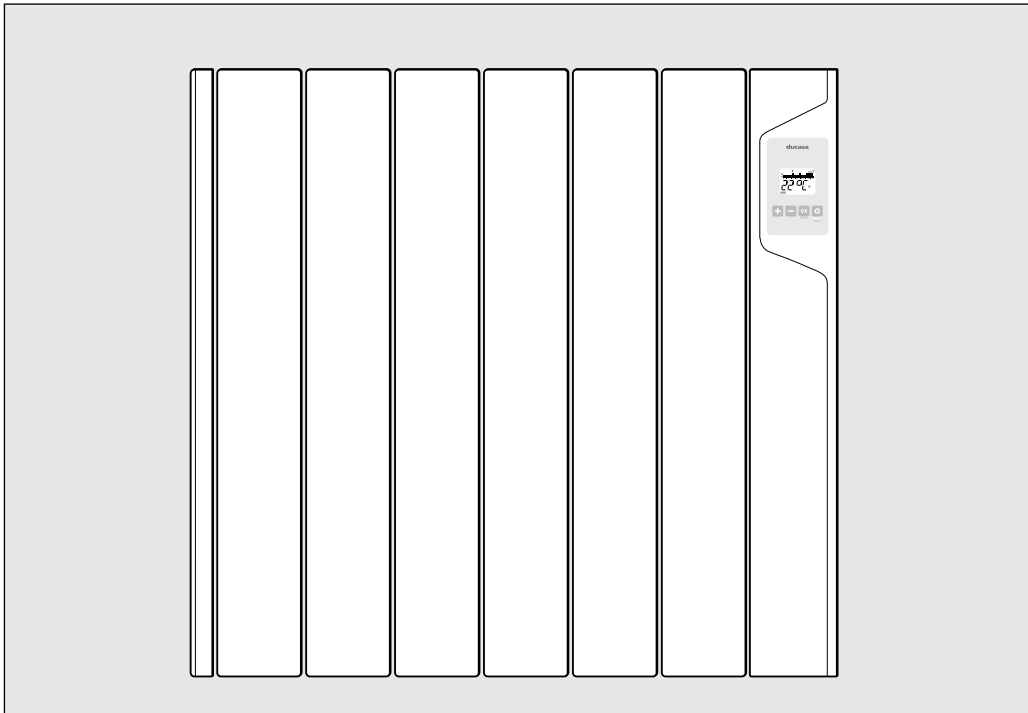# ducasa

AVANT–DGi+

Thermal Electric Radiator

Operating and Installation Instructions

(Read these instructions carefully and retain for future reference)

Models:

AVANT-DGi+ 350
AVANT-DGi+ 500
AVANT-DGi+ 750
AVANT-DGi+ 1000
AVANT-DGi+ 1250
AVANT-DGi+ 1500
AVANT-DGi+ 1800

Ready for
smart command™
Tevolve

Amazon Alexa and Google Home compatible

JUST ASK
alexa

works with the
Google Assistant

NOTE

A qualified electrician must carry out the electrical installation of this radiator. The electrical installation must comply with current UK regulations. Any claim on the warranty could be invalid if these requirements have not been met.

<u>CONTENT</u>

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IMPORTANT SECURITY INFORMATION

- This appliance can be used by children aged 8 years and above and persons with reduced physical, sensory or mental abilities or lack of experience and knowledge, if they have been given supervision or appropriate training regarding the use of the device in a safe way and they understand the dangers involved.
- Children should not play with the appliance. Cleaning and maintenance should not be performed by unsupervised children.
- Children under 3 years should be kept out of reach of the appliance unless they are constantly supervised.
- Children between age 3 and younger than 8 years old should only turn on / off the device whenever it has been placed or installed at its normal operating position provided they are supervised or have received instructions concerning use of the appliance safely and understand the risks that the device has. Children from 3 years and under 8 years old should not plug in, regulate, clean the appliance or perform maintenance.
- Warning: Some parts of this product can become hot and cause burns. Pay particular attention when children and vulnerable people are present.
- Heaters must be installed correctly following the specific requirements of the Installation Instructions section below.

Warning: in order to avoid over heating the unit, do not cover the heaters. This symbol "DO NOT COVER", is placed on the heater as a reminder to the user.

ATTENTION:

- The heaters must not be covered by clothing, containers or any other objects that may block the air ventilation.

