BN thermic

Product Guide & Price List

Valid from 1st November 2015

Ceiling Mounted Fan Heaters

Multi-Heater Control for Halogen Heaters

specialists in

commercial and industrial heaters

underfloor heating

and heating cables

Low Output Underfloor Heating Mats

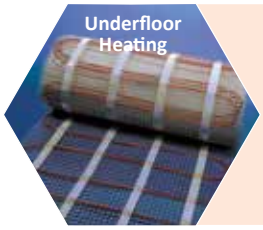
2015-2016

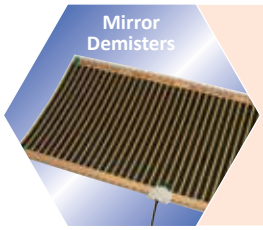
BN thermic

Commercial and Industrial, Electric Heaters and Controls

Catalogue and Price List

Valid from 1st November 2015

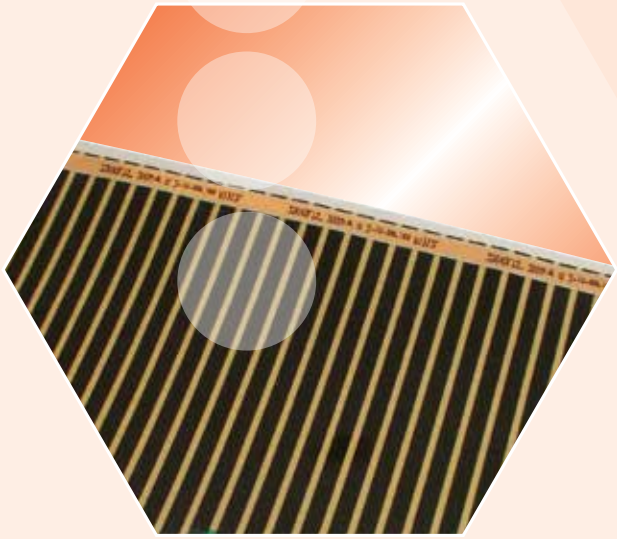


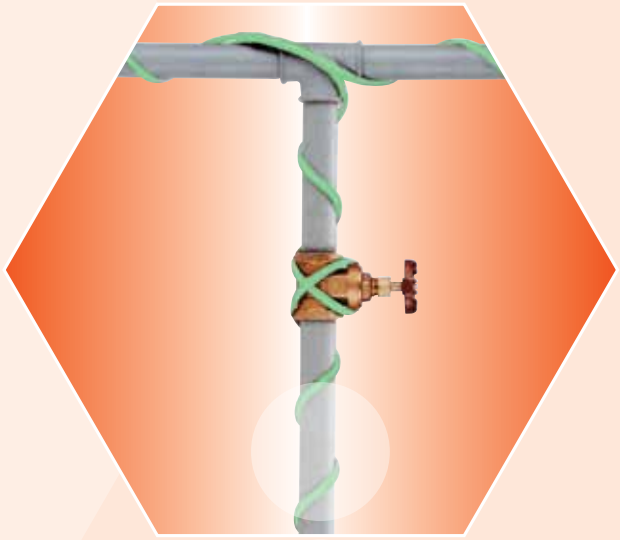


Underfloor Heating and Freeze Protection Products

Commercial and Industrial Heaters and Controls

web www.bnthermic.co.uk **email** sales@bnthermic.co.uk **tel** 01293 547361 **fax** 01293 531432





Underfloor Heating and Freeze Protection Products

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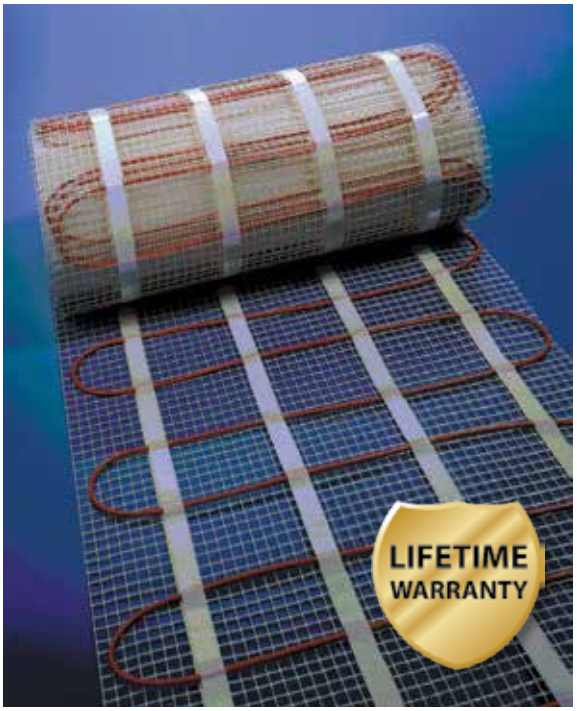
M Series Heating Mats



- **An economic method of heating a room and providing a luxurious warm floor**
- **Manufactured to highest quality for complete peace of mind and backed by a Lifetime Warranty.**

Application

- Suitable for any room including conservatories, bathrooms and wet rooms
- Ideal for use with a wide variety of floor surfaces including ceramic tiles, porcelain tiles, marble, slate, stone, carpet, vinyl, engineered wood and laminate flooring.

Features

- Twin core heating cable pre-assembled onto a fibreglass web ensuring uniform spacing and ease of installation
- Pre-wired 3m power lead
- Continuous earth foil
- Continuous double sided tape on underside of heating mat allows secure placing on any clean surface.

Cable Specification

- Approved to EN60335-2-96 as required by the 17th Edition Wiring Regulations (BS7671.2008)
- EMC compliant
- 230V supply
- Twin core cable diameter 3mm to 4mm
- Earth screen protection by means of AL/PET Foil

Installation

Tiled Floor

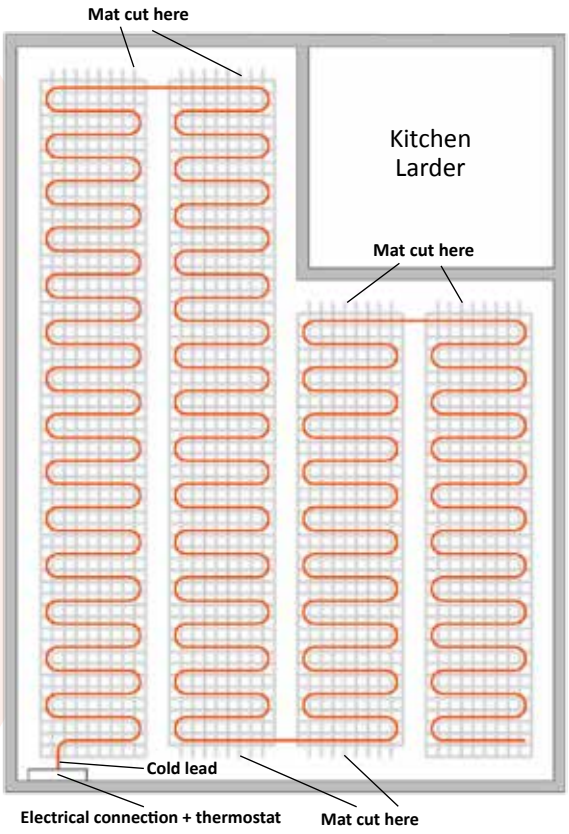
The M Series heating mat should be installed in a flexible self-levelling compound or directly into the tile adhesive. It is important that the heating cable is completely covered.

Other Floor Surfaces (carpet, vinyl, engineered wood and laminate floor)

The M Series mat should be completely covered in a flexible self-levelling compound with the required floor surface applied once the compound is completely dry. Great care must be taken to ensure that fixing devices are not driven through the heating cable.

Where underlay is required, the lowest tog option is recommended. If there is any doubt about the suitability of any given floor surface for use with underfloor heating, confirmation should be sought from the flooring supplier.

Typical M Series Installation



Selection

Output

Standard Output (150W/m²)

Other than in exceptional circumstances, standard output mats will serve as the sole source of heat in a room.

High Output (200W/m²)

High output mats should be selected when one of the following applies

- A room has exceptionally high heat losses (this may apply to some conservatories)
- A rapid heat up is required perhaps because a room is rarely used
- It is only possible to heat a small percentage of the total floor area.

Low Output (100W/m²)

Low output mats are often specified for properties with high levels of insulation. The use of low output mats reduces the power demand for any given room and means that larger areas can be controlled by a single thermostat without the need of a contactor.

Size of Mat

The objective is generally to cover as high a percentage of the free floor area as possible. The free floor area is defined as the floor area not occupied by permanent fixtures such as kitchen cabinets and shower trays.
As a rule of thumb, we suggest selecting a mat with total area approximately 10% less than the total free floor area. This will allow for perimeter spacing and ensure easy installation.

Large Rooms

For large rooms it is common practice to use more than one heating mat. In these circumstances there is a choice of subdividing the room into separate zones each controlled by its own thermostat or connecting the heating mats together electrically in parallel and using a single thermostat. When controlling more than one heating mat from a single thermostat it may be necessary to incorporate a contactor into the control circuit. Alternatively, BN Thermic's Wireless Control System allows several heating mats to be controlled without a contactor (see page 18)

M Series Standard Output Mats (150W/m²) - Specifications and Prices

Model	Heated Area (m²)	Mat Size (m)	kW	Weight (kg)	List Price
M150-005	0.5	1.0 x 0.5	0.07	0.7	£44.00
M150-010	1.0	2.0 x 0.5	0.15	1.4	£48.00
M150-015	1.5	3.0 x 0.5	0.22	2.1	£64.00
M150-020	2.0	4.0 x 0.5	0.30	2.8	£87.00
M150-025	2.5	5.0 x 0.5	0.37	3.5	£94.00
M150-030	3.0	6.0 x 0.5	0.45	4.2	£109.00
M150-035	3.5	7.0 x 0.5	0.52	4.9	£124.00
M150-040	4.0	8.0 x 0.5	0.60	5.6	£148.00
M150-045	4.5	9.0 x 0.5	0.67	6.3	£152.00
M150-050	5.0	10 x 0.5	0.75	7.0	£170.00
M150-060	6.0	12 x 0.5	0.90	8.4	£203.00
M150-070	7.0	14 x 0.5	1.05	9.8	£221.00
M150-080	8.0	16 x 0.5	1.20	11.2	£235.00
M150-090	9.0	18 x 0.5	1.35	12.6	£257.00
M150-100	10	20 x 0.5	1.50	14.0	£275.00
M150-110	11	22 x 0.5	1.65	15.4	£315.00
M150-120	12	24 x 0.5	1.80	16.8	£343.00
M150-140	14	28 x 0.5	2.10	19.6	£369.00
M150-160	16	32 x 0.5	2.40	22.4	£423.00

M Series High Output Mats (200W/m²) - Specifications and Prices

Recommended for Conservatories

Model	Heated Area (m²)	Mat Size (m)	kW	Weight (kg)	List Price
M200-010	1.0	2.0 x 0.5	0.20	1.4	£54.00
M200-020	2.0	4.0 x 0.5	0.40	2.8	£84.00
M200-030	3.0	6.0 x 0.5	0.60	4.2	£100.00
M200-040	4.0	8.0 x 0.5	0.80	5.6	£138.00
M200-050	5.0	10 x 0.5	1.00	7.0	£182.00
M200-060	6.0	12 x 0.5	1.20	8.4	£222.00
M200-070	7.0	14 x 0.5	1.40	9.8	£255.00
M200-080	8.0	16 x 0.5	1.60	11.2	£312.00
M200-090	9.0	18 x 0.5	1.80	12.6	£338.00
M200-100	10	20 x 0.5	2.00	14.0	£429.00

M Series Low Output Mats (100W/m²) – Specification and Prices

Recommended for well insulated properties

Model	Heated Area (m²)	Mat Size (m)	kW	Weight (kg)	List Price
M100-010	1.0	2.0 x 0.5	0.10	1.4	£47.00
M100-015	1.5	3.0 x 0.5	0.15	2.1	£63.00
M100-020	2.0	4.0 x 0.5	0.20	2.8	£86.00
M100-030	3.0	6.0 x 0.5	0.30	4.2	£106.00
M100-040	4.0	8.0 x 0.5	0.40	5.6	£146.00
M100-050	5.0	10 x 0.5	0.50	7.0	£168.00
M100-060	6.0	12 x 0.5	0.60	8.4	£201.00
M100-070	7.0	14 x 0.5	0.70	9.8	£219.00
M100-080	8.0	16 x 0.5	0.80	11.2	£233.00
M100-090	9.0	18 x 0.5	0.90	12.6	£255.00
M100-100	10	20 x 0.5	1.00	14.0	£274.00
M100-120	12	24 x 0.5	1.20	16.8	£341.00

Hundreds of M Series heating mats in stock for 'next day' delivery

Insulation for M Series mats

F-Board

To limit downward heat loss and to significantly improve the economy of an underfloor heating system, the use of F-Board insulated tile backer boards is highly recommended. Installed directly onto the sub-floor and below the heating mat, they provide exceptional thermal insulation with minimal increase in floor height. F-Board insulated tile backer boards should be installed into a bed of tile adhesive.

Selection

Each F-Board covers 0.72m² and sufficient boards should be selected to completely cover the floor area. Total floor area (m²) ÷ 0.72 = minimum number of boards required

F-Board-6

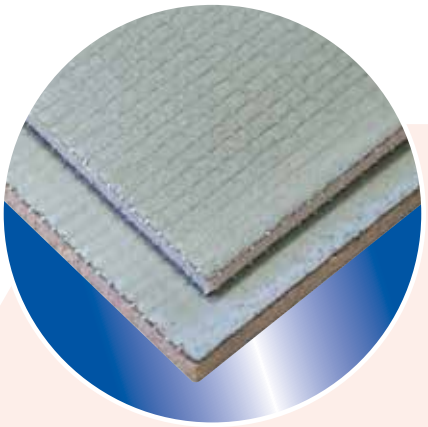
This 6mm thick board provides an extremely effective insulation barrier where floor build-up must be kept to a minimum.

F-Board-10

As the effectiveness of insulation increases with thickness, 10mm thick F-Board-10 should be selected where maximum economy is required and additional floor build-up is acceptable.

Features

- Full resistance to moisture absorption
- Combination of low profile, strength and thermal efficiency
- Lightweight and easily cut to shape
- Easily fixed in place using standard tile adhesive



F-Board-6 and -10
Significantly improving economy by restricting downward heat loss

Insulation for M Series mats				
Model	**Description**	**Dimensions (mm)**	**Area Covered (m²)**	**List Price**
F-Board-6	Insulation	1200 x 600 x 6	0.72	£14.00
F-Board-10	Insulation	1200 x 600 x 10	0.72	£15.00

Miscellaneous accessories for M Series mats

Floorprep Primer

Suppresses dust and improves adhesion on a variety of sub-floor types including concrete and plywood. One bottle of Floorprep Primer covers approximately 6m² when diluted 1:1.

Floorprep is easily applied using a Floorroll Roller.

Floorprep is not required when using F-Board insulated tile backer board

Cable Repair Kit

For emergency use only

This repair kit can be used to repair a heating cable that has been damaged during installation or by drilling through the floor. It is suitable for both M Series Heating Mats and EHC Heating Cables.

Floorprep Primer & Roller
Prepares a sub-floor for M Series Heating Mat installation

Miscellaneous Accessories for M Series mats		
Model	**Description**	**List Price**
Floorprep	Primer 500ml (covers 6m² approx - diluted 1:1)	£10.00
Floorroll	Roller for applying Primer	£5.00
EHM-R-Kit	Cable Repair Kit (for emergency use only)	£18.00

FOR THERMOSTATS - See PAGE 17

Emergency Repair Kit
Rarely needed but always immediately available

EHC Heating Cables

- **An economic method of heating a room and providing a luxurious warm floor**
- **Manufactured to the highest quality for complete peace of mind and backed by a Lifetime Warranty**
- **Ideally suited to small and irregularly shaped rooms**

Application

- Suitable for any room including conservatories, bathrooms and wet rooms
- Ideal for use with a wide variety of floor surfaces including ceramic tiles, porcelain tiles, marble, slate, stone, carpet, vinyl, engineered wood and laminate flooring.

Features

- Twin core heating cable supplied with high adhesion tape
- Pre-wired 3m power lead
- Continuous earth foil

Cable Specification

- Approved to EN60335-2-96 as required by the 17th Edition Wiring Regulations (BS7671.2008)
- EMC compliant
- 230V supply
- Twin core cable diameter 3mm to 4mm
- Earth screen protection by means of AL/PET Foil

Installation

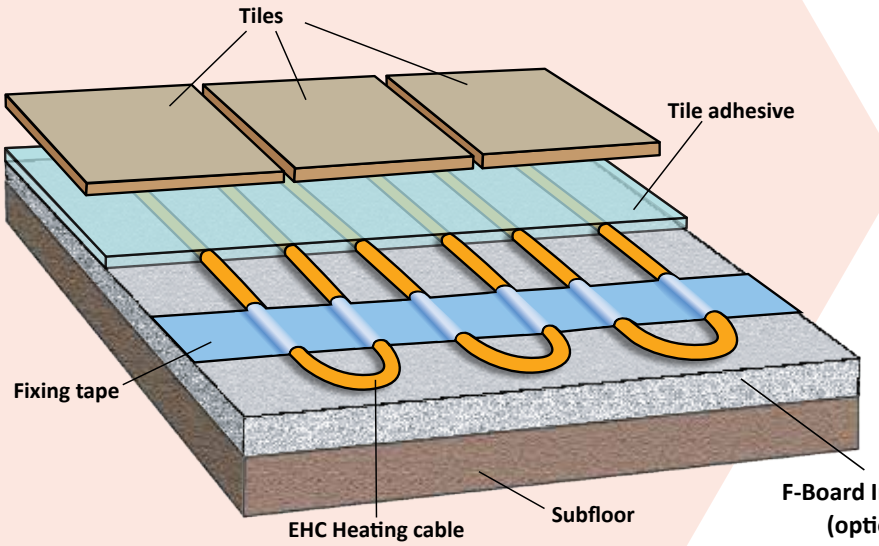
Tiled Floor

The EHC heating cable should be installed in a flexible self-levelling compound or directly into the tile adhesive. It is important that the heating cable is completely covered.

Other Floor Surfaces (carpet, vinyl, engineered wood and laminate floor)

The EHC heating cable should be completely covered in a flexible self-levelling compound with the required floor surface applied once the compound is completely dry. Great care must be taken to ensure that fixing devices are not driven through the heating cable.

Where underlay is required, the lowest tog option is recommended. If there is any doubt about the suitability of any given floor surface for use with underfloor heating, confirmation should be sought from the flooring supplier.



Typical EHC Installation

Selection

The objective is generally to cover as high a percentage of the free floor area as possible. The free floor area is defined as the floor area not occupied by permanent fixtures such as kitchen cabinets and shower trays.

Use the table provided to select the correct cable.

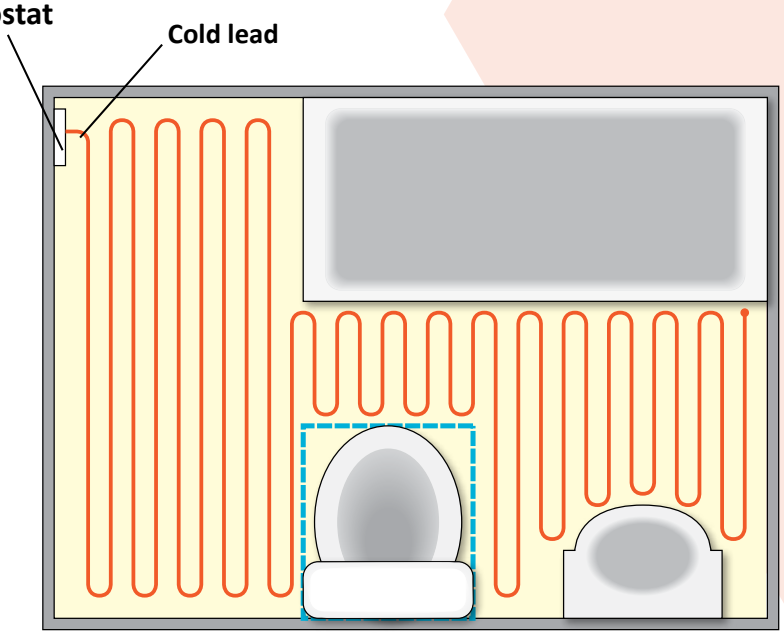
Large Rooms

For large rooms it is common practice to use more than one heating cable. In these circumstances there is a choice of subdividing the room into separate zones each controlled by its own thermostat or connecting the heating cables together electrically in parallel and using a single thermostat. When controlling more than one heating cable from a single thermostat it may be necessary to incorporate a contactor into the control circuit. Alternatively, BN Thermic's Wireless Control System allows several heating cables to be controlled without a contactor (see page 18).

EHC Heating Cables - Specifications and Prices

Model	Volts	kW	Heated Area (m^2)	Cable Length (m)	Weight (kg)	List Price
EHC-012	230	0.12	0.7 – 1.0	11	1.1	£44.00
EHC-020	230	0.20	1.1 – 1.5	19	1.2	£48.00
EHC-025	230	0.25	1.6 – 2.0	24	1.4	£54.00
EHC-032	230	0.32	2.1 – 2.5	32	1.6	£68.00
EHC-040	230	0.40	2.6 – 2.9	37	1.7	£70.00
EHC-045	230	0.45	3.0 – 3.3	46	2.0	£83.00
EHC-052	230	0.52	3.4 – 3.8	50	2.4	£86.00
EHC-060	230	0.60	3.9 – 4.5	64	2.7	£108.00
EHC-075	230	0.75	4.6 – 6.0	76	2.9	£120.00
EHC-095	230	0.95	6.1 – 7.5	87	3.2	£141.00
EHC-110	230	1.10	7.6 – 8.5	115	4.0	£173.00
EHC-130	230	1.30	8.6 – 10.0	131	4.8	£193.00
EHC-170	230	1.70	10.1 – 13.0	159	6.3	£235.00
EHC-200	230	2.00	13.1 – 15.5	194	8.4	£314.00

Electrical connections + thermostat



An EHC heating cable installed in a bathroom

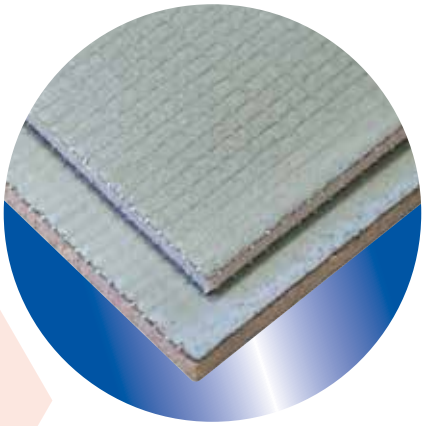
FOR THERMOSTATS - See PAGE 17

EHC Continued

Insulation for EHC cable

F-Board

To limit downward heat loss and to significantly improve the economy of an underfloor heating system, the use of F-Board insulated tile backer boards is highly recommended. Installed directly onto the sub-floor and below the heating mat, they provide exceptional thermal insulation with minimal increase in floor height. F-Board insulated tile backer boards should be installed into a bed of tile adhesive.



F-Board-6 and -10
Significantly improving economy by restricting downward heat loss

Selection

Each F-Board covers 0.72m² and sufficient boards should be selected to completely cover the floor area. Total floor area (m²) ÷ 0.72 = minimum number of boards required

F-Board-6

This 6mm thick board provides an extremely effective insulation barrier where floor build-up must be kept to a minimum.

F-Board-10

As the effectiveness of insulation increases with thickness, 10mm thick F-Board-10 should be selected where maximum economy is required and additional floor build-up is acceptable.

Features

- Full resistance to moisture absorption
- Combination of low profile, strength and thermal efficiency
- Lightweight and easily cut to shape
- Easily fixed in place using standard tile adhesive

Insulation for EHC cable

Model	Description	Dimensions (mm)	Area Covered (m²)	List Price
F-Board-6	Insulation	1200 x 600 x 6	0.72	£14.00
F-Board-10	Insulation	1200 x 600 x 10	0.72	£15.00

Miscellaneous accessories for EHC cable

Floorprep Primer

Suppresses dust and improves adhesion on a variety of sub-floor types including concrete and plywood. One bottle of Floorprep Primer covers approximately 6m² when diluted 1:1.

Floorprep is easily applied using a Floorroll Roller.

Floorprep is not required when using F-Board insulated tile backer board

Floorprep Primer & Roller
Prepares a sub-floor for EHC cable installation

Cable Repair Kit

For emergency use only

This repair kit can be used to repair a heating cable that has been damaged during installation or by drilling through the floor. It is suitable for both M Series Heating Mats and EHC Heating Cables.

Miscellaneous Accessories for EHC cable

Model	Description	List Price
Floorprep	Primer 500ml (covers 6m² approx - diluted 1:1)	£10.00
Floorroll	Roller for applying Primer	£5.00
EHM-R-Kit	Cable Repair Kit (for emergency use only)	£18.00

Emergency Repair Kit
Rarely needed but always immediately available

new

IHC In-Screed Heating Cable

- **A more robust heating cable suitable for installation in a concrete screed**
- **Higher watts per metre rating meaning shorter cables and reduced installation time**

Drum of IHC in-screed cable with IHC-F fixing strip

Application

- Specifically designed for installation in a concrete screed
- Can be used under a wide variety of floor surfaces
- Suitable for both domestic and commercial applications

Features

- 20W/m twin core heating cable
- Pre-wired 3m power lead
- Continuous earth protection

Cable Specification

- Approved to EN60335-2-96 as required by the 17th Edition Wiring Regulations (BS7671.2008)
- EMC compliant
- 230V supply
- Twin core cable diameter 5mm
- Earth protection screen provided by 7 tinned copper wires (0.3mm diameter) and AL/PET foil

Installation

Most commonly IHC cables are fixed onto a layer of insulation (minimum thickness 80mm) using IHC-F metal fixing strip. We recommended a maximum of 1m between fixing strips. The cable should be arranged in evenly spaced loops. The cable is then covered in 80mm to 100mm of concrete screed. Once the screed is completely dry the final floor surface can be applied. Please ask your flooring supplier to confirm compatibility with underfloor heating.

