

Versatile, energy efficient heating and cooling solutions for domestic and small commercial applications

**Product Catalogue**

September 2022

# Smith's fan convectors go hand-in-hand with heat pumps



As heat pumps become more and more viable as alternatives to fossil-fuel powered boilers as the principal heat generator in both domestic and commercial applications Smith's fan convector technology provides an efficient solution for heating buildings.

Inherent in the heat pump's design is that the smaller the temperature between the heat source pump and the heat sink/emitter the higher the energy efficiency of that heat pump.

Fan convectors can work very effectively at system temperatures as low as 40°C. This allows the heat pump to work close to its maximum levels of efficiency, which means it will reduce the user's energy costs and consumption, and carbon emissions, in the way it was intended.

- Smith's fan convectors can work with Flow temperatures as low as 40°C
- Superior response time compared to radiators or underfloor heating, so is far better equipped where intermittent usage is a factor
- Lower water content in fan convectors than UFH or radiators mean 10% energy usage savings
- Used in conjunction with Smith's Smart Controls increases efficiency and versatility

## Why choose Smith's?

If you require energy efficiency and versatility in your heating and cooling, the Smith's range is the ideal solution



Commercial and domestic heating and cooling



Manufactured in the UK



Compatible with heat pumps



Easy installation and ongoing maintenance



Network of sales representatives



Free advice and quotation service



Sales  
+44 (0) 1245 324900  
Technical  
+44 (0) 1245 324560

Since 1991, Smith's EP UK has been manufacturing and providing an extensive range of commercial and domestic heating and cooling solutions from our head office in the UK. Part of the global family-owned US-based business, the Swan Group, Smith's works closely with architects, consultants, heating contractors and installers to deliver, via our stockist network, high quality products with industry-leading warranties on time, with an aftercare and technical support service that is second to none.

We take an active, innovative approach to new product development and creating bespoke heating products to fulfil the creative requirements of a competitive and demanding customer base that spans the UK, Northern Europe and the US. We believe it is essential to be flexible in our partnerships, while remaining uncompromising on the high quality and care that goes into every product in our range. Smith's is an outward-looking, growing business and we are forging relationships with like-minded manufacturers across Europe to ensure that we can provide additional new and essential heating and cooling solutions in areas where we do not specialise and where our partners excel.

Our catalogue showcases our principal commercial and domestic products. At the same time, we have the ability and the will to work alongside clients at any point in the construction process, and collaborate to develop specific solutions for any and every need. We take great pride and go to great lengths to leave our customers not only satisfied but coming back again and again for solutions that are perfect for your project, each and every time.

<b>INTRODUCTION</b>	
About Smith's	4
Contents - Commercial	6
Contents - Domestic	7
<b>COMMERCIAL APPLICATIONS</b>	
Caspian Fan Convectors	8
Anti-Bacterial Paint	29
Air Curtains	30
Unit Heater	34
Fan Coils	36
<b>DOMESTIC APPLICATIONS</b>	
Pedestal Radiators	42
Perimeter Heating	44
Fan Convectors	46
Plinth Heating	62
<b>ACCESSORIES</b>	
Accessories Glossary	70
Accessories Matrix	71

Smith's Environmental Products Ltd

01245 324900 | sales@smithsep.co.uk | SmithsEP.co.uk | @SmithsEP\_UK | #ThinkSmiths

# About Smith's

Founded in 1991 Smith's Environmental Products has grown to become the leading supplier of domestic and commercial heat emitters

Smith's Environmental Products has grown to become the leading supplier of domestic and light commercial fan-assisted hydronic heat emitters. The vast majority of our product range is manufactured from raw materials at our Essex manufacturing facility. Occasionally we source complementary products from other specialist partners to provide the best overall solutions for our customers. The company is the UK's market leader and has significant shares of both the North American and European markets. Smith's Environmental Products is a member of The Swan Group.

In the early years we developed the Smith's Space Saver, the UK's number one plinth heater, and the business quickly became established in heating and plumbing. Other fan convectors followed and the very first Caspian commercial fan convector was launched in 2007. Since 2007 we have introduced several new innovative heating and cooling solutions using fan convector technologies. In 2020 we launched Smart Control which is a control system which integrates the most commonly sought-after control features into one unit. It is app controlled and enables the control of the heating at several remote sites.

The business has grown from strength to strength and today we offer versatile heating and cooling solutions based on fan convector technology to all commercial specifiers from architects and consultants, to major building engineering services companies.

## Manufacturing Facilities

Operating from 40,000 square feet of factory and office space near Chelmsford in Essex we manufacture our product range from raw materials through to finished product utilising computerised design and automated production techniques.

## Quality and the environment

At Smith's we recognise that quality is about more than just the product, it's an approach that runs throughout the business and is centred on meeting and exceeding customers' expectations. Processes are constantly monitored and evaluated with a focus on continuous improvement. Manufacturing facilities are regularly appraised and meet the exacting standards of national approval boards such as UL, CSA and Kema.

Smith's is both ISO 9001 (2015) and ISO 14001 accredited. These accreditations are internationally recognised and demonstrate that Smith's is a responsible and forward-thinking organisation committed to achieving and maintaining the highest organisational standards.

## Product performance testing

To ensure that our products meet the strictest requirements of our demanding customers we work closely with recognised test houses. We work with BSRIA to verify our products to demonstrate that they perform as they are designed to do. We also work with acoustic experts SRL Technical Services to ensure that the noise performance of our products achieve our customers' requirements. This gives our customers the reassurance that they can specify Smith's products with confidence.

## Achilles Building Confidence Scheme

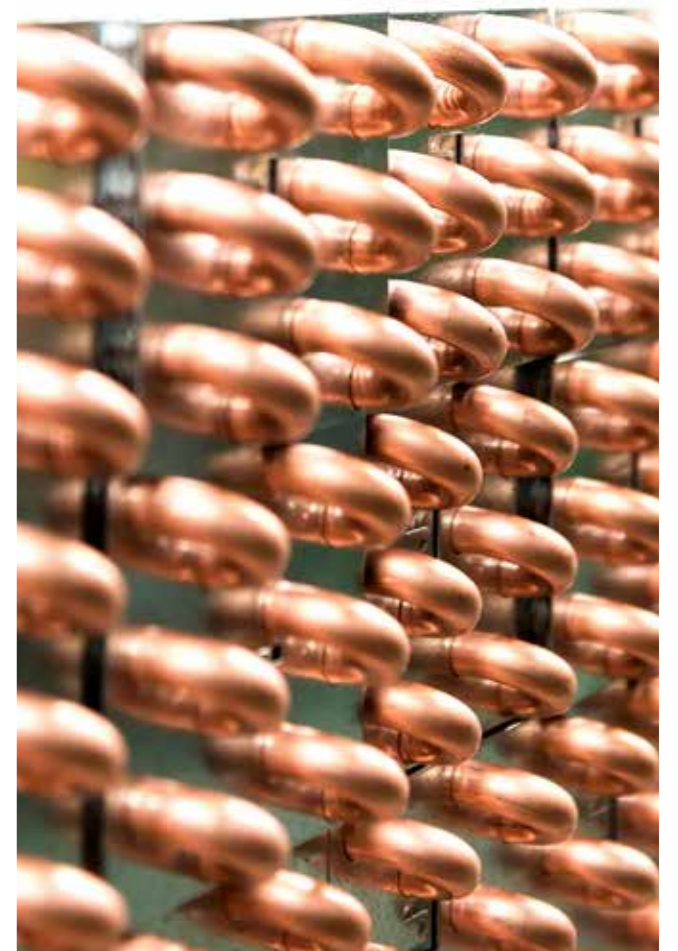
Smith's is a member of the Achilles Building Confidence Scheme. The scheme is designed to give confidence to suppliers in the construction industry that members have achieved the required standard in terms of production quality, health and safety standards, training and development, environmental procedures and processes as well as Corporate Social Responsibility. Membership of this scheme is a requirement of many of the major Main Contractors and suppliers in Construction Industry Supply Chain.

## Renewable technology solutions

The debate and discussion about renewable technology continues to dominate the energy and climate landscape and with heat pumps becoming more viable as alternatives to fossil-fuel powered boilers as the principal heat generator in both domestic and commercial applications Smith's fan convector technology provides an efficient solution for heating buildings.

Inherent in the heat pump's design is that the smaller the temperature between the heat source pump and the heat sink/emitter (under-floor heating, fan convector, radiator), the higher the energy efficiency of that heat pump. This higher efficiency means lower fuel bills and greater carbon savings.

Fan convectors can work very effectively at system temperatures as low as 40°C. This allows your chosen heat pump to work close to its maximum levels of efficiency, which means it will reduce the user's energy costs and energy consumption in the way it was intended. By contrast a standard radiator is designed to be efficient at higher temperatures, 45°C and above, which automatically reduces the heat pump's efficiency by more than 10%. In addition, the size of the radiator has to be increased significantly to cope with the lower system temperatures.



Our products are manufactured in the UK, including the heating/cooling coils, ensuring we can respond quickly to customer demands

ISO 9001 and 14001 accredited

Products are independently tested and verified by BSRIA and SRL Technical services

Compatible with renewable energy sources

Free parts and labour guarantee

# Product ranges

Please see below for a summary of products

## COMMERCIAL APPLICATIONS

### Caspian Fan Convectors



Caspian Smart Control 8



Caspian UV 14



Caspian SL 15



Caspian FF 16



Caspian TT 17

### Caspian Fan Convectors



Caspian EXT 18



Caspian UVC 19



Caspian LST 24



Caspian Skyline 26



Caspian Skyline E 28

### Air Curtains



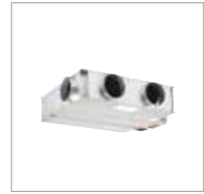
Ostro 30

### Unit Heater



Solano Eco 34

### Fan Coils



Aegean 235 36



Aegean 260 38



Aegean 500 40

## DOMESTIC APPLICATIONS

### Pedestal Radiators



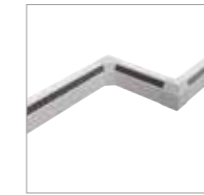
Pedestal - Kiosk 42



Pedestal - Trafalgar 42



Pedestal - Tube 42



Sureline 44



Ecovector High 46

### Fan Convectors



Ecovector Low 48



Ecovector II Low 50



Ecovector II Smart Low Level 52



Ecovector Vertical 54



Multivector 56

### Fan Convectors



Eco-Powerad 58



Spacemaker 59



Sterling 60

### Plinth Heating



Space Saver - Intro 62



Space Saver - Hydronic 64

### Plinth Heating



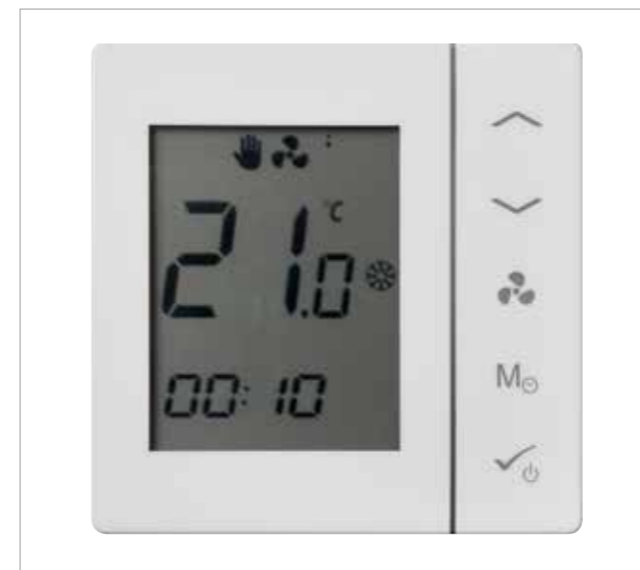
Space Saver - Electric 68

# Caspian® Smart Control

The Smith's Smart Control has been developed to integrate several of the most commonly sought-after control features into one control unit and more

## Applications

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



At the basic level it offers room temperature control and additionally offers a range of time controlling features too, making it perfect for buildings that serve a varied community demand

The Smart Control can automatically control the fan speed of the Caspian fan convector, adjusting it in relation to the air temperature in the room providing a fast heat up period when required, and the quietest possible operation during occupied periods. There is a manual override facility too

Smart Control features a summer mode where air circulation can be achieved without heat in summer months.



Heat mode



Cool mode

The control interface unit can be:



wall mounted (remote) for convenience, for example, where the heater is at high level



flush mounted in the product fascia



internally mounted (tamper-proof)

## Thermostat Features

- Control of 2/4 pipe fan coils
- Multiple configurations
- Large LCD
- Maintain room temperature via built in temperature sensor, or external room temperature/return air temperature sensor
- Programming options: 5+2 (5 days same +2days same); individual day every week; all 7 days same
- ECO mode
- Fan speed Hi/Mi/Lo control (automatic or manual)
- Advanced fan control functions (fan start/stop, delay, fan continuously running in manual mode, or depending on heating/cooling demand)
- Auto Frost protection
- Configurable inputs (occupancy sensor or temperature)
- Installer settings
- Span or TPI temperature control algorithm
- Local or remote control by Smart Home App
- Wireless software update by UG600
- Dirty filter notification
- User settings are saved and restored after power break
- Button lock function

## More advanced capabilities

The thermostats can be used as standalone localised controls, or with the integration of our hub control multiple thermostats using our ZigBee platform and controlled via app over the internet. This level of control is cost effective and is far more economical than using a full BMS system. The control system with the app is very configurable to the needs of the building users and can integrate with many other smart features, like boiler receivers, door, and window sensors. A key advantage to many community buildings is the ability to control the buildings' services remotely and the app makes this all possible.

Smith's Smart Control can become a part of a much wider control system in a building. It is possible to integrate wireless relays to control other appliances like boilers, along with proximity sensors to control lighting.

The system can be expanded in many ways and the app can interact with other apps using IFTTT.

The only limit is your creativity and willingness to embrace new technologies.

## Technical Support

It can be difficult to assess the requirements for a buildings control strategy, so Smith's Technical Support Team will help guide you through, with proposals for your project.

Where drawings can be provided, a desktop exercise can be undertaken to specify the required components, but we are happy to attend site too.

We have taken great care to ensure we have partnered with the best possible providers and have undertaken various site tests in public buildings.

**Smith's can bring experience to your project and assist in conveying the many benefits to your customers.**

# Caspian® Smart Control

The Smith's Smart Control has been developed to integrate several of the most commonly sought-after control features into one control unit and more

- Applications**  
 Education  
 Healthcare  
 Places of worship  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom  
 Industrial

## 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

### 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)

$\frac{\text{Flow temperature} + \text{Return temperature}}{2}$   
 Example:  
 80°C + 70°C divided by 2 = 75°C

Factors are approximate data based upon a standard coil.

## Ordering Guide

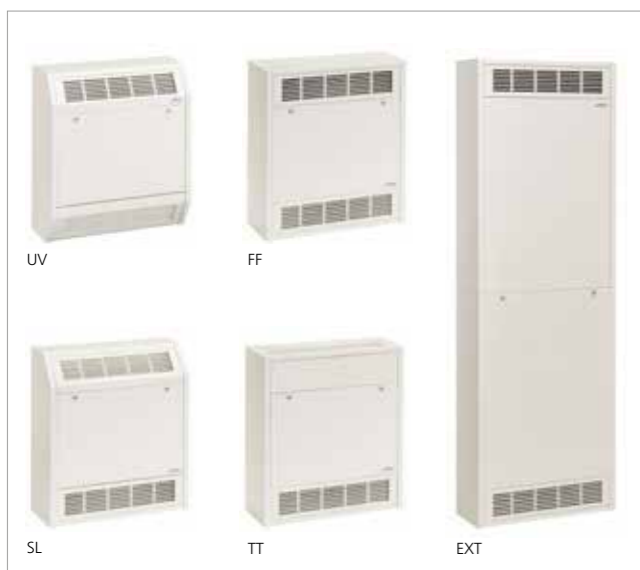
Description	Product Codes
SL60 EC C/W FACIA MOUNTED SMART CONTROL	HPCA32008
SL90 EC C/W FACIA MOUNTED SMART CONTROL	HPCA32009
SL120 EC C/W FACIA MOUNTED SMART CONTROL	HPCA32010
SL150 EC C/W FACIA MOUNTED SMART CONTROL	HPCA32011
SL180 EC C/W FACIA MOUNTED SMART CONTROL	HPCA32012
FF60 EC C/W FACIA MOUNTED SMART CONTROL	HPCA32013
FF90 EC C/W FACIA MOUNTED SMART CONTROL	HPCA32014
FF120 EC C/W FACIA MOUNTED SMART CONTROL	HPCA32015
FF150 EC C/W FACIA MOUNTED SMART CONTROL	HPCA32016
FF180 EC C/W FACIA MOUNTED SMART CONTROL	HPCA32017
UV60 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32018
UV90 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32019
UV120 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32020
UV150 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32021
UV180 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32022
SL60 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32023
SL90 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32024
SL120 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32025
SL150 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32026
SL180 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32027
FF60 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32028
FF90 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32029
FF120 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32030
FF150 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32031
FF180 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32032
EXT60 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32033
EXT90 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32034
EXT120 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32035
EXT150 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32036
EXT180 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32037
TT60 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32059
TT90 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32060
TT120 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32061
TT150 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32062
TT180 EC C/W INTERNAL TAMPROOF SMART CONTROL	HPCA32063

Description	Product Codes
UV60 EC C/W REMOTE SMART CONTROL	HPCA32038
UV90 EC C/W REMOTE SMART CONTROL	HPCA32039
UV120 EC C/W REMOTE SMART CONTROL	HPCA32040
UV150 EC C/W REMOTE SMART CONTROL	HPCA32041
UV180 EC C/W REMOTE SMART CONTROL	HPCA32042
SL60 EC C/W REMOTE SMART CONTROL	HPCA32043
SL90 EC C/W REMOTE SMART CONTROL	HPCA32044
SL120 EC C/W REMOTE SMART CONTROL	HPCA32045
SL150 EC C/W REMOTE SMART CONTROL	HPCA32046
SL180 EC C/W REMOTE SMART CONTROL	HPCA32047
FF60 EC C/W REMOTE SMART CONTROL	HPCA32048
FF90 EC C/W REMOTE SMART CONTROL	HPCA32049
FF120 EC C/W REMOTE SMART CONTROL	HPCA32050
FF150 EC C/W REMOTE SMART CONTROL	HPCA32051
FF180 EC C/W REMOTE SMART CONTROL	HPCA32052
EXT60 EC C/W REMOTE SMART CONTROL	HPCA32053
EXT90 EC C/W REMOTE SMART CONTROL	HPCA32054
EXT120 EC C/W REMOTE SMART CONTROL	HPCA32055
EXT150 EC C/W REMOTE SMART CONTROL	HPCA32056
EXT180 EC C/W REMOTE SMART CONTROL	HPCA32057
TT60 EC C/W REMOTE SMART CONTROL	HPCA32064
TT90 EC C/W REMOTE SMART CONTROL	HPCA32065
TT120 EC C/W REMOTE SMART CONTROL	HPCA32066
TT150 EC C/W REMOTE SMART CONTROL	HPCA32067
TT180 EC C/W REMOTE SMART CONTROL	HPCA32068
CT60 EC C/W REMOTE SMART CONTROL	HPCA32058
SMITHS HUB FOR CASPIAN SMART CONTROL UG600	HACA33130
SMITHS COMBINED SMART PLUG & REPEATER SP600	HACA33133
SMITHS REPEATER FOR CASPIAN SMART CONTROLS RE600	HACA33134
SMITHS SMART BUTTON FOR CASPIAN SMART CONTROLS B600	HACA33135
SMITHS SMART WINDOW DOOR SENSOR SLIM OS600	HACA33136
SMITHS SMART WINDOW DOOR SENSOR SLIM SW600	HACA33137
SMITHS SMART BOILER RECEIVER RX10RF	HACA33138
SMITHS SMART RELAY SR600	HPCA33139

# Caspian® Commercial

Fan convectors suitable for all kinds of commercial applications, from schools and churches to office developments, with the ability to rapidly heat large areas quicker than other heat emitters

- Applications**  
 Education  
 Healthcare  
 Places of worship  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom  
 Industrial



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

Caspian 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

Now available with Smart Control (see page 8)

Available with anti-bacterial paint (see page 29)

**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 anti-bacterial paint (see page 29).

**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 tables: UV p14, SL p15, FF P16, TT p17 and EXT p18.

**Accessories**  
 See matrix on page 71.

## 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		
	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		
EC 90	Low	297.00	80.75	0.20	16.00	34.00	4.70		
	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		
EC 120	Low	419.30	116.50	0.14	16.00	34.00	17.78		
	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		
EC 150	Low	459.80	127.72	0.17	22.00	34.70	22.23		
	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		
EC 180	Low	542.00	150.56	0.19	29.00	34.90	47.83		
	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 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 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)

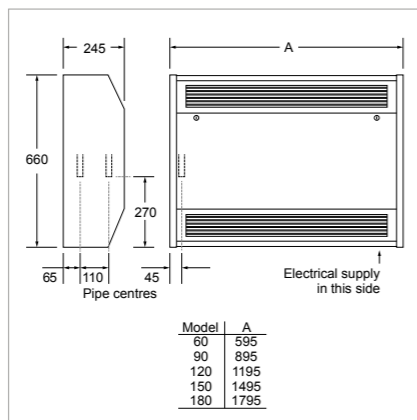
Flow temperature + Return temperature  
 Example: 80°C + 70°C divided by 2 = 75°C  
 2

Factors are approximate data based upon a standard coil.

