



VRF systems MVA 2019

AIR CONDITIONING SOLUTIONS





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Aermec S.p.A.

When it comes to air conditioning, there's no challenge too big for Aermec. A complete range of solutions that stands out in terms of design quality, materials and performance, satisfying all our customers' demands within a series of specific applications.

Skills and innovation in the field of air conditioning and heating

The products

The skills built up with nearly 60 years of experience in this sector are transformed into a range of **products and solutions ideal for winter and summer air conditioning**, for all energy sources and all applications: **residential, commercial and industrial**.

Aermec can boast a wide choice of products from **1 kW to 2 MW**, including fan coils, chillers and air-cooled or water-cooled heat pumps, air handling units, heat recovery units and high-precision air conditioners. **There is also a comprehensive range of system accessories, and various customer services.**

Aermec courses

Conscious of the need to keep its commercial partners always abreast of developments, Aermec has a complete programme of **technical seminars aimed above all at designers, architects and installation firms.**

These training courses focus on products using renewable energy forms: numerous seminars of a theoretical and practical nature, plus others explaining the latest changes in the regulations.

and cost-effectiveness

New range of VRF systems: MVA, looking to the future and the efficient exploitation of primary energy, whilst keeping our company roots based on the principles of quality, reliability and support.

Sustainability

Aermec is committed to a policy of sustainability - one of the company's fundamental principles. Sustainability means combining economy, ecology and social responsibility so as to meet today's needs in the best possible way, but without jeopardising the future for the next generations. That's why it's searching for future-orientated solutions that guarantee excellent results in terms of yield and comfort, fulfilling the energy policy goals defined at European level.

Air-conditioning

Aermec's range of direct expansion products was brought onto the Italian market after the outstanding national and international experience gained by the company in the fields of commercial air cooling and hydronic heat pumps.

The products of the VRF line: MVA integrate the existing split and multisplit systems, ensuring the perfect solution for every situation; in fact, they're ideal for both residential and commercial structures, hotels and any other reception facilities. On the one hand, split and multisplit solutions - also with the new R32 gas - allow you to connect up to 4 indoor wall units to one outdoor unit, covering a power range from 2.5 to 16kW.

On the other hand, the new VRF range: MVA meets the needs of applications between 12 and 180kW, with the possibility to connect different types of indoor unit such as wall-mounting, cassette, ducted, or floor/ceiling mounted. In addition, Aermec has decided to interface the new range with its own air treatment systems, introducing new responses with the aim of guaranteeing a complete solution and optimising environmental well-being.

Reliability, sustainability, efficiency

Design support

Aermec offers a prompt, constant service that integrates its own products with your design in the best and most efficient way.

Pre-sales

To guide its customers in the choice of the system most suited to their own specific needs, Aermec has a trained, skilled pre-sales team.

Taking full advantage of the consolidated technical/commercial structure that has proved to be a great benefit over the years for customers in the hydronics sector, the company has chosen to continue with this organisation in the direct expansion field too.

Pre-sales technicians, aided and coordinated by the sales agents and product management, are on hand to offer qualified technical advice, cost estimates and information about products and systems.

VRF Selection

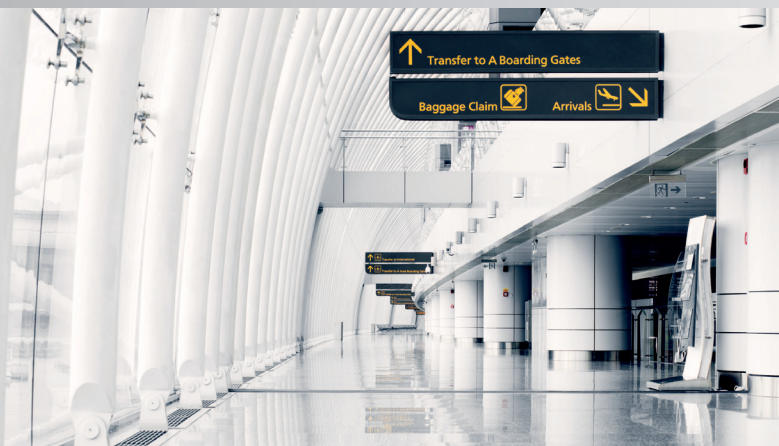
The VRF Selection software is a response to the need to be able to easily design a variable refrigerant flow (VRF) system, with guidance for selecting the most appropriate equipment. The software is almost fully interactive. Each element which makes up the system can be determined by the planner, or selected automatically according to various chosen parameters (power required, etc.).

Maintenance and support

To ensure optimum reliability and safety, Aermec has a wide-spread and highly professional technical assistance network.

Keeping the energy efficiency level constant over time, minimising system downtime and preventing any possible problems or faults are what help to maintain the value of the investment made in the air conditioning system. The members of Aermec's Technical Assistance Service (SAT) team are carefully selected in terms of training and professionalism, to ensure our customers requests are fully met.

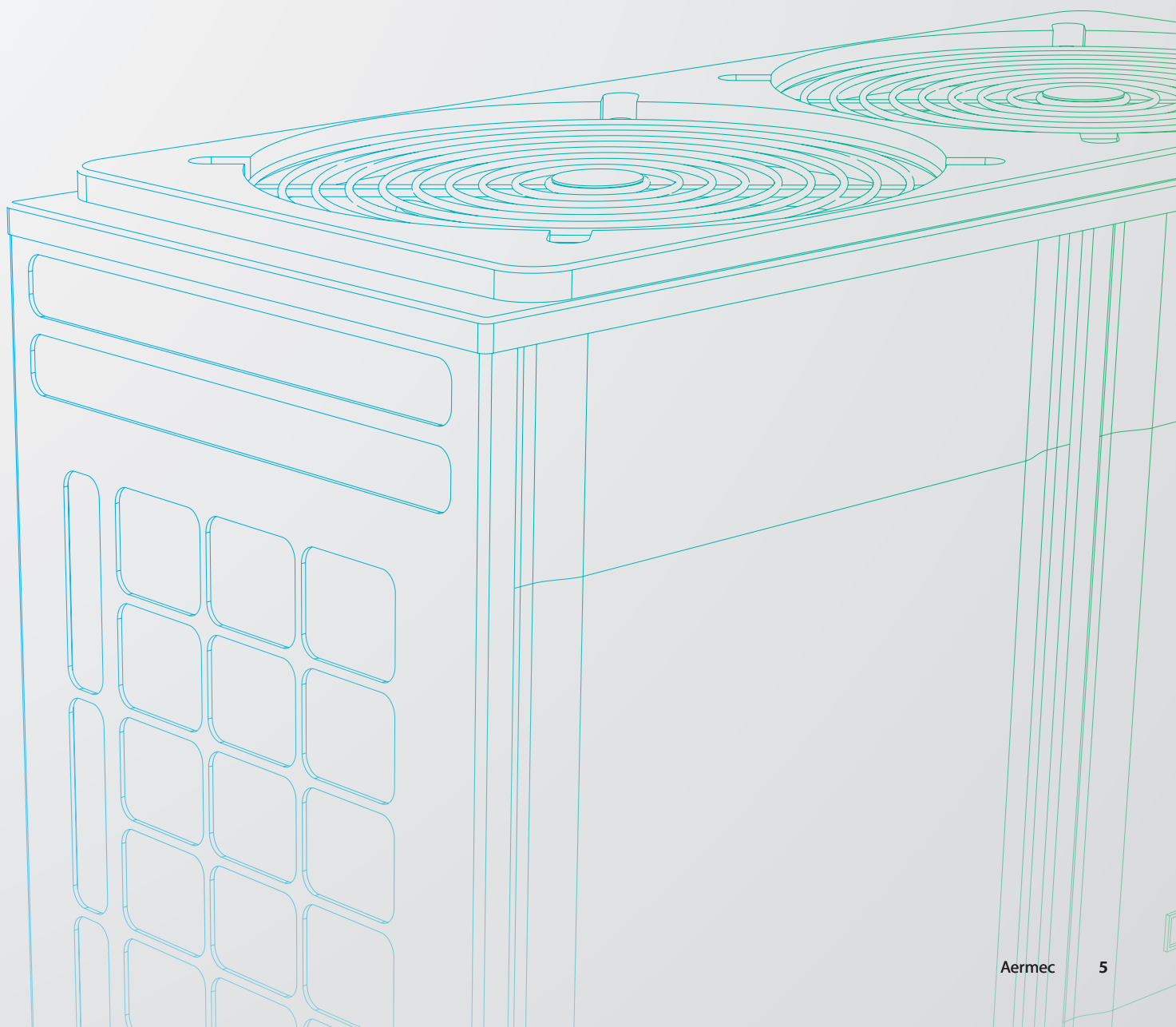




VRF Systems: air-cooled MVA

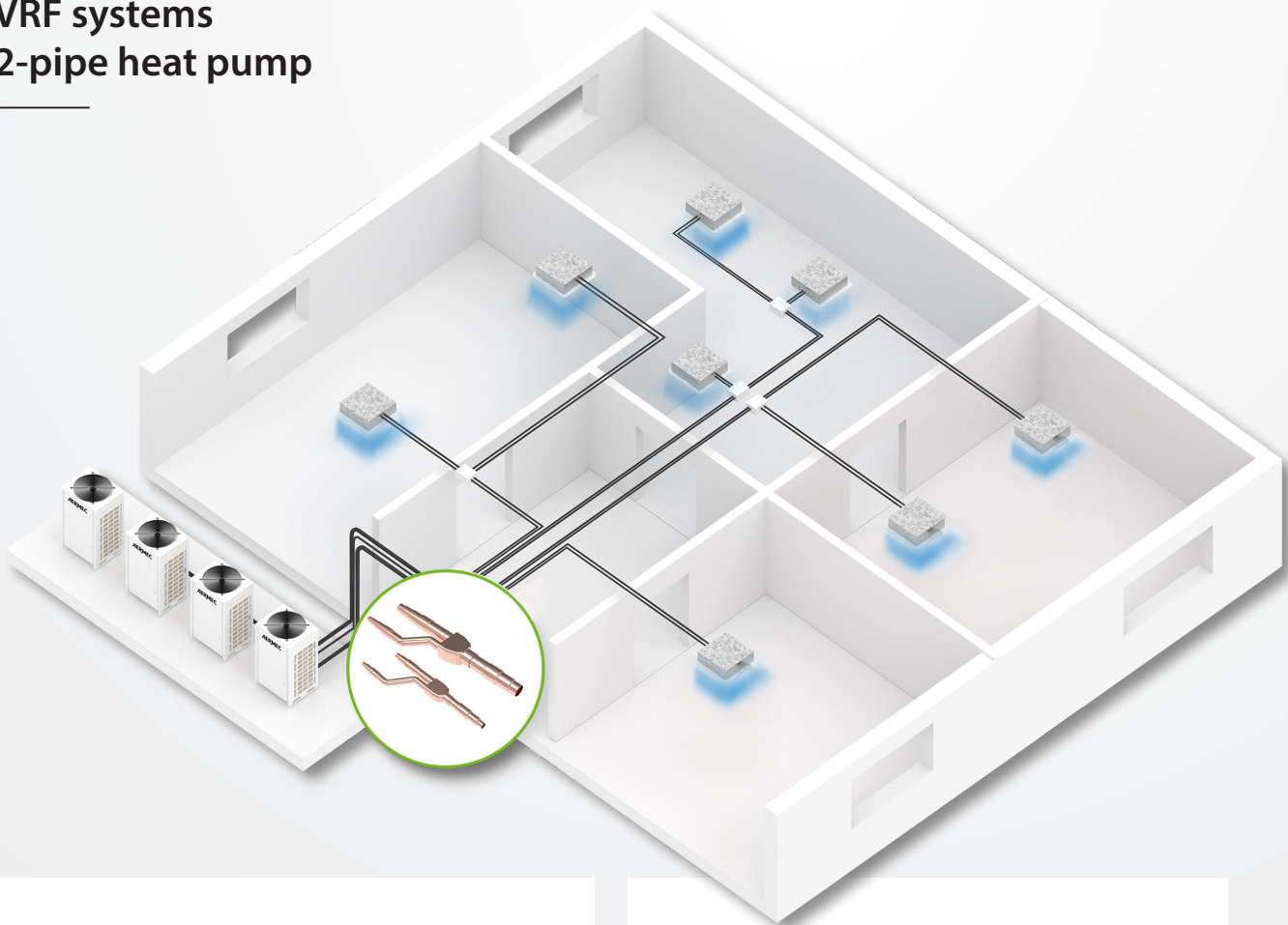
Comfort and energy savings - the best return on your investment

These direct expansion systems with variable refrigerant flow allow the quantity of circulating refrigerant to be modified to suit the real load request from the indoor units.



Choosing the system

VRF systems 2-pipe heat pump



Personalise your VRF system

To guarantee optimum seasonal efficiency and excellent 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.

