

REPLACEMENT HEATING SYSTEM

Caversham Library, Church Street, Caversham, Reading RG4 8AU

Planning, Heritage and Design & Access Statement

18 July 2019



Contents

1.0	Introduction	2
2.0	Character and significance of the Caversham Library	2
3.0	History of the Caversham Library	3
4.0	Extent and nature of proposed development	6
5.0	Impact of development on the heritage asset	6
6.0	Justification for the works	7
7.0	Mitigation proposed to protect the heritage asset	8
8.0	Planning History	8
9.0	Design and Access Statement	8
10.0	RBC Planning Policy	9

Appendix A - Listing Information

Appendix B - Internal Photographs

Appendix C - Material Details Schedule

1.0 Introduction

- 1.1 This Statement has been prepared by Corporate Property Services and is submitted in support of an application on behalf of Reading Borough Council for Listed Building Consent to the Caversham Library, Church Street, Caversham, Reading RG4 8AU.
- 1.2 The property is owned by Reading Borough Council and operated by Library Services. The building was awarded Grade II Listing in 1978 (see Appendix A for details).
- 1.3 Caversham Library is located along Church Street (A4155) in the Caversham Ward, a very busy retail and residential district in the heart of Caversham, which is to the north of the Reading. The buildings in the area are predominately of Victorian origin, except for retail developments directly to the south and west of the site, which were mainly built in the 1970's.
- 1.4 The Library site is 612 square metres in area and the building itself has a gross external area of 339 square metres. It is approximately 400m to the east of Caversham Court Gardens; a Grade II listed Public Park that is on the site of a former Tudor mansion house and 360m north of the River Thames. The immediate neighbour to the east of the site is the New Testament Church of God and St. Martins Shopping Centre is less than 30m to the south.
- 1.5 The proposal is to replace the existing heating system with more efficient and compliant emitters. The current radiators and pipework are a mixture of cast iron and steel.
- 1.6 The new system will be more energy efficient and sustainable and will therefore reduce the impact of the building on the environment.
- 1.7 The new system will include fan convector heaters, installed at high level on the walls. These are similar to the type used in schools and where possible, the existing pipework run routes and apertures will be utilized.
- 1.8 The proposed works will only affect the interior of the building, enhance the library and meet the needs of the users in the future, whilst retaining and respecting the character of the original Grade II Listed structure.

2.0 Character and significance of the building

- 2.1 Caversham Library is one of Caversham's historic landmark buildings and is situated in the heart of Caversham, located opposite St. Martins, the main retail centre and close to other commercial premises.
- 2.2 Caversham Library has a single storey design with traditional loadbearing construction dating back to the beginning of the 20th Century. The building features a dual-pitched roof, clad with plain clay tiles, with a central clock tower with an entrance porch projecting above the ridge to the front elevation. The clock tower has a mock belfry structure with a lead clad globe with a swan weather vane on top. The external walls are constructed in masonry with stone detailing around the porch, tower, windows, doors, parapet walls and gables that bounds the pitched roof. The windows consist of both metal and timber framed single glazed units (some with contemporary secondary glazing behind).
- 2.3 The Library has been described as being in the 'free renaissance style' (possibly meaning that it is not symmetrical, and borrows elements from a

range of styles, including the Arts & Crafts Movement and Classical). The building has a very distinctive and unusual clock tower with a stone carving of "Old Father Time" supporting a cantilevered two sided clock. The clock was originally illuminated at night by three gas-lights and had a chiming mechanism. It is interesting to note that the Historic England Listing describes the stone carving as an "Atlas figure" but this is clearly wrong as the character has a robe, wings and scythe and does resemble the traditional Atlas. All local historians agree that it depicts Old Father Time.

- 2.4 The first edition of Pevsner's Berkshire volume (1966) in the 'Buildings of England' series ignored Caversham Library completely, preferring to mention Alfred Waterhouse's two Baptist Free Churches. However, the second edition (2010) called it '*provokingly eccentric.*'



A watercolour of Lewton's design for Caversham Library (Circa 1906)

- 2.5 The Historic England listing does not mention any internal features (apart from a memorial tablet in the marbled lobby) and states that the interior has been "altered". Nevertheless, the layout of the building appears to have remained largely unchanged.
- 2.6 The interior of the building has vaulted ceilings; however, it is believed that the accommodation has been altered significantly since it was first constructed and no longer retains the building's original ornate features.

3.0 History of Caversham Library

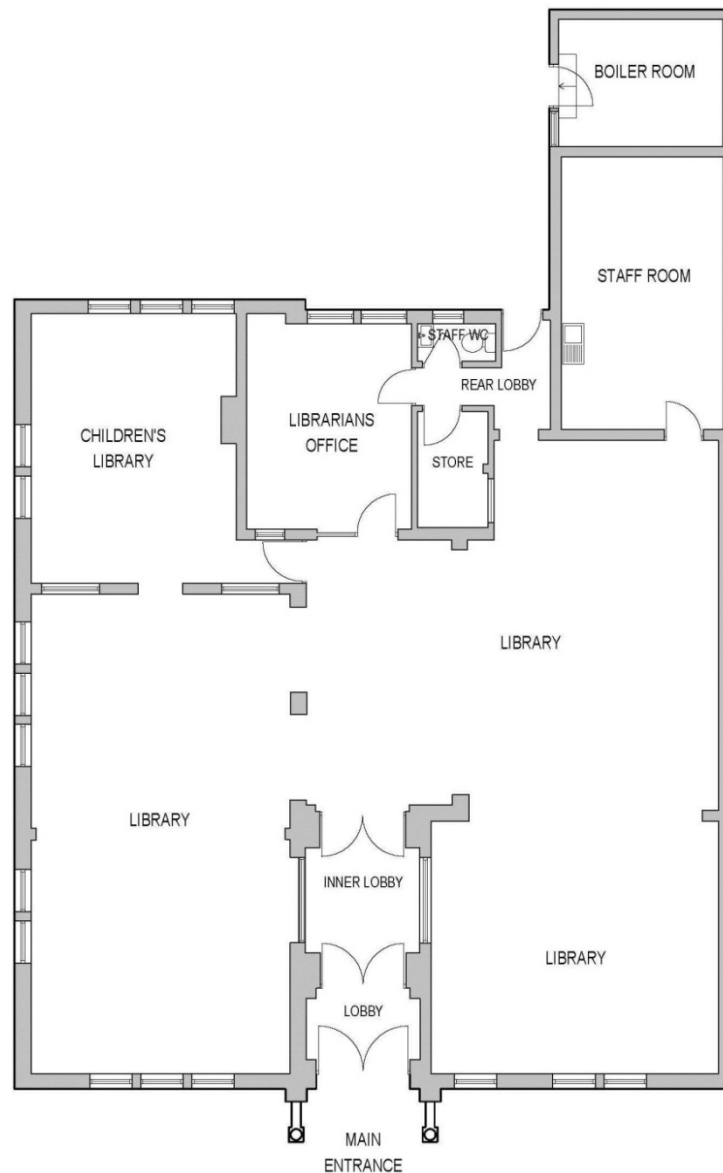
- 3.1 The construction of Caversham Library was partly financed by Andrew Carnegie, the millionaire benefactor from the United States, who set up a trust fund to build 3,000 public libraries in many countries, including 380 in Britain. Coincidentally, Carnegie was also responsible for funding the construction of the Battle Library on the Oxford Road in Reading, which was designed by F. W. Albury and completed in 1908.

