

LSTstandard & LSTplus



THE COMPLETE CHOICE

Stelrad the UK's leading radiator manufacturer has created a range of low surface temperature radiators, which simplify product selection and are easy to install, providing the perfect solution to all your specification requirements for safety critical environments.

With a choice of Standard or Plus variations, the Stelrad LST range offers you greater flexibility to suit your application, sizing and purchasing requirements.

The LST Standard leaves you free to specify your preferred controls, whilst the LST Plus offers an integral remote sensing thermostat valve, the highly specified Danfoss RA2000, which can be pre-set to allow adjustment or room air temperature. In addition, an arthritic adaptor is supplied as standard for special need environments as well as a lockshield valve which can only be adjusted with a 6mm Allen key, hidden with a neat metal dust cover to discourage unauthorised tampering.



Stelrad LST standard



Stelrad LST plus

THE COMPLETE PERFORMANCE

Every Stelrad LST radiator is supplied with an attractive, flat panel outer casing, which is totally reversible to allow piping flexibility. Simple and quick to install, the casing is held by security fittings with a unique seam fixing bracket system, to prevent unauthorised access to the emitter accommodated inside. And for added protection the smooth surface is coated in anti-bacterial paint.

The emitter itself provides high outputs through convection, for outstanding heating performance. Strictly controlled independent laboratory testing ensures that each emitter is guaranteed to perform to a maximum working pressure of 116 psi (8 bar) and conform to BS EN 442 - the European Standard for radiators.



Whether the LST Standard or LST Plus is better suited to your requirements, you will find all the specified components required supplied in one robust package, and as you would expect from the Stelrad brand, every LST radiator is guaranteed to deliver outstanding performance and dependability.

For easy calculations and greater accuracy of sizing the Stelrad STARS Heat Loss and Design Programs are available. Call 0800 318 680 for further information.



Robust packaging protects the emitter and casing during storage and transit to ensure the product arrives in pristine condition.



MULTIPLE CHOICE FEATURES AND OPTIONS

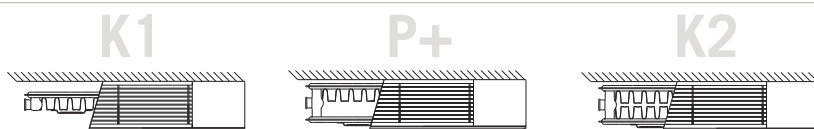
Standard Plus

Fully compliant with all safety standards	✓	✓
Meets the strict requirements of the NHS Guidance Note for 'Safe hot water and surface temperature'	✓	✓
Can be installed in domestic, commercial and public buildings running heating systems with total public safety assured.	✓	✓
Can significantly reduce costs	✓	✓
Easy to install	✓	✓
Anti-bacterial paint as standard	✓	✓
Robust packaging protects the emitter and casing during storage and transit to ensure the product arrives in pristine condition	✓	✓
All specified components are complete within the packaging	✓	✓
Outer casing		
Attractive flat panel	✓	✓
Security fittings to prevent unauthorised access to the emitter	✓	✓
Unique seam fixing bracket system	✓	✓
Emitter		
Provides high outputs through convection	✓	✓
Outstanding heating performance	✓	✓
Guaranteed to perform to a maximum working pressure of 116 psi (8 bar) and conform to BS EN 442	✓	✓
Safety grilles		
Supplied as standard	✓	✓
Can be assembled to run full width	✓	✓
Can be assembled to cover pipes on one side only (650 and 750 high models)		✓
Supplied with integral remote sensing thermostat valve to allow adjustment of room air temperature		✓
Supplied with arthritic adaptor as standard		✓
Supplied with lockshield valve as standard to discourage unauthorised tampering		✓
Optional cover cap included to discourage unauthorised tampering		✓