Selection

The objective is generally to cover as high a percentage of the free floor area as possible. The free floor area is defined as the floor area not occupied by permanent fixtures such as kitchen cabinets and shower trays.

Use the following table to select the correct cable. Typically we suggest a watt density between 150W/m² and 175W/m². Lower densities are sometimes used in very well insulated properties.

IHC In Screed Heating Cables – Specifications and Prices

Model	kW	Cable length (m)	Area Covered (m²) @ 100W/m²	Area Covered (m²) @ 150W/m²	Area Covered (m²) @ 175W/m2	List Price
IHC-016	0.16	8.3	1.6	1.1	0.9	£37.00
IHC-027	0.27	14.0	2.7	1.8	1.5	£48.00
IHC-034	0.34	17.2	3.4	2.3	1.9	£55.00
IHC-045	0.45	22.5	4.5	3.0	2.6	£66.00
IHC-054	0.54	27.4	5.4	3.6	3.1	£72.00
IHC-064	0.64	32.1	6.4	4.3	3.7	£84.00
IHC-072	0.72	35.8	7.2	4.8	4.1	£94.00
IHC-087	0.87	43.8	8.7	5.8	5.0	£108.00
IHC-107	1.07	53.5	10.7	7.1	6.1	£117.00
IHC-129	1.29	64.4	12.9	8.6	7.4	£132.00
IHC-158	1.58	79.0	15.8	10.5	9.0	£153.00
IHC-185	1.85	92.4	18.5	12.3	10.6	£191.00
IHC-230	2.30	117.3	23.0	15.3	13.1	£246.00
IHC-275	2.75	141.4	27.5	18.3	15.7	£312.00
IHC-F	Metal fixing strip (10m) – typically one strip is required for every 8m² of heated area					£23.00

F Series Foil Heating Mats for laminate and engineered wood floors

- **Providing economic heating and luxurious warm floors in any room including bathrooms**
- **Easy to install without requiring adhesive or compounds**
- **Manufactured to the highest quality for complete peace of mind and backed by a 10 year warranty**

Applications

- Suitable for any room including bathrooms
- Specifically designed for use with laminate or engineered wood floors

Features

- An F Series Foil Heating Mat can be manipulated to fill a space in the same way as a conventional underfloor heating mat
- Low profile design (approximately 2mm thick) keeps the increase in floor height to a minimum
- The heating cable are sandwiched between two layers of aluminium foil for excellent heat distribution
- Pre-wired 3m power lead

Specification

- Approved to EN 60335-1:2012, EN 60335-2-96:2003, EN 55014-1:2006, EN 55014-2:1997
- Heating Cable: CuNi, CuZn alloy with ETFE double insulation
- 230V Supply

Installation

F Series Foil Heating Mats are installed directly below the final floor surface (laminate or engineered wood).

The mat should be installed on top of a layer of extruded polystyrene sheet which will act as an underlay. This layer will also improve the floor insulation levels, limiting downward heat loss and improving economy. BN Thermic's I-Board-6 is ideal for this application.

The mat runs should be taped down using AL-50 aluminium tape. One roll of tape will be required for approximately 10m² of floor area.

F Series foil heating mat specifically designed for laminate and engineered wood floors

Selection

The objective is generally to cover as high a percentage of the free floor area as possible. The free floor area is defined as the floor area not occupied by permanent fixtures such as kitchen cabinets and shower trays.

As a rule of thumb, we suggest selecting a mat with an area approximately 10% less than the free floor area. This will allow for perimeter spacing and ensure easy installation

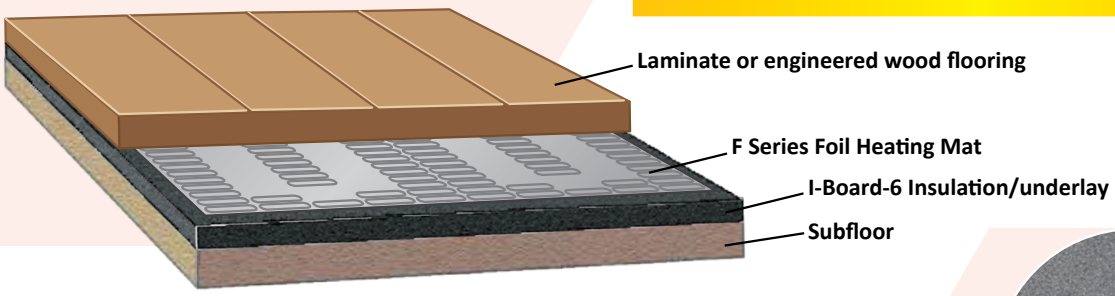
For large rooms it is common practice to use more than one foil mat. In these circumstances the mats are usually connected in parallel and controlled by a single thermostat. When the combined load exceeds the switching capacity of the thermostat, it will be necessary to incorporate a contactor into the control circuit. Alternatively, BN Thermic's Wireless Control System allows several heating mats to be controlled without a contactor (see page 18)

F Series Foil Heating Mats – Specification and Prices

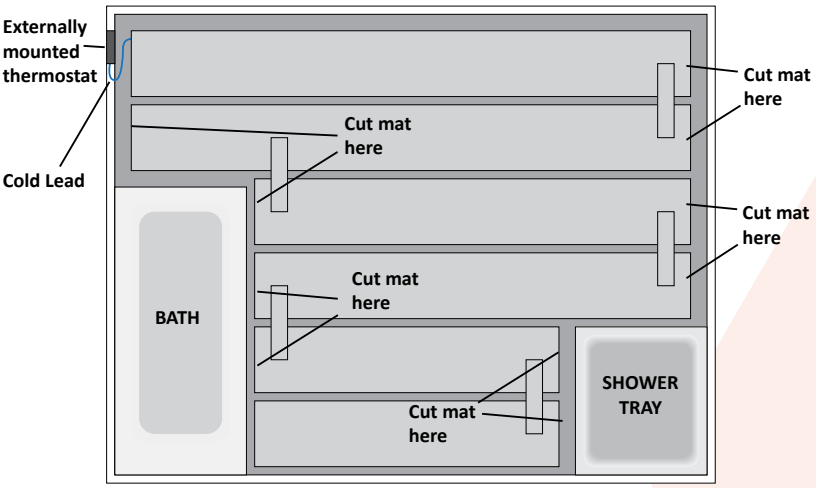
Model	kW	Heated Area (m²)	Mat Size (m)	List Price
F140-010	0.14	1.0	2.0 x 0.5	£56.00
F140-015	0.21	1.5	3.0 x 0.5	£78.00
F140-020	0.28	2.0	4.0 x 0.5	£91.00
F140-030	0.42	3.0	6.0 x 0.5	£122.00
F140-040	0.56	4.0	8.0 x 0.5	£159.00
F140-050	0.70	5.0	10 x 0.5	£186.00
F140-060	0.84	6.0	12 x 0.5	£215.00
F140-070	0.98	7.0	14 x 0.5	£257.00
F140-080	1.12	8.0	16 x 0.5	£277.00
F140-090	1.26	9.0	18 x 0.5	£316.00
F140-100	1.40	10	20 x 0.5	£345.00
F140-120	1.68	12	24 x 0.5	£402.00
F140-140	1.96	14	28 x 0.5	£495.00

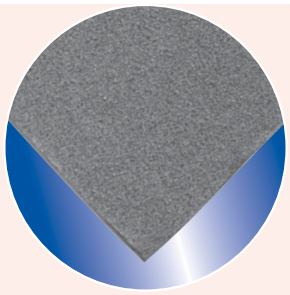
A low profile F Series Installation

FOR THERMOSTATS - See PAGE 17



Typical F Series Installation in a bathroom





I-Board-6 only 6mm thick providing insulation and underlay

LHT High Adhesive Tape

Insulation and tape for F Series foil mats

F Series foil heating mats should be installed onto a layer of I-Board-6 insulation underlay which can be held in place using LHT moisture resistant fixing tape. The foil mat should be taped down using AL-50 aluminium tape.

Model	Description	Area Covered (m²)	List Price
I-Pack-6	Pack of 19 sheets I-Board-6 insulation/underlay 6mm thick	9.76m²	£28.00
I-Board-6	Individual sheet insulation/underlay 6mm thick	0.5m²	£2.00
LHT	50m High Adhesive Tape (one roll for 10m² floor area)		£9.00
AL-50	45m Aluminium Tape (one roll for every 10m² floor area)		£8.00

AL-50 Aluminium Tape

LH Heating films for laminate and engineered wood floors

- **An economic method of heating a room and providing a luxurious warm floor**
- **Easily and quickly installed under laminate and engineered wood floors without the need for adhesives or compounds**
- **Manufactured to highest quality for complete peace of mind and backed by a 10 year warranty**

LH Heating Films
Easy to install under laminate or engineered wood without adhesive

Application

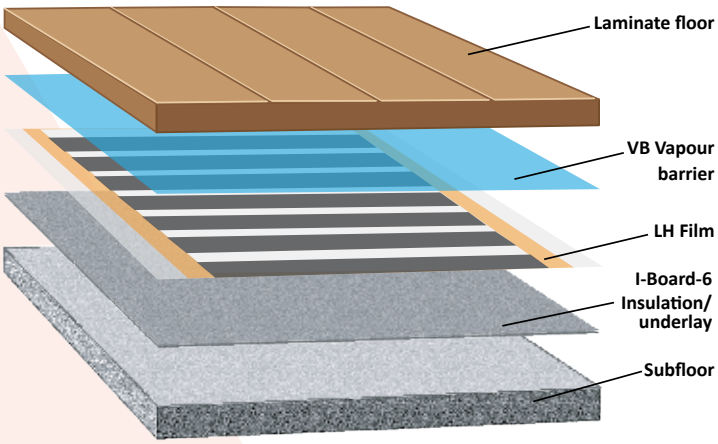
- Suitable for any room except bathrooms and wet rooms
- Specifically designed for use with laminate or engineered wood floors

Features

- Low profile system, combined thickness of insulation/underlay, heating and vapour barrier is approximately 7mm
- Two widths of heating film and a wide range of lengths for good floor coverage in any size of room
- 230V supply
- Pre-wired 4m power leads
- LH heating films can be easily reduced in length during the installation process

Film Specification

- Approved to EN60335-2-96 as required by the 17th Edition Wiring Regulations (BS7671.2008)
- EMC compliant
- 230V supply
- Polyester film less than 1mm thick



The components of an LH heating system: no adhesives or compounds are required

Installation

Three layers are required:

1st Layer I-Board-6 Insulation/ Underlay

The entire floor area must be covered by a 6mm thick layer of I-Board-6.
This layer performs four functions.

- Thermal insulation limiting downward heat loss
- A moisture proof barrier between the heating film and the sub-floor
- Sound deadening
- A non-abrasive surface onto which the heating film can be installed

2nd Layer LH Film

A number of LH heating films are installed side by side to fill the floor area

The heating films are electrically connected in parallel and controlled by a single thermostat

3rd Layer VB Vapour Barrier

The entire floor must be covered in a layer of VB vapour barrier. This layer performs three functions

- Secondary electrical insulation
- Protection from major liquid spills
- A mechanical barrier between the heating film and the floor surface preventing abrasion

I-Board-6, LH Film and VB should all be secured using LHT High Adhesive Tape. One 50m roll is required for each 10m² of floor area.

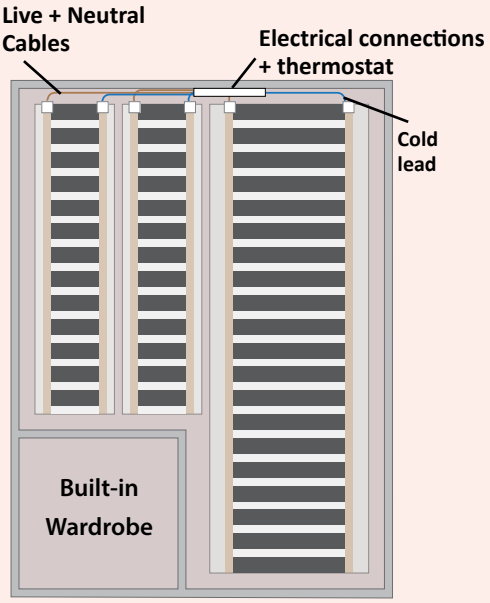
Selection

Step One Draw a plan of the room identifying areas occupied by permanent fixtures such as kitchen cabinets

Step Two Draw the heating films side by side onto the plan keeping all electrical connections along one wall wherever possible. For ease of installation we suggest using a small number of wider films rather than a larger number of narrower films. Frequently a combination of wider and narrower films will be required.

Should you select a film slightly too long for the room, it is a simple process to reduce the length of the film during installation.

Step Three Select the correct number of I-Board-6 insulation/ underlay boards and VB vapour barriers to cover the entire floor area. Both I-Board-6 and VB must be used in the installation. Allow one roll of LHT tape for every 10m² of floor area



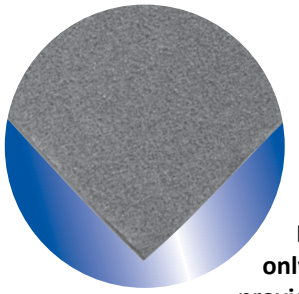
Typical LH Installation

LH Heating for Laminate & Engineered Wood Floors - Specifications and Prices

400mm wide Heating Film				1030mm wide Heating Film			
Model	**kW**	**Length (m)**	**List Price**	**Model**	**kW**	**Length (m)**	**List Price**
LH4-010	0.04	1.0	£19.00	**LH10-010**	0.13	1.0	£38.00
LH4-015	0.06	1.5	£23.00	**LH10-015**	0.19	1.5	£51.00
LH4-020	0.09	2.0	£27.00	**LH10-020**	0.26	2.0	£64.00
LH4-025	0.11	2.5	£31.00	**LH10-025**	0.32	2.5	£77.00
LH4-030	0.13	3.0	£35.00	**LH10-030**	0.39	3.0	£91.00
LH4-035	0.15	3.5	£39.00	**LH10-035**	0.45	3.5	£104.00
LH4-040	0.17	4.0	£43.00	**LH10-040**	0.52	4.0	£117.00
LH4-045	0.19	4.5	£47.00	**LH10-045**	0.58	4.5	£130.00
LH4-050	0.21	5.0	£51.00	**LH10-050**	0.65	5.0	£143.00
LH4-060	0.26	6.0	£59.00	**LH10-060**	0.78	6.0	£170.00
LH4-070	0.30	7.0	£67.00	**LH10-070**	0.91	7.0	£197.00
LH4-080	0.34	8.0	£75.00	**LH10-080**	1.04	8.0	£224.00
LH4-090	0.39	9.0	£82.00	**LH10-090**	1.17	9.0	£250.00
LH4-100	0.43	10	£91.00	**LH10-100**	1.30	10	£278.00

Insulation, vapour barrier and tape for LH Heating Films

Model	Description	Area Covered (m²)	List Price
I-Pack-6	Pack of 19 sheets I-Board-6 insulation/underlay 6m thick	9.76 m²	£28.00
I-Board-6	Individual sheet insulation/underlay 6m thick	0.5 m²	£2.00
VB	Vapour Barrier 4m x 3m	12 m²	£20.00
LHT	50m High Adhesive Tape (one roll for 10m² floor area)		£9.00



I-Board-6 only 6mm thick providing insulation and underlay

LHT High Adhesive Tape

VB Vapour Barrier

FOR THERMOSTATS - See PAGE 17

LH-K Heating film kits for laminate and engineered wood floor

- An alternative to our LH pre-terminated films
- Allows the professional installer to tailor a heating system precisely to a specific space
- Provides 130W/m² power output
- Manufactured to highest quality for complete peace of mind and backed by a ten year warranty

See LH page 14 for applications, specification and floor build-up.

Features

As LH except

- 500mm wide film can be cut and terminated at any point
- Kit includes sufficient components (including crimps and cables) for most standard shaped rooms.

Kit Contents

- Roll of 500mm wide 130W/m² heating film
- 15m insulated cold lead (brown)
- 15m insulated cold lead (blue)
- 20 connection crimps
- 20 insulating discs
- 1m mastic tape
- Crimping tool
- Installation instructions.

The following items must be ordered separately (see page 15)

- I-Board-6 insulation/underlay – sufficient to cover the entire floor area
- VB vapour barrier – sufficient to cover the entire floor area
- LHT fixing tape – one roll of LHT tape for every 10m² of floor area
- Thermostat.

LH-K Kit - Specifications and Prices

Model	Square Area Covered	List Price Each
LH-K05	Up to 5m²	£246.00
LH-K10	5 to 10m²	£361.00
LH-K15	10 to 15m²	£476.00
LH-K20	15 to 20m²	£592.00

LHK- Kit 'top ups'

Model	Description	List Price
LHTU-05	Roll of film 5m²	£137.00
LHTU-10	Roll of film 10m²	£274.00
LHTU-15	Roll of film 15m²	£411.00
LHTU-20	Roll of film 20m²	£548.00
LHTU-BR	15m cold lead brown	£18.00
LHTU-BL	15m cold lead blue	£18.00
LHTU-CR	20 Crimps	£16.00
LHTU-MA	1m mastic tape	£32.00
LHTU-ID	20 insulating discs	£2.00
LHTU-CT	Crimping Tool	£37.00

LH-K 'Top Ups'

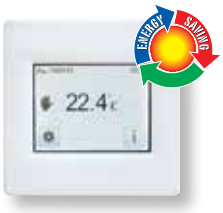
	Roll of film
	Cold Leads
	Pack of 20 crimps
	Mastic tape
	Pack of 20 insulating discs
	Crimp tool

FOR THERMOSTATS - See PAGE 17

Thermostats

Thermostatic control must be used with all BN Thermic Underfloor Heating Systems. BN Thermic offers a range of thermostats all of which are supplied with a floor probe. The thermostats can be configured for primary control via the built-in air sensor or via the floor sensor.

For larger installations, check that the total load is within the switching capacity of the selected thermostat. When the combined load is greater than the switching capacity of the selected thermostat an appropriately rated contactor must be selected. Alternatively, BN Thermic's Wireless Control System allows larger loads to be controlled without a contactor (see page 18).



T16CW

T16C

Our latest full colour touch screen thermostats can switch loads of up to 3.6kW and provide ultra-simple 7-day programming. Available with a choice of white, silver or black surrounds, the T16C can be configured for 'air and floor' or 'floor only' control. When required, the air temperature can be controlled via an IP65 rated remote mounted wall-sensor (T16R). This arrangement is particularly well suited for bathroom applications.

The T16C also allows the user to monitor energy usage and running costs.

T16CS

U16C

The U16C offers simple 7-day programming with programming buttons hidden behind hinged doors on the thermostat face. Capable of switching loads up to 3.4kW, the U16C is configurable for 'air and floor sensor' or 'floor sensor only'. Features include a backlit screen and a summer switch allowing the heating to be switched off without losing the programme.

A16C

Simplicity is the key. The A16C has a smart uncluttered appearance with a dial for temperature adjustment and an on/off switch. Capable of switching loads up to 3.4kW, the A16C is configurable for 'air and floor sensor' or 'floor sensor only'.

T16CB

Stylish 'state of the art' touch screen control

U16C
Fully programmable control

A16C
Simple stylish control

Floor probe and conduit provided with every BN Thermic thermostat

T16R
Optional remote wall sensor for use with T16C thermostat

Thermostats

Model	Load	Operation	Sensor	List Price
T16CW	16A	Programmable Touch Screen (White)	Air and floor or floor only	£101.00
T16CS	16A	Programmable Touch Screen (Silver)	Air and floor or floor only	£106.00
T16CB	16A	Programmable Touch Screen (Black)	Air and floor or floor only	£106.00
T16R	Optional IP65 remote sensor for use with the T16C touch screen thermostat			£13.00
U16C	15A	Programmable Thermostat	Air and floor or floor only	£78.00
A16C	15A	Manual Thermostat	Air and floor or floor only	£68.00

CONTROLS for Underfloor Heating - Continued

Contactors

A suitable rated contactor allows a thermostat to control a load larger than its normal switching capacity.

CON-32 Contactor

Contactors			
Model	Amperage	Max kW (230V 1ph)	List Price
CON-32	32	7	£32.00
CON-50	50	11.5	£42.00
CON-80	80	18	£80.00
ENCL-D	Enclosure for CON-32 and CON-50		£24.00

Wireless Control

Different combinations of three standard components provide a number of convenient, wireless control systems for underfloor heating.

WSB-1 Relay Box

WSB-1 Relay Box

Generally mounted at low level, the WSB-1 Relay Box will switch an underfloor heating load of up to 16A (3.6kW). Each relay box is supplied with a floor probe for monitoring floor temperature. The WSB-1 will control the heating according to wireless signals received from a WST-1 thermostat and/or a WSP-1 central programmer.

The WSB-1 can be installed in any room, including bathrooms.

WST-1 Wireless Thermostat

WST-1 Wireless Thermostat

The WST-1 thermostat is battery powered and can be wall-mounted or simply placed in a convenient location using the small stand provided. A WST-1 can send a wireless signal to one, two, three or four relay boxes. The combination of a WST-1 thermostat and the required number of WSB-1 relay boxes allows larger rooms to be controlled by one thermostat without the requirement to install a contactor.

If used with the WSP-1 central programmer, the WST-1's programmable functions are superseded and it acts primarily as a wireless air temperature sensor with a temporary override function.

WSP-1 Central Programmer

WSP-1 Central Programmer

The WSP-1 is a compact, touch screen device providing wireless control for up to 24 zones of heating. Generally speaking a heating zone would be an individual room meaning that the WSP-1 can be installed in the largest of properties.

The combination of a single WSP-1 central programmer and the appropriate number of WST-1 thermostats and WSB-1 relay boxes, allows completely flexible control of every room of a house from a central location.

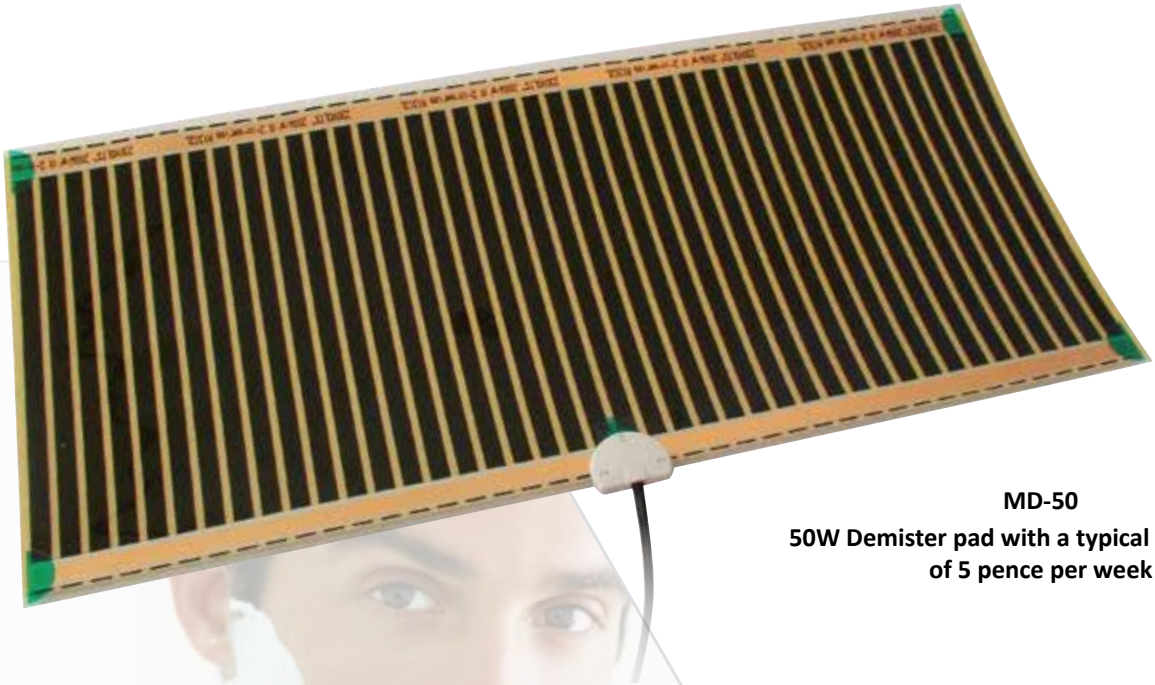
Wireless Control Prices		
Model	Description	List Price
WSB-1	Wireless Relay Box 16A	£83.00
WST-1	Wireless Thermostat (for use with WSB-1 relay box)	£90.00
WSP-1	Wireless Central Programmer	£191.00

A Typical Wireless Control System

LARGE ROOM Requiring 2x WSB-1 Relay Boxes

SMALLER ROOM Requiring 1x WSB-1 Relay Box

MD Mirror Demister Pads



MD-50
50W Demister pad with a typical running cost of 5 pence per week

- **Providing a mist free mirror**
- **100% effective in little over 2 minutes**
- **Very low energy consumption**
- **Simply integrated into the lighting circuit ensuring that they are not left running**

Peel-off adhesive backing

Features

- Protects an area approximately 20% larger than the pad itself
- Double insulated and completely sealed for total safety
- Less than 1mm thick
- Peel off adhesive backing
- 1m long power lead

BESPOKE SIZES AVAILABLE

PLEASE CALL US FOR PRICE AND DELIVERY

Selection

MD Mirror Demister Pads - Specifications and Prices

Model	Volts	Watts	Dimensions (mm)	List Price
MD-12	230	12	252 x 274	£20.00
MD-28	230	28	574 x 274	£26.00
MD-50	230	50	519 x 524	£36.00
MD-100	230	100	1004 x 524	£53.00

GP Self-regulating cable for Gutters and Downpipes

- **Stops accumulation of ice in gutters and downpipes**
- **Prevents damage to gutters and downpipes**
- **Ensures that rain and melt-water can drain away normally and not cause damage to properties**
- **Reduces danger from collapsing gutters and falling icicles.**

Keep gutters and downpipes ice-free

Typical Applications

The GP system is ideal for both domestic and commercial installation.

