



Belgravia  
Fan Convectors



# SPC Belgravia Fan Convectors

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# Belgravia Supreme

With the absence of any sharp corners and its ergonomically rounded design, the Belgravia Supreme is the ideal fan convector suited for environments where appearance and safety are paramount.

Through a variety of control options, power ratings and casing configurations, you can adapt the Belgravia Supreme to a wide range of applications.

Standard colour is white casing and grilles (RAL 9010) but units are also available as two tone grey with the top, bottom and grilles to RAL 9002 and the front and sides in RAL 7044 (alternatively black grilles). Special paint finishes are available to order.



## Dimensions

See page 6 for further configurations

| Dimensions                |              |        |        |         |
|---------------------------|--------------|--------|--------|---------|
| Model                     | SPR 40       | SPR 60 | SPR 90 | SPR 150 |
| Length (mm)               | 800          | 1000   | 1300   | 1600    |
| Height (mm)               | 735 (775mm)* |        |        |         |
| Depth (mm)                | 235          |        |        |         |
| Maximum Weight (kg)       | 31           | 41     | 46     | 52      |
| Extended case length (mm) | 1000         | 1300   | 1600   | -       |
| Extended case weight (kg) | 34.1         | 45.1   | 50.6   | -       |

\* Plus unit has increased height  
Extended casing is not available on plus unit

## Performance data

| Performance at 80/70°C water, 18°C space |               |             |                       |                     |               |             |                       |                     |               |             |                       |                     |
|------------------------------------------|---------------|-------------|-----------------------|---------------------|---------------|-------------|-----------------------|---------------------|---------------|-------------|-----------------------|---------------------|
| Speed                                    | High          |             |                       |                     | Medium        |             |                       |                     | Low           |             |                       |                     |
| Unit size                                | Airflow (l/s) | Output (kW) | Water flow rate (l/s) | Pressure Drop (kPa) | Airflow (l/s) | Output (kW) | Water flow rate (l/s) | Pressure Drop (kPa) | Airflow (l/s) | Output (kW) | Water flow rate (l/s) | Pressure Drop (kPa) |
| SPR40                                    | 140           | 5.7         | 0.14                  | 0.9                 | 112           | 5.0         | 0.12                  | 0.7                 | 89            | 4.3         | 0.10                  | 0.5                 |
| SPR60                                    | 236           | 8.9         | 0.22                  | 2.3                 | 172           | 7.4         | 0.18                  | 1.6                 | 105           | 5.3         | 0.13                  | 0.9                 |
| SPR90                                    | 317           | 11.7        | 0.29                  | 4.4                 | 231           | 9.6         | 0.24                  | 3.2                 | 120           | 6.2         | 0.15                  | 1.5                 |
| SPR150                                   | 329           | 16.3        | 0.40                  | 9.3                 | 289           | 14.9        | 0.37                  | 8.0                 | 180           | 10.5        | 0.26                  | 4.3                 |

## Noise data

| Noise Data  |         |      |        |     |
|-------------|---------|------|--------|-----|
| Fan setting |         | High | Medium | Low |
| Model       | SPR 40  | 45   | 38     | 32  |
|             | SPR 60  | 46   | 41     | 35  |
|             | SPR 90  | 43   | 37     | 32  |
|             | SPR 150 | 45   | 44     | 39  |

NR levels are based on a room volume that would normally be heated by a single unit of each size shown  
Reverberation time of the room is taken to be 0.4 seconds  
The listener is assumed to be standing in the middle of the room  
The unit is assumed to be wall mounted

## Electrical data

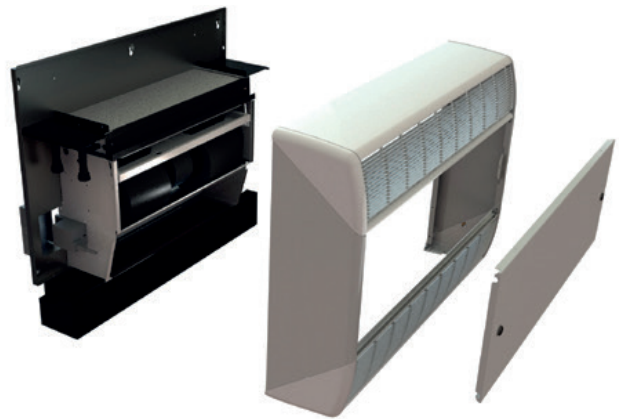
| 230 V / 50 Hz Supply |         |               |                   |                |             |                 |              |             |                 |              |
|----------------------|---------|---------------|-------------------|----------------|-------------|-----------------|--------------|-------------|-----------------|--------------|
| Fan setting          |         | High          |                   |                | Medium      |                 |              | Low         |                 |              |
| Performance          |         | Airflow (l/s) | EC power draw (W) | EC SFP (W/l/s) | Airflow l/s | EC power draw W | EC SFP W/l/s | Airflow l/s | EC power draw W | EC SFP W/l/s |
| Model                | SPR 40  | 140           | 27                | 0.19           | 112         | 16              | 0.14         | 89          | 11              | 0.12         |
|                      | SPR 60  | 236           | 84                | 0.38           | 172         | 53              | 0.29         | 105         | 15              | 0.14         |
|                      | SPR 90  | 317           | 73                | 0.23           | 231         | 34              | 0.15         | 120         | 18              | 0.15         |
|                      | SPR 150 | 329           | 80                | 0.24           | 289         | 58              | 0.20         | 180         | 22              | 0.12         |

## Belgravia Supreme Plus

The Belgravia Supreme Plus range is based on the range of Belgravia Supreme fan convectors and incorporates a fresh air inlet spigot and motorised damper allowing the unit to provide both space heating and ventilation.

See page 6 for styles and dimensions of the unit.

**Contact SPC for more information**



### Enhanced coil and lowflow coil option

Our range of SPC Belgravia fan convectors now come with the option of having an enhanced coil, making them suitable for use with low temperature heating systems.

A lowflow coil option is also available for systems with low water flow rates.

For more information on these options, see page 14



### Extended casing option

Belgravia Fan Convectors are available with extended casings to house valves within the unit. Valves can be specified by the user or supplied by SPC. These can be wired to close when room temperature exceeds the setpoint. Supplied valves and actuators are for on-site fitting and work with standard thermostats or the SPC Modulo v3 controller.

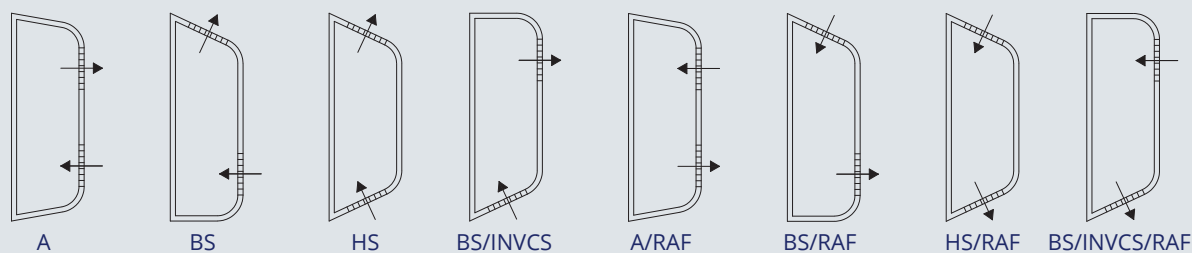
For more information on these options, see page 12



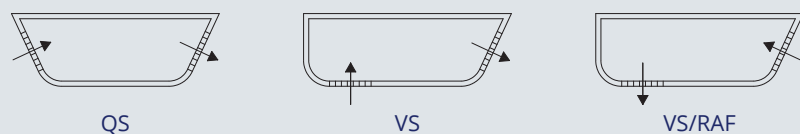
# Configurations

## Belgravia Supreme

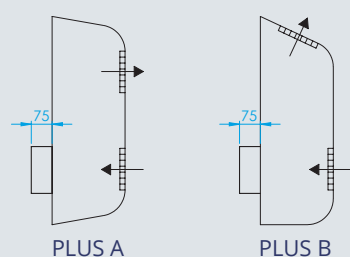
### Vertical styles



### Horizontal styles



### Supreme Plus styles



| Unit Size        | 40         | 60   | 90   | 150  |
|------------------|------------|------|------|------|
| Case Length (mm) | 800        | 1000 | 1300 | 1600 |
| Height (mm)      | 735 (775)* |      |      |      |
| Depth (mm)       | 235        |      |      |      |
| Spigot Width     | 650        | 850  | 1150 | 1450 |
| Spigot Height    | 155        |      |      |      |

\*Plus unit has increased height

Extended casing is not available on plus unit

Pipe connections  $\frac{3}{4}$ " BSP on all models ( $\frac{1}{2}$ " on lowflow heat exchangers)

**Models not drawn to scale**

# Belgravia Classic

The Belgravia Classic fan convectors are so named because the traditional design has been used over many decades in thousands of schools nationwide. With clean lines and quiet running, the Belgravia Classic is ideal for sensitive environments.

