

**Rointe Digital**  
Integral Heating System

# DELTA Ultimate

The new heating system  
**Wi-Fi Inside**



Control your heating...



...anytime, anywhere.



# Always one step ahead.

Rointe has been one of Europe's leading electric heating and domestic hot water (D.H.W.) manufacturers for over 30 years, resulting in a philosophy clearly committed to innovation and quality.

Our commitment is to give customers quality products, which are technologically advanced. We set the benchmark that evolves constantly so that we can offer the most innovative, sustainable and intelligent products in the heating market.

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## 100% Quality European Components

All our products are manufactured in-house with the highest quality components and latest technology. At Rointe we work with our European suppliers to guarantee the highest quality products.

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## International Prestige

Rointe is a leading European brand in electric heating. In addition to the UK, our products are sold in countries such as Portugal, France, Spain, Ireland and Greece.

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## Constant research

Rointe regularly performs tests to verify the data relating to the consumption of our products featured in tests conducted by independent laboratories.

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## Efficient and Eco-friendly

Rointes' aim is to create clean and quality heat, while ensuring the efficient management of energy. Therefore, we have developed our electric heating products to be clean, green and eco-friendly.

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## The best customer service

Rointe puts at your disposal a highly qualified team of professionals to offer the best solution to all your heating needs. Our technical department will conduct a detailed, free and no obligation study of your new Rointe heating system.

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## Warranty and after sales service

Rointe offers an efficient after sales service. Rointes' technical team personally take care of providing the best solution to any problem or technical question, to ensure the optimal operation of your Rointe heating and D.H.W. system.

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# DELTA Ultimate

## Comfort and controllability.

Rointe presents DELTA Ultimate, our latest heating system that combines materials of the highest quality, the most advanced electronics and the new patented E-life Technology.

### What makes it different?



The radiator and end panels are manufactured in 100% aluminium With no external plastic, stylish curved design and metal end panels that match the elements.



New fixing system for the end panels

Exclusive patented system that ensures perfect mechanical fastening of the product.



Touch screen control panel

Made with PMMA high gloss effect methacrylate and ultra-sensitive touch screen technology.



# Rointe Digital Integrated system, unique in the market place.

The DELTA Ultimate Rointe integrated system is the flagship of our brand, offering the best heat by **natural air convection**.

It is produced naturally thanks to the **patented design** of our elements, allowing perfect heat distribution throughout the room including the floor, **maintaining comfortable humidity levels**.



## Outstanding features.

The Rointe DELTA Ultimate system ensures optimal thermal comfort thanks to the combination of all the characteristics that it consists of. The ergonomic design of its elements, the quality of its components and the most advanced exclusive technology ensure maximum comfort with minimum consumption.

- **High purity Aluminium**  
Ensures even heat distribution.
- **Ergonomic fin design**  
For optimum natural convection.
- **Radiator available in 2 finishes**  
White and Graphite.
- **High performance thermal fluid**  
Low average working temperature.
- **Armoured steel heating element**  
Optimum power ratio of 110 watts per element.
- **SMD Electronics**  
With the latest generation ULP32 microcontroller.
- **1.77" TFT Screen**  
High resolution different colour screens available.
- **Wi-Fi Inside**  
Wi-fi integrated in every product.
- **E-life Technology**  
Exclusive communication technology.
- **Energy smart functions**  
Open Windows function.

**NEW!**

Electronics manufactured with an in built  
smart data consumption meter  
**True Real Power**

The DELTA Ultimate has a built in smart data consumption meter so we can see in detail the **actual energy the product uses**.

This meter sends the data to the Rointe Connect App, from where the end user can view the power consumption and work out the real cost of the energy used by introducing the unit cost of the kWh.



# The best technology applied to heating.

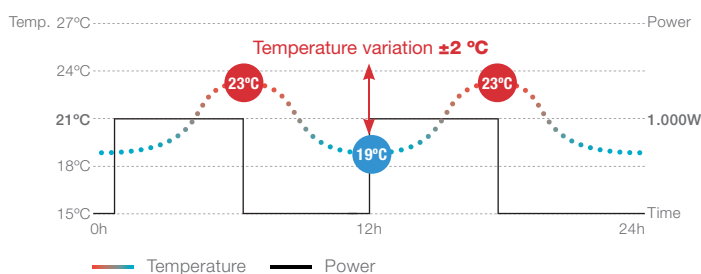
Incorporating Fuzzy Logic Energy Control into the DELTA Ultimate range represents one of the greatest technological advances in the history of Rointe. With this new electronic development smarter use of energy is obtained and as it's a technology that incorporates next generation smart chips response times are quicker.

## Timeline

### Rointes evolution of energy optimization technologies

1985

On/Off technology

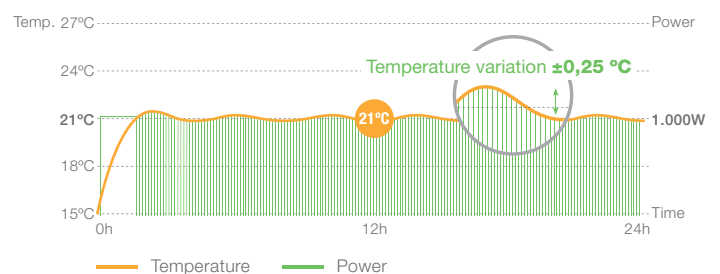


2010

Optimizer Energy Plus



CERTIFIED BY  
INDEPENDENT  
TECH. CENTRES



## How do these technologies work?

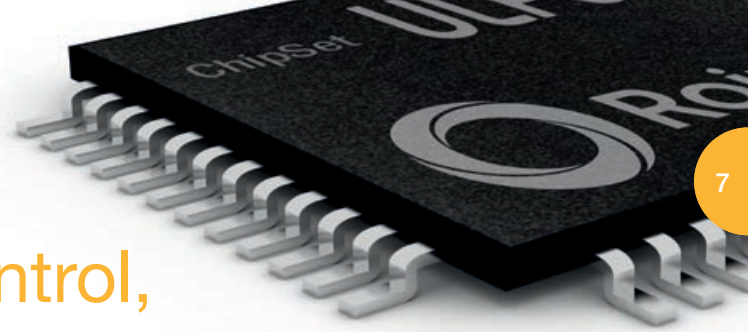
**On/Off technology** - This technology uses mechanical relays to control the temperature, generating unwanted noise during operation. To reach the desired temperature, the element heats continuously for long periods of time, producing temperature variations which can reach up to  $\pm 2^\circ\text{C}$  reducing the feeling of warmth for the end user.

**Optimizer Energy Plus** - Technology tested by independent technology centres that bases its operation on the thousands of micropulses being sent to the element to keep the temperature stable with only  $\pm 0.25^\circ\text{C}$  temperature variation. This technology allows the radiator to achieve an 40% consumption rate of its nominal power.

NEW!



CERTIFIED BY INDEPENDENT TECH. CENTRES



# Fuzzy Logic Energy Control, our latest advance in becoming energy smart.

Fuzzy Logic Energy Control is the new low power technology developed by the Rointe R & D department for the Rointe DELTA Ultimate range of products.

The use of Fuzzy Logic Energy Control technology has been shown in a technical comparative test conducted by independent technology centres, to **reduce the consumption by 6.3%\* from the Optimizer Energy Plus**, the first low power technology developed by Rointe in 2010, always carried out under certain controlled test conditions. Thanks to the introduction of this advanced technology, the DELTA Ultimate radiator offers:

110 watt/element



Optimum balance between watts/element

Temperature stability

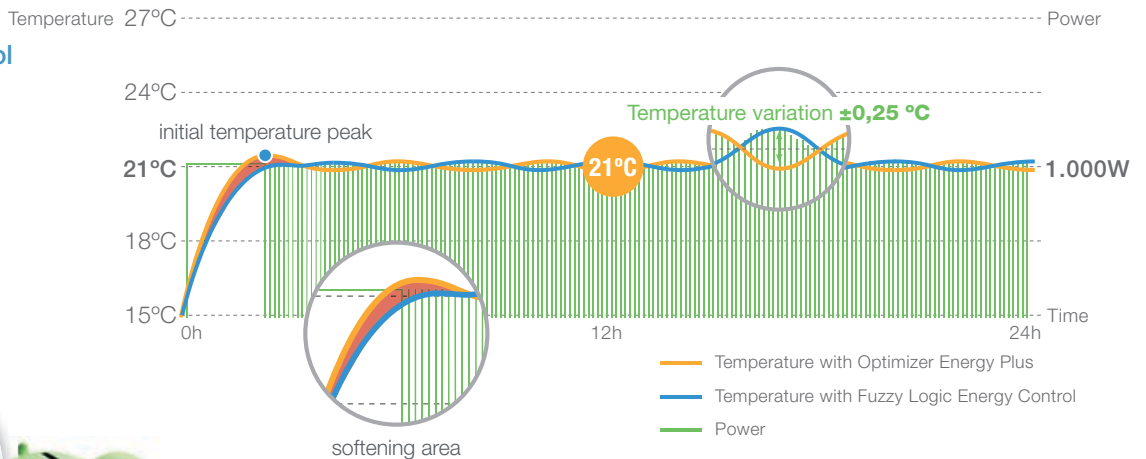
Maximum efficiency

The DELTA Ultimate radiator has 110 Wats per element to provide a balanced heat transfer compared to other radiators that have between 125 & 160 watts per element. With this balance each element of the radiator will heat approximately 1 m<sup>2</sup> in an extra cold area within the United Kingdom.

