MVBM - MVAS - MVBHR

Direct expansion variable refrigerant flow system VRF

Cooling capacity 12,1 ÷ 246,0 kW
Heating capacity 14,0 ÷ 276,0 kW

- **Units prepared for installations with two or three pipes.**
- **The correct balance between cost, efficiency and space.**
- **Wide choice of indoor units available.**
- **Up to 80 connectible indoor units.**

DESCRIPTION

The MV air conditioners from the MVBM, MVAS and MVBHR range are combined with indoor units:

— MVA_WL - **Wall.**
— MVA_D - **Horizontal duct.**
— MVA_DH - **Horizontal duct, high head.**
— MVA_DV - **Vertical duct.**
— MVA_CS, MVA_C - **8-way cassette .**
— MVA_C1 - **1-way cassette .**
— MVA_F - **Floor ceiling.**
— MVA_FS - **Console.**
— MVA_V - **Column.**
— MVA_ERV - **Heat recovery unit.**

TYPE OF INDOOR UNIT

MVA_WL

Wall indoor unit designed to be installed on indoor walls.
— Modern design to blend with all furnishing styles.
— Distributed air jet: air outlet louvers with horizontal and vertical adjustment facility.
— Anti-freeze function that allows a minimum temperature of 8 °C to be maintained in the environment during the winter period.

MVA_D

Duct indoor unit designed for indoor duct type installation.
MVA_D - Horizontal duct.
— Wired panel standard supply.
— Low noise levels.
— Easy installation in small assembly spaces, thanks to the limited dimensions.
— Useful static pressure up to 80 Pa.

MVA_DH

Duct indoor unit designed for indoor duct type installation.
MVA_DH - Horizontal duct, high head.
— Wired panel standard supply.
— Unit without cover, designed for duct type horizontal installation.
— Useful static pressure up to 200 Pa.

MVA_DV

Duct indoor unit designed for indoor vertical installation.
MVA_DV - Vertical duct.
— Wired panel standard supply.
— Unit without cover, designed for installation in wall recesses.
— Useful static pressure up to 60 Pa.

MVA_CS / MVA_C

8-way cassette indoor unit designed to be installed on false ceilings indoors.
MVA_CS - Cassette 570x570.
Mandatory accessory GLG40S.
MVA_C - Cassette 840x840.
Mandatory accessory GLG40.
— Wired panel standard supply.
— Condensate discharge pump as standard.
— Guarantees even air distribution, for optimum comfort.

MVA_C1

1-way cassette indoor unit designed to be installed on false ceilings indoors.

MVA_C1 - Cassette 987x385.
Mandatory accessory GLC1.

— Wired panel standard supply.
— Condensate discharge pump as standard.
— Compact size and minimum dimensions.

MVA_F

Floor ceiling indoor unit to be installed on walls or ceiling.

— Low noise levels.
— Anti-freeze function.
— Flexible installation for any environment.

MVA_FS

Console indoor unit designed to be installed on the floor.

— Anti-freeze function.
— 5-speed fan, to meet every possible need.
— Two delivery vents for optimal control of the air flow.

MVA_V

Column indoor unit designed to be installed in large sized rooms.

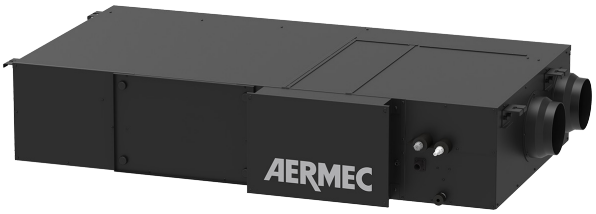
— Easy installation and maintenance.
— Speed in reaching the defined set point in the shortest time possible.
— Ideal for installations in the service sector: hotels, restaurants, offices.

General features

— Operating mode: cooling, heating, dehumidification, automatic and fan only.
— Total capacity connected to the outdoor units between 50% and 135% of the rated capacity of the selected configuration.
— Indoor unit fitted standard with an electronic expansion valve.
— WRC wired panel standard supply with each indoor unit.
— Every indoor unit comes with a remote control and a remote control holder.
— Automatic unit adjustment function.
— Particularly quiet operation.
— Microproccessor control.
— Auto-restart function.
— Self-diagnosis function.
— Easy installation and maintenance.

TYPE OF INDOOR UNIT - HEAT RECOVERY

MVA_ERV



Heat recovery units designed for duct-type horizontal installation indoors. Fitted with a cross-flow enthalpic heat recovery unit with recovery efficiency higher than 70%. The heat exchanger allows energy to be transferred from the exhaust air to the fresh air, avoiding any direct mixing of the air flows. This range of heat recovery units ensures constantly clean and filtered fresh air, a constant air flow rate, and rooms with comfortable temperature and humidity levels, ensuring reduced energy consumption in every application. The device is also equipped with a direct expansion coil to allow the air flow delivered into the room to give off or absorb heat. This means that the unit not only guarantees correct air renewal, but also helps cool or heat the rooms and avoid air currents with a marked temperature difference in relation to the room temperature, to ensure optimum comfort for the occupants.

Operating mode

Every indoor unit comes with a wired panel. The wired panel can be used to set the standard cooling, heating, dehumidification and ventilation-only modes, plus the following operating modes.

— **Bypass with free cooling and night-time free cooling operation**: night-time free cooling operation reduces the thermal load in the rooms, taking advantage merely of the outside temperature difference and therefore boosting energy savings for the following day thanks to free night-time cooling.
— **Control of different inlet and outlet air flow rates**: known as "positive pressure operating mode" when the inlet air flow rate is higher than the recovery one, or "negative pressure operating mode" in the opposite situation.

Mixed connection indoor units + MVA_ERV

In case of mixed systems, i.e. consisting of indoor units of the VRF and units, MVA_ERV to guarantee the proper operation of the system, the nominal cooling powers of the indoor units is between 50% and 100% of the nominal cooling power of the system of external units and that the sum of the installed nominal power of the MVA_ERV units does not exceed 30% of the power of the external units system.
The MVA_ERV units are compatible with MVBHR systems.

Connections with MVA_ERV units only

In case of systems made up only by units, MVA_ERV to guarantee the proper operation of the system, check that the sum of the nominal cooling powers of the indoor units is between 50% and 100% of the nominal cooling power of the external units system.

General features

— Wired panel standard supply with each indoor unit.
— Particularly quiet operation.
— Centrifugal fans with 5-speed brushless DC motor.
— Units fitted with an electronic expansion valve as standard.
— Filters with G4 efficiency level on inlet and outlet air.
— Alarm signal for filter cleaning.
— Timer for programming unit switch-on and switch-off.
— Incorporated electrical panel with electronic card to control the ventilation and free cooling functions.
— Easy installation and maintenance.

TYPE OF OUTDOOR UNIT

MVAS

Standard multisplit VRF air conditioners.
Reversible air/air heat pump with DC inverter technology.

— From 1 to 16 connectible indoor units.
— Total maximum length of the refrigerant lines up to 300 m.
— The sizes MVAS 1201S - MVAS 1401S - MVAS 1601S e MVAS 1201T - MVAS 1401T - MVAS 1601T, are fitted with a base electric resistor to avoid possible formation of ice and encourage the disposal of the condensate during the heating operation.
— Compressor and fan with DC inverter technology.
— Fitted with an electronic expansion valve.

MVBM

Module multisplit VRF ambient air conditioner for 2-pipe systems.
Reversible air/air heat pump with DC inverter technology.

— From 1 to 80 connectible indoor units.
— Total maximum length of the refrigerant lines up to 1000 m.
— Modular system with base modules that can be combined together, up to a maximum of 4, for a total of 33 recommended combinations.
— Compressor and fan with DC inverter technology.
— Fitted with an electronic expansion valve.
— Optimised management of the compressor operating time with partial loads.
— Emergency operation, in the event of problems with the compressors or fans, allows operation of the system with a reduced number of compressors and/or fans for a limited time.
— Channelled air delivery from 0 Pa (default) to 110 Pa of effective static head set via dip switches.
— **For cooling line connections, refer to refnet joints in the accessories section.**

MVBHR

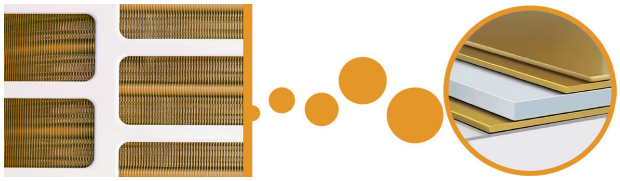
Module multisplit VRF ambient air conditioner for 3-pipe systems.
Reversible air/air heat pump with DC inverter technology.

— From 1 to 80 connectible indoor units.
— Total maximum length of the refrigerant lines up to 1000 m.
— Modular system with base modules that can be combined together, up to a maximum of 4, for a total of 33 recommended combinations.
— Compressor and fan with DC inverter technology.
— Fitted with an electronic expansion valve.
— Channelled air delivery from 0 Pa (default) to 110 Pa of effective static head set via dip switches.
— A system that permits managing the heating and cooling modes in an independent and simultaneous manner.
— Possibility of managing hot or cold modes independently and simultaneously.
— MVBHR 3-pipe outdoor units must be interfaced with two dual pipe MVA_Indoor units using the exchange module (MEB) available with one, two, four or eight branches.

MEB: mandatory accessory for 3-pipe systems.

Special golden fin coil

Unlike normal batteries, this special golden epoxy coating silicon free is able to protect the heat exchanger against rust and corrosion, in areas where the air has a high salt content.



General features

— Operating mode: cooling, heating, dehumidification, automatic and fan only.
— Refrigerant connections with braze welded Y and F joints (mandatory accessories).
— Compressor and fan with DC inverter technology.
— Particularly quiet operation.
— Microproccessor control.
— Auto-restart function.
— Self-diagnosis function.
— Easy installation and maintenance.
— Serial communication in CanBus protocol.

ACCESSORIES

CC2: Centralised control with 7" touchscreen display for managing several indoor units within a number of multisplit systems. The centralised control has an integrated external contact. For more information, refer to the specific documentation. *

MVASZC: Simplified centralised control (4,3" touch screen display), which can be used to manage up to 32 Indoor Units distributed across a maximum of 16 Systems.

WLRC: Remote control with liquid crystal display and soft-touch buttons.

WRC: Wired panel with liquid crystal display and soft-touch buttons.

WRC1: Simplified wired panel with liquid crystal display and soft-touch buttons with built-in external contact. This panel is particularly suitable for hotel applications.

*** The CC2 centralised control can manage up to 255 indoor units distributed over a maximum of 16 VRF systems.**

For more information about the accessories and their functions (such as the auto-restart function), refer to the specific documentation of the single accessory.

AHUKIT: Kit comprised of a box that contains the thermal expansion valve(s) complete with wiring and their control module, with pre-wired probes, a wall-mounted control panel with external contact. The kit is intended to be combined with the direct expansion cooling and/or heating coil (using R410A) of an air treatment unit. The latter is not supplied as an MV_ component, but is functionally connected to an MV_ system and is suitably sized. AHUKIT, and the and the air treatment unit connected to it, treat the recirculated and/or fresh air that falls within the operating limits, regulating the recirculation/expulsion air temperature.

MINIMODBUS10: Thanks to its smaller size, this accessory can be easily installed in the outdoor unit. It allows you to manage up to 16 MV systems (with a maximum of 255 indoor units), with a ModBus RTU serial on RSA485 for supervision with an external BMS.

MVAGW: This accessory allows you to manage up to 16 MV systems (with a maximum of 255 total indoor units), making available a serial in ModBus RTU protocol on RS485, ModBus TCP or BACnet / IP for supervision with an external BMS.

USBDC / USBDC1: The kit includes a converter (from CanBus to ModBus) and the VRF debugger software. IT is designed to meet the requirements of after sales services and qualified technicians who need to carry out control and debugging procedures on the MV_ ranges.

DTAC: Diagnostic tool for indoor and outdoor units of the entire series (tool reserved for service centres or installers).

Accessories mandatory

Air delivery and recovery grille for indoor **Cassette** type units.

Grille model	Indoor unit model			8 WAY	4 WAY	1 WAY	Dimensions LxHxW (mm)	Weight Kg
	MVA_CS	MVA_C	MVA_C1					
GLG40S	•	-	-	•	-	-	620x620x47,5	3,0
GLG40	-	•	-	•	-	-	950x950x52	6,0
GL40B	-	-	-	-	•	-	1040x1040x65	8,0
GLC1	-	-	•	-	-	•	1200x460x55	4,2

Joints refnet

Connection between modular outdoor units.

