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the heat book

DUOHEAT RANGE

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DuoHeat[®] radiators

**BUILDING REGULATIONS
PART L COMPLIANT**

the DUO range

The revolutionary DuoHeat radiator is the latest in stylish, energy-efficient electric heating. With a slim, modern design, user-friendly electronic controls and an innovative "smart" heat management system, DuoHeat is the perfect choice to provide efficient, controllable heat exactly when and where you want it.

By providing heat from an automatically managed mix of off-peak and direct-acting sources, DuoHeat provides the flexibility and controllability to match users lifestyles and ensures plenty of heat is available throughout the day or evening whenever it's needed, while keeping running costs low. Smart control options also allow an entire system to be controlled from the convenience of a single programmer – just like a traditional central heating system – using Dimplex pilot wire or mains borne signalling 4-zone central programmers. DuoHeat has also been designed to be quick and easy to install, with features such as pre-wired electrical connections and fast fit assembly.

Range features

- Stylish, slim-line design with concealed outlet grille.
- Heat output provided by a combination of off-peak and standard rate electricity sources.
- Patented 'smart' heat manager automatically controls output level from each heat source, optimising controllability and economy*.
- Single, simple to use and understand electronic user control, with child lock facility:
 - Electronic room temperature control allowing user adjustment of heater output.
 - User configurable electronic automatic input charge regulator.
- Compatible with Dimplex 4-zone, wall mounted pilot wire and mains borne signalling multi-heater programmers.
- Pre-wired electrical connections.
- Simple, secure wall fixings.
- Snap fit feet.
- Easy-fit front panel connections.
- Compatible with all off-peak tariffs.
- Energy-efficiency savings of up to 10% compared with traditional off-peak electric heating systems, recognised by SAP2005, the tool for showing compliance with Part L of the Building Regulations.

* Patent number: GB2384300



Model Duo400i



Model RXPW4

smarter features

How DuoHeat works

The secret to the DuoHeat radiator is its intelligent use of energy, ensuring plenty of heat is available right through the day, while keeping running costs low.

Uniquely, DuoHeat achieves this by providing heat from 2 separate, fully automatically controlled sources. Energy from low cost electricity tariffs (normally available at night) is retained in the heart of the heater and radiates from the casing throughout the day to provide heat input in to the room. Whenever needed to maintain the room temperature, this is automatically supplemented by a low wattage radiant element fitted in direct contact with the radiator's front panel. To operate effectively and efficiently, both sources must operate together to meet the user's room temperature requirement, set using a single electronic room temperature control. DuoHeat's 'smart' heat management system then automatically adjusts the proportion of heat output provided by each source as needed throughout the day to meet the occupants' selected comfort level.

