

CASSETTE-TYPE FAN COIL WITH INVERTER



FCLI



FCLI 32 (600x600)
FCLI 34 (600x600)
FCLI 42 (600x600)
FCLI 44 (600x600)
FCLI 62 (600x600)
FCLI 64 (600x600)

FCLI 82 (840x840)
FCLI 122 (840x840)
FCLI 124 (840x840)



5 7 7 3 0 1 0 _ 0 1

IFCLITY1106 - 5773010_01

Replace 5773010_00 / 1006



AERMEC

is involved in the Eurovent programme:

FCU

Products covered by the programme can be found on the site

www.eurovent-certification.com

The Aermec FCLI fan coil is made with materials of superior quality in strict compliance with safety regulations. FCLI fan coil is easy to use and will have a long life.

Thanks to Aermec's FCLI range of inverter fan coils, brushless technology can now make inroads in the field of chilled water air conditioning, bringing notable energy savings along with the precise control of both air temperature and humidity in the air-conditioned rooms.

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REMARKS

Keep the manuals in a dry place - to maintain their good condition - for at least 10 years, for any future reference needs.

Carefully and thoroughly read all the information referred to in this manual. Pay particular attention to the instructions for use accompanied by the words "DANGER" or "WARNING" because, if they are not complied with, the machine/property can be damaged and/or people can be injured.

For any irregularities not foreseen by this manual, promptly contact your local After Sales Service.

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

The device warranty does not in any case cover costs resulting from the use of automatic ladders, scaffolding or any other lifting system necessary for carrying out repairs under warranty.

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

This manual contains the following number of pages: 60.

AERMEC S.p.A.

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DICHIARAZIONE DI CONFORMITÀ CE

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

VENTILCONVETTORE

serie FCLI

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

- CEI EN 60335-2-40
- CEI EN 55014-1
- CEI EN 55014-2
- CEI EN 61000-6-1
- CEI EN 61000-6-2
- CEI EN 61000-6-3
- CEI EN 61000-6-4

soddisfando così i requisiti essenziali delle seguenti direttive:

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

FCLI CON ACCESSORI

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

CERTIFICAT DE CONFORMITÉ CE

Nous soussignés déclarons sous notre exclusive responsabilité que le produit:

VENTILO-CONVECTEURS

série FCLI

auquel cette déclaration fait référence, est conforme aux normes harmonisées suivantes:

- EN 60335-2-40
- EN 55014-1
- EN 55014-2
- CEI EN 61000-6-1
- CEI EN 61000-6-2
- CEI EN 61000-6-3
- CEI EN 61000-6-4

satisfaisant ainsi aux conditions essentielles des directives suivantes:

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

FCLI PLUS ACCESSOIRES

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

DECLARACIÓN DE CONFORMIDAD CE

Los que suscriben la presente declaran bajo la propia y exclusiva responsabilidad que el conjunto en objeto, definido como sigue:

FAN COIL

serie FCLI

al que esta declaración se refiere, está en conformidad a las siguientes normas armonizadas:

- EN 60335-2-40
- EN 55014-1
- EN 55014-2
- CEI EN 61000-6-1
- CEI EN 61000-6-2
- CEI EN 61000-6-3
- CEI EN 61000-6-4
- EN 61000-6-3

al que esta declaración se refiere, está en conformidad a las siguientes normas armonizadas:

- Directiva LVD 2006/95/CE
- Directiva compatibilidad electromagnético 2004/108/CE

FCLI CON ACCESORIOS

Está prohibido poner en marcha el producto con accesorios no suministrados por Aermec.

CE CONFORMITY DECLARATION

We the undersigned declare, under our own exclusive responsibility, that the product:

FAN COIL

FCLI series

to which this declaration refers, complies with the following standardised regulations:

- EN 60335-2-40
- EN 55014-1
- EN 55014-2
- CEI EN 61000-6-1
- CEI EN 61000-6-2
- CEI EN 61000-6-3
- CEI EN 61000-6-4

thus meeting the essential requisites of the following directives:

- Directive LVD 2006/95/CE
- EMC Electromagnetic Compatibility Directive 2004/108/CE

FCLI WITH ACCESSORIES

It is not allowed to use the unit equipped with accessories not supplied by Aermec.

CE KONFORMITÄTSERKLÄRUNG

Wir, die hier Unterzeichnenden, erklären auf unsere ausschließliche Verantwortung, dass das Produkt:

GEBLÄSEKONVEKTOR

der Serie FCLI

auf das sich diese Erklärung bezieht, den folgenden harmonisierten Normen entspricht:

- EN 60335-2-40
- EN 55014-1
- EN 55014-2
- CEI EN 61000-6-1
- CEI EN 61000-6-2
- CEI EN 61000-6-3
- CEI EN 61000-6-4

womit die grundlegenden Anforderungen folgender Richtlinien erfüllt werden:

- Richtlinie LVD 2006/95/CE
- Richtlinie zur elektromagnetischen Verträglichkeit 2004/108/CE

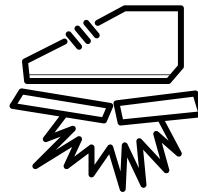
FCLI + ZUBEHÖR

Falls das Gerät mit Zubehörteilen ausgerüstet wird, die nicht von Aermec geliefert werden, ist dessen Inbetriebnahme solange untersagt.

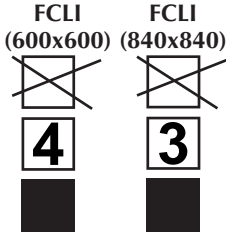
TRASPORTO • CARRIAGE • TRANSPORT • TRANSPORT • TRANSPORTE



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



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



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



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



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



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



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

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



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



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



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

PACKAGE

The fan coils are shipped in standard package which consists of expanded polystyrene foam and cardboard shells.

IMPORTANT INFORMATION AND MAINTENANCE

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

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

⚠ ⓧ WARNING: before carrying out any work, put the proper individual protection equipment on.

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

⚠ WARNING: check that the power supply is disconnected before carrying out any procedures on the unit.

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

⚠ WARNING! DANGER! Any use of the unit not expressly indicated by Aermec is strictly prohibited.

⚠ ONLY SUPPLY THE FAN COIL WITH SINGLE-PHASE 230 VOLT ELECTRICITY

Any other type of power supply could permanently damage the fan coil.

⚠ DO NOT USE THE FAN COIL IMPROPERLY

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

⚠ AIRING THE ROOM

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

⚠ ADJUST TEMPERATURE ADEQUATELY

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

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

⚠ CORRECTLY ADJUST THE AIR JET

Air coming out from the fan coil must not reach people directly; in fact, even if the air is warmer than the room temperature, it could cause a cold sensation and result in discomfort.

⚠ DO NOT USE EXCESSIVELY HOT WATER

Clean the fan coil with a soft cloth or sponge soaked in water not over 40°C. Do not use chemical products or solvents to clean any part of the fan coil. Do not spray water on the outer or inner surfaces of the fan coil (this might cause short circuits).

⚠ CLEAN THE FILTER PERIODICALLY

Cleaning the filter frequently guarantees enhanced operating efficiency.

Check whether the filter is very dirty: in this case, clean it more often.

Clean frequently; remove the accumulated dust with a vacuum cleaner.

Once the filter is clean, refit it on the fan coil following the removal instructions but in reverse order.

⚠ SUPPLEMENTARY CLEANING

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

⚠ DURING OPERATION

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

⚠ WHAT IS NORMAL

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

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

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

⚠ MALFUNCTIONING

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

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

If the problem occurs again, call the local Aftersales Service immediately.

⚠ DO NOT TUG THE ELECTRICAL CABLE

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

A damaged power cable can cause short circuits and injure people.

ⓧ DO NOT OBSTRUCT THE AIR OUTLETS BY PLACING OBJECTS INTO THEM

Do not put anything in the air outlet slots.

This could injure people and damage the fan.

⚠ WARNING

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

⚠ WARNING: reserved for the After Sales service only. There are 2 LEDs on the Inverter card (Alarm / Power) that indicate the unit's operating status. The table for the decoding of messages is found in Chapter Installation.

DESCRIPTION OF THE UNIT

PURPOSE OF THE FCLI CASSETTE-TYPE MODULATING FAN COIL

The fan coil is a room air treatment terminal unit for both winter and summer operation.

The FCLI cassette-type modulating fan coil range with brushless inverter motor are different from traditional fan coils because they offer better climatic and noise comfort, and energy savings.

FCLI CASSETTE-TYPE FAN COILS

Cassette-type fan coil with Inverter for installation in suspended ceilings; greater sizes can be integrated in standard 600x600 and 840x840 panelling.

The FCLI cassette-type fan coil is a room air treating unit. The FCLI concentrates high technological and functional characteristics that make it the ideal

climate control unit for all types of room. The supply of climate-controlled air is distributed throughout the room thanks to the delivery fins which face four directions. The FCLI generates heat if included in a heating system with boiler or heat pump, but may also be used in the summer as an air conditioner if the heating system has a

water chiller.

The fan coils are designed for 2- and 4-pipe systems.

The unit is installed in a suspended ceiling with the possibility to send conditioned air to adjacent rooms and introduce external air regardless of unit ventilation.

ADVANTAGES

- The temperature is maintained with the utmost precision, the continuous modulation fan speed prevents surges due to changes in speed or the succession of on-off cycles.
- The noise comfort is significant, since there are no abrupt changes between the different speeds, the noise changes from one speed to another or the change between off and on cannot be heard. The type of motor and control system used also allows a minimum rotation speed much less than that of traditional models (even less than half) and therefore, not only is the noise well below average, but above all so is the sensation of effective sound (e.g.

if in a bedroom the traditional fan coil alternates minimum speed cycles and fan off cycles, we don't perceive the average noise, but the noise when running at minimum speed remains imprinted).

- Energy savings through the use of the brushless motor that allows for greater efficiency, even under normal conditions. For comparison we have made an exhibitor that we will use during fairs and events where we have installed two of our fan coils of the same size, one with a brushless motor and the other with a traditional motor. With both motors at the same speed (and thus equal airflow) the reduction

in power consumption by the fan coil with brushless motor exceeds 50%. The inverter is a system that automatically reduces the rotational speed and power consumption allowing the fan coil to work reduced, with considerable savings on annual operating costs. The more efficient distribution system helps to improve the energy class of the building. The electronic speed control ensures and controls the starting phase, avoiding the absorption peaks typical of this phase that occur with asynchronous motors. Obviously, these benefits assume increasing advantages in the installation as the number of FCLI fan coils increases.

AVAILABLE SIZES

The cassette-type fan coils of the FCLI range are available in two versions:

for 2-pipe systems

FCLI 32 (600x600)
FCLI 42 (600x600)
FCLI 62 (600x600)
FCLI 82 (840x840)
FCLI 122 (840x840)

For 4-pipe systems

FCLI 34 (600x600)
FCLI 44 (600x600)
FCLI 64 (600x600)
FCLI 124 (840x840)

MANDATORY ACCESSORY

GLLI 10 (600x600)
GLLI 20 (840x600)

Grille unit with intake and delivery filter, with manually adjustable fins, colour RAL 9010. The accessory also includes the electric box for the unit.

CONTROL PANEL

The FCLI unit requires an external control panel with thermostat and ventilation speed control with 0-10V output. See the accessories list for selection.

VERSIONS

The cassette fan coils are available in three versions, to satisfy all system requirements.

The sizes, performance levels and outer dimensions are the same as those for

the standard **FCL** version.

In this manual, versions **FCLI_VL** and **FCLI_V2** will only be referred to when there are differences compared with the standard **FCLI** version; otherwise they

will simply be called **FCLI**.

Versions **FCLI_VL** and **FCLI_V2** are available upon request.

- Standard **FCLI** version, with standard internal 3-way valve fitted with fast connection actuator and visual position signalling.

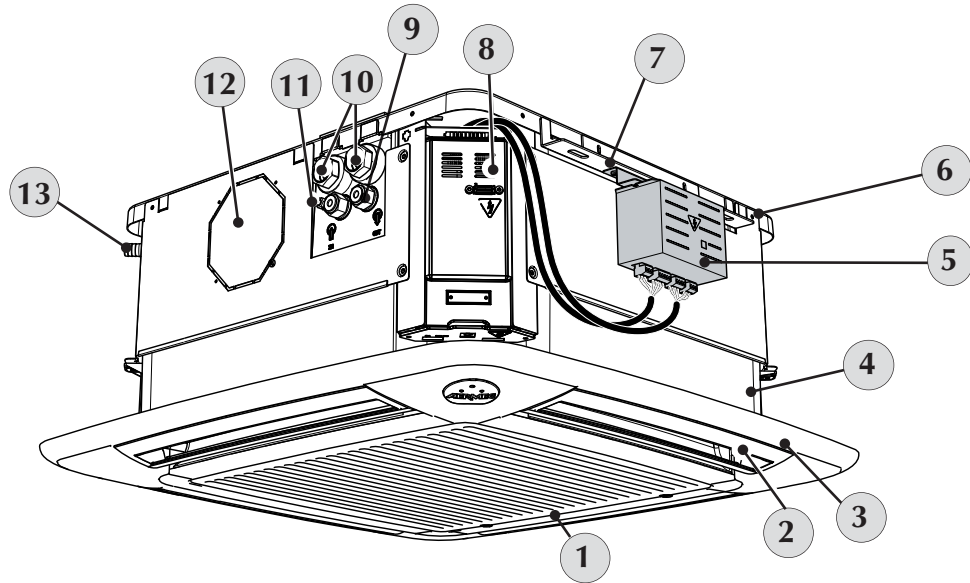
- **FCLI_V2** version, with standard internal 2-way valve fitted with fast connection actuator and visual position signalling, suitable for systems with a variable water flow rate.

- **FCLI_VL** version, without an internal valve.

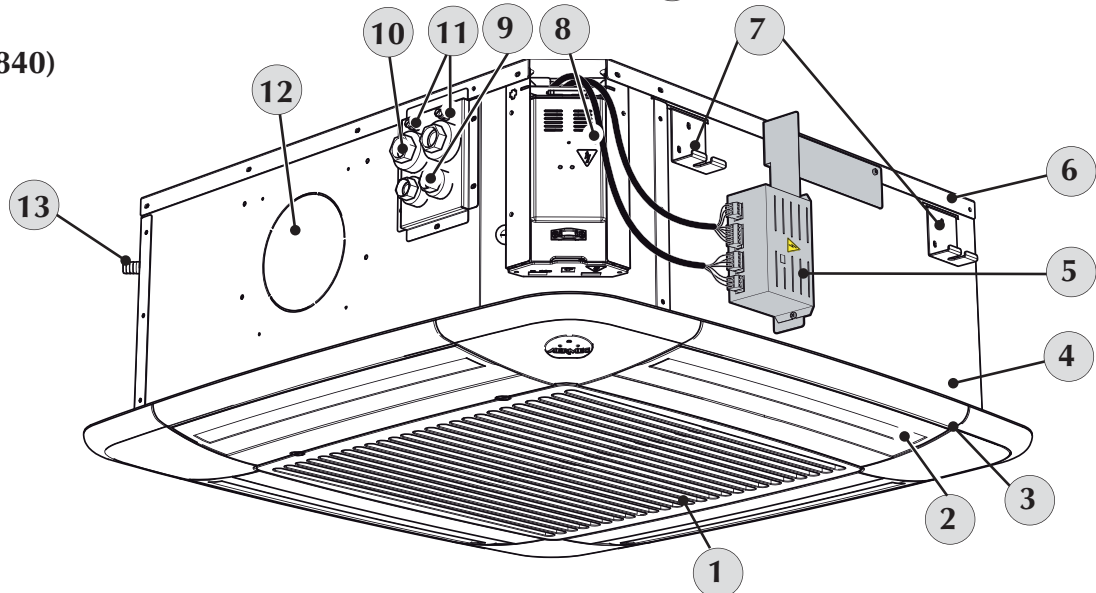
MAIN COMPONENTS

- | | | |
|---------------------------------|--|--|
| 1 Grille with air filter (GLLI) | 6 Base unit | 11 Air drain valve |
| 2 Air delivery deflector (GLLI) | 7 Fastening brackets | 12 Push-out, coupling for air delivery in an adjacent room |
| 3 Grille frame (GLLI) | 8 Electrical box | 13 Condensate drain |
| 4 Tray | 9 Water connections (only for 4 pipes) | |
| 5 Inverter device | 10 Water connections (2 pipes) | |

FCLI (module 600) GLLI 10



FCLI (Module 840) GLLI 20



DESCRIPTION OF COMPONENTS

BASE

The unit is characterised by a reinforced, integral metal structure with insulation in expanded polystyrene obtained from injection moulding for purposes of noise reduction and air routing. The load-bearing base is in galvanised sheet steel and is varnished with polyester powders. The following are fixed to the base: fixing brackets, coils, motor and fan, condensate discharge pump, attachment plate, control board unit and condensate drip tray. By means of the flanges, it allows the channels (for renewing environmental air and/or delivery to an adjacent room) to be joined to the sides.

FASTENING BRACKETS

Galvanised steel brackets for attaching the unit to the ceiling.

TRAY

Tray closing off the unit. Made of injection co-moulded polystyrene to avoid thermal dispersion and the formation of condensate, it conveys conditioned air towards the fins and from the condensate drip tray.

The air suction conveyor is equipped with a protective grille that impedes access to the moving fan.

THERMAL EXCHANGE COIL

The coils used have copper pipes and corrugated or turbulent aluminium fins. They are designed to offer the maximum heat exchange surface. All batteries are provided with air bleed pipes and water drain valves, located respectively on the highest and lowest point of the battery circulation.

INTERNAL THREE-WAY VALVE

Standard on standard versions. Internal all-or-nothing type 3-way valve, with fast connection actuator and visual signalling of the position, assembled as standard on the heating/cooling coil. Powered with a voltage of 230V ~ 50Hz.

FAN UNIT

The fan unit, with the latest axial-centrifugal fan designed to obtain low-sound emissions, is dynamically and statically balanced.

The fan unit can be easily accessed for cleaning and maintenance.

BRUSHLESS ELECTRIC MOTOR WITH INVERTER CONTROL

The "brushless electric motor with Hall sensors" and the control system used in the AERMEC FCXI fan coils

is a combination of sophisticated technologies in the field of mechanics and electronics entirely developed within the industrial group.

This is a permanent magnet motor with low starting current and easy speed adjustment.

Not affected by electromagnetic interference.

The fact that it is brushless allows lower friction and less wear.

With the special inverter device, it is possible to control the speed and torque of the rotor continuously, just by means of the stator currents.

The electric motor is cushioned with elastic supports and the steel shaft is mounted on bushings and resistance to salt fog is tested in accordance with ASTM B117/64.

The "brushless electric motor with Hall sensors" used in AERMEC FCXI modulating fan coils has huge advantages over conventional AC motors and hybrid inverter motors (without Hall sensor) normally used on other modulating fan coils:

- reduced wear and tear
- The possibility to regulate the rotation speed in a precise, continuous manner (0-100%)
- higher energy yields
- Longer life and greater reliability
- Low magnetic noise
- Continuous monitoring of the rotor position implies greater efficiency, and

guaranteed and controlled starting

- Guaranteed minimum speed 90 rpm (for thermodynamic reasons, this limit was raised to 200 rpm).

CONDENSATE DISCHARGE DEVICE

The condensate discharge device disposes of the condensate that is produced by the unit and deposited in the polystyrene basin. This unit is composed of a control board, a non return valve, a three level float and a pump with 800 mm. max. head. The unit can easily be connected to the condensate discharge system by means of a plastic coupling (ext. Ø 16mm).

ALARM: when the level of condensate in the tray reaches the prefixed limit, the alarm will stop the flow of water to the battery, allowing only the fan to function.

HYDRAULIC CONNECTIONS

The attachment plate groups together the water connections and the vent of the coil's primary circuit for 2-pipe and 4-pipe systems. The plates contain raised symbols that identify the input (IN) and output (OUT) water connections for the water.

GLLI10 - GLLI20 (Obligatory accessory) Intake and delivery grille unit with electric box

The form and opening of the suction louvres were developed in order to have the best possible distribution of the air, both when functioning in winter as well

as in summer.

Suction occurs through the central grille, and delivery through the manually adjustable, perimetric slots.

The plastic, colour RAL 9010, grille contains the air filter that can be easily removed for cleaning.

Incorporated electric box with control board for electrical connections.

The GLLI needs to be interfaced with an external control panel (not included) with thermostat and ventilation speed control, with a 0-10V output.

GLLI10N - GLLI20N (VMF System obligatory accessory)

Intake and delivery grille unit with incorporated VMF System-type thermostat.

To be combined with the VMF-E4 control panel.

The GLLI_N grille has the same characteristics as GLLI range grilles.

Incorporated electric box with thermostat board and connectors for electrical connections.

For characteristics, see the section on accessories.

FILTERING SECTION

Mechanical air filter with ABS frame, colour RAL9010.

Filter in filtering class G1, self-extinguishing class V0 (UL94).

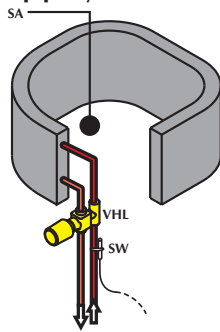
Easily removable and made from regenerable materials. May be cleaned by washing.

SYSTEM EXAMPLE

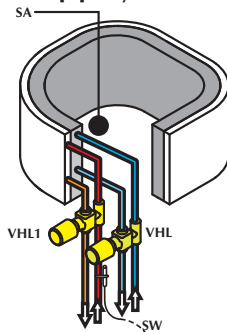
Key:	SA	Ambient probe	V2	2-way valve (Hot/Cold)
	SW	Water probe	VHL1	hot 3-way valve
	VHL	3-way valve (Hot/Cold)	VHL2	hot 2-way valve

FCLI (Standard)

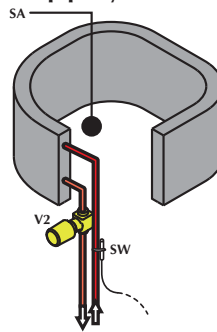
2-pipe system



4-pipe system

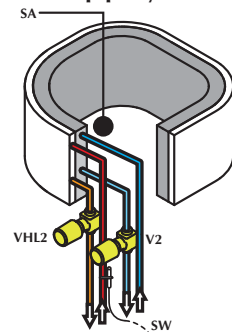


2-pipe system



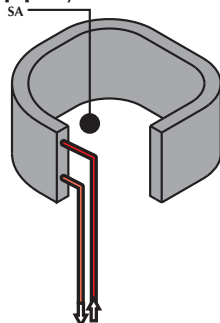
FCLI (V2)

4-pipe system

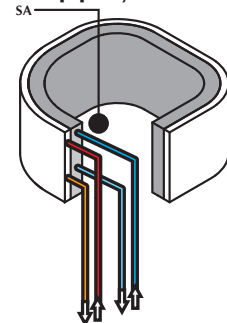


FCLI (VL) without valves

2-pipe system



4-pipe system



HOW TO CHOOSE

The main technical data of the FCLI range are summarised in the tables and diagrams.

The sensible and total cooling capacities at maximum speed depending on the incoming water temperature, thermal head and the dry bulb and wet bulb temperature of the air respectively for sensible and total yield are shown in the table. The performances at the average and minimum speed are obtained by multiplying the table values by the corrective factors indicated.

The water side pressure drops are shown in the diagrams.

The correction factors when the unit

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

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

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

A wide range of accessories is available for the FCLI fan coils, but in certain cases some of them cannot be used simultaneously. Check the accessories are compatible with the fan coil chosen. The manual contains a description of each accessory, plus a drawing and its compatibility.

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

OPERATING LIMITS

FCLI		32	34	42	44	62	64	82	122	124
Maximum water inlet temperature	°C	80°								
Maximum recommended water inlet temperature	°C	65°								
Maximum operating pressure	bar	8°								
Minimum water flow rate (heating)	l/h	100	50	100	50	150	50	250	250	250
Maximum water flow rate (heating)	l/h	750	400	750	400	1050	400	1750	2450	400
Minimum water flow rate (cooling)	l/h	100	100	100	100	150	150	250	350	250
Maximum water flow rate (cooling)	l/h	750	750	750	750	1050	1050	1750	2450	1750
External temperature limits (Ta)	°C	0° < Ta < 40°								
Relative humidity limits in the room (R.H.)		R.H. < 85%								
Power supply		230V (±10%) ~ 50 Hz								
Maximum input current	A	0.22	0.22	0.33	0.33	0.37	0.37	0.7	0.75	0.75

Performance values refer to the following conditions:
- at the maximum motor speed;

- the total input power is determined by adding the input power for the unit and the input power for the accessories connected and declared in the corresponding manuals.

Water temperature

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

temperature over 65°C. The use of water at high temperatures could cause squeaking due to the different thermal expansions of the

elements (plastic and metal). This does not however cause damage to the unit if the maximum water inlet temperature is not exceeded (see table).

Minimum average water temperature

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

deposited on any objects underneath and on the floor.




To avoid condensate on the external structure of the device while the fan is functioning, the average temperature of the water must not be lower than

the limits shown in the table below, that depend on the thermo-hygrometric conditions of the external air.

These limits refer to unit operating with fan at minimum speed.

