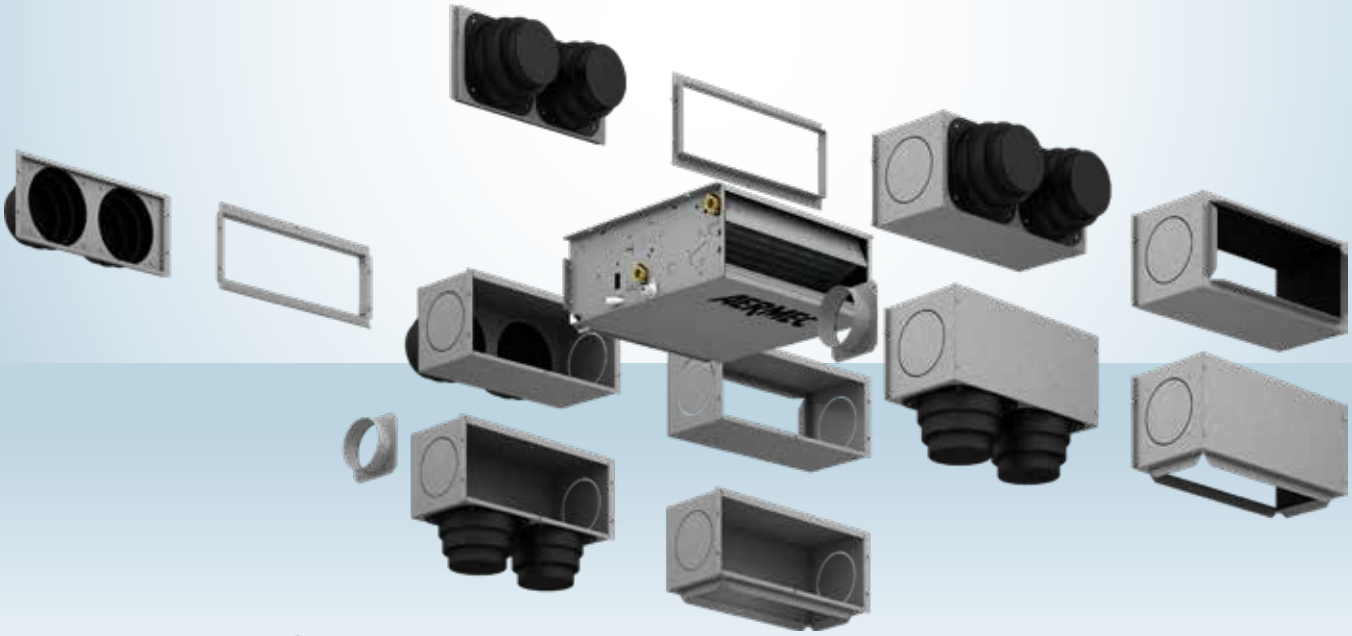
AERMEC



INVERTER TECHNOLOGY

Variable Multi Flow

VMF

INVERTER FAN COILS

for horizontal and vertical ducted installation

Technical Manual

VED_I

VED 030 I_VED 741 I

110/240 V ~ 50/60Hz

AERMEC COMPANY QUALITY SYSTEM ICIM ISO 9001:2008 - Cert. n° 0128 CISQ IQNet AERMEC S.P.A.

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

CE

Dear customer,
Thank you for choosing an AERMEC product. This product is the result of many years of experience and in-depth engineering research, and it is manufactured using top quality materials and cutting edge technologies.
In addition, the CE mark guarantees that our appliances fully comply with the requirements of the European Directives in terms of safety. Il livello qualitativo è sotto costante sorveglianza, ed i prodotti AERMEC sono pertanto sinonimo di Sicurezza, Qualità e Affidabilità.

Product data may be subject to modifications deemed necessary for improving the product without the obligation to give prior notice.

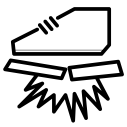
Thank you again.

AERMEC S.p.A

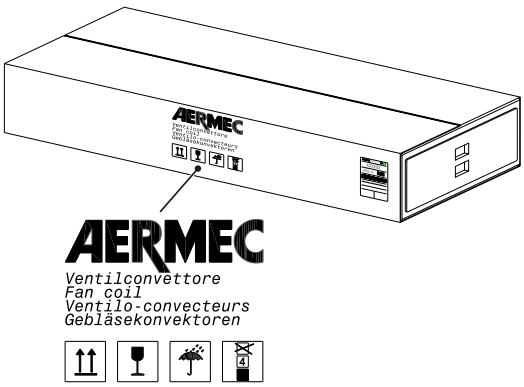
AERMEC S.p.A. reserves the right to make any modifications considered necessary to improve its products at any moment and is not obliged to add these modifications to machines that have already been manufactured, already delivered or are under construction.

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TRASPORTO • TRANSPORT • TRANSPORT • TRANSPORT • TRANSPORTE					
	NON bagnare. Tenere al riparo dalla pioggia.	KEEP DRY. Keep out of the rain.	NE PAS mouiller. Tenir à l'abri de la pluie.	NICHT nass machen. Vor Regen geschützt anbringen	NO mojar. Conservar protegido de la lluvia.
	NON calpestare.	DO NOT step on unit.	NE PAS marcher sur l'appareil.	NICHT betreten .	NO pisar.
	Sovrapponibilità: controllare sull'imballo per conoscere il numero di macchine impilabili.	Stackability: check the package to know the number of stackable machines.	Empilement : vérifier sur l'emballage le nombre d'appareils empilables.	Stapelbarkeit: Auf der Verpackung nachsehen, wie die Anzahl der stapelbaren Geräte lautet.	Superponibilidad: observar en el embalaje la cantidad de máquinas que pueden apilarse.
	NON trasportare la macchina da soli se il suo peso supera i 25Kg.	DO NOT carry the equipment alone if weight exceeds 25Kg.	NE PAS faire transporter l'appareil par une seule personne si son poids est supérieur à 25kg.	NICHT das Gerät allein transportieren, wenn sein Gewicht die 25kg übersteigt.	NO transportar la máquina solos si su peso es superior a los 25Kg.
	NON lasciare gli imballi sciolti durante il trasporto. Non rovesciare.	DO NOT leave boxes unsecured during transportation. Do not overturn.	NE PAS laisser les emballages sans attaches durant le transport. Ne pas renverser.	NICHT die Verpackungen während des Transports geöffnet lassen. Nicht stürzen.	NO dejar los embalajes sin sujetar durante el transporte. No invertir.
	Fragile, maneggiare con cura.	Fragile, handle with care.	Fragile, manipuler avec soin.	Zerbrechlich, sorgfältig handhaben.	Frágil, manipular con cuidado.
Simboli di sicurezza • safety symbol • simboies de SECURITE Sicherheitssymboleole • 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!!!

	Imballo: indicazioni per trasporto e stoccaggio	Packing: indications for transport and storage	Emballage: indications pour le transport et le stockage	Verpackung: Anweisungen für Transport und Lagerung	Embalaje: indicaciones para el transporte y el almacenamiento



GENERAL WARNINGS

The VED_I AERMEC units are constructed according to the recognised technical standards and safety regulations. They have been designed and must be used for air conditioning and heating purposes, in accordance with their technical features.
Any contractual or extra-contractual liability of the Company is excluded for injury/damage to persons, animals or objects owing to installation, regulation and maintenance errors or improper use. All uses not expressly indicated in this manual are prohibited.
Use suitable Personal Protective Equipment (PPE) during installation, maintenance, and cleaning stages.
Do not use the unit as storage for equipment or spare parts. Any use other than that indicated in this manual is prohibited as it can generate dangerous situations.
ATTENTION: the electric and hydraulic connections, together with installation of the fan coils and their accessories must only be performed by technicians who have the technical-professional requisites for installation, transformation, extension and maintenance of the systems and who can verify these functions in terms of safety and functionality (in accordance with the national laws in force in the country of installation), in this manual, they will be identified as: a qualified technician qualified and equipped with specific technical skills. Aermec will not be liable for damage due to failure to follow these instructions.
Make sure the unit has not been damaged during transport before installation.
using a damaged machine could be dangerous;
the support surface must withstand the weight of the unit.
Note:
Always indicate the serial number for future reference and for any communication with AERMEC S.p.A.
STORING THE DOCUMENTATION
Hand over the instructions with all the related documentation to the system user, who must store the instructions so that they are always available in case of necessity.
Read this sheet carefully; the execution of all works must be performed by qualified staff, according to Standards in force on this subject in different countries.
WARNINGS REGARDING SAFETY AND INSTALLATION STANDARDS
Follow the indications below to install the equipment correctly. The completion of all operations, according to specific requirements, is left to the experience of the installer.
The unit must be installed to enable maintenance and/or repairs.
Do not modify or tamper with the units, as dangerous situations can occur. The manufacturer will not be liable for any damage caused. The validity of the warranty shall be void in the event of failure to comply with the above-mentioned indications.
Before starting any operations, READ THESE INSTRUCTIONS CAREFULLY AND CARRY OUT THE SAFETY CHECKS TO AVOID ALL RISKS.
All the staff involved must have thorough knowledge of the operations and any danger that may arise when the installation operations are carried out.
The unit must be installed to facilitate routine (filter cleaning) and special maintenance operations.
⚠ **ATTENTION:** the fan coil is connected to the power supply and the hydraulic circuit. Operations performed by persons who do not have the required technical skills can lead to personal injury to the operator or damage the unit and the surrounding environment.
⚠ **ATTENTION:** the unit must be installed in compliance with national regulations.
⚠ **ATTENTION:** make sure that the power supply has been disconnected before carrying out any interventions.
⚠ **ATTENTION:** install a device, master switch or electric plug that allows the unit's power supply to be completely disconnected.
⚠ **ATTENTION:** In order to protect the unit against short circuits, mount a magnet circuit breaker omnipolar switch on the power supply line. In order to avoid any danger due to the accidental rearming of the thermal cut-out device, this appliance must not be powered with an external switching device, such as a timer, or be connected to a circuit that is regularly powered or disconnected from the service.
⚠ **ATTENTION! DANGER!** Any use other than what is indicated by Aermec is prohibited.
⚠ Supply the fan coil only with the voltage value indicated in the data plate
The fan coil may be permanently damaged if a different electric power supply is used.

PRODUCT IDENTIFICATION

The VED_I fan coils can be identified through:

– PACKAGING LABEL

Located on the packaging, it indicates the product identification data.

– TECHNICAL PLATE
Located inside the unit, it indicates the identification and technical data of the product.

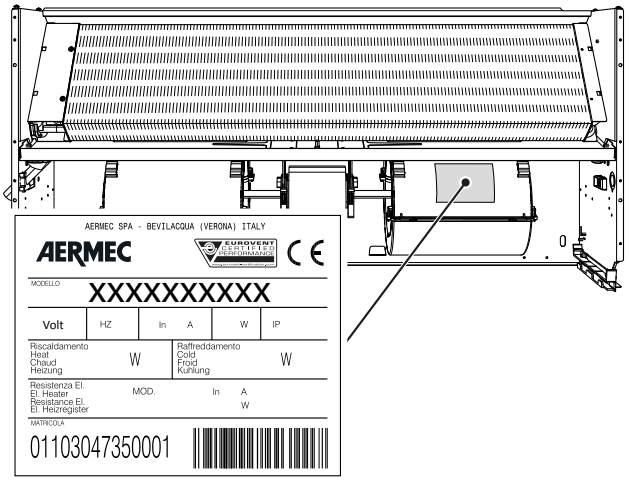
ATTENTION: *Tampering, removal, the lack of the identification plate does not allow the product to be safely identified and will complicate any installation or maintenance operations.*

packaging label



example of packaging label

technical plate



example of technical plate

INFORMATION

TRANSPORT
Refer to the weight indications on the data plate to transport the unit safely.
Take the following measures during transport:
The unit and the accessories must not undergo violent impacts in order not to affect the integrity of the structure and of the internal components;
during transportation, the unit and any accessories must be protected in order to prevent impacts, for this reason they must be properly secured on the transportation floor with ropes or any other means that prevent their movement;
during transport and storage, the unit and the accessories must always be protected against bad weather.

VERIFICATIONS UPON RECEPTION
Visually check the unit upon reception to make sure that:
the order corresponds with what is indicated in the transport documents;
packaging is intact;
the unit is intact;
all the components have been provided.
Indicate any damage or missing components on the transport document.

HANDLING
ATTENTION! : Wear proper personal protective equipment (PPE) during handling operations.
Fully remove the unit and the components from the packaging before installation and use.

INSTALLATION
Read this sheet carefully; the execution of all works must be performed by experienced and qualified staff with specific technical skills, according to Standards in force on this subject in the installation country.
Comply with the installation instructions provided in the following paragraphs. The paragraphs follow a chronological order to facilitate installation.
Retrieve the documents (manuals and declarations of conformity) and the components required to complete installation from inside the unit.
Aermec accessories are supplied complete with a manual for installation and use.
Aermec accessories are designed to be integrated into Aermec units both for functional aspects and safety. Our units are designed to be integrated with Aermec additional heating accessories and if properly fitted they have no effect on the surrounding environment, the technical spaces are unchanged with respect to the basic unit.
Before installation, check the technical spaces required:
for installation;
for connection to the hydraulic circuits and to any valve;
for connection to the power supply;
for connection of an external panel

flush to the unit (when provided for);
for the setup of the flow and intake ducts (for models requiring it);
for correct and sufficient both intake and supply air flow,
for draining condensation;
for cleaning the filters;
for cleaning internal components and for maintenance.

WARNINGS ON USE

ATTENTION: The appliance can be used by children over the age of 8 and by people with reduced physical, sensory or mental capabilities or without experience or necessary knowledge, as long as they are supervised or have been instructed on the safe use. Of the appliance and on the understanding of the dangers inherent to it. Children must not play with the appliance. The cleaning and maintenance to be carried out by the user must not be carried out by children without supervision.

Do not use the FAN COIL improperly

The fan coil must not be used to breed, deliver and raise animals.

Air out the room

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

Adjust the temperature correctly

Ambient temperature should be regulated to ensure maximum comfort, particularly for the elderly, infants and invalids. Prevent temperature fluctuations between indoors and outdoors greater than 7°C during summer. Excessively low temperatures during summer involve higher electrical consumption.

Direct the air flow correctly

Air delivered by the fan coil must not be directed onto people. Even if the air temperature is higher than the ambient temperature, it can cause a cold sensation and, therefore, discomfort.

During operation

During operation, always leave the filter mounted on the fan coil; otherwise the dust in the air will dirty the coil surface.

It is normal

When in cooling mode, water vapour can come out of the fan coil air flow.

When in heating mode, a slight hissing sound can be heard near the fan coil. The fan coil may sometimes emit unpleasant odours due to the accumulation of substances present in the environment (clean the filter more often, especially if the room is not aired out regularly).

During operation, noise and/or a creaking sound may be heard from inside the device, due to the heat expansion of the elements (plastic and metal). However, this does not mean there is a malfunction and it does not damage the unit as long as the inlet water temperature remains within the operating limits.

OPERATION ANOMALIES

In the event of operation anomalies, power off the unit and then power it back on and re-start the unit.

Do not try to repair the unit on your own, as it may be very dangerous!

If the problem persists, call the Area After-sales Service immediately.

Do not pull the electric cable

It is very dangerous to pull, step on or crush the power supply cable or secure it using nails or staples. The damaged cable can cause short circuits and injury to persons.

Electric power supply cable

If the power supply cable is damaged, it must be replaced with a new cable of adequate section. Have the repair made by "Qualified personnel", in order to prevent any risk.

Do not repair damaged cables.

For the electric power supply, use integral cables with suitable section for the load.

Do not introduce objects into air vents

Do not introduce any objects into the air outlet slots. This could cause injury to persons or damage the fan.

OPERATING ENVIRONMENT

The units are designed for installation in closed environments in conditions of 'urban', non-marine atmosphere with non-corrosive and non-dusty characteristics. Under no circumstances the following concentrations of pollutants in the air, in which the unit must operate, shall be exceeded:

SO_2	<0,02 ppm
H_2S	<0,02 ppm
NO,NO_2	<1 ppm
NH_3	<6 ppm
N_2O	<0,25 ppm

The unit should not be installed in locations characterized by the presence of flammable gases or acidic or alkaline substances. Otherwise the coils and the internal components of the equipment could suffer serious and irreparable damage from corrosion.

Warnings for the quality of the water circulating in the coils

It is recommended to perform an analysis of the water circulating in the coil focusing on the research of the possible presence of bacteria (detection of iron bacteria and micro-organisms that can produce H2S or chemically reduce sulphates) and on the chemical composition of the water, to prevent corrosion and fouling inside the tubes.

The water circuit must be supplied and replenished with treated water that does not exceed the threshold levels indicated below.

Total hardness in mmol/l	l < mmoll/l < 1,5
Chlorides [CL^-]	< 10 mg/litre
Sulphates [SO_4^{2-}]	< 30 mg/litre
Nitrates [NO_3^-]	= 0 mg/litre
Dissolved iron	< 0,5 mg/litre
Dissolved oxygen	4 < [O_2] < 9 mg/litre
Carbon dioxide [CO_2]	< 30 mg/litre
Resistivity	20 Ohm·m < Resistivity< 50 Ohm·m
pH	6,9 < pH < 8

MAINTENANCE AND USE PRECAUTIONS

DO NOT USE WATER THAT IS TOO HOT

Use soft cloths or sponge soaked in warm water (no higher than 40°C) to clean the fan coil. Do not use chemical products or solvents to clean any part of the fan coil. Do not spray water on internal or external surfaces of the fan coil (danger of short circuits).

CLEAN THE FILTER PERIODICALLY

Frequent cleaning of the filter will ensure more efficient operation.

Check if the filter is excessively dirty. Repeat the operation more frequently, if required.

Clean often and use a suction device to remove accumulated dust.

When the filter is clean, reassemble it onto the fan coil by following the removal procedure in reverse order.

EXTRAORDINARY CLEANING

Removing the augers of the inspected fans (which can be carried out only by qualified personnel) allows the internal parts to be cleaned accurately. This is essential for installation in very crowded areas or that require high hygienic standards.

DURING OPERATION

Always leave the filter mounted on the fan coil during operation, otherwise, the dust in the air will dirty the surface of the coil.

IT IS NORMAL

When in cooling mode, water vapour can come out of the fan coil air flow.

When in heating mode, a slight hissing sound can be heard near the fan coil. The fan coil may sometimes emit unpleasant odours due to the accumulation of substances present in the environment (clean the filter more often, especially if the room is not aired out regularly).

During operation, noise and/or a creaking sound may be heard from inside the device, due to the heat expansion of the elements (plastic and metal), however, this does not indicate a fault and does not cause damage to the unit unless the maximum input water temperature is exceeded.

OPERATION ANOMALIES

In case of anomalous operation, remove the voltage from the unit and then re-apply it and re-start the appliance.

ATTENTION! Do not try to repair the unit on your own, as it may be very dangerous!

If the problem persists, call the Area After-sales Service immediately.

DO NOT PULL THE ELECTRIC CABLE

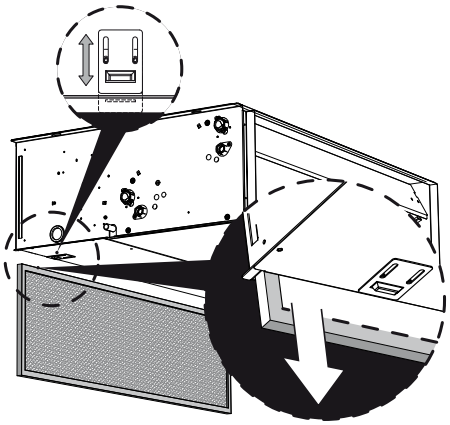
It is very dangerous to pull, step on or crush the power supply cable or secure it using nails or staples. The damaged cable can cause short circuits and injury to persons.

Do not introduce objects into air vents

Do not introduce objects in the air outlet and inlet. This could cause injury to persons or damage the fan.

ATTENTION

Do not allow the appliance to be used by children or disabled people without appropriate supervision. Remember that children must not use the appliance as a toy.

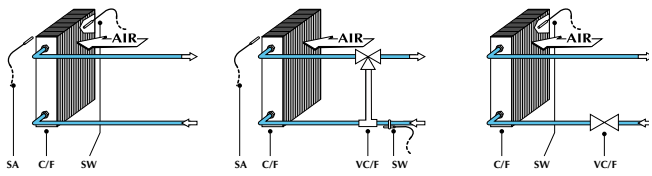


SYSTEM EXAMPLES

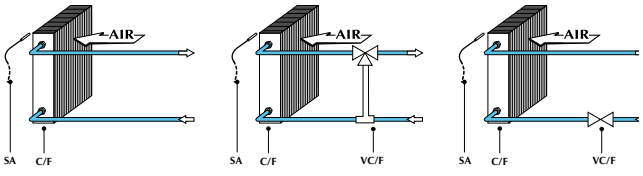
Key:

SW Water temperature probe
SA Ambient temperature probe
VC/F Valve (Heating / Cooling)
C/F Coil (Heating/ Cooling)
VC Valve (Heating)
C Coil (Heating)

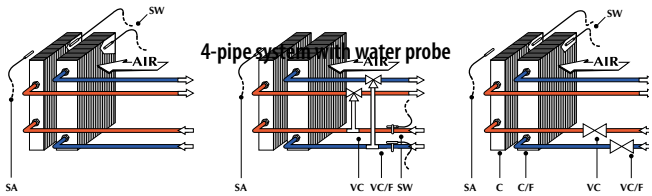
2-pipe system with water probe



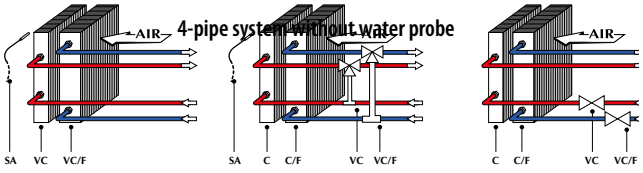
2-pipe system without water probe



4-pipe system with water probe



4-pipe system without water probe



DESCRIPTION OF THE UNIT

AIM OF THE VED FAN COILS WITH INVERTER MOTORISED FAN

– The fan coil is a terminal used to treat air, both during winter and summer. The VED_I fan coils have been designed to meet any requirement in ducted systems.
– In particular, the fact that the unit can be integrated in the VMF system allows you to control the individual fan coil with accessories up to the management of the VED_I inserted in complex networks of fan coils and relative accessories.

SIZES AVAILABLE

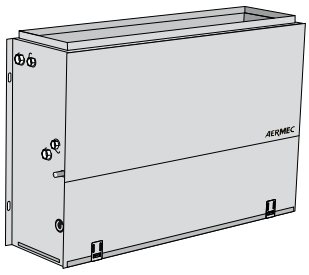
The VED_I fan coils are available for:

2-pipe systems	
VED 030 I	**Standard coil**
VED 040 I	**Larger coil**
VED 130 I	**Standard coil**
VED 140 I	**Larger coil**
VED 230 I	**Standard coil**
VED 240 I	**Larger coil**
VED 330 I	**Standard coil**
VED 340 I	**Larger coil**
VED 530 I	**Standard coil**
VED 540 I	**Larger coil**
VED 730 I	**Standard coil**
VED 740 I	**Larger coil**

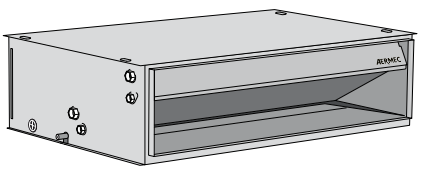
4-pipe systems	
VED 030 I	**With heating coil, VCF, available as accessory**
VED 130 I	**With heating coil, VCF, available as accessory**
VED 230 I	**With heating coil, VCF, available as accessory**
VED 330 I	**With heating coil, VCF, available as accessory**
VED 532 I	**Standard battery + increased heating**
VED 541 I	**Larger coil + standard heating**
VED 732 I	**Standard coils + increased heating**
VED 741 I	**Larger coil + standard heating**

MAIN FEATURES OF THE VED_I FAN COILS

• Fan coil for vertical wall mounted installation and horizontal suspended ceiling installation
• Versions for 2-pipe systems with main, standard or larger coil.
• Versions for 4-pipe systems with also heating, standard or larger coil.
• Coil with low pressure drops.
• Reversible connections on site.
• Wide range of accessories to connect the fan coil to the air ducting.
• It requires an external control device (accessory).
• Set up for insertion in the VMF system, VMF systems for Series 5 and 7 VEDS I MUST be installed on site.
• Wide range of controls and accessories.
• Wide possibility to have different useful static pressure.
• Motorised fan with brushless motor and dedicated inverter.
• Centrifugal fans with blades designed for low sound emissions
• Filter with G3 filtration class.
• Intake air filter, easy to remove for periodical cleaning.
• 3-way and 4-connection valve accessories.
• 2-way valve accessories for systems with variable water flow rate
• Internal insulation class 1.
• Full compliance with accident-prevention standards.
• Easy installation and maintenance
• Flow flange obtained directly on the unit.



Example of vertical installation

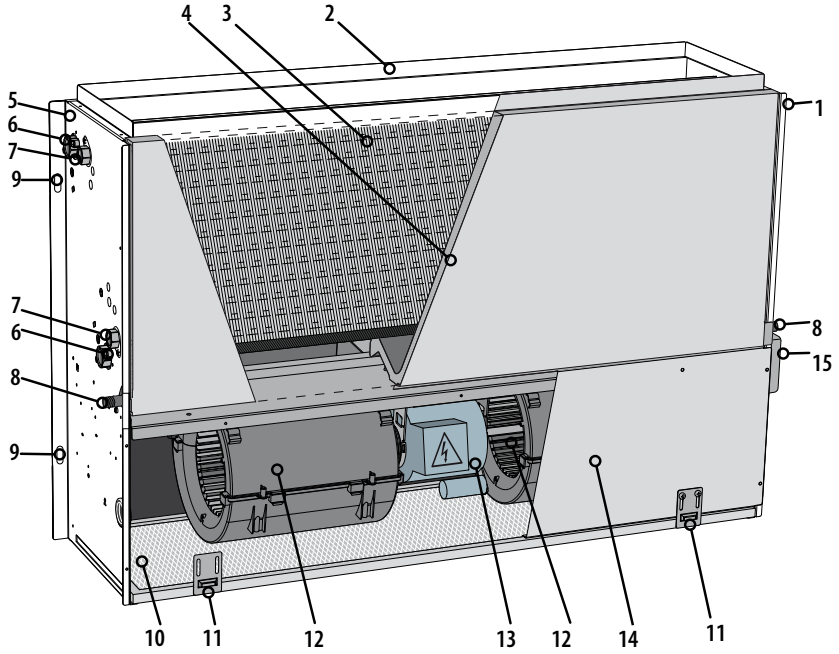


Example of horizontal installation

MAIN COMPONENTS

1 Right side (bearing structure)
2 Air flow range
3 Heat exchange coil
4 Condensate drip tray / Front closing panel (upper)
5 Left side (bearing structure)
6 Vents / discharges on coil
7 Hydraulic connections
8 Condensate drain
9 Fixing slots
10 Air filter (intake)
11 Filter retainer
12 Centrifugal fan
13 Brushless motor with inverter
14 Front closing panel (lower)
15 Electric connections

Example:
VED532I



DESCRIPTION OF COMPONENTS

SYSTEM TYPES
I
they are designed for 2- and 4-pipe system with fixed or variable flow rate.
2-pipe system, versions are available with:
- standard main coil;
- larger main coil;
4-pipe system, versions are available with:
- standard main battery + larger hot water coil for heating only.
- larger main battery + standard hot water coil for heating only.
- with hot water for heating only supplied as accessory for versions VED030I, VED130I, VED230I and VED330I.

VENTILATION
variable speed ventilation must be controlled with a control device (not included) with 0-10V outputs and features compatible with the unit. Aermec provides control devices as accessories.

HEAT EXCHANGE COIL
Coils with low pressure drops, made with copper pipe and aluminium corrugated louvers, blocked by the mechanical expansion of the pipes. The collectors are equipped with female hydraulic connections and air vents on the upper part of the coil.

FILTERING SECTION
Intake air filter, easy to remove for periodical cleaning.
Made with renewable raw materials, it can be cleaned with a suction device.
G3 filtration class. Flame behaviour M1 NF F 16-101.

BRUSHLESS ELECTRIC MOTOR WITH INVERTER CONTROL
The electric motor "brushless with Hall probes" and the control system used in the AERMEC VED_I fan coils come from a combination of the most sophisticated technologies in the field of mechanics and electronics, and are completely developed within the industrial group. It is a permanent magnet motor with low peak current and easily adjustable speed.
It is not affected by electromagnet interference. The fact that it is brushless means less friction and reduced wear.
Through the dedicated inverter device it is possible to continuously control the rotor speed and torque, by simply acting on the stator currents.
The electric motor is buffered with elastic supports and the steel shaft is mounted on bearings. The resistance to saline mist is tested according to ASTM B117/64.
The electric motor "brushless with Hall probes" used in the AERMEC modulating fan coils shows great advantages compared to traditional AC motor and to hybrid and inverter motors (without Hall probes) normally used on other modulating fan coils:
- Reduced wear
- Option to precisely and continuously adjust the rotation speed (0-100%)
- Greater energy yield
- Greater reliability and durability
- Low magnetic noise
- Continuous monitoring of the rotor position implies greater efficiency, and guaranteed and controlled peak
- Minimum guaranteed speed 90 rpm (for thermodynamic reasons this limit has been increased to 200 rpm).

The electric motor is buffered with elastic supports.

SUPPORT STRUCTURE
It is made with galvanised sheet metal of suitable thickness. Internal insulation Class 1
Slots are located on the rear side for installation.
The intake and flow inlets connect the fan coil to any type of air ducting.
The ventilation unit is closed on the front with a metal panel.
The flow inlet includes the connection flange.

CONDENSATE DRAIN
Any device is equipped with a condensate drip tray for vertical and horizontal installation. The fan coil tray has condensate drains on the right and left side. We recommend using the condensate drain fitting placed on the side of the hydraulic connections.

HYDRAULIC CONNECTIONS
The connections placed on the left side are female type. The coil can be rotated to take the connections to the right side. The coil can be rotated in the work site.

OPERATING RANGE

VED		030I	040I	130I	140I	230I	240I	330I	340I
Maximum water inlet temperature recommended	°C	65							
Minimum water flow rate (Main coil)	l/h	150	150	150	150	150	150	300	400
Maximum water flow rate (Main coil)	l/h	1500	1500	1500	1500	1500	1500	3000	4000
Minimum water flow rate (Heating only coil accessory)	l/h	50	-	50	-	50	-	100	-
Maximum water flow rate (Heating only coil accessory)	l/h	500	-	500	-	500	-	1000	-

VED		530I	540I	532I	541I	730I	740I	732I	741I
Maximum water inlet temperature recommended	°C	65							
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	4500	4500	4500	4500
Minimum water flow rate (Heating only coil accessory)	l/h	-	-	200	100	-	-	300	300
Maximum water flow rate (Heating only coil accessory)	l/h	-	-	2000	1500	-	-	2500	3000

The earth leakage current of several devices placed under the same circuit breaker is summed, therefore, we recommend paying attention to the calibration value of the circuit breaker and, if necessary, consider splitting the installation in more circuits, each of which protected by its own circuit breaker.