The modules are easy to install and link together from the cooling point of view, thanks to the connections with dedicated refnet joints. Modularity is the fundamental characteristic of these systems as it also allows high-capacity systems to be created in a quick, simple way.

Y-joints for cooling connection between 2 Outdoor Units in Modular Systems. **A modular system made up of n. base modules requires n-1 RNYMHR.-joints.**

Mandatory accessory for modular systems.

MVBM 2-pipe system.	MVBHR 3-pipe system	MVBM 2-pipe system.	MVBHR 3-pipe system
Outdoor unit	Outdoor unit	Indoor units	Indoor units
RNYM01	RNYMHR10	RNY11	RNY11
	RNYMHR20		
AHUKIT	Outdoor units - MEB	RNY12	RNY12
RNYAHU	RNYHR10	RNY21	
RNYAHU20	RNYHR20	RNY31	
	RNYHR30	RNY41	
	RNYHR40	RNF14	
	RNYHR50	RNF18	
	RNYHR60	RNF18B	
	RNYHR70		

MVBM 2-pipe system

RNYM01

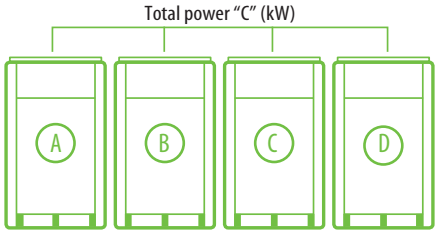
Accessory comprising 2 Y-joints, one for the liquid line and one for the discharge line.

MVBHR 3-pipe system

RNYMHR

Accessory comprising 3 Y-joints - one for the liquid line and two for the gas lines (one high pressure and the other low pressure).

Code	Type
RNYMHR10	Y
RNYMHR20	Y



Connection between modular outdoor units and MEB - Exchange module

RNYHR

Accessory for connecting outdoor units with the MEB exchange module. Comprises three Y-joints one for the liquid line and two for the gas lines (one high pressure and the other low pressure).

Code	Type
RNYHR10	Y
RNYHR20	Y
RNYHR30	Y
RNYHR40	Y
RNYHR50	Y
RNYHR60	Y
RNYHR70	Y

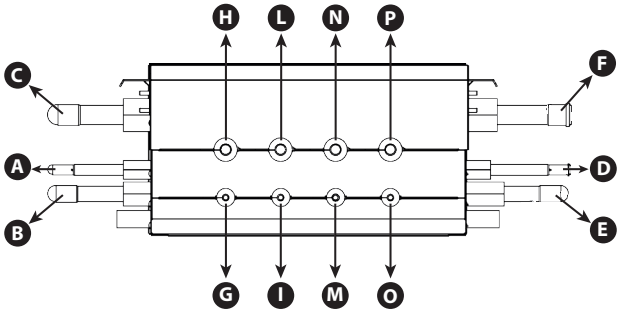
MEB

Exchange module with one, two, four or eight branches (each single branch can manage heating or cooling mode independently of the others, but simultaneously) for interfacing MVBHR 3-pipe outdoor units with the MV 2-pipe indoor units.

Code	Branches	Maximum manageable cooling capacity (per single branch)	Total power managed by the MEB	Connectible indoor units (per single branch)
	No.	(kW)	(kW)	No.
MEB12	1	16,00	≤ 16,00	8
MEB22	2	16,00	≤ 28,00	8
MEB42	4	16,00	≤ 45,00	8
MEB82	8	16,00	≤ 85,00	8

In order to connect indoor units with a capacity higher than 16kW, two branches must be used that are joined into one using suitable DIP-switch settings on the distribution box.

MEB exchange module



Refrigerant connection	Description
A	Liquid (left side)
B	Gas high pressure (left side)
C	Gas low pressure (left side)
D	Liquid (right side)
E	Gas high pressure (right side)
F	Gas low pressure (right side)
G	Liquid (branch 1)
H	Gas (branch 1)
I	Liquid (branch 2)
L	Gas (branch 2)
M	Liquid (branch 3)
N	Gas (branch 3)
O	Liquid (branch 4)
P	Gas (branch 4)

Connection between indoor units

RNY

Accessory comprising 2 Y-joints, one for the liquid line and one for the discharge line.

RNF

Accessory made up of two F-joints, one for the liquid line and one for the discharge line.

Code	System type		Type of joint	Maximum 1-way connectible power	Connectible indoor units
	2-pipe	3-pipe		(kW)	No.
RNY11	•	•	Y	-	-
RNY12	•	•	Y	-	-
RNY21	•		Y	-	-
RNY31	•		Y	-	-
RNY41	•		Y	-	-
RNF14	•		F	16,00	from 2 to 4
RNF18	•		F	16,00	from 4 to 8
RNF18B	•		F	16,00	from 4 to 8

ADVANTAGES FOR VRF SYSTEMS: MVAS - MVBM - MVBHR

Compact design

Thanks to the reduced dimensions and compact design of these units, they are easy to move at the job site. All the models can in fact be transported easily right up to the roof, even using a lift.

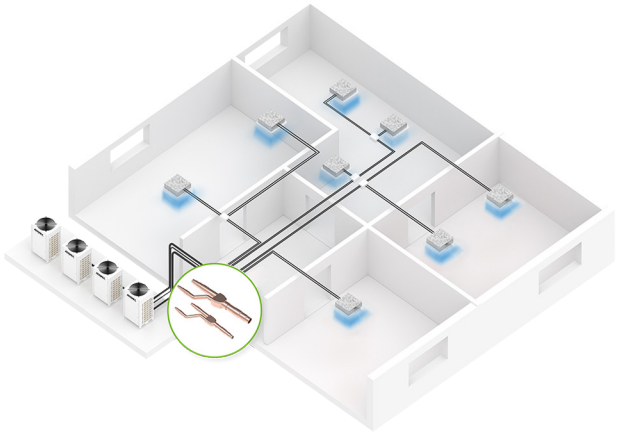
VRF systems - 2-pipe heat pump

Customise your VRF system

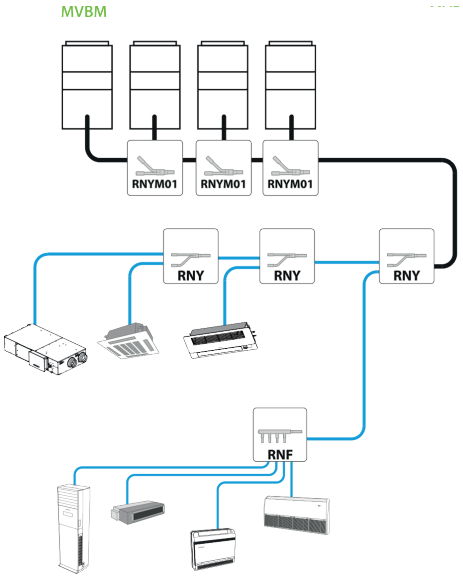
To guarantee greater seasonal efficiency and maximum comfort with the variable refrigerant function.

Continuous comfort

Continuous heating or cooling of the rooms is what makes the VRF system a valid alternative to hydronic systems.



Example of a 2-pipe system



When dimensioning the cooling lines, exclusively refer to the technical manual.

A modular system made up of n base modules requires n-1 Y-joints.

MVAS - MVBM

— 2-pipe system.
— Cooling or heating mode. (The image shows an example of a system in cooling mode)
— Total maximum length of the refrigerant lines: MVAS: 300 m, MVBM: 1000 m

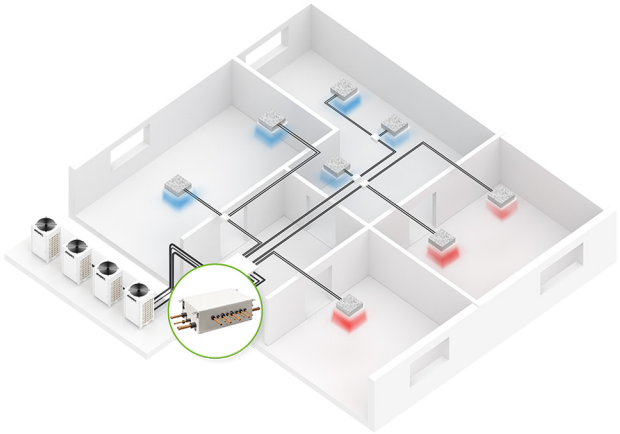
VRF systems - 3-pipe heat pump

The VRF MVBHR heat recovery system heats and cools at the same time with one single circuit.

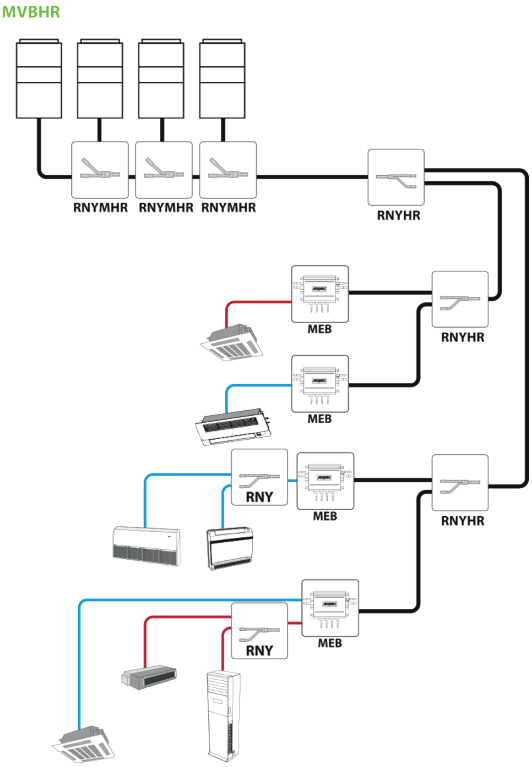
MVBHR recovers the heat produced during cooling and uses it to heat certain rooms cost-free, maximising energy efficiency and reducing energy costs.

Continuous comfort

Simultaneous heating and cooling of the rooms is what makes the VRF system a valid alternative to hydronic systems.



Example of a 3-pipe system



When dimensioning the cooling lines, exclusively refer to the technical manual.

A modular system made up of n base modules requires n-1 Y-joints.

MVBHR

— 3-pipe system.
— Simultaneous cold and hot operation.
— Total maximum length of the refrigerant lines: MVBHR: 1000 m

CONFIGURATIONS

MVAS combinations

MVAS connectable units

MVAS	Nominal cooling capacity (kW)	Min. no. of indoor units	Max. no. of indoor units
1201S	12,10	2	7
1401S	14,00	2	8
1601S	16,00	2	9
1201T	12,10	2	7
1401T	14,00	2	8
1601T	16,00	2	9
2242T	22,40	1	13
2803T	28,00	1	17
3352T	33,50	2	20

MVAS outdoor unit with single duct type indoor unit

MVAS	Nominal cooling capacity (kW)	No. indoor units	Compatible indoor unit
2242T	22,40	1	MVA2240DH
2803T	28,00	1	MVA2800DH

MVBM recommended configurations

	Nominal cooling capacity	MVBM combination Module				Connectible indoor units Number	
	(kW)	(A)	(B)	(C)	(D)	MINIMUM (1)	MAXIMUM (2)
Base Module	22,40	2240T	-	-	-	1	13
	28,00	2800T	-	-	-	1	16
	33,50	3350T	-	-	-	1	19
	40,00	4000T	-	-	-	1	23
	45,00	4500T	-	-	-	1	26
	50,40	5040T	-	-	-	1	29
	56,00	5600T	-	-	-	1	33
	61,50	6150T	-	-	-	2	36
Combinations	68,00	2800T	4000T	-	-	2	39
	73,00	2800T	4500T	-	-	2	43
	78,40	2800T	5040T	-	-	2	46
	84,00	2800T	5600T	-	-	2	50
	89,50	2800T	6150T	-	-	2	53
	95,00	3350T	6150T	-	-	2	56
	101,50	4000T	6150T	-	-	2	59
	106,50	4500T	6150T	-	-	2	63
	111,90	5040T	6150T	-	-	3	64
	117,50	5600T	6150T	-	-	3	64
	123,00	6150T	6150T	-	-	3	64
	129,00	2800T	4500T	5600T	-	3	64
	134,50	2800T	4500T	6150T	-	3	64
	140,00	3350T	4500T	6150T	-	3	66
	145,50	2800T	5600T	6150T	-	3	69
	151,00	2800T	6150T	6150T	-	3	71
	156,50	3350T	6150T	6150T	-	3	74
	163,00	4000T	6150T	6150T	-	3	77
	168,00	4500T	6150T	6150T	-	4	80
	173,40	5040T	6150T	6150T	-	4	80
	179,00	5600T	6150T	6150T	-	4	80
	184,50	6150T	6150T	6150T	-	4	80
	190,50	2800T	4500T	5600T	6150T	4	80
	195,90	2800T	5040T	5600T	6150T	4	80
	201,50	2800T	5600T	5600T	6150T	4	80
	207,00	2800T	5600T	6150T	6150T	4	80
	212,50	2800T	6150T	6150T	6150T	4	80
	218,00	3350T	6150T	6150T	6150T	4	80
	224,50	4000T	6150T	6150T	6150T	5	80
	229,50	4500T	6150T	6150T	6150T	5	80
	234,90	5040T	6150T	6150T	6150T	5	80
	240,50	5600T	6150T	6150T	6150T	5	80
	246,00	6150T	6150T	6150T	6150T	5	80