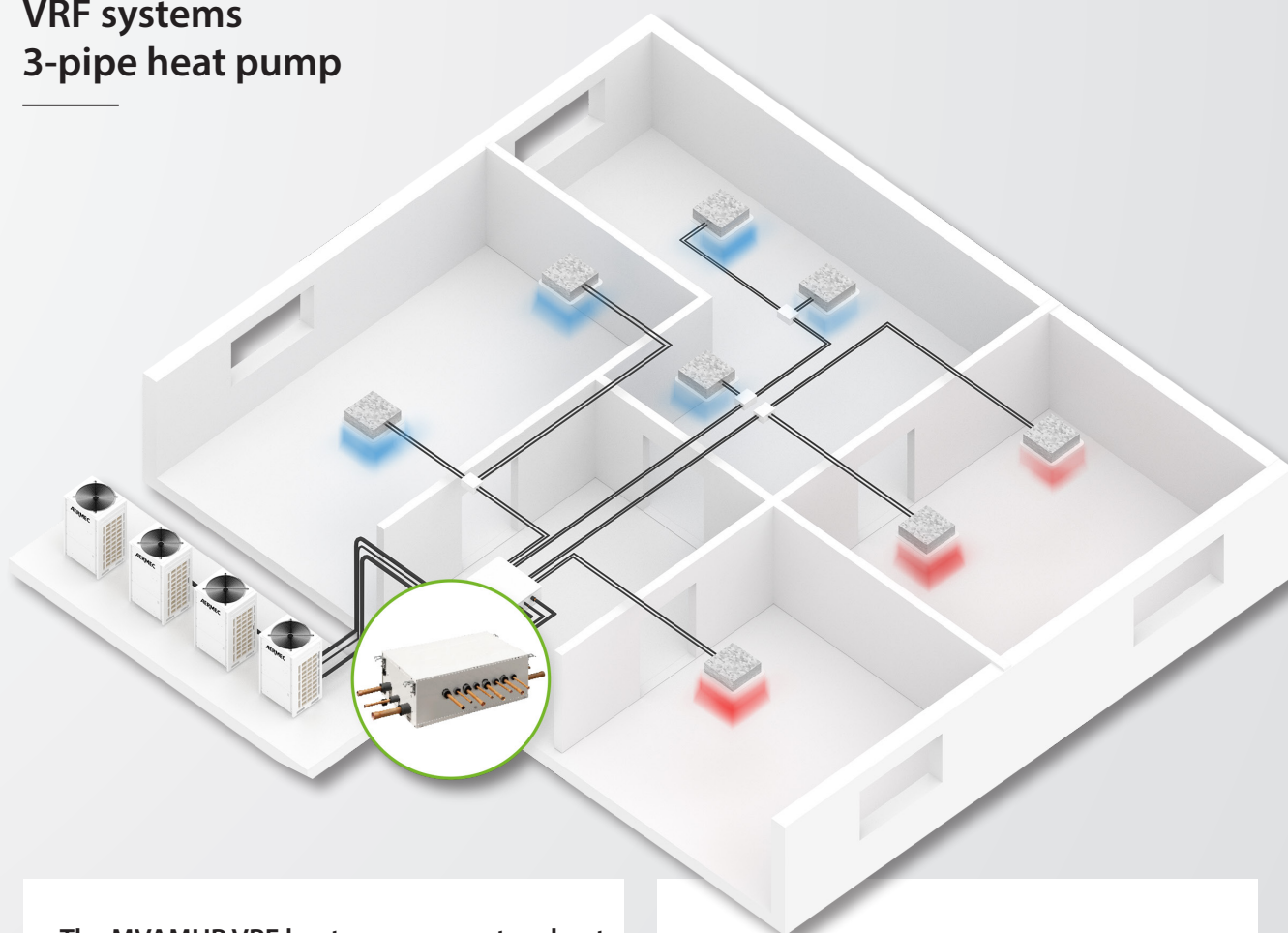
Self-configuration system

To speed up the system start-up.

Wide range of indoor units

To meet any system requirement.

VRF systems 3-pipe heat pump



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

MVAMHR 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.

Self-configuration system

To speed up the system start-up.

Wide range of indoor units

To meet any system requirement.

MVAS

The MVAS heat pump range is suitable for all applications - the right balance between cost, efficiency and space.

Applications



Homes



Small or medium sized offices and shops



Large buildings, shops and offices where space-saving installation is needed

Advantages

Solution with limited overall dimensions, guaranteeing constantly good output levels

Flexible installation

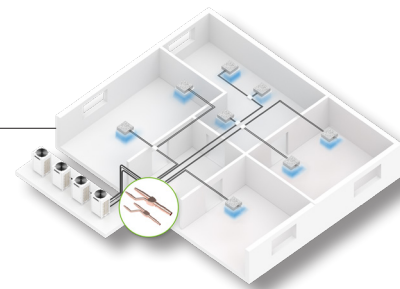
Wide range of power levels available:
Cooling capacity from 22.4 kW to 28.0 kW
Heating capacity from 24.0 kW to 30.0 kW

Inverter compressors

Wide choice of indoor units



MVAM

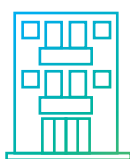


The MVAM heat pump range, with its consolidated technology, offers high efficiency levels and a wide choice of power levels for any type of use.

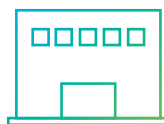
Applications



Medium and large sized offices and shops



Hotels and residential buildings



Commercial and industrial applications



Advantages

Cooling and heating in one single system

Wide range of power levels available:
Cooling capacity from 12.1 kW to 246 kW
Heating capacity from 14.0 kW to 276 kW

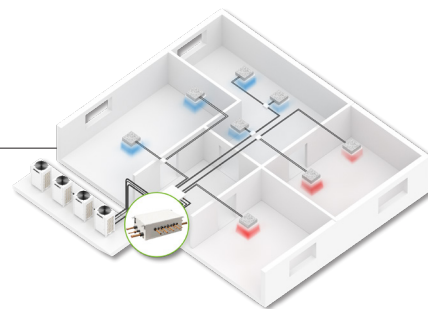
Wide choice of indoor units

High EER and COP values, with the possibility to obtain the feed-in tariff and tax relief

VRF 3-pipe heat pump with heat recovery

MVAMHR

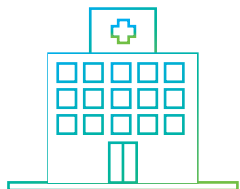
The MVAMHR heat pump range is the ideal solution for continuous climate variations (both seasonal and daily), always guaranteeing optimum well-being in every room of the building.



Applications



Exposed buildings and windows subject to a considerable thermal load imbalance during the day



Special applications such as hospitals and hotels with different thermal requirements in each area of the building

Advantages

Simultaneous heating and cooling in one single system

Cost-free heat recovery from the chilled areas, for the heated areas

Wide range of power levels available:
Cooling capacity from 22.4 kW to 180.0 kW
Heating capacity from 25.0 kW to 200.0 kW

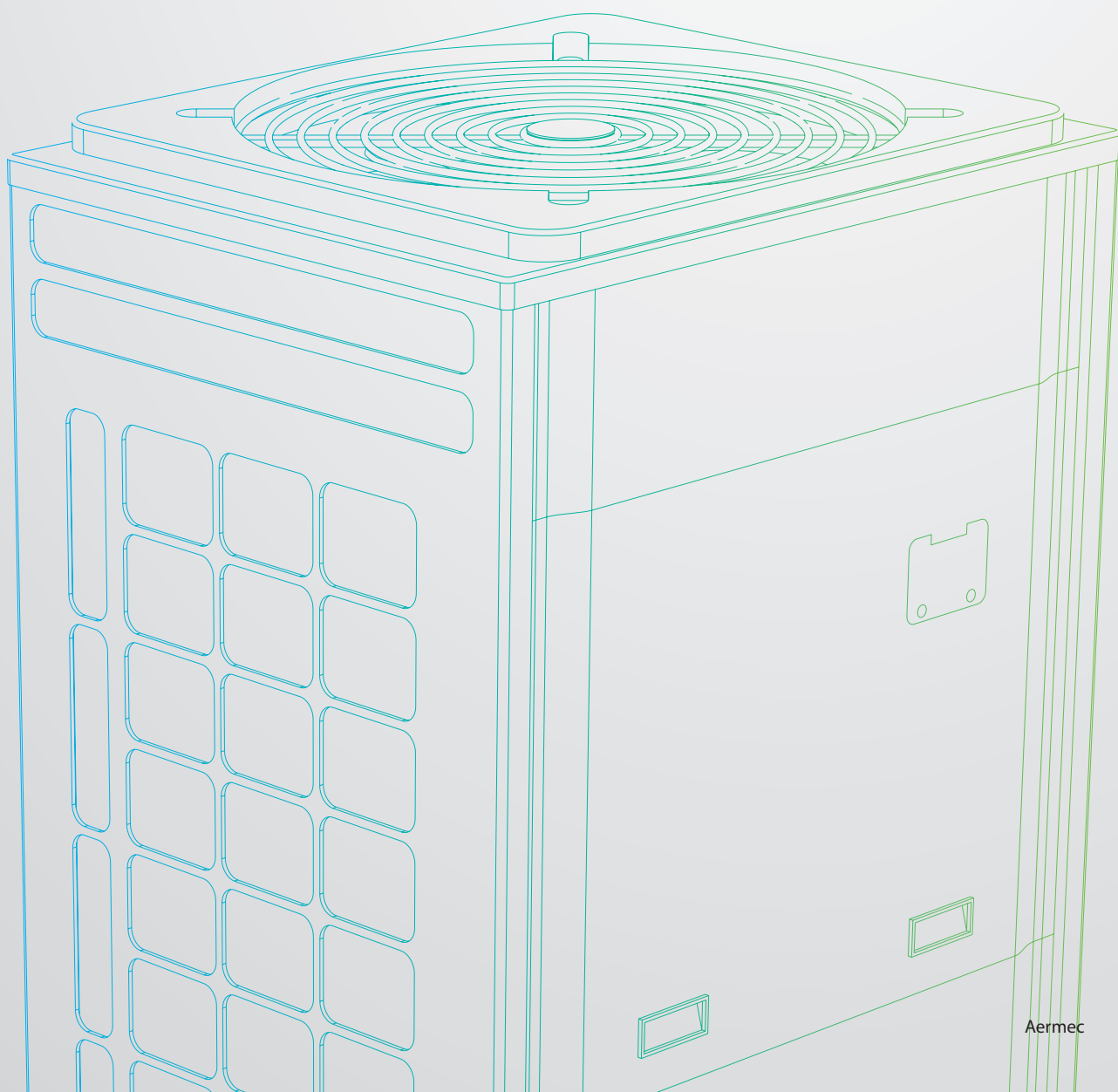
Wide range of indoor units that can be combined with air treatment systems

High EER and COP values, with the possibility to obtain the feed-in tariff and tax relief



Outdoor units

Wide choice of outdoor units, with flexible combinations to meet any thermal load request.



MVAS outdoor units

Features

All the outdoor units have purposely designed inverter compressors that, along with the new condensing coil design, offer enhanced yields in all conditions - whether full load or partial load.



up to 3.99 W/W
in nominal conditions



up to 4.90 W/W
in nominal conditions



Compact design

The compact dimensions ensure easy transport to the worksite. All the models can be transported right up to the roof, even by lift.

The product is delivered to the ground floor on a pallet, so a simple forklift is all that's needed to move it.



Quiet outdoor unit operation

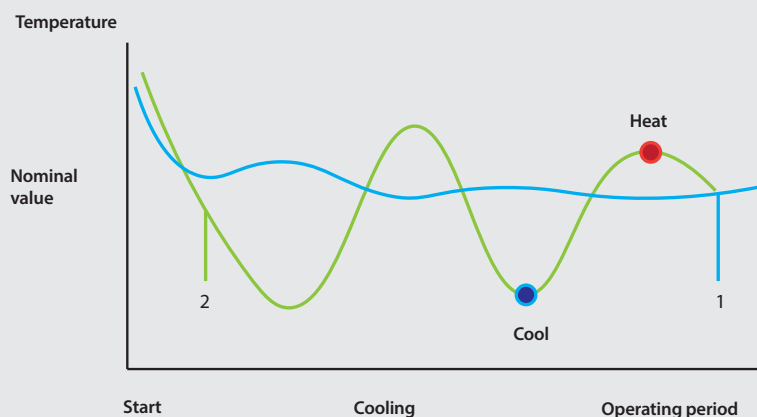
Thanks to the technical solutions adopted (compressor – heat exchanger), and the possibility to select quiet operation modes, noise levels have been greatly reduced and are now lower than 45dB.

These units are suitable for installation where there is little space between the homes.



Performance

Non-alternated technology for oil recovery in heating mode. During heating with outside temperatures from 0 to 20°C, these units don't require the oil recovery mode. That's why they're able to maintain a constant room temperature whilst heating.