Water temperature

In order to prevent air stratification in the environment and thus, have better mixing, the fan coil should not be supplied with water that is hotter than 65 °C. Using water at a very high temperature can cause creaking due to the heat expansion of the elements (plastic and metal). However, this does not cause damage to the unit unless the maximum operating temperature is exceeded.

Minimum average water temperature

If the fan coil runs continuously in cooling mode in an environment with high relative humidity, condensate may form on the air flow. This condensate could drip onto the floor and onto any underlying objects. To prevent condensation phenomena on the external structure of the appliance with the fan running, the average water temperature must not drop below the limits indicated in the table. These limits depend on the temperature and humidity conditions of the room air. These limits refer to operation with the fan running at minimum speed.
Condensation may form in the event the fan is off for a prolonged period and cold water flows in the coil; **therefore, we recommend installing the 3-way valve (accessory).**

		Dry-bulb temperature of ambient air (Ta) [°C]					
		21	23	25	27	29	31
Wet-bulb temperature of ambient air (Ta) [°C]	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
		MINIMUM AVERAGE WATER TEMPERATURE (Tw) [°C]					

TECHNICAL DATA

Mod.		VED	Speed	030I	040I	130I	140I	230I	240I	330I	340I
2-PIPE SYSTEM CONFIGURATION											
Thermal power (70°C)	(1)	W	H	3688	3916	6289	6575	7160	7909	10507	10951
	(1)	W	M	3374	3568	5833	6089	6500	7141	9343	10017
	(1)	W	L	1820	2366	4397	4518	5350	5800	7813	8312
Water flow rate	(1)	l/h	H	323	343	551	576	616	684	921	960
	(1)	l/h	M	296	313	511	534	559	616	819	878
	(1)	l/h	L	160	207	385	396	460	499	685	72
Pressure drops	(1)	kPa	H	9	12	26	18	37	3	16	32
	(1)	kPa	M	7	10	22	16	30	26	13	28
	(1)	kPa	L	3	4	13	9	27	18	9	22
Thermal power (50°C)	(2)	W	H	2180	2340	3750	3940	4320	4750	6270	6550
	(2)	W	M	1990	2130	3480	3650	3920	4290	5580	5980
	(2)	W	L	1100	1410	2620	2710	3230	3450	4670	4970
Water flow rate	(2)	l/h	H	279	327	516	566	588	691	860	922
	(2)	l/h	M	250	296	480	525	538	624	760	824
	(2)	l/h	L	170	193	358	390	445	499	633	685
Pressure drops	(2)	kPa	H	8	12	27	19	35	31	16	21
	(2)	kPa	M	7	10	23	16	29	26	13	17
	(2)	kPa	L	3	5	13	9	20	13	9	13
4-PIPE SYSTEM CONFIGURATION (with additional heat exchanger)											
Thermal power (70°C)	(3)	W	H	2220	-	3780	-	4493	-	5888	-
	(3)	W	M	2080	-	3596	-	4171	-	5499	-
	(3)	W	L	1590	-	2946	-	3675	-	4896	-
Water flow rate	(3)	l/h	H	196	-	331	-	394	-	515	-
	(3)	l/h	M	183	-	315	-	366	-	482	-
	(3)	l/h	L	140	-	258	-	322	-	429	-
Pressure drops	(3)	kPa	H	8	-	28	-	16	-	26	-
	(3)	kPa	M	7	-	25	-	14	-	23	-
	(3)	kPa	L	5	-	17	-	11	-	19	-
COLD OPERATION common to all system configurations											
Total cooling capacity	(4)	W	H	1624	1900	2997	3290	3420	4020	5000	5360
	(4)	W	M	1454	1720	2790	3050	3130	3630	4420	4790
	(4)	W	L	990	1120	2080	2270	2590	2900	3680	3980
Sensitive cooling capacity	(4)	W	H	1242	1350	2090	2370	2700	3015	3738	3990
	(4)	W	M	1116	1230	1940	2190	2440	2718	3337.5	3570
	(4)	W	L	750	810	1440	1610	2000	2200	2800	2950
Water flow rate	(4)	l/h	H	279	327	515	566	588	691	860	922
	(4)	l/h	M	250	296	480	525	538	624	760	824
	(4)	l/h	L	170	193	358	390	445	499	633	685
Water pressure drops	(4)	kPa	H	9	14	31	23	44	37	18	26
	(4)	kPa	M	7	12	27	20	36	31	14	21
	(4)	kPa	L	3	5	15	11	25	16	10	16
Air flow rate		m^3/h	H	285	277	433	420	590	570	805	775
		m^3/h	M	256	249	397	386	524	509	704	685
		m^3/h	L	161	160	287	280	417	406	572	563
Centrifugal		type		fans							
		n°		1	1	2	2	2	2	3	3
Useful static pressure		Pa	H	61	61	60	60	64	63	66	64
		Pa	M	50	50	50	50	50	50	50	50
		Pa	L	21	21	26	26	32	32	33	34
Input power		W	H	36	36	45	45	53	53	86	86
		W	M	29	29	33	33	40	40	60	60
		W	L	12	12	17	17	24	24	35	35
Maximum input current		(A)		0.33	0.33	0.41	0.41	0.5	0.5	0.5	0.5
Sound power (inlet+radiator)	(5)	dB(A)	H	55,5	55,5	56,2	56,2	58,2	58,2	59,5	59,5
	(5)	dB(A)	M	53,5	53,5	49,2	49,2	55,2	55,2	56,4	56,4
	(5)	dB(A)	L	45,5	45,5	48,2	48,2	50,2	50,2	39,5	39,5
Sound power (outlet)	(5)	dB(A)	H	50	50	50	50	52,0	52,0	54,0	54,0
	(5)	dB(A)	M	48	48	48	48	49,0	49,0	51,0	51,0
	(5)	dB(A)	L	40	40	42	42	44	44	34,0	34,0
Water content		l		1.11	1.48	1.5	1.48	1.48	1.48	2.52	3.4
Coil connections		ø Gas (F)		3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Coil connections (additional heat exchanger)		ø Gas (F)		1/2"	-	1/2"	-	1/2"	-	1/2"	-
0-10V signal			H	9V	9V	9V	9V	9V	9V	9V	9V
			M	8.2V	8.2V	8.2V	8.2V	8.2V	7.8V	7.8V	7.8V
			L	5.4V	5.4V	5.8V	5.8V	6,6V	6,2V	6,2V	6,6V
Electric power supply				110/240 V ~ 50/60Hz							

H maximum speed; **M** medium speed; **L** minimum speed

Heating

2-pipe system configuration

(1) Ambient air temperature 20°C d.b.; Inlet water temperature 70°C; ΔT water 10°C

2-pipe system configuration (EUROVENT)

(2) Ambient air temperature 20°C d.b.; Inlet water temperature 50°C; Water flow rate the same as in Cooling mode

4-pipe system configuration with additional heat exchanger

(3) Ambient air temperature 20°C d.b.; Inlet water temperature 70°C; ΔT water 10°C

Cooling (EUROVENT)

(4) Ambient air temperature 27°C d.b./19°C w.b.; Inlet water temperature 7°C; ΔT water 5°C

(5) Sound power based on the measurements carried out in accordance with Eurovent 8/2 standard

Note: For further information, refer to the selection program or to the technical documentation on www.aermec.com

TECHNICAL DATA

Mod.		VED	Speed	530I	540I	541I	730I	740I	741I
2-PIPE SYSTEM CONFIGURATION									
Thermal power (70°C)	(1)	W	H	17572	19908	-	28999	31706	-
	(1)	W	M	16467	18586	-	25364	27650	-
	(1)	W	L	13802	15377	-	21178	22883	-
Water flow rate	(1)	l/h	H	1541	1746	-	2544	2781	-
	(1)	l/h	M	1444	1630	-	2225	2425	-
	(1)	l/h	L	1211	1349	-	1858	2007	-
Pressure drops	(1)	kPa	H	21	29	-	67	46	-
	(1)	kPa	M	18	25	-	55	36	-
	(1)	kPa	L	13	18	-	38	26	-
Thermal power (50°C)	(2)	W	H	10420	11820	-	17280	19150	-
	(2)	W	M	9780	11050	-	15120	16680	-
	(2)	W	L	8190	9170	-	12640	13840	-
Water flow rate	(2)	l/h	H	1335	1543	-	2382	2766	-
	(2)	l/h	M	1271	1469	-	2098	2448	-
	(2)	l/h	L	1060	1278	-	1789	2057	-
Pressure drops	(2)	kPa	H	16	23	-	57	35	-
	(2)	kPa	M	15	21	-	44	28	-
	(2)	kPa	L	11	16	-	33	21	-
4-PIPE SYSTEM CONFIGURATION (with additional heat exchanger)									
Thermal power (70°C)	(3)	W	H	-	-	8850	-	-	14500
	(3)	W	M	-	-	8520	-	-	13300
	(3)	W	L	-	-	7475	-	-	11830
Water flow rate	(3)	l/h	H	-	-	776	-	-	1272
	(3)	l/h	M	-	-	747	-	-	1167
	(3)	l/h	L	-	-	656	-	-	1038
Pressure drops	(3)	kPa	H	-	-	32	-	-	30
	(3)	kPa	M	-	-	30	-	-	26
	(3)	kPa	L	-	-	24	-	-	21
COLD OPERATION common to all system configurations									
Total cooling capacity	(4)	W	H	7760	8970	8970	13850	16080	16080
	(4)	W	M	7390	8540	8540	12200	14230	14230
	(4)	W	L	6160	7430	7430	10400	11960	11960
Sensitive cooling capacity	(4)	W	H	6020	6450	6450	11440	11320	11320
	(4)	W	M	5710	6130	6130	9990	9970	9970
	(4)	W	L	4720	5040	5040	8480	8340	8340
Water flow rate	(4)	l/h	H	1335	1543	1543	2382	2766	2766
	(4)	l/h	M	1271	1469	1469	2098	2448	2448
	(4)	l/h	L	1060	1278	1278	1789	2057	2057
Water pressure drops	(4)	kPa	H	21	28	28	58	45	45
	(4)	kPa	M	19	25	25	46	37	37
	(4)	kPa	L	12	19	19	35	27	27
Air flow rate		m^3/h	H	1520	1500	1460	2410	2350	2350
		m^3/h	M	1400	1380	1360	2040	2000	2000
		m^3/h	L	1120	1100	1060	1640	1600	1600
Centrifugal		type		fans					
		n°		2	2	2	3	3	3
Useful static pressure		Pa	H	58	56	56	69	69	69
		Pa	M	50	50	50	50	50	50
		Pa	L	32	32	32	32	32	32
Input power		W	H	205	205	185	370	370	363
		W	M	170	170	163	245	245	240
		W	L	115	115	106	140	140	138
Sound power (inlet+radiator)	(5)	dB(A)	H	63,5	63,5	63,5	70	70	70
	(5)	dB(A)	M	61	61	61	67,5	67,5	67,5
	(5)	dB(A)	L	55	55	55	63,5	63,5	63,5
Sound power (outlet)	(5)	dB(A)	H	58	58	58	64,5	64,5	64,5
	(5)	dB(A)	M	55,5	55,5	55,5	62,0	62,0	62,0
	(5)	dB(A)	L	49,5	49,5	49,5	58,0	58,0	58,0
Coil connections		ø Gas (F)		3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Coil connections (additional heat exchanger)		ø Gas (F)		-	-	1/2"	-	-	1/2"
0-10V signal			H	9V	9V	9V	9V	9V	9V
			M	8.4V	8.4V	8.4V	7.6V	7.6V	7.6V
			L	6.6V	6.6V	6.6V	6.2V	6.2V	6.2V
Electric power supply				110/240 V ~ 50/60Hz					

H maximum speed; **M** medium speed; **L** minimum speed

Heating

2-pipe system configuration

(1) Ambient air temperature 20°C d.b.; Inlet water temperature 70°C; ΔT water 10°C

2-pipe system configuration (EUROVENT)

(2) Ambient air temperature 20°C d.b.; Inlet water temperature 50°C; Water flow rate the same as in Cooling mode

4-pipe system with additional heat exchanger (EUROVENT)

(3) Ambient air temperature 20°C d.b.; Inlet water temperature 70°C; ΔT water 10°C

Cooling (EUROVENT)

(4) Ambient air temperature 27°C d.b./19°C w.b.; Inlet water temperature 7°C; ΔT water 5°C

(5) Sound power based on the measurements carried out in accordance with Eurovent 8/2 standard

Note: For further information, refer to the selection program or to the technical documentation on www.aermec.com

COOLING CAPACITY

The table shows the sensitive and total cooling capacities at maximum speed depending on the temperature of the water entering, of its heat drop and temperature of the air with dry bulb and wet bulb respectively for sensitive yield and total yield for standard coil versions. The performances at medium and minimum speed are obtained by multiplying the values in the table by the corrective factors indicated for each speed.

NB: The yield values marked in bold indicate the nominal value.

Key:
Tw [°C] = Inlet water temperature
Ta W.B. [°C] = Inlet water temperature with wet bulb
Ta D.B. [°C] = Inlet water temperature with dry bulb
Pc [w] = Total cooling capacity
Ps [w] = Sensitive cooling capacity
Qv [m³/h] = Air flow rate
H = maximum speed
M = medium speed
L = minimum speed

NB: The yield values marked in bold indicate the nominal value.
To calculate the cooling capacity yielded, the values shown in the table must be multiplied by the corrective factors referred to the different speeds.
Sensitive yield values greater than the total yield indicate that cooling occurs without dehumidification.
In this case take into account the sensitive yield values only.

The cooling capacities of the table must be multiplied by the following corrective factors:															
VED		**030I**	**040I**	**130I**	**140I**	**230I**	**240I**	**330I**	**340I**	**530I**	**540I**	**541I**	**730I**	**740I**	**741I**
Total cooling capacity corrective values	**H**	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	M	0,84	0,81	0,79	0,77	0,81	0,77	0,82	0,81	0,84	0,84	0,90	0,82	0,85	0,90
	L	0,65	0,56	0,58	0,65	0,63	0,65	0,61	0,60	0,60	0,60	0,66	0,62	0,67	0,75
Sensitive cooling capacity corrective values	**H**	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	M	0,83	0,81	0,79	0,83	0,81	0,83	0,81	0,80	0,85	0,88	0,83	0,82	0,84	0,97
	L	0,61	0,54	0,55	0,58	0,59	0,58	0,60	0,59	0,60	0,61	0,61	0,61	0,66	0,80

COOLING POWER YELDED

VED030I			Tw(in) = 5°C		Tw(in) = 7°C		Tw(in) = 9°C		Tw(in) = 11°C		Tw(in) = 13°C	
Dt w	Twb	Tdb	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps
[°C]	[°C]	[°C]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]
3	15	21	1279	1040	1022	899	739	1042	551	551	428	428
		23	1271	1173	1016	1031	788	788	669	669	548	548
		25	1266	1266	1013	1163	903	903	784	784	666	666
		27	1247	1247	1133	1313	1016	1016	899	899	781	781
		29	1361	1361	1244	1442	1128	1128	1011	1011	895	895
		31	1469	1469	1354	1569	1238	1238	1122	1122	1007	1007
	17	21	1610	1041	1357	902	1083	761	778	616	406	406
		23	1619	1173	1368	1035	1095	895	793	751	548	548
		25	1607	1303	1357	1166	1087	1027	786	786	666	666
		27	1601	1433	1354	1296	1084	1084	899	899	781	781
		29	1581	1560	1335	1424	1128	1128	1011	1011	895	895
		31	1573	1573	1354	1569	1238	1238	1122	1122	1007	1007
	19	21	2001	1036	1751	899	1481	761	1188	617	861	473
		23	1991	1172	1741	1035	1473	897	1181	759	857	611
		25	1981	1302	1734	1166	1467	1030	1177	891	854	748
		27	1970	1432	1723	1296	1459	1160	1170	1021	849	849
		29	1976	1570	1713	1425	1450	1290	1163	1152	895	895
		31	1967	1695	1707	1552	1445	1417	1160	1160	1007	1007
	21	21	2380	1027	2131	890	1864	753	1574	616	1258	476
		23	2409	1176	2144	1031	1878	895	1591	754	1277	616
		25	2396	1310	2133	1166	1868	1031	1582	894	1271	752
		27	2380	1439	2118	1295	1855	1161	1571	1025	1261	888
		29	2391	1567	2131	1424	1870	1290	1588	1156	1281	1019
		31	2346	1693	2088	1551	1828	1418	1547	1283	1241	1148
	23	23	2818	1166	2554	1022	2289	887	2004	751	1695	615
		25	2829	1303	2567	1160	2304	1026	2021	887	1714	752
		27	2686	1437	2426	1294	2164	1160	1882	1026	1576	890
		29	2794	1554	2551	1422	2292	1289	2012	1156	1709	1022
		31	2754	1680	2513	1549	2255	1417	1977	1284	1675	1150
5	15	21	1167	977	876	823	628	628	503	503	370	370
		23	1161	1111	871	956	749	749	627	627	501	501
		25	1157	1157	987	1144	868	868	747	747	625	625
		27	1219	1219	1101	1276	983	983	864	864	744	744
		29	1330	1330	1214	1407	1097	1097	979	979	861	861
		31	1441	1441	1324	1535	1208	1208	1092	1092	975	975
	17	21	1512	986	1238	840	925	684	513	497	370	370
		23	1522	1119	1250	974	941	820	627	627	501	501
		25	1511	1250	1241	1105	934	934	747	747	625	625
		27	1508	1380	1239	1236	983	983	864	864	744	744
		29	1488	1488	1221	1364	1097	1097	979	979	861	861
		31	1480	1480	1324	1535	1208	1208	1092	1092	975	975
	19	21	1914	986	1648	845	1356	696	1022	543	594	362
		23	1904	1123	1640	982	1349	837	1018	685	592	501
		25	1895	1255	1633	1114	1344	970	1015	818	592	592
		27	1885	1383	**1624**	**1242**	1337	1097	1010	941	744	744
		29	1875	1512	1615	1373	1330	1230	1004	1004	861	861
		31	1867	1639	1610	1500	1327	1327	1092	1092	975	975
	21	21	2299	981	2038	842	1754	700	1439	555	1073	395
		23	2311	1121	2052	983	1770	839	1459	694	1102	542
		25	2299	1256	2042	1118	1761	978	1452	832	1097	680
		27	2284	1385	2029	1248	1750	1110	1441	967	1090	816
		29	2297	1514	2043	1377	1767	1239	1462	1098	1113	949
		31	2253	1641	2000	1505	1725	1367	1421	1226	1072	1072
	23	23	2725	1113	2468	977	2191	839	1888	698	1553	551
		25	2738	1252	2483	1116	2207	976	1907	836	1575	693
		27	2595	1385	2341	1250	2066	1112	1765	973	1431	826
		29	2721	1514	2470	1379	2198	1243	1901	1106	1574	964
		31	2682	1640	2432	1507	2161	1372	1866	1234	1539	1094
7	15	21	996	885	596	684	569	569	416	416	176	176
		23	991	991	825	949	699	699	569	569	420	420
		25	1066	1066	945	1095	822	822	697	697	568	568
		27	1182	1182	1062	1231	942	942	820	820	696	696
		29	1295	1295	1177	1364	1059	1059	939	939	818	818
		31	1407	1407	1290	1495	1173	1173	1055	1055	936	936
	17	21	1375	911	1054	747	618	544	416	416	176	176
		23	1387	1045	1070	883	644	644	569	569	420	420
		25	1378	1177	1062	1014	822	822	697	697	568	568
		27	1375	1307	1062	1146	942	942	820	820	696	696
		29	1356	1356	1177	1364	1059	1059	939	939	818	818
		31	1349	1349	1290	1495	1173	1173	1055	1055	936	936
	19	21	1796	923	1504	771	1162	605	702	406	176	176
		23	1788	1060	1497	909	1157	747	700	545	420	420
		25	1781	1192	1490	1041	1154	880	700	683	568	568
		27	1772	1319	1483	1166	1148	999	820	820	696	696
		29	1762	1451	1476	1301	1142	1142	939	939	818	818
		31	1757	1578	1472	1430	1141	1141	1055	1055	936	936
	21	21	2193	923	1913	778	1598	626	1229	460	720	256
		23	2208	1065	1929	920	1617	766	1253	605	760	403
		25	2197	1200	1920	1057	1609	906	1248	743	758	545
		27	2183	1330	1908	1187	1599	1039	1240	878	751	681
		29	2199	1460	1925	1317	1619	1170	1264	1012	789	789
		31	2154	1586	1882	1445	1577	1297	1220	1139	936	936
	23	23	2630	1062	2358	921	2059	777	1723	626	1330	461
		25	2645	1202	2375	1061	2078	914	1746	765	1357	602
		27	2501	1334	2231	1193	1933	1049	1597	899	1192	730
		29	2631	1463	2364	1325	2072	1184	1744	1037	1361	878
		31	2592	1591	2327	1453	2036	1311	1709	1165	1326	1007

COOLING POWER YELDED

VED040I			Tw(in) = 5°C		Tw(in) = 7°C		Tw(in) = 9°C		Tw(in) = 11°C		Tw(in) = 13°C	
Dt w	Twb	Tdb	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps
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		23	1487	1275	1189	1121	922	922	782	782	642	642
		25	1481	1417	1185	1264	1057	1057	918	918	779	779
		27	1459	1459	1326	1427	1189	1189	1051	1051	914	914
		29	1592	1592	1456	1567	1319	1319	1183	1183	1047	1047
		31	1719	1719	1584	1705	1448	1448	1313	1313	1178	1178
	17	21	1884	1132	1587	980	1267	827	910	669	475	475
		23	1894	1275	1600	1125	1281	972	928	816	642	642
		25	1880	1417	1587	1267	1271	1116	920	920	779	779
		27	1874	1557	1584	1409	1268	1258	1051	1051	914	914
		29	1850	1695	1562	1548	1319	1319	1183	1183	1047	1047
		31	1840	1832	1584	1705	1448	1448	1313	1313	1178	1178
	19	21	2342	1126	2049	977	1733	827	1389	670	1008	514
		23	2329	1274	2037	1125	1724	975	1382	825	1002	664
		25	2318	1416	2028	1268	1716	1119	1377	968	1000	813
		27	2305	1556	2016	1409	1706	1261	1368	1109	993	984
		29	2312	1706	2004	1549	1696	1402	1361	1252	1047	1047
		31	2302	1842	1997	1687	1691	1540	1358	1358	1178	1178
	21	21	2785	1116	2493	968	2181	819	1842	669	1472	518
		23	2819	1279	2508	1120	2197	972	1861	820	1494	669
		25	2803	1424	2495	1267	2185	1120	1851	971	1487	818
		27	2785	1564	2478	1408	2171	1262	1838	1114	1476	966
		29	2798	1703	2493	1548	2188	1402	1858	1256	1498	1107
		31	2745	1840	2442	1686	2139	1541	1810	1395	1452	1247
	23	23	3297	1267	2988	1110	2678	964	2344	816	1983	668
		25	3310	1417	3003	1261	2695	1115	2364	965	2005	817
		27	3143	1562	2838	1407	2532	1261	2202	1115	1844	968
		29	3268	1689	2985	1546	2681	1401	2353	1256	1999	1110
		31	3222	1826	2940	1684	2638	1540	2313	1396	1960	1250
5	15	21	1366	1062	1025	894	735	735	588	588	433	433
		23	1358	1207	1020	1039	877	877	733	733	586	586
		25	1354	1349	1155	1243	1015	1015	874	874	731	731
		27	1427	1427	1288	1387	1150	1150	1011	1011	870	870
		29	1557	1557	1420	1529	1283	1283	1146	1146	1007	1007
		31	1686	1686	1549	1668	1414	1414	1278	1278	1140	1140
	17	21	1769	1071	1448	913	1082	743	600	540	433	433
		23	1781	1216	1463	1058	1101	891	733	733	586	586
		25	1768	1359	1452	1201	1092	1035	874	874	731	731
		27	1764	1500	1449	1343	1150	1150	1011	1011	870	870
		29	1741	1639	1428	1482	1283	1283	1146	1146	1007	1007
		31	1732	1732	1549	1668	1414	1414	1278	1278	1140	1140
	19	21	2239	1072	1928	919	1587	756	1196	590	695	393
		23	2227	1221	1918	1067	1578	910	1191	744	692	545
		25	2217	1364	1911	1211	1573	1055	1188	889	692	692
		27	2205	1504	**1900**	**1350**	1564	1193	1181	1023	870	870
		29	2193	1643	1890	1493	1556	1337	1175	1174	1007	1007
		31	2184	1781	1884	1631	1552	1477	1278	1278	1140	1140
	21	21	2690	1066	2384	915	2052	761	1684	604	1256	429
		23	2703	1219	2401	1068	2071	912	1706	754	1289	589
		25	2690	1365	2389	1215	2061	1063	1698	904	1284	739
		27	2672	1506	2373	1357	2047	1206	1686	1051	1275	887
		29	2688	1645	2391	1497	2067	1347	1710	1193	1302	1031
		31	2636	1783	2340	1636	2018	1486	1662	1332	1254	1170
	23	23	3188	1210	2888	1061	2563	912	2209	759	1816	599
		25	3203	1361	2905	1213	2582	1060	2232	909	1843	753
		27	3036	1506	2739	1359	2417	1209	2065	1058	1674	898
		29	3184	1645	2890	1499	2571	1351	2224	1202	1841	1048
		31	3138	1782	2845	1638	2529	1491	2184	1341	1801	1189
7	15	21	1166	962	697	743	666	666	486	486	205	205
		23	1159	1106	965	1031	818	818	666	666	492	492
		25	1248	1248	1106	1191	962	962	816	816	664	664
		27	1383	1383	1243	1338	1102	1102	960	960	814	814
		29	1516	1516	1378	1483	1238	1238	1099	1099	957	957
		31	1646	1646	1509	1625	1372	1372	1234	1234	1095	1095
	17	21	1608	990	1233	812	723	591	486	486	205	205
		23	1623	1136	1252	960	753	743	666	666	492	492
		25	1612	1280	1242	1103	962	962	816	816	664	664
		27	1608	1420	1242	1245	1102	1102	960	960	814	814
		29	1587	1560	1378	1483	1238	1238	1099	1099	957	957
		31	1578	1578	1509	1625	1372	1372	1234	1234	1095	1095
	19	21	2102	1004	1759	838	1359	657	821	441	205	205
		23	2092	1152	1751	988	1354	812	819	593	492	474
		25	2084	1295	1744	1132	1350	957	819	743	664	664
		27	2073	1433	1735	1268	1343	1086	960	960	814	814
		29	2062	1577	1726	1415	1337	1241	1099	1099	957	957
		31	2055	1715	1722	1554	1335	1335	1234	1234	1095	1095
	21	21	2566	1004	2238	845	1869	681	1437	500	842	278
		23	2583	1157	2257	1000	1892	833	1466	657	890	438
		25	2571	1304	2246	1148	1883	985	1460	807	887	593
		27	2554	1446	2233	1290	1871	1129	1450	955	879	741
		29	2572	1587	2253	1431	1895	1272	1478	1100	923	891
		31	2521	1724	2202	1570	1845	1410	1427	1238	1095	1095
	23	23	3077	1154	2759	1001	2409	844	2016	681	1556	501
		25	3094	1306	2779	1153	2432	994	2043	832	1587	654
		27	2926	1450	2610	1297	2262	1141	1868	977	1395	793
		29	3078	1591	2766	1440	2424	1286	2040	1127	1592	955
		31	3032	1730	2722	1579	2382	1425	1999	1266	1551	1095

COOLING POWER YELDED

VED130I			Tw(in) = 5°C		Tw(in) = 7°C		Tw(in) = 9°C		Tw(in) = 11°C		Tw(in) = 13°C	
Dt w	Twb	Tdb	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps
[°C]	[°C]	[°C]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]
3	15	21	2361	1751	1886	1513	1363	1754	1016	1016	790	790
		23	2346	1973	1875	1736	1455	1455	1234	1234	1012	1012
		25	2336	2193	1869	1957	1667	1667	1448	1448	1228	1228
		27	2302	2302	2091	2210	1875	1875	1658	1658	1442	1442
		29	2511	2511	2296	2426	2081	2081	1866	1866	1651	1651
		31	2712	2712	2498	2640	2285	2285	2071	2071	1858	1858
	17	21	2971	1752	2504	1518	1998	1280	1436	1036	750	750
		23	2987	1973	2524	1742	2021	1505	1463	1263	1012	1012
		25	2965	2193	2504	1961	2005	1728	1450	1450	1228	1228
		27	2955	2411	2498	2181	2001	1948	1658	1658	1442	1442
		29	2918	2625	2464	2396	2081	2081	1866	1866	1651	1651
		31	2902	2837	2498	2640	2285	2285	2071	2071	1858	1858
	19	21	3694	1743	3232	1513	2733	1280	2191	1037	1590	795
		23	3674	1972	3213	1742	2719	1510	2180	1277	1581	1028
		25	3656	2191	3199	1963	2707	1733	2171	1499	1577	1259
		27	3636	2410	3180	2181	2692	1952	2159	1717	1567	1524
		29	3646	2641	3162	2397	2676	2170	2147	1939	1651	1651
		31	3631	2852	3150	2611	2667	2384	2141	2141	1858	1858
	21	21	4393	1728	3933	1498	3440	1268	2905	1036	2322	801
		23	4446	1979	3956	1734	3466	1505	2935	1269	2356	1036
		25	4422	2205	3936	1961	3447	1734	2920	1504	2345	1266
		27	4393	2422	3909	2179	3424	1954	2900	1725	2328	1495
		29	4413	2637	3933	2396	3451	2170	2931	1945	2363	1714
		31	4330	2849	3853	2609	3374	2385	2855	2160	2290	1931
	23	23	5200	1961	4713	1719	4224	1492	3698	1263	3127	1034
		25	5221	2193	4737	1952	4251	1727	3729	1493	3163	1265
		27	4958	2419	4476	2178	3993	1952	3473	1727	2908	1498
		29	5156	2616	4708	2393	4230	2169	3712	1945	3153	1719
		31	5082	2828	4638	2606	4161	2384	3648	2161	3092	1936
5	15	21	2154	1645	1617	1384	1160	1160	927	927	682	682
		23	2143	1869	1608	1608	1383	1383	1157	1157	924	924
		25	2136	2088	1822	1925	1601	1601	1379	1379	1154	1154
		27	2250	2250	2032	2148	1815	1815	1595	1595	1373	1373
		29	2455	2455	2240	2367	2024	2024	1807	1807	1588	1588
		31	2659	2659	2444	2582	2230	2230	2015	2015	1799	1799
	17	21	2791	1658	2285	1413	1707	1151	946	836	682	682
		23	2809	1883	2308	1639	1737	1380	1157	1150	924	924
		25	2789	2104	2290	1860	1723	1602	1379	1379	1154	1154
		27	2782	2322	2286	2079	1815	1815	1595	1595	1373	1373
		29	2746	2537	2253	2294	2024	2024	1807	1807	1588	1588
		31	2732	2732	2444	2582	2230	2230	2015	2015	1799	1799
	19	21	3532	1660	3041	1422	2503	1171	1886	913	1096	609
		23	3513	1890	3026	1652	2490	1408	1879	1153	1092	844
		25	3497	2111	3014	1875	2481	1633	1873	1377	1092	1075
		27	3479	2328	**2997**	**2090**	2467	1846	1863	1584	1373	1373
		29	3460	2544	2981	2311	2454	2070	1853	1817	1588	1588
		31	3446	2758	2971	2525	2448	2287	2015	2015	1799	1799
	21	21	4243	1651	3761	1416	3236	1178	2656	934	1981	665
		23	4264	1887	3787	1654	3266	1412	2692	1168	2034	912
		25	4243	2113	3768	1881	3251	1646	2679	1399	2025	1143
		27	4215	2331	3744	2101	3229	1867	2660	1627	2011	1374
		29	4240	2547	3771	2317	3261	2085	2697	1848	2054	1596
		31	4158	2761	3691	2532	3183	2301	2621	2063	1978	1811
	23	23	5028	1873	4555	1643	4043	1412	3484	1175	2865	927
		25	5052	2107	4582	1878	4073	1642	3520	1407	2907	1166
		27	4789	2331	4320	2104	3813	1872	3258	1637	2640	1390
		29	5022	2547	4558	2320	4056	2092	3509	1861	2904	1622
		31	4949	2759	4488	2535	3989	2308	3444	2076	2841	1840
7	15	21	1839	1489	1099	1151	1051	1051	767	767	324	324
		23	1829	1713	1522	1596	1290	1290	1051	1051	775	775
		25	1968	1968	1744	1843	1518	1518	1287	1287	1048	1048
		27	2181	2181	1961	2072	1739	1739	1514	1514	1284	1284
		29	2391	2391	2173	2296	1954	1954	1733	1733	1509	1509
		31	2597	2597	2381	2516	2164	2164	1946	1946	1727	1727
	17	21	2537	1533	1945	1257	1141	915	767	767	324	324
		23	2560	1758	1975	1486	1188	1150	1051	1051	775	775
		25	2543	1981	1959	1707	1518	1518	1287	1287	1048	1048
		27	2537	2199	1959	1928	1739	1739	1514	1514	1284	1284
		29	2503	2416	2173	2296	1954	1954	1733	1733	1509	1509
		31	2490	2490	2381	2516	2164	2164	1946	1946	1727	1727
	19	21	3315	1554	2775	1298	2144	1018	1296	683	324	324
		23	3299	1784	2762	1530	2136	1257	1291	918	775	735
		25	3287	2005	2750	1752	2130	1481	1291	1150	1048	1048
		27	3269	2219	2736	1963	2118	1681	1514	1514	1284	1284
		29	3252	2441	2723	2190	2108	1922	1733	1733	1509	1509
		31	3242	2655	2716	2407	2105	2105	1946	1946	1727	1727
	21	21	4048	1554	3530	1309	2948	1054	2267	774	1329	430
		23	4075	1792	3560	1548	2984	1289	2312	1018	1403	678
		25	4055	2019	3543	1778	2970	1525	2303	1249	1399	918
		27	4029	2238	3522	1998	2951	1748	2288	1478	1386	1146
		29	4058	2457	3553	2216	2988	1969	2332	1702	1456	1380
		31	3976	2669	3473	2431	2910	2182	2252	1916	1727	1727
	23	23	4853	1787	4351	1549	3800	1307	3180	1054	2454	775
		25	4880	2022	4383	1786	3835	1539	3222	1287	2504	1013
		27	4615	2244	4116	2008	3567	1766	2947	1513	2200	1228
		29	4855	2463	4363	2229	3824	1992	3218	1745	2511	1478
		31	4783	2678	4294	2444	3757	2207	3153	1960	2447	1695