Features

- Energy saving self-regulating cable – power consumption reduces as ambient temperature rises
- Self-regulating technology eliminates 'hot spots' and failures caused by cables touching or crossing
- Parallel cable technology allows cable to be cut to length on site without affecting watts per metre output
- The cable's Polyolefin sheath is UV resistant ensuring long operating life in exposed areas
- 'Gel' filled power connector and end seal allow quick installation without the need for a heat gun or crimp tool. The high-tech insulating gel allows safe and secure joints and terminations to be made in a few minutes.

Controlling GP Self-Regulating Cable

Choose between manual and thermostatic control.

Manual control by means of a simple switch is commonly adopted for small domestic installations.

For larger installations we recommend control by means of a GP-T electronic thermostat.

The problems associated with snow and ice occur when the ambient temperature is between +5°C and -5°C. To ensure maximum economy, the GP-T has two set-points. In this way the system will be switched off when the temperature is either too high or too low for problems to arise.

The GP-T should be mounted externally in a sheltered location. The thermostat conforms to IP65. See page 77 for full details.

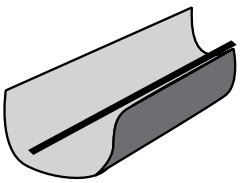
GP-T with cover removed showing set-point adjustment knobs

GP-T with cover in place

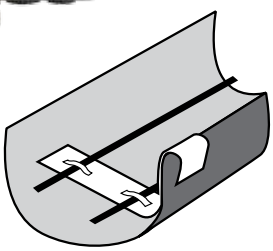
Selection

Gutters

For gutters up to 120mm wide use a single run of GP-18 cable. For wider gutters use an additional run of cable for every additional 120mm increase in width.



Single run of GP-18 cable in a typical domestic gutter



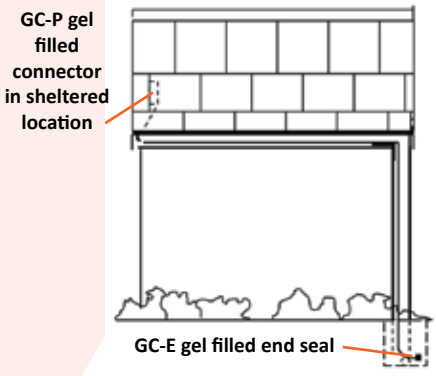
GP-18 cable installed in a wide gutter with spacing maintained by GP-S spacer

Downpipes

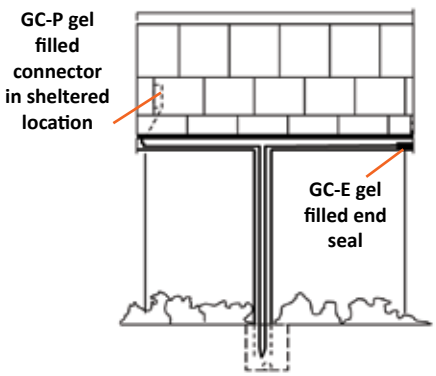
For downpipes at the end of a gutter, a single run of GP-18 will be required with cable extending approximately 500mm below ground level. The gel filled end seal will be applied to the end of the run.

For downpipes which interrupt a gutter, a double loop of cable should be installed with the end of the loop extending approximately 500mm below ground level.

Strain relief will be required for downpipes longer than 34m



GP-18 protecting gutter and downpipe with downpipe at the end of the run

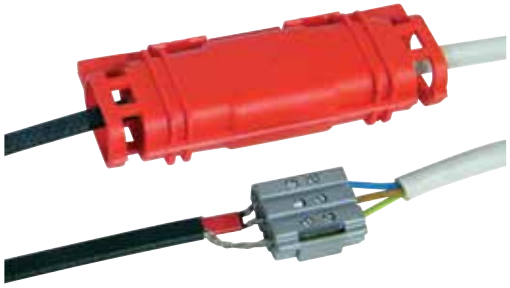


GP-18 protecting gutter and downpipe with a centrally located downpipe

Terminations

BN Thermic's gel filled termination devices should be used. Each cable run will require 1 x GC-P connector and 1 x GC-E end seal. The GC-P should be mounted in a sheltered location and is used to connect the heating cable to the power lead (a 2.5mm² twin and earth cable is recommended).

The GC-E is used to seal the end of a cable run.



GC-P gel filled connector providing quick means of connecting power lead

GC-E gel filled push fit end seal

Spacer Kits

Each GP-S spacer kit consists of 5 stainless steel spacers and 10 UV resistant cable ties. The spacers are used to protect the cable as it passes over a sharp edge and to maintain the correct spacing when multiple cable runs are installed in a gutter.

GP-S spacer kit

GP-S spacer protecting GP-18 cable from a sharp edge

GP-18 Cable Specification

Voltage	230V
Nominal Output at 0°C	
In ice water	36W/m
In air	18W/m
Minimum bending radius	35mm
Maximum circuit length	92m

Maximum cable length against breaker size

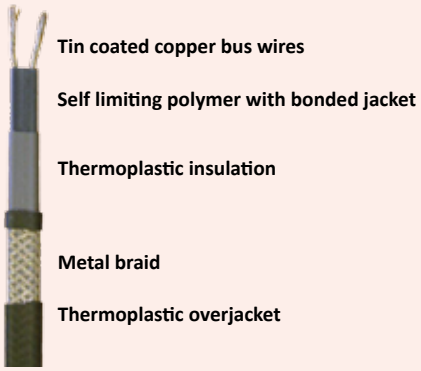
6A	10A	16A	20A
28m	48m	76m	92m

Use type C breaker.

Roof Protection

In areas subject to severe climatic conditions it may be necessary to protect the lower edge of a pitched roof. GP-18 cable is ideal for this application. Please call the BN Thermic sales office to discuss.

Please note that GP-18 is not suitable for use with bitumen or tar related surfaces such as roofing felt.



Structure of GP-18 heating cable

GP Gutter Protection Cable - Specifications and Prices

Model	Description	List Price
GP-18	Self-regulating cable – by the metre	£11.00
GC-P	Gel filled connector	£38.00
GC-E	Gel filled end seal	£13.00
GP-S	Spacer Kit	£36.00
GP-T	Thermostat IP65	£148.00

A length of GP-18 cable supplied on a drum for easy handling

ERC Snow and Ice Melting Heating Mats

- Prevents the accumulation of snow and ice in outdoor locations
- Ensures year-round access to domestic and commercial premises
- Ensure the safety of staff and public in icy conditions

ERC Snow and Ice Melting Mat. An economic means of preventing the accumulation of snow and ice.

Typical Applications

- Driveways
- Ramps
- Disabled access
- Patios
- Parking areas
- Concrete and paving slab surfaces

Features

- Single core heating cable pre-assembled onto a web mat ensuring uniform spacing and ease of installation
- Pre-wired asymmetrical cold leads: 5m at one end and 5m plus the length of the mat at the other end
- Continuous safety earth braid throughout the entire cable
- 300W/m² power density

ERC Snow and Ice Melting Mat providing safe access to an office building

Cable Construction

Core:	Stranded resistance wire
Primary insulation:	0.15mm fluoropolymer (FEP)
Secondary insulation:	0.8mm cross-linked polythene (XLPE)
Earth braid:	14 x 0.3mm dia. tinned copper wires and AIPET foil
Over-jacket:	1mm PVC (105°C)

Selection and Installation

Decide on the area to be heated (in m²) then simply select a mat or a combination of mats to cover this area. The cable supporting mat can be cut at any point to suit the shape of the area but the heating cable itself must NEVER be cut.

ERC mats can be installed in concrete or in fine washed sand under paving slabs. When installing in concrete, care must be taken not to cross expansion joints.

Controls

ERC snow and ice melting mats should be thermostatically controlled to prevent excessive running costs. There are two options.

FST-EX
Low cost control for smaller installations

FST-EX Basic Frost Thermostat

The FST-EX is rated IP65 and is recommended for outdoor installations. It can switch loads up to 10A directly and larger loads up via a suitably rated contactor. This type of control is frequently used for smaller installations. However it should be recognised that if the FST-EX is the only means of control, the heating mats will be switched on whenever there is a low temperature whether or not ice or snow are present.

ERC-T1

The ERC-T1 is the recommended means of controlling ERC snow and ice melting mats. It is estimated that the ERC-T1 will reduce energy consumption by approximately 80% when compared to a basic air temperature sensing thermostat.

The ERC-T1 is installed inside a building and is supplied with a sensor for outdoor installation. The sensor is installed at ground level and monitors both temperature and moisture ensuring that the heating will only be switched on when conditions are likely to produce snow or ice accumulation.

ERC-T1 Providing economic control of ERC Snow and Ice Melting Mats

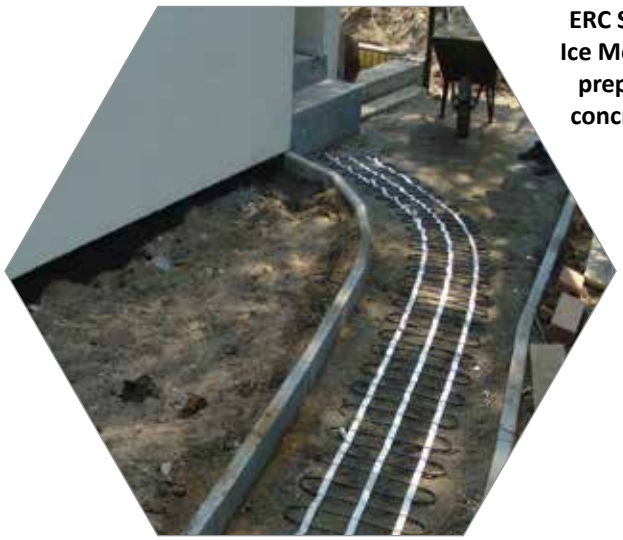
The ERC-T1 will switch loads up to 16A directly and larger loads via a suitably rated contactor.

ERC Snow and Ice Melting Heating Mat - 300W/m² Mat - Specifications and Prices

Model	Volts	kW	Heated Area (m²)	Mat Size (m)	Weight (kg)	List Price
ERC-045	230	0.45	1.5	3 x 0.5	1.5	£81.00
ERC-060	230	0.6	2.0	4 x 0.5	1.9	£103.00
ERC-090	230	0.9	3.0	6 x 0.5	2.6	£134.00
ERC-120	230	1.2	4.0	8 x 0.5	2.8	£151.00
ERC-150	230	1.5	5.0	10 x 0.5	3.6	£195.00
ERC-180	230	1.8	6.0	12 x 0.5	4.5	£230.00
ERC-210	230	2.1	7.0	14 x 0.5	5.3	£237.00
ERC-240	230	2.4	8.0	16 x 0.5	5.2	£268.00
ERC-270	230	2.7	9.0	18 x 0.5	6	£305.00
ERC-300	230	3.0	10	20 x 0.5	6.7	£325.00
ERC-360	230	3.6	12	24 x 0.5	8.6	£399.00
ERC-450	230	4.5	15	30 x 0.5	9.7	£449.00
ERC-600	230	6.0	20	40 x 0.5	14.8	£684.00

Controls

Model	Description	List Price
FST-EX	Frost thermostat	£125.00
ERC-T1	Snow & Ice Melting Electronic Controller & Sensor	£549.00



ERC Snow and Ice Melting Mat prepared for concrete pour

CRJ Self Regulating Water Pipe Freeze Protection Cable

- **Prevents water from freezing in metal and plastic pipes**
- **Avoids the cost and inconvenience of burst pipes**
- **Self regulating technology and recommended thermostatic control ensures lowest possible running costs**

Typical Applications

- Stables
- Sprinkler systems
- Farms

Features

- Self regulating technology ensures that cable power consumption will decrease as ambient temperature increases
- Can be cut to length, terminated, T jointed and spliced on site using the BN Thermic's termination and splice kits
- Can be double wrapped to protect valves, flanges etc. without risk of creating hot spots
- Fully moisture proof with full length earth braid

Controlling CRJ Self Regulating Pipe Freeze Protection cable

Although the cable's self regulating technology ensures that cable output will decrease as ambient temperature increases, thermostatic control is still recommended. A master frost thermostat will prevent the low level of electricity consumption that would otherwise occur when the ambient temperature is above freezing point.

BN Thermic offers a choice of two thermostats: FST-IN and FST-EX. The FST-EX should be selected for outdoor applications or where a tamperproof device is preferred.

Both thermostats have a switching capacity of 10A. Larger loads can be switched via a suitably rated contactor.

FST-IN
Thermostat for indoor use

FST-EX
IP65 Thermostat for outdoor use

CRJ-T Termination Kit
Prepares cable for electrical connection and seals the 'far end'

CRJ-S Splice kit
for joining two lengths of cable or for making a 'T' joint

Notes on Selection and Installation

- Use the following tables to select the correct output and length of cable required for your application. You will notice that in most instances a straight run of cable will suffice. The table also indicates the thickness of the insulation which should cover both pipe and cable.
- A CRJ-T1 termination kit will be required per circuit with one CRJ-S splice kit required for every splice or T joint. Both CRJ-T1 and CRJ-S include the required material to seal the 'far end' of a cable.
- Secure the cable to the pipe at 200mm intervals using PF-T fixing tape
- Plastic pipes should be wrapped in AL50 aluminium tape before installing the cable
- BN Thermic PF-L warning labels should be applied to the outside of the insulation
- Maximum circuit length (and breaker size):
  CRJM-11: 128m (16A)
  CRJM-17: 102m (20A)
  CRJ-25: 126m (32A)

PF-T Fixing Tape
Secures CRJ to pipe

AL-50 Aluminium Tape for use with Plastic Pipes

PF-L Caution Labels applied to the exterior of the insulation

CRJ Pipe Freeze protection Cable - Specifications and Prices

Model	Volts	W/m	Description	List Price (under 50m)	List Price (50m+)
CRJM-11	230	11	11W/m cable - by the metre	£6.30	£5.40
CRJM-17	230	17	17W/m cable - by the metre	£7.30	£6.30
CRJ-25	230	25	25W/m cable - by the metre	£12.00	£11.00

CRJ Accessories - Prices

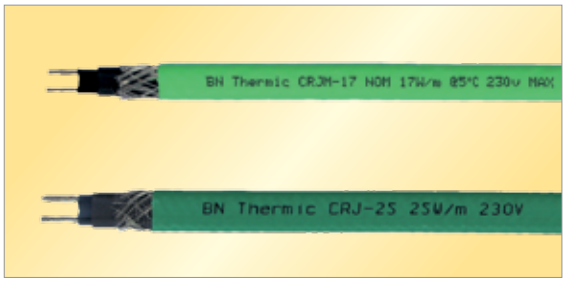
Model	Description	List Price
CRJ-T1	Termination kit	£9.00
CRJ-S	Splice/T joint kit	£8.00
PF-L	Caution label pack of 10	£3.00
PF-T	Flame Retardant Fixing Tape 33m x 19mm	£1.00
AL-50	45m x 50mm aluminium tape	£8.00

CRJ Selection Table 1 (Based on a minimum ambient temperature of -18°C and rock wool insulation)

Outside Pipe Diameter (mm)	Insulation Thickness (mm)		
	12	25	50
12	CRJM-11 Straight	CRJM-11 Straight	CRJM-11 Straight
25	CRJM-17 Straight	CRJM-11 Straight	CRJM-11 Straight
50	CRJ-17 1.6m cable/1m pipe or CRJ-25 Straight	CRJM-11 Straight	CRJM-11 Straight
75	----------	CRJM-11 Straight	CRJM-11 Straight
100	----------	CRJM-17 Straight	CRJ-11 Straight
150	----------	CRJ-17 1.6m cable/1m pipe or CRJ-25 Straight	CRJM-17 Straight

Recommended frost thermostats

Model	Description	Full Details on page	List Price
FST-IN	Frost Thermostat Indoor Use (10A)	76	£54.00
FST-EX	Frost Thermostat Outdoor Use (10A)	77	£125.00



CRJ and CRJM Cables

CRJ Self Regulating Cable - Dispensed by the metre

PW Pre-terminated Water Pipe Freeze Protection Cable

- **Prevents water from freezing in metal and plastic pipes**
- **Avoids the cost and inconvenience of burst pipes**
- **Simple low cost product for quick installation.**

PW Water Pipe Freeze Protection Cable a low price for peace of mind

Typical Applications

- Ideal for use with condensing boilers
- Suitable for both domestic and commercial applications
- Widely used on mobile homes.

Features

- Pre-terminated with 1.5m cold lead and UK 3-pin plug
- Built-in thermostat automatically energises the cable when pipe temperature falls below 3°C
- Profiled thermostat base ensures excellent heat transfer from pipe
- Fully moisture proof.

Controlling PW Pipe Freeze Protection Cable

The PW's built-in thermostat means that no additional control device is required.

PW-06 with built-in thermostat and UK plug

Notes on Selection and Installation

- Assuming a minimum ambient temperature of -15°C and 20mm thick insulation a PW heating cable can be installed in a straight line along pipes up to 50mm diameter
- Always select the shortest suitable cable from the PW range
- Where the cable is longer than the pipe it is protecting, wind the cable in a gentle, evenly spaced helix
- Secure the cable to the pipe at 300mm intervals using PF-T tape
- The entire installation including the thermostat should be covered with a maximum of 20mm thick flame retardant insulation
- Ensure that the thermostat is positioned at the coldest end of the pipe
- Plastic pipes should be wrapped in AL50 aluminium tape before installing the cable
- When used with pipes that may be empty, the cable should be covered in a layer of AL50 aluminium tape before the insulation is applied. A typical example would be when used with a condensing boiler
- PW cables must not be exposed to temperatures in excess of 66°C
- PF-L warning labels should be applied to the outside of the insulation.

PF-L Caution Labels applied to the exterior of the insulation

PW Pipe Freeze Protection Cable - Specifications and Prices

Model	Volts	Watts	Heated Length (m)	Weight (kg)	List Price
PW-01	230	12	1	0.4	£61.00
PW-02	230	24	2	0.5	£67.00
PW-03	230	36	3	0.6	£73.00
PW-04	230	48	4	0.7	£77.00
PW-06	230	72	6	0.8	£84.00
PW-10	230	136	10	1.0	£85.00
PW-14	230	152	14	1.2	£86.00
PW-21	230	281	21	1.5	£95.00
PW-30	230	337	30	2.2	£108.00
PW-42	230	490	42	2.8	£126.00
PF-L	Caution label pack of 10				£3.00
AL50	45m x 50mm aluminium tape				£8.00
PF-T	Flame Retardant Fixing Tape 33m x 19mm				£1.00

AL50 Aluminium Tape for use with plastic pipes

PF-T Fixing Tape secures PW tape to pipe

Commercial and Industrial
Heaters and Controls

Commercial and Industrial Heaters and Controls

web www.bnthermic.co.uk **email** sales@bnthermic.co.uk **tel** 01293 547361 **fax** 01293 531432

SCH Fan Assisted Heaters for 600 x 600 Ceiling Grid

- **Ceiling mounting position allows free use of floor and wall space, an important consideration in retail premises**
- **First class whole life value from a product built to the highest possible standard and designed to give many years of trouble free service**
- **Low running costs by selecting from a range of control options**
- **Specifically designed for quick hassle free installation**

SCH heater installed in a suspended ceiling allowing free use of floor and wall space

Typical Applications

- Shops
- Changing rooms
- Entrance areas

Features Common to all Models

- Insert depth only 153mm
- Designed to rest in the T bar of a 600 x 600 suspended ceiling grid
- Air inlet and outlet through front panel – no requirement for air supply from the ceiling void
- White aluminium egg-crate diffuser
- Pre-wired to rear mounted terminal enclosure
- Auto-reset over-temperature protection
- Simple reduction in output by removal of link in rear mounted enclosure (3kW reduced to 2kW, 4.5kW reduced to 2.25kW)

Controlling SCH Heaters

There are three control options. In all instances the control devices are connected to a convenient terminal enclosure mounted on the rear of the heater. Each heater will require dedicated control. For multi-heater installations we recommend our CHS system which provides a simple means of controlling a group of heaters.

Remote Mounted Controller

The CS-1 controller should be wall-mounted in a convenient location providing the following settings:

- On
- Off
- Low heat
- High heat
- Fan only

The CS-1 controller can be used with all three heaters in the SCH range.

CS-1 Controller Providing on/off/high heat/low heat/fan only settings

Remote Mounted Tamperproof Thermostat

The RST-TP wall-mounted 20A thermostat will provide accurate temperature control for the SCHG-30 (3kW) and SCHG-45 (4.5kW) heaters. Remote thermostatic control is not suitable for use with the SCHG-30E which is supplied with a built-in thermostat.

The RST-TP's tamperproof design prevents casual adjustment of the temperature setting.

RST-TP Energy Saving Tamperproof Thermostat

Combination of Remote Mounted Controller and Tamperproof Thermostat

This combination of control devices provides both manual and accurate thermostatic control.

The CS-1 controller should be wall-mounted in a convenient location providing the following settings:

- On
- Off
- Low heat
- High heat
- Fan only

The RST-TP wall-mounted 20A thermostat will provide accurate temperature control for the SCHG-30 (3kW) and SCHG-45 (4.5kW) heaters. It can be connected directly to the CS-1 controller which in turn is connected to the terminal enclosure on the rear of the heater.

This combination is not suitable for use with the SCHG-30E which is supplied with a built-in thermostat.

The RST-TP's tamperproof design prevents casual adjustment of the temperature setting.

Rear view of SCHG-30E – rear mounted terminal enclosures allow quickest possible electrical connections

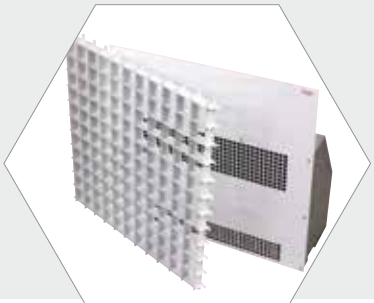
SCH Fan Assisted Heaters - Specification and Pricing

Model	Volts	kW	Airflow m³/h	Controls	Weight (kg)	dB* @2m	Recommended Mounting Height (m)	List Price
SCHG-30	230	3.0	220	Remote (select option)	9	56	2.4 - 3.0	£220.00
SCHG-30E	230	3.0	220	Built-in Electronic Thermostat	9	56	2.4 - 3.0	£276.00
SCHG-45	230	4.5	330	Remote (select option)	10	60	3.0 - 4.0	£264.00

*Noise levels are factory tested, not laboratory tested.

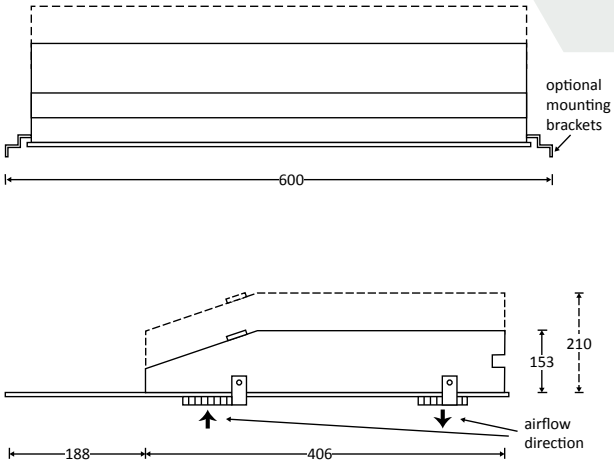
Optional Remote Mounted Control Device

Model	Description	Full Details on Page	List Price
CS-1	Controller for all SCH models	78	£69.00
RST-TP	Tamperproof Thermostat 20A	78	£80.00



SCHG-30 and diffuser designed for quick installation into a 600 x 600 ceiling grid

SCHG-30 installed in a charity shop in Calverton, Notts



SCH Dimensions - note NEW low profile design

Height reduced from 210mm to 153mm

- Installation requires 200mm clearance above ceiling grid

FOR MULTI-HEATER SYSTEMS WE RECOMMEND OUR CHS SYSTEM - See PAGE 30

CHS System Multi-heater System for 600 x 600 Ceiling Grid

- **Fastest possible installation time for a multi-heater system**
- **Efficient and economic temperature control without the need for external contactors or relays**
- **Ceiling mounting position allows free use of floor and wall space, an important consideration in retail premises**
- **First class whole life value from a product built to the highest possible standard and designed to give many years of trouble free service**

CHS heater installed in a 600 x 600 ceiling grid as part of a multi-heater system

Typical Application

- Larger retail outlets requiring a number of heaters

The CHS System

The CHS system allows a group of ceiling heaters to be controlled by a single CS-1 remote mounted controller and/or a single remote mounted thermostat. The CHS system comprises one 'master' heater and any quantity of 'slave' heaters.