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

TECHNICAL DATA

FCLI 2-pipe versions		FCLI	32	42	62	82	122	
Heating								
Heating output 50°C		Speed 4	W	-	4950	6250	7100	13000
		Speed 3	W	2380	3940	4780	5700	10500
		Speed 2	W	1760	3030	3830	4850	8800
		Speed 1	W	1330	2250	3050	3500	6300
Pressure drop (VL)		Speed 4	kPa	-	23	32	23	34
		Speed 3	kPa	9	16	21	15	24
		Speed 2	kPa	6	10	15	11	17
		Speed 1	kPa	4	6	10	6	9
Cooling								
Cooling capacity		Speed 4	W	-	3950	4980	6000	11000
		Speed 3	W	1900	3250	3940	4790	8950
		Speed 2	W	1470	2540	3210	4050	7500
		Speed 1	W	1160	1960	2660	2800	5360
Sensible cooling capacity		Speed 4	W	-	3160	3810	4200	8470
		Speed 3	W	1520	2360	2810	3300	6870
		Speed 2	W	1250	1820	2270	2770	5730
		Speed 1	W	990	1380	1860	1900	4040
Water flow rate		Speed 4	l/h	-	679	857	1032	1892
		Speed 3	l/h	327	559	678	824	1539
		Speed 2	l/h	253	437	552	697	1290
		Speed 1	l/h	200	337	458	482	922
Pressure drop (VL)		Speed 4	kPa	-	25	36	25	38
		Speed 3	kPa	10	18	24	17	26
		Speed 2	kPa	7	11	16	12	19
		Speed 1	kPa	4	7	12	6	10
Common data								
Fans		no.	1	1	1	1	1	
Air flow rate		Speed 4	m ³ /h	-	700	880	1100	1750
		Speed 3	m ³ /h	600	530	660	830	1350
		Speed 2	m ³ /h	410	360	500	680	1100
		Speed 1	m ³ /h	300	260	380	460	750
Sound power		Speed 4	dB(A)	-	53	61	50	60
		Speed 3	dB(A)	46	46	54	45	54
		Speed 2	dB(A)	38	38	47	43	50
Sound pressure		Speed 4	dB(A)	-	44	52	41	51
		Speed 3	dB(A)	37	37	45	36	45
		Speed 2	dB(A)	29	29	38	34	41
Input power		Speed 4	W	-	75	83	150	175
		Speed 3	W	45	47	53	105	125
		Speed 2	W	31	32	37	80	105
		Speed 1	W	21	22	26	45	55
Input current (max speed)		A	0.22	0.33	0.37	0,70	0.75	
Starting current		A	0.66	0.99	1.11	2.10	2.25	
Power supply		V / Hz	230V~50Hz					
Maximum protection level		IP	20	20	20	20	20	
Heat exchanger water content		L	1.2	1.5	2.1	3	4.5	
Water connections		Ø gas	3/4"	3/4"	3/4"	3/4"	3/4"	
Kvs (3-way valve, standard version)			2.5	2.5	2.5	4	4	
Kvs (2-way valve, V2 version)			2.5	2.5	2.5	2.5	2.5	



= Performance certified EUROVENT 6/3 - Sound tests certified EUROVENT 8/2 (ISO 3741/2001)

Performance values refer to the following conditions:

- Level of sound pressure (A-weighted) measured in the room with volume $V = 100 \text{ m}^3$, reverberation time $t = 0.5 \text{ s}$; direction factor $Q = 2$; distance $r = 2.5 \text{ m}$

Cooling:

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

Heating 50°C:

- External air temperature 20°C
- Water inlet temperature: 50°C; Δt water 10°K









Heating 70°C:

- External air temperature 20°C
- Water inlet temperature: 50°C; Δt water 10°K

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

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

TECHNICAL DATA

FCLI 4-pipe versions		FCLI	34	44	64	124	
Heating							
Heating output 70°C		Speed 4	W	-	3070	3800	12500
		Speed 3	W	2600	2730	3380	10400
		Speed 2	W	2190	2290	2990	9300
		Speed 1	W	1950	1960	2640	7050
Water flow rate		Speed 4	l/h	-	264	327	1075
		Speed 3	l/h	224	235	291	894
		Speed 2	l/h	188	197	257	800
		Speed 1	l/h	168	169	227	606
Pressure drop (VL)		Speed 4	kPa	-	14	21	29
		Speed 3	kPa	11	12	17	21
		Speed 2	kPa	8	8	14	17
		Speed 1	kPa	6	6	11	10
Cooling							
Cooling capacity		Speed 4	W	-	3650	4610	8800
		Speed 3	W	1900	3000	3640	7270
		Speed 2	W	1470	2340	2970	6220
		Speed 1	W	1160	1810	2460	4570
Sensible cooling capacity		Speed 4	W	-	2920	3530	6770
		Speed 3	W	1520	2180	2600	5520
		Speed 2	W	1250	1680	2100	4670
		Speed 1	W	990	1270	1720	3370
Water flow rate		Speed 4	l/h	-	628	793	1514
		Speed 3	l/h	327	516	626	1250
		Speed 2	l/h	253	402	511	1070
		Speed 1	l/h	200	311	423	786
Pressure drop (VL)		Speed 4	kPa	-	22	31	38
		Speed 3	kPa	10	15	21	27
		Speed 2	kPa	7	10	14	20
		Speed 1	kPa	4	6	10	12
Common data							
Fans		no.	1	1	1	1	
Air flow rate		Speed 4	cu.m/h	-	700	880	1750
		Speed 3	cu.m/h	600	530	660	1350
		Speed 2	cu.m/h	410	360	500	1100
		Speed 1	cu.m/h	300	260	380	750
Sound power		Speed 4	dB(A)	-	53	61	60
		Speed 3	dB(A)	46	46	54	54
		Speed 2	dB(A)	38	38	47	50
		Speed 1	dB(A)	35	35	41	44
Sound pressure		Speed 4	dB(A)	-	44	52	51
		Speed 3	dB(A)	37	37	45	45
		Speed 2	dB(A)	29	29	38	41
		Speed 1	dB(A)	26	26	32	35
Input power		Speed 4	W	-	75	83	175
		Speed 3	W	45	47	53	125
		Speed 2	W	31	32	37	105
		Speed 1	W	21	22	26	55
Input current (max speed)		A	0.22	0.33	0.37	0.75	
Starting current		A	0.66	0.99	1.11	2.25	
Power supply		V / Hz	230 ~ 50Hz				
Maximum protection level		IP	20	20	20	20	
Heat exchanger water content		L	1.2	1.5	2.1	4.5	
Water connections (cold circuit)		Ø gas	3/4"	3/4"	3/4"	3/4"	
Water connections (hot circuit)		Ø gas	1/2"	1/2"	1/2"	1/2"	
Kvs (3-way valve, standard version)			2.5	2.5	2.5	4	
Kvs (2-way valve, V2 version)			2.5	2.5	2.5	2.5	



= Performance certified EUROVENT 6/3 - Sound tests certified EUROVENT 8/2 (ISO 3741/2001)

Performance values refer to the following conditions:

- Level of sound pressure (A-weighted) measured in the room with volume $V = 100 \text{ m}^3$, reverberation time $t = 0.5 \text{ s}$; direction factor $Q = 2$; distance $r = 2.5 \text{ m}$

Cooling:

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

Heating 50°C:

- External air temperature 20°C
- Water inlet temperature: 50°C; Δt water 10°K

Heating 70°C:

- External air temperature 20°C
- Water inlet temperature: 50°C; Δt water 10°K

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

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

COOLING CAPACITY - FCL132 / FCL134

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.		
5	3	15	1526	1281	1519	1457	1526	1526	1574	1574	1722	1722	1797	1797	
		17	1969	1274	1965	1454	1961	1631	1957	1808	1951	1951	1953	1953	
		19	2448	1264	2442	1444	2436	1623	2430	1800	2424	1975	2420	2062	
		21			2955	1430	2947	1609	2939	1786	2931	1963	2929	2052	
		23					3497	1591	3493	1773	3481	1948	3477	2037	
	5	5	15	1317	1164	1347	1347	1404	1404	1502	1502	1653	1653	1728	1728
			17	1785	1174	1781	1353	1775	1530	1783	1711	1803	1803	1823	1823
			19	2270	1169	2266	1349	2262	1528	2258	1707	2254	1882	2246	1968
			21			2784	1340	2777	1519	2773	1698	2767	1875	2765	1963
			23					3335	1506	3327	1684	3319	1862	3315	1951
	7	7	15	1056	1014	1154	1154	1261	1261	1407	1407	1564	1564	1643	1643
			17	1518	1035	1515	1213	1540	1400	1589	1589	1654	1654	1698	1698
19			2056	1059	2052	1239	2048	1417	2040	1592	2044	1771	2048	1861	
21					2587	1239	2579	1417	2575	1595	2571	1773	2567	1860	
23							3145	1410	3141	1590	3133	1767	3129	1855	
7	3	15	1185	1093	1201	1201	1266	1266	1417	1417	1567	1567	1641	1641	
		17	1631	1093	1627	1271	1621	1448	1620	1620	1649	1649	1670	1670	
		19	2108	1085	2104	1265	2100	1444	2092	1618	2090	1794	2084	1880	
		21			2614	1254	2606	1432	2092	1618	2595	1785	2593	1873	
		23					3156	1417	3153	1597	3145	1774	3141	1862	
	5	5	15	978	974	1064	1064	1188	1188	1344	1344	1498	1498	1573	1573
			17	1417	984	1412	1161	1431	1345	1472	1472	1534	1534	1586	1586
			19	1912	987	1908	1166	1906	1345	1900	1520	1898	1696	1902	1787
			21			2428	1161	2424	1341	2420	1518	2412	1693	2411	1781
			23					2978	1329	2974	1508	2967	1685	2963	1773
	7	7	15	762	762	917	917	1083	1083	1247	1247	1407	1407	1485	1485
			17	1069	812	1132	1014	1213	1213	1307	1307	1417	1417	1488	1488
			19	1643	857	1643	1037	1638	1213	1654	1397	1692	1587	1714	1682
			21			2203	1053	2199	1231	2195	1408	2191	1584	2191	1672
			23					2769	1229	2765	1408	2757	1583	2757	1673
9	3	15	862	862	956	956	1109	1109	1261	1261	1411	1411	1485	1485	
		17	1268	910	1262	1085	1275	1266	1314	1314	1415	1415	1488	1488	
		19	1748	907	1744	1086	1740	1263	1734	1437	1730	1612	1733	1701	
		21			2252	1077	2246	1254	2242	1431	2238	1608	2234	1693	
		23					2796	1243	2790	1421	2784	1597	2781	1685	
	5	5	15	709	709	865	865	1027	1027	1186	1186	1341	1341	1417	1417
			17	996	778	1039	970	1110	1110	1207	1207	1344	1344	1420	1420
			19	1521	800	1518	978	1515	1155	1524	1335	1553	1519	1575	1575
			21			2044	980	2040	1157	2037	1333	2033	1509	2031	1595
			23					2598	1151	2595	1329	2587	1504	2587	1593
	7	7	15	536	536	739	739	917	917	1086	1086	1249	1249	1328	1328
			17	645	599	800	800	944	944	1088	1088	1251	1251	1330	1330
			19	1159	637	1167	817	1213	1010	1284	1211	1368	1368	1415	1415
			21			1775	859	1771	1035	1771	1212	1775	1390	1787	1482
			23					2361	1045	2357	1222	2353	1398	2349	1485

Tw [°C] = Inlet water temperature
Ta W.B. [°C] = Inlet air temperature with wet bulb
Ta D.B. [°C] = Inlet air temperature with dry bulb
Pc [W] = Total cooling capacity
Ps [w] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

The cooling outputs of the table are at maximum speed (maximum air flow).
 To determine the cooling capacity based on the speed (air flow), the values shown in the table must be multiplied by the following factors (k):

NB: The values in bold type indicate the nominal value.
 If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.
 In this case, only sensible power values are considered.

FCL132 / FCL134	Qv [m³/h]	k (Pc)	k (Ps)
Speed V3	600	1	1
Speed V2	410	0.77	0.82
Speed V1	300	0.61	0.65

COOLING CAPACITY - FCLI 32 / FCLI34

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.	
11	3	15	640	640	799	799	954	954	1105	1105	1256	1256	1330	1330
		17	873	719	905	905	973	973	1107	1107	1258	1258	1333	1333
		19	1358	726	1355	902	1352	1077	1353	1255	1382	1382	1398	1398
		21			1866	899	1862	1076	1858	1251	1854	1426	1853	1512
		23					2411	1068	2405	1244	2401	1420	2397	1506
	5	15	522	522	700	700	866	866	1027	1027	1183	1183	1261	1261
		17	601	580	729	729	868	868	1028	1028	1186	1186	1264	1264
		19	1072	599	1075	776	1107	963	1168	1158	1249	1249	1294	1294
		21			1627	794	1624	970	1624	1146	1624	1322	1632	1413
		23					2187	970	2187	1148	2179	1322	2179	1410
	7	15	306	306	550	550	745	745	921	921	1088	1088	1170	1170
		17	306	306	552	552	747	747	924	924	1091	1091	1171	1171
19		506	357	699	603	845	827	979	979	1111	1111	1179	1179	
21				1265	642	1268	819	1306	1007	1366	1203	1401	1301	
23						1910	854	1908	1030	1906	1205	1902	1291	
13	3	15	476	476	639	639	796	796	949	949	1100	1100	1175	1175
		17	514	514	641	641	798	798	951	951	1103	1103	1178	1178
		19	936	540	933	714	956	896	1012	1012	1106	1106	1181	1181
		21			1453	720	1450	896	1447	1069	1445	1242	1451	1332
		23					1997	891	1995	1067	1989	1240	1987	1327
	5	15	324	324	528	528	702	702	866	866	1026	1026	1105	1105
		17	325	325	528	528	703	703	868	868	1028	1028	1107	1107
		19	509	359	638	577	762	762	886	886	1030	1030	1109	1109
		21			1159	599	1159	774	1183	956	1235	1147	1265	1242
		23					1744	787	1740	961	1736	1134	1736	1222
	7	15	154	154	308	308	562	562	751	751	925	925	1008	1008
		17	154	154	308	308	562	562	754	754	926	926	1009	1009
19		159	159	310	310	569	569	755	755	928	928	1012	1012	
21				588	374	754	603	892	821	1020	1020	1080	1080	
23						1377	644	1377	818	1404	1002	1426	1096	
15	3	15	304	304	477	477	638	638	794	794	945	945	1022	1022
		17	305	305	477	477	639	639	796	796	948	948	1023	1023
		19	445	334	538	533	650	650	797	797	949	949	1026	1026
		21			1001	536	998	708	1015	887	1060	1060	1091	1091
		23					1555	713	1553	887	1548	1058	1547	1144
	5	15	124	124	335	335	531	531	703	703	866	866	947	947
		17	124	124	335	335	532	532	705	705	868	868	948	948
		19	125	125	337	337	533	533	706	706	871	871	949	949
		21			558	363	677	574	794	781	911	911	971	971
		23					1246	595	1246	768	1261	946	1280	1039
	7	15	25	25	154	154	321	321	570	570	756	756	843	843
		17	25	25	154	154	321	321	571	571	758	758	845	845
19		25	25	154	154	322	322	573	573	759	759	846	846	
21				160	160	332	332	589	589	766	766	849	849	
23						661	383	813	603	944	815	1007	920	

Tw [°C] = Inlet water temperature

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

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

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

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

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

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

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

In this case, only sensible power values are considered.

FCLI 32 / FCLI34	Qv [m³/h]	k (Pc)	k (Ps)
Speed V3	600	1	1
Speed V2	410	0.77	0.82
Speed V1	300	0.61	0.65

COOLING CAPACITY - FCL1 42

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.		
5	3	15	3173	2662	3159	3029	3173	3173	3272	3272	3580	3580	3736	3736	
		17	4094	2648	4086	3022	4078	3391	4069	3758	4057	4057	4061	4061	
		19	5089	2627	5077	3002	5065	3373	5052	3742	5040	4105	5032	4287	
		21			6143	2973	6126	3346	6110	3714	6093	4082	6089	4265	
		23					7270	3308	7262	3685	7237	4051	7229	4235	
	5	5	15	2737	2420	2800	2800	2918	2918	3122	3122	3436	3436	3592	3592
			17	3711	2441	3703	2813	3691	3180	3707	3556	3748	3748	3790	3790
			19	4719	2430	4711	2805	4703	3177	4695	3548	4686	3913	4670	4091
			21			5789	2786	5772	3158	5764	3530	5752	3898	5748	4082
			23					6932	3131	6916	3502	6900	3871	6891	4055
	7	7	15	2194	2108	2398	2398	2622	2622	2924	2924	3252	3252	3416	3416
			17	3156	2152	3150	2523	3201	2911	3303	3303	3439	3439	3529	3529
19			4275	2201	4267	2575	4259	2946	4242	3310	4250	3681	4259	3870	
21					5377	2576	5361	2946	5353	3316	5345	3686	5336	3866	
23							6538	2931	6529	3305	6513	3674	6505	3857	
7	3	15	2463	2273	2497	2497	2633	2633	2947	2947	3258	3258	3411	3411	
		17	3391	2273	3382	2643	3371	3010	3368	3368	3428	3428	3473	3473	
		19	4382	2256	4374	2631	4365	3002	4349	3365	4345	3731	4333	3908	
		21			5435	2607	5419	2977	4349	3365	5394	3712	5390	3895	
		23					6562	2946	6554	3320	6538	3688	6529	3871	
	5	5	15	2033	2025	2211	2211	2469	2469	2794	2794	3114	3114	3269	3269
			17	2947	2046	2935	2413	2975	2795	3060	3060	3190	3190	3297	3297
			19	3975	2052	3966	2425	3962	2796	3950	3160	3946	3526	3954	3714
			21			5048	2414	5040	2787	5032	3156	5015	3520	5011	3702
			23					6192	2763	6184	3135	6167	3503	6159	3685
	7	7	15	1584	1584	1906	1906	2251	2251	2593	2593	2924	2924	3088	3088
			17	2223	1689	2353	2109	2523	2523	2718	2718	2947	2947	3094	3094
			19	3416	1782	3416	2157	3405	2521	3439	2905	3518	3299	3563	3497
			21			4579	2189	4571	2560	4563	2927	4555	3293	4555	3477
			23					5756	2556	5748	2927	5731	3292	5731	3478
9	3	15	1793	1793	1988	1988	2306	2306	2622	2622	2933	2933	3088	3088	
		17	2636	1891	2624	2256	2650	2631	2732	2732	2941	2941	3094	3094	
		19	3633	1886	3625	2258	3617	2625	3606	2988	3597	3351	3603	3537	
		21			4682	2239	4670	2608	4662	2975	4653	3342	4645	3520	
		23					5813	2585	5801	2954	5789	3321	5781	3503	
	5	5	15	1473	1473	1799	1799	2135	2135	2466	2466	2788	2788	2947	2947
			17	2070	1617	2161	2016	2308	2308	2508	2508	2794	2794	2952	2952
			19	3162	1664	3156	2033	3150	2401	3167	2775	3230	3159	3275	3275
			21			4250	2037	4242	2406	4234	2772	4226	3137	4222	3317
			23					5402	2394	5394	2763	5377	3127	5377	3313
	7	7	15	1114	1114	1536	1536	1906	1906	2257	2257	2596	2596	2760	2760
			17	1340	1244	1663	1663	1963	1963	2262	2262	2602	2602	2766	2766
			19	2409	1325	2426	1699	2523	2101	2670	2519	2845	2845	2941	2941
			21			3691	1785	3683	2152	3683	2519	3691	2889	3716	3082
			23					4908	2173	4900	2541	4892	2907	4884	3087

Tw [°C] = Inlet water temperature

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

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

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

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

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

In this case, only sensible power values are considered.

COOLING CAPACITY CORRECTION FACTORS

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

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

FCL1 42	Qv [m³/h]	k (Pc)	k (Ps)
Speed V4	700	1	1
Speed V3	530	0.82	0.75
Speed V2	360	0.64	0.58
Speed V1	260	0.50	0.44

COOLING CAPACITY - FCL1 42

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.	
11	3	15	1330	1330	1661	1661	1982	1982	2296	2296	2610	2610	2766	2766
		17	1815	1495	1881	1881	2022	2022	2302	2302	2616	2616	2771	2771
		19	2822	1508	2817	1876	2811	2240	2814	2608	2873	2873	2907	2907
		21			3880	1870	3872	2237	3864	2601	3855	2964	3851	3143
		23					5011	2219	4999	2585	4991	2952	4983	3132
	5	15	1086	1086	1455	1455	1801	1801	2135	2135	2460	2460	2622	2622
		17	1250	1205	1516	1516	1804	1804	2138	2138	2466	2466	2627	2627
		19	2228	1245	2234	1614	2302	2002	2429	2407	2596	2596	2689	2689
		21			3382	1651	3377	2017	3377	2383	3377	2748	3394	2937
		23					4546	2017	4546	2387	4530	2747	4530	2931
	7	15	636	636	1142	1142	1550	1550	1915	1915	2262	2262	2432	2432
		17	637	637	1148	1148	1552	1552	1920	1920	2268	2268	2435	2435
		19	1052	743	1454	1253	1756	1720	2036	2036	2310	2310	2452	2452
		21			2630	1335	2636	1703	2715	2094	2839	2501	2913	2704
		23					3971	1776	3966	2142	3962	2506	3954	2684
13	3	15	990	990	1329	1329	1656	1656	1974	1974	2288	2288	2443	2443
		17	1069	1069	1332	1332	1660	1660	1977	1977	2293	2293	2449	2449
		19	1946	1123	1940	1485	1988	1864	2104	2104	2299	2299	2455	2455
		21			3020	1497	3015	1862	3009	2222	3003	2582	3017	2768
		23					4152	1852	4147	2218	4135	2578	4131	2758
	5	15	673	673	1097	1097	1459	1459	1801	1801	2132	2132	2296	2296
		17	676	676	1099	1099	1462	1462	1804	1804	2138	2138	2302	2302
		19	1058	747	1326	1200	1584	1584	1841	1841	2141	2141	2305	2305
		21			2409	1245	2409	1610	2460	1987	2568	2384	2630	2582
		23					3625	1637	3617	1999	3609	2358	3609	2540
	7	15	321	321	641	641	1168	1168	1561	1561	1923	1923	2096	2096
		17	321	321	641	641	1168	1168	1567	1567	1926	1926	2098	2098
		19	331	331	644	644	1182	1182	1569	1569	1929	1929	2104	2104
		21			1222	777	1567	1254	1855	1708	2121	2121	2245	2245
		23					2862	1339	2862	1701	2918	2083	2964	2279
15	3	15	633	633	991	991	1326	1326	1650	1650	1965	1965	2124	2124
		17	634	634	993	993	1329	1329	1654	1654	1971	1971	2127	2127
		19	925	693	1118	1109	1352	1352	1657	1657	1974	1974	2132	2132
		21			2081	1114	2076	1471	2110	1844	2203	2203	2268	2268
		23					3232	1482	3230	1844	3218	2200	3215	2379
	5	15	257	257	695	695	1104	1104	1462	1462	1801	1801	1968	1968
		17	258	258	695	695	1106	1106	1465	1465	1804	1804	1971	1971
		19	259	259	701	701	1108	1108	1468	1468	1810	1810	1974	1974
		21			1159	754	1408	1193	1651	1624	1895	1895	2019	2019
		23					2590	1237	2590	1596	2622	1967	2661	2160
	7	15	51	51	321	321	667	667	1185	1185	1572	1572	1753	1753
		17	51	51	321	321	667	667	1188	1188	1575	1575	1756	1756
		19	51	51	321	321	670	670	1190	1190	1578	1578	1759	1759
		21			333	333	690	690	1224	1224	1592	1592	1765	1765
		23					1374	795	1691	1253	1963	1695	2093	1912

Tw [°C] = Inlet water temperature

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

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

Pc [W] = Total cooling capacity

Ps [w] = Sensible cooling capacity

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

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

In this case, only sensible power values are considered.

COOLING CAPACITY CORRECTION FACTORS

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

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

FCL1 42	Qv [m³/h]	k (Pc)	k (Ps)
Speed V4	700	1	1
Speed V3	530	0.82	0.75
Speed V2	360	0.64	0.58
Speed V1	260	0.50	0.44

COOLING CAPACITY - FCL1 44

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.		
5	3	15	2932	2460	2919	2799	2932	2932	3024	3024	3308	3308	3452	3452	
		17	3783	2447	3775	2793	3768	3133	3760	3473	3749	3749	3753	3753	
		19	4703	2427	4692	2774	4680	3117	4669	3458	4657	3793	4650	3962	
		21			5676	2748	5661	3092	5646	3432	5630	3772	5627	3942	
		23					6718	3057	6710	3405	6687	3743	6680	3913	
	5	5	15	2530	2236	2587	2587	2697	2697	2885	2885	3175	3175	3319	3319
			17	3430	2256	3422	2600	3411	2939	3426	3286	3464	3464	3502	3502
			19	4361	2245	4353	2592	4346	2936	4338	3278	4330	3615	4315	3780
			21			5349	2575	5334	2918	5326	3261	5315	3602	5311	3772
			23					6406	2894	6391	3236	6375	3577	6368	3747
	7	7	15	2028	1948	2216	2216	2422	2422	2702	2702	3005	3005	3157	3157
			17	2916	1989	2911	2331	2958	2690	3052	3052	3178	3178	3261	3261
19			3950	2034	3943	2380	3935	2722	3920	3059	3927	3402	3935	3576	
21					4969	2381	4954	2722	4946	3064	4939	3406	4931	3573	
23							6041	2709	6033	3054	6018	3395	6011	3564	
7	3	15	2276	2101	2307	2307	2433	2433	2723	2723	3010	3010	3152	3152	
		17	3133	2100	3125	2443	3115	2781	3112	3112	3167	3167	3209	3209	
		19	4049	2085	4042	2431	4034	2774	4019	3109	4015	3447	4004	3612	
		21			5022	2409	5007	2751	4019	3109	4984	3430	4980	3599	
		23					6064	2723	6056	3068	6041	3408	6033	3577	
	5	5	15	1879	1872	2043	2043	2281	2281	2582	2582	2877	2877	3021	3021
			17	2723	1891	2713	2230	2749	2583	2828	2828	2948	2948	3047	3047
			19	3673	1896	3665	2240	3661	2583	3650	2920	3646	3258	3654	3432
			21			4665	2231	4657	2576	4650	2917	4635	3252	4631	3421
			23					5722	2553	5714	2897	5699	3237	5691	3405
	7	7	15	1463	1463	1761	1761	2080	2080	2396	2396	2702	2702	2854	2854
			17	2054	1561	2174	1949	2331	2331	2511	2511	2723	2723	2859	2859
			19	3157	1647	3157	1993	3146	2330	3178	2684	3251	3049	3293	3232
			21			4232	2023	4224	2366	4216	2705	4209	3043	4209	3213
			23					5319	2362	5311	2704	5296	3042	5296	3214
9	3	15	1657	1657	1837	1837	2131	2131	2422	2422	2710	2710	2854	2854	
		17	2436	1747	2425	2085	2449	2431	2524	2524	2718	2718	2859	2859	
		19	3357	1743	3350	2086	3342	2425	3332	2761	3324	3097	3329	3268	
		21			4327	2069	4315	2410	4308	2749	4300	3088	4292	3253	
		23					5372	2388	5361	2729	5349	3069	5342	3237	
	5	5	15	1361	1361	1662	1662	1973	1973	2279	2279	2577	2577	2723	2723
			17	1913	1494	1996	1863	2132	2132	2318	2318	2582	2582	2728	2728
			19	2922	1538	2916	1879	2911	2218	2927	2564	2984	2919	3026	3026
			21			3927	1882	3920	2224	3912	2561	3905	2898	3901	3065
			23					4992	2212	4984	2553	4969	2890	4969	3061
	7	7	15	1030	1030	1419	1419	1761	1761	2085	2085	2399	2399	2550	2550
			17	1239	1150	1537	1537	1814	1814	2091	2091	2404	2404	2556	2556
			19	2226	1224	2242	1570	2331	1941	2467	2327	2629	2629	2718	2718
			21			3411	1650	3403	1988	3403	2328	3411	2670	3433	2848
			23					4536	2008	4528	2348	4520	2686	4513	2852

Tw [°C] = Inlet water temperature
Ta W.B. [°C] = Inlet air temperature with wet bulb
Ta D.B. [°C] = Inlet air temperature with dry bulb
Pc [W] = Total cooling capacity
Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

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

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

NB: The values in bold type indicate the nominal value.
 If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.
 In this case, only sensible power values are considered.