Standard colour is white casing and grilles (RAL 9010) or white with black grilles. Special paint finishes are available to order.



## Dimensions

See page 10 for further configurations

| Dimensions                       |        |        |        |         |
|----------------------------------|--------|--------|--------|---------|
| Model                            | BEL 40 | BEL 60 | BEL 90 | BEL 150 |
| Case Length (mm)                 | 700    | 900    | 1200   | 1500    |
| Spigot length (mm)               | 640    | 840    | 1140   | 1440    |
| Weight (kg)                      | 32     | 36     | 45     | 57      |
| Extended case length (mm)        | 900    | 1200   | 1500   | -       |
| Extended case spigot length (mm) | 840    | 1140   | 1440   | -       |
| Extended case weight (kg)        | 35.2   | 39.6   | 49.5   | -       |

## Performance data

| Performance at 80/70°C water, 18°C space |               |             |                       |                     |               |             |                       |                     |               |             |                       |                     |
|------------------------------------------|---------------|-------------|-----------------------|---------------------|---------------|-------------|-----------------------|---------------------|---------------|-------------|-----------------------|---------------------|
| Speed                                    | High          |             |                       |                     | Medium        |             |                       |                     | Low           |             |                       |                     |
| Unit size                                | Airflow (l/s) | Output (kW) | Water flow rate (l/s) | Pressure Drop (kPa) | Airflow (l/s) | Output (kW) | Water flow rate (l/s) | Pressure Drop (kPa) | Airflow (l/s) | Output (kW) | Water flow rate (l/s) | Pressure Drop (kPa) |
| BEL40                                    | 140           | 5.7         | 0.14                  | 0.9                 | 112           | 5.0         | 0.12                  | 0.7                 | 89            | 4.3         | 0.10                  | 0.5                 |
| BEL60                                    | 236           | 8.9         | 0.22                  | 2.3                 | 172           | 7.4         | 0.18                  | 1.6                 | 105           | 5.3         | 0.13                  | 0.9                 |
| BEL90                                    | 317           | 11.7        | 0.29                  | 4.4                 | 231           | 9.6         | 0.24                  | 3.2                 | 120           | 6.2         | 0.15                  | 1.5                 |
| BEL150                                   | 329           | 16.3        | 0.40                  | 9.3                 | 289           | 14.9        | 0.37                  | 8.0                 | 180           | 10.5        | 0.26                  | 4.3                 |

## Noise data

| Noise Data  |         |        |     |    |
|-------------|---------|--------|-----|----|
| Fan setting | High    | Medium | Low |    |
| Model       | BEL 40  | 45     | 38  | 32 |
|             | BEL 60  | 46     | 41  | 35 |
|             | BEL 90  | 43     | 37  | 32 |
|             | BEL 150 | 45     | 44  | 39 |

NR levels are based on a room volume that would normally be heated by a single unit of each size shown

Reverberation time of the room is taken to be 0.4 seconds

The listener is assumed to be standing in the middle of the room

The unit is assumed to be wall mounted

## Electrical data

| 230 V / 50 Hz Supply |               |                   |                |               |                   |                |               |                   |                |      |
|----------------------|---------------|-------------------|----------------|---------------|-------------------|----------------|---------------|-------------------|----------------|------|
| Fan setting          | High          |                   |                | Medium        |                   |                | Low           |                   |                |      |
| Performance          | Airflow (l/s) | EC power draw (W) | EC SFP (W/l/s) | Airflow (l/s) | EC power draw (W) | EC SFP (W/l/s) | Airflow (l/s) | EC power draw (W) | EC SFP (W/l/s) |      |
| Model                | BEL 40        | 140               | 27             | 0.19          | 112               | 16             | 0.14          | 89                | 11             | 0.12 |
|                      | BEL 60        | 236               | 84             | 0.38          | 172               | 53             | 0.29          | 105               | 15             | 0.14 |
|                      | BEL 90        | 317               | 73             | 0.23          | 231               | 34             | 0.15          | 120               | 18             | 0.15 |
|                      | BEL 150       | 329               | 80             | 0.24          | 289               | 58             | 0.20          | 180               | 22             | 0.12 |

## Electric element heating

| Electric Unit |               |             |                       |    |
|---------------|---------------|-------------|-----------------------|----|
| Data          | Airflow (l/s) | Output (kW) | Current per phase (A) |    |
| Model         | BEL 40        | 112         | 3.75                  | 6  |
|               | BEL 60        | 172         | 6.00                  | 9  |
|               | BEL 90        | 231         | 9.00                  | 13 |

All units suitable for 400V/50Hz/3Ph supply

Electric units only available as A style

On/off control by switching or remote thermostat or BMS



## Enhanced coil and lowflow coil option

Our range of SPC Belgravia fan convectors now come with the option of having an enhanced coil, making them suitable for use with low temperature heating systems.

A lowflow coil option is also available for systems with low water flow rates.

For more information on these options, see page 14



## Extended casing option

Belgravia Fan Convectors are available with extended casings to house on/off valves within the unit. Valves can be specified by the user or supplied by SPC. These can be wired to close when room temperature exceeds the setpoint. Supplied valves and actuators are for on-site fitting and work with standard thermostats or the SPC Modulo v3 controller.

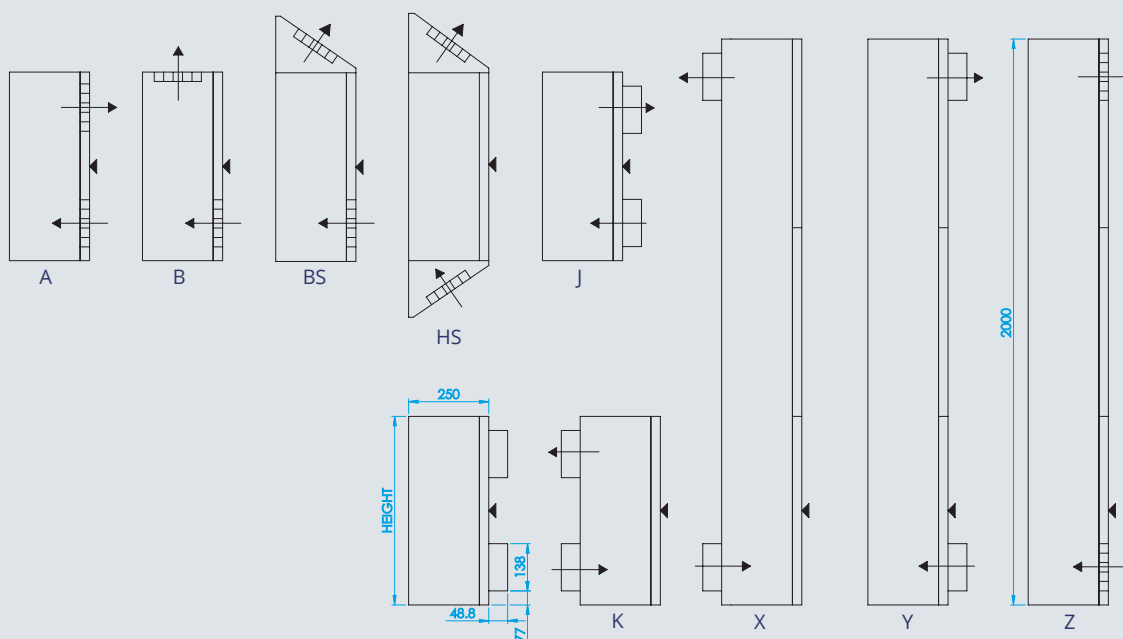
For more information on these options, see page 12



