



# Fan coil unit with design cabinet, 17 cm in depth

# **FLAT S 1 - 3 kW**



# The solution tailored to design requirements of residential applications

Galletti's FLAT series now becomes SLIM. In fact, with a depth of only 17 cm, FLAT S ensures a compact size that makes it easy to integrate in any context, thus responding to the new design trends in the residential sector (and beyond).

The FLAT S mini series means innovation also in terms of engineering: it combines a guarantee of excellent lownoise performance with the advantage of an exclusive design that fits well with both residential and commercial settings.

The stylishly designed cabinet (colour RAL9010) is compact and manufactured from steel sheet and UV-stabilised ABS. The upper grille includes a flap and adjustable louvers fitted with a microswitch that automatically shuts down the unit when the flap itself is closed.

The adoption of UV-stabilized ABS in the parts making up the cabinet and antistatic ABS in the fan assembly (volute and centrifugal fan) guarantee that the product will maintain the same aesthetics and noise levels throughout its lifetime.



# **PLUS**

- » Cabinet with a refined design, depth 17 cm
- » Microswitch on air flap
- » Use of UV-stabilized ABS
- » Can be integrated into GARDA
- » Reversible water connections
- » 3-speed motor
- » ABS centrifugal fans
- » Incorporable JONIX sanitizing module



### MAIN COMPONENTS

### Cabinet

Design cabinet, RAL9010 colour, only 17 cm in depth, 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.

### **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.

### **Electric motor**

It is mounted on vibration dampers, with permanently activated capacitor and thermal protection of the windings, and is directly coupled with the fans. It is available as either at 3- or (on request) 6-speed version in order to meet all the specific needs of performance, quietness, and power consumption.



### Air filter

Honey-comb polypropylene washable air filter, easily removable for maintenance operations.

| CONFIGURATOR  |         |       |   |   |   |   |   |   |   |   |   |    |    |
|---|---------|-------|---|---|---|---|---|---|---|---|---|----|----|
| The models are completely configurable by selecting the                     | Version | Field | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| version and the options. To the right is shown an example of configuration. | FLATS13 |       | L | 0 | М | 0 | 1 | E | 0 | 0 | 0 | 0  | Α  |

To verify the compatibility of the options, use the selection software or the price list.

### **CONFIGURATOR**

| 1 | Version |
|---|---------|
|   |         |

L - Wall mounted with cabinet L

### Motor

- 3-speed motor
- EC motor

### Main coil hydraulic side

- Water connections on the left side

# Water connections on the right Additional coil hydraulic side / heating element

- Absent
- Water connections on the left side
- Water connections on the right

### Valve

5

- 0 Absent

- Absent
  VKS 3 ways valve 230 V ON/OFF complete hydraulic kit
  KV 2 ways valve 230 V ON/OFF
  VKMS 3 ways valve 24 V MODULATING complete hydraulic kit
  KVM 2 ways valve 24 V MODULATING
  VKS24 3 way valve 24 V ON/OFF complete hydraulic kit
  KV24 2 way valve 24 V ON/OFF hydraulic kit on coil side
  VKMSND 3 way valve 24 V MODULATING hydraulic kit on coil side
  VKS24ND 3 ways valve 24 V MODULATING hydraulic kit on coil side
  VKS24ND 3 ways valve 24 V ON/OFF hydraulic kit on coil side
  Control panel

### Control panel

- Absent
- CB On-board speed selector
- TB Speed selector and thermostat
- TIB Speed selector, thermostat and S/W selecting switch TED 2T microprocessor control for 2 pipes

- TED 4T microprocessor control for 4 pipes
- TED 10 microprocessor control for EC MCBE My comfort base MCME My comfort medium

- MCLE My comfort large EVOBOARD Circuit board
- EVOBOARD circuit board + NAVEL Wi-Fi module

