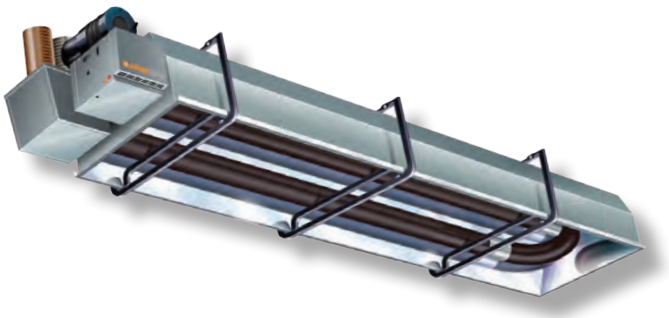
AMBIRAD

VSX

Radiant Tube Heating Systems



AMBIRAD
HEATING AND VENTILATION SOLUTIONS

VSX

Qualified for Energy Technology List
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Radiant Tube Heating Systems

Renowned for its pioneering track record, AmbiRad, Europes leading supplier of radiant tube heating systems, has yet again raised the industry standard in terms of innovation and technical performance.

The range of high efficiency VSX radiant tube heaters delivers exceptional performance in terms of efficiency and the potential to reduce energy costs.

VSX models 15% more effective than standard radiant tube heaters,with payback of 6 months achievable when redeeming ECA allowances.