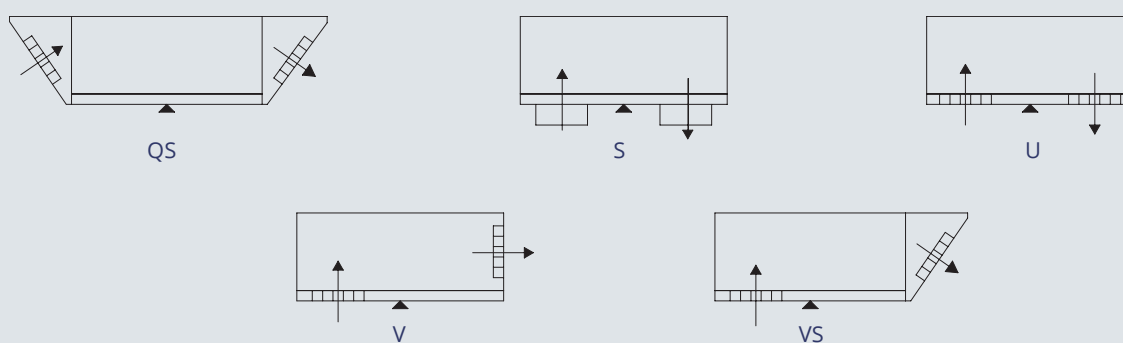
# Configurations

## Belgravia Classic

### Vertical styles



### Horizontal styles



| Model                            | BEL 40 | BEL 60 | BEL 90 | BEL 150 |
|----------------------------------|--------|--------|--------|---------|
| Case Length (mm)                 | 700    | 900    | 1200   | 1500    |
| Spigot Width (mm)                | 540    | 740    | 1040   | 1340    |
| Spigot Length (mm)               | 537.6  | 737.6  | 1037.6 | 1337.6  |
| Extended case length (mm)        | 900    | 1200   | 1500   | -       |
| Extended case spigot length (mm) | 840    | 1140   | 1440   | -       |

Height:

A, B, J, K, S, U, V = 600mm

BS, VS = 725mm

HS, QS = 850mm

X, Y, Z = 2000mm

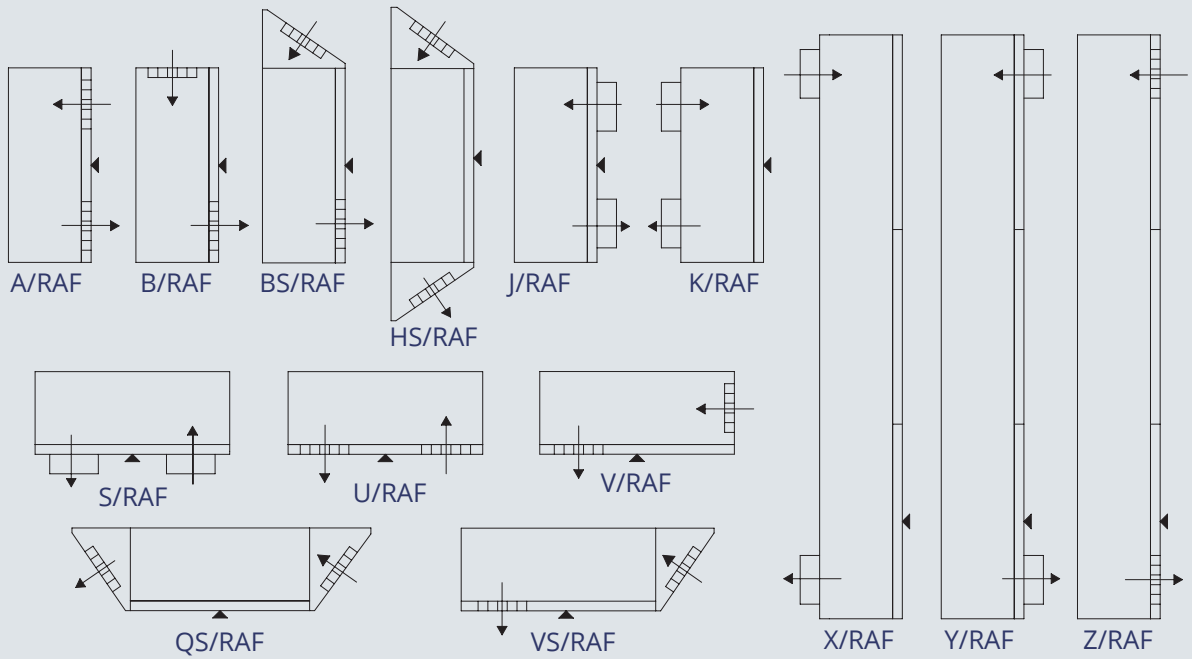
Most styles available with reversed air flow and/or inverted casing

Style x, y, z standard height at 2000mm. Special height available upon request

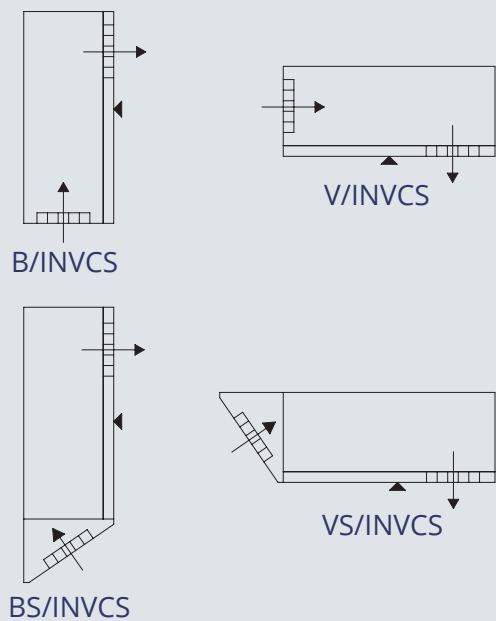
Pipe connections 3/4" BSP on all models (1/2" on lowflow heat exchangers)

**Models not drawn to scale**

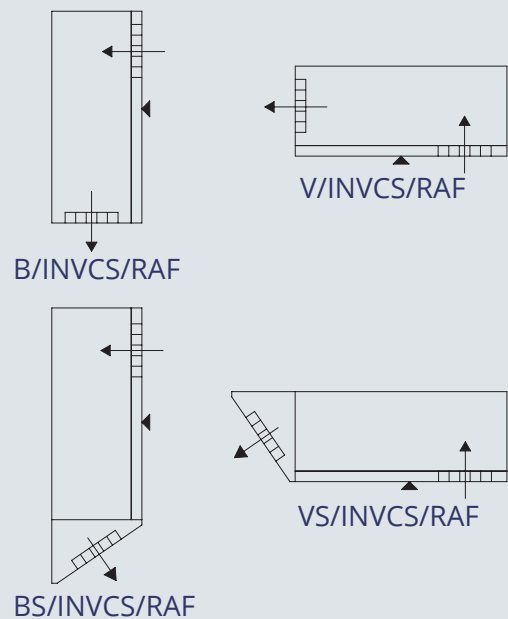
## Reversed air flow styles



## Inverted case styles



## Inverted case + reversed air flow styles



# Extended Casing Option

Belgravia Fan Convectors are available with extended casings for occasions when it is important to incorporate valves within the extent of the unit.

