Caspian® EXT

Warm air is delivered at 1.7m from the base/floor level and the heater can be installed as a freestanding appliance

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
- Reverse air flow versions available upon request

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.

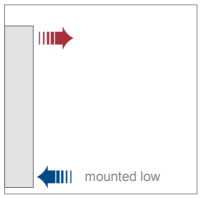
Commissioning

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

Controls

Variable heat output controller (mounted within the products).

Mounting option



Rear outlet (optional)

Caspian® EXT - EC

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Heat output - EC

Model	Control Voltage VDC			Heat Output at 80°			Heat Output at 75°			Heat Output at 70°			Heat Output at 65°		
	Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)
CASPIAN EXT 60	3.80	5.65	7.50	3.2	4.5	5.9	2.9	4.0	5.0	2.6	4.0	5.0	2.3	3.2	4.2
CASPIAN EXT 90	3.40	5.45	7.50	5.2	7.7	10.3	5.0	7.0	10.0	4.0	7.0	9.0	3.9	5.9	8.0
CASPIAN EXT 120	4.94	6.77	8.60	9.0	11.8	14.5	8.0	11.0	13.0	7.0	10.0	12.0	6.6	8.6	10.6
CASPIAN EXT 150	4.70	6.65	8.60	11.7	15.6	19.6	11.0	14.0	18.0	10.0	13.0	16.0	8.8	11.8	14.7
CASPIAN EXT 180	4.70	6.65	8.60	16.3	21.3	26.2	15.0	19.0	24.0	14.0	17.0	21.0	12.3	15.2	18.2

Model	Heat Output at 60°			Heat Output at 55°			Heat Output at 50°			Heat Output at 45°			Heat Output at 40°		
	Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)
CASPIAN EXT 60	2.0	3.0	4.0	1.7	2.0	3.0	1.4	1.9	2.5	1.1	1.5	1.9	0.8	1.0	1.2
CASPIAN EXT 90	4.0	5.0	7.0	3.0	5.0	6.0	2.6	3.9	5.3	2.0	3.0	4.1	1.5	2.2	2.9
CASPIAN EXT 120	6.0	8.0	9.0	5.0	6.0	8.0	3.9	5.4	6.9	3.0	4.2	5.4	2.1	3.0	3.9
CASPIAN EXT 150	8.0	10.0	13.0	7.0	9.0	12.0	5.9	7.9	9.9	4.9	6.6	8.3	3.9	5.3	6.8
CASPIAN EXT 180	11.0	13.0	16.0	9.0	11.0	13.0	7.7	9.4	11.2	6.1	7.5	9.0	4.4	5.6	6.8

Model	Flow & return connections	Fused spur	Air Volume (m³/h)			Air Volume (l/s)			Total Power Consumption			Water Capacity (Litres)
			Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)	Low (Watts)	Medium (kW)	High (Watts)	
CASPIAN EXT 60	22mm	3A	201.0	290.5	380.0	55.9	80.7	105.6	8.0	24.0	40.0	0.92
CASPIAN EXT 90	22mm	3A	297.0	450.5	604.0	80.7	124.4	168.0	15.0	42.5	70.0	1.50
CASPIAN EXT 120	22mm	3A	512.0	692.0	872.0	142.2	192.2	242.2	41.8	75.9	110.0	2.08
CASPIAN EXT 150	22mm	3A	566.7	789.9	1013.0	157.4	219.4	281.4	59.2	118.1	177.0	2.58
CASPIAN EXT 180	22mm	3A	656.0	914.1	1172.2	182.2	253.9	325.6	74.5	147.2	220.0	3.18

Model	Hydraulic resistance (KPA)			Nominal Weight (kg)
	Low (kW)	Medium (kW)	High (kW)	
CASPIAN EXT 60	1.4	1.7	2.0	30
CASPIAN EXT 90	4.7	5.8	7.0	49
CASPIAN EXT 120	17.8	20.6	23.4	58
CASPIAN EXT 150	22.2	36.7	51.2	76
CASPIAN EXT 180	47.8	73.7	99.6	95

Heat output testing based on BS EN442 using mean water temperature, 18°C entering air temperature, 10° temperature drop.

