

FAN COIL
FOR HORIZONTAL AND VERTICAL DUCTED INSTALLATION

VED

Variable Multi Flow

VMF



VED 430
VED 440
VED 530
VED 540

VED 432
VED 441
VED 532
VED 541

VED 630
VED 640
VED 730
VED 740

VED 632
VED 641
VED 732
VED 741



IVEDPY 1107 - 4879010_00



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FCU

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be found on the site

www.eurovent-certification.com

Made with materials of superior quality in strict compliance with safety regulations, VED is easy to use and will have a long life.

The range of VED fan coils are designed for integration in the VMF system.

The VMF (Variable Multi Flow) system is able to intelligently manage a complete hydronic system, made up of chiller/heat pump, a boiler, a network of fan coils (multi-speed or continuous modulation of the speed) divided into zones (up to 64), circulation pumps (up to 12) and heat recovery units with air quality sensor (up to 3), optimising conditioning and heating performance to ensure comfort and energy savings.

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REMARKS

Store the manuals in a dry location to avoid deterioration, as they must be kept for at least 10 years for any future reference.

Carefully and thoroughly read all the information referred to in this manual. Pay particular attention to the usage regulations accompanied by the words “DANGER” or “WARNING” because, if they are not complied with, damage can be caused to the machine and/or injury to persons or damage to property may result.

If any malfunctions are not included in this manual, contact the local After Sales Service immediately.

The apparatus must be installed in such a way that maintenance and/or repair operations are possible.

The apparatus's warranty does not in any case cover costs due to automatic ladders, scaffolding or other lifting systems necessary for carrying out repairs under guarantee.

AERMEC S.p.A. declines all liability for any damage due to improper use of the machine, or the partial or superficial reading of the information contained in this manual.

The information contained in this manual conform to the description of the units at the time of drafting.

This document has been prepared with reference to the pre-series or prototypes, the technical data contained in this document are not binding.

As part of the continuous product improvement policy, AERMEC SpA reserves the right to make any changes at any time deemed necessary to the improvement of the product.

Some configurations and/or functions may not be available for all units.

This manual contains the following number of pages: 84.

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Noi, firmatari della presente, dichiariamo sotto la nostra esclusiva responsabilità, che il prodotto:

VENTILCONVETTORE PER INSTALLAZIONE CANALIZZATA, ORIZZONTALE E VERTICALE serie VED

al quale questa dichiarazione si riferisce è conforme alle seguenti norme armonizzate:

- CEI EN 60335-2-40
- CEI EN 55014-1
- CEI EN 55014-2
- CEI EN 61000-6-1
- CEI EN 61000-6-3

soddisfando così i requisiti essenziali delle seguenti direttive:

- Direttiva LVD 2006/95/CE
- Direttiva compatibilità elettromagnetica 2004/108/CE
- Direttiva Macchine 2006_42_CE

VED CON ACCESSORI

E' fatto divieto di mettere in servizio il prodotto dotato di accessori non di fornitura Aermec.

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- EN 55014-1
- EN 55014-2
- EN 61000-6-1
- EN 61000-6-3

satisfaisant ainsi aux conditions essentielles des directives suivantes:

- Directive LVD 2006/95/CE
- Directive compatibilité électromagnétique 2004/108/CE
- Directive Machines 2006_42_CE

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Il est interdit de faire fonctionner l'appareil avec des accessoires qui ne sont pas fournis de Aermec.

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Bevilacqua, 15/11/2010

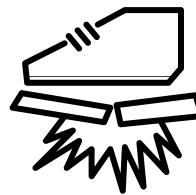
La Direzione Commerciale – Sales and Marketing Director

Luigi Zucchi

TRASPORTO • CARRIAGE • TRANSPORT • TRANSPORT • TRANSPORTE



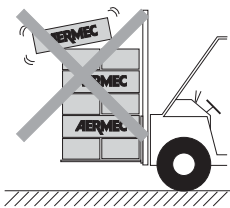
NON bagnare. Tenere al riparo dalla pioggia
Do NOT wet
CRAINT l'humidité
Vor Nässe schützen
NO mojar



NON calpestare
Do NOT step
NE PAS marcher sur cet emballage
Nicht betreten
NO pisar



Sovrapponibilità: controllare sull'imballo per conoscere il numero di macchine impilabili
Stacking: control the packing to know the number of machines that can be stacked
Empilement: vérifier sur l'emballage pour connaître le nombre d'appareils pouvant être empilés
Stapelung: Die Anzahl der stapelbaren Geräte, wird durch die Symbole auf den Verpackungen ermittelt
Apilamiento: observe en el embalaje para saber cuántos equipos pueden pilarse



NON lasciare gli imballi sciolti durante il trasporto - Non rovesciare
Do NOT leave loose packages during transport
ATTACHER les emballages pendant le transport
Die Verpackungen nicht ungesichert transportieren
NO lleve las cajas sueltas durante el transporte



NON trasportare la macchina da soli se il suo peso supera i 25 Kg
DO NOT handle the machine alone if its weight is over 25 Kg
NE PAS transporter tout seul l'appareil si son poids dépasse 25 Kg
Das Gerät NICHT alleine tragen, wenn sein Gewicht 25 Kg überschreitet
NO maneje los equipos en solitario si pesan más de 25 kg



Fragile, maneggiare con cura
Fragile, handle with care
Fragile, manipuler avec soin
Zerbrechlich, mit Sorgfalt behandeln
Frágil, manejar con cuidado



Freccia: alto
Arrow: high
Flèche: haut
Pfeil: hoch
Flecha: alto

**SIMBOLI DI SICUREZZA • SAFETY SYMBOL • SIMBOLES DE SECURITE
SICHERHEITSSYMBOL • SÍMBOLOS DE SEGURIDAD**



Pericolo:
Tensione
Danger:
Power supply
Danger:
Tension
Gefahr !
Spannung
Peligro:
Tensión



Pericolo:
Organi in movimento
Danger:
Movings parts
Danger:
Organes en mouvement
Gefahr !
Rotierende Teile
Peligro:
Elementos en movimiento



Pericolo!!!
Danger!!!
Danger!!!
Gefahr!!!
Peligro!!!

IMPORTANT INFORMATION AND MAINTENANCE

⚠ WARNING: The fan coil is connected to the power supply and a water circuit. Operations performed by persons without the required technical skills can lead to personal injury to the operator or damage to the unit and surrounding objects.

⚠ ONLY POWER THE FAN COIL AT 230V ~ 50Hz

Use of other power supplies could cause permanent damage to the fan coil.

DO NOT USE THE FAN COIL IMPROPERLY

Do not use the fan coil in animal husbandry applications (e.g. incubation).

AIRING THE ROOM

Periodically air the room in which the fan coil has been installed; this is particularly important if the room is occupied by many people, or if gas appliances or sources of odours are present.

CORRECTLY REGULATING THE TEMPERATURE

The external temperature should be adjusted in order to provide maximum comfort to the people in the room, especially if they are elderly, children or sick people; avoid differences over 7°C between the outdoor temperature and the temperature inside the room in summer.

In summer, a temperature that is too low causes higher electrical consumption.

CORRECTLY ADJUSTING THE AIR JET

The area coming out of the fan coil must not strike people directly; in fact, even if at a temperature that is higher than the room temperature, it could cause a cold sensation and resulting discomfort.

DO NOT USE EXCESSIVELY HOT WATER

Clean the fan coil with a soft cloth or sponge soaked in water not over 40°C. Do not use chemical products

AIR FILTER REMOVAL AND REPLACEMENT

The air filter must be removed from the fan coil for cleaning.

The cleaned or new air filter (for replacement) must be correctly fitted and secured in its housing in the fancoil.

To remove the air filter:

- loosen the screws of the two filter clips
- slide the two filter retainers until they stop
- remove the filter from its housing

or solvents to clean any part of the fancoil. Do not spray water on the outer or inner surfaces of the fan coil (it might cause short circuits).

CLEANING PERIODICALLY THE FILTER

Frequent cleaning of the filter will ensure more efficient unit operation.

Check whether the filter is very dirty: in this case, repeat the operation more often.

Clean frequently. Remove the accumulated dust with a vacuum cleaner.

When the filter is clean, refit it on the fan coil following the dismantling instructions in reverse order.

EXTRAORDINARY CLEANING

The fact that the blades of examinable shrouds can be removed (operation done only by adequately skilled technicians) ensures a thorough cleaning of the internal components, which is particularly important when installing the unit in crowded areas or venues requiring high hygiene standards.

DURING OPERATIONS

Always leave the filter on the fan coil during operation (otherwise dust in the air could soil the coil surface area).

WHAT IS NORMAL

In the cooling operation, water vapour may be present in the air delivery of the fan coil.

In the heating operation, a slight hiss might be heard close to the fan coil. Sometimes the fan coil might give off unpleasant smells due to the accumulation of substances present in the air of the room (clean the filter more often, especially if the room is not ventilated regularly).

While the unit is functioning, there could be noises and creaks inside the device due to the various thermal expansions of the elements (plastic and metal), but this does not indicate any malfunction and does not damage the unit unless the maximum input water temperature is exceeded.

To reassemble the air filter:

- insert the air filter into its housing,
- slide the two filter clips until the filter is secured,
- tighten the screws of the two filter clips,
- make sure the filter is secured in its housing.

MALFUNCTIONING

In the case of malfunctioning remove the power to the unit then repower it and start the apparatus up again.

⚠ CAUTION! Do not attempt to repair the unit alone, this is extremely dangerous!

If the problem occurs again, call your areas After-Sales Service promptly.

DO NOT TUG THE ELECTRICAL CABLE

It is very dangerous to pull, tread on or crush the electrical power cable or fix it with nails or drawing pins.

A damaged power cable can cause short circuits and personal injury.

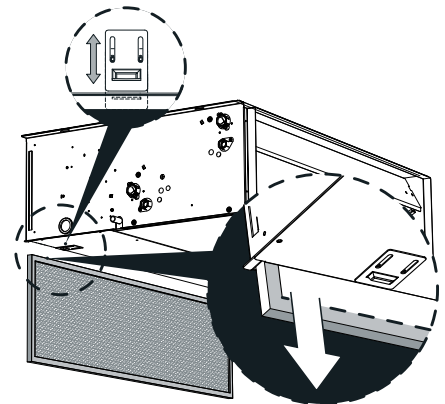
DO NOT PUT ANYTHING IN THE AIR OUTLETS

Never insert objects of any kind in the air delivery and outlet.

⚠ This could cause injury to people and damage to the fan.

⚠ CAUTION

Avoid any use of the device by children or incompetent persons without appropriate supervision; also note that the unit should not be used by children as a toy.



PACKAGING

The cassette fan coils are sent in standard packaging made of foam polystyrene and cardboard.

USE

Consult control panel manual for installation and use instructions.

DESCRIPTION OF THE UNIT

PURPOSE OF THE VED FANCOILS

The fan coil is a room air treatment terminal unit for both winter and summer operation. The VED fancoils are designed to fit any ducted type system.

In particular, the possibility to be integrated into the VMF system allows the control of a single fancoil with accessories and the management of the VED introduced in complex fancoil networks and their accessories.

AVAILABLE SIZES

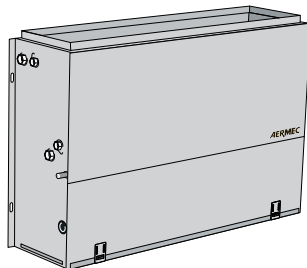
VED fan coils are available in:

8 sizes for 2-pipe systems	
VED 430	(3 row coil)
VED 440	(4 row coil)
VED 530	(3 row coil)
VED 540	(4 row coil)
VED 630	(3 row coil)
VED 640	(4 row coil)
VED 730	(3 row coil)
VED 740	(4 row coil)

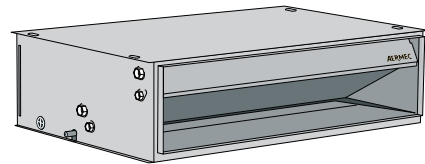
8 sizes for 4-pipe systems	
VED 432	(3 row + 2 Row coil)
VED 441	(4 row + 1 Row coil)
VED 532	(3 row + 2 Row coil)
VED 541	(4 row + 1 Row coil)
VED 632	(3 row + 2 Row coil)
VED 641	(4 row + 1 Row coil)
VED 732	(3 row + 2 Row coil)
VED 741	(4 row + 1 Row coil)

Main features of the VED fancoils

- Fancoil for both vertical wall installation and horizontal false ceiling installation
- Main coil with 3 and 4 rows
- Versions for 4-pipe systems also with heating-only coil of 1 or 2 rows
- Low pressure drop coils
- Couplings reversible onsite
- Wide range of accessories to connect the fan coil to each type of air ducting
- Requires external control panel (accessory)
- Designed to fit in the VMF system
- Wide range of controls and accessories
- High possibility of having different useful static pressures
- 5-speed fan motor, 3 preferred speeds of which can be selected.
- Centrifugal fans with fans designed for low noise emission
- Filter filtration class G3
- Air intake filter, easily removable for periodic cleaning
- Accessories for 3-way valve with 4 connections
- Accessories 2-way valve for the systems to variable water flow rate
- Internal insulating, class 1
- Full compliance with the accident prevention standards
- Ease of installation and maintenance
- Discharge flange incorporated in the unit



Vertical installation



Horizontal installation

SYSTEM EXAMPLE

Key:

SW Water temperature sensor

VC/F Valve (Heating / cooling)

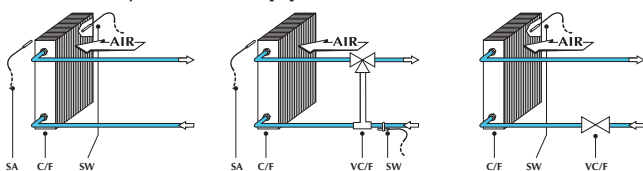
VC Valve (Heating)

SA External temperature sensor

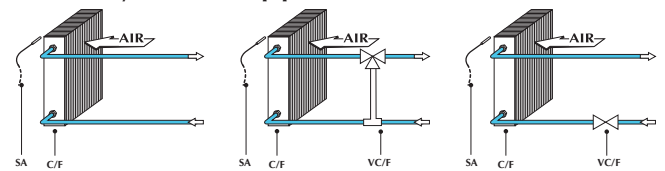
C/F Coil (Heating / Cooling)

C Coil (heating)

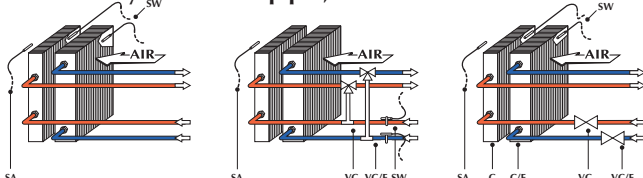
System with 2 pipes, with water sensor



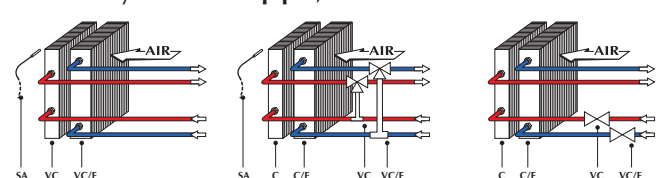
System with 2 pipes, without water sensor



System with 4 pipes, with water sensor



System with 4 pipes, without water sensor



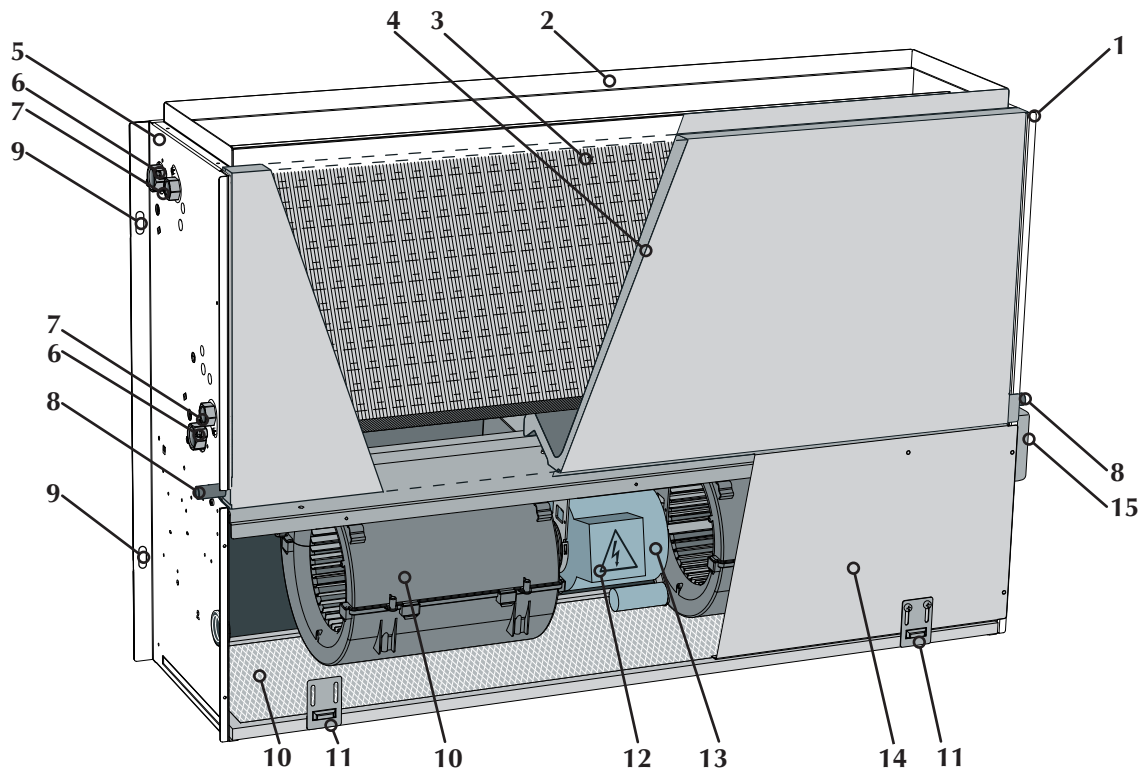
MAIN COMPONENTS

- 1 Right side (load-bearing structure)
- 2 Air delivery flanges
- 3 Heat exchange coil
- 4 Condensate collection tray / Front panel (upper)
- 5 Left side (load-bearing structure)

- 6 Vents / discharges on the coil
- 7 Hydraulic connections
- 8 Condensate drain
- 9 Fixing slots
- 10 Air filter (suction)
- 11 Filter clip

- 10 Centrifugal fan
- 12 Electric motor electrical box
- 13 Electric motor
- 14 Front closure panel (lower)
- 15 Electrical wiring

VED



DESCRIPTION OF COMPONENTS

System types

The fancoils are designed for 2 and 4 pipe systems with fixed or variable flow rate, in versions:

- 3 Rows and 4 Rows;
- 3 Rows with 2-row hot water coil for heating-only.
- 4 Rows with 1-row hot water coil for heating-only.

Ventilation

Ventilation is controlled via a control panel (accessory).

The 5-speed fan motor can connect the control panel to 3 speeds that produce the optimum useful head for the system.

HEAT EXCHANGE COIL

Main coil with 3 and 4 rows Heating-only coil with 1 or 2 rows Coil with low pressure drops, in copper piping and corrugated aluminium fins, blocked via mechanical expansion of the tubes. The collectors are fitted with female hydraulic connections and air vents in the upper part of the coil.

FILTERING SECTION

Air intake filter, easily removable for periodic cleaning Built with renewable materials and can be cleaned with a vacuum cleaner.

Filtration class G3. Behaviour to flames M1 NF F 16-101.

ELECTRIC FAN UNIT

Double suction centrifugal fans with fans designed for low noise emission.

The fans are directly coupled with the shaft of the electric motor.

The 5-speed fan motor allows you to choose the 3 preferred speeds by changing the settings on the electrical box on the motor.

The electric motor is cushioned with elastic supports.

STRUCTURE

Made of galvanised sheet iron of a suitable thickness. Internal insulation in Class 1.

The installation slots are positioned at the rear.

The inlets and outlets are designed to connect the fancoil to all types of air ducting.

The delivery outlet includes the coupling flange.

CONDENSATE DRAIN

Every device is equipped with a condensate collection tray for both vertical and horizontal installation. The tray has 2 fittings (Ø 16mm) for the discharge of condensate. The 2 fittings protrude from the side of the unit.

PLUMBING CONNECTIONS

The connectors, located on the left hand side, are female. The coil can be rotat-

ed onsite to reverse the fittings onto the right side.

CONTROL PANEL

There are several control panels available to choose the most suitable for the system.

The full potential of the VED units can be exploited by combining the control panels, thermostats and other accessories of the VMF series.

The thermostats of the VMF series allow to:

- Control a single unit and the accessories.
- Control a network of 6 units, including a master with thermostat and control panel plus 5 slave units equipped with thermostat, which operate independently based on the ambient conditions.
- Control of the VED unit in a complex network of up to 64 zones with 6 fancoils (up to 384 fancoils with a single VMF-E5 control board).

SELECTION CRITERIA

The VED suspended fancoils are suitable for both vertical and horizontal ducted installations.

VED is factory set to operate at the 3 default speeds indicated in the manual.

In case of ducted installations where pressure drops in the ducts are considerable, the VED allows to achieve the static pressure necessary to guarantee a correct air flow rate by altering the settings of the electrical box connection on the motor. VED allows the selection of 3 speed from the 5 available on the motor.

All versions have to be combined with a control panel (accessory); consult the characteristics and compatibility of the control panels supplied as accessories.

There is a wide range of accessories for VED fan coils, sometimes some of them cannot be used at the same time; check that the accessories are compatible with the fan coil chosen. The manual shows the description of each accessory plus a drawing and its compatibility.

The installation information is included in the manuals supplied together with each fan coil or its accessory. This manual is limited to provide general information in order to obtain a correct installation; it also contains drawings with fan coil dimensions and the wiring diagrams with the connections to control panels.

The main technical data of the VED fancoils are summarised in the tables.

The sensible and total cooling capacities at maximum speed depending on the incoming water temperature, its ther-

mal head and air temperature with dry bulb and wet bulb respectively for sensible output and total cooling capacity are shown in the table and refer to the high speed; the capacity at the average and minimum speed are obtained by multiplying the values obtained from the table at maximum speed by the indicated correction factors.

The water pressure drops, respectively for the 3 - 4 row coils (heating and cooling) and 1 - 2 row (heating-only) are illustrated in the diagrams.

The correction factors when the unit operates with glycol water for cooling and heating function modes are shown in the graphs in percentages of glycol of 10%, 20% and 35%.

The heating capacity from the 3 - 4 and 1 - 2 row coils based on the water flow rate and temperature difference between the inlet water and inlet air is shown in a graphical form and refers to the maximum speed; the performances at average and minimum speeds are obtained by multiplying the values obtained from the chart at maximum speed by the corrective factors indicated.

The pressure level and sound power of the fancoils at different speeds is shown in separate tables.

For the ducted installations, the sound power level is expressed according to the air flow rate and pressure, and represented as graphs.

The static pressure for the suspended versions, according to the air flow rate and the fan speed, are shown as a table; the curves are shown for each reference speed.

For scaling the ducted wall/ceiling-mounting models, it is advisable to proceed as follows: choose the size that in conditions of nominal flow rate has a power immediately above that required; afterwards, mark out the curve of the duct pressure drops on the rate-pressure diagram related to the machine in question in order to individualise the points of machine operation at the different speeds. Based on the output values of these points, you will obtain the correction factors that help calculate the output given the actual conditions of air flow rate.

The above procedure allows to choose whether to change the settings of the motor's connections.

OPERATIONAL LIMITS

VED		430	440	530	540	432	441	532	541
Maximum water inlet temperature	°C	80							
Maximum recommended water inlet temperature	°C	65							
Maximum operating pressure	bar	8							
Minimum water flow rate (Main coil)	l/h	300	300	300	300	300	300	300	300
Maximum water flow rate (Main coil)	l/h	3000	3000	3000	3000	3000	3000	3000	3000
Minimum water flow rate (Heating Only Coil)	l/h	-	-	-	-	200	100	200	100
Maximum water flow rate (Heating Only Coil)	l/h	-	-	-	-	2000	1500	2000	1500
External temperature limits (Ta)	°C	0° < Ta < 40°							
Relative humidity limits in the room (R.H.)		R.H. < 85%							
Power supply		230V (±10%) ~ 50 Hz							
Protection level	IP	20							

VED		630	640	730	740	632	641	732	741
Maximum water inlet temperature	°C	80							
Maximum recommended water inlet temperature	°C	65							
Maximum operating pressure	bar	8							
Minimum water flow rate (Main coil)	l/h	300	300	300	300	300	300	300	300
Maximum water flow rate (Main coil)	l/h	4500	4500	4500	4500	4500	4500	4500	4500
Minimum water flow rate (Heating Only Coil)	l/h	-	-	-	-	300	300	300	300
Maximum water flow rate (Heating Only Coil)	l/h	-	-	-	-	3000	3000	2500	3000
External temperature limits (Ta)	°C	0° < Ta < 40°							
Relative humidity limits in the room (R.H.)		R.H. < 85%							
Power supply		230V (±10%) ~ 50 Hz							
Protection level	IP	20							



The leakage current to earth of several devices placed under the same circuit breaker is summed, so attention should be paid to the calibration of the circuit

breaker and possibly consider the division of the installation into several circuits each of which protected by its own circuit breaker.

Water temperature

In order to prevent air stratification in the room, and therefore to achieve improved mixing, it is advisable not to supply the fan coil with water at a

temperature over 65°C. The use of water at high temperatures could cause squeaking due to the different thermal expansions of the elements (plastics and metals), this does not

however cause damage to the unit if the maximum operating temperature is not exceeded.

Minimum average water temperature

If the fan coil is working in continuous cooling mode in an environment where the relative humidity is high, condensate might form on the air delivery and on the outside of the device. This condensate might be deposited on the floor and on any objects underneath.

To avoid condensate on the external

structure of the apparatus with the fan in operation, the average temperature of the water must not be lower than the limits shown in the table below, that depend on the thermo-hygrometric condition of the air in the environment. The limits mentioned above refer to operation while the fan is set to its minimum speed level.

In the event of prolonged fan inactivity

and with cold water passing through the coil, condensate may form on the external case of the unit. **As a result, we recommend including the 3-way valve accessory.**

MINIMUM AVERAGE WATER TEMPERATURE [°C]		Ambient air temperature with dry bulb					
		21	23	25	27	29	31
Ambient air temperature with wet bulb	15	3	3	3	3	3	3
	17	3	3	3	3	3	3
	19	3	3	3	3	3	3
	21	6	5	4	3	3	3
	23	-	8	7	6	5	5

TECHNICAL DATA

VED for 2-pipe systems		VED	430	440	530	540	630	640	730	740
Heating										
Heating output 50°C	Rated	W	10420	11950	11340	13110	18220	19600	20060	21820
	Maximum (E)	W	9475	10740	10420	11820	16070	17930	17280	19150
	Average (E)	W	8250	9130	9775	11050	13500	14940	15120	16680
	Minimum (E)	W	6195	6810	8190	9170	11100	11980	12640	13840
Pressure drop 50°C	Rated	kPa	17	24	19	29	57	37	69	43
	Maximum (E)	kPa	13	19	16	23	48	32	57	35
	Average (E)	kPa	11	15	15	21	36	24	44	28
	Minimum (E)	kPa	7	9	11	16	26	17	33	21
Cooling										
Cooling capacity	Rated	W	8010	9290	8660	10280	13900	16450	15360	18100
	Maximum (E)	W	6950	8010	7760	8970	12530	15180	13850	16080
	Average (E)	W	6150	7060	7395	8545	10700	12760	12200	14230
	Minimum (E)	W	4685	5340	6160	7435	8890	10430	10400	11960
Sensible cooling capacity	Rated	W	6225	6675	6755	7255	11500	11590	12770	12800
	Maximum (E)	W	5360	5735	6020	6450	10300	10660	11440	11320
	Average (E)	W	4715	5040	5715	6130	8750	8910	9990	9970
	Minimum (E)	W	3545	3785	4720	5040	7220	7240	8480	8340
Water flow rate	Rated	l/h	1378	1598	1490	1768	2391	2829	2642	3113
	Maximum	l/h	1195	1378	1335	1543	2155	2611	2382	2766
	Average	l/h	1058	1214	1272	1470	1840	2195	2098	2448
	Minimum	l/h	806	918	1060	1279	1529	1794	1789	2057
Pressure drop	Rated	kPa	22	30	26	37	58	47	70	56
	Maximum (E)	kPa	17	22	21	28	48	41	58	45
	Average (E)	kPa	13	17	19	25	36	30	46	37
	Minimum (E)	kPa	8	10	12	19	26	21	35	27
Common data										
Air flow rate	Rated	cu.m/h	1520	1520	1700	1700	2450	2450	2800	2800
	Maximum (E)	cu.m/h	1350	1340	1520	1500	2210	2200	2410	2350
	Average (E)	cu.m/h	1130	1100	1400	1380	1800	1770	2040	2000
	Minimum (E)	cu.m/h	790	780	1120	1100	1380	1370	1640	1600
Useful static head (with filter installed)	Rated	Pa	55	50	40	35	68	63	47	37
	Maximum (E)	Pa	72	70	70	56	75	75	69	69
	Average (E)	Pa	50	50	50	50	50	50	50	50
	Minimum (E)	Pa	24	24	25	32	30	30	32	32
Motor speed connections	Rated		V5	V5	V5	V5	V5	V5	V5	V5
	Maximum (E)		V5	V5	V5	V5	V5	V5	V5	V5
	Average (E)		V3	V3	V4	V4	V3	V3	V3	V3
	Minimum (E)		V1	V1	V2	V2	V2	V1	V1	V1
Number of fans		no.	2	2	2	2	3	3	3	3
Input power	Rated	W	238	240	283	282	376	376	411	411
	Maximum (E)	W	228	222	270	267	339	339	371	371
	Average (E)	W	182	178	232	230	268	268	285	285
	Minimum (E)	W	137	135	175	172	224	224	234	234
Input power	Maximum head	W	290	290	300	300	436	436	440	440
Maximum input current		A	1,4	1,4	1,35	1,35	2,07	2,07	2,0	2,0
Sound power level emitted by the delivery of the unit	Maximum (E)	dB(A)	57,2	57,3	58	58	64	64	64,5	64,5
	Average (E)	dB(A)	54	54	56	56	60,5	60,5	62	62
	Minimum (E)	dB(A)	45,5	46	51	51	55,5	55,5	58	58
Sound power level emitted by the unit and by the air intake side.	Maximum (E)	dB(A)	61,5	61,5	62	62	68	68	68,5	68,5
	Average (E)	dB(A)	57,5	57,5	59,5	59,5	64,5	64,5	66	66
	Minimum (E)	dB(A)	51	51	53,5	53,5	59,5	59,5	62	62
Coil water content		l	2,82	3,76	2,82	3,76	4,38	5,84	4,38	5,84
Coil connections		diam	3/4"G	3/4"G	3/4"G	3/4"G	3/4"G	3/4"G	3/4"G	3/4"G

(E) = Performance certified EUROVENT 6/9 - Sound tests certified EUROVENT 8/12 (ISO 3741/2001)

The performance refers to the following conditions:
 ♪ Sound pressure measured in semi-reverberating chamber, 85m³, and with reverberation time Tr = 0.5s.

MPS = 230V-1-50Hz
 Unit with standard filter G3 installed

Cooling:

- External air temperature 27°C D.B. ; 19°C W.B.
- Water inlet temperature 7°C ; Δt water 5°C
- Constant water flow rate

Heating:

- External air temperature 20°C
- Water inlet temperature: 50°C; Maximum speed
- Water flow rate as for cooling

TECHNICAL DATA

VED for 4-pipe systems		VED	432	441	532	541	632	641	732	741
Heating										
Heating output 70°C	Rated	W	13875	8990	15020	9510	22800	14800	25080	15800
	Maximum (E)	W	12090	8160	13540	8850	20500	13750	22180	14500
	Average (E)	W	10725	7480	12850	8520	17750	12370	19720	13330
	Minimum (E)	W	8280	6190	10720	7475	14690	10770	16730	11830
Water flow rate 70°C	Rated	l/h	1193	773	1292	818	1961	1273	2157	1359
	Maximum	l/h	1040	702	1164	761	1763	1183	1907	1247
	Average	l/h	922	643	1105	733	1527	1064	1696	1146
	Minimum	l/h	712	532	922	643	1263	926	1439	1017
Pressure drop 70°C	Rated	kPa	22	32	25	35	33	31	39	34
	Maximum (E)	kPa	17	27	21	31	27	27	31	30
	Average (E)	kPa	14	23	19	29	21	23	25	26
	Minimum (E)	kPa	9	17	14	23	15	18	19	21
Cooling										
Cooling capacity	Rated	W	8010	9290	8660	10280	13900	16450	15360	18100
	Maximum (E)	W	6950	8010	7760	8970	12530	15180	13850	16080
	Average (E)	W	6150	7060	7395	8545	10700	12760	12200	14230
	Minimum (E)	W	4685	5340	6160	7435	8890	10430	10400	11960
Sensible cooling capacity	Rated	W	6225	6675	6755	7255	11500	11590	12770	12800
	Maximum (E)	W	5360	5735	6020	6450	10300	10660	11440	11320
	Average (E)	W	4715	5040	5715	6130	8750	8910	9990	9970
	Minimum (E)	W	3545	3785	4720	5040	7220	7240	8480	8340
Water flow rate	Rated	l/h	1378	1598	1490	1768	2391	2829	2642	3113
	Maximum	l/h	1195	1378	1335	1543	2155	2611	2382	2766
	Average	l/h	1058	1214	1272	1470	1840	2195	2098	2448
	Minimum	l/h	806	918	1060	1279	1529	1794	1789	2057
Pressure drop	Rated	kPa	22	30	26	37	58	47	70	56
	Maximum (E)	kPa	17	22	21	28	48	41	58	45
	Average (E)	kPa	13	17	19	25	36	30	46	37
	Minimum (E)	kPa	8	10	12	19	26	21	35	27
Common data										
Air flow rate	Rated	cu.m/h	1520	1520	1700	1700	2450	2450	2800	2800
	Maximum (E)	cu.m/h	1350	1340	1520	1500	2210	2200	2410	2350
	Average (E)	cu.m/h	1130	1100	1400	1380	1800	1770	2040	2000
	Minimum (E)	cu.m/h	790	780	1120	1100	1380	1370	1640	1600
Useful static head * (with filter installed)	Rated	Pa	55	50	40	35	68	63	47	37
	Maximum (E)	Pa	72	70	70	56	75	75	69	69
	Average (E)	Pa	50	50	50	50	50	50	50	50
	Minimum (E)	Pa	24	24	25	32	30	30	32	32
Motor speed connections	Rated		V5	V5	V5	V5	V5	V5	V5	V5
	Maximum (E)		V5	V5	V5	V5	V5	V5	V5	V5
	Average (E)		V3	V3	V4	V4	V3	V3	V3	V3
	Minimum (E)		V1	V1	V2	V2	V2	V1	V1	V1
Number of fans	no.	2	2	2	2	3	3	3	3	
Input power	Rated	W	238	240	283	282	376	376	411	411
	Maximum (E)	W	228	222	270	267	339	339	371	371
	Average (E)	W	182	178	232	230	268	268	285	285
	Minimum (E)	W	137	135	175	172	224	224	234	234
Input power	Maximum head	W	290	290	300	300	436	436	440	440
Maximum input current	A	1,4	1,4	1,35	1,35	2,07	2,07	2,0	2,0	
Sound power level emitted by the delivery of the unit	Maximum (E)	dB(A)	57,5	57,5	58	58	64	64	64,5	64,5
	Average (E)	dB(A)	54	54	56,8	56,8	60,5	60,5	62	62
	Minimum (E)	dB(A)	46	46	51,6	51,6	55,5	55,5	58	58
Sound power level emitted by the unit and by the air intake side.	Maximum (E)	dB(A)	61,5	61,5	62	62	68	68	68,5	68,5
	Average (E)	dB(A)	57,5	57,5	59,5	59,5	64,5	64,5	66	66
	Minimum (E)	dB(A)	51	51	53,5	53,5	59,5	59,5	62	62
Coil water content (main)	l	2,82	3,76	2,82	3,76	4,38	5,84	4,38	5,84	
Coil water content (heating only)	l	1,88	0,94	1,88	0,94	2,92	1,46	2,92	1,46	
Coil connections (main)	diam	3/4"G	3/4"G	3/4"G	3/4"G	3/4"G	3/4"G	3/4"G	3/4"G	
Coil connections (heating only)	diam	1/2"G	1/2"G	1/2"G	1/2"G	1/2"G	1/2"G	1/2"G	1/2"G	

(E) = Performance certified EUROVENT 6/9 - Sound tests certified EUROVENT 8/12 (ISO 3741/2001)

The performance refers to the following conditions:

- Sound pressure measured in semi-reverberating chamber, 85m³, and with reverberation time Tr = 0.5s

MPS = 230V-1-50Hz

- * Unit with standard filter G3 installed

Cooling:

- External air temperature 27°C D.B. ; 19°C W.B.
- Water inlet temperature 7°C ; Δt water 5°C
- Constant water flow rate

Heating:

- External air temperature 20°C
- Water inlet temperature: 70°C ; Δt water 10°C
- Water flow rate as for cooling

COOLING CAPACITY - VED430 / VED432

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.		
5	3	15	6434	5244	6406	5966	6434	6434	6635	6635	7260	7260	7576	7576	
		17	8302	5217	8285	5954	8269	6680	8252	7403	8227	8120	8235	8235	
		19	10321	5175	10296	5913	10271	6645	10246	7371	10221	8086	10204	8445	
		21			12456	5857	12423	6591	12390	7316	12356	8040	12348	8402	
		23					14742	6517	14725	7259	14675	7979	14659	8342	
	5	5	15	5551	4766	5677	5541	5918	5918	6331	6331	6968	6968	7283	7283
			17	7526	4808	7509	5542	7484	6265	7518	7005	7601	7601	7685	7685
			19	9570	4786	9553	5526	9537	6259	9520	6989	9503	7707	9470	8058
			21			11739	5488	11705	6220	11689	6952	11664	7679	11655	8040
	7	7	15	4450	4152	4863	4863	5316	5316	5930	5930	6595	6595	6928	6928
			17	6400	4239	6389	4969	6492	5734	6698	6532	6974	6974	7157	7157
			19	8669	4337	8652	5073	8636	5802	8602	6520	8619	7252	8636	7622
21					10905	5075	10871	5803	10855	6532	10838	7261	10821	7616	
7	3	15	4995	4478	5064	5064	5339	5339	5976	5976	6606	6606	6916	6916	
		17	6876	4477	6859	5207	6836	5928	6830	6650	6951	6951	7042	7042	
		19	8886	4445	8869	5182	8853	5913	8819	6627	8811	7349	8786	7699	
		21			11021	5135	10988	5863	8819	6627	10938	7311	10930	7672	
		23					13307	5804	13290	6540	13257	7265	13240	7625	
	5	5	15	4123	3989	4484	4484	5006	5006	5666	5666	6314	6314	6629	6629
			17	5976	4030	5953	4753	6033	5506	6205	6205	6469	6469	6687	6687
			19	8060	4042	8043	4776	8035	5507	8010	6225	8002	6945	8018	7316
			21			10237	4756	10221	5491	10204	6217	10171	6933	10162	7292
	7	7	15	3211	3211	3865	3865	4565	4565	5259	5259	5930	5930	6262	6262
			17	4507	3327	4771	4154	5115	4994	5511	5511	5976	5976	6274	6274
			19	6928	3511	6928	4249	6905	4967	6974	5722	7134	6499	7226	6889
21					9286	4312	9270	5043	9253	5765	9236	6487	9236	6849	
9	3	15	3636	3636	4031	4031	4677	4677	5316	5316	5947	5947	6262	6262	
		17	5345	3725	5322	4444	5373	5183	5540	5540	5964	5964	6274	6274	
		19	7368	3716	7351	4447	7334	5170	7312	5885	7295	6601	7306	6967	
		21			9495	4410	9470	5137	9453	5861	9436	6583	9420	6934	
		23					11789	5091	11764	5818	11739	6542	11722	6899	
	5	5	15	2988	2988	3647	3647	4330	4330	5001	5001	5654	5654	5976	5976
			17	4198	3184	4381	3971	4679	4679	5087	5087	5666	5666	5987	5987
			19	6411	3278	6400	4005	6389	4729	6423	5466	6549	6222	6641	6607
			21			8619	4012	8602	4740	8586	5460	8569	6179	8561	6533
	7	7	15	2259	2259	3114	3114	3865	3865	4576	4576	5264	5264	5597	5597
			17	2718	2451	3372	3372	3980	3980	4588	4588	5276	5276	5609	5609
			19	4886	2609	4920	3347	5115	4138	5414	4961	5769	5769	5964	5964
21					7484	3516	7468	4238	7468	4962	7484	5691	7535	6071	
23					9954	4281	9937	5005	9920	5726	9904	6080			

Tw [°C] = Inlet water temperature

Ta W.B. [°C] = Inlet air temperature with wet bulb

Ta D.B. [°C] = Inlet air temperature with dry bulb

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

The cooling outputs of the table are at maximum speed (maximum air flow).

To determine the cooling capacity based on the speed (air flow), the values shown in the table must be multiplied by the following factors (k):

NB: The values in bold type indicate the rated value.

If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.

In this case, only sensible power values are considered.