Stelrad LST standard

TECHNICAL DATA & DIMENSIONS

OUTPUTS AT OPERATING TEMPERATURE 75/65/20°C



OVERALL HEIGHT	EMITTER HEIGHT	OVERALL LENGTH (APPROX)	K1		P+		K2	
	mm	mm	WATTS	Btu/hr	WATTS	Btu/hr	WATTS	Btu/hr
500	300	560	196	668	284	969	348	1188
	300	760	293	1001	426	1454	522	1781
	300	960	391	1335	568	1938	696	2375
	300	1160	489	1669	710	2423	870	2969
	300	1360	587	2003	852	2908	1044	3563
	300	1560	685	2336	994	3392	1218	4157
	300	1760	782	2670	1136	3877	1392	4751
	300	1960	880	3004	1278	4362	1566	5344
	650	450	560	290	990	386	1319	478
450		760	435	1485	580	1978	717	2447
450		960	580	1979	773	2637	956	3263
450		1160	725	2474	966	3297	1195	4078
450		1360	870	2969	1159	3956	1434	4894
450		1560	1015	3464	1352	4615	1673	5710
450		1760	1160	3959	1546	5275	1912	6525
800	450	1960	1305	4454	1739	5934	2151	7341
	600	560	365	1246	501	1709	615	2098
	600	760	548	1870	751	2564	922	3147
	600	960	730	2493	1002	3418	1230	4196
	600	1160	913	3116	1252	4273	1537	5245
	600	1360	1096	3739	1502	5127	1844	6295
	600	1560	1278	4362	1753	5982	2152	7344
	600	1760	1461	4985	2003	6837	2459	8393
	600	1960	1643	5609	2254	7691	2767	9442

EN 442 CERTIFICATION DATA – BSI TESTED IN ACCORDANCE WITH BS EN 442

TYPE	K1			P+			K2		
Overall Height	500	650	800	500	650	800	500	650	800
Emitter Height	300	450	600	300	450	600	300	450	600
W/m at 75/65/20	490	725	913	710	966	1252	870	1195	1537
Heated Surface Area (m ²)	2.09	3.37	4.66	2.44	3.84	5.24	3.51	5.62	7.74
Weight (kg/m)	17.8	23.5	29.4	22.7	30.72	38.4	24.4	33.3	42.5
Water Contents (l/m)	1.89	2.57	3.25	3.78	5.14	6.50	3.78	5.14	6.50

TECHNICAL PRODUCT DETAIL

OVERALL HEIGHT	EMITTER HEIGHT	SURFACE (m ²) (average per section)			VOLUME (litres) (average per section)			DRY WEIGHT (kg) (average per section)		
		K1	P+	K2	K1	P+	K2	K1	P+	K2
500	300	0.06196	0.08646	0.12392	0.056	0.11	0.11	0.28	0.5	0.56
650	450	0.09839	0.13444	0.19678	0.084	0.17	0.17	0.43	0.76	0.86
800	600	0.13485	0.18246	0.2697	0.097	0.19	0.19	0.58	1.02	1.16



The Stelrad LST STANDARD emitter, showing high level valve option.

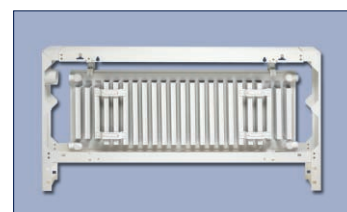
CONNECTIONS

Each Stelrad LST standard radiator has 4 x 1/2" connections as standard, offering adaptable piping options; TBOE, TBSE, BOE.

INSTALLATION

The pack includes heat emitter, radiator panel, casing panels, kick grille and all required hardware fixings.

