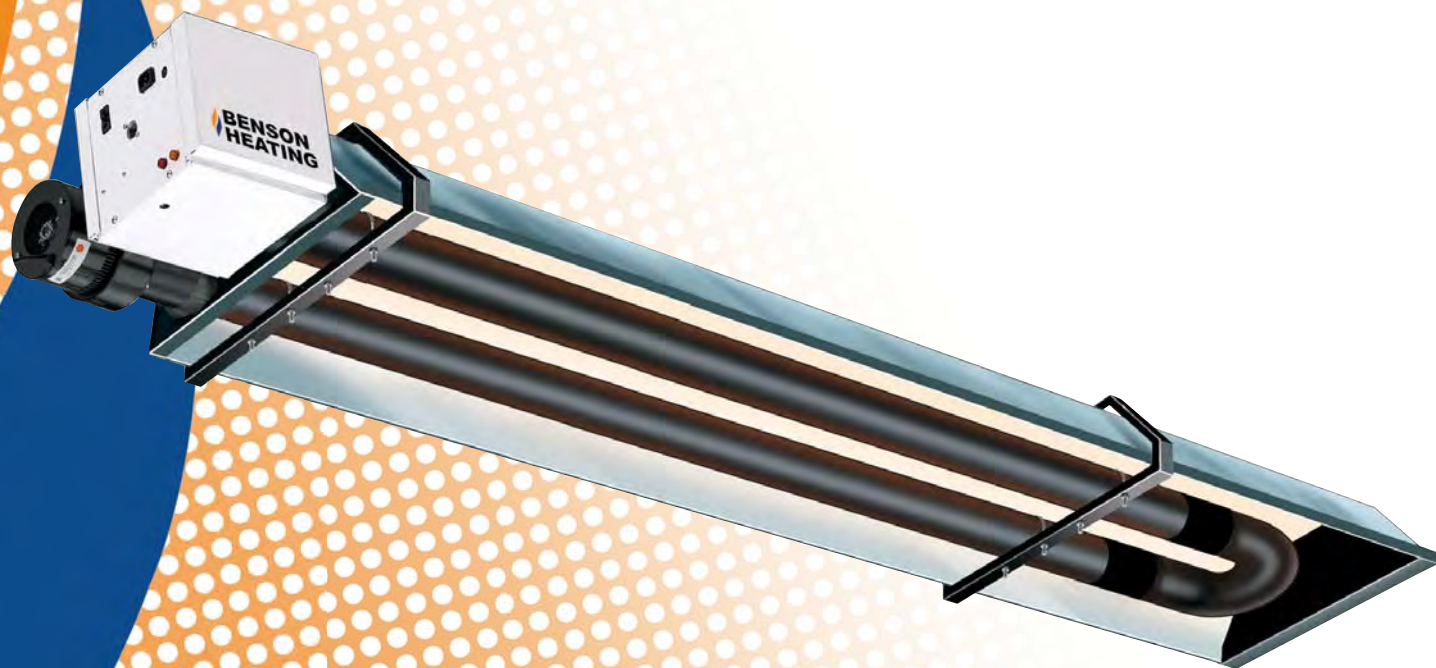


Vision



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Radiant Tube Heating
Systems

U Tube, Single and Double
Linear Models

Vision

Introduction

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

The foundation of this development is a high efficiency advanced burner.



Features

New advanced burner technology

- Choice of burner ratings from 15 to 50kW depending on model type
- All units are CE approved
- No_x emissions as low as 52ppm on certain models - 40% lower than standard radiant heater
- 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 free field)
- 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

Model Range

The BVS range is available in U tube, single linear and double linear models

BVSA models are available on request (aluminised reflectors with no end caps).

All models can be roof or wall mounted.





Benefits

Easy to install and maintain

- On forced gas burner models all electrical wiring is contained at one end of the product, which is particularly time saving when installing single linear (BVSLF) heater models
- All units require straightforward annual maintenance

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

Additional control at the touch of a button

All models are compatible with Benson SmartCom control systems. SmartCom units incorporate a host of features such as self-learning optimised start-up to ensure increased comfort and energy savings.



