

VENTILCONVETTORE CASSETTE
 CASSETTE-TYPE FAN COIL
 VENTILO-CONVECTEUR À CASSETTE
 KASSETTEN-GEBLÄSEKONVEKTOR
 FAN COIL TIPO CASSETTE

FCL

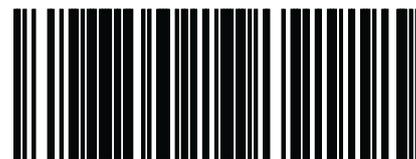
Variable Multi Flow

VMF



FCL 32 (600x600)
 FCL 36 (600x600)
 FCL 42 (600x600)
 FCL 62 (600x600)
 FCL 72 (600x600)
 FCL 34 (600x600)
 FCL 38 (600x600)
 FCL 44 (600x600)
 FCL 64 (600x600)

FCL 82 (840x840)
 FCL 102 (840x840)
 FCL 122 (840x840)
 FCL 84 (840x840)
 FCL 104 (840x840)
 FCL 124 (840x840)



IFCLIJ 1707 - 4528500_07

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IMPORTANT INFORMATION AND MAINTENANCE

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

ONLY POWER THE FAN COIL USING 230 VOLT, SINGLE-PHASE VOLTAGE

The fan coil may undergo permanent damage if different electric power supplies are used.

NEVER USE THE FAN COIL FOR APPLICATIONS FOR WHICH IT WAS NOT DESIGNED

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

AIR THE ROOM

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

ADJUST THE TEMPERATURE CORRECTLY

Room temperature should be regulated to ensure maximum comfort to persons present, particularly in the case of the elderly, infants and invalids. Prevent temperature fluctuations between indoors and outdoors greater than 7 °C during summer.

If the temperature is too low in the summer, there is greater energy consumption.

DIRECT AIR FLOW CORRECTLY

Air delivered by the fan coil should not be directed directly at people; even if air temperature is greater than room temperature, it can cause a cold sensation and consequently discomfort.

DO NOT USE WATER THAT IS TOO HOT

When cleaning the fan coil, use cloths or soft sponges soaked in warm water (no higher than 40°C). Do not use chemical products or solvents to clean any part of

the fan coil. Do not spray water on interior or exterior surfaces of the fan coil (danger of short circuits).

CLEAN THE FILTER PERIODICALLY

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

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

Use a suction device to remove built up dust.

After cleaning and drying the filter, fit it onto the fan coil by following the removal procedure in reverse order.

EXTRAORDINARY CLEANING

The possibility to remove the fan augers, which can be inspected (can only be performed by staff with specific technical skill) allows to carefully clean the internal parts. This is a condition necessary in very busy places or places that require high hygiene standards.

DURING OPERATION

always leave the filter mounted on the fan coil during functioning, otherwise the dust present in the air will dirty the coil surface.

IT IS NORMAL

During cooling, water vapour may be present in the flow air of the fan coil.

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

During functioning, noises and creaks may be heard inside the device, due to the various heat expansions of the elements (plastic and metal), but this does not indicate any malfunctioning and does not cause damage to the unit unless the maximum input water temperature is exceeded.

FUNCTIONING ANOMALIES

In the case of functioning anomalies, remove the voltage from the unit and then re-apply it and re-start the appliance. If the problem persists, call the Area After-sales Service immediately.

DO NOT PULL THE ELECTRIC CABLE

It is very dangerous to pull, step on, crush or fix the electric power supply cable using nails or staples.

The damaged cable can cause short circuits and injury to persons.

DO NOT INTRODUCE OBJECTS INTO THE AIR VENTS

Do not introduce any type of object into the air outlet slots.

This could cause injury to persons or damage the fan.

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

PACKAGING

The fan coils are delivered with standard packaging made up from expanded

polystyrene shells and cardboard.

FUNCTIONING

The same FCL unit can be coupled to several grid accessories that determine different functioning modes.

The particular information is supplied in the manuals supplied with the accessories. The features are recalled here that differentiate the different flow and intake grid units.

- GLL10 / GLL20

If an electronic control panel is to be installed, check that the Dip Switch settings inside the panel correspond to system requirements, otherwise modify the setting as indicated in the instructions attached to the control panel.

In the unit with 4-speed motors, select the 3 fan speeds most suitable for the system from the 4 available.

Check that the Dip Switch settings inside the electric box correspond to system requirements, otherwise modify Dip Switch settings.

In the unit with 4-speed motors, select the 3 fan speeds most suitable for the system from the 4 available.

- GLL10M / GLL10R / GLL20R

Description of fan coil functions with GLL-M and GLL-R grid units

- **Functioning in cooling mode:** using the remote control it is possible to set the cooling mode and the room temperature desired by the user (set). If the fan speed is set in automatic mode, the control board will select the fan speed and decide on the opening of the water valve depending on the difference between room temperature set by the user (set) and the temperature detected by the room probe. In the case, with 4 -pipe system, in cooling mode, the control board will pilot the cold solenoid valve while the hot solenoid valve is closed.

- **Functioning in heating mode:** using the remote control it is possible to set the heating mode and the room temperature desired by the user (set). If the fan speed is set in automatic mode, the control board will select the fan speed and decide on the opening of the water valve depending on the difference between room temperature set by the user (set) and the temperature detected by the room probe. In the case of 2-pipe systems, in heating mode, the control board will pilot the standard solenoid valve. In the case, with 4 -pipe system, in heating mode, the control board will pilot the hot water solenoid valve (accessory), while the cold solenoid valve is closed.

- **AUTO functioning (Automatic):** by activating "AUTO" mode on the remote control, the room temperature is decided by the control board, which will also select the fan speed (functions in Automatic). The thermostat reads the room probe SA (always continuous even in heating mode even if thermostat is enabled) and decides whether to function in heating, cooling or dehumidification mode. From the remote control it is possible to correct the work set by the control board by $\pm 5^{\circ}\text{C}$. The unit will automatically re-select the functioning after every start-up from stand-by.

- **Heating mode functioning with electric resistance:** if the unit foresees an electric resistance, the only fan functioning speeds allowed will be maximum (V3)

and medium (V2), the minimum speed (V1) will be activated automatically only in the post heating phase. Using the dip-switches it is determined in the installation phase whether the electric resistance is active in integration or replacement.

Heating functioning mode with resistance in integration: the resistance is activated at the same time as the hot water valve in order to increase unit efficiency. Alternatively, if the temperature of the water is insufficient, the resistance is activated to make up for the insufficiency of the yield supplied by the coil to the water. Ventilation starts-up later with respect to the resistance (preheating).

Heating functioning mode with resistance in replacement: the resistance is activated only if the temperature of the water is insufficient. Ventilation starts-up later with respect to the resistance (preheating).

- Water probe upstream from the valve: the probe detects the temperature of the water in the system.

- **Continuous ventilation (in cooling and heating modes):** ventilation is always active, the thermostat only controls the water valves and the electric resistance.

- **Thermostat ventilation (heating):** ventilation starts later than the thermostat call in order to allow the hot water to run inside the coil (preheating).

- **Functioning in dehumidification mode:** requests that cold water circulates in the system. The ventilation speed is always minimum. It is possible to correct the work speed, fixed by the control board, by $\pm 5^{\circ}\text{C}$ from the remote control.

- **Functioning with timer:** allows to program the delay on switch on or switch off from 0.5 up to 12 hours. A power cut causes timer settings to be zeroed.

- **Full Power functioning:** ventilation is forced at maximum speed, the set temperatures are 32°C in heating mode and 18°C in cooling mode.

- Stop due to power cut: after a power

cut, the unit re-starts with the settings activated before shutdown, only the timer is reset.

- **Delayed start-up:** the unit can start up ventilation later with respect to switch-on, normally up to 2'40" but in particular conditions the stand-by time may be extended.

