

3CDimplex®



Q-Rad

Introducing Q-Rad

The intelligent electric heater



Introducing Q-Rad — our most intelligent electric radiator to date.

For over 60 years, Dimplex has built its portfolio to the point where it is now the brand leader in electric space and water heating, offering a selection of over 700 products within the electric space heating sector alone – the widest in the world. Its growth can be attributed to providing affordable heating solutions that are efficient, reliable and durable, as well as attractively designed.

With a proud reputation for continued investment in quality and innovation, Dimplex is delighted to introduce its latest innovation: Q-Rad.

Designed and developed by our in-house team of experts, and manufactured in our own factory in the UK, Q-Rad incorporates the most advanced technologies to give you maximum control over your heating. It's our most intelligent electric radiator to date.





Why is Q-Rad so good?

- ✓ Intelligent electric radiator.
- ✓ 'Eco-Start' delayed anticipatory control – the heater decides when to turn on to ensure target temperature is achieved at the selected time.
- ✓ Advanced touch control system.
- ✓ Dual-Element technology for the perfect balance of convection and radiant heater.
- ✓ Open window technology automatically reduces output to prevent heat loss if a window is left open.

Q-Rad – at a glance

Q-Rad combines the latest, most advanced technologies to give you maximum control over your heating. Choose when you want heat and at what temperature using the intuitive Heater Control. Then sit back and let Q-Rad take care of the rest.

- Our most intelligent electric radiator.
 - Highly accurate electronic thermostat (to $\pm 0.2^{\circ}\text{C}$).
 - Advanced touch control system offering temperature selection and preset programmes for maximum control with complete flexibility.
 - 24-hour and 7-day timer control ensures suitability for domestic and commercial applications.
 - Instant warmth through Dual-Element Technology, providing the perfect balance of convection and radiant heat.
 - Stylish design to complement the Quantum heating system.
- Dubbed ‘the electric radiator with a brain’, Q-Rad monitors the effect of its actions on a room’s temperature. It knows precisely how long it takes to get to the desired temperature and when to turn off as it approaches that target temperature. This minimises the energy that it uses, while maximising comfort – keeping you warm for the lowest possible cost.
 - A low thermal mass allows Q-Rad to heat up more quickly and react more responsively to changes in room temperature. This means improved control, comfort and energy saving.
 - Taking design cues from our category-leading Quantum heater, Q-Rad is sleek, slim and stylish. Combining good looks with flexible installation options, Q-Rad is ideal for use in many applications, including in place of conventional convector heaters or electric radiators.
 - Open Window Technology automatically reduces output to prevent heat loss, if a window is left open thereby saving you money.
 - Low thermal heat mass, providing:
 - Faster room heat up time and lower energy consumption than a fluid-filled electric radiator with comparable output.
 - Responsive reaction to changes in temperature to prevent overheating and energy wastage.
 - Stylish design to complement the Quantum heating system.
 - Suitable for use as a stand-alone electric radiator or as part of a Quantum heating system.
 - BEAB approved.



Using Q-Rad

Q-Rad combines state-of-the-art technology with intuitive operation.

Visual and audible feedback

The Heater Control lets you choose when you want to heat the room and to what temperature. This electronic interface comprises an LCD display screen and six touch-sensitive buttons: **Menu**, **Back**, **Advance**, **Up** (arrow), **Down** (arrow) and **Enter**, which make an audible 'beep' when pressed. The pitch of the sound will rise and fall in line with the temperature selected and the temperature display is also colour-coded to assist the visually impaired. (Note, audio feedback may be disabled where not required.)

Pre-programmed settings

Q-Rad comes with four pre-programmed timer modes: **Out All Day**, **Home All Day**, **Holiday** and **Use Timer**. The times of these may be modified to suit your lifestyle, plus there's a handy **Advance** function that lets you change your settings temporarily. For example, you might want to give a 'Boost' of temporary heating for between one and four hours.

Child lock

Q-Rad features a Child Lock to prevent little hands from tinkering with your settings. Activating this is easy: simply press and hold the **Back** and **Enter** buttons on the Heater Control for three seconds. The words 'Child Lock' will appear at the bottom of the screen to tell you that this function is active.



A closer look at energy-saving features

Q-Rad boasts a range of unique, intelligent features which work automatically to help keep you warm for less.



Dual element technology

Q-Rad has a convective element, which has a variable power output and a radiant element. It uses one or both of these heat sources automatically to maintain an accurate target room temperature. Q-Rad calculates the time needed to heat a room and the convective element begins by operating at full power.