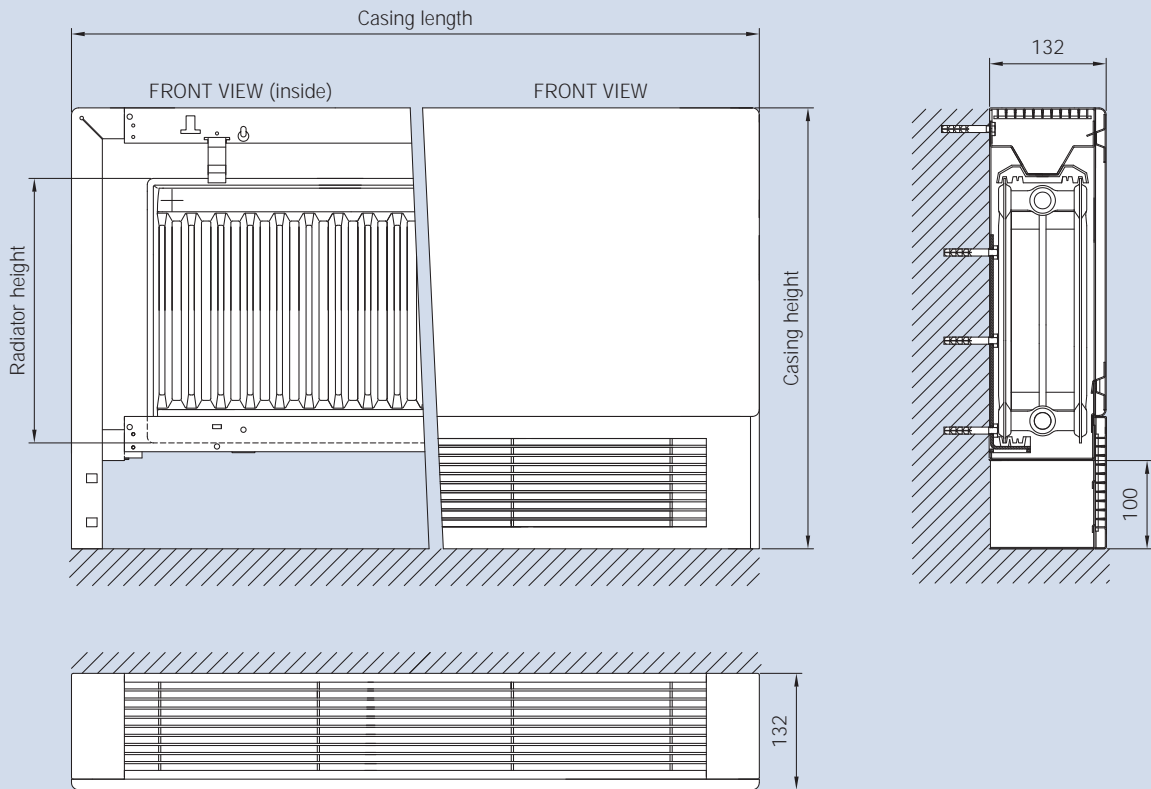
The emitter brackets are of a strong design with open top and deep slots for easy and secure installation. Plastic inserts seat the radiator precisely on the bracket, minimising expansion and contraction noise. The neat nickel-plated plug and vent provide a watertight joint.



Accommodation within the casing, the Stelrad LST STANDARD emitter.

