# Caspian® TT

Education | Healthcare | Places of worship | Leisure and sport | Office | Hospitality | Retail | Showroom | Industrial | Residential





## Warm air is discharged from the upper surface to avoid causing discomfort to people sitting adjacent to the appliance

Caspian fan convectors are both a practical and high quality heating solution for any commercial project

Incorporating the latest EC motor technology, which can result in running-cost savings as high as 70%, and with variable speed control as standard, the Caspian delivers heat quickly and quietly. AC motor models are available on request

It is possible to have master and slave Caspian fan convectors that integrate the entire range of EC Caspian products. Please contact either our sales team or technical team to ensure that this is correctly specified

Caspians are compatible with most types of wet central heating systems, functioning equally efficiently with conventional boilers, biomass technology or ground or air source heat pumps

The airflow can be reversed so that the warm air is discharged from the lower vent. Please contact either our sales team or technical team to ensure that the correct inlet/discharge positioning is specified

Available with Smart Control and Antibacterial paint

## Product Information

**Motor**
EC (BMS compliant) or AC.

**Finish**
Casing: zinc-coated steel 1.2mm .
Polyester powder-coated: white RAL 9010.
Available to special order in any colour and with anti-microbial or antibacterial paint.

**Filter**
Class G2, 100% polyester, non-washable.

**Installation**
Suitable for two-pipe central heating systems.
Maximum installation height for high or ceiling mounting - 4m to underside.
Pipework access holes on the rear and underside.
Key operated front access panels.
Bleed valve accessible on removal of front casing.
Unit must be earthed.

**Commissioning**
Check water is hot enough to activate the low temperature cut-out thermostat.

**Controls**
See accessories table.

**Specification**
To specify state:
Fan Convector with EC motor (or AC), in 1.2mm zinc coated steel, 660mm high and 595mm, 895mm, 1195mm, 1495mm or 1795mm wide. With variable heat output controller. As Smith's Caspian TT 60, 90, 120, 150, 180.

Smith's
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## Technical Data

### Heat output - EC (AC product also available)

| Model Reference | Fan Speed | Control Voltage VDC | 40°C MWT | 45°C MWT | 50°C MWT | 55°C MWT | 60°C MWT | 65°C MWT | 70°C MWT | 75°C MWT | 80°C MWT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EC 60 | Low | 3.4 | 0.85 | 1.20 | 1.45 | 1.80 | 2.16 | 2.35 | 2.73 | 3.08 | 3.40 |
| | Mid | 4.9 | 1.02 | 1.53 | 1.92 | 2.37 | 2.76 | 3.18 | 3.58 | 4.05 | 4.38 |
| | High | 6.4 | 1.18 | 1.85 | 2.38 | 2.93 | 3.36 | 4.00 | 4.43 | 5.02 | 5.36 |
| EC 90 | Low | 3.2 | 1.68 | 2.23 | 3.01 | 3.49 | 4.05 | 4.45 | 5.12 | 5.49 | 6.03 |
| | Mid | 4.6 | 2.22 | 3.07 | 4.05 | 4.66 | 5.42 | 6.01 | 6.81 | 7.34 | 7.93 |
| | High | 6.1 | 2.75 | 3.90 | 5.08 | 5.82 | 6.78 | 7.56 | 8.49 | 9.19 | 9.83 |
| EC 120 | Low | 3.1 | 1.62 | 2.34 | 3.32 | 3.98 | 4.71 | 5.62 | 6.32 | 6.99 | 7.61 |
| | Mid | 4.3 | 2.31 | 3.25 | 4.27 | 5.15 | 6.07 | 7.02 | 7.91 | 8.74 | 9.60 |
| | High | 5.5 | 2.99 | 4.15 | 5.21 | 6.31 | 7.42 | 8.41 | 9.50 | 10.48 | 11.59 |
| EC 150 | Low | 2.8 | 2.95 | 3.72 | 4.49 | 5.27 | 6.045 | 6.79 | 7.54 | 8.29 | 9.04 |
| | Mid | 4.0 | 3.99 | 4.99 | 5.99 | 6.99 | 7.97 | 8.99 | 9.97 | 10.98 | 11.93 |
| | High | 5.1 | 5.02 | 6.26 | 7.49 | 8.71 | 9.90 | 11.19 | 12.39 | 13.67 | 14.82 |
| EC 180 | Low | 2.8 | 3.64 | 5.20 | 6.78 | 8.24 | 9.39 | 10.33 | 11.24 | 12.15 | 13.01 |
| | Mid | 3.9 | 4.51 | 6.18 | 7.85 | 9.51 | 10.95 | 12.36 | 13.70 | 15.07 | 16.40 |
| | High | 4.9 | 5.38 | 7.16 | 8.91 | 10.77 | 12.50 | 14.39 | 16.16 | 18.0 | 19.78 |