VERY IMPORTANT:

The **"OFF"** indicator shown on the heater's control panel does not mean disconnection of the heater from the power supply and should be understood as a standby condition. To ensure the heater is completely off and without access to the power supply, it is recommended to disconnect it from the power supply by removing the fuse from the spur outlet. Alternatively, change the mechanical switch on the side of the heater to **"OFF"**.

- The unit must be placed away from flammable objects and children must not be left unattended when the heater is heating.
- The heater should not be located underneath any electrical connection.
- The electric supply line should be protected with a high sensitivity differential device (RCBO).
- Do not use the heater to dry clothes.
- Heaters must not be installed in places where there are risks of splashes such as next to bathtubs, sinks, etc.
- If the power cord is damaged, it must be changed by the manufacturer, its after-sales service or persons qualified to do so, to avoid possible danger
- Anyone who is in the bathtub or shower should not have access to the switches or other power operation devices. Always keep at least 0.6m (UK) or 3.0m (Ireland) between the radiator and the bath or shower.
  (UK: Outside zone 2, Ireland: Outside zone 3)
- The radiator must be installed so that around the radiator there is sufficient space for proper circulation of hot air, with a minimum distance of 150 mm to curtains, furniture, etc

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- All repairs where required must be completed by the manufacturing company or by special authorised staff.
- If the heater is sold without cable and plug or any other disconnecting method, the installer must incorporate a disconnecting device taking into account the specific regulations that apply.
- This heater has been designed and created as a fixed heating device and must be used for this purpose only.
- The heater must be mounted directly to the wall using the brackets supplied with the heater.
- Do not place the heater directly on the floor.
- Make sure that the wall where the heater is going to be mounted is suitable to bear the heater's weight.
- Use the correct fixing for the type of wall the heater is to be mounted onto.
- Make sure that the electrical power supply corresponds to the information indicated on the heaters rating label.
- The heater must be levelled correctly both vertically and horizontally.
- When the heater is operational, the power cord must be totally unrolled and must not touch the surface of the unit.
- Do not operate the heater with wet hands.
- Before undertaking any type of maintenance, ensure that the heater is disconnected from the power supply by removing the fuse from the spur outlet.

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TECHNICAL DATA

MODEL	Number Of Fins	Power Rating (W)	Size (mm)	Net Weight (Kg.)	Fuse Rating
Avant-DGi+ 350	3	350	340 x 580 x 100	6.9	5 Amp.
Avant-DGi+ 500	4	500	420 x 580 x 100	8	5 Amp.
Avant-DGi+ 750	6	750	580 x 580 x 100	12	5 Amp.
Avant-DGi+ 1000	8	1000	740 x 580 x 100	16	10 Amp.
Avant-DGi+ 1250	10	1250	900 x 580 x 100	20	10 Amp.
Avant-DGi+ 1500	12	1500	1060 x 580 x 100	24	10 Amp.
Avant-DGi+ 1800	12	1800	1060 x 580 x 100	24	10 Amp.

GENERAL INFORMATION

The Avant DGi+ has a special cast aluminium body specifically designed to assure the maximum rate of heat radiation; the air circulation channels provide a very efficient convection effect.

A unique manufacturing process provides bubble free filling so that the fluid delivers warmth from the heating element in a totally uniform way, ensuring that the entire surface of radiator provides comfortable heat.

A monotube heating element ensures maximum heat output.

Designed and fabricated in accordance with EN 60335-1, EN 60335-2 and EN 55014 (regulations for domestic appliances)
Standard colour White (RAL 9016)
Class I
Wall mounted (by quick fixing system)
Bi-metallic thermal cut-out
Overheat protection
Key-pad locking (anti-tamper)
NTC electronic sensor
Fitted with mains power cable approximately 1450mm long (without a plug)

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INSTALLATION INSTRUCTIONS

Electrical Connection

A qualified electrician must carry out the electrical installation of this radiator. The electrical installation must comply with the current UK regulations. Any claim on the warranty could be invalid if these requirements have not been met.

The radiator requires a 230V 50/60Hz power supply.

Connecting wires:
Brown: Live
Blue: Neutral
Yellow-Green: Earth

The connecting wires must be of the appropriate section, in regards to the length of cable, type of cable and power rating of the apparatus.

The apparatus must be connected into a **fused** connecting box or a **plug** fitted with an appropriate sized fuse for the radiator – see Technical Data on Page 3.

