

Electric fan with GreenTech EC motor

ESTRO GT 1 - 6 kW



PLUS

- » GreenTech Technology
- » Inverter-controlled EC motor
- » Low energy consumption
- » Modulating operation
- » Extremely quiet operation
- » Can be integrated into GARDA
- » Incorporable JONIX sanitizing module

The maximum expression of technology at the service of the hotel industry

Galletti's extensive experience in the manufacture of fan coil units and development of refined control logics was combined with the know-how of EBM-PAPST in the construction of fan drive assemblies in order to create ESTRO GT.

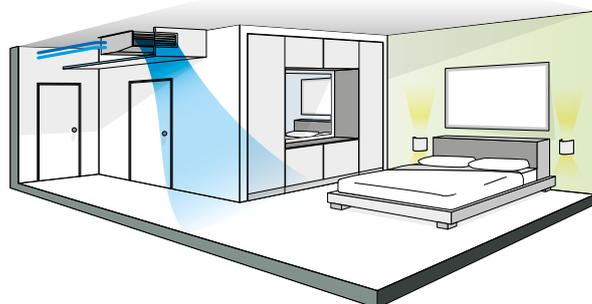
The ESTRO GT design was developed specifically for the hotel industry, where fan coil units represent the most convenient solution for air conditioning rooms given that they are efficient, reliable, quiet and simple to maintain.

With ESTRO GT it's almost like adding another star!

ESTRO GT uses fan drive assemblies with GreenTech technology, which means EC motors directly integrated with the fan assembly and inverter and 70% reductions in electricity consumption compared to traditional AC motors. The low electricity consumption is the ideal solution for installations in hotels, where the fan coil unit is running 80% of the time on average.

The extremely low noise levels and the possibility of continuous modulation of the fan speed fully satisfy guests' needs in terms of flexibility of use and quiet operation. ESTRO GT fan coil units use MYCOMFORT LARGE and EVO microprocessor control panels, which, thanks to the analogue outputs and refined adjustment logics, perfectly control the operation of the EC motors and modulating valves.

A wide range of accessories completes the offerings for recessed ceiling installation.



Thanks to the high efficiency and reliability guaranteed GreenTech technology, ESTRO GT reduces operating and maintenance costs while maintaining a top level of comfort and minimal noise.

AVAILABLE VERSIONS

- ESTRO FL GT** Wall mounted with cabinet
- ESTRO FA GT** Wall recess mounted with cabinet
- ESTRO CL GT** Wall mounted with cabinet
- ESTRO FU GT** Floor and ceiling mounted with cabinet

- ESTRO FP GT** Ceiling mounted with cabinet
- ESTRO FC GT** Vertical / horizontal recess mounted with rear air intake
- ESTRO FF GT** Vertical / horizontal recess mounted with front air intake

MAIN COMPONENTS

Cabinet

Composed of a painted steel sheet panel, side panels, air outlet grille (swinging by 180°) and back suction grille built from ABS.

Structure

Built from galvanised steel sheet of extra thickness, heat and sound insulated by means of Class 1 self-extinguishing panels. FU – FC – FF versions are 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.

Air filter

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

EC GreenTech electrical fan

ESTRO GT uses the exclusive GreenTech technology of EBM-PAPST Permanent magnet EC motor with inverter integrated in the fan assembly, protection rating IP44, insulation class F and ball bearings. Polypropylene (PP) volute. Centrifugal fan with forward-curving blades made of glass-filled polyamide PA 6.



ACCESSORIES

Electronic microprocessor control panels with display

| | |
|--------------------|---|
| DIST | MY COMFORT controller spacer for wall mounting |
| EVO-2-TOUCH | 2.8" touch screen user interface for EVO control |
| EVOBOARD | Circuit board for EVO control |
| EVO DISP | User interface with display for EVO controller |
| EYNAVEL | Device for Wi-Fi or Bluetooth communication between EVOBOARD and smartphone |
| KBESTE | MY COMFORT on-board installation kit for ESTRO |
| MCLE | Microprocessor control with display MY COMFORT LARGE |
| MCSUE | Humidity sensor for MY COMFORT (medium e large), EVO |
| MCSWE | Water sensor for MYCOMFORT and EVO controllers |