As the room approaches the target temperature, Q-Rad begins to cycle the convective element between full and reduced power until the target temperature is reached.

At this point, Q-Rad switches off the convector, thereby avoiding overshooting and saving you energy. To maintain the target temperature, Q-Rad cycles the convective and radiant elements on and off, as required.



Open window detection

Should a window or door be left open accidentally, Q-Rad will detect a sudden change in temperature and scale back the output to 50%. Once the window or door has been closed, Q-Rad will return to normal operation. This technology ensures the output from the heater is reduced when heat is escaping from a room, thereby avoiding wastage and saving you money.





'Eco Start' delayed start anticipatory control

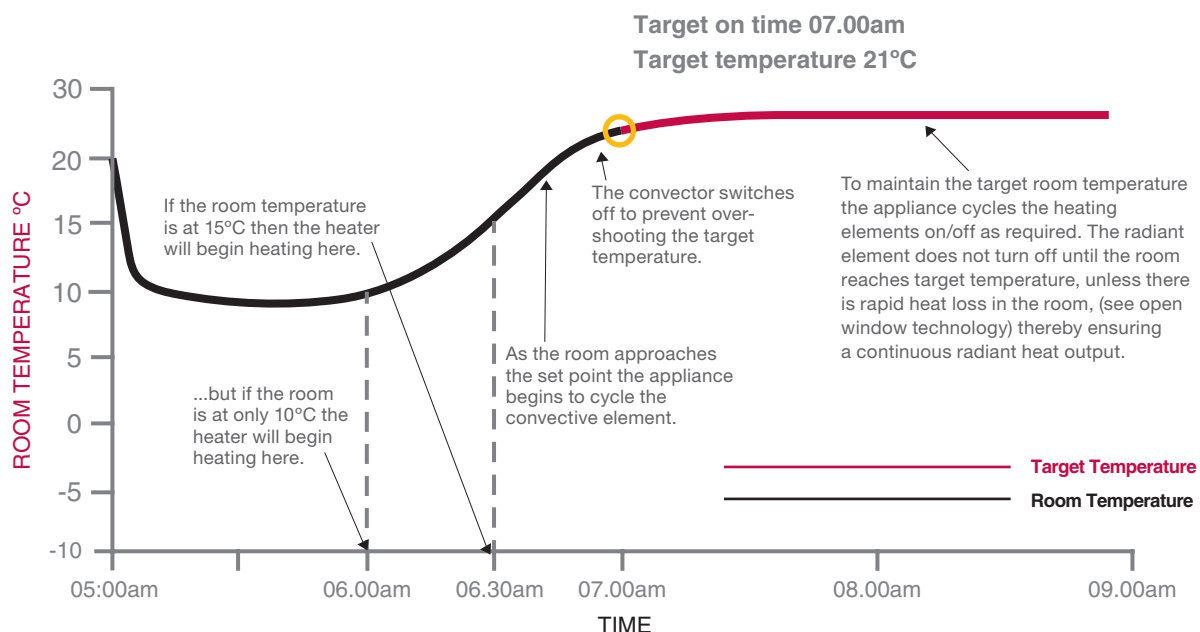
Q-Rad has a unique, self-learning delayed start function, which learns the thermal characteristics of a room and determines how long the appliance needs to operate in order to reach target temperature based on factors such as room size, heat losses and the prevailing weather.

Measuring the heat-up and cool-down times of the room, and how they vary with external temperature, the heater will work out what time it needs to start heating in order to reach the user-defined target temperature at a specified time.

Inevitably this minimises wasted energy and can deliver cost savings for users. E.g. If you plan to get up at 7am and your desired temperature is 21°C: with a traditional system, you would need to estimate when to set the heating to come on to ensure it preheats the room in time.

Depending on your settings and the prevailing temperature, this could mean that the room is still cold when you get out of bed or that it has been warm for some time before it needed to be. However, (as the graph below demonstrates), with this clever feature, Q-Rad anticipates when it needs to start heating to reach 21°C by 7am, pre-heating for shorter periods when the weather is mild and longer periods to ensure you're warm in winter.

'Eco Start' in operation



Attention to every detail

Q-Rad has been designed specifically to heat a room in the shortest amount of time possible.

Heatstream

Thermal Image A shows the hot airflow (heatstream) from the top of a typical wall-mounted electric convector heater in profile view. Image B shows the heatstream from the top of a wall-mounted Q-Rad electric heater.