Correction factors

EAT°C	Mean water temperature °C
	80 to 40
15	1.10
21	0.93

	Temperature drop °C			
	20	15	10	5
Factor	0.89	0.95	1.00	1.04

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)

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

Caspian® EXT - EC

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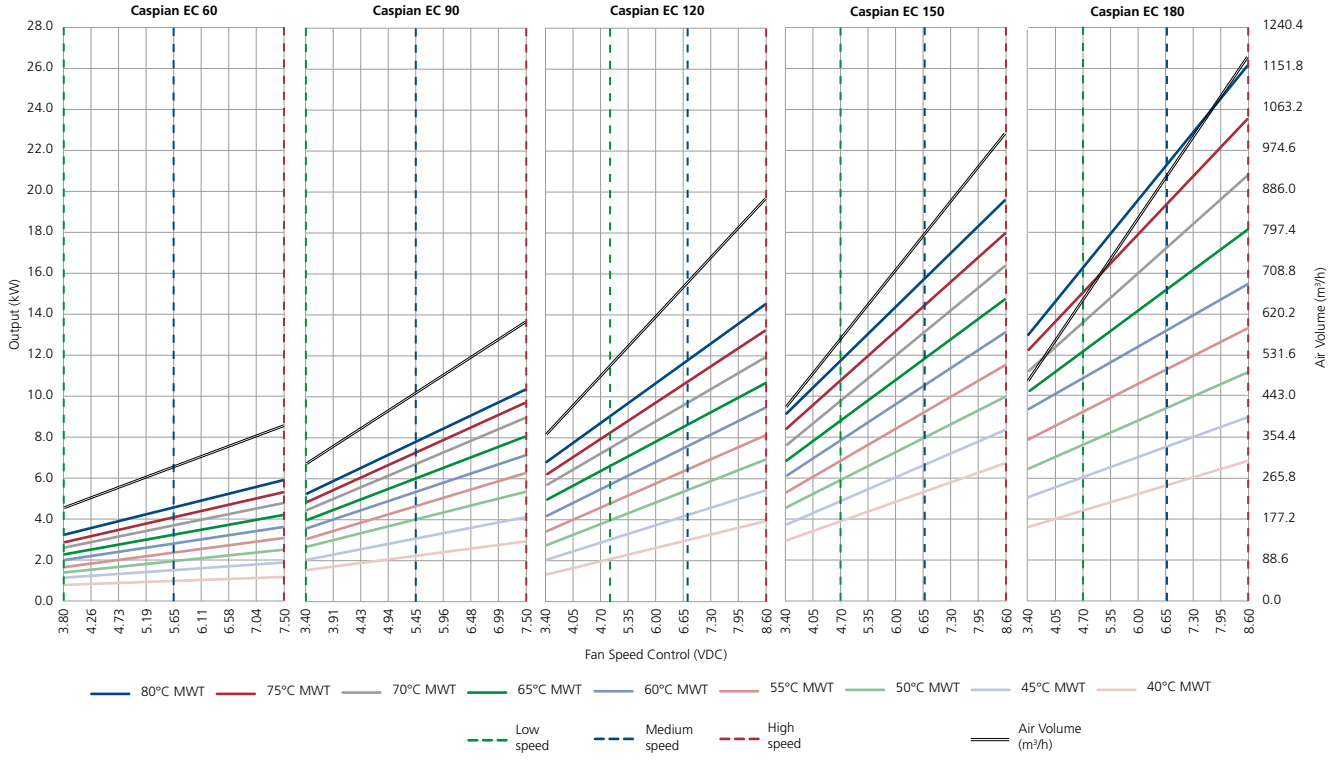
Caspian EC - Performance Graph



