



Introduction to Heat Emitters

This section features the range of Copperad heat emitters available through your local BSS branch. Full specification data is included together with dimensional details and other necessary information. Our technical specialists are pleased to visit clients and advise on the most suitable equipment for a proposed application.

Products supplied by BSS are generally in accordance with British or other international Standard Specifications where applicable and as interpreted by the manufacturers, and present no hazard to health or safety if properly installed. There are however, many occasions when goods are ordered from us without any reference being made to the intended use, in which case, the company must assume that the users will take all necessary steps to ensure that the products purchased are suitable for the conditions in which they are intended to operate.

Our current catalogues generally indicate the Standards and Classes with which the products comply, but if in doubt, please consult your nearest BSS branch. This equipment complements our existing range of heating products, which include our well known range of boilers, heat exchangers, flue and chimney equipment and a comprehensive package of heating and ventilating controls all of which are ex-stock from our central warehouse and readily available to all our depots.

Copperad – A Brief History

Copperad originated in 1932 as the British Unit Heater Company, founded by Mr. S. J. Holmes and a Mr. R. F. Jarratt. The name “Copperad” first appeared in 1939 when the company moved to St. Pancras Place, London, as the brand name for the unit heaters. In 1945 a second piece of apparatus was designed, to replace radiators, and the fan convector was born. In 1946 Copperad Limited became the company name.

Although there have been many changes of ownership, and indeed design, in the intervening years, Copperad has maintained a high level of respect as a brand throughout this period. The most significant change has been the decision to sell all Copperad products into the UK exclusively through nationwide distributor BSS (UK). This decision was not surprising as BSS has been one of Copperad’s major accounts since the early days of the 1930’s and continues to offer major benefits to designers and contractors from its network of local branches.



Natural Convectors



The Copperad Natural Convector range is the latest generation of stylish convector heaters for homes, offices, shops, hotels and hospitals. Wherever comfortable heating and space saving is important. Available in a choice of models ranging from 0.63 to 2.36 kW on Low Temperature Hot Water, or 1.37 to 5.4 kW on steam applications. For ease of installation and accessibility the heat exchanger is

screwed to the wall and the casing held by a top retaining strip and side keyhole slots. The casing can easily be removed for cleaning or decorating. The Natural Convector has been designed to look good in any modern setting. The softly rounded edges and sloping top front to the casing provide added strength as well as a high degree of safety – an important feature when installed in areas used by children and older people. The smooth contoured design also makes cleaning easy, and the anodised aluminium pencil proof grille with the polyester powder coated casing provides a functional, elegant finish.



Features and Benefits

- Sloping top for Safety and Aesthetics.
- Continuous aluminium linear grilles, ideal if installed in schools.
- Compact and space saving.
- Simple wall mounted and easy to remove for decorating.
- Clean and silent in operation.
- Low Surface Temperature, meets DSS DN4 specification (when used on LTHW).
- Inlet Grille model available for safety, and to conceal low level pipework.
- 2 standard casing styles available. Stocked with damper fitted.
- Lengths available 600mm, 900mm, 1200mm and 1500mm.
- 2 Battery styles available – 1 row steam or water and 2 row water.
- Maximum Working Pressure – 10.5 Bar g. water.
- Ex-stock standard models.

Model Reference

The model reference is made up of a number of sections. This is an example of how a unit is identified.

CVD	1	6	06
Code	Heat exchanger	Casing height	Casing length

Code	Description	Remarks
CV	Casing with sloping top, no inlet	
CVI	Casing with sloping top and inlet grille	
CVD**	Casing as CV but with damper	BSS stocked item
CVDI	Casing as CVI but with damper	
1	One row steam/water heat exchanger	3/4" BSP F connectors
2	Two row heat exchanger (water only)	15mm plain tail connections
6	Casing height	600mm casing height standard
06	600mm case length	
09	900mm case length	
12	1200mm case length	
15	1500mm case length	

The units are supplied with a light grey case to RAL 9002 and mid-grey grilles to RAL 7000 as standard. All white units can be provided at no additional charge. Other RAL colours are available at additional cost.

The heat exchanger is mounted on to a bracket type back panel, and can be mounted behind builder's work if required. Any such application must ensure that a sufficiently large access panel is made available for maintenance purposes and a separate outlet grille must be purchased for this application.