COOLING POWER YELDED

VED140I			Tw(in) = 5°C		Tw(in) = 7°C		Tw(in) = 9°C		Tw(in) = 11°C		Tw(in) = 13°C	
Dt w	Twb	Tdb	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps
[°C]	[°C]	[°C]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]
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		23	2576	2238	2058	1968	1597	1597	1355	1355	1111	1111
		25	2565	2487	2052	2219	1830	1830	1589	1589	1348	1348
		27	2527	2527	2296	2506	2058	2058	1820	1820	1583	1583
		29	2757	2757	2521	2751	2285	2285	2049	2049	1813	1813
		31	2977	2977	2742	2993	2508	2508	2274	2274	2039	2039
	17	21	3262	1987	2749	1721	2193	1451	1577	1175	823	823
		23	3279	2238	2771	1975	2219	1707	1606	1432	1111	1111
		25	3255	2487	2749	2224	2201	1960	1592	1592	1348	1348
		27	3244	2734	2742	2473	2196	2196	1820	1820	1583	1583
		29	3203	2976	2705	2717	2285	2285	2049	2049	1813	1813
		31	3186	3186	2742	2993	2508	2508	2274	2274	2039	2039
	19	21	4055	1977	3548	1716	3000	1451	2406	1176	1745	902
		23	4033	2236	3528	1975	2985	1712	2393	1448	1735	1166
		25	4014	2485	3512	2226	2972	1965	2384	1700	1731	1427
		27	3992	2732	3491	2473	2955	2214	2370	1948	1720	1720
		29	4003	2995	3471	2719	2938	2461	2357	2198	1813	1813
		31	3985	3234	3458	2961	2928	2703	2351	2351	2039	2039
	21	21	4823	1960	4317	1699	3776	1437	3189	1175	2549	909
		23	4881	2245	4343	1966	3805	1707	3222	1439	2587	1175
		25	4854	2501	4321	2224	3784	1966	3205	1705	2574	1436
		27	4823	2746	4291	2471	3759	2215	3183	1956	2555	1695
		29	4845	2990	4317	2717	3789	2461	3218	2205	2595	1944
		31	4753	3230	4229	2959	3704	2705	3134	2449	2514	2190
	23	23	5708	2224	5173	1949	4637	1692	4059	1432	3433	1173
		25	5732	2487	5200	2214	4667	1958	4094	1693	3473	1434
		27	5442	2743	4914	2470	4384	2214	3812	1958	3192	1699
		29	5660	2966	5169	2713	4643	2459	4075	2205	3462	1949
		31	5579	3206	5092	2956	4568	2703	4004	2451	3394	2195
5	15	21	2365	1865	1775	1570	1273	1273	1018	1018	749	749
		23	2352	2119	1765	1824	1518	1518	1270	1270	1015	1015
		25	2344	2344	2000	2183	1757	1757	1514	1514	1267	1267
		27	2470	2470	2231	2435	1992	1992	1751	1751	1507	1507
		29	2695	2695	2459	2684	2222	2222	1984	1984	1743	1743
		31	2919	2919	2683	2928	2448	2448	2212	2212	1975	1975
	17	21	3063	1881	2508	1602	1874	1305	1038	948	749	749
		23	3084	2135	2533	1858	1907	1565	1270	1270	1015	1015
		25	3062	2385	2514	2109	1891	1817	1514	1514	1267	1267
		27	3054	2633	2510	2358	1992	1992	1751	1751	1507	1507
		29	3015	2877	2473	2602	2222	2222	1984	1984	1743	1743
		31	2999	2999	2683	2928	2448	2448	2212	2212	1975	1975
	19	21	3877	1882	3339	1613	2747	1328	2071	1036	1204	690
		23	3856	2143	3321	1874	2733	1597	2063	1307	1199	957
		25	3839	2394	3309	2126	2724	1851	2056	1561	1199	1199
		27	3819	2640	**3290**	**2370**	2708	2094	2045	1796	1507	1507
		29	3798	2885	3273	2621	2694	2348	2034	2034	1743	1743
		31	3782	3127	3262	2863	2687	2593	2212	2212	1975	1975
	21	21	4657	1872	4129	1606	3553	1336	2916	1060	2174	754
		23	4681	2140	4157	1875	3586	1601	2955	1324	2233	1034
		25	4657	2396	4136	2133	3568	1867	2941	1587	2223	1297
		27	4627	2643	4110	2382	3545	2118	2920	1844	2207	1558
		29	4654	2889	4140	2628	3580	2365	2961	2095	2255	1810
		31	4564	3131	4052	2871	3495	2609	2878	2339	2171	2054
	23	23	5520	2124	5000	1863	4439	1601	3825	1333	3145	1051
		25	5546	2389	5030	2130	4472	1862	3864	1595	3191	1322
		27	5257	2643	4742	2385	4185	2123	3576	1857	2898	1577
		29	5513	2889	5003	2631	4453	2372	3852	2111	3188	1839
		31	5433	3129	4926	2875	4379	2617	3781	2355	3118	2087
7	15	21	2019	1688	1207	1305	1153	1153	842	842	356	356
		23	2008	1942	1671	1810	1416	1416	1153	1153	851	851
		25	2160	2160	1915	2090	1666	1666	1413	1413	1150	1150
		27	2395	2395	2152	2349	1909	1909	1662	1662	1410	1410
		29	2624	2624	2385	2604	2145	2145	1902	1902	1657	1657
		31	2851	2851	2613	2853	2376	2376	2137	2137	1896	1896
	17	21	2785	1738	2135	1425	1252	1037	842	842	356	356
		23	2810	1994	2168	1685	1304	1304	1153	1153	851	851
		25	2791	2246	2151	1936	1666	1666	1413	1413	1150	1150
		27	2785	2494	2151	2186	1909	1909	1662	1662	1410	1410
		29	2747	2739	2385	2604	2145	2145	1902	1902	1657	1657
		31	2733	2733	2613	2853	2376	2376	2137	2137	1896	1896
	19	21	3639	1762	3046	1472	2354	1154	1422	775	356	356
		23	3622	2023	3032	1735	2344	1425	1418	1041	851	833
		25	3608	2274	3019	1987	2338	1680	1418	1304	1150	1150
		27	3589	2516	3004	2226	2325	1906	1662	1662	1410	1410
		29	3570	2768	2989	2483	2314	2179	1902	1902	1657	1657
		31	3559	3011	2982	2729	2311	2311	2137	2137	1896	1896
	21	21	4443	1762	3875	1484	3237	1195	2489	878	1459	488
		23	4473	2032	3908	1755	3276	1462	2538	1154	1540	769
		25	4451	2289	3889	2016	3260	1729	2528	1417	1536	1041
		27	4423	2538	3866	2265	3240	1982	2511	1676	1521	1300
		29	4454	2786	3900	2513	3281	2233	2560	1930	1599	1565
		31	4365	3026	3812	2756	3194	2475	2472	2173	1896	1896
	23	23	5328	2027	4777	1757	4171	1482	3491	1195	2694	879
		25	5357	2293	4811	2025	4210	1745	3537	1460	2749	1149
		27	5066	2545	4519	2277	3916	2002	3235	1716	2415	1393
		29	5329	2792	4789	2528	4198	2258	3532	1978	2757	1676
		31	5250	3036	4714	2772	4124	2502	3462	2222	2686	1922

COOLING POWER YELDED

VED2301			Tw(in) = 5°C		Tw(in) = 7°C		Tw(in) = 9°C		Tw(in) = 11°C		Tw(in) = 13°C	
Dt w	Twb	Tdb	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps
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		23	2677	2549	2139	2242	1660	1660	1408	1408	1155	1155
		25	2666	2666	2133	2528	1902	1902	1652	1652	1402	1402
		27	2627	2627	2386	2855	2139	2139	1892	1892	1645	1645
		29	2866	2866	2620	3134	2375	2375	2130	2130	1884	1884
		31	3095	3095	2851	3410	2607	2607	2363	2363	2120	2120
	17	21	3391	2264	2857	1960	2280	1653	1639	1338	855	855
		23	3409	2549	2880	2250	2306	1945	1670	1632	1155	1155
		25	3384	2833	2857	2534	2288	2232	1655	1655	1402	1402
		27	3373	3115	2851	2817	2283	2283	1892	1892	1645	1645
		29	3330	3330	2812	3095	2375	2375	2130	2130	1884	1884
		31	3312	3312	2851	3410	2607	2607	2363	2363	2120	2120
	19	21	4215	2252	3688	1955	3119	1653	2501	1340	1814	1027
		23	4192	2547	3667	2250	3103	1951	2488	1649	1804	1328
		25	4172	2831	3651	2536	3090	2238	2478	1937	1799	1626
		27	4149	3113	3629	2817	3072	2522	2463	2219	1788	1788
		29	4161	3412	3608	3097	3054	2804	2450	2450	1884	1884
		31	4143	3684	3595	3373	3044	3044	2444	2444	2120	2120
	21	21	5013	2232	4488	1935	3925	1638	3315	1338	2650	1035
		23	5074	2557	4514	2240	3955	1945	3350	1640	2689	1338
		25	5046	2849	4491	2534	3934	2240	3332	1943	2676	1636
		27	5013	3128	4460	2815	3907	2524	3309	2228	2656	1931
		29	5036	3406	4488	3095	3938	2804	3345	2512	2697	2215
		31	4941	3680	4396	3371	3850	3082	3258	2790	2614	2495
	23	23	5934	2534	5378	2221	4820	1927	4220	1632	3569	1336
		25	5958	2833	5406	2522	4851	2230	4256	1929	3610	1634
		27	5657	3125	5108	2813	4557	2522	3963	2230	3319	1935
		29	5883	3379	5373	3091	4827	2802	4236	2512	3598	2221
		31	5800	3653	5293	3367	4748	3080	4163	2792	3528	2500
5	15	21	2458	2125	1845	1788	1323	1323	1058	1058	779	779
		23	2445	2414	1835	2078	1578	1578	1320	1320	1055	1055
		25	2437	2437	2079	2487	1827	1827	1573	1573	1317	1317
		27	2568	2568	2319	2774	2071	2071	1820	1820	1567	1567
		29	2802	2802	2556	3058	2309	2309	2062	2062	1812	1812
		31	3034	3034	2789	3336	2545	2545	2300	2300	2053	2053
	17	21	3184	2142	2607	1825	1948	1487	1079	1079	779	779
		23	3206	2432	2633	2117	1982	1782	1320	1320	1055	1055
		25	3183	2718	2614	2403	1966	1966	1573	1573	1317	1317
		27	3175	2999	2609	2686	2071	2071	1820	1820	1567	1567
		29	3134	3134	2571	2964	2309	2309	2062	2062	1812	1812
		31	3117	3117	2789	3336	2545	2545	2300	2300	2053	2053
	19	21	4030	2144	3471	1837	2856	1512	2152	1180	1251	787
		23	4009	2442	3453	2135	2841	1820	2144	1489	1246	1090
		25	3991	2727	3440	2422	2831	2109	2138	1778	1246	1246
		27	3970	3007	**3420**	**2700**	2815	2385	2126	2047	1567	1567
		29	3948	3287	3402	2986	2800	2675	2115	2115	1812	1812
		31	3932	3563	3391	3262	2794	2794	2300	2300	2053	2053
	21	21	4841	2133	4292	1829	3693	1522	3031	1207	2260	859
		23	4866	2438	4321	2137	3727	1823	3072	1508	2321	1178
		25	4841	2729	4300	2430	3709	2127	3057	1808	2311	1477
		27	4810	3011	4272	2714	3685	2412	3036	2101	2295	1775
		29	4838	3291	4303	2993	3721	2694	3078	2387	2344	2062
		31	4745	3567	4212	3271	3633	2972	2991	2665	2257	2257
	23	23	5738	2420	5198	2123	4614	1823	3976	1518	3270	1197
		25	5765	2722	5229	2426	4648	2121	4017	1818	3317	1507
		27	5464	3011	4930	2718	4351	2418	3718	2115	3013	1796
		29	5731	3291	5201	2997	4629	2702	4004	2405	3314	2095
		31	5648	3565	5121	3275	4552	2982	3930	2682	3242	2377
7	15	21	2098	1923	1254	1487	1199	1199	875	875	370	370
		23	2087	2087	1737	2062	1472	1472	1199	1199	885	885
		25	2246	2246	1991	2381	1732	1732	1469	1469	1196	1196
		27	2489	2489	2237	2677	1984	1984	1727	1727	1465	1465
		29	2728	2728	2480	2966	2229	2229	1977	1977	1722	1722
		31	2964	2964	2717	3250	2470	2470	2221	2221	1971	1971
	17	21	2895	1980	2219	1624	1302	1182	875	875	370	370
		23	2921	2272	2254	1919	1356	1356	1199	1199	885	885
		25	2902	2559	2236	2205	1732	1732	1469	1469	1196	1196
		27	2895	2841	2236	2491	1984	1984	1727	1727	1465	1465
		29	2856	2856	2480	2966	2229	2229	1977	1977	1722	1722
		31	2841	2841	2717	3250	2470	2470	2221	2221	1971	1971
	19	21	3783	2007	3166	1677	2447	1315	1479	882	370	370
		23	3765	2305	3152	1976	2437	1624	1474	1186	885	885
		25	3750	2590	3139	2264	2430	1913	1474	1474	1196	1196
		27	3731	2866	3122	2536	2417	2172	1727	1727	1465	1465
		29	3711	3154	3108	2829	2406	2406	1977	1977	1722	1722
		31	3700	3430	3099	3109	2403	2403	2221	2221	1971	1971
	21	21	4619	2007	4028	1690	3364	1362	2587	1000	1516	556
		23	4650	2315	4063	2000	3405	1665	2638	1315	1601	877
		25	4627	2608	4043	2297	3389	1970	2628	1614	1596	1186
		27	4598	2892	4019	2581	3368	2258	2610	1910	1582	1481
		29	4630	3173	4055	2862	3410	2543	2661	2199	1662	1662
		31	4537	3447	3963	3140	3320	2819	2569	2475	1971	1971
	23	23	5538	2309	4966	2002	4336	1688	3629	1362	2800	1002
		25	5569	2612	5002	2307	4377	1988	3677	1663	2857	1309
		27	5267	2900	4697	2594	4071	2281	3363	1955	2511	1587
		29	5540	3181	4979	2880	4364	2573	3672	2254	2866	1910
		31	5458	3459	4900	3158	4287	2851	3598	2532	2792	2189

COOLING POWER YELDED

VED240I			Tw(in) = 5°C		Tw(in) = 7°C		Tw(in) = 9°C		Tw(in) = 11°C		Tw(in) = 13°C	
Dt w	Twb	Tdb	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps
[°C]	[°C]	[°C]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]
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		23	3147	2847	2515	2504	1951	1951	1655	1655	1357	1357
		25	3134	3134	2507	2823	2236	2236	1942	1942	1648	1648
		27	3088	3088	2805	3188	2515	2515	2224	2224	1934	1934
		29	3368	3368	3080	3500	2792	2792	2503	2503	2215	2215
		31	3637	3637	3351	3808	3065	3065	2778	2778	2492	2492
	17	21	3985	2528	3359	2189	2680	1846	1926	1494	1005	1005
		23	4007	2847	3386	2513	2711	2172	1963	1822	1357	1357
		25	3978	3164	3359	2829	2690	2493	1946	1946	1648	1648
		27	3964	3478	3351	3146	2684	2684	2224	2224	1934	1934
		29	3914	3786	3305	3456	2792	2792	2503	2503	2215	2215
		31	3893	3893	3351	3808	3065	3065	2778	2778	2492	2492
	19	21	4954	2515	4335	2183	3666	1846	2940	1497	2132	1147
		23	4927	2845	4310	2513	3647	2178	2924	1842	2121	1483
		25	4904	3161	4291	2831	3632	2499	2913	2163	2115	1816
		27	4877	3476	4266	3146	3611	2816	2895	2478	2101	2101
		29	4891	3810	4241	3459	3589	3131	2880	2797	2215	2215
		31	4870	4114	4226	3767	3578	3439	2872	2872	2492	2492
	21	21	5893	2493	5275	2161	4614	1829	3897	1494	3114	1156
		23	5964	2856	5306	2502	4649	2172	3937	1831	3161	1494
		25	5931	3181	5279	2829	4624	2502	3916	2169	3145	1826
		27	5893	3493	5243	3144	4593	2818	3889	2488	3122	2156
		29	5919	3804	5275	3456	4629	3131	3932	2805	3170	2473
		31	5808	4110	5168	3764	4526	3441	3830	3116	3072	2786
	23	23	6975	2829	6321	2480	5666	2152	4960	1822	4195	1492
		25	7004	3164	6354	2816	5702	2491	5002	2154	4243	1824
		27	6650	3489	6004	3142	5356	2816	4658	2491	3901	2161
		29	6915	3773	6315	3452	5673	3129	4979	2805	4230	2480
		31	6817	4079	6221	3760	5581	3439	4893	3118	4147	2792
5	15	21	2890	2373	2169	1997	1555	1555	1244	1244	915	915
		23	2874	2696	2157	2320	1855	1855	1551	1551	1240	1240
		25	2865	2865	2444	2777	2147	2147	1849	1849	1548	1548
		27	3018	3018	2726	3098	2434	2434	2140	2140	1842	1842
		29	3293	3293	3005	3415	2715	2715	2424	2424	2130	2130
		31	3566	3566	3278	3725	2991	2991	2703	2703	2413	2413
	17	21	3743	2392	3065	2038	2290	1660	1269	1206	915	915
		23	3768	2716	3095	2364	2330	1990	1551	1551	1240	1240
		25	3741	3035	3072	2683	2311	2311	1849	1849	1548	1548
		27	3732	3349	3066	3000	2434	2434	2140	2140	1842	1842
		29	3684	3660	3022	3310	2715	2715	2424	2424	2130	2130
		31	3664	3664	3278	3725	2991	2991	2703	2703	2413	2413
	19	21	4737	2395	4080	2052	3357	1689	2530	1317	1471	878
		23	4712	2727	4058	2384	3339	2032	2520	1663	1465	1217
		25	4691	3046	4043	2705	3328	2355	2513	1986	1465	1465
		27	4666	3358	**4020**	**3015**	3309	2663	2499	2285	1842	1842
		29	4641	3670	3999	3334	3291	2987	2486	2486	2130	2130
		31	4622	3978	3985	3642	3284	3284	2703	2703	2413	2413
	21	21	5691	2381	5045	2043	4341	1700	3562	1348	2657	959
		23	5720	2722	5079	2386	4381	2036	3611	1684	2728	1315
		25	5691	3048	5054	2714	4360	2375	3593	2019	2717	1650
		27	5654	3362	5022	3030	4331	2694	3568	2346	2697	1982
		29	5687	3675	5058	3343	4374	3008	3618	2665	2755	2303
		31	5577	3983	4951	3653	4270	3319	3516	2976	2653	2613
	23	23	6744	2703	6110	2370	5423	2036	4674	1695	3843	1337
		25	6777	3039	6146	2709	5464	2368	4722	2030	3899	1682
		27	6423	3362	5794	3035	5114	2700	4370	2362	3541	2006
		29	6737	3675	6114	3347	5441	3017	4706	2685	3895	2340
		31	6638	3981	6019	3657	5350	3330	4620	2995	3810	2655
7	15	21	2467	2148	1475	1660	1409	1409	1029	1029	434	434
		23	2453	2453	2042	2303	1730	1730	1409	1409	1040	1040
		25	2640	2640	2340	2659	2036	2036	1726	1726	1405	1405
		27	2926	2926	2630	2989	2332	2332	2030	2030	1723	1723
		29	3207	3207	2915	3312	2620	2620	2324	2324	2024	2024
		31	3484	3484	3193	3629	2903	2903	2611	2611	2317	2317
	17	21	3403	2211	2609	1813	1530	1320	1029	1029	434	434
		23	3434	2537	2649	2143	1594	1594	1409	1409	1040	1040
		25	3411	2858	2628	2462	2036	2036	1726	1726	1405	1405
		27	3403	3172	2628	2781	2332	2332	2030	2030	1723	1723
		29	3357	3357	2915	3312	2620	2620	2324	2324	2024	2024
		31	3339	3339	3193	3629	2903	2903	2611	2611	2317	2317
	19	21	4447	2242	3722	1872	2876	1468	1738	985	434	434
		23	4426	2574	3705	2207	2865	1813	1732	1324	1040	1040
		25	4408	2893	3689	2528	2857	2137	1732	1658	1405	1405
		27	4385	3201	3670	2831	2841	2425	2030	2030	1723	1723
		29	4362	3522	3653	3159	2828	2772	2324	2324	2024	2024
		31	4349	3830	3643	3472	2824	2824	2611	2611	2317	2317
	21	21	5429	2242	4735	1888	3955	1521	3041	1116	1782	620
		23	5466	2585	4776	2233	4003	1859	3101	1468	1882	979
		25	5439	2912	4752	2565	3983	2200	3089	1802	1876	1324
		27	5404	3229	4724	2882	3958	2521	3068	2132	1859	1654
		29	5443	3544	4766	3196	4008	2840	3128	2456	1953	1953
		31	5333	3850	4658	3507	3903	3148	3020	2764	2317	2317
	23	23	6510	2578	5837	2235	5097	1885	4266	1521	3291	1119
		25	6546	2917	5879	2576	5145	2220	4322	1857	3359	1462
		27	6191	3238	5521	2897	4785	2547	3953	2183	2951	1772
		29	6512	3552	5852	3216	5129	2873	4316	2517	3368	2132
		31	6415	3863	5760	3526	5039	3183	4230	2827	3282	2445

COOLING POWER YELDED

VED330I			Tw(in) = 5°C		Tw(in) = 7°C		Tw(in) = 9°C		Tw(in) = 11°C		Tw(in) = 13°C	
Dt w	Twb	Tdb	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps
[°C]	[°C]	[°C]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]
3	15	21	3938	3131	3147	2706	2274	3137	1695	1695	1318	1318
		23	3914	3529	3128	3104	2427	2427	2059	2059	1688	1688
		25	3898	3898	3118	3500	2781	2781	2415	2415	2049	2049
		27	3840	3840	3489	3952	3128	3128	2767	2767	2406	2406
		29	4189	4189	3831	4339	3472	3472	3113	3113	2755	2755
		31	4524	4524	4168	4721	3812	3812	3455	3455	3099	3099
	17	21	4957	3134	4177	2714	3333	2289	2396	1853	1251	1251
		23	4983	3529	4211	3115	3372	2692	2441	2259	1688	1688
		25	4947	3922	4177	3508	3345	3091	2420	2420	2049	2049
		27	4931	4312	4168	3901	3338	3338	2767	2767	2406	2406
		29	4868	4694	4110	4285	3472	3472	3113	3113	2755	2755
		31	4842	4842	4168	4721	3812	3812	3455	3455	3099	3099
	19	21	6162	3118	5392	2706	4560	2289	3656	1855	2652	1422
		23	6129	3527	5361	3115	4536	2701	3637	2283	2637	1839
		25	6100	3919	5337	3510	4517	3099	3623	2682	2630	2251
		27	6066	4310	5306	3901	4491	3492	3601	3072	2614	2614
		29	6083	4724	5275	4288	4464	3882	3582	3467	2755	2755
		31	6057	5100	5256	4670	4450	4263	3572	3572	3099	3099
	21	21	7329	3091	6561	2679	5739	2267	4847	1853	3874	1433
		23	7418	3540	6600	3101	5782	2692	4897	2270	3931	1853
		25	7377	3944	6566	3508	5751	3101	4871	2690	3912	2264
		27	7329	4331	6521	3898	5713	3494	4837	3085	3883	2673
		29	7363	4716	6561	4285	5758	3882	4890	3478	3943	3066
		31	7224	5095	6428	4667	5629	4266	4763	3863	3821	3454
	23	23	8675	3508	7862	3074	7047	2668	6169	2259	5218	1850
		25	8711	3922	7903	3492	7092	3088	6222	2671	5277	2262
		27	8271	4326	7468	3895	6662	3492	5794	3088	4852	2679
		29	8601	4678	7855	4280	7056	3879	6193	3478	5261	3074
		31	8479	5057	7738	4662	6942	4263	6086	3865	5158	3462
5	15	21	3594	2942	2697	2476	1934	1934	1547	1547	1138	1138
		23	3575	3343	2683	2877	2308	2308	1930	1930	1542	1542
		25	3563	3563	3039	3443	2671	2671	2300	2300	1925	1925
		27	3754	3754	3391	3841	3027	3027	2661	2661	2291	2291
		29	4096	4096	3737	4234	3376	3376	3015	3015	2649	2649
		31	4436	4436	4077	4618	3721	3721	3362	3362	3001	3001
	17	21	4656	2966	3812	2527	2848	2059	1578	1495	1138	1138
		23	4687	3367	3850	2931	2898	2468	1930	1930	1542	1542
		25	4653	3762	3821	3326	2874	2866	2300	2300	1925	1925
		27	4641	4152	3814	3719	3027	3027	2661	2661	2291	2291
		29	4582	4537	3759	4104	3376	3376	3015	3015	2649	2649
		31	4558	4558	4077	4618	3721	3721	3362	3362	3001	3001
	19	21	5892	2969	5074	2543	4175	2094	3147	1633	1829	1089
		23	5861	3380	5048	2955	4154	2519	3135	2061	1822	1509
		25	5835	3776	5029	3353	4139	2920	3125	2462	1822	1822
		27	5803	4163	**5000**	**3738**	4115	3302	3109	2833	2291	2291
		29	5772	4551	4974	4133	4094	3703	3092	3092	2649	2649
		31	5748	4933	4957	4515	4084	4084	3362	3362	3001	3001
	21	21	7078	2952	6275	2533	5399	2107	4431	1671	3305	1189
		23	7114	3375	6318	2958	5450	2525	4491	2088	3393	1631
		25	7078	3779	6286	3364	5423	2944	4469	2503	3379	2045
		27	7033	4169	6246	3757	5387	3340	4438	2909	3355	2457
		29	7073	4556	6291	4144	5440	3730	4500	3305	3427	2855
		31	6937	4938	6157	4529	5311	4115	4374	3689	3300	3240
	23	23	8388	3351	7599	2939	6746	2525	5813	2102	4780	1658
		25	8429	3768	7645	3359	6796	2936	5873	2516	4849	2086
		27	7989	4169	7207	3762	6361	3348	5435	2928	4405	2487
		29	8379	4556	7604	4150	6767	3741	5854	3329	4845	2901
		31	8257	4935	7487	4534	6655	4128	5746	3714	4739	3291
7	15	21	3068	2663	1834	2059	1753	1753	1279	1279	540	540
		23	3051	3051	2539	2855	2152	2152	1753	1753	1294	1294
		25	3283	3283	2910	3296	2532	2532	2147	2147	1748	1748
		27	3639	3639	3271	3705	2901	2901	2525	2525	2143	2143
		29	3989	3989	3625	4106	3259	3259	2891	2891	2518	2518
		31	4333	4333	3972	4499	3611	3611	3247	3247	2881	2881
	17	21	4232	2741	3245	2248	1903	1636	1279	1279	540	540
		23	4271	3145	3295	2657	1982	1982	1753	1753	1294	1294
		25	4242	3543	3269	3053	2532	2532	2147	2147	1748	1748
		27	4232	3933	3269	3448	2901	2901	2525	2525	2143	2143
		29	4175	4175	3625	4106	3259	3259	2891	2891	2518	2518
		31	4154	4154	3972	4499	3611	3611	3247	3247	2881	2881
	19	21	5531	2779	4629	2321	3577	1820	2162	1222	540	540
		23	5505	3191	4608	2736	3563	2248	2154	1641	1294	1294
		25	5483	3586	4589	3134	3553	2649	2154	2056	1748	1748
		27	5454	3968	4565	3510	3534	3007	2525	2525	2143	2143
		29	5426	4366	4543	3917	3517	3437	2891	2891	2518	2518
		31	5409	4748	4531	4304	3513	3513	3247	3247	2881	2881
	21	21	6753	2779	5890	2340	4919	1885	3783	1384	2217	769
		23	6798	3204	5940	2768	4978	2305	3857	1820	2341	1213
		25	6765	3611	5911	3180	4955	2728	3843	2235	2334	1641
		27	6722	4003	5875	3573	4923	3126	3816	2644	2312	2050
		29	6769	4394	5928	3963	4986	3521	3890	3045	2429	2429
		31	6633	4773	5794	4347	4854	3903	3757	3427	2881	2881
	23	23	8097	3196	7260	2771	6339	2338	5306	1885	4094	1387
		25	8142	3616	7312	3194	6399	2752	5375	2302	4177	1812
		27	7700	4014	6868	3592	5952	3158	4916	2706	3670	2197
		29	8099	4404	7279	3987	6380	3562	5368	3120	4189	2644
		31	7979	4789	7164	4372	6267	3947	5261	3505	4082	3031