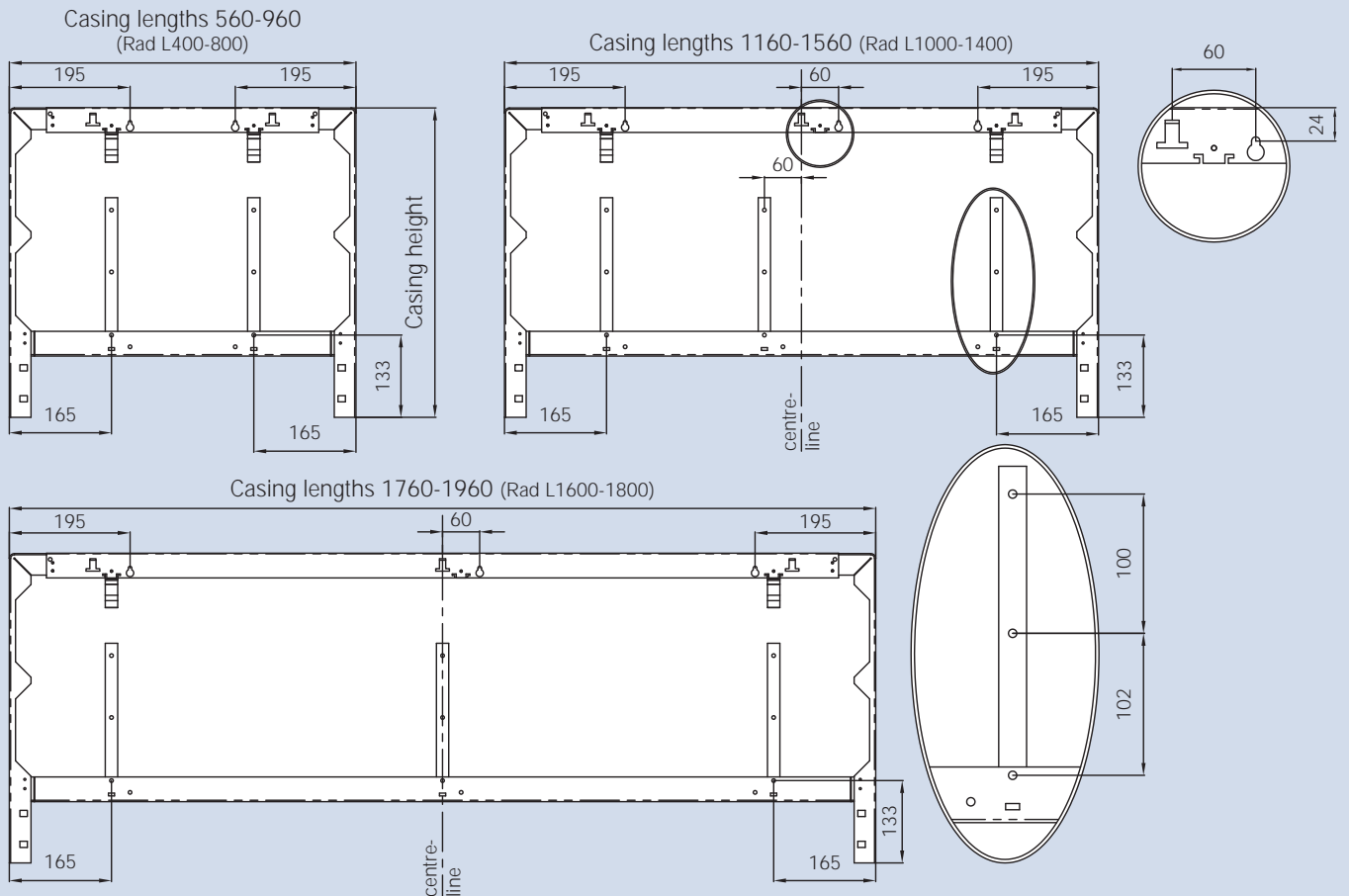
WALL MOUNTED WITH INTEGRAL KICK GRILLE

All dimensions in mm



WALL FIXINGS AND BRACKET POSITIONS

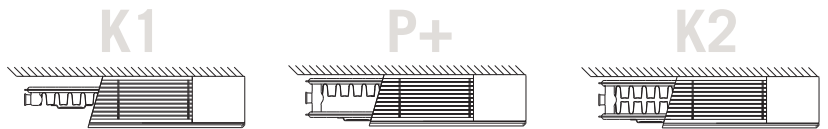
All dimensions in mm



Stelrad LST plus

TECHNICAL DATA & DIMENSIONS

OUTPUTS AT OPERATING TEMPERATURE 75/65/20°C



OVERALL HEIGHT	EMITTER HEIGHT		OVERALL LENGTH (APPROX)		K1		P+		K2		
	mm	mm	mm	mm	WATTS	Btu/hr	WATTS	Btu/hr	WATTS	Btu/hr	
500	300	650	203	650	203	692	290	989	362	1234	
	300	850	304	850	304	1038	435	1484	542	1851	
	300	1050	406	1050	406	1384	580	1979	723	2468	
	300	1250	507	1250	507	1730	725	2474	904	3084	
	300	1450	608	1450	608	2074	870	2968	1085	3701	
	300	1650	710	1650	710	2422	1015	3463	1266	4318	
	300	1850	811	1850	811	2768	1160	3958	1446	4935	
	300	2050	913	2050	913	3114	1305	4453	1627	5552	
	650	400	650	264	650	264	902	388	1332	456	1557
		400	850	397	850	397	1353	581	1984	685	2336
400		1050	529	1050	529	1844	775	2645	913	3114	
400		1250	661	1250	661	2255	969	3306	1141	3893	
400		1450	793	1450	793	2706	1163	3967	1369	4671	
400		1650	925	1650	925	3157	1357	4629	1597	5450	
400		1850	1058	1850	1058	3609	1550	5290	1825	6228	
400		2050	1190	2050	1190	4060	1744	5951	2054	7007	
750		500	650	336	650	336	1145	461	1574	558	1904
		500	850	503	850	503	1718	692	2360	837	2855
	500	1050	671	1050	671	2290	922	3147	1116	3807	
	500	1250	839	1250	839	2863	1153	3635	1395	4759	
	500	1450	1007	1450	1007	3439	1384	4721	1674	5711	
	500	1650	1175	1650	1175	4008	1614	5508	1953	6663	
	500	1850	1342	1850	1342	4580	1845	6294	2332	7614	
	500	2050	1510	2050	1510	5153	2075	7081	2511	8566	

