aircon

20 YEARS ON THE MARKET

Products catalogue

SPLIT • MULTI • OFFICE • VRF

MDV®

aircon

20 YEARS ON THE MARKET

Creating history together

Ladies and gentlemen, it's 20 years now that Aircon Sp. z o.o. company operates and develops for you. It comes from fascination with China - its history, culture, language, kitchen. Today, MDV belongs to a group of ten of the most recognized brands in Poland, that offers modern and complex HVAC solutions. Still, success has many fathers, and this year's anniversary is the best opportunity for awards and thanks.

Above all, AIRCON is the employees' commitment. Our team is created by people with passion and unconventional ideas for company development. It all adds up to the highest quality of services provided to our Customers. I would like to thank, personally and on behalf of the Management Board, for this invaluable support.

I would also like to express my gratitude to Partners, without you, we would not exist. I am grateful for the confidence, cooperation but also concerns and suggestions. All of these allow us to reshape the HVAC industry. Your achievements and results confirm that the MDV brand was like hitting the bull's eye. Our equipment attracts both business and individual customers. I tend to trust that this twentieth anniversary bodes well for further fruitful cooperation.

I also thank all those who are simply with us, share their ideas, support and trust us. On behalf of the entire company we guarantee that we will not rest on laurels and all set objectives and promises will be fulfilled. Wishing all of us growth, involvement and effective cooperation as well as further, together celebrated anniversaries.

Artur Banasiak
Co-founder of
AIRCON company

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MDV®

aircon

20 YEARS ON THE MARKET

"Success of the company depends on people, their individual experiences and knowledge. You need to be creative and think outside the box. AIRCON is created by such a team of involved professionals, who everyday fight with the harsh market reality, staying positive. Yet, successes are possible mainly thanks to the excellent cooperation with external partners and internal teamwork in the company. I would like to thank you for the last 20 years."

Rafał Hubbard,
Sales Manager
in AIRCON for 17 years

Proud of the changes

- Expansion of the company
- 11 regional offices in Poland
- Hundreds of thousands of sold devices
- New training room 420m²
- Thousands of trained people
- Modern marketing support

We trust that in the next 20 years you still will be with us!

Breakthroughs

2000 – Establishment of the Company; Starting cooperation with Israeli company TADMOR

2001 – Launching a module that enables lowering the air-conditioning temperature down to +12°C

2002

2003

2004 – New chapter with MDV brand, that is innovative solutions and HVAC technologies. It hit the bull's eye!

2005 – Launching ducted TADMOR units - air-flow stream control

2006 – We enter the European market

2007 – We are the pioneers on the VRF market

2008 – Modular chillers on the market

2009 – Launching AIR Kit control module

"Company is a place where a vision is achieved. This vision is for the profit of both Customers and employees. It is achieved by people, who operate according to the specified procedures, using various tools, providing products and services. Therefore for these years we have put tremendous effort into things that cannot be directly seen: choice of adequate suppliers, quality monitoring, sale support programs, process improvements."

GENERAL REPRESENTATIVE MDV®

Karolina Rynkiewicz,
Customer Service Manager
in AIRCON for 6 years

Upcoming activities

Enlargement of the team

Innovations in particular divisions

Loyalty program for customers

New products in our offer

New web page

"We have been working for the customers' trust for many years. Guided by the principle of partnership, we have built a strong group of satisfied Partners around us. Their long-term loyalty is another reason to be proud. We believe that in order to turn the sale into sustainable success, you need to be first of all a devoted customer's advisor."

Waldemar Rosa,
Area Manager
in AIRCON for 18 years

2010 – The biggest realization from the start of the company for Kia Motors Poland Sp. z o.o.

2011

2012

2013

2014 – New web page with modern graphic design and easily accessed information about products

2015 – We enlarge the store space, providing full availability and express shipment of the units

2016

2017 – Mmm... jasmine freshness! Something new for demanding customers, that is an air-conditioner with aromatic filter

2018 – We have a new office in Marki near Warsaw

2019 – Take your pick. All Easy air-conditioners tailored to the interior are now offered.

20 references for the 20th anniversary


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Legend:

1. "Domek pilota" military airfield, Dęblin - 415 kW
2. Green Mountain Hotel, Karpacz - 879 kW
3. Hotel LUXOR, Lublin - 310 kW
4. Polkowice Mine, 335 kW
5. Marshal's Office, Łódź - 790 kW
6. Hotel DeSilva Premium, Poznań - 189 kW
7. KIA office building, Warszawa - 571,6 kW
8. Poddębina Seniors' Center, Tuszyn - 170,2 kW
9. Fabryka Formy, Jelenia Góra, Poznań, Żory - 841 kW
10. Żywiec Zdrój, Jeleśnia - 303 kW
11. Victaulic, Drezdenko - 265 kW
12. Lear Corporation, Tychy - 1920 kW
13. Dębiec Gallery, Poznań - 1800 kW
14. Zamek Hotel, Szczecin - 56 kW
15. Voivodeship Labour Office, Rzeszów - 323 kW
16. Legendia Silesian Amusement Park, Chorzów - 417 kW
17. Taranko office building, Gdańsk - 221 kW
18. Science and Technology Park, Opole - 565 kW
19. Panattoni, Radonice - 510 kW
20. Targówek Retail Park, Warszawa - 358,5 kW


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aircon

20 YEARS ON THE MARKET

MDV® - what is sp

SPLIT series

All Easy

MFB
Multi Function Board

Central controller

Alarm port

MULTI series

Units combination possibility:

- floor & ceiling type
- duct type
- wall-mounted type
- cassette type

VRF series

2nd generation indoor units!

EVI compressor

- low heating capacity decreases in extreme minus temperatures

ONE

- capacity from 7.2 kW!
- 90 kW in one module
- capacity extension with 28.0 and 33.5 kW

pecial about us

R-32 eco-friendly refrigerant

Aroma

Operation in low ambient temperatures

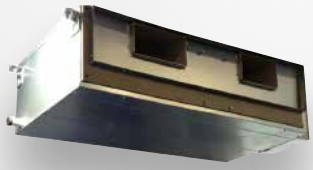
1W in standby mode

Aromatic filter

OFFICE series

Standard and compact cassette

Duct unit BIG Inverter 20-56 kW



We give more power!

- Model 18 = 5.3 kW
- Model 24 = 7.3 kW

Full control options:

- individual
- group
- central
- BMS

Maximum distances	SPLIT series – 50 m
between indoor	OFFICE series – 65 m
and outdoor units	VRF series – 1000 m

Innovative solutions

Design with us

Our unique and technologically advanced systems are perfect for any project.

X2 system

The MULTI X2 system consists of two, simultaneously operating indoor units, connected to a single outdoor unit. This solution ensures installation space savings, thanks to the application of just one outdoor unit while keeping the required heating or cooling capacity in the air-conditioned room. MULTI X2 systems are designed for air-conditioning of large spaces such as: conference rooms, open-space type offices, banquet halls and dining rooms. Dedicated units: ducted and floor & ceiling.

Modules for air handling units

Capacities starting from 2.6 kw and up to 90 kW!

AirKit and AHUKAZ modules enable connection of the universal outdoor unit with a refrigerant coil in the air handling unit.

More on page 44

IMM control

Intelligent MDV Manager (IMM) - as a management system, is especially designed to control and monitor all functions of the MDV VRF system. Flexibility and versatility of application depending on different needs, makes it an ideal manager of any building.

More on page 135

We care for you and environment

bioHEPA filter

- cleans the air of 99% dust with particles larger than 0,3μm
- captures up to 95% bacteria and some viruses as well as fungal cells (including mould)
- creates the effect of sterilisation and air purity

R-32 green refrigerant

By using R-32 refrigerant you contribute to the prevention of global warming.

R-32 refrigerant has three times lower global-warming potential (GWP) in comparison with traditional R410a gas. Contrary to R-32 other refrigerants (such as R-22) it does not contain chlorine which has a harmful effect on the stratospheric ozone layer, leading to its destruction. R-32 refrigerant brings many benefits both for the environment and for the user. It provides very high energy efficiency and better performance of the unit. It belongs to refrigerants with the lowest flammability (2L class).

Functions

Energy saving

ECONOMY OPERATION
When enabled, this function starts the air-conditioner for 8 hours in economy operation mode, thereby reducing energy consumption even by 60%, in comparison with operation in standard mode.

SLEEP MODE
By activating this function, the air-conditioner will automatically increase (or decrease in the heating mode) the set temperature by 1°C during the first two hours of operation, while the fan is set at low speed. After further 5 hours of continuous operation – the air-conditioner will switch off. Unnoticeable for the user, slow change of temperature and automatic switching off, guarantees maintaining comfort and significant energy saving.

1W IN STANDBY MODE
In the standby mode, by cutting off the power from the unused electric components, the energy consumption will be reduced to 1W. In comparison with conventional units that use 5W of energy in standby mode, we can achieve savings of 80%.

Reliability

REFRIGERANT LEAKAGE DETECTION
In the event the unit detects refrigerant leakage, the indoor unit display will show the EC code and the air-conditioner stops operating. This function additionally protects the compressor against damage.

SELF-DIAGNOSTICS AND PROTECTION FUNCTION
In the event of detected malfunction, the unit automatically switches off and displays relevant error code, what significantly simplifies diagnostics and resolving the failure.

EMERGENCY OPERATION MODE
In the event of temperature sensor failure, the air-conditioner displays an error code, without stopping the operation. This allows the air-conditioner to operate in the emergency mode until the arrival of the service team.

OPERATION IN LOW AMBIENT TEMPERATURES
A built-in low temperature kit adjusts the outdoor unit fan speed according to the condensing temperature. This allows the unit to operate in cooling mode at outdoor temperatures as low as -15°C.

Health

BIOHEPA FILTER
It is made of material with pores size of 0,3µm. By using the bioHEPA filters in air-conditioning, 99% of particles down to 0,3µm can be captured. This filter stops fungal cells (including mould), up to 95% of bacteria and some of the viruses, which contributes to the effect of sterilisation and air purity.

HIGH DENSITY FILTER
Smaller mesh diameter of the filter cloth increases filtering efficiency up to 80% in comparison with traditional filters used in other air-conditioners.

FILTER WITH SILVER IONS
Silver ions placed on a special net clean air from bacteria by damaging their cell walls.

CATALYST FILTER
Special catalytic coating of the filter cleans air from formaldehyde and other organic odorous compounds.

MULTIFUNCTIONAL FILTER
Filter composed of three filtration inserts with different characteristics: catalyst filter - removing formaldehyde and odorous compounds, filter with platinum nanoparticles - neutralising allergens and bacteria and filter with vitamin C - enriching air with vitamin C particles for better comfort and well-being.

FRESH AIR
Outdoor air can be supplied to the air-conditioner through the additional ventilation duct. This ensures the supply of oxygen, making the conditions in the room even more comfortable.

IONISER
Releases negative ions, neutralises unpleasant odours, smoke and pollens, providing fresh and healthy air.

Comfort

"FOLLOW ME" FUNCTION
In normal conditions, the unit measures room temperature using the sensor placed under the cover of the appliance. By activating the "Follow me" function, the temperature measurement is performed by the wired or wireless remote controller sensor. This allows to maintain the accurate temperature in the place occupied by the user.

3D AIRFLOW
Automatic vertical and horizontal louvre swing ensures even temperature distribution in the whole room.

FAST COOLING / HEATING FUNCTION
During start-up the compressor instantly reaches its maximum rotations, in order to ensure comfort in the room in the quickest way.

TURBO FUNCTION
After switching this function on, the fan will automatically run on the highest speed, in order to rapidly cool down the room.

5 STEPS OF OUTDOOR FAN SPEED REGULATION
Use of inverter motor in the outdoor fan, allowed to increase the available speeds from two to five, which significantly influences reduction of noise level and power consumption.

HOT START FUNCTION
Activation and speed of the fun in the heating mode depends on temperature of the indoor unit heat exchanger. This prevents the cold air drafts, which might be uncomfortable to the user.

360° AIR-FLOW
Special design of the cassette air-conditioner panel makes it possible to blow air in all available directions, ensuring optimal cooling or heating in the whole room.

MUTE FUNCTION
User can switch off the beep sounds emitted by the air-conditioner as well as the display backlight, to ensure that nothing affects the leisure in the room.

8°C HEATING
This function allows to maintain the minimal temperature of 8°C. This prevents excessive room cooling during longer absence of the residents in the winter period.

INTELLIGENT MODULATION OF THE FAN ROTATIONAL SPEED
12 steps of indoor fan speed regulation to ensure the highest comfort to the users.

AUTO SWING
Through automatic swing of the air louver we can achieve even distribution of the cold or warm air in the whole room.

TWO-WAY AIR-FLOW
In the cooling mode, the louver guides cool air-flow not directly on the users, but parallel to the floor level, in order to make it fall down naturally. In the heating mode, the hot air-flow is directed downward. This solution ensures even temperature distribution in the room and improves comfort.

TEMPERATURE COMPENSATION
Temperature measured by the sensor placed inside the air-conditioner, may differ, depending on the installation height, from the temperature above the floor even by several degrees. The temperature compensation function allows relevant adjustments to be made in order to ensure more accurate temperature control and increase the air-conditioner usage comfort.

Facilities

MANUAL SWITCH
You can easily turn the air-conditioner on or off, without using a remote controller or additional tools, just use the built-in switch.

WIRED REMOTE CONTROLLER
The wired remote controller is permanently fixed to a wall. Depending on the model, the controller has many additional functions that facilitate the maintenance of comfort conditions. It is especially recommended for commercial spaces.

AUTO RESTART
In case of power cuts, the air-conditioner memorizes all last settings and resumes them automatically after the power is restored.

TIMER
This function enables to program the time of automatic switching on and off of the air-conditioner.

MONO & MULTI
Compatible indoor units can be used in single split and multi systems. This facilitates the air-conditioning system configuration in a building with a higher number of rooms.

BUILT-IN DRAIN PUMP
The built-in drain pump with a lift height up to 750 mm, facilitates distribution of the condensate drain installation in the space above the suspended ceiling.

REMOTE SWITCH
Integrated on/off contacts enable remote switching on and off of the air-conditioner with use of an additional switch. This contact can also be used for an emergency switching off of the air-conditioning system, in case of e.g. fire alarm.

CENTRAL CONTROLLER
The central controller enables control of up to 64 indoor units. The control can be carried out individually or in groups. The maximum cable length is 1200 m.

RESTORING THE LOUVER SETTINGS
The air-conditioner memorizes the last setting of the louver and resumes it each time the unit is started.

TWO-WAY CONNECTION OF THE CONDENSATE DRAIN
Condensate drain pipes can be connected both from the left or right side of the unit, what significantly simplifies the installation.

STATIC PRESSURE SETTING
The external static pressure of the unit can be set manually with use of the switch placed on the control board.

SPLIT
SERIES

All Easy

Simple installation

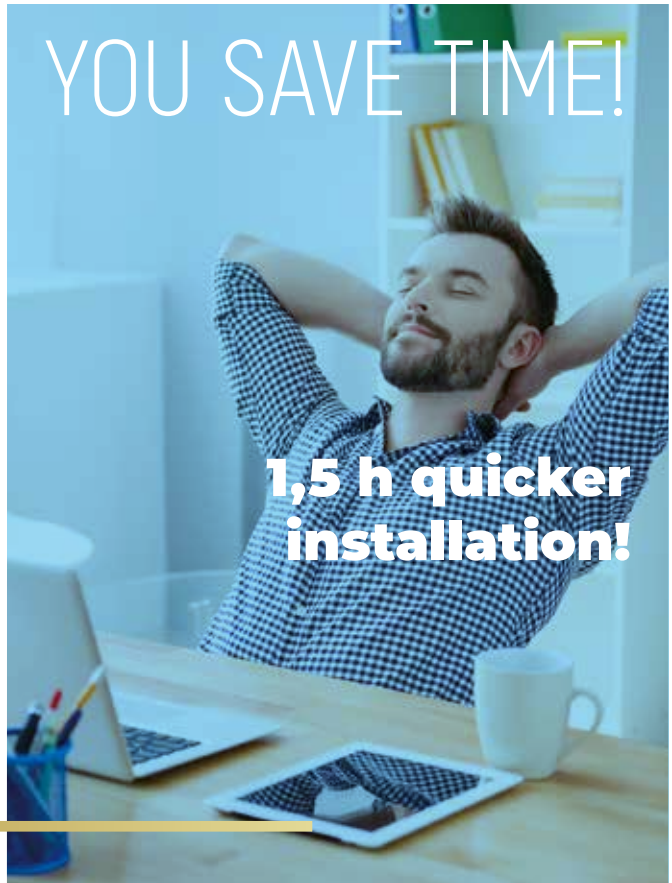
All Easy saves installation time. And all this thanks to the modified connection terminal, massive installation plate and ample space for piping and wiring.

Easy maintenance

New casing design with the universal control board, which is the same for each size of the unit. The board and electronics are very easy to disassemble, what allows to accelerate the maintenance process.

Easy cleaning

Easy do disassemble filters can be removed from the unit without opening the panel. Moreover, detachable louvers make it possible to shorten the air-conditioner cleaning time by up to half, compared with standard appliances.



Functions

STANDARD (available with wireless remote controller RG57A2(B)BGEF)


Wireless remote controller (RG57A2(B)/BGEF)


Easy installation


Emergency operation mode


Mute function

Refrigerant leakage detection


High density filter


Restoring the louver settings

Intelligent modulation of the fan rotational speed


Manual on-off

1W in standby mode


Operation in low ambient temperatures


Two-way connection of the condensate drain


Split and multi compatible

5 steps of fan speed regulation


Hot start


Auto restart


"Follow me" function

OPTIONAL

bioHEPA filter


WiFi control


Alarm port


Wired remote controller


Central controller

8°C heating


Drain pump

Technical specifications

Set				ZAE-09N8-A1	ZAE-12N8-A1	ZAE-18N8-A1	ZAE-24N8-A1
Indoor unit				MSAEAU-09HRFNX-QRD0GW	MSAEBU-12HRFNX-QRD0GW	MSAECU-18HRFNX-QRD0GW	MSAEDU-24HRFNX-QRD0GW
Outdoor unit				MOBA30-09HFN8-QRD0GW	MOBA30-12HFN8-QRD0GW	MOB30-18HFN8-QRD0GW	MOCA30-24HFN8-QRD0GW
Power supply (V/phase/Hz)				220-240/1/50			
Version				Reversible heat pump			
Cooling	Capacity	Rated	kW	2.6	3.5	5.3	7.3
		Min-Max	kW	1.2 - 3.4	1.4 - 4.6	2.0 - 6.2	2.1 - 8.4
	Rated input power		kW	0.77	1.15	1.50	2.26
	EER		kW/kW	3.38	3.04	3.53	3.23
	Annual power consumption		kWh/year	134	204	280	393
	SEER			6.8	6.3	7.1	6.6
	Energy efficiency class			A++	A++	A++	A++
Heating	Capacity	Rated	kW	2.9	4.1	5.7	7.6
		Min-Max	kW	0.8~3.4	0.9~5.1	1.3~7.0	2.1~9.4
	Rated input power		kW	0.78	1.07	1.39	2.11
	COP		kW/kW	3.72	3.83	4.10	3.60
	Annual power consumption		kWh/year	778	859	1406	2053
	SCOP			4.0	4.0	4.0	4.0
	Energy efficiency class			A+	A+	A+	A+
Maximum input current			A	9.5	10.0	11.5	16.0
Indoor unit	Dimensions (width x depth x height)		mm	717×193×285	805×193×302	964×222×305	1106×232×315
	Transport dimensions (width x depth x height)		mm	785×375×302	875×285×375	1045×405×325	1195×420×342
	Weight (net/gross)		kg	7.5/10.1	8.2/10.9	10.8/14.3	14.3/18.2
	Air-flow (low/medium/high)		m^3/min	5.5/7.2/8.1	6.0/8.2/9.2	9.2/12.0/13.5	10.8/16.2/17.5
	Sound pressure level (quiet/low/medium/high)		dB(A)	21/29/34/41	23/30/37/41	24/33/41/45	27/35/44/46
	Sound power level		dB(A)	53	54	57	59
Outdoor unit	Dimensions (width x depth x height)		mm	700×270×550	700×270×550	800×333×554	845×363×702
	Transport dimensions (width x depth x height)		mm	815×325×615	815×325×615	920×390×615	965×395×765
	Weight (net/gross)		kg	26.4/28.9	26.5/28.8	37.0/39.9	48.0/51.3
	Air-flow		m^3/min	33.3	33.3	35.0	45.0
	Sound pressure level		dB(A)	55	55	57	59
	Sound power level		dB(A)	59	61	62	65
Refrigerant	Type			R32	R32	R32	R32
	Charged amount		kg	0.70	0.80	1.25	1.60
Refrigerant installation	Liquid/gas		mm	Ø6.35 / Ø9.52	Ø6.35 / Ø9.52	Ø6.35 / Ø12.7	Ø9.52 / Ø15.9
	Maximum length		m	25	25	30	50
	Maximum height difference		m	10	10	20	25
Recommended electrical wiring and protections	Power supplied unit/cross-section		mm^2	outdoor / 3×1.5	outdoor / 3×1.5	outdoor / 3×2.5	outdoor / 3×2.5
	Transmission		mm^2	5×1.5	5×1.5	5×1.5	5×1.5
	Fuse		A	10	10	16	20
Recommended operating temperature ranges (outdoor)		Cooling	°C	-15 ~ 50			
		Heating	°C	-25 ~ 30			

Capacity is 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. Installation length: length of connected pipes is 7.5 m, the height difference is 0. The unit contains fluorinated greenhouse gases (R32 GWP=675). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

Aroma

Turbo function

After switching on this function, the fan will automatically run on the highest speed, in order to rapidly cool down the room.

1W in standby mode

In the standby mode, by cutting off the power from the unused electric components, the energy consumption will be reduced to 1W. In comparison with conventional units that use 5W of energy in the standby mode, we can achieve savings of 80%.

Aromatic filter

The air-conditioner is optionally equipped with an aromatic filter, which ensures feeling of jasmine freshness for several weeks.

Functions

STANDARD


Wireless remote controller (RG57A7(B)/BGEF)


Emergency operation mode


Operation in low ambient temperatures


Hot start

1W in standby mode


Split and multi compatible


Restoring the louver settings

Turbo function


Auto restart


Timer

5 steps of fan speed regulation

Intelligent modulation of the fan rotational speed


Sleep mode


"Follow me" function

OPTIONAL

bioHEPA filter


WiFi control


Aromatic filter


Wired remote controller


Central controller

Heating 8°C *


Drain pump

Technical specifications

Set				ZAF-09N8-B1	ZAF-12N8-B1	ZAF-18N8-A1	ZAF-24N8-A1
Indoor unit				MSAFBU-09HRDN8-QRD0GW	MSAFBU-12HRDN8-QRD0GW	MSAFCU-18HRFN8-QRD0GW	MSAFDU-24HRFN8-QRD0GW
Outdoor unit				MOBA03-09HFN8-QRD0GW	MOBA03-12HFN8-QRD0GW	MOB02-18HFN8-QRD0GW	MOCA02-24HFN8-QRD0GW
Power supply (V/phase/Hz)				220-240/1/50			
Version				Reversible heat pump			
Cooling	Capacity	Rated	kW	2.6	3.5	5.3	7.0
		Min-Max	kW	1.0~3.2	1.1~4.1	1.8~6.1	2.1~7.9
	Rated input power		kW	0.71	1.24	1.92	2.35
	EER		kW/kW	3.70	2.82	2.76	2.98
	SEER			6.2	6.1	7.1	6.1
	Energy efficiency class			A++	A++	A++	A++
Heating	Capacity	Rated	kW	2.9	3.5	5.6	7.3
		Min-Max	kW	0.8~3.4	1.1~4.2	1.4~6.7	1.6~8.8
	Rated input power		kW	0.74	0.96	1.55	2.04
	COP		kW/kW	3.92	3.65	3.61	3.58
	SCOP			4.0	4.0	4.0	4.0
	Energy efficiency class			A+	A+	A+	A+
Maximum input current			A	10.0	10.0	10.0	16.0
Indoor unit	Dimensions (width x depth x height)		mm	805×194×285	805×194×285	957×213×302	1040×220×310
	Transport dimensions (width x depth x height)		mm	870×270×360	870×270×360	1035×295×380	1120×405×327
	Weight (net/gross)		kg	7.8/9.6	7.8/9.6	10.0/13.0	12.3/15.8
	Air-flow (low/medium/high)		m^3/min	5.7/7.7/8.7	6.0/8.3/10.0	9.0/11.3/14.0	11.0/13.6/16.3
	Sound pressure level (low/medium/high)		dB(A)	28/31/38	27/34/39	28/34/44	30/37/46
	Sound power level		dB(A)	53	53	55	59
Outdoor unit	Dimensions (width x depth x height)		mm	700×270×550	700×270×550	800×333×554	845×363×702
	Transport dimensions (width x depth x height)		mm	815×325×615	815×325×615	920×390×615	965×395×765
	Weight (net/gross)		kg	22.8/25.1	22.8/25.1	34.0/36.7	51.5/54.5
	Air-flow		m^3/min	28.3	28.3	33.3	50.0
	Sound pressure level		dB(A)	55	55	55	59
	Sound power level		dB(A)	61	65	61	67
Refrigerant	Type			R32	R32	R32	R32
	Charged amount		kg	0.50	0.50	1.00	1.60
Refrigerant installation	Liquid/gas		mm	Ø6.35 / Ø9.52	Ø6.35 / Ø9.52	Ø6.35 / Ø12.7	Ø9.52 / Ø15.9
	Maximum length		m	25	25	30	50
	Maximum height difference		m	10	10	20	25
Recommended electrical wiring and protections	Power supplied unit/cross-section		mm^2	outdoor / 3×1.5	outdoor / 3×1.5	outdoor / 3×2.5	outdoor / 3×2.5
	Transmission		mm^2	5×1.5	5×1.5	5×1.5	5×1.5
	Fuse		A	10	10	16	20
Recommended operating temperature ranges (outdoor)		Cooling	°C	-15 ~ 50			
		Heating	°C	-25 ~ 30			

* Function available with RG57A6(B)/BGEF controller

Capacity is 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. Installation length: length of connected pipes is 7.5 m. the height difference is 0. The unit contains fluorinated greenhouse gases (R32 GWP=675). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

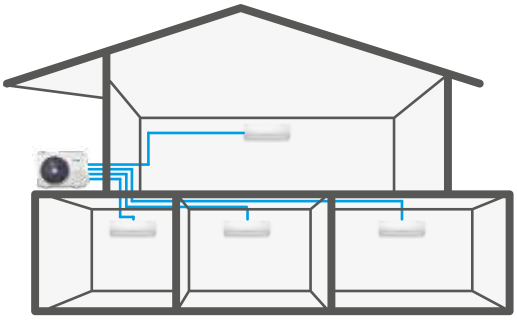
MULTI
SERIES

MULTI Free Match

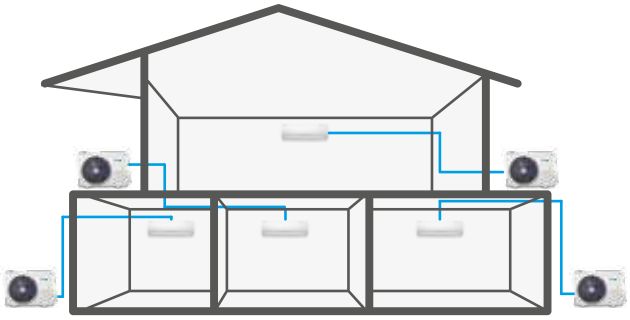
Free Match – flexible installation

Possible to connect up to 5 indoor units to one outdoor unit. Each indoor unit can be individually controlled. Indoor units do not need to be installed at the same time, what enables system extension depending on the user needs.

MULTI system



SPLIT system



Wide selection of indoor units

In one system, it is possible to connect All Easy and Aroma series wall-mounted units (capacity: 2.6-7.3 kW) and cassette type units (capacity: 3.5-5.3 kW), ducted (3.5-5.3 kW), ceiling-floor (5.3 kW). Total installation length can reach up to 80 m. It gives more design freedom and great possibilities of air-conditioning system configuration in spaces with different interior arrangements.

Technical specifications

Outdoor unit				M2OD-18HFN8-QA	M3OF-27HFN8-QA	M4OE-28HFN8-Q	M4OB-36HFN8-Q	M5OD-42HFN8-Q
Power supply (V/phase/Hz)				220-240/1/50				
Version				Reversible heat pump				
Cooling	Rated capacity		kW	5.3	7.9	8.2	10.6	12.3
	Rated input power		kW	1.63	2.45	2.25	3.52	3.80
	EER		kW/kW	3.25	3.22	3.64	2.91	3.22
	SEER			6.1	6.1	6.8	6.5	6.6
	ErP energy class			A++	A++	A++	A++	A++
Heating	Rated capacity		kW	5.6	7.9	8.8	11.1	12.3
	Rated input power		kW	1.50	2.12	2.37	3.17	3.32
	COP		kW/kW	3.73	3.73	3.71	3.51	3.71
	SCOP			4.0	4.0	4.0	4.0	4.0
	ErP energy class			A+	A+	A+	A+	A+
Maximum input power			W	2850	3600	4150	4600	4700
Air-flow			m^3/min	36.7	45.0	63.3	66.7	64.2
Sound pressure level			dB(A)	56	53	62	63	62
Sound power level			dB(A)	64	67	67	68	71
Outdoor unit	Dimensions (width x depth x height)		mm	800×333×554	845×363×702	946×410×810	946×410×810	946×410×810
	Transport dimensions (width x depth x height)		mm	920×390×615	965×395×765	1090×500×875	1090×500×875	1090×500×875
	Weight (net/gross)		kg	35.5/38.5	51.1/55.8	62.1/67.7	68.8/75.6	73.3/80.4
Refrigerant	Type			R32	R32	R32	R32	R32
	Charged amount		kg	1.30	1.57	2.10	2.10	2.40
Refrigerant installation	Liquid/gas		mm	2× Ø6.35 / Ø9.52	3× Ø6.35 / Ø9.52	4 × Ø6.35/3× Ø9.52 +1× Ø12.7	4 × Ø6.35/3× Ø9.52 +1× Ø12.7	5 × Ø6.35/4× Ø9.52 +1× Ø12.7
	Maximum total length		m	40	60	80	80	80
	Maximum length to each unit		m	25	30	35	35	35
	Maximum height difference (outdoor-indoor)		m	15	15	15	15	15
	Max. height difference between indoor units		m	10	10	10	10	10
Recommended electrical wiring and protections	Power supply		mm^2	3×2.5	3×2.5	3×4.0	3×4.0	3×4.0
	Transmission		mm^2	4×1.5	4×1.5	4×1.5	4×1.5	4×1.5
	Fuse		A	16	20	25	25	30
Recommended operating temperature ranges (outdoor)		Cooling	°C	-15 ~ 50				
		Heating	°C	-15 ~ 24				

Capacity is 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. Installation length: length of connected pipes is 7.5 m, the height difference is 0. The unit contains fluorinated greenhouse gases (R32 GWP=675). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer

multi series - indoor units

Available combinations of indoor units

Cooling capacity 5.3 kW

M2OD-18HFN8-QA	
1 UNIT	2 UNITS
9	9+9
12	9+12
18	9+18
	12+12

Cooling capacity 7.9 kW

M3OF-27HFN8-QA		
1 UNIT	2 UNITS	3 UNITS
9	9+9	9+9+9
12	9+12	9+9+12
18	9+18	9+12+12
	12+12	
	12+18	

Cooling capacity 8.2 kW

M4OE-28HFN8-Q			
1 UNIT	2 UNITS	3 UNITS	4 UNITS
9	9+9	9+9+9	9+9+9+9
12	9+12	9+9+12	9+9+9+12
18	9+18	9+9+18	
	12+12	12+12+18	
	12+18	12+12+12	
	18+18		

Cooling capacity 10.6 kW

M4OB-36HFN8-Q					
1 UNIT	2 UNITS	3 UNITS		4 UNITS	
9	9+9	9+9+9	12+12+12	9+9+9+9	9+12+12+18
12	9+12	9+9+12	12+12+18	9+9+9+12	12+12+12+12
18	9+18	9+9+18	12+18+18	9+9+9+18	
	12+12	9+12+12	12+12+12	9+9+12+12	
	12+18	9+12+18	12+12+18	9+9+12+18	
	18+18	9+18+18	12+18+18	9+12+12+12	

Cooling capacity 12.3 kW

M5OD-42HFN8-Q										
1 UNIT	2 UNITS		3 UNITS			4 UNITS			5 UNITS	
9	9+9	12+18	9+9+9	9+12+18	12+12+24	9+9+9+9	9+9+12+18	9+12+12+24	9+9+9+9+9	9+9+12+12+12
12	9+12	12+24	9+9+12	9+12+24	12+18+18	9+9+9+12	9+9+12+24	9+12+18+18	9+9+9+9+12	9+12+12+12+12
18	9+18	18+18	9+9+18	9+18+18	18+18+18	9+9+9+18	9+9+18+18	12+12+12+12	9+9+9+9+18	
24	9+24	18+24	9+9+24	12+12+12		9+9+9+24	9+12+12+12	12+12+12+18	9+9+9+12+12	
	12+12		9+12+12	12+12+18		9+9+12+12	9+12+12+18		9+9+9+12+18	

Technical specifications

Compact cassette 570x570 mm

Set			ZMCA-12N8-B1M	ZMCA-18N8-B1M
Indoor unit			MCA3U-12HRFNX-QRDAW	MCA3U-18HRFNX-QRDA
Panel			T-MBQ4-03E	
Power supply (V/phase/Hz)			220-240/1/50	
Cooling	Rated capacity	kW	3.5	5.3
	Rated input power	kW	0.045	0.045
Heating	Rated capacity	kW	4.4	5.4
	Rated input power	kW	0.045	0.045
Air-flow (low/medium/high)		m^3/min	6.9/8.4/10.3	9.0/10.4/12.0
Sound pressure level (low/medium/high)		dB(A)	33/36/41	35/39/42
Sound power level		dB(A)	51	56
Indoor unit	Dimensions (width x depth x height)	mm	570×570×260	570×570×260
	Transport dimensions (width x depth x height)	mm	662×662×317	662×662×317
	Weight (net/gross)	kg	16.2/21.4	16.5/19.0
Panel	Dimensions (width x depth x height)	mm	647×647×50	647×647×50
	Transport dimensions (width x depth x height)	mm	715×715×123	715×715×123
	Weight (net/gross)	kg	2.5/4.5	2.5/4.5
Refrigerant installation	Liquid	mm	Ø6.35	Ø6.35
	Gas	mm	Ø9.52	Ø12.7

Capacity is 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. Installation length: length of connected pipes is 7.5 m, the height difference is 0. The unit contains fluorinated greenhouse gases (R32 GWP=675). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

Ducted

Indoor unit			MTI-12HWFNX-QRDA	MTIU-18HWFNX-QRDA
Power supply (V/phase/Hz)			220-240/1/50	
Cooling	Rated capacity	kW	3.5	5.3
	Rated input power	kW	0.130	0.090
Heating	Rated capacity	kW	4.1	5.9
	Rated input power	kW	0.130	0.090
Air-flow (low/medium/high)		m^3/min	5.0/8.0/10.0	5.8/10.8/14.7
Sound pressure level (low/medium/high)		dB(A)	26/30/35	33/38/41
Sound power level		dB(A)	56	59
External static pressure		Pa	25 (0~60)	25 (0~100)
Indoor unit	Dimensions (width x depth x height)	mm	700×450×200	880×674×210
	Transport dimensions (width x depth x height)	mm	860×540×285	1070×725×280
	Weight (net/gross)	kg	18.0/22.0	24.3/29.6
Refrigerant installation	Liquid	mm	Ø6.35	Ø6.35
	Gas	mm	Ø9.52	Ø12.7

Capacity is 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. Installation length: length of connected pipes is 7.5 m, the height difference is 0. The unit contains fluorinated greenhouse gases (R32 GWP=675). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

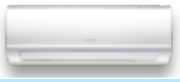
Floor & ceiling type

Indoor unit			MUEU-18HRFNX-QRDA
Power supply (V/phase/Hz)			220-240/1/50
Cooling	Rated capacity	kW	5.3
	Rated input power	kW	0.096
Heating	Rated capacity	kW	5.6
	Rated input power	kW	0.096
Air-flow (low/medium/high)		m^3/min	10.8/12.7/14.7
Sound pressure level (low/medium/high)		dB(A)	34/38/41
Sound power level		dB(A)	58
Indoor unit	Dimensions (width x depth x height)	mm	1068×675×235
	Transport dimensions (width x depth x height)	mm	1145×755×313
	Weight (net/gross)	kg	28.0/33.3
Refrigerant installation	Liquid	mm	Ø6.35
	Gas	mm	Ø12.7

Capacity is 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. Installation length: length of connected pipes is 7.5 m, the height difference is 0. The unit contains fluorinated greenhouse gases (R32 GWP=675). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

Technical specifications

All Easy



Indoor unit			MSAEAU-09HRFNX-QRD0GW	MSAEBU-12HRFNX-QRD0GW	MSAECU-18HRFNX-QRD0GW	MSAEDU-24HRFNX-QRD0GW
Power supply (V/phase/Hz)			220-240/1/50			
Cooling	Rated capacity	kW	2.6	3.5	5.3	7.3
	Rated input power	kW	0.024	0.024	0.034	0.062
Heating	Rated capacity	kW	2.9	4.1	5.7	7.6
	Rated input power	kW	0.024	0.024	0.034	0.062
Air-flow (low/medium/high)		m^3/min	5.5/7.2/8.1	6.0/8.2/9.2	9.2/12.0/13.5	10.8/16.2/17.5
Sound pressure level (low/medium/high)		dB(A)	21/29/34	23/30/37	24/33/41	27/35/44
Sound power level		dB(A)	53	54	57	59
Indoor unit	Dimensions (width x depth x height)	mm	717×193×285	805×193×302	964×222×305	1106×232×315
	Transport dimensions (width x depth x height)	mm	785×375×302	875×285×375	1045×405×325	1195×420×342
	Weight (net/gross)	kg	7.5/10.1	8.2/10.9	10.8/14.3	14.3/18.2
Refrigerant installation	Liquid	mm	Ø6.35	Ø6.35	Ø6.35	Ø9.52
	Gas	mm	Ø9.52	Ø9.52	Ø12.7	Ø15.9

Capacity is 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. Installation length: length of connected pipes is 7.5 m, the height difference is 0. The unit contains fluorinated greenhouse gases (R32 GWP=675). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

Aroma

Indoor unit			MSAFBU-09HRDN8-QRD0GW	MSAFBU-12HRDN8-QRD0GWX	MSAFCU-18HRFN8-QRD0GW	MSAFDU-24HRFN8-QRD0GW
Power supply (V/phase/Hz)			220-240/1/50			
Cooling	Rated capacity	kW	2.6	3.5	5.3	7.0
	Rated input power	kW	0.048	0.048	0.044	0.062
Heating	Rated capacity	kW	2.9	3.5	5.6	7.3
	Rated input power	kW	0.048	0.048	0.044	0.062
Air-flow (low/medium/high)		m^3/min	5.7/7.7/8.7	6.0/8.3/10.0	9.0/11.3/14.0	11.0/13.6/16.3
Sound pressure level (low/medium/high)		dB(A)	28/31/38	27/34/39	28/34/44	30/37/46
Sound power level		dB(A)	53	53	55	59
Indoor unit	Dimensions (width x depth x height)	mm	805×194×285	805×194×285	957×213×302	1040×220×310
	Transport dimensions (width x depth x height)	mm	870×270×360	870×270×360	1035×295×380	1120×405×327
	Weight (net/gross)	kg	7.8/9.6	7.8/9.6	10.0/13.0	12.3/15.8
Refrigerant installation	Liquid	mm	Ø6.35	Ø6.35	Ø6.35	Ø9.52
	Gas	mm	Ø9.52	Ø9.52	Ø12.7	Ø15.9

Capacity is 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. Installation length: length of connected pipes is 7.5 m, the height difference is 0. The unit contains fluorinated greenhouse gases (R32 GWP=675). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

MULTI X2

Simultaneous operation

The MULTI X2 system consists of two, simultaneously operating indoor units, connected to a single outdoor unit. This solution ensures installation space savings, thanks to the application of just one outdoor unit while keeping the required heating or cooling capacity in the air-conditioned room. MULTI X2 systems are designed for air-conditioning of large spaces as: conference rooms, open-space type offices, banquet halls and dining rooms.

Dedicated indoor units

MULTI X2 system enables connecting indoor units with the same capacity. Available models: cassette, duct and ceiling type (capacity index: 18 or 24).