Electronic microprocessor control panels

| | |
|----------------|--|
| KB A | On-board ESTRO FA installation kit suitable for TED controller |
| KB L DX | On-board ESTRO FL/FU/FB installation kit on the right side suitable for TED controller |
| KB L SX | On-board ESTRO FL/FU/FB installation kit on the left side suitable for TED controller |
| TED 10 | Electronic controller for EC fan equipped with inverter and ON/OFF valves 230 V |
| TED SWA | Water temperature sensor for TED controls |

Power interface and regulating louver controllers

| | |
|------------|---|
| CSB | On-board controller for opening and closing the motor-driven regulating louver |
| CSD | Recess mounted controller for opening and closing the SM motor-driven regulating louver |

Additional heat exchanger for 4-pipe systems

| | |
|-----------|--|
| DF | 1-row additional heat exchanger for 4-pipe systems (not suitable for ESTRO "M" models) |
|-----------|--|

Auxiliary water drip trays, insulating shell, condensate drainage pump

| | |
|-------------|--|
| BH | Auxiliary water drip tray for horizontal installation fan coil units |
| BV | Auxiliary water drip tray for vertical installation fan coil units |
| GIVK | Insulating shell for VKS valve |
| KSC | Condensate drainage pump kit |

Base and enclosure elements

| | |
|------------|--|
| D | Support elements for ESTRO FC |
| ZA | Pair of support covering elements with front grille for ESTRO FA |
| ZAG | Pair of support covering elements for ESTRO FA |
| ZC | Pair of support covering elements for ESTRO CL |
| ZCG | Pair of support covering elements for ESTRO CL |
| ZL | Pair of support covering elements for ESTRO FL |
| ZLG | Pair of support covering elements with front grille for ESTRO FL |

Rear covering panels

| | |
|-----------|---|
| PH | Rear painted panel for horizontal installation with cabinet |
| PV | Rear painted panel for vertical installation with cabinet |

Electrical heating elements

| | |
|-----------|---|
| RE | Heating element with installation kit, relay box and safety devices |
|-----------|---|

Air inlet and outlet grilles

| | |
|------------|---|
| GE | Aluminium external air intake grille with subframe |
| GEF | Aluminium external air intake grille with subframe and air filter |
| GM | Aluminium air outlet grille with 2-row fins and subframe |
| RGC | Plenum with circular collars for air outlet grille |

Plenum and connectors

| | |
|-------------|--|
| RA90 | Angular inlet connector |
| RAD | Straight inlet connector |
| RADC | Air inlet plenum with circular collars |

| | |
|------------------------------------|--|
| RM90 | Angular outlet connector |
| RM90C | Angular outlet insulated connector |
| RMCD | Straight outlet insulated connector |
| RMCD C | Air outlet plenum with circular collars |
| RMD | Straight outlet connector |
| External air intake louvers | |
| SM | Motor-driven louver, with motor on the right with transformer |
| SM | Motor-driven louver, with motor on the left with transformer |
| SM | Motorized air intake louver |
| SMC | Motor driven louver, with motor on the right, with transformer |
| SMC | Motor driven louver, with motor on the left, with transformer |
| Valves | |
| KV | 2-way valve, ON/OFF actuator, hydraulic kit on water connection side for main heat exchanger |
| KV24 | 2-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit on water connection side for main heat exchanger |
| KV24DF | 2-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit on water connection side for main and additional heat exchanger |
| KVDF | 2-way valve, ON/OFF actuator, 230 V power supply, hydraulic kit on water connection side for main and additional heat exchanger |
| KVM | 2-way valve, MODULATING actuator, 24 V power supply, hydraulic kit on water connection side for main heat exchanger |
| KVMDF | 2-way valve, MODULATING actuator, 24 V power supply, hydraulic kit on water connection side for main and additional heat exchanger |
| VKDF | 3-way valve, ON/OFF actuator, 230 V power supply, complete hydraulic kit for additional heat exchanger |
| VKDF24 | 3-way valve, ON/OFF actuator, 24 V power supply, complete hydraulic kit for additional heat exchanger |
| VKDF24ND | 3-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit without holder, for additional heat exchanger |
| VKDFND | 3-way valve, ON/OFF actuator, 230 V power supply, hydraulic kit without holder, for additional heat exchanger |
| VKDFD | 3-way valve, MODULATING actuator, 24 V power supply, complete hydraulic kit for additional heat exchanger |
| VKDFDND | 3-way valve, MODULATING actuator, 24 V power supply, hydraulic kit without holder, for additional heat exchanger |
| VKMS | 3-way valve, MODULATING actuator, 24 V power supply, complete hydraulic kit for main heat exchanger |
| VKMSND | 3-way valve, MODULATING actuator, 24 V power supply, hydraulic kit without holder, for main heat exchanger |
| VKS | 3-way valve, ON/OFF actuator, 1230 V power supply, complete hydraulic kit for main heat exchanger |
| VKS24 | 3-way valve, ON/OFF actuator, 24 V power supply, complete hydraulic kit for main heat exchanger |
| VKS24ND | 3-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit without holder, for main heat exchanger |
| VKSND | 3-way valve, ON/OFF actuator, 230 V power supply, hydraulic kit without holder, for main heat exchanger |
| VPIC | 2-way valves pressure independent, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger |
| Sanitisation system | |
| JONIX - on board | Sanitizing module JONIX for on-board installation |