Fuzzy Logic Energy Control improves the management of the energy needed to keep within  $\pm 0.25^{\circ}\text{C}$  of the established temperature, analyzing fluctuations and transmitting electrical micro pulses to the element, allowing 100% heat transfer to the environment through the thermal fluid and high purity aluminium.

The effective energy management of Fuzzy Logic Energy Control enables better power management in the initial heat rise curve. This results in a saving of 6.3%\* when compared in a test with a radiator with this Rointe new technology with another that includes the Optimizer Energy Plus.

## 2015 Fuzzy Logic Energy Control



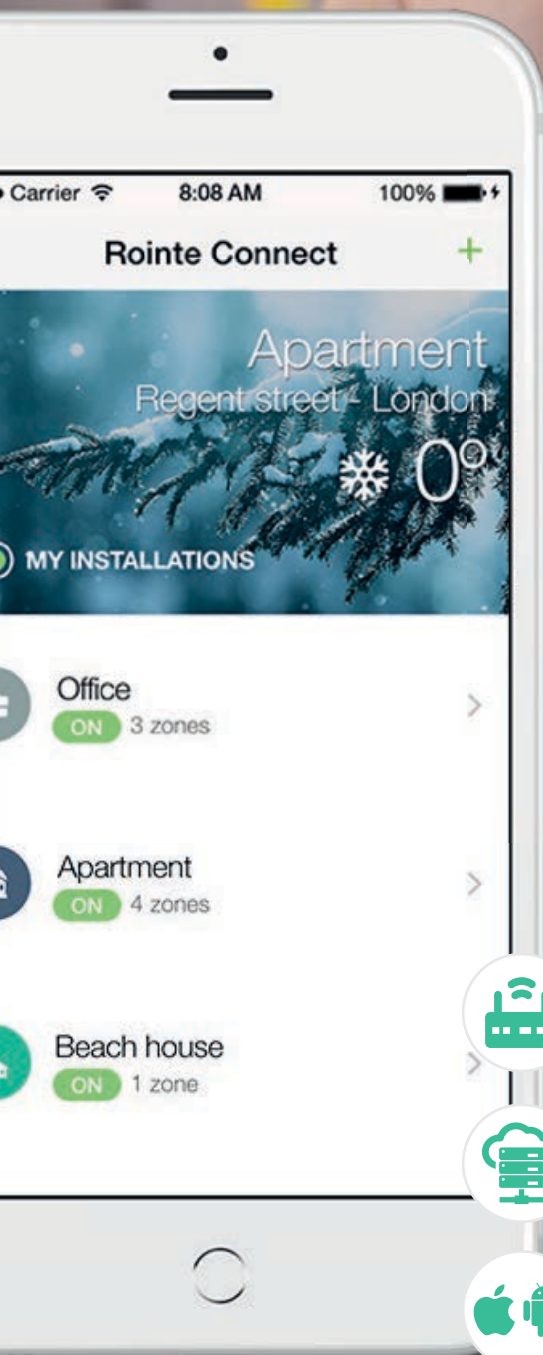
SAVES 6.3% OF ENERGY compared to the Optimizer Energy Plus technology\*



\* Value obtained by independent technology centres testing in a climatic chamber comparing 2 Rointe radiators, one Optimizer Energy Plus technology and one Fuzzy Logic Energy Control under the same parameters as defined in the report of the test.

**Fuzzy Logic Energy Control** · Upon initial start up this technology predicts the amount of energy required at every moment to reach the set point temperature, in this case 21°C. Fuzzy Logic Energy Control proportionally reduces the energy demand required to reach the desired temperature, smoothing the initial heat curve and favoring the subsequent stabilization of said curve. This technology has been **tested by independent technology** centres to show faster and more effective heating thanks to the more precise control of the calculation of energy required against the Optimizer Energy Plus technology.





**e·life**  
technology

## E·life Technology

Control your heating  
**anytime, anywhere.**

The unique E-life Technology guarantees maximum controllability of your DELTA Ultimate heating system, facilitating easy control and management of all the functions necessary to become energy smart.

### What makes E-life Technology different from the rest?

No gateways or intermediate terminals needed for communication.  
E-life Technology only needs a connected Wi-Fi network.

Cloud servers with unlimited device connections.  
Firewall protection for stored data.

Multiplatform system suitable for any operating system.\*  
Designed for iOS, Android and web platform for other devices.



# How does E·life Technology work?

Unlike other similar heating systems, the Rointe DELTA Ultimate needs no gateways or additional connections, **each product can connect directly with the Rointe Connect App**. This direct and immediate connection provided by E-life technology communication protocol, means that the end user can keep their heating working all the time without the worry of losing connection to each individual product.

## User

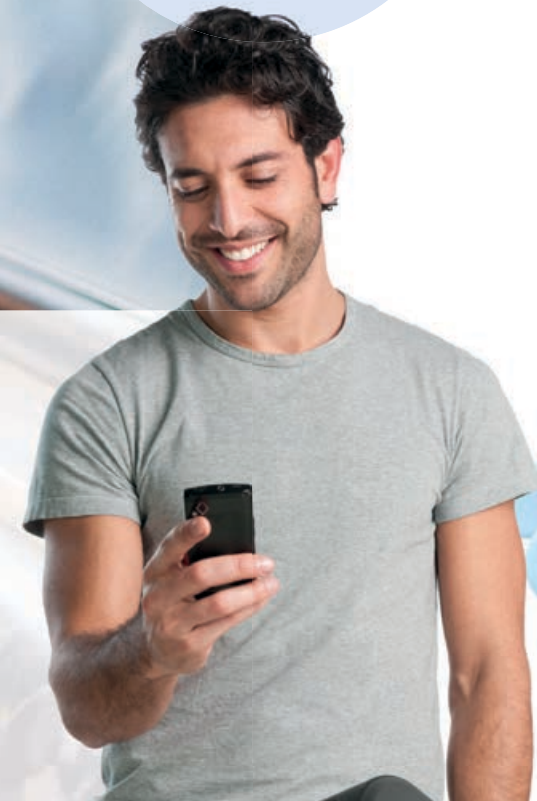
From a Smartphone, Tablet or computer at any time or place, the user can access to the Rointe Connect App and control all the features, modes and functions of their DELTA Ultimate system.

## Cloud Security

The data is encrypted via the Internet to our servers in the cloud where it is stored. Changes are resent back to all the DELTA Ultimate products.

## DELTA Ultimate

All products are instantly updated with any changes made so that when you get home the house is at the temperature you have set it to.



**NEW!**

**E·life Technology:** our direct communication system with **real time synchronisation** applied to heating.

Thanks to the quick response of the new technology that E-life Technology uses, DELTA Ultimate instantly updates with any changes made using the linked Rointe Connect App.



## With Fuzzy Logic Energy Control.

**Difference of 6.3%\*** between former Rointe technology Optimizer Energy Plus and new Fuzzy Logic Energy Control.

\*Value obtained by technological centres in a climatic chamber comparing two Rointe radiators, one with Optimizer Energy Plus technology and one with Fuzzy Logic Energy Control under the same parameters defined in the test.



**NEW!**

**Total controllability**  
through access menus



# DELTA Ultimate Radiator

Technology and style

**e·life** wifinside  
technology

**INFRARED** CONTROLLED



Available accessories for DELTA Ultimate radiator on page 28. Technical information on page 24.

## CHARACTERISTICS

### Fuzzy Logic Energy Control

The average power consumed by the radiator represents only 38% of its nominal power. Difference of 6.3%\* between former Rointe technology Optimizer Energy Plus.

### 100% aluminium with end panels

New curved design with same radiator colour SLIM LINE ALUMINIUM end panels.

### Optimized design for maximum heat dissipation

Maximum performance thanks to the new design of the fins and the 98mm depth of each element.

### SMD electronics and advanced technology

Multilayer electronic microcontroller Rointe ULP32 Ultra Low Power, lithium battery and triac cut out element.

### Optimum balance between w/element

110 watts / element that provides a balanced heat transfer.

### TFT Screen with different coloured screens

1,77" TFT screen with different colours available.

### Open windows function

Energy smart function. Activates the anti-frost mode to 7 ° C when the room temperature drops 4 ° C in 30 minutes.

### E-life Technology [more info on page 9](#)

Home automation technology for managing the system easily from the internet, with individual radiator control.

### Wi-Fi and infrared communication

Radiator with Wi-Fi. Allowing control from a smartphone or tablet. Also works with the AIR Control remote.

### Advanced control panel with touch control

Total control from the radiator itself by touch control panel.

### True Real Power

Smart data consumption meter. Check the real data at any time of each individual product or the whole installation.

### Available in two finishes

Product range finishes in graphite and white.

### Quality guaranteed

Total security with 10 year warranty on aluminium and 2 years on electronics and electrical components.