Technical specifications

Set	Outdoor units	Indoor units	Branch pipe	Panel
TWIN P14	MOEA-48HFN8-RRDA	MUE-24HRFNX-QRDA	FQZHN-01D	-
		MUE-24HRFNX-QRDA		
TWIN D14	MOEA-48HFN8-RRDA	MTI-24HWFNX-QRDA	FQZHN-01D	-
		MTI-24HWFNX-QRDA		
TWIN K14	MOEA-48HFN8-RRDA	MCD-24HRFNX-QRDA	FQZHN-01D	T-MBQ-02M1
		MCD-24HRFNX-QRDA		

Outdoor unit				MOEA-48HFN8-RRDA
Power supply (V/phase/Hz)				380-415/3/50
Version				Reversible heat pump
Cooling	Capacity	Rated	kW	13.6
		Min-Max	kW	4.8~14.6
	Rated input power		kW	5.42
	EER		kW/kW	2.51
	SEER			6.1
	ErP energy class			A++
Heating	Capacity	Rated	kW	15.9
		Min-Max	kW	3.9~16.8
	Rated input power		kW	5.34
	COP		kW/kW	2.98
	SCOP			4.0
	ErP energy class			A+
Maximum input current			A	11.2
Maximum input power			W	6200
Air-flow			m^3/min	125.0
Sound pressure level			dB(A)	66
Sound power level			dB(A)	72
Outdoor unit	Dimensions (width x depth x height)		mm	952×415×1333
	Transport dimensions (width x depth x height)		mm	1095×495×1480
	Weight (net/gross)		kg	116.7/119.9
Refrigerant	Type			R32
	Charged amount		kg	2.80
Refrigerant installation	Liquid/gas		mm	Ø9.52 / Ø15.9
	Maximum length		m	65
	Max. height difference		m	30
Recommended electrical wiring and protections	Power supply		mm^2	5×2.5
	Transmission		mm^2	2×1.0 (shielded)
	Fuse		A	16
Recommended operating temperature ranges (outdoor)		Cooling	°C	-15 ~ 50
		Heating	°C	-15 ~ 24

Capacity is 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. Installation length: length of connected pipes is 7.5 m, the height difference is 0. The unit contains fluorinated greenhouse gases (R32 GWP=675). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

Technical specifications

MULTI X2 cassette type

Indoor unit			MCD-24HRFNX-QRDA
Panel			T-MBQ-02M1
Power supply (V/phase/Hz)			220-240/1/50
Cooling	Rated capacity	kW	7.0
	Rated input power	kW	0.141
Heating	Rated capacity	kW	7.4
	Rated input power	kW	0.141
Air-flow (low/medium/high)		m^3/min	17.2/20.0/23.0
Sound pressure level (low/medium/high)		dB(A)	40/43/47
Sound power level		dB(A)	60
Indoor unit	Dimensions (width x depth x height)	mm	840×840×205
	Transport dimensions (width x depth x height)	mm	900×900×225
	Weight (net/gross)	kg	23.0/27.0
Panel	Dimensions (width x depth x height)	mm	950×950×55
	Transport dimensions (width x depth x height)	mm	1035×1035×90
	Weight (net/gross)	kg	5.0/8.0
Refrigerant installation	Liquid	mm	Ø9.52
	Gas	mm	Ø15.9

Capacity is 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. Installation length: length of connected pipes is 7.5 m, the height difference is 0. The unit contains fluorinated greenhouse gases (R32 GWP=675). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

MULTI X2 duct type

Indoor unit			MTI-24HWFNX-QRDA
Power supply (V/phase/Hz)			220-240/1/50
Cooling	Rated capacity	kW	7.0
	Rated input power	kW	0.090
Heating	Rated capacity	kW	7.6
	Rated input power	kW	0.090
Air-flow (low/medium/high)		m^3/min	14.0/17.6/20.8
Sound pressure level (low/medium/high)		dB(A)	40/42/44
Sound power level		dB(A)	63
External static pressure		Pa	25 (0~160)
Indoor unit	Dimensions (width x depth x height)	mm	1100×774×249
	Transport dimensions (width x depth x height)	mm	1305×805×305
	Weight (net/gross)	kg	31.5/38.9
Refrigerant installation	Liquid	mm	Ø9.52
	Gas	mm	Ø15.9

Capacity is 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. Installation length: length of connected pipes is 7.5 m, the height difference is 0. The unit contains fluorinated greenhouse gases (R32 GWP=675). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

Technical specifications

MULTI X2 floor & ceiling type

Indoor unit			MUE-24HRFNX-QRDA
Power supply (V/phase/Hz)			220-240/1/50
Cooling	Rated capacity	kW	6.9
	Rated input power	kW	0.100
Heating	Rated capacity	kW	7.6
	Rated input power	kW	0.100
Air-flow (low/medium/high)		m^3/min	14.2/17.8/20.1
Sound pressure level (low/medium/high)		dB(A)	41/46/50
Sound power level		dB(A)	62
Indoor unit	Dimensions (width x depth x height)	mm	1068×675×235
	Transport dimensions (width x depth x height)	mm	1145×755×313
	Weight (net/gross)	kg	26.8/31.9
Refrigerant installation	Liquid	mm	Ø9.52
	Gas	mm	Ø15.9

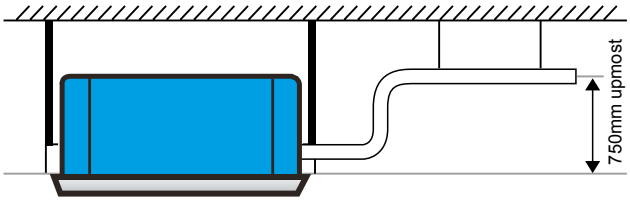
Capacity is based on the following conditions:
Cooling: indoor temperature 27°C DB/19°C WB; outdoor temperature 35°C DB/24°C WB. Heating: indoor temperature 20°C DB/15°C WB; outdoor temperature 7°C DB/6°C WB. Installation length: length of connected pipes is 7.5 m, the height difference is 0. The unit contains fluorinated greenhouse gases (R32 GWP=675). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

OFFICE STANDARD
SERIES

Compact cassette

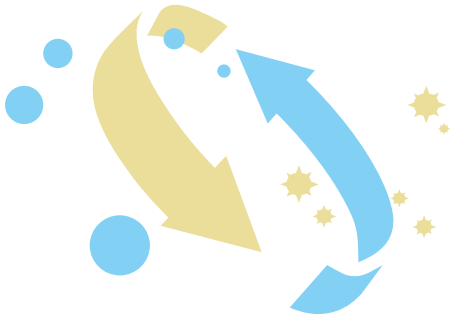
Built-in drain pump

The built-in drain pump with a lift height up to 750 mm, facilitates distribution of the condensate drain installation in the space above the suspended ceiling.



Fresh air

Pre-drilled openings in the cover enable connection of the fresh air-supply duct as well as ducts distributing cooled down air from the air-conditioner to the additional diffusers.

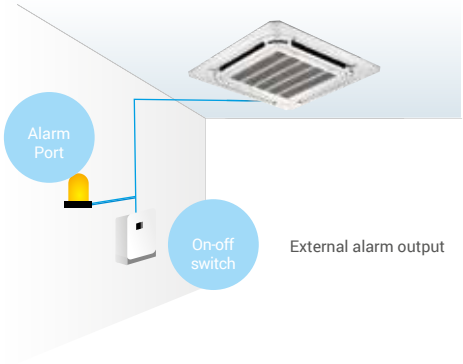


Operation in low ambient temperatures

MDV air-conditioners have been designed in such a way as to operate in the cooling mode even when the temperature falls down to -15°C.

On/Off and Alarm ports

On the indoor unit control board there are ports for remote switching on of the air-conditioner and signalling of the alarm occurrence. The solution is designed especially for units operating in the technical rooms.



Functions

STANDARD


Wireless remote controller


Hot start


Alarm port

Refrigerant leakage detection


Fresh air


Restoring the louver settings


Built-in drain pump


Auto restart


Temperature compensation


Operation in low ambient temperatures


Emergency operation mode

OPTIONAL


"Follow me" function *


Wired remote controller


WiFi control


Central controller

Heating 8°C *

Technical specifications

Set with the white panel					**ZMCA-12N8-B1**	**ZMCA-18N8-B1**
Set with the black panel					**ZMCA-12N8-B1B**	**ZMCA-18N8-B1B**
Indoor unit					**MCA3U-12HRFNX-QRDAW**	**MCA3U-18HRFNX-QRDA**
Outdoor unit					**MOB30-12HFN8-QRDA**	**MOB30-18HFN8-QRDA**
White panel					T-MBQ4-03E	
Black panel					T-MBQ4-03EB	
Indoor unit power supply (V/phase/Hz)					220-240/1/50	220-240/1/50
Outdoor unit power supply (V/phase/Hz)					220-240/1/50	220-240/1/50
Version					Reversible heat pump	
Cooling	Capacity	Rated	kW		3.5	5.3
		Min-Max	kW		1.5~5.3	2.9~5.7
	Rated input power		kW		0.85	1.63
	EER		kW/kW		4.12	3.25
	Annual power consumption		kWh/year		183	278
	SEER				7.8	6.1
	ErP energy class				A++	A++
Heating	Capacity	Rated	kW		4.4	5.4
		Min-Max	kW		1.0~5.6	2.4~6.1
	Rated input power		kW		1.10	1.46
	COP		kW/kW		4.00	3.70
	Annual power consumption		kWh/year		1141	1626
	SCOP				4.6	4.0
	ErP energy class				A++	A+
Maximum input current				A	10.0	13.5
Indoor unit	Dimensions (width x depth x height)			mm	570×570×260	570×570×260
	Transport dimensions (width x depth x height)			mm	662×662×317	662×662×317
	Weight (net/gross)			kg	16.2/21.4	16.5/19.0
	Air-flow (low/medium/high)			m^3/min	6.9/8.4/10.3	9.0/10.4/12.0
	Sound pressure level (low/medium/high)			dB(A)	33/36/41	35/39/42
	Sound power level			dB(A)	51	56
Panel	Dimensions (width x depth x height)			mm	647×647×50	647×647×50
	Transport dimensions (width x depth x height)			mm	715×715×123	715×715×123
	Weight (net/gross)			kg	2.5/4.5	2.5/4.5
Outdoor unit	Dimensions (width x depth x height)			mm	800×333×554	800×333×554
	Transport dimensions (width x depth x height)			mm	920×390×615	920×390×615
	Weight (net/gross)			kg	34.7/37.5	33.7/36.6
	Air-flow			m^3/min	33.3	33.3
	Sound pressure level			dB(A)	55	55
	Sound power level			dB(A)	63	65
Refrigerant	Type				R32	R32
	Charged amount			kg	0.87	1.15
Refrigerant installation	Liquid/gas			mm	Ø6.35 / Ø9.52	Ø6.35 / Ø12.7
	Maximum length			m	25	30
	Max. height difference			m	10	20
Condensate drain				mm	Ø25	Ø25
Recommended electrical wiring and protections	Indoor unit power supply cord			mm^2	3×2,5	3×2,5
	Outdoor unit power supply cord			mm^2	4×1,0	4×1.0
	Fuse			A	16	16
Recommended operating temperature ranges (outdoor)		Cooling		°C	-15 ~ 50	
		Heating		°C	-15 ~ 24	

* Function available with RG10A(B2S)/BGEF controller

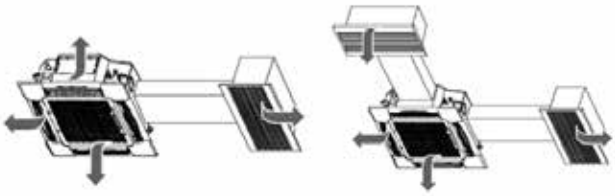
Capacity is based on the following conditions:

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. Installation length: length of connected pipes is 7.5 m, the height difference is 0. The unit contains fluorinated greenhouse gases (R32 GWP=675). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

Standard cassette

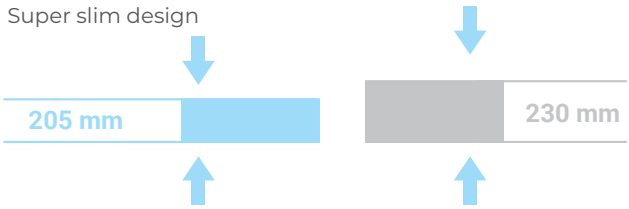
Additional air-supply ducts

Pre-drilled openings in the cover enable connection of the fresh air-supply duct as well as ducts distributing cooled down air from the air-conditioner to the additional diffusers.



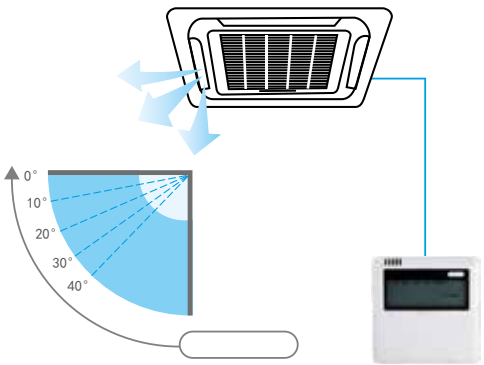
Super slim design

Special design of the indoor unit with the height of only 245 mm (units from 7.0 up to 12.3 kW). This enables to install the air-conditioner in a very narrow ceiling cavities.



Wide angle of the air outlet

Louvers driven by two motors enable to adjust the air outlet angle within 40°. This allows adjustment of the air-flow direction according to the individual user needs.



Circular air-flow

Air-conditioner panel with additional air nozzles on the corners, ensures ideal air distribution in the whole room.

Functions

STANDARD


Wireless remote controller


Hot start


Alarm port

Refrigerant leakage detection


Fresh air


Restoring the louver settings


Built-in drain pump

360° air-flow


Temperature compensation


Operation in low ambient temperatures


Emergency operation mode


Auto restart

OPTIONAL


"Follow me" function*


Wired remote controller


WiFi control


Central controller

Heating 8°C *

Technical specifications

					ZMCD-24N8-B1	ZMCD-36N8-B1	ZMCD-36N8-B3	ZMCD-42N8-B3	ZMCD-48N8-B3	ZMCD-55N8-B3
Set with the black panel					ZMCD-24N8-B1B	ZMCD-36N8-B1B	ZMCD-36N8-B3B	ZMCD-42N8-B3B	ZMCD-48N8-B3B	ZMCD-55N8-B3B
Indoor unit					MCD-24HRFNX-QRDA	MCD-36HRFNX-QRDA	MCD-36HRFNX-QRDA	MCD-42HRFNX-QRDA	MCD-48HRFNX-QRDA	MCD-55HRFNX-QRDA
Outdoor unit					MOCA-24HFN8-QRDA	MODA-36HFN8-QRDA	MODA-36HFN8-RRDA	MODA-42HFN8-RRDA	MOEA-48HFN8-RRDA	MOEA-55HFN8-RRDA
White panel					T-MBQ-02M1					
Black panel					T-MBQ-02M1B					
Indoor unit power supply (V/phase/Hz)					220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50
Outdoor unit power supply (V/phase/Hz)					220-240/1/50	220-240/1/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50
Version					Reversible heat pump					
Cooling	Capacity	Rated	kW		7.0	10.3	10.5	12.3	13.6	15.7
		Min-Max	kW		2.2~8.2	2.6~12.0	2.6~12.0	3.2~13.2	4.8~14.6	5.3~16.7
	Rated input power		kW		2.19	3.81	3.90	4.09	5.42	5.99
	EER		kW/kW		3.21	2.70	2.69	3.01	2.51	2.62
	Annual power consumption		kWh/year		401	593	593	750	805	893
	SEER				6.1	6.1	6.1	6.1	6.1	6.1
	ErP energy class				A++	A++	A++	A++	A++	A++
Heating	Capacity	Rated	kW		7.4	10.9	11.1	13.5	15.9	18.2
		Min-Max	kW		2.4~8.7	2.9~13.2	2.9~13.2	2.9~14.7	3.9~16.8	4.4~19.3
	Rated input power		kW		1.98	3.00	2.97	3.54	5.34	6.03
	COP		kW/kW		3.72	3.63	3.74	3.81	2.98	3.02
	Annual power consumption		kWh/year		1890	2824	2824	2824	3903	4123
	SCOP				4.0	4.0	4.0	4.0	4.0	4.0
	ErP energy class				A+	A+	A+	A+	A+	A+
Maximum input current			A		13.5	21.5	10.0	12.0	11.2	14.0
Indoor unit	Dimensions (width x depth x height)		mm		840×840×24v5	840×840×245	840×840×245	840×840×245	840×840×287	840×840×287
	Transport dimensions (width x depth x height)		mm		900×900×225	900×900×265	900×900×265	900×900×265	900×900×292	900×900×292
	Weight (net/gross)		kg		23.0/27.0	27.5/31.0	27.5/31.0	27.5/31.0	29.0/32.7	29.7/33.4
	Air-flow (low/medium/high)		m^3/min		17.2/20.0/23.0	24.0/27.0/29.6	24.0/27.0/29.6	24.0/27.0/29.6	23.0/26.1/28.6	25.6/29.0/32.8
	Sound pressure level (low/medium/high)		dB(A)		40/43/47	46/49/52	46/49/52	46/49/52	49/50/52	48/50/53
	Sound power level		dB(A)		60	63	63	63	65	65
Panel	Dimensions (width x depth x height)		mm		950×950×55	950×950×55	950×950×55	950×950×55	950×950×55	950×950×55
	Transport dimensions (width x depth x height)		mm		1035×1035×90	1035×1035×90	1035×1035×90	1035×1035×90	1035×1035×90	1035×1035×90
	Weight (net/gross)		kg		5.0/8.0	5.0/8.0	5.0/8.0	5.0/8.0	5.0/8.0	5.0/8.0
Outdoor unit	Dimensions (width x depth x height)		mm		845×363×702	946×410×810	946×410×810	946×410×810	952×415×1333	952×415×1333
	Transport dimensions (width x depth x height)		mm		965×395×765	1090×500×875	1090×500×875	1090×500×875	1095×495×1480	1095×495×1480
	Weight (net/gross)		kg		66.8/72.6	81.5/87.0	81.5/87.0	81.5/87.0	106.7/119.9	111.3/124.3
	Air-flow		m^3/min		45.0	66.7	66.7	66.7	125.0	125.0
	Sound pressure level		dB(A)		62	64	64	64	66	66
	Sound power level		dB(A)		66	68	68	68	72	77
Refrigerant	Type				R32	R32	R32	R32	R32	R32
	Charged amount		kg		1.50	2.40	2.40	2.40	2.80	2.95
Refrigerant installation	Liquid/gas		mm		Ø9.52 / Ø15.9	Ø9.52 / Ø15.9	Ø9.52 / Ø15.9	Ø9.52 / Ø15.9	Ø9.52 / Ø15.9	Ø9.52 / Ø15.9
	Maximum length		m		50	65	65	65	65	65
	Max. height difference		m		25	30	30	30	30	30
Condensate drain			mm		Ø32	Ø32	Ø32	Ø32	Ø32	Ø32
Recommended electrical wiring and protections	Indoor unit power supply cord		mm^2		3×1.5	3×1.5	3×1.5	3×1.5	3×1.5	3×1.5
	Outdoor unit power supply cord		mm^2		3×2.5	3×4.0	5×2.5	5×2.5	5×2.5	5×2.5
	Transmission cable		mm^2		2×1.0 (shielded)					
	Fuse		A		20	25	16	16	16	20
Recommended operating temperature ranges (outdoor)		Cooling	°C		-15 ~ 50					
		Heating	°C		-15 ~ 24					

* Function available with RG10A(B2S)/BGEF controller

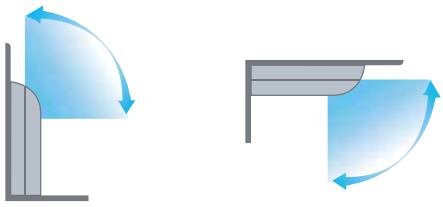
Capacity is based on the following conditions:

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. Installation length: length of connected pipes is 7.5 m, the height difference is 0. The unit contains fluorinated greenhouse gases (R32 GWP=675). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

Floor & ceiling type

Two ways of installation

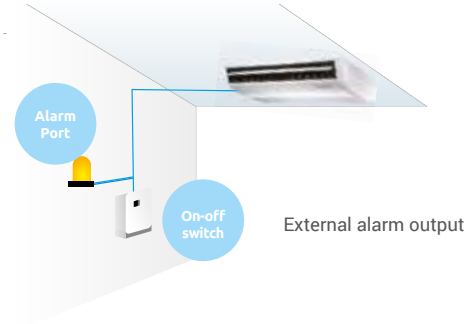
The structural design of the unit makes it possible to install the air-conditioner in two positions: horizontally or vertically at ground level. This significantly increases the scope of possible unit applications.



Possible to install vertically against a wall
or horizontally under the ceiling

On/Off and Alarm ports

On the indoor unit control board there are ports for remote switching on of the air-conditioner and signalling of the alarm occurrence. The solution is designed especially for units operating in the technical rooms.



Turbo function

After switching on this function, the fan will automatically run on the highest speed, in order to rapidly cool down the room.

Fresh air supply

Fresh air can be supplied to the room in order to ensure high quality of the air inside the air-conditioned space.

Functions

STANDARD


Wireless remote controller


Sleep mode


3D airflow

Refrigerant leakage detection


Restoring the louver settings


Emergency operation mode


Fresh air


Alarm port


Hot start


Optional connection of the condensate drain


Timer


Operation in low ambient temperatures


Horizontal louvers control


Vertical louvers control

OPTIONAL


"Follow me" function *


Wired remote controller


WiFi control


Central controller

Heating 8°C *

Technical specifications

Set				ZMUE-18N8-B1	ZMUE-24N8-A1	ZMUE-36N8-A1	ZMUE-36N8-A3	ZMUE-42N8-B3	ZMUE-48N8-A3	ZMUE-55N8-A3
Indoor unit				MUEU-18HRFNX-QRDA	MUE-24HRFNX-QRDA	MUE-36HRFNX-QRDA	MUE-36HRFNX-QRDA	MUE-42HRFNX-QRDA	MUE-48HRFNX-QRDA	MUE-55HRFNX-QRDA
Outdoor unit				MOB30-18HFN8-QRDA	MOCA-24HFN8-QRDA	MODA-36HFN8-QRDA	MODA-36HFN8-RRDA	MODA-42HFN8-RRDA	MOEA-48HFN8-RRDA	MOEA-55HFN8-RRDA
Indoor unit power supply (V/phase/Hz)				220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50
Outdoor unit power supply (V/phase/Hz)				220-240/1/50	220-240/1/50	220-240/1/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50
Version				Reversible heat pump						
Cooling	Capacity	Rated	kW	5.3	6.9	10.4	10.5	12.1	14.2	15.9
		Min-Max	kW	2.7~5.6	2.2~8.2	2.6~12.0	2.6~12.0	3.2~13.2	5.0~15.1	5.3~17.0
	Rated input power		kW	1.63	2.22	3.85	4.03	4.03	5.50	6.06
	EER		kW/kW	3.25	3.12	2.70	2.61	3.00	2.58	2.62
	Annual power consumption		kWh/year	280	393	556	556	750	801	916
	SEER			6.1	6.1	6.1	6.1	6.1	6.1	6.1
	ErP energy class			A++	A++	A++	A++	A++	A++	A++
Heating	Capacity	Rated	kW	5.6	7.6	11.1	11.1	13.5	16.1	18.2
		Min-Max	kW	2.4~6.3	2.4~8.7	2.9~13.2	2.9~13.2	2.9~14.7	3.8~18.1	4.4~19.6
	Rated input power		kW	1.50	2.12	2.98	3.00	3.49	5.05	6.04
	COP		kW/kW	3.73	3.59	3.72	3.71	3.87	2.93	3.02
	Annual power consumption		kWh/year	1640	1858	3052	3052	3654	4005	4138
	SCOP			4.0	4.0	4.0	4.0	4.0	4.0	4.0
	ErP energy class			A+	A+	A+	A+	A+	A+	A+
Maximum input current			A	13.5	13.5	21.5	10.0	12.0	11.2	14.0
Indoor unit	Dimensions (width x depth x height)		mm	1068×675×235	1068×675×235	1650×675×235	1650×675×235	1650×675×235	1650×675×235	1650×675×235
	Transport dimensions (width x depth x height)		mm	1145×755×313	1145×755×313	1725×755×313	1725×755×313	1725×755×313	1725×755×313	1725×755×313
	Weight (net/gross)		kg	28.0/33.3	26.8/31.9	39.0/45.0	39.0/45.0	39.0/45.0	41.2/47.6	41.4/47.8
	Air-flow (low/medium/high)		m^3/min	10.8/12.7/14.7	14.2/17.8/20.1	23.9/30.7/36.0	23.9/30.7/36.0	23.9/30.7/36.0	23.6/32.2/38.8	23.8/30.6/42.6
	Sound pressure level (low/medium/high)		dB(A)	34/38/41	41/46/50	42/47/51	42/47/51	42/47/51	46/50/54	42/47/54
	Sound power level		dB(A)	58	62	61	61	61	67	69
Outdoor unit	Dimensions (width x depth x height)		mm	800×333×554	845×363×702	946×410×810	946×410×810	946×410×810	952×415×1333	952×415×1333
	Transport dimensions (width x depth x height)		mm	920×390×615	965×395×765	1090×500×875	1090×500×875	1090×500×875	1095×495×1480	1095×495×1480
	Weight (net/gross)		kg	35.6/38.5	66.8/72.6	81.5/87.0	81.5/87.0	81.5/87.0	106.7/119.9	111.3/124.3
	Air-flow		m^3/min	35.0	45.0	66.7	66.7	66.7	125.0	125.0
	Sound pressure level		dB(A)	57	62	64	64	64	66	66
	Sound power level		dB(A)	65	66	68	68	68	72	77
Refrigerant	Type			R32	R32	R32	R32	R32	R32	R32
	Charged amount		kg	1.35	1.50	2.40	2.40	2.40	2.80	2.95
Refrigerant installation	Liquid/gas		mm	Ø6.35 / Ø12.7	Ø9.52 / Ø15.9	Ø9.52 / Ø15.9	Ø9.52 / Ø15.9	Ø9.52 / Ø15.9	Ø9.52 / Ø15.9	Ø9.52 / Ø15.9
	Maximum length		m	30	50	65	65	65	65	65
	Max. height difference		m	20	25	30	30	30	30	30
Condensate drain			mm	Ø32	Ø32	Ø32	Ø32	Ø32	Ø32	Ø32
Recom-mended electrical wiring and protections	Indoor unit power supply cord		mm^2	3×1.5	3×1.5	3×1.5	3×1.5	3×1.5	3×1.5	3×1.5
	Outdoor unit power supply cord		mm^2	3×2.5	3×2.5	3×4.0	5×2.5	5×2.5	5×2.5	5×2.5
	Transmission cable		mm^2	2×1.0 (shielded)						
	Fuse		A	16	20	25	16	16	16	20
Recommended operating temperature ranges (outdoor)		Cooling	°C	-15 ~ 50						
		Heating	°C	-15 ~ 24						

* Function available with RG10A(B2S)/BGEF controller

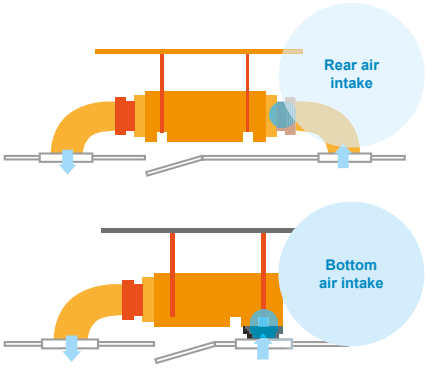
Capacity is based on the following conditions:

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. Installation length: length of connected pipes is 7.5 m, the height difference is 0. The unit contains fluorinated greenhouse gases (R32 GWP=675). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

Ducted

Universal duct installation

Two possibilities of air intake – from back or from bottom. The way the air is taken in can be easily changed by the installer during the installation.



High available static pressure up to 160Pa

High available static pressure, up to 160 Pa, considerably improves the design flexibility of the duct type unit installation. This way, air easily overcomes the line and local resistance in the refrigeration system.

Operation in low ambient temperatures

The built-in, additional low temperature kit and special design of the control board, enable the air-conditioner to operate in the cooling mode even when the outdoor temperature reaches -15°C.

Wired remote controller

In comparison to the wireless remote controller, the wired one can be permanently fixed to a wall, so it does not get lost along the way.

Functions

STANDARD


Static pressure setting


Alarm port


Temperature compensation

Refrigerant leakage detection


Restoring the louver settings


Fresh air


Operation in low ambient temperatures


Wired remote controller


Auto restart


Hot start


Optional connection of the condensate drain


Timer


Emergency operation mode

OPTIONAL


"Follow me" function *


Central controller


WiFi control


Wireless remote controller

Heating 8°C *

Technical specifications

Set				ZMTI-12N8-B1	ZMTI-18N8-B1	ZMTI-24N8-A1	ZMTI-36N8-A1	ZMTI-36N8-A3	ZMTI-42N8-B3	ZMTI-48N8-A3	ZMTI-55N8-A3
Indoor unit				MTI-12HWFNX-QRDA	MTIU-18HWFNX-QRDA	MTI-24HWFNX-QRDA	MTI-36HWFNX-QRDA	MTI-36HWFNX-QRDA	MTI-42HWFNX-QRDA	MTI-48HWFNX-QRDA	MTI-55HWFNX-QRDA
Outdoor unit				MOB30-12HFN8-QRDA	MOB30-18HFN8-QRDA	MOCA-24HFN8-QRDA	MODA-36HFN8-QRDA	MODA-36HFN8-RRDA	MODA-42HFN8-RRDA	MOEA-48HFN8-RRDA	MOEA-55HFN8-RRDA
Indoor unit power supply (V/phase/Hz)				220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50
Outdoor unit power supply (V/phase/Hz)				220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50
Version				Reversible heat pump							
Cooling	Capacity	Rated	kW	3.5	5.3	7.0	10.4	10.4	12.1	14.0	15.4
		Min-Max	kW	1.5~4.8	2.6~5.7	2.2~8.2	2.6~12.0	2.6~12.0	3.2~13.2	4.2~15.2	5.9~17.3
	Rated input power		kW	0.95	1.63	2.19	3.91	4.06	4.11	5.15	5.42
	EER		kW/kW	3.68	3.25	3.20	2.66	2.56	2.94	2.72	2.84
	Annual power consumption		kWh/year	183	278	390	614	614	750	808	935
	SEER			6.5	6.1	6.1	6.1	6.1	6.1	6.1	6.1
	ErP energy class			A++	A++	A++	A++	A++	A++	A++	A++
Heating	Capacity	Rated	kW	4.1	5.9	7.6	11.1	11.2	13.4	16.0	17.7
		Min-Max	kW	1.0~5.6	2.2~6.2	2.4~8.7	2.9~13.2	2.9~13.2	2.9~14.7	3.7~18.0	4.7~20.5
	Rated input power		kW	1.10	1.58	2.04	3.07	2.99	3.49	4.26	5.18
	COP		kW/kW	3.73	3.73	3.72	3.62	3.71	3.84	3.76	3.42
	Annual power consumption		kWh/year	1141	1626	1902	3016	3016	3654	4261	4302
	SCOP			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
	ErP energy class			A+	A+	A+	A+	A+	A+	A+	A+
Maximum input current			A	10.0	13.5	13.5	21.5	10.0	12.0	11.2	14.0
Indoor unit	Dimensions (width x depth x height)		mm	700×450×200	880×674×210	1100×774×249	1360×774×249	1360×774×249	1360×774×249	1200×874×300	1200×874×300
	Transport dimensions (width x depth x height)		mm	860×540×285	1070×725×280	1305×805×305	1570×805×305	1570×805×305	1570×805×305	1405×915×355	1405×915×355
	Weight (net/gross)		kg	18.0/22.0	24.3/29.6	31.5/38.9	40.5/48.5	40.5/48.5	40.5/48.5	47.6/55.8	47.6/55.8
	External static pressure		Pa	25 (0~60)	25 (0~100)	25 (0~160)	37 (0~160)	37 (0~160)	37 (0~160)	50 (0~160)	50 (0~160)
	Air-flow (low/medium/high)		m^3/min	5.0/8.0/10.0	5.8/10.8/14.7	14.0/17.6/20.8	12.5/19.2/23.3	12.5/19.2/23.3	12.5/19.2/23.3	28.0/34.0/40.0	30.3/36.8/43.3
	Sound pressure level (low/medium/high)		dB(A)	26/30/35	33/38/41	40/42/44	40/43/47	40/43/47	40/43/47	48/49/50	50/52/54
	Sound power level		dB(A)	56	59	63	64	64	64	69	74
Outdoor unit	Dimensions (width x depth x height)		mm	800×333×554	800×333×554	845×363×702	946×410×810	946×410×810	946×410×810	952×415×1333	952×415×1333
	Transport dimensions (width x depth x height)		mm	920×390×615	920×390×615	965×395×765	1090×500×875	1090×500×875	1090×500×875	1095×495×1480	1095×495×1480
	Weight (net/gross)		kg	34.7/37.5	33.7/36.6	66.8/72.6	81.5/87.0	81.5/87.0	81.5/87.0	106.7/119.9	111.3/124.3
	Air-flow		m^3/min	33.3	33.3	45.0	66.7	66.7	66.7	125.0	125.0
	Sound pressure level		dB(A)	55	55	62	64	64	64	66	66
	Sound power level		dB(A)	63	65	66	68	68	68	72	77
Refrigerant	Type			R32	R32	R32	R32	R32	R32	R32	R32
	Charged amount		kg	0.87	1.15	1.50	2.40	2.40	2.40	2.80	2.95
Refrigerant installation	Liquid/gas		mm	Ø6.35 / Ø9.52	Ø6.35 / Ø12.7	Ø9.52 / Ø15.9	Ø9.52 / Ø15.9	Ø9.52 / Ø15.9	Ø9.52 / Ø15.9	Ø9.52 / Ø15.9	Ø9.52 / Ø15.9
	Maximum length		m	25	30	50	65	65	65	65	65
	Max. height difference		m	10	20	25	30	30	30	30	30
Condensate drain			mm	Ø25	Ø25	Ø32	Ø32	Ø32	Ø32	Ø32	Ø32
Recommended electrical wiring and protections	Indoor unit power supply cord		mm^2	3×1.5	3×1.5	3×1.5	3×1.5	3×1.5	3×1.5	3×1.5	3×1.5
	Outdoor unit power supply cord		mm^2	4×1.5	4×1.5	3×4.0	3×4.0	5×2.5	5×2.5	5×2.5	5×2.5
	Transmission cable		mm^2	4×1.5		2×1.0 (shielded)					
	Fuse		A	16	16	20	25	16	16	16	20
Recommended operating temperature ranges (outdoor)		Cooling	°C	-15 ~ 50							
		Heating	°C	-15 ~ 24							

* Function available with RG10A(B2S)/BGEF controller

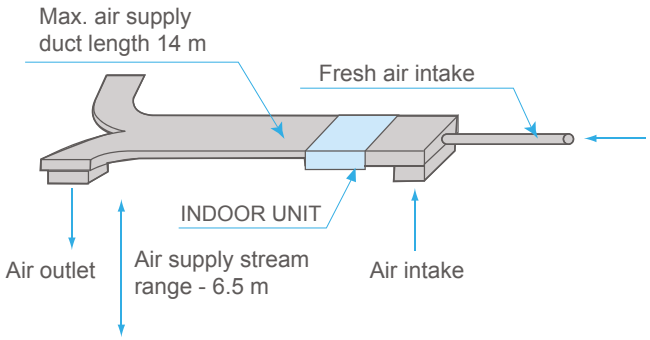
Capacity is based on the following conditions:

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. Installation length: length of connected pipes is 7.5 m, the height difference is 0. The unit contains fluorinated greenhouse gases (R32 GWP=675). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

Ducted BIG Inverter

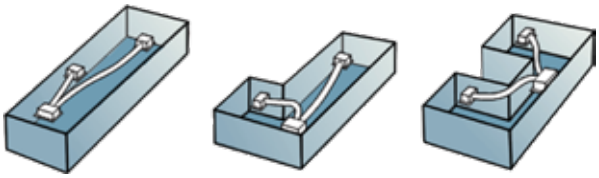
High static pressure

Static pressure up to 400 Pa makes it possible to use duct with length of up to 14 m on the height of 6,5 m. These units are specially designed for large, spacious rooms.



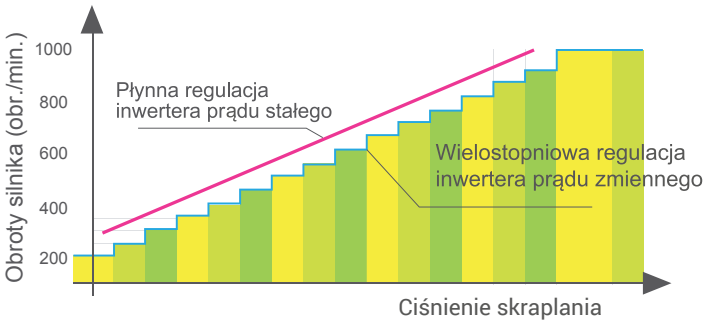
Flexible installation

High available static pressure allows to apply different solutions of air distribution in rooms with unusual shapes.



High performance DC fan

The unit is equipped with DC inverter driven fan. In comparison with AC motor fans, the electric energy consumption is reduced by 50%. Another benefit of the DC motor fans would be the lower level of emitted noise.



Functions

STANDARD

Hot start | Refrigerant leakage detection | Fresh air | Operation in low ambient temperatures | Auto restart | Timer | Wired remote controller

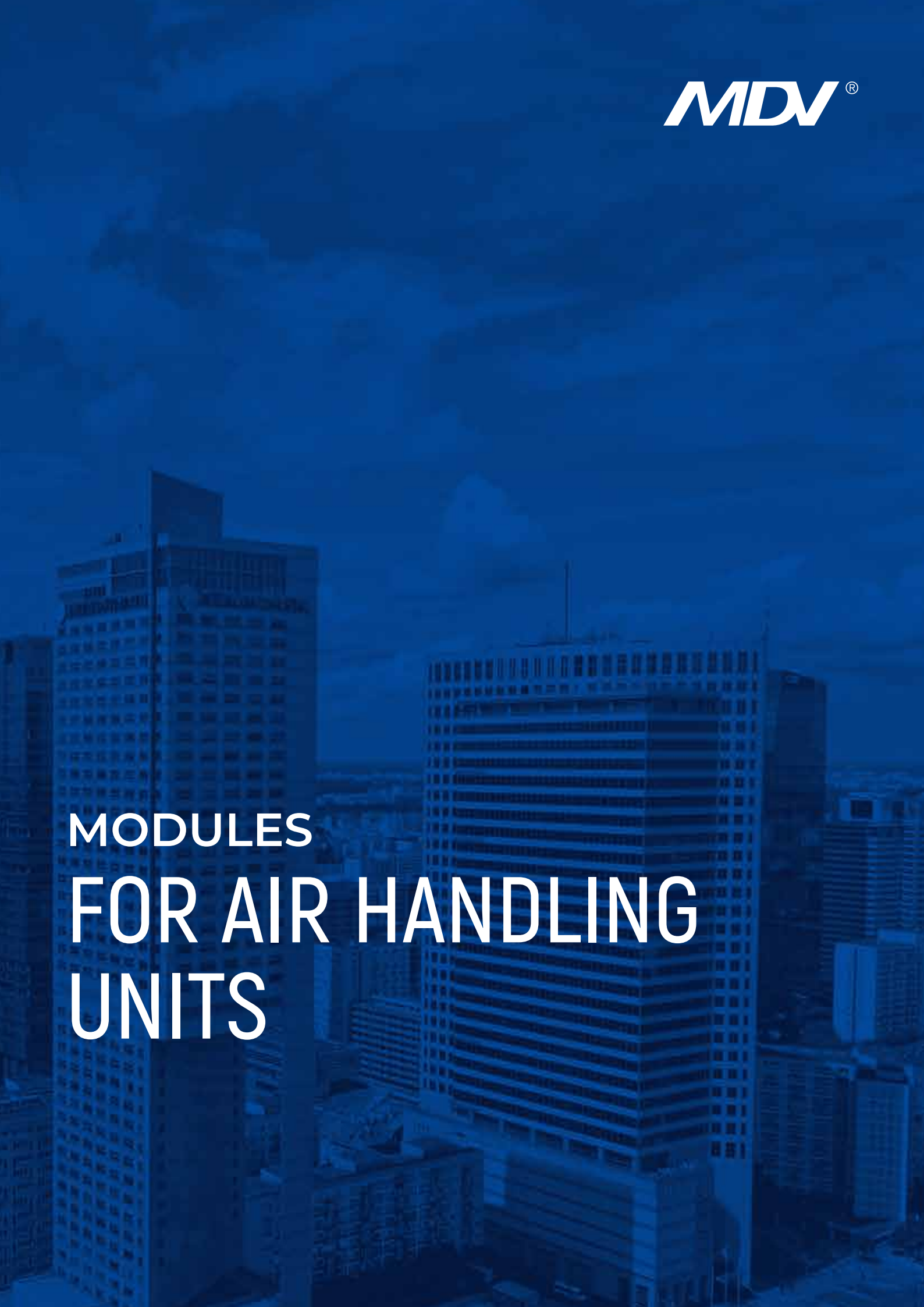
OPTIONAL

Wireless remote controller | Central controller

Technical specifications

				NEW	NEW	NEW			
Set				**ZBIG-200N1-B3**	**ZBIG-250N1-B3**	**ZBIG-280N1-B3**	**ZBIG-400N1-B3**	**ZBIG-450N1-B3**	**ZBIG-560N1-B3**
Indoor unit				**MDV-200T1/DN1**	**MDV-250T1/DN1**	**MDV-280T1/DN1**	**MDV-400T1/DN1**	**MDV-450T1/DN1**	**MDV-560T1/DN1**
Outdoor unit				**MDV-V200W/DRN1**	**MDV-V260W/DRN1**	**MDV-V280W/DGN1**	**MDV-V400W/DRN1**	**MDV-V450W/DRN1**	**MV6-i560WV-2GN1-E**
Indoor unit power supply (V/phase/Hz)				220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50
Outdoor unit power supply (V/phase/Hz)				380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50
Version				Reversible heat pump					
Cooling	Capacity	Rated	kW	20.0	25.0	28.0	40.0	45.0	56.0
	Rated input power		kW	7.09	8.8	13.9	13.70	15.40	18.27
	EER		kW/kW	2.82	2.84	2.01	2.92	2.92	3.07
Heating	Capacity	Rated	kW	22.5	26.0	31.5	45.0	56.0	63.0
	Rated input power		kW	7.09	8.0	7.88	12.90	14.50	16.07
	COP		kW/kW	3.17	3.25	4.00	3.49	3.86	3.92
Indoor unit	Dimensions (width x depth x height)		mm	1440×505×925	1440×505×925	1440×505×925	2005×670×929	2005×670×929	2005×670×929
	Transport dimensions (width x depth x height)		mm	1509×550×990	1509×550×990	1509×550×990	2095×800×964	2095×800×964	2095×800×964
	Weight (net/gross)		kg	130/142	130/142	130/142	210.0/235.0	210.0/235.0	218.0/248.0
	External static pressure		Pa	170 (20~250)	170 (20~250)	170 (20~250)	300 (100 ~ 400)	300 (100 ~ 400)	300 (100 ~ 400)
	Air-flow (low/medium/high)		m^3/min	62.4/674/72.6	62.4/674/72.6	62.4/674/72.6	73.3/90.8/108.3	73.3/90.8/108.3	83.3/103.3/123.3
	Sound pressure level (low/medium/high)		dB(A)	50/54/57	50/54/57	50/54/57	52/57/60	52/57/60	51/56/59
Outdoor unit	Dimensions (width x depth x height)		mm	1120×1558×528	1120×1558×528	1120×1558×528	1360×540×1650	1460×540×1650	1340×825×1635
	Transport dimensions (width x depth x height)		mm	1270×1720×565	1270×1720×565	1270×1720×565	1450×560×1785	1550×560×1785	1405×910×1805
	Weight (net/gross)		kg	137/153	146.5/162.5	147/163	240.0/260.0	275.0/290.0	344.0/364.0
	Air-flow		m^3/min	183.3	174.9	174.9	276.0	276.0	283.0
	Sound pressure level		dB(A)	59	59	60	62	62	66
Refrigerant	Type			R410A	R410A	R410A	R410A	R410A	R410A
Refrigerant installation	Liquid/gas		mm	Ø12.7 / Ø22.2	Ø12.7 / Ø22.2	Ø12.7 / Ø22.2	Ø12.7 / Ø22.2	Ø12.7 / Ø25.4	Ø19.1 / Ø31.8
Condensate drain			mm^2	Ø32	Ø32	Ø32	Ø32	Ø32	Ø32
Recommended electrical wiring and protections	Indoor unit power supply cord		mm^2	3×2.5	3×2.5	3×2.5	3×2.5	3×2.5	3×2.5
	Outdoor unit power supply cord		mm^2	5×4.0	5×4.0	5×4.0	5×4.0	5×4.0	5×6.0
	Transmission cable		mm^2	3×0.75 (shielded)					
Recommended operating temperature ranges (outdoor)		Cooling	°C	-15 ~ 48	-15 ~ 48	-15 ~ 48	-5 ~ 48	-5 ~ 48	-5 ~ 48
		Heating	°C	-15 ~ 24	-15 ~ 24	-15 ~ 24	-15 ~ 24	-15 ~ 24	-23 ~ 24

Capacity is 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. Installation length: length of connected pipes is 7.5 m, the height difference is 0. The unit contains fluorinated greenhouse gases (R410A GWP=2088). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.