# Caspian® UV

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

- Applications**  
 Education  
 Healthcare  
 Places of worship  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom  
 Industrial

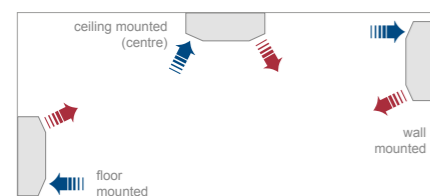


**Ordering guide**

Model	Packed Wt (kg)	Product Codes
<b>AC Codes</b>		
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
<b>EC Codes</b>		
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 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 UV 60, 90, 120, 150, 180.

**Mounting options**

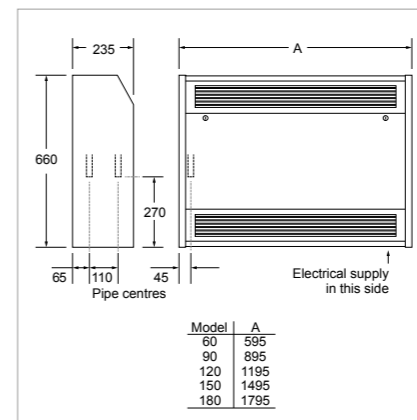


Plinths	Product Codes	
	100mm	150mm
CASPIAN UV/SL/TT 60 PLINTH BLACK	HACA33106	HACA33097
CASPIAN UV/SL/TT 90 PLINTH BLACK	HACA33107	HACA33098
CASPIAN UV/SL/TT 120 PLINTH BLACK	HACA33108	HACA33099
CASPIAN UV/SL/TT 150 PLINTH BLACK	HACA33109	HACA33100
CASPIAN UV/SL/TT 180 PLINTH BLACK	HACA33110	HACA33101
CASPIAN UV/SL/TT 60 PLINTH WHITE	HACA33111	HACA33006
CASPIAN UV/SL/TT 90 PLINTH WHITE	HACA33112	HACA33007
CASPIAN UV/SL/TT 120 PLINTH WHITE	HACA33113	HACA33008
CASPIAN UV/SL/TT 150 PLINTH WHITE	HACA33114	HACA33009
CASPIAN UV/SL/TT 180 PLINTH WHITE	HACA33115	HACA33010
<b>Accessories</b>		
PENCIL PROOF GRILLE INSERT (PAIR TO SUIT FF, SL & UV 60)	HACA33069	
PENCIL PROOF GRILLE INSERT (PAIR TO SUIT FF, SL & UV 90)	HACA33070	
PENCIL PROOF GRILLE INSERT (PAIR TO SUIT FF, SL & UV 120)	HACA33071	
PENCIL PROOF GRILLE INSERT (PAIR TO SUIT FF, SL & UV 150)	HACA33072	
PENCIL PROOF GRILLE INSERT (PAIR TO SUIT FF, SL & UV 180)	HACA33073	
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	

# Caspian® SL

Warm air is discharged at an upward 45° angle to avoid causing discomfort to people sitting adjacent to appliance and with chamfered profile to avoid sharp corners

- Applications**  
 Education  
 Healthcare  
 Places of worship  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom  
 Industrial



**Ordering guide**

Model	Packed Wt (kg)	Product Codes
<b>AC Codes</b>		
CASPIAN SL 60	23	HPCA31601
CASPIAN SL 90	36	HPCA31602
CASPIAN SL 120	45	HPCA31603
CASPIAN SL 150	60	HPCA31604
CASPIAN SL 180	78	HPCA31605
<b>EC Codes</b>		
CASPIAN SL 60	23	HPCA31501
CASPIAN SL 90	36	HPCA31502
CASPIAN SL 120	45	HPCA31503
CASPIAN SL 150	60	HPCA31504
CASPIAN SL 180	78	HPCA31505

**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 SL 60, 90, 120, 150, 180.

**Mounting options**



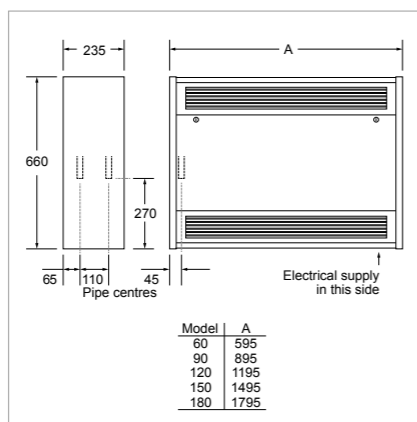
Plinths	Product Codes	
	100mm	150mm
CASPIAN FF/EXT/SL/TT 60 PLINTH BLACK	HACA33077	HACA33082
CASPIAN FF/EXT/SL/TT 90 PLINTH BLACK	HACA33078	HACA33083
CASPIAN FF/EXT/SL/TT 120 PLINTH BLACK	HACA33079	HACA33084
CASPIAN FF/EXT/SL/TT 150 PLINTH BLACK	HACA33080	HACA33085
CASPIAN FF/EXT/SL/TT 180 PLINTH BLACK	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
<b>Accessories</b>		
PENCIL PROOF GRILLE INSERT (PAIR TO SUIT FF, SL & UV 60)	HACA33069	
PENCIL PROOF GRILLE INSERT (PAIR TO SUIT FF, SL & UV 90)	HACA33070	
PENCIL PROOF GRILLE INSERT (PAIR TO SUIT FF, SL & UV 120)	HACA33071	
PENCIL PROOF GRILLE INSERT (PAIR TO SUIT FF, SL & UV 150)	HACA33072	
PENCIL PROOF GRILLE INSERT (PAIR TO SUIT FF, SL & UV 180)	HACA33073	
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	



# 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

- Applications**  
 Education  
 Healthcare  
 Places of worship  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom  
 Industrial



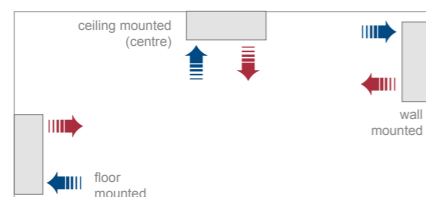
### Ordering guide

Model	Packed Wt (kg)	AC Codes	EC Codes
CASPIAN FF 60	24	HPCA23001	HPCA22001
CASPIAN FF 90	39	HPCA23002	HPCA22002
CASPIAN FF 120	46	HPCA23003	HPCA22003
CASPIAN FF 150	61	HPCA23004	HPCA22004
CASPIAN FF 180	76	HPCA23005	HPCA22005
<b>Rear Outlet</b>			
CASPIAN FF 60	24	HPCA23006	HPCA22006
CASPIAN FF 90	39	HPCA23007	HPCA22007
CASPIAN FF 120	46	HPCA23008	HPCA22008
CASPIAN FF 150	61	HPCA23009	HPCA22009
CASPIAN FF 180	76	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.

### Mounting options



### Rear outlet

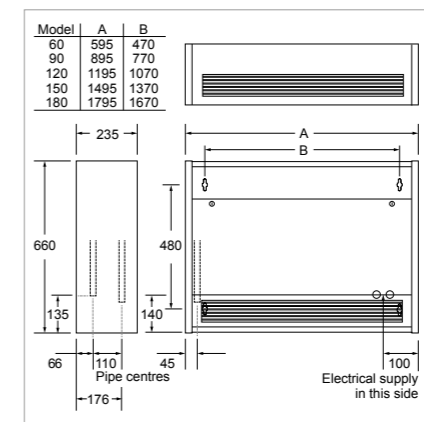


Plinths	Product Codes			
	100mm Black	100mm White	150mm Black	150mm White
CASPIAN FF/EXT/SL/TT 60 PLINTH	HACA33077	HACA33087	HACA33082	HACA33092
CASPIAN FF/EXT/SL/TT 90 PLINTH	HACA33078	HACA33088	HACA33083	HACA33093
CASPIAN FF/EXT/SL/TT 120 PLINTH	HACA33079	HACA33089	HACA33084	HACA33094
CASPIAN FF/EXT/SL/TT 150 PLINTH	HACA33080	HACA33090	HACA33085	HACA33095
CASPIAN FF/EXT/SL/TT 180 PLINTH	HACA33081	HACA33091	HACA33086	HACA33096
<b>Accessories</b>	<b>White Steel</b>	<b>Black Steel</b>		
POWDER-COATED STEEL INLET/OUTLET GRILLE (TO SUIT FF & EXT RO 60)	HACA33048	HACA33053		
POWDER-COATED STEEL INLET/OUTLET GRILLE (TO SUIT FF & EXT RO 90)	HACA33049	HACA33054		
POWDER-COATED STEEL INLET/OUTLET GRILLE (TO SUIT FF & EXT RO 120)	HACA33050	HACA33055		
POWDER-COATED STEEL INLET/OUTLET GRILLE (TO SUIT FF & EXT RO 150)	HACA33051	HACA33056		
POWDER-COATED STEEL INLET/OUTLET GRILLE (TO SUIT FF & EXT RO 180)	HACA33052	HACA33057		
<b>Accessories</b>	<b>Product Codes</b>			
ADJUSTABLE STRAIGHT AIR INLET/OUTLET EXTENSION DUCT (TO SUIT EXT & FF RO 60)	HACA33043			
ADJUSTABLE STRAIGHT AIR INLET/OUTLET EXTENSION DUCT (TO SUIT EXT & FF RO 90)	HACA33044			
ADJUSTABLE STRAIGHT AIR INLET/OUTLET EXTENSION DUCT (TO SUIT EXT & FF RO 120)	HACA33045			
ADJUSTABLE STRAIGHT AIR INLET/OUTLET EXTENSION DUCT (TO SUIT EXT & FF RO 150)	HACA33046			
ADJUSTABLE STRAIGHT AIR INLET/OUTLET EXTENSION DUCT (TO SUIT EXT & FF RO 180)	HACA33047			
ANODISED ALUMINIUM INLET/OUTLET GRILLE (TO SUIT FF & EXT RO 60)	HACA33058			
ANODISED ALUMINIUM INLET/OUTLET GRILLE (TO SUIT FF & EXT RO 90)	HACA33059			
ANODISED ALUMINIUM INLET/OUTLET GRILLE (TO SUIT FF & EXT RO 120)	HACA33060			
ANODISED ALUMINIUM INLET/OUTLET GRILLE (TO SUIT FF & EXT RO 150)	HACA33061			
ANODISED ALUMINIUM INLET/OUTLET GRILLE (TO SUIT FF & EXT RO 180)	HACA33062			
PENCIL PROOF GRILLE INSERT (PAIR TO SUIT FF, SL & UV 60)	HACA33069			
PENCIL PROOF GRILLE INSERT (PAIR TO SUIT FF, SL & UV 90)	HACA33070			
PENCIL PROOF GRILLE INSERT (PAIR TO SUIT FF, SL & UV 120)	HACA33071			
PENCIL PROOF GRILLE INSERT (PAIR TO SUIT FF, SL & UV 150)	HACA33072			
PENCIL PROOF GRILLE INSERT (PAIR TO SUIT FF, SL & UV 180)	HACA33073			
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			

# Caspian® TT

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

- Applications**  
 Education  
 Healthcare  
 Places of worship  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom  
 Industrial



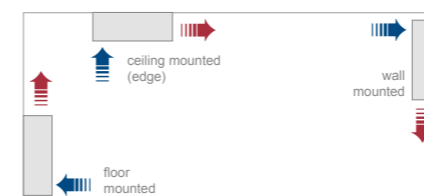
### Ordering guide

Model	Packed Wt (kg)	Product Codes
<b>AC Codes</b>		
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
<b>EC Codes</b>		
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

### 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.

### Mounting options

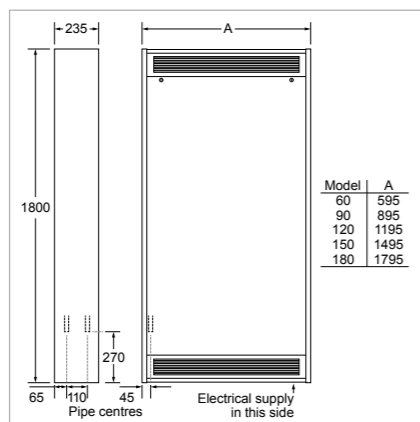


Plinths	Product Codes	
	100mm	150mm
CASPIAN FF/EXT/SL/TT 60 PLINTH BLACK	HACA33077	HACA33082
CASPIAN FF/EXT/SL/TT 90 PLINTH BLACK	HACA33078	HACA33083
CASPIAN FF/EXT/SL/TT 120 PLINTH BLACK	HACA33079	HACA33084
CASPIAN FF/EXT/SL/TT 150 PLINTH BLACK	HACA33080	HACA33085
CASPIAN FF/EXT/SL/TT 180 PLINTH BLACK	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
<b>Accessories</b>	<b>Product Codes</b>	
FLEXIBLE HOSES 22MM PAIR	HAGA95003	
ROOM THERMOSTAT HARD WIRED	HAGA95001	
ROOM THERMOSTAT TAMPER PROOF	HACA95004	
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	

# Caspian® EXT

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

**Applications**  
 Education  
 Healthcare  
 Places of worship  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom  
 Industrial



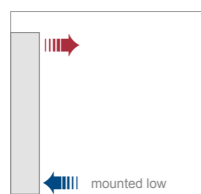
### Ordering guide

Model	Packed Wt (kg)	Product Codes
<b>AC Codes</b>		
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
<b>EC Codes</b>		
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.

### Mounting option



### Rear outlet



Plinths	Product Codes			
	100mm Black	100mm White	150mm Black	150mm White
CASPIAN FF/EXT/SL/TT 60 PLINTH	HACA33077	HACA33087	HACA33082	HACA33092
CASPIAN FF/EXT/SL/TT 90 PLINTH	HACA33078	HACA33088	HACA33083	HACA33093
CASPIAN FF/EXT/SL/TT 120 PLINTH	HACA33079	HACA33089	HACA33084	HACA33094
CASPIAN FF/EXT/SL/TT 150 PLINTH	HACA33080	HACA33090	HACA33085	HACA33095
CASPIAN FF/EXT/SL/TT 180 PLINTH	HACA33081	HACA33091	HACA33086	HACA33096
<b>Accessories</b>		<b>White Steel</b>	<b>Black steel</b>	
POWDER-COATED STEEL INLET/OUTLET GRILLE (TO SUIT FF & EXT RO 60)	HACA33048		HACA33053	
POWDER-COATED STEEL INLET/OUTLET GRILLE (TO SUIT FF & EXT RO 90)	HACA33049		HACA33054	
POWDER-COATED STEEL INLET/OUTLET GRILLE (TO SUIT FF & EXT RO 120)	HACA33050		HACA33055	
POWDER-COATED STEEL INLET/OUTLET GRILLE (TO SUIT FF & EXT RO 150)	HACA33051		HACA33056	
POWDER-COATED STEEL INLET/OUTLET GRILLE (TO SUIT FF & EXT RO 180)	HACA33052		HACA33057	
<b>Accessories</b>		<b>Product Codes</b>		
ADJUSTABLE STRAIGHT AIR INLET/OUTLET EXTENSION DUCT (TO SUIT EXT & FF RO 60)	HACA33043			
ADJUSTABLE STRAIGHT AIR INLET/OUTLET EXTENSION DUCT (TO SUIT EXT & FF RO 90)	HACA33044			
ADJUSTABLE STRAIGHT AIR INLET/OUTLET EXTENSION DUCT (TO SUIT EXT & FF RO 120)	HACA33045			
ADJUSTABLE STRAIGHT AIR INLET/OUTLET EXTENSION DUCT (TO SUIT EXT & FF RO 150)	HACA33046			
ADJUSTABLE STRAIGHT AIR INLET/OUTLET EXTENSION DUCT (TO SUIT EXT & FF RO 180)	HACA33047			
ANODISED ALUMINIUM INLET/OUTLET GRILLE (TO SUIT FF & EXT RO 60)	HACA33058			
ANODISED ALUMINIUM INLET/OUTLET GRILLE (TO SUIT FF & EXT RO 90)	HACA33059			
ANODISED ALUMINIUM INLET/OUTLET GRILLE (TO SUIT FF & EXT RO 120)	HACA33060			
ANODISED ALUMINIUM INLET/OUTLET GRILLE (TO SUIT FF & EXT RO 150)	HACA33061			
ANODISED ALUMINIUM INLET/OUTLET GRILLE (TO SUIT FF & EXT RO 180)	HACA33062			
PENCIL PROOF GRILLE INSERT (PAIR TO SUIT FF, SL & UV 60)	HACA33069			
PENCIL PROOF GRILLE INSERT (PAIR TO SUIT FF, SL & UV 90)	HACA33070			
PENCIL PROOF GRILLE INSERT (PAIR TO SUIT FF, SL & UV 120)	HACA33071			
PENCIL PROOF GRILLE INSERT (PAIR TO SUIT FF, SL & UV 150)	HACA33072			
PENCIL PROOF GRILLE INSERT (PAIR TO SUIT FF, SL & UV 180)	HACA33073			
FLEXIBLE HOSES 22MM PAIR	HAGA95003			
ROOM THERMOSTAT HARD WIRED	HAGA95001			
ROOM THERMOSTAT TAMPER PROOF	HACA95004			
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			

# 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

**Applications**  
 Education  
 Healthcare  
 Places of worship  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom  
 Industrial



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

Now available with Smart Control (see page 8)

**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 on page 23.

**Accessories**  
 White powder-coated steel inlet/outlet grille. Anodised aluminium air inlet/outlet grille. 90°C cranked air inlet/outlet duct. 1m adjustable straight air inlet/outlet extension duct. Circular spigot air inlet/outlet duct. See matrix on page 71 for other accessories.

**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.

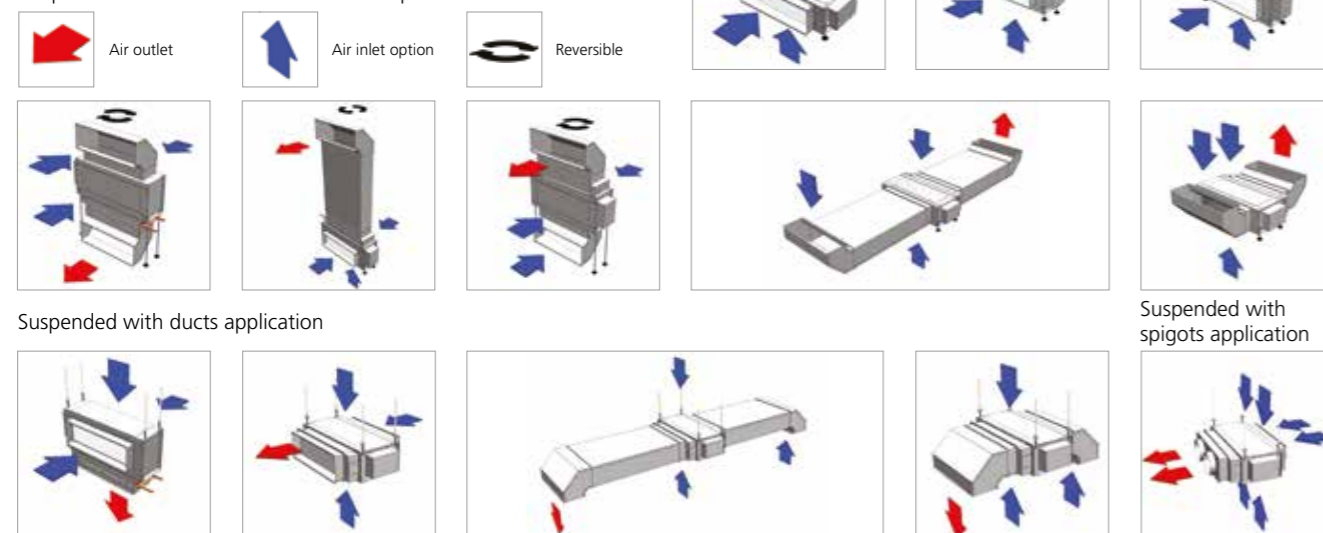
# Caspian® UVC

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

- Applications**  
 Education  
 Healthcare  
 Places of worship  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom  
 Industrial

### 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 than can be achieved with the Caspian UVC and Accessories. If in doubt please contact us.



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

Model Reference	Fan Speed	Control Voltage VDC	Mean Water Temp °C								
			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

Water Temperature drop °C	Mean Water Temp °C			
	45	50	55	60
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 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)

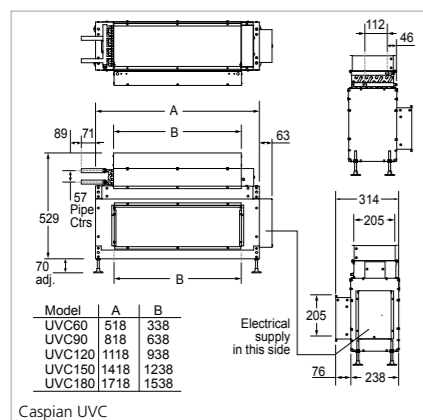
Flow temperature + Return temperature / 2  
 Example: 80°C + 70°C divided by 2 = 75°C

Factors are approximate data based upon a standard coil.