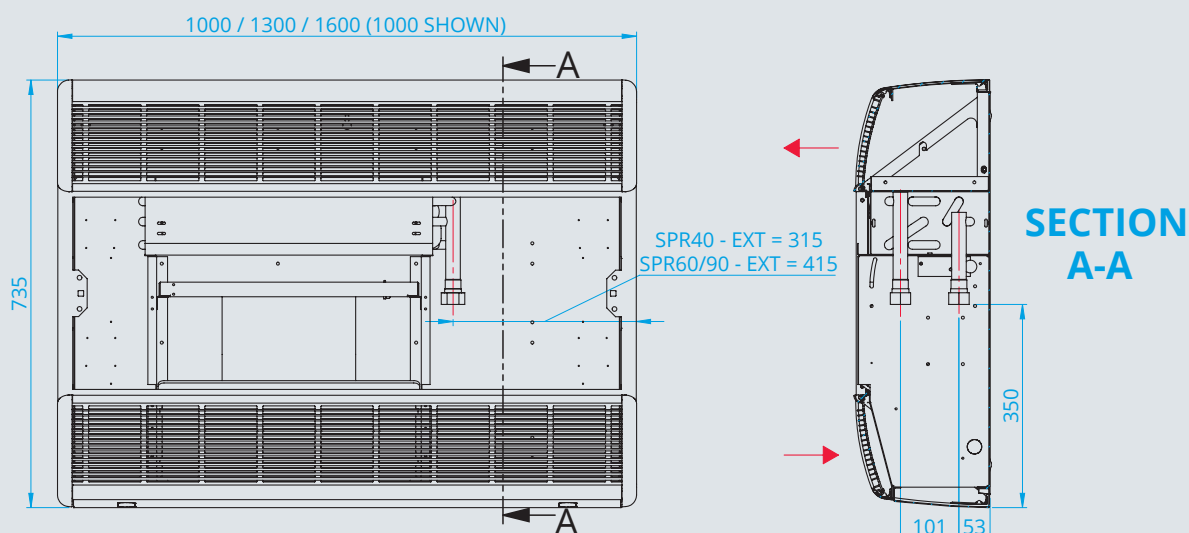
An extended casing shares its width with the next size up in the standard range of units. Valves can be specified and supplied by the user or are available from SPC. SPC units can be wired such

that waterside valves close whenever the sensed room air temperature exceeds setpoint.

If supplied by SPC, the valves and corresponding actuators are supplied loose for on-site fitting. The valves can be arranged to close in response to a standard on/off thermostat or can be integrated with the SPC Modulo v3 proportional controller.

## Belgravia Supreme

### Supreme A + Ext



| Unit Size        | SPR40A | SPR60A | SPR90A |
|------------------|--------|--------|--------|
| Case Length (mm) | 1000   | 1300   | 1600   |
| Height (mm)      | 735    | 735    | 735    |
| Depth (mm)       | 235    | 235    | 235    |

Units shown with rh connections dimensions same with lh connections. Connections through knock-outs in bottom panel or through plinth. Plinth not shown

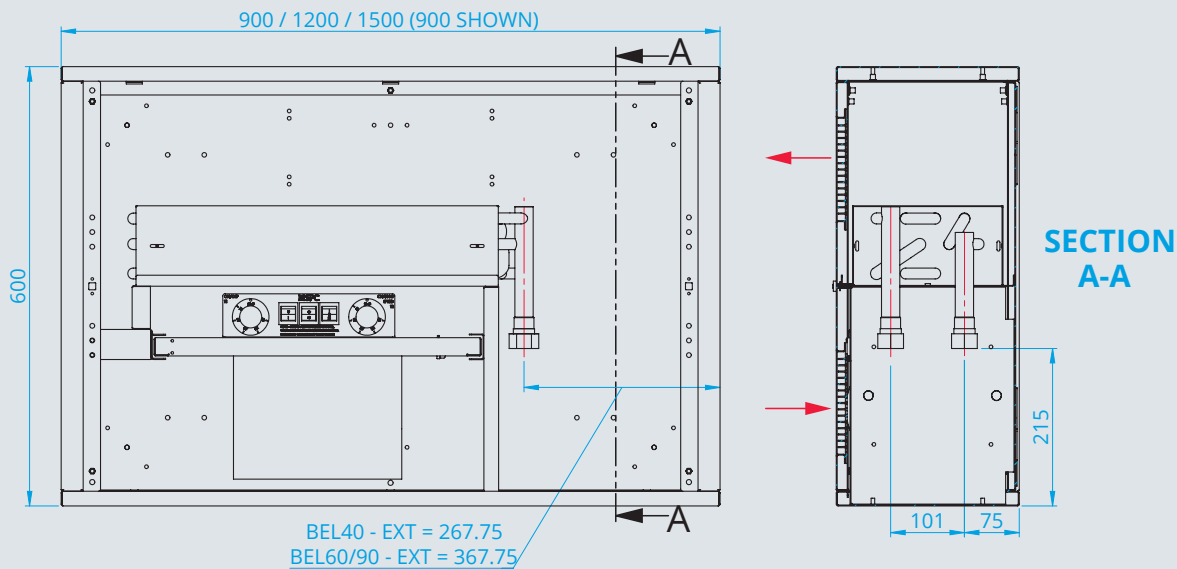
For styles A/RAF, BS, BS/RAF, BS/INVCS, BS/INVCS/RAF, HS, HS/RAF, QS, QS/RAF, VS and VS/RAF, please refer to our Belgravia Supreme Fan Convector IOM.

See **page 4** for Outputs, Noise Data and Electrical Data

Note: Extended casing is not available on plus unit

# Belgravia Classic

## Style A



| Unit Size        | BEL40 | BEL60 | BEL90 |
|------------------|-------|-------|-------|
| Case Length (mm) | 900   | 1200  | 1500  |
| Height (mm)      | 600   | 600   | 600   |
| Depth (mm)       | 250   | 250   | 250   |

For other styles, please refer to our Belgravia Classic Fan Convector IOM.

See **page 8** for Outputs, Noise Data and Electrical Data

# Enhanced Coil Options

The tables below give details of the outputs obtainable from the range of Belgravia Supreme and Classic units equipped with enhanced low water temperature coils.

If water temperatures are low, as is increasingly the case when heat pumps or condensing boilers

are used, an enhanced coil can be specified.

Enhanced coils have increased surface area to optimise output at low hot water temperatures. If both low water temperatures and lowflow rates are used then the lowflow coil is the better solution.

## Belgravia Supreme & Classic

**Table 1. Performance at 50/40°C water, 18°C space**

| Speed      | High          |             |                       |                     | Medium        |             |                       |                     | Low           |             |                       |                     |
|------------|---------------|-------------|-----------------------|---------------------|---------------|-------------|-----------------------|---------------------|---------------|-------------|-----------------------|---------------------|
| Unit size  | Airflow (l/s) | Output (kW) | Water flow rate (l/s) | Pressure Drop (kPa) | Airflow (l/s) | Output (kW) | Water flow rate (l/s) | Pressure Drop (kPa) | Airflow (l/s) | Output (kW) | Water flow rate (l/s) | Pressure Drop (kPa) |
| BEL/SPR40* | 126           | 3.3         | 0.08                  | 4.2                 | 101           | 2.8         | 0.07                  | 3.1                 | 80            | 2.3         | 0.06                  | 2.3                 |
| BEL/SPR60  | 212           | 4.5         | 0.11                  | 1.2                 | 155           | 3.5         | 0.09                  | 0.8                 | 95            | 2.2         | 0.06                  | 0.4                 |
| BEL/SPR90  | 285           | 6.3         | 0.15                  | 2.6                 | 208           | 5.1         | 0.12                  | 1.8                 | 108           | 3.0         | 0.07                  | 0.7                 |
| BEL/SPR150 | 296           | 8.5         | 0.21                  | 5.1                 | 260           | 7.7         | 0.19                  | 4.3                 | 162           | 5.2         | 0.13                  | 2.2                 |

