
Sound pressure level(H/M/L)		dB(A)	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			
Body	Net dim.(W×H×D)	in.(mm)	22-7/16×10-15/64×22-7/16(570×260×570)			
	Gross dim.(W×H×D)		26-9/16×11-7/32×26-9/16(675×285×675)			
	Net/Gross weight		lbs.(kg)	35.3/44.1(16/20)	35.3/44.1(16/20)	39.7/48.5(18/22)
Panel	Net dim.(W×H×D)	in.(mm)	25-15/32×1-31/32×25-15/2(647×50×647)			
	Gross dim.(W×H×D)		28-5/32×4-27/32×28-5/32 (715×123×715)			
	Net/Gross weight		lbs.(kg)	6.6/11(3/5)	6.6/11(3/5)	6.6/11(3/5)
Piping connections	L(flare)	in.(mm)	Φ1/4(6.35)	Φ1/4(6.35)	Φ1/4(6.35)	Φ1/4(6.35)
	G(flare)	in.(mm)	Φ1/2(12.7)	Φ1/2(12.7)	Φ1/2(12.7)	Φ1/2(12.7)
	Drain piping	in.(mm)	OD 63/64(Φ25)	OD 63/64(Φ25)	OD 63/64(Φ25)	OD 63/64(Φ25)
Standard controller		Wireless remote controller (RM05/BG(T)E-A)				

### Notes:

- Nominal cooling capacities are based on the following conditions: return air temp. : 80.6°F(27°C)DB,66.2°F(19°C)WB, and outdoor temp.: 95°F(35°C)DB, equivalent ref. piping: 26.25ft. (8m) (horizontal)
- Nominal heating capacities are based on the following conditions: return air temp.: 68°F(20°C)DB, outdoor temp.: 44.6°F(7°C)DB,42.8°F(6°C)WB, and equivalent ref. Piping: 26.25ft. (8m) (horizontal)
- Sound Level is measured 4.59ft. (1.4m) below the unit

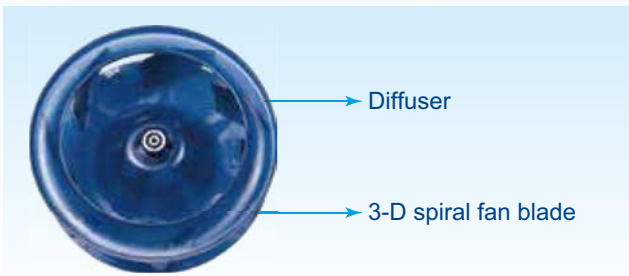
# Four-way Cassette



- 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.

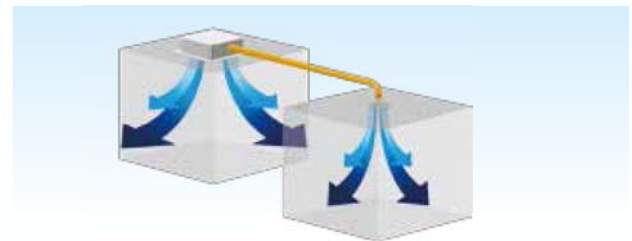


## Fresh air intake



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

## Sub duct



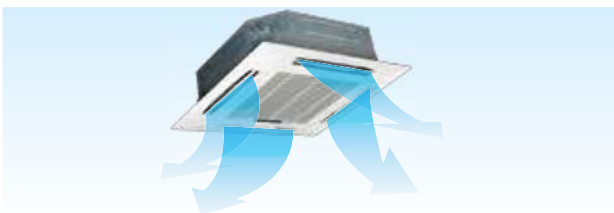
Sub duct enables you to use the same air conditioner unit to cool an additional smaller space nearby.

## Easy troubleshooting

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



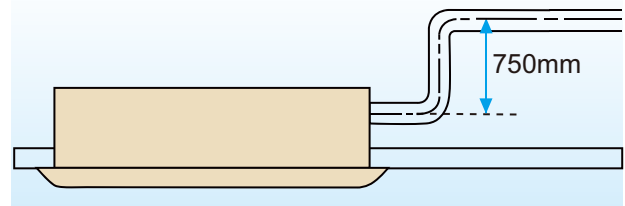
## Four-way uniform airflow



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.



## 50Hz Specifications

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 <sup>3</sup> /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 weight	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)		1,035×90×1,035	1,035×90×1,035	1,035×90×1,035	1,035×90×1,035	1,035×90×1,035
	Net/gross weight	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 <sup>3</sup> /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 weight	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)		1,035×90×1,035	1,035×90×1,035	1,035×90×1,035	1,035×90×1,035	1,035×90×1,035
	Net/gross weight	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:

- 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)
- 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)
- Sound level is measured at 1.4m below the unit.

# 60Hz Specifications

Indoor units lineup

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, 60Hz					
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	90	90	90	90	115
	Heating		90	90	90	90	115
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)	m³/h	1,155/847/766/640	1,155/847/766/640	1,207/864/755/658	1,207/864/755/658	1,327/1,157/955/749	
	CFM	680/499/451/377	680/499/451/377	710/509/444/387	710/509/444/387	781/681/562/441	
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)	35-19/32×9-1/16×33-5/64(904×230×840)					
	Gross dim.(W×H×D)	37-19/32×10-15/64×37-19/32(955×260×955)					
	Net/gross weight	lbs.(kg)	53 /61.7(24/28)	53 /61.7(24/28)	57.3 /66.2(26/30)	57.3 /66.2(26/30)	57.3 /66.2(26/30)
Panel	Net dim.(W×H×D)	37-13/32×2-9/64×37-13/32(950×54.5×950)					
	Gross dim.(W×H×D)	40-3/4×3-35/64×40-3/4(1,035×90×1,035)					
	Net/gross weight	lbs.(kg)	11.0/19.9(5/9)	11.0/19.9(5/9)	11.0/19.9(5/9)	11.0/19.9(5/9)	11.0/19.9(5/9)
Piping connections	L(flare)	in.(mm)	Φ1/4(6.35)	Φ1/4(6.35)	Φ1/4(6.35)	Φ3/8(9.53)	Φ3/8(9.53)
	G(flare)	in.(mm)	Φ1/2(12.7)	Φ1/2(12.7)	Φ1/2(12.7)	Φ5/8(15.9)	Φ5/8(15.9)
	Drain piping	in.(mm)	OD 1-17/64(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, 60Hz					
Cooling capacity	kW	8	9	10	11.2	14	
	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	10	11.1	12.5	15	
	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	115	160	160	160	180
	Heating		115	160	160	160	180
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)	m³/h	1,357/1,236/973/729	1,795/1,590/1,300/1,090	1,795/1,590/1,300/1,090	1,795/1,590/1,300/1,090	1,881/1,678/1,358/1,115	
	CFM	799/727/573/429	1,057/936/765/642	1,057/936/765/642	1,057/936/765/642	1,107/988/799/656	
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)	35-19/32×9-1/16×33-5/64(904×230×840)					
	Gross dim.(W×H×D)	37-19/32×10-15/64×37-19/32(955×260×955)					
	Net/gross weight	lbs.(kg)	57.3/66(26/30)	70.5/81.6(32/37)	70.5/81.6(32/37)	70.5/81.6(32/37)	70.5/81.6(32/37)
Panel	Net dim.(W×H×D)	37-13/32×2-9/64×37-13/32(950×54.5×950)					
	Gross dim.(W×H×D)	40-3/4×3-35/64×40-3/4(1,035×90×1,035)					
	Net/gross weight	lbs.(kg)	11.0/17.6(5/8)	11.0/17.6(5/8)	11.0/17.6(5/8)	11.0/17.6(5/8)	11.0/17.6(5/8)
Piping connections	L(flare)	in.(mm)	Φ3/8(9.53)	Φ3/8(9.53)	Φ3/8(9.53)	Φ3/8(9.53)	Φ3/8(9.53)
	G(flare)	in.(mm)	Φ5/8(15.9)	Φ5/8(15.9)	Φ5/8(15.9)	Φ5/8(15.9)	Φ5/8(15.9)
	Drain piping	in.(mm)	OD 1-17/64(Φ32)				
Standard controller	-	Wireless remote controller (RM05/BG(T)E-A)					

### Notes:

- Nominal cooling capacities are based on the following conditions: return air temperature : 80.6°F(27°C)DB,66.2°F(19°C)WB,and outdoor temperature: 95°F(35°C)DB,equivalent ref. piping: 26.25ft. (8m) (horizontal)
- Nominal heating capacities are based on the following conditions: return air temperature: 68°F(20°C)DB,outdoor temperature: 44.6°F(7°C)DB,42.8°F(6°C)WB, and equivalent ref. Piping: 26.25ft. (8m) (horizontal)
- Sound Level is measured 4.59ft. (1.4m) below the unit

# Four-way Cassette - Silent Type



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

## 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

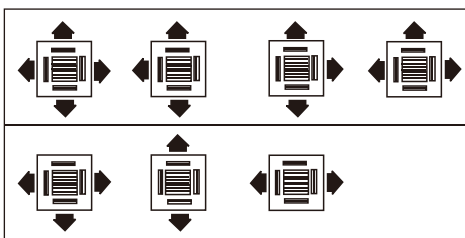
- The connection of drainage pan adopts foaming technology which can further improve the connection tightness.
- Capacitor is isolated by a sheet metal box making it safer and even more reliable.



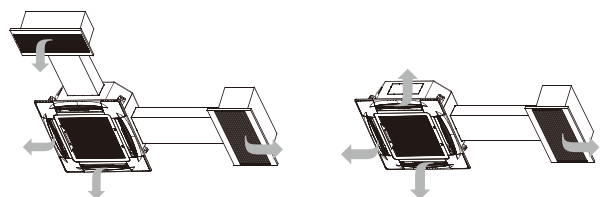
- The high voltage and low voltage electricity wires are separated in electronic control box making the interference decreased greatly.

## 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.



## 50Hz Specifications

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
	Heating	W	80	80	88	88
Rated current	Cooling	A	0.31	0.31	0.41	0.41
	Heating	A	0.31	0.31	0.41	0.41
Airflow rate (SH/H/M/L)	m <sup>3</sup> /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
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	176
	Heating	W	110	140	165	165
Rated current	Cooling	A	0.48	0.67	0.72	0.75
	Heating	A	0.48	0.67	0.72	0.72
Airflow rate (SH/H/M/L)	m <sup>3</sup> /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
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:

- 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)
- 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)
- Sound level is measured at 1.4m below the unit.



# 60Hz Specifications

Model		MDV-D28Q4/VN1-E	MDV-D36Q4/VN1-E	MDV-D45Q4/VN1-E	MDV-D56Q4/VN1-E	MDV-D71Q4/VN1-E	
Power supply		1-phase, 208-230V, 60Hz					
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	80	80	88	88	105
	Heating	W	80	80	88	88	105
Rated current	Cooling	A	0.31	0.31	0.4	0.4	0.43
	Heating	A	0.31	0.31	0.4	0.4	0.43
Airflow rate (SH/H/ML)	m <sup>3</sup> /h	1020/791/674/596	1020/791/674/596	1195/942/777/662	1195/942/777/662	1421/1235/1013/805	
	CFM	600/465/396/351	600/465/396/351	703/554/457/389	703/554/457/389	836/726/596/474	
Sound pressure level (H/ML)	dB(A)	30/25/22	30/25/22	35/31/27	35/31/27	43/37/31	
Refrigerant	Type	R410A					
	Control method	EXV					
Body	Net dim. (W×H×D)	in.(mm)	33-1/16×9-1/16×33-1/16(840×230×840)				
	Gross dim. (W×H×D)	in.(mm)	37-19/32×10-1/4×37-19/32(955×260×955)				
	Net/Gross weight	lbs.(kg)	47.3/58.7(21.5/26.7)	47.3/58.7(21.5/26.7)	52.1/63.6(23.7/28.9)	52.1/63.6(23.7/28.9)	52.1/63.6(23.7/28.9)
Panel	Net dim. (W×H×D)	in.(mm)	37-13/32×2-9/64×37-13/32(950×54.5×950)				
	Gross dim. (W×H×D)	in.(mm)	40-3/4×3-9/16×40-3/4(1035×90×1035)				
	Net/Gross weight	lbs.(kg)	13.2/19.8(6/9)				
Piping connections	L (flare)	in. (mm)	Φ1/4 (6.35)	Φ1/4 (6.35)	Φ1/4 (6.35)	Φ3/8 (9.53)	Φ3/8 (9.53)
	G (flare)	in. (mm)	Φ1/2 (12.7)	Φ1/2 (12.7)	Φ1/2 (12.7)	Φ5/8 (15.9)	Φ5/8 (15.9)
	Drain piping	in. (mm)	Φ1-1/4 (32)				
Standard controller	Wireless remote controller (RM05/BG(T)E-A)						







Model		MDV-D80Q4/VN1-E	MDV-D90Q4/VN1-E	MDV-D100Q4/VN1-E	MDV-D112Q4/VN1-E	MDV-D140Q4/VN1-E	
Power supply		1-phase, 208-230V, 60Hz					
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	120	187	200	200	220
	Heating	W	120	187	200	200	220
Rated current	Cooling	A	0.53	0.84	0.87	0.87	0.94
	Heating	A	0.53	0.84	0.87	0.87	0.94
Airflow rate (SH/H/ML)	m <sup>3</sup> /h	1421/1235/1013/805	1606/1333/1158/957	1766/1634/1219/1139	1766/1634/1219/1139	1790/1692/1243/1157	
	CFM	836/726/596/474	945/784/681/563	1039/961/717/670	1039/961/717/670	1053/995/731/681	
Sound pressure level (H/ML)	dB(A)	43/37/31	43/38/32	45/37/35	45/37/35	46/38/37	
Refrigerant	Type	R410A					
	Control method	EXV					
Body	Net dim. (W×H×D)	in.(mm)	33-1/16×9-1/16×33-1/16 (840×230×840)	33-1/16×11-13/16×33-1/16(840×300×840)			
	Gross dim. (W×H×D)	in.(mm)	37-19/32×10-1/4×37-19/32 (955×260×955)	37-19/32×13×37-19/32(955×330×955)			
	Net/Gross weight	lbs.(kg)	52.1/63.6(23.7/28.9)	63.1/75(28.7/34.1)	63.1/75(28.7/34.1)	63.1/75(28.7/34.1)	68/79.9(30.9/36.3)
Panel	Net dim. (W×H×D)	in.(mm)	37-13/32×2-9/64×37-13/32(950×54.5×950)				
	Gross dim. (W×H×D)	in.(mm)	40-3/4×3-9/16×40-3/4(1035×90×1035)				
	Net/Gross weight	lbs.(kg)	13.2/19.8(6/9)				
Piping connections	L (flare)	in. (mm)	Φ3/8 (9.53)				
	G (flare)	in. (mm)	Φ5/8 (15.9)				
	Drain piping	in. (mm)	Φ1-1/4 (32)				
Standard controller	Wireless remote controller (RM05/BG(T)E-A)						

**Notes:**

- Nominal cooling capacities are based on the following conditions: return air temperature : 80.6°F(27°C)DB,66.2°F(19°C)WB,and outdoor temperature: 95°F(35°C)DB,equivalent ref. piping: 26.25ft. (8m) (horizontal)
- Nominal heating capacities are based on the following conditions: return air temperature: 68°F(20°C)DB,outdoor temperature: 44.6°F(7°C)DB,42.8°F(6°C)WB, and equivalent ref. Piping: 26.25ft. (8m) (horizontal)
- Sound Level is measured 4.59ft. (1.4m) below the unit

# Low Static Pressure Duct



-  **Auto Restart**
-  **Auto Addressing**
-  **Follow Me**
-  **Wireless Remote Controller**
-  **Anti-Cold Air Function**
-  **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.