Features

- Designed to rest in the T bar of a 600 x 600 suspended ceiling grid
- Air inlet and outlet through front panel – no requirement for air supply from the ceiling void
- White aluminium egg-crate diffuser
- Pre-wired to rear mounted terminal enclosures
- Auto-reset over-temperature protection
- Insert Depth only 153mm (Installation requires 200mm clearance above ceiling grid)
- Simple reduction of output to 2kW by removal of link in rear mounted enclosure
- Can be mixed and matched with the SMH-R range of heaters (see page 32)

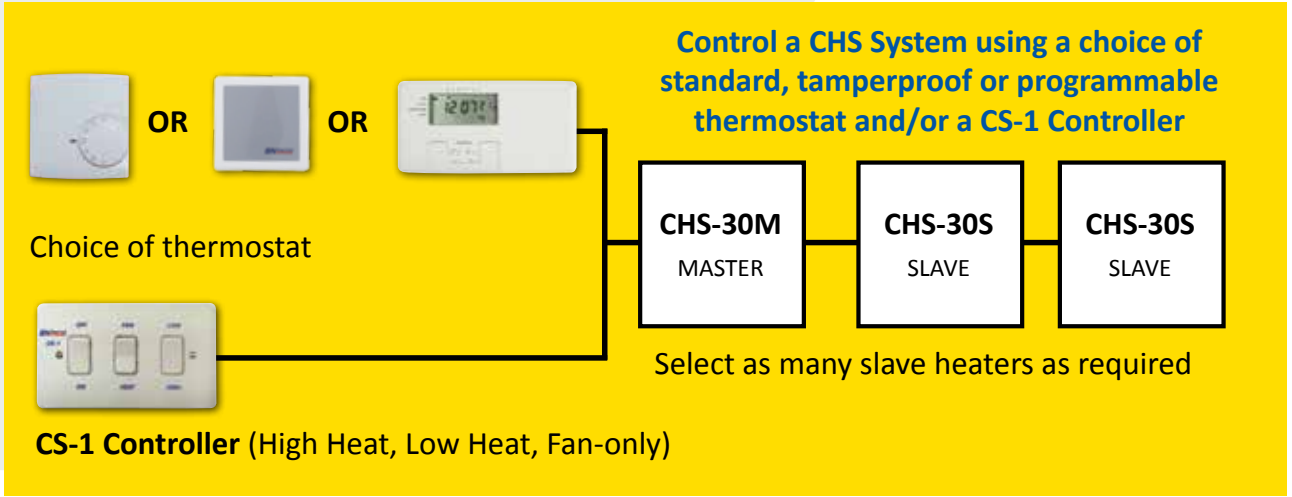
CHS Multi-Heater System - Specifications and Prices

Model	kW	Master/Slave	dB* @2m	Recommended Mounting Height (m)	Weight (kg)	List Price
CHS-30M	3.0	Master	56	2.4 - 3.0	9	£325.00
CHS-30S	3.0	Slave	56	2.4 - 3.0	9	£296.00

*Noise levels are factory tested, not laboratory tested.

Controlling a CHS System

The main benefit of selecting a CHS multi-heater system is that control devices can be easily linked to the group of heaters. In most cases a wall-mounted controller (CS-1) and a suitable thermostat are used in unison. However, where preferred, the controller or thermostat can be used as the sole means of control.



Wall-mounted controller

The CS-1 controller should be wall-mounted in a convenient location and connected to the 'master' heater is the CHS system. It will provide the following settings:

- On
- Off
- Low heat
- High heat
- Fan only

Choice of Thermostats

Adjustable wall-mounted thermostat

BN Thermic's RST-IN standard, commercial grade thermostat provides accurate temperature control and allows easy adjustment of temperature set-point.

Tamperproof wall-mounted thermostat

To prevent wilful or casual adjustment of temperature set point, we recommend the RST-TP tamperproof thermostat. The set-point adjustment knob is concealed under the thermostat's cover and optional 'shear-off' fixing screws are provided for complete security.

Programmable wall-mounted thermostat

The PROSTAT-7 is a seven day programmable thermostat which allows the heating system to be controlled to match the pattern of use. Temporary and permanent overrides are provided.

Remote Mounted Control Devices for a CHS System

Model	Description	Full Details on Page	List Price
CS-1	Remote mounted controller	78	£69.00
RST-IN	Standard room thermostat	76	£54.00
RST-TP	Tamperproof thermostat 20A	78	£80.00
PROSTAT-7	7 day programmable thermostat	77	£84.00

CS-1 Controller Providing on/off/high heat/low heat/fan only settings

RST-IN Standard Thermostat

RST-TP Energy Saving Tamperproof Thermostat

PROSTAT-7 7-day programmable thermostat for maximum economy

Rear view of CHS-30M showing terminal enclosures allowing quick and easy connection to any number of slave heaters

Rear view of CHS-30S showing terminal enclosures

Power is connected to the smaller enclosure

SMH Surface Mount Ceiling Heaters

new

- **Low profile ceiling heaters allowing free use of floor and wall space**
- **UK manufactured high quality heater providing years of trouble-free service**
- **Quick hassle free installation**

Typical Applications

- Shops that do not have suspended ceilings
- Over door heating where space is limited

Features

- Choice of basic models or SMH-R multi-heater system for larger premises
- Compact design for minimum visual impact
- Simple keyhole screw fixing to conventional ceiling
- M8 threaded holes for suspension by drop rods if required
- Access to terminal enclosure by removable side panel
- Multiple knockouts for cable entry
- Auto-reset over-temperature protection
- Simple reduction in output by removal of link in terminal enclosure (3kW reduced to 2kW, 4.5kW reduced to 2.25kW)
- Can be mixed and matched with the CHS range of heaters (see page 30)

Basic SMH or SMH-R multi-heater system?

For smaller premises where perhaps only one heater is required, select a basic model. For larger premises where a number of heaters are required select the SMH-R system allowing a group of heaters to be controlled by a single CS-1 controller and/or a single remote mounted thermostat. An SMH-R system comprises one 'master' heater and any number of 'slave' heaters.

Physical Data	
Dimensions	576mm x 434mm x 180mm high
Weight (3kW models)	11.5kg
Weight (4.5kW models)	12.5kg

SMH Surface-Mount Ceiling Heaters (basic models) – Specification and Pricing

Model	Volts	kW	Airflow (m^3/h)	Controls	dB* @2m	Recommended Mounting Height (m)	List Price
SMH-30	230	3.0	220	Remote (select option)	56	2.4 – 3.0	£259.00
SMH-30E	230	3.0	220	Built-in Electronic Thermostat	56	2.4 – 3.0	£322.00
SMH-45	230	4.5	330	Remote (select option)	60	3.0 – 4.0	£274.00

*Noise levels are factory tested not laboratory tested

SMH-R Surface-Mount Ceiling Heaters (multi-heater system) – Specification and Pricing

Model	Volts	kW	Airflow (m^3/h)	Master/Slave	dB* @2m	Recommended Mounting Height (m)	List Price
SMH-R30M	230	3.0	220	Master	56	2.4 – 3.0	£354.00
SMH-R30S	230	3.0	220	Slave	56	2.4 – 3.0	£315.00

*Noise levels are factory tested not laboratory tested

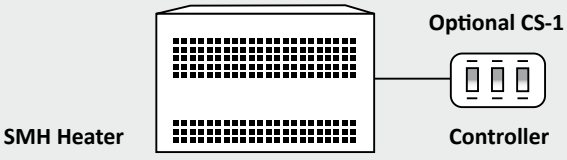
Controlling Basic SMH Heaters

There are three control options. In each instance the control devices are connected to a convenient terminal enclosure located behind the removable side panel. Each heater will require dedicated control. For multi-heater installations we recommend the SMH-R heaters (see overleaf).

Remote Mounted Controller

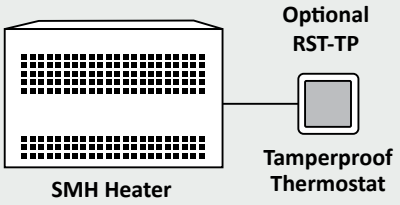
The CS-1 controller should be wall-mounted in a convenient location providing the following settings:

- On
- Off
- Low heat
- High heat
- Fan only



Remote Mounted Tamperproof Thermostat

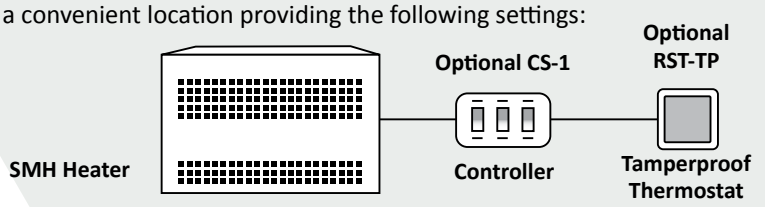
The RSP-TP wall-mounted 20A thermostat will provide accurate temperature control for both 3kW and 4.5kW heaters. Remote thermostatic control is not suitable for the SMH-30E which is supplied with a built-in thermostat.
The RST-TP's tamperproof design prevents casual adjustment of the temperature settings.



Combination of Remote Mounted Controller and Tamperproof Thermostat

This combination of control devices provides both manual and accurate thermostatic control.
The CS-1 controller should be wall-mounted in a convenient location providing the following settings:

- On
- Off
- Low heat
- High heat
- Fan only



The RSP-TP wall-mounted 20A thermostat will provide accurate temperature control for both 3kW and 4.5kW heaters. Remote thermostatic control is not suitable for the SMH-30E which is supplied with a built-in thermostat.
The RST-TP's tamperproof design prevents casual adjustment of the temperature settings.

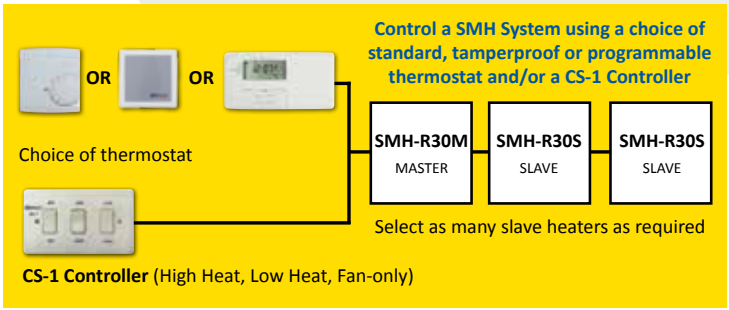
Controlling SMH-R models (multi-heater system)

The main benefit of selecting a SMH-R multi-heater system is that control devices can be easily linked to the group of heaters. In most cases a CS-1 wall-mounted controller and a suitable thermostat are used in unison. However where preferred, the controller or thermostat can be used as a sole means of control.

Remote Mounted Controller

The CS-1 controller should be wall-mounted in a convenient location providing the following settings

- On
- Off
- Low heat
- High heat
- Fan only



Choice of Thermostat

Adjustable wall-mounted thermostat

BN Thermic's RST-IN standard, commercial grade thermostat provides accurate temperature control and allows easy adjustment of temperature set-point.

Tamperproof wall-mounted thermostat

To prevent wilful or casual adjustment of temperature set-point, we recommend the RST-TP tamperproof thermostat. The set-point adjustment knob is concealed under the thermostat's cover. Optional 'shear-off' fixing screws are provided for complete security.

Programmable wall-mounted thermostat

The PROSTAT-7 is a seven day programmable thermostat which allows the heating system to be controlled to match the pattern of use. Temporary and permanent overrides are provided.

Remote Mounted Control Devices

Model	Description	Suitable For	Full Details On Page	List Price
CS-1	Remote Mounted Controller	All Models	78	£69.00
RST-TP	Tamperproof Thermostat (20A)	All Models	78	£80.00
RST-IN	Standard Room Thermostat	SMH-R Models only	76	£54.00
PROSTAT-7	7 Day Programmable Thermostat	SMH-R Models Only	77	£84.00

800 Series High Level Wall or Overdoor Fan Assisted Heaters

- **Providing warm inviting welcome to commercial premises**
- **Smart modern appearance**
- **First class whole life value from a product built to the highest possible standard and designed to give many years of trouble free service**
- **Low running costs by selecting from a range of control options**

830T with wall bracket fitted

Typical Applications

- Overdoor heating in shops and cafes
- Space heating in a wide variety of commercial premises

Note: We do not recommend that 830T or 860T are used as overdoor heaters above external doors as the built-in thermostat can be unnecessarily activated when the door is opened.

Features Common to all Models

- Dual function bracket for vertical discharge (overdoor) or angled discharge (general space heating)
- M8 threaded holes in top face for suspension from drop rods
- Attractive white (RAL9010) finish
- Auto-reset over-temperature protection
- Panel front on/off switch
- Pre-wired to rear mounted terminal enclosures
- Simple reduction in output by removal of link in rear mounted enclosure
  (3kW heater reduced to 2kW and 6kW heater reduced to 4kW)
- Suitable for use with CS-1 remote mounted controller providing on/off/high heat/low heat/fan only settings
- Redesigned bracket for easy 'one man' installation

Rear views of 800 Series showing rear mounted terminal enclosures. These provide:

- **Easy power connection**
- **Simple means of reducing output by removal of links**
- **Quick connection to optional remote control devices.**

860T with wall bracket fitted

Controlling the 800 Series

830 3kW and 860 6kW

Control mode 1 – Simple on/off control

Simple control using panel front on/off switch

Control mode 2 – Remote Thermostat

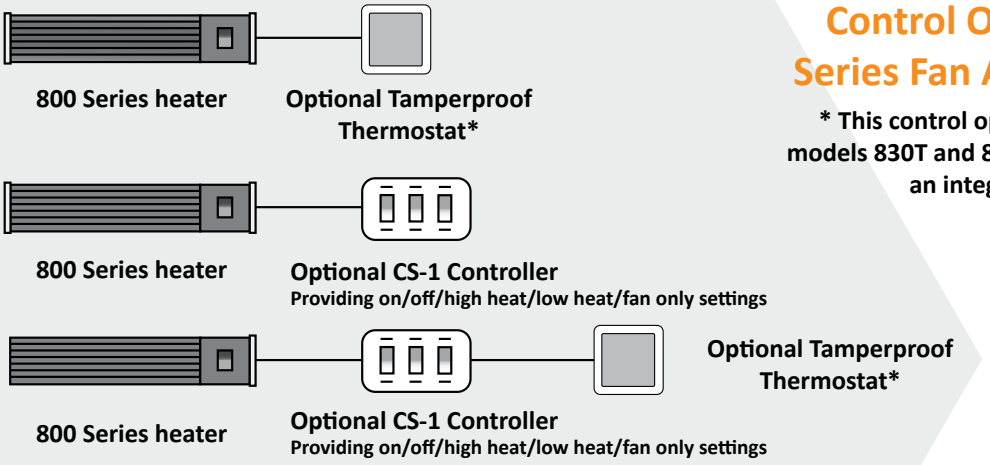
Thermostatic control using an RST-TP remote mounted tamperproof thermostat, connected into the rear mounted terminal enclosure. The RST-TP's tamperproof design prevents casual adjustment of temperature setting.

Control mode 3 – Remote controller

Control is provided by means of a remote mounted CS-1 control box which is connected into the rear mounted terminal enclosure. The CS-1 controller provides on/off/high heat/low heat/fan only settings.

Control Options for 800 Series Fan Assisted Heaters

*** This control option is not available to models 830T and 860T as these heaters have an integral thermostat**



Control mode 4 – Combination of Remote Thermostat and Remote Controller

Both remote mounted RST-TP tamperproof thermostat and remote mounted CS-1 controller are connected into the rear mounted terminal enclosure. The RST-TP's tamperproof design prevents casual adjustment of temperature setting. The CS-1 controller provides on/off/high heat/low heat/fan only settings.

830T 3kW with built-in thermostat and 860T 6kW with built-in thermostat

Control mode 1 – Built-in thermostatic control

On/off control is provided by a panel front switch with thermostatic control provided by the built-in electronic thermostat. Thermostat set-point adjustment is by means of a panel front knob. Once the temperature set-point is reached, the thermostat will switch off both the heating element and the fan.

Control mode 2 – Combination of built-in thermostatic control and remote controller

Thermostatic control is provided by the built-in electronic thermostat. Thermostat set-point adjustment is by means of a panel front knob. Once the temperature set-point is reached, the thermostat will switch off both the heating element and the fan. A remote mounted CS-1 controller is also connected into the rear mounted terminal enclosure. The CS-1 controller provides on/off/high heat/low heat/fan only settings.

800 Series - Specifications and Prices

Model	Volts	kW	Integral Controls	Dimensions (mm)			dB* @2m	Weight (kg)	List Price
				H	W	D			
830	230	3.0	On/Off Switch	225	635	108	56	7	£179.00
830T	230	3.0	On/Off Switch & Electronic Thermostat	225	635	108	56	7	£235.00
860	230	6.0	On/Off Switch	225	1105	108	56	14	£320.00
860T	230	6.0	On/Off Switch & Electronic Thermostat	225	1105	108	56	14	£385.00

*Noise levels are factory tested, not laboratory tested.

Optional Remote Control Devices

Model	Description	Full Details on Page	List Price
CS-1	Wall-Mounted Controller	78	£69.00
RST-TP	Tamperproof Thermostat 20A	78	£80.00

CS-1
Providing on/off/high heat/ low heat/fan only settings

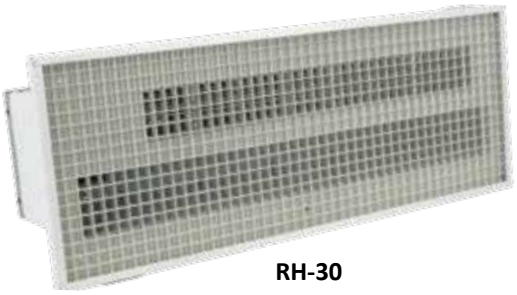
RST-TP
Energy Saving Tamperproof Thermostat

830T installed over a showroom door

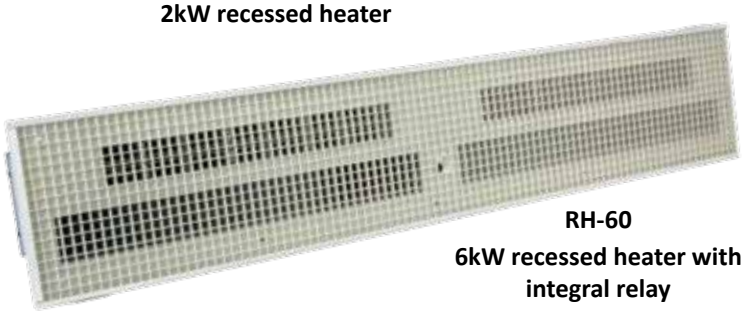
RH Recessed Fan Assisted Heaters

- **Providing warm inviting commercial premises**
- **Choice of ceiling or wall mounting allows free use of floor and wall space, often an important consideration**
- **First class whole life value from a product built to the highest possible standard and designed to give many years of trouble free service**
- **Low running costs by selecting from a range of control options**

RH-20
Extremely compact 2kW recessed heater



RH-30
3kW recessed heater commonly installed above a door



RH-60
6kW recessed heater with integral relay

Typical Applications

- Overdoor heating in shops and cafes especially where it is not practical or desirable to install conventional wall-mounted heater
- Space heating in a wide variety of commercial premises
- Changing rooms
- Entrance areas

Features Common to all Models

- Air inlet and outlet through front panel – no requirement for air supply to the rear of the heater
- White aluminium egg-crate grille
- Pre-wired to rear mounted terminal enclosure
- Auto-reset over-temperature protection
- Simple fixing through the face of the heater
- Suitable for vertical or horizontal discharge
- Simple reduction in output by removal of link in rear mounted enclosure (2kW heater reduced to 1kW, 3kW heater reduced to 2kW and 6kW heater reduced to 4kW)

Rear view of RH-30
External enclosures allowing the quickest possible electrical connections

Controlling the RH Series

Control mode 1 – Simple on/off control

Simple control using remote isolating switch

Control mode 2 – Remote Tamperproof Thermostat

An RST-TP remote mounted tamperproof thermostat. The Electronic Control Thermostat is connected into the rear mounted terminal enclosure. The RST-TP's tamperproof design prevents casual adjustment of temperature setting.

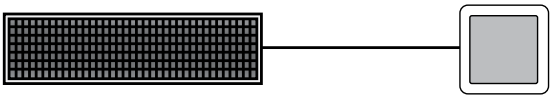
Control mode 3 – Remote controller

Control is provided by means of a remote mounted CS-1 control box which is connected into the rear mounted terminal enclosure. The CS-1 controller provides on/off/high heat/low heat/fan only settings

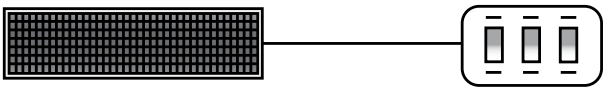
Control mode 4 – Combination of Remote Thermostat and Remote controller

Both remote mounted tamperproof thermostat and remote mounted CS-1 controller are connected into the rear mounted terminal enclosure. The RST-TP's tamperproof design prevents casual adjustment of temperature setting. The CS-1 controller provides on/off/high heat/low heat/fan only settings

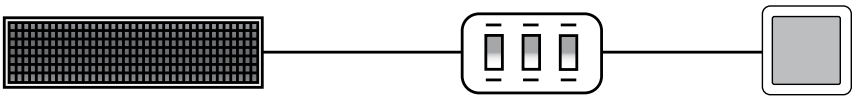
Control Options for RH Recessed Fan Assisted Heaters



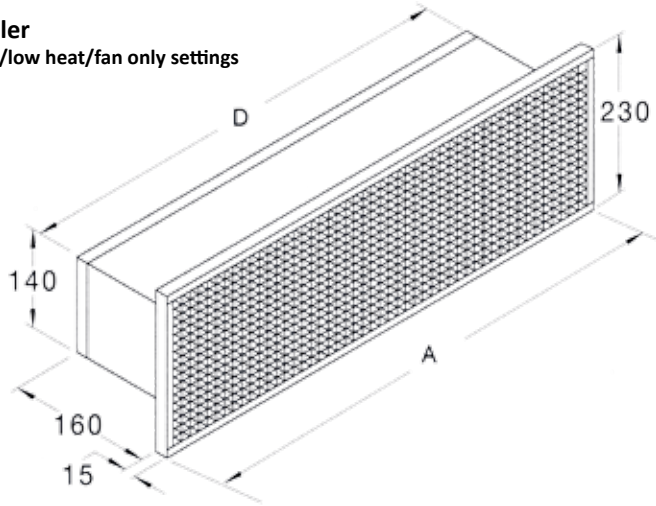
RH Series heater — Optional Tamperproof Thermostat



RH Series heater — Optional CS-1 Controller
Providing on/off/high heat/low heat/fan only settings



RH Series heater — Optional CS-1 Controller
Providing on/off/high heat/low heat/fan only settings — Optional Tamperproof Thermostat



RH Dimensions

Model	A (mm)	D (mm)
RH-20	363	307
RH-30	597	550
RH-60	1198	1138

RH Recessed Fan Assisted Heaters - Specifications and Prices

Model	Volts	kW	Airflow (m^3/h)	Aperture Size (mm)	Insert Clearance (mm)	dB* @2m	Weight (kg)	List Price
RH-20	230	2.0	120	315 x 150	200	50	3.3	£169.00
RH-30	230	3.0	250	560 x 150	200	56	4.2	£210.00
RH-60	230	6.0	500	1148 x 150	230	58	11	£445.00

* Noise levels are factory tested, not laboratory tested.

Optional Remote Mounted Control Devices for the RH Range

Model	Description	Full Details on Page	List Price
CS-1	Controller for all RH models	78	£69.00
RST-TP	Tamperproof Thermostat 20A	78	£80.00

CS-1 Controller
Providing on/off/high heat/low heat/fan only settings

RST-TP
Energy Saving Tamperproof Thermostat

HCA Air Curtain

- Provides an invisible barrier across entrances to commercial premises
- Reduces heating and air conditioning costs
- Minimises the ingress of pollutants

HCA air curtains reduce heating costs

Typical Applications

- Shops
- Offices
- Hospitals
- Hotels

Features

- Sturdy steel case with white RAL9010 satin finish
- Wall-mounting plate supplied as standard, alternatively the unit can be suspended from drop rods (4 x M6 threaded holes are provided in the top of the unit).
- Automatic and manual-reset over-temperature safety devices
- Recommended mounting height 2.5m to 4m

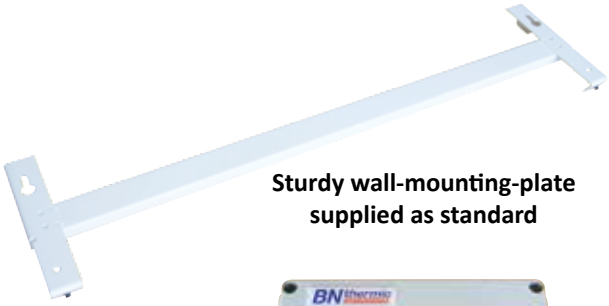
Specification and Prices...

Model	Volts	kW		Airflow(m^3)		Dimensions (mm)			Weight	List Price
		Low	High	Low	High	H	W	D	(kg)	
HCA-09	400/3N	4.5	9.0	1444	1879	254	1113	265	19.6	£1,081.00
HCA-13	400/3N	6.75	13.5	2441	2617	254	1621	265	25.4	£1,357.00
HCA-18	400/3N	6.0	18.0	3834	4100	254	2121	265	31.9	£1,835.00

Estimated Noise Levels

Model	dB* at 3m
HCA-09	64
HCA-13	69
HCA-18	66

*Noise levels are factory tested not laboratory tested



Sturdy wall-mounting-plate supplied as standard

Controlling an HCA Air Curtain

Every HCA air curtain is supplied with a control box for remote mounting. The control box is hard wired to the air curtain and provides the following settings.

- On
- Off
- Low airflow/No heat
- High airflow/No heat
- Low airflow/low heat
- High airflow/low heat
- High airflow/high heat

Remote mounted control box for high/low airflow and heat, supplied as standard

Please note the control system will not allow the selection of low airflow/high heat

The control box also allows a remote mounted thermostat to be incorporated into the control system. Once the thermostat's set-point is reached, the heating elements will be isolated with the fan continuing to operate.

Select the most suitable thermostat from the following range:

Adjustable wall-mounted thermostat (commercial grade)

BN Thermic's standard, commercial grade thermostats provide accurate control and allow easy adjustment of temperature set-point.