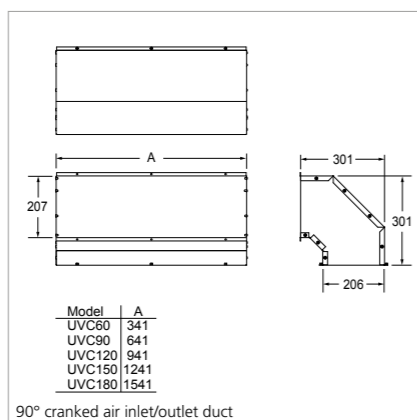
# Caspian® UVC

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

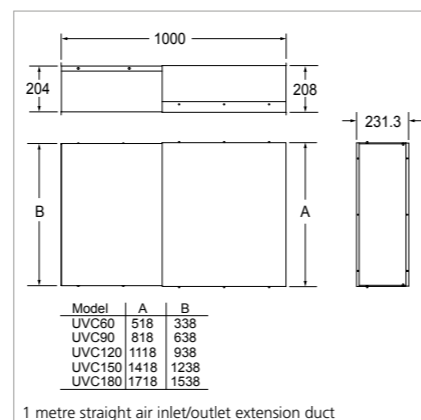
**Applications**  
 Education  
 Healthcare  
 Places of worship  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom  
 Industrial



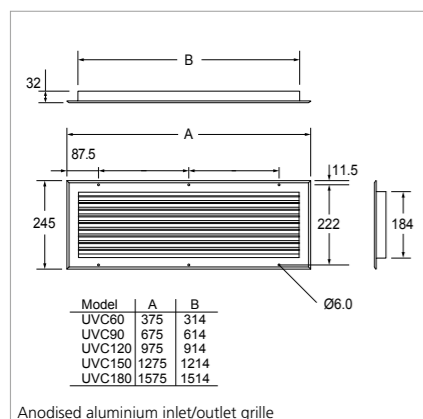
Caspian UVC



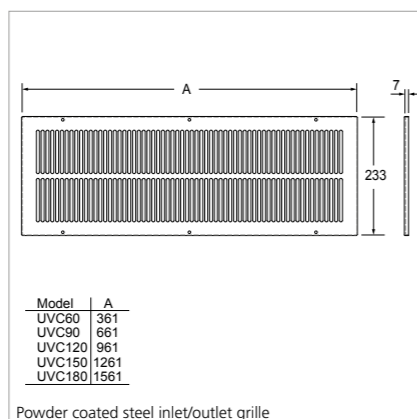
90° cranked air inlet/outlet duct



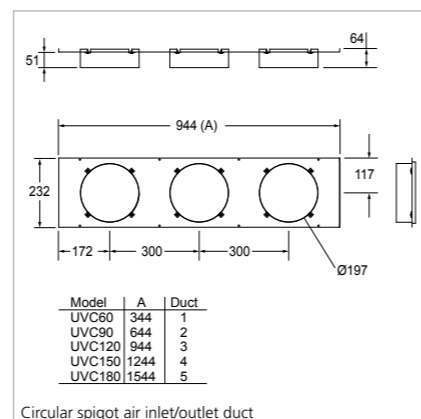
1 metre straight air inlet/outlet extension duct



Anodised aluminium inlet/outlet grille



Powder coated steel inlet/outlet grille



Circular spigot air inlet/outlet duct

## 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	Product Codes
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 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 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 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
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
FLEXIBLE HOSES 22MM PAIR	HAGA95003
ROOM THERMOSTAT HARD WIRED	HAGA95001
ROOM THERMOSTAT TAMPER PROOF	HACA95004
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

## Accessories



90° cranked air inlet/outlet



1m adjustable straight air inlet/outlet extension duct



Anodised aluminium inlet/outlet grille



Powder-coated steel inlet/outlet grille



Circular spigot inlet/outlet

# Caspian® LST

Caspian LST (low surface temperature) is ideal for applications where the surface temperature of is important such as schools and certain healthcare applications

**Applications**  
 Education  
 Healthcare  
 Office  
 Hospitality



Caspian LST (low surface temperature) fully complies with the NHS Estates Health Guidance Notes, "Safe hot water and surface temperatures" (formally known as DN4) and has been independently verified by BSRIA

Using EC technology and meeting the DN4 legislation 100% of the time, this hydronic fan convector provides complete peace of mind for specifiers choosing the Caspian

Any building registered under the Registered Homes Act 1984, including hospitals, clinics, surgeries and other health care premises, requires heat emitters whose maximum surface temperature must not exceed 43°C. This also extends to social services personal care properties, and may also apply to any property where occupants may be at risk of burns to their skin if they came into prolonged (10 seconds or more) contact with a standard heat emitter

As well as healthcare applications Caspian LST is the ideal choice for schools and nurseries where the risk of children coming into contact with higher surface temperature heat emitters can be avoided

Caspian LST range is patented (UK Patent No. 2,555,566)

**Motor**  
 EC (BMS compliant).

**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 anti-bacterial paint (see page 29).

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

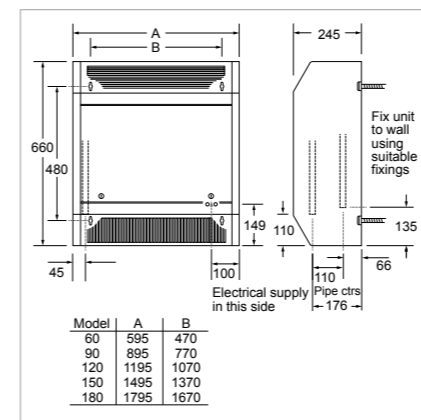
**Installation**  
 Suitable for two-pipe central heating systems.  
 Pipework access holes on the rear and underside.  
 Key operated front access panels.  
 Bleed valve accessible on removal of front casing.  
 Unit must be earthed.

**Commissioning**  
 Check water is hot enough to activate the low temperature cut-out thermostat.  
 Regulate the flow to achieve maximum performance.

**Controls**  
 Variable heat output controller (mounted within the products).

**Accessories**  
 See matrix on page 71.

**Specification**  
 To specify state:  
 Low Surface Temperature Fan Convector with EC motor, in 1.2mm zinc coated steel, polyester powder coated in white RAL 9010.  
 Dimensions at 660mm high and 595mm, 895mm, 1195mm, 1495mm or 1795mm wide. With variable heat output controller.  
 As Smith's Caspian LST 60, 90, 120, 150, 180.



Heat output For other heat output data please download the data sheet from our website

Model	Heat Output at 75°			Heat Output at 50°			Pressure Drop		
	Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)	High (kPa)	Medium (kPa)	Low (kPa)
CASPIAN LST 60	0.9	1.4	1.9	0.6	0.7	0.8	1.5	1.1	0.9
CASPIAN LST 90	2.8	3.2	3.7	1.6	2.0	2.3	3.9	2.3	1.6
CASPIAN LST 120	4.7	5.1	5.5	2.8	3.2	3.7	7.3	5.5	5.3
CASPIAN LST 150	6.0	6.5	7.0	4.2	4.7	5.2	8.6	6.8	6.2
CASPIAN LST 180	7.5	8.0	8.5	5.7	6.2	6.7	11.3	8.6	7.9

Model	Flow & return connections	Fused spur	Total Power Consumption				Sound Levels			Casting colour	Fan only
			Low (Watts)	Medium (Watts)	High (Watts)	Water Capacity (Litres)	High (dBA)	Medium (dBA)	Low (dBA)		
CASPIAN LST 60	22mm	3A	26	41	55	0.92	50	43	35	white	•
CASPIAN LST 90	22mm	3A	33	59	85	1.50	53	45	37	white	•
CASPIAN LST 120	22mm	3A	33	79	125	2.08	57	48	38	white	•
CASPIAN LST 150	22mm	3A	50	119	188	2.58	59	47	36	white	•
CASPIAN LST 180	22mm	3A	66	158	250	3.18	59	47	36	white	•

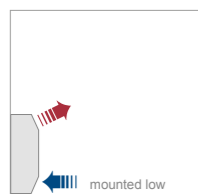
Heat output testing based on BS EN442 using mean water temperature, 20°C entering air temperature, 10° temperature drop. Sound levels measured at 3m in front of the floor mounted model.

### Ordering guide

Model	Packed Wt (kg)	Product Codes
CASPIAN LST 60 EC	24	HPCA28001
CASPIAN LST 90 EC	37	HPCA28002
CASPIAN LST 120 EC	46	HPCA28003
CASPIAN LST 150 EC	60	HPCA28004
CASPIAN LST 180 EC	78	HPCA28005

Plinths	Product Codes			
	100mm Black	100mm White	150mm Black	150mm White
CASPIAN UV/LST 60 PLINTH	HACA33106	HACA33111	HACA33097	HACA33006
CASPIAN UV/LST 90 PLINTH	HACA33107	HACA33112	HACA33098	HACA33007
CASPIAN UV/LST 120 PLINTH	HACA33108	HACA33113	HACA33099	HACA33008
CASPIAN UV/LST 150 PLINTH	HACA33109	HACA33114	HACA33100	HACA33009
CASPIAN UV/LST 180 PLINTH	HACA33110	HACA33115	HACA33101	HACA33010
Accessories				Product Codes
FLEXIBLE HOSES 22MM PAIR				HAGA95003
CASPIAN REMOTE SWITCHING ON/OFF RELAY (24V AC COIL)				HACA33127

### Mounting option



# Caspian Skyline®

Caspian Skyline CT60 fits into a 600mm x 600mm ceiling tile, providing easy access for both installation and maintenance. It's suitable for projects in schools, retail or food units or where the heating needs to complement the rest of the premise

- Applications**  
 Education  
 Healthcare  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom



The Caspian Skyline has been developed to provide a more easily installed ceiling tile fan convector to complement the Smith's range of Caspian commercial fan convectors and may be used alone or in tandem with other Smith's products

Plumbing easily into any wet central heating system, the Caspian Skyline will also work effectively and efficiently with renewable heat sources, such as air or ground source heat pumps

Now available with Smart Control (see page 8)

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

**Finish**  
 Casing: galvanised steel 1.2mm.  
 Grille: Eggcrate core, white RAL 9010 complete with touch catches.

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

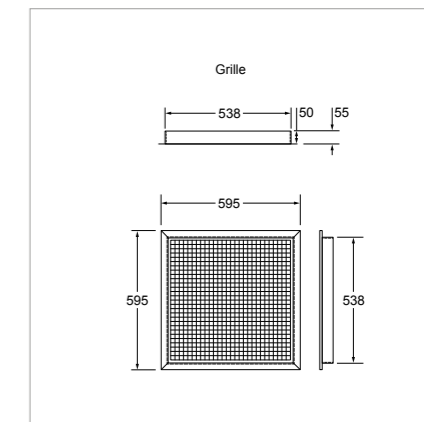
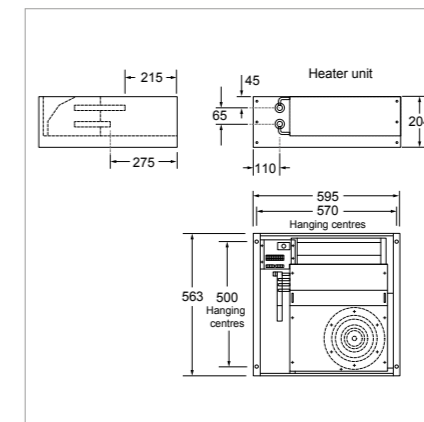
**Installation**  
 Suitable for two-pipe central heating systems.  
 Maximum installation height – 4m to underside.  
 Unit must be earthed.

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

**Controls**  
 See accessories table on page 27.

**Accessories**  
 See matrix on page 71.

**Specification**  
 To specify state:  
 Ceiling mounted Fan Convactor with EC (or AC) motor, in 1.2mm galvanised steel, egg crate core grille in white RAL 9010. To fit a standard 600mm x 600mm ceiling grid. With variable heat output controller.  
 As Smith's Caspian Skyline CT60.



Heat output For other heat output data please download the data sheet from our website

Model	Heat Output at 75°			Heat Output at 45°		
	Low (kW)	Medium (kW)	High (kW)	Low (kW)	Medium (kW)	High (kW)
CASPIAN SKYLINE CT60	2.7	3.7	4.6	0.5	0.9	1.3

Model	Flow & return connections	Fused spur	Total Power Consumption				Sound Levels			Grille colour
			Low (Watts)	Medium (Watts)	High (Watts)	Water Capacity (Litres)	High (dBA)	Medium (dBA)	Low (dBA)	
CASPIAN SKYLINE CT60	22mm	3A	8	24	40	0.75	48	40	34	white

Heat output testing based on BS EN442 using mean water temperature, 18°C entering air temperature, 10° temperature drop. Sound levels measured at 3m.

**Correction factors**

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

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

**Ordering guide**

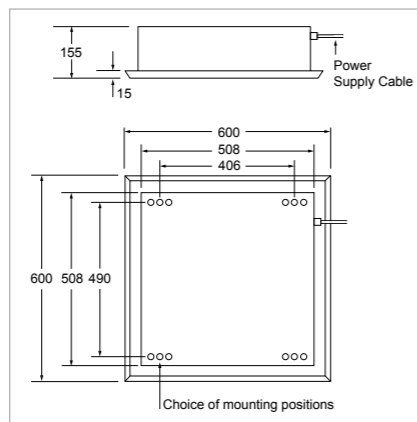
Model	Packed Wt (kg)	Product Codes
<b>AC Codes</b>		
CASPIAN SKYLINE CT60 AC	20	HPCA30001
<b>EC Codes</b>		
CASPIAN SKYLINE CT60 EC	20	HPCA29001

Accessories	Product Codes
CASPIAN ADJUSTABLE LOW TEMPERATURE CUT-OUT (EC AND AC)	HACA33001
CASPIAN EXTERNAL CONTROL HARNESS (EC)	HACA33004
CASPIAN SKYLINE CT60 PROPORTIONAL HEAT OUTPUT CONTROLLER 15-25 (REMOTE SENSOR)	HACA33125
CASPIAN SKYLINE CT60 PROPORTIONAL HEAT OUTPUT CONTROLLER 11-21 (REMOTE SENSOR)	HACA33123
ROOM THERMOSTAT HARD WIRED	HAGA95001
ROOM THERMOSTAT TAMPER PROOF	HAGA95004
FLEXIBLE HOSES 22MM PAIR	HAGA95003
CASPIAN REMOTE SWITCHING ON/OFF RELAY (24V AC COIL)	HACA33127
BLANK CONFIGURABLE PROPORTIONAL HEAT OUTPUT CONTROLLER (PROGRAMMED AT FACTORY)	HACA33126
CASPIAN EC LINKING KIT (MASTER/SLAVE)	HACA33068

# Caspian Skyline® E

The electric Skyline fits neatly into existing ceiling space - replacing a 600mm x 600mm ceiling tile and because it is ceiling mounted, it saves valuable wall space - particularly important in retail units

- Applications**  
 Education  
 Healthcare  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Industrial



It is unobtrusive and effective

This high output fan convector effectively heats large areas

Choice of punched steel or egg-crate grille options

Supplied as standard in white but can be supplied in any colour

**Motor**  
AC only.

**Finish**  
Outer casing 0.9mm zinc-coated steel. Polyester powder-coated. Polyester powder-coated RAL 9010.

**Installation**  
Maximum installation height 3.2m (10'6") to underside.  
Minimum 150mm void space required for recessed installation.  
Not suitable for bathrooms and other high humidity areas.  
Maximum flexibility in installation: only 600mm - side clearance required.  
Facility for connection to 6mm threaded rod or chains (rods and chains - not supplied). 20 amp fused spur required.  
Unit must be earthed.  
Supplied with remote wireless controller.

**Control**

Overheat protection: thermal cut-out.  
Manual reset procedure: switch power off at mains, wait 5 minutes, switch power on.  
Battery powered wireless controller with On/Off function, thermostat control, setback temperature and run back timer.

**Attachment**

Egg-crate grille accessory (remove standard grille).  
Surface mounting kit - 135mm. Provides a complete foursided trim when fitted to a solid ceiling.  
Ceiling tile spacer (85mm).

**Specification**

To specify state: Ceiling mounted heat emitter at 4Kw in white 600x600mm. As Smith's Caspian Skyline E.

## Heat output

Model	Heat Output (kW)	Mains cable	Fused spur	Total Power Consumption (kW)	Sound Levels (dBA)	Casting colour	Fan-only
SKYLINE E 4KW	4.0	1.5m	20A	4.1	40	white	n/a

## Ordering guide

Model	Packed Wt (kg)	Product Codes
SKYLINE E 4KW	9	HPSK40003
Accessories		
SKYLINE E 4KW EGG CRATE GRILLE ACCESSORY		HASK40104
SKYLINE SURFACE MOUNTING KIT (135MM)		HASK40102
SKYLINE CEILING TILE SPACER (85MM)		HASK40103

# Smith's Antibacterial paint

We have developed a paint finish that has antibacterial properties for use on Caspian Fan Convectors (except UVC and Skyline)

Containing the proven Biocote® Antimicrobial Technology, which repeatedly demonstrates broad spectrum antibacterial performance, Smith's antibacterial paint provides additional protection in environments where minimising the risk and transmission of infection is crucial.

It can be applied to products that are located in areas where there is a need to maintain a low level of microbes such as hospitals, health centres and care homes, and where there is high level of human traffic such as schools.

The powder used to make the antibacterial paint, Interpon 610 AM, has been tested for antimicrobial efficacy in accordance with ISO 22196:2011 and exhibited a minimum of 95% and up to 99.99% reduction in the population of E. Coli and MRSA. Using Silver ion technology Biocote® has been proven to be effective against a wide range of the most common bacteria.

- Provides an additional level of antimicrobial growth on the surface of the fan convectors
- Help prevent odours, stains and material deterioration
- Provides 24-hour protection, 7-days a week
- Be easier to keep hygienically clean

## Efficacy of Biocote®

A study conducted soon after the H1N1 viral pandemic of 2009 investigated the conversion rate of an H1N1 virus from an infectious to non-infectious form because of its exposure to Biocote® protected products.

A variety of surfaces had the virus added to them and were left to grow over night. Half contained the Biocote® Antimicrobial Additives, and the other half did not. Having been left for a sufficient amount of time for the virus to grow all of the surfaces were assessed for the presence of the virus. On all the materials, the Biocote® protected surfaces were less contaminated with the virus with up to a 99.99% reduction in the virus.

## Where should Caspian fan convectors with antibacterial paint be used?

- Schools
- Hospitals
- Care homes
- Health centres
- Dentists surgeries and waiting rooms
- Public buildings including Libraries, Museums and Village Halls

## Support

If you require advice on the antibacterial paint please contact our Technical Team: 01245 324560 | technical.sales@smithsep.co.uk



# Ostro®

A range of commercial air curtains designed for use in the entrances of shops, offices, leisure facilities, hotels, schools, hospitals and most other public buildings

**Applications**  
Education  
Healthcare  
Leisure and sport  
Office  
Hospitality  
Retail  
Showroom



Ostro is available in 3 versions – W hydronic, E Electric and C Ambient

Ostro air curtains are designed for use in regions with moderate or cold climates in spaces where the temperature range is -10°C to +40°C, in conditions that are free from external contaminants such as pollen and hydrometeor (horizontal precipitation)

In winter Ostro air curtains protect against heat loss in rooms by directing a warm air stream across doorways preventing cold air from entering the heated space. In summer, the air curtains can be used as cooling devices to prevent the entry of hot air and pollutants from the outside

Available in hydronic versions (Ostro W) and electric versions (Ostro E), and ambient versions (Ostro C) without a heater for applications with entrances where no additional comfort heat is required

There are 3 sizes, 1084mm, 1554mm and 2024mm available in all 3 versions

### Ostro W (hydronic)

- Heat outputs from 10 - 40kW (inlet temperature of 0°C and inlet/outlet temperature of 90/70°C)
- 3 fan speeds the hydronic version is fully controllable
- Air throughput from 1200 – 4800m<sup>3</sup>/h
- Low noise levels – 61dB at maximum fan speed
- Maximum mounting height 4m

### Ostro E (electric)

- Heat output up to 14kW
- Air throughput from 1200 – 4800m<sup>3</sup>/h
- Low noise levels – 61dB at maximum fan speed
- Featuring a new type of PTC electric coil which minimises the voltage on the surface of the coil.
- Large heat exchanger surface area
- Fully automatic heat control dependent on airflow
- Auto shut-off if the airflow is compromised preventing overheating
- Low energy consumption
- Maximum mounting height 4m

### Ostro C (ambient)

- Air throughput from 1250 – 5000m<sup>3</sup>/h
- Low noise levels – 61dB at maximum fan speed
- Low energy consumption
- Maximum mounting height 4m

### Controls



**Panel COMFORT**  
Control of up to two Ostro Air Curtains Curtain is managed using the COMFORT control panel, which allows adjustment of the airflow and air temperature.