Indoor units lineup

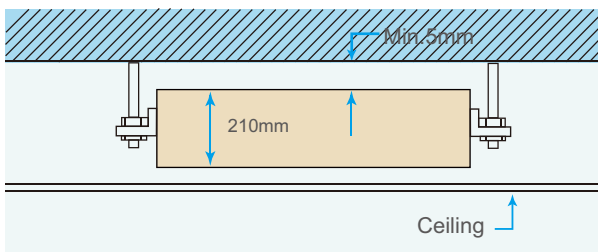
## V shape evaporator-- good for heat exchanging

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

## Convenient for installation and maintenance

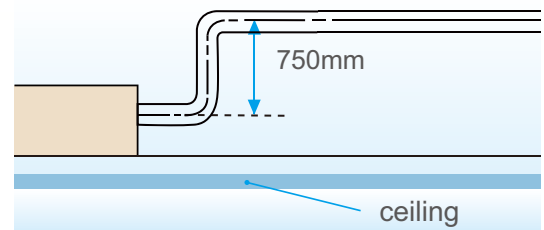
The EXV is fixed inside the indoor unit.

## 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.

## 50Hz Specifications

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	130	
	Heating		59	59	59	65	105	130	
Rated current	Cooling	A	0.31	0.31	0.31	0.36	0.36	0.5	
	Heating		0.31	0.31	0.31	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(30Pa)/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)								

## 60Hz Specifications

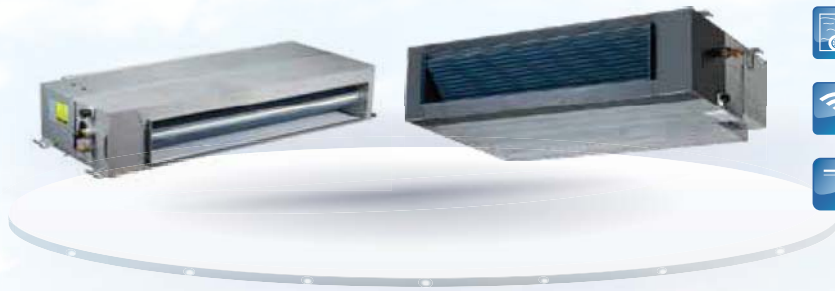
Model		MDV-D18T3/VN1-C	MDV-D22T3/VN1-C	MDV-D28T3/VN1-C	MDV-D36T3/VN1-C	MDV-D45T3/VN1-C	MDV-D56T3/VN1-C	MDV-D71T3/VN1-C
Power supply		208-230V~1Ph~60Hz						
Cooling capacity	kW	1.8	2.2	2.8	3.6	4.5	5.6	7.1
	kcal/h	1500	1900	2400	3100	3900	4800	6100
	Btu/h	6100	7500	9600	12300	15400	19100	24200
Heating 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	130
	Heating		59	59	59	65	105	130
Rated current	Cooling	A	0.26	0.26	0.26	0.3	0.5	0.6
	Heating		0.26	0.26	0.26	0.3	0.5	0.6
Airflow rate(SH/H/M/L)	m³/h	606(30pa)/578/512/409	606(30pa)/578/512/409	606(30pa)/578/512/409	646(30pa)/617/551/441	803(30pa)/824/690/609	803(30pa)/824/690/609	1207(30pa)/1060/970/811
	CFM	357/340/301/241	357/340/301/241	357/340/301/241	380/363/324/260	473/485/406/358	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)	in.(mm)	29-9/64×8-17/64×18-1/2(740×210×470)			37-51/64×8-17/64×18-1/2(960×210×470)		46-29/64×8-17/64×18-1/2(1180×210×470)
	Packing (W×H×D)	in.(mm)	35-53/64×9-1/16×20-5/64(910×230×510)			44-31/64×9-1/16×20-5/64(1130×230×510)		53-5/32×9-1/16×20-5/64(1350×230×510)
	Net/Gross weight	lbs.(kg)	32.0/39.7(14.5/18)			39.7/49.6(18/22.5)		49.6/58.5(22.5/26.5)
Piping connections	L(flare)	in.(mm)	1/4(Φ6.35)	1/4(Φ6.35)	1/4(Φ6.35)	1/4(Φ6.35)	3/8(Φ9.53)	3/8(Φ9.53)
	G(flare)	in.(mm)	1/2(Φ12.7)	1/2(Φ12.7)	1/2(Φ12.7)	1/2(Φ12.7)	Φ12.7	5/8(Φ15.9)
	Drain piping	in.(mm)	OD 63/64(Φ25)					
Standard controller	Wireless remote controller (RM05/BG(T)E-A)							

### Notes:

- Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.: 35°CDB, equivalent ref. piping: 8m (horizontal)
- Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
- Sound level is measured at 1.4m below the air outlet.

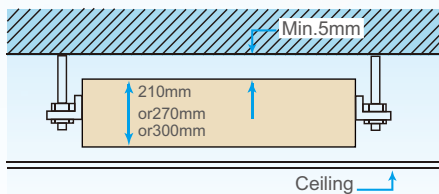
\* External static pressure is based on high speed indoor air flow.

# Concealed Duct Unit (A5 Type)



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

## 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

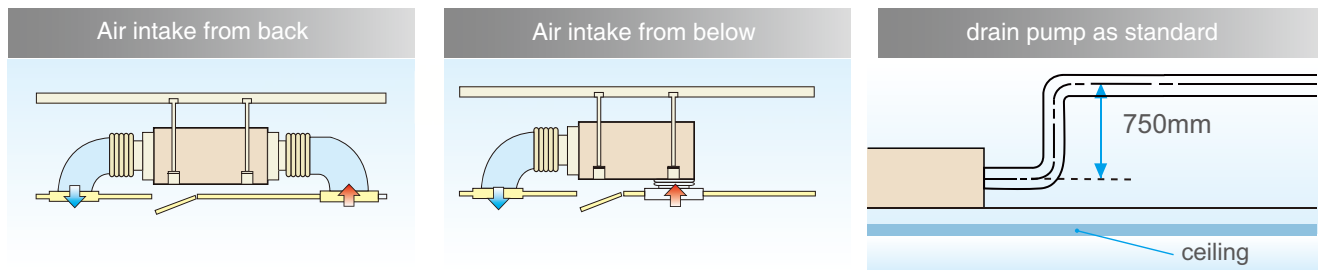
The EXV is fixed inside of the indoor unit.

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.



## 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).

## 50Hz Specifications

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/ML)	m <sup>3</sup> /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	740x210x500	740x210x500	740x210x500	740x210x500	960x210x500	960x210x500
	Gross dim.(W×H×D)		870×285×525	870×285×525	870×285×525	870×285×525	1,115x285x525	1,115x285x525
	Net/Gross weight		kg	17.5/20.5	17.5/20	17.5/20	17.5/20	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/ML)	m <sup>3</sup> /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	1,180x210x500	1,230x270x775	1,230x270x775	1,230x270x775	1,290x300x865
Packing dimension	W×H×D	mm	1,335x285x525	1,355x350x795	1,355x350x795	1,355x350x795	1,400x375x925
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:

- Nominal cooling capacities are based on the following conditions: return air temperature: 27°CDB, 19°CWB, and outdoor temperature: 35°CDB, equivalent ref. piping: 8m (horizontal)
  - Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
  - Sound level is measured at 1.4m below the air out-let.
- \* External static pressure is based on high speed indoor air flow.  
 \* Specifications are subject to change without prior notice for product improvement.

# 60Hz Specifications

Model		MDV-D22T2 /VN1-DA5	MDV-D28T2 /VN1-DA5	MDV-D36T2 /VN1-DA5	MDV-D45T2 /VN1-DA5	MDV-D56T2 /VN1-DA5	MDV-D71T2 /VN1-DA5	
Power supply		1-phase,208-230V,60Hz						
Cooling capacity	kW	2.2	2.8	3.6	4.5	5.6	7.1	
	kcal/h	1900	2400	3100	3900	4800	6100	
	Btu/h	7500	9600	12300	15400	19100	24200	
Heating capacity	kW	2.6	3.2	4.0	5.0	6.3	8.0	
	kcal/h	2200	2800	3400	4300	5400	6900	
	Btu/h	8200	10900	13600	17100	21500	27300	
Rated input	Cooling	W	66	72	77	100	100	125
	Heating		66	72	77	100	100	125
Rated current	Cooling	A	0.24	0.24	0.28	0.48	0.48	0.6
	Heating		0.24	0.24	0.28	0.48	0.48	0.6
Airflow rate(SH/H/M/L)	m <sup>3</sup> /h	588(30pa) /538/456/375	588(30pa) /538/456/375	614(30pa) /597/514/429	763(30pa) /811/684/575	763(30pa) /811/684/575	1127(30pa)/1029/934/781	
	CFM	346/317/268/221	346/317/268/221	361/351/303/253	449/477/403/338	449/477/403/338	663/606/550/460	
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)	36/35/32	36/35/32	38.6/37.5/33.8	39/37.9/34	39/37.9/34	41.4/39/35	
Refrigerant	Type	R410A						
	Control method	EXV						
Indoor Unit	Net dim.(W×H×D)	29-9/64x8-17/64x19-11/16(740x210x500)			37-51/64x8-17/64x19-11/16(960x210x500)	37-51/64x8-17/64x19-11/16(960x210x500)	46-29/64x8-17/64x19-11/16(1180x210x500)	
	Gross dim.(W×H×D)	34-1/4×11-7/32×20-43/64(870×285×525)			43-57/64×11-7/32×20-43/64 (1115×285×525)	43-57/64×11-7/32×20-43/64 (1115×285×525)	52-9/16×11-7/32×20-43/64 (1335×285×525)	
	Net/Gross weight	lbs.(kg)	38.6/44.1(17.5/20)	38.6/44.1(17.5/20)	38.6/44.1(17.5/20)	49.6/57.3(22.5/26)	49.6/57.3(22.5/26)	61.8/69.5(28/31.5)
Piping connections	L(flare)	in.(mm)	1/4(Φ6.35)	1/4(Φ6.35)	1/4(Φ6.35)	1/4(Φ6.35)	3/8(Φ9.53)	3/8(Φ9.53)
	G(flare)	in.(mm)	1/2(Φ12.7)	1/2(Φ12.7)	1/2(Φ12.7)	1/2(Φ12.7)	5/8(Φ15.9)	5/8(Φ15.9)
	Drain piping	in.(mm)	OD 63/64(Φ25)	OD 63/64(Φ25)	OD 63/64(Φ25)	OD 63/64(Φ25)	OD 63/64(Φ25)	OD 63/64(Φ25)
Standard controller	Wired controller KJR-29B1/BK-E (6 meters connection wire)							

Model		MDV-D80T2 /VN1-BA5	MDV-D90T2 /VN1-BA5	MDV-D112T2 /VN1-BA5	MDV-D140T2 /VN1-BA5	
Power supply		1-phase,208-230V,60Hz				
Cooling capacity	kW	8	9	11.2	14	
	kcal/h	6900	7700	9600	12000	
	Btu/h	27300	30700	38200	47800	
Heating capacity	kW	9	10	12.5	15.5	
	kcal/h	7700	8600	10800	13300	
	Btu/h	30700	34100	42700	52900	
Rated input	Cooling	W	133	134	378	352
	Heating		133	134	378	352
Rated current	Cooling	A	1	1	1.8	1.55
	Heating		1	1	1.8	1.55
Airflow rate (SH/H/M/L)	m <sup>3</sup> /h	1,388(50pa)/1,345/1,165/1,013	1,388(50pa)/1,345/1,165/1,013	1,851(80pa)/1,800/1,556/1,400	1,745(100pa)/1,905/1,636/1,400	
	CFM	817/792/686/596	817/792/686/596	1,089/1,059/916/824	1,027/1,121/963/824	
ESP(external static pressure)	Pa	20(10-50)	20(10-50)	40(10-80)	40(10-100)	
Sound pressure level(H/M/L)	dB(A)	45.4/39.8/37	45.4/39.8/37	48.0/41.9/38	47.7/43.2/39	
Refrigerant	Type	R410A				
	Control method	EXV				
Indoor Unit	Net dim.(W×H×D)	48-27/64×10-5/8×30-33/64(1230×270×775)			50-25/32×11-13/16×34-1/16(1290×300×865)	
	Gross dim.(W×H×D)	53-11/32×13-25/31×31-19/64 (1355×350×795)			55-1/8×14-49/64×36-27/64(1400×375×925)	
	Net/Gross weight	lbs.(kg)	84/102.5(38/46.5)	88.2/105.8 (40/48)	88.2/105.8 (40/48)	108.0/127.9(49/58)
Piping connections	L(flare)	in.(mm)	Φ3/8(Φ9.53)	Φ3/8(Φ9.53)	Φ3/8(Φ9.53)	Φ3/8(Φ9.53)
	G(flare)	in.(mm)	Φ5/8(Φ15.9)	Φ5/8(Φ15.9)	Φ5/8(Φ15.9)	Φ5/8(Φ15.9)
	Drain piping	in.(mm)	OD 63/64(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: 80.6°F(27°C)DB,66.2°F(19°C)WB,and outdoor temperature: 95°F(35°C)DB,equivalent ref. piping: 26.25ft. (8m) (horizontal)

2. Nominal heating capacities are based on the following conditions: return air temperature: 68°F(20°C)DB, outdoor temperature: 44.6°F(7°C)DB,42.8°F(6°C)WB, and equivalent ref. piping: 26.25ft. (8m) (horizontal)

3. Sound Level is measured 4.59ft. (1.4m) below the unit.

\* external static pressure are based on high speed indoor airflow.

\* Specifications are subject to change without prior notice for product improvement.