FCL1 44	Qv [m³/h]	k (Pc)	k (Ps)
Speed V4	700	1	1
Speed V3	530	0.82	0.75
Speed V2	360	0.64	0.58
Speed V1	260	0.50	0.43

COOLING CAPACITY - FCL1 44

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.	
11	3	15	1229	1229	1535	1535	1832	1832	2122	2122	2412	2412	2556	2556
		17	1677	1382	1738	1738	1868	1868	2127	2127	2417	2417	2561	2561
		19	2608	1394	2603	1734	2598	2070	2600	2410	2655	2655	2686	2686
		21			3585	1728	3578	2067	3570	2403	3563	2738	3559	2904
		23					4631	2051	4619	2389	4612	2728	4604	2894
	5	15	1003	1003	1344	1344	1665	1665	1973	1973	2273	2273	2422	2422
		17	1155	1113	1401	1401	1667	1667	1976	1976	2279	2279	2428	2428
		19	2059	1151	2064	1492	2127	1850	2245	2224	2399	2399	2485	2485
		21			3125	1525	3120	1864	3120	2202	3120	2539	3136	2714
		23					4201	1864	4201	2206	4186	2539	4186	2708
	7	15	587	587	1056	1056	1432	1432	1769	1769	2091	2091	2247	2247
		17	589	589	1061	1061	1435	1435	1774	1774	2096	2096	2250	2250
		19	972	687	1343	1158	1623	1589	1881	1881	2135	2135	2266	2266
		21			2430	1233	2436	1573	2509	1935	2624	2311	2692	2499
		23					3669	1641	3665	1979	3661	2316	3654	2480
13	3	15	915	915	1228	1228	1530	1530	1824	1824	2114	2114	2258	2258
		17	988	988	1231	1231	1534	1534	1827	1827	2119	2119	2263	2263
		19	1798	1038	1793	1372	1837	1722	1944	1944	2125	2125	2268	2268
		21			2791	1383	2786	1720	2780	2053	2775	2386	2788	2558
		23					3836	1711	3832	2049	3821	2382	3817	2549
	5	15	622	622	1014	1014	1348	1348	1665	1665	1970	1970	2122	2122
		17	624	624	1015	1015	1351	1351	1667	1667	1976	1976	2127	2127
		19	977	691	1226	1109	1463	1463	1701	1701	1978	1978	2130	2130
		21			2226	1151	2226	1487	2273	1836	2373	2203	2430	2386
		23					3350	1513	3342	1847	3334	2179	3334	2347
	7	15	297	297	593	593	1079	1079	1442	1442	1777	1777	1936	1936
		17	297	297	593	593	1079	1079	1448	1448	1780	1780	1939	1939
		19	306	306	595	595	1092	1092	1450	1450	1782	1782	1944	1944
		21			1129	718	1448	1159	1714	1578	1960	1960	2075	2075
		23					2645	1238	2645	1572	2697	1925	2739	2106
15	3	15	585	585	916	916	1226	1226	1525	1525	1816	1816	1962	1962
		17	586	586	917	917	1228	1228	1529	1529	1821	1821	1965	1965
		19	854	641	1033	1025	1249	1249	1531	1531	1824	1824	1970	1970
		21			1923	1029	1918	1360	1949	1704	2036	2036	2096	2096
		23					2987	1370	2984	1704	2974	2033	2971	2198
	5	15	237	237	643	643	1020	1020	1351	1351	1665	1665	1819	1819
		17	238	238	643	643	1022	1022	1354	1354	1667	1667	1821	1821
		19	239	239	648	648	1024	1024	1356	1356	1672	1672	1824	1824
		21			1071	697	1301	1102	1526	1501	1751	1751	1866	1866
		23					2394	1143	2394	1475	2422	1817	2459	1996
	7	15	47	47	297	297	616	616	1095	1095	1453	1453	1620	1620
		17	47	47	297	297	616	616	1097	1097	1455	1455	1623	1623
		19	47	47	297	297	619	619	1100	1100	1458	1458	1625	1625
		21			308	308	637	637	1131	1131	1471	1471	1631	1631
		23					1270	735	1563	1158	1814	1566	1934	1767

Tw [°C] = Inlet water temperature

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

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

Pc [W] = Total cooling capacity

Ps [w] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

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

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

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

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

In this case, only sensible power values are considered.

FCL1 44	Qv [m³/h]	k (Pc)	k (Ps)
Speed V4	700	1	1
Speed V3	530	0.82	0.75
Speed V2	360	0.64	0.58
Speed V1	260	0.50	0.43

COOLING CAPACITY - FCL1 62

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.		
5	3	15	4000	3210	3983	3652	4000	4000	4125	4125	4514	4514	4710	4710	
		17	5162	3193	5151	3644	5141	4089	5130	4531	5115	4970	5120	5120	
		19	6417	3167	6401	3619	6386	4067	6370	4512	6354	4950	6344	5169	
		21			7744	3585	7724	4034	7703	4478	7682	4921	7677	5143	
		23					9165	3989	9155	4443	9124	4884	9114	5106	
	5	5	15	3451	2917	3530	3392	3680	3680	3936	3936	4332	4332	4528	4528
			17	4679	2943	4669	3392	4653	3834	4674	4288	4726	4726	4778	4778
			19	5950	2929	5939	3382	5929	3831	5919	4278	5908	4717	5888	4932
			21			7298	3359	7278	3807	7267	4256	7252	4700	7246	4921
			23					8740	3775	8719	4222	8699	4668	8688	4889
	7	7	15	2767	2541	3023	3023	3305	3305	3687	3687	4100	4100	4307	4307
			17	3979	2595	3972	3042	4036	3510	4164	3998	4336	4336	4450	4450
19			5390	2654	5379	3105	5369	3552	5348	3991	5359	4439	5369	4665	
21					6780	3106	6759	3552	6749	3998	6738	4444	6728	4661	
23							8242	3534	8232	3985	8211	4429	8201	4650	
7	3	15	3105	2741	3148	3148	3319	3319	3715	3715	4107	4107	4300	4300	
		17	4275	2740	4264	3187	4250	3629	4246	4070	4321	4321	4378	4378	
		19	5525	2721	5514	3172	5504	3619	5483	4057	5478	4498	5462	4712	
		21			6852	3143	6832	3589	5483	4057	6800	4475	6795	4696	
		23					8273	3552	8263	4003	8242	4447	8232	4667	
	5	5	15	2563	2442	2788	2788	3113	3113	3523	3523	3926	3926	4122	4122
			17	3715	2467	3701	2909	3751	3370	3858	3845	4022	4022	4157	4157
			19	5011	2474	5001	2923	4996	3371	4980	3810	4975	4251	4985	4478
			21			6365	2911	6354	3361	6344	3806	6323	4244	6318	4464
			23					7807	3332	7796	3780	7775	4223	7765	4443
	7	7	15	1997	1997	2403	2403	2838	2838	3269	3269	3687	3687	3893	3893
			17	2802	2036	2966	2543	3180	3057	3426	3426	3715	3715	3901	3901
			19	4307	2149	4307	2601	4293	3040	4336	3502	4435	3978	4492	4217
			21			5774	2639	5763	3087	5753	3529	5742	3970	5742	4192
			23					7257	3081	7246	3529	7226	3969	7226	4193
9	3	15	2260	2260	2506	2506	2908	2908	3305	3305	3697	3697	3893	3893	
		17	3323	2280	3309	2720	3341	3173	3444	3444	3708	3708	3901	3901	
		19	4581	2275	4570	2722	4560	3165	4546	3602	4535	4040	4542	4264	
		21			5903	2699	5888	3144	5877	3587	5867	4030	5856	4244	
		23					7329	3116	7314	3561	7298	4004	7288	4223	
	5	5	15	1857	1857	2268	2268	2692	2692	3109	3109	3516	3516	3715	3715
			17	2610	1949	2724	2430	2909	2909	3163	3163	3523	3523	3722	3722
			19	3986	2006	3979	2452	3972	2894	3993	3345	4072	3808	4129	4044
			21			5359	2456	5348	2901	5338	3342	5327	3782	5322	3999
			23					6811	2886	6800	3331	6780	3770	6780	3994
	7	7	15	1405	1405	1936	1936	2403	2403	2845	2845	3273	3273	3480	3480
			17	1690	1500	2096	2080	2474	2474	2852	2852	3280	3280	3487	3487
			19	3038	1597	3059	2049	3180	2533	3366	3037	3587	3540	3708	3708
			21			4653	2152	4643	2594	4643	3037	4653	3484	4684	3716
			23					6188	2620	6178	3063	6168	3505	6157	3722

Tw [°C] = Inlet water temperature
 Ta W.B. [°C] = Inlet air temperature with wet bulb
 Ta D.B. [°C] = Inlet air temperature with dry bulb
 Pc [W] = Total cooling capacity
 Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

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

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

NB: The values in bold type indicate the nominal value.
 If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.
 In this case, only sensible power values are considered.

FCL1 62	Qv [m³/h]	k (Pc)	k (Ps)
Speed V4	880	1	1
Speed V3	660	0.79	0.74
Speed V2	500	0.64	0.60
Speed V1	380	0.53	0.49

COOLING CAPACITY - FCLI 62

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.	
11	3	15	1677	1677	2095	2095	2499	2499	2895	2895	3291	3291	3487	3487
		17	2288	1803	2371	2270	2549	2549	2902	2902	3298	3298	3494	3494
		19	3558	1819	3551	2262	3544	2700	3548	3145	3622	3601	3665	3665
		21			4892	2254	4881	2697	4871	3136	4861	3573	4856	3789
		23					6318	2676	6303	3117	6292	3559	6282	3776
	5	15	1369	1369	1834	1834	2271	2271	2692	2692	3102	3102	3305	3305
		17	1576	1453	1911	1911	2275	2275	2695	2695	3109	3109	3312	3312
		19	2810	1502	2817	1946	2902	2414	3063	2902	3273	3273	3391	3391
		21			4264	1990	4257	2432	4257	2873	4257	3313	4279	3541
		23					5732	2432	5732	2878	5711	3313	5711	3534
	7	15	801	801	1440	1440	1954	1954	2414	2414	2852	2852	3066	3066
		17	803	803	1447	1447	1957	1957	2421	2421	2859	2859	3070	3070
19		1326	896	1833	1511	2214	2073	2567	2567	2913	2913	3091	3091	
21				3316	1609	3323	2053	3423	2525	3580	3016	3672	3261	
23						5006	2142	5001	2582	4996	3021	4985	3236	
13	3	15	1248	1248	1676	1676	2087	2087	2489	2489	2884	2884	3080	3080
		17	1348	1348	1679	1679	2093	2093	2492	2492	2892	2892	3088	3088
		19	2453	1355	2446	1790	2506	2247	2653	2653	2899	2899	3095	3095
		21			3808	1805	3801	2245	3794	2679	3786	3113	3804	3338
		23					5234	2232	5229	2674	5213	3109	5208	3325
	5	15	848	848	1383	1383	1840	1840	2271	2271	2688	2688	2895	2895
		17	852	852	1385	1385	1843	1843	2275	2275	2695	2695	2902	2902
		19	1333	901	1672	1447	1997	1979	2321	2321	2699	2699	2906	2906
		21			3038	1501	3038	1941	3102	2396	3237	2875	3316	3113
		23					4570	1974	4560	2410	4550	2844	4550	3062
	7	15	405	405	809	809	1472	1472	1968	1968	2424	2424	2642	2642
		17	405	405	809	809	1472	1472	1975	1975	2428	2428	2645	2645
19		417	417	812	812	1490	1490	1979	1979	2432	2432	2653	2653	
21				1540	937	1975	1512	2339	2059	2674	2593	2831	2831	
23						3608	1615	3608	2051	3680	2512	3737	2748	
15	3	15	798	798	1250	1250	1672	1672	2080	2080	2478	2478	2678	2678
		17	800	800	1251	1251	1676	1676	2086	2086	2485	2485	2681	2681
		19	1166	836	1410	1337	1704	1704	2089	2089	2489	2489	2688	2688
		21			2624	1343	2617	1774	2660	2223	2777	2688	2859	2859
		23					4075	1787	4072	2223	4057	2653	4054	2869
	5	15	324	324	877	877	1392	1392	1843	1843	2271	2271	2481	2481
		17	325	325	877	877	1394	1394	1847	1847	2275	2275	2485	2485
		19	326	326	884	884	1398	1398	1850	1850	2282	2282	2489	2489
		21			1462	910	1775	1438	2082	1959	2389	2389	2546	2546
		23					3266	1492	3266	1924	3305	2371	3355	2604
	7	15	64	64	405	405	841	841	1494	1494	1982	1982	2210	2210
		17	64	64	405	405	841	841	1497	1497	1986	1986	2214	2214
19		64	64	405	405	844	844	1501	1501	1989	1989	2218	2218	
21				420	414	870	870	1544	1544	2007	2007	2225	2225	
23						1733	959	2132	1511	2474	2043	2638	2305	

Tw [°C] = Inlet water temperature

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

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

Pc [W] = Total cooling capacity

Ps [w] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

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

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

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

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

In this case, only sensible power values are considered.

FCLI 62	Qv [m³/h]	k (Pc)	k (Ps)
Speed V4	880	1	1
Speed V3	660	0.79	0.74
Speed V2	500	0.64	0.60
Speed V1	380	0.53	0.49

COOLING CAPACITY - FCL1 64

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.		
5	3	15	3703	2974	3687	3383	3703	3703	3819	3819	4179	4179	4360	4360	
		17	4778	2958	4768	3376	4759	3788	4749	4198	4735	4605	4740	4740	
		19	5940	2935	5925	3353	5911	3768	5897	4180	5882	4586	5873	4789	
		21			7169	3322	7150	3738	7131	4149	7111	4559	7107	4765	
		23					8484	3696	8475	4116	8446	4525	8436	4731	
	5	5	15	3195	2703	3268	3142	3406	3406	3644	3644	4010	4010	4192	4192
			17	4332	2727	4322	3143	4308	3553	4327	3973	4375	4375	4423	4423
			19	5508	2714	5498	3134	5489	3549	5479	3963	5469	4371	5450	4570
			21			6756	3112	6737	3527	6727	3943	6713	4355	6708	4560
			23					8091	3498	8072	3912	8052	4325	8043	4530
	7	7	15	2561	2354	2799	2799	3060	3060	3413	3413	3796	3796	3987	3987
			17	3683	2404	3677	2818	3736	3252	3855	3704	4013	4013	4119	4119
19			4989	2459	4980	2877	4970	3291	4951	3698	4960	4113	4970	4323	
21					6276	2878	6257	3291	6247	3705	6238	4118	6228	4319	
23							7630	3274	7620	3692	7601	4104	7591	4308	
7	3	15	2875	2539	2914	2914	3073	3073	3439	3439	3802	3802	3980	3980	
		17	3957	2539	3947	2953	3934	3362	3931	3771	4000	4000	4053	4053	
		19	5114	2521	5105	2939	5095	3353	5076	3758	5071	4167	5056	4366	
		21			6343	2912	6324	3325	5076	3758	6295	4146	6290	4351	
		23					7659	3291	7649	3709	7630	4120	7620	4324	
	5	5	15	2373	2262	2581	2581	2881	2881	3261	3261	3634	3634	3815	3815
			17	3439	2285	3426	2695	3472	3123	3571	3562	3723	3723	3848	3848
			19	4639	2292	4629	2709	4624	3123	4610	3530	4605	3938	4615	4149
			21			5892	2697	5882	3114	5873	3526	5853	3932	5849	4135
			23					7227	3087	7217	3503	7198	3913	7188	4117
	7	7	15	1848	1848	2224	2224	2627	2627	3027	3027	3413	3413	3604	3604
			17	2594	1887	2746	2356	2944	2832	3172	3172	3439	3439	3611	3611
			19	3987	1991	3987	2409	3974	2817	4013	3245	4106	3686	4159	3907
			21			5345	2445	5335	2860	5325	3270	5316	3679	5316	3884
			23					6718	2855	6708	3269	6689	3677	6689	3885
9	3	15	2092	2092	2320	2320	2692	2692	3060	3060	3423	3423	3604	3604	
		17	3076	2112	3063	2520	3093	2939	3188	3188	3433	3433	3611	3611	
		19	4240	2107	4231	2522	4221	2932	4208	3338	4198	3743	4205	3951	
		21			5465	2501	5450	2913	5441	3324	5431	3734	5421	3932	
		23					6785	2887	6770	3299	6756	3710	6746	3913	
	5	5	15	1719	1719	2099	2099	2492	2492	2878	2878	3254	3254	3439	3439
			17	2416	1806	2522	2252	2693	2693	2928	2928	3261	3261	3446	3446
			19	3690	1859	3683	2272	3677	2682	3697	3100	3769	3528	3822	3747
			21			4960	2275	4951	2688	4941	3096	4932	3504	4927	3705
			23					6305	2674	6295	3086	6276	3493	6276	3701
	7	7	15	1300	1300	1792	1792	2224	2224	2634	2634	3030	3030	3221	3221
			17	1564	1390	1941	1927	2291	2291	2640	2640	3036	3036	3228	3228
			19	2812	1480	2832	1898	2944	2347	3116	2814	3320	3280	3433	3433
			21			4308	1994	4298	2404	4298	2814	4308	3228	4336	3443
			23					5729	2428	5719	2838	5709	3248	5700	3448

Tw [°C] = Inlet water temperature

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

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

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

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

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

In this case, only sensible power values are considered.

COOLING CAPACITY CORRECTION FACTORS

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

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

FCL1 64	Qv [m³/h]	k (Pc)	k (Ps)
Speed V4	880	1	1
Speed V3	660	0.79	0.74
Speed V2	500	0.64	0.59
Speed V1	380	0.53	0.49

COOLING CAPACITY - FCLI 64

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.	
11	3	15	1553	1553	1939	1939	2314	2314	2680	2680	3046	3046	3228	3228
		17	2118	1671	2195	2103	2360	2360	2687	2687	3053	3053	3235	3235
		19	3294	1685	3287	2096	3281	2502	3284	2914	3353	3336	3393	3393
		21			4528	2088	4519	2499	4509	2905	4500	3311	4495	3511
		23					5849	2479	5834	2888	5825	3297	5815	3499
	5	15	1267	1267	1698	1698	2102	2102	2492	2492	2871	2871	3060	3060
		17	1459	1346	1769	1769	2106	2106	2495	2495	2878	2878	3066	3066
		19	2601	1391	2607	1803	2687	2237	2835	2689	3030	3030	3139	3139
		21			3947	1844	3941	2254	3941	2662	3941	3070	3961	3281
		23					5306	2253	5306	2666	5287	3069	5287	3274
	7	15	742	742	1333	1333	1809	1809	2234	2234	2640	2640	2838	2838
		17	744	744	1340	1340	1812	1812	2241	2241	2647	2647	2842	2842
		19	1228	830	1696	1400	2050	1921	2376	2376	2696	2696	2862	2862
		21			3069	1491	3076	1902	3168	2340	3314	2794	3400	3021
		23					4634	1984	4629	2392	4624	2799	4615	2998
13	3	15	1155	1155	1551	1551	1932	1932	2304	2304	2670	2670	2852	2852
		17	1247	1247	1554	1554	1937	1937	2307	2307	2677	2677	2858	2858
		19	2271	1255	2264	1659	2320	2082	2456	2456	2683	2683	2865	2865
		21			3525	1672	3518	2080	3512	2482	3505	2884	3522	3093
		23					4845	2068	4840	2478	4826	2880	4821	3081
	5	15	785	785	1280	1280	1703	1703	2102	2102	2489	2489	2680	2680
		17	788	788	1282	1282	1706	1706	2106	2106	2495	2495	2687	2687
		19	1234	835	1548	1341	1848	1833	2149	2149	2498	2498	2690	2690
		21			2812	1391	2812	1798	2871	2220	2997	2663	3069	2884
		23					4231	1829	4221	2233	4212	2635	4212	2837
	7	15	375	375	749	749	1363	1363	1822	1822	2244	2244	2446	2446
		17	375	375	749	749	1363	1363	1828	1828	2248	2248	2449	2449
		19	386	386	752	752	1380	1380	1832	1832	2251	2251	2456	2456
		21			1426	868	1828	1401	2165	1907	2475	2402	2621	2621
		23					3340	1496	3340	1900	3406	2327	3459	2546
15	3	15	739	739	1157	1157	1548	1548	1926	1926	2294	2294	2479	2479
		17	740	740	1158	1158	1551	1551	1931	1931	2300	2300	2482	2482
		19	1079	775	1305	1239	1578	1578	1934	1934	2304	2304	2489	2489
		21			2429	1244	2423	1644	2462	2060	2571	2490	2647	2647
		23					3773	1656	3769	2060	3756	2458	3753	2658
	5	15	300	300	812	812	1289	1289	1706	1706	2102	2102	2297	2297
		17	301	301	812	812	1290	1290	1710	1710	2106	2106	2300	2300
		19	302	302	818	818	1294	1294	1713	1713	2112	2112	2304	2304
		21			1353	843	1644	1332	1927	1815	2211	2211	2357	2357
		23					3023	1382	3023	1783	3060	2197	3106	2413
	7	15	59	59	375	375	778	778	1383	1383	1835	1835	2046	2046
		17	59	59	375	375	778	778	1386	1386	1838	1838	2050	2050
		19	59	59	375	375	782	782	1389	1389	1842	1842	2053	2053
		21			388	383	805	805	1429	1429	1858	1858	2059	2059
		23					1604	888	1974	1400	2291	1893	2442	2136

Tw [°C] = Inlet water temperature

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

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

Pc [W] = Total cooling capacity

Ps [w] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

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

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

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

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

In this case, only sensible power values are considered.

FCLI 64	Qv [m³/h]	k (Pc)	k (Ps)
Speed V4	880	1	1
Speed V3	660	0.79	0.74
Speed V2	500	0.64	0.59
Speed V1	380	0.53	0.49

COOLING CAPACITY - FCL1 82

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.		
5	3	15	4820	3538	4798	4026	4820	4516	4970	4970	5438	5438	5675	5675	
		17	6219	3520	6206	4017	6194	4507	6181	4995	6162	5479	6169	5722	
		19	7731	3492	7712	3990	7693	4483	7675	4974	7656	5456	7643	5699	
		21			9331	3952	9306	4447	9281	4936	9256	5425	9249	5669	
		23					11043	4397	11030	4898	10993	5384	10980	5629	
	5	5	15	4158	3216	4253	3739	4433	4267	4742	4742	5219	5219	5456	5456
			17	5638	3245	5625	3739	5606	4227	5631	4727	5694	5225	5756	5479
			19	7168	3229	7156	3729	7143	4223	7131	4716	7119	5200	7094	5437
			21			8793	3703	8768	4197	8756	4691	8737	5181	8731	5425
			23					10530	4162	10505	4655	10480	5146	10468	5390
	7	7	15	3333	2801	3643	3389	3982	3946	4442	4442	4940	4940	5189	5189
			17	4794	2860	4785	3353	4863	3869	5017	4407	5224	4945	5361	5217
19			6494	2926	6481	3423	6469	3915	6444	4400	6456	4893	6469	5143	
21					8168	3424	8143	3916	8131	4408	8118	4899	8106	5139	
23							9930	3896	9918	4393	9893	4883	9880	5126	
7	3	15	3742	3021	3793	3520	3999	3999	4476	4476	4949	4949	5181	5181	
		17	5151	3021	5138	3513	5121	4000	5116	4487	5206	4991	5275	5229	
		19	6656	2999	6644	3496	6631	3990	6606	4472	6600	4958	6581	5195	
		21			8256	3465	8231	3956	6606	4472	8193	4933	8187	5177	
		23					9968	3916	9955	4413	9930	4902	9918	5145	
	5	5	15	3089	2692	3359	3248	3750	3750	4244	4244	4730	4730	4966	4966
			17	4476	2719	4459	3207	4519	3715	4648	4238	4846	4756	5009	5009
			19	6037	2727	6025	3223	6019	3716	6000	4200	5994	4686	6006	4936
			21			7668	3209	7656	3705	7643	4195	7618	4678	7612	4920
			23					9405	3673	9393	4167	9368	4655	9356	4898
	7	7	15	2405	2291	2895	2895	3419	3419	3939	3939	4442	4442	4691	4691
			17	3376	2245	3574	2803	3832	3370	4128	3932	4476	4472	4700	4700
			19	5189	2369	5189	2867	5172	3351	5224	3861	5344	4385	5413	4648
			21			6956	2910	6944	3402	6931	3890	6919	4377	6919	4621
			23					8743	3397	8731	3890	8706	4375	8706	4623
9	3	15	2723	2525	3020	3020	3503	3503	3982	3982	4455	4455	4691	4691	
		17	4004	2513	3986	2999	4025	3497	4150	4005	4468	4468	4700	4700	
		19	5519	2507	5506	3001	5494	3489	5477	3971	5464	4454	5473	4701	
		21			7112	2976	7094	3466	7081	3955	7069	4442	7056	4679	
		23					8831	3435	8812	3926	8793	4414	8781	4655	
	5	5	15	2238	2206	2732	2732	3243	3243	3746	3746	4236	4236	4476	4476
			17	3144	2149	3282	2679	3505	3225	3810	3767	4244	4244	4485	4485
			19	4803	2211	4794	2703	4785	3191	4811	3688	4906	4198	4974	4458
			21			6456	2707	6444	3198	6431	3684	6419	4169	6412	4408
			23					8206	3181	8193	3672	8168	4156	8168	4403
	7	7	15	1692	1692	2332	2332	2895	2895	3428	3428	3943	3943	4193	4193
			17	2036	1654	2526	2292	2981	2896	3437	3437	3952	3952	4201	4201
			19	3660	1761	3686	2258	3832	2792	4055	3348	4321	3902	4468	4183
			21			5606	2373	5594	2860	5594	3348	5606	3840	5644	4096
			23					7456	2889	7443	3377	7431	3864	7418	4103

Tw [°C] = Inlet water temperature
 Ta W.B. [°C] = Inlet air temperature with wet bulb
 Ta D.B. [°C] = Inlet air temperature with dry bulb
 Pc [W] = Total cooling capacity
 Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

The cooling outputs of the table are at maximum speed (maximum air flow).
 To determine the cooling capacity based on the speed (air flow), the values shown in the table must be multiplied by the following factors (k):

NB: The values in bold type indicate the nominal value.
 If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.
 In this case, only sensible power values are considered.

FCL1 82	Qv [m³/h]	k (Pc)	k (Ps)
Speed V4	1100	1	1
Speed V3	830	0.80	0.79
Speed V2	680	0.68	0.66
Speed V1	460	0.47	0.45

COOLING CAPACITY - FCLI 82

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.	
11	3	15	2021	2021	2524	2524	3011	3011	3488	3488	3965	3965	4201	4201
		17	2757	1988	2857	2502	3071	3023	3497	3497	3973	3973	4210	4210
		19	4287	2005	4279	2494	4270	2977	4274	3467	4364	3969	4416	4219
		21			5894	2485	5881	2973	5869	3457	5856	3939	5850	4177
		23					7612	2950	7593	3436	7581	3923	7568	4163
	5	15	1649	1649	2210	2210	2736	2736	3243	3243	3737	3737	3982	3982
		17	1899	1601	2302	2194	2741	2741	3247	3247	3746	3746	3991	3991
		19	3385	1655	3394	2145	3497	2661	3690	3199	3943	3740	4085	4005
		21			5138	2194	5129	2681	5129	3167	5129	3652	5155	3903
		23					6906	2681	6906	3172	6881	3652	6881	3895
	7	15	966	966	1735	1735	2354	2354	2908	2908	3437	3437	3694	3694
		17	968	968	1744	1744	2358	2358	2917	2917	3445	3445	3699	3699
19		1598	988	2208	1665	2668	2286	3093	2883	3510	3452	3724	3724	
21				3995	1774	4004	2263	4124	2784	4313	3324	4425	3594	
23						6031	2361	6025	2846	6019	3331	6006	3567	
13	3	15	1503	1503	2019	2019	2515	2515	2998	2998	3475	3475	3711	3711
		17	1624	1487	2023	2023	2521	2521	3003	3003	3484	3484	3720	3720
		19	2955	1493	2947	1973	3020	2477	3196	2995	3492	3492	3729	3729
		21			4588	1990	4579	2474	4571	2953	4562	3432	4584	3680
		23					6306	2461	6300	2948	6281	3427	6275	3666
	5	15	1022	1022	1667	1667	2216	2216	2736	2736	3239	3239	3488	3488
		17	1026	1026	1669	1669	2221	2221	2741	2741	3247	3247	3497	3497
		19	1606	993	2015	1595	2405	2181	2796	2745	3252	3252	3501	3501
		21			3660	1655	3660	2139	3737	2641	3900	3169	3995	3432
		23					5506	2176	5494	2657	5481	3135	5481	3376
	7	15	488	488	974	974	1774	1774	2371	2371	2921	2921	3183	3183
		17	488	488	974	974	1774	1774	2380	2380	2925	2925	3187	3187
19		503	464	979	979	1795	1782	2384	2384	2930	2930	3196	3196	
21				1856	1033	2380	1667	2818	2270	3222	2858	3411	3143	
23						4347	1780	4347	2261	4433	2769	4502	3029	
15	3	15	961	961	1505	1505	2015	2015	2506	2506	2985	2985	3226	3226
		17	963	963	1508	1508	2019	2019	2513	2513	2994	2994	3230	3230
		19	1405	922	1699	1474	2053	2025	2517	2517	2998	2998	3239	3239
		21			3162	1481	3153	1955	3205	2451	3346	2963	3445	3219
		23					4910	1970	4906	2451	4889	2925	4884	3162
	5	15	390	390	1056	1056	1677	1677	2221	2221	2736	2736	2990	2990
		17	391	391	1056	1056	1679	1679	2225	2225	2741	2741	2994	2994
		19	393	391	1065	1065	1684	1684	2229	2229	2749	2749	2998	2998
		21			1761	1003	2139	1585	2509	2159	2878	2721	3067	2997
		23					3935	1644	3935	2121	3982	2614	4042	2871
	7	15	77	77	488	488	1013	1013	1800	1800	2388	2388	2663	2663
		17	77	77	488	488	1013	1013	1804	1804	2393	2393	2668	2668
19		77	77	488	488	1017	1017	1808	1808	2397	2397	2672	2672	
21				505	456	1048	1029	1860	1794	2418	2403	2680	2680	
23						2088	1057	2569	1666	2981	2253	3179	2541	

Tw [°C] = Inlet water temperature

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

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

Pc [W] = Total cooling capacity

Ps [w] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

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

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

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

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

In this case, only sensible power values are considered.