RST-IN
Standard Room Thermostat

Tamperproof wall-mounted thermostat (commercial grade)

To prevent wilful or casual adjustment of temperature set point, we recommend the RST-TP tamperproof thermostat. The set-point adjustment knob is concealed under the thermostat's cover and optional 'shear-off' fixing screws are provided for complete security.

RST-TP
Energy Saving Tamperproof Thermostat

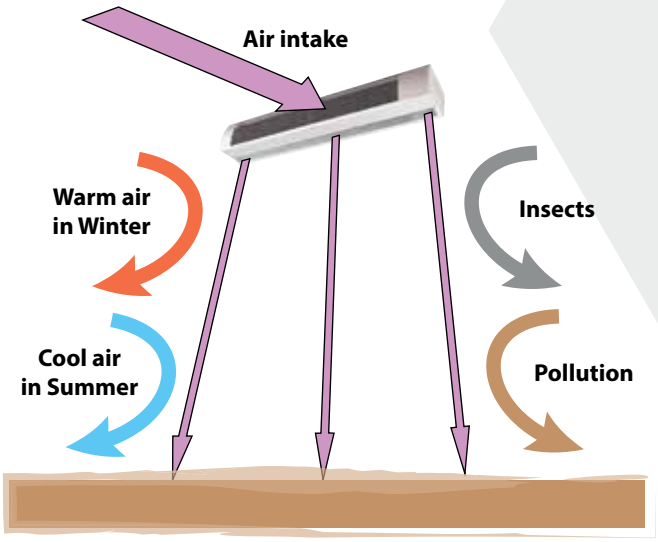
Tamperproof wall-mounted thermostat (industrial grade)

BN Thermic's famous Hard Case industrial and public area thermostats provide rugged tamperproof and vandal resistant control. Hard Case thermostats require a special tool to gain access to the temperature adjustment knob.

HC-T2 Energy Saving Tamperproof Thermostat

HC-D Tamperproof Tool for HC-T2
Ensuring that only authorised personnel can adjust temperature settings

Optional Thermostats			
Model	**Description**	**Full details on page**	**List Price**
RST-IN	Standard room thermostat	76	£54.00
RST-TP	Tamperproof thermostat	78	£80.00
HC-T2	Hard Case tamperproof thermostat	74	£158.00
HC-D	Tamperproof Tool for Hard Case thermostat	74	£20.00



An HCA Air Curtain reduces heating costs in Winter and Air conditioning costs in Summer

HCA air curtains installed in a DIY store

OUH Unit Heaters

- **Providing an efficient means of heating large industrial premises**
- **Exceptional reliability – backed by 5 year warranty**
- **The most robust industrial unit heater available**

OUH Unit Heater – Robust, Rugged, Reliable

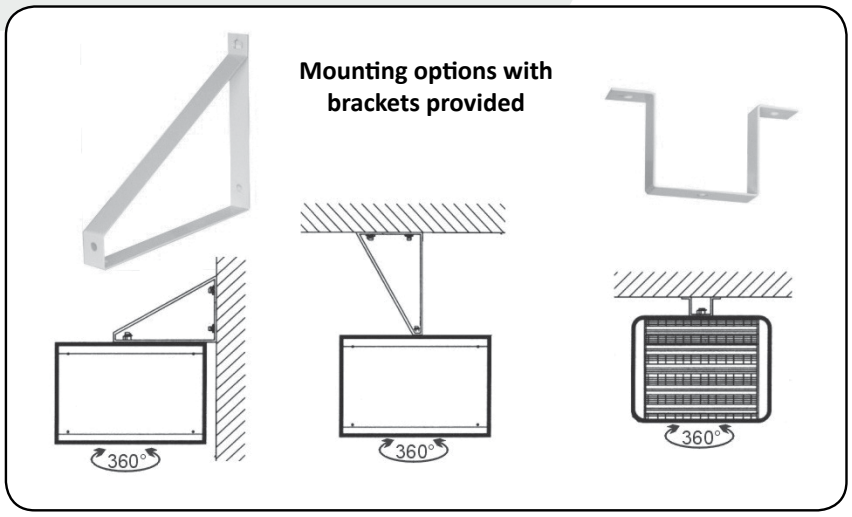
Typical Applications

- Warehouses
- Workshops

The installed load must exceed the heat loss from the entire area. OUH unit heaters are space heaters – they are NOT suitable for 'spot heating'.

Features Common to all Models

- FIVE YEAR WARRANTY
- Integral contactor and fused control circuit
- Heavy gauge steel construction with almond (RAL9001) finish
- Adjustable louvers
- Wall and ceiling brackets supplied as standard
- Optional suspension kit (OUH-J)
- Optional diffuser (OUH-CD) for use with suspended heaters; aids heat distribution
- Optional factory fitted built-in thermostat
- Terminals supplied for easy connection to remote control devices
- Auto-reset over-temperature protection



OUH Unit Heater suspended and fitted with optional diffuser for improved heat distribution

Controlling OUH Heaters

OUH industrial unit heaters must be thermostatically controlled. Every heater has a built-in fused control circuit, incorporating a contactor, with a pair of terminals provided for easy connection to a dedicated thermostat. Here is a summary of the most common control components.

Built-in thermostat

All heaters in the OUH range can be factory fitted with an adjustable thermostat. This approach keeps external wiring and installation time to a minimum and is recommended where very accurate temperature control is not essential.

To specify a factory fitted thermostat, add the suffix 'T' to the heater model number.

OUH Optional built-in thermostat

Adjustable wall-mounted thermostat (commercial grade)

For more accurate temperature control, a wall-mounted thermostat is recommended. BN Thermic's standard, commercial grade thermostats provide accurate control and allow easy adjustment of temperature set-point. The RST-IN should be selected for comfort heating applications whereas the FST-IN is designed for frost protection.

RST-IN
Standard Room Thermostat

FST-IN
Frost Thermostat

Tamperproof wall-mounted thermostat (commercial grade)

To prevent wilful or casual adjustment of temperature set point, we recommend the RST-TP tamperproof thermostat. The set-point adjustment knob is concealed under the thermostat's cover and optional 'shear-off' fixing screws are provided for complete security.

RST-TP
Energy Saving Tamperproof Thermostat

Programmable wall-mounted thermostat (commercial grade)

The PROSTAT-7 is a seven day programmable thermostat which allows the heating system to be controlled to match the pattern of use. Temporary and permanent overrides are provided.

PROSTAT 7
Programmable Thermostat

Tamperproof wall-mounted thermostat (industrial grade)

BN Thermic's famous Hard Case industrial and public area thermostats provide rugged tamperproof and vandal resistant control. Hard Case thermostats require a special tool to gain access the temperature adjustment knob.

Tamperproof wall-mounted thermostat with set-back (industrial grade)

A Hard Case thermostat is available with all the features of the standard model but with two temperature set-points: high (comfort) and low (set-back). Typically this device would be used to provide comfort heating when a building is occupied and frost protection at other times. There are two means of switching between comfort and set-back.

Operation Mode One

Use the side mounted button to activate the built-in, programmable timer. The Hard Case thermostat will then control at the 'comfort' set-point until the pre-programmed time period has elapsed at which point it will revert to the default 'set-back' temperature.

Operation Mode Two

Use a remote timer (see below) to switch between 'comfort' and 'set-back' to match the building's pattern of use.

HC-T2 Energy Saving Tamperproof Thermostat

Remote mounted programmable timer

The PROTIM-7 provides 24 hour or 7 day programmable control for any number of OUH industrial fan heaters. The timer's robust aluminium case makes it ideal for industrial applications.

Features include the following

- Advance to next programme
- Boost (select 1 hour or 2 hours)
- Override – permanently on or permanently off
- Automatic summer update
- Battery back up

HC-ST2 Tamperproof Electronic Thermostat with two adjustable set-points

PROTIM-7
24 hour or 7 day programmable control for any number of OUH industrial fan heaters

HC-D Tamperproof Tool for Hard Case Electronic Thermostats, ensuring that only authorised personnel can adjust temperature settings

OUH Continued

OUH Unit Heaters - Specifications and Prices

Model	Volts	kW	Airflow (m^3/h)	Dimensions (mm)			Weight (kg)	List Price
				H	W	D		
OUH-03-1	230	3	1180	305	420	432	23	£801.00
OUH-03-3	400/3N	3	1180	305	420	432	23	£801.00
OUH-05-1	230	5	1180	305	420	432	23	£819.00
OUH-05-3	400/3N	5	1180	305	420	432	23	£819.00
OUH-07-1	230	7.5	1180	305	420	432	23	£825.00
OUH-07-3	400/3N	7.5	1180	305	420	432	23	£825.00
OUH-10	400/3N	10	1180	305	420	432	23	£834.00
OUH-15	400/3N	15	2200	444	560	572	35	£1,372.00
OUH-20	400/3N	20	2200	444	560	572	35	£1,412.00
OUH-25	400/3N	25	2200	444	560	572	35	£1,452.00
Optional factory fitted thermostat 5°C to 35°C - Add 'T' suffix to model code above							0.3	£54.00
OUH-J	J hooks for vertical suspension (set of 4)						2.0	£12.00
OUH-CD1	Diffuser for suspended heater 3kW to 10kW						4.0	£67.00
OUH-CD2	Diffuser for suspended heater 15kW to 25kW						7.0	£101.00

PLEASE CONTACT BN THERMIC FOR NON-STANDARD VOLTAGES INCLUDING 3 PHASE 'NO NEUTRAL' OPTIONS

Remote Mounted Control Devices

Model	Description	Full details on page	List Price
RST-IN	Standard room thermostat (commercial grade)	76	£54.00
FST-IN	Standard frost thermostat (commercial grade)	76	£54.00
RST-TP	Tamperproof thermostat (commercial grade)	78	£80.00
PROSTAT-7	7 day programmable thermostat (commercial grade)	78	£84.00
HC-T2	Tamperproof Electronic thermostat (industrial grade)	74	£158.00
HC-ST2	Tamperproof Electronic thermostat switching between high and low settings using remote timer (TIM-D1) (industrial grade)	74	£190.00
HC-D	Tamperproof Tool for Hard Case (HC) range	74	£20.00
PROTIM-7	Programmable timer	73	£112.00

OUH Unit Heater wall mounted in a vehicle repair shop

DSU Destratification Units

- **Reducing heating bills by up to 30% by recycling warm air that has collected at high level.**
- **Recommended for industrial premises where roof height exceeds 4m**

Reduces energy costs when roof height exceeds 4m

Typical Applications

- Warehouses
- Exhibition Halls
- Ideally suited for use in conjunction with BN Thermic's OUH Industrial Unit Heaters

Features

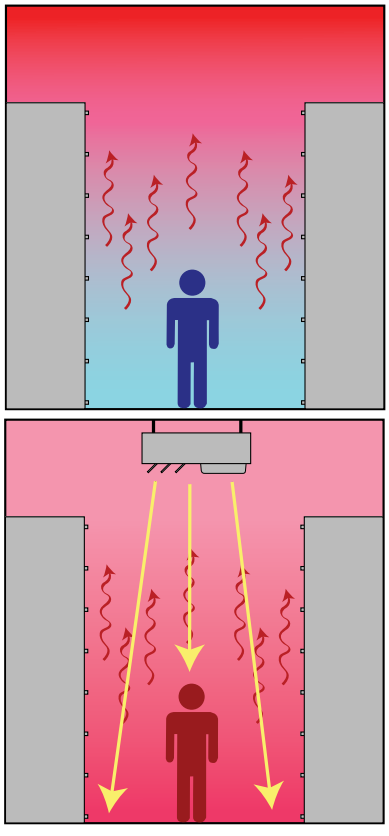
- Reduces heating costs by up to 30%
- Heavy duty steel construction
- Built-in thermostat automatically energises fan
- 4-way adjustable louvers
- Suspension kit supplied as standard (4 x 500mm chains and associated hooks)

DSU Destratification Units - Specifications and Prices

Model	Volts	Airflow (m^3/h)	W	Dimensions (mm)			Roof height (m)	Area Covered (m)	dB* at 5m	Weight (kg)	List Price
				H	W	D					
DSU-4	230	4000	200	385	560	560	4 to 7	20 x 20	45	18	£683.00
DSU-8	230	8000	250	385	720	720	7 to 12	25 x 25	50	24	£826.00

*Noise levels are factory tested not laboratory tested.

Warehouse Example



Without DSU
Warm air accumulates at high level

With DSU
Warm air is recycled reducing heating costs by up to 30%

DSU-4 installed in a vehicle repair shop in Kent

Top view of DSU-8 showing powerful fan

WHE Compact Heavy Duty Wall Mounted Fan Assisted Heaters

- **Providing warmth in public areas and industrial installations**
- **Exceptional reliability – backed by 5 year warranty**
- **Ideally suited to applications where space is limited**
- **Low running costs by selecting from a range of control options**

Typical Applications

- Crane cabs
- Toll Booths
- Workshops

Features Common to all Models

- FIVE YEAR WARRANTY
- Can be mounted vertically or horizontally
- Heavy gauge steel construction with almond (RAL9001) finish
- Can be recessed or surface mounted with optional WHE-SB surface mount box
- Auto-reset over-temperature protection

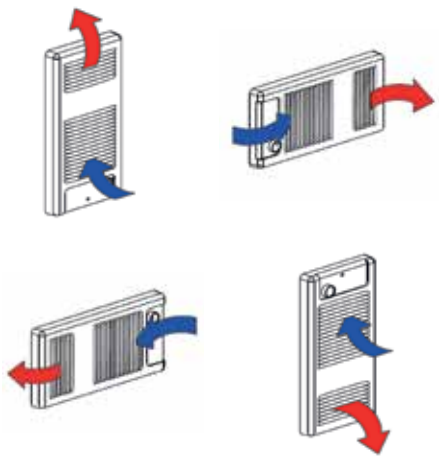
WHE with optional adjustable thermostat

Controlling WHE Heaters

Thermostatic control is highly recommended. This is generally achieved by means of an optional built-in thermostat which can be made tamperproof if required. Model numbers for heaters with a built-in thermostat have a 'T' suffix.

WHE Fan Assisted Heaters - Specifications and Prices

Model	Built-in Thermostat	Volts	kW	Airflow (m^3/h)	Dimensions (mm)			Weight (kg)	List Price
					H	W	D		
WHE-2024	No	230	2.0	135	406	206	108	4	£269.00
WHE-2024T	Yes	230	2.0	135	406	206	108	4	£360.00
WHE-1512	No	110	1.5	135	406	206	108	4	£286.00
WHE-1512T	Yes	110	1.5	135	406	206	108	4	£364.00
WHE-SB	Optional Surface Mount Box				407	206	76	1	£55.00



4 alternative mounting configurations

Optional surface mount box

WHE fitted into surface mount box

EFC Fan Convector Heater

- **Providing comfort heat in commercial buildings and public areas**
- **Exceptional build quality for long life and peace of mind**

EFC-06 Fan Convector: robust construction for public areas

Typical Applications

- Community Halls
- Schools
- Entrance Areas
- Corridors

Features

- Super robust steel case with rounded corners
- Key lockable front panel (key provided)
- Powerful fan motor ensures quick warm up and even temperature distribution
- 'Pencil proof' inlet and outlet grille
- Over temperature protection
- Dedicated MCBs for heating elements and fan motor
- Side mounted switch for on/off and high/low control
- Stylish grey finish with black grilles
- Terminals for connection to remote thermostat (we recommend our RST-TP tamperproof thermostat)

Optional Plinth

The EFC-06 can be supplied with an optional 100mm high plinth. The plinth is painted black to match inlet and outlet grille and offers the following advantages.

- Reduces the chance of dust being drawn in through the inlet grille
- Allows for easier floor cleaning
- Creates a recess for standard height skirting board

EFC-06 with optional plinth fitted

Controlling an EFC-06

The side mounted switch provides on/off/high/low settings. Typically the 'high' (6kW) setting would be selected initially for the quickest possible warm up. Once an acceptable temperature has been achieved, the heater can be switched to 'low' (3kW). This will reduce both running costs and noise. Approximate dB levels are as follows:

High Setting: 58dB.

Low Setting: 50dB

To ensure maximum economy the EFC-06 should be controlled by a remote wall-mounted thermostat. We recommend our RST-TP tamperproof thermostat which prevents casual adjustment of temperature set-point.

Specification and Prices

Model	Volts	High Setting		Low Setting		Dimensions (mm)			Weight	List Price
		kW	m^3/h	kW	m^3/h	H	W	D	(kg)	
EFC-06	230	6.0	540	3.0	378	675	895	230	45	£2,009.00
EFC-P	Optional 100mm black plinth									£64.00
RST-TP	Recommended remote mounted tamperproof thermostat (see page 78)									£80.00

BLC Pew Heaters

- **Providing an unobtrusive and economic means of heating a church**

BLC-300B

BLC Series - ideal for unobtrusive installation under a church pew

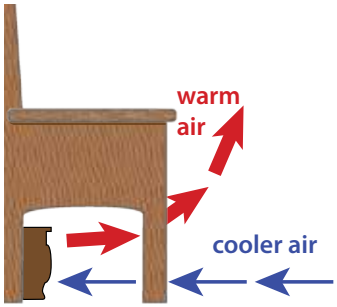
BLC-500B

BLC-750B

Heating in Churches

Heating a conventional church presents many problems to overcome.

- The large volume means that maintaining a comfortable air temperature is extremely expensive.
- To warm up the air from 'cold' prior to each service would take a very long time, consume a great deal of energy and is not generally regarded as a practical solution.
- In many churches it is not permissible to fit heaters to walls or suspend them from the roof.
- Any source of heat needs to be silent and as unobtrusive as possible.



BLC mounted under a church pew

Where fixed pews are in place, the BLC range provides the best method of heating in a church. The heaters are generally fixed to the back-board of the pew below the seat.

- BLC Pew heaters provide direct heat to the people sitting in the pews. As no attempt is made to build up a body of warm air within the church, the heaters can be switched on minutes before a service starts and switched off immediately it finishes.
- BLC Pew heaters are extremely unobtrusive. When installed under a traditional pew they are barely noticeable.
- Natural convection heaters such as the BLC are silent and with no moving parts require little maintenance.
- As the BLC is a direct source of heat, only occupied pews need to be heated.

Features

- Robust steel construction with central baffle plate to promote convection currents
- Long life metal sheathed finned heating element
- Dark brown paint finish
- Auto-reset over-temperature protection
- Terminal enclosure on right hand side for easy electrical connection
- Optional safety guards with dark brown finish - new easy-fit design
- Optional floor mounting brackets or suspension brackets with dark brown finish

BLC heaters installed under pews in St Bartholomew's Church Notgrove

Controlling BLC Heaters in a Church

Controlling BLC heaters in a church is generally as simple as switching on the required heaters immediately before a service and switching them off once the pews have been vacated. This can be achieved manually or by means of a programmable timer if preferred.

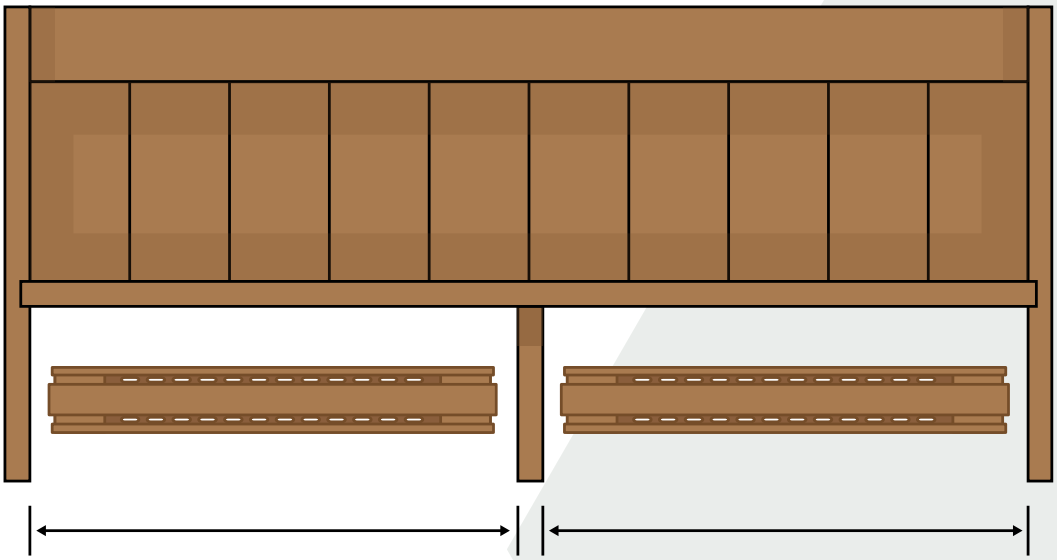
It is not usually necessary to use thermostatic control in a church application as there is no attempt being made to build up and maintain a body of warm air.

Selection

BLC heaters are designed to be fitted onto the backboard between the seat supports of a church pew. For best results the heaters should cover as much of the length of the pew as possible. Where a backboard is not available BLC-FB floor brackets or BLC-HB suspension brackets will be required.

Use the following table to determine the recommended heaters:

Space Between Pew Seat Supports		Recommended Heater
Minimum	Maximum	
650mm	750mm	BLC-300B
750mm	1000mm	BLC-500B
1000mm	1500mm	BLC-750B
1500mm +		Use multiple heaters



Spaces between seat supports

BLC Low Level Convector Heaters - Specifications and Prices

Model	Volts	kW	Dimensions (mm)			Finish	Recommended Guard	Weight (kg)	List Price
			H	W	D				
BLC-300B	230	0.3	148	566	62	Brown	BLC-EXG6	3.0	£80.00
BLC-500B	230	0.5	148	691	62	Brown	BLC-EXG7	4.0	£84.00
BLC-750B	230	0.75	148	945	62	Brown	BLC-EXG10	5.0	£93.00
BLC-FB	Floor mounting brackets (pair)					Brown	-	-	£19.00
BLC-HB	Suspension brackets (pair)					Brown	-	-	£18.00
BLC-EXG6	Safety guard 610mm					Brown	-	-	£20.00
BLC-EXG7	Safety guard 730mm					Brown	-	-	£22.00
BLC-EXG10	Safety guard 1000mm					Brown	-	-	£24.00

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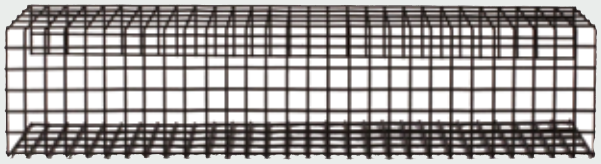
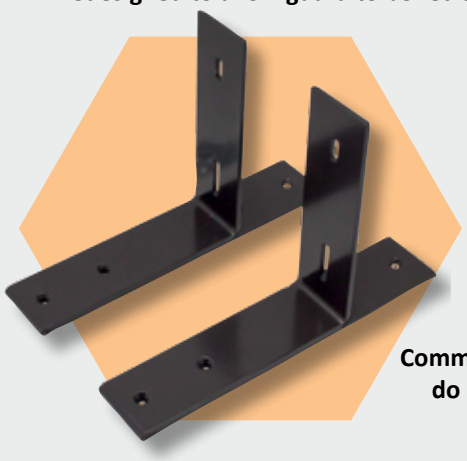
BLC Continued



BLC-EXG6 optional safety guard for BLC range
Redesigned to allow guard to be retro-fitted

BLC-HB optional
suspension brackets for BLC range



BLC-FB Floor Mounting Brackets
Commonly used in churches where the pews do not have a conventional back-board

BLS 110V Low Level Convector Heaters

- **Providing comfort heat where only a 110V supply is available**
- **Low running costs ensured by integral thermostatic control**
- **Low profile design allows maximum use of wall space**

BLS-110-1000T
110V robust convector heater – ideal for site huts

Typical Applications

- Site Huts

Features

- Robust steel construction with central baffle plate to promote convection currents
- Long life metal sheathed finned heating element
- Auto-reset over-temperature protection
- Built-in thermostat with external knob allowing easy adjustment of temperature set-point

BLS Low Level Convector Heaters - Specifications and Price

Model	Volts	kW	Dimensions (mm)			Weight (kg)	List Price
			H	W	D		
BLS-110-1000T	110	1.0	148	1206	62	6.0	£147.00

SWD Industrial Finned Tubular Heaters

- **Providing background or comfort heat in damp or corrosive environments**
- **Specifically designed for long life in the most demanding conditions**
- **Low running costs by selecting from a range of control options**

SWD Industrial Finned Tubular Heater ideal for damp and corrosive environments

Typical Applications

- Water treatment plants
- Plant rooms
- Lift shafts

Features Common to all Models

- Welded stainless steel tube with stainless steel cooling fins
- Stainless steel brackets for floor or low level wall mounting
- Waterproof reinforced glass fibre terminal enclosure conforming to IP66
- M20 waterproof cable gland supplied as standard

SWD-U standard format

SWD-A with externally adjustable thermostat

Controlling SWD Heaters

Thermostatic control is highly recommended. The simplest option is to select a heater with the prefix SWD-A. This indicates that a built-in adjustable thermostat is provided. The built-in thermostat has a set-point range between 5°C and 30°C and includes a frost protection setting.

Where remote thermostatic control is preferred we recommend our tamperproof Hard Case Range of Thermostats (see overleaf). Hard Case thermostats' tamperproof design ensures that only authorised personnel can adjust the temperature setting. The standard Hard Case is not waterproof, however the Hard Case range includes and optional remote sensor with an IP55 rating. The Hard Case HC-T2 will switch a single phase load of up to 16A and larger loads or 3-phase loads via a suitably rated contactor (see page 73)

Safety Guards

Where personnel have access to an SWD heater, the use of an SWG safety guard is strongly recommended. Manufactured from heavy gauge zinc plated wire, the SWG comes complete with mounting clips for easy fixing to floor or wall.