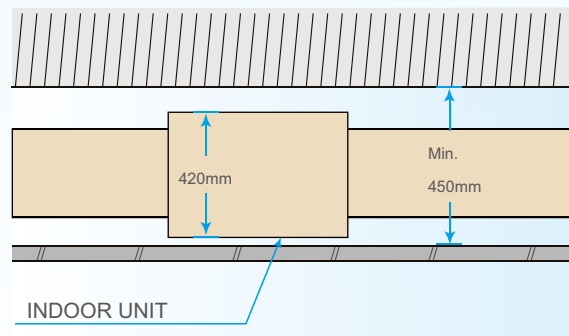
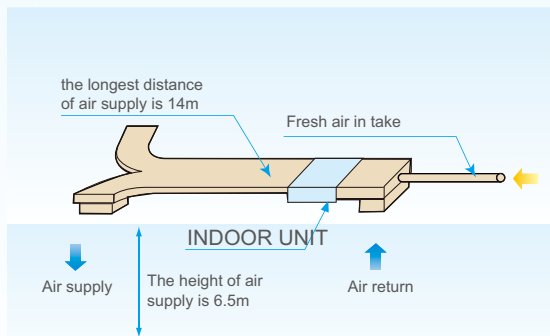
# High Static Pressure Duct



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

Indoor units lineup

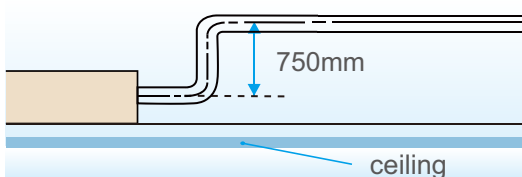
## Convenient installation

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

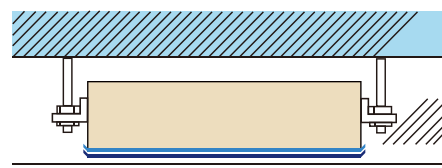
Wired remote controller KJR-29B1/BK-E is as standard, and wireless remote controller RM05/BG(T)E-A is as an option.  
The display board is connected to the E-box in factory, easier troubleshooting by LED display.  
Easy access filters both at the rear & bottom  
Standard functional port such as remote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

## 50Hz Specifications

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)		m³/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)		m³/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	Φ12.7×2	Φ12.7×2	Φ15.9×2
	G(flare)	mm	Φ15.9×2	Φ15.9×2	Φ15.9×2	Φ22.2×2	Φ22.2×2	Φ28.6×2
	Drain piping	mm	ODΦ32	ODΦ32	ODΦ32	ODΦ32	ODΦ32	ODΦ32
Standard controller		-	Wired controller KJR-29B1/BK-E (6 meters connection wire)					

### Notes:

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

\* External static pressure is based on high speed indoor air flow.

\* Specifications are subject to change without prior notice for product improvement.



# 60Hz Specifications

Model			MDV-D71T1/VN1-B	MDV-D80T1/VN1-B	MDV-D90T1/VN1-B	MDV-D112T1/VN1-B
Power Supply			208~230V-1Ph-60Hz			
Capacity	Cooling	kW	7.1	8	9	11.2
		kcal/h	6,100	6,900	7,700	9,600
		Btu/h	24,200	27,300	30,700	38,200
	Heating	kW	8	9	10	12.5
		kcal/h	6,900	7,700	8,600	10,800
		Btu/h	27,300	30,700	34,100	42,700
Power input	Cooling	W	414	402	409	409
	Heating		414	402	409	409
Rated current	Cooling	A	1.8	1.8	1.8	2.01
	Heating		1.8	1.8	1.8	2.01
Indoor air flow (H/M/L)		m³/h	1683/1550/1317	1683/1550/1317	2240/2020/1590	2186/1975/1560
		CFM	990/912/775	990/912/775	1318/1188/935	1286/1162/918
EXP (external static pressure)		Pa	40(30~196)	40(30~196)	40(30~196)	50(30~196)
Sound pressure level(H/M/L)		dB(A)	48/46/44.5	48/46/44.5	52/49/47	52/49/47
Refrigerant	Type	R410A				
	Control method	EXV				
Net dimension	W×H×D	in.(mm)	37-31/64×16-17/32×27-11/64(952×420×690)			
Packing dimension	W×H×D	in.(mm)	42-29/32×17-21/64×30-15/64(1090×440×768)			
Net/Gross weight		lbs.(kg)	102.6/114.7(46.5/52)	102.6/114.7(46.5/52)	110.3/124.6(50/56.5)	110.3/124.6(50/56.5)
Piping connections	L(flare)	in.(mm)	Φ3/8(Φ9.53)	Φ3/8(Φ9.53)	Φ3/8(Φ9.53)	Φ3/8(Φ9.53)
	G(flare)	in.(mm)	Φ5/8(Φ15.9)	Φ5/8(Φ15.9)	Φ5/8(Φ15.9)	Φ5/8(Φ15.9)
	Drain piping	in.(mm)	OD 1-17/64(Φ32)	OD 1-17/64(Φ32)	OD 1-17/64(Φ32)	OD 1-17/64(Φ32)
Standard controller		-	Wired controller KJR-29B1/BK-E (6m wire is standard)			

Model			MDV-D140T1/VN1-B	MDV-D160T1/VN1-B	MDV-D400T1/N1	MDV-D450T1/N1
Power Supply			208~230V-1Ph-60Hz			
Capacity	Cooling	kW	14	16	40	45
		kcal/h	12,000	13,800	34400	38,700
		Btu/h	47,800	54,600	136500	153,500
	Heating	kW	16	18	45	50
		kcal/h	13,800	15,500	38700	43,000
		Btu/h	54,600	61,400	153,500	170600
Power input	Cooling	W	527	532	1,600	1,600
	Heating		527	532	1,600	1,600
Rated current	Cooling	A	2.2	2.2	7.5	7.5
	Heating		2.2	2.2	7.5	7.5
Indoor air flow (H/M/L)		m³/h	2969/2688/2469	2969/2688/2469	7083/6200/4630	7083/6200/4630
		CFM	1746/1582/1452	1746/1582/1452	4166/3647/2723	4166/3647/2723
EXP (external static pressure)		Pa	50(30~196)	50(30~196)	196(50~250)	196(50~250)
Sound pressure level(H/M/L)		dB(A)	53/50/48	54/52/50	61/59/56	61/59/56
Refrigerant	Type	R410A				
	Control method	EXV				
Net dimension	W×H×D	in.(mm)	47-1/4×15-3/4×23-5/8 (1,200×400×600)		77-9/16×26-19/64×33-51/64(1,970×668×858.5)	
Packing dimension	W×H×D	in.(mm)	56-17/32×17-23/32×30-15/64(1436×450×768)		82-31/64×31-1/2×37-61/64(2,095×800×964)	
Net/Gross weight		lbs.(kg)	149.9/154.3(68/70)	153.3/167.6(69.5/76)	511/540(232/245)	511/540(232/245)
Piping connections	L(flare)	in.(mm)	Φ3/8(Φ9.53)	Φ3/8(Φ9.53)	Φ1/2(Φ12.7)	Φ1/2(Φ12.7)
	G(flare)	in.(mm)	Φ5/8(Φ15.9)	Φ5/8(Φ15.9)	Φ7/8(Φ22.2)	Φ7/8(Φ22.2)
	Drain piping	in.(mm)	OD 1-17/64(Φ32)	OD 1-17/64(Φ32)	OD 1-17/64(Φ32)	OD 1-17/64(Φ32)
Standard controller		-	Wired controller KJR-29B1/BK-E(6m wire is standard)			

**Notes:**

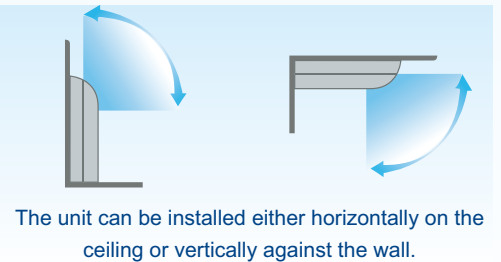
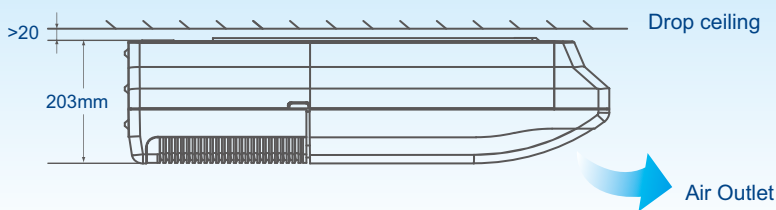
- Nominal cooling capacities are based on the following conditions: return air temperature: 80.6°F(27°C)DB,66.2°F(19°C)WB,and outdoor temperature: 95°F(35°C)DB,equivalent ref. Piping:26.25ft(8m)(horizontal)
  - Nominal heating capacities are based on the following conditions: return air temperature: 68°F(20°C)DB, outdoor temperature: 44.6°F(7°C)DB,42.8°F(6°C)WB, and equivalent ref. Piping: 26.25ft(8m)(horizontal)
  - Sound Level is measured 4.59ft. (1.4m) below the unit.
- \* Specifications are subject to change without prior notice for product improvement.

# Ceiling & Floor



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

## Convenient installation



- 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.

## 50Hz Specifications

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 <sup>3</sup> /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 Φ16	OD Φ16	OD Φ16	OD Φ16	OD Φ16
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 <sup>3</sup> /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	ODΦ16	ODΦ16	ODΦ16	ODΦ16
Standard Controller		-	Wireless remote controller(RM05/BG(T)E-A)			

### Notes:

- Nominal cooling capacities are based on the following conditions: return air temperature.: 27°CDB, 19°CWB, and outdoor temperature.:35°CDB, equivalent ref. piping: 8m (horizontal)
  - Nominal heating capacities are based on the following conditions: return air temperature.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
  - 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.
- \* Specifications are subject to change without prior notice for product improvement.

## 60Hz Specifications

Model		MDV-D36DL/N1-C	MDV-D45DL/N1-C	MDV-D56DL/N1-C	MDV-D71DL/N1-C	
Power supply		220~240V-1Ph-60Hz				
Cooling capacity	kW	3.6	4.5	5.6	7.1	
	kcal/h	3,100	3,900	4,800	6,100	
	Btu/h	12,300	15,400	19,100	24,200	
Heating capacity	kW	4	5	6.3	8	
	kcal/h	3,400	4300	5,400	6,800	
	Btu/h	13,600	17,100	21,500	27,300	
Power input	Cooling	W	50	148	148	148
	Heating		50	148	148	148
Rated current	Cooling	A	0.55	0.55	0.55	0.57
	Heating		0.55	0.55	0.55	0.57
Airflow rate(H/M/L)	m³/h	600/480/400	750/650/550	750/650/550	750/650/550	
	CFM	353/283/235	441/383/324	441/383/324	441/383/324	
Sound pressure level(H/M/L)	dB(A)	40/38/36	43/41/38	43/41/38	43/41/38	
Refrigerant	Type	R410A				
	Control method	EXV				
Net dimension(W×H×D)	in.(mm)	38-31/32×7-63/64×25-63/64(990×203×660)				
Packing dimension(W×H×D)	in.(mm)	42-7/8x11-21/32x29-9/32(1089x296x744)				
Net/Gross weight	lbs.(kg)	57.3/70.6(26/32)	61.7/75.0(28/34)	61.7/75.0(28/34)	61.7/75.0(28/34)	
Piping connections	L(flare)	in.(mm)	1/4(Φ6.35)	1/4(Φ6.35)	3/8(Φ9.53)	3/8(Φ9.53)
	G(flare)	in.(mm)	1/2(Φ12.7)	1/2(Φ12.7)	5/8(Φ15.9)	5/8(Φ15.9)
	Drain piping	in.(mm)	OD 5/8(Φ16)	OD 5/8(Φ16)	OD 5/8(Φ16)	OD 5/8(Φ16)
Standard controller	-	Wireless remote controller (RM05/BG(T)E-A)				

Model		MDV-D80DL/N1-C	MDV-D90DL/N1-C	MDV-D112DL/N1-C	MDV-D140DL/N1-C	MDV-D160DL/N1-C	
Power supply		220~240V-1Ph-60Hz					
Cooling capacity	kW	8	9	11.2	14	16	
	kcal/h	6,900	7,700	9,600	12,000	13,800	
	Btu/h	27,300	30,700	38,200	47,800	54,600	
Heating capacity	kW	9	10	12.5	15	18	
	kcal/h	7,700	8,600	10,800	12,900	15,477	
	Btu/h	30,700	34,100	42,700	51,200	61,400	
Power input	Cooling	W	183	183	245	245	378
	Heating		183	183	245	245	378
Rated current	Cooling	A	0.6	0.6	0.83	0.83	1.75
	Heating		0.6	0.6	0.83	0.83	1.75
Airflow rate(H/M/L)	m³/h	1,200/900/700	1,200/900/700	1,980/1,860/1,730	1,980/1,860/1,730	2,300/2,100/1,800	
	CFM	706/530/412	706/530/412	1,165/1,095/1,018	1,165/1,095/1,018	1,354/1,236/1,060	
Sound pressure level(H/M/L)	dB(A)	45/43/40	45/43/40	47/45/42	47/45/42	47/45/42	
Refrigerant	Type	R410A					
	Control method	EXV					
Net dimension(W×H×D)	in.(mm)	50-25/64×7-63/64×25-63/64(1280×203×660)		65-3/4 x9-39/64x26-49/64(1670 x244x680)		65-3/4x11-7/32x26-49/64(1670x285x680)	
Packing dimension(W×H×D)	in.(mm)	54-19/64x11-21/32x29-19/64(1379x296x744)		69-29/64 x12-61/64x29-59/64(1764x329x760)		69-7/8x14-27/32x29-59/64(1775x377x760)	
Net/Gross weight	lbs.(kg)	76.1/90.4(34.5/41)	76.1/90.4(34.5/41)	119.0/130.1(54/59)	119.0/130.1(54/59)	126.5/139.7(57.5/63.5)	
Piping connections	L(flare)	in.(mm)	3/8(Φ9.53)	3/8(Φ9.53)	3/8(Φ9.53)	3/8(Φ9.53)	
	G(flare)	in.(mm)	5/8(Φ15.9)	5/8(Φ15.9)	5/8(Φ15.9)	5/8(Φ15.9)	
	Drain piping	in.(mm)	OD 5/8(Φ16)	OD 5/8(Φ16)	OD 5/8(Φ16)	OD 5/8(Φ16)	
Standard controller	-	Wireless remote controller (RM05/BG(T)E-A)					

Notes:

- Nominal cooling capacities are based on the following conditions: return air temperature: 80.6°F(27°C)DB,66.2°F(19°C)WB,and outdoor temperature: 95°F(35°C)DB,equivalent ref. piping: 26.25ft. (8m) (horizontal)
- Nominal heating capacities are based on the following conditions: return air temperature: 68°F(20°C)DB, outdoor temperature: 44.6°F(7°C)DB,42.8°F(6°C)WB, and equivalent ref. Piping: 26.25ft.(8m) (horizontal)
- Floor standing :Sound level is measured 3.28ft(1m) from air-outlet in horizontal distance, 3.28ft(1m) above the floor in vertical distance.  
Ceiling mounted:Sound level is measured 3.28ft(1m) from air-outlet in horizontal distance,3.28ft(1m) from air-outlet in vertical distance.