COOLING POWER YELDED

VED340I			Tw(in) = 5°C		Tw(in) = 7°C		Tw(in) = 9°C		Tw(in) = 11°C		Tw(in) = 13°C	
Dt w	Twb	Tdb	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps
[°C]	[°C]	[°C]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]
3	15	21	4222	3342	3373	2888	2438	3349	1817	1817	1412	1412
		23	4196	3767	3353	3313	2602	2602	2207	2207	1810	1810
		25	4178	4178	3343	3736	2981	2981	2589	2589	2197	2197
		27	4117	4117	3740	4218	3353	3353	2966	2966	2579	2579
		29	4491	4491	4107	4632	3722	3722	3338	3338	2953	2953
		31	4850	4850	4468	5040	4086	4086	3704	3704	3322	3322
	17	21	5314	3345	4478	2897	3573	2443	2568	1978	1341	1341
		23	5342	3767	4514	3325	3614	2874	2617	2411	1810	1810
		25	5304	4187	4478	3744	3586	3299	2594	2594	2197	2197
		27	5286	4603	4468	4163	3578	3578	2966	2966	2579	2579
		29	5219	5011	4406	4574	3722	3722	3338	3338	2953	2953
		31	5191	5191	4468	5040	4086	4086	3704	3704	3322	3322
	19	21	6606	3328	5780	2888	4888	2443	3919	1981	2843	1518
		23	6570	3764	5747	3325	4863	2883	3899	2437	2827	1963
		25	6539	4184	5721	3747	4842	3308	3884	2862	2820	2403
		27	6503	4600	5688	4163	4814	3727	3860	3279	2802	2802
		29	6521	5042	5655	4577	4786	4143	3840	3701	2953	2953
		31	6493	5444	5634	4985	4770	4551	3830	3830	3322	3322
	21	21	7857	3299	7034	2860	6152	2420	5196	1978	4153	1530
		23	7952	3779	7075	3311	6198	2874	5250	2423	4214	1978
		25	7908	4210	7039	3744	6165	3311	5222	2871	4194	2417
		27	7857	4623	6990	4161	6124	3730	5186	3293	4163	2854
		29	7893	5034	7034	4574	6173	4143	5242	3712	4227	3273
		31	7744	5439	6890	4982	6034	4554	5106	4123	4096	3686
	23	23	9300	3744	8428	3282	7554	2848	6613	2411	5593	1975
		25	9338	4187	8472	3727	7603	3296	6670	2851	5657	2414
		27	8867	4617	8005	4158	7142	3727	6211	3296	5201	2860
		29	9220	4993	8421	4568	7564	4140	6639	3712	5639	3282
		31	9090	5398	8295	4976	7441	4551	6524	4126	5529	3695
5	15	21	3853	3140	2891	2643	2074	2074	1658	1658	1220	1220
		23	3832	3568	2876	3071	2474	2474	2069	2069	1653	1653
		25	3819	3819	3258	3675	2863	2863	2466	2466	2064	2064
		27	4024	4024	3635	4100	3245	3245	2853	2853	2456	2456
		29	4391	4391	4007	4519	3619	3619	3232	3232	2840	2840
		31	4755	4755	4371	4930	3989	3989	3604	3604	3217	3217
	17	21	4991	3166	4086	2698	3053	2197	1692	1596	1220	1220
		23	5024	3594	4127	3128	3107	2634	2069	2069	1653	1653
		25	4988	4016	4096	3551	3081	3059	2466	2466	2064	2064
		27	4975	4432	4089	3970	3245	3245	2853	2853	2456	2456
		29	4911	4843	4030	4380	3619	3619	3232	3232	2840	2840
		31	4886	4886	4371	4930	3989	3989	3604	3604	3217	3217
	19	21	6316	3169	5439	2715	4476	2235	3373	1743	1961	1162
		23	6283	3608	5411	3154	4453	2689	3361	2200	1953	1610
		25	6255	4030	5391	3579	4437	3117	3350	2628	1953	1953
		27	6221	4444	**5360**	**3990**	4412	3525	3332	3024	2456	2456
		29	6188	4857	5332	4412	4388	3952	3314	3314	2840	2840
		31	6162	5265	5314	4820	4378	4366	3604	3604	3217	3217
	21	21	7588	3152	6726	2703	5788	2249	4750	1784	3543	1269
		23	7626	3603	6772	3157	5842	2695	4814	2229	3637	1741
		25	7588	4033	6739	3591	5814	3143	4791	2672	3622	2183
		27	7539	4450	6696	4010	5775	3565	4758	3105	3596	2622
		29	7582	4863	6744	4424	5832	3981	4824	3527	3673	3047
		31	7436	5271	6601	4834	5693	4392	4688	3938	3537	3458
	23	23	8992	3577	8146	3137	7231	2695	6232	2244	5124	1769
		25	9036	4022	8195	3585	7285	3134	6296	2686	5199	2226
		27	8564	4450	7726	4016	6819	3574	5827	3126	4722	2654
		29	8982	4863	8152	4429	7254	3993	6275	3553	5193	3097
		31	8851	5268	8026	4840	7134	4406	6160	3964	5081	3513
7	15	21	3289	2842	1966	2197	1879	1879	1371	1371	579	579
		23	3271	3270	2722	3047	2307	2307	1879	1879	1387	1387
		25	3520	3520	3120	3519	2715	2715	2302	2302	1874	1874
		27	3901	3901	3507	3955	3109	3109	2707	2707	2297	2297
		29	4276	4276	3886	4383	3494	3494	3099	3099	2699	2699
		31	4645	4645	4258	4802	3871	3871	3481	3481	3089	3089
	17	21	4537	2926	3478	2400	2040	1746	1371	1371	579	579
		23	4578	3357	3532	2836	2125	2125	1879	1879	1387	1387
		25	4547	3782	3504	3259	2715	2715	2302	2302	1874	1874
		27	4537	4198	3504	3681	3109	3109	2707	2707	2297	2297
		29	4476	4476	3886	4383	3494	3494	3099	3099	2699	2699
		31	4453	4453	4258	4802	3871	3871	3481	3481	3089	3089
	19	21	5929	2966	4963	2478	3835	1943	2317	1304	579	579
		23	5901	3406	4940	2920	3819	2400	2310	1752	1387	1387
		25	5878	3828	4919	3345	3809	2828	2310	2195	1874	1874
		27	5847	4236	4893	3747	3789	3209	2707	2707	2297	2297
		29	5816	4661	4870	4181	3771	3669	3099	3099	2699	2699
		31	5798	5068	4858	4594	3766	3766	3481	3481	3089	3089
	21	21	7239	2966	6314	2498	5273	2012	4055	1477	2376	821
		23	7288	3420	6367	2955	5337	2461	4135	1943	2510	1295
		25	7252	3854	6337	3394	5311	2912	4119	2385	2502	1752
		27	7206	4273	6298	3814	5278	3337	4091	2822	2479	2189
		29	7257	4690	6355	4230	5345	3759	4171	3250	2604	2604
		31	7111	5094	6211	4641	5204	4166	4027	3658	3089	3089
	23	23	8680	3412	7782	2958	6795	2495	5688	2012	4388	1480
		25	8728	3860	7839	3409	6860	2938	5762	2458	4478	1934
		27	8254	4285	7362	3834	6380	3371	5270	2888	3935	2345
		29	8682	4701	7803	4256	6839	3802	5755	3331	4491	2822
		31	8554	5112	7680	4667	6719	4213	5639	3741	4376	3235

COOLING POWER YELDED

VED530I			Tw(in) = 5°C		Tw(in) = 7°C		Tw(in) = 9°C		Tw(in) = 11°C		Tw(in) = 13°C	
Dt w	Twb	Tdb	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps
[°C]	[°C]	[°C]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]
3	15	21	6112	5043	4884	4358	3529	5053	2631	2631	2045	2045
		23	6075	5684	4854	4999	3767	3767	3195	3195	2620	2620
		25	6049	6049	4839	5636	4316	4316	3748	3748	3180	3180
		27	5960	5960	5415	6365	4854	4854	4294	4294	3733	3733
		29	6502	6502	5945	6988	5389	5389	4832	4832	4275	4275
		31	7021	7021	6469	7604	5916	5916	5363	5363	4810	4810
	17	21	7693	5047	6483	4371	5173	3686	3719	2984	1941	1941
		23	7734	5684	6535	5017	5233	4336	3789	3638	2620	2620
		25	7678	6317	6483	5649	5192	4977	3756	3756	3180	3180
		27	7652	6945	6469	6282	5181	5181	4294	4294	3733	3733
		29	7556	7556	6379	6901	5389	5389	4832	4832	4275	4275
		31	7515	7515	6469	7604	5916	5916	5363	5363	4810	4810
	19	21	9564	5021	8369	4358	7077	3686	5674	2988	4116	2290
		23	9512	5680	8320	5017	7040	4349	5645	3677	4093	2962
		25	9467	6312	8283	5654	7010	4990	5622	4319	4082	3625
		27	9415	6940	8235	6282	6970	5623	5589	4947	4056	4056
		29	9441	7608	8187	6906	6929	6251	5559	5559	4275	4275
		31	9400	8214	8157	7521	6906	6866	5544	5544	4810	4810
	21	21	11375	4977	10183	4314	8907	3651	7522	2984	6012	2308
		23	11512	5702	10243	4995	8974	4336	7600	3656	6101	2984
		25	11449	6352	10191	5649	8925	4995	7560	4332	6071	3647
		27	11375	6975	10120	6277	8866	5627	7508	4969	6027	4306
		29	11427	7595	10183	6901	8936	6251	7589	5601	6120	4938
		31	11211	8206	9976	7516	8736	6871	7393	6221	5930	5562
	23	23	13464	5649	12202	4951	10937	4297	9575	3638	8098	2979
		25	13520	6317	12265	5623	11007	4973	9656	4301	8190	3643
		27	12837	6967	11590	6273	10339	5623	8992	4973	7530	4314
		29	13349	7534	12191	6892	10952	6247	9612	5601	8165	4951
		31	13160	8144	12009	7508	10773	6866	9445	6225	8005	5575
5	15	21	5578	4737	4186	3987	3002	3002	2401	2401	1767	1767
		23	5548	5383	4164	4633	3581	3581	2995	2995	2394	2394
		25	5530	5530	4717	5545	4145	4145	3570	3570	2987	2987
		27	5826	5826	5262	6186	4698	4698	4131	4131	3555	3555
		29	6357	6357	5801	6818	5240	5240	4680	4680	4112	4112
		31	6884	6884	6327	7438	5775	5775	5218	5218	4657	4657
	17	21	7226	4777	5916	4070	4420	3315	2449	2408	1767	1767
		23	7274	5422	5975	4720	4498	3974	2995	2995	2394	2394
		25	7222	6059	5930	5357	4461	4461	3570	3570	2987	2987
		27	7203	6687	5919	5989	4698	4698	4131	4131	3555	3555
		29	7111	7111	5834	6609	5240	5240	4680	4680	4112	4112
		31	7073	7073	6327	7438	5775	5775	5218	5218	4657	4657
	19	21	9144	4781	7875	4096	6480	3372	4884	2630	2839	1754
		23	9096	5444	7834	4759	6446	4057	4865	3320	2828	2430
		25	9055	6081	7805	5401	6424	4703	4850	3965	2828	2828
		27	9007	6705	**7760**	**6020**	6387	5318	4824	4563	3555	3555
		29	8959	7329	7719	6657	6353	5963	4799	4799	4112	4112
		31	8922	7944	7693	7272	6339	6339	5218	5218	4657	4657
	21	21	10985	4755	9738	4079	8380	3394	6877	2692	5129	1915
		23	11041	5435	9805	4764	8458	4066	6970	3363	5266	2626
		25	10985	6085	9757	5418	8417	4742	6936	4031	5244	3294
		27	10914	6714	9694	6051	8361	5379	6888	4685	5207	3957
		29	10978	7337	9764	6674	8443	6007	6984	5322	5318	4598
		31	10766	7953	9556	7294	8242	6626	6788	5941	5121	5121
	23	23	13019	5396	11794	4733	10469	4066	9022	3385	7419	2670
		25	13082	6068	11865	5409	10547	4729	9115	4053	7526	3359
		27	12399	6714	11185	6059	9872	5392	8435	4716	6836	4005
		29	13004	7337	11801	6683	10503	6024	9085	5361	7519	4672
		31	12815	7948	11620	7303	10328	6648	8918	5981	7355	5300
7	15	21	4761	4288	2846	3315	2720	2720	1985	1985	839	839
		23	4735	4735	3941	4598	3340	3340	2720	2720	2008	2008
		25	5095	5095	4516	5309	3930	3930	3333	3333	2713	2713
		27	5648	5648	5077	5968	4502	4502	3919	3919	3325	3325
		29	6190	6190	5626	6613	5058	5058	4487	4487	3908	3908
		31	6725	6725	6164	7246	5604	5604	5040	5040	4472	4472
	17	21	6569	4415	5036	3621	2954	2635	1985	1985	839	839
		23	6628	5065	5114	4279	3077	3077	2720	2720	2008	2008
		25	6584	5706	5073	4916	3930	3930	3333	3333	2713	2713
		27	6569	6334	5073	5553	4502	4502	3919	3919	3325	3325
		29	6480	6480	5626	6613	5058	5058	4487	4487	3908	3908
		31	6446	6446	6164	7246	5604	5604	5040	5040	4472	4472
	19	21	8584	4476	7185	3739	5552	2931	3355	1967	839	839
		23	8543	5139	7151	4406	5530	3621	3344	2644	2008	2008
		25	8510	5776	7122	5047	5515	4266	3344	3311	2713	2713
		27	8465	6391	7085	5654	5485	4842	3919	3919	3325	3325
		29	8421	7032	7051	6308	5459	5459	4487	4487	3908	3908
		31	8395	7647	7033	6932	5452	5452	5040	5040	4472	4472
	21	21	10480	4476	9141	3769	7634	3036	5871	2229	3440	1239
		23	10551	5161	9218	4458	7727	3712	5986	2931	3633	1954
		25	10499	5815	9174	5121	7689	4393	5964	3599	3622	2644
		27	10432	6448	9118	5754	7641	5034	5923	4258	3589	3302
		29	10506	7076	9200	6382	7738	5671	6038	4903	3771	3771
		31	10295	7686	8992	7002	7534	6286	5830	5518	4472	4472
	23	23	12566	5148	11267	4463	9838	3765	8235	3036	6353	2234
		25	12636	5824	11349	5143	9931	4432	8343	3708	6483	2918
		27	11950	6465	10658	5784	9237	5086	7630	4358	5697	3538
		29	12570	7093	11297	6421	9901	5736	8332	5025	6502	4258
		31	12384	7713	11119	7041	9727	6356	8165	5645	6335	4881

COOLING POWER YELDED

VED532I			Tw(in) = 5°C		Tw(in) = 7°C		Tw(in) = 9°C		Tw(in) = 11°C		Tw(in) = 13°C	
Dt w	Twb	Tdb	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps
[°C]	[°C]	[°C]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]
3	15	21	6112	5043	4884	4358	3529	5053	2631	2631	2045	2045
		23	6075	5684	4854	4999	3767	3767	3195	3195	2620	2620
		25	6049	6049	4839	5636	4316	4316	3748	3748	3180	3180
		27	5960	5960	5415	6365	4854	4854	4294	4294	3733	3733
		29	6502	6502	5945	6988	5389	5389	4832	4832	4275	4275
		31	7021	7021	6469	7604	5916	5916	5363	5363	4810	4810
	17	21	7693	5047	6483	4371	5173	3686	3719	2984	1941	1941
		23	7734	5684	6535	5017	5233	4336	3789	3638	2620	2620
		25	7678	6317	6483	5649	5192	4977	3756	3756	3180	3180
		27	7652	6945	6469	6282	5181	5181	4294	4294	3733	3733
		29	7556	7556	6379	6901	5389	5389	4832	4832	4275	4275
		31	7515	7515	6469	7604	5916	5916	5363	5363	4810	4810
	19	21	9564	5021	8369	4358	7077	3686	5674	2988	4116	2290
		23	9512	5680	8320	5017	7040	4349	5645	3677	4093	2962
		25	9467	6312	8283	5654	7010	4990	5622	4319	4082	3625
		27	9415	6940	8235	6282	6970	5623	5589	4947	4056	4056
		29	9441	7608	8187	6906	6929	6251	5559	5559	4275	4275
		31	9400	8214	8157	7521	6906	6866	5544	5544	4810	4810
	21	21	11375	4977	10183	4314	8907	3651	7522	2984	6012	2308
		23	11512	5702	10243	4995	8974	4336	7600	3656	6101	2984
		25	11449	6352	10191	5649	8925	4995	7560	4332	6071	3647
		27	11375	6975	10120	6277	8866	5627	7508	4969	6027	4306
		29	11427	7595	10183	6901	8936	6251	7589	5601	6120	4938
		31	11211	8206	9976	7516	8736	6871	7393	6221	5930	5562
	23	23	13464	5649	12202	4951	10937	4297	9575	3638	8098	2979
		25	13520	6317	12265	5623	11007	4973	9656	4301	8190	3643
		27	12837	6967	11590	6273	10339	5623	8992	4973	7530	4314
		29	13349	7534	12191	6892	10952	6247	9612	5601	8165	4951
		31	13160	8144	12009	7508	10773	6866	9445	6225	8005	5575
5	15	21	5578	4737	4186	3987	3002	3002	2401	2401	1767	1767
		23	5548	5383	4164	4633	3581	3581	2995	2995	2394	2394
		25	5530	5530	4717	5545	4145	4145	3570	3570	2987	2987
		27	5826	5826	5262	6186	4698	4698	4131	4131	3555	3555
		29	6357	6357	5801	6818	5240	5240	4680	4680	4112	4112
		31	6884	6884	6327	7438	5775	5775	5218	5218	4657	4657
	17	21	7226	4777	5916	4070	4420	3315	2449	2408	1767	1767
		23	7274	5422	5975	4720	4498	3974	2995	2995	2394	2394
		25	7222	6059	5930	5357	4461	4461	3570	3570	2987	2987
		27	7203	6687	5919	5989	4698	4698	4131	4131	3555	3555
		29	7111	7111	5834	6609	5240	5240	4680	4680	4112	4112
		31	7073	7073	6327	7438	5775	5775	5218	5218	4657	4657
	19	21	9144	4781	7875	4096	6480	3372	4884	2630	2839	1754
		23	9096	5444	7834	4759	6446	4057	4865	3320	2828	2430
		25	9055	6081	7805	5401	6424	4703	4850	3965	2828	2828
		27	9007	6705	**7760**	**6020**	6387	5318	4824	4563	3555	3555
		29	8959	7329	7719	6657	6353	5963	4799	4799	4112	4112
		31	8922	7944	7693	7272	6339	6339	5218	5218	4657	4657
	21	21	10985	4755	9738	4079	8380	3394	6877	2692	5129	1915
		23	11041	5435	9805	4764	8458	4066	6970	3363	5266	2626
		25	10985	6085	9757	5418	8417	4742	6936	4031	5244	3294
		27	10914	6714	9694	6051	8361	5379	6888	4685	5207	3957
		29	10978	7337	9764	6674	8443	6007	6984	5322	5318	4598
		31	10766	7953	9556	7294	8242	6626	6788	5941	5121	5121
	23	23	13019	5396	11794	4733	10469	4066	9022	3385	7419	2670
		25	13082	6068	11865	5409	10547	4729	9115	4053	7526	3359
		27	12399	6714	11185	6059	9872	5392	8435	4716	6836	4005
		29	13004	7337	11801	6683	10503	6024	9085	5361	7519	4672
		31	12815	7948	11620	7303	10328	6648	8918	5981	7355	5300
7	15	21	4761	4288	2846	3315	2720	2720	1985	1985	839	839
		23	4735	4735	3941	4598	3340	3340	2720	2720	2008	2008
		25	5095	5095	4516	5309	3930	3930	3333	3333	2713	2713
		27	5648	5648	5077	5968	4502	4502	3919	3919	3325	3325
		29	6190	6190	5626	6613	5058	5058	4487	4487	3908	3908
		31	6725	6725	6164	7246	5604	5604	5040	5040	4472	4472
	17	21	6569	4415	5036	3621	2954	2635	1985	1985	839	839
		23	6628	5065	5114	4279	3077	3077	2720	2720	2008	2008
		25	6584	5706	5073	4916	3930	3930	3333	3333	2713	2713
		27	6569	6334	5073	5553	4502	4502	3919	3919	3325	3325
		29	6480	6480	5626	6613	5058	5058	4487	4487	3908	3908
		31	6446	6446	6164	7246	5604	5604	5040	5040	4472	4472
	19	21	8584	4476	7185	3739	5552	2931	3355	1967	839	839
		23	8543	5139	7151	4406	5530	3621	3344	2644	2008	2008
		25	8510	5776	7122	5047	5515	4266	3344	3311	2713	2713
		27	8465	6391	7085	5654	5485	4842	3919	3919	3325	3325
		29	8421	7032	7051	6308	5459	5459	4487	4487	3908	3908
		31	8395	7647	7033	6932	5452	5452	5040	5040	4472	4472
	21	21	10480	4476	9141	3769	7634	3036	5871	2229	3440	1239
		23	10551	5161	9218	4458	7727	3712	5986	2931	3633	1954
		25	10499	5815	9174	5121	7689	4393	5964	3599	3622	2644
		27	10432	6448	9118	5754	7641	5034	5923	4258	3589	3302
		29	10506	7076	9200	6382	7738	5671	6038	4903	3771	3771
		31	10295	7686	8992	7002	7534	6286	5830	5518	4472	4472
	23	23	12566	5148	11267	4463	9838	3765	8235	3036	6353	2234
		25	12636	5824	11349	5143	9931	4432	8343	3708	6483	2918
		27	11950	6465	10658	5784	9237	5086	7630	4358	5697	3538
		29	12570	7093	11297	6421	9901	5736	8332	5025	6502	4258
		31	12384	7713	11119	7041	9727	6356	8165	5645	6335	4881

COOLING POWER YELDED

VED540I			Tw(in) = 5°C		Tw(in) = 7°C		Tw(in) = 9°C		Tw(in) = 11°C		Tw(in) = 13°C	
Dt w	Twb	Tdb	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps
[°C]	[°C]	[°C]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]
3	15	21	7065	5403	5645	4669	4080	5414	3041	3041	2364	2364
		23	7022	6090	5611	5356	4354	4354	3694	3694	3029	3029
		25	6992	6768	5594	6039	4989	4989	4333	4333	3676	3676
		27	6889	6889	6259	6819	5611	5611	4963	4963	4316	4316
		29	7516	7516	6872	7488	6229	6229	5585	5585	4942	4942
		31	8116	8116	7477	8147	6838	6838	6199	6199	5560	5560
	17	21	8893	5408	7494	4683	5980	3949	4298	3197	2244	2244
		23	8940	6090	7554	5375	6049	4646	4380	3898	3029	3029
		25	8876	6768	7494	6053	6001	5333	4341	4341	3676	3676
		27	8846	7441	7477	6730	5989	5989	4963	4963	4316	4316
		29	8734	8100	7374	7394	6229	6229	5585	5585	4942	4942
		31	8687	8687	7477	8147	6838	6838	6199	6199	5560	5560
	19	21	11055	5380	9674	4669	8181	3949	6559	3202	4757	2454
		23	10995	6085	9618	5375	8138	4660	6525	3940	4732	3174
		25	10943	6763	9575	6057	8103	5347	6499	4627	4719	3884
		27	10883	7436	9519	6730	8056	6025	6460	5300	4689	4689
		29	10913	8151	9463	7399	8009	6698	6426	5983	4942	4942
		31	10866	8801	9429	8058	7983	7357	6409	6409	5560	5560
	21	21	13148	5333	11771	4623	10296	3912	8695	3197	6949	2473
		23	13307	6109	11840	5352	10373	4646	8786	3917	7052	3197
		25	13234	6805	11780	6053	10317	5352	8738	4641	7018	3907
		27	13148	7474	11698	6726	10248	6029	8678	5324	6967	4613
		29	13208	8137	11771	7394	10330	6698	8773	6001	7074	5291
		31	12960	8792	11531	8053	10098	7361	8545	6665	6855	5959
	23	23	15563	6053	14105	5305	12642	4604	11068	3898	9360	3192
		25	15628	6768	14178	6025	12724	5328	11162	4608	9468	3903
		27	14838	7464	13397	6721	11951	6025	10394	5328	8704	4623
		29	15430	8072	14092	7385	12659	6693	11111	6001	9438	5305
		31	15212	8726	13882	8044	12453	7357	10918	6670	9253	5973
5	15	21	6448	5076	4839	4272	3470	3470	2776	2776	2042	2042
		23	6413	5768	4813	4964	4140	4140	3462	3462	2767	2767
		25	6392	6392	5452	5941	4792	4792	4127	4127	3453	3453
		27	6735	6735	6083	6628	5431	5431	4775	4775	4110	4110
		29	7348	7348	6705	7305	6057	6057	5409	5409	4753	4753
		31	7958	7958	7314	7969	6675	6675	6031	6031	5384	5384
	17	21	8352	5118	6838	4361	5109	3552	2831	2580	2042	2042
		23	8408	5810	6907	5057	5199	4258	3462	3462	2767	2767
		25	8348	6492	6855	5740	5156	4945	4127	4127	3453	3453
		27	8327	7165	6842	6417	5431	5431	4775	4775	4110	4110
		29	8219	7829	6744	7081	6057	6057	5409	5409	4753	4753
		31	8176	8176	7314	7969	6675	6675	6031	6031	5384	5384
	19	21	10570	5123	9103	4389	7490	3613	5645	2818	3282	1879
		23	10514	5833	9056	5099	7451	4347	5624	3557	3269	2603
		25	10467	6515	9021	5786	7426	5038	5607	4249	3269	3269
		27	10411	7184	**8970**	**6450**	7383	5698	5577	4889	4110	4110
		29	10356	7852	8923	7132	7344	6389	5547	5547	4753	4753
		31	10313	8511	8893	7791	7327	7058	6031	6031	5384	5384
	21	21	12698	5095	11256	4370	9686	3636	7949	2884	5929	2052
		23	12762	5824	11334	5104	9776	4356	8056	3604	6087	2814
		25	12698	6520	11278	5805	9729	5081	8018	4319	6062	3529
		27	12616	7193	11205	6483	9665	5763	7962	5020	6019	4239
		29	12689	7862	11286	7151	9759	6436	8073	5702	6147	4926
		31	12445	8521	11046	7815	9528	7100	7846	6366	5920	5590
	23	23	15049	5782	13633	5071	12102	4356	10429	3627	8575	2860
		25	15122	6501	13715	5796	12192	5067	10536	4342	8700	3599
		27	14332	7193	12929	6492	11411	5777	9751	5053	7902	4291
		29	15032	7862	13642	7160	12140	6455	10501	5744	8691	5006
		31	14813	8516	13431	7824	11939	7123	10308	6408	8502	5679
7	15	21	5504	4594	3290	3552	3144	3144	2295	2295	969	969
		23	5474	5286	4556	4926	3861	3861	3144	3144	2321	2321
		25	5890	5890	5221	5688	4543	4543	3852	3852	3136	3136
		27	6529	6529	5868	6394	5204	5204	4530	4530	3844	3844
		29	7155	7155	6503	7086	5847	5847	5186	5186	4517	4517
		31	7773	7773	7125	7763	6478	6478	5826	5826	5169	5169
	17	21	7593	4730	5821	3879	3415	2823	2295	2295	969	969
		23	7662	5426	5911	4585	3556	3548	3144	3144	2321	2321
		25	7610	6113	5864	5268	4543	4543	3852	3852	3136	3136
		27	7593	6787	5864	5950	5204	5204	4530	4530	3844	3844
		29	7490	7455	6503	7086	5847	5847	5186	5186	4517	4517
		31	7451	7451	7125	7763	6478	6478	5826	5826	5169	5169
	19	21	9922	4795	8305	4006	6418	3141	3878	2108	969	969
		23	9875	5506	8266	4721	6392	3879	3865	2832	2321	2267
		25	9837	6188	8232	5408	6375	4571	3865	3548	3136	3136
		27	9785	6847	8189	6057	6340	5188	4530	4530	3844	3844
		29	9734	7534	8151	6758	6310	5931	5186	5186	4517	4517
		31	9704	8193	8129	7427	6302	6302	5826	5826	5169	5169
	21	21	12114	4795	10566	4038	8824	3253	6786	2388	3977	1327
		23	12196	5529	10656	4777	8931	3978	6919	3141	4200	2094
		25	12136	6230	10604	5487	8888	4707	6894	3856	4187	2832
		27	12059	6908	10540	6165	8833	5394	6847	4562	4148	3538
		29	12144	7581	10634	6838	8944	6076	6980	5253	4358	4258
		31	11900	8235	10394	7502	8708	6735	6739	5913	5169	5169
	23	23	14525	5515	13024	4781	11372	4034	9519	3253	7344	2393
		25	14607	6240	13118	5511	11480	4749	9644	3973	7494	3127
		27	13813	6927	12320	6198	10677	5450	8820	4669	6585	3791
		29	14530	7600	13058	6880	11445	6146	9631	5384	7516	4562
		31	14315	8263	12852	7544	11244	6810	9438	6048	7323	5230