We recommend that the connecting box is positioned 10cm to the right of the apparatus and at 15cm above the floor.

According to regulations, the apparatus must be connected to the power supply by means of an all-pole circuit breaker with a contact gap of at least 3mm or by a thermal-magnetic circuit breaker.

Location

The ideal place to site the Ducasa radiator is as close as possible to coolest wall in the room but it is not recommended to site the radiator on un-insulated exterior walls, in this case, the part of the wall behind the radiator should be insulated.

In bathrooms, the radiators must not be sited inside the protected areas. The control unit switches must not be reachable, directly or indirectly, by a person in the bath / shower or using the wash basin.

The radiator, under no circumstances, should be installed below an electric power point.
Choose the location of the radiator in respect of the minimum distances that are indicated in Figure A.

Fig. A

150mm. min.
unobstructed space each side

window sill

150mm.

150mm.
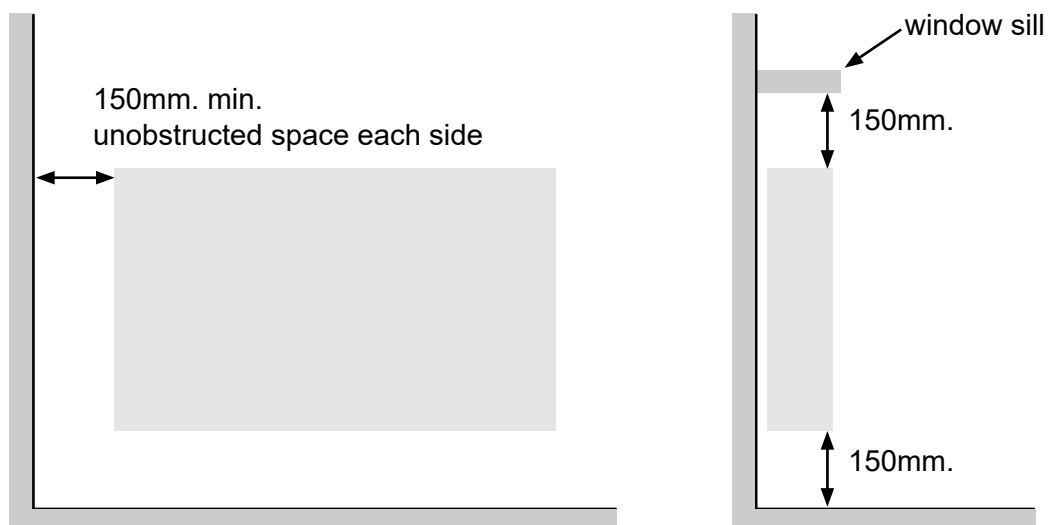
Note: If the window sill protrudes less than 20mm the gap above the heater can be disregarded.

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Mounting The Radiator

Place the radiator on the floor, as shown in Figure 1. For radiators with 4, 6, 8 or 10 elements position the supports supplied with the radiator as shown in Figure 1. For radiators with 12 elements the supports should be positioned between the second and third elements from each end.

Fig. 1
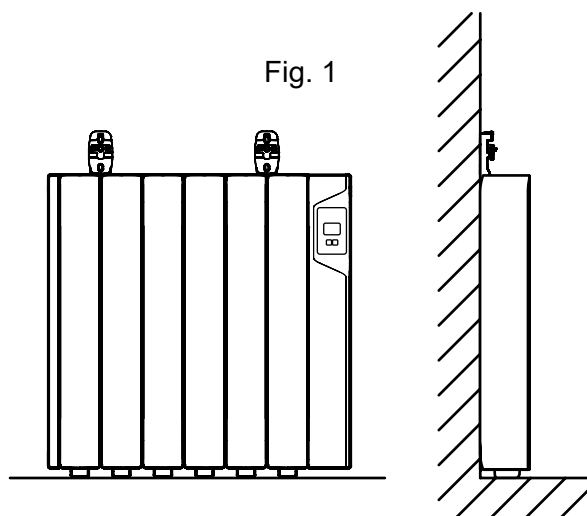
Place the supports between the elements as shown in Figure 2a, mark points on the walls through the fixing holes as shown in Figure 2b. This determines the spacing of the supports. Fix the supports to the wall with plugs and screws. Be sure that the supports are mounted in the correct position.
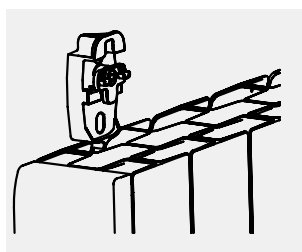
Fig. 2a
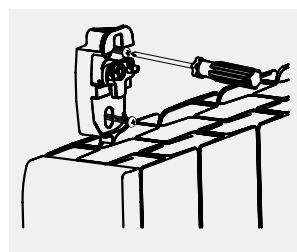
Fig. 2b

Lift the radiator and hang it on the supports, as Figures 3a and 3b.

