Caspian® FF

Can be installed in an adjacent room, or storage cupboard, with the warm air outlets positioned at the rear of the appliance and ducted into the adjacent room such as a sports hall or even a narrow corridor, permitting an obstruction free wall space

Features

- 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
- 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
- EC versions are now available with Caspian Smart Controls, for more information please visit our website: https://smithsep.co.uk/catalogue/caspian-smart-controls/

Applications

Education, healthcare, places of worship, leisure and sport office, hospitality, retail, showroom and industrial.

Motor

EC (BMS compliant) or AC.

Finish

Casing: zinc-coated steel 1.2mm.
Polyester powdercoated: white RAL 9010.
Available to special order in any colour and with anti-microbial or anti-bacterial 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.

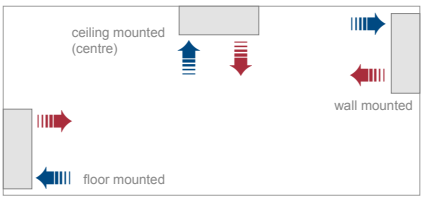
Commissioning

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

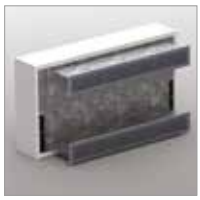
Controls

See accessories table.

Mounting options



Rear outlet



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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
	Low	3.4	0.85	1.20	1.45	1.80	2.16	2.35	2.73	3.08	3.40
EC 60	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
	Low	3.2	1.68	2.23	3.01	3.49	4.05	4.45	5.12	5.49	6.03
EC 90	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
	Low	3.1	1.62	2.34	3.32	3.98	4.71	5.62	6.32	6.99	7.61
EC 120	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
	Low	2.8	2.95	3.72	4.49	5.27	6.045	6.79	7.54	8.29	9.04
EC 150	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
	Low	2.8	3.64	5.20	6.78	8.24	9.39	10.33	11.24	12.15	13.01
EC 180	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 (m^3/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)
	Low	201.00	55.90	0.14	8.00	34.00	1.38		
EC 60	Mid	290.50	80.75	0.26	21.00	41.50	1.69	23.00	0.92
	High	380.00	105.60	0.32	34.00	49.50	2.00		
	Low	297.00	80.75	0.20	16.00	34.00	4.70		
EC 90	Mid	450.50	124.38	0.34	42.00	41.50	5.85	36.00	1.50
	High	604.00	168.00	0.40	68.00	49.97	7.00		
	Low	419.30	116.50	0.14	16.00	34.00	17.78		
EC 120	Mid	549.65	152.68	0.26	40.00	42.00	20.59	45.00	2.08
	High	680.00	188.89	0.34	64.00	49.96	23.40		
	Low	459.80	127.72	0.17	22.00	34.70	22.23		
EC 150	Mid	598.10	166.14	0.35	59.00	41.50	29.46	60.00	2.58
	High	736.40	205.56	0.47	96.00	49.38	36.69		
	Low	542.00	150.56	0.19	29.00	34.90	47.83		
EC 180	Mid	690.00	191.67	0.40	78.50	41.50	60.76	78.00	3.18
	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 173m^3 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

Factors are approximate data based upon a standard coil.

How to calculate Mass Flow Rate (L/S)

M = H / CP x (Flow °C – Return °C)

M = Mass flow rate (L/S)
H = Output of product (W)
CP = Specific heat capacity [J/(kg·°C)].
Varies upon system temperature, approx. 4187 if fluid is water.

