

# Contents

<b>Part 1</b>	<b>General Information.....</b>	<b>1</b>
<b>Part 2</b>	<b>Outdoor Units.....</b>	<b>9</b>
<b>Part 3</b>	<b>Installation.....</b>	<b>50</b>
<b>Part 4</b>	<b>Troubleshooting.....</b>	<b>73</b>
<b>Part 5</b>	<b>Control System.....</b>	<b>100</b>

Manufacture reserves the right to discontinue, or change at any time, specifications or designs without notices and without incurring obligations.



# Part 1      General Information

1. Product Lineup .....	2
2. Nomenclature.....	3
3. Features.....	4
4. Indoor Unit Lineup.....	7

# 1. Product Lineup

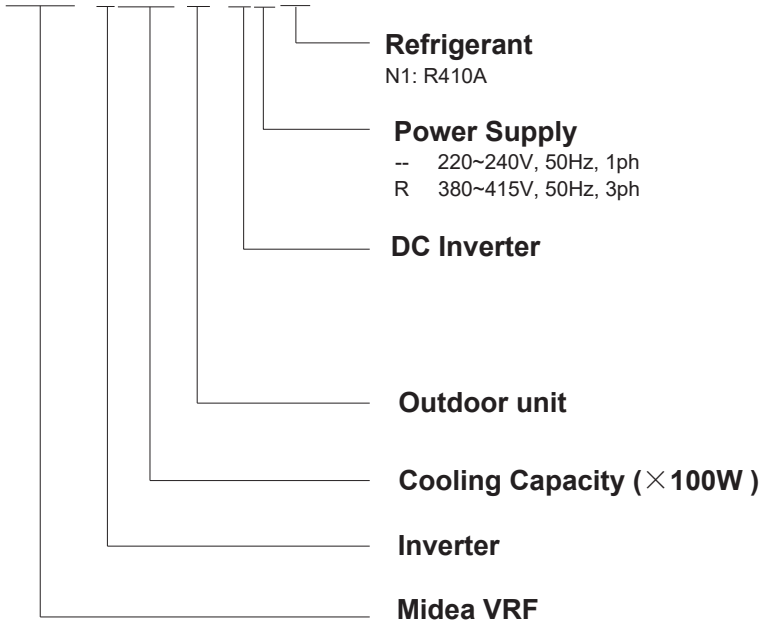
## Outdoor Units



Model name	Dimension body(mm)	Net/Gross weight (kg)	Power supply
MDV-V120W/DRN1	Width: 900 Height: 1327 Depth:320	95/103	380-415V-3ph~ 50Hz
MDV-V140W/DRN1	Width: 900 Height: 1327 Depth:320	95/103	380-415V-3ph~ 50Hz
MDV-V160W/DRN1	Width: 900 Height: 1327 Depth:320	102/113	380-415V-3ph~ 50Hz
MDV-V180W/DRN1	Width: 900 Height: 1327 Depth:320	107/118	380-415V-3ph~ 50Hz