MODULES

FOR AIR HANDLING UNITS

AIR Kit

AIR Kit

AIR Kit control module enables connection of the universal, inverter outdoor unit with a refrigerant coil in the air handling unit.

Main characteristics:
- simple construction and low cost
- unlimited control of the condensing unit
- 0~10V analogue signal control
- heating and cooling mode
- soft start function
- support of all Office Standard MDV units
- error diagnostics
- defrost function
- anti-freeze Frost sensor (option)
- 0~25 kOhm signal control
- on/off signal control

Very simple connection

The system utilizes expansion elements built-in the outdoor unit, so it is unnecessary to use additional valves.

The unit is controlled by the input signals:
- dry contact, on-off signal to enable cooling and heating operation
- 0-10 V DC signal for stepless control of unit capacity
- 0-25 kΩ resistance signal for continuous control of unit capacity

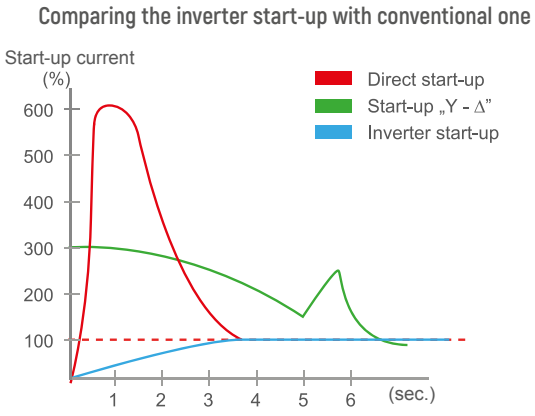
Signals outputted from the control unit:
- dry contact for alarm signal
- dry contact, signal active during outdoor unit exchanger defrosting

Heating/cooling mode

AIR Kit module can supply coils of the air handling units that operates both, as coolers or heaters.

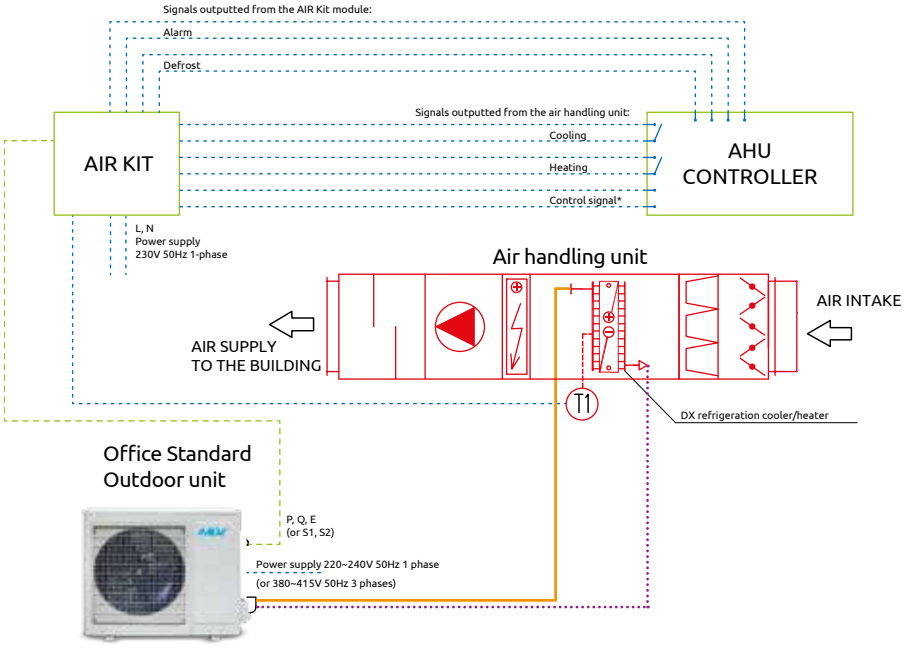
Soft start

Inverter compressor with the „soft" start function limits temporary overloads and voltage drops in the building's electrical network. High performance inverter compressors achieve rated capacity in a very short time, directly impacting the time of cooling down or heating up the air-conditioned rooms. Lower temperature fluctuations provide an instant feeling of comfort.



Circuit diagrams

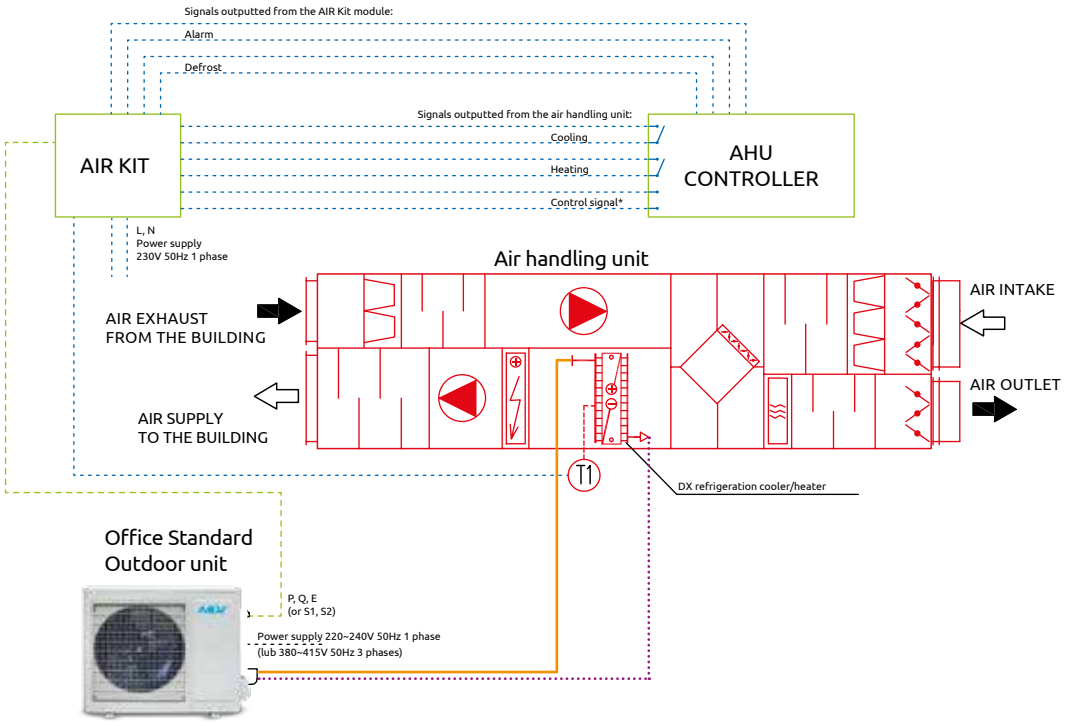
Connection of the outdoor unit with the supply air handling unit



Designation:
- LIQUID copper pipeline, heat insulated
- GAS copper pipeline, heat insulated
- Electrical / signal and control connections
- (T1) Optional temperature sensor for the anti-freeze protection

***Control signals:**
- analogue 0~10V
- resistance 0~25 Ω
- ON/OFF

Connection of the outdoor unit with the supply and exhaust air handling unit



Designation:
- LIQUID copper pipeline, heat insulated
- GAS copper pipeline, heat insulated
- Electrical / signal and control connections
- (T1) Optional temperature sensor for the anti-freeze protection

***Control signals:**
- analogue 0~10V
- resistance 0~25 Ω
- ON/OFF

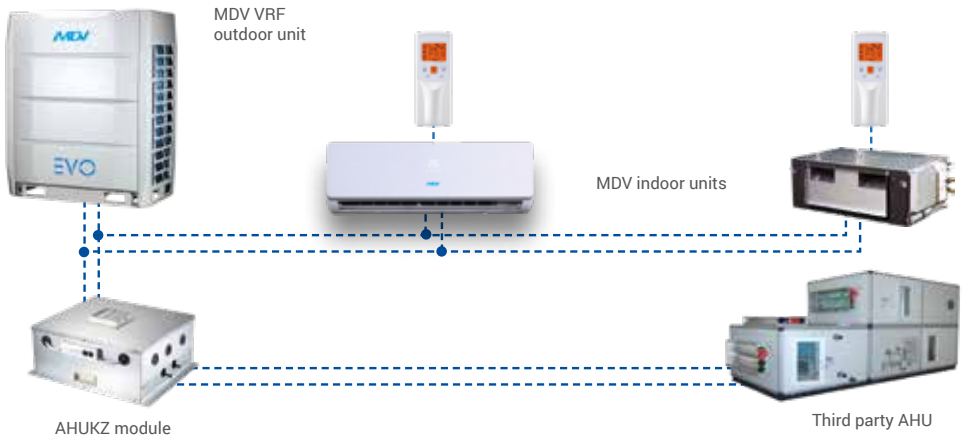
AHUKZ-N1

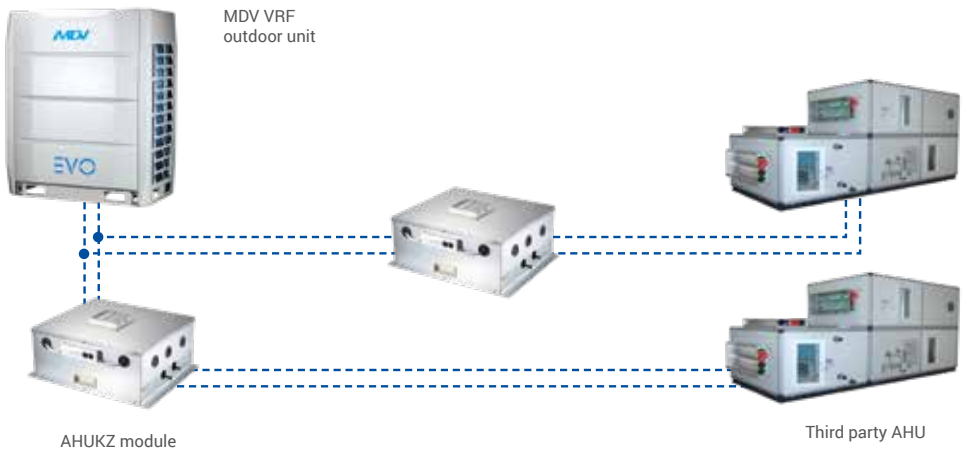
Functions

CE-AHUKZ-01~03 control module enables interaction of the MDV VRF system with another manufacturers units, that needs to be supplied with R410A refrigerant. The module can be used for supplying refrigerant heat exchangers in air handling units and other unconventional air-conditioning units.

Flexible configuration

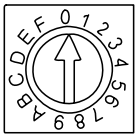
The AHU can be connected as one of several indoor units in the VRF system (indoor units with total capacity of minimum 50% of the whole refrigerant circuit capacity). It is also possible to connect one AHU directly to one outdoor unit or several AHUs to one outdoor unit while maintaining individual control.





Capacity control - high application flexibility

AHUKZ modules are available in three basic sizes: 14, 28 and 56 kW. The built-in knob enables reduction of the rated module capacity so as to optimally adjust it to the AHU heat exchanger capacity. Built-in electronic expansion valve enables stepless adjustment of cooling and heating, ensuring comfort in the air-conditioned room.

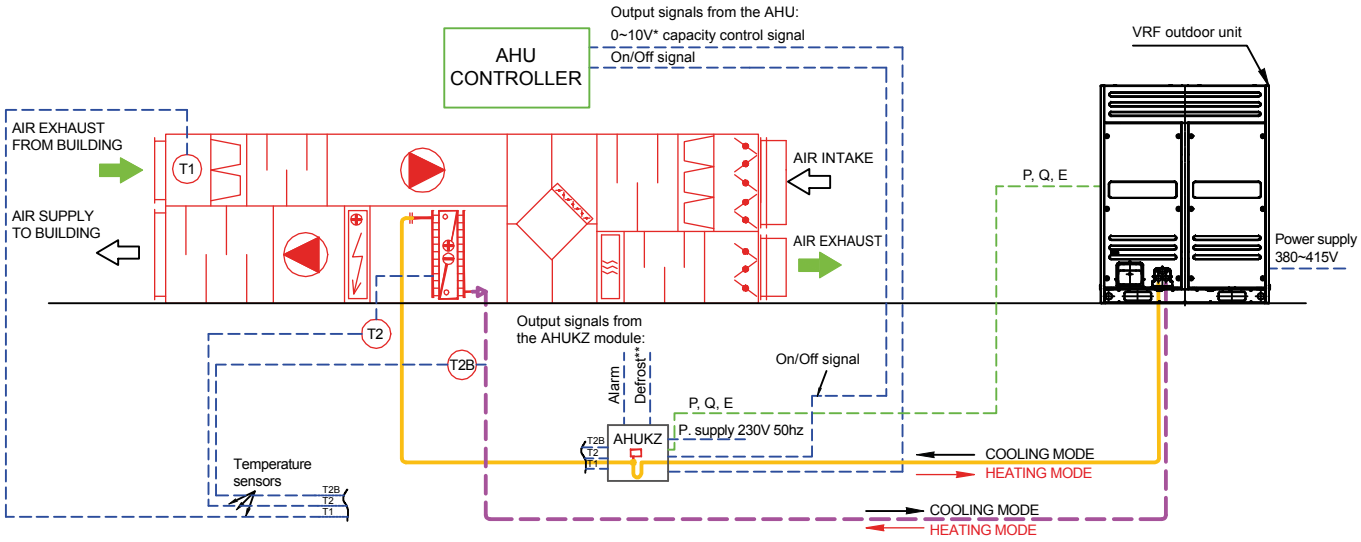


EN C1

Stepless capacity control using AHU signal

The B version of the AHUKZ module enables capacity adjustment by means of a 0~10V analogue signal from the AHU. Additionally, this module is fitted with an output defrost signal and automatic operation mode changeover.

Connection diagram



DESIGNATIONS:

- T1 — Exhaust air temperature sensor
- T2 — Sensor in the middle of the DX cooler manifold
- T2B — Sensor at the outlet of the DX cooler
- LIQUID copper pipeline, thermally insulated
- GAS copper pipeline, thermally insulated
- Electrical / signal and control connections

* 0~10V control signal is available for the control module only in version B

** Defrost signal is available for the control module only in version B

Technical specifications

Model			AHUKZ-01B-N1	AHUKZ-02B-N1	AHUKZ-03B-N1
Power supply		V/phase/Hz	220~240/1/50		
Cooling	Minimum / maximum capacity	kW	9.0~20.0	20.0~36.0	36.0~56.0
Heating	Minimum / maximum capacity	kW	9.0~20.0	20.0~36.0	36.0~56.0
Dimensions	Net dimensions (width x height x depth)	mm	375×350×150	375×350×150	375×350×150
	Transport dimensions (width x height x depth)	mm	490×420×240	490×420×240	490×420×240
Refrigerant			R410A		
Refrigerant flow control			Electronic expansion valve		
Piping	Inlet pipe	mm	Ø9.52	Ø12.7	Ø15.9
	Outlet pipe	mm	Ø9.52	Ø12.7	Ø15.9
Cables	Power supply	mm^2	3×2.5		
	Communication with external unit	mm^2	3×0.75 shielded		
Sterownik			Wired remote controller KJR-10B		

R-32 eco-friendly refrigerant

Technical specifications

Set				AHU-KIT09-B1AF	AHU-KIT12-B1AF	AHU-KIT18-B1AF	AHU-KIT24-B1AF	AHU-KIT24-A1
Coil module				AirKit-KA8140	AirKit-KA8140	AirKit-KA8140	AirKit-KA8140	AIR KIT_B
Outdoor unit				MOBA03-09HFN8-QRD0GW	MOBA03-12HFN8-QRD0GW	MOB02-18HFN8-QRD0GW	MOCA02-24HFN8-QRD0GW	MOCA-24HFN8-QRDA
Outdoor unit power supply (V/phase/Hz)				220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50
Coil module power supply (V/phase/Hz)				220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50
Version				Reversible heat pump				
Cooling	Capacity	Rated	kW	2.6	3.5	5.3	7.0	7.0
		Min-Max	kW	1.0~3.2	1.1~4.1	1.8~6.1	2.1~7.9	2.2~8.2
	Rated input power		kW	0.71	1.24	1.92	2.35	2.19
	EER		kW/kW	3.70	2.82	2.76	2.98	3.21
Heating	Capacity	Rated	kW	2.9	3.5	5.6	7.3	7.4
		Min-Max	kW	0.8~3.4	1.1~4.2	1.4~6.7	1.6~8.8	2.4~8.7
	Rated input power		kW	0.74	0.96	1.55	2.04	1.98
	COP		kW/kW	3.92	3.65	3.61	3.58	3.72
Air-flow			m^3/min	28.3	28.3	33.3	50.0	45.0
Sound pressure level			dB(A)	55	55	55	59	62
Dimensions (width x depth x height)			mm	700×270×550	700×270×550	800×333×554	845×363×702	845×363×702
Transport dimensions (width x depth x height)			mm	815×325×615	815×325×615	920×390×615	965×395×765	965×395×765
Weight (net/gross)			kg	22.8/25.1	22.8/25.1	34.0/36.7	51.5/54.5	66.8/72.6
Refrigerant	Type			R32	R32	R32	R32	R32
	Charged amount		kg	0.50	0.50	1.00	1.60	1.50
Refrigerant installation	Liquid/gas		mm	Ø6.35 / Ø9.52	Ø6.35 / Ø9.52	Ø6.35 / Ø12.7	Ø9.52 / Ø15.9	Ø9.52 / Ø15.9
	Maximum length		m	25	25	30	50	50
	Max. height difference		m	10	10	20	25	25
Recommended electrical wiring and protections	Power supply cord		mm^2	3x1.5	3x1.5	3x2.5	3x2.5	3×2.5
	Fuse		A	10	10	16	20	20
Recommended operating temperature ranges (outdoor)		Cooling	°C	-15 ~ 50	-15 ~ 50	-15 ~ 50	-15 ~ 50	-15 ~ 50
		Heating	°C	-25 ~ 30	-25 ~ 30	-25 ~ 30	-25 ~ 30	-15 ~ 24

Capacity is 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. Installation length: length of connected pipes is 7.5 m, the height difference is 0. The unit contains fluorinated greenhouse gases (R32 GWP=675). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

Technical specifications

Set				AHU-KIT36-A1	AHU-KIT36-A3	AHU-KIT42-A3	AHU-KIT48-A3	AHU-KIT55-A3
Coil module				AirKit_B	AirKit_B	AirKit_B	AirKit_B	AirKit_B
Outdoor unit				MODA-36HFN8-QRDA	MODA-36HFN8-RRDA	MODA-42HFN8-RRDA	MOEA-48HFN8-RRDA	MOEA-55HFN8-RRDA
Outdoor unit power supply (V/phase/Hz)				220-240/1/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50
Coil module power supply (V/phase/Hz)				220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50
Version				Reversible heat pump				
Cooling	Capacity	Rated	kW	10.4	10.5	12.1	13.6	15.7
		Min-Max	kW	2.6~12.0	2.6~12.0	3.2~13.2	4.8~14.6	5.3~16.7
	Rated input power		kW	3.91	3.90	4.03	5.42	5.99
	EER		kW/kW	2.66	2.69	3.00	2.51	2.62
Heating	Capacity	Rated	kW	11.1	11.1	13.5	15.9	18.2
		Min-Max	kW	2.9~13.2	2.9~13.2	2.9~14.7	3.9~16.8	4.4~19.3
	Rated input power		kW	3.07	2.97	3.49	5.34	6.03
	COP		kW/kW	3.62	3.74	3.87	2.98	3.02
Air-flow			m^3/min	66.7	66.7	66.7	125.0	125.0
Sound pressure level			dB(A)	64	64	64	66	66
Dimensions (width x depth x height)			mm	946×410×810	946×410×810	946×410×810	952×415×1333	952×415×1333
Transport dimensions (width x depth x height)			mm	1090×500×875	1090×500×875	1090×500×875	1095×495×1480	1095×495×1480
Weight (net/gross)			kg	81.5/87.0	81.5/87.0	81.5/87.0	106.7/119.9	111.3/124.3
Refrigerant	Type			R32	R32	R32	R32	R32
	Charged amount		kg	2.40	2.40	2.40	2.80	2.95
Refrigerant installation	Liquid/gas		mm	Ø9.52 / Ø15.9	Ø9.52 / Ø15.9	Ø9.52 / Ø15.9	Ø9.52 / Ø15.9	Ø9.52 / Ø15.9
	Maximum length		m	65	65	65	65	65
	Max. height difference		m	30	30	30	30	30
Recommended electrical wiring and protections	Power supply cord		mm^2	5×2.5	5×2.5	5×2.5	5×2.5	5×2.5
	Fuse		A	25	16	16	16	20
Recommended operating temperature ranges (outdoor)		Cooling	°C	-15 ~ 50				
		Heating	°C	-15 ~ 24				

Capacity is 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. Installation length: length of connected pipes is 7.5 m, the height difference is 0. The unit contains fluorinated greenhouse gases (R410A, GWP=2088). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

Technical specifications

Set					AHU-KIT-180-B3	AHU-KIT-200-B3	AHU-KIT-260-B3	AHU-KIT-335-B3	AHU-KIT-400-B3	AHU-KIT-450-B3	AHU-KIT-500-B3	AHU-KIT-560-B3	AHU-KIT-615-B3
Coil module					AHUKZ-01N1	AHUKZ-02N1	AHUKZ-02N1	AHUKZ-03N1	AHUKZ-03N1	AHUKZ-03N1	AHUKZ-03N1	AHUKZ-03N1	AHUKZ-02N1 + AHUKZ-02N1
Outdoor unit					MDV-V180W/DRN1	MDV-V200W/DRN1	MDV-V260W/DRN1	MDV-V335W/DGN1	MDV-V400W/DRN1	MDV-V450W/DRN1	MV6-i500WV2GN1-E	MV6-i560WV2GN1-E	MV6-i615WV2GN1-E
Outdoor unit power supply (V/phase/Hz)					380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50
Coil module power supply (V/phase/Hz)					220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50
Version					Reversible heat pump								
Cooling	Capacity	Rated	kW		17.5	20.0	26.0	33.5	40.0	45.0	50.0	56.0	61.5
		Min-Max	kW		-	-	-	-	-	-	-	-	-
	Rated input power		kW		5.30	6.35	8.13	15.09	15.09	13.55	14.70	16.00	20.20
	EER		kW/kW		3.30	3.15	3.20	2.22	2.65	3.32	3.40	3.50	3.04
Heating	Capacity	Rated	kW		33.5	22.0	28.5	33.5	40.0	45.0	50.0	56.0	61.5
		Min-Max	kW		-	-	-	-	-	-	-	-	-
	Rated input power		kW		5.00	6.20	7.22	7.94	10.00	11.11	12.20	13.80	17.60
	COP		kW/kW		6.70	3.55	3.95	4.22	4.00	4.05	4.10	4.06	3.49
Air-flow			m^3/min		113.0	183.0	175.0	188	276.0	276.0	217.0	283.0	283.0
Sound pressure level			dB(A)		59	59	60	61	62	62	65	66	66
Dimensions (width x depth x height)			mm		900×320×1327		1120×528×1558		1360×540×1650	1460×540×1650		1340×850×1635	
Transport dimensions (width x depth x height)			mm		1030×435×1456		1270×565×1720		1450×560×1785	1550×560×1785		1405×910×1805	
Weight (net/gross)			kg		107.0/118.0	137.0/153.0	147/162.5	157/173	250/268	280/300	295.0/322.0	344.0/364.0	344.0/364.0
Refrigerant	Type				R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Charged amount		kg		4.50	4.80	6.20	8.00	9.00	12.00	13.00	17.00	17.00
Refrigerant installation	Liquid/gas		mm		Ø9.52 / Ø19.1	Ø9.52 / Ø19.1	Ø9.52 / Ø22.2	Ø12.7 / Ø25.4	Ø12.7 / Ø22.2	Ø12.7 / Ø25.4	Ø19.1 / Ø31.8	Ø19.1 / Ø31.8	Ø19.1 / Ø31.8
	Maximum length		m		60	60	60	60	100	100	175	175	175
	Max. height difference		m		30	30	30	30	30	30	110	110	110
Recommended electrical wiring and protections	Power supply cord		mm^2		5×4.0	5×4.0	5×4.0	5×4.0	5×4.0	5×4.0	5×6.0	5×6.0	5×10.0
	Fuse		A		25	25	32	32	60	60	50	50	63
Recommended operating temperature ranges (outdoor)		Cooling	°C		-15 ~ 48	-15 ~ 46	-15 ~ 46	-5 ~ 48	-5 ~ 48	-5 ~ 48	-5 ~ 48	-5 ~ 48	-5 ~ 48
		Heating	°C		-15 ~ 27	-15 ~ 24	-15 ~ 24	-20 ~ 24	-15 ~ 24	-15 ~ 24	-23 ~ 24	-23 ~ 24	-23 ~ 24

Capacity is 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. Installation length: length of connected pipes is 7.5 m, the height difference is 0. The unit contains fluorinated greenhouse gases (R410A, GWP=2088). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

Technical specifications

Set				AHU-KIT670-B3	AHU-KIT730-B3	AHU-KIT785-B3	AHU-KIT850-B3	AHU-KIT900-B3
Coil module				AHUKZ-02N1 + AHUKZ-02N1	AHUKZ-02N1 + AHUKZ-03N1	AHUKZ-02N1 + AHUKZ-03N1	AHUKZ-02N1 + AHUKZ-03N1	AHUKZ-02N1 + AHUKZ-03N1
Outdoor unit				MV6-i670WV2GN1-E	MV6-i730WV2GN1-E	MV6-i785WV2GN1-E	MV6-i850WV2GN1-E	MV6-i900WV2GN1-E
Outdoor unit power supply (V/phase/Hz)				380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50
Coil module power supply (V/phase/Hz)				220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50
Version				Reversible heat pump				
Cooling	Capacity	Rated	kW	67.0	73.0	78.5	85.0	90.0
		Min-Max	kW	-	-	-	-	-
	Rated input power		kW	21.60	21.60	24.90	28.30	32.10
	EER		kW/kW	3.10	3.38	3.15	3.00	2.80
Heating	Capacity	Rated	kW	67.0	73.0	78.5	85.0	90.0
		Min-Max	kW	-	-	-	-	-
	Rated input power		kW	16.80	18.10	21.80	24.30	26.50
	COP		kW/kW	3.99	4.03	3.60	3.50	3.40
Air-flow			m^3/min	417.0	417.0	417.0	400.0	400.0
Sound pressure level			dB(A)	67	68	68	68	68
Dimensions (width x depth x height)			mm	1730×850×1830	1730×850×1830	1730×850×1830	1730×850×1830	1730×850×1830
Transport dimensions (width x depth x height)			mm	1800×910×2000	1800×910×2000	1800×910×2000	1800×910×2000	1800×910×2000
Weight (net/gross)			kg	407.0/430.0	429.0/452.0	429.0/452.0	475.0/507.0	475.0/507.0
Refrigerant	Type			R410A	R410A	R410A	R410A	R410A
	Charged amount		kg	22.00	22.00	22.00	25.00	25.00
Refrigerant installation	Liquid/gas		mm	Ø19.1 / Ø31.8	Ø22.2 / Ø31.8	Ø22.2 / Ø31.8	Ø22.2 / Ø38.1	Ø22.2 / Ø38.1
	Maximum length		m	175	175	175	175	175
	Max. height difference		m	110	110	110	110	110
Recommended electrical wiring and protections	Power supply cord		mm^2	5×10.0	5×10.0	5×10.0	5×10.0	5×10.0
	Fuse		A	63	63	63	80	80
Recommended operating temperature ranges (outdoor)		Cooling	°C	-5 ~ 48	-5 ~ 48	-5 ~ 48	-5 ~ 48	-5 ~ 48
		Heating	°C	-23 ~ 24	-23 ~ 24	-23 ~ 24	-23 ~ 24	-23 ~ 24

Capacity is 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. Installation length: length of connected pipes is 7.5 m, the height difference is 0. The unit contains fluorinated greenhouse gases (R410A, GWP=2088). For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

CONTROL SYSTEM

RG10A

FUNCTIONS

- On / Off
- Ioniser (Magic Air)
- "Follow Me"
- Change of operation mode
- Change of fan speed
- Set temperature adjustment
- Horizontal / vertical louver control and swing
- Clock
- Timer
- Mute on / switching off the backlit
- Backlit display
- Turbo
- Sleep mode

"Follow Me" function

This function activates the temperature sensor built-in the controller. This provides maintenance of an accurate temperature in location of the user.

Specifications

Model	RG10A
Dimensions (width x height x depth) [mm]	195×49×18
Power supply	3.0V (R03/LR03×2)

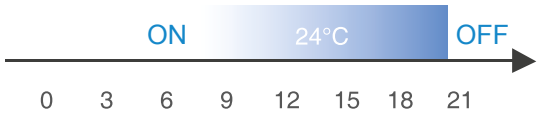
RG-57

FUNCTIONS

- On / Off
- Change of operation mode
- Change of fan speed
- Set temperature adjustment
- Horizontal / vertical louver control and swing
- Clock
- Timer
- Mute on / switching off the backlit
- Backlit display
- Turbo
- Sleep mode
- "Follow Me"

Timer

The built-in timer enables to program the time of automatic switching on/off of the air-conditioner.



Air-conditioner set to operate in the auto mode from 8 AM to 8 PM.

Specifications

Model	RG-57
Dimensions (width x height x depth) [mm]	55×140×23
Power supply	1.5V (LR03/AAA)×2

FUNCTIONS

- Control of up to 64 air-conditioners
- Individual or group control
- On/Off
- Operation mode setting
- Fan speed setting
- Set temperature adjustment
- Timer
- Lock function
- Swing function
- Cooling mode
- Heating mode
- Fan mode

CCM30

Central remote controller

The controller is a multifunctional device, which can control operation of up to 64 indoor units. The maximum length of the transmission cable is 1200 m.

Specifications

Model	CCM30
Dimensions (width x height x depth) [mm]	180×122×78
Power supply	198-242V (50/60Hz)

FUNCTIONS

- On / Off
- Operation mode setting
- Individual, group and central control
- Control of up to 64 indoor units
- Weekly timer
- Error code display
- Emergency switching on/off
- Control via internet

CCM-180A/WS

Central control

It is possible to connect up to 64 indoor units to a single central remote controller.

Specifications

Model	CCM-180A
Dimensions (width x height x depth) [mm]	182×123×34
Power supply	DC 5V

VRF INDOOR UNITS

EVO series

EVO is a modular system for changing the operation mode of the circuit from cooling to heating, with a guarantee that the constant condition will be maintained in all zones.

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

Model

Capacity range	HP	8	10	12	14	16	18	20	22
	kW	25.2	28.0	33.5	40.0	45.0	50.0	56.0	61.5
Appearance									

Combination table

Model	No. of outdoor units	No. of compres-sors	Outdoor unit combination								Max. no. of connected indoor units	Capacity [kW]	
			8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP		Cooling	Heating
MV5-E252W/V2GN1	1	1	1								13	25.2	27.0
MV5-E280W/V2GN1	1	1		1							16	28.0	31.5
MV5-E335W/V2GN1	1	1			1						20	33.5	37.5
MV5-E400W/V2GN1	1	2				1					23	40.0	40.0
MV5-E450W/V2GN1	1	2					1				26	45.0	45.0
MV5-E500W/V2GN1	1	2						1			29	50.0	50.0
MV5-E560W/V2GN1	1	2							1		33	56.0	56.0
MV5-E615W/V2GN1	1	2								1	36	61.5	61.5
MV5-E670W/V2GN1	2	2			2						39	67.0	75.0
MV5-E730W/V2GN1	2	3		1			1				43	73.0	76.5
MV5-E780W/V2GN1	2	3		1				1			46	78.0	81.5
MV5-E840W/V2GN1	2	3		1					1		50	84.0	87.5
MV5-E895W/V2GN1	2	3		1						1	53	89.5	93.0
MV5-E950W/V2GN1	2	3			1					1	56	95.0	99.0
MV5-E1000W/V2GN1	2	4						2			59	100.0	100.0
MV5-E1065W/V2GN1	2	4					1			1	63	106.5	106.5
MV5-E1115W/V2GN1	2	4						1		1	64	111.5	111.5
MV5-E1175W/V2GN1	2	4							1	1	64	117.5	117.5
MV5-E1230W/V2GN1	2	4								2	64	123.0	123.0
MV5-E1285W/V2GN1	3	4			2					1	64	128.5	136.5
MV5-E1345W/V2GN1	3	5		1			1			1	64	134.5	138.0
MV5-E1395W/V2GN1	3	5		1				1		1	64	139.5	143.0
MV5-E1455W/V2GN1	3	5		1					1	1	64	145.5	149.0
MV5-E1510W/V2GN1	3	5		1						2	64	151.0	154.5
MV5-E1565W/V2GN1	3	5			1					2	64	156.5	160.5
MV5-E1615W/V2GN1	3	6						2		1	64	161.5	161.5
MV5-E1680W/V2GN1	3	6					1			2	64	168.0	168.0
MV5-E1730W/V2GN1	3	6						1		2	64	173.0	173.0
MV5-E1790W/V2GN1	3	6							1	2	64	179.0	179.0
MV5-E1845W/V2GN1	3	6								3	64	184.5	184.5
MV5-E1900W/V2GN1	4	6			2					2	64	190.0	198.0
MV5-E1960W/V2GN1	4	7		1			1			2	64	196.0	199.5
MV5-E2010W/V2GN1	4	7		1				1		2	64	201.0	204.5
MV5-E2070W/V2GN1	4	7		1					1	2	64	207.0	210.5
MV5-E2125W/V2GN1	4	7		1						3	64	212.5	216.5
MV5-E2180W/V2GN1	4	7			1					3	64	218.0	222.0
MV5-E2230W/V2GN1	4	8						2		2	64	223.0	223.0
MV5-E2295W/V2GN1	4	8					1			3	64	229.5	229.5
MV5-E2345W/V2GN1	4	8						1		3	64	234.5	234.5
MV5-E2405W/V2GN1	4	8							1	3	64	240.5	240.5
MV5-E2460W/V2GN1	4	8								4	64	246.0	246.0

Note:
Unit capacity is based on the following conditions:
Cooling: indoor temperature 27°C DB/ 19°C WB, outdoor temperature 35°C DB
Heating: indoor temperature 20°C DB/ 15°C WB, outdoor temperature 7°C DB
Refrigerant installation length 7.5 m with the height difference of 0 m.
The above combination is recommended by the manufacturer.
DB - dry bulb, WB - wet bulb
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner.
Choice of the appropriate solution is a matter for installer.

High performance for large buildings

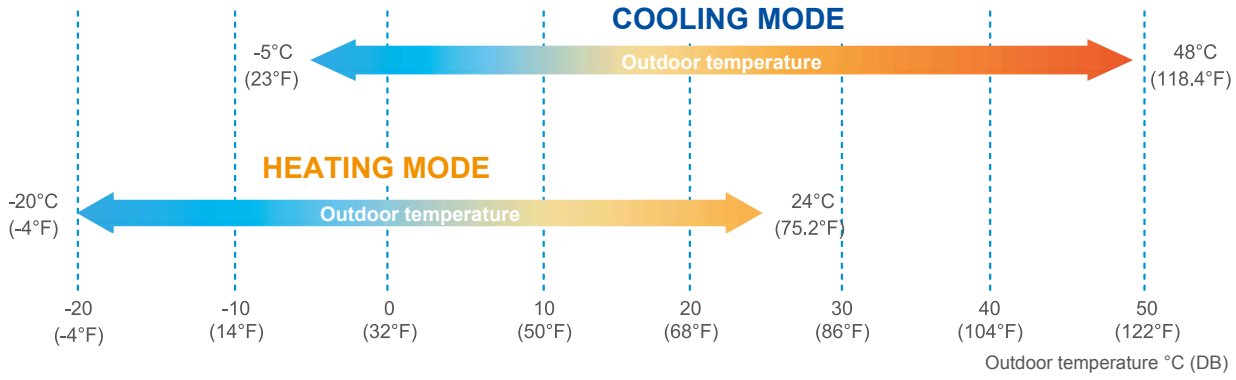
Capacity range: from 8 HP (25.2 kW) up to 88 HP (246 kW) in steps of 2 HP (5 kW). Maximum 64 indoor units with the total connectable capacity of 130% of the rated outdoor unit capacity in one system.

8, 10, 12 HP	14, 16, 18, 20, 22 HP	24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44 HP
		

46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66 HP	68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88 HP
	

Wide range of available outdoor temperatures

EVO system provides stable operation in extreme temperatures from -20˚C to +48˚C.

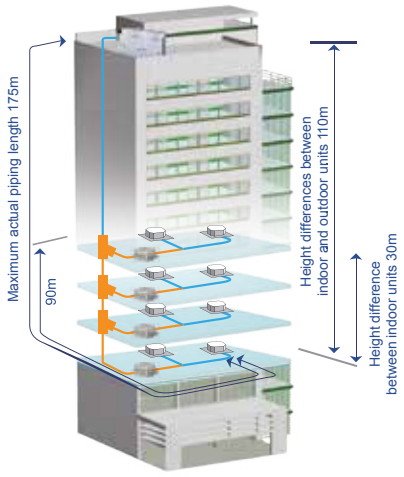


Long refrigerant piping

Total installation length up to 1000 m with the height difference of 110 m increases the range of system applications in large projects.

			Acceptable value (m)
Pipe length	Total piping length *(actual)		1000
	Maximum length (L)	Actual length	175
		Equivalent length	200
Height difference	Distance from the first system separation tube to the farthest indoor unit (equivalent length)		40/90**
	Between indoor and outdoor units	Outdoor unit above	90
		Outdoor unit below	110
	Between indoor units		30

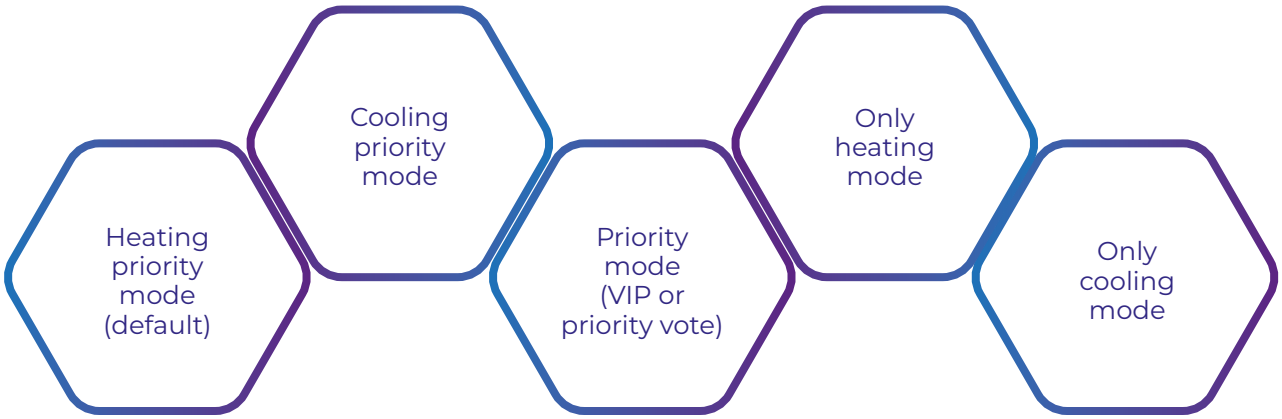
* Total piping length is equal to twice the piping length — plus piping length —
** If this section exceeds 40 m, it is important to meet special conditions, specified in the technical documentation in the part concerning installation.



first system separation tube

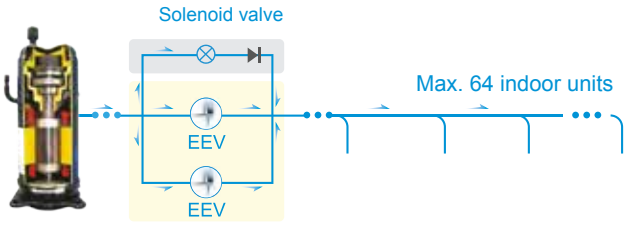
Many options of operation lock

Possibility to set different priorities and operation mode locks ensure greater convenience of use. Available options are: heating priority, cooling priority, heating only, cooling only as well as VIP and vote.
In the VIP or "vote" mode, the whole system's mode of operation is decided by the master VIP unit with address set to 63. If the system lacks an unit with 63 address, the operation mode is determined by the units with higher cooling or heating load.