**Magnetic door switch**  
A magnetic door switch is available to manage Ostro Air Curtain in conjunction of the operation of the doorway.

**BMS communication module**  
Ostro Air Curtains are compatible with BMS via a communication module, available as an accessory.

### Finish

Materials: EPP and steel.  
End caps: grey finish. Steel main body: white finish.

### Installation

Ostro can be mounted vertically or horizontally and side by side in tandem for larger doorways. To enable the correct method of installing Ostro Air Curtain mounting brackets are available as accessories. These are available as horizontal mounting kits and vertical mounting kits.

### Specification

To specify state:  
Universally mounted hydronic air curtain with 3 fan speeds and temperature control with heat output of 16kW, or 29kW or 40kW. As Smith's Ostro 100W, or Smith's Ostro 150W, or Smith's Ostro 200W  
Universally mounted electric air curtain with 3 fan speeds and temperature control with heat output of 7kW, or 11kW or 14kW. As Smith's Ostro 100E, or Smith's Ostro 150E, or Smith's Ostro 200E  
Universally mounted ambient air curtain with 3 fan speeds. As Smith's Ostro 100C, or Smith's Ostro 150C, or Smith's Ostro 200C

### Technical data

		Ostro W with water heater			Ostro E with electric heater		
		100W	150W	200W	100E	150E	200E
Length of unit	m	1	1.5	2	1	1.5	2
Max. installation height	m	4	4	4	4	4	4
Max air output	m <sup>3</sup> /h	1200/1550/2000	2200/3000/3600	2900/4000/4800	1200/1550/2000	2200/3000/3600	2900/4000/4800
Heat output	kW	10-16	20-29	25-40	4-7	6.5-11	8.5-14
Max working pressure	MPa	1.6	1.6	1.6	-	-	-
Diameter of male connectors	inches	1/2"	1/2"	1/2"	-	-	-
Motor power supply, consumption	V/Hz A	230/50 1.95A	230/50 2.6A	230/50 2.6A	230/50 1.95A	230/50 2.6A	230/50 2.6A
Motor power	W	51/106/220	75/162/320	75/162/320	51/106/220	75/162/320	75/162/320
Electric heating power supply, consumption	V/Hz A	-	-	-	400/50 11.0A	400/50 16.6A	400/50 22.4A
Weight filled with water/without water	kg	18.0/16.5	22.6/20.5	31.0/28.0	17	21.5	29
Volume level I/II/III*	dB (A)	44/49/59	45/49/61	46/49/61	44/49/59	45/49/61	46/49/61
Protection class IP	-	IP21	IP21	IP21	IP21	IP21	IP21

		Ostro C without heater		
		100C	150C	200C
Length of unit	m	1	1.5	2
Max. installation height	m	4	4	4
Max air output	m <sup>3</sup> /h	1250/1600/2100	2250/3100/3700	3000/4200/5000
Heat output	kW	-	-	-
Max working pressure	MPa	-	-	-
Diameter of male connectors	inches	-	-	-
Motor power supply, consumption	V/Hz A	230/50 1.95A	230/50 2.6A	230/50 2.6A
Motor power	W	51/106/220	75/162/320	75/162/320
Electric heating power supply, consumption	V/Hz A	-	-	-
Weight filled with water/without water	kg	15	18.5	25
Volume level I/II/III*	dB (A)	45/50/60	46/50/61	47/50/61
Protection class IP	-	IP21	IP21	IP21

\* Noise level measured in distance of 3m in an open space



# Ostro®

A range of commercial air curtains designed for use in the entrances of shops, offices, leisure facilities, hotels, schools, hospitals and most other public buildings

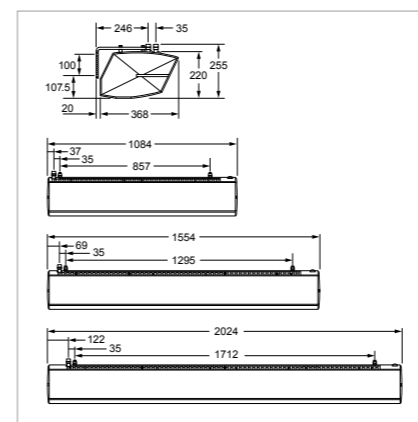
- Applications**  
 Education  
 Healthcare  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom

Technical data For other heat output data please download the data sheet from our website

inlet/outlet water temperature	water 70/50 °C					water 80/60 °C					water 70/50 °C					water 80/60 °C													
	0	5	10	15	20	0	5	10	15	20	0	5	10	15	20	0	5	10	15	20									
<b>OSTRO 100W</b>															<b>OSTRO 150W</b>														
III max air flow - 2000 m³/h															III max air flow - 3600 m³/h														
heat output (kW)	11.3	10.3	9.2	8.1	7.1	13.7	12.6	11.5	10.5	9.4	21.3	19.5	17.7	15.9	14.1	25.1	23.3	21.6	19.7	18.0									
outlet air temperature (°C)	18.4	21.8	25.2	28.7	32.1	21.9	25.3	28.7	32.1	35.5	18.3	21.8	25.3	28.9	32.4	21.5	25.0	28.6	32.0	35.6									
water flow (m³/h)	0.5	0.4	0.4	0.3	0.3	0.6	0.5	0.5	0.4	0.4	0.8	0.7	0.7	0.6	0.5	1.0	0.9	0.8	0.7	0.7									
pressure drop (kPa)	4.0	3.0	2.0	2.0	1.0	5.0	5.0	4.0	3.0	2.0	12.0	10.0	8.0	6.0	5.0	17.0	14.0	12.0	10.0	8.0									
III max air flow - 1550 m³/h															III max air flow - 3000 m³/h														
heat output (kW)	10.0	9.1	8.2	7.2	6.3	12.0	11.1	10.2	9.2	8.3	19.6	17.9	16.3	14.7	13.1	23.1	21.4	19.8	18.2	16.6									
outlet air temperature (°C)	20.3	23.5	26.8	30.0	33.3	24.2	27.4	30.6	33.9	37.1	19.7	23.1	26.5	29.9	33.2	23.2	26.5	29.9	33.3	36.7									
water flow (m³/h)	0.4	0.4	0.3	0.3	0.2	0.5	0.4	0.4	0.4	0.3	0.7	0.7	0.6	0.5	0.5	0.9	0.8	0.8	0.7	0.6									
pressure drop (kPa)	3.0	2.0	2.0	1.0	1.0	4.0	3.0	3.0	2.0	2.0	10.0	8.0	6.0	5.0	4.0	14.0	12.0	10.0	8.0	7.0									
III max air flow - 1200 m³/h															III max air flow - 2200 m³/h														
heat output (kW)	8.8	8.0	7.2	6.4	5.6	10.5	9.7	8.9	8.1	7.3	16.9	15.5	14.2	12.9	11.5	19.8	18.4	17.1	15.7	14.4									
outlet air temperature (°C)	22.3	25.3	28.4	31.5	34.5	26.6	29.6	32.7	35.7	38.8	22.1	25.3	28.5	31.6	34.8	26.1	29.2	32.4	35.6	38.7									
water flow (m³/h)	0.3	0.3	0.3	0.2	0.2	0.4	0.4	0.4	0.3	0.3	0.6	0.6	0.5	0.4	0.4	0.8	0.7	0.6	0.6	0.5									
pressure drop (kPa)	2.0	2.0	1.0	1.0	1.0	3.0	3.0	2.0	2.0	1.0	7.0	6.0	5.0	4.0	3.0	10.0	8.0	7.0	6.0	5.0									

inlet/outlet water temperature	water 70/50 °C					water 80/60 °C				
	0	5	10	15	20	0	5	10	15	20
<b>OSTRO 200W</b>										
III max air flow - 4800 m³/h										
heat output (kW)	29.8	27.4	25.0	22.6	20.2	34.9	32.5	30.1	27.7	25.3
outlet air temperature (°C)	18.9	22.4	25.9	29.4	32.9	22.1	25.6	29.1	32.6	36.1
water flow (m³/h)	1.1	1.0	0.9	0.8	0.7	1.4	1.2	1.1	1.0	0.9
pressure drop (kPa)	22.0	19.0	15.0	12.0	9.0	32.0	27.0	23.0	19.0	15.0
III max air flow - 4000 m³/h										
heat output (kW)	27.5	25.3	23.1	20.9	18.8	32.1	29.9	27.7	25.5	23.4
outlet air temperature (°C)	20.3	23.7	27.0	30.4	33.8	23.7	27.1	30.5	33.8	37.2
water flow (m³/h)	1.0	0.9	0.8	0.7	0.6	1.2	1.1	1.0	0.9	0.8
pressure drop (kPa)	19.0	16.0	13.0	10.0	8.0	26.0	22.0	19.0	16.0	13.0
III max air flow - 2900 m³/h										
heat output (kW)	23.6	21.8	20.0	18.2	16.4	27.4	25.6	23.8	22.0	20.2
outlet air temperature (°C)	22.9	26.0	29.2	32.3	35.5	26.8	29.9	33.1	36.2	39.4
water flow (m³/h)	0.8	0.8	0.7	0.6	0.5	1.0	0.9	0.9	0.7	0.7
pressure drop (kPa)	13.0	11.0	9.0	7.0	5.0	18.0	16.0	13.0	11.0	9.0

inlet air temperature	100E					150E					200E				
	0	5	10	15	20	0	5	10	15	20	0	5	10	15	20
<b>OSTRO 100, 150 and 200 Electric</b>															
heat output (kW)	7.0	7.0	7.0	7.0	7.0	11.0	11.0	11.0	11.0	11.0	14.0	14.0	14.0	14.0	14.0
outlet air temperature (°C)	12	17	22	27	32	13	18	23	28	33	14	19	24	29	34



### Ordering guide

Model	Wt (kg)	Product Codes
<b>Ostro W Hydronic</b>		
OSTRO 100W WATER EXCHANGER	18.0 / 16.5	HPAC310014
OSTRO 150W WATER EXCHANGER	22.6 / 20.5	HPAC310015
OSTRO 200W WATER EXCHANGER	31.0 / 28.0	HPAC310016
<b>Ostro E Electric</b>		
OSTRO 100E ELECTRIC EXCHANGER	17.0	HPAC310017
OSTRO 150E ELECTRIC EXCHANGER	21.5	HPAC310018
OSTRO 200E ELECTRIC EXCHANGER	29.0	HPAC310019
<b>Ostro C Ambient</b>		
OSTRO 100C WITHOUT EXCHANGER	15.0	HPAC310020
OSTRO 150C WITHOUT EXCHANGER	18.5	HPAC310021
OSTRO 200C WITHOUT EXCHANGER	25.0	HPAC310022

Accessories	Product Codes
OSTRO HORIZONTAL HOLDER SET	HPAC310023
OSTRO VERTICAL HOLDER SET	HPAC310024
1/2" STRAIGHT VALVE	HPUH310026
ACTUATOR TS LITE M30X1,5	HPUH310027
<b>Controls</b>	
PANEL COMFORT - SPEED REGULATION & THERMOSTAT	HPUH310009
OSTRO DOOR SWITCH	HPUH310025
OSTRO AIR CURTAIN BMS MODULE	HPUH310028

# Solano® Eco

A modern and lightweight hydronic fan-assisted unit. Eco to heat open areas such as gyms, schools halls, workshops and showrooms, and Eco MAX for larger open spaces such as industrial units, factories and warehouses

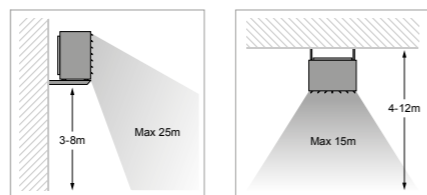
- Applications**  
 Industrial  
 Workshops  
 Retail  
 Showrooms  
 Leisure and sport



- Lightweight for easy installation from <11kg to 25.5kg
- High performance heat output up to 93.9kW
- Air volumes up to 5700 m³/h and 3 speed fan
- Attractive design
- Solano Eco MAX version developed for use with heat pumps

**Finish**  
 Expanded Polypropylene (EPP) - Silver grey.

**Installation**  
 Suitable for wall or ceiling mounting.  
 Bracket design aids installation at also 30° and 60°.



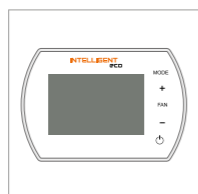
**Specification**  
 To specify state:  
 Lightweight hydronic fan-assisted unit heater at 10-35kW/15-50kW/20-70kW. As Smith's Solano Eco.

Lightweight hydronic fan-assisted unit heater at 25-70kW/35-95kW/40-120kW. As Smith's Solano Eco MAX.

**Controls**



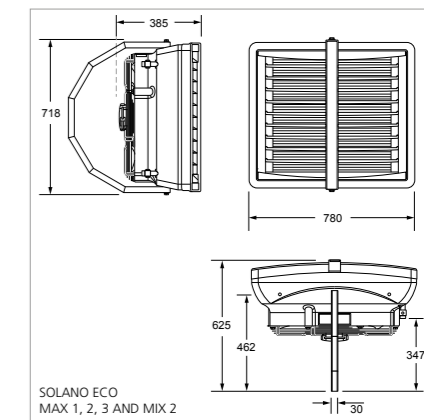
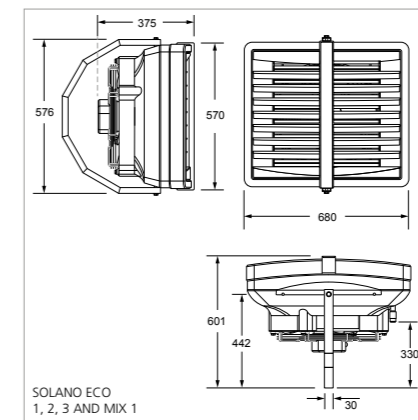
- Panel COMFORT**
- Manual temperature regulation
  - Fan speed change
  - Ventilation in summer season
  - Control up to 3 pcs of HEATER



- Panel INTELLIGENT**
- Weekly thermostat
  - Automatic change of fan speed depending on room temperature
  - BMS communication
  - Control up to 2 pcs of HEATER



- Splitter MULTI 6**
- Control up to 6 pcs of HEATER



Technical data For other heat output data please download the data sheet from our website

	Heater Eco 1	Heater Eco 2	Heater Eco 3	Heater Eco MAX 1	Heater Eco MAX 2	Heater Eco MAX 3	Heater Eco MIX 1	Heater Eco MIX 2
Heat output range*	kW	10-35	15-50	20-70	25-70	35-95	40-120	-
Heat output (90/70°C) / ΔT air temperature increase**	kW/°C	23kW/18°C	39kW/33°C	50kW/48°C	55kW/30°C	74kW/49°C	94kW/60°C	-
Heat output (70/50°C) / ΔT air temperature increase**	kW/°C	16kW/13°C	26kW/22°C	35kW/34°C	40kW/22°C	53kW/35°C	68kW/44°C	-
Heat output (50/30°C) / ΔT air temperature increase**	kW/°C	9kW/8°C	13kW/11°C	20kW/20°C	25kW/14°C	32kW/21°C	42kW/27°C	-
Max air output - III speed	m³/h	3900	3350	2950	5700	5600	5100	4800
Sound level I/II/III speed****	dB (A)	44/52/62	41/50/60	39/48/60	41/50/59	40/48/58	40/48/58	36/44/54
Number of coil rows	-	1	2	3	2	3	3	-
Max working pressure	Mpa		1.6		1.6			
Max airflow range*****	m	24	21	19	26	25	23	13***
Diameter of connection nozzles	inches		3/4"		3/4"			
Power supply	V/Hz A		230/50 1.08A		230/50 2.2A		230/50 1.08A	230/50 2.2A
Motor power	W		250		520		250	520
Motor speed	rpm		1350		1380		1350	1380
Protection class IP	-		IP54		IP54		IP54	
Weight without water/with water	kg	10.8/11.9	12.7/14.8	14.5/16.9	23.6/25.2	25.2/27.4	25.5/28	9.2

**Ordering guide**

Model	Wt (kg)	Product Codes
SOLANO ECO 1 (Incl mounting bracket)	10.8/11.9	HPUH310030
SOLANO ECO 2 (Incl mounting bracket)	12.7/14.8	HPUH310031
SOLANO ECO 3 (Incl mounting bracket)	14.5/16.9	HPUH310032
SOLANO ECO MAX 1 (Incl mounting bracket)	23.6/25.2	HPUH310033
SOLANO ECO MAX 2 (Incl mounting bracket)	25.2/27.4	HPUH310034
SOLANO ECO MAX 3 (Incl mounting bracket)	25.5/28.0	HPUH310035
SOLANO MIX 1 (Incl mounting bracket)	9.2	HPUH310004
SOLANO MIX 2 (Incl mounting bracket)	15.8	HPUH310036

Accessories	Product Codes
SOLANO INSTALLATION BRACKET (ECO 1, 2, 3 AND MIX 1)	HPUH310005
SOLANO MAX INSTALLATION BRACKET (MAX 1, 2, 3 AND MIX 2)	HPUH310037
PANEL INTELLIGENT THERMOSTAT	HPUH310008
PANEL INTELLIGENT REMOTE SENSOR	HPUH310038
PANEL COMFORT - SPEED REGULATION & THERMOSTAT	HPUH310009
MULTI 6 SPLITTER	HPUH310010
ELASTIC CONNECTION FOR HEATING MEDIUM (PAIR)	HPUH310029
ACTUATOR TS LITE M30X1.5	HPUH310006
VALVE ASP/SSP KVS 5,5	HPUH310007

# Aegean® SFC 235H

A range of fan coil units suitable for all kinds of commercial applications, from restaurants and hotels to office developments, with the ability to rapidly heat and cool large areas with much greater efficiency than other similar heating and cooling systems

- Applications**  
 Education  
 Healthcare  
 Places of worship  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom  
 Industrial



- EC motor (BMS compatible for easy integration)
- Low sound levels
- Fully attenuated discharge plenum
- Positive fall drain tray
- Designed and made in the UK

**Finish**  
 Chassis manufactured from 1.2mm hot dipped galvanised steel. All flanges formed inward facing to prevent exposure to bare metal edges.

**Installation**  
 Flow and return connections 15mm. Designed for system pressures up to 10 bar. Fan coils are 4-pipe coils (heating and cooling circuit).

**Customised requirements**  
 All leading manufacturers controls factory fitted. Acoustically lined inlet plenum. Concealed/hidden applications (underfloor, behind false walls and ceilings). Bespoke options.

**Specification**  
 To specify state:  
 Horizontal Fan Coil Unit 235mm high with EC motor. As Smith's Aegean SFC23510 (or SFC23520, SFC23525, SFC23530, SFC23540, SFC23550, SFC23555, SFC23560).

**Ordering information**  
 Aegean is a highly configurable bespoke product. Please contact us to discuss your requirements.

**Performance data**

SIZE	NR	Nominal fan speed (%)	ESP Pa	Airflow l/s	SFP W/l/s	Total cooling		Sensible cooling		LPHW heating	LPHW heating
						5.5/11°C	5.5/11°C	6/12°C	6/12°C	82/71°C	60/50°C
10	35	47	30	65	0.30	1.43	1.05	1.30	0.99	1.62	0.93
20	35	48	30	95	0.28	2.07	1.52	1.83	1.41	3.54	2.43
25	35	47	30	121	0.26	2.78	2.02	2.55	1.91	2.86	1.69
30	35	49	30	154	0.24	3.07	2.33	2.56	2.06	3.52	2.08
40	35	47	30	174	0.22	3.70	2.75	3.29	2.54	4.04	2.41
50	35	47	30	185	0.23	4.29	3.11	3.92	2.92	4.43	2.60
55	35	43	30	190	0.27	4.79	3.39	4.45	3.22	4.82	2.84
60	35	35	30	163	0.27	4.12	2.91	3.84	2.78	4.39	2.60

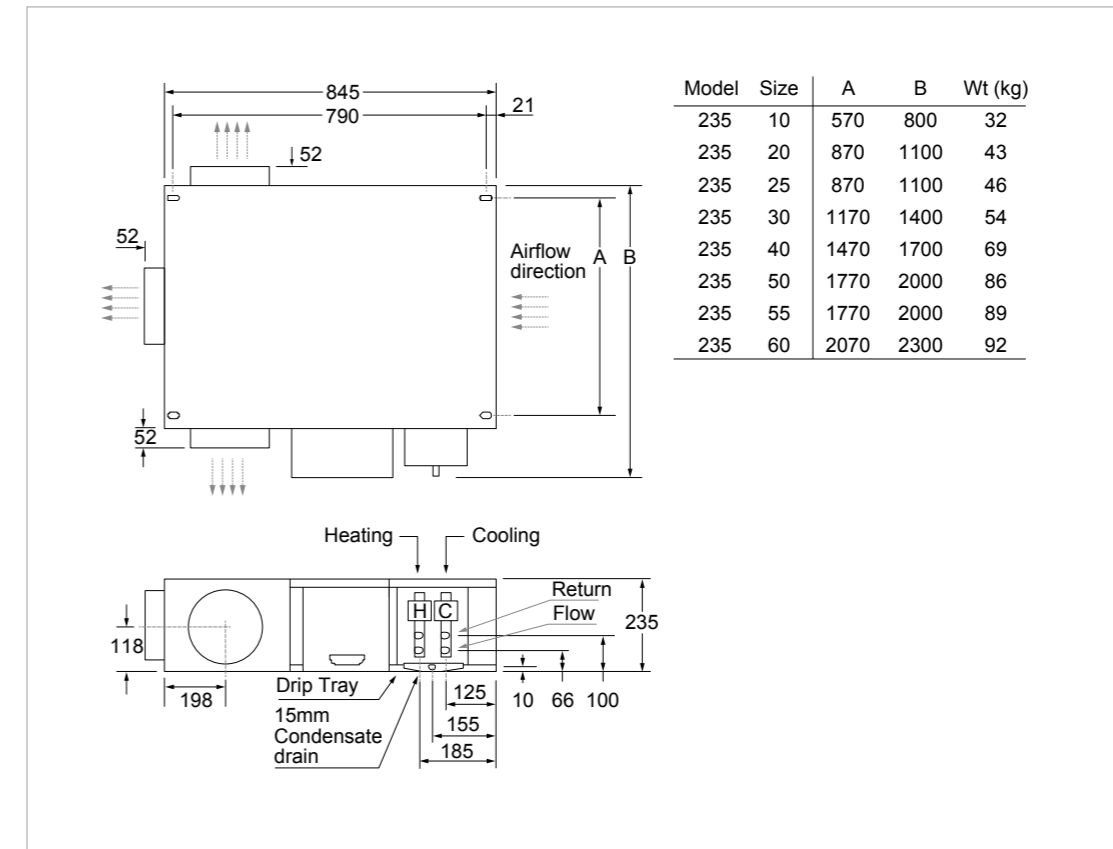
Summer Condition: 23°C EAT, 50% RH (5.5/11°C, 6/12°C)  
 Winter Condition: 21°C EAT (82/71°C, 60/50°C)

**Performance data verification**

Heating and cooling performance has been tested and independently verified by BSRIA to BS EN 1397:2015. Full set up and details available on request.