2 PIPES - RATED TECHNICAL DATA

| ESTRO GT | | | 1 | | | 3 | | | 4 | | | 4M | | |
|---------------------------|--------|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Speed | | | min | med | max |
| Control voltage | (E) | V | 2,10 | 2,50 | 3,10 | 2,80 | 3,70 | 5,00 | 2,80 | 3,70 | 5,00 | 2,80 | 3,70 | 5,00 |
| Total cooling capacity | (1)(E) | kW | 0,77 | 0,91 | 1,14 | 1,25 | 1,51 | 1,72 | 1,35 | 1,69 | 1,94 | 1,49 | 1,84 | 2,23 |
| Sensible cooling capacity | (1)(E) | kW | 0,59 | 0,69 | 0,86 | 0,94 | 1,13 | 1,28 | 1,04 | 1,30 | 1,49 | 1,05 | 1,31 | 1,59 |
| FCEER class | (E) | | B | | | | | | | | | | | |
| Water flow | (2) | l/h | 132 | 158 | 197 | 216 | 261 | 299 | 234 | 292 | 337 | 258 | 317 | 384 |
| Water pressure drop | (2)(E) | kPa | 4 | 5 | 7 | 8 | 11 | 14 | 7 | 10 | 13 | 10 | 14 | 20 |
| Heating capacity | (3)(E) | kW | 0,95 | 1,11 | 1,32 | 1,45 | 1,72 | 1,84 | 1,50 | 1,81 | 2,15 | 1,53 | 1,88 | 2,29 |
| FCCOP class | (E) | | C | | | B | | | B | | | B | | |
| Water flow | (3) | l/h | 166 | 194 | 229 | 252 | 300 | 320 | 260 | 315 | 373 | 265 | 328 | 397 |
| Water pressure drop | (3)(E) | kPa | 5 | 6 | 8 | 9 | 12 | 14 | 6 | 9 | 12 | 9 | 12 | 17 |
| Rated air flow | | m ³ /h | 149 | 189 | 231 | 211 | 271 | 344 | 211 | 271 | 344 | 211 | 271 | 344 |
| Power input | (E) | W | 6 | 7 | 9 | 7 | 9 | 16 | 7 | 9 | 16 | 9 | 10 | 16 |
| Total sound power level | (4)(E) | dB(A) | 30 | 32 | 40 | 38 | 44 | 49 | 40 | 44 | 50 | 41 | 45 | 51 |