VED 430/432	Qv [m³/h]	k (Pc)	k (Ps)
Maximum Rated speed V5	1520	1	1
Maximum speed	1350	0.87	0.86
Average speed	1130	0.77	0.76
Minimum speed	790	0.58	0.57

COOLING CAPACITY - VED430 / VED432

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.	
11	3	15	2698	2698	3369	3369	4020	4020	4657	4657	5293	5293	5609	5609
		17	3681	2946	3813	3708	4100	4100	4668	4668	5305	5305	5620	5620
		19	5723	2971	5712	3696	5700	4412	5706	5138	5827	5827	5895	5895
		21			7868	3683	7852	4407	7835	5123	7818	5838	7810	6190
		23					10162	4372	10137	5093	10121	5814	10104	6169
	5	15	2202	2202	2950	2950	3653	3653	4330	4330	4989	4989	5316	5316
		17	2535	2373	3074	3074	3659	3659	4335	4335	5001	5001	5328	5328
		19	4519	2453	4530	3179	4668	3944	4926	4741	5264	5264	5454	5454
		21			6859	3252	6847	3974	6847	4694	6847	5413	6882	5785
		23					9220	3973	9220	4702	9186	5412	9186	5773
	7	15	1289	1289	2317	2317	3142	3142	3882	3882	4588	4588	4932	4932
		17	1292	1292	2328	2328	3148	3148	3894	3894	4599	4599	4938	4938
19		2133	1464	2948	2468	3561	3387	4129	4129	4685	4685	4972	4972	
21				5333	2629	5345	3354	5505	4126	5758	4927	5907	5327	
23						8052	3499	8043	4218	8035	4936	8018	5286	
13	3	15	2007	2007	2695	2695	3358	3358	4003	4003	4639	4639	4955	4955
		17	2168	2168	2701	2701	3366	3366	4008	4008	4651	4651	4966	4966
		19	3945	2213	3934	2925	4031	3671	4267	4267	4662	4662	4978	4978
		21			6125	2949	6113	3667	6102	4376	6090	5086	6119	5453
		23					8419	3647	8410	4369	8385	5079	8377	5433
	5	15	1364	1364	2225	2225	2959	2959	3653	3653	4324	4324	4657	4657
		17	1370	1370	2228	2228	2965	2965	3659	3659	4335	4335	4668	4668
		19	2145	1472	2689	2365	3211	3211	3733	3733	4341	4341	4674	4674
		21			4886	2453	4886	3171	4989	3914	5207	4696	5333	5086
		23					7351	3225	7334	3937	7318	4646	7318	5003
	7	15	651	651	1301	1301	2368	2368	3165	3165	3900	3900	4249	4249
		17	651	651	1301	1301	2368	2368	3177	3177	3905	3905	4255	4255
19		671	671	1306	1306	2397	2397	3183	3183	3911	3911	4267	4267	
21				2477	1531	3177	2471	3762	3364	4301	4236	4553	4553	
23						5804	2638	5804	3350	5918	4103	6010	4489	
15	3	15	1283	1283	2010	2010	2689	2689	3346	3346	3986	3986	4307	4307
		17	1286	1286	2013	2013	2695	2695	3355	3355	3997	3997	4312	4312
		19	1875	1366	2268	2185	2741	2741	3360	3360	4003	4003	4324	4324
		21			4221	2194	4209	2898	4278	3632	4467	4391	4599	4599
		23					6555	2920	6549	3632	6526	4334	6520	4686
	5	15	521	521	1410	1410	2239	2239	2965	2965	3653	3653	3991	3991
		17	522	522	1410	1410	2242	2242	2970	2970	3659	3659	3997	3997
		19	525	525	1422	1422	2248	2248	2976	2976	3670	3670	4003	4003
		21			2351	1486	2856	2349	3349	3200	3842	3842	4095	4095
		23					5253	2437	5253	3144	5316	3874	5396	4255
	7	15	103	103	651	651	1353	1353	2403	2403	3188	3188	3555	3555
		17	103	103	651	651	1353	1353	2408	2408	3194	3194	3561	3561
19		103	103	651	651	1358	1358	2414	2414	3200	3200	3567	3567	
21				675	675	1399	1399	2483	2483	3229	3229	3578	3578	
23						2787	1566	3429	2469	3980	3338	4244	3766	

Tw [°C] = Inlet water temperature

Ta W.B. [°C] = Inlet air temperature with wet bulb

Ta D.B. [°C] = Inlet air temperature with dry bulb

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

The cooling outputs of the table are at maximum speed (maximum air flow).

To determine the cooling capacity based on the speed (air flow), the values shown in the table must be multiplied by the following factors (k):

NB: The values in bold type indicate the rated value.

If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.

In this case, only sensible power values are considered.

VED 430/432	Qv [m³/h]	k (Pc)	k (Ps)
Maximum Rated speed V5	1520	1	1
Maximum speed	1350	0.87	0.86
Average speed	1130	0.77	0.76
Minimum speed	790	0.58	0.57

COOLING CAPACITY - VED440 / VED441

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.		
5	3	15	7463	5623	7429	6398	7463	7177	7695	7695	8420	8420	8787	8787	
		17	9629	5594	9609	6384	9590	7163	9571	7938	9542	8707	9551	9094	
		19	11970	5549	11941	6340	11912	7125	11883	7904	11854	8671	11835	9056	
		21			14447	6281	14408	7067	14369	7845	14331	8622	14321	9010	
		23					17098	6988	17078	7784	17020	8556	17001	8946	
	5	5	15	6438	5111	6585	5942	6864	6782	7343	7343	8081	8081	8447	8447
			17	8729	5156	8710	5943	8680	6718	8719	7512	8816	8304	8913	8707
			19	11099	5132	11080	5926	11061	6711	11041	7494	11022	8265	10983	8641
			21			13615	5885	13576	6670	13557	7455	13528	8234	13518	8622
			23					16304	6614	16266	7397	16227	8178	16208	8565
	7	7	15	5161	4452	5640	5386	6166	6166	6877	6877	7649	7649	8035	8035
			17	7423	4546	7409	5329	7529	6149	7769	7004	8088	7859	8301	8292
			19	10054	4650	10035	5440	10016	6222	9977	6992	9996	7776	10016	8174
			21			12647	5442	12609	6223	12589	7005	12570	7786	12550	8167
			23					15376	6192	15356	6982	15317	7760	15298	8146
7	3	15	5793	4802	5873	5595	6192	6192	6931	6931	7662	7662	8021	8021	
		17	7975	4801	7955	5583	7928	6357	7922	7131	8061	7931	8168	8168	
		19	10306	4766	10287	5557	10267	6340	10228	7107	10219	7880	10190	8256	
		21			12783	5506	12744	6288	10228	7107	12686	7840	12676	8227	
		23					15434	6224	15414	7013	15376	7791	15356	8177	
	5	5	15	4782	4278	5201	5162	5806	5806	6571	6571	7323	7323	7689	7689
			17	6931	4322	6904	5097	6997	5904	7197	6736	7503	7503	7755	7755
			19	9348	4334	9329	5122	9319	5905	9290	6675	9280	7447	9300	7845
			21			11873	5100	11854	5888	11835	6667	11796	7435	11786	7820
			23					14563	5837	14543	6623	14505	7399	14485	7784
	7	7	15	3724	3641	4483	4483	5294	5294	6099	6099	6877	6877	7263	7263
			17	5228	3567	5534	4455	5933	5355	6392	6249	6931	6931	7276	7276
			19	8035	3765	8035	4556	8008	5326	8088	6136	8274	6969	8381	7388
			21			10770	4624	10751	5407	10732	6182	10712	6956	10712	7344
			23					13537	5399	13518	6182	13479	6953	13479	7346
9	3	15	4217	4013	4676	4676	5424	5424	6166	6166	6897	6897	7263	7263	
		17	6199	3994	6172	4766	6232	5558	6425	6365	6917	6917	7276	7276	
		19	8545	3985	8526	4769	8506	5544	8480	6311	8460	7078	8474	7471	
		21			11012	4729	10983	5509	10964	6285	10944	7060	10925	7436	
		23					13673	5460	13644	6239	13615	7015	13595	7398	
	5	5	15	3465	3465	4230	4230	5022	5022	5800	5800	6558	6558	6931	6931
			17	4869	3415	5081	4258	5427	5125	5900	5900	6571	6571	6944	6944
			19	7436	3515	7423	4295	7409	5071	7449	5861	7596	6672	7702	7085
			21			9996	4302	9977	5083	9958	5855	9938	6626	9929	7006
			23					12705	5056	12686	5836	12647	6606	12647	6997
	7	7	15	2620	2620	3611	3611	4483	4483	5308	5308	6106	6106	6492	6492
			17	3152	2629	3911	3643	4616	4603	5321	5321	6119	6119	6505	6505
			19	5667	2798	5707	3589	5933	4437	6279	5320	6691	6202	6917	6648
			21			8680	3771	8661	4545	8661	5321	8680	6103	8739	6510
			23					11544	4591	11525	5367	11506	6141	11486	6520

Tw [°C] = Inlet water temperature

Ta W.B. [°C] = Inlet air temperature with wet bulb

Ta D.B. [°C] = Inlet air temperature with dry bulb

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

The cooling outputs of the table are at maximum speed (maximum air flow).

To determine the cooling capacity based on the speed (air flow), the values shown in the table must be multiplied by the following factors (k):

NB: The values in bold type indicate the rated value.

If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.

In this case, only sensible power values are considered.

VED 440/441	Qv [m³/h]	k (Pc)	k (Ps)
Rated speed	1520	1	1
Maximum speed	1340	0.86	0.86
Average speed	1100	0.76	0.76
Minimum speed	780	0.57	0.57

COOLING CAPACITY - VED440 / VED441

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.	
11	3	15	3129	3129	3907	3907	4662	4662	5401	5401	6139	6139	6505	6505
		17	4269	3159	4423	3976	4755	4755	5414	5414	6152	6152	6518	6518
		19	6638	3186	6625	3963	6611	4731	6618	5509	6758	6308	6837	6705
		21			9126	3949	9106	4726	9087	5494	9067	6260	9058	6638
		23					11786	4688	11757	5461	11738	6235	11718	6615
	5	15	2554	2554	3422	3422	4237	4237	5022	5022	5786	5786	6166	6166
		17	2940	2545	3565	3487	4243	4243	5028	5028	5800	5800	6179	6179
		19	5241	2631	5254	3409	5414	4230	5713	5085	6106	5943	6325	6325
		21			7955	3487	7942	4261	7942	5033	7942	5804	7981	6203
		23					10693	4260	10693	5042	10654	5803	10654	6191
	7	15	1495	1495	2687	2687	3645	3645	4503	4503	5321	5321	5720	5720
		17	1498	1498	2700	2700	3651	3651	4516	4516	5334	5334	5727	5727
		19	2474	1570	3419	2647	4130	3632	4789	4582	5434	5434	5767	5767
		21			6186	2820	6199	3597	6385	4424	6678	5283	6851	5712
		23					9338	3752	9329	4524	9319	5293	9300	5668
13	3	15	2328	2328	3126	3126	3894	3894	4642	4642	5381	5381	5747	5747
		17	2514	2363	3132	3132	3904	3904	4649	4649	5394	5394	5760	5760
		19	4576	2373	4563	3136	4676	3936	4948	4760	5407	5407	5773	5773
		21			7103	3162	7090	3932	7077	4693	7064	5454	7097	5848
		23					9764	3911	9754	4685	9725	5446	9716	5826
	5	15	1582	1582	2580	2580	3432	3432	4237	4237	5015	5015	5401	5401
		17	1589	1589	2584	2584	3438	3438	4243	4243	5028	5028	5414	5414
		19	2487	1579	3119	2536	3724	3466	4330	4330	5035	5035	5421	5421
		21			5667	2630	5667	3400	5786	4197	6039	5036	6186	5454
		23					8526	3458	8506	4222	8487	4982	8487	5365
	7	15	755	755	1508	1508	2747	2747	3671	3671	4523	4523	4928	4928
		17	755	755	1508	1508	2747	2747	3685	3685	4529	4529	4935	4935
		19	779	737	1515	1515	2780	2780	3691	3691	4536	4536	4948	4948
		21			2873	1642	3685	2649	4363	3607	4988	4542	5281	4995
		23					6731	2829	6731	3593	6864	4400	6970	4814
15	3	15	1488	1488	2331	2331	3119	3119	3881	3881	4622	4622	4995	4995
		17	1492	1492	2334	2334	3126	3126	3891	3891	4636	4636	5002	5002
		19	2175	1465	2630	2343	3179	3179	3897	3897	4642	4642	5015	5015
		21			4895	2353	4882	3108	4962	3895	5181	4708	5334	5117
		23					7602	3131	7596	3895	7569	4648	7562	5025
	5	15	604	604	1636	1636	2597	2597	3438	3438	4237	4237	4629	4629
		17	606	606	1636	1636	2600	2600	3445	3445	4243	4243	4636	4636
		19	609	609	1649	1649	2607	2607	3452	3452	4257	4257	4642	4642
		21			2727	1594	3312	2519	3884	3431	4456	4324	4749	4749
		23					6092	2613	6092	3372	6166	4154	6259	4562
	7	15	120	120	755	755	1569	1569	2787	2787	3698	3698	4124	4124
		17	120	120	755	755	1569	1569	2793	2793	3705	3705	4130	4130
		19	120	120	755	755	1575	1575	2800	2800	3711	3711	4137	4137
		21			783	725	1622	1622	2880	2852	3744	3744	4150	4150
		23					3232	1680	3977	2647	4616	3580	4922	4039

Tw [°C] = Inlet water temperature

Ta W.B. [°C] = Inlet air temperature with wet bulb

Ta D.B. [°C] = Inlet air temperature with dry bulb

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

The cooling outputs of the table are at maximum speed (maximum air flow).

To determine the cooling capacity based on the speed (air flow), the values shown in the table must be multiplied by the following factors (k):

NB: The values in bold type indicate the rated value.

If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.

In this case, only sensible power values are considered.

VED 440/441	Qv [m³/h]	k (Pc)	k (Ps)
Rated speed	1520	1	1
Maximum speed	1340	0.86	0.86
Average speed	1100	0.76	0.76
Minimum speed	780	0.57	0.57

COOLING CAPACITY - VED530 / VED532

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.		
5	3	15	6957	5691	6926	6474	6957	6957	7174	7174	7849	7849	8191	8191	
		17	8976	5661	8958	6461	8940	7249	8922	8033	8894	8812	8904	8904	
		19	11158	5616	11131	6417	11104	7211	11077	7999	11050	8776	11032	9165	
		21			13467	6356	13431	7152	13395	7939	13359	8725	13350	9118	
		23					15938	7072	15920	7877	15866	8659	15848	9053	
	5	5	15	6002	5172	6138	6013	6399	6399	6845	6845	7533	7533	7874	7874
			17	8137	5218	8119	6014	8092	6798	8128	7602	8218	8218	8308	8308
			19	10347	5194	10328	5997	10310	6792	10292	7584	10274	8364	10238	8745
			21			12691	5956	12655	6750	12637	7545	12610	8333	12601	8725
			23					15199	6694	15163	7486	15127	8276	15108	8668
	7	7	15	4811	4505	5258	5258	5747	5747	6411	6411	7130	7130	7490	7490
			17	6919	4600	6907	5393	7019	6223	7242	7089	7539	7539	7738	7738
			19	9372	4706	9354	5505	9336	6297	9300	7076	9318	7870	9336	8272
			21			11790	5507	11753	6297	11735	7089	11717	7879	11699	8265
			23					14333	6266	14315	7065	14279	7853	14261	8244
7	3	15	5400	4860	5475	5475	5772	5772	6461	6461	7143	7143	7477	7477	
		17	7434	4859	7415	5650	7391	6433	7384	7217	7515	7515	7614	7614	
		19	9607	4824	9589	5624	9571	6416	9535	7192	9526	7975	9499	8355	
		21			11916	5572	11880	6363	9535	7192	11826	7934	11817	8326	
		23					14387	6298	14369	7097	14333	7884	14315	8275	
	5	5	15	4458	4329	4848	4848	5413	5413	6126	6126	6826	6826	7167	7167
			17	6461	4374	6436	5158	6523	5975	6709	6709	6994	6994	7229	7229
			19	8714	4386	8696	5183	8687	5976	8660	6755	8651	7536	8669	7939
			21			11068	5161	11050	5959	11032	6747	10996	7524	10987	7914
			23					13575	5907	13557	6703	13521	7487	13503	7877
	7	7	15	3472	3472	4179	4179	4935	4935	5685	5685	6411	6411	6771	6771
			17	4873	3610	5158	4508	5530	5420	5958	5958	6461	6461	6783	6783
			19	7490	3810	7490	4611	7465	5390	7539	6209	7713	7053	7812	7476
			21			10040	4680	10022	5472	10004	6257	9986	7039	9986	7433
			23					12619	5463	12601	6256	12565	7037	12565	7435
9	3	15	3931	3931	4359	4359	5056	5056	5747	5747	6430	6430	6771	6771	
		17	5778	4042	5754	4823	5809	5625	5989	5989	6448	6448	6783	6783	
		19	7966	4033	7948	4826	7929	5611	7905	6387	7887	7163	7899	7561	
		21			10265	4786	10238	5575	10220	6360	10202	7144	10184	7525	
		23					12746	5525	12718	6314	12691	7099	12673	7487	
	5	5	15	3230	3230	3943	3943	4681	4681	5406	5406	6113	6113	6461	6461
			17	4538	3456	4737	4309	5059	5059	5499	5499	6126	6126	6473	6473
			19	6932	3557	6919	4347	6907	5132	6944	5931	7081	6752	7180	7170
			21			9318	4354	9300	5144	9282	5925	9264	6705	9255	7090
			23					11844	5117	11826	5906	11790	6685	11790	7081
	7	7	15	2443	2443	3366	3366	4179	4179	4948	4948	5692	5692	6051	6051
			17	2939	2660	3646	3646	4303	4303	4960	4960	5704	5704	6064	6064
			19	5282	2832	5320	3632	5530	4490	5853	5384	6237	6237	6448	6448
			21			8092	3816	8074	4600	8074	5385	8092	6176	8146	6588
			23					10761	4646	10743	5431	10725	6214	10707	6598

Tw [°C] = Inlet water temperature

Ta W.B. [°C] = Inlet air temperature with wet bulb

Ta D.B. [°C] = Inlet air temperature with dry bulb

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

The cooling outputs of the table are at maximum speed (maximum air flow).

To determine the cooling capacity based on the speed (air flow), the values shown in the table must be multiplied by the following factors (k):

NB: The values in bold type indicate the rated value.

If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.

In this case, only sensible power values are considered.

VED 530/532	Qv [m³/h]	k (Pc)	k (Ps)
Rated speed	1700	1	1
Maximum speed	1520	0.90	0.89
Average speed	1400	0.85	0.85
Minimum speed	1120	0.71	0.70

COOLING CAPACITY - VED530 / VED532

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.	
11	3	15	2917	2917	3642	3642	4346	4346	5034	5034	5723	5723	6064	6064
		17	3979	3197	4123	4024	4433	4433	5047	5047	5735	5735	6076	6076
		19	6188	3224	6175	4011	6163	4788	6169	5576	6299	6299	6374	6374
		21			8507	3996	8489	4782	8471	5560	8453	6335	8444	6718
		23					10987	4744	10960	5527	10942	6310	10924	6695
	5	15	2381	2381	3190	3190	3949	3949	4681	4681	5394	5394	5747	5747
		17	2740	2576	3323	3323	3956	3956	4687	4687	5406	5406	5760	5760
		19	4886	2662	4898	3450	5047	4280	5326	5146	5692	5692	5896	5896
		21			7415	3529	7403	4313	7403	5094	7403	5874	7440	6278
		23					9968	4311	9968	5102	9932	5873	9932	6265
	7	15	1394	1394	2505	2505	3398	3398	4197	4197	4960	4960	5332	5332
		17	1397	1397	2517	2517	3404	3404	4210	4210	4972	4972	5338	5338
		19	2306	1588	3187	2679	3850	3676	4464	4464	5065	5065	5375	5375
		21			5766	2853	5778	3640	5952	4477	6225	5347	6386	5781
		23					8705	3797	8696	4578	8687	5357	8669	5737
13	3	15	2170	2170	2914	2914	3630	3630	4328	4328	5016	5016	5357	5357
		17	2343	2343	2920	2920	3639	3639	4334	4334	5028	5028	5369	5369
		19	4266	2402	4253	3174	4359	3984	4613	4613	5041	5041	5382	5382
		21			6622	3200	6609	3980	6597	4749	6585	5520	6616	5918
		23					9102	3958	9093	4741	9066	5512	9057	5896
	5	15	1475	1475	2405	2405	3199	3199	3949	3949	4675	4675	5034	5034
		17	1481	1481	2409	2409	3205	3205	3956	3956	4687	4687	5047	5047
		19	2319	1597	2908	2566	3472	3472	4036	4036	4693	4693	5053	5053
		21			5282	2662	5282	3441	5394	4248	5630	5096	5766	5520
		23					7948	3499	7929	4273	7911	5041	7911	5429
	7	15	704	704	1406	1406	2560	2560	3422	3422	4216	4216	4594	4594
		17	704	704	1406	1406	2560	2560	3435	3435	4222	4222	4600	4600
		19	726	726	1412	1412	2591	2591	3441	3441	4228	4228	4613	4613
		21			2678	1662	3435	2681	4067	3650	4650	4597	4923	4923
		23					6275	2863	6275	3636	6399	4453	6498	4872
15	3	15	1387	1387	2173	2173	2908	2908	3618	3618	4309	4309	4656	4656
		17	1390	1390	2176	2176	2914	2914	3627	3627	4321	4321	4662	4662
		19	2027	1482	2452	2371	2963	2963	3633	3633	4328	4328	4675	4675
		21			4563	2381	4551	3145	4625	3942	4830	4765	4972	4972
		23					7087	3169	7081	3942	7056	4704	7050	5086
	5	15	563	563	1525	1525	2421	2421	3205	3205	3949	3949	4315	4315
		17	565	565	1525	1525	2424	2424	3211	3211	3956	3956	4321	4321
		19	568	568	1537	1537	2430	2430	3218	3218	3968	3968	4328	4328
		21			2542	1613	3087	2549	3621	3473	4154	4154	4427	4427
		23					5679	2645	5679	3412	5747	4204	5834	4617
	7	15	112	112	704	704	1462	1462	2598	2598	3447	3447	3844	3844
		17	112	112	704	704	1462	1462	2604	2604	3453	3453	3850	3850
		19	112	112	704	704	1469	1469	2610	2610	3460	3460	3856	3856
		21			730	730	1512	1512	2684	2684	3491	3491	3869	3869
		23					3013	1700	3708	2679	4303	3623	4588	4087

Tw [°C] = Inlet water temperature

Ta W.B. [°C] = Inlet air temperature with wet bulb

Ta D.B. [°C] = Inlet air temperature with dry bulb

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

The cooling outputs of the table are at maximum speed (maximum air flow).

To determine the cooling capacity based on the speed (air flow), the values shown in the table must be multiplied by the following factors (k):

NB: The values in bold type indicate the rated value.

If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.

In this case, only sensible power values are considered.

VED 530/532	Qv [m³/h]	k (Pc)	k (Ps)
Rated speed	1700	1	1
Maximum speed	1520	0.90	0.89
Average speed	1400	0.85	0.85
Minimum speed	1120	0.71	0.70

COOLING CAPACITY - VED540 / VED541

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.		
5	3	15	8258	6112	8221	6954	8258	7800	8516	8516	9318	9318	9723	9723	
		17	10655	6080	10633	6939	10612	7785	10590	8628	10558	9464	10569	9885	
		19	13246	6031	13213	6891	13181	7745	13149	8591	13117	9425	13096	9844	
		21			15986	6827	15943	7682	15901	8527	15858	9371	15847	9793	
		23					18920	7595	18898	8460	18834	9300	18813	9723	
	5	5	15	7124	5555	7286	6459	7595	7371	8125	8125	8942	8942	9347	9347
			17	9659	5604	9638	6459	9606	7302	9648	8165	9755	9025	9862	9464
			19	12282	5578	12261	6441	12239	7295	12218	8146	12196	8983	12154	9392
			21			15066	6397	15023	7250	15001	8103	14969	8950	14959	9371
			23					18042	7189	17999	8040	17956	8888	17935	9310
	7	7	15	5711	4839	6241	5854	6823	6816	7610	7610	8464	8464	8891	8891
			17	8214	4941	8199	5792	8332	6683	8596	7613	8950	8542	9185	9012
			19	11126	5054	11104	5912	11083	6763	11040	7600	11062	8452	11083	8884
			21			13995	5915	13952	6764	13931	7614	13909	8463	13888	8876
			23					17014	6730	16993	7588	16950	8434	16928	8854
7	3	15	6410	5219	6499	6081	6852	6852	7669	7669	8479	8479	8876	8876	
		17	8825	5218	8803	6069	8773	6910	8766	7751	8920	8621	9038	9033	
		19	11404	5181	11383	6040	11361	6891	11318	7725	11308	8565	11276	8973	
		21			14145	5985	14102	6834	14138	7725	14038	8521	14027	8942	
		23					17078	6764	17057	7622	17014	8468	16993	8888	
	5	5	15	5292	4650	5755	5611	6425	6425	7272	7272	8103	8103	8508	8508
			17	7669	4697	7640	5540	7743	6418	7963	7321	8302	8216	8582	8582
			19	10344	4711	10323	5567	10312	6418	10280	7255	10269	8094	10291	8527
			21			13138	5543	13117	6400	13096	7247	13053	8081	13042	8499
			23					16115	6344	16093	7199	16051	8042	16029	8461
	7	7	15	4121	3958	4960	4960	5858	5858	6749	6749	7610	7610	8037	8037
			17	5785	3877	6123	4842	6565	5821	7073	6792	7669	7669	8052	8052
			19	8891	4092	8891	4952	8861	5789	8950	6669	9156	7575	9274	8030
			21			11918	5026	11897	5877	11875	6720	11854	7560	11854	7983
			23					14980	5868	14959	6719	14916	7558	14916	7985
9	3	15	4666	4362	5174	5174	6002	6002	6823	6823	7632	7632	8037	8037	
		17	6859	4342	6830	5180	6896	6041	7110	6918	7654	7654	8052	8052	
		19	9456	4331	9434	5183	9413	6026	9384	6860	9362	7694	9377	8120	
		21			12186	5140	12154	5988	12132	6831	12111	7673	12089	8082	
		23					15130	5934	15098	6781	15066	7625	15044	8041	
	5	5	15	3834	3810	4681	4681	5557	5557	6418	6418	7257	7257	7669	7669
			17	5387	3711	5623	4628	6006	5571	6528	6507	7272	7272	7684	7684
			19	8228	3820	8214	4669	8199	5512	8243	6370	8405	7252	8523	7701
			21			11062	4676	11040	5525	11019	6364	10997	7201	10987	7615
			23					14059	5496	14038	6343	13995	7180	13995	7606
	7	7	15	2900	2900	3996	3996	4960	4960	5873	5873	6756	6756	7183	7183
			17	3488	2857	4327	3960	5108	5003	5888	5888	6771	6771	7198	7198
			19	6271	3041	6315	3901	6565	4823	6948	5782	7404	6740	7654	7226
			21			9606	4099	9584	4940	9584	5784	9606	6634	9670	7076
			23					12774	4990	12753	5833	12732	6674	12710	7087

Tw [°C] = Inlet water temperature

Ta W.B. [°C] = Inlet air temperature with wet bulb

Ta D.B. [°C] = Inlet air temperature with dry bulb

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

The cooling outputs of the table are at maximum speed (maximum air flow).

To determine the cooling capacity based on the speed (air flow), the values shown in the table must be multiplied by the following factors (k):

NB: The values in bold type indicate the rated value.

If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.

In this case, only sensible power values are considered.

VED 540/541	Qv [m³/h]	k (Pc)	k (Ps)
Rated speed	1700	1	1
Maximum speed	1500	0.87	0.89
Average speed	1380	0.83	0.85
Minimum speed	1100	0.72	0.72

COOLING CAPACITY - VED540 / VED541

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.	
11	3	15	3463	3463	4324	4324	5159	5159	5976	5976	6793	6793	7198	7198
		17	4724	3433	4894	4322	5262	5221	5991	5991	6808	6808	7213	7213
		19	7345	3463	7331	4308	7316	5142	7323	5988	7478	6857	7566	7288
		21			10098	4292	10077	5136	10055	5971	10034	6804	10023	7215
		23					13042	5095	13010	5936	12989	6777	12967	7190
	5	15	2826	2826	3786	3786	4688	4688	5557	5557	6403	6403	6823	6823
		17	3253	2766	3945	3790	4695	4695	5564	5564	6418	6418	6837	6837
		19	5800	2859	5814	3706	5991	4597	6322	5526	6756	6460	6999	6918
		21			8803	3790	8788	4632	8788	5471	8788	6309	8832	6742
		23					11832	4630	11832	5480	11790	6308	11790	6729
	7	15	1654	1654	2973	2973	4033	4033	4983	4983	5888	5888	6329	6329
		17	1658	1658	2988	2988	4040	4040	4997	4997	5903	5903	6337	6337
		19	2738	1706	3783	2877	4570	3948	5299	4980	6013	5963	6381	6381
		21			6845	3065	6859	3909	7066	4809	7389	5742	7581	6209
		23					10334	4078	10323	4917	10312	5753	10291	6161
13	3	15	2576	2576	3459	3459	4309	4309	5137	5137	5954	5954	6359	6359
		17	2782	2569	3466	3466	4320	4320	5144	5144	5969	5969	6374	6374
		19	5064	2579	5049	3409	5174	4278	5476	5174	5984	5984	6388	6388
		21			7860	3437	7846	4274	7831	5101	7816	5928	7853	6356
		23					10805	4251	10794	5092	10762	5920	10751	6332
	5	15	1751	1751	2855	2855	3798	3798	4688	4688	5549	5549	5976	5976
		17	1758	1758	2859	2859	3805	3805	4695	4695	5564	5564	5991	5991
		19	2752	1716	3452	2756	4121	3767	4791	4741	5571	5571	5998	5998
		21			6271	2859	6271	3695	6403	4562	6683	5474	6845	5928
		23					9434	3758	9413	4589	9391	5415	9391	5831
	7	15	835	835	1669	1669	3039	3039	4063	4063	5005	5005	5454	5454
		17	835	835	1669	1669	3039	3039	4077	4077	5012	5012	5461	5461
		19	862	801	1677	1677	3076	3076	4085	4085	5019	5019	5476	5476
		21			3179	1785	4077	2880	4828	3920	5520	4937	5844	5429
		23					7448	3075	7448	3905	7595	4783	7713	5232
15	3	15	1647	1647	2579	2579	3452	3452	4294	4294	5115	5115	5527	5527
		17	1651	1651	2583	2583	3459	3459	4305	4305	5130	5130	5535	5535
		19	2406	1592	2911	2546	3518	3499	4313	4313	5137	5137	5549	5549
		21			5417	2558	5402	3378	5490	4233	5733	5118	5903	5561
		23					8412	3403	8405	4233	8376	5052	8368	5462
	5	15	669	669	1810	1810	2874	2874	3805	3805	4688	4688	5122	5122
		17	670	670	1810	1810	2877	2877	3812	3812	4695	4695	5130	5130
		19	674	674	1825	1825	2885	2885	3820	3820	4710	4710	5137	5137
		21			3017	1732	3665	2738	4298	3730	4931	4700	5255	5176
		23					6742	2840	6742	3665	6823	4516	6926	4959
	7	15	133	133	835	835	1736	1736	3084	3084	4092	4092	4563	4563
		17	133	133	835	835	1736	1736	3091	3091	4099	4099	4570	4570
		19	133	133	835	835	1743	1743	3098	3098	4107	4107	4578	4578
		21			866	788	1795	1778	3187	3100	4143	4143	4592	4592
		23					3577	1826	4401	2877	5108	3891	5446	4390

Tw [°C] = Inlet water temperature

Ta W.B. [°C] = Inlet air temperature with wet bulb

Ta D.B. [°C] = Inlet air temperature with dry bulb

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

The cooling outputs of the table are at maximum speed (maximum air flow).

To determine the cooling capacity based on the speed (air flow), the values shown in the table must be multiplied by the following factors (k):

NB: The values in bold type indicate the rated value.

If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.

In this case, only sensible power values are considered.

VED 540/541	Qv [m³/h]	k (Pc)	k (Ps)
Rated speed	1700	1	1
Maximum speed	1500	0.87	0.89
Average speed	1380	0.83	0.85
Minimum speed	1100	0.72	0.72

COOLING CAPACITY - VED630 / VED632

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.		
5	3	15	11166	9688	11116	11022	11166	11166	11514	11514	12599	12599	13147	13147	
		17	14407	9638	14378	10999	14349	12341	14320	13677	14276	14276	14291	14291	
		19	17910	9560	17866	10924	17823	12276	17780	13618	17736	14940	17707	15603	
		21			21616	10821	21558	12176	21500	13516	21442	14854	21428	15523	
		23					25582	12040	25553	13410	25466	14741	25437	15412	
	5	5	15	9633	8806	9852	9852	10270	10270	10987	10987	12091	12091	12639	12639
			17	13060	8884	13031	10238	12988	11574	13046	12943	13191	13191	13335	13335
			19	16607	8842	16578	10209	16549	11563	16520	12912	16491	14239	16433	14887
			21			20371	10140	20313	11492	20284	12845	20240	14186	20226	14854
			23					24395	11396	24337	12745	24279	14089	24250	14757
	7	7	15	7722	7670	8439	8439	9225	9225	10290	10290	11445	11445	12022	12022
			17	11106	7832	11086	9180	11265	10594	11624	11624	12101	12101	12420	12420
			19	15044	8012	15015	9372	14986	10720	14928	12047	14957	13398	14986	14082
			21			18923	9375	18865	10721	18836	12069	18807	13414	18778	14070
			23					23005	10667	22976	12028	22919	13369	22890	14035
7	3	15	8668	8273	8787	8787	9265	9265	10370	10370	11464	11464	12002	12002	
		17	11932	8272	11902	9619	11863	10952	11853	11853	12062	12062	12221	12221	
		19	15420	8212	15391	9574	15362	10924	15304	12244	15290	13577	15246	14224	
		21			19126	9486	19068	10833	15304	12244	18981	13507	18967	14174	
		23					23092	10722	23063	12082	23005	13423	22976	14088	
	5	5	15	7155	7155	7782	7782	8688	8688	9832	9832	10957	10957	11504	11504
			17	10370	7446	10330	8781	10469	10173	10768	10768	11226	11226	11604	11604
			19	13987	7467	13958	8824	13943	10174	13900	11500	13886	12830	13914	13516
			21			17765	8786	17736	10144	17707	11487	17649	12809	17635	13473
			23					21789	10056	21760	11411	21703	12747	21674	13411
	7	7	15	5573	5573	6707	6707	7921	7921	9126	9126	10290	10290	10867	10867
			17	7822	6146	8280	7675	8877	8877	9564	9564	10370	10370	10887	10887
			19	12022	6486	12022	7849	11982	9176	12101	10571	12380	12007	12539	12539
			21			16115	7967	16086	9316	16057	10652	16028	11984	16028	12654
			23					20255	9301	20226	10651	20168	11980	20168	12657
9	3	15	6309	6309	6996	6996	8115	8115	9225	9225	10320	10320	10867	10867	
		17	9275	6882	9235	8211	9325	9325	9613	9613	10350	10350	10887	10887	
		19	12785	6865	12756	8216	12727	9552	12689	10873	12659	12195	12679	12679	
		21			16477	8148	16433	9491	16404	10828	16375	12163	16346	12811	
		23					20458	9406	20414	10749	20371	12086	20342	12747	
	5	5	15	5185	5185	6329	6329	7513	7513	8678	8678	9812	9812	10370	10370
			17	7284	5883	7603	7336	8120	8120	8827	8827	9832	9832	10390	10390
			19	11126	6055	11106	7400	11086	8736	11146	10098	11365	11365	11524	11524
			21			14957	7412	14928	8757	14899	10088	14870	11415	14855	12070
			23					19010	8711	18981	10055	18923	11381	18923	12056
	7	7	15	3921	3921	5404	5404	6707	6707	7941	7941	9136	9136	9713	9713
			17	4717	4529	5851	5851	6906	6906	7961	7961	9155	9155	9733	9733
			19	8479	4821	8538	6183	8877	7645	9394	9166	10011	10011	10350	10350
			21			12988	6497	12959	7830	12959	9168	12988	10515	13075	11216
			23					17273	7909	17244	9246	17215	10580	17186	11233

Tw [°C] = Inlet water temperature

Ta W.B. [°C] = Inlet air temperature with wet bulb

Ta D.B. [°C] = Inlet air temperature with dry bulb

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

The cooling outputs of the table are at maximum speed (maximum air flow).

To determine the cooling capacity based on the speed (air flow), the values shown in the table must be multiplied by the following factors (k):

NB: The values in bold type indicate the rated value.

If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.

In this case, only sensible power values are considered.

VED 630/632	Qv [m³/h]	k (Pc)	k (Ps)
Rated speed	2450	1	1
Maximum speed	2210	0.90	0.90
Average speed	1800	0.77	0.76
Minimum speed	1380	0.64	0.63

COOLING CAPACITY - VED630 / VED632

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.	
11	3	15	4682	4682	5846	5846	6976	6976	8081	8081	9185	9185	9733	9733
		17	6387	5442	6618	6618	7115	7115	8101	8101	9205	9205	9753	9753
		19	9932	5489	9912	6828	9892	8151	9902	9492	10111	10111	10230	10230
		21			13654	6804	13625	8142	13596	9465	13567	10785	13553	11437
		23					17635	8076	17591	9409	17562	10742	17533	11398
	5	15	3821	3821	5120	5120	6339	6339	7513	7513	8658	8658	9225	9225
		17	4398	4385	5334	5334	6349	6349	7523	7523	8678	8678	9245	9245
		19	7842	4533	7862	5874	8101	7287	8548	8548	9136	9136	9464	9464
		21			11902	6008	11882	7342	11882	8672	11882	10000	11942	10688
		23					15999	7340	15999	8686	15941	9998	15941	10666
	7	15	2237	2237	4020	4020	5453	5453	6737	6737	7961	7961	8558	8558
		17	2242	2242	4040	4040	5463	5463	6757	6757	7981	7981	8568	8568
		19	3702	2704	5115	4560	6180	6180	7165	7165	8130	8130	8628	8628
		21			9255	4858	9275	6197	9554	7622	9991	9102	10250	9841
		23					13972	6464	13958	7794	13943	9120	13914	9766
13	3	15	3483	3483	4677	4677	5826	5826	6946	6946	8051	8051	8598	8598
		17	3761	3761	4687	4687	5841	5841	6956	6956	8071	8071	8618	8618
		19	6847	4089	6827	5403	6996	6782	7404	7404	8091	8091	8638	8638
		21			10628	5448	10609	6775	10589	8086	10569	9397	10618	10075
		23					14609	6738	14595	8071	14551	9383	14537	10038
	5	15	2367	2367	3861	3861	5135	5135	6339	6339	7503	7503	8081	8081
		17	2377	2377	3866	3866	5145	5145	6349	6349	7523	7523	8101	8101
		19	3722	2720	4667	4369	5573	5573	6478	6478	7533	7533	8111	8111
		21			8479	4531	8479	5858	8658	7231	9036	8676	9255	9255
		23					12756	5957	12727	7274	12698	8583	12698	9243
	7	15	1130	1130	2257	2257	4110	4110	5493	5493	6767	6767	7374	7374
		17	1130	1130	2257	2257	4110	4110	5513	5513	6777	6777	7384	7384
		19	1165	1165	2267	2267	4159	4159	5523	5523	6787	6787	7404	7404
		21			4299	2829	5513	4565	6528	6214	7464	7464	7902	7902
		23					10071	4874	10071	6189	10270	7581	10429	8294
15	3	15	2227	2227	3488	3488	4667	4667	5807	5807	6916	6916	7474	7474
		17	2232	2232	3493	3493	4677	4677	5821	5821	6936	6936	7484	7484
		19	3254	2523	3936	3936	4757	4757	5831	5831	6946	6946	7503	7503
		21			7324	4054	7304	5354	7424	6710	7752	7752	7981	7981
		23					11375	5395	11365	6711	11325	8008	11315	8658
	5	15	904	904	2447	2447	3886	3886	5145	5145	6339	6339	6926	6926
		17	906	906	2447	2447	3891	3891	5155	5155	6349	6349	6936	6936
		19	911	911	2467	2467	3901	3901	5165	5165	6369	6369	6946	6946
		21			4080	2746	4956	4340	5812	5812	6667	6667	7105	7105
		23					9116	4502	9116	5809	9225	7158	9364	7860
	7	15	179	179	1130	1130	2347	2347	4169	4169	5533	5533	6170	6170
		17	179	179	1130	1130	2347	2347	4179	4179	5543	5543	6180	6180
		19	179	179	1130	1130	2357	2357	4189	4189	5553	5553	6190	6190
		21			1171	1171	2427	2427	4309	4309	5603	5603	6210	6210
		23					4836	2894	5951	4561	6906	6168	7364	6958

Tw [°C] = Inlet water temperature

Ta W.B. [°C] = Inlet air temperature with wet bulb

Ta D.B. [°C] = Inlet air temperature with dry bulb

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

The cooling outputs of the table are at maximum speed (maximum air flow).

To determine the cooling capacity based on the speed (air flow), the values shown in the table must be multiplied by the following factors (k):

NB: The values in bold type indicate the rated value.

If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.

In this case, only sensible power values are considered.

VED 630/632	Qv [m³/h]	k (Pc)	k (Ps)
Rated speed	2450	1	1
Maximum speed	2210	0.90	0.90
Average speed	1800	0.77	0.76
Minimum speed	1380	0.64	0.63

COOLING CAPACITY - VED640 / VED641

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.		
5	3	15	13214	9764	13155	11109	13214	12461	13626	13626	14910	14910	15559	15559	
		17	17050	9714	17015	11085	16981	12437	16947	13784	16895	15119	16913	15791	
		19	21195	9635	21144	11009	21093	12372	21041	13725	20990	15057	20956	15725	
		21			25581	10906	25513	12271	25444	13622	25376	14970	25358	15645	
		23					30275	12134	30241	13515	30138	14857	30104	15533	
	5	5	15	11400	8874	11660	10318	12154	11776	13002	13002	14310	14310	14957	14957
			17	15456	8953	15422	10319	15371	11664	15439	13044	15611	14418	15782	15119
			19	19654	8911	19619	10289	19585	11654	19551	13013	19517	14350	19448	15004
			21			24108	10219	24039	11582	24005	12945	23954	14297	23937	14971
			23					28870	11485	28802	12844	28733	14199	28699	14873
	7	7	15	9139	7730	9987	9352	10918	10889	12178	12178	13544	13544	14227	14227
			17	13144	7893	13120	9252	13332	10676	13756	12162	14321	13646	14698	14397
			19	17803	8074	17769	9445	17735	10804	17666	12141	17701	13503	17735	14192
			21			22395	9449	22326	10805	22292	12163	22258	13519	22223	14180
			23					27226	10751	27192	12123	27123	13474	27089	14145
7	3	15	10258	8338	10399	9715	10965	10965	12272	12272	13568	13568	14204	14204	
		17	14121	8336	14086	9695	14039	11038	14027	12382	14274	13772	14463	14431	
		19	18249	8276	18215	9649	18180	11009	18112	12340	18095	13683	18043	14335	
		21			22635	9561	22566	10917	18112	12340	22463	13613	22446	14285	
		23					27329	10806	27294	12177	27226	13528	27192	14198	
	5	5	15	8468	7428	9210	8964	10282	10282	11636	11636	12967	12967	13615	13615
			17	12272	7504	12225	8850	12390	10252	12743	11696	13285	13125	13732	13732
			19	16553	7526	16519	8893	16501	10254	16450	11590	16433	12931	16467	13622
			21			21024	8855	20990	10224	20956	11577	20887	12910	20870	13578
			23					25787	10134	25752	11500	25684	12847	25650	13516
	7	7	15	6595	6322	7938	7938	9375	9375	10800	10800	12178	12178	12861	12861
			17	9257	6194	9799	7735	10505	9299	11318	10850	12272	12272	12884	12884
			19	14227	6537	14227	7911	14180	9248	14321	10654	14651	12101	14840	12828
			21			19071	8029	19037	9389	19003	10735	18968	12078	18968	12753
			23					23971	9374	23937	10734	23868	12074	23868	12756
9	3	15	7467	6969	8279	8279	9604	9604	10918	10918	12213	12213	12861	12861	
		17	10976	6936	10929	8275	11035	9651	11377	11052	12248	12248	12884	12884	
		19	15131	6919	15097	8280	15062	9627	15016	10958	14981	12291	15005	12972	
		21			19499	8212	19448	9565	19414	10913	19380	12258	19345	12911	
		23					24211	9480	24159	10833	24108	12180	24074	12846	
	5	5	15	6136	6087	7490	7490	8892	8892	10270	10270	11612	11612	12272	12272
			17	8621	5929	8998	7393	9610	8900	10446	10395	11636	11636	12296	12296
			19	13167	6103	13144	7458	13120	8805	13191	10177	13450	11585	13638	12302
			21			17701	7470	17666	8826	17632	10166	17598	11504	17581	12165
			23					22497	8779	22463	10133	22395	11470	22395	12150
	7	7	15	4640	4640	6395	6395	7938	7938	9398	9398	10812	10812	11495	11495
			17	5582	4564	6925	6326	8173	7993	9422	9422	10835	10835	11518	11518
			19	10034	4858	10105	6232	10505	7704	11118	9238	11848	10768	12248	11543
			21			15371	6547	15336	7892	15336	9239	15371	10597	15473	11304
			23					20442	7971	20407	9319	20373	10663	20339	11321

Tw [°C] = Inlet water temperature

Ta W.B. [°C] = Inlet air temperature with wet bulb

Ta D.B. [°C] = Inlet air temperature with dry bulb

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

The cooling outputs of the table are at maximum speed (maximum air flow).