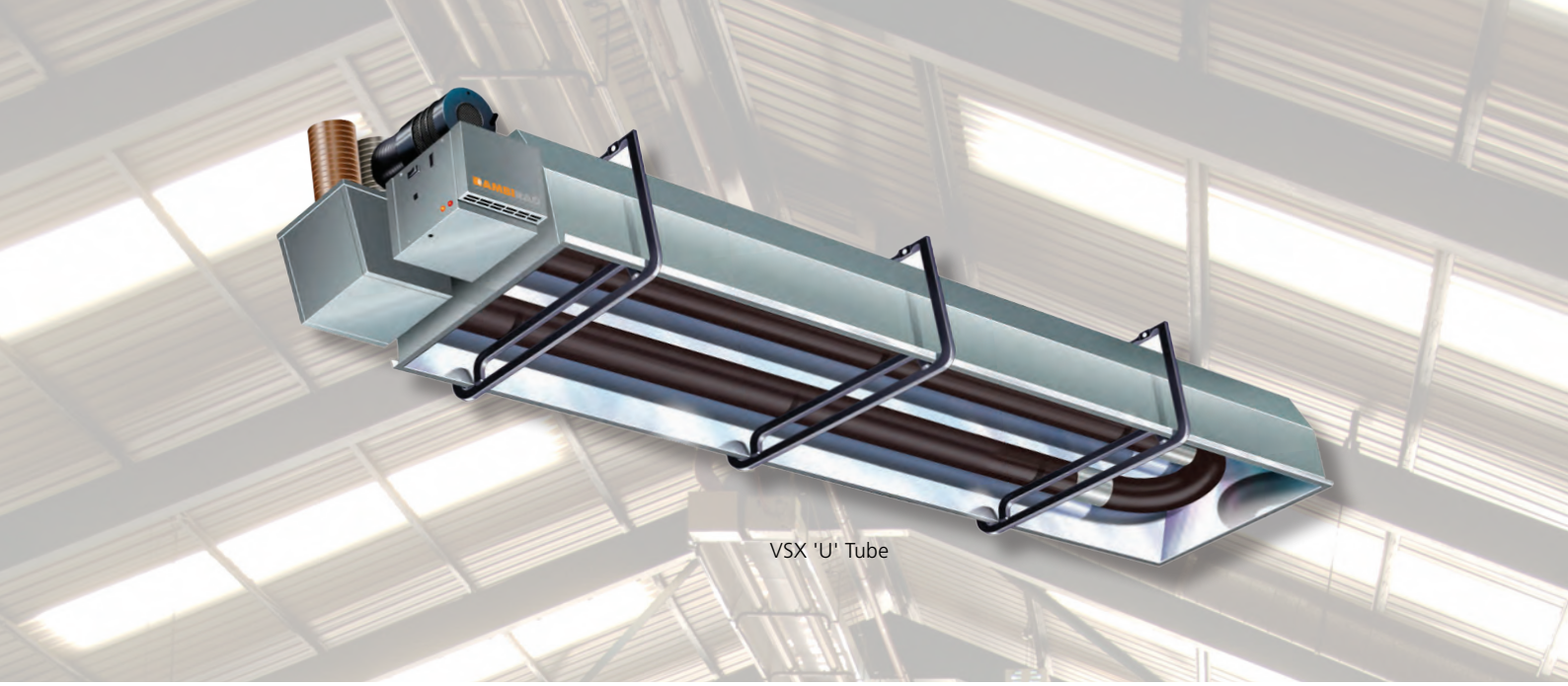
* Applicable to certain models only

Features & Benefits

Features:

New advanced burner technology

- Choice of burner ratings from 20 to 50kW
- NO_x emissions as low as 52ppm on certain models - 40% lower than standard radiant heater
- All units CE approved
- New slim-line burner head provides a long evenly distributed flame that dramatically improves temperature distribution along the entire length of the heater, delivering a more even floor coverage
- Combustion occurs entirely within the firing tube. Not only does this reduce the size and weight of the traditional burner control housing but it also helps to reduce noise levels (as quiet as 47 dB(A) 3m field)
- The inclusion of a recuperative heat exchanger on VSX models (patent P308150GB), mounted adjacent to the burner housing, significantly increases thermal efficiencies up to 90% and enhances radiant efficiency above 62.5%.



VSX 'U' Tube

Optimum economy and fuel savings

> The elimination of both distribution and standby losses coupled with high operational efficiencies at the point of use enable fuel savings of up to 65% compared with conventional heating systems

> Excellent radiant performance. More of the available heat generated is distributed to floor level thereby improving efficiency and reducing energy consumption

> 'High efficiency VSX heaters are included on the Government's Energy Technology List and may be eligible for Enhanced Capital Allowances (ECA)

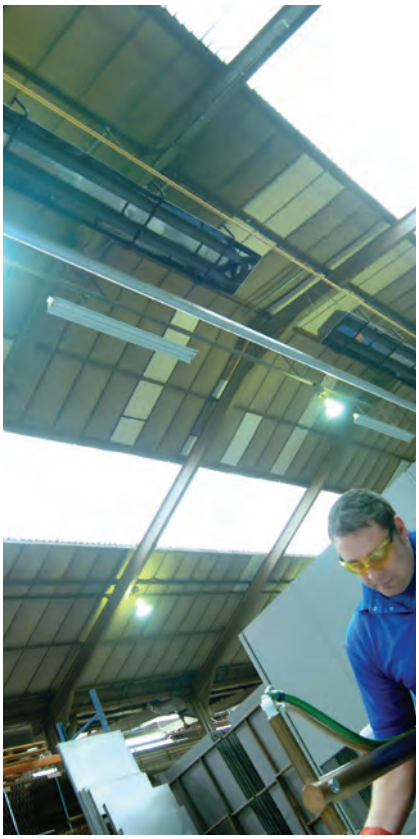
Additional control at the touch of a button

All models are compatible with AmbiRad SmartCom control systems. SmartCom units incorporate a host of features such as self learning optimised start-up to ensure

SmartCom^3 control panel

Radiant black bulb sensor

(Please refer to separate leaflet 'SmartCom Energy Management Control' for full details)



Herringbone Configuration

Herringbone systems are specifically designed to suit individual building requirements; they can incorporate up to ten 'U' tube or linear heaters on one exhaust manifold. The exhaust manifold may be terminated through the roof or wall

The particular benefits of herringbone systems are:

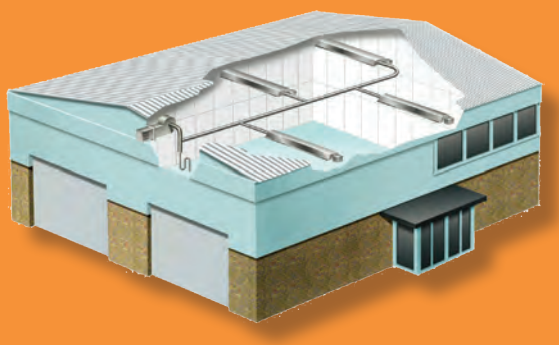
> Optimised energy efficiencies

> All units share a common internal flue thereby raising efficiency within the building

> Uniform heat distribution within the space being heated

> Improved aesthetics and minimal risk of water ingress - only one penetration of the building is required to enable the products of combustion to be expelled

> Universal application - they are ideal for both new build and older premises (in particular where penetration of an asbestos roof is an issue)



Specification

VSX model

Flueing

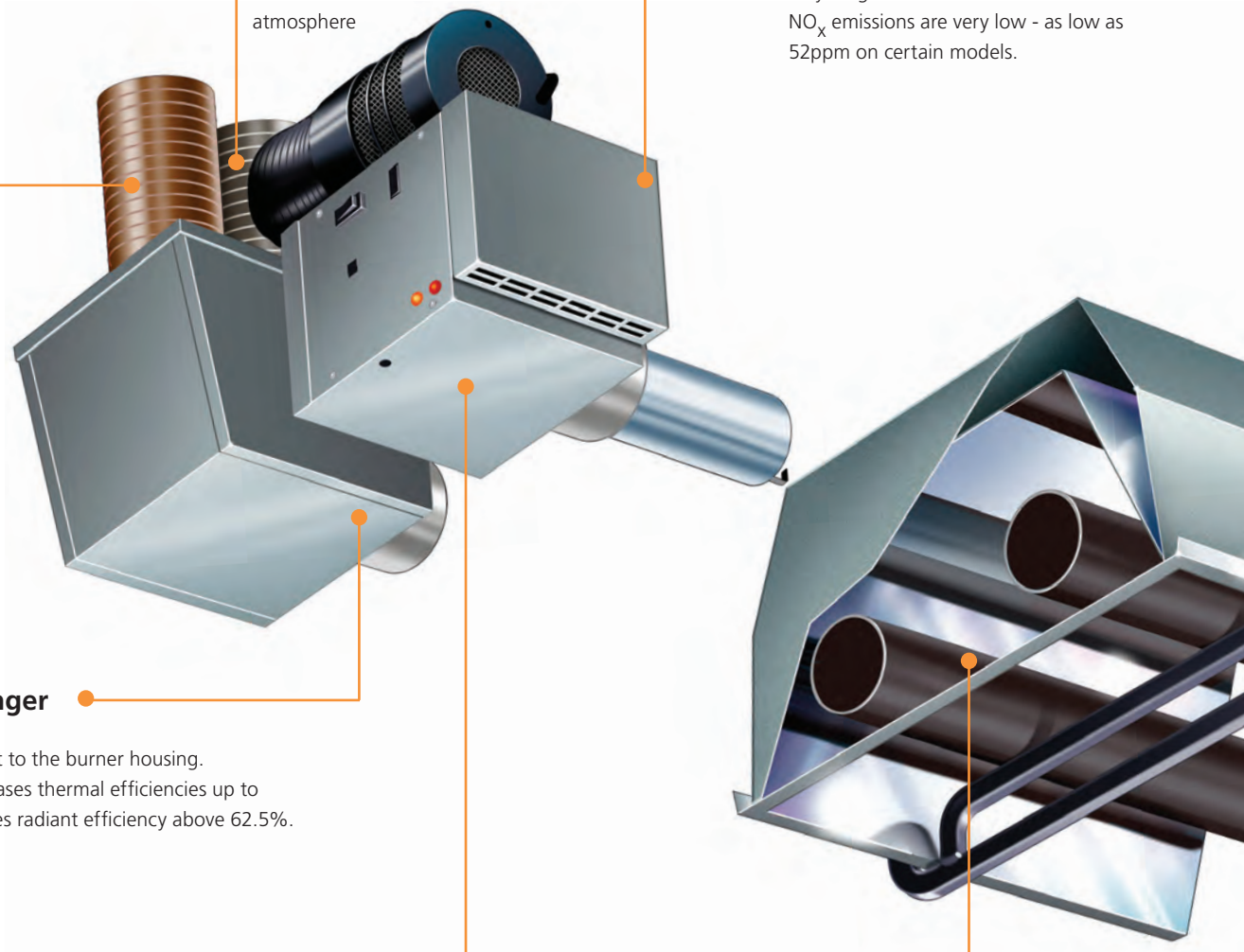
Units can be installed unflued or individually flued (including concentric flues to minimise building penetrations).

