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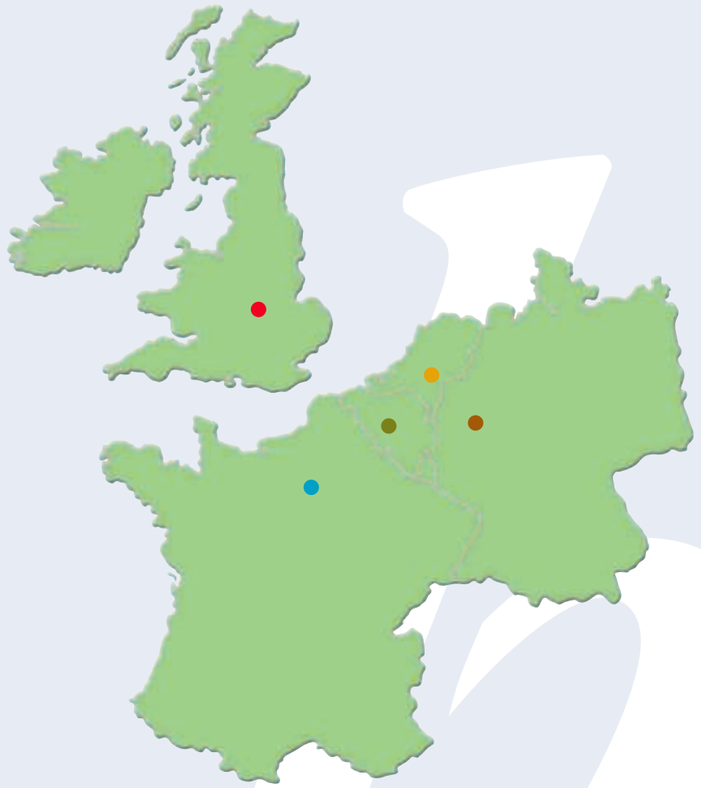

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LST Fan Convector

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Forceflow™
FAN CONVECTOR RANGE LST

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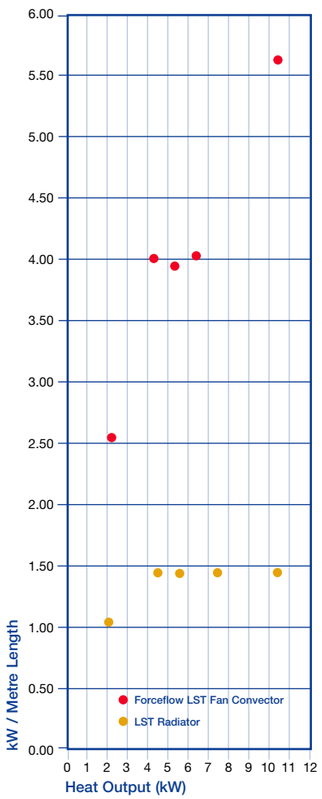
Why use a Fan Convector ?

Widely used in buildings such as schools, libraries, churches, hospitals, leisure centres, shops and offices fan convectors have for many years been universally acknowledged to be one of the simplest and most cost-effective ways of heating a room quickly.
With minimal maintenance requirements, fan convectors are designed to rapidly distribute heat throughout a room whilst occupying much less wall space than a radiator of equivalent output.

Why use a LST Fan Convector ?

A heat emitter with a surface temperature no greater than 43°C is considered a major safety benefit, particularly in nurseries, infant and special needs schools, and elderly people's care homes.
Traditional fan convectors can have a surface temperature in excess of 50°C. However if LST radiators, which typically have less heating capacity than a fan convector, are used as an alternative there often is not enough wall space available to install all the radiators necessary to heat the space.
Using a LST fan convector gives all the benefits of a traditional fan convector whilst maintaining a surface temperature, including that of the discharge grille, at or below 43°C. Indeed the heat output per metre length of a LST fan convector is over twice that of the equivalent LST radiator.

Forceflow LST v LST Radiator



What tests have been undertaken to verify the Forceflow LST Fan Convector ?

Two separate tests have been carried out by BSRIA. The first confirms heat output and the second confirms that no part of the surface rises above 43°C.
The Forceflow LST fan convector is manufactured and tested in accordance with BS EN 442, under a BS EN ISO 9001:2000 quality system, and complies with DHSS Engineering Data DN4 and NHS Estates Health Guidance Note 'Safe Hot Water and Surface Temperatures' 1998 (less than 43°C surface temperature with water flow temperatures of 80°C). And because of its innovative nature the product has a patent pending.