- **SW4 probe:** the installation of a probe for the detection of the temperature of the water that circulates in the system is envisioned as an optional.

- **Emergency control:** if necessary, the "AUX" key is available on the receiver grid, which activates the "Auto-Emergency" mode. In this mode, the unit functions in automatic, depending on the room temperature read when the "AUX" key is pressed. If Auto-Emergency functioning mode is selected, timer functioning is excluded. Pressing of the "AUX" button is indicated by an acoustic signal. Switch-off takes place by the same "AUX" key.

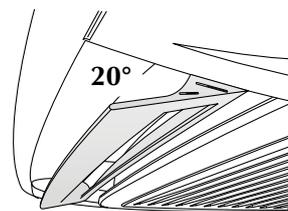
USE (MODULE 600)

In heating functioning mode, a louvered fin opening of 20° is recommended, indicated with a raised line on the louvered fins (see figure).

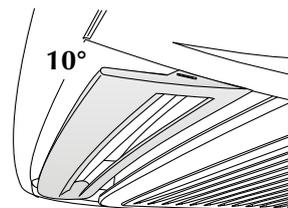
In cooling functioning mode, a louvered fin opening of 10° is recommended, indicated with a raised line on the louvered fins (see figure).

Ventilation is allowed with the louvered fins closed.

Position of the louvered fins in heating mode
20° opening



Position of the louvered fins in cooling mode
10° opening



Ventilation is allowed with the louvered fins closed.



English

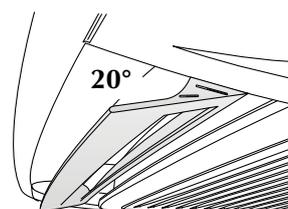
USE (MODULE 840)

Complete louvered fin opening is recommended in heating functioning mode (see figure).

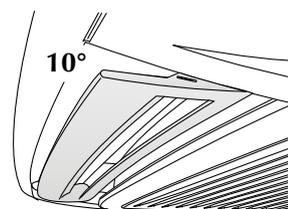
In cooling functioning mode louvered fin opening of 50% is recommended (see figure).

Ventilation is allowed with the louvered fins closed.

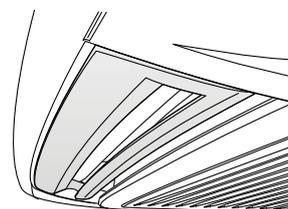
Position of the louvered fins in heating mode
completely open



Position of the louvered fins in cooling mode
half-way opening



Ventilation is allowed with the louvered fins closed.



DESCRIPTION OF THE UNIT

PURPOSE OF THE UNIT

The fan coil is a terminal for treating air in a room in the winter and summer seasons.

FCL version

Cassette type fan coil for suspended-ceiling installation.

SIZES AVAILABLE

The cassette fan coils in the FCL range are available in two fundamental dimensions that are called "Modules"

For two-pipe systems

8 sizes

FCL 32	(Module 600)	FCL 72	(Module 600)
FCL 36	(Module 600)	FCL 82	(Module 840)
FCL 42	(Module 600)	FCL 102	(Module 840)
FCL 62	(Module 600)	FCL 122	(Module 840)

For four-pipe systems

7 sizes

FCL 34	(Module 600)	FCL 84	(Module 840)
FCL 38	(Module 600)	FCL 104	(Module 840)
FCL 44	(Module 600)	FCL 124	(Module 840)
FCL 64	(Module 600)		

SET-UPS

The cassette fan coils are available in three set-ups, in order to satisfy all system requirements.

The sizes, performance and external dimensions are the same as the standard

- Standard **FCL** set-up with internal 3-way valve as per standard with quick-fitting actuator and visual position signal.

FCL set-up.

In this manual the FCL_VL and FCL_V2 set-ups will only be recalled where there are differences with respect to standard FCL versions, otherwise they will be simply

- The **FCL_V2** set-up, with 2-way internal valve as per standard with quick-fitting actuator and visual position signal, suitable for variable water flow rate systems.

- The **FCL_VL** set-up, without internal valve.

called FCL. The FCL_VL and FCL_V2 set-ups are available on request.

TECHNICAL DATA AND FUNCTIONING LIMITS

FCL		32	34	36	38	42	44	62	64	72	82	84	102	104	122	124
Maximum water inlet temperature	[°C]	80														
Maximum operating pressure	kPa	800 (8 bar)														
Minimum operating pressure	kPa	100 (1 bar)														
Minimum water flow rate (heating)	[l/h]	100	50	100	50	100	50	150	50	150	250	50	350	50	350	50
Maximum water flow rate (heating)	[l/h]	750	400	750	400	750	400	1050	400	1050	1750	400	2450	400	2450	400
Minimum water flow rate (cooling)	[l/h]	100	100	100	100	100	100	150	150	150	250	250	350	250	350	250
Maximum water flow rate (cooling)	[l/h]	750	750	750	750	750	750	1050	1050	1050	1750	1750	2450	1750	2450	1750
Room temperature limits (Ta)	[°C]	0 < Ta < 40														
Relative humidity limits in the room	R.H.	U.R. < 85%														
Power supply		230V (±10%) ~ 50Hz														
Total input power	[W]	45	45	45	45	75	75	83	83	93	150	150	155	155	175	175

The performance refers to the following conditions:

- at maximum motor speed;

- the total power absorbed is given by the sum of the power absorbed by the unit and the power absorbed by the accessories and declared in the relative manuals.

Water temperature

In order to prevent stratification of the air in the room, and therefore have better mixing, it is recommended not to power the fan coil

with water hotter than 65°C.

The use of water with high temperatures can cause small cracks due to the different heat dilations of the elements (plastics and metals).

This however does not cause damage to the unit if the maximum working temperature is not exceeded.

Average minimum temperature of the water

If the fan coil functions continuously in cooling mode inside a room with high relative humidity, condensate may form on the air flow and outside the appliance. This condensate, could deposit on the floor and

any other objects.

To prevent condensate forming on the external structure of the appliance with fan running, the average temperature of the water must not be lower than the limits stated in the table below, which depend on

the thermo-hygrometric conditions of the environment air.

These limits refer to functioning with the fan running at minimum speed.

AVERAGE MINIMUM TEMPERATURE OF THE WATER [°C]	Dry bulb temperature of the room temperature [°C]					
	21	23	25	27	29	31
Wet bulb temperature of the room air [°C]	15	3	3	3	3	3
	17	3	3	3	3	3
	19	3	3	3	3	3
	21	6	5	4	3	3
	23	-	8	7	6	5

