

# TECHNICAL MANUAL



Variable Multi Flow  
VMF



INVERTER  
TECHNOLOGY

## CASSETTE-type fan coil with Inverter

**FCLI 32 (600x600)**

**FCLI 82 (840x840)**

**FCLI 34 (600x600)**

**FCLI 122 (840x840)**

**FCLI 42 (600x600)**






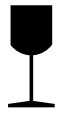



**FCLI 124 (840x840)**

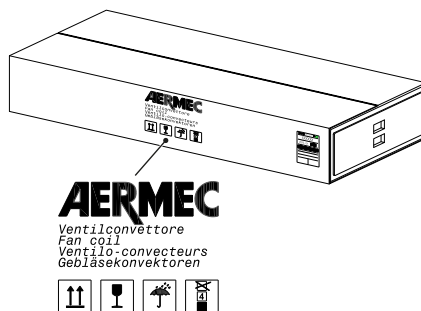
**FCLI 44 (600x600)**

**FCLI 62 (600x600)**

**FCLI 64 (600x600)**



TRASPORTO • TRANSPORT • TRANSPORT • TRANSPORT • TRANSPORTE					
	NON bagnare. Tenere al riparo dalla pioggia.	KEEP DRY. Keep out of the rain.	NE PAS mouiller. Tenir à l'abri de la pluie.	NICHT nass machen. Vor Regen geschützt anbringen	NO mojar. Conservar protegido de la lluvia.
	NON calpestare.	DO NOT step on unit.	NE PAS marcher sur l'appareil.	NICHT betreten .	NO pisar.
	Sovrapponibilità: controllare sull'imballo per conoscere il numero di macchine impilabili.	Stackability: check the package to know the number of stackable machines.	Empilement : vérifier sur l'emballage le nombre d'appareils empilables.	Stapelbarkeit: Auf der Verpackung nachsehen, wie die Anzahl der stapelbaren Geräte lautet.	Superponibilidad: observar en el embalaje la cantidad de máquinas que pueden apilarse.
	NON trasportare la macchina da soli se il suo peso supera i 25Kg.	DO NOT carry the equipment alone if weight exceeds 25Kg.	NE PAS faire transporter l'appareil par une seule personne si son poids est supérieur à 25kg.	NICHT das Gerät allein transportieren, wenn sein Gewicht die 25kg übersteigt.	NO transportar la máquina solos si su peso es superior a los 25Kg.
	NON lasciare gli imballi sciolti durante il trasporto. Non rovesciare.	DO NOT leave boxes unsecured during transportation. Do not overturn.	NE PAS laisser les emballages sans attaches durant le transport. Ne pas renverser.	NICHT die Verpackungen während des Transports geöffnet lassen. Nicht stürzen.	NO dejar los embalajes sin sujetar durante el transporte. No invertir.
	Fragile, maneggiare con cura.	Fragile, handle with care.	Fragile, manipuler avec soin.	Zerbrechlich, sorgfältig handhaben.	Frágil, manipular con cuidado.
SIMBOLI DI SICUREZZA • SAFETY SYMBOL • SIMBOLES DE SECURITE SICHERHEITSSYMBOLS • 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:** the fan coil is connected to the power supply and a water circuit. Operations performed by persons without the required technical skills can lead to personal injury to the operator or damage to the unit and surrounding objects.

**ONLY SUPPLY THE FAN COIL WITH SINGLE-PHASE 230 VOLT ELECTRICITY**  
Use of other power supplies could cause permanent damage to the fan coil.

**DO NOT USE THE FAN COIL IMPROPERLY**

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

**DO NOT TUG THE ELECTRICAL CABLE**

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

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

**DO NOT PUT ANYTHING IN THE AIR OUTLETS**

Do not put anything at all in the air outlet slots.

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

**WARNING**

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard."

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.



**AIRING THE ROOM**

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

**CORRECTLY REGULATING THE TEMPERATURE**

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

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

**CORRECTLY ADJUSTING THE AIR JET**

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.

**DURING OPERATIONS**

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

**WHAT IS NORMAL**

During cooling function, water vapour may be present in the air delivery.

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).

**ATTENTION:** reserved solely to the After-sales service/assistance. On the Inverter board there are 2 LED (Alarm/Power) indicating the operating status of the unit. The table for decoding the messages can be found in the installation chapter.

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## DESCRIPTION OF THE UNIT

### PURPOSE OF THE FCLI CASSETTE MODULATING FAN COIL

The fan coil is a terminal used to treat air, both during winter and summer.

The Cassette modulating fan coils of the FCLI series with brushless type inverter motor (ie without brushes) are different from the traditional fan coils because they offer a better climatic, acoustic comfort and energy saving.

### FCLI CASSETTE

Cassette Type Fan Coil with Inverter for installation in suspended ceiling, integrable in standard panels 600x600 and 840x840 in larger sizes.

The FCLI cassette type fan coil is a terminal for the conditioning of air in a room. The FCLI concentrates high technological and functional features that make it the ideal means for air conditioning for all environments.

The supply of heated air is distributed throughout the room thanks to the flow louvers oriented in the four directions. FCLI heats the room if included in a heating system with boiler or heat pump. However, it 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 systems with 2 and 4 pipes.

The unit is mounted in a suspended ceiling with the possibility of sending conditioned air to adjacent rooms and introducing external air independently from unit ventilation.

### ADVANTAGES

- The set temperature is maintained with utmost precision, the continuous modulation of the fan speed prevents oscillations due to speed changes or succession of on-off cycles.
- The acoustic comfort is remarkable, since there are no abrupt changes between the various speeds, you cannot hear the noise changes from one speed to another, or the change between off and on. The type of motor and control used also allow a minimum rotation speed must lower than that of traditional models (even less than half) and so, not only is the average noise must lower, but above all it is the feeling of actual noise (e.g. if the traditional

fancoil in a bedroom alternates cycles at minimum speed and fan off cycles, what we perceive is not the average noise, but the noise of when it is running at minimum speed).

- Energy saving thanks to the use of brushless motor that allows for greater efficiency, even under normal conditions. For comparison we have created a display that we will use during fairs and events, where we have installed two of our fan coils of the same size, one with traditional motor and the other with brushless. On an equal number of motor revs (and so with same air flow rate), the reduction in input power of the fan coil with brushless

motor exceeds 50%. The inverter is a system that automatically reduces the revs and the input, allowing the fan coil to work partialised, with significant savings on annual management costs. The more efficient distribution system contributes in improving the energy class of the building. The electronic control of the number of revs allows ensuring and controlling the peak phase, avoiding input peaks typical of this phase had with asynchronous motors. Obviously these benefits increase in the installation with the increasing of the number of FCLI fan coils present.

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## DESCRIPTION OF THE UNIT

### MACHINE PURPOSE

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

### FCLI VERSION

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

### AVAILABLE SIZES

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

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)

### GRILLE UNIT (OBLIGATORY ACCESSORY)

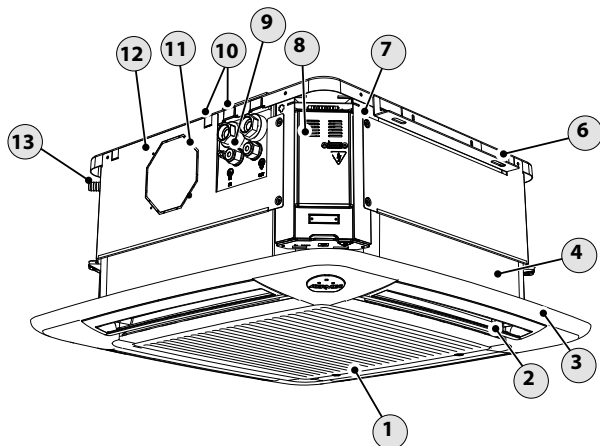
GLLI100/GLFI10/GLLI100N/GLFI10N/GLFI10M/GLLI100EH/GLFI10EH - GLLI 20 (840x840): Grille unit with suction and delivery filter, with manually adjustable fins; requires an external control panel with thermostat and ventilation speed control, with 0-10V output.



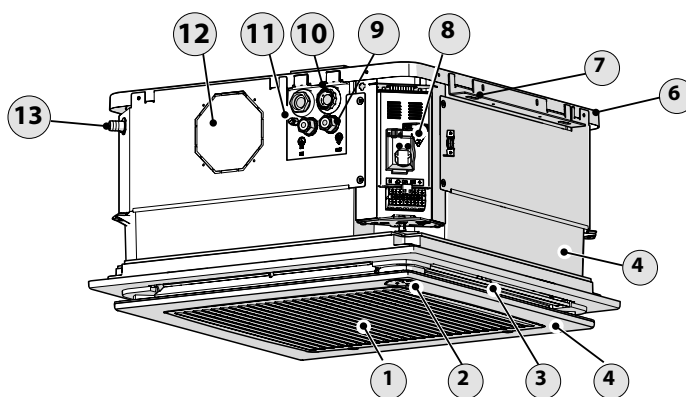
## MAIN COMPONENTS

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

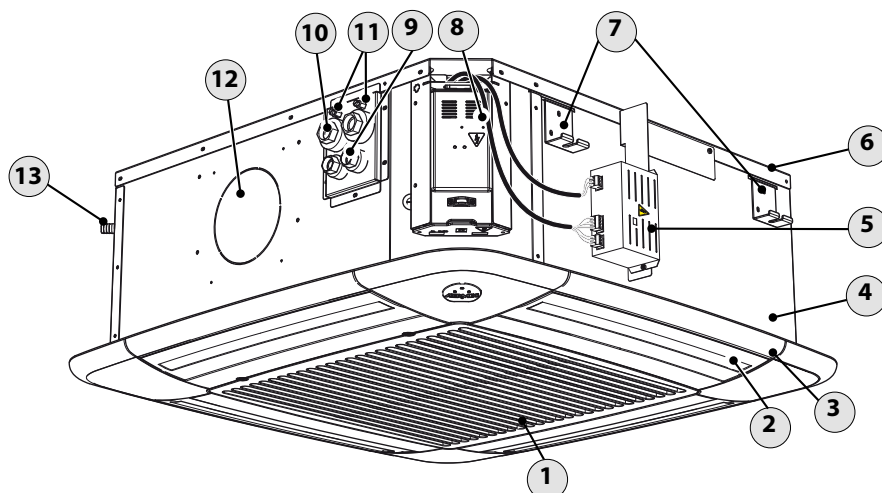
FCLI (module 600)  
(GLLI100) (GLLI100N) (GLLI100EH)



FCLI (module 600)  
(GLFI10) (GLFI10N) (GLFI10M) (GLFI10EH)



FCLI (Module 840)  
GLLI 20



## DESCRIPTION

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. 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. Thanks to its dimensions, the FCLI with "module 600" can be perfectly integrated in standard 600x600 suspended ceiling panelling.

### BASE

The unit has an integrated metal structure.

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 clamps 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.

### THREE-WAY VALVE

Internal 3-way valve, of the all-or-nothing type, 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 three-phase brushless electric motor is powered by a dedicated inverter device that allows the ventilation speed to be continuously varied.

The electric motor is cushioned with elastic supports and the steel shaft is mounted on bearings and resists salty fog in accordance with ASTM B117/64.

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

#### CONDENSATE DISCHARGE DEVICE

The condensate discharge device disposes of the condensate that is produced by the unit and deposited in the polystyrene basin. The device consists of a control board, a non-return valve, a 3-level float, and a pump with a maximum head of 800mm. The unit can be easily connected to the condensate discharge system by means of a plastic connector with an external Ø of 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.

#### WATER 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.

#### GLLI/ GLFI (Accessory)

Suction and delivery grille unit

The grille is part of the GLLI100/GLLI110 GLLI100N/GLLI10N/ GLLI10M GLLI100EH/GLFI100EH and GLLI20 range grille unit (obligatory accessory).

The form and opening of the intake slats were developed in order to have the best possible distribution of the air, both when function-

ing 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/GLFI need to be interfaced with an external control panel (not included) with thermostat and ventilation speed control, with a 0-10V output.

#### FILTERING SECTION

Mechanical air filter with ABS frame, colour RAL9010.

Filter in self-extinguishing class V0 (UL94).

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

#### CONTROL PANEL

Use a control panel with thermostat and ventilation speed control, with 0-10V output.

## SYSTEM EXAMPLES

**Key:**

SA  
SW

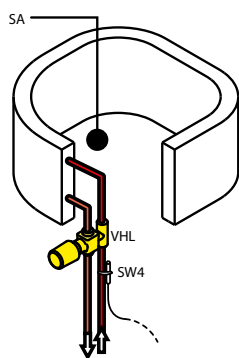
Ambient probe;  
Water probe

RXLE  
VHL  
VHL1/2/20/22

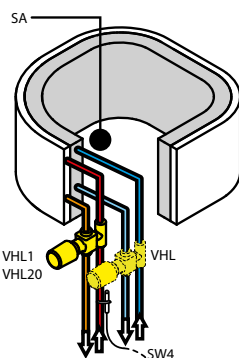
Heater  
Water valve (inside the unit)  
Hot valve

#### FCLI (Standard)

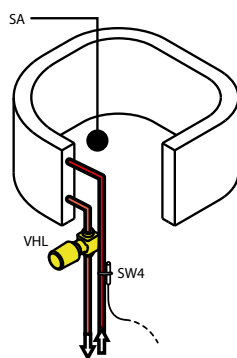
##### 2-pipe system



##### 4-pipe system

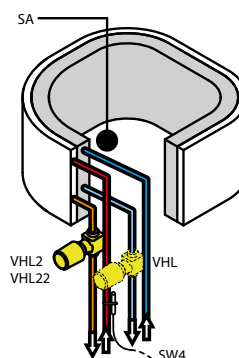


##### 2-pipe system



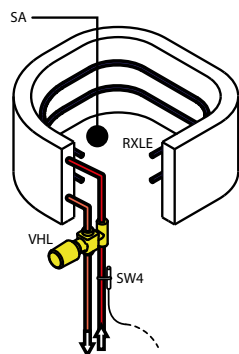
#### FCLI (V2)

##### 4-pipe system



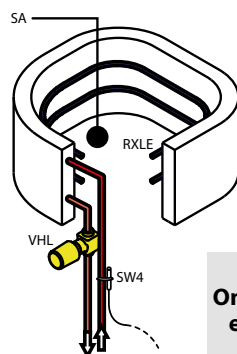
#### FCLI (Standard) with electric heater

##### 2-pipe system



#### FCLI (V2) with electric heater

##### 2-pipe system

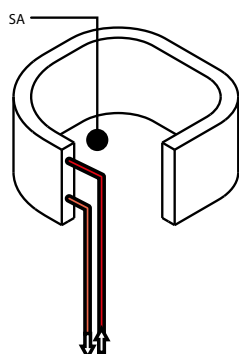


#### RXLE

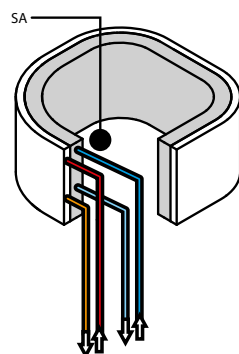
Only for models and configurations that envisage heating with an electric heater

#### FCLI (VL) without valves

##### 2-pipe system



##### 4-pipe system



For units without valve on the machine, check compatibility with accessories

## TECHNICAL DATA AND OPERATING LIMITS

	FCL1	32	34	42	44	62	64	82	122	124
Maximum recommended temperature	65°C									
Maximum water inlet temperature	80°C									
Maximum operating pressure	kPa 800 (8 bar)									
Minimum operating pressure	kPa 100 (1 bar)									
Room temperature limit R.T.	0°C<Ta<40 °C									
Room temperature limit R.H.	R.H.< 85%									
Minimum delivery (heating)	°C	100	50	100	50	150	50	250	350	50
Maximum delivery (heating)	°C	750	400	750	400	1050	400	1750	2450	400
Minimum delivery (cooling)	°C	100	100	100	100	150	150	250	350	250
Maximum delivery (cooling)	°C	750	750	750	750	1050	1050	1750	2450	1750
Maximum input current	A	0.22	0.22	0.33	0.33	0.37	0.37	0.75	0.75	0.75
Power supply	V / Hz	230V (±10%) 50 Hz						230V (±10%) 50/60 Hz		

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 to 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

(plastics and metals), this does not however cause damage to the unit if the maximum operating temperature is not exceeded.

### Minimum average water temperature

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

deposited on any objects underneath and on the floor.

To avoid condensate on the external structure of the apparatus with the fan in operation, the average temperature of the water must not be lower than the limits shown in the table below, that

depend on the thermo-hygrometric condition of the air in the environment.

The limits mentioned above refer to operation while the fan is set to its minimum speed level.

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

### PERFORMANCE SPECIFICATIONS

#### 2-pipe

		FCL132			FCL142			FCL162			FCL182			FCL1122		
		1	2	3	1	2	4	1	2	4	1	2	4	1	2	4
		L	M	H	L	M	H	L	M	H	L	M	H	L	M	H
Heating performance 70 °C / 60 °C (1)																
Heating capacity	kW	2,22	2,95	4,00	3,32	4,47	7,34	5,19	6,37	10,49	5,88	8,12	11,88	10,53	14,73	21,75
Water flow rate system side	l/h	194	258	350	290	391	642	454	558	918	514	710	1039	921	1289	1903
Pressure drop system side	kPa	4	6	10	6	10	24	12	17	42	7	13	26	11	21	42
Heating performance 45 °C / 40 °C (2)																
Heating capacity	kW	1,10	1,47	1,98	1,67	2,21	3,64	2,58	3,21	5,21	2,94	4,05	5,90	5,28	7,37	10,80
Water flow rate system side	l/h	192	254	345	287	386	633	448	550	905	507	701	1025	909	1271	1877
Pressure drop system side	kPa	4	6	11	5	9	21	10	17	41	7	13	23	12	21	41
Cooling performance 7 °C / 12 °C (3)																
Cooling capacity	kW	1,15	1,46	1,88	1,95	2,52	3,90	2,65	3,19	4,92	2,79	4,04	5,97	5,34	7,47	10,87
Sensible cooling capacity	kW	0,98	1,24	1,50	1,37	1,80	3,11	1,85	2,25	3,75	1,89	2,76	4,17	4,02	5,70	8,34
Water flow rate system side	l/h	200	253	327	337	437	679	458	551	856	482	695	1032	921	1292	1893
Pressure drop system side	kPa	4	4	13	7	11	25	12	16	36	7	12	28	10	19	38
Fan																
Type	type	Centrifugal			Centrifugal			Centrifugal			Centrifugal			Centrifugal		
Fan motor	type	Inverter			Inverter			Inverter			Inverter			Inverter		
Number	no.	1			1			1			1			1		
Air flow rate	m³/h	300	410	600	260	360	700	380	500	880	460	680	1100	750	1100	1750
Input power	W	10	13	18	12	16	55	14	20	61	10	14	33	16	33	135
Signal 0-10V	%	42	62	90	34	46	90	40	52	90	38	54	90	38	54	90
Cassettes sound data (4)																
Sound power level	dB(A)	35,0	38,0	46,0	35,0	38,0	53,0	41,0	47,0	61,0	39,0	43,0	50,0	44,0	50,0	60,0
Sound pressure	dB(A)	26,0	29,0	37,0	26,0	30,0	44,0	32,0	38,0	52,0	30,0	34,0	41,0	35,0	41,0	51,0
Diametre hydraulic fittings																
Main coil	Ø	3/4"			3/4"			3/4"			3/4"			3/4"		
Secondary coil	Ø	-			-			-			-			-		
Power supply																
Power supply		230V~50Hz			230V~50Hz			230V~50Hz			230V~50Hz			230V~50Hz		

(1) Room air temperature 20 °C d.b.; Water (in/out) 70 °C/60 °C

(2) Room air temperature 20 °C d.b.; Water (in/out) 45 °C/40 °C; EUROVENT

(3) Room air temperature 27 °C d.b./19 °C w.b.; Water (in/out) 7 °C/12 °C; EUROVENT

(4) For the cassettes, Aermec determines the value of the sound power on the basis of measurements carried out in accordance with the standard UNI EN 16583:15, in observance of the EUROVENT certification and the level of sound pressure (weighed A) measured in an environment with volume V=100m³, reverberation time t=0.5s direction factor Q=2; distance r=2.5m.

#### 4-pipe

		FCL134			FCL144			FCL164			FCL1124		
		1	2	3	1	2	3	1	2	4	1	2	4
		L	M	H	L	M	H	L	M	H	L	M	H
Heating performance 65 °C / 55 °C (1)													
Heating capacity	kW	1,70	1,97	2,32	1,70	2,02	2,74	2,05	2,76	3,14	6,46	8,30	11,10
Water flow rate system side	l/h	152	171	203	153	178	240	194	219	279	551	727	977
Pressure drop system side	kPa	5	7	9	6	7	12	9	11	19	10	15	25
Cooling performance 7 °C / 12 °C (2)													
Cooling capacity	kW	1,15	1,46	1,88	1,80	2,32	3,59	2,29	2,76	4,25	4,55	6,19	8,67
Sensible cooling capacity	kW	0,98	1,24	1,50	1,26	1,66	2,87	1,59	1,93	3,22	3,35	4,64	6,64
Water flow rate system side	l/h	200	253	327	314	396	626	424	510	793	786	1068	1513
Pressure drop system side	kPa	4	7	10	6	10	23	16	23	50	10	20	38
Fan													
Type	type	Centrifugal											
Fan motor	type	Inverter											
Number	no.	1			1			1			1		
Air flow rate	m³/h	300	410	600	260	360	700	380	500	880	750	1100	1750
Input power	W	10	13	18	12	16	55	14	20	61	16	33	135
Signal 0-10V	%	42	62	90	34	46	90	40	52	90	38	58	90
Cassettes sound data (3)													
Sound power level	dB(A)	35,0	38,0	46,0	35,0	39,0	53,0	41,0	47,0	61,0	44,0	52,0	60,0
Sound pressure	dB(A)	26,0	29,0	37,0	26,0	30,0	44,0	32,0	38,0	52,0	35,0	41,0	51,0
Diameter hydraulic fittings													
Main coil	Ø	3/4"											
Secondary coil	Ø	1/2"											
Power supply													
Power supply		230V~50Hz											

(1) Room air temperature 20 °C d.b.; Water (in/out) 65 °C/55 °C; EUROVENT

(2) Room air temperature 27 °C d.b./19 °C w.b.; Water (in/out) 7 °C/12 °C; EUROVENT

(3) For the cassettes, Aermec determines the value of the sound power on the basis of measurements carried out in accordance with the standard UNI EN 16583:15, in observance of the EUROVENT certification and the level of sound pressure (weighed A) measured in an environment with volume V=100m³, reverberation time t=0.5s direction factor Q=2; distance r=2.5m.

