

# Caspian® UVC

The Caspian UVC fan convector was developed for recessed or concealed heating projects and is suitable for high, low or ceiling concealed installations, can even be turned upside down



## Features

- Compatible with all types of wet central heating systems and any commercial or domestic air source heat pump project, the Caspian UVC has four different main accessories. They function together in any combination to create the recessed or concealed heating solution required, depending on the project specification
- AC motor models are available on request
- Caspian UVC is compatible with most types of wet central heating systems, functioning equally efficiently with conventional boilers, biomass technology or ground or air source heat pumps
- 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: galvanised steel 1.2mm.

## Filter

Class G2, 100% polyester, non washable.

## Installation

Suitable for two-pipe central heating systems.

Unit must be earthed.

Maximum installation height 4m to underside.

## Commissioning

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

## Controls

See accessories table.

## Attachments

90° cranked air inlet/outlet duct.

1m adjustable straight air inlet/outlet extension duct.

Circular spigot air inlet/outlet duct.

Anodised aluminium air inlet/outlet grille.

White powder-coated steel inlet/outlet grille.

## Specification

To specify state:

A concealed fan convector for universal mounting with variable heat output controller.

As Smith's Caspian UVC 60, 90, 120, 150, 180.

## Attachments



90° cranked air inlet/outlet



1m adjustable straight air inlet/outlet extension duct



Circular spigot inlet/outlet



Anodised aluminium inlet/outlet grille



Powder-coated steel inlet/outlet grille

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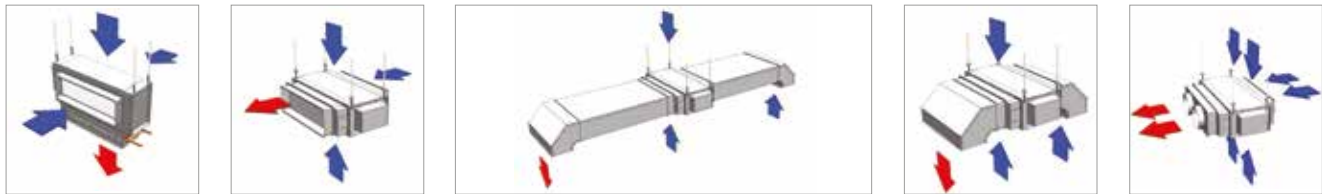
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## Floor mounted application

The Caspian UVC can be installed either on or behind walls at high and low level, in ceiling voids and on or under floors. Detailed below are a number of application options that can be achieved with the Caspian UVC and Accessories. If in doubt please contact us.



Suspended with ducts application



Suspended with spigots application



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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
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/l/s	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

Factors are approximate data based upon a standard coil.

### 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.

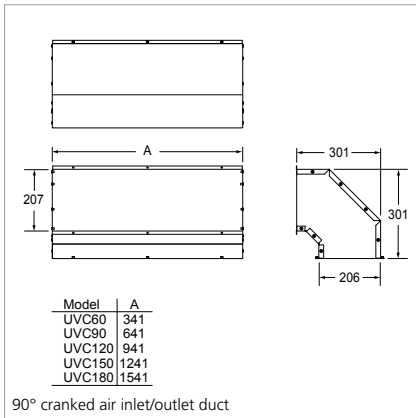
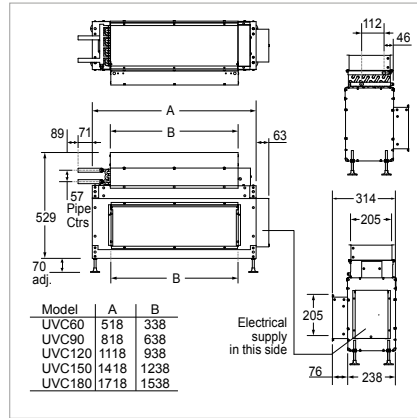
### How to calculate Mean Water Temperature (ΔT)

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

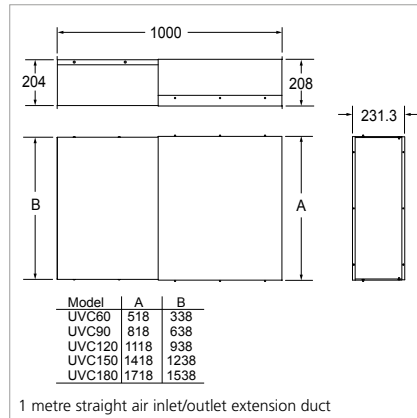
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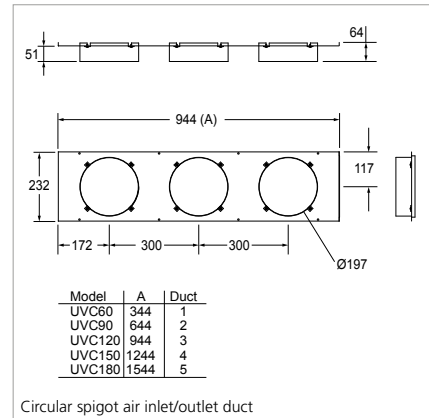
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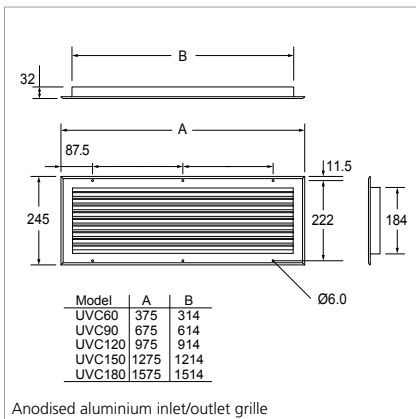
90° cranked air inlet/outlet duct