#### **Probes**

- 0 Absent
- ASSENT SA Remote air probe for MYCOMFORT, LED503 and EVO SW Water probe for MYCOMFORT, LED503 and EVO SU Humidity probe for MYCOMFORT and EVO

- SA+SW Remote air and water probes for MYCOMFORT, LED503 and EVO SA+SU Remote air and humidity probes for MYCOMFORT and EVO SA+SU+SW- Remote air, water, humidity probes for MYCOMFORT and EVO TC Thermostat for minimum water temperature
- SA Remote air probe for TED
- SW Water probe for TED
- SA + SW Air and water probes for TED

### Accessories

- Absent JONIX 0
- BV Auxiliary drip tray GIVK Insulating shell

# Filter

Standard filter air 0

#### 10 Release

- 0
- Ă Ă

| ACCES:          | Sories  |                 |   |
|-----------------|---|-----------------|---|
| Elecromechani   | cal control panels  | Auxiliary water | er drip trays, insulating shell, condensate drainage pump   |
| СВ              | On-board speed switch   | BVK             | Auxiliary water drip tray for vertical installation fan coil units  |
| CD              | Recess wall-mounted speed switch  | GIVKL           | Insulating shell for VKS valve, water connections on the left   |
| TC              | Thermostat for minimum water temperature in heating mode (42 °C)                        | GIVKR           | Insulating shell for VKS valve, water connections on the right  |
| TIB             | On-board speed switch, thermostat and summer/winter selecting switch                    | Base and encl   | osure elements  |
| Electronic micr | oprocessor control panels with display  | ZLS             | Pair of base and enclosure elements for FLAT S  |
| СОВ             | Finishing plate for LED 503 controller, RAL9005 black                                   | Rear covering   | panels  |
| COG             | Finishing plate for LED 503 controller, RAL7031 grey                                    | PV              | Rear painted panel for vertical installation with cabinet   |
| COW             | Finishing plate for LED 503 controller, RAL9003 white                                   | Valves          |   |
| DIST            | MY COMFORT controller spacer for wall mounting  | KV              | 2-way valve, ON/OFF actuator, hydraulic kit on water connection side for main heat exchanger                          |
| EVO-2-TOUCH     | 2.8" touch screen user interface for EVO control  | KV24DF          | 2-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit on water connection                                    |
| EVOBOARD        | Circuit board for EVO control   | INVETUI         | side for main and additional heat exchanger   |
| EVODISP         | User interface with display for EVO controller  | V2VDF+STD       | 2-way valves, ON/OFF or MUDULATING actuator, 230 V or 24 V power supply, hydraulic                                    |
| EYNAVEL         | Device for Wi-Fi or Bluetooth communication between EVOBOARD and smartphone             |                 | kit, for main and additional heat exchanger   |
| KBFLAE          | MY COMFORT on-board installation KIT for FLAT   | V2VSTD          | 2-way valve, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic                                     |
| LED503          | Recessed wall-mounted electronic display controller LED 503                             |                 | kit, for main heat exchanger  |
| MCBE            | MYCOMFORT BASE electronic controller with display                                       | V3VDF           | 3-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for additional heat exchanger |
| MCLE            | Microprocessor control with display MY COMFORT LARGE                                    |                 | 2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic                                    |
| MCME            | MYCOMFORT MEDIUM electronic controller with display                                     | V3VSTD          | kit, for main heat exchanger  |
| MCSUE           | Humidity sensor for MY COMFORT (medium e large), EVO                                    | -               | 3-way valve, ON/OFF actuator, 24 V power supply, complete hydraulic kit for additional                                |
| MCSWE           | Water sensor for MYCOMFORT and EVO controllers  | VKDF24          | heat exchanger  |
|                 | oprocessor control panels   | 10/146          | 3-way valve, MODULATING actuator, 24 V power supply, complete hydraulic kit for main                                  |
| KB F            | On-board FLAT/FLAT S installation kit suitable for TED controller                       | VKMS            | heat exchanger  |
| TED 2T          | Electronic controller for AC fan control and one ON/OFF 230 V valve                     | VKMSND          | 3-way valve, MODULATING actuator, 24 V power supply, hydraulic kit without holder,                                    |
| TED 4T          | Electronic controller for AC fan control and two ON/OFF 230 V valves                    | UNIONU          | for main heat exchanger   |
| TED SWA         | Water temperature sensor for TED controls   | VKSND           | 3-way valve, ON/OFF actuator, 230 V power supply, hydraulic kit without holder, for                                   |
|                 | e and regulating louver controllers   | VKJND           | main heat exchanger   |
| KP              | Power interface for connecting in parallel up to 4 fun coil units to the one controller | VPIC            | 2-way valves pressure independent, ON/OFF or MODULATING actuator, 230 V or 24 V                                       |
|                 | t exchanger for 4-pipe systems  |                 | power supply, hydraulic kit, for main heat exchanger  |
| DF              | 1-row additional coil for 4 pipes system  | Sanitisation s  |   |
|                 |   | JONIX inside    | Sanitizing module JONIX for on-board installation   |