MVBHR recommended configurations

	Nominal cooling capacity	MVBHR combination				Connectible indoor units	
		Module				Number	
	(kW)	(A)	(B)	(C)	(D)	MINIMUM (1)	MAXIMUM (2)
Base Module	22,40	2240T	-	-	-	1	13
	28,00	2800T	-	-	-	1	16
	33,50	3350T	-	-	-	1	19
	40,00	4000T	-	-	-	1	23
	45,00	4500T	-	-	-	1	26
	50,40	5040T	-	-	-	1	29
	56,00	5600T	-	-	-	1	33
	61,50	6150T	-	-	-	2	36
Combinations	68,00	2800T	4000T	-	-	2	39
	73,00	2800T	4500T	-	-	2	43
	78,40	2800T	5040T	-	-	2	46
	84,00	2800T	5600T	-	-	2	50
	89,50	2800T	6150T	-	-	2	53
	95,00	3350T	6150T	-	-	2	56
	101,50	4000T	6150T	-	-	2	59
	106,50	4500T	6150T	-	-	2	63
	111,90	5040T	6150T	-	-	3	64
	117,50	5600T	6150T	-	-	3	64
	123,00	6150T	6150T	-	-	3	64
	129,00	2800T	4500T	5600T	-	3	64
	134,50	2800T	4500T	6150T	-	3	64
	140,00	3350T	4500T	6150T	-	3	66
	145,50	2800T	5600T	6150T	-	3	69
	151,00	2800T	6150T	6150T	-	3	71
	156,50	3350T	6150T	6150T	-	3	74
	163,00	4000T	6150T	6150T	-	3	77
	168,00	4500T	6150T	6150T	-	4	80
	173,40	5040T	6150T	6150T	-	4	80
	179,00	5600T	6150T	6150T	-	4	80
	184,50	6150T	6150T	6150T	-	4	80
	190,50	2800T	4500T	5600T	6150T	4	80
	195,90	2800T	5040T	5600T	6150T	4	80
	201,50	2800T	5600T	5600T	6150T	4	80
	207,00	2800T	5600T	6150T	6150T	4	80
	212,50	2800T	6150T	6150T	6150T	4	80
	218,00	3350T	6150T	6150T	6150T	4	80
	224,50	4000T	6150T	6150T	6150T	5	80
	229,50	4500T	6150T	6150T	6150T	5	80
	234,90	5040T	6150T	6150T	6150T	5	80
	240,50	5600T	6150T	6150T	6150T	5	80
	246,00	6150T	6150T	6150T	6150T	5	80

INDOOR UNIT PERFORMANCE DATA

MVA_WL

		MVA220WL	MVA280WL	MVA360WL	MVA450WL	MVA500WL	MVA560WL	MVA630WL	MVA710WL
Nominal cooling performances									
Cooling capacity (1)	kW	2,20	2,80	3,60	4,50	5,00	5,60	6,30	7,10
Nominal heating performances									
Heating capacity (2)	kW	2,50	3,20	4,00	5,00	5,60	6,30	7,10	7,50
Electric data									
Rated power input (3)	W	20	20	25	35	35	50	50	65
Fan									
Type	type	Inverter tangential	Inverter tangential	Inverter tangential	Inverter tangential	Inverter tangential	Inverter tangential	Inverter tangential	Inverter tangential
Air flow rate									
Minimum	m^3/h	300	300	320	500	501	650	650	650
Average	m^3/h	440	440	460	580	580	850	850	850
Maximum	m^3/h	500	500	630	850	850	1100	1100	1200
Sound power (4)									
Minimum	dB(A)	40,0	41,0	41,0	47,0	47,0	47,0	48,0	47,0
Average	dB(A)	43,0	43,0	45,0	50,0	50,0	51,0	51,0	51,0
Maximum	dB(A)	45,0	45,0	48,0	53,0	53,0	53,0	53,0	54,0
Sound pressure (5)									
Minimum	dB(A)	30,0	30,0	31,0	37,0	37,0	37,0	37,0	37,0
Average	dB(A)	33,0	33,0	35,0	40,0	40,0	41,0	41,0	41,0
Maximum	dB(A)	35,0	35,0	38,0	43,0	43,0	43,0	43,0	44,0
Refrigeration pipework									
Diameter of liquid refrigerant connections	mm (inch)	6,35 (1/4")	6,35 (1/4")	6,35 (1/4")	6,35 (1/4")	6,35 (1/4")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")
Diameter of refrigerant gas connections	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")	15,9 (5/8")
Power supply									
Indoor unit power supply		220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz
Indoor unit									
Condensate discharge diameter	mm	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0

(1) Cooling (EN 14511 and EN 14825) ambient air temperature 27 °C d.b. / 19 °C w.b.; outside air temperature 35 °C; turbo speed; length of refrigerant lines 5 m.
(2) Heating (EN 14511 and EN 14825) ambient air temperature 20 °C d.b.; outside air temperature 7 °C d.b. / 6 °C w.b.; turbo speed; length of refrigerant lines 5 m.
(3) The rated power input (rated current input) is the maximum input electrical power (maximum current input) from the system, in accordance with the Standards EN 60335-1 and EN 60335-2-40.
(4) Sound power calculated in free field, in accordance with UNI EN ISO 3744.
(5) Sound pressure measured in semi anechoic chamber at a distance of 1,5 m from the source.

MVA_D

		MVA222D	MVA252D	MVA282D	MVA322D	MVA362D	MVA402D
Nominal cooling performances							
Cooling capacity (1)	kW	2,20	2,50	2,80	3,20	3,60	4,00
Nominal heating performances							
Heating capacity (2)	kW	2,50	2,80	3,20	3,60	4,00	4,50
Electric data							
Rated power input (3)	W	78	78	78	78	78	78
Refrigeration pipework							
Diameter of liquid refrigerant connections	mm (inch)	6,35 (1/4")					
Diameter of refrigerant gas connections	mm (inch)		9,52 (3/8")			12,7 (1/2")	
Power supply							
Indoor unit power supply		220-240V ~ 50Hz					
Power supply 60Hz							
Indoor unit power supply		208-230V ~ 60Hz					
Indoor unit							
Condensate discharge diameter	mm	25,0 x 2	25,0 x 2	25,0 x 2	25,0 x 2	25,0 x 2	25,0 x 2
Fan							
Type	type	Inverter centrifugal					
Air flow rate							
Minimum	m^3/h	200	200	200	300	300	400
Average	m^3/h	350	350	350	400	400	550
Maximum	m^3/h	450	450	450	550	550	750
Sound power							
Minimum	dB(A)	34,0	34,0	34,0	37,0	37,0	39,0
Average	dB(A)	37,0	37,0	37,0	39,0	39,0	41,0
Maximum	dB(A)	42,0	42,0	42,0	43,0	43,0	45,0
Sound pressure							
Minimum	dB(A)	22,0	22,0	22,0	25,0	25,0	27,0
Average	dB(A)	25,0	25,0	25,0	27,0	27,0	29,0
Maximum	dB(A)	30,0	30,0	30,0	31,0	31,0	33,0
Useful static pressure							
Nominal	Pa	15	15	15	15	15	15
Range of static pressure	Pa	0~30					

		MVA452D	MVA502D	MVA562D	MVA632D	MVA712D	MVA802D
Nominal cooling performances							
Cooling capacity (1)	kW	4,50	5,00	5,60	6,30	7,10	8,00
Nominal heating performances							
Heating capacity (2)	kW	5,00	5,60	6,30	7,10	8,00	9,00
Electric data							
Rated power input (3)	W	78	78	117	117	154	154
Refrigeration pipework							
Diameter of liquid refrigerant connections	mm (inch)	6,35 (1/4")			9,52 (3/8")		
Diameter of refrigerant gas connections	mm (inch)	12,7 (1/2")			15,9 (5/8")		
Power supply							
Indoor unit power supply		220-240V ~ 50Hz					
Power supply 60Hz							
Indoor unit power supply		208-230V ~ 60Hz					
Indoor unit							
Condensate discharge diameter	mm	25,0 x 2	25,0 x 2	25,0 x 2	25,0 x 2	25,0 x 2	25,0 x 2
Fan							
Type	type	Inverter centrifugal					
Air flow rate							
Minimum	m^3/h	400	400	550	550	650	700
Average	m^3/h	550	550	700	700	850	950
Maximum	m^3/h	750	750	850	850	1100	1200
Sound power							
Minimum	dB(A)	39,0	39,0	41,0	41,0	42,0	43,0
Average	dB(A)	41,0	41,0	43,0	43,0	44,0	47,0
Maximum	dB(A)	45,0	45,0	47,0	47,0	49,0	52,0
Sound pressure							
Minimum	dB(A)	27,0	27,0	29,0	29,0	30,0	31,0
Average	dB(A)	29,0	29,0	31,0	31,0	32,0	35,0
Maximum	dB(A)	33,0	33,0	35,0	35,0	37,0	40,0
Useful static pressure							
Nominal	Pa	15	15	15	15	15	15
Range of static pressure	Pa	0~30					0-30

(1) Cooling (EN-14511 and EN-14825) Ambient air temperature 27°C D.B. / 19°C W.B.; Outside air temperature 35°C; Max speed; Length of Refrigerant Lines 5m.
(2) Heating (EN-14511 and EN-14825) Ambient air temperature 20°C D.B.; Outside air temperature 7°C D.B./6°C W.B.; Max speed; Length of Refrigerant Lines 5m.
(3) The rated power input (rated current input) is the maximum input electrical power (maximum current input) from the system, in accordance with the Standards EN 60335-1 and EN 60335-2-40.
Sound power measured in anechoic chamber at a distance of 1,0m from the source, according to EN 12102.
Sound pressure measured in semi anechoic chamber at a distance of 1,0m from the source, according to EN 12102.

		MVA901D	MVA1001D	MVA1121D	MVA1251D	MVA1401D
Nominal cooling performances						
Cooling capacity (1)	kW	9,00	10,00	11,20	12,50	14,00
Nominal heating performances						
Heating capacity (2)	kW	10,00	11,20	12,50	14,00	16,00
Electric data						
Rated power input (3)	W	130	130	130	170	170
Fan						
Type	type	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal
Air flow rate						
Minimum	m^3/h	900	1000	1100	1400	1400
Average	m^3/h	1250	1350	1500	1700	1700
Maximum	m^3/h	1500	1500	1700	2000	2000
High static pressure						
Nominal	Pa	50	50	50	50	50
Minimum	Pa	0	0	0	0	0
Maximum	Pa	80	80	80	80	80
Sound power (4)						
Minimum	dB(A)	47,0	47,0	47,0	52,0	52,0
Average	dB(A)	51,0	51,0	51,0	55,0	55,0
Maximum	dB(A)	55,0	55,0	55,0	57,0	57,0
Sound pressure (5)						
Minimum	dB(A)	32,0	32,0	32,0	37,0	37,0
Average	dB(A)	36,0	36,0	36,0	40,0	40,0
Maximum	dB(A)	40,0	40,0	40,0	42,0	42,0
Refrigeration pipework						
Diameter of liquid refrigerant connections	mm (inch)	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")
Diameter of refrigerant gas connections	mm (inch)	15,9 (5/8")	15,9 (5/8")	15,9 (5/8")	15,9 (5/8")	15,9 (5/8")
Power supply						
Indoor unit power supply		220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz
Indoor unit						
Condensate discharge diameter	mm	25,0	25,0	25,0	25,0	25,0

(1) Cooling (EN 14511 and EN 14825) ambient air temperature 27 °C d.b. / 19 °C w.b.; outside air temperature 35 °C; turbo speed; length of refrigerant lines 5 m.
(2) Heating (EN 14511 and EN 14825) ambient air temperature 20 °C d.b.; outside air temperature 7 °C d.b. / 6 °C w.b.; turbo speed; length of refrigerant lines 5 m.
(3) The rated power input (rated current input) is the maximum input electrical power (maximum current input) from the system, in accordance with the Standards EN 60335-1 and EN 60335-2-40.
(4) Sound power calculated in free field, in accordance with UNI EN ISO 3744.
(5) Sound pressure measured in semi anechoic chamber at a distance of 1,5 m from the source.

