

Caspian® UV

One heating solution, suitable for high, low or ceiling mounted applications



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
- Caspian's 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

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.

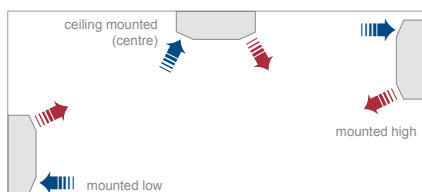
Commissioning

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

Controls

Variable heat output controller (mounted within the products).

Mounting options



Caspian® UV - 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 UV 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 UV 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 UV 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 UV 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 UV 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 UV 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 UV 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 UV 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 UV 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 UV 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			Air Volume (m³/h)			Air Volume (l/s)			Total Power Consumption			Water Capacity (Litres)
	Flow & return connections	Fused spur	Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)	Low (Watts)	Medium (Watts)	High (Watts)	
CASPIAN UV 60	22mm	3A	201.0	290.5	380.0	55.9	80.7	105.6	8.0	24.0	40.0	0.92
CASPIAN UV 90	22mm	3A	297.0	450.5	604.0	80.7	124.4	168.0	15.0	42.5	70.0	1.50
CASPIAN UV 120	22mm	3A	512.0	692.0	872.0	142.2	192.2	242.2	41.8	75.9	110.0	2.08
CASPIAN UV 150	22mm	3A	566.7	789.9	1013.0	157.4	219.4	281.4	59.2	118.1	177.0	2.58
CASPIAN UV 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 UV 60	1.4	1.7	2.0	23
CASPIAN UV 90	4.7	5.8	7.0	36
CASPIAN UV 120	17.8	20.6	23.4	45
CASPIAN UV 150	22.2	36.7	51.2	60
CASPIAN UV 180	47.8	73.7	99.6	78

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)

$$M = H / CP \times (\text{Flow } ^\circ\text{C} - \text{Return } ^\circ\text{C})$$

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)

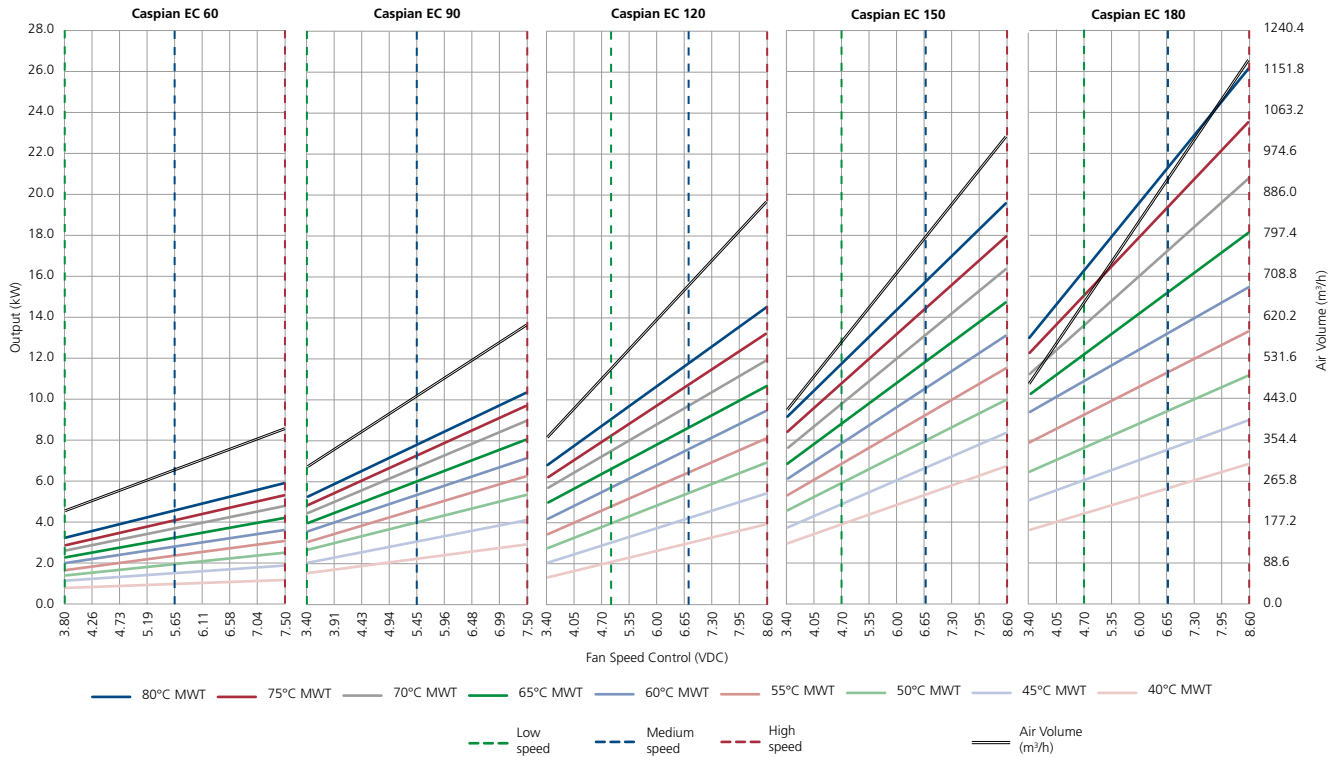
$$\text{Mean water temperature } (\Delta T) = \left[\frac{\text{Flow temperature} + \text{Return temperature}}{2} \right] - \text{Ambient Temperature}$$