Fig. 3a

Fig. 3b

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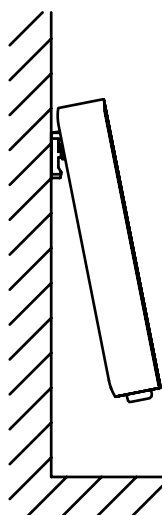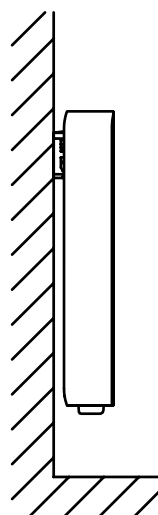
As soon as the radiator is hanging on the supports press on the locking plate until a click is heard. See Figure 4. The radiator is now installed.

Fig. 4
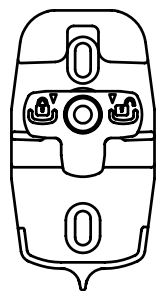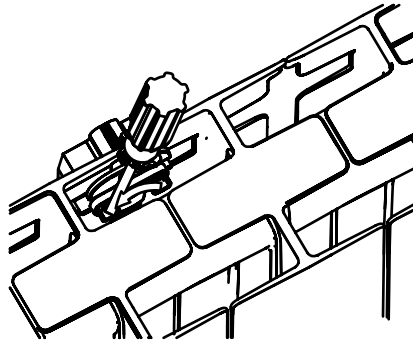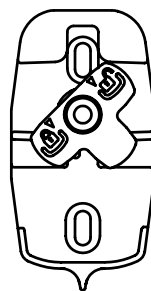
UNLOCKED   LOCKED

CONTROL OPTIONS

The Avant DGi+ is designed to be used in conjunction with the **smart command** *Tevolve* system and App, providing total control of your heating system from anywhere in the world via the internet. The App is available for both Android and iOS devices and offers the ultimate in control and energy monitoring.