EN 442 CERTIFICATION DATA – BSI TESTED IN ACCORDANCE WITH BS EN 442

TYPE	K1			P+			K2		
Overall Height	500	650	800	500	650	800	500	650	800
Emitter Height	300	400	500	300	400	500	300	400	500
W/m at 75/65/20	507	661	839	727	969	1153	904	1141	1395
n-coefficients	1.26	1.35	1.32	1.32	1.32	1.34	1.31	1.34	1.36
Heated Surface Area (m²)	2.09	2.95	3.80	2.44	3.37	4.31	3.51	4.92	6.33
Weight (kg/m)	9.31	12.78	16.24	14.29	19.46	24.63	16.18	22.87	28.93
Water Contents (l/m)	1.89	2.34	2.80	3.70	4.67	5.63	3.70	4.67	5.63

TECHNICAL PRODUCT DETAIL

OVERALL HEIGHT	EMITTER HEIGHT	SURFACE (m²) (average per section)			VOLUME (litres) (average per section)			DRY WEIGHT (kg) (average per section)		
		K1	P+	K2	K1	P+	K2	K1	P+	K2
500	300	0.06196	0.08646	0.12392	0.056	0.11	0.11	0.28	0.5	0.56
650	450	0.09839	0.13444	0.19678	0.084	0.17	0.17	0.43	0.76	0.86
800	600	0.13485	0.18246	0.2697	0.097	0.19	0.19	0.58	1.02	1.16

INSTALLATION

Everything required for the installation of the Stelrad LST Plus can be found in the one robust pack. This includes the emitter and radiator casing panel, together with the required brackets. These 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. The radiator valves and pipework, together with kick grille/pipe cover grille and all required hardware fixings can also be found in this pack.

REMOTE SENSING THERMOSTATIC VALVE

The Danfoss RA2000 is designed specifically for commercial heating systems and can be pre-set to allow adjustment of room temperature between 5°C and 26°C. Special tools are not required, as the valve is gland seal removable.

Suitable for both 1/2" steel and 15mm copper piping, with left or right hand, same end connections for flow and return, giving flexibility of installation.

LOCKSHIELD VALVE

Able to withstand 10 bar static pressure, the valve has a drain tap adaptor available, which can also be used as a filling point. Mandatory fittings should be used in order to comply with current water regulations.

CONNECTIONS

Each Stelrad LST Plus radiator has 2 x 1/2" connections as standard, complete with Danfoss remote sensing thermostatic radiator valve, pre-piped with 2 x 1/2" BSP connections at 50mm centres positioned at either left or right of the casing.



Accommodated within the casing, the stelrad LST PLUS Emitter, with tbe valve arrangement and 2 x 1/2 BSP connections as standard.



The remote sensing thermostatic valve gives accuracy of operation and the limiting device is completely hidden to stop the maximum temperature being exceeded.



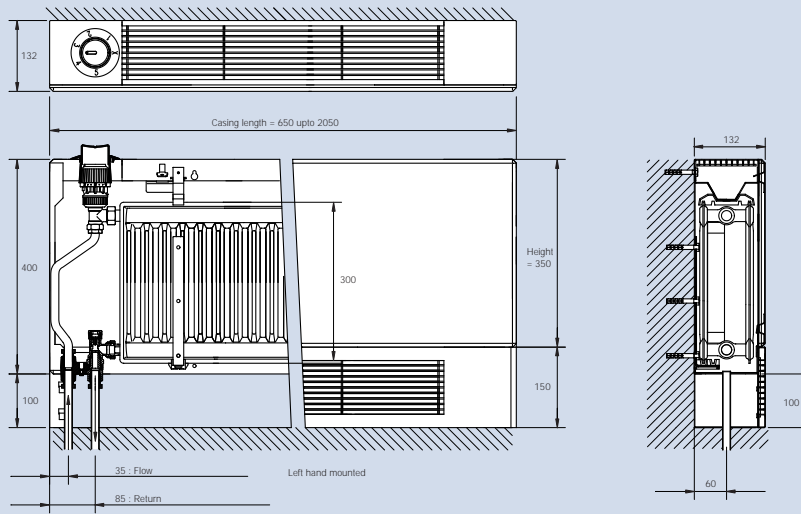
Optional cover cap to discourage unauthorised tampering.



