MULTIWARM

HIGH TECH
INNOVATION

general catalogue air conditioning

multiwarm.it

contents


MULTIWARM

High tech innovation, complete Multiwarm comfort

Multiwarm offers products that optimise the energy performance of heating, cooling and domestic hot water production in buildings.

MULTIWARM is a brand by the Termal Group, a leader in Italy in the air conditioning sector.

MULTIWARM systems are technologically advanced and perfectly in line with design requirements in the residential and commercial sectors, to achieve high quality standards.

Multiwarm specialist installers always one step ahead

Multiwarm guarantees full support to its installers thanks to an advanced logistics hub for fast delivery of supplies and spare parts.

MULTIWARM products are marketed through the **Specialised Installers** channel, which is widely distributed throughout Italy and Europe.

The central storage centre is in Bologna at the Termal Group and in external service logistics.

The operating centre is divided into a series of premises dedicated to commercial, administrative and logistical activities with 4,500 square metres of warehousing area that guarantees fast deliveries, a vast assortment of spare parts and accessories that can be ordered online and are available in 24 hours.

All this provides customers with outstanding operational and commercial flexibility and therefore strong competitiveness in the various local markets.

Courses and training for professional growth

Anyone who chooses to install MULTIWARM has the security of working with an innovative brand. Selected and certified specialists in accordance with Presidential Decree 146 of 16 November 2018 and subsequent updates.

MULTIWARM organises regular refresher and advanced training sessions via **webinars** and in-person.

The training centre is structured with dedicated classrooms for theoretical and practical lessons, with functioning installed products and their control systems.

The courses provide participants with in-depth knowledge of installation logic, service and maintenance techniques for residential and commercial environments. Below are the topics covered:

- Presentation of new products
- In-depth insights into technological developments
- Sector regulations
- Refrigerant circuit
- Installation issues and fault diagnostics
- Assistance
- VRF system design
- Use of system software

At the end of the course, each participant receives an attendance certificate and handouts on the technical topics covered.

Wi-Fi

Wi-Fi technology at the service of the R32 and VRF residential product ranges.

Air conditioning at your fingertips

VRF and Residential MULTIWARM air-conditioning systems let you control your air conditioning system at home and away from home using apps available for iOS and Android devices (standard and optional).

You can manage your air conditioning system through MULTIWARM apps, for the best comfort and careful consumption.

Environmental protection mission

Multiwarm products help to significantly improve climatic comfort, achieve substantial energy savings and protect the environment.

MULTIWARM is at the forefront of supplying efficient, innovative air conditioning systems that ensure comfort and savings on energy bills.

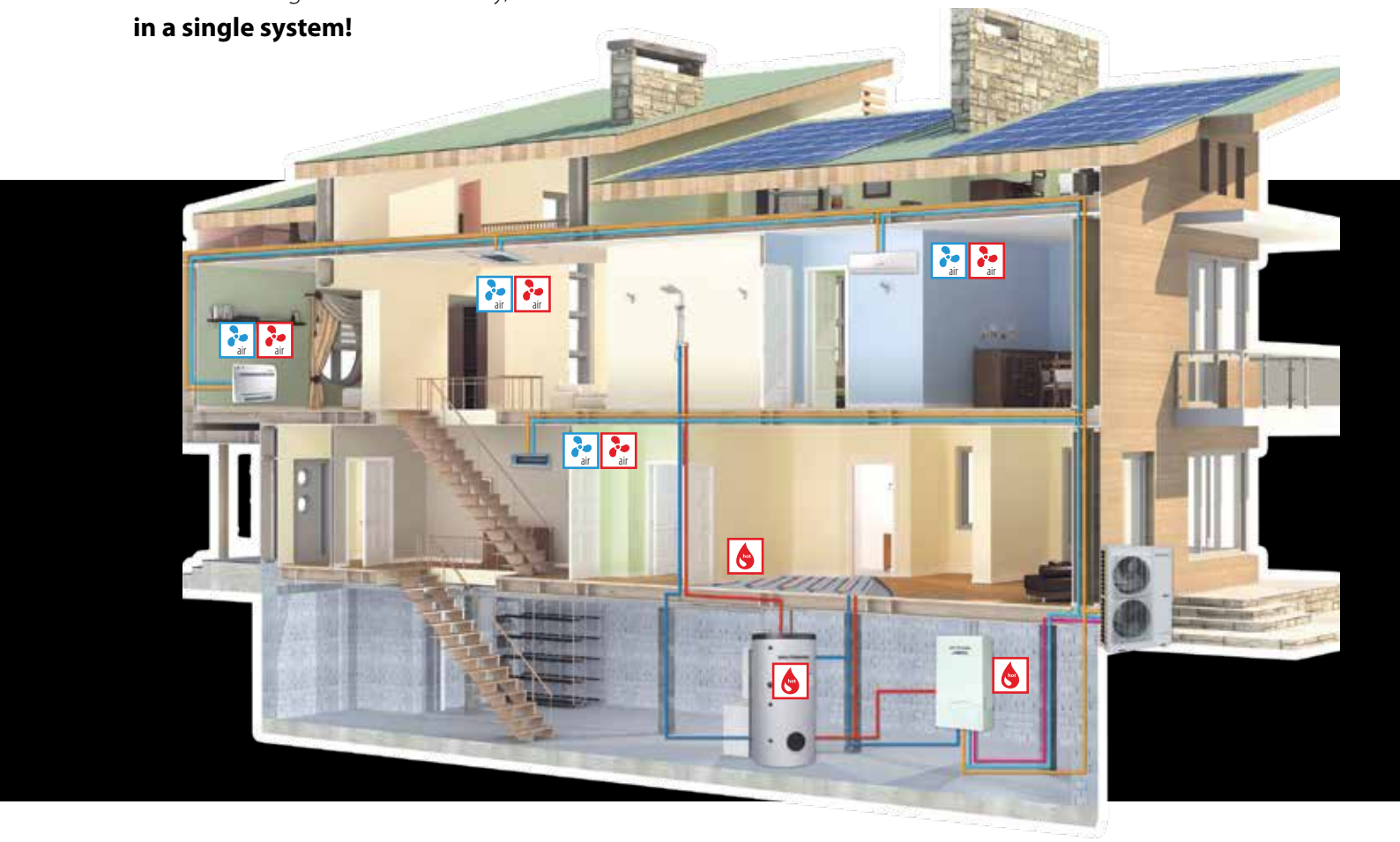
To air condition domestic and commercial environments, systems must have at least these following characteristics:

- Energy efficiency and reduced consumption
- Innovation, standard functional and remote controls
- Low emissions for maximum environmental protection
- Design, refined materials and aesthetics are important elements when choosing a product
- Quiet
- Practicality of use

VRF MW HYBRID SYSTEM

VRF MW HYBRID HEAT PUMP SYSTEM

Heating, air conditioning and domestic hot water along with heat recovery,
in a single system!



no more traditional systems

MW HYBRID (VRF system + hydronic module) is a combination that replaces traditional systems, consisting of two separate systems (air conditioner + traditional boiler).

free hot water

In cooling mode, heat is recovered to produce **free** domestic hot water.

hybrid system

MW HYBRID was born from the innovative combination of two technologies:

1. Direct expansion technology: cools or heats rooms with MW HYBRID indoor units.

2. Hydronic technology: heating is provided by the hydronic module that supplies low temperature systems such as radiant panels and high-efficiency radiators. The MW HYBRID system is capable of producing domestic hot water.

Air-to-Air

Direct expansion cooling and heating.

The air-to-air mode with the use of direct expansion indoor units ensures that desired comfort is achieved quickly.

Air-to-Water

Heating and domestic hot water production with hydromodule, cooling with direct expansion units (mandatory installation).

UNDERFLOOR HEATING

HIGH-EFFICIENCY RADIATORS

DOMESTIC HOT WATER

In this configuration, the MW HYBRID system can be used in winter to produce domestic hot water and to heat indoor spaces using radiant panels (or high-efficiency radiators). In summer, when the indoor direct expansion units work in cooling mode, it is possible to produce domestic hot water by recovering the heat that would be dispersed by the outdoor unit.

Air-to-Air and Air-to-Water

Combined use of the two technologies.

UNDERFLOOR HEATING

HEATING OR COOLING

DOMESTIC HOT WATER

MW HYBRID heats using either direct expansion indoor units or a radiant panel system (or high-efficiency radiators) and produces domestic hot water. Operating priority can be selected by the user.

OUTDOOR UNITS

During the summer months, these units make it possible to recover the condensation heat that would normally be dissipated in the room. This heat is directed to the hydromodule, which produces domestic hot water free of charge.

HYDRONIC MODULE

Heat exchanger for the production of domestic hot water and water for low temperature heating systems.

All-around comfort **all year round**

MW HYBRID provides a complete solution for climate control for all rooms, all year round.

It is an economical system that reduces CO2 emissions, provides indoor comfort and produces domestic hot water.

MW HYBRID uses single phase and three-phase outdoor units with different power levels, to which up to 13 indoor units and 2 hydronic modules can be connected.

HYDRONIC MODULE CONTROL

Multifunctional control panel for managing the hydronic part (can be remote managed).

RADIANT PANELS

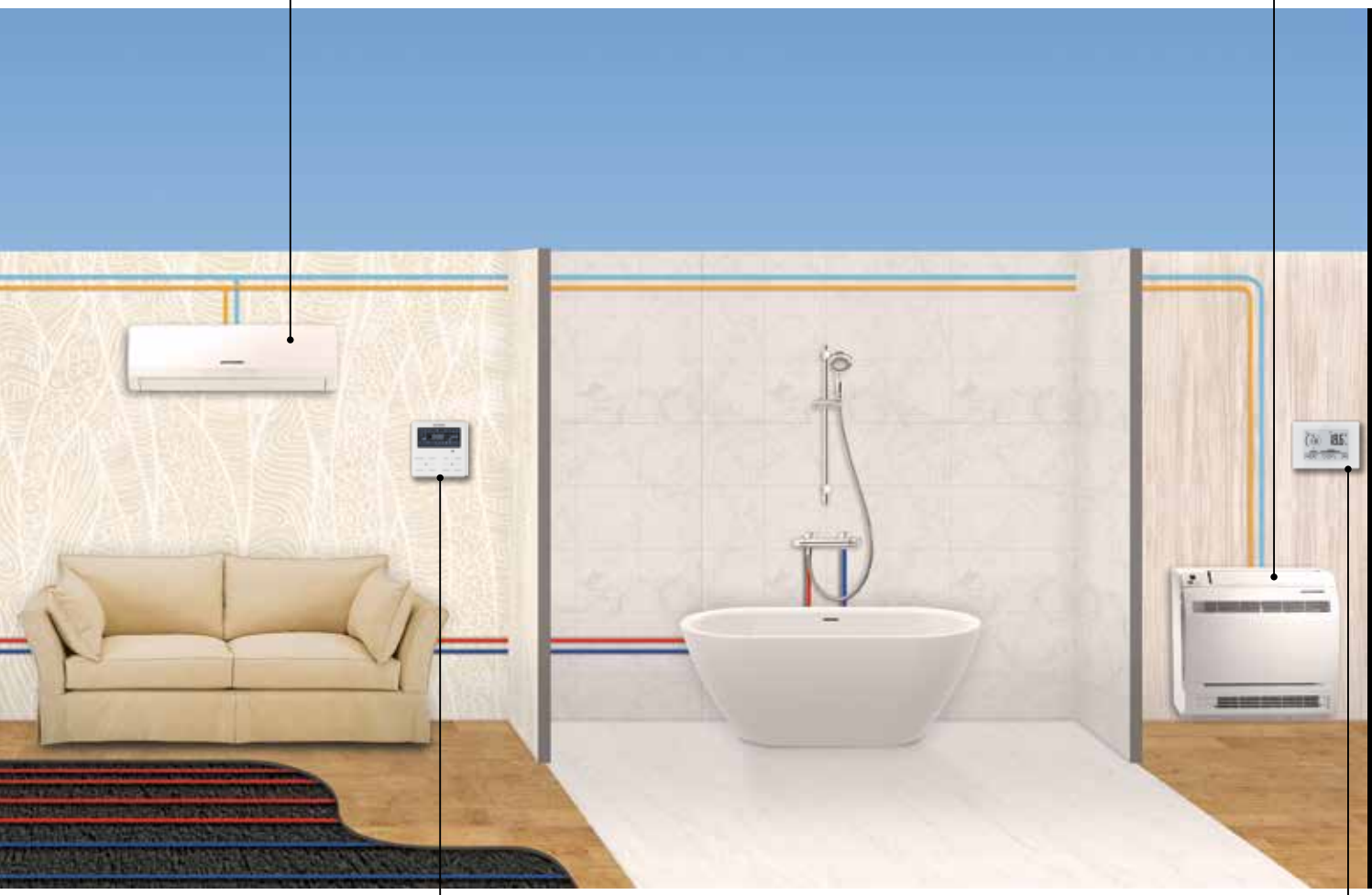
These warm the home with a pleasant thermal gradient (*not supplied by MULTIWARM*).

DOMESTIC HOT WATER TANK

Stores and dispenses domestic hot water produced by the system.

DIRECT EXPANSION INDOOR UNITS

Wall, cassette, ducted, console, floor/ceiling, recessed floor models.



CONTROL PANEL

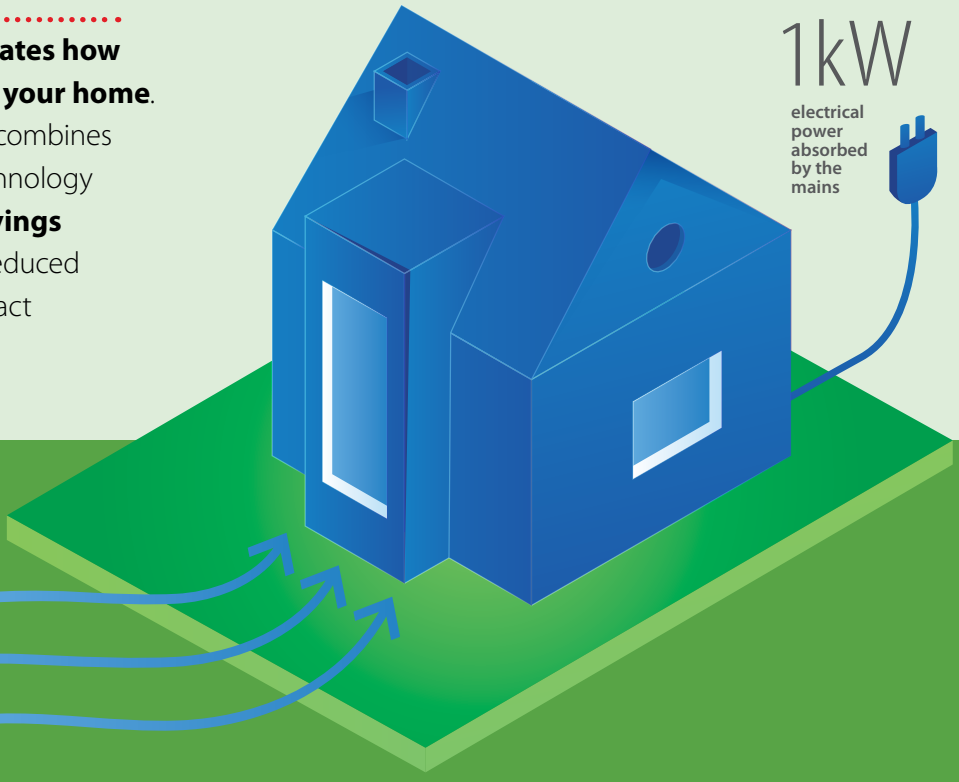
Control panel for direct expansion and hydronic management with built-in temperature sensor.

ROOM THERMOSTAT

Possibility of integration with third-party room thermostat (*not supplied by MULTIWARM*).

ENERGY SAVINGS

Multiwarm innovates how you air condition your home. The hybrid system combines state-of-the-art technology for **immediate savings on your bill** and reduced environmental impact



MW HYBRID runs on free renewable energy!

As a very energy efficient heat pump system, MW HYBRID draws 75-80% of the energy it uses from outside air.

For every kW of electricity consumed, there are as many as 3 kW drawn for free from the outside air.

The heat output given off inside the room is 4 times the electrical power absorbed.

3kW FREE + 1kW ELECTRICAL CURRENT = 4kW HEATING POWER IN YOUR HOUSE!

MW HYBRID does not dissipate energy but uses it to heat water...how?

During the summer months, while the indoor units operate in cooling mode, **the condensation heat** is not dispersed to the outside environment but **is instead recovered inside the hydromodule to produce FREE domestic hot water**.

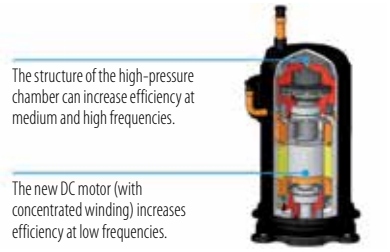
FREE DHW
IN THE SUMMER WITH CONDENSATION HEAT RECOVERY

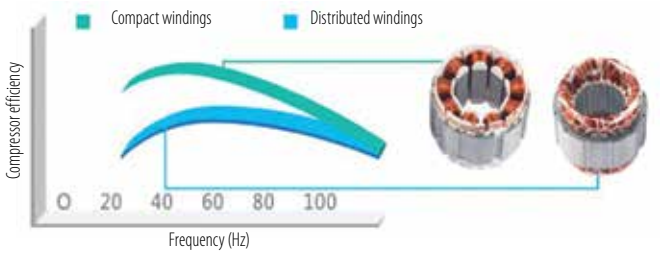
TOTAL INVERTER TECHNOLOGY

DC Inverter compressors and fans

ADVANTAGES

- Maximised performance efficiency
- Reduced energy consumption and operating costs





SIMPLE INSTALLATION AND MAINTENANCE

Automatic addressing of units

The indoor and outdoor units are addressed automatically, not manually. Through a special setting, the outdoor unit recognises the various indoor units in the system, reducing possible risks of error.

Can-bus communication system

MW HYBRID adopts a faster, more reliable and anti-interference communication system (between outdoor unit, indoor unit and hydromodule).

Maintenance

Maintenance of MW HYBRID is easy thanks to the 3 self-diagnostic functions:

1. Automatic detection of unit error type

2. Automatic start of diagnostic operation

3. Real-time fault detection

ALL-AROUND COMFORT

Ultra-fast comfort

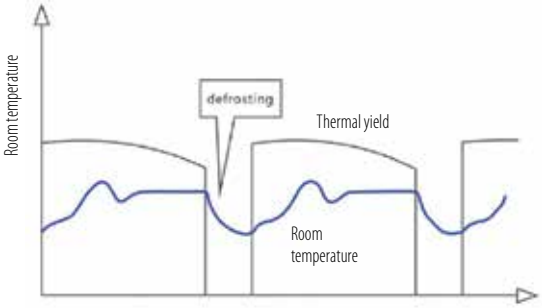
Maximum winter comfort is achieved by simultaneously using direct expansion technology and radiant underfloor heating, heating rooms quickly and economically.

"Continuous heating" effect

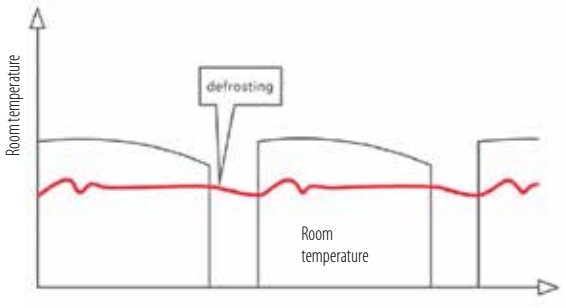
MW HYBRID is equipped with smart defrost as it uses the thermal energy of the domestic hot water tank whenever possible.

This generates a "**continuous heating**" effect with the following advantages:

- Stable room temperature
- No draught (skin effect)



COMPETITOR'S HEAT PUMP



MW HYBRID HEAT PUMP

Quiet operation

The MW HYBRID system can determine when to activate the "silent night mode" function (based on outdoor temperature and indoor load): the outdoor unit operates with **noise emissions below 45 dB(A)**.

Silent mode can be activated in:

AUTOMATIC

The system automatically activates silent mode in low load conditions, at night.

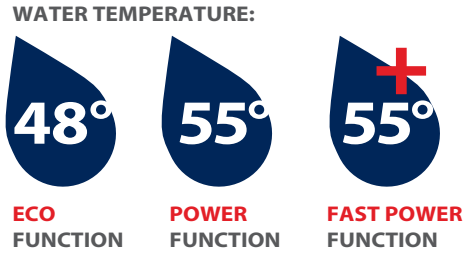
MANUAL

In particular applications where low noise is required, the system can force the unit to run at reduced speeds, thus limiting noise emissions.

DHW PRODUCTION

Operating range

- **Eco Function (recommended)**: max water temperature 48°C.
- **Power Function**: max water temperature 55°C.
- **Fast Power Function**: required water temperature more than 55°C (by integration with heating element).



Special applications

- **Sunflower**: domestic hot water is heated during the hottest hours of the day (according to the highest outside temperature recorded the previous day) to achieve maximum energy savings.
- **Auto**: sets the set point temperature automatically according to the outside temperature.
- **Sterilize**: Anti-legionella cycle 65-70°C.
- **Rapid**: starts the compressor and heating element at the same time to heat water for domestic use or hydronic heating in a short time.

Sterilize Function

Using the MW HYBRID system hydronic module, it is possible to program sterilisation cycles at regular intervals (1 to 60 days, at least one cycle per month recommended) **or to carry out a single cycle with a simple function, which can be set from the remote control.**

With a thermal shock, temperatures between 60~70°C are reached which ensure the elimination of any bacteria.

RESIDENTIAL MULTIWARM HYBRID APPLICATIONS

WHERE TO APPLY MW HYBRID

RESIDENTIAL
Single and multi-family house for continuous use

RESIDENTIAL
Occasional residences

TERTIARY
Buildings used as B&Bs

TERTIARY
Public and private office buildings

TERTIARY
Bar, bistro and restaurant buildings

RESIDENTIAL APPLICATIONS

TERTIARY APPLICATIONS

EXAMPLES OF APPLICATION OF THE "ALL-IN-ONE" MW HYBRID SYSTEM

MW HYBRID is an "**all-in-one**" system that meets the needs of consumers all year round, as it:

- Air conditions rooms both in summer and winter using direct expansion indoor units
- Allows for the combined use of both direct expansion (air-to-air) and indirect expansion (air-to-water) technology, with the use of high-efficiency radiant panel heating systems and/or radiators
- Through the hydromodule, it is possible in the winter to produce both domestic hot water and water to feed heating systems with radiant panels and/or high-efficiency radiators

MW HYBRID makes it possible to optimise indoor comfort with a low system running cost.
It is the most suitable plant engineering solution for multiple applications.

special functions common to all applications

ENERGY SAVING PARAMETERS: "NIGHT" SETTING

The special "Night" function is dedicated to the production of domestic hot water during the hours in which it is possible to take advantage of reduced electricity tariffs (e.g. 12am to 6am). The next morning, hot water will be ready for use at the desired temperature.

ABSENCE

This special application can be used during periods of short or medium absence. The system constantly controls the water temperature inside the radiant circuit, preventing the room temperature from falling below 8°C.

STERILIZE

Periodic sterilisation cycles of water stored at a high temperature of up to 70°C (also useful for Anti-legionella cycles) via the hydromodule wired remote control, with programming of duration and interval days between cycles.

3D HEATING

Combined use of the two technologies: direct expansion and underfloor heating (or high-efficiency radiators). This function is recommended for rapid room start-up on particularly cold days (three-phase models: M-VH-OV-224-SG, M-VH-OV-280-SG).

cooling function

- **In air-to-air mode**, via direct expansion terminals (mandatory installation) with reduced room set-up times.

heating function

- **In air-to-air mode**, via direct expansion terminals (mandatory installation), for rapid thermal comfort.
- **In air-to-water mode**, for supplying low temperature radiant underfloor systems (range 25-35°C) and/or high-efficiency radiators (range 40-50°C).

domestic hot water production function

USAGE OPTIONS

The system can produce domestic hot water in 3 different ways:

- **ECO** (recommended): maximum water temperature **48°C** (in compliance with regulations).
- **POWER:** maximum water temperature **55°C**.
- **FAST POWER:** maximum water temperature **70°C** (via integration with heating element).

WINTER

During the winter months, the system produces domestic hot water via the hydromodule with priority over hydronic heating (radiant panels and/or high-efficiency radiators). Once the set water temperature inside the storage tank has been reached, the system automatically switches over (if necessary) to the hydronic system.

MID-SEASON

In the mid-season, when heating and cooling might not be used, the production of domestic hot water is still always guaranteed using the full power of the system..

SUMMER - EXCLUSIVE MW HYBRID "HEAT RECOVERY" MODE

During the summer months while the indoor units operate in cooling mode in one or more rooms, the condensation heat, which would normally be dissipated by the outdoor unit, is directed to the hydromodule, which recovers a significant amount of energy, **producing domestic hot water free of charge up to 46°C**.

In order to meet different user requirements, it is possible **to produce domestic hot water at a higher temperature of up to 55°C**, interrupting the cooling function and directing the system priority to domestic hot water production. For higher temperatures, you can use the electric heating element installed inside the domestic hot water tank (maximum attainable temperature 70°C).

RESIDENTIAL

SINGLE AND MULTI-FAMILY HOUSE FOR CONTINUOUS USE

NEW RESIDENTIAL BUILDINGS OR BUILDINGS WITH MAJOR RENOVATIONS

Energy class in compliance with regulations

Newly built buildings must fulfil the parameters set out in current energy classification regulations, intervening both on the building enclosure and plant engineering, increasingly using underfloor radiant systems.

The MW HYBRID system meets the requirements of the plant engineering sector.

Application advantages

MW HYBRID is even more cost-effective with a photovoltaic system installed on your roof!

How? By programming the system to switch on in cooling and heat recovery mode, the electricity produced (and not fed into the grid) will be used to air condition the rooms and store **free** hot water ready for use when you return home.

In air-to-air mode: **desired comfort is achieved quickly** in rooms with occasional use such as attics, basements, studies, etc.

RESIDENTIAL

OCCASIONAL RESIDENCES

Application advantages

MW HYBRID is even more cost-effective with a photovoltaic system installed on your roof!

How? By programming the system to switch on in cooling and heat recovery mode, the electricity produced (and not fed into the grid) will be used to air condition the rooms and store **free** hot water ready for use when you return home.

Programming and immediate comfort

Occasional use housing units require fast set-up times to allow the desired comfort.
Use of property tends to be planned in advance, but sometimes you may decide at the last moment: with the MW HYBRID system functions, you can decide on a whim.

The system can be activated on arrival, selecting the priority between heating, domestic hot water and cooling.

Example of priority setting: when you immediately activate domestic hot water production, the system will work until the desired water temperature is reached and then fulfil heating or cooling needs.

TERTIARY

BUILDINGS USED AS BED & BREAKFASTS

SMALL AND MEDIUM-SIZED ACCOMMODATIONS ARE OFTEN FACED WITH THE NEED FOR SHORT STAYS AND SAME-DAY BOOKINGS, WHERE YOU NEED TO AIR CONDITION FACILITIES QUICKLY TO ENSURE COMFORT.

The comfort you need, quickly

The user-friendliness of the MW HYBRID system lets you optimally manage your system to guarantee the required service, with the energy management of the facility being governed by centralized control.

It is possible to install a single system or several separate systems depending on the needs and use of the B&B spaces (examples: System A and System B), which perform the following functions:

Application advantages

MW HYBRID is even more cost-effective with a photovoltaic system installed on your roof!

How? By programming the system to switch on in cooling and heat recovery mode, the electricity produced (and not fed into the grid) will be used to air condition the rooms and store **free** hot water ready for use when you return home.

SYSTEM A

System dedicated to common use areas (breakfast room, bar area, recreation room, reception).

These areas need to be air conditioned according to different needs and on a pre-established schedule.

The breakfast room and bar area also need hot water guaranteed by the MW HYBRID system.

SYSTEM B

System dedicated exclusively to room energy requirements. Key cards activate operation.

Guests can control the temperature via the optional wired hotel control (M-V-CW-HB1-G) that manages the power on, power off and operation of the air conditioning system.

Management of DHW production is entrusted to the hotelier, who can set the water temperature using the control on the hydromodule. DHW can be restored during the night by activating the "Night" function in order to guarantee the adequate amount from the early morning.

RESIDENTIAL

PUBLIC AND PRIVATE OFFICE BUILDINGS

OFFICES - MEETING ROOMS - SOCIAL HUBS - MEETING AREAS - FITNESS AREAS

Application advantages

MW HYBRID is even more cost-effective with a photovoltaic system installed on your roof!

How? By programming the system to switch on in cooling and heat recovery mode, the electricity produced (and not fed into the grid) will be used to air condition the rooms and store **free** hot water ready for use when you return home.

Optimal climate for all business functions

The user-friendliness of the MW HYBRID system lets you optimally manage your facility to guarantee the required service.

Working inside offices requires a careful study of the environmental conditions in which occupants can carry out their tasks in optimal climatic conditions.

In addition, more and more companies worldwide are offering better working conditions by creating, for example, indoor fitness areas and changing rooms, which require not only air conditioning but also hot water.

An appropriate design study makes it possible to realise customised plant solutions for employment areas, satisfying the heating/cooling and hot water needs of both continuous and occasional use environments, such as meeting rooms, social hubs, meeting areas and fitness areas.

TERTIARY

BAR, BISTRO AND RESTAURANT BUILDINGS

BARS, BISTROS AND RESTAURANTS REQUIRE DIFFERENT OPERATING MODES AND COMFORT LEVELS DEPENDING ON THE ACCOMMODATION (TEA ROOM, SNACK BAR, RESTAURANT ROOM, ETC.). MW HYBRID MAKES IT POSSIBLE TO MANAGE AND OPTIMISE REQUIREMENTS.

SYSTEM A

Bars, tea rooms and snack bars are usually active from the early hours of the day, needing heating and hot water in the winter months for a variety of uses. During the summer, the needs are repeated, the air-to-air system with active heat recovery function also produces domestic hot water free of charge, ensuring optimisation of energy expenditure.

A flexible system

The design can include different applications, e.g. two separate systems or a single system for constant use, if the energy requirements are homogeneous.

Application advantages

MW HYBRID is even more cost-effective with a photovoltaic system installed on your roof!

How? By programming the system to switch on in cooling and heat recovery mode, the electricity produced (and not fed into the grid) will be used to air condition the rooms and store **free** hot water ready for use when you return home.

SYSTEM B

Restaurants: in the winter, the flexibility of activating the various functions of the system allows for continuous or programmed room preparation, also using domestic hot water production in this case, with a significant advantage during the summer thanks to the special heat recovery function.

The hot water required for kitchen use can be produced by the system or used as pre-heating water if an independent domestic hot water generator is already present. DHW can be restored during the night by activating the "Night" function in order to guarantee the adequate amount from the early morning.

The user-friendliness of the MW HYBRID system lets you optimally manage your facility to guarantee the required service.

THE VRF MW HYBRID SYSTEM RANGE

OUTDOOR UNITS

12.10 kW	14.00 kW	16.00 kW
single phase	single phase	single phase
M-VH-OV-120-NG	M-VH-OV-140-NG	M-VH-OV-160-NG

22.40 kW	28.00 kW
three-phase	three-phase
M-VH-OV-224-SG	M-VH-OV-280-SG

HYDRONIC MODULE

16.00 kW
single phase
M-VH-HM-160-NG

TANKS

200 Litres	300 Litres	500 Litres
WT-XL-DW1-200 C-1	WT-XL-DW1-300 C-1	WT-XL-DW1-500 C-1

NOTE: Third-party tanks can also be used.

INDOOR UNITS

Indoor units applicable for air-to-air operation on page 73

MW HYBRID CONSISTS OF **5 OUTDOOR UNITS** TO WHICH UP TO A MAXIMUM OF **13 INDOOR UNITS** AND **2 HYDRONIC MODULES** CAN BE CONNECTED, DEPENDING ON THE SIZE OF THE OUTDOOR UNIT

3 SINGLE PHASE MODELS

The single phase outdoor units with horizontal air discharge are available in 12.10 kW, 14.00 kW and 16.00 kW models. All compressors in the single phase models are Rotary DC Inverter.

2 THREE-PHASE MODELS

The three-phase outdoor units with vertical air discharge are available in 22.40 kW and 28.00 kW models. All compressors in the three-phase models are Scroll DC Inverter.

POWER AND NUMBER OF CONNECTABLE INDOOR UNITS

Model	Min~Max power Connectable I.U.	Min~Max number Connectable I.U.	Max number of connectable hydronic modules
M-VH-OV-120-NG	80~110%	1~6	1
M-VH-OV-140-NG	80~110%	1~7	1
M-VH-OV-160-NG	80~110%	1~8	1
M-VH-OV-224-SG	80~110%	1~10	2
M-VH-OV-280-SG	80~110%	1~13	2

MAXIMUM COMPACTNESS FOR ALL OUTDOOR UNITS

12.10 - 14.00 - 16.00 kW

L 900 x H 1345 x D 340 (mm)

22.40 - 28.00 kW

L 1340 x H 1605 x D 765 (mm)

Operating ranges of outdoor units

The **VRF MW HYBRID** system boasts a very wide outdoor temperature operating range, providing significant design flexibility.

-15°C IN **WINTER**

50°C IN **SUMMER**

COOLING MODE

Outside temperature from -5° to 50°C

HEATING MODE

Outside temperature from -15° to 24°C

HYDRONIC HEATING MODE

Outdoor temperature -15° to 21°C
Water temperature 25° to 52°C

DOMESTIC HOT WATER PRODUCTION

Outdoor temperature -15° to 43°C
Water temperature 35° to 55°C

OUTDOOR UNITS

5 POWER LEVELS
12.10~28.00 kW

R410A
Refrigerant gas

DC Inverter compressors ensure total reliability due to their high energy efficiency and quiet operation. In addition, they enable reduced vibration and accurate control of the operating frequency.

M-VH-OV-120-NG
M-VH-OV-140-NG
M-VH-OV-160-NG

M-VH-OV-224-SG
M-VH-OV-280-SG

Model			M-VH-OV-120-NG	M-VH-OV-140-NG	M-VH-OV-160-NG	M-VH-OV-224-SG	M-VH-OV-280-SG
Nominal Data							
Rated capacity	Cooling	kW	12.10	14.00	16.00	22.40	28.00
Rated absorbed power		kW	3.05	3.98	4.85	5.35	7.70
Energy efficiency coefficient (rated)		EER[1]	3.97	3.52	3.30	4.19	3.64
Rated capacity	Heating	kW	14.00	16.50	18.50	25.00	31.50
Rated absorbed power		kW	3.30	4.10	4.67	5.80	7.60
Energy performance coefficient (rated)		COP[1]	4.24	4.02	3.96	4.31	4.14
Seasonal Data							
Seasonal energy efficiency index	Cooling	SEER[2]	8.08	7.79	7.73	8.46	7.58
	Heating	SCOP[2]	4.17	4.11	4.04	5.50	5.58
Electrical data							
Power supply		Ph-V-Hz	1-220~240V-50Hz				
Maximum current		A	27.00	31.00	33.00	16.10	20.90
Refrigerant circuit data							
Refrigerant[3]		type (GWP)	R410A (2088)				
Refrigerant pre-load quantity[4] (tons of CO2 equivalent)		Kg	5 (10.4)	5 (10.4)	5 (10.4)	10.5 (21.9)	11 (23)
Compressor		no. / type	1/ Rotary DC inverter			1 / Scroll DC Inverter	
Pipe diameter	Liquid	mm (inch)	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")
	Gas	mm (inch)	15.9 (5/8")	15.9 (5/8")	19.05 (3/4")	19.05 (3/4")	22.2 (7/8")
	High pressure gas	mm (inch)	12.7 (1/2")	12.7 (1/2")	12.7 (1/2")	15.9 (5/8")	15.9 (5/8")
Product Specifications							
Dimensions	LxHxD	mm	900x1345x340	900x1345x340	900x1345x340	1340x1605x765	1340x1605x765
Net weight		Kg	113	113	113	295	295
Sound power level	max	dB(A)	72	72	72	81	81
Sound pressure level at 1 m	max	dB(A)	55	56	58	57	58
Treated air volume	max	m3/h	6000	6300	6600	14000	14000
Operating limits (outside temperature)	Cooling	°C	-5~50				
	Air heating	°C	-15~24				
	Hydronic heating	°C	-15~21				
	Domestic hot water (DHW)	°C	-15~43				
	Cooling + DHW	°C	-5~43				
	Air heating + DHW	°C	-15~24				
Water circuit operating limits	Hydronic heating	°C	25~52				
	Domestic hot water (DHW)	°C	35~55				
Connectable air-to-air indoor units (min - max)[5]		**no.**	**1~6**	**1~7**	**1~8**	**1~10**	**1~13**
Connectable hydronic modules (max)		**no.**	**1**	**1**	**1**	**2**	**2**
Capacity of connectable air-to-air indoor units		**%**	**80~110**				

1. Value measured according to harmonised standard EN14511.
2. EU Regulation No.206/2012 - - Value measured according to harmonised standard EN14825.
3. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 2088. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 2088 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.
4. Refer to the labels on the inside and outside of the unit to calculate the additional refrigerant load.
5. At least 1 direct expansion indoor unit is mandatory.

HYDRONIC MODULE

HIGH EFFICIENCY
A+ in combination with each outdoor unit size

DHW PRODUCTION
105 L/h rated
75-140 (min.-max. L/h) outdoor

DHW HEATING CAPACITY
4.50 kW rated for DHW production
3.60-16.00 (min.-max. kW)

HEATING CAPACITY
16.00 kW for hydronic heating

CONTROLS
Wired remote control included

M-VH-HM-160-NG

Model			M-VH-HM-160-NG
Rated capacity	Domestic hot water1	kW	4.50 (3.60~16.00)
	Hydronic heating	kW	16.00
Maximum delivery water temperature		℃	55
Electrical data			
Power supply		Ph-V-Hz	1-220~240-50Hz
Electrical integration power (2 steps)		kW	1.50+1.50
Hydraulic system data			
Water/freon heat exchanger		type	Braze-welded plates
Circulation pump	Brand	-	Wilo
	Water flow	m^3/h	1.7
	Static pressure	m	6
Water connections	Diameter	mm	25
	Threading	Inches	G1
Expansion tank	Volume	L	10
	Pre-load	bar	1
Refrigerant circuit data			
Pipe diameter	Liquid	mm (inch)	9.52 (3/8")
	Gas		15.9 (5/8")
	High pressure gas		12.7 (1/2")
Product specifications			
Dimensions	LxHxD	mm	500x919x328
Net weight		kg	56

1. Conditions: outside air 20°C DB (15°C WB), inlet water 15°C / outlet 52°C.

Hydronic module control

The hydronic module is equipped with a control to manage hydronic heating and provides various domestic hot water management functions.

SOME FUNCTIONS

- **Sunflower:** domestic hot water is heated during the hottest hours of the day (according to the highest outside temperature recorded the previous day) to achieve maximum energy savings.
- **Auto:** sets the set point temperature automatically according to the outside temperature.
- **Sterilize:** Anti-legionella cycle 65-70°C.
- **Rapid:** starts the compressor and heating element of the tank at the same time to heat water for domestic use or hydronic heating in a short time.

DHW STORAGE TANKS

Domestic hot water storage tanks

MULTIWARM offers a complete range of fixed coil tanks for domestic hot water production.

The Polywarm-coated steel construction and the included magnesium anode, proportionate to the volume to be protected, ensure high corrosion protection.

The insulation in the 200, 300 and 500 litre models, which cannot be removed, is made of polyurethane foam (50 mm thick).

All tanks are externally lined with flexible PVC, which ensures excellent insulation and minimises heat loss.

WT-XL-DW1-200 C-1
WT-XL-DW1-300 C-1
WT-XL-DW1-500 C-1

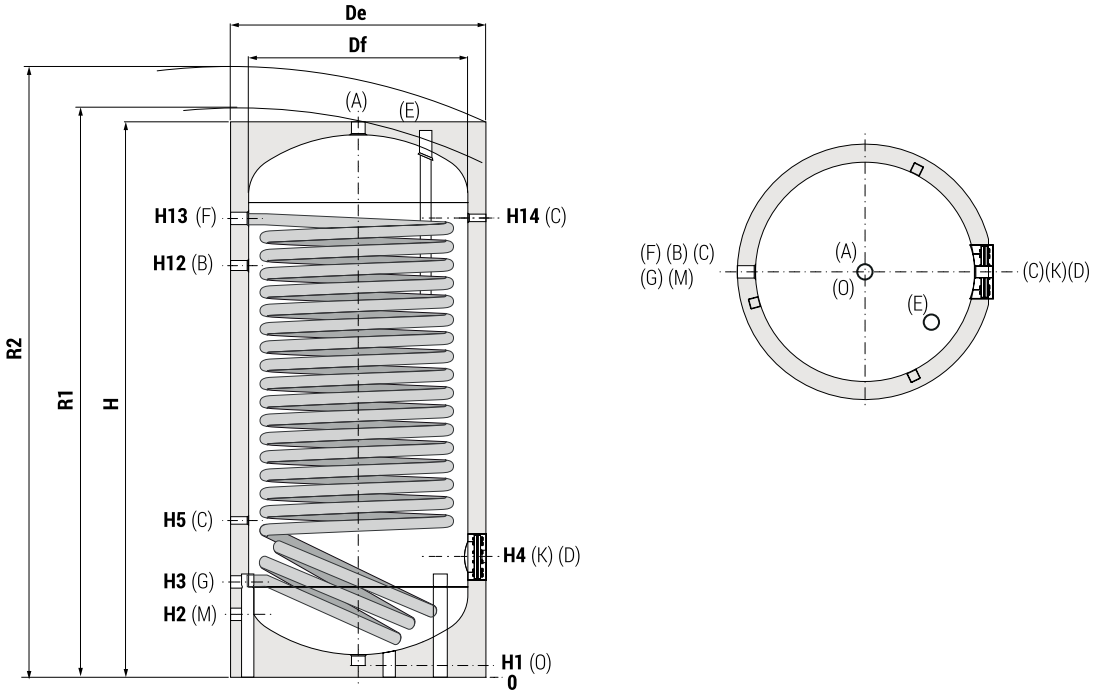
Model			WT-XL-DW1-200 C-1	WT-XL-DW1-300 C-1	WT-XL-DW1-500 C-1
Net storage volume		litres	189	291	498
Storage material		-	Polywarm-coated steel		
Heating element power (optional)		kW	1.50		
Exchanger surface		m^2	2.00	3.40	5.40
Insulation thickness		mm	50		
Maximum water temperature		°C	90		
Dimensions	Diameter	mm	550	650	750
	Height	mm	1440	1500	1800
Net weight		kg	96	130	174
Connections	Domestic water inlet	inches	3/4"	1"	1"
	Domestic hot water outlet	inches	1"1/4	1"1/4	1"1/4
	Recirculation	inches	3/4"	1"	1"
	Drain	inches	1"1/4	1"1/4	1"1/4
Energy efficiency class *			B	B	C

* ERP ready 2017 (EU regulation No.814/2013).

STORAGE		EXCHANGER	
Maximum pressure	Maximum temperature	Maximum pressure	Maximum temperature
10 bar	90°C	12 bar	110°C

TANK FEATURES

- **USE**
  Production and storage of domestic hot water (DHW).
  All hydraulic connections at the back; front connections and flange are aligned for quick and easy installation.
- **MATERIALS AND FINISHES**
  Polywarm®-coated steel (ACS - SSICA - EN 16421 certifications) suitable for drinking water according to Min.Decree No.174 of 06.04.04.
- **HEAT EXCHANGER**
  Polywarm®-coated steel fixed heat exchanger.
- **RIGID INSULATION**
  Polyurethane foam with high thermal insulation.
- **CATHODIC PROTECTION**
  Magnesium anode.
- **DRAIN**
  Drain through sleeve at the bottom.
- **COUNTERFLANGE - GASKETS**
  Gaskets in food-grade silicone rubber (Min. Decree No.174 of 2004); operating resistance up to 200°C.
  Carbon steel head with Polywarm® treatment and equipped for heating element.