Search for "Tevolve" on the either the Google Play Store or the Apple App Store. Scan this QR code to access to the download.
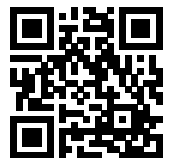
It is also possible to programme each radiator individually without the App by using the built in controls and screen. This may be convenient for single heaters however we recommend the Tevolve Gateway to control multiple heaters.
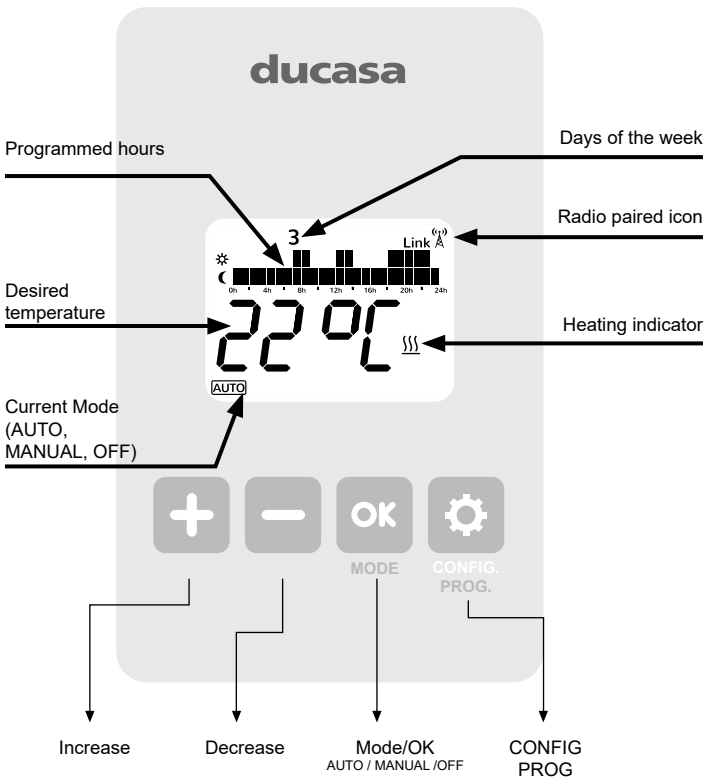
The Avant DGi+ is also compatible with Amazon Alexa and Google Home via the **smart command** *Tevolve* System and app.
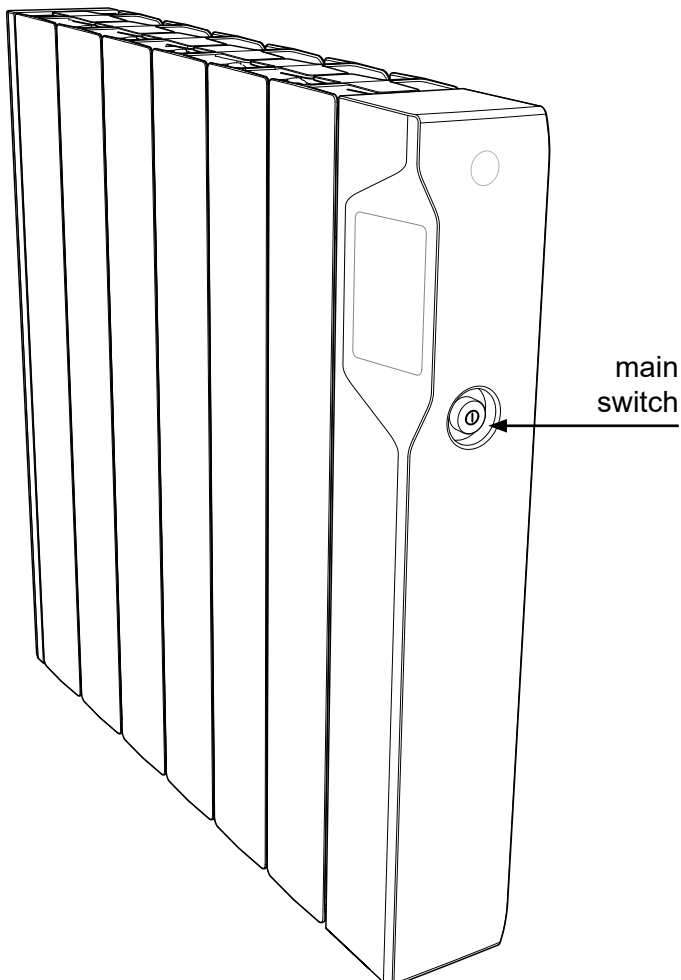For instructions on how to link them, visit https://ducasa.co.uk/smartcommand/voicecontrol

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OPERATING INSTRUCTIONS

The control is based on four buttons and an LCD display.

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Programmed hours

Days of the week

Radio paired icon

Desired temperature

Heating indicator

Current Mode (AUTO, MANUAL, OFF)

Increase	Decrease	Mode/OK AUTO / MANUAL /OFF	CONFIG PROG

Ducasa DGi+ Radiator Controls

main switch

SWITCHING ON (MASTER)

Once the radiator has been mounted on the wall and correctly connected to the main electricity power supply, press the main On-Off switch on the right hand side of the radiator.

After around 3 seconds the screen will show various information and the radiator is ready to work.

SWITCHING OFF (MASTER)

To switch off the radiator press the main On-Off switch on the right hand side of the radiator. The LCD screen will be blank and the radiator will lose connection with the *Tevolve* Gateway.

STAND-BY FUNCTION

Press the Mode/OK button until the [OFF] symbol is present as shown in the following screen.

When the radiator is in Stand-by Mode it will retain programmes and continue to communicate with the *Tevolve* Gateway but will not heat.

To switch the radiator On again, press the MODE button to choose programme mode [AUTO] or manual mode [✋] – you will see the following screens:
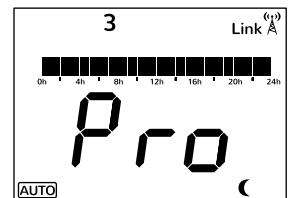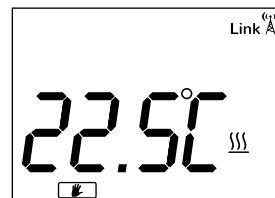
AWAY MODE OR AWAY FROM HOME

AWAY mode is activated only through geolocation or manually from the app. It reduces the set temperature by a number of degrees that is configured for each device from the app. The default is 2 degrees.

