

# 2008/2009 Product Directory

Heating Solutions



## **Creda Heating** Introducing the fuel of the future!

For over 40 years Creda has been dedicated to heating the nation. In the future low carbon electricity will make electric heating the first choice for a lower carbon footprint and low lifetime cost of ownership.

Our heating technology has been developed with today's lifestyles in mind, so attention to style as well as efficiency and economy are paramount. At Creda we never forget, however, that safety is the number one concern.

With a renowned safety record, ease of installation or upgrade, virtually no maintenance and low cost of ownership, electric heating continues to grow in popularity in the UK and across the world.

As electricity generation gets ever greener, the world is turning to electric heating. In the UK our heating products are designed to comply with Part L of the Building Regulations which focuses on reducing carbon emissions and the conservation of fuel and power. For more details on meeting these regulations see pages 6 & 7 of this brochure. For advice on helping to save the Earth by saving energy and saving money too - see the guide at the back of this brochure.

Our advanced heating control options assist in achieving the best possible SAP ratings. (SAP is the Standard Assessment Procedure for energy ratings and is also used within Part L). As pioneers in electric heating, we continue to lead the field with innovative and contemporary product design, backed by nationwide after-sales support and a dedicated specification team.

We are here to help you develop the most effective, economical and environmental heating solution.

Welcome to the fuel of the future!

NEW

NEV



TPRIII Electronic pilot plus panel heaters with plug-in

timer options or 4 zone central control.

Proline II Ladder style electric towel rails with fast response heating technology.



Eco-Response storage radiant heaters offer advanced heating technology with rapid response, touch temperature control.

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Low carbon electricity, generated here in the UK and not imported from around the world, gives us security of energy supplies and contributes to reducing the devastating impact of climate change.

Low carbon electricity provides low carbon heating from electric panel and storage heaters. Creda are at the forefront of these developments with the latest technology, advanced energy-saving controls and contemporary styling to suit the homes of today.

#### Part L and SAP

(Standard Assessment Procedure)

The April 2006 revision to Part L of the Building Regulations requires that all new buildings do not exceed a Target Carbon Emission Rate (TER) as measured by a Standard Assessment Procedure (SAP). For more details on how to comply see our 'quick start' guide on pages 6 & 7 of this brochure.

Every day, across the country, we design electric heating systems that improve SAP scores and achieve full compliance with Part L of the Building Regulations for buildings of all shapes and sizes. See page 5 for information on how!

#### **Decent Homes and Sustainable Communities**

By 2010, the government has committed to bring 95% of all social housing in the UK into a decent condition and the remainder are to be improved soon after.

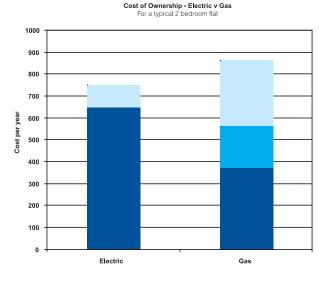
The new Housing and Regeneration Bill has also committed the government to building 3 million new affordable and sustainable homes by 2020. The provision of modern facilities are along with the building improvements required to meet this legal obligation, brings energy efficiency to the fore. Improved air-tightness combined with new heating systems, kitchen and bathroom facilities and effective ventilation strategies will all be needed. Our sister brand Redring has a successful track record in providing affordable hot water and showering into Decent Homes projects (see www.redring.co.uk) and Xpelair are experts in the field of low carbon ventilation, with the Xpelair Carbonlite boasting a range of low energy and long-life product (see www.xpelair.co.uk). Here at Creda we are the heating experts.

Warmth is a pre-requisite of decent housing and low carbon electricity is the route to sustainable communities. We believe electricity is the fuel of the future; homes built today may well last 60 to 100 years, so we must build for the future today! Creda electric heating can meet and exceed the needs of the Decent Homes Standard. Our website provides on-line help, tutorials and CPD accredited courses for those wishing to ensure their development is compliant with the regulations.

#### Creda on the web

Visit www.creda-heating.co.uk for downloads, brochures, product specifications and more information on Part L, SAP and the Decent Homes Standard.

#### Electric heating is cheaper than gas



Annualised installation costs (based on manufacturers' quoted average lifetimes and typical installation costs for 6 electric panels or 6 wet-radiators and a gas boiler).

Annual safety check and maintenance costs (to comply with manufacturers' conditions of guarantee - using lowest priced British Gas service contract to include boiler, controls and radiators).

Annual fuel costs (based on guidance from the Energy Saving Trust publication CE185 and Npower standard gas and electricity prices on Feb 10th 2008).

Low carbon electricity from renewable sources makes electric heating the fuel of the future; but already electric heating is cheaper than gas.

In recent times all energy prices have risen but none more so than gas. Creda electric heating is now cheaper over its entire lifetime than gas, when all the facts are considered.

Electric heating products cost less to buy in the first place and are quick and easy to install or upgrade. They offer total flexibility in the building design, with no complicated pipe runs, which also leave gaps in the building fabric; a problem when air-tightness is a key factor in improving the carbon footprint of a building and meeting Part L of the building regulations. Once installed, electric heating requires virtually no maintenance. Unlike gas there is no legal requirement for an annual landlord safety certificate.

Year in and year out, electric heating provides instant, responsive and safe heating on demand. Recent calculations have shown that when all these factors are taken into account there is a minimum overall cost saving of at least 13% a year in comparison to gas central heating.

Apartments and flats often favour electric heating for all these reasons. It is the simplest and most cost effective solution for many hotels, gyms, crèches, nurseries, surgeries, care homes, offices and shops all over the UK.

#### Application design

We have over 40 years experience in designing and supporting electrical heating installations. We are able to offer an expert application design service for all our products, helping new and existing customers alike to specify Creda products into real buildings and live projects, either off-plan, commenced new-build or refurbishments. In recent times the proliferation of environmental legislation and revisions to Building Regulations, all designed to reduce carbon intensity and improve energy efficiency, have made the design process more complex. We are here to help with two levels of design service.

#### Level 1:

Our standard design service is free of charge and will provide a clear and simple indication of the products required and the associated costs. This service can be provided from basic plans and drawings.

#### Level 2:

Our enhanced design service incurs a very competitive fee to cover third-party costs and a small contribution to the work of our accredited SAP assessors. In return a dedicated assessor will provide schematic designs and confirmation of regulatory compliance including Part L of the Building Regulations and a SAP score, as well as the product requirements and costs to achieve this. Full architectural drawings are required to complete this service and work cannot commence without them.

For further information send a description of your project, contact details and drawings to aedesign@applied-energy.com

#### **Technical services**

Our technical services call centre is staffed by a team trained in diagnosing and rectifying potential concerns over the phone. If for any reason they are unable to solve a problem by phone, they will brief an engineer on your behalf prior to the service visit to ensure that, wherever possible, the problem is fixed first time.

The team also provides advice on product selection, application, installation and operation; ensuring maximum value is gained from selecting a Creda heating product.

For further information:

Tel: 08709 000430 Fax: 08709 000530

#### The Building Centre

Building specifiers within easy reach of Central London can see a permanent exhibition of selected Creda products at the Building Centre in Store Street, WC1E 7BT. The centre also offers a full library support and literature distribution service for visitors, to assist them in identifying the most appropriate products for any given application.

Details of the Building Centre can be seen by the following the link at www.creda-heating.co.uk



## **Meeting Part L** The quick start guide!



E

Xpelair Xcell 270

66 Electric heating continues to grow in popularity. In April 2006 the revision to Part L of the Building Regulations meant the way you comply for new buildings changed. This is the guick-start guide to complying with Part L.

#### What changed?

All the old methods of compliance have been abolished and replaced with a Target Carbon Emission Rate (TER).

Whatever fuel type you choose for the heating and hot water of your new building - gas, oil, LPG or electric - you have to show that the overall carbon emission rate is less than the target for that building type.

There are also new minimum standards for U-values and airtightness, which must be tested on completion of the building. However, even meeting all the minimum standards will not guarantee a pass.

The biggest change is that under the new rules the whole building is taken into consideration. Every factor that can influence carbon emissions is relevant and it's the whole building that must pass. So just building to minimum standards may not guarantee a pass because the whole building may still exceed the target carbon emission rate.

#### What's my target?

The target is set in terms of Kilograms of carbon dioxide for every square metre of the building, over the course of a year  $(KgCO_2/m^2/yr).$ 

A range of sample buildings is used to set the target, which is then adjusted for the size and shape of the actual design and the heating and hot water plan.

The complex calculation of both the target and the actual score of your new building can be performed within special SAP 2005 approved software. (The government's adopted Standard Assessment Procedure). An accredited SAP assessor is required to complete this.

The targets created under Part L 2006 demand a 20% reduction in carbon emissions compared with the previous rules. This new tougher target was set to improve the country's energy efficiency and dependence on imported fuel and to reduce the devastating effects of climate change.

The tougher target applies to all relevant buildings, all products and all fuel types. It's the whole building that must comply, not any given product or building service.

#### **Block Assessment**

Part L 2006 has important rules for setting and achieving the targets in flats and apartments. So called 'Block Assessment' allows for all the flats or apartments in a building to be assessed in one go.

Each flat or apartment can be dealt with as the developer or specifier feels appropriate for meeting the overall TER, across the different floors and sides of the building. Any given flat or apartment does not have to meet an individual TER as long as the whole building does.

This allows the developer or specifier flexibility in how to achieve the target. For example, mechanical ventilation with heat recovery (see picture above) may be installed which would create carbon savings which can be shared out across the whole building. It also reduces running costs and becomes a major selling feature. For more advice on saving energy see the guide at the back of this brochure.

## Can you comply using electric heating and hot water?

Yes.

The only test for compliance is that the building does not exceed the target carbon emission rate. We continue to supply electric heating and hot water solutions into fully compliant buildings. Electric heating has also been shown to have lower lifetime costs of ownership than gas, is easier and quicker to install, is maintenance free, offers great design flexibility and has lower initial capital costs.

Electric heating is the fuel of the future. Low carbon electricity from UK sources produces low carbon heating only with electric products.

#### How do I reduce the carbon emission rate of a building?

There are a number approaches that are proving most effective at reducing the carbon emission rate of a building. We recommend you consider the following options. In isolation or in combination, all of these options have been used in conjunction with modern electric heating.

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www.creda-heating.co.uk



#### Creda Eco-Response

#### 1 Improve the air-tightness:

It is now mandatory to test the air-tightness of a building on its completion. There are minimum levels required under the new regulations but improving on these has been shown to be one of the best ways to reduce the carbon emission rate and therefore comply with Part L. Electric heating is helpful in this regard as it results in less holes and gaps in the building fabric than gas heating systems. The regulations require a minimum air-tightness of 10 cubic metres per hour per square metre of floor area at 50 Pascals of pressure. (10m<sup>3</sup>/h/m<sup>2</sup> @ 50Pa). Many developments can now achieve 7 or 5 and some even 3m<sup>3</sup>/h/m<sup>2</sup> @ 50Pa.

#### 2 Install mechanical ventilation with heat recovery:

Used in conjunction with improved air-tightness, so called MVHR recovers otherwise wasted heat and is a great advantage to the ventilation strategy. There are specific provisions within SAP (Appendix Q) which show how using MVHR can reduce the carbon emissions rate and help compliance with Part L. Xpelair offers leading MVHR systems as part of the Carbonlite range, see www.xpelair.co.uk.

#### 3 Improve the building fabric:

There are minimum U-values for all elements of the building fabric. U-values are a measure of how much heat energy can escape through a given element of a building. However, simply meeting these alone does not guarantee compliance. By exceeding the minimum requirement significant improvements can be made on the carbon emission rate. It is possible to show compliance with Part L just by improving building fabric U-values. However, a combination of improved airtightness, MVHR and modest improvements in building fabric U-values has proved most cost effective in many building developments. Consider reducing U-values for roofs to 0.14, walls to 0.3, floors to 0.2 and glazing to 1.8 but, generally speaking, the lower the better.

## 4 Consider glazing as a percentage of the building floor area:

The regulations assume that glazing coverage is equivalent to 25% of the floor area, which is more than most developments. Where this can be sensibly reduced it will improve the carbon emission rate of the building. If the specification of glazing is also improved the impact is increased. Consider gas filled or triple glazing.

#### 5 Go renewable:

The installation of solar thermal hot water systems, heat-pumps or micro wind-turbines can have a number of major benefits. Often the installation of some of these products can turn an otherwise non-compliant building into a fully compliant one. However, many developers now also see this as the preferred route to meeting other planning requirements or aspirational targets for the use of micro-generation technologies. They can significantly reduce running costs and can be a great selling point. Redring offers one of the most efficient solar thermal hot water systems in the UK see www.redring.co.uk - and Xpelair has a world-class micro wind-turbine (see www.xpelair.co.uk).

#### 6 Improve the lighting plan:

In some buildings the carbon impact of the lighting can be significant and expert advice can assist in demonstrating compliance with Part L. Modular lighting strategies should be considered. The traditional rules of thumb based on the number of rooms should give way to a recommended number of lighting points by square metre of floor area. It is good practice to install low energy fittings as standard indoors, with consideration given to highly effective control. Externally the regulations require a maximum 150W with automatic switch-off via PIR, photocell and timers.

#### 7 Controllability reduces emissions:

It has been shown that easy to use, highly responsive heating systems actually reduce carbon emissions. When heating responds quickly it tends, in practice, to be used more effectively. Where controls are simple to use, people make better use of them. Modern electric heating is highly controllable and responsive. This is recognised within SAP. We offer leading edge electric heating with our Eco-Response technology. Integrated and sensitive thermostats within Creda electric heating products allow precise control room by room, ensuring solar gain is taken into account in maintaining a desired temperature and reducing carbon emissions.

#### 8 Background heat:

By ensuring there is a low level background heat throughout the common walkways, like stainwells and landings in apartment blocks, adjoining walls are only considered semi-exposed for calculation purposes, reducing heat losses and improving the carbon emission rate. We offer modern electric heating solutions designed for this purpose.