To determine the cooling capacity based on the speed (air flow), the values shown in the table must be multiplied by the following factors (k):

NB: The values in bold type indicate the rated value.

If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.

In this case, only sensible power values are considered.

VED 640/641	Qv [m³/h]	k (Pc)	k (Ps)
Rated speed	2450	1	1
Maximum speed	2200	0.92	0.92
Average speed	1770	0.78	0.77
Minimum speed	1370	0.63	0.62

COOLING CAPACITY - VED640 / VED641

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.	
11	3	15	5541	5541	6919	6919	8256	8256	9563	9563	10870	10870	11518	11518
		17	7559	5485	7832	6904	8421	8341	9587	9587	10894	10894	11542	11542
		19	11754	5532	11730	6881	11707	8215	11718	9566	11966	10954	12107	11643
		21			16159	6857	16124	8205	16090	9539	16056	10869	16039	11526
		23					20870	8140	20819	9483	20784	10826	20750	11487
	5	15	4522	4522	6059	6059	7502	7502	8892	8892	10246	10246	10918	10918
		17	5205	4419	6312	6055	7514	7514	8904	8904	10270	10270	10941	10941
		19	9280	4568	9304	5920	9587	7344	10117	8829	10812	10320	11200	11051
		21			14086	6055	14062	7399	14062	8740	14062	10078	14133	10771
		23					18934	7397	18934	8754	18866	10077	18866	10749
	7	15	2647	2647	4758	4758	6454	6454	7973	7973	9422	9422	10128	10128
		17	2653	2653	4781	4781	6465	6465	7997	7997	9445	9445	10140	10140
		19	4381	2725	6053	4596	7313	6307	8479	7956	9622	9527	10211	10211
		21			10953	4896	10976	6245	11306	7682	11824	9173	12131	9918
		23					16536	6515	16519	7855	16501	9191	16467	9843
13	3	15	4122	4122	5535	5535	6895	6895	8220	8220	9528	9528	10176	10176
		17	4451	4103	5547	5547	6913	6913	8232	8232	9551	9551	10199	10199
		19	8103	4121	8079	5445	8279	6835	8762	8265	9575	9575	10223	10223
		21			12578	5491	12555	6828	12531	8149	12508	9471	12566	10154
		23					17289	6791	17272	8135	17221	9457	17204	10116
	5	15	2801	2801	4569	4569	6077	6077	7502	7502	8880	8880	9563	9563
		17	2813	2813	4575	4575	6089	6089	7514	7514	8904	8904	9587	9587
		19	4404	2741	5523	4403	6595	6019	7667	7574	8915	8915	9598	9598
		21			10034	4567	10034	5904	10246	7288	10694	8744	10953	9470
		23					15097	6004	15062	7331	15028	8650	15028	9315
	7	15	1337	1337	2671	2671	4864	4864	6501	6501	8008	8008	8727	8727
		17	1337	1337	2671	2671	4864	4864	6524	6524	8020	8020	8739	8739
		19	1379	1280	2683	2683	4923	4917	6536	6536	8032	8032	8762	8762
		21			5087	2851	6524	4600	7726	6263	8833	7887	9351	8672
		23					11919	4912	11919	6238	12154	7640	12343	8358
15	3	15	2635	2635	4128	4128	5523	5523	6872	6872	8185	8185	8845	8845
		17	2641	2641	4133	4133	5535	5535	6889	6889	8209	8209	8856	8856
		19	3851	2543	4658	4068	5629	5589	6901	6901	8220	8220	8880	8880
		21			8668	4086	8644	5396	8786	6763	9174	8175	9445	8884
		23					13462	5437	13450	6763	13403	8070	13391	8726
	5	15	1070	1070	2896	2896	4599	4599	6089	6089	7502	7502	8197	8197
		17	1073	1073	2896	2896	4605	4605	6100	6100	7514	7514	8209	8209
		19	1078	1078	2920	2920	4616	4616	6112	6112	7537	7537	8220	8220
		21			4828	2767	5865	4374	6878	5958	7891	7509	8409	8269
		23					10788	4538	10788	5854	10918	7214	11082	7922
	7	15	212	212	1337	1337	2778	2778	4934	4934	6548	6548	7302	7302
		17	212	212	1337	1337	2778	2778	4946	4946	6560	6560	7313	7313
		19	212	212	1337	1337	2790	2790	4958	4958	6571	6571	7325	7325
		21			1386	1259	2873	2841	5099	4952	6630	6630	7349	7349
		23					5723	2917	7043	4597	8173	6216	8715	7013

Tw [°C] = Inlet water temperature

Ta W.B. [°C] = Inlet air temperature with wet bulb

Ta D.B. [°C] = Inlet air temperature with dry bulb

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

The cooling outputs of the table are at maximum speed (maximum air flow).

To determine the cooling capacity based on the speed (air flow), the values shown in the table must be multiplied by the following factors (k):

NB: The values in bold type indicate the rated value.

If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.

In this case, only sensible power values are considered.

VED 640/641	Qv [m³/h]	k (Pc)	k (Ps)
Rated speed	2450	1	1
Maximum speed	2200	0.92	0.92
Average speed	1770	0.78	0.77
Minimum speed	1370	0.63	0.62

COOLING CAPACITY - VED730 / VED732

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.		
5	3	15	12339	10758	12284	12240	12339	12339	12724	12724	13922	13922	14528	14528	
		17	15920	10703	15888	12214	15856	13704	15824	15187	15776	15776	15792	15792	
		19	19791	10616	19743	12130	19695	13632	19647	15122	19599	16590	19567	17326	
		21			23886	12016	23822	13521	23758	15009	23694	16494	23678	17237	
		23					28269	13369	28237	14891	28141	16369	28109	17114	
	5	5	15	10645	9778	10887	10887	11349	11349	12141	12141	13361	13361	13966	13966
			17	14432	9865	14400	11369	14352	12852	14416	14372	14576	14576	14736	14736
			19	18351	9818	18319	11337	18287	12840	18255	14338	18223	15811	18159	16531
			21			22510	11259	22446	12761	22414	14263	22366	15753	22350	16495
			23					26957	12654	26893	14152	26829	15645	26797	16387
	7	7	15	8534	8517	9325	9325	10194	10194	11371	11371	12647	12647	13284	13284
			17	12273	8697	12251	10194	12449	11763	12845	12845	13372	13372	13724	13724
			19	16624	8897	16592	10407	16560	11904	16496	13377	16528	14877	16560	15637
			21			20911	10411	20847	11905	20815	13402	20783	14895	20751	15624
			23					25422	11846	25390	13357	25326	14845	25294	15585
7	3	15	9578	9187	9710	9710	10238	10238	11459	11459	12669	12669	13262	13262	
		17	13185	9185	13152	10682	13108	12162	13097	13097	13328	13328	13504	13504	
		19	17040	9119	17008	10631	16976	12130	16912	13597	16896	15076	16848	15794	
		21			21135	10534	21071	12029	16912	13597	20975	14999	20959	15740	
		23					25518	11907	25486	13416	25422	14905	25390	15644	
	5	5	15	7907	7907	8599	8599	9600	9600	10865	10865	12108	12108	12713	12713
			17	11459	8268	11415	9751	11569	11296	11899	11899	12405	12405	12823	12823
			19	15456	8292	15424	9798	15408	11298	15360	12770	15344	14247	15376	15009
			21			19631	9756	19599	11264	19567	12755	19503	14224	19487	14960
			23					24078	11166	24046	12671	23982	14155	23950	14892
	7	7	15	6158	6158	7412	7412	8753	8753	10084	10084	11371	11371	12009	12009
			17	8643	6825	9149	8522	9809	9809	10568	10568	11459	11459	12031	12031
			19	13284	7203	13284	8716	13240	10189	13372	11738	13680	13333	13856	13856
			21			17807	8847	17775	10345	17743	11828	17711	13308	17711	14051
			23					22382	10328	22350	11827	22286	13303	22286	14055
9	3	15	6972	6972	7731	7731	8968	8968	10194	10194	11404	11404	12009	12009	
		17	10249	7642	10205	9118	10304	10304	10623	10623	11437	11437	12031	12031	
		19	14128	7623	14096	9123	14064	10607	14021	12074	13988	13542	14010	14010	
		21			18207	9048	18159	10539	18127	12024	18095	13506	18063	14226	
		23					22606	10445	22558	11936	22510	13421	22478	14154	
	5	5	15	5729	5729	6994	6994	8303	8303	9589	9589	10843	10843	11459	11459
			17	8050	6533	8402	8146	8973	8973	9754	9754	10865	10865	11481	11481
			19	12295	6724	12273	8217	12251	9701	12317	11213	12559	12559	12735	12735
			21			16528	8231	16496	9724	16464	11202	16432	12676	16416	13403
			23					21007	9673	20975	11165	20911	12637	20911	13387
	7	7	15	4332	4332	5971	5971	7412	7412	8775	8775	10095	10095	10733	10733
			17	5212	5029	6466	6466	7632	7632	8797	8797	10117	10117	10755	10755
			19	9369	5353	9435	6866	9809	8489	10381	10178	11063	11063	11437	11437
			21			14352	7214	14320	8695	14320	10180	14352	11676	14448	12454
			23					19087	8783	19055	10268	19023	11748	18991	12474

Tw [°C] = Inlet water temperature

Ta W.B. [°C] = Inlet air temperature with wet bulb

Ta D.B. [°C] = Inlet air temperature with dry bulb

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

The cooling outputs of the table are at maximum speed (maximum air flow).

To determine the cooling capacity based on the speed (air flow), the values shown in the table must be multiplied by the following factors (k):

NB: The values in bold type indicate the rated value.

If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.

In this case, only sensible power values are considered.

VED 730/732	Qv [m³/h]	k (Pc)	k (Ps)
Rated speed	2800	1	1
Maximum speed	2410	0.90	0.90
Average speed	2040	0.79	0.78
Minimum speed	1640	0.68	0.66

COOLING CAPACITY - VED730 / VED732

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.	
11	3	15	5174	5174	6460	6460	7709	7709	8929	8929	10150	10150	10755	10755
		17	7058	6043	7313	7313	7863	7863	8951	8951	10172	10172	10777	10777
		19	10975	6095	10953	7582	10931	9051	10942	10540	11173	11173	11305	11305
		21			15088	7555	15056	9041	15024	10510	14992	11976	14976	12700
		23					19487	8968	19439	10448	19407	11929	19375	12656
	5	15	4222	4222	5658	5658	7005	7005	8303	8303	9567	9567	10194	10194
		17	4860	4860	5894	5894	7016	7016	8314	8314	9589	9589	10216	10216
		19	8665	5033	8687	6523	8951	8092	9446	9446	10095	10095	10458	10458
		21			13152	6671	13130	8153	13130	9630	13130	11104	13196	11868
		23					17679	8150	17679	9645	17615	11103	17615	11844
	7	15	2472	2472	4442	4442	6026	6026	7445	7445	8797	8797	9457	9457
		17	2477	2477	4464	4464	6037	6037	7467	7467	8819	8819	9468	9468
		19	4090	3003	5652	5064	6829	6829	7918	7918	8984	8984	9534	9534
		21			10227	5394	10249	6881	10557	8464	11041	10107	11327	10928
		23					15440	7178	15424	8654	15408	10127	15376	10845
13	3	15	3849	3849	5168	5168	6438	6438	7676	7676	8896	8896	9501	9501
		17	4156	4156	5179	5179	6455	6455	7687	7687	8918	8918	9523	9523
		19	7566	4540	7544	6000	7731	7531	8182	8182	8940	8940	9545	9545
		21			11745	6050	11723	7523	11701	8979	11679	10435	11734	11188
		23					16144	7482	16128	8963	16080	10419	16064	11146
	5	15	2616	2616	4266	4266	5674	5674	7005	7005	8292	8292	8929	8929
		17	2627	2627	4272	4272	5685	5685	7016	7016	8314	8314	8951	8951
		19	4112	3020	5157	4851	6158	6158	7159	7159	8325	8325	8962	8962
		21			9369	5032	9369	6505	9567	8030	9985	9635	10227	10227
		23					14096	6615	14064	8077	14032	9531	14032	10263
	7	15	1248	1248	2494	2494	4541	4541	6070	6070	7478	7478	8149	8149
		17	1248	1248	2494	2494	4541	4541	6092	6092	7489	7489	8160	8160
		19	1287	1287	2505	2505	4596	4596	6103	6103	7500	7500	8182	8182
		21			4750	3141	6092	5069	7214	6900	8248	8248	8731	8731
		23					11129	5412	11129	6873	11349	8418	11525	9209
15	3	15	2461	2461	3854	3854	5157	5157	6416	6416	7643	7643	8259	8259
		17	2466	2466	3860	3860	5168	5168	6433	6433	7665	7665	8270	8270
		19	3596	2802	4349	4349	5256	5256	6444	6444	7676	7676	8292	8292
		21			8094	4502	8072	5946	8204	7451	8566	8566	8819	8819
		23					12570	5990	12559	7452	12515	8892	12504	9614
	5	15	999	999	2704	2704	4294	4294	5685	5685	7005	7005	7654	7654
		17	1002	1002	2704	2704	4299	4299	5696	5696	7016	7016	7665	7665
		19	1007	1007	2727	2727	4310	4310	5707	5707	7038	7038	7676	7676
		21			4508	3049	5476	4819	6422	6422	7368	7368	7852	7852
		23					10073	5000	10073	6450	10194	7948	10348	8728
	7	15	198	198	1248	1248	2594	2594	4607	4607	6114	6114	6818	6818
		17	198	198	1248	1248	2594	2594	4618	4618	6125	6125	6829	6829
		19	198	198	1248	1248	2605	2605	4629	4629	6136	6136	6840	6840
		21			1294	1294	2682	2682	4761	4761	6191	6191	6862	6862
		23					5344	3214	6576	5065	7632	6849	8138	7727

Tw [°C] = Inlet water temperature

Ta W.B. [°C] = Inlet air temperature with wet bulb

Ta D.B. [°C] = Inlet air temperature with dry bulb

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

The cooling outputs of the table are at maximum speed (maximum air flow).

To determine the cooling capacity based on the speed (air flow), the values shown in the table must be multiplied by the following factors (k):

NB: The values in bold type indicate the rated value.

If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.

In this case, only sensible power values are considered.

VED 730/732	Qv [m³/h]	k (Pc)	k (Ps)
Rated speed	2800	1	1
Maximum speed	2410	0.90	0.90
Average speed	2040	0.79	0.78
Minimum speed	1640	0.68	0.66

COOLING CAPACITY - VED740 / VED741

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.		
5	3	15	14540	10783	14475	12268	14540	13762	14993	14993	16406	16406	17120	17120	
		17	18760	10728	18722	12243	18684	13736	18647	15223	18590	16697	18609	17439	
		19	23321	10641	23265	12159	23208	13664	23152	15158	23095	16629	23058	17367	
		21			28147	12044	28072	13553	27996	15044	27921	16533	27902	17278	
		23					33312	13401	33274	14926	33161	16408	33123	17155	
	5	5	15	12544	9801	12829	11395	13373	13005	14306	14306	15745	15745	16458	16458
			17	17007	9888	16969	11396	16912	12882	16988	14406	17176	15923	17365	16697
			19	21625	9841	21587	11363	21550	12870	21512	14371	21474	15848	21399	16570
			21			26526	11286	26451	12791	26413	14297	26356	15790	26337	16534
			23					31766	12684	31691	14185	31615	15682	31578	16425
	7	7	15	10056	8537	10989	10328	12013	12013	13399	13399	14903	14903	15654	15654
			17	14462	8717	14436	10218	14669	11791	15136	13432	15758	15071	16173	15900
			19	19589	8917	19551	10431	19514	11932	19438	13408	19476	14912	19514	15674
			21			24641	10435	24566	11933	24528	13433	24490	14930	24452	15661
			23					29957	11873	29919	13388	29844	14880	29806	15622
7	3	15	11287	9208	11442	10729	12064	12064	13503	13503	14928	14928	15628	15628	
		17	15538	9207	15499	10707	15447	12191	15434	13675	15706	15210	15913	15913	
		19	20079	9140	20042	10656	20004	12159	19928	13629	19910	15111	19853	15831	
		21			24905	10559	24829	12057	19928	13629	24716	15034	24698	15777	
		23					30070	11935	30032	13448	29957	14940	29919	15681	
	5	5	15	9317	8204	10134	9900	11313	11313	12803	12803	14268	14268	14980	14980
			17	13503	8287	13451	9774	13633	11323	14021	12917	14617	14495	15110	15110
			19	18213	8311	18175	9821	18157	11324	18100	12800	18081	14281	18119	15044
			21			23133	9779	23095	11291	23058	12785	22982	14257	22963	14996
			23					28373	11192	28336	12701	28260	14188	28222	14927
	7	7	15	7257	6982	8734	8734	10315	10315	11883	11883	13399	13399	14151	14151
			17	10185	6841	10781	8542	11559	10269	12453	11983	13503	13503	14177	14177
			19	15654	7220	15654	8737	15602	10213	15758	11766	16121	13364	16328	14167
			21			20984	8867	20946	10369	20909	11856	20871	13339	20871	14084
			23					26375	10353	26337	11855	26262	13334	26262	14088
9	3	15	8216	7696	9110	9110	10568	10568	12013	12013	13438	13438	14151	14151	
		17	12077	7660	12026	9139	12142	10659	12518	12205	13477	13477	14177	14177	
		19	16649	7641	16611	9145	16573	10632	16522	12102	16484	13574	16510	14327	
		21			21455	9069	21399	10564	21361	12052	21323	13538	21286	14259	
		23					26639	10470	26583	11964	26526	13452	26488	14188	
	5	5	15	6751	6722	8241	8241	9784	9784	11300	11300	12777	12777	13503	13503
			17	9486	6548	9900	8165	10574	9829	11494	11480	12803	12803	13529	13529
			19	14488	6740	14462	8237	14436	9724	14514	11239	14799	12794	15006	13586
			21			19476	8250	19438	9747	19401	11228	19363	12705	19344	13435
			23					24754	9696	24716	11191	24641	12667	24641	13418
	7	7	15	5105	5105	7036	7036	8734	8734	10341	10341	11896	11896	12648	12648
			17	6142	5041	7619	6986	8993	8827	10367	10367	11922	11922	12674	12674
			19	11041	5366	11118	6882	11559	8509	12233	10202	13036	11892	13477	12748
			21			16912	7231	16875	8716	16875	10204	16912	11704	17026	12484
			23					22492	8803	22454	10292	22417	11776	22379	12503

Tw [°C] = Inlet water temperature

Ta W.B. [°C] = Inlet air temperature with wet bulb

Ta D.B. [°C] = Inlet air temperature with dry bulb

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

The cooling outputs of the table are at maximum speed (maximum air flow).

To determine the cooling capacity based on the speed (air flow), the values shown in the table must be multiplied by the following factors (k):

NB: The values in bold type indicate the rated value.

If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.

In this case, only sensible power values are considered.

VED 740/741	Qv [m³/h]	k (Pc)	k (Ps)
Rated speed	2800	1	1
Maximum speed	2350	0.89	0.88
Average speed	2000	0.79	0.79
Minimum speed	1600	0.66	0.65

COOLING CAPACITY - VED740 / VED741

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.	
11	3	15	6097	6097	7613	7613	9084	9084	10522	10522	11961	11961	12674	12674
		17	8317	6057	8617	7625	9265	9212	10548	10548	11987	11987	12699	12699
		19	12933	6110	12907	7600	12881	9072	12894	10565	13166	12097	13322	12858
		21			17780	7573	17742	9062	17704	10535	17666	12004	17648	12729
		23					22963	8989	22907	10473	22869	11957	22831	12686
	5	15	4976	4976	6667	6667	8254	8254	9784	9784	11274	11274	12013	12013
		17	5727	4881	6946	6687	8267	8267	9797	9797	11300	11300	12039	12039
		19	10211	5045	10237	6538	10548	8111	11131	9750	11896	11397	12324	12205
		21			15499	6687	15473	8172	15473	9652	15473	11130	15551	11896
		23					20833	8170	20833	9668	20758	11129	20758	11871
	7	15	2913	2913	5235	5235	7101	7101	8773	8773	10367	10367	11144	11144
		17	2919	2919	5261	5261	7114	7114	8799	8799	10393	10393	11157	11157
		19	4820	3010	6660	5076	8047	6966	9330	8786	10587	10521	11235	11235
		21			12051	5407	12077	6897	12440	8484	13010	10131	13347	10954
		23					18194	7195	18175	8675	18157	10151	18119	10870
13	3	15	4535	4535	6090	6090	7587	7587	9045	9045	10483	10483	11196	11196
		17	4898	4532	6103	6103	7606	7606	9058	9058	10509	10509	11222	11222
		19	8915	4551	8889	6014	9110	7548	9641	9128	10535	10535	11248	11248
		21			13840	6064	13814	7541	13788	9000	13762	10459	13827	11214
		23					19024	7500	19005	8984	18948	10444	18929	11172
	5	15	3082	3082	5028	5028	6686	6686	8254	8254	9771	9771	10522	10522
		17	3095	3095	5034	5034	6699	6699	8267	8267	9797	9797	10548	10548
		19	4846	3027	6077	4862	7257	6647	8436	8365	9810	9810	10561	10561
		21			11041	5044	11041	6520	11274	8049	11766	9657	12051	10459
		23					16611	6631	16573	8096	16535	9553	16535	10287
	7	15	1471	1471	2939	2939	5351	5351	7153	7153	8812	8812	9602	9602
		17	1471	1471	2939	2939	5351	5351	7179	7179	8825	8825	9615	9615
		19	1517	1414	2952	2952	5416	5416	7192	7192	8838	8838	9641	9641
		21			5598	3149	7179	5081	8501	6917	9719	8710	10289	9578
		23					13114	5425	13114	6889	13373	8438	13581	9231
15	3	15	2900	2900	4542	4542	6077	6077	7561	7561	9006	9006	9732	9732
		17	2906	2906	4548	4548	6090	6090	7581	7581	9032	9032	9745	9745
		19	4237	2809	5125	4492	6194	6173	7593	7593	9045	9045	9771	9771
		21			9537	4512	9511	5960	9667	7469	10095	9029	10393	9812
		23					14812	6004	14799	7469	14747	8913	14734	9637
	5	15	1177	1177	3187	3187	5060	5060	6699	6699	8254	8254	9019	9019
		17	1180	1180	3187	3187	5066	5066	6712	6712	8267	8267	9032	9032
		19	1186	1186	3213	3213	5079	5079	6725	6725	8293	8293	9045	9045
		21			5313	3056	6453	4831	7568	6580	8682	8292	9252	9133
		23					11870	5011	11870	6465	12013	7967	12194	8749
	7	15	233	233	1471	1471	3056	3056	5429	5429	7205	7205	8034	8034
		17	233	233	1471	1471	3056	3056	5442	5442	7218	7218	8047	8047
		19	233	233	1471	1471	3069	3069	5455	5455	7231	7231	8060	8060
		21			1525	1390	3161	3137	5611	5469	7295	7295	8086	8086
		23					6298	3221	7749	5077	8993	6865	9589	7745

Tw [°C] = Inlet water temperature

Ta W.B. [°C] = Inlet air temperature with wet bulb

Ta D.B. [°C] = Inlet air temperature with dry bulb

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

The cooling outputs of the table are at maximum speed (maximum air flow).

To determine the cooling capacity based on the speed (air flow), the values shown in the table must be multiplied by the following factors (k):

NB: The values in bold type indicate the rated value.

If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.

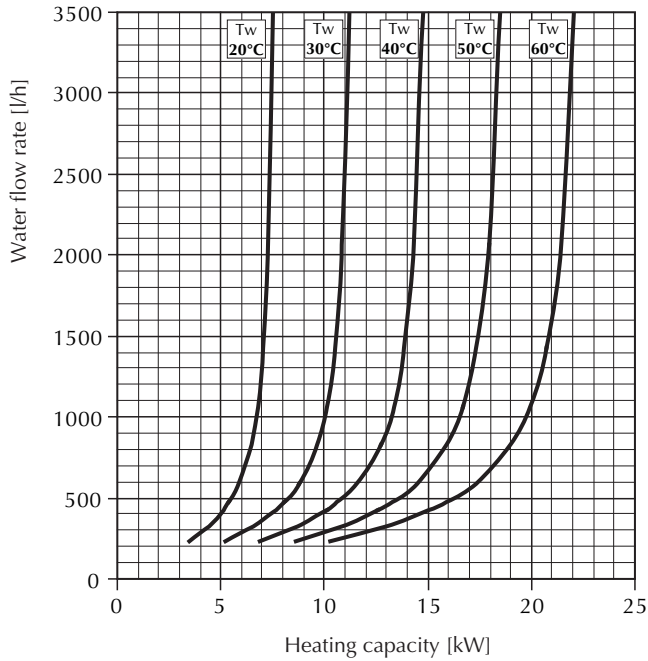
In this case, only sensible power values are considered.

VED 740/741	Qv [m³/h]	k (Pc)	k (Ps)
Rated speed	2800	1	1
Maximum speed	2350	0.89	0.88
Average speed	2000	0.79	0.79
Minimum speed	1600	0.66	0.65

HEATING CAPACITY

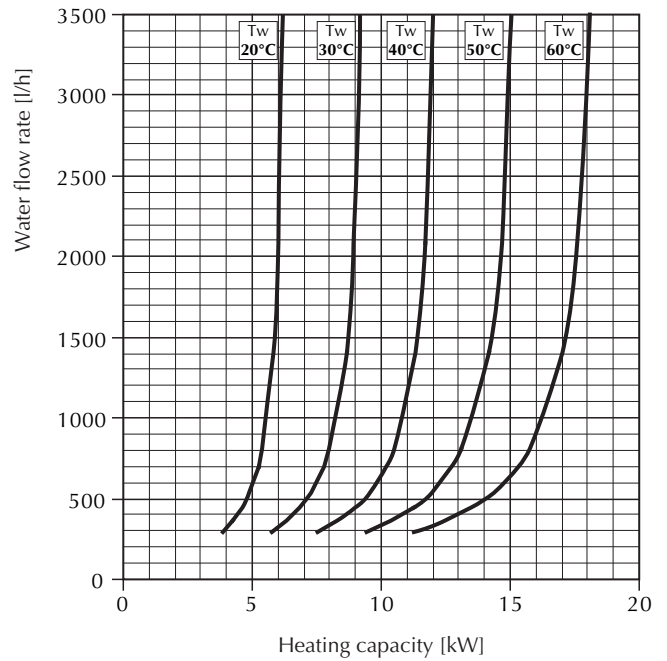
VED 430

T_w =water inlet temperature - air inlet temperature =20°C



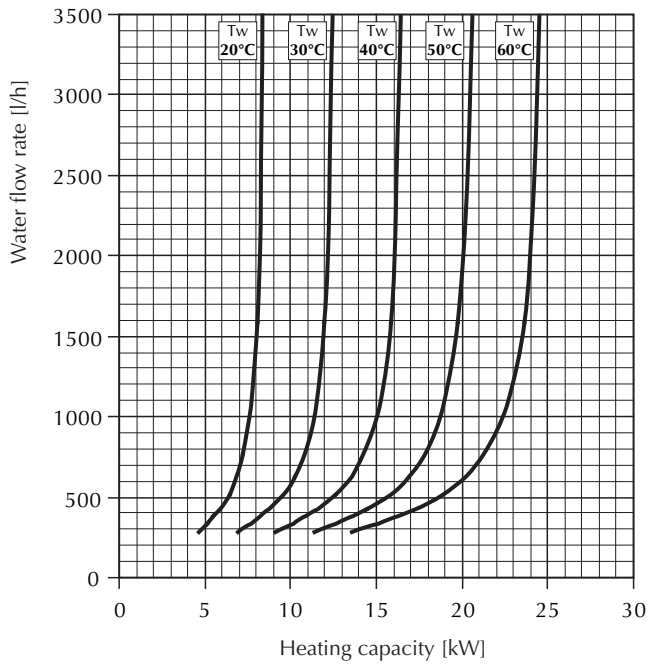
VED 432

T_w =water inlet temperature - air inlet temperature =20°C



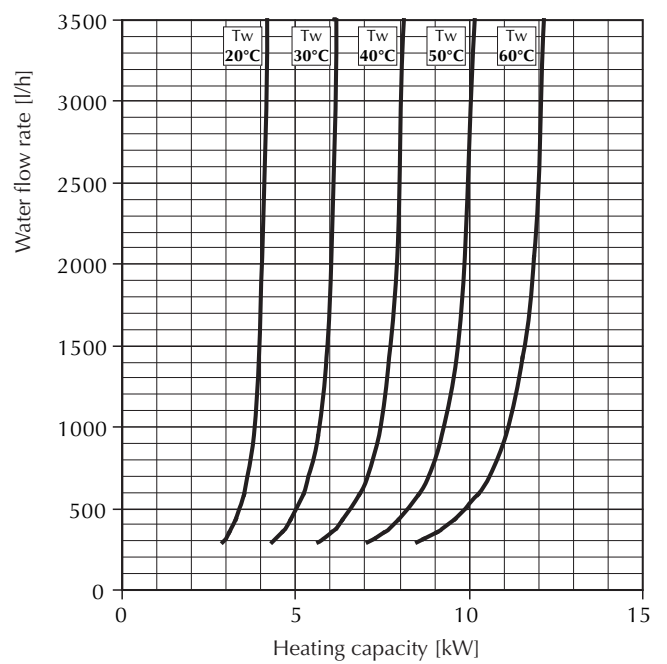
VED 440

T_w =water inlet temperature - air inlet temperature =20°C



VED 441

T_w =water inlet temperature - air inlet temperature =20°C



HEATING CAPACITY CORRECTION FACTORS

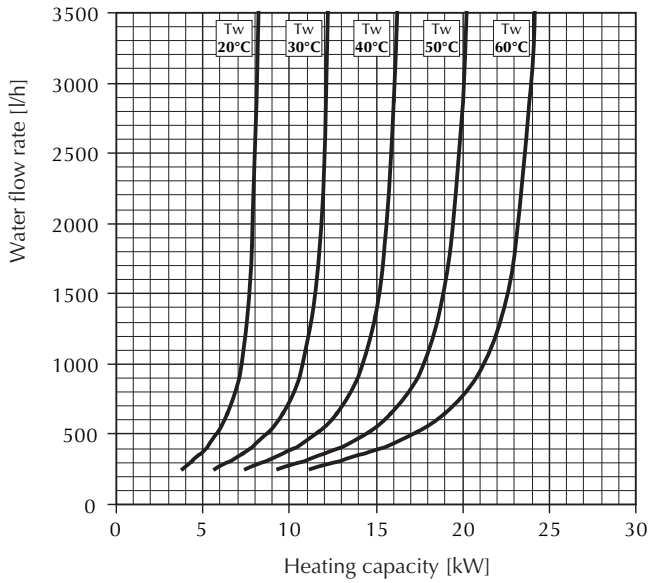
The heat capacities refer to the rated speed. For the rest of the speeds the values must be multiplied by the following values:

VED	430	432	440	441
	k (Ph)	k (Ph)	k (Ph)	k (Ph)
Rated speed	1	1	1	1
Maximum speed	0.91	0.91	0.90	0.91
Average speed	0.79	0.83	0.76	0.83
Minimum speed	0.59	0.69	0.57	0.69

HEATING CAPACITY

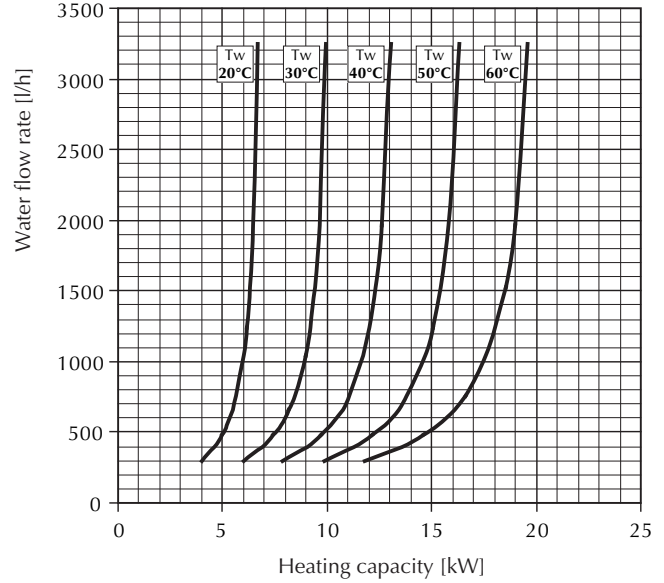
VED 530

T_w =water inlet temperature - air inlet temperature =20°C



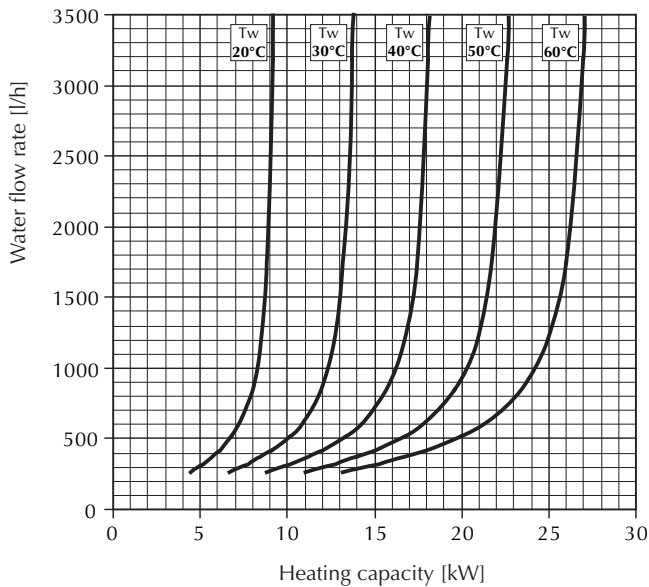
VED 532

T_w =water inlet temperature - air inlet temperature =20°C



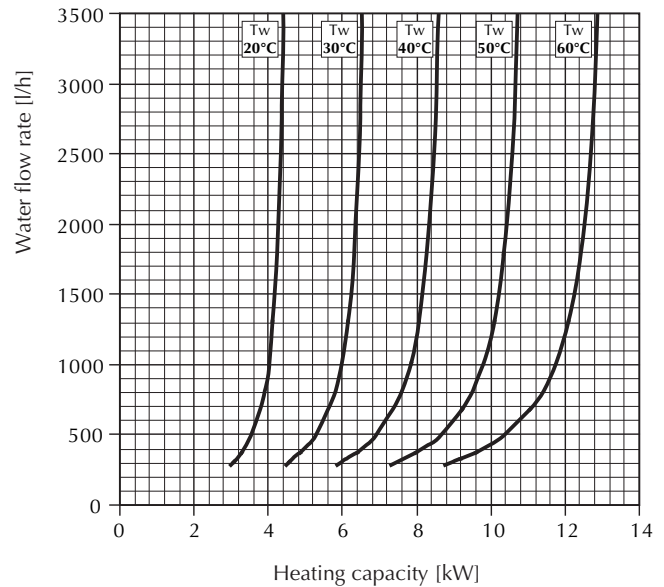
VED 540

T_w =water inlet temperature - air inlet temperature =20°C



VED 541

T_w =water inlet temperature - air inlet temperature =20°C



HEATING CAPACITY CORRECTION FACTORS

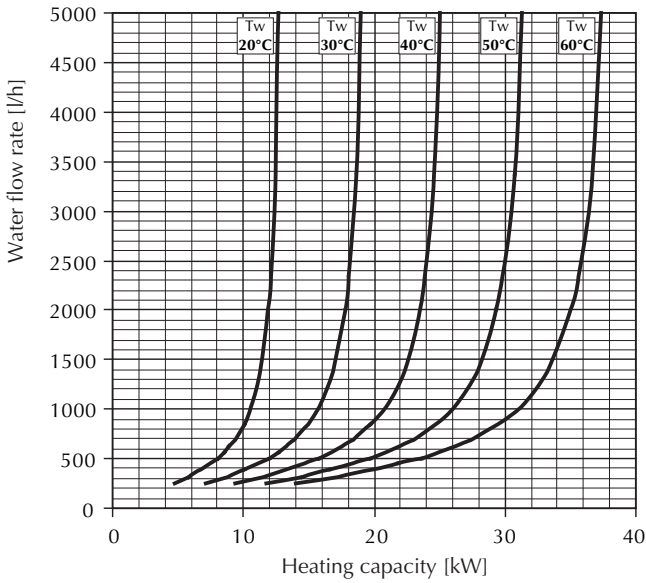
The heat capacities refer to the rated speed. For the rest of the speeds the values must be multiplied by the following values:

VED	530	532	540	541
	k (Ph)	k (Ph)	k (Ph)	k (Ph)
Rated speed	1	1	1	1
Maximum speed	0.92	0.90	0.90	0.93
Average speed	0.86	0.86	0.84	0.90
Minimum speed	0.72	0.71	0.7	0.79

HEATING CAPACITY

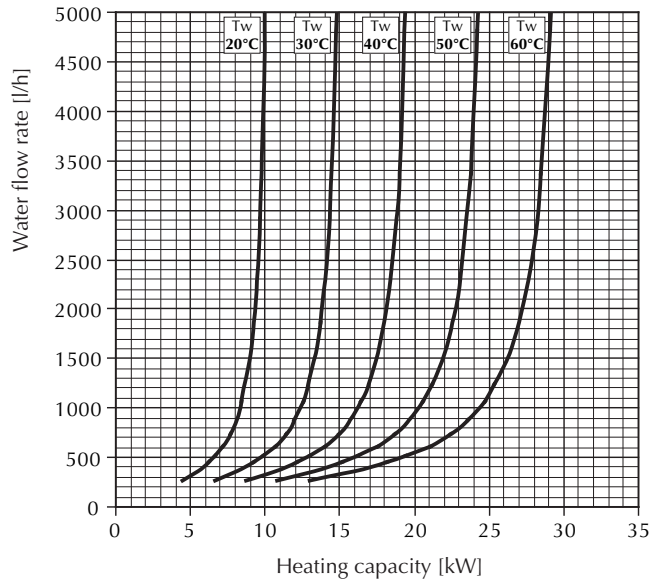
VED 630

T_w =water inlet temperature - air inlet temperature =20°C



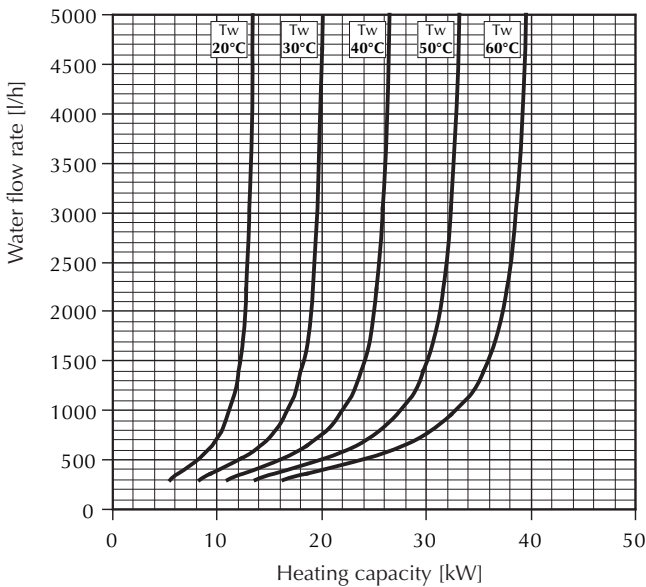
VED 632

T_w =water inlet temperature - air inlet temperature =20°C



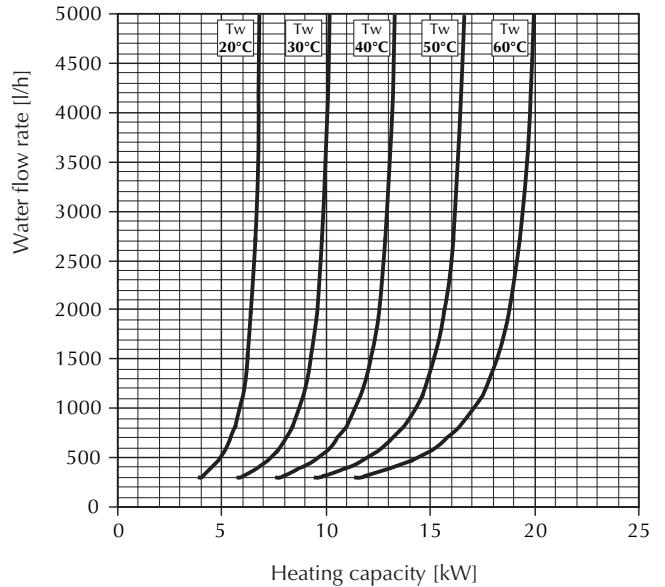
VED 640

T_w =water inlet temperature - air inlet temperature =20°C



VED 641

T_w =water inlet temperature - air inlet temperature =20°C



HEATING CAPACITY CORRECTION FACTORS

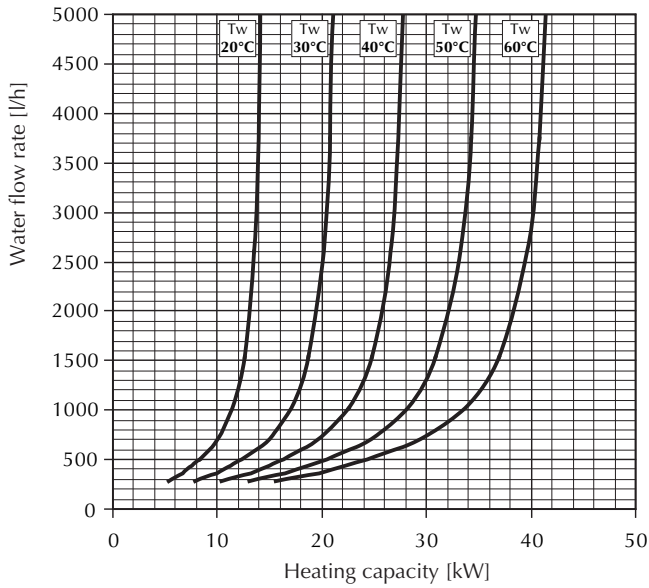
The heat capacities refer to the rated speed. For the rest of the speeds the values must be multiplied by the following values:

VED	630	632	640	641
	k (Ph)	k (Ph)	k (Ph)	k (Ph)
Rated speed	1	1	1	1
Maximum speed	0.88	0.90	0.91	0.93
Average speed	0.74	0.78	0.76	0.84
Minimum speed	0.61	0.64	0.61	0.73

HEATING CAPACITY

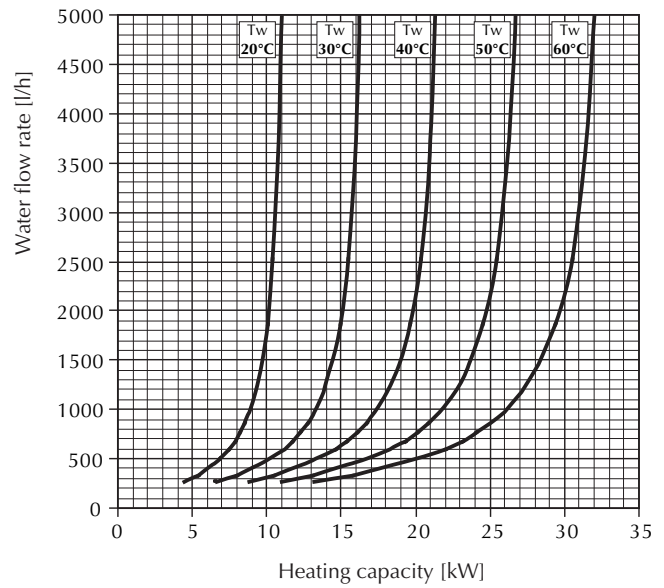
VED 730

T_w =water inlet temperature - air inlet temperature =20°C



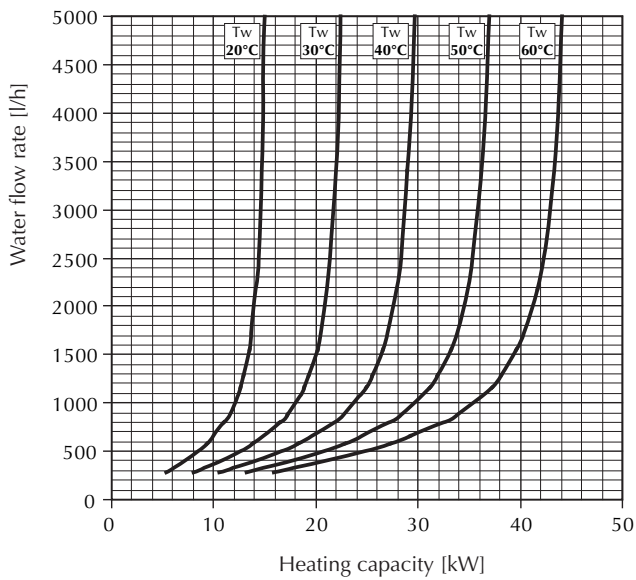
VED 732

T_w =water inlet temperature - air inlet temperature =20°C



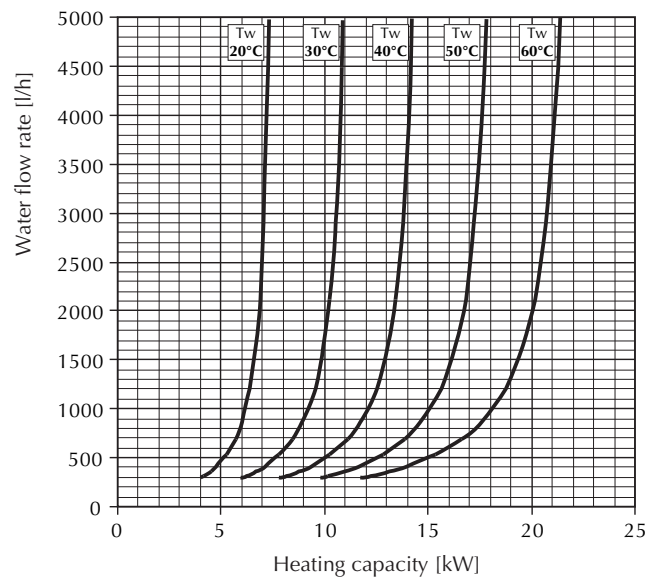
VED 740

T_w =water inlet temperature - air inlet temperature =20°C



VED 741

T_w =water inlet temperature - air inlet temperature =20°C



HEATING CAPACITY CORRECTION FACTORS

The heat capacities refer to the rated speed. For the rest of the speeds the values must be multiplied by the following values:

VED	730	732	740	741
	k (Ph)	k (Ph)	k (Ph)	k (Ph)
Rated speed	1	1	1	1
Maximum speed	0.86	0.88	0.88	0.92
Average speed	0.75	0.79	0.76	0.84
Minimum speed	0.63	0.67	0.63	0.75

MAIN COOLING COIL PRESSURE DROP WITH WATER 7°C [kPa]

The pressure drops are calculated with the following formula:

$$DP = \frac{DP_{\text{rated}}}{(QW_{\text{rated}})^{1.8} * (QW)^{1.8}}$$

The table shows the pressure drop for each size with flow rate intervals of 100l/h

Water flow rate(l/h)	VED 430	VED 440	VED 530	VED 540	VED 630	VED 640	VED 730	VED 740
	VED 432	VED 441	VED 532	VED 541	VED 632	VED 641	VED 732	VED 741
200	0.68	0.71	0.70	0.73	0.67	0.40	0.67	0.40
300	1.41	1.48	1.45	1.52	1.38	0.83	1.39	0.83
400	2.37	2.48	2.44	2.55	2.32	1.39	2.34	1.39
500	3.55	3.71	3.64	3.81	3.47	2.08	3.50	2.08
600	4.93	5.14	5.06	5.29	4.82	2.88	4.86	2.89
700	6.50	6.79	6.67	6.98	6.36	3.80	6.41	3.82
800	8.27	8.63	8.49	8.88	8.08	4.84	8.15	4.85
900	10.22	10.67	10.49	10.97	9.99	5.98	10.08	6.00
1000	12.35	12.90	12.68	13.27	12.08	7.23	12.18	7.25
1100	14.66	15.32	15.06	15.75	14.34	8.58	14.46	8.61
1200	17.15	17.91	17.61	18.42	16.77	10.04	16.91	10.07
1300	19.81	20.69	20.34	21.27	19.37	11.59	19.53	11.63
1400	22.64	23.64	23.24	24.31	22.13	13.25	22.32	13.29
1500	25.63	26.77	26.31	27.52	25.06	15.00	25.27	15.05
1600	28.79	30.07	29.56	30.91	28.14	16.85	28.38	16.90
1700	32.11	33.53	32.96	34.48	31.39	18.79	31.65	18.85
1800	35.58	37.17	36.54	38.21	34.79	20.83	35.08	20.89
1900	39.22	40.97	40.27	42.12	38.35	22.96	38.67	23.03
2000	43.02	44.93	44.17	46.19	42.06	25.18	42.41	25.25
2100	46.96	49.05	48.22	50.43	45.92	27.49	46.30	27.57
2200	51.07	53.34	52.43	54.84	49.93	29.89	50.35	29.98
2300	55.32	57.78	56.80	59.41	54.09	32.38	54.54	32.48
2400	59.72	62.38	61.32	64.14	58.39	34.96	58.88	35.06
2500	64.28	67.14	66.00	69.03	62.85	37.62	63.37	37.74
2600	68.98	72.05	70.83	74.08	67.44	40.37	68.01	40.50
2700	73.83	77.11	75.80	79.28	72.18	43.21	72.79	43.34
2800	78.82	82.33	80.93	84.65	77.07	46.14	77.71	46.28
2900	83.96	87.70	86.21	90.17	82.09	49.14	82.78	49.29
3000	89.25	93.22	91.63	95.84	87.26	52.24	87.99	52.39
3100	94.67	98.89	97.21	101.67	92.56	55.41	93.34	55.58
3200	100.24	104.70	102.92	107.65	98.01	58.67	98.83	58.85
3300	105.95	110.66	108.78	113.78	103.59	62.01	104.46	62.20
3400	111.80	116.77	114.79	120.06	109.31	65.44	110.23	65.63
3500	117.79	123.03	120.94	126.49	115.16	68.94	116.13	69.15
3600					121.15	72.53	122.17	72.75
3700					127.28	76.19	128.35	76.42
3800					133.54	79.94	134.66	80.18
3900					139.93	83.77	141.10	84.02
4000					146.45	87.67	147.68	87.94
4100					153.11	91.66	154.39	91.93
4200					159.89	95.72	161.24	96.01
4300					166.81	99.86	168.21	100.16
4400					173.86	104.08	175.32	104.40
4500					181.04	108.38	182.56	108.70
4600					188.34	112.75	189.93	113.09
4700					195.78	117.20	197.42	117.56
4800					203.34	121.73	205.05	122.10
4900					211.03	126.33	212.80	126.71
5000					218.84	131.01	220.68	131.40

MAIN HEATING COIL PRESSURE DROP WITH WATER 50°C [kPa]

The pressure drops are calculated with the following formula:

$$DP = \frac{DP_{\text{rated}}}{(Q_{w \text{ rated}})^{1.8} * (Q_w)^{1.8}}$$

The table shows the pressure drop for each size with flow rate intervals of 100l/h

Water flow rate(l/h)	VED 430	VED 440	VED 530	VED 540	VED 630	VED 640	VED 730	VED 740
	VED 432	VED 441	VED 532	VED 541	VED 632	VED 641	VED 732	VED 741
200	0.53	0.57	0.51	0.57	0.66	0.31	0.66	0.31
300	1.09	1.18	1.06	1.19	1.36	0.65	1.37	0.64
400	1.83	1.98	1.78	2.00	2.28	1.09	2.31	1.07
500	2.74	2.96	2.66	2.99	3.41	1.63	3.45	1.60
600	3.81	4.12	3.70	4.15	4.73	2.27	4.79	2.22
700	5.02	5.43	4.88	5.47	6.25	3.00	6.32	2.93
800	6.39	6.91	6.20	6.96	7.94	3.81	8.03	3.73
900	7.90	8.54	7.67	8.60	9.82	4.71	9.93	4.61
1000	9.55	10.32	9.27	10.40	11.87	5.69	12.01	5.57
1100	11.33	12.25	11.00	12.34	14.09	6.76	14.25	6.61
1200	13.25	14.33	12.87	14.44	16.48	7.90	16.67	7.73
1300	15.31	16.55	14.86	16.67	19.03	9.13	19.25	8.93
1400	17.49	18.91	16.98	19.05	21.75	10.43	22.00	10.20
1500	19.80	21.42	19.23	21.57	24.63	11.81	24.91	11.55
1600	22.24	24.05	21.60	24.23	27.66	13.26	27.98	12.98
1700	24.81	26.83	24.09	27.02	30.85	14.79	31.20	14.47
1800	27.50	29.73	26.70	29.95	34.19	16.40	34.58	16.04
1900	30.31	32.77	29.43	33.01	37.69	18.07	38.12	17.68
2000	33.24	35.94	32.28	36.21	41.33	19.82	41.80	19.39
2100	36.29	39.24	35.24	39.53	45.13	21.64	45.64	21.17
2200	39.46	42.67	38.32	42.98	49.07	23.53	49.63	23.02
2300	42.75	46.23	41.51	46.56	53.15	25.49	53.76	24.94
2400	46.15	49.91	44.81	50.27	57.39	27.52	58.04	26.92
2500	49.67	53.71	48.23	54.10	61.76	29.62	62.47	28.98
2600	53.30	57.64	51.76	58.06	66.28	31.78	67.04	31.10
2700	57.05	61.69	55.40	62.14	70.94	34.02	71.75	33.28
2800	60.91	65.87	59.14	66.35	75.74	36.32	76.60	35.53
2900	64.88	70.16	63.00	70.67	80.68	38.69	81.60	37.85
3000	68.96	74.57	66.96	75.12	85.75	41.12	86.73	40.23
3100	73.16	79.11	71.03	79.69	90.97	43.62	92.01	42.68
3200	77.46	83.76	75.21	84.37	96.32	46.19	97.42	45.19
3300	81.87	88.53	79.50	89.18	101.80	48.82	102.97	47.76
3400	86.39	93.42	83.88	94.10	107.42	51.51	108.65	50.40
3500	91.02	98.42	88.38	99.14	113.18	54.27	114.47	53.10
3600					119.06	57.10	120.42	55.86
3700					125.08	59.98	126.51	58.68
3800					131.23	62.93	132.73	61.57
3900					137.51	65.94	139.09	64.52
4000					143.93	69.02	145.57	67.52
4100					150.47	72.16	152.19	70.59
4200					157.14	75.35	158.93	73.72
4300					163.94	78.62	165.81	76.91
4400					170.86	81.94	172.82	80.16
4500					177.92	85.32	179.95	83.47
4600					185.10	88.76	187.21	86.84
4700					192.40	92.27	194.60	90.27
4800					199.83	95.83	202.12	93.75
4900					207.39	99.45	209.76	97.30
5000					215.07	103.14	217.53	100.90

HEATING ONLY MAIN COIL PRESSURE DROP WITH WATER 70°C [kPa]

The pressure drops are calculated with the following formula:

$$DP = \frac{DP_{\text{rated}}}{(Q_{w \text{ rated}})^{1.8} * (Q_w)^{1.8}}$$

The table shows the pressure drop for each size with flow rate intervals of 100l/h

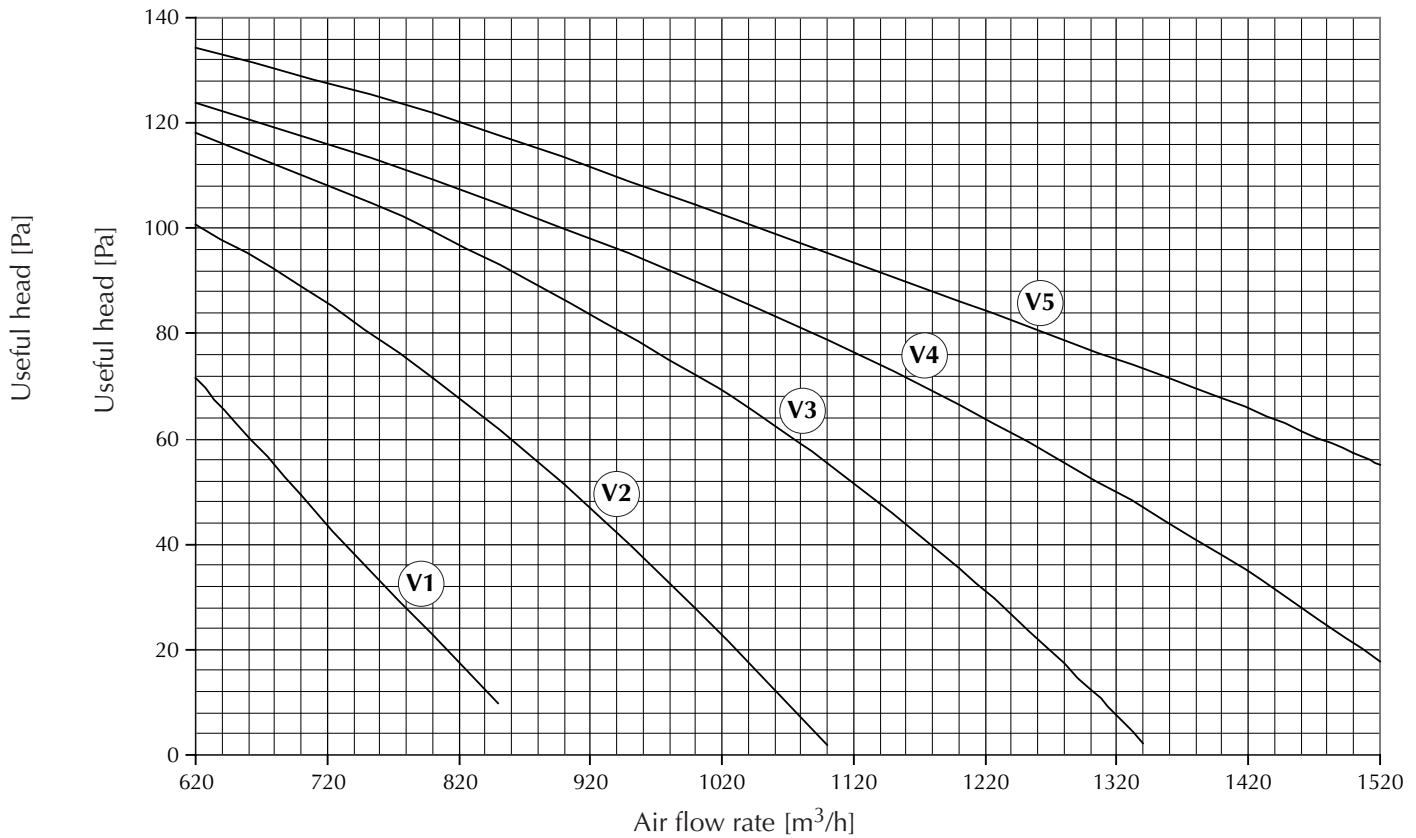
Water flow rate(l/h)	VED 432	VED 441	VED 532	VED 541	VED 632	VED 641	VED 732	VED 741
200	0.68	0.76	0.67	0.69	0.38	0.26	0.37	0.24
300	1.41	1.58	1.40	1.44	0.79	0.55	0.78	0.50
400	2.37	2.64	2.34	2.41	1.32	0.92	1.30	0.85
500	3.55	3.95	3.50	3.60	1.97	1.37	1.95	1.26
600	4.93	5.49	4.86	5.00	2.74	1.90	2.71	1.76
700	6.50	7.24	6.42	6.60	3.62	2.51	3.57	2.32
800	8.27	9.21	8.16	8.40	4.60	3.19	4.54	2.95
900	10.22	11.39	10.09	10.38	5.68	3.95	5.61	3.64
1000	12.35	13.76	12.20	12.55	6.87	4.77	6.79	4.40
1100	14.66	16.34	14.48	14.90	8.16	5.66	8.06	5.23
1200	17.15	19.11	16.93	17.42	9.54	6.62	9.42	6.11
1300	19.81	22.07	19.56	20.12	11.02	7.65	10.88	7.06
1400	22.64	25.22	22.35	22.99	12.59	8.74	12.43	8.07
1500	25.63	28.55	25.30	26.04	14.26	9.89	14.08	9.14
1600	28.79	32.07	28.42	29.24	16.01	11.11	15.81	10.26
1700	32.11	35.77	31.70	32.61	17.86	12.39	17.64	11.44
1800	35.58	39.65	35.13	36.15	19.80	13.74	19.55	12.68
1900	39.22	43.70	38.72	39.84	21.82	15.14	21.54	13.98
2000	43.02	47.93	42.47	43.70	23.93	16.61	23.63	15.33
2100	46.96	52.32	46.37	47.71	26.13	18.13	25.80	16.74
2200	51.07	56.89	50.42	51.88	28.41	19.71	28.05	18.20
2300	55.32	61.63	54.62	56.20	30.77	21.36	30.39	19.72
2400	59.72	66.54	58.96	60.67	33.22	23.06	32.81	21.29
2500	64.28	71.61	63.46	65.30	35.76	24.82	35.31	22.91
2600	68.98	76.85	68.10	70.07	38.37	26.63	37.89	24.59
2700	73.83	82.26	72.89	75.00	41.07	28.50	40.55	26.32
2800	78.82	87.82	77.82	80.07	43.85	30.43	43.30	28.10
2900	83.96	93.55	82.89	85.29	46.71	32.41	46.12	29.93
3000	89.25	99.43	88.11	90.66	49.65	34.45	49.02	31.81
3100	94.67	105.48	93.47	96.17	52.66	36.55	52.00	33.74
3200	100.24	111.68	98.96	101.83	55.76	38.70	55.06	35.73
3300	105.95	118.04	104.60	107.63	58.94	40.90	58.20	37.76
3400	111.80	124.56	110.37	113.57	62.19	43.16	61.41	39.85
3500	117.79	131.23	116.29	119.65	65.52	45.47	64.70	41.98
3600					68.93	47.84	68.07	44.17
3700					72.42	50.26	71.51	46.40
3800					75.98	52.73	75.02	48.68
3900					79.61	55.25	78.61	51.01
4000					83.33	57.83	82.28	53.39
4100					87.11	60.46	86.02	55.82
4200					90.97	63.14	89.83	58.29
4300					94.91	65.87	93.72	60.81
4400					98.92	68.65	97.68	63.38
4500					103.00	71.48	101.71	66.00
4600					107.16	74.37	105.82	68.66
4700					111.39	77.30	109.99	71.37
4800					115.69	80.29	114.24	74.13
4900					120.07	83.33	118.56	76.93
5000					124.51	86.41	122.95	79.78

STATIC PRESSURE

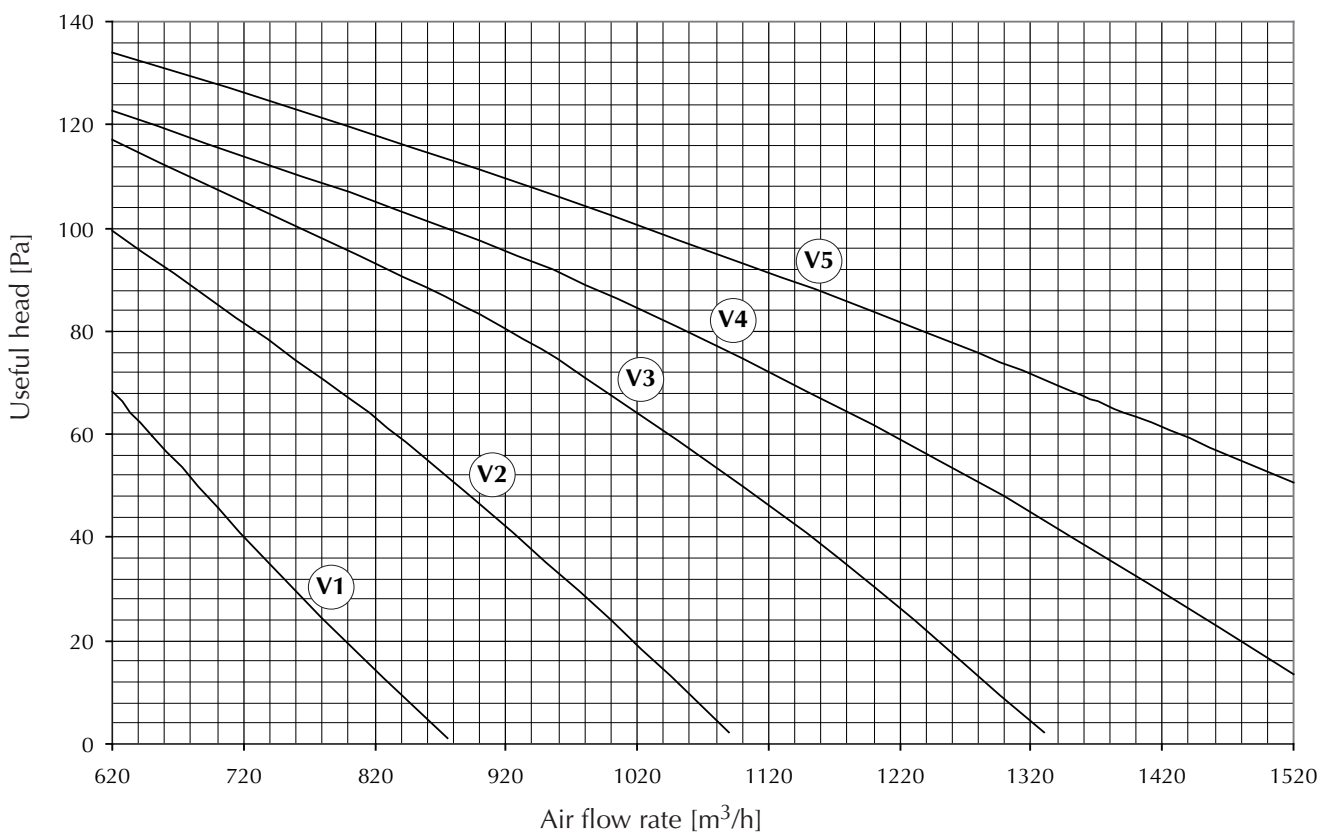
The fan coils in the VED series have been designed to make it possible to adjust the static pressure supplied by the fan upon pressure drops in the duct by choosing an appropriate set of three speeds.

The graph shows the useful static pressure of the machines with the updated multispeed motor in function of the air flow rate and speed of the fan (V1...V5).

VED 430



VED 440

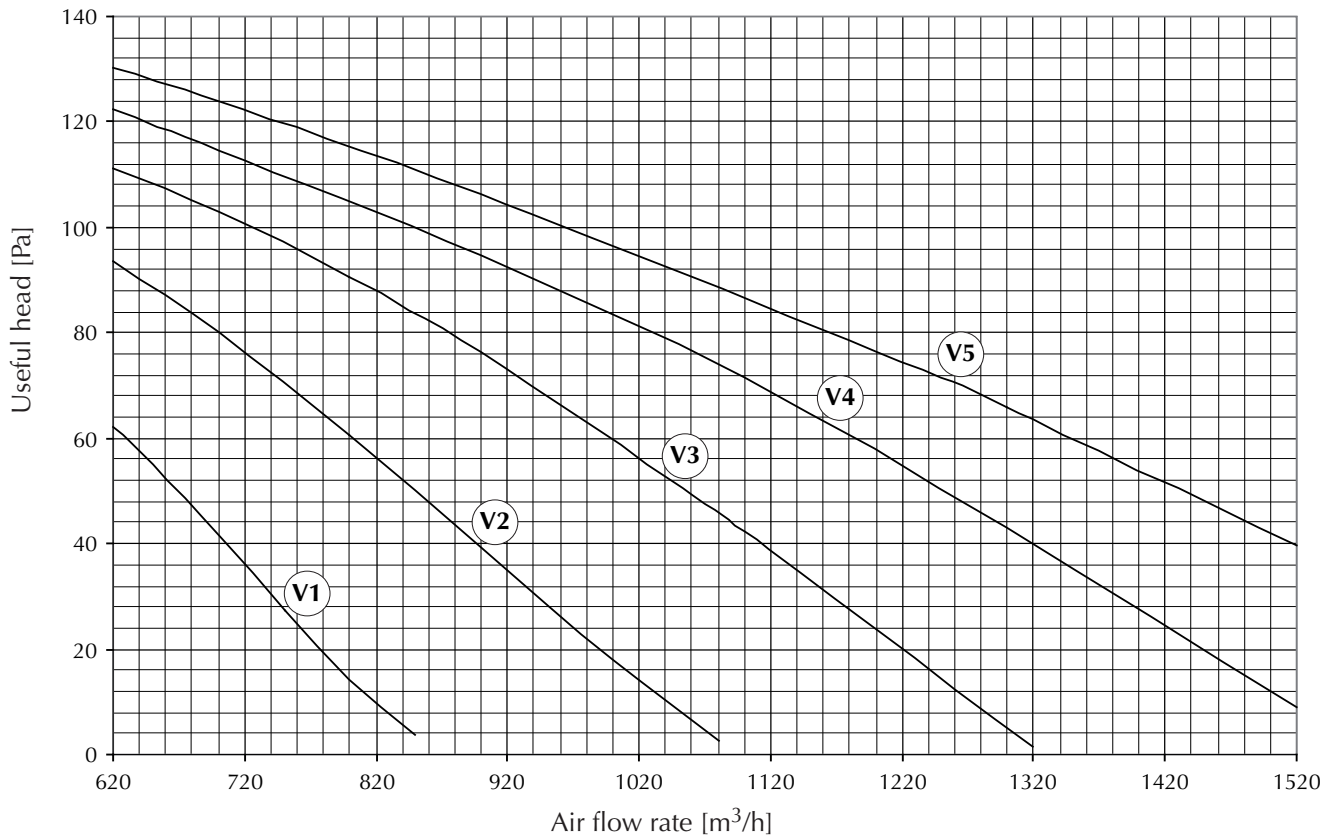


STATIC PRESSURE

The fan coils in the VED series have been designed to make it possible to adjust the static pressure supplied by the fan upon pressure drops in the duct by choosing an appropriate set of three speeds.

The graph shows the useful static pressure of the machines with the uprated multispeed motor in function of the air flow rate and speed of the fan (V1...V5).

VED 432 - VED 441

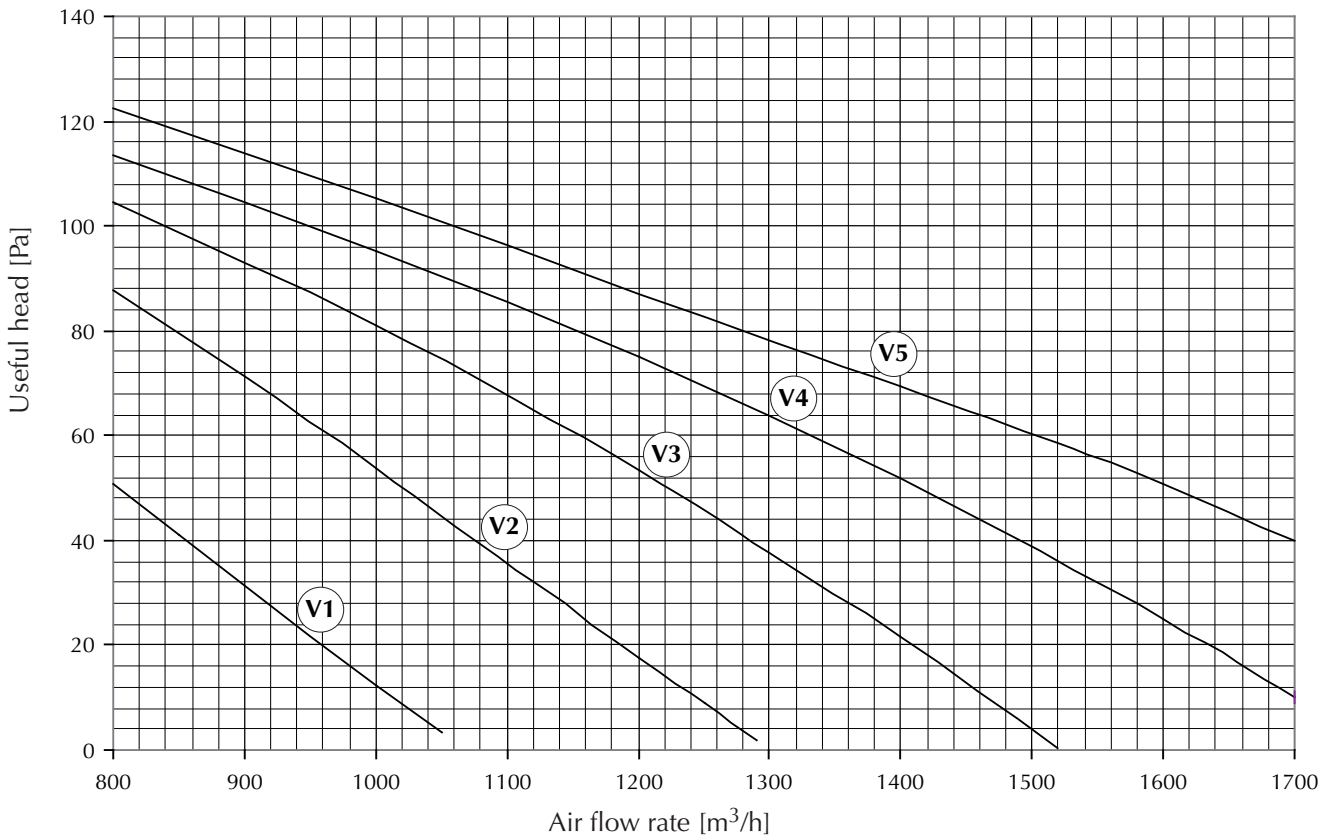


STATIC PRESSURE

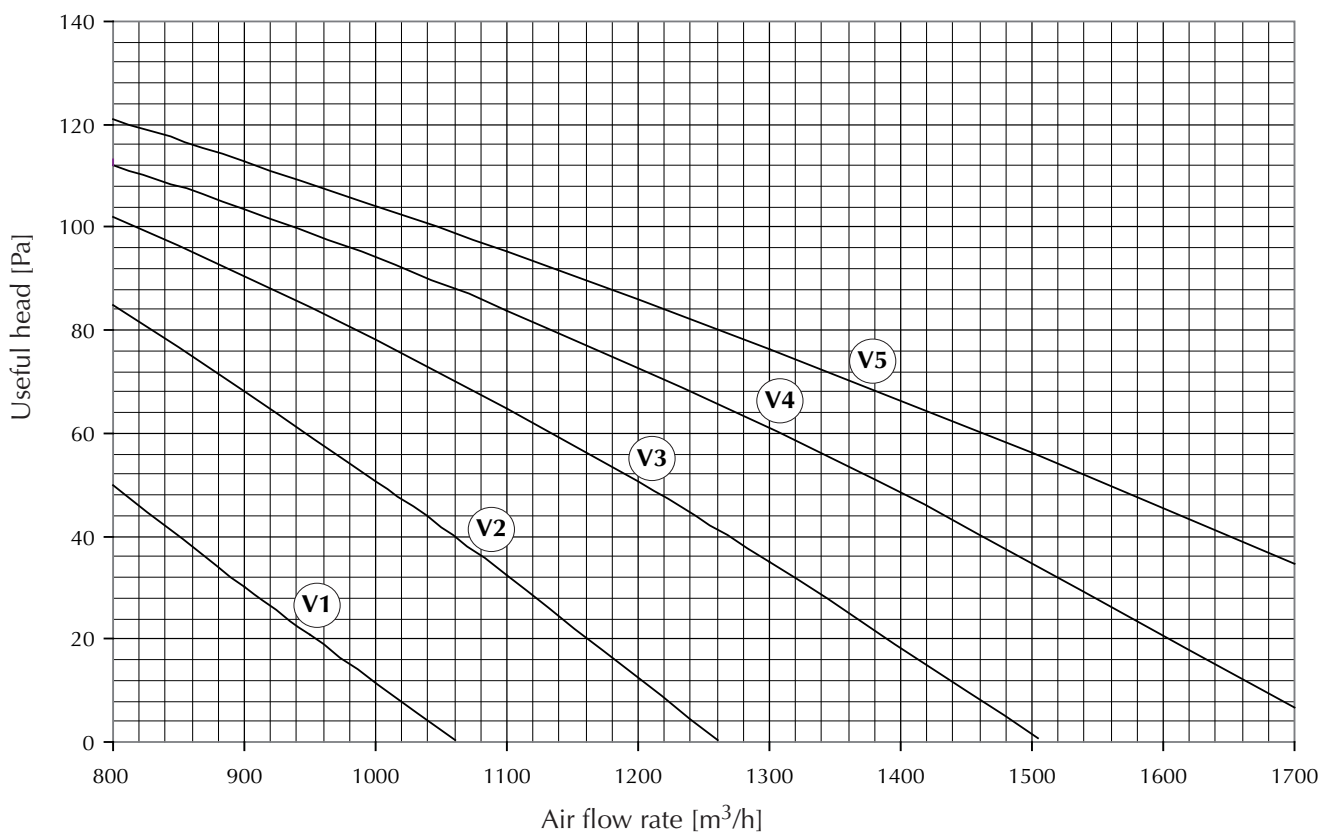
The fan coils in the VED series have been designed to make it possible to adjust the static pressure supplied by the fan upon pressure drops in the duct by choosing an appropriate set of three speeds.

The graph shows the useful static pressure of the machines with the updated multispeed motor in function of the air flow rate and speed of the fan (V1...V5).

VED 530



VED 540

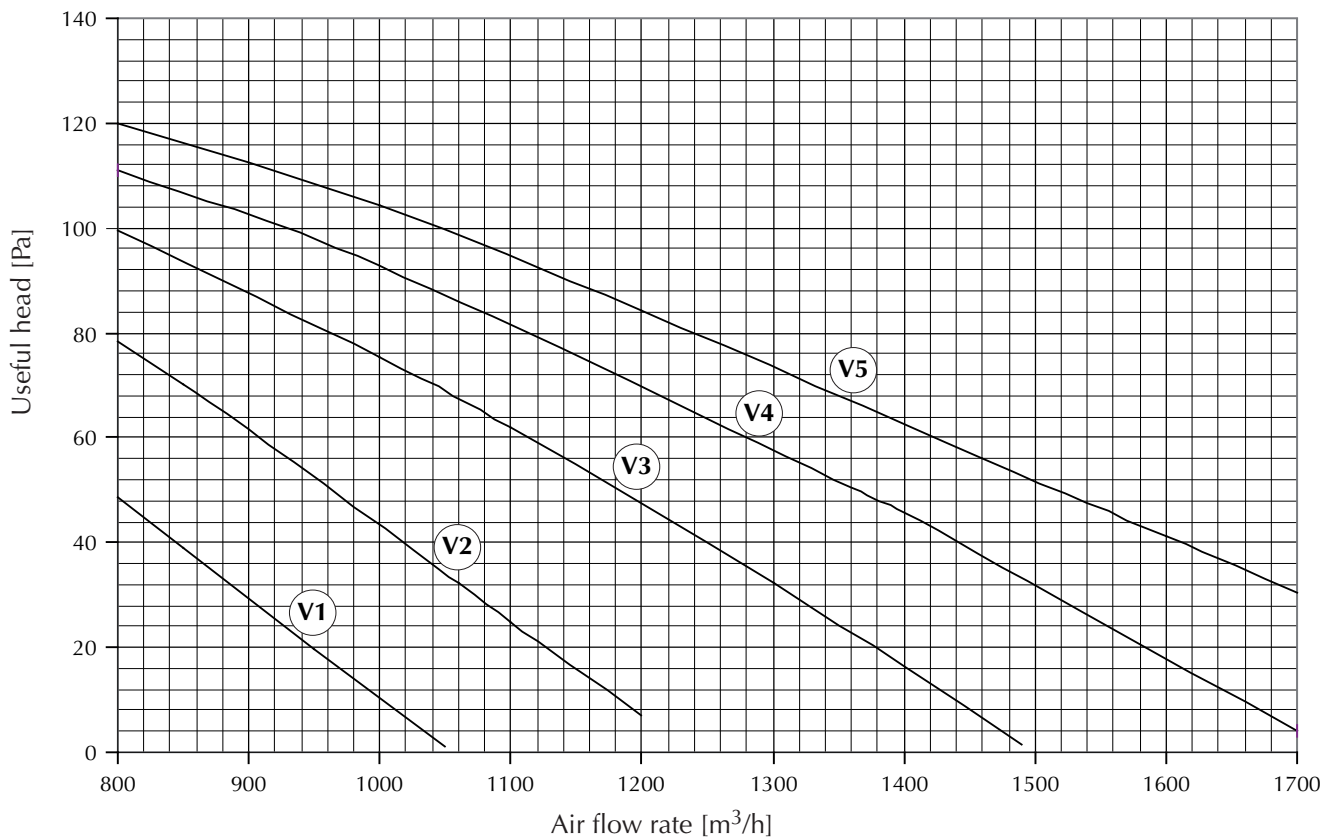


STATIC PRESSURE

The fan coils in the VED series have been designed to make it possible to adjust the static pressure supplied by the fan upon pressure drops in the duct by choosing an appropriate set of three speeds.

The graph shows the useful static pressure of the machines with the uprated multispeed motor in function of the air flow rate and speed of the fan (V1...V5).

