

HN Series Shortwave Infrared Halogen Heaters



HN2-1500G 1.5kW Shortwave Heater



HN2-3000G 3kW Shortwave Heater



HN2-4500G 4.5kW Shortwave Heater

- Providing instant comfort heat in a variety of commercial and industrial buildings.
- Especially suited to irregularly used buildings where conventional space heating is impractical.
- Ideally suited to spot heating a defined area within an otherwise unheated space
- Low running costs by selecting from a range of control options

Typical Applications

- Community halls
- Churches
- Workshops
- Packing areas
- Squash courts
- Factories
- Warehouses

Features

- Aluminium construction with closely spaced safety grille
- High quality halogen lamp with 7000 hours average operating life
- Halogen lamp is easily replaceable
- High quality ivory paint finish
- Wall mounting bracket providing 'up and down' and 'side to side' angle adjustment
- Optional suspension kit
- Gold lamp with soft pink glow
- Three lamp models can be converted from 230V/1 to 400V/3N on site
- 1m high-temperature cable fitted to every heater



HN-Shortwave Infrared Halogen Heater with long life gold lamps

Controlling HN Heaters

HN infrared halogen heaters heat people directly without the need to build up and maintain a body of warm air. For this reason thermostatic control is rarely appropriate. Applicable control falls into the following two categories.

1. Intensity adjustment
2. Devices to reduce running costs

Intensity Adjustment

CS-2 and CS-3 Controllers

These devices are for use with two and three lamp models and allow the lamps to be switched individually. This allows the user to run a heater at full output in very cold conditions but reduce the output as the ambient temperature rises.

Controller	Heater	Settings		
		High	Medium	Low
CS-2	HN2-3000G	3kW	N/A	1.5kW
CS-3	HN2-4500G	4.5kW	3kW	1.5kW
CS-3	HN2-6000G	6kW	4kW	2kW

The controllers should be wall-mounted in a convenient location and hard wired to the heater. By using suitably rated contactors a single controller can be used to provide flexible control for a group of heaters.

VR-1 Dimmer

The VR-1 dimmer can control the intensity of the output from infrared halogen heaters up to 3kW. A simple panel front knob provides 0% to 100% adjustment. It also proves a convenient means of isolating the heater with a definite 'click' to off.

Devices to Reduce Running Costs

TS-3 Push Button Timer (pre-programmed time delay)

The TS-3 is a compact surface-mount, weatherproof device which will energise a heater or heaters for a pre-programmed period between 2 minutes and 2 hours. Once this period has elapsed the heating will automatically be switched off until the button is pushed again.

The TS-3 can switch loads up to 3kW directly and larger loads via a suitable contactor.

TS-4 Push Button Timer (user selectable time delay)

The TS-4 is designed for installation into a single-gang back box. A simple push button provides 15 minute/ 30 minute/1 hour/2 hour settings. Once the period selected has elapsed the heating will automatically be switched off until the button is pushed again. The time setting can be changed at any point and the timer also provides a means of switching the heating off.

The TS-4 can switch loads up to 3kW directly and larger loads via a suitable contactor.

TS-5 High Capacity Soft Start Timer

The TS-5 timer is designed for direct switching of halogen heaters with a combined load of up to 6kW. The time delay period can be adjusted from 5 minutes to 70 minutes and once this time period has elapsed the heating will be switched off automatically. The device is rated IP55 making it completely safe for outdoor installation. The built-in triac provides 'soft start' prolonging lamp life and reducing stress on the mains supply. The TS-5 includes terminals allowing the device to be connected to a remote programmable timer and/or a thermostat.

WH-402 Movement Sensor

The WH-402 is a compact, surface mount, weatherproof device which can detect movement up to 12m from its mounting position in a 180° arc. Both distance and angle of detection can be reduced. Once movement has been detected the heating will be switched on. If no further movement is detected within a pre-programmed period (between 5 seconds and 18 minutes) the heating will be automatically switched off.