Fresh air intake

Fresh air can be ducted into the heat exchanger from outside the building to provide clean combustion air, required when there are contaminates in the atmosphere

Burner

Burner ratings range between 20 and 50kW in 5kW increments. The new burner head located within the firing tube leg provides a very long flame with even heat distribution. NO_x emissions are very low - as low as 52ppm on certain models.



Heat Exchanger

Mounted adjacent to the burner housing. Significantly increases thermal efficiencies up to 90% and enhances radiant efficiency above 62.5%.

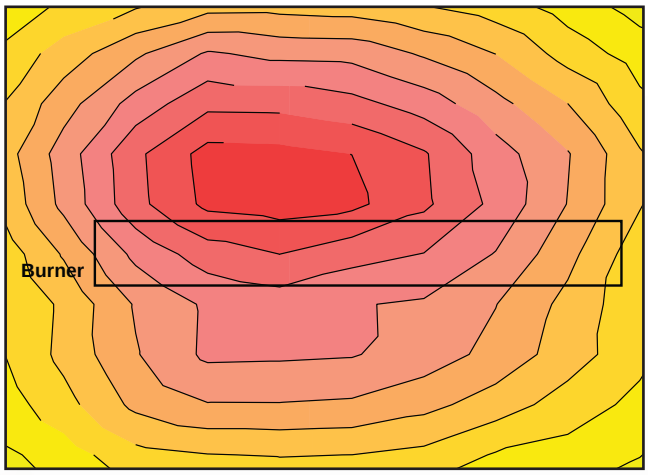
Control housing

Burner controls are mounted within a chassis that incorporates hinged doors for ease of access for commissioning and maintenance.

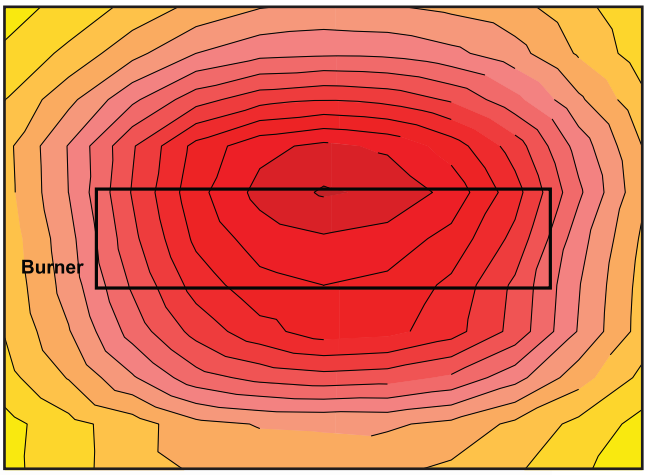
Tube finish

CALCOAT® tubes – a high technology process that applies a tough, dense, highly emissive surface both inside and out that eliminates the need for painting. As a result CALCOAT® ensures a long lasting surface that will not rust or flake, protects welds and maintains the highest of emissivity factors throughout the entire life of the heater.