MVA_DH

		MVA222DH	MVA252DH	MVA282DH	MVA322DH	MVA362DH	MVA402DH	MVA452DH	MVA502DH	MVA562DH
Nominal cooling performances										
Cooling capacity (1)	kW	2,20	2,50	2,80	3,20	3,60	4,00	4,50	5,00	5,60
Nominal heating performances										
Heating capacity (2)	kW	2,50	2,80	3,20	3,60	4,00	4,50	5,00	5,60	6,30
Electric data										
Rated power input (3)	W	50	50	50	50	50	100	100	100	105
Refrigeration pipework										
Diameter of liquid refrigerant connections	mm (inch)	6,35 (1/4")								9,52 (3/8")
Diameter of refrigerant gas connections	mm (inch)	9,52 (3/8")					12,7 (1/2")			15,9 (5/8")
Power supply										
Indoor unit power supply		220-240V ~ 50Hz								
Power supply 60Hz										
Indoor unit power supply		208-230V ~ 60Hz								
Indoor unit										
Condensate discharge diameter	mm	25 x 2,5	25 x 2,5	25 x 2,5	25 x 2,5	25 x 2,5	25 x 2,5	25 x 2,5	25 x 2,5	25 x 2,5
Fan										
Type	type	Inverter centrifugal								
Air flow rate										
Minimum	m^3/h	400	400	400	420	420	600	600	600	700
Average	m^3/h	480	480	480	500	500	700	700	700	800
Maximum	m^3/h	550	550	550	600	600	850	850	850	1000
Sound power										
Minimum	dB(A)	39,0	39,0	39,0	40,0	40,0	42,0	42,0	42,0	42,0
Average	dB(A)	41,0	41,0	41,0	43,0	43,0	46,0	46,0	46,0	46,0
Maximum	dB(A)	45,0	45,0	45,0	46,0	46,0	50,0	50,0	50,0	50,0
Sound pressure										
Minimum	dB(A)	29,0	29,0	29,0	30,0	30,0	32,0	32,0	32,0	32,0
Average	dB(A)	31,0	31,0	31,0	33,0	33,0	36,0	36,0	36,0	36,0
Maximum	dB(A)	35,0	35,0	35,0	36,0	36,0	40,0	40,0	40,0	40,0
Useful static pressure										
Nominal	Pa	50	50	50	50	50	50	50	50	90
Range of static pressure	Pa	0~80								0~200

		MVA632DH	MVA712DH	MVA802DH	MVA902DH	MVA1002DH	MVA1122DH	MVA1252DH	MVA1402DH	MVA1602DH
Nominal cooling performances										
Cooling capacity (1)	kW	6,30	7,10	8,00	9,00	10,00	11,20	12,50	14,00	16,00
Nominal heating performances										
Heating capacity (2)	kW	7,10	8,00	9,00	10,00	11,20	12,50	14,00	16,00	18,00
Electric data										
Rated power input (3)	W	105	110	110	170	170	170	170	240	240
Refrigeration pipework										
Diameter of liquid refrigerant connections	mm (inch)	9,52 (3/8")								
Diameter of refrigerant gas connections	mm (inch)	15,9 (5/8")								19,05 (3/4")
Power supply										
Indoor unit power supply		220-240V ~ 50Hz								
Power supply 60Hz										
Indoor unit power supply		208-230V ~ 60Hz								
Indoor unit										
Condensate discharge diameter	mm	25 x 2,5	25 x 2,5	25 x 2,5	25 x 2,5	25 x 2,5	25 x 2,5	25 x 2,5	25 x 2,5	25 x 2,5
Fan										
Type	type	Inverter centrifugal								
Air flow rate										
Minimum	m^3/h	700	950	950	1250	1250	1400	1400	1650	1650
Average	m^3/h	800	1050	1050	1450	1450	1600	1600	1900	1900
Maximum	m^3/h	1000	1250	1250	1800	1800	2000	2000	2350	2350
Sound power										
Minimum	dB(A)	42,0	42,0	42,0	44,0	44,0	46,0	47,0	48,0	50,0
Average	dB(A)	46,0	46,0	46,0	48,0	48,0	49,0	50,0	51,0	53,0
Maximum	dB(A)	50,0	50,0	50,0	52,0	52,0	53,0	54,0	54,0	55,0
Sound pressure										
Minimum	dB(A)	32,0	32,0	32,0	34,0	34,0	34,0	37,0	38,0	40,0
Average	dB(A)	36,0	36,0	36,0	38,0	38,0	38,0	40,0	41,0	43,0
Maximum	dB(A)	40,0	40,0	40,0	42,0	42,0	43,0	44,0	44,0	45,0
Useful static pressure										
Nominal	Pa	90	90	90	90	90	90	90	90	90
Range of static pressure	Pa	0~200			0-200			0~200		

(1) Cooling (EN-14511 and EN-14825) Ambient air temperature 27°C D.B. / 19°C W.B.; Outside air temperature 35°C; Max speed; Length of Refrigerant Lines 5m.
(2) Heating (EN-14511 and EN-14825) Ambient air temperature 20°C D.B.; Outside air temperature 7°C D.B./6°C W.B.; Max speed; Length of Refrigerant Lines 5m.
(3) The rated power input (rated current input) is the maximum input electrical power (maximum current input) from the system, in accordance with the Standards EN 60335-1 and EN 60335-2-40.
Sound power measured in anechoic chamber at a distance of 1,0m from the source, according to EN 12102.
Sound pressure measured in semi anechoic chamber at a distance of 1,0m from the source, according to EN 12102.

		MVA 2240 DH	MVA 2800 DH
Nominal cooling performances			
Cooling capacity (1)	kW	22,40	28,00
Nominal heating performances			
Heating capacity (2)	kW	24,00	30,00
Electric data			
Rated power input (3)	W	960	1250
Air flow rate			
Minimum	m^3/h	-	-
Average	m^3/h	-	-
Maximum	m^3/h	4000	4400
High static pressure			
Nominal	Pa	150	150
Minimum	Pa	-	-
Maximum	Pa	-	-
Sound power (4)			
Minimum	dB(A)	59,0	60,0
Average	dB(A)	62,0	62,0
Maximum	dB(A)	64,0	65,0
Sound pressure (5)			
Minimum	dB(A)	49,0	50,0
Average	dB(A)	52,0	52,0
Maximum	dB(A)	54,0	55,0
Refrigeration pipework			
Diameter of liquid refrigerant connections	mm (inch)	19,05 (3/4")	22,2 (7/8")
Diameter of refrigerant gas connections	mm (inch)	9,52 (3/8")	9,52 (3/8")
Power supply			
Indoor unit power supply		220-240V ~ 50Hz	220-240V ~ 50Hz
Indoor unit			
Condensate discharge diameter	mm	30,0	30,0

(1) Cooling (EN 14511 and EN 14825) ambient air temperature 27 °C d.b. / 19 °C w.b.; outside air temperature 35 °C; turbo speed; length of refrigerant lines 5 m.
(2) Heating (EN 14511 and EN 14825) ambient air temperature 20 °C d.b.; outside air temperature 7 °C d.b. / 6 °C w.b.; turbo speed; length of refrigerant lines 5 m.
(3) The rated power input (rated current input) is the maximum input electrical power (maximum current input) from the system, in accordance with the Standards EN 60335-1 and EN 60335-2-40.
(4) Sound power calculated in free field, in accordance with UNI EN ISO 3744.
(5) Sound pressure measured in semi anechoic chamber at a distance of 1,5 m from the source.

MVA_DV

		MVA220DV	MVA280DV	MVA360DV	MVA450DV	MVA560DV	MVA630DV	MVA710DV
Nominal cooling performances								
Cooling capacity (1)	kW	2,20	2,80	3,60	4,50	5,60	6,30	7,10
Nominal heating performances								
Heating capacity (2)	kW	2,50	3,20	4,00	5,00	6,30	7,10	8,00
Electric data								
Rated power input (3)	W	35	35	43	45	80	80	90
Fan								
Type	type	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal
Air flow rate								
Minimum	m^3/h	250	250	350	400	600	600	700
Average	m^3/h	350	350	450	500	750	750	900
Maximum	m^3/h	450	450	550	650	900	900	1100
High static pressure								
Nominal	Pa	10	10	10	15	15	15	15
Minimum	Pa	0	0	0	0	0	0	0
Maximum	Pa	40	40	40	60	60	60	60
Sound power (4)								
Minimum	dB(A)	35,0	35,0	38,0	38,0	40,0	40,0	43,0
Average	dB(A)	38,0	38,0	41,0	41,0	43,0	43,0	45,0
Maximum	dB(A)	40,0	40,0	43,0	43,0	45,0	45,0	47,0
Sound pressure (5)								
Minimum	dB(A)	25,0	25,0	28,0	28,0	30,0	30,0	33,0
Average	dB(A)	28,0	28,0	31,0	31,0	33,0	33,0	35,0
Maximum	dB(A)	30,0	30,0	33,0	33,0	35,0	35,0	37,0
Refrigeration pipework								
Diameter of liquid refrigerant connections	mm (inch)	6,35 (1/4")	6,35 (1/4")	6,35 (1/4")	6,35 (1/4")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")
Diameter of refrigerant gas connections	mm (inch)	9,52 (3/8")	9,52 (3/8")	12,7 (1/2")	12,7 (1/2")	15,9 (5/8")	15,9 (5/8")	15,9 (5/8")
Power supply								
Indoor unit power supply		220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz
Indoor unit								
Condensate discharge diameter	mm	25,0	25,0	25,0	25,0	25,0	25,0	25,0

(1) Cooling (EN 14511 and EN 14825) ambient air temperature 27 °C d.b. / 19 °C w.b.; outside air temperature 35 °C; turbo speed; length of refrigerant lines 5 m.
(2) Heating (EN 14511 and EN 14825) ambient air temperature 20 °C d.b.; outside air temperature 7 °C d.b. / 6 °C w.b.; turbo speed; length of refrigerant lines 5 m.
(3) The rated power input (rated current input) is the maximum input electrical power (maximum current input) from the system, in accordance with the Standards EN 60335-1 and EN 60335-2-40.
(4) Sound power calculated in free field, in accordance with UNI EN ISO 3744.
(5) Sound pressure measured in semi anechoic chamber at a distance of 1,5 m from the source.

MVA_CS

		MVA151CS	MVA181CS	MVA221CS	MVA281CS	MVA361CS	MVA451CS	MVA501CS	MVA561CS
Nominal cooling performances									
Cooling capacity (1)	kW	1,50	1,80	2,20	2,80	3,60	4,50	5,00	5,60
Nominal heating performances									
Heating capacity (2)	kW	1,80	2,20	2,50	3,20	4,00	5,00	5,60	6,30
Electric data									
Rated power input (3)	W	30	30	30	30	30	45	45	45
Fan									
Type	type	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal
Air flow rate									
Minimum	m^3/h	370	370	370	420	480	560	560	560
Average	m^3/h	420	420	460	480	550	650	650	650
Maximum	m^3/h	460	460	500	570	620	730	730	730
Sound power (4)									
Minimum	dB(A)	39,0	39,0	39,0	42,0	45,0	53,0	43,0	53,0
Average	dB(A)	44,0	44,0	45,0	47,0	49,0	55,0	55,0	55,0
Maximum	dB(A)	47,0	47,0	50,0	50,0	52,0	57,0	57,0	57,0
Sound pressure (5)									
Minimum	dB(A)	25,0	25,0	25,0	28,0	31,0	39,0	39,0	39,0
Average	dB(A)	30,0	30,0	31,0	33,0	35,0	41,0	41,0	41,0
Maximum	dB(A)	33,0	33,0	36,0	36,0	38,0	43,0	43,0	43,0
Refrigeration pipework									
Diameter of liquid refrigerant connections	mm (inch)	6,35 (1/4")	6,35 (1/4")	6,35 (1/4")	6,35 (1/4")	6,35 (1/4")	6,35 (1/4")	6,35 (1/4")	9,52 (3/8")
Diameter of refrigerant gas connections	mm (inch)	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")	12,7 (1/2")	12,7 (1/2")	12,7 (1/2")	15,9 (5/8")
Power supply									
Indoor unit power supply		220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz
Indoor unit									
Condensate discharge diameter	mm	25,0	25,0	25,0	25,0	25,0	25,0	25,0	25,0

(1) Cooling (EN 14511 and EN 14825) ambient air temperature 27 °C d.b. / 19 °C w.b.; outside air temperature 35 °C; turbo speed; length of refrigerant lines 5 m.
(2) Heating (EN 14511 and EN 14825) ambient air temperature 20 °C d.b.; outside air temperature 7 °C d.b. / 6 °C w.b.; turbo speed; length of refrigerant lines 5 m.
(3) The rated power input (rated current input) is the maximum input electrical power (maximum current input) from the system, in accordance with the Standards EN 60335-1 and EN 60335-2-40.
(4) Sound power calculated in free field, in accordance with UNI EN ISO 3744.
(5) Sound pressure measured in semi anechoic chamber at a distance of 1,5 m from the source.