#### 9 Size the cylinder:

The regulations now assume a 170l water cylinder. By ensuring the cylinder is not oversized for its application, heat losses are reduced. If the cylinder size is reduced below 170l then the carbon emission rate is improved. Redring offers cylinders at 90, 125, 150 and 170 litre capacities, as well as larger sizes where necessary. See www.redring.co.uk for a full range of instant water heating products that have no standing losses at all!







66 Eco-Response offers advanced electric heating for the future, challenging expected norms with superior efficiency and controllability.

Warmth where it's needed, when it's needed...

in a single room or across the house. A constant low level of background heat prevents the fabric of the building from cooling. On demand, this fast-acting appliance raises the temperature to meet your needs, providing total control and the peace of mind that comes with low running costs.

#### Key features

- Economical use of energy utilising the best of stored and direct acting heating technologies
- · Contemporary design looks good in any home
- · Unobtrusive takes up no more space than a traditional wet radiator
- · One-touch electronic controls with child lock facility
- · Simple '+ or -' touch temperature control for accuracy and flexibility
- · Rapid response to changing temperature demands
- Pre-wired with 2 x 1.6 metre lengths of cable for storage and direct acting power supplies - for ease of connection
- · Designed for rapid assembly to keep installation costs down
- · Requires no annual maintenance
- · Optional central controller for 4 zone pilot wire linked heating system



Stored heat - maintains low level background heat to keep the fabric of the building warm, utilising economy off-peak electricity

Simple integral control on top of the heater - allows easy adjustment to achieve the user's preferred comfort temperature

Radiant heat - rapidly raises temperature to required comfort level on demand

#### PART L and SAP 2005

The Creda Eco-Response has been developed to help meet the needs of Part L 2006 Building Regulations and provides enhanced SAP scores.

Specifiers will benefit from the 'integrated storage/direct acting heater' category within table 4a of SAP 2005 which rewards the enhanced controllability of Eco-Response with a 100% efficiency rating, placing this leading technology in heating type 2 with a responsiveness weighting of 0.75.



## Product Selector

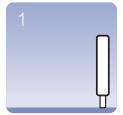
Model	Reference	Nominal Output	Charge Acceptance	Input Rating (Off Peak)	Input Rating (Radiant Elt.)	Number of Elements	Number of Bricks	Weight
ER300	75 773301	0.7kW	9.1kWh	1.3kW	0.28kW	2	8	65kg
ER400	75 773302	1.1kW	13.65kWh	1.95kW	0.34kW	3	12	94kg
ER500	75 773303	1.5kW	18.2kWh	2.6kW	0.39kW	4	16	124kg

PW E4ZC 75 770916 4 zone pilot wire central controller

## **Eco-Response** Storage radiant heaters

# Advanced control heating systems

#### **Conventional heater**



With a conventional 'wet' heating system, when heating goes off, building shell cools.



t' The building shell has to then be warmed again before room feels comfortable.



This takes time and energy - slow response.

#### Eco-Response



It is smarter to

maintain low level

background heat.

The room temperature can be raised quickly

needed.

and efficiently when

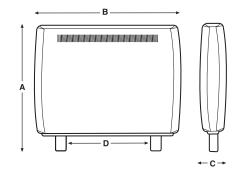


Economical. Responsive. Intelligent.



- Elements (Storage) 650W incoloy sheathed, mineral filled elements
- Element (Direct Acting) cable-on-foil thin facia panel
- Thermostat (Input) integral electronic charge limiter Maximum core temperature 670°C/690°C at full charge
- Thermostat (Output) integral electronic thermostat with child lock facility
- Thermal Insulation Carbowool 128kg/m<sup>2</sup>, Microtherm G and calcium silicate
- Energy Retention Cells high density bonded magnetite
- Protection (Storage) automatic reset core limit thermostat and manual over-temperature cut out
- Protection (Direct Acting) automatic reset limit thermostat and automatic reset over-temperature cut out
- · Finish white polyester and zinc coated steel with grey base
- Cable (Storage) 1.6m 2.5mm<sup>2</sup> 3 core
- Cable (Direct Acting) 1.6m 0.75mm<sup>2</sup> 2 core
- Supply 230/240V AC single phase

#### Dimensions



Model	Height A	Width B	Depth C	Feet Position D
ER300	712mm	600mm	130mm+10mm	295mm
ER400	712mm	830mm	130mm+10mm	523mm
ER500	712mm	1060mm	130mm+10mm	751mm

Minimum clearance required

- 75mm either side of heater
- 150mm in front of the heater
- · 250mm directly above the heater



**Control options** 

4 zone pilot wire central controller

Allows 7 day programming of comfort/setback time settings of multiple pilot wire linked heaters in up to 4 separate zones.

Ref: 75 770916



Matching TPRIII E Electronic panel heaters also available for pilot wire linked heating systems (See page 12-13).



## Contour100 Electronic panel heater

## Advanced control heating systems



66 The all new Contour100 panel heater range offers high quality build and panel finish with contemporary radiator styling.

> Contour100 panel heaters incorporate electronic thermostatic controls which allow very precise regulation of room temperatures.

#### **Key features**

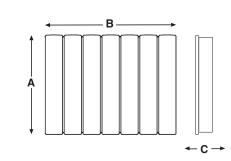
- · Contemporary radiator styling
- Electronic thermostatic control, accurate to +/-0.3°C
- · Convected heat for rapid warm up
- Silent operation
- Pre-set background temperature at 5°C below thermostat setting (when connected to a programming unit supporting setback feature)
- · IPX4 rated (splashproof)
- Being electronic, control is totally silent and reliable •
- · Hidden thermostat range limiter feature for additional economy
- · Range of optional plug-in electronic timer modules, including: - 24 hour digital timer
  - Single zone 7 day pilot wire programmer
  - Runback timer
- · Compatible with Creda 4 zone pilot wire central controller

#### **Technical Specification**

- · Elements finned, mineral-filled sheath type
- Thermostat electronic with 5°C setback control capability
- · Finish white powder coated steel and thermoplastic
- · Protection auto reset thermal cutout
- · Cable 1.2 metres, 4 core (live, neutral, pilot and earth)
- IP rating IPX4 (splashproof)

Dimensions

· Supply - 230/240V AC single phase



12kg

12kg

15kg

17.5kg

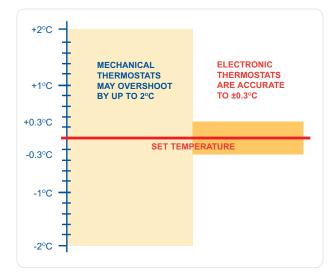
22kg

#### **Product Selector** Rating Width B Depth C Weight Model Reference Height A 75 775101 CEP 500E 0.5kW 536mm 503mm 104mm CEP 750E 75 775102 0.75kW 536mm 503mm 104mm CEP 1000E 75 775103 1kW 536mm 671mm 104mm CEP 1500E 75 775104 1.5kW 536mm 741mm 104mm CEP 2000E 75 775105 2kW 536mm 911mm 104mm

#### **Contour100 Electronic panel features**



- · High quality build and panel finish
- · Forward angled facing grille to assist heat circulation
- · Electronic thermostat for accuracy



Both Contour100 and TPRIII E electronic panel heaters feature highly accurate electronic thermostats (+/-0.3°C), providing superior comfort and operating efficiency.

As the room temperature nears the desired set point, power to the elements is reduced. The room temperature is closely monitored to an accuracy of less than 0.3°C, minimising overshoot and temperature drift, resulting in better energy efficiency and user comfort.

#### **Control options**





4 zone pilot wire central controller

Allows 7 day programming of comfort/setback time settings of multiple pilot wire linked heaters in up to 4 separate zones (see page 20).



A range of optional plug-in control modules, which can be removed from the heater for easy programming, provide the flexibility for TPRIII to meet a wide range of control specifications:



• TPR E24T 24 hour digital timer. Provides 24 hour programmable on/off control



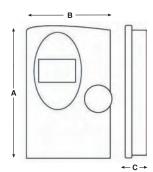
 TPR E7DT single zone, pilot wire programmer controls up to 10 slave heaters. Provides 7 day programmable on/off control

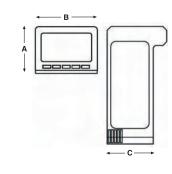


• TPR ERBT runback timer. Provides installer programmable runback time up to 4 hours (in 30 minute increments). Can be locked into heater

#### Dimensions

- 4 zone pilot wire controller
- Plug-in timer module





## **Product Selector**

110000000					
Model	Reference	Product Description	Height A	Width B	Depth C
TPR E24T	75 770912	24 hour plug-in timer module	50mm	70mm	145mm
TPR E7DT	75 770913	7 day single zone plug-in timer module	50mm	70mm	145mm
TPR ERBT	75 770914	4 hour run back timer plug-in module	50mm	70mm	145mm
PW E16A	75 770915	16 amp pilot wire interface unit	86mm	86mm	22mm
PW E4ZC	75 770916	4 zone pilot wire central controller	132mm	86mm	38mm

## **TPRIII E** Electronic pilot plus panel heaters

# Advanced control heating systems



**66** The TPRIII Electronic pilot plus panel heater range - unites smooth styling with superior control performance options to give flexible heating solutions.

TPRIII Electronic pilot plus panel heaters incorporate electronic thermostatic controls to allow precise regulation of room temperatures - essential when comfort, economy and energy efficiency need to be considered in equal measure. To meet the needs of most applications the TPRIII Electronic pilot plus panel heaters can also be controlled by a new range of plug-in timers or by pilot wired signalling from a 4 zone pilot wire central controller.

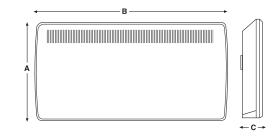
#### Key features

- · Front facing grille for best possible heat projection
- Styling to complement Eco-Response radiators with pure white finish
- Electronic thermostatic control +/-0.3°C, completely silent operation
- Pre-set background temperature at 5°C below thermostat setting (when connected to a programming unit supporting setback feature)
- Optional plug-in electronic timer modules, including:
  - 24 hour digital timer
  - Single-zone pilot wire programmer
  - Runback timer
- Compatible with Creda 4 zone, wall mounted pilot wire signalling multi-heater programmers
- IPX4 rated (splashproof)
- Hidden thermostat range limiter feature for additional economy
- · Simple detachable wall bracket for easy installation

#### **Technical Specification**

- · Element finned, mineral-filled sheathed type
- Thermostat electronic with fixed 5°C setback facility
- · Finish white powder coated steel and thermoplastic
- · Protection auto reset thermal cut-out
- IP rating IPX4 (splashproof)
- · Cable 1.2 metres, 4 core cable (live, neutral, pilot and earth)
- Supply 230/240V AC single phase

## Dimensions



Product Sele	Selector					
Model	Reference	Loading	Height A	Width B	Depth C	Weight
TPRIII 500E	75774440	0.5kW	430mm	450mm	108mm	5.2kg
TPRIII 750E	75774441	0.75kW	430mm	620mm	108mm	6.6kg
TPRIII 1000E	75774442	1kW	430mm	620mm	108mm	6.6kg
TPRIII 1250E	75774443	1.25kW	430mm	690mm	108mm	7.1kg
TPRIII 1500E	75774444	1.5kW	430mm	690mm	108mm	7.1kg
TPRIII 2000E	75774445	2kW	430mm	860mm	108mm	8.5kg



### **TPRIII E Electronic rotary thermostat**



Improved economy may be achieved by limiting the thermostat rotational range, by means of the mechanical 'peg and hole' feature hidden beneath a removable cap on the thermostat knob.

#### **Control Options**



TPRIII E Electronic panel heaters will accept the same range of plug-in timer modules as Contour100 electronic panel heaters (featured on page 11).

#### Pilot wire auxiliary interface unit

Product Selector



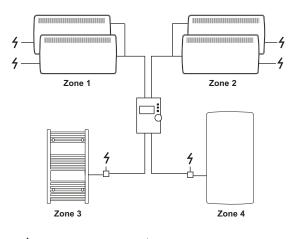
The PW E16A pilot wire auxiliary interface unit enables heaters without electronic controls to be central programmed, for on/off time periods only, as part of a pilot wire linked heating system.

(Max. 3kW. Requires a 38mm deep metal box or surface patress).

#### Pilot wire heating system

The PW E4ZC central controller allows 7 day programming for comfort and setback temperature periods of multiple pilot wire linked heaters in up to four separate zones.

- 4 Separate heating zones
- · Heater modes Comfort/Setback, Comfort/Frost or Comfort/Off
- Wall mounted mains powered controller with capacitor back up (approx. 4 hrs)

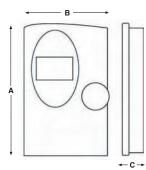


4 240v mains supply

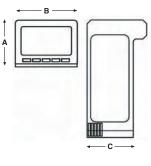
DW E16A Interface unit

#### Dimensions

4 zone pilot wire controller







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Model	Reference	Product Description	Height A	Width B	Depth C
TPR E24T	75 770912	24 hour plug-in timer module	50mm	70mm	145mm
TPR E7DT	75 770913	7 day single zone plug-in timer module	50mm	70mm	145mm
TPR ERBT	75 770914	4 hour run back timer plug-in module	50mm	70mm	145mm
PW E16A	75 770915	16 amp pilot wire interface unit	86mm	86mm	22mm
PW E4ZC	75 770916	4 zone pilot wire central controller	132mm	86mm	38mm

## TPRIII M / MT

Mechanical thermostatic panel heaters

# Advanced control heating systems



**66** TPRIII mechanical thermostat panel heaters offer a versatile choice of models with built-in timer options or panels with no controls at all.

Popular with specifiers and contractors to complement Creda electric storage heaters, TPRIII mechanical thermostatic panels are most commonly used to warm bedrooms, bathrooms, kitchens and other areas which only require heating for short periods of the day. Cost effective, they offer an efficient way to extend an existing heating system. The ranges come with control options to fulfil the widest range of applications, from single room background heating through to commercial applications.