One and two row LPHW coil options as standard with 15mm plain tails on 2-row water, 3/4" BSP on steam/water 1-row coil.

Unit size	600 (1606)	900 (1609)	1200 (1612)	1500 (1615)	600 (2606)	900 (2609)	1200 (2612)	1500 (2615)
No of rows	1	1	1	1	2	2	2	2
Output kW 80/70 LPHW	0.63	1.06	1.48	1.9	0.79	1.31	1.83	2.36
Output kW 65/55 LPHW	0.4	0.68	0.95	1.22	0.51	0.84	1.17	1.51
Output kW Steam 0.5 barg	1.46	2.63	3.24	3.98	n/a	n/a	n/a	n/a
Unit weight	9.8	12.5	17.2	20.1	10.0	12.8	17.5	20.4

The above is based on 20°C entering air temperature. To obtain duties under other conditions than the above, multiply the emissions from that table by the factors given below.

LST Units operating on 75°C mean will have a casing temperature lower than 40°C, but the grille temperature will be up to 50°C. However units operating on 60°C mean will maintain a casing and grille temperature below 43°C.

Steam Systems

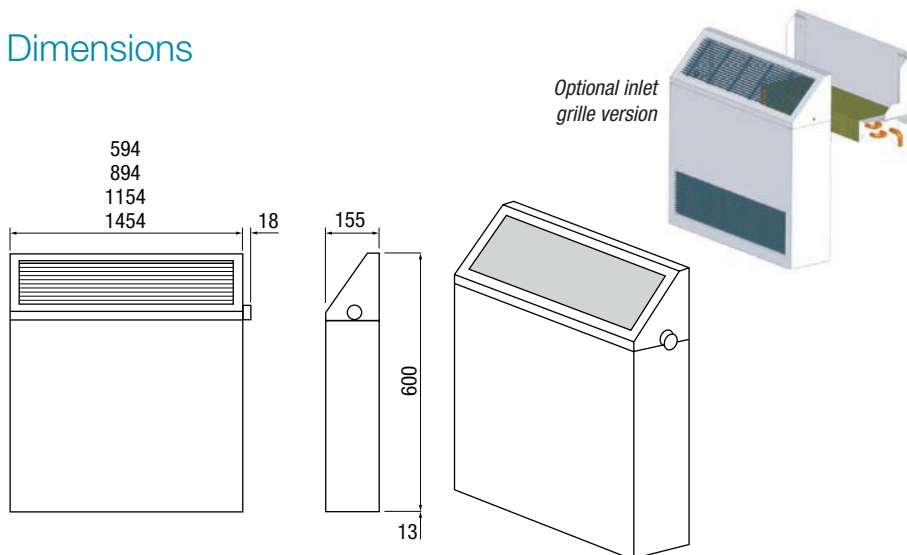
Units offered are suitable for maximum safe working pressure of 2.0 barg (30 psig), we generally recommend that natural convectors are operated on low steam pressures, up to 1.5 barg (20 psig) – convectors can be operated at higher pressures, but leaving air temperatures tend to be excessive and dehumidify the air of the heated area.

Emission factors for hot water		Mean water temperature °C									
		60	65	70	75	80	85	90	95	100	110
EAT°C	15	0.75	0.87	1	1.13	1.27	1.42	1.56	1.72	1.87	2.20
	18	0.68	0.8	0.92	1.05	1.19	1.33	1.47	1.62	1.78	2.1
	20	0.63	0.75	0.87	1	1.13	1.27	1.42	1.56	1.72	2.03

	Temperature drop °C							
	5	10	15	20	25	30	35	40
1 row unit	1.06	1	0.94	0.89	0.83	0.78	0.73	0.68
2 row units	1.09	1	0.92	0.85	0.78	0.72	0.67	0.52

Emission factors for steam		0.05	0.5	1	1.5	2	2.5	4	5	8
		Mean water temperature °C								
		101	111	120	127	134	139	152	159	175
EAT°C	15	0.94	1.06	1.19	1.28	1.39	1.44	1.60	1.72	1.95
	18	0.90	1.02	1.15	1.24	1.35	1.41	1.58	1.68	1.91
	20	0.87	1	1.12	1.21	1.31	1.39	1.56	1.65	1.88

Dimensions



Quality Assurance

The manufacturer of Copperad products has been inspected and holds manufacturing systems controlled to ISO9001 standards, and all products conform to the latest CE requirements.