- 3.2 The Library Committee of Oxfordshire County Council (from where Caversham was originally administered) wrote to Carnegie in June 1905 and received a promise of £2,575 to pay for the construction of the building (an overspend was covered by a further grant).
- 3.3 According to the Carnegie legacy in England and Wales (Libraries funded by Andrew Carnegie), the architect for the new library was decided by a competition judged by the Reading architects Charles Smith and Son. There were seven entries and the designs went on public exhibition in the Police Court House in Church Road, opposite 'The Griffin' Public House.
- 3.4 The winner of the competition was a Reading architect, Mr. William George Lewton (1856-1914). Lewton was a student at the Reading School of Art and worked and trained with the well-known local architect William Ravenscroft.
- 3.5 Lewton was also responsible for designing another Grade II Listed Building in Reading; the Reading Synagogue, Goldsmid Road, which was built a few years earlier in 1900-01.
- 3.6 It should be noted that the Historic England listing states that F. W. Albury, another local Architect, was possibly responsible for the design. This would appear to be incorrect, according to the historical documented evidence.
- 3.7 The foundation stone was laid on the 23rd March 1907 by William Bullivant Williams. Williams lived in St. Peter's Avenue, Caversham and was a Director of Huntley and Palmers. He donated the land on which the library stands and also paid for the projecting clock with two faces, supported by the carved figure that is on the clock tower above the entrance porch (see photograph opposite).
- 3.8 The clock and statue did not feature in the original design as they are not shown on the original competition drawings or the watercolour on the previous page. This detail was added to the design after the commission was awarded, at the request of the Caversham Urban District Council.
- 3.9 Caversham Library was opened in 1907 on the 11th December by Viscount Valentia, who was Chairman of Oxfordshire County Council at the time.
- 3.10 Since its completion in 1907, the Caversham Library has provided a unique landmark for the local community and from the Church Road it is an eye-catching structure and arguably the most distinctive building on the main street.
- 3.11 Today, Caversham Library provides a range of highly valued inclusive services and is not just about lending books. It is a hub at the heart of the local community and is exceptionally well used by all ages. The Library



Service provides the following facilities and activities:

- Books (fiction and non-fiction, adult and children, large print)
- Books in foreign languages (French, German, Hindi, Polish and Spanish)
- Spoken word and music CDs
- DVDs
- National/Local newspapers and magazines
- Photocopier/Printing
- Free internet access and Wi-Fi
- Study space
- Toy Library - reserve and pick up small items
- Song and rhyme sessions for babies, toddlers and their Caregivers
- Clubs/Groups/Evening Events



Floor plan of the existing Library

4.0 Extent and nature of proposed development

- 4.1 Currently the heating system is a single pipe system and this shall be replaced with a two pipe system.
- 4.2 All redundant radiators (emitters) and pipework shall be removed and the remaining surfaces and finishes will be made good where disturbed with appropriate materials.
- 4.3 The proposed fan convector heaters shall be wall mounted at high level, which will allow supplementary book shelves and displays to be installed in the vacant spaces where the old radiators were located.
- 4.4 The fan convector units for the primary heating shall be Belgravia Supreme Plus fan convectors manufactured by S & P Coil Products Limited of Leicester. See Material Details Schedule – Appendix C.
- 4.5 The fan convector unit casings shall be aluminium extrusions and end-castings, with medium gauge mild steel front and side panels. The external faces shall have a polyester powder coat finish as follows:

Drop-Over Casing - powder-coated side and front panel in dark grey (RAL 7044), top and bottom castings in light grey (RAL 9002) and pencil-proof grilles in light grey (RAL 9002).

Access Panel - powder coated finish in dark grey (RAL 7004).
- 4.6 The fan convector unit for the secondary heating (Main Entrance door curtain) shall be Myson Wallmount HI-LINE RC fan convectors manufactured by Rettig UK Limited of Gateshead. See Material Details Schedule – Appendix C.
- 4.7 The fan convector unit casing shall be steel and the external faces shall have a polyester powder coat finish in White (RAL 9016).
- 4.8 The Librarian's Office, Staff Toilet and Rear Lobby will be provided with Steel Panel Low Surface Temperature Radiators manufactured by Stelrad of Rotherham. The covers will have an anti-bacterial paint finish in White. See Material Details Schedule – Appendix C.
- 4.9 The proposed pipework and fittings to and from the new fan convector units shall be from the VSH PowerPress range, manufactured by Pegler Yorkshire Group Limited of Doncaster. See Material Details Schedule – Appendix C.
- 4.10 The pipework shall consist of 15mm – 60mm diameter steel tube, which will be decorated to match the colour of the background walls/ceilings. The new pipework shall be fixed to internal walls with propriety brackets.
- 4.11 It is also proposed to install new controls in the Librarian's Office, which will be more convenient for the staff to monitor and control the new heating system.

5.0 Impact of development on the heritage asset

- 5.1 The proposed works will be carried out within the interior of the building and will therefore not be visible from the main street scene. The existing internal fabric of the building will not be altered or lost due to the proposed works.
- 5.2 The original internal low level fresh air inlet vents which are located

behind the current radiators will be protected and retained.

- 5.3 The floor plan and layout of the building will remain unaffected by the proposed works.
- 5.4 The proposed works will not change or affect the external fabric or structure of the existing building or result in the loss of any of its significant historic features.



Photograph of the interior of the Caversham Library today

6.0 Justification for the works

- 6.1 The current heating system is approximately 50-60 years old and is not the original installation. The original heating system would have been removed prior to the date that the building was listed.
- 6.2 The existing heating system has come to the end of its life cycle and is not considered to be energy efficient.
- 6.3 The new heating system will be more energy efficient with enhanced controls, which will reduce natural gas consumption and hence less CO2 omissions. The system will therefore be more sustainable and reduce the impact of the building on the environment.
- 6.4 The existing heating system is not considered to be safe for children or elderly persons, who are major users of the library. The surfaces of the radiators and the pipework get very hot and could scald people.
- 6.5 The existing radiators and the connecting pipework do not have low temperature surfaces and therefore do not comply with the requirements of Part M of the Building Regulations (Access to and use of buildings), which states that any heat emitters are either screened or have their exposed surfaces kept at a temperature below 43°C.
- 6.6 The new heating system will also comply with BS 8300 Design of Buildings

and their Approaches to Meet the Needs of Disabled People - A Code of Practice.

7.0 Mitigation proposed to protect the heritage asset

- 7.1 The existing pipework run routes and apertures in wall and ceilings will be utilized wherever possible to install the new pipework.
- 7.2 The proposed development can be simply removed in the future should it become necessary.

8.0 Planning History

- 8.1 A search of the Reading Borough Council online planning application pages discloses several records of planning permission being granted for the site and they are as follows:

- Application Number 181413 (dated 17/09/2018): Siting of external bookdrop facility to allow return of library books outside of opening hours.
- Application Number 121635 (dated 25/09/2012): Historical information sign fixed to the railings of Caversham library.
- Application Number 100962 (dated 20/05/2010): Bus shelter advertisement.
- Application Number 010420 (dated 18/10/2001): Alteration to external layout. Removal of concrete steps and block paving, replacing with Yorkstone. New boundary wall, railings and pillars to match original (1907). New tree and shrub planting.
- Application Number 011166 (dated 18/10/2001): Alteration to external surfaces, steps and boundary walls. Replacement of existing concrete paving and steps with Yorkstone. Restoration of boundary brick walls, pillars and railings to original design (1904).
- Application Number 960695 (dated 16/12/1996): Addition of sign beneath existing signs to front elevation.
- Application Number 960917 (dated 28/11/1996): Provision of a disabled ramp involving new entrance steps and new access to pavement.

- 8.2 There are no details of applications prior to 1988 on the system.

9.0 Design and Access Statement

- 9.1 Pedestrian access to the existing building is directly from the pavement running along the Church Street. Dropped kerbs with tactile paving have been provided at road crossings and a pedestrian crossing with traffic lights and visual/audible warnings is available a short distance away from the entrance to the Library. The building is also well served by public buses with bus stops within a short walk of the library.
- 9.2 The building has a level approach to the principal entrance from the pavement via a ramp. There are no changes in floor level within the

building and all doors have level thresholds. All floor surfaces are firm, level and slip resistant.