#### Key features

- TPRIII (MT) models have programmable 24 hour timers
- · TPRIII (MT7) model has a programmable 7 day timer
- TPRIII (NC) models with no built-in controls
- · Full or half power output selection on thermostatic models
- Adjustable thermostat (5-30°C) on thermostatic models
- Convected heat for rapid warm-up. Suitable for domestic or commercial use
- IPX4 rated (splashproof)

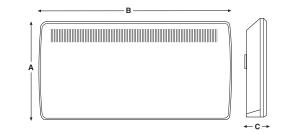
#### Frost protection setting on thermostatic models

- · 2kW model available with 7 day timer
- Front heat outlet grille for efficient heat circulation
- · Lockable dust cover (on thermostatic models)
- · Detachable hinged wall mounting bracket for fast installation and easy cleaning

## **Technical Specification**

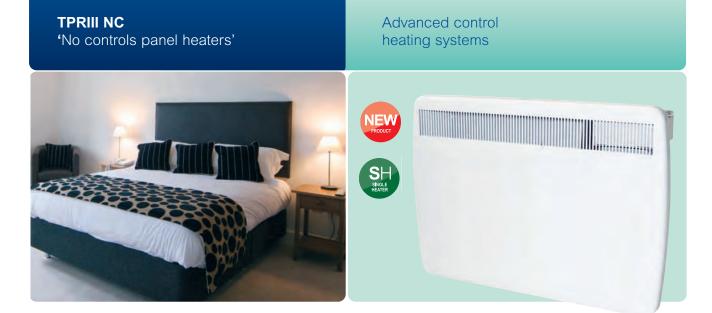
- · Element mineral-filled sheathed type
- Thermostat capillary type (MT models only)
- · Finish white powder coated steel
- · Protection auto reset thermal cut-out
- · IP rating IPX4 (splashproof)
- Supply 230/240V AC single phase

## Dimensions



Product Selector	oduct Selector					
Model	Reference	Loading	Height A	Width B	Depth C	Weight
Thermostat only models	;					
TPRIII 500M	75 774440	0.5kW	430mm	450mm	108mm	4.8kg
TPRIII 750M	75 774401	0.75kW	430mm	620mm	108mm	6.2kg
TPRIII 1000M	75 774402	1kW	430mm	620mm	108mm	6.2kg
TPRIII 1250M	75 774403	1.25kW	430mm	690mm	108mm	6.6kg
TPRIII 1500M	75 774404	1.5kW	430mm	690mm	108mm	6.6kg
TPRIII 2000M	75 774405	2.kW	430mm	860mm	108mm	8.0kg
Timer models 24hr						
TPRIII 500MT	75 774410	0.5kW	430mm	450mm	108mm	4.8kg
TPRIII 750MT	75 774411	0.75kW	430mm	620mm	108mm	6.2kg
TPRIII 1000MT	75 774412	1.kW	430mm	620mm	108mm	6.2kg
TPRIII 1250MT	75 774413	1.25kW	430mm	690mm	108mm	6.6kg
TPRIII 1500MT	75 774414	1.5kW	430mm	690mm	108mm	6.6kg
TPRIII 2000MT	75 774415	2.kW	430mm	860mm	108mm	8.0kg
Timer model 7 day						
TPRIII 2000MT7	75 774435	2.kW	430mm	860mm	108mm	8.0kg

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#### **TPRIII** Thermostatic panel heater ranges



TPRIII M mechanical thermostat without timer (500W - 2000W models).



TPRIII MT mechanical thermostat with 24hr timer (500W - 2000W models).



TPRIII MT7 mechanical thermostat with 7 day timer (available in 2000W model only).

## **Product Selector**

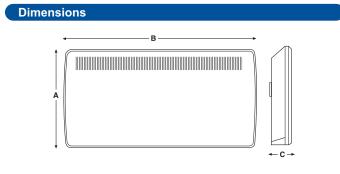
#### **TPRIII No controls panel heater range**



TPRIII NC a range of panel heaters without any integral controls for use in applications where external control of temperature and time programming is required.

#### **Technical Specification**

- Element mineral-filled sheathed type
- · Finish white powder coated steel
- · Protection auto reset thermal cut-out
- IP rating IPX4 (splashproof)
- Supply 230/240V AC single phase



Model	Reference	Loading	Height A	Width B	Depth C	Weight
No controls models						
TPRIII 500NC	75 774300	0.5kW	430mm	450mm	108mm	4.8kg
TPRIII 750NC	75 774301	0.75kW	430mm	620mm	108mm	6.2kg
TPRIII 1000NC	75 774302	1kW	430mm	620mm	108mm	6.2kg
TPRIII 1250NC	75 774303	1.25kW	430mm	690mm	108mm	6.6kg
TPRIII 1500NC	75 774304	1.5kW	430mm	690mm	108mm	6.6kg
TPRIII 2000NC	75 774305	2kW	430mm	860mm	108mm	8.0kg

## **Newera Style** Panel heaters

# Advanced control heating systems



**66** The Newera Style provides a contemporary option for fully controllable heating in every room, with accurate twin electronic thermostats providing flexible control.

> Safety and comfort feature highly in the design of the Newera Style, manufactured from composite material to provide a lower surface temperature without loss of convected heat with a unique outlet grille design that helps prevent wall discolouration.

#### Key features

- Unique grille design to keep walls free
   of dust marks
- Composite construction for lower surface temperature without loss of convected heat
- Twin electronic thermostats for comfort and setback
- Mains borne and pilot wire control options
- · IP24 rated (splashproof)



Newera Style and Newera Electronic panel heaters may be connected as a centrally controlled system using the optional mains borne accessories.



The MB programmer communicates with the heaters and controls a comfort or setback thermostat as per the times set in the programmer.

MB Programmer Ref: 75 770907 MB Interface Ref: 75 770908



Allows 7 day programming of comfort/setback time settings of multiple pilot wire linked heaters in up to 4 separate zones.

4 zone pilot wire central controller Ref: 75 770916

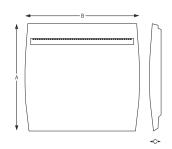


Integral twin electronic thermostats for setting comfort and setback temperatures.

#### **Technical Specification**

- Elements finned, metal sheathed mineral filled type
- Thermostats twin electronic
- · Protection two level thermal safety overheat
- Supply 230/240V AC single phase

## Dimensions



Product Selector					
Model	Reference	Rating	Height A	Width B	Depth C
PPH750	75 772601	0.75kW	615mm	497mm	135mm
PPH1000	75 772602	1kW	615mm	645mm	135mm
PPH1500	75 772603	1.5kW	615mm	941mm	135mm
PPH2000	75 772604	2kW	615mm	1163mm	135mm
MBPRG	75 770907	Newera MB programmer			
MBIF	75 770908	Newera MB interface			
PW E4ZC	75 770916	4 zone pilot wire central controller			

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**66** The Newera Electronic and Plus panel heater ranges provide a choice of control options or stand alone heaters in sleek designs.

#### Newera Electronic

The Newera Electronic range provides style, flexibility and ease of use in buildings of any size. Built-in twin electronic thermostats allow control of comfort and setback temperatures. So panels can be used individually or can be linked to provide complete heating systems. A 7 day programmer can be added for the convenience of hassle-free heating matched to the way you use the space throughout the week.

#### Key features

- · Twin electronic thermostats for comfort and setback
- · Can be used with mains borne or pilot wire controllers as part of a complete heating system
- · Compact, attractive design occupying minimum wall space
- Mains borne and pilot wire control options
- · Hinged wall mounting bracket to allow easy access for cleaning and decorating
- · IP24 rated (splashproof)

#### **Technical Specification**

- · Elements finned, metal sheathed mineral filled type
- Thermostats twin Electronic (Newera Electronic only)
- Thermostat single mechanical (Newera Plus only)
- · Protection two level thermal safety overheat
- · Supply 230/240V AC single phase

Dimensions

#### **Newera Plus**

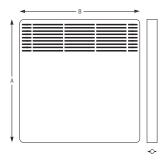
A simple robust stand alone thermostatic panel heater. The Newera Plus range offers a low cost heating solution ideal for hotels or student accommodation.



#### Single mechanical thermostat

#### Key features

- · Single mechanical thermostat, stand alone heating
- · Excellent value and simple to operate
- · Robust construction and easy to install
- · Compact takes up minimal wall space
- · Hinged wall mounting bracket to allow easy access for cleaning and decorating
- Ideal for conservatories, extensions, hotels and
- student accommodation · IP24 rated (splashproof)



Model	Reference	Rating	Height A	Width B	Depth C
EPH500	75 772401	0.5kW	450mm	370mm	78mm
EPH1000	75 772402	1kW	450mm	445mm	78mm
EPH1250	75 772403	1.25kW	450mm	520mm	78mm
EPH1500	75 772404	1.5kW	450mm	590mm	78mm
EPH2000	75 772405	2kW	450mm	740mm	78mm
PW E4ZC	75 770916		4 zone pilot wire central control	er	
MBPRG	75 770907		Newera MB Programmer		
MBIF	75 770908		Newera MB Interface		
HPH750	75 772301	0.75kW	450mm	370mm	78mm
HPH1000	75 772302	1kW	450mm	445mm	78mm
HPH1250	75 772303	1.25kW	450mm	520mm	78mm
HPH1500	75 772304	1.5kW	450mm	590mm	78mm

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# **RF** Electronic radio frequency controlled panels

# Advanced control heating systems



**C** The RF range offers a combination of slimline, flexible heater panels with non-wired control solutions; ideal for use in domestic and commercial applications.

Designed to offer economical, stylish and safe heating solutions, these compact panels can be used in conjunction with tailored accessories to provide the perfect heating solution.

A digital electronic thermostat uses integral drift compensation to ensure a stable and consistent room temperature and an on/off switch allows flexibility when heating is not required.

The RF panel range includes standard 400mm panels, 200mm plinth panels and splash-proof models to provide a complete heating solution for every room, including the bathroom.

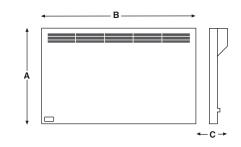
#### Key features

- Local or central control meets Building Regulations Part L (when used with Creda Saver or Zone Controllers)
- Electronic thermostat with drift compensation for accurate room temperature control
- RF/E406S and RF/E410S models are IP24 rated (splashproof)
- · Non-wired signalling for total flexibility and ease of insulation

#### Technical Specification

- · Elements Finned, metal sheathed mineral-filled type
- Finish Cream powder coated steel and thermoplastic
- · Protection Two level thermal safety overheat
- Supply 230/240V AC single phase

#### Dimensions





#### Product Selector

Model	Reference	Product Description	Rating	Height A	Width B	Depth C
RF/E408	85510	RF 400mm panel heater	0.8kW	400mm	645mm	80mm
RF/E410	85520	RF 400mm panel heater	1kW	400mm	735mm	80mm
RF/E412	85530	RF 400mm panel heater	1.2kW	400mm	915mm	80mm
RF/E415	85540	RF 400mm panel heater	1.5kW	400mm	1,095mm	80mm
RF/E420	85550	RF 400mm panel heater	2kW	400mm	1,365mm	80mm
RF/E406S	85820	RF 400mm panel heater (splashproof)	0.6kW	400mm	555mm	80mm
RF/E410S	85840	RF 400mm panel heater (splashproof)	1kW	400mm	735mm	80mm
RF/E208	85610	RF 200mm panel heater (plinth)	0.8kW	200mm	1,095mm	80mm
RF/E210	85620	RF 200mm panel heater (plinth)	1kW	200mm	1,275mm	80mm
RF/E212	85630	RF 200mm panel heater (plinth)	1.2kW	200mm	1,545mm	80mm
RF/E215	85640	RF 200mm panel heater (plinth)	1.5kW	200mm	1,725mm	80mm

## **RF** Panel heater control options

# Advanced control heating systems



Creda Zone Receivers:

A choice of innovative control options is available to suit both domestic and commercial applications.

#### Electronic thermostat:



- All RF panels feature integral electronic thermostat
- Drift compensation to maintain a stable room temperature
- · Double pole on/off switch and overheat protection
- LCD display when element is energised

#### Creda Saver:



- Optional plug-in, programmable cartridge with 15 pre-set programmes
- · Comfort mode thermostat on heater
- Integral setback thermostat
   (Comfort thermostat on panel)



 Optional plug-in receivers for heaters, to enable control via Creda Zone controllers

· Automatic start up when communication is restored

Integral thermostat for setback

(Creda Zone 1 and 6 zone controllers)

• 433 MHz operating band

 868 MHz operating band (Creda Zone 8 zone controller)

•

#### New Creda Zone 8:

- New controller for up to 8 zones (868 MHz)
- Time and temperature adjustment 24 hours a day, 7 days a week
- Frost protection setting (5-15°C)
- Setback temperature (5-20°C)
- Comfort temperature setting (5-30°C)
- Individual zone & measured zone temperature LCD display
- Can be wall mounted or freestanding for hand held programming
- Battery operated (2 x AAA)

#### Creda Zone 1 and 6:

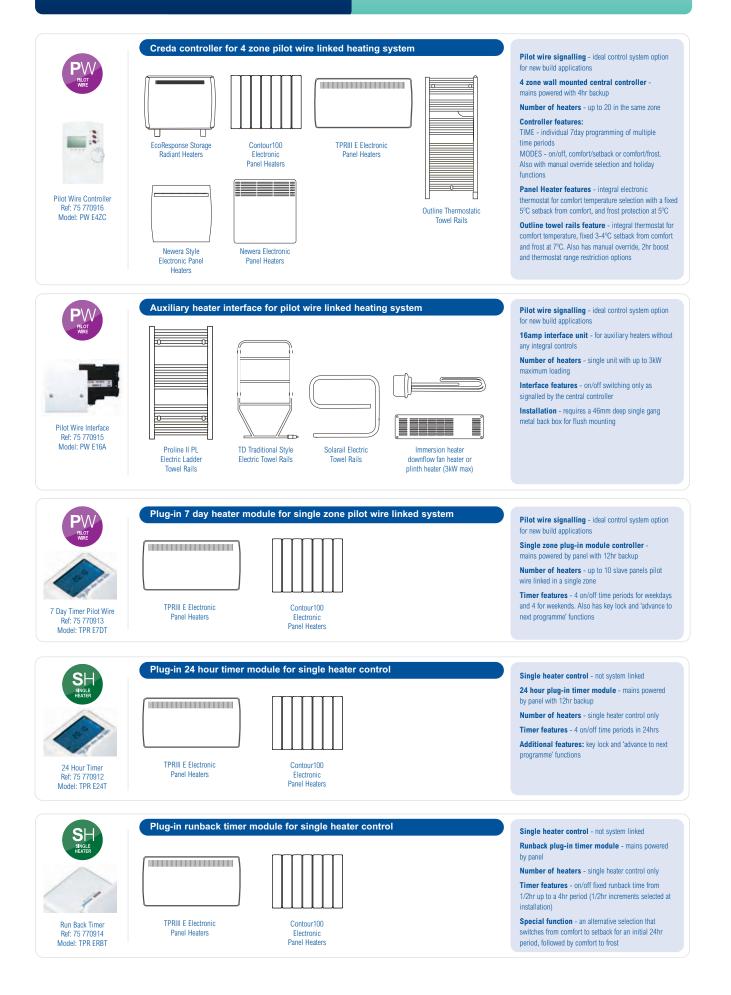
- Single or 6 zone controllers (433 MHz)
- Time and temperature adjustment 24 hours a day, 7 days a week
- Frost protection setting (5-15°C)
- Fall back temperature (5-30°C)
- Comfort temperature setting (5-30°C)
- Individual zone & measured zone temperature LCD display
- Can be wall mounted or freestanding for hand held programming
- Battery operated (3 x AAA)