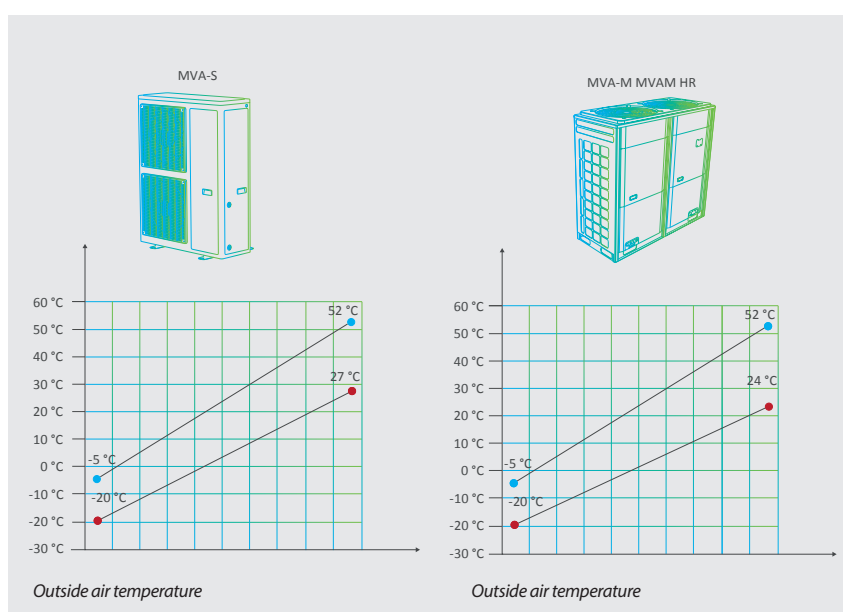
1 With the normal oil recovery mode, the room temperature is subject to swings.
2 With the new non-alternated oil recovery technology, the room temperature remains constant.

Condensing coil with Golden Fin protection.

The aluminium-manganese (Al-Mn) coil fins are coated with a special layer of epoxy resin (which gives them their characteristic golden colour), and then a hydrophilic layer to protect against atmospheric agents.



Maximum operating range



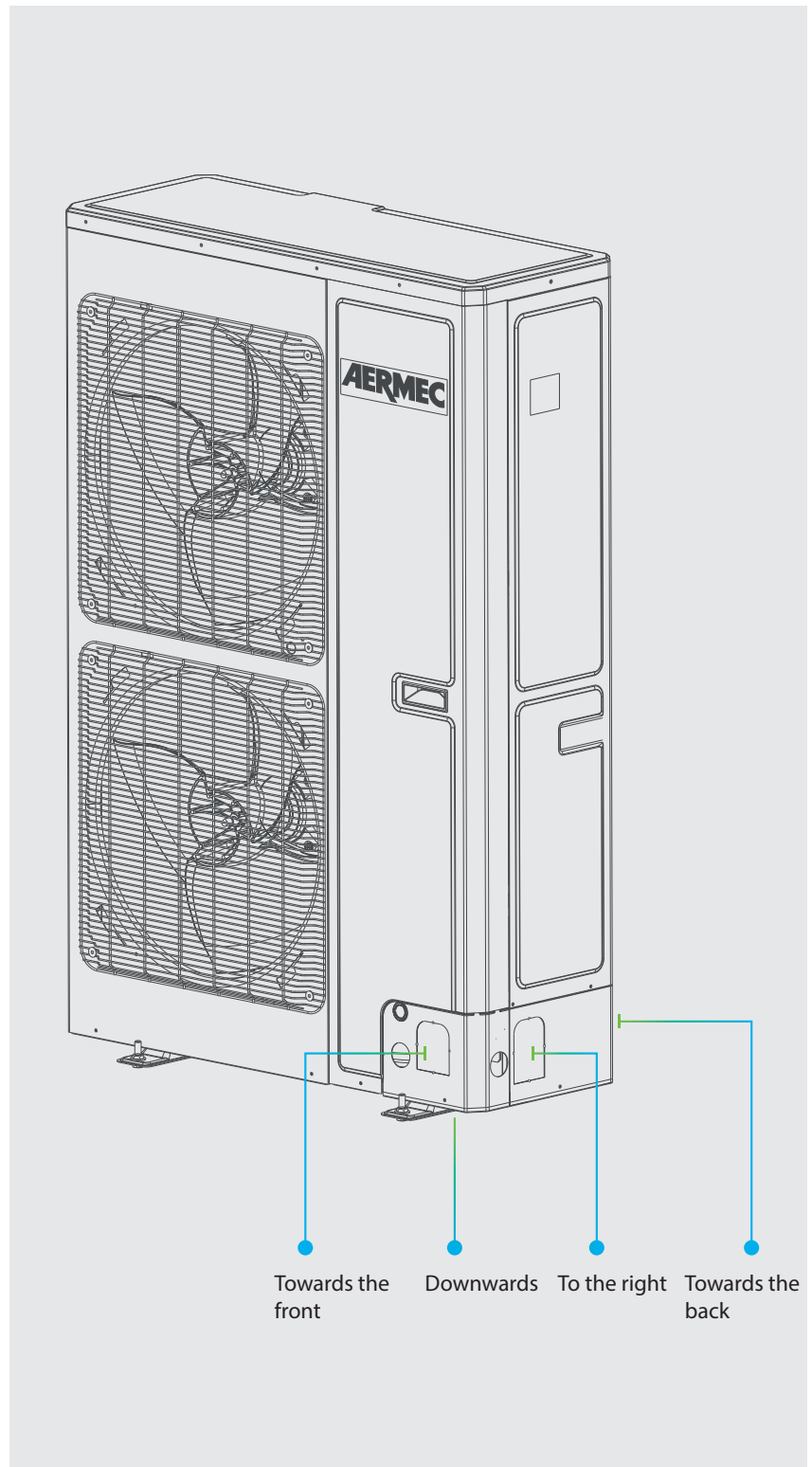
MVAS outdoor units

Simplified installation

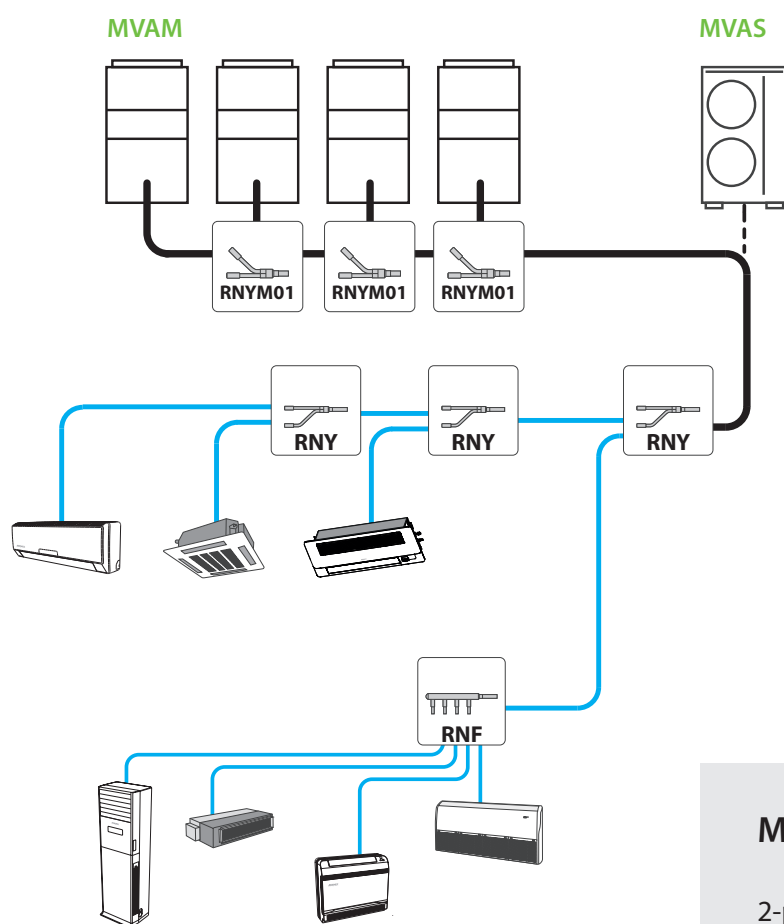
4 options for connecting the cooling and electric lines to the MVAS outdoor units, ensuring faster assembly times and aesthetically pleasing results.

Simplified communication via CAN-Bus.

In addition, the time-consuming addressing of the indoor and outdoor units is now superfluous. The network recognises and automatically registers all the indoor and outdoor units.



Maximum length of the lines



MVAS - MVAM

2-pipe system
Cooling or heating mode

Cooling mode

Maximum total length of the cooling lines

MVAS: 300m

MVAM: 1000m

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.

Code	Type	Number of joints included in a Single Kit
RNYM01	Y	2 (Liquid / Gas)
RNY	Y	2 (Liquid / Gas)
RNF	F	2 (Liquid / Gas)

MVAM and MVMHR outdoor units

Features

All the outdoor units have purposely designed inverter compressors that offer enhanced yields in all conditions - whether full load or partial load.

Thanks to the technical features, system efficiency has been boosted considerably.

The motor of the DC inverter fan is highly efficient as it has a wide range of speeds (5 ~ 65 Hz).



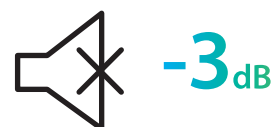
Speed range



Comfort

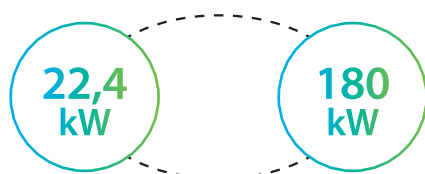
The system automatically switches to quiet mode at night, guaranteeing the well-being of the user.

Thanks to the new design of the outdoor unit fan, the sound level is now down to 3dB.



Wide range of power levels

The wide range of power levels and flexible combinations mean that these applications are ideal in installations from 22.4 to 180kW.



Possibility to connect a high number of indoor units

Up to 80 indoor units can be connected to the outdoor ones, offering the perfect solution for projects and applications requiring numerous indoor units (e.g. hotels, offices and shopping centres).



Flexible installation

The compact dimensions of the MVAM and MVAMHR ranges ensure easy transport to the worksite. Some models can be transported by lift.

Both ranges, but in particular the MVAMHR, offer outstanding installation flexibility.

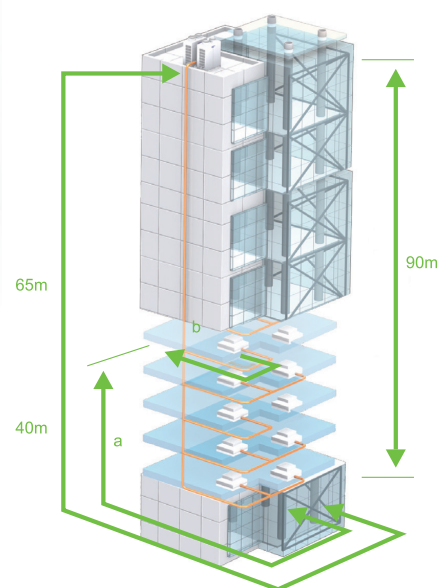
- The total pipe length is 1000m.
- The length of the pipes between the outdoor unit and the furthest indoor unit is 165m.
- The maximum level difference between the outdoor unit and each indoor unit is 90m. The maximum level difference between the indoor units is 30m.



NB:

a) Difference between the first distributor and the furthest indoor unit: max. 40m

b) Difference between the first distributor and the nearest indoor unit: max. 40m



System lifespan

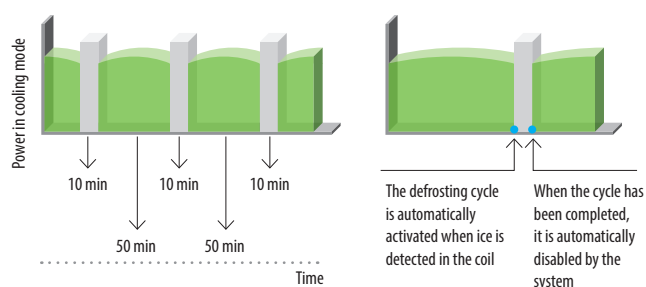
To lengthen the system lifespan, the operating order of the outdoor modules is rotated every 8 hours, without any need for continuous restarts.



New defrosting control

Traditional defrosting is time-based and is activated at regular intervals.

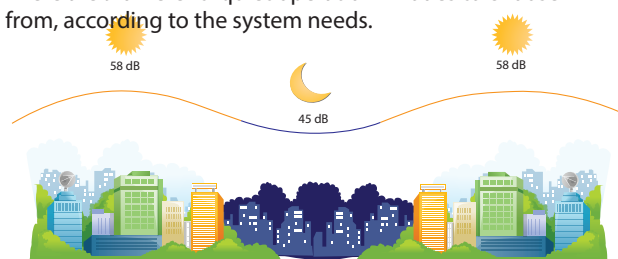
This new defrosting method, on the other hand, is based on the time and the outside temperature, guaranteeing optimum internal comfort and maximum efficiency.



Quiet night-time operation

The system memorises the maximum outside temperature, switching to quiet operation after a certain time has elapsed.