2. Nomenclature

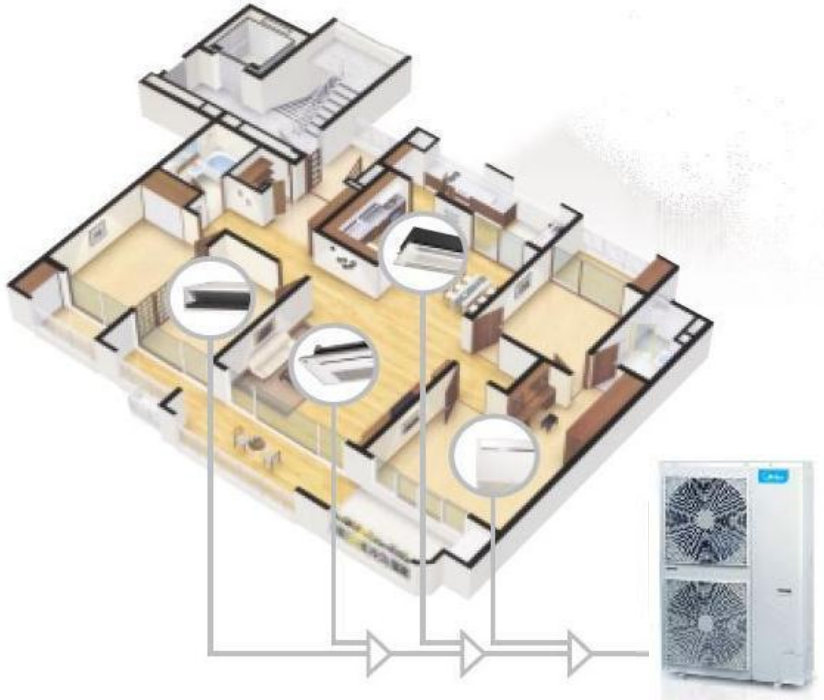
MDV-V120W/DRN1



## 3. Features

### 3.1 Wide application

The Full DC Inverter mini VRF system is a highly efficient solution for small commercial buildings requiring heating and cooling of up to 9 zones with one outdoor unit. Such as villa, restaurant, school etc.



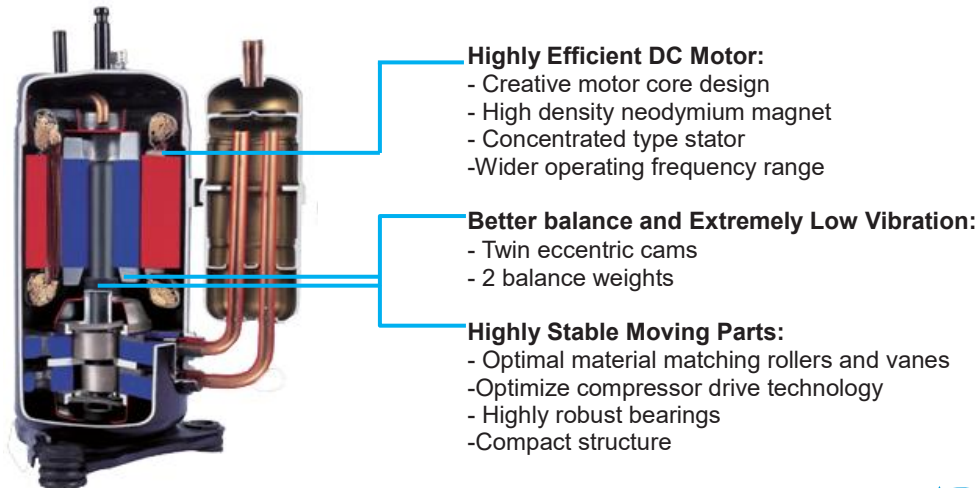
Midea offers various indoor units, more than 100 models of 15 types. Capacity ranges are from 1.8kW to 16 kW. it is full compliance with residential and light commercial place. Our systems can be operated up to 130% of capacity which allows any system to be designed to the customers' and applications' needs.



### 3.2 High efficient DC inverter compressor

Full DC inverter mini VRF adopts highly intelligent inverter-driven compressor. This advanced technology enables the output of the outdoor unit to be modulated by the real heat load demands..

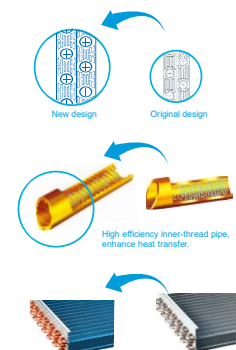
This advanced system ensures precise temperature regulation and highly efficient energy usage, making a significant contribution to the limiting the impact on the environment.