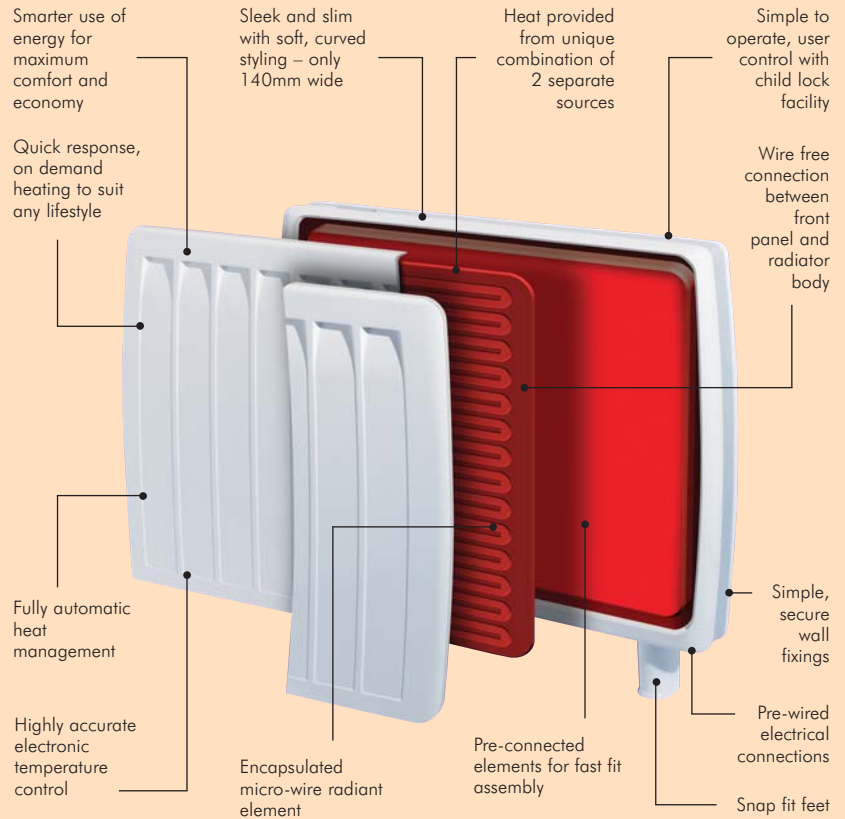
Economical and Controllable

Using a combination of heat sources in this way has proven to be a more effective and energy-efficient way of heating.

- Reduction of total energy use (kWh) by up to 10%, compared to traditional storage heaters.
- The 10% reduction in energy use is recognised by the Government's SAP 2005 (Standard Assessment Procedure for energy ratings in dwellings).
- Not reliant on 'off peak energy' alone for heating.
- Heat output provided by a combination of off-peak and standard rate electricity sources.
- Stored heat is supplemented by small amounts of direct acting energy, released from the radiant front panel.
- Provides background heat to maintain room temperature, as required by the user throughout the later part of the day.
- Patented 'Smart' heat manager automatically controls output level from each heat source, optimising controllability and economy.
- Simple to use interface, with added features of child safety lock.



Optional central control unit available



Unique twin heat sources for smart optimisation of energy....



constant background heating from low cost energy....



supplemented by unique thin-film radiant element whenever more heat is needed.



One simple finger-tip and child-proof control

technical specifications

Construction Details

Durable polyester coated steel front and rear casing mounted on plastic feet (clip on). Insulated heat-retaining core behind inner front skin.

Internal Details

1 Heat retention

High density bonded magnetite energy retention cells.

2 Heating elements

Encapsulated microwire element fixed to the inside of the front panel, covering the whole fascia. Two, three or four (depending on model) mineral filled incoloy sheathed units of 0.65kW.

3 Thermal insulation

Front and rear panels: microporous silica.
Top and ends: resin free ceramic fibre.
Base: calcium silicate slab.

Controls

1 Room temperature controls

Integral user adjustable electronic room thermostat controlling front panel element operation. Set via LED membrane display on top of heater. Child lock facility.

2 Input charge control

Electronic room temperature sensing thermostat with external sensor. Limits charge in relation to room temperature during charge period. User selectable setting.

3 Thermal safety devices

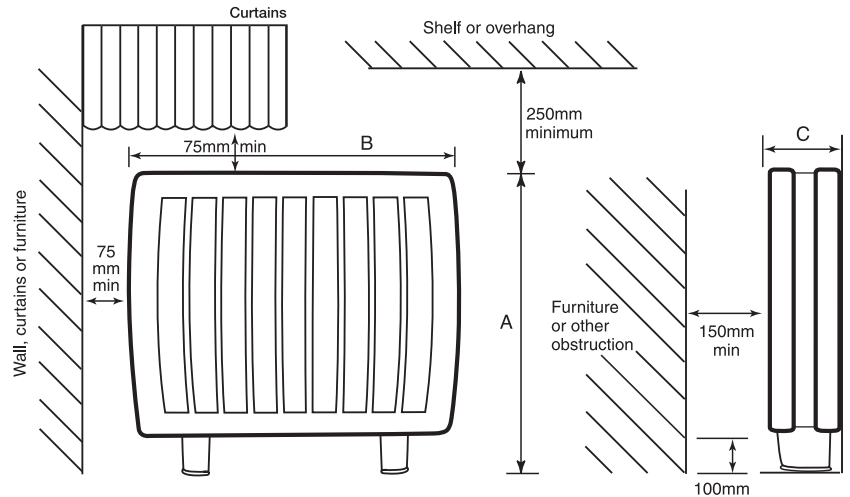
Automatic reset core limit thermostat and manual reset over temperature cut out. Thermal control device on front panel limits surface temperature to 75°C maximum.

