

Design fan coil unit with centrifugal fan and BLDC motor

FLAT i 2 - 5 kW



PLUS

- ✓ Inverter-controlled BLDC motor
- ✓ Low energy consumption
- ✓ Modulating operation
- ✓ ABS centrifugal fans
- ✓ Can be integrated into the ERGO
- ✓ UV-stabilized ABS cabinet with a refined design
- ✓ Air outlet flap w/microswitch
- ✓ Reversible water connections
- ✓ Incorporable ioniser

Technology and design in a single solution

Galletti FLAT hydronic indoor units are equipped with a permanent magnet (brushless) electric motor, controlled by an inverter, which enables continuous adjustment in the number of fan revolutions.

In addition to the important reduction in electricity consumption compared to AC motors, the use of inverter BLDC technology makes it possible to continually adjust the operation of the unit to the actual thermo-hygrometric load of the interior, with a clear benefit in terms of comfort and reducing noise.

Its use is particularly effective in the frequent cases of operation under partial load conditions, the situation that occurs most frequently, when the adjustment logic allows greatly reduced motor rotation speeds with exceptional reductions in electricity consumption and noise emissions.

The operation of the unit with brushless motor is managed by EVO or MYCOMFORT LARGE microprocessor control panel, using an analogue output (0-10V) which is connected to the inverter.

The Galletti brushless fan coil thus represent the state of the art due to the possibility of regulating the operation, depending on the temperature of the air, its relative humidity, the temperature of the water and based on the programmable time slots.

By means of the digital outputs it is possible to switch on and off external units or devices such as chiller, boiler, pumps, water circulation pumps, etc.

Another analog output makes it possible to control the modulating valves.



AVAILABLE VERSIONS

3 models with cooling capacity from 2 to 5 kW, in two different versions:



FLAT i L

Suspended wall installation, with cabinet, with vertical air flow.



FLAT i U

Floor or ceiling mounted, with cabinet, with vertical air flow and air intake grille complete with filters.



MAIN COMPONENTS

Cabinet with a refined design

RAL9010 colour, front panel made of sheet steel. Side panels and an upper grille with covers on either side manufactured from UV-stabilised ABS to maintain the colour intact over time. The upper grille consists of a flap and adjustable louvers. The flap features a microswitch that automatically shuts down the unit when the flap itself is closed.



Structure

Built from galvanised steel sheet of extra thickness, heat and sound insulated by means of Class 1 self-extinguishing panels. FLAT Ui version is suitable for either vertical or horizontal installation thanks to the dual condensate collection and drainage system.

Heat exchanger

High efficiency heat exchanger made with copper piping and aluminium fins, provided with brass manifolds and vent valve. The water connections are reversible at the time of installation. On request it is possible to mount an additional heat exchanger for 4-pipe systems.

Fans

Double suction centrifugal fans, statically and dynamically balanced, manufactured from anti-static ABS, with blades having an airfoil section and offset modules. The fans are housed in a low-noise ABS volute with high-efficiency profile.



BLDC electric motor

The unit is equipped with an inverter board to control the motor, which can be used separately or installed on the motor itself. This system makes it possible to precisely set the maximum rotation speed of the motor (control signal 0-10 V) even when the maximum rotation speed must be controlled to reduce noise levels.



Air filter

Honey-comb polypropylene washable air filter, easily removable for maintenance operations. On FLAT Ui version the air filters are fitted onto the air inlet grille.

ACCESSORIES

Wall-mounted microprocessor electronic control panels

MCLE	MYCOMFORT LARGE electronic controller with display
EVO	Wall-mounted microprocessor controller
KBFLAE	FLAT i on-board installation kit
MCSWE	Water sensor for MYCOMFORT and EVO microprocessor controllers
MCSUE	Remote humidity sensor for EVO, MYCOMFORT MEDIUM and LARGE on-board controllers

Additional heat exchanger for 4-pipe systems

DF	1 row additional heat exchanger for 4-pipe systems (hot water circuit)
-----------	--

Base supports and enclosing panels

ZL	Pair of base and enclosure elements
PV	Rear pre-painted panel for vertical installation fan coils with cabinet
PH	Rear pre-painted panel for horizontal installation fan coils with cabinet

Valves

KVK	2 or 3-way valve with ON/OFF or modulating electrothermal motor and hydraulic kit for standard heat exchanger
VKDF	2 or 3-way valve with ON/OFF or modulating electrothermal motor and hydraulic kit for DF heat exchanger

Auxiliary water drip trays, insulating shell

BV	Auxiliary water drip tray for vertical installation fan coil units
BH	Auxiliary water drip tray for horizontal installation fan coil units
GIVK	Valve body insulation shell

