FCLI

with Brushless Inverter motor

Models:
FCLI82, FCLI102, FCLI122
FCLI84, FCLI104, FCLI124

Aermec
participate in the EUROVENT
program:LCP/A/P/C
the products are present on the site

Remote Control included for
GLL20R

GLLI20, GLLI20R, GLLI20N
White: RAL 9010

The future is Inverter

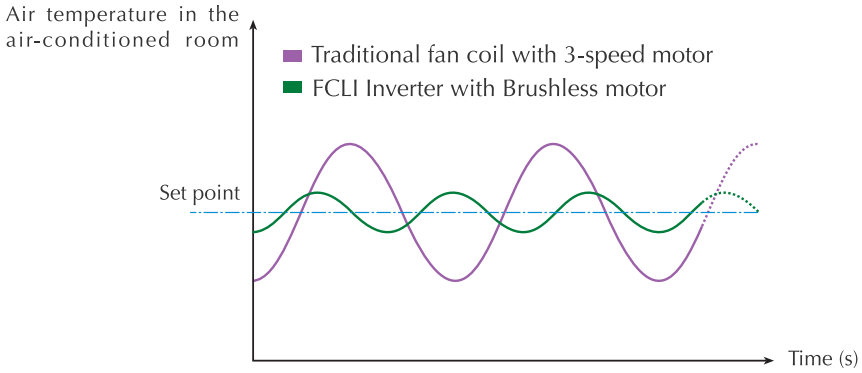
FCLI is the Aermec range of cassette-type fan coils with continuous 0-100% air flow rate variation and therefore continuous heating/cooling capacity variation. Thanks to the Inverter technology, the FCLI continuously modifies the air flow rate, adapting it - moment by moment - to the real needs in the room. This produces considerable advantages in terms of electric savings, comfort and noise reduction compared with a traditional on-off 3-speed fan coil.

- **VMF SYSTEM WITH GLLI20N GRILLE**
- **ELECTRIC SAVINGS OF 50% COMPARED WITH A FAN COIL WITH TRADITIONAL 3-SPEED MOTOR**
- **VERY QUIET OPERATION**
- **TOTAL COMFORT: REDUCED TEMPERATURE AND HUMIDITY VARIATIONS IN THE AIR-CONDITIONED ROOMS**
- **STANDARD INTERNAL THREE-WAY VALVE, WITH FAST CONNECTION ACTUATOR AND POSITION VISUAL SIGNALLING**
- **VERSION WITH 2-WAY VALVE FOR VARIABLE WATER FLOW RATE SYSTEMS**
- **VERSION WITHOUT VALVES**
- **THERMAL EXCHANGE BATTERY WITH SHAPED PROFILE AND ENHANCED SURFACE**
- **FAN FOR LOW SOUND EMISSIONS**
- **VERSIONS FOR SYSTEMS WITH 2 AND 4 PIPES**

Features

- Fan unit with Brushless motor (Continuous 0-100% speed variation);
- 2-pipe versions:FCLI 82-122
- 4 -pipe versions:FCLI 124
- Standard preparation with standard internal three-way valve, with fast connection actuator and visual signalling of the position
- FCLI_V2 preparation (available upon request), with internal two-way valve, suitable for variable water flow rate systems
- FCLI_VL preparation (available upon request), without internal valve
- Requires matching with the obligatory accessories, grill and control panel, necessary for the operation
- High design aesthetics
- Grille dimensions that can be perfectly incorporated into standard suspended ceiling panel size (840X840) for more powerful units.
- Fan for low sound emissions
- EUROVENT certification
- The load-bearing structure, reinforced with a galvanised steel side band, contains insulation elements in expanded polystyrene obtained from injection moulding for purposes of noise reduction and air routing
- The condensation drip tray is in one piece, with V0 self-extinguishing level and joined by means of over-moulding technology to the insulation in expanded polystyrene with flame retardant additive
- Heat exchanger with shaped profile to increase
the exchange surface, and easily accessible drain valves
- Possibility of direct release of external air regardless of indoor unit ventilation
- Air filter easily removed and cleaned, self supporting structure, characterised by a high efficiency and low pressure drops, with a fire resistance class V0 (UL 94)
- Full compliance with the accident prevention standards
- Ease of installation and maintenance