### 3.3 High performance heat exchanger

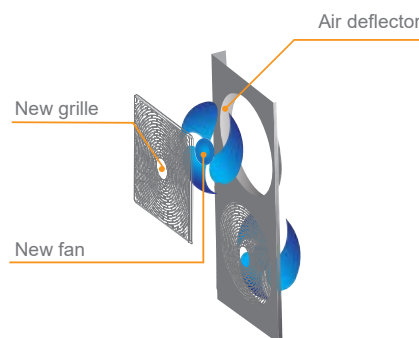
The new designed window fins enlarge the heat-exchanging area , which decrease the air resistance, save more power and enhance heat exchange performance.

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



### 3.4 Low-operating sound design

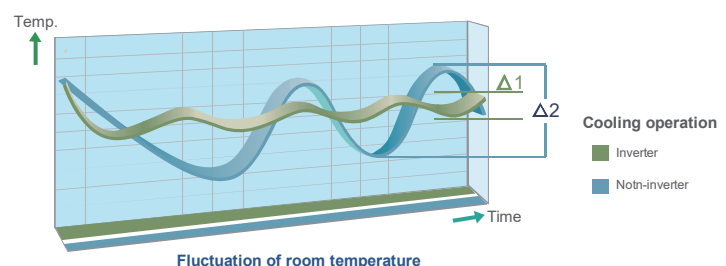
Optimally design fan shape and new designed discharge air grille and air deflector, making higher air volume and lower operation sound.



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

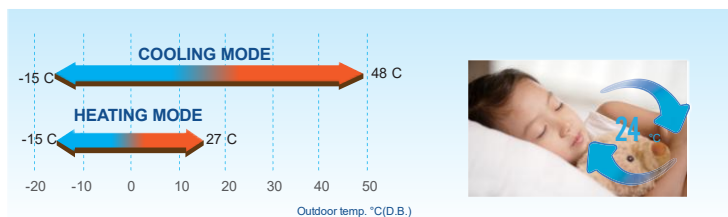
Utilizing the inverter compressor benefits, the system can reach full load quickly and shorten warm-up or cool-down time for an immediate comfortable air solution.

Less temperature fluctuation will create a better living environment.

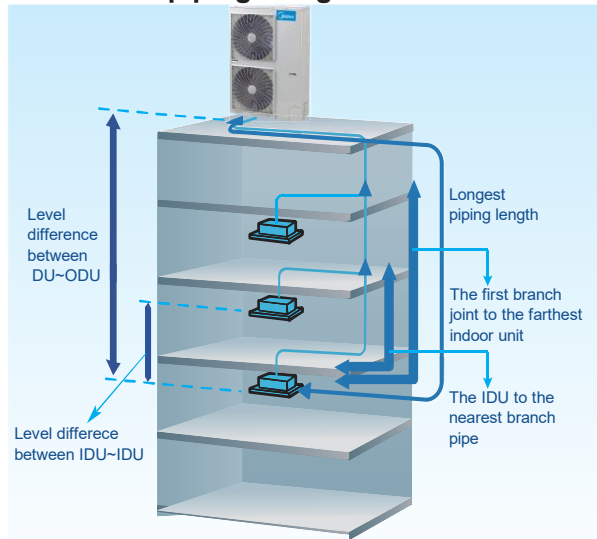


### 3.6 Wide operation temperature range

No matter in extremely cold winter when outdoor temperature gets as low as  $-15^{\circ}\text{C}$  or in hot summer when temperature is up to  $48^{\circ}\text{C}$ , the mini VRF system will keep stable performance.