Multiple solenoid valve control technology

Two electronic expansion valves (EEV) and solenoid bypass valve on the liquid line. Each of the EEV valves is controlled with 480 pulses in order to precisely adjust the flow (960 pulses in total). All the solenoid valves installed in the unit, ensure accurate temperature control, stable system operation and saving in order to reach comfortable conditions.



Refrigerant pressure control technology

The pressure sensor monitors high system pressure and sends this information dynamically to the main board. System adjusts speed of the DC fan motor, accordingly to the system load and high pressure, and this way ensures precise pressure control. It can also operate with the most convenient pressure mode in different operating conditions. This will increase its reliability and extend the expected lifetime.

Alternative operation cycle of outdoor units

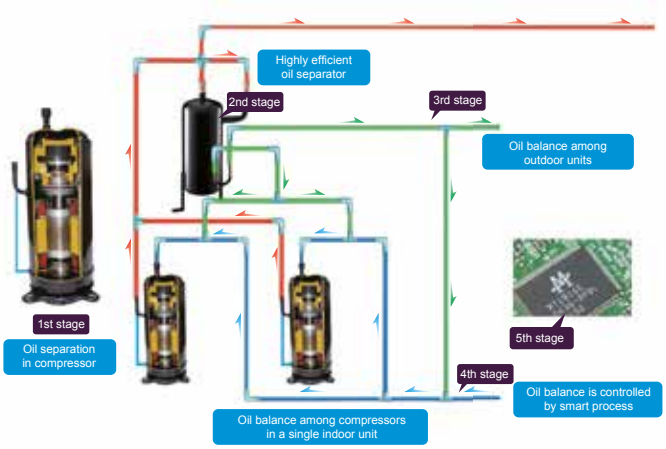
In a single and modular arrangement, each outdoor unit can operate as a master, switching periodically other units operation. This ensures uniform durability of the units and as a result significantly increases their service life.

Back up - maintaining operation

In case of master outdoor unit failure in a modular system, the slave type outdoor unit is set automatically as the Master unit - the remaining units can continue operation. This function can be enabled with a switch on the outdoor unit board.

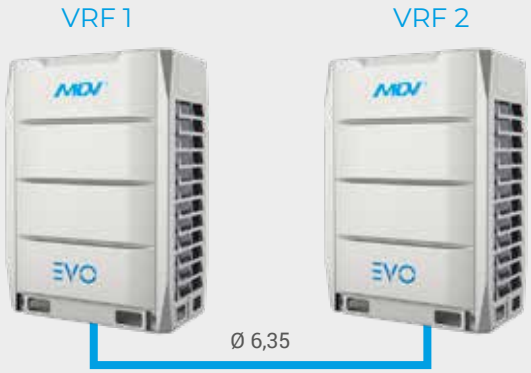
Precise oil control technology

Five-stage oil control technology ensures the compressor oil is maintained on a safe level, completely wiping out the problem of its deficiency.
1st step: oil separation inside the compressor;
2nd step: highly efficient oil separator (deoiling efficiency up to 99%);
3rd step: oil level balance technology among compressors
4th step: oil level balance technology among modules;
5th step: intelligent oil return programme.



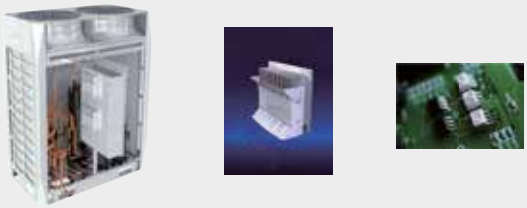
Gravity oil balancing in outdoor units

In the refrigerant system made of two and more outdoor units, MDV uses the oil balance, which equalizes oil under gravity and maintains it on a stable level in every unit, without the need to stop operation. In standard applications, during part load operation, the oil accumulates in the operation unit. Standard units, from time to time, stop the cooling or heating operation and continue in the oil recovery mode. MDV units, by adopting the oil balance, operate continuously.



High temperature protection

A specially designed air direction louver of the inverter control system heat sink, allows to obtain up to 8°C lower temperature of the electronic components, with regard to the solution without the louver, thus warranting reliability of operation.



Protective functions

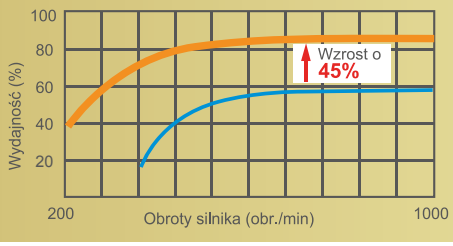
- Earthing
- Phase sequence protection
- Default phase protection
- Overvoltage protection
- Low voltage protection
- Current protection
- Fan motor thermal protection
- Compressor overload protection
- Compressor thermal protection
- Pressure protection

DC inverter compressor

EVO series relies solely on the DC inverter compressors.
Advantages:
- high efficiency thanks to the asymmetric design of the compressor scrolls,
- effectiveness thanks to the seal between discharge and suction sides,
- refrigerant oil balance.

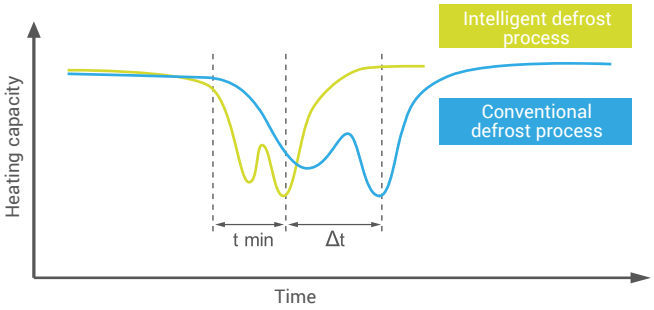
Fan with DC motor

Required compression is secured by the fan with DC inverter driven motor, that ensures up to 45% energy saving in comparison to the solution based on AC supplied motors.



Smart defrost technology

The programme allows to precisely specify the real system demand for defrost function. Smart technology reduces defrosting time to a minimum - limiting interruptions to the heating operation it maintains comfortable room conditions.



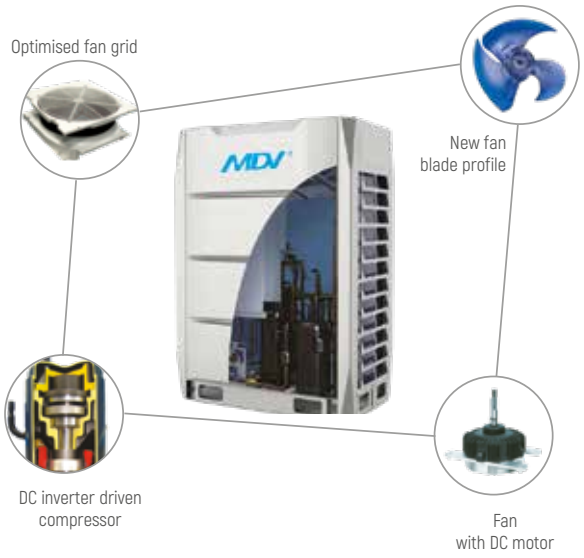
Rotatable electric box

Easy technical maintenance thanks to the new, rotational construction of the electric box - a perfect solution as the box can rotate up to an angle of 150°. It is very convenient during installation and technical inspections and also eliminates the time necessary to remove the box.

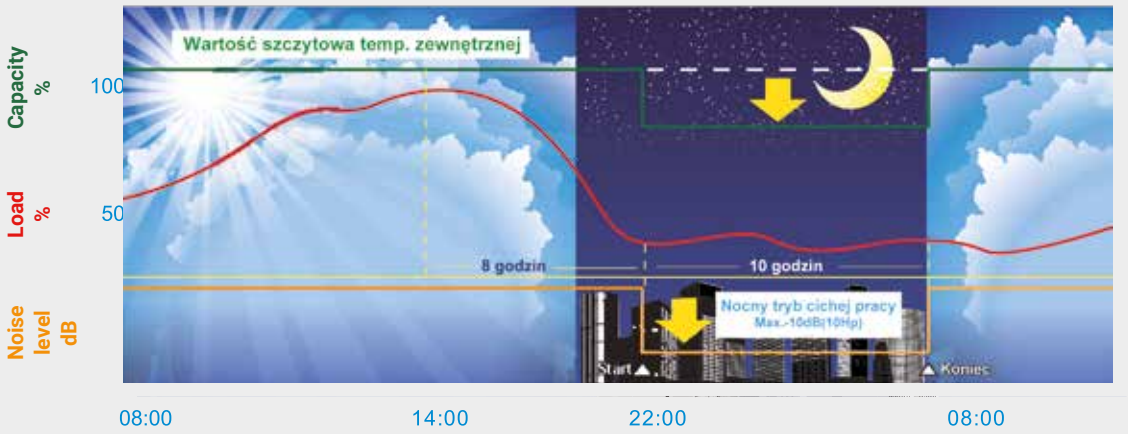
Advanced quiet operation technology

- improved air outlet grille and new shape of fan blades result in reduction of operation noise and vibrations;
- DC inverter driven compressor, low operation noise; new sound insulation of the compressor.
- DC inverter driven fan motor, low noise and night quiet operation mode;
- silent mode in MDV units can be easily activated and allows to set the system operation in 4 time regimes, after measuring the highest outdoor temperature:
  1. activation after 6 hours of the highest outdoor temperature - quiet operation lasts for 10 hours;
  2. activation after 9 hours of the highest outdoor temperature - quiet operation lasts for 10 hours;
  3. activation after 6 hours of the highest outdoor temperature - quiet operation lasts for 12 hours;
  4. activation after 8 hours of the highest outdoor temperature - quiet operation lasts for 8 hours.

In the auto quiet mode with the full capacity, the noise level can be reduced by 15 dB(A).



- Model 1->X: 6 hours, Y: 10 hours
- Model 3->X: 6 hours, Y: 12 hours
- Model 2->X: 8 hours, Y: 10 hours
- Model 4->X: 8 hours, Y: 8 hours



Notes:
This function can be enabled by configuring appropriate settings. The graph shows an exemplary temperature (load) curve.

Self-diagnosis mode and auto addressing function

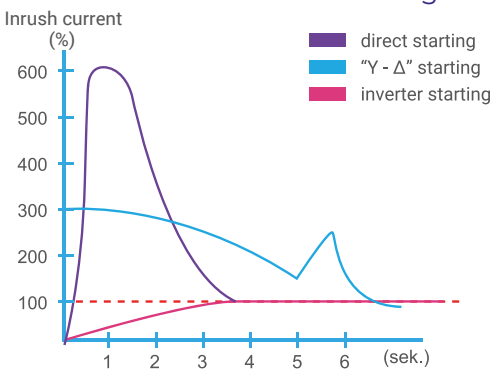
- air-conditioning system self-diagnosis available at the push
- of the button;
- outdoor unit automatically assigns addresses to indoor units, without the need to enter manual settings;
- with use of the wireless remote controller it is possible to acquire and modify any indoor unit address.

Automatic identification

Smart "soft start" technology

DC Inverter compressor with „soft" start function reduces the problem of strong inrush current surges. High-performance and quiet scroll type compressor, starts up faster what directly influences the air-conditioned rooms cooling down or heating up time.

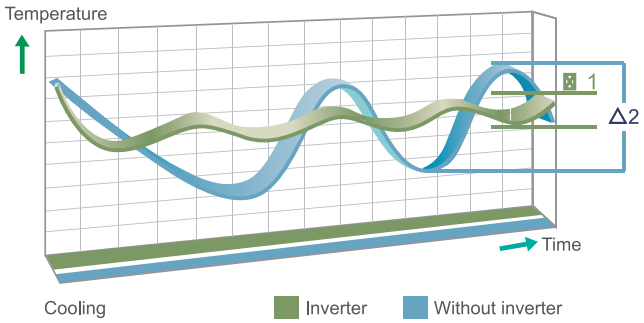
Comparison of inverter and conventional starting



Fast heating up and cooling down

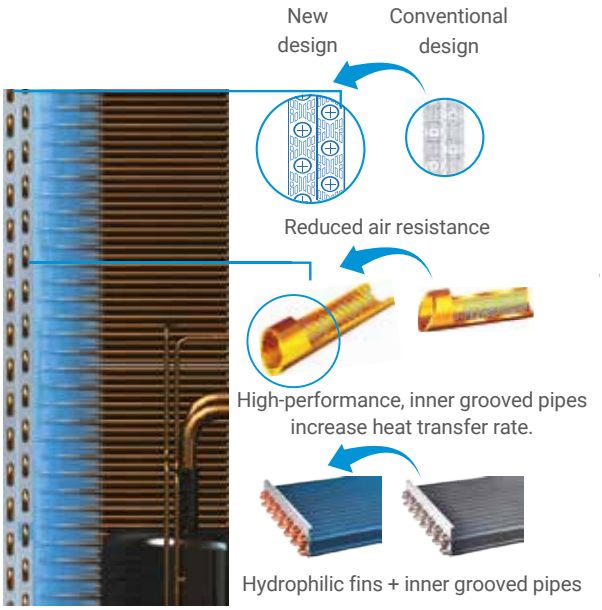
Benefiting from the use of DC inverter driven compressor, the system achieves full load in a very short time and thus limits cooling down or heating up time, to ensure instant comfort. Less temperature fluctuation will create a better living environment.

Room temperature fluctuations



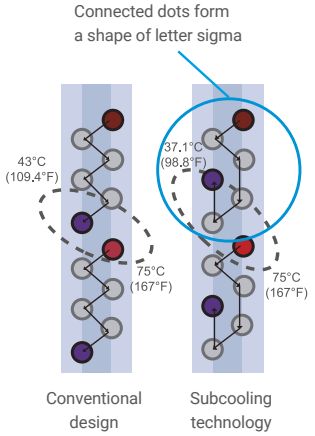
High-performance sigma type heat exchanger

Sigma technology is characterised by high heat exchange efficiency. New design of the exchangers and the fins with hydrophilic film ensure high heat exchange efficiency in each operation mode of the system. Enlarged heat-exchanging area through the grooved pipes on the refrigerant side, ensures high energy efficiencies.

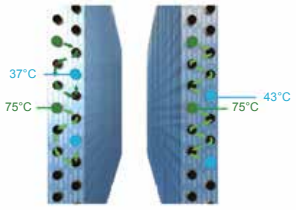


Example

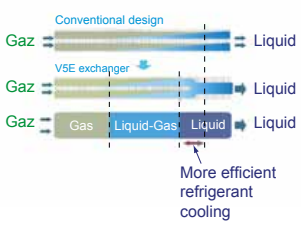
Exchanger with conventional refrigerant flow allows to cool down the fluid to 43°C at the outside temperature +35°C. Sigma technology cools refrigerant down to 37,1°C in the same conditions. Owing to this, the condenser fan consumes less electric energy, and the refrigerant is sub-cooled.



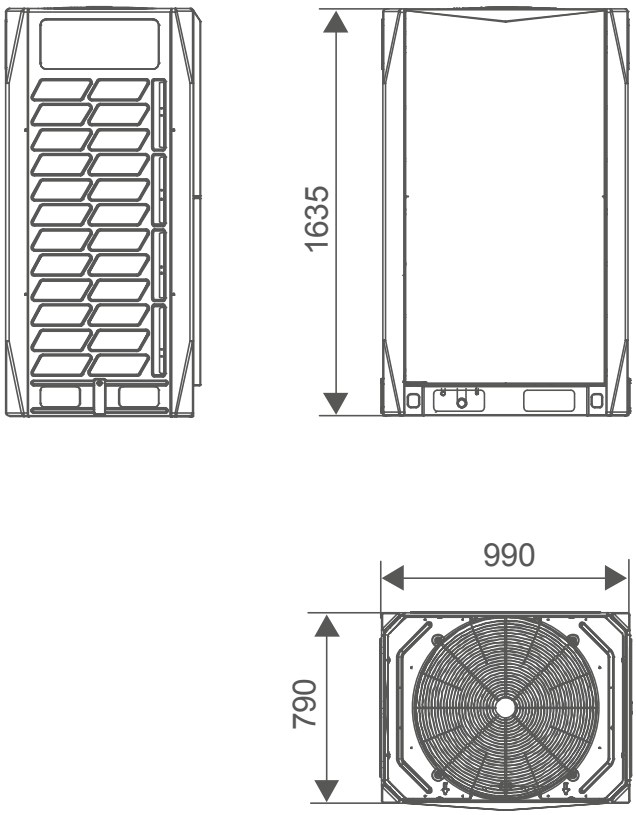
Higher heat exchange efficiency and savings on running costs are obtained by changing the placement of exchanger fins. Enlarged heat-exchanging area and reduced air-flow resistance, resulted in more efficient operation of the unit.



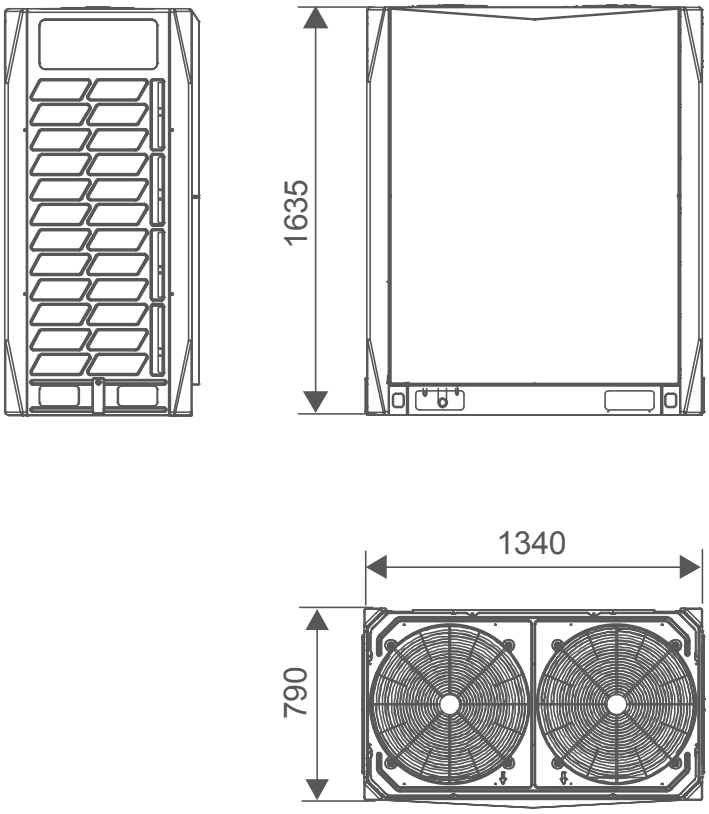
δ type exchanger



25.2, 28.0, 33.5 kW



40.0, 45.0, 50.0, 56.0 kW



25.2~33.5 kW

Technical specifications

Model			MV5-E252W/V2GN1	MV5-E280W/V2GN1	MV5-E335W/V2GN1
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	25.2	28.0	33.5
	Input power	kW	6.26	7.49	8.91
	EER	W/W	4.03	3.74	3.76
	SEER	W/W	7.29	7.10	6.36
Heating	Capacity	kW	27.0	31.5	37.5
	Input power	kW	5.3	6.89	8.91
	COP	W/W	5.09	4.57	4.21
	SCOP	W/W	3.97	3.97	4.18
Available indoor unit capacity range		%	50-150	50-150	50-150
Max. no. of indoor units		pcs	20	20	25
DC Inverter compressor	Type		Scroll	Scroll	Scroll
	Brand		Hitachi	Hitachi	Hitachi
	Charged amount		1	1	1
Fan motor	Type		DC	DC	DC
	Charged amount		1	1	1
Fan	Type		Axial	Axial	Axial
	Charged amount		1	1	1
	Static pressure	Pa	0~20 (default)	0~20 (default)	0~20 (default)
		Pa	20~60 (option)	20~60 (option)	20~60 (option)
Heat exchanger	External finish		Aluminum with hydrophilic coating	Aluminum with hydrophilic coating	Aluminum with hydrophilic coating
	Pipe type		Internally threaded	Internally threaded	Internally threaded
Air-flow		m^3/min	200	200	200
Sound pressure level		dB(A)	43~59	43~63	43~62
Dimensions and weight	Net dimensions (width x height x depth)	mm	990×1635×790	990×1635×790	990×1635×790
	Transport dimensions (width x height x depth)	mm	1055×1805×855	1055×1805×855	1055×1805×855
	Net / gross weight	kg	219/234	219/234	237/252
Refrigerant	Type		R410A	R410A	R410A
	Charged amount	kg	9	9	11
Expansion component			Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
Refrigerant installation	Liquid pipe	mm	Ø12.7	Ø12.7	Ø12.7
	Gas pipe	mm	Ø25.4	Ø25.4	Ø25.4
	Oil balance	mm	Ø6.35	Ø6.35	Ø6.35
	Total installation length	m	1000	1000	1000
	Max. distance indoor-outdoor	m	200	200	200
	Max. height difference, outdoor unit above	m	90	90	90
	Max. height difference, outdoor unit below	m	110	110	110
	Height difference between indoor units	m	30	30	30
Outdoor temperature	Cooling	°C	-5~48	-5~48	-5~48
	Heating	°C	-20~24	-20~24	-20~24

Note:

Unit capacity is based on the following conditions:
Cooling: indoor temperature 27°C DB/ 19°C WB, outdoor temperature 35°C DB
Heating: indoor temperature 20°C DB/ 15°C WB, outdoor temperature 7°C DB
Refrigerant installation length 7.5 m with the height difference of 0 m.
DB - dry bulb, WB - wet bulb
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1.3 m above the floor..
Main pipeline diameters are given for reference design conditions and basing on the assumption of 100% outdoor unit over-sizing.
Actual diameters to be determined on the basis of the data included in technical documentation or with use of the selection software.
The unit contains fluorinated greenhouse gases (R410A GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner.
Choice of the appropriate solution is a matter for installer.

40.0~50.0 kW

Technical specifications

Model			MV5-E400W/V2GN1	MV5-E450W/V2GN1	MV5-E500W/V2GN1
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	40.0	45.0	50.0
	Input power	kW	11.66	13.64	14.71
	EER	W/W	3.43	3.30	3.40
	SEER	W/W	6.56	6.15	6.60
Heating	Capacity	kW	40.0	45.0	50.0
	Input power	kW	9.83	11.69	12.50
	COP	W/W	4.07	3.85	4.00
	SCOP	W/W	4.06	4.06	3.98
Available indoor unit capacity range		%	50-150	50-150	50-150
Max. no. of indoor units		pcs	25	30	30
DC Inverter compressor	Type		Scroll	Scroll	Scroll
	Brand		Hitachi	Hitachi	Hitachi
	Charged amount		2	2	2
Fan motor	Type		DC	DC	DC
	Charged amount		2	2	2
Fan	Type		Axial	Axial	Axial
	Charged amount		2	2	2
	Static pressure	Pa	0~20 (default)	0~20 (default)	0~20 (default)
		Pa	20~60 (option)	20~60 (option)	20~60 (option)
Heat exchanger	External finish		Aluminum with hydrophilic coating	Aluminum with hydrophilic coating	Aluminum with hydrophilic coating
	Pipe type		Internally threaded	Internally threaded	Internally threaded
Air-flow		m^3/min	233	233	267
Sound pressure level		dB(A)	43~66	43~66	43~66
Dimensions and weight	Net dimensions (width x height x depth)	mm	1340×1635×790	1340×1635×790	1340×1635×790
	Transport dimensions (width x height x depth)	mm	1405×1805×855	1405×1805×855	1405×1805×855
	Net / gross weight	kg	297/315	297/315	305/323
Refrigerant	Type		R410A	R410A	R410A
	Charged amount	kg	13	13	13
Expansion component			Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
Refrigerant installation	Liquid pipe	mm	Ø15.9	Ø15.9	Ø15.9
	Gas pipe	mm	Ø31.8	Ø31.8	Ø31.8
	Oil balance	mm	Ø6.35	Ø6.35	Ø6.35
	Total installation length	m	1000	1000	1000
	Max. distance indoor-outdoor	m	200	200	200
	Max. height difference, outdoor unit above	m	90	90	90
	Max. height difference, outdoor unit below	m	110	110	110
	Height difference between indoor units	m	30	30	30
Outdoor temperature	Cooling	°C	-5~48	-5~48	-5~48
	Heating	°C	-20~24	-20~24	-20~24

Note:
Unit capacity is based on the following conditions:
Cooling: indoor temperature 27°C DB/ 19°C WB, outdoor temperature 35°C DB
Heating: indoor temperature 20°C DB/ 15°C WB, outdoor temperature 7°C DB
Refrigerant installation length 7.5 m with the height difference of 0 m.
DB - dry bulb, WB - wet bulb
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1.3 m above the floor..
Main pipeline diameters are given for reference design conditions and basing on the assumption of 100% outdoor unit over-sizing.
Actual diameters to be determined on the basis of the data included in technical documentation or with use of the selection software.
The unit contains fluorinated greenhouse gases (R410A GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner.
Choice of the appropriate solution is a matter for installer.

56.0~61.5 kW

Technical specifications

Model			MV5-E560W/V2GN1	MV5-E615W/V2GN1
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	56.0	61.5
	Input power	kW	16.47	19.84
	EER	W/W	3.40	3.10
	SEER	W/W	6.54	6.13
Heating	Capacity	kW	56.0	61.5
	Input power	kW	16.47	19.84
	COP	W/W	4.00	3.80
	SCOP	W/W	3.82	3.82
Available indoor unit capacity range		%	50-150	50-150
Max. no. of indoor units		pcs	35	40
DC Inverter compressor	Type		Scroll	Scroll
	Brand		Hitachi	Hitachi
	Charged amount		2	2
Fan motor	Type		DC	DC
	Charged amount		2	2
Fan	Type		Axial	Axial
	Charged amount		2	2
	Static pressure	Pa	0~20 (default)	0~20 (default)
		Pa	20~60 (option)	20~60 (option)
Heat exchanger	External finish		Aluminum with hydrophilic coating	Aluminum with hydrophilic coating
	Pipe type		Internally threaded	Internally threaded
Air-flow		m^3/min	267	267
Sound pressure level		dB(A)	43~66	43~66
Dimensions and weight	Net dimensions (width x height x depth)	mm	1340×1635×790	1340×1635×790
	Transport dimensions (width x height x depth)	mm	1405×1805×855	1405×1805×855
	Net / gross weight	kg	340/358	340/358
Refrigerant	Type		R410A	R410A
	Charged amount	kg	16	16
Expansion component			Electronic expansion valve	Electronic expansion valve
Refrigerant installation	Liquid pipe	mm	Ø15.9	Ø15.9
	Gas pipe	mm	Ø31.8	Ø31.8
	Oil balance	mm	Ø6.35	Ø6.35
	Total installation length	m	1000	1000
	Max. distance indoor-outdoor	m	200	200
	Max. height difference, outdoor unit above	m	90	90
	Max. height difference, outdoor unit below	m	110	110
	Height difference between indoor units	m	30	30
Outdoor temperature	Cooling	°C	-5~48	-5~48
	Heating	°C	-20~24	-20~24

Note:

Unit capacity is based on the following conditions:
Cooling: indoor temperature 27°C DB/ 19°C WB, outdoor temperature 35°C DB
Heating: indoor temperature 20°C DB/ 15°C WB, outdoor temperature 7°C DB
Refrigerant installation length 7.5 m with the height difference of 0 m.
DB - dry bulb, WB - wet bulb
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1.3 m above the floor..
Main pipeline diameters are given for reference design conditions and basing on the assumption of 100% outdoor unit over-sizing.
Actual diameters to be determined on the basis of the data included in technical documentation or with use of the selection software.
The unit contains fluorinated greenhouse gases (R410A GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner.
Choice of the appropriate solution is a matter for installer.

67.0~78.0 kW

Technical specifications

Model	Units set name		MV5-E670W/V2GN1	MV5-E730W/V2GN1	MV5-E780W/V2GN1
	Compound units		MV5-E335W/V2GN1	MV5-E280W/V2GN1	MV5-E280W/V2GN1
			MV5-E335W/V2GN1	MV5-E450W/V2GN1	MV5-E500W/V2GN1
	Branch pipe connecting compound units		FQZHW-02N1D	FQZHW-02N1D	FQZHW-02N1D
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	67.0	73.0	78.0
	Input power	kW	17.82	21.13	22.20
	EER	kW/kW	3.76	3.45	3.51
Heating	Capacity	kW	75.0	76.5	81.5
	Input power	kW	17.82	18.58	19.39
	COP	kW/kW	4.21	4.12	4.20
Available indoor unit capacity range		%	50-150	50-150	50-150
Max. no. of indoor units		pcs	40	45	50
DC Inverter compressor	Type		Scroll	Scroll	Scroll
	Brand		Hitachi	Hitachi	Hitachi
	Charged amount		2	3	3
Air-flow		m^3/min	400	433	467
Sound pressure level		dB(A)	65	68	68
Dimensions and weight	Net dimensions (width x height x depth)	mm	(990×1635×790)×2	(960×1635×790) + (1340×1635×790)	(960×1635×790) + (1340×1635×790)
	Transport dimensions (width x height x depth)	mm	(1055×1805×855)×2	(1055×1805×855) + (1405×1805×855)	(1055×1805×855) + (1405×1805×855)
	Net / gross weight	kg	237×2/252×2	219+297/234+315	219+305/234+323
Refrigerant	Type		R410A	R410A	R410A
	Charged amount	kg	22	22	22
Refrigerant installation	Liquid pipe	mm	Ø15.9	Ø19.1	Ø19.1
	Gas pipe	mm	Ø28.6	Ø31.8	Ø31.8
Outdoor temperature	Cooling	°C	-5~48	-5~48	-5~48
	Heating	°C	-20~24	-20~24	-20~24

Note:
Unit capacity is based on the following conditions:
Cooling: indoor temperature 27°C DB/ 19°C WB. outdoor temperature 35°C DB
Heating: indoor temperature 20°C DB/ 15°C WB. outdoor temperature 7°C DB
Refrigerant installation length 7.5 m with the height difference of 0 m.
DB - dry bulb. WB - wet bulb
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1.3 m above the floor.
Main pipeline diameters are given for reference design conditions and basing on the assumption of 100% outdoor unit over-sizing.
Actual diameters to be determined on the basis of the data included in technical documentation or with use of the selection software.
The unit contains fluorinated greenhouse gases (R410A GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner.
Choice of the appropriate solution is a matter for installer.

84.0~95.0 kW

Technical specifications

Model	Units set name		MV5-E840W/V2GN1	MV5-E895W/V2GN1	MV5-E950W/V2GN1
	Compound units		MV5-E280W/V2GN1	MV5-E280W/V2GN1	MV5-E335W/V2GN1
			MV5-E560W/V2GN1	MV5-E615W/V2GN1	MV5-E615W/V2GN1
	Branch pipe connecting compound units		FQZHW-02N1D	FQZHW-02N1D	FQZHW-02N1D
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	84.0	89.5	95.0
	Input power	kW	23,96	27,33	28,75
	EER	kW/kW	3.51	3.27	3.30
Heating	Capacity	kW	87.5	93.0	99.0
	Input power	kW	20,89	23,07	25,09
	COP	kW/kW	4.19	4.03	3.95
Available indoor unit capacity range		%	50-150	50-150	50-150
Max. no. of indoor units		pcs	55	55	60
DC Inverter compressor	Type		Scroll	Scroll	Scroll
	Brand		Hitachi	Hitachi	Hitachi
	Charged amount		3	3	3
Air-flow		m^3/min	467	467	467
Sound pressure level		dB(A)	68	68	67
Dimensions and weight	Net dimensions (width x height x depth)	mm	(990×1635×790) + (1340×1635×790)	(990×1635×790) + (1340×1635×790)	(990×1635×790) + (1340×1635×790)
	Transport dimensions (width x height x depth)	mm	(1055×1805×855) + (1405×1805×855)	(1055×1805×855) + (1405×1805×855)	(1055×1805×855) + (1405×1805×855)
	Net / gross weight	kg	219+340/234+358	219+340/234+358	237+340/252+358
Refrigerant	Type		R410A	R410A	R410A
	Charged amount	kg	25	25	27
Refrigerant installation	Liquid pipe	mm	Ø19.1	Ø19.1	Ø19.1
	Gas pipe	mm	Ø31.8	Ø31.8	Ø31.8
Outdoor temperature	Cooling	°C	-5~48	-5~48	-5~48
	Heating	°C	-20~24	-20~24	-20~24

Note:

Unit capacity is based on the following conditions:
Cooling: indoor temperature 27°C DB/ 19°C WB, outdoor temperature 35°C DB
Heating: indoor temperature 20°C DB/ 15°C WB, outdoor temperature 7°C DB
Refrigerant installation length 7.5 m with the height difference of 0 m.
DB - dry bulb, WB - wet bulb
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1.3 m above the floor..
Main pipeline diameters are given for reference design conditions and basing on the assumption of 100% outdoor unit over-sizing.
Actual diameters to be determined on the basis of the data included in technical documentation or with use of the selection software.
The unit contains fluorinated greenhouse gases (R410A GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner.
Choice of the appropriate solution is a matter for installer.

100.0~111.5 kW

Technical specifications

Model	Units set name		MV5-E1000W/V2GN1	MV5-E1065W/V2GN1	MV5-E1115W/V2GN1
	Compound units		MV5-E500W/V2GN1	MV5-E450W/V2GN1	MV5-E500W/V2GN1
			MV5-E500W/V2GN1	MV5-E615W/V2GN1	MV5-E615W/V2GN1
	Branch pipe connecting compound units		FQZHW-02N1D	FQZHW-02N1D	FQZHW-02N1D
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	100.0	106.5	111.5
	Input power	kW	29,42	33,48	34,55
	EER	kW/kW	3.40	3.18	3.23
Heating	Capacity	kW	100.0	106.5	111.5
	Input power	kW	25,00	27,87	28,68
	COP	kW/kW	4.00	3.82	3.89
Available indoor unit capacity range		%	50-150	50-150	50-150
Max. no. of indoor units		pcs	64	64	64
DC Inverter compressor	Type		Scroll	Scroll	Scroll
	Brand		Hitachi	Hitachi	Hitachi
	Charged amount		4	4	4
Air-flow		m^3/min	533	500	533
Sound pressure level		dB(A)	69	69	69
Dimensions and weight	Net dimensions (width x height x depth)	mm	(1340×1635×790)×2	(1340×1635×790)×2	(1340×1635×790)×2
	Transport dimensions (width x height x depth)	mm	(1405×1805×855)×2	(1405×1805×855)×2	(1405×1805×855)×2
	Net / gross weight	kg	305×2/323×2	297+340/315+358	305+340/323+358
Refrigerant	Type		R410A	R410A	R410A
	Charged amount	kg	26	29	29
Refrigerant installation	Liquid pipe	mm	Ø19.1	Ø19.1	Ø19.1
	Gas pipe	mm	Ø38.1	Ø38.1	Ø38.1
Outdoor temperature	Cooling	°C	-5~48	-5~48	-5~48
	Heating	°C	-20~24	-20~24	-20~24

Note:
Unit capacity is based on the following conditions:
Cooling: indoor temperature 27°C DB/ 19°C WB, outdoor temperature 35°C DB
Heating: indoor temperature 20°C DB/ 15°C WB, outdoor temperature 7°C DB
Refrigerant installation length 7.5 m with the height difference of 0 m.
DB - dry bulb, WB - wet bulb
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1.3 m above the floor..
Main pipeline diameters are given for reference design conditions and basing on the assumption of 100% outdoor unit over-sizing.
Actual diameters to be determined on the basis of the data included in technical documentation or with use of the selection software.
The unit contains fluorinated greenhouse gases (R410A GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner.
Choice of the appropriate solution is a matter for installer.

117.5~123.0 kW

Technical specifications

Model	Units set name		MV5-E1175W/V2GN1	MV5-E1230W/V2GN1
	Compound units		MV5-E560W/V2GN1	MV5-E615W/V2GN1
			MV5-E615W/V2GN1	MV5-E615W/V2GN1
	Branch pipe connecting compound units		FQZHW-02N1D	FQZHW-02N1D
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	117.5	123.0
	Input power	kW	36,31	39,68
	EER	kW/kW	3.24	3.10
Heating	Capacity	kW	117.5	123.0
	Input power	kW	30,18	32,36
	COP	kW/kW	3.89	3.80
Available indoor unit capacity range		%	50-150	50-150
Max. no. of indoor units		pcs	64	64
DC Inverter compressor	Type		Scroll	Scroll
	Brand		Hitachi	Hitachi
	Charged amount		4	4
Air-flow		m^3/min	533	533
Sound pressure level		dB(A)	69	69
Dimensions and weight	Net dimensions (width x height x depth)	mm	(1340×1635×790)×2	(1340×1635×790)×2
	Transport dimensions (width x height x depth)	mm	(1405×1805×855)×2	(1405×1805×855)×2
	Net / gross weight	kg	340×2/358×2	340×2/358×2
Refrigerant	Type		R410A	R410A
	Charged amount	kg	32	32
Refrigerant installation	Liquid pipe	mm	Ø19.1	Ø19.1
	Gas pipe	mm	Ø31.8	Ø31.8
Outdoor temperature	Cooling	°C	-5~48	-5~48
	Heating	°C	-20~24	-20~24

Note:

Unit capacity is based on the following conditions:
Cooling: indoor temperature 27°C DB/ 19°C WB, outdoor temperature 35°C DB
Heating: indoor temperature 20°C DB/ 15°C WB, outdoor temperature 7°C DB
Refrigerant installation length 7.5 m with the height difference of 0 m.
DB - dry bulb, WB - wet bulb
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1.3 m above the floor..
Main pipeline diameters are given for reference design conditions and basing on the assumption of 100% outdoor unit over-sizing.
Actual diameters to be determined on the basis of the data included in technical documentation or with use of the selection software.
The unit contains fluorinated greenhouse gases (R410A GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner.
Choice of the appropriate solution is a matter for installer.

128.5~139.5 kW

Technical specifications

Model	Units set name		MV5-E1285W/V2GN1	MV5-E1345W/V2GN1	MV5-E1395W/V2GN1
	Compound units		MV5-E335W/V2GN1	MV5-E280W/V2GN1	MV5-E280W/V2GN1
			MV5-E335W/V2GN1	MV5-E450W/V2GN1	MV5-E500W/V2GN1
			MV5-E615W/V2GN1	MV5-E615W/V2GN1	MV5-E615W/V2GN1
	Branch pipe connecting compound units		FQZHW-03N1D	FQZHW-03N1D	FQZHW-03N1D
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	128.5	138	139.5
	Input power	kW	37.66	40.97	42.04
	EER	kW/kW	3.41	3.28	3.32
Heating	Capacity	kW	136.5	134.5	143.0
	Input power	kW	34.00	34.76	35.57
	COP	kW/kW	4.01	3.97	4.02
Available indoor unit capacity range		%	50-150	50-150	50-150
Max. no. of indoor units		pcs	64	64	64
DC Inverter compressor	Type		Scroll	Scroll	Scroll
	Brand		Hitachi	Hitachi	Hitachi
	Charged amount		4	5	5
Air-flow		m^3/min	667	700	733
Sound pressure level		dB(A)	69	70	70
Dimensions and weight	Net dimensions (width x height x depth)	mm	(990×1635×790)×2 + (1340×1635×790)	(990×1635×790) + (1340×1635×790)×2	(990×1635×790) + (1340×1635×790)×2
	Transport dimensions (width x height x depth)	mm	(1055×1805×855)×2 + (1405×1805×855)	(1055×1805×855) + (1405×1805×855)×2	(1055×1805×855) + (1405×1805×855)×2
	Net / gross weight	kg	237×2+340/252×2+358	219+297+340/234+315+358	219+305+340/234+323+358
Refrigerant	Type		R410A	R410A	R410A
	Charged amount	kg	38	38	38
Refrigerant installation	Liquid pipe	mm	Ø19.1	Ø19.1	Ø19.1
	Gas pipe	mm	Ø38.1	Ø38.1	Ø38.1
Outdoor temperature	Cooling	°C	-5~48	-5~48	-5~48
	Heating	°C	-20~24	-20~24	-20~24

Note:
Unit capacity is based on the following conditions:
Cooling: indoor temperature 27°C DB/ 19°C WB, outdoor temperature 35°C DB
Heating: indoor temperature 20°C DB/ 15°C WB, outdoor temperature 7°C DB
Refrigerant installation length 7.5 m with the height difference of 0 m.
DB - dry bulb, WB - wet bulb
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1.3 m above the floor..
Main pipeline diameters are given for reference design conditions and basing on the assumption of 100% outdoor unit over-sizing.
Actual diameters to be determined on the basis of the data included in technical documentation or with use of the selection software.
The unit contains fluorinated greenhouse gases (R410A GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner.
Choice of the appropriate solution is a matter for installer.