MVA_C

		MVA221C	MVA281C	MVA361C	MVA451C	MVA501C	MVA561C	MVA631C
Nominal cooling performances								
Cooling capacity (1)	kW	2,20	2,80	3,60	4,50	5,00	5,60	6,30
Nominal heating performances								
Heating capacity (2)	kW	2,50	3,20	4,00	5,00	5,60	6,30	7,10
Electric data								
Rated power input (3)	W	26	26	26	26	28	35	60
Fan								
Type	type	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal
Air flow rate								
Minimum	m^3/h	600	600	600	600	700	750	850
Average	m^3/h	700	700	700	700	800	850	950
Maximum	m^3/h	800	800	800	800	900	950	1150
Sound power (4)								
Minimum	dB(A)	42,0	42,0	42,0	42,0	43,0	44,0	45,0
Average	dB(A)	44,0	44,0	44,0	44,0	46,0	47,0	48,0
Maximum	dB(A)	47,0	47,0	47,0	48,0	49,0	51,0	51,0
Sound pressure (5)								
Minimum	dB(A)	28,0	28,0	28,0	28,0	29,0	30,0	31,0
Average	dB(A)	30,0	30,0	30,0	30,0	32,0	33,0	34,0
Maximum	dB(A)	33,0	33,0	33,0	34,0	35,0	37,0	37,0
Refrigeration pipework								
Diameter of liquid refrigerant connections	mm (inch)	6,35 (1/4")	6,35 (1/4")	6,35 (1/4")	6,35 (1/4")	6,35 (1/4")	9,52 (3/8")	9,52 (3/8")
Diameter of refrigerant gas connections	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")
Power supply								
Indoor unit power supply		220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz
Indoor unit								
Condensate discharge diameter	mm	25,0	25,0	25,0	25,0	25,0	25,0	25,0

(1) Cooling (EN 14511 and EN 14825) ambient air temperature 27 °C d.b. / 19 °C w.b.; outside air temperature 35 °C; turbo speed; length of refrigerant lines 5 m.
(2) Heating (EN 14511 and EN 14825) ambient air temperature 20 °C d.b.; outside air temperature 7 °C d.b. / 6 °C w.b.; turbo speed; length of refrigerant lines 5 m.
(3) The rated power input (rated current input) is the maximum input electrical power (maximum current input) from the system, in accordance with the Standards EN 60335-1 and EN 60335-2-40.
(4) Sound power calculated in free field, in accordance with UNI EN ISO 3744.
(5) Sound pressure measured in semi anechoic chamber at a distance of 1,5 m from the source.

		MVA711C	MVA801C	MVA901C	MVA1001C	MVA1121C	MVA1251C	MVA1401C	MVA1601C
Nominal cooling performances									
Cooling capacity (1)	kW	7,10	8,00	9,00	10,00	11,20	12,50	14,00	16,00
Nominal heating performances									
Heating capacity (2)	kW	8,00	9,00	10,00	11,20	12,50	14,00	16,00	18,00
Electric data									
Rated power input (3)	W	60	85	85	85	115	115	115	170
Fan									
Type	type	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal
Air flow rate									
Minimum	m^3/h	850	900	900	900	1100	1100	1100	1430
Average	m^3/h	950	1000	1000	1000	1300	1300	1300	1800
Maximum	m^3/h	1150	1250	1250	1250	1650	1650	1650	2000
Sound power (4)									
Minimum	dB(A)	45,0	48,0	48,0	48,0	53,0	53,0	53,0	54,0
Average	dB(A)	48,0	51,0	51,0	51,0	55,0	55,0	55,0	60,0
Maximum	dB(A)	51,0	53,0	53,0	53,0	57,0	57,0	57,0	63,0
Sound pressure (5)									
Minimum	dB(A)	31,0	34,0	34,0	34,0	39,0	39,0	39,0	42,0
Average	dB(A)	34,0	37,0	37,0	37,0	41,0	41,0	41,0	48,0
Maximum	dB(A)	37,0	39,0	39,0	39,0	43,0	43,0	43,0	51,0
Refrigeration pipework									
Diameter of liquid refrigerant connections	mm (inch)	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")
Diameter of refrigerant gas connections	mm (inch)	15,9 (5/8")	15,9 (5/8")	15,9 (5/8")	15,9 (5/8")	15,9 (5/8")	15,9 (5/8")	15,9 (5/8")	19,05 (3/4")
Power supply									
Indoor unit power supply		220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz
Indoor unit									
Condensate discharge diameter	mm	25,0	25,0	25,0	25,0	25,0	25,0	25,0	25,0

(1) Cooling (EN 14511 and EN 14825) ambient air temperature 27 °C d.b. / 19 °C w.b.; outside air temperature 35 °C; turbo speed; length of refrigerant lines 5 m.
(2) Heating (EN 14511 and EN 14825) ambient air temperature 20 °C d.b.; outside air temperature 7 °C d.b. / 6 °C w.b.; turbo speed; length of refrigerant lines 5 m.
(3) The rated power input (rated current input) is the maximum input electrical power (maximum current input) from the system, in accordance with the Standards EN 60335-1 and EN 60335-2-40.
(4) Sound power calculated in free field, in accordance with UNI EN ISO 3744.
(5) Sound pressure measured in semi anechoic chamber at a distance of 1,5 m from the source.

MVA_C1

		MVA220C1	MVA280C1	MVA360C1	MVA450C1	MVA500C1
Nominal cooling performances						
Cooling capacity (1)	kW	2,20	2,80	3,60	4,50	5,00
Nominal heating performances						
Heating capacity (2)	kW	2,50	3,20	4,00	5,00	5,60
Electric data						
Rated power input (3)	W	30	30	30	30	30
Fan						
Type	type	Inverter tangential	Inverter tangential	Inverter tangential	Inverter tangential	Inverter tangential
Air flow rate						
Minimum	m^3/h	450	450	450	500	500
Average	m^3/h	500	500	500	600	600
Maximum	m^3/h	600	600	600	830	830
Sound power (4)						
Minimum	dB(A)	38,0	38,0	38,0	40,0	40,0
Average	dB(A)	42,0	42,0	42,0	45,0	45,0
Maximum	dB(A)	46,0	46,0	46,0	50,0	50,0
Sound pressure (5)						
Minimum	dB(A)	28,0	28,0	28,0	30,0	30,0
Average	dB(A)	32,0	32,0	32,0	35,0	35,0
Maximum	dB(A)	36,0	36,0	36,0	40,0	40,0
Refrigeration pipework						
Diameter of liquid refrigerant connections	mm (inch)	6,35 (1/4")	6,35 (1/4")	6,35 (1/4")	6,35 (1/4")	6,35 (1/4")
Diameter of refrigerant gas connections	mm (inch)	9,52 (3/8")	9,52 (3/8")	12,7 (1/2")	12,7 (1/2")	12,7 (1/2")
Power supply						
Indoor unit power supply		220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz
Indoor unit						
Condensate discharge diameter	mm	25,0	25,0	25,0	25,0	25,0

(1) Cooling (EN 14511 and EN 14825) ambient air temperature 27 °C d.b. / 19 °C w.b.; outside air temperature 35 °C; turbo speed; length of refrigerant lines 5 m.
(2) Heating (EN 14511 and EN 14825) ambient air temperature 20 °C d.b.; outside air temperature 7 °C d.b. / 6 °C w.b.; turbo speed; length of refrigerant lines 5 m.
(3) The rated power input (rated current input) is the maximum input electrical power (maximum current input) from the system, in accordance with the Standards EN 60335-1 and EN 60335-2-40.
(4) Sound power calculated in free field, in accordance with UNI EN ISO 3744.
(5) Sound pressure measured in semi anechoic chamber at a distance of 1,5 m from the source.

MVA_F

		MVA281F	MVA361F	MVA501F	MVA561F	MVA631F	MVA711F	MVA901F	MVA1121F	MVA1251F	MVA1401F	MVA1601F
Nominal cooling performances												
Cooling capacity (1)	kW	2,80	3,60	5,00	5,60	6,30	7,10	9,00	11,20	12,50	14,00	16,00
Nominal heating performances												
Heating capacity (2)	kW	3,20	4,00	5,60	6,30	7,10	8,00	10,00	12,50	14,00	16,00	18,00
Electric data												
Rated power input (3)	W	35	35	55	55	80	80	120	120	120	150	175
Fan												
Type	type	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal
Air flow rate												
Minimum	m^3/h	450	450	600	600	1050	1050	1250	1400	1400	1600	1650
Average	m^3/h	500	500	650	650	1200	1200	1400	1600	1600	1750	1850
Maximum	m^3/h	600	600	750	750	1350	1350	1550	1800	1800	2000	2150
Sound power (4)												
Minimum	dB(A)	45,0	45,0	48,0	48,0	54,0	54,0	54,0	54,0	54,0	55,0	57,0
Average	dB(A)	48,0	48,0	51,0	51,0	57,0	57,0	56,0	56,0	56,0	57,0	60,0
Maximum	dB(A)	52,0	52,0	54,0	54,0	60,0	60,0	59,0	59,0	59,0	61,0	64,0
Sound pressure (5)												
Minimum	dB(A)	29,0	29,0	36,0	36,0	38,0	38,0	41,0	42,0	42,0	43,0	45,0
Average	dB(A)	32,0	32,0	39,0	39,0	41,0	41,0	44,0	44,0	44,0	45,0	48,0
Maximum	dB(A)	36,0	36,0	42,0	42,0	44,0	44,0	47,0	47,0	47,0	49,0	52,0
Refrigeration pipework												
Diameter of liquid refrigerant connections	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")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")
Diameter of refrigerant gas connections	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")	15,9 (5/8")	15,9 (5/8")	19,05 (3/4")
Power supply												
Indoor unit power supply		220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz
Indoor unit												
Condensate discharge diameter	mm	17,0	17,0	17,0	17,0	17,0	17,0	17,0	17,0	17,0	17,0	17,0

(1) Cooling (EN 14511 and EN 14825) ambient air temperature 27 °C d.b. / 19 °C w.b.; outside air temperature 35 °C; turbo speed; length of refrigerant lines 5 m.
(2) Heating (EN 14511 and EN 14825) ambient air temperature 20 °C d.b.; outside air temperature 7 °C d.b. / 6 °C w.b.; turbo speed; length of refrigerant lines 5 m.
(3) The rated power input (rated current input) is the maximum input electrical power (maximum current input) from the system, in accordance with the Standards EN 60335-1 and EN 60335-2-40.
(4) Sound power calculated in free field, in accordance with UNI EN ISO 3744.
(5) Sound pressure measured in semi anechoic chamber at a distance of 1,5 m from the source.