4 Central control

Enabled for pilot wire connection as standard. Requires optional receiver for Mains Borne Signalling connection (RX03002). Functions are:

Controller Mode	Heater Function
Comfort	Heater functions at thermostat setting
Background	Temperature controlled at 2°C below thermostat setting
Frost protection	No input charge accepted. Film element maintains frost protection
Off	Heater does not function

Dimensions and clearances



Model No.	Duo300i	Duo400i	Duo500i
Height A	712mm	712mm	712mm
Width B	600mm	830mm	1060mm
Depth C	130mm+10mm	130mm+10mm	130mm+10mm
Weight (Installed)	65kg	94kg	124kg

Model No.	Duo300i	Duo400i	Duo500i
Nominal Output	0.7kW	1.0kW	1.4kW
Charge Acceptance	9.1kWh	13.65kWh	18.2kWh
Input Rating	18.2kW	1.95kW	2.6kW
Input Rating	0.3kW	0.35kW	0.4kW

Installation

1 Assembly

Removable front panel with wire free low voltage connection to main body.

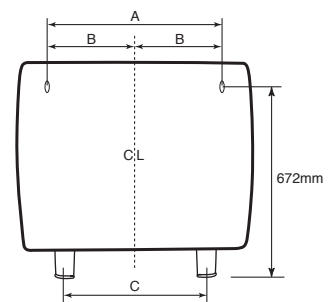
2 Supply connection

Off peak supply: Located at front left hand end of base. Pre-wired with 1.6m 3 core, 2.5mm² cable. 24 hour supply: Located at front right hand end of base. Pre-wired with 1.6m 4 core, 0.75mm² cable (for pilot wire control).

3 Feet

Plastic moulded with 'clip on' fixing to base.

Fixing Dimensions



Model No.	A	B	C
Duo300i	424mm	212mm	295mm
Duo400i	652mm	326mm	523mm
Duo500i	880mm	440mm	751mm

See pages 24-26 for central control compatibility details.

After Sales Service

After sales service if required is absolutely no problem with Dimplex – we have a network of appointed Service Agents spread throughout the Country who are qualified and trained to repair or service any of our appliances.

Bathrooms

Any electrical appliances installed in a bathroom should be fitted by a competent electrician in accordance with the current I.E.E. Regulations.

Portable heaters are NOT suitable for use in a bathroom.

Unless otherwise specified in this brochure, heaters that can be permanently fixed have to be so mounted that any controls cannot be reached by a person using a bath or shower. This restriction does not apply to Dimplex heated towel rails, which do not have controls.

Safety

Dimplex products are designed to comply with EN60335 the British Standard covering the safety requirements of electric heating appliances, and momentary contact with any part of the heater should not cause injury. However, in order to be effective, heaters or towel rails of any type do get hot especially (if applicable) around the air outlet grille. Therefore if aged or infirm persons, or young children, are likely to be left unsupervised in the vicinity of a heater we advise that precautions should be taken. We recommend that a guard is fitted around the heater, as is normal with many types of heating appliance in similar circumstances, to ensure contact with the heater is avoided and objects cannot be inserted into the product.

(Please see page 36 for details of accessory guards.)

Heating appliances should never be covered or positioned where objects may fall onto them.

Specifications

Dimplex policy is one of continuous improvement; the Company therefore reserves the right to alter specifications without notice. Although every care has been taken in the reproduction of product finishes in this brochure, the colour photographs should be taken only as a guide. The information contained in this brochure is correct at the time of printing. You are advised to consult your dealer before purchasing.

Plugs

All portable appliances are supplied with a fitted plug.

British Electrotechnical Approvals Board BEAB Approved



The mark of the British Electrotechnical Approvals Board signifies that the appliance bearing it has been produced to the stringent safety requirements for domestic electrical appliances as laid down in EN60335.

CE Mark



Products carrying the CE mark comply with European safety standards and the European Standard for electro-magnetic compatibility.

Installation Guidance

This brochure is designed to assist you with your choice of Dimplex products and it is not intended as an installation guide.

For safety, products should only be installed by a competent person, in accordance with current regulations and the manufacturers instructions. If you require further advice concerning the installation of our products – especially where the installed dimensions may be critical to your choice and the location of the product – please contact our Customer Care on 0845 600 5111 or consult your installer.

Please note that the dimensions contained within this brochure do not in all cases include clearances required around installed products for safe operation.

Useful Numbers

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Dimplex
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