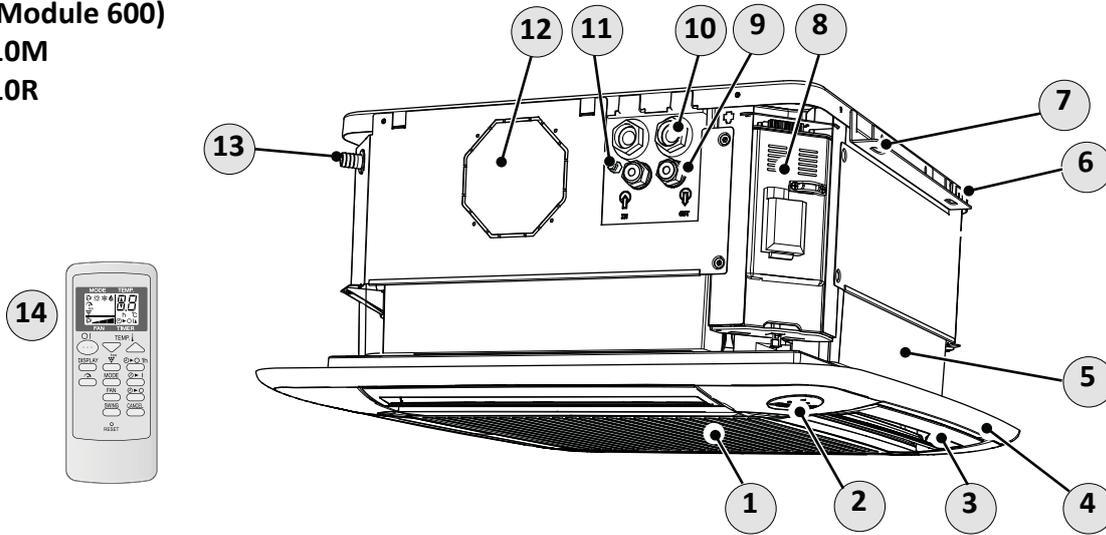
MAIN COMPONENTS

- | | | |
|---------------------------|--------------------------------------------|----------------------------------------------------------|
| 1 Grid with air filter | 6 Base | 11 Air vent valve |
| 2 Receiver (GLL_M; GLL_R) | 7 Fixing brackets | 12 Semi-sliced, fitting for air flow to an adjacent room |
| 3 Air flow deflector | 8 Electric box | 13 Condensate drain |
| 4 Grid frame | 9 Hydraulic attachments (for 4 pipes only) | 14 Remote control (GLL_M; GLL_R) |
| 5 Tray | 10 Hydraulic attachments (2 pipes) | |

FCL (Module 600)

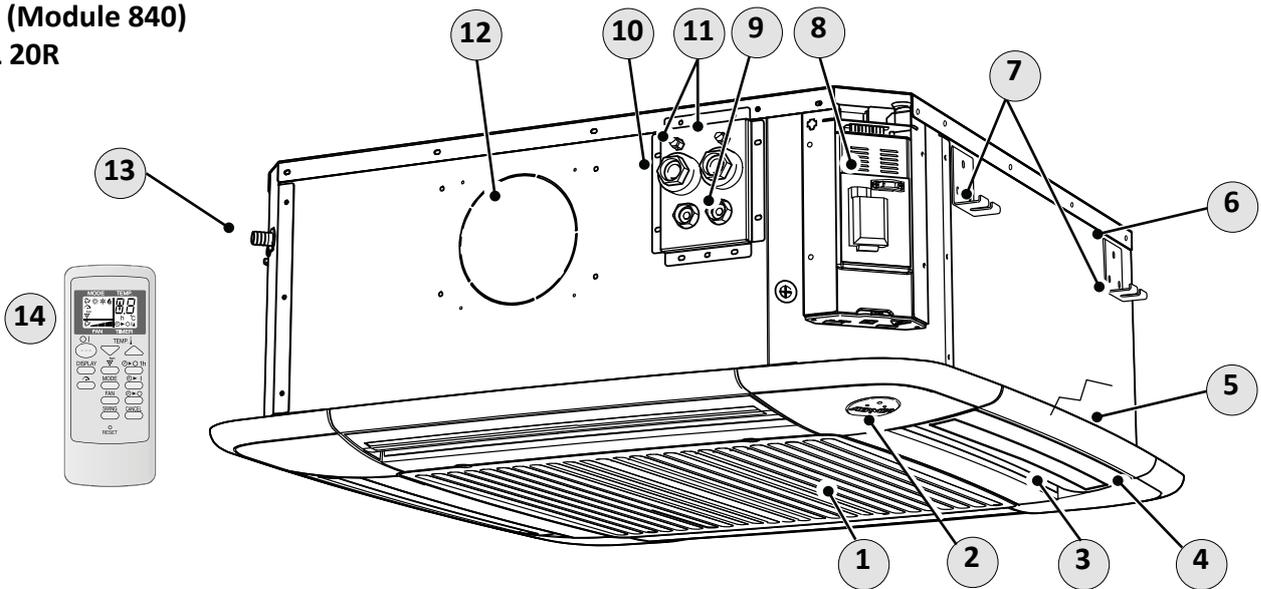
GLL 10M

GLL 10R



FCL (Module 840)

GLL 20R



DESCRIPTION

The FCL cassette type fan coil is a terminal for conditioning air in a room. The FCL concentrates high technological and functional features that make it the ideal means for air conditioning for all environments. The supply of conditioned air is distributed throughout the room; FCL 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 (in the versions with hot water coil).

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.

The FCL units are available in two fundamental dimensions, which will be called:

"Module 600" for units that can be integrated in the standard 600x600mm suspended ceiling panelling.

"Module 840" for more powerful versions, dimensioned to be housed in a compartment measuring 840x840mm.

BASE

The support base is in deep-drawn

galvanised sheet steel. The following are fixed to the base: fixing brackets, coils, motor and fan, condensate draining pump, attachment plates, terminal board unit and condensate drip tray. Using the relevant flange (accessory) it allows to connect the ducts to the sides for fresh air to the room and/or for flow to an adjacent room.

The units with "Module 600" are built with a reinforced support structure with lateral strip in galvanised sheet steel and heat insulated with internal elements in expanded polystyrene insulation elements obtained from injection moulding with the functions of noise

reduction and conveying air.

The units with "Module 840" are built from a structure completely in galvanised sheet steel, insulated internally with closed cell expanded polyethylene and externally covered with anti-condensate felt

FIXING BRACKETS

Galvanised steel brackets for fixing the unit to the ceiling.

BASIN

The unit's closing tray is made out of injected high density polystyrene to avoid the loss of heat and the formation of condensate and conveys the conditioned air toward the louvered fins, from the condensate drip tray.

The intake air conveyor has a protection grid to prevent access to the fan compartment.

HEAT EXCHANGE COIL

The coils used have copper pipes and corrugated or turbolenced aluminium louvered fins. They are designed to have the maximum heat exchange surface. All coils are provided with air bleed valve and water drain valve, located respectively on the highest and lowest point of the coil circuit.

WATER VALVE

The standard unit version incorporates an internal 3-way valve of the all-or-nothing type with quick-fitting actuator and visual position signal, mounted as per standard on the hot/cold coil. powered with current of 230V ~ 50Hz,

The units are available, on request, also in another two versions set-up with a 2-way valve and without valve.

The unit with twin coil (for 4 pipe systems) can be connected to a second valve, available as an accessory in the 3-way versions (for systems with fixed flow rate) or 2-way (for variable flow rate systems).

VENTILATING UNIT

The ventilating unit, with new conception axial centrifugal fan, studied to obtain low noise emission, statically and dynamically balanced.

The electric motor with 3 speeds for smaller sizes (FCL 32-34-36-38) and 4 speeds for larger sizes, in order to choose the 3 speeds that satisfy individual requirements of power supplied and silence. FCL can be set with continuous fan functioning to prevent stratification of the air in the room.

The electric motor is buffered using elastic mounts and the steel shaft is mounted on bearings.

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

CONDENSATE DRAIN DEVICE

The condensate drain device is required to dispose of the condensate that is produced by the unit and deposited in the polystyrene tray. This device is composed of a control board, a non-return valve, a three-level float and a pump with 800 mm. max. static pressure.

The unit can be easily fitted to the condensate drain system using a plastic fitting Øext. 16mm.

ALARM: when the level of the condensate in the tray reaches the pre-fixed limit, the alarm stops the flow of the water to the coil, leaving only the fan to function.

HYDRAULIC CONNECTIONS

The attachment plates group the hydraulic connections and the vent valve of the coil primary circuit for 2 and 4-pipe systems. The symbols for identification of the input (IN) and output (OUT) hydraulic connections are embossed on the plate.

FILTERING SECTION

The air filter is inserted in the intake grid. Mechanical air filter with ABS frame.

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

Easy to remove and built with regenerable materials and which can be washed.

INTAKE AND FLOW GRID UNIT (GLL range accessories)

The FCL cassette type fan coil is only completed if coupled to a GLL series grid; a mandatory accessory for fan coil functioning. The GLL series grid accessories, as well as intake with filter and the air flow louvered fins, include a dedicated electric box, which is connected using bayonet joints to the connector, fixed to the unit support structure.