COOLING POWER YELDED

VED541I			Tw(in) = 5°C		Tw(in) = 7°C		Tw(in) = 9°C		Tw(in) = 11°C		Tw(in) = 13°C	
Dt w	Twb	Tdb	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps
[°C]	[°C]	[°C]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]
3	15	21	7065	5403	5645	4669	4080	5414	3041	3041	2364	2364
		23	7022	6090	5611	5356	4354	4354	3694	3694	3029	3029
		25	6992	6768	5594	6039	4989	4989	4333	4333	3676	3676
		27	6889	6889	6259	6819	5611	5611	4963	4963	4316	4316
		29	7516	7516	6872	7488	6229	6229	5585	5585	4942	4942
		31	8116	8116	7477	8147	6838	6838	6199	6199	5560	5560
	17	21	8893	5408	7494	4683	5980	3949	4298	3197	2244	2244
		23	8940	6090	7554	5375	6049	4646	4380	3898	3029	3029
		25	8876	6768	7494	6053	6001	5333	4341	4341	3676	3676
		27	8846	7441	7477	6730	5989	5989	4963	4963	4316	4316
		29	8734	8100	7374	7394	6229	6229	5585	5585	4942	4942
		31	8687	8687	7477	8147	6838	6838	6199	6199	5560	5560
	19	21	11055	5380	9674	4669	8181	3949	6559	3202	4757	2454
		23	10995	6085	9618	5375	8138	4660	6525	3940	4732	3174
		25	10943	6763	9575	6057	8103	5347	6499	4627	4719	3884
		27	10883	7436	9519	6730	8056	6025	6460	5300	4689	4689
		29	10913	8151	9463	7399	8009	6698	6426	5983	4942	4942
		31	10866	8801	9429	8058	7983	7357	6409	6409	5560	5560
	21	21	13148	5333	11771	4623	10296	3912	8695	3197	6949	2473
		23	13307	6109	11840	5352	10373	4646	8786	3917	7052	3197
		25	13234	6805	11780	6053	10317	5352	8738	4641	7018	3907
		27	13148	7474	11698	6726	10248	6029	8678	5324	6967	4613
		29	13208	8137	11771	7394	10330	6698	8773	6001	7074	5291
		31	12960	8792	11531	8053	10098	7361	8545	6665	6855	5959
	23	23	15563	6053	14105	5305	12642	4604	11068	3898	9360	3192
		25	15628	6768	14178	6025	12724	5328	11162	4608	9468	3903
		27	14838	7464	13397	6721	11951	6025	10394	5328	8704	4623
		29	15430	8072	14092	7385	12659	6693	11111	6001	9438	5305
		31	15212	8726	13882	8044	12453	7357	10918	6670	9253	5973
5	15	21	6448	5076	4839	4272	3470	3470	2776	2776	2042	2042
		23	6413	5768	4813	4964	4140	4140	3462	3462	2767	2767
		25	6392	6392	5452	5941	4792	4792	4127	4127	3453	3453
		27	6735	6735	6083	6628	5431	5431	4775	4775	4110	4110
		29	7348	7348	6705	7305	6057	6057	5409	5409	4753	4753
		31	7958	7958	7314	7969	6675	6675	6031	6031	5384	5384
	17	21	8352	5118	6838	4361	5109	3552	2831	2580	2042	2042
		23	8408	5810	6907	5057	5199	4258	3462	3462	2767	2767
		25	8348	6492	6855	5740	5156	4945	4127	4127	3453	3453
		27	8327	7165	6842	6417	5431	5431	4775	4775	4110	4110
		29	8219	7829	6744	7081	6057	6057	5409	5409	4753	4753
		31	8176	8176	7314	7969	6675	6675	6031	6031	5384	5384
	19	21	10570	5123	9103	4389	7490	3613	5645	2818	3282	1879
		23	10514	5833	9056	5099	7451	4347	5624	3557	3269	2603
		25	10467	6515	9021	5786	7426	5038	5607	4249	3269	3269
		27	10411	7184	**8970**	**6450**	7383	5698	5577	4889	4110	4110
		29	10356	7852	8923	7132	7344	6389	5547	5547	4753	4753
		31	10313	8511	8893	7791	7327	7058	6031	6031	5384	5384
	21	21	12698	5095	11256	4370	9686	3636	7949	2884	5929	2052
		23	12762	5824	11334	5104	9776	4356	8056	3604	6087	2814
		25	12698	6520	11278	5805	9729	5081	8018	4319	6062	3529
		27	12616	7193	11205	6483	9665	5763	7962	5020	6019	4239
		29	12689	7862	11286	7151	9759	6436	8073	5702	6147	4926
		31	12445	8521	11046	7815	9528	7100	7846	6366	5920	5590
	23	23	15049	5782	13633	5071	12102	4356	10429	3627	8575	2860
		25	15122	6501	13715	5796	12192	5067	10536	4342	8700	3599
		27	14332	7193	12929	6492	11411	5777	9751	5053	7902	4291
		29	15032	7862	13642	7160	12140	6455	10501	5744	8691	5006
		31	14813	8516	13431	7824	11939	7123	10308	6408	8502	5679
7	15	21	5504	4594	3290	3552	3144	3144	2295	2295	969	969
		23	5474	5286	4556	4926	3861	3861	3144	3144	2321	2321
		25	5890	5890	5221	5688	4543	4543	3852	3852	3136	3136
		27	6529	6529	5868	6394	5204	5204	4530	4530	3844	3844
		29	7155	7155	6503	7086	5847	5847	5186	5186	4517	4517
		31	7773	7773	7125	7763	6478	6478	5826	5826	5169	5169
	17	21	7593	4730	5821	3879	3415	2823	2295	2295	969	969
		23	7662	5426	5911	4585	3556	3548	3144	3144	2321	2321
		25	7610	6113	5864	5268	4543	4543	3852	3852	3136	3136
		27	7593	6787	5864	5950	5204	5204	4530	4530	3844	3844
		29	7490	7455	6503	7086	5847	5847	5186	5186	4517	4517
		31	7451	7451	7125	7763	6478	6478	5826	5826	5169	5169
	19	21	9922	4795	8305	4006	6418	3141	3878	2108	969	969
		23	9875	5506	8266	4721	6392	3879	3865	2832	2321	2267
		25	9837	6188	8232	5408	6375	4571	3865	3548	3136	3136
		27	9785	6847	8189	6057	6340	5188	4530	4530	3844	3844
		29	9734	7534	8151	6758	6310	5931	5186	5186	4517	4517
		31	9704	8193	8129	7427	6302	6302	5826	5826	5169	5169
	21	21	12114	4795	10566	4038	8824	3253	6786	2388	3977	1327
		23	12196	5529	10656	4777	8931	3978	6919	3141	4200	2094
		25	12136	6230	10604	5487	8888	4707	6894	3856	4187	2832
		27	12059	6908	10540	6165	8833	5394	6847	4562	4148	3538
		29	12144	7581	10634	6838	8944	6076	6980	5253	4358	4258
		31	11900	8235	10394	7502	8708	6735	6739	5913	5169	5169
	23	23	14525	5515	13024	4781	11372	4034	9519	3253	7344	2393
		25	14607	6240	13118	5511	11480	4749	9644	3973	7494	3127
		27	13813	6927	12320	6198	10677	5450	8820	4669	6585	3791
		29	14530	7600	13058	6880	11445	6146	9631	5384	7516	4562
		31	14315	8263	12852	7544	11244	6810	9438	6048	7323	5230

COOLING POWER YELDED

VED730I			Tw(in) = 5°C		Tw(in) = 7°C		Tw(in) = 9°C		Tw(in) = 11°C		Tw(in) = 13°C	
Dt w	Twb	Tdb	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps
[°C]	[°C]	[°C]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]
3	15	21	10909	9583	8717	8282	6299	9602	4696	4696	3650	3650
		23	10843	10802	8664	9500	6723	6723	5703	5703	4676	4676
		25	10797	10797	8637	10710	7703	7703	6690	6690	5676	5676
		27	10638	10638	9664	12095	8664	8664	7664	7664	6663	6663
		29	11605	11605	10611	13280	9618	9618	8624	8624	7630	7630
		31	12532	12532	11545	14449	10558	10558	9571	9571	8584	8584
	17	21	13731	9591	11571	8306	9233	7005	6637	5670	3464	3464
		23	13804	10802	11664	9533	9339	8240	6763	6763	4676	4676
		25	13704	12004	11571	10735	9266	9266	6703	6703	5676	5676
		27	13658	13197	11545	11937	9247	9247	7664	7664	6663	6663
		29	13486	13486	11386	13115	9618	9618	8624	8624	7630	7630
		31	13413	13413	11545	14449	10558	10558	9571	9571	8584	8584
	19	21	17069	9542	14936	8282	12631	7005	10128	5679	7346	4352
		23	16976	10793	14850	9533	12565	8265	10075	6988	7306	5629
		25	16897	11995	14784	10744	12512	9484	10035	8207	7286	6889
		27	16804	13189	14698	11937	12439	10686	9975	9401	7240	7240
		29	16851	14458	14612	13123	12366	11879	9922	9922	7630	7630
		31	16778	15610	14559	14292	12327	12327	9896	9896	8584	8584
	21	21	20301	9459	18175	8199	15897	6939	13426	5670	10730	4385
		23	20546	10835	18281	9492	16016	8240	13565	6947	10889	5670
		25	20434	12070	18188	10735	15930	9492	13492	8232	10836	6930
		27	20301	13255	18063	11929	15824	10694	13400	9442	10757	8182
		29	20394	14433	18175	13115	15950	11879	13545	10644	10922	9384
		31	20010	15593	17804	14283	15592	13057	13194	11821	10585	10570
	23	23	24031	10735	21778	9409	19520	8166	17089	6914	14453	5662
		25	24130	12004	21891	10686	19646	9450	17235	8174	14618	6922
		27	22911	13239	20686	11921	18453	10686	16049	9450	13439	8199
		29	23825	14317	21759	13098	19546	11871	17155	10644	14572	9409
		31	23487	15477	21434	14267	19228	13048	16857	11830	14287	10594
5	15	21	9955	9003	7471	7577	5359	5359	4285	4285	3153	3153
		23	9902	9902	7432	8804	6392	6392	5345	5345	4272	4272
		25	9869	9869	8419	10536	7399	7399	6372	6372	5332	5332
		27	10399	10399	9392	11755	8386	8386	7372	7372	6345	6345
		29	11346	11346	10353	12957	9353	9353	8352	8352	7339	7339
		31	12287	12287	11293	14134	10306	10306	9313	9313	8313	8313
	17	21	12896	9077	10558	7734	7889	6300	4372	4372	3153	3153
		23	12982	10304	10664	8970	8028	7552	5345	5345	4272	4272
		25	12890	11515	10585	10180	7962	7962	6372	6372	5332	5332
		27	12856	12708	10565	11382	8386	8386	7372	7372	6345	6345
		29	12691	12691	10412	12559	9353	9353	8352	8352	7339	7339
		31	12625	12625	11293	14134	10306	10306	9313	9313	8313	8313
	19	21	16321	9086	14055	7784	11565	6408	8717	4999	5067	3333
		23	16235	10346	13982	9044	11505	7710	8684	6309	5047	4617
		25	16162	11556	13929	10263	11465	8936	8657	7535	5047	5047
		27	16076	12742	**13850**	**11440**	11399	10105	8611	8611	6345	6345
		29	15989	13927	13777	12650	11340	11332	8564	8564	7339	7339
		31	15923	15096	13731	13819	11313	11313	9313	9313	8313	8313
	21	21	19606	9036	17380	7751	14956	6450	12274	5115	9154	3639
		23	19705	10329	17500	9053	15095	7726	12439	6391	9399	4990
		25	19606	11564	17414	10296	15022	9011	12380	7660	9359	6259
		27	19480	12758	17301	11498	14923	10221	12293	8903	9293	7519
		29	19593	13944	17427	12683	15069	11415	12466	10114	9492	8738
		31	19215	15112	17056	13861	14711	12592	12115	11291	9141	9141
	23	23	23236	10255	21050	8994	18685	7726	16102	6433	13241	5073
		25	23348	11531	21176	10279	18824	8986	16268	7701	13433	6383
		27	22130	12758	19964	11515	17619	10246	15055	8961	12201	7610
		29	23209	13944	21063	12700	18745	11448	16215	10188	13419	8878
		31	22871	15104	20739	13877	18434	12634	15917	11365	13128	10072
7	15	21	8498	8149	5080	6300	4855	4855	3544	3544	1497	1497
		23	8452	8452	7034	8738	5961	5961	4855	4855	3583	3583
		25	9094	9094	8061	10089	7014	7014	5948	5948	4842	4842
		27	10081	10081	9061	11341	8034	8034	6995	6995	5935	5935
		29	11048	11048	10041	12567	9028	9028	8008	8008	6975	6975
		31	12002	12002	11002	13769	10002	10002	8995	8995	7981	7981
	17	21	11724	8389	8988	6881	5272	5007	3544	3544	1497	1497
		23	11830	9625	9127	8132	5491	5491	4855	4855	3583	3583
		25	11750	10843	9054	9343	7014	7014	5948	5948	4842	4842
		27	11724	11724	9054	10553	8034	8034	6995	6995	5935	5935
		29	11565	11565	10041	12567	9028	9028	8008	8008	6975	6975
		31	11505	11505	11002	13769	10002	10002	8995	8995	7981	7981
	19	21	15320	8505	12823	7104	9909	5571	5988	3739	1497	1497
		23	15248	9765	12764	8373	9869	6881	5968	5024	3583	3583
		25	15188	10976	12711	9591	9843	8107	5968	5968	4842	4842
		27	15108	12145	12645	10744	9790	9202	6995	6995	5935	5935
		29	15029	13363	12585	11987	9743	9743	8008	8008	6975	6975
		31	14983	14532	12552	13173	9730	9730	8995	8995	7981	7981
	21	21	18705	8505	16314	7162	13625	5770	10479	4236	6140	2354
		23	18831	9807	16453	8472	13790	7055	10684	5571	6485	3714
		25	18738	11050	16374	9732	13724	8348	10644	6839	6465	5024
		27	18619	12252	16274	10934	13638	9566	10571	8091	6405	6275
		29	18751	13446	16420	12128	13810	10777	10777	9318	6730	6730
		31	18374	14607	16049	13305	13446	11946	10406	10406	7981	7981
	23	23	22428	9782	20109	8481	17559	7154	14698	5770	11340	4244
		25	22553	11067	20255	9774	17725	8422	14890	7046	11571	5546
		27	21328	12286	19023	10992	16486	9666	13618	8282	10167	6723
		29	22434	13479	20162	12203	17672	10901	14870	9550	11605	8091
		31	22103	14656	19844	13380	17361	12078	14572	10727	11307	9276

COOLING POWER YELDED

VED732I			Tw(in) = 5°C		Tw(in) = 7°C		Tw(in) = 9°C		Tw(in) = 11°C		Tw(in) = 13°C	
Dt w	Twb	Tdb	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps
[°C]	[°C]	[°C]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]
3	15	21	10909	9583	8717	8282	6299	9602	4696	4696	3650	3650
		23	10843	10802	8664	9500	6723	6723	5703	5703	4676	4676
		25	10797	10797	8637	10710	7703	7703	6690	6690	5676	5676
		27	10638	10638	9664	12095	8664	8664	7664	7664	6663	6663
		29	11605	11605	10611	13280	9618	9618	8624	8624	7630	7630
		31	12532	12532	11545	14449	10558	10558	9571	9571	8584	8584
	17	21	13731	9591	11571	8306	9233	7005	6637	5670	3464	3464
		23	13804	10802	11664	9533	9339	8240	6763	6763	4676	4676
		25	13704	12004	11571	10735	9266	9266	6703	6703	5676	5676
		27	13658	13197	11545	11937	9247	9247	7664	7664	6663	6663
		29	13486	13486	11386	13115	9618	9618	8624	8624	7630	7630
		31	13413	13413	11545	14449	10558	10558	9571	9571	8584	8584
	19	21	17069	9542	14936	8282	12631	7005	10128	5679	7346	4352
		23	16976	10793	14850	9533	12565	8265	10075	6988	7306	5629
		25	16897	11995	14784	10744	12512	9484	10035	8207	7286	6889
		27	16804	13189	14698	11937	12439	10686	9975	9401	7240	7240
		29	16851	14458	14612	13123	12366	11879	9922	9922	7630	7630
		31	16778	15610	14559	14292	12327	12327	9896	9896	8584	8584
	21	21	20301	9459	18175	8199	15897	6939	13426	5670	10730	4385
		23	20546	10835	18281	9492	16016	8240	13565	6947	10889	5670
		25	20434	12070	18188	10735	15930	9492	13492	8232	10836	6930
		27	20301	13255	18063	11929	15824	10694	13400	9442	10757	8182
		29	20394	14433	18175	13115	15950	11879	13545	10644	10922	9384
		31	20010	15593	17804	14283	15592	13057	13194	11821	10585	10570
	23	23	24031	10735	21778	9409	19520	8166	17089	6914	14453	5662
		25	24130	12004	21891	10686	19646	9450	17235	8174	14618	6922
		27	22911	13239	20686	11921	18453	10686	16049	9450	13439	8199
		29	23825	14317	21759	13098	19546	11871	17155	10644	14572	9409
		31	23487	15477	21434	14267	19228	13048	16857	11830	14287	10594
5	15	21	9955	9003	7471	7577	5359	5359	4285	4285	3153	3153
		23	9902	9902	7432	8804	6392	6392	5345	5345	4272	4272
		25	9869	9869	8419	10536	7399	7399	6372	6372	5332	5332
		27	10399	10399	9392	11755	8386	8386	7372	7372	6345	6345
		29	11346	11346	10353	12957	9353	9353	8352	8352	7339	7339
		31	12287	12287	11293	14134	10306	10306	9313	9313	8313	8313
	17	21	12896	9077	10558	7734	7889	6300	4372	4372	3153	3153
		23	12982	10304	10664	8970	8028	7552	5345	5345	4272	4272
		25	12890	11515	10585	10180	7962	7962	6372	6372	5332	5332
		27	12856	12708	10565	11382	8386	8386	7372	7372	6345	6345
		29	12691	12691	10412	12559	9353	9353	8352	8352	7339	7339
		31	12625	12625	11293	14134	10306	10306	9313	9313	8313	8313
	19	21	16321	9086	14055	7784	11565	6408	8717	4999	5067	3333
		23	16235	10346	13982	9044	11505	7710	8684	6309	5047	4617
		25	16162	11556	13929	10263	11465	8936	8657	7535	5047	5047
		27	16076	12742	**13850**	**11440**	11399	10105	8611	8611	6345	6345
		29	15989	13927	13777	12650	11340	11332	8564	8564	7339	7339
		31	15923	15096	13731	13819	11313	11313	9313	9313	8313	8313
	21	21	19606	9036	17380	7751	14956	6450	12274	5115	9154	3639
		23	19705	10329	17500	9053	15095	7726	12439	6391	9399	4990
		25	19606	11564	17414	10296	15022	9011	12380	7660	9359	6259
		27	19480	12758	17301	11498	14923	10221	12293	8903	9293	7519
		29	19593	13944	17427	12683	15069	11415	12466	10114	9492	8738
		31	19215	15112	17056	13861	14711	12592	12115	11291	9141	9141
	23	23	23236	10255	21050	8994	18685	7726	16102	6433	13241	5073
		25	23348	11531	21176	10279	18824	8986	16268	7701	13433	6383
		27	22130	12758	19964	11515	17619	10246	15055	8961	12201	7610
		29	23209	13944	21063	12700	18745	11448	16215	10188	13419	8878
		31	22871	15104	20739	13877	18434	12634	15917	11365	13128	10072
7	15	21	8498	8149	5080	6300	4855	4855	3544	3544	1497	1497
		23	8452	8452	7034	8738	5961	5961	4855	4855	3583	3583
		25	9094	9094	8061	10089	7014	7014	5948	5948	4842	4842
		27	10081	10081	9061	11341	8034	8034	6995	6995	5935	5935
		29	11048	11048	10041	12567	9028	9028	8008	8008	6975	6975
		31	12002	12002	11002	13769	10002	10002	8995	8995	7981	7981
	17	21	11724	8389	8988	6881	5272	5007	3544	3544	1497	1497
		23	11830	9625	9127	8132	5491	5491	4855	4855	3583	3583
		25	11750	10843	9054	9343	7014	7014	5948	5948	4842	4842
		27	11724	11724	9054	10553	8034	8034	6995	6995	5935	5935
		29	11565	11565	10041	12567	9028	9028	8008	8008	6975	6975
		31	11505	11505	11002	13769	10002	10002	8995	8995	7981	7981
	19	21	15320	8505	12823	7104	9909	5571	5988	3739	1497	1497
		23	15248	9765	12764	8373	9869	6881	5968	5024	3583	3583
		25	15188	10976	12711	9591	9843	8107	5968	5968	4842	4842
		27	15108	12145	12645	10744	9790	9202	6995	6995	5935	5935
		29	15029	13363	12585	11987	9743	9743	8008	8008	6975	6975
		31	14983	14532	12552	13173	9730	9730	8995	8995	7981	7981
	21	21	18705	8505	16314	7162	13625	5770	10479	4236	6140	2354
		23	18831	9807	16453	8472	13790	7055	10684	5571	6485	3714
		25	18738	11050	16374	9732	13724	8348	10644	6839	6465	5024
		27	18619	12252	16274	10934	13638	9566	10571	8091	6405	6275
		29	18751	13446	16420	12128	13810	10777	10777	9318	6730	6730
		31	18374	14607	16049	13305	13446	11946	10406	10406	7981	7981
	23	23	22428	9782	20109	8481	17559	7154	14698	5770	11340	4244
		25	22553	11067	20255	9774	17725	8422	14890	7046	11571	5546
		27	21328	12286	19023	10992	16486	9666	13618	8282	10167	6723
		29	22434	13479	20162	12203	17672	10901	14870	9550	11605	8091
		31	22103	14656	19844	13380	17361	12078	14572	10727	11307	9276

COOLING POWER YELDED

VED740I			Tw(in) = 5°C		Tw(in) = 7°C		Tw(in) = 9°C		Tw(in) = 11°C		Tw(in) = 13°C	
Dt w	Twb	Tdb	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps
[°C]	[°C]	[°C]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]
3	15	21	12666	9483	10120	8195	7313	9501	5452	5452	4237	4237
		23	12589	10688	10059	9401	7805	7805	6621	6621	5429	5429
		25	12535	11878	10028	10598	8944	8944	7767	7767	6590	6590
		27	12350	12350	11220	11968	10059	10059	8897	8897	7736	7736
		29	13473	13473	12320	13141	11166	11166	10013	10013	8859	8859
		31	14550	14550	13404	14298	12258	12258	11112	11112	9966	9966
	17	21	15942	9491	13435	8219	10720	6931	7705	5611	4022	4022
		23	16026	10688	13542	9433	10843	8154	7852	6841	5429	5429
		25	15911	11878	13435	10623	10758	9360	7782	7782	6590	6590
		27	15857	13059	13404	11812	10735	10549	8897	8897	7736	7736
		29	15657	14216	13219	12977	11166	11166	10013	10013	8859	8859
		31	15572	15364	13404	14298	12258	12258	11112	11112	9966	9966
	19	21	19817	9442	17341	8195	14665	6931	11758	5619	8528	4307
		23	19710	10680	17241	9433	14588	8178	11697	6915	8482	5570
		25	19617	11870	17164	10631	14527	9384	11651	8121	8459	6817
		27	19510	13051	17064	11812	14442	10574	11581	9302	8405	8252
		29	19564	14306	16964	12985	14357	11755	11520	10500	8859	8859
		31	19479	15446	16903	14142	14311	12911	11489	11489	9966	9966
	21	21	23570	9360	21102	8113	18456	6866	15588	5611	12458	4339
		23	23855	10721	21225	9392	18595	8154	15749	6874	12643	5611
		25	23724	11943	21117	10623	18495	9392	15665	8145	12581	6858
		27	23570	13116	20971	11804	18372	10582	15557	9343	12489	8096
		29	23678	14281	21102	12977	18518	11755	15726	10533	12681	9286
		31	23232	15430	20671	14134	18102	12920	15319	11697	12289	10459
	23	23	27900	10623	25285	9310	22663	8080	19840	6841	16780	5603
		25	28015	11878	25416	10574	22809	9351	20010	8088	16972	6849
		27	26600	13100	24016	11796	21425	10574	18633	9351	15603	8113
		29	27661	14166	25262	12961	22693	11747	19917	10533	16918	9310
		31	27269	15315	24885	14117	22324	12911	19571	11706	16588	10483
5	15	21	11558	8908	8674	7497	6221	6221	4975	4975	3660	3660
		23	11497	10122	8628	8711	7421	7421	6206	6206	4960	4960
		25	11458	11312	9774	10426	8590	8590	7398	7398	6191	6191
		27	12073	12073	10905	11632	9736	9736	8559	8559	7367	7367
		29	13173	13173	12020	12821	10858	10858	9697	9697	8521	8521
		31	14265	14265	13112	13986	11966	11966	10812	10812	9651	9651
	17	21	14973	8982	12258	7653	9159	6234	5075	4528	3660	3660
		23	15073	10196	12381	8876	9320	7473	6206	6206	4960	4960
		25	14965	11394	12289	10073	9244	8679	7398	7398	6191	6191
		27	14926	12575	12266	11263	9736	9736	8559	8559	7367	7367
		29	14734	13740	12089	12427	10858	10858	9697	9697	8521	8521
		31	14657	14657	13112	13986	11966	11966	10812	10812	9651	9651
	19	21	18948	8990	16318	7703	13427	6341	10120	4946	5883	3298
		23	18848	10237	16234	8949	13358	7629	10082	6242	5860	4569
		25	18764	11435	16172	10155	13312	8843	10051	7456	5860	5824
		27	18664	12608	**16080**	**11320**	13235	9999	9997	8580	7367	7367
		29	18564	13781	15995	12518	13165	11213	9943	9843	8521	8521
		31	18487	14937	15942	13674	13135	12386	10812	10812	9651	9651
	21	21	22763	8941	20179	7670	17364	6382	14250	5061	10628	3601
		23	22878	10221	20317	8958	17526	7645	14442	6324	10912	4938
		25	22763	11443	20217	10188	17441	8917	14373	7579	10866	6193
		27	22617	12624	20087	11377	17326	10114	14273	8810	10789	7440
		29	22747	13797	20233	12550	17495	11295	14473	10008	11020	8646
		31	22309	14954	19802	13715	17080	12460	14065	11172	10612	9811
	23	23	26977	10147	24439	8900	21694	7645	18695	6365	15373	5020
		25	27108	11410	24585	10172	21855	8892	18887	7620	15596	6316
		27	25693	12624	23178	11394	20456	10139	17480	8867	14165	7530
		29	26946	13797	24455	12567	21763	11328	18825	10081	15580	8785
		31	26554	14946	24078	13732	21402	12501	18479	11246	15242	9967
7	15	21	9866	8063	5898	6234	5637	5637	4114	4114	1738	1738
		23	9813	9277	8167	8646	6921	6921	5637	5637	4160	4160
		25	10559	10559	9359	9983	8144	8144	6906	6906	5621	5621
		27	11704	11704	10520	11222	9328	9328	8121	8121	6890	6890
		29	12827	12827	11658	12436	10482	10482	9297	9297	8098	8098
		31	13934	13934	12773	13625	11612	11612	10443	10443	9267	9267
	17	21	13611	8301	10435	6808	6121	4955	4114	4114	1738	1738
		23	13735	9524	10597	8047	6375	6226	5637	5637	4160	4160
		25	13642	10729	10512	9245	8144	8144	6906	6906	5621	5621
		27	13611	11911	10512	10442	9328	9328	8121	8121	6890	6890
		29	13427	13084	11658	12436	10482	10482	9297	9297	8098	8098
		31	13358	13358	12773	13625	11612	11612	10443	10443	9267	9267
	19	21	17787	8416	14888	7030	11504	5512	6952	3700	1738	1738
		23	17703	9663	14819	8285	11458	6808	6929	4971	4160	3978
		25	17633	10861	14757	9491	11427	8022	6929	6226	5621	5621
		27	17541	12017	14680	10631	11366	9105	8121	8121	6890	6890
		29	17449	13223	14611	11861	11312	10409	9297	9297	8098	8098
		31	17395	14380	14573	13034	11297	11297	10443	10443	9267	9267
	21	21	21717	8416	18941	7087	15819	5709	12166	4192	7129	2330
		23	21863	9704	19102	8383	16011	6981	12404	5512	7529	3675
		25	21755	10934	19010	9630	15934	8260	12358	6767	7506	4971
		27	21617	12124	18895	10820	15834	9466	12273	8006	7436	6210
		29	21771	13305	19064	12001	16034	10664	12512	9220	7813	7473
		31	21332	14454	18633	13166	15611	11820	12081	10377	9267	9267
	23	23	26039	9679	23347	8392	20386	7079	17064	5709	13165	4200
		25	26185	10951	23516	9671	20579	8334	17287	6972	13435	5488
		27	24762	12157	22086	10877	19141	9565	15811	8195	11804	6653
		29	26046	13338	23409	12075	20517	10787	17264	9450	13473	8006
		31	25662	14503	23040	13239	20156	11952	16918	10615	13127	9179

COOLING POWER YELDED

VED741I			Tw(in) = 5°C		Tw(in) = 7°C		Tw(in) = 9°C		Tw(in) = 11°C		Tw(in) = 13°C	
Dt w	Twb	Tdb	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps	Pc	Ps
[°C]	[°C]	[°C]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]	[W]
3	15	21	12666	9483	10120	8195	7313	9501	5452	5452	4237	4237
		23	12589	10688	10059	9401	7805	7805	6621	6621	5429	5429
		25	12535	11878	10028	10598	8944	8944	7767	7767	6590	6590
		27	12350	12350	11220	11968	10059	10059	8897	8897	7736	7736
		29	13473	13473	12320	13141	11166	11166	10013	10013	8859	8859
		31	14550	14550	13404	14298	12258	12258	11112	11112	9966	9966
	17	21	15942	9491	13435	8219	10720	6931	7705	5611	4022	4022
		23	16026	10688	13542	9433	10843	8154	7852	6841	5429	5429
		25	15911	11878	13435	10623	10758	9360	7782	7782	6590	6590
		27	15857	13059	13404	11812	10735	10549	8897	8897	7736	7736
		29	15657	14216	13219	12977	11166	11166	10013	10013	8859	8859
		31	15572	15364	13404	14298	12258	12258	11112	11112	9966	9966
	19	21	19817	9442	17341	8195	14665	6931	11758	5619	8528	4307
		23	19710	10680	17241	9433	14588	8178	11697	6915	8482	5570
		25	19617	11870	17164	10631	14527	9384	11651	8121	8459	6817
		27	19510	13051	17064	11812	14442	10574	11581	9302	8405	8252
		29	19564	14306	16964	12985	14357	11755	11520	10500	8859	8859
		31	19479	15446	16903	14142	14311	12911	11489	11489	9966	9966
	21	21	23570	9360	21102	8113	18456	6866	15588	5611	12458	4339
		23	23855	10721	21225	9392	18595	8154	15749	6874	12643	5611
		25	23724	11943	21117	10623	18495	9392	15665	8145	12581	6858
		27	23570	13116	20971	11804	18372	10582	15557	9343	12489	8096
		29	23678	14281	21102	12977	18518	11755	15726	10533	12681	9286
		31	23232	15430	20671	14134	18102	12920	15319	11697	12289	10459
	23	23	27900	10623	25285	9310	22663	8080	19840	6841	16780	5603
		25	28015	11878	25416	10574	22809	9351	20010	8088	16972	6849
		27	26600	13100	24016	11796	21425	10574	18633	9351	15603	8113
		29	27661	14166	25262	12961	22693	11747	19917	10533	16918	9310
		31	27269	15315	24885	14117	22324	12911	19571	11706	16588	10483
5	15	21	11558	8908	8674	7497	6221	6221	4975	4975	3660	3660
		23	11497	10122	8628	8711	7421	7421	6206	6206	4960	4960
		25	11458	11312	9774	10426	8590	8590	7398	7398	6191	6191
		27	12073	12073	10905	11632	9736	9736	8559	8559	7367	7367
		29	13173	13173	12020	12821	10858	10858	9697	9697	8521	8521
		31	14265	14265	13112	13986	11966	11966	10812	10812	9651	9651
	17	21	14973	8982	12258	7653	9159	6234	5075	4528	3660	3660
		23	15073	10196	12381	8876	9320	7473	6206	6206	4960	4960
		25	14965	11394	12289	10073	9244	8679	7398	7398	6191	6191
		27	14926	12575	12266	11263	9736	9736	8559	8559	7367	7367
		29	14734	13740	12089	12427	10858	10858	9697	9697	8521	8521
		31	14657	14657	13112	13986	11966	11966	10812	10812	9651	9651
	19	21	18948	8990	16318	7703	13427	6341	10120	4946	5883	3298
		23	18848	10237	16234	8949	13358	7629	10082	6242	5860	4569
		25	18764	11435	16172	10155	13312	8843	10051	7456	5860	5824
		27	18664	12608	**16080**	**11320**	13235	9999	9997	8580	7367	7367
		29	18564	13781	15995	12518	13165	11213	9943	9843	8521	8521
		31	18487	14937	15942	13674	13135	12386	10812	10812	9651	9651
	21	21	22763	8941	20179	7670	17364	6382	14250	5061	10628	3601
		23	22878	10221	20317	8958	17526	7645	14442	6324	10912	4938
		25	22763	11443	20217	10188	17441	8917	14373	7579	10866	6193
		27	22617	12624	20087	11377	17326	10114	14273	8810	10789	7440
		29	22747	13797	20233	12550	17495	11295	14473	10008	11020	8646
		31	22309	14954	19802	13715	17080	12460	14065	11172	10612	9811
	23	23	26977	10147	24439	8900	21694	7645	18695	6365	15373	5020
		25	27108	11410	24585	10172	21855	8892	18887	7620	15596	6316
		27	25693	12624	23178	11394	20456	10139	17480	8867	14165	7530
		29	26946	13797	24455	12567	21763	11328	18825	10081	15580	8785
		31	26554	14946	24078	13732	21402	12501	18479	11246	15242	9967
7	15	21	9866	8063	5898	6234	5637	5637	4114	4114	1738	1738
		23	9813	9277	8167	8646	6921	6921	5637	5637	4160	4160
		25	10559	10559	9359	9983	8144	8144	6906	6906	5621	5621
		27	11704	11704	10520	11222	9328	9328	8121	8121	6890	6890
		29	12827	12827	11658	12436	10482	10482	9297	9297	8098	8098
		31	13934	13934	12773	13625	11612	11612	10443	10443	9267	9267
	17	21	13611	8301	10435	6808	6121	4955	4114	4114	1738	1738
		23	13735	9524	10597	8047	6375	6226	5637	5637	4160	4160
		25	13642	10729	10512	9245	8144	8144	6906	6906	5621	5621
		27	13611	11911	10512	10442	9328	9328	8121	8121	6890	6890
		29	13427	13084	11658	12436	10482	10482	9297	9297	8098	8098
		31	13358	13358	12773	13625	11612	11612	10443	10443	9267	9267
	19	21	17787	8416	14888	7030	11504	5512	6952	3700	1738	1738
		23	17703	9663	14819	8285	11458	6808	6929	4971	4160	3978
		25	17633	10861	14757	9491	11427	8022	6929	6226	5621	5621
		27	17541	12017	14680	10631	11366	9105	8121	8121	6890	6890
		29	17449	13223	14611	11861	11312	10409	9297	9297	8098	8098
		31	17395	14380	14573	13034	11297	11297	10443	10443	9267	9267
	21	21	21717	8416	18941	7087	15819	5709	12166	4192	7129	2330
		23	21863	9704	19102	8383	16011	6981	12404	5512	7529	3675
		25	21755	10934	19010	9630	15934	8260	12358	6767	7506	4971
		27	21617	12124	18895	10820	15834	9466	12273	8006	7436	6210
		29	21771	13305	19064	12001	16034	10664	12512	9220	7813	7473
		31	21332	14454	18633	13166	15611	11820	12081	10377	9267	9267
	23	23	26039	9679	23347	8392	20386	7079	17064	5709	13165	4200
		25	26185	10951	23516	9671	20579	8334	17287	6972	13435	5488
		27	24762	12157	22086	10877	19141	9565	15811	8195	11804	6653
		29	26046	13338	23409	12075	20517	10787	17264	9450	13473	8006
		31	25662	14503	23040	13239	20156	11952	16918	10615	13127	9179

HEATING POWER YIELDED (2-PIPE SYSTEM)

The heating power yielded by the coils (standard or larger) are stated in table format and are referred to the maximum speed, based on the water flow and on the difference of temperature between water entering and air entering. The performances at medium and minimum speed are obtained by multiplying the values in the graphic by the corrective factors indicated for each speed.