FCLI 82	Qv [m³/h]	k (Pc)	k (Ps)
Speed V4	1100	1	1
Speed V3	830	0.80	0.79
Speed V2	680	0.68	0.66
Speed V1	460	0.47	0.45

COOLING CAPACITY - FCL1 122

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.		
5	3	15	8836	7135	8797	8118	8836	8836	9112	9112	9970	9970	10404	10404	
		17	11401	7099	11378	8101	11355	9089	11332	10073	11298	11049	11309	11309	
		19	14173	7041	14139	8046	14105	9041	14070	10030	14036	11004	14013	11492	
		21			17106	7970	17060	8968	17014	9955	16968	10940	16957	11433	
		23					20245	8867	20222	9877	20153	10857	20130	11351	
	5	5	15	7623	6485	7797	7540	8127	8127	8695	8695	9569	9569	10002	10002
			17	10336	6543	10313	7541	10278	8524	10324	9532	10439	10439	10553	10553
			19	13142	6512	13119	7519	13096	8516	13073	9510	13051	10487	13005	10965
			21			16121	7468	16075	8464	16052	9460	16018	10449	16006	10941
			23					19305	8393	19260	9387	19214	10377	19191	10869
	7	7	15	6111	5649	6678	6678	7300	7300	8143	8143	9057	9057	9514	9514
			17	8789	5768	8773	6762	8915	7802	9199	8888	9577	9577	9829	9829
19			11905	5901	11882	6903	11859	7895	11813	8873	11836	9868	11859	10372	
21					14975	6905	14929	7896	14906	8889	14884	9880	14861	10363	
23							18206	7857	18183	8859	18137	9847	18114	10337	
7	3	15	6859	6093	6954	6954	7332	7332	8206	8206	9073	9073	9498	9498	
		17	9443	6092	9419	7085	9388	8067	9380	9049	9545	9545	9671	9671	
		19	12203	6048	12180	7051	12157	8046	12111	9018	12100	9999	12065	10476	
		21			15136	6987	15090	7979	12111	9018	15021	9949	15010	10440	
		23					18274	7897	18252	8899	18206	9886	18183	10376	
	5	5	15	5662	5429	6158	6158	6875	6875	7781	7781	8671	8671	9104	9104
			17	8206	5484	8175	6467	8285	7492	8521	8521	8884	8884	9183	9183
			19	11069	5500	11046	6499	11034	7493	11000	8470	10989	9450	11011	9955
			21			14059	6471	14036	7471	14013	8460	13967	9434	13956	9923
			23					17243	7406	17221	8404	17175	9388	17152	9877
	7	7	15	4410	4410	5308	5308	6269	6269	7222	7222	8143	8143	8600	8600
			17	6190	4527	6552	5653	7025	6796	7568	7568	8206	8206	8616	8616
			19	9514	4777	9514	5781	9482	6758	9577	7786	9797	8843	9923	9374
			21			12753	5868	12730	6862	12707	7845	12684	8827	12684	9320
			23					16029	6850	16006	7845	15960	8824	15960	9322
9	3	15	4993	4993	5536	5536	6422	6422	7300	7300	8167	8167	8600	8600	
		17	7340	5069	7308	6048	7379	7053	7608	7608	8190	8190	8616	8616	
		19	10118	5056	10095	6051	10072	7035	10041	8008	10018	8982	10033	9480	
		21			13039	6001	13005	6990	12982	7975	12959	8958	12936	9436	
		23					16189	6928	16155	7917	16121	8902	16098	9388	
	5	5	15	4103	4103	5009	5009	5946	5946	6867	6867	7765	7765	8206	8206
			17	5765	4333	6017	5403	6426	6426	6985	6985	7781	7781	8222	8222
			19	8805	4460	8789	5450	8773	6435	8821	7437	8994	8466	9120	8990
			21			11836	5459	11813	6450	11790	7430	11768	8407	11756	8890
			23					15044	6416	15021	7405	14975	8382	14975	8879
	7	7	15	3103	3103	4276	4276	5308	5308	6285	6285	7230	7230	7686	7686
			17	3733	3336	4631	4623	5465	5465	6300	6300	7245	7245	7702	7702
			19	6710	3550	6757	4554	7025	5630	7434	6751	7923	7869	8190	8190
			21			10278	4785	10255	5767	10255	6752	10278	7745	10347	8261
			23					13669	5825	13646	6810	13623	7792	13600	8274

Tw [°C] = Inlet water temperature

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

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

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

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

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

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

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

In this case, only sensible power values are considered.

FCL1 122	Qv [m³/h]	k (Pc)	k (Ps)
Speed V4	1750	1	1
Speed V3	1350	0.81	0.81
Speed V2	1100	0.68	0.68
Speed V1	750	0.49	0.48

COOLING CAPACITY - FCL1 122

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.	
11	3	15	3705	3705	4627	4627	5521	5521	6395	6395	7269	7269	7702	7702
		17	5055	4008	5237	5045	5631	5631	6411	6411	7285	7285	7718	7718
		19	7860	4043	7844	5029	7828	6003	7836	6991	8001	8001	8096	8096
		21			10805	5011	10782	5996	10759	6971	10737	7943	10725	8423
		23					13956	5949	13921	6930	13898	7912	13875	8395
	5	15	3024	3024	4052	4052	5016	5016	5946	5946	6852	6852	7300	7300
		17	3481	3230	4221	4221	5024	5024	5954	5954	6867	6867	7316	7316
		19	6206	3338	6221	4326	6411	5367	6765	6452	7230	7230	7490	7490
		21			9419	4425	9403	5407	9403	6387	9403	7365	9451	7872
		23					12661	5406	12661	6398	12615	7364	12615	7856
	7	15	1770	1770	3181	3181	4316	4316	5332	5332	6300	6300	6773	6773
		17	1774	1774	3197	3197	4323	4323	5347	5347	6316	6316	6781	6781
19		2929	1992	4048	3359	4890	4609	5670	5670	6434	6434	6828	6828	
21				7324	3578	7340	4564	7560	5614	7907	6704	8112	7248	
23						11057	4761	11046	5740	11034	6717	11011	7193	
13	3	15	2756	2756	3701	3701	4611	4611	5497	5497	6371	6371	6804	6804
		17	2977	2977	3709	3709	4623	4623	5505	5505	6387	6387	6820	6820
		19	5418	3011	5402	3980	5536	4995	5859	5859	6403	6403	6836	6836
		21			8411	4013	8395	4990	8379	5955	8364	6921	8403	7421
		23					11561	4963	11550	5945	11516	6911	11504	7393
	5	15	1873	1873	3055	3055	4064	4064	5016	5016	5938	5938	6395	6395
		17	1881	1881	3059	3059	4071	4071	5024	5024	5954	5954	6411	6411
		19	2945	2003	3693	3218	4410	4398	5127	5127	5962	5962	6418	6418
		21			6710	3337	6710	4314	6852	5326	7151	6390	7324	6921
		23					10095	4388	10072	5358	10049	6321	10049	6807
	7	15	894	894	1786	1786	3252	3252	4347	4347	5355	5355	5836	5836
		17	894	894	1786	1786	3252	3252	4363	4363	5363	5363	5843	5843
19		922	922	1794	1794	3292	3292	4371	4371	5371	5371	5859	5859	
21				3402	2083	4363	3362	5166	4577	5906	5764	6253	6253	
23						7970	3590	7970	4559	8127	5583	8253	6108	
15	3	15	1762	1762	2760	2760	3693	3693	4595	4595	5473	5473	5914	5914
		17	1766	1766	2764	2764	3701	3701	4607	4607	5489	5489	5922	5922
		19	2575	1858	3114	2973	3764	3764	4615	4615	5497	5497	5938	5938
		21			5796	2986	5780	3944	5875	4942	6135	5975	6316	6316
		23					9002	3973	8994	4942	8962	5898	8954	6377
	5	15	716	716	1937	1937	3075	3075	4071	4071	5016	5016	5481	5481
		17	717	717	1937	1937	3079	3079	4079	4079	5024	5024	5489	5489
		19	721	721	1953	1953	3087	3087	4087	4087	5040	5040	5497	5497
		21			3229	2022	3922	3196	4599	4354	5276	5276	5623	5623
		23					7214	3316	7214	4278	7300	5272	7411	5789
	7	15	142	142	894	894	1857	1857	3300	3300	4379	4379	4883	4883
		17	142	142	894	894	1857	1857	3307	3307	4386	4386	4890	4890
19		142	142	894	894	1865	1865	3315	3315	4394	4394	4898	4898	
21				927	920	1921	1921	3410	3410	4434	4434	4914	4914	
23						3827	2131	4709	3359	5465	4543	5828	5125	

Tw [°C] = Inlet water temperature

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

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

Pc [W] = Total cooling capacity

Ps [w] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

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

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

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

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

In this case, only sensible power values are considered.

FCL1 122	Qv [m³/h]	k (Pc)	k (Ps)
Speed V4	1750	1	1
Speed V3	1350	0.81	0.81
Speed V2	1100	0.68	0.68
Speed V1	750	0.49	0.48

COOLING CAPACITY - FLCI 124

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.		
5	3	15	7069	5703	7038	6489	7069	7069	7290	7290	7976	7976	8323	8323	
		17	9121	5674	9102	6475	9084	7265	9066	8051	9038	8831	9047	9047	
		19	11339	5628	11311	6431	11284	7227	11256	8017	11229	8795	11210	9185	
		21			13685	6370	13648	7168	13611	7957	13575	8744	13566	9138	
		23					16196	7088	16178	7895	16123	8678	16104	9073	
	5	5	15	6099	5184	6237	6027	6502	6502	6956	6956	7655	7655	8002	8002
			17	8268	5230	8250	6027	8223	6814	8259	7619	8351	8351	8443	8443
			19	10514	5205	10495	6010	10477	6807	10459	7601	10440	8382	10404	8764
			21			12897	5969	12860	6765	12842	7562	12814	8351	12805	8745
			23					15444	6709	15408	7503	15371	8294	15353	8687
	7	7	15	4889	4515	5343	5343	5840	5840	6515	6515	7245	7245	7611	7611
			17	7031	4610	7019	5405	7132	6236	7359	7104	7661	7661	7863	7863
			19	9524	4716	9506	5517	9487	6311	9451	7092	9469	7887	9487	8290
			21			11980	5519	11943	6311	11925	7105	11907	7897	11888	8283
			23					14565	6280	14546	7081	14510	7870	14491	8262
7	3	15	5488	4870	5563	5563	5866	5866	6565	6565	7258	7258	7598	7598	
		17	7554	4869	7535	5663	7510	6448	7504	7233	7636	7636	7737	7737	
		19	9762	4834	9744	5636	9726	6431	9689	7208	9680	7992	9652	8373	
		21			12108	5585	12072	6377	9689	7208	12017	7952	12008	8344	
		23					14620	6312	14601	7113	14565	7902	14546	8294	
	5	5	15	4530	4339	4927	4927	5500	5500	6225	6225	6937	6937	7283	7283
			17	6565	4383	6540	5169	6628	5989	6817	6817	7107	7107	7346	7346
			19	8855	4396	8837	5195	8827	5989	8800	6770	8791	7553	8809	7957
			21			11247	5172	11229	5972	11210	6762	11174	7541	11164	7931
			23					13795	5920	13776	6717	13740	7504	13721	7895
	7	7	15	3528	3528	4246	4246	5015	5015	5777	5777	6515	6515	6880	6880
			17	4952	3618	5242	4518	5620	5432	6055	6055	6565	6565	6893	6893
			19	7611	3819	7611	4621	7586	5402	7661	6223	7838	7068	7939	7493
			21			10202	4690	10184	5484	10166	6271	10147	7055	10147	7449
			23					12823	5476	12805	6270	12768	7053	12768	7451
9	3	15	3994	3994	4429	4429	5138	5138	5840	5840	6533	6533	6880	6880	
		17	5872	4051	5847	4834	5903	5637	6086	6086	6552	6552	6893	6893	
		19	8094	4042	8076	4837	8058	5623	8033	6401	8014	7179	8027	7578	
		21			10431	4797	10404	5587	10385	6375	10367	7160	10349	7542	
		23					12952	5537	12924	6328	12897	7115	12878	7504	
	5	5	15	3282	3282	4007	4007	4757	4757	5494	5494	6212	6212	6565	6565
			17	4612	3463	4813	4319	5141	5141	5588	5588	6225	6225	6578	6578
			19	7044	3565	7031	4356	7019	5143	7056	5945	7195	6767	7296	7186
			21			9469	4364	9451	5155	9432	5938	9414	6720	9405	7106
			23					12035	5128	12017	5919	11980	6700	11980	7097
	7	7	15	2482	2482	3421	3421	4246	4246	5028	5028	5784	5784	6149	6149
			17	2986	2666	3704	3695	4372	4372	5040	5040	5796	5796	6162	6162
			19	5368	2838	5406	3640	5620	4500	5948	5396	6338	6290	6552	6552
			21			8223	3825	8204	4610	8204	5397	8223	6190	8278	6603
			23					10935	4656	10917	5443	10899	6228	10880	6613

Tw [°C] = Inlet water temperature

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

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

Pc [W] = Total cooling capacity

Ps [W] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

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

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

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

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

In this case, only sensible power values are considered.

FLCI 124	Qv [m³/h]	k (Pc)	k (Ps)
Speed V4	1750	1	1
Speed V3	1350	0.83	0.82
Speed V2	1100	0.71	0.69
Speed V1	750	0.52	0.50

COOLING CAPACITY - FCL1 124

Tw [°C]	ΔT [°C]	Ta W.B. [°C]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]	Pc [W]	Ps [W]
			21°C Ta D.B.		23°C Ta D.B.		25°C Ta D.B.		27°C Ta D.B.		29°C Ta D.B.		30°C Ta D.B.	
11	3	15	2964	2964	3701	3701	4416	4416	5116	5116	5815	5815	6162	6162
		17	4044	3204	4190	4033	4505	4505	5128	5128	5828	5828	6174	6174
		19	6288	3231	6275	4020	6263	4798	6269	5588	6401	6398	6477	6477
		21			8644	4005	8626	4793	8608	5572	8589	6349	8580	6733
		23					11164	4755	11137	5539	11119	6324	11100	6710
	5	15	2419	2419	3241	3241	4013	4013	4757	4757	5481	5481	5840	5840
		17	2785	2581	3377	3377	4019	4019	4763	4763	5494	5494	5853	5853
		19	4965	2668	4977	3458	5128	4290	5412	5157	5784	5784	5992	5992
		21			7535	3537	7523	4322	7523	5105	7523	5887	7560	6292
		23					10129	4321	10129	5114	10092	5886	10092	6279
	7	15	1416	1416	2545	2545	3452	3452	4265	4265	5040	5040	5418	5418
		17	1419	1419	2558	2558	3459	3459	4278	4278	5053	5053	5425	5425
		19	2344	1592	3238	2685	3912	3684	4536	4536	5147	5147	5462	5462
		21			5859	2860	5872	3648	6048	4487	6326	5358	6489	5794
		23					8846	3806	8837	4588	8827	5369	8809	5749
13	3	15	2205	2205	2961	2961	3689	3689	4398	4398	5097	5097	5443	5443
		17	2381	2381	2967	2967	3698	3698	4404	4404	5110	5110	5456	5456
		19	4335	2407	4322	3181	4429	3992	4687	4687	5122	5122	5469	5469
		21			6729	3207	6716	3989	6704	4760	6691	5532	6722	5931
		23					9249	3967	9240	4752	9212	5524	9203	5909
	5	15	1499	1499	2444	2444	3251	3251	4013	4013	4750	4750	5116	5116
		17	1505	1505	2447	2447	3257	3257	4019	4019	4763	4763	5128	5128
		19	2356	1601	2955	2572	3528	3516	4101	4101	4769	4769	5135	5135
		21			5368	2668	5368	3448	5481	4257	5721	5108	5859	5532
		23					8076	3507	8058	4282	8039	5053	8039	5441
	7	15	715	715	1429	1429	2602	2602	3478	3478	4284	4284	4668	4668
		17	715	715	1429	1429	2602	2602	3490	3490	4290	4290	4675	4675
		19	738	738	1435	1435	2633	2633	3497	3497	4297	4297	4687	4687
		21			2722	1665	3490	2687	4133	3658	4725	4607	5002	5002
		23					6376	2869	6376	3644	6502	4463	6603	4882
15	3	15	1410	1410	2208	2208	2955	2955	3676	3676	4379	4379	4731	4731
		17	1413	1413	2211	2211	2961	2961	3686	3686	4391	4391	4738	4738
		19	2060	1485	2492	2376	3011	3011	3692	3692	4398	4398	4750	4750
		21			4637	2387	4624	3152	4700	3950	4908	4775	5053	5053
		23					7201	3176	7195	3950	7170	4714	7164	5097
	5	15	572	572	1549	1549	2460	2460	3257	3257	4013	4013	4385	4385
		17	574	574	1549	1549	2463	2463	3263	3263	4019	4019	4391	4391
		19	577	577	1562	1562	2470	2470	3270	3270	4032	4032	4398	4398
		21			2583	1616	3137	2555	3679	3480	4221	4221	4498	4498
		23					5771	2651	5771	3420	5840	4214	5929	4627
	7	15	113	113	715	715	1486	1486	2640	2640	3503	3503	3906	3906
		17	113	113	715	715	1486	1486	2646	2646	3509	3509	3912	3912
		19	113	113	715	715	1492	1492	2652	2652	3515	3515	3919	3919
		21			741	735	1537	1537	2728	2728	3547	3547	3931	3931
		23					3062	1704	3767	2685	4372	3631	4662	4096

Tw [°C] = Inlet water temperature

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

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

Pc [W] = Total cooling capacity

Ps [w] = Sensible cooling capacity

COOLING CAPACITY CORRECTION FACTORS

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

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

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

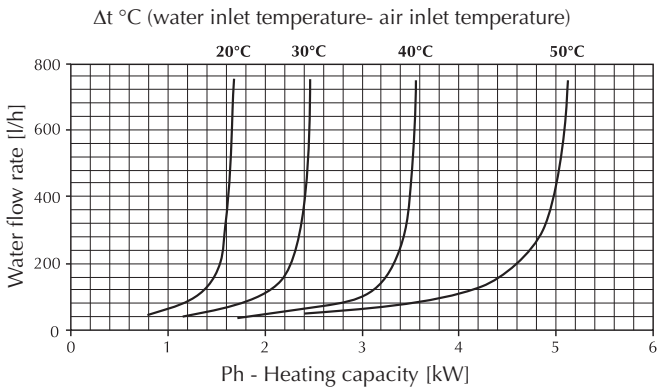
If sensible power values are above the total cooling capacity, this means that cooling is carried out without dehumidification.

In this case, only sensible power values are considered.

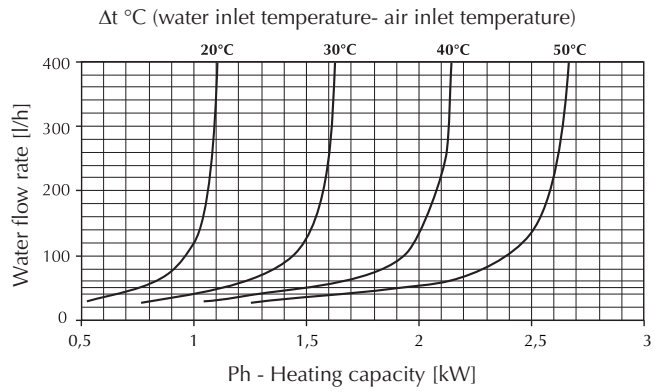
FCL1 124	Qv [m³/h]	k (Pc)	k (Ps)
Speed V4	1750	1	1
Speed V3	1350	0.83	0.82
Speed V2	1100	0.71	0.69
Speed V1	750	0.52	0.50

HEATING CAPACITY "Module 600"

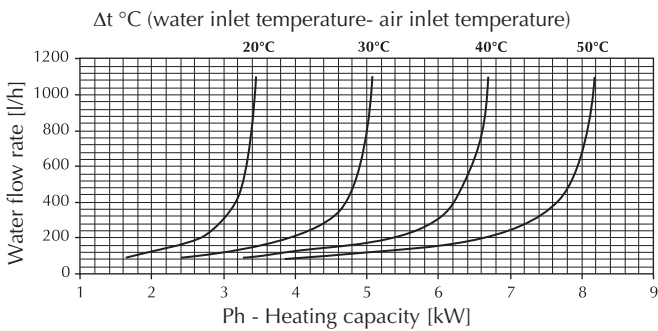
FCLI 32



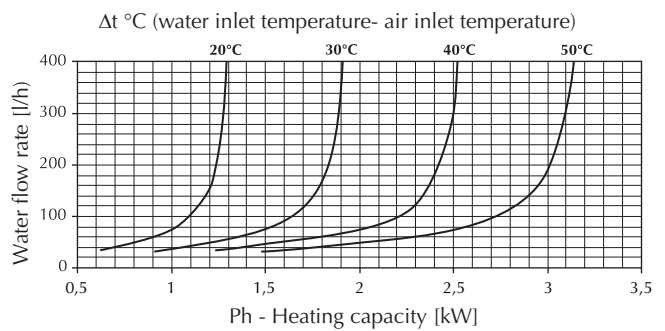
FCLI 34



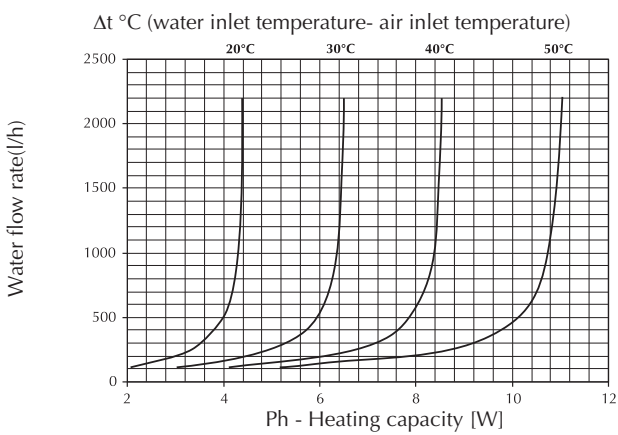
FCLI 42



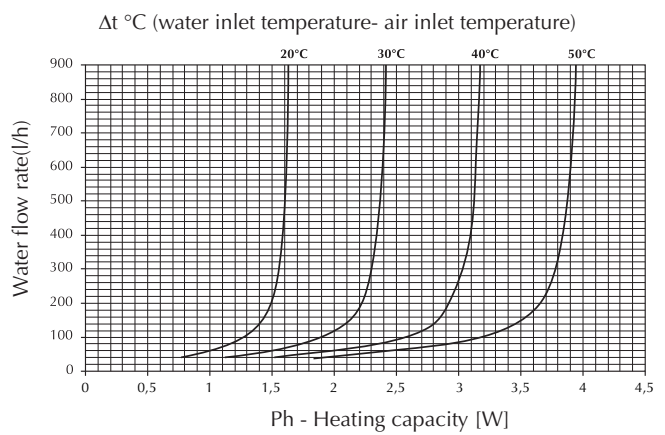
FCLI 44



FCLI 62



FCLI 64



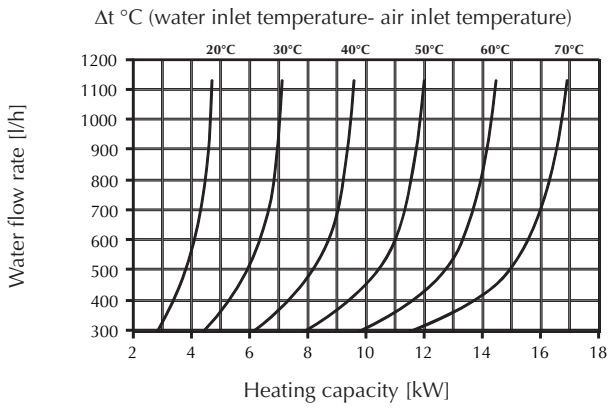
HEATING CAPACITY CORRECTION FACTORS

The heat yields refer to the maximum speed. For the rest of the speeds the values must be multiplied by the following factors:

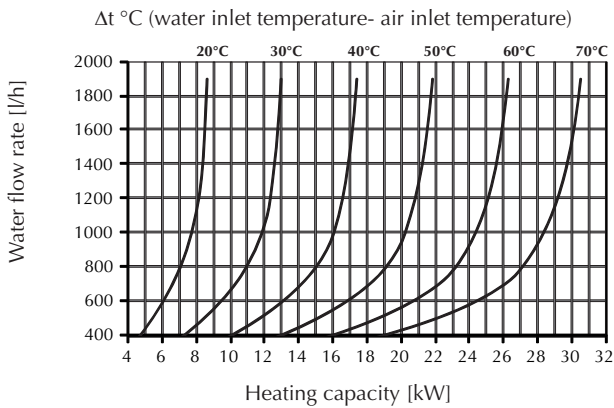
FCLI	32	34	42	44	62	64
Speed 4 (Maximum)	-	-	1	1	1	1
Speed 3	1	1	0.81	0.89	0.80	0.89
Speed 2	0.82	0.84	0.61	0.78	0.66	0.81
Speed 1 (Minimum)	0.71	0.75	0.50	0.72	0.55	0.75

HEATING OUTPUT "Modulo 840"

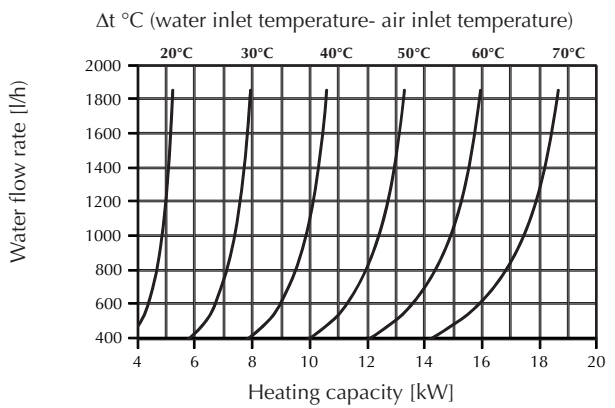
FCLI 82



FCLI 122



FCLI 124



HEATING CAPACITY CORRECTION FACTORS

The heat yields refer to the maximum speed. For the rest of the speeds the values must be multiplied by the following factors:

	FCLI	82	122	124
Speed 4 (Maximum)		1	1	1
Speed 3		0.91	0.81	0.83
Speed 2		0.61	0.68	0.74
Speed 1 (Minimum)		0.49	0.49	0.56

COIL PRESSURE DROPS (VL version without valve)

Pressure drops [kPa] - Heating with 50°C water					
Water flow rate [l/h]	FCL132	FCL142	FCL162	FCL182	FCL1122
100	1.07	0.73	0.67	0.34	0.17
200	3.71	2.55	2.33	1.20	0.60
300	7.71	5.29	4.84	2.49	1.24
400	12.93	8.87	8.12	4.18	2.07
500	19.33	13.26	12.13	6.24	3.10
600	26.84	18.41	16.84	8.67	4.30
700	35.42	24.30	22.23	11.44	5.68
800	45.04	30.90	28.27	14.54	7.22
900	55.68	38.19	34.95	17.98	8.93
1000	67.31	46.17	42.25	21.73	10.79
1100	79.90	54.81	50.15	25.80	12.81
1200	93.45	64.10	58.66	30.17	14.98
1300	107.93	74.04	67.75	34.85	17.30
1400	123.34	84.60	77.41	39.82	19.77
1500	139.64	95.79	87.65	45.09	22.39
1600	156.85	107.59	98.45	50.64	25.14
1700	174.93	120.00	109.80	56.48	28.04
1800	193.89	133.00	121.70	62.60	31.08
1900	213.70	146.59	134.13	69.00	34.26
2000	234.37	160.77	147.11	75.68	37.57
2100	255.89	175.53	160.61	82.62	41.02
2200	278.24	190.86	174.64	89.84	44.60
2300	301.42	206.76	189.19	97.32	48.32
2400	325.41	223.22	204.25	105.07	52.17
2500	350.23	240.24	219.82	113.08	56.15