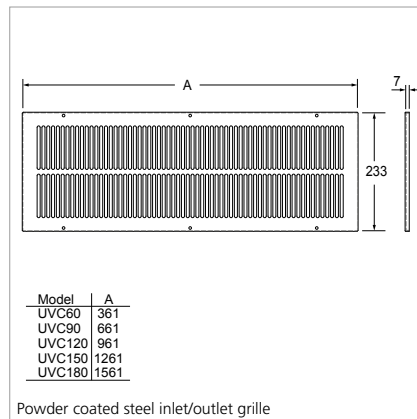
1 metre straight air inlet/outlet extension duct



Circular spigot air inlet/outlet duct



Anodised aluminium inlet/outlet grille



Powder coated steel inlet/outlet grille

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## Ordering guide

Model	Packed Wt (kg)	Product Codes
<b>AC Codes</b>		
CASPIAN UVC 60 AC	23	HPCA27001
CASPIAN UVC 90 AC	36	HPCA27002
CASPIAN UVC 120 AC	45	HPCA27003
CASPIAN UVC 150 AC	60	HPCA27004
CASPIAN UVC 180 AC	78	HPCA27005
<b>EC Codes</b>		
CASPIAN UVC 60 EC	23	HPCA26001
CASPIAN UVC 90 EC	36	HPCA26002
CASPIAN UVC 120 EC	45	HPCA26003
CASPIAN UVC 150 EC	60	HPCA26004
CASPIAN UVC 180 EC	78	HPCA26005

Accessories and attachments	Product Codes
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	HAGA95004
FLEXIBLE HOSES 22MM PAIR	HAGA95003
CASPIAN UVC 60 90° CRANKED AIR INLET/OUTLET DUCT	HACA33011
CASPIAN UVC 90 90° CRANKED AIR INLET/OUTLET DUCT	HACA33012
CASPIAN UVC 120 90° CRANKED AIR INLET/OUTLET DUCT	HACA33013
CASPIAN UVC 150 90° CRANKED AIR INLET/OUTLET DUCT	HACA33014
CASPIAN UVC 180 90° CRANKED AIR INLET/OUTLET DUCT	HACA33015
CASPIAN UVC 60 1M ADJUSTABLE STRAIGHT AIR INLET/OUTLET EXTENSION DUCT	HACA33016
CASPIAN UVC 90 1M ADJUSTABLE STRAIGHT AIR INLET/OUTLET EXTENSION DUCT	HACA33017
CASPIAN UVC 120 1M ADJUSTABLE STRAIGHT AIR INLET/OUTLET EXTENSION DUCT	HACA33018
CASPIAN UVC 150 1M ADJUSTABLE STRAIGHT AIR INLET/OUTLET EXTENSION DUCT	HACA33019
CASPIAN UVC 180 1M ADJUSTABLE STRAIGHT AIR INLET/OUTLET EXTENSION DUCT	HACA33020
CASPIAN UVC 60 CIRCULAR SPIGOT (200MM X 2) AIR INLET/OUTLET DUCT	HACA33021
CASPIAN UVC 90 CIRCULAR SPIGOT (200MM X 2) AIR INLET/OUTLET DUCT	HACA33022
CASPIAN UVC 120 CIRCULAR SPIGOT (200MM X 3) AIR INLET/OUTLET DUCT	HACA33023
CASPIAN UVC 150 CIRCULAR SPIGOT (200MM X 4) AIR INLET/OUTLET DUCT	HACA33024
CASPIAN UVC 180 CIRCULAR SPIGOT (200MM X 5) AIR INLET/OUTLET DUCT	HACA33025
CASPIAN UVC 60 INLET/OUTLET GRILLE POWDER-COATED WHITE	HACA33026
CASPIAN UVC 90 INLET/OUTLET GRILLE POWDER-COATED WHITE	HACA33027
CASPIAN UVC 120 INLET/OUTLET GRILLE POWDER-COATED WHITE	HACA33028
CASPIAN UVC 150 INLET/OUTLET GRILLE POWDER-COATED WHITE	HACA33029
CASPIAN UVC 180 INLET/OUTLET GRILLE POWDER-COATED WHITE	HACA33030
CASPIAN UVC 60 INLET/OUTLET GRILLE ANODISED ALUMINIUM	HACA33031
CASPIAN UVC 90 INLET/OUTLET GRILLE ANODISED ALUMINIUM	HACA33032
CASPIAN UVC 120 INLET/OUTLET GRILLE ANODISED ALUMINIUM	HACA33033
CASPIAN UVC 150 INLET/OUTLET GRILLE ANODISED ALUMINIUM	HACA33034
CASPIAN UVC 180 INLET/OUTLET GRILLE ANODISED ALUMINIUM	HACA33035

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