**Table 2. Performance at 50/35°C water, 18°C space**

| Speed      | High          |             |                       |                     | Medium        |             |                       |                     | Low           |             |                       |                     |
|------------|---------------|-------------|-----------------------|---------------------|---------------|-------------|-----------------------|---------------------|---------------|-------------|-----------------------|---------------------|
| Unit size  | Airflow (l/s) | Output (kW) | Water flow rate (l/s) | Pressure Drop (kPa) | Airflow (l/s) | Output (kW) | Water flow rate (l/s) | Pressure Drop (kPa) | Airflow (l/s) | Output (kW) | Water flow rate (l/s) | Pressure Drop (kPa) |
| BEL/SPR40* | 126           | 2.4         | 0.04                  | 1.2                 | 101           | 1.9         | 0.03                  | 0.8                 | 80            | 0.8         | 0.01                  | 0.1                 |
| BEL/SPR60* | 212           | 4.4         | 0.07                  | 4.0                 | 155           | 3.5         | 0.06                  | 2.7                 | 95            | 2.3         | 0.04                  | 1.3                 |
| BEL/SPR90* | 285           | 6.0         | 0.10                  | 8.2                 | 208           | 4.8         | 0.08                  | 5.7                 | 108           | 3.0         | 0.05                  | 2.4                 |
| BEL/SPR150 | 296           | 7.2         | 0.12                  | 1.9                 | 260           | 6.5         | 0.11                  | 1.6                 | 162           | 4.3         | 0.07                  | 0.8                 |

**Table 3. Performance at 45/35°C water, 18°C space**

| Speed      | High          |             |                       |                     | Medium        |             |                       |                     | Low           |             |                       |                     |
|------------|---------------|-------------|-----------------------|---------------------|---------------|-------------|-----------------------|---------------------|---------------|-------------|-----------------------|---------------------|
| Unit size  | Airflow (l/s) | Output (kW) | Water flow rate (l/s) | Pressure Drop (kPa) | Airflow (l/s) | Output (kW) | Water flow rate (l/s) | Pressure Drop (kPa) | Airflow (l/s) | Output (kW) | Water flow rate (l/s) | Pressure Drop (kPa) |
| BEL/SPR40* | 126           | 2.5         | 0.06                  | 2.7                 | 101           | 2.1         | 0.05                  | 2.0                 | 80            | 1.7         | 0.04                  | 1.4                 |
| BEL/SPR60* | 212           | 4.1         | 0.10                  | 7.4                 | 155           | 3.3         | 0.08                  | 5.1                 | 95            | 2.3         | 0.06                  | 2.6                 |
| BEL/SPR90  | 285           | 4.8         | 0.12                  | 1.7                 | 208           | 3.8         | 0.09                  | 1.1                 | 108           | 2.1         | 0.05                  | 0.4                 |
| BEL/SPR150 | 296           | 6.8         | 0.17                  | 3.5                 | 260           | 6.1         | 0.15                  | 3.0                 | 162           | 4.1         | 0.10                  | 1.5                 |

**Note.** Selections marked \* use the 'lowflow' coil with 1/2" pipe connectors, other selections are based on the 'enhanced' coil with 3/4" pipe connectors.

**Enhanced or lowflow coils should be considered if water temperatures are below 60°C.**



# Lowflow Coil Option

It is increasingly common for fan convectors to be installed in systems which take advantage of low water flow rates to enhance efficiency and provide reduced return water temperature.

SPC manufacture their own coil heat exchangers and are able to offer the Supreme and Classic units with a special 'lowflow' coil to suit the above scenario. This special heat exchanger prevents the rapid fall off of capacity with flow rate.

## Performance data

| Performance at 60/45°C water, 18°C space |               |             |                       |                     |               |             |                       |                     |               |             |                       |                     |
|------------------------------------------|---------------|-------------|-----------------------|---------------------|---------------|-------------|-----------------------|---------------------|---------------|-------------|-----------------------|---------------------|
| Speed                                    | High          |             |                       |                     | Medium        |             |                       |                     | Low           |             |                       |                     |
| Unit size                                | Airflow (l/s) | Output (kW) | Water flow rate (l/s) | Pressure Drop (kPa) | Airflow (l/s) | Output (kW) | Water flow rate (l/s) | Pressure Drop (kPa) | Airflow (l/s) | Output (kW) | Water flow rate (l/s) | Pressure Drop (kPa) |
| BEL/SPR40                                | 126           | 4.1         | 0.07                  | 3.0                 | 101           | 3.5         | 0.06                  | 2.3                 | 80            | 2.9         | 0.05                  | 1.7                 |
| BEL/SPR60                                | 212           | 6.6         | 0.11                  | 7.8                 | 155           | 5.3         | 0.09                  | 5.4                 | 95            | 3.7         | 0.06                  | 2.8                 |
| BEL/SPR90                                | 285           | 8.7         | 0.14                  | 15.3                | 208           | 7.0         | 0.11                  | 10.5                | 108           | 4.3         | 0.07                  | 4.5                 |
| BEL/SPR150                               | 296           | 11.5        | 0.19                  | 28.9                | 260           | 10.4        | 0.17                  | 24.3                | 162           | 7.1         | 0.12                  | 12.4                |

**Lowflow coils should be considered if the return temperature is 15°C or more less than the flow temperature.**



# Active LST

SPC have developed a low surface temperature control system for use with its fan convector range. The new controller ensures that surface temperatures remain below the threshold above which there is a risk to vulnerable occupants. According to NHS guidelines this is taken as being equal to 43°C.

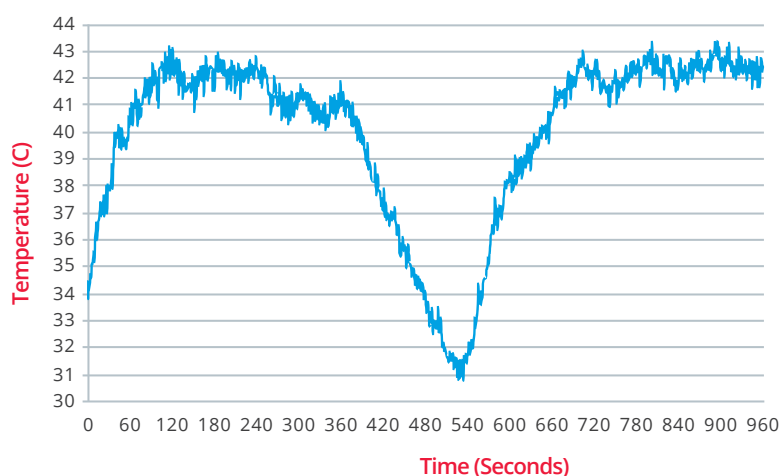
Unlike other fan-assisted low surface temperature units 'Active LST' control actively prevents surface temperature increase by monitoring the casing temperature at its hottest point. An independent valve then opens and closes in direct response to the casing temperature.

The closing of the valve reduces water flowrate and casing surface temperature to maintain it at or below the threshold value.

The chart shows temperatures measured on the outlet grille of an SPC fan convector utilising 'Active LST' control. The outlet grille and top panel are the hottest points on the casing.



## Measured surface temperatures



## Output Table

| Unit size  | Nominal length (mm) | Airflow (litres/s) | Capacity (kW) |
|------------|---------------------|--------------------|---------------|
| BEL/SPR40  | 700                 | 112                | 3.1           |
| BEL/SPR60  | 900                 | 172                | 4.7           |
| BEL/SPR90  | 1200                | 231                | 6.4           |
| BEL/SPR150 | 1500                | 289                | 8.0           |

Based on water at 80/60°C and 20°C room air.