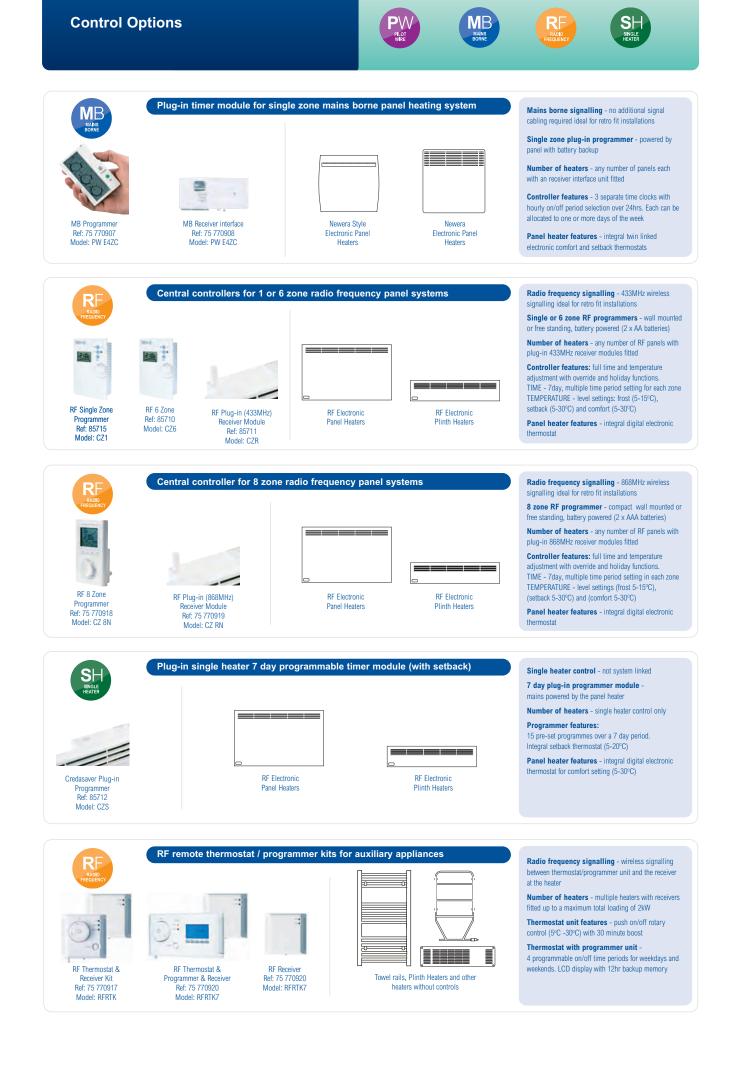
#### Product Selector

Nodel	Reference	Product Description
8N	75770918	Creda Zone 8 RF controller (868 MHz)
ZRN	75770919	Plug-in receiver (868 MHz)
CZ6	85710	Creda Zone 6 RF controller (433 MHz)
CZ1	85715	Creda Zone 1 RF controller (433 MHz)
CZR	85711	Plug-in receiver (433 MHz)
CZS	85712	Plug-in Creda Saver
CZC	85713	Cover for controls

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The performance and economy of Creda heating products can be further enhanced by use of control options best suited to the type of installation and lifestyle requirements.





## SFHA Sensair Automatic Electric storage fan heaters



**66** The ultimate combination of storage and direct fan heating. Able to regulate input with direct acting heat flexibility, the SFHA Sensair is more effective at retaining heat than a conventional storage heater.

Able to operate on virtually any tariff and with superior high performance insulation levels, it achieves higher SAP and NHER ratings than manual input storage heaters.

#### Key features

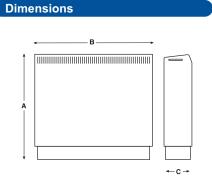
- Combines electric storage fan heating, direct acting heating and fanned heat output with simple controls
- Fully automatic heat storage no user adjustment required on input controls
- High performance insulation works more
   effectively than a conventional storage heater
- Heat output is via a quiet two speed fan
- · Boost setting for high speed room heat up
- Fan can be switched off without altering thermostat setting
- Operates on virtually any tariff and takes better advantage of extended or split tariffs
- Fanned heating avoids heat stratification
- · Lockable controls cover
- Negative pressure air movement through the storage core avoids hotspots and heat leakage

Electric storage heating



#### **Technical Specification**

- Elements (storage) mineral insulated stainless steel sheathed
- Insulation opacified silicaceous aerogel and mineral fibre mat
- · Storage Core high density iron oxide compound
- Fan Unit two speed crossflow fan
- Controls (Output) regulated by fan, activated by integral adjustable thermostat
- Controls (Input) hydraulic head temperature compensated, room and storage core temperature sensitive, auto-set charge control
- · Protection two level thermal safety overheat
- Supply 230/240V AC single phase



Model	Height A	Width B	Depth C
SFH18AW	705mm	788mm	187mm
SFH24AW	705mm	1016mm	187mm

Product	Selector								
Model	Reference	Rating Storage	Direct Acting	Charge Acceptance (7 hrs)	Net Storage	Weight	Number of Elements	Number of Core Bricks	Remaining Useful Heat* (Fan Off) After 17hrs (Static) Discharge
SFH18AW	70305	2.5kW	1.5kW	17.6kWh	14.9kWh	121kg	3	12	40%
SFH24AW	70315	3.4kW	1.5kW	23.5kWh	20kWh	158kg	4	16	40%

## **TSR Supaslim Combi** Storage fan heaters



66 The Creda Supaslim Combi heater is designed to combine economic and has efficient storage heating using low-cost tariff electricity with an independently thermostatcontrolled fan heater.

> Effectively two heaters in one, the built-in fan can provide heat on its own or in combination with the storage heater for a rapid boost to room temperature.

#### Key features

- Combines economic tariff rate storage heater with a fast and responsive Warmflow fan heater for instant room heating
- The slimmest storage combination heater available
- Sensamatic fully automatic storage heater output ensures room comfort levels are maintained throughout the day without user intervention
- The Warmflow fan heater has manually adjustable room temperature sensing thermostatic control accurate to within 0.5°C
- Warmflow gives better heat distribution, helping to avoid heat stratification

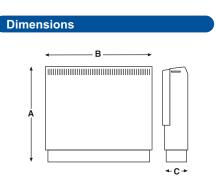
- Quiet, low velocity Warmflow fan
- All controls are concealed behind a lockable flap
- CW range manually adjustable hydraulic charge control thermostat
- ACW range has hydraulic input charge control thermostat providing auto-set input charge control
- Fan heater ratings can be set on full or half load (installation option)
- Automatic fan heater switch-off during off-peak tariff periods (installation override option)

Electric storage heating



#### **Technical Specification**

- Elements (storage) mineral insulated stainless steel sheathed
- Insulation opacified silicaceous aerogel and mineral fibre mat
- · Storage Core high density iron oxide compound
- Fan Unit crossflow
- Controls hydraulic head temperature compensated, room and storage core temperature sensitive, auto-set charge control
- · Protection two level thermal safety overheat
- Supply 230/240V AC single phase



Model	Height A	Width B	Depth C
TSR12CW/ACW	760mm	560mm	170mm
TSR18CW/ACW	760mm	788mm	170mm
TSR24CW/ACW	760mm	1016mm	170mm

#### Product Selector

Model	Reference	Rating Storage	Direct Acting	Charge Acceptance (7hrs)	Net Storage	Weight	Number of Elements	Number of Core Bricks
TSR12CW	79348	1.7kW	1/0.5kW	11.8kWh	12.6kWh	78kg	2	8
TSR18CW	79358	2.5kW	1.5/0.75kW	17.6kWh	18.5kWh	114kg	3	12
TSR24CW	79368	3.4kW	2/1kW	23.5kWh	25.0kWh	149kg	4	16
TSR12ACW	75 772001	1.7kW	1/0.5kW	11.8kWh	12.6kWh	78kg	2	8
TSR18ACW	75 772002	2.5kW	1.5/0.75kW	17.6kWh	18.5kWh	114kg	3	12
TSR24ACW	75 772003	3.4kW	2/1kW	23.5kWh	25.0kWh	149kg	4	16

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## **TSR Sensor Plus & Slimline** Electric storage heaters



66 The Multi-sense system in the TSR Sensor Plus (AW models) automatically controls heat storage to maintain the desired room temperature.

> Working on any low-cost tariff, these heaters monitor the room temperature and energy stored within the heater core to avoid overcharging. This can save up to 15% of the energy used by ordinary storage heaters.

#### Key features

- · Multi-sense two thermostatic sensor control system for heat storage and room temperature control
- · The only storage heater available that automatically monitors and controls heat output through a thermostatic sensor
- · Controls couldn't be simpler one for input and one for output
- · Multi-sense system enables energy savings of up to 15%
- · Multi-sense operates exclusively at maximum efficiency on all economy tariff periods
- · Automatic control means little if any control adjustment - just set and forget

- · All Multi-sense sensors are mounted within the heater
- · Lockable controls cover

TSR Slimline (MW) models offer the same range of sizes and outputs but with simple manual input and output controls.

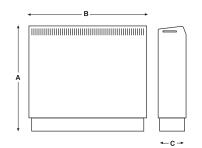


TSR6AW/MW have no user controls and are IPX2 rated (drip-proof)



- · Elements (storage) mineral insulated stainless steel sheathed
- · Insulation opacified silicaceous aerogel and mineral fibre mat
- · Storage Core high density iron oxide compound
- Controls\* (Output) manually adjustable thermostat controlling output damper.
- · Controls (Input) hydraulic charge control thermostat, manually adjustable
- · Protection two level thermal safety overheat
- · Supply 230/240V AC single phase

#### Dimensions



Model	Height A	Width B	Depth C
TSR6A/MW	705mm	335mm	170mm
TSR12A/MW	705mm	560mm	170mm
TSR18A/MW	705mm	788mm	170mm
TSR24A/MW	705mm	1016mm	170mm

Prod	luct	Sel	AC	tor
FIUU	luci	Sei		LUI

Product Se	elector						
Model	Reference	Rating Storage	Charge Acceptance (7 hrs)	Charge Acceptance (8 hrs)	Weight	Number of Elements	Number of Core Bricks
TSR6AW	79331	0.9kW	6.3kWh	7.2kWh	41kg	1	4
TSR12AW	79341	1.68kW	11.8kWh	12.6kWh	77kg	2	8
TSR18AW	79351	2.5kW	17.6kWh	18.5kWh	110kg	3	12
TSR24AW	79361	3.4kW	23.5kWh	25kWh	145kg	4	16
TSR6MW	79334	0.9kW	6.3kWh	7.2kWh	41kg	1	4
TSR12MW	79344	1.68kW	11.8kWh	12.6kWh	77kg	2	8
TSR18MW	79354	2.5kW	17.6kWh	18.5kWh	110kg	3	12
TSR24MW	79364	3.4kW	23.5kWh	25kWh	145kg	4	16



Electric storage

heating

## **TSF Turbo** Commercial storage fan heaters



Electric storage heating



66 Creda TSF Turbo storage fan heaters provide controlled output space heating with maximum economy and flexibility.

The heater retains up to 40% of its total stored heat after 17 hours, allowing the thermostatically controlled 2-speed centrifugal fan to deliver rapid and uniform heat.

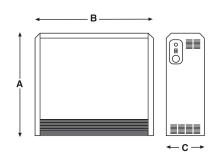
#### Key features

- Smooth, rounded, modern appearance, compatible with today's home and office décor
- TSF Turbo uses economy tariff electricity, operating particularly well on special daytime economy periods
- Available in 3.6kW, 4.8kW and 5.7kW models
- More controllable, providing heat quickly when required
- In-built direct element for out of season heating using day rate electricity
- Fanned heat is faster and more even in distribution, particularly near ground level
- Easy to use manual controls for room thermostat
   and economy charge
- · Single or 3 phase installation capability



- Insulation opacified silicaceous aerogel and mineral fibre mat
- Storage Core high density iron oxide compound
- Storage Elements mineral insulated stainless steel sheathed
- · Protection two level thermal safety overheat
- Supply 230/240V AC single phase

#### Dimensions



Model	Height A	Width B	Depth C
TSF24K	672mm	776mm	250mm
TSF32K	672mm	926mm	250mm
TSF42K	672mm	1076mm	250mm

Product Selector							
Model	Reference	Rating	Direct Acting Element Load	Charge Acceptance (7hrs)	Charge Acceptance (8hrs)	Weight	Number of Core Bricks
TSF24K	70369KS	3.6kW	0.7kW	25.2kWh	28.8kWh	137kg	18
TSF32K	70379KS	4.8kW	1.1kW	33.6kWh	38.4kWh	176kg	24
TSF42K	70389KS	5.7kW	1.5kW	39.9kWh	45.6kWh	215kg	30

**User controls** 

· Charge input control

· Neon switch for fan

Heat output control

· Neon switch for direct acting element

## Storage Heater Accessories



66 Creda are also able to offer a choice of heater accessories to complement the storage heater ranges.

Useful shelves for utilising space above the heater and rail attachment to warm towels and clothes.