The form and opening of the flow louvered fins were developed in order to have the best possible distribution of the air, both when functioning in winter and summer modes.

Intake takes place through the central grid, flow through the adjustable perimeter slots. In RAL 9010 plastic, it houses the air filter, which can be easily extracted for cleaning.

The same basic FCL unit can be configured in several versions by simply coupling it to different grid units of the GLL series (mandatory accessory), which determine the functioning modes:

- GLL 10 M (for Module 600 only)

With remote control and louvered fins moveable using remote control, the IR receiver is integrated into the grid. GLL-M is complete with electronic thermostat able to manage all configurations (hot coil with valve, cold coil with valve, electric resistance in replacement or integration mode) as well as all functions (heating, cooling, continuous or thermostat ventilation, dehumidification, timed switch-on/off). In functioning with electric resistance it is envisioned that the ventilation is only active at maximum and medium speed.

- GLL 10 R (for Module 600 only)

With remote control and manually moveable louvered fins, the IR receiver is integrated into the grid. GLL-R is complete with electronic thermostat able

to manage all configurations (hot coil with valve, cold coil with valve, electric resistance in replacement or integration mode) as well as all functions (heating, cooling, continuous or thermostat ventilation, dehumidification, timed switch-on/off). In functioning with electric resistance it is envisioned that the ventilation is only active at maximum and medium speed.

- GLL 10 (for Module 600 only)

GLL 20 (for Module 840 only)

Version with manually moveable louvered fins. It must be interfaced with an individual or centralised external control panel (not included). The functioning modes are managed from the control panel. A control panel must be selected that can manage all functions and any accessories installed. The accessories of the SIT series allow to connect several FCL units, complete with GLL, in network controlled by a unique control panel (for selection consult the features and compatibility of the accessories). The GLL grid accessory also allows coupling to the centralised HSH AERDOMUS control system with wired and wireless connections.

CONTROL PANEL (Accessories)

When coupled to the units with GLL10 and GLL20 grid units, use an external control panel (see compatibility and functions of the control panels).

INSTALLATION

ATTENTION: before carrying out any intervention, make sure that the electric power supply has been disconnected.

ATTENTION: before carrying out any work, wear the appropriate individual protection devices.

ATTENTION: The appliance must be installed in compliance with national regulations on this subject.

ATTENTION: the electric connections, the installation of the fan coils and their accessories must only be performed by subjects with the technical-professional requisites for enabling and installation, transformation, extension and maintenance of the systems and able to check the same for safety and functionality purposes (in this manual they will be indicated by the generic term "staff with specific technical skill").

In particular, for the electric connections, checks relative to the following are requested:

- Measurement of the electric plant isolation resistance.
- Continuity test of the protection wires.

ATTENTION: Install a device, master switch or electric plug that allows to completely interrupt the appliance's electric power supply.

Here find the essential indications for correct installation of the appliance.

The completion of all operations, according to specific requirements, is left to the

experience of the installer.

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

The fan coil must be installed in a position such to easily allow routine maintenance (cleaning the filter) and extraordinary maintenance, as well as access to the air vent valve on the side of the frame (connections side).

Do not install the unit in rooms where inflammable gases or acid or alkaline substances are present that can permanently damage the copper-aluminium heat exchangers or internal plastic components.

Do not install the unit in workshops or kitchens, where oil vapours mixed with the treated can deposit on the heat exchanger coils, reducing their performance, or on the internal parts of the unit, thus damaging the plastic components.

The fan coil must be installed in a position such that the air can be distributed throughout the entire room, that there are no obstacles (curtains or objects) to the passage of air from the intake grids.

Choose a position in the centre of the room if possible; the regulation of the air output allows the air to be distributed optimally in the room. Generally the best position of the fins is that that allows the launch of the air adhering to the ceiling for the coined effect, during cold function-

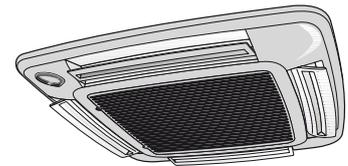
ing. The side section of the deflectors (Module 600) shows the opening positions for proper warm functioning (opening 20°) and cold functioning (opening 10°) of the machine.

For the Module 840 units, it is recommended to completely open the deflector in heating mode. In cooling mode, rotate the deflector to half way.

Depending on the user's requirements, it is possible to position the louvered fins in the intermediate of complete closure positions. Thanks to the special shapes of the louvered fins the machine can also function with the deflectors completely closed.

Do not install at height of above three metres.

The FCL unit is set for connection with fresh air ducts and for the flow of the treated air in an adjacent room.



SYSTEM EXAMPLES

Key:

SA

SW

RXLE

Room temperature probe

Water temperatur probe

Electric heater (for Module 600 only)

VHL

VHL1 / VHL20

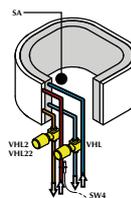
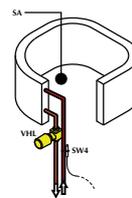
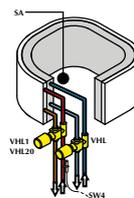
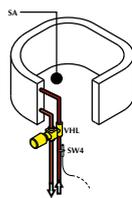
VHL2 / VHL22

Solenoid valve (Heating/Cooling)

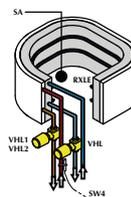
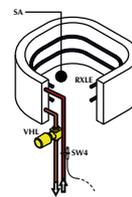
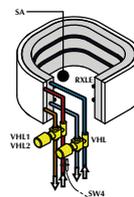
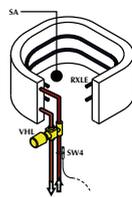
Hot Valve (3-way)

Hot Valve (2-way)

2-pipe systemi

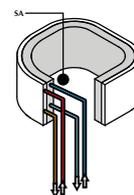
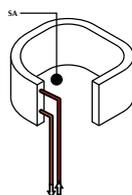


4-pipe system



2-pipe system with resistance

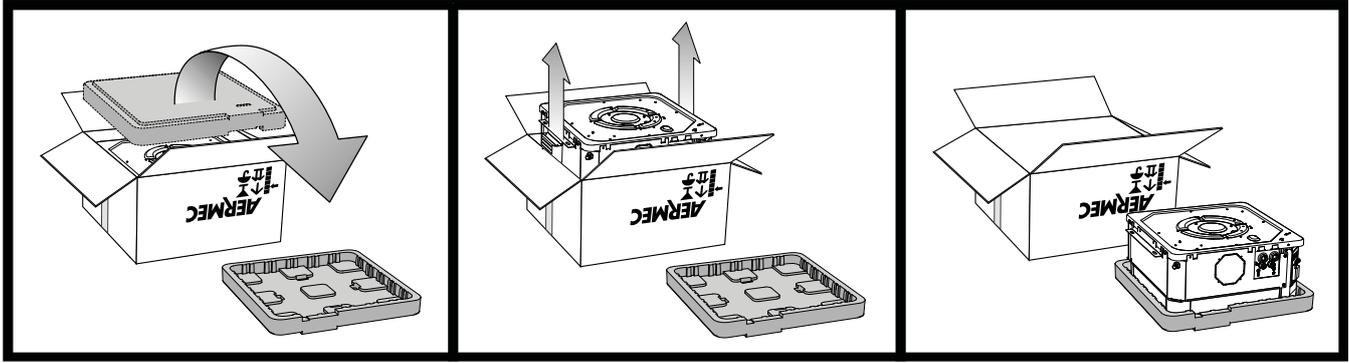
(Only for models and configurations that envision heating with resistance)



4-pipe system with resistance

(Only for models and configurations that envision heating with resistance)

INSTALLATION OF THE "MODULE 600" UNIT



English

- Choose where to install the machine according to the layout of the room, the number of units to be installed and any limitations imposed by the architecture. Check that installation and maintenance of the machine is possible in the position chosen.