# Wall-mounted

S type panel









C type panel



R type panel



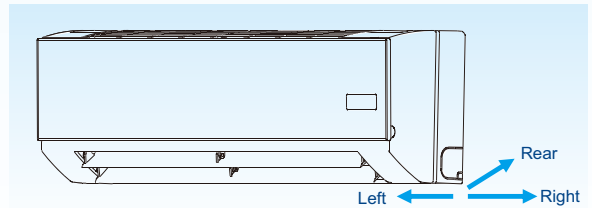
-  Auto Restart
-  Auto Addressing
-  Cleanable Panel
-  Anti-Cold Air Function
-  Follow Me
-  LED Display

## 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.

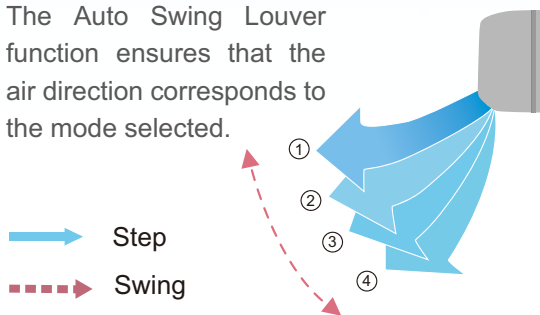
## Convenient installation

- 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 type panel (50hz)

Model		MDV-D15G/N1-S	MDV-D22G/N1-S	MDV-D28G/N1-S	MDV-D36G/N1-S	MDV-D45G/N1-S	MDV-D56G/N1-S	
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	2.4	3.2	4	5	6.3	
	kcal/h	1470	2100	2800	3400	4300	5400	
	Btu/h	5800	8200	10900	13600	17100	21500	
Rated input	Cooling	W	28	28	28	28	45	45
	Heating		28	28	28	28	45	45
Rated current	Cooling	A	0.12	0.14	0.14	0.14	0.2	0.2
	Heating		0.12	0.14	0.14	0.14	0.2	0.2
Airflow rate (H/M/L)	m <sup>3</sup> /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	
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						
Indoor Unit	Net dim.(W×H×D)	mm	915×290×230	915×290×230	915×290×230	915×290×230	1072×315×230	1072×315×230
	Gross dim.(W×H×D)		1,020×390×315	1,020×390×315	1,020×390×315	1,020×390×315	1,180×415×315	1,180×415×315
	Net/Gross weight		kg	12.4/15.9	13/16.8	13/16.8	13/16.8	15.1/19.5
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	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5
Standard controller		Wireless remote controller (RM05/BG(T)E-A)						

## C type panel (50hz)

Model		MDV-D22G/N1YB	MDV-D28G/N1YB	MDV-D36G/N1YB	MDV-D45G/N1YB	MDV-D56G/N1YB	
Power supply		1-phase, 220-240V, 50Hz					
Cooling capacity	kW	2.2	2.8	3.6	4.5	5.6	
	kcal/h	1,900	2,400	3,100	3,900	4,800	
	Btu/h	7,500	9,600	12,300	15,400	19,100	
Heating capacity	kW	2.4	3.2	4	5	6.3	
	kcal/h	2,100	2,800	3,400	4,300	5,400	
	Btu/h	8,200	10,900	13,600	17,000	21,500	
Power input	Cooling	W	28	28	28	45	45
	Heating		28	28	28	45	45
Rated current	Cooling	A	0.14	0.14	0.14	0.2	0.2
	Heating		0.14	0.14	0.14	0.2	0.2
Airflow rate(H/M/L)	m <sup>3</sup> /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)	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)		mm	915×290×210	915×290×210	915×290×210	1,070×315×210	1,070×315×210
Packing dimension(W×H×D)		mm	1,020×385×300	1,020×385×300	1,020×385×300	1,180×410×300	1,180×410×300
Net weight		kg	12	12	12	15	15
Gross weight		kg	17.5	17.5	17.5	19	18
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9
	Drain piping	mm	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5
Standard controller		-	Wireless remote controller(RM05/BG(T)E-A)				

Notes:

- Nominal cooling capacities are based on the following conditions: return air temperature: 27°CDB, 19°CWB, and outdoor temperature:35°CDB, equivalent ref. piping: 8m (horizontal)
  - Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
  - Sound level is measured 1m below the air outlet horizontally and vertically.
- \* Specifications are subject to change without prior notice for product improvement.

## R type panel (50Hz)

Model		MDV-D71G-R3/N1Y	MDV-D80G-R3/N1Y	MDV-D90G-R3/N1Y
Power supply		1-phase, 220-240V, 50Hz		
Cooling capacity	kW	7.1	8	9
	kcal/h	6,100	6,900	7,700
	Btu/h	24,200	27,300	30,700
Heating capacity	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
	Heating		75	86
Rated current	Cooling	A	0.33	0.39
	Heating		0.33	0.39
Airflow rate(H/M/L)	m <sup>3</sup> /h	1,190/780/580	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 dimension(W×H×D)	mm	1,345×430×335		
Net weight	kg	19.9		
Gross weight	kg	25		
Piping connections	L(flare)	mm	Φ9.53	
	G(flare)	mm	Φ15.9	
	Drain piping	mm	OD Φ16.5	
Standard controller	-	Wireless remote controller(RM05/BG(T)E-A)		

## S type panel (60Hz)

Model		MDV-D22G/N1-S	MDV-D28G/N1-S	MDV-D36G/N1-S	MDV-D45G/N1-S	MDV-D56G/N1-S
Power supply		220~240V-1Ph-60Hz				
Cooling capacity	kW	2.2	2.8	3.6	4.5	5.6
	kcal/h	1,900	2,400	3,100	3,900	4,800
	Btu/h	7,500	9,600	12,300	15,400	19,100
Heating capacity	kW	2.4	3.2	4	5	6.3
	kcal/h	2,100	2,800	3,400	4,300	5,400
	Btu/h	8,200	10,900	13,600	17,100	21,500
Power input	Cooling	W	28	28	28	51
	Heating		28	28	28	51
Rated current	Cooling	A	0.14	0.14	0.14	0.2
	Heating		0.14	0.14	0.14	0.2
Airflow rate(H/M/L)	m <sup>3</sup> /h	525/480/430	525/480/430	590/520/480	860/755/630	925/860/755
	CFM	309/283/253	309/283/253	347/306/283	506/444/371	544/506/444
Sound pressure level(H/M/L)	dB(A)	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)	in.(mm)	36-1/32x11-13/32x9-1/16(915×290×230)			42-7/32x12-13/32x9-1/16(1072×315×230)	
Packing dimension(W×H×D)	in.(mm)	40-5/32x15-11/32x12-13/32(1020×390×315)			46-15/32x16-11/32x12-13/32(1180×415×315)	
Net weight	lbs.(kg)	28.7(13)	28.7(13)	28.7(13)	33.4(15.1)	33.4(15.1)
Gross weight	lbs.(kg)	37.1(16.8)	37.1(16.8)	37.1(16.8)	43/19.5	43/19.5
Piping connections	L(flare)	in.(mm)	Φ1/4(Φ6.35)	Φ1/4(Φ6.35)	Φ1/4(Φ6.35)	Φ1/4(Φ6.35)
	G(flare)	in.(mm)	Φ1/2(Φ12.7)	Φ1/2(Φ12.7)	Φ1/2(Φ12.7)	Φ1/2(Φ12.7)
	Drain piping	in.(mm)	OD 21/32(Φ16.5)	OD 21/32(Φ16.5)	OD 21/32(Φ16.5)	OD 21/32(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 temp.: 80.6°F(27°C)DB,66.2°F(19°C)WB, and outdoor temp.: 95°F(35°C)DB, equivalent ref. piping: 26.25ft(8m)(horizontal)

2. Nominal heating capacities are based on the following conditions: return air temp.: 68°F(20°C)DB, outdoor temp.: 44.6°F(7°C)DB,42.8°F(6°C)WB, and equivalent ref. piping: 26.25ft(8m)(horizontal)

3. Sound level is measured 3.28ft.(1m) below the air out-let both in horizontal and vertical distance.

\* Specifications are subject to change without prior notice for product improvement.

## C type panel (60Hz)

Model		MDV-D22G/N1YB	MDV-D28G/N1YB	MDV-D36G/N1YB	MDV-D45G/N1YB	MDV-D56G/N1YB	
Power supply		220-240V~, 1Ph, 60Hz					
Cooling capacity	kW	2.2	2.8	3.6	4.5	5.6	
	kcal/h	1,900	2,400	3,100	3,900	4,800	
	Btu/h	7,500	9,600	12,300	15,400	19,100	
Heating capacity	kW	2.4	3.2	4	5	6.3	
	kcal/h	2,200	2,800	3,400	4,300	5,400	
	Btu/h	8,900	10,900	13,600	17,100	21,500	
Power input	Cooling	W	28	28	28	45	45
	Heating		28	28	28	45	45
Rated current	Cooling	A	0.14	0.14	0.14	0.2	0.2
	Heating		0.14	0.14	0.14	0.2	0.2
Airflow rate(H/M/L)	m <sup>3</sup> /h	557/520/467	557/520/467	557/520/467	842/722/597	842/722/597	
	CFM	328/306/275	328/306/275	328/306/275	496/425/351	496/425/351	
Sound pressure level(H/M/L)	dB(A)	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)	in.(mm)	36-1/32x11-13/32x8-9/32(915×290×210)			42-7/32x12-13/32x8-9/32(1070×315×210)		
Packing dimension(W×H×D)	in.(mm)	40-5/32×15-5/32×11-13/16(1020×385×300)			45-7/8x15-9/16x11-7/32(1165×395x285)		
Net weight	lbs.(kg)	26.5(12)	26.5(12)	26.5(12)	33.1(15)	33.1(15)	
Gross weight	lbs.(kg)	38.6(17.5)	38.6(17.5)	38.6(17.5)	41.9(19)	39.7(18)	
Piping connections	L(flare)	in.(mm)	Φ1/4(Φ6.35)	Φ1/4(Φ6.35)	Φ1/4(Φ6.35)	Φ1/4(Φ6.35)	Φ3/8(Φ9.53)
	G(flare)	in.(mm)	Φ1/2(Φ12.7)	Φ1/2(Φ12.7)	Φ1/2(Φ12.7)	Φ1/2(Φ12.7)	Φ5/8(Φ15.9)
	Drain piping	in.(mm)	OD 21/32(Φ16.5)	OD 21/32(Φ16.5)	OD 21/32(Φ16.5)	OD 21/32(Φ16.5)	OD 21/32(Φ16.5)
Standard controller	-	Wireless remote controller (RM05/BG(T)E-A)					

## R type panel (60Hz)

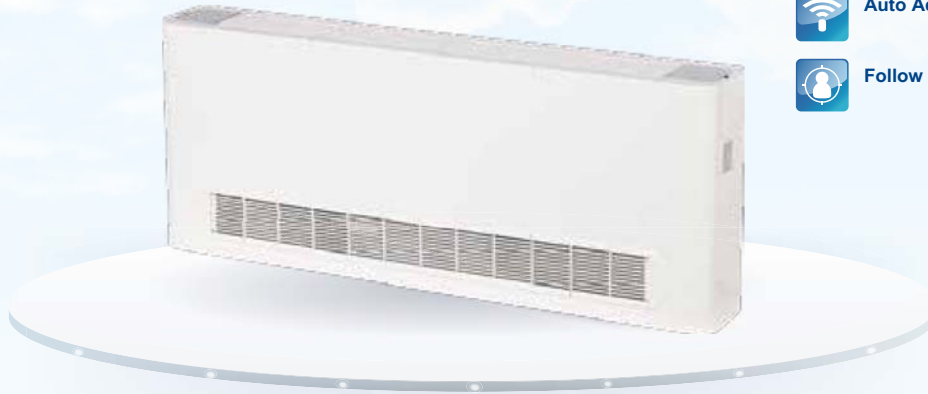
Model		MDV-D71G-R3/QN1Y	MDV-D80G-R3/QN1Y	MDV-D90G-R3/QN1Y	
Power supply		1-phase, 220-240V, 60Hz			
Cooling capacity	kW	7.1	8	9	
	kcal/h	6,100	6,900	7,700	
	Btu/h	24,200	27,300	30,700	
Heating capacity	kW	8	9	10	
	kcal/h	6,900	7,700	8,600	
	Btu/h	27,300	30,700	34,100	
Power input	Cooling	W	79	95	95
	Heating		79	95	95
Rated current	Cooling	A	0.33	0.39	0.39
	Heating		0.33	0.39	0.39
Airflow rate(H/M/L)	m <sup>3</sup> /h	1,190/780/580	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)	45/42/39	48/43/38	49/43/38	
Refrigerant	Type	R410A			
	Control method	EXV			
Net dimension(W×H×D)	in.(mm)	49-7/32×12-51/64×9-41/64(1250×325×245)			
Packing dimension(W×H×D)	in.(mm)	52-61/64×16-59/64×13-3/16(1345×430×335)			
Net weight	lbs.(kg)	43.8 (19.9)			
Gross weight	lbs.(kg)	55.1 (25)			
Piping connections	L(flare)	in.(mm)	Φ3/8(Φ9.53)		
	G(flare)	in.(mm)	Φ5/8(Φ15.9)		
	Drain piping	in.(mm)	OD 21/32(Φ16.5)		
Standard controller	-	Wireless remote controller (RM05/BG(T)E-A)			

### Notes:

- Nominal cooling capacities are based on the following conditions: return air temp.: 80.6°F(27°C)DB,66.2°F(19°C)WB, and outdoor temp.: 95°F(35°C)DB, equivalent ref. piping: 26.25ft(8m)(horizontal)
  - Nominal heating capacities are based on the following conditions: return air temp.: 68°F(20°C)DB, outdoor temp.: 44.6°F(7°C)DB,42.8°F(6°C)WB, and equivalent ref. Piping: 26.25ft(8m)(horizontal)
  - Sound level is measured 3.28ft.(1m) below the air out-let both in horizontal and vertical distance.
- \* Specifications are subject to change without prior notice for product improvement.



# 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.

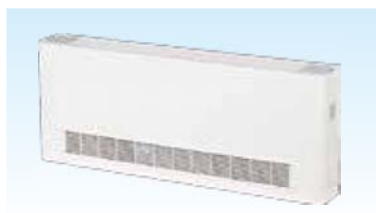
## Optional panel styles

### 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	1900	2400	3100	3900	4800	6100	6900	
	Btu/h	7500	9600	12300	15400	19100	24200	27300	
Heating capacity	kW	2.4	3.2	4	5	6.3	8	9	
	kcal/h	2100	2800	3400	4300	5400	6900	7700	
	Btu/h	8200	10900	13600	17100	21500	27300	30700	
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)	m³/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							
Indoor Unit	Net dim.(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 dim.(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	ODΦ16	ODΦ16	ODΦ16	ODΦ16	ODΦ16	ODΦ16	ODΦ16
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	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	
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)	m³/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	ODΦ16	ODΦ16	ODΦ16	ODΦ16	ODΦ16	ODΦ16	ODΦ16
Standard controller	Wireless remote controller(RM05/BG(T)E-A)								

**Notes:**

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

\* Specifications are subject to change without prior notice for product improvement.