The WH-402 can switch loads up to 3kW directly and larger loads via a suitable contactor.



CS-2 Controller



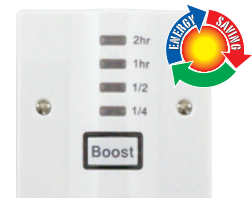
CS-3 Controller



VR-1 Dimmer switch



TS-3 Energy - saving timer with tamperproof delay adjustment



TS-4 Energy - saving timer



TS-5 Weatherproof Timer for larger loads



WH-402 Movement sensor

HN Continued

Heat Requirements

Use **Table 1** to determine the total kW output required. The W/m² applicable to the type of activity and the nature of the building should be multiplied by the total area in m². The 'spot heating' figure should be used when heating a section of an otherwise unheated building.

The output, position and mounting height of the heaters can be determined using **Table 2**. We suggest that the areas covered by individual heaters are allowed to overlap by 10% to 15% to ensure even coverage.

Table 1

W/m ² required			
	Heavy Work	Light Work	Spot Heating
Highly Insulated	150	200	250
Insulated	175	225	250
Un-Insulated	200	250	275
Light Cladding	250	300	300
Badly insulated/damp	300	300	300

Spot Heating

As an additional guide to spot heating, we would also recommend heating from two directions, to cover the area from opposite sides. This will ensure an overall feeling of comfort and warmth. A heat loading of 250 -300 W/m² can be considered as a guide for this type of area.