SWD mounted under SWG Guard

An SWD guard is recommended when personnel have access to the heaters

SWD Continued

SWD - Models with Built-in Thermostat

Model	kW	Volts	Built-in thermostat	Dimensions (mm)			Weight (kg)	Recommended Guard	List Price
				H	W	D			
SWD-A-500	0.5	230V 1ph	Yes	170	440	130	3.0	SWG-1	£332.00
SWD-A-1000	1.0	230V 1ph	Yes	170	640	130	4.8	SWG-2	£393.00
SWD-A-1500	1.5	230V 1ph	Yes	170	840	130	6.2	SWG-3	£465.00
SWD-A-2000	2.0	230V 1ph	Yes	170	1040	130	7.7	SWG-3	£502.00
SWD-A-3000	3.0	230V 1ph	Yes	170	1440	130	10.9	SWG-4	£647.00

SWD - Models without Built-in Thermostat

Model	kW	Volts	Built-in thermostat	Dimensions (mm)			Weight (kg)	Recommended Guard	List Price
				H	W	D			
SWD-U-500	0.5	230V 1ph	No	170	440	130	3.0	SWG-1	£246.00
SWD-U-1000	1.0	230V 1ph or 400V 3ph	No	170	640	130	4.8	SWG-2	£302.00
SWD-U-1500	1.5	230V 1ph or 400V 3ph	No	170	840	130	6.2	SWG-3	£353.00
SWD-U-2000	2.0	230V 1ph or 400V 3ph	No	170	1040	130	7.7	SWG-3	£414.00
SWD-U-3000	3.0	230V 1ph or 400V 3ph	No	170	1440	130	10.9	SWG-4	£566.00
SWD-U-4000	4.0	230V 1ph or 400V 3ph	No	170	1840	130	13.7	SWG-5	£772.00

SWD - 110V Models without Built-in Thermostats

Model	kW	Volts	Built-in thermostat	Dimensions (mm)			Weight (kg)	Recommended Guard	List Price
				H	W	D			
SWD-U-500-1	0.5	110V 1ph	No	170	440	130	3.0	SWG-1	£265.00
SWD-U-1000-1	1.0	110V 1ph	No	170	640	130	4.8	SWG-2	£328.00
SWD-U-1500-1	1.5	110V 1ph	No	170	840	130	6.2	SWG-3	£377.00

Recommended Guards

Model	Dimensions (mm)			Weight (kg)	List Price
	H	W	D		
SWG-1	240	450	240	1.0	£58.00
SWG-2	240	650	240	1.5	£66.00
SWG-3	240	1075	240	2.0	£78.00
SWG-4	240	1600	240	3.5	£126.00
SWG-5	240	1900	240	4.0	£131.00

HC-T2 Energy Saving Tamperproof Electronic Thermostat

Remote Thermostat

Model	Description	List Price
HC-T2	Tamperproof Thermostat 16A	£158.00
HC-S2	Optional Remote Waterproof Sensor (IP55) for use with HC-T2 Thermostat	£43.00
HC-D	Tamperproof Tool for Hard Case (HC) range	£20.00

This table only shows the basic HC-T2 Hard Case Thermostat. However it is possible that an alternative model from the Hard Case range may be more suitable for any given installation. Please see page 74 for full details of the Hard Case range.

HC-S2 Sensor
Optional remote sensor for use with Hard Case Tamperproof Thermostats and conforming to IP55

HC-D Tamperproof Tool for HC-T2
Ensuring that only authorised personnel can adjust temperature settings

ETH Terrace Heaters

ETH Terrace Heater – smart modern design

- **A stylish means of providing a temperature boost on terraces and patios**
- **Ideal for both domestic and commercial use**
- **High quality construction for long life and peace of mind**

Typical Applications

- Dining areas
- Pavement cafés
- Balconies

Terrace heaters are especially well suited to partially enclosed areas where draughts are restricted. In more exposed areas we would recommend our HWP2 Patio Heaters.

ETH Terrace Heaters are also perfectly well suited for indoor applications.

Features

- Smart black appearance
- No light output
- Angle adjustable mounting brackets provided
- 2m pre-wired power cable
- Fixing points provided for suspension
- IP44 rated for outdoor use

Brackets supplied with each heater for easy installation and angle adjustment

Terrace Heaters - Specifications and Prices

Model	Volts	kW	H	W	D	Weight (kg)	List Price
ETH-10	230	1.0	45	1080	140	4.0	£257.00
ETH-15	230	1.5	45	1580	140	6.0	£301.00

An ETH Terrace Heater installed in the smoking area of a Sussex pub

ETH Terrace heaters installed indoors in a football clubhouse in Norfolk

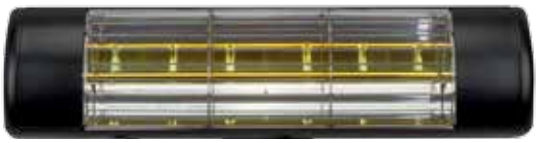
HWP2 Patio Heater

- **Providing safe, instant comfort heat in outdoor locations**
- **Ensures the maximum use of outdoor facilities**
- **Minimal maintenance especially when compared to gas systems**
- **Low running costs by selecting from a range of control options**
- **Smart modern design complementing external decor**

HWP2-B

HWP2-S

HWP2-W



HWP2-2B

Typical Applications

- Patios – both commercial and domestic
- Pub gardens
- Pavement cafes
- Golf driving ranges
- Nightclub queuing areas
- Smoking areas

HWP2-3B

Features Common to all Models

- IP55 rating allowing the heater to be installed and left outdoors throughout the year
- Aluminium construction with stainless steel safety grille
- High quality halogen lamp with 7000 hours average operating life
- Halogen lamp is easily replaceable
- Choice of black, white or silver finish
- Wall mounting bracket and parasol clamp supplied as standard
- Open fronted design provides a 25% increase in heating efficiency when compared with glass-fronted heaters
- Convenient rear mounted lugs facilitate suspension

HWP2-45B

Controlling HWP Patio Heaters

As HWP patio heaters are 100% effective the instant they are switched on, we recommend a control system that will de-energise a heater when heating is not required. This can be achieved by means of a Push Button Timer or a Movement Detector.

TS-6 Timer
Energy saving timer
weather-proof to IP66

TS-6 Push Button Timer (pre-programmed time delay)

The TS-6 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-6 is rated IP66 making it safe for outdoor use, and is touch activated for easy operation.

The TS-6 can switch loads up to 3kW directly and larger loads via a suitable contactor.

TS-5 Weatherproof
Timer for larger loads

TS-5 High Capacity Soft Start Timer

The TS-5 timer is designed for direct switching of patio 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

Movement Sensor

The BN Thermic WH-402 is a compact, surface mount, weatherproof device conforming to IP55. The WH-402 will detect movement in an area up to 12m from its mounting position in a 180° arc. Both distance and angle of detection can be reduced if required. Once movement

has been detected, the heating will be switched on. If no further movement is detected within a pre-programmed time period (5 seconds to 18 minutes) the heating will be automatically switched off. For full details of the WH-402 see page 80.

The WH-402 has a switching capacity of 16A. It can therefore directly switch a combined load of up to 3kW. Larger loads or 3-phase loads can be switched via a suitably rated contactor.

VR-2

Dimmer switch for fine adjustment of heater output

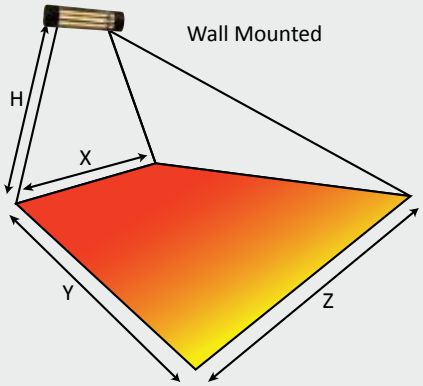
Dimmer

In specific applications there may be a need to adjust the intensity of the heat output from a HWP patio heater. The BN Thermic VR-2 provides adjustment between 30% and 100% of heater output. It also has a definite 'click' to off allowing it to be used as an on/off switch. The VR-2 is an IP55 rated surface mount device and is suitable for both indoor and outdoor installation. For full details of the VR-2 see page 80.

The VR-2 has a switching capacity of 13A. It can therefore directly switch a combined load of up to 3kW.

Area covered by the heater

Heater Output	Wall Mounted				Area Covered
	H	X	Y	Z	
1.5kW	2.0m	2.3m	2.4m	4.0m	7.6m²
1.5kW	2.5m	3.0m	3.0m	5.2m	12.3m²
2kW	2.0m	2.3m	2.4m	4.0m	7.6m²
2kW	2.5m	3.0m	3.0m	5.2m	12.3m²
3kW	2.0m	2.6m	2.4m	4.5m	8.5m²
3kW	2.5m	3.4m	3.0m	5.8m	13.8m²
4.5kW	2.0m	7.5m	2.4m	12.0m	23.4m²
4.5kW	2.5m	9.0m	3.0m	15.6m	26.9m²



Patio Heater Selection

Use the following diagram and table to select the optimum mounting position. In an exposed location and where mounting height is relatively high, we recommend installing a 2kW, 3kW or 4.5kW heater.

HWP2 Patio Heater - Specifications and Prices

Model	Volts	kW	Finish	Dimensions (mm)			Weight (kg)	List Price
				H	W	D		
HWP2-W	230	1.5	White	120	480	120	1.7	£134.00
HWP2-B	230	1.5	Black	120	480	120	1.7	£134.00
HWP2-S	230	1.5	Silver	120	480	120	1.7	£134.00
HWP2-2B	230	2.0	Black	120	480	120	1.7	£167.00
HWP2-3B	230	3.0	Black	120	960	120	3.2	£245.00
HWP2-45B	230/400	4.5	Black	120	1440	120	6.4	£351.00

Replacement Lamps

Heater Output	Qty	Model	Description	List Price
1.5kW	1	RL15CW	1.5kW Clear Lamp	£38.00
2kW	1	RL20GW	2kW Gold Lamp	£53.00
3kW	2	RL15GW/3	1.5kW Gold Lamp	£53.00
4.5kW	1	RL15GW	1.5kW Gold Lamp (centre lamp)	£51.00
4.5kW	2	RL15GW/4	1.5kW Gold Lamp (outside lamps)	£53.00

Optional Remote Mounted Control Devices

Model	Description	Full Details on Page	List Price
WH-402	Movement sensor (16A)	80	£84.00
TS-6	Push button timer (16A)	79	£79.00
TS-5	Soft Start timer (6kW)	80	£136.00
VR-2	IP55 Dimmer (13A)	80	£104.00

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

Rear view of HN2-3000G showing wall bracket and terminal enclosure

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. The following control devices have been selected to help ensure that unoccupied areas are not heated and to allow the intensity of heat to be adjusted. These two approaches ensure economy and enhance comfort.

For multi-heater systems we recommend our MC1 controller (see page 58)

Control Switches

BN Thermic provides a range of industrially rated control switches specifically designed to cope with the inrush associated with halogen lamps. The simple CS-4 provides an easy method of switching heaters up to 3kW on and off. The CS-2 and CS-3 are for use with two and three lamp heaters, allowing lamps to be switched individually. By using the CS-2 or CS-3, the user can run a heater at full power in very cold conditions but reduce output as the ambient temperature rises.

Control switch selection table

Control Switch	Heater	Settings		
		High	Medium	Low
CS-4	HN2-1500G	1.5kW	N/A	N/A
CS-4	HN2-2000G	2kW	N/A	N/A
CS-4	HN2-3000G	3kW	N/A	N/A
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

VR-2 Dimmer

The VR-2 dimmer can control the intensity of the output from infrared halogen heaters up to 3kW. A simple panel front knob provides 30% to 100% adjustment. It also proves a convenient means of isolating the heater with a definite 'click' to off.

TS-6 Push Button Timer (pre-programmed time delay)

The TS-6 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-6 can switch loads up to 3kW directly and is touch activated for easy operation.

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.

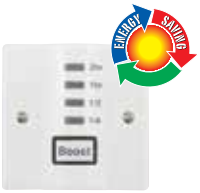
CS-4 Controller Switch

CS-2 Controller Switch

CS-3 Controller Switch

VR-2 Dimmer switch

TS-6 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/m² 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.

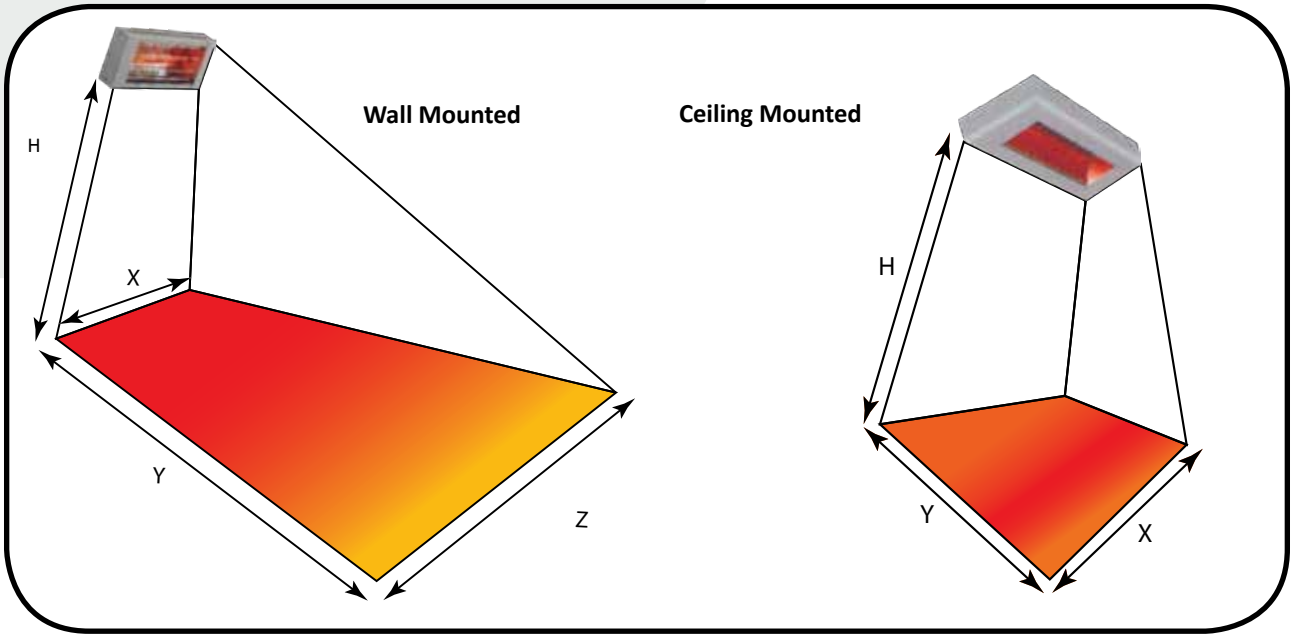


Table 2

	Wall Mounted (m)				Area Covered (m²)	Overhead Mounted (m)			Area Covered (m²)
	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 and Prices

Model	Volts	kW	Dimensions (mm)			Weight (kg)	List Price
			H	W	D		
HN2-1500G	230	1.5	275	420	140	3.8	£152.00
HN2-2000G	230	2.0	275	420	140	3.8	£162.00
HN2-3000G	230	3.0	430	420	140	5.5	£231.00
HN2-4500G	230/400	4.5	590	420	140	6.5	£401.00
HN2-6000G	230/400	6.0	590	420	140	6.5	£447.00
RL15GF	230	1.5	Replacement Gold Lamp for 1.5, 3 & 4.5 kW heaters				£49.00
RL20GF	230	2.0	Replacement Gold Lamp for 2 & 6 kW heaters				£47.00
HSK	Suspension Kit (chain not supplied)						£4.00

Optional Remote Mounted Control Devices

Model	Description	Full Details on Page	List Price
WH-402	Movement sensor (16A)	80	£84.00
TS-6	Push button timer (16A)	79	£79.00
TS-4	Push button timer - user selectable time delay (13A)	79	£43.00
TS-5	Soft Start timer (6kW)	80	£136.00
VR-2	Dimmer (13A) IP55	80	£104.00
CS-4	Simple on/off switch For HN2-1500G, HN2-2000G or HN2-3000G		£37.00
CS-2	Variable output controller switch for HN2-3000G		£49.00
CS-3	Variable output controller switch for HN2-4500G and HN2-6000G		£68.00

HN2-3000G shortwave heaters providing instant economical heating in St Stephen's Church Barnet

HN2-1500G Spot heating a workstation

MC1 Variable Output Control for Multi-Heater Installation

new

- **Control system specifically for use with BN Thermic halogen heater models: HN2-3000G, HN2-4500G and HN2-6000G**
- **Allows individual heating lamps to be switched on and off from a single point thereby enhancing comfort and improving economy**
- **By using an MC1-P (primary) and a number of MC1-S (secondary) controllers a virtually limitless number of heaters can be controlled**
- **A large range of optional control devices can be added allowing a control system to be designed to meet a project's specific requirements**

Typical Applications

- Churches
- Community Halls
- Sports Halls
- Workshops
- Warehouses
- Factories

Specification

Models	MC1-P (primary) and MC1-S (secondary)
Mounting	Surface
Switching Capacity per controller	Max 4 x 6kW heaters Max 4 x 4.5kW heaters Max 6 x 3kW heaters
Voltage Supply	400V 3ph and neutral
Dimensions	320 x 340 x 100mm
Weight	4kg
Ingress Protection	IP30
Fuses	12.5A per lamp
Remote switching device – select from	CS-2 to control groups of HN2-3000G 3kW heaters (switch between 1.5kW and 3kW) CS-3 to control groups of HN2-4500 4.5kW (switch between 1.5kW, 3kW and 4.5kW) or HN2-6000G 6kW heaters (switch between 2kW, 4kW and 6kW) Additional heaters can be controlled by using MC1-S secondary controller(s)
Special features	Soft start increasing lamp life by up to 10% Built-in rundown timer (10 to 140 minutes) Can control an almost limitless number of heaters by using 1 x MC1-P primary controller and a number of MC1-S secondary controllers
Optional remote control devices to be connected to MC1-P **(No remote control devices need to be connected to MC1-S secondary controllers**	FST-IN Frost thermostat RST-IN Room thermostat (for economy not temperature control) RST-TP Tamperproof room thermostat(for economy not temperature control) PROTIM-7 Programmable timer WH-402 Movement sensor CS-5 Push button to activate controller's built-in rundown timer CS-6 Master control switch overrides all connected control devices except frost thermostat

MC1 Controller Prices

Model	Description	List Price
MC1-P	Controller - primary	£604.00
MC1-S	Controller - secondary	£542.00

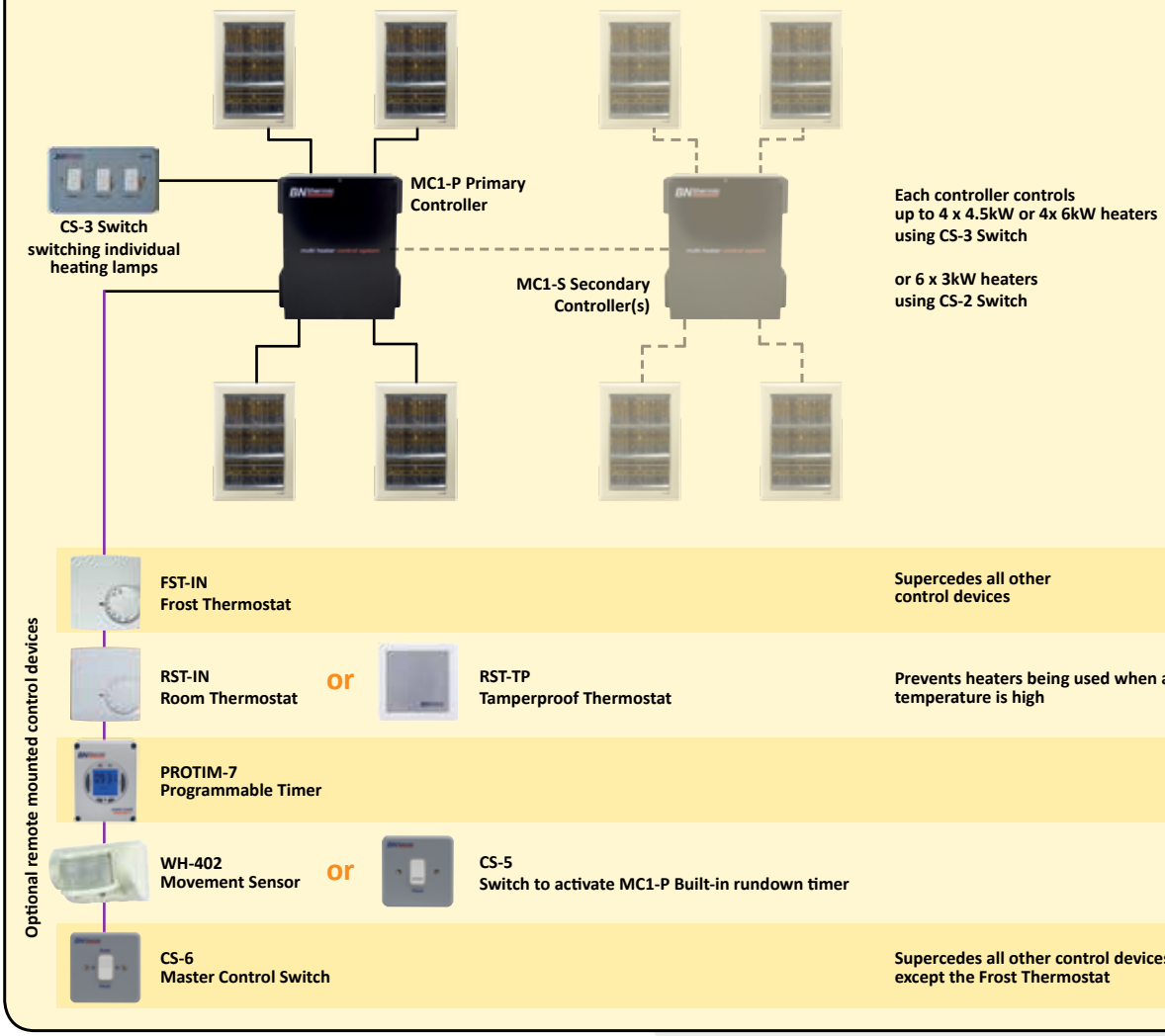
Remote Mounted Switch Prices

Model	Description	List Price
CS-2	Switch to control HN2-3000G 3kW heaters	£49.00
CS-3	Switch to control HN2-4500G 4.5kW heaters or HN2-6000G 6kW heaters	£68.00

Optional Remote Mounted Control Devices Prices

Model	Description	List Price
FST-IN	Frost Thermostat	£54.00
RST-IN	Room Thermostat (for economy not temperature control)	£54.00
RST-TP	Tamperproof Thermostat (for economy not temperature control)	£80.00
PROTIM-7	Programmable Timer	£112.00
WH-402	Movement Sensor	£84.00
CS-5	Push button (activates MC1-P built-in rundown timer)	£36.00
CS-6	Master control button	£38.00

Controlling a Multi-Heater Installation

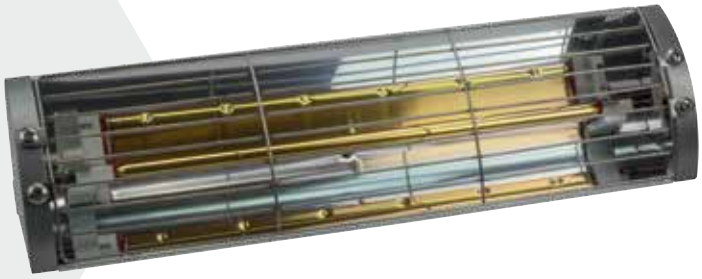


HB Shortwave Workshop and Smoking Area Heater

- **A low cost means of providing instant direct heat**
- **Ideally suited to heating a work bench**
- **Very economic as no pre-heating is required**

Typical Applications

- Smoking area
- Workshops
- Packing bench



HB-1500 can be used indoors or outdoors

Features

- IP44 rated for outdoor use
- High quality halogen lamp with 7000 hours average operating life
- Gold lamp with soft pink glow
- Wall mounting bracket providing 'up and down' angle adjustment (not suitable for suspension)
- Built-in safety guard
- Pre-wired power cable

At a typical mounting height of 2.2m, the HB-1500 will heat an area approximately 3m wide x 2.6m deep.

Shortwave Workshop Heater - Specifications and Prices

Model	Volts	kW	Dimensions (mm)			Weight (kg)	List Price
			H	W	D		
HB-1500	230	1.5	140	400	85	1.5	£109.00
RL-15GH	Replacement Gold Lamp 1.5kW						£49.00

CS-4 Control switch

HB-1500 Providing instant, direct heat to a technician at BN Thermic's Crawley HQ

Controlling the HB-1500

Control Switch

The CS-4 industrially rated control switch has been specifically designed to cope with the inrush associated with halogen lamps and provides an easy method of switching heaters up to 3kW on and off.

Push Button Timer

The TS-6 push button timer is a wall mounted device with a 16A switching capacity. When the button is pushed the heater will be energised for a pre-programmed period between 2 minutes and 2 hours. Once this period has elapsed the heater will be automatically switched off.

The TS-6 is touch activated for easy operation.

Movement Sensor

The WH-402 movement sensor has a 16A switching capacity and can be programmed for time periods between 5 seconds and 18 minutes. Should movement not be detected within this period, the heater will be automatically switched off.