# 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.



Indoor units lineup

## 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



## 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)

## 50Hz Specifications

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 <sup>3</sup> /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:

- 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)
- 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)
- Sound level is measured 1m from the air outlet in horizontal distance and 1m above the floor in vertical distance.

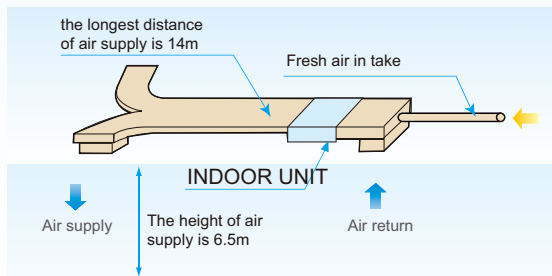
# Fresh Air Processing Unit



## Healthy and comfortable

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

## 100% Fresh air processing unit



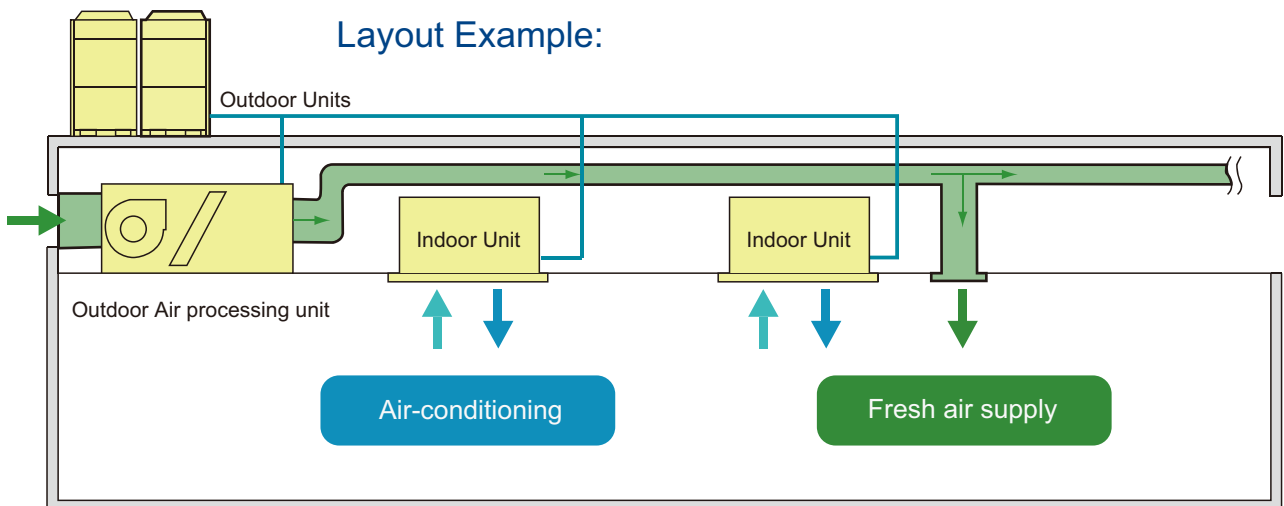
Both fresh air filtration and heating/cooling can be achieved in a single system. Indoor units and fresh air processing unit can be connected to the same refrigerant system, increasing design flexibility and greatly reducing total system costs.

Indoor units lineup

## High external static pressure

External static pressure can be up to 220Pa(models 125 to 140) and 260Pa(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



## 50Hz Specifications

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 <sup>3</sup> /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)					

## 60Hz Specifications

Model			MDV-D125T1/VN1-FA	MDV-D140T1/VN1-FA	MDV-D200T1/VN1-FA	MDV-D250T1/VN1-FA	MDV-D280T1/VN1-FA	
Power Supply			208 ~ 230V-1Ph-60Hz					
Capacity	Cooling	kW	12.5	14	20	25	28	
		kcal/h	10,800	12,000	17,200	21,500	24,100	
		Btu/h	42,600	47,800	68,200	85,300	95,500	
	Heating	kW	10.5	12	18	20	22	
		kcal/h	9,000	10,300	15,500	17,200	18,900	
		Btu/h	36,000	41,000	61,400	68,200	75,000	
Power input	Cooling	W	468	468	616	616	616	
	Heating	W	468	468	616	616	616	
Rated current	Cooling	A	2.4	2.4	4.2	4.4	4.4	
	Heating	A	2.4	2.4	4.2	4.4	4.4	
Indoor air flow (H/M/L)		m <sup>3</sup> /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	53/50/48	54/53/51	55/54/52	55/54/52	
Refrigerant		Type	R410A					
		Control method	EXV					
Net dimension		W×H×D in.(mm)	51-3/16×16-17/32×27-11/64(1300×420×690)			56-13/16×18-1/2×31-57/64(1443×470×810)		
Packing dimension		W×H×D in.(mm)	56-17/32×17-23/32×30-1/4(1,436×450×768)			59-13/32×21-21/32×38-31/32(1,509×550×990)		
Net/Gross weight		lbs.(kg)	153.2/167.5(69.5/76)	153.2/167.5(69.5/76)	251/274(114/124)	251/274(114/124)	251/274(114/124)	
Piping connections		L(flare)	in.(mm)	Φ3/8(Φ9.53)	Φ3/8(Φ9.53)	Φ3/8(Φ9.53)	Φ3/8(Φ9.53)	Φ3/8(Φ9.53)
		G(flare)	in.(mm)	Φ5/8(Φ15.9)	Φ5/8(Φ15.9)	Φ5/8(Φ15.9)	Φ5/8(Φ15.9)	Φ5/8(Φ15.9)
		Drain piping	in.(mm)	OD 1-17/64(Φ32)				
Standard controller		-	Wired controller KJR-29B1/BK-E (6 meters connection wire)					

### Notes:

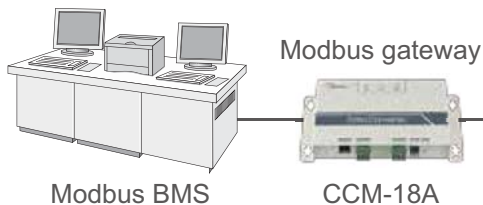
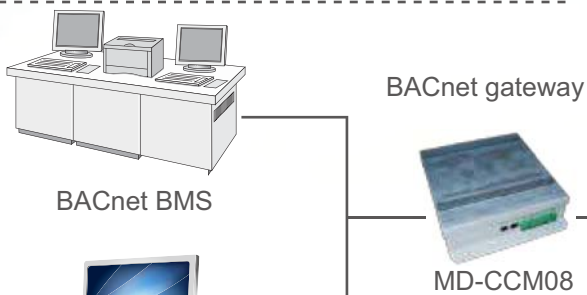
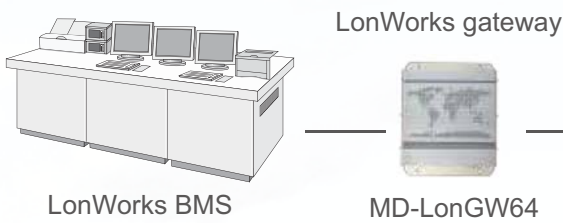
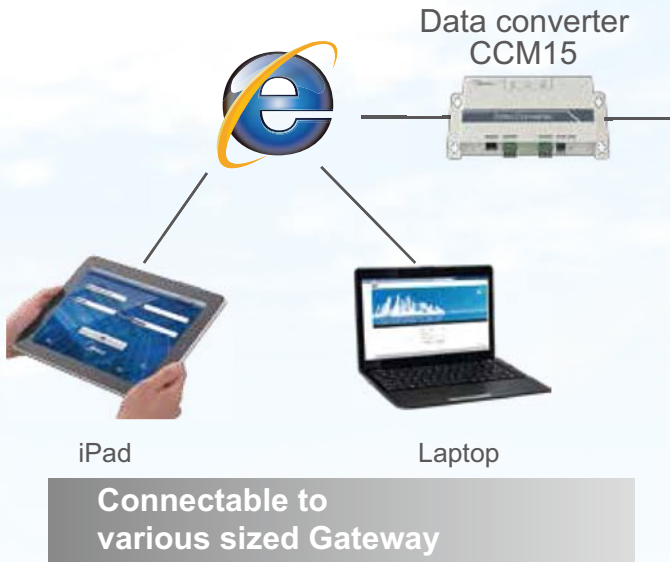
- Nominal cooling capacities are based on the following conditions: outdoor air temp.:91.4°F(33°C)DB, 75.2°F(24°C)WB, equivalent ref. piping:26.25ft. (8m)(horizontal).
  - Nominal heating capacities are based on the following conditions: outdoor air temp.:32°F(0°C)DB, 30.2°F(-1°C)WB, equivalent ref. piping:26.25ft. (8m)(horizontal).
  - Sound level is measured 4.59ft.(1.4m) from the air out-let.
- \* External static pressure are based on high speed indoor air flow.
  - \* Specifications are subject to change without prior notice for product improvement.
  - \* 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.Connection Conditions:The following restrictions must be observed in order to maintain the indoor units connected to the same system.

# Control Systems →



# Control Systems

## Network Control



### Centralized Control

#### Indoor Centralized Controller (Touch key)



#### Indoor Centralized Controller



#### Outdoor Centralized Monitor



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		
		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°C 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

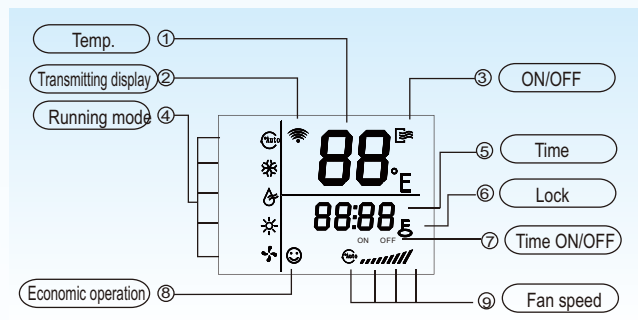
### Portable device

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



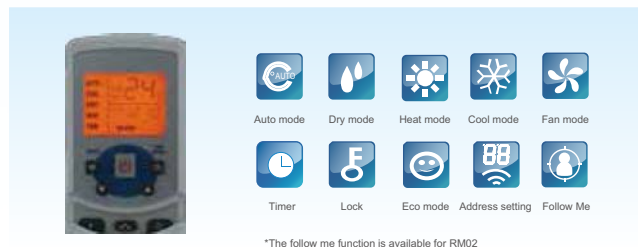
### Simplified user interface

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

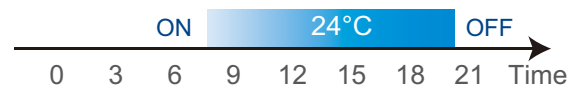
The background light allows users to operate the device in a dark room. The device lights up when a button is pressed, and turns off when a given operation is completed.



\*The follow me function is available for RM02.

### 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				

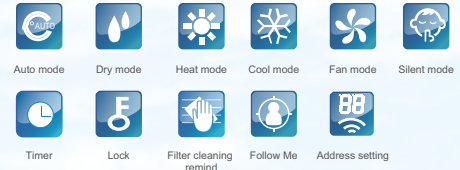
## Wired Controller



KJR-29B



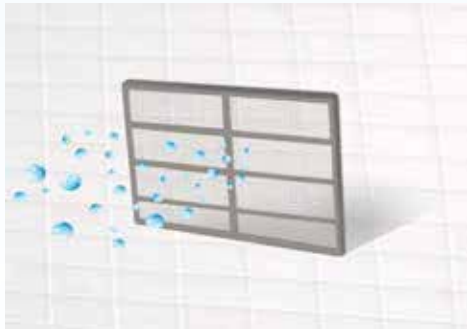
KJR-90C



## 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.



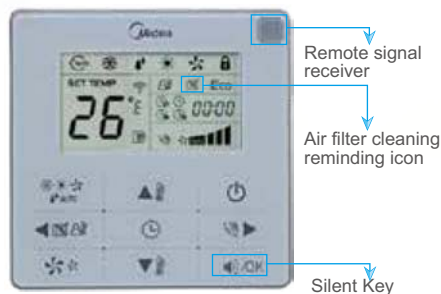
\*Available for KJR-10B/KJR-29B/KJR-90C model.

### 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.



Control system



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	

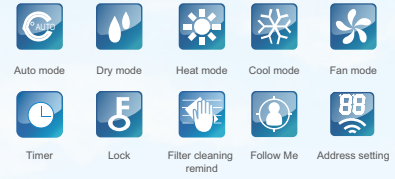
## Wired Controller



KJR-10B

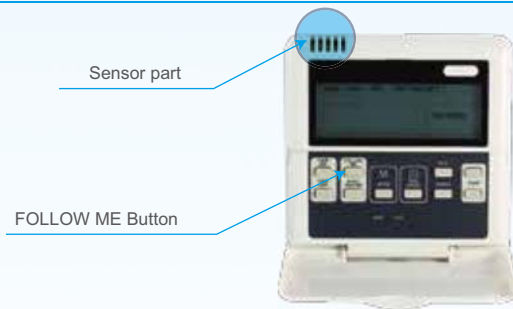


KJR-12B



## 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.

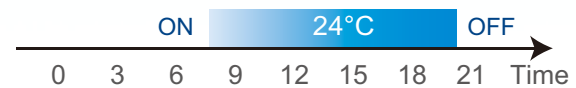
### Setting addresses

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

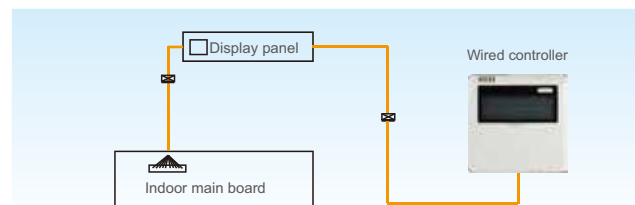
Built-in daily timer offers the convenience of automatically starting and stopping the system at set times.



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

### Built-in timer

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



KJR-90A

### 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.



26°C Shortcut setting  
Combination key  
Selecting mode

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.

