



## Caspian® - Smart Controls

Providing comfort with control and convenience

# Caspian® - Smart Controls

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.

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.

Suitable for schools, churches, village halls, community centres, offices, medical practices, retail outlets, restaurants, hotels and sports centres.

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

It is possible to have master and slave Caspian fan convectors that integrate the entire range of EC Caspian products.

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 Controls

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.

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

Model Reference	Fan Speed	Control Voltage VDC	40°C MWT	45°C MWT	50°C MWT	55°C MWT	60°C MWT	65°C MWT	70°C MWT	75°C MWT	80°C MWT
EC 60	Low	3.4	0.85	1.20	1.45	1.80	2.16	2.35	2.73	3.08	3.40
	Mid	4.9	1.02	1.53	1.92	2.37	2.76	3.18	3.58	4.05	4.38
	High	6.4	1.18	1.85	2.38	2.93	3.36	4.00	4.43	5.02	5.36
EC 90	Low	3.2	1.68	2.23	3.01	3.49	4.05	4.45	5.12	5.49	6.03
	Mid	4.6	2.22	3.07	4.05	4.66	5.42	6.01	6.81	7.34	7.93
	High	6.1	2.75	3.90	5.08	5.82	6.78	7.56	8.49	9.19	9.83
EC 120	Low	3.1	1.62	2.34	3.32	3.98	4.71	5.62	6.32	6.99	7.61
	Mid	4.3	2.31	3.25	4.27	5.15	6.07	7.02	7.91	8.74	9.60
	High	5.5	2.99	4.15	5.21	6.31	7.42	8.41	9.50	10.48	11.59
EC 150	Low	2.8	2.95	3.72	4.49	5.27	6.045	6.79	7.54	8.29	9.04
	Mid	4.0	3.99	4.99	5.99	6.99	7.97	8.99	9.97	10.98	11.93
	High	5.1	5.02	6.26	7.49	8.71	9.90	11.19	12.39	13.67	14.82
EC 180	Low	2.8	3.64	5.20	6.78	8.24	9.39	10.33	11.24	12.15	13.01
	Mid	3.9	4.51	6.18	7.85	9.51	10.95	12.36	13.70	15.07	16.40
	High	4.9	5.38	7.16	8.91	10.77	12.50	14.39	16.16	18.0	19.78

Model Reference	Fan Speed	Air Volume (m³/h)	Air Volume (l/s)	Specific Fan Power w/l/s	Power Consumption (W)	NR in typical room*	Hydraulic Resistance (KPA)	Nominal Weight (KG)	Water Capacity (L)
EC 60	Low	201.00	55.90	0.14	8.00	34.00	1.38	23.00	0.92
	Mid	290.50	80.75	0.26	21.00	41.50	1.69		
	High	380.00	105.60	0.32	34.00	49.50	2.00		
EC 90	Low	297.00	80.75	0.20	16.00	34.00	4.70	36.00	1.50
	Mid	450.50	124.38	0.34	42.00	41.50	5.85		
	High	604.00	168.00	0.40	68.00	49.97	7.00		
EC 120	Low	419.30	116.50	0.14	16.00	34.00	17.78	45.00	2.08
	Mid	549.65	152.68	0.26	40.00	42.00	20.59		
	High	680.00	188.89	0.34	64.00	49.96	23.40		
EC 150	Low	459.80	127.72	0.17	22.00	34.70	22.23	60.00	2.58
	Mid	598.10	166.14	0.35	59.00	41.50	29.46		
	High	736.40	205.56	0.47	96.00	49.38	36.69		
EC 180	Low	542.00	150.56	0.19	29.00	34.90	47.83	78.00	3.18
	Mid	690.00	191.67	0.40	78.50	41.50	60.76		
	High	838.00	232.78	0.55	128.00	49.00	73.70		

\*a typical room is taken as a room with a volume of 173m³ and a reverberation time of 0.8 seconds at 500 Hz with one unit installed, situated against a wall or ceiling (radiating noise in a quartersphere). No allowance is made for attenuation provided by ceilings, enclosures or ductwork. Outputs based upon testing at EN442: 2014 using mean water temperature and an entering air temperature of 20°C with a 10°C temperature drop between flow and return.

## Correction factors

Mean Water Temp °C		45 - 80			
Water Temperature drop °C		5	10	15	20
Entering Air Temperature °C	15	1.13	1.10	1.07	1.05
	18	1.08	1.05	1.02	0.99
	20	1.04	1.00	0.95	0.89
	25	0.93	0.91	0.89	0.86

Factors are approximate data based upon a standard coil.

### How to calculate Mass Flow Rate (L/S)

$M = H / CP \times (\text{Flow } ^\circ\text{C} - \text{Return } ^\circ\text{C})$   
 $M$  = Mass flow rate (L/S)  
 $H$  = Output of product (W)  
 $CP$  = Specific heat capacity [J/(kg·°C)].  
 Varies upon system temperature, approx. 4187 if fluid is water.

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

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



## 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 BOILER RECEIVER RX10RF	HACA33138
SMITHS SMART RELAY SR600	HPCA33139



### 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 our 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 are 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.

As part of our commitment to continuous improvement Smith's Environmental Products may change the specifications of its products without prior notification or public announcement. All descriptions, illustrations, drawings and specifications in this publication present only general particulars and shall not form part of any contract. All dimensions are in mm unless otherwise stated. Please visit the website for the most up to date information.

To view the full product information  
download the datasheet at:  
[www.SmithsEP.co.uk](http://www.SmithsEP.co.uk)

For product information, customer services or  
sales support call us on **+44 (0) 1245 324900**

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**

**@SmithsEP\_UK**

**#ThinkSmiths**

ENGLISH | UK | IRL | August 2020