\*Value obtained by technological centres in a climatic chamber comparing two Rointe radiators, one with Optimizer Energy Plus technology and one with Fuzzy Logic Energy Control under the same parameters defined in the test.

## CHARACTERISTICS

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Total security with 10 year warranty on aluminium and 2 years on electronics and electrical components.

# DELTA Ultimate

## Radiator

*graphite*

Seamless integration into  
any environment

**e·life** wifinside  
technology

**INFRARED** CONTROL



\*Value obtained by technological centres in a climatic chamber comparing two Rointe radiators, one with Optimizer Energy Plus technology and one with Fuzzy Logic Energy Control under the same parameters defined in the test.

📍 Available accessories for DELTA Ultimate radiator on page 28.

✖ Technical information on page 24.

## With Fuzzy Logic Energy Control.

**Difference of 6.3%\*** between former Rointe technology Optimizer Energy Plus and new Fuzzy Logic Energy Control.

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\*Value obtained by technological centres in a climatic chamber comparing two Rointe radiators, one with Optimizer Energy Plus technology and one with Fuzzy Logic Energy Control under the same parameters defined in the test.

**NEW!**

**Total controllability**  
through access menus





**NEW!**

**Total controllability**  
through access menus

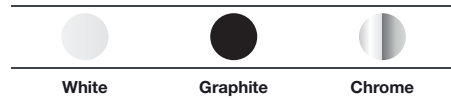


# DELTA Ultimate towel rail

Modern and elegant  
design



## FINISHES AVAILABLE



**e·life** technology **wifinside**

**INFRARED** COMFORT Class II

**IP44**

## CHARACTERISTICS

### Curved steel body design



Made of 1.5mm thick ST12 steel and electrically welded for a perfect seal. Curved design.

### Optimal ratio between heating element and thermal fluid



Class II heating element duly balanced in Watts per m and in contact with the thermal fluid to give the product a great heat transfer.

### SMD electronics and advanced technology



Multilayer electronic microcontroller Rointe ULP32 Ultra Low Power, lithium battery and triac cut out element.

### TFT Screen with different coloured screens



1,77" TFT screen with different colours available.

### Open windows function



Energy smart function. Activates the anti-frost mode to 7 ° C when the room temperature drops 4 ° C in 30 minutes.

### E-life Technology

[more info on page 9](#)



Home automation technology for managing the system easily from the internet, with individual radiator control.

### WIFI and infrared communication



Towel rails with WIFI. Allows control from a smartphone or tablet. Also works with the Air Control remote.

### 2 hour boost button



This function sets the towel rail to maximum temperature for 2 hours.

### Advanced control panel with touch control



Total control of the towel rail by its touch control panel.

### True Real Power



Smart data consumption meter. See the real data at any time of single products or the whole installation.

### Available in three finishes



Product range finished in white, graphite or chrome in four different sizes.

### Quality guaranteed



Total security with 10 year warranty on aluminium and 2 years on electronics and electrical components.



# Rointe Connect

## Easy control of your heating system.

With a simple design anyone can use the Rointe Connect App. It has been developed by Rointe to allow the end user to easily manage their total heating system via the Internet.

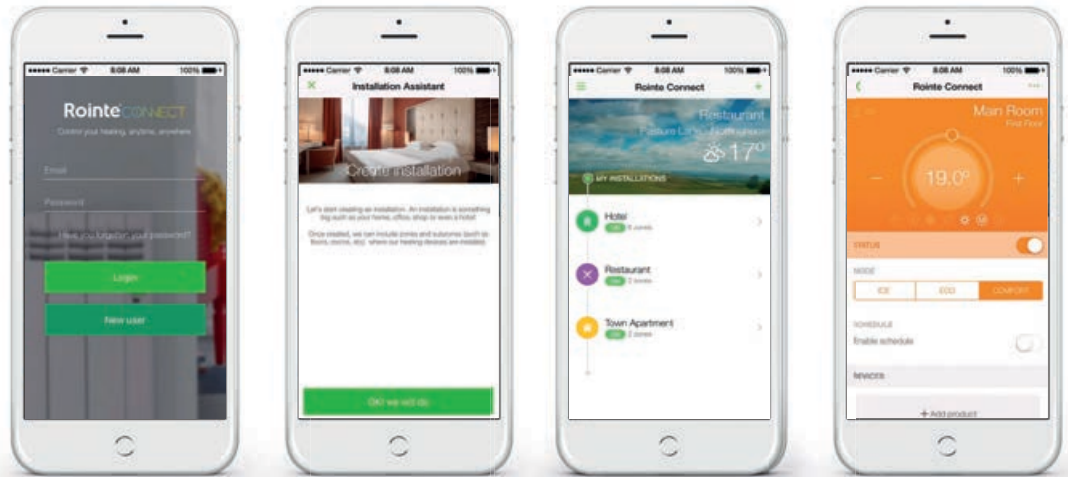




# The complete App to control your heating.

Designed for simple and easy use by anyone, Rointe Connect offers many advantages: control of individual products or whole zones, creating multiple installations from just one app, total management of your home or business heating, create zones and sub zones within your installation as you require them.

In addition, info screens for power use and statistics, provide all the data necessary to instantly know the power usage and economic cost of the installation. Below we briefly describe some of the screens that are in the Rointe Connect App:



App access*	Installation wizard	My installations	Temperature control
Rointe Connect can be downloaded from the iOS App store or Google Play for Android devices. You can also access from the web application <a href="http://www.rointeconnect.com">www.rointeconnect.com</a> .	With this wizard you can easily create as many installations and zones as you require and add all your DELTA Ultimate products to them.	From this menu "my installations" you can control any of your installations, zones and products that you have added with the installation wizard.	On this screen you can control the temperature and functions of your zones or products, you can switch your products on and off from here too.



**NEW!**

## View your real data consumption with personalised statistics.

The New Rointe Connect App processes and analyzes the data obtained from the smart data consumption meter- **True Real Power** which is installed in every DELTA Ultimate product. These statistics can show you the real data of each product.

Just enter the price per kWh and the user can see in detail the actual consumption of the products either individually or as a whole installation so there's no surprises in the next electricity bill.



\*iOS 7.0 or higher, Android 4.0 or higher and the latest versions of browsers Google Chrome, Mozilla Firefox and Internet Explorer.

## CHARACTERISTICS

### Multiplatform application



Manage from any device on iOS or Android operating systems. Manage via Web platform for PC's and other mobile devices.\*

### Regular updates



App with constant improvements to increase response times and the options for managing your DELTA Ultimate heating system.

### Tailored for your installation



Ability to configure from a single product in your home to multi zoned homes and businesses.

### Installation wizard



App installation guide, step by step guide to help you to correctly connect all your products to the Rointe Connect App.

### New User mode



This allows you to customize the temperatures in the Comfort and Eco modes.

### Statistics



Visualization of consumption statistics, average power, temperature etc...

### Personalised support



Specialized professional team to provide support and Quick resolution of any queries or problems.

### Total control 24/7 365 days a year



Total programming and control available 24 hours a day 7 days a week from any device with internet access 365 days a year

### Alerts and warnings



Alert system that informs the user of any event or change in the programming of the product.

### Maximum security



Rointe Connect works with highly reliable servers that allow us to ensure stability of all Connections and securely stored data.

### Full warranty



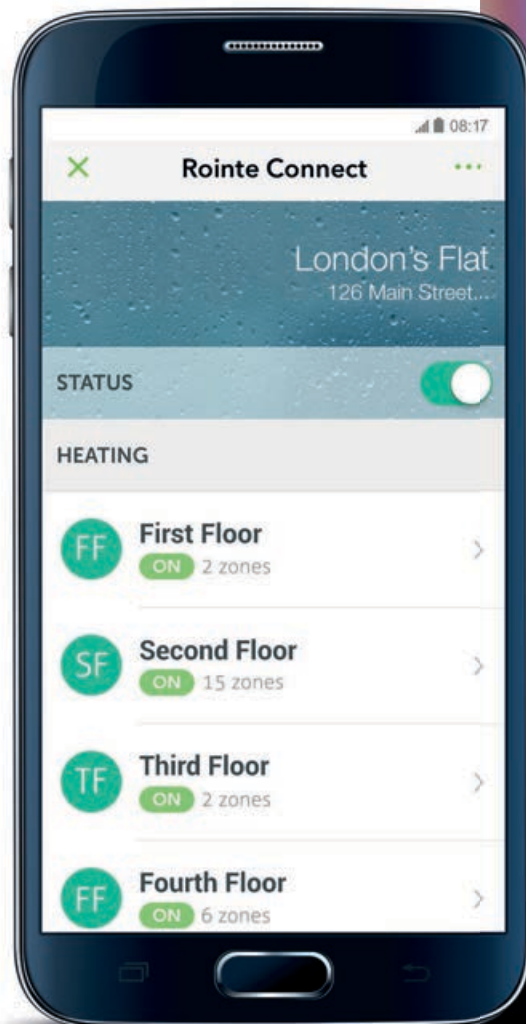
Rointe connect comes with the Rointe maximum guarantee, backed with proven technology and professional support.