Pressure drops [kPa] - Heating with 70°C water				
Water flow rate [l/h]	FCL134	FCL144	FCL164	FCL1124
50	0.74	0.70	0.71	0.12
100	2.58	2.44	2.49	0.40
150	5.34	5.06	5.16	0.84
200	8.97	8.49	8.67	1.41
250	13.40	12.69	12.95	2.10
300	18.61	17.62	17.98	2.92
350	24.56	23.26	23.73	3.85
400	31.24	29.58	30.18	4.89
500	46.68	44.20	45.10	7.31
600	64.81	61.36	62.62	10.15
700	85.53	80.99	82.64	13.40
800	108.77	102.99	105.10	17.04
900	134.46	127.31	129.92	21.06
1000	162.53	153.90	157.05	25.46
1100	192.95	182.70	186.44	30.23
1200	225.67	213.68	218.05	35.35
1300	260.64	246.80	251.84	40.83
1400	297.84	282.01	287.78	46.65
1500	337.22	319.30	325.83	52.82
1600	378.76	358.64	365.97	59.33
1700	422.43	399.99	408.17	66.17
1800	468.21	443.33	452.40	73.34
1900	516.06	488.65	498.64	80.84
2000	565.98	535.91	546.87	88.66

COIL PRESSURE DROPS (VL version without valve)

Pressure drops [kPa] - Cooling with 7°C water									
Water flow rate [l/h]	FCLI32	FCLI42	FCLI62	FCLI82	FCLI122	FCLI34	FCLI44	FCLI64	FCLI124
100	1.19	0.80	0.75	0.37	0.19	1.19	0.81	0.37	0.29
200	4.13	2.77	2.62	1.30	0.67	4.13	2.81	1.30	0.99
300	8.56	5.75	5.44	2.70	1.38	8.56	5.82	2.70	2.06
400	14.37	9.64	9.13	4.54	2.32	14.37	9.77	4.54	3.46
500	21.48	14.41	13.65	6.78	3.46	21.48	14.60	6.78	5.17
600	29.82	20.01	18.95	9.42	4.81	29.82	20.27	9.42	7.18
700	39.35	26.41	25.01	12.43	6.35	39.35	26.75	12.43	9.48
800	50.05	33.58	31.81	15.81	8.07	50.05	34.01	15.81	12.05
900	61.87	41.52	39.32	19.54	9.98	61.87	42.05	19.54	14.90
1000	74.78	50.19	47.53	23.62	12.06	74.78	50.83	23.62	18.01
1100	88.78	59.58	56.42	28.04	14.32	88.78	60.34	28.04	21.38
1200	103.83	69.68	65.99	32.80	16.74	103.83	70.57	32.80	25.01
1300	119.93	80.48	76.21	37.88	19.34	119.93	81.51	37.88	28.88
1400	137.04	91.96	87.09	43.29	22.10	137.04	93.14	43.29	33.01
1500	155.16	104.12	98.61	49.01	25.02	155.16	105.45	49.01	37.37
1600	174.27	116.95	110.75	55.05	28.10	174.27	118.44	55.05	41.97
1700	194.37	130.43	123.52	61.39	31.34	194.37	132.10	61.39	46.81
1800	215.43	144.57	136.91	68.05	34.74	215.43	146.42	68.05	51.89
1900	237.45	159.34	150.90	75.00	38.29	237.45	161.38	75.00	57.19
2000	260.42	174.75	165.50	82.26	41.99	260.42	176.99	82.26	62.72
2100	284.32	190.80	180.69	89.81	45.85	284.32	193.24	89.81	68.48
2200	309.15	207.46	196.47	97.65	49.85	309.15	210.11	97.65	74.46
2300	334.91	224.74	212.84	105.79	54.01	334.91	227.62	105.79	80.66
2400	361.57	242.64	229.78	114.21	58.30	361.57	245.74	114.21	87.08
2500	389.14	261.14	247.30	122.92	62.75	389.14	264.48	122.92	93.72

CORRECTION FACTORS WHEN OPERATING USING GLYCOL WATER

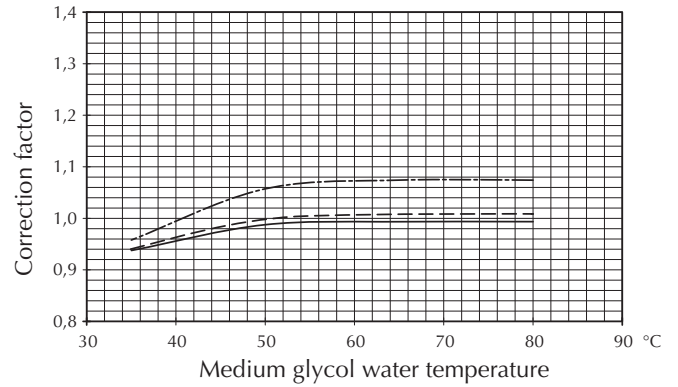
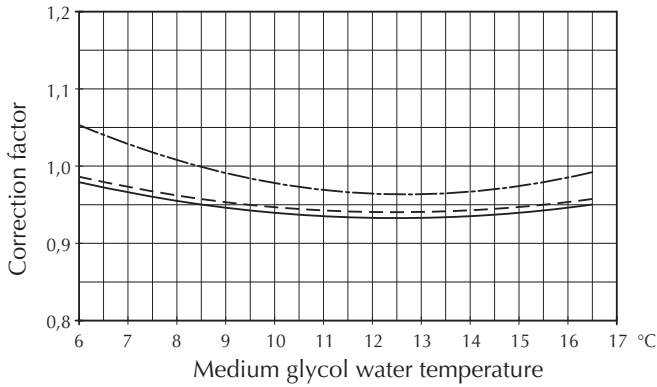
Key:

- · — · Pressure drops
- - - Air flow rate
- Capacity

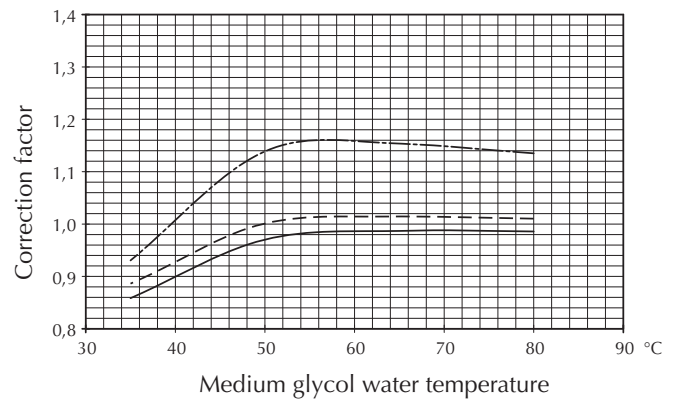
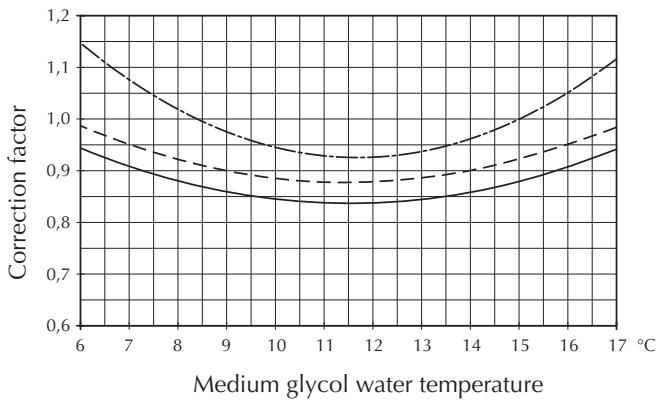
COOLING FUNCTION MODE

HEATING FUNCTION MODE

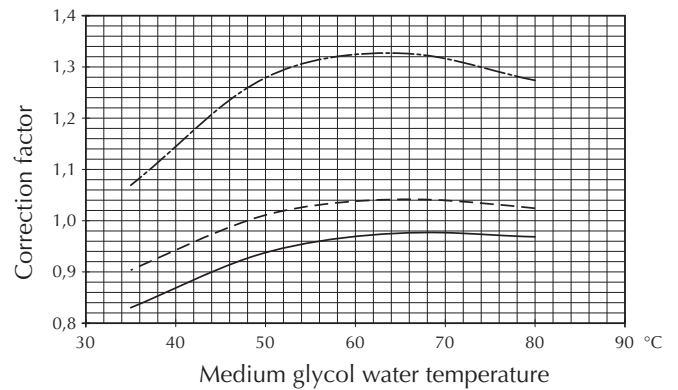
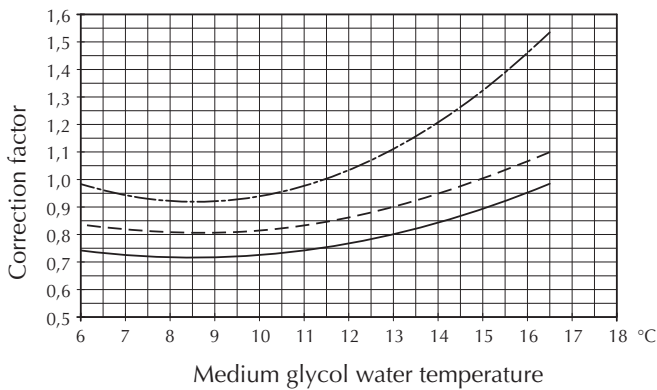
GLYCOL WATER AT 10%








GLYCOL WATER AT 20%



GLYCOL WATER AT 35%



SOUND POWER LEVEL IN dB (A)

Mod.	Speed	Central frequency band [Hz]							Over-all		
		125	250	500	1000	2000	4000	8000	dB	dB(A)	
FCLI32 FCLI34	Speed 3 (Maximum)	49.6	48.5	45.7	39.1	36.2	20.5	14.0	53	46	
	Speed 2	38.2	40.2	38.7	31.0	23.9	22.4	18.9	44	38	
	Speed 1 (Minimum)	35.2	37.2	35.7	28.0	20.9	19.4	15.9	41	35	
FCLI42 FCLI44	Speed 4 (Super Maximum)	54.1	54.2	51.7	46.8	44.0	31.2	16.6	59	53	
	Speed 3	49.6	48.5	45.7	39.1	36.2	20.5	14.0	53	46	
	Speed 2	38.2	40.2	38.7	31.0	23.9	22.4	18.9	44	38	
	Speed 1 (Minimum)	35.2	37.2	35.7	28.0	20.9	19.4	15.9	41	35	
FCLI62 FCLI64	Speed 4 (Super Maximum)	60.5	63.7	58.3	55.5	52.3	45.2	31.8	67	61	
	Speed 3	55.1	55.2	52.7	47.8	45.0	32.2	17.3	60	54	
	Speed 2	48.9	48.9	46.0	39.3	36.0	19.4	10.6	53	47	
	Speed 1 (Minimum)	42.6	43.7	41.4	32.0	23.3	9.1	9.4	48	41	
FCLI82	Speed 4 (Super Maximum)	57.3	49.5	46.2	46.3	39.0	28.3	18.1	59	50	
	Speed 3	56.4	42.6	42.1	40.1	25.2	7.5	12.9	57	45	
	Speed 2	55.3	41.2	41.0	35.0	27.8	9.9	12.5	56	43	
	Speed 1 (Minimum)	51.5	35.3	36.6	25.9	30.4	11.0	12.2	52	39	
FCLI122 FCLI124	Speed 4 (Super Maximum)	63.1	60.1	56.3	55.1	52.5	46.3	36.6	66	60	
	Speed 3	58.8	53.3	49.8	50.1	45.9	37.0	23.5	61	54	
	Speed 2	59.6	48.3	46.6	46.2	34.6	21.8	18.1	60	50	
	Speed 1 (Minimum)	55.4	41.6	41.1	39.1	24.2	10.1	15.3	56	44	



= EUROVENT 8/2 (ISO 3741/2001) certified acoustic tests

SOUND PRESSURE LEVEL expressed in dB (A)

Speed	FCLI	32	34	42	44	62	64	82	122	124
Speed 4 (Super Maximum)	dB(A)	-	-	44	44	52	52	41	51	51
Speed 3	dB(A)	37	37	37	37	45	45	36	45	45
Speed 2	dB(A)	29	29	29	29	38	38	34	41	41
Speed 1 (Minimum)	dB(A)	26	26	26	26	32	32	30	35	35

Level of sound pressure (A-weighted) measured in the room with volume $V = 100 \text{ m}^3$; reverberation time $t = 0.5 \text{ s}$; direction factor $Q = 2$; distance $r = 2.5 \text{ m}$;

ACCESSORIES

Consult the compatibility table to choose accessories.

FCLI	32	34	42	44	62	64	82	122	124
Obligatory accessories									
GLLI10	✓	✓	✓	✓	✓	✓			
GLLI20							✓	✓	✓
WMT20*	✓	✓	✓	✓	✓	✓	✓	✓	✓
Obligatory accessories for the VMF System									
GLLI10N	✓	✓	✓	✓	✓	✓			
GLLI20N							✓	✓	✓
•VMF-E4**	✓	✓	✓	✓	✓	✓	✓	✓	✓
Accessory for installation									
FCLM10	✓	✓	✓	✓	✓	✓			
Accessory for air purification									
FEL10	✓	✓	✓	✓	✓	✓			
Accessories for air delivery in an adjacent room and for connection to a fresh air intake									
KFL	✓	✓	✓	✓	✓	✓			
KFL20							✓	✓	✓
KFLD*	✓	✓	✓	✓	✓	✓			
KFLD20							✓	✓	✓
Accessories valves									
VHL1		✓		✓		✓			
VHL20									
VHL2		✓		✓		✓			
VHL22									
Accessory probe for WMT20									
SWI	✓	✓	✓	✓	✓	✓	✓	✓	✓
FCLI / VMF System Accessories to combine with the GLLI10N and GLLI20N grilles with VMF-E4 control panels									
FCLI	32	34	42	44	62	64	82	122	124
Accessory main interface panel for plant management									
•VMF-E5B	✓	✓	✓	✓	✓	✓	✓	✓	✓
•VMF-E5N	✓	✓	✓	✓	✓	✓	✓	✓	✓
Accessory water temperature probe for a 2-pipe system									
SW4	✓	✓	✓	✓	✓	✓	✓	✓	✓
Accessories water temperature probes for a 4-pipe system									
•VMF-SW1 ***	✓	✓	✓	✓	✓	✓	✓	✓	✓
SW4***		✓		✓		✓			✓

Obligatory accessories: essential for unit operation.

GLLI and GLLI_N range intake and delivery grille units with electric box are obligatory accessories as the FCLI units are dispatched without these components.
The GLLI and GLLI_N range accessories

consist of a grille with central suction and lateral air delivery fins, all within a frame, and include an electric box for FCLI versions.

NB>

* The GLLI10 and GLLI20 grille units have to be combined with a 0-10V output

control panel to control ventilation speed (see WMT20).

** The GLLI10N and GLLI20N grille units have to be combined with a VMF range control panel (see VMF-E4).

*** Cold water circuit

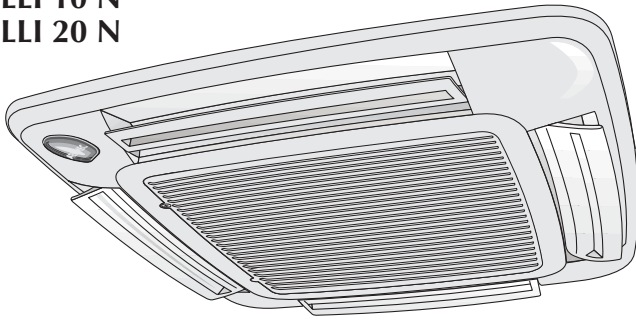
**** Hot water circuit



Some accessories may not be applied at the same time on the same fan coil, while others need to be used with other accessories and/or with a particular fan coil configuration.
Before placing an order, see documentation relating to all accessories and the fan coil.

GLLI10N - GLLI20N INTAKE AND DELIVERY GRILLE UNIT WITH "VMF System" THERMOSTAT

**GLLI 10 N
GLLI 20 N**



**GLLI10N 600x600
GLLI10N 840x600**

Intake and delivery grille unit with "VMF System" advanced electronic thermostat.

The grille is part of the GLLI-N range grille unit (obligatory accessory).

The form and opening of the suction louvres were developed in order to have the best possible distribution of the air, both when functioning in winter as well as in summer.

Suction occurs through the central grille, and delivery through the manually adjustable, perimetric slots. In plastic, colour RAL 9010, it contains the air filter that can be easily removed for cleaning.

The GLLI_N includes the electric box with incorporated VMF System thermostat board, with bayonet coupling to the connector bound to the unit's load-bearing structure.

The GLLI_N needs to be interfaced with a VMF-E4 external control panel if installed on a single FCLI unit, or with a "Master" function in a network with up to 5 other "Slave" fan coils supplied with "VMF System" thermostat only (GLLI-N and/or GLL-N and/or VMF-E18 and/or VMF-E1 and/or VMF-E0).

If the GLLI_N is combined with a VMF-E4 control panel ("Master" configuration), the fan coil can be connected to a VMF-E5 central supervisor system.

The GLLI_N accessory consists of :

Intake and delivery grille unit

- "VMF System" advanced electronic thermostat board, installed in the electric box, easily applicable to the fan coil.
- System with connection cables to the Inverter Command Module. The cables are wired with connectors for quick connection.

The thermostat board has a protective fuse, a dip-switch for configuration, and connectors for connection with:

- the power supply,
- the earthing,
- the valve control,
- the Inverter command module power supply,
- the ambient air temperature probe,
- the water temperature probe,

- the auxiliary water temperature probe,
- the control panel (user interface),
- the presence sensor,
- the external contact,
- the microswitch contact
- the VMF-E5 central supervisor system serial,
- the fan coil network serial (TTL).

The thermostat is used to control:

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

- Input for "external contact". This is a digital input with the following logic:
 - When open, the thermostat works normally;
 - When closed, the fan coil is switched off.
- Anti-freeze function
- Presence sensor to enable the "SLEEP" function from an external contact (reduction of ambient set-point by 2 or 5 degrees, depending on the settings, if a room is unoccupied)
- Input for local serial. The thermostat is designed to communicate with GLLI-N and/or GLL-N and/or VMF-E18 and/or VMF-E1 and/or VMF-E0 type thermostats via a dedicated serial based on the TTL logic standards. This serial communication is essential for the

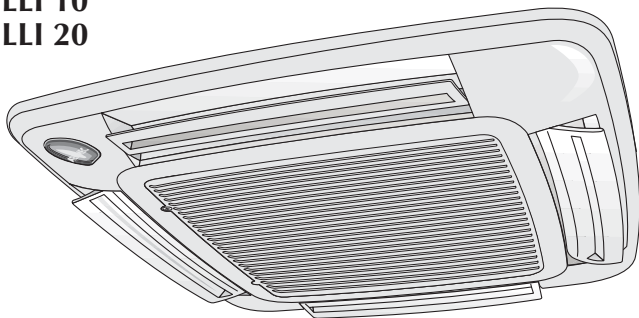
exchange of information within small fan coil networks (up to 6 thermostats with a maximum length of 30 metres). It was designed, in fact, for small areas where the fan coils (more than one) need to be controlled from a single control point. More specifically, this network always contains a Master (to which a user interface VMF-E2, VMF-E4 is connected) which controls the operation of the Slaves connected to it, according to the settings made on its user interface.

- Input for supervision serial. In networks made up of several fan coils subdivided into independent temperature areas, the GLLI-N area thermostat allows communication with a central system supervisor (VMF-E5).

ACCESSORIES

GLLI10 - GLLI20 INTAKE AND DELIVERY GRILLE UNIT

GLLI 10 GLLI 20



The GLLI includes the electric box, with bayonet coupling to the connector bound to the unit's load-bearing structure.

The GLLI needs to be interfaced with an external control panel (not included)) with thermostat and ventilation speed control, with a 0-10V output.

GLLI10 (600x600)

GLLI20 (840x840)

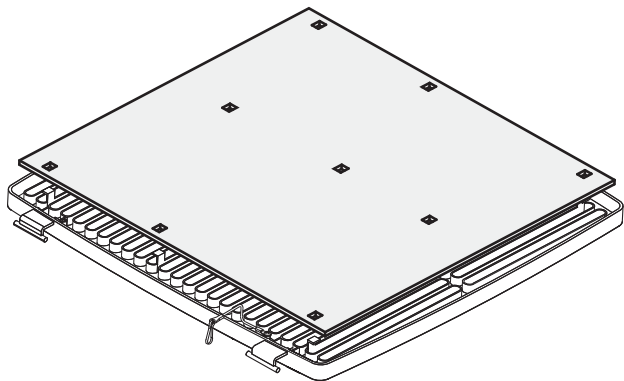
Suction and delivery grille unit

The grille is part of the GLLI range grille unit (obligatory accessory).

The form and opening of the suction louvres were developed in order to have the best possible distribution of the air, both when functioning in winter as well as in summer.

Suction occurs through the central grille, and delivery through the manually adjustable, perimetric slots. In plastic, colour RAL 9010, it contains the air filter that can be easily removed for cleaning.

FEL10 ELECTROSTATICALLY PRE-CHARGED AIR FILTER



FEL10

For GLLI10 and GLLI10N grille units.

Electrostatically pre-charged air filter, regenerated with class-2 fire resistance (UL 900).

Supplied in a sealed package which should only be opened at the time of use.

The electrostatically pre-charged filter combines the normal mechanical filtering of the air that passes through the filter, with an electrostatic attraction of powder that increases its filtering considerably.

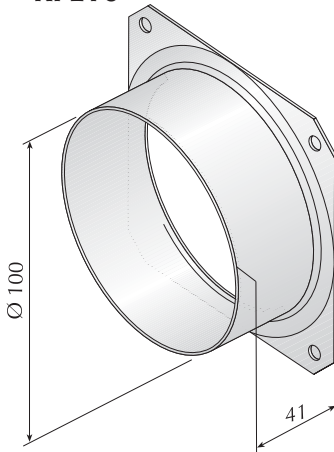
The electrostatic filter charge runs down two years after the opening of the box; after this period it behaves like a normal filter.

Frequent cleaning, removal (with a vacuum) of the dust that has built up, and the use of water and detergents considerably speeds up the deterioration of the electrostatic charge.

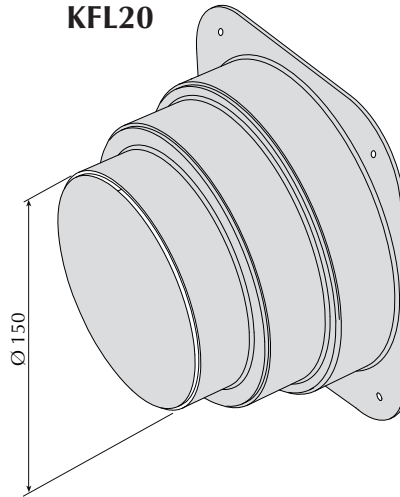
ACCESSORIES

KFL DELIVERY FLANGE

KFL10



KFL20



KFL10

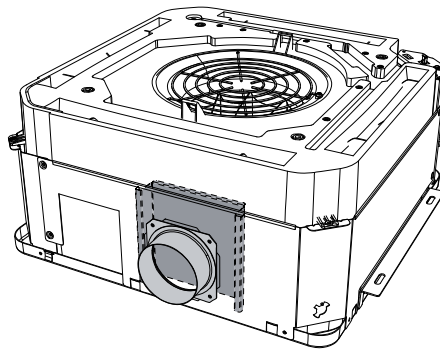
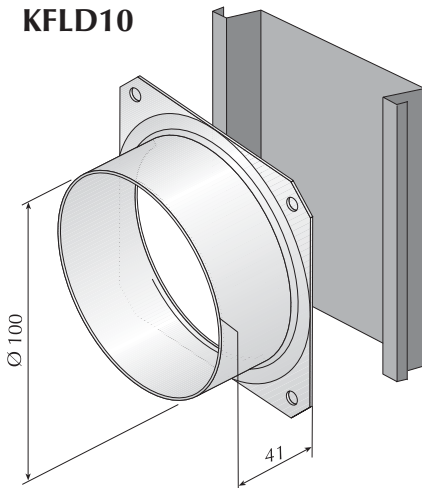
Delivery flange for directing air to an adjacent room.

KFL20 (***)

Delivery flange for directing air to an adjacent room. Up to three KFL20 can be assembled on a single unit.

KFLD SUCTION FLANGE

KFLD10

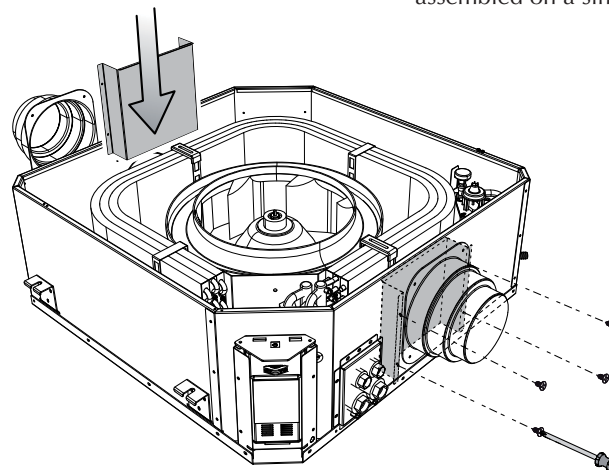
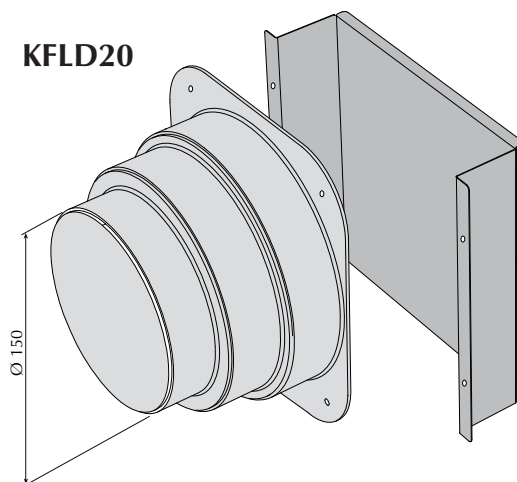


KFLD

Suction flange for connection to a duct, to introduce fresh air into the room via an external fan. The fresh air is directly introduced from the fin corresponding to the flange position.

The air is not extracted by the fan, so is not mixed inside the unit with air that has already been treated.

KFLD20



KFLD20 (***)

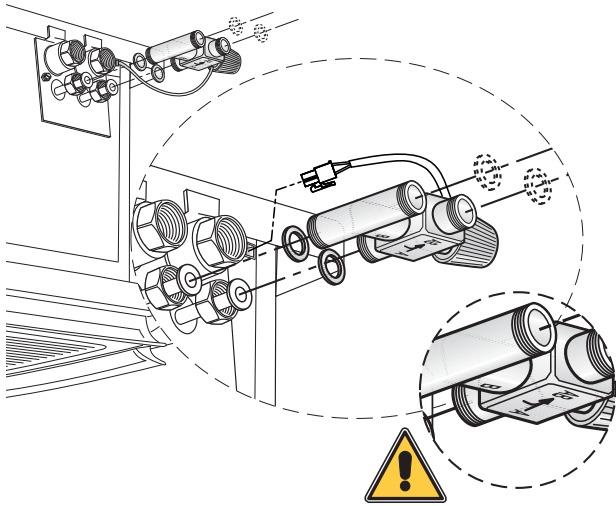
Suction flange for connection to a duct, to introduce fresh air into the room via an external fan. The fresh air is directly introduced from the fin corresponding to the flange position.