#### TSR towel rails

- Available for TSR 6, TSR 12 and TSR18 auto and manual models
- · Warms and drys towels safely
- Matching white finish
- · Quick and easy to fit
- Supply complete with fixings

#### Storage heater shelves

- Available in four widths to cover all sizes of TSR storage heaters and SFHA storage fan heaters
- · Matching white finish
- · Quick and easy to fit
- · Supply complete with fixings





# Electric storage heating



#### **Heater Guard Options**

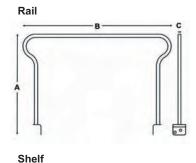
A range of guards, designed to protect against accidental contact with the hot surface of the heater, is available for Creda heaters from our suppliers:

Norfolk Industries, 95 Oak Street, Norwich NR3 3BP.

Please contact them direct: Tel: 01603 667957 Fax: 01603 624265



#### Dimensions



C

## Product Selector

Model	Reference	Product Description	Rating	Height A	Width B	Depth C
TR6	79130WS	Storage heater towel rail attachment	TSR6A and TSR6M	226mm	391mm	Ø10mm
TR12	79140WS	Storage heater towel rail attachment	TSR12A and TSR12M	226mm	618mm	Ø10mm
TR18	79150W	Storage heater towel rail attachment	TSR18A and TSR18M	226mm	826mm	Ø10mm
SHS6	79032S	Storage heater shelf	TSR6	140mm	405mm	93mm
SHS12	79042S	Storage heater shelf	TSR12	140mm	630mm	93mm
SHS18	79052S	Storage heater shelf	TSR18 and SFHA18	140mm	858mm	93mm
SHS24	79062S	Storage heater shelf	TSR24 and SFHA24	140mm	1086mm	93mm

## Outline

Thermostatic integral control towel rails

# Towel rails & bathroom warmers



66 Outline heated towel rails are of the popular ladder style and, with outputs of up to 750W, they provide background heating as well as warm dry towels.

#### Key features

- 300W, 500W and 750W output rails
- · High quality white or chrome finish
- Integral controls (Controls must be positioned outside of zones 0, 1 & 2)
- Digital electronic thermostat with range restriction and lock facility
- Pilot wire control compatible
- IP24 rated (splashproof)

#### Integral control features



- · Push button On/off with neon indicator
- · Rotary Thermostat with frost protection setting
- Rotary Variable boost time set 15 minutes, 30 minutes,1 hour or 2 hours







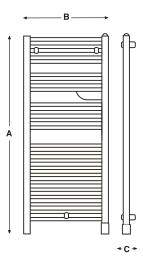
Outline towel rails can be pilot wire linked to a flash controller as part of a complete heating system.



#### **Technical Specification**

- Element cartridge type
- Control digital electronic thermostat with boost facility
- Protection thermal cut-out
- Supply 230/240V AC single phase

#### Dimensions



Product Selec	tor					
Model	Reference	Product Description	Rating	Height A	Width B	Depth C
OTRC300	75 772710	Outline 30 (chrome)	300W	855mm	550mm	85mm
OTRC500	75 772711	Outline 50 (chrome)	500W	1,300mm	550mm	85mm
OTRW500	75 772701	Outline 50 (white)	500W	815mm	550mm	85mm
OTRW750	75 772702	Outline 75 (white)	750W	1,225mm	550mm	85mm
PW E4ZC	75 770916	4 zone pilot wire central controller				

## **Proline II PL** Fast response electric ladder towel rails

Towel rails & bathroom warmers



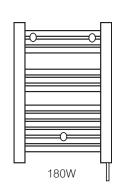
**66** The new Proline II range of dry element ladder style towel rails provide much faster heat up than fluid filled models and are

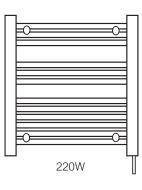
lighter and easier to install, with no chance of leaks.

Featuring a patented fast response technology and outstanding performance. Proline II towel rails are available in a choice of 16 models with chrome or white finishes and both and straight options.

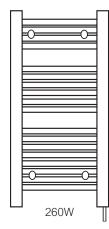
#### Key features

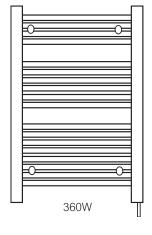
- Fast response technology for a quicker warm up than conventional towel rails
- Provides more heat from a lower output so more energy efficient
- Even heat distribution no cold spots
- Compact, slimline design
- Dry element technology no leakage, no rusting
- Lightweight for faster, easier installation
- IPX4 rated (splashproof)





Four sizes each in white or chrome, straight or curved rails





#### Product Selector

Model	Reference	Description	Rating	Height A	Width B	Depth C	Weight
traight rail models							
PL180SW	75 774502	Straight white	180W	610mm	453mm	80mm	4.4kg
PL220SW	75 774503	Straight white	220W	610mm	602mm	80mm	7.9kg
PL260SW	75 774504	Straight white	260W	843mm	453mm	80mm	5.5kg
PL360SW	75 774505	Straight white	360W	843mm	602mm	80mm	9.5kg
PL180SC	75 774512	Straight chrome	180W	610mm	453mm	80mm	5.4kg
PL220SC	75 774513	Straight chrome	220W	610mm	602mm	80mm	7.9kg
PL260SC	75 774514	Straight chrome	260W	843mm	453mm	80mm	5.5kg
PL360SC	75 774515	Straight chrome	360W	843mm	602mm	80mm	9.5kg

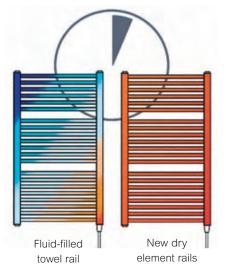
## **Proline II PL**

Fast response electric ladder towel rails

## Towel rails & bathroom warmers



Fast even heat distribution in minutes



#### **Control Options**



RFRTK7 RF remote thermostat and programmer kit.

Enables thermostatic and time control using wireless signalling between the remote wall mounted thermostat and the receiver unit at the appliance (Also available thermostat kit only see page 21).



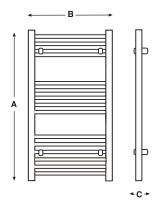
PW E16A Pilot wire auxiliary interface unit

Enables heaters without electronic controls to be central programmed, for on/off time periods only, as part of a pilot wire linked heating system (see page 20).

#### **Technical Specification**

- · Element silicone coated dry element type
- · Control cycling cutout
- Protection Two auto re-set temperature limiters
- Supply 230/240V AC single phase

#### Dimensions



## **Product Selector**

Model	Reference	Description	Rating	Height A	Width B	Depth C	Weight
Curved rail models							
PL180CW	75 774552	Curved white	180W	610mm	453mm	90-100mm	4.4kg
PL220CW	75 774553	Curved white	220W	610mm	602mm	90-100mm	7.9kg
PL260CW	75 774554	Curved white	260W	843mm	454mm	90-100mm	5.5kg
PL360CW	75 774555	Curved white	360W	843mm	602mm	90-100mm	9.5kg
PL180CC	75 774562	Curved chrome	180W	610mm	453mm	90-100mm	4.4kg
PL220CC	75 774563	Curved chrome	220W	610mm	602mm	90-100mm	7.9kg
PL260CC	75 774564	Curved chrome	260W	843mm	453mm	90-100mm	5.5kg
PL360CC	75 774565	Curved chrome	360W	843mm	602mm	90-100mm	9.5kg
RF Thermostat kits							
RFRTK	75 770917	RF remote thermostat kit	2kW				
RFRTK7	75 770920	RF thermostat and programmer	2kW				
RFRI	75 770921	RF additional receiver unit only	2kW				
Pilot wire interface unit		·					
PW E16A	75 770915	Pilot wire auxiliary interface unit	3kW				

+44 (0) 1733 456789

#### TD Traditional o

Traditional style electric towel rails

# Towel rails & bathroom warmers



66 Classically styled towel rails that warm and dry towels. All models offer low energy use whilst maintaining superior heat output.

> Permanently liquid filled for maintenance free operation the TD towel rail range offers chrome and white options, ideal for drying and airing small towels in areas such as kitchens, cloakrooms and ensuite bathrooms. The TD towel rail can be left switched on indefinitely with the low wattage cartridge element providing economical operation.

#### Key features

- 60W or 80W models
- Available in white or chrome finishes
- Oil filled for even heat transfer
- · Mains neon indicator
- IPX4 rated (splashproof)
- · Supplied with wall mounting brackets as standard
- Durable white stove enamel or chrome plated
- Can be mounted for left or right hand cable entry



#### **Control options**



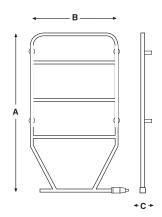
RFRTK RF remote thermostat kit.

Enables thermostatic control of electric towel rails using wireless signalling between the remote wall mounted thermostat and the receiver unit at the appliance. (see page 21).

#### **Technical Specification**

- Element cartridge type
- Cycling thermostat
- Protection thermofuse
- Supply 230/240V AC single phase

## Dimensions



#### Product Selector

Model	Reference	Product Description	Rating	Height A	Width B	Depth C
TD60W	75 774601	TD towel rail (white)	60W	616mm	533mm	93mm
TD60C	75 774611	TD towel rail (chrome)	60W	616mm	533mm	93mm
TD80W	75 774602	TD towel rail (white)	80W	851mm	533mm	93mm
TD80C	75 774612	TD towel rail (chrome)	80W	851mm	533mm	93mm
RFRTK	75 770917	RF remote thermostat kit	-	-	-	-

# Solarail and LRC Electric towel rails

66 Solarail and LRC electric and dry element towel rails offer a choice of large surface area to ultra compact towel rails to satisfy all requirements.

#### Solarail dry element towel rails

Designed for towel drying in the bathroom, shower room or even kitchen areas, Solarails are compact enough to fit in the smallest of spaces.

#### Key features

- Dry element towel rails with a choice of 50W, 85W and 100W outputs
- Supplied with mains cable and mounting brackets for easy installation
- · Finished in white or chrome
- · IPX4 rated (splashproof)

#### LRC electric towel rails

A range of ladder style fluid-filled towel rails finished in chrome. All models offer low energy usage whilst maintaining superior heat output.

#### Key features

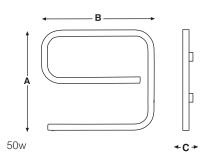
- · Fluid filled for even heat distribution
- 22mm rail diameter
- Triple layer corrosion protection
- Unique styling complements a range of décor
- Maximises power distribution to optimise energy usage
- Highly polished finish
- · High impact ABS support brackets
- IP55 rated (water jets)
- · Easy to install complete with fittings
- Designed for durability

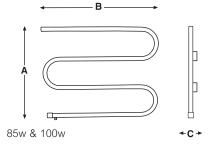
### **Technical Specification**

LRC

- Elements cartridge type (LRC)
- Flexible cable type (Solarail)
- Cycling thermostat
- · Protection thermofuse
- Supply 230/240V AC single phase

#### Dimensions





#### Product Selector

Model	Reference	Product Description	Rating	Height A	Width B	Depth C
LRC3	86060	Ladder Rail (chrome)	140W	1,000mm	500mm	110mm
LRC5	86080	Ladder Rail (chrome)	175W	1,200mm	600mm	155mm
CSR50W	51 805702	Solarail 50 (white)	50W	410mm	460mm	85mm
CSR50C	51 805701	Solarail 50 (chrome)	50W	410mm	460mm	85mm
CSR100W	51 805303	Solarail 100 (white)	100W	570mm	710mm	100mm
CSR85C	51 805314	Solarail 85 (chrome)	85W	570mm	710mm	100mm

## CDF Compact downflow fan heaters

## Underfloor heating & fan heaters



66 Fast response downflow heaters offer a low cost solution for rapid heating on demand.

> Available in three models, they are ideal for bathroom, shower room, kitchen, conservatory or garage locations.

- · Pull cord operated
- · Power on neon indicator
- · Two integral safety devices

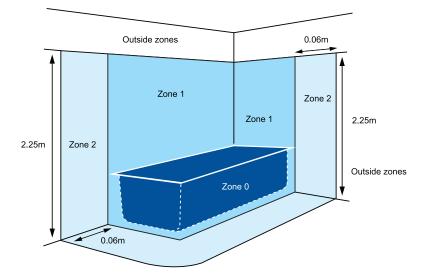
#### Key features

- 1kW constant heat (CDF1)
- 2kW with rotary variable thermostat (CDF2T)
- · 2kW steps back to 1kW after warm up (CDF2)

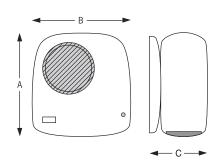
## **Technical Specification**

Creda

- · Element stitched 'black heat' type
- · Protection thermal cut-off and safety overheat
- · Thermostat mechanical bi-metal type (CDF2T only)
- Weight 1.45kg
- Supply 230/240V AC single phase



## Dimensions



#### Electrical products installed in bathrooms

Heating products installed in Zone 2 of a bathroom must carry an IP rating of at least IPX4 (IPX5 if water jets are going to be used in that area).

All electrical products must be connected in compliance with IEE wiring regulations (17th edition) and the circuit protected by an RCD.

Product Select	tor					
Model	Reference	Product Description	Rating	Height A	Width B	Depth C
CDF1	75 771002	Compact downflow (constant)	1kW	240mm	235mm	135mm
CDF2T	75 771003	Compact downflow (variable thermostat)	2kW	240mm	235mm	135mm
CDF2	75 771001	Compact downflow (pre-set step down)	2kW	240mm	235mm	135mm

## **PH2** Electric plinth heaters for base units

# Underfloor heating & fan heaters



ROUCT		
Manual model (white fascia fi	tted)	

66 Small and compact, plinth heaters provide effective warmth to a cold floor and rapidly heat the room, with 3 fascia choices in every box.

The plinth heater will heat a room much faster than a traditional radiator many times its size but will not occupy valuable wall space. The heater sits neatly in kitchen base units, reception desks, shop counters and even stair risers to provide an unobtrusive flow of warm air at floor level.