145.5~156.5 kW

Technical specifications

Model	Units set name		MV5-E1455W/V2GN1	MV5-E1510W/V2GN1	MV5-E1565W/V2GN1
	Compound units		MV5-E280W/V2GN1	MV5-E280W/V2GN1	MV5-E335W/V2GN1
			MV5-E560W/V2GN1	MV5-E615W/V2GN1	MV5-E615W/V2GN1
			MV5-E615W/V2GN1	MV5-E615W/V2GN1	MV5-E615W/V2GN1
	Branch pipe connecting compound units		FQZHW-03N1D	FQZHW-03N1D	FQZHW-03N1D
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	145.5	151.0	156.5
	Input power	kW	43.80	47.17	48.59
	EER	kW/kW	3.32	3.20	3.22
Heating	Capacity	kW	149.0	154.5	160.5
	Input power	kW	37.07	39.25	41.27
	COP	kW/kW	4.02	3.94	3.89
Available indoor unit capacity range		%	50-150	50-150	50-150
Max. no. of indoor units		pcs	64	64	64
DC Inverter compressor	Type		Scroll	Scroll	Scroll
	Brand		Hitachi	Hitachi	Hitachi
	Charged amount		5	5	5
Air-flow		m^3/min	733	733	733
Sound pressure level		dB(A)	70	70	70
Dimensions and weight	Net dimensions (width x height x depth)	mm	(990×1635×790) + (1340×1635×790)×2	(990×1635×790) + (1340×1635×790)×2	(990×1635×790) + (1340×1635×790)×2
	Transport dimensions (width x height x depth)	mm	(1055×1805×855) + (1405×1805×855)×2	(1055×1805×855) + (1405×1805×855)×2	(1055×1805×855) + (1405×1805×855)×2
	Net / gross weight	kg	219+340×2/234+358×2	219+340×2/234+358×2	237+340×2/252+358×2
Refrigerant	Type		R410A	R410A	R410A
	Charged amount	kg	41	41	43
Refrigerant installation	Liquid pipe	mm	Ø22.2	Ø22.2	Ø22.2
	Gas pipe	mm	Ø41.3	Ø41.3	Ø41.3
Outdoor temperature	Cooling	°C	-5~48	-5~48	-5~48
	Heating	°C	-20~24	-20~24	-20~24

Note:

Unit capacity is based on the following conditions:
Cooling: indoor temperature 27°C DB/ 19°C WB, outdoor temperature 35°C DB
Heating: indoor temperature 20°C DB/ 15°C WB, outdoor temperature 7°C DB
Refrigerant installation length 7.5 m with the height difference of 0 m.
DB - dry bulb, WB - wet bulb
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1.3 m above the floor..
Main pipeline diameters are given for reference design conditions and basing on the assumption of 100% outdoor unit over-sizing.
Actual diameters to be determined on the basis of the data included in technical documentation or with use of the selection software.
The unit contains fluorinated greenhouse gases (R410A GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner.
Choice of the appropriate solution is a matter for installer.

161.5~173.0 kW

Technical specifications

Model	Units set name		MV5-E1615W/V2GN1	MV5-E1680W/V2GN1	MV5-E1730W/V2GN1
	Compound units		MV5-E500W/V2GN1	MV5-E450W/V2GN1	MV5-E500W/V2GN1
			MV5-E500W/V2GN1	MV5-E615W/V2GN1	MV5-E615W/V2GN1
			MV5-E615W/V2GN1	MV5-E615W/V2GN1	MV5-E615W/V2GN1
	Branch pipe connecting compound units		FQZHW-03N1D	FQZHW-03N1D	FQZHW-03N1D
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	161.5	168.0	173.0
	Input power	kW	49.26	53.32	54.39
	EER	kW/kW	3.28	3.15	3.18
Heating	Capacity	kW	161.5	168.0	173.0
	Input power	kW	41.18	44.05	44.86
	COP	kW/kW	3.92	3.81	3.86
Available indoor unit capacity range		%	50-150	50-150	50-150
Max. no. of indoor units		pcs	64	64	64
DC Inverter compressor	Type		Scroll	Scroll	Scroll
	Brand		Hitachi	Hitachi	Hitachi
	Charged amount		6	6	6
Air-flow		m^3/min	800	767	800
Sound pressure level		dB(A)	71	71	71
Dimensions and weight	Net dimensions (width x height x depth)	mm	(1340×1635×790)×3	(1340×1635×790)×3	(1340×1635×790)×3
	Transport dimensions (width x height x depth)	mm	(1405×1805×855)×3	(1405×1805×855)×3	(1405×1805×855)×3
	Net / gross weight	kg	340+305×2/358+323×2	297+340×2/315+358×2	305+340×2/323+358×2
Refrigerant	Type		R410A	R410A	R410A
	Charged amount	kg	42	45	45
Refrigerant installation	Liquid pipe	mm	Ø22.2	Ø22.2	Ø22.2
	Gas pipe	mm	Ø41.3	Ø41.3	Ø41.3
Outdoor temperature	Cooling	°C	-5~48	-5~48	-5~48
	Heating	°C	-20~24	-20~24	-20~24

Note:
Unit capacity is based on the following conditions:
Cooling: indoor temperature 27°C DB/ 19°C WB, outdoor temperature 35°C DB
Heating: indoor temperature 20°C DB/ 15°C WB, outdoor temperature 7°C DB
Refrigerant installation length 7.5 m with the height difference of 0 m.
DB - dry bulb, WB - wet bulb
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1.3 m above the floor..
Main pipeline diameters are given for reference design conditions and basing on the assumption of 100% outdoor unit over-sizing.
Actual diameters to be determined on the basis of the data included in technical documentation or with use of the selection software.
The unit contains fluorinated greenhouse gases (R410A GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner.
Choice of the appropriate solution is a matter for installer.

179.0~184.5 kW

Technical specifications

Model	Units set name		MV5-E1790W/V2GN1	MV5-E1845W/V2GN1
	Compound units		MV5-E560W/V2GN1	MV5-E615W/V2GN1
			MV5-E615W/V2GN1	MV5-E615W/V2GN1
			MV5-E615W/V2GN1	MV5-E615W/V2GN1
	Branch pipe connecting compound units		FQZHW-03N1D	FQZHW-03N1D
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	179.0	184.5
	Input power	kW	56.15	59.52
	EER	kW/kW	3.19	3.10
Heating	Capacity	kW	179.0	184.5
	Input power	kW	46.36	48.54
	COP	kW/kW	3.86	3.80
Available indoor unit capacity range		%	50-150	50-150
Max. no. of indoor units		pcs	64	64
DC Inverter compressor	Type		Scroll	Scroll
	Brand		Hitachi	Hitachi
	Charged amount		6	6
Air-flow		m^3/min	800	800
Sound pressure level		dB(A)	71	71
Dimensions and weight	Net dimensions (width x height x depth)	mm	(1340×1635×790)×3	(1340×1635×790)×3
	Transport dimensions (width x height x depth)	mm	(1405×1805×855)×3	(1405×1805×855)×3
	Net / gross weight	kg	340×3/358×3	340×3/358×3
Refrigerant	Type		R410A	R410A
	Charged amount	kg	48	48
Refrigerant installation	Liquid pipe	mm	Ø22.2	Ø22.2
	Gas pipe	mm	Ø41.3	Ø41.3
Outdoor temperature	Cooling	°C	-5~48	-5~48
	Heating	°C	-20~24	-20~24

Note:
Unit capacity is based on the following conditions:
Cooling: indoor temperature 27°C DB/ 19°C WB, outdoor temperature 35°C DB
Heating: indoor temperature 20°C DB/ 15°C WB, outdoor temperature 7°C DB
Refrigerant installation length 7.5 m with the height difference of 0 m.
DB - dry bulb, WB - wet bulb
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1.3 m above the floor..
Main pipeline diameters are given for reference design conditions and basing on the assumption of 100% outdoor unit over-sizing.
Actual diameters to be determined on the basis of the data included in technical documentation or with use of the selection software.
The unit contains fluorinated greenhouse gases (R410A GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

190.0~201.0 kW

Technical specifications

Model	Units set name		MV5-E1900W/V2GN1	MV5-E1960W/V2GN1	MV5-E2010W/V2GN1
	Compound units		MV5-E335W/V2GN1	MV5-E280W/V2GN1	MV5-E280W/V2GN1
			MV5-E335W/V2GN1	MV5-E450W/V2GN1	MV5-E500W/V2GN1
			MV5-E615W/V2GN1	MV5-E615W/V2GN1	MV5-E615W/V2GN1
			MV5-E615W/V2GN1	MV5-E615W/V2GN1	MV5-E615W/V2GN1
	Branch pipe connecting compound units		FQZHW-04N1D	FQZHW-04N1D	FQZHW-04N1D
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	190.0	196.0	201.0
	Input power	kW	57.50	60.81	61.88
	EER	kW/kW	3.30	3.22	3.25
Heating	Capacity	kW	198.0	199.5	204.5
	Input power	kW	50.18	50.94	51.75
	COP	kW/kW	3.95	3.92	3.95
Available indoor unit capacity range		%	50-150	50-150	50-150
Max. no. of indoor units		pcs	64	64	64
DC Inverter compressor	Type		Scroll	Scroll	Scroll
	Brand		Hitachi	Hitachi	Hitachi
	Charged amount		6	7	7
Air-flow		m^3/min	933	967	1000
Sound pressure level		dB(A)	70	71	71
Dimensions and weight	Net dimensions (width x height x depth)	mm	(990×1635×790)×2 + (1340×1635×790)×2	(990×1635×790) + (1340×1635×790)×3	(990×1635×790) + (1340×1635×790)×3
	Transport dimensions (width x height x depth)	mm	(1055×1805×855)×2 + (1405×1805×855)×2	(1055×1805×855) + (1405×1805×855)×3	(1055×1805×855) + (1405×1805×855)×3
	Net / gross weight	kg	237×2+340×2/252×2+358×2	219+297+340×2/234+315+358×2	219+305+340×2/234+323+358×2
Refrigerant	Type		R410A	R410A	R410A
	Charged amount	kg	54	54	54
Refrigerant installation	Liquid pipe	mm	Ø25.4	Ø25.4	Ø25.4
	Gas pipe	mm	Ø44.5	Ø44.5	Ø44.5
Outdoor temperature	Cooling	°C	-5~48	-5~48	-5~48
	Heating	°C	-20~24	-20~24	-20~24

Note:
Unit capacity is based on the following conditions:
Cooling: indoor temperature 27°C DB/ 19°C WB, outdoor temperature 35°C DB
Heating: indoor temperature 20°C DB/ 15°C WB, outdoor temperature 7°C DB
Refrigerant installation length 7.5 m with the height difference of 0 m.
DB - dry bulb, WB - wet bulb
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1.3 m above the floor..
Main pipeline diameters are given for reference design conditions and basing on the assumption of 100% outdoor unit over-sizing.
Actual diameters to be determined on the basis of the data included in technical documentation or with use of the selection software.
The unit contains fluorinated greenhouse gases (R410A GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

207.0~212.5 kW

Technical specifications

Model	Units set name		MV5-E2070W/V2GN1	MV5-E2125W/V2GN1
	Compound units		MV5-E280W/V2GN1	MV5-E280W/V2GN1
			MV5-E560W/V2GN1	MV5-E615W/V2GN1
			MV5-E615W/V2GN1	MV5-E615W/V2GN1
			MV5-E615W/V2GN1	MV5-E615W/V2GN1
	Branch pipe connecting compound units		FQZHW-04N1D	FQZHW-04N1D
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	207.0	212.5
	Input power	kW	63.64	67.01
	EER	kW/kW	3.25	3.17
Heating	Capacity	kW	210.5	216.5
	Input power	kW	53.25	55.43
	COP	kW/kW	3.95	3.91
Available indoor unit capacity range		%	50-150	50-150
Max. no. of indoor units		pcs	64	64
DC Inverter compressor	Type		Scroll	Scroll
	Brand		Hitachi	Hitachi
	Charged amount		7	7
Air-flow		m^3/min	1000	1000
Sound pressure level		dB(A)	71	71
Dimensions and weight	Net dimensions (width x height x depth)	mm	(990×1635×790) + (1340×1635×790)×3	(990×1635×790) + (1340×1635×790)×3
	Transport dimensions (width x height x depth)	mm	(1055×1805×855) + (1405×1805×855)×3	(1055×1805×855) + (1405×1805×855)×3
	Net / gross weight	kg	219+340×3/234+358×3	219+340×3/234+358×3
Refrigerant	Type		R410A	R410A
	Charged amount	kg	57	57
Refrigerant installation	Liquid pipe	mm	Ø25.4	Ø25.4
	Gas pipe	mm	Ø44.5	Ø44.5
Outdoor temperature	Cooling	°C	-5~48	-5~48
	Heating	°C	-20~24	-20~24

Note:

Unit capacity is based on the following conditions:
Cooling: indoor temperature 27°C DB/ 19°C WB, outdoor temperature 35°C DB
Heating: indoor temperature 20°C DB/ 15°C WB, outdoor temperature 7°C DB
Refrigerant installation length 7.5 m with the height difference of 0 m.
DB - dry bulb, WB - wet bulb
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1.3 m above the floor..
Main pipeline diameters are given for reference design conditions and basing on the assumption of 100% outdoor unit over-sizing.
Actual diameters to be determined on the basis of the data included in technical documentation or with use of the selection software.
The unit contains fluorinated greenhouse gases (R410A GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

218.0~223.0 kW

Technical specifications

Model	Units set name		MV5-E2180W/V2GN1	MV5-E2230W/V2GN1
	Compound units		MV5-E335W/V2GN1	MV5-E500W/V2GN1
			MV5-E615W/V2GN1	MV5-E500W/V2GN1
			MV5-E615W/V2GN1	MV5-E615W/V2GN1
			MV5-E615W/V2GN1	MV5-E615W/V2GN1
	Branch pipe connecting compound units		FQZHW-04N1D	FQZHW-04N1D
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	218.0	223.0
	Input power	kW	68.43	69.10
	EER	kW/kW	3.19	3.23
Heating	Capacity	kW	222.0	223.0
	Input power	kW	57.45	57.36
	COP	kW/kW	3.86	3.89
Available indoor unit capacity range		%	50-150	50-150
Max. no. of indoor units		pcs	64	64
DC Inverter compressor	Type		Scroll	Scroll
	Brand		Hitachi	Hitachi
	Charged amount		7	8
Air-flow		m^3/min	1000	1067
Sound pressure level		dB(A)	71	72
Dimensions and weight	Net dimensions (width x height x depth)	mm	(990×1635×790) + (1340×1635×790)×3	(1340×1635×790)×4
	Transport dimensions (width x height x depth)	mm	(1055×1805×855) + (1405×1805×855)×3	(1405×1805×855)×4
	Net / gross weight	kg	237+340×3/252+358×3	305×2+340×2/323×2+358×2
Refrigerant	Type		R410A	R410A
	Charged amount	kg	59	58
Refrigerant installation	Liquid pipe	mm	Ø25.4	Ø25.4
	Gas pipe	mm	Ø44.5	Ø44.5
Outdoor temperature	Cooling	°C	-5~48	-5~48
	Heating	°C	-20~24	-20~24

Note:
Unit capacity is based on the following conditions:
Cooling: indoor temperature 27°C DB/ 19°C WB, outdoor temperature 35°C DB
Heating: indoor temperature 20°C DB/ 15°C WB, outdoor temperature 7°C DB
Refrigerant installation length 7.5 m with the height difference of 0 m.
DB - dry bulb, WB - wet bulb
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1.3 m above the floor..
Main pipeline diameters are given for reference design conditions and basing on the assumption of 100% outdoor unit over-sizing.
Actual diameters to be determined on the basis of the data included in technical documentation or with use of the selection software.
The unit contains fluorinated greenhouse gases (R410A GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

229.5~234.5 kW

Technical specifications

Model	Units set name		MV5-E2295W/V2GN1	MV5-E2345W/V2GN1
	Compound units		MV5-E450W/V2GN1	MV5-E500W/V2GN1
			MV5-E615W/V2GN1	MV5-E615W/V2GN1
			MV5-E615W/V2GN1	MV5-E615W/V2GN1
			MV5-E615W/V2GN1	MV5-E615W/V2GN1
	Branch pipe connecting compound units		FQZHW-04N1D	FQZHW-04N1D
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	229.5	234.5
	Input power	kW	73.16	74.23
	EER	kW/kW	3.14	3.16
Heating	Capacity	kW	229.5	234.5
	Input power	kW	60.23	61.04
	COP	kW/kW	3.81	3.84
Available indoor unit capacity range		%	50-150	50-150
Max. no. of indoor units		pcs	64	64
DC Inverter compressor	Type		Scroll	Scroll
	Brand		Hitachi	Hitachi
	Charged amount		8	8
Air-flow		m^3/min	1033	1067
Sound pressure level		dB(A)	72	72
Dimensions and weight	Net dimensions (width x height x depth)	mm	(1340×1635×790)×4	(1340×1635×790)×4
	Transport dimensions (width x height x depth)	mm	(1405×1805×855)×4	(1405×1805×855)×4
	Net / gross weight	kg	297+340×3/315+358×3	305+340×3/323+358×3
Refrigerant	Type		R410A	R410A
	Charged amount	kg	61	61
Refrigerant installation	Liquid pipe	mm	Ø25.4	Ø25.4
	Gas pipe	mm	Ø44.5	Ø44.5
Outdoor temperature	Cooling	°C	-5~48	-5~48
	Heating	°C	-20~24	-20~24

Note:

Unit capacity is based on the following conditions:
Cooling: indoor temperature 27°C DB/ 19°C WB, outdoor temperature 35°C DB
Heating: indoor temperature 20°C DB/ 15°C WB, outdoor temperature 7°C DB
Refrigerant installation length 7.5 m with the height difference of 0 m.
DB - dry bulb, WB - wet bulb
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1.3 m above the floor..
Main pipeline diameters are given for reference design conditions and basing on the assumption of 100% outdoor unit over-sizing.
Actual diameters to be determined on the basis of the data included in technical documentation or with use of the selection software.
The unit contains fluorinated greenhouse gases (R410A GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

240.5~246.0 kW

Technical specifications

Model	Units set name		MV5-E2405W/V2GN1	MV5-E2460W/V2GN1
	Compound units		MV5-E560W/V2GN1	MV5-E615W/V2GN1
			MV5-E615W/V2GN1	MV5-E615W/V2GN1
			MV5-E615W/V2GN1	MV5-E615W/V2GN1
			MV5-E615W/V2GN1	MV5-E615W/V2GN1
	Branch pipe connecting compound units		FQZHW-04N1D	FQZHW-04N1D
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	240.5	246.0
	Input power	kW	75.99	79.36
	EER	kW/kW	3.16	3.10
Heating	Capacity	kW	240.5	246.0
	Input power	kW	62.54	64.72
	COP	kW/kW	3.85	3.80
Available indoor unit capacity range		%	50-150	50-150
Max. no. of indoor units		pcs	64	64
DC Inverter compressor	Type		Scroll	Scroll
	Brand		Hitachi	Hitachi
	Charged amount		8	8
Air-flow		m^3/min	1067	1067
Sound pressure level		dB(A)	72	72
Dimensions and weight	Net dimensions (width x height x depth)	mm	(1340×1635×790)×4	(1340×1635×790)×4
	Transport dimensions (width x height x depth)	mm	(1405×1805×855)×4	(1405×1805×855)×4
	Net / gross weight	kg	340×4/358×4	340×4/358×4
Refrigerant	Type		R410A	R410A
	Charged amount	kg	64	64
Refrigerant installation	Liquid pipe	mm	Ø25.4	Ø25.4
	Gas pipe	mm	Ø44.5	Ø44.5
Outdoor temperature	Cooling	°C	-5~48	-5~48
	Heating	°C	-20~24	-20~24

Note:
Unit capacity is based on the following conditions:
Cooling: indoor temperature 27°C DB/ 19°C WB, outdoor temperature 35°C DB
Heating: indoor temperature 20°C DB/ 15°C WB, outdoor temperature 7°C DB
Refrigerant installation length 7.5 m with the height difference of 0 m.
DB - dry bulb, WB - wet bulb
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1.3 m above the floor..
Main pipeline diameters are given for reference design conditions and basing on the assumption of 100% outdoor unit over-sizing.
Actual diameters to be determined on the basis of the data included in technical documentation or with use of the selection software.
The unit contains fluorinated greenhouse gases (R410A GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

ONE series

ONE series is a system designed for single-family houses, offices and other small commercial facilities. Depending on the outdoor unit size, it is possible to connect from 6 to 15 indoor units to one circuit. Individual control system ensures independent setting of required air parameters in each room.

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

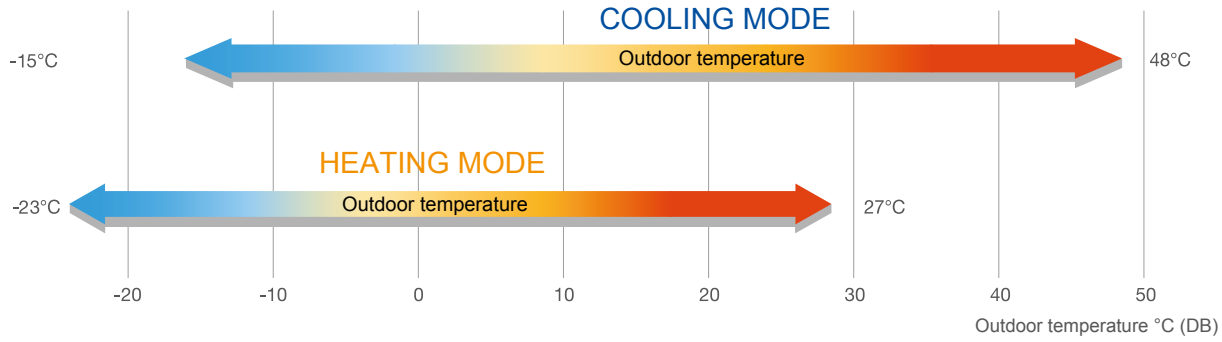
Variety of available outdoor units

Outdoor unit capacity ranges from 7.2 to 90.0 kW. Perfect for application in residences and single-family houses, small offices and other public facilities.

7.2-9.0 kW	12,3-45.0 kW	50.0-90.0 kW
		

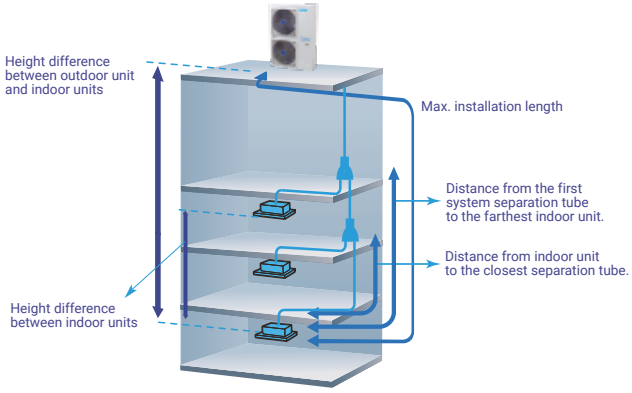
Wide range of available outdoor temperatures

ONE series system guarantees correct operation in the outdoor temperature range of -23°C do +48°C.



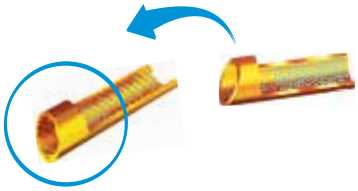
Long refrigerant piping - design flexibility

			Acceptable value (m)				
			7.2 - 9.0 kW	18 kW	22.4 - 26.0 kW	40.0 - 45.0 kW	50.0 - 90.0 kW
Piping length	Total piping length (actual)		100	100	120	250	1000
	Maximum length (L)	Actual length	50	60	60	100	175
		Equivalent length	50	70	70	120	200
Height difference	Distance from the first system separation tube to the farthest indoor unit		20	20	20	40	40
	Distance from indoor unit to the closest separation tube		15	15	15	15	90
	Between indoor and outdoor units	Outdoor unit above	30	30	30	30	70
		Outdoor unit below	20	20	20	20	110
	Between indoor units		8	8	8	8	30

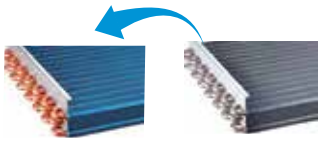


High-performance heat exchanger

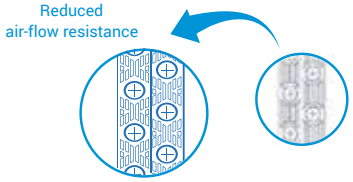
Inside the specially designed heat exchanger there are used fins with greater heat exchange surface and reduced air-flow resistance. External surface of the fins is covered with hydrophilic coating. The copper pipes internal surfaces have a special groove embossed, which improves heat transfer on the refrigerant side. These solutions, together with the innovative method of exchanger pipes connection, ensure the highest heat exchange efficiency.



High performance, inner grooved pipes of the heat exchanger with large heat exchange surface



Hydrophilic fins + inner grooved copper pipes



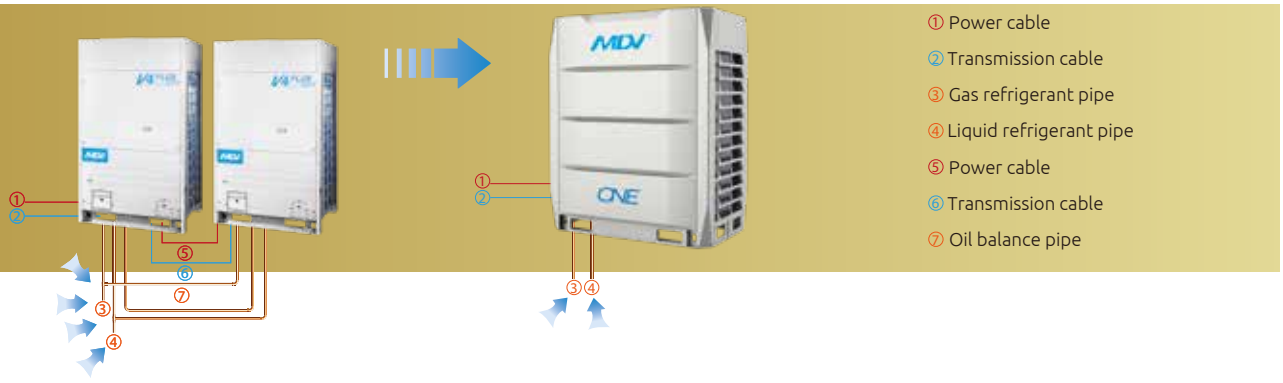
New design Previous design

Lower risk of refrigerant leakage

In comparison to standard units combined of several modules, the units of the Individual type do not require creating any complex electric and cooling connections at the installation site. The power supply and communication cables, the oil balance pipe and distributors on cooling pipes are eliminated. A larger number of soldered connections in combined system increases the risk of moisture passage into the inside of pipelines. Thanks to the reduced number of connection in the ONE series system, this risk is limited to the minimum.

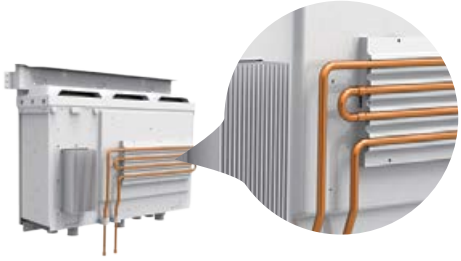
Combination of standard units

ONE series outdoor unit



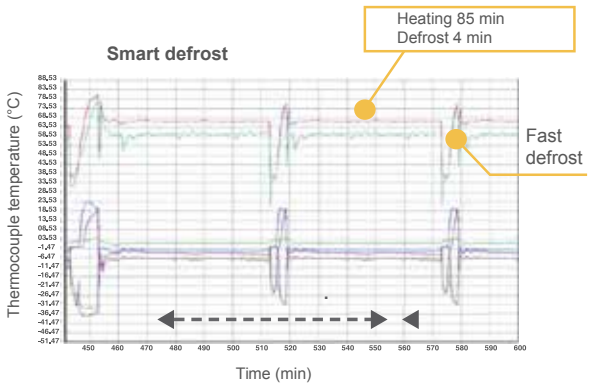
Cooling down the electronics

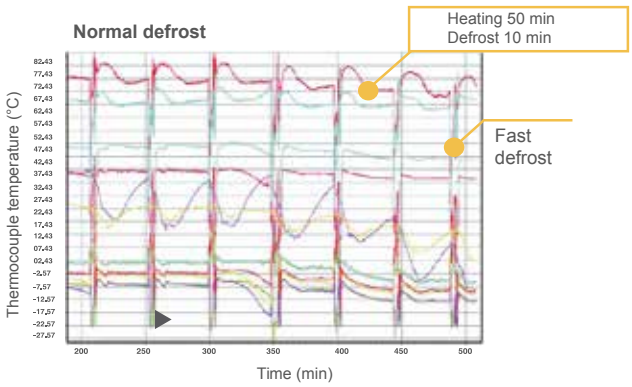
The electric control box in VRF ONE series systems is cooled with refrigerant. This reduces the average temperature of electrical components by about 8°C, ensuring stable and safe operation of the control system.



Defrosting technology

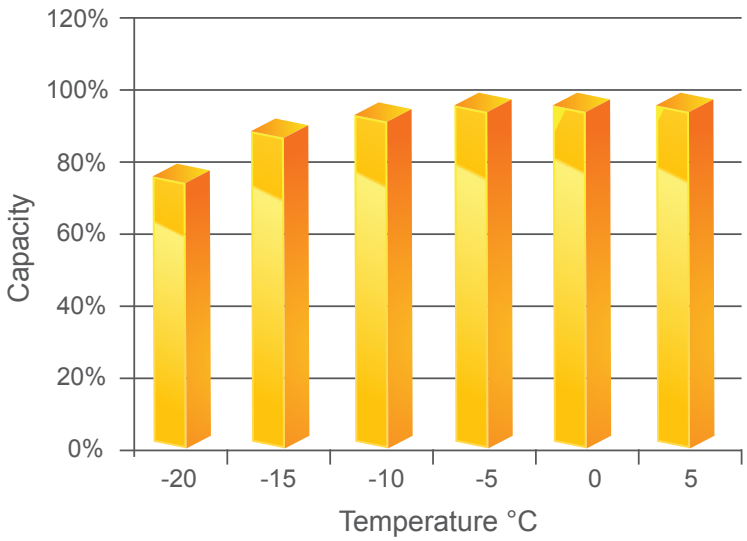
A specially designed defrosting algorithm provides the removal of ice from outdoor unit heat exchanger in optimal time. Because the defrosting time depends on actual, outside conditions, the heating intervals are reduced to the minimum necessary, what has a significant influence on keeping thermal comfort in the heated rooms.





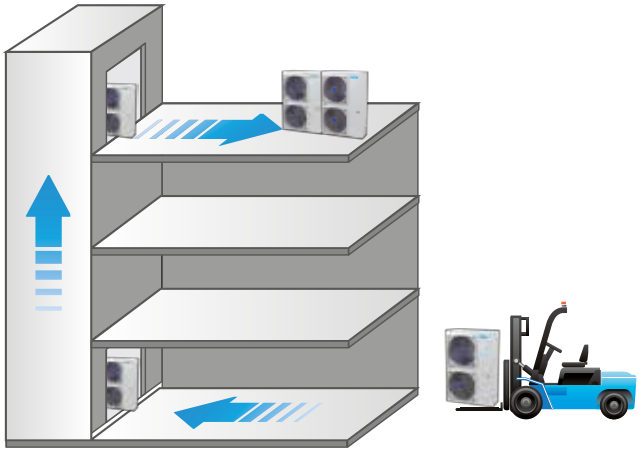
Higher heating capacity

Heating capacity obtains 100% of nominal capacity at outdoor temperature of -5°C and 90% at -15°C.



Compact design - effective use of space

Compact size and limited weight facilitate transport and installation, reduce ceiling and structure loads. Now, only with help of a forklift and an elevator, the units can be placed on the roof of a high building.



Installation space saving - building aesthetic is maintained

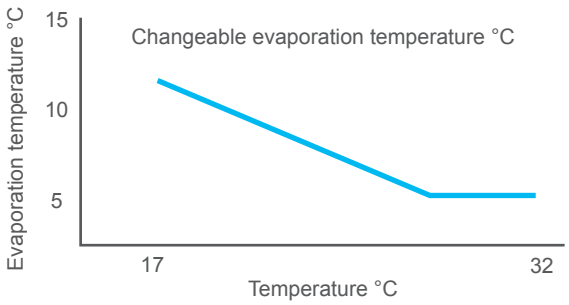
Outdoor unit compact casing leads to considerable savings of the installation space. Small dimensions and low weight makes it possible to install the unit even on the wall brackets. In comparison to traditional split type air-conditioners, the ONE series system replaces from several to dozens of smaller units, without affecting current aesthetic of the building.

Easy maintenance

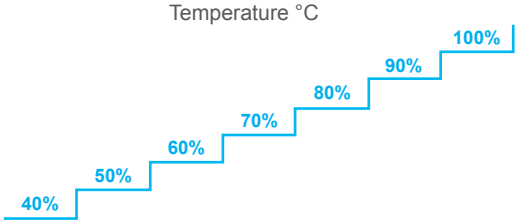
Forced cooling switch enables starting the outdoor unit in cooling mode in any conditions, which facilitate refrigerant charge in case of such need. Self-diagnosis function detects system malfunctions and displays adequate error codes, which makes it considerably easier to perform troubleshooting.

Energy Management System (EMS)

VARIABLE REFRIGERANT TEMPERATURE FOR BALANCED COMFORT AND PERFORMANCE
Evaporation temperature (in cooling mode) and condensing temperature (in heating mode) are adjusted automatically, depending on the indoor and outdoor temperature, in order to increase comfort and energy efficiency.



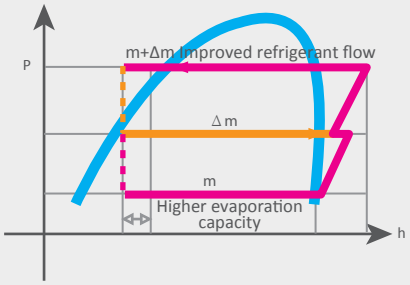
POWER LIMIT DURING ENERGY SUPPLY DISRUPTIONS
Through the integration with the EMS system, in installation with temporary disruptions in energy supply, V6 system can be set at 40-100% capacity.



Improved compressor with vapour injection (EVI)

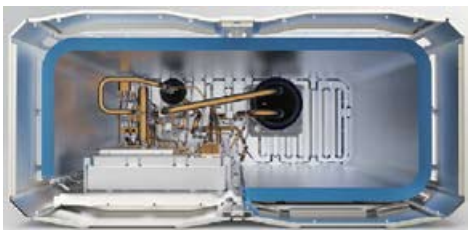
Adoption of the DC inverter compressors with vapour injection, ensures stable operation of the ONE series units in the heating mode at temperature reaching -23 °C, significantly increasing heating capacity.

EVI compressor



G type, high-performance heat exchanger

Units with capacity from 67.0 to 90.0 kW are equipped with high-performance 3-row G type heat exchanger with the exchange area 1.5 times bigger than in 61.5 kW unit. Additionally, 67.0 90.0 kW units have a large fan with up to 750 mm diameter.



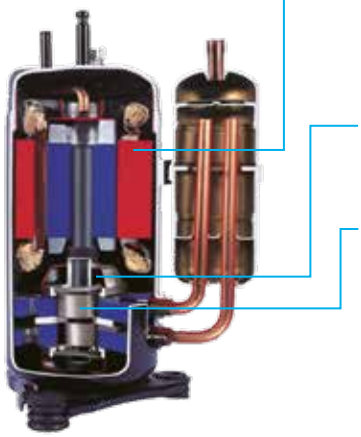
3-row G-type exchanger

Big fan

DC Inverter - high performance compressor

Application of new inverter technology and DC fan motor allow to achieve high capacity and energy saving, significantly reducing energy consumption during continuous operation, while ensuring stable temperature conditions in the room.

Twin rotary DC compressor



High performance DC motor
- new motor core
- high density neodymium magnet
- concentrated stator
- wide range of operational frequency

Better balance and very low vibrations
- twin eccentric discs
- two balance weights

More stable moving parts
- optimal shafts and vanes fitting
- optimisation of compressor drive technology
- extremely durable bearings
- compact construction

Quiet fan with DC motor

Special guard design and properly profiled fan blades significantly reduces noise while keeping large air-flow.

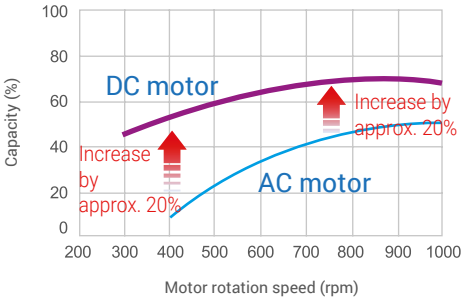
DC Panasonic fan motor
- fan speed wide adjustment range
- lower noise
- lower energy consumption

New fan guard

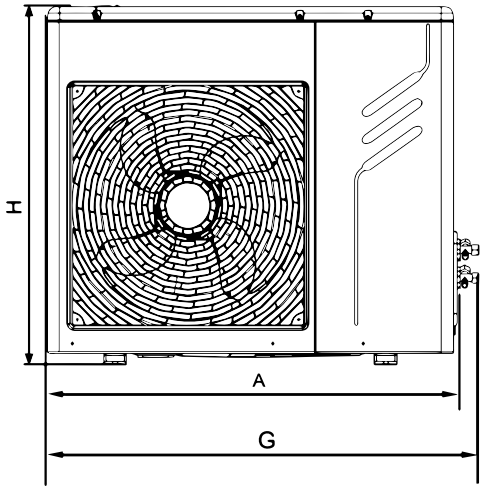
New, bigger propeller

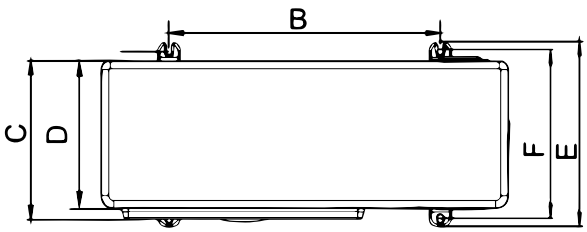
DC motor efficiency

(comparison with conventional alternating current motor)

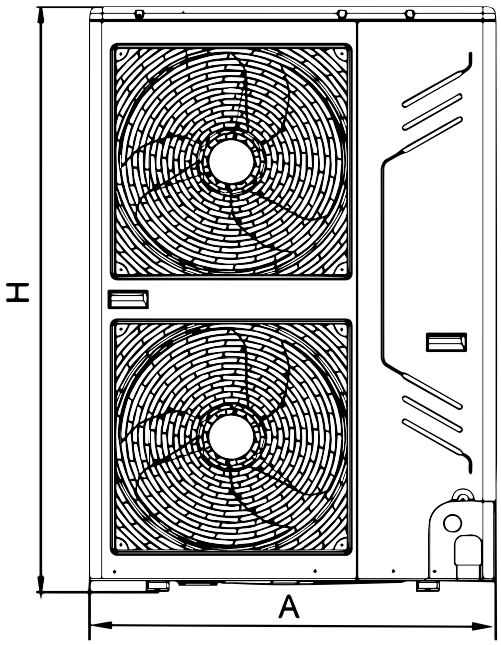


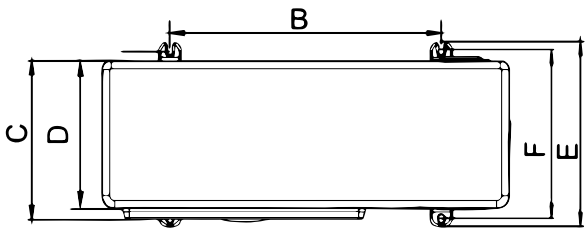
7.2, 9.0 kW





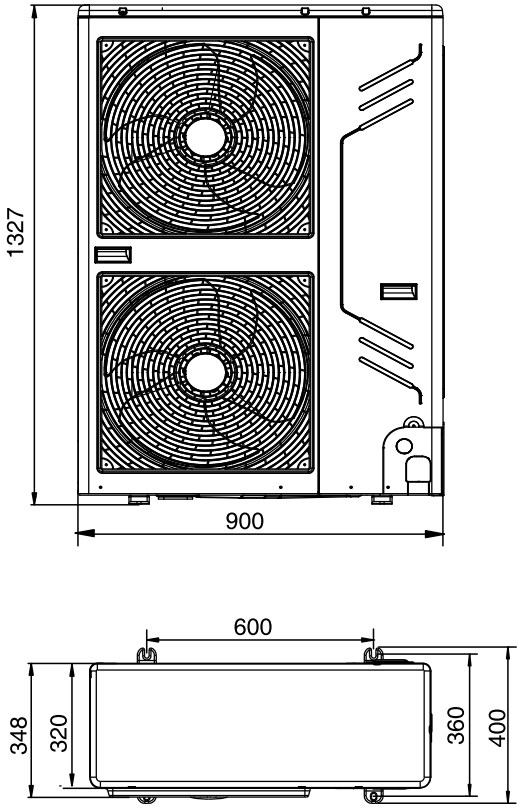
12.3, 14.0, 15.5 kW



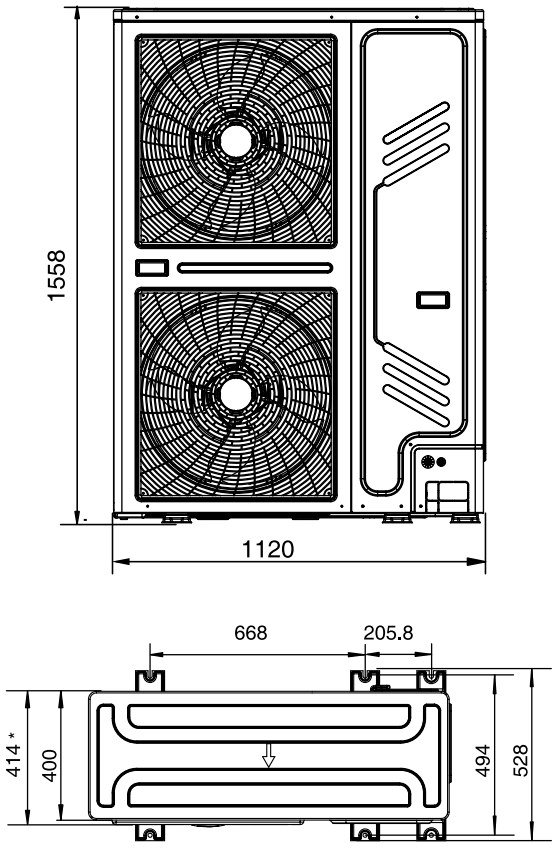


Model	A	B	C	D	E	F	G	H
7.2, 9.0 kW	990	624	354	336	396	366	1075	966
12.3, 14.0, 15.5 kW	900	600	348	320	400	360	-	1327

17.5 kW

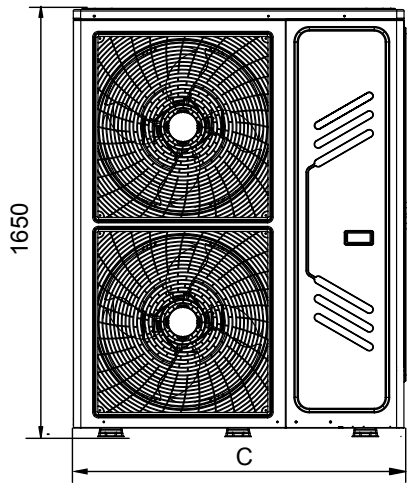


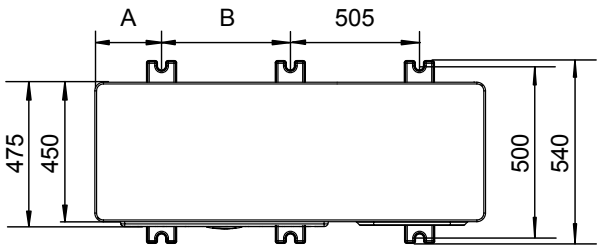
20.0-33.5 kW



* for 28.0 and 33.5 kW models this size is 440 mm.