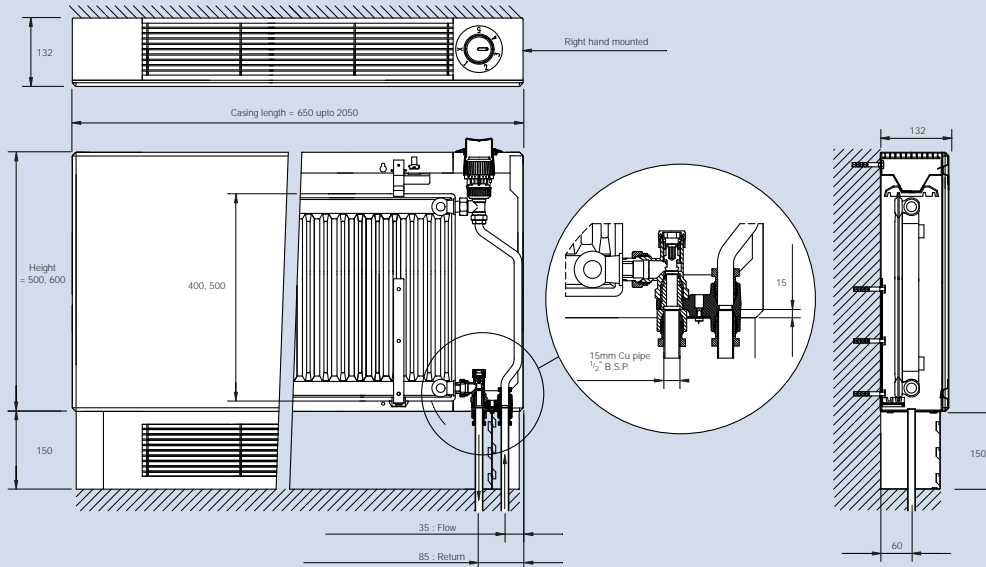
An arthritic adaptor is supplied as standard for special need environments.

500mm WALL MOUNTED WITH INTEGRAL KICK GRILLE

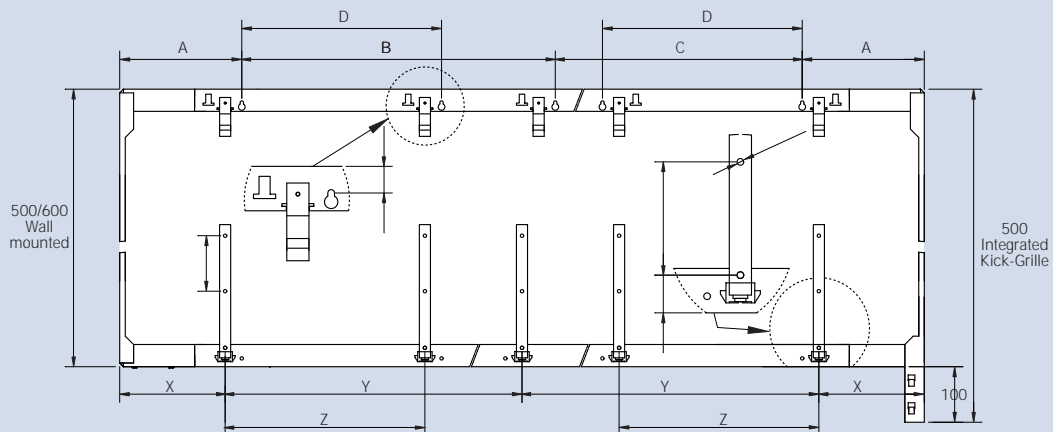
All dimensions in mm



500mm & 600mm WALL MOUNTED + 150mm KICK GRILLE



WALL FIXINGS AND BRACKET POSITIONS



CASING LENGTH	NO. OF BRACKETS	POSITION TOP				BOTTOM		
		A	B	C	D	X	Y	Z
650/850/10	2	270	-	-	D	240	-	-
1250	3	270	415	295	-	240	385	-
1450	3	270	515	395	-	240	485	-
1650/1850/2050	4	270	-	-	410	240	-	410

General TECHNICAL DATA

TEMPERATURE TABLE

To apply the factors shown in the table below to our quoted outputs, multiply the quoted output by the chosen operating factor to give the new output.