- Direct sensing of hottest temperature on casing
- Independent control valve modulates to set maximum threshold temperature at 43°C
- Available with a range of capacity control options
- Surface temperature and heating capacity separately controlled
- Ensures compliance with NHS guidelines
- Can be implemented on the full range of available sizes of SPC fan convector
- No additional pipework or wiring required; everything is pre-installed
- Available with rounded ends for enhanced safety
- Available on Classic and Supreme units for A and BS styles'
- LST valve sets terminate in 15mm copper tails

**Contact SPC for further information.**

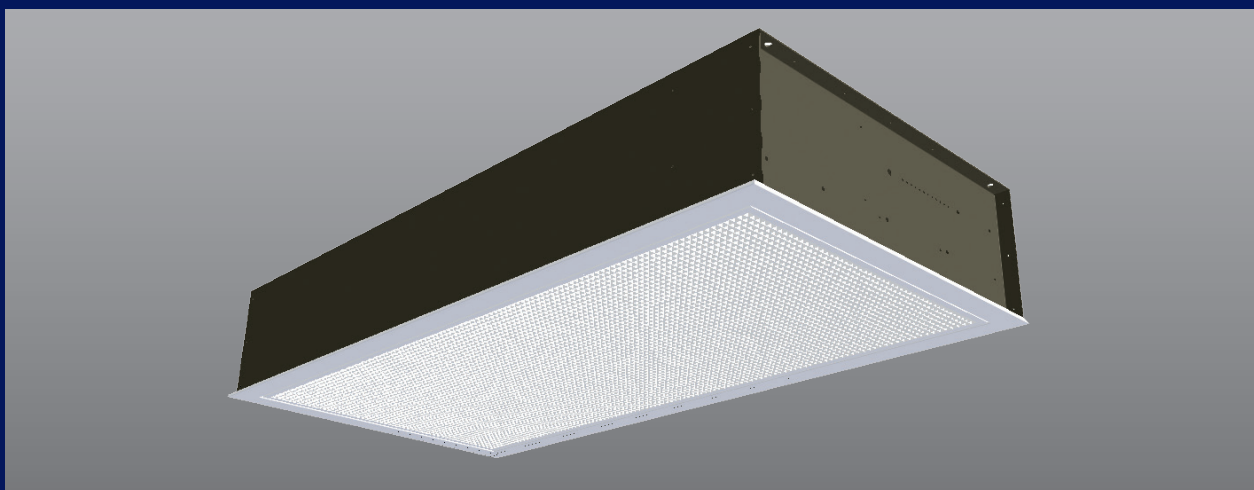
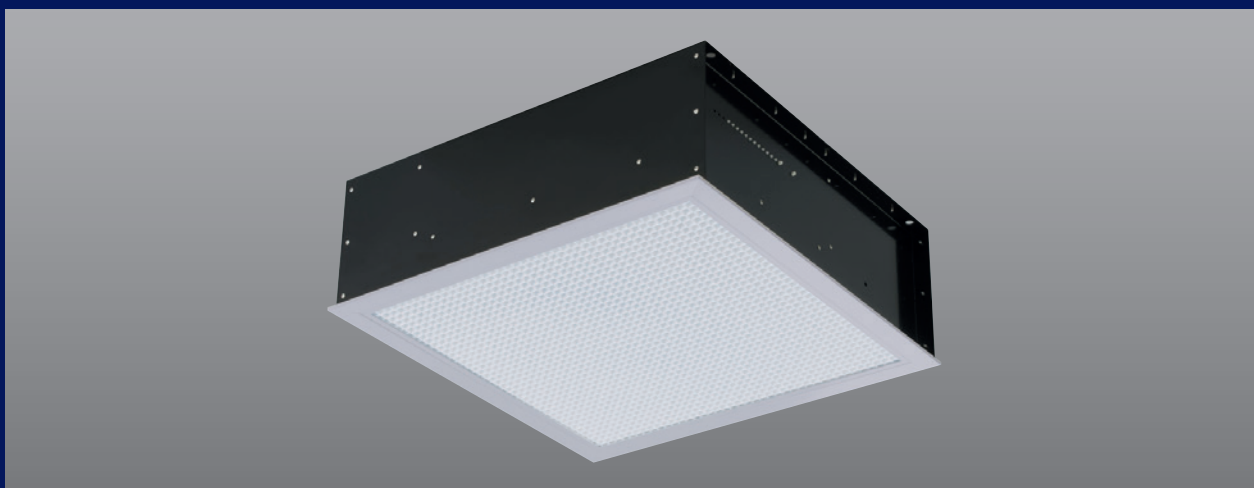
# Belgravia Tilevector

Powerful reliable fans are provided to draw in room air and distribute the conditioned air. The combination of air throw and rapid energy transfer brings immediate warmth to those below.

The Belgravia Tilevector range is suitable for installation into both T-Bar suspended ceiling grids

(600mm x 600mm) and plasterboard ceilings. They can also be suspended from solid ceilings.

The body of the casing is in black; the room-facing grille is in white (RAL 9010).



## Dimensions

| Dimensions          |      |      |
|---------------------|------|------|
| Model               | SOLO | DUO  |
| Length (mm)         | 595  | 1195 |
| Width (mm)          | 595  |      |
| Depth (mm)          | 210  |      |
| Maximum Weight (kg) | 18   | 35   |

## Performance data

| Performance at 80/70°C water, 18°C space |               |             |                    |                     |                       |               |             |                    |                     |                       |               |             |                    |                     |                       |
|------------------------------------------|---------------|-------------|--------------------|---------------------|-----------------------|---------------|-------------|--------------------|---------------------|-----------------------|---------------|-------------|--------------------|---------------------|-----------------------|
| Speed                                    | High          |             |                    |                     |                       | Medium        |             |                    |                     |                       | Low           |             |                    |                     |                       |
| Unit Size                                | Airflow (l/s) | Output (kW) | Exit Air Temp (°C) | Pressure Drop (kPa) | Water Flow Rate (l/s) | Airflow (l/s) | Output (kW) | Exit Air Temp (°C) | Pressure Drop (kPa) | Water Flow Rate (l/s) | Airflow (l/s) | Output (kW) | Exit Air Temp (°C) | Pressure Drop (kPa) | Water Flow Rate (l/s) |
| SOLO                                     | 95            | 3.7         | 49.9               | 6                   | 0.09                  | 85            | 3.4         | 51.3               | 5.3                 | 0.08                  | 70            | 3.1         | 53.9               | 4.3                 | 0.07                  |
| DUO                                      | 190           | 8.6         | 55                 | 44.2                | 0.21                  | 170           | 8           | 56.5               | 39.1                | 0.19                  | 140           | 7           | 59                 | 31.3                | 0.17                  |

## Electric element heating

| Performance Data |      |                     |             |
|------------------|------|---------------------|-------------|
| Fan setting      |      | Single speed        |             |
| Performance      |      | Air Flow rate (l/s) | Output (kW) |
| Model            | SOLO | 121                 | 3           |
|                  | DUO  | 242                 | 6           |

## Noise data

| Noise Data  |           |      |        |     |
|-------------|-----------|------|--------|-----|
| Fan setting |           | High | Medium | Low |
| Model       | Solo      | 42   | 40     | 36  |
|             | Duo       | 44   | 42     | 38  |
|             | Solo Plus | 40   | 38     | 34  |
|             | Duo Plus  | 42   | 40     | 36  |

NR levels are based on a room volume that would normally be heated by a single unit of each size shown  
Reverberation time of the room is taken to be 0.4 seconds

## Electrical data

| 230 V / 50 Hz Supply |           |               |                   |                |               |                   |                |               |                   |                |
|----------------------|-----------|---------------|-------------------|----------------|---------------|-------------------|----------------|---------------|-------------------|----------------|
| Fan setting          |           | High          |                   |                | Medium        |                   |                | Low           |                   |                |
| Performance          |           | Airflow (l/s) | EC power draw (W) | EC SFP (W/l/s) | Airflow (l/s) | EC power draw (W) | EC SFP (W/l/s) | Airflow (l/s) | EC power draw (W) | EC SFP (W/l/s) |
| Model                | Solo      | 95            | 18                | 0.19           | 85            | 14                | 0.16           | 70            | 12                | 0.17           |
|                      | Duo       | 190           | 36                | 0.19           | 170           | 28                | 0.16           | 140           | 24                | 0.17           |
|                      | Solo Plus | 152           | 30                | 0.20           | 130           | 20                | 0.15           | 110           | 15                | 0.14           |
|                      | Duo Plus  | 304           | 60                | 0.20           | 260           | 40                | 0.15           | 220           | 30                | 0.14           |

Dimensions and weights are given including unit cases and grilles

Coil supplied with 15mm connections on flow and return

Motors are high efficiency EC type

Grilles are hinged, egg-crate style core, all aluminium construction with powder coats or satin-silver finish

# Belgravia Tilevector Plus

## Fan Convector units for low water temperature applications

The conventional Tilevectors are intended to fit within a suspended T bar ceiling grid. They are designed for optimum operation against traditional hot water temperatures generated by conventional boilers.