- Install four M8 threaded rods into the ceiling to hold the frame.

Proceed as follows to install the FCL unit:

- Overturn the FCL cassette fan coil box.

- Open the cardboard package.

- Remove the box, it is recommended to make incisions on the corners of the box and to remove the cardboard one piece at a time.

- Remove the upper part of the packaging shell used to protect the unit during transport.

- If necessary, mount any accessories (electric resistances, fresh air kit or flow to adjacent room, hot water valve). Carry out these operations before installing the unit on the ceiling.

ATTENTION: consult the accessory manuals.

- Do not handle the unit using the hydraulic connections but use the appropriate brackets.

- Lift the unit carefully using the brackets and holding it slightly inclined. Fix it to the 4 threaded rods using the 8 nuts of which 4 are self-locking. Act on the nuts to adjust the height, finally check that the unit is installed in a horizontal position.

- Feed the hydraulic lines through the suspended-ceiling to the attachment plate on the unit;

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

- Take the condensate drain pipe to the respective fitting on the attachment plate;

- Bleed the system, the vent valve for the two-pipe circuit is external on the connections plate. The vent valve for the heating circuit of the 4-pipe system is internal, to access remove the polystyrene basin.

- Connect the condensate drain as described in the relative chapter.

- Take the electric power supply cables and control cables in proximity of the electric box; make sure that 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 grid accessories (GLL10, GLL10R and GLL10 M).

- Consult the grid accessories manuals. The instructions for mounting and connection of the electric box are contained in the manual supplied with the grid accessory.

- After having completed the connections and the electric box is inserted in its housing in the FCL unit, fix it using the two screws.

ATTENTION: fix the safety cable to the electric box screw fastener positioned at the side of the hydraulic connections. The safety cable snap hook must then be attached to the grid frame.

- For GLL10M and GLL10R only: apply any air probe (SA) to the centre of the fan grid, fix the cable using the supplied straps, lay the excess cable in the grooves made in the polystyrene.

- The grill frame must be positioned in a way that the AERMEC logo holder corresponds with the corner of the electric box.

- Mount the grill to the safety cable.

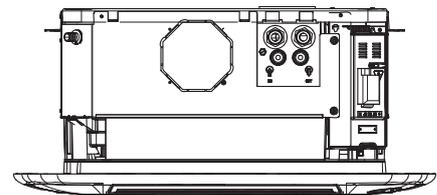
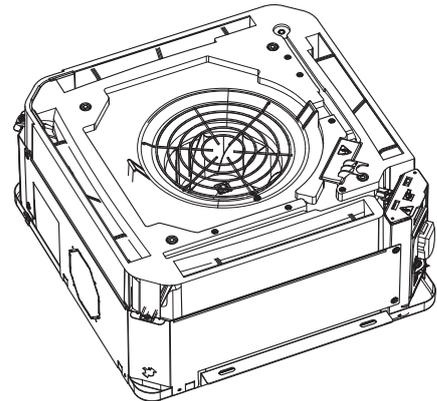
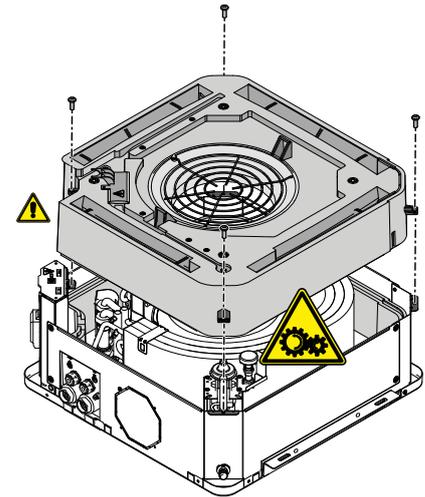
- For GLL10M and GLL10R only: make the connections between the electric box and the receiver.

- Fix the grid using the 4 screws.

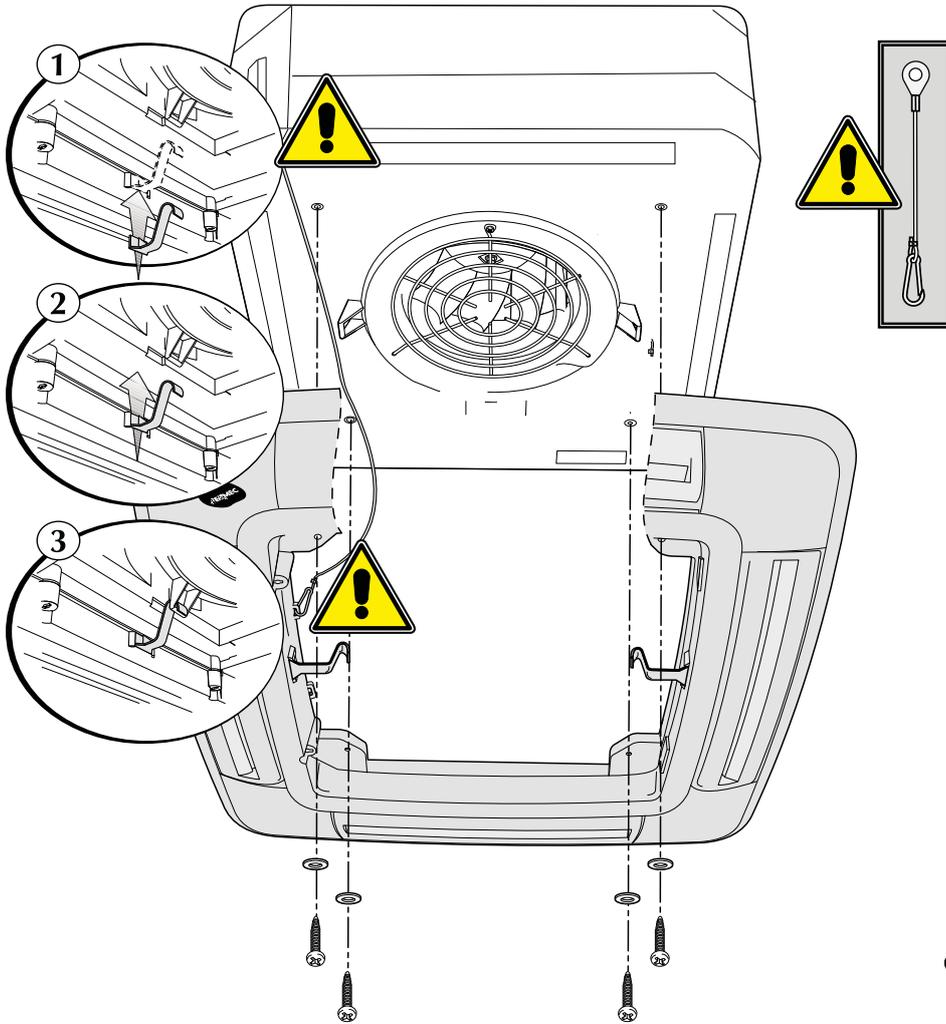
ATTENTION!! tighten the screws with maximum coupling torque of 0.45 Nm. It is advised to use a screwdriver, do not use non-calibrated electric screwdrivers. An excessive coupling torque will damage the tray irreparably.

- Adjust the position of the unit by the support bracket by means of the nuts, in a way that the unit is level and the frame rests slightly in the suspended ceiling.

- Start the fan coil and carry out a functioning test. The functions are described in the user manual.