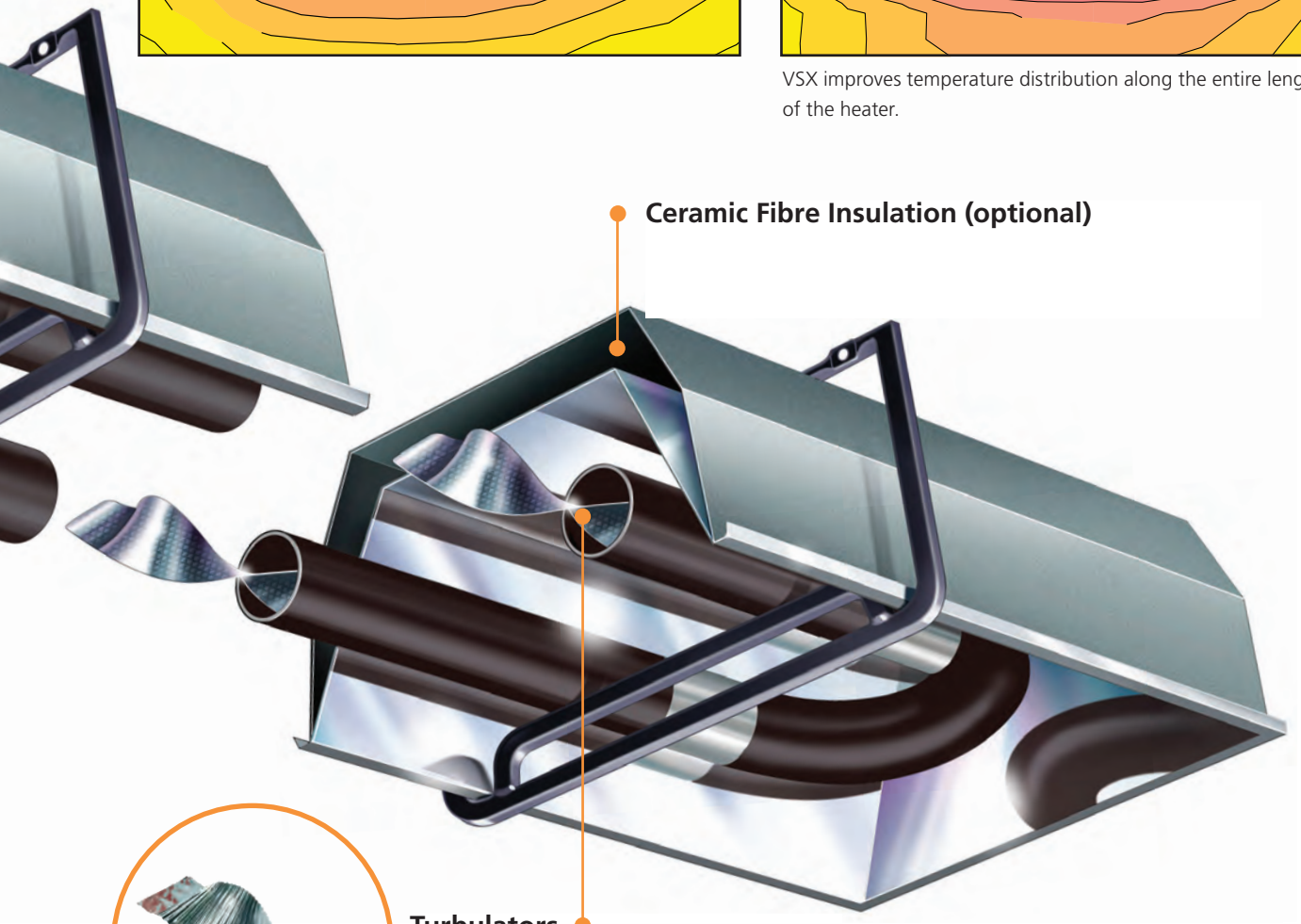
Standard radiant heater

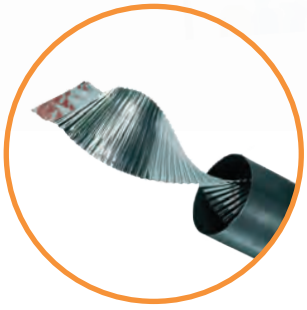


VSX



VSX improves temperature distribution along the entire length of the heater.