## COOLING CAPACITY OUTPUT - FCL132

Dt [°C]	Tbu [°C]	Tbs [°C]	Pc Tw(in) = 5°C	Ps Tw(in) = 5°C	Pc Tw(in) = 7°C	Ps Tw(in) = 7°C	Pc Tw(in) = 9°C	Ps Tw(in) = 9°C	Pc Tw(in) = 11°C	Ps Tw(in) = 11°C	Pc Tw(in) = 13°C	Ps Tw(in) = 13°C
3	15	21	1497	829	1196	717	864	831	644	509	501	395
		23	1487	935	1189	822	922	728	782	618	642	506
		25	1481	1039	1185	927	1057	834	918	725	779	615
		27	1459	1141	1326	1047	1189	938	1051	830	914	722
		29	1592	1257	1456	1149	1319	1042	1183	934	1047	826
		31	1719	1357	1584	1250	1448	1144	1313	1037	1178	930
	17	21	1884	830	1587	719	1267	606	910	491	475	357
		23	1894	935	1600	825	1281	713	928	598	642	506
		25	1880	1039	1587	929	1271	819	920	704	779	615
		27	1874	1142	1584	1033	1268	923	1051	830	914	722
		29	1850	1243	1562	1135	1319	1042	1183	934	1047	826
		31	1840	1344	1584	1250	1448	1144	1313	1037	1178	930
	19	21	2342	826	2049	717	1733	606	1389	491	1008	377
		23	2329	934	2037	825	1724	715	1382	605	1002	487
		25	2318	1038	2028	930	1716	821	1377	710	1000	596
		27	2305	1141	2016	1033	1706	925	1368	814	993	722
		29	2312	1251	2004	1136	1696	1028	1361	918	1047	826
		31	2302	1351	1997	1237	1691	1129	1358	1021	1178	930
	21	21	2785	819	2493	710	2181	600	1842	491	1472	380
		23	2819	938	2508	821	2197	713	1861	601	1494	491
		25	2803	1045	2495	929	2185	821	1851	712	1487	600
		27	2785	1147	2478	1032	2171	925	1838	817	1476	708
		29	2798	1249	2493	1135	2188	1028	1858	921	1498	812
		31	2745	1349	2442	1236	2139	1130	1810	1023	1452	915
	23	21	3297	929	2988	814	2678	707	2344	598	1983	490
		23	3310	1039	3003	925	2695	818	2364	707	2005	599
		25	3143	1146	2838	1032	2532	925	2202	818	1844	710
		27	3268	1239	2985	1133	2681	1027	2353	921	1999	814
		29	3222	1339	2940	1235	2638	1129	2313	1024	1960	917
		31	3222	1339	2940	1235	2638	1129	2313	1024	1960	917
5	15	21	1366	779	1025	656	735	567	588	464	433	341
		23	1358	885	1020	762	877	692	733	579	586	463
		25	1354	989	1155	912	1015	801	874	690	731	578
		27	1427	1126	1288	1017	1150	908	1011	798	870	687
		29	1557	1229	1420	1121	1283	1013	1146	905	1007	795
		31	1686	1331	1549	1223	1414	1116	1278	1009	1140	900
	17	21	1769	786	1448	669	1082	545	600	396	433	341
		23	1781	892	1463	776	1101	654	733	545	586	463
		25	1768	996	1452	881	1092	759	874	690	731	578
		27	1764	1100	1449	985	1150	900	1011	798	870	687
		29	1741	1202	1428	1087	1283	1013	1146	905	1007	795
		31	1732	1302	1549	1223	1414	1116	1278	1009	1140	900
	19	21	2239	786	1928	674	1587	555	1196	433	695	288
		23	2227	895	1918	783	1578	667	1191	546	692	400
		25	2217	1000	1911	888	1573	773	1188	652	692	509
		27	2205	1103	<b>1900</b>	<b>990</b>	1564	875	1181	750	870	687
		29	2193	1205	1890	1095	1556	981	1175	861	1007	795
		31	2184	1306	1884	1196	1552	1083	1278	1009	1140	900
	21	21	2690	782	2384	671	2052	558	1684	443	1256	315
		23	2703	894	2401	783	2071	669	1706	553	1289	432
		25	2690	1001	2389	891	2061	780	1698	663	1284	542
		27	2672	1104	2373	995	2047	885	1686	770	1275	651
		29	2688	1207	2391	1098	2067	988	1710	875	1302	756
		31	2636	1308	2340	1199	2018	1090	1662	977	1254	858
	23	21	3188	887	2888	778	2563	669	2209	557	1816	439
		23	3203	998	2905	890	2582	778	2232	666	1843	552
		25	3203	998	2905	890	2582	778	2232	666	1843	552
		27	3036	1104	2739	996	2417	887	2065	776	1674	659
		29	3184	1207	2890	1099	2571	991	2224	882	1841	768
		31	3138	1307	2845	1201	2529	1093	2184	984	1801	872
7	15	21	1166	705	697	545	666	526	486	384	205	162
		23	1159	811	965	756	818	646	666	526	492	388
		25	1248	968	1106	873	962	760	816	644	664	524
		27	1383	1092	1243	981	1102	870	960	758	814	643
		29	1516	1197	1378	1088	1238	978	1099	867	957	755
		31	1646	1300	1509	1192	1372	1083	1234	974	1095	864
	17	21	1608	726	1233	595	723	433	486	364	205	162
		23	1623	833	1252	704	753	545	666	526	492	388
		25	1612	938	1242	809	962	729	816	644	664	524
		27	1608	1042	1242	913	1102	870	960	758	814	643
		29	1587	1144	1378	1088	1238	978	1099	867	957	755
		31	1578	1246	1509	1192	1372	1083	1234	974	1095	864
	19	21	2102	736	1759	615	1359	482	821	324	205	159
		23	2092	845	1751	725	1354	595	819	435	492	348
		25	2084	950	1744	830	1350	702	819	545	664	508
		27	2073	1051	1735	930	1343	796	960	743	814	643
		29	2062	1156	1726	1037	1337	910	1099	854	957	755
		31	2055	1258	1722	1140	1335	1014	1234	974	1095	864
	21	21	2566	736	2238	620	1869	499	1437	367	842	204
		23	2583	849	2257	733	1892	611	1466	482	890	321
		25	2571	956	2246	842	1883	722	1460	592	887	435
		27	2554	1060	2233	946	1871	828	1450	700	879	543
		29	2572	1164	2253	1050	1895	933	1478	806	923	654
		31	2521	1264	2202	1151	1845	1034	1427	908	1095	829
	23	21	3077	847	2759	734	2409	619	2016	499	1556	367
		23	3094	958	2779	846	2432	729	2043	610	1587	480
		25	2926	1063	2610	951	2262	836	1868	717	1395	582
		27	3078	1166	2766	1056	2424	943	2040	826	1592	700
		29	3078	1166	2766	1056	2424	943	2040	826	1592	700
		31	3032	1268	2722	1158	2382	1045	1999	928	1551	803

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] = Sensitive cooling capacity

### CORRECTIVE FACTORS FOR YIELD COOLING CAPACITY

The cooling yields in the table refer to maximum speed (maximum air flow rate).

To determine the cooling capacity output according to speed (air flow rate), the values stated in the table must be multiplied by the following factors (k):

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

Sensitive cooling capacity values greater than the total power indicate that cooling occurs without dehumidification.

In this case take into account the sensitive power values only.

FCL1 32 / 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 OUTPUT - FCL134

Dt [°C]	Tbu [°C]	Tbs [°C]	Pc Tw(in) = 5°C	Ps	Pc Tw(in) = 7°C	Ps	Pc Tw(in) = 9°C	Ps	Pc Tw(in) = 11°C	Ps	Pc Tw(in) = 13°C	Ps
3	15	21	1497	1273	1196	1100	864	1276	644	644	501	501
		23	1487	1435	1189	1262	922	922	782	782	642	642
		25	1481	1481	1185	1423	1057	1057	918	918	779	779
		27	1459	1459	1326	1607	1189	1189	1051	1051	914	914
		29	1592	1592	1456	1765	1319	1319	1183	1183	1047	1047
		31	1719	1719	1584	1920	1448	1448	1313	1313	1178	1178
	17	21	1884	1274	1587	1104	1267	931	910	753	475	475
		23	1894	1435	1600	1267	1281	1095	928	919	642	642
		25	1880	1595	1587	1426	1271	1257	920	920	779	779
		27	1874	1754	1584	1586	1268	1268	1051	1051	914	914
		29	1850	1850	1562	1742	1319	1319	1183	1183	1047	1047
		31	1840	1840	1584	1920	1448	1448	1313	1313	1178	1178
	19	21	2342	1268	2049	1100	1733	931	1389	754	1008	578
		23	2329	1434	2037	1267	1724	1098	1382	929	1002	748
		25	2318	1594	2028	1427	1716	1260	1377	1090	1000	915
		27	2305	1752	2016	1586	1706	1420	1368	1249	993	993
		29	2312	1921	2004	1744	1696	1578	1361	1361	1047	1047
		31	2302	2074	1997	1899	1691	1691	1358	1358	1178	1178
	21	21	2785	1257	2493	1089	2181	922	1842	753	1472	583
		23	2819	1440	2508	1261	2197	1095	1861	923	1494	753
		25	2803	1604	2495	1426	2185	1261	1851	1094	1487	921
		27	2785	1761	2478	1585	2171	1421	1838	1255	1476	1087
		29	2798	1918	2493	1742	2188	1578	1858	1414	1498	1247
		31	2745	2072	2442	1898	2139	1735	1810	1571	1452	1404
	23	23	3297	1426	2988	1250	2678	1085	2344	919	1983	752
		25	3310	1595	3003	1420	2695	1256	2364	1086	2005	920
		27	3143	1759	2838	1584	2532	1420	2202	1256	1844	1089
		29	3268	1902	2985	1740	2681	1577	2353	1414	1999	1250
		31	3222	2056	2940	1896	2638	1734	2313	1572	1960	1408
5	15	21	1366	1196	1025	1007	735	735	588	588	433	433
		23	1358	1358	1020	1170	877	877	733	733	586	586
		25	1354	1354	1155	1400	1015	1015	874	874	731	731
		27	1427	1427	1288	1562	1150	1150	1011	1011	870	870
		29	1557	1557	1420	1722	1283	1283	1146	1146	1007	1007
		31	1686	1686	1549	1878	1414	1414	1278	1278	1140	1140
	17	21	1769	1206	1448	1028	837	600	600	600	433	433
		23	1781	1369	1463	1192	1101	1003	733	733	586	586
		25	1768	1530	1452	1353	1092	1092	874	874	731	731
		27	1764	1689	1449	1512	1150	1150	1011	1011	870	870
		29	1741	1741	1428	1669	1283	1283	1146	1146	1007	1007
		31	1732	1732	1549	1878	1414	1414	1278	1278	1140	1140
	19	21	2239	1207	1928	1034	1587	851	1196	664	695	443
		23	2227	1375	1918	1202	1578	1024	1191	838	692	614
		25	2217	1535	1911	1364	1573	1187	1188	1001	692	692
		27	2205	1693	<b>1900</b>	<b>1520</b>	1564	1343	1181	1152	870	870
		29	2193	1850	1890	1681	1556	1506	1175	1175	1007	1007
		31	2184	2006	1884	1836	1552	1552	1175	1278	1140	1140
	21	21	2690	1201	2384	1030	2052	857	1684	680	1256	484
		23	2703	1372	2401	1203	2071	1027	1706	849	1289	663
		25	2690	1537	2389	1368	2061	1197	1698	1018	1284	832
		27	2672	1695	2373	1528	2047	1358	1686	1183	1275	999
		29	2688	1853	2391	1685	2067	1517	1710	1344	1302	1161
		31	2636	2008	2340	1842	2018	1673	1662	1500	1254	1254
	23	23	3188	1362	2888	1195	2563	1027	2209	855	1816	674
		25	3203	1532	2905	1366	2582	1194	2232	1023	1843	848
		27	3036	1695	2739	1530	2417	1361	2065	1191	1674	1011
		29	3184	1853	2890	1687	2571	1521	2224	1354	1841	1180
		31	3138	2007	2845	1844	2529	1679	2184	1510	1801	1338
7	15	21	1166	1083	697	837	666	666	486	486	205	205
		23	1159	1159	965	1161	818	818	666	666	492	492
		25	1248	1248	1106	1340	962	962	816	816	664	664
		27	1383	1383	1243	1507	1102	1102	960	960	814	814
		29	1516	1516	1378	1670	1238	1238	1099	1099	957	957
		31	1646	1646	1509	1830	1372	1372	1234	1234	1095	1095
	17	21	1608	1115	1233	914	723	665	486	486	205	205
		23	1623	1279	1252	1081	753	666	666	666	492	492
		25	1612	1441	1242	1241	962	962	816	816	664	664
		27	1608	1599	1242	1402	1102	1102	960	960	814	814
		29	1587	1587	1378	1670	1238	1238	1099	1099	957	957
		31	1578	1578	1509	1830	1372	1372	1234	1234	1095	1095
	19	21	2102	1130	1759	944	1359	740	821	497	205	205
		23	2092	1298	1751	1112	1354	914	819	667	492	492
		25	2084	1458	1744	1274	1350	1077	819	819	664	664
		27	2073	1614	1735	1427	1343	1223	960	960	814	814
		29	2062	1776	1726	1593	1337	1337	1099	1099	957	957
		31	2055	1931	1722	1750	1335	1335	1234	1234	1095	1095
	21	21	2566	1130	2238	952	1869	767	1437	563	842	313
		23	2583	1303	2257	1126	1892	937	1466	740	890	493
		25	2571	1468	2246	1293	1883	1109	1460	909	887	667
		27	2554	1628	2233	1453	1871	1271	1450	1075	879	834
		29	2572	1787	2253	1611	1895	1432	1478	1238	923	923
		31	2521	1941	2202	1768	1845	1587	1427	1393	1095	1095
	23	23	3077	1300	2759	1127	2409	951	2016	767	1556	564
		25	3094	1470	2779	1299	2432	1119	2043	936	1587	737
		27	2926	1632	2610	1461	2262	1284	1868	1100	1395	893
		29	3078	1791	2766	1621	2424	1448	2040	1269	1592	1075
		31	3032	1947	2722	1778	2382	1605	1999	1425	1551	1233

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] = Sensitive cooling capacity

### CORRECTIVE FACTORS FOR YIELD COOLING CAPACITY

The cooling yields in the table refer to maximum speed (maximum air flow rate).

To determine the cooling capacity output according to speed (air flow rate), the values stated in the table must be multiplied by the following factors (k):

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

Sensitive cooling capacity values greater than the total power indicate that cooling occurs without dehumidification.

In this case take into account the sensitive power values only.

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 OUTPUT - FCL142

Dt [°C]	Tbu [°C]	Tbs [°C]	Pc Tw(in) = 5°C	Ps Tw(in) = 5°C	Pc Tw(in) = 7°C	Ps Tw(in) = 7°C	Pc Tw(in) = 9°C	Ps Tw(in) = 9°C	Pc Tw(in) = 11°C	Ps Tw(in) = 11°C	Pc Tw(in) = 13°C	Ps Tw(in) = 13°C
3	15	21	3111	2647	2486	2288	1796	2652	1339	1339	1041	1041
		23	3092	2984	2471	2624	1917	1917	1626	1626	1334	1334
		25	3079	3079	2463	2958	2197	2197	1908	1908	1619	1619
		27	3034	3034	2756	3341	2471	2471	2186	2186	1900	1900
		29	3310	3310	3026	3668	2743	2743	2460	2460	2176	2176
		31	3574	3574	3293	3991	3011	3011	2730	2730	2448	2448
	17	21	3916	2649	3300	2294	2633	1935	1893	1566	988	988
		23	3937	2984	3327	2633	2664	2276	1929	1910	1334	1334
		25	3908	3316	3300	2965	2643	2613	1912	1912	1619	1619
		27	3895	3645	3293	3297	2637	2637	2186	2186	1900	1900
		29	3846	3846	3247	3623	2743	2743	2460	2460	2176	2176
		31	3825	3825	3293	3991	3011	3011	2730	2730	2448	2448
	19	21	4868	2636	4260	2288	3602	1935	2888	1569	2095	1202
		23	4842	2981	4235	2633	3584	2283	2873	1930	2084	1555
		25	4819	3313	4216	2968	3568	2620	2862	2267	2078	1903
		27	4793	3643	4192	3297	3548	2952	2845	2597	2065	2065
		29	4806	3994	4167	3625	3527	3281	2830	2830	2176	2176
		31	4785	4312	4152	3948	3516	3516	2822	2822	2448	2448
	21	21	5790	2613	5184	2265	4534	1917	3829	1566	3060	1211
		23	5860	2993	5214	2622	4568	2276	3869	1919	3106	1566
		25	5828	3334	5187	2965	4543	2622	3848	2274	3090	1914
		27	5790	3661	5151	3295	4513	2954	3822	2608	3068	2260
		29	5816	3987	5184	3623	4549	3281	3863	2940	3115	2592
		31	5707	4307	5078	3945	4447	3607	3763	3265	3019	2920
	23	23	6853	2965	6211	2599	5567	2256	4874	1910	4122	1564
		25	6882	3316	6243	2952	5603	2610	4915	2258	4169	1912
		27	6534	3657	5899	3293	5263	2952	4577	2610	3833	2265
		29	6795	3955	6206	3618	5575	3279	4893	2940	4156	2599
		31	6699	4275	6113	3941	5484	3604	4808	3268	4075	2926
		21	2839	2487	2131	2093	1528	1528	1222	1222	899	899
5	15	23	2824	2824	2120	2432	1823	1823	1524	1524	1218	1218
		25	2815	2815	2401	2910	2110	2110	1817	1817	1521	1521
		27	2966	2966	2679	3247	2392	2392	2103	2103	1810	1810
		29	3236	3236	2953	3579	2667	2667	2382	2382	2093	2093
		31	3504	3504	3221	3904	2939	2939	2656	2656	2371	2371
		21	3678	2507	3011	2136	2250	1740	1247	1247	899	899
	17	23	3703	2846	3041	2478	2290	2086	1524	1524	1218	1218
		25	3676	3181	3019	2812	2271	2271	1817	1817	1521	1521
		27	3667	3510	3013	3144	2392	2392	2103	2103	1810	1810
		29	3619	3619	2970	3469	2667	2667	2382	2382	2093	2093
		31	3601	3601	3221	3904	2939	2939	2656	2656	2371	2371
		21	4655	2510	4009	2150	3298	1770	2486	1381	1445	921
	19	23	4630	2858	3988	2498	3281	2130	2477	1743	1439	1275
		25	4609	3192	3973	2835	3270	2468	2469	2081	1439	1439
		27	4585	3520	<b>3950</b>	<b>3160</b>	3251	2791	2456	2395	1810	1810
		29	4560	3847	3929	3494	3234	3130	2443	2443	2093	2093
		31	4541	4170	3916	3817	3226	3226	2656	2656	2371	2371
		21	5592	2496	4957	2141	4265	1782	3500	1413	2611	1005
	21	23	5620	2853	4991	2501	4305	2134	3548	1765	2681	1378
		25	5592	3194	4966	2844	4284	2489	3531	2116	2669	1729
		27	5556	3524	4934	3176	4256	2823	3506	2459	2650	2077
		29	5588	3852	4970	3503	4298	3153	3555	2794	2707	2414
		31	5480	4174	4864	3829	4196	3478	3455	3119	2607	2607
		23	6627	2833	6003	2484	5329	2134	4592	1777	3776	1401
	23	25	6659	3185	6039	2839	5369	2482	4640	2127	3831	1763
		27	6311	3524	5694	3181	5025	2830	4294	2475	3480	2102
		29	6619	3852	6007	3508	5346	3162	4624	2814	3827	2452
		31	6523	4172	5915	3833	5257	3490	4539	3139	3744	2782
		21	2424	2251	1449	1740	1385	1385	1011	1011	427	427
		23	2410	2410	2006	2414	1700	1700	1385	1385	1022	1022
7	15	25	2594	2594	2299	2787	2001	2001	1696	1696	1381	1381
		27	2875	2875	2584	3133	2291	2291	1995	1995	1693	1693
		29	3151	3151	2864	3471	2575	2575	2284	2284	1989	1989
		31	3423	3423	3138	3803	2852	2852	2565	2565	2276	2276
		21	3344	2317	2563	1901	1504	1383	1011	1011	427	427
		23	3374	2659	2603	2246	1566	1566	1385	1385	1022	1022
	17	25	3351	2995	2582	2581	2001	2001	1696	1696	1381	1381
		27	3344	3325	2582	2915	2291	2291	1995	1995	1693	1693
		29	3298	3298	2864	3471	2575	2575	2284	2284	1989	1989
		31	3281	3281	3138	3803	2852	2852	2565	2565	2276	2276
		21	4369	2349	3657	1962	2826	1539	1708	1033	427	427
		23	4349	2697	3640	2313	2815	1901	1702	1388	1022	1022
	19	25	4332	3032	3625	2649	2807	2239	1702	1702	1381	1381
		27	4309	3355	3606	2968	2792	2542	1995	1995	1693	1693
		29	4286	3691	3589	3311	2779	2779	2284	2284	1989	1989
		31	4273	4014	3580	3639	2775	2775	2565	2565	2276	2276
		21	5335	2349	4653	1978	3886	1594	2988	1170	1751	650
		23	5371	2709	4692	2340	3933	1949	3047	1539	1849	1026
	21	25	5344	3052	4670	2688	3914	2306	3036	1889	1844	1388
		27	5310	3384	4641	3020	3890	2642	3015	2235	1827	1733
		29	5348	3714	4683	3350	3939	2977	3073	2574	1919	1919
		31	5240	4035	4577	3675	3835	3300	2968	2897	2276	2276
		23	6396	2702	5735	2343	5008	1976	4192	1594	3234	1172
		25	6432	3057	5777	2700	5055	2326	4247	1946	3300	1532
	23	27	6083	3394	5425	3036	4702	2670	3884	2288	2900	1857
		29	6398	3723	5750	3371	5040	3011	4241	2638	3310	2235
		31	6304	4048	5660	3696	4951	3336	4156	2963	3225	2562

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] = Sensitive cooling capacity

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

Sensitive cooling capacity values greater than the total power indicate that cooling occurs without dehumidification.

In this case take into account the sensitive power values only.

## CORRECTIVE FACTORS FOR YIELD COOLING CAPACITY

The cooling yields in the table refer to maximum speed (maximum air flow rate).

To determine the cooling capacity output according to speed (air flow rate), the values stated 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 OUTPUT - FCLI 44

Dt [°C]	Tbu [°C]	Tbs [°C]	Pc Tw(in) = 5°C	Ps Tw(in) = 5°C	Pc Tw(in) = 7°C	Ps Tw(in) = 7°C	Pc Tw(in) = 9°C	Ps Tw(in) = 9°C	Pc Tw(in) = 11°C	Ps Tw(in) = 11°C	Pc Tw(in) = 13°C	Ps Tw(in) = 13°C
3	15	21	2867	2438	2291	2107	1655	2442	1234	1234	959	959
		23	2850	2748	2277	2417	1767	1767	1499	1499	1229	1229
		25	2837	2837	2270	2724	2025	2025	1758	1758	1492	1492
		27	2796	2796	2540	3077	2277	2277	2014	2014	1751	1751
		29	3050	3050	2789	3378	2528	2528	2267	2267	2005	2005
		31	3294	3294	3034	3675	2775	2775	2515	2515	2256	2256
		21	3609	2440	3041	2113	2427	1782	1744	1442	910	910
		23	3628	2748	3066	2425	2455	2096	1777	1759	1229	1229
	17	25	3602	3053	3041	2731	2435	2406	1762	1762	1492	1492
		27	3590	3357	3034	3037	2430	2430	2014	2014	1751	1751
		29	3544	3544	2992	3336	2528	2528	2267	2267	2005	2005
		31	3525	3525	3034	3675	2775	2775	2515	2515	2256	2256
		21	4486	2427	3925	2107	3320	1782	2662	1444	1931	1107
		23	4462	2746	3903	2425	3302	2102	2648	1778	1920	1432
		25	4441	3051	3885	2733	3288	2412	2637	2088	1915	1752
		27	4416	3355	3863	3037	3269	2718	2622	2391	1903	1903
	19	29	4429	3678	3840	3338	3250	3022	2608	2608	2005	2005
		31	4409	3971	3826	3635	3240	3240	2601	2601	2256	2256
		21	5336	2406	4777	2086	4178	1765	3529	1442	2820	1116
		23	5400	2756	4805	2414	4209	2096	3565	1767	2862	1442
		25	5370	3070	4780	2731	4187	2414	3546	2094	2848	1763
		27	5336	3372	4747	3034	4159	2720	3522	2402	2827	2081
		29	5360	3671	4777	3336	4192	3022	3560	2708	2871	2387
		31	5259	3966	4679	3633	4098	3321	3468	3007	2782	2689
	23	23	6316	2731	5724	2393	5130	2077	4491	1759	3798	1440
		25	6342	3053	5753	2718	5163	2404	4530	2079	3842	1761
		27	6021	3368	5436	3032	4850	2718	4218	2404	3532	2086
		29	6262	3642	5719	3332	5137	3020	4509	2708	3830	2393
		31	6173	3937	5633	3629	5054	3319	4430	3009	3755	2695
5	15	21	2616	2290	1964	1927	1408	1408	1126	1126	829	829
		23	2602	2602	1953	2239	1680	1680	1405	1405	1123	1123
		25	2594	2594	2213	2680	1944	1944	1675	1675	1401	1401
		27	2733	2733	2468	2990	2204	2204	1938	1938	1668	1668
		29	2982	2982	2721	3296	2458	2458	2195	2195	1929	1929
		31	3229	3229	2968	3595	2709	2709	2448	2448	2185	2185
		21	3389	2309	2775	1967	2073	1603	1149	1149	829	829
		23	3412	2621	2803	2282	2110	1921	1405	1405	1123	1123
	17	25	3388	2929	2782	2589	2092	2092	1675	1675	1401	1401
		27	3379	3233	2777	2895	2204	2204	1938	1938	1668	1668
		29	3335	3335	2737	3195	2458	2458	2195	2195	1929	1929
		31	3318	3318	2968	3595	2709	2709	2448	2448	2185	2185
		21	4289	2311	3694	1980	3039	1630	2291	1272	1332	848
		23	4267	2632	3675	2301	3024	1961	2282	1605	1326	1175
		25	4248	2940	3661	2611	3013	2273	2275	1917	1326	1326
		27	4225	3241	<b>3640</b>	<b>2910</b>	2996	2571	2263	2206	1668	1668
	19	29	4202	3543	3621	3218	2980	2883	2251	2251	1929	1929
		31	4185	3840	3609	3515	2973	2973	2448	2448	2185	2185
		21	5153	2298	4568	1972	3931	1641	3226	1301	2406	926
		23	5179	2627	4599	2303	3967	1965	3269	1626	2470	1269
		25	5153	2942	4577	2619	3948	2292	3254	1948	2460	1592
		27	5120	3245	4547	2925	3922	2600	3231	2265	2442	1913
		29	5149	3547	4580	3226	3960	2904	3276	2573	2495	2223
		31	5050	3844	4483	3526	3866	3203	3184	2872	2402	2402
	23	23	6107	2608	5532	2288	4911	1965	4232	1636	3480	1291
		25	6136	2933	5565	2615	4947	2286	4275	1959	3530	1624
		27	5816	3245	5247	2929	4631	2606	3957	2280	3207	1936
		29	6100	3547	5536	3231	4926	2912	4261	2592	3527	2258
		31	6011	3842	5450	3530	4845	3214	4183	2891	3450	2562
7	15	21	2233	2073	1335	1603	1276	1276	931	931	393	393
		23	2221	2221	1849	2223	1567	1567	1276	1276	942	942
		25	2390	2390	2119	2566	1844	1844	1563	1563	1273	1273
		27	2649	2649	2381	2885	2112	2112	1838	1838	1560	1560
		29	2904	2904	2639	3197	2373	2373	2105	2105	1833	1833
		31	3154	3154	2891	3503	2629	2629	2364	2364	2098	2098
		21	3081	2134	2362	1750	1386	1274	931	931	393	393
		23	3109	2448	2399	2069	1443	1443	1276	1276	942	942
	17	25	3088	2758	2380	2377	1844	1844	1563	1563	1273	1273
		27	3081	3062	2380	2684	2112	2112	1838	1838	1560	1560
		29	3039	3039	2639	3197	2373	2373	2105	2105	1833	1833
		31	3024	3024	2891	3503	2629	2629	2364	2364	2098	2098
		21	4026	2164	3370	1807	2604	1417	1574	951	393	393
		23	4007	2484	3355	2130	2594	1750	1568	1278	942	942
		25	3992	2792	3341	2440	2587	2062	1568	1568	1273	1273
		27	3971	3089	3323	2733	2573	2341	1838	1838	1560	1560
	19	29	3950	3399	3308	3049	2561	2561	2105	2105	1833	1833
		31	3938	3697	3299	3351	2557	2557	2364	2364	2098	2098
		21	4916	2164	4288	1822	3581	1468	2754	1078	1614	599
		23	4949	2495	4324	2155	3624	1795	2808	1417	1704	945
		25	4925	2811	4303	2476	3607	2123	2797	1740	1699	1278
		27	4893	3117	4277	2781	3584	2433	2778	2058	1683	1596
		29	4928	3420	4315	3085	3630	2741	2832	2370	1769	1769
		31	4829	3716	4218	3384	3534	3039	2735	2668	2098	2098
	23	23	5894	2488	5285	2157	4615	1820	3863	1468	2980	1080
		25	5927	2815	5323	2486	4658	2142	3913	1792	3041	1411
		27	5605	3125	5000	2796	4333	2459	3579	2107	2672	1710
		29	5896	3429	5299	3104	4644	2773	3908	2429	3050	2058
		31	5809	3728	5215	3403	4563	3072	3830	2729	2972	2360

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] = Sensitive cooling capacity

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

Sensitive cooling capacity values greater than the total power indicate that cooling occurs without dehumidification.