The air is not extracted by the fan, so is not mixed inside the unit with air that has already been treated.

Up to two KFLD20D devices can be assembled on a single unit.

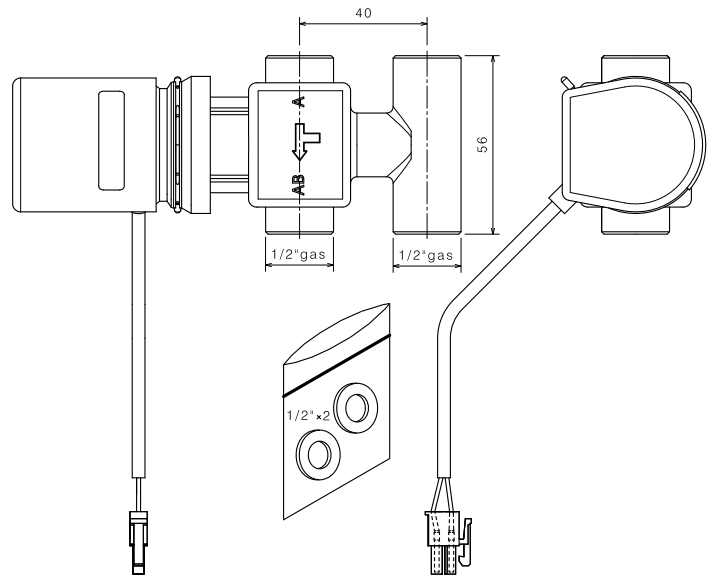
ACCESSORIES

VHL1 - VHL20 3-WAY VALVES KIT

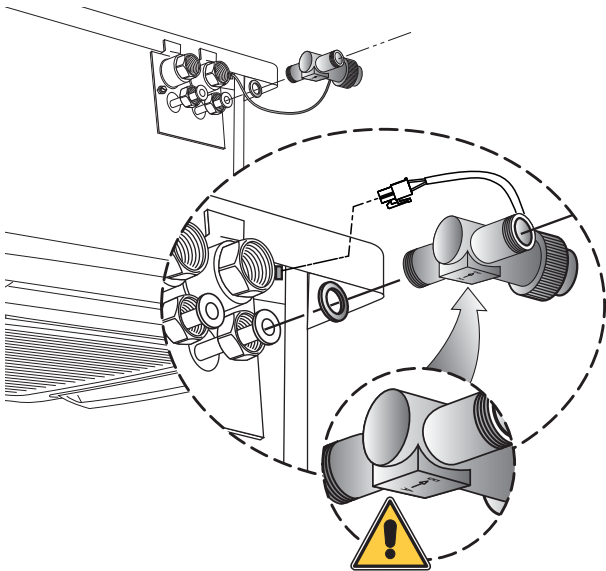


VHL1 - VHL20

Motor-driven three-way valve for the heating battery in 4-pipe systems.
Obligatory accessory for 4-pipe systems.

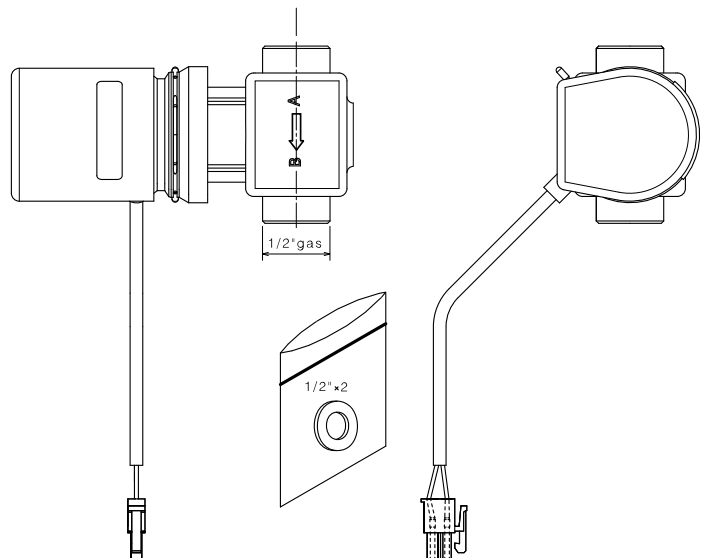


VHL2 - VHL22 2-WAY VALVES KIT



VHL2 - VHL22

motor-driven two-way valve for the heating battery in 4-pipe systems.
Obligatory accessory in 4-pipe systems with variable flow rates.



ACCESSORIES

CONTROL PANEL WITH THERMOSTAT



CONTROL PANELS *:

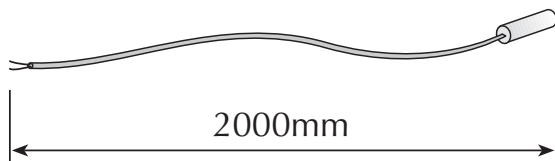
These accessories can only be used with the FCL1 models fitted with GLLI range grilles.

WMT20

Wired control panel with thermostat and digital display, ventilation speed control with 0-10V output; wall mounting.

- Reconfigurable to meet the needs of different types of system
- P or P+I adjustment of the fan with 0..10V proportional output
- Adjustment with ON-OFF actuators control
- Range of setpoint knob different for heating and cooling
- Special functions, economy, dirty filter warning, window contact
- Input for centralised* summer/winter selection
- Selectable power supply 230V~ or 24V~

SW1 WATER TEMPERATURE PROBE



SW1

Water temperature probe for WMT20 control panels. Cable length L = 2m.

ACCESSORIES WATER TEMPERATURE PROBES FOR VMF SYSTEM

SW4 WATER TEMPERATURE PROBE FOR:

- 2-PIPE SYSTEMS
- HOT WATER CIRCUIT IN 4-PIPE SYSTEMS

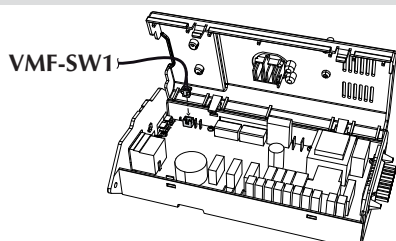
SW4

Water temperature probe for VMF System thermostats to be used in:

- 2-pipe systems
- the hot water circuit in 4-pipe systems

VMF-SW1 WATER TEMPERATURE PROBE FOR:

- COLD WATER CIRCUIT IN 4-PIPE SYSTEMS



•VMF-SW1:

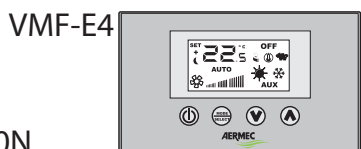
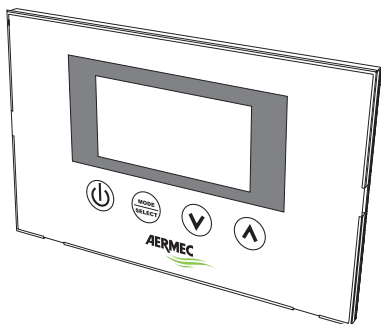
Water temperature probe for VMF System thermostats to be used in:

- the cold water circuit in 4-pipe systems

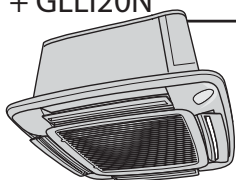
ACCESSORIES VMF SYSTEM CONTROL PANELS

VMF-E4 VMF RANGE THERMOSTAT CONTROL PANEL, WALL MOUNTING

VMF-E4



FCL + GLL110N
FCL + GLL120N



Wired control panel, user interface for thermostats incorporated in GLL110N and GLL120N grille units, and for all other VMF range thermostats.

The panel must be used with VMF range thermostats and operates a single or networked fan coil (see characteristics of the combined thermostat)

Wall mounting with connection cable.

Digital display, "Touch" keyboard, only 11mm thick and mounted on the wall in Type 503 recessed electrical boxes and compatible with the Type 502 boxes, M20 (see installation manual).

The following can be selected from the control panel:

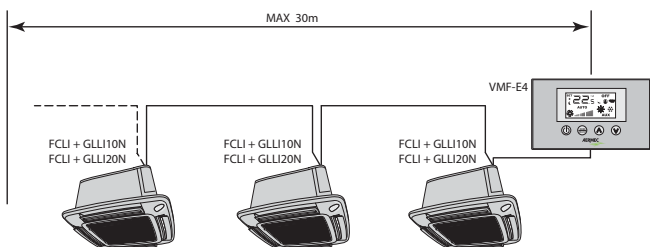
- Switching the device on and off
- The ventilation speed, in automatic or manual mode
- The room temperature
- The operating mode

The digital display also shows:

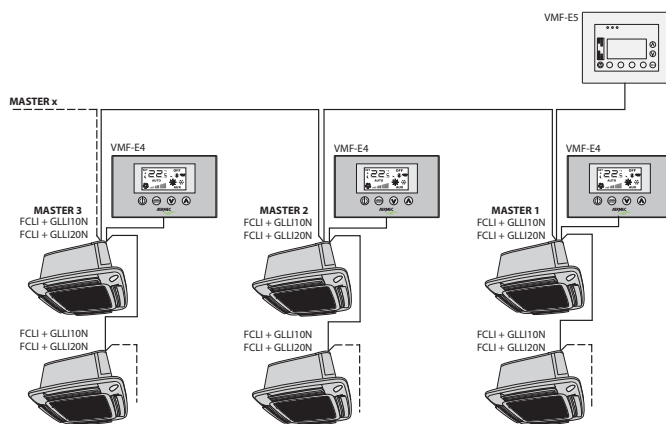
- Thermostat On / Off
- The room temperature / set temperature
- The ventilation speed with 3 positions displayed by graduated bar
- The operating mode (Automatic / Heating / Cooling)
- The night-time comfort function (Sleep)
- Supervisor controlled operating mode (VMF-E5)

See the accessories manual for complete information on its features.

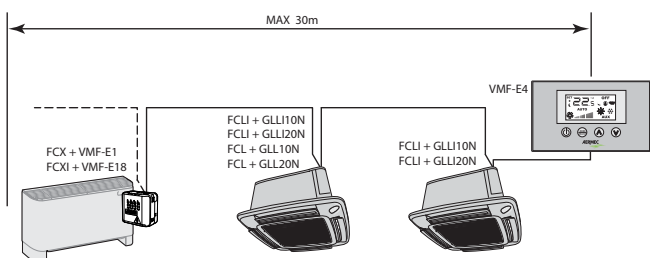
Example of a TTL local network consisting only of FCLIs



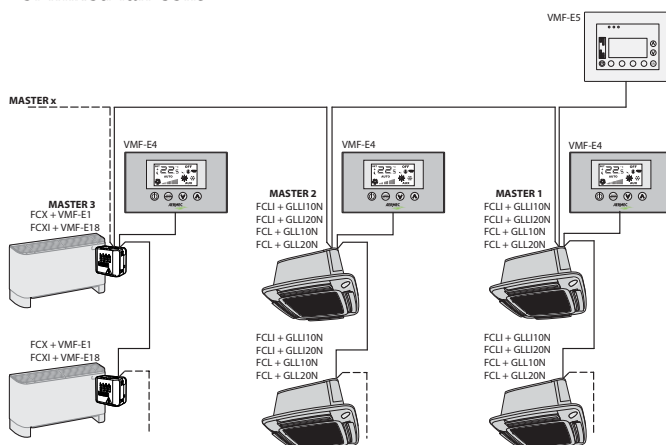
Example of a network with VMF-E5 supervisor consisting only of FCLIs



Example of a TTL local network consisting of mixed fan coils



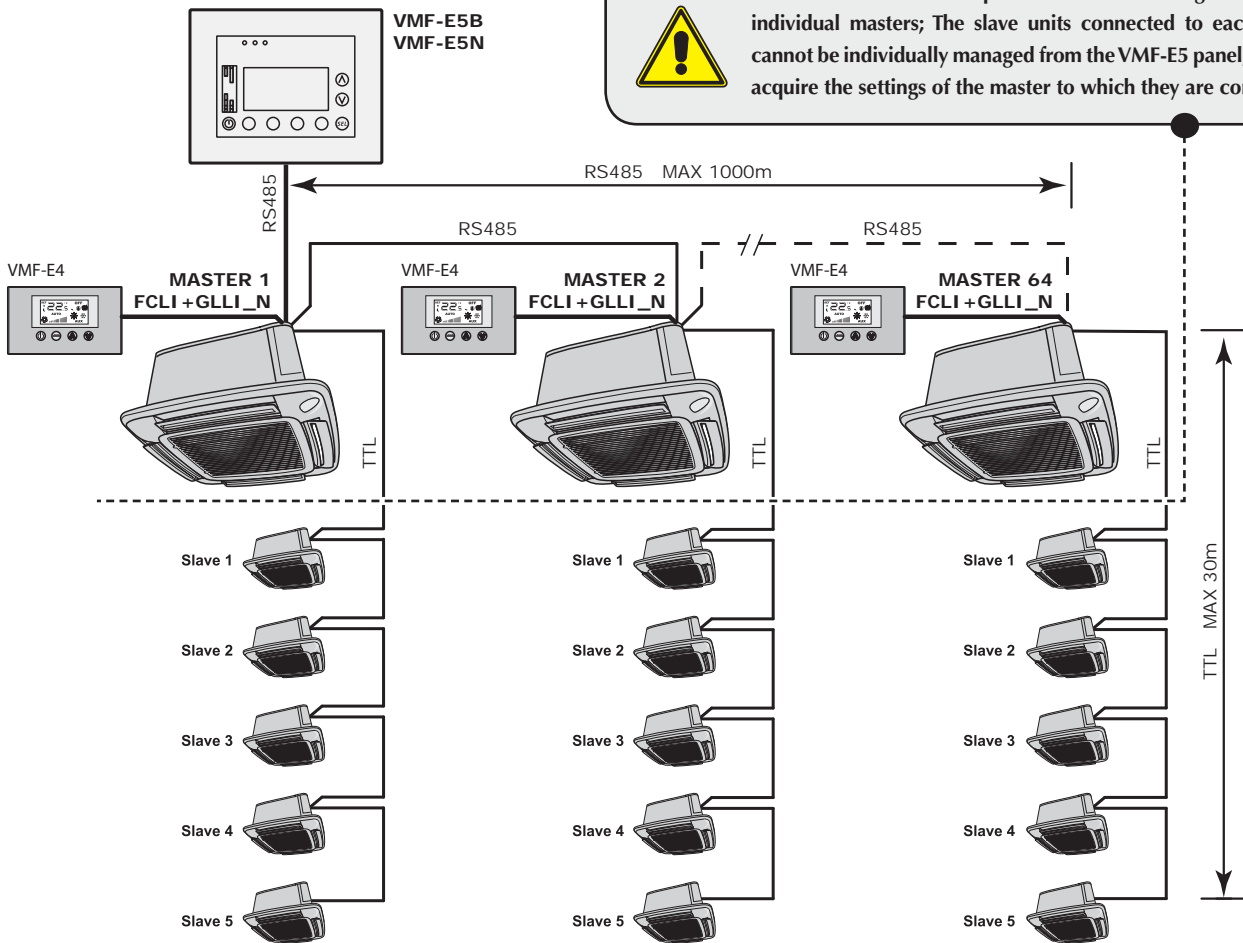
Example of a network with VMF-E5 supervisor consisting only of mixed fan coils



ACCESSORIES VMF SYSTEM SUPERVISION

VMF-E5B / E5N SYSTEM'S MAIN SUPERVISION INTERFACE

WARNING: the VMF-E5 panel allows the management of the individual masters; The slave units connected to each master cannot be individually managed from the VMF-E5 panel, but they acquire the settings of the master to which they are connected.



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

Recessed supervisor control panel, available in two colours:

- **VMF-E5B** white
- **VMF-E5N** black.

Graphic back-lit LCD display and capacitive keyboard.

VMF-E5B / VMF-E5N allows for the centralised control/operation of a complete hydronic system consisting of:

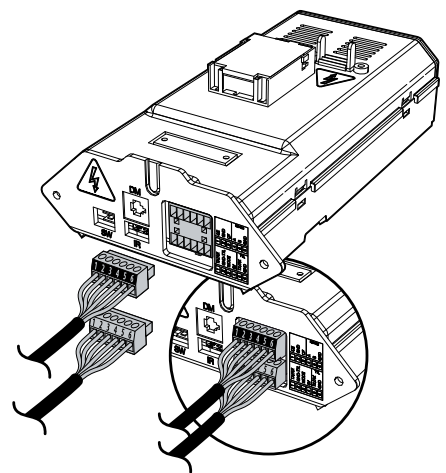
- Fan coils: up to 64 fan coil zones comprising 1 master + maximum 5 slaves.
- Chiller/heat pump equipped with controls Modu_Control, GR3 and pCO₂ / PCO₃ (required accessory RS 485 interface respectively MODU-485A, AER485, AER485P2 / AER485P1)
- Circulators: maximum of 12 configurable zone circulators.
- Boiler: boiler consensus management for hot water production.
- Heat recovery units: consents up to 3

per programmable recovery units based on the timing and/or by measuring the air quality obtained with the VMF-VOC accessory.

- Domestic hot water module: complete management of the domestic hot water production through the control of:
 - Diverting valve/circulator
 - Supplementary heater
 - Accumulation temperature probe
 - Anti-legionella circuit

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

⚠ See the accessories manual for complete information on its features.



INSTALLATION INFORMATION

- ⚠ WARNING** check that the power supply is disconnected before carrying out any procedures on the unit.
- ⚠ WARNING:** before carrying out any operation, use appropriate personal protective equipment.
- ⚠ WARNING:** the device must be installed in compliance with the national plant engineering rules.
- ⚠ WARNING:** electrical wirings, installation of the fan coils and relevant accessories should be performed by a technician who has the necessary technical and professional expertise to install, modify, extend and maintain systems, and who is able to check the systems for the purposes of safety and correct operation.
- ⚠ WARNING:** Install a device, main switch, or electric plug so you can fully disconnect the device from the power supply.
- ⚠ WARNING:** Consult all documentation before starting the installation.

The essential indications to install the device correctly are given here. The completion of all the operations in accordance with the specific requirements is however left to the experience of the installation engineer.

The water, condensate discharge and electrical circuit ducts must be provided for. The fan coil must be installed in such a position that the air can be distributed throughout the room and so that there are no obstacles (curtains or objects) to the passage of the air from the suction louvers.

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

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

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

Choose a position at the centre of the room whenever possible; adjusting the air output allows air to be distributed optimally within the room. Generally the best position of the fins is that which allows the launch of the air adhering to the ceiling for the coined effect, during cold functioning. The

opening positions are indicated on the side section of the air flow unit for correct machine operation when hot (20° opening) and cold (10° opening). There are intermediate and completely closed positions available. Thanks to the special shapes of the fins, the machine can also function with the deflectors completely closed.

The regulation of the air output allows the air to be distributed optimally in the room.

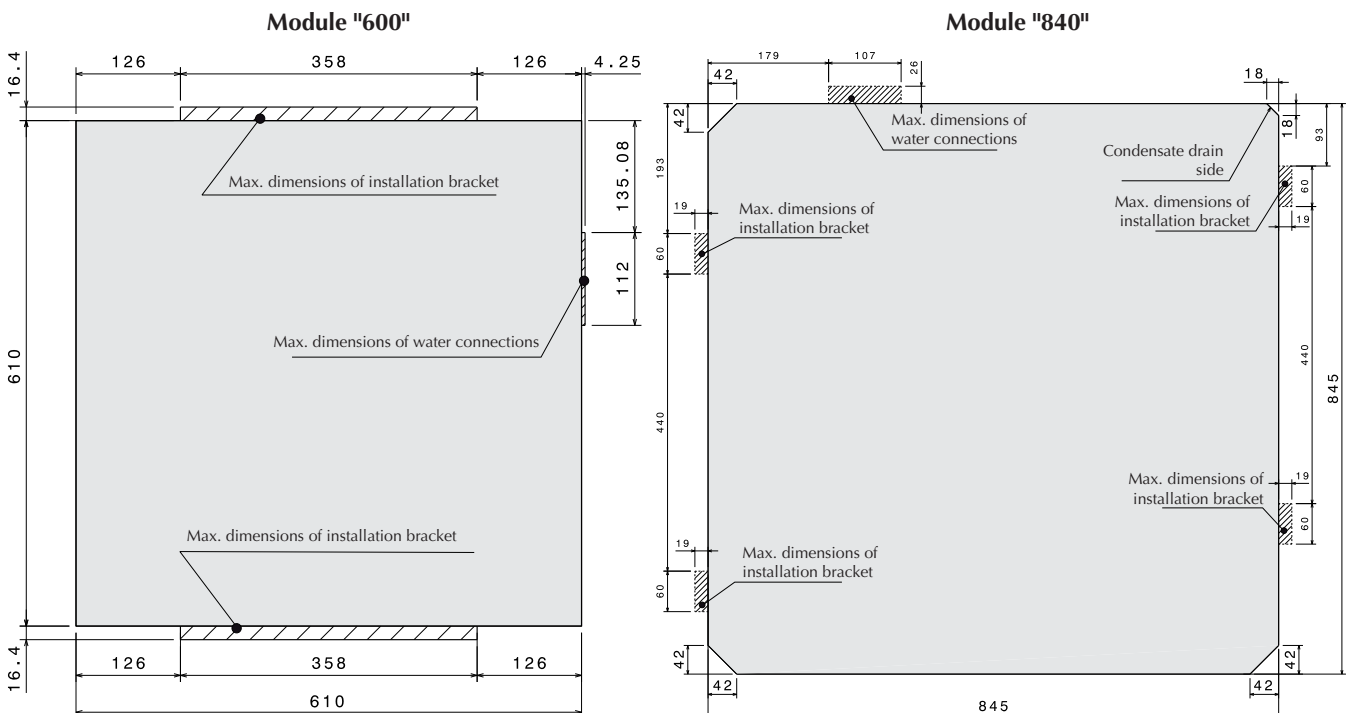
Do not install at a height above three metres.

The FCLI unit is prepared for connections with channelling for the fresh air and for the delivery of treated air to an adjacent room.

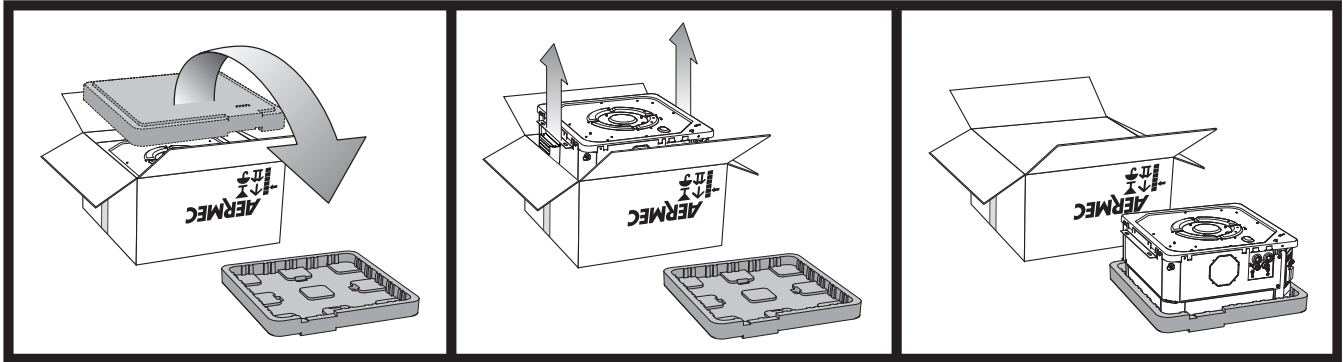
⚠ WARNING: After completing the installation check the operation of the condensate discharge system, the seal of the hydraulic fittings, insulation of ducts and pipes. Then perform a functional test. In the event of malfunction consult the Alarm Codes Table to interpret the alarms indicated by the 2 LEDs (Alarm / Power) that relay the operating status of the unit. The box with Inverter card is positioned outside the unit.

⚠ DANGER! Only qualified service personnel can access it.

RECOMMENDED INSTALLATION TEMPLATE



INSTALLING THE "MODULE 600" UNIT



- Choose the place for unit installation according to the layout of the room, the number of units to be installed, and any limitations imposed by the architecture. Check the chosen place is suitable for installation and maintenance work on the unit.
- Install four M8 threaded rods into the ceiling to hold the frame.

To install the FCLI unit, proceed as follows:

- upturn the box of the FCLI cassette-type fan coil
- open the cardboard box
- remove the box; you are advised to make cuts on the corners of the box and remove the cardboard in separate pieces
- remove the upper part of the packaging frame (that protects the unit during transportation)
- remove the fan grille and take out the Inverter
- reassemble the fan grille
- assemble the Inverter on the bracket
- If it is necessary to fit any accessories (fresh air kit or delivery to an adjacent room, hot water valve), carry out these operations before installing the machine on the ceiling.

⚠ WARNING: consult the relevant manuals of the accessories

Do not handle the unit using the water connections; use the specific brackets for this purpose.

- lift the unit carefully by means of the brackets and, keeping it slightly inclined, attach it to the 4 threaded bars using 8 nuts (4 of which are self-locking). Use the nuts to adjust the height of the unit; finally, check that the unit is installed in a horizontal position
- feed the hydraulic pipes through the suspended ceiling to the attachment plate on the unit
- make the plumbing connections as described in the relative chapter
- Take the condensate discharge piping to the relative fitting on the attachment plate
- bleed the system (the drain valve for the 2-pipe circuit is on the outside of the attachment plate). The drain valve for the heat circuit of 4-pipe systems is inside (to access it, remove the

polystyrene tray)

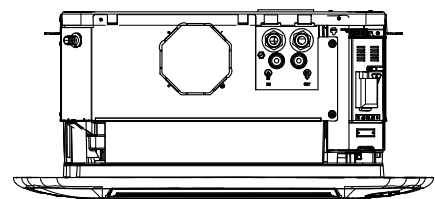
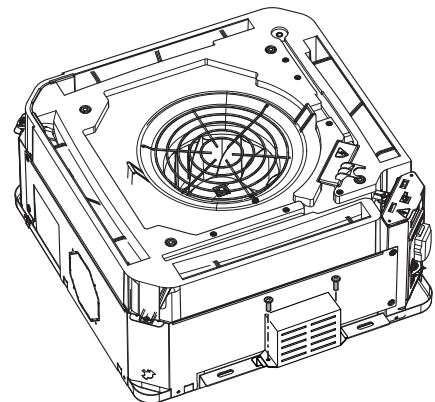
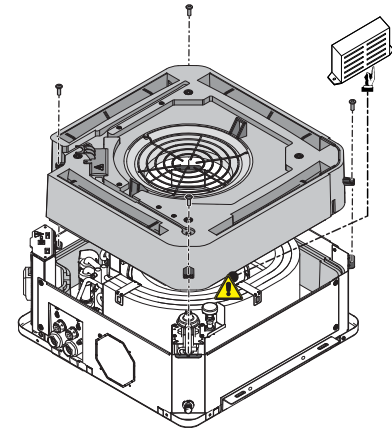
- make the condensate drainage connection as described in the relative chapter
- The electric box is supplied with the grille accessory (GLLI - GLLI_N).
- bring the power supply and command cables close to the electric box; ensure the cables are long enough to follow the movement of the electric box on the guides during the assembly and disassembly phases
- connect the Inverter to the electric box, using the cables supplied
- consult the manuals of the grille accessories; the instructions for assembling and connecting the electric box can be found in the manual supplied with the grille accessory
- After completing the connections and inserting the electric box in its seat in the FCLI unit, fix it with the two screws.

⚠ WARNING: fix the safety cable to the fixing screw of the electric box (to the side of the water connections). The snap-hook of the safety cable must then be connected to the grille frame.