VED 532 - VED 541

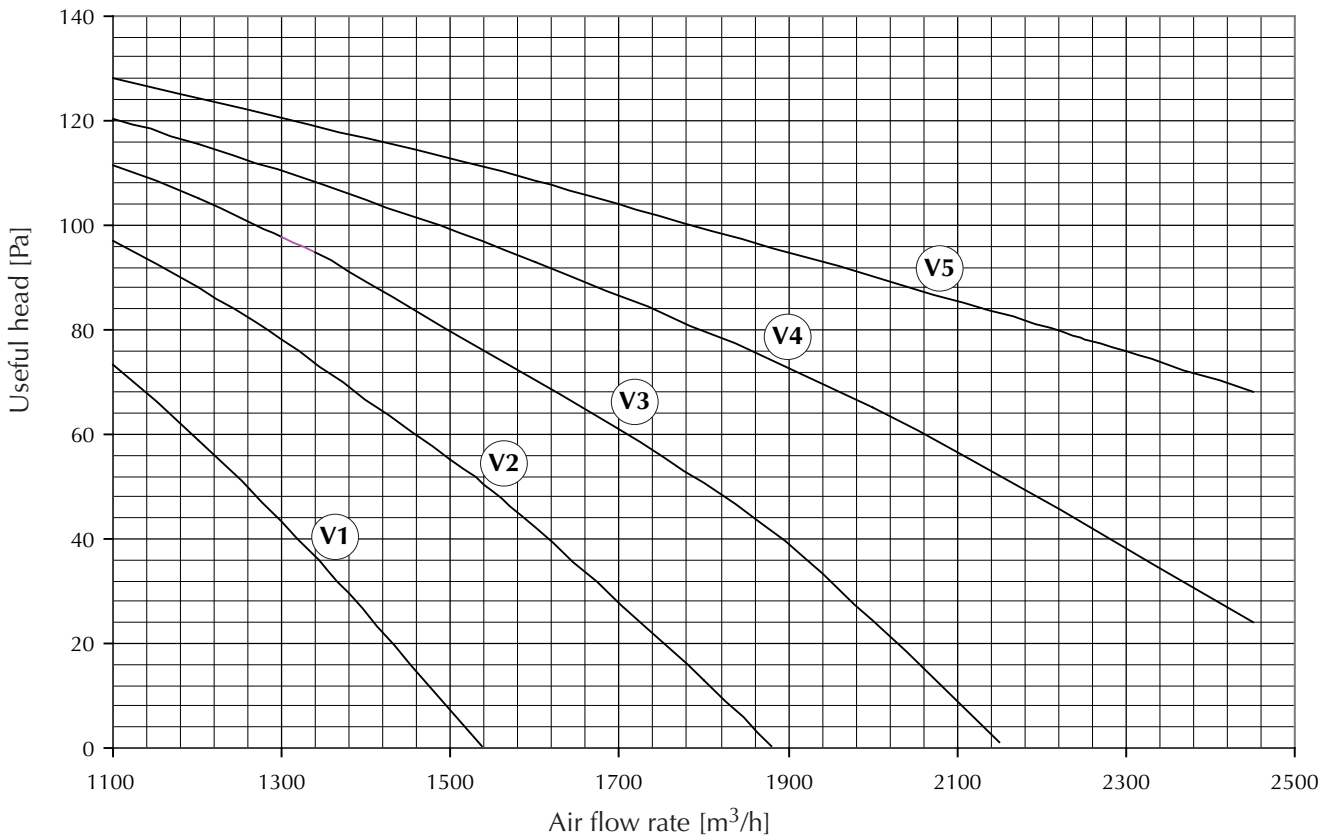


STATIC PRESSURE

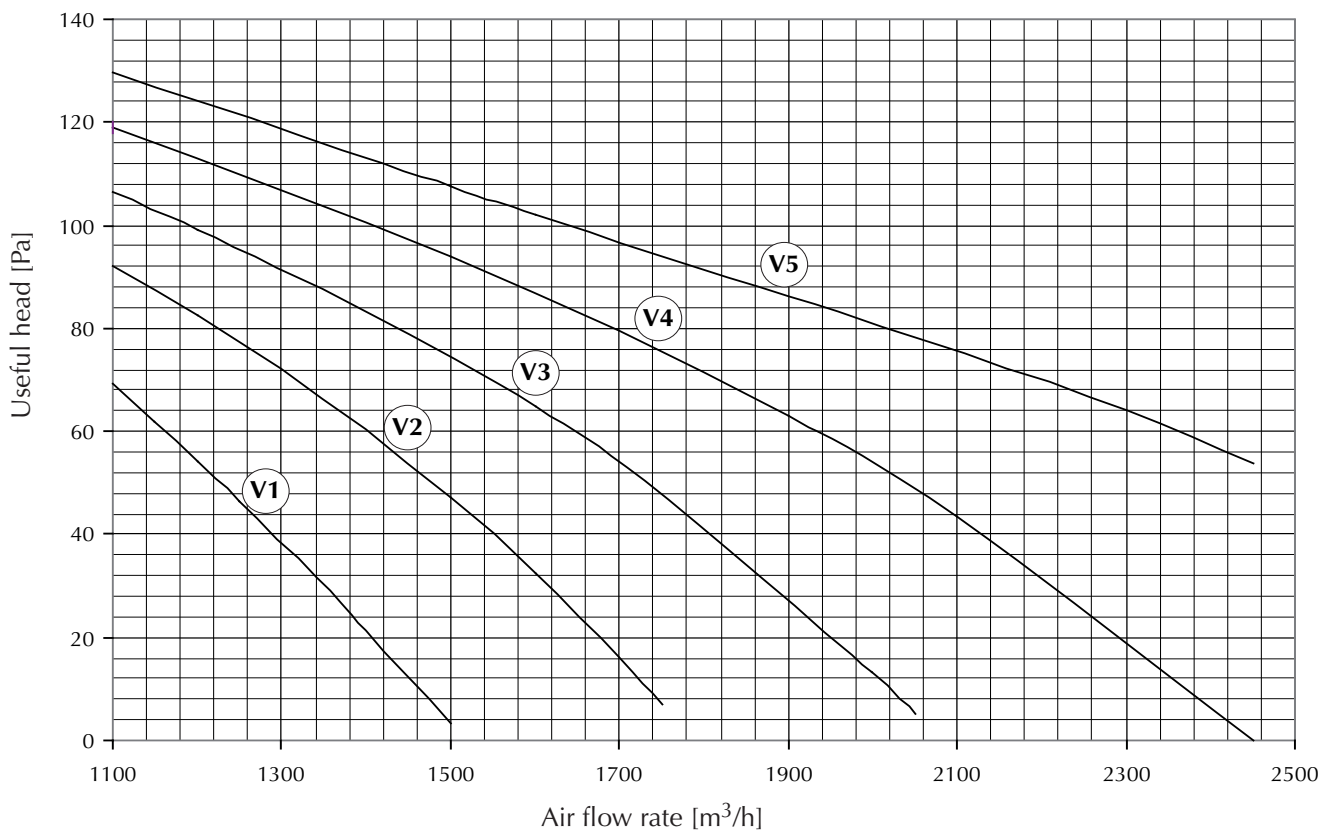
The fan coils in the VED series have been designed to make it possible to adjust the static pressure supplied by the fan upon pressure drops in the duct by choosing an appropriate set of three speeds.

The graph shows the useful static pressure of the machines with the updated multispeed motor in function of the air flow rate and speed of the fan (V1...V5).

VED 630



VED 640

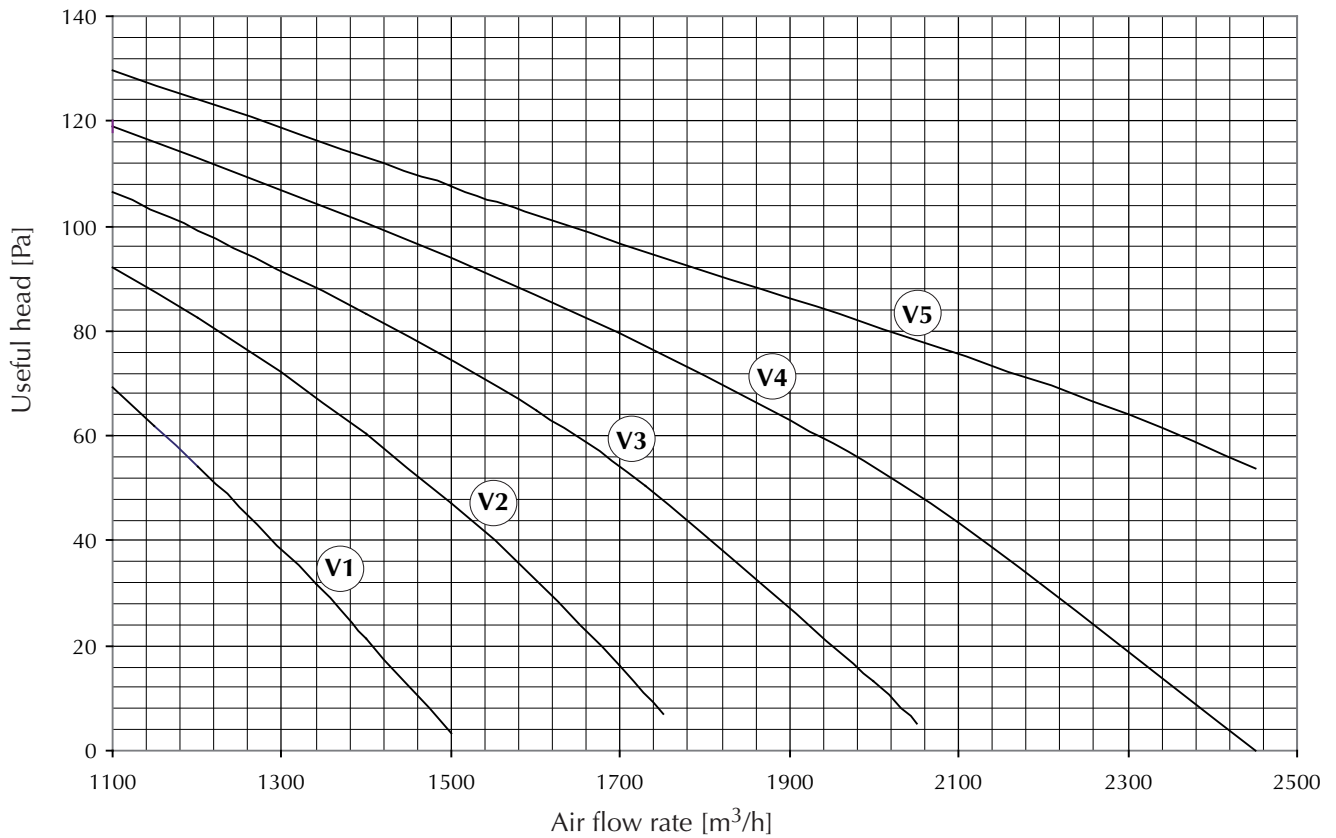


STATIC PRESSURE

The fan coils in the VED series have been designed to make it possible to adjust the static pressure supplied by the fan upon pressure drops in the duct by choosing an appropriate set of three speeds.

The graph shows the useful static pressure of the machines with the uprated multispeed motor in function of the air flow rate and speed of the fan (V1...V5).

VED 632 - VED 641

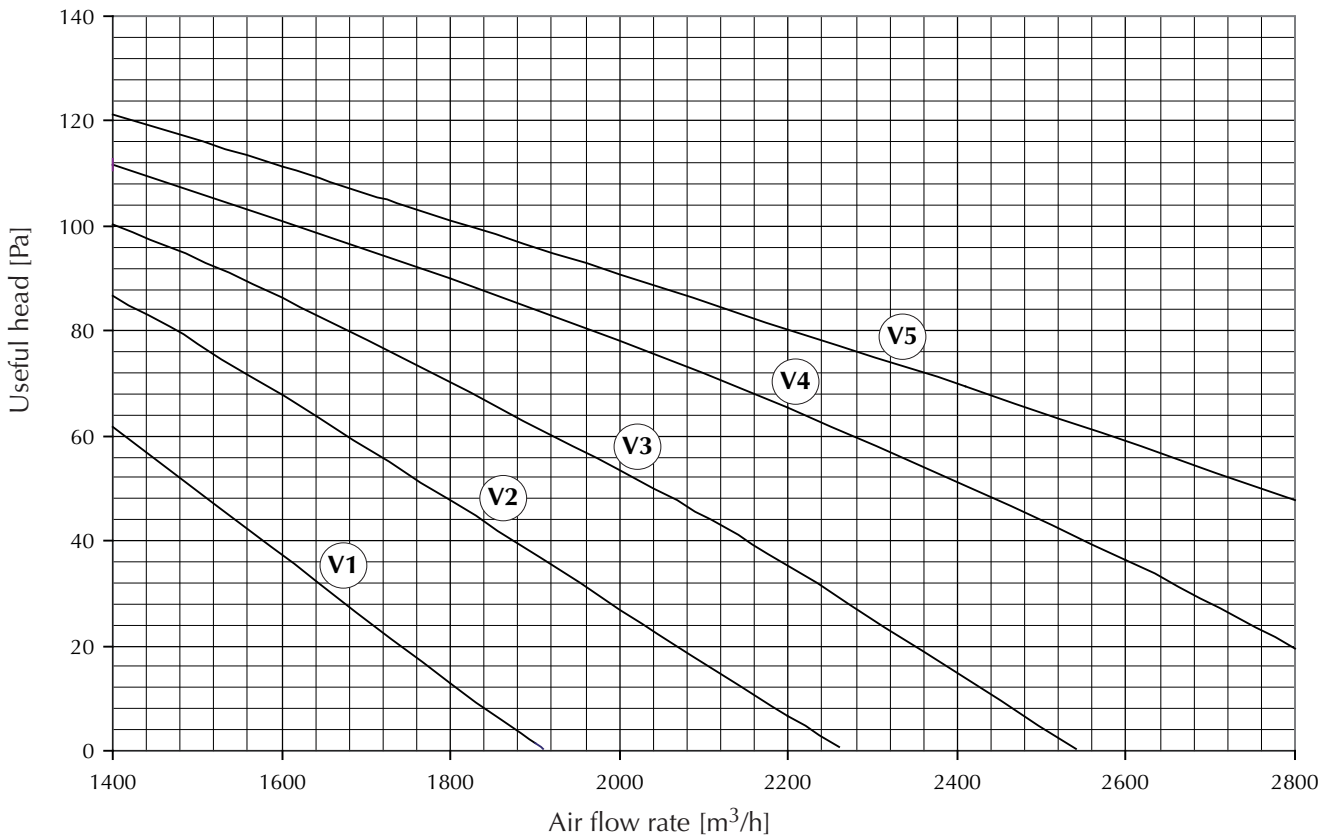


STATIC PRESSURE

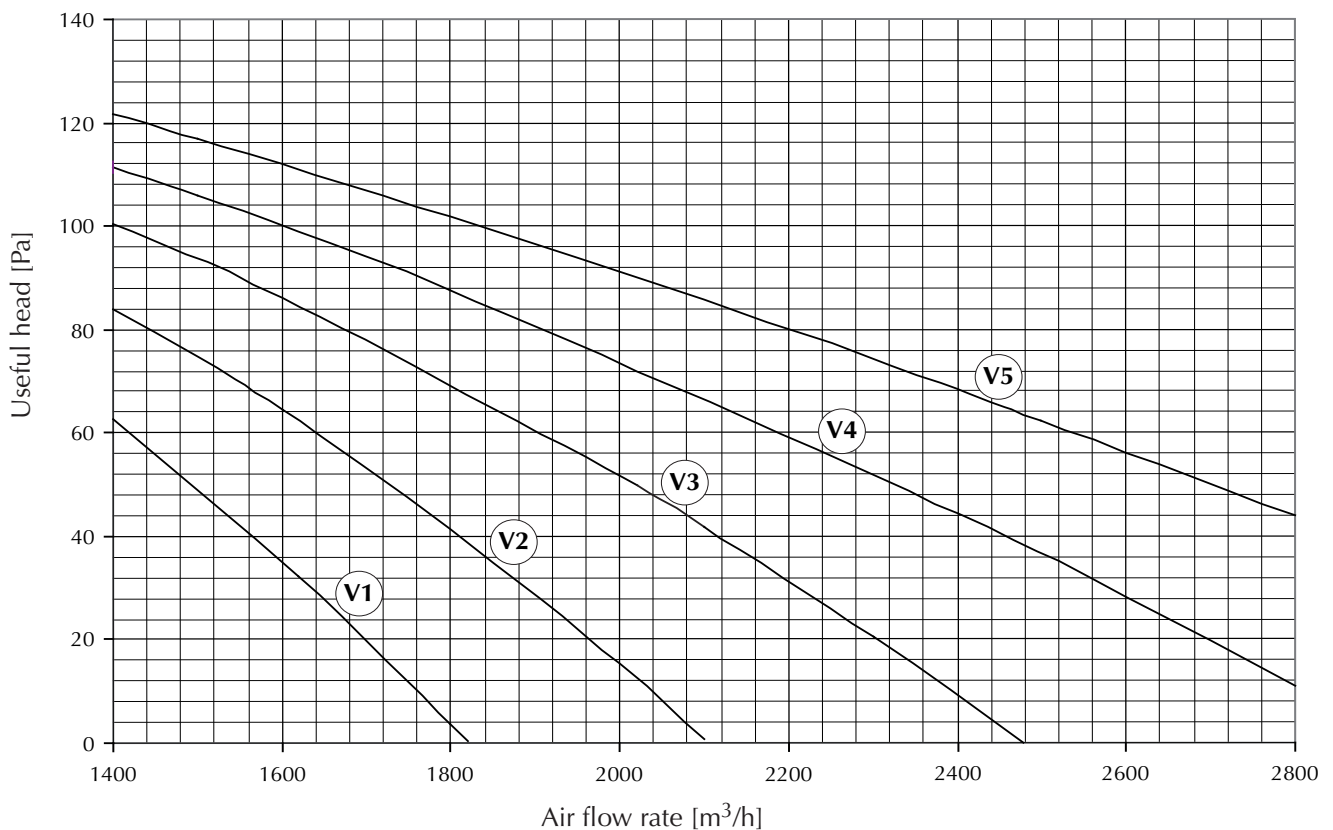
The fan coils in the VED series have been designed to make it possible to adjust the static pressure supplied by the fan upon pressure drops in the duct by choosing an appropriate set of three speeds.

The graph shows the useful static pressure of the machines with the updated multispeed motor in function of the air flow rate and speed of the fan (V1...V5).

VED 730



VED 740

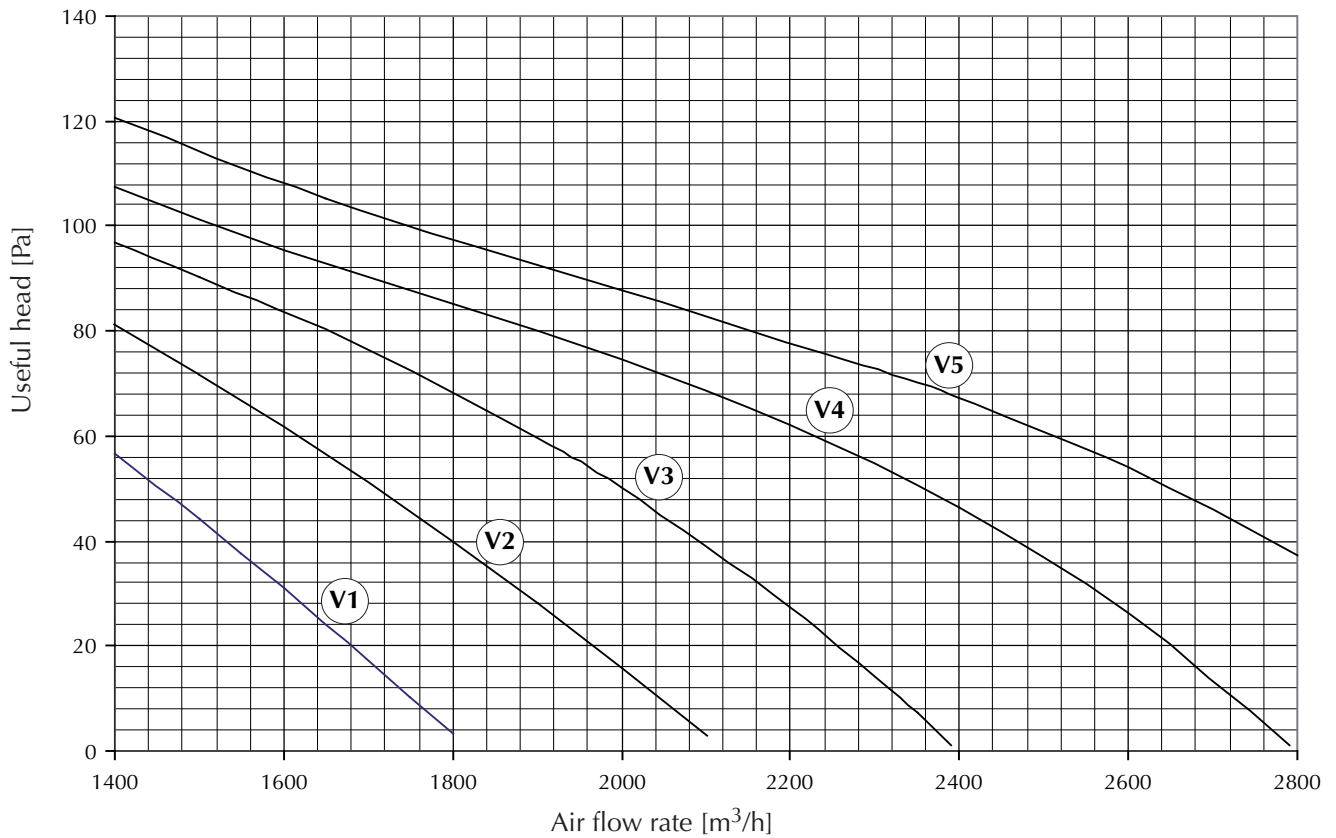


STATIC PRESSURE

The fan coils in the VED series have been designed to make it possible to adjust the static pressure supplied by the fan upon pressure drops in the duct by choosing an appropriate set of three speeds.

The graph shows the useful static pressure of the machines with the uprated multispeed motor in function of the air flow rate and speed of the fan (V1...V5).

VED 732 - VED 741



CORRECTION FACTORS WHEN OPERATING USING GLYCOL WATER

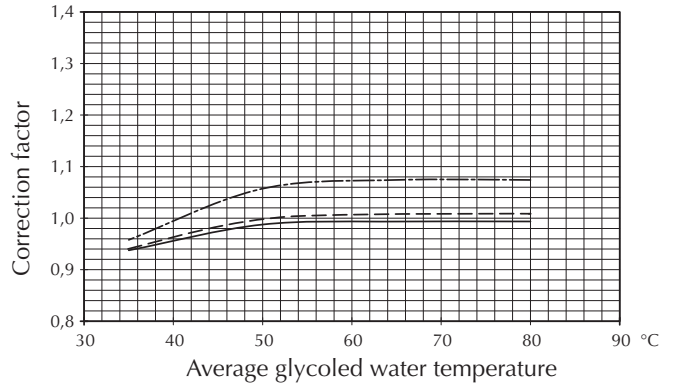
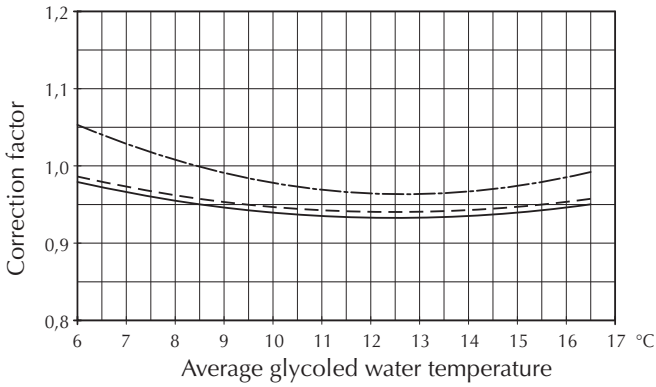
Key:

- Pressure drop
- Reduce air flow
- Yield

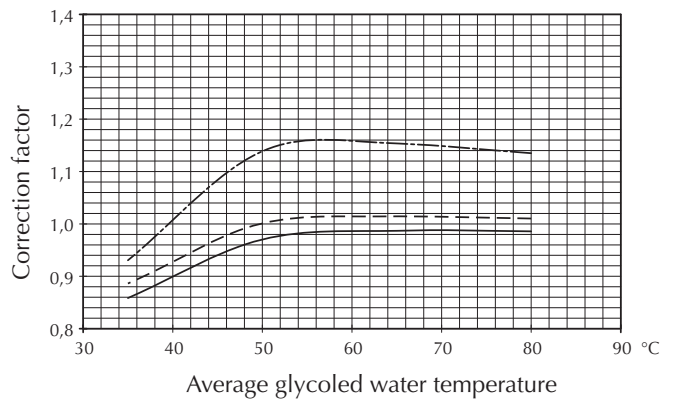
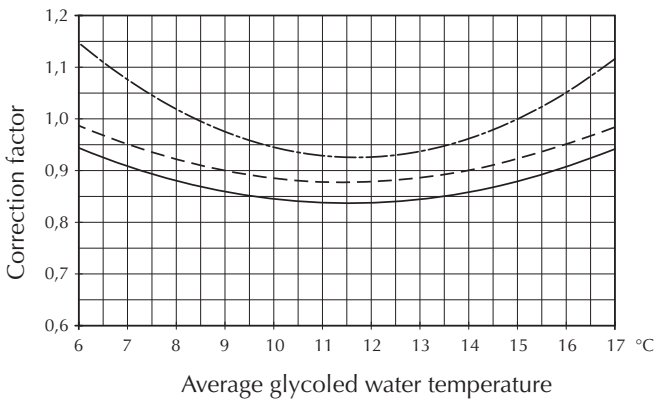
COOLING FUNCTION MODE

HEATING FUNCTION MODE

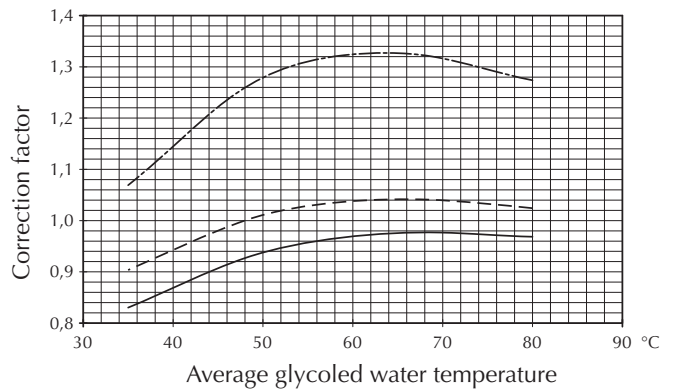
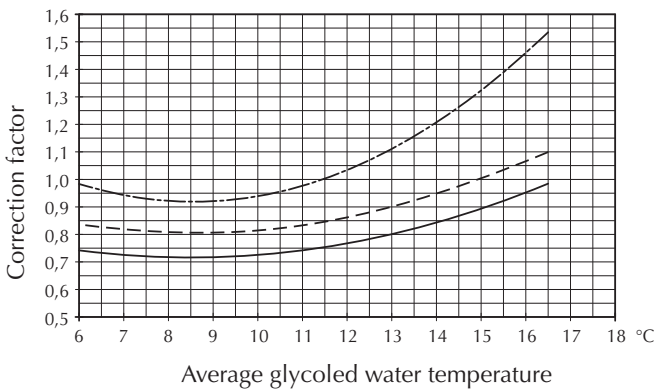
GLYCOL WATER AT 10%



GLYCOL WATER AT 20%



GLYCOL WATER AT 35%

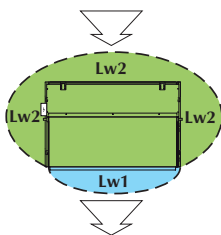


SOUND POWER LEVEL expressed in dB (A)

VED 430-440-432-441

Frequency Hz	Maximum			Average			Minimum		
	Tot. dB[A]	Lw2 dB[A]	Lw1 dB[A]	Tot. dB[A]	Lw2 dB[A]	Lw1 dB[A]	Tot. dB[A]	Lw2 dB[A]	Lw1 dB[A]
100	36.5	35.0	31.0	32.7	31.2	27.2	25.0	23.5	19.5
125	38.6	37.1	33.1	33.5	32.0	28.0	27.7	26.2	22.2
160	43.9	42.4	38.4	39.6	38.1	34.1	32.6	31.1	27.1
200	48.1	46.6	42.6	44.1	42.6	38.6	37.8	36.3	32.3
250	50.8	49.3	45.3	46.9	45.4	41.4	40.5	39.0	35.0
315	51.3	49.8	45.8	47.6	46.1	42.1	41.8	40.3	36.3
400	51.0	49.5	45.5	47.5	46.0	42.0	43.0	41.5	37.5
500	50.6	49.1	45.1	47.3	45.8	41.8	43.0	41.5	37.5
630	51.6	50.1	46.1	47.8	46.3	42.3	44.0	42.5	38.5
800	54.9	53.4	49.4	51.7	50.2	46.2	44.2	42.7	38.7
1000	54.7	53.2	49.2	50.0	48.5	44.5	42.6	41.1	37.1
1250	53.3	51.8	47.8	49.1	47.6	43.6	41.5	40.0	36.0
1600	52.8	51.3	47.3	48.4	46.9	42.9	39.8	38.3	34.3
2000	50.6	49.1	45.1	46.1	44.6	40.6	37.5	36.0	32.0
2500	48.8	47.3	43.3	44.2	42.7	38.7	35.1	33.6	29.6
3150	45.7	44.2	40.2	40.8	39.3	35.3	30.8	29.3	25.3
4000	42.6	41.1	37.1	37.5	36.0	32.0	27.0	25.5	21.5
5000	38.9	37.4	33.4	33.1	31.6	27.6	24.0	22.5	18.5
6300	34.7	33.2	29.2	30.4	28.9	24.9	14.0	12.5	8.5
8000	31.0	29.5	25.5	26.1	24.6	20.6	13.0	11.5	7.5
1000	26.9	25.4	21.4	21.3	19.8	15.8	12.3	10.8	6.8
dB[A] tot.	63.0	61.5 (E)	57.5 (E)	59.0	57.5 (E)	53.5 (E)	52.5	51.0 (E)	47.0 (E)

Acoustic tests carried out in accordance with EUROVENT 8/2 (ISO 3741/2001)



Legend:

Tot.: Total sound power level

Lw1: Sound power level emitted by the delivery of the unit

Lw2: Sound power level emitted by the unit and by the air intake side

(E) = EUROVENT certificate performances 6/3

SOUND PRESSURE LEVEL expressed in dB (A)

VED 430-440-432-441

dB[A]	Maximum			Average			Minimum		
	Tot.	Lw2	Lw1	Tot.	Lw2	Lw1	Tot.	Lw2	Lw1
	54.5	53	49	50.5	49	45	44	42.5	38.5

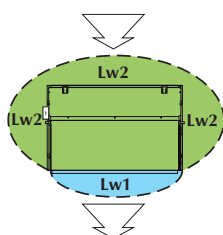
Level of sound pressure (A-weighted) measured in the room with volume $V = 85 \text{ m}^3$; reverberation time $t = 0.5 \text{ s}$; direction factor $Q = 2$; distance $r = 2.5 \text{ m}$.

SOUND POWER LEVEL expressed in dB (A)

VED 530-540-532-541

Frequency Hz	Maximum			Average			Minimum		
	Tot. dB[A]	Lw2 dB[A]	Lw1 dB[A]	Tot. dB[A]	Lw2 dB[A]	Lw1 dB[A]	Tot. dB[A]	Lw2 dB[A]	Lw1 dB[A]
100	36.9	35.4	31.4	35.1	33.6	29.6	28.3	26.8	22.8
125	38.9	37.4	33.4	35.9	34.4	30.4	29.7	28.2	24.2
160	44.1	42.6	38.6	41.5	40.0	36.0	35.4	33.9	29.9
200	48.6	47.1	43.1	46.0	44.5	40.5	40.0	38.5	34.5
250	51.1	49.6	45.6	48.6	47.1	43.1	42.9	41.4	37.4
315	51.7	50.2	46.2	49.1	47.6	43.6	44.0	42.5	38.5
400	51.2	49.7	45.7	49.1	47.6	43.6	44.6	43.1	39.1
500	50.8	49.3	45.3	48.8	47.3	43.3	44.7	43.2	39.2
630	51.6	50.1	46.1	49.8	48.3	44.3	45.5	44.0	40.0
800	55.3	53.8	49.8	53.5	52.0	48.0	47.1	45.6	41.6
1000	55.4	53.9	49.9	52.2	50.7	46.7	45.3	43.8	39.8
1250	54.0	52.5	48.5	51.1	49.6	45.6	44.6	43.1	39.1
1600	53.4	51.9	47.9	50.6	49.1	45.1	43.4	41.9	37.9
2000	51.2	49.7	45.7	48.2	46.7	42.7	41.1	39.6	35.6
2500	49.4	47.9	43.9	46.3	44.8	40.8	38.8	37.3	33.3
3150	46.3	44.8	40.8	43.0	41.5	37.5	35.0	33.5	29.5
4000	43.4	41.9	37.9	39.8	38.3	34.3	31.2	29.7	25.7
5000	39.7	38.2	34.2	35.8	34.3	30.3	26.6	25.1	21.1
6300	36.3	34.8	30.8	32.1	30.6	26.6	24.5	23.0	19.0
8000	32.5	31.0	27.0	28.1	26.6	22.6	19.8	18.3	14.3
10000	27.8	26.3	22.3	23.6	22.1	18.1	15.1	13.6	9.6
dB[A] tot.	63.5	62.0 (E)	58.0 (E)	61.0	59.5 (E)	55.5 (E)	55.0	53.5 (E)	49.5 (E)

Acoustic tests carried out in accordance with EUROVENT 8/2 (ISO 3741/2001)



Legend:

Tot.: Total sound power level

Lw1: Sound power level emitted by the delivery of the unit

Lw2: Sound power level emitted by the unit and by the air intake side

(E) =EUROVENT certificate performances

SOUND PRESSURE LEVEL expressed in dB (A)

VED 530-540-532-541

dB[A]	Maximum			Average			Minimum		
	Tot.	Lw2	Lw1	Tot.	Lw2	Lw1	Tot.	Lw2	Lw1
	55	53.5	49.5	52.5	51	47	46.5	45	41

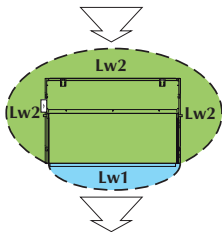
Level of sound pressure (A-weighted) measured in the room with volume $V = 85 \text{ m}^3$; reverberation time $t = 0.5 \text{ s}$; direction factor $Q = 2$; distance $r = 2.5 \text{ m}$.

SOUND POWER LEVEL expressed in dB (A)

VED 630-640-632-641

Frequency	Maximum			Average			Minimum		
	Tot.	Lw2	Lw1	Tot.	Lw2	Lw1	Tot.	Lw2	Lw1
Hz	dB[A]	dB[A]	dB[A]	dB[A]	dB[A]	dB[A]	dB[A]	dB[A]	dB[A]
100	39.5	38.0	34.0	35.0	33.5	29.5	31.3	29.8	25.8
125	42.0	40.5	36.5	38.5	37.0	33.0	33.8	32.3	28.3
160	47.7	46.2	42.2	43.7	42.2	38.2	38.6	37.1	33.1
200	51.7	50.2	46.2	47.7	46.2	42.2	42.9	41.4	37.4
250	53.0	51.5	47.5	49.2	47.7	43.7	44.7	43.2	39.2
315	54.0	52.5	48.5	50.5	49.0	45.0	46.1	44.6	40.6
400	54.8	53.3	49.3	52.0	50.5	46.5	48.4	46.9	42.9
500	57.0	55.5	51.5	54.3	52.8	48.8	50.9	49.4	45.4
630	57.0	55.5	51.5	54.1	52.6	48.6	49.9	48.4	44.4
800	60.1	58.6	54.6	57.0	55.5	51.5	51.9	50.4	46.4
1000	62.8	61.3	57.3	59.5	58.0	54.0	54.7	53.2	49.2
1250	62.5	61.0	57.0	59.0	57.5	53.5	53.5	52.0	48.0
1600	60.5	59.0	55.0	56.2	54.7	50.7	50.2	48.7	44.7
2000	57.8	56.3	52.3	53.6	52.1	48.1	47.2	45.7	41.7
2500	54.4	52.9	48.9	50.0	48.5	44.5	43.9	42.4	38.4
3150	50.8	49.3	45.3	46.5	45.0	41.0	39.7	38.2	34.2
4000	47.7	46.2	42.2	42.7	41.2	37.2	34.3	32.8	28.8
5000	43.2	41.7	37.7	37.0	35.5	31.5	28.3	26.8	22.8
6300	38.6	37.1	33.1	32.3	30.8	26.8	23.8	22.3	18.3
8000	35.2	33.7	29.7	28.7	27.2	23.2	20	18.5	14.5
10000	30.2	28.7	24.7	23.7	22.2	18.2	15.2	13.7	9.7
dB[A] tot.	69.5	68.0 (E)	64.0 (E)	66.0	64.5 (E)	60.5 (E)	61.0	59.5 (E)	55.5 (E)

Acoustic tests carried out in accordance with EUROVENT 8/2 (ISO 3741/2001)



Legend:

Tot.: Total sound power level

Lw1: Sound power level emitted by the delivery of the unit

Lw2: Sound power level emitted by the unit and by the air intake side

(E) =EUROVENT certificate performances 6/3

SOUND PRESSURE LEVEL expressed in dB (A)

VED 630-640-632-641

dB[A]	Maximum			Average			Minimum		
	Tot.	Lw2	Lw1	Tot.	Lw2	Lw1	Tot.	Lw2	Lw1
	61	59.5	55.5	57.5	56	52	52.5	51	47

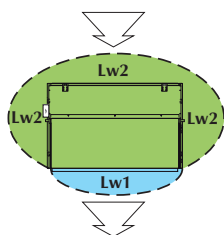
Level of sound pressure (A-weighted) measured in the room with volume $V = 85 \text{ m}^3$; reverberation time $t = 0.5 \text{ s}$; direction factor $Q = 2$; distance $r = 2.5 \text{ m}$.

SOUND POWER LEVEL expressed in dB (A)

VED 730-740-732-741

Frequency	Maximum			Average			Minimum		
	Tot.	Lw2	Lw1	Tot.	Lw2	Lw1	Tot.	Lw2	Lw1
Hz	dB[A]	dB[A]	dB[A]	dB[A]	dB[A]	dB[A]	dB[A]	dB[A]	dB[A]
100	39.1	37.6	33.6	36.0	34.5	30.5	32.5	31.0	27.0
125	42.4	40.9	36.9	39.8	38.3	34.3	36.0	34.5	30.5
160	48.1	46.6	42.6	45.2	43.7	39.7	41.0	39.5	35.5
200	52.3	50.8	46.8	49.4	47.9	43.9	45.2	43.7	39.7
250	53.3	51.8	47.8	50.8	49.3	45.3	46.8	45.3	41.3
315	54.2	52.7	48.7	51.9	50.4	46.4	48.3	46.8	42.8
400	55.3	53.8	49.8	53.3	51.8	47.8	50.3	48.8	44.8
500	57.4	55.9	51.9	55.6	54.1	50.1	52.8	51.3	47.3
630	57.5	56.0	52.0	55.5	54.0	50.0	51.9	50.4	46.4
800	60.5	59.0	55.0	58.6	57.1	53.1	54.5	53.0	49.0
1000	63.4	61.9	57.9	60.9	59.4	55.4	57.1	55.6	51.6
1250	63.1	61.6	57.6	60.5	59.0	55.0	56.4	54.9	50.9
1600	61.0	59.5	55.5	58.1	56.6	52.6	53.2	51.7	47.7
2000	58.3	56.8	52.8	55.4	53.9	49.9	50.4	48.9	44.9
2500	54.9	53.4	49.4	51.8	50.3	46.3	46.9	45.4	41.4
3150	51.3	49.8	45.8	48.3	46.8	42.8	43.2	41.7	37.7
4000	48.0	46.5	42.5	44.8	43.3	39.3	38.4	36.9	32.9
5000	43.5	42.0	38.0	39.5	38.0	34.0	32.5	31.0	27.0
6300	39.0	37.5	33.5	34.8	33.3	29.3	27.8	26.3	22.3
8000	35.7	34.2	30.2	31.2	29.7	25.7	24.0	22.5	18.5
10000	30.8	29.3	25.3	26.2	24.7	20.7	19.1	17.6	13.6
dB[A] tot.	70.0	68.5 (E)	64.5 (E)	67.5	66.0 (E)	62.0 (E)	63.5	62.0 (E)	58.0 (E)

Acoustic tests carried out in accordance with EUROVENT 8/2 (ISO 3741/2001)



Legend:

Tot.: Total sound power level

Lw1: Sound power level emitted by the delivery of the unit

Lw2: Sound power level emitted by the unit and by the air intake side

(E) = EUROVENT certificate performances 6/3

SOUND PRESSURE LEVEL expressed in dB (A)

VED 730-740-732-741

dB[A]	Maximum			Average			Minimum		
	Tot.	Lw2	Lw1	Tot.	Lw2	Lw1	Tot.	Lw2	Lw1
	61.5	60	56	59	57.5	53.5	55	53.5	49.5

Level of sound pressure (A-weighted) measured in the room with volume $V = 85 \text{ m}^3$; reverberation time $t = 0.5 \text{ s}$; direction factor $Q = 2$; distance $r = 2.5 \text{ m}$.

ACCESSORIES

Consult the compatibility table to make your choice.

Accessories	VED fancoil															
	430	432	440	441	530	532	540	541	630	632	640	641	730	732	740	741
Intake connections and plenum																
RDA450V	✓	✓	✓	✓	✓	✓	✓	✓								
RDA670V									✓	✓	✓	✓	✓	✓	✓	✓
RPA45 V	✓	✓	✓	✓	✓	✓	✓	✓								
RPA670V									✓	✓	✓	✓	✓	✓	✓	✓
PA450V	✓	✓	✓	✓	✓	✓	✓	✓								
PA670V									✓	✓	✓	✓	✓	✓	✓	✓
Delivery connections and plenum																
RPM450V	✓	✓	✓	✓	✓	✓	✓	✓								
RPM670V									✓	✓	✓	✓	✓	✓	✓	✓
PM450V	✓	✓	✓	✓	✓	✓	✓	✓								
PM670V									✓	✓	✓	✓	✓	✓	✓	✓
Circular flange for intake and delivery plenum																
KFV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Three-way water valve for main coil																
VCF45C	✓	✓	✓	✓	✓	✓	✓	✓								
VCF47C									✓	✓	✓	✓	✓	✓	✓	✓
Two-way water valve for main coil																
VCF25C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Three-way water valve for heating only coil																
VCF45H		✓		✓		✓		✓								
VCF47H										✓		✓		✓		✓
Two-way water valve for heating only coil																
VCF25H		✓		✓		✓		✓		✓		✓		✓		✓
Control panels, interface cards and probes																
SIT3*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
WMT05	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
WMT06	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
WMT10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VMF System - Thermostats, control panels and system components																
VMF-SIT3****	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VMF-E0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VMF - E1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VMF-SW	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
•VMF-SW1:	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VMF-E4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
•VMF-E5B	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
•VMF-E5N	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

* SIT3 = Accessory compulsory on VED units combined with thermostats different from the VMF System

** SIT5 = Accessory compulsory on VED units combined with a networked centralised PXAE panel

*** SW3 = Water temperature probe for PXAE

**** VMF-SIT3 = Mandatory accessory to be combined with or VMF-E0 or VMF-E1 thermostats

POSSIBLE CONFIGURATIONS OF THE VED FAN COILS WITH THE AVAILABLE THERMOSTATS

		Single unit					Fan coil network								
	VED FAN COILS	VED 4X - 5X	VED 6X - 7X	VED 4X - 5X	VED 6X - 7X	VED 4X - 5X	VED 6X - 7X	VED 4X - 5X	VED 6X - 7X	VED 4X - 5X	VED 6X - 7X	VED 4X - 5X	VED 6X - 7X	VED 4X - 5X	VED 6X - 7X
ACCESSORY	NOTES	FAN COIL CONFIGURATION													
		Without valves	Two pipe circuit with valve	Four pipe circuit with valve	VED network Without valves	VED network Two pipe circuit with valve	VED network Without valves	VED network Two pipe circuit with valve	VED network Without valves	VED network Two pipe circuit with valve	VED network Without valves	VED network Two pipe circuit with valve	VED network Without valves	VED network Two pipe circuit with valve	VED network Four pipe circuit with valve

VED combined with VMF-System series control devices

VMF-SIT3 (4A)	Thermostat interface	Mandatory accessory Mandatory accessory between the VED fan coil and the VMF-E0 or VMF-E1 thermostats													
VMF-E0 (0.7A) VMF-E1 (0.7A)	VMF-System thermostats Obligatory accessories	Permitted combinations (mandatory combination with VMF-SIT3) Possible combinations: VMF-E1 (Master) + VMF-E1 (Slave) VMF-E1 (Master) + VMF-E0 (Slave) VMF-E0 (Master) + VMF-E0 (Slave)													
VMF-E4	VMF-System control panels	Single unit To be combined with thermostats VMF-E0 and VMF-E1													
VMF - E5	Control panel for VMF- E1 stand alone or for a VMF network in which the first is a VMF-E1.	Single unit To be combined with a VMF-E1 thermostat													

VED combined with control panels with thermostat

PXAE (1.1A)	Command panels with thermostat	Combinations allowed for installation on a single unit (mandatory combination with SIT3)													
WMT05 (3A)	Command panels with thermostat	Permitted	Not permitted	Not permitted	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3
WMT06 (3A)	Command panels with thermostat	Permitted	Permitted	Permitted	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3
WMT10 (1.4A)	Command panels with thermostat	Permitted	Permitted	Permitted	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3	Permitted with SIT3
SIT3 (4A)	Control panel interface	Mandatory accessory in a VED network (max 3), one for each unit controlled by control panels with thermostat. Interface mandatory between the VED fan coils and the WMT10 control panels (as indicated in the table)													
SIT5 (4A)	PXAE Control panel network interface	Not permitted													
SW3	Water temperature probe	PXAE control panel dedicated accessory													

ACCESSORIES

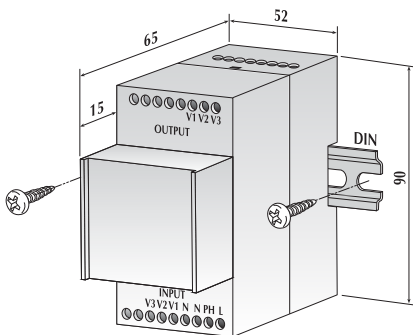
ACCESSORIES MANDATORY FOR THE OPERATION:

- **VMF-SIT3** : VMF System thermostat interface card Mandatory accessory on the VED unit equipped with VMF-E0 or VMF-E1 thermostat. The VMF-SIT3 accessory sends back the control of the three speeds to the fan coils.
- **SIT3** : Thermostat interface card Accessory compulsory on VED units combined with thermostats different from the VMF System. The SIT3 accessory sends back the control of the three speeds to the fan coils.
- **SIT5** : Thermostat interface card Accessory compulsory on the VED unit with up to 2 water valves, combined to the PXAE control panel. The SIT5 accessory sends back the control of the three speeds and the valves to the fan coils.