NB: The yield values marked in bold indicate the nominal value.

Key:
Tw [°C] = Inlet water temperature
Ta D.B. [°C] = Inlet water temperature with dry bulb
Ph [w] = Heating power yielded

H = maximum speed
M = medium speed
L = minimum speed

The heating power yielded indicated in the table must be multiplied by the following corrective factors:																	
		030I	**040I**	**130I**	**140I**	**230I**	**240I**	**330I**	**340I**	**530I**	**540I**	**730I**	**740I**	**64**	**82**	**84**	**102**
Thermal power corrective factors	**H**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	M	0.91	0.91	0.93	0.93	0.91	0.90	0.89	0.91	0.84	0.83	0.83	0.83	0.80	0.88	0.84	0.90
	L	0.49	0.60	0.70	0.69	0.75	0.73	0.74	0.76	0.79	0.77	0.73	0.72	0.59	0.71	0.65	0.74

VED030I		**Ta D.B. [°C]**				
		16	**18**	**20**	**22**	**24**
Tw [°C]		**Ph**	**Ph**	**Ph**	**Ph**	**Ph**
in	dt	[W]	[W]	[W]	[W]	[W]
70	**5**	3351	3177	3004	2835	2667
	10	4041	4683	**3688**	3514	3341
	15	3930	3751	3575	3398	3227
60	**5**	3472	3296	3117	2943	2769
	10	3246	3072	2901	2730	2561
	15	3117	2943	2769	2596	2424
50	**5**	2564	2393	2224	2059	1895
	10	2446	2274	2103	1935	1766
	15	2290	2114	1937	1761	1585
40	**5**	1772	1606	1443	1277	1116
	10	1627	1453	1282	1108	929
	15	1411	1219	987	642	369

VED040I		**Ta D.B. [°C]**				
		16	**18**	**20**	**22**	**24**
Tw [°C]		**Ph**	**Ph**	**Ph**	**Ph**	**Ph**
in	dt	[W]	[W]	[W]	[W]	[W]
70	5	3558	3374	3189	3010	2831
	10	4291	4973	**3916**	3732	3547
	15	4173	3983	3796	3609	3427
60	5	3687	3500	3309	3125	2940
	10	3446	3262	3080	2899	2720
	15	3309	3125	2940	2756	2574
50	5	2722	2541	2362	2186	2013
	10	2597	2415	2233	2054	1876
	15	2432	2245	2057	1870	1683
40	5	1881	1705	1532	1356	1185
	10	1727	1543	1361	1177	987
	15	1498	1294	1048	682	391

VED130I		**Ta D.B. [°C]**				
		16	**18**	**20**	**22**	**24**
Tw [°C]		**Ph**	**Ph**	**Ph**	**Ph**	**Ph**
in	dt	[W]	[W]	[W]	[W]	[W]
70	**5**	5714	5418	5122	4835	4547
	10	6891	7986	**6289**	5993	5696
	15	6702	6397	6096	5795	5503
60	**5**	5921	5620	5315	5019	4722
	10	5535	5239	4947	4655	4368
	15	5315	5019	4722	4426	4134
50	**5**	4372	4080	3793	3510	3232
	10	4170	3878	3587	3299	3012
	15	3905	3605	3304	3003	2702
40	**5**	3021	2738	2460	2177	1903
	10	2774	2478	2186	1890	1585
	15	2406	2078	1683	1095	628

VED140I		**Ta D.B. [°C]**				
		16	**18**	**20**	**22**	**24**
Tw [°C]		**Ph**	**Ph**	**Ph**	**Ph**	**Ph**
in	dt	[W]	[W]	[W]	[W]	[W]
70	5	5974	5665	5355	5054	4754
	10	7204	8349	**6575**	6265	5956
	15	7007	6688	6373	6059	5754
60	5	6190	5876	5557	5247	4937
	10	5787	5477	5172	4867	4566
	15	5557	5247	4937	4627	4322
50	5	4571	4266	3966	3670	3379
	10	4360	4055	3750	3449	3149
	15	4083	3769	3454	3140	2825
40	5	3158	2863	2572	2276	1990
	10	2900	2591	2286	1976	1657
	15	2515	2173	1760	1145	657

HEATING POWER YIELDED

VED230I		Ta D.B. [°C]				
		16	18	20	22	24
Tw [°C]		Ph	Ph	Ph	Ph	Ph
in	dt	[W]	[W]	[W]	[W]	[W]
70	5	6506	6169	5831	5504	5177
	10	7845	9092	**7160**	6823	6485
	15	7630	7283	6940	6598	6266
60	5	6741	6399	6051	5714	5376
	10	6301	5964	5632	5300	4973
	15	6051	5714	5376	5039	4707
50	5	4978	4646	4318	3997	3680
	10	4748	4416	4083	3756	3429
	15	4446	4104	3761	3419	3077
40	5	3439	3117	2801	2479	2167
	10	3158	2821	2489	2152	1804
	15	2739	2366	1916	1247	715

VED240I		Ta D.B. [°C]				
		16	18	20	22	24
Tw [°C]		Ph	Ph	Ph	Ph	Ph
in	dt	[W]	[W]	[W]	[W]	[W]
70	5	7186	6814	6441	6080	5719
	10	8665	10043	**7909**	7536	7164
	15	8428	8044	7666	7288	6921
60	5	7446	7068	6684	6311	5939
	10	6961	6588	6221	5854	5493
	15	6684	6311	5939	5566	5199
50	5	5498	5132	4770	4415	4065
	10	5244	4877	4511	4149	3788
	15	4911	4533	4155	3777	3398
40	5	3799	3444	3094	2738	2394
	10	3489	3116	2749	2377	1993
	15	3026	2614	2117	1377	790

VED330I		Ta D.B. [°C]				
		16	18	20	22	24
Tw [°C]		Ph	Ph	Ph	Ph	Ph
in	dt	[W]	[W]	[W]	[W]	[W]
70	5	9547	9052	8557	8077	7597
	10	11512	13342	**10507**	10012	9517
	15	11197	10687	10185	9682	9195
60	5	9892	9390	8880	8385	7890
	10	9247	8752	8265	7777	7297
	15	8880	8385	7890	7395	6907
50	5	7305	6817	6337	5865	5400
	10	6967	6480	5992	5512	5032
	15	6525	6022	5520	5017	4515
40	5	5047	4575	4110	3637	3180
	10	4635	4140	3652	3157	2647
	15	4020	3472	2812	1830	1050

VED340I		Ta D.B. [°C]				
		16	18	20	22	24
Tw [°C]		Ph	Ph	Ph	Ph	Ph
in	dt	[W]	[W]	[W]	[W]	[W]
70	5	9950	9435	8919	8418	7918
	10	11998	13906	**10951**	10435	9919
	15	11670	11139	10615	10091	9583
60	5	10310	9786	9255	8739	8223
	10	9638	9122	8614	8106	7606
	15	9255	8739	8223	7707	7199
50	5	7613	7105	6605	6113	5628
	10	7262	6754	6245	5745	5245
	15	6800	6277	5753	5229	4706
40	5	5261	4768	4283	3791	3314
	10	4831	4315	3807	3291	2759
	15	4190	3619	2931	1907	1094

VED530I		Ta D.B. [°C]				
		16	18	20	22	24
Tw [°C]		Ph	Ph	Ph	Ph	Ph
in	dt	[W]	[W]	[W]	[W]	[W]
70	5	15967	15139	14311	13508	12706
	10	19253	22313	**17572**	16744	15916
	15	18726	17873	17033	16192	15377
60	5	16544	15703	14850	14022	13195
	10	15465	14637	13822	13007	12204
	15	14850	14022	13195	12367	11552
50	5	12216	11401	10598	9808	9031
	10	11652	10837	10021	9219	8416
	15	10912	10072	9231	8391	7551
40	5	8441	7651	6873	6083	5318
	10	7751	6923	6108	5280	4427
	15	6723	5807	4703	3060	1756

VED540I		Ta D.B. [°C]				
		16	18	20	22	24
Tw [°C]		Ph	Ph	Ph	Ph	Ph
in	dt	[W]	[W]	[W]	[W]	[W]
70	5	18089	17151	16213	15304	14395
	10	21812	25279	**19908**	18970	18032
	15	21215	20249	19297	18345	17421
60	5	18743	17791	16824	15887	14949
	10	17521	16583	15659	14736	13826
	15	16824	15887	14949	14011	13087
50	5	13840	12917	12007	11112	10231
	10	13201	12277	11354	10444	9535
	15	12363	11411	10458	9506	8554
40	5	9563	8668	7787	6892	6025
	10	8782	7844	6920	5982	5016
	15	7616	6579	5329	3467	1989

HEATING POWER YIELDED

VED730I		Ta D.B. [°C]				
		16	18	20	22	24
Tw [°C]		Ph	Ph	Ph	Ph	Ph
in	dt	[W]	[W]	[W]	[W]	[W]
70	5	26350	24983	23617	22293	20968
	10	31773	36823	**28999**	27633	26267
	15	30903	29496	28109	26722	25377
60	5	27302	25915	24507	23141	21775
	10	25522	24155	22810	21465	20140
	15	24507	23141	21775	20409	19064
50	5	20161	18815	17490	16186	14903
	10	19229	17884	16538	15214	13889
	15	18008	16621	15234	13847	12461
40	5	13930	12626	11343	10039	8776
	10	12792	11426	10080	8714	7307
	15	11095	9584	7762	5051	2898

VED740I		Ta D.B. [°C]				
		16	18	20	22	24
Tw [°C]		Ph	Ph	Ph	Ph	Ph
in	dt	[W]	[W]	[W]	[W]	[W]
70	5	28809	27316	25822	24374	22925
	10	34739	40261	**31706**	30212	28719
	15	33788	32249	30733	29217	27746
60	5	29850	28334	26795	25301	23808
	10	27904	26410	24939	23468	22020
	15	26795	25301	23808	22314	20843
50	5	22043	20572	19123	17697	16294
	10	21024	19553	18082	16634	15185
	15	19689	18173	16656	15140	13624
40	5	15231	13805	12402	10976	9596
	10	13986	12492	11021	9528	7989
	15	12130	10478	8487	5522	3168

POWER YIELDED WITH HEATING ONLY COIL (4 PIPES AND 4 CONNECTIONS)

The power yielded by the heating only coils installed on the fan coils (double-circuit or BV accessory), are stated in table format and are referred to the maximum speed, based on the water flow and on the difference of temperature between water entering and air entering. The performances at medium and minimum speed are obtained by multiplying the values in the graphic by the corrective factors indicated for each speed.

NB: The yield values marked in bold indicate the nominal value.

Key:
Tw [°C] = Inlet water temperature
Ta D.B. [°C] = Inlet water temperature with dry bulb
Ph [w] = Heating power yielded

H = maximum speed
M = medium speed
L = minimum speed

The heating power yielded indicated in the table must be multiplied by the following corrective factors:									
		VED030I BV030	VED130I BV130	VED230I BV230	VED330I BV162	VED532I	VED541I	VED732I	VED741I
Total cooling capacity corrective values	H	1	1	1	1	1	1	1	1
	M	0.94	0.95	0.93	0.93	0.95	0.96	0.89	0.92
	L	0.72	0.78	0.82	0.83	0.79	0.84	0.75	0.82

VED030I BV030		Ta D.B. [°C]				
		16	18	20	22	24
Tw [°C]		Ph	Ph	Ph	Ph	Ph
in	dt	[W]	[W]	[W]	[W]	[W]
70	5	2017	1913	1808	1707	1605
	10	2432	2819	**2220**	2115	2011
	15	2366	2258	2152	2046	1943
60	5	2090	1984	1876	1772	1667
	10	1954	1849	1746	1643	1542
	15	1876	1772	1667	1562	1459
50	5	1543	1440	1339	1239	1141
	10	1472	1369	1266	1165	1063
	15	1379	1272	1166	1060	954
40	5	1066	967	868	769	672
	10	979	875	772	667	559
	15	849	734	594	387	222

VE130I BV130		Ta D.B. [°C]				
		16	18	20	22	24
Tw [°C]		Ph	Ph	Ph	Ph	Ph
in	dt	[W]	[W]	[W]	[W]	[W]
70	5	3435	3257	3079	2906	2733
	10	4142	4800	**3780**	3602	3424
	15	4028	3845	3664	3483	3308
60	5	3559	3378	3195	3016	2838
	10	3327	3149	2973	2798	2625
	15	3195	3016	2838	2660	2485
50	5	2628	2453	2280	2110	1943
	10	2507	2331	2156	1983	1810
	15	2347	2167	1986	1805	1624
40	5	1816	1646	1479	1309	1144
	10	1667	1489	1314	1136	952
	15	1446	1249	1012	658	378

VED230I BV230		Ta D.B. [°C]				
		16	18	20	22	24
Tw [°C]		Ph	Ph	Ph	Ph	Ph
in	dt	[W]	[W]	[W]	[W]	[W]
70	5	4083	3871	3659	3454	3249
	10	4923	5705	**4493**	4281	4070
	15	4788	4570	4355	4140	3932
60	5	4230	4015	3797	3585	3374
	10	3954	3743	3534	3326	3120
	15	3797	3585	3374	3162	2954
50	5	3124	2915	2710	2508	2309
	10	2979	2771	2562	2357	2152
	15	2790	2575	2360	2145	1931
40	5	2158	1956	1757	1555	1360
	10	1982	1770	1562	1350	1132
	15	1719	1485	1203	783	449

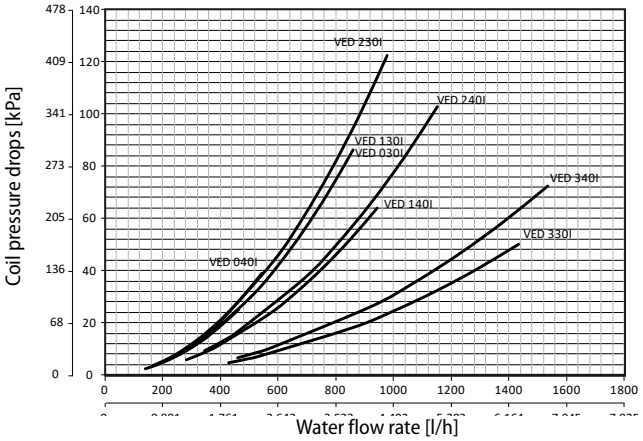
VED330I BV162		Ta D.B. [°C]				
		16	18	20	22	24
Tw [°C]		Ph	Ph	Ph	Ph	Ph
in	dt	[W]	[W]	[W]	[W]	[W]
70	5	5350	5073	4795	4526	4257
	10	6451	7477	**5888**	5611	5333
	15	6275	5989	5707	5426	5153
60	5	5543	5262	4976	4699	4421
	10	5182	4905	4631	4358	4089
	15	4976	4699	4421	4144	3871
50	5	4093	3820	3551	3287	3026
	10	3904	3631	3358	3089	2820
	15	3656	3375	3093	2812	2530
40	5	2828	2564	2303	2038	1782
	10	2597	2320	2047	1769	1484
	15	2253	1946	1576	1025	588

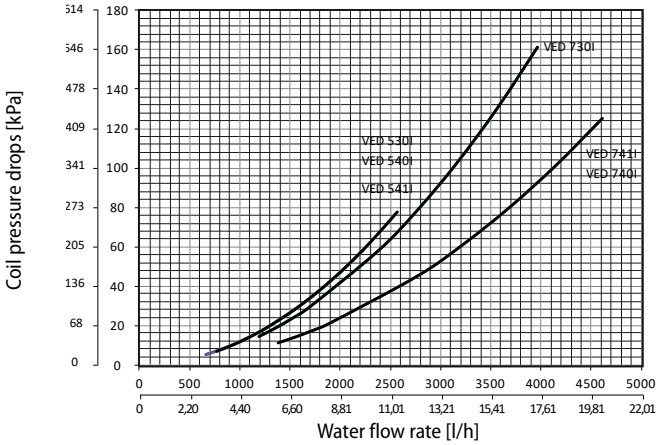
POWER YIELDED WITH HEATING ONLY COIL (4 pipes)

VED541I		Ta D.B. [°C]				
		16	18	20	22	24
Tw [°C]		Ph	Ph	Ph	Ph	Ph
in	dt	[W]	[W]	[W]	[W]	[W]
70	5	8041	7625	7208	6803	6399
	10	9696	11238	**8850**	8433	8016
	15	9431	9002	8578	8155	7745
60	5	8332	7909	7479	7062	6645
	10	7789	7372	6961	6551	6146
	15	7479	7062	6645	6228	5818
50	5	6153	5742	5338	4940	4548
	10	5868	5458	5047	4643	4239
	15	5496	5072	4649	4226	3803
40	5	4251	3853	3462	3064	2678
	10	3904	3487	3076	2659	2230
	15	3386	2925	2369	1541	884

VED741I		Ta D.B. [°C]				
		16	18	20	22	24
Tw [°C]		Ph	Ph	Ph	Ph	Ph
in	dt	[W]	[W]	[W]	[W]	[W]
70	5	13175	12492	11809	11147	10484
	10	15887	18412	**14500**	13817	13134
	15	15452	14748	14055	13362	12689
60	5	13651	12958	12254	11571	10888
	10	12761	12078	11405	10733	10070
	15	12254	11571	10888	10205	9532
50	5	10081	9408	8746	8094	7452
	10	9615	8942	8269	7607	6945
	15	9004	8311	7617	6924	6231
40	5	6965	6313	5672	5020	4388
	10	6396	5713	5040	4357	3653
	15	5547	4792	3881	2525	1449

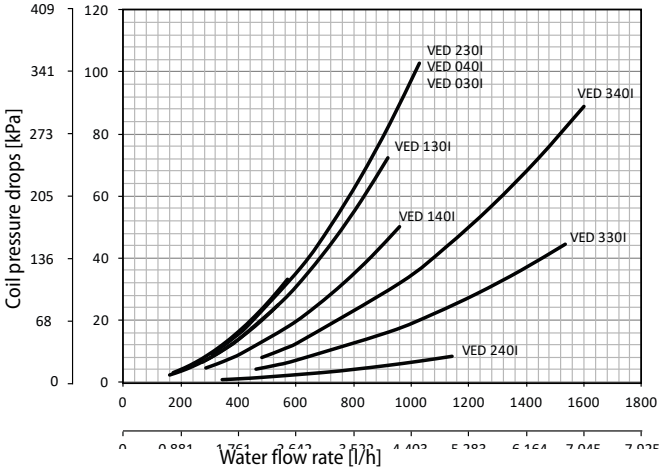
PRESSURE DROPS COOLING ONLY

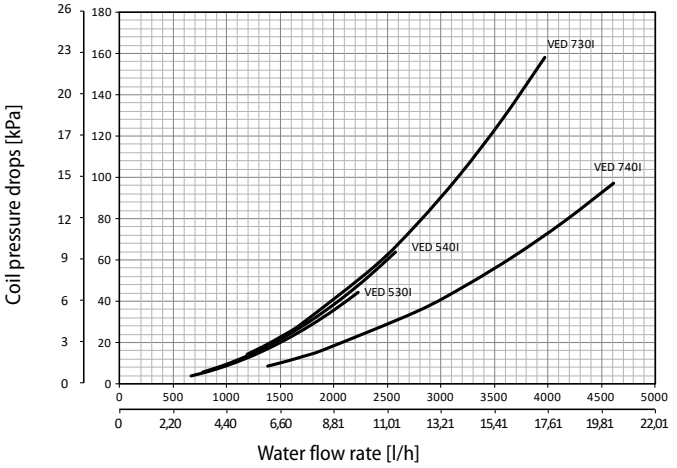




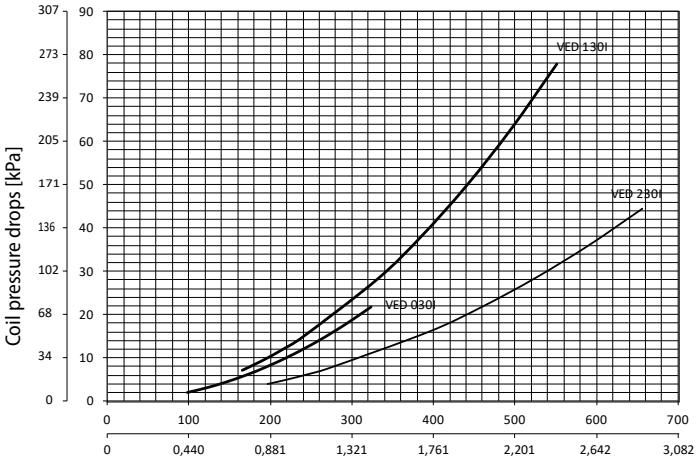
The pressure drops in the previous diagram relate to an average water temperature of 10 °C. The table below states the correction to apply to the pressure drops on variation of the average water temperature.								
Water medium temperature	°C	5	10	15	20	50	60	70
Multiplicative coefficients		1.03	1	0.96	0.91	0.78	0.75	0.72

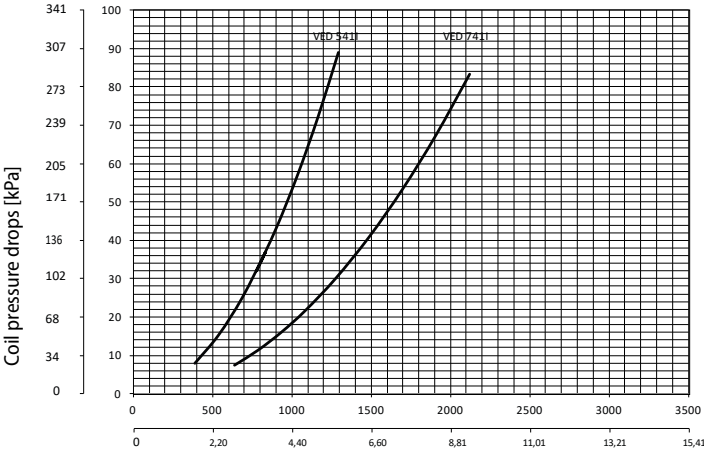
2-PIPE SYSTEM PRESSURE DROPS HEATING ONLY





4-PIPE SYSTEM PRESSURE DROPS HEATING ONLY



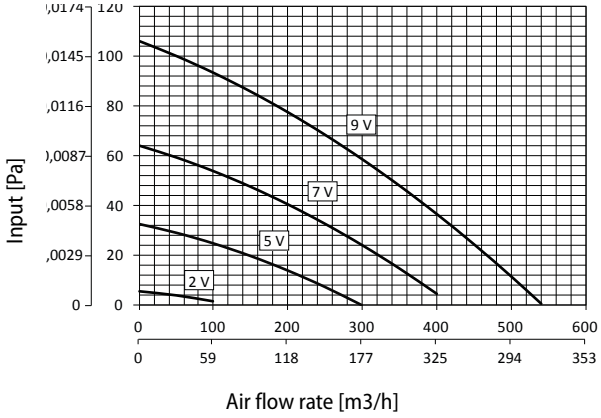


The pressure drops in the previous diagram relate to an average water temperature of 10 °C. The table below states the correction to apply to the pressure drops on variation of the average water temperature.								
Water medium temperature	°C	5	10	15	20	50	60	70
Multiplicative coefficients		1.03	1	0.96	0.91	0.78	0.75	0.72

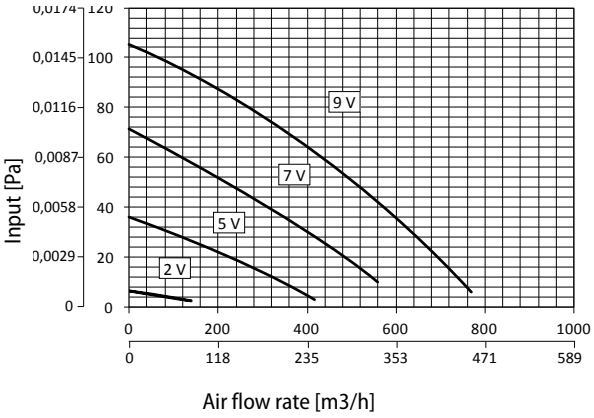
FLOW STATIC PRESSURE

The tables express the useful static pressure at flow and the input power of the VED_I fan coils based on the air flow rate and speed of the fan coil, the speeds refer to 4 power supply voltages.
The motor is set, via the dip switches, to work with the speed increased.
Speed increased: To allow adjusting the static pressure provided by the fan coil to the duct pressure drops, only on VED_I fan coils it is possible to increase maximum speed by modifying the settings of the motor dip switches (see "Installation information" chapter).