Caspian® UV - EC

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Caspian EC - Performance Graph



Caspian® UV - 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 UV 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 UV 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 UV 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 UV 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 UV 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 UV 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 UV 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 UV 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 UV 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 UV 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		Air Volume (m³/h)			Air Volume (l/s)			Total Power Consumption			Water Capacity (Litres)
	Flow & return connections	Fused spur	Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)	Low (Watts)	Medium (Watts)	High (Watts)	
CASPIAN UV 60	22mm	3A	220.0	248.0	281.0	61.1	68.9	78.1	29	36	51	0.92
CASPIAN UV 90	22mm	3A	367.0	414.0	461.0	101.9	115.0	128.1	53	60	98	1.50
CASPIAN UV 120	22mm	3A	608.0	720.0	781.0	168.9	200.0	216.9	99	135	151	2.08
CASPIAN UV 150	22mm	3A	822.9	896.4	969.8	228.6	249.0	269.4	149	203	227	2.58
CASPIAN UV 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)
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CASPIAN UV 60	1.4	1.7	2.0	23
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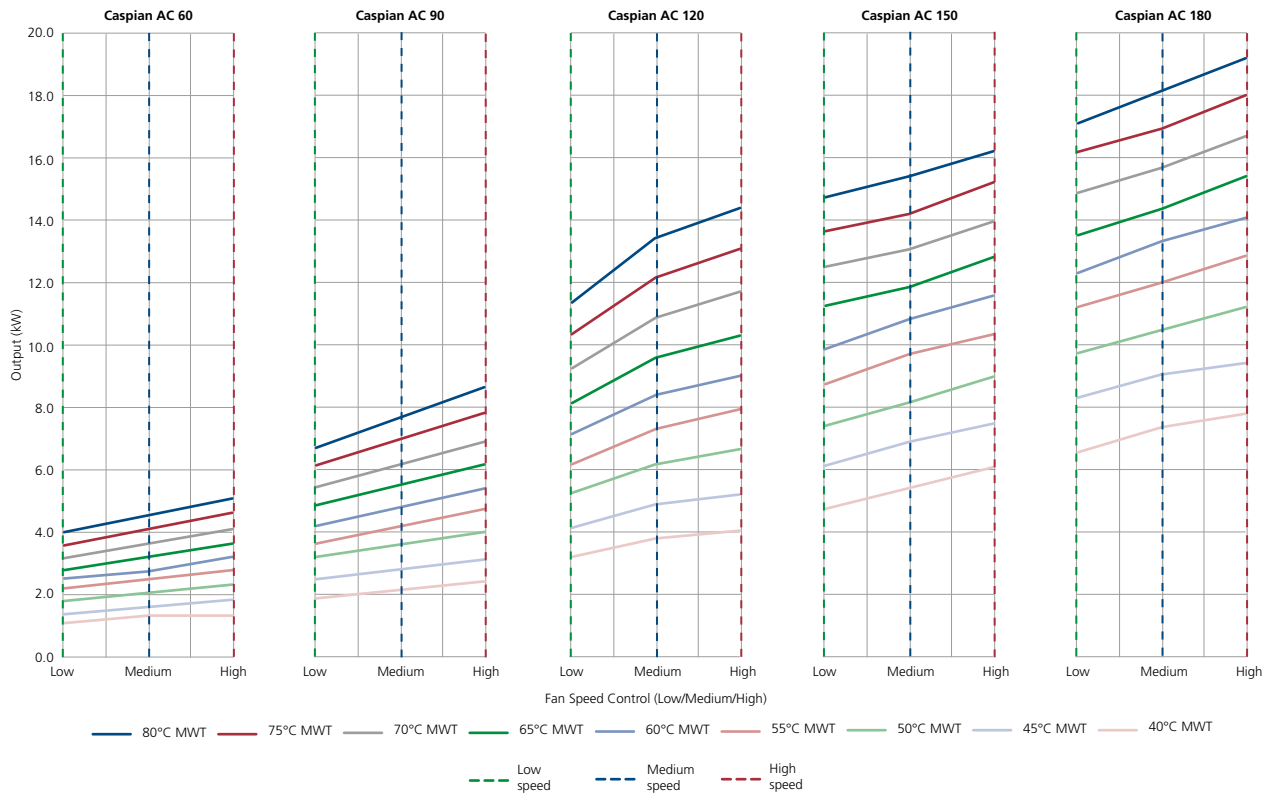
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Caspian® UV - AC