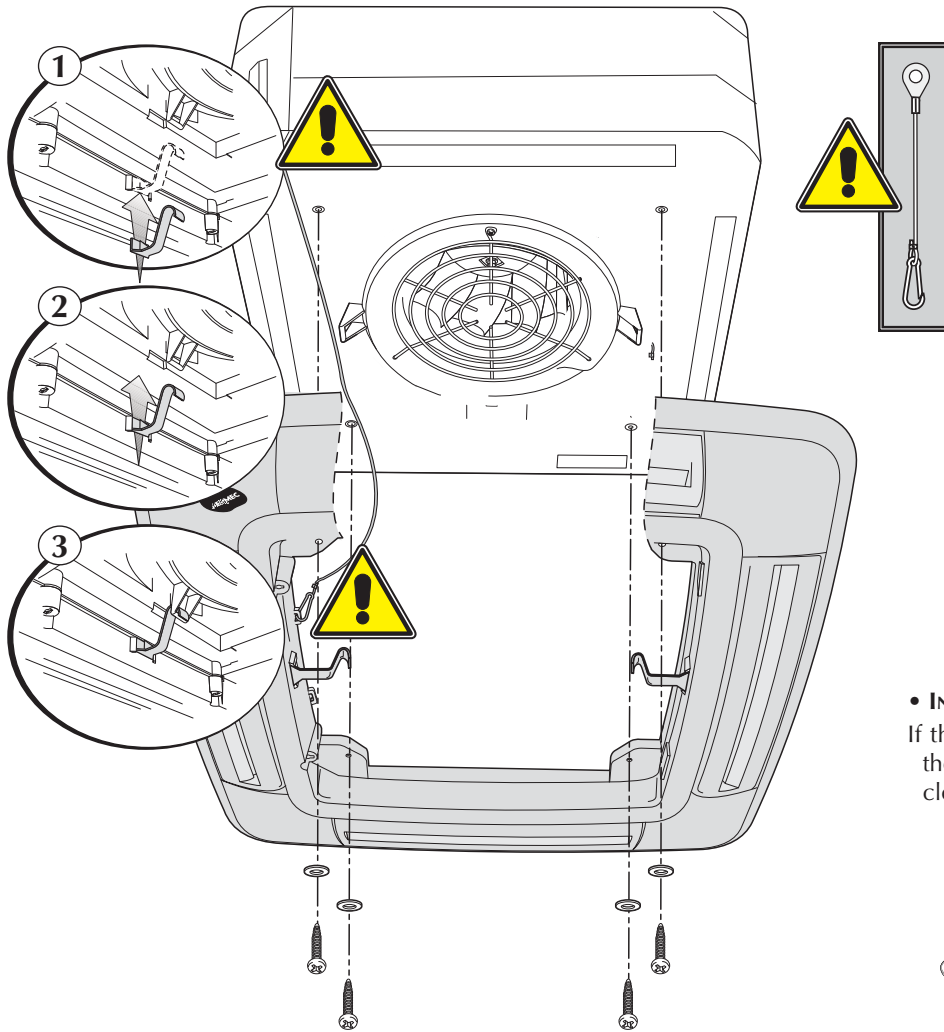
- The grille frame must be positioned so that the glass with the AERMEC logo is in line with the corner of the electric box.
- Fix the grille to the safety cable.
- Fix the grille with the 4 screws.

⚠ WARNING!! Tighten the screws with a maximum tightening torque of 0.45 Nm. You are advised to use a screwdriver. Do not use non-calibrated electric screwdrivers. The tray will be irreparably damaged if tightened too far.

- Remove the suction grille by means of the two ¼ turn bolts.
- Assemble the air filter.
- Reassemble the suction grille by means of the two ¼ turn bolts.
- adjust the position of the unit from the support bracket by means of the nuts so that the unit is level and the frame rests slightly on the suspended ceiling
- start the fan coil unit and carry out an operation test; the functions are described in the User Manual

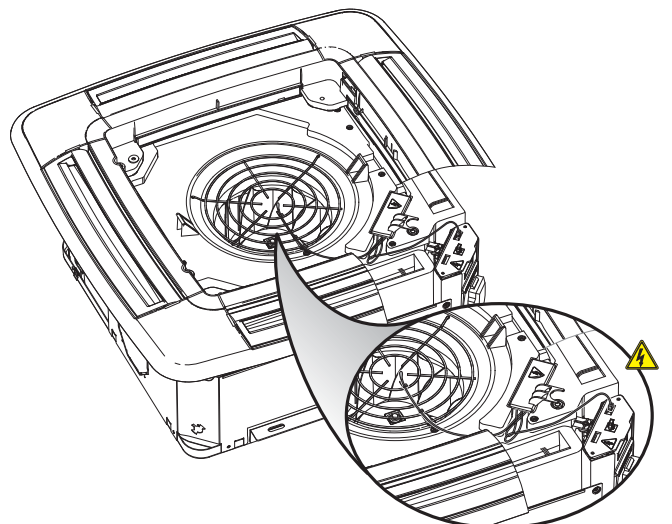
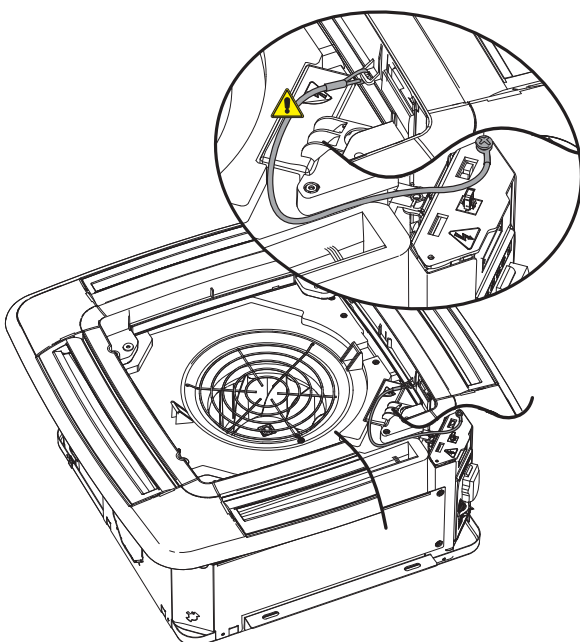
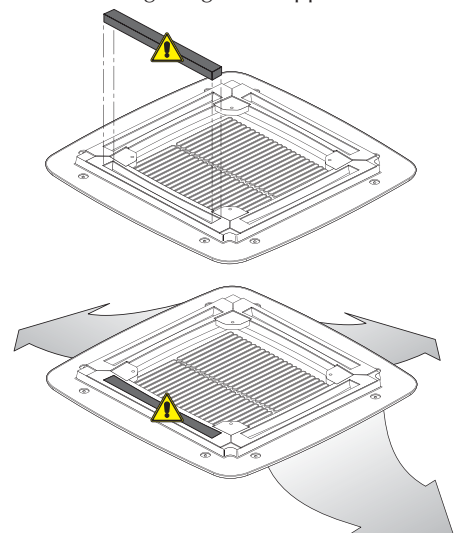


INSTALLING THE "MODULE 600" UNIT

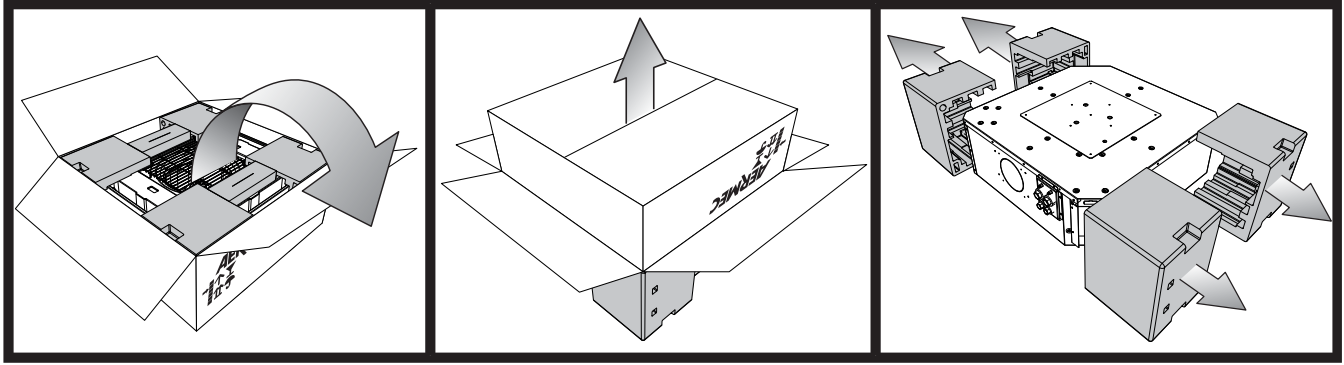


- **INSTALLING NEAR A WALL**

If the unit is to be installed near a wall, the corresponding delivery outlet can be closed using the gasket supplied.



INSTALLING THE "MODULE 840" UNIT



- Choose the place for unit installation according to the layout of the room, the number of units to be installed, and any limitations imposed by the architecture. Check the chosen place is suitable for installation and maintenance work on the unit.
- Install four M8 threaded rods into the ceiling to hold the frame.

To install the FCLI unit, proceed as follows:

- open the cardboard box
- upturn the box of the FCLI cassette-type fan coil
- remove the box
- remove the packaging shells used to protect the unit during transport
- fix the 4 installation brackets to the unit (see the figure)
- if it is necessary to fit any accessories (electric heaters, kit for fresh air or delivery to an adjacent room, hot water valve), carry out these operations before installing the machine on the ceiling

WARNING: consult the relevant manuals of the accessories

⚠ - Do not handle the unit using the water connections; use the specific brackets for this purpose.

- lift the unit carefully by means of the brackets and, keeping it slightly inclined, attach it to the 4 threaded bars using 8 nuts (4 of which are self-locking). Use the nuts to adjust the height of the unit; finally, check that the unit is installed in a horizontal position
- feed the hydraulic pipes through the suspended ceiling to the attachment plate on the unit
- make the plumbing connections as described in the relative chapter
- Take the condensate discharge piping to the relative fitting on the attachment plate
- make the condensate drainage connection as described in the relative chapter

- drain the system; the drain valves are on the outside, on the attachment plate
- bring the power supply and command cables close to the electric box; ensure the cables are long enough to follow the movement of the electric box on the guides during the assembly and disassembly phases
- The electric box is supplied with the grille accessories (GLL20)
- consult the manuals of the grille accessories; the instructions for assembling and connecting the electric box can be found in the manual supplied with the accessory
- After completing the connections and inserting the electric box in its seat in the FCLI unit, fix it with the two screws.

- The grille frame must be positioned so that the glass with the AERMEC logo is in line with the corner of the electric box.

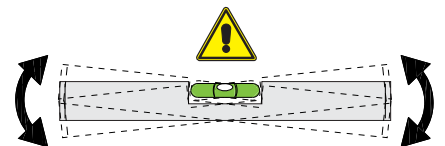
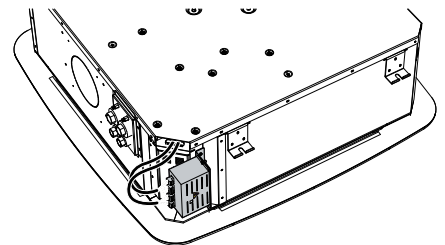
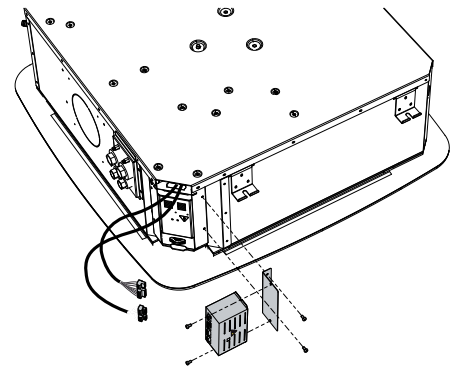
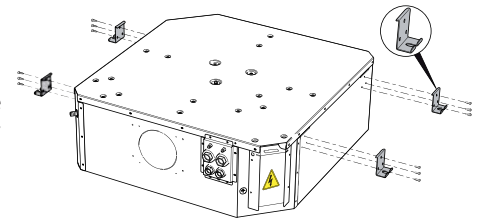
- Fix the grille with the 4 screws.

⚠ WARNING!! Tighten the screws with a maximum tightening torque of 0.45 Nm. You are advised to use a screwdriver. Do not use non-calibrated electric screwdrivers. The tray will be irreparably damaged if tightened too far.

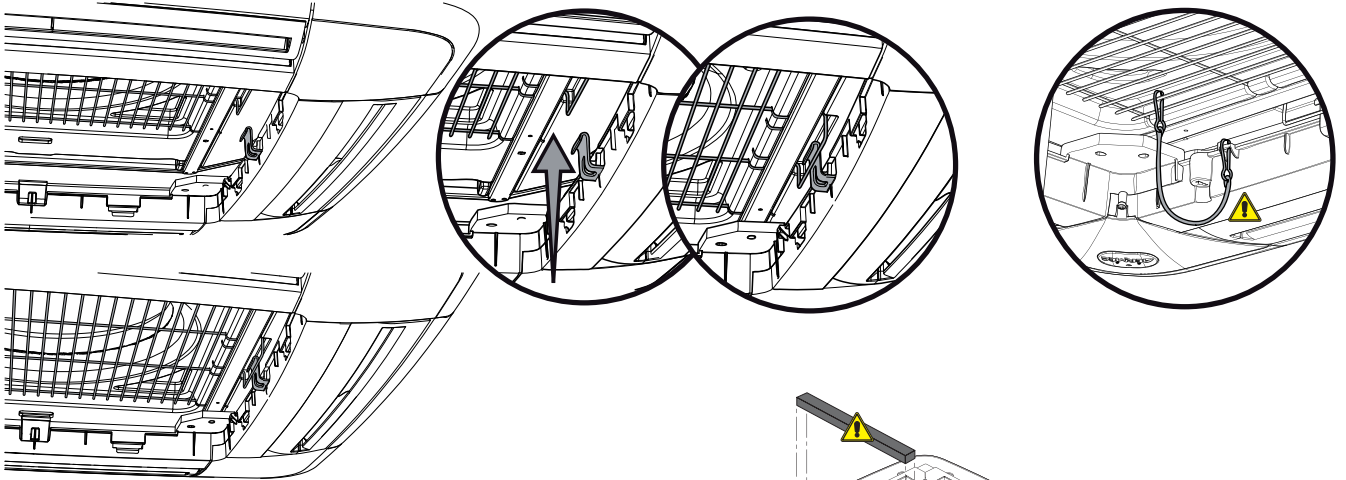
- **⚠ WARNING:** fix one snap-hook of the safety wire to the grille frame, and the other to the fan protection grille.

- **⚠ Fasten the suction grille to the safety wire.**

- adjust the position of the unit from the support bracket - by means of the nuts
 - so the unit is level and the frame rests slightly on the suspended ceiling
- start the fan coil unit and carry out an operation test; the functions are described in the User Manual

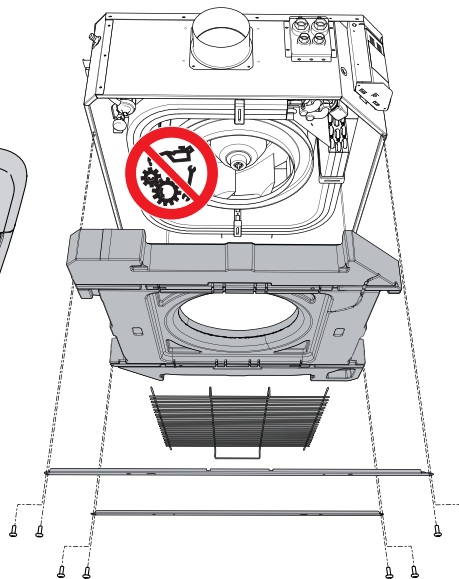
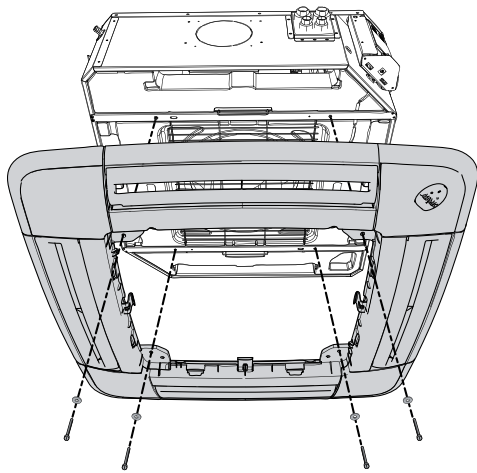
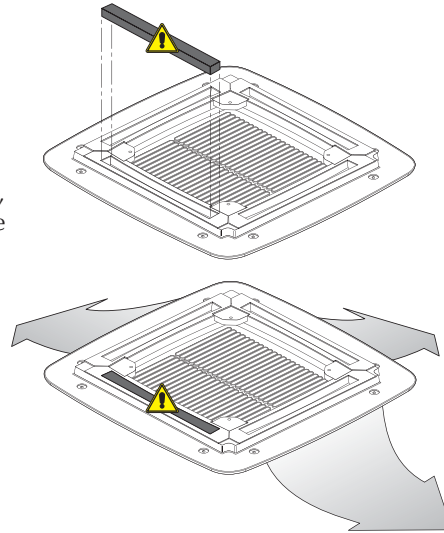


INSTALLING THE "MODULE 840" UNIT



• Installing near a wall

If the unit is to be installed near a wall, the corresponding delivery outlet can be closed using the gasket supplied.



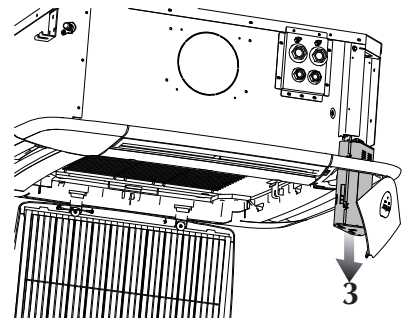
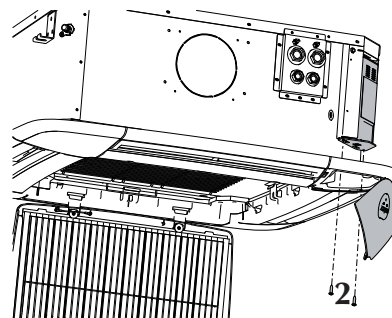
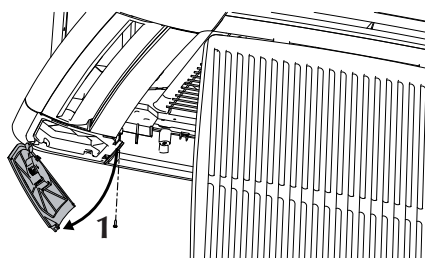
• Disassembling for maintenance purposes

- Before carrying out any operations on the unit, it is essential to disconnect it from the power supply.
- To access the inside of the unit, remove the two crossbars that are screwed to the frame. It will then be possible to remove the fan protection grille and the polystyrene tray (see the figure)
- ⚠ - **DANGER!!** Before re-powering the unit, check you have correctly reassembled all the components and in particular the protection grille.

- **Maintenance of the electric box**
- If you need to access the electric box for maintenance purposes, observe the following indications:
- open the filter grille (make a ¼ turn of

- the two bolts)
- remove the screw that blocks the corner hatch (with the Aermec logo)
- remove the 2 screws that block the electric box

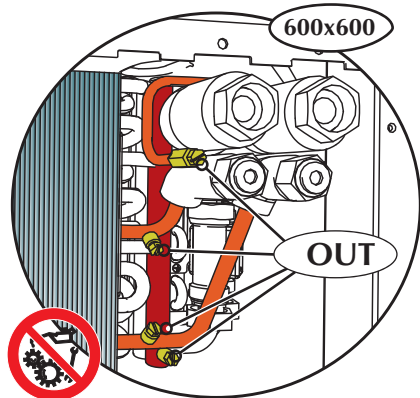
- pull the electric box downwards
- carry out the maintenance work
- reassemble everything, following the above instructions in the reverse order



CONNECTIONS

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

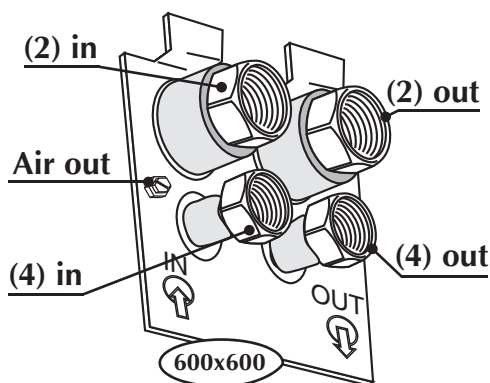
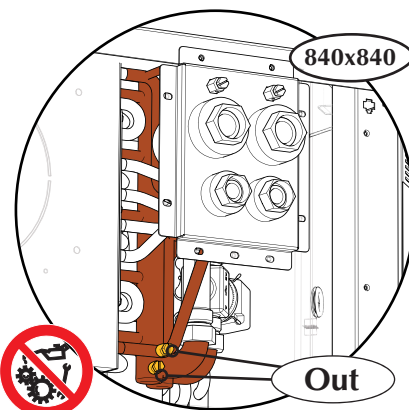
HYDRAULIC CONNECTIONS



The water connections are made with flat fittings complete with seal gaskets (supplied). In the **4-pipe** version of the unit, it is **essential** to install the valve accessory for the hot water coil; use the supplied gaskets. The accessory comes complete with gaskets for connection to the system.

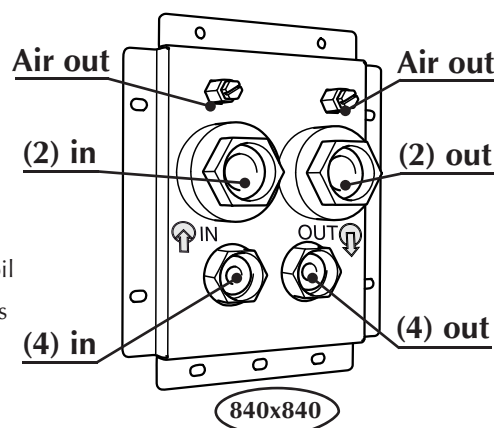
Information for the correct installation of the valve is contained in the accessory instruction booklet.

The delivery and return pipes must be equal, suitably scaled and insulated to avoid heat dispersion and dripping during cooling operation.



CONNECTIONS

- (2) = Standard coil connections
- Air = Air vent of the standard coil
- (4) = Hot water coil connections



Mod. FCLI		32	34	42	44	62	82	122	124
Standard coil connections (2)	diam.	3/4"F	3/4"F	3/4"F	3/4"F	3/4"F	3/4"F	3/4"F	3/4"F
Additional coil connections (4)	diam.	3/4"F	1/2"F	1/2"F	3/4"F	1/2"F	3/4"F	3/4"F	1/2"F

CONDENSATE DISCHARGE CONNECTION

During cooling operation the indoor unit removes humidity from the air. The condensate water must be eliminated by connecting the appropriate discharge coupling to the piping of the condensate discharge system.

In units with "Module 600", the polystyrene tray has a hole that allows for the complete draining of the condensate (useful in the case of disassembly). **The drainage hole must always be closed again with the rubber plug provided.**

The units are fitted as standard with a pump/float device for raising the condensate from the tray to the drainage point; it consists of an electronic card, an electric pump with non-return valve, and a float with a 3-level sensor (ON, OFF and Alarm).

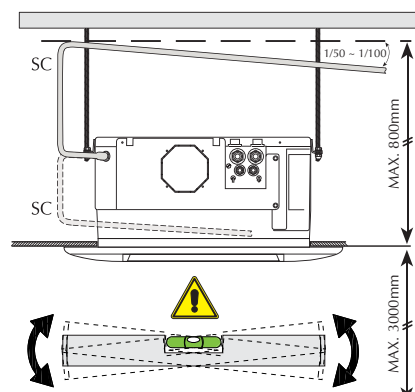
The power supply for the float/pump device must never be interrupted.

In the event of an alarm, the float device interrupts the flow of water in the coil. The tray is fitted with an overflow hole to ensure that the condensate water runs off if the floating pump device is not working. In this case dripping can be seen from the grille.

The pump allows a maximum head of 80cm from the level of the suspended ceiling; if this is not high enough you will have to use an auxiliary device.

You are advised to use rigid piping that is heat-insulated, to avoid condensation on the outer surfaces.

SC = Condensate discharge (male Ø 16mm)



to be assembled inside the unit.

CONNECTIONS FOR THE SUCTION OF FRESH EXTERNAL AIR

The unit can be connected to a fresh air suction conduit via the circular flange accessory applied to the vent. The application of the flange requires a

hole to be opened up on the side. The connection with the outside is direct, regardless of unit ventilation. The accessory also includes a deflector,

CONNECTIONS FOR THE DELIVERY OF TREATED AIR TO AN ADJACENT ROOM

The unit can be connected to a conduit for delivering treated air to an adjacent

room via the circular flange accessory. The application of the flange requires a

hole to be opened up on the side.

ELECTRICAL WIRINGS

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

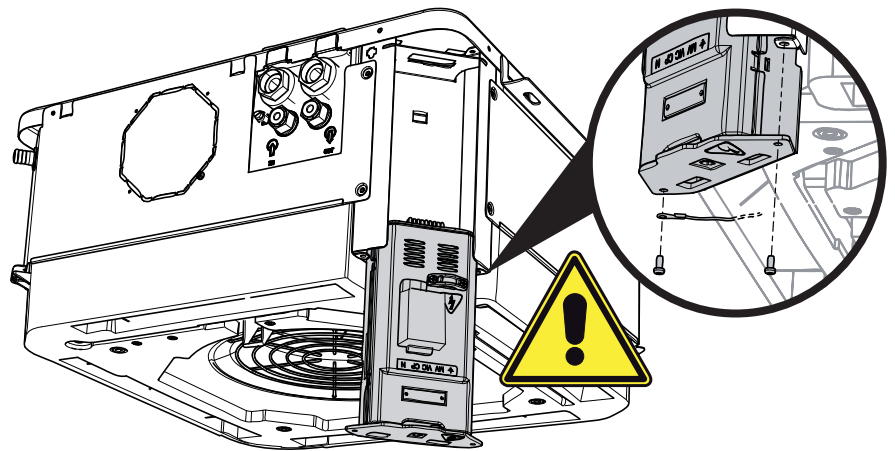
The FCLI cassette-type fan coils must be powered with a current of 230V ~50Hz with an earth connection; the line voltage must however remain within the tolerance of $\pm 10\%$ compared with the nominal value.

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

The electrical power cable must be of the H07 V-K or N07 V-K type with 450/750V insulation if inside a tube or raceway. Use cables with double H5vv-F type insulation for visible cable installation.

For all the connections, follow the wiring diagrams supplied with the device and

shown in this documentation. The electric box is supplied with obligatory accessories (GLLI - GLLI_N).