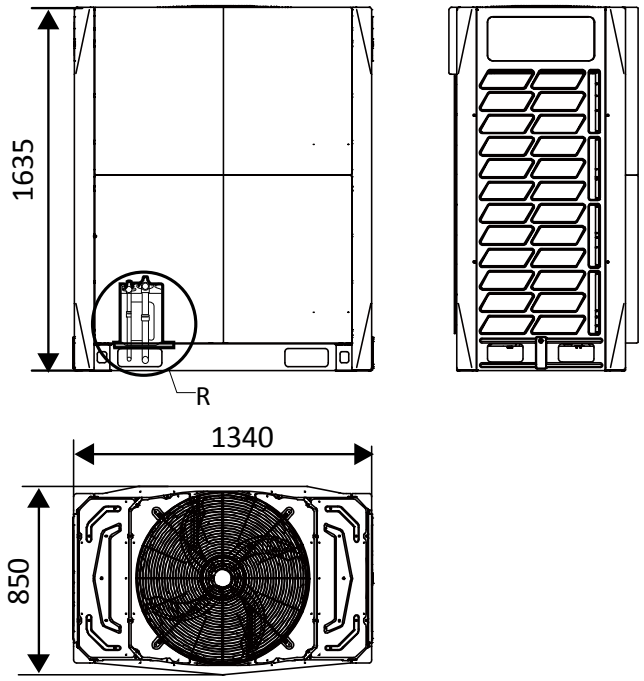
40.0-49.0 kW



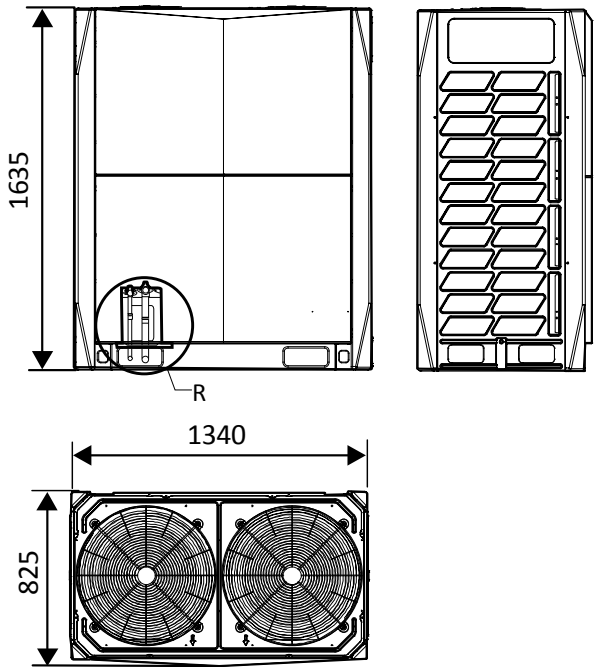


Model	A	B	C
40kW	175	505	1360
45 i 49kW	225	555	1460

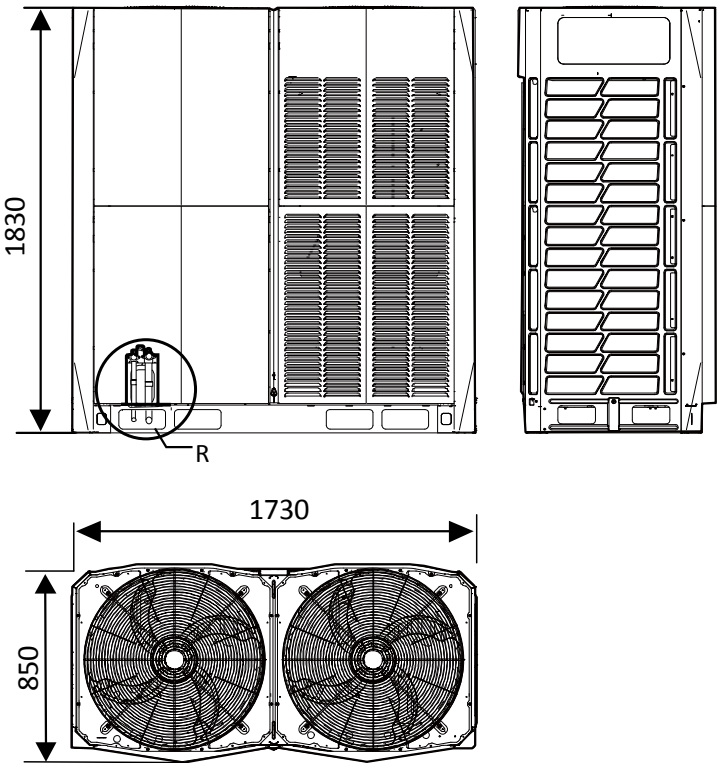
50 kW



56.0, 61.5 kW



67.0, 73.0, 78.5, 85.0, 90.0 kW



7.2~15.5 kW

Technical specifications

Model			MDV-V80W/DN1	MDV-V105W/DN1	MDV-V120W/DN1	MDV-V120W/DRN1	MDV-V140W/DN1	MDV-V140W/DRN1	MDV-V160W/DN1(B)	MDV-V160W/DRN1
Power supply		V/phase/Hz	220-240/1/50			380-415/3/50	220-240/1/50	380-415/3/50	220-240/1/50	380-415/3/50
Cooling	Capacity	kW	7.2	9.0	12.3	12.3	14.0	14.0	15.5	15.5
	Input power	kW	1.85	2.54	3.25	3.25	3.85	3.85	4.39	4.52
	EER	kW/kW	3.89	3.54	3.78	3.78	3.64	3.64	3.53	3.43
	SEER	kW/kW	5.85	5.70	5.40	5.40	5.30	5.30	5.50	5.50
Heating	Capacity	kW	7.2	9.0	13.2	13.2	15.4	15.4	17.0	17.0
	Input power	kW	1.79	2.43	3.47	3.47	4.05	4.05	4.58	4.77
	COP	kW/kW	4.02	3.70	3.80	3.80	3.80	3.80	3.71	3.56
	SCOP	kW/kW	3.80	3.85	3.85	3.85	3.95	3.95	3.80	3.80
Available indoor unit capacity range		%	45-130	45-130	45-130	45-130	45-130	45-130	45-130	45-130
Max. no. of indoor units			4	5	6	6	6	6	7	7
DC Inverter compressor	Type		Rotary							
	Brand		Mitsubishi Electric							
Fan motor	Type		DC							
Fan	Type		Axial							
	Diameter	mm	560	560	2×508	2×508	2×508	2×508	2×508	2×508
Heat exchanger	Type		Aluminum with hydrophilic coating							
Air-flow		m^3/min	92	92	100	100	100	100	100	100
Sound pressure level		dB(A)	56	57	57	57	57	57	57	57
Dimensions and weight	Net dimensions (width x height x depth)	mm	1075×966×396		900×1327×400					
	Transport dimensions (width x height x depth)	mm	1120×1100×435		1030×1456×435					
	Net / gross weight	kg	75.5/85.5	75.5/85.5	95.0/106.0	95.0/106.0	95.0/106.0	95.0/106.0	100.0/111.0	102.0/113.0
Refrigerant	Type		R410A							
	Charged amount	kg	2.95		3.30		3.90			
Expansion component			Electronic expansion valve							
Refrigerant installation	Liquid pipe/gas pipe	mm	Ø9.52 / Ø15.9						Ø9.52 / Ø19.1	
	Max. piping length	m	100							
	Max. height difference between ODU and IDU	m	30							
Outdoor temperature	Cooling	°C	-15 ~ 43							
	Heating	°C	-15 ~ 27							

Note:
Unit capacity is based on the following conditions:
Cooling - indoor temperature 27°C DB/19°C WB, outdoor temperature 35°C DB.
Heating - indoor temperature 20°C DB/15°C WB, outdoor temperature 7°C DB.
Refrigerant installation length 5 m with the height difference of 0 m.
DB dry bulb, WB- wet bulb.
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1 m above the floor.
The unit contains fluorinated greenhouse gases R410A (GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner.
Choice of the appropriate solution is a matter for installer.

18.0~20.0 kW

Technical specifications

Model			MDV-V180W/DRN1	MDV-V200W/DRN1
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	17.5	20.0
	Input power	kW	5.47	6.35
	EER	kW/kW	3.20	3.15
	SEER	kW/kW	5.50	5.60
Heating	Capacity	kW	19.0	22.0
	Input power	kW	5.00	6.2
	COP	kW/kW	3.80	3.55
	SCOP	kW/kW	4.15	3.70
Available indoor unit capacity range		%	45-130	50-200
Max. no. of indoor units			9	10
DC Inverter compressor	Type		Rotary	
	Brand		Mitsubishi Electric	
Fan motor	Type		DC	
Fan	Type		Axial	
	Diameter	mm	2×508	2×560
Heat exchanger	Type		Aluminum with hydrophilic coating	Aluminum with hydrophilic coating
Air-flow		m^3/min	113	183
Sound pressure level		dB(A)	59	59
Dimensions and weight	Net dimensions (width x height x depth)	mm	900×1327×400	1120×1558×528
	Transport dimensions (width x height x depth)	mm	1030×1456×435	1270×1720×565
	Net / gross weight	kg	107/118	137/153
Refrigerant	Type		R410A	
	Charged amount	kg	4.5	4.8
Expansion component			Electronic expansion valve	
Refrigerant installation	Liquid pipe/gas pipe	mm	Ø9.52/Ø19.1	
	Max. piping length	m	100	
	Max. height difference between ODU and IDU	m	30	
Outdoor temperature	Cooling	°C	-15 ~ 43	-15 ~ 46
	Heating	°C	-15 ~ 27	-15 ~ 24

Note:
Unit capacity is based on the following conditions:
Cooling - indoor temperature 27°C DB/19°C WB. outdoor temperature 35°C DB.
Heating - indoor temperature 20°C DB/15°C WB. outdoor temperature 7°C DB.
Refrigerant installation length 5 m with the height difference of 0 m.
DB dry bulb. WB- wet bulb.
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1 m above the floor.
The unit contains fluorinated greenhouse gases R410A (GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner. Choice of the appropriate solution is a matter for installer.

22.4~33.5 kW

Technical specifications

					NEW	NEW
Model			**MDV-V224W/DRN1**	**MDV-V260W/DRN1**	**MDV-V280W/DGN1**	**MDV-V335W/DGN1**
Power supply		V/phase/Hz	380~415/3/50	380~415/3/50	380~415/3/50	380~415/3/50
Cooling	Capacity	kW	22.4	26.0	28.0	33.5
	Input power	kW	6.81	8.13	12.07	15.09
	EER	kW/kW	3.29	3.20	2.32	2.22
	SEER	kW/kW	5.90	5.50	5.90	6.77
Heating	Capacity	kW	24.5	28.5	28.0	33.5
	Input power	kW	5.9	7.22	6.68	7.94
	COP	kW/kW	4.15	3.95	4.19	4.22
	SCOP	kW/kW	3.80	3.75	4.26	4.05
Available indoor unit capacity range		%	50-130	50-130	50-130	50-130
Max. no. of indoor units			11	12	16	20
DC Inverter compressor	Type		Rotary	Rotary	Rotary	Rotary
	Brand		Mitsubishi Electric	Mitsubishi Electric	Mitsubishi electric	Mitsubishi electric
Fan motor	Type		DC	DC	DC	DC
Fan	Type		Axial	Axial	Axial	Axial
	Diameter	mm	2×560	2×560	2×700	2×700
Heat exchanger	Type		Aluminum with hydrophilic coating			
Air-flow		m^3/min	175	175	183	188
Sound pressure level		dB(A)	59	60	59	61
Dimensions and weight	Net dimensions (width x height x depth)	mm	1120×1558×400	1120×1558×400	1120×1558×528	1120×1558×528
	Transport dimensions (width x height x depth)	mm	1270×1575×480	1270×1575×480	1270×1720×565	1270×1720×565
	Net / gross weight	kg	146.5/162.5	147/163	157/173	157/173
Refrigerant	Type		R410A	R410A	R410A	R410A
	Charged amount	kg	6.2	6.2	8	8
Expansion component			Electronic expansion valve			
Refrigerant installation	Liquid pipe/gas pipe	mm	Ø9.52/Ø19.1	Ø9.52/Ø22.2	Ø9.5/ Ø22.2	Ø12.7 / Ø25.4
	Max. piping length	m	120	120	120	120
	Max. height difference between ODU and IDU	m	30	30	30	30
Outdoor temperature	Cooling	°C	-15 ~ 46	-15 ~ 48	-5~48	-5~48
	Heating	°C	-15 ~ 24	-15 ~ 27	-20~24	-20~24

Note:
Unit capacity is based on the following conditions:
Cooling - indoor temperature 27°C DB/19°C WB, outdoor temperature 35°C DB.
Heating - indoor temperature 20°C DB/15°C WB, outdoor temperature 7°C DB.
Refrigerant installation length 5 m with the height difference of 0 m.
DB dry bulb, WB- wet bulb.
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1 m above the floor.
The unit contains fluorinated greenhouse gases R410A (GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner.
Choice of the appropriate solution is a matter for installer.

40.0~49.0 kW

Technical specifications

Model			MDV-V400W/DRN1(A)	MDV-V450W/DRN1(A)	MDV-V490W/DRN1(A)
Power supply		V/phase/Hz	380~415/3/50	380~415/3/50	380~415/3/50
Cooling	Capacity	kW	40.0	45.0	49.0
	Input power	kW	15.09	13.55	14.70
	EER	kW/kW	2.65	3.32	3.33
	SEER	kW/kW	5.70	5.65	5.55
Heating	Capacity	kW	40.0	45.0	54.0
	Input power	kW	10.0	11.11	13.70
	COP	kW/kW	4.0	4.05	3.94
	SCOP	kW/kW	3.75	3.70	3.70
Available indoor unit capacity range		%	50-180	50-180	50-200
Max. no. of indoor units			30	30	30
DC Inverter compressor	Type		Rotary	Rotary	Rotary
	Brand		Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric
Fan motor	Type		DC + AC	DC + AC	DC + AC
Fan	Type		Axial	Axial	Axial
	Diameter	mm	2×700	2×700	2×700
Heat exchanger	Type		Aluminum with hydrophilic coating		
Air-flow		m^3/min	276	276	276
Sound pressure level		dB(A)	62	62	62
Dimensions and weight	Net dimensions (width x height x depth)	mm	1360×1650×540	1460×1650×540	1460×1650×540
	Transport dimensions (width x height x depth)	mm	1450×1785×560	1550×1785×560	1550×1785×560
	Net / gross weight	kg	250/268	280/300	280/300
Refrigerant	Type		R410A	R410A	R410A
	Charged amount	kg	9	12	12
Expansion component			Electronic expansion valve		
Refrigerant installation	Liquid pipe/gas pipe	mm	Ø12.7/Ø22.2	Ø12.7/Ø25.4	Ø12.7/Ø25.4
	Max. piping length	m	250	250	100
	Max. height difference between ODU and IDU	m	30	30	30
Outdoor temperature	Cooling	°C	-5 ~ 48	-5 ~ 48	-5 ~ 48
	Heating	°C	-15 ~ 24	-15 ~ 24	-15 ~ 24

Note:
Unit capacity is based on the following conditions:
Cooling - indoor temperature 27°C DB/19°C WB, outdoor temperature 35°C DB.
Heating - indoor temperature 20°C DB/15°C WB, outdoor temperature 7°C DB.
Refrigerant installation length 5 m with the height difference of 0 m.
DB dry bulb, WB- wet bulb.
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1 m above the floor.
The unit contains fluorinated greenhouse gases R410A (GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner.
Choice of the appropriate solution is a matter for installer.

50.0~56.0 kW

Technical specifications

Model			MV6-i500WV2GN1-E	MV6-i560WV2GN1-E
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	50.0	56.0
	Input power	kW	14.49	16.00
	EER	kW/kW	3.45	3.5
	SEER	kW/kW	6.8	6.45
Heating	Capacity	kW	50.0	56.0
	Input power	kW	12.2	13.83
	COP	kW/kW	4.10	4.05
	SCOP	kW/kW	3.65	3.65
Available indoor unit capacity range		%	50-200	50-200
Max. no. of indoor units			do 64	do 64
DC Inverter compressor	Type		scroll	scroll
	Brand		Hitachi	Hitachi
	Charged amount		1	2
Fan motor	Type		DC	DC
	Charged amount		1	2
Fan	Type		Axial	Axial
	Charged amount		2	2
	Static pressure	Pa	0~40 (default)	0~40 (default)
		Pa	20~60 (option)	20~60 (option)
Heat exchanger	External finish		Aluminum with hydrophilic coating	Aluminum with hydrophilic coating
	Pipe type		Internally threaded	Internally threaded
Air-flow		m^3/min	217	283
Sound pressure level		dB(A)	43 ~ 65	43 ~ 66
Dimensions and weight	Net dimensions (width x height x depth)	mm	1340×1635×850	1340×1635×850
	Transport dimensions (width x height x depth)	mm	1405×1805×910	1405×1805×910
	Net / gross weight	kg	295/322	344/364
Refrigerant	Type		R410A	R410A
	Charged amount	kg	13	17
Expansion component			Electronic expansion valve	Electronic expansion valve
Refrigerant installation	Liquid pipe	mm	Ø15.9/ Ø19.1*	Ø19.1
	Gas pipe	m	Ø31.8	Ø31.8
	Oil balance	mm	-	-
	Total installation length	m	1000	1000
	Max. distance indoor-outdoor	m	200	200
	Max. height difference, outdoor unit above	m	90	90
	Max. height difference, outdoor unit below	m	110	110
	Height difference between indoor units	m	30	30
Outdoor temperature	Cooling	°C	-5 ~ 48	-5 ~ 48
	Heating	°C	-23 ~ 24	-23 ~ 24

Note:
Unit capacity is based on the following conditions:
Cooling - indoor temperature 27°C DB/19°C WB, outdoor temperature 35°C DB.
Heating - indoor temperature 20°C DB/15°C WB, outdoor temperature 7°C DB.
Refrigerant installation length 5 m with the height difference of 0 m.
DB dry bulb, WB- wet bulb.
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1 m above the floor.
The unit contains fluorinated greenhouse gases R410A (GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner.
Choice of the appropriate solution is a matter for installer.
*depending on the selection software

61.5~67.0 kW

Technical specifications

Model			MV6-i615WV2GN1-E	MV6-i670WV2GN1-E
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	61.5	67.0
	Input power	kW	20.16	21.61
	EER	kW/kW	3.05	3.10
	SEER	kW/kW	6.25	6.84
Heating	Capacity	kW	61.5	67.0
	Input power	kW	16.40	15.95
	COP	kW/kW	3.75	4.20
	SCOP	kW/kW	3.65	3.80
Available indoor unit capacity range		%	50-200	50-200
Max. no. of indoor units			do 64	do 64
DC Inverter compressor	Type		scroll	Scroll
	Brand		Hitachi	Hitachi
	Charged amount		2	2
Fan motor	Type		DC	DC
	Charged amount		2	2
Fan	Type		Axial	Axial
	Charged amount		2	2
	Static pressure	Pa	0~40 (default)	0~40 (default)
		Pa	20~60 (option)	20~60 (option)
Heat exchanger	External finish		Aluminum with hydrophilic coating	Aluminum with hydrophilic coating
	Pipe type		Internally threaded	Internally threaded
Air-flow		m^3/min	283	417
Sound pressure level		dB(A)	43 ~ 66	43~67
Dimensions and weight	Net dimensions (width x height x depth)	mm	1340×1635×850	1730×1830×850
	Transport dimensions (width x height x depth)	mm	1405×1805×910	1800×2000×910
	Net / gross weight	kg	344/364	407/430
Refrigerant	Type		R410A	R410A
	Charged amount	kg	17	22
Expansion component			Electronic expansion valve	Electronic expansion valve
Refrigerant installation	Liquid pipe	mm	Ø19.1	Ø19.1
	Gas pipe	m	Ø31.8	Ø31.8
	Oil balance	mm	-	-
	Total installation length	m	1000	1000
	Max. distance indoor-outdoor	m	200	200
	Max. height difference, outdoor unit above	m	90	90
	Max. height difference, outdoor unit below	m	110	110
	Height difference between indoor units	m	30	30
Outdoor temperature	Cooling	°C	-5 ~ 48	-5~48
	Heating	°C	-23 ~ 24	-23~24

Note:
Unit capacity is based on the following conditions:
Cooling - indoor temperature 27°C DB/19°C WB, outdoor temperature 35°C DB.
Heating - indoor temperature 20°C DB/15°C WB, outdoor temperature 7°C DB.
Refrigerant installation length 5 m with the height difference of 0 m.
DB dry bulb, WB- wet bulb.
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1 m above the floor.
The unit contains fluorinated greenhouse gases R410A (GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner.
Choice of the appropriate solution is a matter for installer.

73.0~78.5 kW

Technical specifications

Model			MV6-i730WV2GN1-E	MV6-i785WV2GN1-E
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	73.0	78.5
	Input power	kW	21.47	24.92
	EER	kW/kW	3.40	3.15
	SEER	kW/kW	6.49	6.20
Heating	Capacity	kW	73.0	78.5
	Input power	W	18.02	21.22
	COP	kW/kW	4.05	3.70
	SCOP	kW/kW	3.80	3.80
Available indoor unit capacity range		%	50-200	50-200
Max. no. of indoor units			do 64	do 64
DC Inverter compressor	Type		Scroll	Scroll
	Brand		Hitachi	Hitachi
	Charged amount		2	2
Fan motor	Type		DC	DC
	Charged amount		2	2
Fan	Type		Axial	Axial
	Charged amount		2	2
	Static pressure	Pa	0~40 (default)	0~40 (default)
		Pa	20~60 (option)	20~60 (option)
Heat exchanger	External finish		Aluminum with hydrophilic coating	Aluminum with hydrophilic coating
	Pipe type		Internally threaded	Internally threaded
Air-flow		m^3/min	417	417
Sound pressure level		dB(A)	43~68	43~68
Dimensions and weight	Net dimensions (width x height x depth)	mm	1730×1830×850	1730×1830×850
	Transport dimensions (width x height x depth)	mm	1800×2000×910	1800×2000×910
	Net / gross weight	kg	429/452	429/452
Refrigerant	Type		R410A	R410A
	Charged amount	kg	22	22
Expansion component			Electronic expansion valve	Electronic expansion valve
Refrigerant installation	Liquid pipe	mm	Ø19.1/Ø22.2*	Ø19.1/Ø22.2*
	Gas pipe	m	Ø31.8	Ø31.8
	Oil balance	mm	-	-
	Total installation length	m	1000	1000
	Max. distance indoor-outdoor	m	200	200
	Max. height difference, outdoor unit above	m	90	90
	Max. height difference, outdoor unit below	m	110	110
	Height difference between indoor units	m	30	30
Outdoor temperature	Cooling	°C	-5~48	-5~48
	Heating	°C	-23~24	-23~24

Note:
Unit capacity is based on the following conditions:
Cooling - indoor temperature 27°C DB/19°C WB, outdoor temperature 35°C DB.
Heating - indoor temperature 20°C DB/15°C WB, outdoor temperature 7°C DB.
Refrigerant installation length 5 m with the height difference of 0 m.
DB dry bulb, WB- wet bulb.
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1 m above the floor.
The unit contains fluorinated greenhouse gases R410A (GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner.
Choice of the appropriate solution is a matter for installer.
*depending on the selection software

85.0~90.0 kW

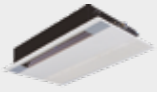
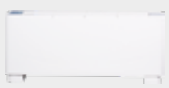
Technical specifications

Model			MV6-i850WV2GN1-E	MV6-i900WV2GN1-E
Power supply		V/phase/Hz	380-415/3/50	380-415/3/50
Cooling	Capacity	kW	85.0	90.0
	Input power	kW	28.33	32.14
	EER	kW/kW	3.00	2.80
	SEER	kW/kW	6.05	5.87
Heating	Capacity	kW	85.0	90.0
	Input power	kW	24.3	26.47
	COP	kW/kW	3.50	3.40
	SCOP	kW/kW	3.90	3.90
Available indoor unit capacity range		%	50-200	50-200
Max. no. of indoor units			do 64	do 64
DC Inverter compressor	Type		Scroll	Scroll
	Brand		Hitachi	Hitachi
	Charged amount		2	2
Fan motor	Type		DC	DC
	Charged amount		2	2
Fan	Type		Axial	Axial
	Charged amount		2	2
	Static pressure	Pa	0~40 (default)	0~40 (default)
		Pa	20~60 (option)	20~60 (option)
Heat exchanger	External finish		Aluminum with hydrophilic coating	Aluminum with hydrophilic coating
	Pipe type		Internally threaded	Internally threaded
Air-flow		m^3/min	400	400
Sound pressure level		dB(A)	43~68	43~68
Dimensions and weight	Net dimensions (width x height x depth)	mm	1730×1830×850	1730×1830×850
	Transport dimensions (width x height x depth)	mm	1800×2000×910	1800×2000×910
	Net / gross weight	kg	475/507	475/507
Refrigerant	Type		R410A	R410A
	Charged amount	kg	25	25
Expansion component			Electronic expansion valve	Electronic expansion valve
Refrigerant installation	Liquid pipe	mm	Ø22.2	Ø22.2
	Gas pipe	m	Ø31.8/Ø38.1*	Ø31.8/Ø38.1*
	Oil balance	mm	-	-
	Total installation length	m	1000	1000
	Max. distance indoor-outdoor	m	200	200
	Max. height difference, outdoor unit above	m	90	90
	Max. height difference, outdoor unit below	m	110	110
	Height difference between indoor units	m	30	30
Outdoor temperature	Cooling	°C	-5~48	-5~48
	Heating	°C	-23~24	-23~24

Note:
Unit capacity is based on the following conditions:
Cooling - indoor temperature 27°C DB/19°C WB, outdoor temperature 35°C DB.
Heating - indoor temperature 20°C DB/15°C WB, outdoor temperature 7°C DB.
Refrigerant installation length 5 m with the height difference of 0 m.
DB dry bulb, WB- wet bulb.
Noise level measured in a reverberation chamber, at a distance of 1 m from the front of the unit. A microphone placed 1 m above the floor.
The unit contains fluorinated greenhouse gases R410A (GWP=2088).
For the proper operation of outdoor units in the heat pump mode, it is necessary to apply a drain pan heater or provide smooth condensate drain in another manner.
Choice of the appropriate solution is a matter for installer.
*depending on the selection software

VRF OUTDOOR UNITS

2nd generation indoor units

Type	Model	18	22	28	36	45	56	71	80
	kW	1.8	2.2	2.8	3.6	4.5	5.6	7.1	8.0
Wall-mounted			●	●	●	●	●	●	●
Duct - medium static pressure			●	●	●	●	●	●	●
Duct - high static pressure								●	●
Duct with 100% fresh air intake									
4-way compact cassette			●	●	●	●			
4-way standard cassette				●	●	●	●	●	●
2-way cassette			●	●	●	●	●	●	
1-way cassette		●	●	●	●	●	●	●	
Ceiling-floor					●	●	●	●	●
Standing (floor)			●	●	●	●	●	●	●

90	100	112	125	140	160	200	250	280	Page
9.0	10.0	11.2	12.5	14.0	16.0	20.0	25.0	28.0	
●									106
●		●		●					108
●		●		●	●	●	●	●	110
			●	●		●	●	●	112
									114
●	●	●		●					116
									118
									120
●		●		●					122
									124

2nd generation indoor units

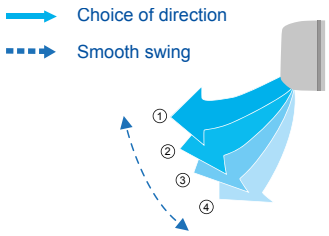
M model

7 fan speeds

7 available indoor unit fan speeds allows more accurate air-flow adjustment and enables individual adaptation of comfort conditions in a room.

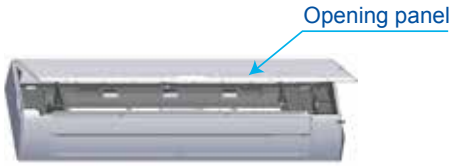
Automatic swing

Possibility to set louvers swing. Louvers can be stopped in any position. Air louver automatically adjusts its position when changing the operation mode, so to ensure highest possible comfort.



Super slim design

Front panel can be easily removed in order to improve service access.



Improved refrigerant flow control, lower noise level

EXV expansion valve provides quiet operation and precise adjustment of the refrigerant flow, which ensures stable maintenance of the set temperature. Full range of adjustment is 2000 steps. Three fan speeds and properly shaped air deflectors ensure even air-flow without unnecessary whirls and turbulence.

Technical specifications

Model			MDV-022G/DN1	MDV-028G/DN1	MDV-036G/DN1	MDV-045G/DN1
Power supply		V/phase/Hz	220~240/1/50			
Cooling	Rated capacity (*1)	kW	2.2	2.8	3.6	4.5
	Input power	kW	0.028	0.028	0.03	0.04
	Input current	A	0.12	0.12	0.13	0.17
Heating	Rated capacity (*2)	kW	2.4	3.2	4.0	5.0
	Input power	kW	0.028	0.028	0.03	0.04
	Input current	A	0.12	0.12	0.13	0.17
Heat exchanger	Corrosion protection		Hydrophilic coating			
Rated air-flow		m^3/h	356/368/380/393/402/411/422	316/338/353/370/386/402/417	488/515/544/573/591/628/656	424/450/478/507/535/563/594
Sound level (lowest-highest) (*3)		dB(A)	22 - 25	22 - 25	23 - 26	24 - 27
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)		dB(A)	29/29/29/30/30/30/31	29/29/29/30/30/30/31	30/30/31/31/32/32/33	31/31/32/33/33/34/35
Dimensions	Net dimensions (width x height x depth)	mm	835×280×203	835×280×203	990×315×223	990×315×223
	Transport dimensions (width x height x depth)	mm	935×385×320	935×385×320	1085×420×335	1085×420×335
	Net/gross weight	kg	8.4/12.1	9.5/13.1	11.4/15.5	12.8/16.9
Refrigerant			R410A			
Refrigerant flow control			Electronic expansion valve			
Piping	Liquid	mm	Ø6.35	Ø6.35	Ø6.35	Ø6.35
	Gas	mm	Ø12.7	Ø12.7	Ø12.7	Ø12.7
Condensate drain		mm	Ø16	Ø16	Ø16	Ø16
Cables	Power supply	mm^2	3×1.5			
	Transmission	mm^2	3×0.75 shielded			

Model			MDV-056G/DN1	MDV-071G/DN1	MDV-080G/DN1	MDV-090G/DN1
Power supply		V/phase/Hz	220~240/1/50			
Cooling	Rated capacity (*1)	kW	5.6	7.1	8.0	9.0
	Input power	kW	0.045	0.055	0.055	0.082
	Input current	A	0.20	0.24	0.24	0.36
Heating	Rated capacity (*2)	kW	6.3	8.0	9.0	10.0
	Input power	kW	0.045	0.055	0.055	0.082
	Input current	A	0.20	0.24	0.24	0.36
Heat exchanger	Corrosion protection		Hydrophilic coating			
Rated air-flow		m^3/h	547/578/613/648/685/713/747	809/875/940/1005/1065/1130/1195	809/875/940/1005/1065/1130/1195	867/934/1005/1067/1125/1300/1421
Sound level (lowest-highest) (*3)		dB(A)	26 - 30	28 - 34	28 - 34	29 - 35
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)		dB(A)	34/34/35/36/36/37/38	36/37/38/39/42/43/44	36/37/38/39/42/43/44	38/40/41/43/45/46/48
Dimensions	Net dimensions (width x height x depth)	mm	990×315×223	1194×343×262	1194×343×262	1194×343×262
	Transport dimensions (width x height x depth)	mm	1085×420×335	1290×375×460	1290×375×460	1290×375×460
	Net/gross weight	kg	12.8/16.9	17.0/22.4	17.0/22.4	17.0/22.4
Refrigerant			R410A			
Refrigerant flow control			Electronic expansion valve			
Piping	Liquid	mm	Ø9.53	Ø9.53	Ø9.53	Ø9.53
	Gas	mm	Ø15.9	Ø15.9	Ø15.9	Ø15.9
Condensate drain		mm	Ø16	Ø16	Ø16	Ø16
Cables	Power supply	mm^2	3×1.5			
	Transmission	mm^2	3×0.75 shielded			

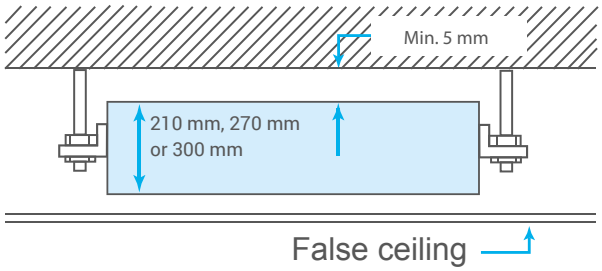
Notes:
Unit rated capacity is based on the following conditions:
(*1) Cooling: indoor temperature 27°C DB/19°C WB; outdoor temperature 35°C DB/24°C WB
(*2) Heating: indoor temperature 20°C DB/15°C WB; outdoor temperature 7°C DB/6°C WB
Refrigerant piping length measured for the liquid side 8 m. Height difference 0 m.
DB - dry bulb. WB - wet bulb
(*3) Sound pressure level measured in an anechoic chamber
(*4) Sound pressure level measured in an semi-anechoic chamber

2nd generation indoor units

Medium static pressure

Compact size

Unit height only 210 mm (22÷71 models) and 270 mm (80÷112 models) and 300 mm (140 model). Electronic expansion valve built-in the unit.



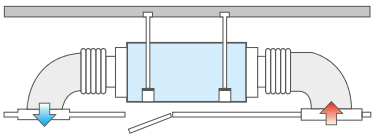
Wide capacity range

Capacity range from 2.2 kW to 14.0 kW. 10 models available.

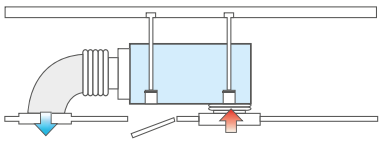
Convenient installation

- EXV valve built-in the unit.
- Filter fitted in the aluminium frame, easy to remove.
- Standard air inlet from the back of the unit, or optional from the bottom.
- The possibility of supplying fresh air. Inlet and outlet connection flanges as standard.
- Drain pump as a standard equipment.

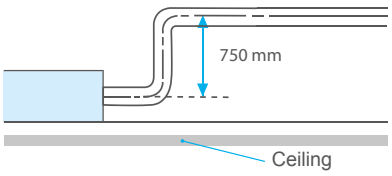
Air inlet from the back



Air inlet from the bottom



Drain pump with head up to 750 mm



Technical specifications

Model			MDV-022T2/DN1	MDV-028T2/DN1	MDV-036T2/DN1	MDV-045T2/DN1	MDV-056T2/DN1
Power supply		V/phase/Hz	220~240/1/50				
Cooling	Rated capacity (*1)	kW	2.2	2.8	3.6	4.5	5.6
	Input power	kW	0.04	0.04	0.045	0.092	0.092
	Input current	A	0.17	0.17	0.20	0.40	0.40
Heating	Rated capacity (*2)	kW	2.6	3.2	4.0	5.0	6.3
	Input power	kW	0.04	0.04	0.045	0.092	0.092
	Input current	A	0.17	0.17	0.20	0.40	0.40
Heat exchanger	Corrosion protection		Hydrophilic coating				
Rated air-flow		m^3/h	300/330/360/400/440/480/520	300/330/360/400/440/480/520	370/400/430/460/500/540/580	400/480/540/620/680/740/800	560/600/640/680/720/760/830
Available static pressure		Pa	10(0~50)	10(0~50)	10(0~50)	10(0~50)	10(0~50)
Sound level (lowest-highest) (*3)		dB(A)	20 - 23	20 - 23	22 - 26	23 - 27	23 - 27
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)		dB(A)	31/32/33/34/34/35/35	31/32/33/34/34/35/35	33/34/35/36/36/37/37	33/34/35/36/37/37/38	33/34/35/36/37/38/38
Dimensions	Net dimensions (width x height x depth)	mm	780x210x500	780x210x500	780x210x500	1000x210x500	1000x210x500
	Transport dimensions (width x height x depth)	mm	870x285x525	870x285x525	870x285x525	1115x285x525	1115x285x525
	Net/gross weight	kg	18.0/21.0	18.0/21.0	18.0/21.0	21.5/25.0	21.5/25.0
Refrigerant			R410A				
Refrigerant flow control			Electronic expansion valve				
Piping	Liquid	mm	Ø6.35	Ø6.35	Ø6.35	Ø6.35	Ø6.35
	Gas	mm	Ø12.7	Ø12.7	Ø12.7	Ø12.7	Ø12.7
Condensate drain		mm	Ø25	Ø25	Ø25	Ø25	Ø25
Cables	Power supply	mm^2	3×1.5				
	Transmission	mm^2	3×0.75 shielded				

Model			MDV-071T2/DN1	MDV-080T2/DN1	MDV-090T2/DN1	MDV-112T2/DN1	MDV-140T2/DN1
Power supply		V/phase/Hz	220~240/1/50				
Cooling	Rated capacity (*1)	kW	7.1	8.0	9.0	11.2	14.0
	Input power	kW	0.098	0.11	0.12	0.2	0.25
	Input current	A	0.43	0.48	0.52	0.87	1.09
Heating	Rated capacity (*2)	kW	8.0	9.0	10.0	12.5	15.5
	Input power	kW	0.098	0.11	0.12	0.2	0.25
	Input current	A	0.43	0.48	0.52	0.87	1.09
Heat exchanger	Corrosion protection		Hydrophilic coating				
Rated air-flow		m^3/h	680/720/780/840/900/960/1000	780/860/940/1020/1100/1180/1260	780/860/940/1020/1100/1180/1260	1080/1140/1210/1290/1360/1430/1500	1360/1460/1560/1660/1760/1860/1960
Available static pressure		Pa	10(0~50)	20(10~100)	20(10~100)	20(10~100)	40(30~150)
Sound level (low/medium/high) (*3)		dB(A)	27 - 30	29 - 34	29 - 34	31 - 39	34 - 40
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)		dB(A)	34/35/36/37/38/39/40	37/38/39/41/42/43/44	37/38/39/41/42/43/44	37/39/41/43/44/46/47	38/39/41/43/44/46/47
Dimensions	Net dimensions (width x height x depth)	mm	1220×210×500	1230×270×775	1230×270×775	1230×270×775	1290×300×865
	Transport dimensions (width x height x depth)	mm	1335×285×525	1335×350×795	1335×350×795	1335×350×795	1400×375×925
	Net/gross weight	kg	27.5/31.5	36.5/44.5	37.5/45.5	37.5/45.5	46.5/55.5
Refrigerant			R410A				
Refrigerant flow control			Electronic expansion valve				
Piping	Liquid	mm	Ø9.53	Ø9.53	Ø9.53	Ø9.53	Ø9.53
	Gas	mm	Ø15.9	Ø15.9	Ø15.9	Ø15.9	Ø15.9
Condensate drain		mm	Ø25	Ø25	Ø25	Ø25	Ø25
Cables	Power supply	mm^2	3×1.5				
	Transmission	mm^2	3×0.75 shielded				

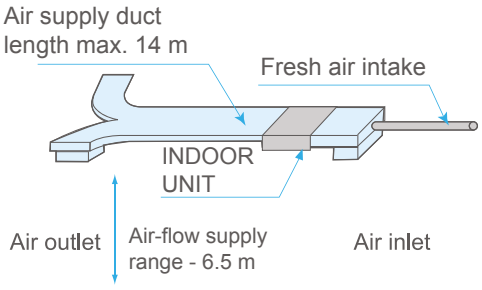
Notes:
Unit rated capacity is based on the following conditions:
(*1) Cooling: indoor temperature 27°C DB/19°C WB; outdoor temperature 35°C DB/24°C WB
(*2) Heating: indoor temperature 20°C DB/15°C WB; outdoor temperature 7°C DB/6°C WB
Refrigerant piping length measured for the liquid side 8 m. Height difference 0 m.
DB - dry bulb. WB - wet bulb
(*3) Sound pressure level measured in an anechoic chamber
(*4) Sound pressure level measured in an semi-anechoic chamber

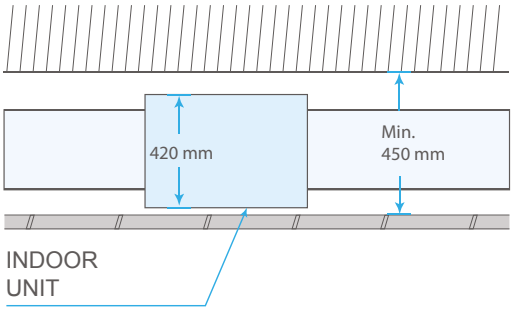
2nd generation indoor units

High static pressure

Flexible structure of the air supply duct

Maximum length of the air supply duct is approx. 14 m, air-flow range is 6,5 m. Minimum ceiling cavity is 450 mm (unit height is 420 mm for 71÷160 models).