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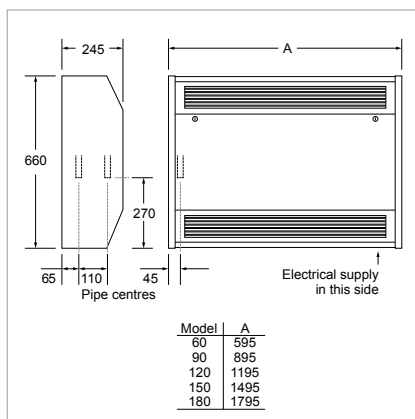


Caspian AC - Performance Graph



Caspian® UV

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Ordering guide

Model	Packed Wt (kg)	Product Codes
AC Codes		
CASPIAN UV 60 AC	23	HPCA21001
CASPIAN UV 90 AC	36	HPCA21002
CASPIAN UV 120 AC	45	HPCA21003
CASPIAN UV 150 AC	60	HPCA21004
CASPIAN UV 180 AC	78	HPCA21005
EC Codes		
CASPIAN UV 60 EC	23	HPCA20001
CASPIAN UV 90 EC	36	HPCA20002
CASPIAN UV 120 EC	45	HPCA20003
CASPIAN UV 150 EC	60	HPCA20004
CASPIAN UV 180 EC	78	HPCA20005

Specification

To specify state:

Fan Convactor 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 UV 60, 90, 120, 150, 180.

Accessories	Product Codes
CASPIAN UV/LST 60 PLINTH WHITE (150MM)	HACA33006
CASPIAN UV/LST 90 PLINTH WHITE (150MM)	HACA33007
CASPIAN UV/LST 120 PLINTH WHITE (150MM)	HACA33008
CASPIAN UV/LST 150 PLINTH WHITE (150MM)	HACA33009
CASPIAN UV/LST 180 PLINTH WHITE (150MM)	HACA33010
CASPIAN UV/LST 60 PLINTH BLACK (150MM)	HACA33097
CASPIAN UV/LST 90 PLINTH BLACK (150MM)	HACA33098
CASPIAN UV/LST 120 PLINTH BLACK (150MM)	HACA33099
CASPIAN UV/LST 150 PLINTH BLACK (150MM)	HACA33100
CASPIAN UV/LST 180 PLINTH BLACK (150MM)	HACA33101
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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