TS-6 Energy - saving timer with tamperproof adjustment of time delay

WH-402 Energy saving device ensuring that heating is switched off when an area is unoccupied

Optional Remote Control Devices

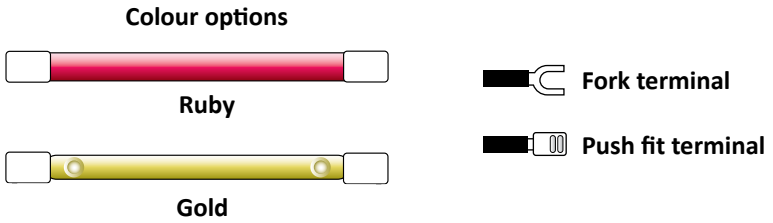
Model	Description	Full Details on Page	List Price
CS-4	Simple on/off switch	-	£37.00
TS-6	Push Button Timer 16A	79	£79.00
WH-402	Movement Sensor 16A	80	£84.00

RL Replacement Infrared Lamps

A range of shortwave quartz halogen heat lamps to suit almost all available heaters from a variety of manufacturers.

Lamps with flexible leads and SK15 caps

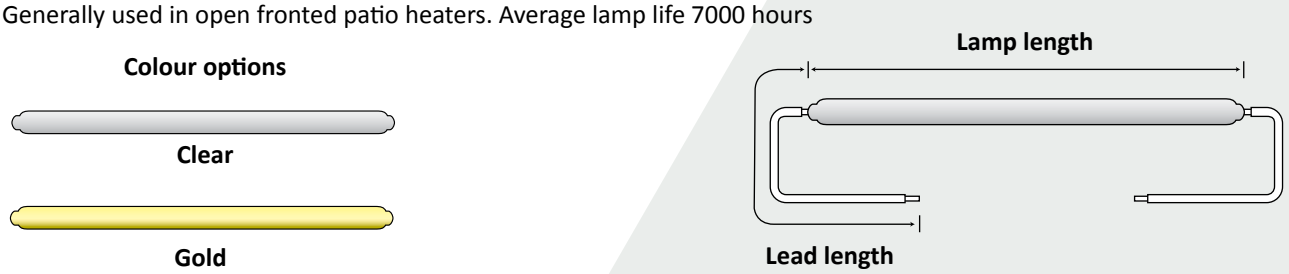
Used in a variety of open fronted commercial and industrial heaters.
Average lamp life 7000 hours



Model	kW	Voltage	Colour	Lamp length (mm)	Lead length (mm)	Terminal	List Price
RL10RF	1	230	Ruby	346	230	Fork	£46.00
RL10GF	1	230	Gold	353	230	Fork	£46.00
RL15RF	1.5	230	Ruby	346	230	Fork	£46.00
RL15GF	1.5	230	Gold	353	230	Fork	£49.00
RL15RF/1	1.5	120	Ruby	346	230	Fork	£46.00
RL15RP	1.5	230	Ruby	346	440	Push Fit	£51.00
RL15GP	1.5	230	Gold	346	440	Push Fit	£49.00
RL20RF	2	230	Ruby	346	230	Fork	£51.00
RL20GF	2	230	Gold	353	230	Fork	£47.00

Weatherproof (IP55) lamps with flexible leads

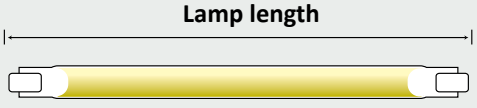
Generally used in open fronted patio heaters. Average lamp life 7000 hours



Model	kW	Voltage	Colour	Lamp length (mm)	Lead length (mm)	Terminal	List Price
RL15CW	1.5	230	Clear	440	375	Plain Ferrule	£38.00
RL15GW	1.5	230	Gold	440	375	Plain Ferrule	£51.00
RL15GW/3	1.5	230	Gold	440	200 & 600	Plain Ferrule	£53.00
RL15GW/4	1.5	230	Gold	440	430 & 905	Plain Ferrule	£53.00
RL20GW	2	230	Gold	440	375	Plain Ferrule	£53.00

Lamps with R7s caps

Generally used in glass fronted patio heaters. This lamp is used with spring loaded fittings. Average lamp life 3000 hours in glass fronted heaters.



Model	kW	Voltage	Colour	Lamp length (mm)	List Price
RL13GS	1.3	230	Gold	254	£42.00

CH Ceramic Heaters

- **Providing virtually instant comfort heat in a variety of commercial and industrial buildings.**
- **Especially suited to irregularly used buildings where conventional space heating is impractical.**
- **Avoids the light output associated with shortwave infrared heaters**
- **Ideally suited to spot heating a defined area within an otherwise unheated space**
- **Low running costs by selecting from a range of control options**

CH-3000 3kW Ceramic Heater providing directional radiant heat without light output

Typical Applications

Please note ceramic heaters are best suited to buildings with relatively low ceilings

- Community halls
- Workshops
- Kennels
- Zoos

CH-1500 1.5kW Ceramic Heater fully effective within a few minutes

Features Common to all Models

- Aluminium construction with safety grille
- Long life ceramic heat emitters
- High quality ivory paint finish
- Wall mounting bracket and providing 'up and down' and 'side to side' angle adjustment

Controlling CH Heaters

As CH ceramic heaters are 100% effective within four minutes of being switched on, we recommend a control system that will de-energise a heater when heating is not required. This can be achieved by means of a Push Button Timer or a Movement Detector.

Push Button Timer – TS-6 pre-programmed time delay

The BN Thermic TS-6 is a compact, surface mount, weatherproof device conforming to IP66. A simple touch activated push button 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 be automatically switched off until the button is pushed again. The device is vandal resistant and tamperproof meaning only authorised personnel can adjust the time settings. For full details of the TS-6 see page 79.

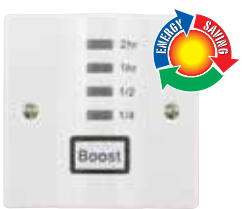
The TS-6 has a switching capacity of 16A. It can therefore directly switch a combined load of up to 3kW. Larger loads or 3-phase loads can be switched via a suitably rated contactor (see page 73).

TS-6 Energy - saving device with time delay selected by authorised personnel

Push Button Timer – TS-4 user selectable time delay

The BN Thermic TS-4 is designed for installation into a standard single-gang back box. A simple push button provides 15 minute/ 30 minute / 1 hour / 2 hour settings. Once the selected period has elapsed the heating will be automatically switched off until the button is pushed again. The time setting can be changed at any point during the cycle and the timer also provides a means of switching the heating off. For full details of the TS-4 see page 79.

The TS-4 has a switching capacity of 13A. It can therefore directly switch a combined load of up to 3kW. Larger loads or 3-phase loads can be switched via a suitably rated contactor (see page 73).



TS-4 Energy - saving device allowing time delay selected and altered easily

TS-5 High Capacity Soft Start Timer

The TS-5 timer is designed for direct switching of 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 whilst the built-in triac reduces 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.

TS-5 Weatherproof Timer for larger loads

Movement Sensor

The BN Thermic WH-402 is a compact, surface mount, weatherproof device conforming to IP55. The WH-402 will detect movement in an area up to 12m from its mounting position in a 180° arc. Both distance and angle of detection can be reduced if required. Once movement has been detected, the heating will be switched on. If no further movement is detected within a pre-programmed time period (5 seconds to 18 minutes) the heating will be automatically switched off. For full details of the WH-402 see page 80.

The WH-402 has a switching capacity of 16A. It can therefore directly switch a combined load of up to 3kW. Larger loads or 3-phase loads can be switched via a suitably rated contactor (see page 73).

WH-402 Movement sensor

CH Ceramic Heaters - Specifications and Prices

Model	Volts	kW	Dimensions (mm)			Weight (kg)	List Price
			H	W	D		
CH-1500	230	1.5	190	405	72	1.8	£136.00
CH-3000	230	3.0	345	405	72	2.8	£235.00

Optional Remote Mounted Control Devices

Model	Description	Full Details on Page	List Price
WH-402	Movement sensor (16A)	80	£84.00
TS-6	Push button timer (16A)	79	£79.00
TS-4	Push button timer - user selectable time delay (13A)	79	£43.00
TS-5	Soft Start timer (6kW)	80	£136.00

CH-1500 Ceramic Heaters providing an economic means of heating a community hall

Bracket providing 'up and down' adjustment

Bracket fitted with extension arm providing 'up and down' and 'side to side' adjustment

GL Glass Radiators

- **Stylish glass radiators in white, black, red or mirror**
- **A unique combination of beauty and economy**
- **Ideal for both domestic and commercial applications**
- **Safe for use in bathrooms**

Typical Applications

- Houses and apartments
- Offices
- Reception Areas

GL-09W Economic and modern heating in an Architect's office

Features

- Choice of black, white, red or mirrored finish
- Toughened glass construction
- Wall mounting brackets supplied as standard
- Can be mounted vertically or horizontally
- Class II, double insulation suitable for bathroom installation
- IP44 rated
- Auto-reset over-temperature cut-out
- Electrical connection: 1m pre-wired cable

GL-09B Efficient radiant heating to suit a contemporary lifestyle

Red, black and white GL glass radiators are available in three sizes

GL-03R Compact and stylish heating solution

GL-09M Providing stylish heating and a functional mirror in a bathroom

Controlling GL Glass Radiators

We recommend that GL glass radiators are thermostatically controlled. This heating technology is particularly well suited to wireless control.

Each heater is connected to a WSB-1 relay box which is generally mounted at skirting level. The relay box will control the heater according to wireless signals received from a WST-1 thermostat.

WSB-1 Relay Box

The WST-1 programmable thermostat is battery powered and can be wall-mounted or simply placed in a convenient location using the small stand provided. The thermostat can send a signal to up to four WSB-1 relay boxes and thus can control up to four heaters.

WST-1 Wireless Thermostat

For multi-room installations a WSP-1 central programmer can be used. The WSP-1 is a compact, touchscreen device providing individual programmable control for up to 24 heating zones. Generally a heating zone would be an individual room.

When used with the WSP-1 central programmer, the WST-1 thermostat's programmable functions are superseded and it will act primarily as a wireless air sensor although it will still provide a temporary override function

WSP-1 Central Programmer

The combination of a single WSP-1 central programmer and the appropriate number of WST-1 thermostats and WSB-1 relay boxes will provide completely flexible control of every room in a property from one location.

GL Glass Radiators

Model	Colour	Output (W)	Dimensions (mm)			Weight (kg)	List Price
			W	H	D		
GL-03W	White	300	700	500	12	14	£438.00
GL-03B	Black	300	700	500	12	14	£438.00
GL-03R	Red	300	700	500	12	14	£438.00
GL-05W	White	500	900	600	12	21	£622.00
GL-05B	Black	500	900	600	12	21	£622.00
GL-05R	Red	500	900	600	12	21	£622.00
GL-05M	Mirror	500	900	600	8	16	£661.00
GL-09W	White	900	1200	800	12	38	£897.00
GL-09B	Black	900	1200	800	12	38	£897.00
GL-09R	Red	900	1200	800	12	38	£897.00
GL-09M	Mirror	900	1200	800	8	27	£1,024.00

Wireless Control Prices

Model	Description	List Price
WSB-1	Wireless Relay Box 16A	£83.00
WST-1	Wireless Thermostat (for use with WSB-1 relay box)	£90.00
WSP-1	Wireless Central Programmer	£191.00

ESP Radiant Cassettes

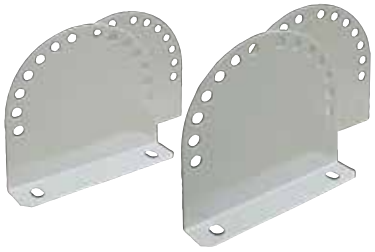
- **Providing an extremely economic means of heating large commercial spaces**
- **Attractive unobtrusive design well suited to modern facilities**
- **High mounting positions allows flexible use of floor and wall space and does not interfere with activities**

The ESP range providing an economic means of heating large areas

Typical Applications

- Sports Halls
- Squash Courts
- Showrooms
- Community Halls
- Food Halls

New compact model



ESP-B Optional Adjustable Brackets
Can be used for both wall and ceiling mounting.

The installed load must exceed the heat loss from the entire area. ESP black heat radiant cassettes are not ideally suited to 'spot heating' applications.

Features Common to all Models

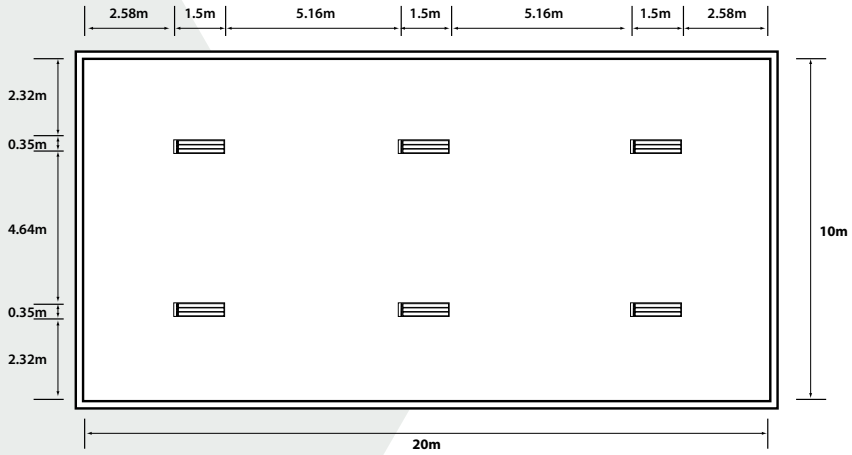
- No draughts, noise or light output
- Robust steel case with attractive white epoxy finish
- Specially treated aluminium heat emitter
- Brackets for ceiling mounting with four fixing points to facilitate suspension

Optional Adjustable Brackets

ESP-B adjustable brackets can be used for both wall and ceiling mounting. The brackets are designed to allow the angle of the heater to be easily adjusted.

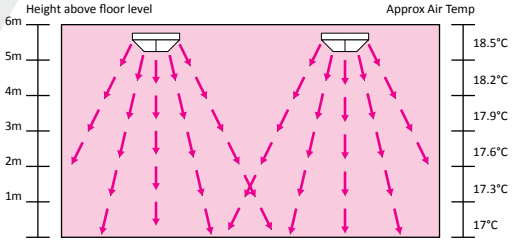
Selection and Installation

The total load of the selected ESP cassettes should exceed the heat loss from the building in cold conditions. The heaters should be ceiling mounted or suspended at high level ensuring that the space between the heaters is no greater than the distance between the heaters and the floor.



Typical ESP System Layout

Black Heat Radiant Cassettes should be seen as an energy saving alternative to conventional space heating systems, they are not ideally suited to 'spot heating' applications.



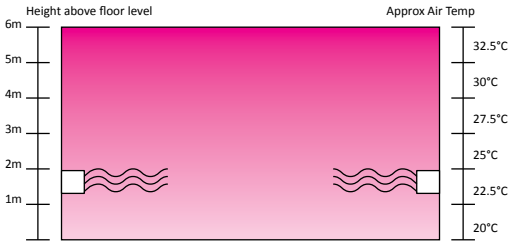
Energy Saving with ESP Radiant Cassettes

Heating a building using ESP Radiant Cassettes

Energy Saving

ESP Radiant Cassettes are our most economic heaters for buildings with high roofs for the following reasons:

- The gentle radiant effect means that the 'experienced temperature' can be up to 4°C warmer than the actual air temperature. This means that the thermostat can be set up to 4°C lower.
- The temperature gradient is negligible. Typically air temperature will increase by 0.3°C per metre above floor level. This figure compares to a typical 2.5°C per metre when using fan heaters.



Heating a large building using fan heaters

Controlling ESP Radiant Cassettes

The recommended means of controlling ESP Black Heat Radiant Cassettes is to select one of four control packages

Comfort control package

Programmable package

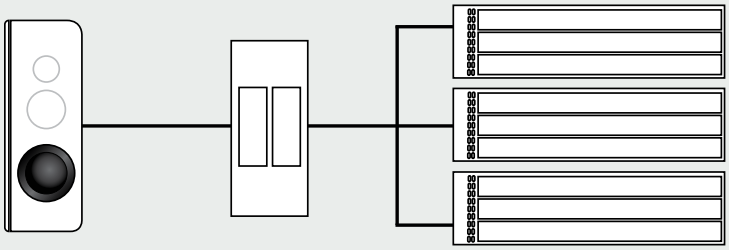
Programmable package with set-back

Flexible Package

All control packages are based on BN Thermic's range of Hard Case tamperproof and vandal resistant Thermostats. Hard Case's tamperproof design ensures that only authorised personnel can adjust the temperature setting.

Comfort Control Package

The comfort package utilises the Hard Case HC-T2 Tamperproof Thermostat which should be wall mounted at approximately 1.5m above floor level. The thermostat will switch the heaters via a suitably rated contactor.



HC-T2
Tamperproof Electronic Thermostat

CON
Contactor selected to suit heating load

ESP
Group of black heat radiant cassettes

Control Components

HC-T2 Tamperproof Thermostat

Suitably Rated Contactor

Programmable Package

The programmable package utilises the Hard Case HC-T2 tamperproof thermostat which should be wall mounted at approximately 1.5m above floor level. The thermostat will switch the heaters via a suitably rated contactor.

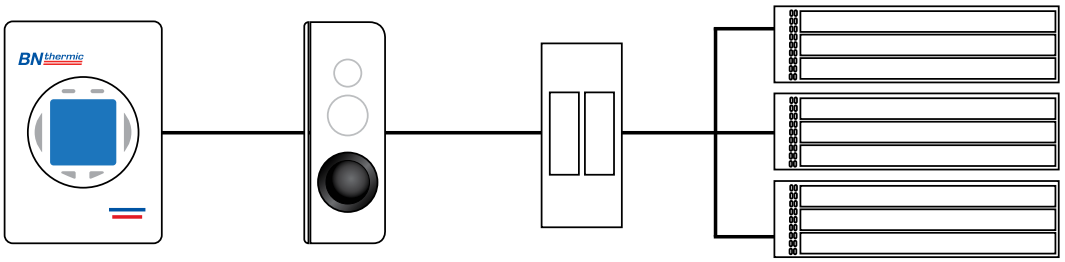
A PROTIM-7 programmable timer will ensure that the heating system is not energised while the building is unoccupied (typically at night and at weekends). The PROTIM-7 incorporates a boost button which allows a temporary temperature boost while the system is in 'off' mode. The timer also provides permanent 'on' and permanent 'off' overrides.

Control Components

HC-T2 Tamperproof Thermostat

PROTIM-7 Programmable Timer

Suitably Rated Contactor



PROTIM-7
Programmable Timer

HC-T2
Tamperproof Electronic Thermostat

CON
Contactor selected to suit heating load

ESP
Group of black heat radiant cassettes

ESP Continued

Programmable Package with Set-Back

The programmable package with set-back utilises the Hard Case HC-ST2 tamperproof thermostat which should be wall mounted at approximately 1.5m above floor level. The thermostat will switch the heaters via a suitably rated contactor (see page 73).

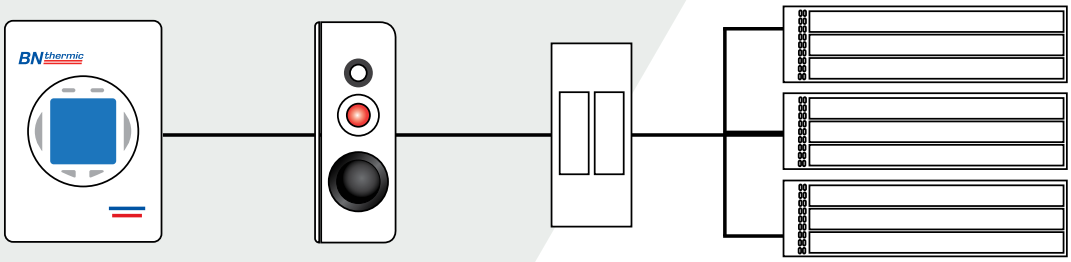
The HC-ST2 has two settings: high (comfort) and low (set-back). A PROTIM-7 programmable timer will ensure that the heating system operates at its low (set-back) setting while the building is unoccupied (typically at night and at weekends). The PROTIM-7 incorporates a boost button which allows a temporary temperature boost while the system is in 'Set-back' mode. The timer also provides permanent 'comfort' and permanent 'set-back' overrides.

Control Components

HC-ST2 Tamperproof Thermostat

PROTIM-7 Programmable Timer

Suitably Rated Contactor



PROTIM-7
Programmable Timer

HC-ST2
Tamperproof Electronic Thermostat with high-low settings

CON
Contactor selected to suit heating load

ESP
Group of black heat radiant cassettes

Flexible Package

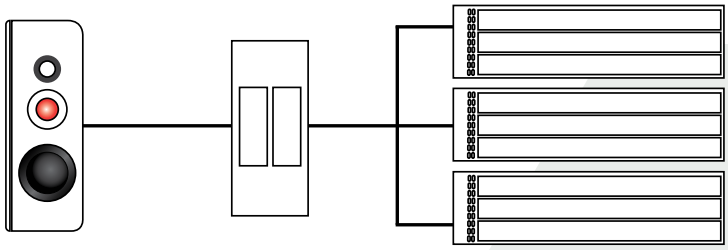
The flexible control package utilises a Hard Case HC-ST2 Thermostat switching a group of Black Heat Radiant Cassettes via a suitably rated contactor (see page 73).

The HC-ST2 has two settings: high (comfort) and low (set-back). The default setting is low (set-back). The HC-ST2 incorporates a simple push button which changes the set-point from low (set-back) to high (comfort) for a pre-programmed period of time (1/2, 1, 2 or 4 hours). Once this period of time has elapsed the thermostat will automatically revert to its low (set-back) setting.

Control Components

HC-ST2 Tamperproof Thermostat

Suitably Rated Contactor



HC-ST2
Tamperproof Electronic Thermostat with high-low settings and run-down timer

CON
Contactor selected to suit heating load

ESP
Group of black heat radiant cassettes

ESP heaters providing cost effective heating in a showroom in Maidstone

ESP2 Radiant cassettes - Specifications and Prices

Model	Volts	kW	Dimensions (mm)			Mounting Height (m)	Weight (kg)	List Price
			H	W	D			
ESP2-09	230	0.9	60	1550	150	2.8 to 10	5.8	£261.00
ESP2-12	230	1.2	60	1550	150	2.8 to 10	5.8	£268.00
ESP2-18	230	1.8	60	1550	250	3.0 to 10	9.9	£370.00
ESP2-24	230	2.4	60	1550	250	3.0 to 10	9.9	£393.00
ESP2-30	230 or 400/3N	3.0	60	1550	350	3.0 to 10	13.9	£525.00
ESP2-36	230 or 400/3N	3.6	60	1550	350	3.0 to 10	13.9	£530.00
ESP2C-06 Compact	230	0.6	60	650	250	2.8 to 10	5.5	£290.00
ESP2C-08 Compact	230	0.85	60	650	250	2.8 to 10	7.5	£302.00
ESP2-B	Optional wall brackets (pair) suitable for all ESP2 models							£25.00

Control Options

Model	Description	Full Details on Page	List Price
HC-T2	Tamperproof Thermostat	74	£158.00
HC-ST2	Tamperproof Thermostat with Set-Back	74	£190.00
HC-D	Tamperproof Tool for Hard Case (HC) range	74	£20.00
PROTIM-7	Programmable Timer	73	£112.00

Hard Case models have the option of a remote sensor (see pages 74-75)

HC-T2 Energy Saving Tamperproof Electronic Thermostat

HC-ST2 Tamperproof Thermostat with two adjustable set-points

HC-D Tamperproof Tool for HC-T2
Ensuring that only authorised personnel can adjust temperature settings

PROTIM-7 Programmable Timer

Contactors

Model	Poles	Amps per Pole	Max kW per Pole @230V	List Price
CON-32	3	32	7	£32.00
CON-50	3	50	11.5	£42.00
CON-80	3	80	18	£80.00
ENCL-D	Enclosure for CON-32 and CON-50			£24.00

Contactor allowing a single thermostat to switch a group of ESP Radiant Cassettes

RP Radiant Ceiling Panels

- **Providing a sophisticated noise and draught free means of heating commercial premises**
- **Low running costs**
- **Extra safety as personnel have no access to heaters**
- **Ceiling mounting allows flexible use of floor and wall space and does not interfere with activities**

Typical Applications

- Care Homes
- Trade Counters
- Offices
- Meeting Rooms

The installed load must exceed the heat loss from the entire area. RP black heat radiant cassettes are not ideally suited to 'spot heating' applications although they can provide a localised temperature boost within a larger space, perhaps over a work station.

RP-03 provides an almost invisible source of gentle radiant heat

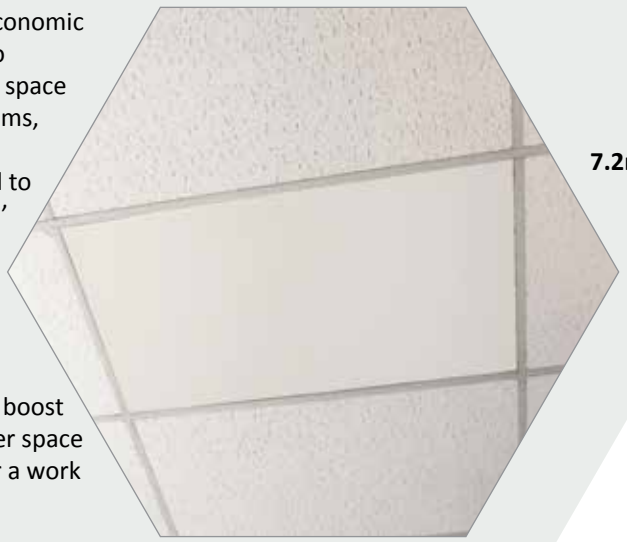
Features Common to all Models

- Specifically designed for quick and easy installation into suspending ceilings
- Bracket supplied for easy mounting onto a conventional ceiling
- Attractive white finish
- Fully enclosed steel case conforming to IP44
- Integral insulation layer ensures that radiant energy is directed into the room
- Suitable for mounting heights up to 4m

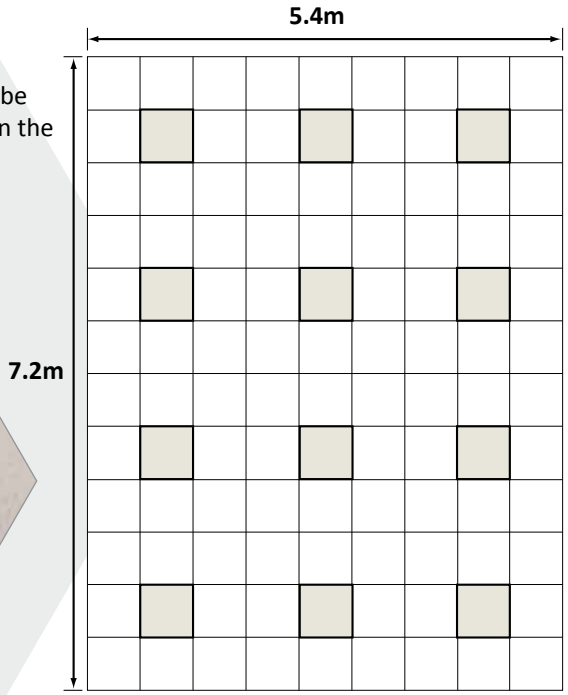
Selection and Installation

The total load of the selected RP Ceiling Panels should exceed the heat loss from the building in cold conditions. The heaters should be positioned so that the space between the heaters is no greater than the distance between the heaters and the floor.