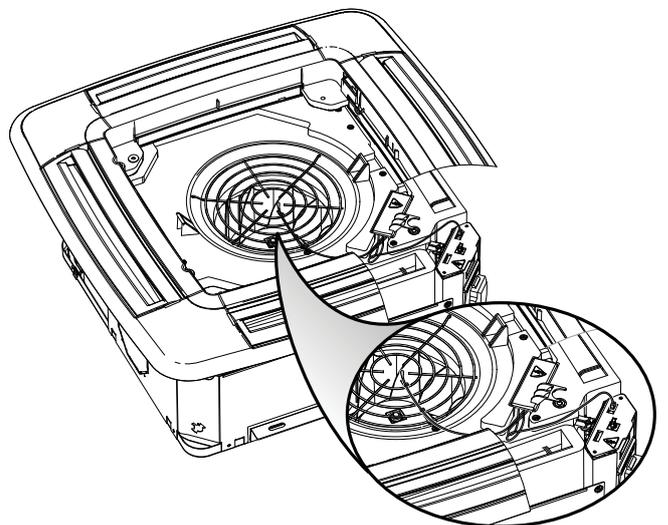
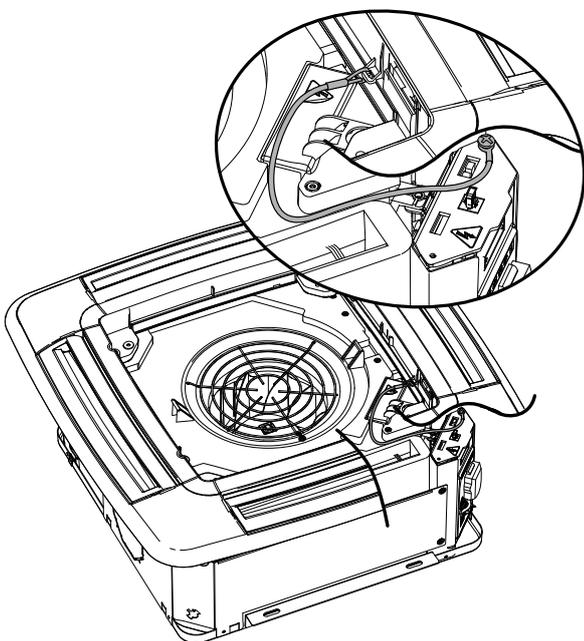
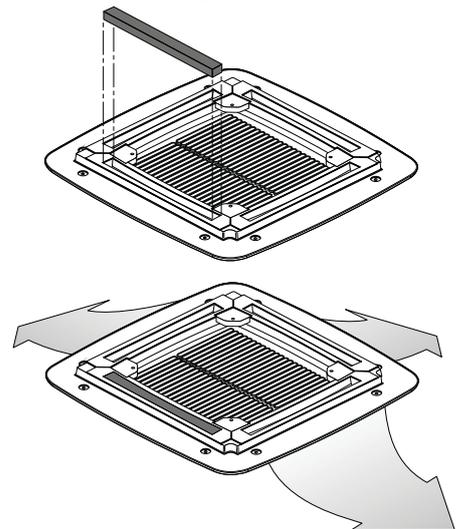


"MODULE 600" INSTALLATION

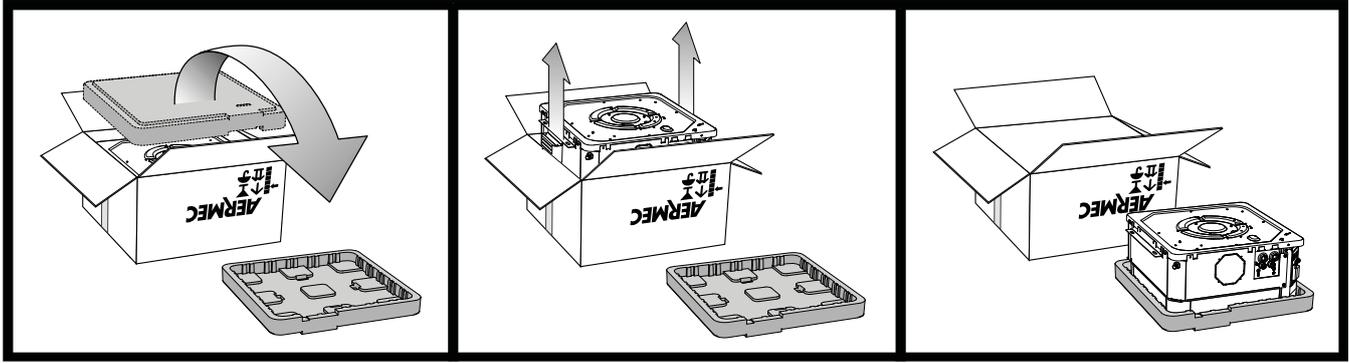


• INSTALLATION IN PROXIMITY OF A WALL

If installed in proximity of a wall it is possible to close the corresponding flow inlet using the gasket supplied.



INSTALLATION OF THE "MODULE 840" UNIT



English

- Choose where to install the machine according to the layout of the room, the number of units to be installed and any limitations imposed by the architecture. Check that installation and maintenance of the machine is possible in the position chosen.

- Install four M8 threaded rods into the ceiling to hold the frame.

Proceed as follows to install the FCL unit:

- Open the cardboard package.
- Overturn the FCL cassette fan coil box.
- Remove the box.
- Remove the packaging shells used to protect the unit during transport.
- Apply the 4 installation brackets all' unit. (see figure)
- If necessary, mount any accessories (electric resistances, fresh air kit or flow to adjacent room, hot water valve). Carry out these operations before installing the unit on the ceiling.

ATTENTION: consult the accessory manuals.

- **Do not handle the unit using the hydraulic connections but use the brackets.**
- Lift the unit carefully using the brackets and holding it slightly inclined. Fix it to the 4 threaded rods using the 8 nuts of which 4 are self-locking. Act on the nuts to adjust the height, finally check that the unit is installed in a horizontal position.
- Feed the hydraulic lines through the suspended-ceiling to the attachment plate on the unit;
- Make the hydraulic connections as described in the relative chapter.
- Take the condensate drain pipe to the respective fitting on the attachment plate;
- Connect the condensate drain as described in the relative chapter.
- Bleed the system, the vent valves are external on the connections plate.
- Take the electric power supply cables and control cables in proximity of the electric box; make sure that 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 grid accessories (GLL20 and GLL20R)).
- Consult the grid accessory manuals. The instructions for mounting and connection

of the electric box are contained in the manual supplied with the accessory.

- After having completed the connections and the electric box is inserted in its housing in the FCL unit, fix it using the two screws.

- **For GLL20R only:** apply any air probe (SA) to the centre of the fan grid, fix the cable using the supplied straps, lay the excess cable in the grooves made in the polystyrene.

- **The grill frame must be positioned in a way that the AERMEC logo holder corresponds with the corner of the electric box.**

- Fix the grid using the 4 screws.

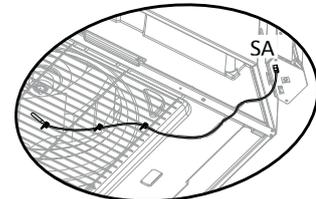
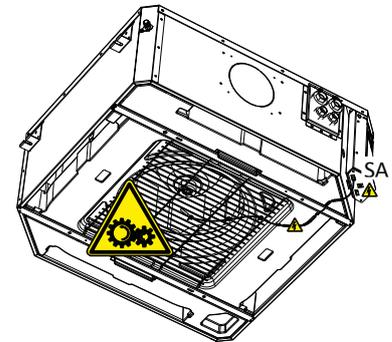
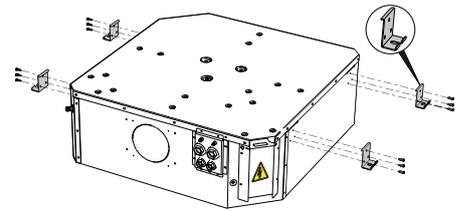
ATTENTION!! tighten the screws with maximum coupling torque of 0.45 Nm. It is advised to use a screwdriver, do not use non calibrated electric screwdrivers. An excessive coupling torque will damage the tray irreparably.