Available with integral controls or hand held infra-red remote control. Each model comes complete with white, brown and silver fascias to complement modern room designs.

#### Key features

- Choice of 3 models: manual, remote or no controls
- Each model comes complete with white, brown and silver fascias
- · Automatic over temperature cut out
- Maximum output of 2kW (1kW on TM and TR models)
- Low noise fan only option for cool air circulation (on TM models)
- · Easy slot in profile (no metal sleeve required)



Remote model (silver fascia fitted)



No controls model (brown fascia fitted)



PH2TR supplied complete with hand held on/off infra-red remote control.

#### **Control options**



RFRTK RF remote thermostat kit.

Enables thermostatic control using wireless signalling between the remote wall mounted thermostat and the receiver unit at the appliance.

#### **Technical Specification**

- Element stitched 'black heat' type
- Fan crossflow type
- Thermoplastic body
- Powder coated fascias white, brown and silver
- Weight 2.5kg
- Supply 230/240V AC single phase

### Dimensions



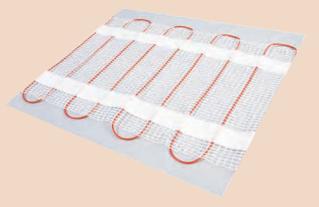


Product Se	elector					
Model	Reference	Rating	Product description	Height A	Width B	Width C
PH2TM	75 774701	2kW	Plinth heater 2kW thermostatic manual	100mm	400mm	200mm
PH2TR	75 774702	2kW	Plinth heater 2kW thermostatic remote	100mm	400mm	200mm
PH2NC	75 774703	2kW	Plinth heater 2kW no controls	100mm	400mm	200mm
RFRTK	75 770917	2kW	RF remote thermostat kit	-	-	-
RFRTK7	75 770920	2kW	RF remote thermostat and programmer	-	-	-
RFRI	75 770921	2kW	RF additional receiver unit only	-	-	-

## **Soleglow** Underfloor electric heating



Underfloor heating & fan heaters



66 Soleglow underfloor heating gently dissipates into the room, giving an even, draught-free and comfortable warmth.

> Independent tests have shown that if your feet are warm, the air temperature in your room can be set a few degrees lower without affecting how you feel. A reduction of 2-3 degrees will make a dramatic impact on the amount of energy that is used, resulting in much lower fuel bills.

> With a low capital cost and easy installation, underfloor heating can be a very attractive proposition. But combine this with the clean, even and draught free heat produced, and with no unsightly radiators to collect dust and hamper future redecoration, then the arguments in favour of Soleglow become very attractive.



Typical undertile installation

#### Control options

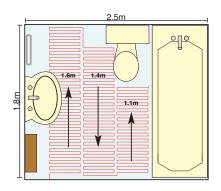
Advanced multi-controller allows 7 day programming of 'on/off' times, comfort and set-back temperatures.



Multi-Controller (optional) Ref: 75 771202

#### What size heating mat?

Making sure the correct sized mat is ordered is essential. Underfloor heating does not go under permanent furniture. The bathroom below is 1800mm long by 2500mm wide, this equals 4.5m<sup>2</sup> of floor area but the actual amount of underfloor heating required is only 2m<sup>2</sup>.



Add the lengths of runs i.e. 1.6 + 1.4 + 1.1 = 4.1 metres. Calculate the m<sup>2</sup>, multiply overall length (4.1) by mat width (0.5m),  $4.1m \times 0.5m = 2.05m^2$ .

Never select a mat larger than this area. In this case you would select the  $2.0m^2$  mat.

Prod	uct	Sel	ect	tor
		~~	~~~	

Model	Reference	Rating	Area	Length	Width	Depth
CSG1	75 771101	160W	1m <sup>2</sup>	2,000mm	500mm	3mm
CSG1.5	75 771102	240W	1.5m <sup>2</sup>	3,000mm	500mm	3mm
CSG2	75 771103	320W	2m <sup>2</sup>	4,000mm	500mm	3mm
CSG2.5	75 771104	400W	2.5m <sup>2</sup>	5,000mm	500mm	3mm
CSG3	75 771105	480W	3m <sup>2</sup>	6,000mm	500mm	3mm
CSG4	75 771106	640W	4m <sup>2</sup>	8,000mm	500mm	3mm
CSG5	75 771107	800W	5m <sup>2</sup>	10,000mm	500mm	3mm
CSG6	75 771108	960W	6m <sup>2</sup>	12,000mm	500mm	3mm
CSG7	75 771109	1120W	7m <sup>2</sup>	14,000mm	500mm	3mm
CSGMC	75 771202	Soleglow Multi-Controller (7 d	ay programmer)			

## Sunplus Outdoor patio heaters

# Commercial space heating







**66** The new Sunplus outdoor heater provides a safe, efficient and easy answer for outdoor heating.

Sunplus heaters give instant heat, are quick to install and only require minimal maintenance, contrasting gas patio heaters, which also have bulky and costly gas bottles to deal with. Sunplus heaters give heat at the flick of a switch and heat like the sun. The radiant heat passes through the air and heats solid objects making it highly efficient wherever it's installed, making them the ideal outdoor heating solution.

The heaters transmit harmless infra-red radiant energy, like the sun, that turns into heat only when it comes into contact with a solid object such as people.

So you're not heating the atmosphere or having the heat blown away in the wind unlike outdoor gas heaters.

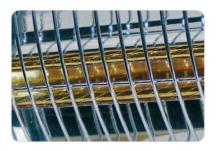
#### Key features

- Low running costs as Radiant heat heats solid objects not the air
- · Instant heat cuts the cost of outdoor heating overall
- Silent running with no moving parts or noisy naked flames

- Low capital cost as these heaters allow you to select fewer heaters, but place them exactly where the heating need is
- When used with PIR sensors, further energy savings are available

#### Gold finish halogen lamp

The gold quartz halogen lamp fitted to the Sunplus runs at up to 2,200°C and offers extended performance and 15% greater transmission.



#### Control options

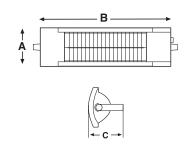


Sunquartz autodriver

#### **Technical Specification**

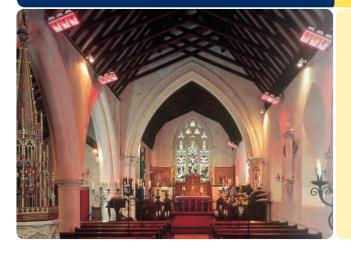
- Element 2kW gold quartz halogen lamp
- Finish high quality aluminium case in silver
- Reflector high performance polished reflector
- Fitted guard included
- IP rating IP24 (splashproof)
- Supply 230/240V AC single phase

## Dimensions



roduct Se	elector					
Model	Reference	Rating	Product description	Height A	Width B	Width C
CSP2	75 775201	2kW	Sunplus outdoor patio heater	159mm	594mm	144mm
CSQAD	85 822084		Sunquartz autodriver PIR			

## Sunquartz Shortwave infra-red radiant heaters



66 Instant heat right where it's needed. Sunquartz short wave infra-red heaters warm people, not the air.

> Their uses are endless, from warehouses to churches. These efficient sun-like heaters can penetrate damp air with minimum heat loss to the atmosphere.

#### Key features

- Up to 90% efficient at converting electricity into energy
- · Instant sensation of heat with visible glow at switch on
- · Absolutely silent in operation
- · Long range heat projection
- · Modular design
- · Lightweight and silent
- · Fitted with wire guard for safety
- 1 and 2 lamp units are suitable for a 230-240V single phase supply
- · 3 lamp units are supplied wired for single phase supply but can be connected to a 380-415 volt 3 phase supply

#### **Control options**

PIR automatic controller senses movement detected within its range and automatically switch on the heater which will remain switched on for a preset time.

The unit is suitable for 500W-6,000W single phase operation. Soft start circuitry is incorporated to reduce the inrush current, allowing cables and fusegear to be rated as for resistive loads and extending lamp life.

The PIR range is adjustable and a temperature hold-off facility will inhibit operation when ambient temperatures exceed a value selected between 10°C and 20°C.





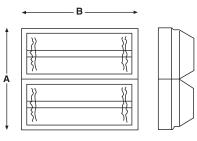
## Commercial space heating



### **Technical Specification**

- Tungsten halogen lamps, 230/240V with ruby red quartz outer sleeve
- Reflectors bright rolled, specular 99.8% aluminium, electro-chemically brightened
- · Electro zinc coated steel casing
- · High pressure die cast aluminium end castings
- · Epoxy polyester powder paint finish white/grey
- · Supply 230/240V AC single phase (3 lamp units can be connected to a 380/415V 3 phase supply)

#### **Dimensions**





#### **Product Selector**

Model	Reference	Rating	Number of lamps	Height A	Width B	Depth C
CSQ1.5	75 771801	1.5kW	1	185mm	390mm	115mm
CSQ2.0	75 771802	2kW	1	185mm	390mm	115mm
CSQ3.0	75 771803	3kW	2	370mm	390mm	115mm
CSQ4.0	75 771804	4kW	2	370mm	390mm	115mm
CSQ4.5	75 771806	4.5kW	3	555mm	390mm	115mm
CSQ6.0	75 771807	6kW	3	555mm	390mm	115mm
CSQAD	85 822084	Sunquartz autodriver PIR				

85 822084 Sunquartz autodriver PIR

## **Ceramic Emitters** Long wave infra-red heaters



66 Long wave infra-red heaters offer highly efficient, silent, space heating.

These heaters incorporate dual ceramic emitters to rapidly convert electrical energy into heat energy without

With no moving parts, these heaters are

Durable ceramic emitters which rapidly convert electrical energy into heat energy
Available in 2, 3 and 4.5kW versions

 No fans or moving components, so no dust contamination to the environment

producing light.

Key features

· Low maintenance

Vall

· Good vibration resistance

virtually maintenance-free.

· Fitted with wire safety guards

- Robust fitting brackets
- Ideal for commercial and industrial
   application where glare free heat is required

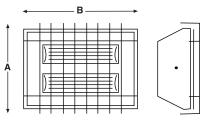
Commercial

space heating

#### **Technical Specification**

- Element ceramic emitter
- Grey painted steel casing
- Supply 230/240V AC single phase

Dimensions



← C →

Rating	Height A	Height B	Height C
2kW	1800	300	200
3kW	2500	300	300
4.5kW	3000	500	500



Floor

Vall

## Area of coverage at minimum mounting height

Heating index	Applications	2kW	3kW	4.5kW
130-150W/m <sup>2</sup>	Shops, meeting halls	7.2m <sup>2</sup>	12.0m <sup>2</sup>	18.8m <sup>2</sup>
150-170W/m <sup>2</sup>	Offices, canteens	6.8m <sup>2</sup>	11.3m <sup>2</sup>	17.7m <sup>2</sup>
170-200W/m <sup>2</sup>	Workshops, garages	6.0m <sup>2</sup>	10.0m <sup>2</sup>	15.7m <sup>2</sup>
220-240W/m <sup>2</sup>	Churches	4.7m <sup>2</sup>	7.8m <sup>2</sup>	12.3m <sup>2</sup>

## **Product Selector**

Floo

Model	Reference	Rating	Height A	Width B	Depth C
CCR2	75 771701	2kW	340mm	376mm	140mm
CCR3	75 771702	3kW	340mm	376mm	140mm
CCR45	75 771703	4.5kW	440mm	376mm	140mm

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## Sunslim Commercial radiant heaters

## Commercial space heating



66 Sunslim is a low cost, robust and easy to install radiant heater. Its tilt mounting allows heat to be localised, or directed to a general area.

Corrosion resistant

- · Suitable for bracket or chain mounting
- Easy to install
- Ideal for localised heating in large covered areas such as factories and workshops

#### **Technical Specification**

- · Element 'black heat' type
- · Zinc coated steel body/matt black end caps

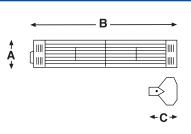
- Chrome plated steel guards
- · Anodised aluminium reflector
- Supply 230/240V AC single phase

The Sunslim can be wall-mounted or ceiling hung.

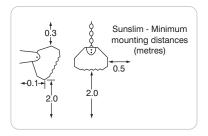
#### Key features

- · Instant, directional radiant heat
- Available in 2kW and 3kW versions
- · Completely silent in operation
- · Lightweight and robust





- Minimum mounting height 2 metres
- 300mm minimum clearance above the heater
- 500mm minimum clearance on either side
- Installation notes: High temperature cable must be used. We recommend the use of a residual current device (RCD)



•		
Sunslim	heated	area

leating index		3kW			2kW	
-	н	L	w	н	L	W
10	4.0	5.24	5.49	3.3	4.11	4.53
12	3.6	4.88	4.94	3.0	3.84	4.12
14	3.2	4.51	4.39	2.7	3.57	3.70
16	16 3.5		4.12	2.5	3.38	3.43
18	2.8	4.14	3.84	-	-	-

H = mounting height (determined by on-site requirements) L = length of the heated area W = width of the heated area

Product Sele	ctor				
Model	Reference	Rating	Height A	Width B	Depth C
CSL2	75 771601	2kW	108mm	1,215mm	71mm
CSL3	75 771602	3kW	108mm	1,671mm	71mm

## **Suntube** Tubular heaters

## Commercial space heating





66 Suntubes are the perfect answer where a steady energy efficient source of heat is needed, providing gentle background warmth and frost protection for both domestic and commercial applications.

> They are highly effective as window demisters and for horticultural use, providing invaluable, effective heating and frost protection in greenhouses and conservatories.

#### Key features

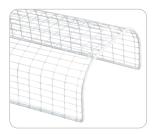
- 60-360W outputs
- A range of 6 lengths and loadings
- Complete with universal mounting brackets for floor or wall fixing and 1m white cable

#### **Optional accessories**



**Interlinking kit** Available for multiple installations (100mm mounting centres).

Ref: 85 731506



#### STG guards\*

We recommend the use of guards for additional security in sensitive areas such as schools, hospitals and care homes.