# Rointe Connect App

The new way  
to control  
your heating

e·life  
technology

RointeCONNECT



\* Technical information on page 29.

\*iOS7.0 or higher, Android 4.0 or higher and the latest stable versions of Google Chrome, Mozilla Firefox, Internet Explorer.

With its simple design anyone can use the Rointe Connect App that has been developed to allow the end user the easiest way of managing their Rointe DELTA Ultimate heating system.



# Optimize your well-being & be energy smart.

The Rointe Digital Integrated System helps you to manage your heating whilst giving you maximum heat and comfort in your home.



## Why keep the house at 21°C if everyone is out during the day?

Thanks to the versatile programming available with the Rointe Digital Integrated System and with just a little effort, you can become energy smart.

To maximize your heating without affecting your comfort, you can program our heaters for every hour, a range of temperatures and rooms or areas throughout the whole week. The Rointe Digital Integrated System allows you to set your heating system exactly according to your lifestyle and daily needs.



**Leave the house** · It's time to go to work and school

**Program** · Sleep mode  08:00h - 18:00h

- °C



While the house is empty during the day, we will schedule our radiators in Sleep mode. During this period they will be kept waiting for the next active mode.

08:00 h



00:00 h

Eco Mode

04:00 h

Sleep Mode

06:00 h


Comfort Mode

08:00 h

06:00 h



**It's almost time to get up** · A new day is about to begin for the whole family

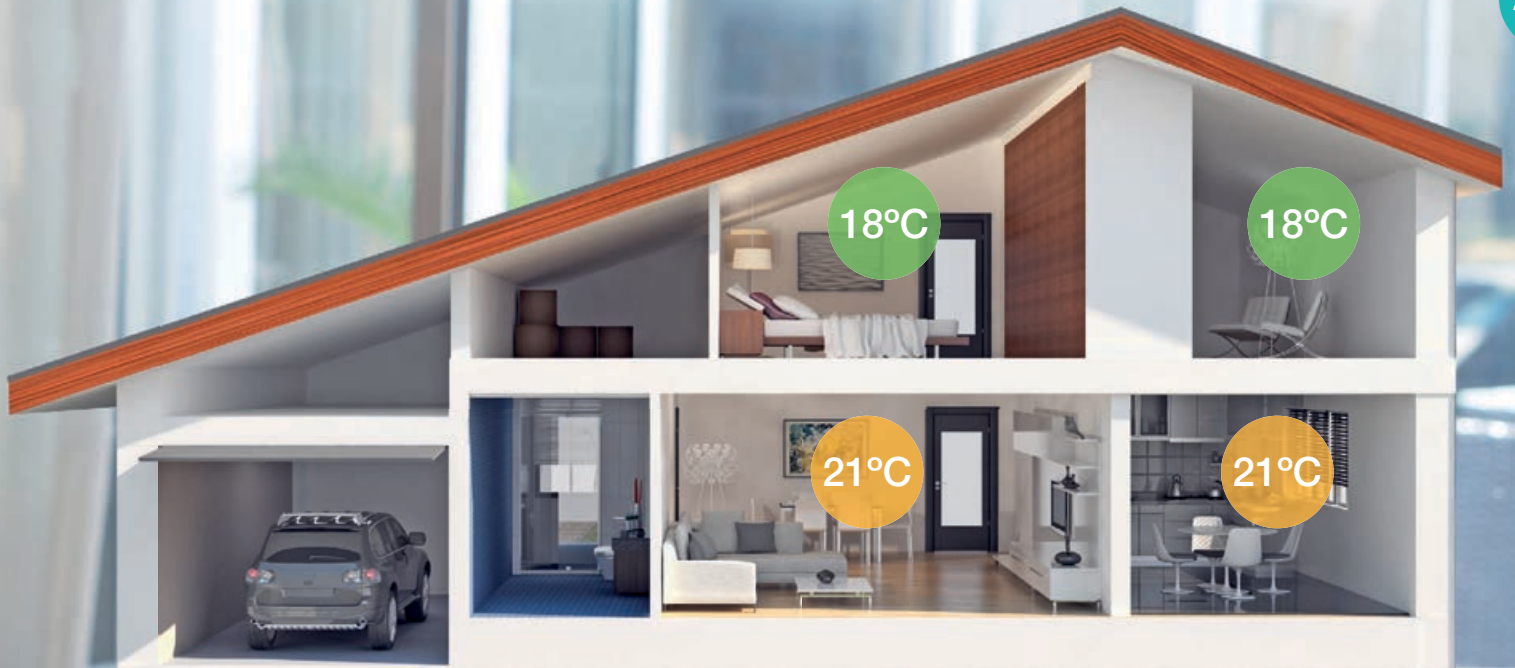
**Program** · COMFORT mode  06:00h - 08:00h

21°C



An hour before getting up our radiators will raise the temperature to 21 °C so we wake up to a comfortable and warm atmosphere.





## If the whole family is in the living room, does it make sense to heat the office?

If we think about our daily lives, there are places in our home, such as the living room or the kitchen, where we spend most of the time. Other rooms such as the bedrooms are usually only used for sleeping. Would it not be much smarter to heat only the rooms that we are actually using? With the custom programming of our radiators you can create different zones within your own house, for example, all the bedrooms, the kitchen and lounge. So you can choose to have maximum comfort in rooms that you are using, decreasing the temperature in those that you are not.



**Bedtime** · The end of the day arrives and it's time to start thinking about bed.



**Program** · ECO mode 🌙 23:00h - 04:00h

At the programmed time, our radiators go back to Eco mode at 18 °C, the temperature recommended for comfort and quality sleep.



23:00 h



18:00 h

23:00 h

Sleep Mode

Comfort Mode

Eco Mode

△  
18:00 h



**The family is about to get home** · After a productive day, it's time to go home.

**Program** · COMFORT mode ☀️ 18:00h - 23:00h

21°C



An hour before arriving home, our heating system goes into comfort mode so when you get home it's to a warm and comfortable environment.



# R.T.C. and sizing

The RTC is a coefficient developed by Rointe that serves to relate the number of elements necessary for a room with its floor area and the geographical area where it is located. With the correct sizing and using the right RTC, we will obtain a consistent consumption and effective power that is below the nominal power of the installation.

## How to obtain the R.T.C.?

The following formula shows how the Rointe Thermal Coefficient is obtained.

$$\frac{\text{CLIMATE ZONE RATE}}{\text{OUTPUT COEFFICIENT PER ELEMENT}} = \text{R.T.C.}$$

To calculate the necessary radiators, we have to distinguish between m<sup>2</sup> and m<sup>3</sup>. For ceilings with a height less than 3 metres, we use the RTC (m<sup>2</sup>) and for higher ceilings RTC (m<sup>3</sup>).

Using the following formulas we can calculate the necessary number of elements that need to be installed. It is very important to use the correct RTC depending on the climatic zone and the ceiling height.

$$\text{R.T.C.} \times \text{m}^2 = \text{ELEMENTS NEEDED}$$

$$\text{R.T.C.} \times \text{m}^3 = \text{ELEMENTS NEEDED}$$

## Sizing DELTA radiators: reference tables

In the following tables you can find examples of calculations already made showing number of elements, room area and climate zone.

### Less than 3 meters - m<sup>2</sup>

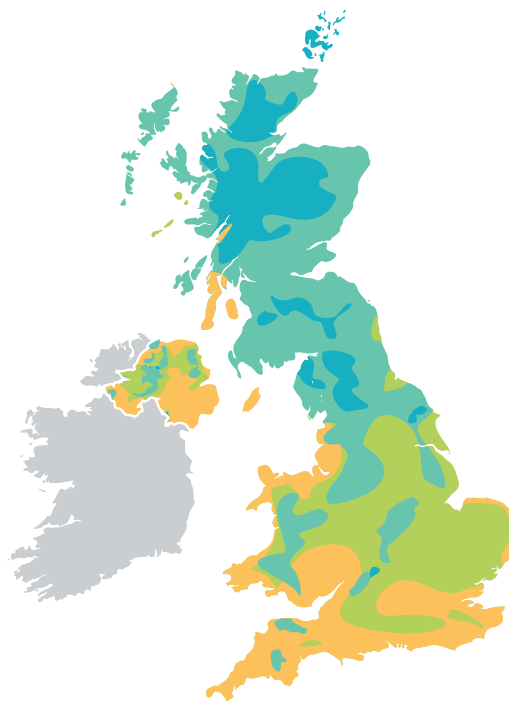
Climate	MILD	COLD	VERY COLD	EXTRA COLD
BTU/h m <sup>2</sup>	436 BTU/h m <sup>2</sup>	476 BTU/h m <sup>2</sup>	516 BTU/h m <sup>2</sup>	556 BTU/h m <sup>2</sup>
R.T.C.	0.75 elm. / m <sup>2</sup>	0.80 elm. / m <sup>2</sup>	0.85 elm. / m <sup>2</sup>	0.90 elm. / m <sup>2</sup>
3 ele.	Up to 4 m <sup>2</sup>	Up to 4 m <sup>2</sup>	Up to 4 m <sup>2</sup>	Up to 3 m <sup>2</sup>
5 ele.	Up to 7 m <sup>2</sup>	Up to 6 m <sup>2</sup>	Up to 6 m <sup>2</sup>	Up to 6 m <sup>2</sup>
7 ele.	Up to 10 m <sup>2</sup>	Up to 9 m <sup>2</sup>	Up to 8 m <sup>2</sup>	Up to 8 m <sup>2</sup>
9 ele.	Up to 12 m <sup>2</sup>	Up to 11 m <sup>2</sup>	Up to 11 m <sup>2</sup>	Up to 10 m <sup>2</sup>
11 ele.	Up to 15 m <sup>2</sup>	Up to 14 m <sup>2</sup>	Up to 13 m <sup>2</sup>	Up to 12 m <sup>2</sup>
13 ele.	Up to 18 m <sup>2</sup>	Up to 16 m <sup>2</sup>	Up to 15 m <sup>2</sup>	Up to 15 m <sup>2</sup>
15 ele.	Up to 20 m <sup>2</sup>	Up to 19 m <sup>2</sup>	Up to 18 m <sup>2</sup>	Up to 17 m <sup>2</sup>