If one device is in Away, all devices in the house will be.

If a button is pressed on the device control, all devices in the house will exit AWAY mode for 2 hours.

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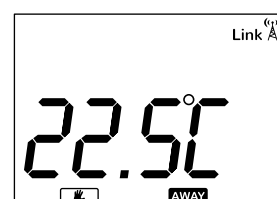
MODE OPERATION

To assist with programming the LCD screen is backlit and will stay illuminated for approximately 10 seconds after the last button is pressed.

When the radiator is operational and the room temperature is lower than the set temperature the heating symbol §§§ will be shown indicating that the radiator is producing heat. When the room temperature equals or is above the set temperature the heating symbol will not be present indicating the radiator is not producing heat.

The following screens show **OFF**, **AUTO** and **MANUAL** modes. To chose diferent modes press **MODE/OK** button.
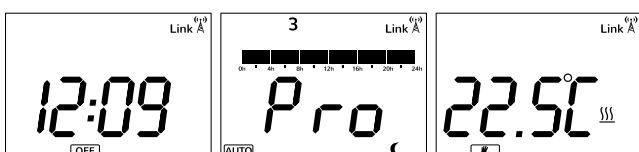

When the radiator is in **AUTO** mode the temperature can be changed by pressing the +/- buttons. This change will remain active until the next programme change or until midnight when the temperature will revert to the preset value.

Use the +/- keys to change the temperature when the radiator is in **MANUAL** mode.
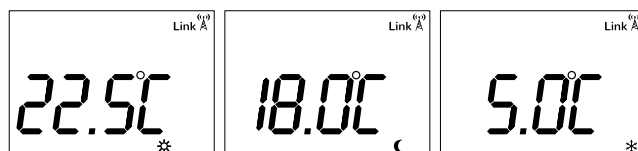
ADJUST PROGRAMMED TEMPERATURES

Adjusting temperature in the following way will only effect the temperatures used for programmed modes.

To change these set up temperatures press the **CONFIG** button and the following screen appears:
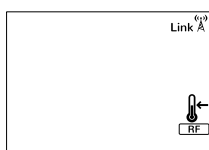

When the temperature setup icon ↧← starts flashing, press OK to scroll through each mode.

Press the +/- button to change the temperature of each mode then press **OK** to confirm and go to the next MODE and exit to the temperature setting screen by pressing CONFIG.

SETTING PROGRAMME AND CLOCK

To start programming press and hold **CONFIG/ PROG** button for 3 seconds and the following screen will appear:
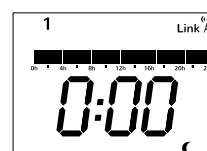

Programming starts on Monday at 00:00 and is set by choosing the required Mode for each hour of the week. Use the **OK** button to choose between Comfort ☼, Economy ☾ or Frost ❄ Protection modes. On the screen programme hours will show two blocks for Comfort, one block for Economy and no blocks for frost protection). After choosing the mode press the +/- buttons to select the next hour to be programmed. When a full day has been programmed the screen moves to the next day.

Once each day of the week has been programmed the clock must be set.

Press the **CONFIG** button to exit from programming screen and enter the time setting screen.

To select the day of the week (1=Mon, 7=Sun) press +/- buttons and confirm with the **OK** button. Next select the hour, confirm with **OK** and then select the minutes and confirm pressing **OK** once more.
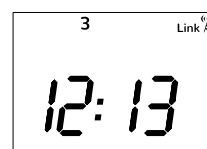

If a radiator is paired with a *Tevolve* Gateway, time setting is not required as it recognises the system's time automatically.

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To programme your Avant DGi+ with a *Tevolve* Gateway you must pair the radiator to the Gateway. First you must activate the pairing/discovery mode in the Gateway. Details of this can be found in the **smart command** *Tevolve* instruction manual.

Once this is done press the CONFIG button on the radiator and use the + or - key until the RF icon flashes. Press OK and 'Link' together with an antenna icon will appear in the top right of the screen.
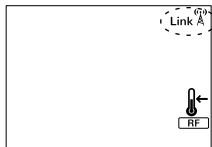
Another way to pair the radiator is to press the **OK** button for 3 seconds while the radiator is in one of the main modes (OFF, AUTO, MANUAL).