MVA_FS

		MVA220FS	MVA280FS	MVA360FS	MVA450FS	MVA500FS
Nominal cooling performances						
Cooling capacity (1)	kW	2,20	2,80	3,60	4,50	5,00
Nominal heating performances						
Heating capacity (2)	kW	2,50	3,20	4,00	5,00	5,50
Electric data						
Rated power input (3)	W	15	15	20	40	40
Fan						
Type	type	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal	Inverter centrifugal
Air flow rate						
Minimum	m^3/h	270	270	310	500	500
Average	m^3/h	320	320	400	600	600
Maximum	m^3/h	400	400	480	680	680
Sound power (4)						
Minimum	dB(A)	37,0	37,0	42,0	49,0	49,0
Average	dB(A)	43,0	43,0	47,0	53,0	53,0
Maximum	dB(A)	48,0	48,0	50,0	56,0	56,0
Sound pressure (5)						
Minimum	dB(A)	27,0	27,0	32,0	39,0	39,0
Average	dB(A)	33,0	33,0	37,0	43,0	43,0
Maximum	dB(A)	38,0	38,0	40,0	46,0	46,0
Refrigeration pipework						
Diameter of liquid refrigerant connections	mm (inch)	6,35 (1/4")	6,35 (1/4")	6,35 (1/4")	6,35 (1/4")	6,35 (1/4")
Diameter of refrigerant gas connections	mm (inch)	9,52 (3/8")	9,52 (3/8")	12,7 (1/2")	12,7 (1/2")	12,7 (1/2")
Power supply						
Indoor unit power supply		220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz
Indoor unit						
Condensate discharge diameter	mm	17,2	17,2	17,2	17,2	17,2

(1) Cooling (EN 14511 and EN 14825) ambient air temperature 27 °C d.b. / 19 °C w.b.; outside air temperature 35 °C; turbo speed; length of refrigerant lines 5 m.
(2) Heating (EN 14511 and EN 14825) ambient air temperature 20 °C d.b.; outside air temperature 7 °C d.b. / 6 °C w.b.; turbo speed; length of refrigerant lines 5 m.
(3) The rated power input (rated current input) is the maximum input electrical power (maximum current input) from the system, in accordance with the Standards EN 60335-1 and EN 60335-2-40.
(4) Sound power calculated in free field, in accordance with UNI EN ISO 3744.
(5) Sound pressure measured in semi anechoic chamber at a distance of 1,5 m from the source.

MVA_V

		MVA1000V	MVA1400V
Nominal cooling performances			
Cooling capacity (1)	kW	10,00	14,00
Nominal heating performances			
Heating capacity (2)	kW	11,00	15,00
Electric data			
Rated power input (3)	W	200	200
Fan			
Type	type	Inverter centrifugal	Inverter centrifugal
Air flow rate			
Minimum	m^3/h	1400	1400
Average	m^3/h	1600	1600
Maximum	m^3/h	1850	1850
Sound power (4)			
Minimum	dB(A)	56,0	56,0
Average	dB(A)	58,0	58,0
Maximum	dB(A)	60,0	60,0
Sound pressure (5)			
Minimum	dB(A)	46,0	46,0
Average	dB(A)	48,0	48,0
Maximum	dB(A)	50,0	50,0
Refrigeration pipework			
Diameter of liquid refrigerant connections	mm (inch)	9,52 (3/8")	9,52 (3/8")
Diameter of refrigerant gas connections	mm (inch)	15,9 (5/8")	15,9 (5/8")
Power supply			
Indoor unit power supply		220-240V ~ 50Hz	220-240V ~ 50Hz
Indoor unit			
Condensate discharge diameter	mm	31,0	31,0

(1) Cooling (EN 14511 and EN 14825) ambient air temperature 27 °C d.b. / 19 °C w.b.; outside air temperature 35 °C; turbo speed; length of refrigerant lines 5 m.
(2) Heating (EN 14511 and EN 14825) ambient air temperature 20 °C d.b.; outside air temperature 7 °C d.b. / 6 °C w.b.; turbo speed; length of refrigerant lines 5 m.
(3) The rated power input (rated current input) is the maximum input electrical power (maximum current input) from the system, in accordance with the Standards EN 60335-1 and EN 60335-2-40.
(4) Sound power calculated in free field, in accordance with UNI EN ISO 3744.
(5) Sound pressure measured in semi anechoic chamber at a distance of 1,5 m from the source.

MVA_ERV

		MVA500ERV	MVA800ERV	MVA1000ERV
Nominal cooling performances				
Cooling capacity (1)	kW	8,50	12,00	14,50
Cooling capacity of finned pack heat exchanger (2)	kW	3,60	6,30	8,00
Nominal heating performances				
Heating capacity (3)	kW	4,00	10,60	12,00
Heating capacity of finned pack heat exchanger	kW	2,00	8,04	8,40
Heat recovery unit				
Unit type		UVNR	UVNR	UVNR
Thermal efficiency (4)	%	73	74	73
Fans				
Commissioning	type	Speed variator	Speed variator	Speed variator
SFP int	$W/(m^3/s)$	1099,57	1118,00	1059,20
Nominal external pressure Δp (5)	Pa	150	150	150
Type of fan	Type	Centrifugal	Centrifugal	Centrifugal
Nominal air flow rate	m^3/h	500	800	1000
Sound data				
Sound power level	dB(A)	55,0	59,0	62,0
General data				
Rated power input	W	270	440	640
Diameter of liquid refrigerant connections	mm (inch)	7,89 (5/16")	9,52 (3/8")	9,52 (3/8")
Diameter of refrigerant gas connections	mm (inch)	12,7 (1/2")	15,9 (5/8")	15,9 (5/8")
Condensate discharge diameter	mm	26,0	26,0	26,0
Heat recovery unit				
Power supply		220-240V ~ 50Hz	220-240V ~ 50Hz	220-240V ~ 50Hz

(1) Cooling: room air temperature 27 °C d.b. / 19.5 °C w.b.; outside air temperature 35 °C; turbo speed; cooling line length 5 m; indoor and outdoor units at the same height.
(2) Use the finned pack heat exchanger power (cooling) to make the calculation and select the unit.
(3) Heating: room air temperature 20 °C d.b.; outside air temperature 7 °C d.b. / 6 °C w.b.; turbo speed; cooling line length 5 m; indoor and outdoor units at the same height.
(4) Thermal efficiency complying with European regulation EU 1253/2014.
(5) Performances referring to clean filters.
The air flow rate is calculated on the basis of the nominal high static pressure at high fan speed. It may vary according to the real installation conditions.
The nominal static pressure is the effective pressure value declared for a standard unit when it leaves the factory. The use of other filters may alter the unit performance values.

2-PIPE SYSTEM OUTDOOR UNIT PERFORMANCE DATA

		MVAS 1201S	MVAS 1201T	MVAS 1401S	MVAS 1401T	MVAS 1601S	MVAS 1601T
Nominal cooling performances							
Cooling capacity (1)	kW	12,10	12,10	14,00	14,00	16,00	16,00
Cooling input power (1)	kW	3,03	3,03	3,59	3,59	4,75	4,75
Nominal heating performances							
Heating capacity (2)	kW	14,00	14,00	16,50	16,50	18,00	18,00
Heating input power (2)	kW	3,27	3,27	3,95	3,95	4,65	4,65
Fan							
Type	type	Inverter axial	Inverter axial	Inverter axial	Inverter axial	Inverter axial	Inverter axial
Number	no.	2	2	2	2	2	2
Air flow rate							
Nominal	m^3/h	6000	6000	6300	6300	6600	6600
Sound pressure (3)							
Nominal	dB(A)	57,0	57,0	58,0	58,0	58,0	58,0
Compressor							
Type	type	Scroll inverter	Scroll inverter	Scroll inverter	Scroll inverter	Scroll inverter	Scroll inverter
Number	no.	1	1	1	1	1	1
Refrigerant	type	R410A	R410A	R410A	R410A	R410A	R410A
Refrigerant charge	kg	3,3	3,3	3,3	3,3	3,3	3,3
Electric data							
Rated current input (4)	A	30,4	11,1	33,7	12,0	36,3	12,5
Refrigeration pipework							
Maximum refrigerant tube length	m	300	300	300	300	300	300
Power supply							
Outdoor unit power supply		220-245V ~ 50Hz	380-415V ~ 3N 50Hz	220-245V ~ 50Hz	380-415V ~ 3N 50Hz	220-245V ~ 50Hz	380-415V ~ 3N 50Hz

(1) Cooling (EN 14511 and EN 14825) ambient air temperature 27 °C d.b. / 19 °C w.b.; outside air temperature 35 °C; turbo speed; length of refrigerant lines 5 m.
(2) Heating (EN 14511 and EN 14825) ambient air temperature 20 °C d.b.; outside air temperature 7 °C d.b. / 6 °C w.b.; turbo speed; length of refrigerant lines 5 m.
(3) Sound pressure measured in semi anechoic chamber at a distance of 1,5 m from the source.
(4) The rated power input (rated current input) is the maximum input electrical power (maximum current input) from the system, in accordance with the Standards EN 60335-1 and EN 60335-2-40.

		MVAS 2242T	MVAS 2803T	MVAS 3352T
Nominal cooling performances				
Cooling capacity (1)	kW	22,40	28,00	33,50
Cooling input power (1)	kW	6,12	13,02	12,88
Nominal heating performances				
Heating capacity (2)	kW	22,40	28,00	33,50
Heating input power (2)	kW	4,90	8,00	10,47
Fan				
Type	type	Inverter axial	Inverter axial	Inverter axial
Number	no.	2	2	2
Air flow rate				
Nominal	m^3/h	8000	11000	11000
Sound data calculated in cooling mode				
Maximum sound pressure level	dB(A)	58,0	62,0	62,0
Maximum sound power level	dB(A)	78,0	80,0	80,0
Sound data calculated in heating mode				
Maximum sound pressure level	dB(A)	58,0	64,0	64,0
Maximum sound power level	dB(A)	79,0	82,0	82,0
Compressor				
Type	type	Rotary	Rotary	Rotary
Number	no.	1	1	1
Refrigerant	type	R410A	R410A	R410A
Refrigerant charge	kg	5,5	7,1	8,5
Electric data				
Rated current input (3)	A	17,2	22,5	24,5
Refrigeration pipework				
Maximum refrigerant tube length	m	300	300	300
Power supply				
Outdoor unit power supply		380-415V ~ 3N 50Hz	380-415V ~ 3N 50Hz	380-415V ~ 3N 50Hz

(1) Cooling (EN 14511 and EN 14825) ambient air temperature 27 °C d.b. / 19 °C w.b.; outside air temperature 35 °C; turbo speed; length of refrigerant lines 5 m.
(2) Heating (EN 14511 and EN 14825) ambient air temperature 20 °C d.b.; outside air temperature 7 °C d.b. / 6 °C w.b.; turbo speed; length of refrigerant lines 5 m.
(3) The rated power input (rated current input) is the maximum input electrical power (maximum current input) from the system, in accordance with the Standards EN 60335-1 and EN 60335-2-40.

		MVBM 2240T	MVBM 2800T	MVBM 3350T	MVBM 4000T	MVBM 4500T	MVBM 5040T	MVBM 5600T	MVBM 6150T
Nominal cooling performances									
Cooling capacity (1)	kW	22,40 (2)	28,00 (2)	33,50 (2)	40,00 (2)	45,00 (2)	50,40 (2)	52,00 (2)	52,00 (2)
Maximum cooling performances									
Cooling capacity	kW	22,40	28,00	33,50	40,00	45,00	50,40	56,00	61,50
Nominal heating performances									
Heating capacity (3)	kW	22,40 (2)	28,00 (2)	33,50 (2)	40,00 (2)	45,00 (2)	50,40 (2)	56,00 (2)	56,00 (2)
Maximum heating performances									
Heating capacity	kW	25,00	31,50	37,50	45,00	50,00	56,50	63,00	69,00
Fan									
Type	type	Inverter axial	Inverter axial	Inverter axial	Inverter axial	Inverter axial	Inverter axial	Inverter axial	Inverter axial
Number	no.	1	1	1	2	2	2	2	2
Air flow rate									
Nominal	m^3/h	9750	10500	11100	13500	15400	16000	16500	16500
Sound pressure (4)									
Nominal	dB(A)	56,0	57,0	59,0	59,0	60,0	61,0	62,0	63,0
Compressor									
Type	type	Scroll inverter	Scroll inverter	Scroll inverter	Scroll inverter	Scroll inverter	Scroll inverter	Scroll inverter	Scroll inverter
Number	no.	1	1	1	1	1	2	2	2
Refrigerant	type	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Refrigerant charge	kg	5,5	5,5	7,5	7,5	7,5	8,3	8,3	8,3
Electric data									
Rated current input (5)	A	23,0	23,5	24,1	37,5	39,3	47,0	48,0	49,0
Refrigeration pipework									
Type refrigerant connections	Type	To be soldered	To be soldered	To be soldered	To be soldered	To be soldered	To be soldered	To be soldered	To be soldered
Diameter of liquid refrigerant connections	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")	15,9 (5/8")
Diameter of refrigerant gas connections	mm (inch)	19,05 (3/4")	22,2 (7/8")	25,4 (1")	25,4 (1")	28,6 (1" 1/8)	28,6 (1" 1/8)	28,6 (1" 1/8)	28,6 (1" 1/8)
Maximum refrigerant tube length	m	1000	1000	1000	1000	1000	1000	1000	1000
Power supply									
Outdoor unit power supply		380-415V~3N 50Hz	380-415V~3N 50Hz	380-415V~3N 50Hz	380-415V~3N 50Hz	380-415V~3N 50Hz	380-415V~3N 50Hz	380-415V~3N 50Hz	380-415V~3N 50Hz

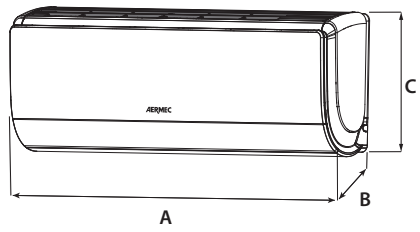
(1) Cooling (EN 14511 and EN 14825) ambient air temperature 27 °C d.b. / 19 °C w.b.; outside air temperature 35 °C; turbo speed; length of refrigerant lines 5 m.
(2) the cooling capacity of the system actually selected may be different from the value shown in the table; to determine the cooling performance data of each MVBM system refer to the selection software
(3) Heating (EN 14511 and EN 14825) ambient air temperature 20 °C d.b.; outside air temperature 7 °C d.b. / 6 °C w.b.; turbo speed; length of refrigerant lines 5 m.
(4) Sound pressure measured in semi anechoic chamber at a distance of 1,5 m from the source.
(5) The rated power input (rated current input) is the maximum input electrical power (maximum current input) from the system, in accordance with the Standards EN 60335-1 and EN 60335-2-40.