Caspian® EXT - AC

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Heat output - AC

Model	Transformer Voltage VDC			Heat Output at 80°			Heat Output at 75°			Heat Output at 70°			Heat Output at 65°		
	Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)
CASPIAN EXT 60	90	100	110	4.0	4.5	5.1	3.6	4.0	5.0	3.2	4.0	4.0	2.8	3.2	3.6
CASPIAN EXT 90	90	100	110	6.8	7.7	8.6	6.0	7.0	8.0	6.0	6.0	7.0	4.9	5.5	6.2
CASPIAN EXT 120	110	130	140	11.4	13.4	14.4	10.0	12.0	13.0	9.0	11.0	12.0	8.2	9.6	10.3
CASPIAN EXT 150	110	130	140	14.8	15.4	16.2	14.0	14.0	15.0	13.0	13.0	14.0	11.3	11.9	12.8
CASPIAN EXT 180	110	130	140	17.2	18.2	19.2	16.0	17.0	18.0	15.0	16.0	17.0	13.6	14.4	15.4

Model	Heat Output at 60°			Heat Output at 55°			Heat Output at 50°			Heat Output at 45°			Heat Output at 40°		
	Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)
CASPIAN EXT 60	2.5	3.0	3.0	2.2	3.0	3.0	1.8	2.1	2.3	1.4	1.6	1.8	1.1	1.3	1.4
CASPIAN EXT 90	4.0	5.0	5.0	4.0	4.0	5.0	3.2	3.6	4.0	2.5	2.8	3.1	1.9	2.2	2.4
CASPIAN EXT 120	7.0	8.0	9.0	6.0	7.0	8.0	5.3	6.2	6.7	4.2	4.9	5.2	3.2	3.8	4.1
CASPIAN EXT 150	10.0	11.0	12.0	9.0	10.0	10.0	7.5	8.2	9.0	6.2	6.9	7.5	4.8	5.4	6.1
CASPIAN EXT 180	12.0	13.0	14.0	11.0	12.0	13.0	9.8	10.5	11.2	8.4	9.1	9.4	6.6	7.3	7.8

Model	Flow & return connections	Fused spur	Air Volume (m³/h)			Air Volume (l/s)			Total Power Consumption			Water Capacity (Litres)
			Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)	Low (Watts)	Medium (Watts)	High (Watts)	
CASPIAN EXT 60	22mm	3A	220.0	248.0	281.0	61.1	68.9	78.1	29	36	51	0.92
CASPIAN EXT 90	22mm	3A	367.0	414.0	461.0	101.9	115.0	128.1	53	60	98	1.50
CASPIAN EXT 120	22mm	3A	608.0	720.0	781.0	168.9	200.0	216.9	99	135	151	2.08
CASPIAN EXT 150	22mm	3A	822.9	896.4	969.8	228.6	249.0	269.4	149	203	227	2.58
CASPIAN EXT 180	22mm	3A	981.0	1168.0	1258.0	272.5	324.4	349.4	198	270	302	3.18