VMF-SIT3 INTERFACE CARD DEDICATED TO THE VMF SERIES THERMOSTATS

Variable Multi Flow

VMF



Thermostat interface card dedicated to the VMF thermostats

The VMF-SIT3 accessory sends back the control of the three speeds to the fan coils.

The VMF-SIT3 thermostat interface card is dedicated to the fan coils with VMF E0/E1 thermostats, except for the models in which the absorption of the motor does not exceed 0.7 A.

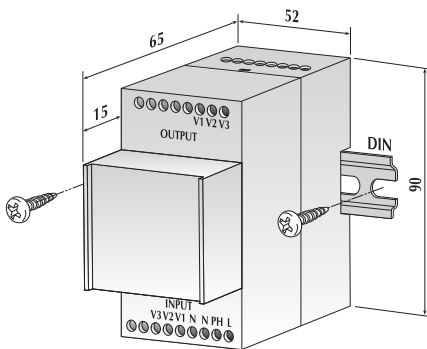
⚠ Each fan coil must be interfaced with the VMF-SIT3 card.

VMF-SIT3 is equipped with a 2A fuse to protect the fan coil.

If the fan coil absorbs more than 2A and up to 4A, the internal fuse must be replaced with a 4A fuse, (supplied).

The VMF-SIT3 accessory can no longer be used for absorptions over 4A.

SIT3 - SIT5 INTERFACE CARDS



SIT 3

Each fan coil fitted with SIT3 card becomes a Slave and can be controlled from a centralised control panel with electromechanical selector or with SIT 5.

The accessory sends back the control of the three speeds to the fan coils.

⚠ The electromechanical control panels with just the speed control can be fitted directly to the SIT 3 without the SIT 5 interface.

SIT 5

The SIT5 accessory, Master interface card, is connected to the electronic control panels with or without control of the valves and/or the electric resistors.

The accessory sends back the control of the three speeds to the fan coils.

⚠ The PXAE electronic control panels or those with valve control must also be interfaced with a SIT5 .

VMF - VARIABLE MULTI FLOW SYSTEM

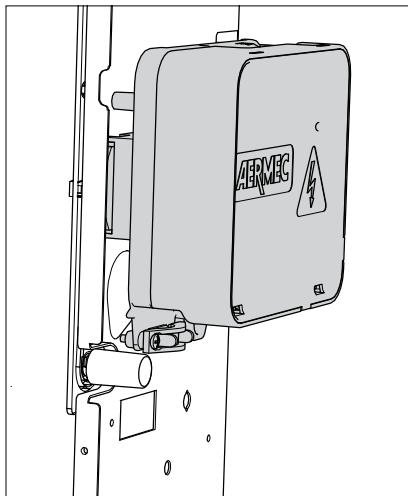
•VMF: Variable Multi Flow system
 Management and control system of hydronic systems for the conditioning, heating and production of domestic hot water.
 The VMF system allows complete control of every component of a hydronic system both locally and centrally and, communicating between the various components of the system, manages the performance without ever neglecting the end user's request of comfort, but reaching it as efficiently as possible with energy saving.
 Summing up the advantages of this innovative control with the flexibility of a hydronic system, a more effective and efficient alternative to the variable refrigerant flow systems (VRF) is obtained.
 The VMF system is extremely flexible, enough to allow various control and manage steps, expandable at different moments:



- 1) Control of a single fancoil
 - 2) Control of a microzone (one MASTER fancoil and a maximum of 5 SLAVE fancoils)
 - 3) Control of multi independent zones system (one MASTER fancoil and a maximum of 5 SLAVE fancoils for each zone)
 - 4) Control of a fancoil system, plus management of the heat pump (if compatible with the VMF system)
 - 5) Control of a fancoil system, heat pump and management of the domestic hot water system (VMF-DHW)
 - 6) Control of a fancoil system, heat pump, domestic hot water production and additional circulators (up to a maximum of 12 using three additional VMF-CRP modules).
 - 7) Control of a fancoil system, heat pump, domestic hot water production, additional circulators and management of heat recovery units, maximum 3, (with the ability to handle up to 3 VMF-VOC probes) or a boiler.
- The VMF system can operate and manage, through a VMF-E5 panel, a maximum of 64 zones consisting of a MASTER fancoil and a maximum of

- 5 SLAVE fancoils connected to each MASTER, for a total of 384 fancoils
- Besides the central control supplied by the VMF-E5 panel, the MASTER fancoils must be provided with a local control interface; this interface can be assembled on the fancoil (VMF-E2 / VMF-E2H) or on a wall panel (VMF-E4)
- Different functions can be controlled through the VMF-E5 panel, including :
 - Identify the different zones setting a name for each one
 - Check and set the ON-OFF function and the set temperature of each zone
 - Set and manage the set temperature of the heat pump
 - Scheduling time slots
- Simple installation of the fancoil system through the SELF-MONITORING function of the MASTER fancoils

VMF-E0 ELECTRONIC THERMOSTAT FOR FANCOILS



⚠ Each thermostat applied to a VED series unit must be interfaced with a VMF-SIT3 card.

The VMF-E0 accessory is an advanced electronic thermostat kit to be applied

to the fan coils; requires a wall mounted interface (VMF-E4).
 The VMF-E0 thermostat must be applied to the side of the fan coil.

The VMF-E0 kit consists of:

- an E0-type thermostat board inserted in a protective box and easily applied to the side of the fan coil. The E0-type thermostat board has a protective fuse, a dip-switch for configuration, and connectors for connection with:
 - the power supply,
 - the earthing,

- the valve control,
- the fan motor control,
- external air temperature sensor,
- water temperature sensor,
- the control panel (user interface),
- the external contact,
- the fan coil network serial (TTL).

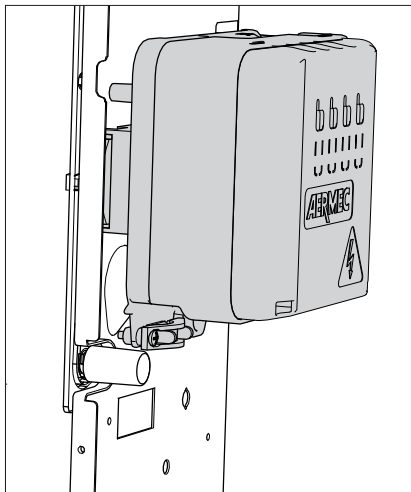
With the VMF-E0, you can manage:

- Three fan coil speeds in manual mode
- Continuous ventilation and thermostat control, by controlling the valves.
- Automatic fan mode according to the load.
- Season visualisation.
- Visualisation of alarms and ventilation request.
- Up to two ON/OFF 2- or 3-way valves.
- The switch-on of an electric heater.
- A germicidal lamp.
- Plasmacluster filter.
- An air temperature sensor.
- A water temperature probe, with minimum and maximum temperature and changeover functions.
- Season change according to the water or air temperature (4-pipe systems).

- Input for "external contact". This is a digital input with the following logic: When open, the thermostat works normally; When closed, the fan coil is switched off.
- Microswitch for fin contact.
- Anti-freeze function.
- Communication with other thermostats, via a dedicated serial based on the TTL logic standards.

⚠ WARNING! : Not all accessory features are applicable to the unit. Check the compatibility of the functions with the configuration of the unit and other accessories used. For complete information concerning the functions, refer to the technical manuals of the unit and the accessories.

VMF-E1 ELECTRONIC THERMOSTAT FOR FANCOILS



⚠ Each thermostat applied to a VED series unit must be interfaced with a VMF-SIT3 card.

The VMF-E1 of the unit accessory is an advanced electronic thermostat kit to be

applied to the fan coils; requires a wall mounted interface (VMF-E4).

The VMF-E1 thermostat must be applied to the side of the fan coil.

VMF-E1 comprises:

- An E1-type thermostat board inserted in a protective box and easily applied to the side of the fan coil. This board has a protective fuse, a dip-switch for configuration, and connectors for connection with:
 - the power supply,
 - the earthing,
 - the valve control,
 - the fan motor control,
- external air temperature sensor,
- water temperature sensor,
- auxiliary water temperature sensor,
- the control panel (user interface),
- the presence sensor,
- the external contact,
- the central supervisor system serial (VMF-E5),
- the fan coil network serial (TTL).

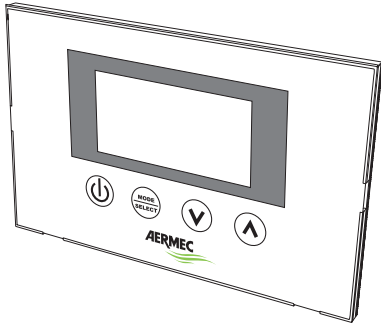
With the VMF-E1, you can manage:

- Three fan coil speeds in manual mode
- Continuous ventilation and thermostat control, by controlling the valves.
- Automatic fan mode according to the load.
- Season visualisation.
- Visualisation of alarms and ventilation request.
- Up to two ON/OFF 2- or 3-way valves.
- The switch-on of an electric heater.
- A germicidal lamp.
- Plasmacluster filter.
- An air temperature sensor.
- A water temperature probe, with minimum and maximum temperature and changeover functions.
- An additional water probe (accessory) for controlling the second coil (4-pipe systems).
- Season change according to the water or air temperature (4-pipe systems).
- Input for "external contact". This is a digital input with the following logic: When open, the thermostat works normally; When closed, the fan coil is switched off.
- Microswitch for fin contact.
- Anti-freeze function.
- Presence sensor
- Input for supervision serial. In networks made up of several fan coils subdivided into independent temperature areas, the VMF-E1 area regulator allows communication with a central system supervisor (VMF-E5)
- Communication with other thermostats, via a dedicated serial based on the TTL logic standards.

⚠ WARNING! : Not all accessory features are applicable to the unit. Check the compatibility of the functions with the configuration of the unit and other accessories used. For complete information concerning the functions, refer to the technical manuals of the unit and the accessories.

VMF-E4 VMF SERIES THERMOSTATS CONTROL PANEL, WALL MOUNTING

VMF-E4

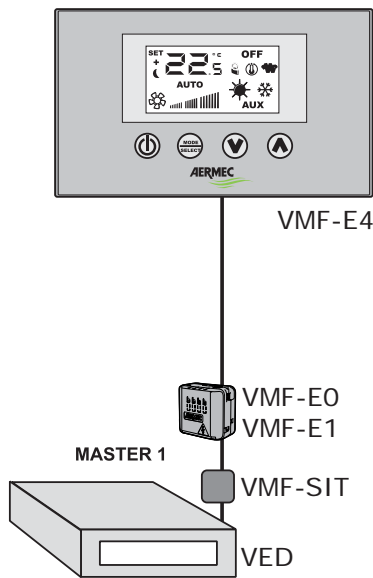


Wall mounted wire connected electronic control panel, advanced interface for VMF series thermostats. Must be combined to VMF-E0 or VMF-E1 thermostats. Digital display, "Touch" keyboard, only 11mm thick and mounted on the wall in Type 503 recessed electrical boxes and compatible with the Type 502 boxes, M20 (see installation manual).

Usage:

- control panel for a single fancoil;
- a single control panel to control a TTL network with up to 6 fancoils;
- control panel to control a TTL network (zone) with up to 6 fancoils placed in a higher-level network;

Control panel connection for a single unit



The following can be selected from the control panel:

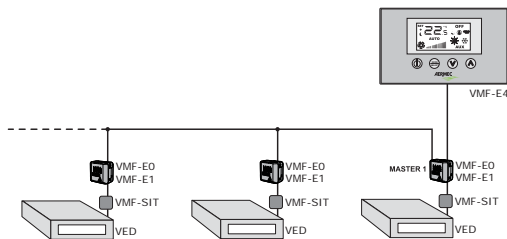
- automatic or manual ventilation speed with 20 positions displayed by graduated bar;
- the external temperature;
- the operating mode.

The digital display also shows:

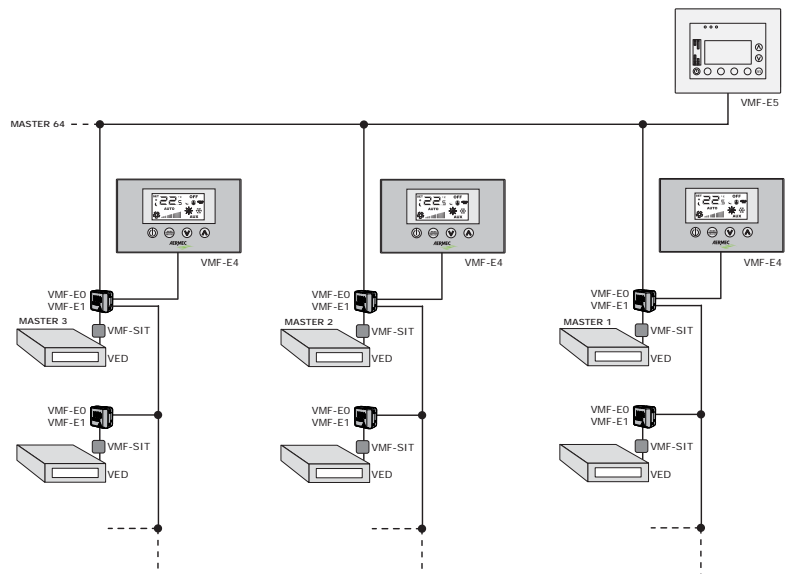
- the set temperature;
- the external temperature;
- possible alarms.

⚠ CAUTION! : Not all accessory features are applicable to the unit. Check the compatibility of the functions with the configuration of the unit and other accessories used. For complete information concerning the functions, refer to the technical manuals of the unit and the accessories.

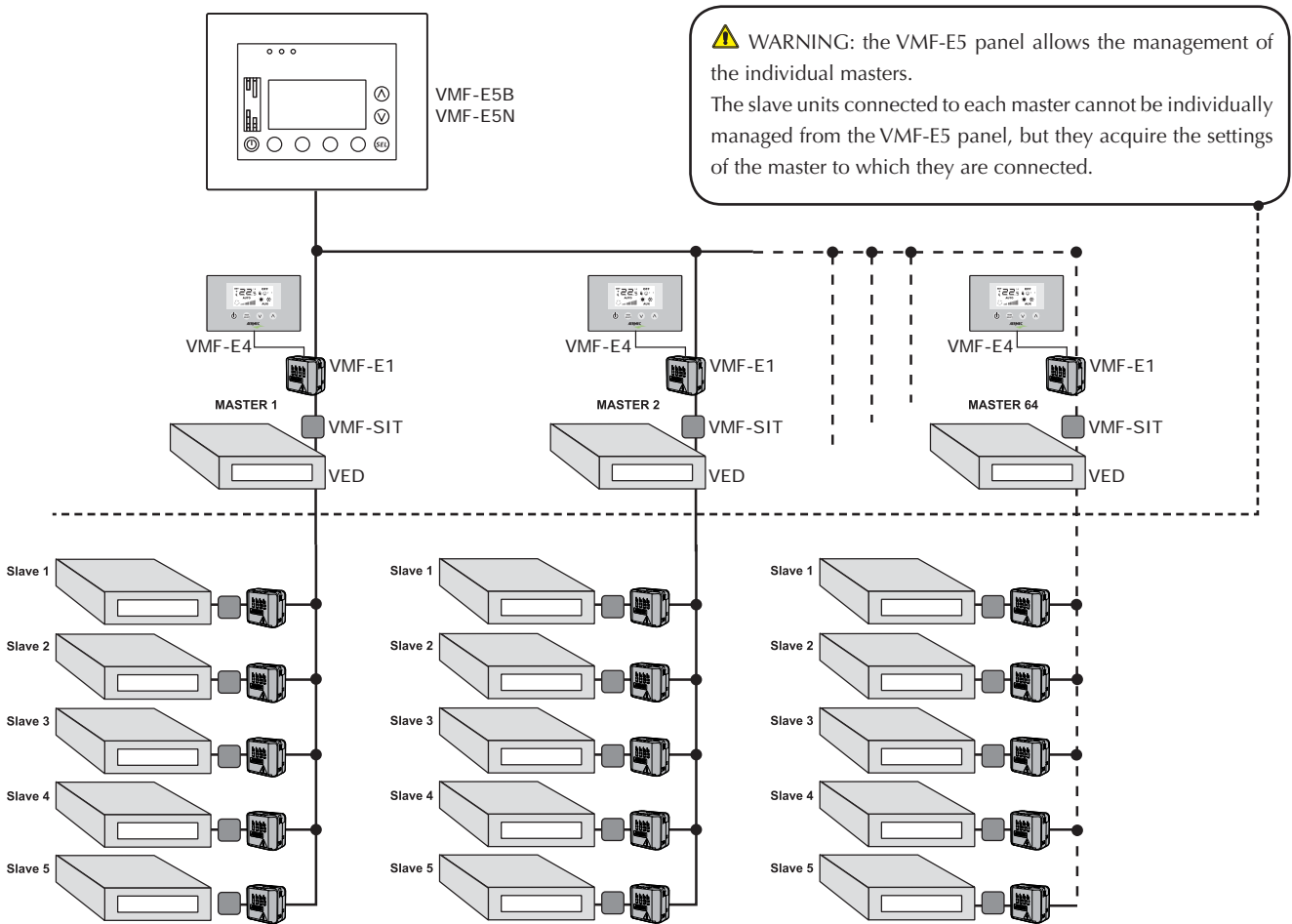
Control of a TTL network with fancoil (up to 6)



Zone control (up to 6 fancoils) in a network of up to 64 zones (up to 384 fancoils)



VMF-E5B / VMF-E5N SYSTEM'S MAIN SUPERVISION INTERFACE



- Maximum number of MASTER fancoils = 64
- Maximum number of SLAVE fancoils that can be connected to each MASTER = 5

Built-in panel available in two colours, VMF-E5B white and VMF-E5N black with graphic LCD backlit display and capacitive keyboard, allows the centralised control/command of a complete hydronic system consisting of:

- Fan coils: up to 64 fan coil zones comprising 1 master + maximum 5 slaves.
- Chiller/heat pump equipped with controls Modu_Control, GR3 and pCO₂ / PCO³ (required accessory RS 485 interface respectively MODU-485A, AER485, AER485P2 / AER485P1)
- Circulators: maximum of 12 configurable zone circulators.

- Boiler: boiler consensus management for hot water production.
- Heat recovery units: consents up to 3 per programmable recovery units based on the timing and/or by measuring the air quality obtained with the VMF-VOC accessory.
- Domestic hot water module: complete management of the domestic hot water production through the control of:
 - Diverting valve/circulator
 - Supplementary heater
 - Accumulation temperature probe
 - Anti-legionella circuit

The main feature is the possibility of managing the plant through dedicated algorithms to achieve a comfortable environment with energy saving in mind.

See the accessories manual for complete information on its features.

⚠ CAUTION! : Not all accessory features are applicable to the unit. Check the compatibility of the functions with the configuration of the unit and other accessories used. For complete information concerning the functions, refer to the technical manuals of the unit and the accessories.

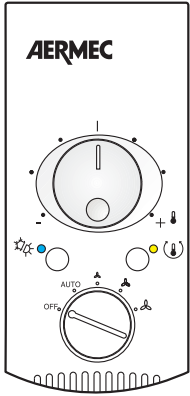
ACCESSORIES

CONTROL PANELS AND THERMOSTATS - ACCESSORIES COMPULSORY FOR THE OPERATION:

The full characteristics of the control panels are described on the appropriate card. See the accessory instructions for further information.

Some control panels need to be combined with other accessories, see the related documentation.

PXAE CONTROL PANEL WITH MULTIFUNCTION ELECTRONIC THERMOSTAT



Multifunction electronic room thermostat for fan coils on two or three pipe systems.

Simplified controls with only two selectors to control temperature and ventilation, 3 speeds + automatic speed, on-off and automatic summer-winter switching, according to water temperature.

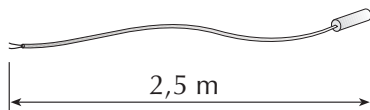
It can control up to two On-Off valves. Continuous or thermostat-controlled ventilation.

The minimum water temperature SW3 probe is available as an accessory. It

interrupts the heating operation when the water temperature is below 35°C. See the accessory instructions for further information.

Wall-mounting.

SW3 MINIMUM WATER TEMPERATURE SENSOR



Water temperature probe SW3 accessory for use with PXAE control panels.

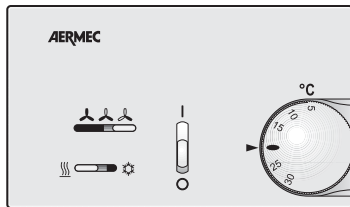
Detects the water temperature in the heating coil, to prevent the operation of the fan coils when the water temperature is less than 35° C. The SW3

sensors are arranged for 230V single phase power supply.

The probe has a 2.5 metre long cable.

WMT05 CONTROL PANEL WITH THERMOSTAT

WMT05



Electronic thermostat for fan coils installed on two-pipe systems.

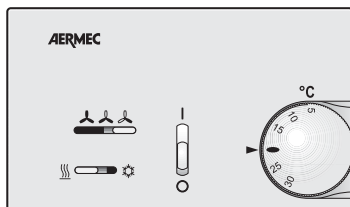
The panel is electrically protected by an internal fuse.

See the accessory instructions for further information.

Wall-mounting.

WMT06 CONTROL PANEL WITH THERMOSTAT

WMT06



Electronic thermostat for fan coils installed on two-pipe and four-pipe systems.

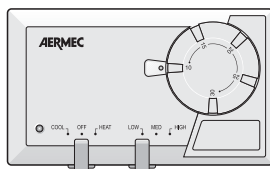
The panel is electrically protected by an internal fuse.

See the accessory instructions for further information.

Wall-mounting.

WMT10 CONTROL PANEL WITH ELECTROMECHANICAL THERMOSTAT

WMT10



Electromechanical thermostat for fan coils installed in 4-pipe, 2-pipe and 2-pipe with heater systems, with the possibility of connecting two On-Off valves to shut off the water feeding the coils.

The panel is electrically protected by an internal fuse. Continuous or thermostat-controlled ventilation.

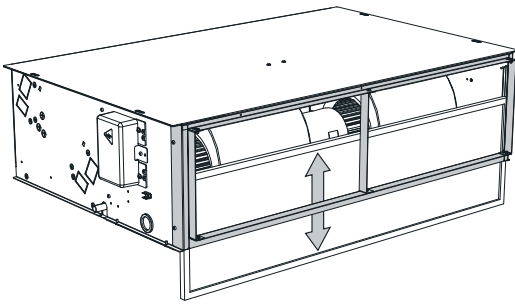
See the accessory instructions for further information.

Wall-mounting.

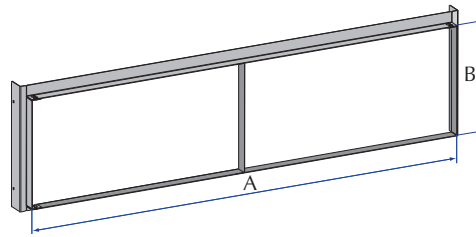
ACCESSORIES

DUCTING ACCESSORIES:

RDA_V STRAIGHT INTAKE COUPLING

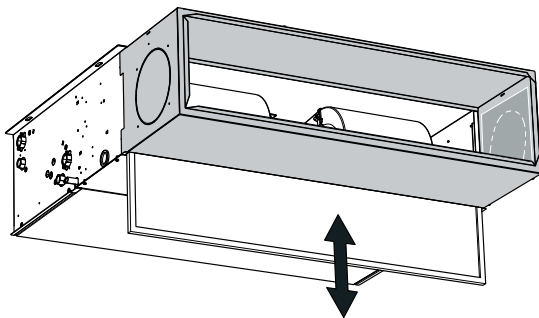


Straight intake coupling with rectangular flange for ducting. In galvanised steel. Air filter can also be housed.



DIMENSIONS [mm]		
MOD.	A	B
RDA450V	1053	257
RDA670V	1453	308

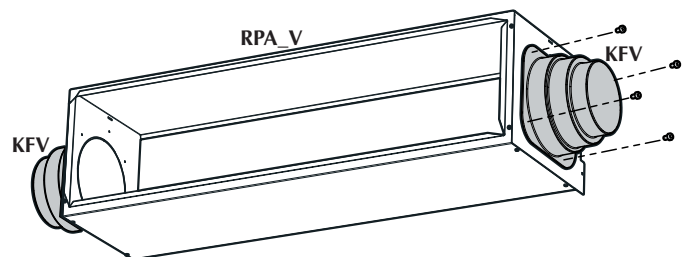
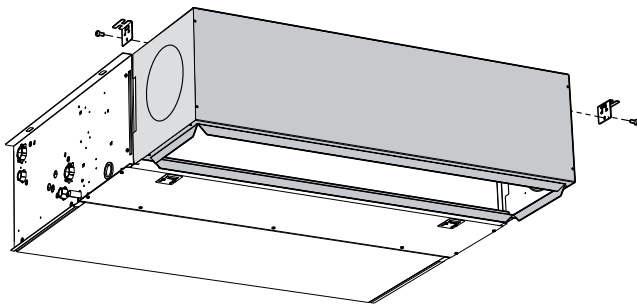
RPA_V INTAKE PLENUM WITH RECTANGULAR FLANGE



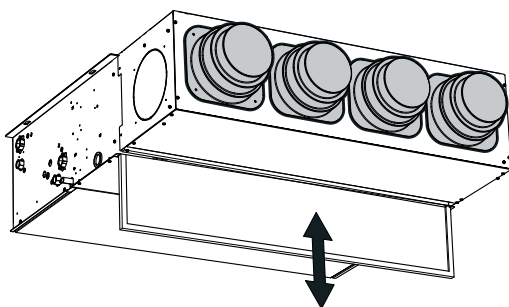
RPA_V is an intake plenum with rectangular flange made of galvanised steel. This accessory allows to connect a duct of rectangular section to the inlet of the VED unit.

Due to the different system needs, the RPA_V accessory allows the intake both longitudinally and perpendicularly to the air flow passing through the VED unit.

A circular duct can be connected to the sides of the RPA_V intake plenum by means of the accessory KFV.



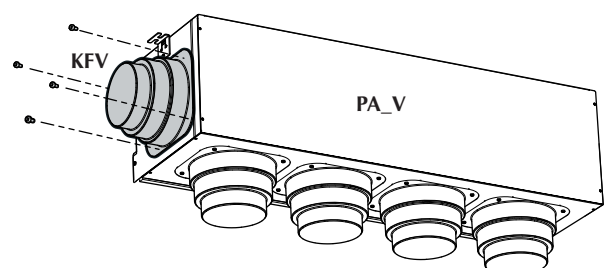
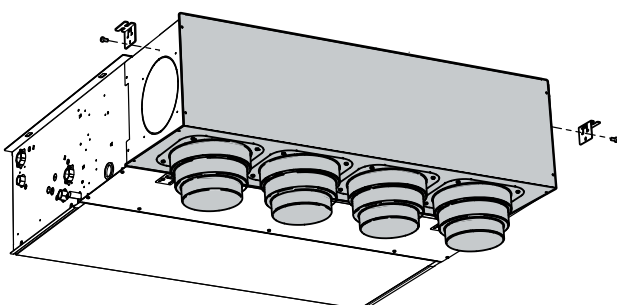
PA_V INTAKE PLENUM WITH CIRCULAR FLANGE



PA_V is a galvanised steel intake plenum with a plastic variable section circular flange. This accessory allows to connect ducts of circular section to the inlet of the VED unit.

Due to the different system needs, the PA_V accessory allows the intake both longitudinally and perpendicularly to the air flow passing through the VED unit.

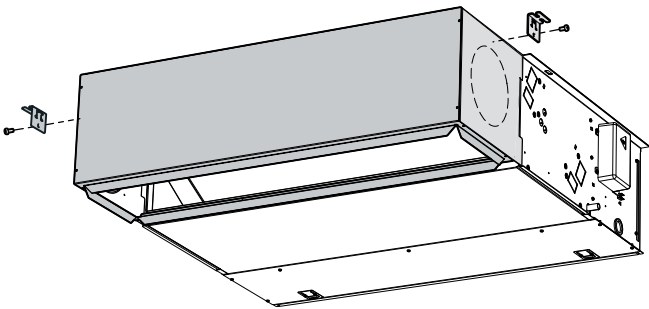
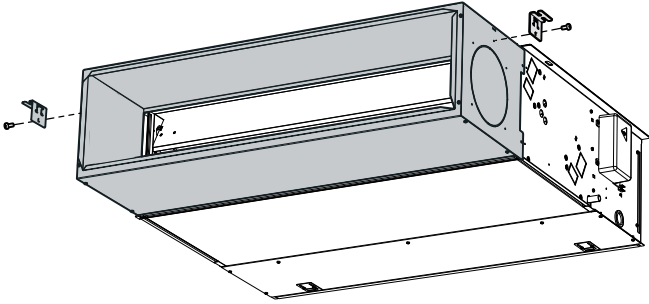
A circular duct can be connected to the sides of the PA_V intake plenum by means of the accessory KFV.



ACCESSORIES

DUCTING ACCESSORIES:

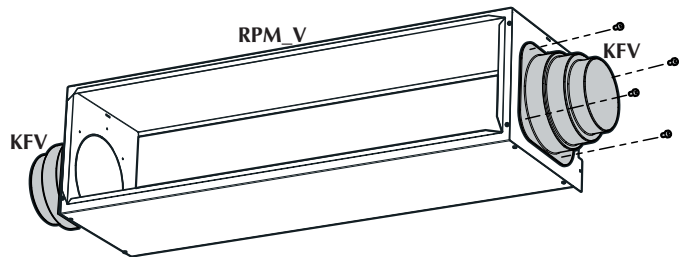
RPM_V DELIVERY PLENUM WITH RECTANGULAR FLANGE



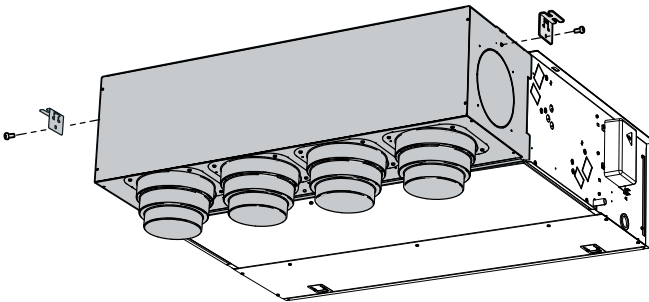
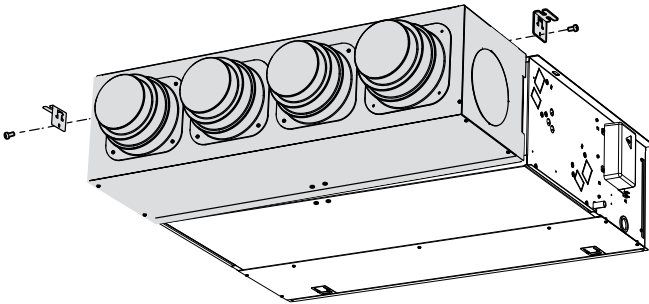
RPM_V is an internally insulated galvanised steel delivery plenum with rectangular flange. This accessory allows to connect a duct of rectangular section to the delivery outlet of the VED unit.

Due to the different system needs, the RPM_V accessory allows the delivery both longitudinally and perpendicularly to the air flow passing through the VED unit.

A circular duct can be connected to the sides of the RPM_V delivery plenum by means of the accessory KfV.



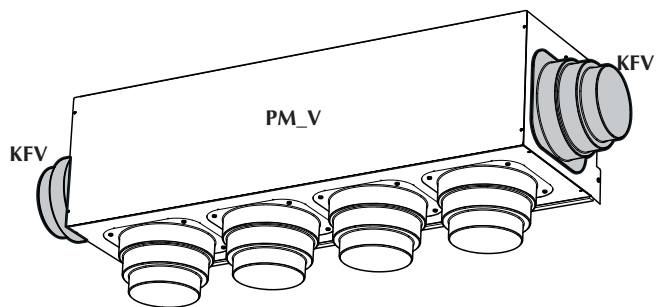
PM_V DELIVERY PLENUM WITH CIRCULAR FLANGE



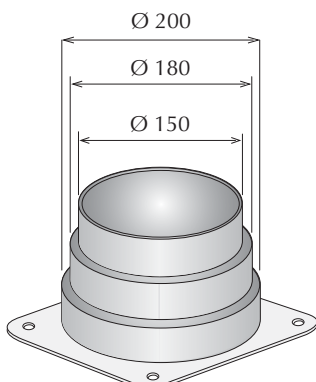
PM_V is an internally insulated galvanised steel delivery plenum with a plastic variable section circular flange. This accessory allows to connect ducts of circular section to the delivery outlet of the VED unit.

Due to the different system needs, the PM_V accessory allows the delivery both longitudinally and perpendicularly to the air flow passing through the VED unit.

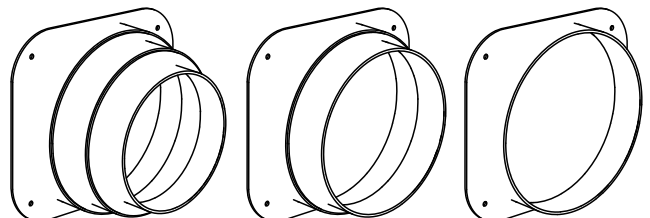
A circular duct can be connected to the sides of the PM_V delivery plenum by means of the accessory KfV.



KfV CIRCULAR FLANGE KIT FOR INTAKE OR DELIVERY PLENUMS

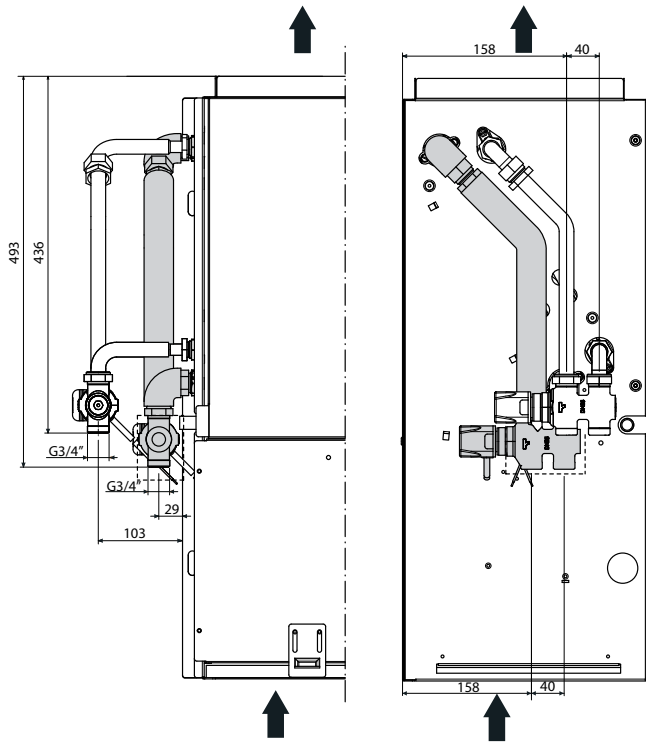


KfV is a plastic variable section intake/delivery circular flange kit. This accessory allows to connect an additional circular duct using connection points present on the sides of the inlet/delivery plenum of the VED unit.



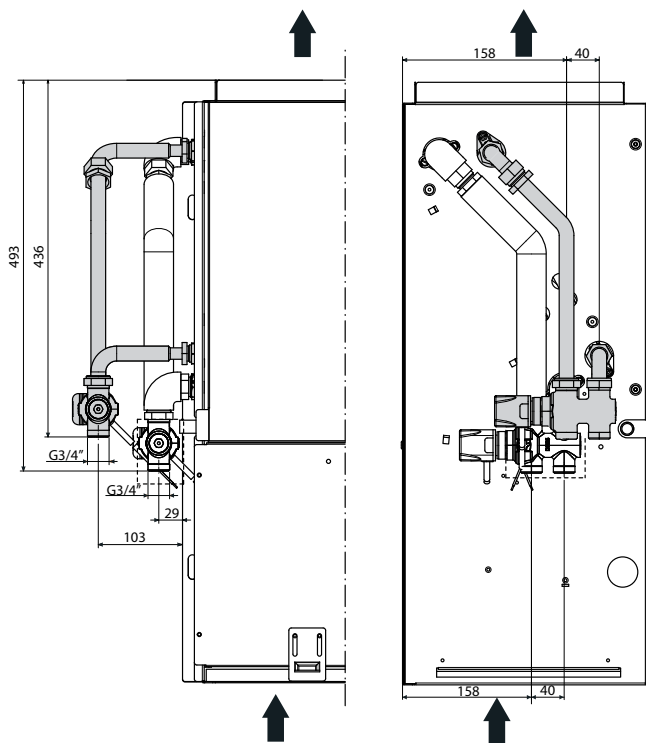
ACCESSORIES

MAIN COIL WATER VALVE



- **VCF45C:** The kit comprises a motorised 3-way valve with insulating shell, plus couplings and insulated copper pipes. For main coil. Power supply 230V-1-50Hz.
- **VCF47C:** The kit comprises a motorised 3-way valve with insulating shell, plus couplings and insulated copper pipes. For main coil. Power supply 230V-1-50Hz.
- **VCF25C:** Kit consisting of a motorised 2-way valve, with copper couplings and pipes. For main coil. Power supply 230V-1-50Hz.

HEATING ONLY COIL WATER VALVE



- **VCF45H:** Kit consisting of motorised 3-way motorised valve, copper couplings and pipes. For heating-only coil. Power supply 230V-1-50Hz.
- **VCF47H:** Kit consisting of motorised 3-way motorised valve, copper couplings and pipes. For heating-only coil. Power supply 230V-1-50Hz.
- **VCF25H:** Kit consisting of a motorised 2-way valve, with copper couplings and pipes. For main coil. Power supply 230V-1-50Hz.

INSTALLATION INFORMATION

⚠ WARNING: before carrying out any work, make sure the power supply is disconnected.

⚠ CAUTION: before carrying out any work, put the proper individual protection devices on.

⚠ WARNING: the device must be installed in compliance with the national plant engineering rules.

⚠ WARNING: electrical wiring, installation of the fan coils and relevant accessories should be performed by a technician who has the necessary technical and professional expertise to install, modify, extend and maintain systems, and who is able to check the systems for the purposes of safety and correct operation.

⚠ WARNING: Install a device, main switch, or electric plug so you can fully disconnect the device from the power supply.

⚠ WARNING: Consult all documentation before starting the installation.

The essential indications to carry out a proper installation are given below.

The installer's experience will be necessary however, to perfect all the operations in accordance with the specific requirements.

The water, condensate discharge and electrical circuit ducts must be provided for.

The fan coil must be installed in such a position that the air can be distributed throughout the room and so that there are no obstacles (curtains or objects) to the passage of the air from the suction inlet and delivery outlet.

The fan coil should be installed in such a way as to facilitate routine (filter cleaning) and special maintenance operations, as well as access to the air drain valve on the side of the unit frame (connections side).

Do not install units in rooms where there are inflammable gases or acid or alkaline substances that could irreparably damage the aluminium-copper heat exchanger or internal plastic parts.

Do not install the unit in workshops or kitchens where the oil vapours mixed with the treated air can be deposited on the exchange coils, reducing their performance, or on the parts inside the unit damaging the plastic parts.

The VED unit is prepared for connection with air ducting.

The VED fancoils are equipped with 5 speed motors, 3 operating speeds of which can be selected by changing the connections in the electrical box of the motor. The fancoils are provided with connections to the standard speed. See the wiring diagram before changing the motor connections.

If a three-way valve is installed, the minimum water temperature sensor can be installed in two locations:

- in its housing in the coil;
- on the delivery pipe up stream of the valve.

Check the thermostat manual before choosing the location of the minimum water temperature sensor, according to the preferred control logic. The thermostat may need the settings of the dip-switches changed.

⚠ CAUTION: After completing the installation check the operation of the condensate discharge system, the seal of the hydraulic fittings, insulation of ducts and pipes. Then perform a functional test.

⚠ DANGER! Only qualified service personnel can access it.

INSTALLING THE UNIT

To install the unit, proceed as follows:

- For wall mounting, maintain a minimum distance of 160mm from the floor;
- For ducted installation, provide the fitting of the channels to the unit, see the drawing with the dimensional data. The delivery outlet is already provided with coupling flange.
- Use expansion bolts (not supplied) for wall or ceiling installation, finally make sure that the unit is installed horizontally.
- For installation suspended from the ceiling, use four M8 threaded rods to support the frame. Secure the unit to the 4 threaded rods using 8 nuts of

which 4 self-locking nuts. Use the nuts to adjust the height of the unit; finally, check that the unit is installed in a horizontal position

- **WARNING:** The fan coil must be installed in a horizontal position, otherwise the correct discharge of condensate can not be guaranteed.