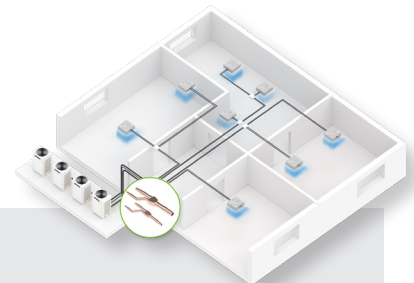
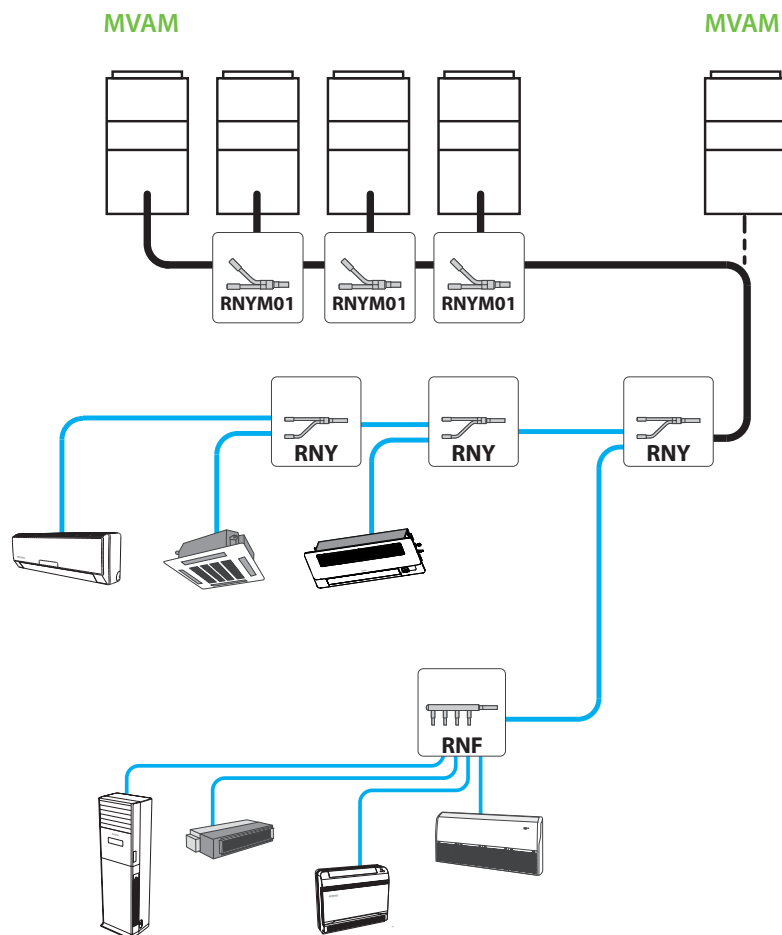
There are 9 different "quiet operation" modes to choose from, according to the system needs.



Outdoor Units

MVAM and MVMHR outdoor units

Maximum length of the lines



MVAM

2-pipe system.
Cooling or
heating mode.

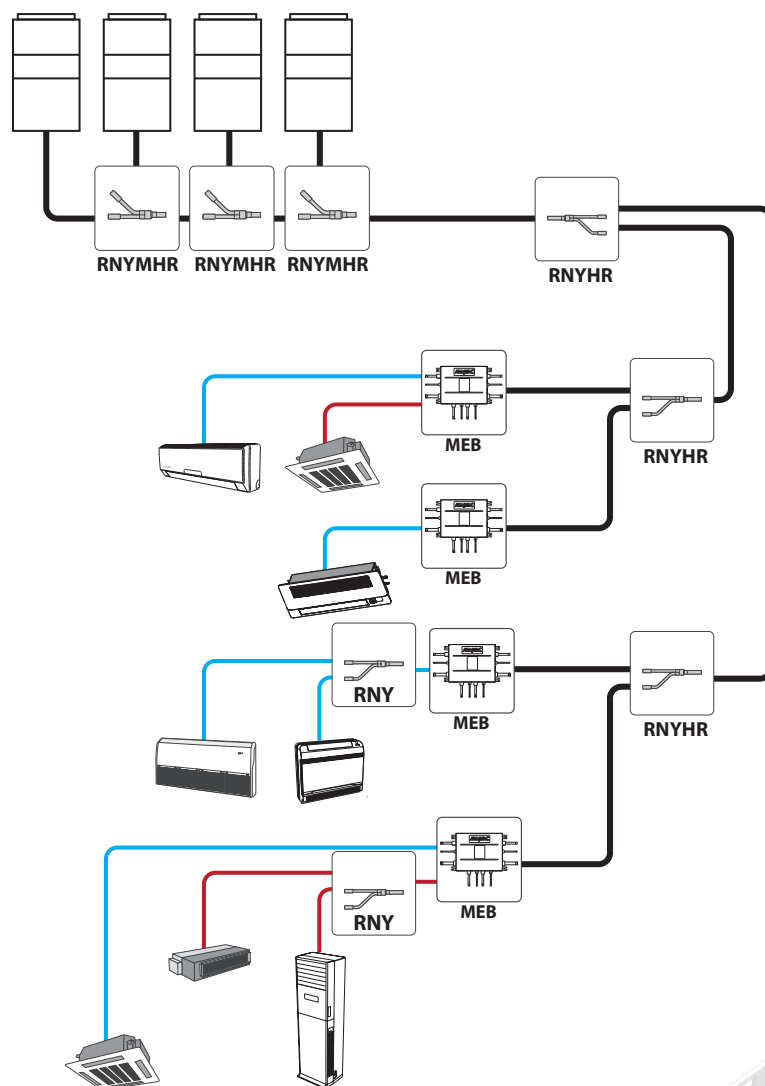
- Cooling mode
- Heating mode

Maximum total length
of the MVAM cooling
lines: 1000m

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.

Code	Type	Number of joints included in a Single Kit
RNYMHR	Y	3 (Liquid / High Pressure Gas / Low Pressure Gas)
RNYHR	Y	3 (Liquid / High Pressure Gas / Low Pressure Gas)
RNY	Y	2 (Liquid / Gas)
RNF	F	2 (Liquid / Gas)

MVAMHR**MVAMHR**

3-pipe system.
Simultaneous
cooling and heating
operation.

■ Cooling mode
■ Heating mode

Maximum total length
of the MVAMHR
cooling lines: 1000m

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

Technical description

The **DC inverter** technology ensures high efficiency levels

Cooling capacity: from 12 kW to 33.5 kW

The **CAN BUS** communication protocol guarantees fast communication and reliability

Optimum installation flexibility:

Total pipe length: 300m

Length of the lines between the outdoor unit and the furthest indoor unit: 120m

Maximum level difference between the indoor units: 15m

Temperature limits (outside air)

from -5°C to 52°C in cooling mode,

from -20°C to 27°C in heating mode

Ratio between indoor unit power and outdoor unit power: 50 - 135%



Outdoor units	MVAS		1201S	1401S	1601S	1201T	1401T	1601T	2242T	2802T	3351T
Cooling capacity (nominal) ⁽¹⁾		kW	12.1	14	16	12.1	14	16	22.4	28	33.5
Input power (nominal)		kW	3.03	3.59	4.75	3.03	3.59	4.75	6.12	7.78	9.57
Input current (nominal)		A	-	-	-	-	-	-	10.9	13.9	17.1
EER		W/W	3.99	3.9	3.37	3.99	3.9	3.37	3.66	3.6	3.5
Heating capacity (nominal) ⁽²⁾		kW	14	16.5	18	14	16.5	18	24	30	35
Input power (nominal)		kW	3.27	3.95	4.65	3.27	3.95	4.65	4.9	6.12	7.14
Input current (nominal)		A	-	-	-	-	-	-	8.8	10.9	12.8
COP		W/W	4.28	4.18	3.87	4.28	4.18	3.87	4.9	4.9	4.9
Nominal input power ⁽³⁾		kW	-	-	-	-	-	-	9.6	12.5	13.7
Nominal input current ⁽³⁾		A	30.4	33.7	36.3	11.1	12	12.5	17.2	22.4	24.5
Refrigerant gas		Type / GWP	R410A / 2088kgCO ₂ eq								
Refrigerant gas charge		kg	3.3	3.3	3.3	3.3	3.3	3.3	5.5	7.1	8
Compressors		DC inverter	1	1	1	1	1	1	1	1	1
Nominal air flow rate		m ³ /h	6000	6300	6600	6000	6300	6600	8000	11000	11000
Maximum total length of lines		m	300	300	300	300	300	300	300	300	300
Fans		no.	2	2	2	2	2	2	2	2	2
Sound pressure ⁽⁴⁾		dB(A)	57	58	58	57	58	58	63	65	65
Number of indoor units that can be connected		no.	2	2	2	2	2	2	1	1	2
Max number of indoor units that can be connected		no.	7	8	9	7	8	9	13	17	20
Chiller connections	Ø liquid	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")	12.7 (1/2")
	Ø gas	mm (inch)	15.9 (5/8")	15.9 (5/8")	19.05 (3/4")	15.9 (5/8")	15.9 (5/8")	19.05 (3/4")	19.05 (3/4")	22.2 (7/8")	25.4 (1")
		Type	Flared	Flared	Flared	Flared	Flared	Flared	To be soldered	To be soldered	To be soldered
Power supply			220-240V ~ 50/60Hz			380-415V 3N~50/60Hz			380-415V 3N~50/60Hz		
			220-240V ~ 50/60Hz			380-415V 3N~50/60Hz			380-415V 3N~50/60Hz		

(1) Cooling (EN-14511): Room air temperature 27°C D.B. / 19°C W.B.; Outside air temperature 35°C.

(2) Heating (EN-14511): Room air temperature 20°C D.B.; Outside air temperature 7°C D.B. / 6°C W.B.

(3) The nominal input power (nominal input current) is the maximum electrical input power (maximum input current) from the system, in accordance with the Standards EN-60335-1 and EN-60335-2-40

(4) Sound pressure measured in a semi anechoic chamber at 1m from the front of the unit.

MVAM

Technical description

The unit can work in heating or cooling mode with various indoor units, but all working in the same mode (2-pipe system)

Temperature limits (outside air)

from -5°C to 52°C in cooling mode

from -20°C to 24°C in heating mode

Ratio between indoor unit power

and outdoor unit power: 50 - 135%



Outdoor units		MVAM	2241T	2801T	3351T	4001T	4501T	5041T	5601T	6151T
Cooling capacity (nominal) ⁽¹⁾		kW	22.4	28	33.5	40	45	50.4	56	61.5
Total input power (nominal)		kW	4.74	6.25	8.4	10.53	12.82	15.75	20	29.29
Input current (nominal)		A	8.47	11.17	15.02	18.82	22.92	28.15	35.75	52.35
EER		W/W	4.73	4.48	3.99	3.8	3.51	3.2	2.8	2.1
Heating capacity (nominal) ⁽²⁾		kW	25	31.5	37.5	45	50	56.5	63	69
Input power (nominal)		kW	4.81	5.67	7.14	9.51	10.86	14.1	16.6	18.9
Input current (nominal)		A	8.6	10.14	12.76	17	19.41	25.2	29.67	33.78
COP		W/W	5.2	5.56	5.25	4.73	4.6	4.01	3.8	3.65
Nominal input power ⁽³⁾		kW	9	11.7	13.8	16.1	18.6	25	28	30
Nominal input current ⁽³⁾		A	16.1	20.9	24.6	28.8	33.2	44.7	50	53.6
Refrigerant gas		Type / GWP	R410A / 2088kgCO2eq							
Refrigerant gas charge		kg	5.9	9	8.2	9.8	10.3	11.3	14.3	14.3
Compressors		DC inverter	1	1	1	2	2	2	2	2
Nominal air flow rate		m³/h	11400	11400	14000	14000	16000	16000	16000	16000
Maximum total length of lines		m	1000	1000	1000	1000	1000	1000	1000	1000
Fans		no.	1	1	1	2	2	2	2	2
Sound pressure ⁽⁴⁾		dB(A)	60	61	63	63	63	63	63	64
Number of indoor units that can be connected		no.	1	1	1	1	1	1	1	2
Max number of indoor units that can be connected		no.	13	16	19	23	26	29	33	36
Chiller connections	Ø liquid	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")
	Ø gas	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)
	Ø oil balancing	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")
	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
Power supply			380-415V 3N~50/60Hz							

(1) **Cooling (EN-14511)**: Room air temperature 27°C D.B. / 19°C W.B.; Outside air temperature 35°C.

(2) **Heating (EN-14511)**: Room air temperature 20°C D.B.; Outside air temperature 7°C D.B. / 6°C W.B.

(3) The nominal input power (nominal input current) is the maximum electrical input power (maximum input current) from the system, in accordance with the Standards EN-60335-1 and EN-60335-2-40

(4) Sound pressure measured in a semi anechoic chamber at 1m from the front of the unit.