# 2 PIPES - RATED TECHNICAL DATA

| FLAT S                    |        |       |      | 13   |      |      | 23   |      |      | 33   |      |      | 43   |      |
|---------------------------|--------|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| Speed                     |        |       | min  | med  | max  |
| Total cooling capacity    | (1)(E) | kW    | 0,85 | 0,96 | 1,22 | 1,08 | 1,33 | 1,72 | 1,40 | 1,74 | 2,29 | 1,75 | 2,12 | 2,75 |
| Sensible cooling capacity | (1)(E) | kW    | 0,60 | 0,68 | 0,87 | 0,74 | 0,91 | 1,19 | 1,00 | 1,24 | 1,65 | 1,25 | 1,52 | 1,99 |
| FCEER class               | (E)    |       |      |      |      |      |      |      | D    |      |      |      |      |      |
| Water flow                | (2)    | l/h   | 148  | 168  | 213  | 186  | 230  | 300  | 243  | 303  | 399  | 303  | 368  | 477  |
| Water pressure drop       | (2)(E) | kPa   | 3    | 3    | 5    | 5    | 7    | 11   | 3    | 5    | 7    | 5    | 7    | 10   |
| Heating capacity          | (3)(E) | kW    | 0,89 | 1,01 | 1,27 | 1,00 | 1,22 | 1,59 | 1,52 | 1,85 | 2,40 | 1,85 | 2,22 | 2,86 |
| FCCOP class               | (E)    |       |      |      |      |      |      |      | D    |      |      |      |      |      |
| Water flow                | (3)    | l/h   | 155  | 176  | 221  | 174  | 211  | 277  | 264  | 321  | 417  | 321  | 386  | 497  |
| Water pressure drop       | (3)(E) | kPa   | 2    | 3    | 4    | 3    | 5    | 8    | 3    | 4    | 7    | 4    | 6    | 9    |
| Rated air flow            |        | m³/h  | 115  | 135  | 170  | 135  | 170  | 225  | 200  | 250  | 340  | 250  | 310  | 420  |
| Power input               | (E)    | W     | 12   | 17   | 23   | 14   | 20   | 27   | 23   | 28   | 37   | 25   | 31   | 42   |
| Total sound power level   | (4)(E) | dB(A) | 30   | 35   | 40   | 35   | 40   | 46   | 32   | 38   | 46   | 37   | 42   | 49   |

<sup>(1)</sup> Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015 (2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) (3) Water temperature 45°C / 40°C, air temperature 20°C (4) Sound power measured according to standards ISO 3741 and ISO 3742