TANK DIAGRAMS AND MEASUREMENTS

Model	Volume	Weight	Df	H	De	R2	H1	H2	H3	H4	H5	H12	H13	H14	K	M	B	A	D
	[lt]	[Kg]	[mm]													Gas connections F (inches)			
200	188.8	96	//	1440	550	1560	71	215	285	325	405	1055	1190	1190	Øi120/Øe180	3/4"	3/4"	1"1/4"	1"1/2"
300	290.5	130	//	1500	650	1650	71	241	321	381	431	1091	1211	1211	Øi120/Øe180	1"	1"	1"1/4"	1"1/2"
500	497.4	174	//	1800	750	1960	71	266	346	411	466	1326	1486	1486	Øi120/Øe180	1"	1"	1"1/4"	1"1/2"

CONNECTIONS

A	Domestic hot water outlet	**G**	Primary circuit outlet 1"1/4"Gas F
B	Recirculation connection	**K**	Inspection flange
C	Connection for instrumentation 1/2"Gas F	**M**	Domestic water inlet
D	Electrical integration connection	**N**	Connection for instrumentation 1/2"Gas F
E	Connection for magnesium anode 1"1/4"Gas F	**O**	Drain 1"1/4"Gas F
F	Primary circuit inlet 1"1/4"Gas F		

OPTIONAL ACCESSORIES

- 1.5 kW integrative heating element (**WT-EH-15-C**).
- Titanium anode for 200 and 300-litre tanks (**WT-AT-2-4-C**).
- Titanium anode for 500-litre tanks.(**WT-AT-5-C**).

NOTE: Third-party accessories can also be used.

VRF
MW MINI
MW 2-PIPE
MW 3-PIPE
SYSTEMS

THE MW MINI SYSTEM

COMPACT OUTDOOR UNITS

10.00 kW	12.10 kW	14.10 kW
single phase	single phase	single phase
M-VMC-OV-100-NG	M-VMC-OV-121-NG	M-VMC-OV-141-NG

SLIM OUTDOOR UNITS

16.00 kW	22.40 kW	28.00 kW	33.50 kW
three-phase	three-phase	three-phase	three-phase
M-VM-OV-160-SG	M-VS-OV-224-SG	M-VS-OV-280-SG	M-VS-OV-335-SG

INDOOR UNITS

Indoor units applicable for
air-to-air operation on page 73

THE **MW MINI COMPACT** AND **SLIM** CONSISTS OF **7** INDIVIDUAL **OUTDOOR UNITS** UNITS TO WHICH A MAXIMUM OF **20 INDOOR UNITS** CAN BE CONNECTED

3 SINGLE PHASE SINGLE-FAN MODELS

The single phase outdoor units with horizontal air discharge are available in 10.00 kW, 12.10 kW and 14.10 kW models.
All compressors in the single phase models are Rotary DC Inverter and Inverter fans.

4 THREE-PHASE TWIN-FAN MODELS

The three-phase outdoor units with horizontal air discharge are available in 16.00 kW, 22.40 kW, 28.00 kW and 33.50 kW models.

DC Inverter Rotary Compressor for the 16.00 kW and 22.40 kW models.
Inverter Scroll Compressor for the 28.00 kW and 33.50 kW models.

POWER AND NUMBER OF CONNECTABLE INDOOR UNITS

Model	Min~Max power Connectable I.U.	Min~Max number Connectable I.U.
M-VMC-OV-100-NG	50~135%	1~5
M-VMC-OV-121-NG	50~135%	1~6
M-VMC-OV-141-NG	50~135%	1~8
M-VM-OV-160-SG	50~135%	1~9
M-VS-OV-224-SG	50~135%	1~13
M-VS-OV-280-SG	50~135%	1~17
M-VS-OV-335-SG	50~135%	1~20

MAXIMUM COMPACTNESS FOR ALL OUTDOOR UNITS

COMPACT
10.00 - 12.10 - 14.10 kW

L 980 x H 790 x D 360 (mm) 10~12.1 kW
L 940 x H 820 x D 460 (mm) 14.1 kW

SLIM
16.00 - 22.40 - 28.00 - 33.50 kW

L 900 x H 1345 x D 340 (mm) 16.00 kW
L 940 x H 1430 x D 320 (mm) 22.4 kW
L 940 x H 1615 x D 460 (mm) 28~33.5 kW

COMPACT OUTDOOR UNITS

3 REFRIGERATION POWER LEVELS
10.00 - 12.10 - 14.10 kW

R410A
Refrigerant gas

GOLD FIN PROTECTION

USE IN INDIVIDUAL MODE
(not combined)

COMPACT DESIGN

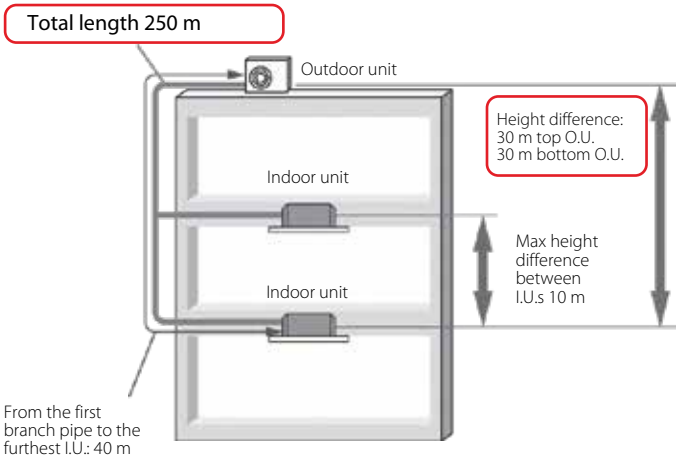
OPERATING LIMITS IN COOLING MODE
-5~+52°C

OPERATING LIMITS IN HEATING MODE
-20~+27°C

M-VMC-OV-100-NG
M-VMC-OV-121-NG
M-VMC-OV-141-NG

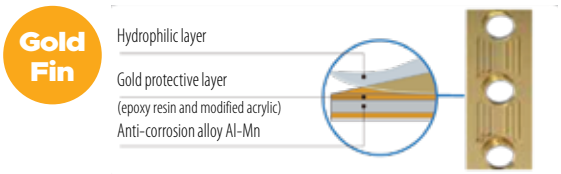
Model			M-VMC-OV-100-NG	M-VMC-OV-121-NG	M-VMC-OV-141-NG
Nominal Data					
Rated capacity	Cooling	kW	10.00	12.10	14.10
Rated absorbed power		kW	2.70	3.50	3.92
Energy efficiency coefficient (rated)		EER[1]	3.70	3.51	3.60
Rated capacity	Heating	kW	11.00	13.00	16.00
Rated absorbed power		kW	2.50	2.70	4.16
Energy performance coefficient (rated)		COP[1]	4.40	4.81	3.85
Seasonal Data					
Seasonal energy efficiency index	Cooling	SEER[2]	6.60	7.28	6.76
	Heating	SCOP[2]	3.80	4.45	3.67
Electrical data					
Power supply		Ph-V-Hz		1-220~240V-50Hz	
Maximum current		A	22.40	24.00	35.80
Refrigerant circuit data					
Refrigerant[3]		type (GWP)		R410A (2088)	
Refrigerant pre-load quantity[4] (tons of CO2 equivalent)		Kg	1.8 (3.76)	2 (4.18)	3.3 (6.89)
Compressor		no. / type		1/ Rotary DC inverter	
Pipe diameter	Liquid	mm (inch)	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")
	Gas	mm (inch)	15.9 (5/8")	15.9 (5/8")	15.9 (5/8")
Product Specifications					
Dimensions	LxHxD	mm	980x790x360	980x790x360	940x820x460
Net weight		Kg	80	85	98
Sound power level	max	dB(A)	69	70	73
Sound pressure level at 1 m	max	dB(A)	-	-	-
Treated air volume	max	m3/h	4000	4400	5200
Operating limits (outside temperature)	Cooling	°C	-5~52	-5~52	-5~52
	Heating	°C	-20~27	-20~27	-20~27
Connectable indoor units (min - max)		**no.**	**1 - 5**	**1 - 6**	**1 - 8**
Capacity of connectable indoor units		**%**		**50 ~ 135**	

1. Value measured according to harmonised standard EN14511.
2. EU Regulation No.206/2012 - - Value measured according to harmonised standard EN14825.
3. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 2088. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 2088 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.
4. Refer to the labels on the inside and outside of the unit to calculate the additional refrigerant load.



ALUMINIUM LOUVERS WITH ANTI-CORROSION COATING (GOLD FIN)

The coating on the louvers is durable and provides greater resistance to salt corrosion.



SLIM OUTDOOR UNITS

4 REFRIGERATION POWER LEVELS
16.00 - 22.40 - 28.00 - 33.50 kW

R410A
Refrigerant gas

GOLD FIN PROTECTION

USE IN INDIVIDUAL MODE
(not combined)

COMPACT DESIGN

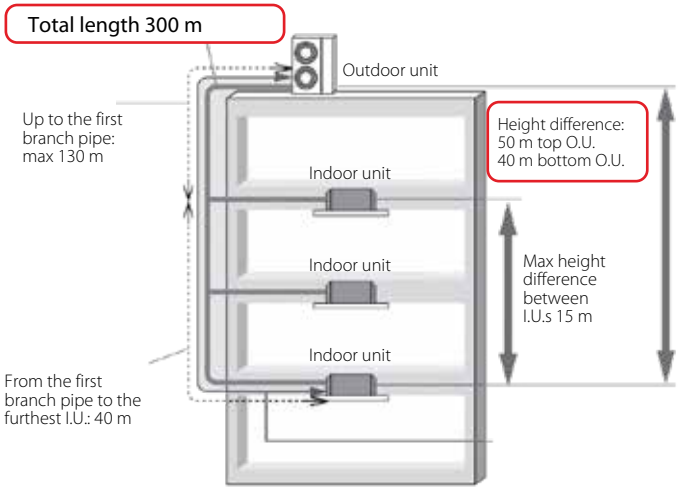
OPERATING LIMITS IN COOLING MODE
-5~+52°C

OPERATING LIMITS IN HEATING MODE
-20~+27°C

M-VM-OV-160-SG
M-VS-OV-224-SG
M-VS-OV-280-SG
M-VS-OV-335-SG

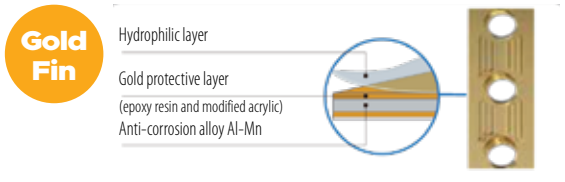
Model			M-VM-OV-160-SG	M-VS-OV-224-SG	M-VS-OV-280-SG	M-VS-OV-335-SG
Nominal Data						
Rated capacity	Cooling	kW	16.00	22.40	28.00	33.50
Rated absorbed power		kW	4.75	6.12	7.78	9.57
Energy efficiency coefficient (rated)		EER[1]	3.37	3.66	3.60	3.50
Rated capacity	Heating	kW	18.00	24.00	30.00	35.00
Rated absorbed power		kW	4.65	4.90	6.12	7.14
Energy performance coefficient (rated)		COP[1]	3.87	4.90	4.90	4.90
Seasonal Data						
Seasonal energy efficiency index	Cooling	SEER[2]	6.96	7.27	6.98	7.10
	Heating	SCOP[2]	4.04	4.08	3.92	4.06
Electrical data						
Power supply		Ph-V-Hz	3-380~415V-50Hz			
Maximum current		A	12.50	17.20	2.40	24.50
Refrigerant circuit data						
Refrigerant[3]		type (GWP)	R410A (2088)			
Refrigerant pre-load quantity[4] (tons of CO2 equivalent)		Kg	3.3 (6.89)	5.5 (11.48)	7.1 (14.82)	8 (16.7)
Compressor		no. / type	1/ Rotary DC Inverter		1 / Scroll DC Inverter	
Pipe diameter	Liquid	mm (inch)	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")	12.7 (1/2")
	Gas	mm (inch)	19.05 (3/4")	19.05 (3/4")	22.2 (7/8")	25.4 (1")
Product Specifications						
Dimensions	LxHxD	mm	900x1345x340	940x1430x320	940x1615x460	940x1615x460
Net weight		Kg	122	133	166	177
Sound power level	max	dB(A)	69	74	74	76
Sound pressure level at 1 m	max	dB(A)	-	-	-	-
Treated air volume	max	m3/h	6000	8000	11000	11000
Operating limits (outside temperature)	Cooling	°C	-5~52	-5~52	-5~52	-5~52
	Heating	°C	-20~27	-20~27	-20~27	-20~27
Connectable indoor units (min - max)		**no.**	**1 - 9**	**1 - 13**	**1 - 17**	**1 - 20**
Capacity of connectable indoor units		**%**	**50 ~ 135**			

1. Value measured according to harmonised standard EN14511.
2. EU Regulation No.206/2012 - - Value measured according to harmonised standard EN14825.
3. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 2088. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 2088 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.
4. Refer to the labels on the inside and outside of the unit to calculate the additional refrigerant load.



ALUMINIUM LOUVERS WITH ANTI-CORROSION COATING (GOLD FIN)

The coating on the louvers is durable and provides greater resistance to salt corrosion.



THE MW 2-PIPE SYSTEM **ANTI-CORROSION** IN INDIVIDUAL OR MODULAR USE

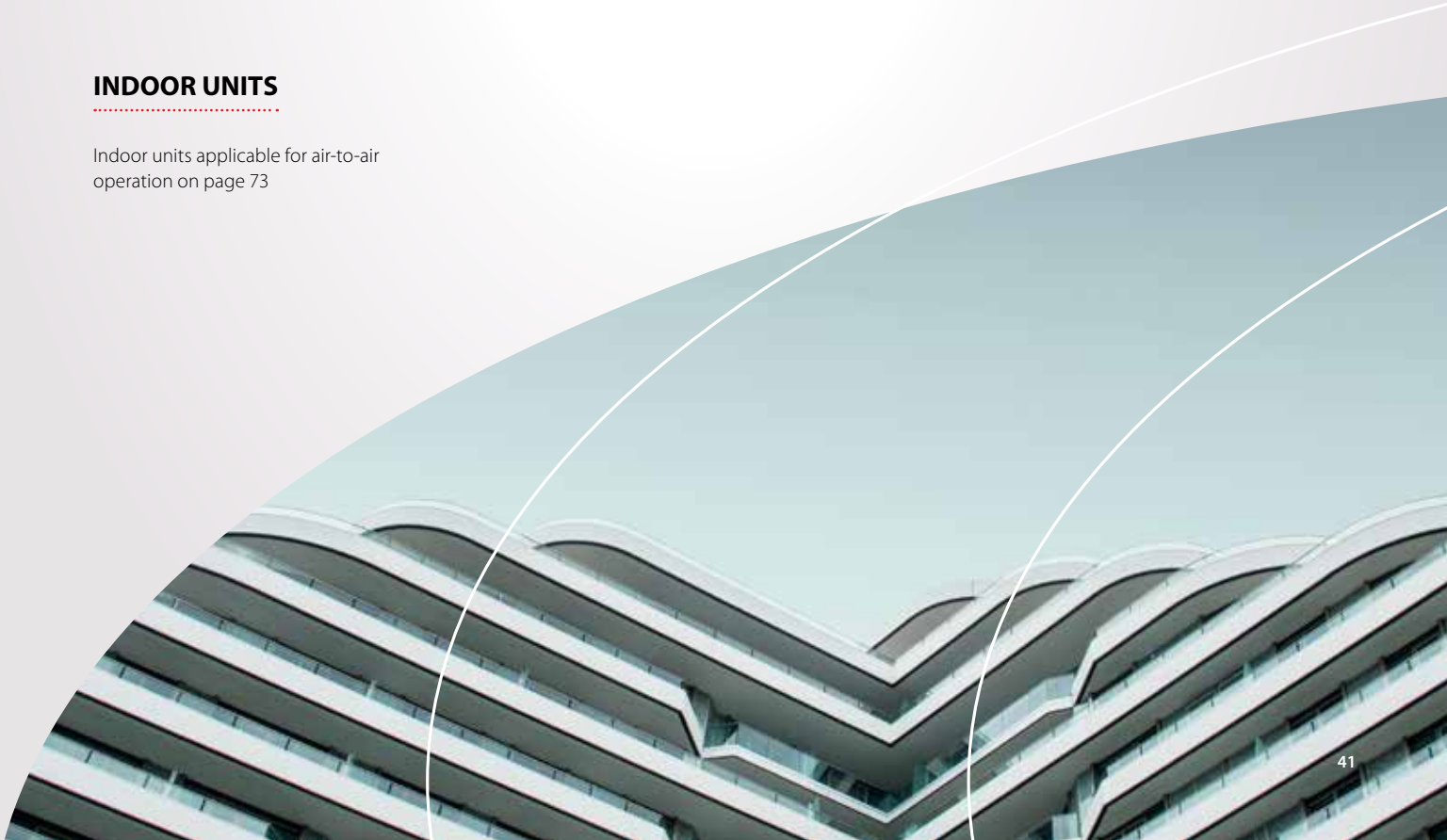
OUTDOOR UNITS

22.40 kW	28.00 kW	33.50 kW
8HP	**10HP**	**12HP**
M-VA-OV-224-SG	M-VA-OV-280-SG	M-VA-OV-335-SG

40.00 kW	45.00 kW	50.40 kW	56.00 kW	61.50 kW
14HP	**16HP**	**18HP**	**20HP**	**22HP**
M-VA-OV-400-SG	M-VA-OV-450-SG	M-VA-OV-500-SG	M-VA-OV-560-SG	M-VA-OV-615-SG

INDOOR UNITS

Indoor units applicable for air-to-air operation on page 73



THE **MW 2-PIPE ANTI-CORROSION** CONSISTS OF **8 INDIVIDUAL OUTDOOR UNITS**. IN COMBINATION IT REACHES A MAXIMUM OUTPUT OF **246 KW** TO WHICH UP TO **80 INDOOR UNITS** CAN BE CONNECTED.

8 THREE-PHASE MODELS

The three-phase outdoor units with vertical air discharge are available in 22.40 kW and up to 61.50 kW models. The maximum power of the combined outdoor units reaches 246 kW, the highest value in the industry.

All compressors in the three-phase models are Scroll DC Inverter.
The MW 2-PIPE ANTI-CORROSION system can connect up to a maximum of 80 indoor units.

POWER AND NUMBER OF CONNECTABLE INDOOR UNITS

Model	Min~Max power Connectable I.U.	Min~Max number Connectable I.U.
M-VA-OV-224-SG	50~135%	1~13
M-VA-OV-280-SG	50~135%	1~16
M-VA-OV-335-SG	50~135%	1~19
M-VA-OV-400-SG	50~135%	1~23
M-VA-OV-450-SG	50~135%	1~26
M-VA-OV-500-SG	50~135%	1~29
M-VA-OV-560-SG	50~135%	1~33
M-VA-OV-615-SG	50~135%	1~36

MAXIMUM COMPACTNESS FOR ALL OUTDOOR UNITS

22.40 - 33.50 kW

L 930 x H 1690 x D 775 (mm)

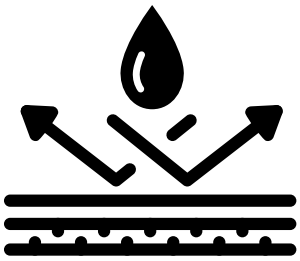
40.00 - 61.50 kW

L 1340 x H 1690 x D 775 (mm)

SPECIAL ANTI-CORROSION TREATMENT

Application possibilities are increased thanks to the special anti-corrosion treatment of the outdoor units, especially in coastal areas where the air is richer in salt and humidity, and in industrial areas where high concentrations of chemicals are present.

Tests carried out with neutral salt spray (H) found real increases in performance compared to untreated models.



ZINC-NICKEL FASTENERS

The body uses zinc-nickel alloy screws to improve anti-corrosive performance. These screws withstand the neutral salt spray test for 500 hours without generating rust.

+400% anti-corrosive capacity compared to normal galvanised screws.

GRILLES

The grilles receive a phosphating and electrophoresis treatment and are coated with highly weather-resistant powder.

+100% anti-corrosive capacity compared to standard models.

GAS-LIQUID SEPARATOR

The surface of the pressure vessel undergoes a phosphorisation treatment and is coated with highly weather-resistant powder.

+ 400% anti-corrosive capacity compared to standard models.

PRINTED CIRCUIT BOARD

The surface of the controller is coated with a special protective material, acting against moisture, mould and corrosion.

+ 400% anti-corrosive capacity compared to standard models.

BODY

The surface of the cover plate is treated with highly weather-resistant powder.

+100% anti-corrosive capacity compared to standard models.

EXCHANGER

The heat exchanger is fitted with black aluminium louvers that are resistant to acids and corrosion. State-of-the-art anti-corrosion treatment.

+33% anti-corrosive capacity compared to standard models.

EXCELLENT PERFORMANCE

MW 2-PIPE ANTI-CORROSION systems are characterised by their high installation flexibility, thanks to the possibility of connecting different types of indoor units.

The wide range of outdoor units, in terms of power, modularity and size, also allows you to choose the optimal solution that meets the requirements of space occupied, weight and manageability in every application.

Can use traditional heat recovery units (ERV) or combined with after-treatment batteries (ERV+DX) for fresh air supply. Recovery units are equipped with high-efficiency filters.

Large systems can be managed remotely and from a single terminal through centralised controls, Wi-Fi interfaces and multiple protocol gateways.

ENERGY EFFICIENCY

- Highly efficient low temperature enthalpy addition technology.
- New heat exchanger design.
- Smart control.
- Smart cooling and heating technology.
- Noise control technology.

RELIABLE AND STABLE

- Multiple corrosion protection.
- CAN+ communication technology.
- Multiple safety protection.
- Self-adapting drive control technology.
- Oil quality control technology.
- Oil circuit management technology.
- Compact structure.
- Very wide operating range: thanks to its modularity, the system can be adapted to the power required by different installations.

ADAPTABLE AND FLEXIBLE

- Compact design.
- Static fan pressure: up to 110 Pa, the highest on the market.
- Very high split limits and height difference between units: make the system adaptable to various types of installation.
- Fast installation.
- High degree of installation adaptability.

Operating ranges of outdoor units

The **MW 2-PIPE ANTI-CORROSION** system boasts a very wide outdoor temperature operating range, providing significant design flexibility.

-30°C
IN **WINTER**

55°C
IN **SUMMER**

COOLING MODE

Outside temperature from -15° to 55°C

HEATING MODE

Outside temperature from -30° to 24°C

OUTDOOR UNITS

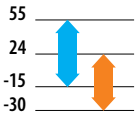
3 REFRIGERATION POWER LEVELS
22.40 - 28.00 - 33.50 kW

R410A
Refrigerant gas

DC Inverter compressors ensure total reliability due to their high energy efficiency and quiet operation.
In addition, they enable reduced vibration and accurate control of the operating frequency.

M-VA-OV-224-SG
M-VA-OV-280-SG
M-VA-OV-335-SG

OPERATING RANGE



Very wide range of operating limits: winter operation up to -30°C of outside air and summer up to +55°C.

Model			M-VA-OV-224-SG	M-VA-OV-280-SG	M-VA-OV-335-SG
Power class		**HP**	**8**	**10**	**12**
Nominal Data					
Rated capacity	Cooling	kW	22.40	28.00	33.50
Rated absorbed power		kW	4.99	6.26	8.00
Energy efficiency coefficient (rated)		EER[1]	4.49	4.47	4.19
Rated capacity	Heating	kW	25.00	31.50	37.50
Rated absorbed power		kW	4.85	7.39	8.68
Energy performance coefficient (rated)		COP[1]	5.15	4.26	4.32
Seasonal Data					
Seasonal energy efficiency index	Cooling	SEER[2]	7.10	6.59	6.31
	Heating	SCOP[2]	4.62	4.80	4.40
Electrical data					
Power supply		Ph-V-Hz	3~380~415V-50Hz		
Maximum current		A	23.00	23.50	24.10
Refrigerant circuit data					
Refrigerant[3]		type (GWP)	R410A (2088)		
Refrigerant pre-load quantity[4] (tons of CO2 equivalent)		Kg	5.5 (11.48)	5.5 (11.48)	7.5 (15.66)
Compressor		no. / type	1 / Scroll DC Inverter		
Pipe diameter	Liquid	mm (inch)	9.52 (3/8")	9.52 (3/8")	12.7 (1/2")
	Gas	mm (inch)	19.05 (3/4")	22.2 (7/8")	25.4 (1")
Product Specifications					
Dimensions	LxHxD	mm	930x1690x775	930x1690x775	930x1690x775
Net weight		Kg	220	220	240
Sound power level	max	dB(A)	82	86	86
Sound pressure level at 1 m	max	dB(A)	56	57	59
Treated air volume	max	m^3/h	9750	10500	11100
Available static pressure	std/max	Pa	0/110	0/110	0/110
Operating limits (outside temperature)	Cooling	°C	-15~55	-15~55	-15~55
	Heating	°C	-30~24	-30~24	-30~24
Connectable indoor units (max)		**no.**	**13**	**16**	**19**
Capacity of connectable indoor units		**%**	**50 ~ 135**		

1. Value measured according to harmonised standard EN14511.
2. EU Regulation No.206/2012 - - Value measured according to harmonised standard EN14825.
3. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 2088. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 2088 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.
4. Refer to the labels on the inside and outside of the unit to calculate the additional refrigerant load.

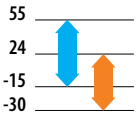
OUTDOOR UNITS

5 REFRIGERATION POWER LEVELS
40.00 - 45.00 - 50.40 - 56.00 - 61.50 kW

R410A
Refrigerant gas

DC Inverter compressors ensure total reliability due to their high energy efficiency and quiet operation. In addition, they enable reduced vibration and accurate control of the operating frequency.

OPERATING RANGE



Very wide range of operating limits: winter operation up to -30°C of outside air and summer up to +55°C.

M-VA-OV-400-SG
M-VA-OV-450-SG
M-VA-OV-500-SG
M-VA-OV-560-SG
M-VA-OV-615-SG

Model			M-VA-OV-400-SG	M-VA-OV-450-SG	M-VA-OV-500-SG	M-VA-OV-560-SG	M-VA-OV-615-SG
Power class		**HP**	**14**	**16**	**18**	**20**	**22**
Nominal Data							
Rated capacity	Cooling	kW	40.00	45.00	50.40	56.00	61.50
Rated absorbed power	Cooling	kW	9.52	11.87	12.76	15.47	17.47
Energy efficiency coefficient (rated)	Cooling	EER[1]	4.20	3.79	3.95	3.62	3.52
Rated capacity	Heating	kW	45.00	50.00	56.50	63.00	69.00
Rated absorbed power	Heating	kW	11.17	12.99	13.92	15.56	17.60
Energy performance coefficient (rated)	Heating	COP[1]	4.03	3.85	4.06	4.05	3.92
Seasonal Data							
Seasonal energy efficiency index	Cooling	SEER[2]	6.68	6.17	6.06	5.97	5.97
Seasonal energy efficiency index	Heating	SCOP[2]	4.80	4.84	4.19	4.11	4.11
Electrical data							
Power supply		Ph-V-Hz	3-380~415V-50Hz				
Maximum current		A	37.50	39.30	47.00	48.00	49.00
Refrigerant circuit data							
Refrigerant[3]		type (GWP)	R410A (2088)				
Refrigerant pre-load quantity[4] (tons of CO2 equivalent)		Kg	7.5 (15.66)	7.5 (15.66)	8.3 (17.33)	8.3 (17.33)	8.3 (17.33)
Compressor		no. / type	1 / Scroll DC Inverter		2 / Scroll DC Inverter		
Pipe diameter	Liquid	mm (inch)	12.7 (1/2")	12.7 (1/2")	15.9 (5/8")	15.9 (5/8")	15.9 (5/8")
Pipe diameter	Gas	mm (inch)	25.4 (1")	28.6 (1-1/8")	28.6 (1-1/8")	28.6 (1-1/8")	28.6 (1-1/8")
Product Specifications							
Dimensions	LxHxD	mm	1340x1690x775	1340x1690x775	1340x1690x775	1340x1690x775	1340x1690x775
Net weight		Kg	300	300	350	350	355
Sound power level	max	dB(A)	90	93	93	94	94
Sound pressure level at 1 m	max	dB(A)	59	60	61	62	63
Treated air volume	max	m3/h	13500	15400	16000	16500	16500
Available static pressure	std/max	Pa	0/110	0/110	0/110	0/110	0/110
Operating limits (outside temperature)	Cooling	°C	-15~55	-15~55	-15~55	-15~55	-15~55
Operating limits (outside temperature)	Heating	°C	-30~24	-30~24	-30~24	-30~24	-30~24
Connectable indoor units (max)		**no.**	**23**	**26**	**29**	**33**	**36**
Capacity of connectable indoor units		**%**	**50 ~ 135**				

1. Value measured according to harmonised standard EN14511.
2. EU Regulation No.206/2012 - - Value measured according to harmonised standard EN14825.
3. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 2088. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 2088 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.
4. Refer to the labels on the inside and outside of the unit to calculate the additional refrigerant load.

COMBINATIONS

Model			M-VA-OV-680-SG	M-VA-OV-730-SG	M-VA-OV-785-SG	M-VA-OV-850-SG
Power class		**HP**	**24**	**26**	**28**	**30**
Combination			**280+400**	**280+450**	**280+500**	**280+560**
Rated capacity	Cooling	kW	68.00	73.00	78.40	84.00
Rated absorbed power		kW	15.79	18.14	19.02	21.73
Energy efficiency coefficient (rated)		EER[1]	4.31	4.02	4.12	3.86
Rated capacity	Heating	kW	76.50	81.50	88.00	94.50
Rated absorbed power		kW	18.56	20.38	21.31	22.95
Energy performance coefficient (rated)		COP[1]	4.12	4.00	4.13	4.12
Electrical data						
Power supply		Ph-V-Hz	3-380~415V-50Hz			
Maximum current		A	61.00	62.80	70.50	71.50
Refrigerant circuit data						
Refrigerant[2]		type (GWP)	R410A (2088)			
Refrigerant pre-load quantity[3] (tons of CO2 equivalent)		Kg	13 (27.14)	13 (27.14)	13.8 (28.81)	13.8 (28.81)
Compressor		no. / type	2 / Scroll DC Inverter		3 / Scroll DC Inverter	
Pipe diameter[4]	Liquid	mm (inch)	15.9 (5/8")	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")
	Gas	mm (inch)	28.6 (1-1/8")	31.8 (1-1/4")	31.8 (1-1/4")	31.8 (1-1/4")
Product Specifications						
Dimensions[5]	LxHxD	mm	2370x1690x775	2370x1690x775	2370x1690x775	2370x1690x775
Net weight		Kg	520	520	570	570
Treated air volume	max	m3/h	24000	25900	26500	27000
Available static pressure	std/max	Pa	0/110	0/110	0/110	0/110
Operating limits (outside temperature)	Cooling	°C	-15~55	-15~55	-15~55	-15~55
	Heating	°C	-30~24	-30~24	-30~24	-30~24
Connectable indoor units (max)		**no.**	**39**	**43**	**46**	**50**
Capacity of connectable indoor units		**%**	**50 ~ 135**			
Accessories						
Branch pipe kit for O.U. pairing		no. / type	1 / DOS-68-MW-VA			

Model			M-VA-OV-1300-SG	M-VA-OV-1350-SG	M-VA-OV-1410-SG	M-VA-OV-1460-SG
Power class		**HP**	**46**	**48**	**50**	**52**
Combination			**280+450+560**	**280+450+615**	**335+450+615**	**280+560+615**
Rated capacity	Cooling	kW	129.00	134.50	140.00	145.50
Rated absorbed power		kW	33.61	35.61	37.34	36.50
Energy efficiency coefficient (rated)		EER[1]	3.84	3.78	3.75	3.99
Rated capacity	Heating	kW	144.50	150.50	156.50	163.50
Rated absorbed power		kW	35.94	37.98	39.27	38.91
Energy performance coefficient (rated)		COP[1]	4.02	3.96	3.99	4.20
Electrical data						
Power supply		Ph-V-Hz	3-380~415-50			
Maximum current		A	110.80	111.80	112.40	119.50
Refrigerant circuit data						
Refrigerant[2]		type (GWP)	R410A (2088)			
Refrigerant pre-load quantity[3] (tons of CO2 equivalent)		Kg	21.3 (44.47)	21.3 (44.47)	23.3 (48.65)	22.1 (46.14)
Compressor		no. / type	4 / Scroll DC Inverter			5 / Scroll DC Inverter
Pipe diameter[4]	Liquid	mm (inch)	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")
	Gas	mm (inch)	38.1 (1-1/2")	38.1 (1-1/2")	41.3 (1-5/8")	41.3 (1-5/8")
Product Specifications						
Dimensions[5]	LxHxD	mm	3810x1690x775	3810x1690x775	3810x1690x775	3810x1690x775
Net weight		Kg	870	875	895	925
Treated air volume	max	m3/h	42400	42400	43000	43000
Available static pressure	std/max	Pa	0/110	0/110	0/110	0/110
Operating limits (outside temperature)	Cooling	°C	-15~55	-15~55	-15~55	-15~55
	Heating	°C	-30~24	-30~24	-30~24	-30~24
Connectable indoor units (max)		**no.**	**64**	**64**	**66**	**69**
Capacity of connectable indoor units		**%**	**50 ~ 135**			
Accessories						
Branch pipe kit for O.U. pairing		no. / type	2 / DOS-68-MW-VA			

1. Value measured according to harmonised standard EN14511.
2. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 2088. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 2088 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.
3. Refer to the labels on the inside and outside of the unit to calculate the additional refrigerant load.
4. When several outdoor units are paired the diameters indicated refer to the section up to the first branch, with a length equivalent or less than 90 m.
5. Space between the paired units = 100 mm.

COMBINATIONS

M-VA-OV-900-SG	M-VA-OV-960-SG	M-VA-OV-1010-SG	M-VA-OV-1065-SG	M-VA-OV-1130-SG	M-VA-OV-1180-SG	M-VA-OV-1235-SG
32	34	36	38	40	42	44
280+615	335+615	400+615	450+615	500+615	560+615	615+615
89.50	95.00	101.50	106.50	111.90	117.50	123.00
23.74	25.47	27.00	29.34	30.23	32.94	34.94
3.77	3.73	3.76	3.63	3.70	3.57	3.52
100.50	106.50	114.00	119.00	125.50	132.00	138.00
25.00	26.28	28.77	30.59	31.52	33.16	35.20
4.02	4.05	3.96	3.89	3.98	3.98	3.92
3-380~415V-50Hz						
72.50	73.10	86.50	88.30	96.00	97.00	98.00
R410A (2088)						
13.8 (28.81)	15.8 (32.99)	15.8 (32.99)	15.8 (32.99)	16.6 (34.66)	16.6 (34.66)	16.6 (34.66)
3 / Scroll DC Inverter				4 / Scroll DC Inverter		
19.05 (3/4")	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")
31.8 (1-1/4")	31.8 (1-1/4")	38.1 (1-1/2")	38.1 (1-1/2")	38.1 (1-1/2")	38.1 (1-1/2")	38.1 (1-1/2")
2370x1690x775	2370x1690x775	2780x1690x775	2780x1690x775	2780x1690x775	2780x1690x775	2780x1690x775
575	595	655	655	705	705	710
27000	27600	30000	31900	32500	33000	33000
0/110	0/110	0/110	0/110	0/110	0/110	0/110
-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55
-30~24	-30~24	-30~24	-30~24	-30~24	-30~24	-30~24
53	56	59	63	64	64	64
50 ~ 135						
1 / DOS-68-MW-VA						

M-VA-OV-1515-SG	M-VA-OV-1580-SG	M-VA-OV-1630-SG	M-VA-OV-1685-SG	M-VA-OV-1750-SG	M-VA-OV-1800-SG	M-VA-OV-1845-SG
54	56	58	60	62	64	66
280+615+615	335+615+615	400+615+615	450+615+615	500+615+615	560+615+615	615+615+615
151.00	156.50	163.00	168.00	173.40	179.00	184.50
41.21	42.94	44.47	46.82	47.70	50.41	52.41
3.66	3.64	3.67	3.59	3.64	3.55	3.52
169.50	175.50	183.00	188.00	194.50	201.00	207.00
42.60	43.88	46.37	48.19	49.12	50.76	52.81
3.98	4.00	3.95	3.90	3.96	3.96	3.92
3-380~415-50						
121.50	122.10	135.50	137.30	145.00	146.00	147.00
R410A (2088)						
22.1 (46.14)	24.1 (50.32)	24.1 (50.32)	24.1 (50.32)	24.9 (51.99)	24.9 (51.99)	24.9 (51.99)
5 / Scroll DC Inverter				6 / Scroll DC Inverter		
19.05 (3/4")	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")
41.3 (1-5/8")	41.3 (1-5/8")	41.3 (1-5/8")	41.3 (1-5/8")	41.3 (1-5/8")	41.3 (1-5/8")	41.3 (1-5/8")
3810x1690x775	3810x1690x775	4220x1690x775	4220x1690x775	4220x1690x775	4220x1690x775	4220x1690x775
930	950	1010	1010	1060	1060	1065
43500	44100	46500	48400	49000	49500	49500
0/110	0/110	0/110	0/110	0/110	0/110	0/110
-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55
-30~24	-30~24	-30~24	-30~24	-30~24	-30~24	-30~24
71	74	77	80	80	80	80
50 ~ 135						
2 / DOS-68-MW-VA						

1. Value measured according to harmonised standard EN14511.
2. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 2088. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 2088 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.
3. Refer to the labels on the inside and outside of the unit to calculate the additional refrigerant load.
4. When several outdoor units are paired the diameters indicated refer to the section up to the first branch, with a length equivalent or less than 90 m.
5. Space between the paired units = 100 mm.

COMBINATIONS

Model			M-VA-OV-1908-SG	M-VA-OV-1962-SG	M-VA-OV-2016-SG	M-VA-OV-2072-SG
Power class		**HP**	**68**	**70**	**72**	**74**
Combination			**280+450+560+615**	**280+500+560+615**	**280+560+560+615**	**280+560+615+615**
Rated capacity	Cooling	kW	190.50	195.90	201.50	207.00
Rated absorbed power		kW	51.08	51.96	54.67	56.68
Energy efficiency coefficient (rated)		EER[1]	3.73	3.77	3.69	3.65
Rated capacity	Heating	kW	213.50	220.00	226.50	232.50
Rated absorbed power		kW	53.54	54.47	56.11	58.15
Energy performance coefficient (rated)		COP[1]	3.99	4.04	4.04	4.00
Electrical data						
Power supply		Ph-V-Hz	3-380~415-50			
Maximum current		A	159.80	167.50	168.50	169.50
Refrigerant circuit data						
Refrigerant[2]		type (GWP)	R410A (2088)			
Refrigerant pre-load quantity[3] (tons of CO2 equivalent)		Kg	29.6 (61.8)	30.4 (63.47)	30.4 (63.47)	30.4 (63.47)
Compressor		no. / type	6 / Scroll DC Inverter	7 / Scroll DC Inverter		
Pipe diameter[4]	Liquid	mm (inch)	22.2 (7/8")	22.2 (7/8")	22.2 (7/8")	22.2 (7/8")
	Gas	mm (inch)	44.5 (1-3/4")	44.5 (1-3/4")	44.5 (1-3/4")	44.5 (1-3/4")
Product Specifications						
Dimensions[5]	LxHxD	mm	5250x1690x775	5250x1690x775	5250x1690x775	5250x1690x775
Net weight		Kg	1225	1275	1275	1280
Treated air volume	max	m^3/h	58900	59500	60000	60000
Available static pressure	std/max	Pa	0/110	0/110	0/110	0/110
Operating limits (outside temperature)	Cooling	°C	-15~55	-15~55	-15~55	-15~55
	Heating	°C	-30~24	-30~24	-30~24	-30~24
Connectable indoor units (max)		**no.**	**80**	**80**	**80**	**80**
Capacity of connectable indoor units		**%**	**50 ~ 135**			
Accessories						
Branch pipe kit for O.U. pairing		no. / type	3 / DOS-68-MW-VA			

1. Value measured according to harmonised standard EN14511.
2. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 2088. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 2088 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.
3. Refer to the labels on the inside and outside of the unit to calculate the additional refrigerant load.
4. When several outdoor units are paired the diameters indicated refer to the section up to the first branch, with a length equivalent or less than 90 m.
5. Space between the paired units = 100 mm.

COMBINATIONS

M-VA-OV-2128-SG	M-VA-OV-2184-SG	M-VA-OV-2240-SG	M-VA-OV-2295-SG	M-VA-OV-2350-SG	M-VA-OV-2405-SG	M-VA-OV-2460-SG
76	**78**	**80**	**82**	**84**	**86**	**88**
280+615+615+615	**335+615+615+615**	**400+615+615+615**	**450+615+615+615**	**500+615+615+615**	**560+615+615+615**	**615+615+615+615**
212.50	218.00	224.50	229.50	234.90	240.50	246.00
58.68	60.41	61.94	64.29	65.17	67.88	69.89
3.62	3.61	3.62	3.57	3.60	3.54	3.52
238.50	244.50	252.00	257.00	263.50	270.00	276.00
60.20	61.49	63.97	65.79	66.72	68.36	70.41
3.96	3.98	3.94	3.91	3.95	3.95	3.92
3-380~415-50						
170.50	171.10	184.50	186.30	194.00	195.00	196.00
R410A (2088)						
30.4 (63.47)	32.4 (67.65)	32.4 (67.65)	32.4 (67.65)	33.2 (69.32)	33.2 (69.32)	33.2 (69.32)
7 / Scroll DC Inverter				8 / Scroll DC Inverter		
22.2 (7/8")	22.2 (7/8")	22.2 (7/8")	22.2 (7/8")	22.2 (7/8")	22.2 (7/8")	22.2 (7/8")
44.5 (1-3/4")	44.5 (1-3/4")	44.5 (1-3/4")	44.5 (1-3/4")	44.5 (1-3/4")	44.5 (1-3/4")	44.5 (1-3/4")
5250x1690x775	5250x1690x775	5660x1690x775	5660x1690x775	5660x1690x775	5660x1690x775	5660x1690x775
1285	1305	1365	1365	1415	1415	1420
60000	60600	63000	64900	65500	66000	66000
0/110	0/110	0/110	0/110	0/110	0/110	0/110
-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55
-30~24	-30~24	-30~24	-30~24	-30~24	-30~24	-30~24
80	**80**	**80**	**80**	**80**	**80**	**80**
50 ~ 135						
3 / DOS-68-MW-VA						

1. Value measured according to harmonised standard EN14511.
2. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 2088. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 2088 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.
3. Refer to the labels on the inside and outside of the unit to calculate the additional refrigerant load.
4. When several outdoor units are paired the diameters indicated refer to the section up to the first branch, with a length equivalent or less than 90 m.
5. Space between the paired units = 100 mm.

THE MW 3-PIPE SYSTEM **HEAT RECOVERY** IN INDIVIDUAL OR MODULAR USE

OUTDOOR UNITS

22.40 kW	28.00 kW	33.50 kW
8HP	**10HP**	**12HP**
M-VR-OV-224-SG	M-VR-OV-280-SG	M-VR-OV-335-SG

40.00 kW	45.00 kW	50.40 kW	56.00 kW	61.50 kW
14HP	**16HP**	**18HP**	**20HP**	**22HP**
M-VR-OV-400-SG	M-VR-OV-450-SG	M-VR-OV-500-SG	M-VR-OV-560-SG	M-VR-OV-615-SG

FLOW CONTROLLERS

Number of connections	Number of connections	Number of connections	Number of connections
1	**2**	**4**	**8**
M-VR-ME-1-NG	M-VR-ME-2-NG	M-VR-ME-4-NG	M-VR-ME-8-NG




HYDRONIC MODULE

16.00 kW
single phase
M-VR-HM-16-NG

30.00 kW
single phase
M-VR-HM-30-NG

INDOOR UNITS

Indoor units applicable for air-to-air operation on page 73

THE **MW 3-PIPE HEAT RECOVERY** CONSISTS OF **8 INDIVIDUAL OUTDOOR UNITS**. IN COMBINATION IT REACHES A MAXIMUM OUTPUT OF **246 KW** TO WHICH UP TO **80 INDOOR UNITS** CAN BE CONNECTED.