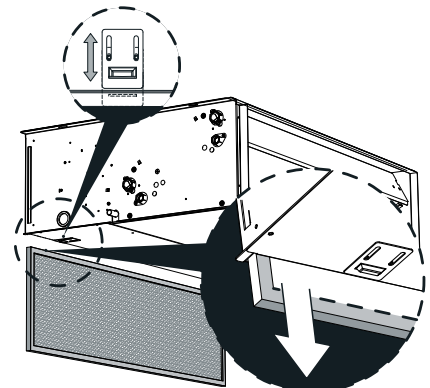
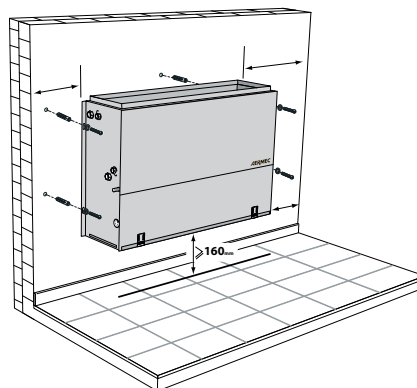
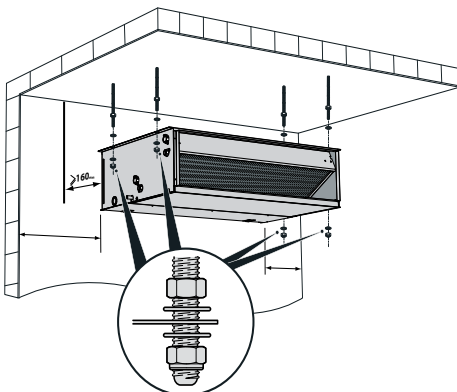
- Make the hydraulic connections as described in the relative chapter.

- Make the condensate discharge connection as described in the relative chapter. The fan coils that work in heat mode only do not require condensate discharge.

- Make the electrical wirings as shown in the relative chapter and in the wiring diagrams.

- Install and connect any accessories.

- Start up the fan coil and check all the components and functions are operating correctly.



PLUMBING CONNECTIONS

- Make the hydraulic connections.

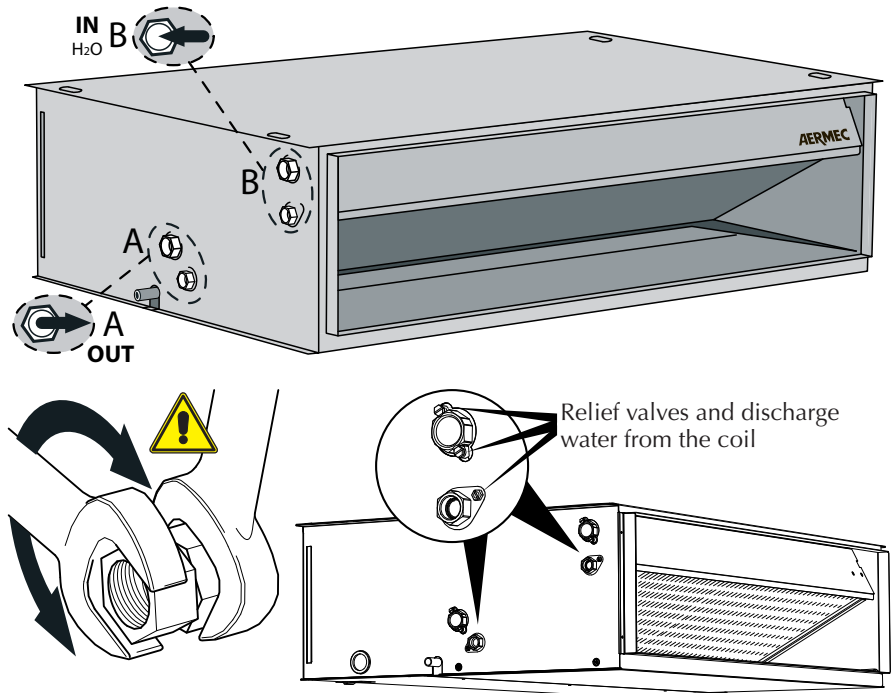
⚠ WARNING: Always use a wrench and counter-wrench to fix the pipes. Refer to the size data for the position, type and diameter of the hydraulic connections.

You are advised to adequately insulate water lines and/or fit the auxiliary condensate drain tray (available as an accessory), to prevent dripping during the cooling function.

After installing, check the seal on the connections.

⚠ WARNING: Bleed the hydraulic system. The relief valves are positioned at the top of the coil near the hydraulic fittings.

⚠ WARNING: To discharge the unit, use the exhaust valves located in the lower part of the coil near the hydraulic fittings.



ELECTRICAL CONNECTIONS

The unit must be connected directly to an electrical outlet or to an independent circuit.

⚠ WARNING: **WARNING:** it is compulsory to connect the power cables Phase (L) and Neutral (N) to the respective terminals, do not to reverse the connections, and observe the wiring diagram.

Install a device, main switch, or electric plug so you can fully disconnect the device from the power supply.

To protect the unit against short circuits, fit an omnipolar thermal-magnetic trip 2A 250V (IG) to the power line with a minimum contact opening distance of 3mm.

For installations with three-phase power supply, the following precautions should be considered:

1. In the presence of breakers or thermomagnetic switches 3P + N, the triggering current must be at least 170% of the total load absorbed by the fan coils for each phase.
2. The section of the neutral wire must be of a dimension taking into consideration the operating current equal to 170% of the total load absorbed by the fan coils for each phase.

CHARACTERISTICS OF THE CONNECTION CABLES

Use H05V-K or N07V-K type cables with 300/500 V with insulation, routed through pipes or raceway.

Use a cable with a minimum section of 1mm².

All the cables must be in pipes or raceways until they are inside the fan coil. The cables leaving the pipe or raceway must be positioned in such a way that they are pulled or twisted and are anyway protected from outside agents.

Stranded cables can only be used with cable terminals. Make sure that the strands of the wires are inserted properly. The wiring diagrams are subject to continuous updates, so it is essential to use those on the machine as your reference.

The control panel may not be fitted on a metal wall unless this is connected to a grounded outlet permanently.

Before installing the control panel, read the instructions carefully and configure the panel if necessary. Some control panels require the combination with components supplied as accessories, check availability.

⚠ WARNING: Make sure the control panel supports the load of the electric motor, otherwise placed an SIT3 interface accessory between the fan and the control panel.

⚠ WARNING: The units that are equipped with VMF series thermostats must be combined with an VMF-SIT interface accessory.

When combining to control panels, the relative wiring diagram must be respected.

If present, connect the valve and sensor to the control board, in the positions indicated in the wiring diagram. In installations with a 3-way valve, the minimum water temperature sensor must be relocated from its standard mounting in the coil assembly to the delivery hose upstream of the valve.

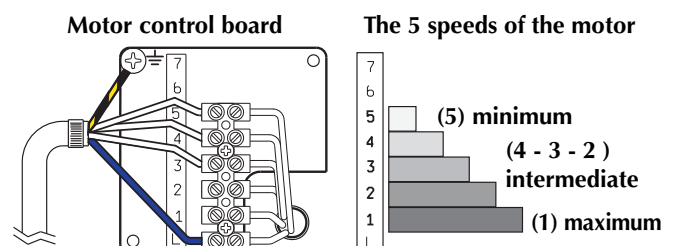
If the highest speeds of the motor are required, change the connection to the control board on the electric motor. Follow the wiring diagram.

⚠ WARNING: check whether the installation has been carried out correctly. FOLLOW THE CHECKING PROCEDURES indicated in the control panel manuals.

⚠ WARNING: VED is supplied with connections to terminals 5 - 4 - 3.

To make use of the higher speeds (terminals 2 and 1), disconnect the wires from the terminals of the default speeds and connect them to the terminals of the desired speed.

The three speeds must always be adjacent.



CONDENSATE DRAIN

The tray of the fan coil has 2 condensate drainage connections with external diameter $\varnothing = 16\text{mm}$.

The condensate drain connection should ideally be used on the hydraulic connection side.

Connect the tray connection to the condensate drainage system, using a hose fixed to the tray connection. The drain connections are designed to be connected to flexible hose only of suitable internal diameter, avoid applying higher loads and do not used for other purposes.

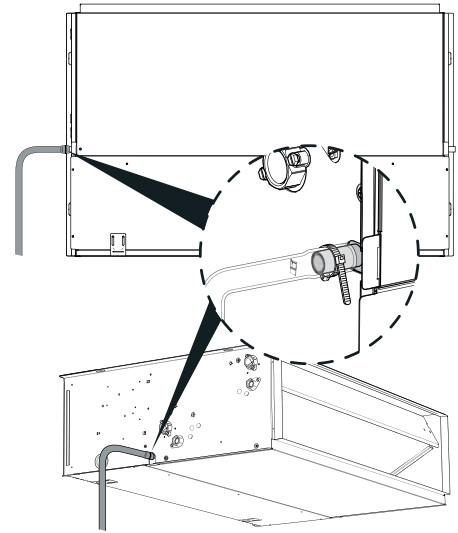
Make sure the discharge that is not used is closed and not leaking.

The condensate drain network must be

properly scaled and the piping situated in such a ways as to keep an adequate slope along the route (min.1%).

In the case of drainage into the sewerage network, you are advised to make a syphon to stop bad smells being returning into the room.

Carry out a functioning and seal test of the condensate drain system by pouring water into the tray



COIL ROTATION

If the hydraulic connections require the rotation of the coil, remove the front closure panel and proceed as follows:

- Remove the condensate drip tray;
- Undo the screws and remove the coil cover.
- Remove the screws securing the coil, then remove the coil.
- Remove the push-outs on the right-hand side.

⚠ WARNING: Consult the coil rotation diagram before rotating the coil.

It is important that the coil is installed and rotated in the right direction.

Rotate the coil correctly and secure it with the previously removed screws; The spaces between the collector and the hole on the side must be completely sealed and filled with insulating material.

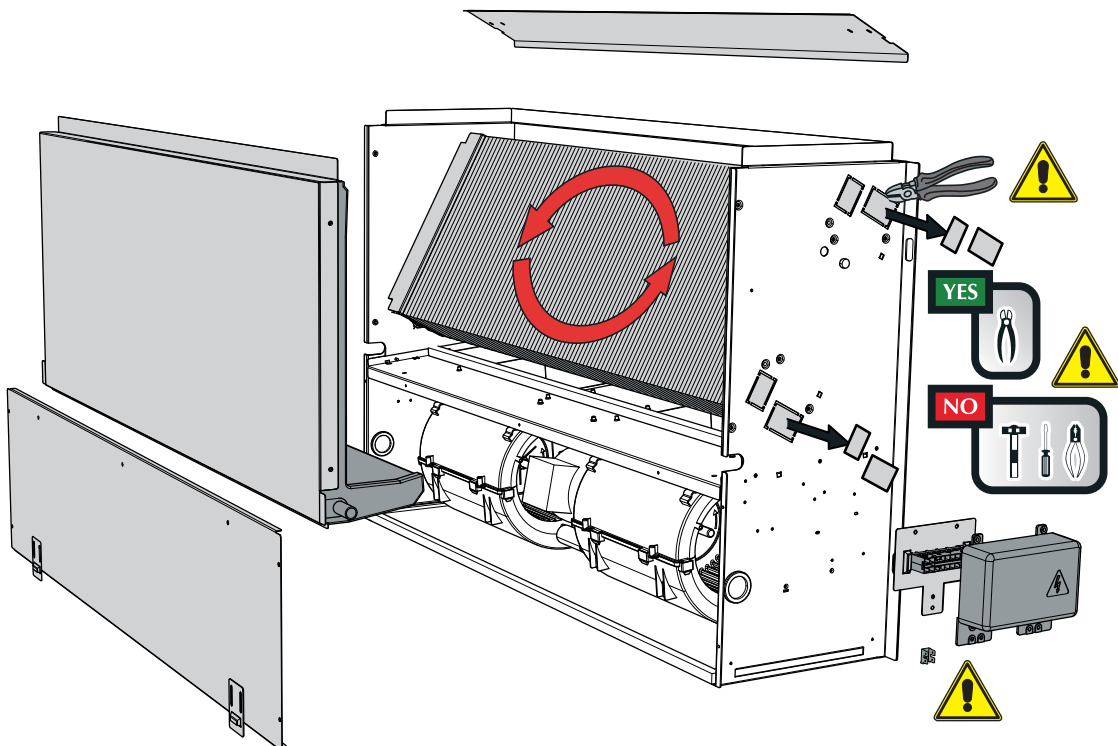
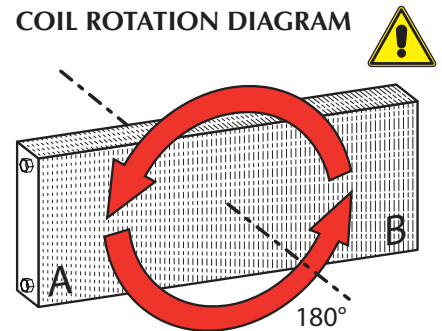
Reassemble the coil cover and fix it with the screws.

- Block the holes left open by the hydraulic connections on the left side with insulating material.
- Reassemble the condensate drip tray. The tray is designed to drain the condensate on both sides. The condensate drain connection should ideally be used on the hydraulic connection side.

Make sure the discharge that is not used is closed and not leaking.

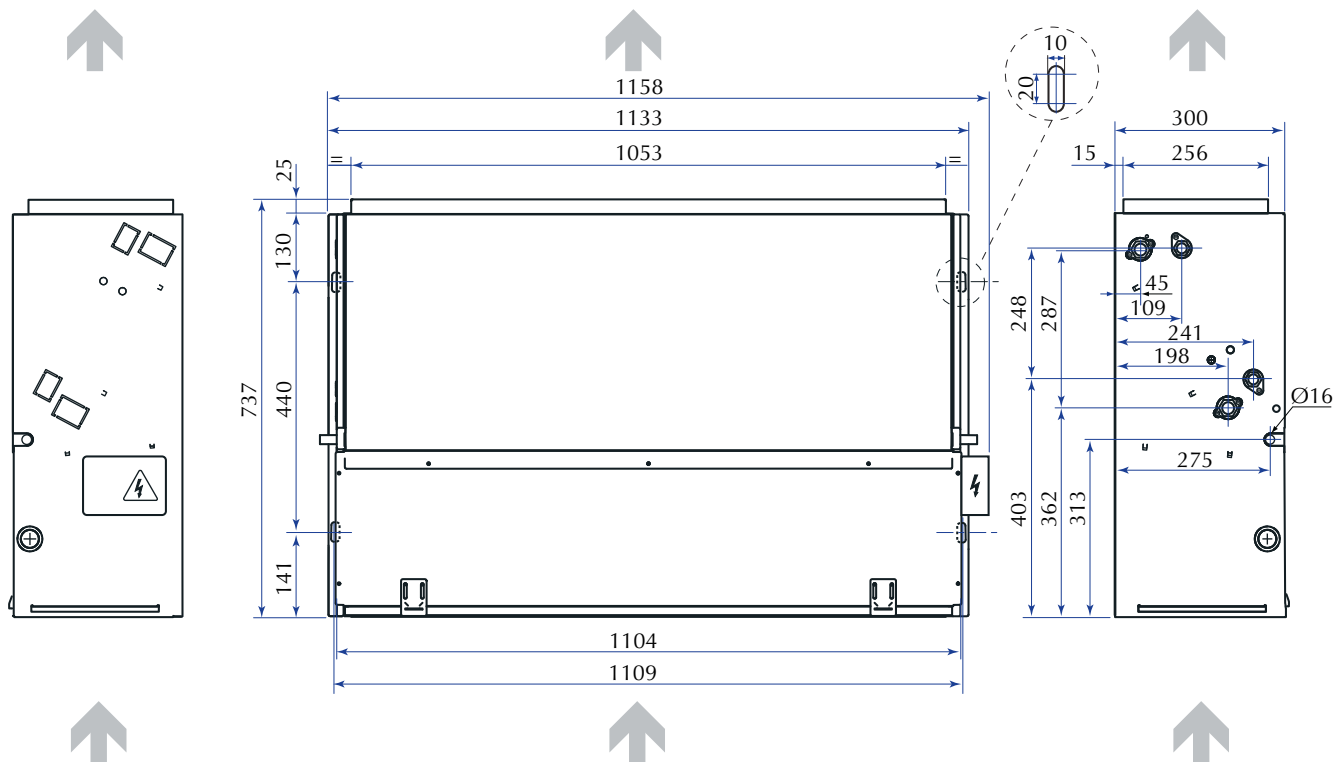
- Pull the electrical connections out of the right side.
- Transfer the electrical wirings to the left side through the cable grommet.
- Move the support plate, the control board, the earthing u-bolt and any electric devices from the right side to the left side.
- Reassemble the front closure panel.

COIL ROTATION DIAGRAM



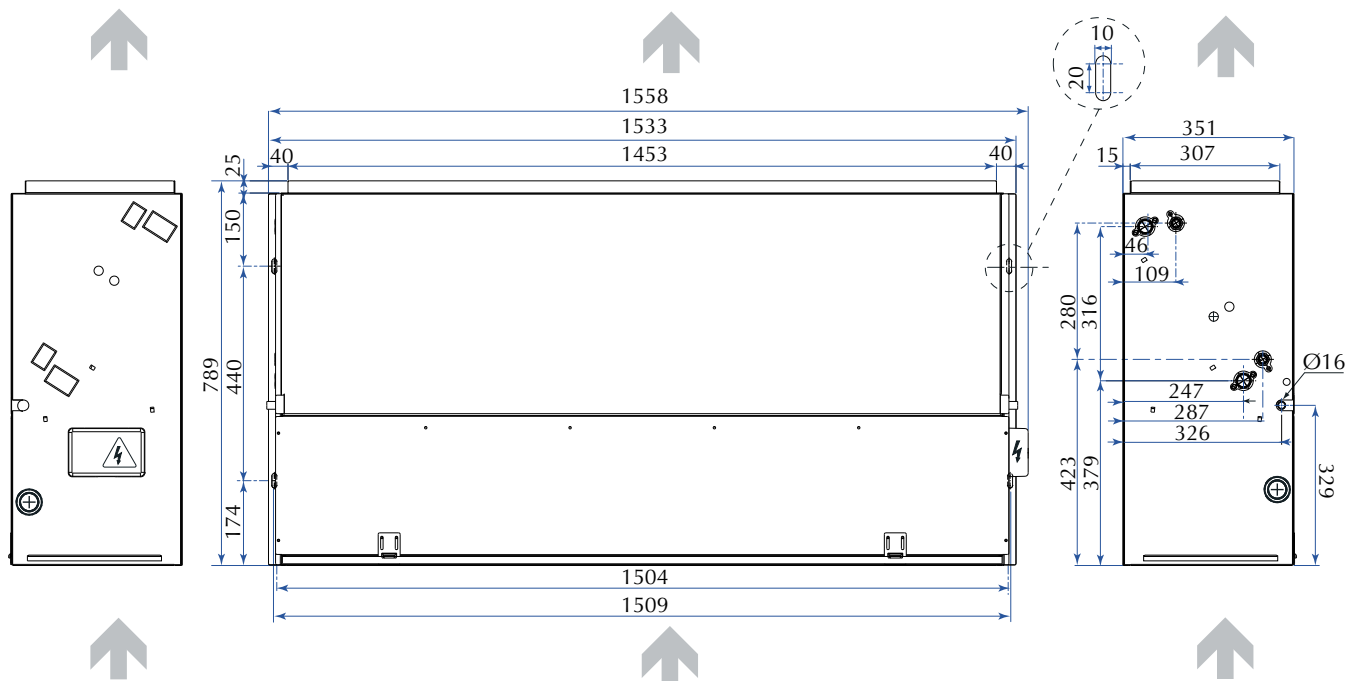
DIMENSIONS [mm]

VED 430 - 440 - 530 - 540 - 432 - 441 - 532 - 541



VED		430	440	530	540	432	441	532	541
Main coil water connections (female)	Ø	3/4"G	3/4"G	3/4"G	3/4"G	3/4"G	3/4"G	3/4"G	3/4"G
heating only coil water connections (female)	Ø	-	-	-	-	1/2"G	1/2"G	1/2"G	1/2"G
Condensate discharge connections (external diameter)	mm	16	16	16	16	16	16	16	16

VED 630 - 640 - 730 - 740 - 632 - 641 - 732 - 741

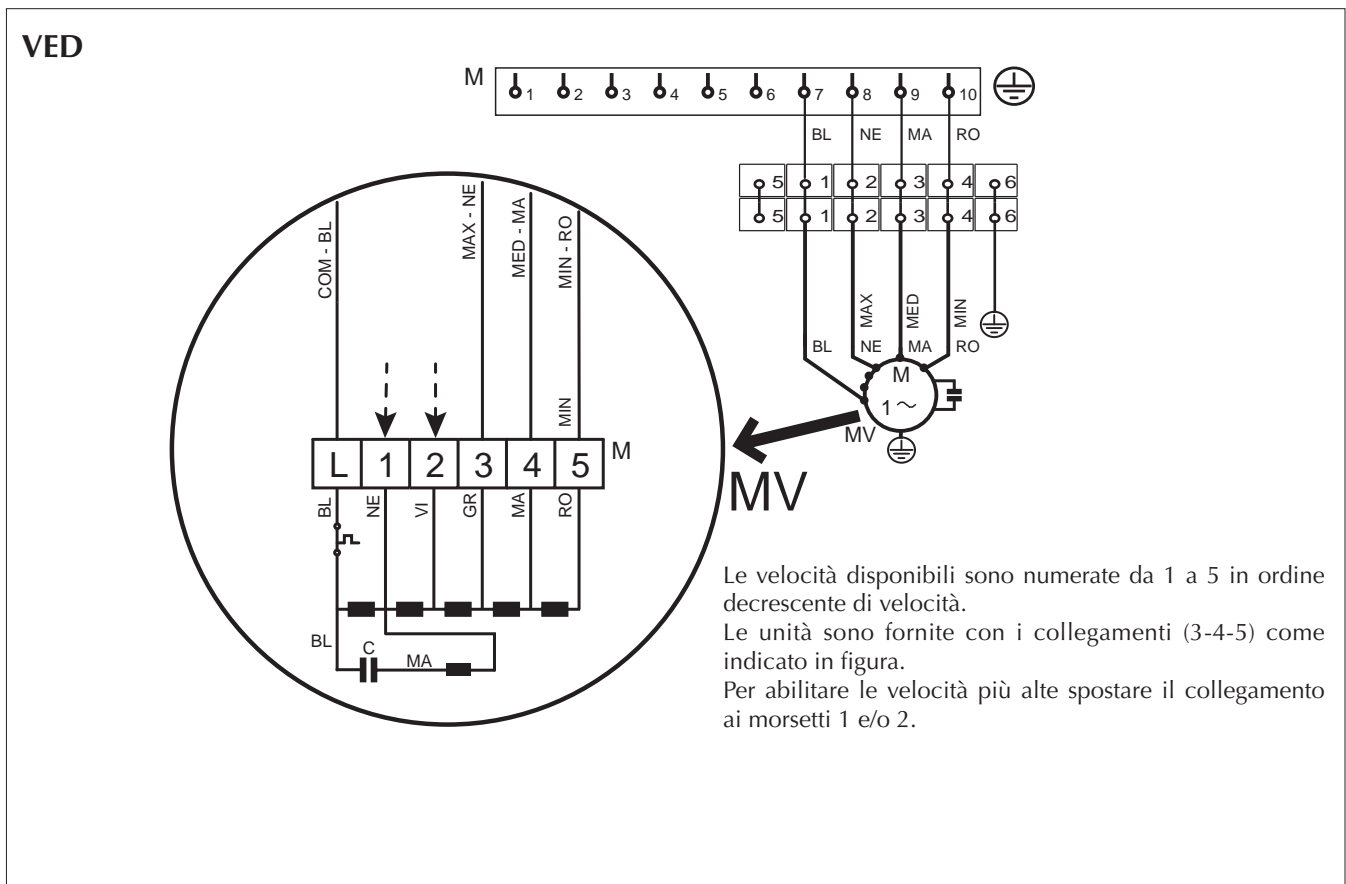


VED		630	640	730	740	632	641	732	741
Main coil water connections (female)	Ø	3/4"G	3/4"G	3/4"G	3/4"G	3/4"G	3/4"G	3/4"G	3/4"G
heating only coil water connections (female)	Ø	-	-	-	-	1/2"G	1/2"G	1/2"G	1/2"G
Condensate discharge connections (external diameter)	mm	16	16	16	16	16	16	16	16

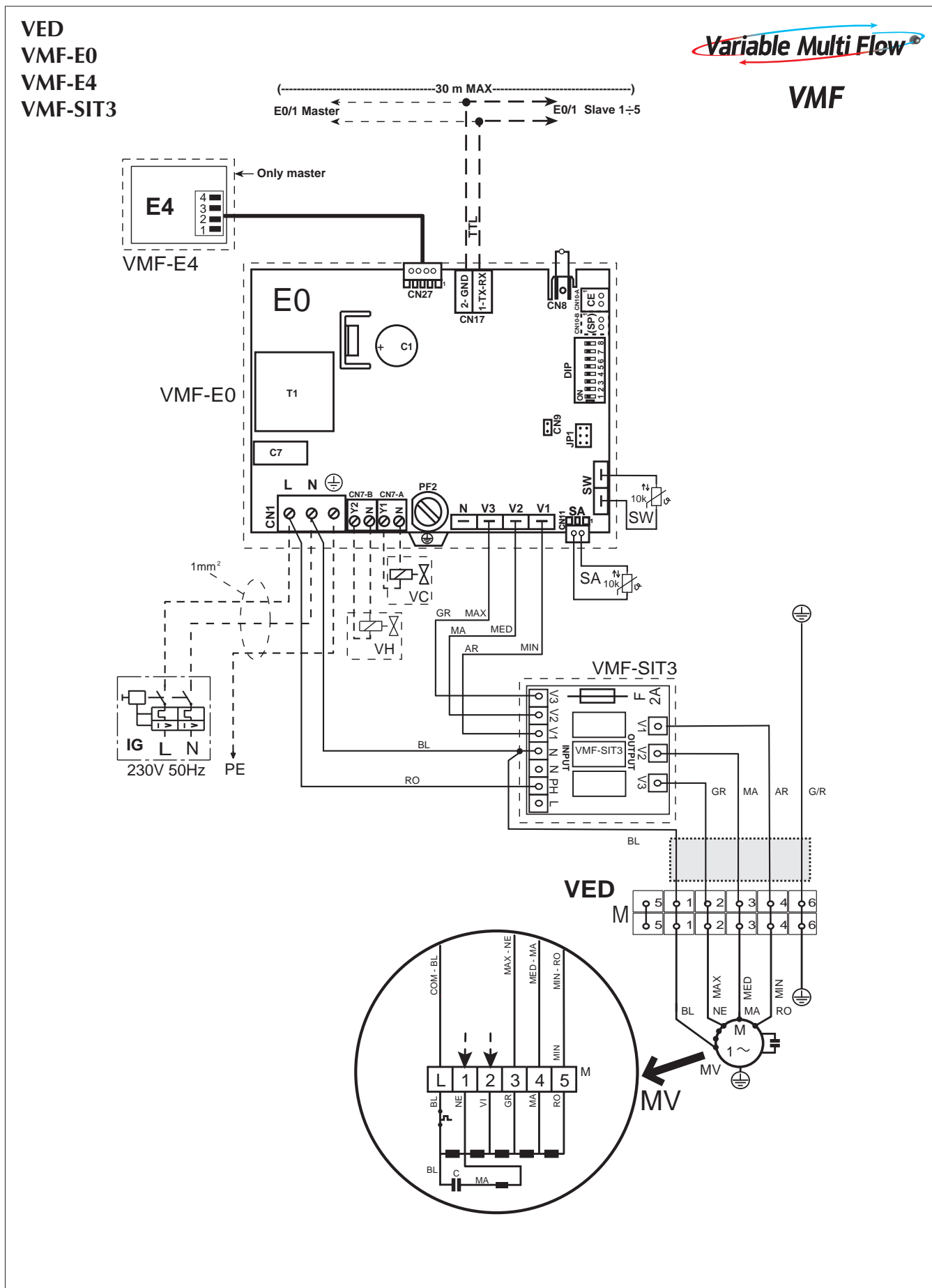
LEGENDA • READING KEY • LEGENDE • LEGENDE • LEYENDA

- F** = Fusibile • Fuse • Fusible • Sicherung • Fusible
- IG** = Interruttore generale • Master switch • Interrupteur général • Hauptschalter • Interruptor general
- M** = Morsettiera • Control board • Bornier • Klemmleiste • Caja de conexiones
- MV** = Motore ventilatore • Fan motor • Moteur du ventilateur • Ventilatormotor • Motor ventilador
- PE** = Collegamento di terra • Earth connection • Mise à la terre • Erdung • Toma de tierra
- SA** = Sonda ambiente • Ambient probe • Sonde ambiante • Raumtemperaturfühler • Sonda ambiente
- SC** = Sonda ambiente • Control card • carte de contrôle • Steuerplatine • Tarjeta de control
- SW** = Sonda minima temperatura acqua • Minimum water temperature probe • Sonde de température minimale de l'eau
Sonde für Mindest-Wassertemperatur • Sonda mínima temperatura del agua
- VC** = Valvola solenoide caldo • Solenoid valve hot • Vanne magnétique chaud
Magnetventil Heizbetrieb • Válvula solenoide para calor
- VF** = Valvola solenoide freddo • Solenoid valve cold • Vanne magnétique froid
Magnetventil Kühlbetrieb • Válvula solenoide para frío
- = Componenti non forniti • Components not supplied • Composants non fournis
Nicht lieferbare Teile • Componentes no suministrados
- = Componenti forniti optional • Components supplied as optional extras • Composants fournis en option
Als Option lieferbare Teile • Componentes opcionales facilitados
- - - - = Collegamenti da eseguire in loco • Connections to be made on site • Branchements à effectuer sur les lieux
Vor Ort auszuführende Anschlüsse • Conexiones que realizar in situ

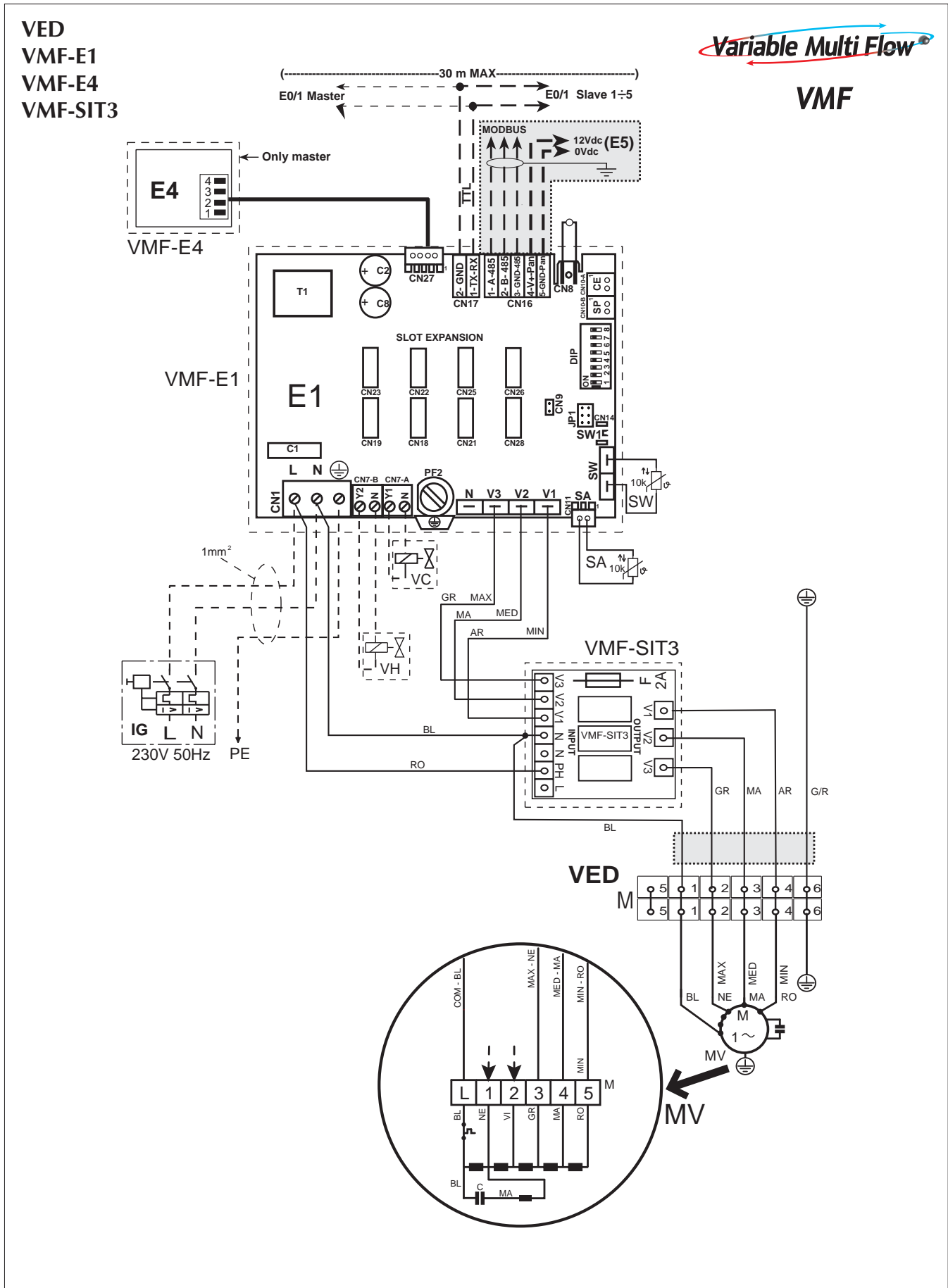
AR = Arancio	AR = Orange	AR = orange	AR = Orange	AR = Naranja
BI = Bianco	BI = White	BI = blanc	BI = Weiß	BI = Blanco
BL = Blu	BL = Blue	BL = bleu	BL = Blau	BL = Azul
GR = Grigio	GR = Grey	GR = gris	GR = Grau	GR = Gris
GV = Giallo-Verde	GV = Yellow-green	GV = jaune-vert	GV = Gelb/Grün	GV = Amarillo-Verde
MA = Marrone	MA = Brown	MA = marron	MA = Braun	MA = Marrón
NE = Nero	NE = Black	NE = noir	NE = Schwarz	NE = Negro
RO = Rosso	RO = Red	RO = rouge	RO = Rot	RO = Rojo



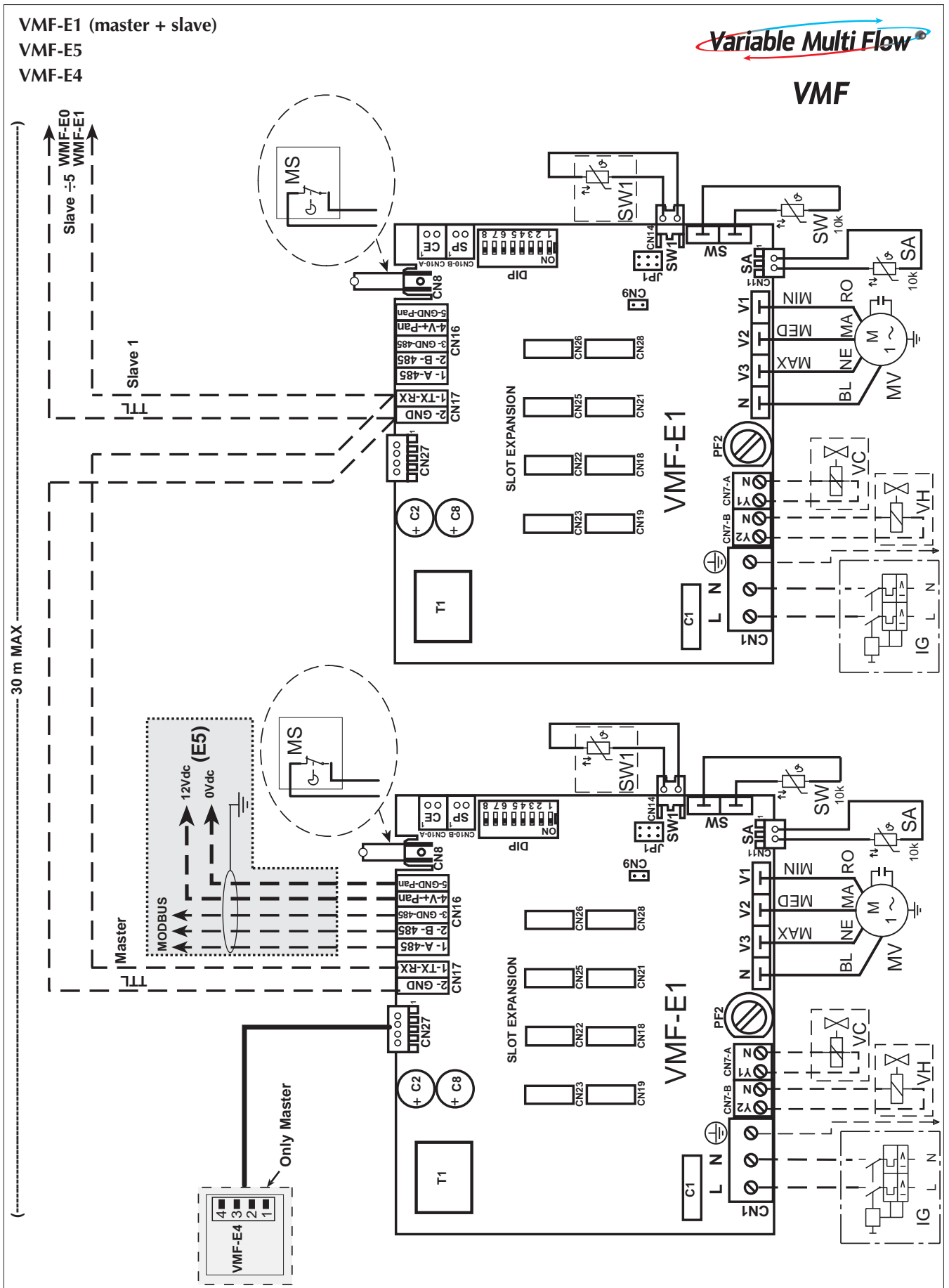
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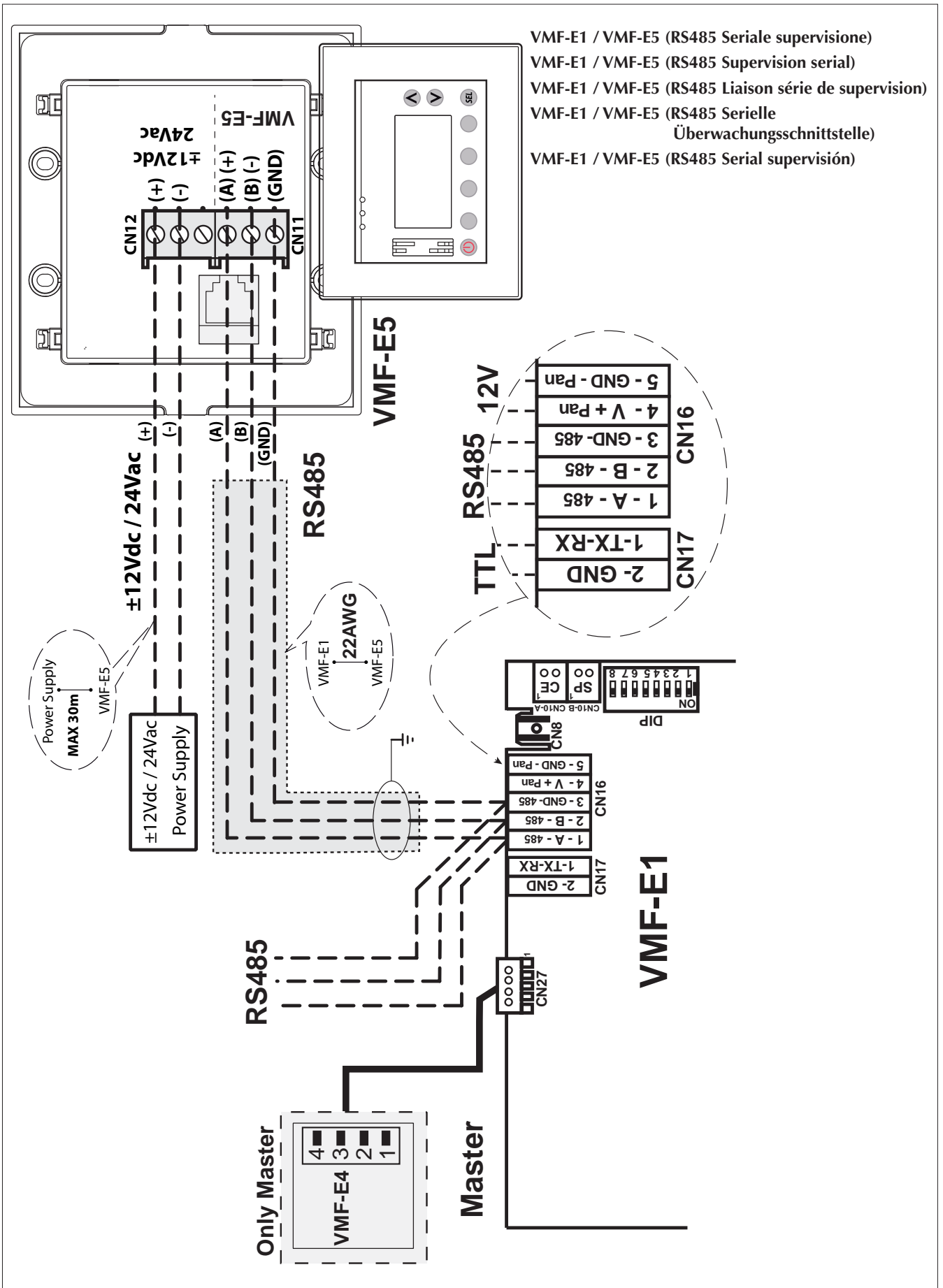
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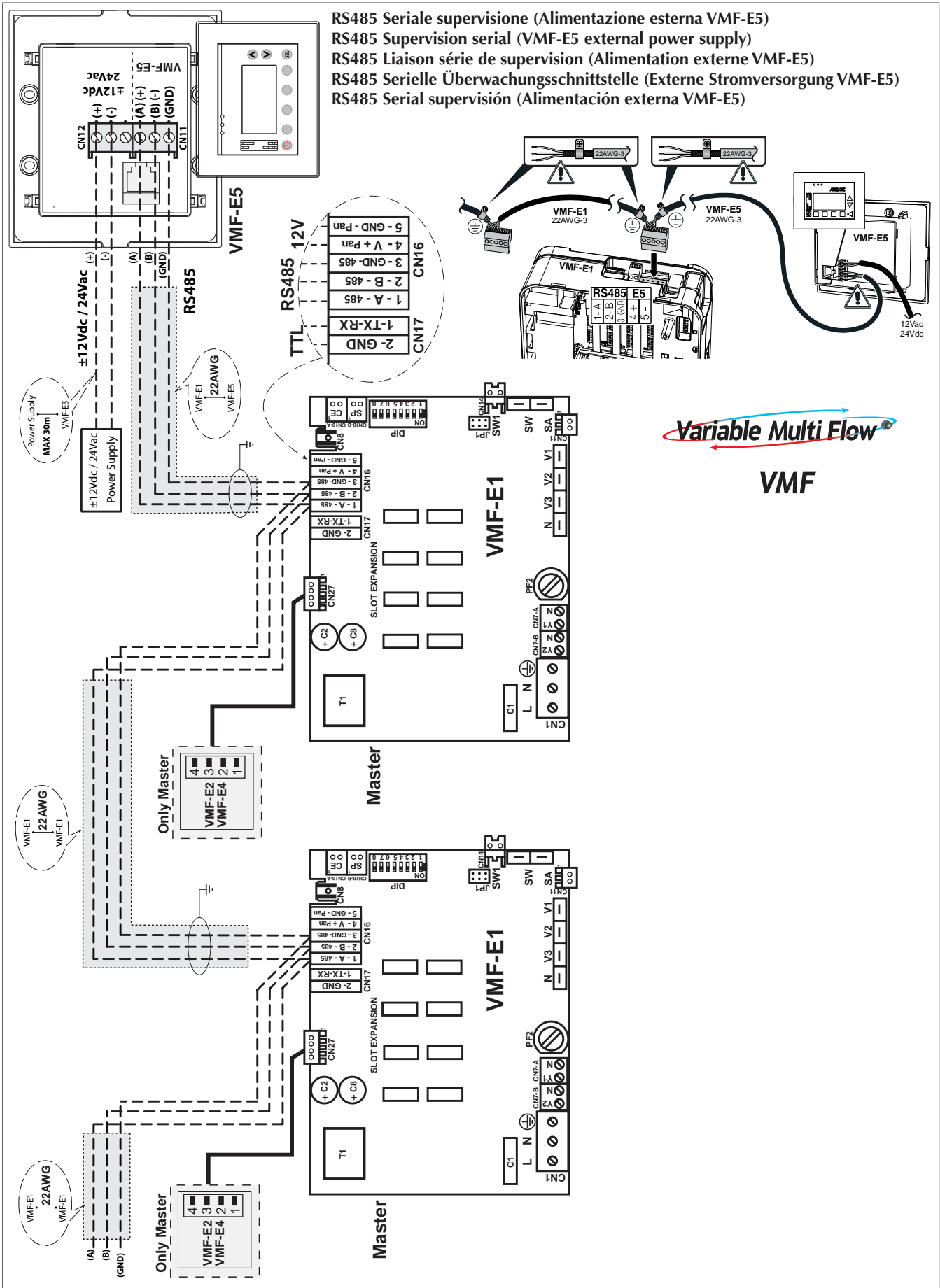