In this case take into account the sensitive power values only.

### CORRECTIVE FACTORS FOR YIELD COOLING CAPACITY

The cooling yields in the table refer to maximum speed (maximum air flow rate).

To determine the cooling capacity output according to speed (air flow rate), the values stated in the table must be multiplied by the following factors (k):

FCLI 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 OUTPUT - FCL1 62

Dt [°C]	Tbu [°C]	Tbs [°C]	Pc Tw(in) = 5°C	Ps Tw(in) = 5°C	Pc Tw(in) = 7°C	Ps Tw(in) = 7°C	Pc Tw(in) = 9°C	Ps Tw(in) = 9°C	Pc Tw(in) = 11°C	Ps Tw(in) = 11°C	Pc Tw(in) = 13°C	Ps Tw(in) = 13°C
3	15	21	3923	3192	3134	2758	2265	3198	1689	1689	1312	1162
		23	3899	3597	3115	3164	2417	2417	2051	2051	1681	1489
		25	3882	3882	3106	3567	2770	2770	2405	2405	2041	1807
		27	3825	3825	3475	4028	3115	3115	2756	2756	2396	2121
		29	4173	4173	3815	4423	3458	3458	3101	3101	2744	2429
		31	4506	4506	4151	4812	3796	3796	3441	3441	3087	2733
	17	21	4937	3194	4161	2766	3320	2333	2386	1888	1246	1050
		23	4963	3597	4194	3175	3358	2744	2432	2303	1681	1489
		25	4928	3998	4161	3575	3332	3150	2410	2410	2041	1807
		27	4911	4395	4151	3976	3325	3325	2756	2756	2396	2121
		29	4849	4785	4094	4368	3458	3458	3101	3101	2744	2429
		31	4823	4823	4151	4812	3796	3796	3441	3441	3087	2733
	19	21	6137	3178	5371	2758	4542	2333	3642	1891	2641	1107
		23	6104	3595	5340	3175	4518	2753	3622	2327	2627	1432
		25	6076	3995	5316	3578	4499	3158	3608	2733	2620	1752
		27	6042	4393	5285	3976	4473	3559	3587	3131	2603	2121
		29	6059	4815	5254	4370	4447	3956	3568	3534	2744	2429
		31	6033	5199	5235	4760	4432	4346	3558	3558	3087	2733
	21	21	7300	3150	6535	2731	5716	2311	4828	1888	3858	1116
		23	7388	3608	6573	3161	5759	2744	4878	2314	3915	1442
		25	7347	4020	6540	3575	5728	3161	4851	2742	3896	1763
		27	7300	4415	6495	3973	5690	3562	4818	3145	3868	2081
		29	7333	4807	6535	4368	5735	3956	4870	3545	3927	2387
		31	7195	5193	6402	4757	5606	4348	4744	3937	3806	2689
	23	23	8641	3575	7831	3134	7019	2719	6145	2303	5197	1440
		25	8676	3998	7871	3559	7064	3147	6197	2722	5256	1761
		27	8238	4409	7438	3970	6635	3559	5771	3147	4832	2086
		29	8567	4768	7824	4362	7028	3954	6168	3545	5240	2393
		31	8445	5155	7707	4751	6914	4346	6061	3940	5137	2695
		21	3580	2998	2686	2523	1927	1927	1541	1541	1134	1004
5	15	23	3561	3407	2672	2932	2298	2298	1922	1922	1536	1360
		25	3549	3549	3027	3509	2660	2660	2291	2291	1917	1698
		27	3739	3739	3377	3915	3015	3015	2651	2651	2282	2020
		29	4080	4080	3722	4315	3363	3363	3003	3003	2639	2336
		31	4418	4418	4061	4707	3706	3706	3349	3349	2989	2646
		21	4637	3023	3796	2576	2837	2098	1572	1524	1134	1004
	17	23	4668	3432	3834	2987	2887	2515	1922	1922	1536	1360
		25	4635	3835	3806	3390	2863	2863	2291	2291	1917	1698
		27	4623	4232	3799	3791	3015	3015	2651	2651	2282	2020
		29	4563	4563	3744	4183	3363	3363	3003	3003	2639	2336
		31	4539	4539	4061	4707	3706	3706	3349	3349	2989	2646
		21	5868	3026	5054	2592	4158	2134	3134	1665	1822	848
	19	23	5837	3446	5028	3012	4137	2568	3122	2101	1815	1175
		25	5811	3849	5009	3418	4123	2976	3113	2510	1815	1497
		27	5780	4243	<b>4980</b>	<b>3810</b>	4099	3366	3096	2888	2282	2020
		29	5749	4638	4954	4213	4077	3774	3079	3079	2639	2336
		31	5725	5028	4937	4602	4068	4068	3349	3349	2989	2646
		21	7050	3009	6249	2581	5378	2148	4413	1703	3291	926
	21	23	7085	3440	6292	3015	5428	2573	4473	2129	3380	1269
		25	7050	3851	6261	3429	5402	3001	4451	2551	3365	1592
		27	7004	4249	6221	3829	5366	3404	4420	2965	3341	1913
		29	7045	4644	6266	4224	5418	3802	4482	3368	3413	2223
		31	6909	5033	6133	4616	5290	4194	4356	3760	3287	2522
		23	8355	3415	7569	2996	6719	2573	5790	2142	4761	1291
	23	25	8395	3840	7614	3423	6769	2993	5849	2565	4830	1624
		27	7957	4249	7178	3835	6335	3412	5413	2985	4387	1936
		29	8345	4644	7574	4230	6740	3813	5830	3393	4825	2258
		31	8224	5030	7457	4622	6628	4208	5723	3785	4720	2562
		21	3056	2714	1827	2098	1746	1746	1274	1274	538	477
		23	3039	3039	2529	2910	2143	2143	1746	1746	1288	1141
7	15	25	3270	3270	2898	3360	2522	2522	2139	2139	1741	1541
		27	3625	3625	3258	3777	2889	2889	2515	2515	2134	1889
		29	3973	3973	3611	4185	3246	3246	2879	2879	2508	2220
		31	4316	4316	3956	4586	3596	3596	3234	3234	2870	2541
		21	4215	2794	3232	2292	1896	1668	1274	1274	538	477
		23	4254	3205	3282	2708	1974	1974	1746	1746	1288	1141
	17	25	4225	3611	3256	3112	2522	2522	2139	2139	1741	1541
		27	4215	4009	3256	3515	2889	2889	2515	2515	2134	1889
		29	4158	4158	3611	4185	3246	3246	2879	2879	2508	2220
		31	4137	4137	3956	4586	3596	3596	3234	3234	2870	2541
		21	5509	2833	4611	2366	3563	1855	2153	1245	538	468
		23	5483	3252	4589	2788	3549	2292	2146	1673	1288	1023
	19	25	5461	3655	4570	3194	3539	2700	2146	2096	1741	1493
		27	5433	4045	4547	3578	3520	3065	2515	2515	2134	1889
		29	5404	4451	4525	3992	3503	3503	2879	2879	2508	2220
		31	5387	4840	4513	4387	3499	3499	3234	3234	2870	2541
		21	6726	2833	5866	2385	4899	1922	3768	1411	2208	599
		23	6771	3266	5916	2822	4959	2350	3842	1855	2332	945
	21	25	6738	3680	5887	3241	4935	2780	3827	2278	2324	1278
		27	6695	4081	5852	3642	4904	3186	3801	2695	2303	1596
		29	6742	4478	5904	4039	4966	3589	3875	3103	2420	1921
		31	6607	4865	5771	4431	4835	3978	3742	3493	2870	2436
		23	8064	3258	7231	2824	6314	2383	5285	1922	4077	1080
		25	8109	3686	7283	3255	6373	2805	5354	2347	4161	1411
	23	27	7669	4092	6840	3661	5928	3219	4897	2758	3656	1710
		29	8067	4489	7250	4064	6354	3631	5347	3181	4173	2058
		31	7948	4881	7135	4456	6242	4023	5240	3573	4065	2360

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] = Sensitive cooling capacity

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

Sensitive cooling capacity values greater than the total power indicate that cooling occurs without dehumidification.

In this case take into account the sensitive power values only.

## CORRECTIVE FACTORS FOR YIELD COOLING CAPACITY

The cooling yields in the table refer to maximum speed (maximum air flow rate).

To determine the cooling capacity output according to speed (air flow rate), the values stated in the table must be multiplied by the following factors (k):

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 OUTPUT - FCLI 64

Dt [°C]	Tbu [°C]	Tbs [°C]	Pc Tw(in) = 5°C	Ps Tw(in) = 5°C	Pc Tw(in) = 7°C	Ps Tw(in) = 7°C	Pc Tw(in) = 9°C	Ps Tw(in) = 9°C	Pc Tw(in) = 11°C	Ps Tw(in) = 11°C	Pc Tw(in) = 13°C	Ps Tw(in) = 13°C
3	15	21	3631	2957	2901	2555	2097	2963	1563	1563	1215	1215
		23	3609	3333	2884	2931	2238	2238	1898	1898	1557	1557
		25	3594	3594	2875	3305	2564	2564	2227	2227	1889	1889
		27	3541	3541	3217	3732	2884	2884	2551	2551	2218	2218
		29	3863	3863	3532	4098	3201	3201	2871	2871	2540	2540
		31	4171	4171	3843	4459	3514	3514	3186	3186	2857	2857
	17	21	4570	2960	3852	2563	3073	2161	2209	1750	1153	1153
		23	4595	3333	3882	2942	3109	2543	2251	2133	1557	1557
		25	4561	3704	3852	3313	3084	2919	2231	2231	1889	1889
		27	4546	4072	3843	3683	3078	2551	2551	2218	2218	2218
		29	4489	4433	3790	4047	3201	3201	2871	2871	2540	2540
		31	4464	4464	3843	4459	3514	3514	3186	3186	2857	2857
	19	21	5681	2944	4972	2555	4204	2161	3371	1752	2445	1343
		23	5651	3330	4943	2942	4182	2550	3353	2156	2432	1737
		25	5624	3701	4921	3315	4165	2926	3340	2532	2425	2126
		27	5593	4070	4892	3683	4140	3297	3320	2901	2410	2410
		29	5609	4461	4864	4049	4116	3666	3303	3274	2540	2540
		31	5584	4817	4846	4410	4103	4026	3294	3294	2857	2857
	21	21	6757	2919	6050	2530	5291	2141	4469	1750	3572	1353
		23	6839	3343	6085	2929	5331	2543	4515	2144	3625	1750
		25	6801	3724	6054	3313	5302	2929	4491	2540	3607	2138
		27	6757	4090	6012	3681	5267	3300	4460	2914	3580	2525
		29	6788	4453	6050	4047	5309	3666	4509	3284	3636	2896
		31	6660	4812	5926	4407	5190	4029	4392	3648	3523	3261
	23	21	7999	3313	7249	2903	6497	2520	5688	2133	4811	1747
		23	8032	3704	7286	3297	6539	2916	5737	2522	4866	2136
		25	7626	4085	6885	3678	6142	3297	5342	2916	4473	2530
		27	7930	4418	7242	4042	6506	3663	5710	3284	4850	2903
		29	7818	4776	7134	4402	6400	4026	5611	3650	4756	3269
		31	7314	5178	6885	4803	6000	4426	5178	4026	4269	3636
5	15	21	3296	3157	2474	2717	2128	2128	1779	1779	1422	1422
		23	3285	3285	2802	3251	2463	2463	2121	2121	1775	1775
		25	3461	3461	3126	3627	2791	2791	2454	2454	2112	2112
		27	3777	3777	3446	3998	3113	3113	2780	2780	2443	2443
		29	4090	4090	3759	4361	3430	3430	3100	3100	2767	2767
		31	4293	2801	3514	2387	2626	1944	1455	1412	1049	1049
	17	21	4321	3180	3550	2768	2672	2330	1779	1779	1422	1422
		23	4290	3553	3523	3141	2650	2650	2121	2121	1775	1775
		25	4279	3921	3516	3512	2791	2791	2454	2454	2112	2112
		27	4224	4224	3466	3875	3113	3113	2780	2780	2443	2443
		29	4202	4202	3759	4361	3430	3430	3100	3100	2767	2767
		31	5432	2804	4678	2402	3849	1977	2901	1542	1687	1028
	19	21	5404	3192	4654	2791	3830	2379	2890	1947	1680	1425
		23	5379	3566	4636	3167	3816	2757	2882	2325	1680	1680
		25	5351	3932	<b>4610</b>	<b>3530</b>	3794	3118	2866	2676	2112	2112
		27	5322	4297	4586	3903	3774	3497	2851	2851	2443	2443
		29	5300	4658	4570	4264	3766	3766	3100	3100	2767	2767
		31	6526	2788	5785	2392	4978	1990	4085	1578	3047	1123
	21	21	6559	3187	5825	2793	5024	2384	4140	1972	3128	1540
		23	6526	3568	5796	3177	5000	2781	4121	2364	3115	1931
		25	6484	3937	5759	3548	4967	3154	4092	2747	3093	2320
		27	6521	4303	5801	3914	5016	3522	4149	3121	3159	2696
		29	6396	4663	5677	4277	4897	3886	4032	3484	3042	3042
		31	7734	3164	7006	2775	6219	2384	5360	1985	4407	1565
	23	21	7772	3558	7048	3172	6266	2773	5415	2376	4471	1970
		23	7366	3937	6645	3553	5864	3162	5011	2765	4061	2348
		25	7725	4303	7011	3919	6239	3533	5397	3144	4467	2740
		27	7613	4661	6903	4282	6136	3898	5298	3507	4370	3108
		29	2829	2514	1691	1944	1616	1616	1180	1180	498	498
		31	2813	2813	2341	2696	1984	1984	1616	1616	1193	1193
7	15	21	3027	3027	2683	3113	2335	2335	1980	1980	1612	1612
		23	3356	3356	3016	3499	2674	2674	2328	2328	1975	1975
		25	3677	3677	3342	3878	3005	3005	2665	2665	2322	2322
		27	3995	3995	3662	4249	3329	3329	2994	2994	2657	2657
		29	3902	2589	2992	2123	1755	1545	1180	1180	498	498
		31	3938	2970	3038	2509	1828	1828	1616	1616	1193	1193
	17	21	3911	3346	3014	2883	2335	2335	1980	1980	1612	1612
		23	3902	3714	3014	3256	2674	2674	2328	2328	1975	1975
		25	3849	3849	3342	3878	3005	3005	2665	2665	2322	2322
		27	3830	3830	3662	4249	3329	3329	2994	2994	2657	2657
		29	5099	2624	4268	2192	3298	1719	1993	1154	498	498
		31	5075	3013	4248	2584	3285	2123	1986	1550	1193	1193
	19	21	5055	3387	4231	2960	3276	2502	1986	1942	1612	1612
		23	5029	3747	4209	3315	3259	2839	2328	2328	1975	1975
		25	5002	4123	4189	3699	3243	3243	2665	2665	2322	2322
		27	4987	4484	4178	4065	3239	3239	2994	2994	2657	2657
		29	6226	2624	5430	2210	4535	1780	3488	1307	2044	726
		31	6268	3026	5476	2614	4590	2177	3556	1719	2158	1146
	21	21	6237	3410	5450	3003	4568	2576	3543	2110	2152	1550
		23	6197	3781	5417	3374	4539	2952	3519	2497	2132	1936
		25	6241	4149	5465	3742	4597	3325	3587	2875	2240	2240
		27	6116	4507	5342	4106	4476	3686	3464	3236	2657	2657
		29	7465	3018	6693	2617	5845	2208	4892	1780	3774	1310
		31	7507	3415	6742	3016	5900	2599	4956	2174	3852	1711
	23	21	7099	3791	6332	3392	5487	2983	4533	2555	3384	2075
		23	7467	4159	6711	3765	5882	3364	4950	2947	3863	2497
		25	7357	4522	6605	4129	5778	3727	4850	3310	3763	2862

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] = Sensitive cooling capacity

### CORRECTIVE FACTORS FOR YIELD COOLING CAPACITY

The cooling yields in the table refer to maximum speed (maximum air flow rate).

To determine the cooling capacity output according to speed (air flow rate), the values stated in the table must be multiplied by the following factors (k):

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

Sensitive cooling capacity values greater than the total power indicate that cooling occurs without dehumidification.

In this case take into account the sensitive power values only.

FCLI 64	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 OUTPUT - FCLI 82

Dt [°C]	Tbu [°C]	Tbs [°C]	Pc Tw(in) = 5°C	Ps Tw(in) = 5°C	Pc Tw(in) = 7°C	Ps Tw(in) = 7°C	Pc Tw(in) = 9°C	Ps Tw(in) = 9°C	Pc Tw(in) = 11°C	Ps Tw(in) = 11°C	Pc Tw(in) = 13°C	Ps Tw(in) = 13°C
3	15	21	4726	3518	3776	3040	2729	3525	2034	2034	1581	1581
		23	4697	3966	3753	3488	2912	2912	2471	2471	2026	2026
		25	4677	4407	3742	3932	3337	3337	2898	2898	2459	2459
		27	4608	4608	4187	4440	3753	3753	3320	3320	2887	2887
		29	5027	5027	4597	4876	4166	4166	3736	3736	3306	3306
		31	5429	5429	5001	5305	4574	4574	4146	4146	3719	3719
	17	21	5948	3521	5013	3050	4000	2572	2875	2082	1501	1501
		23	5980	3966	5053	3500	4046	3025	2930	2538	2026	2026
		25	5937	4407	5013	3941	4014	3473	2904	2904	2459	2459
		27	5917	4845	5001	4383	4006	3914	3320	3320	2887	2887
		29	5842	5274	4933	4815	4166	4166	3736	3736	3306	3306
		31	5811	5700	5001	5305	4574	4574	4146	4146	3719	3719
	19	21	7395	3503	6471	3040	5472	2572	4387	2085	3182	1598
		23	7354	3963	6433	3500	5443	3034	4364	2566	3165	2067
		25	7320	4404	6405	3944	5420	3482	4347	3013	3156	2529
		27	7280	4842	6367	4383	5389	3923	4321	3451	3136	3062
		29	7300	5308	6330	4818	5357	4361	4298	3896	3306	3306
		31	7268	5731	6307	5247	5340	4790	4287	4287	3719	3719
	21	21	8795	3473	7874	3010	6887	2547	5816	2082	4648	1610
		23	8901	3978	7920	3485	6938	3025	5877	2550	4717	2082
		25	8852	4431	7879	3941	6901	3485	5845	3022	4694	2544
		27	8795	4867	7825	4380	6855	3926	5805	3467	4660	3004
		29	8835	5299	7874	4815	6910	4361	5868	3908	4732	3445
		31	8669	5725	7713	5244	6755	4793	5716	4340	4585	3880
	23	23	10410	3941	9435	3454	8456	2998	7403	2538	6261	2079
		25	10453	4407	9484	3923	8511	3470	7466	3001	6333	2541
		27	9925	4860	8961	4377	7994	3923	6953	3470	5822	3010
		29	10321	5256	9426	4809	8468	4358	7432	3908	6313	3454
		31	10175	5682	9286	5238	8330	4790	7303	4343	6189	3890
		21	4313	3305	3237	2782	2321	2321	1857	1857	1366	1366
5	15	23	4290	3756	3220	3232	2769	2769	2316	2316	1851	1851
		25	4275	4197	3647	3868	3205	3205	2760	2760	2310	2310
		27	4505	4505	4069	4316	3633	3633	3194	3194	2749	2749
		29	4915	4915	4485	4757	4052	4052	3618	3618	3179	3179
		31	5323	5323	4892	5189	4465	4465	4034	4034	3601	3601
		21	5587	3333	4574	2840	3418	2313	1894	1680	1366	1366
	17	23	5624	3783	4620	3293	3478	2773	2316	2310	1851	1851
		25	5584	4227	4585	3737	3449	3220	2760	2760	2310	2310
		27	5570	4666	4577	4179	3633	3633	3194	3194	2749	2749
		29	5498	5098	4511	4611	4052	4052	3618	3618	3179	3179
		31	5469	5469	4892	5189	4465	4465	4034	4034	3601	3601
		21	7070	3336	6089	2858	5010	2353	3776	1835	2195	1223
	19	23	7033	3798	6057	3320	4984	2830	3762	2316	2187	1695
		25	7001	4243	6034	3768	4967	3281	3750	2767	2187	2161
		27	6964	4678	<b>6000</b>	<b>4200</b>	4938	3710	3730	3183	2749	2749
		29	6927	5113	5968	4644	4912	4160	3710	3652	3179	3179
		31	6898	5542	5948	5073	4901	4596	4034	4034	3601	3601
		21	8494	3317	7529	2846	6479	2368	5317	1878	3966	1336
	21	23	8537	3792	7581	3323	6539	2837	5389	2347	4072	1832
		25	8494	4246	7544	3780	6508	3308	5363	2812	4055	2298
		27	8439	4684	7495	4221	6465	3753	5326	3269	4026	2760
		29	8488	5119	7549	4657	6528	4191	5400	3713	4112	3208
		31	8324	5548	7389	5089	6373	4623	5248	4145	3960	3640
		23	10066	3765	9119	3302	8095	2837	6976	2362	5736	1863
	23	25	10115	4233	9174	3774	8155	3299	7047	2827	5819	2343
		27	9587	4684	8648	4227	7633	3762	6522	3290	5286	2794
		29	10055	5119	9125	4663	8121	4203	7024	3740	5813	3260
		31	9908	5545	8984	5095	7986	4638	6895	4173	5687	3698
		21	3681	2992	2201	2313	2103	2103	1535	1535	648	648
		23	3661	3442	3047	3208	2582	2582	2103	2103	1552	1552
7	15	25	3940	3940	3492	3704	3039	3039	2577	2577	2098	2098
		27	4367	4367	3925	4163	3481	3481	3030	3030	2571	2571
		29	4786	4786	4350	4614	3911	3911	3469	3469	3022	3022
		31	5199	5199	4766	5055	4333	4333	3897	3897	3458	3458
		21	5079	3080	3894	2526	2284	1838	1535	1535	648	648
		23	5125	3533	3954	2986	2379	2310	2103	2103	1552	1552
	17	25	5090	3981	3923	3430	3039	3039	2577	2577	2098	2098
		27	5079	4419	3923	3874	3481	3481	3030	3030	2571	2571
		29	5010	4854	4350	4614	3911	3911	3469	3469	3022	3022
		31	4984	4984	4766	5055	4333	4333	3897	3897	3458	3458
		21	6637	3123	5555	2608	4293	2045	2594	1373	648	648
		23	6605	3585	5529	3074	4275	2526	2585	1844	1552	1476
	19	25	6580	4030	5506	3521	4264	2977	2585	2310	2098	2098
		27	6545	4459	5478	3944	4241	3378	3030	3030	2571	2571
		29	6511	4906	5452	4401	4221	3862	3469	3469	3022	3022
		31	6491	5335	5438	4836	4215	3897	3897	3897	3458	3458
		21	8103	3123	7067	2630	5902	2118	4539	1555	2660	864
		23	8158	3600	7128	3110	5974	2590	4628	2045	2809	1363
	21	25	8118	4057	7093	3573	5945	3065	4611	2511	2801	1844
		27	8066	4498	7050	4014	5908	3512	4580	2970	2775	2304
		29	8123	4937	7113	4453	5983	3957	4669	3421	2915	2773
		31	7960	5363	6953	4885	5825	4386	4508	3850	3458	3458
		23	9716	3591	8712	3113	7607	2627	6367	2118	4912	1558
		25	9770	4063	8775	3588	7679	3092	6451	2587	5013	2036
	23	27	9240	4510	8241	4036	7142	3549	5900	3040	4405	2468
		29	9719	4949	8735	4480	7656	4002	6442	3506	5027	2970
		31	9575	5381	8597	4912	7521	4434	6313	3938	4898	3406

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] = Sensitive cooling capacity

## CORRECTIVE FACTORS FOR YIELD COOLING CAPACITY

The cooling yields in the table refer to maximum speed (maximum air flow rate).