| ESTRO GT | | | 5 | | | 6 | | | 6M | | | 7 | | |
|---------------------------|--------|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Speed | | | min | med | max |
| Control voltage | (E) | V | 2,50 | 3,90 | 5,40 | 2,50 | 3,90 | 5,40 | 2,50 | 3,90 | 5,40 | 2,50 | 3,60 | 5,70 |
| Total cooling capacity | (1)(E) | kW | 1,59 | 2,02 | 2,40 | 1,75 | 2,37 | 2,91 | 1,92 | 2,63 | 3,27 | 1,97 | 2,63 | 3,50 |
| Sensible cooling capacity | (1)(E) | kW | 1,17 | 1,56 | 1,86 | 1,25 | 1,69 | 2,09 | 1,32 | 1,82 | 2,28 | 1,44 | 2,04 | 2,74 |
| FCEER class | (E) | | A | | | | | | | | | | | |
| Water flow | (2) | l/h | 275 | 348 | 415 | 302 | 408 | 503 | 331 | 452 | 565 | 340 | 451 | 602 |
| Water pressure drop | (2)(E) | kPa | 8 | 12 | 16 | 5 | 8 | 11 | 7 | 12 | 17 | 4 | 7 | 12 |
| Heating capacity | (3)(E) | kW | 1,74 | 2,26 | 2,70 | 1,76 | 2,37 | 2,94 | 1,74 | 2,41 | 3,03 | 2,39 | 3,13 | 4,05 |
| FCCOP class | (E) | | A | | | | | | | | | | | |
| Water flow | (3) | l/h | 302 | 393 | 469 | 301 | 408 | 506 | 338 | 466 | 586 | 415 | 545 | 704 |
| Water pressure drop | (3)(E) | kPa | 8 | 12 | 17 | 5 | 8 | 11 | 6 | 10 | 15 | 5 | 8 | 13 |
| Rated air flow | | m ³ /h | 241 | 341 | 442 | 241 | 341 | 442 | 241 | 341 | 442 | 320 | 450 | 640 |
| Power input | (E) | W | 6 | 8 | 15 | 6 | 8 | 15 | 6 | 8 | 15 | 7 | 10 | 21 |
| Total sound power level | (4)(E) | dB(A) | 35 | 43 | 48 | 36 | 42 | 48 | 35 | 43 | 49 | 35 | 43 | 52 |

| ESTRO GT | | | 8 | | | 9 | | | 9M | | |
|---------------------------|--------|-------------------|------|------|------|------|------|------|------|------|------|
| Speed | | | min | med | max | min | med | max | min | med | max |
| Control voltage | (E) | V | 2,80 | 4,10 | 6,50 | 3,70 | 5,40 | 8,00 | 3,80 | 5,30 | 7,60 |
| Total cooling capacity | (1)(E) | kW | 2,50 | 3,26 | 4,30 | 3,00 | 3,64 | 4,49 | 3,52 | 4,36 | 5,38 |
| Sensible cooling capacity | (1)(E) | kW | 1,79 | 2,44 | 3,12 | 2,32 | 2,90 | 3,63 | 2,47 | 3,06 | 3,80 |
| FCEER class | (E) | | A | | | | | | | | |
| Water flow | (2) | l/h | 431 | 561 | 743 | 515 | 628 | 774 | 605 | 750 | 927 |
| Water pressure drop | (2)(E) | kPa | 5 | 8 | 12 | 7 | 10 | 14 | 11 | 16 | 24 |
| Heating capacity | (3)(E) | kW | 2,47 | 3,24 | 4,24 | 3,36 | 4,11 | 4,88 | 3,53 | 4,37 | 5,39 |
| FCCOP class | (E) | | A | | | B | | | A | | |
| Water flow | (3) | l/h | 430 | 563 | 736 | 575 | 709 | 866 | 613 | 759 | 937 |
| Water pressure drop | (3)(E) | kPa | 4 | 6 | 10 | 7 | 9 | 13 | 10 | 14 | 20 |
| Rated air flow | | m ³ /h | 361 | 497 | 706 | 470 | 605 | 785 | 470 | 605 | 785 |
| Power input | (E) | W | 8 | 12 | 25 | 11 | 19 | 35 | 11 | 19 | 35 |
| Total sound power level | (4)(E) | dB(A) | 35 | 43 | 53 | 43 | 49 | 56 | 44 | 50 | 57 |

- (1) 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
 (E) EUROVENT certified data

NOTE: The dimensional drawings of the ESTRO GT inverter units are the same of the ESTRO ON/OFF version. They are reported from page 47