### More than 3 meters - m<sup>3</sup>

Climate	MILD	COLD	VERY COLD	EXTRA COLD
BTU/h m <sup>3</sup>	139 BTU/h m <sup>3</sup>	159 BTU/h m <sup>3</sup>	179 BTU/h m <sup>3</sup>	198 BTU/h m <sup>3</sup>
R.T.C.	0.23 elm. / m <sup>3</sup>	0.26 elm. / m <sup>3</sup>	0.30 elm. / m <sup>3</sup>	0.33 elm. / m <sup>3</sup>
3 ele.	Up to 15 m <sup>3</sup>	Up to 13 m <sup>3</sup>	Up to 11 m <sup>3</sup>	Up to 10 m <sup>3</sup>
5 ele.	Up to 23 m <sup>3</sup>	Up to 21 m <sup>3</sup>	Up to 18 m <sup>3</sup>	Up to 16 m <sup>3</sup>
7 ele.	Up to 32 m <sup>3</sup>	Up to 28 m <sup>3</sup>	Up to 25 m <sup>3</sup>	Up to 22 m <sup>3</sup>
9 ele.	Up to 41 m <sup>3</sup>	Up to 36 m <sup>3</sup>	Up to 31 m <sup>3</sup>	Up to 28 m <sup>3</sup>
11 ele.	Up to 50 m <sup>3</sup>	Up to 44 m <sup>3</sup>	Up to 38 m <sup>3</sup>	Up to 34 m <sup>3</sup>
13 ele.	Up to 58 m <sup>3</sup>	Up to 51 m <sup>3</sup>	Up to 45 m <sup>3</sup>	Up to 40 m <sup>3</sup>
15 ele.	Up to 67 m <sup>3</sup>	Up to 59 m <sup>3</sup>	Up to 51 m <sup>3</sup>	Up to 46 m <sup>3</sup>

## Towel rails recommended by area

AREA	NOMINAL POWER	SERIES	MODEL
Up to 3 m <sup>2</sup>	300 W	DELTA Ultimate White/ Graphite	DTI030SEW/SEB
Up to 5 m <sup>2</sup>	450 W		DTI045SEW/SEB
Up to 7 m <sup>2</sup>	600 W		DTI060SEW/SEB
Up to 10 m <sup>2</sup>	750 W		DTI075SEW/SEB
Up to 2 m <sup>2</sup>	300 W	DELTA Ultimate Chrome	DTI030SEC
Up to 4 m <sup>2</sup>	300 W		DTI045SEC
Up to 6 m <sup>2</sup>	450 W		DTI060SEC
Up to 8 m <sup>2</sup>	600 W		DTI075SEC



	Climate		R.T.C. (m <sup>2</sup> )	R.T.C. (m <sup>3</sup> )
Mild	436 BTU/h m <sup>2</sup>	139 BTU/h m <sup>3</sup>	0.75 elm./m <sup>2</sup>	0.23 elm./m <sup>3</sup>
Cold	476 BTU/h m <sup>2</sup>	159 BTU/h m <sup>3</sup>	0.80 elm./m <sup>2</sup>	0.26 elm./m <sup>3</sup>
Very cold	516 BTU/h m <sup>2</sup>	179 BTU/h m <sup>3</sup>	0.85 elm./m <sup>2</sup>	0.30 elm./m <sup>3</sup>
Extra Cold	556 BTU/h m	198 BTU/h m <sup>3</sup>	0.90 elm./m <sup>2</sup>	0.33 elm./m <sup>3</sup>

For example, if we want to obtain the R.T.C. of a cold zone...

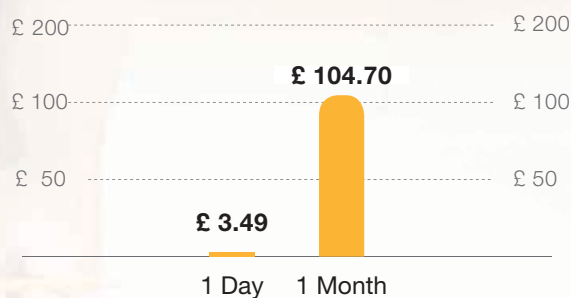
$$\frac{476 \text{ BTU/h m}^2}{595 \text{ BTU/h m}^2} = 0.80 \text{ elements/m}^2$$



# Calculation example

for a household of 80 m<sup>2</sup>  
in cold climate zone

Estimated calculation for an 80m<sup>2</sup> dwelling located within a cold area of the UK providing 12 hours/day-night maintaining the radiators' set temperature at 21°C.



Sample calculation in m<sup>2</sup> (ceiling height less than 3 metres). Well insulated and double glazed.

ROOM	M <sup>2</sup>	RTC	N° OF ELEMENTS	PRODUCTS	NOM. POWER	CONSUMPTION COEFFICIENT RATIO	EFF. POWER
Living room	19	0.80	15	1 x DIW1600RAD	1,600 W	38%	608.00 W
Kitchen	14	0.80	11	1 x DIW1210RAD	1,210 W	38%	459.80 W
Hall	9	0.80	7	1 x DIW0770RAD	770 W	38%	292.60 W
Bathroom	6	0.80	5	1 x DIW0550RAD	550 W	38%	209.00 W
Bedroom 1	12	0.80	9	1 x DIW0990RAD	990 W	38%	376.20 W
Bedroom 2	10	0.80	7	1 x DIW0770RAD	770 W	38%	292.60 W
Bedroom 3	10	0.80	7	1 x DIW0770RAD	770 W	38%	292.60 W
<b>80 m<sup>2</sup></b>			<b>61</b>	<b>7</b>	<b>6,660 W</b>	<b>38%</b>	<b>2,530.80 W</b>

DELTA Ultimate radiator : calculation of effective power

### ⊙ Calculation of effective power

NOMINAL POWER	EQ. RATIO OF CONSUMPTION	EFFECTIVE POWER
6,660 W	38%	2.53 KW

The Rointe DELTA radiator to maintain a stable temperature of 21°C for 12 hours just needs an equivalent ratio of consumption of only the 38% of its nominal power.

### ⊙ Calculating the daily / monthly cost

EFFECTIVE POWER	HOURS OF HEATING	UNIT RATE	DAILY COST	MONTHLY COST
2.53 kW	12 h	£ 0.115	£ 3.49	£ 104.70

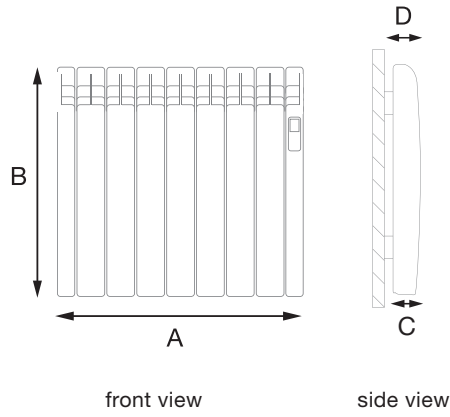
Remember that these are estimates and should be considered as an average. It is mandatory that a personalised study is carried out by a Rointe qualified installer or the Rointe technical team.