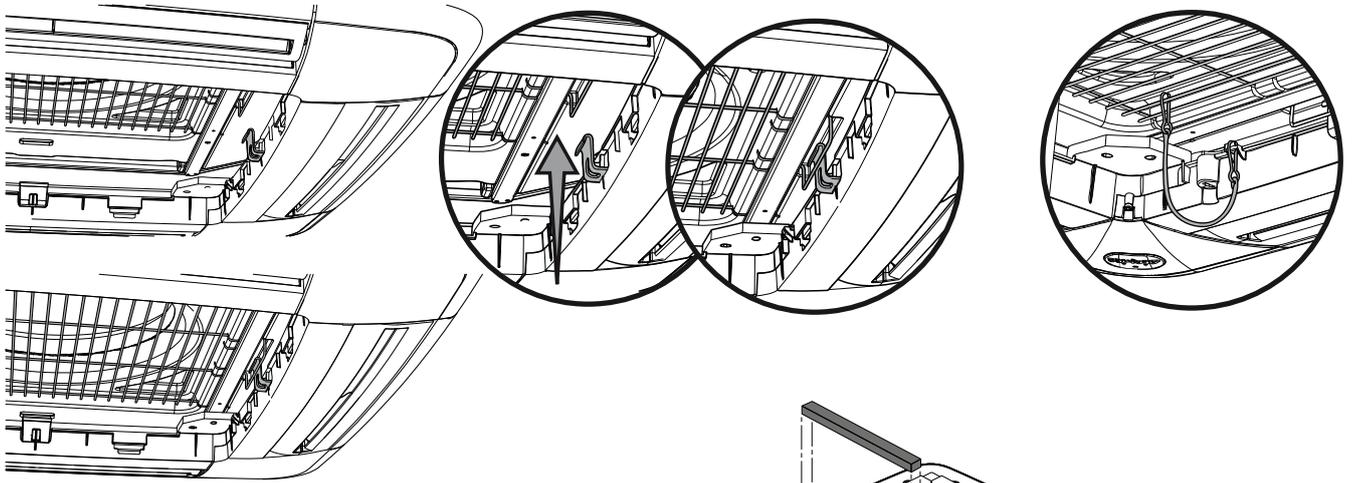
- **ATTENTION:** fix a safety cable snap hook must then be attached to the grid frame and the other snap hook to the fan protection grid.

- Fix the intake grill to the safety cable.

- **For GLL20R only:** make the connections between the electric box and the receiver.
- Adjust the position of the unit by the support brackets by means of the nuts, in a way that the unit is level and the frame rests slightly on the suspended ceiling.

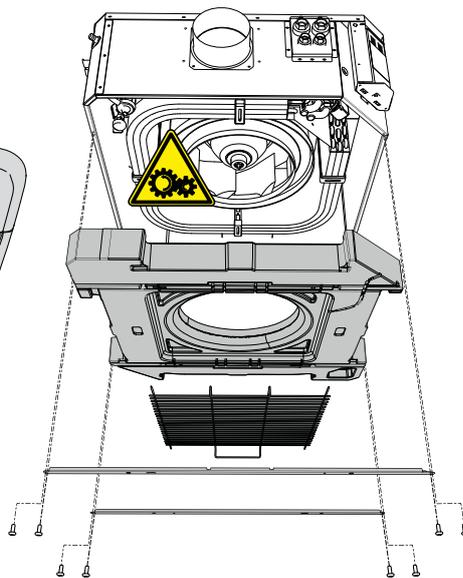
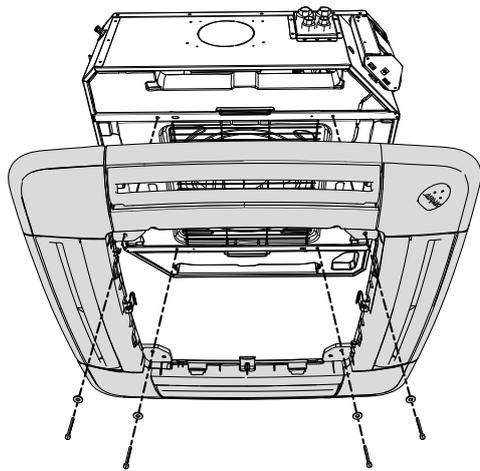
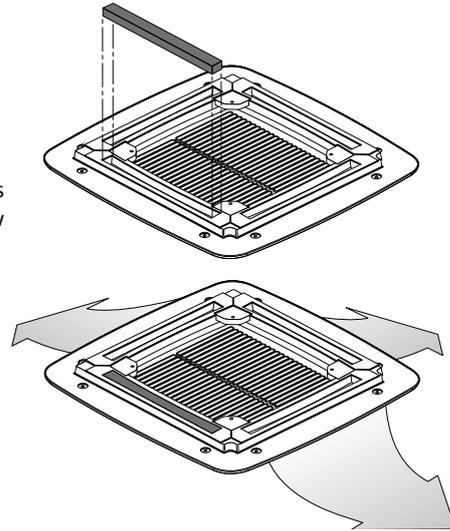
- Start the fan coil and carry out a functioning test. The functions are described in the user manual.





• **Installation in proximity of a wall**

If installed in proximity of a wall it is possible to close the corresponding flow inlet using the gasket supplied.



• **Disassembly for maintenance**

- Before performing any operation on the unit, the electric power supply must be interrupted.
- To access the inside of the unit, remove the two cross-members fixed to the frame with the screws. It is now possible to remove the fan protection grid and the polystyrene basin. (see figure)
- **DANGER!!** Before re-applying voltage to the unit, all components, especially the protection grid, must have been re-mounted correctly.

• **Electric box maintenance**

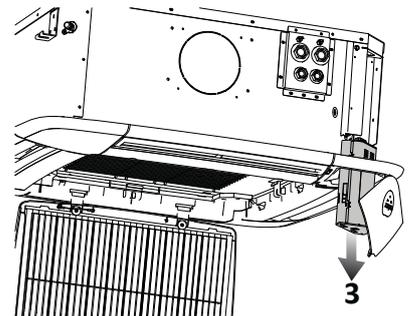
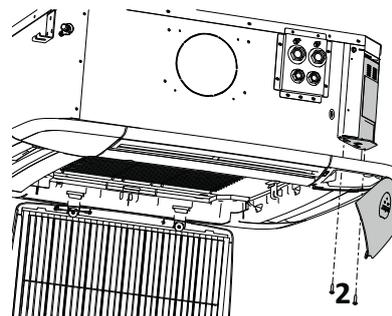
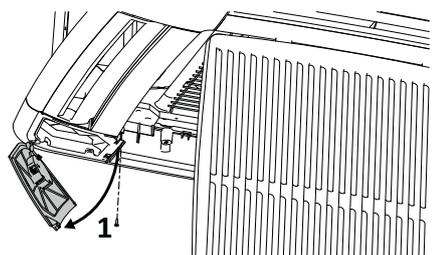
If the electric box must be accessed for maintenance, follow the indications below:

- Open the filter grid (turn the two ratchets

by ¼ of a turn).

- Remove the lock screw on the corner door with the Aermec logo.
- Remove the 2 lock screws from the electric box.

- Slide the electric box downwards.
- Carry out the necessary maintenance.
- Re-mount everything performing the disassembly procedure in reverse order.