4 PIPES - RATED TECHNICAL DATA

| ESTRO GT | | | 1 | | | 3 | | | 4 | | | 5 | | |
|---------------------------|--------|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Speed | | | min | med | max |
| Control voltage | (E) | V | 2,10 | 2,50 | 3,00 | 2,70 | 3,50 | 4,70 | 2,70 | 3,50 | 4,70 | 2,50 | 3,80 | 5,20 |
| Total cooling capacity | (1)(E) | kW | 0,75 | 0,89 | 1,12 | 1,23 | 1,47 | 1,67 | 1,25 | 1,55 | 1,77 | 1,57 | 1,99 | 2,38 |
| Sensible cooling capacity | (1)(E) | kW | 0,57 | 0,68 | 0,85 | 0,92 | 1,10 | 1,26 | 0,97 | 1,21 | 1,44 | 1,16 | 1,53 | 1,85 |
| FCEER class | (E) | | B | | | B | | | B | | | A | | |
| Water flow | (2) | l/h | 130 | 155 | 194 | 212 | 254 | 291 | 216 | 267 | 307 | 272 | 343 | 409 |
| Water pressure drop | (2)(E) | kPa | 4 | 5 | 7 | 8 | 11 | 14 | 7 | 10 | 13 | 8 | 12 | 16 |
| Heating capacity | (3)(E) | kW | 1,18 | 1,31 | 1,49 | 1,36 | 1,56 | 1,76 | 1,36 | 1,56 | 1,76 | 1,78 | 2,18 | 2,53 |
| FCCOP class | (E) | | B | | | B | | | B | | | A | | |
| Water flow | (3) | l/h | 103 | 115 | 130 | 120 | 137 | 154 | 119 | 136 | 154 | 156 | 191 | 222 |
| Water pressure drop | (3)(E) | kPa | 2 | 3 | 4 | 4 | 5 | 7 | 4 | 5 | 6 | 2 | 3 | 3 |
| Power input | | W | 6 | 7 | 9 | 7 | 8 | 15 | 7 | 8 | 15 | 6 | 8 | 14 |
| Rated air flow | | m ³ /h | 146 | 184 | 226 | 205 | 261 | 330 | 205 | 261 | 327 | 238 | 334 | 432 |
| Total sound power level | (4)(E) | dB(A) | 29 | 32 | 40 | 40 | 44 | 49 | 38 | 44 | 50 | 34 | 43 | 48 |

| ESTRO GT | | | 6 | | | 7 | | | 8 | | | 9 | | |
|---------------------------|--------|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Speed | | | min | med | max |
| Control voltage | (E) | V | 2,50 | 3,80 | 5,20 | 2,50 | 3,50 | 5,50 | 2,80 | 4,00 | 6,30 | 3,70 | 5,10 | 7,30 |
| Total cooling capacity | (1)(E) | kW | 1,72 | 2,32 | 2,87 | 1,95 | 2,60 | 3,44 | 2,47 | 3,22 | 4,25 | 3,11 | 3,80 | 4,66 |
| Sensible cooling capacity | (1)(E) | kW | 1,23 | 1,65 | 2,07 | 1,43 | 2,02 | 2,69 | 1,77 | 2,41 | 3,08 | 2,28 | 2,86 | 3,56 |
| FCEER class | (E) | | A | | | A | | | A | | | A | | |
| Water flow | (2) | l/h | 297 | 400 | 493 | 336 | 447 | 594 | 425 | 554 | 730 | 535 | 654 | 802 |
| Water pressure drop | (2)(E) | kPa | 5 | 8 | 11 | 4 | 7 | 12 | 5 | 7 | 12 | 7 | 10 | 14 |
| Heating capacity | (3)(E) | kW | 1,88 | 2,31 | 2,68 | 2,82 | 3,47 | 4,20 | 2,73 | 3,22 | 3,82 | 3,55 | 4,07 | 4,64 |
| FCCOP class | (E) | | A | | | A | | | A | | | A | | |
| Water flow | (3) | l/h | 165 | 202 | 234 | 247 | 304 | 368 | 238 | 281 | 334 | 311 | 357 | 406 |
| Water pressure drop | (3)(E) | kPa | 2 | 3 | 4 | 8 | 12 | 16 | 8 | 10 | 14 | 7 | 8 | 11 |
| Power input | | W | 6 | 8 | 14 | 7 | 10 | 20 | 7 | 12 | 23 | 11 | 18 | 33 |
| Rated air flow | | m ³ /h | 237 | 332 | 431 | 316 | 444 | 628 | 356 | 490 | 690 | 460 | 593 | 763 |
| Total sound power level | (4)(E) | dB(A) | 33 | 41 | 47 | 36 | 45 | 53 | 39 | 46 | 56 | 48 | 53 | 58 |

- (1) 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

NOTE: The dimensional drawings of the ESTRO GT inverter units are the same of the ESTRO ON/OFF version. They are reported from page 47