MODELS	WHITE	DIW0330RAD	DIW0550RAD	DIW0770RAD	DIW0990RAD	DIW1210RAD
	GRAPHITE	DIB0330RAD	DIB0550RAD	DIB0770RAD	DIB0990RAD	DIB1210RAD
N° of elements		3	5	7	9	11
<b>DIMENSIONS</b>						
A (mm) - Width		350	510	675	835	992
B (mm) - Height		585	585	585	585	585
C (mm) - Depth		97	97	97	97	97
D (mm) - Installed depth		120	120	120	120	120
<b>MECHANICAL CHARACTERISTICS</b>						
Armoured steel heating element		●	●	●	●	●
Curved design		●	●	●	●	●
PC/ABS panel with keypad		●	●	●	●	●
High purity aluminium		●	●	●	●	●
Thermal oil		●	●	●	●	●
Resistance armored steel		●	●	●	●	●
Left side cover PC/ABS		●	●	●	●	●
Weight (Kg)		7.7	12.2	16.4	20.4	24.1
Weight with packaging (Kg)		8.8	13.3	17.5	21.5	25.2
Finish	white / graphite	white RAL 9016 / graphite forge effect				
<b>ELECTRICAL CHARACTERISTICS</b>						
Nominal power (W)		330	550	770	990	1.210
Effective power (W)*		<b>125</b>	<b>209</b>	<b>293</b>	<b>376</b>	<b>460</b>
Voltage (V)		230 V ~	230 V ~	230 V ~	230 V ~	230 V ~
Current (A)		1.5	2.4	3.4	4.3	5.3
<b>FUNCTIONALITY</b>						
TFT screen (1.77 ")		●	●	●	●	●
User / Eco / Comfort mode / Antifrost		●	●	●	●	●
Manual / Automatic function		●	●	●	●	●
Screen brightness		●	●	●	●	●
Nominal and effective power		●	●	●	●	●
Open windows function		●	●	●	●	●
Programmable 24/7/365 using keyboard, Rointe Connect App or AIR Control		●	●	●	●	●
<b>PERFORMANCE AND SECURITY</b>						
Fuzzy Logic Energy Control		●	●	●	●	●
E-life Technology		●	●	●	●	●
Rointe ULP32 Microcontroller		●	●	●	●	●
Wi-Fi Inside module		●	●	●	●	●
Temperature stability (°C)		±0.07	±0.07	±0.07	±0.07	±0.07
Air velocity (m/s)		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Power per element (W/element)		110	110	110	110	110
Safety thermostat		●	●	●	●	●
Average surface temp. during the steady period (°C)**		40 °C	40 °C	40 °C	40 °C	40 °C
Protection grade		IP24	IP24	IP24	IP24	IP24
<b>INSTALLATION</b>						
Template & Installation kit		●	●	●	●	●
<b>CERTIFICATIONS</b>						
2004/108/CE Electromagnetic Comp.		●	●	●	●	●
2006/95/CE Electronic Security		●	●	●	●	●
<b>EAN CODE</b>	<b>White</b>	<b>8436045913708</b>	<b>8436045913715</b>	<b>8436045913722</b>	<b>8436045913739</b>	<b>8436045913746</b>
	<b>Graphite</b>	<b>8436045913777</b>	<b>8436045913784</b>	<b>8436045913791</b>	<b>8436045913807</b>	<b>8436045913814</b>
<b>T.P.</b>	<b>White</b>	<b>£ 352.00</b>	<b>£ 446.00</b>	<b>£ 558.00</b>	<b>£ 637.00</b>	<b>£ 707.00</b>
	<b>Graphite</b>	<b>£ 373.00</b>	<b>£ 473.00</b>	<b>£ 591.00</b>	<b>£675.00</b>	<b>£750.00</b>

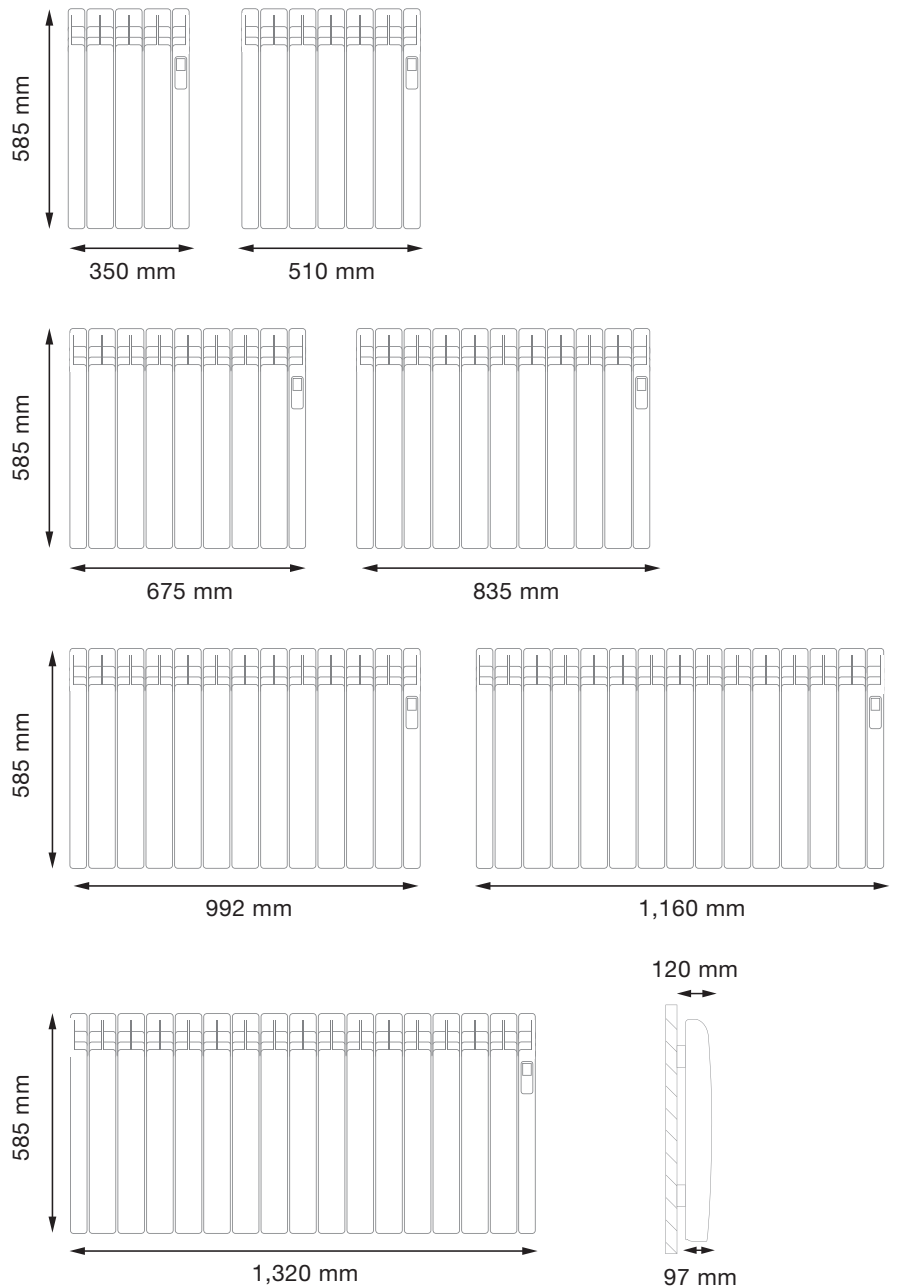


DIW1430RAD	DIW1600RAD
DIB1430RAD	DIB1600RAD
13	15
1.160	1.320
585	585
97	97
120	120
●	●
●	●
●	●
●	●
●	●
●	●
●	●
25.9	32.1
27.0	33.2
white RAL 9016 / graphite forge effect	
1,430	1,600
<b>543</b>	<b>608</b>
230 V ~	230 V ~
6.2	7.0
●	●
●	●
●	●
●	●
●	●
●	●
±0.07	±0.07
< 0.1	< 0.1
110	110
●	●
40 °C	40 °C
IP24	IP24
●	●
●	●
8436045913753	8436045913760
8436045913821	8436045913838
£ 783.00	£ 874.00
£ 830.00	£ 926.00