8 THREE-PHASE MODELS

The maximum power of the individual outdoor unit reaches 61.5 kW (22 HP); the maximum power of the combined outdoor units reaches 246 kW (88 HP), the highest value in the industry.

The MW 3-pipe system is able to realise combinations of up to 4 outdoor units, to which up to 80 indoor units can be connected, thanks to the latest CAN+ technology.

POWER AND NUMBER OF CONNECTABLE INDOOR UNITS

Model	Min~Max power Connectable I.U.	Min~Max number Connectable I.U.
M-VR-OV-224-SG	50~135%	1~13
M-VR-OV-280-SG	50~135%	1~16
M-VR-OV-335-SG	50~135%	1~19
M-VR-OV-400-SG	50~135%	1~23
M-VR-OV-450-SG	50~135%	1~26
M-VR-OV-500-SG	50~135%	1~29
M-VR-OV-560-SG	50~135%	1~33
M-VR-OV-615-SG	50~135%	1~36

MAXIMUM COMPACTNESS FOR ALL OUTDOOR UNITS

Compactness is another important benefit. Two model designs are available: single fan (22.4 to 33.5 kW) and double fan (40 to 61.5 kW).

22.40 - 33.50 kW

L 930 x H 1690 x D 775 (mm)

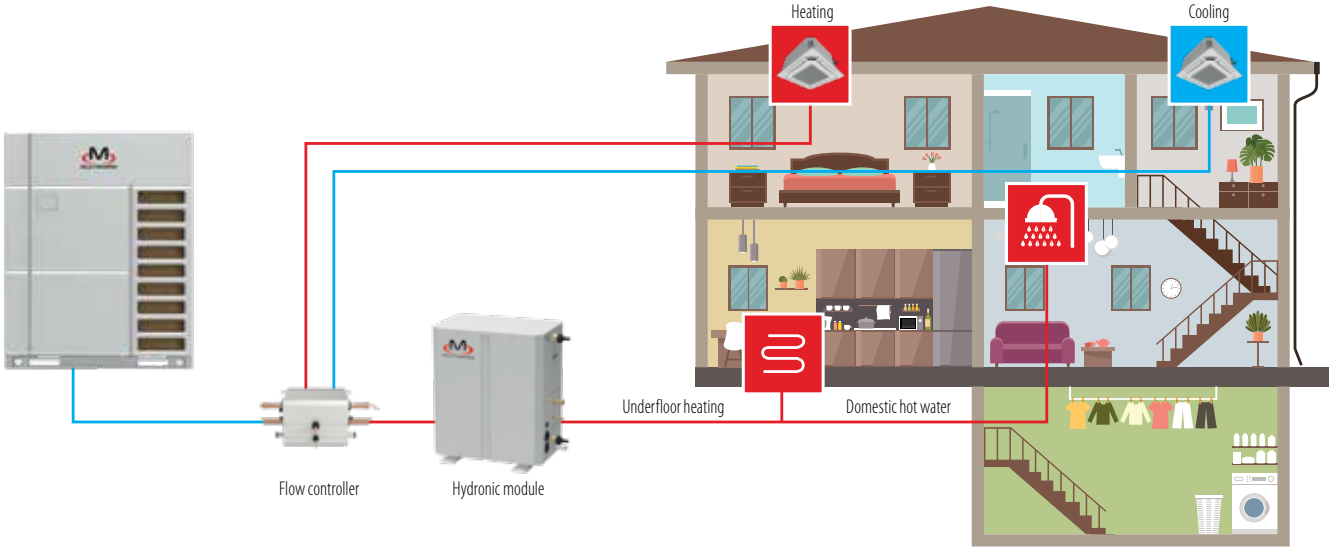
40.00 - 61.50 kW

L 1340 x H 1690 x D 775 (mm)

MIXED TECHNOLOGIES FOR MAXIMUM EFFICIENCY AND ENERGY SAVINGS

The MULTIWARM 3-pipe system with heat recovery can simultaneously fulfil air conditioning, heating and hot water production needs.

The MULTIWARM 3-pipe range is especially suitable for many types of applications: villas, shops, offices, shopping centres, hotels, hospitals, banks, museums, schools.



All DC Inverter Compressors

The use of All DC Inverter compressors guarantees excellent system efficiency at both full and partial load. The high-efficiency permanent magnet synchronous motor produces better efficiency than the conventional DC Inverter compressor.

The system is able to absorb gas directly to reduce overheating loss.

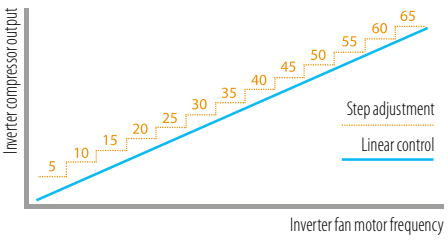
+ medium and high-frequency performance thanks to the new high-pressure chamber design

+ low-frequency efficiency with the new concentrated winding motor

DC Inverter Sensorless fan motors

The linear speed control ranges from 5 to 65 Hz. Operation is more efficient compared to conventional inverter motors.

Sensorless control technology ensures quieter running, less vibration and more uniform operation.



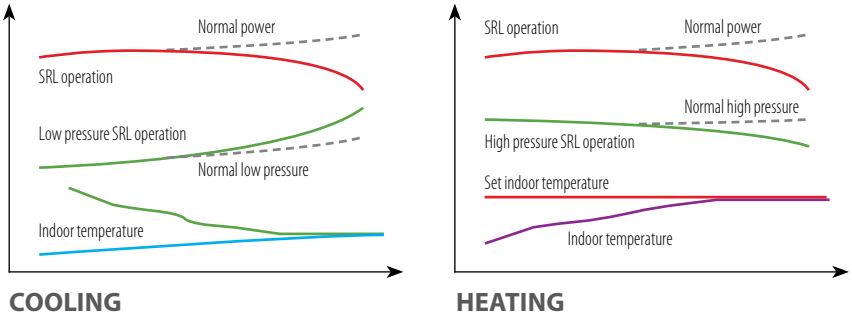
Enhanced Vapour Injection "EVI" technology

This special technology applied to the compressor uses part of the refrigerant to maximise performance while improving energy efficiency.

Automatic load control

The unit intelligently detects and controls the system parameters, adapting them to the actual cooling/heating needs.

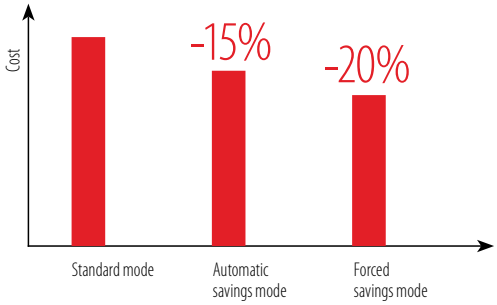
It automatically adjusts the refrigerant heat exchange temperature according to the increase or decrease in room temperature.



Control technology with energy savings of up to 20%

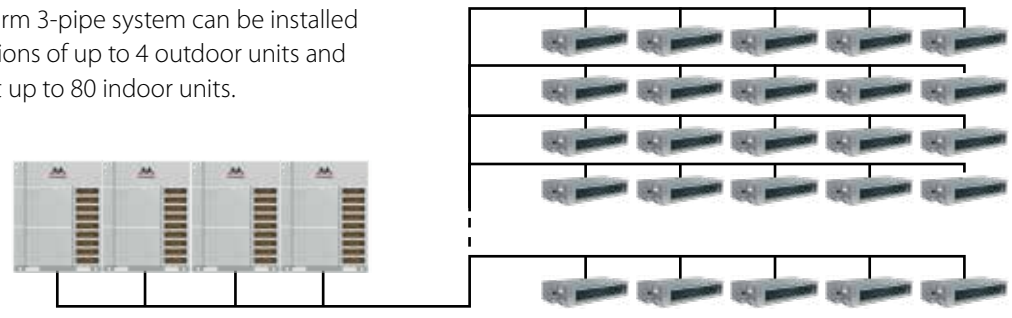
The 3-pipe MW system has two energy-saving modes:

- **Automatic energy savings:** automatically adjusts parameters according to the operating status, thus reducing the cost of electricity. Up to 15% energy can be saved.
- **Forced energy savings:** compulsorily limits the output power. A 90% or 80% capacity ratio can be selected depending on energy consumption and user requirements.



Up to 80 connectable indoor units

The Multiwarm 3-pipe system can be installed in combinations of up to 4 outdoor units and can connect up to 80 indoor units.

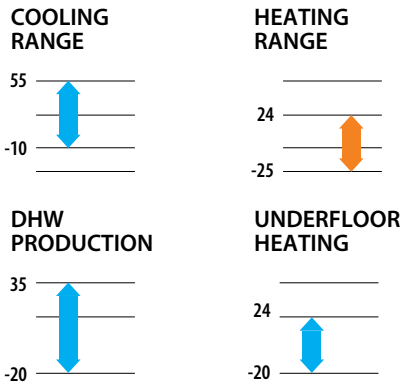


QUIET COMFORT THAT LASTS

Wide operating range from -25°C to 55°C, rapid start-up times, rapid defrosting without performance loss.
Low noise for maximum comfort in all environments.

Wide range of operation and operating conditions

Operation is possible for voltages from 380 to 415V, at 50Hz.



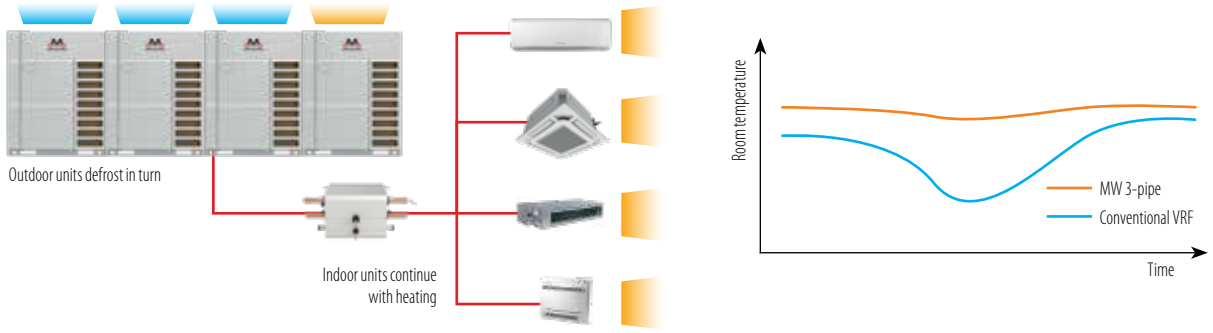
up to **55°C** in cooling

up to **-25°C** in heating

up to **-20°C** in DHW production and underfloor heating

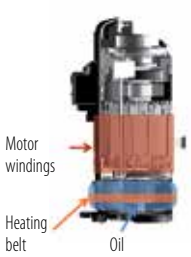
Defrosting technology with heat storage (optional module)

The heat storage module is optional and offers the advantage of an innovative and intelligent defrosting mode. It accelerates heat transfer, defrosts quickly and maintains constant comfort.



Reduced pre-heating time

The electric motor winding and the heating belt are activated simultaneously, heating the oil and ensuring rapid and complete evaporation of the refrigerant. This allows the pre-heating time to be reduced by 75%, from 8 to 2 hours.

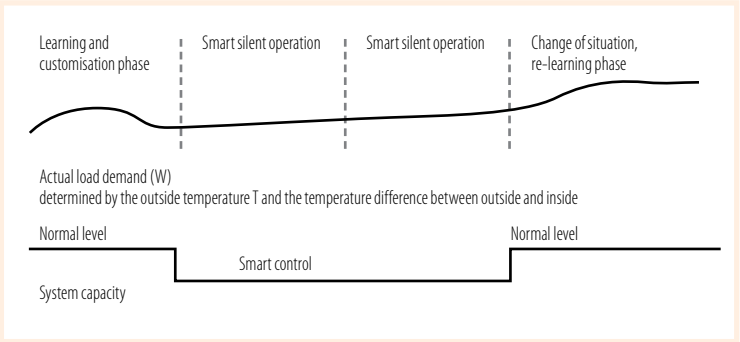


Smart defrost and auto adaptive control

This runs with variable cycles and capacities depending on the system temperature, pressure and speed of the working load. The MW 3-pipe system can automatically modify the compressor capacity during defrosting by evaluating the parameters in real time to achieve stable or rapid defrosting.

Outdoor unit silent mode and sound level control

The system can learn, define and remember users' habits. It can automatically determine the system capacity over the next 24 hours to achieve automatic silent operation.

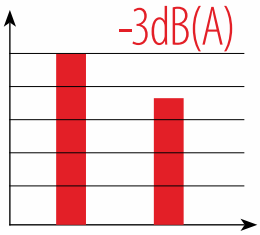


Optimised fan housing design

The fan housing design reduces vibrations during operation. This enables a reduction in sound level up to 3 dB(A).

Aerodynamic 3D axial fan

Its special inverted S-shape has the advantage of limiting noise emissions while providing a significant increase in air flow.



Sound absorption and insulation

The use of high-quality sound-absorbing materials ensures optimal insulation of the compressor and other components. The adoption of sound-absorbing cotton + insulation box allows control over the sound level of the unit.

Sound-absorbing cotton

Insulation box

Smart control of the refrigerant circuit

The system intelligently judges whether the amount of refrigerant circulation is sufficient according to the system parameters (pressure, temperature, speed, etc.). Refrigerant transfer is performed automatically.

EXCELLENT PERFORMANCE

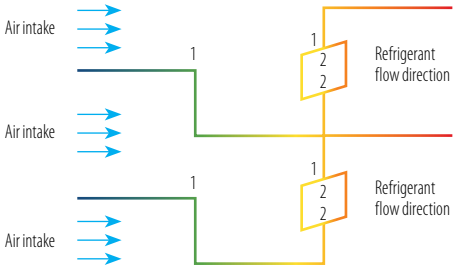
The new generation intelligent management control system and the healthy fresh air solution guarantee excellent energy savings, comfort and reliability.

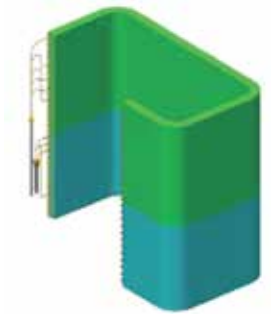
High-efficiency heat exchanger

The heat exchanger is designed in such a way that the coil is divided into two distinct areas (upper and lower) to improve refrigerant flow: the flow pattern adopted (1-2-2-1) ensures better heat exchange compared to the traditional one.

Its features:

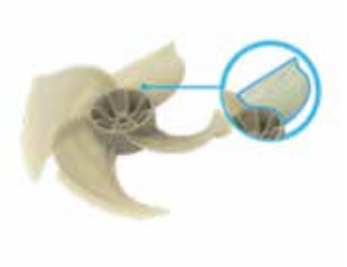
- Short-pitch corrugated heat exchange louvers
- Reduced louver cross-section, increased corrosion resistance
- Corrugated hydrophilic design, easier defrosting easier





Wide air flow

The special inverted S-shape design of the fan blades allows a greater area of action and consequently a greater volume of treated air at the same rpm.



HPAC function - intelligent switching control

The MW 3-pipe system makes use of a brand new modular control method that guarantees not only the operational lifetime of the entire unit but also overall operational energy efficiency through intelligent switching, modulated according to the load demands of the indoor unit.

Traditional VRF system

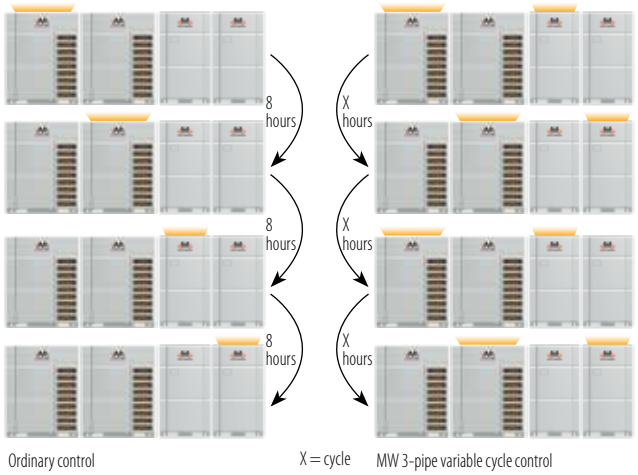
MW 3-pipe

RELIABILITY OVER TIME AND EASY MAINTENANCE

Heat exchanger with Golden Fin treatment against corrosion. Protects against atmospheric phenomena and the effects of an aggressive environment.

Alternate variable cycle module control

The HPAC function, with intelligent switching between outdoor units according to a variable control cycle based on the load requirements of the indoor unit, contributes to increased system reliability over time.

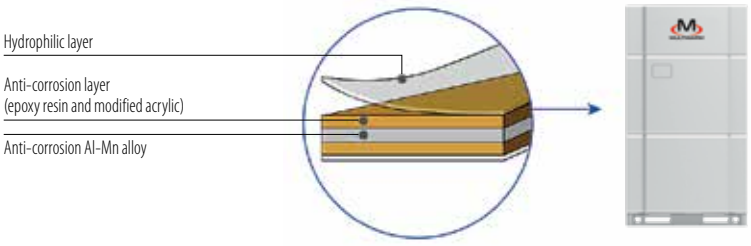


Control with compressor rotation

The overall life of the modular units is considered in the system control. When more than one compressor is present, the internal compressors will run in turn to balance the life of each compressor.

Golden Fin corrosion protection

The main Golden Fin material is an aluminium-manganese (Al- Mn) anti-rust alloy, coated with the Golden Protection Layer (anti-corrosion layer composed of epoxy resin and modified acrylic without silicone) whose anti-corrosion performance in salt spray tests is 200-300% higher than normal Blue Fin.



FLEXIBILITY AND EASY INSTALLATION

The maximum total pipe length of 1000 m available on the market allows installation in a wide range of buildings with the utmost flexibility.

High splitting length

Maximum effective length of a single pipe = 200 m

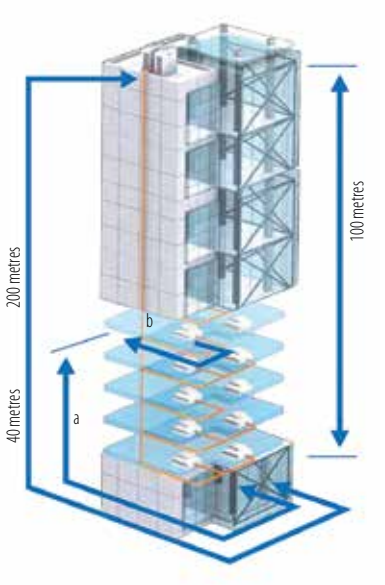
Maximum equivalent length of a single pipe = 240 m

Maximum pipe length = 1000 m

Maximum length after first branch = 120 m

Maximum height difference between indoor and outdoor units = 110 m

Maximum height difference between indoor units = 30 m



Smart start

FAST INSTALLATION

- Automatic address assignment to indoor units, no DIP switch required for start-up.
- Five-sided outlet pipe connection method: utmost installation versatility.
- No external oil balance pipe thanks to advanced oil balance control.
- Highly versatile design.

EFFICIENT MULTI-STARTS

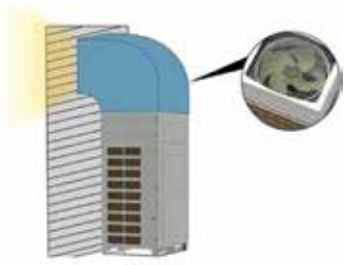
Fast one-button start-up.

Clear interface, detailed data and professional analysis.

Multifunctional debugger, quick connection, no special PC required, automatic data storage, no external memory.
Debug without wire remote control installation.

Air ducting - maximum versatility

The design of the outdoor unit fan allows a very high static pressure of the outdoor unit, with a range from 0 to 110 Pa. This makes unit installation more versatile and suitable for different types of environments, especially in cases where it is necessary to position the outdoor units inside rooms.



Large spaces for easy maintenance

The MW 3-pipe system is designed with integrated electrical control and reserved maintenance space for easy after-sales service.

Excellent emergency operation

EMERGENCY FUNCTION

The system is capable of a combination of 4 modules with outdoor units. When an error occurs on one of the modules, the others take over emergency operation to continue service.

EMERGENCY OPERATION OF THE FAN

Thanks to the dual fan design, one of the two fans can continue to operate if the other has an error.

EMERGENCY OPERATION OF THE COMPRESSOR

All compressors in each module are DC inverter and when one compressor faults, the others take over emergency operation.

EMERGENCY OPERATION OF THE SENSOR

In the event of a sensor problem on one indoor unit, it can be switched off while the others continue to operate. A maximum of 3 indoor units can be switched off at the same time.

Automatic refrigerant recovery

The advanced automatic indoor and outdoor unit refrigerant recovery function allows effective recovery of refrigerant from the units in the event of a malfunction, avoiding gas leakage and reducing service times.

Indoor unit emergency function

When an indoor unit has to be switched off for maintenance, the other indoor units connected to the same system continue running.

Indoor unit auto-positioning function

If several indoor units are installed in large spaces such as exhibition halls, conference rooms or offices, the auto-positioning function enables indoor unit buzzer sounding so that they can be located quickly.

OUTDOOR UNITS

3 REFRIGERATION POWER LEVELS
22.40 - 28.00 - 33.50 kW

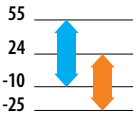
R410A
Refrigerant gas

DC Inverter compressors ensure total reliability due to their high energy efficiency and quiet operation. In addition, they enable reduced vibration and accurate control of the operating frequency.

NEW

M-VR-OV-224-SG
M-VR-OV-280-SG
M-VR-OV-335-SG

OPERATING RANGE



Very wide range of operating limits: winter operation up to -25°C of outside air and summer up to +55°C.

Model			M-VR-OV-224-SG	M-VR-OV-280-SG	M-VR-OV-335-SG
Power class		**HP**	**8**	**10**	**12**
Nominal Data					
Rated capacity	Cooling	kW	22.40	28.00	33.50
Rated absorbed power		kW	4.98	6.48	8.19
Energy efficiency coefficient (rated)		EER[1]	4.50	4.32	4.09
Rated capacity	Heating	kW	25.00	31.50	37.50
Rated absorbed power		kW	5.10	7.24	8.91
Energy performance coefficient (rated)		COP[1]	4.90	4.35	4.21
Seasonal Data					
Seasonal energy efficiency index	Cooling	SEER[2]	7.00	6.70	6.55
	Heating	SCOP[2]	4.32	4.58	4.74
Electrical data					
Power supply		Ph-V-Hz	3-380~415V-50Hz		
Maximum current		A	23.00	23.50	24.10
Refrigerant circuit data					
Refrigerant[3]		type (GWP)	R410A (2088)		
Refrigerant pre-load quantity[4] (tons of CO2 equivalent)		Kg	8.2 (17.12)	8.5 (17.75)	9.6 (20.04)
Compressor		no. / type	1 / Scroll DC Inverter		
Pipe diameter	Liquid	mm (inch)	9.52 (3/8")	9.52 (3/8")	12.7 (1/2")
	HP gas	mm (inch)	15.9 (5/8")	19.05 (3/4")	19.05 (3/4")
	LP gas	mm (inch)	19.05 (3/4")	22.2 (7/8")	25.4 (1")
Product Specifications					
Dimensions	LxHxD	mm	930x1690x775	930x1690x775	930x1690x775
Net weight		Kg	243	243	256
Sound power level	max	dB(A)	80	82	84
Sound pressure level at 1 m	max	dB(A)	60	61	63
Treated air volume	max	m3/h	9750	10500	11100
Available static pressure	std/max	Pa	0/110	0/110	0/110
Operating limits (outside temperature)	Cooling	°C	-10~55	-10~55	-10~55
	Heating	°C	-25~24	-25~24	-25~24
	Hydronic heating	°C	-20~24	-20~24	-20~24
	Domestic hot water (DHW)	°C	-20~35	-20~35	-20~35
Connectable indoor units (max)		**no.**	**13**	**16**	**19**
Connectable hydronic modules (max)[5]		**no.**	**2**	**2**	**2**
Capacity of connectable indoor units		**%**	**50 ~ 135**		

1. Value measured according to harmonised standard EN14511.
2. EU Regulation No.206/2012 - - Value measured according to harmonised standard EN14825.
3. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 2088. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 2088 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.
4. Refer to the labels on the inside and outside of the unit to calculate the additional refrigerant load.
5. Refer to the installation manual to determine the power of the connectable hydronic modules.

OUTDOOR UNITS

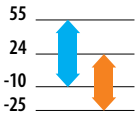
5 REFRIGERATION POWER LEVELS
40.00 - 45.00 - 50.40 - 56.00 - 61.50 kW

R410A
Refrigerant gas

DC Inverter compressors ensure total reliability due to their high energy efficiency and quiet operation. In addition, they enable reduced vibration and accurate control of the operating frequency.

NEW

OPERATING RANGE



Very wide range of operating limits: winter operation up to -25°C of outside air and summer up to +55°C.

M-VR-OV-400-SG
M-VR-OV-450-SG
M-VR-OV-500-SG
M-VR-OV-560-SG
M-VR-OV-615-SG

Model			M-VR-OV-400-SG	M-VR-OV-450-SG	M-VR-OV-500-SG	M-VR-OV-560-SG	M-VR-OV-615-SG
Power class		**HP**	**14**	**16**	**18**	**20**	**22**
Nominal Data							
Rated capacity	Cooling	kW	40.00	45.00	50.40	56.00	61.50
Rated absorbed power	Cooling	kW	9.76	11.45	12.99	15.82	18.52
Energy efficiency coefficient (rated)	Cooling	EER[1]	4.10	3.93	3.88	3.54	3.32
Rated capacity	Heating	kW	45.00	50.00	56.50	63.00	69.00
Rated absorbed power	Heating	kW	10.84	12.47	14.49	16.71	18.40
Energy performance coefficient (rated)	Heating	COP[1]	4.15	4.01	3.90	3.77	3.75
Seasonal Data							
Seasonal energy efficiency index	Cooling	SEER[2]	6.91	6.46	6.48	6.32	6.32
Seasonal energy efficiency index	Heating	SCOP[2]	4.44	4.42	4.25	4.15	4.15
Electrical data							
Power supply		Ph-V-Hz	3-380~415V-50Hz				
Maximum current		A	37.50	39.30	47.00	48.00	49.00
Refrigerant circuit data							
Refrigerant[3]		type (GWP)	R410A (2088)				
Refrigerant pre-load quantity[4] (tons of CO2 equivalent)		Kg	11.1 (23.18)	11.6 (24.22)	12.8 (26.73)	12.8 (26.73)	13.3 (27.77)
Compressor		no. / type	1 / Scroll DC Inverter		2 / Scroll DC Inverter		
Pipe diameter	Liquid	mm (inch)	12.7 (1/2")	12.7 (1/2")	15.9 (5/8")	15.9 (5/8")	15.9 (5/8")
Pipe diameter	HP gas	mm (inch)	22.2 (7/8")	22.2 (7/8")	25.4 (1")	25.4 (1")	25.4 (1")
Pipe diameter	LP gas	mm (inch)	25.4 (1")	28.6 (1-1/8")	28.6 (1-1/8")	28.6 (1-1/8")	28.6 (1-1/8")
Product Specifications							
Dimensions	LxHxD	mm	1340x1690x775	1340x1690x775	1340x1690x775	1340x1690x775	1340x1690x775
Net weight		Kg	325	325	385	385	385
Sound power level	max	dB(A)	91	91	88	88	88
Sound pressure level at 1 m	max	dB(A)	63	63	63	63	64
Treated air volume	max	m3/h	13500	15400	16500	16500	16500
Available static pressure	std/max	Pa	0/110	0/110	0/110	0/110	0/110
Operating limits (outside temperature)	Cooling	°C	-10~55	-10~55	-10~55	-10~55	-10~55
Operating limits (outside temperature)	Heating	°C	-25~24	-25~24	-25~24	-25~24	-25~24
Operating limits (outside temperature)	Hydronic heating	°C	-20~24	-20~24	-20~24	-20~24	-20~24
Operating limits (outside temperature)	Domestic hot water (DHW)	°C	-20~35	-20~35	-20~35	-20~35	-20~35
Connectable indoor units (max)		**no.**	**23**	**26**	**29**	**33**	**36**
Connectable hydronic modules (max)[5]		**no.**	**2**	**2**	**2**	**2**	**2**
Capacity of connectable indoor units		**%**	**50 ~ 135**				

1. Value measured according to harmonised standard EN14511.
2. EU Regulation No.206/2012 - - Value measured according to harmonised standard EN14825.
3. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 2088. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 2088 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.
4. Refer to the labels on the inside and outside of the unit to calculate the additional refrigerant load.
5. Refer to the installation manual to determine the power of the connectable hydronic modules.

COMBINATIONS

Model			M-VR-OV-680-SG	M-VR-OV-730-SG	M-VR-OV-785-SG	M-VR-OV-850-SG
Power class		**HP**	**24**	**26**	**28**	**30**
Combination			**280+400**	**280+450**	**280+500**	**280+560**
Rated capacity	Cooling	kW	68.00	73.00	78.40	84.00
Rated absorbed power	Cooling	kW	16.24	17.93	19.47	22.30
Energy efficiency coefficient (rated)	Cooling	EER[1]	4.19	4.07	4.03	3.77
Rated capacity	Heating	kW	76.50	81.50	88.00	94.50
Rated absorbed power	Heating	kW	18.08	19.71	21.73	23.95
Energy performance coefficient (rated)	Heating	COP[1]	4.23	4.13	4.05	3.95
Electrical data						
Power supply		Ph-V-Hz	3-380~415V-50Hz			
Maximum current		A	61.00	62.80	70.50	71.50
Refrigerant circuit data						
Refrigerant[2]		type (GWP)	R410A (2088)			
Refrigerant pre-load quantity[3] (tons of CO2 equivalent)		Kg	19.6 (40.93)	20.1 (41.97)	21.3 (44.48)	21.3 (44.48)
Compressor		no. / type	2 / Scroll DC Inverter		3 / Scroll DC Inverter	
Pipe diameter[4]	Liquid	mm (inch)	15.9 (5/8")	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")
Pipe diameter[4]	HP gas	mm (inch)	25.4 (1")	28.6 (1-1/8")	28.6 (1-1/8")	28.6 (1-1/8")
Pipe diameter[4]	LP gas	mm (inch)	28.6 (1-1/8")	31.8 (1-1/4")	31.8 (1-1/4")	31.8 (1-1/4")
Product Specifications						
Dimensions[5]	LxHxD	mm	2370x1690x775	2370x1690x775	2370x1690x775	2370x1690x775
Net weight		Kg	568	568	628	628
Treated air volume	max	m3/h	24000	25900	27000	27000
Available static pressure	std/max	Pa	0/110	0/110	0/110	0/110
Operating limits (outside temperature)	Cooling	°C	-10~55	-10~55	-10~55	-10~55
Operating limits (outside temperature)	Heating	°C	-25~24	-25~24	-25~24	-25~24
Operating limits (outside temperature)	Hydronic heating	°C	-20~24	-20~24	-20~24	-20~24
Operating limits (outside temperature)	Domestic hot water (DHW)	°C	-20~35	-20~35	-20~35	-20~35
Connectable indoor units (max)		**no.**	**39**	**43**	**46**	**50**
Connectable hydronic modules (max)[6]		**no.**	**4**	**4**	**4**	**4**
Capacity of connectable indoor units		**%**	**50 ~ 135**			
Accessories						
Branch pipe kit for O.U. pairing		no. / type	1 / DOS-68-MW-VR			

Model			M-VR-OV-1300-SG	M-VR-OV-1350-SG	M-VR-OV-1410-SG	M-VR-OV-1460-SG
Power class		**HP**	**46**	**48**	**50**	**52**
Combination			**280+450+560**	**280+450+615**	**335+450+615**	**280+560+615**
Rated capacity	Cooling	kW	129.00	134.50	140.00	145.50
Rated absorbed power	Cooling	kW	33.75	36.46	38.17	40.82
Energy efficiency coefficient (rated)	Cooling	EER[1]	3.82	3.69	3.67	3.56
Rated capacity	Heating	kW	144.50	150.50	156.50	163.50
Rated absorbed power	Heating	kW	36.42	38.11	39.78	42.35
Energy performance coefficient (rated)	Heating	COP[1]	3.97	3.95	3.93	3.86
Electrical data						
Power supply		Ph-V-Hz	3-380~415-50			
Maximum current		A	110.80	111.80	112.40	120.50
Refrigerant circuit data						
Refrigerant[2]		type (GWP)	R410A (2088)			
Refrigerant pre-load quantity[3] (tons of CO2 equivalent)		Kg	32.9 (68.70)	33.4 (69.74)	34.5 (72.03)	34.6 (72.25)
Compressor		no. / type	4 / Scroll DC Inverter			5 / Scroll DC Inverter
Pipe diameter[4]	Liquid	mm (inch)	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")
Pipe diameter[4]	HP gas	mm (inch)	31.8 (1-1/4")	31.8 (1-1/4")	38.1 (1-1/2")	38.1 (1-1/2")
Pipe diameter[4]	LP gas	mm (inch)	38.1 (1-1/2")	38.1 (1-1/2")	41.3 (1-5/8")	41.3 (1-5/8")
Product Specifications						
Dimensions[5]	LxHxD	mm	3810x1690x775	3810x1690x775	3810x1690x775	3810x1690x775
Net weight		Kg	953	953	966	1013
Treated air volume	max	m3/h	42400	42400	43000	43500
Available static pressure	std/max	Pa	0/110	0/110	0/110	0/110
Operating limits (outside temperature)	Cooling	°C	-10~55	-10~55	-10~55	-10~55
Operating limits (outside temperature)	Heating	°C	-25~24	-25~24	-25~24	-25~24
Operating limits (outside temperature)	Hydronic heating	°C	-20~24	-20~24	-20~24	-20~24
Operating limits (outside temperature)	Domestic hot water (DHW)	°C	-20~35	-20~35	-20~35	-20~35
Connectable indoor units (max)		**no.**	**64**	**64**	**66**	**69**
Connectable hydronic modules (max)[6]		**no.**	**6**	**6**	**6**	**6**
Capacity of connectable indoor units		**%**	**50 ~ 135**			
Accessories						
Branch pipe kit for O.U. pairing		no. / type	1 / DOS-68-MW-VR + 1 / DOS-246-MW-VR			

1. Value measured according to harmonised standard EN14511.
2. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 2088. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 2088 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.
3. Refer to the labels on the inside and outside of the unit to calculate the additional refrigerant load.
4. When several outdoor units are paired the diameters indicated refer to the section up to the first branch, with a length equivalent or less than 90 m.
5. Space between the paired units = 100 mm.
6. Refer to the installation manual to determine the power of the connectable hydronic modules.

COMBINATIONS

M-VR-OV-900-SG	M-VR-OV-960-SG	M-VR-OV-1010-SG	M-VR-OV-1065-SG	M-VR-OV-1130-SG	M-VR-OV-1180-SG	M-VR-OV-1235-SG
32	34	36	38	40	42	44
280+615	335+615	400+615	450+615	500+615	560+615	615+615
89.50	95.00	101.50	106.50	111.90	117.50	123.00
25.01	26.71	28.28	29.97	31.51	34.34	37.05
3.58	3.56	3.59	3.55	3.55	3.42	3.32
100.50	106.50	114.00	119.00	125.50	132.00	138.00
25.64	27.31	29.24	30.87	32.89	35.11	36.80
3.92	3.90	3.90	3.86	3.82	3.76	3.75
3-380~415V-50Hz						
72.50	73.10	86.50	88.30	96.00	97.00	98.00
R410A (2088)						
21.8 (45.52)	22.9 (47.81)	24.4 (50.95)	24.9 (51.99)	26.1 (54.50)	26.1 (54.50)	26.6 (55.54)
3 / Scroll DC Inverter				4 / Scroll DC Inverter		
19.05 (3/4")	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")
28.6 (1-1/8")	28.6 (1-1/8")	28.6 (1-1/8")	31.8 (1-1/4")	31.8 (1-1/4")	31.8 (1-1/4")	31.8 (1-1/4")
31.8 (1-1/4")	31.8 (1-1/4")	31.8 (1-1/4")	38.1 (1-1/2")	38.1 (1-1/2")	38.1 (1-1/2")	38.1 (1-1/2")
2370x1690x775	2370x1690x775	2780x1690x775	2780x1690x775	2780x1690x775	2780x1690x775	2780x1690x775
628	641	710	710	770	770	770
27000	27600	30000	31900	33000	33000	33000
0/110	0/110	0/110	0/110	0/110	0/110	0/110
-10~55	-10~55	-10~55	-10~55	-10~55	-10~55	-10~55
-25~24	-25~24	-25~24	-25~24	-25~24	-25~24	-25~24
-20~24	-20~24	-20~24	-20~24	-20~24	-20~24	-20~24
-20~35	-20~35	-20~35	-20~35	-20~35	-20~35	-20~35
53	56	59	63	64	64	64
4	4	4	4	4	4	4
50 ~ 135						
1 / DOS-68-MW-VR		1 / DOS-246-MW-VR				

M-VR-OV-1515-SG	M-VR-OV-1580-SG	M-VR-OV-1630-SG	M-VR-OV-1685-SG	M-VR-OV-1750-SG	M-VR-OV-1800-SG	M-VR-OV-1845-SG
54	56	58	60	62	64	66
280+615+615	335+615+615	400+615+615	450+615+615	500+615+615	560+615+615	615+615+615
151.00	156.50	163.00	168.00	173.40	179.00	184.50
43.53	45.24	46.80	48.50	50.04	52.87	55.57
3.47	3.46	3.48	3.46	3.47	3.39	3.32
169.50	175.50	183.00	188.00	194.50	201.00	207.00
44.04	45.71	47.64	49.27	51.29	53.51	55.20
3.85	3.84	3.84	3.82	3.79	3.76	3.75
3-380~415-50						
121.50	122.10	135.50	137.30	145.00	146.00	147.00
R410A (2088)						
35.1 (73.29)	36.2 (75.58)	37.7 (78.72)	38.2 (79.76)	39.4 (82.27)	39.4 (82.27)	39.9 (83.31)
5 / Scroll DC Inverter				6 / Scroll DC Inverter		
19.05 (3/4")	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")	19.05 (3/4")
38.1 (1-1/2")	38.1 (1-1/2")	38.1 (1-1/2")	38.1 (1-1/2")	38.1 (1-1/2")	38.1 (1-1/2")	38.1 (1-1/2")
41.3 (1-5/8")	41.3 (1-5/8")	41.3 (1-5/8")	41.3 (1-5/8")	41.3 (1-5/8")	41.3 (1-5/8")	41.3 (1-5/8")
3810x1690x775	3810x1690x775	4220x1690x775	4220x1690x775	4220x1690x775	4220x1690x775	4220x1690x775
1013	1026	1095	1095	1155	1155	1155
43500	44100	46500	48400	49500	49500	49500
0/110	0/110	0/110	0/110	0/110	0/110	0/110
-10~55	-10~55	-10~55	-10~55	-10~55	-10~55	-10~55
-25~24	-25~24	-25~24	-25~24	-25~24	-25~24	-25~24
-20~24	-20~24	-20~24	-20~24	-20~24	-20~24	-20~24
-20~35	-20~35	-20~35	-20~35	-20~35	-20~35	-20~35
71	74	77	80	80	80	80
6	6	6	6	6	6	6
50 ~ 135						
1 / DOS-68-MW-VR + 1 / DOS-246-MW-VR		2 / DOS-246-MW-VR				

1. Value measured according to harmonised standard EN14511.
2. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 2088. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 2088 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.
3. Refer to the labels on the inside and outside of the unit to calculate the additional refrigerant load.
4. When several outdoor units are paired the diameters indicated refer to the section up to the first branch, with a length equivalent or less than 90 m.
5. Space between the paired units = 100 mm.
6. Refer to the installation manual to determine the power of the connectable hydronic modules.

COMBINATIONS

Model			M-VR-OV-1908-SG	M-VR-OV-1962-SG	M-VR-OV-2016-SG	M-VR-OV-2072-SG
Power class		**HP**	**68**	**70**	**72**	**74**
Combination			**280+450+560+615**	**280+500+560+615**	**280+560+560+615**	**280+560+615+615**
Rated capacity	Cooling	kW	190.50	195.90	201.50	2070
Rated absorbed power		kW	52.28	53.81	56.64	59.35
Energy efficiency coefficient (rated)		EER[1]	3.64	3.64	3.56	3.49
Rated capacity	Heating	kW	213.50	220.00	226.50	232.50
Rated absorbed power		kW	54.82	56.84	59.06	60.75
Energy performance coefficient (rated)		COP[1]	3.89	3.87	3.83	3.83
Electrical data						
Power supply		Ph-V-Hz	3-380~415-50			
Maximum current		A	159.80	167.50	168.50	169.50
Refrigerant circuit data						
Refrigerant[2]		type (GWP)	R410A (2088)			
Refrigerant pre-load quantity[3](tons of CO2 equivalent)		Kg	46.2 (96.47)	47.4 (98.98)	47.4 (98.98)	47.9 (100.02)
Compressor		no. / type	6 / Scroll DC Inverter	7 / Scroll DC Inverter		
Pipe diameter[4]	Liquid	mm (inch)	22.2 (7/8")	22.2 (7/8")	22.2 (7/8")	22.2 (7/8")
	HP gas	mm (inch)	41.3 (1-5/8")	41.3 (1-5/8")	41.3 (1-5/8")	41.3 (1-5/8")
	LP gas	mm (inch)	44.5 (1-3/4")	44.5 (1-3/4")	44.5 (1-3/4")	44.5 (1-3/4")
Product Specifications						
Dimensions[5]	LxHxD	mm	5250x1690x775	5250x1690x775	5250x1690x775	5250x1690x775
Net weight		Kg	1338	1398	1398	1398
Treated air volume	max	m^3/h	58900	60000	60000	60000
Available static pressure	std/max	Pa	0/110	0/110	0/110	0/110
Operating limits (outside temperature)	Cooling	℃	-10~55	-10~55	-10~55	-10~55
	Heating	℃	-25~24	-25~24	-25~24	-25~24
	Hydronic heating	℃	-20~24	-20~24	-20~24	-20~24
	Domestic hot water (DHW)	℃	-20~35	-20~35	-20~35	-20~35
Connectable indoor units (max)		**no.**	**80**	**80**	**80**	**80**
Connectable hydronic modules (max)[6]		**no.**	**6**	**6**	**6**	**6**
Capacity of connectable indoor units		**%**	**50 ~ 135**			
Accessories						
Branch pipe kit for O.U. pairing		no. / type	1 / DOS-68-MW-VR + 2 / DOS-246-MW-VR			

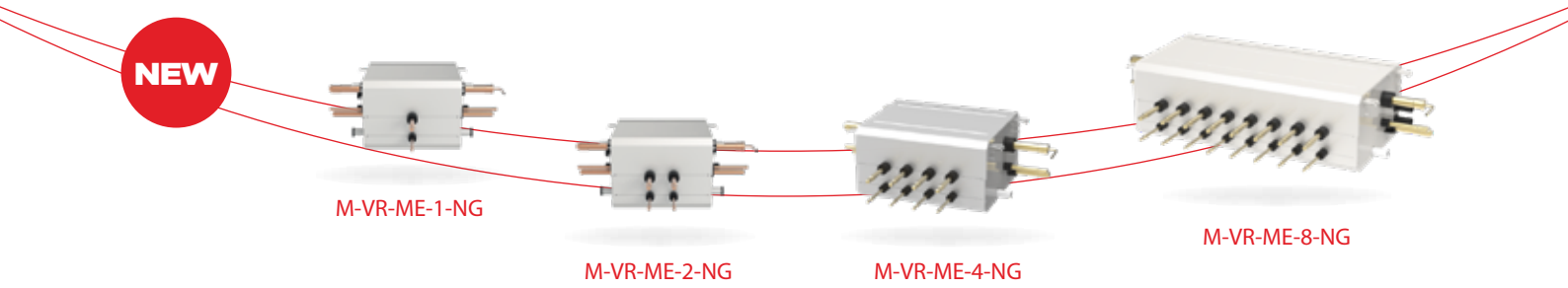
1. Value measured according to harmonised standard EN14511.
2. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 2088. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 2088 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.
3. Refer to the labels on the inside and outside of the unit to calculate the additional refrigerant load.
4. When several outdoor units are paired the diameters indicated refer to the section up to the first branch, with a length equivalent or less than 90 m.
5. Space between the paired units = 100 mm.
6. Refer to the installation manual to determine the power of the connectable hydronic modules.