To determine the cooling capacity output according to speed (air flow rate), the values stated in the table must be multiplied by the following factors (k):

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

Sensitive cooling capacity values greater than the total power indicate that cooling occurs without dehumidification.

In this case take into account the sensitive power values only.

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 OUTPUT - FCL1 122

Dt [°C]	Tbu [°C]	Tbs [°C]	Pc Tw(in) = 5°C	Ps Tw(in) = 5°C	Pc Tw(in) = 7°C	Ps Tw(in) = 7°C	Pc Tw(in) = 9°C	Ps Tw(in) = 9°C	Pc Tw(in) = 11°C	Ps Tw(in) = 11°C	Pc Tw(in) = 13°C	Ps Tw(in) = 13°C
3	15	21	8664	7095	6923	6132	5003	7109	3730	3730	2899	2899
		23	8612	7997	6881	7034	5340	5340	4529	4529	3714	3714
		25	8575	8575	6860	7930	6118	6118	5313	5313	4508	4508
		27	8449	8449	7675	8955	6881	6881	6087	6087	5292	5292
		29	9217	9217	8428	9833	7638	7638	6849	6849	6060	6060
		31	9953	9953	9169	10698	8385	8385	7602	7602	6818	6818
	17	21	10905	7101	9190	6150	7333	5186	5271	4198	2751	2751
		23	10963	7997	9264	7058	7418	6101	5371	5119	3714	3714
		25	10884	8887	9190	7948	7360	7003	5324	5324	4508	4508
		27	10847	9771	9169	8838	7344	7344	6087	6087	5292	5292
		29	10711	10637	9043	9710	7638	7638	6849	6849	6060	6060
		31	10653	10653	9169	10698	8385	8385	7602	7602	6818	6818
	19	21	13557	7064	11863	6132	10032	5186	8044	4204	5834	3222
		23	13483	7991	11794	7058	9979	6119	8001	5174	5802	4167
		25	13420	8881	11742	7954	9937	7022	7970	6076	5787	5100
		27	13346	9765	11673	8838	9879	7911	7923	6960	5750	5750
		29	13383	10704	11605	9716	9822	8795	7880	7856	6060	6060
		31	13325	11557	11563	10581	9790	9661	7859	7859	6818	6818
	21	21	16124	7003	14435	6070	12626	5137	10663	4198	8522	3247
		23	16319	8022	14519	7028	12720	6101	10774	5143	8648	4198
		25	16229	8936	14446	7948	12652	7028	10716	6095	8606	5131
		27	16124	9814	14346	8832	12568	7918	10642	6991	8543	6058
		29	16198	10686	14435	9710	12668	8795	10758	7881	8675	6948
		31	15892	11545	14141	10575	12384	9667	10479	8752	8407	7826
	23	23	19086	7948	17297	6966	15503	6046	13572	5119	11479	4192
		25	19165	8887	17386	7911	15603	6997	13688	6052	11610	5125
		27	18197	9802	16429	8826	14656	7911	12747	6997	10674	6070
		29	18923	10600	17281	9698	15524	8789	13625	7881	11573	6966
		31	18654	11459	17023	10563	15272	9661	13388	8758	11347	7844
5	15	21	7907	6666	5934	5610	4256	4256	3404	3404	2504	2504
		23	7865	7574	5902	6518	5077	5077	4245	4245	3393	3393
		25	7838	7838	6686	7801	5876	5876	5061	5061	4235	4235
		27	8259	8259	7460	8703	6660	6660	5855	5855	5040	5040
		29	9011	9011	8222	9593	7428	7428	6634	6634	5829	5829
		31	9758	9758	8969	10465	8186	8186	7396	7396	6602	6602
	17	21	10242	6721	8385	5726	6265	4665	3472	3388	2504	2504
		23	10311	7629	8470	6641	6376	5591	4245	4245	3393	3393
		25	10237	8525	8407	7537	6323	6323	5061	5061	4235	4235
		27	10211	9409	8391	8427	6660	6660	5855	5855	5040	5040
		29	10079	10079	8270	9299	7428	7428	6634	6634	5829	5829
		31	10027	10027	8969	10465	8186	8186	7396	7396	6602	6602
	19	21	12962	6727	11163	5763	9185	4744	6923	3701	4024	2467
		23	12894	7660	11105	6696	9138	5708	6897	4671	4009	3419
		25	12836	8556	11063	7598	9106	6616	6876	5579	4009	4009
		27	12768	9434	<b>11000</b>	<b>8470</b>	9054	7482	6839	6420	5040	5040
		29	12699	10311	10942	9366	9006	8390	6802	6802	5829	5829
		31	12647	11177	10905	10232	8985	8985	7396	7396	6602	6602
	21	21	15571	6690	13804	5739	11879	4775	9748	3787	7270	2694
		23	15650	7648	13899	6702	11989	5720	9879	4732	7465	3695
		25	15571	8562	13830	7623	11931	6672	9832	5671	7433	4634
		27	15472	9446	13741	8513	11852	7568	9764	6592	7381	5567
		29	15561	10324	13841	9391	11968	8452	9901	7488	7538	6469
		31	15261	11189	13546	10262	11684	9323	9622	8360	7260	7260
	23	23	18454	7592	16718	6659	14840	5720	12789	4763	10516	3756
		25	18544	8538	16818	7611	14951	6653	12920	5702	10669	4726
		27	17576	9446	15856	8525	13993	7586	11957	6635	9690	5634
		29	18433	10324	16729	9403	14888	8476	12878	7543	10658	6573
		31	18165	11183	16471	10274	14640	9354	12641	8415	10427	7457
7	15	21	6749	6033	4035	4665	3856	3856	2814	2814	1189	1189
		23	6713	6713	5587	6469	4735	4735	3856	3856	2846	2846
		25	7223	7223	6402	7470	5571	5571	4724	4724	3846	3846
		27	8007	8007	7197	8396	6381	6381	5555	5555	4714	4714
		29	8775	8775	7975	9305	7170	7170	6360	6360	5539	5539
		31	9532	9532	8738	10195	7944	7944	7144	7144	6339	6339
	17	21	9311	6211	7139	5094	4187	3707	2814	2814	1189	1189
		23	9396	7126	7249	6021	4361	4361	3856	3856	2846	2846
		25	9332	8028	7191	6917	5571	5571	4724	4724	3846	3846
		27	9311	8912	7191	7813	6381	6381	5555	5555	4714	4714
		29	9185	9185	7975	9305	7170	7170	6360	6360	5539	5539
		31	9138	9138	8738	10195	7944	7944	7144	7144	6339	6339
	19	21	12168	6297	10185	5260	7870	4125	4756	2768	1189	1189
		23	12110	7230	10137	6199	7838	5094	4740	3719	2846	2846
		25	12063	8126	10095	7101	7817	6003	4740	4659	3846	3846
		27	12000	8992	10043	7954	7775	6813	5555	5555	4714	4714
		29	11936	9894	9995	8875	7738	7738	6360	6360	5539	5539
		31	11900	10759	9969	9753	7728	7728	7144	7144	6339	6339
	21	21	14856	6297	12957	5303	10821	4272	8322	3136	4877	1743
		23	14956	7261	13067	6273	10953	5223	8485	4125	5150	2750
		25	14882	8182	13004	7206	10900	6181	8454	5064	5134	3719
		27	14788	9071	12925	8096	10832	7083	8396	5990	5087	4646
		29	14893	9955	13041	8979	10968	7979	8559	6899	5345	5345
		31	14593	10815	12747	9851	10679	8844	8264	7764	6339	6339
	23	23	17813	7242	15971	6279	13946	5297	11673	4272	9006	3142
		25	17912	8194	16087	7236	14077	6236	11826	5217	9190	4106
		27	16939	9096	15109	8139	13094	7157	10816	6132	8075	4978
		29	17818	9980	16013	9035	14035	8071	11810	7071	9217	5990
		31	17555	10851	15761	9906	13788	8943	11573	7942	8980	6868

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] = Sensitive cooling capacity

### CORRECTIVE FACTORS FOR YIELD COOLING CAPACITY

The cooling yields in the table refer to maximum speed (maximum air flow rate).

To determine the cooling capacity output according to speed (air flow rate), the values stated in the table must be multiplied by the following factors (k):

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

Sensitive cooling capacity values greater than the total power indicate that cooling occurs without dehumidification.

In this case take into account the sensitive power values only.

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 OUTPUT - FCLI 124

Dt [°C]	Tbu [°C]	Tbs [°C]	Pc Tw(in) = 5°C	Ps Tw(in) = 5°C	Pc Tw(in) = 7°C	Ps Tw(in) = 7°C	Pc Tw(in) = 9°C	Ps Tw(in) = 9°C	Pc Tw(in) = 11°C	Ps Tw(in) = 11°C	Pc Tw(in) = 13°C	Ps Tw(in) = 13°C
3	15	21	6931	3384	5538	2925	4002	3391	2984	2076	2319	1613
		23	6889	3815	5505	3355	4272	2971	3624	2521	2971	2067
		25	6860	4239	5488	3782	4895	3405	4251	2957	3607	2509
		27	6759	4658	6140	4271	5505	3829	4869	3387	4234	2945
		29	7373	5129	6742	4690	6111	4251	5479	3812	4848	3373
		31	7963	5539	7335	5103	6708	4666	6081	4230	5454	3794
	17	21	8724	3387	7352	2933	5867	2474	4217	2002	2201	1458
		23	8771	3815	7411	3367	5934	2910	4297	2442	2971	2067
		25	8707	4239	7352	3791	5888	3340	4259	2872	3607	2509
		27	8678	4661	7335	4216	5875	3765	4869	3387	4234	2945
		29	8569	5073	7234	4631	6111	4251	5479	3812	4848	3373
		31	8522	5483	7335	5103	6708	4666	6081	4230	5454	3794
	19	21	10845	3370	9490	2925	8026	2474	6435	2005	4667	1537
		23	10786	3812	9435	3367	7984	2919	6401	2468	4642	1988
		25	10736	4236	9393	3794	7950	3349	6376	2898	4629	2433
		27	10677	4658	9339	4216	7904	3774	6338	3320	4600	2945
		29	10706	5106	9284	4634	7857	4195	6304	3747	4848	3373
		31	10660	5513	9250	5047	7832	4608	6288	4166	5454	3794
	21	21	12899	3340	11548	2895	10100	2450	8531	2002	6818	1549
		23	13055	3826	11615	3352	10176	2910	8619	2453	6919	2002
		25	12983	4262	11557	3791	10121	3352	8573	2907	6885	2447
		27	12899	4681	11477	4213	10054	3777	8514	3334	6835	2889
		29	12958	5097	11548	4631	10134	4195	8606	3759	6940	3314
		31	12714	5507	11312	5044	9907	4611	8383	4175	6725	3733
	23	23	15268	3791	13838	3323	12402	2884	10858	2442	9183	2000
		25	15332	4239	13909	3774	12482	3337	10951	2887	9288	2444
		27	14557	4675	13143	4210	11725	3774	10197	3337	8539	2895
		29	15138	5056	13825	4626	12419	4192	10900	3759	9259	3323
		31	14923	5466	13619	5038	12217	4608	10711	4178	9078	3741
5	15	21	6325	3179	4747	2676	3405	2313	2723	1894	2003	1394
		23	6292	3613	4722	3109	4061	2825	3396	2363	2714	1888
		25	6271	4037	5349	3721	4701	3270	4049	2816	3388	2357
		27	6607	4596	5968	4151	5328	3706	4684	3258	4032	2805
		29	7209	5015	6578	4576	5942	4134	5307	3692	4663	3244
		31	7807	5431	7176	4991	6548	4555	5917	4116	5282	3674
	17	21	8194	3206	6708	2731	5012	2225	2778	1616	2003	1394
		23	8249	3639	6776	3168	5101	2667	3396	2222	2714	1888
		25	8190	4066	6725	3595	5059	3097	4049	2816	3388	2357
		27	8169	4488	6713	4020	5328	3671	4684	3258	4032	2805
		29	8064	4904	6616	4435	5942	4134	5307	3692	4663	3244
		31	8021	5313	7176	4991	6548	4555	5917	4116	5282	3674
	19	21	10370	3209	8930	2749	7348	2263	5538	1765	3220	1177
		23	10315	3654	8884	3194	7310	2723	5517	2228	3207	1631
		25	10269	4081	8851	3624	7285	3156	5501	2661	3207	2079
		27	10214	4500	<b>8800</b>	<b>4040</b>	7243	3569	5471	3062	4032	2805
		29	10159	4918	8754	4467	7205	4002	5442	3513	4663	3244
		31	10117	5331	8724	4880	7188	4421	5917	4116	5282	3674
	21	21	12457	3191	11043	2737	9503	2278	7798	1806	5816	1285
		23	12520	3648	11119	3197	9591	2728	7904	2257	5972	1762
		25	12457	4084	11064	3636	9545	3182	7866	2705	5947	2210
		27	12377	4505	10993	4060	9482	3610	7811	3144	5905	2655
		29	12449	4924	11073	4479	9574	4031	7920	3572	6031	3086
		31	12209	5337	10837	4895	9347	4447	7697	3987	5808	3501
	23	23	14763	3621	13375	3176	11872	2728	10231	2272	8413	1792
		25	14835	4072	13455	3630	11961	3173	10336	2720	8535	2254
		27	14061	4505	12684	4066	11195	3618	9566	3165	7752	2687
		29	14747	4924	13383	4485	11910	4043	10302	3598	8526	3135
		31	14532	5334	13177	4901	11712	4462	10113	4014	8341	3557
7	15	21	5400	2878	3228	2225	3085	2146	2252	1566	951	662
		23	5370	3311	4469	3086	3788	2635	3085	2146	2277	1584
		25	5778	3949	5122	3563	4457	3100	3779	2629	3076	2140
		27	6405	4456	5757	4005	5105	3551	4444	3091	3771	2623
		29	7020	4883	6380	4438	5736	3990	5088	3539	4432	3083
		31	7626	5305	6990	4863	6355	4421	5715	3976	5071	3528
	17	21	7449	2963	5711	2430	3350	1768	2252	1484	951	662
		23	7516	3399	5799	2872	3489	2222	3085	2146	2277	1584
		25	7466	3829	5753	3299	4457	2974	3779	2629	3076	2140
		27	7449	4251	5753	3727	5105	3551	4444	3091	3771	2623
		29	7348	4669	6380	4438	5736	3990	5088	3539	4432	3083
		31	7310	5085	6990	4863	6355	4421	5715	3976	5071	3528
	19	21	9734	3004	8148	2509	6296	1967	3804	1320	951	650
		23	9688	3449	8110	2957	6271	2430	3792	1774	2277	1420
		25	9650	3876	8076	3387	6254	2863	3792	2222	3076	2073
		27	9600	4289	8034	3794	6220	3250	4444	3033	3771	2623
		29	9549	4719	7996	4233	6191	3715	5088	3484	4432	3083
		31	9520	5132	7975	4652	6182	4137	5715	3976	5071	3528
	21	21	11885	3004	10366	2529	8657	2038	6658	1496	3901	831
		23	11965	3463	10454	2992	8762	2491	6788	1967	4120	1312
		25	11906	3902	10403	3437	8720	2948	6763	2415	4108	1774
		27	11830	4327	10340	3861	8665	3378	6717	2857	4070	2216
		29	11914	4748	10433	4283	8775	3806	6847	3291	4276	2667
		31	11674	5158	10197	4699	8543	4219	6612	3703	5071	3381
	23	23	14250	3454	12777	2995	11157	2526	9339	2038	7205	1499
		25	14330	3908	12870	3452	11262	2974	9461	2488	7352	1959
		27	13551	4339	12087	3882	10475	3414	8653	2925	6460	2374
		29	14254	4760	12811	4309	11228	3850	9448	3373	7373	2857
		31	14044	5176	12609	4725	11031	4265	9259	3788	7184	3276

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] = Sensitive cooling capacity

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

Sensitive cooling capacity values greater than the total power indicate that cooling occurs without dehumidification.

In this case take into account the sensitive power values only.

### CORRECTIVE FACTORS FOR YIELD COOLING CAPACITY

The cooling yields in the table refer to maximum speed (maximum air flow rate).

To determine the cooling capacity output according to speed (air flow rate), the values stated in the table must be multiplied by the following factors (k):

FCLI 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 OUTPUT 2-PIPE SYSTEM CONFIGURATION Room air 20°C D.B.; WATER (IN/OUT) 70°C/60°C;

FCL132						
T.w. Water [°C]		Air R.T. in [°C]				
in	dt	16	18	20	22	24
		W	W	W	W	W
70	5	4485	4291	4100	3911	3726
	10	4383	5079	4000	3812	3623
	15	4263	4069	3877	3686	3500
65	5	4060	3869	3680	3492	3309
	10	3951	3763	3575	3386	3201
	15	3823	3632	3440	3252	3066
60	5	3766	3575	3380	3192	3004
	10	3520	3332	3146	2961	2778
	15	3380	3192	3004	2815	2630
50	5	2781	2595	2413	2233	2056
	10	2652	2467	2281	2099	1916
	15	2484	2293	2101	1910	1719
45	5	2353	2170	1990	1810	1633
	10	2210	2027	1842	1659	1473
	15	2019	1824	1627	1425	1219
40	5	1921	1742	1565	1385	1211
	10	1764	1576	1390	1202	1008
	15	1530	1322	1071	697	400

FCL142						
T.w. Water [°C]		Air R.T. in [°C]				
in	dt	16	18	20	22	24
		W	W	W	W	W
70	5	8231	7874	7523	7178	6837
	10	8042	9320	7340	6994	6648
	15	7822	7466	7115	6764	6423
65	5	7450	7099	6753	6407	6072
	10	7251	6905	6559	6214	5873
	15	7015	6664	6313	5967	5627
60	5	6910	6559	6203	5857	5512
	10	6460	6114	5774	5433	5098
	15	6203	5857	5512	5166	4825
50	5	5103	4762	4427	4097	3772
	10	4867	4527	4186	3851	3515
	15	4558	4207	3856	3505	3154
45	5	4317	3982	3652	3322	2997
	10	4055	3720	3379	3044	2703
	15	3704	3348	2986	2614	2237
40	5	3526	3196	2871	2541	2221
	10	3238	2892	2551	2206	1849
	15	2808	2426	1965	1278	733

FCL162						
T.w. Water [°C]		Air R.T. in [°C]				
in	dt	16	18	20	22	24
		W	W	W	W	W
70	5	1176	1125	1075	1026	977
	10	1149	1332	1049	1000	950
	15	1118	1067	1017	967	918
65	5	1065	1015	965	916	868
	10	1036	987	937	888	839
	15	1003	952	902	853	804
60	5	988	937	887	837	788
	10	923	874	825	776	729
	15	887	837	788	738	690
50	5	729	681	633	586	539
	10	696	647	598	550	502
	15	651	601	551	501	451
45	5	617	569	522	475	428
	10	580	532	483	435	386
	15	529	478	427	374	320
40	5	504	457	410	363	317
	10	463	413	365	315	264
	15	401	347	281	183	105

FCL182						
T.w. Water [°C]		Air R.T. in [°C]				
in	dt	16	18	20	22	24
		W	W	W	W	W
70	5	13322	12745	12177	11617	11066
	10	13016	15085	11880	11320	10761
	15	12660	12084	11515	10947	10396
65	5	12058	11490	10930	10371	9828
	10	11736	11176	10617	10057	9506
	15	11354	10786	10218	9658	9107
60	5	11185	10617	10040	9480	8921
	10	10455	9896	9345	8793	8251
	15	10040	9480	8921	8361	7810
50	5	8259	7708	7165	6631	6105
	10	7878	7326	6775	6233	5690
	15	7377	6809	6241	5673	5105
45	5	6987	6445	5910	5376	4850
	10	6563	6021	5469	4927	4376
	15	5995	5419	4833	4231	3621
40	5	5707	5173	4647	4113	3595
	10	5240	4681	4130	3570	2993
	15	4545	3926	3180	2069	1187

FCL122						
T.w. Water [°C]		Air R.T. in [°C]				
in	dt	16	18	20	22	24
		W	W	W	W	W
70	5	24389	23334	22293	21269	20260
	10	23830	27618	21750	20725	19701
	15	23178	22123	21082	20042	19033
65	5	22076	21036	20011	18987	17993
	10	21486	20461	19437	18412	17403
	15	20787	19747	18707	17683	16673
60	5	20477	19437	18381	17357	16332
	10	19142	18117	17108	16099	15105
	15	18381	17357	16332	15307	14298
50	5	15121	14112	13118	12140	11178
	10	14422	13413	12404	11411	10417
	15	13506	12466	11426	10386	9346
45	5	12792	11799	10821	9843	8880
	10	12016	11022	10013	9020	8011
	15	10976	9920	8849	7747	6629
40	5	10448	9470	8507	7529	6582
	10	9594	8570	7560	6536	5480
	15	8321	7188	5822	3788	2173



## HEATING CAPACITY OUTPUT 4-PIPE SYSTEM CONFIGURATION 20°C d.b.; Water (in/out) 65°C/55°C; (EUROVENT)

FCL134						
T.w. Water [°C]		Air R.T. in [°C]				
in	dt	16	18	20	22	24
		W	W	W	W	W
70	5	2915	2789	2665	2542	2422
	10	2849	3301	2600	2478	2355
	15	2771	2645	2520	2396	2275
65	5	2639	2515	2392	2270	2151
	10	2568	2446	2323	2201	2080
	15	2485	2361	2236	2114	1993
60	5	2448	2323	2197	2075	1952
	10	2288	2166	2045	1924	1806
	15	2197	2075	1952	1830	1709
50	5	1808	1687	1568	1451	1336
	10	1724	1603	1483	1364	1245
	15	1615	1490	1366	1242	1117
45	5	1529	1410	1294	1177	1062
	10	1436	1318	1197	1078	958
	15	1312	1186	1058	926	792
40	5	1249	1132	1017	900	787
	10	1147	1024	904	781	655
	15	995	859	696	453	260

FCL144						
T.w. Water [°C]		Air R.T. in [°C]				
in	dt	16	18	20	22	24
		W	W	W	W	W
70	5	3443	3294	3147	3002	2860
	10	3364	3898	3070	2925	2781
	15	3272	3123	2976	2829	2687
65	5	3116	2969	2825	2680	2540
	10	3033	2888	2743	2599	2456
	15	2934	2787	2641	2496	2353
60	5	2890	2743	2594	2450	2305
	10	2702	2557	2415	2272	2132
	15	2594	2450	2305	2161	2018
50	5	2134	1992	1852	1714	1578
	10	2036	1893	1751	1611	1470
	15	1906	1760	1613	1466	1319
45	5	1806	1665	1527	1389	1253
	10	1696	1556	1413	1273	1131
	15	1549	1400	1249	1093	936
40	5	1475	1337	1201	1063	929
	10	1354	1210	1067	923	774
	15	1175	1015	822	535	307

FCL164						
T.w. Water [°C]		Air R.T. in [°C]				
in	dt	16	18	20	22	24
		W	W	W	W	W
70	5	4003	3830	3659	3491	3325
	10	3911	4533	3570	3402	3234
	15	3804	3631	3460	3290	3124
65	5	3624	3453	3285	3116	2953
	10	3527	3359	3190	3022	2857
	15	3412	3241	3071	2902	2737
60	5	3361	3190	3017	2849	2681
	10	3142	2974	2808	2642	2479
	15	3017	2849	2681	2513	2347
50	5	2482	2316	2153	1993	1835
	10	2367	2202	2036	1873	1710
	15	2217	2046	1875	1705	1534
45	5	2100	1937	1776	1616	1458
	10	1972	1809	1644	1480	1315
	15	1802	1628	1452	1272	1088
40	5	1715	1554	1396	1236	1080
	10	1575	1407	1241	1073	900
	15	1366	1180	956	622	357