Dimensions DELTA Ultimate



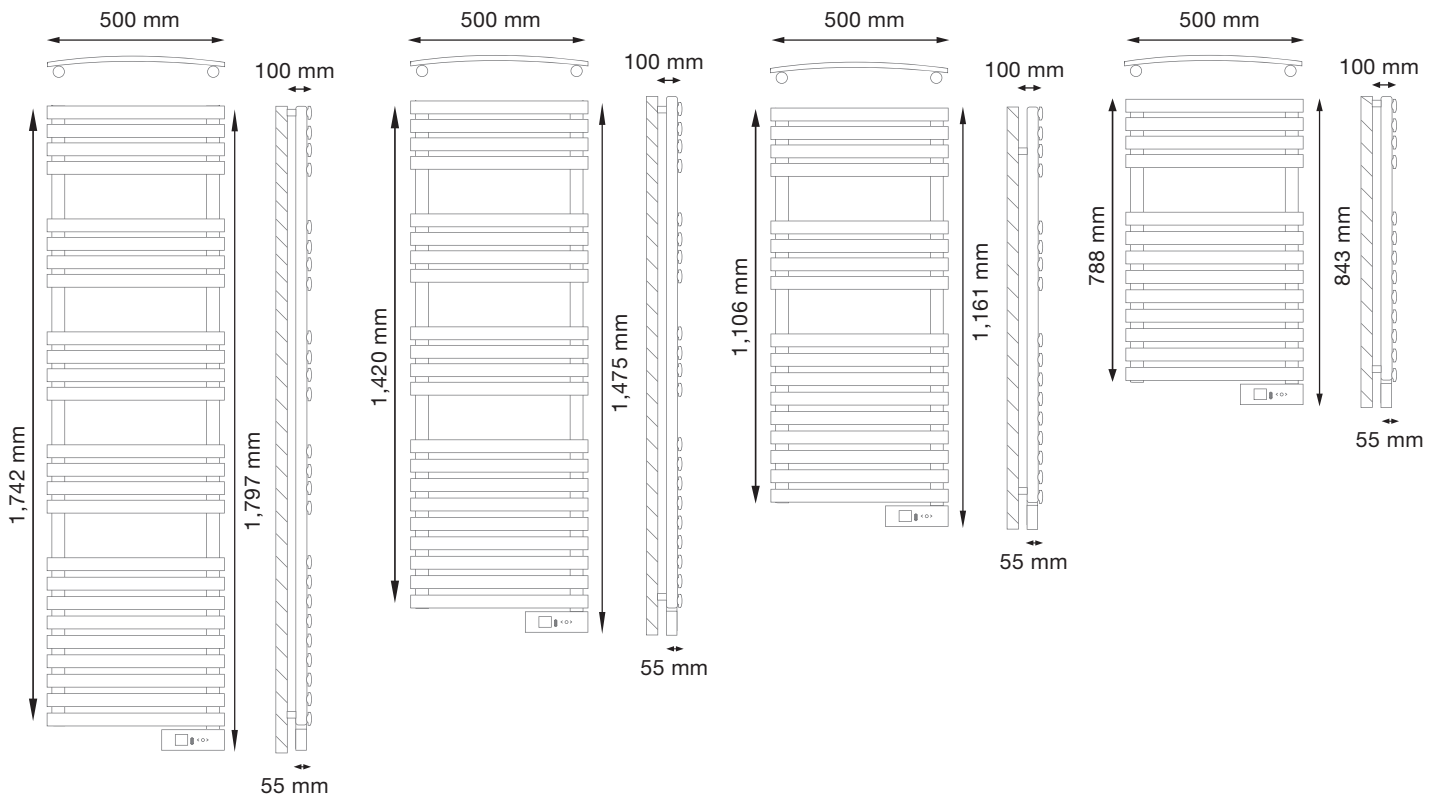
DELTA Ultimate radiator model range



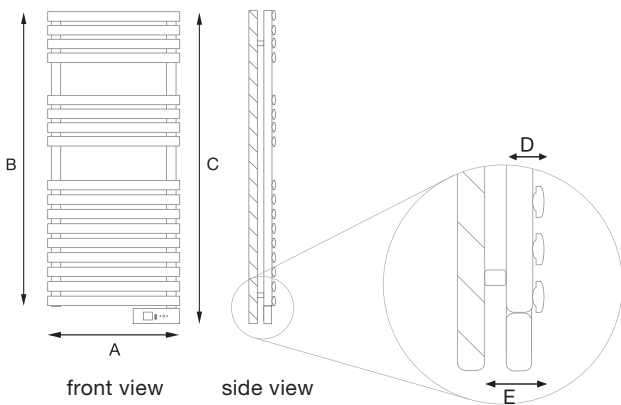
\* The effective power is the actual power required to heat a room of 12m2 with a set temperature of 21°C, always under certain parameters and according to the results of the tests performed by independent laboratories in a climatic chamber. \*\* Average surface temperature obtained with the radiator temperature set to 21°C.

MODELS	WHITE	DTI030SEW	DTI045SEW	DTI060SEW	DTI075SEW
	GRAPHITE	DTI030SEB	DTI045SEB	DTI060SEB	DTI075SEB
	CHROME	DTI030SEC	DTI045SEC	DTI060SEC	DTI075SEC
<b>DIMENSIONS</b>					
A (mm) - Width		500	500	500	500
B (mm) - Height without control panel		788	1,106	1,420	1,742
C (mm) - Height with control panel		843	1,161	1,475	1,797
D (mm) - Depth		55	55	55	55
E (mm) - Installed depth		100	100	100	100
<b>MECHANICAL CHARACTERISTICS</b>					
Armoured steel heating element		●	●	●	●
Thermal fluid		●	●	●	●
PC/ABS control panel		●	●	●	●
Weight (Kg)		13	17	21	25
Finish / Colour RAL	White	RAL 9016			
	Graphite	graphite forge effect			
	Chrome	chrome			
Design		curve			
<b>ELECTRICAL CHARACTERISTICS</b>					
Nominal power (W)	White / Graphite	300	450	600	750
	Chrome	300	300	450	600
Voltage (V)		230 V ~	230 V ~	230 V ~	230 V ~
Current (A)	White / Graphite	1.30	1.96	2.61	3.26
	Chrome	1.30	1.30	1.96	2.61
Class II		●	●	●	●
<b>FUNCTIONS</b>					
TFT screen (1.77 ")		●	●	●	●
Manual/automatic function		●	●	●	●
Eco / comfort mode / Antifrost		●	●	●	●
Open windows function		●	●	●	●
Screen brightness		●	●	●	●
2 hr boost function		●	●	●	●
Programmable 24/7 using keyboard, Rointe Connect App or AIR Control		●	●	●	●
<b>PERFORMANCE AND SECURITY</b>					
E-life Technology		●	●	●	●
Rointe ULP32 Microcontroller		●	●	●	●
Wi-Fi Inside module		●	●	●	●
Fire proof cabling		●	●	●	●
Safety thermostat		●	●	●	●
Protection grade		IP 44	IP 44	IP 44	IP 44
<b>INSTALLATION</b>					
Template		●	●	●	●
Installation kit		●	●	●	●
<b>CERTIFICATIONS</b>					
2004/108/CE Electromagnetic compatibility		●	●	●	●
2006/95/CE Electronic security		●	●	●	●
EAN CODE	White	8436045913920	8436045913937	8436045913944	8436045913951
	Graphite	8436045913883	8436045913890	8436045913906	8436045913913
	Chrome	8436045913845	8436045913852	8436045913869	8436045913876
T.P.	White	£ 423.00	£ 476.00	£ 519.00	£ 576.00
	Graphite	£ 493.00	£ 616.00	£ 690.00	£ 759.00
	Chrome	£ 535.00	£ 686.00	£ 796.00	£ 921.00




DELTA Ultimate towel rail model range



DELTA Ultimate dimensions



AVAILABLE FINISHES

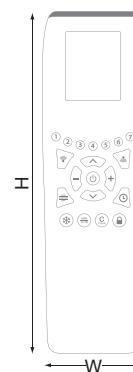
-  **White**
-  **Graphite**
-  **Chrome**



MODELS	ACMI120
<b>DIMENSIONS</b>	
W (mm) - Width	54
H (mm) - Height	177
D (mm) - Depth	21
<b>MECHANICAL CHARACTERISTICS</b>	
Weight (grs)	115
Colour RAL	White RAL 9010
Surround material	PC/ABS
Range operating temperature	-20 to 55 °C
<b>ELECTRICAL CHARACTERISTICS</b>	
Power	3Vdc
Battery type	2 x 1'5 AAA
<b>COMUNICATION</b>	
Wireless IR.	●
Shipping - range (m)	3
Reception - range (m)	1
<b>INSTALLATION</b>	
Wall bracket	●
Installed depth with support (mm)	25
<b>FUNCTIONALITY</b>	
TFT screen (1'77")	●
24 hours / 7 days programmer	●
Manual / automatic function	●
Remote memory lock - heating and D.H.W.	●
Erasing programming memory	●
Changing screen brightness - On / Stand-by mode	●
Display nominal and effective power	●
<b>ADVANCED FUNCTIONS</b>	
Display software version	●
Display consumption time	●
System reset	●
Display battery level	●
<b>APPLICABLE REGULATIONS</b>	
CE	●
ROHS	●
<b>EAN CODE</b>	8436045914286
<b>TP</b>	£ 135.00

● incorporated ○ not incorporated □ optional × not available / not applicable

## Dimensions



front view



side view

DELTA Ultimate range infrared remote control (Optional)



<b>VERSION</b>	<b>V 1.0.</b>
<b>COMMUNICATION</b>	
Wireless Via Wi-Fi	●
<b>PLATFORMS</b>	
iOS 8.0 or higher	●
Android 4.0 or higher	●
Web (Google Chrome, Mozilla Firefox, Internet Explorer, Opera ) Last version	●
<b>FUNCTIONS</b>	
Alter the temperature	●
Programable 7 days a week/24 hours a day	●
Function Manual / Automatic	●
Remote control lock – Heating	●
Memory erase	●
Light and colour display change	●
View nominal and effective power	●
Open windows mode	●
Statistics control	●
Product Pairing	●
Product management	●
Individual or zone control	●
<b>LANGUAGES</b>	
Multilingual	●
<b>T.P.</b>	<b>FREE *</b>

\*Device not incorporated.

● incorporated ○ not incorporated □ optional × not available / not applicable



# Terms and conditions of sale

## 1. DEFINITIONS

"Company" means ROINTE UK.

"Customer" means any person or organisation to whom the Company shall provide or contract to provide Goods.

"Goods" means goods sold by the Company to the Customer and including but not limited to those goods for which payment in full has not been received by the Company.

"Contract" means the Contract between the Company and the Customer for the sale of Goods.

## 2. GENERAL APPLICATION

2.1. These conditions apply to all Goods supplied by the Company to the Customer and no alteration or qualification of these conditions shall be effective unless agreed by the Company in writing. No order shall be binding on the Company until accepted by the Company in writing.

2.2. The Customer who orders Goods from the Company shall be deemed to agree that any written or printed conditions attached to or referred to in such orders are only binding so far as they are not at variance with the Company's Terms and Conditions.