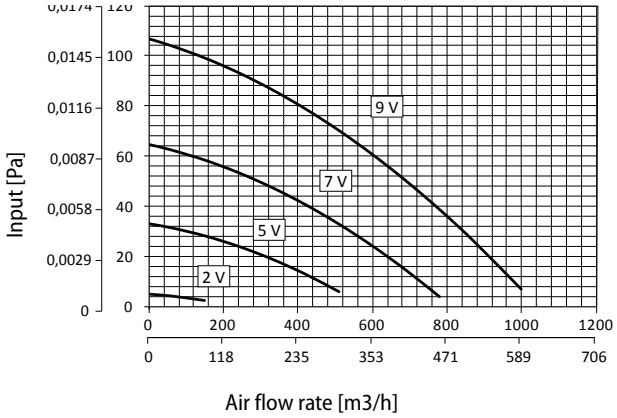
VED 030I



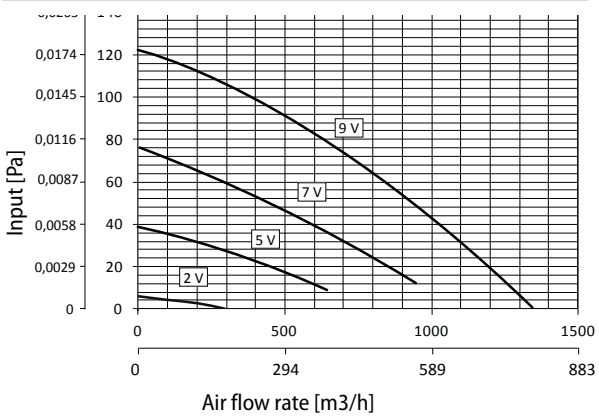
VED 130I



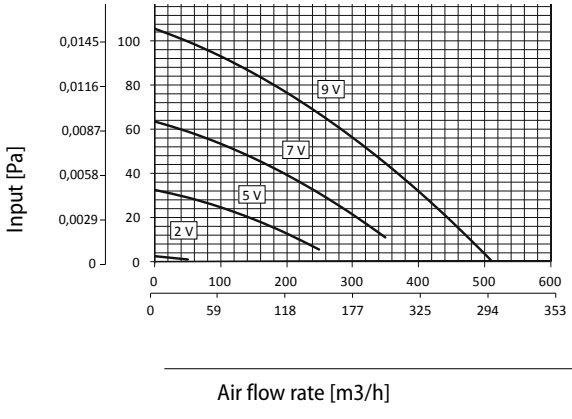
VED 230I



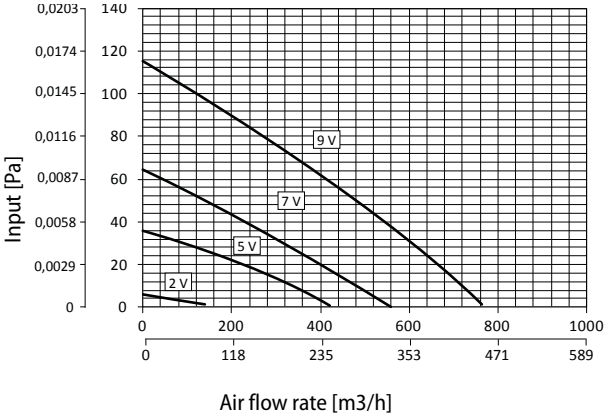
VED 330I



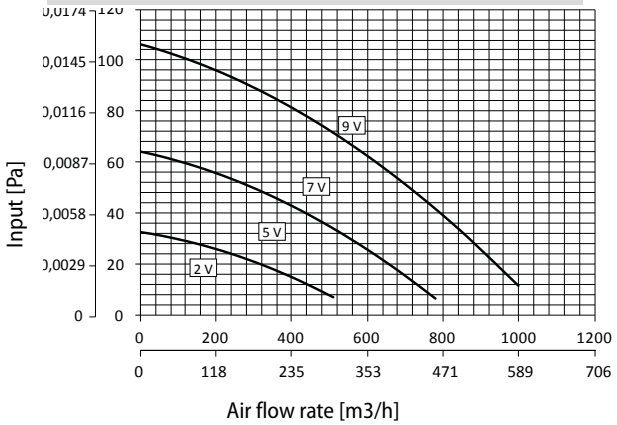
VED 040I



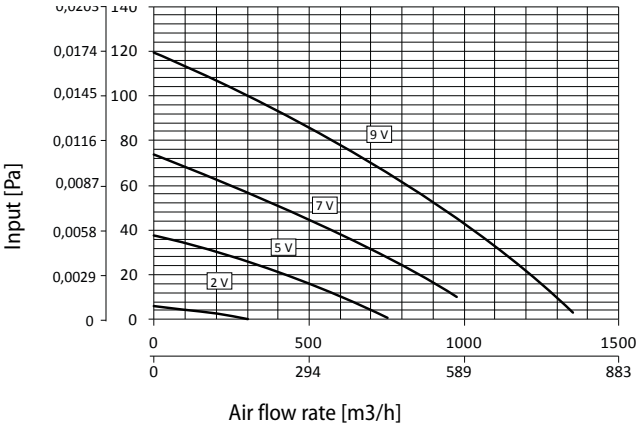
VED140I



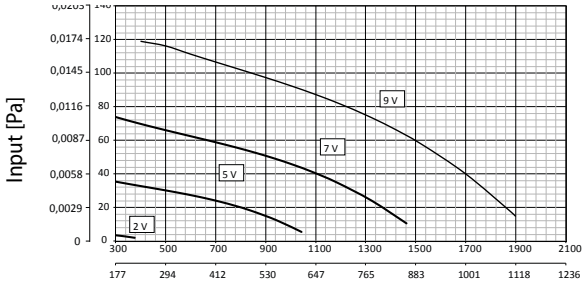
VED 240I



VED 340I

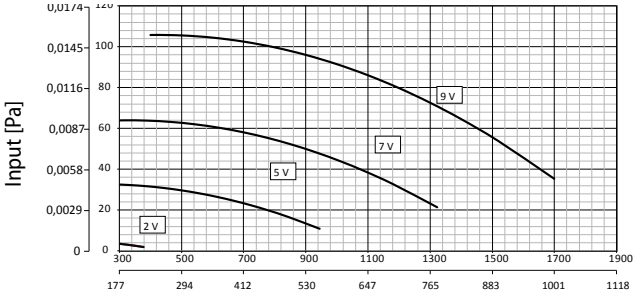


VED 530I



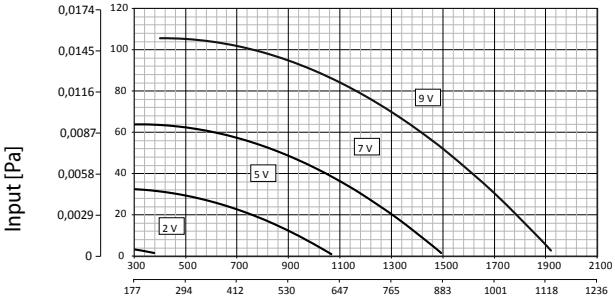
Air flow rate [m3/h]

VED 540I



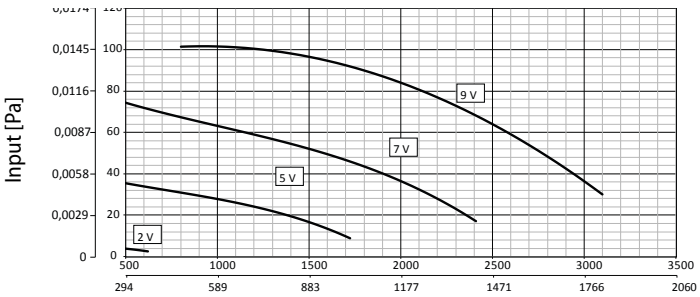
Air flow rate [m3/h]

VED 541I



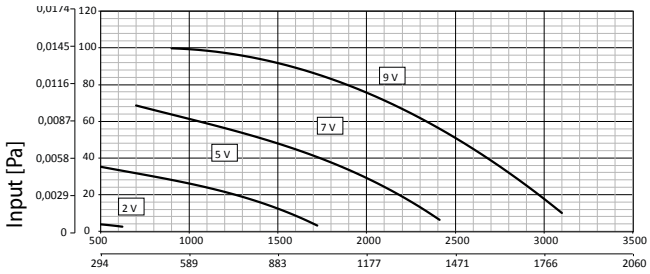
Air flow rate [m3/h]

VED 730I



Air flow rate [m3/h]

VED 740I



Air flow rate [m3/h]

CORRECTION FACTORS IN FUNCTIONING WITH GLYCOL WATER

Key:

Pressure drops

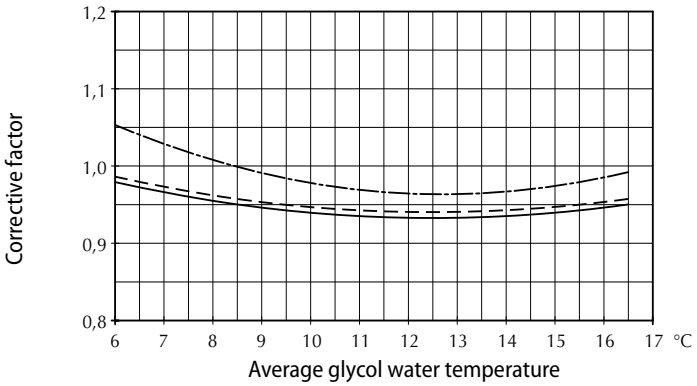
Flow rate

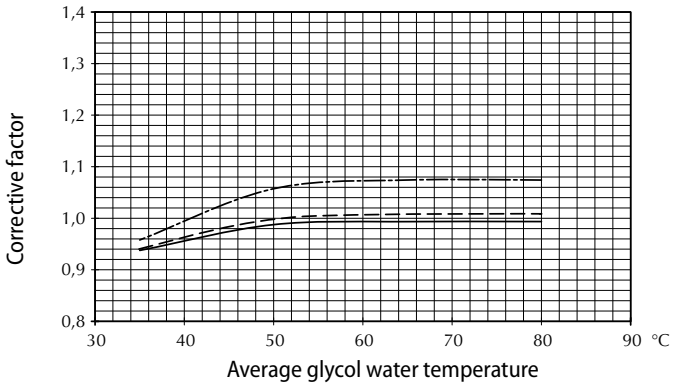
Yield

IN COOLING MODE

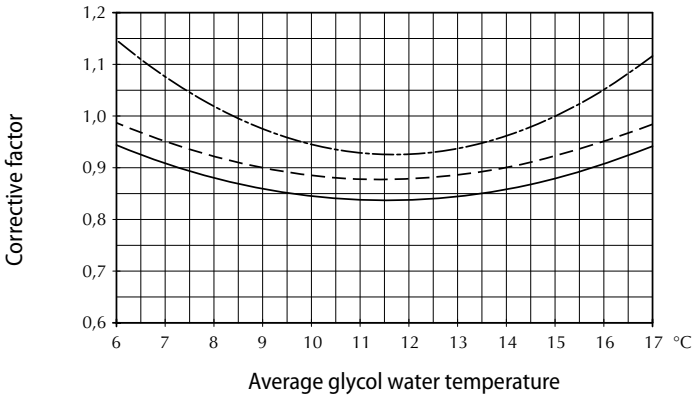
IN HEATING MODE

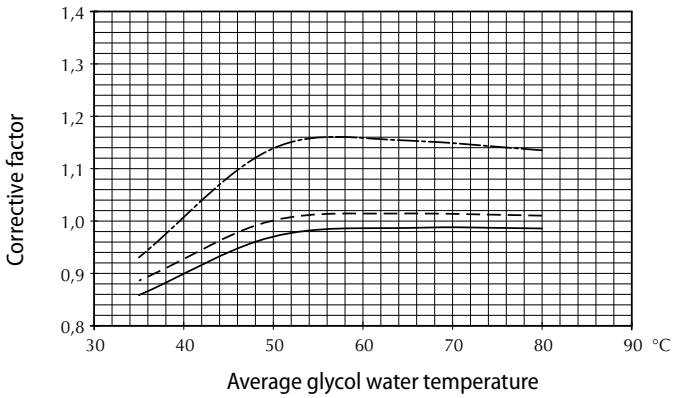
GLYCOL WATER AT 10%



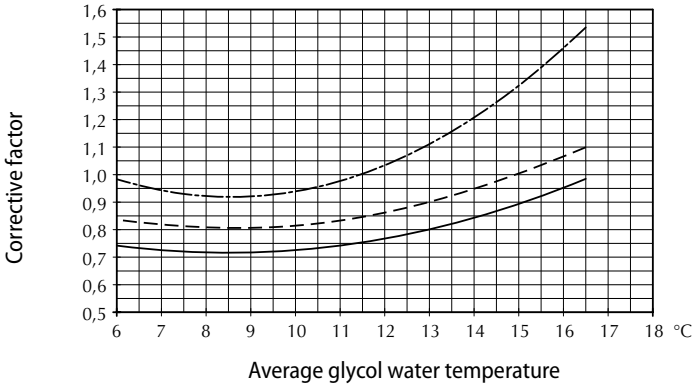


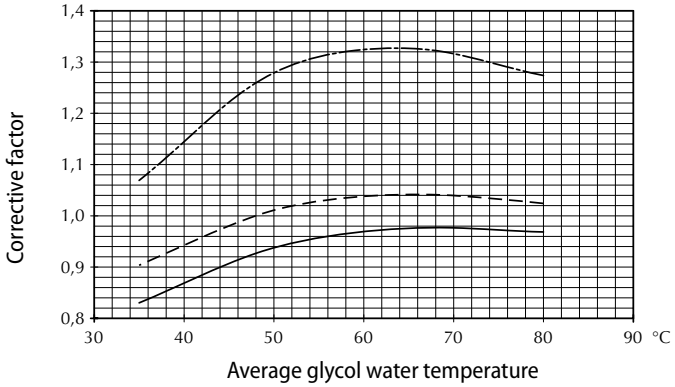
GLYCOL WATER AT 20%





GLYCOL WATER AT 35%

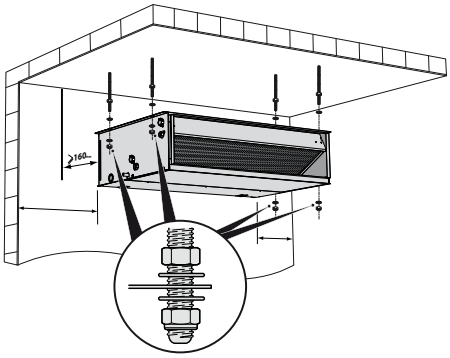


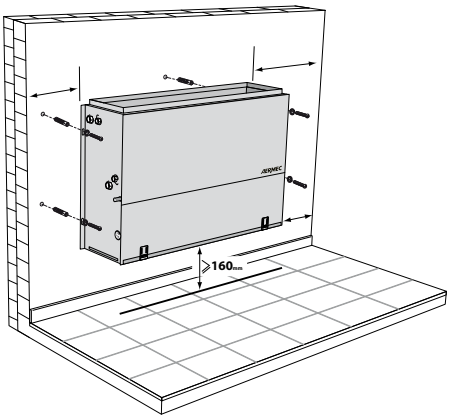


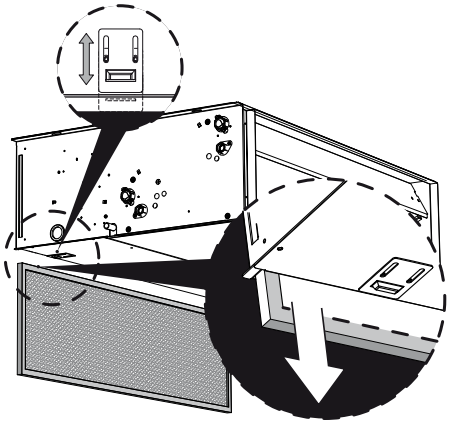
PRELIMINARY OPERATIONS

Set up the systems fr power supply and connection with the wired control panel.
Set up a suitable condensate draining system.

INSTALLATION OF THE UNIT

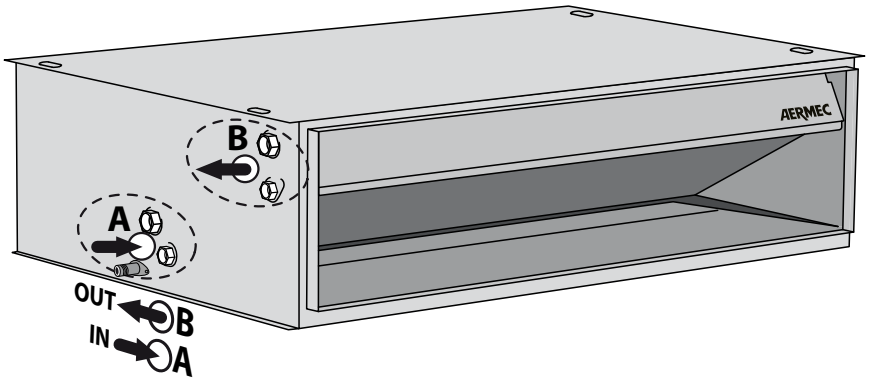


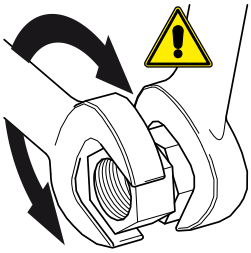


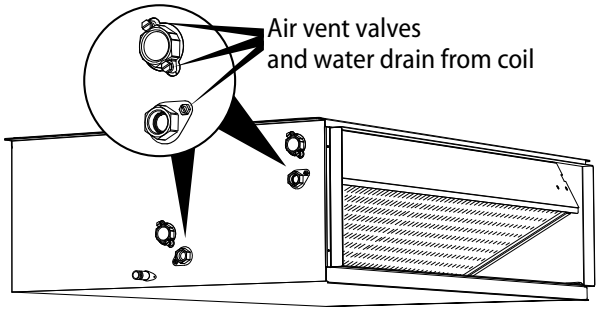


Proceed as follows to install the unit:
- For wall installation, keep a minimum distance of 160 mm from the floor.
-For ducted installation connect the channels to the unit. Refer to the drawing containing dimensional data. The flow is provided with fitting flange.
- For wall or ceiling installation, use expansion plugs (not supplied). Make sure that the unit is installed horizontally.
- For ceiling installation, use four M8 threaded rods to support the frame. Fasten the unit to 4 threaded bars using 8 nuts, 4 of which must be self-locking. Use the nuts to adjust the height and make sure that the unit is installed horizontally.
- ATTENTION: The fan coil must be installed perfectly horizontal. Otherwise, condensate water drain cannot be guaranteed.
- Make the hydraulic connections as described in the relative chapter.
- Make the connection of the condensate drain as indicated in the relative chapter. The fan coils, which will run only in heating mode, do not require condensate drain.
- Make the electrical connections as indicated in the relative chapter and as indicated in the electrical diagrams.
- Connect and install the accessories.
- Power up the fan coil and check the operation of the components and of all the functions.

HYDRAULIC CONNECTIONS







- Make the hydraulic connections.
ATTENTION: Always use a wrench and counter-wrench to fix the pipes.
The position, type and diameter of the hydraulic connections are specified in the dimensional data.
It is recommended to insulate water pipelines and/or to install the suitable auxiliary condensate collection tray, available as an accessory, in order to avoid dripping during cooling operation.
During installation check the seal of the connections.
Attention: Discharge the hydraulic system The vent valves are positioned on the top of the coil close to the hydraulic fittings.
Attention: to drain the unit, use the discharge valves placed at the bottom of the coil close to the hydraulic fittings.

ELECTRIC CONNECTIONS

The unit must be connected directly to an electrical outlet or to a separate 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 environment.
Supply the fan coil only with voltage 110/240 V ~ 50/60Hz.
The fan coil may be permanently damaged if a different electric power supply is used.
ATTENTION: it is mandatory to connect the Phase (L) and the Neutral (N) power supply cables to the relative clamps. Do not reverse the connections. Follow the wiring diagram.
Install a device, master switch or electric plug that allows the unit's power supply to be completely disconnected.
To protect the unit against short circuits, fit an omnipolar magnet circuit breaker switch (4Ac, C-type intervention features) to the power supply line with a minimum contact opening distance of 3 mm.
We recommend using differential devices suitable for intervening for currents of different type:
sinusoidal AC and pulsating DC currents suddenly applied or slowly rising.
sinusoidal AC with frequency up to 1000 hz

The following measures must be considered for installations with three-phase power supply:
1. In the presence of 3P + N isolators or magnet circuit breakers, the release current must be at least 170% of the value absorbed by the overall load of the fan coils for each phase.
2. The neutral wire section must be sized considering a working current equal to 170% of the value absorbed by the overall load of the fan coils for each phase.

SPECIFICATIONS OF THE CONNECTION CABLES

Use H05V-K or N07V-K power cables with 300/500 V insulation enclosed inside a pipe or trough.
Use a cable with a minimum cross-section of 1 mm2.
All the cables must be enclosed inside a pipe or trough until they are inside the fan coil.
The cables at the outlet of the pipe or cable trough must be positioned in a way not to undergo traction or twisting stress and be however, protected from external agents.
Cables with strand can only be used with crimped connectors. Make sure that the strands are well inserted.
The wiring diagrams are subject to constant updating and it is therefore mandatory to refer to those on the unit.
The unit must be combined with a control device to be purchased separately.
Refer to the wiring diagram and instructions in this manual before making the connections.
The control panel can be fitted on a metal wall, unless it is permanently connected to the earth plug.
Carefully read the instructions and, if necessary, carry out the configuration as indicated, before installing the control device. Some control devices must be combined with components supplied as accessories, verify their availability.

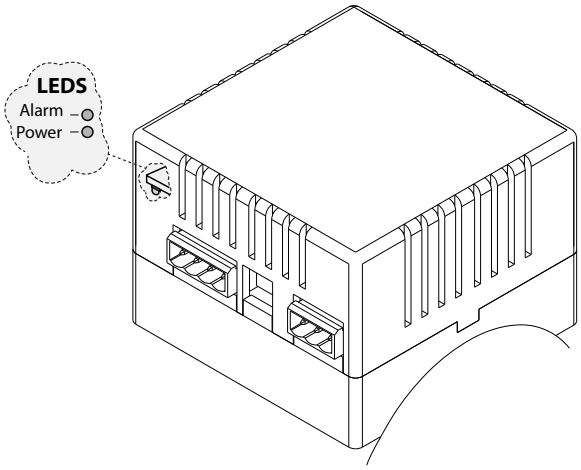
ATTENTION: Verify that the control device is compatible with the electrical features of the fan coil.
In combining the control devices, follow the relative wiring diagram and the instructions in this manual.
If present, connect the valve and the probe to the terminal board according to the positions specified in the wiring diagram. In installations with three-way valve, the minimum temperature probe of the water must be moved from its seat in the coil, to the flow pipe upstream of the valve.
Follow the wiring diagram.

ATTENTION: verify whether the installation has been carried out correctly. Follow the verification procedures indicated in the manuals of the control devices.

ATTENTION: Then run an operating test.

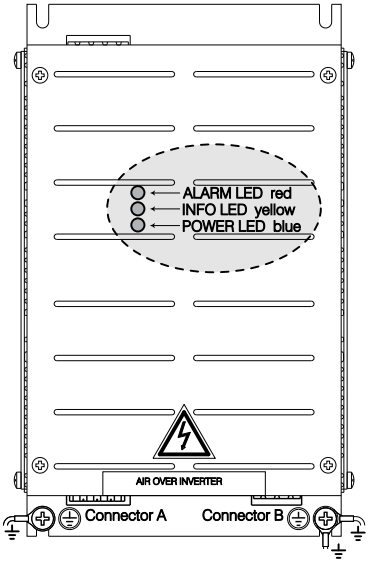
ATTENTION: In case of malfunction, refer to the Alarm Code Table to interpret the signals of the 2 LED (Alarm/Power) indicating the functioning status of the unit. The Inverter board is found inside the unit.
DANGER! Only qualified maintenance personnel can access it.

This section is reserved to the After-sales Service Centres only.
The board is found inside the unit and requires disassembly.
DANGER! Only qualified maintenance personnel can access it.
On the Inverter board there are 2 LED (Alarm/Power) indicating the functioning status of the unit.
The following table indicates how to decode the messages.



VED 030 I
VED 040 I
VED 130 I
VED 140 I
VED 230 I
VED 240 I
VED 030 I
VED 040 I
VED 130 I
VED 140 I

VED 230 I
VED 240 I
VED 330 I
VED 340 I
VED 530 I
VED 540 I
VED 532 I
VED 541 I



VED 730 I
VED 740 I
VED 732 I
VED 741 I

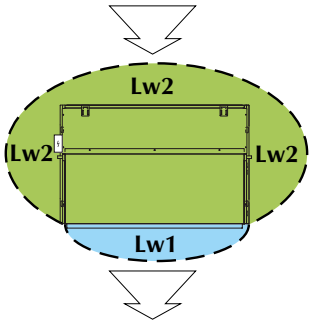
ALARM TYPE	INDICATIONS	ANOMALY	NOTES
High temperature	Flashing ALARM led 3sec ON / 0.5sec OFF After 1.5 min the ALARM led is permanently on	Motor off	Auto-Restart alarm If the conditions persist after 1.5 min, the alarm becomes permanent: - Alarm led on - led ON - the system switches off
Overvoltage			
Undervoltage			
Overcurrent			
Overload	Flashing ALARM led 0.5sec ON / 0.5sec OFF	Speed reduction	Power limitation
Safety control			Temperature limitation
STOP	Alarm led permanently ON	Motor off	To reset the alarms: Set 0V ON INPUT (disconnect voltage and switch on again)

SOUND POWER LEVEL expressed in dB (A)

VED 030-40 I

	Maximum			Medium			Minimum		
Frequency	**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	39.4	35.6	37.0	37.1	33.2	34.9	28.4	24.8	26.0
125	38.0	36.2	33.2	35.8	34.0	31.1	27.4	25.8	22.4
160	38.9	38.1	31.1	36.9	36.0	29.6	29.1	28.2	21.6
200	40.5	39.5	33.5	38.6	37.7	31.6	31.6	30.5	24.9
250	44.1	43.2	36.7	42.4	41.5	35.3	35.6	34.7	28.3
315	47.2	45.7	41.9	45.6	44.0	40.4	38.1	36.7	32.5
400	49.4	48.0	43.8	47.3	45.9	41.8	39.3	38.0	33.4
500	47.0	45.5	41.9	44.9	43.3	39.7	37.1	35.3	32.2
630	44.5	42.8	39.7	42.6	40.9	37.8	36.3	34.1	32.3
800	45.3	43.5	40.6	43.6	41.8	39.0	32.1	30.4	27.2
1000	42.9	42.0	35.7	40.4	39.5	33.1	31.1	30.2	23.5
1250	39.9	38.5	34.5	37.4	36.0	31.9	27.5	26.2	21.6
1600	35.3	34.0	29.5	32.7	31.4	27.0	21.9	20.6	16.2
2000	34.0	32.6	28.4	31.2	29.8	25.6	19.4	18.0	13.9
2500	31.5	30.1	26.0	28.3	26.8	23.0	15.7	14.1	10.8
3150	28.3	26.6	23.6	25.1	23.2	20.6	12.6	10.6	8.3
4000	24.1	22.7	18.4	20.6	19.3	14.9	6.8	5.4	5.4
5000	21.4	20.4	14.5	17.7	16.9	10.1	5.0	3.7	3.7
6300	17.4	16.4	10.3	13.8	13.0	6.0	5.6	3.5	3.5
8000	13.0	11.6	7.4	9.8	8.1	4.8	7.5	4.9	4.9
10000	11.9	8.6	9.1	10.9	8.0	7.9	11.2	8.5	8.5
dB[A] tot.	**55.5**	**54**	**50.0**	**53.5**	**52**	**48.0**	**45.5**	**44**	**40**

Acoustic tests performed according to EUROVENT 8/2 (ISO 3741/2001)



Key:

Tot.: Total sound power level

Lw1: Sound power level emitted by the unit flow

Lw2: Power sound level emitted by the unit and suction side

(E)= EUROVENT certified performance

SOUND PRESSURE LEVEL expressed in dB (A)

VED 030 - 040 I

	Maximum			Medium			Minimum		
	Tot.	**Lw2**	**Lw1**	**Tot.**	**Lw2**	**Lw1**	**Tot.**	**Lw2**	**Lw1**
dB[A]	37.0	35.5	31.5	35.0	33.5	29.5	27.0	25.5	21.5

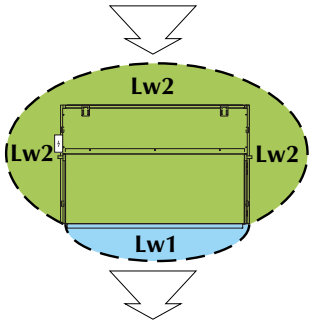
Sound pressure level (weighted A) measured in environment with volume V=85 m^3 , reverberation time t=05s, directivity factor Q=2, distance r=2.5m

SOUND POWER LEVEL expressed in dB (A)

VED 130-140 I

	Maximum			Medium			Minimum		
Frequency	**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	39.8	36.6	37.0	37.5	34,2	34.8	30.9	27.8	28.0
125	38.7	37.2	33.2	36.5	35,0	31.0	30.1	28.8	24.4
160	39.8	39.1	31.1	37.7	37,0	29.5	31.9	31.2	23.6
200	41.3	40.5	33.5	39.4	38,7	31.5	34.4	33.5	26.9
250	44.9	44.2	36.7	43.3	42,5	35.2	38.4	37.7	30.3
315	48.0	46.7	41.9	46.3	45,0	40.3	40.8	39.7	34.5
400	50.2	49.0	43.8	48.0	46,9	41.7	42.0	41.0	35.4
500	47.8	46.5	41.9	45.6	44,3	39.6	39.8	38.3	34.2
630	45.2	43.8	39.7	43.3	41,9	37.7	38.9	37.1	34.3
800	46.0	44.5	40.6	44.3	42,8	38.9	34.8	33.4	29.2
1000	43.8	43.0	35.7	41.2	40,5	33.0	33.9	33.2	25.5
1250	40.7	39.5	34.5	38.1	37,0	31.8	30.3	29.2	23.6
1600	36.1	35.0	29.5	33.5	32,4	26.9	24.7	23.6	18.2
2000	34.8	33.6	28.4	31.9	30,8	25.5	22.2	21.0	15.9
2500	32.3	31.1	26.0	29.0	27,8	22.9	18.5	17.1	12.8
3150	29.0	27.6	23.6	25.8	24,2	20.5	15.2	13.6	10.3
4000	24.8	23.7	18.4	21.4	20,3	14.8	10.9	8.4	7.4
5000	22.2	21.4	14.5	18.6	17,9	10.0	9.2	6.7	5.7
6300	18.2	17.4	10.3	14.6	14,0	5.9	9.0	6.5	5.5
8000	13.7	12.6	7.4	10.5	9,1	4.7	10.4	7.9	6.9
10000	12.4	9.6	9.1	11.4	9,0	7.8	14.0	11.5	10.5
dB[A] tot.	**56.2**	**55.0**	**50.0**	**49.2**	**53,0**	**48.0**	**48.2**	**47.0**	**42.0**

Acoustic tests performed according to EUROVENT 8/2 (ISO 3741/2001)



Key:

Tot.: Total sound power level

Lw1: Sound power level emitted by the unit flow

Lw2: Power sound level emitted by the unit and suction side

(E)= EUROVENT certified performance

SOUND PRESSURE LEVEL expressed in dB (A)

VED 130 - 140 I

	Maximum			Medium			Minimum		
	Tot.	**Lw2**	**Lw1**	**Tot.**	**Lw2**	**Lw1**	**Tot.**	**Lw2**	**Lw1**
dB[A]	37.7	36.5	31.5	30.7	24.5	29.5	29.7	28.5	23.5

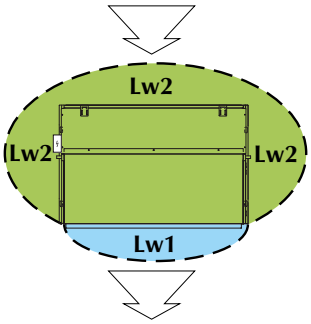
Sound pressure level (weighted A) measured in environment with volume V=85 m^3 , reverberation time t=05s, directivity factor Q=2, distance r=2.5m

SOUND POWER LEVEL expressed in dB (A)

VED 230-240 I

	Maximum			Medium			Minimum		
Frequency	**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	41.8	38.6	39.0	38.5	35.2	35.8	32.9	29.8	30.0
125	40.7	39.2	35.2	37.5	36.0	32.0	32.1	30.8	26.4
160	41.8	41.1	33.1	38.7	38.0	30.5	33.9	33.2	25.6
200	43.3	42.5	35.5	40.4	39.7	32.5	36.4	35.5	28.9
250	46.9	46.2	38.7	44.3	43.5	36.2	40.4	39.7	32.3
315	50.0	48.7	43.9	47.3	46.0	41.3	42.8	41.7	36.5
400	52.2	51.0	45.8	49.0	47.9	42.7	44.0	43.0	37.4
500	49.8	48.5	43.9	46.6	45.3	40.6	41.8	40.3	36.2
630	47.2	45.8	41.7	44.3	42.9	38.7	40.9	39.1	36.3
800	48.0	46.5	42.6	45.3	43.8	39.9	36.8	35.4	31.2
1000	45.8	45.0	37.7	42.2	41.5	34.0	35.9	35.2	27.5
1250	42.7	41.5	36.5	39.1	38.0	32.8	32.3	31.2	25.6
1600	38.1	37.0	31.5	34.5	33.4	27.9	26.7	25.6	20.2
2000	36.8	35.6	30.4	32.9	31.8	26.5	24.2	23.0	17.9
2500	34.3	33.1	28.0	30.0	28.8	23.9	20.5	19.1	14.8
3150	31.0	29.6	25.6	26.8	25.2	21.5	17.2	15.6	12.3
4000	26.8	25.7	20.4	22.4	21.3	15.8	12.9	10.4	9.4
5000	24.2	23.4	16.5	19.6	18.9	11.0	11.2	8.7	7.7
6300	20.2	19.4	12.3	15.6	15.0	6.9	11.0	8.5	7.5
8000	15.7	14.6	9.4	11.5	10.1	5.7	12.4	9.9	8.9
10000	14.4	11.6	11.1	12.4	10.0	8.8	16.0	13.5	12.5
dB[A] tot.	**58.2**	**57.0**	**52.0**	**55.2**	**54.0**	**49.0**	**50.2**	**49.0**	**44.0**