In Image A the hot air is slow moving, turbulent and being pushed straight up. However, the heatstream creates a slight vacuum between the heater and the wall, which is pulling the hot air towards the wall. As well as running the risk of wall staining, this increases the likelihood of heat transfer through the wall, reducing the potential benefit from that heat output.

In contrast, in Image B we see the airflow from Q-Rad is less turbulent, faster and is directed away from the wall. The length and inclination of the louvres in the air outlet grille of Q-Rad have been optimised to direct the heat into the room. This clever design feature not only minimises wall staining and heat transfer, but helps to heat the room in the shortest amount of time.



Image A – Typical convector airflow



Image B – Q-Rad airflow

Radiant heat output

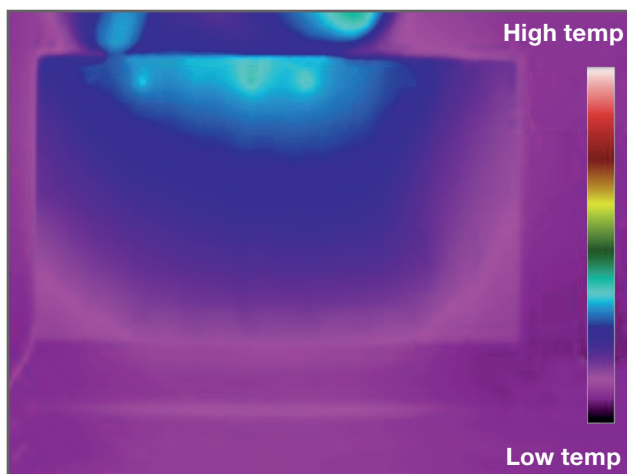
Q-Rad's ratio of radiant and convected heat provides the optimum mix for human comfort.

Thermal Imagery

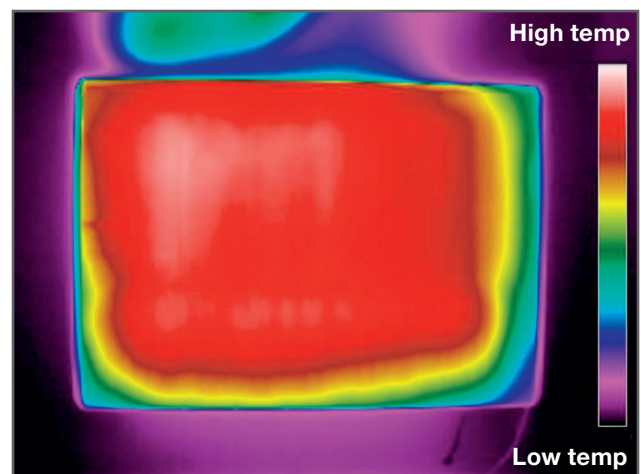
Thermal image A shows the radiant heat output from a typical electric convector, and clearly displays the limited radiant heat coming from the front panel of the heater, which is emitting low frequency electromagnetic waves indicating low energy transfer.

Thermal image B shows the radiant heat output from the Q-Rad and clearly displays the high level and uniform distribution of radiant heat coming from the front panel, emitting high frequency electromagnetic waves and therefore high energy transfer.

This ratio of radiant and convected heat provides the optimum mix for human comfort and also enables the user to reduce the room temperature and thereby save energy, but still remain comfortably warm.



Thermal image A of typical convector



Thermal image B of Q-Rad

Technical specifications

Thermostat

Electronic type, accurate to $\pm 0.2^{\circ}\text{C}$.

Convector Element

Compact, finned, mineral-filled sheathed type, providing virtually silent operation.

Radiant Element

Encapsulated microwave element fixed to the inside of the front panel, covering the whole fascia.

Thermal cut-out

Two auto reset cut-outs, one for each element. Thermal fuse protection on front element.

Construction

Durable epoxy-polyester powder coated steel casing, with upward-facing grille. Temperature resistant nylon thermoplastic moulded parts.

Colour/Finish

White

Installation

Supplied with metal wall bracket.

Electrical connections

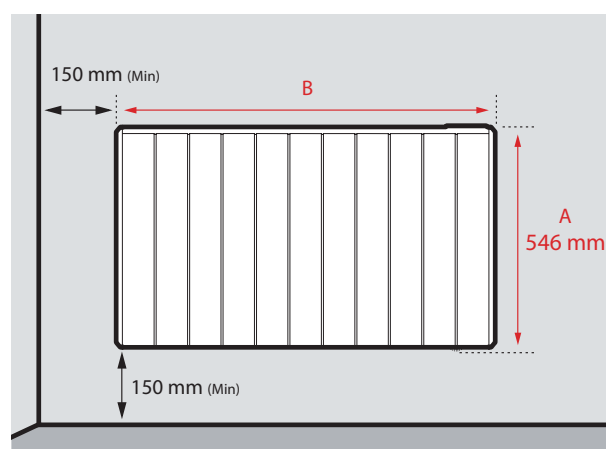
1.0m, 4 core cable (live, neutral, earth, pilot) supplied fitted to each heater.