3-PIPE SYSTEM OUTDOOR UNIT PERFORMANCE DATA

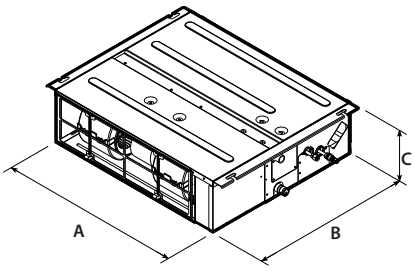
		MVBHR2240T	MVBHR2800T	MVBHR3350T	MVBHR4000T	MVBHR4500T	MVBHR5040T	MVBHR5600T	MVBHR6150T
Nominal cooling performances									
Cooling capacity (1)	kW	22,40	28,00	33,50	40,00	45,00	50,40	52,00	52,00
Maximum cooling performances									
Cooling capacity	kW	22,40	28,00	33,50	40,00	45,00	50,40	56,00	61,50
Nominal heating performances									
Heating capacity (2)	kW	22,40	28,00	33,50	40,00	45,00	50,40	56,00	56,00
Maximum heating performances									
Heating capacity	kW	25,00	31,50	37,50	45,00	50,00	56,50	63,00	69,00
Fan									
Type	type	Inverter axial	Inverter axial	Inverter axial	Inverter axial	Inverter axial	Inverter axial	Inverter axial	Inverter axial
Number	no.	1	1	1	2	2	2	2	2
Air flow rate									
Maximum	m^3/h	9750	10500	11100	13500	15400	16000	16500	16500
Compressor									
Type	type	Scroll inverter	Scroll inverter	Scroll inverter	Scroll inverter	Scroll inverter	Scroll inverter	Scroll inverter	Scroll inverter
Number	no.	1	1	1	1	1	2	2	2
Refrigerant charge	kg	8,2	8,5	9,6	11,1	11,6	12,8	12,8	13,3
Electric data									
Rated current input (3)	A	23,0	23,5	24,1	37,5	39,3	47,0	48,0	49,0
Refrigeration pipework									
Type refrigerant connections	Type	To be soldered	To be soldered	To be soldered	To be soldered	To be soldered	To be soldered	To be soldered	To be soldered
Diameter of liquid refrigerant connections	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")	15,9 (5/8")
Diameter of low pressure refrigerant gas connections	mm (inch)	19,05 (3/4")	22,2 (7/8")	25,4 (1")	25,4 (1")	28,6 (1 1/8")	28,6 (1 1/8")	28,6 (1 1/8")	28,6 (1 1/8")
Diameter of high pressure refrigerant gas connections	mm (inch)	15,9 (5/8")	19,05 (3/4")	19,05 (3/4")	22,2 (7/8")	22,2 (7/8")	25,4 (1")	25,4 (1")	25,4 (1")
Maximum refrigerant tube length	m	1000	1000	1000	1000	1000	1000	1000	1000
Power supply									
Outdoor unit power supply		380-415V ~ 3N 50Hz	380-415V ~ 3N 50Hz	380-415V ~ 3N 50Hz	380-415V ~ 3N 50Hz	380-415V ~ 3N 50Hz	380-415V ~ 3N 50Hz	380-415V ~ 3N 50Hz	380-415V ~ 3N 50Hz

(1) Cooling (EN 14511 and EN 14825) ambient air temperature 27 °C d.b. / 19 °C w.b.; outside air temperature 35 °C; turbo speed; length of refrigerant lines 5 m.
(2) Heating (EN 14511 and EN 14825) ambient air temperature 20 °C d.b.; outside air temperature 7 °C d.b. / 6 °C w.b.; turbo speed; length of refrigerant lines 5 m.
(3) The rated power input (rated current input) is the maximum input electrical power (maximum current input) from the system, in accordance with the Standards EN 60335-1 and EN 60335-2-40.

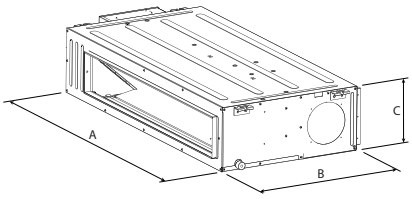
INDOOR UNIT WEIGHTS AND DIMENSIONS



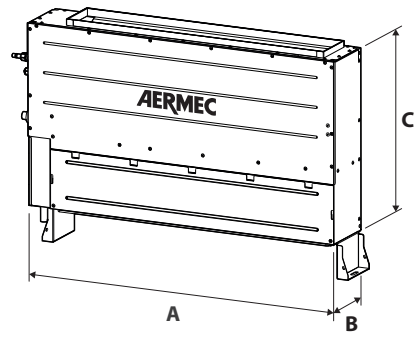
MVA_WL



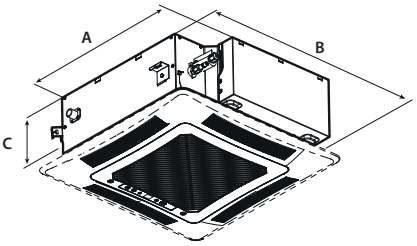
MVA_D



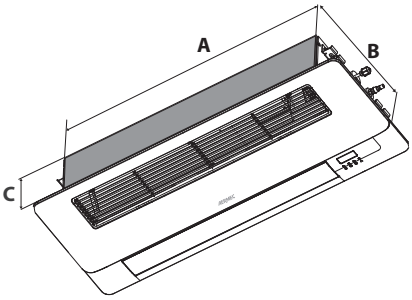
MVA_DH



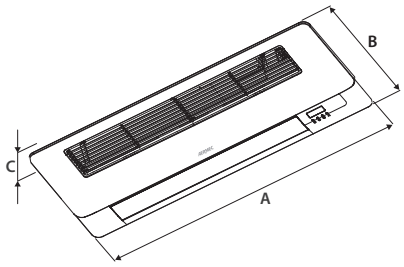
MVA_DV



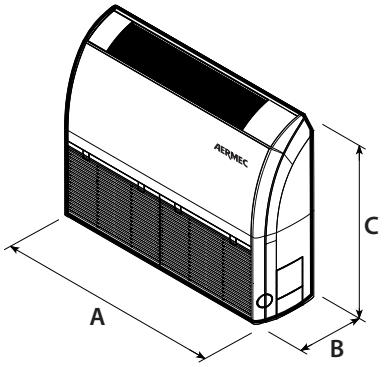
MVA_C / MVA_CS



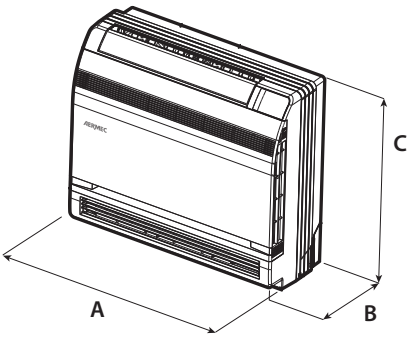
MVA_C1



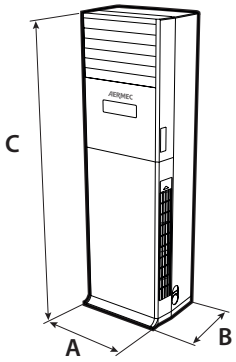
GLC1



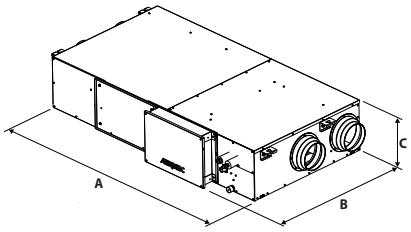
MVA_F



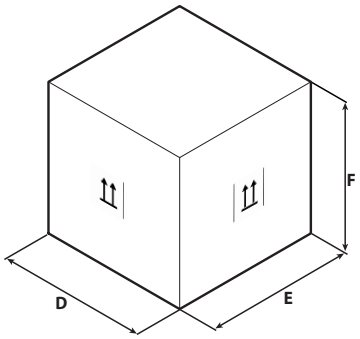
MVA_FS



MVA_V



MVA_ERV



Carton Box Example

MVA_WL

		MVA220WL	MVA280WL	MVA360WL	MVA450WL	MVA500WL	MVA560WL	MVA630WL	MVA710WL
Indoor unit									
A	mm	845	845	845	970	970	1078	1078	1078
B	mm	209	209	209	224	224	246	246	246
C	mm	289	289	289	300	300	325	325	325
D	mm	976	976	976	1096	1096	1203	1203	1203
E	mm	281	281	281	320	320	350	350	350
F	mm	379	379	379	383	383	413	413	413
Net weight	kg	11,0	11,0	11,0	13,0	13,0	16,0	16,0	16,0
Weight for transport	kg	13,0	13,0	13,0	16,0	16,0	19,0	19,0	19,0

MVA_D

		MVA222D	MVA252D	MVA282D	MVA322D	MVA362D	MVA402D
Indoor unit							
A	mm	710	710	710	710	710	1010
B	mm	462	462	462	462	462	462
C	mm	200	200	200	200	200	200
D	mm	1008	1008	1008	1008	1008	1308
E	mm	568	568	568	568	568	568
F	mm	275	275	275	275	275	275
Net weight	kg	18,5	18,5	18,5	19,0	19,0	24,0
Weight for transport	kg	23,5	23,5	23,5	24,0	24,0	30,0

		MVA452D	MVA502D	MVA562D	MVA632D	MVA712D	MVA802D
Indoor unit							
A	mm	1010	1010	1010	1010	1310	1310
B	mm	462	462	462	462	462	462
C	mm	200	200	200	200	200	200
D	mm	1308	1308	1308	1308	1608	1608
E	mm	568	568	568	568	568	568
F	mm	275	275	275	275	275	275
Net weight	kg	24,0	24,0	25,0	25,0	31,0	31,0
Weight for transport	kg	30,0	30,0	31,0	31,0	37,5	37,5

		MVA901D	MVA1001D	MVA1121D	MVA1251D	MVA1401D
Indoor unit						
A	mm	1340	1340	1340	1340	1340
B	mm	655	655	655	655	655
C	mm	260	260	260	260	260
D	mm	1588	1588	1588	1588	1588
E	mm	858	858	858	858	858
F	mm	315	315	315	315	315
Net weight	kg	46,0	46,0	46,0	47,0	47,0
Weight for transport	kg	55,0	55,0	55,0	56,0	56,0

MVA_DV

		MVA220DV	MVA280DV	MVA360DV	MVA450DV	MVA560DV	MVA630DV	MVA710DV
Indoor unit								
A	mm	700	700	700	900	1100	1100	1100
B	mm	200	200	200	200	200	200	200
C	mm	615	615	615	615	615	615	615
D	mm	893	893	893	1123	1323	1323	1323
E	mm	305	305	305	305	305	305	305
F	mm	743	743	743	743	743	743	743
Net weight	kg	23,0	23,0	23,0	27,0	32,0	32,0	32,0
Weight for transport	kg	30,0	30,0	30,0	36,0	41,0	41,0	41,0

