Thermolier Steam Unit Heater

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Thermolier Unit Heater - Steam-Fed

PRODUCT DESCRIPTION

The distinctive Thermolier Steam Unit Heaters are fan driven, hot air heating system products, which utilise heat exchange technology to transfer heat from steam to the air, keeping costs at bay.

Front louvers and careful situation of the units gives exceptionally fast warm up and practical heat control in high roofed, large spaces. Requiring little or no maintenance, this system is tough and efficient.

In designing Industrial Heat Exchangers capable of operating at high extremes of temperature and in harsh environments particular attention has been paid to the areas most likely to fail through leakage. This is typically the point of joining the tubes to the header, particularly in the case of copper tube to steel header joints.

Central to the robustness of the high grade plate-fin coils is the unique steel encased tube header design which incorporates high grade thick walled copper tubes and BS EN1501-161-430 (EN10028) boilerplate and interference fit steel ferrules.

This unique design ensures integrity at high temperature and pressure and negates the requirement for traditional return bends which have inherent fragility and are prone to frost damage.

FEATURES

- Robust design and construction
- Ideal for harsh environments
- Mechanical bonding of Cu tubes to steel header
- Five different physical sizes to suit any location
- High performance parameters
- Red powder coated finish to RAL 3022
- Totally enlcosed B.S motors with ‘sealed for life’ ball bearings require no maintenance
- Two coat stove enamelled zintec casing resists corrosion

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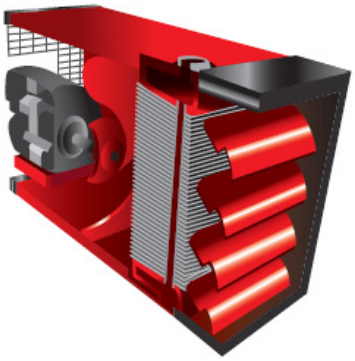


Cross section showing key components

TECHNICAL SPECIFICATiON

The casing is constructed from 1mm thick zinc coated steel to BS.1449. The body and louvers are stove enamel finished in post office red with the louvre box and fan guard black.

The heater battery is constructed using 15mm outside diameter specifically made thick walled copper tubes to BS.2870 grade C106. The gills are 0.35mm thick aluminium to BS.1470. The boiler plate header channels are 8mm thick steel to BS.1501-161-430B. Eyebolts are secured to lugs welded directly to the headers.

The battery is hydraulically tested to 25 bar. Motor and fan assembly is a continuously rated, totally enclosed air over motor type with IP44 protection against the penetration of dust and moisture into the windings.

STANDARD RANGE

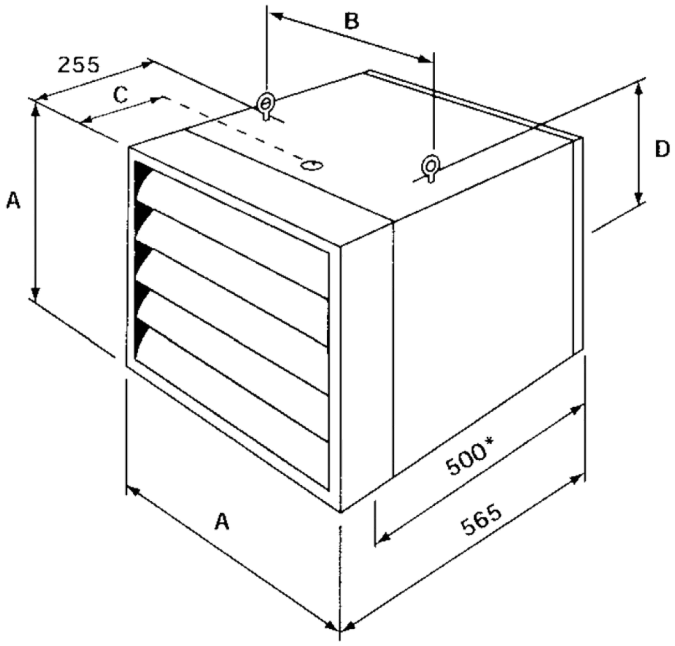
Model	Fan RPM	Heat Output at 20°C Entering Air kW	Mounting Height		Dimensions WxHxD mm	Air Throw m	Volume m³/s	Velocity m/s	Weight kgs
			Vertical mm	Horizontal mm					
STEAM123	930	12.7	3.0-3.7	2.4-4.3	345x345x565	7.5	0.295	3	35
STEAM223	930	22.2	3.3-4.0	3.0-5.2	425x425x565	12	0.515	4	40
STEAM323	930	37.3	3.3-4.0	3.4-4.6	500x500x565	15	0.880	4.5	50
STEAM423	930	63.9	4.3-5.5	4.3-6.4	575x575x565	15	1.040	4	70
STEAM523	930	88.2	5.0-6.0	5.0-7.0	650x650x565	18.5	1.495	4.5	75

Heat Output Values based on a Steam Pressure of 3 Bar

FORMULA TO OBTAIN STEAM CONSUMPTION $\frac{\text{WATTS}}{580} = \text{Kg/Hr}$

DIMENSIONS

DIM.	A		B		C		D		Connection		Weight	
Size	**mm**	**in**	**mm**	**in**	**mm**	**in**	**mm**	**in**	**mm**	**in**	**kg**	**lb**
1	345	13 1/2	275	10 3/4	120	4 3/4	190	7 1/2	25	1	35	77
2	425	16 1/2	350	13 3/4	120	4 3/4	230	9	25	1	40	88
3	500	19 1/2	425	16 3/4	120	4 3/4	265	10 1/2	25	1	50	110
4	575	22 1/2	505	19 3/4	130	5	305	12	40	1 1/2	70	154
5	650	25 1/2	580	22 3/4	130	5	345	13 1/2	40	1 1/2	75	165



*Overall length of unit when fitted with front angle flange.

INSTALLATION

Ensure no equipment is installed in a position that will obstruct the airflow from the unit. Even small bore pipe will cause turbulence in the air leaving the Unit and will prevent the unit delivering its full output into the occupied zone. The air intake should also be unobstructed.

Hangers must be fixed to both the unit the wall, truss or column. Ensure the hangers will allow the unit to move when the pipework expands.

The fanguard should be undamaged and securely fixed in the correct position.

Where the unit is fitted into ductwork a fan guard is not required. Check that the ductwork has provision for access to the motor and heater battery for annual inspection and maintenance. A short length of soft, i.e. canvas ducting should be fitted between the unit and ductwork to stop any vibration being transmitted into the ductwork.

It is recommended that the louvres are set as follows: Horizontal Units; louvres parallel, angled slightly downwards. Downflow units; when mounted at the upper recommended height each set of louvres should be parallel and angled slightly outwards.

When mounted at the lower mounting height, the outer louvres should be angled outwards and the inner louvres vertical. This gives the maximum spread for the Downflow Unit. It also applies when used as a door heater.

Full installation and maintenance instructions can be downloaded from our website.