### 3.7 Flexible piping design

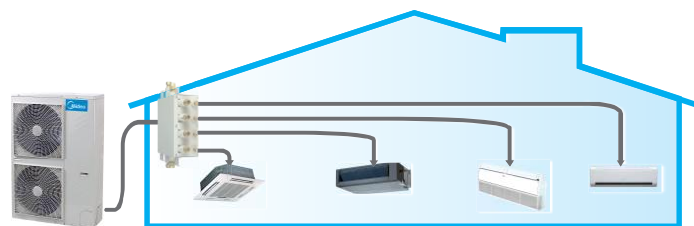


Piping Length		Permitted Value
Total piping length (Actual)		100m
Longest piping length	Actual	60m
	Equivalent	70m
The first branch joint to the farthest IDU		20m
The IDU to the nearest branch pipe		15m
Level difference between ODU~IDU	ODU up	30m
	ODU down	20m
Level difference between IDU~IDU		8m

### 3.8 Flexible indoor unit's connection

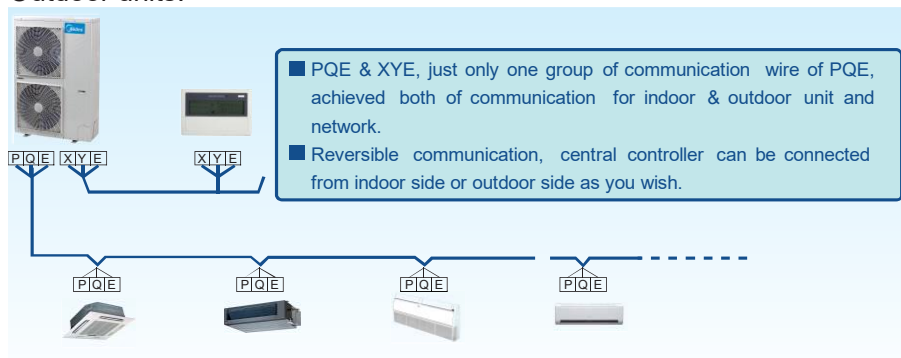
Mini VRF with intelligent control gives you independent zoning control with maximum flexibility. A single outdoor unit supports up to nine indoor units, freeing up considerable space outside. Use your backyard more wisely with much more space available created by less number of outdoor units.

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



### 3.9 Simple signal line connection

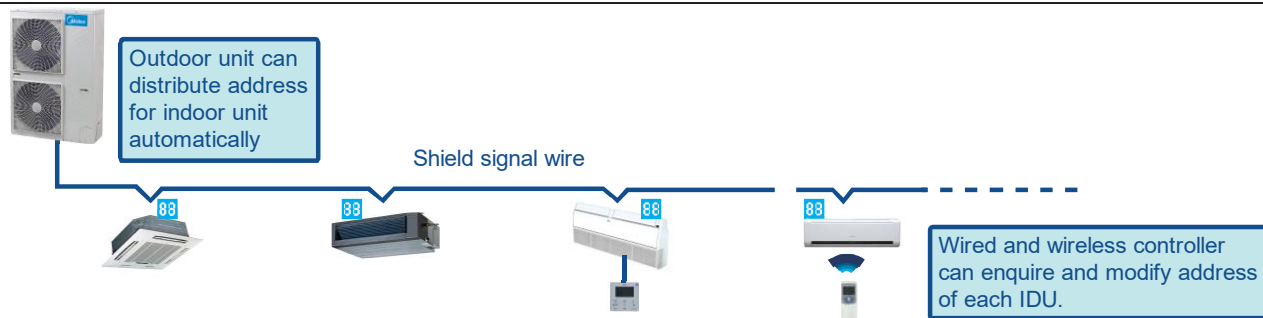
Installation is much easier as the communication wiring between indoor & outdoor units can be shared. It's easy for the user to retrofit the existing system with a centralized control by simply connecting to Outdoor units.