- 9.3 The proposed works will not change or affect the access to the existing building or result in the loss of any of its facilities.
- 9.4 Crime prevention measures and the design attributes of safe, sustainable places are not relevant to the proposed development.
- 9.5 The proposed works are restricted to the interior of the building and therefore the character and appearance of the building and the area will be preserved.
- 9.6 Due to the nature of the proposed works, information on the proposed use, amount of development, layout, scale parameters and landscaping are not relevant.



Photograph of the front elevation of the Caversham Library

10.0 RBC Planning Policy

10.1 The following Planning Policies are relevant:

- **National Planning Policy Framework** para. 128
- **Core Strategy Document (2008 & altered 2015)**
Policy CS33: Protection and Enhancement of the Historic Environment
Policy CS7: Design and the Public Realm
- **Sites and Detailed Policies Document (2012 & altered 2015)**
Policy DM4: Safeguarding Amenities
- Supplementary Planning Guidance

APPENDIX A

Listing Information

The Historic England Heritage List Entry Summary for Caversham Free Public Library

CAVERSHAM FREE PUBLIC LIBRARY

Overview

Heritage Category: Listed Building

Grade: II

List Entry Number: 1113456

Date first listed: 14-Dec-1978

Statutory Address: CAVERSHAM FREE PUBLIC LIBRARY, CHURCH STREET

This copy shows the entry on 26-Jun-2019 at 14:34:12.

Location

Statutory Address: CAVERSHAM FREE PUBLIC LIBRARY, CHURCH STREET

The building or site itself may lie within the boundary of more than one authority.

District: Reading (Unitary Authority)

National Grid Reference: SU 71349 74812

Details

CHURCH STREET 1. 5128 Caversham Caversham Free Public Library SU 7174 11/455 II
2. Foundation stone laid 23.iii 1907. Site given by Andrew Carnegie. Architect possibly F W Albury. Irregular red brick and stone sub-Voysey style with tiled roof. Asymmetrically disposed gables - one with inscription, other with date - flanking off centre tower which has pylon corner piers, and which is capped by ball finials and a small copper domed stair turret. Entrance in tower with large columns. Above is an Atlas figure (signed B L) supporting a clock. 3 windows in all, 3, 1 and 2 lights with dividing pilasters of alternate stone and brick and floral caps. Memorial tablet in marbled lobby. 3 window return to Hemdean Road. Interior altered.

Listing NGR: SU7134974812

Legacy

The contents of this record have been generated from a legacy data system.

Legacy System number: 38884

Legacy System: LBS

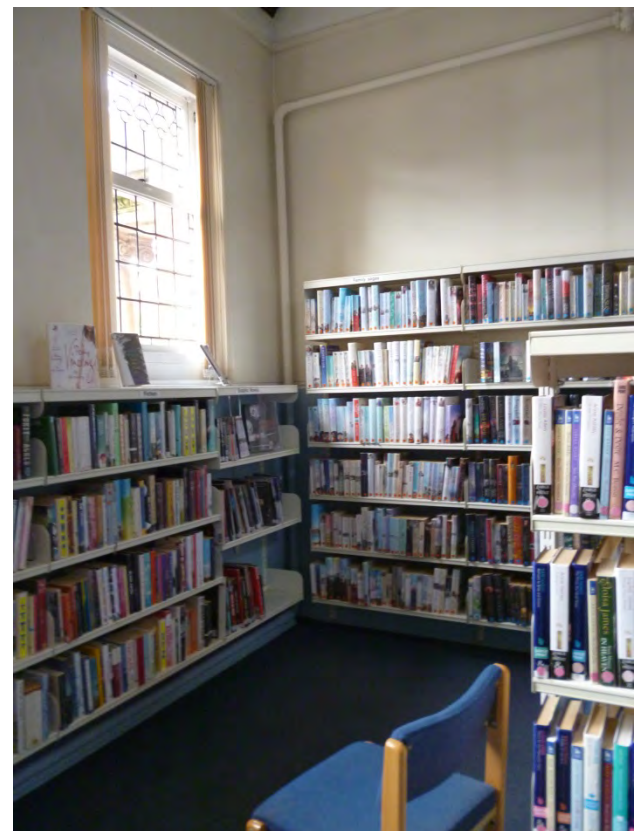
Legal

This building is listed under the Planning (Listed Buildings and Conservation Areas) Act 1990 as amended for its special architectural or historic interest.

End of official listing

APPENDIX B

Existing Internal Photographs





APPENDIX C

Material Details Schedule

Proposed Fan Convectors

Proposed LST Radiators

Proposed Pipework



FAN CONVECTOR
Belgravia
Supreme Plus

FAN CONVECTOR
Belgravia
Supreme Plus

FAN CONVECTOR Belgravia Supreme Plus

Belgravia Supreme Plus: General Information

The SPC 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.

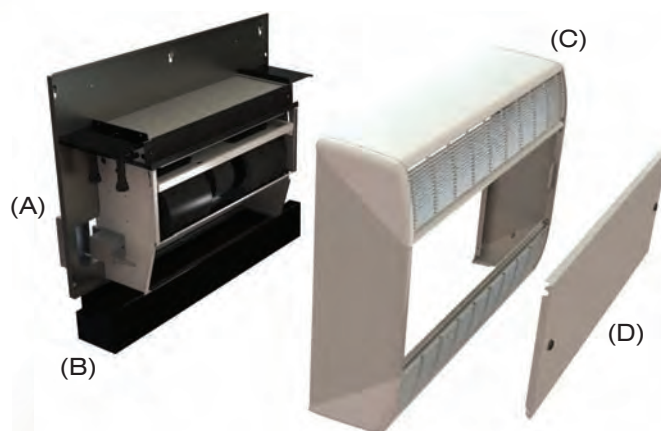
The specially designed damper is operated via a mechanism which simultaneously closes the room inlet grille when outside air is admitted. This outside air is treated by the heat exchanger prior to release to the space, preventing the possibility of draughts and offsetting the ventilation load at source.

Units can be wall or floor mounted. Wall mounted units have the fresh air inlet spigot in the back plate, floor mounted units have the option of the fresh air being drawn in from below the floor via a plinth which can be ordered with the unit.

Belgravia Supreme Plus: Construction

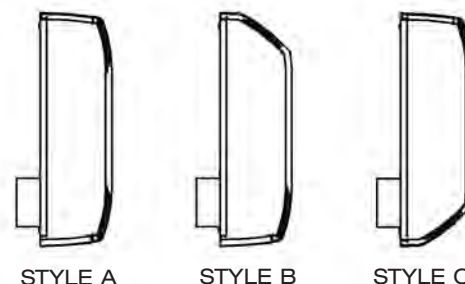
All Belgravia Supreme Plus units are composed of four basic parts:

- (A) **Back Plate Assembly** - including fans, heat exchanger, pipework and electric connections. This also incorporates the fresh air spigot, damper and actuator
- (B) **Plinth** - for floor mounted units
- (C) **Drop-Over Casing** - powder-coated side and front panel in dark grey (RAL 7044), top and bottom castings in light grey (RAL 9002) and pencilproof grilles in light grey (RAL 9002)
- (D) **Access Panel** - powder coated finish in dark grey (RAL 7004) as standard with tamperproof (accessed with an allen key) or lockable (accessed with a key) options.



Belgravia Supreme Plus: Sizes and Styles

Three styles of Belgravia Supreme Plus units are available, each comes in 7 models. All styles can have left-hand or right-hand coil connections with top or bottom pipe entry. The 3 styles are shown in the sketches opposite. Maximum dimensions and weight for each model are shown in the table below. Standard airflow is in through the bottom grille and out through the top. Units can be arranged with reversed airflow but must be specified when ordering.



