Technical information

Many technical features are constant across the Stelrad ranges, as outlined here - apart from the Radical Energy Saving Radiator, which has its own technical information pages.
Each section's introduction page provides you with any further technical information specific to the ranges included.

Extra performance to guaranteed standards

Stelrad combine the most sophisticated production resources in Europe with substantial investment in testing and verification of performance data - which has helped us create high output radiators delivering heating performance that exceeds expectation.

More choice for application flexibility

A range of models provide extra sizing flexibility and covers a multitude of application requirements, including those where there are installation difficulties or where wall space is at a premium.

Superb quality from design to installation

Our radiators are specifically designed to minimise any movement, providing a tight, professional fit, that will remain in place, even after storage, transit and installation. Convectors are precision welded directly onto the waterways for greater efficiency and economy, with flexible connection options for the highest of commercial and domestic application specifications.

Stelrad radiators are manufactured under ISO 9001 quality systems in the UK and every one comes wrapped in robust, practical packaging that will keep the product pristine, right through to installation. This clever packaging design allows installation to be completed prior to removal.

Temperature table

For systems not operating at Δt50 the factors in the table below should be applied. The output of a given radiator can be obtained by multiplying the quoted Δt50 output by the operating factor. Conversely, to derive a non Δt50 output, divide the heat output required by the relevant operation factor. This 'Δt50 equivalent output' can then be used to select a radiator from the standard tables.

°C		°F	
Δt	Operating Factor	Δt	Operating Factor
5	0.050	10	0.057
10	0.123	20	0.142
15	0.209	30	0.240
20	0.304	40	0.348
25	0.406	50	0.466
30	0.515	60	0.590
35	0.629	70	0.721
40	0.748	80	0.858
45	0.872	90	1.000
50	1.000	100	1.147
55	1.132	110	1.298
60	1.267	120	1.454
65	1.406	130	1.613
70	1.549	150	1.776
75	1.694	-	-

Example: Exact output at Δt50 = 2000 Btu/hr
Output at Δt30 = 2000 x 0.515 = 1030 Btu/hr

Testing and operating pressures

All models are high pressure tested to withstand 152.3 psi (10.5 bar). Strictly controlled independent laboratory testing ensures that all Stelrad radiators are guaranteed to perform to a maximum working pressure of 116 psi (8 bar) at a maximum temperature of 95°C. All conform to BS EN 442 - the European Standard for radiators.

Connections

Each radiator has 4 x ½" connections as standard. A ¾" valve adaptor is also available, providing a ¾" connector option to the valve without reducing performance.

(Please note: Concord and Radical have different connections).

Applications

Stelrad radiators are suitable for two pipe installations. For single pipe applications, it is advisable to use diversion tees in the pipework, as this will assist in obtaining design performance from the radiators. Although our radiators are suitable for Microbore pipework, the back tappings make them unsuitable for twin entry valves.

Installation

Everything required for installation can be found within each radiator's packaging. Brackets are of a strong design, with open top and deep slots, which facilitate easy and secure installation. Plastic inserts seat the radiator precisely on the bracket minimising expansion and contraction noise.

The neat nickel-plated plug and vent provide a watertight joint, whilst complementing the superior finish.

To facilitate easy one off replacement, nickel-plated brass extension pieces are also available, complete with sealing washer, in 20mm, 30mm and 40mm options. Recommended height from the floor to the base of the radiator is 150mm minimum. This allows adequate airflow when the radiator is placed on the bracket.

Caution

When designing for domestic systems we recommend that the Stelrad radiators are only used in heating systems complying with British Standard Code of Practice for Central Heating for Domestic Premises BS EN 12828:2003 and BS EN 12831:2003.

Single feed, direct cylinders are not recommended as should interchange of water occur, fresh aerated water would enter the heating system, resulting in corrosion.

Water treatment

On completion of the installation, the system should be properly flushed and filled in accordance with the British Standard Code of Practice BS 7593:2006 for the Treatment of Water in Domestic Hot Water Central Heating Systems, Part L of Building Regulations and Good Practice Guidance for Scotland.

After installation of a new Stelrad radiator the central heating system should be cleaned and flushed with cleaner to remove existing contaminants, flux residue and other installation debris which, if left, can cause damage to the new radiator. Afterwards, treat the system with an inhibitor to ensure long term protection against corrosion and limescale.

A comprehensive range of quality chemicals including inhibitors, cleaners, leak sealers and noise reducers that protect and maintain central heating systems can be obtained from:

Sentinel Performance Solutions Ltd
The Heath Business & Technical Park, Runcorn, Cheshire WA7 4QX
Tel: 01928 588 330 (UK)
www.sentinel-solutions.net

Fernox - Cookson Electronics, Forsyth Road, Sheerwater, Woking, Surrey GU21 5RZ
www.fernox.com

Two coat paint process

Each Stelrad radiator is subjected to a multi stage cleaning process before the paint is applied. This involves several rinsing stages, including an iron phosphate and demineralisation rinse. The first coat of paint is applied by electrophoresis and the radiator is then stoved and cooled. The second powder coat in warm white (RAL 9016) is applied and the radiator goes through a final curing stage. It is then allowed to cool, prior to packaging.