COMBINATIONS

M-VR-OV-2128-SG	M-VR-OV-2184-SG	M-VR-OV-2240-SG	M-VR-OV-2295-SG	M-VR-OV-2350-SG	M-VR-OV-2405-SG	M-VR-OV-2460-SG
76	78	80	82	84	86	88
280+615+615+615	335+615+615+615	400+615+615+615	450+615+615+615	500+615+615+615	560+615+615+615	615+615+615+615
212.50	218.00	224.50	229.50	234.90	240.50	246.00
62.05	63.76	65.33	67.02	68.56	71.39	74.10
3.42	3.42	3.44	3.42	3.43	3.37	3.32
238.50	244.50	252.00	257.00	263.50	270.00	276.00
62.44	64.11	66.04	67.67	69.69	71.91	73.60
3.82	3.81	3.82	3.80	3.78	3.75	3.75
3-380~415-50						
170.50	171.10	184.50	186.30	194.00	195.00	196.00
R410A (2088)						
48.4 (101.06)	49.5 (103.35)	51 (106.49)	51.5 (107.53)	52.7 (110.04)	52.7 (110.04)	53.2 (111.08)
7 / Scroll DC Inverter				8 / Scroll DC Inverter		
22.2 (7/8")	22.2 (7/8")	22.2 (7/8")	22.2 (7/8")	22.2 (7/8")	22.2 (7/8")	22.2 (7/8")
41.3 (1-5/8")	41.3 (1-5/8")	41.3 (1-5/8")	41.3 (1-5/8")	41.3 (1-5/8")	41.3 (1-5/8")	41.3 (1-5/8")
44.5 (1-3/4")	44.5 (1-3/4")	44.5 (1-3/4")	44.5 (1-3/4")	44.5 (1-3/4")	44.5 (1-3/4")	44.5 (1-3/4")
5250x1690x775	5250x1690x775	5660x1690x775	5660x1690x775	5660x1690x775	5660x1690x775	5660x1690x775
1398	1411	1480	1480	1540	1540	1540
60000	60600	63000	64900	66000	66000	66000
0/110	0/110	0/110	0/110	0/110	0/110	0/110
-10~55	-10~55	-10~55	-10~55	-10~55	-10~55	-10~55
-25~24	-25~24	-25~24	-25~24	-25~24	-25~24	-25~24
-20~24	-20~24	-20~24	-20~24	-20~24	-20~24	-20~24
-20~35	-20~35	-20~35	-20~35	-20~35	-20~35	-20~35
80	80	80	80	80	80	80
6	6	6	6	6	6	6
50 ~ 135						
1 / DOS-68-MW-VR + 2 / DOS-246-MW-VR		3 / DOS-246-MW-VR				

1. Value measured according to harmonised standard EN14511.
2. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 2088. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 2088 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.
3. Refer to the labels on the inside and outside of the unit to calculate the additional refrigerant load.
4. When several outdoor units are paired the diameters indicated refer to the section up to the first branch, with a length equivalent or less than 90 m.
5. Space between the paired units = 100 mm.
6. Refer to the installation manual to determine the power of the connectable hydronic modules.

FLOW CONTROLLERS



Model				M-VR-ME-1-NG	M-VR-ME-2-NG	M-VR-ME-4-NG	M-VR-ME-8-NG
Pair of connections for indoor units			**qty.**	**1**	**2**	**4**	**8**
Max number of connectable indoor units	for each pair of connections[1]			8	8	8	8
	for each flow controller			8	16	32	64
Max capacity of connectable indoor units	for each pair of connections[2]		kW	16.00	16.00	16.00	16.00
	for each flow controller[3]		kW	16.00	28.00	45.00	85.00
Electrical data							
Power supply			Ph-V-Hz	1-220~240V-50Hz			
Refrigerant circuit data							
Pipe diameter (by brazing)	Outdoor Unit side	Liquid	mm (inch)	9.52 (3/8")	9.52 (3/8")	12.7 (1/2")	12.7 (1/2")
		HP gas	mm (inch)	19.05 (3/4")	19.05 (3/4")	22.2 (7/8")	22.2 (7/8")
		LP gas	mm (inch)	22.2 (7/8")	22.2 (7/8")	28.6 (1-1/8")	28.6 (1-1/8")
	Indoor Unit side	Liquid	mm	6.35 / 9.52	6.35 / 9.52	6.35 / 9.52	6.35 / 9.52
		Gas	mm	12.7 / 15.9	12.7 / 15.9	12.7 / 15.9	12.7 / 15.9
Product specifications							
Dimensions		LxHxD	mm	340x250x388	340x250x388	460x250x388	784x250x388
Net weight			Kg	12	14.5	20.6	33
Condensate drain				Necessary	Necessary	Necessary	Necessary

1. Any indoor units connected to the same pair of connections must run in the same operating mode.
2. I.U.'s with a capacity of 16 to 30 kW can be connected to flow controllers with 2 to 8 connections using the DIS-180-1 branch kit, which occupies 2 pairs of connections.
3. When hydronic modules are connected, the maximum capacity increases to 32 kW (2 connections), 64 kW (4 connections) and 96 kW (8 connections).

HYDRONIC MODULE

NEW

M-VR-HM-16-NG
M-VR-HM-30-NG

Model			M-VR-HM-16-NG	M-VR-HM-30-NG
Rated capacity	Domestic hot water	kW	4.50 (3.60~16.00)	4.50 (3.60~30.00)
	Hydronic heating	kW	16.00	30.00
Maximum delivery water temperature		℃	55	55
Electrical data				
Power supply		Ph-V-Hz	1-220~240-50Hz	
Hydraulic system data				
Water/freon heat exchanger	Brand	type	Braze-welded plates	Braze-welded plates
	Water flow	m^3/h	2.76	5.16
	Load loss	kPa	27.5	38.5
Circulation pump			Not included	
Water connections	Diameter	mm	25	25
	Threading	Inches	G1	G1
Min/Max operating pressure	Max	bar	3	3
Expansion tank			Not included	
Refrigerant circuit data				
Pipe diameter	Liquid	mm (inch)	9.52 (3/8")	9.52 (3/8")
	Gas		15.9 (5/8")	22.2 (7/8")
Product specifications				
Dimensions	LxHxD	mm	515x606x330	515x606x330
Net weight		kg	36	40
Condensate drain			Necessary	
Controls	Wire control		Included	
	Climatic curve		Available	
Accessories				
Branch pipe kit for connector to flow controller			-	DIS-180-1

INDOOR UNITS

VRF MW HYBRID, MW MINI, MW 2-PIPE, MW 3-PIPE SYSTEMS

WALL

7 POWER LEVELS
1.50~7.10 kW

ELEGANT, COMPACT DESIGN
209 mm depth for models
1.50 to 3.60 kW

WASHABLE FILTER
improved air quality

SELF-DIAGNOSIS

CONTROLS
standard remote control
optional wired remote control

M-V-WLA-151~711-G

Wi-Fi
(optional)

Model			M-V-WLA-151-G	M-V-WLA-221-G	M-V-WLA-281-G
Control (included)			Remote control		
Rated capacity	Cooling	kW	1.50	2.20	2.80
	Heating	kW	1.80	2.50	3.20
Electrical data					
Power supply		Ph-V-Hz	1-220~240V-50Hz		
Power absorption		W	20	20	20
Product specifications					
Dimensions	LxHxD	mm	845x289x209	845x289x209	845x289x209
Net weight		Kg	10.5	10.5	10.5
Sound pressure level at 1 m	H/M/L	dB(A)	35/33/30	35/33/30	35/33/30
Treated air volume	H/M/L	m³/h	500/440/300	500/440/300	500/440/300
Connection diameter	Liquid/Gas	mm (inch)	6.35 (1/4") / 9.52 (3/8")		
	Condensate	mm	20	20	20
Optional parts					
Wired remote control			M-V-CW-SD1-G (LCD) / M-V-CW-TW1-G (touch) / M-V-CW-HB1-G (basic)		
Centralized control			M-V-CC-T255-G / M-V-CC-T32-G (basic)		

Model			M-V-WLA-361-G	M-V-WLA-451-G	M-V-WLA-561-G	M-V-WLA-711-G
Control (included)						
Rated capacity	Cooling	kW	3.60	4.50	5.60	7.10
	Heating	kW	4.00	5.00	6.30	7.50
Electrical data						
Power supply		Ph-V-Hz	1-220~240V-50Hz			
Power absorption		W	25	35	50	65
Product specifications						
Dimensions	LxHxD	mm	845x289x209	970x300x224	1078xx325x246	1078xx325x246
Net weight		Kg	10.5	12.5	16	16
Sound pressure level at 1 m	H/M/L	dB(A)	38/35/31	43/40/37	43/41/37	44/41/37
Treated air volume	H/M/L	m³/h	630/460/320	850/580/500	1100/850/650	1200/850/650
Connection diameter	Liquid/Gas	mm (inch)	6.35 (1/4") / 12.74 (1/2")		9.52 (3/8") / 15.9 (5/8")	
	Condensate	mm	20	20	20	20
Optional parts						
Wired remote control			M-V-CW-SD1-G (LCD) / M-V-CW-TW1-G (touch) / M-V-CW-HB1-G (basic)			
Centralized control			M-V-CC-T255-G / M-V-CC-T32-G (basic)			

60x60 **8-WAY** COMPACT CASSETTE

6 POWER LEVELS
1.50~5.60 kW

COMPACT DESIGN
265 mm height for building into false ceilings

360° AIR DISTRIBUTION

INDIVIDUAL DEFLECTOR CONTROL
for better air flow management

WASHABLE FILTER
improved air quality

CONDENSATE DRAIN PUMP INCLUDED
maximum height difference **1200 mm** from the flush panel

CONTROLS
standard remote control
optional wired remote control

M-V-CSA-151~561-G

Wi-Fi
(optional)

Model			M-V-CSA-151-G	M-V-CSA-221-G	M-V-CSA-281-G
Control (included)			Remote control		
Rated capacity	Cooling	kW	1.50	2.20	2.80
	Heating	kW	1.80	2.50	3.20
Electrical data					
Power supply		Ph-V-Hz	1~220~240V-50Hz		
Power absorption		W	30	30	30
Product specifications					
Dimensions	LxHxD	mm	570x265x570	570x265x570	570x265x570
Net weight		Kg	17.5	17.5	17.5
Sound pressure level at 1 m	H/M/L	dB(A)	33/30/25	36/31/25	36/33/28
Treated air volume	H/M/L	m^3/h	460/420/370	500/460/370	570/480/420
Connection diameter	Liquid/Gas	mm (inch)	6.35 (1/4") / 9.52 (3/8")		
	Condensate	mm	25	25	25
Accessories					
Decorative panel			M-V-CGR-608-G		
Panel dimensions	LxHxD	mm	620x47.5x620	620x47.5x620	620x47.5x620
Net weight		Kg	3	3	3
Optional parts					
Wired remote control			M-V-CW-SD1-G (LCD) / M-V-CW-TW1-G (touch) / M-V-CW-HB1-G (basic)		
Centralized control			M-V-CC-T255-G / M-V-CC-T32-G (basic)		

Model			M-V-CSA-361-G	M-V-CSA-451-G	M-V-CSA-561-G
Control (included)			Remote control		
Rated capacity	Cooling	kW	3.60	4.50	5.60
	Heating	kW	4.00	5.00	6.30
Electrical data					
Power supply		Ph-V-Hz	Remote control		
Power absorption		W	30	45	45
Product specifications					
Dimensions	LxHxD	mm	570x265x570	570x265x570	570x265x570
Net weight		Kg	17.5	17.5	17.5
Sound pressure level at 1 m	H/M/L	dB(A)	39/37/35	43/41/39	43/41/39
Treated air volume	H/M/L	m^3/h	620/550/480	730/650/560	730/650/560
Connection diameter	Liquid/Gas	mm (inch)	6.35 (1/4") / 12.74 (1/2")		9.52 (3/8") / 15.9 (5/8")
	Condensate	mm	25	25	25
Accessories					
Decorative panel			M-V-CGR-608-G		
Panel dimensions	LxHxD	mm	620x47.5x620	620x47.5x620	620x47.5x620
Net weight		Kg	3	3	3
Optional parts					
Wired remote control			M-V-CW-SD1-G (LCD) / M-V-CW-TW1-G (touch) / M-V-CW-HB1-G (basic)		
Centralized control			M-V-CC-T255-G / M-V-CC-T32-G (basic)		

84x84 **8-WAY** CASSETTE

5 POWER LEVELS
7.10~16.00 kW

ULTRA-COMPACT DESIGN
only **240 mm** height for models from 7.10 to 9.00 kW for building into false ceilings

WASHABLE FILTER
improved air quality

INDIVIDUAL DEFLECTOR CONTROL
for better air flow management

CONDENSATE DRAIN PUMP INCLUDED
maximum height difference **1200 mm** from the flush panel

CONTROLS
standard remote control
optional wired remote control

M-V-CBA-711~1601-G

Wi-Fi
(optional)

Model			M-V-CBA-711-G	M-V-CBA-901-G
Control (included)			Remote control	
Rated capacity	Cooling	kW	7.10	9.00
	Heating	kW	8.00	10.00
Electrical data				
Power supply		Ph-V-Hz	1-220~240V-50Hz	
Power absorption		W	60	68
Product specifications				
Dimensions	LxHxD	mm	840x240x840	840x240x840
Net weight		Kg	28	29
Sound pressure level at 1 m	H/M/L	dB(A)	37/34/31	39/37/34
Treated air volume	H/M/L	m^3/h	1150/950/850	1250/1000/900
Connection diameter	Liquid/Gas	mm (inch)	9.52 (3/8") / 15.9 (5/8")	
	Condensate	mm	25	25
Accessories				
Decorative panel			M-V-CGR-848-G	
Panel dimensions	LxHxD	mm	950x65x950	950x65x950
Net weight		Kg	6	6
Optional parts				
Wired remote control			M-V-CW-SD1-G (LCD) / M-V-CW-TW1-G (touch) / M-V-CW-HB1-G (basic)	
Centralized control			M-V-CC-T255-G / M-V-CC-T32-G (basic)	

Model			M-V-CBA-1121-G	M-V-CBA-1401-G	M-V-CBA-1601-G
Control (included)			Remote control		
Rated capacity	Cooling	kW	11.20	14.00	16.00
	Heating	kW	12.50	16.00	18.00
Electrical data					
Power supply		Ph-V-Hz	1-220~240V-50Hz		
Power absorption		W	80	115	170
Product specifications					
Dimensions	LxHxD	mm	840x290x840	840x290x840	840x290x840
Net weight		Kg	33	33	36
Sound pressure level at 1 m	H/M/L	dB(A)	43/41/39	43/41/39	51/48/42
Treated air volume	H/M/L	m^3/h	1650/1300/1100	1650/1300/1100	2000/1800/1430
Connection diameter	Liquid/Gas	mm (inch)	9.52 (3/8") / 15.9 (5/8")		
	Condensate	mm	25	25	25
Accessories					
Decorative panel			M-V-CGR-848-G		
Panel dimensions	LxHxD	mm	950x65x950	950x65x950	950x65x950
Net weight		Kg	6	6	6
Optional parts					
Wired remote control			M-V-CW-SD1-G (LCD) / M-V-CW-TW1-G (touch) / M-V-CW-HB1-G (basic)		
Centralized control			M-V-CC-T255-G / M-V-CC-T32-G (basic)		

DUCTED LOW/MEDIUM STATIC PRESSURE

8 POWER LEVELS
2.20~11.20 kW

WASHABLE FILTER
improved air quality

CONDENSATE DRAIN PUMP INCLUDED
maximum height difference **850 mm** from the exit hole

Ideal for cooling and heating small and medium environments

COMPACT MODEL
only **200 mm** height, **710 mm** width and **462 mm** depth (2.20~3.60 kW)

CONTROLS
wired remote control included

M-V-DLA-221~1121-G

Wi-Fi
(optional)

Model			M-V-DLA-221-G	M-V-DLA-281-G	M-V-DLA-361-G	M-V-DLA-451-G
Control (included)			Wired remote control			
Rated capacity	Cooling	kW	2.20	2.80	3.60	4.50
	Heating	kW	2.50	3.20	4.00	5.00
Electrical data						
Power supply		Ph-V-Hz	1-220~240V-50Hz			
Power absorption		W	28	28	37	40
Product specifications						
Dimensions	LxHxD	mm	710x200x462	710x200x462	710x200x462	1010x200x462
Net weight		Kg	18.5	18.5	19	25
Sound pressure level at 1 m	H/M/L	dB(A)	30/25/22	30/25/22	31/27/25	33/29/27
Treated air volume	H/M/L	m³/h	450/350/200	450/350/200	550/400/300	750/550/400
Static fan pressure	Std/Max	Pa	15/30	15/30	15/30	15/30
Connection diameter	Liquid/Gas	mm (inch)	6.35 (1/4") / 9.52 (3/8")		6.35 (1/4") / 12.74 (1/2")	
	Condensate	mm	25	25	25	25
Optional parts						
Centralized control			M-V-CC-T255-G / M-V-CC-T32-G (basic)			

Model			M-V-DLA-561-G	M-V-DLA-711-G	M-V-DLA-901-G	M-V-DLA-1121-G
Control (included)			Wired remote control			
Rated capacity	Cooling	kW	5.60	7.10	9.00	11.20
	Heating	kW	6.30	8.00	10.00	12.50
Electrical data						
Power supply		Ph-V-Hz	1-220~240V-50Hz			
Power absorption		W	55	55	130	130
Product specifications						
Dimensions	LxHxD	mm	1010x200x462	1310x200x462	1340x260x655	1340x260x655
Net weight		Kg	25	31	45.5	45.5
Sound pressure level at 1 m	H/M/L	dB(A)	35/31/29	37/32/30	40/36/32	40/36/32
Treated air volume	H/M/L	m³/h	850/700/550	1100/850/650	1500/1250/900	1700/1500/1100
Static fan pressure	Std/Max	Pa	15/30	15/30	50/80	50/80
Connection diameter	Liquid/Gas	mm (inch)	9.52 (3/8") / 15.9 (5/8")			
	Condensate	mm	25	25	25	25
Optional parts						
Centralized control			M-V-CC-T255-G / M-V-CC-T32-G (basic)			

DUCTED WITH HIGH STATIC PRESSURE

8 POWER LEVELS
7.10~28.00 kW

ULTRA-COMPACT DESIGN
only **300 mm** height for models 7.10 and 18.00 kW

WASHABLE FILTER
improved air quality

CONDENSATE DRAIN PUMP INCLUDED maximum height difference **1100 mm** from the exit hole for models from 7.10 to 18.00 kW

Ideal for cooling and heating medium and large environments

5 FAN SPEEDS
auto, low, med, high, turbo

CONTROLS
wired remote control included

Wi-Fi
(optional)

M-V-DHA-711~1801-G

M-V-DHA-224~280-G

Model			M-V-DHA-711-G	M-V-DHA-901-G	M-V-DHA-1121-G	M-V-DHA-1401-G
Control (included)			Wired remote control			
Rated capacity	Cooling	kW	7.10	9.00	11.20	14.00
	Heating	kW	8.00	10.00	12.50	16.00
Electrical data						
Power supply		Ph-V-Hz	1-220~240V-50Hz			
Power absorption		W	100	140	160	220
Product specifications						
Dimensions	LxHxD	mm	1000x300x700	1400x300x700	1400x300x700	1400x300x700
Net weight		Kg	43	57	57	58
Sound pressure level at 1 m	H/M/L	dB(A)	38/36/34	40/37/35	40/38/36	42/39/37
Treated air volume	H/M/L	m^3/h	1250/1050/950	1800/1450/1250	2000/1600/1400	2350/1900/1650
Static fan pressure	Std/Max	Pa	90/200	90/200	90/200	90/200
Connection diameter	Liquid/Gas	mm (inch)	9.52 (3/8") / 15.9 (5/8")			
	Condensate	mm	25	25	25	25
Optional parts						
Centralized control			M-V-CC-T255-G / M-V-CC-T32-G (basic)			

Model			M-V-DHA-1601-G	M-V-DHA-1801-G	M-V-DHA-224-G	M-V-DHA-280-G
Control (included)			Wired remote control			
Rated capacity	Cooling	kW	16.00	18.00	22.40	28.00
	Heating	kW	18.00	20.00	25.00	31.00
Electrical data						
Power supply		Ph-V-Hz	1-220~240V-50Hz			
Power absorption		W	230	350	800	900
Product specifications						
Dimensions	LxHxD	mm	1400x300x700	1400x300x700	1483x385x791	1686x450x870
Net weight		Kg	58	58	82	105
Sound pressure level at 1 m	H/M/L	dB(A)	44/41/38	49/47/44	54/52/49	55/52/50
Treated air volume	H/M/L	m^3/h	2500/2000/1750	3000/2600/2000	4000/3600/3200	4400/4000/3600
Static fan pressure	Std/Max	Pa	90/200	90/170	100/200	100/200
Connection diameter	Liquid/Gas	mm (inch)	9.52 (3/8") / 19.05 (3/4")			9.52 (3/8") / 22.2 (7/8")
	Condensate	mm	25	25	25	25
Optional parts						
Centralized control			M-V-CC-T255-G / M-V-CC-T32-G (basic)			

CONSOLE

5 POWER LEVELS
2.20~5.00 kW

LOW ACOUSTIC IMPACT
only **27 dB(A)** for models
2.20 and 2.80 kW

SELF-DIAGNOSIS

I FEEL FUNCTION

CONTROLS
remote control included
optional wired remote control

M-V-CNA-22~50-G

Wi-Fi
(optional)

Model			M-V-CNA-22-G	M-V-CNA-28-G
Control (included)			Remote control	
Rated capacity	Cooling	kW	2.20	2.80
	Heating	kW	2.50	3.20
Electrical data				
Power supply		Ph-V-Hz	1-220~240V-50Hz	
Power absorption		W	15	15
Product specifications				
Dimensions	LxHxD	mm	700x600x215	700x600x215
Net weight		Kg	16	16
Sound pressure level at 1 m	H/M/L	dB(A)	38/33/27	38/33/27
Treated air volume	H/M/L	m³/h	400/320/270	400/320/270
Connection diameter	Liquid/Gas	mm (inch)	6.35 (1/4) / 9.52 (3/8)	
	Condensate	mm	28	28
Optional parts				
Wired remote control			M-V-CW-SD1-G (LCD) / M-V-CW-TW1-G (touch) / M-V-CW-HB1-G (basic)	
Centralized control			M-V-CC-T255-G / M-V-CC-T32-G (basic)	

Model			M-V-CNA-36-G	M-V-CNA-45-G	M-V-CNA-50-G
Control (included)			Remote control		
Rated capacity	Cooling	kW	3.60	4.50	5.00
	Heating	kW	4.00	5.00	5.50
Electrical data					
Power supply		Ph-V-Hz	1-220~240V-50Hz		
Power absorption		W	20	40	40
Product specifications					
Dimensions	LxHxD	mm	700x600x215	700x600x215	700x600x215
Net weight		Kg	16	16	16
Sound pressure level at 1 m	H/M/L	dB(A)	40/37/32	46/43/39	46/43/39
Treated air volume	H/M/L	m³/h	480/400/300	680/600/500	680/600/500
Connection diameter	Liquid/Gas	mm (inch)	6.35 (1/4) / 12.74 (1/2)		
	Condensate	mm	28	28	28
Optional parts					
Wired remote control			M-V-CW-SD1-G (LCD) / M-V-CW-TW1-G (touch) / M-V-CW-HB1-G (basic)		
Centralized control			M-V-CC-T255-G / M-V-CC-T32-G (basic)		

FLOOR/CEILING

6 POWER LEVELS
3.60~14.00 kW

COMPACT DESIGN
235 mm height for all models

WASHABLE FILTER
improved air quality

I FEEL FUNCTION

SELF-DIAGNOSIS

CONTROLS
remote control included
optional wired remote control

M-V-FCA-361~1401-G

Wi-Fi
(optional)

Model			M-V-FCA-361-G	M-V-FCA-561-G	M-V-FCA-711-G
Control (included)			Remote control		
Rated capacity	Cooling	kW	3.60	5.60	7.10
	Heating	kW	4.00	6.30	8.00
Electrical data					
Power supply		Ph-V-Hz	1~220~240V-50Hz		
Power absorption		W	40	75	75
Product specifications					
Dimensions	LxHxD	mm	870x235x665	870x235x665	1200x 235x665
Net weight		Kg	25	31	31
Sound pressure level at 1 m	H/M/L	dB(A)	36/32/28	44/41/38	44/41/38
Treated air volume	H/M/L	m³/h	650/610/530/460	850/800/700/600	1300/1220/1090/940
Connection diameter	Liquid/Gas	mm (inch)	6.35 (1/4") / 12.74 (1/2")	9.52 (3/8") / 15.9 (5/8")	
	Condensate	mm	17	17	17
Optional parts					
Wired remote control			M-V-CW-SD1-G (LCD) / M-V-CW-TW1-G (touch) / M-V-CW-HB1-G (basic)		
Centralized control			M-V-CC-T255-G / M-V-CC-T32-G (basic)		

Model			M-V-FCA-901-G	M-V-FCA-1121-G	M-V-FCA-1401-G
Control (included)			Remote control		
Rated capacity	Cooling	kW	9.00	11.20	14.00
	Heating	kW	10.00	12.50	16.00
Electrical data					
Power supply		Ph-V-Hz	1~220~240V-50Hz		
Power absorption		W	140	160	160
Product specifications					
Dimensions	LxHxD	mm	1200x235x665	1570x235x665	1570x235x665
Net weight		Kg	31	40	42
Sound pressure level at 1 m	H/M/L	dB(A)	47/43/39	47/44/42	50/48/44
Treated air volume	H/M/L	m³/h	1500/1380/1200/1020	1800/1700/1540/1400	2100/2000/1800/1480
Connection diameter	Liquid/Gas	mm (inch)	9.52 (3/8") / 15.9 (5/8")		
	Condensate	mm	17	17	17
Optional parts					
Wired remote control			M-V-CW-SD1-G (LCD) / M-V-CW-TW1-G (touch) / M-V-CW-HB1-G (basic)		
Centralized control			M-V-CC-T255-G / M-V-CC-T32-G (basic)		

RECESSED FLOOR

6 POWER LEVELS
2.20~7.10 kW

COMPACT DESIGN
200 mm depth on all sizes

WASHABLE FILTER
improved air quality

M-V-FYA-221~711-G

Wi-Fi
(optional)

Model			M-V-FYA-221-G	M-V-FYA-281-G	M-V-FYA-361-G
Control (included)			Wired remote control		
Rated capacity	Cooling	kW	2.20	2.80	3.60
	Heating	kW	2.50	3.20	4.00
Electrical data					
Power supply		Ph-V-Hz	1~220~240V~50Hz		
Power absorption		W	35	35	43
Product specifications					
Dimensions	LxHxD	mm	700x615x200	700x615x200	700x615x200
Net weight		Kg	23	23	23
Sound pressure level at 1 m	H/M/L	dB(A)	30/28/25	30/28/25	33/31/28
Treated air volume	H/M/L	m^3/h	450/350/250	450/350/250	550/450/350
Static fan pressure	Std/Max	Pa	10/40	10/40	10/40
Connection diameter	Liquid/Gas	mm (inch)	6.35 (1/4) / 9.52 (3/8)		6.35 (1/4) / 12.74 (1/2)
	Condensate	mm	25	25	25
Optional parts					
Centralized control			M-V-CC-T255-G / M-V-CC-T32-G (basic)		

Model			M-V-FYA-451-G	M-V-FYA-561-G	M-V-FYA-711-G
Control (included)			Wired remote control		
Rated capacity	Cooling	kW	4.50	5.60	7.10
	Heating	kW	5.00	6.30	8.00
Electrical data					
Power supply		Ph-V-Hz	1~220~240V~50Hz		
Power absorption		W	45	80	90
Product specifications					
Dimensions	LxHxD	mm	900x615x200	1100x615x200	1100x615x200
Net weight		Kg	27	32	32
Sound pressure level at 1 m	H/M/L	dB(A)	33/31/28	35/33/30	37/35/33
Treated air volume	H/M/L	m^3/h	650/500/400	900/750/600	1100/900/700
Static fan pressure	Std/Max	Pa	15/60	15/60	15/60
Connection diameter	Liquid/Gas	mm (inch)		9.52 (3/8) / 15.9 (5/8)	
	Condensate	mm	25	25	25
Optional parts					
Centralized control			M-V-CC-T255-G / M-V-CC-T32-G (basic)		

100% OUTDOOR AIR DUCTED

2 POWER LEVELS
12.50~14.00 kW

WASHABLE FILTER
improved air quality

All-air ducting allows fresh outside air to be introduced into rooms without causing fluctuations in indoor temperature.

CONTROLS
wired remote control included

M-V-DFA-12520~14020-G

Wi-Fi
(optional)

Model			M-V-DFA-12520-G	M-V-DFA-14020-G
Control (included)			Wired remote control	
Rated capacity	Cooling[1]	kW	12.50	14.00
	Heating[2]	kW	8.50	10.00
Electrical data				
Power supply		Ph-V-Hz	1-220~240V-50Hz	
Power absorption		W	200/350	200/350
Product specifications				
Dimensions	LxHxD	mm	1400x300x700	1400x300x700
Net weight		Kg	54	54
Sound pressure level at 1 m	H/M/L	dB(A)	46/50	46/50
Treated air volume	H/M/L	m^3/h	1200/2000	1200/2000
Static fan pressure	Std/Max	Pa	150/200	150/200
Connection diameter	Liquid/Gas	mm (inch)	9.52 (3/8") / 15.9 (5/8")	
	Condensate	mm	25	25
Field of application (suctioned air temp.)		°C	-7~45 DB	
Optional parts				
Centralized control			M-V-CC-T255-G / M-V-CC-T32-G	

1. Conditions: suctioned air 35°C DB (28°C WB), inlet air 18°C.
2. Conditions: suctioned air 7°C DB (6°C WB), inlet air 22°C.

ENTHALPY HEAT RECOVERY WITH COIL

3 SIZES
500~1000 m³/h

COMPACT DESIGN
880 mm width, **340 mm** height and **1700 mm** depth for 500 m³/h model

LOW ACOUSTIC IMPACT
55 dB(A) for the 500 m³/h model

FAN SPEED
5 + automatic

DAILY TIMER

FILTER AND HEAT EXCHANGER
easily removable

FILTER CLEANING
filter cleaning and replacement reminder

HIGH degree of filtration

M-V-THE-DX-500~1000-NG

Model			M-V-THE-DX-500-NG	M-V-THE-DX-800-NG	M-V-THE-DX-1000-NG
Control (included)			Wired remote control		
Rated capacity	Cooling1	kW	8.50	12.00	14.50
	Heating2	kW	4.00	10.60	12.00
Heat exchange efficiency		%	73	74	73
Electrical data					
Power supply		Ph-V-Hz	1-220~240V-50Hz		
Power absorption		W	270	440	640
Product specifications					
Dimensions	LxHxD	mm	880x340x1700	1185x390x1800	1185x390x1800
Net weight		Kg	120	158	158
Sound power level	Hi	dB(A)	55	59	62
Sound pressure level at 1 m		dB(A)	41.4	46.1	50.1
Treated air volume		m³/h	500	800	1000
Static fan pressure		Pa	150	150	150
Ducting flange	Diameter	mm	200	250	250
Connection diameter	Liquid/Gas	mm (inch)	6.35 (1/4") / 12.74 (1/2")	9.52 (3/8") / 15.9 (5/8")	9.52 (3/8") / 15.9 (5/8")
	Condensate	mm	25	25	25
Field of application (suctioned air temp.)		°C	-25~48 DB		
Optional parts					
Centralized control			M-V-CC-T255-G / M-V-CC-T32-G (basic)		

1. Conditions: indoor air 27°C DB/19.5°C WB; outside air 35°C DB/28°C WB.
2. Conditions: indoor air 20°C DB/12°C WB; outside air 7°C DB/6°C WB.

CONNECTABILITY LIMITATIONS

50-100%
The sum of the power of the indoor units + the power of the heat recovery unit must be between 50 and 100% of the rated power of the outdoor unit.

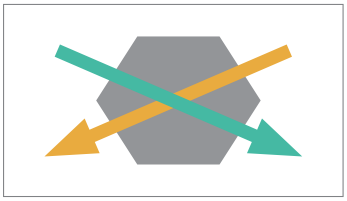
30%
The maximum power of the recovery unit must not exceed 30% of the rated power of the outdoor unit.

FUNCTIONS AVAILABLE FROM THE CONTROL

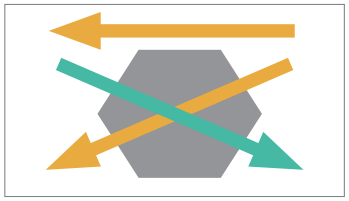
Linkage control
Automatic activation of the heat recovery unit via CAN-BUS communication if at least one indoor unit is active; shut-down if all indoor units are deactivated.

Free cooling with automatic bypass
Available when the outside temperature falls below the inside temperature (e.g. during the night). This function reduces the energy consumption of the fan, prolonging the life of the heat exchanger.

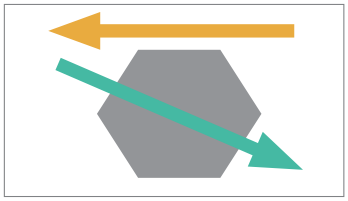
OPERATING MODES



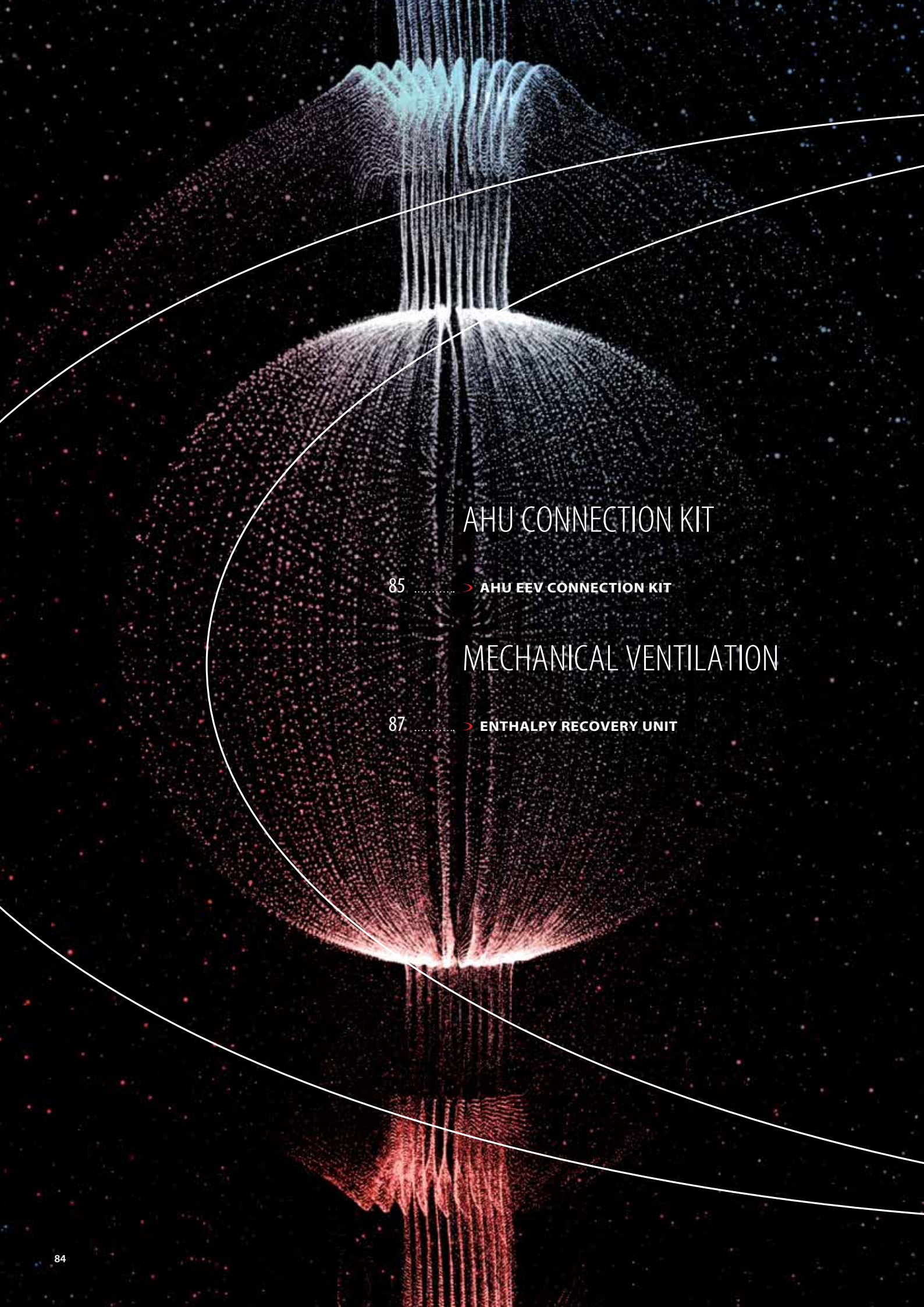
Heat exchange mode
In this mode, exhaust air and fresh air enter the exchanger.



Automatic mode
The unit regulates the heat exchange automatically in this mode.



By-pass mode
The exhaust air does not pass through the exchanger in this mode.



AHU CONNECTION KIT

MECHANICAL VENTILATION

AHU EEV CONNECTION KIT

5 MODELS
3.60~56.00 kW

CLEAN CONTRACT

HIGH EFFICIENCY
fewer outdoor unit start & stop cycles thanks to VRF technology

ENERGY SAVINGS
by means of the DC Inverter technology

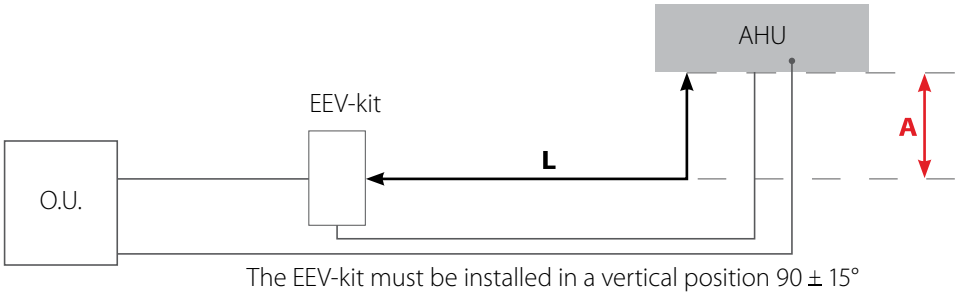
CONTROL
wired remote control included

M-V-AHU-362~5602-G

Model			M-V-AHU-362-G		M-V-AHU-712-G			M-V-AHU-1402-G		
Control (included)			Wired remote control		Wired remote control			Wired remote control		
Rated capacity	Cooling	kW	3.60		7.10			14.00		
	Heating	kW	4.00		8.00			16.00		
Settable capacity	Cooling	kW	2.80	3.60	4.50	5.60	7.10	9.00	11.20	14.00
	Heating	kW	3.20	4.00	5.00	6.30	8.00	10.00	12.50	16.00
Electrical data										
Power supply		Ph-V-Hz	1-220~240V-50Hz		1-220~240V-50Hz			1-220~240V-50Hz		
Power absorption		W	8		8			8		
Product specifications										
EEV kit dimensions	LxHxD	mm	203x85x326		203x85x326			203x85x326		
Control box dimensions	LxHxD	mm	334x111x284		334x111x284			334x111x284		
Net weight		Kg	10		10.5			10.5		
Connection diameter	Liquid from O.U. to kit	mm (inch)	6.35 (1/4")	6.35 (1/4")	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")
	Liquid from kit to AHU	mm (inch)	6.35 (1/4")	6.35 (1/4")	6.35 (1/4")	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")
	Gas from O.U. to AHU	mm (inch)	9.52 (3/8")	12.7 (1/2")	12.7 (1/2")	15.9 (5/8")	15.9 (5/8")	15.9 (5/8")	15.9 (5/8")	15.9 (5/8")
Optional parts										
Centralized control			M-V-CC-T255-G / M-V-CC-T32-G (basic)							

Model			M-V-AHU-2802-G					M-V-AHU-5602-G		
Control (included)			Wired remote control					Wired remote control		
Rated capacity	Cooling	kW	28.00					56.00		
	Heating	kW	31.50					63.00		
Settable capacity	Cooling	kW	22.40	28.00	33.50	40.00	45.00	50.40	56.00	84.00
	Heating	kW	25.00	31.50	37.50	45.00	50.00	56.50	63.00	94.50
Electrical data										
Power supply		Ph-V-Hz	1-220~240V-50Hz					1-220~240V-50Hz		
Power absorption		W	8					8		
Product specifications										
EEV kit dimensions	LxHxD	mm	203x85x326					246x120x500		
Control box dimensions	LxHxD	mm	334x111x284					334x111x284		
Net weight		Kg	10.5					13		
Connection diameter	Liquid from O.U. to kit	mm (inch)	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")	15.9 (5/8")	15.9 (5/8")	15.9 (5/8")
	Liquid from kit to AHU	mm (inch)	9.52 (3/8")	9.52 (3/8")	12.7 (1/2")	12.7 (1/2")	12.7 (1/2")	15.9 (5/8")	15.9 (5/8")	19.05 (3/4")
	Gas from O.U. to AHU	mm (inch)	19.05 (3/4")	22.2 (7/8")	25.4 (1")	25.4 (1")	28.6 (9/8")	28.6 (9/8")	28.6 (9/8")	31.8 (1-1/4")
Optional parts										
Centralized control			M-V-CC-T255-G / M-V-CC-T32-G (basic)							

The **EEV-KIT** allows the connection of an AHU to the outdoor unit of a VRF system via an electronic expansion valve regulated by an electronic control system (Control Box). The advantages of VRF technology can be utilised in this way.



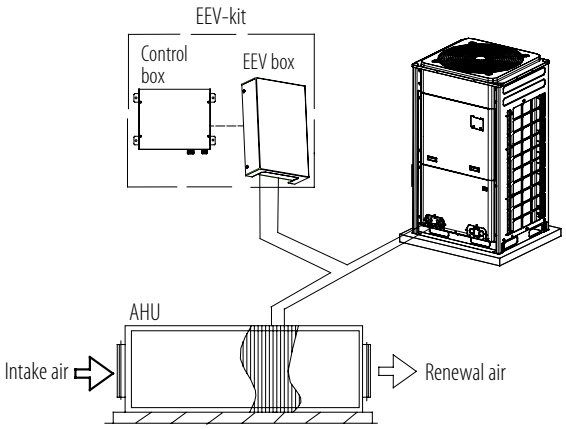
The EEV-kit must be installed in a vertical position 90 ± 15°

A The maximum height difference between EEV-kit and AHU is 2 metres.

L The maximum liquid pipe distance between EEV-kit and AHU is 2 metres. Also consider the maximum length of refrigerant piping.