DIMENSIONS							
MODEL	SPR 30	SPR 40	SPR 60	SPR 75	SPR 90	SPR 115	SPR 150
Length (mm)	800	800	1000	1300	1300	1600	1600
Height (mm)	740						
Depth (mm)	235						
Maximum Weight (kg)	36	36	46	51	51	57	57
Spigot Width (mm)	650	650	850	1150	1150	1450	1450
Spigot Height (mm)	155	155	155	155	155	155	155

Belgravia Supreme Plus: Performance Data

Performance Data																
Fan Setting		Boost					Medium					Low				
Performance		Air Flow Rate l/s	Output kW	Exit Air Temp °C	Pressure Drop kPa	Water Flow Rate l/s	Air Flow Rate l/s	Output kW	Exit Air Temp °C	Pressure Drop kPa	Water Flow Rate l/s	Air Flow Rate l/s	Output kW	Exit Air Temp °C	Pressure Drop kPa	Water Flow Rate l/s
Model	SPR 30	155	3.9	36.0	0.5	0.09	124	3.5	38.5	0.4	0.08	99	2.9	39.4	0.3	0.07
	SPR 40	140	5.8	49.5	1.1	0.14	112	5.0	52.2	0.8	0.12	89	4.2	54.3	0.6	0.10
	SPR 60	236	9.3	47.8	3.0	0.22	172	7.3	50.4	1.9	0.17	105	5.2	56.3	1.0	0.12
	SPR 75	280	11.6	49.5	5.3	0.28	189	8.5	52.5	2.9	0.20	110	5.9	59.7	1.7	0.14
	SPR 90	317	13.0	49.2	6.3	0.31	231	10.3	52.2	4.3	0.25	120	6.8	62.2	1.9	0.16
	SPR 115	248	13.5	60.4	7.7	0.32	188	10.8	62.9	5.3	0.26	128	8.1	67.7	3.0	0.19
	SPR 150	329	15.9	55.3	10.4	0.38	289	14.6	57.1	9.0	0.35	180	10.7	64.5	4.9	0.25

CORRECTION FACTORS													
Mean Water Temperature °C		80			70			60			50		
Water Temperature Drop °C		5	10	20	5	10	20	5	10	20	5	10	20
Entering Air Temperature °C	-5	1.46	1.40	1.36	1.27	1.24	1.15	1.11	1.05	0.98	0.92	0.86	0.75
	0	1.38	1.36	1.27	1.20	1.17	1.08	1.02	0.96	0.88	0.83	0.79	0.63
	5	1.30	1.26	1.19	1.12	1.08	1.00	0.93	0.88	0.79	0.75	0.70	0.52
	10	1.23	1.18	1.11	1.02	1.00	0.92	0.85	0.81	0.69	0.67	0.61	-
	15	1.14	1.08	1.02	0.94	0.90	0.82	0.76	0.73	0.58	0.57	0.51	-
	20	1.05	1.00	0.94	0.87	0.82	0.73	0.67	0.63	0.46	0.49	0.42	-
	25	0.96	0.93	0.86	0.77	0.73	0.63	0.58	0.55	-	-	-	-

Belgravia Supreme Plus: Noise Data

NR LEVELS				
Fan Setting		Boost	Medium	Low
Model	SPR 30	46	39	33
	SPR 40	45	38	32
	SPR 60	46	41	35
	SPR 75	44	38	33
	SPR 90	43	37	32
	SPR 115	42	39	34
	SPR 150	45	44	39

NOTES:

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

Belgravia Supreme Plus: Fan Assembly Electrical Data

230 V / 50 Hz Supply									
Fan Setting		High			Medium			Low	
Performance		Airflow (l/s)	EC Power draw (W)	EC SPF (W/l/s)	Airflow (l/s)	EC Power draw (W)	EC SPF (W/l/s)	Airflow (l/s)	EC Power draw (W)
Model	SPR 30	155	34	0.22	124	20	0.16	99	13
	SPR 40	140	27	0.19	112	16	0.14	89	11
	SPR 60	223	84	0.38	184	53	0.29	108	15
	SPR 75	280	53	0.19	189	23	0.12	110	19
	SPR 90	317	73	0.23	231	34	0.15	120	18
	SPR 115	248	40	0.16	188	23	0.12	128	18
	SPR 150	329	80	0.24	289	58	0.20	180	22

Belgravia Supreme Plus: Controls and Accessories

The units are designed such that the fresh air inlet damper is controlled independently of the fan converter heater. The damper would normally be opened to fresh air via a signal from a central control system (BMS), by others. In turn, the signal to the controller will be from a CO₂ or occupancy sensor opening the damper only when the level of pollutants requires their dilution. The units can also be used in summer for free cooling when the boiler is not operating.

All unit functions can be controlled remotely by a central system in which case the units are supplied with relays which will accept signals not only to operate the damper but also to control fan on/off, change speed and summer/winter switch over.

The units can, if required, be controlled locally in which case the units are equipped with a variety of switches and thermostats as shown in the table.

FACTORY FITTED ACCESSORIES		
	Reference	Function
Thermostat	LTC	Low water temperature fan cut-out
	ALTC	Adjustable low water temperature fan cut-out
	RT1	Remote mounted on-off control
	RT2	Remote mounted change speed control
	TLX1	Tamper-proof on-off control
	TLX2	Tamper-proof change speed control
	2 STAGE	Combined on-off/change speed control
Switches	RS1	On-off rocker switch
	RS2	Summer-winter switch
	RS3	Change speed rocker switch
	RS12	Combined on-off / summer-winter rockers
	RS13	Combined on-off / change speed rockers
	RS23	Combined summer-winter / change speed rockers
	RS123	Combined on-off, summer-winter / change speed rockers
Relays	BMS	12/24/230V relays to accept control signals from a central controller
Electrical Connections	FSB	Fused spur box
	CCB	Customer connection box for remote stats etc.
Case Options & Accessories	EAV	Extended air vent
	RAF	Reversed airflow
	AF3	Air filter
	SPF	Special paint finish
	P	Plinth
	LAP	Lockable access panel
	TAP	Tamper-proof access panel
	BOX1F	Metal flush mounting box for single rocker switch
	BOX1S	White plastic surface mounting box for single rocker switch
	BOX2F	Metal flush mounting box for combined rockers switches
	BOX2S	White plastic surface mounting box for combined rocker switches

Belgravia Supreme Plus: Ordering Information

Full technical support is available by contacting the SPC Office.

Units are delivered wrapped and display the SPC works order number, model reference, site reference (where appropriate), handing and site details. Installation, operation and maintenance instructions, together with wiring and any special instructions, are supplied with the unit.

Belgravia Supreme Plus: Standard Engineering Specification

The Belgravia Supreme fan convector shall be manufactured by S & P Coil Products Limited, SPC House, Evington Valley Road, Leicester. The heater shall be suitable for the duties as described in the literature, dependent on the model selected. The quantities and model references shall be indicated in the schedule, the constructional features complying with the under-mentioned specification.