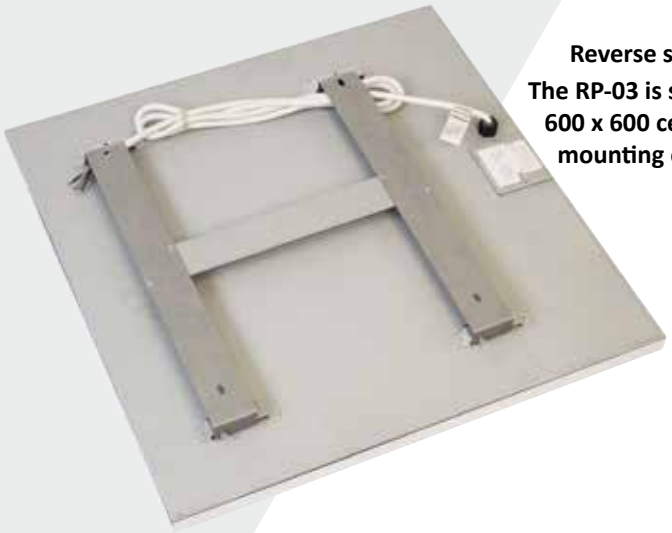
RP Ceiling Panels should be seen as an economic alternative to conventional space heating systems, they are not ideally suited to 'spot heating' applications although they can provide a localised temperature boost within a larger space perhaps over a work station.



RP-06 specifically sized for easy installation in a 1200 x 600 ceiling grid but supplied with bracket for mounting onto a conventional ceiling if required



Typical arrangement of RP-03 ceiling panels in a 600 x 600 ceiling grid



Reverse side RP-03 showing mounting bracket

The RP-03 is specifically sized for easy installation in a 600 x 600 ceiling grid but supplied with bracket for mounting onto a conventional ceiling if required

RP-06 Radiant Panels providing an economic and stylish means of heating a flying school in Sussex

Energy Saving

RP Ceiling Panels are a more economic means of heating commercial premises than conventional heating systems.

- The gentle radiant effect means that the 'experienced temperature' can be up to 4°C warmer than the actual air temperature. This means that the thermostat can be set up to 4°C lower.
- The temperature gradient is negligible. Typically air temperature will increase by 0.3°C per metre above floor level. This figure compares to a typical 2.5°C per metre when using fan heaters.

Controlling RP Radiant Ceiling Panels

RP radiant ceiling panels should generally be thermostatically controlled. Normally the thermostat will be wall-mounted at approximately 1.5m above floor level. Where the combined installed load exceeds the switching capacity of the thermostat, a suitably rated contactor will be required.

Select from the following control components:

RST-IN Adjustable wall-mounted thermostat (commercial grade)

RST-IN, BN Thermic's standard, commercial grade thermostats provide accurate control and allow easy adjustment of temperature set-point.

RST-IN Standard Room Thermostat

RST-TP Tamperproof wall-mounted thermostat (commercial grade)

To prevent wilful or casual adjustment of temperature set point, we recommend the RST-TP tamperproof thermostat. The set-point adjustment knob is concealed under the thermostat's cover and optional 'shear-off' fixing screws are provided for complete security.

RST-TP Energy Saving Tamperproof Thermostat

PROSTAT 7 Programmable wall-mounted thermostat (commercial grade)

The PROSTAT-7 is a seven day programmable thermostat which allows the heating system to be controlled to match the pattern of use. Temporary and permanent overrides are provided.

PROSTAT 7 Programmable Thermostat

HC-T2 Tamperproof wall-mounted thermostat (industrial grade)

BN Thermic's famous Hard Case industrial and public area thermostats provide rugged tamperproof and vandal resistant control. Hard Case thermostats require a special tool to gain access the temperature adjustment knob.

HC-T2 Energy Saving Tamperproof Thermostat

HC-ST2 Tamperproof wall-mounted thermostat with set-back (industrial grade)

A Hard Case thermostat is available with all the features of the standard model but with two set-points: high (comfort) and low (set-back). Typically this device would be used to provide comfort heating when a building is occupied and frost protection at other times. There are two means of switching between comfort and set-back.

Operation Mode One

Use the side mounted button to activate the built-in, programmable timer. The Hard Case thermostat will then control at the 'comfort' set-point until the pre-programmed time period has elapsed at which point it will revert to the default 'set-back' temperature.

Operation Mode Two

Use a remote mounted PROTIM-7 timer to switch between 'comfort' and 'set-back' to match the building's pattern of use. The PROTIM-7 also provides boost and override functions.

HC-ST2 Tamperproof Electronic Thermostat with two adjustable set-points

PROTIM-7
24 hour or 7 day programmable control for any number of OUH industrial fan heaters

HC-D Tamperproof Tool for Hard Case Electronic Thermostats, ensuring that only authorised personnel can adjust temperature settings

RP Radiant Ceiling Panels - Specifications and Prices

Model	Volts	kW	Dimensions (mm)			Weight (kg)	List Price
			H	W	D		
RP-03	230	0.3	25	595	595	5	£150.00
RP-06	230	0.6	25	1195	595	10	£206.00

Remote Mounted Control Components

Model	Description	Full Details on Page	List Price
RST-IN	**Room Thermostat (commercial grade)**	76	£54.00
RST-TP	**Tamperproof Thermostat (commercial grade)**	78	£80.00
PROSTAT-7	**Programmable Timer (commercial grade)**	77	£84.00
HC-T2	**Tamperproof Electronic Thermostat (industrial grade)**	74	£158.00
HC-ST2	**Tamperproof Electronic Thermostat with 'comfort' and 'set-back' settings (industrial grade)**	74	£190.00
HC-D	**Tamperproof tool for use with Hard Case (HC) thermostats**	74	£20.00
PROTIM-7	**Programmable Timer (industrial grade)**	73	£112.00

PROTIM-7 Programmable Timer

Application

- Can be used with a wide range of BN Thermic heaters and heating systems
- Tough Hard Case aluminium box makes the PROTIM-7 ideal for industrial applications

PROTIM-7
Programmable timer

Specification

Programming	7 day, 5 + 2 days or 24 hour
Mounting	Surface
Maximum events per day	4
Switching Capacity	13A 230V (not recommended for direct switching of halogen heaters)
Voltage Supply	230V
Dimensions	90 x 115 x 57mm
Ingress Protection	IP30
Special Features	Advance to next programme Boost (select 1 hour or 2 hours) Override – permanently on or permanently off Automatic summer update Battery back up

TIMERS - Prices

Model	Description	List Price
PROTIM-7	Programmable Timer	£112.00

Contactors allow a thermostat or similar switching device to switch large single phase or three phase loads.

(230V coil – resistive loads only)

CON-32
Contactor

CON-32 mounted in ENCL-D enclosure on DIN rail

CON-50

Contactors - Specifications and Prices

Model	Poles	Amps per Pole	Max kW per Pole @230V	List Price
CON-32	3	32	7	£32.00
CON-50	3	50	11.5	£42.00
CON-80	3	80	18	£80.00
ENCL-D	Enclosure for CON-32 and CON-50			£24.00

CONTROLS Hard Case Thermostats

HARD CASE

Energy Saving Tamperproof Thermostats

- **Energy saving control devices because only authorised personnel can adjust temperature settings**
- **Vandal resistant design suitable for public areas**
- **Highly accurate electronic temperature control ensures lowest possible heating costs**
- **Top quality products backed by 5 year warranty**

Typical Applications

- Controlling BN Thermic heating systems such as OUH Industrial Unit Heaters and ESP Radiant Cassettes
- Accurate temperature control in shops, warehouses, schools, sports halls etc
- Frequently used as an integral component in a programmable heating system

Features Common to both Models

- Tamperproof design requires a special tool (HC-D) to adjust temperature settings
- Electronic control accurate to within +/- 0.5°C
- Super robust vandal resistant die-cast aluminium enclosure
- Integral black sensor ideally suited for control of radiant heating systems
- Suitable for use with a remote HC-S2 Sensor

HC-T2

Standard Thermostat

Application

Comfort heating control or frost protection

HC-T2 External View
Note Tamperproof screws preventing unauthorised personnel from adjusting temperature settings

Features specific to HC-T2

Adjustable range (comfort):	12 to 25°C
Adjustable range (frost protection):	0 to 12°C

Selection between ranges by means of switch located under tamperproof lid

Output switch rating:	16A
Output switch:	Changeover
Adjustable differential:	0.25 to 5°C
Power Supply:	230V
Dimensions:	120 x 95 x 56.5mm
Weight:	0.33kg

HC-T2 Internal View
Note switch allowing either 'comfort' or 'frost protection' to be selected

HC-S2 Remote Sensor

Optional remote mounted sensor for use with HC-T2 and HC-ST2 tamperproof Thermostats. When the provided gasket is fitted, the unit will conform to IP55 (protected against water sprayed from all directions).

Dimensions: 74 x 51 x 28mm

HC-D Special Tool for Removing Tamperproof Screws

The key to the Hard Case energy saving potential is the HC-D. Without this device it is impossible to adjust temperature settings. This ensures that changes are only made by authorised personnel and prevents casual or willful adjustments being made.

HC-ST2

Thermostat with Set-Back

Application

Provides frost protection as a default with a comfort setting for programmable periods

HC-ST2 External View
Note push button used to activate run-down timer

Operation

Operation Mode 1 – Using Integral Run-Down Timer

Ideal for irregularly used facilities

The HC-ST2 has two temperature settings: high (comfort) and low (set-back). The default setting is low (set-back). The HC-ST2 incorporates a simple push button which changes the set-point from low (set-back) to high (comfort) for a pre-programmed period of time (½ hour to 7½ hours in ½ hour increments). Once this period of time has elapsed the device will automatically revert to its low (set-back) setting.

This method of temperature control is ideal for irregularly used facilities such as community halls where the set-back setting will provide frost protection while the hall is unoccupied.

Operation Mode 2 – Using Remote Programmable Timer

Ideal for facilities with a regular pattern of use (with a provision for occasional comfort heating outside normal hours)

The HC-ST2 has two settings: high (comfort) and low (set-back). A PROTIM-7 programmable timer will ensure that the heating system operates at its low (set-back) setting while the building is unoccupied (typically at night and at weekends). The PROTIM-7 incorporates a boost button which allows a temporary temperature boost while the system is in 'Set-back' mode. The timer also provides permanent 'comfort' and permanent 'set-back' overrides.

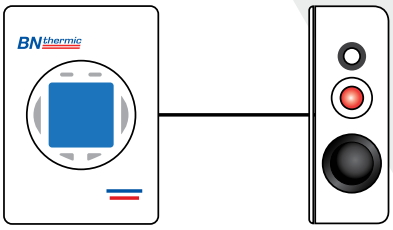
See page 73 for full details of the PROTIM-7 programmable timer

Features specific to HC-ST2

Adjustable range (comfort):	12 to 25°C
Adjustable set-back:	Up to 20°C below high temperature setting
Led indicator:	blue (set-back) or red (comfort)
Output switch rating:	16A
Output switch:	Changeover
Adjustable differential:	0.25 to 5°C
Power Supply:	230V
Dimensions:	120 x 95 x 56.5mm
Weight:	0.33kg

HC-ST2 Internal View
Note adjustment knobs for both comfort and set-back settings

HARD CASE



PROTIM-7
Programmable timer

HC-ST2
Tamperproof thermostat with two settings: HIGH (comfort) and LOW (set-back)

HC-ST2 Used with a programmable timer

HC Hard Case - Prices

Model	Description	List Price
HC-T2	Standard Electronic Thermostat	£158.00
HC-ST2	Set-Back Electronic Thermostat with Run-Down Timer	£190.00
HC-S2	Remote Sensor	£43.00
HC-D	Special Tool for Removing Tamperproof Screws	£20.00

CONTROLS Thermostats

BN Thermic offers a range of thermostats to meet the requirements of a variety of commercial and industrial heating applications. For tamperproof and vandal resistant devices please see our Hard Case range on page 74

RST-IN Thermostat for Comfort Heating Applications

Application

The RST-IN is a simple wall-mounted thermostat suitable for controlling a variety of space heaters

Specification

Adjustable Range	+5°C to +30°C
Mounting	Surface
Switching Capacity	10A 230V (larger loads and 3-phase loads can be switched via a suitable rated contactor - see page 73)
Voltage Supply	230V
Contacts	Single pole, change over
Dimensions	74 x 74 x 23mm
Ingress protection:	IP30
Special Features	Integral heat anticipator improves control accuracy. Adjustable range can be limited or locked.

List Price £54.00

RST-EX Thermostat suitable for Damp Conditions

Application

The RST-EX has a high IP rating making it suitable for applications such as plant rooms and water treatment works

Specification

Adjustable Range	+5°C to +35°C
Mounting	Surface
Switching Capacity	15A 230V (larger loads and 3-phase loads can be switched via a suitable rated contactor - see page 73)
Voltage Supply	None Required
Contacts	Single pole, change over
Dimensions	105 x 105 x 60mm
Ingress protection:	IP54

List Price £76.00

FST-IN Frost Thermostat

Application

The FST-IN will provide accurate control at low temperatures and is ideal for use with pipe freeze protection cables

Specification

Adjustable Range	-20°C to +30°C
Mounting	Surface
Switching Capacity	10A 230V (larger loads and 3-phase loads can be switched via a suitable rated contactor - see page 73)
Voltage Supply	230V
Contacts	Single pole, change over
Dimensions	74 x 74 x 23mm
Ingress protection:	IP30
Special Features	Integral heat anticipator improves control accuracy. Adjustable range can be limited or locked.

List Price £54.00

FST-EX Frost Thermostat for Outdoor Use

Application

The FST-EX will provide accurate control at low temperatures and is ideal for use with pipe freeze protection cables. A high IP rating means that this device is suitable for outdoor use.

Specification

Adjustable Range	-20°C to +30°C
Mounting	Surface
Switching Capacity	10A 230V (larger loads and 3-phase loads can be switched via a suitable rated contactor - see page 73)
Voltage Supply	230V
Contacts	Single pole, change over
Dimensions	125 x 125 x 75mm
Ingress protection:	IP65
Special Features	Integral heat anticipator improves control accuracy. Adjustable range can be limited or locked. Cover must be removed to allow set-point adjustment

List Price £125.00

PROSTAT-7 Programmable Thermostat

Application

By controlling both air temperature and the hours of operation, the PROSTAT-7 ensures maximum economy in a wide variety of commercial applications. A simple override facility provides a quick boost to comfort levels when the thermostat would normally be in set-back mode.

Specification

Adjustable Range	+5°C to +30°C
Mounting	Surface
Switching Capacity	6A 230V (larger loads and 3-phase loads can be switched via a suitable rated contactor - see page 73)
Voltage Supply	3 x AA batteries (supplied)
Contacts	Single pole, change over
Dimensions	142 x 71 x 30mm
Ingress protection:	IP30
Special Features	Battery life in excess of 2 years Up to 6 programmable events per day Temporary temperature override until next preset period Temperature lock – permanent temperature override until reset.

List Price £84.00

GP-T Electronic Thermostat for Gutter and Downpipe Heating Systems

Application

The problems associated with snow and ice occur when the ambient temperature is between +5°C and -5°C. To ensure maximum economy, the GP-T has two set-points. In this way the system will be switched off when the temperature is either too high or too low for problems to arise. The GP-T should be mounted externally in a sheltered location.

GP-T with cover in place

GP-T with cover removed showing set-point adjustment knobs

Specification

Adjustable Range:	-10°C to +30°C
Mounting:	Surface
Switching Capacity:	16A 230V
Voltage Supply:	230V
Contacts:	Single pole, single throw
Dimensions:	120 x 122 x 55mm
Ingress Protection:	IP65
Special Features:	Supplied with M20 cable gland

List Price £148.00

RST-TP Energy Saving Tamperproof Thermostat

Application

The RST-TP is a simple wall mounted thermostat for controlling a variety of space heaters. The temperature adjusting knob is concealed.

Specification

Adjustable Range	+5°C to + 25°C
Mounting	Surface
Switching Capacity	20A 230V (larger loads and 3-phase loads can be switched via a suitably rated contactor - see page 73)
Voltage Supply	230V
Contacts	Single pole, single throw
Dimensions:	85 x 85 x 35mm
Ingress Protection	IP30
Special Features	Concealed temperature adjustment. Optional shear-off cover fixing screws provided. Integral heat anticipator improves control accuracy.

List Price £80.00

ERC-T1 Thermostat for Snow and Ice Melting

Application

The ERC-T1 provides an economic means of controlling ERC snow and ice melting mats.

Specification

Adjustable Range:	0 to 10°C
Adjustable Run-on Time:	0 to 5 hours
Mounting:	DIN-rail
Switching Capacity:	16A 230V (larger loads and 3-phase loads can be switched via a suitably rated contactor - see page 73)
Voltage Supply:	230V
Contacts:	Single pole, single throw
Dimensions:	86 x 52 x 59mm
Ingress Protection:	IP20
Ground Sensor (loose):	Detecting moisture and temperature IP68
Sensor Dimensions:	60 dia x 32 with 10m cable
Special Features:	LED indicators: power on/moisture detected/low temperature detected/output on

List Price £549.00

CS-1 Wall Mounted Controller

Application

The CS-1 controller has been developed specifically for use with BN Thermic's 800, SCH, CHS, SMH and RH range of commercial fan assisted heaters.

Specification

Mounting	Surface
Switching	Manual
Settings	On/Off/High Heat/Low Heat/Fan-only
Voltage Supply	230V
Dimensions	90 x 149 x 45mm
Ingress protection:	IP30

List Price £69.00

BN Thermic's range of shortwave heater controls has been devised to ensure the lowest possible running costs for a heating system.

TS-6 Pre-programmed Push Button Timer

Application

- Generally used with shortwave radiant heaters such as BN Thermic's HWP2 patio heaters
- An energy saving device preventing shortwave heaters being energised unnecessarily
- Safe to install and leave outdoors.

Specification

Mounting	Surface
Adjustable Time Delay	2 minutes to 2 hours
Switching Capacity	16A 230V (larger loads and 3-phase loads can be switched via a suitable rated contactor)
Voltage Supply	230V
Contacts	Single pole, single throw
Dimensions	85 x 85 x 67mm
Ingress protection:	IP66 suitable for outdoor use
Special Features	Touch activated for easy operation Blue locator light illuminated when heating 'off' Red LED indicates 1 minute of operation remaining.

List Price £79.00

TS-4 Push Button Timer (User Selectable Time Delay)

Application

- Generally used with shortwave radiant heaters such a BN Thermic's HN Series Shortwave Infrared Heaters
- An energy saving device preventing shortwave heaters being energised unnecessarily
- For indoor use in facilities such as school buildings and community halls

Specification

Mounting	Recessed into 25mm (minimum) back-box
Time Delay	User selects 15 minute/ 30 minute / 1 hour / 2 hour
Switching Capacity	13A 230V (larger loads and 3-phase loads can be switched via a suitable rated contactor)
Voltage Supply	230V
Contacts	Single pole, single throw
Dimensions	85 x 85 x 31mm
Ingress protection:	IP20 not suitable for outdoor use
Special Features	LED indicates 2 minutes of operation remaining Time setting can be changed at any time during cycle Provides a means of switching off heating.

List Price £43.00

TS-5 6kW Soft Start Push Button Timer

Application

- Ideal for use with BN Thermic's HWP patio and HN halogen heaters
- Switches loads up to 6kW
- Energy saving device preventing heaters being switched on unnecessarily
- Safe to install and leave outdoors.

Specification

Mounting	Surface
Time delay	Pre-programmed 5 minutes to 70 minutes
Switching capacity	6kW 230V (250W minimum)
Voltage supply	230V
Contacts	Single pole, single throw
Dimensions	110mm x 168mm x 80mm
Ingress protection	IP55
Special features	Can be used in conjunction with a programmable timer and/or a thermostat.

List Price £136.00

VR-2 Dimmer Switch

Application

Specifically designed for use with radiant heaters, the VR-2 provides fine adjustment of heat intensity.

Specification

Mounting	Surface
Output adjustment	30% to 100%
Switching Capacity	13A 230V (shortwave infrared heaters up to 3kW 230V)
Voltage Supply	230V
Dimensions	115 x 90 x 58mm
Ingress protection:	IP55 (suitable for indoor or outdoor use)
Special Features	Definite click to 'off'.

List Price £104.00

WH-402 Movement Sensor

Application

Ideal for use with shortwave halogen heaters, the WH-402 improves economy switching off heating when no movement is detected. It is suitable for both indoor and outdoor use.

Specification

Mounting	Surface
Switching Capacity	16A 230V (larger loads and 3-phase loads can be switched via a suitable rated contactor)
Voltage Supply	230V
Sensing Range	12m 180° (both distance and angle can be reduced)
Time Delay	5 seconds to 18 minutes (adjustable)
Dimensions	65 x 83 x 115mm
Ingress protection:	IP55 suitable for indoor or outdoor use.

List Price £84.00

Company History

We are often asked whether there is a connection between BN Thermic and the once famous Bush Nelson company. The answer is most definitely: 'Yes'.

Bush Nelson Ltd was established in 1962 and quickly established a reputation for manufacturing high quality electric fan heaters for both domestic and commercial applications. During the 1990s Bush Nelson merged with the York based Can-Corp Ltd, a company specialising in industrial heaters, with Can-Corp's Dave Hillier becoming Managing Director of the consolidated company.

In the year 2000 the Bush Nelson team was further strengthened with the arrival of current BN Thermic Director, Richard Evans who already had over 20 years' experience in the heating industry.

BN Thermic Headquarters at Crawley, West Sussex

In 2005, Dave and Richard launched BN Thermic Ltd, a new company more keenly focused on the industrial and commercial sectors of the heating market. BN Thermic's first catalogue was a 6 page monochrome affair which, as you can see, has now grown to an 84 page full colour publication. As well as extending our product range, we have also extended our business hours and are now available to our customers from 8am to 5.30pm Monday to Friday.

At BN Thermic, we are proud of our company and excited by the opportunities the future brings, but we are also proud of our heritage which stretches back more than 50 years.

Environmental Awareness

BN Thermic has recently instigated several environmental programmes.

Energy Saving Products

Throughout this catalogue you will see our energy saving icon drawing attention to products and control systems that make the most of every kW consumed.

Paper Use Reduction

BN Thermic has invested significantly in IT developments enabling the company to reduce its paper usage by 50%. As a by-product of this programme, customer orders are now handled more efficiently helping the company to close in on its objective of 100% on time deliveries.

Recycling

BN Thermic believes strongly in the principle of recycling. Virtually all packaging material used is both recycled and recyclable.

For help in making the right selection for your application contact our Technical Sales Team

How to order BN Thermic Products

- BN Thermic products can be ordered from almost all UK electrical wholesalers
- Visit www.bnthermic.co.uk or call 01293 547361 for details of a wholesaler in your area
- This price list shows list prices – call your preferred wholesaler for your trade price

New Website

Our new website was launched in December 2014 with a smart phone and tablet friendly version following in early 2015. We believe our website now provides a valuable technical resource for our customers be they wholesalers, contractors, specifiers or end users.

Please go to **www.bnthermic.co.uk** and explore the following features

Selection by Application

For example, click on 'church' from the application menu and you will be given an overview of the two most suitable heating technologies. From this startling point you will be able to 'dill down' further for complete product data.

Heater Selection

Once you have selected the type of heating system, a step by step procedure is provided to help select the correct model or models. Where necessary this procedure will include the use of our kW calculator. If you prefer one of our engineers to do this work for you, simple questionnaires are provided.

Heater Control

To ensure an economic and efficient heating system the correct controls are essential. For every heater type, there is a 'control tab' guiding you to the control system best suited to your application

Image Gallery

Every product has a gallery with detailed images of the product itself as well as images of actual installations. For example have a look at the images of our GL glass radiant heaters which look really great installed in apartments and offices.

Downloads

Literature and manuals are available in pdf format for every product.

BN Thermic News

Find out about new products and developments at BN Thermic from our news pages or for absolutely up to the minute information like us on Facebook for follow us on Twitter.

the BN thermic brand promise

- We provide heating systems for just about every commercial and industrial application
- We are experts in underfloor heating and carry vast stocks
- Friendly experienced staff are always available to provide technical assistance
- We offer a free design service
- We carry out ‘free of charge’ and ‘no obligation’ site visits throughout the UK
- Next day delivery is available for almost all products.

Mirrored Radiant Heater

Contact us for technical advice, free designs or detailed quotations

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Web www.bnthermic.co.uk

Weatherproof Dimmer for Patio Heaters

Low Cost Self-Regulating Heating Cable

BN thermic