How to calculate Mean Water Temperature (ΔT)

$$\text{Mean water temperature } (\Delta T) = \left[\frac{\text{Flow temperature} + \text{Return temperature}}{2}\right] - \text{Ambient Temperature}$$

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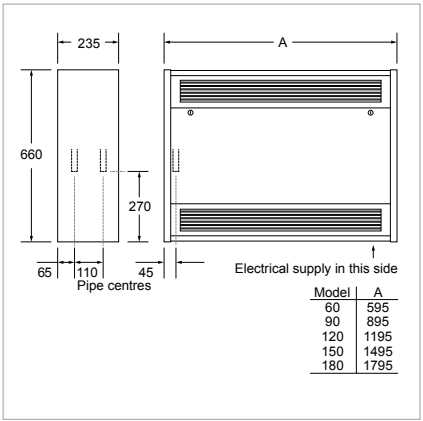

Model	A
60	595
90	895
120	1195
150	1495
180	1795

Ordering guide

Model	Packed Wt (kg)	AC Codes	EC Codes
CASPIAN FF 60	23	HPCA23001	HPCA22001
CASPIAN FF 90	36	HPCA23002	HPCA22002
CASPIAN FF 120	45	HPCA23003	HPCA22003
CASPIAN FF 150	60	HPCA23004	HPCA22004
CASPIAN FF 180	78	HPCA23005	HPCA22005
Rear Outlet			
CASPIAN FF 60	23	HPCA23006	HPCA22006
CASPIAN FF 90	36	HPCA23007	HPCA22007
CASPIAN FF 120	45	HPCA23008	HPCA22008
CASPIAN FF 150	60	HPCA23009	HPCA22009
CASPIAN FF 180	78	HPCA23010	HPCA22010

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 FF 60, 90, 120, 150, 180.

Accessories	Product Codes
CASPIAN FF/EXT/SL/TT 60 PLINTH WHITE (150MM)	HACA33092
CASPIAN FF/EXT/SL/TT 90 PLINTH WHITE (150MM)	HACA33093
CASPIAN FF/EXT/SL/TT 120 PLINTH WHITE (150MM)	HACA33094
CASPIAN FF/EXT/SL/TT 150 PLINTH WHITE (150MM)	HACA33095
CASPIAN FF/EXT/SL/TT 180 PLINTH WHITE (150MM)	HACA33096
CASPIAN FF/EXT/SL/TT 60 PLINTH BLACK (150MM)	HACA33082
CASPIAN FF/EXT/SL/TT 90 PLINTH BLACK (150MM)	HACA33083
CASPIAN FF/EXT/SL/TT 120 PLINTH BLACK (150MM)	HACA33084
CASPIAN FF/EXT/SL/TT 150 PLINTH BLACK (150MM)	HACA33085
CASPIAN FF/EXT/SL/TT 180 PLINTH BLACK (150MM)	HACA33086
CASPIAN ADJUSTABLE LOW TEMPERATURE CUT-OUT (EC AND AC)	HACA33001
CASPIAN THERMOSTAT (T1) (EC LOW LEVEL)	HACA33002
CASPIAN THERMOSTAT (T2) (AC LOW LEVEL)	HACA33036
CASPIAN THERMOSTAT (T1) & AUTO-SPEED CONTROL (T2) (AC LOW LEVEL)	HACA33003
CASPIAN EXTERNAL CONTROL HARNESS (EC)	HACA33004
CASPIAN PROPORTIONAL HEAT OUTPUT CONTROLLER 15°-25°C INTEGRAL (EC)	HACA33005
CASPIAN PROPORTIONAL HEAT OUTPUT CONTROLLER 15°-25°C REMOTE SENSOR (EC)	HACA33037
CASPIAN PROPORTIONAL HEAT OUTPUT CONTROLLER 11°-21°C INTEGRAL (EC)	HACA33117
CASPIAN PROPORTIONAL HEAT OUTPUT CONTROLLER 11°-21°C REMOTE SENSOR (EC)	HACA33118
ROOM THERMOSTAT HARD WIRED	HAGA95001
ROOM THERMOSTAT HARD WIRED SIEMENS	HACA33104
ROOM THERMOSTAT RF SIEMENS	HACA33074
ROOM THERMOSTAT TAMPER PROOF SIEMENS	HACA95004
FLEXIBLE HOSES 22MM PAIR	HAGA95003

100mm plinth also available, please contact us for further information

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