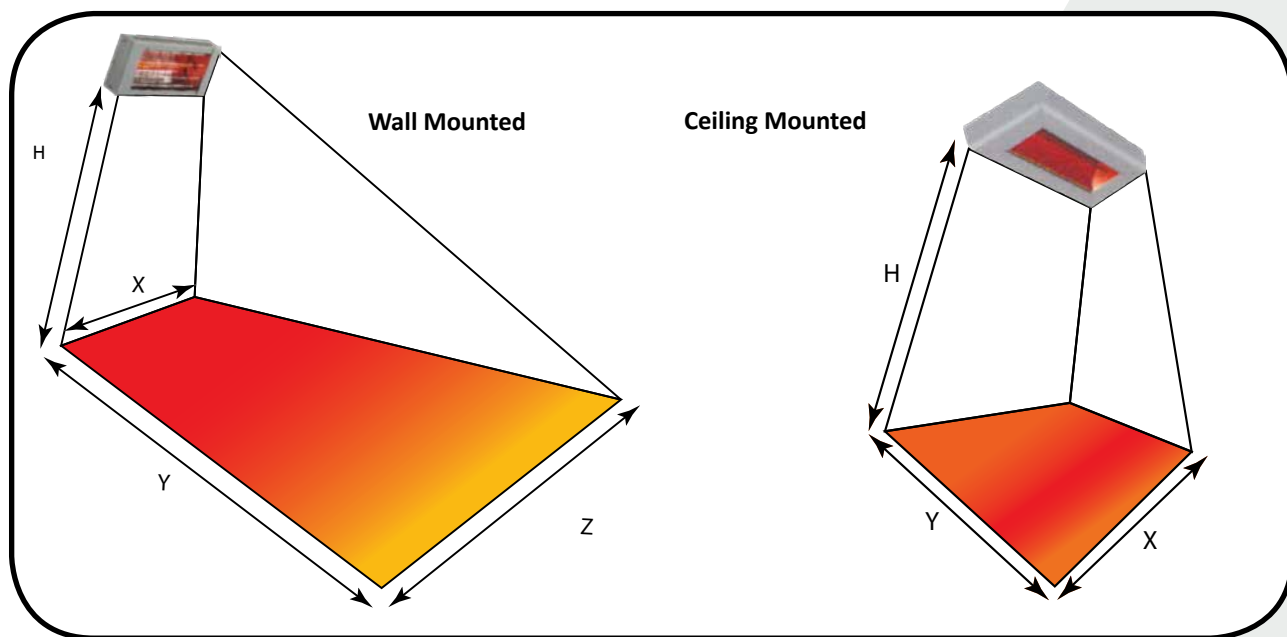


Table 2

	Wall Mounted (m)				Area Covered (m ²)	Overhead Mounted (m)			Area Covered (m ²)
	H	X	Y	Z		H	X	Y	
HN2-1500G or HN2-2000G	2.5	3.2	2.6	6.0	11.9	3.0	3.0	2.0	6.0
	3.0	3.4	3.6	6.7	18.2	3.5	3.3	2.3	7.6
HN2-3000G	3.0	3.7	3.6	7.0	19.2	3.5	3.3	2.6	8.6
	3.5	4.0	4.2	7.9	25.0	4.0	5.0	3.1	15.5
HN2-4500G or HN2-6000G	3.5	4.0	4.2	8.1	25.4	4.0	5.0	3.4	17.0
	4.0	4.3	4.5	8.4	28.6	5.0	5.3	3.7	19.6

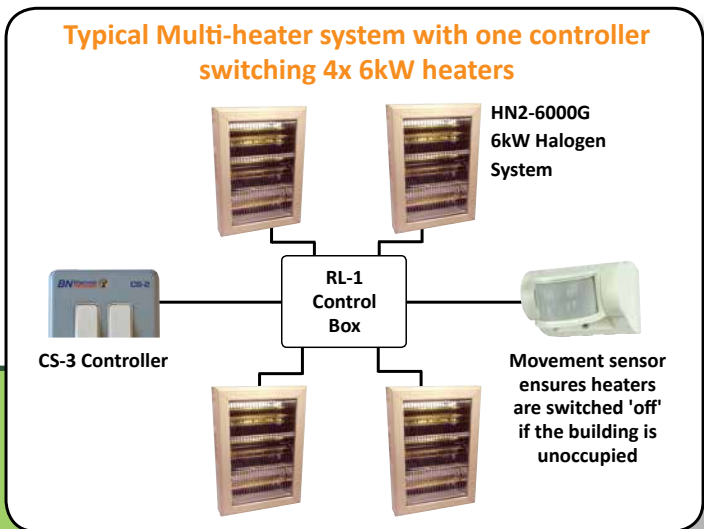
Heater Selection

HN Series Shortwave Infrared Halogen Heaters - Specifications						
Model	Volts	kW	Dimensions (mm)			Weight (kg)
			H	W	D	
HN2-1500G	230	1.5	275	420	140	3.8
HN2-2000G	230	2.0	275	420	140	3.8
HN2-3000G	230	3.0	430	420	140	5.5
HN2-4500G	230/400	4.5	590	420	140	6.5
HN2-6000G	230/400	6.0	590	420	140	6.5
RL15GF	230	1.5	Replacement Gold Lamp for 1.5, 3 & 4.5 kW heaters			
RL20GF	230	2.0	Replacement Gold Lamp for 2 & 6 kW heaters			
HSK	Suspension Kit (chain not supplied)					

Optional Remote Mounted Control Devices		
Model	Description	Full Details on Page
WH-402	Movement sensor (16A)	73
TS-3	Push button timer (16A)	72
TS-4	Push button timer - user selectable time delay (13A)	72
TS-5	Soft Start timer (6kW)	73
VR-1	Dimmer (13A)	73
CS-2	Variable output controller for HN2-3000G	
CS-3	Variable output controller for HN2-4500G and HN2-6000G	



HN2-6000G halogen heaters spot heating individual machines in a factory in Doncaster



Variable output control for multi-heater installations

BN Thermic has developed a system allowing variable output control for a virtually unlimited number of halogen heaters from a single control point. The system can incorporate optional movement sensor, programmable timer, rundown timer or frost thermostat.

Call us now on **01293 547261** to discuss your installation.