Turbulators

Stainless steel spiral turbulators optimise tube temperatures by 'scrubbing' the flue gases against the tube surface, maximising heat transfer and increasing radiant efficiency.

Radiant Heating

Working in the same way as the sun, radiant heat warms all solid objects and surfaces in its path through electromagnetic waves. Being mounted overhead, AmbiRad radiant heaters produce infrared heat that is directed downwards to low level by a reflector.

Infrared energy passes inertly through the air, dissipating as heat upon contact with people and surfaces thus creating a comfortable, all-round radiant warmth at lower air temperature. This reduces wasteful heating of empty space and makes substantial energy savings over conventional boiler and air systems.

Universal Application

Radiant heating has traditionally been predominant in industrial and commercial buildings, especially where there are large, high bay areas or where there are a high number of air changes within the environment.

VSX has been developed with these markets in mind and with a view to making radiant heating truly competitive within new smaller industrial and commercial buildings.

Its application is universal including environments with high air change, frequently opened doors, or where there is a need for zonal heating in very large premises.

The highly efficient performance of VSX provides greatly reduced running costs and improved capital payback, setting new industry standards.

VSX Applications

- Aircraft hangars
- Automotive workshops and showrooms
- Factories
- Retail outlets
- Sports arenas and halls
- Warehouses
- Workshops

Enhanced Capital Allowances

The Government's Enhanced Capital Allowance scheme actively encourages industry and commerce to reduce energy consumption by promoting the use of energy efficient equipment. With radiant efficiencies of above 62.5% and thermal efficiencies of up to 91% (reducing fossil fuel consumption) a significant number of VSX models are included on the list.

Qualified for Energy Technology List

This symbol verifies that the product has been independently assessed and qualifies for the ECA scheme, an upfront tax relief enabling businesses that invest in energy-saving equipment to claim 100% first-year capital allowances against their taxable profits.

Technical Data - All Models	
Gas supply	Connection 1/2 BSP internal thread
Electrical supply	230 volt 1 phase 50Hz
Current rating	1.0 amp max (inductive)
External fuse rating	3 amp external
Ignition	Electronic programme start up with spark ignition
Exhaust flue - twin wall diameter	127 mm (5")

VSX Recuperative Heat Exchange U Tube Models (forced burner)

Technical Data							
Model	**VSX20UT**	**VSX25UT**	**VSX30UT**	**VSX35UT**	**VSX40UT**	**VSX45UT**	**VSX50UT**
Nominal gross heat input kW	20.0	25.0	32.0	36.0	40.0	44.0	49.5
Nominal gas rate per burner m^3/h	1.9	2.4	3.1	3.4	3.8	4.2	4.7
Dimensional & weight data							
Length mm	4047			5927			7692
Overall height mm	All models 450						
Overall width mm	All models 746						
Total installed weight kg	114			158			205
Recommended mounting height range	**For mounting heights above or below those specified contact AmbiRad design office**						
Horizontal m	4.5 to 7	5 to 8	5.5 to 9	6 to 10	6.5 to 11	7 to 12	7.5 to 13
Inclined / wall mounted m	3.5 to 5	4 to 5	4 to 6	4.5 to 6.5	5 to 7	5.5 to 8	6 to 9
MINIMUM CLEARANCE DISTANCES TO COMBUSTIBLE SURFACES							
Above reflector mm	All models 100						
Above burner & heat exchanger assembly mm	All models 500						
Beneath tubes mm	2300			2500			
To the sides mm	All models 1300						
Horizontally from heat exchanger outlet unflued mm	All models 1200						
End of the heater to the wall mm	All models 700						

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