The Tilevector Plus unit has been developed as an alternative unit with enhanced airflow and heat exchanger to optimise operation against the increasingly lower temperature hot water available from heat pumps and condensing boilers.

The tables below give details of the outputs obtainable from the Tilevector Plus unit supplied with various low grade hot water temperatures.

The Tilevector Plus is available as both a Solo and Duo unit. Overall dimensions of the Solo unit are 595mmx595mmx260mm and for the Duo unit 1195mmx595mmx260mm. Weight of the Solo is 20kg and the Duo 35kg. Connections are 15mm copper on flow and return.



| Unit size        | Solo Plus |        |      | Duo Plus |        |      |
|------------------|-----------|--------|------|----------|--------|------|
| Speed            | Low       | Medium | High | Low      | Medium | High |
| Output (kW)      | 2.7       | 3.2    | 3.5  | 5.8      | 7.1    | 7.8  |
| Water flow (l/s) | 0.06      | 0.08   | 0.08 | 0.14     | 0.17   | 0.19 |
| Water PD (kPa)   | 9.4       | 13.1   | 15.4 | 9.4      | 13.7   | 15.8 |

Table 1. Performance at 50/40°C water, 18°C entering air

| Unit size        | Solo Plus |        |      | Duo Plus |        |      |
|------------------|-----------|--------|------|----------|--------|------|
| Speed            | Low       | Medium | High | Low      | Medium | High |
| Output (kW)      | 2.1       | 2.6    | 2.8  | 4.7      | 5.7    | 6.3  |
| Water flow (l/s) | 0.05      | 0.06   | 0.07 | 0.11     | 0.14   | 0.15 |
| Water PD (kPa)   | 6.5       | 8.9    | 10.6 | 6.6      | 9.2    | 11.0 |

Table 2. Performance at 45/35°C water, 18°C entering air

| Unit size        | Solo Plus |        |      | Duo Plus |        |      |
|------------------|-----------|--------|------|----------|--------|------|
| Speed            | Low       | Medium | High | Low      | Medium | High |
| Output (kW)      | 2.3       | 2.8    | 3.0  | 5.2      | 6.2    | 6.8  |
| Water flow (l/s) | 0.04      | 0.05   | 0.05 | 0.08     | 0.10   | 0.11 |
| Water PD (kPa)   | 3.5       | 4.9    | 5.8  | 3.7      | 5.2    | 6.1  |

Table 3. Performance at 50/35°C water, 18°C entering air

# SPC Modulo v3

## Our new proportional controller for fan-assisted heaters

Taking advantage of advances in design of electric motors, SPC Modulo v3, SPC's new proportional controller, is designed especially for incorporation into systems using airside control via 0 to 10V analogue signals. The SPC range of heating units utilise EC/DC fans and in conjunction with the new controller will provide enhanced comfort and energy efficiency.

Simplicity of use is key to the SPC Modulo v3. The thermostat is energised when the touch area in the top right is pressed and setpoint adjusted by the touch areas in the bottom left and right of

the controller – no other settings are required. The controller will then automatically control the rotational speed of the fan depending on the difference between sensed and setpoint temperature.

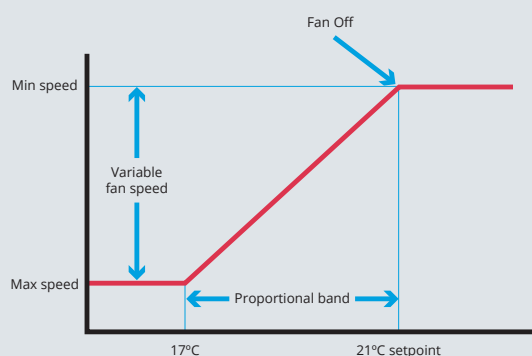
A transparent coverbox is available with lockable cover if access to the thermostat needs to be restricted.

The units can be supplied with a relay box with volt free contact to provide on/off control of a water valve.



### Key Features

- Energy saving via proportional speed control
- Enhanced comfort via precise thermostatic control
- Easy to use interface via touch area on fascia
- Can be supplied with ventilated, lockable, transparent cover for tamperproof applications.
- Volt free contact for valve control available as an option



The chart shows how the controller varies the speed of the fan in response to the difference between the actual temperature and the setpoint temperature. Within the proportional band the fan speed is continuously varied to precisely match heat output to the required load.

# Case Options for Modulo Controllers

We offer two types of cases for our SPC Modulo controller, providing flexibility to suit different installation environments. Each case is designed for specific applications, depending on the level of protection required.

Both options are shown below to help you choose the right solution for your project:

- **Standard square case** – A simple, ventilated cover offering basic protection for general installations.
- **Curved tamperproof case** – Ideal for tamperproof applications, this ventilated, transparent cover includes a lockable feature to prevent unauthorised access to the controller.

| Modulo case options                |         |
|------------------------------------|---------|
| Square tamperproof case (Standard) | 400/408 |
| Curved tamperproof case            | 400/362 |



# SPC Vision Controller

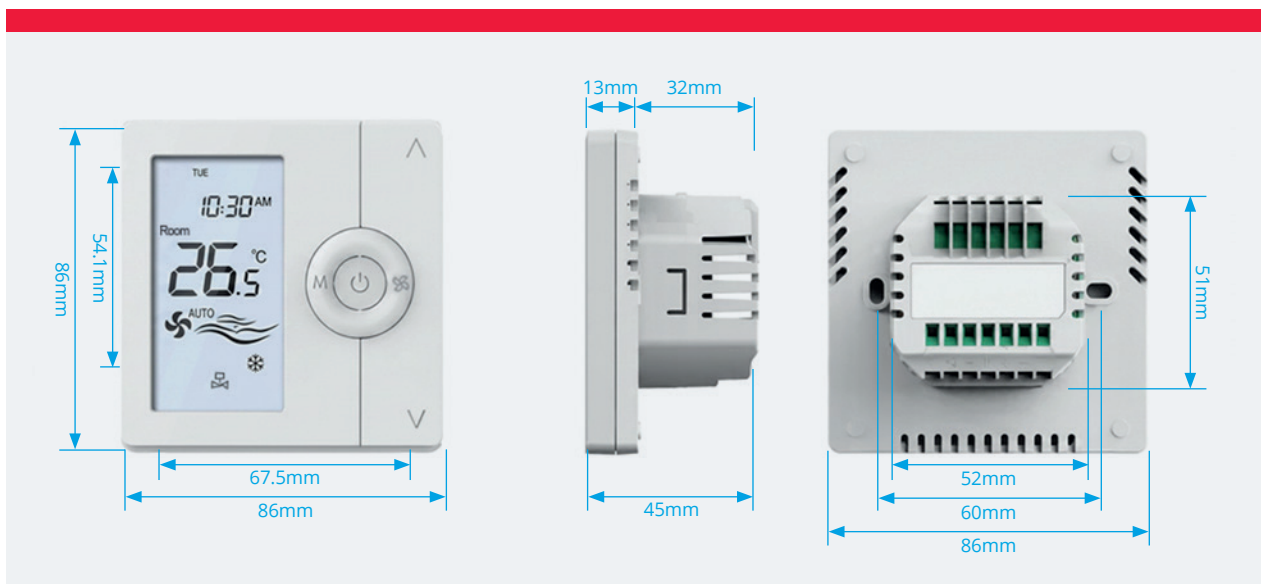
The SPC Vision Controller is a high end surface mounted control device, designed specifically for use with the range of SPC Fan Convectors fitted with EC motors.

The controller is surface mounted in a representative position within the conditioned room and incorporates a sophisticated LCD and intuitive push button control. The user sets the required room temperature using the up and down buttons and controls the fan speed between low, medium and high using the fan speed button. Fan speeds are preset via a 0-10V signal generated directly by the controller.

The controller directly sets the rotational speed of the fan via a control signal to the motor. There are also terminals available on the controller for operation of a 230V on/off water valve to stop the flow of hot water to the Fan Convector unit when the room setpoint temperature is reached.

An additional set of volt free contacts are available for remote enable/disable operation.

Multiple units in a single room can be controlled via a single controller. Contact SPC to discuss your requirements.