SmartCom³
control panel



Radiant black
bulb sensor

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



Vision

Specification

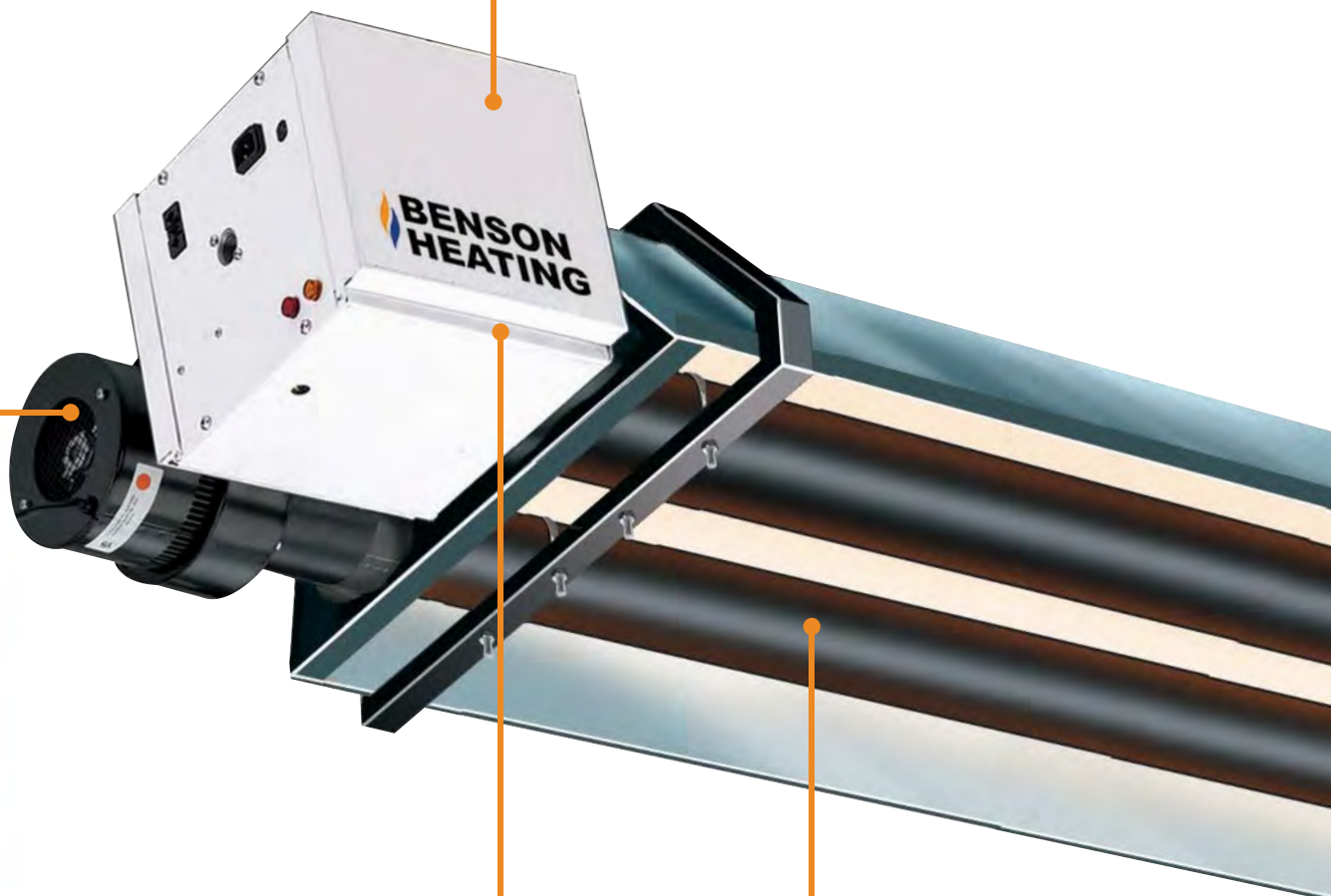
BVS model

Flueing

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

Burner

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.