### 3.10 Auto address setting function

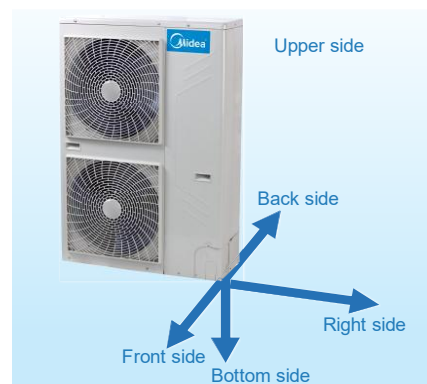
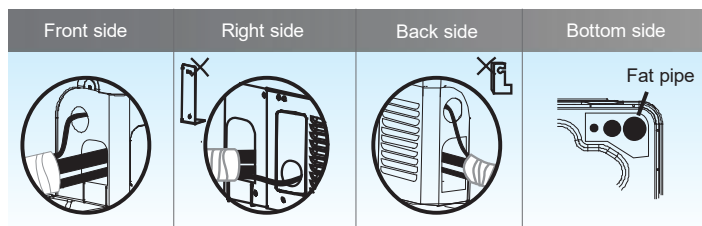
The addresses of indoor units can be set automatically by outdoor unit. Wired controller and wireless controller can enquire and modify the address of each indoor unit.





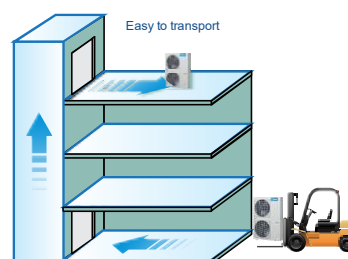
### 3.11 Easy piping connection

Offering four directions to connect pipes and wirings to meet various installation requests.



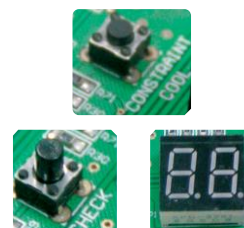
### 3.12 Easy installation

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



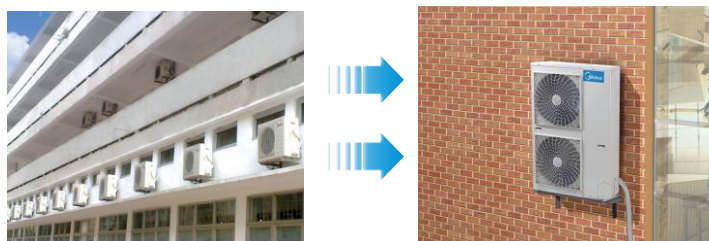
### 3.13 Easy maintenance

Forced cooling button makes outdoor unit run in cooling mode at any condition, so it is very easy for you to charge refrigerant to the system when it needs to be done. The self-diagnosis function detects malfunctions in major locations in the system and displays the type of malfunction and location. This allows service and maintenance to be performed more efficiently.














### 3.14 Space saving





The Mini VRF units are more compact, resulting in significant savings in installation space. It is particularly suitable for small offices, villas, shops, etc.



## 4. Indoor Units Lineup

Capacity (×100W)	Model					
	1-way cassette	2-way cassette	4-way cassette (compact)	4-waycassette	Low static pressure duct	Medium static pressure duct
						
18					●	
22		●	●		●	●
28	●	●	●	●	●	●
36	●	●	●	●	●	●
45	●	●	●	●	●	●
56	●	●		●	●	●
71		●		●		●
80				●		●
90				●		●
100				●		
112				●		●
125						
140				●		●

Capacity (×100W)	Model				
	High static pressure duct		Wall mounted S type	Wall mounted C type	Wall mounted R type
					
18					
22			●	●	
28			●	●	
36			●	●	
45			●	●	
56			●	●	
71	●				●
80	●				●
90	●				●
100					
112	●				
125					
140		●			
160		●			

Capacity (×100W)	Model			
	Ceiling & floor	Floor standing (exposed)	Floor standing (concealed)	Console
				
18				
22		●	●	●
28		●	●	●
36	●	●	●	●
45	●	●	●	●
56	●	●	●	
71	●	●	●	
80	●	●	●	
90	●			
100				
112	●			
125				
140	●			
160	●			

**Note:** If ODU connect only one IDU, the capacity of IDU should be not more than ODU.

If ODU connect more than one IDU, the capacity of each IDU should be not more than 8kW for refrigerant uniform distribution.

Due to continuous improvement, specifications are subject to change without prior notice.