Acoustic tests performed according to EUROVENT 8/2 (ISO 3741/2001)



Key:

Tot.: Total sound power level

Lw1: Sound power level emitted by the unit flow

Lw2: Power sound level emitted by the unit and suction side

(E)= EUROVENT certified performance

SOUND PRESSURE LEVEL expressed in dB (A)

VED 230 - 240 I

	Maximum			Medium			Minimum		
	Tot.	**Lw2**	**Lw1**	**Tot.**	**Lw2**	**Lw1**	**Tot.**	**Lw2**	**Lw1**
dB[A]	39.7	38.5	33.5	36.7	35.5	30.5	31.7	30.5	25.5

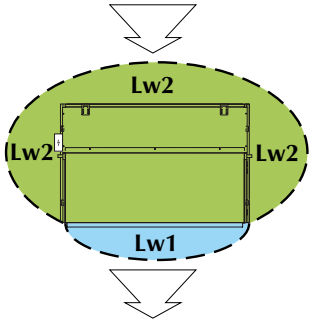
Sound pressure level (weighted A) measured in environment with volume V=85 m^3 , reverberation time t=05s, directivity factor Q=2, distance r=2.5m

SOUND POWER LEVEL expressed in dB (A)

VED 330-340 I

	Maximum			Medium			Minimum		
Frequency	**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	43,4	39,6	41,0	40,1	36,2	37,8	22,4	18,8	20,0
125	42,0	40,2	37,2	38,8	37,0	34,0	21,4	19,8	16,4
160	42,9	42,1	35,1	39,9	39,0	32,5	23,1	22,2	15,6
200	44,5	43,5	37,5	41,6	40,7	34,5	25,6	24,5	18,9
250	48,1	47,2	40,7	45,4	44,5	38,2	29,6	28,7	22,3
315	51,2	49,7	45,9	48,5	47,0	43,3	32,1	30,7	26,5
400	53,4	52,0	47,8	50,3	48,9	44,7	33,3	32,0	27,4
500	51,0	49,5	45,9	47,8	46,3	42,6	31,1	29,3	26,2
630	48,5	46,8	43,7	45,6	43,9	40,7	30,3	28,1	26,3
800	49,3	47,5	44,6	46,6	44,8	41,9	26,1	24,4	21,2
1000	46,9	46,0	39,7	43,3	42,5	36,0	25,1	24,2	17,5
1250	43,9	42,5	38,5	40,4	39,0	34,8	21,5	20,2	15,6
1600	39,3	38,0	33,5	35,7	34,4	29,9	15,9	14,6	10,2
2000	38,0	36,6	32,4	34,2	32,8	28,5	13,4	12,0	7,9
2500	35,5	34,1	30,0	31,2	29,8	25,9	9,7	8,1	4,8
3150	32,3	30,6	27,6	28,1	26,2	23,5	6,6	4,6	2,3
4000	28,1	26,7	22,4	23,6	22,3	17,8	6,4	2,5	4,2
5000	25,4	24,4	18,5	20,7	19,9	13,0	6,6	3,5	3,6
6300	21,4	20,4	14,3	16,8	16,0	8,9	7,3	4,0	4,6
8000	17,0	15,6	11,4	12,8	11,1	7,7	9,1	6,0	6,1
10000	15,9	12,6	13,1	13,9	11,0	10,8	9,3	7,0	5,5
dB[A] tot.	**59,5**	**58,0**	**54,0**	**56,4**	**55,0**	**51,0**	**39,5**	**38,0**	**34,0**

Acoustic tests performed according to EUROVENT 8/2 (ISO 3741/2001)



Key:

Tot.: Total sound power level

Lw1: Sound power level emitted by the unit flow

Lw2: Power sound level emitted by the unit and suction side

(E)= EUROVENT certified performance

SOUND PRESSURE LEVEL expressed in dB (A)

VED 330-340 I

	Maximum			Medium			Minimum		
	Tot.	**Lw2**	**Lw1**	**Tot.**	**Lw2**	**Lw1**	**Tot.**	**Lw2**	**Lw1**
dB[A]	78	58	54	56,4	55	51	39,5	38	34

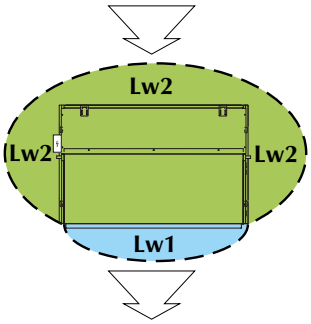
Sound pressure level (weighted A) measured in environment with volume V=85 m^3 , reverberation time t=05s, directivity factor Q=2, distance r=2.5m

SOUND POWER LEVEL expressed in dB (A)

VED 530-540-532-541 I

	Maximum			Medium			Minimum		
Frequency	**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	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 performed according to EUROVENT 8/2 (ISO 3741/2001)



Key:

Tot.: Total sound power level

Lw1: Sound power level emitted by the unit flow

Lw2: Power sound level emitted by the unit and suction side

(E)= EUROVENT certified performance

SOUND PRESSURE LEVEL expressed in dB (A)

VED 530-540-532-541 I

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

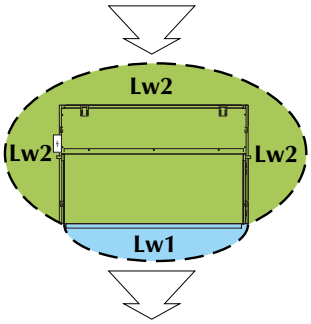
Sound pressure level (weighted A) measured in environment with volume V=85 m^3 , reverberation time t=05s, directivity factor Q=2, distance r=2.5m

SOUND POWER LEVEL expressed in dB (A)

VED 730-740-732-741 I

	Maximum			Medium			Minimum		
Frequency	**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 performed according to EUROVENT 8/2 (ISO 3741/2001)



Key:

Tot.: Total sound power level

Lw1: Sound power level emitted by the unit flow

Lw2: Power sound level emitted by the unit and suction side

(E)= EUROVENT certificated performance 6/3

SOUND PRESSURE LEVEL expressed in dB (A)

VED 730-740-732-741 I

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

Sound pressure level (weighted A) measured in environment with volume V=85 m^3 , reverberation time t=05s, directivity factor Q=2, distance r=2.5m

AER503IR: Flush-mounting thermostat with backlit display, capacitive keypad and infrared receiver, for controlling both brushless fan coils and those with an asynchronous motor. In 2-pipe systems, the thermostat can control standard fan coils or those equipped with an electric heater, with air purifying devices (Cold Plasma and germicidal lamp), with radiant plate or with FCZ-D twin delivery (Dualjet). In addition, it can control systems with radiant panels or mixed (fan coil and radiant floor) systems. Being equipped with an infrared receiver, it can, in turn, be controlled by the VMF-IR remote control.
SA5: air probe kit (L = 15 m) with probe-locking cable grommet.
SW3: Water probe (L = 2.5 m) for controlling the minimum and maximum and to allow automatic seasonal switching for electronic thermostats fitted with water side changeover.
SW5: water probe kit (L = 15m) with probe-holder connection point, fixing clip and probe-holder from heat exchanger.
TX: Wall-mounting thermostat for controlling either brushless fan coils or those with asynchronous motors. In 2-pipe systems, the thermostat can control standard fan coils or those equipped with an electric heater, with air purifying devices, radiant plate or FCZ-D twin delivery (Dualjet).
VMF-E19I: Thermostat for inverter unit to be fixed on the side of the fan coil, fitted as standard with an air and water probe.
VMF-E3: Wall mounted user interface, to be combined with accessories VMF-E19, VMF-E19I, VMF-E0X with grids GLF_N/M and GLL_N, can be controlled with VMF-IR control.
VMF-E4DX: Wall-mounted user interface. Grey front panel PANTONE 425C (METAL).
VMF-E4X: Wall-mounted user interface. Light grey front panel PANTONE COOL GRAY 1C.
VMF-IO: Manage the unit exclusively from a centralized VMF control panel without area control panel.
VMF-IR: User interface compatible with the AER503IR thermostat and with all the grids of cassettes equipped with the infrared receiver compatible with the VMF system.
VMF-LON: Expansion allowing the thermostat to interface with BMS systems that use the LON protocol.
VMF-SW: Water temperature probe.
VMF-SW1: Extra water probe to be used for 4-pipe systems.
BV: Single row hot water heat exchanger.
VCFD: Motorized 2-way valve kit without insulating shell, can be installed on the main or secondary battery or a battery that is only warm. The kit is made up of a valve, actuator and relative hydraulic fittings. It can be installed on fan coils with connections on the right and on the left.
VCF41 - 42 - 43 - for main coil: 3-way motorised valve kit for the main coil. The kit consists of a valve with its insulating shell, actuator and relevant water fittings; it is suitable to be installed on the fan coils with right and left water connections.
VJP: Control and balancing combination valve for 2 and 4 pipe systems to install outside the unit, supplied without fittings and hydraulic components. The valve, which can guarantee a constant water flow rate in the terminal, within its operating range.
AMP: Wall mounting kit
DSC: Condensate drainage device.
BC: Condensate drip.
GA: Intake grid with fixed louvers
GAF: Intake grid with filter and fixed louvers
GM: Flow grid with adjustable louvers.
VCF_X: Kit of 3-way valves for fan coils with a single coil and the water connections on the left, for installation in 4-pipe systems. This kit consists of two 3-way insulated valves and four connections, complete with electrothermal actuators, insulating shells for the valves, and the relative hydraulic couplings. 230V power supply. Water connections: Valve body Ø G 3/4" male; Valve side connection tubes Ø G 3/4" female; Unit side connection tubes Ø G 3/4" male.
VCF44 - 45 - for the secondary coil: The 3-way motorised valve kit for the secondary coil or an optional heat only coil. The kit consists of a valve with its insulating shell, actuator and relevant water fittings; it is suitable to be installed on the fan coils with right and left water connections.
MZC: Plenum with motorised dampers.
RDA_V: Straight intake connection with rectangular flange.
RPA_V: Suction plenum with rectangular flange; both sides have a circular push-out Ø 150mm that can be removed.
RDA_C: Straight intake connection with circular flanges.
PA_V: Suction plenum with circular plastic flanges; both sides have a circular push-out Ø 150mm that can be removed.
PM_V: Internally insulated delivery plenum with circular flanges; both sides have a circular push-out Ø 150mm that can be removed.
RPM_V: Internally insulated delivery plenum with rectangular flange; both sides have a circular push-out Ø 150mm that can be removed.
RDM_C: Straight discharge internally insulated, with circular flanges.
KFV10: Circular flanges kit for plenum.
SE_X: External air shutter with manual control.

ACCESSORIES COMPATIBILITY

Control panels and dedicated accessories

Accessory	VED030I	VED040I	VED130I	VED140I	VED230I	VED240I	VED330I	VED340I
AER503IR	•	•	•	•	•	•	•	•
PRO503	•		•	•	•	•	•	•
SA5	•	•	•	•	•	•	•	•
SW3	•	•	•	•	•	•	•	•
SW5	•	•	•	•	•	•	•	•
TX	•	•	•	•	•	•	•	•

VMF system

Accessory	VED030I	VED040I	VED130I	VED140I	VED230I	VED240I	VED330I	VED340I
VMF-E19I	•	•	•	•	•	•	•	•
VMF-E3	•	•	•	•	•	•	•	•
VMF-E4DX	•	•	•	•	•	•	•	•
VMF-E4X	•	•	•	•	•	•	•	•
VMF-IO	•	•	•	•	•	•	•	•
VMF-IR	•		•		•	•	•	•
VMF-LON	•	•	•	•	•	•	•	•
VMF-SW	•	•	•	•	•	•	•	•
VMF-SW1	•	•	•	•	•	•	•	•

(Heating only) additional coil

Accessory	VED030I	VED130I	VED230I	VED330I
BV030	•			
BV130		•		
BV162				•
BV230			•	

Water valves

Valve Kit for 4 pipe systems with main coil

Accessory	VED030I	VED040I	VED130I	VED140I	VED230I	VED240I	VED330I	VED340I
VCF3X4L	•	•	•		•		•	•
VCF3X4LS				•		•		
VCF3X4R	•	•	•		•		•	•
VCF3X4RS				•		•		

3 way valve kit

	VED030I	VED040I	VED130I	VED140I	VED230I	VED240I	VED330I	VED340I
3 way valve kit								
Main coil	VCF43-VCF4324	VCF43-VCF4324	VCF43-VCF4324	VCF43S-VCF4324S	VCF43-VCF4324	VCF43S-VCF4324S	VCF43-VCF4324	VCF43-VCF4324
Additional coil "BV"	VCF45-VCF4524	-	VCF45-VFC4524	-	VCF45-VCF4524	-	VCF45-VCF4524	-

VCF43 - 45 Power supply 230V, VCF4324-4524 Power supply 24V - Hydraulic connections Ø 3/4"

2 way valve kit

	VED030I	VED040I	VED130I	VED140I	VED230I	VED240I	VED330I	VED340I
2 way valve kit								
Main coil	VCFD3-VCFD324	VCFD3-VCFD324	VCFD3-VCFD324	VCFD3-VCFD324	VCFD3-VCFD324	VCFD3-VCFD324	VCFD3-VCFD324	VCFD3-VCFD324
Additional coil "BV"	VCFD4-VCFD424	-	VCFD4-VCFD424	-	VCFD4-VCFD424	-	VCFD4-VCFD424	-

VCFD3 Power supply 230V, VCFD324 Power supply 24V - Hydraulic connections Ø 3/4"

VCFD4 Power supply 230V, VCFD424 Power supply 24V - Hydraulic connections Ø 1/2"; For additional coil (heating only) BV.

Combined adjustment and balancing valve cold side

Model	Ver	030	040	130	140	230	240	330	340
VJP060 (1)	I	•	•	•	•				
VJP060M (2)	I	•	•	•	•				
VJP090 (1)	I					•	•		
VJP090M (2)	I					•	•		
VJP150 (1)	I							•	•
VJP150M (2)	I							•	•

(1) 230V~50Hz

(2) 24V

Installation accessories

Wall mounting accessories

Accessory	VED030I	VED040I	VED130I	VED140I	VED230I	VED240I	VED340I
AMP	•	•	•	•	•	•	•

Condensate drip

Accessory	VED030I	VED040I	VED130I	VED140I	VED230I	VED240I	VED330I	VED340I
BCZ4	•	•	•	•	•	•	•	•
BCZ6	•	•	•	•	•	•	•	•

Accessory	VED030I	VED040I	VED130I	VED140I	VED230I	VED240I	VED330I	VED340I
BC9	•	•	•	•	•	•	•	•

BCZ4 For vertical installation.
BCZ6 For horizontal installation.
BC9 For horizontal installation.

Condensate drainage

Ver	030	040	130	140	230	240	330	340
I	DSC4	DSC4	DSC4	DSC4	DSC4	DSC4	DSC4	DSC4

Accessories for intake

Intake grids

Accessory	VED030I	VED040I	VED130I	VED140I	VED230I	VED240I	VED330I	VED340I
GA22	•	•						
GA32			•	•				
GA42					•	•		
GA62							•	•

Intake grid with filter and fixed louvers

Accessory	VED030I	VED040I	VED130I	VED140I	VED230I	VED240I	VED330I	VED340I
GAF22	•	•						
GAF32			•	•				
GAF42					•	•		
GAF62							•	•

External air shutter with manual control

Ver	030	040	130	140	230	240	330	340
I	SE20X (1)	SE20X (1)	SE30X (1)	SE30X (1)	SE40X (1)	SE40X (1)	SE80X (1)	SE80X (1)

(1) The SE accessories must be combined with the design and structural feet.

Intake straight with rectangular flanges

Accessory	VED030I	VED040I	VED130I	VED140I	VED230I	VED240I	VED330I	VED340I
RDA000V	•	•						
RDA100V			•	•				
RDA200V					•	•		
RDA300V							•	•

Intake straight internally insulated, with circular flanges

Accessory	VED030I	VED040I	VED130I	VED140I	VED230I	VED240I	VED330I	VED340I
RDAC000V	•	•						
RDAC100V			•	•				
RDAC200V					•	•		
RDAC300V							•	•

Intake plenum with rectangular flanges

Accessory	VED030I	VED040I	VED130I	VED140I	VED230I	VED240I	VED330I	VED340I
RPA000V	•	•						
RPA100V			•	•				
RPA200V					•	•		
RPA300V							•	•

Intake plenum with circular flanges

Accessory	VED030I	VED040I	VED130I	VED140I	VED230I	VED240I	VED330I	VED340I
PA000V	•	•						
PA100V			•	•				
PA200V					•	•		
PA300V							•	•

Delivery accessories

Plenum with motor-driven dampers

Accessory	VED030I	VED040I	VED130I	VED140I	VED230I	VED240I	VED330I	VED340I
MZC220	•	•						
MZC320			•	•				
MZC530					•	•		
MZC830							•	•

AER503: Wall-mounted panel.
SA5: Air temperature probe.
SW5: Water temperature probe.
SWAI: External air or water temperature probe.
WMT21: Electronic thermostat for inverter fan-coils.
VMF-E19I: Thermostat for inverter unit to be fixed on the side of the fan coil, fitted as standard with an air and water probe.
VMF-E4DX: Wall-mounted user interface. Grey front panel PANTONE 425C (METAL).
VMF-E4X: Wall-mounted user interface. Light grey front panel PANTONE COOL GRAY 1C.
VMF-IO: Expansion board that extends the availability of digital inputs and outputs (configured via the dip switches).
VMF-LON: Expansion allowing the thermostat to interface with BMS systems that use the LON protocol.
VMF-SW: Water temperature probe.
VMF-SW1: Extra water probe to be used for 4-pipe systems.
VJP: Control and balancing combination valve for 2 and 4 pipe systems to install outside the unit, supplied without fittings and hydraulic components. The valve, which can guarantee a constant water flow rate in the terminal, within its operating range.
VCF45C - 47C - for main coil: Motorized 3-way valve kit for main coil. The kit consists of a 4-way 4-way valve with its insulating shell, the actuator and the relative hydraulic fittings, it is suitable for installation on both fan coil units with hydraulic connections on the right and left.
VCF45H - 47H - for heating only coil: Motorized 3-way valve kit for hot only coil. The kit consists of a 3-way 4-way valve, the actuator and its hydraulic fittings, it is suitable for installation on both fan coil units with hydraulic connections on the right and left.
VCF25C - for main coil: 2-way motorized valve kit for main coil. The kit consists of a valve with its insulating shell, the actuator and the relative hydraulic fittings, it is suitable for installation on both fan coil units with hydraulic connections on the right and left.
VCF25H - for heating only coil: 2-way motorized valve kit for hot only coil. The kit consists of a valve, actuator and relative hydraulic fittings, it is suitable for installation on both fan coils with hydraulic connections on the right and left.
MZC: Plenum with motorised dampers.
RDA_V: Straight intake connection with rectangular flange.
RPA_V: Suction plenum with rectangular flange; both sides have a circular push-out Ø 150mm that can be removed.
PA_V: Suction plenum with circular plastic flanges; both sides have a circular push-out Ø 150mm that can be removed.
PM_V: Internally insulated delivery plenum with circular flanges; both sides have a circular push-out Ø 150mm that can be removed.
RPM_V: Internally insulated delivery plenum with rectangular flange; both sides have a circular push-out Ø 150mm that can be removed.
KFV10: Circular flanges kit for plenum.

Control panels and dedicated accessories

Model	Ver	530	532	540	541	730	732	740	741
AER503	.	•	•	•	•	•	•	•	•
SA5	.	•	•	•	•	•	•	•	•
SW5	.	•	•	•	•	•	•	•	•
SWAI (1)	.	•	•	•	•	•	•	•	•
WMT21	.	•	•	•	•	•	•	•	•

(1) Probe for thermostat WMT21.

VMF system

Model	Ver	530	532	540	541	730	732	740	741
VMF-E19I	.	•	•	•	•	•	•	•	•
VMF-E4DX	.	•	•	•	•	•	•	•	•
VMF-E4X	.	•	•	•	•	•	•	•	•
VMF-IO	.	•	•	•	•	•	•	•	•
VMF-LON	.	•	•	•	•	•	•	•	•
VMF-SW	.	•	•	•	•	•	•	•	•
VMF-SW1	.	•	•	•	•	•	•	•	•

Water valves

3 way valve kit

Ver	530	532	540	541	730	732	740	741
.	VCF45C (1)	VCF45C (1)	VCF45C (1)	VCF45C (1)	VCF47C (1)	VCF47C (1)	VCF47C (1)	VCF47C (1)

(1) 230V power supply - Hydraulic connection Ø 3/4"

3-way valve kit for heating only coil

Ver	530	532	540	541	730	732	740	741
.	-	VCF45H (1)	-	VCF45H (1)	-	VCF47H (1)	-	VCF47H (1)

(1) Power supply 230V - Hydraulic connections Ø 1/2"
The accessory cannot be fitted on the configurations indicated with -

2 way valve kit

Model	Ver	530	532	540	541	730	732	740	741
VCF25C (1)	.	•	•	•	•	•	•	•	•

(1) 230V power supply - Hydraulic connection Ø 3/4"

2-way valve for heating only coil

Model	Ver	530	532	540	541	730	732	740	741
VCF25H (1)	.		•		•		•		•

(1) Power supply 230V - Hydraulic connections Ø 1/2"

2-way globe valves actuator excluded

Ver	430	432	440	441	530	532	540	541	630	632	640	641	730	732	740	741
.	VCT102	VCT102	VCT102	VCT102	VCT102	VCT102	VCT102	VCT102	VCT202	VCT202	VCT202	VCT202	VCT202	VCT202	VCT202	VCT202

Actuator 230V

Ver	430	432	440	441	530	532	540	541	630	632	640	641	730	732	740	741
.	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230

Actuator 24V

Ver	030	040	130	140	230	240	330	340
.	GAF22	GAF22	GAF32	GAF32	GAF42	GAF42	GAF62	GAF62

Combined adjustment and balancing valve cold side

Model	Ver	530	532	540	541	730	732	740	741
VJP150 (1)	.	•	•	•	•				
VJP150M (2)	.	•	•	•	•				
VJP270M (2)	.					•	•	•	•

(1) 230V~50Hz
(2) 24V

VJP/VJP_M the compatibility of the hot water valves with the designed air flow in a four-pipe installation is to be verified.

Accessories for intake

Intake straight with rectangular flanges

Ver	530	532	540	541	730	732	740	741
.	RDA450V	RDA450V	RDA450V	RDA450V	RDA670V	RDA670V	RDA670V	RDA670V

Intake plenum with rectangular flanges

Ver	530	532	540	541	730	732	740	741
.	RPA450V	RPA450V	RPA450V	RPA450V	RPA670V	RPA670V	RPA670V	RPA670V

Intake plenum with circular flanges

Ver	530	532	540	541	730	732	740	741
.	PA450V	PA450V	PA450V	PA450V	PA670V	PA670V	PA670V	PA670V

Delivery accessories

Plenum with motor-driven dampers

Ver	530	532	540	541	730	732	740	741
.	MZC5040	MZC5040	MZC5040	MZC5040	MZC7050	MZC7050	MZC7050	MZC7050

Delivery plenum internally insulated, with rectangular flanges

Ver	530	532	540	541	730	732	740	741
.	RPM450V	RPM450V	RPM450V	RPM450V	RPM670V	RPM670V	RPM670V	RPM670V

Delivery plenum internally insulated, with circular flanges

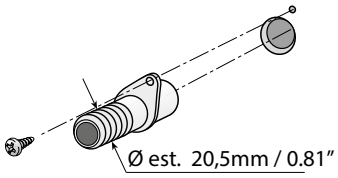
Ver	530	532	540	541	730	732	740	741
.	-	-	-	-	PM670V	PM670V	PM670V	PM670V

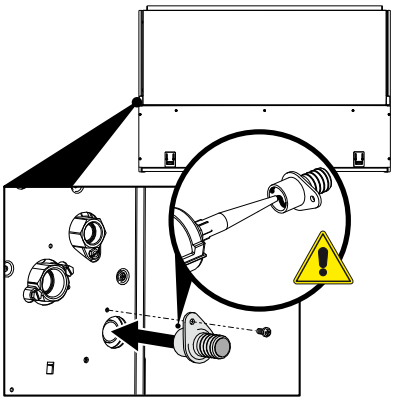
The accessory cannot be fitted on the configurations indicated with -

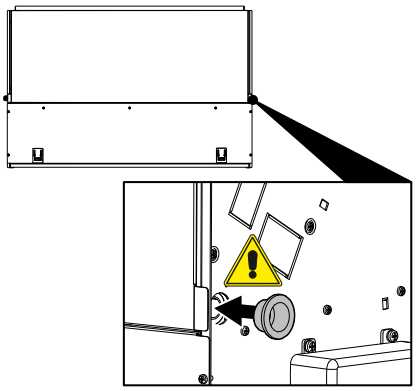
Circular flanges kit for plenum

Ver	530	532	540	541	730	732	740	741
.	KFV10	KFV10	KFV10	KFV10	KFV10	KFV10	KFV10	KFV10

CONDENSATE DRAIN CONNECTION







The fan coil tray has 2 condensate drains on the right and left side.
We recommend using the condensate drain fitting placed on the side of the hydraulic connections.
Install the drain condensate drain fitting supplied. Seal the connection between the tray and the fitting with silicone.
Seal the drain that is not used.
Connect the tray fitting to the condensate drain network. Use a drain pipe, which must be fixed to the tray fitting. The drain fittings are designed to be fixed to hoses with suitable inner diameter. Avoid the application of greater loads and do not use them for other purposes.
Make sure that the drain not used is closed and does not leak.
The condensate drain network must be properly sized and the pipelines must be positioned in order to maintain a suitable slope along the path (min.1%).
In the case of discharge to the sewer, it is advisable to make a siphon which prevents odours from returning into the environment.
Run an operating and condensate drain system seal test by pouring water in the tray.

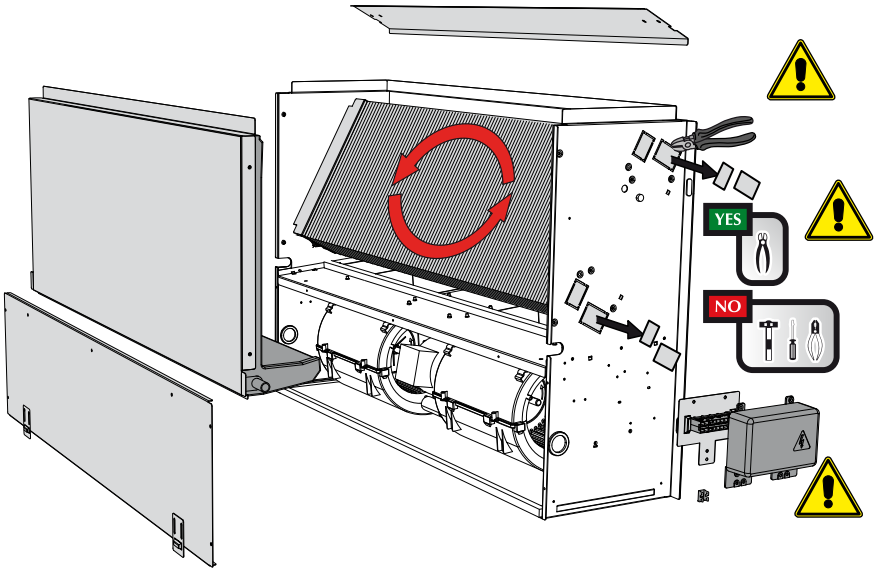
AIR CHANNEL CONNECTION TO THE UNIT

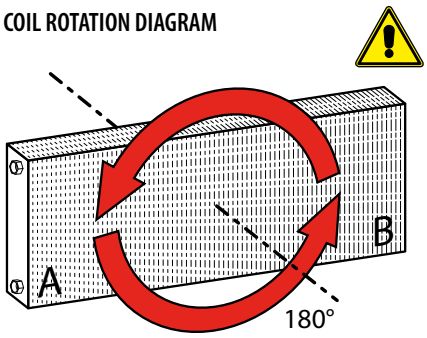
The VED_I unit is set up for connections with air ducts.
To identify the position of the ducts, refer to the drawing.

Connect the air channels to the fittings. Fasten the channels with straps.
During operation, always leave the filter mounted on the fan coil; otherwise the dust in the air will dirty the coil surface.

COIL ROTATION

Should the coil rotate due to the hydraulic connection, remove the front closing panel and proceed as follows:
- Remove the condensate collection tray.
- Remove the cover from the coil by loosening the screws.
- Remove the screws that fasten the coil and remove the latter.
- Remove the push-out elements from the right side.
– ATTENTION! Before rotating the coil, refer to the coil rotation diagram.
The coil must be rotated in installed correctly. Rotate the coil correctly and fix it with the screws that you have previously removed. The spaces between manifold and hole on the side must be filled and sealed with insulation material.
- Remount the cover on the coil by fastening the screws.
- Close the holes left free from the hydraulic connections on the left side with insulation material.
- Remount the condensate collection tray.
The tray is set up for the condensate drain on both sides. We recommend using the condensate drain fitting placed on the side of the hydraulic connections.
Make sure that the drain not used is closed and does not leak.
- remove the electrical connections from the right side.
- Move the electrical connections to the left side making them pass through the cable gland.
- Move the support plate, terminal board, earthing jumper, and electrical devices from the right to the left side.
- Remount the front closing panel.





TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	SOLUTION
Little outlet air.	Incorrect speed setting on the control panel.	Select the correct speed on the control panel.
	Clogged filter.	Clean the filter.
It is not hot.	Air flow obstruction (inlet and/or outlet).	Remove the obstruction.
	Lack of hot water.	Check the boiler.
It is not cold.	Incorrect control panel setting.	Set the control panel.
	Lack of cold water.	Check the chiller.
The fan does not turn.	Incorrect control panel setting.	Set the control panel.
	Lack of current.	Check the presence of electric voltage.
	The water has not reached operating temperature. The water has not reached operating temperature.	Check the boiler or the chiller. Check the thermostat setting.
Condensation phenomena on the external structure of the appliance.	The temperature and humidity limit conditions described in "MINIMUM AVERAGE WATER TEMPERATURE" have been reached.	Increase the water temperature beyond the minimum limits described in "MINIMUM AVERAGE WATER TEMPERATURE".

For anomalies that are not contemplated, contact the After-sales Service immediately.



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