Acoustic data has been measured and independently verified by SRL Technical Services to BS EN 16583:2015. Please ask us for our acoustic information pack for more details, including laboratory measured sound power data.

**Dimensions**



# Aegean® SFC 260H

A range of fan coil units suitable for all kinds of commercial applications, from restaurants and hotels to office developments, with the ability to rapidly heat and cool large areas with much greater efficiency than other similar heating and cooling systems

- Applications**  
 Education  
 Healthcare  
 Places of worship  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom  
 Industrial



- EC motor (BMS compatible for easy integration)
- Low sound levels
- Fully attenuated discharge plenum
- Positive fall drain tray
- Designed and made in the UK

**Finish**  
 Chassis manufactured from 1.2mm hot dipped galvanised steel. All flanges formed inward facing to prevent exposure to bare metal edges.

**Installation**  
 Flow and return connections 15mm. Designed for system pressures up to 10 bar. Fan coils are 4-pipe coils (heating and cooling circuit).

**Customised requirements**  
 All leading manufacturers controls factory fitted. Acoustically lined inlet plenum. Concealed/hidden applications (underfloor, behind false walls and ceilings). Bespoke options.

**Specification**  
 To specify state:  
 Horizontal Fan Coil Unit 260mm high with EC motor. As Smith's Aegean SFC26010 (or SFC26020, SFC26025, SFC26030, SFC26040, SFC26050, SFC26055, SFC26060).

**Ordering information**  
 Aegean is a highly configurable bespoke product. Please contact us to discuss your requirements.

## Performance data

SIZE	NR	Nominal fan speed (%)	ESP Pa	Airflow l/s	SFP W/l/s	Total cooling		Sensible cooling		LPHW heating	LPHW heating
						5.5/11°C	5.5/11°C	6/12°C	6/12°C	82/71°C	60/50°C
10	35	41	30	80	0.21	0.98	0.83	0.88	0.76	1.39	0.76
20	35	37	30	99	0.21	1.51	1.24	1.33	1.13	4.62	3.18
25	35	32	30	109	0.21	1.96	1.53	1.77	1.43	2.28	1.32
30	35	30	30	124	0.21	2.27	1.76	2.02	1.62	2.82	1.66
40	35	33	30	194	0.22	3.50	2.74	3.11	2.52	3.80	2.26
50	35	33	30	175	0.21	3.41	2.60	3.05	2.41	3.84	2.24
55	35	30	30	189	0.21	4.13	3.04	3.61	2.78	4.84	2.86
60	35	27	30	184	0.21	4.39	3.15	3.96	2.94	5.28	3.15

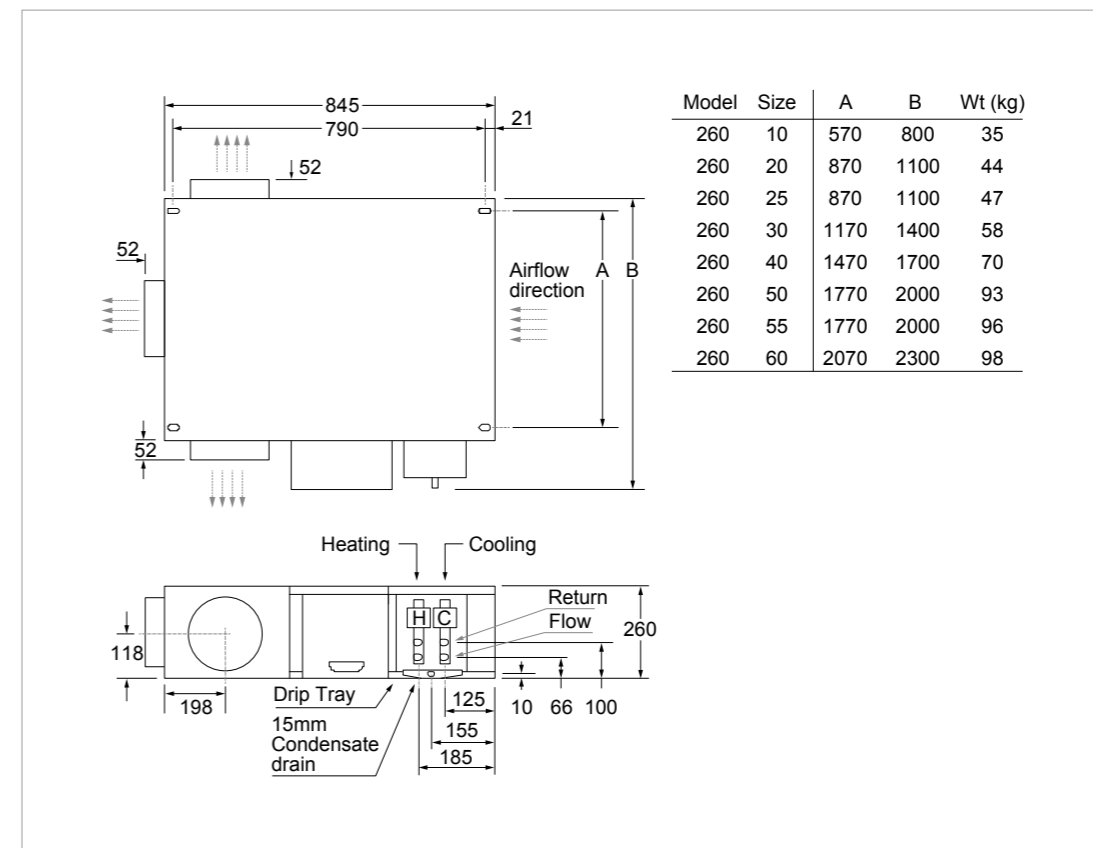
Summer Condition: 23°C EAT, 50% RH (5.5/11°C, 6/12°C)  
 Winter Condition: 21°C EAT (82/71°C, 60/50°C)

## Performance data verification

Heating and cooling performance has been tested and independently verified by BSRIA to BS EN 1397:2015. Full set up and details available on request.

Acoustic data has been measured and independently verified by SRL Technical Services to BS EN 16583:2015. Please ask us for our acoustic information pack for more details, including laboratory measured sound power data.

## Dimensions



# Aegean® SVFC 500

A range of fan coil units suitable for all kinds of commercial applications, from restaurants and hotels to office developments, with the ability to rapidly heat and cool large areas with much greater efficiency than other similar heating and cooling systems

- Applications**  
 Education  
 Healthcare  
 Places of worship  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom  
 Industrial



- EC motor (BMS compatible for easy integration)
- Low sound levels
- Fully attenuated discharge plenum
- Positive fall drain tray
- Designed and made in the UK

**Finish**  
 Chassis manufactured from 1.2mm hot dipped galvanised steel. All flanges formed inward facing to prevent exposure to bare metal edges.

**Installation**  
 Flow and return connections 15mm. Designed for system pressures up to 10 bar. Fan coils are 4-pipe coils (heating and cooling circuit).

**Customised requirements**  
 All leading manufacturers controls factory fitted. Acoustically lined inlet plenum. Concealed/hidden applications (underfloor, behind false walls and ceilings). Bespoke options.

**Specification**  
 To specify state:  
 Vertical Fan Coil Unit 500mm high with EC motor. As Smith's Aegean SVFC50010 (or SVFC50020, SVFC50025, SVFC50030, SVFC50040, SVFC50050, SVFC50055, SVFC50060).

**Ordering information**  
 Aegean is a highly configurable bespoke product. Please contact us to discuss your requirements.

**Performance data**

SIZE	NR	Nominal fan speed (%)	ESP Pa	Airflow l/s	SFP W/l/s	Total cooling		Sensible cooling		LPHW heating	
						5.5/11°C	5.5/11°C	6/12°C	6/12°C	82/71°C	60/50°C
10	35	56	30	119	0.12	1.56	1.33	1.40	1.22	1.45	0.76
20	35	49	30	120	0.16	1.97	1.59	1.77	1.48	5.30	3.73
25	35	43	30	121	0.20	2.00	1.61	1.80	1.50	2.78	1.62
30	35	36	30	116	0.24	1.53	1.30	1.42	1.23	3.06	1.81
40	35	34	30	118	0.28	1.68	1.40	1.56	1.33	3.46	2.07
50	35	34	30	161	0.27	2.25	1.89	2.08	1.78	5.63	3.37
55	35	34	30	184	0.24	2.96	2.40	2.41	2.05	6.00	3.58
60	35	38	30	228	0.24	4.01	3.16	3.52	2.89	6.41	3.82

Summer Condition: 23°C EAT, 50% RH (5.5/11°C, 6/12°C)  
 Winter Condition: 21°C EAT (82/71°C, 60/50°C)

**Performance data verification**

Heating and cooling performance has been tested and independently verified by BSRIA to BS EN 1397:2015. Full set up and details available on request.

Acoustic data has been measured and independently verified by SRL Technical Services to BS EN 16583:2015. Please ask us for our acoustic information pack for more details, including laboratory measured sound power data.

**Dimensions**

Unit size	W	X	Y	Z	Wt(kg)
50010	970	510	512	583	30
50020	1270	810	812	883	36
50025	1270	810	812	883	40
50030	1570	1110	1112	1183	47
50040	1870	1410	1412	1483	58
50050	2170	1710	1712	1783	66
50055	2170	1710	1712	1783	77
50060	2470	2010	2012	2083	80

# Pedestal

A new range of freestanding natural convector pedestal heaters, Kiosk, Trafalgar and Tube in a variety of shapes, lengths and finishes

**Applications**  
 Education  
 Healthcare  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom



Perfect for beneath large windows, Smith's freestanding pedestal heaters help to minimise the problem of downward cold airflow with commonly associated with glazed façades

Fitting into the smallest of spaces Smith's range of freestanding pedestal heaters provide a stylish solution without the need for wall hung heaters

Lengths from 0.5m to 2m

Perfect for where sub-floor trench heating is not possible

Heat source: boiler or heat pump

### Finish

Outer casing: 1.2mm zintec. Polyester powder coated.  
 Paint specification: textured white BS 4800 00A01 18% gloss.

### Installation

Flow and return connections 22mm copper.  
 Designed for system pressures up to 10 bar.  
 Suitable for two pipe central heating systems only.

### Customised requirements

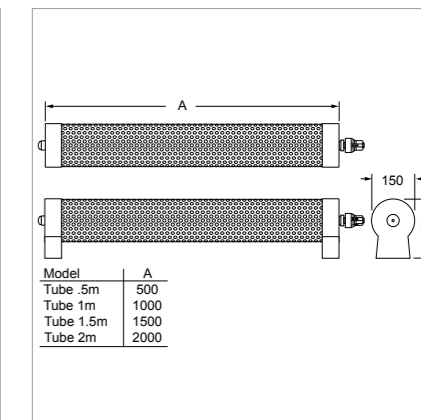
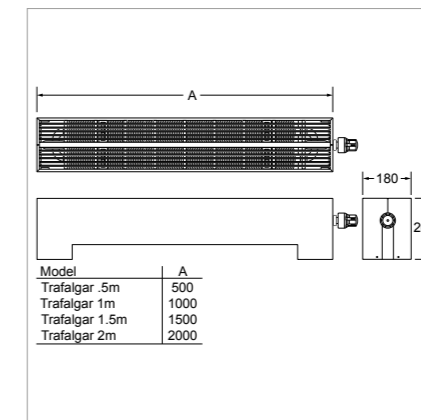
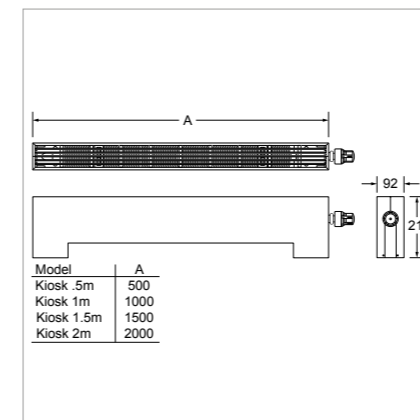
Any colour finishes are available on request.  
 Price and availability will be confirmed at the time of order.

### Controls

Supplied with TRV and lockshield valve.

### Specification

To specify state:  
 Low height freestanding pedestal heater in linear form with rectangular profile, large rectangular profile or circular profile.  
 As Smith's Kiosk, Trafalgar or Tube.



### Heat output

Product length	ΔT °C					
	20 ΔT	30 ΔT	40 ΔT	50 ΔT	60 ΔT	70 ΔT
<b>Kiosk</b>						
0.5m	22	39	60	83	109	136
1.0m	73	133	202	281	367	459
1.5m	125	226	345	479	626	783
2.0m	176	320	487	677	884	1106
<b>Trafalgar</b>						
0.5m	39	72	110	154	201	253
1.0m	133	243	373	519	681	856
1.5m	226	414	635	885	1160	1459
2.0m	320	585	898	1250	1640	2062
<b>Tube</b>						
0.5m	36	64	96	132	170	212
1.0m	88	157	237	325	421	524
1.5m	141	251	378	519	671	836
2.0m	193	344	519	712	922	1148

Entering ambient air temperature of 20°C  
 Outputs in Watts. In accordance with EN442 - BSRIA verified

### 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)

Flow temperature + Return temperature  
 Example: 80°C + 70°C divided by 2 = 75°C

### Ordering guide

Listed below are the Pedestal in white complete with TRV.

Description	Wt (kg)	Product Codes
<b>Kiosk</b>		
PEDESTAL KIOSK WHITE 500	5	HPKI100025
PEDESTAL KIOSK WHITE 1000	10	HPKI100028
PEDESTAL KIOSK WHITE 1500	15	HPKI100031
PEDESTAL KIOSK WHITE 2000	20	HPKI100034
<b>Trafalgar</b>		
PEDESTAL TRAFALGAR WHITE 500	8	HPTR110025
PEDESTAL TRAFALGAR WHITE 1000	16	HPTR110028
PEDESTAL TRAFALGAR WHITE 1500	24	HPTR110031
PEDESTAL TRAFALGAR WHITE 2000	32	HPTR110034
<b>Tube</b>		
PEDESTAL TUBE WHITE 500	5	HPTU110001
PEDESTAL TUBE WHITE 1000	10	HPTU110004
PEDESTAL TUBE WHITE 1500	15	HPTU110007
PEDESTAL TUBE WHITE 2000	20	HPTU110010

# Sureline®

Provides gentle, discreet and efficient low-level warmth and is the ideal heating solution for areas where wall space is limited - rooms such as loft conversions and new-builds

- Applications**  
 Education  
 Healthcare  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom  
 Residential



Simple to install along the skirting in any room, Sureline is an efficient natural convector that provides discreet heating

Supplied as standard in white but casing can be supplied in any colour

**Finish**

Outer casing 0.7mm zinc coated steel.  
 Polyester powder-coated RAL 9010.  
 Each length includes casing, element, backplate and joining strip.  
 Casing only includes casing, backplate and joining strip.

**Installation**

Minimum clearance above floor 50mm.  
 Flow and return connections 22mm copper.  
 Designed for system pressures up to 10 bar.  
 Suitable for two-pipe central heating systems only.

**Attachments**

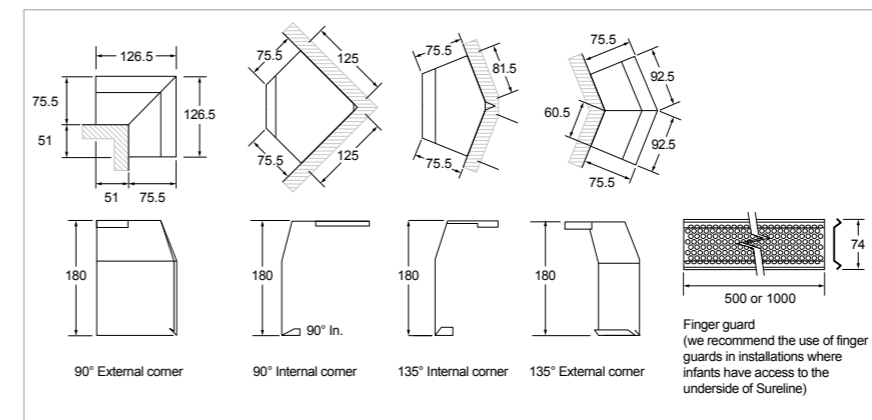
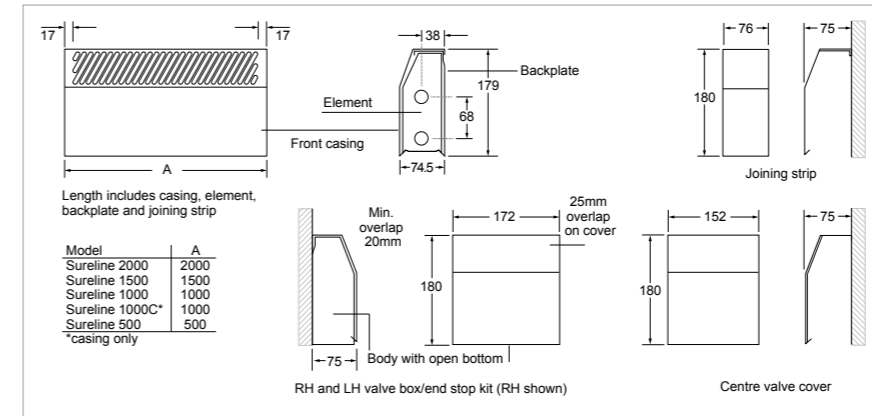
- Casing only (1000mm)
- LH valve box/end cap kit
- RH valve box/end cap kit
- Centre valve cover
- 90° internal cover
- 90° external cover
- 135° internal cover
- 135° external cover
- Finger guard 500 (500mm)
- Finger guard 1000 (1000mm)
- Element (1000mm)

**Customised requirements**

We are able to offer casings painted in any colour.  
 Price and availability will be confirmed at the time of order.

**Specification**

To specify state:  
 Skirting level perimeter hydronic heat emitter in white.  
 As Smith's Sureline 500, 1000, 1500, 2000.