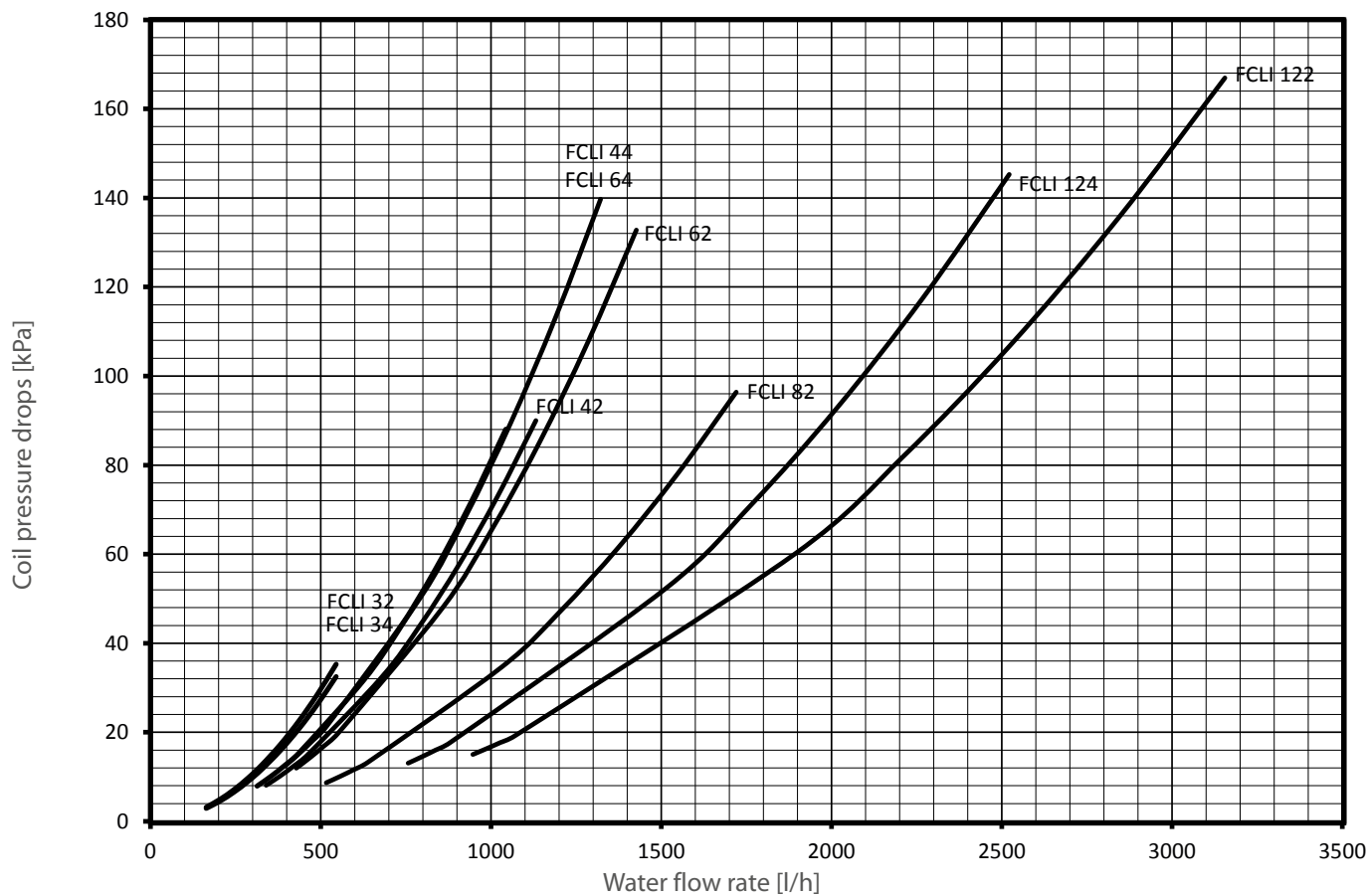
FCL124						
T.w. Water [°C]		Air R.T. in [°C]				
in	dt	16	18	20	22	24
		W	W	W	W	W
70	5	14017	13410	12812	12223	11643
	10	13696	15873	12500	11911	11322
	15	13321	12714	12116	11519	10939
65	5	12687	12090	11501	10912	10341
	10	12348	11759	11171	10582	10002
	15	11947	11349	10751	10162	9582
60	5	11768	11171	10564	9975	9386
	10	11001	10412	9832	9252	8681
	15	10564	9975	9386	8797	8217
50	5	8690	8110	7539	6977	6424
	10	8289	7709	7129	6558	5987
	15	7762	7165	6567	5969	5371
45	5	7352	6781	6219	5657	5103
	10	6906	6335	5755	5184	4604
	15	6308	5701	5086	4452	3810
40	5	6005	5443	4889	4327	3783
	10	5514	4925	4345	3756	3150
	15	4782	4131	3346	2177	1249

## HEATING CAPACITY CORRECTION FACTORS

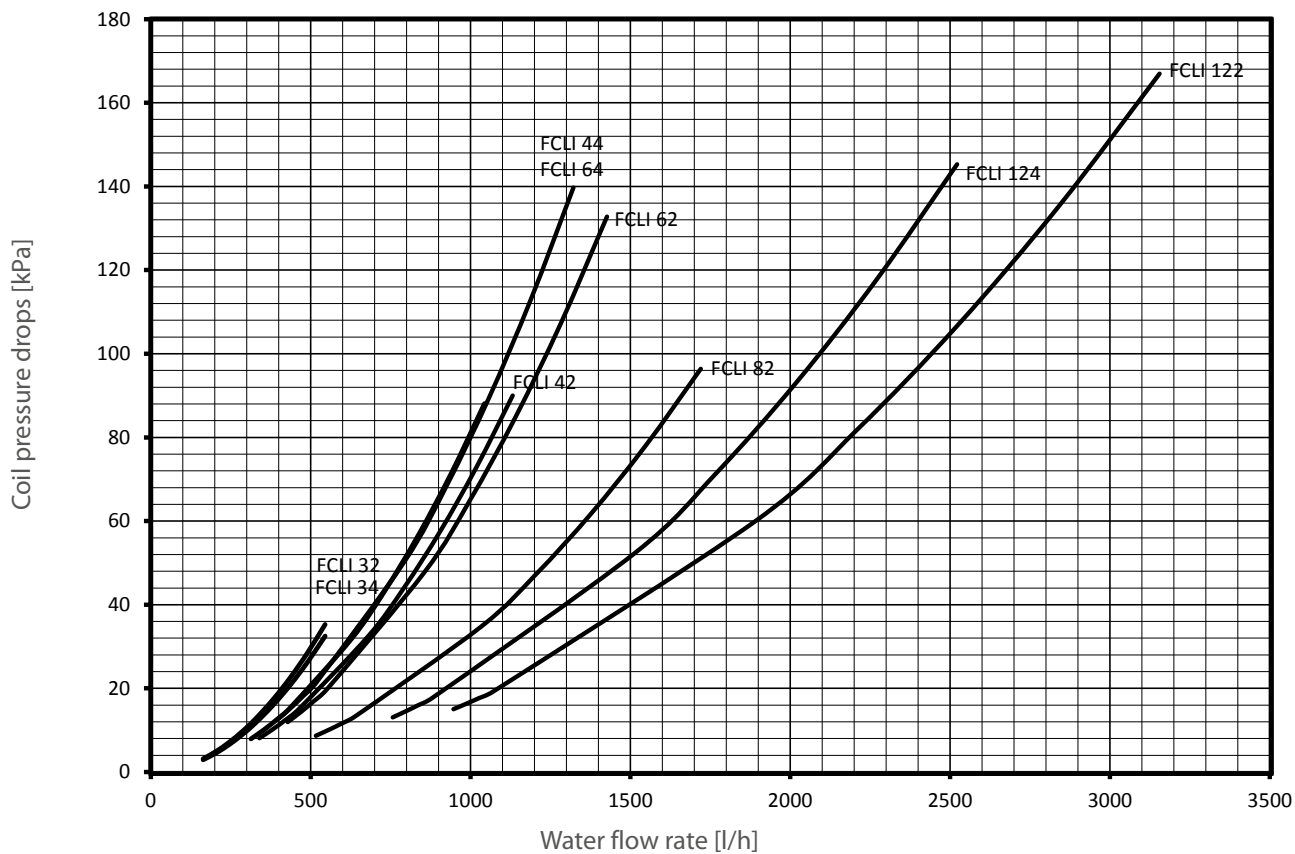
The heating capacity refers to the maximum speed (Eurovent certified). For the others the speeds, the values must be multiplied by the following factors:

FCLI	32	34	42	44	62	64	82	124	122
speed 3	1	1	1	1	1	1	1	1	1
speed 2	0,74	0,85	0,61	0,74	0,62	0,88	0,69	0,75	0,68
Speed 1 (minimum)	0,56	0,73	0,46	0,62	0,50	0,65	0,50	0,58	0,49

## PRESSURE DROPS WITH STANDARD COIL IN COOLING



## PRESSURE DROPS WITH SECONDARY COIL IN HEATING



1. CORRECTIVE FACTORS ETHYLENE GLYCOL

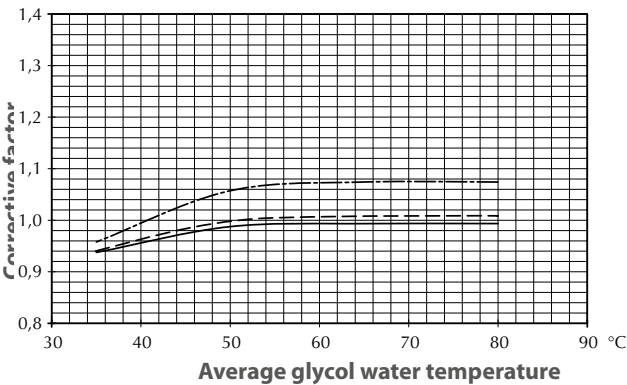
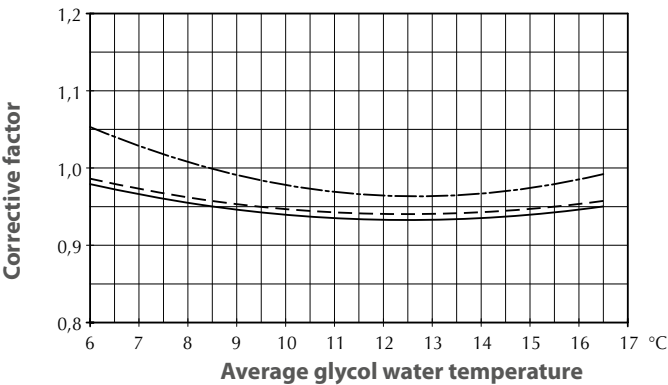
Key:

- Pressure drops
- - - Flow rate
- Yield

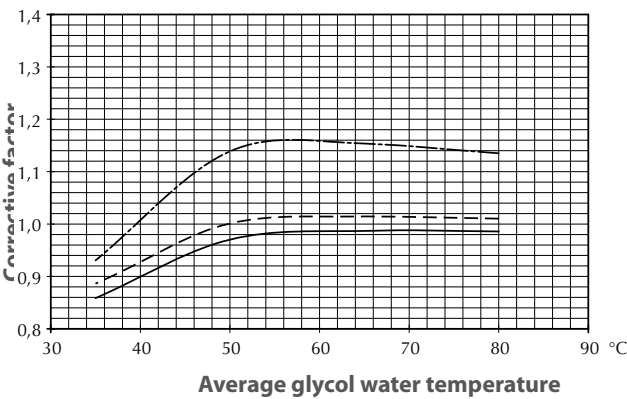
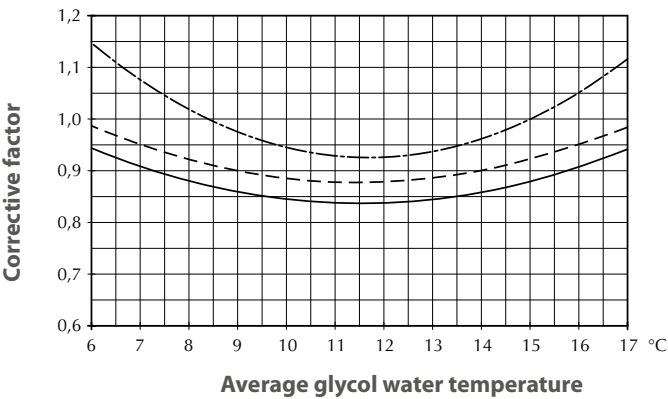
IN COOLING MODE

IN HEATING MODE

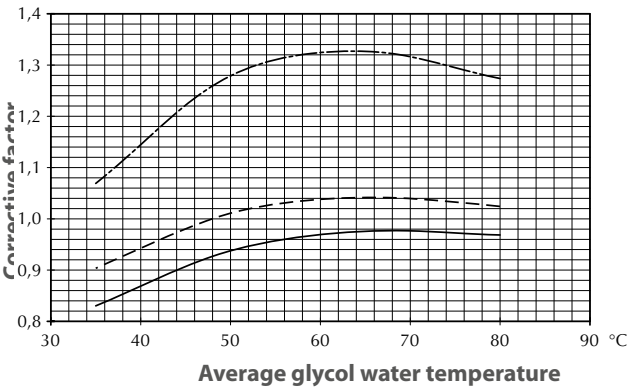
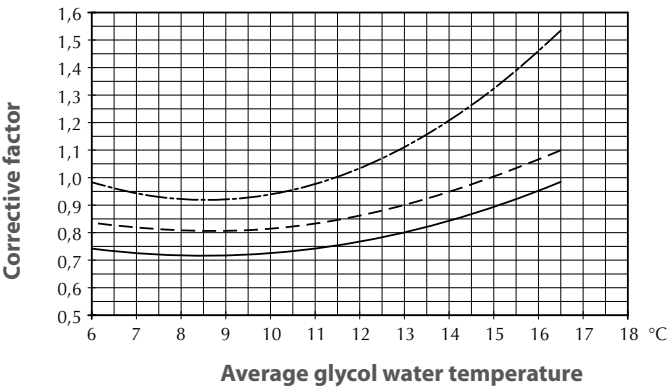
GLYCOL WATER AT 10%



GLYCOL WATER AT 20%



GLYCOL WATER AT 35%



## SOUND POWER LEVEL expressed in dB (A)

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

<sup>e</sup> = Aermec determines the sound power value on the basis of measurements made in accordance with the UNI EN 16583: 15 standard, in compliance with Eurovent certification.



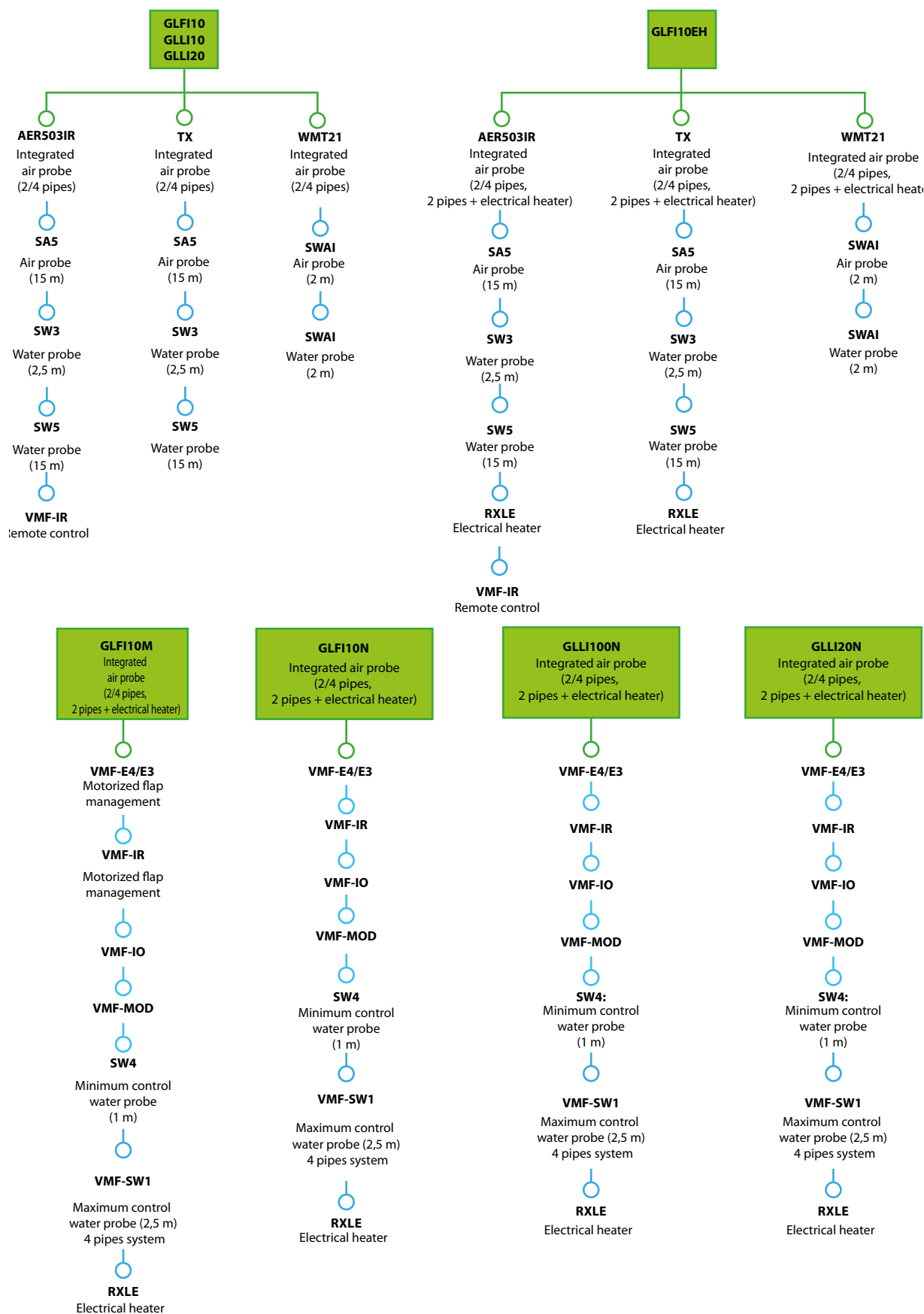
## SOUND PRESSURE LEVEL expressed in dB (A)

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

Sound pressure level (weighted A) measured in environment with volume  $V=100 \text{ m}^3$ ; reverberation time  $t=0.5\text{s}$ ; directivity factor  $Q=2$ ; distance  $r=2.5\text{m}$

## ACCESSORIES

### Accessories that can be combined with the grilles



**RXLE** it can be installed only at the factory.

### Intake grids and distribution of the air, compulsory accessory

**GLFI10:** Recovery and air supply grille in plastic, RAL 9010 colour, measuring 600x600 mm adapts perfectly to standard false ceilings without overlapping parts. Intake is in the central part, where the easily removable air filter is housed. Delivery is via the perimeter slits with manually orientated louvers. Must be combined with a wall-mounted panel. (size 840x840 mm not available).

**GLFI10EH:** Recovery and air supply grille in plastic, RAL 9010 colour, measuring 600x600 mm; adapts perfectly to standard false ceilings without overlapping parts. Suitable for use with the RXLE heater. Intake is in the central part, where the easily removable air filter is housed. Delivery is via the perimeter slits with manually orientated fins. Must be combined with a wall-mounted panel. (size 840x840 mm not available).

**GLFI10M:** Recovery and air supply grille in plastic, RAL 9010 colour, measuring 600x600 mm adapts perfectly to standard false ceilings without overlapping parts. It is equipped with an infrared receiver with an emergency operation button, a thermostat card which also requires the installation of the VMF-E4 panel or the VMF-IR remote control. Intake is in the central part, where the easily removable air filter is housed. Delivery is via the perimeter slits that can be orientated with the remote control. (size 840x840 not available).

**GLFI10N:** Recovery and air supply grille in plastic, RAL 9010 colour, measuring 600x600 mm, adapts perfectly to standard false ceilings without overlapping parts. Fitted with a thermostat board that necessarily requires the installation of the VMF-E4 or VMF-IR panel as well. Intake is in the central part, where the easily removable air filter is housed. Delivery is via the perimeter slits that can be manually orientated. (size 800x800 mm not available).

**GLLI100:** Recovery and air supply grille in plastic, RAL 9010 colour, measuring 600x600 mm; adapts perfectly to standard false ceilings without overlapping parts. Intake is in the central part, where the easily removable air filter is housed. Delivery is via the perimeter slits that can be manually orientated. Must be combined with a wall-mounted panel.

**GLLI100EH:** Recovery and air supply grille in plastic, RAL 9010 colour, measuring 600x600 mm; adapts perfectly to standard false ceilings without overlapping parts. Suitable for use with the RXLE heater. Intake is in the central part, where the easily removable air filter is housed. Delivery is via the perimeter slits with manually orientated fins. Must be combined with a wall-mounted panel. (size 840x840 mm not available).

**GLLI100N:** Recovery and air supply grille in plastic, RAL 9010 colour, measuring 600x600 mm; adapts perfectly to standard false ceilings without overlapping parts. Fitted with a thermostat board that necessarily requires the installation of the VMF-E4X panel as well, and suitable for use with the RXLE heater. Intake is in the central part, where the easily removable air filter is housed. Delivery is via the perimeter slits that can be manually orientated.

**GLLI120:** Recovery and air supply grille in plastic, RAL 9010 colour, measuring 840x840 mm, adapts perfectly to standard false ceilings without overlapping parts. Intake is in the central part, where the easily removable air filter is housed. Delivery is via the perimeter slits that can be manually orientated. Must be combined with a wall-mounted panel.

**GLLI120N:** Recovery and air supply grille in plastic, RAL 9010 colour, measuring 840x840 mm, adapts perfectly to standard false ceilings without overlapping parts. Fitted with a thermostat board that necessarily requires the installation of the VMF-E4X or VMF-IR panel as well. Intake is in the central part, where the easily removable air filter is housed. Delivery is via the perimeter slits that can be manually orientated.

### AerSuite

The AerSuite application is used to remotely control the DI24 user interface, with VMF-E19/VMF-E19I thermostats, using Smart Devices with iOS and Android operating systems.

This is an application for Smartphones and Tablets with which the user can access and control the system operation remotely.

For more information about the use of the application and the available functions, refer to the respective documentation on the website.



### VMF system

**DI24:** Flush-mounted interface (503 box) with 2.4" touch screen display to be combined with VMF-E19, VMF-E19I accessories. It allows you to regulate and monitor the temperature inside rooms precisely and on time; in addition to accessing and interacting with your system's operating information, parameters and alarms, it allows you to set time slots. Thanks to its Wi-Fi connection, DI24 in combination with the AerSuite APP (available for Android and iOS) can also be remotely controlled. All programming and most functions are done in a simple and intuitive way using the APP. To allow for customization of the interface so that it seamlessly integrates with the style of any home, DI24 is compatible with switch plates from major brands available on the market. For more information, please refer to our documentation. However, a switch plate with its graphite gray support, DI24CP, is also available as a separate accessory in our catalog.

**VMF-E3:** Wall mounted user interface, to be combined with accessories VMF-E19, VMF-E19I, with grids GLF\_N/M and GLL\_N, can be controlled with VMF-IR control.

**VMF-E4DX:** Wall-mounted user interface. Grey front panel PANTONE 425C (METAL).

**VMF-E4X:** Wall-mounted user interface. Light grey front panel PANTONE COOL GRAY 1C.

**VMF-IR:** User interface compatible with the AER503IR, VMF-E3 thermostat and with all the grids of cassettes equipped with the infrared receiver compatible with the VMF system.

**VMF-SW:** Water probe (L = 2.5m) used if required in place of the standard unit supplied with the VMF-E19 and VMF-E19I thermostats for mounting it upstream of the valve.

**VMF-SW1:** Additional water probe (L = 2.5m) to be used if required for 4-pipe systems with the VMF-E19 and VMF-E19I thermostats for maximum control in the cold range

**VMHI:** The VMHI panel can be used as a user interface for VMF-E19/E19I thermostats, GLFxN/M or GLLxN grids, or as an interface for the MZC system. What determines the function to be performed by the user interface is determined by its correct parametrisation and by following the electrical connections between interface and thermostat or interface and plenum.

### Control panels and their accessories

**AER503IR:** Flush-mounting thermostat with backlit display, capacitive keypad and infrared receiver, for controlling both brushless fan coils and those with an asynchronous motor. In 2-pipe systems, the thermostat can control standard fan coils or those equipped with an electric heater, with air purifying devices (Cold Plasma and germicidal lamp), with radiant plate or with FCZ-D twin delivery (Dualjet). In addition, it can control systems with radiant panels or mixed (fan coil and radiant floor) systems. Being equipped with an infrared receiver, it can, in turn, be controlled by the VMF-IR remote control.

**SA5:** air probe kit (L = 15 m) with probe-locking cable grommet.

**SW3:** Water probe (L = 2.5 m) for controlling the minimum and maximum and to allow automatic seasonal switching for electronic thermostats fitted with water side changeover.

**SW4:** Water temperature probe allowing automatic season change on electronic controllers supplied with water-side change over.

**SW5:** water probe kit (L = 15m) with probe-holder connection point, fixing clip and probe-holder from heat exchanger.

**SWAI:** External air or water temperature probe.

**TX:** Wall-mounting thermostat for controlling either brushless fan coils or those with asynchronous motors for 2/4 pipe. In 2-pipe systems, the thermostat can control standard fan coils or those equipped with an electric heater, with air purifying devices, radiant plate or FCZ-D twin delivery (Dualjet).

**WMT21:** Electronic thermostat for inverter fancoils.

## Electric heaters

**RXLE:** Electric heater for heating, can be installed on board the units.

**RXLE20:** Electric heater for heating, can be installed on board the units.

## Water valve kit

**VCFLX4:** 3-way valve kit for single-coil fan coil for 4-pipe systems. With totally separate "heating" and "cooling" circuits. This kit consists of two 3-way insulated valves and four connections, complete with electrothermal actuators, insulating shells for the valves, and the relative hydraulic couplings.

**VHL1:** 3-way motorised valve kit with 4 connections including the actuator. 230V~50Hz power supply.

**VHL124:** 3-way motorised valve kit with 4 connections including the actuator. 24V power supply.

**VHL20:** Motorised 3-way valve kit with 4 connections, complete with actuator and the relative hydraulic couplings. 230V~50Hz power supply.

**VHL2024:** Motorised 3-way valve kit with 4 connections, complete with actuator and the relative hydraulic couplings. 24V power supply.

**VHL2:** 2-way motorised valve kit with 2 connections including the actuator. Power supply 230V~50Hz;

**VHL22:** Motorised 2-way valve kit with 2 connections, complete with actuator and the relative hydraulic couplings. Power supply 230V~50Hz;

**VHL2224:** Motorised 2-way valve kit with 2 connections, complete with actuator and the relative hydraulic couplings. 24V power supply.