Model	Hydraulic resistance (KPA)			Nominal Weight (kg)
	Low (kW)	Medium (kW)	High (kW)	
CASPIAN EXT 60	1.4	1.7	2.0	30
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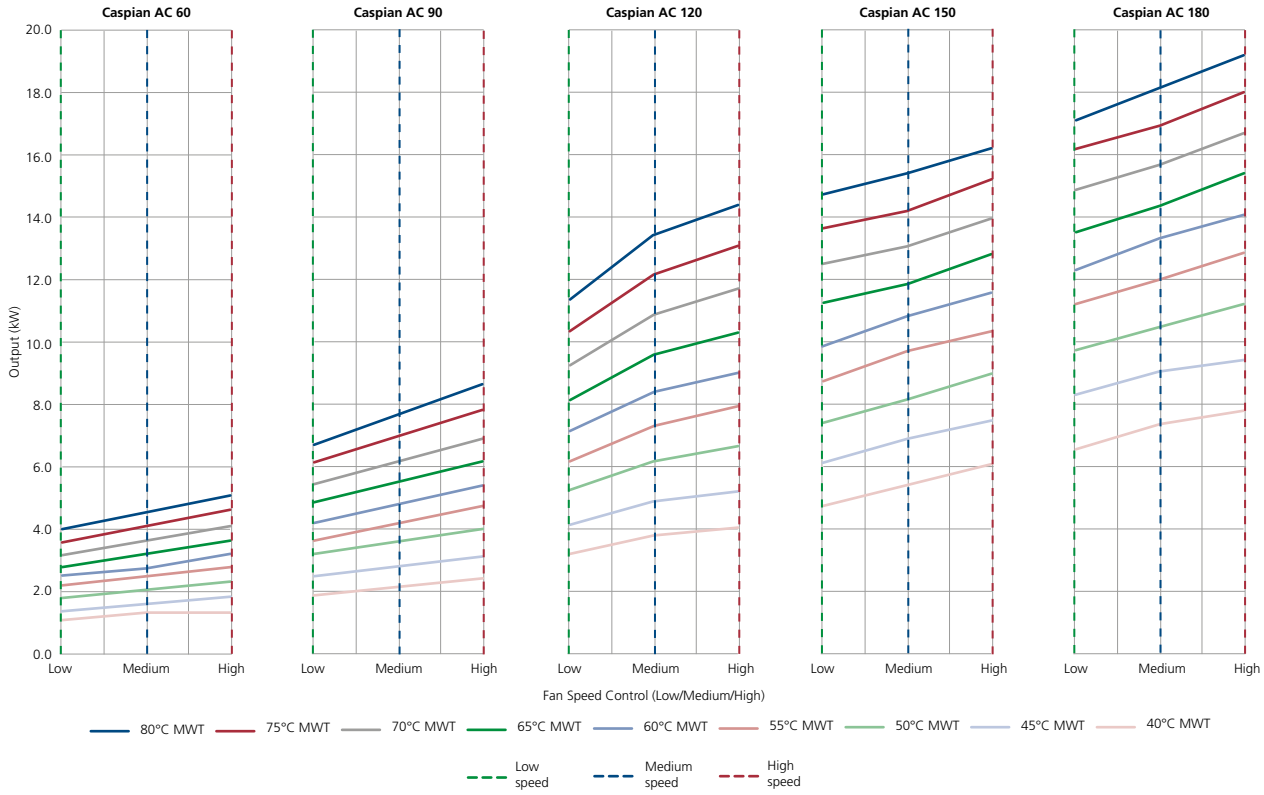
Caspian AC - Performance Graph



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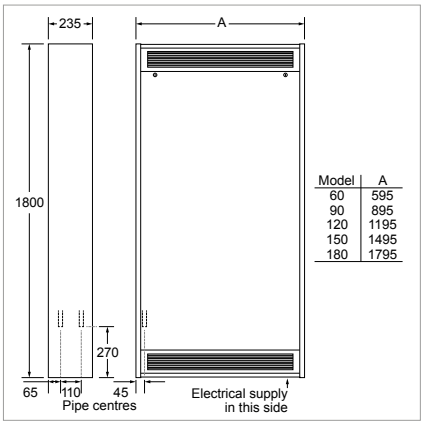

Ordering guide

Model	Packed Wt (kg)	Product Codes
AC Codes		
CASPIAN EXT 60 AC	30	HPCA25001
CASPIAN EXT 90 AC	49	HPCA25002
CASPIAN EXT 120 AC	58	HPCA25003
CASPIAN EXT 150 AC	76	HPCA25004
CASPIAN EXT 180 AC	95	HPCA25005
EC Codes		
CASPIAN EXT 60 EC	30	HPCA24001
CASPIAN EXT 90 EC	49	HPCA24002
CASPIAN EXT 120 EC	58	HPCA24003
CASPIAN EXT 150 EC	76	HPCA24004
CASPIAN EXT 180 EC	95	HPCA24005

Specification

To specify state:
Fan Convector with EC motor (or AC), in 1.2mm zinc coated steel, 1800mm high and 595mm, 895mm, 1195mm, 1495mm or 1795mm wide. With variable heat output controller. As Smith's Caspian EXT 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

Issue 003 I March 2020