Case	The case shall be manufactured from aluminium extrusions and end-castings, with medium gauge mild steel front and side panels. The detachable access panel shall be fully trayed, and be retained by two tamper-proof fasteners. The internal chassis shall be constructed from medium gauge mild steel. The casing will locate into angled slots on the internal chassis and will be locked in place with standard bolts.
Finish	The case and internal chassis components shall be degreased and treated with an approved priming process, followed by final coats of colour-specified powder-coat finish.
Grilles	Integral grilles to be of linear pattern complying with BSEN 60335, manufactured from extruded aluminium with treated finish.
Attachable Plinth	Plinth, where called for, shall be manufactured from medium gauge mild steel, treated and paint-finished to suit.
Filters	Filters shall be a washable-type Bondina P15/150 non-woven polyamide, or equivalent, bonded with synthetic resin, and rated at EU2 arrestance complying with BSEN 779. Filters should be removable for cleaning.
Heat Exchangers	The heat exchanger shall be of block fin construction, comprising aluminium fins mechanically bonded to copper primary tubes brazed, in turn, into copper headers having BSP female flow and return connections at the same end, and rated in accordance with BS 5141. 1/8" BSP air bleed and drain connections to be provided as standard.
Test Pressure	The heat exchanger shall be tested to 22 bar (2,200kPa) air under water.
Working Pressure	All heat exchangers to be suitable for a maximum working pressure of 10 bar (1,000 kPa).
Motor Plate, Fan & Motor Assembly	The motor plate assembly shall be readily withdrawable for ease of maintenance, being resiliently mounted on guide rails. Ceiling mounted units shall have motor plates fixed by Nylock retaining nuts.
Fans	The fan(s) shall be of the double inlet, centrifugal type with forward curved blades. The impeller and scroll shall be from galvanised sheet steel and the impeller shall be directly mounted on the external rotor motor. One or two fans shall be used according to size.
Motors	The motor shall be of the electronically commutated external rotor type with inbuilt electronics enclosure. The motor will incorporate maintenance free ball bearings. Motors shall be Ip44 and insulation class B rated. Rotational speed shall be controlled via a 0 to 10V signal to the terminal block of the rotor.
Dampor Actuator	230V, open/close actuator with a 5Nm torque rating. Power consumption 1.5W
Wiring & Controls	Provision shall be made for internal wiring with selected control options, and an internally-mounted customer connection box shall be provided for interfacing remote options to the unit. All internal wiring shall be tri-rated heat-resistant cable. Unit motors to be suitable for operation with a standard single phase 230V/50Hz supply.
Packaging	Each fan convector shall be despatched in a purpose-made carton, which will be clearly marked with the unit model reference, and instructions called for in the schedule.
C E Marking	The fan convector shall comply with all relevant EU directives currently in force.

S & P Coil Products reserve the right to amend specification whilst pursuing a policy of continual improvements in performance and design.



WALLMOUNT

The wallmount range provides rapid heat using a small amount of space. They are perfect for maximising the amount of available space in any room. They provide solutions for semi-commercial applications such as retail or restaurant dining spaces. They can also be a great solution for domestic properties in areas such as conservatories or narrow areas that have large heating demands.



HI-LINE Range

MYSON HI-LINE is a range of high level, wall mounted fan convectors that can utilise unused space above a door. They provide rapid heat from above and incorporate technology that is generations ahead of the competition. HI-LINE connects easily to a central heating system.

- Range includes the discreet HI-LINE RC, the powerful HI-LINE SUPER RC and a low voltage 12V model
- Perfect for domestic and commercial applications, such as restaurants and offices
- HI-LINE RC and HI-LINE SUPER RC are fitted with digital controls and supplied with a handheld remote
- HI-LINE LV model is ideally suited to bathroom applications where safety matters most

WALLMOUNT RANGE (HI-LINE, LO-LINE, SLIM-LINE)

GENERAL SPECIFICATION



CERTIFICATION

Produced under a quality management system - ISO 9001:2015, environmental management system - ISO 14001:2015 and Occupational health and safety management system - ISO 45001:2018. Carries the CE mark and conforms to the Low Voltage Directive 2014/35/EU and the EMC Directive 2014/30/EU. Outputs are tested to BS 4856 Part 1. Sound levels are tested to EN 23741.



GUARANTEE

2 year guarantee from date of purchase against manufacturing defects.



COLOUR

Finished in white (RAL 9016) powder coating.



ANTI-BACTERIAL PAINT

Coating to suppress bacterial growth.



SYSTEM

Closed circulation, 2 pipe pump assisted central heating systems.



CONNECTIONS

15mm copper pipe (HI-LINE RC, LO-LINE RC and SLIM-LINE RC), 22mm copper pipe (HI-LINE SUPER RC).



AIR VENTS

Integrated with LO-LINE RC and SLIM-LINE RC. Excluded from HI-LINE range.



OPERATING PRESSURES

Tested to a pressure of 20 bar. Working pressure of up to 10 bar.



OPERATING TEMPERATURE

Maximum 90°C.



ELECTRICAL SUPPLY

220-240V - 50Hz fused at 3A.



DELIVERY

2 - 5 working days.

For more general information, please see page 276.

CONTROLS

HI-LINE RC, HI-LINE SUPER RC, LO-LINE RC and SLIM-LINE RC units are supplied with an electronic infra-red remote control system with the following features:

- Automatic room temperature control
- Fan only option for ambient air circulation
- Three fan speeds
- Unit mounted controls and display
- Unit control panel electronic tamper proof lock
- Displayed temperature calibration system

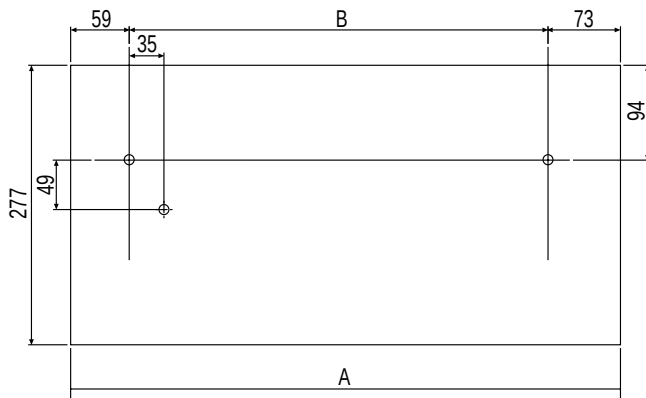
HI-LINE LV units are fitted with a switch offering high and low fan speeds and off selection. A low limit thermostat is fitted to the unit to ensure that the fan stops after the heating system is switched off.



REMOTE CONTROL SUPPLIED (Excluding LV Model)

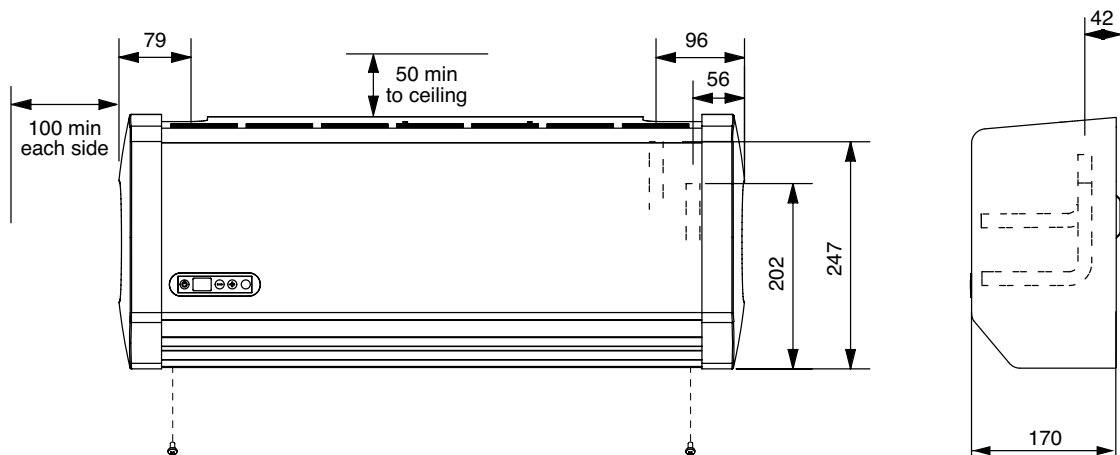


CONTROL PANEL (Excluding LV Model)

WALLMOUNT RANGE (HI-LINE, LO-LINE, SLIM-LINE)**TECHNICAL INFORMATION****HI-LINE RC, HI-LINE LV DIMENSIONS & FIXINGS**

Model	A	B
	(mm)	(mm)
7-4*	554	422
10-6	682	550
15-10	886	754
20-14	1171	1039

*HI-LINE LV only available as a 7-4 model



Case fixing screw positions and water connections

- Maximum installation height is 2.13m to the underside of the unit
- Minimum installation height is 1.8m to the underside of the unit
- Maximum ceiling height is 3m
- Minimum clearance each side is 100mm
- Minimum top clearance is 50mm
- Please note the transformer is mounted inside the unit (LV model only)

If installing the product above the recommended height consider adding additional margin to the heat loss, or install de-stratification fans.