MVA_DH

		MVA222DH	MVA252DH	MVA282DH	MVA322DH	MVA362DH	MVA402DH	MVA452DH	MVA502DH	MVA562DH
Indoor unit										
A	mm	700	700	700	700	700	700	700	700	1000
B	mm	700	700	700	700	700	700	700	700	700
C	mm	300	300	300	300	300	300	300	300	300
D	mm	897	897	897	897	897	897	897	897	1205
E	mm	808	808	808	808	808	808	808	808	813
F	mm	360	360	360	360	360	360	360	360	360
Net weight	kg	30,5	30,5	30,5	30,5	30,5	31,5	31,5	31,5	40,5
Weight for transport	kg	36,0	36,0	36,0	36,0	36,0	37,0	37,0	37,0	46,5

		MVA632DH	MVA712DH	MVA802DH	MVA902DH	MVA1002DH	MVA1122DH	MVA1252DH	MVA1402DH	MVA1602DH
Indoor unit										
A	mm	1000	1000	1000	1400	1400	1400	1400	1400	1400
B	mm	700	700	700	700	700	700	700	700	700
C	mm	300	300	300	300	300	300	300	300	300
D	mm	1205	1205	1205	1600	1600	1600	1600	1600	1600
E	mm	813	813	813	813	813	813	813	813	813
F	mm	360	360	360	365	365	365	365	365	365
Net weight	kg	40,5	41,0	41,0	54,0	54,0	54,0	54,0	54,5	54,5
Weight for transport	kg	46,5	47,0	47,0	61,0	61,0	61,0	61,0	61,5	61,5

		MVA2240DH	MVA2800DH
Indoor unit			
A	mm	1483	1686
B	mm	791	870
C	mm	385	450
D	mm	1758	1788
E	mm	883	988
F	mm	470	580
Net weight	kg	82,0	105,0
Weight for transport	kg	104,0	140,0

MVA_CS

		MVA151CS	MVA181CS	MVA221CS	MVA281CS	MVA361CS	MVA451CS	MVA501CS	MVA561CS
Indoor unit									
A	mm	570	570	570	570	570	570	570	570
B	mm	570	570	570	570	570	570	570	570
C	mm	265	265	265	265	265	265	265	265
D	mm	698	698	698	698	698	698	698	698
E	mm	653	653	653	653	653	653	653	653
F	mm	295	295	295	295	295	295	295	295
Net weight	kg	18,0	18,0	18,0	18,0	18,0	18,0	18,0	18,0
Weight for transport	kg	23,0	23,0	23,0	23,0	23,0	23,0	23,0	23,0

MVA_C

		MVA221C	MVA281C	MVA361C	MVA451C	MVA501C	MVA561C	MVA631C	MVA711C
Indoor unit									
A	mm	840	840	840	840	840	840	840	840
B	mm	840	840	840	840	840	840	840	840
C	mm	240	240	240	240	240	240	240	240
D	mm	963	963	963	963	963	963	963	963
E	mm	963	963	963	963	963	963	963	963
F	mm	325	325	325	325	325	325	325	325
Net weight	kg	27,0	27,0	27,0	27,0	28,0	28,0	28,0	28,0
Weight for transport	kg	35,0	35,0	35,0	35,0	36,0	36,0	36,0	36,0

		MVA801C	MVA901C	MVA1001C	MVA1121C	MVA1251C	MVA1401C	MVA1601C
Indoor unit								
A	mm	840	840	840	840	840	840	840
B	mm	840	840	840	840	840	840	840
C	mm	240	240	240	290	290	290	290
D	mm	963	963	963	963	963	963	963
E	mm	963	963	963	963	963	963	963
F	mm	325	325	325	375	375	375	375
Net weight	kg	29,0	29,0	29,0	33,0	33,0	33,0	36,0
Weight for transport	kg	37,0	37,0	37,0	42,0	42,0	42,0	44,0

MVA_C1

		MVA220C1	MVA280C1	MVA360C1	MVA450C1	MVA500C1
Indoor unit						
A	mm	987	987	987	987	987
B	mm	385	385	385	385	385
C	mm	178	178	178	178	178
D	mm	1307	1307	1307	1307	1307
E	mm	501	501	501	501	501
F	mm	310	310	310	310	310
Net weight	kg	20,0	20,0	20,0	21,0	21,0
Weight for transport	kg	27,0	27,0	27,0	29,0	29,0

MVA_F

		MVA280F	MVA281F	MVA360F	MVA361F	MVA500F	MVA501F	MVA561F	MVA630F	MVA631F	MVA710F
Indoor unit											
A	mm	1220	870	1220	870	1220	870	870	1420	1200	1420
B	mm	225	235	225	235	225	235	235	245	235	245
C	mm	700	665	700	665	700	665	665	700	665	700
D	mm	1343	973	1343	973	1343	973	973	1548	1303	1548
E	mm	315	300	315	300	315	300	300	345	300	345
F	mm	823	770	823	770	823	770	770	828	770	828
Net weight	kg	40,0	24,0	40,0	24,0	40,0	25,0	25,0	50,0	32,0	50,0
Weight for transport	kg	49,0	29,0	49,0	29,0	49,0	30,0	30,0	58,0	38,0	58,0

		MVA711F	MVA900F	MVA901F	MVA1120F	MVA1121F	MVA1250F	MVA1251F	MVA1400F	MVA1401F	MVA1601F
Indoor unit											
A	mm	1200	1420	1200	1700	1570	1700	1570	1700	1570	1570
B	mm	235	245	235	245	235	245	235	245	235	235
C	mm	665	700	665	700	665	700	665	700	665	665
D	mm	1303	1548	1303	1828	1669	1828	1669	1828	1669	1669
E	mm	300	345	300	345	300	345	300	345	300	300
F	mm	770	828	770	828	770	828	770	828	770	770
Net weight	kg	32,0	50,0	33,0	60,0	41,0	60,0	41,0	60,0	43,0	43,0
Weight for transport	kg	38,0	58,0	39,0	68,0	48,0	68,0	48,0	68,0	50,0	50,0

MVA_FS

		MVA220FS	MVA280FS	MVA360FS	MVA450FS	MVA500FS
Indoor unit						
A	mm	700	700	700	700	700
B	mm	215	215	215	215	215
C	mm	600	600	600	600	600
D	mm	780	780	780	780	780
E	mm	285	285	285	285	285
F	mm	682	682	682	682	682
Net weight	kg	16,0	16,0	16,0	16,0	16,0
Weight for transport	kg	19,0	19,0	19,0	19,0	19,0

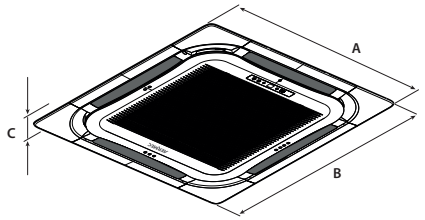
MVA_V

		MVA1000V	MVA1400V
Indoor unit			
A	mm	580	580
B	mm	400	400
C	mm	1870	1870
D	mm	738	738
E	mm	545	545
F	mm	2083	2083
Net weight	kg	54,0	57,0
Weight for transport	kg	74,0	77,0

MVA_ERV

		MVA500ERV	MVA800ERV	MVA1000ERV
Dimensions and weights				
A	mm	1700	1800	1800
B	mm	880	1185	1185
C	mm	340	390	390
D	mm	1988	2110	2110
E	mm	1138	1440	1440
F	mm	535	567	567
Net weight	kg	120,0	158,0	158,0
Weight for transport	kg	175,0	225,0	225,0

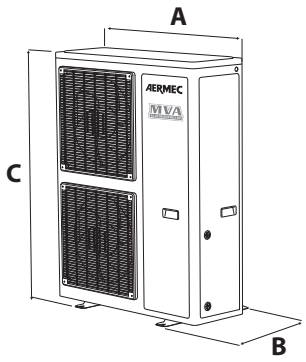
GLC1 / GL40B / GLG40S / GLG40



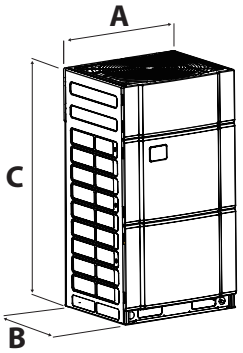
GLG40S / GLG40 / GL40B

		GLC1	GL40B	GLG40S	GLG40
Indoor unit					
A	mm	1200	1040	620	950
B	mm	460	1040	620	950
C	mm	55	65	48	52
D	mm	1265	1137	701	1033
E	mm	536	1137	701	1038
F	mm	118	140	125	112
Net weight	kg	4,0	8,0	3,0	6,0
Weight for transport	kg	6,0	12,0	5,0	10,0

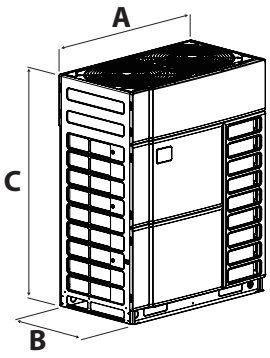
OUTDOOR UNIT WEIGHTS AND DIMENSIONS



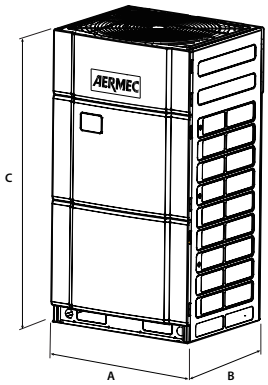
MVAS



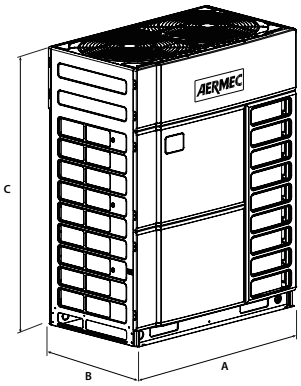
MVBM2240T-2800T-3350T



MVBM4000T-4500T
5040T-5600T-6150T



MVBHR2240T-2800T-3350T



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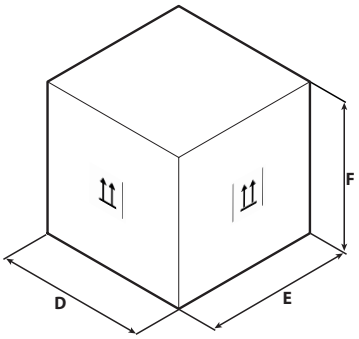

Carton Box Example

MVAS

		MVAS 1201S	MVAS 1201T	MVAS 1401S	MVAS 1401T	MVAS 1601S	MVAS 1601T	MVAS 2242T	MVAS 2803T	MVAS 3352T
Outdoor unit										
A	mm	900	900	900	900	900	900	940	940	940
B	mm	340	340	340	340	340	340	320	460	460
C	mm	1345	1345	1345	1345	1345	1345	1430	1615	1615
D	mm	1408	1048	1408	1048	1408	1048	1038	1038	1038
E	mm	458	458	458	458	458	458	438	578	578
F	mm	1507	1507	1507	1507	1507	1507	1580	1765	1765
Net weight	kg	110,0	120,0	110,0	120,0	110,0	120,0	133,0	163,0	174,0
Weight for transport	kg	123,0	133,0	123,0	133,0	123,0	133,0	144,0	175,0	187,0

MVBM

		MVBM 2240T	MVBM 2800T	MVBM 3350T	MVBM 4000T	MVBM 4500T	MVBM 5040T	MVBM 5600T	MVBM 6150T
Outdoor unit									
A	mm	930	930	930	1340	1340	1340	1340	1340
B	mm	775	775	775	775	775	775	775	775
C	mm	1690	1690	1690	1690	1690	1690	1690	1690
D	mm	1000	1000	1000	1400	1400	1400	1400	1400
E	mm	830	830	830	830	830	830	830	830
F	mm	1855	1855	1855	1855	1855	1855	1855	1855
Net weight	kg	220,0	220,0	240,0	300,0	300,0	350,0	350,0	355,0
Weight for transport	kg	230,0	230,0	250,0	315,0	315,0	365,0	365,0	370,0

MVBHR

		MVBHR2240T	MVBHR2800T	MVBHR3350T	MVBHR4000T	MVBHR4500T	MVBHR5040T	MVBHR5600T	MVBHR6150T
Outdoor unit									
A	mm	930	930	930	1340	1340	1340	1340	1340
B	mm	775	775	775	775	775	775	775	775
C	mm	1690	1690	1690	1690	1690	1690	1690	1690
D	mm	1000	1000	1000	1400	1400	1400	1400	1400
E	mm	830	830	830	830	830	830	830	830
F	mm	1855	1855	1855	1855	1855	1855	1855	1855
Net weight	kg	243,0	243,0	256,0	325,0	325,0	385,0	385,0	385,0
Weight for transport	kg	253,0	253,0	266,0	340,0	340,0	400,0	400,0	400,0

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