Your Avant DGi+ radiator is now ready to accept programme instructions from the Gateway (you will need to complete *Tevolve* web activation).

If the radiator has been linked to the Gateway and for some reason communication is lost, the Link icon disappears and the antenna ⅍ starts flashing.

KEYPAD LOCKING (ANTI-TAMPER)

The keypad can be locked to prevent any unauthorised person (children, people in public places, nurseries, offices, hotels etc.) altering the settings of the radiator. To lock the keypad depress and hold the + and – buttons at the same time for 3 seconds until "bloc" appears on the screen. Any button presses will be ignored and "bloc" will be displayed on the screen.

To unlock keyboard, once again press and hold + and - for 3 seconds until the word 'bloc' disappears.

When the keypad is locked the radiator will still receive communications from the *Tevolve* Gateway.

ADVANCED SETTINGS

To enter the advanced settings mode, press **CONFIG** while the radiator is in one of the main modes (OFF, AUTO, MANUAL). The following window will appear:
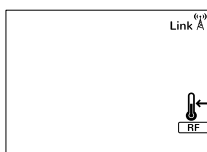

Now press the **CONFIG** button for 5 seconds and C1 appears on the screen.

To select one of the advanced settings (C1 to C6) use the +/- keys and choose the required mode by pressing OK. The advanced settings are:

1. C1-> Choose ºF or ºC
2. C2-> Choose type of control
3. C3-> Temperature Compensation
4. C4-> Firmware version
5. C5-> Open Window detection
6. C6-> Eco-Start

Degrees Fahrenheit or Celsius (C1)

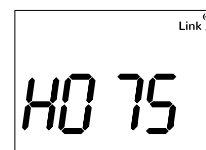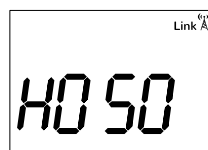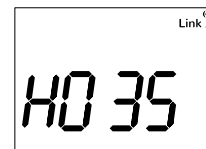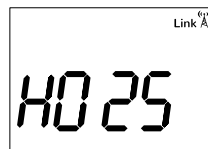Select ºC or ºF with the +/- keys and confirm with OK button .
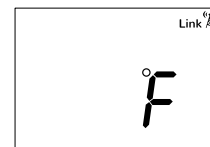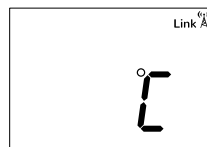
Type of Control (C2)

You access the setting mode control, showing the type of control currently used. There are 5 types of control PID, hysteresis of 0.25ºC, hysteresis of 0.35ºC, hysteresis of 0.50ºC and hysteresis of 0.75ºC.

To change type of control press +/-. Confirm with **OK.**

The screens shown are:
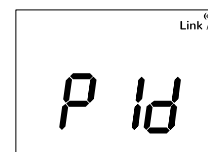
Temperature Compensation (C3)

In this mode the display will alternate between the temperature compensation (offset) and the measured temperature with offset applied. Alter the offset with the +/- buttons and confirm with OK.

Temperature compensation can be adjusted up to +/- 3ºC

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Firmware Version (C4)

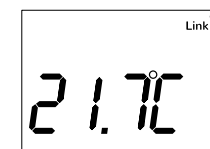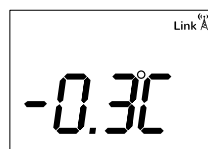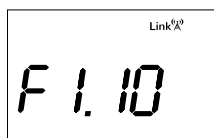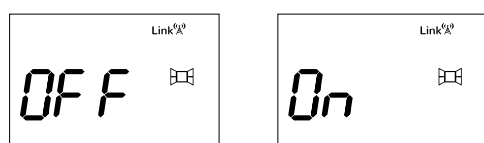It shows internal software installed in the electronics.

```
Link
F 1. 10
```

Open Window detection (C5)

In order to save energy, if a window opens and causes a sudden drop in temperature the heater will stop heating.

By default this function is deactivated. To change the status of the function, press the +,- button and then press ok to confirm.

```
Link                    Link
OFF                     On
```

This function detects a temperature drop of 0.6ºC every minute over a period 4 minutes.