Convenient installation

- EXV valve built-in the unit. Capacity range from 7.1 kW to 28.0 kW. 9 models available.
- Filter fitted in the aluminium frame, easy to remove.
- The possibility of supplying fresh air. Inlet and outlet connection flanges as standard.
- Standard air inlet from the back of the unit, or optional from
- the bottom.

Wide capacity range

Capacity range from 7.1 kW to 28.0 kW. 9 models available.

Flexible control, simple maintenance

Wired remote controller as a standard equipment. LED display is pre-wired to the electrical box - easy error codes reading. Possibility to install the electric box in a distance of 1 m from the unit, in a more convenient place for the service stuff. As a standard, the unit is equipped with ports for remote turning on and off and alarm signaling (230 V).

Technical specifications

Model			MDV-071T1/DN1	MDV-080T1/DN1	MDV-090T1/DN1	MDV-112T1/DN1	MDV-140T1/DN1
Power supply		V/phase/Hz	220~240/1/50				
Cooling	Rated capacity (*1)	kW	7.1	8.0	9.0	11.2	14.0
	Input power	kW	0.18	0.18	0.22	0.38	0.42
	Input current	A	0.78	0.78	0.96	1.65	1.83
Heating	Rated capacity (*2)	kW	8.0	9.0	10.0	12.5	16.0
	Input power	kW	0.18	0.18	0.22	0.38	0.42
	Input current	A	0.78	0.78	0.96	1.65	1.83
Heat exchanger	Corrosion protection		Hydrophilic coating				
Rated air-flow		m^3/h	1159/1197/1234/1264/ 1296/1333/1360	1159/1197/1234/1264/ 1296/1333/1360	1151/1195/1237/1285/ 1328/1378/1428	1354/1429/1528/1614/ 1695/1775/1886	1601/1707/1818/1927/ 2033/2127/2258
Available static pressure		Pa	100(30~200)	100(30~200)	100(30~200)	100(30~200)	100(30~200)
Sound level (lowest-highest) (*3)		dB(A)	28 - 32	28 - 32	30 - 37	32 - 40	37 - 43
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)		dB(A)	42/43/44/45/45/46/46	42/43/44/45/45/46/46	45/46/47/48/48/49/50	45/46/47/48/49/50/50	48/49/50/51/51/52/53
Dimensions	Net dimensions (width x height x depth)	mm	952×420×690	952×420×690	952×420×690	952×420×690	1300×420×690
	Transport dimensions (width x height x depth)	mm	1090×440×768	1090×440×768	1090×440×768	1090×440×768	1436×450×768
	Net/gross weight	kg	41.0/47.0	41.0/47.0	51.0/57.0	51.0/57.0	63.0/70.0
Refrigerant			R410A				
Refrigerant flow control			Electronic expansion valve				
Piping	Liquid	mm	Ø9.52	Ø9.52	Ø9.52	Ø9.52	Ø9.52
	Gas	mm	Ø15.9	Ø15.9	Ø15.9	Ø15.9	Ø15.9
Condensate drain		mm	Ø25	Ø25	Ø25	Ø25	Ø25
Cables	Power supply	mm^2	3×1.5				
	Transmission	mm^2	3×0.75 shielded				

Model			MDV-160T1/DN1	MDV-200T1/DN1	MDV-250T1/DN1	MDV-280T1/DN1
Power supply		V/phase/Hz	220~240/1/50			
Cooling	Rated capacity (*1)	kW	16.0	20.0	25.0	28.0
	Input power	kW	0.7	0.99	1.2	1.2
	Input current	A	3.04	4.30	5.22	5.22
Heating	Rated capacity (*2)	kW	17.0	22.5	26.0	31.5
	Input power	kW	0.7	0.99	1.2	1.2
	Input current	A	3.04	4.30	5.22	5.22
Heat exchanger	Corrosion protection		Hydrophilic coating			
Rated air-flow		m^3/h	1879/2013/2099/2239/ 2354/2501/2608	3745/3837/3941/4043/ 4144/4237/4358	3745/3837/3941/4043/ 4144/4237/4358	3745/3837/3941/4043/ 4144/4237/4358
Available static pressure		Pa	100(30~200)	170(20~250)	170(20~250)	170(20~250)
Sound level (lowest-highest) (*3)		dB(A)	40 - 48	41 - 48	41 - 48	42 - 49
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)		dB(A)	50/50/51/52/53/54/54	50/52/53/54/55/56/57	50/52/53/54/55/56/57	50/52/53/54/55/56/57
Dimensions	Net dimensions (width x height x depth)	mm	1300×420×690	1440×505×925	1440×505×925	1440×505×925
	Transport dimensions (width x height x depth)	mm	1436×450×768	1509×550×990	1509×550×990	1509×550×990
	Net/gross weight	kg	63.0/70.0	130.0/142.0	130.0/142.0	130.0/142.0
Refrigerant			R410A			
Refrigerant flow control			Electronic expansion valve (2 sets)			
Piping	Liquid	mm	Ø9.52	Ø9.52 (×2)	Ø9.52 (×2)	Ø9.52 (×2)
	Gas	mm	Ø15.9	Ø15.9 (×2)	Ø15.9 (×2)	Ø15.9 (×2)
Condensate drain		mm	Ø25	Ø32	Ø32	Ø32
Cables	Power supply	mm^2	3×1.5			
	Transmission	mm^2	3×0.75 shielded			

Notes:
Unit rated capacity is based on the following conditions:
(*1) Cooling: indoor temperature 27°C DB/19°C WB; outdoor temperature 35°C DB/24°C WB
(*2) Heating: indoor temperature 20°C DB/15°C WB; outdoor temperature 7°C DB/6°C WB
Refrigerant piping length measured for the liquid side 8 m. Height difference 0 m.
DB - dry bulb. WB - wet bulb
(*3) Sound pressure level measured in an anechoic chamber
(*4) Sound pressure level measured in an semi-anechoic chamber

2nd generation indoor units

100% fresh air

Comfortable and healthy climate

Fresh air supply to the air-conditioned rooms ensures highest comfort of the occupants.

100% of fresh air

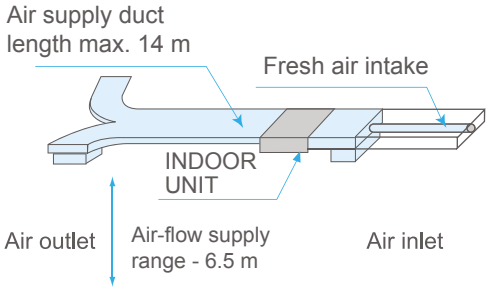
Filtering, cooling and heating function can be performed in one system. Duct unit can operate on 100% fresh air or partial recirculation.

High external static pressure

External static pressure can achieve 200 Pa (models 125÷280).

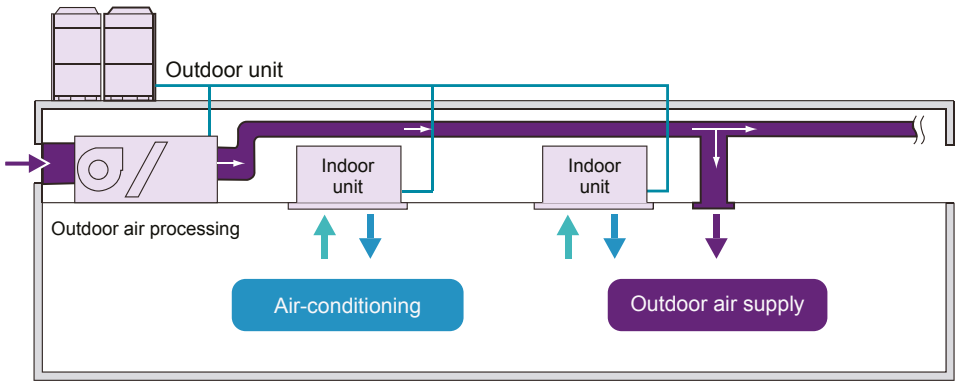
Flexible structure of the air supply duct

Maximum length of the air supply duct is approx. 14 m, air-flow range is 6,5 m. Minimum ceiling cavity is 450 mm (unit height is 420 mm for 125-140 models).



Flexible structure of air supply ducts

Maximum length of the air supply duct is approx. 14 m, air-flow range is 6,5 m. Minimum ceiling cavity is 450 mm (unit height is 420 mm for 125÷140 models).



Technical specifications

Model			MDV-125FA/DN1	MDV-140FA/DN1
Power supply		V/phase/Hz	220~240/1/50	
Cooling	Rated capacity (*1)	kW	12.5	14.0
	Input power	kW	0.48	0.48
	Input current	A	2.09	2.09
Heating	Rated capacity (*2)	kW	10.5	12.0
	Input power	kW	0.48	0.48
	Input current	A	2.09	2.09
Heat exchanger	Corrosion protection		Hydrophilic coating	
Rated air-flow		m^3/h	1500/1583/1667/1750/ 1833/1917/2000	1500/1583/1667/1750/ 1833/1917/2000
Available static pressure		Pa	180(30~200)	180(30~200)
Sound level (lowest-highest) (*3)		dB(A)	31 - 38	31 - 38
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)		dB(A)	42/43/44/45/46/47/48	42/43/44/45/46/47/48
Dimensions	Net dimensions (width x height x depth)	mm	1322×423×691	1322×423×691
	Transport dimensions (width x height x depth)	mm	1436×450×768	1436×450×768
	Net/gross weight	kg	68.0/76.0	68.0/76.0
Refrigerant			R410A	
Refrigerant flow control			Electronic expansion valve	
Piping	Liquid	mm	Ø9.53	
	Gas	mm	Ø15.9	
Condensate drain		mm	Ø25	
Cables	Power supply	mm^2	3×1.5	
	Transmission	mm^2	3×0.75 shielded	

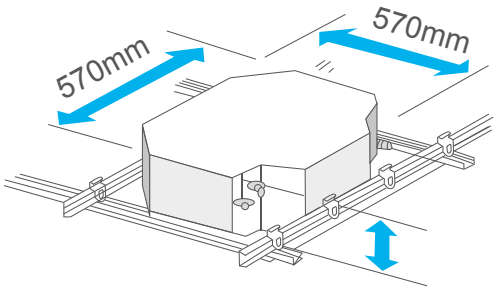
Notes:
Unit rated capacity is based on the following conditions:
(*1) Cooling: outdoor temperature 33°C DB/28°C WB
(*2) Heating: outdoor temperature 0°C DB/ -2.9°C WB
Refrigerant piping length measured for the liquid side 8 m. Height difference 0 m.
DB - dry bulb. WB - wet bulb
(*3) Sound pressure level measured in an anechoic chamber
(*4) Sound pressure level measured in an semi-anechoic chamber

2nd generation indoor units

4-way compact

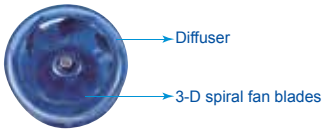
Compact design, easy installation and maintenance

Compact structure enables installation in standard 600x600 modular ceiling. Units low height and weight simplify installation works.



Quiet operation, gentle air-flow

Modern structure and spatially shaped fan blades significantly reduced noise level while maintaining large air-flow.



7 fan speeds

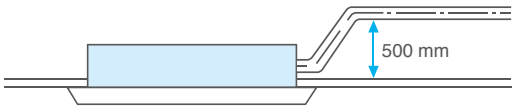
7 available indoor unit fan speeds allows more accurate air-flow adjustment and enables individual adaptation of comfort conditions in a room.

360° air outlet

360° air outlet ensures even temperature and air-flow distribution in the whole room.

Built-in drain pump

Built-in drain pump with maximum head up to 500 mm.



Technical specifications

Model			MDV-022Q4C/DN1	MDV-028Q4C/DN1	MDV-036Q4C/DN1	MDV-045Q4C/DN1
Panel			CE-MBQ-03C4	CE-MBQ-03C4	CE-MBQ-03C4	CE-MBQ-03C4
Power supply		V/phase/Hz	220~240/1/50			
Cooling	Rated capacity (*1)	kW	2.2	2.8	3.6	4.5
	Input power	kW	0.035	0.035	0.04	0.05
	Input current	A	0.15	0.15	0.17	0.22
Heating	Rated capacity (*2)	kW	2.4	3.2	4.0	5.0
	Input power	kW	0.035	0.035	0.04	0.05
	Input current	A	0.15	0.15	0.17	0.22
Fan	Input power	W	16.4	19.5	19.5	23.6
Heat exchanger	Corrosion protection		Hydrophilic coating			
Rated air-flow		m^3/h	405/441/462/503/524/552/576	405/441/462/503/524/552/576	400/434/478/516/541/573/604	400/434/478/516/541/573/604
Sound level (lowest-highest) (*3)		dB(A)	19 - 25	19 - 25	22 - 30	22 - 30
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)		dB(A)	22/23/26/29/33/34/35	22/23/26/29/33/34/35	28/29/30/32/35/38/41	28/29/30/32/35/38/41
Unit dimensions	Net dimensions (width x height x depth)	mm	630×260×570	630×260×570	630×260×570	630×260×570
	Transport dimensions (width x height x depth)	mm	700×345×660	700×345×660	700×345×660	700×345×660
	Net/gross weight	kg	18.0/23.5	18.0/23.5	19.2/24.7	19.2/24.7
Panel	Net dimensions (width x height x depth)	mm	647×50×647	647×50×647	647×50×647	647×50×647
	Transport dimensions (width x height x depth)	mm	715×123×715	715×123×715	715×123×715	715×123×715
	Net/gross weight	kg	2.5/4.5	2.5/4.5	2.5/4.5	2.5/4.5
Refrigerant			R410A			
Refrigerant flow control			Electronic expansion valve			
Piping	Liquid	mm	Ø6.35	Ø6.35	Ø6.35	Ø6.35
	Gas	mm	Ø12.7	Ø12.7	Ø12.7	Ø12.7
Condensate drain		mm	Ø32	Ø32	Ø32	Ø32
Cables	Power supply	mm^2	3×1.5			
	Transmission	mm^2	3×0.75 shielded			

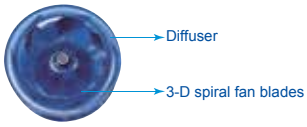
Notes:
Unit rated capacity is based on the following conditions:
(*1) Cooling: indoor temperature 27°C DB/19°C WB; outdoor temperature 35°C DB/24°C WB
(*2) Heating: indoor temperature 20°C DB/15°C WB; outdoor temperature 7°C DB/6°C WB
Refrigerant piping length measured for the liquid side 8 m. Height difference 0 m.
DB - dry bulb. WB - wet bulb
(*3) Sound pressure level measured in an anechoic chamber
(*4) Sound pressure level measured in an semi-anechoic chamber

2nd generation indoor units

4-way standard

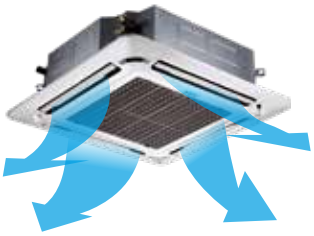
Quiet operation, gentle air-flow

Modern structure and spatially shaped fan blades significantly reduced noise level while maintaining large air-flow.



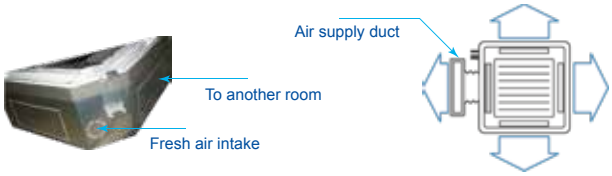
Even 4-way air supply

Four air outlet ducts provides effective circulation in the whole room. Setting the high fan speed ensures even temperature distribution also in rooms with height of more than 3 m.



Additional connections

Possible to air-condition additional rooms by connection of ventilation ducts.

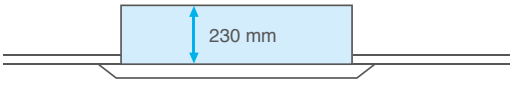


Easy troubleshooting

Reading the error codes directly from a display on the panel simplifies problem recognition and helps in quicker trouble-shooting.

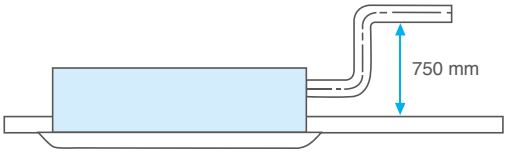
Slim design

Ultra slim unit structure facilitates installation and maintenance. Unit height is only 230 mm (for 28÷80 models).



Built-in drain pump

Built-in drain pump with maximum head up to 750 mm, significantly simplifies drain outlet installation.



Technical specifications

Model			MDV-028Q4/DN1	MDV-036Q4/DN1	MDV-045Q4/DN1	MDV-056Q4/DN1	MDV-071Q4/DN1
Panel			T-MBQ-02C1	T-MBQ-02C1	T-MBQ-02C1	T-MBQ-02C1	T-MBQ-02C1
Power supply		V/phase/Hz	220~240/1/50				
Cooling	Rated capacity (*1)	kW	2.8	3.6	4.5	5.6	7.1
	Input power	kW	0.025	0.025	0.031	0.031	0.046
	Input current	A	0.11	0.11	0.13	0.13	0.20
Heating	Rated capacity (*2)	kW	3.2	4.0	5.0	6.3	8.0
	Input power	kW	0.025	0.025	0.031	0.031	0.046
	Input current	A	0.11	0.11	0.13	0.13	0.20
Fan	Input power	W	42	42	44	44	55
Heat exchanger	Corrosion protection		Hydrophilic coating				
Rated air-flow		m^3/h	677/732/788/832/877/935/982	677/732/788/832/877/935/982	704/756/801/857/899/957/1029	704/756/801/857/899/957/1029	748/866/920/996/1065/1132/1200
Sound level (lowest-highest) (*3)		dB(A)	22 - 31	22 - 31	25 - 33	25 - 33	26 - 35
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)		dB(A)	32/34/35/37/38/40/42	32/34/35/37/38/40/42	34/35/36/38/39/41/43	34/35/36/38/39/41/43	34/35/37/39/41/43/45
Unit dimensions	Net dimensions (width x height x depth)	mm	904×230×840	904×230×840	904×230×840	904×230×840	904×230×840
	Transport dimensions (width x height x depth)	mm	955×260×955	955×260×955	955×260×955	955×260×955	955×260×955
	Net/gross weight	kg	21.3/25.8	21.3/25.8	23.2/27.6	23.2/27.6	23.2/27.6
Panel	Net dimensions (width x height x depth)	mm	950×54.5×950	950×54.5×950	950×54.5×950	950×54.5×950	950×54.5×950
	Transport dimensions (width x height x depth)	mm	1035×90×1035	1035×90×1035	1035×90×1035	1035×90×1035	1035×90×1035
	Net/gross weight	kg	5/8	5/8	5/8	5/8	5/8
Refrigerant			R410A				
Refrigerant flow control			Electronic expansion valve				
Piping	Liquid	mm	Ø6.35	Ø6.35	Ø6.35	Ø9.53	Ø9.53
	Gas	mm	Ø12.7	Ø12.7	Ø12.7	Ø15.9	Ø15.9
Condensate drain		mm	Ø32	Ø32	Ø32	Ø32	Ø32
Cables	Power supply	mm^2	3×1.5				
	Transmission	mm^2	3×0.75 shielded				

Model			MDV-080Q4/DN1	MDV-090Q4/DN1	MDV-100Q4/DN1	MDV-112Q4/DN1	MDV-140Q4/DN1
Panel			T-MBQ-02C1	T-MBQ-02C1	T-MBQ-02C1	T-MBQ-02C1	T-MBQ-02C1
Power supply		V/phase/Hz	220~240/1/50				
Cooling	Rated capacity (*1)	kW	8.0	9.0	10.0	11.2	14.0
	Input power	kW	0.048	0.075	0.075	0.075	0.094
	Input current	A	0.21	0.33	0.33	0.33	0.41
Heating	Rated capacity (*2)	kW	9.0	10.0	11.0	12.5	16.0
	Input power	kW	0.048	0.075	0.075	0.075	0.094
	Input current	A	0.21	0.33	0.33	0.33	0.41
Fan	Input power	W	42	42	44	44	55
Heat exchanger	Corrosion protection		Hydrophilic coating				
Rated air-flow		m^3/h	811/893/975/1055/1117/1195/1264	1034/1087/1154/1239/1365/1477/1596	1034/1087/1154/1239/1365/1477/1596	1034/1087/1154/1239/1365/1477/1596	1224/1289/1351/1426/1517/1622/1727
Sound level (lowest-highest) (*3)		dB(A)	27 - 37	28 - 38	28 - 38	28 - 38	29 - 40
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)		dB(A)	35/36/38/40/42/44/46	36/37/39/41/43/45/47	36/37/39/41/43/45/47	36/37/39/41/43/45/47	35/36/38/45/46/48/50
Unit dimensions	Net dimensions (width x height x depth)	mm	904×230×840	904×300×840	904×300×840	904×300×840	904×300×840
	Transport dimensions (width x height x depth)	mm	955×260×955	955×330×955	955×330×955	955×330×955	955×330×955
	Net/gross weight	kg	23.2/27.6	28.4/33.8	28.4/33.8	28.4/33.8	28.4/33.8
Panel	Net dimensions (width x height x depth)	mm	950×54.5×950	950×54.5×950	950×54.5×950	950×54.5×950	950×54.5×950
	Transport dimensions (width x height x depth)	mm	1035×90×1035	1035×90×1035	1035×90×1035	1035×90×1035	1035×90×1035
	Net/gross weight	kg	5/8	5/8	5/8	5/8	5/8
Refrigerant			R410A				
Refrigerant flow control			Electronic expansion valve				
Piping	Liquid	mm	Ø9.53	Ø9.53	Ø9.53	Ø9.53	Ø9.53
	Gas	mm	Ø15.9	Ø15.9	Ø15.9	Ø15.9	Ø15.9
Condensate drain		mm	Ø32	Ø32	Ø32	Ø32	Ø32
Cables	Power supply	mm^2	3×1.5				
	Transmission	mm^2	3×0.75 shielded				

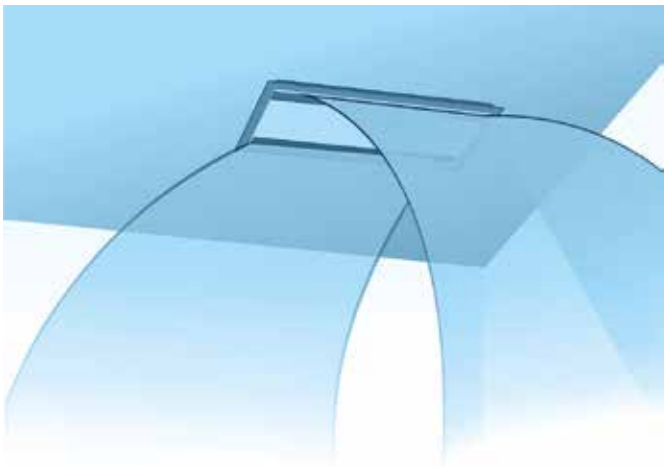
Notes:
Unit rated capacity is based on the following conditions:
(*1) Cooling: indoor temperature 27°C DB/19°C WB; outdoor temperature 35°C DB/24°C WB
(*2) Heating: indoor temperature 20°C DB/15°C WB; outdoor temperature 7°C DB/6°C WB
Refrigerant piping length measured for the liquid side 8 m. Height difference 0 m.
DB - dry bulb. WB - wet bulb
(*3) Sound pressure level measured in an anechoic chamber
(*4) Sound pressure level measured in an semi-anechoic chamber

2nd generation indoor units

2-way

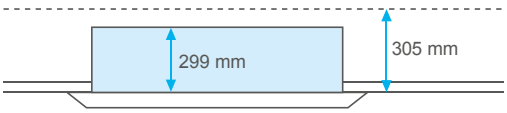
Long distance

Long distance air stream ensures even temperature distribution in the whole room.



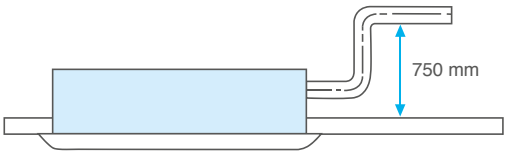
Stylish design

With a stylish appearance and compact size, the unit harmonizes with the room interior. Slim structure (only 299 mm of height) simplifies installation in limited spaces.
Slim intake grille design simplifies maintenance and maintaining cleanness.



Built-in drain pump

A drain pump with head of 750 mm is built-in as a standard.



Quiet operation

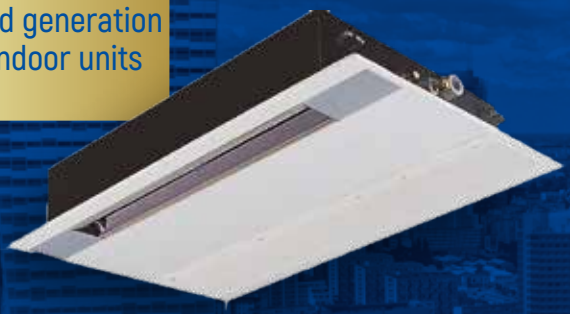
Optimum air ducts shape significantly reduces noise level. Minimum noise level is only 24 dB(A).

Technical specifications

Model			MDV-022Q2/DN1	MDV-028Q2/DN1	MDV-036Q2/DN1	MDV-045Q2/DN1	MDV-056Q2/DN1	MDV-071Q2/DN1
Panel			MBQ2-01	MBQ2-01	MBQ2-01	MBQ2-01	MBQ2-01	MBQ2-01
Power supply		V/phase/Hz	220~240/1/50					
Cooling	Rated capacity (*1)	kW	2.2	2.8	3.6	4.5	5.6	7.1
	Input power	kW	0.035	0.04	0.04	0.05	0.069	0.098
	Input current	A	0.15	0.17	0.17	0.22	0.30	0.43
Heating	Rated capacity (*2)	kW	2.6	3.2	4	5	6.3	8
	Input power	kW	0.035	0.04	0.04	0.05	0.069	0.098
	Input current	A	0.15	0.17	0.17	0.22	0.30	0.43
Heat exchanger	Corrosion protection		Hydrophilic coating					
Rated air-flow		m^3/h	410/449/488/530/571/612/654	410/449/488/530/571/612/654	458/509/554/591/641/679/725	550/592/631/670/731/792/850	670/710/760/800/860/920/970	790/860/940/1010/1050/1090/1120
Sound level (lowest-highest) (*3)		dB(A)	20 - 27	20 - 27	22 - 29	25 - 30	26 -31	28 - 36
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)		dB(A)	24/25/27/29/30/31/33	24/25/27/29/30/31/33	25/27/29/30/32/33/35	30/31/32/34/35/36/37	30/31/33/35/36/37/39	34/36/38/40/41/42/44
Unit dimensions	Net dimensions (width x height x depth)	mm	1172×299×591	1172×299×591	1172×299×591	1172×299×591	1172×299×591	1172×299×591
	Transport dimensions (width x height x depth)	mm	1355×400×675	1355×400×675	1355×400×675	1355×400×675	1355×400×675	1355×400×675
	Net/gross weight	kg	33.5/42.0	33.5/42.0	33.5/42.0	35.0/43.5	35.0/43.5	35.0/43.5
Panel	Net dimensions (width x height x depth)	mm	1430×53×680	1430×53×680	1430×53×680	1430×53×680	1430×53×680	1430×53×680
	Transport dimensions (width x height x depth)	mm	1525×130×765	1525×130×765	1525×130×765	1525×130×765	1525×130×765	1525×130×765
	Net/gross weight	kg	10.5/15	10.5/15	10.5/15	10.5/15	10.5/15	10.5/15
Refrigerant			R410A					
Refrigerant flow control		type	Electronic expansion valve					
Piping	Liquid	mm	Ø6.35	Ø6.35	Ø6.35	Ø6.35	Ø9.53	Ø9.53
	Gas	mm	Ø12.7	Ø12.7	Ø12.7	Ø12.7	Ø15.9	Ø15.9
Condensate drain		mm	Ø32	Ø32	Ø32	Ø32	Ø32	Ø32
Cables	Power supply	mm^2	3×1.5					
	Transmission	mm^2	3×0.75 shielded					

Notes:
Unit rated capacity is based on the following conditions:
(*1) Cooling: indoor temperature 27°C DB/19°C WB; outdoor temperature 35°C DB/24°C WB
(*2) Heating: indoor temperature 20°C DB/15°C WB; outdoor temperature 7°C DB/6°C WB
Refrigerant piping length measured for the liquid side 8 m. Height difference 0 m.
DB - dry bulb. WB - wet bulb
(*3) Sound pressure level measured in an anechoic chamber
(*4) Sound pressure level measured in an semi-anechoic chamber

2nd generation indoor units



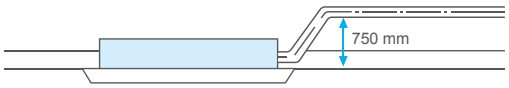
1-way

Only 153 mm of height

Optimal shape of the air ducts significantly reduces noise level.

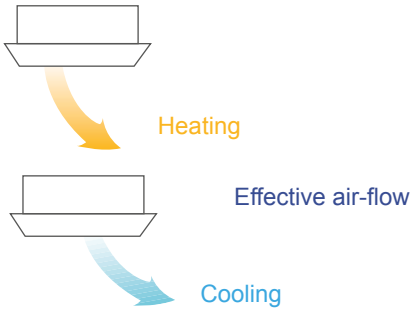
Built-in drain pump

A drain pump with head of 750 mm is built-in as a standard.



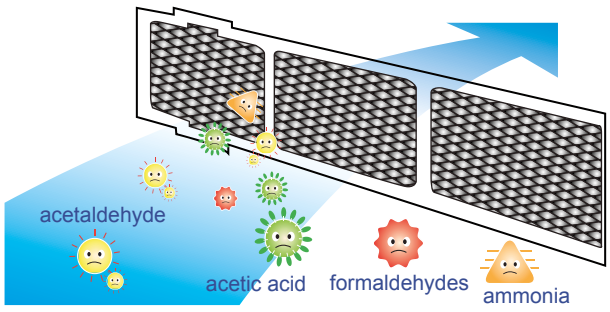
Auto Swing

Auto swing mechanism guarantees even air and temperature distribution in the room.



Air filters

Special enzyme filtration technology removes bacteria, smoke and pollens from the air. This makes the room air more natural and healthier.



Technical specifications

Model			MDV-018Q1/DN1	MDV-022Q1/DN1	MDV-028Q1/DN1	MDV-036Q1/DN1
Panel			MBQ1-02D	MBQ1-02D	MBQ1-02D	MBQ1-02D
Power supply		V/phase/Hz	220~240/1/50			
Cooling	Rated capacity (*1)	kW	1.8	2.2	2.8	3.6
	Input power	kW	0.025	0.025	0.03	0.03
	Input current	A	0.11	0.11	0.13	0.13
Heating	Rated capacity (*2)	kW	2.2	2.6	3.2	4.0
	Input power	kW	0.025	0.025	0.03	0.03
	Input current	A	0.11	0.11	0.13	0.13
Heat exchanger	Corrosion protection		Hydrophilic coating			
Rated air-flow		m^3/h	275/312/360/404/448/482/523	275/312/360/404/448/482/523	315/364/420/456/492/531/573	315/364/420/456/492/531/573
Sound level (lowest-highest) (*3)		dB(A)	22 - 27	22 - 27	24 - 30	24 - 30
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)		dB(A)	30/31/32/34/35/36/37	30/31/32/34/35/36/37	34/35/35/36/37/38/39	34/35/35/36/37/38/39
Unit dimensions	Net dimensions (width x height x depth)	mm	1054×153×425	1054×153×425	1054×153×425	1054×153×425
	Transport dimensions (width x height x depth)	mm	1155×245×490	1155×245×490	1155×245×490	1155×245×490
	Net/gross weight	kg	11.8/15.3	11.8/15.3	12.3/15.8	12.3/15.8
Panel	Net dimensions (width x height x depth)	mm	1180×25×465	1180×25×465	1180×25×465	1180×25×465
	Transport dimensions (width x height x depth)	mm	1232×107×517	1232×107×517	1232×107×517	1232×107×517
	Net/gross weight	kg	3.5/5.2	3.5/5.2	3.5/5.2	3.5/5.2
Refrigerant			R410A			
Refrigerant flow control		type	Electronic expansion valve			
Piping	Liquid	mm	Ø6.35	Ø6.35	Ø6.35	Ø6.35
	Gas	mm	Ø12.7	Ø12.7	Ø12.7	Ø12.7
Condensate drain		mm	Ø25			
Cables	Power supply	mm^2	3×1.5			
	Transmission	mm^2	3×0.75 shielded			

Model			MDV-045Q1/DN1	MDV-056Q1/DN1	MDV-071Q1/DN1
Panel			MBQ1-01D	MBQ1-01D	MBQ1-01D
Power supply		V/phase/Hz	220~240/1/50		
Cooling	Rated capacity (*1)	kW	4.5	5.6	7.1
	Input power	kW	0.04	0.048	0.06
	Input current	A	0.17	0.21	0.26
Heating	Rated capacity (*2)	kW	5.0	6.3	8.0
	Input power	kW	0.04	0.048	0.06
	Input current	A	0.17	0.21	0.26
Heat exchanger	Corrosion protection		Hydrophilic coating		
Rated air-flow		m^3/h	476/510/556/600/638/662/693	549/589/643/688/728/763/792	592/637/689/749/815/873/933
Sound level (lowest-highest) (*3)		dB(A)	25 - 32	26 - 33	27 - 34
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)		dB(A)	35/36/37/38/39/40/41	36/37/38/39/40/41/42	37/48/39/41/42/43/44
Unit dimensions	Net dimensions (width x height x depth)	mm	1275×189×450	1275×189×450	1275×189×450
	Transport dimensions (width x height x depth)	mm	1370×295×505	1370×295×505	1370×295×505
	Net/gross weight	kg	16.1/20.4	16.4/20.7	17.6/22.4
Panel	Net dimensions (width x height x depth)	mm	1350×25×505	1350×25×505	1350×25×505
	Transport dimensions (width x height x depth)	mm	1410×95×560	1410×95×560	1410×95×560
	Net/gross weight	kg	4.0/5.4	4.0/5.4	4.0/5.4
Refrigerant			R410A		
Refrigerant flow control		type	Electronic expansion valve		
Piping	Liquid	mm	Ø6.35	Ø12.7	Ø12.7
	Gas	mm	Ø12.7	Ø15.9	Ø15.9
Condensate drain		mm	Ø25		
Cables	Power supply	mm^2	3×1.5		
	Transmission	mm^2	3×0.75 shielded		

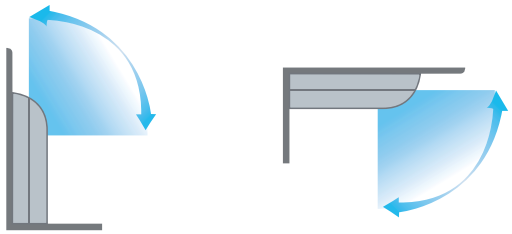
Notes:
Unit rated capacity is based on the following conditions:
(*1) Cooling: indoor temperature 27°C DB/19°C WB; outdoor temperature 35°C DB/24°C WB
(*2) Heating: indoor temperature 20°C DB/15°C WB; outdoor temperature 7°C DB/6°C WB
Refrigerant piping length measured for the liquid side 8 m. Height difference 0 m.
DB - dry bulb. WB - wet bulb
(*3) Sound pressure level measured in an anechoic chamber
(*4) Sound pressure level measured in an semi-anechoic chamber

2nd generation indoor units

Ceiling-floor

Convenient installation

Easy and convenient installation below the ceiling even in narrow spaces in corners (when, for instance, it is impossible to install the unit in the central part of the ceiling due to such obstacles as lighting etc.).



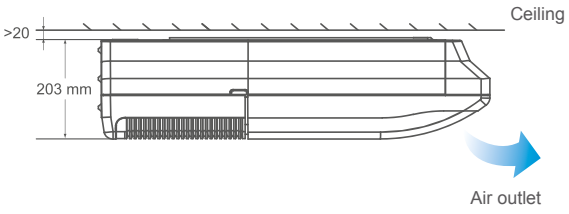
Possible to install vertically against the wall or horizontally below the ceiling

Panel with LED display

A clear operating panel with LED display informs about operation status, and in case of failure, helps to read the error code.

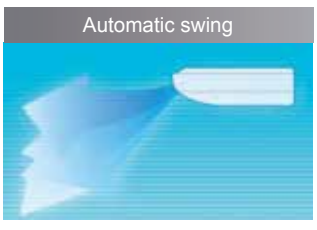
Key features

- Slim
- Elegant appearance
- Relatively low weight
- Quick installation
- Low noise level



Auto swing function and wide air-flow angle

Units are equipped with the automatic vertical and horizontal swing function, what ensures even temperature distribution in a room. Three fan speeds are available. Multi blade fan ensures even air-flow without unnecessary whirls and turbulences.



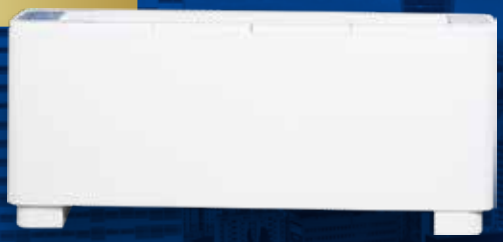
Technical specifications

Model			MDV-036DL/DN1	MDV-045DL/DN1	MDV-056DL/DN1	MDV-071DL/DN1
Power supply		V/phase/Hz	220~240/1/50			
Cooling	Rated capacity (*1)	kW	3.6	4.5	5.6	7.1
	Input power	kW	0.049	0.115	0.115	0.115
	Input current	A	0.21	0.50	0.50	0.50
Heating	Rated capacity (*2)	kW	4.0	5.0	6.3	8.0
	Input power	kW	0.049	0.115	0.115	0.115
	Input current	A	0.21	0.50	0.50	0.50
Rated air-flow		m^3/h	420/440/460/480/ 500/525/550	420/440/460/480/ 500/525/550	720/755/792/830/ 860/895/930	720/755/792/830/ 860/895/930
Sound level (lowest-highest) (*3)		dB(A)	25 - 31	25 - 31	27 - 33	27 - 33
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)		dB(A)	36/36/37/38/38/39/40	36/36/37/38/38/39/40	38/38/39/41/41/42/43	38/38/39/41/41/42/43
Unit dimensions	Net dimensions (width x height x depth)	mm	990×660×203	990×660×203	990×660×203	990×660×203
	Transport dimensions (width x height x depth)	mm	1089×744×296	1089×744×296	1089×744×296	1089×744×296
	Net/gross weight	kg	26.0/32.0	26.0/32.0	28.0/34.0	28.0/34.0
Refrigerant			R410A			
Refrigerant flow control		type	Electronic expansion valve			
Piping	Liquid	mm	Ø6.35	Ø6.35	Ø9.53	Ø9.53
	Gas	mm	Ø12.7	Ø12.7	Ø15.9	Ø15.9
Condensate drain		mm	Ø16	Ø16	Ø16	Ø16
Cables	Power supply	mm^2	3×1.5			
	Transmission	mm^2	3×0.75 shielded			

Model			MDV-080DL/DN1	MDV-090DL/DN1	MDV-112DL/DN1	MDV-140DL/DN1
Power supply		V/phase/Hz	220~240/1/50			
Cooling	Rated capacity (*1)	kW	8.0	9.0	11.2	14.0
	Input power	kW	0.13	0.13	0.18	0.18
	Input current	A	0.57	0.57	0.78	0.78
Heating	Rated capacity (*2)	kW	9.0	10.0	12.5	15.0
	Input power	kW	0.13	0.13	0.18	0.18
	Input current	A	0.57	0.57	0.78	0.78
Rated air-flow		m^3/h	1050/1085/1130/1170/ 1210/1245/1280	1050/1085/1130/1170/ 1210/1245/1280	1580/1620/1660/1700/ 1765/1830/1890	1580/1620/1660/1700/ 1765/1830/1890
Sound level (lowest-highest) (*3)		dB(A)	30 - 36	30 - 36	32 - 37	32 - 37
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)		dB(A)	40/41/42/43/43/44/45	40/41/42/43/43/44/45	42/43/44/45/45/46/47	42/43/44/45/45/46/47
Unit dimensions	Net dimensions (width x height x depth)	mm	1280×660×203	1280×660×203	1670×680×244	1670×680×244
	Transport dimensions (width x height x depth)	mm	1379×744×296	1379×744×296	1915×760×330	1915×760×330
	Net/gross weight	kg	35.0/41.0	35.0/41.0	48.0/58.0	48.0/58.0
Refrigerant			R410A			
Refrigerant flow control		type	Electronic expansion valve			
Piping	Liquid	mm	Ø9.53	Ø9.53	Ø9.53	Ø9.53
	Gas	mm	Ø15.9	Ø15.9	Ø15.9	Ø15.9
Condensate drain		mm	Ø16	Ø16	Ø16	Ø16
Cables	Power supply	mm^2	3×1.5			
	Transmission	mm^2	3×0.75 shielded			

Notes:
Unit rated capacity is based on the following conditions:
(*1) Cooling: indoor temperature 27°C DB/19°C WB; outdoor temperature 35°C DB/24°C WB
(*2) Heating: indoor temperature 20°C DB/15°C WB; outdoor temperature 7°C DB/6°C WB
Refrigerant piping length measured for the liquid side 8 m. Height difference 0 m.
DB - dry bulb. WB - wet bulb
(*3) Sound pressure level measured in an anechoic chamber
(*4) Sound pressure level measured in an semi-anechoic chamber

2nd generation indoor units



Standing

High versatility

Units can be mounted on wall or floor, extremely simple access to the unit interior simplifies cleaning and maintenance.