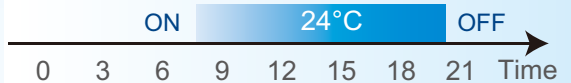
**AUTO->HEAT EXCHANGE->  
EXHAUST->BYPASS->AIR SUPPLY**

### Built-in timer

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

Setup screen example

Set to wednesday: 8:00 to 20:00



## 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 design

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

## Centralized Controller

### Indoor Centralized Controller



MD-CCM03



CCM30

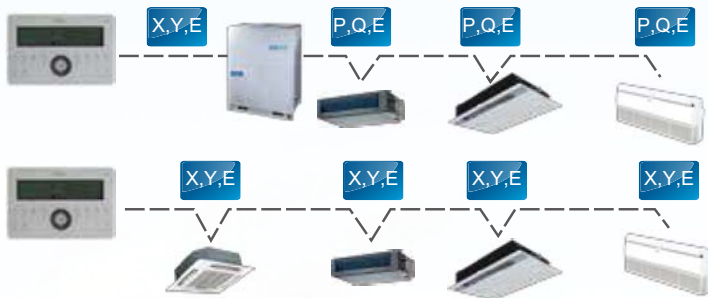
- Cool mode
- Swing
- Filter cleaning remind
- Heat mode
- Keyboard lock
- Remote controller lock
- Timer
- Fan mode
- Cooling lock
- Heating lock
- Net connection

## 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.

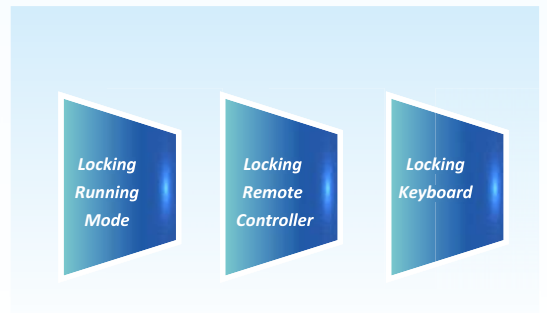
The device connects to the master outdoor units of Midea's newly designed products to simplify and centralize the wiring configuration. The 2 ways of connecting are as follow:



\*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.

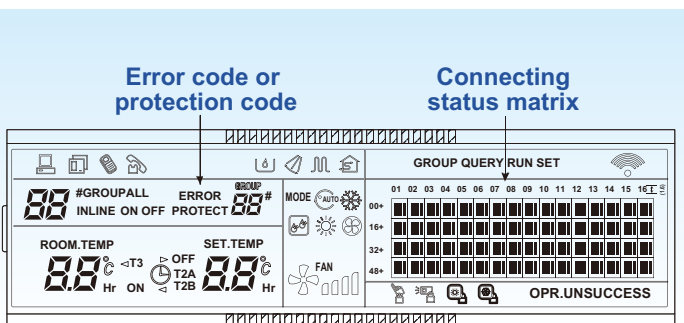


### Indoor unit working status display

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

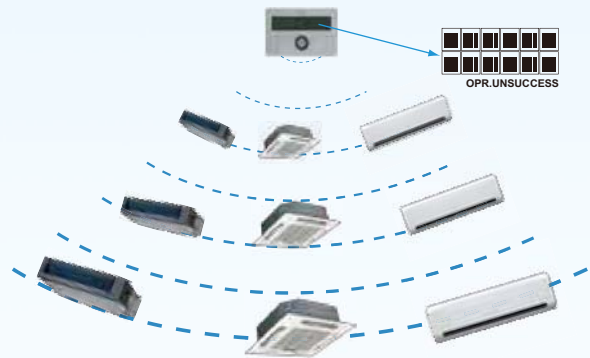
### Stylish design

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.



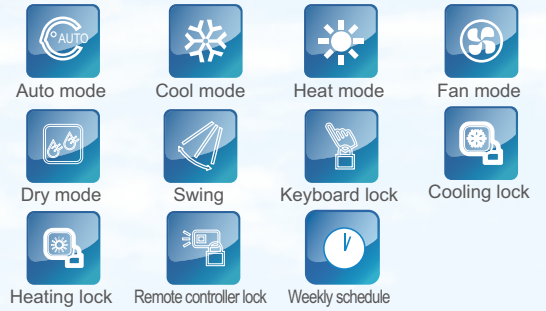
## Specifications

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



## Functions

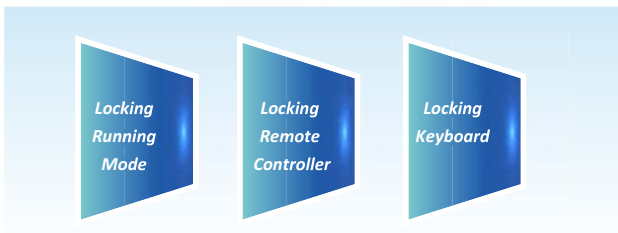
### Weekly schedule

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.

	8:00	16:00	23:59
Sun	28°C	22°C	24°C
Mon	26°C	22°C	17°C
Tue	26°C	22°C	17°C
Wed	26°C	22°C	17°C
Thu	26°C	22°C	26°C
Fri	26°C	22°C	26°C
Sat	28°C	off	24°C

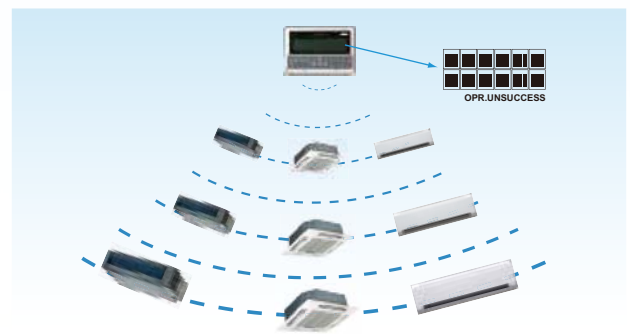
### Three lock modes

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.

Error code or protection code										Connecting status matrix														
Current	ALL	Protect	Set. temp	Mode	Auto	Query	Set	Opr. unsuccess																
88	Online	ON	OFF	Error	88	88	88	88	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
12A 12B 13	Period	Room temp	1	2	3	4	5	6	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
88:88	88:88	88:88	88:88	88:88	88:88	88:88	88:88	88:88	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat		48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
88	18	28	38	48	58	68	78		Weekly Timer Off															

## Specifications

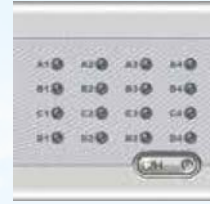
Model	MD-CCM09
Dimensions (H*W*D)(mm)	179×119×74
Power (V)	198-242V(50/60Hz)

## Centralized Controller

# 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.



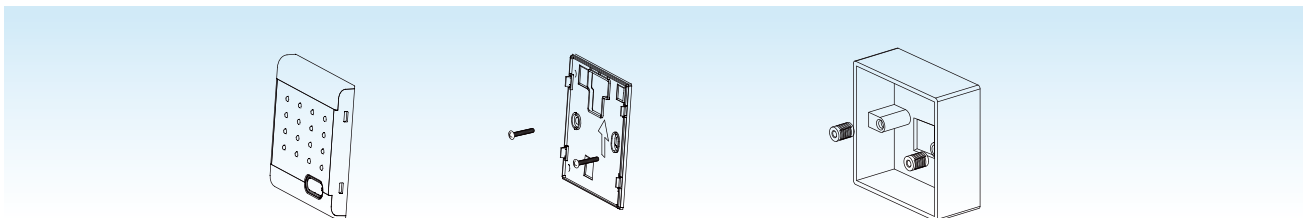
### Light indicator

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

## Centralized Monitor

# Outdoor Centralized Monitor

MD-CCM02

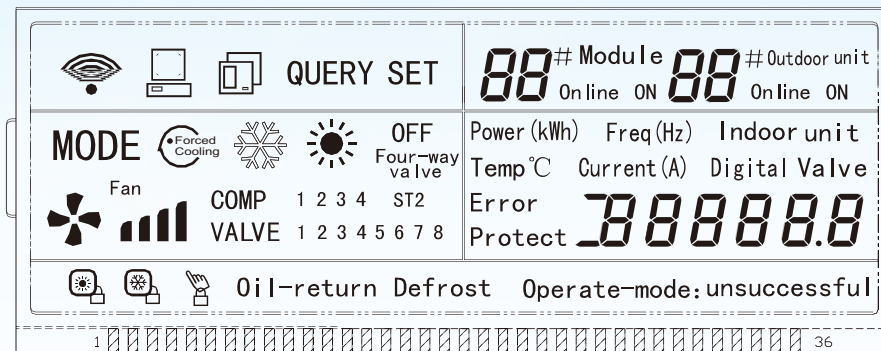


- Query parameters
- 4-way/EXV valve
- Protection/Error codes
- Power consumption
- With the ODU communication
- With the PC communication
- Forced Cooling

## 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



Control system

## Central Control Software

# IMM(Intelligent Manager of Midea) 4th Generation Network Control System



## Functions

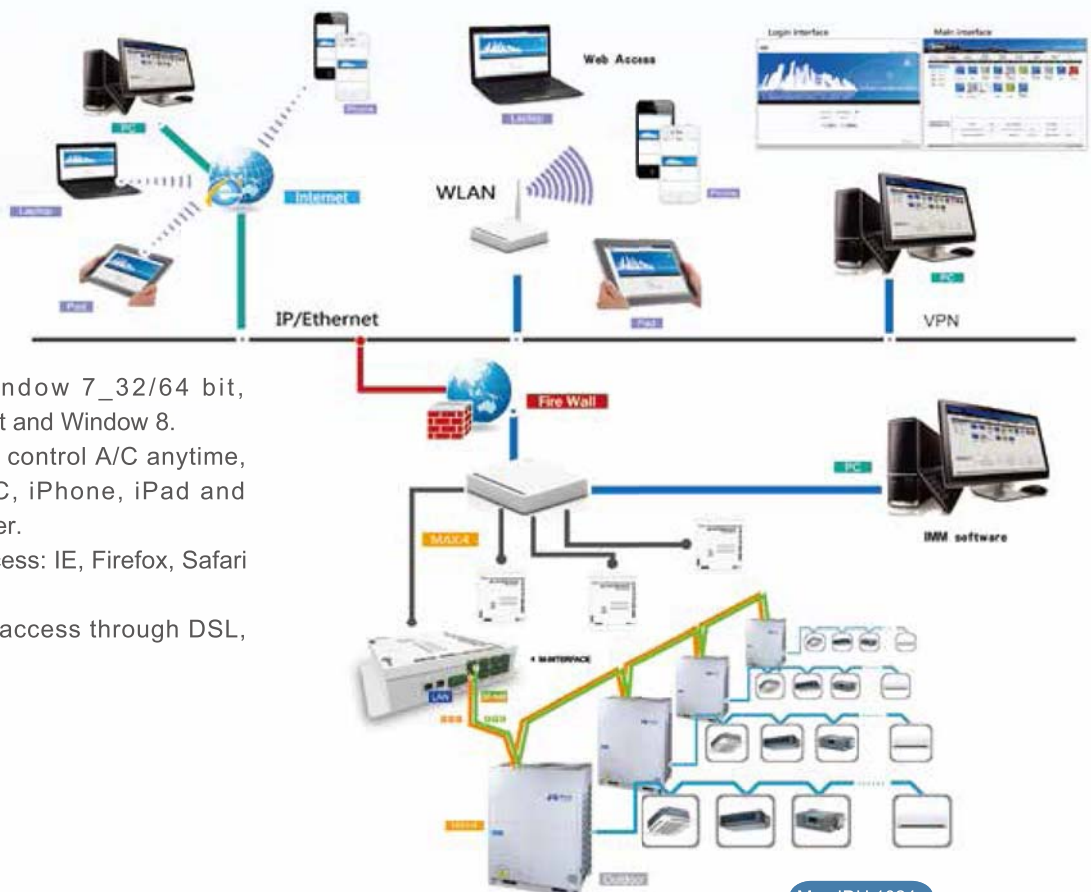
Intelligent Manager of Midea, designed specifically to control VRF systems, is based on a centralized format and dedicated to the complete control and monitoring of all the system's functions. It can be used as a flexible multi-purpose system and applied to a variety of needs, according to the scale,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

### Web Access

### Local



- 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.

Max.IDU:1024

## 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.

## Highlights



### 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.

## 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 X Y E 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 X Y E 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

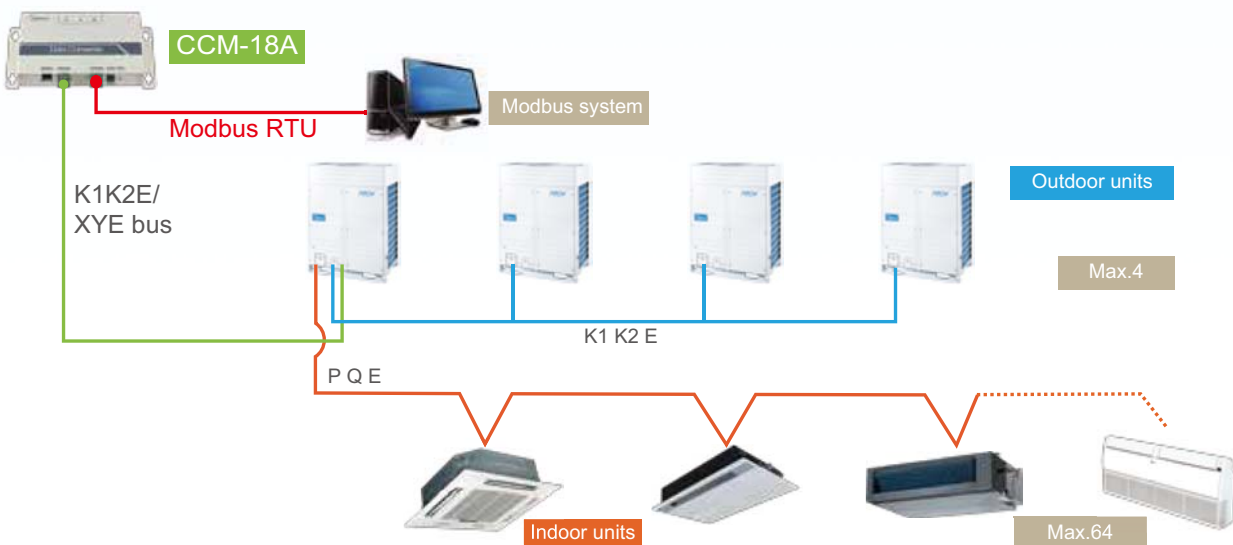


## Network example

### 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.

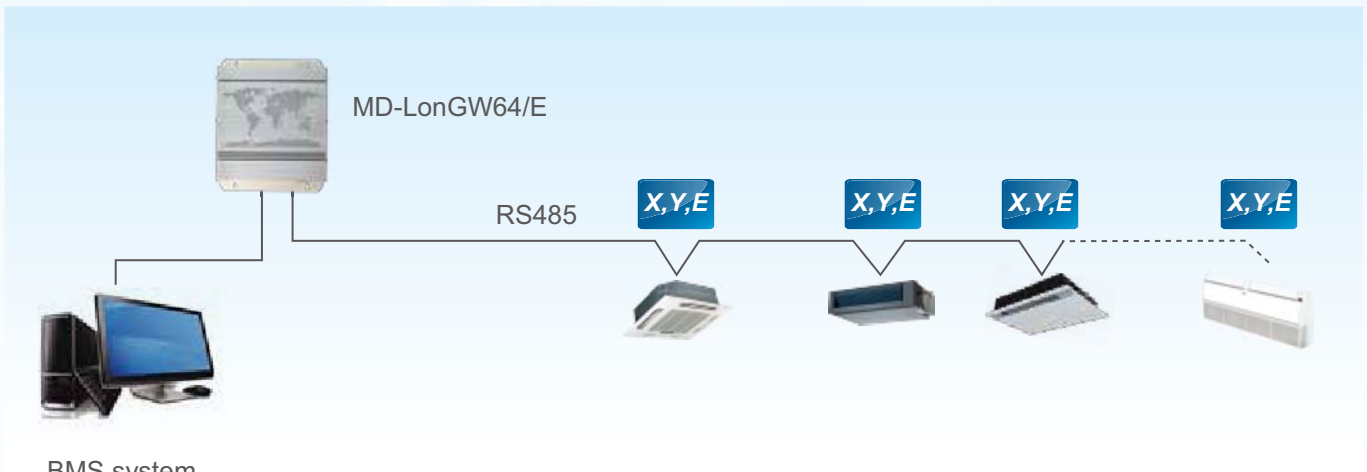
Can connect up to 64 indoor units to the BMS.