MVAM

Recommended configurations

	Nominal cooling capacity	MVAM combination (module)				Indoor units that can be connected (number)	
	(kW)	(A)	(B)	(C)	(D)	MINIMUM (1)	MAXIMUM (2)
Base module	22.4	2241T	---	---	---	1	13
	28	2801T	---	---	---	1	16
	33.5	3351T	---	---	---	1	19
	40	4001T	---	---	---	1	23
	45	4501T	---	---	---	1	26
	50.4	5041T	---	---	---	1	29
	56	5601T	---	---	---	1	33
	61.5	6151T	---	---	---	2	36
Combinations	68	2801T	4001T	---	---	2	39
	73	2801T	4501T	---	---	2	43
	78.4	2801T	5041T	---	---	2	46
	84	2801T	5601T	---	---	2	50
	89.5	2801T	6151T	---	---	2	53
	95	3351T	6151T	---	---	2	56
	101.5	4001T	6151T	---	---	2	59
	106.5	4501T	6151T	---	---	2	63
	111.9	5041T	6151T	---	---	3	64
	117.5	5601T	6151T	---	---	3	64
	123	6151T	6151T	---	---	3	64
	129	2801T	4501T	5601T	---	3	64
	134.5	2801T	4501T	6151T	---	3	64
	140	3351T	4501T	6151T	---	3	66
	145.5	2801T	5601T	6151T	---	3	69
	151	2801T	6151T	6151T	---	3	71
	156.5	3351T	6151T	6151T	---	3	74
	163	4001T	6151T	6151T	---	3	77
	168	4501T	6151T	6151T	---	4	80
	173.4	5041T	6151T	6151T	---	4	80
	179	5601T	6151T	6151T	---	4	80
	184.5	6151T	6151T	6151T	---	4	80
	190.5	2801T	4501T	5601T	6151T	4	80
	195.9	2801T	5041T	5601T	6151T	4	80
	201.5	2801T	5601T	5601T	6151T	4	80
	207	2801T	5601T	6151T	6151T	4	80
	212.5	2801T	6151T	6151T	6151T	4	80
	218	3351T	6151T	6151T	6151T	4	80
	224.5	4001T	6151T	6151T	6151T	5	80
	229.5	4501T	6151T	6151T	6151T	5	80
	234.9	5041T	6151T	6151T	6151T	5	80
	240.5	5601T	6151T	6151T	6151T	5	80
	246	6151T	6151T	6151T	6151T	5	80

Notes

Modular system obtained by combining 2-4 base modules.

The connections between the base modules must be made at the time of installation.

(1) The sum of the power levels for the indoor units must never be less than 50% of the rated cooling capacity of the outdoor unit selected (or the sum of the units).

(2) The sum of the power levels for the indoor units must never be more than 135% of the rated cooling capacity of the outdoor unit selected (or the sum of the units).

MVAM

Permitted configurations

Nominal cooling capacity	MVAM combination (module)				Indoor units that can be connected (number)	
	(A)	(B)	(C)	(D)	MINIMUM (1)	MAXIMUM (2)
50.4	2241T	2801T	---	---	1	29
56	2801T	2801T	---	---	1	33
61.5	2801T	3351T	---	---	2	36
78.5	3351T	4501T	---	---	2	46
85	4001T	4501T	---	---	2	50
90	4501T	4501T	---	---	2	53
96	2801T	2801T	4001T	---	2	56
101	2801T	2801T	4501T	---	2	59
106.5	2801T	3351T	4501T	---	3	63
113	2801T	4001T	4501T	---	3	64
118	2801T	4501T	4501T	---	3	64
123.5	3351T	4501T	4501T	---	3	64
130	4001T	4501T	4501T	---	3	64
135	4501T	4501T	4501T	---	3	64
141	2801T	2801T	4001T	4501T	3	66
146	2801T	2801T	4501T	4501T	3	69
151.5	2801T	3351T	4501T	4501T	3	71
158	2801T	4001T	4501T	4501T	3	74
163	2801T	4501T	4501T	4501T	3	77
168.5	3351T	4501T	4501T	4501T	4	80
175	4001T	4501T	4501T	4501T	4	80
180	4501T	4501T	4501T	4501T	4	80

Notes

Modular system obtained by combining 2-4 base modules.

The connections between the base modules must be made at the time of installation.

(1) The sum of the power levels for the indoor units must never be less than 50% of the rated cooling capacity of the outdoor unit selected (or the sum of the units).

(2) The sum of the power levels for the indoor units must never be more than 135% of the rated cooling capacity of the outdoor unit selected (or the sum of the units).

MVAMHR

Technical description

A single unit can work simultaneously in heating and cooling mode with various indoor units (**3-pipe system**)

With 5 outdoor units, a **power range** up to 180kW can be covered

Temperature limits (outside air)
from -5°C to 52°C in cooling mode
from -20°C to 24°C in heating mode

Ratio between indoor unit power and outdoor unit power: 50 - 135%



Outdoor units		MVAMHR	2241T	2801T	3351T	4001T	4501T
Cooling capacity (nominal) ⁽¹⁾		kW	22.4	28.0	33.5	40.0	45.0
Total input power (nominal)		kW	5.5	8.2	8.3	11.9	14.8
Input current (nominal)		A	9.8	14.6	14.8	21.3	26.5
EER		W/W	4.09	3.44	4.04	3.36	3.04
Heating capacity (nominal) ⁽²⁾		kW	25.0	31.5	37.5	45.0	50.0
Input power (nominal)		kW	5.3	7.3	7.7	10.0	12.7
Input current (nominal)		A	9.4	13.0	13.8	17.9	22.7
COP		W/W	4.75	4.32	4.87	4.50	3.94
Nominal input power ⁽³⁾		kW	9.10	11.70	13.80	16.10	18.60
Nominal input current ⁽³⁾		A	16.3	20.9	24.7	28.8	33.2
Refrigerant gas		Type / GWP	R410A / 2088kgCO ₂ eq				
Refrigerant gas charge		kg	6.2	7.1	9.6	11.1	11.6
Compressors		DC inverter	1	1	1	2	2
Maximum total length of lines		m	1000	1000	1000	1000	1000
Fans		no.	1	1	2	2	2
Nominal air flow rate		m ³ /h	11400	11400	14000	14000	14000
Sound pressure ⁽⁴⁾		dB(A)	60	61	63	63	63
Chiller connections	Ø liquid	mm (inch)	9.52 (3/8")	9.52 (3/8")	12.7 (1/2")	12.7 (1/2")	12.7 (1/2")
	Ø gas (high pressure)	mm (inch)	15.9 (5/8")	19.05 (3/4")	19.05 (3/4")	22.2 (7/8")	22.2 (7/8")
	Ø gas (low pressure)	mm (inch)	19.05 (3/4")	22.2 (7/8")	25.4 (1 1/16")	25.4 (1 1/16")	28.6 (1 1/8")
	Type		To be soldered	To be soldered	To be soldered	To be soldered	To be soldered
Power supply			380-415V 3N~50Hz				

(1) Cooling (EN-14511): Room air temperature 27°C D.B. / 19°C W.B.; Outside air temperature 35°C.

(2) Heating (EN-14511): Room air temperature 20°C D.B.; Outside air temperature 7°C D.B. / 6°C W.B.

(3) The nominal input power (nominal input current) is the maximum electrical input power (maximum input current) from the system, in accordance with the Standards EN-60335-1 and EN-60335-2-40

(4) Sound pressure measured in a semi anechoic chamber at 1m from the front of the unit.

Configurations

	Nominal cooling capacity	MVAM combination (module)				Indoor units that can be connected (number)	
	(kW)	(A)	(B)	(C)	(D)	MINIMUM (1)	MAXIMUM (2)
Base module	22.4	2241T	---	---	---	1	13
	28	2801T	---	---	---	1	16
	33.5	3351T	---	---	---	1	19
	40	4001T	---	---	---	1	23
	45	4501T	---	---	---	1	26
Combinations	50.4	2241T	2801T	---	---	1	29
	56	2801T	2801T	---	---	1	33
	61.5	2801T	3351T	---	---	2	36
	68	2801T	4001T	---	---	2	39
	73	2801T	4501T	---	---	2	43
	78.5	3350T	4501T	---	---	2	46
	85	4001T	4501T	---	---	2	50
	90	4501T	4501T	---	---	2	53
	96	2801T	2801T	4001T	---	2	56
	101	2801T	2801T	4501T	---	2	59
	106.5	2801T	3351T	4501T	---	3	63
	113	2801T	4001T	4501T	---	3	64
	118	2801T	4501T	4501T	---	3	64
	123.5	3351T	4501T	4501T	---	3	64
	130	4001T	4501T	4501T	---	3	64
	135	4501T	4501T	4501T	---	3	64
	141	2801T	2801T	4001T	4501T	3	66
	146	2801T	2801T	4501T	4501T	3	69
	151.5	2801T	3351T	4501T	4501T	3	71
	158	2801T	4001T	4501T	4501T	3	74
	163	2801T	4501T	4501T	4501T	3	77
	168.5	3351T	4501T	4501T	4501T	4	80
	175	4001T	4501T	4501T	4501T	4	80
	180	4501T	4501T	4501T	4501T	4	80

Notes

Modular system obtained by combining 2-4 base modules.

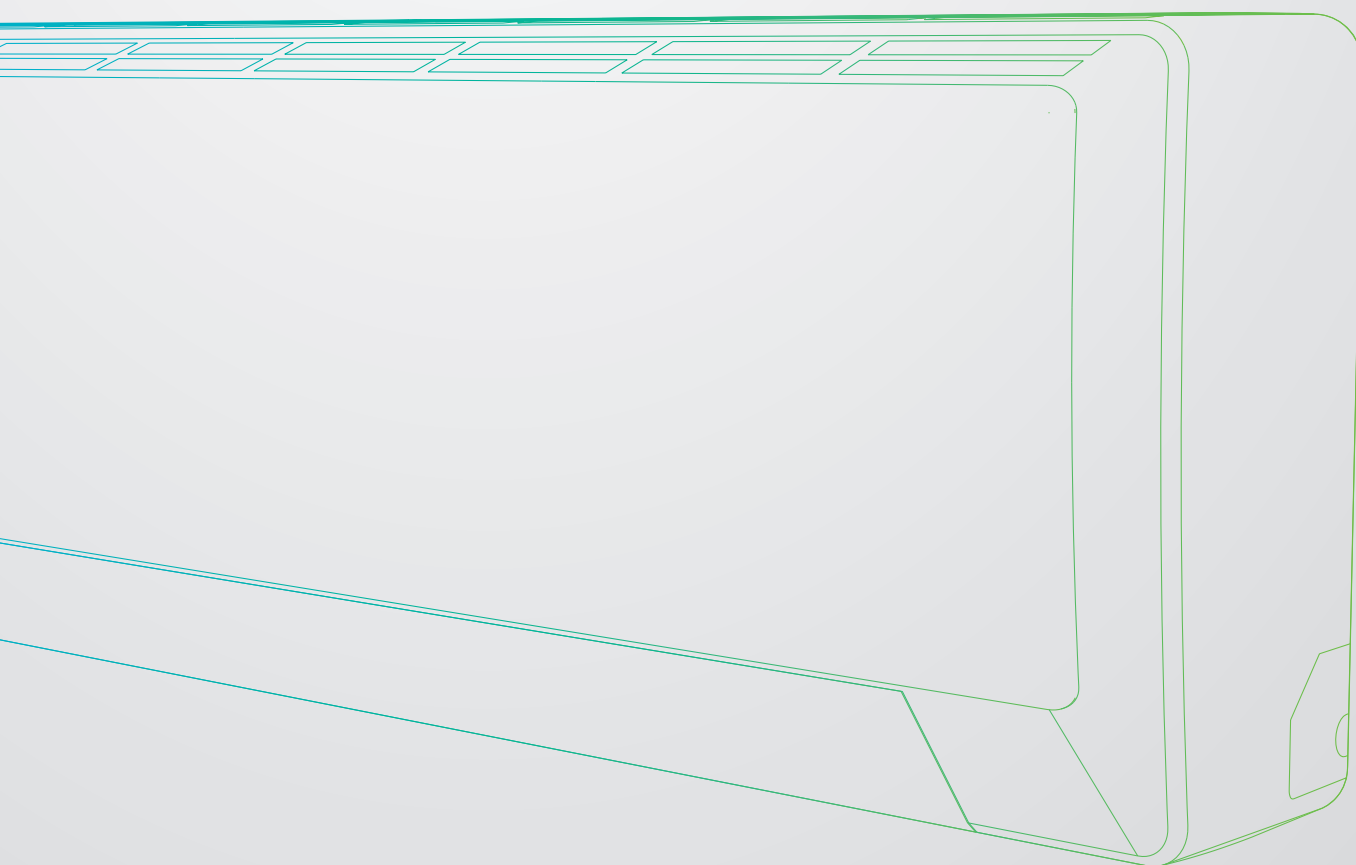
The connections between the base modules must be made at the time of installation.

(1) The sum of the power levels for the indoor units must never be less than 50% of the rated cooling capacity of the outdoor unit selected (or the sum of the units).

(2) The sum of the power levels for the indoor units must never be more than 135% of the rated cooling capacity of the outdoor unit selected (or the sum of the units).

Indoor units

Wide choice of indoor units to suit all plant engineering solutions.



Indoor units

MVA_W indoor units

- Distributed air jet: air outlet fins with horizontal and vertical adjustment facility.
- Anti-freeze function: allows a minimum temperature of 8°C to be maintained indoors throughout the winter period.



Wall (indoor units)	MVA		220W	280W	360W	450W	500W	560W	630W	710W
Cooling capacity ⁽¹⁾	kW		2.2	2.8	3.6	4.5	5	5.6	6.3	7.1
Heating capacity ⁽²⁾	kW		2.5	3.2	4	5	5.8	6.3	7	7.5
Nominal input power ⁽³⁾	W		50	50	60	60	60	70	70	70
Nominal air flow rate	m ³ /h		500	500	630	630	630	750	750	750
Sound pressure (min.)	dB(A)		30	30	38	38	38	38	38	38
Sound pressure (max.)	dB(A)		38	38	44	44	44	44	44	44
Chiller connections	Ø liquid	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")
	Ø gas	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	220-240V ~ 50Hz									

(1) **Cooling (EN-14511):** Room air temperature 27°C D.B. / 19°C W.B.; Outside air temperature 35°C.