Rated technical data

FLAT i		20			40			70		
		min	med	max	min	med	max	min	med	max
Fan speed										
Control voltage	V	6,1	8,1	8,3	4,6	6,8	8,6	5,8	8,3	8,5
Total cooling capacity (1) (E)	kW	1,44	1,81	2,27	1,74	2,39	2,92	2,64	3,46	4,46
Sensible cooling capacity (1) (E)	kW	1,06	1,32	1,72	1,32	1,83	2,26	2,12	2,80	3,70
Water flow (1)	l/h	247	310	390	299	411	501	454	593	765
Water pressure drop (1) (E)	kPa	6	9	13	4	7	10	4	7	11
Heating capacity (2) (E)	kW	1,82	2,23	2,86	2,18	2,90	3,48	3,62	4,63	5,87
Water pressure drop (2) (E)	kPa	5	7	11	3	5	8	3	5	9
Heating capacity (3)	kW	3,08	3,86	4,84	3,70	4,89	5,86	6,25	7,94	10,05
Water flow (3)	l/h	271	339	424	325	429	514	548	696	882
Water pressure drop (3)	kPa	5	8	12	3	6	8	4	7	10
Air flow	m ³ /h	216	284	378	283	407	520	482	659	911
Power input (E)	W	7	11	22	7	12	24	13	21	49
Sound power level (4) (E)	dB/A	38	44	50	33	41	48	43	51	58
Additional coil heating capacity DF (3) (E)	kW	1,70	1,96	2,24	2,31	2,77	3,11	3,53	4,11	4,77
Water flow (3)	l/h	149	171	197	202	243	273	310	361	418
Water pressure drop (3) (E)	kPa	4	5	7	10	14	17	4	5	6

(1) Water temperature 7 / 12°C, air temperature D.B. 27°C, W.B. 19°C (47% relative humidity)

(2) Inlet water temperature 50°C, water flow rate same as in cooling mode, air temperature 20°C

(3) Water temperature 70 / 60°C, air temperature 20°C

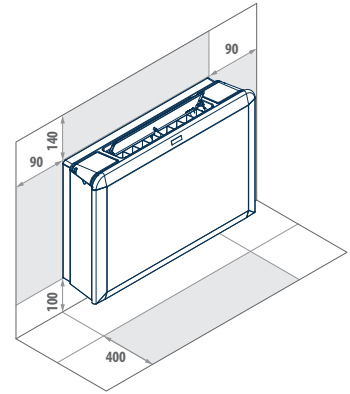
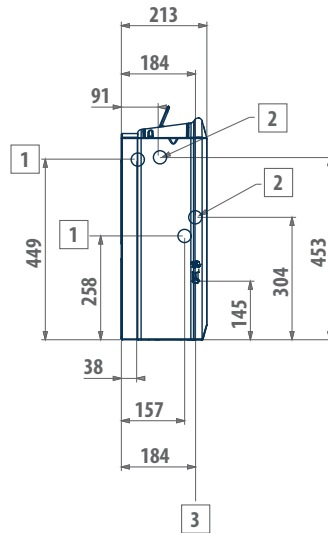
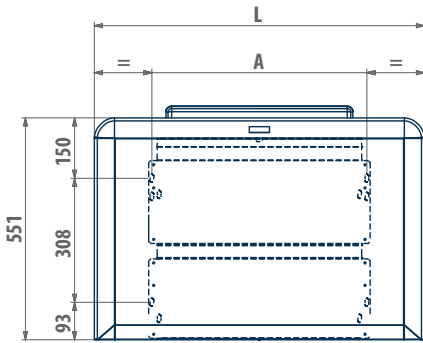
(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

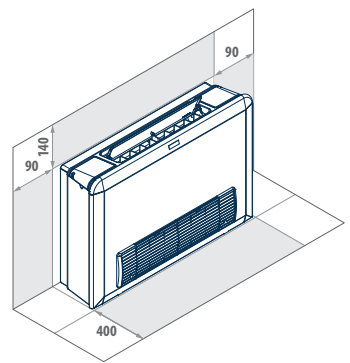
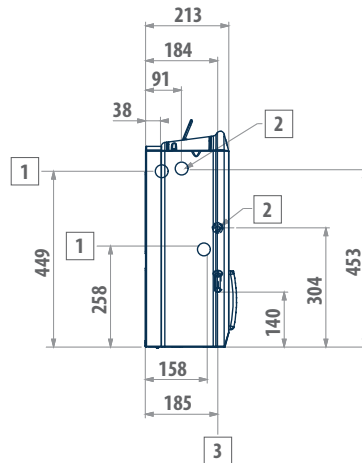
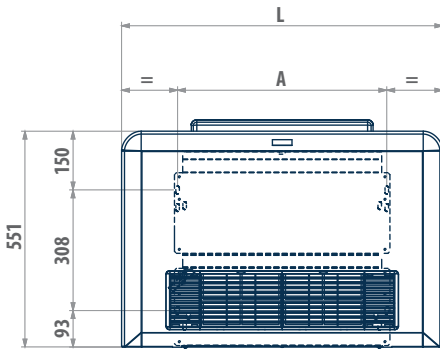
Power supply 230-1-50 (V-ph-Hz)



FLAT L i



FLAT U i



FLAT L - U i	20	40	70
A	534	704	874
L	820	990	1160
1 - Water connections (female gas), standard heat exchanger	1/2"	1/2"	1/2"
2 - Water connections (female gas), DF heat exchanger	1/2"	1/2"	1/2"
3 - Drain outlet for vertical installation	16	16	16
Diameter of drain outlet for horizontal installation	17	17	17