These can be obtained from C.Ainao Ltd. Tel: 020 7987 1184

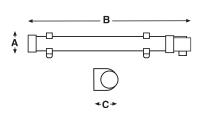
#### **Product Selector**

Model	Reference	Guard short code*	Rating	Diameter A	Length B	Depth C	
CST1	75 771501	STG1	60 Watts	52mm	410mm	75mm	
CST2	75 771502	STG2	120 Watts	52mm	670mm	75mm	
CST3	75 771503	STG3	180 Watts	52mm	980mm	75mm	
CST4	75 771504	STG4	240 Watts	52mm	1,280mm	75mm	
CST5	75 771505	STG5	300 Watts	52mm	1,590mm	75mm	
CST6	75 771506	STG6	360 Watts	52mm	1,890mm	75mm	
CSIK	85 731506	Interlinking kit					

### **Technical Specification**

- · Elements metal sheathed throughout
- Polyester epoxy powder coated aluminium body
- High temperature glass filled nylon end caps and brackets
- Supply 230/240V AC single phase

### Dimensions



## Sunfan High level fan heater



## Commercial space heating



66 Sunfan is a robust 3kW high volume air throughput commercial/industrial wall mounted fan heater designed to provide highly efficient heating in winter, or cool air circulation in summer.

Key features

- High air volume throughput of 300m3/hour
- Quiet running, totally enclosed motor
- · Wall mounted with 2 part self supporting bracket
- Multi-directional adjustment of 45° vertically and 150° horizontally with single screw locking
- High level heating/cooling ideal for shops
   and warehouses where wall space is at a premium
- Double insulated
- Supplied complete with variable thermostatic controller



**Thermostatic controller (included)** For remote switching on/off and variable thermostatic control.

#### **Control options**

For remote switching on/off and hot/cold air circulation.

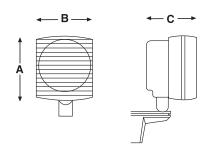


Dual control switch (optional) Ref: 82 815906

#### **Technical Specification**

- Flame retardant polycarbonate/glass filled nylon body
- · Single phase, 4 pole motor
- Two tone grey (neutral colours)
- · Protection Two thermal cut-outs
- Supply 230/240V AC single phase

#### Dimensions



- Minimum mounting height 1.8 metres
- 150mm minimum clearance above the heater
- 300mm minimum clearance on either side

roduct Sel	lector					
Model	Reference	Rating	Noise level @3m	Height A	Width B	Depth (
CSF3	75 771401	ЗkW	40.5dBA	229mm	267mm	260mm
CDCS	82 815906	Dual control switch				

### Sunscreen Warm air curtains



## Commercial space heating



66 Sunscreen and Sunspot heaters provide the ideal solution for draught exclusion on external doors.

> When mounted on the inside of an external door they create a 'hot air curtain' to prevent cold draughts entering a building. In summer they can be switched to fan only to form a barrier against incoming dust and provide a refreshing breeze. Suitable for a range of doorway applications in commercial premises such as shops, offices, workshops and stores, the Sunscreen and Sunspot heaters are designed for fast installation with key hole-slots for vertical mounting or brackets providing complete flexibility of adjustment from vertical to horizontal. Easily accessible switches allow the option to run the unit on fan only or at half or full heat output.

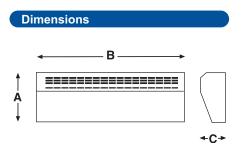


#### Sunspot 2.25kW

The Sunspot is a modular unit almost half the width of the Sunscreen. It can be used with a Sunscreen for wider doorways or on its own as a high level wall-mounted fan heater in commercial premises.

#### **Technical Specification**

- Element open coil supported by ceramic insulators
- Zinc coated steel, powder coated body white/grey
- Shaded pole motor
- Protection thermal safety cut-out
- Supply 230/240V AC single phase



Wall Mount

#### Ceiling Mount





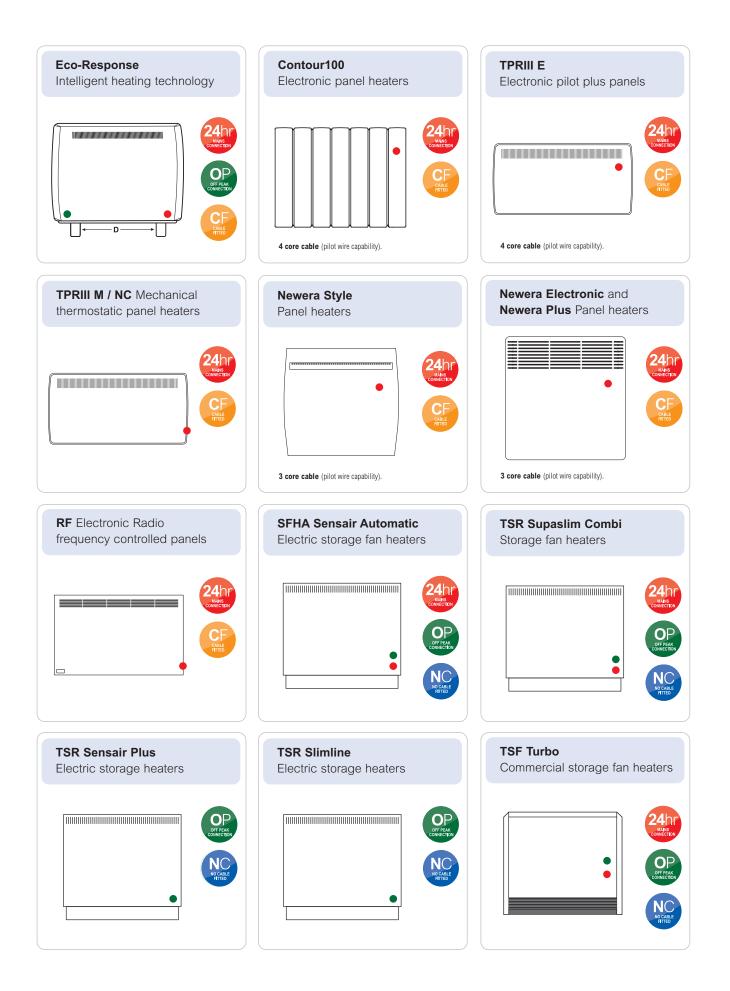
- Can be fixed directly to the wall using the key slot holes provided or angled using the brackets provided
- Mounting directly above the door at a height of between 1.8 and 2.25m

#### Key features

- · Two heat settings or cold
- · High volume throughput
- Smooth running, shaded pole motor, with 'greased-for-life' bearings
- Integral switching for ease of installation
- · Tangential blower

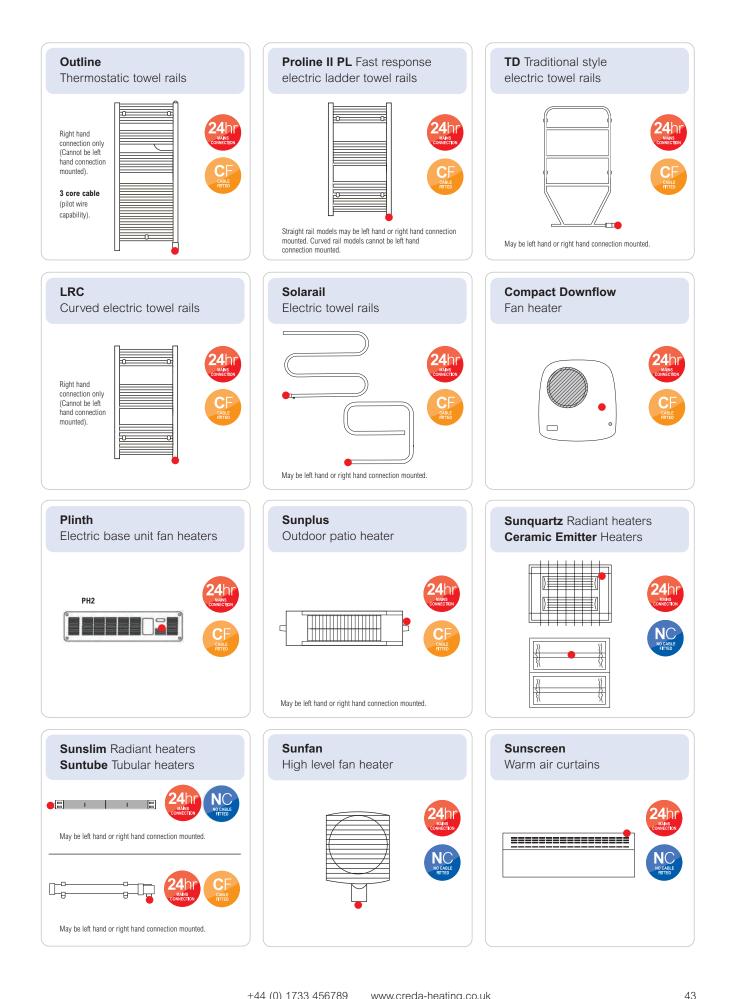


Model	Reference	Rating	Height A	Width B	Depth C
CSS3	50 813976	3kW	185mm	610mm	105mm
CSS45	50 813977	4.5kW	185mm	610mm	105mm
CSS225	50 813975	2.25kW	kW 185mm 350mm		105mm









To use these tables, select the type of heater and the appropriate sizing guide table. Then read across from the nearest floor area and appropriate external wall length to where the columns intersect. There are two temperature options given in each table:

- Comfort approximately 21°C for living areas
- Background approximately 18°C, typically
- required in bedrooms

Choose either comfort or background heating for the suggested heater size.

These tables are based on conventionally constructed single or two storey dwellings within:

- · Ceiling heights of 2.5m (8ft)
- Roof insulation of 25mm (1in) thick
- · Brick cavity walls with no insulation
- An external temperature of -1°C

#### **Technical Specification**

Tables for storage and storage fan heaters also assume the use of 7 hour economy tariff electricity. Please check your tariff and metering requirements with either your electricity supplier or call the Creda Technical Centre on 08709 000430.

Pro	oduct Sele	ctor																			
Floor .	Temperature								Tot	al Leng	th of Ou	utside V	Vall (m)								
Area m <sup>2</sup>	Options	1.5m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
Up to	Comfort	S/XS	S	S	Μ	Μ	М														
	Background	S/XS	S/XS	S	S	S	M														
Up to	Comfort	S	M	M	M	L	L	L	L												
6m <sup>2</sup> Up to	Background Comfort	S S	S M	S	S L	M	L	M	MS	SM	2M										
9m <sup>2</sup>	Background	S	S	M	M	M	M	M	1013		2111										
Up to	Comfort	M	M	L	L	L	MS	MS	MS	2M	2M	2M	LM								
<u> </u>	Background	S	Μ	М	Μ	Μ	L	L	L	L	MS	MS	MS								
Up to	Comfort	L	L	L	L	MS	MS	2M	2M	2M	LM	LM	2L	2L							
15 m <sup>2</sup>	Background	М	Μ	M	Μ	L	L	L	MS	MS	MS	2M	2M	LM							
Up to	Comfort	L	L	L	MS	MS	2M	2M	2M	LM	LM	2L	2L	2L	3M	3M					
18m <sup>2</sup> Up to	Background Comfort	M	M	M MS	L MS	2M	L 2M	MS 2M	MS LM	MS LM	MS 2L	2M 2L	2M 2L	2M 3M	2M 3M	LM 3M	2L+S				
	Background	M	M	11/15	11/15	L	MS	MS	MS	MS	2L 2M	2L 2M	2L 2M	2M	LM	LM	LM				
Up to	Comfort	1	MS	MS	2M	2M	2M	LM	LM	2L	21VI 2L	21VI 2L	3M	3M	3M	2L+S	2L+S	2L+S			
	Background	M	L	L	L	MS	MS	MS	MS	2M	2M	2M	LM	LM	ML	2L	2L	2L			
Up to	Comfort	MS	MS	2M	2M	2M	LM	LM	2L	2L	2L	2L	3M	3M	3M	2L+S	2L+S	2L+M	2L+M		
27m <sup>2</sup>	Background	L	L	L	MS	MS	MS	MS	2M	2M	2M	LM	LM	LM	2L	2L	2L	2L	2L		
Up to	Comfort	2M	2M	2M	LM	LM	2L	2L	2L	2L	2L+S	2L+S	2L+S	2L+S	2L+M	2L+M	2L+M	2L+M	3L	3L	3L
30m <sup>2</sup>	Background	L	L	MS	MS	MS	2M	2M	2M	2M	2M	LM	LM	2L	2L	2L	2L	2L	ЗM	ЗM	ЗM
Up to	Comfort	18	18	18	18	18	18														
	Background	18	18	18	18	18	18														
Up to	Comfort	18	18	18	18	24	24	24	24												
	Background	18	18	18	18	18	18	18	18												
Up to 9m <sup>2</sup>	Comfort Background	18 18	18 18	18 18	24 18	24 18	24 18	24 18	18+S 24	18+S 24	18+S 24										
Up to	Comfort	18	18	24	24	24	18+S	18+S	18+S	18+M	18+M	18+M	18+M								
	Background	18	18	18	18	18	24	24	24	24	18+S	18+S	18+S								
Up to	Comfort	24	24	24	24	18+S	18+S	18+S	18+S	18+M	24+M	24+M	24+M	24+L							
<u> </u>	Background	18	18	18	18	24	24	24	24	18+S	18+S	18+S	18+M	18+M							
Up to	Comfort	24	24	24	18+S	18+S	18+S	18+M	18+M	24+M	24+M	24+L	24+L	24+L	24+L	24+L					
	Background	18	18	18	24	24	24	24	18+S	18+S	18+S	18+M	18+M	18+M	18+M	24+M					
Up to	Comfort	24	24	18+S	18+S	18+S	18+S	18+M	18+M	18+M	24+M	24+M	24+L	24+L	24+L		18+2M				
21m <sup>2</sup>	Background	18	18	24 18+S	24 18+S	24 18+S	24 18+M	18+S	18+S	18+S	18+M	18+M	18+M	24+M	24+M	24+M	24+M	04:014			_
Up to 24m <sup>2</sup>	Comfort	24 18	24	24	24	24	18+IVI 18+S	18+M 18+S	24+M 18+S	24+M 18+M	24+L 18+M	24+L 18+M	24+L 24+M	18+2M 24+M	18+2M 24+M	24+21VI 24+L	24+2M 24+L	24+2M 24+L			
Up to	Background Comfort	18+S	18+S	18+S	24 18+M	24 18+M	18+M	24+M	24+M	24+L	24+L	24+L	18+2M		18+2M		24+L 24+2M				
	Background	24	24	24	24	18+S	18+S	18+S	18+M	18+M	18+M	24+M	24+M	24+M	24+1	24+1	24+1	24+1	24+L		
Up to	Comfort	18+M	18+M	18+M		24+M	24+L	24+L	24+L	24+L	18+2M	18+2M			18+2M		24+2M			24+2L	24+2
	Background	24	24	24	18+S	18+S	18+M	18+M	18+M	18+M	18+M	24+M	24+M	24+L	24+L	24+L	24+L	24+L	18+2M	18+2M	18+2
Up to	Comfort	600	600	1000	1000	1250	1250														
3m <sup>2</sup>	Background	600	600	600	1000	1000	1000														
Up to	Comfort	600	1000	1000	1250	1250	1500	1500	2000												
	Background	600	600	1000	1000	1000	1250	1250	1500												
Up to	Comfort	1000	1000	1250	1250	1500	1500	2000	2000	2000	2250										
	Background	1000	1000	1000	1250	1250	1250	1500	1500	2000	2000	0502	0500								
Up to	Comfort	1250	1250	1250	1500	1500 1250	2000	2000	2000	2250	2500	2500	2500					_	_		_
12m <sup>2</sup> Up to	Background Comfort	1000 1250	1000 1250	1250 1500	1250 1500	2000	1500 2000	1500 2250	1500 2250	2000 2500	2000 2500	2000 2750	2000	3000							
15m <sup>2</sup>	Background	1250	1250	1250	1500	1500	1500	2250	2250	2000	22500	2750	2500	2500							
Up to	Comfort	1500	1500	2000	2000	2000	2250	2500	2500	2500	2750	3000	3000	3250	3500	3500					
18m <sup>2</sup>	Background	1250	1250	1250	1500	1500	1500	2000	2000	2250	2250	2500	2500	2500	2500	2750		_	_		_
Up to	Comfort	1500	2000	2000	2000	2250	2250	2500	2500	2750	3000	3000	3250	3500	3500	4000	4000				
21m <sup>2</sup>	Background	1250	1500	1500	1500	2000	2000	2000	2000	2250	2250	2500	2500	2750	2750	3000	3000				
Up to	Comfort	2000	2000	2000	2250	2500	2500	2750	2750	3000	3000	3250	3500	3500	4000	4000	4000	4000			
24m <sup>2</sup>	Background	1500	1500	2000	2000	2000	2000	2250	2250	2500	2500	2500	2750	2750	3000	3000	3250	3250			
Up to	Comfort	2000	2000	2250	2500	2500	2750	3000	3000	3250	3500	3500	4000	4000	4000	4100	4400	4400	4750		
072	D	1500	1500	0000	0000	0000	0000	0050	0500	0500	0500	0750	0750	0000	0000	0050	0050	0500	0500		