To apply the factor to the required output, divide the required output by the factor to give the correct radiator from the LST range.

Testing and operating pressures

All models are high pressure tested to withstand 152.3 psi (10.5 bar), to perform at a maximum working pressure of 116 psi (8 bar) at a maximum temperature of 75°C.

CAUTION

When designing for domestic systems we recommend that the Stelrad LST range be used only in heating systems complying with the British Standard Code of Practice for Central Heating for Domestic Premises BS 5449 Part 1.

Single feed, indirect 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 flushed and filled in accordance with the British Standard Code of Practice for the Treatment of Water in Domestic Hot Water Central Heating Systems BS 7593.

This will remove flux residues and installation debris, which might promote corrosion and damage within the system.

If it is decided to apply a corrosion inhibitor to maximise the working life of the system, it should be applied in accordance with the manufacturer's instructions and should be suitable for the particular metals within the system.

TEMPERATURES			
Factors for differences between mean water temperature and room temperature in °C and °F other than 50°C (90°F)			
°C	°F		
5°C	0.050	10°F	0.057
10°C	0.123	20°F	0.142
15°C	0.209	30°F	0.240
20°C	0.304	40°F	0.348
25°C	0.406	50°F	0.466
30°C	0.515	60°F	0.590
35°C	0.629	70°F	0.721
40°C	0.748	80°F	0.858
45°C	0.872	90°F	1.000
50°C	1.000	100°F	1.147
55°C	1.132	110°F	1.298
60°C	1.267	120°F	1.454
65°C	1.406	130°F	1.613
70°C	1.549	140°F	1.776
75°C	1.694		

Further details of readily available inhibitors can be obtained from:

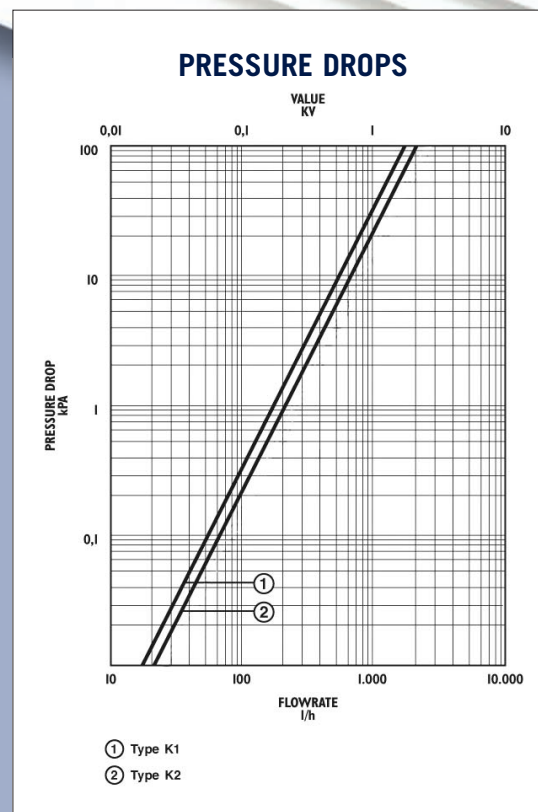
Sentinel Division, BetzDearborn Limited
Foundry Lane, Widnes WA8 8UD
Tel: 0151 420 9595

Alpha Fry Technologies, Tandem House
Marlowe Way, Beddington Farm Road
Croydon CRO 4XS
Tel: 01799 550811

ANTI-BACTERIAL PAINT

Every Stelrad LST emitter is subjected to a multi-stage cleaning process before the paint is applied. This involves several rinsing stages, including an iron phosphate and demineralisation phase.

The first coat of paint is applied by electrophoresis and the radiator is then stoved and cooled. Followed by a second powder coat in warm white and the emitter goes through a final curing stage. It is then allowed to cool prior to packaging. All exposed painted surfaces are finished in a long lasting anti-bacterial coating.



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