

AMBI RAD

ENERGY EFFICIENT HEATING SYSTEMS



OPTIMA

RADIANT TUBE HEATING SYSTEMS

Optima Series

The Optima Series represents the next generation of radiant tube heating systems and is the result of a major three year development programme.

Optima is CE approved and includes a number of technical and styling innovations that dramatically increase the radiant efficiency of the product, providing consultants, contractors and building managers with the most advanced radiant tube heating system available.

The Optima Series is available as Optima SE - Super Efficiency Model. Optima incorporates burner-inputs from 11kW to 38kW; all are range rated allowing complete flexibility of system design.

Optima is modular in construction being available in two or three module units depending on burner input rating required. The standard Optima burner provides quiet operation, performing better than any known equivalent product currently available. However, a 'matrix-style' burner head is an option that results in an ultra quiet performance for specialist applications.

The Climate Change Levy

The UK Government is to introduce the Climate Change Levy (CCL) from 1 April 2001.

The latest proposals are: to levy 0.43 pence per kWh on electricity; and 0.15 pence per kWh on gas consumption, which equates to a 20% increase on the average industrial gas bill. This means that energy intensive industries now need to consider how best to reduce the burden of the energy tax.

Investment in an Optima heating system can substantially contribute to minimising the impact of the levy. A correctly designed and installed heating system can reduce gas consumption by up to 65% depending on the application and provide many other benefits.



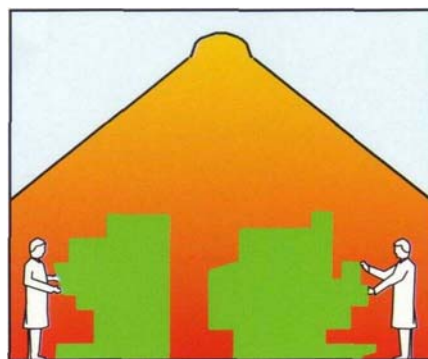
Optima Super Efficiency Model

Increased radiant efficiency

Radiant efficiency is defined as the amount of usable radiant energy from the combustion process that is emitted downwards to the floor. Measured in accordance with the new European pre-standard (DD ENV 1259-1:1994), the Optima SE achieves a significant increase in radiant efficiency over any competitive standard radiant tube system currently in the market-place.

This advance has been achieved primarily through the combination of new burner technology and the incorporation of insulated black emitters, optimised tube geometry, insulated overshield reflectors and endcaps. (Patent Application No. 9416130.4).

This increase in radiant efficiency provides the flexibility to the customer of reducing gas consumption, whilst maintaining the required comfort condition in the building. Thus, significant fuel-cost savings can be achieved.



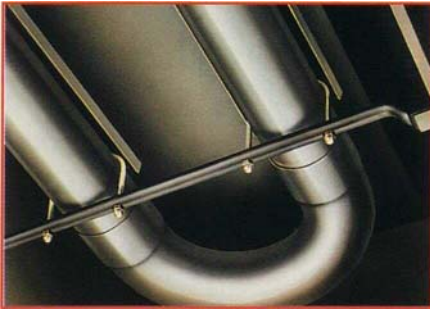
Benefits

- Reduces fuel costs.
- Minimises the impact of climate change levy by significantly reducing gas consumption.
- Specifically designed for industrial or commercial buildings.
- Creates no draughts or air movement, so increasing work force comfort.
- Does not re-circulate dust and airborne contaminants.
- Rapid heating up and recovery times.
- Systems can be zoned to accommodate varying temperatures and operating times.
- Heaters mounted at high level release valuable floor space.
- Can be integrated with energy management systems.
- Minimises roof heat losses.
- Fuel burnt where and when heat is required, eliminating distribution and standby losses.
- Easy to install and service.
- Environmentally friendly, with reduced emission levels.
- Minimises maintenance.
- Design flexibility - through innovative styling.

Specification

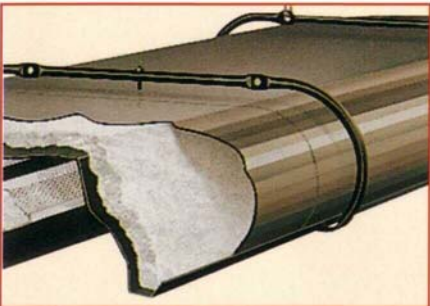
Burner control housing

New chassis-style burner control housing with quick release access lid provides a fully demountable inner assembly for ease of maintenance.