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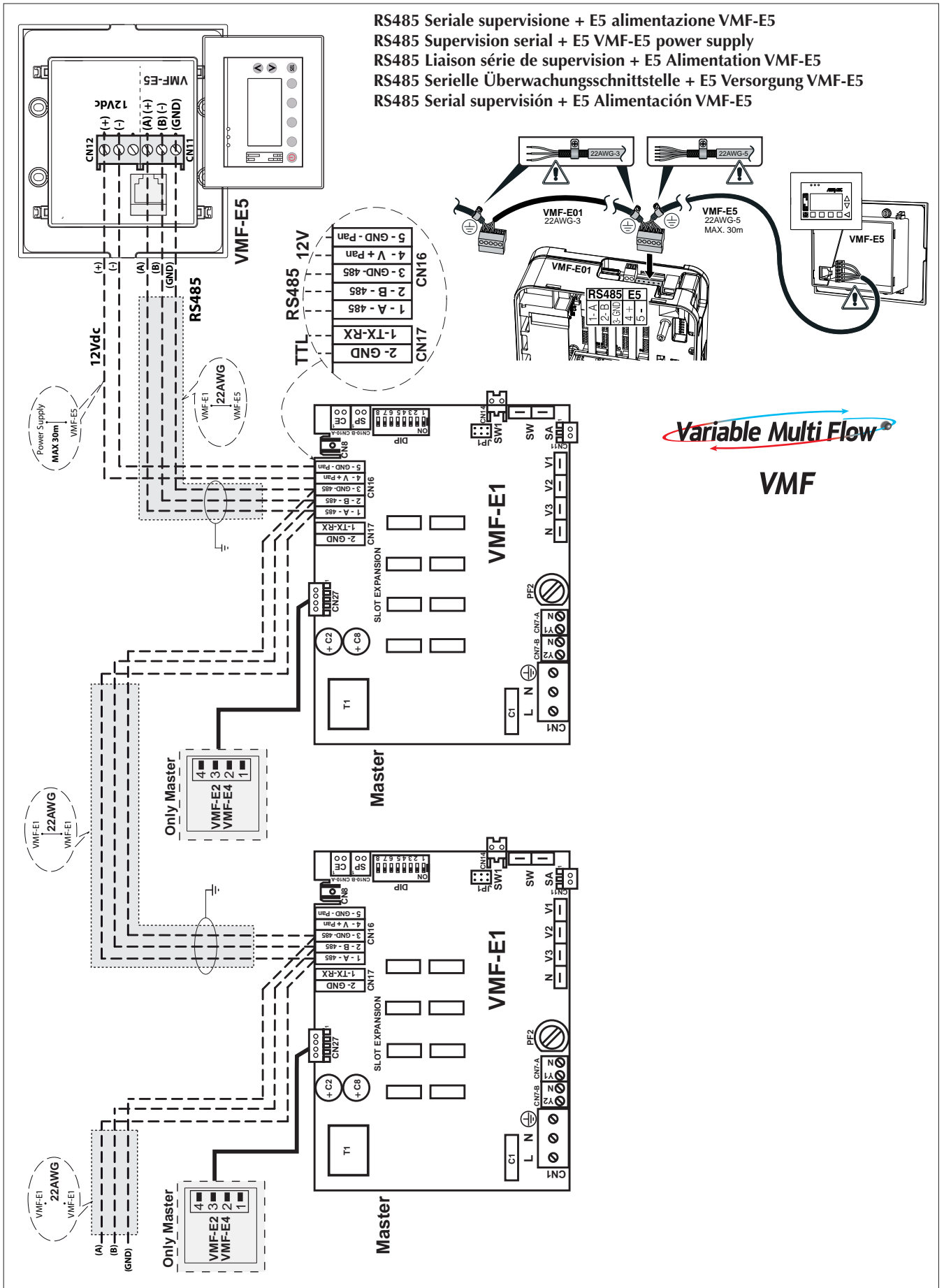


- VMF-E1 / VMF-E5 (RS485 Seriale supervisione)
- VMF-E1 / VMF-E5 (RS485 Supervision serial)
- VMF-E1 / VMF-E5 (RS485 Liaison série de supervision)
- VMF-E1 / VMF-E5 (RS485 Serielle Überwachungsschnittstelle)
- VMF-E1 / VMF-E5 (RS485 Serial supervisión)

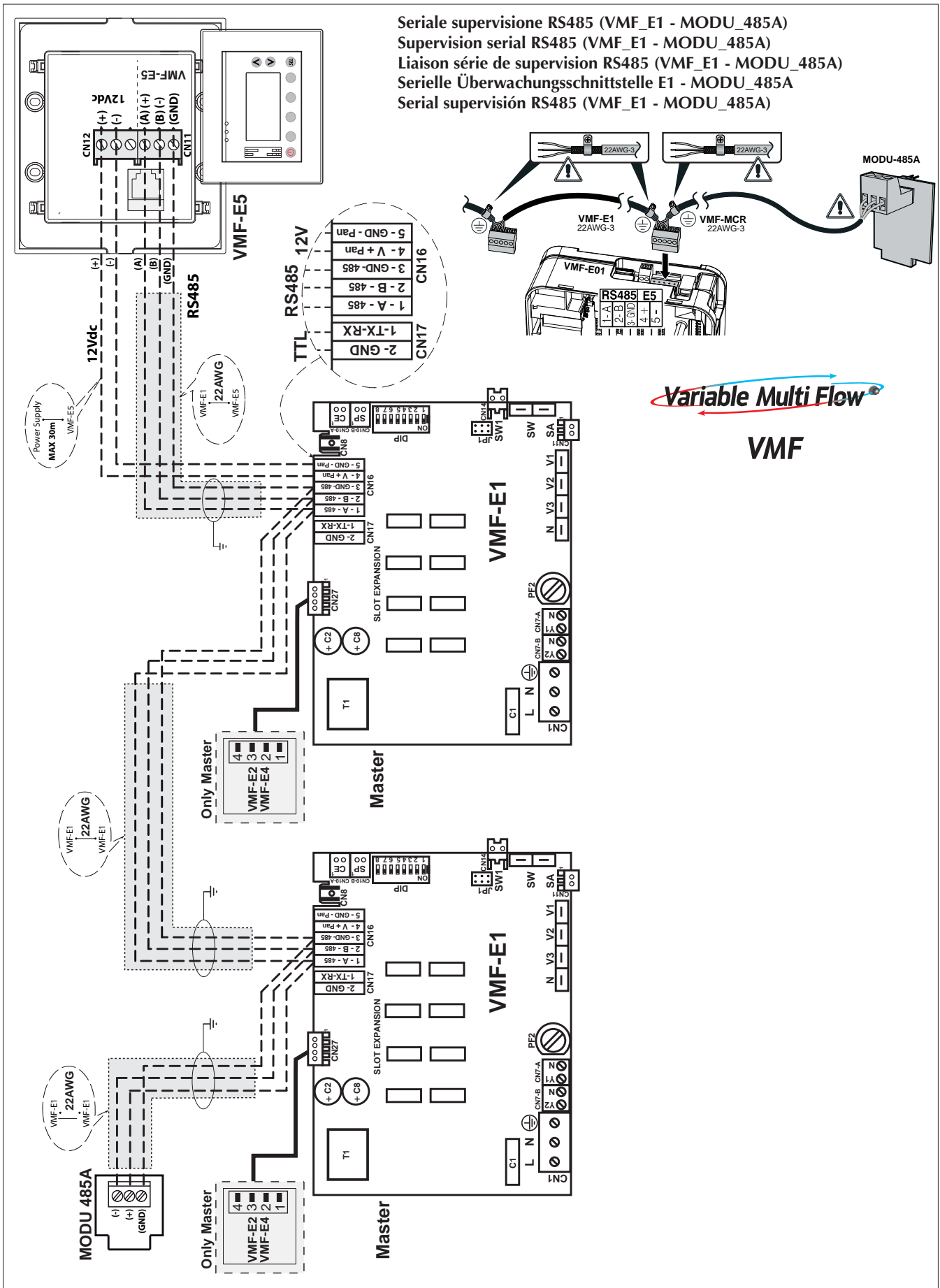
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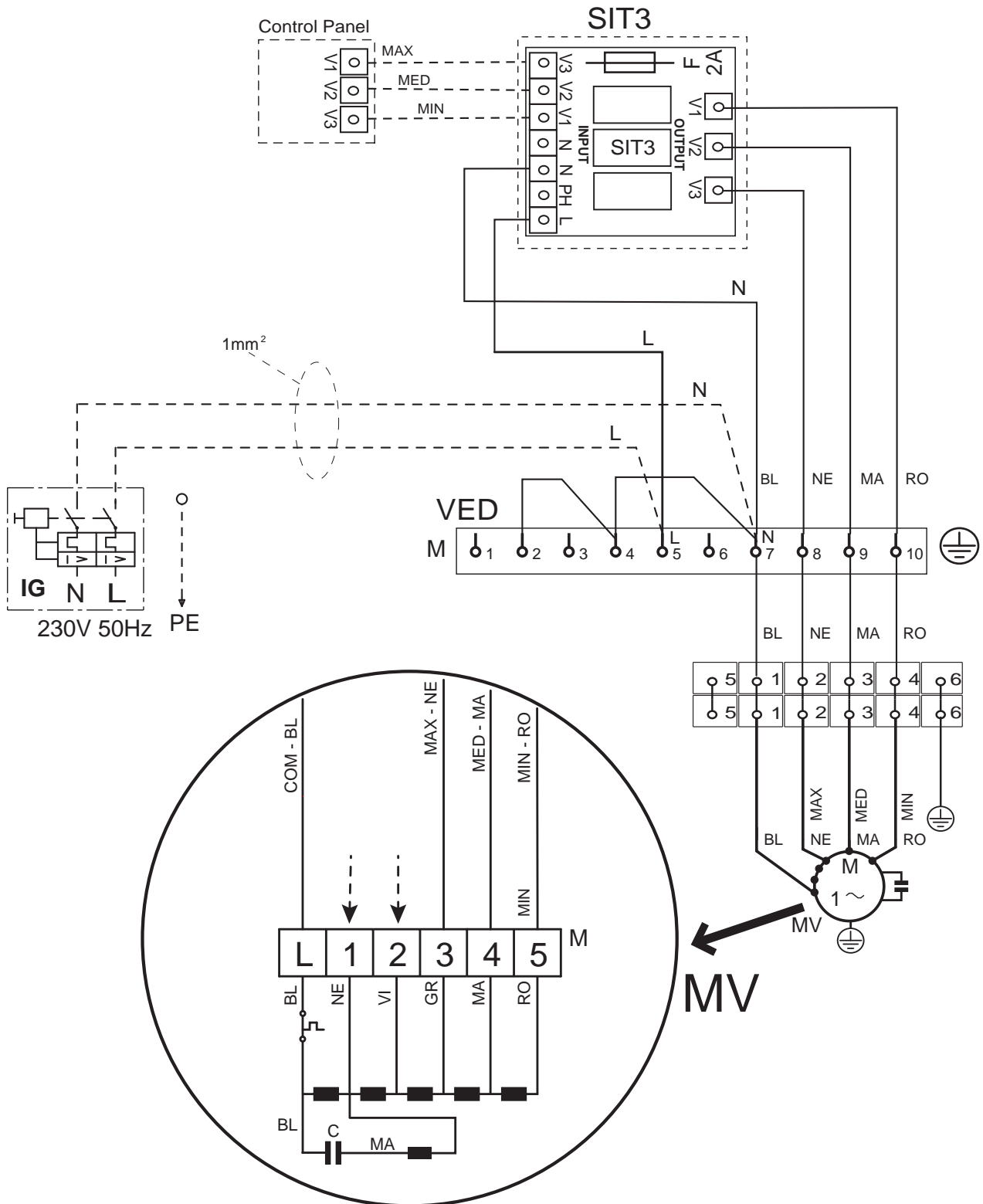


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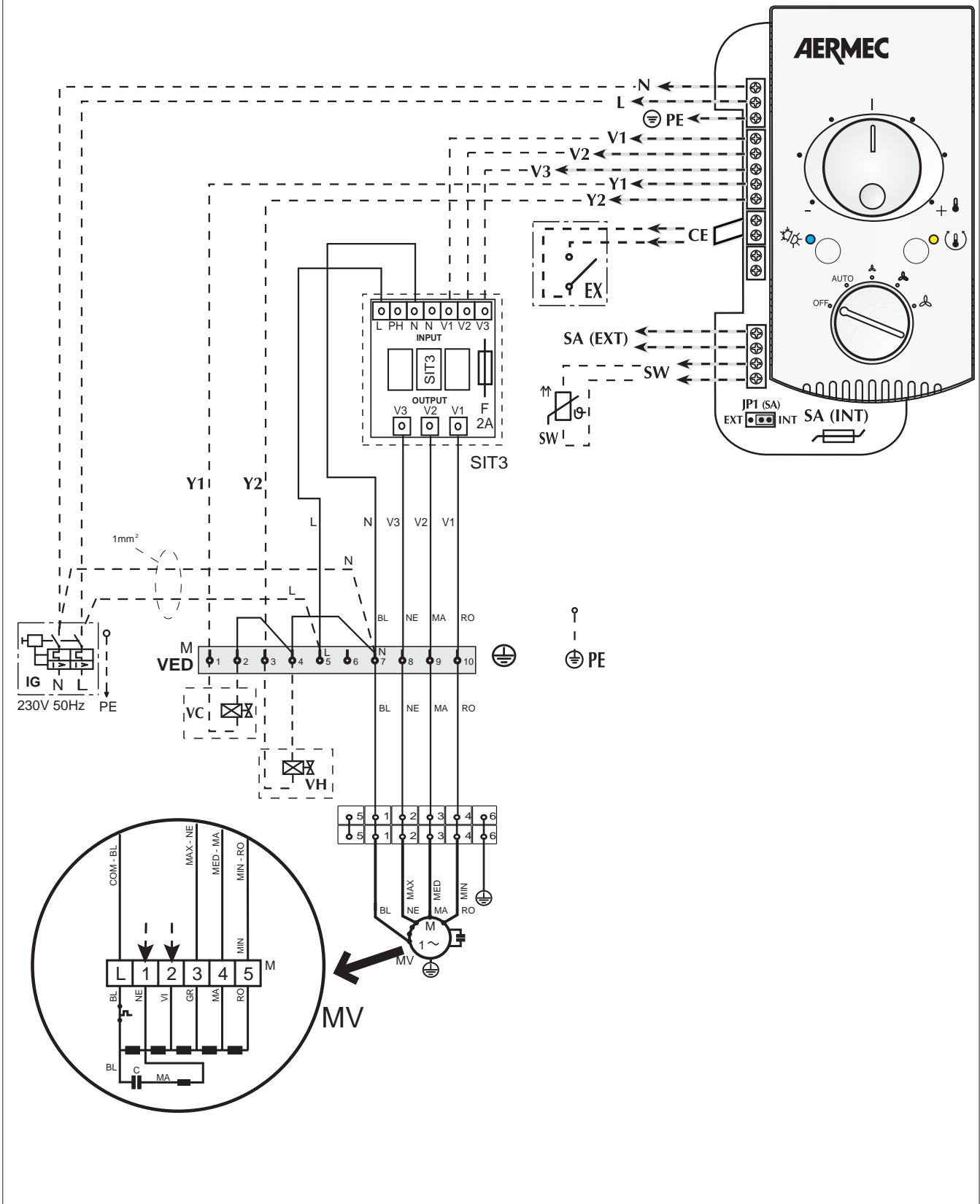
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**VED
SIT3**

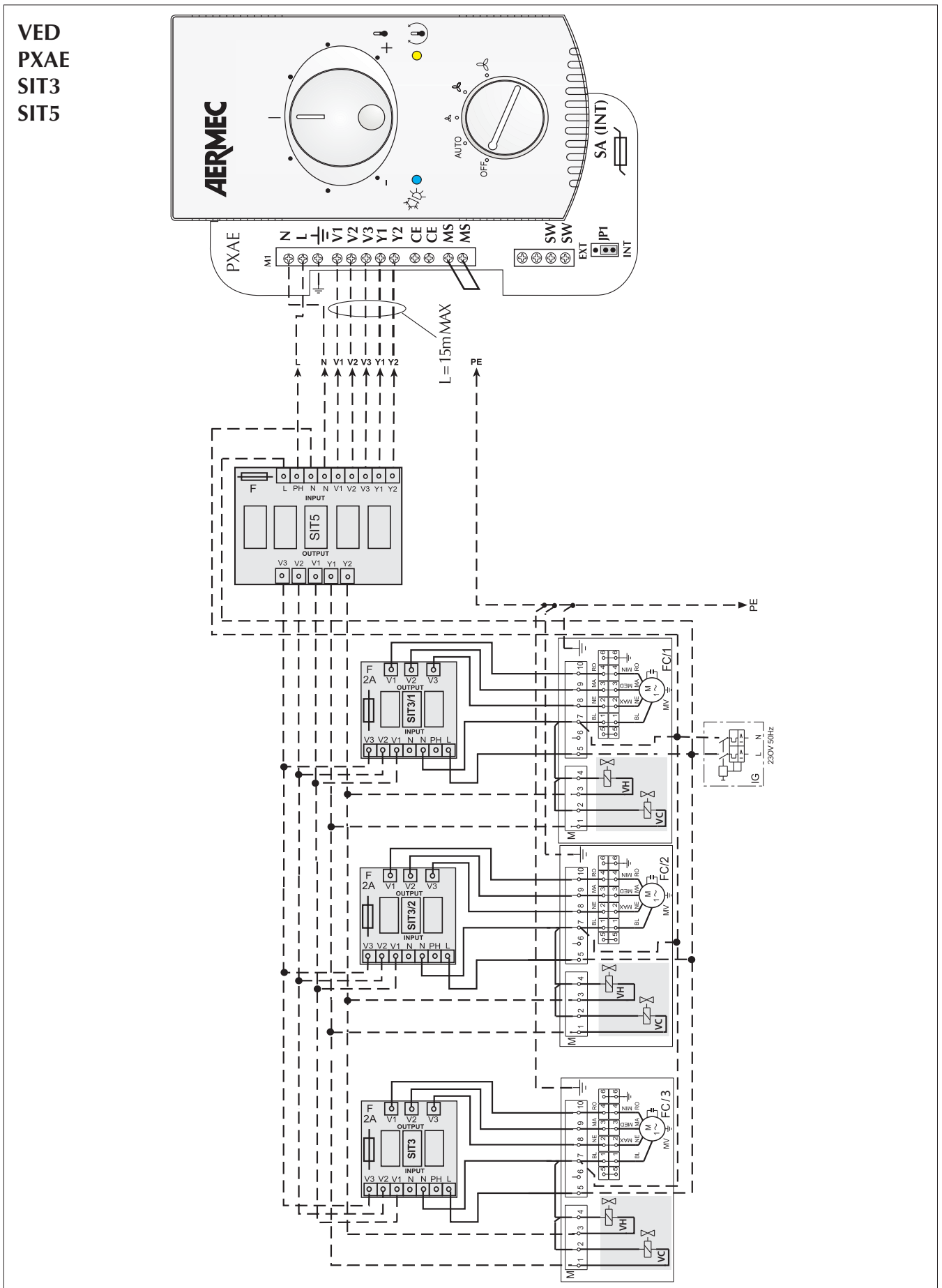


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**VED
PXAE
SIT3**

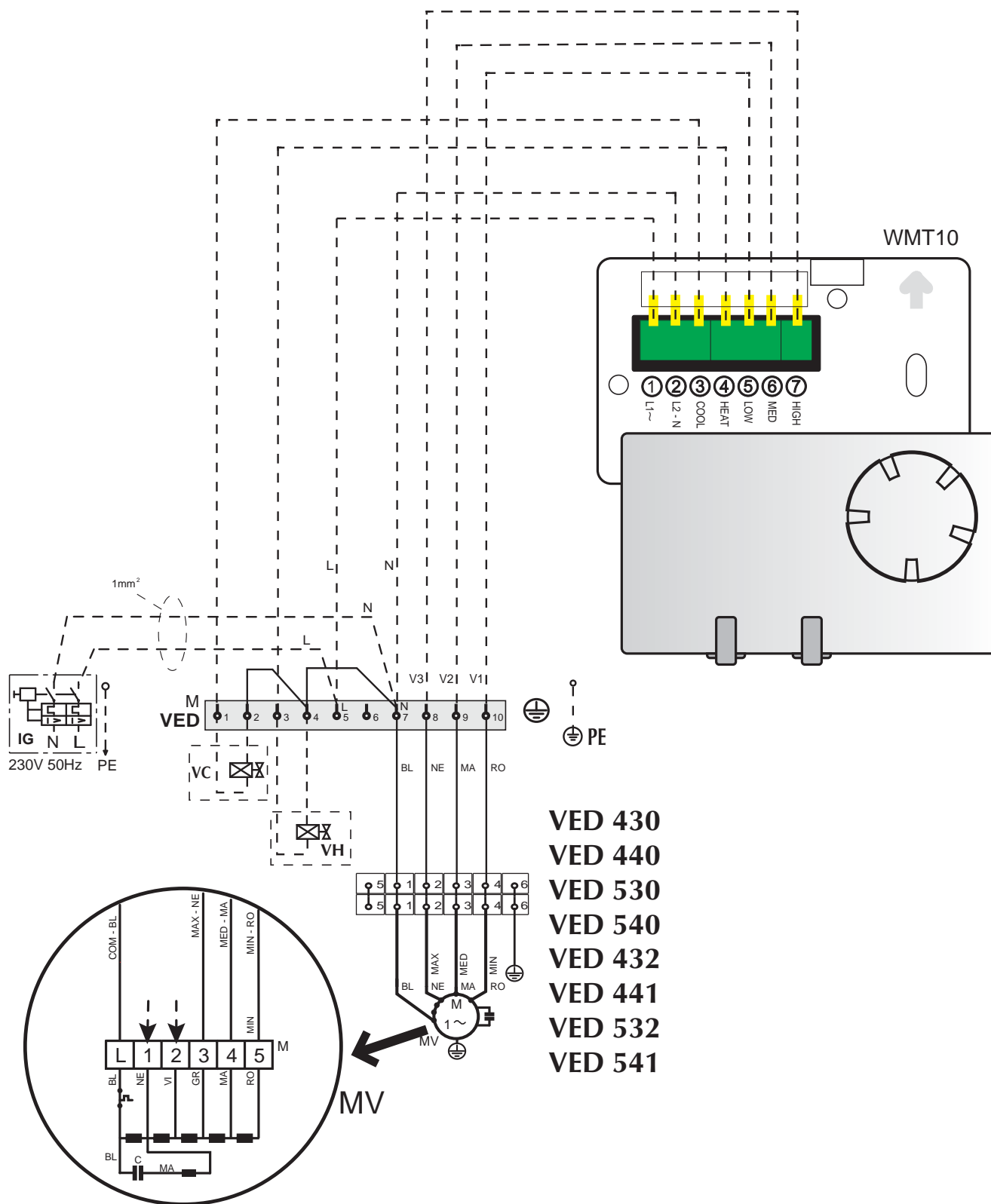


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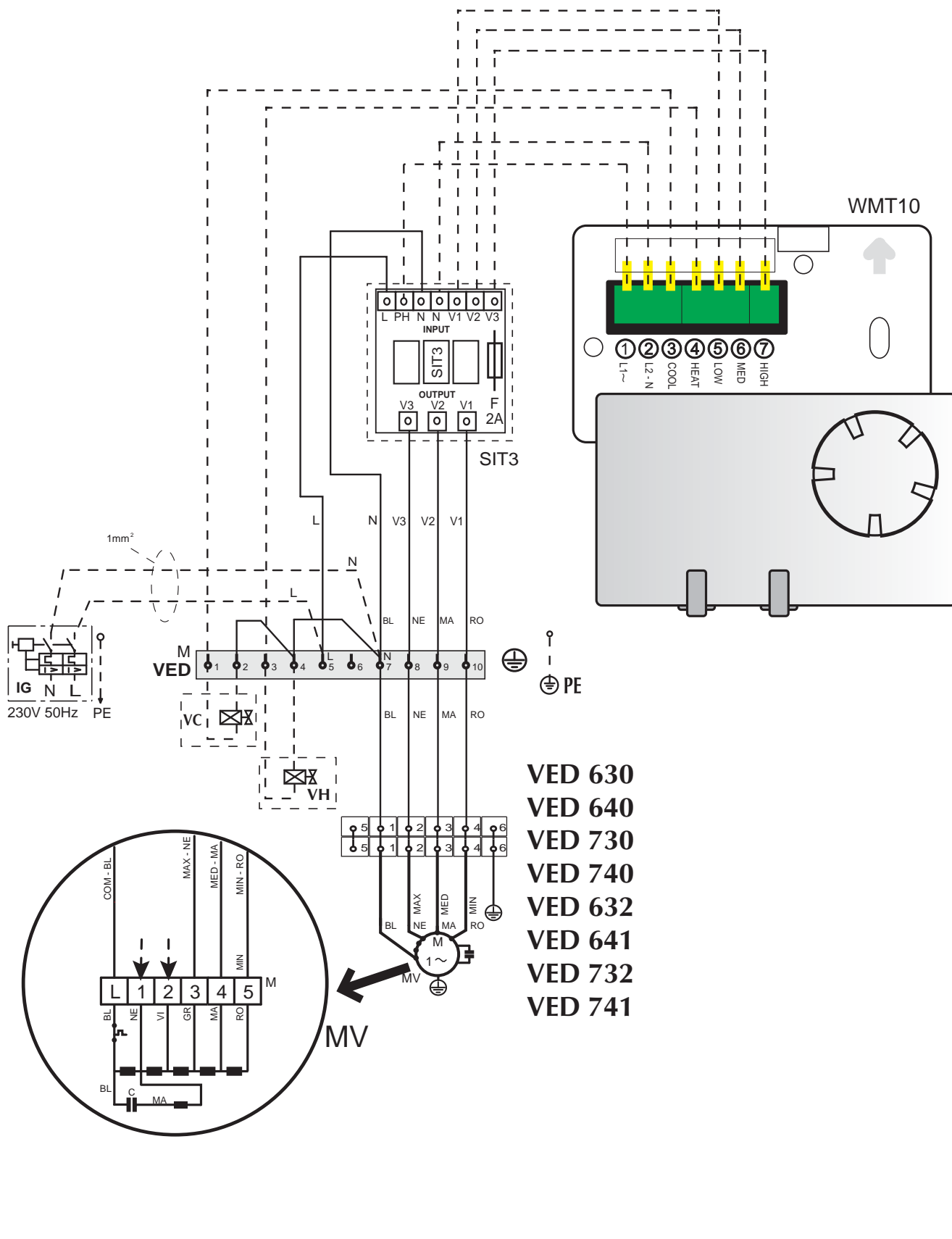
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VED 4 - 5
WMT10



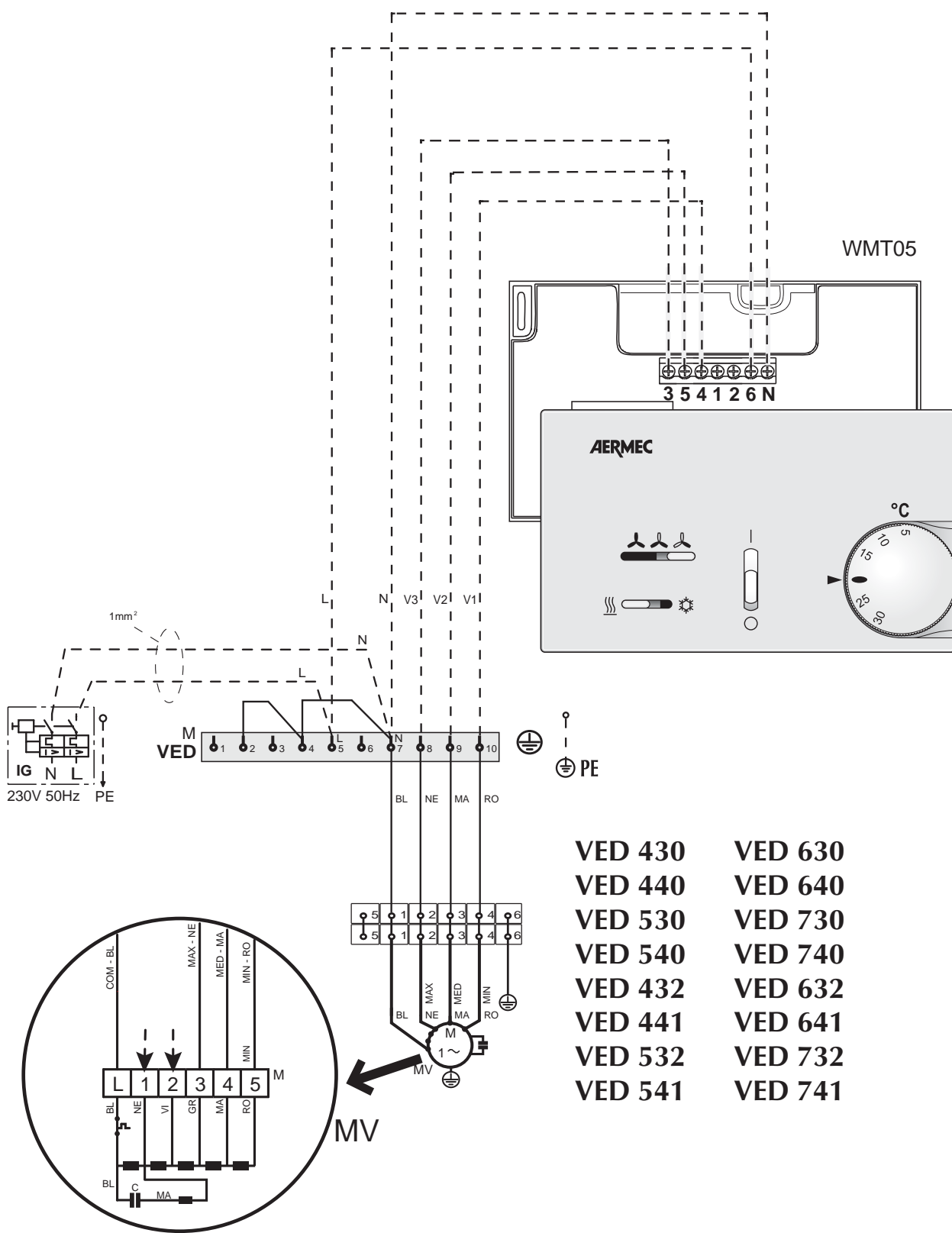
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VED 6 - 7
WMT10
SIT3



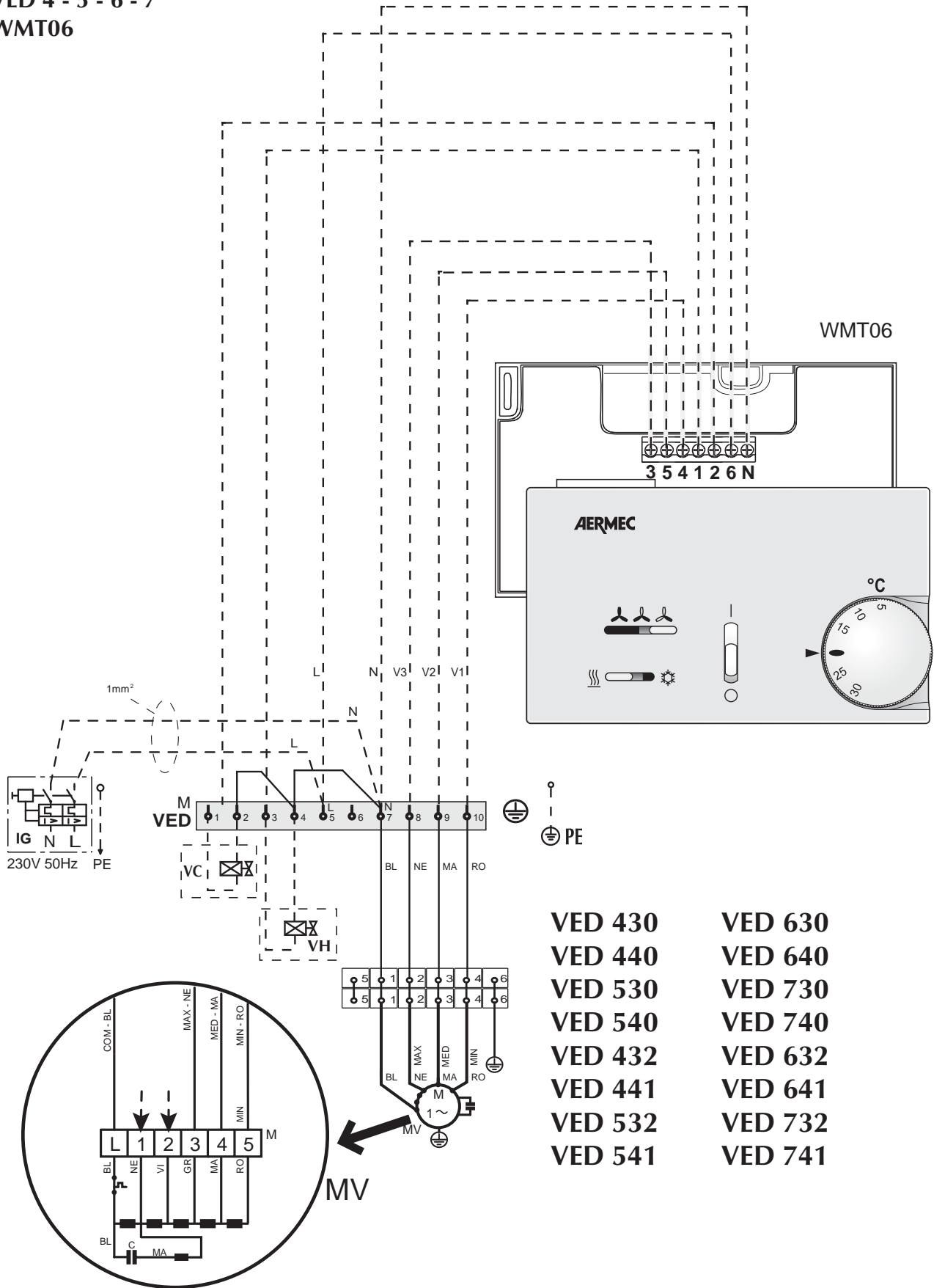
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VED 4 - 5 - 6 - 7
WMT05



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VED 4 - 5 - 6 - 7
WMT06



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PROBLEMA • PROBLEM PROBLEME • PROBLEM PROBLEMA	PROBABILE CAUSA • PROBABLE CAUSE CAUSE PROBABLE • MÖGLICHE URSACHE CAUSA PROBABLE	SOLUZIONE • REMEDY SOLUTION • ABHILFE SOLUCIÓN
Poca aria in uscita. Feeble air discharge. Il y a peu d'air en sortie. Schwacher Luftstrom am Austritt. Poco aire en salida.	Errata impostazione della velocità sul pannello comandi. Wrong speed setting on the control panel. Mauvaise présélection de la vitesse sur le panneau de commandes. Falsche Geschwindigkeitseinstellung am Bedienpaneel. Programación errada de la velocidad en el tablero de mandos. Filtro intasato. Blocked filter. Filtre encrassé. Filter verstopft. Filtro atascado.	Scegliere la velocità corretta sul pannello comandi. Select the speed on the control panel. Choisir la vitesse sur la panneau de commandes. Die Geschwindigkeit am Bedienpaneel wählen. Elegir la velocidad correcta en el tablero de mandos. Pulire il filtro. Clean the filter. Nettoyer le filtre. Filter reinigen. Limpiar el filtro.
Non fa caldo. It does not heat. Pas de chaleur. Keine Heizung. No hace calor.	Ostruzione del flusso d'aria (entrata e/o uscita). Obstruction of the air flow (inlet and/or outlet). Obstruction du flux d'air (entrée/sortie). Luftstrom behindert (Eintritt bzw. Austritt). Obstrucción del chorro del aire (entrada y/o salida). Mancanza di acqua calda. Poor hot water supply. Il n'y a pas d'eau chaude. Kein Warmwasser. Falta de agua caliente.	Rimuovere l'ostruzione. Remove the obstruction. Enlever l'objet faisant obstruction. Verstopfung beseitigen. Quitar la obstrucción. Controllare la caldaia. Control the boiler. Vérifier la chaudière. Kaltwasserseitigen Wärmeaustauscher kontrollieren. Comprobar el calentador.
Non fa freddo. It does not cool. Pas de froid. Keine Kühlung. No hace frío.	Impostazione errata del pannello comandi. Wrong setting on control panel. Mauvaise présélection sur le panneau de commandes. Falsche Einstellung am Bedienpaneel. Programación errada del tablero de mandos. Mancanza di acqua fredda. Poor chilled water supply. Il n'y a pas d'eau froide. Kein Kaltwasser. Falta de agua fría.	Impostare il pannello comandi. See control panel settings. Présélectionner au panneau de commandes. Richtige Einstellung am Bedienpaneel vornehmen. Programar el tablero de mandos. Controllare il refrigeratore. Control the chiller. Vérifier le réfrigérateur. Kaltwasserseitigen Wärmeaustauscher kontrollieren. Comprobar el refrigerador.
Il ventilatore non gira. The fan does not turn. Le ventilateur ne tourne pas. Ventilator Arbeit nicht. El ventilador no gira.	Impostazione errata del pannello comandi. Wrong setting on control panel. Mauvaise présélection sur le panneau de commandes. Falsche Einstellung am Bedienpaneel. Programación errada del tablero de mandos. Mancanza di corrente. No current. Il n'y a pas de courant. Kein Strom. Falta de corriente. L'acqua non ha raggiunto la temperatura d'esercizio. The water has not reached operating temperature. L'eau n'a pas atteint la température de service. Das Wasser hat die Betriebstemperatur nicht erreicht. El agua no ha alcanzado la temperatura de ejercicio.	Impostare il pannello comandi. See control panel settings. Présélectionner au panneau de commandes. Richtige Einstellung am Bedienpaneel vornehmen. Programar el tablero de mandos. Controllare la presenza di tensione elettrica. Control the power supply. Contrôler l'alimentation électrique. Kontrollieren, ob Spannung anliegt. Comprobar la presencia de tensión eléctrica. Controllare la caldaia o il refrigeratore. Controllare il settaggio del termostato. Please check up the boiler or the chiller. Check up the thermostat settings. Contrôler la chaudière ou le refroidisseur. Contrôler le réglage du thermostat. Das Heiz- oder Kühlaggregat überprüfen. Die Einstellungen des Temperaturreglers überprüfen. Comprobar el calentador o el refrigerador. Comprobar la programación del termostato.
Fenomeni di condensazione sulla struttura esterna dell'apparecchio. Condensation on the unit cabinet. Phénomènes de condensation sur la structure extérieure de l'appareil. Kondenswasserbildung am Gerät. Fenómenos de condensación en la estructura externa del aparato.	Sono state raggiunte le condizioni limite di temperatura e umidità descritte in "MINIMA TEMPERATURA MEDIA DELL'ACQUA". The limit conditions of temperature and humidity indicated in "MINIMUM AVERAGE WATER TEMPERATURE" have been reached. On a atteint les conditions limite de température et d'humidité indiquées dans "TEMPERATURE MINIMALE MOYENNE DE L'EAU". Erreichen der maximalen Temperatur- und Feuchtigkeitswerte (siehe Abschnitt "DURCHSCHNITTLLICHE MINDEST - WASSERTEMPERATUR"). Se han alcanzado las condiciones límites de temperatura y humedad descritas en "MÍNIMA TEMPERATURA MEDIA DEL AGUA".	Innalzare la temperatura dell'acqua oltre i limiti minimi descritti in "MINIMA TEMPERATURA MEDIA DELL'ACQUA". Increase the water temperature beyond the minimum limits indicated in "MINIMUM AVERAGE WATER TEMPERATURE". Élever la température de l'eau au-delà des limites minimales indiquées dans "TEMPERATURE MINIMALE MOYENNE DE L'EAU". Wassertemperatur über die um Abschnitt "DURCHSCHNITTLLICHE MINDEST - WASSERTEMPERATUR" angegebenen min. Werte erhöhen. Aumentar la temperatura del agua por encima de los límites descritos en "Mínima temperatura media del agua".

Per anomalie non contemplate, interpellare tempestivamente il Servizio Assistenza.

For anomalies don't hesitate, contact the aftersales service immediately.

Pour toute anomalie non répertoriée, consulter le service après-vente.

Sich bei hier nicht aufgeführten Störungen umgehend an den Kundendienst wenden.

En el caso de anomalías no contempladas, ponerse en contacto de inmediato con el Servicio de Asistencia.



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