(2) **Heating (EN-14511):** Room air temperature 20°C D.B.; Outside air temperature 7°C D.B. / 6°C W.B.

(3) The nominal input power (nominal input current) is the maximum electrical input power (maximum input current) from the system, in accordance with the Standards EN-60335-1 and EN-60335-2-40

Indoor units

MVA_D indoor units

- Wired panel supplied as standard.
- Easy installation in small assembly spaces, thanks to the limited dimensions.
- Low noise levels.



Units with low effective static pressure (indoor units)	MVA		220D	250D	280D	320D	360D	400D	450D	500D
Cooling capacity ⁽¹⁾	kW		2.2	2.5	2.8	3.2	3.6	4	4.5	5
Heating capacity ⁽²⁾	kW		2.5	2.8	3.2	3.6	4	4.5	5	5.6
Nominal input power ⁽³⁾	W		35	35	35	43	43	52	52	52
Nominal air flow rate	m ³ /h		450	450	450	550	550	700	700	700
Nominal effective static head ⁽⁵⁾	Pa		30	30	30	30	30	30	30	30
Sound pressure (min) ⁽⁴⁾	dB(A)		25	25	25	27	27	28	28	28
Sound pressure (max) ⁽⁴⁾	dB(A)		31	31	31	32	32	33	33	33
Chiller connections	Ø liquid	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")	6.35 (1/4")
	Ø gas	mm (inch)	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")	12.7 (1/2")	12.7 (1/2")	12.7 (1/2")	12.7 (1/2")	12.7 (1/2")
Power supply		220-240V ~ 50/60 Hz								

Units with low effective static pressure (indoor units)	MVA		560D	630D	710D	800D	900D	1000D	1120D	1250D	1400D
Cooling capacity ⁽¹⁾	kW		5.6	6.3	7.1	8	9	10	11.2	12.5	14
Heating capacity ⁽²⁾	kW		6.3	7.1	8	9	10	11.2	12.5	14	16
Nominal input power ⁽³⁾	W		99	99	105	140	209	209	209	230	230
Nominal air flow rate	m³/h		1000	1000	1100	1100	1500	1500	1700	2000	2000
Nominal effective static head ⁽⁵⁾	Pa		30	30	50	50	50	50	50	50	50
Sound pressure (min) ⁽⁴⁾	dB(A)		30	30	30	31	32	32	32	37	37
Sound pressure (max) ⁽⁴⁾	dB(A)		35	35	35	36	40	40	40	42	42
Chiller connections	Ø liquid	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")	9.52 (3/8")
	Ø gas	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")	15.9 (5/8")	15.9 (5/8")
Power supply		220-240V ~ 50/60 Hz									

(1) **Cooling (EN-14511)**: Room air temperature 27°C D.B. / 19°C W.B.; Outside air temperature 35°C.

(2) **Heating (EN-14511)**: Room air temperature 20°C D.B.; Outside air temperature 7°C D.B. / 6°C W.B.

(3) The nominal input power (nominal input current) is the maximum electrical input power (maximum input current) from the system, in accordance with the Standards EN-60335-1 and EN-60335-2-40

(4) Sound pressure measured in a semi anechoic chamber at 1m from the front of the unit.

(5) Nominal effective static head calculated at maximum speed.

MVA_DH indoor units

- Suitable for long-distance channels.
- Effective static pressure that can reach 150 Pa.
- Easy maintenance.
- Wired panel supplied as standard.



Units with high effective static pressure (indoor units)	MVA		560DH	630DH	710DH	800DH	900DH	1000DH	1120DH	1250DH	1400DH	1600DH	2240DH	2800DH
Cooling capacity ⁽¹⁾	kW		5.6	6.3	7.1	8	9	10	11.2	12.5	14	16	22.4	28
Heating capacity ⁽²⁾	kW		6.3	7.1	8	9	10	11.2	12.5	14	16	17	25	31
Nominal input power ⁽³⁾	W		120	120	130	130	200	200	200	220	220	350	800	900
Nominal air flow rate	m ³ /h		1000	1000	1000	1000	1700	1700	1700	2000	2000	2050	4000	4400
Nominal effective static head ⁽⁵⁾	Pa		100	100	100	100	100	100	100	100	100	150	150	150
Sound pressure (min) ⁽⁴⁾	dB(A)		36	36	37	37	42	42	42	42	44	46	49	50
Sound pressure (max) ⁽⁴⁾	dB(A)		44	44	45	45	46	46	46	48	48	48	54	55
Chiller connections	Ø liquid	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")	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")
	Ø gas	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")	15.9 (5/8")	15.9 (5/8")	19.05 (3/4")	19.05 (3/4")	22.2 (7/8")
Power supply	220-240V ~ 50Hz													

(1) **Cooling (EN-14511):** Room air temperature 27°C D.B. / 19°C W.B.; Outside air temperature 35°C.

(2) **Heating (EN-14511):** Room air temperature 20°C D.B.; Outside air temperature 7°C D.B. / 6°C W.B.

(3) The nominal input power (nominal input current) is the maximum electrical input power (maximum input current) from the system, in accordance with the Standards EN-60335-1 and EN-60335-2-40

(4) Sound pressure measured in a semi anechoic chamber at 1m from the front of the unit.

(5) Nominal effective static head calculated at maximum speed.

Indoor units

MVA_DV indoor units

- Low noise levels.
- Supplied with standard wired panel.
- Easy vertical installation in small assembly spaces, thanks to the limited dimensions.



Units with low effective static pressure for vertical installation (indoor units)	MVA		220DV	280DV	360DV	450DV	560DV	630DV	710DV
Cooling capacity ⁽¹⁾	kW		2.2	2.8	3.6	4.5	5.6	6.3	7.1
Heating capacity ⁽²⁾	kW		2.5	3.2	4	5	6.3	7.1	8
Nominal input power ⁽³⁾	W		35	35	43	45	80	80	90
Nominal air flow rate	m ³ /h		450	450	550	650	900	900	1100
Nominal effective static head ⁽⁵⁾	Pa		10	10	10	15	15	15	15
Sound pressure (min) ⁽⁴⁾	dB(A)		25	25	28	28	30	30	33
Sound pressure (max) ⁽⁴⁾	dB(A)		30	30	33	33	35	35	37
Chiller connections	Ø liquid	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")
	Ø gas	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	220-240V ~ 50Hz								

(1) **Cooling (EN-14511):** Room air temperature 27°C D.B. / 19°C W.B.; Outside air temperature 35°C.

(2) **Heating (EN-14511):** Room air temperature 20°C D.B.; Outside air temperature 7°C D.B. / 6°C W.B.

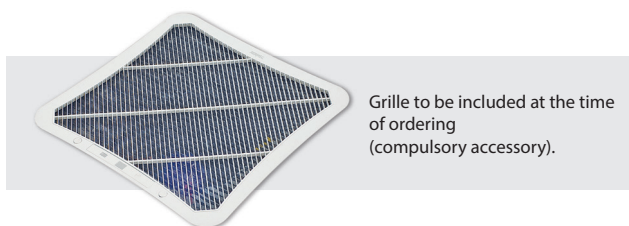
(3) The nominal input power (nominal input current) is the maximum electrical input power (maximum input current) from the system, in accordance with the Standards EN-60335-1 and EN-60335-2-40

(4) Sound pressure measured in a semi anechoic chamber at 1m from the front of the unit.

(5) Nominal effective static head calculated at maximum speed.

MVA_CS indoor units

- Guarantees even air distribution, for optimum comfort.
- Long-life, washable filter.
- Condensate discharge pump supplied as standard.
- Wired panel supplied as standard.



small 4-way cassette type Indoor units	MVA		220CS	280CS	360CS	450CS	500CS	560CS
Cooling capacity ⁽¹⁾	kW		2.2	2.8	3.6	4.5	5	5.6
Heating capacity ⁽²⁾	kW		2.5	3.2	4	5	5.6	6.3
Nominal input power ⁽³⁾	W		35	35	35	45	45	45
Nominal air flow rate	m ³ /h		600	600	600	700	700	700
Sound pressure (min) ⁽⁴⁾	dB(A)		35	35	35	38	38	38
Sound pressure (max) ⁽⁴⁾	dB(A)		41	41	41	45	45	45
Chiller connections	Ø liquid	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")
	Ø gas	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")
Power supply	220-240V ~ 50/60Hz							

(1) **Cooling (EN-14511):** Room air temperature 27°C D.B. / 19°C W.B.; Outside air temperature 35°C.

(2) **Heating (EN-14511):** Room air temperature 20°C D.B.; Outside air temperature 7°C D.B. / 6°C W.B.

(3) The nominal input power (nominal input current) is the maximum electrical input power (maximum input current) from the system, in accordance with the Standards EN-60335-1 and EN-60335-2-40

(4) Sound pressure measured in a semi anechoic chamber at 1m from the front of the unit.

Indoor units

MVA_C indoor units

- Guarantees even air distribution, for optimum comfort.
- Long-life, washable filter.
- Condensate discharge pump supplied as standard.
- Wired panel supplied as standard.
- Low noise levels.



4-way cassette type Indoor units	MVA		280C	360C	450C	500C	560C	630C	710C	800C	900C	1000C	1120C	1250C	1400C	1600CB
Cooling capacity ⁽¹⁾	kW		2.8	3.6	4.5	5	5.6	6.3	7.1	8	9	10	11.2	12.5	14	16
Heating capacity ⁽²⁾	kW		3.2	4	5	5.6	6.3	7.1	8	9	10	11.2	12.5	14	16	17.5
Nominal input power ⁽³⁾	W		48	48	48	50	59	59	68	68	98	98	110	110	110	130
Nominal air flow rate	m³/h		750	750	750	830	1000	1000	1180	1180	1500	1500	1700	1860	1860	2100
Sound pressure (min) ⁽⁴⁾	dB(A)		31	31	31	31	32	32	33	33	35	35	36	38	38	42
Sound pressure (max) ⁽⁴⁾	dB(A)		36	36	36	36	37	37	38	38	40	40	41	43	43	47
Chiller connections	Ø liquid	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")	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")
	Ø gas	mm (inch)	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")	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")
Power supply	220-240V ~ 50Hz										220-240V ~ 50Hz					

1-way cassette type (indoor units)	MVA		220C1	280C1	360C1	450C1	500C1
Cooling capacity ⁽¹⁾	kW		2.2	2.8	3.6	4.5	5
Heating capacity ⁽²⁾	kW		2.5	3.2	4	5	5.6
Nominal input power ⁽³⁾	W		30	30	30	30	30
Nominal air flow rate	m³/h		600	600	600	830	830
Sound pressure (min) ⁽⁴⁾	dB(A)		28	28	28	30	30
Sound pressure (max) ⁽⁴⁾	dB(A)		36	36	36	40	40
Chiller connections	Ø liquid	mm (inch)	6.35 (1/4")	6.35 (1/4")	6.35 (1/4")	6.35 (1/4")	6.35 (1/4")
	Ø gas	mm (inch)	9.52 (3/8")	9.52 (3/8")	12.7 (1/2")	12.7 (1/2")	12.7 (1/2")
Power supply	220-240V ~ 50/60Hz						

(1) **Cooling (EN-14511):** Room air temperature 27°C D.B. / 19°C W.B.; Outside air temperature 35°C.

(2) **Heating (EN-14511):** Room air temperature 20°C D.B.; Outside air temperature 7°C D.B. / 6°C W.B.

(3) The nominal input power (nominal input current) is the maximum electrical input power (maximum input current) from the system, in accordance with the Standards EN-60335-1 and EN-60335-2-40

(4) Sound pressure measured in a semi anechoic chamber at 1m from the front of the unit.

MVA_FS indoor units

- Offers a compatible solution in systems with fan coils.
- Floor installation.
- Cold Plasma purifier.
- Wireless control as standard.



console (indoor units)	MVA		220FS	280FS	360FS	450FS	500FS	560CS
Cooling capacity ⁽¹⁾	kW		2.2	2.8	3.6	4.5	5	5.6
Heating capacity ⁽²⁾	kW		2.5	3.2	4	5	5.5	6.3
Nominal input power ⁽³⁾	W		15	15	20	40	40	45
Nominal air flow rate	m ³ /h		400	400	480	680	680	700
Sound pressure (min) ⁽⁴⁾	dB(A)		27	27	32	39	39	38
Sound pressure (max) ⁽⁴⁾	dB(A)		38	38	40	46	46	45
Chiller connections	Ø liquid	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")
	Ø gas	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")
Power supply	220-240V ~ 50/60Hz							

(1) **Cooling (EN-14511):** Room air temperature 27°C D.B. / 19°C W.B.; Outside air temperature 35°C.

(2) **Heating (EN-14511):** Room air temperature 20°C D.B.; Outside air temperature 7°C D.B. / 6°C W.B.

(3) The nominal input power (nominal input current) is the maximum electrical input power (maximum input current) from the system, in accordance with the Standards EN-60335-1 and EN-60335-2-40

(4) Sound pressure measured in a semi anechoic chamber at 1m from the front of the unit.