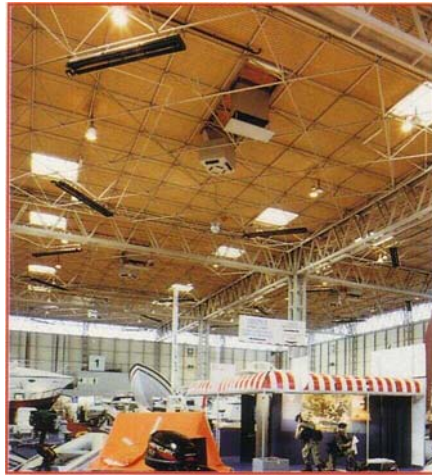
Black emitters

Innovative black emitter panels in combination with the insulated canopy provide the most efficient emissive surface. Tube material is stainless and aluminised steel.



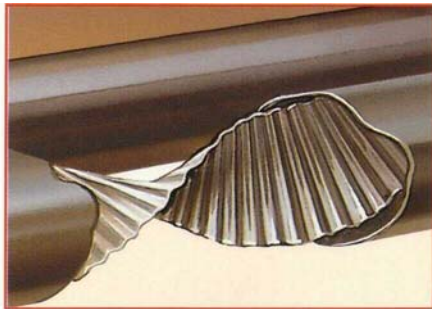
Insulated canopy

Insulated, multi-faceted steel canopy and tube overshields, minimise the heat-loss through convection and maximise downward radiant efficiency.



End covers

Quick release end covers manufactured in black composite, surround the burner control housing and fan, and provide an innovative stylish appearance and further reduces noise levels.



Turbulators

Stainless steel spiral turbulators present in both legs of the tube, optimise tube temperature.

Brackets

Stylised tubular brackets provide strong but streamlined support fixing.



System application

The Optima Series is ideally suited for industrial and commercial premises, whether they are new or old. In environments with high air-change, or where there is a need for controllable heat, the system's high efficiency will greatly reduce running costs and improve capital pay-back.

Optima is available in a U-tube configuration and may be flued individually or into a central manifold to create a multi-burner single exhaust system. Heaters are suspended horizontally or can be angle-mounted to a recommended maximum of 30°.

The improved appearance of the Optima SE widens the usage of radiant heaters bringing the benefits of energy saving to building types that were previously precluded because of the styling limitations attributed to other radiant tube heaters.



Specification and technical data

Model		SE15	SE20	SE25	SE28	SE33	SE35	SE38
Type	'U' Tube		'U' Tube	'U' Tube	'U' Tube	'U' Tube	'U' Tube	'U' Tube
Nominal heat input range	kW	15	20	25	28	33	35	38
Overall length	mm	5130	5130	5130	6925	6925	6925	6925
Overall width	mm	788	788	788	788	788	788	788
Nominal gas rate per burner	m ³ /h							
	Natural gas G20	1.43	1.91	2.38	2.66	3.14	3.33	3.62
	(LPG) Propane G31	0.56	0.75	0.94	1.05	1.24	1.32	1.43
Gas supply	Connection R 1/2, 1/2 in BSP external thread							
Electrical supply	230 volt 1.1 PH/50Hz							
Current rating	0.55 amp max (inductive)							
Fuse rating	1 amp internal, 3 amp external							
Ignition	Electronic programme start up with spark ignition							
Exhaust flue (diameter) twin wall	125mm							
Total installed weight	kg	105	105	105	146	146	146	146

Mounting heights

Model	Mounting position	Minimum mounting height (m)	Recommended mounting height range (m)†
SE15	Horizontal	4.4	4.6-7.0
SE15	*Inclined	3.9	4.2-5.2
SE20	Horizontal	4.9	5.5-9.0
SE20	*Inclined	4.4	4.4-5.8
SE25	Horizontal	5.4	6.0-11.0
SE25	*Inclined	4.7	5.0-6.1
SE28	Horizontal	5.8	6.4-12.0
SE28	*Inclined	5.1	5.5-7.0
SE33	Horizontal	6.3	6.9-13.5
SE33	*Inclined	5.5	6.0-7.6
SE35	Horizontal	6.5	7.1-14.0
SE35	*Inclined	5.7	6.5-8.3
SE38	Horizontal	6.9	7.5-16.0
SE38	*Inclined	6.0	6.7-8.7

* Maximum recommended angle of mounting is 30°.

† When mounting over these recommendations, contact Ambi-Rad Technical Department.

Clearance distances to combustible materials

Model	SE15	SE20	SE25	SE28	SE33	SE35	SE38
Above canopy	100	100	100	100	100	100	100
Above fan	400	400	400	400	400	400	400
Beneath the burner	1300	1490	1675	1820	2060	2160	2300
To the sides (from reflector edge)	450	520	580	500	550	630	730
Above canopy (inclined mounting)	100	100	100	200	200	200	200
Beneath the burner (inclined mounting)	1000	1200	1400	1500	1650	1760	1910

All distances are in millimetres.

Patents 9509657, P19529343.6, 9416130.4, 5626125.



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