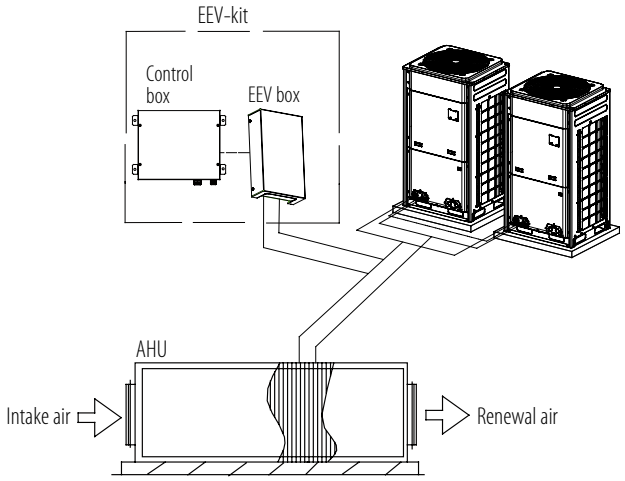
EEV-KIT

Connectability



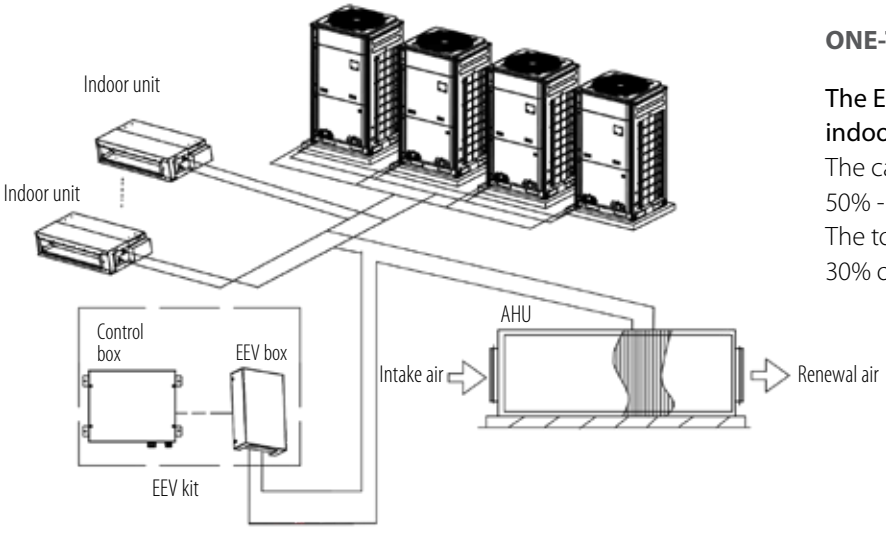
ONE-TO-ONE

An EEV-kit connected with a VRF outdoor unit.
The capacity of the EEV-kit must be between 80% - 110% of the capacity of the outdoor unit.



ONE-TO-MORE

An EEV-kit connected with multiple VRF outdoor units.
The capacity of the EEV-kit must be between 50% - 110% of the capacity of the outdoor units.



ONE-TO-MORE (MIXED CONNECTION)

The EEV-kit is connected to a VRF system including indoor units.
The capacity of the EEV-kit must be between 50% - 110% of the capacity of the outdoor unit.
The total capacity of the EEV-kit must not exceed 30% of the capacity of the outdoor unit.

ENTHALPY RECOVERY UNIT

4 SIZES
150~500 m3/h

COMPACT DESIGN
1160 mm width, **220 mm** height and **700 mm** depth for models from 150 to 250 m3/h

LOW ACOUSTIC IMPACT
43 dB(A) for the 150 m3/h model

FAN SPEED
5 + automatic

DAILY TIMER

FILTER AND HEAT EXCHANGER
easily removable

FILTER CLEANING
filter cleaning and replacement reminder

HIGH degree of filtration (F7)

UNDER CONTROL
wired remote control included

M-V-THE-150~500-NG2

Model			M-V-THE-150-NG2	M-V-THE-250-NG2	M-V-THE-350-NG2	M-V-THE-500-NG2
Control (included)			Wired remote control			
Heat exchange efficiency1		%	80	75	76	73
Electrical data						
Power supply		Ph-V-Hz	1-220~240V-50Hz			
Power absorption		W	50	105	155	250
Product specifications						
Dimensions	LxHxD	mm	1160x220x700	1160x220x700	1200x240x785	1358x240x785
Net weight		Kg	50	50	60	71.5
Sound power level		dB(A)	43	50	55	57
Treated air volume		m3/h	150	250	350	500
Static fan pressure		Pa	100	100	100	100
Ducting flange	Diameter	mm	150	150	150	185
Field of application (suctioned air temp.)		°C	-15~50 DB (max RH 80%)			
Specific energy consumption2	SEC	kWh/m2.a	-35.1	-28.7	-	-
Class SEC2			A	B	-	-

Reference standards: EU Ecodesign Directive 1253/2014 for non-residential ventilation units (NRVU) and residential ventilation (RVU). EU Energy Labelling 1254/2014 Residential Ventilation Unit (RVU).
1. Values for the following conditions: cooling efficiency: indoor air 27°C DB/20°C WB; outdoor air 35°C DB/29°C WB. Heating efficiency: indoor air 20°C DB/14°C WB; outdoor air 5°C DB/2°C WB.
2. Mandatory data for residential ventilation units (RVU) only.

INDIVIDUAL USE ENTHALPY HEAT RECOVERY UNIT

Ventilation system that enables enthalpy heat recovery of indoor air. Suitable for residential and commercial applications, making the environment healthy and the air clean.

The recovery unit generates energy savings by recovering heat and humidity from the exhaust air.

Winter-summer recovery operation

The energy contained in the renewal air expelled from rooms that would otherwise be dispersed into the atmosphere is recovered and used to pre-heat/pre-cool the air coming in from outside.

FUNCTIONS AVAILABLE FROM THE CONTROL

Linkage control

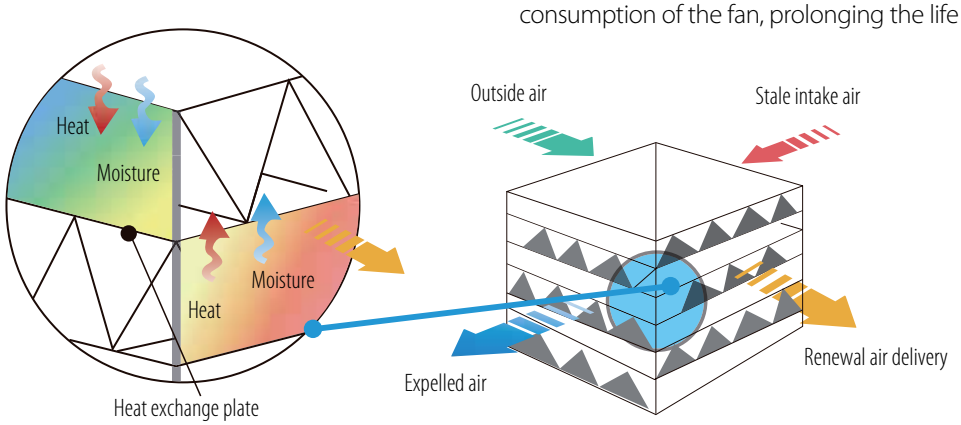
Automatic activation of the heat recovery unit via CAN-BUS communication if at least one indoor unit is active; shut-down if all indoor units are deactivated.

Auto control

4 selectable air filtration level settings (excellent, good, moderate, sufficient).

Free cooling with automatic bypass

Available when the outside temperature falls below the inside temperature (e.g. during the night). This function reduces the energy consumption of the fan, prolonging the life of the heat exchanger.




R32

RESIDENTIAL & LIGHT COMMERCIAL R32

MW MONOSPLIT
MW LIGHT COMMERCIAL
MW MULTISPLIT

R32: better performance, less environmental impact

The advantages of R32

In this day and age, environmental protection is considered by both users and professionals to be of the utmost importance.

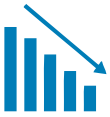
Choosing an air conditioner with the new R32 refrigerant helps achieve excellent comfort in both cooling and heating, reducing polluting emissions.

The most relevant aspect of the R32 gas is its 675 GWP value, which makes it possible to create systems containing up to 7 kg of gas without exceeding the threshold requiring a characteristic leakage control, keeping of the equipment register; a threshold that for a R410A gas has already been surpassed by 2.4 kg of gas.

Refrigerant R32:

- Environmentally friendly
- **Non-toxic**
- Slightly flammable
- Not harmful and does not present risks to the ozone
- Very efficient

LESS ENVIRONMENTAL IMPACT



REDUCED GREENHOUSE EFFECT

Why choose R32?

The specific name of R32 gas is difluoromethane. Currently, it is present among the low-value GWP fluorinated gases, equal to 675, and is used in residential use air conditioning units.

There is no requirement to replace the current R410A gas, which therefore remains regularly on the market, except in monosplit applications with refrigerant <3 kg where the use of gas with GWP<750 will be mandatory for new installations beginning in 2025.

There are certain limitations in particular conditions of use that must be considered in accordance with the Regulations in force.

Storage, standards and design

When storing units containing R32, it may be necessary to revise the Fire Prevention Certificate depending on the quantities stored, to guarantee the validity of its insurance coverage (Presidential Decree 151/2011). The transport of dangerous goods is regulated by Leg. Decree 35/2010. R32 has been classified as slightly flammable by ISO 817 and as such has no stringent restrictions on road transport (ADR in force), maintaining a strict regulation in maritime (IMDG in force) and aeronautical (IATA in force) transport.

The EN 378:2016 standard also regulates the applications of appliances using R32 gas. The maximum concentration limits of gas in residential applications must always be verified, with particular regard to multisplit systems that can potentially concentrate high quantities of refrigerant in small-sized environments (in case of leakage). **R32 gas is heavier than air and accumulates in the event of a leak**. Indoor units therefore follow different normative parameters depending on the type of application.

Installation in public buildings is regulated by specific standards concerning the application of appliances with flammable gases, such as: Min. Decree for Hotels 09/04/1994, Min. Decree for shopping centres 27/07/2010, Min. Decree for buildings for public entertainment 19/08/1996, Min. Decree for hospitals 18/09/2012, Min. Decree for schools 26/08/1992, Min. Decree for offices 22/02/2006, Min. Decree for games for children 16/07/2014, Min. Decree for airports 07/07/2014, Min. Decree for interports 18/07/2014.

The design, installation and maintenance of appliances with R32 gas are regulated by the following standards: Ministerial Decree 37/2008 provisions concerning the installation of plants inside buildings, Leg. Decree 81/2008 text on health and safety at work, F-gas 517/2014 regulation of fluorinated gases, Presidential Decree 151/2011 governing the procedures relating to fire prevention, EN 378:2016 refrigeration systems and heat pumps (requirements for plant safety).

With Ministerial Decree of 10 March 2020 and the subsequent Circular DCPREV 9833 of 22 July 2020 by the Fire Brigade, the technical provisions are updated allowing the possibility of using machines equipped with A1 or A2L classified refrigerants in air conditioning systems, thus overcoming the restriction of using only non-toxic or non-flammable fluids.

A scrupulous check of existing regulations is however recommended when using equipment containing R32 gas. Failure to comply with these regulations requires the designers and installers of equipment with R32 to have a direct legal responsibility for their application.

MW MONOSPLIT R32, THE RANGE

INDOOR UNITS

	kW		2.60	3.50	5.30	7.10
	AIR ULTRA PLUS	Indoor unit	MKEGM 266 ZAL	MKEGM 356 ZAL		
		Outdoor unit	MCNGS 266 ZA	MCNGS 356 ZA		
	AIRPRO PLUS	Indoor unit	MKEGM 265 ZAL	MKEGM 355 ZAL	MKEGM 535 ZAL	MKEGM 715 ZAL
		Outdoor unit	MCNGS 265 ZA	MCNGS 355 ZA	MCNGS 535 ZA	MCNGS 715 ZA
	CONSOLE	Indoor unit	MFIGM 260 ZAL	MFIGM 350 ZAL	MFIGM 530 ZAL	
		Outdoor unit	MCJGS 260 ZA	MCJGS 350 ZA	MCJGS 530 ZA	

OUTDOOR UNITS

AIR ULTRA PLUS

Exclusive design with compact, rounded shapes. The new Air Ultra Plus Multiwarm combines cutting-edge design and technology.

Energy savings and tax incentives

A+++
Energy class in cooling

A++
Energy class in heating

Operating range

up to
50°C
in cooling

up to
-25°C
in heating

Very quiet operation:

21 dB

Temperature adjustment

0.5°C
Temperature adjustable even by half a degree.

Built-in Smart Wi-Fi

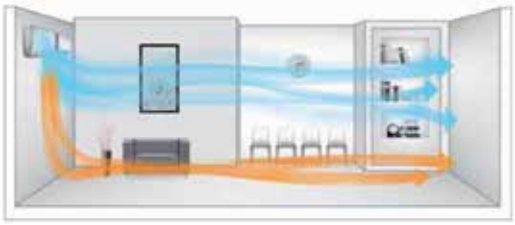
Thanks to its Smart Wi-Fi technology, the air conditioners can be switched on and off, as well as set in cooling or heating mode, their airflow can be adjusted and proper system functioning can be checked.

Management via EWPE Smart app

FEATURES AND FUNCTIONS

Turbo function

With the turbo function, airflow is very powerful horizontally towards the ceiling in cold, towards the floor in warm, to quickly reach the desired temperature.



4-way air outlet

The flaps can be adjusted horizontally and vertically to maximise comfort.

Self-Clean function

One of the main causes of bad odours is mould and bacteria. The Self-Clean function dries out the inside of the air conditioner to prevent this by eliminating residual moisture inside the indoor unit. This function works by significantly reducing unpleasant odours and therefore lets you get cleaner air from your air conditioner.

Cold Plasma Filter

The plasma purification system produces clusters of ions that collide, capturing and destroy odours, bacteria, pollen and allergen substances in order to lessen allergy and asthma symptoms.

I-Feel function

The sensor built into the remote control senses the surrounding temperature and transmits the signal to the indoor unit. This allows the indoor unit to adjust the volume and temperature of the air flow for maximum comfort.

Remote control with "I FEEL", actual temperature 26°C, perceived temperature 26°C.

Remote control without "I FEEL", actual temperature 29°C, perceived temperature 26°C.

Sleep mode

Activating the Sleep function allows the unit to automatically adjust the air temperature when you are resting.

Quiet Design

In this mode, the indoor unit fans run at low speed and operating noise is reduced to a minimum.

Smart pre-heating

Air is brought to temperature before being fed into the room.

Self-diagnosis

The controller detects the error, indicates the corresponding code on the display and interrupts operation.

8°C mode

This mode means the room temperature never drops below 8°C, which is very useful in preventing apartments from deteriorating due to excessive cold during the winter season.

Rapid defrost

The outdoor unit recognises possible freezing and activates the quick defrost procedure to improve heat dissipation.

Standby

Consumption is less than or equal to 1 watt when the unit ceases operation and is switched off.

7 fan speeds

Choose your desired speed from super low to turbo.

Soft Start

When the power comes back on after a blackout, the units restarts gradually to avoid a power overload.

Other functions

Timer, Auto restart, Key lock, LCD backlight, LED lights, Turbo cooling, Low voltage power on.

AIR ULTRA PLUS

2 POWER LEVELS
2.70~3.53 kW

ELEGANT, COMPACT DESIGN
186 mm depth

VERY QUIET OPERATION
only 21 dB(A) in Low mode for all models

UP TO -25°C
In heating

SLEEP MODE

I-FEEL FUNCTION

SELF-CLEAN FUNCTION

COLD PLASMA FILTER

REMOTE CONTROL INCLUDED

cool.
A+++
models
2.70~3.53 kW

Wi-Fi
built-in

MKEGM 266~356 ZAL

	SEER	SCOP
2.70 kW	8.80	4.70
3.53 kW	8.60	4.60

Indoor unit model			MKEGM 266 ZAL	MKEGM 356 ZAL
Outdoor unit model			MCNGS 266 ZA	MCNGS 356 ZA
Type			DC-Inverter heat pump	
Control (included)			Remote control	
Nominal Data				
Rated capacity (T=+35°C)	Cooling	kW	2.70 (0.85~4.20)	3.53 (1.00~4.70)
Rated absorbed power (T=+35°C)		kW	0.60 (0.10~1.40)	0.88 (0.10~1.40)
Rated energy efficiency coefficient		EER[1]	4.50	4.00
Rated capacity (T=+7°C)	Heating	kW	3.20 (1.00~4.40)	3.81 (1.00~5.20)
Rated absorbed power (T=+7°C)		kW	0.695 (0.15~1.50)	0.95 (0.18~1.65)
Rated energy performance coefficient		COP[1]	4.60	4.00
Seasonal Data				
Theoretical load (Pdesignc)	Cooling	kW	2.70	3.50
Seasonal energy efficiency index		SEER[2]	8.80	8.60
Seasonal energy efficiency class		626/2011[3]	A+++	A+++
Annual energy consumption		kWh/a	107	142
Theoretical load (Pdesignh) @-10°C	Heating (average climatic conditions)	kW	3.00	3.20
Seasonal energy efficiency index		SCOP[2]	4.70	4.60
Seasonal energy efficiency class		626/2011[3]	A++	A++
Annual energy consumption		kWh/a	894	974
Electrical data				
Power supply	Outdoor unit	Ph-V-Hz	1Ph - 220/240V - 50Hz	
Power cable		Type	3 x 1.5 mm^2	
Connection wires between I.U. and O.U.		no.	4	4
Rated absorbed current	Cooling	A	3.10	4.00
	Heating	A	3.40	4.30
Maximum current		A	6.70	7.40
Maximum absorbed power		kW	1.50	1.65
Refrigerant circuit data				
Refrigerant[4]		Type (GWP)	R32 (675)	R32 (675)
Quantity refrigerant pre-load		Kg	0.7	0.8
Tons of equivalent CO2		t	0.473	0.540
Diameter of liquid/gas refrigerant piping		mm (inches)	ø6.35(1/4") / ø9.52(3/8")	ø6.35(1/4") / ø9.52(3/8")
Max splitting length		m	15	20
Max height difference I.U./O.U.		m	10	10
Splitting length without additional load		m	5	5
Additional load		g/m	16	16
Indoor unit specifications				
Dimensions	LxDxH	mm	980x186x312	980x186x312
Net weight		Kg	14	14
Sound power level	Hi~Lo	dB(A)	57/53/49/45/43/37/35	57/50/46/43/41/33/31
Sound pressure level	Hi~Lo	dB(A)	41/39/35/31/29/23/21	42/40/36/33/31/23/21
Treated air volume	Hi~Lo	m^3/h	670/620/510/410/380/300/276	670/620/540/480/380/300/276
Specifications of outdoor units				
Dimensions	LxDxH	mm	732x330x555	802x350x555
Net weight		Kg	26.5	29
Sound power level		dB(A)	62	62
Sound pressure level		dB(A)	51	53
Treated air volume	Max	m^3/h	1950	2200
Operating limits (outside temperature)	Cooling	°C	-15~50	
	Heating	°C	-25~30	
Optional parts				
Wi-Fi module			Included	
Wired remote control			Not available	
Centralized control (only with wired remote control)			Not available	

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AIRPRO PLUS

Airpro Plus provides exceptional climate control. The smart technology on which it is based makes your home so comfortable that you practically forget you have it.

Energy savings and tax incentives

A+++
Energy class in cooling
(power 2.7 and 3.5 kW)

A++
Energy class in heating
(power 2.7 kW)

Operating range

up to
50°C
in cooling

up to
-15°C
in heating

Very quiet operation:

22 dB
Very low noise levels in low mode
(power 2.7 kW)

Built-in Smart Wi-Fi

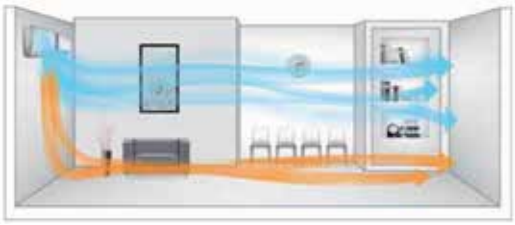
Thanks to its Smart Wi-Fi technology, the air conditioners can be switched on and off, as well as set in cooling or heating mode, their airflow can be adjusted and proper system functioning can be checked.

Management via
EWPE Smart app

FEATURES AND FUNCTIONS

Turbo function

With the turbo function, airflow is very powerful horizontally towards the ceiling in cold, towards the floor in warm, to quickly reach the desired temperature.



4-way air outlet

The flaps can be adjusted horizontally and vertically to maximise comfort.

Self-Clean function

One of the main causes of bad odours is mould and bacteria. The Self-Clean function dries out the inside of the air conditioner to prevent this by eliminating residual moisture inside the indoor unit. This function works by significantly reducing unpleasant odours and therefore lets you get cleaner air from your air conditioner.

Cold Plasma Filter

The plasma purification system produces clusters of ions that collide, capturing and destroy odours, bacteria, pollen and allergen substances in order to lessen allergy and asthma symptoms.

I-Feel function

The sensor built into the remote control senses the surrounding temperature and transmits the signal to the indoor unit. This allows the indoor unit to adjust the volume and temperature of the air flow for maximum comfort.

Remote control without "I FEEL", actual temperature 29°C, perceived temperature 26°C.

Remote control with "I FEEL", actual temperature 26°C, perceived temperature 26°C.

Quiet Design

In this mode, the indoor unit fans run at low speed and operating noise is reduced to a minimum.

Smart pre-heating

Air is brought to temperature before being fed into the room.

Self-diagnosis

The controller detects the error, indicates the corresponding code on the display and interrupts operation.

8°C mode

This mode means the room temperature never drops below 8°C, which is very useful in preventing apartments from deteriorating due to excessive cold during the winter season.

Other functions

Timer, Auto restart, Key lock, LCD backlight, LED lights, Turbo cooling, Low voltage power on.

Rapid defrost

The outdoor unit recognises possible freezing and activates the quick defrost procedure to improve heat dissipation.

Standby

Consumption is less than or equal to 1 watt when the unit ceases operation and is switched off.

7 fan speeds

Choose your desired speed from super low to turbo.

Soft Start

When the power comes back on after a blackout, the units restarts gradually to avoid a power overload.

AIRPRO PLUS

4 POWER LEVELS
2.70~7.10 kW

ELEGANT, COMPACT DESIGN
210 mm depth for models 2.70 to 3.50 kW

VERY QUIET OPERATION
only 22 dB(A) in Low mode for model 2.70 kW

I-FEEL FUNCTION

SELF-CLEAN FUNCTION

COLD PLASMA FILTER

REMOTE CONTROL INCLUDED

cool. A+++ models 2.70~3.50 kW

Wi-Fi built-in

MKEGM 265~715 ZAL

	SEER	SCOP
2.70 kW	9.00	4.60
3.50 kW	8.50	4.40
5.30 kW	7.60	4.30
7.10 kW	7.00	4.20

Indoor unit model			MKEGM 265 ZAL	MKEGM 355 ZAL	MKEGM 535 ZAL	MKEGM 715 ZAL
Outdoor unit model			MCNGS 265 ZA	MCNGS 355 ZA	MCNGS 535 ZA	MCNGS 715 ZA
Type			DC-Inverter heat pump			
Control (included)			Remote control			
Nominal Data						
Rated capacity (T=+35°C)	Cooling	kW	2.70 (0.85~4.00)	3.50 (0.40~4.50)	5.30 (1.26~6.60)	7.10 (2.00~8.85)
Rated absorbed power (T=+35°C)		kW	0.60 (0.10~1.40)	0.875 (0.10~1.40)	1.41 (0.10~2.23)	2.03 (0.45~2.50)
Rated energy efficiency coefficient		EER[1]	4.50	4.00	3.75	3.50
Rated capacity (T=+7°C)	Heating	kW	3.00 (1.00~4.60)	3.81 (1.00~5.20)	5.60 (1.40~7.50)	7.80 (1.80~9.45)
Rated absorbed power (T=+7°C)		kW	0.68 (0.15~1.60)	0.952 (0.18~1.85)	1.33 (0.24~2.50)	2.00 (0.35~3.00)
Rated energy performance coefficient		COP[1]	4.41	4.00	4.20	3.90
Seasonal Data						
Theoretical load (Pdesignc)	Cooling	kW	2.70	3.50	5.30	7.10
Seasonal energy efficiency index		SEER[2]	9.00	8.50	7.60	7.00
Seasonal energy efficiency class		626/2011[3]	A+++	A+++	A++	A++
Annual energy consumption		kWh/a	105	144	244	355
Theoretical load (Pdesignh) @-10°C	Heating (average climatic conditions)	kW	3.00	3.20	4.30	5.60
Seasonal energy efficiency index		SCOP[2]	4.60	4.40	4.30	4.20
Seasonal energy efficiency class		626/2011[3]	A++	A+	A+	A+
Annual energy consumption		kWh/a	913	1018	1400	1867
Electrical data						
Power supply	Outdoor unit	Ph-V-Hz	1Ph - 220/240V - 50Hz			
Power cable		Type	3 x 1.5 mm²	3 x 2.5 mm²	3 x 2.5 mm²	3 x 4 mm²
Connection wires between I.U. and O.U.		no.	4	4	4	4
Rated absorbed current	Cooling	A	3.10	4.00	6.50	9.00
	Heating	A	3.70	4.50	6.20	9.30
Maximum current		A	7.10	8.00	12.50	13.50
Maximum absorbed power		kW	1.60	1.85	2.50	3.00
Refrigerant circuit data						
Refrigerant[4]		Type (GWP)	R32 (675)	R32 (675)	R32 (675)	R32 (675)
Quantity refrigerant pre-load		Kg	0.7	0.8	1	1.5
Tons of equivalent CO2		t	0.473	0.540	0.675	1.013
Diameter of liquid/gas refrigerant piping		mm (inches)	ø6.35(1/4") / ø9.52(3/8")	ø6.35(1/4") / ø9.52(3/8")	ø6.35(1/4") / ø12.74(1/2")	ø6.35(1/4") / ø15.88(5/8")
Max splitting length		m	15	20	25	25
Max height difference I.U./O.U.		m	10	10	10	10
Splitting length without additional load		m	5	5	5	5
Additional load		g/m	16	16	16	40
Indoor unit specifications						
Dimensions	LxDxH	mm	865x210x290	865x210x290	996x225x301	1101x249x327
Net weight		Kg	10.5	10.5	13	16
Sound power level	Hi~Lo	dB(A)	58/52/50/48/44/40/36	58/53/51/49/46/43/37	60/57/55/54/52/50/46	64/59/56/55/53/51/48
Sound pressure level	Hi~Lo	dB(A)	41/38/36/34/30/26/22	43/39/37/35/32/29/23	43/41/39/37/35/32/31	48/44/41/40/38/36/33
Treated air volume	Hi~Lo	m³/h	660/590/540/490/450/420/390	680/590/540/490/450/420/390	850/750/680/610/570/520/460	1250/1100/1000/950/900/850/800
Specifications of outdoor units						
Dimensions	LxDxH	mm	732x330x555	802x350x555	958x402x660	958x402x660
Net weight		Kg	27	29	42	42.5
Sound power level		dB(A)	62	64	64	70
Sound pressure level		dB(A)	50	52	57	59
Treated air volume	Max	m³/h	1950	2200	3600	3600
Operating limits (outside temperature)	Cooling	°C	-15~50			
	Heating	°C	-15~30			
Optional parts						
Wi-Fi module			Included			
Wired remote control			M-RF-CW2-L-G			
Centralized control (only with wired remote control)			M-V-CC-T255-G			

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CONSOLE

3 POWER LEVELS
2.70~5.20 kW

7 FAN SPEEDS

TOTAL CONTROL OF THE TEMPERATURE
the ***I feel*** function detects the room temperature at the user's location

ELEGANT, COMPACT DESIGN
215 mm depth

DOUBLE AIR OUTLET

X-FAN allows the evaporator to dry, to prevent the formation of mould and bacteria

8°C HEATING
prevents the room temperature from falling below 8°C

REMOTE CONTROL INCLUDED

cool. A++ models 2.70~5.20 kW

-22°C in heating

Wi-Fi (optional)

MFIGM 260~530 ZAL

	SEER	SCOP
2.70 kW	7.20	4.00
3.52 kW	7.00	4.10
5.20 kW	6.60	4.00

Indoor unit model			MFIGM 260 ZAL	MFIGM 350 ZAL	MFIGM 530 ZAL
Outdoor unit model			MCJGS 260 ZA	MCJGS 350 ZA	MCJGS 530 ZA
Type			DC-Inverter heat pump		
Control (included)			Remote control		
Nominal Data					
Rated capacity (T=+35°C)	Cooling	kW	2.70 (0.70~3.40)	3.52 (0.80~4.40)	5.20 (1.26~6.60)
Rated absorbed power (T=+35°C)		kW	0.72 (0.17~1.30)	1.00 (0.16~1.50)	1.55 (0.38~2.45)
Rated energy efficiency coefficient		EER[1]	3.75	3.52	3.40
Rated capacity (T=+7°C)	Heating	kW	2.90 (0.60~3.50)	3.80 (1.10~4.40)	5.33 (1.12~6.80)
Rated absorbed power (T=+7°C)		kW	0.73 (0.13~1.35)	0.96 (0.17~1.50)	1.50 (0.35~2.50)
Rated energy performance coefficient		COP[1]	3.97	3.96	3.55
Seasonal Data					
Theoretical load (Pdesignc)	Cooling	kW	2.70	3.50	5.20
Seasonal energy efficiency index		SEER[2]	7.20	7.00	6.60
Seasonal energy efficiency class		626/2011[3]	A++	A++	A++
Annual energy consumption		kWh/a	131	175	276
Theoretical load (Pdesignh) @-10°C	Heating (average climatic conditions)	kW	2.60	3.20	5.00
Seasonal energy efficiency index		SCOP[2]	4.00	4.10	4.00
Seasonal energy efficiency class		626/2011[3]	A+	A+	A+
Annual energy consumption		kWh/a	910	1093	1750
Electrical data					
Power supply	Outdoor unit	Ph-V-Hz	1Ph - 220/240V - 50Hz		
Power cable		Type	3 x 1.5 mm^2	3 x 1.5 mm^2	3 x 2.5 mm^2
Connection wires between I.U. and O.U.		no.	4	4	4
Rated absorbed current	Cooling	A	3.50	4.50	7.10
	Heating	A	3.60	4.30	6.70
Maximum current		A	6.00	6.70	11.10
Maximum absorbed power		kW	1.35	1.50	2.50
Refrigerant circuit data					
Refrigerant[4]		Type (GWP)	R32 (675)	R32 (675)	R32 (675)
Quantity refrigerant pre-load		Kg	0.55	0.75	0.95
Tons of equivalent CO2		t	0.371	0.506	0.641
Diameter of liquid/gas refrigerant piping		mm (inches)	ø6.35(1/4") / ø9.52(3/8")	ø6.35(1/4") / ø9.52(3/8")	ø6.35(1/4") / ø12.74(1/2")
Max splitting length		m	15	20	25
Max height difference I.U./O.U.		m	10	10	10
Splitting length without additional load		m	5	5	5
Additional load		g/m	16	16	16
Indoor unit specifications					
Dimensions	LxDxH	mm	700v215x600	700v215x600	700v215x600
Net weight		Kg	15.5	15.5	15.5
Sound power level	Hi~Lo	dB(A)	50/48/45/44/42/38/34	54/50/48/46/43/39/35	57/55/53/51/48/47/42
Sound pressure level	Hi~Lo	dB(A)	39/36/33/31/29/26/23	44/40/38/36/33/29/25	47/45/43/41/38/37/32
Treated air volume	Hi~Lo	m^3/h	500/430/410/370/330/280/250	600/520/480/440/400/360/280	700/650/580/520/460/410/320
Specifications of outdoor units					
Dimensions	LxDxH	mm	782x320x540	848x320x596	965x396x700
Net weight		Kg	27.5	30.5	46
Sound power level		dB(A)	60	62	65
Sound pressure level		dB(A)	49	52	57
Treated air volume	Max	m^3/h	1600	2200	3200
Operating limits (outside temperature)	Cooling	°C	-15~43		
	Heating	°C	-22~24		
Optional parts					
Wi-Fi module			MKG-WiFi		
Wired remote control			M-RF-CW2-L-G		
Centralized control (only with wired remote control)			M-V-CC-T255-G		

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MW LIGHT COMMERCIAL R32, THE RANGE

INDOOR UNITS

	kW		3.50	5.30	7.10
 Wi-Fi	8-WAY COMPACT CASSETTE	Indoor unit	MTFGS 351 ZA		
		Outdoor unit	MCKGS 351 ZA		
 Wi-Fi	8-WAY COMPACT CASSETTE	Indoor unit		MTBGS 531 ZA	MTBGS 711 ZA
		Outdoor unit		MCKGS 531 ZA	MCKGS 711 ZA
 Wi-Fi	DUCTED	Indoor unit	MUDGS 351 ZA	MUDGS 531 ZA	MVDGS 711 ZA
		Outdoor unit	MCKGS 351 ZA	MCKGS 531 ZA	MCKGS 711 ZA
 Wi-Fi	FLOOR/CEILING	Indoor unit	MSFGS 351 ZA	MSFGS 531 ZA	MSFGS 711 ZA
		Outdoor unit	MCKGS 351 ZA	MCKGS 531 ZA	MCKGS 711 ZA

OUTDOOR UNITS

60x60 **8-WAY** COMPACT CASSETTE

1 POWER LEVEL
3.50 kW

COMPACT DESIGN
260 mm height for building into false ceilings

MEMORY FUNCTION

WASHABLE FILTER
optimised air quality

360° AIR DISTRIBUTION

MTFGS 351 ZA

UP TO -20°C

UP TO 52°C
In cooling

Wi-Fi
optional
with wired remote control

CONDENSATE DRAIN PUMP INCLUDED maximum height difference **1000 mm** from the flush panel

PRE-CUT FOR OUTSIDE AIR INFLOW

CONTROLS
standard remote control

	SEER	SCOP
3.50 kW	7.10	4.20

Indoor unit model			MTFGS 351 ZA
Outdoor unit model			MCKGS 351 ZA
Type			DC-Inverter heat pump
Control (included)			Remote control
Nominal Data			
Rated capacity (T=+35°C)	Cooling	kW	3.50
Rated absorbed power (T=+35°C)		kW	0.92
Rated energy efficiency coefficient		EER[1]	3.80
Rated capacity (T=+7°C)	Heating	kW	4.00
Rated absorbed power (T=+7°C)		kW	1.00
Rated energy performance coefficient		COP[1]	4.00
Seasonal Data			
Theoretical load (Pdesignc)	Cooling	kW	3.50
Seasonal energy efficiency index		SEER[2]	7.10
Seasonal energy efficiency class		626/2011[3]	A++
Annual energy consumption		kWh/a	173
Theoretical load (Pdesignh) @-10°C	Heating (average climatic conditions)	kW	3.10
Seasonal energy efficiency index		SCOP[2]	4.20
Seasonal energy efficiency class		626/2011[3]	A+
Annual energy consumption		kWh/a	1033
Electrical data			
Power supply	Outdoor unit	Ph-V-Hz	1-220~240V-50/60HZ
Power cable		Type	3 x 1.5 mm^2
Connection wires between I.U. and O.U.		no.	4
Rated absorbed current	Cooling	A	4.40
	Heating	A	4.80
Maximum current		A	6.00
Maximum absorbed power		kW	1.30
Refrigerant circuit data			
Refrigerant[4]		Type (GWP)	R32 (675)
Quantity refrigerant pre-load		Kg	0.57
Tons of equivalent CO2		t	0.385
Diameter of liquid/gas refrigerant piping		mm (inches)	ø6.35(1/4") / ø9.52(3/8")
Max splitting length		m	30
Max height difference I.U./O.U.		m	15
Splitting length without additional load		m	5
Additional load		g/m	16
Indoor unit specifications			
Dimensions	LxDxH	mm	570x570x260
Net weight		Kg	16.5
Sound power level	SHi	dB(A)	47
Sound pressure level	SHi/Hi/Mi/Lo	dB(A)	36/35/33/29
Treated air volume	SHi/Hi/Mi/Lo	m^3/h	600/550/500/400
Specifications of outdoor units			
Dimensions	LxDxH	mm	675x285x553
Net weight		Kg	24.5
Sound power level	Max	dB(A)	56
Sound pressure level	Max	dB(A)	48
Treated air volume	Max	m^3/h	1800
Operating limits (outside temperature)	Cooling	°C	-20~52
	Heating	°C	-20~24
Accessories			
Decorative panel			MTFPG 350 ZA
Dimensions	LxDxH	mm	620x620x47.5
Net weight		Kg	3
Optional parts			
Wired remote control with built-in Wi-Fi module			DMW-ZA1 WiFi
Centralized control			M-V-CC-T255-G

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84x84 **8-WAY** BIG CASSETTE

2 POWER LEVELS
5.30~7.10 kW

COMPACT DESIGN
200 mm height for building into false ceilings

360° AIR DISTRIBUTION

CONDENSATE DRAIN PUMP INCLUDED maximum height difference **1000 mm** from the flush panel

PRE-CUT FOR OUTSIDE AIR INFLOW

MEMORY FUNCTION

UP TO -20°C

MAXIMUM SPLITTING LENGTH 30 m

CONTROLS
standard remote control

MTBGS 531~711 ZA

Wi-Fi
optional

	SEER	SCOP
5.30 kW	7.20	4.30
7.10 kW	6.70	4.30

Indoor unit model			MTBGS 531 ZA	MTBGS 711 ZA
Outdoor unit model			MCKGS 531 ZA	MCKGS 711 ZA
Type			DC-Inverter heat pump	
Control (included)			Remote control	
Nominal Data				
Rated capacity (T=+35°C)	Cooling	kW	5.30	7.10
Rated absorbed power (T=+35°C)		kW	1.54	2.03
Rated energy efficiency coefficient		EER[1]	3.45	3.50
Rated capacity (T=+7°C)	Heating	kW	5.80	8.00
Rated absorbed power (T=+7°C)		kW	1.47	2.00
Rated energy performance coefficient		COP[1]	3.95	4.00
Seasonal Data				
Theoretical load (Pdesignc)	Cooling	kW	5.30	7.10
Seasonal energy efficiency index		SEER[2]	7.20	6.70
Seasonal energy efficiency class		626/2011[3]	A++	A++
Annual energy consumption		kWh/a	258	371
Theoretical load (Pdesignh) @-10°C	Heating (average climatic conditions)	kW	3.90	5.00
Seasonal energy efficiency index		SCOP[2]	4.30	4.30
Seasonal energy efficiency class		626/2011[3]	A+	A+
Annual energy consumption		kWh/a	1270	1628
Electrical data				
Power supply	Outdoor unit	Ph-V-Hz	1~220~240V-50HZ	
Power cable		Type	3 x 2.5 mm^2	3 x 4 mm^2
Connection wires between I.U. and O.U.		no.	4	4
Rated absorbed current	Cooling	A	7.30	9.70
	Heating	A	7.00	9.60
Maximum current		A	9.50	14.00
Maximum absorbed power		kW	1.90	2.80
Refrigerant circuit data				
Refrigerant[4]		Type (GWP)	R32 (675)	R32 (675)
Quantity refrigerant pre-load		Kg	0.85	1.5
Tons of equivalent CO2		t	0.574	1.013
Diameter of liquid/gas refrigerant piping		mm (inches)	ø6.35(1/4") / ø12.74(1/2")	ø9.52(3/8") / ø15.88(5/8")
Max splitting length		m	30	30
Max height difference I.U./O.U.		m	20	20
Splitting length without additional load		m	5	5
Additional load		g/m	16	20
Indoor unit specifications				
Dimensions	LxDxH	mm	840x840x200	840x840x200
Net weight		Kg	21	21
Sound power level	SHi	dB(A)	51	51
Sound pressure level	SHi/Hi/Mi/Lo	dB(A)	36/35/33/31	39/38/36/34
Treated air volume	SHi/Hi/Mi/Lo	m^3/h	900/800/700/600	1100/1000/900/800
Specifications of outdoor units				
Dimensions	LxDxH	mm	745x300x555	889x340x660
Net weight		Kg	30.5	41.5
Sound power level	Max	dB(A)	65	69
Sound pressure level	Max	dB(A)	52	55
Treated air volume	Max	m^3/h	2200	3600
Operating limits (outside temperature)	Cooling	°C	-20~52	
	Heating	°C	-20~24	
Accessories				
Decorative panel			MTBPG 710 ZA	
Dimensions	LxDxH	mm	950x950x52	950x950x52
Net weight		Kg	6	6
Optional parts				
Wired remote control with built-in Wi-Fi module			DMW-ZA1 WiFi	
Centralized control			M-V-CC-T255-G	

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DUCTED

3 POWER LEVELS
3.50~7.10 kW

WASHABLE FILTER
optimised air quality

MEMORY FUNCTION

CONDENSATE DRAIN PUMP INCLUDED
maximum height difference **1000 mm** from the lower profile

VERY COMPACT DESIGN
only **200 mm** height for models 3.50 and 5.30 kW

MAXIMUM SPLITTING LENGTH 30 m

STATIC PRESSURE LEVEL
can be set up to **160 Pa** (model 7.10 kW)

COMPATIBLE WITH SYSTEMS
AIRZONE

UP TO -20°C

CONTROLS
wired remote control included

cool.
A++
models
3.50~7.10 kW

Wi-Fi optional
Wired remote control
DMW-ZA1 WiFi

MUDGS 351~531 ZA MVDGS 711 ZA

	SEER	SCOP
3.50 kW	6.50	4.00
5.30 kW	6.30	4.00
7.10 kW	6.60	4.10

Indoor unit model			MUDGS 351 ZA	MUDGS 531 ZA	MVDGS 711 ZA
Outdoor unit model			MCKGS 351 ZA	MCKGS 531 ZA	MCKGS 711 ZA
Type			DC-Inverter heat pump		
Control (included)			Wired remote control		
Nominal Data					
Rated capacity (T=+35°C)	Cooling	kW	3.50	5.30	7.10
Rated absorbed power (T=+35°C)		kW	1.03	1.51	1.92
Rated energy efficiency coefficient		EER[1]	3.40	3.50	3.70
Rated capacity (T=+7°C)	Heating	kW	4.00	5.60	8.00
Rated absorbed power (T=+7°C)		kW	1.00	1.42	2.00
Rated energy performance coefficient		COP[1]	4.00	3.95	4.00
Seasonal Data					
Theoretical load (Pdesignc)	Cooling	kW	3.50	5.30	7.10
Seasonal energy efficiency index		SEER[2]	6.50	6.30	6.60
Seasonal energy efficiency class		626/2011[3]	A++	A++	A++
Annual energy consumption		kWh/a	188	294	377
Theoretical load (Pdesignh) @-10°C	Heating (average climatic conditions)	kW	3.00	3.90	4.70
Seasonal energy efficiency index		SCOP[2]	4.00	4.00	4.10
Seasonal energy efficiency class		626/2011[3]	A+	A+	A+
Annual energy consumption		kWh/a	1050	1365	1605
Electrical data					
Power supply	Outdoor unit	Ph-V-Hz	1-220~240V-50/60HZ		
Power cable		Type	3 x 1.5 mm^2	3 x 2.5 mm^2	3 x 4 mm^2
Connection wires between I.U. and O.U.		no.	4	4	4
Rated absorbed current	Cooling	A	4.90	7.20	9.20
	Heating	A	4.80	6.80	9.60
Maximum current		A	6.00	9.50	14.00
Maximum absorbed power		kW	1.30	1.90	2.80
Refrigerant circuit data					
Refrigerant[4]		Type (GWP)	R32 (675)	R32 (675)	R32 (675)
Quantity refrigerant pre-load		Kg	0.57	0.85	1.5
Tons of equivalent CO2		t	0.385	0.574	1.013
Diameter of liquid/gas refrigerant piping		mm (inches)	ø6.35(1/4") / ø9.52(3/8")	ø6.35(1/4") / ø12.74(1/2")	ø9.52(3/8") / ø15.88(5/8")
Max splitting length		m	30	30	30
Max height difference I.U./O.U.		m	15	20	20
Splitting length without additional load		m	5	5	5
Additional load		g/m	16	16	20
Indoor unit specifications					
Dimensions	LxDxH	mm	700x450x200	1000x450x200	900x655x260
Net weight		Kg	18	24	29.5
Sound power level	SHi	dB(A)	56	59	58
Sound pressure level	SHi/Hi/Mi/Lo	dB(A)	35/33/32/30	36/35/33/31	37/35/33/31
Treated air volume	SHi/Hi/Mi/Lo	m^3/h	600/550/500/400	900/800/700/600	1100/1000/900/800
Static fan pressure	Std/Max	Pa	25/80	25/80	25/160
Specifications of outdoor units					
Dimensions	LxDxH	mm	675x285x553	745x300x555	889x340x660
Net weight		Kg	24.5	30.5	41.5
Sound power level	Max	dB(A)	56	65	69
Sound pressure level	Max	dB(A)	48	52	55
Treated air volume	Max	m^3/h	1800	2200	3600
Operating limits (outside temperature)	Cooling	°C	-20~52		
	Heating	°C	-20~24		
Optional parts					
Wired remote control with built-in Wi-Fi module			DMW-ZA1 WiFi		
Centralized control			M-V-CC-T255-G		

1. Value measured according to harmonised standard EN14511. 2. EU Regulation No.206/2012 - - Value measured according to harmonised standard EN14825. 3. EU Delegated Regulation No.626/2011 on the new labelling indicating the energy consumption of air conditioners. 4. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 675. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 675 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.