**VHL224:** 2-way motorised valve kit with 2 connections including the actuator. 24V power supply.

## Installation accessories

**KFL:** Delivery flange, allowing the air to be directed to an adjacent room.

**KFL20:** Delivery flange, allowing the air to be directed to an adjacent room. Up to three KFL20 can be assembled on a single unit.

**KFLD:** Suction flange, allows to introduce external air directly into the room without mixing.

**KFLD20:** Suction flange, allows to introduce external air directly into the room without mixing. Up to two KFLD20 can be assembled on a single unit.

**FCLMC10:** Perimeter housing in painted galvanised sheet metal, 600x600 mm, used when the fan coil is installed outside the false ceiling. It has an aesthetic and protective purpose only, so the technical characteristics of the fan coil remain unaltered. Can only be combined with GLL/GLLI grilles.

**FCLMC20:** Perimeter housing in painted sheet metal, 840x840 mm, used when the fan coil is installed outside the false ceiling. It has an aesthetic and protective purpose only, so the technical characteristics of the fan coil remain unaltered. Can only be combined with GLL/GLLI grilles.

**FCLMC20IK:** Installation kit for the inverter controller. Mandatory for units with FCLMC20.

## ACCESSORIES COMPATIBILITY

### Intake grids and distribution of the air

Model	Ver	32	34	42	44	62	64	82	122	124
GLFI10 (1)	FCLJ,V2,VL	*	*	*	*	*	*			
GLFI10EH (2)	FCLJ,V2,VL	*	*	*	*	*	*			
GLFI10M (3)	FCLJ,V2,VL	*	*	*	*	*	*			
GLFI10N (3)	FCLJ,V2,VL	*	*	*	*	*	*			

(1) Not compatible with the VMF system and electric heaters.

(2) Not compatible with the VMF system, but compatible with electric heaters.

(3) Compatible with the VMF system and electric heaters.

### Intake grid and distribution of the air

Model	Ver	32	34	42	44	62	64	82	122	124
GLLI100 (1)	FCLJ,V2,VL	*	*	*	*	*	*			
GLLI100EH (2)	FCLJ,V2,VL	*	*	*	*	*	*			
GLLI100N (3)	FCLJ,V2,VL	*	*	*	*	*	*			
GLLI20 (1)	FCLJ,V2,VL							*	*	*
GLLI20N (4)	FCLJ,V2,VL							*	*	*

(1) Not compatible with the VMF system and electric heaters.

(2) Not compatible with the VMF system, but compatible with electric heaters.

(3) Compatible with the VMF system and electric heaters.

(4) Compatibility with VMF system.

### VMF system

Model	Ver	32	34	42	44	62	64	82	122	124
DI24	FCLJ,V2,VL	*	*	*	*	*	*	*	*	*
VMF-E3	FCLJ,V2,VL	*	*	*	*	*	*	*	*	*
VMF-E4DX	FCLJ,V2,VL	*	*	*	*	*	*	*	*	*
VMF-E4X	FCLJ,V2,VL	*	*	*	*	*	*	*	*	*
VMF-IR	FCLJ,V2,VL	*	*	*	*	*	*	*	*	*
VMF-SW	FCLJ,V2,VL	*	*	*	*	*	*	*	*	*
VMF-SW1	FCLJ,V2,VL	*	*	*	*	*	*	*	*	*
VMHI	FCLJ,V2,VL	*	*	*	*	*	*	*	*	*

### Control panels and dedicated accessories

Model	Ver	32	34	42	44	62	64	82	122	124
AERS03IR (1)	FCLJ,V2,VL	*	*	*	*	*	*	*	*	*
SA5 (2)	FCLJ,V2,VL	*	*	*	*	*	*	*	*	*
SW3 (2)	FCLJ,V2,VL	*	*	*	*	*	*	*	*	*
SW4	FCLJ,V2,VL	*	*	*	*	*	*	*	*	*
SW5 (2)	FCLJ,V2,VL	*	*	*	*	*	*	*	*	*
SWAI (3)	FCLJ,V2,VL	*	*	*	*	*	*	*	*	*
TX (4)	FCLJ,V2,VL	*	*	*	*	*	*	*	*	*
WMT21	FCLJ,V2,VL	*	*	*	*	*	*	*	*	*

(1) Wall-mount installation.

(2) Probe for AERS03IR-TX thermostats, if fitted.

(3) Probe for thermostat WMT21.

(4) Wall-mounting. If the unit intake exceeds 0.7A, or several units need to be managed with a single thermostat, board SIT3 and/or SIT5 is required.



**3 way valve kit**

Model	Ver	32	34	42	44	62	64	82	122	124
VHL1 (1)	VL		*		*		*			
VHL124 (1)	VL		*		*		*			
VHL20 (1)	VL									*
VHL2024 (1)	VL									*

(1) Obligatory accessory in 4-pipe systems.

**2 way valve kit**

Model	Ver	32	34	42	44	62	64	82	122	124
VHL2 (1)	VL		*		*		*			
VHL22 (1)	VL									*
VHL2224 (1)	VL									*
VHL224 (1)	VL		*		*		*			

(1) Compulsory accessory in 4-pipe systems with variable flow rate.

**Valve Kit for 4 pipe systems**

Model	Ver	32	34	42	44	62	64	82	122	124
VCFLX4 (1)	VL	*		*		*				

(1) The valve must be commanded via command panels enabled for valve control.

**Delivery and suction flange**

Model	Ver	32	34	42	44	62	64	82	122	124
KFL	FCLJ,V2,VL	*	*	*	*	*	*			
KFL20	FCLJ,V2,VL							*	*	*
KFLD	FCLJ,V2,VL	*	*	*	*	*	*			
KFLD20	FCLJ,V2,VL							*	*	*

**Perimeter case**

Model	Ver	32	34	42	44	62	64	82	122	124
FCLMC10 (1)	FCLJ,V2,VL	*	*	*	*	*	*			
FCLMC20 (1)	FCLJ,V2,VL							*	*	*
FCLMC20IK (2)	FCLJ,V2,VL							*	*	*

(1) Can only be combined with GLL/GLLI grilles

(2) Mandatory for units with FCLMC20.

## INSTALLATION



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

**WARNING:** before carrying out any work, put the proper individual protection devices on.

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

**WARNING:** the electrical connections, the 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 (in this manual they will be indicated with the general term "persons with specific technical skills").

In the specific case of electrical wirings, the following must be checked:

- measurement of the electrical system insulation strength
- continuity test of the protection wires

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

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

The final touches to all the operations are, however, left to the experience of the installation engineer in accordance with the specific needs.

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

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

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

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

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 grilles.

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.

On the side of the deflectors there is an indication of the opening positions for correct operation:

- Module 600 hot opening 20°
- Module 600 cold opening 10°
- Module 840 hot opening 25°; 100%
- Module 840 cold opening 50°

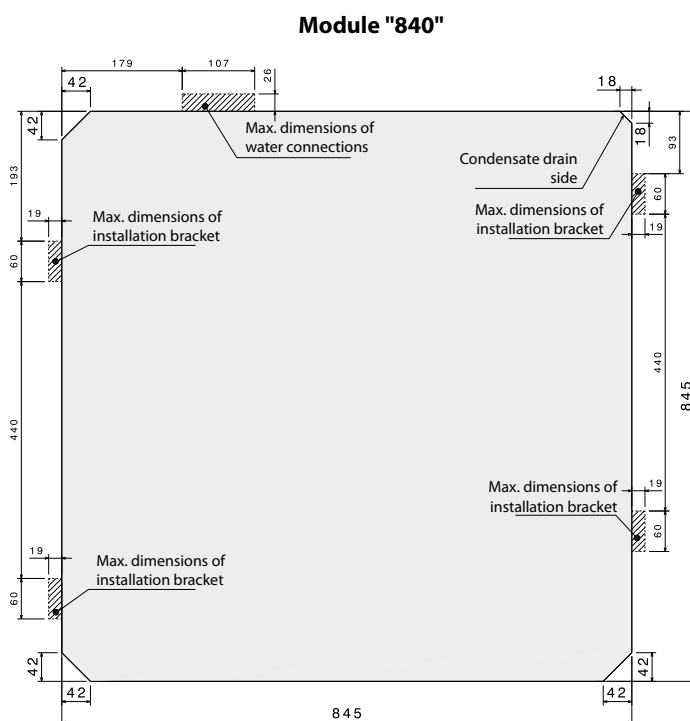
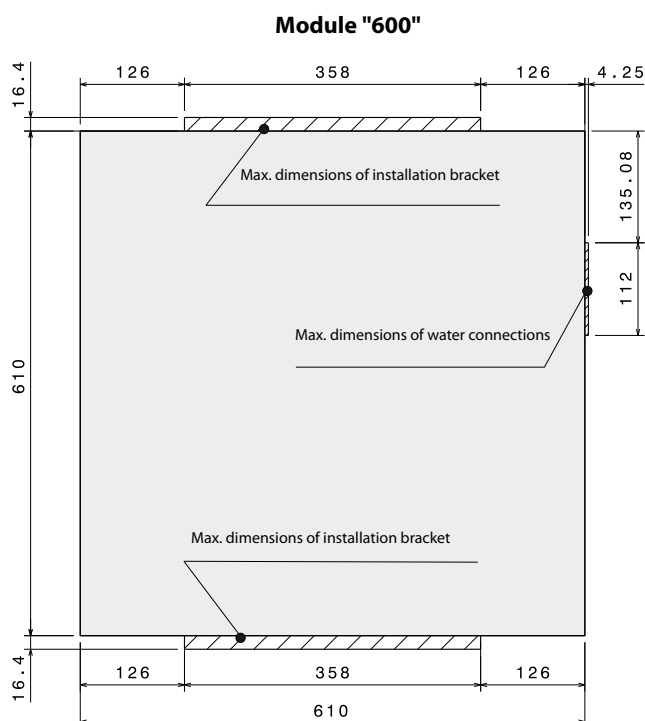
Depending on the user's needs, the fins can be adjusted to the intermediate positions, or completely closed.

Thanks to the special shapes of the fins, the machine can also function with the deflectors completely closed.

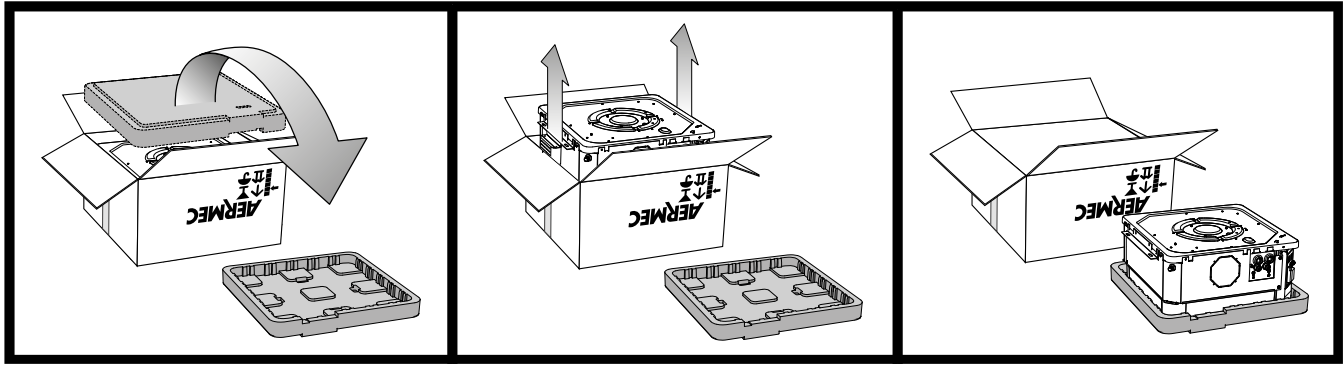
Do not install at a height above three metres.

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

## 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

**The FCLI 600x600 driver inverter is integrated to the group motor-fan.**

- 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/GLF10)
- bring the power supply and command cables close to the electric box; ensure the cables are long enough to follow the

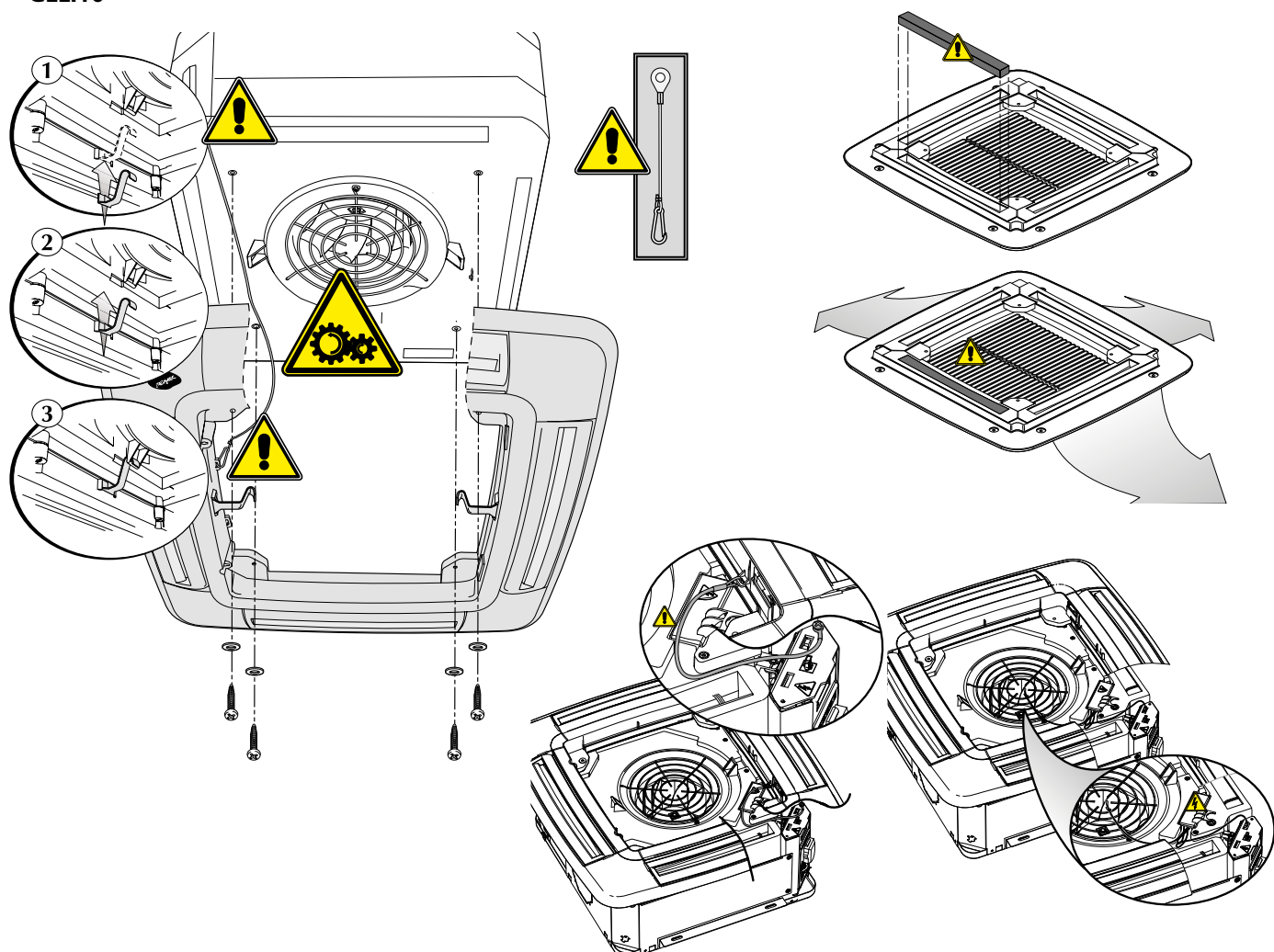
movement of the electric box on the guides during the assembly and disassembly phases

- 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 a function test, the functions are described in the user manual.

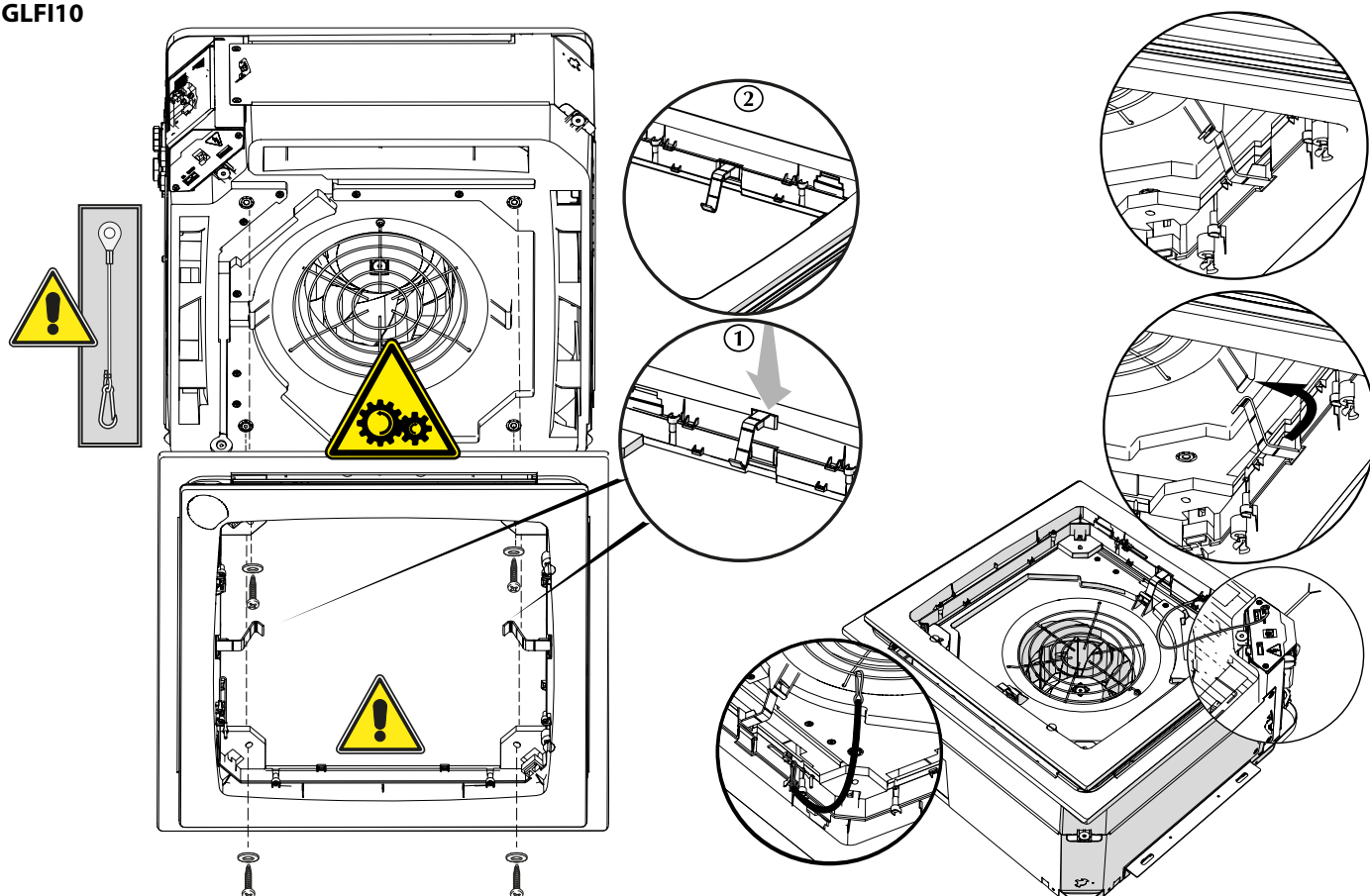
### • INSTALLING NEAR A WALL

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

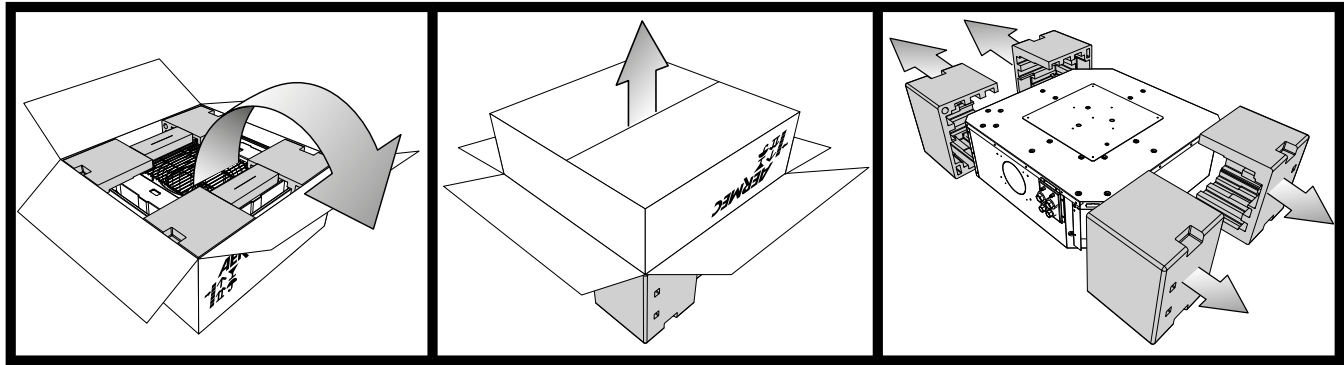
GLLI10



GLFI10




## 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 (GLLI20)
- 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.

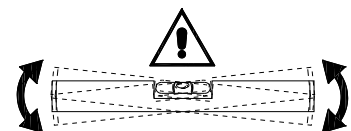
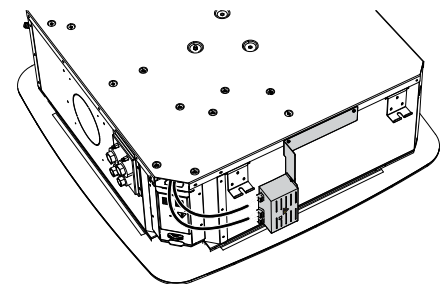
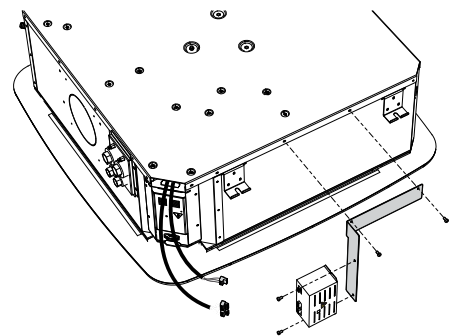
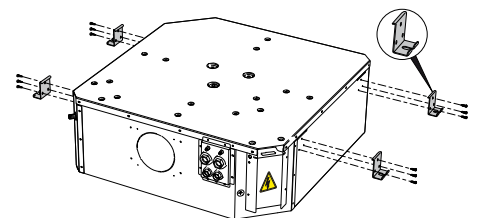
- Fix the grille with the 4 screws. **WARNING!!** Tighten the screws with a maximum tightening torque of 0.45 Nm. You are advised to use a screwdriver. Do not use non-calibrated electric screwdrivers. The tray will be irreparably damaged if tightened too far.

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

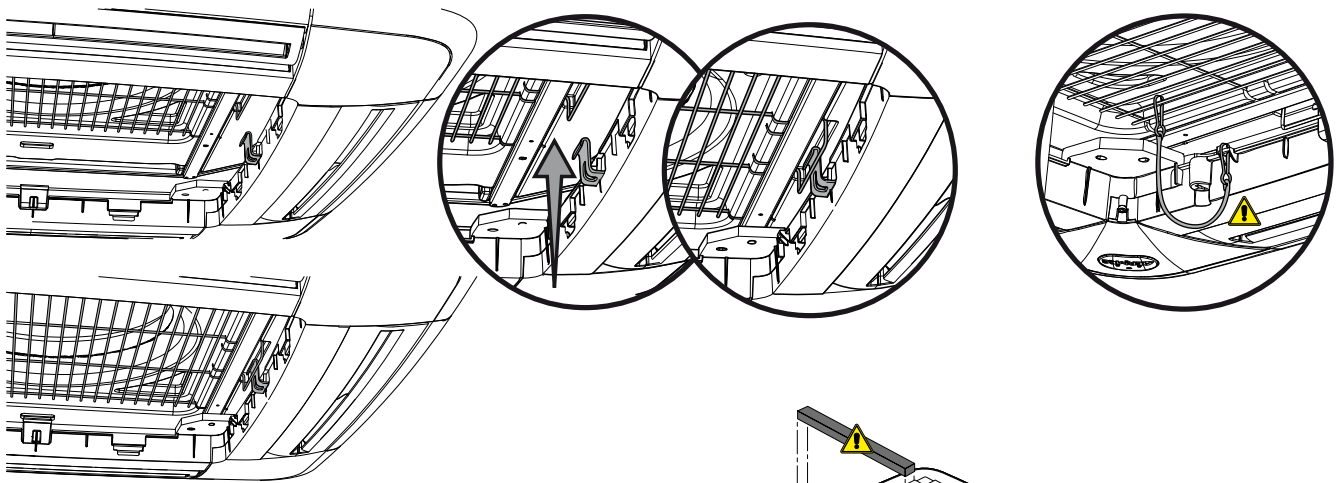


Fasten the suction grille to the safety wire.