# Accessories and options

| Accessories |                   |                                                            |         |         |            |
|-------------|-------------------|------------------------------------------------------------|---------|---------|------------|
|             | Control           | Function                                                   | Classic | Supreme | Tilevector |
| THERMOSTATS | LTC <sup>†</sup>  | Low water temperature fan cut-out                          | ✓       | ✓       | ✓          |
|             | ALTC <sup>†</sup> | Adjustable low water temperature fan cut-out               | ✓       | ✓       | ✓          |
|             | T1*               | In-built on-off control                                    | ✓       | ✓       |            |
|             | T2*               | In-built change speed control                              | ✓       | ✓       |            |
|             | RT1               | Remote mounted on-off control                              | ✓       | ✓       | ✓          |
|             | RT2               | Remote mounted change speed control                        | ✓       | ✓       | ✓          |
|             | TRT1              | Tamper-proof on-off stat                                   | ✓       | ✓       | ✓          |
|             | TRT2              | Tamper proof change speed control                          | ✓       | ✓       | ✓          |
|             | MODULO            | Proportional touchscreen controller                        | ✓       | ✓       | ✓          |
|             | VISION            | Digital Thermostat Controller                              | ✓       | ✓       | ✓          |
| SWITCHES    | RS1               | On-off rocker switch                                       | ✓       | ✓       | ✓          |
|             | RS2               | Summer-winter switch                                       | ✓       | ✓       | ✓          |
|             | RS3               | Three speed rocker switch                                  | ✓       | ✓       | ✓          |
|             | RS12              | Combined on-off / summer-winter rocker switch              | ✓       | ✓       | ✓          |
|             | RS13              | Combined on-off / change speed rocker switch               | ✓       | ✓       | ✓          |
|             | RS23              | Combined summer-winter / change speed rocker switch        | ✓       | ✓       | ✓          |
|             | RS123             | Combined on-off summer-winter & change speed rocker switch | ✓       | ✓       | ✓          |
| BMS         | BMS1              | Relay for remote enable/disable signal                     | ✓       | ✓       | ✓          |
|             | BMS2              | On/off and speed control via remote 0-10V signal from BMS  | ✓       | ✓       | ✓          |

\*Not available on RAF or INVS/RAF units

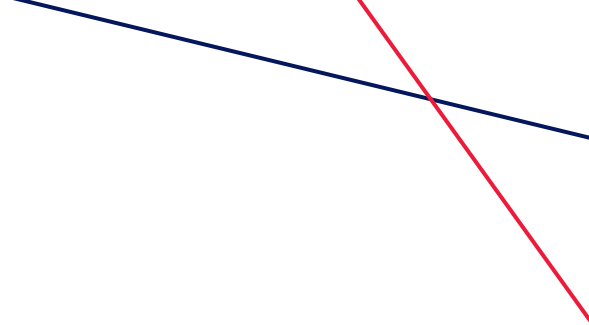
<sup>†</sup> LTC is a fixed temperature thermal switch which enables the fan on a temperature rise (>35°C) and disables it on a temperature fall (<25°C). It is suitable for use with return water temperatures of 40°C and above and is fitted directly to the heat exchanger.

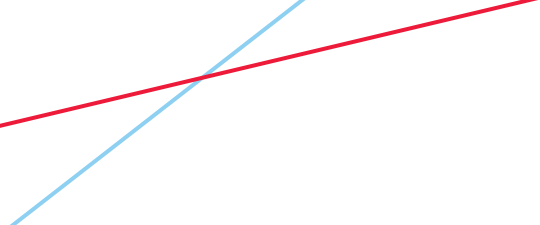
<sup>†</sup> An ALTC is an adjustable version (30 to 90°C) which is fitted to the flow pipe, not the heat exchanger and is suitable for use with flow temperatures of 40°C and above. Note that LTC/ALTC are not suitable for use at very low hot water temperatures and are not compatible with weather compensated systems regularly found on heat pumps.

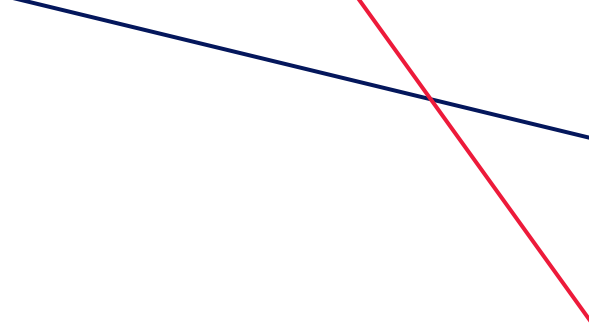
Please see the next page for more accessories and options

| Accessories                |         |                                                                                            |         |         |            |
|----------------------------|---------|--------------------------------------------------------------------------------------------|---------|---------|------------|
|                            | Control | Function                                                                                   | Classic | Supreme | Tilevector |
| ELECTRICAL CONNECTIONS     | FSB     | Fuse spur box                                                                              | ✓       | ✓       | ✓          |
|                            | CCB     | Customer connection box                                                                    | ✓       | ✓       | ✓          |
| AIR SIDE OPTIONS           | EAV     | Extended air vent                                                                          | ✓       |         |            |
|                            | RAF     | Reverse air flow                                                                           | ✓       | ✓       |            |
|                            | AF1     | Air filter fitted between fan deck and coil                                                | ✓       |         | ✓          |
|                            | AF2     | Air filter fitted behind the inlet grille                                                  | ✓       |         |            |
|                            | AF3     | Air filter covering the inlet grille fitted to the motor plate                             |         | ✓       |            |
|                            | POD     | Power operated damper                                                                      | ✓       |         |            |
| CASE OPTIONS & ACCESSORIES | SPF     | Special paint finish                                                                       | ✓       | ✓       |            |
|                            | P       | Plinth                                                                                     | ✓       | ✓       |            |
|                            | LAP     | Lockable access panel                                                                      | ✓       | ✓       |            |
|                            | TAP     | Tamper proof access panel                                                                  | ✓       | ✓       |            |
|                            | EXTC    | Extended casing                                                                            | ✓       | ✓       |            |
|                            | LGA     | Loose grille assembly                                                                      | ✓       |         |            |
|                            | SWF     | Special white finish                                                                       | ✓       |         |            |
|                            | BOX IF  | Metal flush mounting box for single rocker switch                                          | ✓       | ✓       | ✓          |
|                            | BOX IS  | White plastic surface mounting box for single rocker switches                              | ✓       | ✓       | ✓          |
|                            | BOX 2F  | Metal flush mounting box for combined rocker switches                                      | ✓       | ✓       | ✓          |
|                            | BOX S2  | White plastic surface mounting box for combined rocker switches                            | ✓       | ✓       | ✓          |
|                            | INVCS   | Inverted casing                                                                            | ✓       | ✓       |            |
|                            | WM      | Wall mounted stiffeners                                                                    | ✓       | ✓       |            |
| LOW SURFACE TEMPERATURE    | LST     | Low surface temperature unit                                                               | ✓       | ✓       |            |
| COIL CONNECTIONS           | ISV     | Isolating valves for flow and return pipes<br>(Not available on Tilevector Plus)           |         |         | ✓          |
|                            | 2PV     | On/off valve for waterside controls<br>(extended case required for internal valve fitting) | ✓       | ✓       |            |
|                            | M2PV*   | Modulo 2 port valve plus relay box<br>(extended case required for internal valve fitting)  | ✓       | ✓       | ✓          |
|                            | V2PV    | Vision 2-port on/off valve for waterside controls                                          | ✓       | ✓       | ✓          |

\* Tilevector – Valve needs to be fitted outside the unit

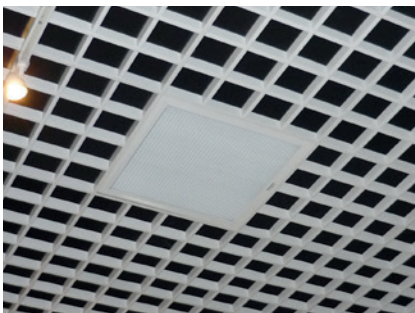






# SPC

## Fan Convector projects



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SPC Belgravia Fan Convector Brochure Issue 20