2.3. The Customer acknowledges these terms and conditions of sale having checked them in advanced and accepting them in full. (CTD15V2-UK)

## 3. PRICE AND PAYMENT

3.1. All Goods must be paid for at the time of ordering unless the Company has agreed to supply on credit terms in which case the following conditions apply:

- a. Payment shall be due as per the invoice.
- b. Payment shall be made in full without deduction or set off.
- c. The Customer shall indemnify the Company in respect of all costs incurred by the Company in recovery of the price from the Customer.
- d. Payment may under no circumstances be delayed.

3.2. Prices are subject to revision without notice and the prices payable by the Customer will be those in effect at the date of order.

3.3. Prices quoted in current price lists of the Company supersede all prices for similar goods in previous price lists.

3.4. Prices quoted are exclusive of V.A.T. which shall be charged at such rate as shall be applicable from time to time.

## 4. CANCELLATION

4.1. No cancellation of any order from the Customer can be accepted without prior written agreement of the Company and if the Company provides written agreement to cancellation any and all costs and expenses incurred by the Company in disposing of the Contract shall be paid by the Customer.

4.2. No orders cancellation will be accepted under the following circumstances:

- a. If the order has been dispatched.
- b. If the order contains special units whose manufacturing has begun.

## 5. CUSTOMER RETURNS IN GOOD CONDITIONS.

5.1. No customer returns from the Customer can be accepted without prior written agreement of the Company and if the Company provides written agreement to cancellation any and all costs and expenses incurred by the Company in disposing of the Contract shall be paid by the Customer.

5.2. A charge of at least 15% of their original price will be payable to cover reception, inspection and fault registration costs. All returns must arrive at no cost to the Company.

5.3. No customer returns in good conditions will be accepted unless the Company agrees it in writing under the following conditions:

- a. If goods are returned within less than 30 days after being purchased by the Customer will be 15% of handling charge.
- b. If goods are returned within between 30 days and 3 months after being purchased by the Customer will be 20% of handling charge.
- c. If goods are returned within between 3 months and 12 months after being purchased by the Customer will be 25% of handling charge.
- d. If goods are returned after 12 months from being purchased by the Customer will be 30% of handling charge.

## 6. DELIVERY

6.1. All times or dates given for the delivery of the Goods are approximate only and the Company shall not be liable for any delay in delivery of the goods howsoever caused. Time for delivery shall not be of the essence unless previously agreed by the Company in writing.

6.2. The Company shall be entitled to delay or cancel delivery or to reduce the amount delivered if it prevented from or hindered in or delayed in manufacturing obtaining or delivering the Goods by normal route or means of delivery through any circumstances beyond its control including but not limited to strikes, lockouts, accidents, war, fire, reduction in or unavailability of power at manufacturing plant, breakdown of plant or machinery or shortage of or unavailability of raw materials from normal sources of supply.

6.3. Minimum carriage paid: £1,000 net (excluding VAT). For less than this total amount, £30 carriage fee.

6.4. The Company reserves the right not to supply if the Customer has outstanding invoices to be paid and the payment is overdue. The customer in this case will be on stop.

## 7. DELIVERY CONDITIONS

7.1. The products are supplied packaged with brackets, screws and fixings the cost of which is included in the sale price. The goods are deemed to be delivered when they are placed on the lorry in the warehouses, except for offers with special conditions, and the Company's liability as a haulier ends at that point.

7.2. Confirmed orders may be supplied in partial deliveries, unless the Customer checks the goods, the Customer will write "received pending checking" next to the signature in the haulier's delivery note.

## 8. GUARANTEE

8.1. All the materials are covered by the respective guarantees for any manufacturing faulty from the date of sale and acceptance of the fault by our Technical department will be required before the faulty product is returned to us. Please refer to our brochure to check all details.

## 9. DEBIT NOTES

9.1. The Company reserves the right not to accept debit notes received by the Customer.

9.2. No debit note from the Customer can be accepted without prior written agreement of the Company and the Company provides written agreement to process the debit note accordingly.

## 10. RISK AND TITLE

- 10.1. Risk in respect of any Goods connected with the Contract shall pass to the Customer at the time of delivery by the Company.  
 10.2. Title to the Goods shall not pass to the Customer until the Customer has paid to the Company the total price.

10.3. The Customer is not the agent of the Company for the purposes of any sale of the Goods and for the avoidance of doubt it is hereby declared that on no account has the Customer or its receiver or liquidator or trustee in bankruptcy any authority to sell the Goods when in receivership liquidation or bankruptcy or when the same is about to occur.

## 11. EXCLUSION OF LIABILITY

11.1. Except in respect of death or personal injury caused by the negligence of the Company or its agents, officials or employees (being negligence defined by Section 1 of the Unfair Contract Terms Act 1977) the Company shall not be liable to the Customer by reason of any representation implied warranty condition or other term or any duty at common law or under any contract or for any economic loss, loss of production, loss of bargain, loss of profit or any other costs expenses or other claims for consequential compensation whatsoever which arise out of or in connection with the Contract except as expressly provided in these conditions and PROVIDED ALWAYS that the maximum liability of the Company in relation to any loss or damage shall in no case exceed the price in the Contract.

## 12. REPRESENTATIONS

12.1. The Company's employees or agents are not authorized to make any representations concerning the Goods unless confirmed by the Company in writing.

## 13. SHORTAGES

- 13.1. Shortages should be identified at the time of delivery and noted on the face of proof of delivery document which should be signed by the Customer indicating acceptance of the delivery as specified or amended.  
 13.2. Failure to note alleged shortages at the time of delivery shall prevent the Customer from claiming under the Contract.  
 13.3. The customer cannot claim compensation under any circumstances.

## 14. BRITISH STANDARD

14.1. The Goods shall be supplied by the Company in accordance with the relevant British standard applying to such Goods.

## 15. WARRANTY

15.1. Where any Goods (or any part thereof) are shown to the reasonable satisfaction of the Company to be defective by reason of faulty material or workmanship within a period of twelve months from the date of installation in respect of domestic heaters or water heaters or twelve months from the date of delivery in the case of Goods supplied for use in homes or professional areas the Company shall at its sole option:

- a. Deliver replacement Goods or any part or parts thereof free of charge.
- b. Raise a credit note for the full total amount paid by the Customer for this unit. The customer needs to send the original purchase order so we can check the initial price paid for this unit.
- c. The liability of the Company under these terms and conditions shall be accepted by the Customer in substitution for and to the exclusion of any other claims for direct loss which the Customer has or may have.
- d. The Customer should revise the instructions manual and bear in mind the Company recommendations.

## 16. HEALTH AND SAFETY

16.1. All Goods are supplied by the Company to the Customer with appropriate fitting and other instructions relating to the fitting and installation of Goods. Certain goods are supplied accompanied by written recommendation from the Company that they should only be fitted or installed by expert and skilled workers and it shall be the responsibility of the Customer to ensure that where the Goods are sold on to a third party they are accompanied by all appropriate safety and fitting instructions.

16.2. Where the Customer fits and installs the Goods itself it shall ensure that the contents of all the safety and fitting instructions are specifically drawn to the attention of its employees.

16.3. The Customer hereby undertakes to take such measures as are communicated in writing to the Customer by the Company and to take such other steps as are sufficient to ensure so far as is reasonably practicable that the Goods will at all times be safe and without risk to health when properly used and the Goods shall not be regarded as properly used when they are used without regard to any relevant information or advice relating to their use which is communicated to the Customer by the Company.

16.4. The Customer shall indemnify and keep indemnified the Company in respect of all claims, actions, proceedings, costs, expenses, loss or damage (whether direct, indirect, economic or consequential) including without prejudice to the generality hereof any monetary penalty or fine in respect of or in connection with the Goods arising out of any one or more of the following:

- a. under the Health and Safety at work Act 1974 as amended or any regulations orders or directions made thereunder.
- b. Resulting from any breach of the Customer's obligations under this terms and conditions.
- c. Under the Consumer Protection Act 1987 or any statutory replacement therefor in respect of Goods which were not defective at the time when they were supplied to the Customer.

## 17. SEVERANCE

17.1. In the event that for any reason any provision or provisions in these conditions or any part thereof is or is held to be void or unenforceable or otherwise invalid any Contract made which incorporates these conditions shall continue to be fully binding and the remainder of these conditions shall continue to be effective.

## 18. WAIVER

18.1. The rights and remedies of the Company under the Contract shall not be diminished waived or extinguished by the granting of any indulgence, forbearance or extension of time by the Company nor by any failure of or delay by the Company in asserting or exercising any such right or remedy.

## 19. JURISDICTION

19.1. The conditions in each and every Contract made pursuant hereto here shall be governed by and construed in all respects in accordance with the Laws of England and the Company and the Customer irrevocably submits to the exclusive jurisdiction of the English Courts.

19.2. These general terms of sale will apply to all trade relations between the Company and the Customers, and purchases accept these general conditions when making an order.

**NOTE:** Rointe reserves the right to modify the configuration and presentation of the contents included within this publication. The images published in this publication may not exactly match the final installed product.

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