WALLMOUNT RANGE (HI-LINE, LO-LINE, SLIM-LINE)

TECHNICAL INFORMATION (cont...)

		Fan Speed	Model						
			HI-LINE RC				HI-LINE SUPER RC		HI-LINE LV
			7-4	10-6	15-10	20-14	25-18	29-20	7-4
Dimensions	Nominal Height (mm)	-	277	277	277	277	275	275	277
	Nominal Depth (mm)	-	170	170	170	170	203	203	170
	Nominal Length (mm)	-	554	682	887	1171	1150	1360	554
Sound Levels*	Sound Pressure (dBA) (at 2.5m)	Normal	23.4	23.5	28.8	33.3	28.3	33.7	16.6
		Medium	32.5	30.8	35.4	38.7	37.8	36.8	-
		Boost	43.3	37.2	45.6	45.4	45.6	47.9	32.5
Weight, Water Content & Motor Power	Unpacked Weight (kg)	-	7.4	8.9	11.3	14.7	18.0	21.0	7.4
	Water Content (l)	-	0.30	0.32	0.56	0.77	0.63	0.85	0.3
	Motor Power (W - max.)	-	35	35	62	80	80	80	30
Air Flow Rates	Air Flow (m³/h)	Normal	81	143	207	285	350	390	81
		Medium	105	171	276	371	430	470	-
		Boost	133	220	333	431	500	540	133
	Air Flow (ft³/h)	Normal	2859	5048	7307	10061	12360	13772	2859
		Medium	3707	6036	9743	13096	15185	16597	-
		Boost	4695	7766	11755	15214	17657	19069	4695
		ltr/h	Model						
			HI-LINE RC				HI-LINE SUPER RC		HI-LINE LV
			7-4	10-6	15-10	20-14	25-18	29-20	7-4
Approximate Hydraulic Resistance	mm wg	455	1084	1240	1500	1774	2095	2551	1084
		341	798	657	905	1140	1282	1530	798
		227	350	327	450	565	620	850	350
		113	134	105	157	221	234	245	134
	kPa	455	9.4	12.12	14.7	17.42	20.5	24.6	9.4
		341	7.7	6.42	8.9	11.2	12.6	15.0	7.7
		227	3.5	3.25	4.37	5.5	6.1	8.3	3.5
		113	1.4	1.1	1.57	2.1	2.3	2.4	1.4

*Sound levels tested in accordance with EN 23741.

		Fan Speed	Model				
			LO-LINE RC				SLIM-LINE RC
			6-4	9-6	14-10	19-15	
Dimensions	Nominal Height (mm)	-	385	385	385	385	795
	Nominal Depth (mm)	-	130	130	130	130	170
	Nominal Length (mm)	-	523	645	854	1138	361
Sound Levels*	Sound Pressure (dBA) (at 2.5m)	Normal	23.7	21.6	23.1	27.2	21.9
		Medium	31.7	29.6	28.5	31.8	30.6
		Boost	40.7	38	40.1	38.6	39.7
Weight, Water Content & Motor Power	Unpacked Weight (kg)	-	7.7	9.1	12.7	15.7	14.5
	Water Content (l)	-	0.3	0.32	0.56	0.75	0.51
	Motor Power (W - max.)	-	35	35	62	80	125
Air Flow Rates	Air Flow (m³/h)	Normal	65	112	160	241	164
		Medium	86	129	200	288	216
		Boost	122	175	288	335	316
	Air Flow (ft³/h)	Normal	2295	3954	5648	8507	5789
		Medium	3036	4554	7060	10166	7625
		Boost	4307	6178	10166	11826	11155
		ltr/h	Model				
			LO-LINE RC				SLIM-LINE RC
			6-4	9-6	14-10	19-15	
Approximate Hydraulic Resistance	mm wg	455	910	998	1240	1670	1771
		340	514	520	719	954	1161
		227	235	121	324	469	561
		113	47	97	75	77	201
	kPa	455	8.98	9.85	12.20	16.40	17.4
		340	5.06	5.10	7.00	9.40	11.4
		227	2.35	1.18	3.20	4.60	5.5
		113	0.45	0.97	0.75	0.82	2.0

*Sound levels tested in accordance with EN 23741.

WALLMOUNT RANGE (HI-LINE, LO-LINE, SLIM-LINE)

HEAT OUTPUTS

HI-LINE RC

Model	Fan Speed	Heat Outputs @ ΔT 50°C		Heat Outputs @ ΔT 30°C		Order Code
		Watts	Btu/h	Watts	Btu/h	
HI-LINE RC 7-4	Normal	930	3172	541	1845	HIRC7
	Medium	1292	4410	752	2565	
	Boost	1702	5808	991	3380	
HI-LINE RC 10-6	Normal	1610	5493	937	3197	HIRC10
	Medium	1959	6683	1140	3889	
	Boost	2521	8602	1467	5005	
HI-LINE RC 15-10	Normal	2459	8390	1431	4881	HIRC15
	Medium	2783	9496	1620	5526	
	Boost	3690	12590	2147	7327	
HI-LINE RC 20-14	Normal	3468	11831	2018	6884	HIRC20
	Medium	4380	14944	2548	8695	
	Boost	4959	16921	2889	9858	

HI-LINE SUPER RC

HI-LINE SUPER RC 25-18	Normal	4270	14569	2563	8746	2HI25
	Medium	5238	17873	3030	10339	
	Boost	6200	21154	3454	11785	
HI-LINE SUPER RC 29-20	Normal	4962	16930	2870	9791	2HI29
	Medium	6011	20508	3462	11811	
	Boost	7045	24037	4040	13785	

HI-LINE LV

HI-LINE LV 7-4	Normal	930	3173	541	1846	HILV
	Boost	1702	5807	991	3381	

LO-LINE RC

LO-LINE RC 6-4	Normal	916	3126	564	1923	LORC6
	Medium	1043	3558	641	2187	
	Boost	1437	4904	883	3014	
LO-LINE RC 9-6	Normal	1358	4633	834	2847	LORC9
	Medium	1777	6064	1093	3728	
	Boost	2240	7643	1377	4699	
LO-LINE RC 14-10	Normal	2377	8111	1461	4986	LORC14
	Medium	2928	9989	1800	6140	
	Boost	3467	11829	2131	7272	
LO-LINE RC 19-15	Normal	3613	12327	2221	7578	LORC19
	Medium	4144	14140	2548	8692	
	Boost	4640	15831	2852	9731	

SLIM-LINE RC

SLIM-LINE RC	Normal	2290	7813	1340	4572	SLIMRC
	Medium	2870	9792	1710	5835	
	Boost	3720	12693	2220	7575	

Heat outputs tested in accordance with BS 4856 Part 1.

Flow Rate (all products): 340 ltr/h (75 gal/h)

Flow Rate Correction Factors:

(HI-LINE RC, HI-LINE LV, LO-LINE RC & SLIM-LINE RC)

455 ltr/h (100 gal/h) multiply output by 1.06

227 ltr/h (50 gal/h) multiply output by 0.96

113 ltr/h (25 gal/h) multiply output by 0.85

Flow Rate Correction Factors:

(HI-LINE SUPER RC)

455 ltr/h (100 gal/h) multiply output by 1.03

227 ltr/h (50 gal/h) multiply output by 0.98

113 ltr/h (25 gal/h) multiply output by 0.85

LST Range

Standard

Stelrad's range of Low Surface Temperature radiators is the most comprehensive in the UK, with sizes and models to suit all applications. They all meet NHS Guidance for 'safe hot water and surface temperature' and are finished with anti-bacterial paint as standard, making them the No.1 choice for safety-critical environments. Installation is simple and all components are included in a single robust pack.