WATER CONNECTIONS

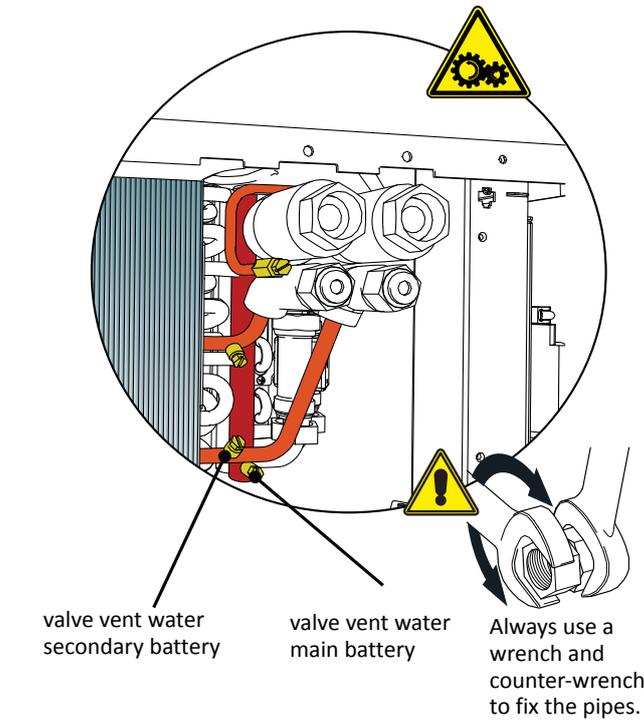
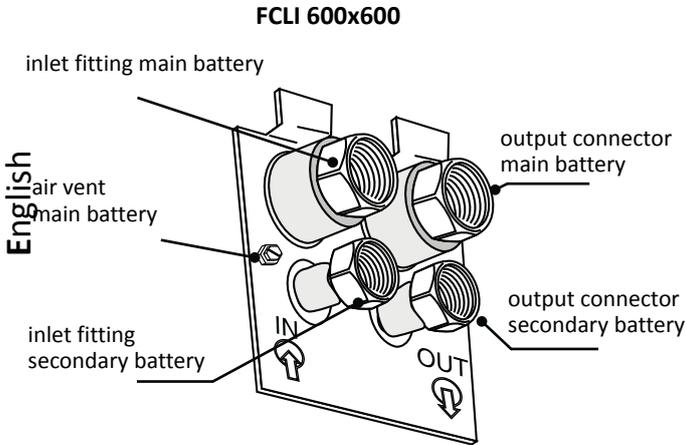
The water connections are made with flat fittings complete with seal gaskets (supplied).

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

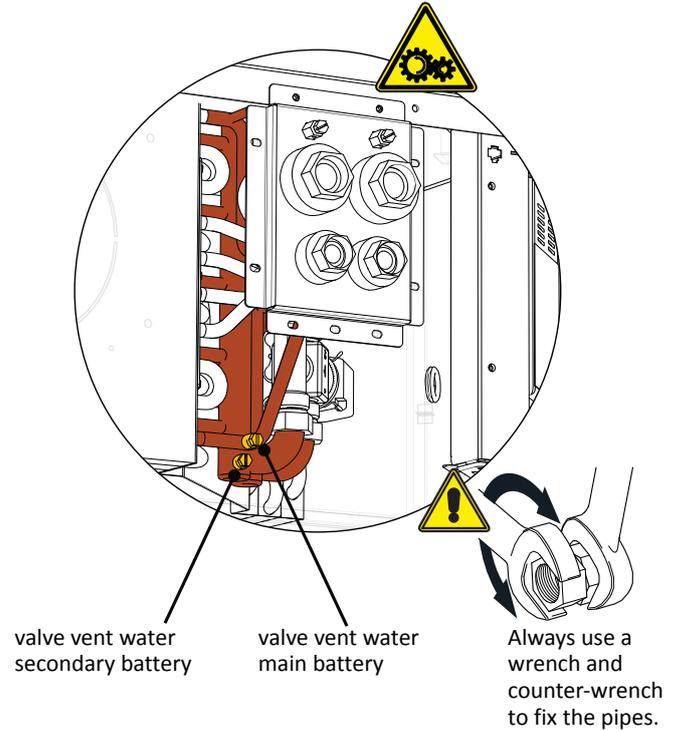
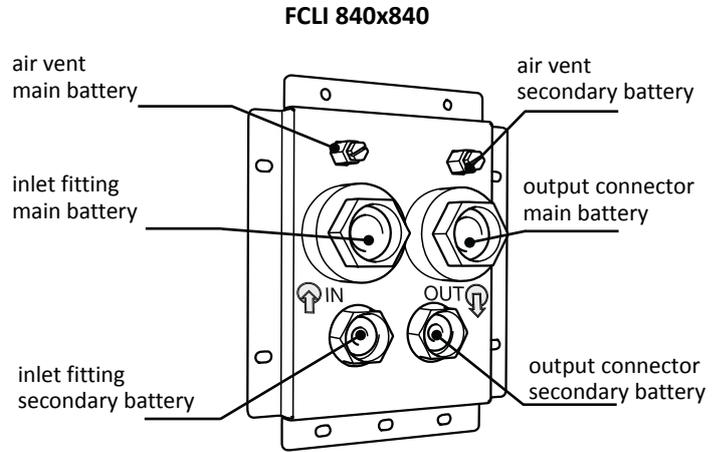
complete with gaskets for connection to the system.

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

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



! 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.



! 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. FCL	32	36	42	62	72	82	102	122	34	38	44	64	84	104	124	
Standard coil connections (2) \emptyset	3/4" F								3/4" F							
Additional coil connections (4) \emptyset	--								1/2" F							

CONDENSATE DRAIN CONNECTIONS

During functioning in cooling mode the internal unit removes humidity from the air. The condensate water must be eliminated by linking the proper drainage pipe attachment with the condensate system drain pipe.

In the "Module 600" unit, the polystyrene basin has a hole that allows to empty the condensate, useful in the case of disassembly.

The draining hole must always be closed again using the rubber cap.

The units are supplied as standard with a number of floating pump-floats for lifting the condensate from the basin to the drainage consisting of one electric card, one electric pump with non-return valve and float with three-level sensors: ON, OFF and Alarm.

The electrical supply to the pump-float device must never be interrupted.

In the case of alarm the lifting device, interrupts the flow of water in the coil.

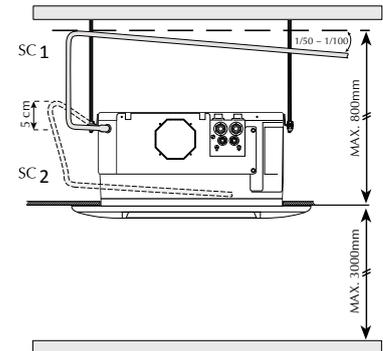
The basin is fitted with an overflow hole to ensure that the condensate water runs off if the pump-float device is not working. In this case dripping can be seen from the grid.

The pump allows a maximum head of 80 cm from the level of the suspended ceiling. If this height is not sufficient an aux. device must be used.

It is advised to use heat-insulated rigid piping in order to avoid condensation on the outer surfaces.

SC1 = Condensate drain (male Ø 16mm)

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



CONNECTIONS FOR THE INTAKE OF EXTERNAL FRESH AIR

The unit can be connected to a fresh air intake duct through the circular flange accessory, applied to the vent. The application of the

flange requires the opening of a hole on the side. Connection to the outside is direct and independent from unit ventilation.

The accessory also includes a deflector to be mounted inside the unit.

CONNECTION FOR THE AIR FLOW CONDITIONED IN AN ADJOINING ROOM

The unit can be connected to a pipe for conditioned air flow into an adjacent

room, via the circular flange. The application of the flange requires the

opening of a hole on the side.

ELECTRIC CONNECTIONS

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

The FCL cassette fan coils must be powered with 230V ~ 50Hz current and have an earth connection. The line voltage must remain within the tolerance of ±10% with respect to the nominal value.

In order to protect the unit against short circuits, mount a max. 2A 250V (IG) magnet circuit breaker omnipolar switch

on the power supply line with a minimum contact opening distance of 3 mm.

The electrical power supply 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.

Refer to the wiring diagrams of the appliance and the control panel.