Heat Output For other heat output data please download the data sheet from our website

	Flow Rate L/h (G/h)	Btu/h/m @ average water temperature					W/m @ average water temperature						
		50°C	55°C	60°C	65°C	70°C	75°C	50°C	55°C	60°C	65°C	70°C	75°C
Two supplies - Parallel	920 (200)	1310	1570	1820	2070	2300	2560	380	460	530	610	670	750
Bottom supply - Top return	920 (200)	1030	1250	1460	1710	1920	2140	300	370	430	500	560	630

**Ordering guide**

Model	Packed Wt (kg)	Product Codes	Attachments	Product Codes
SURELINE 500	5	HPSL30001	SURELINE CASING 1000MM	HASL30101
SURELINE 1000	7	HPSL30002	SURELINE LEFT HAND VALVE COVER/END CAP	HASL30102
SURELINE 1500	10	HPSL30003	SURELINE RIGHT HAND VALVE COVER/END CAP	HASL30103
SURELINE 2000	14	HPSL30004	SURELINE CENTRE VALVE COVER	HASL30104
			SURELINE 90° INTERNAL CORNER	HASL30105
			SURELINE 90° EXTERNAL CORNER	HASL30106
			SURELINE 135° INTERNAL CORNER	HASL30107
			SURELINE 135° EXTERNAL CORNER	HASL30108
			SURELINE FINGER GUARD 500MM	HASL30109
			SURELINE FINGER GUARD 1000MM	HASL30110
			SURELINE ELEMENT 1000MM	HASL30111

# Ecovector® High

The Ecovector Hydronic fan convectors provide effective and dependable heating for both small and large commercial areas, fitted unobtrusively above head height

- Applications**  
 Education  
 Healthcare  
 Places of worship  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom  
 Industrial  
 Residential



They work particularly well in shops and libraries, where lower wall space is limited

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

**Motor**  
AC only.

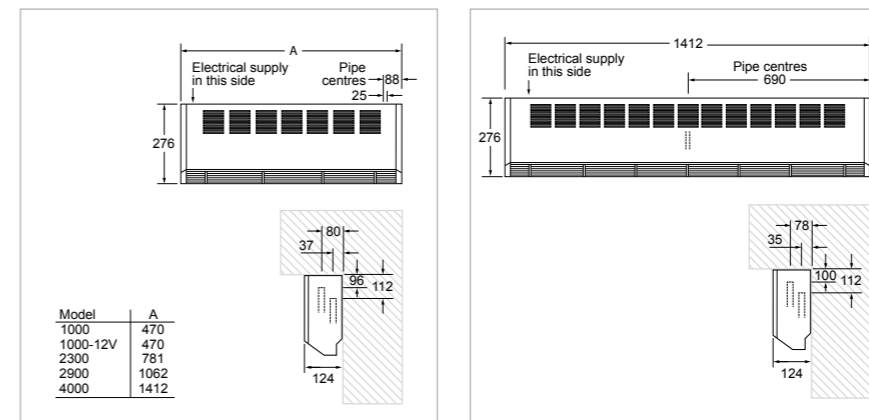
**Finish**  
 Front casing: zinc-coated steel.  
 Polyester powder-coated RAL 9010.  
 Side panels: polymer eggshell white.

**Installation**  
 Maximum installation height 2.1m (6'11") to underside.  
 No top or side clearance required.  
 Unit must be earthed (except model 1000-12V).  
 Suitable for two-pipe central heating systems.  
 Patress box not supplied for transformer (model 1000-12V).

**Commissioning**  
 Check water is hot enough to activate the low temperature cut-out thermostat. The inclusion of an automatic air vent at the highest point is recommended to avoid possible air locks.

**Controls**  
 Two rocker switches - normal/off/boost, heating/fan-only.  
 Low temperature cut out thermostat, set to energise fan at approximately 35°C.

**Specification**  
 To specify state:  
 High level hydronic fan convector in white.  
 As Smith's Ecovector High 1000, 2300, 2900, 4000, 1000-12V.



Heat Output For other heat output data please visit our website

Model	Heat Output at 75°		Heat Output at 45°		Flow & return connections	Mains cable	Transformer	Fused spur	Total Power Consumption	
	Normal (kW)	Boost (kW)	Normal (kW)	Boost (kW)					Normal (Watts)	Boost (Watts)
ECOVECTOR HL 1000	1.0	1.2	0.5	0.6	15mm	1.5m	n/a	3A	20	25
ECOVECTOR HL 2300	2.1	2.8	1.1	1.4	15mm	1.5m	n/a	3A	20	32
ECOVECTOR HL 2900	2.7	4.0	1.4	2.0	15mm	1.5m	n/a	3A	33	50
ECOVECTOR HL 4000	3.7	4.8	1.8	2.5	22mm	1.5m	n/a	3A	40	60
ECOVECTOR HL 1000-12V	1.0	1.2	0.5	0.5	15mm	0.45m	•	3A	20	25

Model	Water Capacity (Litres)	Sound Levels		Casting colour	Fan-only
		Normal (dBA)	Boost (dBA)		
ECOVECTOR HL 1000	0.28	32	40	white	•
ECOVECTOR HL 2300	0.32	34	50	white	•
ECOVECTOR HL 2900	0.52	37	51	white	•
ECOVECTOR HL 4000	1.04	39	52	white	•
ECOVECTOR HL 1000-12V	0.28	32	39	white	•

Heat outputs tested in accordance with BS4856 using entering water temperature and 340 l/h (75gph) flow rate. Sound levels measured at 1.5m.

### Ordering guide

Model	Packed Wt (kg)	Product Codes
ECOVECTOR HL 1000	7	HPEV50011
ECOVECTOR HL 2300	11	HPEV50012
ECOVECTOR HL 2900	15	HPEV50013
ECOVECTOR HL 4000	18	HPEV50014
ECOVECTOR HL 1000-12V	8	HPEV50015

Accessories	
ROOM THERMOSTAT HARD WIRED	HAGA95001
ROOM THERMOSTAT TAMPER PROOF	HAGA95004



# Ecovector® Low

Ecovector Low Level fan convectors provide warmth from the floor upwards and are more energy efficient and effective than radiators

## Applications

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



The Ecovector can heat up a room more quickly than radiators, thereby reducing the amount of time your boiler or heat pump is running - making it extremely efficient and cost effective

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

Ideal for new and existing developments, due to ease of installation, the Ecovector is available in a range of models to suit varying room sizes and heat output requirements

### Motor

AC only.

### Finish

Front casing: zinc-coated steel.  
Polyester powder-coated RAL 9010.  
Side panels: polymer eggshell white.

### Installation

Mounting bracket supplied.  
Unit must be earthed.  
Suitable for two-pipe central heating systems.  
Minimum height above floor level 150mm.  
Maximum height above floor level 500mm.

### Commissioning

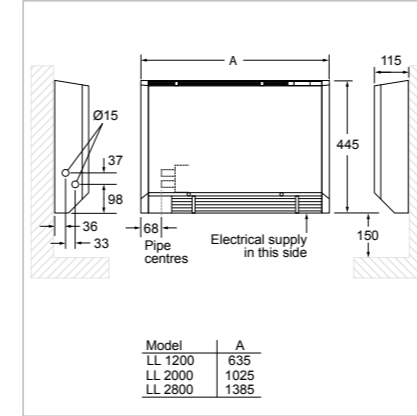
Check water is hot enough to activate the selectable low temperature cut-out thermostat.

### Control

Rocker switch - normal/off/boost.  
Built-in room thermostat.  
Low temperature cut-out thermostat set to energise fan at approximately 35°C.

### Specification

To specify state:  
Low level hydronic fan convector in white.  
As Smith's Ecovector Low LL1200, LL2000, LL2800.



Heat Output For other heat output data please visit our website

Model	Heat Output at 75°		Heat Output at 45°	
	Normal (kW)	Boost (kW)	Normal (kW)	Boost (kW)
ECOVECTOR LL 1200	1.1	1.4	0.5	0.6
ECOVECTOR LL 2000	1.9	2.4	0.9	1.1
ECOVECTOR LL 2800	2.6	3.2	1.2	1.5

Model	Water Capacity (Litres)	Sound Levels		Casting colour	Fan-only	Flow & return connections	Mains cable	Transformer	Fused spur	Total Power Consumption	
		Normal (dBA)	Boost (dBA)							Normal (Watts)	Boost (Watts)
ECOVECTOR LL 1200	0.29	32	38	white	n/a	15mm	1.5m	n/a	3A	17	21
ECOVECTOR LL 2000	0.58	35	40	white	n/a	15mm	1.5m	n/a	3A	26	55
ECOVECTOR LL 2800	0.83	37	42	white	n/a	15mm	1.5m	n/a	3A	43	76

Heat outputs tested in accordance with BS4856 using entering water temperature and 340 l/h (75gph) flow rate. Sound levels measured at 1.5m.

### Ordering guide

Model	Packed Wt (kg)	Product Codes
ECOVECTOR LL 1200	12	HPEV50001
ECOVECTOR LL 2000	17	HPEV50002
ECOVECTOR LL 2800	24	HPEV50003

# Ecovector® II Low

Ecovector II Low Level fan convectors provide warmth from a low level upwards and are more energy efficient and effective than radiators

- Applications**  
 Education  
 Healthcare  
 Places of worship  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom  
 Industrial  
 Residential



The Ecovector II can heat up a room more quickly than radiators, thereby reducing the amount of time your boiler or heat pump is running - making it extremely efficient and cost effective

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

Ideal for new and existing developments, due to ease of installation, the Ecovector is available in a range of models to suit varying room sizes and heat output requirements

**Motor**  
AC only.

**Finish**  
Front casing: zinc-coated steel.  
Polyester powder-coated RAL 9016.

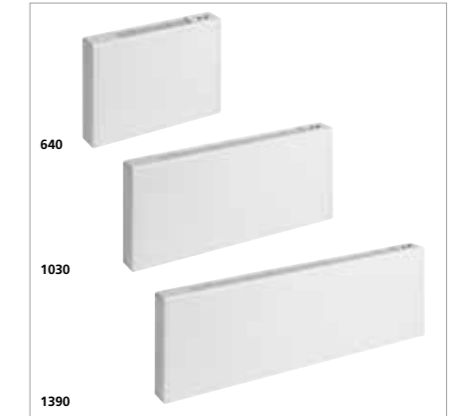
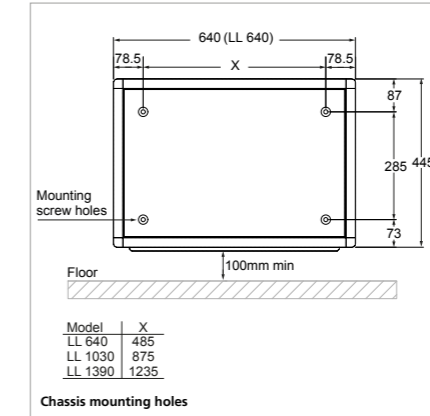
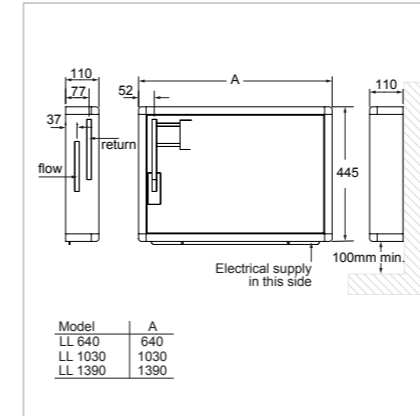
**Installation**  
This heating appliance is intended for mounting on a wall at low level via the chassis mounting holes. The minimum recommended installation height is 100mm from the floor. There is no clearance required on either side of the heater.

Ecovector II is designed for use on standard two-pipe pumped central heating systems where the system hot water is generated from either a boiler or renewable sources.

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

**Control**  
Rocker switch - normal/off/boost.  
Wireless room thermostat to be positioned on wall.  
Low temperature cut-out thermostat set to energise fan at approximately 33°C.  
Fan only switch.

**Specification**  
To specify state:  
Low level hydronic fan convector in white.  
As Smith's Ecovector II LL640/LL1030/LL1390



## Heat output

Model	Heat Output at 80°		Heat Output at 75°		Heat Output at 70°		Heat Output at 65°		Heat Output at 60°	
	Normal (kW)	Boost (kW)	Normal (kW)	Boost (kW)	Normal (kW)	Boost (kW)	Normal (kW)	Boost (kW)	Normal (kW)	Boost (kW)
ECOVECTOR II LL 640	1.2	1.6	1.1	1.4	1.0	1.3	0.9	1.1	0.8	1.0
ECOVECTOR II LL 1030	2.0	2.6	1.9	2.4	1.6	2.2	1.5	1.9	1.3	1.7
ECOVECTOR II LL 1390	2.8	3.5	2.6	3.2	2.3	2.9	2.0	2.6	1.9	2.4

Model	Heat Output at 55°		Heat Output at 50°		Heat Output at 45°		Heat Output at 40°	
	Low (kW)	Medium (kW)	Low (kW)	Medium (kW)	Low (kW)	Medium (kW)	Low (kW)	Medium (kW)
ECOVECTOR II LL 640	0.7	0.8	0.6	0.7	0.5	0.6	0.4	0.5
ECOVECTOR II LL 1030	1.2	1.6	1.0	1.3	0.9	1.1	0.7	0.8
ECOVECTOR II LL 1390	1.9	2.1	1.3	1.8	1.2	1.5	1.0	1.2

Model	Flow & return connections	Mains cable	Transformer	Fused spur	Total Power Consumption		Water Capacity (Litres)	Sound Levels		Casting colour	Fan-only
					Normal (Watts)	Boost (Watts)		Normal (dBA)	Boost (dBA)		
ECOVECTOR II LL 640	15mm	1.5m	n/a	3A	17	21	0.29	32	38	white	yes
ECOVECTOR II LL 1030	15mm	1.5m	n/a	3A	26	55	0.58	35	40	white	yes
ECOVECTOR II LL 1390	15mm	1.5m	n/a	3A	43	76	0.83	37	42	white	yes

Heat outputs tested in accordance with BS4856 using entering water temperature and 340 l/h (75gph) flow rate. Fan-only option operational only when central heating system is switched off. Sound levels measured at 1.5m.

## Ordering guide

Model	Packed Wt (kg)	Product Codes
ECOVECTOR II LL 640	14	HPEV50004
ECOVECTOR II LL 1030	19	HPEV50005
ECOVECTOR II LL 1390	26	HPEV50006

# Ecovector® II Smart Low Level

Ecovector II Low Level fan convectors provide warmth from a low level upwards and are more energy efficient and effective than radiators

- Applications**  
 Education  
 Healthcare  
 Places of worship  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom  
 Industrial  
 Residential



The Ecovector II can heat up a room more quickly than radiators, thereby reducing the amount of time your boiler or heat pump is running - making it extremely efficient and cost effective

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

Ideal for new and existing developments, due to ease of installation, the Ecovector is available in a range of models to suit varying room sizes and heat output requirements

**Motor**  
AC only

**Finish**  
 Front casing: zinc-coated steel.  
 Polyester powder-coated RAL 9016.

**Installation**  
 This heating appliance is intended for mounting on a wall at low level via the chassis mounting holes. The minimum recommended installation height is 100mm from the floor. There is no clearance required on either side of the heater.

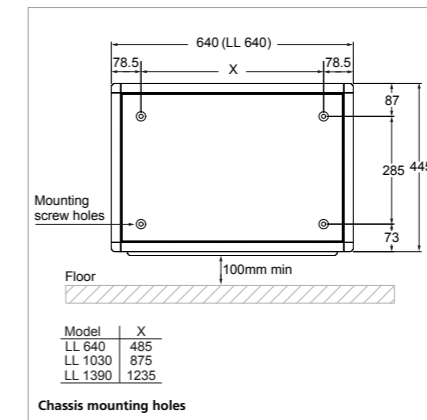
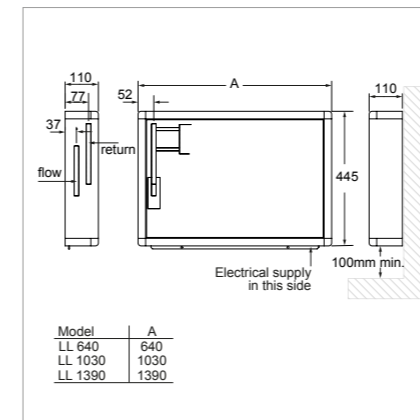
Ecovector II is designed for use on standard two-pipe pumped central heating systems where the system hot water is generated from either a boiler or renewable sources.

**Commissioning**  
 Check water is hot enough to activate the low temperature cut-out thermostat when in heating mode. Check functionality of thermostat and link to Hub if required.

**Control**  
 Built-in smart control with manual/auto fan speed, time and temperature control.

Capable of being used with App when a Hub is used.

**Specification**  
 To specify state:  
 Low level hydronic fan convector in white.  
 As Smith's Ecovector II Smart Low Level LL640/LL1030/LL1390.



## Heat output

Model	Heat Output at 80°			Heat Output at 75°			Heat Output at 70°			Heat Output at 65°			Heat Output at 60°		
	Low (kW)	Normal (kW)	Boost (kW)	Low (kW)	Normal (kW)	Boost (kW)	Low (kW)	Normal (kW)	Boost (kW)	Low (kW)	Normal (kW)	Boost (kW)	Low (kW)	Normal (kW)	Boost (kW)
ECOVECTOR II SMART LL 640	1.2	1.6	2.0	1.1	1.4	1.7	1.0	1.3	1.6	0.9	1.1	1.3	0.8	1.0	1.2
ECOVECTOR II SMART LL 1030	2.0	2.6	3.2	1.9	2.4	2.9	1.6	2.2	2.8	1.5	1.9	2.3	1.3	1.7	2.1
ECOVECTOR II SMART LL 1390	2.8	3.5	4.2	2.6	3.2	3.8	2.3	2.9	3.5	2.0	2.6	3.2	1.9	2.4	2.9

Model	Heat Output at 55°			Heat Output at 50°			Heat Output at 45°			Heat Output at 40°		
	Low (kW)	Normal (kW)	Boost (kW)	Low (kW)	Normal (kW)	Boost (kW)	Low (kW)	Normal (kW)	Boost (kW)	Low (kW)	Normal (kW)	Boost (kW)
ECOVECTOR II SMART LL 640	0.7	0.8	0.9	0.6	0.7	0.8	0.5	0.6	0.7	0.4	0.5	0.6
ECOVECTOR II SMART LL 1030	1.2	1.6	1.9	1.0	1.3	1.6	0.9	1.1	1.3	0.7	0.8	0.9
ECOVECTOR II SMART LL 1390	1.9	2.1	2.3	1.3	1.8	2.2	1.2	1.5	1.8	1.0	1.2	1.4

Model	Flow & return connections				Total Power Consumption			Water Capacity (Litres)	Sound Levels			Casting colour	Fan-only	
	Flow	return	Mains cable	Trans-former	Fused spur	Low (Watts)	Normal (Watts)		Boost (Watts)	Low (dBA)	Medium (dBA)			High (dBA)
ECOVECTOR II SMART LL 640	15mm	15mm	1.5m	n/a	3A	9	12	21	0.29	32	38	TBC	white	n/a
ECOVECTOR II SMART LL 1030	15mm	15mm	1.5m	n/a	3A	12	16	29	0.58	35	40	TBC	white	n/a
ECOVECTOR II SMART LL 1390	15mm	15mm	1.5m	n/a	3A	24	33	58	0.83	37	42	TBC	white	n/a

Heat outputs tested in accordance with BS4856 using entering water temperature and 340 l/h (75gph) flow rate. Sound levels measured at 1.5m.

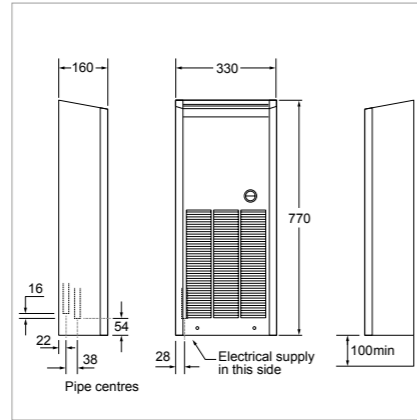
## Ordering guide

Model	Packed Wt (kg)	Product Codes
ECOVECTOR II SMART LL 640	14	HPEV50022
ECOVECTOR II SMART LL 1030	19	HPEV50023
ECOVECTOR II SMART LL 1390	26	HPEV50024

# Ecovector® Vertical

Ideal for hallways, corridors, alcoves and other places where space is limited. Ecovector can heat up a room more quickly than radiators, thereby reducing the amount of time your boiler or heat pump is running - making it extremely efficient and cost effective

- Applications**  
 Education  
 Healthcare  
 Places of worship  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom  
 Industrial  
 Residential



Ideal for new and existing building developments

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

**Motor**  
AC only.

**Finish**  
 Front casing and side panels: zinc-coated steel.  
 Polyester powder-coated RAL 9010.

**Installation**  
 Mounting bracket supplied.  
 Unit must be earthed.  
 Suitable for two-pipe central heating systems.  
 Minimum height above floor level 150mm.  
 Maximum height above floor level 500mm.

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

**Controls**

Rocker switch - normal/off/boost.  
 Low temperature cut-out thermostat set to energise fan at approximately 35°C.  
 Wireless wall mounted thermostat included with this product.

**Specification**

To specify state:  
 Vertical floor mounted hydronic fan convector in white.  
 As Smith's Ecovector Vertical.

**Heat Output** For other heat output data please visit our website

Model	Heat Output at 75°		Heat Output at 45°		Flow & return connections	Mains cable	Transformer	Fused spur	Total Power Consumption	
	Normal (kW)	Boost (kW)	Normal (kW)	Boost (kW)					Normal (Watts)	Boost (Watts)
ECOVECTOR VE 2500	2.3	2.4	1.1	1.1	15mm	1.5m	n/a	3A	28	36

Model	Water Capacity (Litres)	Sound Levels		Casting colour	Fan-only
		Normal (dBA)	Boost (dBA)		
ECOVECTOR VE 2500	0.75	36	39	white	n/a

**Ordering guide**

Model	Packed Wt (kg)	Product Codes
ECOVECTOR VE 2500	15	HPEV50021

Heat outputs tested in accordance with BS4856 using entering water temperature and 340 l/h (75gph) flow rate. Sound levels measured at 1.5m.