FLOOR/CEILING

3 POWER LEVELS
3.50~7.10 kW

COMPACT DESIGN
235 mm height for all models

WASHABLE FILTER
optimised air quality

CHECK CONTROL SELF-DIAGNOSIS

MEMORY FUNCTION

DAILY TIMER

MAXIMUM SPLITTING LENGTH 30m

UP TO -20°C

CONTROLS
remote control included

cool.
A++
models
3.50~7.10 kW

Wi-Fi
optional

MSFGS 351~711 ZA

	SEER	SCOP
3.50 kW	7.20	4.10
5.30 kW	6.50	4.20
7.10 kW	7.20	4.30

Indoor unit model			MSFGS 351 ZA	MSFGS 531 ZA	MSFGS 711 ZA
Outdoor unit model			MCKGS 351 ZA	MCKGS 531 ZA	MCKGS 711 ZA
Type			DC-Inverter heat pump		
Control (included)			Remote control		
Nominal Data					
Rated capacity (T=+35°C)	Cooling	kW	3.50	5.30	7.10
Rated absorbed power (T=+35°C)		kW	0.92	1.56	2.03
Rated energy efficiency coefficient		EER[1]	3.80	3.40	3.50
Rated capacity (T=+7°C)	Heating	kW	4.00	5.60	7.70
Rated absorbed power (T=+7°C)		kW	0.93	1.44	1.95
Rated energy performance coefficient		COP[1]	4.30	3.90	3.95
Seasonal Data					
Theoretical load (Pdesignc)	Cooling	kW	3.50	5.30	7.10
Seasonal energy efficiency index		SEER[2]	7.20	6.50	7.20
Seasonal energy efficiency class		626/2011[3]	A++	A++	A++
Annual energy consumption		kWh/a	170	285	345
Theoretical load (Pdesignh) @-10°C	Heating (average climatic conditions)	kW	3.10	3.90	4.70
Seasonal energy efficiency index		SCOP[2]	4.10	4.20	4.30
Seasonal energy efficiency class		626/2011[3]	A+	A+	A+
Annual energy consumption		kWh/a	1059	1300	1530
Electrical data					
Power supply	Outdoor unit	Ph-V-Hz	1-220~240V-50/60Hz		
Power cable		Type	3 x 1.5 mm^2	3 x 2.5 mm^2	3 x 4 mm^2
Connection wires between I.U. and O.U.		no.	4	4	4
Rated absorbed current	Cooling	A	4.40	7.30	9.70
	Heating	A	4.50	7.00	9.10
Maximum current		A	6.00	9.50	14.00
Maximum absorbed power		kW	1.30	1.90	2.80
Refrigerant circuit data					
Refrigerant[4]		Type (GWP)	R32 (675)	R32 (675)	R32 (675)
Quantity refrigerant pre-load		Kg	0.57	0.85	1.5
Tons of equivalent CO2		t	0.385	0.574	1.013
Diameter of liquid/gas refrigerant piping		mm (inches)	ø6.35(1/4") / ø9.52(3/8")	ø6.35(1/4") / ø12.74(1/2")	ø9.52(3/8") / ø15.88(5/8")
Max splitting length		m	30	30	30
Max height difference I.U./O.U.		m	15	20	20
Splitting length without additional load		m	5	5	5
Additional load		g/m	16	16	20
Indoor unit specifications					
Dimensions	LxDxH	mm	870x665x235	870x665x235	1200x665x235
Net weight		Kg	24	25	31
Sound power level	SHi	dB(A)	49	59	54
Sound pressure level	SHi/Hi/Mi/Lo	dB(A)	35/34/31/28	41/40/38/36	41/39/37/35
Treated air volume	SHi/Hi/Mi/Lo	m^3/h	650/600/500/400	900/800/700/600	1250/1100/1000/900
Specifications of outdoor units					
Dimensions	LxDxH	mm	675x285x553	745x300x555	889x340x660
Net weight		Kg	24.5	30.5	41.5
Sound power level	Max	dB(A)	56	65	69
Sound pressure level	Max	dB(A)	48	52	55
Treated air volume	Max	m^3/h	1800	2200	3600
Operating limits (outside temperature)	Cooling	°C	-20~52		
	Heating	°C	-20~24		
Optional parts					
Wired remote control with built-in Wi-Fi module			DMW-ZA1 WiFi		
Centralized control			M-V-CC-T255-G		

1. Value measured according to harmonised standard EN14511. 2. EU Regulation No.206/2012 - - Value measured according to harmonised standard EN14825. 3. EU Delegated Regulation No.626/2011 on the new labelling indicating the energy consumption of air conditioners. 4. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 675. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 675 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.

MW MULTISPLIT R32, THE RANGE

kW		4.10	5.20	6.10	7.10	8.00	12.10
No. connectable indoor units		2	2	2-3:	2-3:	2-4:	2-5:
		 MCKGM 402 Z2	 MCKGM 532 Z2	 MCKGM 602 Z3	 MCKGM 712 Z3	 MCKGM 822 Z4	 NEW MCKGM 1202 Z5
 Wi-Fi	MKEGM 266 ZAL	●	●	●	●	●	●
	MKEGM 356 ZAL	●	●	●	●	●	●
 Wi-Fi	MKEGM 265 ZAL	●	●	●	●	●	●
	MKEGM 355 ZAL	●	●	●	●	●	●
	MKEGM 535 ZAL			●	●	●	●
	MKEGM 715 ZAL				●	●	●
 Wi-Fi	MFIGM 260 ZAL	●	●	●	●	●	●
	MFIGM 350 ZAL	●	●	●	●	●	●
	MFIGM 530 ZAL			●	●	●	●
	MTFGM 351 ZL	●	●	●	●	●	●
	MTFGM 531 ZL			●	●	●	●
	MTSGM 351 ZL	●	●	●	●	●	●
	MTSGM 531 ZL			●	●	●	●
	MUCGM 261 ZL	●	●	●	●	●	●
	MUCGM 351 ZL	●	●	●	●	●	●
	MUCGM 531 ZL			●	●	●	●
	MSEGM 260 ZL	●	●	●	●	●	●
	MSEGM 350 ZL	●	●	●	●	●	●
	MSEGM 530 ZL			●	●	●	●

MULTISPLIT OUTDOOR UNITS

Multiwarm has a wide range of outdoor units with motors of different power ratings. The multisplit outdoor units can be connected to up to 5 indoor units, for residential and commercial use.

Equipped with a DC Inverter rotary compressor, they guarantee the best performance in all seasons.

NEW

Outdoor unit	EER*	COP*	SEER*	SCOP*
MCKGM 402 Z2	3.72	4.54	7.20 / A++	4.20 / A+
MCKGM 532 Z2	3.58	4.53	7.20 / A++	4.20 / A+
MCKGM 602 Z3	4.12	4.56	7.80 / A++	4.30 / A+
MCKGM 712 Z3	3.77	3.86	7.10 / A++	4.30 / A+
MCKGM 822 Z4	3.77	4.31	7.20 / A++	4.20 / A+
MCKGM 1202 Z5	3.56	4.08	7.20 / A++	4.20 / A+

* The values shown may vary depending on the combinations chosen. For further information, refer to the technical manual.

-15°C
High operating efficiency in heating

43°C
High operating efficiency in cooling

Highly compact

MCKGM 402-532 Z2

MCKGM 602-712 Z3 | MCKGM 822 Z4

MCKGM 1202 Z5

OUTDOOR UNITS

6 POWER LEVELS
4.10~12.10 kW

UP TO FIVE CONNECTABLE INDOOR UNITS

MAXIMUM FLEXIBILITY
easy installation guaranteed by long refrigerant pipe length

ALL COMPRESSORS ARE ROTARY DC INVERTER

BROAD OPERATING RANGE
heating mode with outside temperature up to -15°C

MCKGM 402 Z2 / MCKGM 532 Z2

MCKGM 602 Z3 / MCKGM 712 Z3 / MCKGM 822 Z4

MCKGM 1202 Z5

For possible combinations under the 65% tax deduction and the Thermal Account 2.0, please request tables from the MULTIWARM brand technical department.

Outdoor unit model			MCKGM 402 Z2	MCKGM 532 Z2	MCKGM 602 Z3	MCKGM 712 Z3	MCKGM 822 Z4	MCKGM 1202 Z5
Type			Outdoor DC-Inverter heat pump unit					
Connectable indoor units (min - max)		no.	1 - 2	1 - 2	2 - 3	2 - 3	2 - 4	2 - 5
Nominal Data								
Rated capacity (T=+35°C)	Cooling	kW	4.10 (2.05~5.00)	5.30 (2.14~5.80)	6.10 (2.22~8.30)	7.10 (2.30~9.20)	8.00 (2.30~11.00)	12.10 (2.60~15.20)
Rated absorbed power (T=+35°C)		kW	1.10	1.48	1.48	1.88	2.12	3.40
Rated energy efficiency coefficient		EER[1]	3.72	3.58	4.12	3.77	3.77	3.56
Rated capacity (T=+7°C)	Heating	kW	4.40 (2.49~5.40)	5.65 (2.58~6.50)	6.50 (3.60~8.50)	8.60 (3.65~9.20)	9.50 (3.65~10.25)	13.00 (3.00~15.50)
Rated absorbed power (T=+7°C)		kW	0.97	1.25	1.43	2.23	2.20	3.19
Rated energy performance coefficient		COP[1]	4.54	4.53	4.56	3.86	4.31	4.08
Seasonal Data								
Theoretical load (Pdesignc)	Cooling	kW	4.10	5.30	6.10	7.10	8.00	12.10
Seasonal energy efficiency index		SEER[2]	7.20	7.20	7.80	7.10	7.20	7.20
Seasonal energy efficiency class		626/2011[3]	A++	A++	A++	A++	A++	A++
Annual energy consumption		kWh/a	199	257	273	350	388	588
Theoretical load (Pdesignh) @-10°C	Heating (average climatic conditions)	kW	3.80	4.10	6.10	6.10	7.20	13.00
Seasonal energy efficiency index		SCOP[2]	4.20	4.20	4.30	4.30	4.20	4.20
Seasonal energy efficiency class		626/2011[3]	A+	A+	A+	A+	A+	A+
Annual energy consumption		kWh/a	1266	1366	1986	1986	2400	4333
Electrical data								
Power supply		Ph-V-Hz	1-220~240V-50HZ					
Power cable		Type	3 x 2.5 mm²	3 x 2.5 mm²	3 x 4 mm²	3 x 4 mm²	3 x 4 mm²	3 x 4 mm²
Connection wires between each I.U. and O.U.		no.	4	4	4	4	4	4
Rated absorbed current	Cooling	A	4.90	6.60	6.60	8.40	9.40	15.10
	Heating	A	4.40	5.60	6.30	9.90	9.80	14.20
Maximum current		A	10.00	11.00	12.90	15.00	16.00	21.70
Maximum absorbed power		kW	2.25	2.50	2.90	3.40	3.60	5.00
Refrigerant circuit data								
Refrigerant[4]		Type (GWP)	R32 (675)					
Quantity refrigerant pre-load		Kg	0.75	0.9	1.6	1.7	1.8	2.4
Tons of equivalent CO2		t	0.506	0.608	1.080	1.148	1.215	1.620
Diameter of liquid/gas refrigerant piping		mm (inches)	2 x ø6.35(1/4") 2 x ø9.52(3/8")	2 x ø6.35(1/4") 2 x ø9.52(3/8")	3 x ø6.35(1/4") 3 x ø9.52(3/8")	3 x ø6.35(1/4") 3 x ø9.52(3/8")	4 x ø6.35(1/4") 4 x ø9.52(3/8")	5 x ø6.35(1/4") 5 x ø9.52(3/8")
Total splitting length		m	40	40	60	60	70	100
Max length of a single refrigeration line		m	20	20	20	20	20	25
Max height difference I.U./O.U.		m	15	15	15	15	15	25
Max height difference between I.U.		m	15	15	15	15	15	25
Splitting length without additional load		m	10	10	30	30	40	50
Additional load		g/m	20	20	20	20	20	20
Product specifications								
Dimensions	LxDxH	mm	745x300x550	745x300x550	889x340x654	889x340x654	889x340x654	1020x427x826
Net weight		Kg	30	32	47.5	47.5	51	73
Sound power level	Max	dB(A)	62	64	68	68	68	74
Sound pressure level	Max	dB(A)	52	54	58	58	58	60
Treated air volume		m³/h	2300	2300	3800	3800	3800	5800
Operating limits (outside temperature)	Cooling	°C	-15~43					
	Heating	°C	-15~24					

Energy efficiency values refer to the following combinations:
MCKGM 402 Z2 + 2 x MKEGM 265 ZAL - MCKGM 532 Z2 + 2 x MKEGM 265 ZAL - MCKGM 602 Z3 + 3 x MKEGM 265 ZAL - MCKGM 712 Z3 + 3 x MKEGM 265 ZAL - MCKGM 822 Z4 + 4 x MKEGM 265 ZAL - MCKGM 1202 Z5 + 5 x MKEGM 265 ZAL.

1. Value measured according to harmonised standard EN14511. 2. EU Regulation No.206/2012 - - Value measured according to harmonised standard EN14825. 3. EU Delegated Regulation No.626/2011 on the new labelling indicating the energy consumption of air conditioners. 4. Refrigerant leakage contributes to climate change. When released into the atmosphere, refrigerants with a lower global warming potential (GWP) contribute less to global warming than those with a higher GWP. This appliance contains a refrigerant with a GWP of 675. If 1 kg of this refrigerant fluid were released into the atmosphere, therefore, the impact on global warming would be 675 times higher than 1 kg of CO2, over a period of 100 years. Under no circumstances should the user try to intervene on the refrigerant circuit or disassemble the product. Always contact qualified personnel if necessary.

INDOOR UNITS

2 POWER LEVELS
2.60~3.50 kW

ELEGANT, COMPACT DESIGN
186 mm depth

SLEEP MODE

I-FEEL FUNCTION

COLD PLASMA FILTER

REMOTE CONTROL INCLUDED

Wi-Fi included

wall

Model			MKEGM 266 ZAL	MKEGM 356 ZAL
Type			Indoor wall unit	
Control			Remote control	
Rated capacity	Cooling	kW	2.60	3.50
	Heating	kW	2.80	3.80
Electrical data				
Power supply		Ph-V-Hz	-	-
Connection wires between I.U. and O.U.		no.	4	4
Refrigerant circuit data				
Diameter of liquid/gas refrigerant piping		mm (inches)	ø6.35(1/4") / ø9.52(3/8")	ø6.35(1/4") / ø9.52(3/8")
Product specifications				
Dimensions	LxDxH	mm	980x186x312	980x186x312
	Net weight	Kg	14	14
Sound power level	Hi~Lo	dB(A)	57/53/49/45/43/37/35	57/50/46/43/41/33/31
Sound pressure level	Hi~Lo	dB(A)	41/39/35/31/29/23/21	42/40/36/33/31/23/21
Treated air volume	Hi~Lo	m³/h	670/620/510/410/380/300/276	670/620/540/480/380/300/276
Optional parts				
Wired remote control			Not available	
Wi-Fi module			Built-in	
Centralized control			Not available	

4 POWER LEVELS
2.60~7.20 kW

ELEGANT,
COMPACT DESIGN
210 mm depth for models
2.60 to 3.50 kW

VERY QUIET OPERATION
only 22 dB(A) in Low mode
for model 2.60 kW

I-FEEL FUNCTION

COLD PLASMA FILTER

REMOTE CONTROL INCLUDED

Wi-Fi included

wall

Model			MKEGM 265 ZAL	MKEGM 355 ZAL	MKEGM 535 ZAL	MKEGM 715 ZAL
Type			Indoor wall unit			
Control			Remote control			
Rated capacity	Cooling	kW	2.60	3.50	5.00	7.20
	Heating	kW	2.80	3.80	5.60	8.50
Electrical data						
Power supply		Ph-V-Hz	-	-	-	-
Connection wires between I.U. and O.U.		no.	4	4	4	4
Refrigerant circuit data						
Diameter of liquid/gas refrigerant piping		mm (inches)	ø6.35(1/4") / ø9.52(3/8")	ø6.35(1/4") / ø9.52(3/8")	ø6.35(1/4") / ø12.74(1/2")	ø6.35(1/4") / ø15.9(5/8")
Product specifications						
Dimensions	LxDxH	mm	865x210x290	865x210x290	996x225x301	1101x249x327
	Net weight	Kg	10.5	10.5	13	16
Sound power level	Hi~Lo	dB(A)	58/52/50/48/44/40/36	58/53/51/49/46/43/37	60/57/55/54/52/50/46	64/59/56/55/53/51/48
Sound pressure level	Hi~Lo	dB(A)	41/38/36/34/30/26/22	43/39/37/35/32/29/23	43/41/39/37/35/32/31	48/44/41/40/38/36/33
Treated air volume	Hi~Lo	m³/h	660/590/540/490/450/420/390	680/590/540/490/450/420/390	850/750/680/610/570/520/460	1250/1100/1000/950/900/850/800
Optional parts						
Wired remote control			M-RF-CW2-L-G			
Wi-Fi module			Built-in			
Centralized control (only with wired remote control)			M-V-CC-T255-G			

INDOOR UNITS

3 POWER LEVELS
2.60~5.00 kW

7 FAN SPEEDS

ELEGANT, COMPACT DESIGN
215 mm depth

DOUBLE AIR OUTLET

X-FAN

I-FEEL FUNCTION

8°C HEATING

REMOTE CONTROL INCLUDED

console

Wi-Fi optional

Model			MFIGM 260 ZAL	MFIGM 350 ZAL	MFIGM 530 ZAL
Type			Internal console unit		
Control			Remote control		
Rated capacity	Cooling	kW	2.60	3.50	5.00
	Heating	kW	2.80	3.80	5.60
Electrical data					
Power supply		Ph-V-Hz	-	-	-
Connection wires between I.U. and O.U.		no.	4	4	4
Refrigerant circuit data					
Diameter of liquid/gas refrigerant piping		mm (inches)	ø6.35(1/4") / ø9.52(3/8")	ø6.35(1/4") / ø9.52(3/8")	ø6.35(1/4") / ø12.74(1/2")
Product specifications					
Dimensions	LxDxH	mm	700x215x600	700x215x600	700x215x600
	Net weight	Kg	15.5	15.5	15.5
Sound power level	Hi~Lo	dB(A)	50/48/45/44/42/38/34	54/50/48/46/43/39/35	57/55/53/51/48/47/42
Sound pressure level	Hi~Lo	dB(A)	39/36/33/31/29/26/23	44/40/38/36/33/29/25	47/45/43/41/38/37/32
Treated air volume	Hi~Lo	m³/h	500/430/410/370/330/280/250	600/520/480/440/400/360/280	700/650/580/520/460/410/320
Optional parts					
Wired remote control			M-RF-CW2-L-G		
Wi-Fi module			MKG-WiFi		
Centralized control			M-V-CC-T255-G		

2 POWER LEVELS
3.50~5.00 kW

COMPACT DESIGN
265 mm height for building into false ceilings

WASHABLE FILTER

X-FAN

TOTAL CONTROL OF THE TEMPERATURE

REMOTE CONTROL INCLUDED

compact cassette

Wi-Fi **Optional built-in wired remote control**

Model			MTFGM 351 ZL	MTFGM 531 ZL
Type			Indoor cassette unit	
Control			Remote control	
Rated capacity	Cooling	kW	3.50	5.00
	Heating	kW	3.80	5.60
Electrical data				
Power supply		Ph-V-Hz	-	-
Connection wires between I.U. and O.U.		no.	4	4
Refrigerant circuit data				
Diameter of liquid/gas refrigerant piping		mm (inches)	ø6.35(1/4") / ø9.52(3/8")	ø6.35(1/4") / ø12.74(1/2")
Product specifications				
Dimensions	LxDxH	mm	570x570x265	570x570x265
	Net weight	Kg	17	17
Sound power level	Hi~Lo	dB(A)	57/55/52/50/48/46/44	59/55/52/50/48/46/44
Sound pressure level	Hi~Lo	dB(A)	41/39/36/34/32/30/28	43/39/36/34/32/30/28
Treated air volume	Hi~Lo	m³/h	560/540/490/450/420/380/350	650/540/490/450/420/380/350
Accessories				
Decorative panel			MTFPG 350 ZA	
Optional parts				
Wired remote control			M-RF-CW2-L-G	
Wired remote control with built-in Wi-Fi module			DMW-ZAL-LCAC WiFi	
Centralized control			M-V-CC-T255-G	

INDOOR UNITS

2 POWER LEVELS
3.50~5.00 kW

COMPACT DESIGN
178 mm height for building into false ceilings

WASHABLE FILTER

CONDENSATE DRAIN PUMP INCLUDED maximum height difference **1000 mm**

REMOTE CONTROL INCLUDED

1-way cassette

Wi-Fi **Optional built-in wired remote control**

Model			MTSGM 351 ZL	MTSGM 531 ZL
Type			Indoor cassette unit	
Control			Remote control	
Rated capacity	Cooling	kW	3.50	5.00
	Heating	kW	3.80	5.60
Electrical data				
Power supply		Ph-V-Hz	-	-
Connection wires between I.U. and O.U.		no.	4	4
Refrigerant circuit data				
Diameter of liquid/gas refrigerant piping		mm (inches)	ø6.35(1/4") / ø9.52(3/8")	ø6.35(1/4") / ø12.74(1/2")
Product specifications				
Dimensions	LxDxH	mm	987x385x178	987x385x178
	Net weight	Kg	19	20
Sound power level	Hi~Lo	dB(A)	53/50/43/41	56/53/48/45
Sound pressure level	Hi~Lo	dB(A)	42/39/35/31	43/40/35/32
Treated air volume	Hi~Lo	m³/h	600/500/440/390	700/600/500/450
Accessories				
Decorative panel			MTSPG 351 Z	
Optional parts				
Wired remote control			M-RF-CW2-L-G	
Wired remote control with built-in Wi-Fi module			DMW-ZAL-LCAC WiFi	
Centralized control			M-V-CC-T255-G	

3 POWER LEVELS
2.60~5.00 kW

MAXIMUM COMPACTNESS
only 200 mm height

WASHABLE FILTER

6 FAN SPEEDS

DAILY TIMER

WIRED REMOTE CONTROL INCLUDED

ducted

Wi-Fi **Standard built-in wired remote control with WiFi**

Model			MUCGM 261 ZL	MUCGM 351 ZL	MUCGM 531 ZL
Type			Indoor ducted unit		
Serial control			Wired remote control		
Rated capacity	Cooling	kW	2.60	3.50	5.00
	Heating	kW	2.80	3.80	5.60
Electrical data					
Power supply		Ph-V-Hz	-	-	-
Connection wires between I.U. and O.U.		no.	4	4	4
Refrigerant circuit data					
Diameter of liquid/gas refrigerant piping		mm (inches)	ø6.35(1/4") / ø9.52(3/8")	ø6.35(1/4") / ø9.52(3/8")	ø6.35(1/4") / ø12.74(1/2")
Product specifications					
Dimensions	LxDxH	mm	710x450x200	710x450x200	1010x450x200
	Net weight	Kg	18.5	19	25
Sound power level	Hi~Lo	dB(A)	57/55/54/53/52/51/50	55/53/52/51/50/49/48	57/55/55/54/54/53/50
Sound pressure level	Hi~Lo	dB(A)	41/39/38/37/36/35/34	39/37/36/35/34/33/32	41/39/39/38/38/37/34
Treated air volume	Hi~Lo	m³/h	700/670/640/610/580/550/520	650/560/520/480/450/410/380	880/840/810/790/770/750/730
Static fan pressure	Std/Max	Pa	25/60	25/60	25/60
Optional parts					
Wi-Fi module			Standard built-in wired remote control		
Centralized control			M-V-CC-T255-G		

INDOOR UNITS

3 POWER LEVELS
2.60~5.00 kW

WASHABLE FILTER

X-FAN

TOTAL CONTROL OF THE TEMPERATURE

REMOTE CONTROL INCLUDED

ceiling

Wi-Fi **Optional built-in wired remote control**

Model			MSEGM 260 ZL	MSEGM 350 ZL	MSEGM 530 ZL
Type			**Indoor ceiling unit**		
Control			Remote control		
Rated capacity	Cooling	kW	2.60	3.50	5.00
	Heating	kW	2.80	3.80	5.60
Electrical data					
Power supply		Ph-V-Hz	-	-	-
Connection wires between I.U. and O.U.		no.	4	4	4
Refrigerant circuit data					
Diameter of liquid/gas refrigerant piping		mm (inches)	ø6.35(1/4") / ø9.52(3/8")	ø6.35(1/4") / ø9.52(3/8")	ø6.35(1/4") / ø12.74(1/2")
Product specifications					
Dimensions	LxDxH	mm	870x235x665	870x235x665	870x235x665
	Net weight	Kg	25	25	25.5
Sound power level	Hi~Lo	dB(A)	38/35/30/26	38/35/30/26	38/35/30/26
Sound pressure level	Hi~Lo	dB(A)	52/49/44/40	52/49/44/40	52/49/44/40
Treated air volume	Hi~Lo	m^3/h	700/610/540/420	700/610/540/420	680/590/520/410
Motor power	Output	W	15	15	15
Optional parts					
Wired remote control			M-RF-CW2-L-G		
Wired remote control with built-in Wi-Fi module			DMW-ZAL-LCAC WiFi		
Centralized control			M-V-CC-T255-G		

COMBINATIONS

COOLING R32 COMBINATIONS

Outdoor units	Combinations					Rated capacity (kW)					Total cooling capacity (kW)			Absorbed power (kW)			EER	SEER	Energy class
	Unit A	Unit B	Unit C	Unit D	Unit E	Unit A	Unit B	Unit C	Unit D	Unit E	Min	Rtd	Max	Min	Rtd	Max			
MCKGM 402 Z2	26	-	-	-	-	2.60	-	-	-	-	2.05	2.60	3.00	0.20	0.70	1.30	3.71	6.10	A++
	35	-	-	-	-	3.50	-	-	-	-	2.05	3.50	4.00	0.30	1.00	1.78	3.50	6.10	A++
	26	26	-	-	-	2.05	2.05	-	-	-	2.05	4.10	5.00	0.40	1.10	2.20	3.73	7.20	A++
	26	35	-	-	-	1.76	2.34	-	-	-	2.05	4.10	5.00	0.40	1.10	2.20	3.73	7.20	A++
MCKGM 532 Z2	26	-	-	-	-	2.6	-	-	-	-	2.15	2.60	3.00	0.30	0.70	1.50	3.71	6.10	A++
	35	-	-	-	-	3.5	-	-	-	-	2.15	3.50	3.80	0.30	1.20	1.80	2.92	6.10	A++
	26	26	-	-	-	2.65	2.65	-	-	-	2.15	5.30	5.80	0.40	1.48	2.50	3.58	7.20	A++
	26	35	-	-	-	2.30	3.00	-	-	-	2.15	5.30	5.80	0.50	1.48	2.50	3.58	7.20	A++
	35	35	-	-	-	2.65	2.65	-	-	-	2.15	5.30	5.80	0.50	1.48	2.50	3.58	7.20	A++
MCKGM 602 Z3	26	26	-	-	-	2.65	2.65	-	-	-	2.20	5.30	6.00	0.40	1.20	2.60	4.42	6.10	A++
	26	35	-	-	-	2.60	3.50	-	-	-	2.20	6.10	7.20	0.50	1.48	2.90	4.12	6.10	A++
	26	53	-	-	-	2.03	4.07	-	-	-	2.20	6.10	8.30	0.60	1.48	2.90	4.12	6.10	A++
	35	35	-	-	-	3.05	3.05	-	-	-	2.20	6.10	8.30	0.60	1.48	2.90	4.12	6.10	A++
	35	53	-	-	-	2.44	3.66	-	-	-	2.20	6.10	8.30	0.60	1.48	2.90	4.12	6.10	A++
	26	26	26	-	-	2.03	2.03	2.03	-	-	2.20	6.10	8.30	0.60	1.48	2.90	4.12	7.80	A++
	26	26	35	-	-	1.83	1.83	2.44	-	-	2.20	6.10	8.30	0.60	1.48	2.90	4.12	7.80	A++
MCKGM 712 Z3	26	26	-	-	-	2.65	2.65	-	-	-	2.30	5.30	6.30	0.80	1.40	3.00	3.79	6.10	A++
	26	35	-	-	-	2.60	3.50	-	-	-	2.30	6.10	7.30	1.00	1.65	3.20	3.71	6.10	A++
	26	53	-	-	-	2.37	4.73	-	-	-	2.30	7.10	8.50	1.10	1.88	3.40	3.78	6.10	A++
	35	35	-	-	-	3.55	3.55	-	-	-	2.30	7.10	9.20	1.10	1.88	3.40	3.78	6.10	A++
	35	53	-	-	-	2.84	4.26	-	-	-	2.30	7.10	9.20	1.10	1.88	3.40	3.78	6.10	A++
	53	53	-	-	-	3.55	3.55	-	-	-	2.30	7.10	9.20	1.10	1.88	3.40	3.78	6.10	A++
	26	26	26	-	-	2.37	2.37	2.37	-	-	2.30	7.10	9.20	1.10	1.88	3.40	3.78	7.10	A++
	26	26	35	-	-	2.13	2.13	2.84	-	-	2.30	7.10	9.20	1.10	1.88	3.40	3.78	7.10	A++
	26	26	53	-	-	1.78	1.78	3.55	-	-	2.30	7.10	9.20	1.10	1.88	3.40	3.78	7.10	A++
	26	35	35	-	-	1.94	2.58	2.58	-	-	2.30	7.10	9.20	1.10	1.88	3.40	3.78	7.10	A++
	35	35	35	-	-	2.37	2.37	2.37	-	-	2.30	7.10	9.20	1.10	1.88	3.40	3.78	7.10	A++
MCKGM 822 Z4	26	26	-	-	-	2.65	2.65	-	-	-	2.30	5.30	6.30	0.80	1.40	2.60	3.79	6.10	A++
	26	35	-	-	-	2.60	3.50	-	-	-	2.30	6.10	7.30	0.80	1.60	2.80	3.81	6.10	A++
	26	53	-	-	-	2.60	5.00	-	-	-	2.30	7.60	8.50	1.20	2.00	2.80	3.80	6.10	A++
	35	35	-	-	-	3.50	3.50	-	-	-	2.30	7.00	9.20	1.20	1.80	2.80	3.89	6.10	A++
	35	53	-	-	-	3.20	4.80	-	-	-	2.30	8.00	10.00	1.20	2.12	3.40	3.77	6.10	A++
	53	53	-	-	-	4.00	4.00	-	-	-	2.30	8.00	11.00	1.20	2.12	3.60	3.77	6.10	A++
	26	26	26	-	-	2.67	2.67	2.67	-	-	2.30	8.00	10.00	1.30	2.00	3.40	4.00	6.50	A++
	26	26	35	-	-	2.40	2.40	3.20	-	-	2.30	8.00	11.00	1.30	2.12	3.60	3.77	6.50	A++
	26	26	53	-	-	2.00	2.00	4.00	-	-	2.30	8.00	11.00	1.30	2.12	3.60	3.77	6.50	A++
	26	35	35	-	-	2.18	2.91	2.91	-	-	2.30	8.00	11.00	1.30	2.12	3.60	3.77	6.50	A++
	26	35	53	-	-	1.85	2.46	3.69	-	-	2.30	8.00	11.00	1.30	2.12	3.60	3.77	6.50	A++
	35	35	35	-	-	2.67	2.67	2.67	-	-	2.30	8.00	11.00	1.30	2.12	3.60	3.77	6.50	A++
	35	35	53	-	-	2.29	2.29	3.43	-	-	2.30	8.00	11.00	1.30	2.12	3.60	3.77	6.50	A++
	26	26	26	26	-	2.00	2.00	2.00	2.00	-	2.30	8.00	11.00	1.30	2.12	3.60	3.77	7.20	A++
	26	26	26	35	-	1.85	1.85	1.85	2.46	-	2.30	8.00	11.00	1.30	2.12	3.60	3.77	7.20	A++
	26	26	35	35	-	1.71	1.71	2.29	2.29	-	2.30	8.00	11.00	1.30	2.12	3.60	3.77	7.20	A++
MCKGM 1202 Z5	26	35	-	-	-	2.60	3.50	-	-	-	2.60	6.10	7.50	1.60	2.30	4.60	2.65	6.10	A++
	26	53	-	-	-	2.60	5.00	-	-	-	2.60	7.60	9.00	1.60	2.60	4.60	2.92	6.10	A++
	26	71	-	-	-	2.60	7.20	-	-	-	2.60	9.80	11.00	1.60	3.40	4.60	2.88	6.10	A++
	35	35	-	-	-	3.50	3.50	-	-	-	2.60	7.00	9.20	1.60	2.40	4.60	2.92	6.10	A++
	35	53	-	-	-	3.50	5.00	-	-	-	2.60	8.50	10.00	1.60	3.00	4.60	2.83	6.10	A++
	35	71	-	-	-	3.50	7.10	-	-	-	2.60	10.60	12.00	1.60	3.40	4.60	3.12	6.10	A++
	53	53	-	-	-	5.30	5.30	-	-	-	2.60	10.60	12.00	1.60	3.40	4.60	3.12	6.10	A++
	53	71	-	-	-	4.55	6.05	-	-	-	2.60	10.60	12.00	1.60	3.40	4.60	3.12	6.10	A++
	71	71	-	-	-	5.30	5.30	-	-	-	2.60	10.60	12.00	1.60	3.40	4.60	3.12	6.10	A++
	26	26	26	-	-	2.67	2.67	2.67	-	-	2.60	8.00	10.00	1.60	2.80	4.60	2.86	6.10	A++
	26	26	35	-	-	2.60	2.60	4.20	-	-	2.60	9.40	11.00	1.60	3.40	4.60	2.76	6.10	A++
	26	26	53	-	-	2.60	2.60	5.00	-	-	2.60	10.20	13.02	1.60	3.00	4.60	3.40	6.10	A++
	26	26	71	-	-	2.60	2.60	6.90	-	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	35	35	-	-	2.60	3.50	3.50	-	-	2.60	9.60	11.94	1.60	3.00	4.60	3.20	6.10	A++
	26	35	53	-	-	2.60	3.50	5.00	-	-	2.60	11.10	14.11	1.60	3.40	4.60	3.26	6.10	A++
	26	35	71	-	-	2.40	3.20	6.50	-	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	53	53	-	-	2.50	4.80	4.80	-	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	53	71	-	-	2.10	4.30	5.70	-	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	71	71	-	-	1.90	5.10	5.10	-	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	35	35	35	-	-	3.50	3.50	3.50	-	-	2.60	10.50	13.02	1.60	3.00	4.60	3.50	6.10	A++

Energy Class = EU Delegated Regulation No.626/2011 on the new labelling indicating the energy consumption of air conditioners.
SEER = EU Regulation No.206/2012 - - Value measured according to harmonised standard EN14825.
EER = Value measured according to harmonised standard EN14511.

COOLING R32 COMBINATIONS

Outdoor units	Combinations					Rated capacity (kW)					Total cooling capacity (kW)			Absorbed power (kW)			EER	SEER	Energy class
	Unit A	Unit B	Unit C	Unit D	Unit E	Unit A	Unit B	Unit C	Unit D	Unit E	Min	Rtd	Max	Min	Rtd	Max			
MCKGM 1202 Z5	35	35	53	-	-	3.50	3.50	5.10	-	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	35	35	71	-	-	3.00	3.00	6.10	-	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	35	53	53	-	-	3.10	4.50	4.50	-	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	35	53	71	-	-	2.70	4.00	5.40	-	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	35	71	71	-	-	2.50	4.80	4.80	-	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	53	53	53	-	-	4.03	4.03	4.03	-	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	53	53	71	-	-	3.60	3.60	4.90	-	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	26	26	26	-	2.60	2.60	2.60	2.60	-	2.60	10.40	13.02	1.60	3.40	4.60	3.06	7.20	A++
	26	26	26	35	-	2.60	2.60	2.60	3.50	-	2.60	11.30	14.11	1.60	3.40	4.60	3.32	7.20	A++
	26	26	26	53	-	2.42	2.42	2.42	4.84	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	26	26	71	-	2.14	2.14	2.14	5.69	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	26	35	35	-	2.59	2.59	3.46	3.46	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	7.20	A++
	26	26	35	53	-	2.27	2.27	3.03	4.54	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	26	35	71	-	2.02	2.02	2.69	5.38	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	26	53	53	-	2.02	2.02	4.03	4.03	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	26	53	71	-	1.82	1.82	3.63	4.84	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	35	35	35	-	2.42	3.23	3.23	3.23	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	7.20	A++
	26	35	35	53	-	2.14	2.85	2.85	4.27	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	35	35	71	-	1.91	2.55	2.55	5.09	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	35	53	53	-	1.91	2.55	3.82	3.82	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	35	53	71	-	1.73	2.30	3.46	4.61	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	53	53	53	-	1.73	3.46	3.46	3.46	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	35	35	35	35	-	3.03	3.03	3.03	3.03	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	7.20	A++
	35	35	35	53	-	2.69	2.69	2.69	4.03	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	35	35	35	71	-	2.42	2.42	2.42	4.84	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	35	35	53	53	-	2.42	2.42	3.63	3.63	-	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	26	26	26	26	2.42	2.42	2.42	2.42	2.42	2.60	12.10	15.20	1.60	3.40	4.60	3.56	7.20	A++
	26	26	26	26	35	2.27	2.27	2.27	2.27	3.03	2.60	12.10	15.20	1.60	3.40	4.60	3.56	7.20	A++
	26	26	26	26	53	2.02	2.02	2.02	2.02	4.03	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	26	26	26	71	1.82	1.82	1.82	1.82	4.84	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	26	26	35	35	2.14	2.14	2.14	2.85	2.85	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	26	26	35	53	1.91	1.91	1.91	2.55	3.82	2.60	12.10	15.20	1.60	3.40	4.60	3.56	7.20	A++
	26	26	26	35	71	1.73	1.73	1.73	2.30	4.61	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	26	26	53	53	1.73	1.73	1.73	3.46	3.46	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	26	35	35	35	2.02	2.02	2.69	2.69	2.69	2.60	12.10	15.20	1.60	3.40	4.60	3.56	7.20	A++
	26	26	35	35	53	1.82	1.82	2.42	2.42	3.63	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	26	35	35	35	35	1.91	2.55	2.55	2.55	2.55	2.60	12.10	15.20	1.60	3.40	4.60	3.56	7.20	A++
	26	35	35	35	53	1.73	2.30	2.30	2.30	3.46	2.60	12.10	15.20	1.60	3.40	4.60	3.56	6.10	A++
	35	35	35	35	35	2.42	2.42	2.42	2.42	2.42	2.60	12.10	15.20	1.60	3.40	4.60	3.56	7.20	A++

Energy Class = EU Delegated Regulation No.626/2011 on the new labelling indicating the energy consumption of air conditioners.
SEER = EU Regulation No.206/2012 - - Value measured according to harmonised standard EN14825.
EER = Value measured according to harmonised standard EN14511.