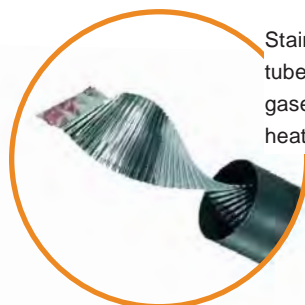


Control housing

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

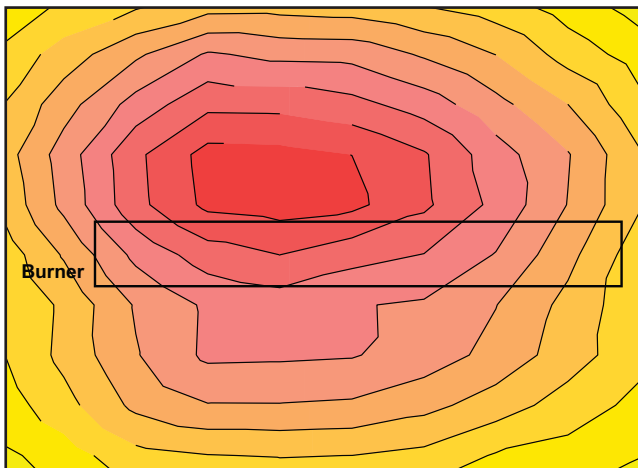
Turbulators

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

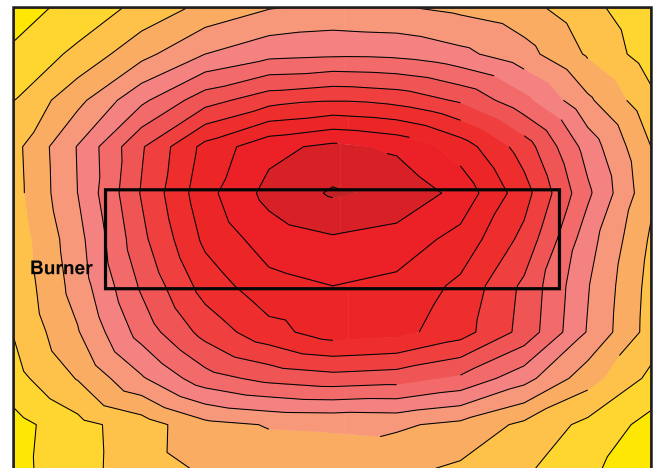




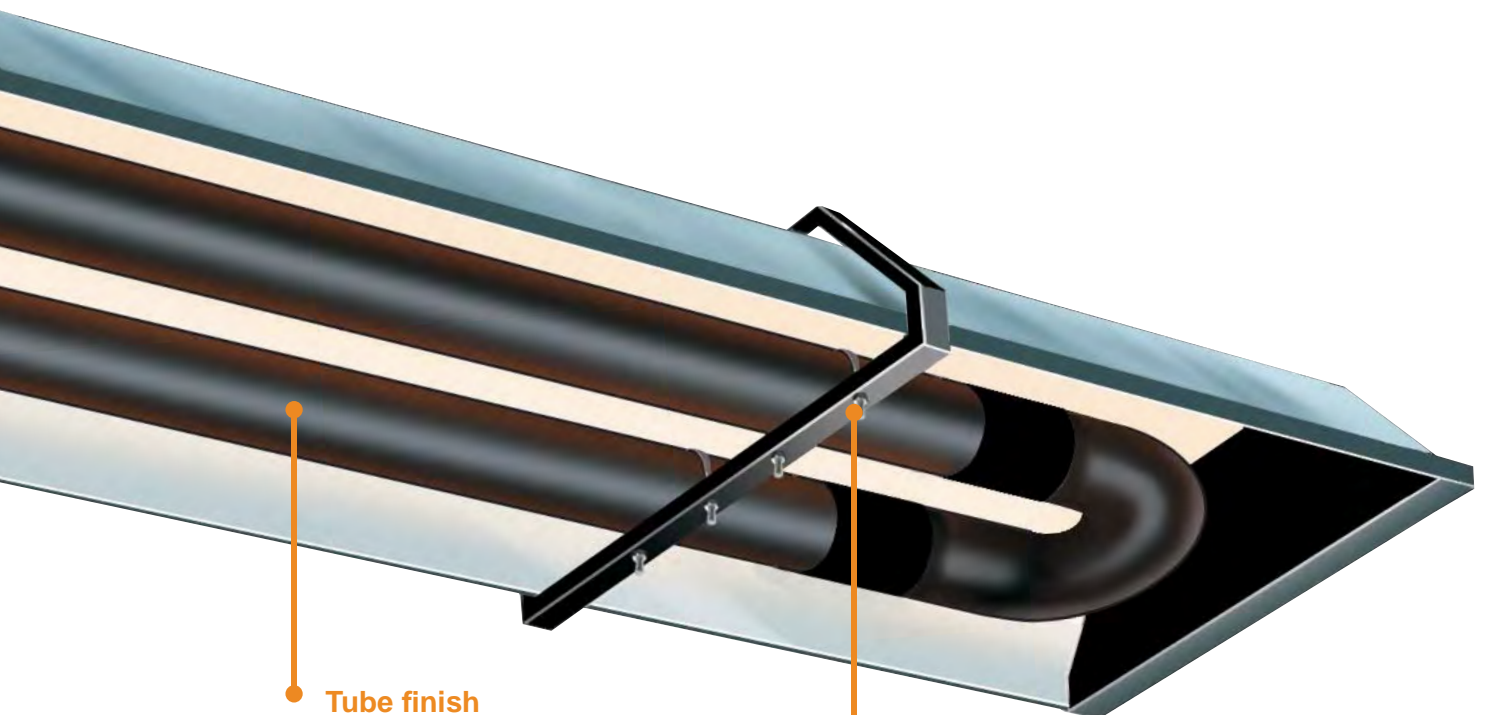
Last generation radiant heater



Benson Vision (BVS)



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



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.

U bolts

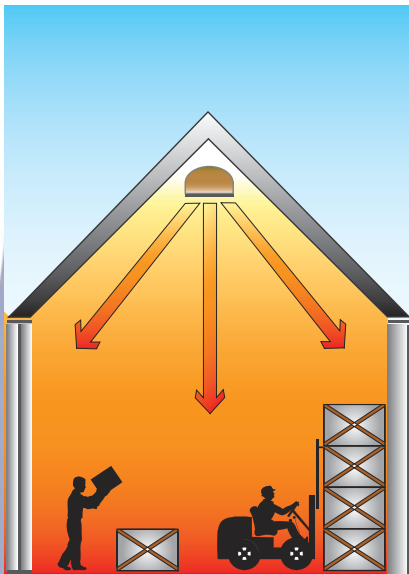
U bolt clamps for ease of installation and assembly.

Vision

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, Benson 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.

Vision 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 Vision provides greatly reduced running costs and improved capital payback, setting new industry standards.



Vision Applications

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





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")

Vision Standard U Tube Models (induced burner) BVSUT & BVSAUT

Note: All technical details shown relate to BVSUT & BVSAUT models except for clearance distances as indicated.

TECHNICAL DATA											