Safety



CPD

BIM

5

FIVE YEAR
WARRANTY
ON CASING

10

TEN YEAR
WARRANTY
ON EMITTER

Standard 72 models

Heights: 500mm, 600mm & 800mm

Lengths: 560mm to 1960mm

Outputs: 196 to 2767 watts, 668 to 9442 Btu/hr

Types: K1, P+ & K2



@stelrad



facebook.com/stelradradiators



Stelrad[®]

Call **0844 543 6200** visit **Stelrad.com**

Leading the way

Stelrad LST Range Standard



50 Δt (75/65/20°C)

K1



P+



K2



Casing Height	Casing Length mm	Emitter Height mm	Emitter Length mm	Heat output			Heat output			Heat output		
				UIN	Watts	Btu/hr	UIN	Watts	Btu/hr	UIN	Watts	Btu/hr
500	560	300	400	145000	196	669	145008	284	969	145016	348	1187
	760	300	600	145001	293	1000	145009	426	1454	145017	522	1781
	960	300	800	145002	391	1334	145010	568	1938	145018	696	2375
	1160	300	1000	145003	489	1668	145011	710	2423	145019	870	2968
	1360	300	1200	145004	587	2003	145012	852	2907	145020	1044	3562
	1560	300	1400	145005	685	2337	145013	994	3392	145021	1218	4156
	1760	300	1600	145006	782	2668	145014	1136	3876	145022	1392	4750
	1960	300	1800	145007	880	3003	145015	1278	4361	145023	1566	5343
650	560	450	400	145024	290	989	145032	386	1317	145040	478	1631
	760	450	600	145025	435	1484	145033	580	1979	145041	717	2446
	960	450	800	145026	580	1979	145034	773	2637	145042	956	3262
	1160	450	1000	145027	725	2474	145035	966	3296	145043	1195	4077
	1360	450	1200	145028	870	2968	145036	1159	3955	145044	1434	4893
	1560	450	1400	145029	1015	3463	145037	1352	4613	145045	1673	5708
	1760	450	1600	145030	1160	3958	145038	1546	5275	145046	1912	6524
	1960	450	1800	145031	1305	4453	145039	1739	5933	145047	2151	7341
800	560	600	400	145048	365	1245	145056	501	1709	145064	615	2098
	760	600	600	145049	548	1870	145057	751	2562	145065	922	3146
	960	600	800	145050	730	2493	145058	1002	3419	145066	1230	4197
	1160	600	1000	145051	913	3115	145059	1252	4272	145067	1537	5244
	1360	600	1200	145052	1096	3740	145060	1502	5125	145068	1844	6295
	1560	600	1400	145053	1278	4361	145061	1753	5981	145069	2152	7343
	1760	600	1600	145054	1461	4985	145062	2003	6837	145070	2459	8393
	1960	600	1800	145055	1643	5606	145063	2254	7691	145071	2767	9441

$\Delta t50$ is the UK's industry standard for heating outputs, which has an operating temperature of 75/65/20°C if you have a low temperature heat source you may wish to consider $\Delta t40$ or $\Delta t30$ output (see your installer or system designer).

40 Δt (65/55/20°C)

K1



P+



K2



Casing Height	Casing Length mm	Emitter Height mm	Emitter Length mm	Heat output			Heat output			Heat output		
				UIN	Watts	Btu/hr	UIN	Watts	Btu/hr	UIN	Watts	Btu/hr
500	560	300	400	145000	147	500	145008	212	725	145016	260	888
	760	300	600	145001	219	748	145009	319	1087	145017	390	1332
	960	300	800	145002	292	998	145010	425	1450	145018	521	1776
	1160	300	1000	145003	366	1248	145011	531	1812	145019	651	2220
	1360	300	1200	145004	439	1498	145012	637	2174	145020	781	2664
	1560	300	1400	145005	512	1748	145013	744	2537	145021	911	3109
	1760	300	1600	145006	585	1996	145014	850	2899	145022	1041	3553
	1960	300	1800	145007	658	2246	145015	956	3262	145023	1171	3997
650	560	450	400	145024	217	740	145032	289	985	145040	358	1220
	760	450	600	145025	325	1110	145033	434	1480	145041	536	1830
	960	450	800	145026	434	1480	145034	578	1973	145042	715	2440
	1160	450	1000	145027	542	1850	145035	723	2465	145043	894	3050
	1360	450	1200	145028	651	2220	145036	867	2958	145044	1073	3660
	1560	450	1400	145029	759	2590	145037	1011	3451	145045	1251	4270
	1760	450	1600	145030	868	2961	145038	1156	3946	145046	1430	4880
	1960	450	1800	145031	976	3331	145039	1301	4438	145047	1609	5490
800	560	600	400	145048	273	932	145056	375	1279	145064	460	1570
	760	600	600	145049	410	1399	145057	562	1917	145065	690	2353
	960	600	800	145050	546	1863	145058	749	2557	145066	920	3139
	1160	600	1000	145051	683	2330	145059	936	3195	145067	1150	3923
	1360	600	1200	145052	820	2797	145060	1123	3833	145068	1379	4706
	1560	600	1400	145053	956	3262	145061	1311	4474	145069	1610	5492
	1760	600	1600	145054	1093	3729	145062	1498	5112	145070	1839	6276
	1960	600	1800	145055	1229	4193	145063	1686	5753	145071	2070	7062

Stelrad LST Range Standard



30 Δt (55/45/20°C)

K1



P+



K2



Casing Height

500

650

800

Casing Length mm	Emitter Height mm	Emitter Length mm	UIN	Heat output		Heat output			Heat output		
				Watts	Btu/hr	UIN	Watts	Btu/hr	UIN	Watts	Btu/hr
560	300	400	145200	101	344	145248	146	499	145224	179	611
760	300	600	145201	151	515	145249	219	749	145225	269	917
960	300	800	145202	201	687	145250	293	998	145226	358	1223
1160	300	1000	145203	252	859	145251	366	1248	145227	448	1529
1360	300	1200	145204	302	1031	145252	439	1497	145228	538	1834
1560	300	1400	145205	353	1204	145253	512	1747	145229	627	2140
1760	300	1600	145206	403	1374	145254	585	1996	145230	717	2446
1960	300	1800	145207	453	1546	145255	658	2246	145231	806	2752
560	450	400	145208	149	510	145256	199	678	145232	246	840
760	450	600	145209	224	764	145257	299	1019	145233	369	1260
960	450	800	145210	299	1019	145258	398	1358	145234	492	1680
1160	450	1000	145211	373	1274	145259	497	1697	145235	615	2100
1360	450	1200	145212	448	1529	145260	597	2037	145236	739	2520
1560	450	1400	145213	523	1784	145261	696	2376	145237	862	2940
1760	450	1600	145214	597	2038	145262	796	2717	145238	985	3360
1960	450	1800	145215	672	2293	145263	896	3056	145239	1108	3780
560	600	400	145216	188	641	145264	258	880	145240	317	1081
760	600	600	145217	282	963	145265	387	1320	145241	475	1620
960	600	800	145218	376	1283	145266	516	1761	145242	633	2161
1160	600	1000	145219	470	1604	145267	645	2200	145243	792	2701
1360	600	1200	145220	564	1926	145268	774	2639	145244	950	3240
1560	600	1400	145221	658	2246	145269	903	3080	145245	1108	3781
1760	600	1600	145222	752	2567	145270	1032	3520	145246	1266	4321
1960	600	1800	145223	846	2887	145271	1161	3961	145247	1425	4862

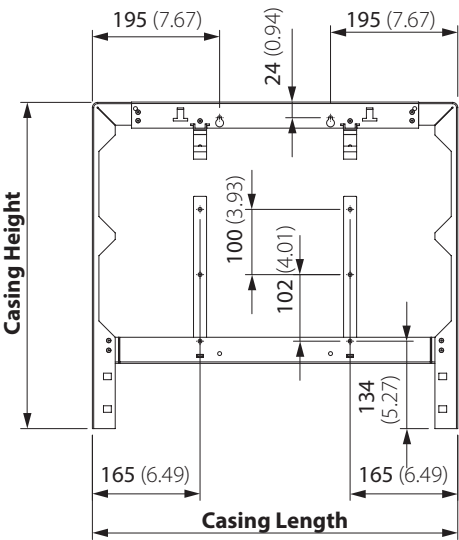
EN 442 Certification Data - CETIAT tested in accordance with BS EN 442