Realizes non-polarity communication, and also the application can be download online.

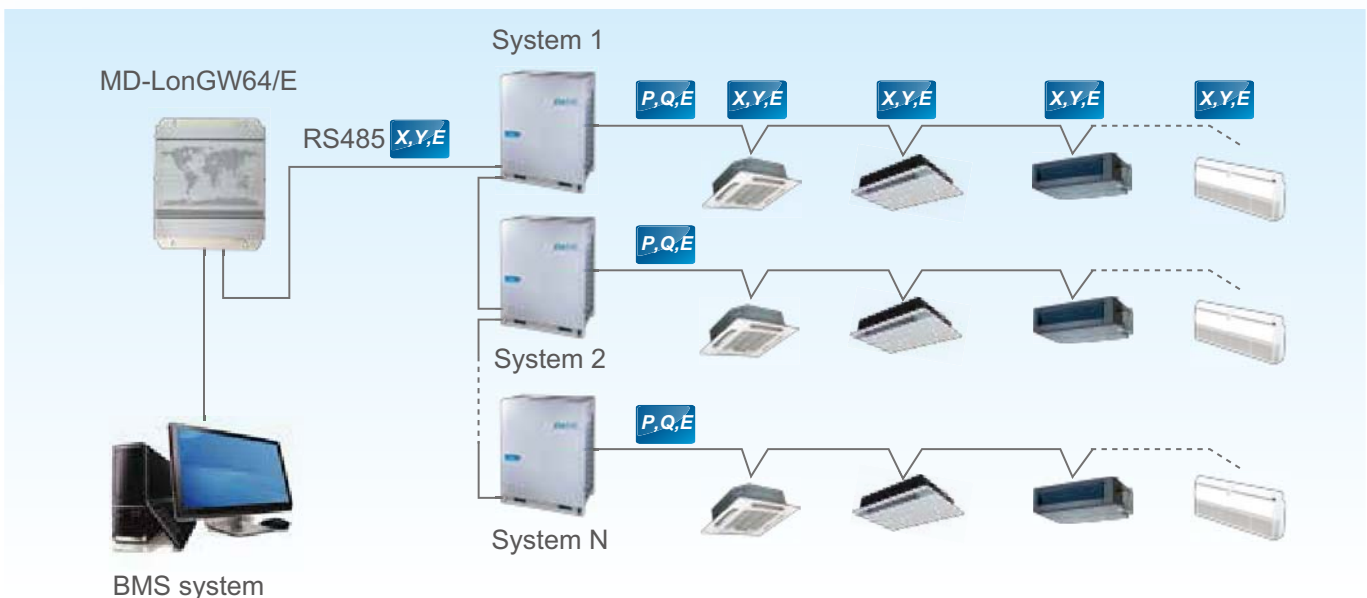


## Network example

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

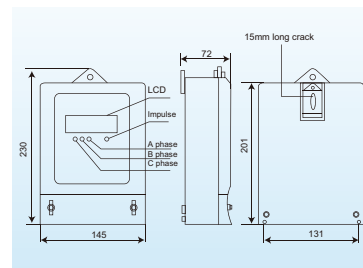
Calculates power consumption.  
Does not need adjusting after long-term use.  
Corresponds one outdoor unit to one digital power meter.



## 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



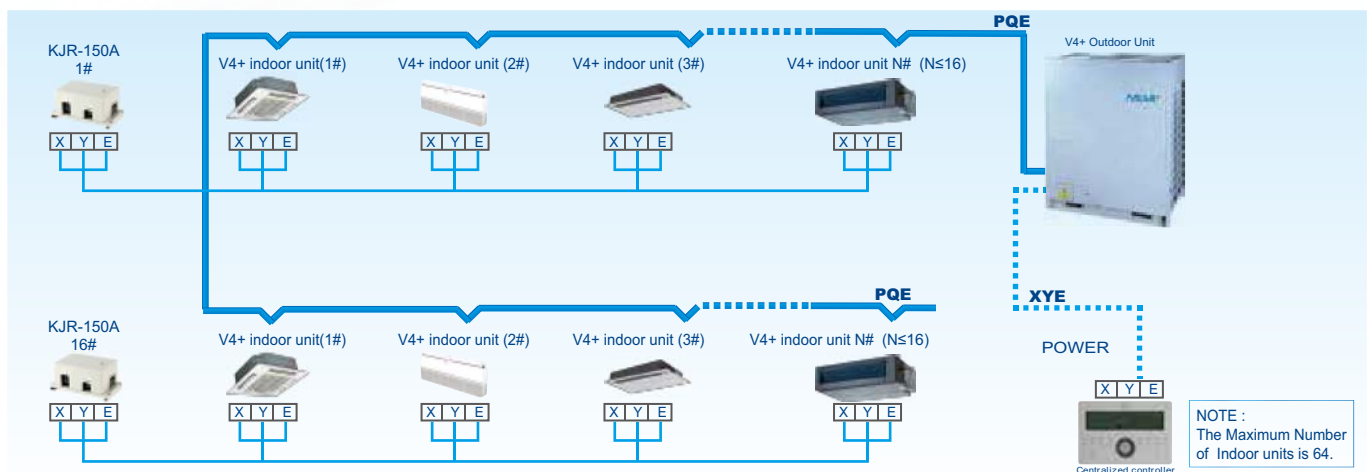
### Functions

#### 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

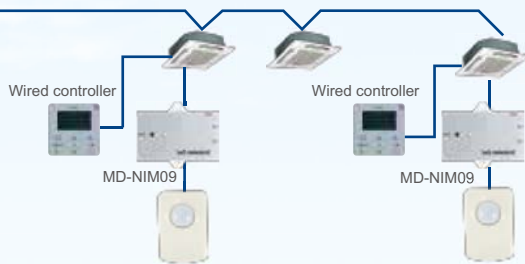
Automatically adjust the room environment.

Automatically extend the shutting down time, avoiding frequent ON/OFF.

Graceful appearance accommodates itself to different buildings.

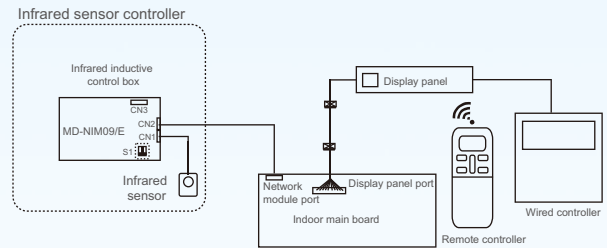


#### Installation example



Remote controller or wired controller can control indoor unit.

#### Electrical wiring



## Specifications

Model	MD-NIM09
Dimensions(H×W×D)(mm)	Sensor 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.

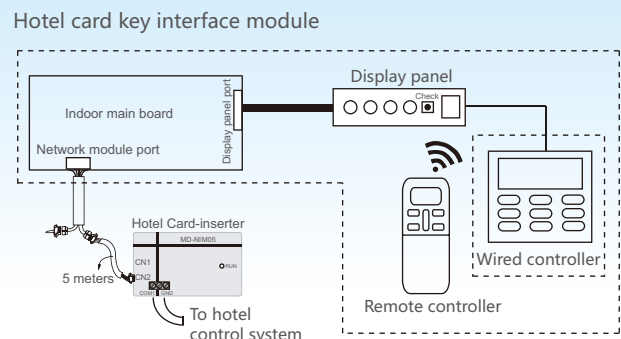
Remote controller or wired controller can control indoor unit.



#### 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

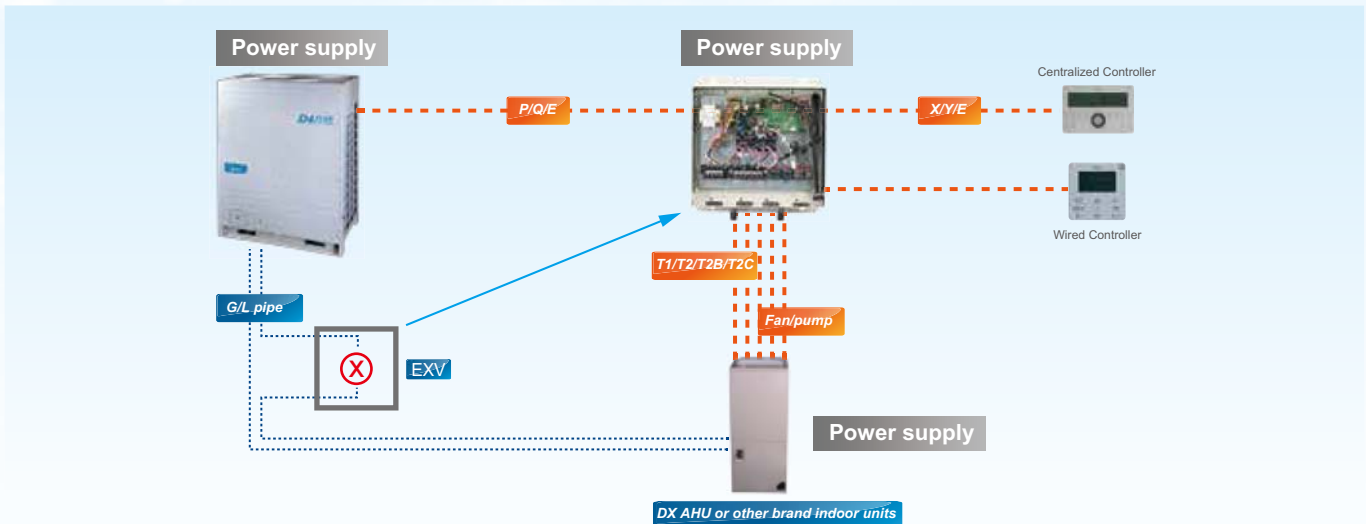
V4+ functions inside.

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

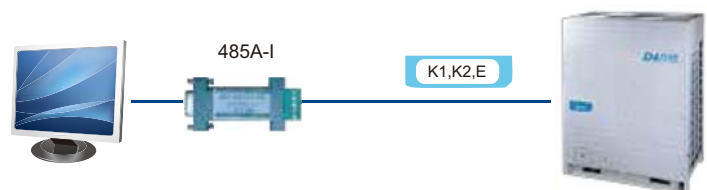
## Midea Outdoor Unit Diagnosis Software MCAC-DIAG/E

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

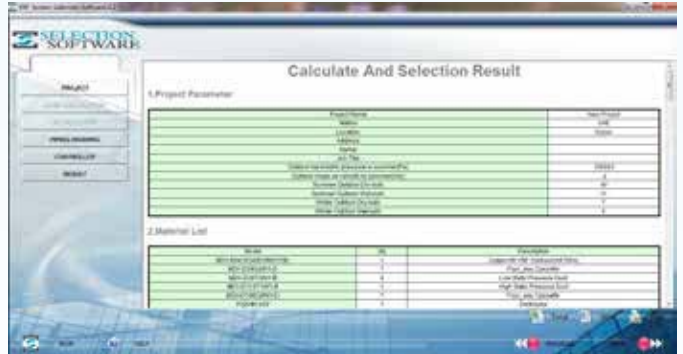
**Load calculation:** Provides two calculation methods (detailed room load calculation and rough load calculation).

**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

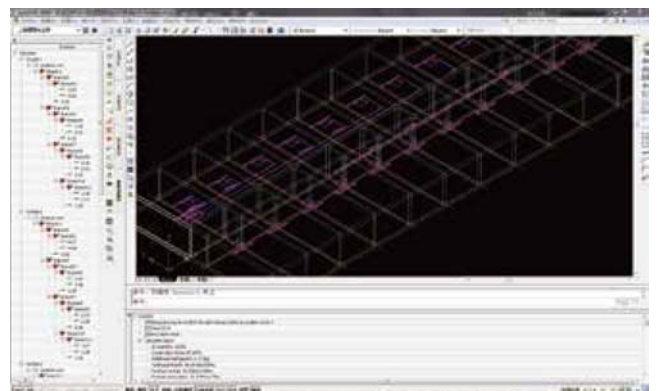
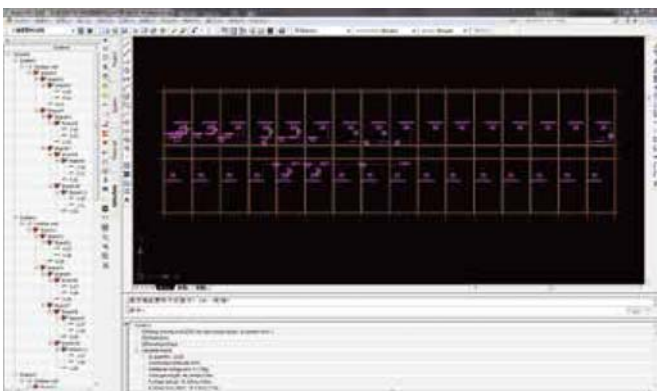
AutoCAD add-on software