Simple maintenance

The proper structure of the unit facilitates access to the filter (supplied as a standard). Stylish and elegant design perfectly harmonizes with every modern room interior design. Each metal part is galvanically covered with anti-corrosion coating, which significantly extends the service life of the unit.

Auto swing function and wide air-flow angle

The standing unit can be flush-mounted and therefore it perfectly harmonizes with room interior design. Depth of 212 mm additionally simplifies installation. Low noise level and efficient operation create a perfect comfort level in the room.

Standing unit for the flush-mount

Model F3

Front air inlet

Model F4

Bottom air inlet

Model F5

Technical specifications

Model			MDV-022F3/DN1	MDV-028F3/DN1	MDV-036F3/DN1	MDV-045F3/DN1
Power supply		V/phase/Hz	220~240/1/50			
Cooling	Rated capacity (*1)	kW	2.2	2.8	3.6	4.5
	Input power	kW	0.04	0.045	0.055	0.06
	Input current	A	0.17	0.20	0.24	0.26
Heating	Rated capacity (*2)	kW	2.4	3.2	4.0	5.0
	Input power	kW	0.04	0.045	0.055	0.06
	Input current	A	0.17	0.20	0.24	0.26
Heat exchanger	Corrosion protection		Hydrophilic coating			
Rated air-flow		m^3/h	400/418/439/456/478/504/530	421/443/462/485/515/540/569	375/420/473/522/557/591/624	440/475/501/542/583/625/660
Sound level (lowest-highest) (*3)			23 - 27	23 - 27	24 - 28	24 - 28
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)			29/30/31/33/34/35/36	29/30/31/33/34/35/36	30/31/32/34/35/36/37	30/31/32/34/35/36/37
Dimensions	Net dimensions (width x height x depth)	mm	840×545×212	840×545×212	1036×639×305	1036×639×305
	Transport dimensions (width x height x depth)	mm	925×639×305	925×639×305	1125×639×305	1125×639×305
	Net/gross weight	kg	21.0/25.5	21.0/25.5	25.5/30.5	25.5/30.5
Refrigerant			R410A			
Refrigerant flow control			Electronic expansion valve			
Piping	Gas	mm	Ø6.35	Ø6.35	Ø6.35	Ø6.35
	Liquid	mm	Ø12.7	Ø12.7	Ø12.7	Ø12.7
Condensate drain		mm	Ø16	Ø16	Ø16	Ø16
Cables	Power supply	mm^2	3×1.5			
	Transmission	mm^2	3×0.75 shielded			

Model			MDV-056F3/DN1	MDV-071F3/DN1	MDV-080F3/DN1
Power supply		V/phase/Hz	220~240/1/50		
Cooling	Rated capacity (*1)	kW	5.6	7.1	8.0
	Input power	kW	0.088	0.11	0.13
	Input current	A	0.38	0.48	0.57
Heating	Rated capacity (*2)	kW	6.3	8.0	9.0
	Input power	kW	0.088	0.11	0.13
	Input current	A	0.38	0.48	0.57
Heat exchanger	Corrosion protection		Hydrophilic coating		
Rated air-flow		m^3/h	830/886/925/970/1028/1094/1150	830/886/925/970/1028/1094/1150	870/955/1033/1100/1205/1290/1380
Sound level (lowest-highest) (*3)			25 - 31	25 - 31	28 - 35
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)			31/32/33/35/37/39/41	31/32/33/35/37/39/41	33/35/37/39/40/42/44
Dimensions	Net dimensions (width x height x depth)	mm	1340×545×212	1340×545×212	1340×545×212
	Transport dimensions (width x height x depth)	mm	1425×639×305	1425×639×305	1425×639×305
	Net/gross weight	kg	30.5/35.5	30.5/35.5	32.0/37.0
Refrigerant			R410A		
Refrigerant flow control			Electronic expansion valve		
Piping	Gas	mm	Ø9.53	Ø9.53	Ø9.53
	Liquid	mm	Ø15.9	Ø15.9	Ø15.9
Condensate drain		mm	Ø16	Ø16	Ø16
Cables	Power supply	mm^2	3×1.5		
	Transmission	mm^2	3×0.75 shielded		

Notes:
Unit rated capacity is based on the following conditions:
(*1) Cooling: indoor temperature 27°C DB/19°C WB; outdoor temperature 35°C DB/24°C WB
(*2) Heating: indoor temperature 20°C DB/15°C WB; outdoor temperature 7°C DB/6°C WB
Refrigerant piping length measured for the liquid side 8 m. Height difference 0 m.
DB - dry bulb. WB - wet bulb
(*3) Sound pressure level measured in an anechoic chamber
(*4) Sound pressure level measured in an semi-anechoic chamber

Technical specifications

Model			MDV-022F4/DN1	MDV-028F4/DN1	MDV-036F4/DN1	MDV-045F4/DN1
Power supply		V/phase/Hz	220~240/1/50			
Cooling	Rated capacity (*1)	kW	2,2	2,8	3,6	4,5
	Input power	kW	0,04	0,045	0,055	0,06
	Input current	A	0,17	0,20	0,24	0,26
Heating	Rated capacity (*2)	kW	2,4	3,2	4,0	5,0
	Input power	kW	0,04	0,045	0,055	0,06
	Input current	A	0,17	0,20	0,24	0,26
Heat exchanger	Corrosion protection		Hydrophilic coating			
Rated air-flow		m^3/h	400/418/439/456/478/504/530	421/443/462/485/515/540/569	375/420/473/522/557/591/624	440/475/501/542/583/625/660
Sound level (lowest-highest) (*3)			23 - 27	23 - 27	24 - 28	24 - 28
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)			29/30/31/33/34/35/36	29/30/31/33/34/35/36	30/31/32/34/35/36/37	30/31/32/34/35/36/37
Dimensions	Net dimensions (width x height x depth)	mm	1000×596×225	1000×596×225	1200×596×225	1200×596×225
	Transport dimensions (width x height x depth)	mm	1089×683×312	1089×683×312	1289×683×312	1289×683×312
	Net/gross weight	kg	28.0/33.0	28.0/33.0	33.0/40.7	33.0/40.7
Refrigerant			R410A			
Refrigerant flow control			Electronic expansion valve			
Piping	Gas	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35
	Liquid	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7
Condensate drain		mm	Φ16	Φ16	Φ16	Φ16
Cables	Power supply	mm^2	3×1.5			
	Transmission	mm^2	3×0.75 shielded			

Model			MDV-056F4/DN1	MDV-071F4/DN1	MDV-080F4/DN1
Power supply		V/phase/Hz	220~240/1/50		
Cooling	Rated capacity (*1)	kW	5,6	7,1	8,0
	Input power	kW	0,088	0,11	0,13
	Input current	A	0,38	0,48	0,57
Heating	Rated capacity (*2)	kW	6,3	8,0	9,0
	Input power	kW	0,088	0,11	0,13
	Input current	A	0,38	0,48	0,57
Heat exchanger	Corrosion protection		Hydrophilic coating		
Rated air-flow		m^3/h	830/886/925/970/1028/1094/1150	870/955/1033/1100/1205/1290/1380	870/955/1033/1100/1205/1290/1380
Sound level (lowest-highest) (*3)			25 - 31	25 - 31	28 - 35
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)			31/32/33/35/37/39/41	33/35/37/39/40/42/44	33/35/37/39/40/42/44
Dimensions	Net dimensions (width x height x depth)	mm	1500×596×225	1500×596×225	1500×596×225
	Transport dimensions (width x height x depth)	mm	1589×683×312	1589×683×312	1589×683×312
	Net/gross weight	kg	40.4/48.6	40.4/48.6	41.5/49.5
Refrigerant			R410A		
Refrigerant flow control			Electronic expansion valve		
Piping	Gas	mm	Ø9.53	Ø9.53	Ø9.53
	Liquid	mm	Ø15.9	Ø15.9	Ø15.9
Condensate drain		mm	Ø16	Ø16	Ø16
Cables	Power supply	mm^2	3×1.5		
	Transmission	mm^2	3×0.75 shielded		

Notes:
Unit rated capacity is based on the following conditions:
(*1) Cooling: indoor temperature 27°C DB/19°C WB; outdoor temperature 35°C DB/24°C WB
(*2) Heating: indoor temperature 20°C DB/15°C WB; outdoor temperature 7°C DB/6°C WB
Refrigerant piping length measured for the liquid side 8 m. Height difference 0 m.
DB - dry bulb. WB - wet bulb
(*3) Sound pressure level measured in an anechoic chamber
(*4) Sound pressure level measured in an semi-anechoic chamber

Technical specifications

Model			MDV-022F5/DN1	MDV-028F5/DN1	MDV-036F5/DN1	MDV-045F5/DN1
Power supply		V/phase/Hz	220~240/1/50			
Cooling	Rated capacity (*1)	kW	2,2	2,8	3,6	4,5
	Input power	kW	0,04	0,045	0,055	0,06
	Input current	A	0,17	0,20	0,24	0,26
Heating	Rated capacity (*2)	kW	2,4	3,2	4,0	5,0
	Input power	kW	0,04	0,045	0,055	0,06
	Input current	A	0,17	0,20	0,24	0,26
Heat exchanger	Corrosion protection		Hydrophilic coating			
Rated air-flow		m^3/h	400/418/439/456/478/504/530	421/443/462/485/515/540/569	375/420/473/522/557/591/624	440/475/501/542/583/625/660
Sound level (lowest-highest) (*3)			23 - 27	23 - 27	24 - 28	24 - 28
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)			29/30/31/33/34/35/36	29/30/31/33/34/35/36	30/31/32/34/35/36/37	30/31/32/34/35/36/37
Dimensions	Net dimensions (width x height x depth)	mm	1000×677×220	1000×677×220	1200×677×220	1200×677×220
	Transport dimensions (width x height x depth)	mm	1182×683×312	1182×683×312	1382×683×312	1382×683×312
	Net/gross weight	kg	28.0/35.0	28.0/35.0	33.0/40.7	33.0/40.7
Refrigerant			R410A			
Refrigerant flow control			Electronic expansion valve			
Piping	Gas	mm	Ø6.35	Ø6.35	Ø6.35	Ø6.35
	Liquid	mm	Ø12.7	Ø12.7	Ø12.7	Ø12.7
Condensate drain		mm	Ø16	Ø16	Ø16	Ø16
Cables	Power supply	mm^2	3×1.5			
	Transmission	mm^2	3×0.75 shielded			

Model			MDV-056F5/DN1	MDV-071F5/DN1	MDV-080F5/DN1
Power supply		V/phase/Hz	220~240/1/50		
Cooling	Rated capacity (*1)	kW	5,6	7,1	8,0
	Input power	kW	0,088	0,11	0,13
	Input current	A	0,38	0,48	0,57
Heating	Rated capacity (*2)	kW	6,3	8,0	9,0
	Input power	kW	0,088	0,11	0,13
	Input current	A	0,38	0,48	0,57
Heat exchanger	Corrosion protection		Hydrophilic coating		
Rated air-flow		m^3/h	830/886/925/970/1028/1094/1150	870/955/1033/1100/1205/1290/1380	870/955/1033/1100/1205/1290/1380
Sound level (lowest-highest) (*3)			25 - 31	25 - 31	28 - 35
Sound pressure level (speed 1/2/3/4/5/6/7) (*4)			31/32/33/35/37/39/41	33/35/37/39/40/42/44	33/35/37/39/40/42/44
Dimensions	Net dimensions (width x height x depth)	mm	1500×677×220	1500×677×220	1500×677×220
	Transport dimensions (width x height x depth)	mm	1682×683×312	1682×683×312	1682×683×312
	Net/gross weight	kg	40.4/48.6	40.4/48.6	41.5/49.5
Refrigerant			R410A		
Refrigerant flow control			Electronic expansion valve		
Piping	Gas	mm	Ø9.53	Ø9.53	Ø9.53
	Liquid	mm	Ø15.9	Ø15.9	Ø15.9
Condensate drain		mm	Ø16	Ø16	Ø16
Cables	Power supply	mm^2	3×1.5		
	Transmission	mm^2	3×0.75 shielded		

Notes:
Unit rated capacity is based on the following conditions:
(*1) Cooling: indoor temperature 27°C DB/19°C WB; outdoor temperature 35°C DB/24°C WB
(*2) Heating: indoor temperature 20°C DB/15°C WB; outdoor temperature 7°C DB/6°C WB
Refrigerant piping length measured for the liquid side 8 m. Height difference 0 m.
DB - dry bulb. WB - wet bulb
(*3) Sound pressure level measured in an anechoic chamber
(*4) Sound pressure level measured in an semi-anechoic chamber

VRF CONTROL SYSTEM

Type		Wireless remote controllers	Wired controllers		Central controllers	
Model		RM05B	WDC-86E/KD	WDC-120G/WK	CCM180A/WS	MD-CCM15
Max. no. of indoor units		1	16	16	64	64
Air-conditioning control functions	On/Off	●	●	●	●	●
	Operation mode setting	●	●	●	●	●
	Fan speed	●	●	●	●	●
	Temperature settings	●	●	●	●	●
	Vertical swing	●	–	●	–	–
	Horizontal swing	●	●	●	●	●
	Economy operation mode	●	●	●	–	–
	Group control	–	–	●	●	●
	Key lock	●	–	●	●	●
	Operation mode lock	–	–	●	●	–
	7 fan speeds	–	●	●	–	–
Display	Background light	●	●	●	●	●
	Individual controllers lock	–	●	●	●	●
	Error codes	–	●	●	●	●
	Room temperature	–	●	●	●	●
Clock	Time	–	–	●	●	●
	Timer	●	●	●	–	–
	Weekly timer	–	–	●	●	●
Additional functions	FOLLOW ME function	–	●	●	–	–
	Address setting	●	●	●	–	–
	Control via the Internet	–	–	–	–	●
	Filter cleaning reminder	–	●	●	–	–

● Function available
– Function unavailable

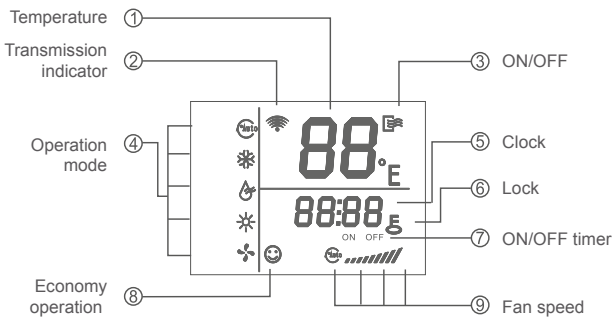
RM05B

FUNCTIONS

- On / Off
- Operation mode switching
- Fan speed switching
- Temperature setting
- Vertical / horizontal louver adjustment / swing
- Clock
- Timer
- Mute / display off function
- Backlit screen
- Turbo
- Sleep mode

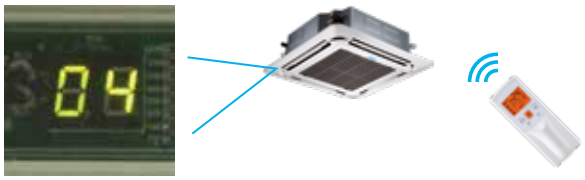
Easy-to-read display

Parameters set by the user are clearly presented on the controller display, so they can be easily adapted to individual needs.



Unit address setting

RM05 controller provides easy programming and checking of indoor unit address.



Specifications

Model	RM05B
Dimensions (width x height x depth) [mm]	150×65×20
Power supply	1.5V(LR03/AAA)×2

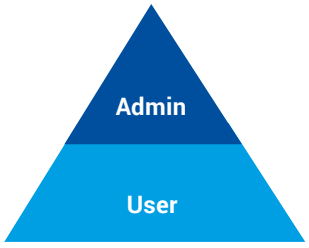
WDC-86E/KD

2-way communication

The wired remote controller can check the system operation parameters thanks to the new two-way communication function. Moreover, it is possible to configure settings that include: static pressure, cold draft prevention, temperature compensation.

2 authorization levels

2 levels of authorization provides users with easy access to control functions and admins with convenient access to the operational parameters.



Setting prolong function

This function is especially designed for users, who work overtime. By pressing the button you can postpone system shutdown by 1 or 2 hours.

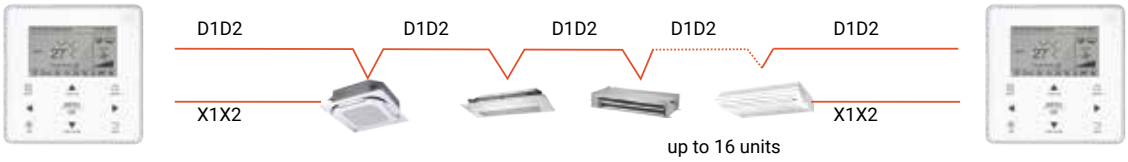
Specifications

Model	WDC-86E/KD
Dimensions (width x height x depth) [mm]	86×86×18
Power supply	DC 18V

WDC-120G/WK

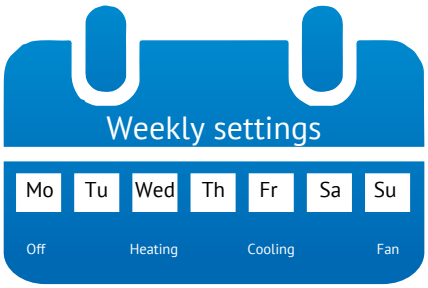
Group control, main and auxiliary settings

Easy control of up to 16 indoor units with one controller. Two controllers can be used simultaneously. Set operation mode can be modified on the second controller. Controllers displays are synchronized and after entering a new setting, both displays are updated.



Weekly timer

The built-in timer is a convenient solution that enables automatic system turning on and off at defined time during the week of operation.



Double temperature setting

In case of double setting, the set temperature changes automatically after modification of the operating mode.

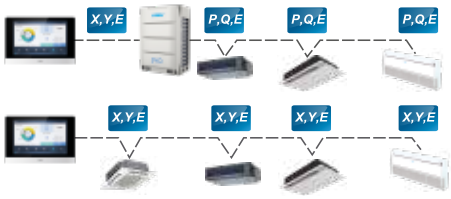
Specifications

Model	WDC-120G/WK
Dimensions (width x height x depth) [mm]	120×120×20
Power supply	DC 18V

CCM-180A/WS

Central remote controller

Multifunctional central controller can control up to 64 indoor units. Total communication cable length can reach even 1200 m. The controller can be connected directly to the indoor units or the “master” outdoor unit, which significantly facilitates installation.
The picture below shows two methods of controller connection.



Weekly timer

User can program up to four changes of air-conditioning operation parameters daily. Available functions are: on/off, operation mode, temperature and fan speed.

Unit operation monitoring

The controller enables to monitor units operation parameters, reading of temperature in each room, reading of error codes and all of this is realized in real time. In its memory, the controller stores the history of errors which occured in any unit, together with the exact event time. The “Help” button triggers a list, which presents en explanation of each error code and thus speeds up troubleshooting.

Control

Central controller enables individual control of single unit and simultaneous control of all indoor units in the system. Additionally, it is possible to create groups from selected air-conditioners and control the whole group.
Turning the whole system on or off can be done with the push of a single button. Feedback signal from the indoor units immediately informs user about the adoption of modified settings.

Touch screen

New CCM180A controller is equipped with a 6.2” colour touch display. The complete menu is available in Polish language.

Specifications

Model	CCM180A
Dimensions (width x height x depth) [mm]	183×124×29
Power supply	198-242V(50/60Hz)

IMM

Advanced control system designed for EVO and ONE series units with capacity up to 49kW

Energy consumption costs division between each tenant

Intelligent MDV Manager (IMM) monitors operation of each particular indoor and outdoor unit, among others their operating time and intensity, and on this basis, it divides the air-conditioning exploitation costs between all the users.

Versatility of applications

Intelligent MDV Manager (IMM) - as a management system, is especially designed to control and monitor all functions of the MDV VRF system. Flexibility and versatility of application depending on different needs, makes it an ideal manager of any building.

- it can manage 4 M-Interface web gates, 64 refrigerant systems, 1024 indoor units and 256 outdoor units from one PC
- web network access
- user-friendly and intuitive interface
- central monitoring and building management
- control lock (each particular controller)
- temperature limits setting
- proportional division of energy consumption
- annual operation schedule
- indication of low load level
- generating operational reports (daily, weekly, monthly)
- displaying errors and warning message
- filter replacement reminder
- emergency stop, alarm signalling

Displaying outdoor unit parameters

- cooperation with Windows 7 64bit and Windows XP 32bit system
- monitoring and control from any place with use of PC computer, phone, tablet
- web network access with use of the most popular search engines: IE, Firefox, Chrome, Safari etc.
- provides remote access through DSL, VPN and etc.
- annual operation schedule
- indication of low load level
- generating operational reports (daily, weekly, monthly)
- displaying errors and warning message
- filter replacement reminder
- emergency stop, alarm signalling

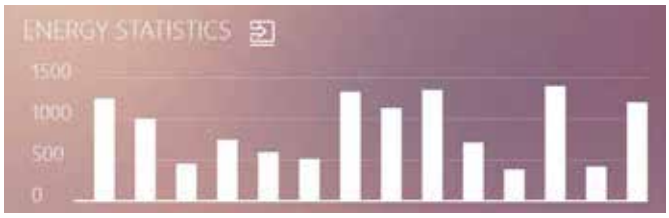
IMMP-BAC, IMMP-S

Versatility of applications

- it can manage 10 gates in the IMMP-M system, 320 refrigerant systems, 2564 indoor units
- temperature setting
- dual temperature set points
- 7-speed fan control
- automatic swing
- 5-step swing
- outdoor unit ECO mode setting
- holiday setting
- schedule management
- present time
- 2 authorization levels
- unit model recognition
- electricity charge distribution
- system diagram
- energy management
- group control
- error codes
- system parameter querying
- report output
- operation setting log
- LAN access
- data backup
- remote signal reception
- choice of language (Polish, English, French, Spanish)

Electricity charge distribution

The IMMPRO uses the patented MDV Calculation Method to estimate the electricity consumption of the outdoor units and then divide it among the indoor units so that the electricity charges can be equitably divided among building occupants.

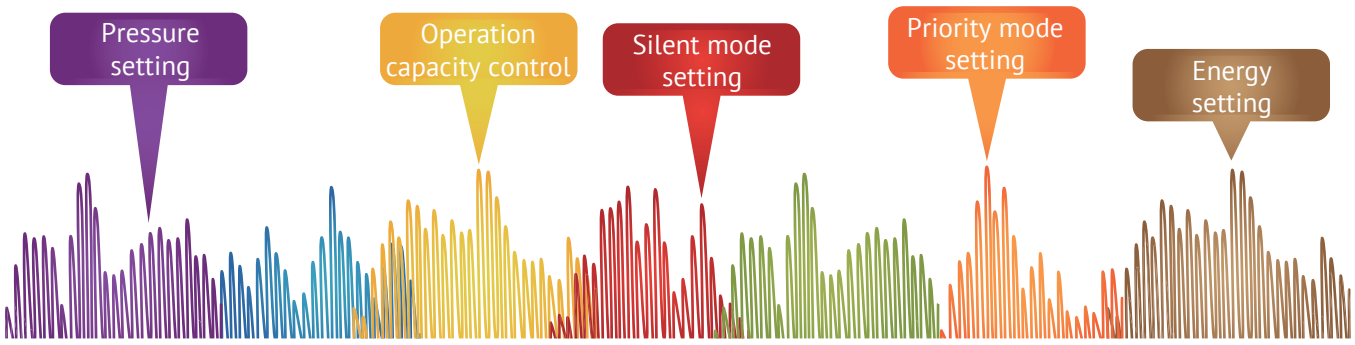


Schedule management

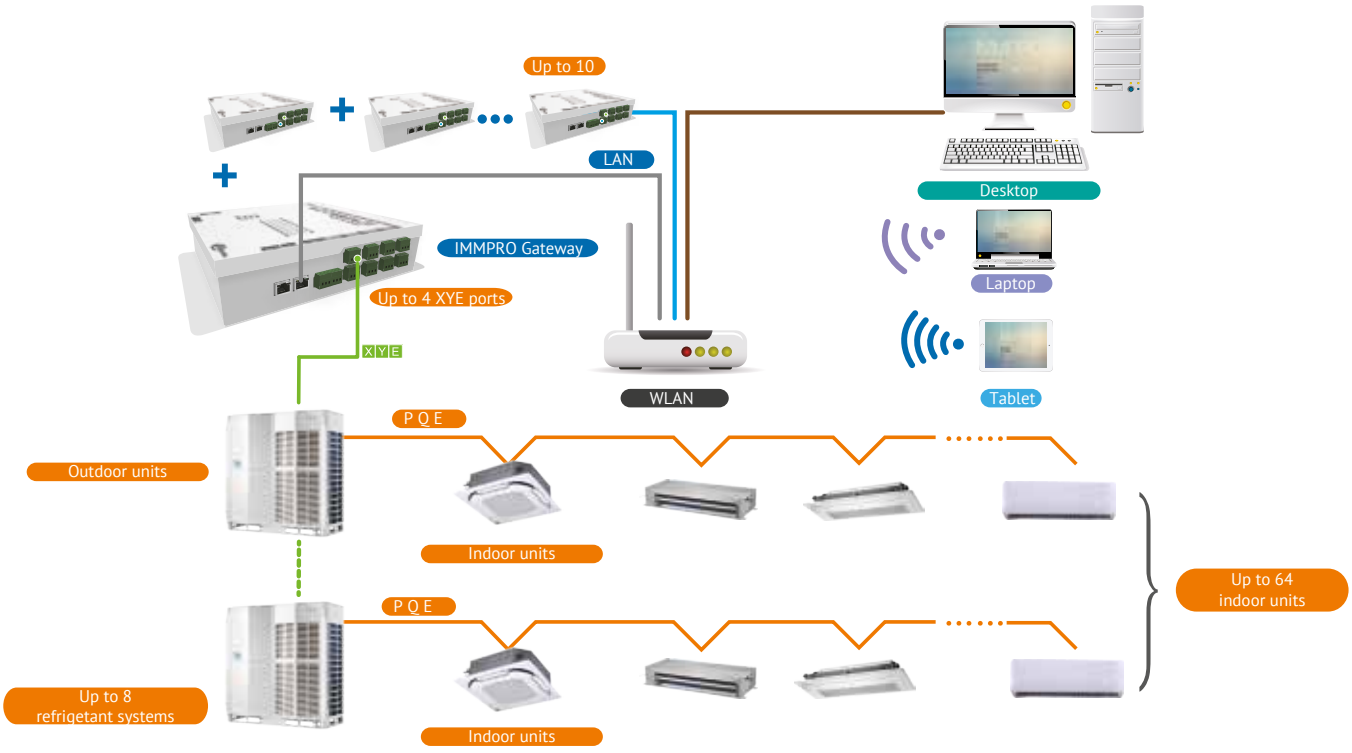
Daily, weekly or annual schedules can be used to set individual settings of the unit such as on/off, operating mode, set temperature, fan speed and swing.

Outdoor unit configuration

Outdoor unit configuration and settings can be monitored and controlled without having to go outdoors.



Schemat systemu



Specifications

Model	IMMP-BAC
Dimensions (width x height x depth) [mm]	319×251×66
Power supply	100-240V(50/60Hz)

MD-CCM15

Diversity of applications

The controller is used to convert data between RS485 and TCP/IP protocols. Access to the VRF system management is performed through the web site. The user can control and monitor air-conditioning system operation through the LAN and WAN network. Access to the air-conditioning system is available through WEB/HTTP/TCP/IP. Remote control with use of a computer, smart-phone, tablet etc.

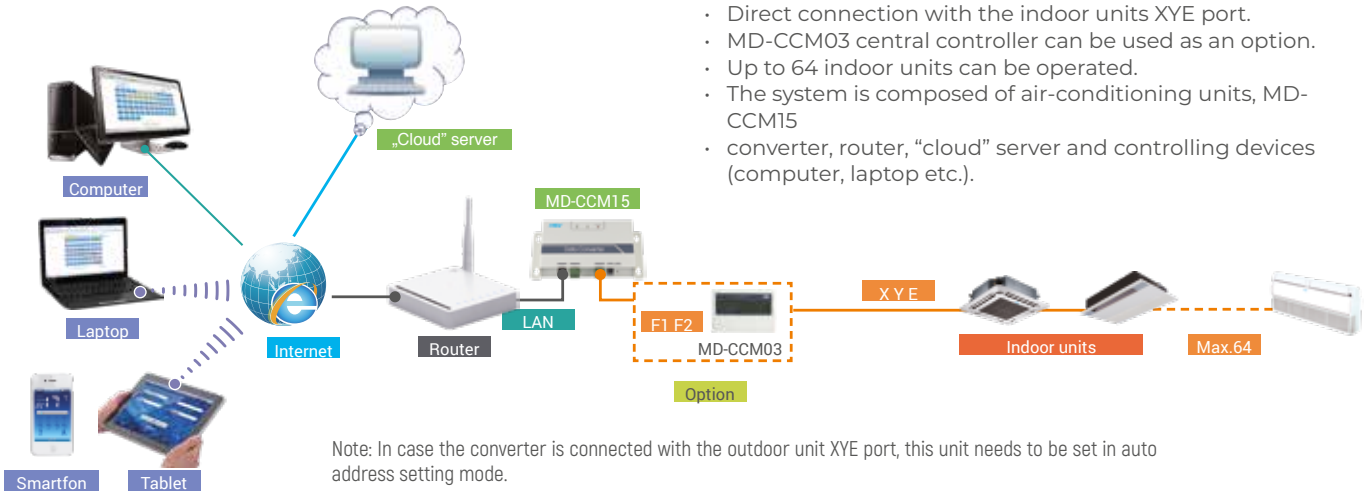
Simple control interface

- Software access through the WEB.
- Simple and user friendly “click and go” interface.
- Individual and group control.
- Icon colours enable easy recognition of the air-conditioners operation mode.
- Full-screen mode and temperature adjustment with a slider available.

Functions available via website

- Control and monitoring of single unit or whole group operational status.
- Weekly timer, individual or group programming.
- Group control of several converters after logging in as a “group user”.
- Error history - simplified service and system troubleshooting owing to the possibility of checking the history of occurred errors.

Network configuration



- Direct connection with the indoor units XYE port.
- MD-CCM03 central controller can be used as an option.
- Up to 64 indoor units can be operated.
- The system is composed of air-conditioning units, MD-CCM15
- converter, router, "cloud" server and controlling devices (computer, laptop etc.).

Note: In case the converter is connected with the outdoor unit XYE port, this unit needs to be set in auto address setting mode.

Weekly timer

- Weekly timer for mobile devices available
- Possibility of setting several time periods daily for a single unit or the whole group
- Functions available for the weekly timer mode: start/stop, operation mode and temperature

Smart control system

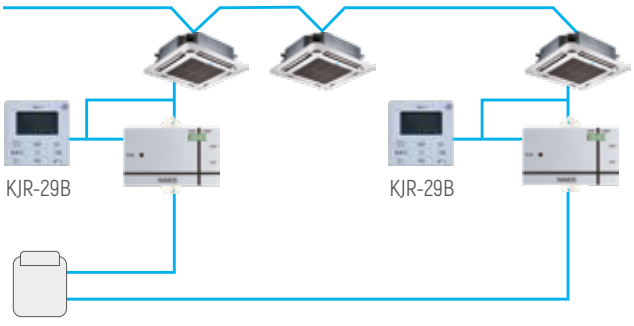
- Remote control of the air-conditioning system with use of a smartphone or tablet.
- Possibility to control and monitor the system operation at any place and time.
- Ability to turn the unit off remotely in order to avoid wasteful consumption of energy.

MD-NIM05B/E · MD-NIM05

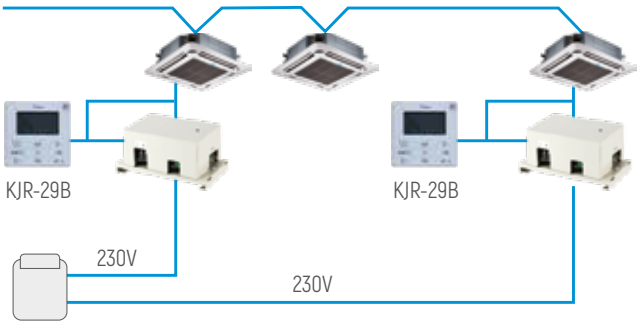
Diversity of applications

- Compatible with wired remote controller
- Low voltage supply - safety and operation stability (version MD-NIM05)
- Built-in auto restart function

Installation example



Model NIM05



Model NIM05B/E

Specifications

Model	MD-NIM05	MD-NIM05B/E
Dimensions (width x height x depth) [mm]	72.8×86×15.5	150×74×88
Power supply	DC 5V	230V

BMS gateways

EVO and ONE systems (up to 49 kW): MD-CCM08, MD-CCM18, LONGW64, KNX1B/16/64.
ONE system (above 49 kW): IMMP-BAC, GW-MOD, GW-LON, GW-KNX

Communication

4 BMS protocols available that support communication with the air-conditioning system: ModBus, BACnet, LonWorks, kNX.

Flexibility of application

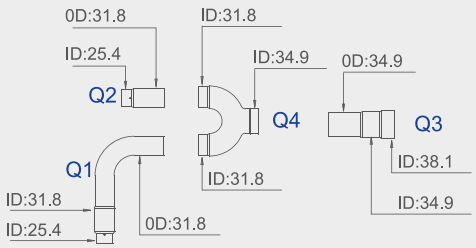
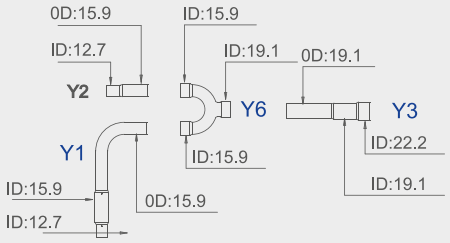
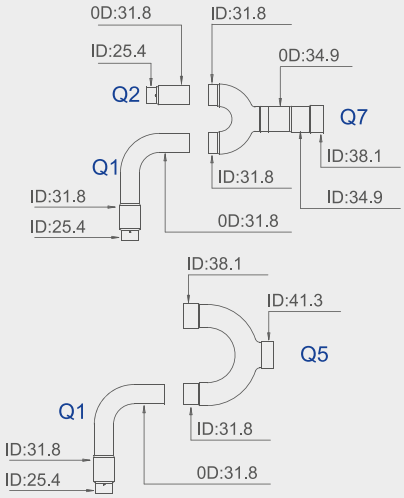
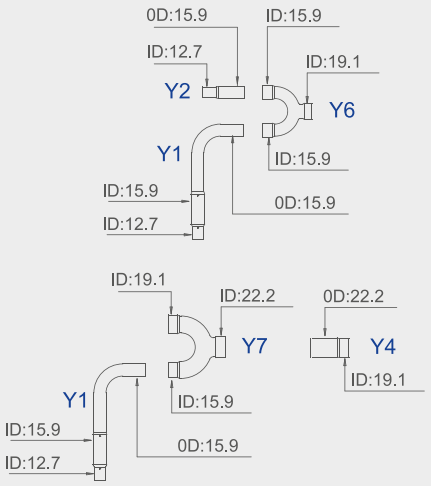
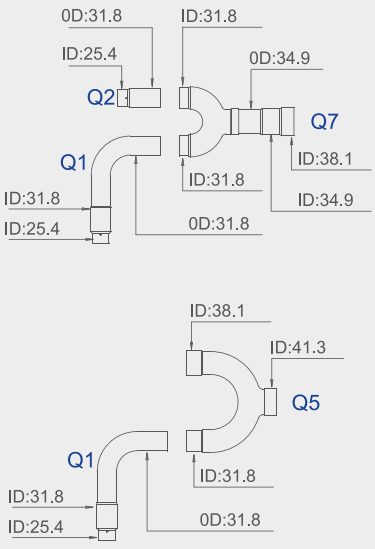
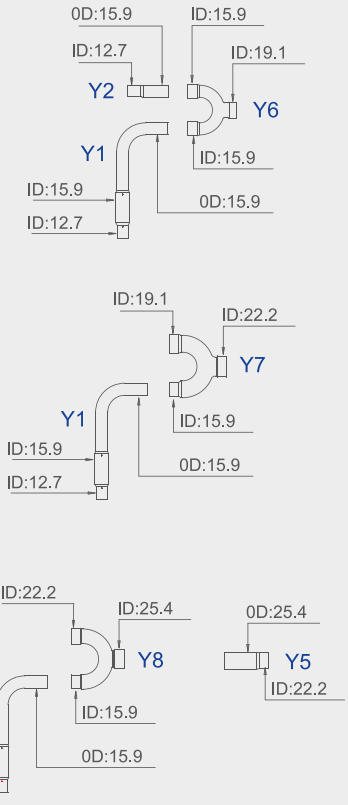
Thanks to the BMS gateways it is possible to build complex system networks, including even thousands of indoor units, operating in hundreds of refrigerant systems – depending on customer's requirements and communication protocol.

Operation monitoring

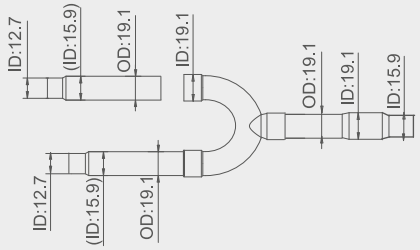
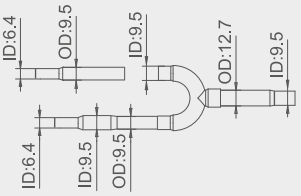
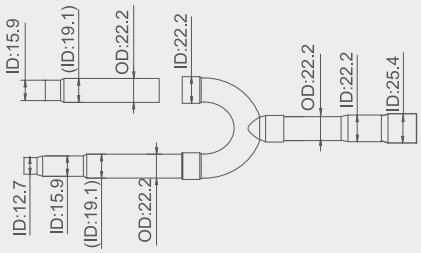
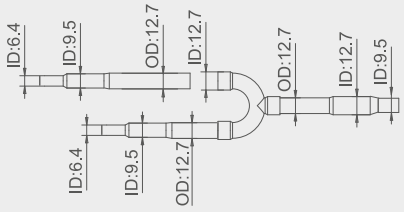
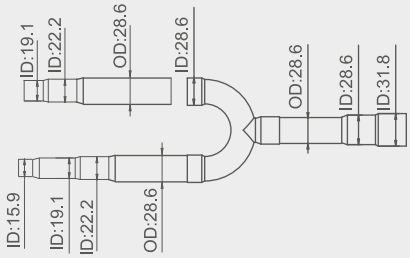
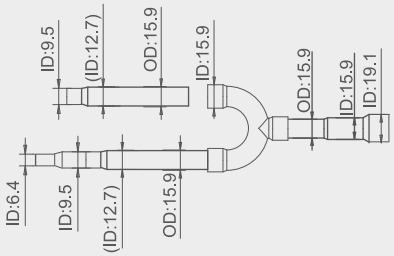
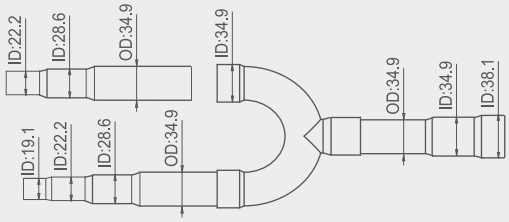
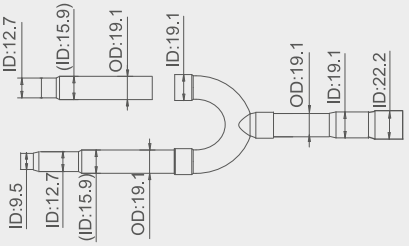
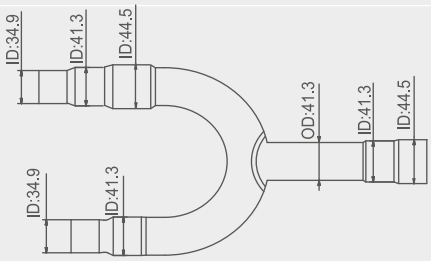
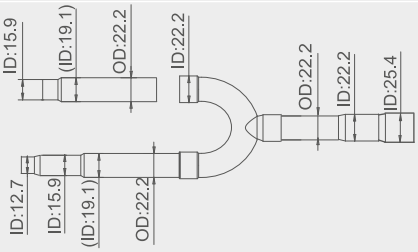
It is possible to control operation parameters in real time. Enables data analysis, reduction of energy consumption and minimising costs, as well as fast detection of abnormalities in system operation.

VRF ACCESSORIES

Outdoor unit branch joint dimensions

Model	Gas side	Liquid side
FQZHW-02N1D		
FQZHW-03N1D		
FQZHW-04N1D		

Indoor unit branch joint dimensions

Model	Gas side	Liquid side
FQZHN-01D		
FQZHN-02D		
FQZHN-03D		
FQZHN-04D		
FQZHN-05D		

aircon
KLIMATYZACJA

MDV General Representative in Poland

The manufacturer reserves the right to make changes concerning units technical specifications at any time. Unit parameters are subject to change without prior notice. The unit contains fluorinated greenhouse gases (R32 GWP=675, R410 GWP=2088).

S/001/2020

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