Type	K1			P+			K2		
Casing 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	489	725	913	710	966	1252	870	1195	1537
n-coefficients	1.19	1.25	1.34	1.24	1.27	1.31	1.27	1.30	1.32
Heated Surface Area (m²/m)	2.09	3.37	4.66	2.44	3.84	5.24	3.51	5.62	7.74
Weight (kg/m)	17.80	23.50	29.40	22.70	30.72	38.40	24.40	33.30	42.50
Water Contents (l/m)	1.89	2.57	3.25	3.70	5.15	6.60	3.70	5.15	6.60

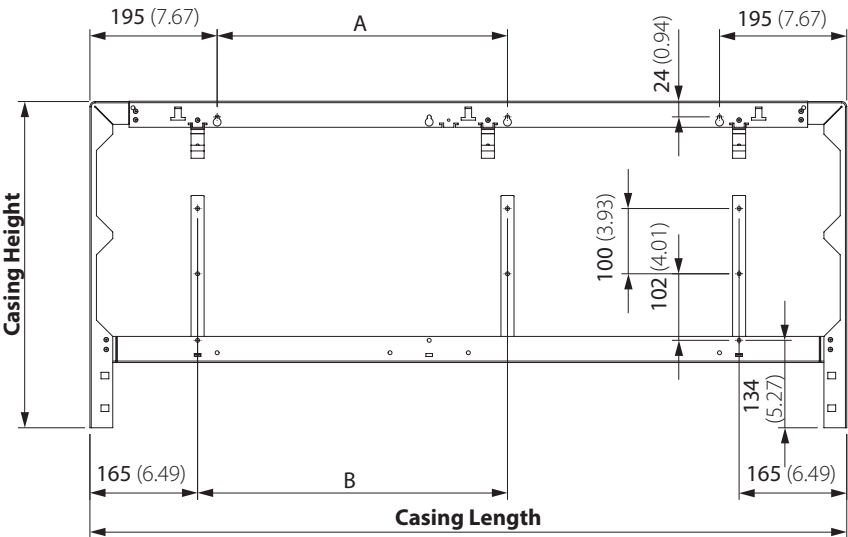
LST Standard wall fixings & bracket positions

All dimensions in mm. Inches in brackets.

Casing Length	Casing Height
560	500
760	650
960	800

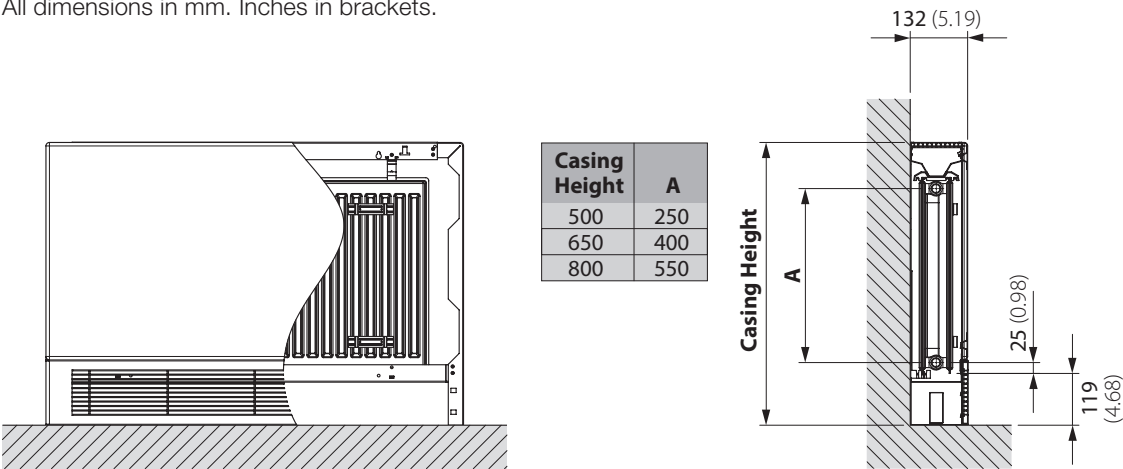


Casing Length	A	B	Casing Height
1160	445	475	500
1360	545	575	650
1560	645	675	800
1760	745	775	
1960	845	875	

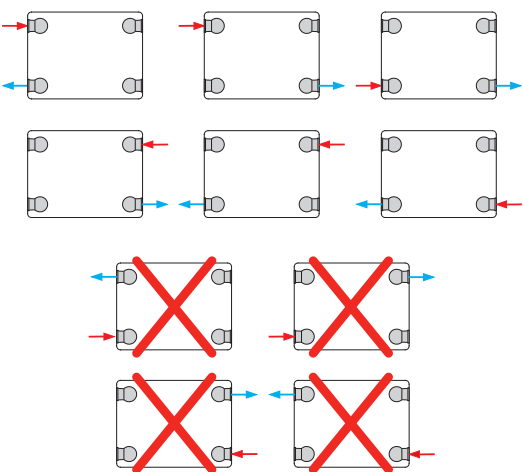


LST Standard connection options

All dimensions in mm. Inches in brackets.



LST Standard piping options



LST Range Components



LST Standard front case view.



LST Standard inside the casing showing the emitter.



LST Standard emitter, showing high level valve option (valve not included).



LST Standard circular knockout for TRV. Oblong knockout for pipe.



LST Plus front case view.



LST Plus inside the casing showing the emitter.



LST Vertical front case view.



LST i Plus front case view.



LST i Plus inside the casing showing the emitter.



Press-fit



VSH PowerPress

The VSH PowerPress range is a press system designed for thick wall steel pipe. Installation times are reduced, and a clean working environment is assured. This new system offers installers a complete solution with great flexibility.



Faster

Up to 80% quicker compared with welded or threaded example, brewery, 16 hours screwed, 2 hours PowerPress.

No requirement for tools on site.

No hot permit required.

No down time at close of business.



Easier

Less technical than threading or welding.

Reduced number of skilled workers.

Installation can be carried out on wet systems.

PowerPress ring indicates fitting function and o ring material, and reduces contamination and deflection.



Safer

Full Aalberts Integrated Piping System (IPS) including valves offers enhanced warranty and reduced contractor risk.

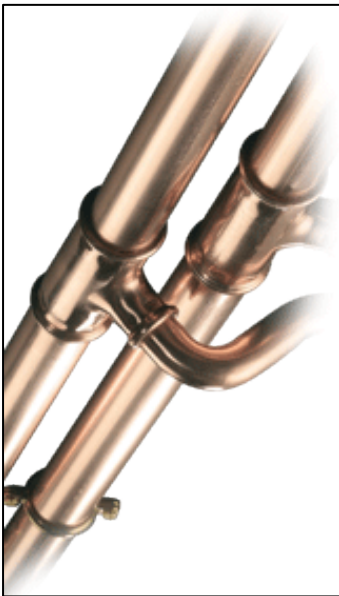
Reduced requirement for tools on site for cleaner and safer working.

Leak before pressure feature reduced risk of failure and poor installations.

Can be installed in hazardous applications without additional precautions

Typical Applications:

- Heating
- Cooling
- Compressed Air



VSH XPress

VSH XPress is a leading press-fit system, offering a comprehensive and flexible range for all modern building services, providing easy, fast, cost effective and reliable joints.



Innovative, comprehensive and easy to use

VSH XPress offers all the benefits of a heat free, press-fit system, saving time and money with every joint



Diverse

VSH XPress offers a more diverse range of installations and opportunities, such as for gas and solar installations, with super sizes available for the highest tower block



Performance

VSH XPress's performance is exceptional, a heat free, clean system offering major advantages over its competitors

Typical Applications:

- domestic
- multi occupancy
- commercial
- public utility