Brushless electric motor



The "brushless" electric motor is the result of combining the most sophisticated technologies from the fields of mechanics and electronics.
"Brushless" literally means "without brushes".
The brushless electric motor has no sliding contacts between the rotor and the stator.
In brushless motors, the rotor consists of permanent magnets whose magnetic field interacts - without any mechanical contact - with the stator windings. With the special inverter device, it is possible to control the speed and torque of the rotor continuously, just by means of the stator currents.
Compared with the traditional alternate current motors, the brushless motor offers huge advantages:
- Reduced wear and tear
- The possibility to adjust the rotation speed accurately and continuously (0-100%)
- Higher energy yields
- Longer life and greater reliability

These characteristics have made the brushless motor irreplaceable in a wide variety of applications:

- robotics
- automotive
- precision drives
- CD/DVD players
- medical equipment
- etc.

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

Accessories

Obligatory accessories, essential for unit operation:

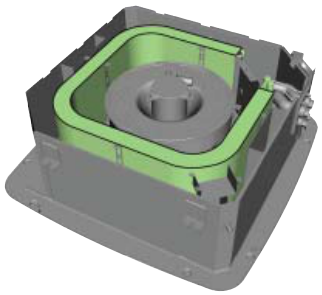
- **GLLI20 (840x840)**
  Delivery grille with louvers manually adjustable and air intake. Combined with wall-mounted control panel. White RAL 9010.
- **GLLI20N (840x840)**
  Delivery grille with Manually adjustable fins and air intake, with "VMF System" advanced electronic thermostat. Individual units, or network master also requires a wired control panel (VMF-E4 compulsory accessory). White RAL 9010.
- **VMF-E4** : Control panel "VMF System" with electronic thermostat and LCD monitor. Wall-mounting
- **Control panels and VMF System**: the characteristics are described on the appropriate card.

Accessories:

- **VHL1-24V:** motor-driven three-way valve for the heating battery in 4-pipe systems. Obligatory accessory in the 4-pipe systems.
- **VHL2-24V:**motor-driven two-wa valve for the heating battery in 4-pipe systems. Obligatory accessory for 4-pipe systems with variable flow rates.

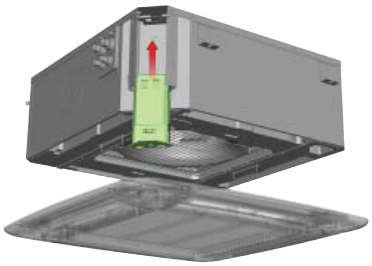
Technical data

COIL



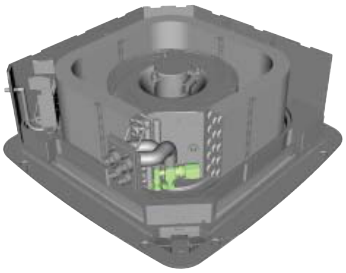
The triple loop heat exchange coil has allowed to increase the energy efficiency of heat exchange by 40% compared to traditional Cassette with circular coils.

ELECTRONIC BOX



The electronic box with bayonet fitting makes installation and maintenance operations extremely easy.

VALVE



The three-way valve is fitted as standard inside the machine. The two-way modulating valve is also available on request, suitable for innovative systems with variable water flow rate.

Mod. FCLI 2-pipe version	Speed		82	122
* Heating Capacity 122°F	max	BTU/h	24226	44358
* Pressure drop 122°F	max	ft wg	7.3	11.38
* Total cooling capacity	max	BTU/h	20473	37534
* Sensible cooling capacity	max	BTU/h	14331	28901
* Water flow rate	max	gpm	4.54	8.33
Pressure drop	max	ft wg	8.37	12.71
Air flow rate	speed max	cfm	647	1030
	speed min	cfm	206	206
Number of fans		n°	1	1
Sound power	speed max	dB(A)	50	60
Sound pressure	speed max	dB(A)	41	51
	speed min	dB(A)	30	35
Heat exchanger water content		gal	0.79	1.19
Coil connections		Ø	3/4"	3/4"
Input power	max	W	80	90
Input current	max	A	0.71	0.80