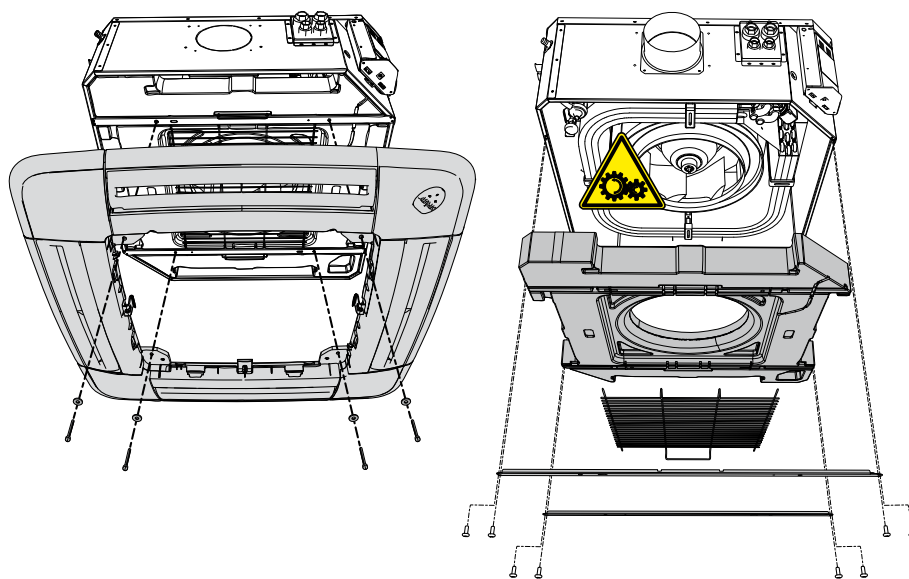
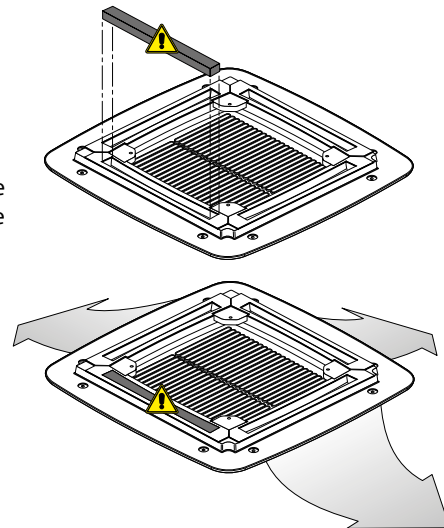
- adjust the position of the unit from the support bracket - by means of the nuts
  - so the unit is level and the frame rests slightly on the suspended ceiling
- Start the fan coil unit and carry out a function test, the functions are described in the user manual.







- **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.

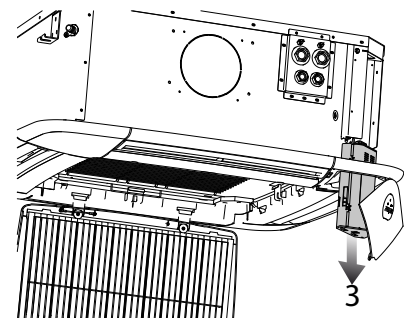
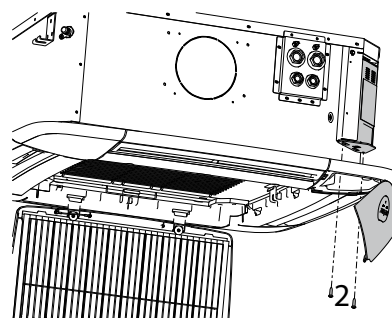
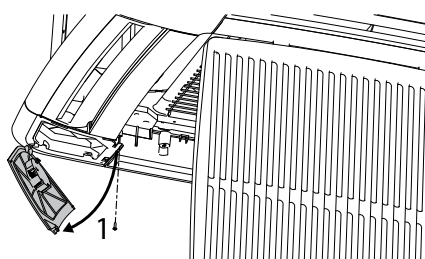


- **Disassembling for maintenance purposes**
  - Before carrying out any operations on the unit, it is essential to disconnect it from the power supply.
  - To access the inside of the unit, remove the two crossbars that are screwed to the frame. It will then be possible to remove the fan protection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



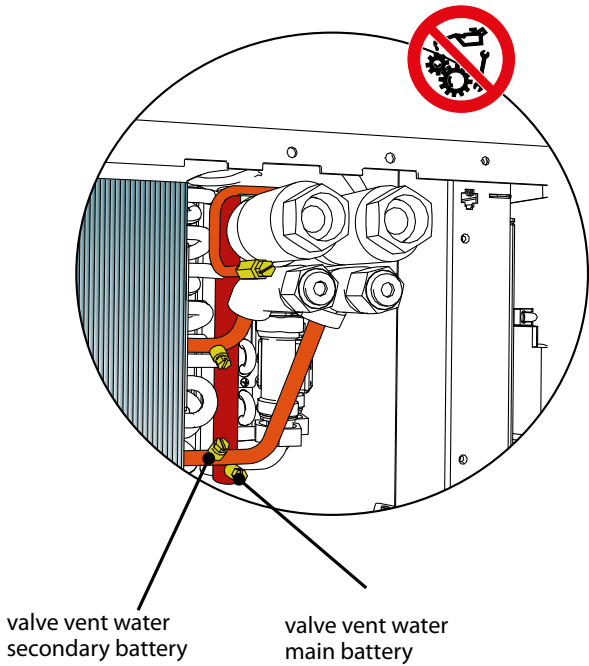
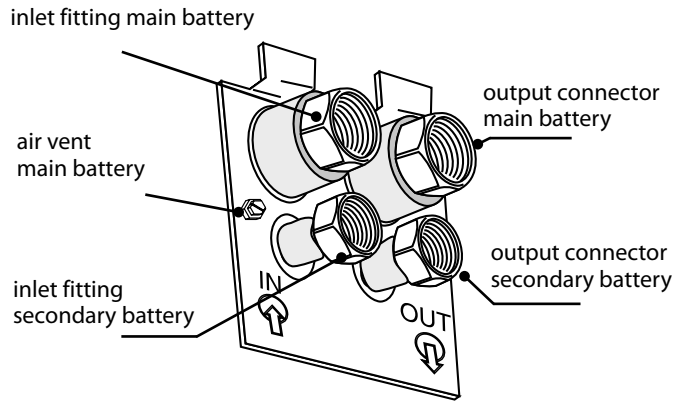
WATER CONNECTIONS

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

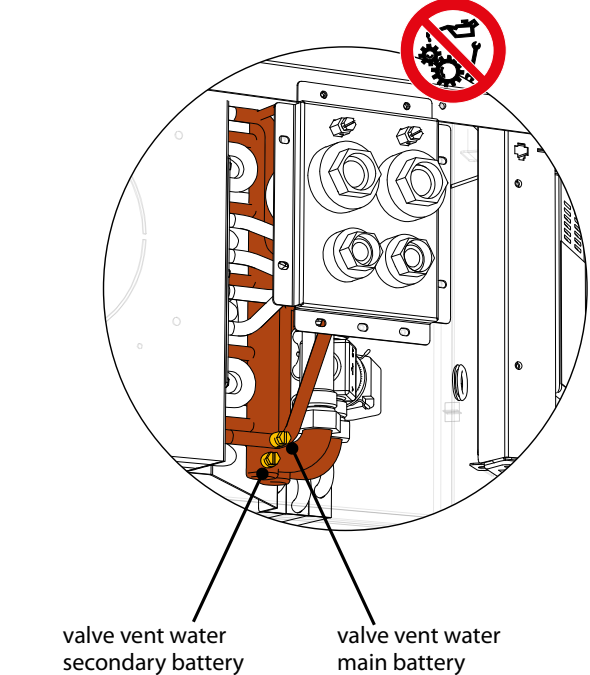
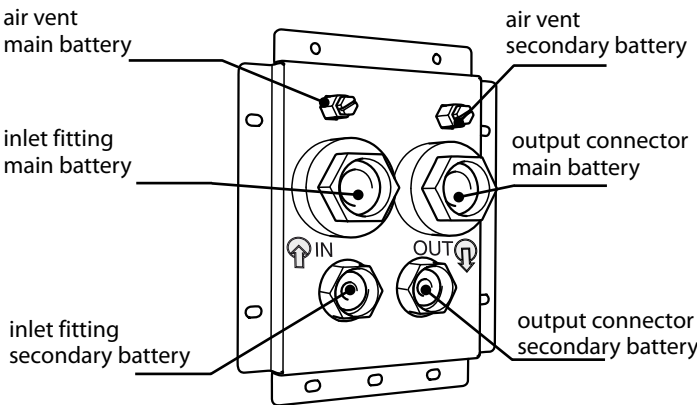
instruction booklet.  
The delivery and return pips must be equal, suitably scaled and insulated to avoid heat dispersion and dripping during cold functioning.

FCLI 600x600



**⚠** For the proper discharge of air and water through the special valve is necessary to remove the condensate drain pan, as shown on the previous page  
For proper water drainage and must make sure that the hydraulic connections main are closed.

FCLI 840x840



**⚠** For proper drainage of water through the drain valve is necessary to remove the condensate drain pan, as shown on the previous page  
For proper water drainage and must make sure that the hydraulic connections main are closed.

Mod. FCLI		32	34	42	44	62	64	82	122	124
Attacks standard battery	ø	3/4°F	3/4°F	3/4°F	3/4°F	3/4°F	3/4°F	3/4°F	3/4°F	3/4°F
Attacks additional battery	ø	-	1/2°F	-	1/2°F	-	1/2°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 floating pump device must never be interrupted.

In the event of an alarm, the float device interrupts the flow of water in the coil.

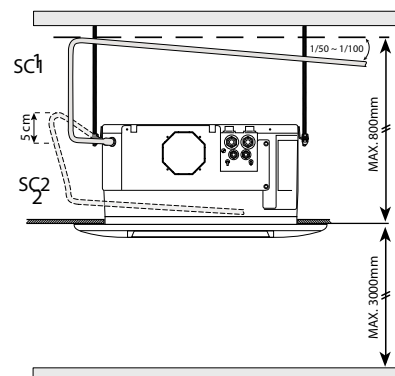
The basin is fitted with an overflow hole to ensure that the condensate water runs off if the floating pump device is not working. In this case dripping can be seen from the grille.

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.

SC1 = Condensate discharge (male Ø 16mm)

SC2 = Condensate discharge with siphon (male Ø 16mm) Ensuring a vertical section of at least 5 cm (from the pump outlet, upward)



## 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, to be assembled inside the unit.

## 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 (FCLI32\_64), 230V ~ 50/60Hz (FCLI82\_122) 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 thermomagnetic cut out max. 2A 250V (IG)V on the power line with a minimum opening distance between the contacts of 3mm.

**We recommend using differential devices suitable for intervening for currents of**

**different type:**

 **sinusoidal AC and pulsating DC currents suddenly applied or slowly rising.**

 **sinusoidal AC with frequency up to 1000 hz**

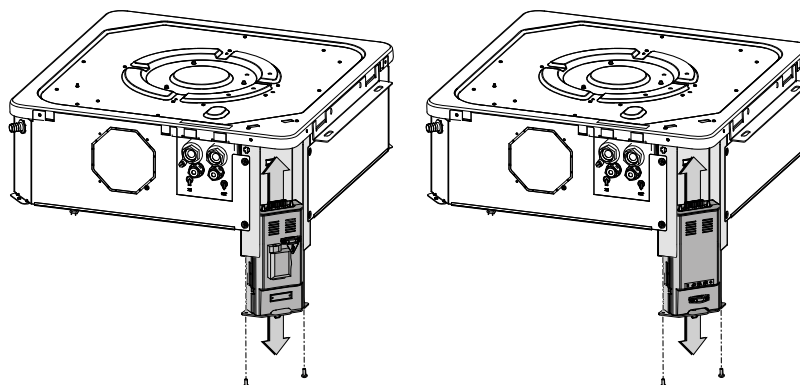
The electrical power cable must be of the H07 V-K or N07 V-K type with 450/750V insulation if inside a tube or raceway. Use cables with double H5vv-F type insulation for visible cable installation.

When making the connections, follow the wiring diagrams supplied with the equipment and shown in this document.

Connect the Inverter to the electric box, using the

cables supplied.

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.

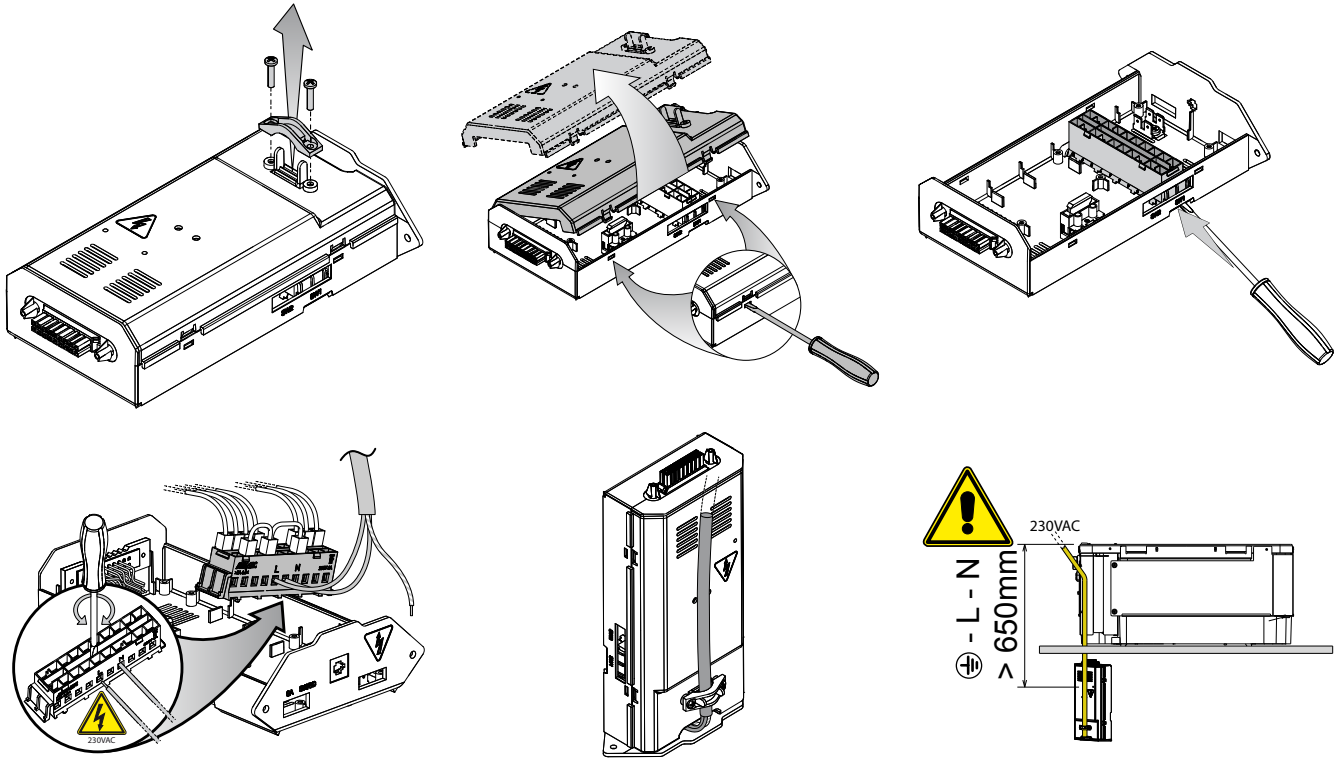


**⚠ WARNING: Do not modify the settings of the Inverter device. Any modification to the parameters could cause the device to malfunction. The factory settings are shown on the label attached to the unit.**



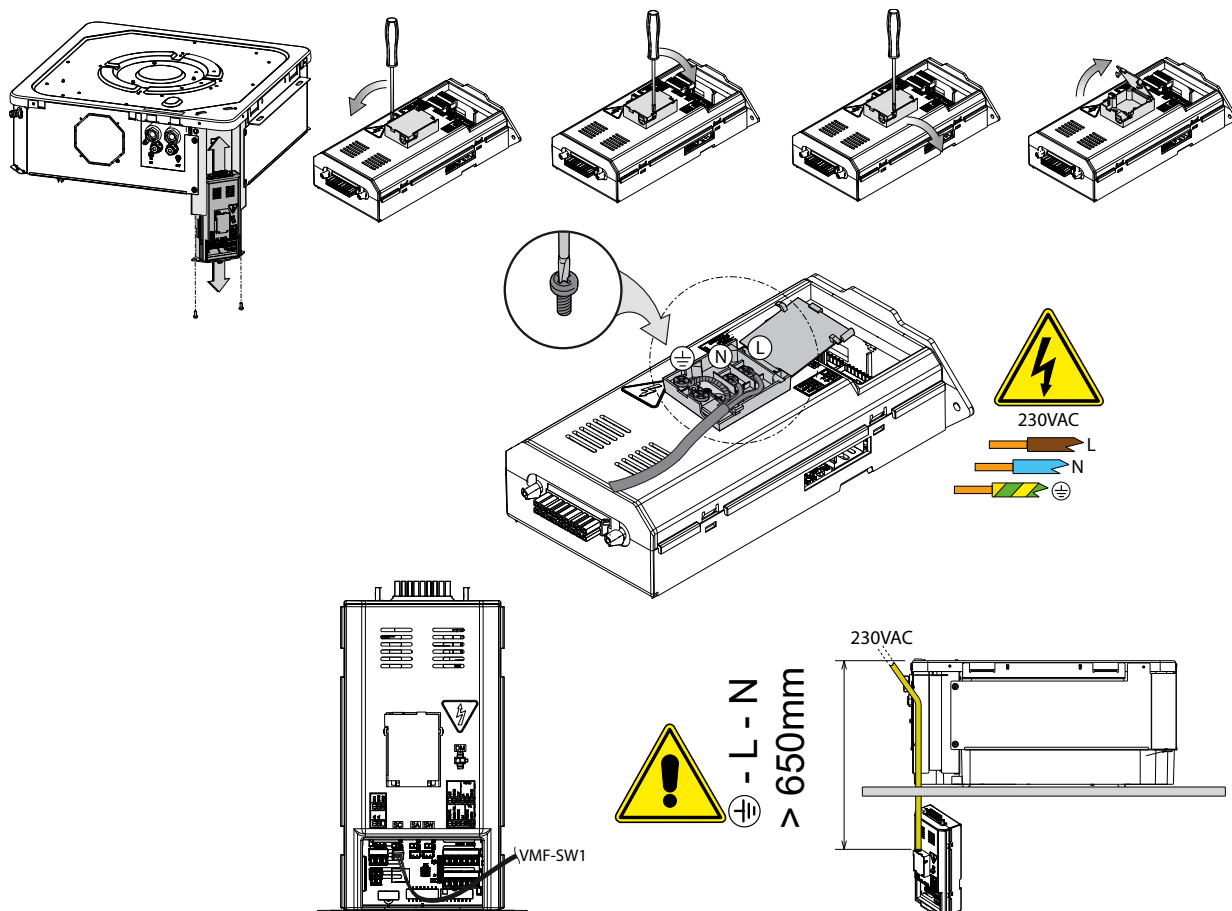
## COLLEGAMENTI ELETTRICI CON GLI ACCESSORI GLLI100 E GLLI20

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

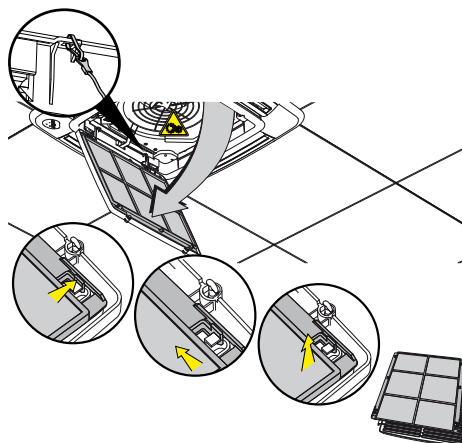
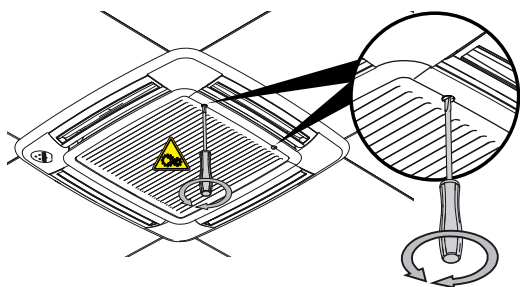


## GLLI100N E GLLI20N

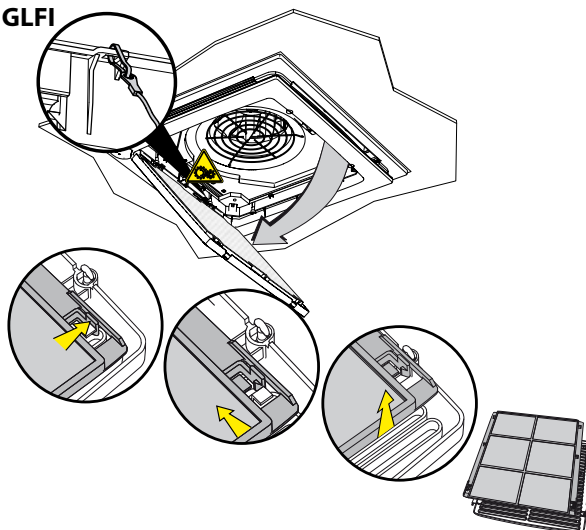
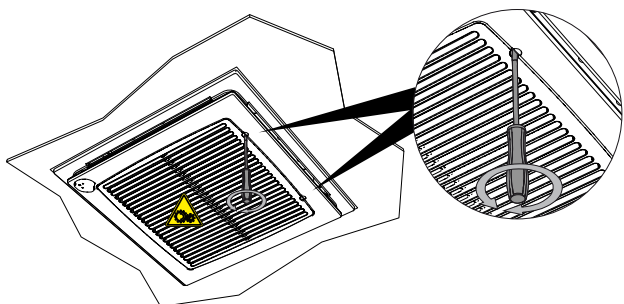
Before installing the electrical box, it is necessary to check the configuration of the Dip-switches of the electronic board to adapt it to the system. The diagram for setting the Dip-switches is shown in the GLLI\_N accessories manual.  
Connect the VMF-E4 control panel, the supervision network cable, the TTL network cable, the probe and valve cables according to the system needs.  
For the connections, refer to the wiring diagrams of the fan coil and the connected accessories.



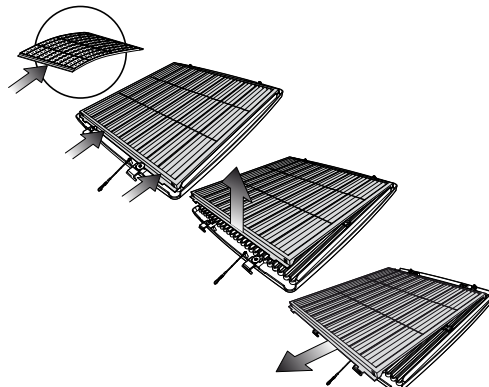
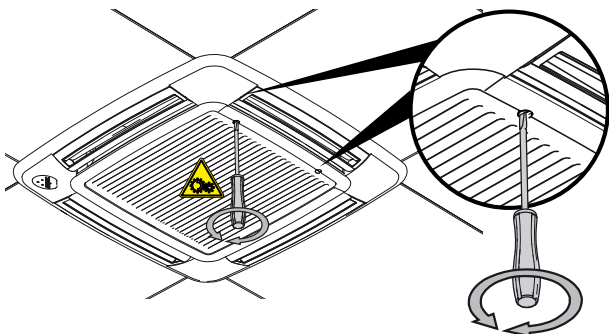
**INSTALLAZIONE E SOSTITUZIONE DEL FILTRO "Modulo 600" GLLI**  
**INSTALLATION AND REPLACEMENT OF THE "Module 600" FILTER GLLI**  
**INSTALLATION ET REMPLACEMENT DU FILTRE "Module 600" GLLI**  
**INSTALLATION UND AUSTAUSCH DES FILTERS "Modul 600" GLLI**  
**INSTALACIÓN Y SUSTITUCIÓN DEL FILTRO "Módul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



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

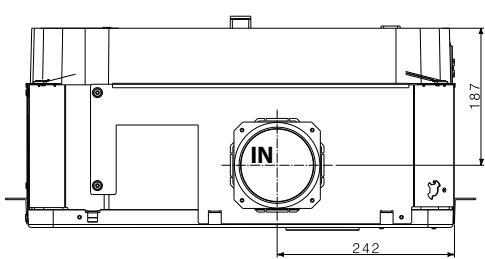


**INSTALLAZIONE E SOSTITUZIONE DEL FILTRO "Modulo 840" GLLI**  
**INSTALLATION AND REPLACEMENT OF THE "Module 840" FILTER GLLI**  
**INSTALLATION ET REMPLACEMENT DU FILTRE "Module 840" GLLI**  
**INSTALLATION UND AUSTAUSCH DES FILTERS "Modul 840" GLLI**  
**INSTALACIÓN Y SUSTITUCIÓN DEL FILTRO "Módul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

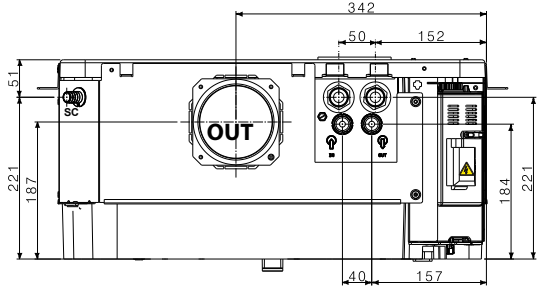
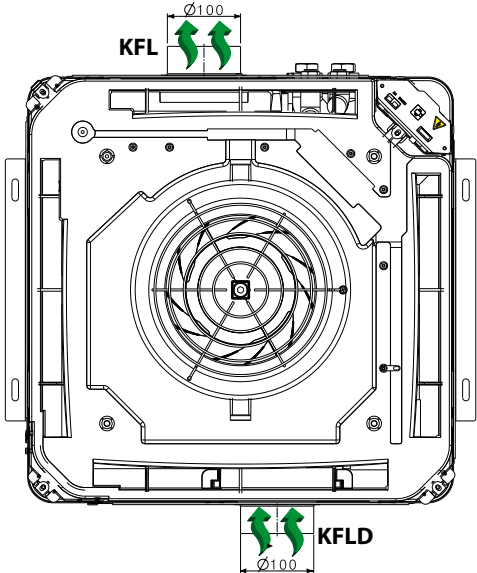


**PERICOLO:** Togliere tensione prima d'iniziare le operazioni di pulizia del filtro e/o dell'unità.  
**DANGER:** Switch off power supply before cleaning filter and/or unit.  
**DANGER:** Couper la tension avant de commencer les opérations de nettoyage du filtre et/ou de l'unité.  
**GEFAHR:** Vor der 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.