| Model Reference | Fan Speed | Air Volume (m³/h) | Air Volume (l/s) | Specific Fan Power w/ls | Power Consumption (W) | NR in typical room* | Hydraulic Resistance (KPA) | Nominal Weight (KG) | Water Capacity (L) |
|---|---|---|---|---|---|---|---|---|---|
| EC 60 | Low | 201.00 | 55.90 | 0.14 | 8.00 | 34.00 | 1.38 | 23.00 | 0.92 |
| | Mid | 290.50 | 80.75 | 0.26 | 21.00 | 41.50 | 1.69 | | |
| | High | 380.00 | 105.60 | 0.32 | 34.00 | 49.50 | 2.00 | | |
| EC 90 | Low | 297.00 | 80.75 | 0.20 | 16.00 | 34.00 | 4.70 | 36.00 | 1.50 |
| | Mid | 450.50 | 124.38 | 0.34 | 42.00 | 41.50 | 5.85 | | |
| | High | 604.00 | 168.00 | 0.40 | 68.00 | 49.97 | 7.00 | | |
| EC 120 | Low | 419.30 | 116.50 | 0.14 | 16.00 | 34.00 | 17.78 | 45.00 | 2.08 |
| | Mid | 549.65 | 152.68 | 0.26 | 40.00 | 42.00 | 20.59 | | |
| | High | 680.00 | 188.89 | 0.34 | 64.00 | 49.96 | 23.40 | | |
| EC 150 | Low | 459.80 | 127.72 | 0.17 | 22.00 | 34.70 | 22.23 | 60.00 | 2.58 |
| | Mid | 598.10 | 166.14 | 0.35 | 59.00 | 41.50 | 29.46 | | |
| | High | 736.40 | 205.56 | 0.47 | 96.00 | 49.38 | 36.69 | | |
| EC 180 | Low | 542.00 | 150.56 | 0.19 | 29.00 | 34.90 | 47.83 | 78.00 | 3.18 |
| | Mid | 690.00 | 191.67 | 0.40 | 78.50 | 41.50 | 60.76 | | |
| | High | 838.00 | 232.78 | 0.55 | 128.00 | 49.00 | 73.70 | | |

*a typical room is taken as a room with a volume of 173m³ and a reverberation time of 0.8 seconds at 500 Hz with one unit installed, situated against a wall or ceiling (radiating noise in a quartersphere). No allowance is made for attenuation provided by ceilings, enclosures or ductwork. Outputs based upon testing at EN442: 2014 using mean water temperature and an entering air temperature of 20°C with a 10°C temperature drop between flow and return.

### Correction factors

| Mean Water Temp °C | | 45 - 80 | | | |
|---|---|---|---|---|---|
| Water Temperature drop °C | | 5 | 10 | 15 | 20 |
| Entering Air Temperature °C | 15 | 1.13 | 1.10 | 1.07 | 1.05 |
| | 18 | 1.08 | 1.05 | 1.02 | 0.99 |
| | 20 | 1.04 | 1.00 | 0.95 | 0.89 |
| | 25 | 0.93 | 0.91 | 0.89 | 0.86 |

**How to calculate Mean Water Temperature**
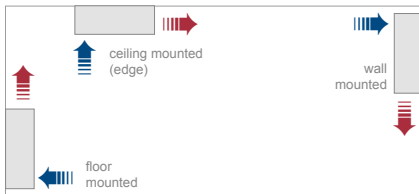
$$\text{Mean water temperature } (\Delta T) = \frac{\text{Flow temperature} + \text{Return temperature}}{2}$$
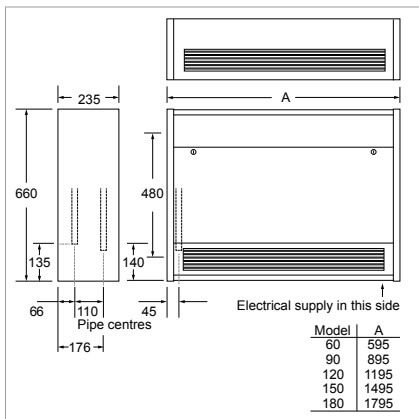
Factors are approximate data based upon a standard coil.