Indoor units

MVA_F indoor units

- Offers a compatible solution in systems with fan coils.
- Floor or ceiling installation.
- Wireless control as standard.



console (indoor units)	MVA		280F	360F	500F	630F	710F	900F	1120F	1250F	1400F
Cooling capacity ⁽¹⁾	kW		2.8	3.6	5	6.3	7.1	9	11.2	12.5	14
Heating capacity ⁽²⁾	kW		3.6	4	5.6	7.1	8	11.2	12.5	14	16
Nominal input power ⁽³⁾	W		40	40	50	75	75	140	160	160	160
Nominal air flow rate	m ³ /h		650	650	950	1400	1400	1600	2000	2000	2000
Sound pressure (min) ⁽⁴⁾	dB(A)		32	32	33	39	39	43	42	45	45
Sound pressure (max) ⁽⁴⁾	dB(A)		36	36	42	44	44	50	51	52	52
Chiller connections	Ø liquid	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")
	Ø gas	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")
Power supply	220-240V ~ 50/60Hz										

(1) **Cooling (EN-14511):** Room air temperature 27°C D.B. / 19°C W.B.; Outside air temperature 35°C.

(2) **Heating (EN-14511):** Room air temperature 20°C D.B.; Outside air temperature 7°C D.B. / 6°C W.B.

(3) The nominal input power (nominal input current) is the maximum electrical input power (maximum input current) from the system, in accordance with the Standards EN-60335-1 and EN-60335-2-40

(4) Sound pressure measured in a semi anechoic chamber at 1m from the front of the unit.

MVA_V indoor units

- Solution for very large areas.



console (indoor units)	MVA		1000V	1400V
Cooling capacity ⁽¹⁾	kW		10	14
Heating capacity ⁽²⁾	kW		11	15
Nominal input power ⁽³⁾	W		200	200
Nominal air flow rate	m ³ /h		1600	1600
Sound pressure (min) ⁽⁴⁾	dB(A)		46	46
Sound pressure (max) ⁽⁴⁾	dB(A)		50	50
Chiller connections	Ø liquid	mm (inch)	9.52 (3/8")	9.52 (3/8")
	Ø gas	mm (inch)	15.9 (5/8")	15.9 (5/8")
Power supply	220-240V ~ 50/60Hz			

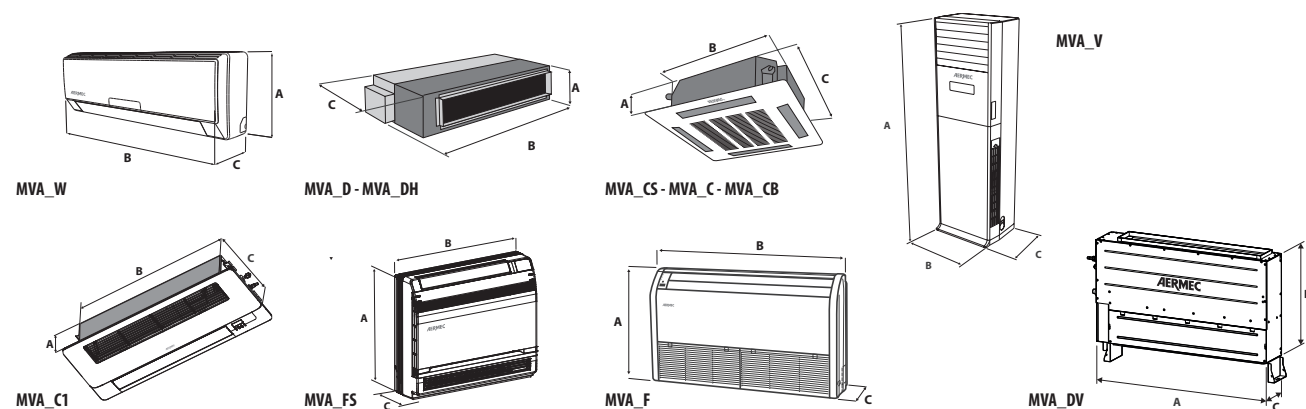
(1) **Cooling (EN-14511):** Room air temperature 27°C D.B. / 19°C W.B.; Outside air temperature 35°C.

(2) **Heating (EN-14511):** Room air temperature 20°C D.B.; Outside air temperature 7°C D.B. / 6°C W.B.

(3) The nominal input power (nominal input current) is the maximum electrical input power (maximum input current) from the system, in accordance with the Standards EN-60335-1 and EN-60335-2-40

(4) Sound pressure measured in a semi anechoic chamber at 1m from the front of the unit.

Dimensions and weights



MVA_W	A (mm)	B (mm)	C (mm)	Net weight (kg)
MVA220W	275	843	180	10
MVA280W	275	843	180	10
MVA360W	298	940	200	12.5
MVA450W	298	940	200	12.5
MVA500W	298	940	200	12.5
MVA560W	319	1008	221	15
MVA630W	319	1008	221	15
MVA710W	319	1008	221	15

MVA_C1	A (mm)	B (mm)	C (mm)	Net weight (kg)
MVA220C1	178	987	385	20
MVA280C1	178	987	385	20
MVA360C1	178	987	385	20
MVA450C1	178	987	385	21
MVA500C1	178	987	385	21

Grille dimensions GLC1 1200 x 460 x 55mm - 4.2kg

MVA_CS	A (mm)	B (mm)	C (mm)	Net weight (kg)
MVA220CS	240	596	596	20.5
MVA280CS	240	596	596	20.5
MVA360CS	240	596	596	20.5
MVA450CS	240	596	596	20.5
MVA500CS	240	596	596	20.5
MVA560CS	240	596	596	20.5

Grille dimensions GL40S 670 x 670 x 50mm - 3.5kg

MVA_C	A (mm)	B (mm)	C (mm)	Net weight (kg)
MVA280C	190	840	840	25
MVA360C	190	840	840	25
MVA450C	190	840	840	25
MVA500C	190	840	840	25
MVA560C	240	840	840	30
MVA630C	240	840	840	30
MVA710C	240	840	840	30
MVA800C	240	840	840	30
MVA900C	320	840	840	35
MVA1000C	320	840	840	35
MVA1120C	320	840	840	35
MVA1250C	320	840	840	35
MVA1400C	320	840	840	35

Grille dimensions GL40 950 x 950 x 60mm - 7kg

MVA_CB	A (mm)	B (mm)	C (mm)	Net weight (kg)
MVA1600CB	293	910	910	45

Grille dimensions GL40B 1040 x 1040 x 65mm - 8kg

MVA_FS	A (mm)	B (mm)	C (mm)	Net weight (kg)
MVA220FS	600	700	215	16
MVA280FS	600	700	215	16
MVA360FS	600	700	215	16
MVA450FS	600	700	215	16
MVA500FS	600	700	215	16

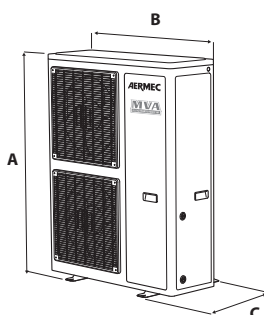
MVA_F	A (mm)	B (mm)	C (mm)	Net weight (kg)
MVA280F	700	1220	225	40
MVA360F	700	1220	225	40
MVA500F	700	1220	225	40
MVA630F	700	1420	245	50
MVA710F	700	1420	245	50
MVA900F	700	1700	245	50
MVA1120F	700	1700	245	60
MVA1250F	700	1700	245	60
MVA1400F	700	1700	245	60

MVA_D	A (mm)	B (mm)	C (mm)	Net weight (kg)
MVA220D	200	700	615	22
MVA250D	200	700	615	22
MVA280D	200	700	615	22
MVA320D	200	700	615	22
MVA360D	200	700	615	22
MVA400D	200	900	615	27
MVA450D	200	900	615	27
MVA500D	200	900	615	27
MVA560D	200	1100	615	31
MVA630D	200	1100	615	31
MVA710D	260	1200	655	31
MVA800D	260	1200	655	40
MVA900D	260	1340	655	46
MVA1000D	260	1340	655	46
MVA1120D	260	1340	655	46
MVA1250D	260	1340	655	47
MVA1400D	260	1340	655	47

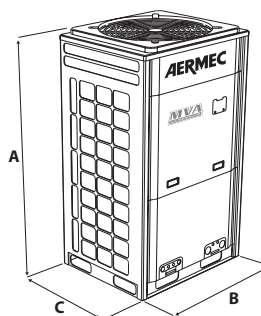
MVA_DH	A (mm)	B (mm)	C (mm)	Net weight (kg)
MVA560DH	268	1271	558	35
MVA630DH	268	1271	558	35
MVA710DH	268	1271	558	35
MVA800DH	268	1271	558	35
MVA900DH	290	1229	775	47
MVA1000DH	290	1229	775	47
MVA1120DH	290	1229	775	47
MVA1250DH	290	1229	775	47
MVA1400DH	290	1229	775	47
MVA1600DH	350	1340	750	60
MVA2240DH	385	1483	791	115
MVA2800DH	450	1686	870	115

MVA_V	A (mm)	B (mm)	C (mm)	Net weight (kg)
MVA1000V	1870	580	400	54
MVA1400V	1870	580	400	57

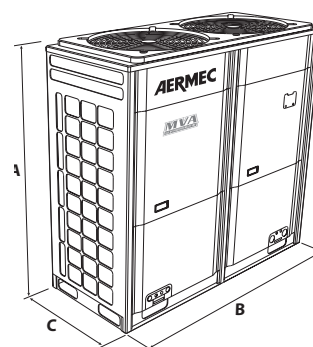
MVA_DV	A (mm)	B (mm)	C (mm)	Net weight (kg)
MVA220DV	700	615	200	23
MVA280DV	700	615	200	23
MVA360DV	700	615	200	23
MVA450DV	900	615	200	27
MVA560DV	1100	615	200	32
MVA630DV	1100	615	200	32
MVA710DV	1100	615	200	32

**MVAS**

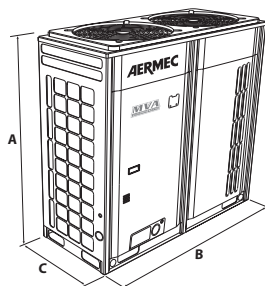
MVAS	A (mm)	B (mm)	C (mm)	Net weight (kg)
MVAS1201S	1345	900	340	110
MVAS1401S	1345	900	340	110
MVAS1601S	1345	900	340	110
MVAS1201T	1345	900	340	120
MVAS1401T	1345	900	340	120
MVAS1601T	1345	900	340	120
MVAS2242T	1430	940	320	133
MVAS2802T	1615	940	460	166
MVAS3351T	1615	940	460	177

**MVAM2241T**
MVAM2801T

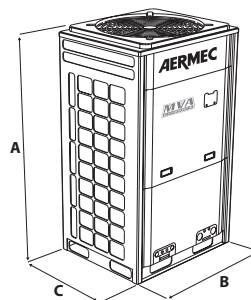
MVAM	A (mm)	B (mm)	C (mm)	Net weight (kg)
MVAM2241T	1605	930	765	225
MVAM2801T	1605	930	765	225

**MVAM3351T**
MVAM4001T
MVAM4501T

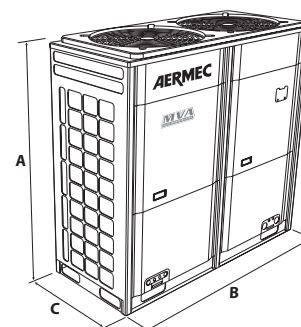
MVAM	A (mm)	B (mm)	C (mm)	Net weight (kg)
MVAM3351T	1605	1340	765	285
MVAM4001T	1605	1340	765	360

**MVAM4501T**
MVAM5041T
MVAM5601T
MVAM6151T

MVAM	A (mm)	B (mm)	C (mm)	Net weight (kg)
MVAM4501T	1740	1340	765	360
MVAM5041T	1740	1340	765	360
MVAM5601T	1740	1340	765	385
MVAM6151T	1740	1340	765	385

**MVAMHR2241T**
MVAMHR2801T

MVAM	A (mm)	B (mm)	C (mm)	Net weight (kg)
MVAMHR2241T	1605	930	765	233
MVAMHR2801T	1605	930	765	233

**MVAMHR3351T**
MVAMHR4001T
MVAMHR4501T

MVAM	A (mm)	B (mm)	C (mm)	Net weight (kg)
MVAMHR3351T	1605	1340	765	302
MVAMHR4001T	1605	1340	765	346
MVAMHR4501T	1605	1340	765	346