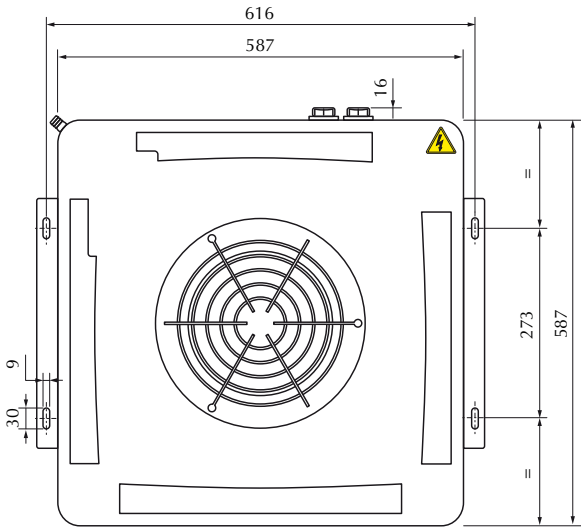
DATI DIMENSIONALI • DIMENSIONS • DONNÉES DES LES DIMENSIONS • ABMESSUNGEN • DATOS DIMENSIONALES [mm]



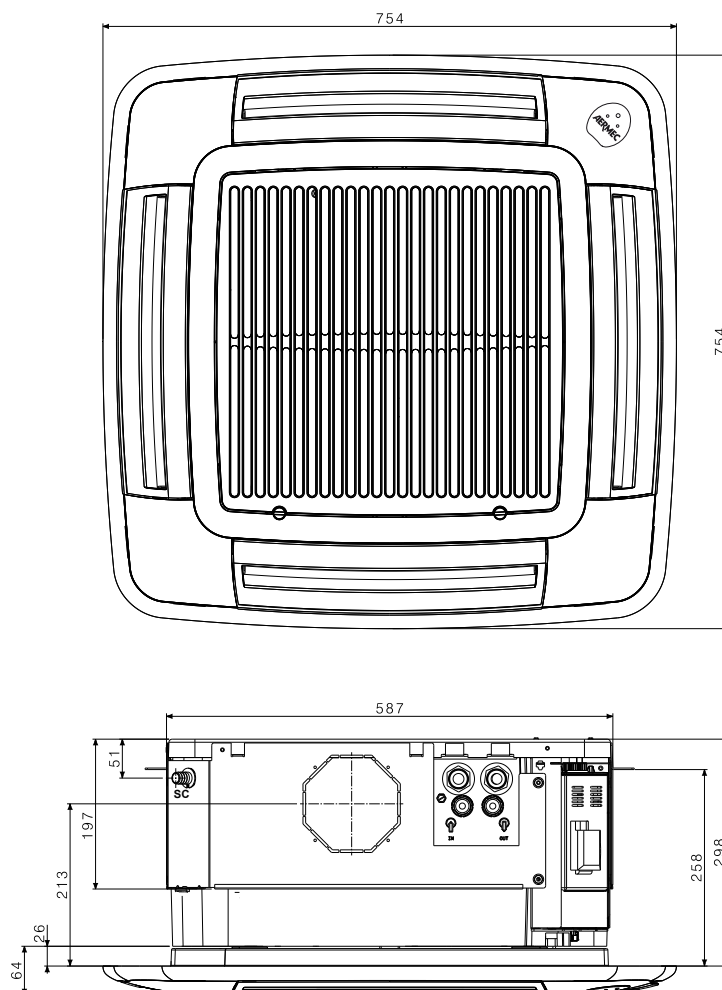
FCLI 32  
FCLI 34  
FCLI 36  
FCLI 42  
FCLI 44  
FCLI 62  
FCLI 64



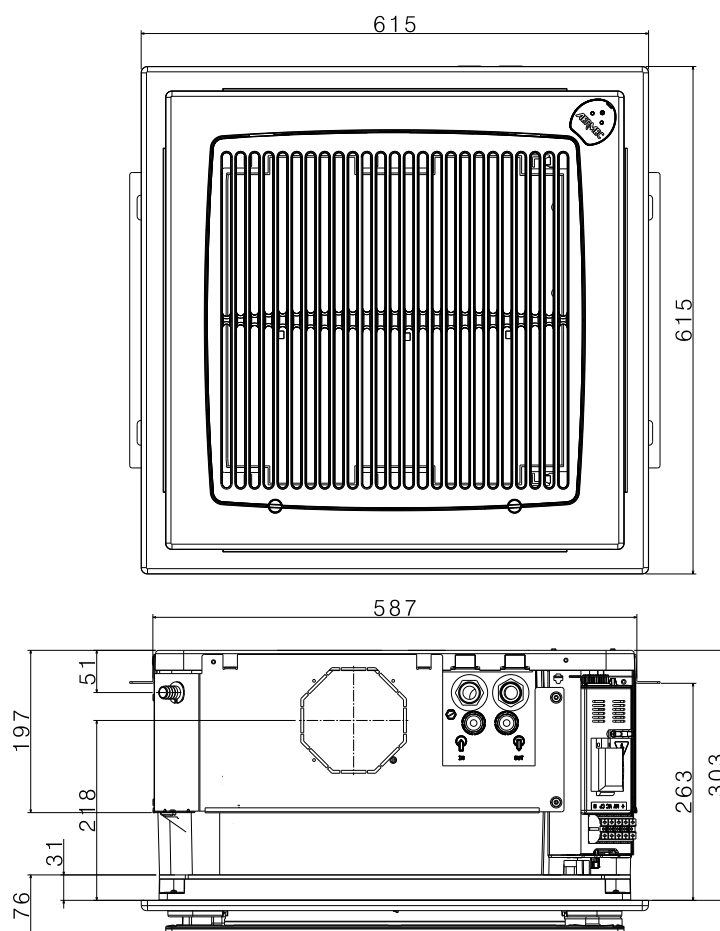
	FCLI	32	34	42	44	62	64
FCLI	kg	20,5	21,0	20,5	21,0	22	22,5



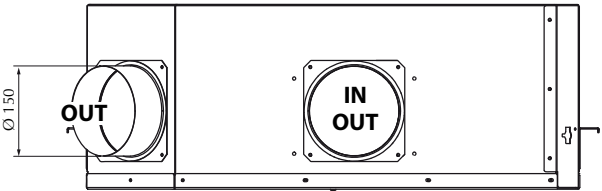
GLLI 10  
GLLI 100  
GLLI 100EH  
GLLI 100N



GLFI 10  
GLFI 10EH  
GLFI 10N  
GLFI 10M

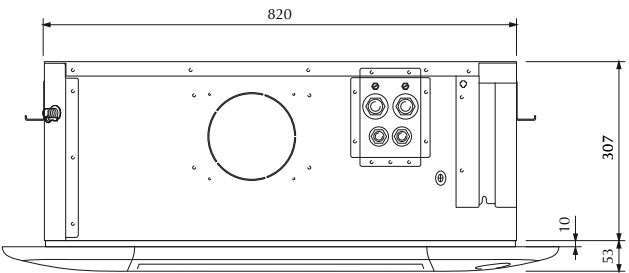
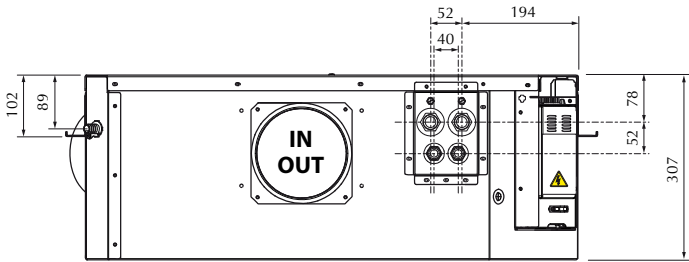
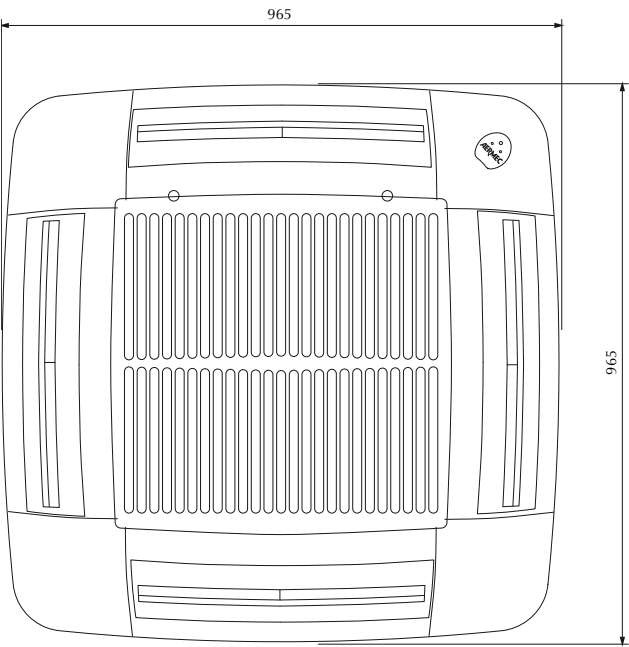
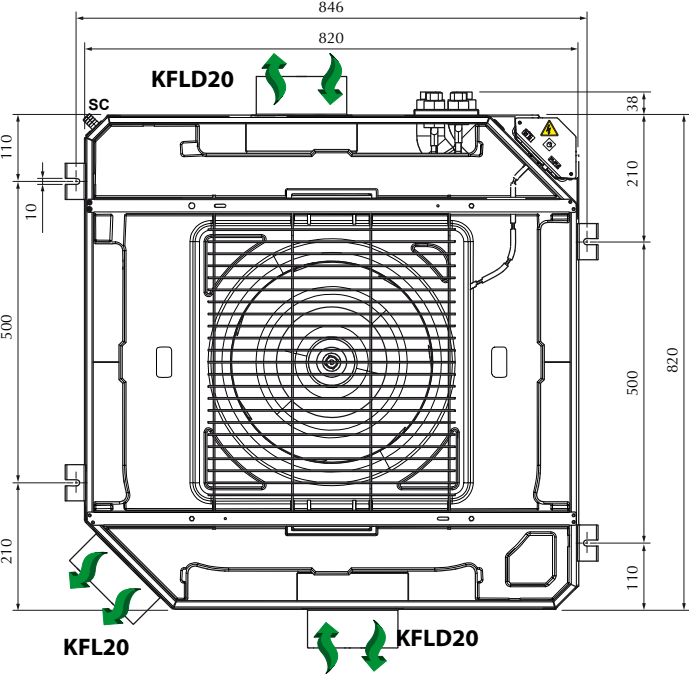


DATI DIMENSIONALI • DIMENSIONS • DONNÉES DES LES DIMENSIONS • ABMESSUNGEN • DATOS DIMENSIONALES [mm]

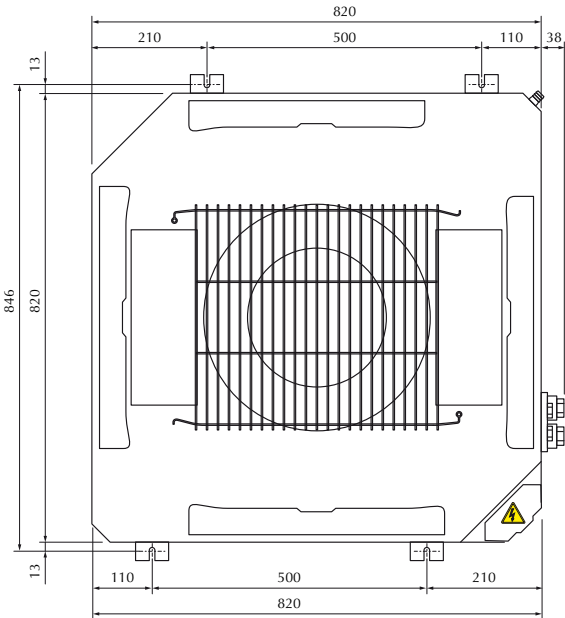


FCLI 82  
FCLI 122  
FCLI 124

GLLI 20



	FCLI	82	122	124
FCLI_	[kg]	36	36	36



## PROBLEMI E SOLUZIONI

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

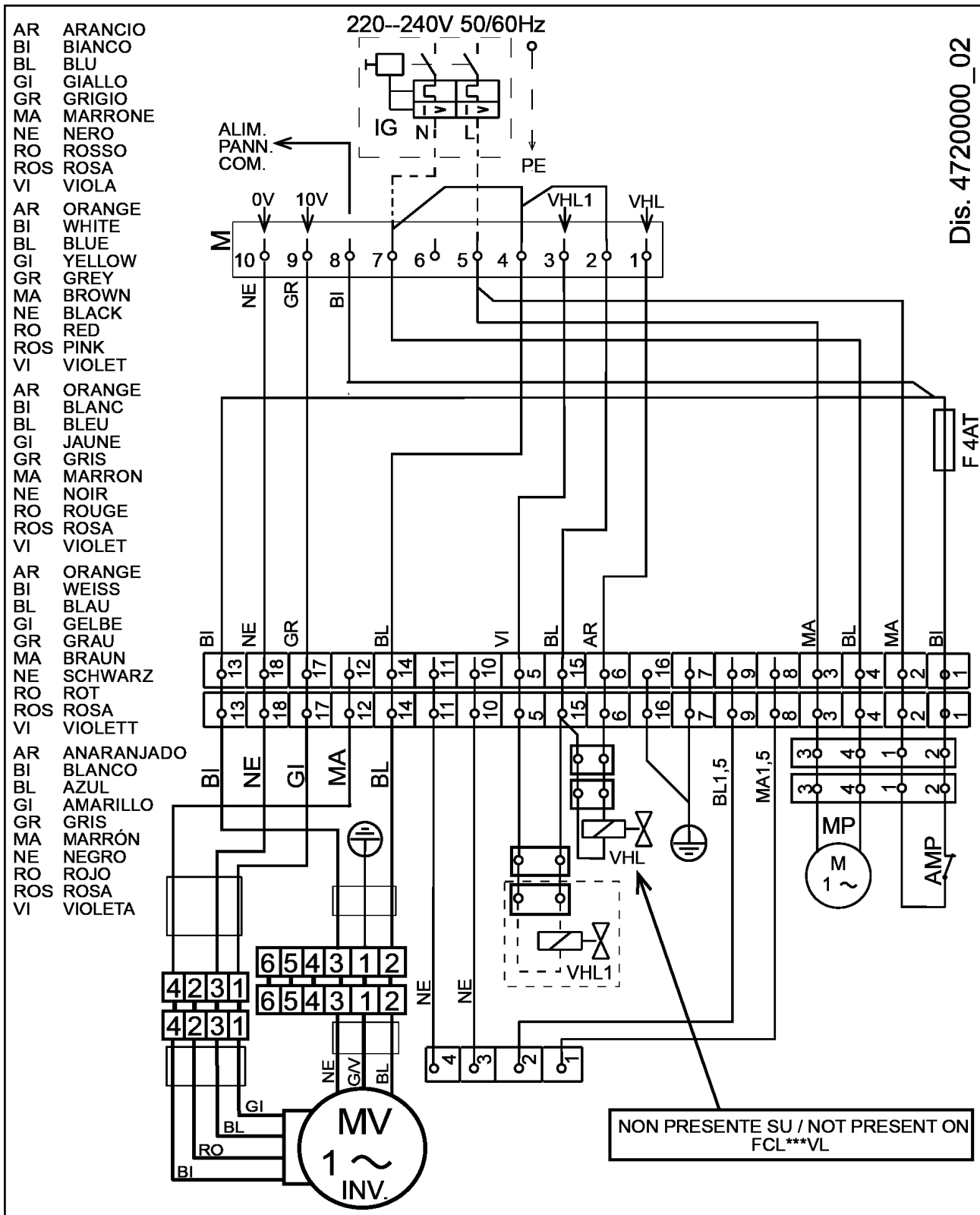
**Per anomalie non contemplate, interpellare tempestivamente il Servizio Assistenza.**

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

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

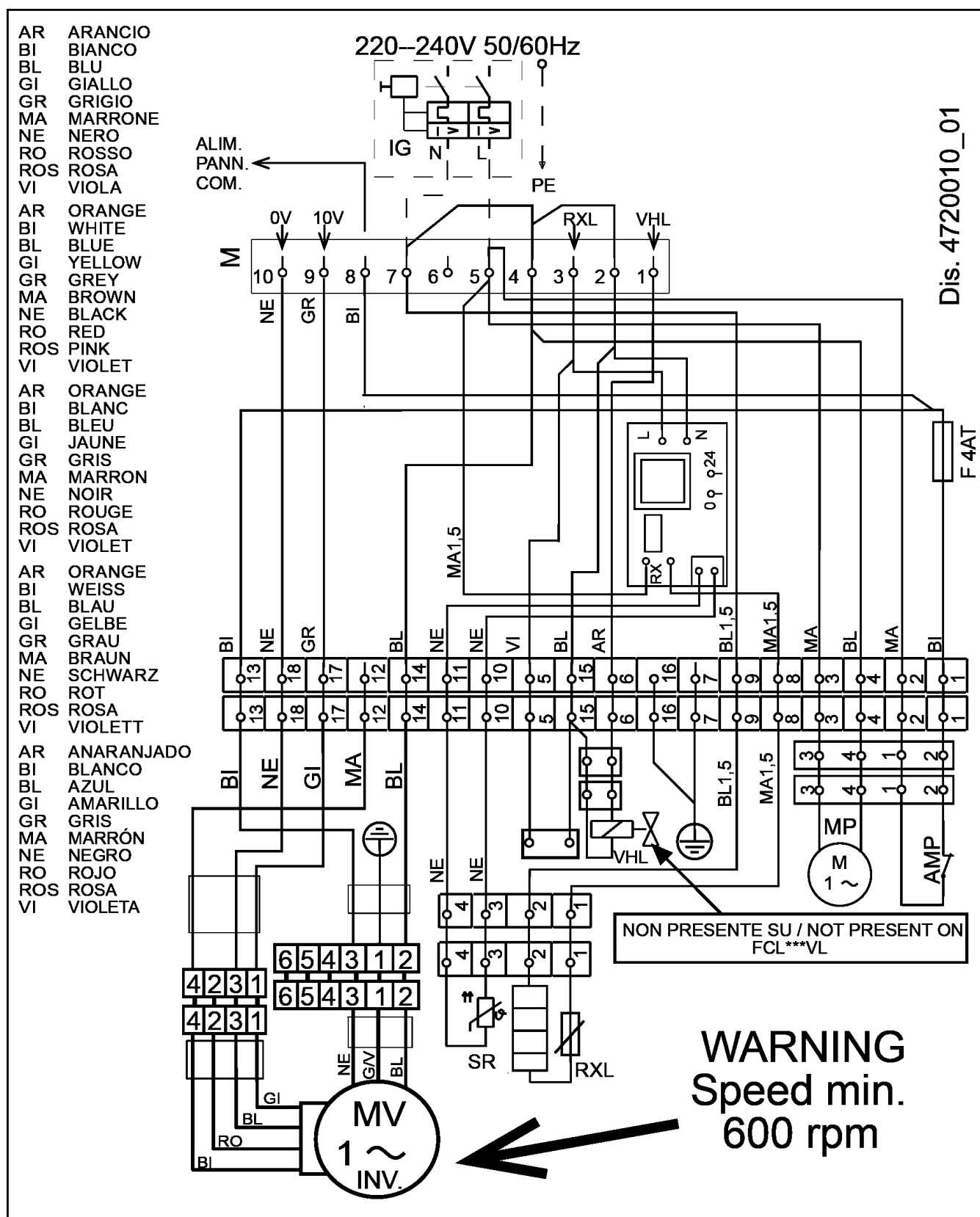
**Sich bei hier nicht aufgeführten Störungen umgehend an den Kundendienst wenden.**

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

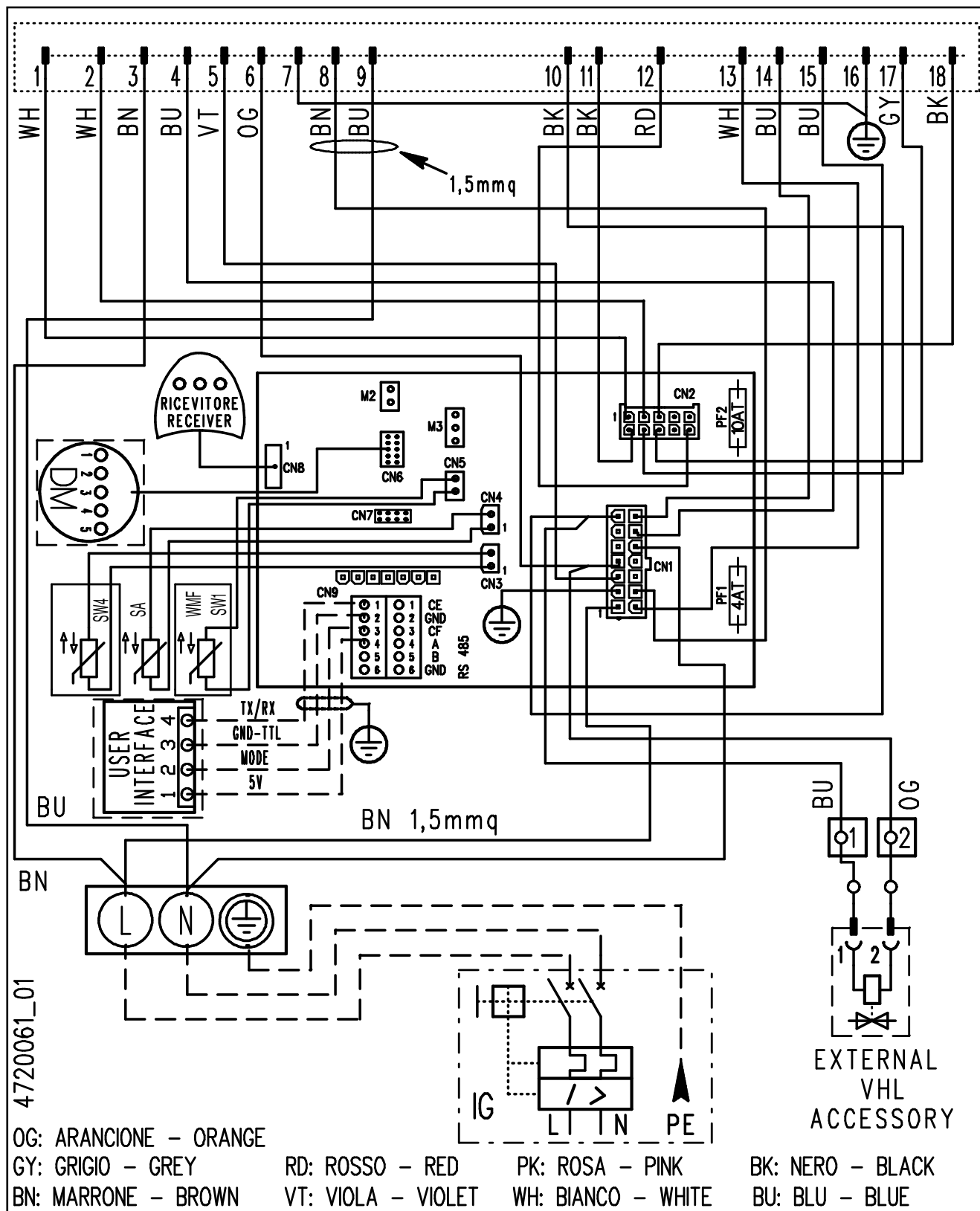


Gli schemi elettrici sono soggetti ad un continuo aggiornamento, è obbligatorio quindi fare riferimento a quelli a bordo macchina.  
 All wiring diagrams are constantly updated. Please refer to the ones supplied with the unit.  
 Nos schémas électriques étant constamment mis à jour, il faut absolument se référer à ceux fournis à bord de nos appareils.  
 Die Schaltpläne werden ständig aktualisiert, deswegen muss man sich stets auf das mit dem Gerät gelieferte Schaltschema beziehen.  
 El cableado de las máquinas es sometido a actualizaciones constantes. Por favor, para cada unidad hagan referencia a los esquemas suministrados con la misma.





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## ALARM CODE

This section is reserved to the After-sales Service Centres only.  
The board is found inside the unit and requires disassembly.  
**DANGER!** Only qualified maintenance personnel can access it.

On the Inverter board there are 2 LED (Alarm/Power) indicating the operating status of the unit.

The following table indicates how to decode the messages.

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



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