IP rating

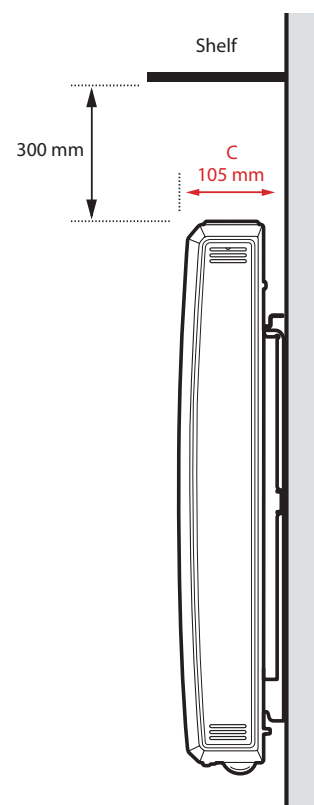
Splashproof IPX4.

Model No.	Loading	Convective element	Radiant element	Height A	Width B	Depth C	Weight
QRAD050	0.5kW	301W	199W	546mm	513mm	105mm	7.1kg
QRAD075	0.75kW	551W	199W	546mm	513mm	105mm	7.1kg
QRAD100	1.0kW	714W	286W	546mm	675mm	105mm	8.7kg
QRAD150	1.5kW	1213W	287W	546mm	756mm	105mm	9.4kg
QRAD200	2.0kW	1660W	340W	546mm	918mm	105mm	11.0kg

Dimensions and minimum clearances



Dimension C and minimum clearances



Q-Rad and Quantum

A perfect partnership

The Q-Rad electric radiator has been designed to operate as a stand-alone heater or as a mixed heating system using Q-Rads in the bedrooms and Quantum off-peak heaters in living areas.

Quantum is the world's most advanced electric space heater. It uses low cost, off-peak energy to provide the most economical electric heating system on the market today, plus it also provides heat only when it's needed – whatever the time of day or night.

Quantum is the culmination of three years' research and development work and builds on the knowledge and expertise we have gained from over 60 years manufacturing efficient, reliable and attractively designed products. Not only has Quantum been designed and developed by our own in-house team of experts, it is also award-winning, scooping the prestigious Electrical Industry Energy & Carbon Saving Award in 2013.

- ✓ Up to **27% cheaper** to run than a standard storage heater system*.
- ✓ Uses low cost, off-peak energy.
- ✓ Incorporates our revolutionary iQ controller† making Quantum highly controllable – yet simple to use.
- ✓ Heat on demand – whatever the user's lifestyle.
- ✓ 10 year warranty‡



*Calculated using SAP2012 – the only Government approved energy performance assessment method.
†Patent applied for. ‡Terms and conditions apply. See www.dimplex.co.uk/quantumregistration for details.

Specifications

Dimplex policy is one of continuous improvement; the Company therefore reserves the right to alter specifications without notice. The information contained in this brochure is correct at the time of printing. You are advised to consult your Dealer before purchasing.

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 manufacturer's instructions.

The Dimplex Range

Dimplex offers the widest range of renewable energy, electric space and water heating products in the world – over 700. In addition to this publication, we have a wide range of brochures for both domestic and commercial applications. Please visit our website www.dimplex.co.uk for more information.



Quantum off-peak heater brochure



Quantum hot water cylinder brochure



Domestic heating brochure



Designer panel heating brochure



Towel rail brochure



Commercial brochure



Electric fires brochure



Renewables at home brochure



Solid fuel brochure

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[†]Patent applied for.

Products within the Quantum range are protected by one or more of the following patents and patent applications:

Great Britain GB2481048, GB 2487147, GB 2487148, GB 1101971.8, GB 1205302.1, GB 1212547.2, GB1212546.4, GB 1304025.8
Australia AU 2011263698, **Canada** CA 2,801,973, **Chile** CL 03468-2012, **European** EP 11731288.4, **New Zealand** NZ 604163, **South Africa** ZA 2012/09378, **United States** US 13/703,068, **China** CN 201180037404.2, **Japan** JP 506280052

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