# 4 PIPES - RATED TECHNICAL DATA

| FLAT S                    |        |       |      | 13   |      |      | 23   |      |      | 33   |      |      | 43   |      |
|---------------------------|--------|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| Speed                     |        |       | min  | med  | max  |
| Total cooling capacity    | (1)(E) | kW    | 0,85 | 0,96 | 1,22 | 1,08 | 1,33 | 1,72 | 1,40 | 1,74 | 2,29 | 1,75 | 2,12 | 2,75 |
| Sensible cooling capacity | (1)(E) | kW    | 0,60 | 0,68 | 0,87 | 0,74 | 0,91 | 1,19 | 1,00 | 1,24 | 1,65 | 1,25 | 1,52 | 1,99 |
| FCEER class               | (E)    |       |      |      |      |      |      |      | D    |      |      |      |      |      |
| Water flow                | (2)    | l/h   | 148  | 168  | 213  | 186  | 230  | 300  | 243  | 303  | 399  | 303  | 368  | 477  |
| Water pressure drop       | (2)(E) | kPa   | 3    | 3    | 5    | 5    | 7    | 11   | 3    | 5    | 7    | 5    | 7    | 10   |
| Heating capacity          | (3)(E) | kW    | 1,04 | 1,15 | 1,36 | 1,35 | 1,56 | 1,91 | 1,88 | 2,16 | 2,69 | 2,16 | 2,45 | 3,02 |
| FCCOP class               | (E)    |       |      |      |      |      |      |      | D    |      |      |      |      |      |
| Water flow                | (3)    | l/h   | 91   | 100  | 119  | 118  | 136  | 167  | 165  | 189  | 235  | 189  | 215  | 264  |
| Water pressure drop       | (3)(E) | kPa   | 2    | 2    | 3    | 4    | 5    | 7    | 1    | 2    | 3    | 2    | 2    | 3    |
| Rated air flow            |        | m³/h  | 115  | 135  | 170  | 135  | 170  | 225  | 200  | 250  | 340  | 250  | 310  | 420  |
| Power input               | (E)    | W     | 12   | 17   | 23   | 14   | 20   | 27   | 23   | 28   | 37   | 25   | 31   | 42   |
| Total sound power level   | (4)(E) | dB(A) | 30   | 35   | 40   | 35   | 40   | 46   | 32   | 38   | 46   | 37   | 42   | 49   |

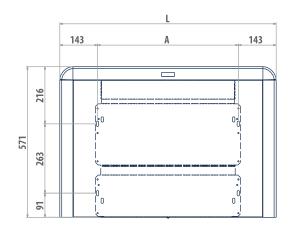
<sup>(1)</sup> Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015
(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)
(3) Water temperature 65°C / 55°C, air temperature 20°C
(4) Sound power measured according to standards ISO 3741 and ISO 3742
(E) EUROVENT certified data
Power supply 230-1-50 (V-ph-Hz)

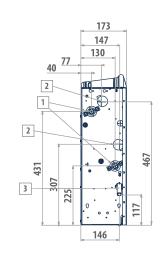
<sup>(</sup>E) EUROVENT certified data Power supply 230-1-50 (V-ph-Hz)

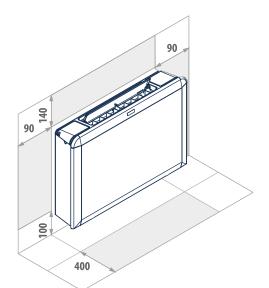


# **DIMENSIONAL DRAWINGS**

# FLAT S







### LEGEND

| Cond | ensate discharge diameter for horizontal installation ø 17 mm   |
|------|---|
| 3    | Condensate discharge diameter for vertical installation ø 16 mm |
| 2    | DF 1-row additional heat exchanger water connections ø 1/2"     |
| 1    | Water connections standard heat exchanger ø 1/2"                |
|      |   |

| FLAT S  | A   | L    | RG |
|---------|-----|------|----|
| FLAI 3  | mm  | mm   | kg |
| 13      | 534 | 820  | 17 |
| 23      | 704 | 990  | 21 |
| 33 - 43 | 874 | 1160 | 23 |