Model		BVS15UT4	BVS15UT	BVS20UT	BVS25UT	BVS30UT	BVS35UT	BVS40UT	BVS45UT	BVS50UT	
Nominal gross heat input	kW	15.8	15.0	19.5	23.5	29.5	36.0	40.0	44.0	48.0	
Nominal gas rate per burner	m ³ /h	1.5	1.4	1.9	2.3	2.8	3.4	3.8	4.2	4.6	
Dimensional & weight data											
Length	mm	2219	3417	4142	5066	6029	5709	5709	7471	7471	
Overall height	mm	235	168	168	168	168	235	235	235	235	
Overall width	mm	675	500	500	500	500	675	675	675	675	
Total installed weight	kg	41	43	43	60	70	92	92	121	121	
Recommended mounting height range											
For mounting heights above or below those specified contact Benson design office											
Horizontal	m	4 to 5	4 to 5	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 4.5	3.5 to 4.5	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											
Model		BVS15UT4	BVS15UT	BVS20UT	BVS25UT	BVS30UT	BVS35UT	BVS40UT	BVS45UT	BVS50UT	
Above reflector BVS models with end caps	mm	All models 180									
Above reflector BVSA models no end caps	mm	All models 280									
Above burner & fan assembly flued	mm	All models 500									
Beneath tubes	mm	1500			1700			2100			
To the sides	mm	900			1000			1100			
Horizontally from fan outlet unflued	mm	All models 1200									
End of the heater to the wall	mm	All models 500									