HEATING R32 COMBINATIONS

Outdoor units	Combinations					Rated capacity (kW)					Total heating capacity (kW)			Absorbed power (kW)			COP	SCOP	Energy class
	Unit A	Unit B	Unit C	Unit D	Unit E	Unit A	Unit B	Unit C	Unit D	Unit E	Min	Rtd	Max	Min	Rtd	Max			
MCKGM 402 Z2	26	-	-	-	-	2.80	-	-	-	-	2.49	2.80	3.02	0.30	0.80	1.80	3.50	4.00	A+
	35	-	-	-	-	3.80	-	-	-	-	2.49	3.80	4.10	0.40	0.80	2.00	4.75	4.00	A+
	26	26	-	-	-	2.20	2.20	-	-	-	2.50	4.40	5.40	0.60	0.97	2.25	4.54	4.20	A+
	26	35	-	-	-	1.89	2.51	-	-	-	2.50	4.40	5.40	0.60	0.97	2.25	4.54	4.20	A+
MCKGM 532 Z2	26	-	-	-	-	2.80	-	-	-	-	2.58	2.80	3.02	0.40	0.80	1.80	3.50	4.00	A+
	35	-	-	-	-	3.80	-	-	-	-	2.58	3.80	4.10	0.40	0.80	2.00	4.75	4.00	A+
	26	26	-	-	-	2.70	2.70	-	-	-	2.58	5.65	6.50	0.70	1.25	2.50	4.52	4.20	A+
	26	35	-	-	-	2.31	3.09	-	-	-	2.58	5.65	6.50	0.70	1.25	2.50	4.52	4.20	A+
	35	35	-	-	-	2.70	2.70	-	-	-	2.58	5.65	6.50	0.70	1.25	2.50	4.52	4.20	A+
MCKGM 602 Z3	26	26	-	-	-	2.80	2.80	-	-	-	2.70	5.60	8.50	0.60	1.23	2.50	4.57	4.00	A+
	26	35	-	-	-	2.70	3.80	-	-	-	2.70	6.50	8.50	0.80	1.43	2.90	4.55	4.00	A+
	26	53	-	-	-	2.17	4.33	-	-	-	2.70	6.50	8.50	0.80	1.43	2.90	4.55	4.00	A+
	35	35	-	-	-	3.25	3.25	-	-	-	2.70	6.50	8.50	0.80	1.43	2.90	4.55	4.00	A+
	35	53	-	-	-	2.60	3.90	-	-	-	2.70	6.50	8.50	0.80	1.43	2.90	4.55	4.00	A+
	26	26	26	-	-	2.17	2.17	2.17	-	-	2.70	6.50	8.50	0.80	1.43	2.90	4.55	4.30	A+
	26	26	35	-	-	1.95	1.95	2.60	-	-	2.70	6.50	8.50	0.80	1.43	2.90	4.55	4.30	A+
MCKGM 712 Z3	26	26	-	-	-	2.60	2.60	-	-	-	2.80	6.40	8.80	0.60	1.67	2.40	3.83	4.00	A+
	26	35	-	-	-	2.60	3.80	-	-	-	2.80	7.50	8.80	0.60	1.95	2.60	3.84	4.00	A+
	26	53	-	-	-	2.80	5.60	-	-	-	2.80	8.60	8.80	0.80	2.23	3.00	3.86	4.00	A+
	35	35	-	-	-	4.25	4.25	-	-	-	2.80	8.60	8.80	0.80	2.23	3.00	3.86	4.00	A+
	35	53	-	-	-	3.40	5.10	-	-	-	2.80	8.60	8.80	0.80	2.23	3.00	3.86	4.00	A+
	53	53	-	-	-	4.25	4.25	-	-	-	2.80	8.60	8.80	0.80	2.23	3.00	3.86	4.00	A+
	26	26	26	-	-	2.83	2.83	2.83	-	-	2.80	8.60	9.20	0.80	2.23	3.00	3.86	4.30	A+
	26	26	35	-	-	2.55	2.55	3.40	-	-	2.80	8.60	9.20	0.80	2.23	3.00	3.86	4.30	A+
	26	26	53	-	-	2.13	2.13	4.25	-	-	2.80	8.60	9.20	0.80	2.23	3.00	3.86	4.30	A+
	26	35	35	-	-	2.32	3.09	3.09	-	-	2.80	8.60	9.20	0.80	2.23	3.00	3.86	4.30	A+
	35	35	35		-	2.83	2.83	2.83		-	2.80	8.60	9.20	0.80	2.23	3.00	3.86	4.30	A+
MCKGM 822 Z4	26	26	-	-	-	2.80	2.80	-	-	-	2.80	5.60	10.00	0.70	1.41	2.50	3.96	4.00	A+
	26	35	-	-	-	2.80	5.43	-	-	-	2.80	8.23	10.25	0.70	1.65	2.60	4.99	4.00	A+
	26	53	-	-	-	2.80	3.80	-	-	-	2.80	6.60	10.25	1.00	2.12	3.40	3.11	4.00	A+
	35	35	-	-	-	3.80	3.80	-	-	-	2.80	7.60	10.25	0.90	1.89	2.80	4.03	4.00	A+
	35	53	-	-	-	3.80	5.60	-	-	-	2.80	9.40	10.25	1.00	2.20	3.60	4.27	4.00	A+
	53	53	-	-	-	4.75	4.75	-	-	-	2.80	9.50	10.25	1.00	2.20	3.60	4.32	4.00	A+
	26	26	26	-	-	3.17	3.17	3.17	-	-	2.80	9.50	10.25	1.00	2.12	3.40	4.48	4.00	A+
	26	26	35	-	-	2.85	2.85	3.80	-	-	2.80	9.50	10.25	1.00	2.20	3.60	4.32	4.00	A+
	26	26	53	-	-	2.38	2.38	4.75	-	-	2.80	9.50	10.25	1.00	2.20	3.60	4.32	4.00	A+
	26	35	35	-	-	2.59	3.45	3.45	-	-	2.80	9.50	10.25	1.00	2.20	3.60	4.32	4.00	A+
	26	35	53	-	-	2.19	2.92	4.38	-	-	2.80	9.50	10.25	1.00	2.20	3.60	4.32	4.00	A+
	35	35	35	-	-	3.17	3.17	3.17	-	-	2.80	9.50	10.25	1.00	2.20	3.60	4.32	4.00	A+
	35	35	53	-	-	2.71	2.71	4.07	-	-	2.80	9.50	10.25	1.00	2.20	3.60	4.32	4.00	A+
	26	26	26	26	-	2.38	2.38	2.38	2.38	-	2.80	9.50	10.25	1.00	2.20	3.60	4.32	4.20	A+
	26	26	26	35	-	2.19	2.19	2.19	2.92	-	2.80	9.50	10.25	1.00	2.20	3.60	4.32	4.20	A+
	26	26	35	35	-	2.04	2.04	2.71	2.71	-	2.80	9.50	10.25	1.00	2.20	3.60	4.32	4.20	A+
MCKGM 1202 Z5	26	35	-	-	-	2.80	3.80	-	-	-	3.00	6.60	7.75	1.61	2.30	4.20	2.87	4.00	A+
	26	53	-	-	-	2.80	5.60	-	-	-	3.00	8.40	9.96	1.61	2.60	4.50	3.23	4.00	A+
	26	71	-	-	-	2.80	8.50	-	-	-	3.00	11.30	12.17	1.61	2.80	4.50	4.04	4.00	A+
	35	35	-	-	-	3.80	3.80	-	-	-	3.00	7.60	8.85	1.61	2.60	4.50	2.92	4.00	A+
	35	53	-	-	-	3.80	5.60	-	-	-	3.00	9.40	11.07	1.61	2.80	4.50	3.36	4.00	A+
	35	71	-	-	-	3.80	8.50	-	-	-	3.00	12.30	13.28	1.61	2.80	4.50	4.39	4.00	A+
	53	53	-	-	-	5.60	5.60	-	-	-	3.00	11.20	13.28	1.61	2.80	4.50	4.00	4.00	A+
	53	71	-	-	-	5.57	7.43	-	-	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	71	71	-	-	-	6.50	6.50	-	-	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	26	26	-	-	2.80	2.80	2.80	-	-	3.00	8.40	9.96	1.61	2.60	4.50	3.23	4.00	A+
	26	26	35	-	-	2.80	2.80	3.80	-	-	3.00	9.40	11.07	1.61	2.80	4.50	3.36	4.00	A+
	26	26	53	-	-	2.80	2.80	5.60	-	-	3.00	11.20	13.28	1.61	2.80	4.50	4.00	4.00	A+
	26	26	71	-	-	2.79	2.79	7.43	-	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	35	35	-	-	2.80	3.80	3.80	-	-	3.00	10.40	12.17	1.61	2.80	4.50	3.71	4.00	A+
	26	35	53	-	-	2.80	3.80	5.60	-	-	3.00	12.20	14.39	1.61	3.19	5.00	3.82	4.00	A+
	26	35	71	-	-	2.60	3.47	6.93	-	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	53	53	-	-	2.60	5.20	5.20	-	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	53	71	-	-	2.29	4.59	6.12	-	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	71	71	-	-	2.05	5.47	5.47	-	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	35	35	35	-	-	4.33	4.33	4.33	-	-	3.00	13.00	13.28	1.61	2.80	4.50	4.64	4.00	A+

Energy Class = EU Delegated Regulation No.626/2011 on the new labelling indicating the energy consumption of air conditioners.
SCOP = EU Regulation No.206/2012 - - Value measured according to harmonised standard EN14825.
COP = Value measured according to harmonised standard EN14511.

HEATING R32 COMBINATIONS

Outdoor units	Combinations					Rated capacity (kW)					Total heating capacity (kW)			Absorbed power (kW)			COP	SCOP	Energy class
	Unit A	Unit B	Unit C	Unit D	Unit E	Unit A	Unit B	Unit C	Unit D	Unit E	Min	Rtd	Max	Min	Rtd	Max			
MCKGM 1202 Z5	35	35	53	-	-	3.71	3.71	5.57	-	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	35	35	71	-	-	3.25	3.25	6.50	-	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	35	53	53	-	-	3.25	4.88	4.88	-	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	35	53	71	-	-	2.89	4.33	5.78	-	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	35	71	71	-	-	2.60	5.20	5.20	-	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	53	53	53	-	-	4.33	4.33	4.33	-	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	53	53	71	-	-	3.90	3.90	5.20	-	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	26	26	26	-	3.25	3.25	3.25	3.25	-	3.00	13.00	14.00	1.61	3.00	4.80	4.33	4.00	A+
	26	26	26	35	-	3.00	3.00	3.00	4.00	-	3.00	13.00	14.39	1.61	3.19	5.00	4.08	4.00	A+
	26	26	26	53	-	2.60	2.60	2.60	5.20	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	26	26	71	-	2.29	2.29	2.29	6.12	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	26	35	35	-	2.79	2.79	3.71	3.71	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	26	35	53	-	2.44	2.44	3.25	4.88	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	26	35	71	-	2.17	2.17	2.89	5.78	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	26	53	53	-	2.17	2.17	4.33	4.33	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	26	53	71	-	1.95	1.95	3.90	5.20	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	35	35	35	-	2.60	3.47	3.47	3.47	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	35	35	53	-	2.29	3.06	3.06	4.59	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	35	35	71	-	2.05	2.74	2.74	5.47	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	35	53	53	-	2.05	2.74	4.11	4.11	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	35	53	71	-	1.86	2.48	3.71	4.95	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	53	53	53	-	1.86	3.71	3.71	3.71	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	35	35	35	35	-	3.25	3.25	3.25	3.25	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	35	35	35	53	-	2.89	2.89	2.89	4.33	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	35	35	35	71	-	2.60	2.60	2.60	5.20	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	35	35	53	53	-	2.60	2.60	3.90	3.90	-	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	26	26	26	26	2.60	2.60	2.60	2.60	2.60	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.20	A+
	26	26	26	26	35	2.44	2.44	2.44	2.44	3.25	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.20	A+
	26	26	26	26	53	2.17	2.17	2.17	2.17	4.33	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	26	26	26	71	1.95	1.95	1.95	1.95	5.20	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	26	26	35	35	2.29	2.29	2.29	3.06	3.06	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.20	A+
	26	26	26	35	53	2.05	2.05	2.05	2.74	4.11	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	26	26	35	71	1.86	1.86	1.86	2.48	4.95	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	26	26	53	53	1.86	1.86	1.86	3.71	3.71	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	26	35	35	35	2.17	2.17	2.89	2.89	2.89	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.20	A+
	26	26	35	35	53	1.95	1.95	2.60	2.60	3.90	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	26	35	35	35	35	2.05	2.74	2.74	2.74	2.74	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.20	A+
	26	35	35	35	53	1.86	2.48	2.48	2.48	3.71	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.00	A+
	35	35	35	35	35	2.60	2.60	2.60	2.60	2.60	3.00	13.00	15.50	1.61	3.19	5.00	4.08	4.20	A+

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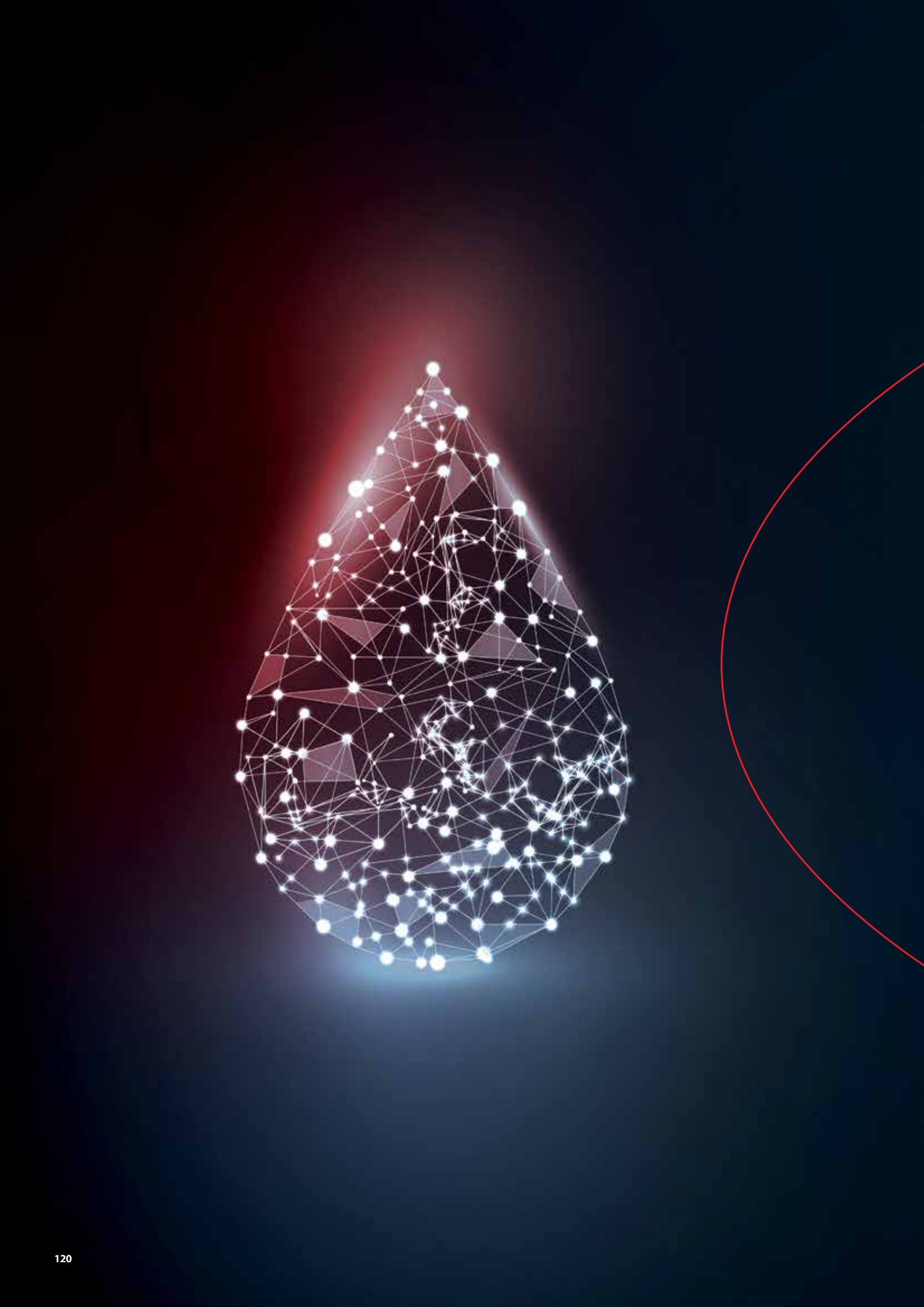
SCOP = EU Regulation No.206/2012 - - Value measured according to harmonised standard EN14825.
COP = Value measured according to harmonised standard EN14511.



DHW R32 AIR-TO-WATER HEAT PUMP

MW MONOBLOC
MW MODULAR MONOBLOC
MW R32 SPLIT WITH HYDROMODULE AND WITH BUILT-IN TANK

MW MONOBLOC R32

Air-water heat pump

OUTDOOR UNITS

NEW

5.00 kW	6.00 kW
single phase	single phase
MCWNGS 401 Z	MCWNGS 601 Z

NEW

8.20 kW	10.20 kW	12.00 kW	14.20 kW	15.70 kW
single phase	single phase	single phase	single phase	single phase
MCWNGS 801 Z	MCWNGS 1001 Z	MCWNGS 1201 Z	MCWNGS 1401 Z	MCWNGS 1601 Z

10.20 kW	12.00 kW	14.20 kW	15.70 kW
three-phase	three-phase	three-phase	three-phase
MCWSGS 1001 Z	MCWSGS 1201 Z	MCWSGS 1401Z	MCWSGS 1601 Z

AIR-TO-WATER HEAT PUMP MW MONOBLOC R32

MW MONOBLOC by MULTIWARM is a reliable, cost-effective solution for heating, cooling and the production of DHW in small apartment buildings, single homes and flats.
The cutting-edge full DC Inverter technology guarantees top class performance and energy savings, with the added MULTIWARM brand guarantee.

65° **Delivery temperature, without integrations**

Management via EWPE Smart app

BUILT-IN WiFi

Heating through radiant flooring, fan coils and radiators

MW MONOBLOC by MULTIWARM makes it possible to heat all environments, powering low-temperature hydronic terminals such as radiant floors and medium-temperature terminals such as fan coils and high efficiency radiators.

Main operating modes

- Cooling, heating, DHW production
- Cooling + DHW production (with selectable priority)
- Heating + DHW production (with selectable priority)
- DHW production

Design climate zones for heating

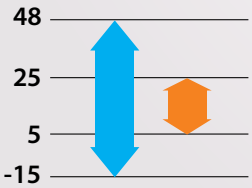
Outside design temp.	Max Delivery Temp.	Climate zones
+10°C	65°C	WARMER
+5°C	62°C	
+2°C	60°C	
0°	59°C	AVERAGE
-5°C	56°C	
-10°C	53°C	
-15°C	50°C	COLDER
-20°C	47°C	
-25°C	44°C	

MW MONOBLOC is a R32 heat pump that operates in the following modes:

COOLING MODE

from -15°C to 48°C

from 5°C to 25°C (delivery temp.)



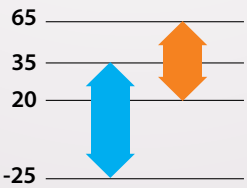
DHW PRODUCTION

from -25°C to 45°C

HEATING MODE

from -25°C to 35°C

from 20°C to 65°C (delivery temp.)



Key

Outside air temperature

Water temperature

MW MONOBLOC R32

Product benefits

SILENT MODE

Silent mode reduces the noise of the compressor and the heat pump fan.

CONNECTION WITH OTHER HEAT SOURCES

If the outdoor temperature is lower than the set point temperature, the external heat source will begin running.

CLIMATIC CURVE

Automatically adjusts the water flow temperature and the room temperature according to the outdoor temperature.

EMERGENCY MODE

In the event of a heat pump malfunction, the auxiliary heating elements are activated.

ANTI-LEGIONELLA CYCLE

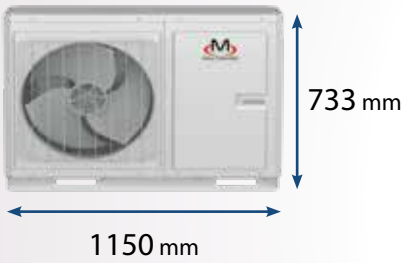
Increases water temperature up to 70°C to eliminate Legionella bacteria and sterilise the DHW storage tank.

WEEKLY TIMER

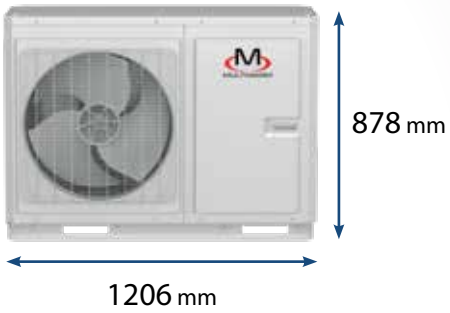
Possibility of setting up to three daily operating programs (in both heating and cooling).

Compact size

5.00~6.00 kW



8.20~15.70 kW

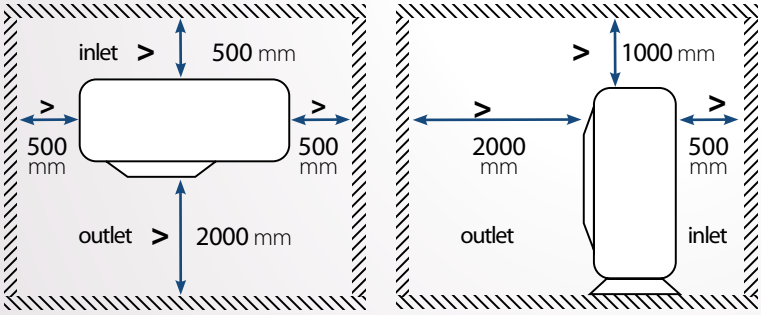


Aluminium louvers with anti-corrosion coating (Gold Fin)

Gold Fin

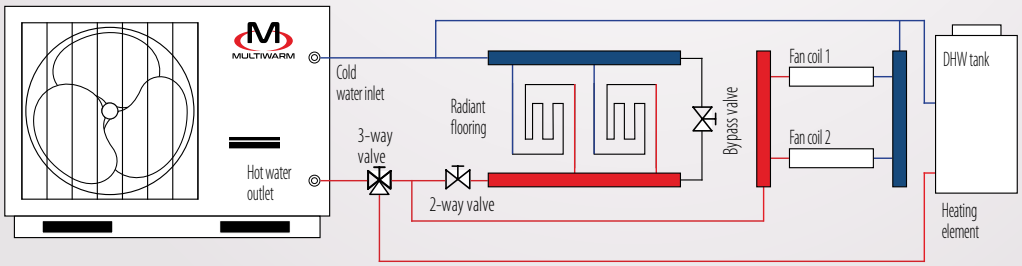
The coating on the louvers is durable and provides greater resistance to salt corrosion.

Ease of installation



No connection needs to be made to the refrigerant circuit; hydraulic connections are sufficient.

System diagram



OUTDOOR UNITS

MCWNGS 401 - 601 Z
Single phase

MCWNGS 801 Z
Single phase

ENERGY EFFICIENCY CLASS

A+++
In heating mode with **35°C** delivery water temperature.

A++
In heating mode with **55°C** delivery water temperature.

Model				MCWNGS 401 Z	MCWNGS 601 Z	MCWNGS 801 Z
Heating	Rated power	A7//W35	kW	5.00	6.00	8.20
	Electrical absorption			0.93	1.11	1.54
	Performance coefficient		COP	5.40	5.40	5.32
	Rated power	A7/W45	kW	4.90	6.80	8.30
	Electrical absorption			1.17	1.66	1.90
	Performance coefficient		COP	4.20	4.10	4.36
Cooling	Rated power	A35//W18	kW	5.00	6.50	8.30
	Electrical absorption			0.96	1.27	1.56
	Energy efficiency		EER	5.20	5.10	5.32
	Rated power	A35//W5	kW	4.90	5.70	7.40
	Electrical absorption			1.40	1.75	2.00
	Energy efficiency		EER	3.50	3.25	3.70
Seasonal heating data	Theoretical load (Pdesignh) @-10°C	35/55	kW	5/5	6/5	8/9
	Seasonal energy efficiency (ηs)		%	192/137	199/137	177/145
	Energy efficiency class		-	A+++/A++		
	Annual energy consumption		kWh/a	2306/2882	2386/2882	3827/5206
Operating limits	Outside air temperature	Heat.	°C	-25~35		
		Cool.		-15~48		
		DHW		-25~45		
	Delivery water temperature	Heat.	°C	20~65		
		Cool.	°C	5~25		
Refrigerant circuit data	Refrigerant type (GWP)			R32 (675)		
	Quantity (tons CO2)		kg (t)	0.95 (0.641)		1.6 (1.080)
	Control system			Electronic expansion valve		
	Compressor		type	Rotary- DC Inverter		
Hydraulic system data	Heat exchanger	Type		With brazed stainless steel plates		
		Flow rate	m^3/h	0.9	1.0	1.4
	Circulation pump	Brand		Shinhoo		
		Static pressure[1]	kPa	79	78	63
	Water connections	Type		Threaded		
		Dimensions	Inches	1"F BSP		
	Min/Max operating pressure		bar	0.5/2.5		
	Expansion tank	Volume	L	2		
		Pre-load	bar	1		
Electrical data	Power supply		Ph/V/Hz	1ph-230V-50Hz		
	Maximum current	Heat.	A	11	11	23
		Cool.		8	8	12
	Power cable (recommended)		type	3x2.5 mm^2		3x6 mm^2
Product specifications	Fan	Type	qty.	DC Inverter		
		Air flow	m^3/h	3200		5800
	Sound power level		dB(A)	58		68
	Sound pressure level	Heat.	dB(A)	58		62
		Cool.		56		60
	Dimensions	LxDxH	mm	1150x372x733		1206x445x878
	Weight	Net	kg	90		120
	Control (included)			Wired remote control		

1. Values net of heat exchanger load losses.

GENERAL NOTE:
The data contained above refer to the following standards: EN 14511:2018; EN 14825:2019; EN50564:2011; EN12102-1:2018; EN12102-2:2019; (EU)No:811:2013; (EU)No:813:2013; OJ 2014/C 207/02:2014.

OUTDOOR UNITS

MCWNGS 1001 - 1601 Z Single phase
MCWSGS 1001 - 1601 Z Three-phase

ENERGY EFFICIENCY CLASS

A+++

In heating mode with **35°C** delivery water temperature.

A++

In heating mode with **55°C** delivery water temperature.

Model				MCWNGS 1001 Z	MCWNGS 1201 Z	MCWNGS 1401 Z	MCWNGS 1601 Z	MCWSGS 1001 Z	MCWSGS 1201 Z	MCWSGS 1401 Z	MCWSGS 1601 Z
Heating	Rated power	A7//W35	kW	10.20	12.00	14.20	15.70	10.20	12.00	14.20	15.70
	Electrical absorption			2.02	2.43	2.99	3.45	2.06	2.49	3.09	3.57
	Performance coefficient		COP	5.05	4.94	4.75	4.55	4.95	4.82	4.60	4.40
	Rated power	A7/W45	kW	10.20	13.00	14.20	16.20	10.20	13.00	14.20	16.20
	Electrical absorption			2.50	2.45	3.00	3.60	2.13	2.61	3.32	4.05
	Performance coefficient		COP	4.08	5.31	4.73	4.50	4.79	4.98	4.28	4.00
Cooling	Rated power	A35//W18	kW	10.20	12.00	13.70	15.50	10.20	12.00	13.90	15.40
	Electrical absorption			2.00	2.45	3.00	3.60	2.13	2.61	3.32	4.05
	Energy efficiency		EER	5.10	4.90	4.57	4.31	4.79	4.60	4.19	3.80
	Rated power	A35//W5	kW	9.00	11.10	13.30	13.80	9.10	11.10	13.30	13.80
	Electrical absorption			2.65	3.58	4.75	5.09	2.80	3.58	4.75	5.09
	Energy efficiency		EER	3.40	3.10	2.80	2.71	3.25	3.10	2.80	2.71
Seasonal heating data	Theoretical load (Pdesignh) @-10°C	35/55	kW	9/10	12/12	13/13	14/14	9/10	12/12	13/13	13/14
	Seasonal energy efficiency (ηs)		%	176/135	188/144	185/145	184/145	189/140	180/137	179/138	179/138
	Energy efficiency class		-	A+++/A++							
	Annual energy consumption		kWh/a	4163/6076	5194/6606	5682/7456	6072/7768	4069/5907	5517/6990	5927/7769	5927/8014
Operating limits	Outside air temperature	Heat.	°C	-25~35							
		Cool.		-15~48							
		DHW		-25~45							
	Delivery water temperature	Heat.	°C	20~65							
		Cool.	°C	5~25							
Refrigerant circuit data	Refrigerant type (GWP)			R32 (675)							
	Quantity (tons CO2)		kg (t)	1.6 (1.080)	2.2 (1.485)			1.6 (1.080)	2.2 (1.485)		
	Control system			Electronic expansion valve							
	Compressor		type	Rotary- DC Inverter							
Hydraulic system data	Heat exchanger	Type		With brazed stainless steel plates							
		Flow rate	m³/h	1.8	2.1	2.4	2.7	1.8	2.1	2.4	2.7
	Circulation pump	Brand		Shinhoo							
		Static pressure[1]	kPa	49	46	32	23	49	46	34	23
	Water connections	Type		Threaded							
		Dimensions	Inches	1"F BSP							
	Min/Max operating pressure		bar	0.5/2.5							
	Expansion tank	Volume	L	2	3			3			
		Pre-load	bar	1	1			1			
Electrical data	Power supply		Ph/V/Hz	1ph-230V-50Hz				3ph-400V-50Hz			
	Maximum current	Heat.	A	25	30	30	30	9	11.5	12	12.5
		Cool.		12	17	21	23	7	5	8	8.5
	Power cable (recommended)		type	3x6 mm²				5x2.5 mm²			
Product specifications	Fan	Type	qty.	DC Inverter							
		Air flow	m³/h	5800	5015			5800	5015		
	Sound power level		dB(A)	68	68			68	68		
	Sound pressure level	Heat.	dB(A)	62	54	55	56	60	54	55	56
		Cool.		60	55	57	59	57	55	57	59
	Dimensions	LxDxH	mm	1206x445x878				1206x445x878			
	Weight	Net	kg	120	138			134	144		
	Control (included)			Wired remote control							

1. Values net of heat exchanger load losses.

GENERAL NOTE:
The data contained above refer to the following standards: EN 14511:2018; EN 14825:2019; EN50564:2011; EN12102-1:2018; EN12102-2:2019; (EU)No:811:2013; (EU)No:813:2013; OJ 2014/C 207/02:2014.

MW MODULAR MONOBLOC 32

Air-water heat pump

OUTDOOR UNITS

NEW

36.02 kW	62.60 kW
three-phase	three-phase
MCWSGS 3501 Z	MCWSGS 6001 Z

AIR-TO-WATER HEAT PUMP MW MODULAR MONOBLOC R32

The new range of full DC Inverter modular heat pumps is ideal for cooling and heating residential and commercial buildings. Modularity is one of its most important pluses, as it is available in two sizes, 35 and 60 kW cooling capacity. It is possible to combine the two models up to 16 units for a maximum capacity of 960 kW.

Combined high power

35 and 60 kW

Outdoor unit sizes

960 kW

Maximum capacity combining 16 units of 60 kW

Energy efficiency

A++

In heating mode with **35°C** delivery water temperature.

R32

30% less charge than R410A gas.

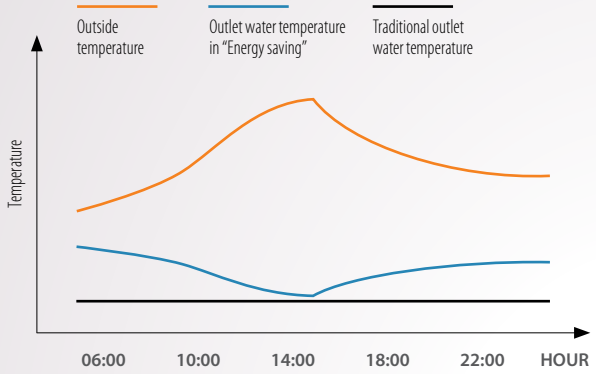
Modbus

The system is equipped with Modbus protocol as standard.

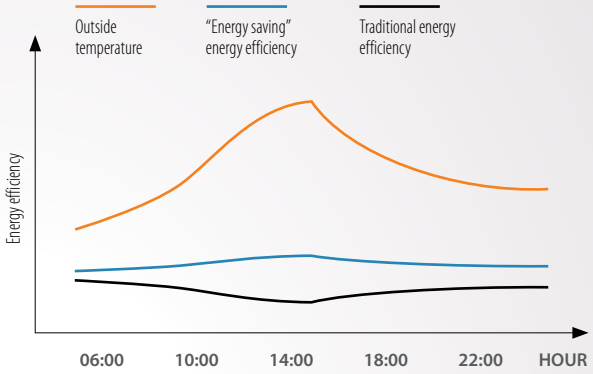
Controlling consumption with the (Energy saving) mode

The unit is able to estimate the heat load of the building based on the outside air temperature, changing the delivery water temperature set accordingly in order to reduce energy consumption.

OUTLET WATER TEMPERATURE



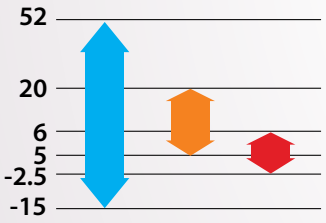
ENERGY EFFICIENCY TRENDS



Broad operating range

COOLING MODE

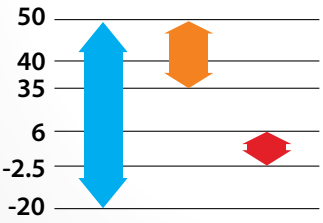
- from -15°C to 52°C
- from 5°C to 20°C (delivery temp.)
- from 2.5°C to 6°C



- Outside air temperature
- Delivery water temperature

HEATING MODE

- from -20°C to 40°C
- from 35°C to 50°C (delivery temp.)
- from 2.5°C to 6°C



- Delivery water temperature difference

-15°C
Minimum outside temperature in cooling mode.

52°C
Maximum outside temperature in cooling mode.

-20°C
Minimum outside temperature in heating mode.

40°C
Maximum outside temperature in heating mode.

Very quiet operation:

- Large plastic fan blades
- "Quiet mode" function
- Compressor sound insulation
- Special fan zone design

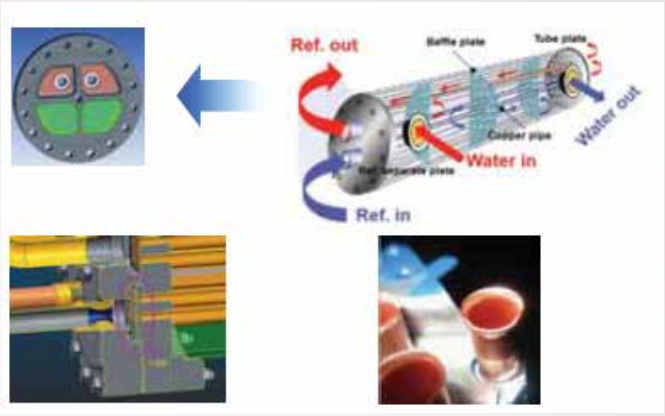
52dB(A)
sound level at partial loads

High efficiency with shell and tube heat exchanger

Heat exchanger with (dual flow) design to increase unit efficiency and capacity.

The special design of the plate and throttling devices at the heat exchanger inlet keep the refrigerant flow smooth and uniform to improve exchange efficiency.

The U-shaped threading inside the copper piping improves laminar flow of the fluid and facilitates heat exchange.



Longer service life with the balanced work function

Thanks to smart control, it is possible to balance the working time of the compressors to avoid overworking only some, which improves system reliability and service life.

Increased reliability with the hydronic pump rotation function

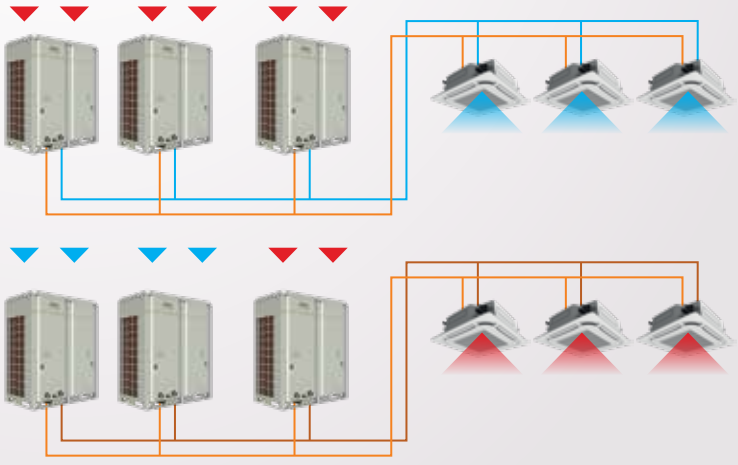
The units do not have hydronic pumps, which must therefore be provided externally, even in pairs.
The rotation function of the pumps can be activated automatically to increase their service life.

Outdoor hydronic modules

The series is equipped with external hydronic modules, with and without a buffer tank, with single or dual circulator, in order to meet the requirements of each type of system.

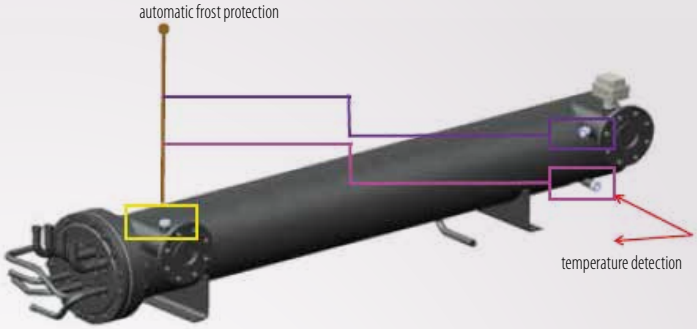
Comfort in winter with selective machine defrosting

Only one third of the outdoor units are allowed to defrost at the same time, thus reducing fluctuations in outlet water temperature and, as a result, improving room comfort.



Frost protection for temperatures below 5°C

Frost protection is automatically activated in both cooling and heating mode by the unit when the outside temperature falls below 5°C.



Operational continuity with the master unit free

Each unit can be master. If a master unit malfunctions, communication between units in the same system is timely. A problem on one unit therefore does not affect the normal operation of the others, ensuring operational continuity.

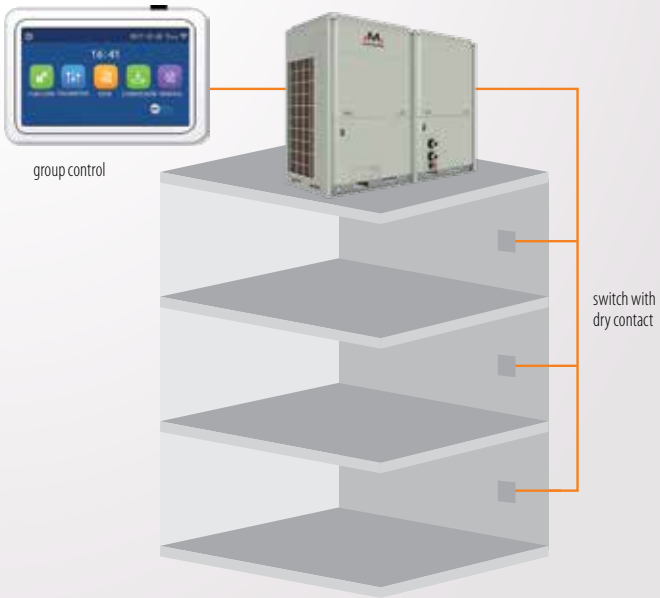
Centralised control of up to 16 units

Wired control allows control of up to 16 units.

- Features a 4.3-inch liquid crystal backlit touch screen display.
- Allows real time display of parameters and operating status.
- Characterised by anti-corrosion treatment.
- Touch screen enables quick and easy operation.
- Can show up to 10 error codes on the same page.

Remote On/off via dry contact

The unit (or group of units) can be set to standby/ON via an external dry contact.



OUTDOOR UNITS

MCWSGS 3501 Z

MCWSGS 6001 Z

ENERGY EFFICIENCY CLASS

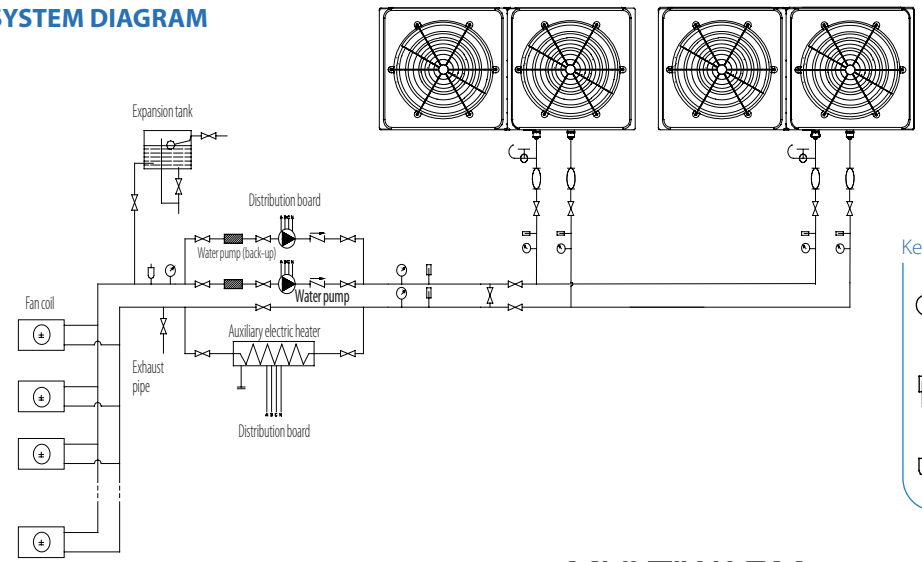
A++

In heating mode with **35°C** delivery water temperature.

Model				MCWSGS 3501 Z	MCWSGS 6001 Z
Heating	Rated power	A7//W35	kW	36.02	62.60
	Electrical absorption		kW	8.81	15.08
	Performance coefficient		COP	4.09	4.15
	Rated power	A7/W45	kW	35.00	65.00
	Electrical absorption		kW	10.60	19.90
	Performance coefficient		COP	3.30	3.27
Cooling	Rated power	A35//W7	kW	32.00	60.00
	Electrical absorption		kW	11.70	20.80
	Energy efficiency		EER	2.74	2.88
	Maximum power	A35//W18	kW	41.38	72.18
	Electrical absorption		kW	11.18	18.60
	Energy efficiency		EER	3.70	3.88
Seasonal heating data	Theoretical load (Pdesignh) @-10°C	W35	kW	24.00	51.00
	Seasonal energy efficiency (ηs)		%	153.0	153.0
	Energy efficiency class		-	A++	A++
	Annual energy consumption		kWh/a	12504	25964
Operating limits	Outside air temperature	Heat.	°C	-20~40	
		Cool.		-15~52	
	Delivery water temperature	Heat.	°C	35~50	
		Cool.	°C	5~20	
Refrigerant circuit data	Refrigerant type (GWP)			R32 (675)	
	Quantity (tons CO2)		kg (t)	5.5 (3.713)	5.5 x 2 (7.425)
	Control system			Electronic expansion valve	
	Compressor		type	Twin Rotary DC Inverter x 1	Twin Rotary DC Inverter x 2
Hydraulic system data	Heat exchanger	Type		Shell and tube	
		Flow rate	m³/h	5.5	10.3
		Load loss	kPa	80	55
	Circulation pump			Not included	
	Water connections	Type		Threaded	Threaded
		Dimensions	Inches	G1) 1/4 M (DN32)	G2) M (DN50)
	Min/Max operating pressure		bar	0.6/16	
	Expansion tank			Not included	
Electrical data	Power supply		Ph-V-Hz	3-380~415V-50Hz	
	Maximum Current		A	22.00	52.00
	Power cable (recommended)		type	5x6 mm²	5x16 mm²
Product specifications	Fan	Type	qty.	DC Inverter x 2	DC Inverter x 2
		Air flow	m³/h	12600	24000
	Sound pressure level		dB(A)	62	68
	Sound power level		dB(A)	78	86
	Dimensions	LxDxH	mm	1340x845x1605	2200x965x1675
	Weight	Net	kg	405	686
	Controls	Wired remote control (NOT included)		DMWZ-CWG-BIG	
		Climatic curve		NOT available	
		Modbus		Built-in	

GENERAL NOTE: The data contained above refer to the following standards: EN 14511:2018; EN 14825:2019; EN50564:2011; EN12102-1:2018; EN12102-2:2019; (EU)No:811:2013; (EU)No:813:2013; OJ 2014/C 207/02:2014

SYSTEM DIAGRAM



MW R32 SPLIT WITH HYDROMODULE AND WITH BUILT-IN TANK

Air-water heat pump

OUTDOOR UNITS

NEW

MCENGS 600 Z

NEW

MCENGS 800~1200 Z
MCESGS 1400~1600 Z

HYDROMODULE TYPE INDOOR UNITS

NEW

MHNGS 400~1600 Z
MHSGS 1200~1600 Z

INDOOR UNITS WITH BUILT-IN TANK

NEW

MHANGS 401~1601 Z
MHASGS 1201~1601 Z

MW R32 SPLIT R32 AIR-TO-WATER HEAT PUMP WITH HYDROMODULE AND WITH BUILT-IN TANK

The new MW R32 Split air-to-water heat pump range with hydromodule and built-in tank with the latest DC Inverter technology is ideal for cooling, heating and DHW production.
It is available in a single-phase version from 6to 12 kW and in a three-phase version from 14 to 15.5 kW heat output. It achieves very high efficiency levels in heating, up to 5 COP.

Energy efficiency

A+++

In heating mode with **35°C** delivery water temperature.

A++

In heating mode with **55°C** delivery water temperature.

R32

30% less charge than R410A gas.

Design flexibility

6~15.5 kW

Power levels

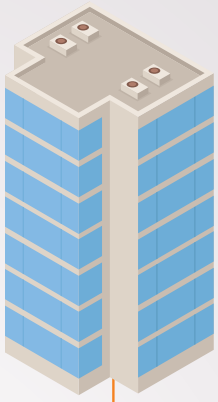
Features of the MW R32 Split R32 to-water heat pump with hydromodule and with built-in tank

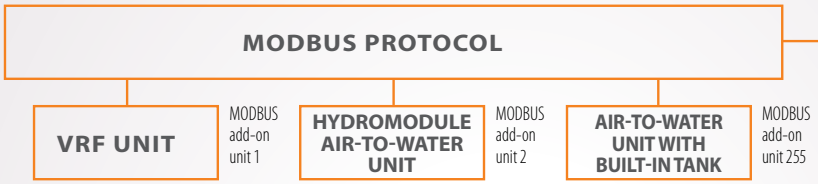
- The axial DC Brushless fans are designed for aerodynamic optimisation, guaranteeing low noise level, but high efficiency and large air flow
- Equipped with an electrical heating element on the base to prevent the formation of ice during winter operation
- The outdoor unit is equipped with an electronic expansion valve
- The system is equipped with Modbus protocol as standard: control via WiFi is possible

Connectivity and remote control

The unit allows connection with a BMS supervision system using the standard Modbus protocol.