Background Extra Small (XS) = TSR6 = 0.9kW

Background

Comfort

Small (S) = TSR12 = 1.7kW

2000 2500

2000 2000

2000 3000

2250 3000

2500 3250

1500

1500

Medium (M) = TSR18 = 2.5kW

2500 3250

2750 3500

2750 4000

3000 Large (L) = TSR24 = 3.4kW

3000

4000

3000 4000

4100

4400

4750

4000

4750

4000

5000

4000

4400

Storage fan heaters

Storage heaters

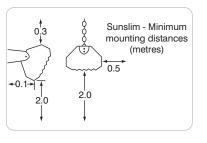
27m

30m

#### Sunslim radiant heaters

When planning a radiant heating installation, refer to Table 1 to select the application and type of environment you wish to heat. Table 2 shows the area that can be heated by a single Sunslim radiant heater in 3kW and 2kW variants.

Note: Heating areas can be overlapped to achieve the necessary heating index.



#### Table 1 - Sunslim heating index

Applications	Heating Index
Offices, canteens,	10-14
waiting rooms, entrance	
halls, dressing rooms	
Shops, meeting halls,	12-16
recreation rooms, clubs	
workshops, garages,	14-18
public buildings	
Warehouses, loading bays,	16-20
hangars	
Churches	18-20

#### Table 2 - Sunslim heated area

Heating index		3kW		2kW				
-	н	L	W	н	L	w		
10	4.0	5.24	5.49	3.3	4.11	4.53		
12	3.6	4.88	4.94	3.0	3.84	4.12		
14	3.2	4.51	4.39	2.7	3.57	3.70		
16	3.5	4.33	4.12	2.5	3.38	3.43		
18	2.8	4.14	3.84	-	-	-		

H = mounting height (determined by on-site requirements)

 $\mathsf{L} = \mathsf{length} \ \mathsf{of} \ \mathsf{the} \ \mathsf{heated} \ \mathsf{area} \qquad \qquad \mathsf{W} = \mathsf{width} \ \mathsf{of} \ \mathsf{the} \ \mathsf{heated} \ \mathsf{area}$ 

#### Sunquartz radiant heaters

Use the following procedure when planning a Sunquartz heating installation for buildings having a floor area of up to 500m<sup>2</sup>.

- Make a scaled plan of the area to be heated, noting possible mounting heights and positions
- Determine the overall heating requirements

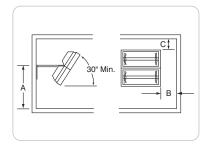
WxYxK = Total kW loading

#### Key: W= Length to be heated in metres

- Y = Width to be heated in metres
- K = Intensity watts per m<sup>2</sup>, determined from Heating Index Table 1
- Determine the number of Sunquartz heaters by dividing the kW rating of the selected units into the total kW loading from stage 2

#### Table 1 - Sunquartz heating index

Sunquartz - Heating Index (K)	Recommended Applications:
130 - 170	Shops, meeting halls,
	recreation rooms, clubs
150 - 170	Offices, canteens,
	waiting rooms,
	entrance halls
150 - 200	Workshops, garages,
	public buildings
180 - 220	Warehouses, loading bays,
	hangars
220 - 240	Churches



#### Table 2 - Sunquartz heated area

Model	el Spare tube reference Min mounting distances			nces
		Α	В	С
Sunquartz 1.5kW	85 821421	1,800	300	300
Sunquartz 2.0kW	85 822171	2,500	300	300
Sunquartz 3.0kW 2 lamp	85 821421	3,000	500	500
Sunquartz 3.0kW 3 lamp	85 821421	3,000	500	500
Sunquartz 4.0kW	85 822171	3,000	500	500
Sunquartz 4.5kW	85 821421	3,000	500	500
Sunquartz 6.0kW	85 822171	4,000	500	500

#### Fax back to: 01733 552 882

Completed form to be returned to Applications Design Department, Applied Energy Products Ltd, Morley Way, Peterborough PE2 9JJ

Customer name

Address

Telephone

Fax

Contact

#### **Newbuild Properties**

For new-build developments the following are required:

- Scaled plans of the property/building (1:100 minimum)
- · Sections and elevations
- · Construction details and insulation standards
- Type of space and water heating system required

• Degree of site exposure (severe, normal, sheltered etc) These may be supplied as hard copy or electronically as DWG, DWF, DXF files

#### Additional design information required

Solar water heating	
All water heating products	
Wind turbines	
Mechanical heat recovery and ventilation	
Heat pumps and cooling	

#### **Existing properties**

Construction details	(Items marked * will	be taken if no int	formation supplied)			
Age of build						
External wall type	Solid		Cavity*		Filled cavity	
Roof insulation	None*		25mm(1")		50mm(2")	
	100mm(4")		150mm(6")		200mm(8")	
Floor type	Solid*		Timber		Insulated	
Glazing	Single*		Double		Triple	
Window frames	Metal		Timber*		UPVC	
Property type	House		Bungalow		Office	
or						
Flat storey type	Ground*		Intermediate		Тор	
Usage pattern	Domestic*		Commercial		Chimney*	
	None		Open		Blocked off	
Type of heating required						
Storage heating	TSR Auto		TSR Manual		TSR Combi	
Storage fan heaters	SFHA Sensair		TSF Turbo			
Panel heaters (electronic)			Downflow fan		Plinth heater	
Panel heaters (mechanical)			Sunscreen		Fan convector	
Sunquartz			Pilot wire		4 zone control	
Eco Response	ER					
External wall Window 2.4m x 1.5m  4m  Lounge  Ceiling height 2.4m  Internal walls  Door	External wall		Note: If dime 2) Number of e	sions including ceiling ensions are in feet, plea xternal walls size of windows	0	ly

46

66 Buildings are responsible for 30% of the country's carbon dioxide  $(CO_2)$  emissions.

> Most Creda heating appliances come complete with built-in thermostats for energy saving but other energy saving tips can save you money and help protect the environment.

- Turning your thermostat down by just 1°C could 1 cut your heating bills by up to 10%.
- Is your water too hot? Your cylinder thermostat should be set at 60°C / 140°C.
- 3 Close curtains or blinds at dusk to stop heat escaping through the windows.
- 4 Always turn off the lights when you leave a room. Or even better, switch to energy saving light bulbs. They save up to ten times their price over their lifetime.
- 5 Don't leave electronic items on standby or on charge unnecessarily. Standby can use as much as 60% of the electricity used when it is fully switched on.
- 6 Use your washing machine, dishwasher and tumbledryer on half-load or economy settings.
- 7 Only boil the amount of water you need for one cup of tea, rather than half a kettle full.
- 8 Set the appropriate temperature on your heaters for the room they are in. In a spare room, for example, leave the thermostat on a lower setting.
- 9 Make sure your hot-water tank is properly insulated. A British Standard lagging jacket only costs £10 and could save £10-£15 per year.
- 10 Use a lid on saucepans and save energy and money with every meal.
- **11** Stop your heating bill going through the roof. Fitting 250mm of loft insulation can save £100.

- **12** Nearly 25% of heat loss can occur through poorly insulated frames and single glazing. If you can't afford to double glaze all your windows, go for the room you heat the most.
- 13 Defrost fridges and freezers regularly to keep them running efficiently and ensure the elements to the rear are off the wall so they can work efficiently. Don't leave the door open longer than necessary. Don't put hot or warm food straight into the fridge - let it cool down first.
- 14 Use Creda heaters fitted with timers to turn the heating on only when you need it and automatically switch it off when you don't. Creda products used in conjunction with control options should be put in setback mode to save energy.
- 15 Use a shower if you have one save time, money and water. Visit www.redring.co.uk.
- 16 A dripping hot water tap wastes energy and in one week wastes enough hot water to fill half a bath.
- 17 Hot water solar thermal collectors are becoming very popular for free hot water. Visit www.redring.co.uk.
- 18 Generate your own electricity. A modern micro wind-turbine is the windmill of the 21st century. Visit www.xpelair.co.uk.

#### Energy efficiency tips in the workplace

Many of the items listed above will be relevant to the workplace but there are certain areas which need specific attention:

- Fit PIR sensors to lighting so it only comes on when people are in the 1 area. And make the most of natural light - it's free and won't damage the environment.
- 2 Have an energy efficiency champion in each department who makes sure printers and photocopies are all turned off at night and at weekends you'll be amazed at the savings made.
- 3 Make sure staff switch their monitors off at weekends and during holidays. On average, offices waste £6,000 each year by leaving equipment on over weekends and bank holidays.
- 4 If you have a working environment that entails keeping draughty doors open all the time, or sees regular opening and closing of doors, invest in a Creda air curtain which works like an invisible barrier and keeps draughty cold air out and warm air in.

#### Renewable energy

The best way to save energy is to use renewable energy, derived from inexhaustible sources such as the wind and sun, which can provide an economical and sustainable heating solution.

### **UK Sales**

Sales Hotline:	08709 000420
Sales Fax:	08709 000520

#### **Technical Services**

Techline:	08709 000430
Techfax:	08709 000530

#### **Brochure Hotline**

Telephone: 08709 000540

### **International Sales**

Creda is a great British brand in every sense of the word. It is also a world leader in space heating with sales in over twenty countries world-wide. We have achieved this by taking into consideration global market requirements and ensuring products are developed to meet these needs, as well as developing products for specific countries and regions, taking into consideration approvals, electrical supply and climate. For further details call:

Sales Hotline: +44 (0) 1733 456789 Sales Fax: +44 (0) 1733 456727

## Equipment Directive

Waste Electrical and Electronic

Applied Energy Products Ltd and its associated brands can confirm that all our responsibilities under the Waste Electrical and Electronic Equipment Directive will be fulfilled in accordance with the law. As required within its provisions we are members of an accredited WEEE recycling scheme for all product categories within the scope of the directive.

WEEE product registration number: WEE/EE0202VV.



Factory inspection is an important element of the BEAB Approved product scheme. Inspections are carried out annually, at each factory where BEAB Approved products are manufactured. Applied Energy Products Limited is a BEAB approved factory.



The BEAB Approved Mark is the electrical safety mark of the UK's leading independent approvals specialists. It confirms to all in the supply chain that all products displaying the mark have been evaluated to the highest European and International safety standards.

# CE

All Creda Heating products are CE marked to certify that the product fulfills the requirements of all relevant European product directives.

## applied energy///

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C019 August 08



All Creda Heating products, unless otherwise stated, are covered by a full parts and labour guarantee for 1 year from the date of purchase, so should the product become faulty within the guarantee period, it will be replaced with a new product or repaired by our service engineers, totally free of charge.

Applied Energy Products reserve the right to alter product specification or appearance without prior notice. All finishes in the brochure are as accurate as printing processes allow. Free Manuals Download Website <u>http://myh66.com</u> <u>http://usermanuals.us</u> <u>http://www.somanuals.com</u> <u>http://www.4manuals.cc</u> <u>http://www.4manuals.cc</u> <u>http://www.4manuals.cc</u> <u>http://www.4manuals.com</u> <u>http://www.404manual.com</u> <u>http://www.luxmanual.com</u> <u>http://aubethermostatmanual.com</u> Golf course search by state

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