Mod. FCLI 4-pipe version	Speed		124
* Heating Capacity 158°F	max	BTU/h	42652
* Water flow rate 158°F	max	gpm	4.73
* Pressure drop 158°F	max	ft wg	9.70
* Total cooling capacity	max	BTU/h	30027
* Sensible cooling capacity	max	BTU/h	23100
* Water flow rate	max	gpm	6.66
Pressure drop	max	ft wg	12.71
Air flow rate	speed max	cfm	1030
	speed min	cfm	206
Number of fans		n°	1
Sound power	speed max	dB(A)	60
Sound pressure	speed max	dB(A)	51
	speed min	dB(A)	35
Heat exchanger water content		gal	1.19
Heat exchanger water content (hot circuit)		gal	1.19
Coil connections		Ø	3/4"
Coil connections (hot circuit)		Ø	1/2"
Input power	max	W	90
Input current	max	A	0.80

- Electric power supply: 230V-60Hz
The performance refers to the following conditions:

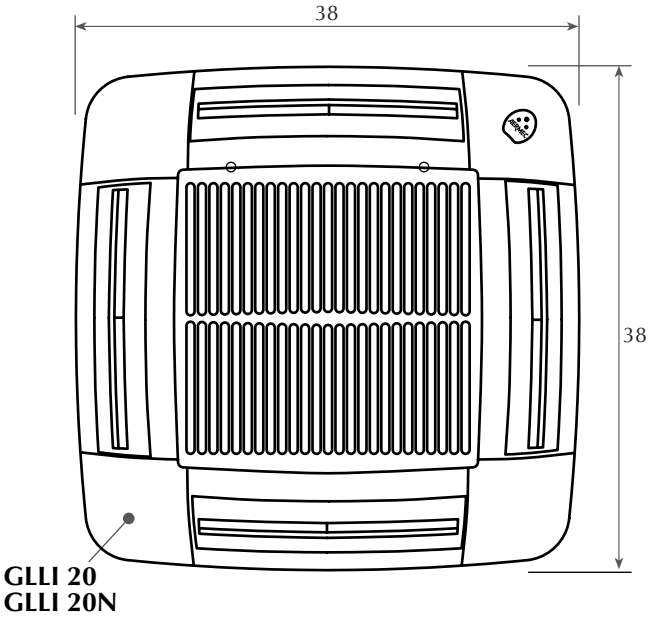
* **Cooling:**
Inlet air temperature = 81°F d.b.Inlet air temperature = 66°F w.b.Water inlet temperature = 45°FΔ T = 9°F

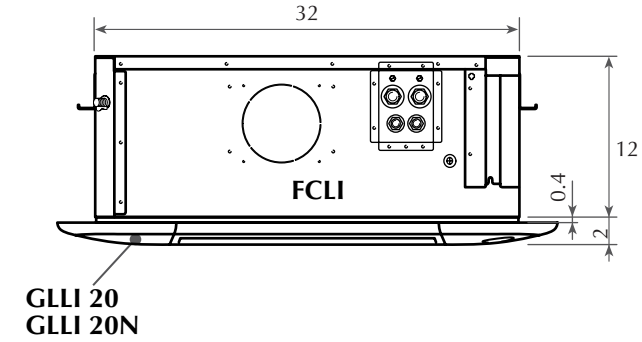
* **Heating** (122°F) Inlet air temperature = 68°F d.b. Water inlet temperature = 122°FWater flow rate as in cooling mode

* **Heating** (158°F) Inlet air temperature = 68°F d.b. Water inlet temperature = 158°FWater flow rate as in cooling modeΔ T = 18°F

Dimensions (inch)

FCLI 82-122-124
FCLI 82V2-122V2-124V2
FCLI 82VL-122VL-124VL





Mod. FCL		82	122	124
Weight	lb	77	79	79

Mod. FCL		82 V2	122V2	124V2
Weight	lb	77	79	79

Mod. FCL		32 VL	122 VL	124 VL
Weight	lb	75	77	77