You can remotely control the most significant heat pump parameters via integrated WiFi by installing MULTIWARM's Ewpe Smart APP on your smartphone.





Dual stage compressor with steam injection

Under low outside temperature conditions, the dual stage compressor with steam injection reduces heat capacity losses and is more energy efficient than the conventional compressor.

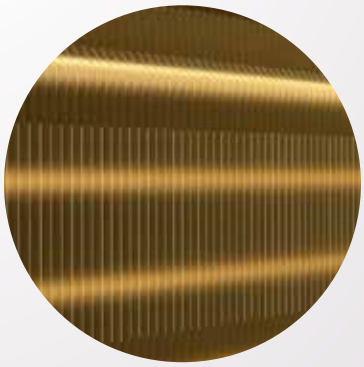
Under the same conditions, high compressor discharge temperatures and other problems can be completely avoided and compressor reliability is significantly higher.

Dual stage compression, dual stage lamination and steam injection increase the outlet water temperature and improve control accuracy.

Golden fin corrosion protection treatment

The heat exchanger coils undergo a special (Golden Fin) anti-corrosion protection treatment.
The louvers of the coils, made of aluminium-manganese, are coated with a special layer of epoxy resin, which gives them their typical golden colour and an additional hydrophilic layer.

This special treatment is able to protect the exchanger from rust and corrosion in areas with high salt concentration air, typical of marine areas.



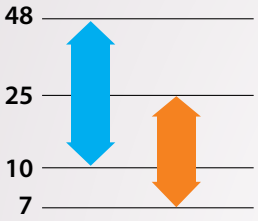
Broad operating range

The outlet water temperature range is from 20°C to 60°C: this allows use with radiant floors, hydronic terminals and medium-temperature radiators.

COOLING MODE

from 10°C to 48°C

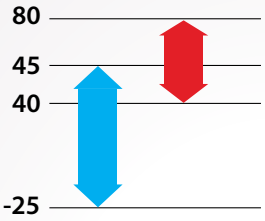
from 7°C to 25°C (delivery temp.)



DHW PRODUCTION

from -25°C to 45°C

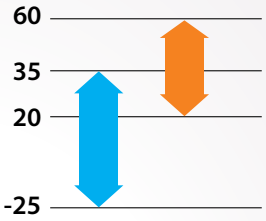
from 40°C to 80°C (tank temp.)



HEATING MODE

from -25°C to 35°C

from 20°C to 60°C (delivery temp.)



Outside air temperature

Delivery water temperature

Tank DHW temperature

48°C

Maximum outside temperature in cooling mode.

-25°C

Minimum outside temperature in heating mode.

Touch screen control panel

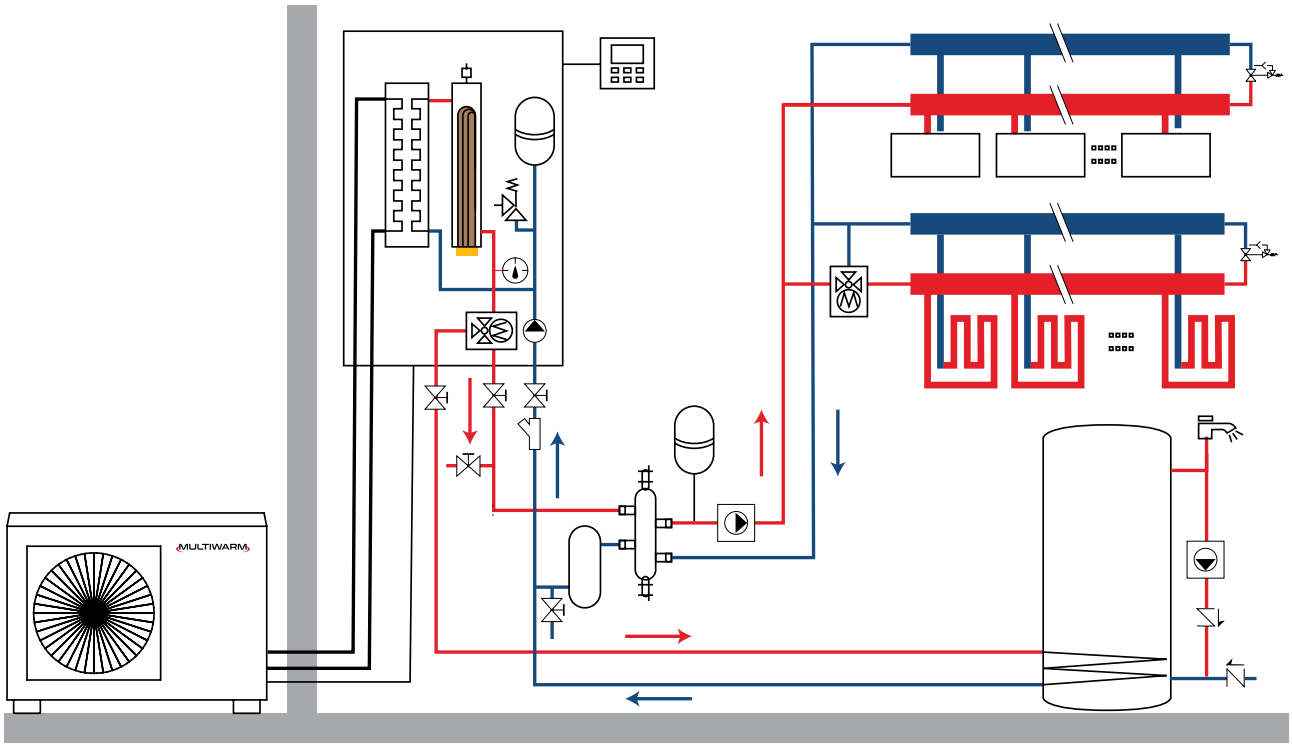
The supplied control panel is built into the indoor unit and allows users to:

- Define the heat pump operating mode and its priorities (heating, cooling, domestic hot water production).
- Set all the main operating parameters (set point, hysteresis, etc.).
- Activate external or internal integration or replacement systems to the unit for heating and domestic hot water production.
- Manage the commissioning activity of the unit.
- View the status of the operating parameters of the main heat pump components.
- Manage the unit remotely by connecting to a Modbus network or via the Wi-Fi built into the control panel.

Specific auxiliary functions are also available in the control panel, including:

- Automatic management of the fluid flow temperature according to the outside temperature (climate curve).
- Programming of weekly and time band operation.
- Activation of silent operation.
- Emergency management in the event of unit malfunction.
- Programmable activation of the anti-legionella cycle.
- Automatic activation of frost protection.

SPLIT MODEL WITH HYDROMODULE - SYSTEM DIAGRAM



SPLIT MODULE WITH HYDROMODULE

MCENGS 600 Z

MCENGS 800~1200 Z
MCESGS 1400~1600 Z

MHNGS 400-1600 Z
MHSGS 1200~1600 Z

ENERGY EFFICIENCY CLASS

A+++

In heating mode with **35°C** delivery water temperature.

A++

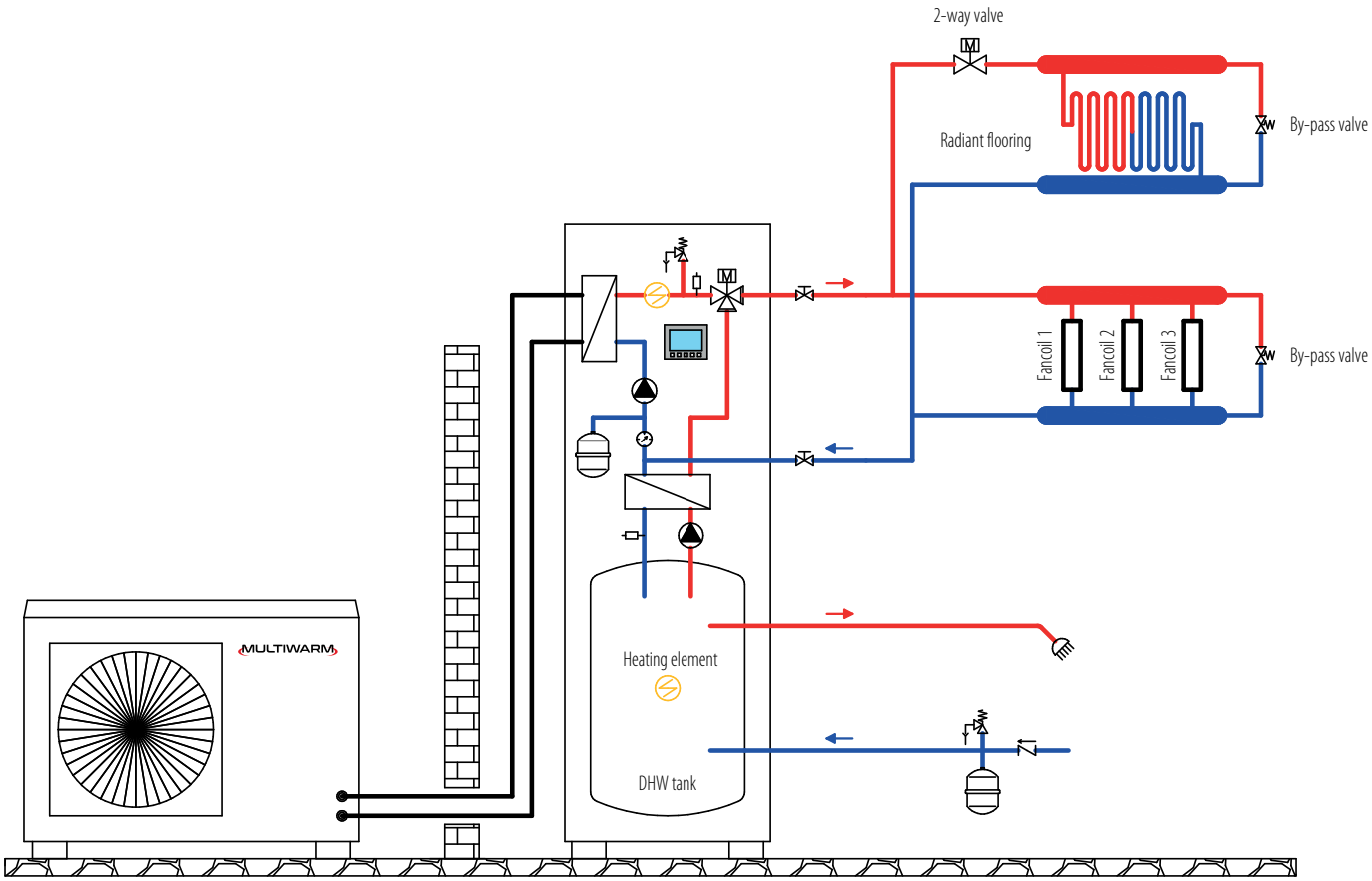
In heating mode with **55°C** delivery water temperature.

Outdoor unit model				**MCENGS 600 Z**	**MCENGS 800 Z**	**MCENGS 1000 Z**	**MCENGS 1200 Z**	**MCESGS 1400 Z**	**MCESGS 1600 Z**
Heating	Rated power	A7//W35	kW	6.00	8.00	10.00	12.00	14.00	15.50
	Electrical absorption		kW	1.20	1.61	2.10	2.40	2.98	3.44
	Performance coefficient		COP	5.00	4.97	4.76	5.00	4.70	4.51
	Rated power	A7/W45	kW	5.80	8.00	9.85	12.40	14.44	16.13
	Electrical absorption		kW	1.52	2.07	2.69	3.29	3.63	4.16
	Performance coefficient		COP	3.82	3.86	3.66	3.77	3.98	3.88
Cooling	Rated power	A35//W18	kW	5.80	7.70	9.35	11.00	12.60	13.00
	Electrical absorption		kW	1.13	1.72	2.36	2.50	3.41	3.6
	Energy efficiency		EER	5.15	4.48	3.96	4.40	3.70	3.61
	Rated power	A35//W7	kW	4.00	7.15	7.60	10.59	11.24	11.52
	Electrical absorption		kW	1.16	2.49	2.77	3.79	4.13	4.38
	Energy efficiency		EER	3.45	2.87	2.74	2.79	2.72	2.63
Seasonal heating data	Theoretical load (Pdesignh) @-10°C	35/55	kW	6/5	7/7	9/8	11/11	12/13	13/13
	Seasonal energy efficiency (ηs)		%	178.7/127.4	181/129	181/127	182/126	175/131	175/131
	Energy efficiency class		-	A+++/A++	A+++/A++	A+++/A++	A+++/A++	A+++/A++	A+++/A++
	Annual energy consumption		kWh/a	2729/3169	3149/4371	4038/5091	4967/6985	5552/7958	6027/7958
Operating limits	Outside air temperature	Heat.	℃	-25~35					
		Cool.		10~48					
		DHW		-25~45					
Refrigerant circuit data	Refrigerant type (GWP)			R32 (675)					
	Pre-charge quantity (tons CO2)		kg (t)	1.1 (0.743)	1.84 (1.242)	1.84 (1.242)		1.84 (1.242)	
	Diameter of liquid/gas piping		mm (inch)	6.35(1/4") / 12.74(1/2")		6.35(1/4") / 12.74(1/2")	6.35(1/4") / 15.88(5/8")	6.35(1/4") / 15.88(5/8")	
	Max. splitting length		m	20	15	15	15	15	15
	Max height difference O.U./I.U. / I.U.-O.U.		m	15	15	15	15	15	15
	Splitting length without additional load		m	10	15	15	15	15	15
	Additional load		g/m	16	0	0	0	0	0
	Refrigerant control system			Electronic expansion valve					
	Compressor		type	Rotary- DC Inverter					
Electrical data	Power supply		Ph-V-Hz	1ph-230V-50Hz				3ph-400V-50Hz	
	Maximum current	Heat.	A	10.00	13.50	15.00	17.80	8.00	8.50
		Cool.		11.00	20.00	22.00	25.60	11.50	11.50
	Power cable (recommended)		type	3x2.5 mm²		3x4 mm²		5x2.5 mm²	
Product specifications	Fan	Type	qty.	DC Inverter		DC Inverter		DC Inverter	
		Air flow	m³/h	3200	3300	3300	5015	5015	5015
	Sound power level		dB(A)	62	67	68	68	68	68
	Sound pressure level		dB(A)	52	55	55	57	58	58
	Dimensions	LxDxH	mm	975x396x702	982x427x787	982x427x787	940x460x820	940x460x820	940x460x820
	Weight	Net	kg	55	82	82	104	110	110

Indoor unit model				**MHNGS 400-600 Z**	**MHNGS 800-1000 Z**	**MHNGS 1200-1600 Z**	**MHSGS 1200-1600 Z**
Operating limits	Delivery water temperature	Heat.	℃	20~60	20~60	20~60	20~60
		Cool.	℃	7~25	7~25	7~25	7~25
	DHW temperature (tank)			40~80	40~80	40~80	40~80
Hydraulic system data	Water/freon heat exchanger	Type		Braze-welded plates			
	Circulation pump	Brand		Shinhoo			
	Water connections	Type		Threaded			
		Dimensions	Inches	1"M BSP	1"M BSP	1"M BSP	1"M BSP
	Operating pressure	Min/Max	bar	0.5/2.5	0.5/2.5	0.5/2.5	0.5/2.5
	Expansion tank	Volume	L	10	10	10	10
		Pre-load	bar	1	1	1	1
Electrical data	Power supply		Ph-V-Hz	1ph-230V-50Hz			3ph-400V-50Hz
	Electrical integration		kW	3.00	6.00	6.00	6.00
	Electrical absorption	Max	kW	3.10	6.10	6.10	6.1
	Power cable (recommended)		type	3x2.5 mm²	3x6 mm²	3x6 mm²	5x4 mm²
Product specifications	Sound power level		dB(A)	42	42	42	42
	Sound pressure level		dB(A)	29	29	29	29
	Dimensions	LxDxH	mm	460x318x860	460x318x860	460x318x860	460x318x860
	Weight	Net	kg	58	58	58	60
	Control (included)			On-board machine control			
	Built-in remote control			Wifi, Modbus			

GENERAL NOTE: The data contained above refer to the following standards: EN 14511:2018; EN 14825:2019; EN50564:2011; EN12102-1:2018; EN12102-2:2019; (EU)No:811:2013; (EU)No:813:2013; OJ 2014/C 207/02:2014.

SPLIT MODEL WITH HYDROMODULE - SYSTEM DIAGRAM



SPLIT MODEL WITH BUILT-IN TANK

MCENGS 600 Z

MCENGS 800~1200 Z
MCESGS 1400~1600 Z

MHANGS 401-1601 Z
MHASGS 1201-1601 Z

ENERGY EFFICIENCY CLASS

A+++

In heating mode with **35°C** delivery water temperature.

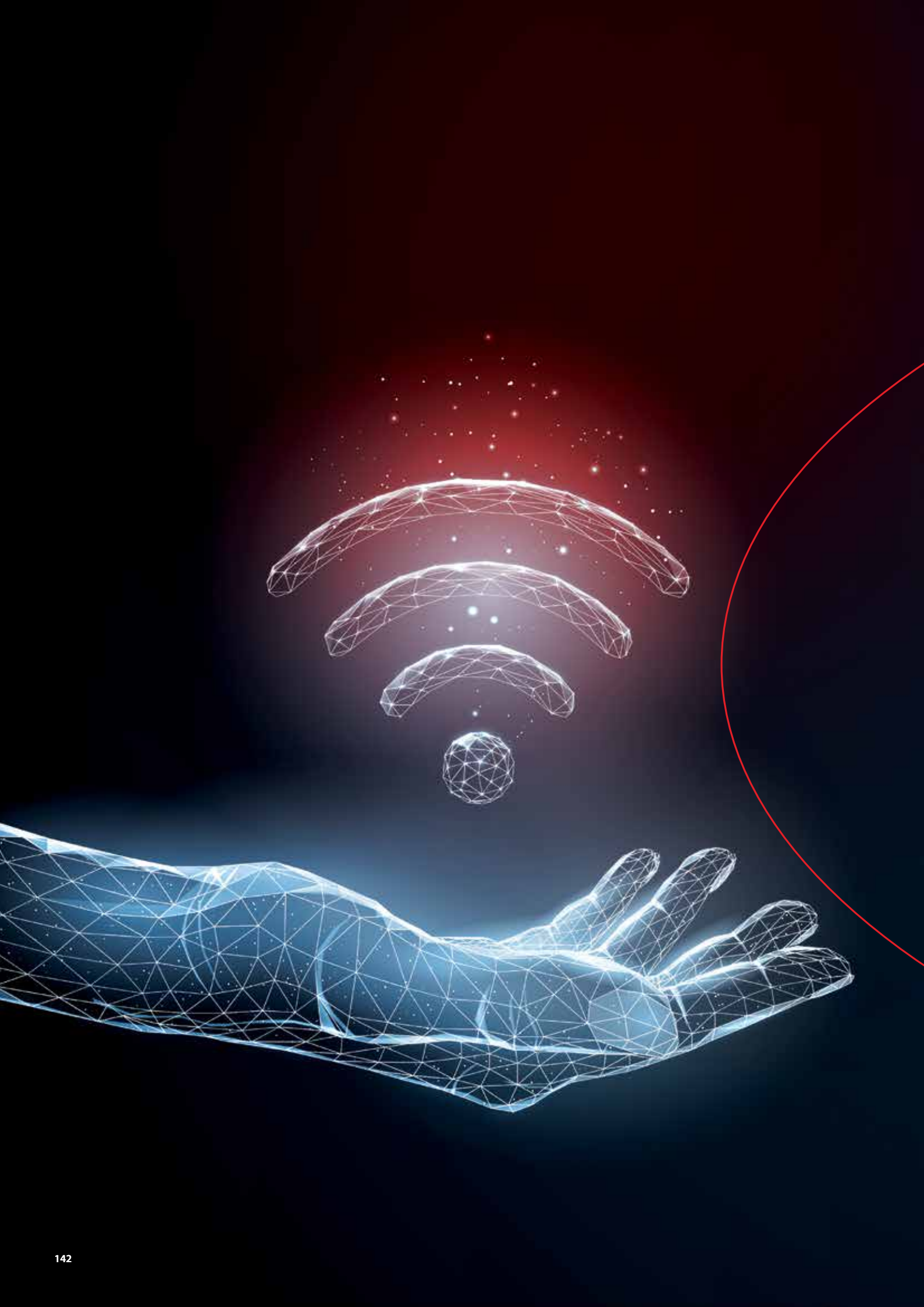
A++

In heating mode with **55°C** delivery water temperature.

Outdoor unit model				MCENGS 600 Z	MCENGS 800 Z	MCENGS 1000 Z	MCENGS 1200 Z	MCESGS 1400 Z	MCESGS 1600 Z
Heating	Rated power	A7//W35	kW	6.00	8.00	10.00	12.00	14.00	15.50
	Electrical absorption		kW	1.20	1.61	2.10	2.40	2.98	3.44
	Performance coefficient		COP	5.00	4.97	4.76	5.00	4.70	4.51
	Rated power	A7/W45	kW	5.80	8.00	9.85	12.40	14.44	16.13
	Electrical absorption		kW	1.52	2.07	2.69	3.29	3.63	4.16
	Performance coefficient		COP	3.82	3.86	3.66	3.77	3.98	3.88
Cooling	Rated power	A35//W18	kW	5.80	7.70	9.35	11.00	12.60	13.00
	Electrical absorption		kW	1.13	1.72	2.36	2.50	3.41	3.60
	Energy efficiency		EER	5.13	4.48	3.96	4.40	3.70	3.61
	Rated power	A35//W7	kW	4.00	7.15	7.60	10.59	11.24	11.52
	Electrical absorption		kW	1.16	2.49	2.77	3.79	4.13	4.38
	Energy efficiency		EER	3.45	2.87	2.74	2.79	2.72	2.63
Seasonal heating data	Theoretical load (Pdesignh) @-10°C	35/55	kW	6/5	7/7	9/8	11/11	12/13	13/13
	Seasonal energy efficiency (ηs)		%	182/128	181/129	181/127	182/126	175/132	175/132
	Energy efficiency class		-	A+++/A++	A+++/A++	A+++/A++	A+++/A++	A+++/A++	A+++/A++
	Annual energy consumption		kWh/a	2685/3152	3149/4371	4038/5091	4967/6985	5552/7958	6027/7958
Operating limits	Outside air temperature	Heat.	°C	-25~35					
		Cool.		10~48					
		DHW		-25~45					
Refrigerant circuit data	Refrigerant type (GWP)			R32 (675)					
	Pre-charge quantity (tons CO2)		kg (t)	1.1 (0.743)	1.84 (1.242)	1.84 (1.242)		1.84 (1.242)	
	Diameter of liquid/gas piping		mm (inch)	6.35(1/4") / 12.74(1/2")		6.35(1/4") / 12.74(1/2")	6.35(1/4") / 15.88(5/8")	6.35(1/4") / 15.88(5/8")	
	Max. splitting length		m	20	25	25	15	15	15
	Max height difference O.U./I.U. / I.U.-O.U.		m	15	15	15	15	15	15
	Splitting length without additional load		m	10	25	25	15	15	15
	Additional load		g/m	16	0	0	0	0	0
	Refrigerant control system			Electronic expansion valve					
	Compressor		type	Two-stage rotary - DC Inverter					
Electrical data	Power supply		Ph-V-Hz	1ph-230V-50Hz				3ph-400V-50Hz	
	Maximum current	Heat.	A	10.00	13.50	15.00	17.80	8.00	8.50
		Cool.		11.00	20.00	22.00	25.60	11.50	11.50
	Power cable (recommended)		type	3x2.5 mm2		3x4 mm2		5x2.5 mm2	
Product specifications	Fan	Type	qty.	DC Inverter		DC Inverter		DC Inverter	
		Air flow	m3/h	3200	3300	3300	5015	5015	5015
	Sound power level		dB(A)	62	67	68	68	68	68
	Sound pressure level		dB(A)	52	55	55	57	58	58
	Dimensions	LxDxH	mm	975x396x702	982x427x787	982x427x787	940x460x820	940x460x820	940x460x820
	Weight	Net	kg	55	82	82	104	110	110

Indoor unit model				MHANGS 401-601 Z	MHANGS 801-1001 Z	MHANGS 1201-1601 Z	MHASGS 1201-1601 Z
Operating limits	Delivery water temperature	Heat.	°C	20~60	20~60	20~60	20~60
		Cool.	°C	7~25	7~25	7~25	7~25
	DHW temperature (tank)			40~80	40~80	40~80	40~80
Hydraulic system data	DHW tank capacity		L	190	190	190	190
	Water/freon heat exchanger	Type		Braze-welded plates			
	Circulation pump	Brand		Shinhoo			
	Water connections	Type		Threaded			
		Dimensions	Inches	1"M BSP	1"M BSP	1"M BSP	1"M BSP
	Operating pressure	Min/Max	bar	0.5/2.5	0.5/2.5	0.5/2.5	0.5/2.5
	Expansion tank	Volume	L	10	10	10	10
		Pre-load	bar	1	1	1	1
Electrical data	Power supply		Ph-V-Hz	1ph-230V-50Hz			3ph-400V-50Hz
	Electrical integration	Heat.	kW	3.00	6.00	6.00	6.00
		DHW tank		3.00	3.00	3.00	3.00
	Electrical absorption	Max	kW	3.175	6.10	6.10	6.1
	Power cable (recommended)		type	3x4 mm2	3x6 mm2	3x6 mm2	5x4 mm2
Product specifications	Sound power level		dB(A)	47	47	47	47
	Sound pressure level		dB(A)	29	29	29	29
	Dimensions	LxDxH	mm	600x650x1800	600x650x1800	600x650x1800	600x650x1800
	Weight	Net	kg	195	195	195	195
	Control (included)			On-board machine control			
	Built-in remote control			Wifi, Modbus			

GENERAL NOTE: The data contained above refer to the following standards: EN 14511:2018; EN 14825:2019; EN50564:2011; EN12102-1:2018; EN12102-2:2019; (EU)No:811:2013; (EU)No:813:2013; OJ 2014/C 207/02:2014.



CONTROLS

FOR VRF MW HYBRID - MW MINI - MW 2-PIPE SYSTEMS

FOR RESIDENTIAL & LIGHT COMMERCIAL MW MONOSPLIT/LIGHT COMMERCIAL/ MULTISPLIT R32

STANDARD INDIVIDUAL CONTROLS

INFRA-RED REMOTE CONTROL

M-V-CI-NB1-G

Standard for the following units:

wall, 8-way compact cassette, 8-way cassette, console, floor/ceiling

CHARACTERISTICS

- Clock
- Timer
- 4 levels of fan speed + Turbo function
- Air distribution with vertical or horizontal swing
- Room temperature setting and display of indoor and outdoor temperature

FUNCTIONS

- I-Feel
- Sleep
- Energy saving (in cooling)
- Absence (in heating)
- Button lock
- X-fan
- Light

MODES

- Heating
- Cooling
- Dehumidification
- Ventilation
- Automatic

WIRED REMOTE CONTROL

M-V-CW-SD1-G

Standard for the following units:

ducted:
low/high static pressure, all-outside air, enthalpy heat recovery unit, recovery unit with coil, recessed floor models and EEV kits for AHU

Optional for all other units

Touch key panel Monochrome LCD display with white backlighting, soft touch buttons Modern, straight-lined design Intuitive user-friendly and versatile remote control with various functions

CHARACTERISTICS

- Clock
- 24-hour on/off timer
- 6 levels of fan speed + Turbo function
- Air distribution with vertical or horizontal swing
- Built-in room temperature sensor
- Display and setting of design parameters
- Remote control infra-red signal reception

FUNCTIONS

- Sleep
- Quiet
- Auto Quiet
- X-fan
- Light
- Defrost
- Save
- Absence (in heating)
- Button lock
- Memory
- Filter cleaning reminder

MODES

- Heating
- Hydronic heating
- 3D heating
- Room heating
- Cooling
- Dehumidification
- Ventilation
- Automatic

See details on functions and application types, *page 146*

OPTIONAL INDIVIDUAL CONTROLS

WIRED REMOTE CONTROL FOR HOTELS

M-V-CW-HB1-G

Optional for all types of indoor units

Simplified panel particularly suitable for hotel applications. Backlit monochrome LCD display, mechanical buttons. Modern, straight-lined design with polished glass-effect front panel. Very user-friendly and intuitive remote control with simplified functions. Possible connection with automatic access management systems.

CHARACTERISTICS

- 6 levels of fan speed + Turbo function
- Air distribution with vertical swing
- Setting and display of room temperature
- Remote control infra-red signal reception

FUNCTIONS

- Defrost
- Button lock
- Memory

MODES

- Heating
- Cooling
- Dehumidification
- Ventilation
- Automatic

SMART WIRED REMOTE CONTROL

M-V-CW-TW1-G

Optional for all types of indoor units

Smart touch panel with high resolution LCD display. Elegant, straight-lined design. Highly advanced remote control complete with several functions, each displayed on a single interactive, easy to manage screen.

CHARACTERISTICS

- Clock
- 3 types of Weekly timers
- 6 levels of fan speed + Turbo function
- Air distribution with vertical or horizontal swing
- Detection and display of room temperature
- Remote control infra-red signal reception
- Various customisations possible such as light adjustment and stand-by time

FUNCTIONS

- Sleep
- Quiet
- Auto Quiet
- X-fan
- Light
- Defrost
- Save
- Absence (in heating)
- Button lock
- Memory
- Filter cleaning reminder

MODES

- Heating
- Hydronic heating
- 3D heating
- Room heating
- Cooling
- Dehumidification
- Ventilation
- Automatic

See details on functions and application types, *page 146*

APPLICATION TYPES FOR **WIRED REMOTE CONTROLS**

M-V-CW-SD1-G
M-V-CW-HB1-G
M-V-CW-TW1-G

page 144-145

SINGLE CONTROL FOR MANAGING A SINGLE INDOOR UNIT

Each indoor unit has its own independent control

TWO CONTROLS FOR MANAGING A SINGLE UNIT

One indoor unit can be controlled by two wired controls placed in different locations (Master/Slave mode).

SINGLE CONTROL FOR MANAGING SEVERAL INDOOR UNITS (GROUP CONTROL)

One wired control can control up to 16 indoor units simultaneously.

TWO CONTROLS FOR MANAGING SEVERAL INDOOR UNITS

Indoor units (maximum 16) can be controlled by two wired controls at the same time.

APPENDIX

DETAIL OF THE CONTROL FUNCTIONS

- **Absence (in heating only)**: prevents the room temperature from falling below 8°C.
- **Defrost**: defrosting function.
- **Energy saving/Save**: energy savings.
- **I Feel**: adjusts the room temperature according to the temperature detected by the remote control for maximum comfort.
- **Light**: brightness adjustment.
- **Memory**: in case of blackout, automatically restarts with the previous settings when the power is restored.
- **Quiet/Auto Quiet**: silent mode.
- **Rapid**: when the unit is switched on in cooling or direct expansion heating mode, it quickly reaches the set temperature, improving indoor comfort.
- **Sleep**: night-time operation.
- **Turbo**: the unit runs at very high speed to quickly reach the temperature in cooling or heating mode.
- **X-Fan**: allows the evaporator to dry, to prevent the formation of mould and bacteria.

OPTIONAL CENTRALIZED CONTROLS

M-V-CC-T32-G

Simplified centralizer panel with 4.3) LCD touch screen. Modern, elegant design. Small footprint: recessed wall installation with a protrusion of only 11 mm.

Up to 32 groups of indoor units can be managed (32 indoor units in total) distributed over a maximum of 16 systems*. Possibility to: assign names to indoor units, select icons and create customised settings (background, backlighting).

CHARACTERISTICS

- Display and setting of design parameters.
- Fault logging and access management.

FUNCTIONS

- Single unit control: temperature setting, timer, fan speed, air distribution control with vertical or horizontal swing and advanced functions (sleep, quiet, auto quiet, auxiliary heating, save, rapid, absence in heating).
- Group management.
- Centralized control of indoor units.

MODES

- Heating
- Hydronic heating
- 3D heating
- Room heating
- Cooling
- Dehumidification
- Ventilation
- Automatic

M-V-CC-T255-G

Centralized Touch screen panel. 7) high resolution 1280x800 touch screen LCD display. Modern, elegant design. User-friendly operation. Small footprint: recessed wall installation with a protrusion of only 11 mm.

Up to 255 groups of indoor units can be managed (255 indoor units in total) distributed over a maximum of 16 systems*. Possibility to: assign names to indoor units, select icons and create customised settings (background, backlighting).

CHARACTERISTICS

- Display and setting of design parameters.
- Fault logging and access management.
- Programming (setting several programs).
- Maintains settings in the event of a blackout.

FUNCTIONS

- Single unit control: temperature setting, timer, fan speed, air distribution control with vertical or horizontal swing and advanced functions (sleep, quiet, auto quiet, auxiliary heating, save, rapid, absence in heating).
- Group management.
- Centralized control of indoor units.

MODES

- Heating
- Hydronic heating
- 3D heating
- Room heating
- Cooling
- Dehumidification
- Ventilation
- Automatic

* When centralizers are connected to several outdoor units in combination, plug in the 120Ω heating element and use a twisted, shielded cable.

OTHER OPTIONAL CONTROLS

WEB-BASED MONITORING SOFTWARE

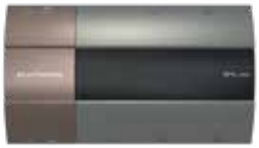
M-V-SOFT-Mon

Optional for all types of indoor units

(requires Gateway M-V-Gateway-Mon)

Remote control of power on, power off, temperature setting, operating mode and other parameters on any type of indoor unit or group of indoor units.

- Real-time monitoring of system status and output of data for errors and malfunctions.
- Unit programming according to user requirements and the intended use of the building.
- Displayed graphical representation of the system structure and control modes of individual devices and/or groups of the entire project.



M-V-Gateway-Mon

TCP/IP network gateway

GATEWAY FOR BACNET/IP E MODBUS RTU/TCP MAX 255 I.U.

M-V-Gateway-LAN/Bacnet

Optional for all types of indoor units

(max 16 systems or 255 indoor units)

- Network gateway that also supports connection to a building management system (BMS).
- This network gateway features BACnet and Modbus communication protocols.
- The highly efficient, large-volume communication system can monitor unit operation in real time and control up to 255 indoor units simultaneously.

MINI GATEWAY FOR MODBUS RTU

M-V-Gateway-Modbus

Optional for all types of indoor units

(max 16 systems or 128 indoor units)

- The Modbus mini network gateway allows connection to a building management system (BMS).
- Remote control for individual units or groups of units of power on, power off, temperature setting, operating mode, fan speed, control lock with individual remote controls and real-time monitoring of operating parameters and unit error codes.


TEST

VRF SYSTEM WI-FI CONTROLS

Wi-Fi MODULE

Wi-Fi

M-V-WiFi-IDU

EWPE SMART

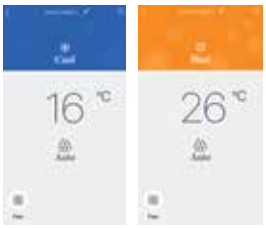
Available for Android and iOS smartphones and tablets

Some examples of screens from iOs devices

M-V-WiFi-IDU module for VRF systems

All your main air conditioning settings right from your smartphone.

MULTIWARM presents the new M-V-WiFi-IDU module that allows access to remote control of the air conditioner via an app that can be downloaded to a smartphone.
The MULTIWARM Wi-Fi kit is capable of controlling up to 80 indoor units.
Thanks to the M-V-WiFi-IDU app, it is possible to manage the main operating parameters from your home with a simple Wi-Fi home connection, or away from home, with a simple Internet connection. With EWPE SMART by MULTIWARM it is possible to switch on, switch off, adjust the room temperature and the air flow of the air conditioner, the cooling or heating operation with a few (touches) of your mobile phone. An intelligent app that controls comfort and energy savings that benefits your energy bill.



MAIN APP FUNCTIONS

- Access security with account protected by credentials (UserID & PWD)
- Individual control of single units
- On and off control
- Operating mode selection
- Set temperature adjustment
- Fan speed
- Weekly timer
- 8°C heating activation (function that prevents the room temperature from falling below 8°C)
- Silent mode

RESIDENTIAL R32 WI-FI CONTROLS

Wi-Fi MODULE

MKG-WiFi
RESIDENTIAL R32
console

Wi-Fi

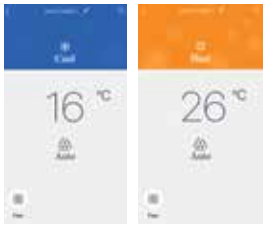
Available for Android and iOS smartphones and tablets

Some examples of screens from iOs devices

MKG-WiFi module for R32 console unit

Allows access to remote control of the air conditioner via an app that can be downloaded to a smartphone

Thanks to the MKG-WiFi app, it is possible to manage the main operating parameters from your home with a simple Wi-Fi home connection, or away from home, with a simple Internet connection. With MKG-WiFi by MULTIWARM it is possible to switch on, switch off, adjust the room temperature and the air flow of the air conditioner, the cooling or heating operation with a few (touches) on the mobile phone.



STANDARD R32 INDIVIDUAL CONTROLS

INFRA-RED REMOTE CONTROL

Air Ultra Plus
Remote control included

MONOSPLIT/MULTISPLIT **R32**

CHARACTERISTICS

- Setting and display of temperature
- Clock
- 6 fan speed levels: auto, low, medium-low, medium, medium-high or high
- ON/OFF timer
- Air distribution with automatic vertical and/or horizontal swing
- Autorestart: restart after blackout with restoration of previous state

FUNCTIONS

- I-Feel: optimal room temperature control based on the temperature detected by the sensor built into the remote control.
- Sleep: automatic nigh-time room temperature control (3 functions).
- X-fan: allows the evaporator to dry, to prevent the formation of mould and bacteria.
- Turbo: quickly reaches room temperature.
- Light: switches display brightness on/off.
- Quiet: silent mode.
- Energy savings.
- Wi-Fi.
- Cold Plasma: ioniser.

Airpro Plus
Remote control included

MONOSPLIT/MULTISPLIT **R32**

MODES

- Heating
- Cooling
- Dehumidification
- Ventilation
- Automatic

Remote control included

MULTISPLIT **R32**
8-way compact cassette

LIGHT COMMERCIAL **R32**
8-way compact cassette
8-way big cassette
floor/ceiling

CHARACTERISTICS

- Clock
- Timer
- 4 levels of fan speed + Turbo function
- Air distribution with vertical or horizontal swing
- Room temperature setting and display of indoor and outdoor temperature

FUNCTIONS

- I-Feel
- Sleep
- Energy saving (in cooling)
- Absence (in heating)
- Button lock
- X-fan
- Light

MODES

- Heating
- Cooling
- Dehumidification
- Ventilation
- Automatic

STANDARD R32 INDIVIDUAL CONTROLS

INFRA-RED REMOTE CONTROL

Remote control included
MULTISPLIT **R32**
1-way cassette
ceiling

Remote control included
MONOSPLIT/MULTISPLIT **R32**
console

CHARACTERISTICS

- Setting and display of temperature
- Clock
- ON/OFF timer
- 4 fan speed levels: auto, low, medium or high
- 6 fan speed levels with remote control for consoles: auto, low, medium-low, medium, medium-high or high
- Air distribution with automatic vertical swing
- Autorestart: restart after blackout withrestoration of previous state

FUNCTIONS

- I-Feel: optimal room temperature control based on the temperature detected by the sensor built into the remote control.
- Sleep: automatic nigh-time room temperature control.
- X-fan: allows the evaporator to dry, to prevent the formation of mould and bacteria.
- Turbo: the unit runs at very high speed to quickly reach the temperature in cooling or heating mode.
- Light: switches display brightness on/off.
- Quiet: silent mode (only with remote control for consoles).
- Energy saving silent mode (only with remote control for consoles).
- Key lock.

MODES

- Heating
- Cooling
- Dehumidification
- Ventilation
- Automatic

WIRED REMOTE CONTROL

Wired remote control

STANDARD (included) for LIGHT COMMERCIAL **R32 models:**
ducted

CHARACTERISTICS

- Setting and display of temperature
- ON/OFF timer
- 6 fan speeds
- Air distribution with automatic vertical and horizontal swing
- Autorestart: restart after blackout with restoration of previous state

FUNCTIONS

- Sleep: automatic nigh-time room temperature control.
- Turbo: the unit runs at very high speed to quickly reach the temperature in cooling or heating mode.
- Blow: after the unit is switched off, it allows the evaporator to be dried to prevent the formation of mould and bacteria
- Key lock

MODES

- Heating
- Cooling
- Dehumidification
- Ventilation
- Automatic

R32 INDIVIDUAL CONTROLS

WIRED REMOTE CONTROL WITH BUILT-IN WI-FI MODULE

DMW-ZA1-WiFi
Wired remote control

Optional for
LIGHT COMMERCIAL
R32 models:
8-way compact cassette
8-way big cassette
floor/ceiling
ducted

CHARACTERISTICS

- Setting and display of temperature
- ON/OFF timer
- 6 fan speeds
- Air distribution with automatic vertical and horizontal swing
- Autorestart: restart after blackout with restoration of previous state

FUNCTIONS

- Sleep: automatic nigh-time room temperature control.
- Turbo: the unit runs at very high speed to quickly reach the temperature in cooling or heating mode.
- Blow: after the unit is switched off, it allows the evaporator to be dried to prevent the formation of mould and bacteria
- Key lock

MODES

- Heating
- Cooling
- Dehumidification
- Ventilation
- Automatic

WIRED REMOTE CONTROL WITH BUILT-IN WI-FI MODULE

DMW-ZAL-LCAC WiFi
Wired remote control

STANDARD (included) for
MULTISPLIT **R32 models:**
ducted

Optional for
MULTISPLIT **R32 models:**
8-way compact cassette
1-way cassette
floor/ceiling

CHARACTERISTICS

- Built-in room temperature sensor
- 6 fan speeds
- Air distribution with automatic vertical swing
- Error display
- Daily timer
- Autorestart: restart after blackout with restoration of previous state

FUNCTIONS

- Sleep: automatic nigh-time room temperature control.
- Turbo: the unit runs at very high speed to quickly reach the temperature in cooling or heating mode.
- Quiet: silent mode.
- X-fan: allows the evaporator to dry, to prevent the formation of mould and bacteria
- Absence (in heating only): prevents the room temperature from falling below 8°C
- Key lock

MODES

- Heating
- Cooling
- Dehumidification
- Ventilation
- Automatic

R32 OPTIONAL CONTROLS

WIRED REMOTE CONTROL

M-RF-CW2-L-G

Optional for
MULTISPLIT **R32 models:**
Wall (Airpro Plus)
Console
1-way cassette
Compact cassette
Ceiling

CHARACTERISTICS

- Management of up to 16 connected indoor units
- Built-in room temperature sensor
- 4 fan speed levels: auto, low, medium or high
- Air distribution with automatic vertical and horizontal swing
- Error display
- Daily, weekly or bi-weekly timer
- Autorestart: restart after blackout with restoration of previous state

FUNCTIONS

- Sleep: automatic nigh-time room temperature control.
- Turbo: the unit runs at very high speed to quickly reach the temperature in cooling or heating mode.
- Quiet: silent mode.
- X-Fan: after the unit is switched off, it allows the evaporator to be dried to prevent the formation of mould and bacteria
- Absence (in heating only): prevents the room temperature from falling below 8°C.
- Key lock

MODES

- Heating
- Cooling
- Dehumidification
- Ventilation
- Automatic

MULTIWARM

As a result of the ongoing technological evolution of products, we reserve the right to change the technical specifications in this catalogue at any time and without notice. The products shown are only illustrative of the types of applications. Energy efficiency values refer to measurements carried out according to the following harmonised standards: EN14511; EN14825; EN16147.

multiwarm.it

MULTIWARM

Distributed by HOKKAIDO srl
Via della Salute, 14 - 40132 Bologna - Italy
Tel. +39 051 41 33 111 | Fax +39 051 41 33 112
www.multiwarm.it | info@multiwarm.it

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