# Multivector®

Low level wall mounted fan convector with Smart Controls developed for use with heat pumps

## Applications

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



- Energy efficient EC motor
- Ideal for use with heat pumps
- Low water content enabling fast response
- Two pipe heating
- Low surface temperature compared to a radiator
- Smart Control – time, temperature and speed control
- App – when paired with UG600 gateway
- 3 selectable speed
- Designed and manufactured in the UK

### Motor

EC only.

### Finish

Outer casing zinc coated steel.  
Polyester, powder coated RAL 9010.

### Installation

Suitable for two-pipe central heating systems.  
Minimum height above floor level 150mm.  
Maximum height above floor level 500mm.  
Pipework access holes on the rear and underside.  
Bleed valve accessible on removal of front casing.  
Unit must be earthed.

### Control

Flush mounted Smart Control: fan speed, time programming, temperature control and valve/actuator.  
App control - when used with UG600 gateway.

### Attachment

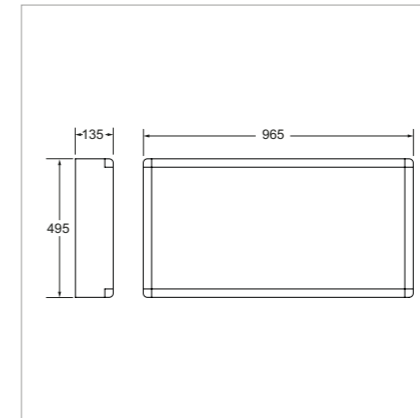
To utilise "Salus Smart Home" app a UG600 gateway must be installed and connected to the local network.

### Customised requirements

For bespoke specification, please contact us to discuss your requirements.

### Specification

To specify state: Low level wall mounted fan convector 970mm, 1170mm or 1370mm wide with EC motor with Time and Temperature control built in. As Smith's Multivector 970, 1170 or 1370



## Heat output

Model	Fan Speed	Heating Capacity - EWT °C / kW									Heating Flow Rate (l/h)	Sound level NR
		40°C	45°C	50°C	55°C	60°C	65°C	70°C	75°C	80°C		
MULTIVECTOR 970	LOW	0.51	0.62	0.74	0.85	0.97	1.10	1.24	1.37	1.50	340	26
	MEDIUM	0.70	0.82	0.94	1.06	1.18	1.38	1.59	1.79	1.99	340	32
	HIGH	0.91	1.11	1.30	1.50	1.69	1.89	2.09	2.29	2.48	340	37

BS4856; Methods for testing and rating fan coil units, unit heaters and unit coolers.  
Tested with shown EWT & 18°C EAT.  
Sound Level measured at SRL (Sound Research Laboratory Testing) in accordance with BS 4856-4:1997.

## Ordering guide

Listed below are the basic models. For all other variants please visit our website for the most up to date information.

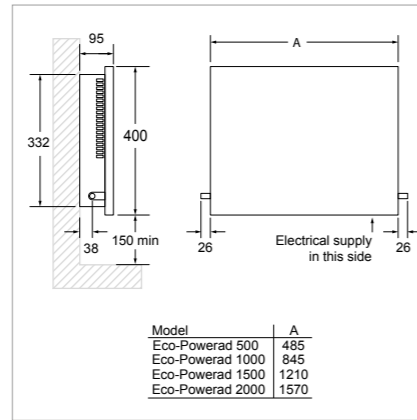
Model	Packed Wt (kg)	Product Codes
MULTIVECTOR 970	22.5	HPMV50501
MULTIVECTOR 1170		COMING SOON
MULTIVECTOR 1370		COMING SOON

For bespoke specifications, including electric heating capability please contact us to discuss

# Eco-Powerad®

The Eco-Powerad is the fan convector of the future - energy efficient, responsive and suitable for installation within most wet central heating systems, driven by either boilers or low temperature renewable technology

- Applications**  
 Education  
 Healthcare  
 Places of worship  
 Leisure and sport  
 Office  
 Hospitality  
 Retail  
 Showroom  
 Residential



Compact, with smooth lines to achieve visual simplicity, the Eco-Powerad also features low surface temperature casing for complete safety and possesses a very low operating sound - between 28 and 32 decibels

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

Supplied as standard in white but casing can be supplied in any colour

**Motor**  
AC only.

**Finish**  
Front casing: zinc coated steel.  
Polyester powder-coated RAL 9010.

**Installation**  
Mounting bracket supplied.  
Unit must be earthed.  
Suitable for two-pipe central heating systems.  
Minimum height above floor level 150mm.  
Maximum height above floor level 500mm.

**Commissioning**  
Check water is hot enough to activate the low temperature cut-out thermostat.  
Ensure system is balanced for even heat distribution.

**Control**  
Low temperature cut-out thermostat, set to energise fan at approximately 35°C.  
Suitable for thermostatic radiator valves (TRV) - not supplied.  
Rocker switch - normal/low.

**Specification**  
To specify state:  
Wall mounted hydronic heat emitter with fan and low temperature cut-out.  
As Smith's Eco-Powerad 500, 1000, 1500, 2000.

Heat Output For other heat output data please visit our website

Model	Heat Output at 75° (kW)	Heat Output at 45° (kW)	Flow & return connections	Mains cable	Transformer	Fused spur	Total Power Consumption (Watts)
ECO-POWERAD 500	0.8	0.4	15mm	2m	n/a	3A	15
ECO-POWERAD 1000	2.1	0.8	15mm	2m	n/a	3A	18
ECO-POWERAD 1500	2.4	1.2	15mm	2m	n/a	3A	33
ECO-POWERAD 2000	3.5	1.7	15mm	2m	n/a	3A	36

Model	Water Capacity (Litres)	Sound Levels (dBA)	Casting colour
ECO-POWERAD 500	0.17	28	white
ECO-POWERAD 1000	0.28	30	white
ECO-POWERAD 1500	0.44	31	white
ECO-POWERAD 2000	0.55	32	white

Outputs based on exiting water temperature. Heat outputs tested in accordance with BS4856 using exiting water temperature and 340 l/h (75gph) flow rate. Sound levels measured at 1.5m.

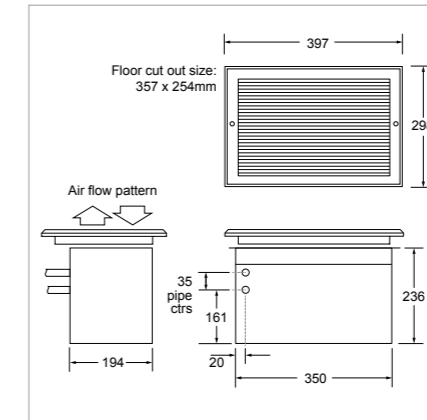
### Ordering guide

Model	Packed Wt (kg)	Product Codes
ECO-POWERAD 500	6	HPEP52001
ECO-POWERAD 1000	10	HPEP52002
ECO-POWERAD 1500	14	HPEP52003
ECO-POWERAD 2000	18	HPEP52004

# Spacemaker

A fan convector that installs flush with the floor, providing efficient and effective heat at low level

- Applications**  
 Hall  
 Kitchen  
 Utility  
 Conservatory



Perfect for places in the home where space is particularly limited

Ideal for spaces such as entrance halls, lobbies, circulation areas and applications where wall space is limited

**Motor**  
AC only.

**Finish**  
Anodised aluminium grille with removable centre section.

**Installation**  
Installs between floor joists or purpose made trenches in concrete floors.  
Air intake and discharge through grille.  
Unit must be earthed.  
Suitable for two-pipe central heating systems only.

**Commissioning**  
Check water temperature is hot enough to activate low temperature cut-out (LTC). Vent screw accessible through grille.

**Controls**  
Rocker switch - normal/off/boost, below grille  
Low temperature cut-out thermostat set to energise fan at approx. 35°C.

Heat Output For other heat output data please visit our website

Model	Heat Output at 75°		Heat Output at 45°		Flow & return connections	Mains cable	Transformer	Fused spur	Total Power Consumption	
	Normal (kW)	Boost (kW)	Normal (kW)	Boost (kW)					Normal (Watts)	Boost (Watts)
SPACEMAKER	1.5	2.1	0.7	1.0	15mm	1.5m	n/a	3A	20	30

Model	Water Capacity (Litres)	Sound Levels		Casting colour	Fan-only
		Normal (dBA)	Boost (dBA)		
SPACEMAKER	0.27	32	39	Anodised aluminium	n/a

Heat outputs tested in accordance with BS4856 using entering water temperature and 340 l/h (75gph) flow rate. Sound levels measured at 1.5m.

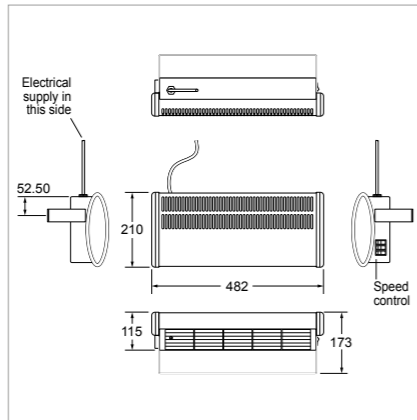
### Ordering guide

Model	Packed Wt (kg)	Product Codes
SPACEMAKER	7	HPSM12001

# Sterling

The Sterling fan-assisted electric heater is a great low cost solution providing effective and dependable heating for both small and large commercial areas, fitted unobtrusively above head height

- Applications**
- Education
  - Healthcare
  - Places of worship
  - Leisure and sport
  - Office
  - Hospitality
  - Retail
  - Showroom
  - Industrial
  - Residential



It has been designed for rooms with limited lower wall space, such as shops and libraries

**Motor**  
AC only.

**Finish**  
Outer casing 0.9mm zinc-coated steel.  
Polyester powder-coated white.  
Side panels: Polymer - white.

**Installation**  
Recommended installation height 2.3m (7ft 6") to underside.  
Not suitable for bathrooms and other high humidity areas.  
Angled mounting (optional).  
13 amp fused spur required.  
Unit must be earthed.

**Controls**

Rocker switches for fan and element - fan only 1kW/2kW/3kW.  
Wireless temperature control featuring comfort, set back and run back timer (battery operated) supplied.  
Overheat protection: thermal cut-out.  
Manual reset procedure: switch power off at mains, wait 20 minutes, switch power on.

**Specification**

To specify state:  
3-speed electric fan-assisted heater in white polyester coated 0.9mm zinc-coated steel body with built in room thermostat.  
As Smith's Sterling.

**Heat output**

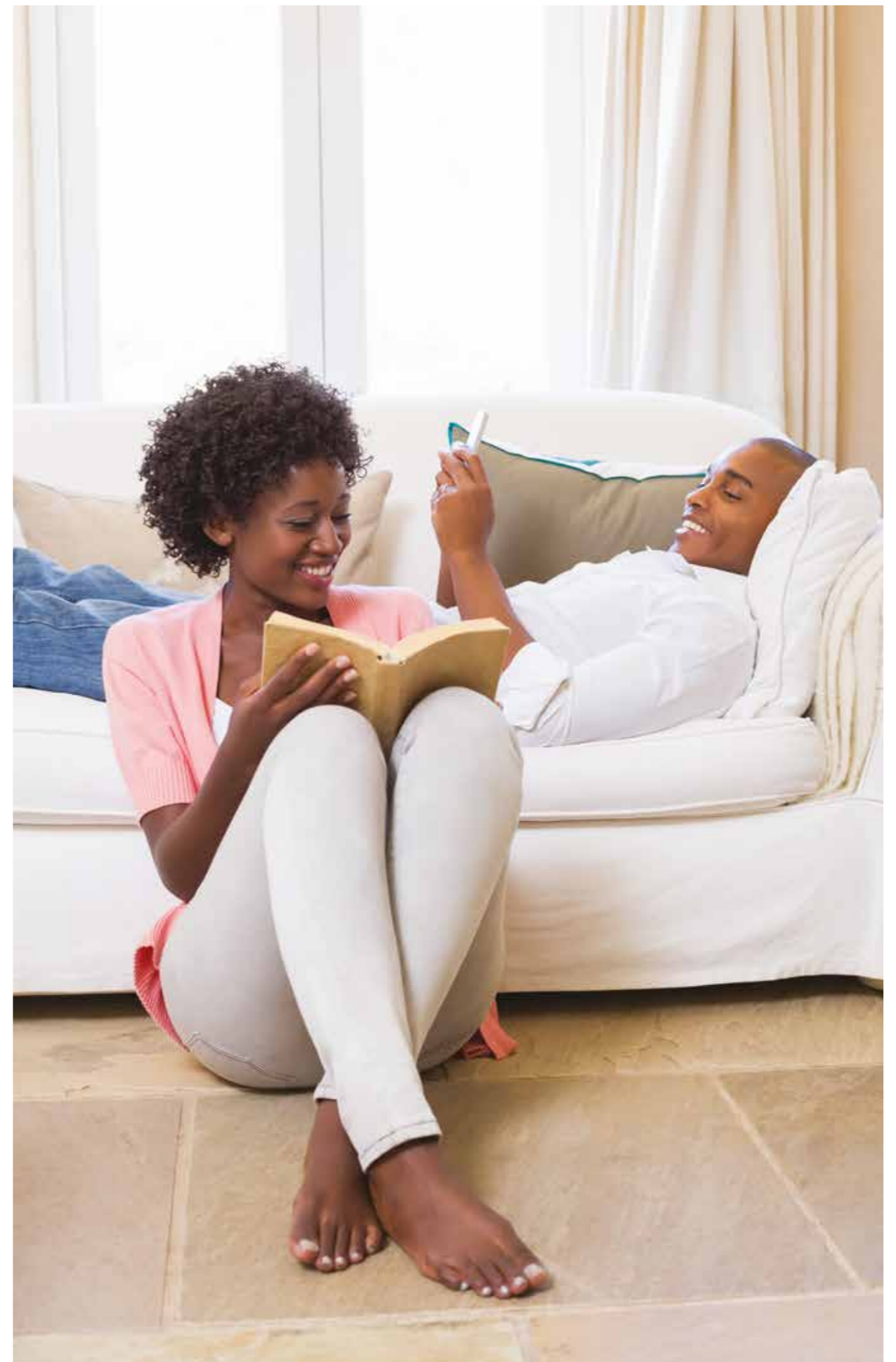
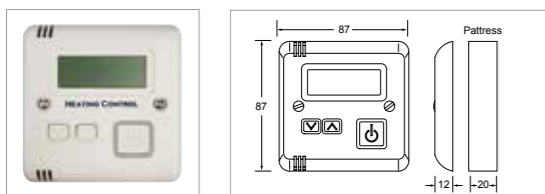
Model	Heat Output (kW)	Fused spur	Total Power Consumption (kW)	Sound Levels (dBA)	Casting colour	Fan-only
STERLING E 3KW	1kW/2kW/3kW	13A	1kW/2kW/3kW	39	white	•

Sound levels measured at 1.5m with the product installed at 2.2m high

**Ordering guide**

Model	Packed Wt (kg)	Product Codes
STERLING E 3KW	4	HPST51012

**Wireless controller**



# Space Saver

A highly energy efficient fan convector that fits neatly into the plinth of a kitchen unit and eliminates the need for conventional radiators

**Applications**  
Kitchen  
Utility  
Bathroom



Makes room for extra kitchen storage, work space, or additional appliances

More affordable than underfloor heating

Get the flooring you want

Discreet heating

Easy to use

Suitable for plinth heights from 80mm upwards

Contemporary design with a wide choice of grille colours to suit interior decoration

Two heat outputs and fan only option for instant heat and cool air circulation

Low voltage bathroom model available for high humidity areas

Free five years parts and labour warranty

To see which Space Saver plinth heater is most suitable to heat your kitchen, use the Heat Loss Calculator on our website:  
<https://smithsep.co.uk/heat-loss-calculator/>

## Easy to use

Smith's Space Saver comes on and off with your central heating, just like the rest of your radiators do. It uses the same water that your radiator uses, just a lot less and it has a tiny energy efficient electric fan that pushes out the heat into the room.

## How many do I need?

As a rule of thumb, for every radiator you remove, install one Space Saver. If you need further help, go to our website to read our installation guides, email us or give us call.

## Is it quiet?

The sound is very similar to that of your fridge and we think you won't notice it as you go about your daily life in your kitchen, boiling kettles, running taps, chatting with friends.

## Is it expensive to run?

Not at all. Because the heat comes from your boiler (hydronic version) the only extra is the running cost of the fan - it costs 1p a day to use a Space Saver in your kitchen.

## Which Space Saver do I need?

To see which Space Saver plinth heater is most suitable to heat your kitchen, use the Heat Loss Calculator on our website:  
<https://smithsep.co.uk/heat-loss-calculator/>

## Can I find out more?

Just visit our website for more information and a list of stockists. Any questions, please contact us directly.

## How a Smith's Space Saver works

### Hydronic:

Hot water from your central heating system passes through a heat exchanger transferring its heat to the aluminium fins. Cooler air is drawn in by the fan and heated as it passes through the heat exchanger before being expelled gently back into the room. This not only gives a more even temperature spread, but will heat up a room quicker than a traditional panel radiator.

### Hydronic Low Voltage:

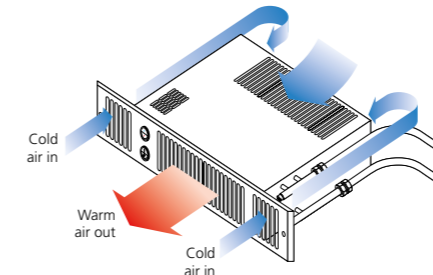
Functions in exactly the same way as a hydronic models but uses a transformer to ensure the product is safe to operate with wet hands.

### Hydronic/Electric:

Like a hydronic model but also includes an electric element so you can still use the product when the central heating system is switched off.

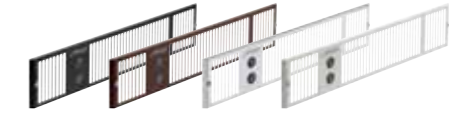
### Electric:

Plugs into a standard electrical socket when there isn't access to the central heating system. Electric heaters cost approx. 15p per kWh to run.



## Alternative grille finishes

Most Space Saver models are supplied with a detachable Stainless Steel fascia grille. Alternative colours are shown below.



Black Brown Chrome White

Grilles shown are for colour reference only and switch configuration varies by product

**Outputs** For other heat output data please download the data sheet from our website

Model	Heat Output		Sound levels		Fascia grille finish	Fan-only	Minimum plinth height (mm)
	Normal (kW)	Boost (kW)	Normal (dBA)	Boost (dBA)			
<b>Hydronic</b>							
SS80	0.8	1.1	32	40	Stainless Steel		80
SS3	1.1	1.4	26	39	Stainless Steel	•	100
SS5	1.3	1.7	27	43	Stainless Steel	•	100
SS7	1.6	1.9	30	44	Stainless Steel	•	100
SS9	2.2	2.4	41	46	Stainless Steel	•	100
<b>Hydronic Low Voltage</b>							
SS5 12V	1.3	1.7	31	39	Stainless Steel	•	100
<b>Hydronic/Electric (Dual)</b>							
SS5 Dual (in hydronic mode)	1.3	1.7	27	43	Stainless Steel	•	100
SS5 Dual (in electric mode)	1.0	-	27	43	Stainless Steel		100
<b>Electric</b>							
SS3E	1kW/2kW/3kW		42		Stainless Steel	•	100
SS2E	1kW/2kW		42		Stainless Steel	•	100
SS80E	0.6kW/1.2kW		42		Stainless Steel	•	80

Heat outputs tested in accordance with BS4856 using entering water temperature and 340 l/h (75gph) flow rate.

Heat outputs shown above are at 80°C entering water.

Fan-only option operational only when central heating system is switched off.

Dual models include an electric element which in electric heating mode will emit 1kW of heat. Sound levels measured at 1.5m.