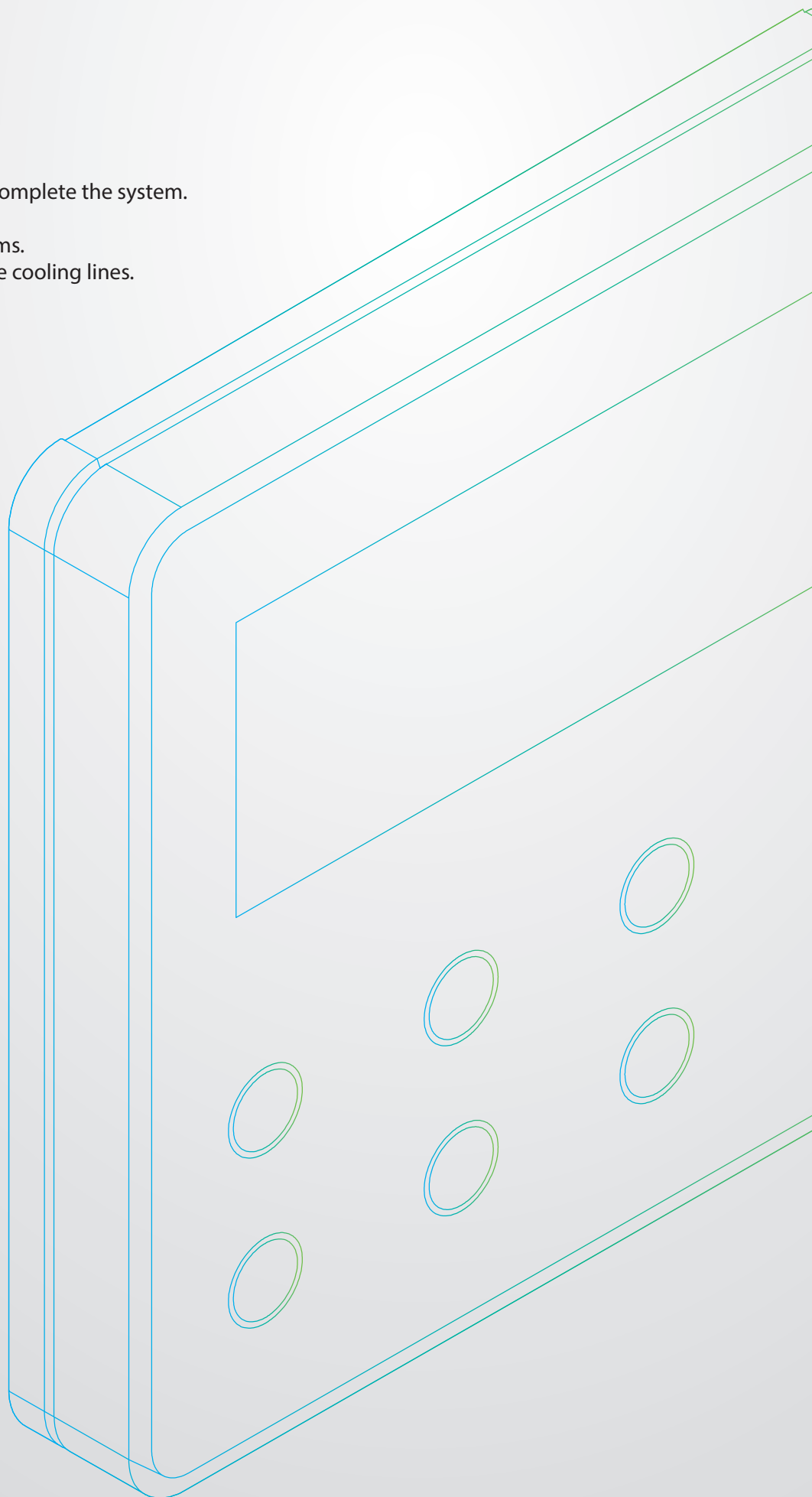
Accessories

Wide choice of accessories to complete the system.

Pioneering control panels.

ModBus communication systems.

Refnet joints for connecting the cooling lines.



Accessories

INFRARED REMOTE CONTROLS

WLRC

Infrared remote control for indoor units.



CONTROL PANELS

WRC

Wired panel (soft touch) for indoor units.

Functions: On/Off, operating mode selection, temperature setting, ventilation levels, timer.

It can command a single indoor unit or a set of indoor units (up to a maximum of 16).



WRC1

Simplified wired panel (soft touch) for indoor units with built-in external contact. This panel is particularly suitable for hotel applications. It can control a single indoor unit or a set of indoor units (up to a maximum of 16) with the same settings from two separate locations.



MVASZC

Simplified centralised control (4.3" touchscreen display), for managing up to 32 indoor units distributed across a maximum of 16 systems.



CC2

Centralised control (7" touchscreen display), for managing up to 255 indoor units distributed across a maximum of 16 systems. The centralised control has an integrated external contact.



MANAGEMENT AND CONTROL

MODBUSGW MODBUSGW10

This accessory allows you to manage up to 16 MVA systems (with a maximum of 128 indoor units), with a Modbus serial for supervision with an external BMS.



MINIMODBUS10

This accessory allows you to manage up to 16 MVA systems (with a maximum of 255 indoor units), with a Modbus serial for supervision with an external BMS.



BACNETGW

This accessory allows you to manage up to 16 MVA systems (with a maximum of 255 indoor units), with a BACnet serial for supervision with an external BMS.



USBDC

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 MVA ranges.

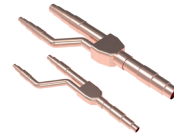


Accessories

JOINTS FOR COOLING LINE CONNECTIONS

RNY

Accessory consisting of two Y-joints, one for the liquid line and one for the gas line.


RNF

Accessory consisting of two F-joints, one for the liquid line and one for the gas line.
For 2-pipe systems.



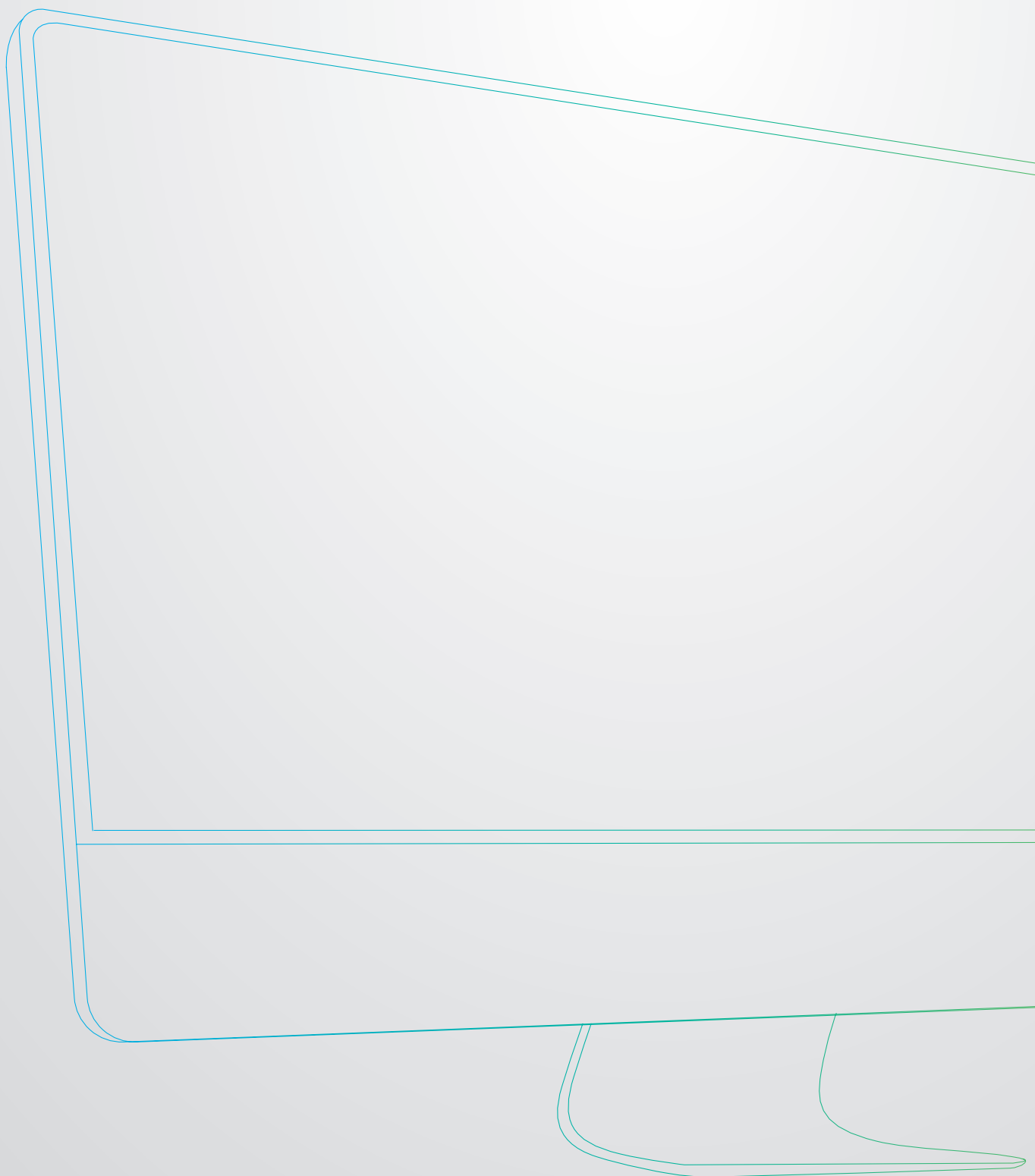
EXCHANGE MODULES FOR 3-PIPE SYSTEMS

MEB

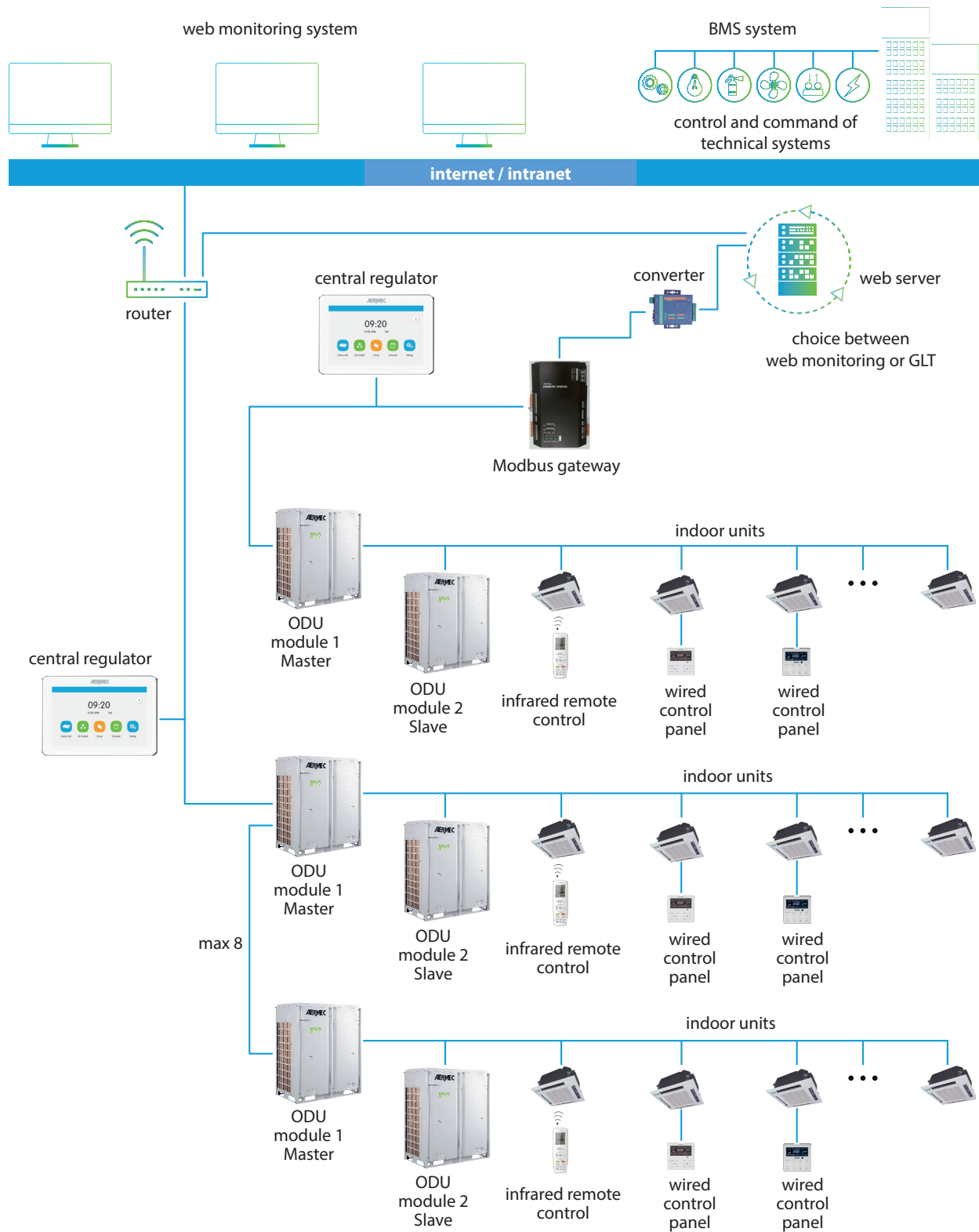
Exchange module with one, two, four or eight branches (each single branch can manage heating or cooling mode independently of the others, but simultaneously) for interfacing the MVAMHR 3-pipe outdoor units with the MVA 2-pipe indoor units.



Configurations



Connections (VRF systems)





If you need help designing a refrigerant flow system, download the

VRF SELECTION

program from the following link:

<http://www.aermec.com/support/downloads/vrfsetup.exe>