Vision Standard Linear Models (forced burner) BVSLF & BVSALF

Note: All technical details shown relate to both the BVSLF & BVSALF models except for clearance distances as indicated.

Model		BVS15LF	BVS20LF	BVS25LF	BVS30LF	BVS35LF	BVS40LF	BVS45LF	BVS50LF
Nominal gross heat input	kW	13.8	19.5	23.5	29.5	36.5	40.0	45.0	50.0
Nominal gas rate per burner	m ³ /h	1.3	1.9	2.3	2.8	3.5	3.8	4.3	4.8
Dimensional & weight data									
Standard length option	Nominal metres	6	7	8	10.5	10.5	13.5	13.5	13.5
Total installed standard length weight option	kg	43	49	53	72	103	126	126	126
Extended length option	Nominal metres	8	10.5	10.5	12.5	13.5	16	16	16
Total installed extended length weight option	kg	53	72	72	84	126	147	147	147
Overall height	mm	174				235			
Overall width	mm	304				470			
Recommended mounting height range For mounting heights above or below those specified contact Benson design office									
Horizontal	m	4 to 5	5 to 7	5 to 7	5 to 9	5 to 11	5 to 11	6 to 12	7 to 13
Inclined / wall mounted	m	3.5 to 4.5	4 to 5	4 to 5	4 to 6	4 to 7	4 to 7	5 to 8	6 to 9
MINIMUM CLEARANCE DISTANCE TO COMBUSTIBLE SURFACES									
Above reflector BVSLF models with end caps	mm	All models 150							
Above reflector BVSALF models no end caps	mm	All models 280							
Above burner	mm	All models 500							
Beneath tubes	mm	1500	1700			2100			
To the sides	mm	All models 750							
Horizontally from heater outlet unflued	mm	All models 1200							
End of the heater to the wall	mm	All models 500							

Vision Standard Linear Tube Models (induced burner) BVSLI & BVSALI

Note: For all dimensional, weight and clearance details please refer to Vision Standard Linear forced burner section detailed above

Model		BVS15LI	BVS20LI	BVS25LI	BVS30LI	BVS35LI	BVS40LI	BVS45LI	BVS50LI
Nominal gross heat input	kW	15.0	19.5	23.5	29.5	36.0	40.0	44.0	50.0
Nominal gas rate per burner	m ³ /h	1.4	1.9	2.3	2.8	3.4	3.8	4.2	4.8

Vision Standard Double Linear Models (induced burner) BVSDL & BVSADL

Note: For clearance details please refer to Vision Standard Linear forced burner section detailed above

Model		BVS15DL	BVS20DL	BVS25DL	BVS30DL	BVS35DL	BVS40DL	BVS45DL	BVS50DL
Total nominal gross heat input both burners	kW	30.0	39.0	47.0	59.0	72.0	80.0	88.0	100.0
Total nominal gas rate both burners	m ³ /h	2.8	3.8	4.6	5.6	6.8	7.6	8.4	9.6
Dimensional & weight data									
Standard length option	Nominal metres	12	14	16	21	21	27	27	27
Total installed standard length weight option	kg	86	98	106	144	206	252	252	252
Extended length option	Nominal metres	16	21	21	25	27	32	32	32
Total installed extended length weight option	kg	106	144	144	168	252	294	294	294

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