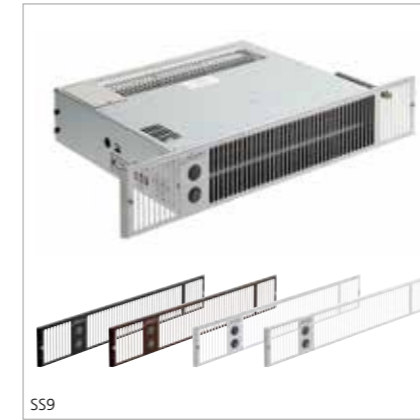
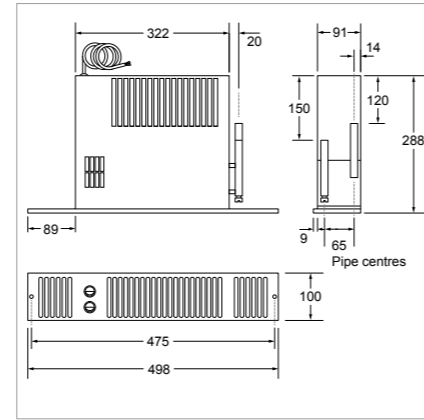
# Space Saver - Hydronic

A highly energy efficient fan convector that fits neatly into the plinth of a kitchen unit and eliminates the need for conventional radiators

**Applications**  
Kitchen  
Utility  
Bathroom



SS3, SS5, SS5 12V, SS7



SS9



SS80



SS5 Dual

Makes room for extra kitchen storage, work space, or additional appliances

More affordable than underfloor heating

Get the flooring you want

Discreet heating

Easy to use

Suitable for plinth heights from 80mm upwards

Contemporary design with a wide choice of grille colours to suit interior decoration

Two heat outputs and fan only option for instant heat and cool air circulation

Low voltage bathroom model available for high humidity areas

Free five years parts and labour warranty

**Motor**  
AC.

**Finish**  
Fascia grille: Stainless Steel.  
See under attachments for other fascia grille colours.

**Installation**  
Correct fascia grille opening must be cut to allow sufficient air intake.  
20mm clearance above unit required.  
Model secured to plinth by two screws through fascia grille.  
Unit must be earthed (not 12 volt SELV).  
Suitable for two-pipe central heating systems only.  
SS80 supplied with detachable cable.  
SS80 models have easy fit thermostat facility.

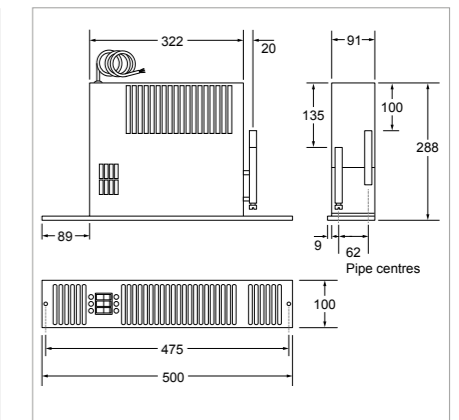
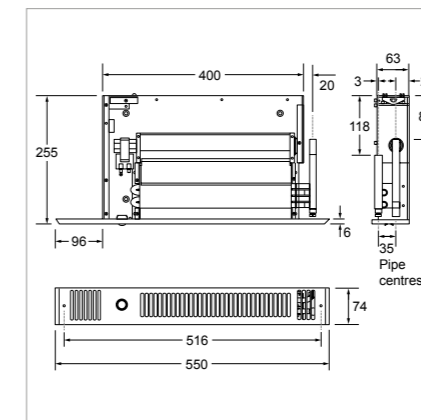
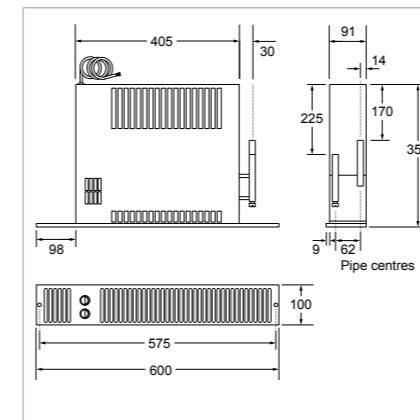
**Commissioning**  
Check water temperature is hot enough to activate low temperature cut-out thermostat. (LTC). Vent screw accessible through fascia grille.

**Controls**

Single rocker switch - low/off/normal.  
SS80: Low temperature cut-out thermostat set to energise fan at approximately 35°C.  
SS5/Dual: Wireless temperature control featuring comfort, setback and run back timer (battery operated) supplied, three rocker switches, heating/off/fan-only, hydronic/electric, normal/boost.  
Low temperature cut-out thermostat set to energise fan at approximately 35°C.  
All other models: two rocker switches - normal/off/boost, heating/fan-only.  
Low temperature cut-out thermostat set to energise fan at approximately 35°C.

**Accessories**

Wall-mounted room thermostat.  
Wall mounted control switch (white) to suit SS3, SS5, SS5/12V, SS7, SS9.  
Grilles: brown (RAL 8016), black (RAL 9005), white (RAL 9010) and chrome.



BEFORE



AFTER

# Space Saver - Hydronic

A highly energy efficient fan convector that fits neatly into the plinth of a kitchen unit and eliminates the need for conventional radiators

**Applications**  
Kitchen  
Utility  
Bathroom

## Outputs

Model	Flow & return connections	Mains cable	Transformer	Flexible hoses	Fused spur	Output		Water Capacity (Litres)
						Normal (W)	Boost (W)	
SS3	15mm	2m	n/a	n/a	3A	18	25	0.36
SS5	15mm	2m	n/a	•	3A	18	25	0.36
SS7	15mm	2m	n/a	•	3A	21	30	0.38
SS9	15mm	2m	n/a	•	3A	24	35	0.53
SS80	15mm	2m	n/a	•	3A	5	10	0.35
SS5 12V	15mm	0.45m	•	•	3A	21	30	0.36
SS5 Dual	15mm	2m	n/a	•	5A	18 (electric mode)	25 (electric mode)	0.36

## Ordering guide

Model	Packed Wt (kg)	Product Codes	Accessories	Colour	Product Codes
<b>Hydronic - with stainless steel grilles</b>			SPACE SAVER SS3 / SS5 / SS5 12V / SS7 GRILLE	BROWN	HASS10101
SPACE SAVER SS3	5	HPSS10001	SPACE SAVER SS3 / SS5 / SS5 12V / SS7 GRILLE	BLACK	HASS10102
SPACE SAVER SS5	6	HPSS10002	SPACE SAVER SS3 / SS5 / SS5 12V / SS7 GRILLE	WHITE	HASS10103
SPACE SAVER SS7	6	HPSS10003	SPACE SAVER SS3 / SS5 / SS5 12V / SS7 GRILLE	CHROME	HASS10104
SPACE SAVER SS9	7	HPSS10004	SPACE SAVER SS9 GRILLE	BROWN	HASS10111
SPACE SAVER SS80	5	HPSS10009	SPACE SAVER SS9 GRILLE	BLACK	HASS10112
SPACE SAVER SS5/12V	6	HPSS10005	SPACE SAVER SS9 GRILLE	WHITE	HASS10113
<b>Hydronic/Electric - with stainless steel grilles</b>			SPACE SAVER SS9 GRILLE	CHROME	HASS10114
SPACE SAVER SS5/Dual	6	HPSS10076	SPACE SAVER SS5 DUAL GRILLE	BROWN	HASS10121
			SPACE SAVER SS5 DUAL GRILLE	BLACK	HASS10122
			SPACE SAVER SS5 DUAL GRILLE	WHITE	HASS10123
			SPACE SAVER SS5 DUAL GRILLE	CHROME	HASS10124
			SPACE SAVER SS80 GRILLE	BROWN	HASS10141
			SPACE SAVER SS80 GRILLE	BLACK	HASS10142
			SPACE SAVER SS80 GRILLE	WHITE	HASS10143
			SPACE SAVER SS80 GRILLE	CHROME	HASS10165
			ROOM THERMOSTAT HARD WIRED		HAGA95001
			SPACE SAVER WALL MOUNTED CONTROL SWITCH SS3, SS5, SS7, SS9		HASS10162
			FLEXIBLE HOSES 15MM PAIR		HAGA95002



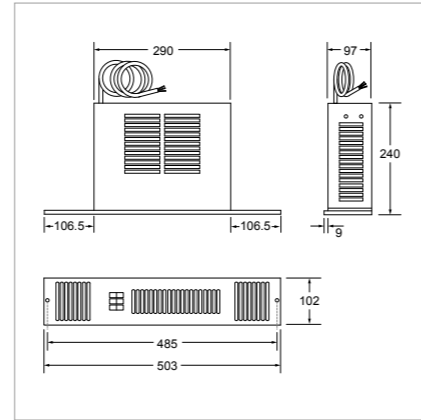
# Space Saver - Electric

A highly energy efficient fan convector that fits neatly into the plinth of a kitchen unit and eliminates the need for conventional radiators

Applications  
Kitchen  
Utility



SS2E



- Makes room for extra kitchen storage, work space, or additional appliances
- More affordable than underfloor heating
- Get the flooring you want
- Discreet heating
- Easy to use
- Suitable for plinth heights from 80mm upwards
- Contemporary design with a wide choice of grille colours to suit interior decoration
- Two heat outputs and fan only option for instant heat and cool air circulation
- Free five years parts and labour warranty

**Motor**  
AC.

**Finish**

Fascia grille: Stainless Steel or White RAL 9010 (SS2E, SS3E).  
See under attachments for other fascia grille colours.

**Installation**

Correct fascia grille opening must be cut to allow sufficient air intake.  
SS2E and SS3E - 20mm clearance above unit required.  
SS80E - 10mm clearance above unit required.  
Model secured to plinth by two screws through fascia grille.  
Unit must be earthed.

**Controls**

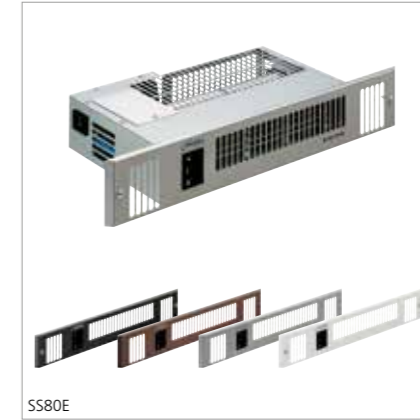
Wireless temperature control featuring comfort, set back and run back timer (battery operated) supplied.  
Overheat protection: thermal cut-out.  
Manual reset procedure: switch power off at unit or mains, wait 5 minutes, switch power on.  
SS2E: three rocker switches on/off, 1kW, 2kW.  
SS3E: two rockers switches 1kW, 2kW, 3kW.  
SS80E: three rocker switches on/off, 0.6kW, 1.2kW.

**Accessories**

Grilles SS2E: brown (RAL 8016), black (RAL 9005) white (RAL 9010), chrome.  
Alternative grilles for SS2E fit over the supplied grille.  
Grilles SS80E: brown (RAL 8016), black (RAL 9005), white (RAL 9010).



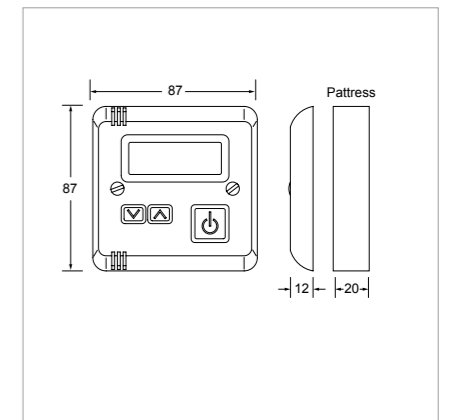
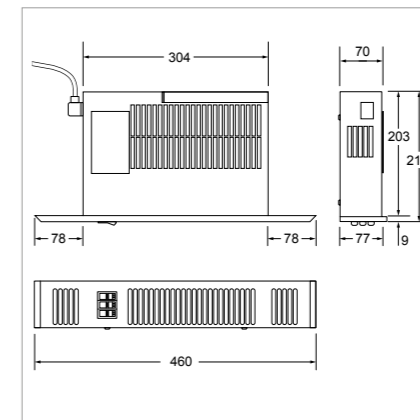
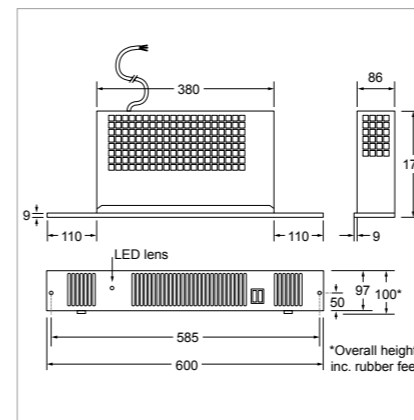
SS3E



SS80E



Wall Controller



**Outputs**

Model	Mains cable	Fused spur	Output (kW)
SS2E	2m	10A	1kW/2kW
SS3E	2m	13A	1kW/2kW/3kW
SS80E	2m	10A	0.6kW/1.2kW

**Ordering guide**

Model	Packed Wt (kg)	Product Codes
<b>Electric</b>		
SPACE SAVER SS2E (STAINLESS STEEL GRILLE)	4	HPSS10070
SPACE SAVER SS2E (WHITE GRILLE)	4	HPSS10079
SPACE SAVER SS3E (STAINLESS STEEL GRILLE)	5	HPSS10075
SPACE SAVER SS3E (WHITE GRILLE)	5	HPSS10084
SPACE SAVER SS80E (STAINLESS STEEL GRILLE)	4	HPSS10073

Attachments	Colour	Product Codes
SPACE SAVER SS2E GRILLE	BROWN	HASS10131
SPACE SAVER SS2E GRILLE	BLACK	HASS10132
SPACE SAVER SS2E GRILLE	WHITE	HASS10133
SPACE SAVER SS2E GRILLE	CHROME	HASS10134
SPACE SAVER SS80E GRILLE	BROWN	HASS10151
SPACE SAVER SS80E GRILLE	BLACK	HASS10152
SPACE SAVER SS80E GRILLE	WHITE	HASS10153
SPACE SAVER SS80E GRILLE	CHROME	HASS10164

<b>Accessories</b>	
FLEXIBLE HOSES 15MM PAIR	HAGA95002

# Accessories

## Glossary

### Remote (Wired) Room Thermostat

This accessory measures room temperature and switches off the heater when the set temperature is reached. This thermostat is hard wired and connects directly into either the heater's terminal block or power supply.

### Remote (Wired) Room Thermostat Tamper Proof

This accessory measures room temperature and switches off the heater when the set temperature is reached. This thermostat is hard wired and connects directly into either the heater's terminal block or power supply. The thermostat has a secure cover that deters unwanted adjustment of the room temperature set point.

### Wall mounted control switch

Allows the product to be controlled from a switch mounted on the wall rather than the product. Linking to the heater is made by replacing the existing switch connections with the connections on the control switch.

### Flexible hoses

Flexible connections are a convenient way of connecting a heater into your system. They will provide an easy to achieve connection from your first-fix pipe work. In addition they will provide for a level of expansion and contraction in rigid pipe work and mitigating possible sound and vibration transmission.

### Adjustable low temperature cut-out (LTC)

This cut out device allows the user to set the water temperature (between 30°C and 90°C) at which the product will start to emit heat. It is more accurate than the standard fitted LTC (set at 35°C) and enables more flexible use with both low system temperature heat pumps and higher system temperature boilers including biomass that can produce 80°C flow temperatures.

### Plinth

The optional plinth creates an attractive floor standing unit and also conceals the pipe work from view. This can also be invaluable where it is necessary to prevent contact with heating pipes by vulnerable groups. A plinth can also add an additional level of protection from the ingress of dust on hard flooring surfaces. Available in 100mm and 150mm high versions and in black or white.

### Caspian EC linking kit (EC only)

The linking kit allows for the creation of master and slave units (up to four units), by allowing a 0-10 V signal to be transmitted through its cabling. This allows one fan speed controller, or room thermostat to control multiple units. It can also be used to control multiple units by means of a BMS. Where master and slave units are required this must be clearly identified at time of ordering.

### External control harness (EC only)

This accessory is generally used to permit a remote manual speed adjustment on an EC variant Caspian. It is possible to provide speed control to a master unit and to then utilise the EC linking kit to link to any slave units.

### Proportional Heat Output Controller

This accessory controls the fan speed and hence the heat output of the unit. These controls are available in integral (low level units) and in a remote format (high level units). PHOC's are available in two standard temperature settings, either 15 - 25°C , or 11 - 21°C. When the room temperature is at or below the lowest set point (11°C or 15°C) the fan speed will run at its maximum speed to give fastest heat up time. As the room temperature increases towards the upper set point (21°C or 25°C), the fan speed modulates downwards towards a minimum level. Customised temperature ranges can be produced upon request

### Thermostat T1

This is a factory fitted air thermostat suited to both AC and EC products installed at low level. This control provides a tamperproof room temperature control and is ideal for use in public buildings.

### Thermostat T2 (AC only)

A T2 thermostat is used to control the fan speed on low level AC products only. The objective in using this control is to facilitate a faster heat up period in a room. An installer or commissioning engineer can determine the temperature set point at which the fan speed is changed from high to low. A typical set point would be 16°C, where temperatures below this level would trigger a higher fan speed.

### Thermostat and Auto-Speed control (T1/T2)

This accessory serves two purposes. Firstly, it becomes an integral room thermostat for the unit providing localised control and secondly, the heat output will be changed according to the temperature in the room. For example, the fan may work on full power up to 18°C and above this temperature move to a lower fan speed. Normally the fan speeds used will be medium and low.

# Accessories Matrix

## Easy guide to accessories

Control	Product Codes	Products										
		Caspian SL/FF/UV/TT		Caspian EXT		Caspian UVC		Caspian LST	Caspian Skyline		Caspian Skyline E	Ecovector
		EC	AC	EC	AC	EC	AC	EC	EC	AC		High
CASPIAN ADJUSTABLE LOW TEMPERATURE CUT-OUT (EC AND AC)	HACA33001	✓	✓	✓	✓	✓	✓		✓	✓		
CASPIAN THERMOSTAT (T1) (EC & AC 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)	HHCA33004	✓		✓		✓			✓			
CASPIAN PROPORTIONAL HEAT OUTPUT CONTROLLER 15°-25°C INTEGRAL (EC STD LOW LEVEL INSTALL ONLY)	HACA33005	✓		✓		✓						
CASPIAN PROPORTIONAL HEAT OUTPUT CONTROLLER 15°-25°C REMOTE SENSOR (EC)	HACA33037	✓		✓		✓						
CASPIAN PROPORTIONAL HEAT OUTPUT CONTROLLER 11°-21°C INTEGRAL (EC STD LOW LEVEL INSTALL ONLY)	HACA33117	✓		✓		✓						
CASPIAN PROPORTIONAL HEAT OUTPUT CONTROLLER 11°-21°C REMOTE SENSOR (EC)	HACA33118	✓		✓		✓						
BLANK CONFIGURABLE PROPORTIONAL HEAT OUTPUT CONTROLLER (PROGRAMMED AT FACTORY ONLY)	HACA33126	✓		✓		✓			✓			
CASPIAN EC LINKING KIT (MASTER/SLAVE)	HACA33068	✓		✓		✓			✓			
CASPIAN REMOTE SWITCHING ON/OFF RELAY (24V AC COIL)	HACA33127	✓	✓	✓	✓	✓	✓	✓	✓	✓		
CASPIAN SKYLINE CT60 PROPORTIONAL HEAT OUTPUT CONTROLLER 15-25 (REMOTE SENSOR)	HACA33125								✓	✓		
CASPIAN SKYLINE CT60 PROPORTIONAL HEAT OUTPUT CONTROLLER 11-21 (REMOTE SENSOR)	HACA33123								✓	✓		
ROOM THERMOSTAT HARD WIRED	HAGA95001	✓	✓	✓	✓	✓	✓		✓	✓		✓
ROOM THERMOSTAT TAMPER PROOF	HAGA95004	✓	✓	✓	✓	✓	✓		✓	✓		✓
FLEXIBLE HOSES 22MM PAIR	HAGA95003	✓	✓	✓	✓	✓	✓	✓	✓	✓		
INTEGRAL, SURFACE MOUNTED AND REMOTE SWITCHING OPTIONS	*	✓	✓	✓	✓	✓	✓		✓	✓		
FACTORY FITTED CONTROLS AS STANDARD	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BESPOKE RAL PAINT FINISHES	*	✓	✓	✓	✓	✓	✓	✓				
ANTIBACTERIAL AND ANTIMICROBIAL PAINT FINISHES (SEE PAGE 29)	*	✓	✓	✓	✓			✓				

Note: \* Please contact Smith's for further information



### Happy to help

Smith's Environmental Products Ltd is one of the leading manufacturers of heating and cooling products in the UK. We are committed to achieving the highest standards and our faith is supported by a free parts and labour guarantee with every product (see website for more information). Our customer service is second to none and we are happy to offer any help and guidance that you might need.

### Stockists

All products are available nationally from Builders' Merchants, Plumbers' Merchants, Heating Equipment Distributors and Kitchen Equipment Distributors. In the event of difficulty, please contact us or visit our website [SmithsEP.co.uk](http://SmithsEP.co.uk) for details of your nearest stockist.

### Information and advice

Full technical specifications and list prices is available to download from our website or in hard copy from our office. Also available on our website are price lists, individual product data sheets, installation & user guides, where to buy, who to contact and a media centre.

Alternatively contact our office 9.00am to 5.00pm Monday to Friday.

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For product information, customer services or  
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For the Republic of Ireland, contact  
MT Agencies on 01 864 3363

Sales: [sales@smithsep.co.uk](mailto:sales@smithsep.co.uk)  
General information: [info@smithsep.co.uk](mailto:info@smithsep.co.uk)

Smith's Environmental Products Ltd  
Blackall Industrial Estate, South Woodham  
Ferrers, Chelmsford, Essex CM3 5UW

[SmithsEP.co.uk](http://SmithsEP.co.uk)

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[sales@smithsep.co.uk](mailto:sales@smithsep.co.uk)  
**+44 (0) 1245 324900**  
[smithsep.co.uk](http://smithsep.co.uk)