How does the Forceflow LST Fan Convector work ?

A special thermostatic radiator valve (TRV) set by the manufacturer is fitted to the heating coil pipework and a temperature sensor positioned immediately behind the discharge grille. The valve modulates between the open and closed positions carefully maintaining the discharge air temperature so that surface temperature satisfies LST regulations whilst optimising heat output.

How is room temperature controlled ?

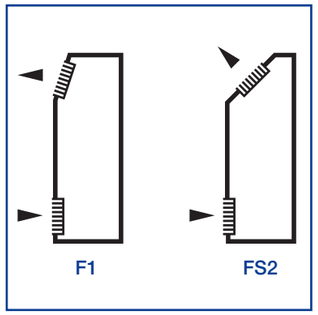
During normal operation the fans run at a constant speed set initially by the installer or end user. A second TRV, with a temperature sensor positioned immediately behind the return air grille, is fitted into the heating coil pipework. This controls the room temperature by adjusting the water flow rate and is normally set by the installer or end user to give the space temperature required.

Performance

Model	Fan Speed	Air Volume (l/s)	Heating Duty (kW)	Noise Level (NR)	Water Flow Rate (l/s)	Water Pressure Drop (kPa)	Full Load Current (Amps)
915-LST	high medium low	118 87 59	2.83 2.09 1.42	40 35 27	0.041 0.028 0.018	1.6 0.8 0.3	0.33 0.28 0.21
930-LST	high medium low	190 176 104	4.56 4.22 2.50	41 35 25	0.051 0.047 0.028	2.4 2.2 0.8	0.49 0.48 0.43
935-LST	high medium low	254 202 136	6.40 5.09 3.43	43 35 24	0.068 0.057 0.040	4.5 3.2 1.6	0.45 0.42 0.38
940-LST	high medium low	318 249 164	8.01 6.28 4.13	42 35 30	0.070 0.059 0.042	5.0 3.4 1.8	0.50 0.43 0.39
975-LST	high medium low	465 408 250	11.72 10.28 6.30	46 37 29	0.114 0.100 0.062	9.8 7.7 3.0	1.70 0.91 0.74

What styles are available ?

The two styles illustrated below are available as the Forceflow LST fan convector.



Model	Depth (mm)	Width (mm)	Height (mm)
915-LST	207	805	660
930-LST	207	1055	660
935-LST	207	1305	660
940-LST	207	1555	660
975-LST	250	1805	660

Controls and Accessories

Each Forceflow LST fan convector runs continuously at a single fan speed which is chosen and set by the installer or end user, and is supplied as standard with :

- built-in on/off, fan speed and summer/winter rocker switches
- a low water temperature cut-out (T4) thermostat
- a textured white (RAL9010) paint finish
- an EU3 grade disposable panel filter
- a screw-fixed or lockable access panel
- integral discharge and return air grilles
- 22mm copper pipe connections
- a factory set TRV valve, fitted into the heating coil pipework, with discharge temperature sensor
- an installer or end user set TRV valve, fitted into the heating coil pipework, with built in or remote (max. distance from unit 15m) room temperature sensor
- a manual reset overheat switch

Pencil proof grilles and plinths are available as options.

Important

1 The unit must not be switched on or off via the electrical supply. Switching must always be done 'globally' via the integral low water temperature cut-out (T4) thermostat.

2 Higher water flow rates will not produce higher heat outputs. As the leaving air temperature is fixed by the LAT TRV to achieve a satisfactory low surface temperature, only an increase in fan speed and/or a decrease in entering air temperature to below 20°C will result in higher heat outputs than those shown in the Performance Table.

3 Do not use a pump more powerful than is required to achieve the design water flow rates with the hydraulic pressure drops given. The differential pressure over the thermostatic valves must not exceed 20kPa (0.2 bar). If it does the valve seat will lift, compromise the LST performance of the unit and cause the manual reset overheat switch to turn the fans off. This will require resetting by a technician. If it is clear that high differential pressures will occur in the partial load condition (ie. TRV head throttling down) a suitable differential pressure regulating device must be fitted in the pipework to the unit(s).