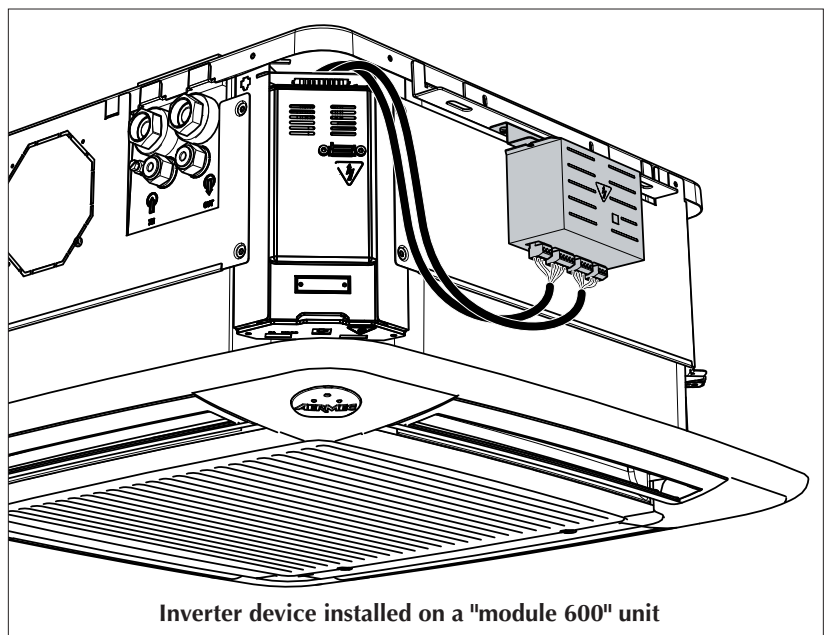
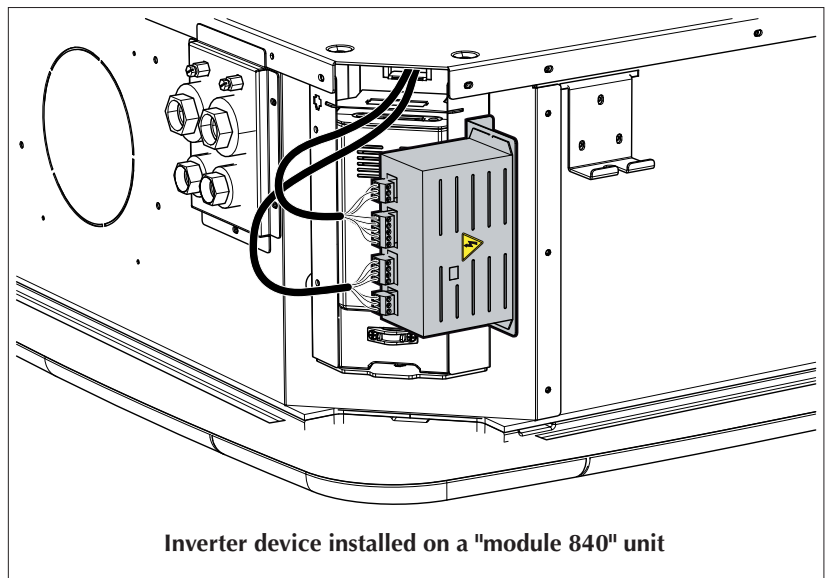


Connect the Inverter to the electric box, using the cables supplied.

⚠ WARNING: Do not modify the settings of the Inverter device. Any modification to the parameters could cause the device to malfunction. The factory settings are shown on the label attached to the unit.

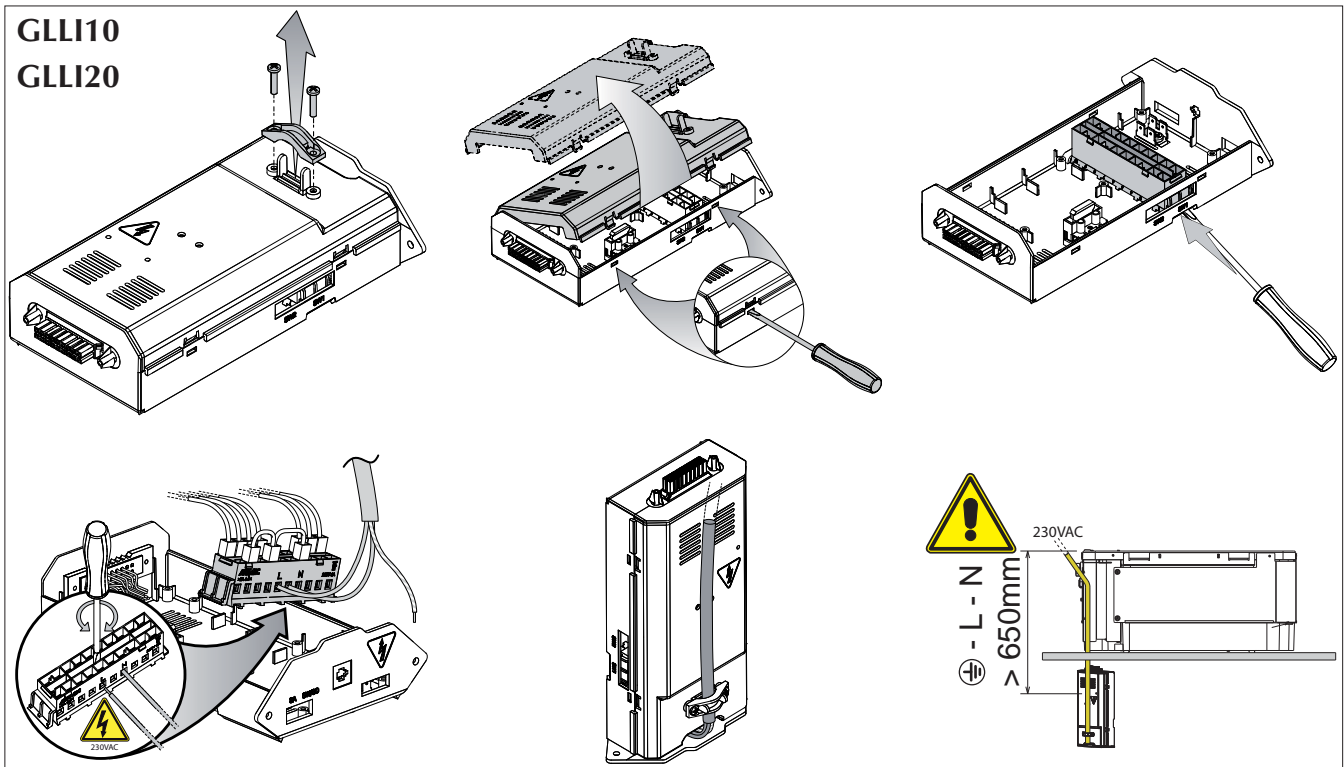
⚠ The 4 connectors between the unit and inverter are different.

This makes the fitters' work easier and prevents erroneous connections.



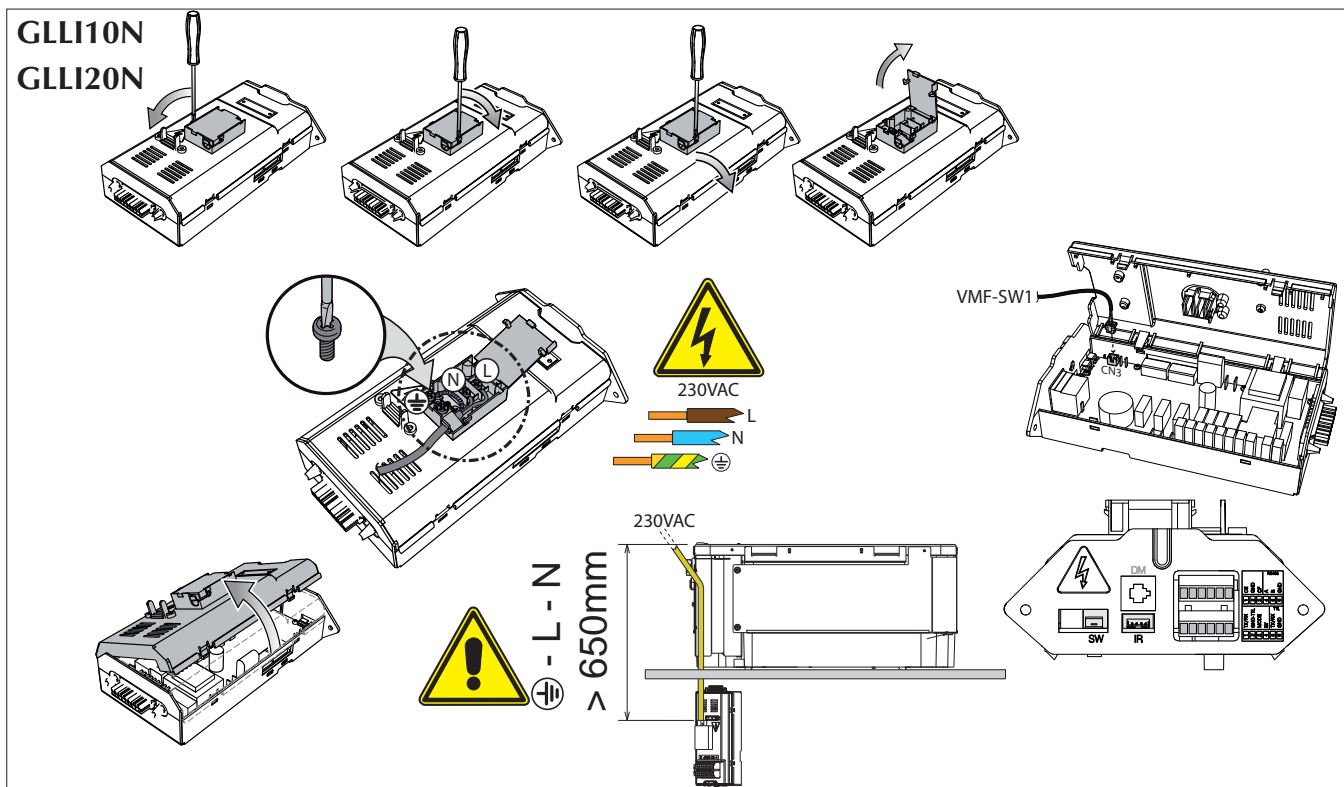
ELECTRICAL CONNECTIONS WITH GLLI10 AND GLLI20 ACCESSORIES

Connect a control panel with thermostat and ventilation speed control, with 0-10V output. For the connections, refer to the wiring diagrams of the fan coil and control panel.

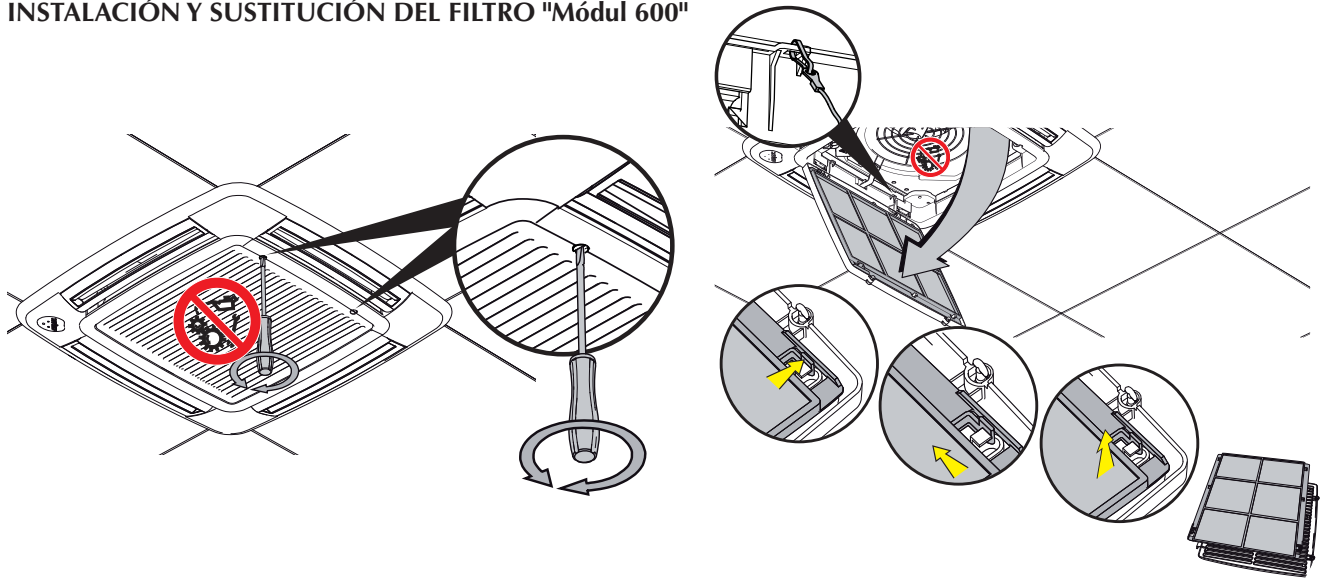


ELECTRICAL CONNECTIONS WITH GLLI10N AND GLLI20N ACCESSORIES

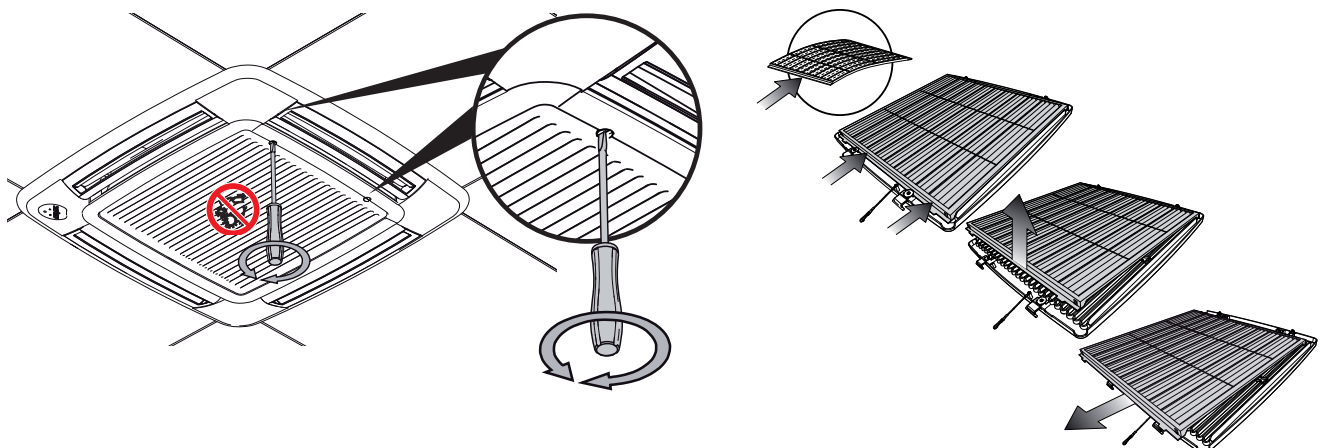
Before installing the electric box, the configuration of the electronic board dip-switches needs to be checked in order to adjust the board to the system. The diagram for configuring dip-switches is included in the GLLI_N accessories manual. Connect the VMF-E4 control panel, supervision network cable, TTL network cable, and probe and valve cables based on system requirements. For the connections, refer to the wiring diagrams of the fan coil and connected accessories.



INSTALLAZIONE E SOSTITUZIONE DEL FILTRO "Modulo 600"
INSTALLATION AND REPLACEMENT OF THE "Module 600" FILTER
INSTALLATION ET REMPLACEMENT DU FILTRE "Module 600"
INSTALLATION UND AUSTAUSCH DES FILTERS "Modul 600"
INSTALACIÓN Y SUSTITUCIÓN DEL FILTRO "Módul 600"



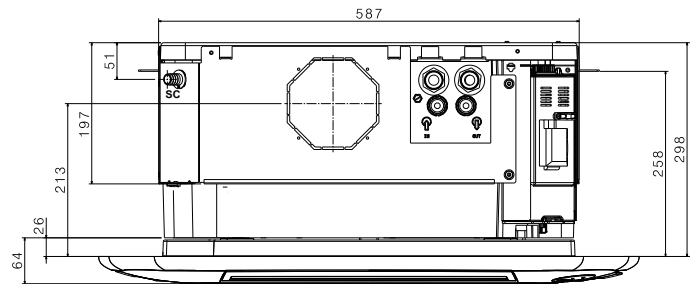
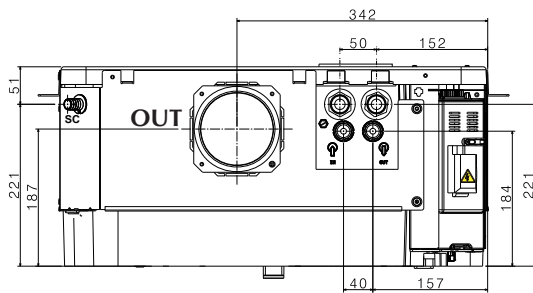
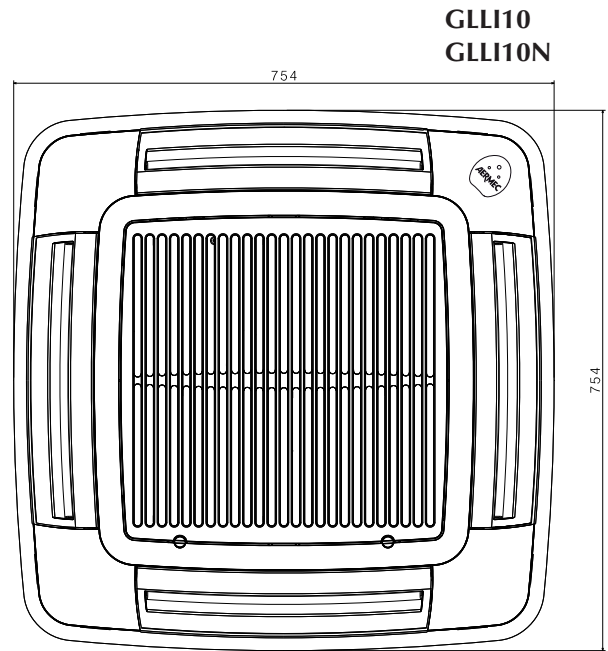
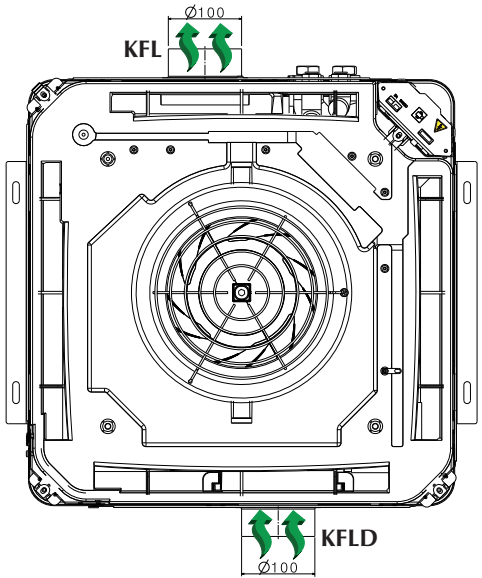
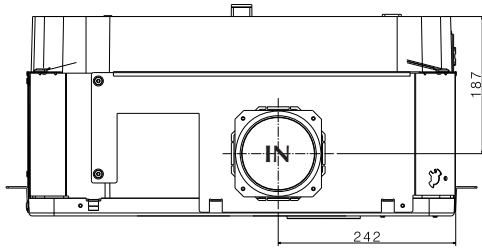
INSTALLAZIONE E SOSTITUZIONE DEL FILTRO "Modulo 840"
INSTALLATION AND REPLACEMENT OF THE "Module 840" FILTER
INSTALLATION ET REMPLACEMENT DU FILTRE "Module 840"
INSTALLATION UND AUSTAUSCH DES FILTERS "Modul 840"
INSTALACIÓN Y SUSTITUCIÓN DEL FILTRO "Módul 840"



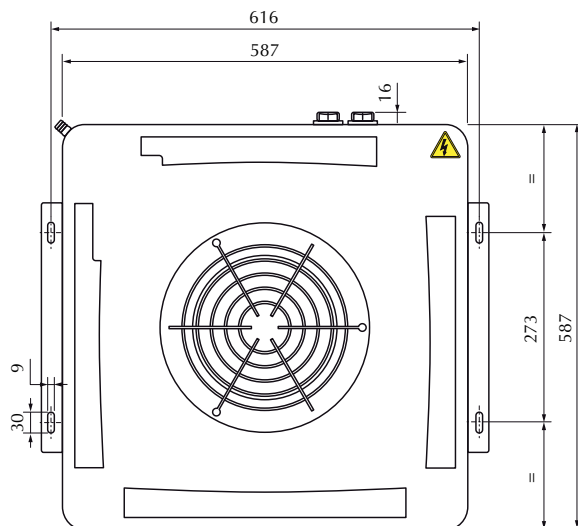
PERICOLO: Togliere tensione prima d'iniziare le operazioni di pulizia del filtro e/o dell'unità.
DANGER: Switch off power supply before cleaning filter and/or unit.
DANGER : Couper la tension avant de commencer les opérations de nettoyage du filtre et/ou de l'unité.
GEFAHR: Vor der Reinigung des Filters und/oder des Gerätes die Stromversorgung abschalten.
PELIGRO: Quitar la tensión antes de iniciar las operaciones de limpieza del filtro o de la unidad.

DATI DIMENSIONALI • DIMENSIONS • DONNÉES DES LES DIMENSIONS • ABMESSUNGEN • DATOS DIMENSIONALES [mm]

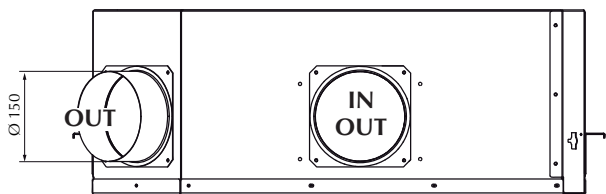
- FCLI 32
- FCLI 34
- FCLI 36
- FCLI 42
- FCLI 44
- FCLI 62
- FCLI 64



FCLI		32	34	36	38	42	44	62	64
FCLI	kg	20.5	21.0	20.5	21.0	20.5	21.0	22	22.5
FCLI_V2	kg	20.5	21.0	20.5	21.0	20.5	21	21	22.5
FCLI_VL	kg	20.0	20.5	20.0	20.5	20.0	20.5	21.5	22

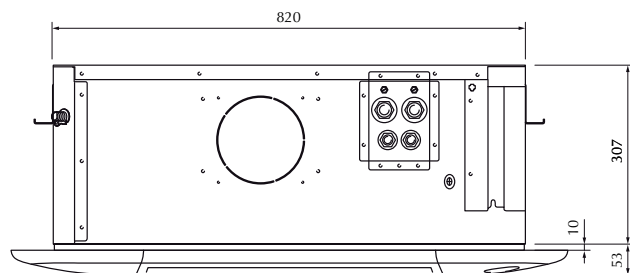
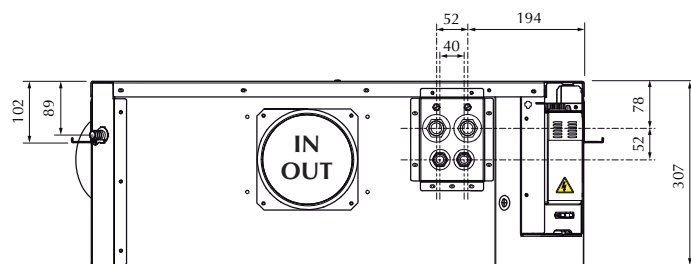
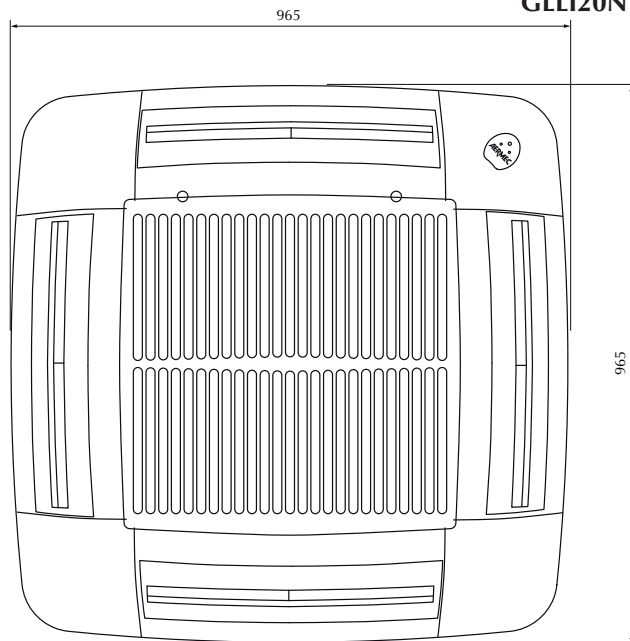
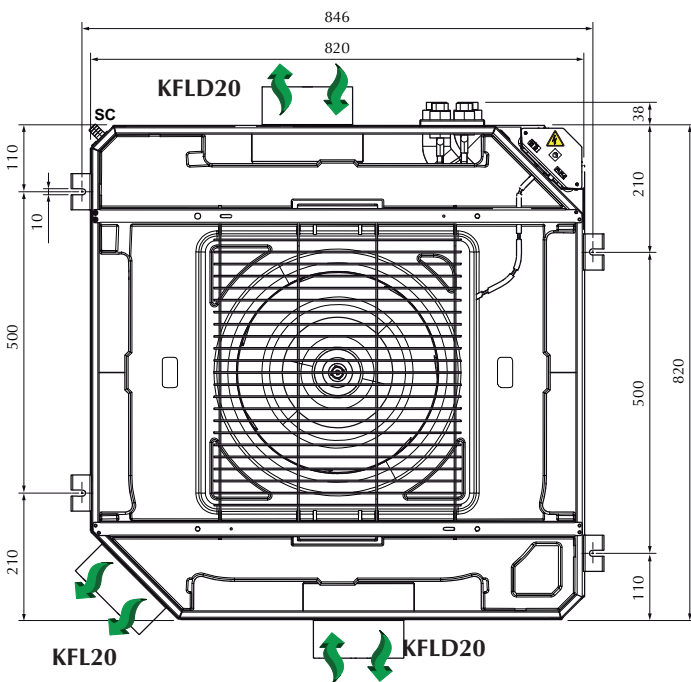


**DATI DIMENSIONALI • DIMENSIONS • DONNÉES DES LES DIMENSIONS
 ABMESSUNGEN • DATOS DIMENSIONALES [mm]**

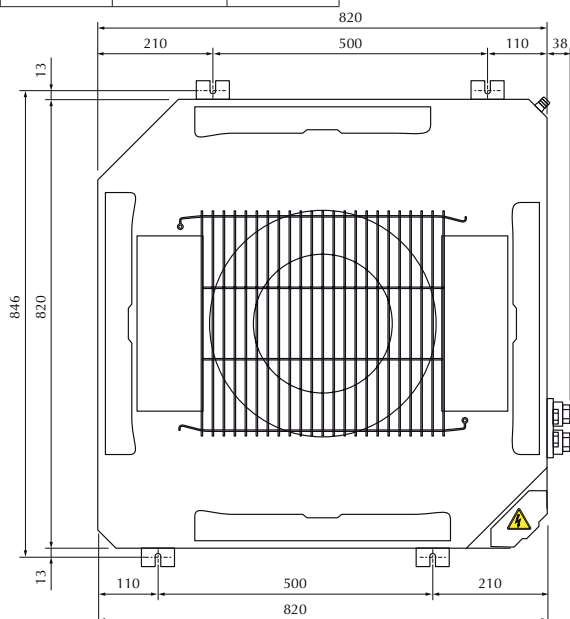


FCLI 82
 FCLI 122
 FCLI 124

GLLI20
 GLLI20N



		FCLI	82	122	124
FCLI_	[kg]		36	36	36
FCLI_V2	[kg]		36	36	36
FCLI_VL	[kg]		35	35	35



ALARM CODES

This section is reserved for the After Sales service only.
 The card is located inside the unit and requires dismantling.
DANGER! Only qualified service personnel can access it.

There are 2 LEDs on the Inverter card (Alarm / Power) that indicate the unit's operating status.
 The table below shows how to decode the messages.

ALARM TYPE	INDICATIONS	IRREGULARITY	Notes
High temperature	ALARM LED flashes 3sec ON 0.5sec OFF The LED if permanently ON after 1.5min	Motor off	Auto-Restart Alarm. If the conditions persist after 1.5min, the alarm becomes permanent, the Alarm LED stays on, the system turns off.
Overvoltage			
Undervoltage			
Overcurrent			
Overload	ALARM LED flashes 0.5sec ON 0.5sec OFF	Speed reduction	Power limitation
Safety control			Temperature limitation
STOP	Alarm LED permanently on	Motor off	For alarms reset: Set 0V ON INPUT (turn the power off and then on again)



AERMEC

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