**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

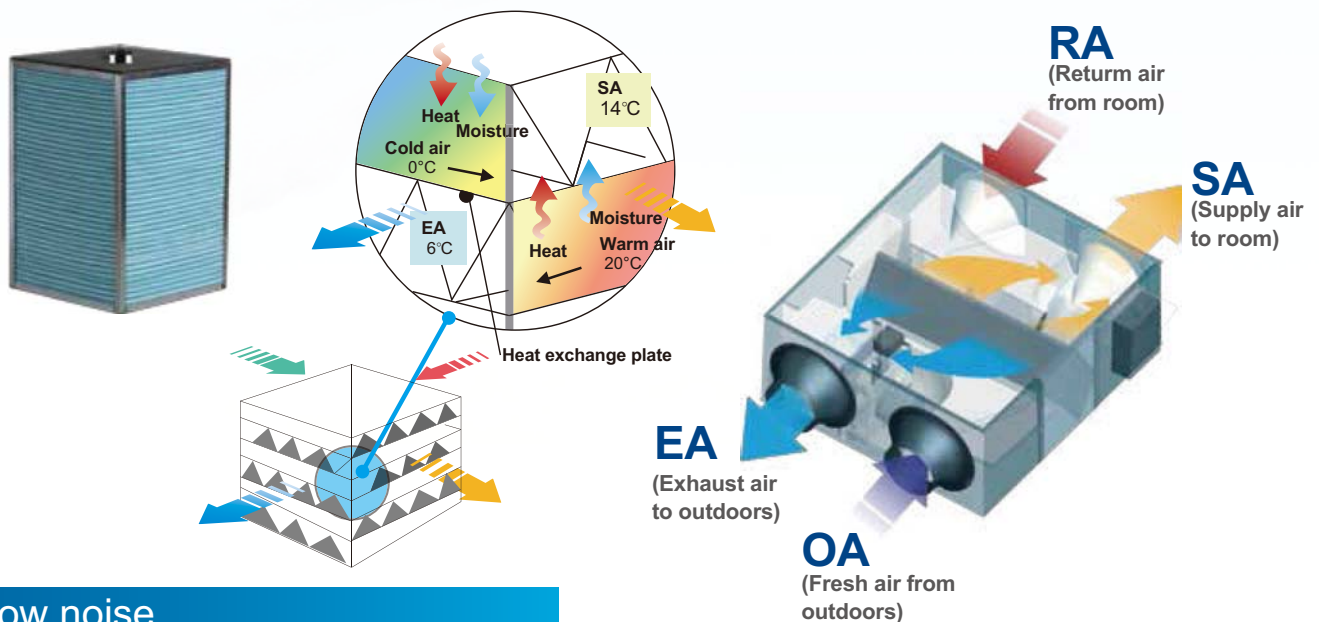
The heat recovery ventilator (HRV) can reclaim heat energy lost through ventilation and reduce the room temperature fluctuation caused by ventilation process. By utilizing the most advanced technology and technics, Midea HRV has extremely good performance. The heat exchanged core is made of special paper 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-500
HRV-300	HRV-800
HRV-400	HRV-1000



HRV-1500      HRV-2000

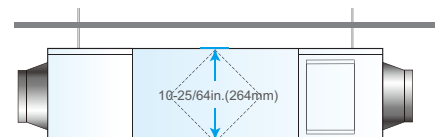


### Low noise

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.

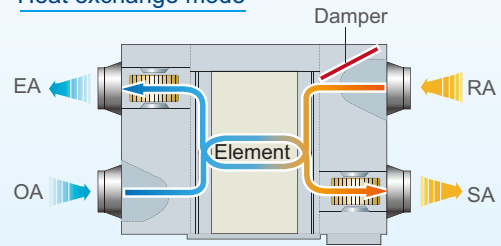
### Exhaust air mode

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.

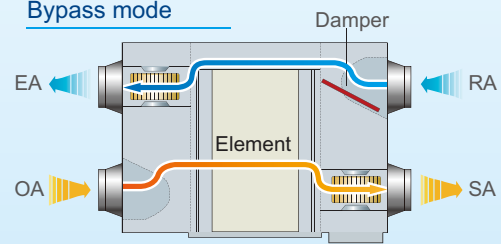
### Auto mode

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.

Heat exchange mode

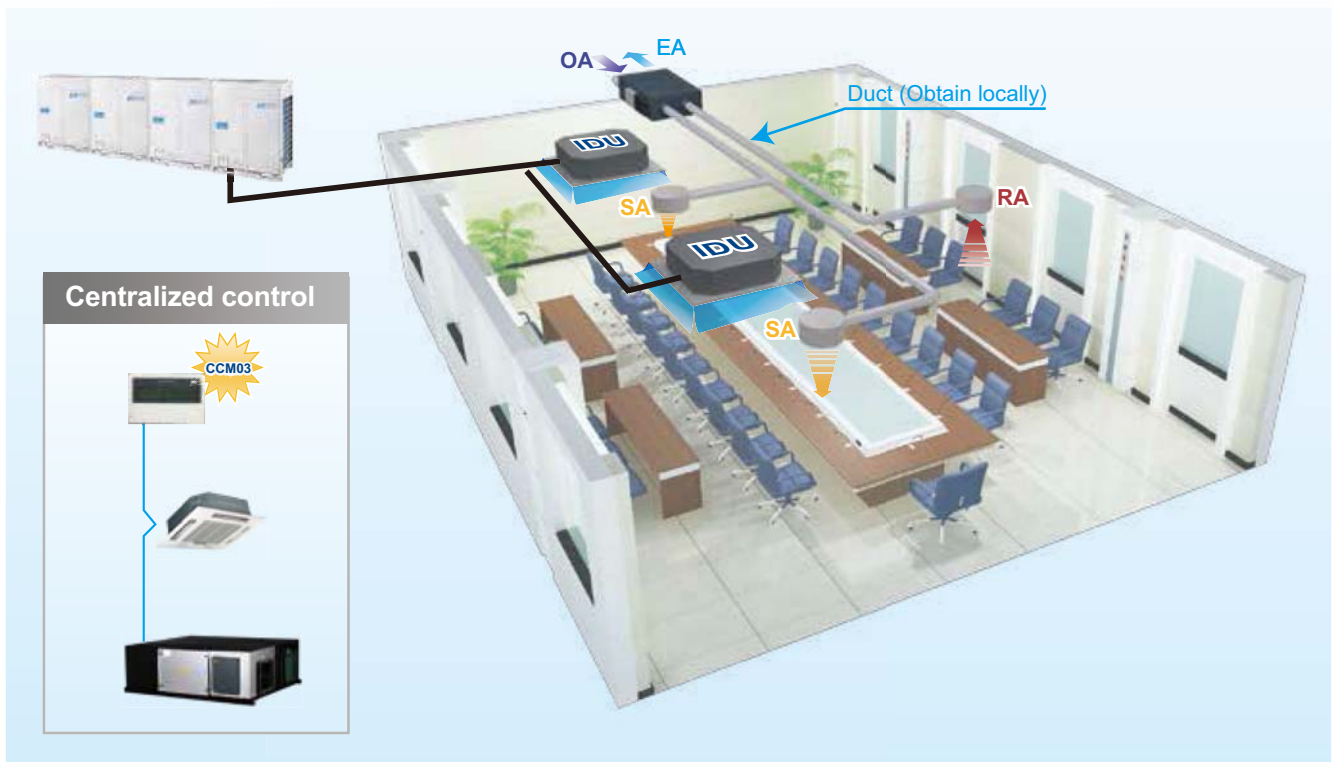


Bypass mode



## 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 (220/1/60)	220-240/1/50 (220/1/60)
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
			inch	34-1/8×25-3/4×10-3/8	37-3/16×28-27/64×10-5/8	37-3/16×36-1/2×10-5/8	40-7/8×40-3/8×10-5/8
Packing size (W×D×H)			mm	930×730×445	1010×800×450	1010×1010×450	1120×1120×452
			inch	36-5/8×28-3/4×17-1/2	39-3/4×31-1/2×17-3/4	39-3/4×39-3/4×17-3/4	44-1/8×44-1/8×17-13/16
Net/gross weight			kg(lbs)	23/40	26/44	31/52(68.3/114.4)	41/64(90.4/140.8)
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	m³/h(CFM)	200	300	400(235.6)	500(294.5)
		Medium	m³/h(CFM)	200	300	400(235.6)	500(294.5)
		Low	m³/h(CFM)	150	225	300(176.7)	375(220.8)
	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(in.)	Φ144	Φ144	Φ144(5-5/8)
Operating temperature range			°C	-7~43 DB, 80% RH or less			
			°F	19.4~109.4 DB, 80% RH or less			

Model			HRV-800	HRV-1000	HRV-1500	HRV-2000	
Power supply			V/Ph/Hz	220-240/1/50 (220/1/60)	220-240/1/50 (220/1/60)	380-415/3/50 (280/3/60)	380-415/3/50 (280/3/60)
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
			inch	50-5/8×39-5/8×15-1/4	50-5/8×49-7/16×15-1/4	63×50×21-1/4	65×57-7/8×21-1/4
Packing size (W×D×H)			mm	1380×1100×573	1390×1350×580	1680×1350×720	1760×1580×720
			inch	54-5/16×43-5/16×22-9/16	54-3/4×53-1/8×22-13/16	66-1/8×53-1/8×28-3/8	69-5/16×62-3/16×28-3/8
Net/gross weight			kg(lbs)	62/88(136.7/193.6)	79/110(173.8/242)	163/224(358.6/492.8)	182/247(400.4/543.4)
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	m³/h(CFM)	800(471.1)	1000(588.2)	1500(882.4)	2000(1176.5)
		Medium	m³/h(CFM)	800(471.1)	1000(588.2)	/	/
		Low	m³/h(CFM)	600(353.4)	750(441.2)	/	/
	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(in.)	Φ242(9-1/2)	Φ242(9-1/2)	346×326(13-5/8×12-7/8)
Operating temperature range			°C	-7~43 DB, 80% RH or less			
			°F	19.4~109.4 DB, 80% RH or less			

Note:

1. For the units model of HRV (400-1000), 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(80.6°F) DB, 19.5°C(67.1°F) WB., Fresh Air Temp. 35°C(95°F) DB, 28°C(82.4°F) WB.

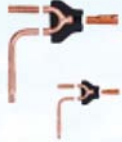



\* Heating Condition: Air Exhaust Temp. 21°C(69.8°F) DB, 13°C(55.4°F) WB., Fresh Air Temp. 5°C(41°F) DB, 2°C(35.6°F) WB.



**Branch Pipe** →

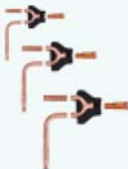




# Branch Pipe

## Branch joints of two-pipe refrigerant system

Model	Appearance	Model name	Packing Size in.(mm)	Gross Weight lbs.(kg)	Description
Branch joint for 410A outdoor unit		FQZHW-02N1D	10-1/16×5-7/8×7-1/4 (255×150×185)	3.3(1.5)	For two outdoor units connection
		FQZHW-03N1D	13-9/16×6-5/16×11-1/4 (345×160×285)	7.48(3.4)	For three outdoor units connection
		FQZHW-04N1D	18-3/4×6-1/2×11-3/4 (475×165×300)	10.56(4.8)	For four outdoor units connection
Branch joint for R410A indoor unit		FQZHN-01D	11-7/16×4-1/8×4 (290×105×100)	0.88(0.4)	A* < 16.6kW
		FQZHN-02D	11-7/16×4-1/8×4 (290×105×100)	1.32(0.6)	16.6 ≤ A* < 33kW
		FQZHN-03D	12-3/16×5-1/8×4-15/16 (310×130×125)	1.98(0.9)	33kW ≤ A* < 66kW
		FQZHN-04D	13-25/32×7-3/32×6-11/16 (350×180×170)	3.3(1.5)	66kW ≤ A* < 92kW
		FQZHN-05D	14-3/8×7-11/16×8-15/32 (365×195×215)	4.18(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 in.(mm)	Gross Weight lbs.(kg)	Description
Branch joint between outdoor unit		FQZHW-02SB	10-11/16×6-9/16×9-1/8 (272×167×232)	4.84(2.2)	For two outdoor units connection
		FQZHW-03SB	18-9/16×6-3/16×12-9/32 (472×157×312)	11(5.0)	For three outdoor units connection
		FQZHW-04SB	29-5/16×6-5/16×13-3/16 (745×160×335)	16.5(7.5)	For four outdoor units connection
Branch joint between MS unit and outdoor unit		FQZHN-01SB	10-1/8×5×4-7/32 (257×127×107)	1.76(0.8)	A* < 16.6kW
		FQZHN-02SB	11-5/16×5-3/8×4-7/32 (287×137×107)	1.98(0.9)	16.6 ≤ A* < 33kW
		FQZHN-03SB	11-11/16×6-9/16×6-31/32 (297×167×177)	3.08(1.4)	33kW ≤ A* < 66kW
		FQZHN-04SB	14-5/8×7-3/4×7-3/8 (372×197×187)	5.06(2.3)	66kW ≤ A* < 92kW
		FQZHN-05SB	17-1/64×8-3/4×8-15/16 (432×222×227)	7.26(3.3)	92kW ≤ A*
Branch joint between MS unit and indoor unit		FQZHN-01D	11-7/16×4-1/8×4 (290×105×100)	0.88(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		

Branch pipes



## Central Control Software

### Data converter

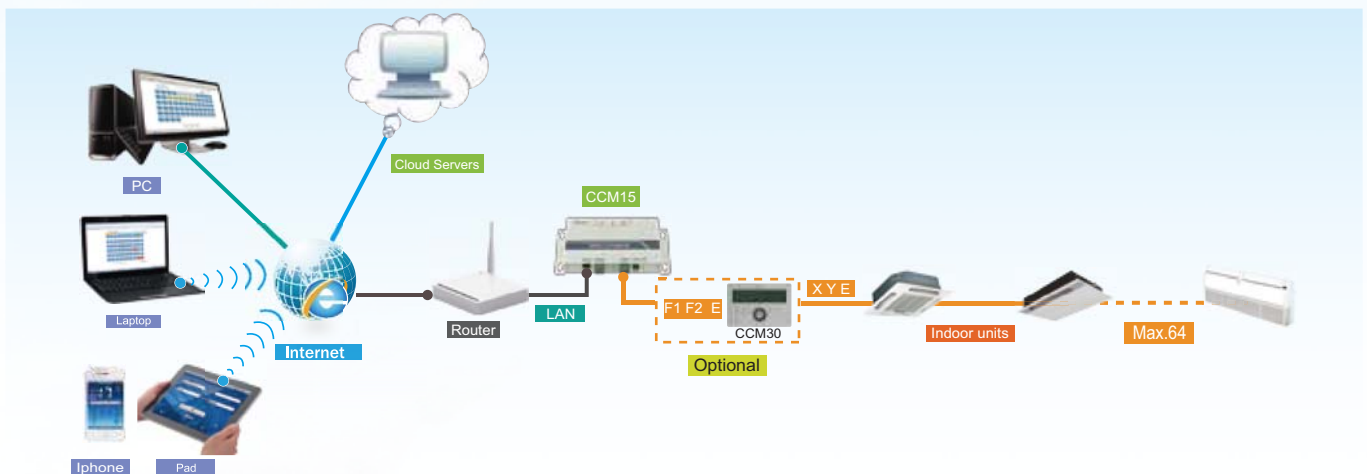
#### CCM15

- 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.



1502-8V1501



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Is certified under the ISO 14001 International standard  
for environmental management.  
Certificate No.15912E10020R0L



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



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

## 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>

Note: The data in this book may be changed without notice for further improvement  
on quality and performance.

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