## Ordering Guide

| Model | Packed Wt (kg) | Product Codes |
|---|---|---|
| **AC Codes** | | |
| CASPIAN TT 60 AC | 24 | HPCA16000 |
| CASPIAN TT 90 AC | 39 | HPCA16001 |
| CASPIAN TT 120 AC | 46 | HPCA16002 |
| CASPIAN TT 150 AC | 61 | HPCA16003 |
| CASPIAN TT 180 AC | 76 | HPCA16004 |
| **EC Codes** | | |
| CASPIAN TT 60 EC | 24 | HPCA15000 |
| CASPIAN TT 90 EC | 39 | HPCA15001 |
| CASPIAN TT 120 EC | 46 | HPCA15002 |
| CASPIAN TT 150 EC | 61 | HPCA15003 |
| CASPIAN TT 180 EC | 76 | HPCA15004 |

| Plinths | Product Codes | |
|---|---|---|
| | 100mm | 150mm |
| CASPIAN FF/EXT/SL/TT 60 PLINTH BLACK | HACA33077 | HACA33082 |
| CASPIAN FF/EXT/SL/TT 90 PLINTH BLACK | HACA33078 | HACA33083 |
| CASPIAN FF/EXT/SL/TT 120 PLINTH BLACK | HACA33079 | HACA33084 |
| CASPIAN FF/EXT/SL/TT 150 PLINTH BLACK | HACA33080 | HACA33085 |
| CASPIAN FF/EXT/SL/TT 180 PLINTH BLACK | HACA33081 | HACA33086 |
| CASPIAN FF/EXT/SL/TT 60 PLINTH WHITE | HACA33087 | HACA33092 |
| CASPIAN FF/EXT/SL/TT 90 PLINTH WHITE | HACA33088 | HACA33093 |
| CASPIAN FF/EXT/SL/TT 120 PLINTH WHITE | HACA33089 | HACA33094 |
| CASPIAN FF/EXT/SL/TT 150 PLINTH WHITE | HACA33090 | HACA33095 |
| CASPIAN FF/EXT/SL/TT 180 PLINTH WHITE | HACA33091 | HACA33096 |

| Accessories | Product Codes |
|---|---|
| FLEXIBLE HOSES 22MM PAIR | HAGA95003 |
| ROOM THERMOSTAT HARD WIRED | HAGA95001 |
| ROOM THERMOSTAT TAMPER PROOF | HAGA95004 |
| CASPIAN PROPORTIONAL HEAT OUTPUT CONTROLLER 15°-25° INTEGRAL (EC) | HACA33005 |
| CASPIAN PROPORTIONAL HEAT OUTPUT CONTROLLER 15°-25° REMOTE SENSOR (EC) | HACA33037 |
| CASPIAN PROPORTIONAL HEAT OUTPUT CONTROLLER 11°-21° INTEGRAL (EC) | HACA33117 |
| CASPIAN PROPORTIONAL HEAT OUTPUT CONTROLLER 11°-21° REMOTE SENSOR (EC) | HACA33118 |
| BLANK CONFIGURABLE PROPORTIONAL HEAT OUTPUT CONTROLLER (PROGRAMMED AT FACTORY) | HACA33126 |
| CASPIAN ADJUSTABLE LOW TEMPERATURE CUT-OUT (EC AND AC) | HACA33001 |
| CASPIAN EXTERNAL CONTROL HARNESS (EC) | HACA33004 |
| CASPIAN EC LINKING KIT (MASTER/SLAVE) | HACA33068 |
| CASPIAN REMOTE SWITCHING ON/OFF RELAY (24V AC COIL) | HACA33127 |
| CASPIAN THERMOSTAT (T1) & AUTO-SPEED CONTROL (T2) (AC LOW LEVEL) | HACA33003 |
| CASPIAN THERMOSTAT (T1) (EC & AC LOW LEVEL) | HACA33002 |
| CASPIAN THERMOSTAT (T2) (AC LOW LEVEL) | HACA33036 |

## Mounting Options



ceiling mounted (edge)
wall mounted
floor mounted

## Dimensions



235
660
480
135
140
66
110
45
176
Pipe centres
A
Electrical supply in this side

| Model | A |
|---|---|
| 60 | 595 |
| 90 | 895 |
| 120 | 1195 |
| 150 | 1495 |
| 180 | 1795 |

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