If the heater is heating, it will be disconnected for 30 minutes and shows the Open Window icon on the display.

```
3        Link
22.0C
AUTO           ☀
```

The heater will restore normal function in any of these situations:

- After 30 minutes
- If the temperature increases by 0.2ºC for 1 minute from the point of activation.
- Pressing any key on the Heater

Eco-Start (C6)

With this feature activated the radiator will learn what time it should switch on to achieve the required room temperature at a particular time.

The heater will monitor the room temperature over 10 days to establish how quickly the room reaches temperature and uses this information to switch the heater on at the correct time.

By reaching the required temperature at the set time and not before, energy use and running costs are reduced.

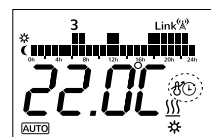By default this function is deactivated.

To change the status of the function, press the +,- button and then press ok to confirm.

```
Link                    Link
OFF                     On
```
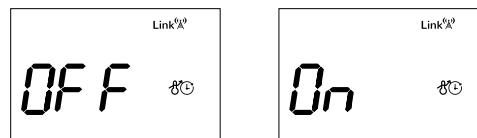
If this function is active then ⏰ will be shown on the program screen.

This function doesn't work in MANUAL mode, it only works in the PROGRAM mode.

If the heater is reset, all previous Eco-Start data will be deleted.

```
3        Link
22.0C
AUTO           ☀
```

Radiator Reset

Resetting the radiator will return all settings to the factory defaults and will also delete any 'pairing' with a *Tevolve* Gateway. To activate the RESET feature press the **OK** button and the **CONFIG** button for 10 seconds. The following screen will appear:

To confirm the reset, press **OK** again, to cancel the **RESET** press any other key.

```
Link
r ES
```
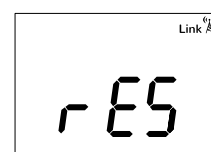
Default Values

- Working mode: OFF
- Comfort Temp : 19ºC
- Economy Temp : 17ºC
- Frost Protection Temp : 5ºC
- Manual Mode Temp: 19ºC
- Temperature Compensation: 0ºC
- No RF paired network
- Temperature units ºC
- Control type: PID
- Default Programme: All Economy
- Open Window detection OFF.
- Eco-Start OFF.

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Ducasa Avant DGi+

QUICK GUIDE TO MANUAL PROGRAMMING

The Avant DGi+ & Vitro-i+ radiator is programmed by using heating 'modes'.
The modes are set for each hour of the week, starting from midnight on Sunday
The days are numbered 1 to 7, with 1 being Monday and 7 being Sunday

The 'modes' are:
☼ **Comfort**　　☾ **Economy**　　❄ **Frost Protection**

There are 3 steps to programming your heater;
1.Programming the Modes 2.Setting the Clock 3.Setting the Temperatures

Programming the Modes

Press ⚙ Prog / Config for 3 Seconds
Press OK to choose the mode and '+' to confirm for each hour of each day
If you make a mistake press '-' to go back
When you are happy the modes are correct press ⚙ to move onto setting the clock

Setting the Clock

Use +/- to select the current day, 1 =Mon 7=Sun
then press OK
Use +/- to set the hour
then press OK
Use +/- to set the minute
When you are happy the clock is correct press ⚙ to move onto setting the temperatures

Setting the Mode Temperatures

Use + / - to select 🌡← then press OK
Use +/- to set the ☼ comfort temperature then press OK
Use +I- to set the ☾ Economy temperature then press OK
Use +I- to set the ❄ Frost Protection temperature then press ⚙
Press OK until AUTO is shown on screen
Programming is complete

Notes & Tips:
When the radiator is running in Auto the set temperature can be changed by pressing +/-
At the next programmed mode change, the radiator will return to the pre-set temperature

It can be useful to write down the times and modes you want before starting to
programme the radiator

The screen backlight switches of after 10 seconds and the radiator exits programme mode.
If this happens you will need to press ⚙ Prog / Config for 3 seconds and re-enter your modes.

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Installation Notes:

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Models	Avant DGi+ 350	Avant DGi+ 500	Avant DGi+ 750	Avant DGi+ 1000	Avant DGi+ 1250	Avant DGi+ 1500	Avant DGi+ 1800
Heat output							
Nominal heat output (P_{nom})	0.35kW	0.5 kW	0.75 kW	1.0 kW	1.25 kW	1.5 kW	1.8 kW
Maximum continuous heat output ($P_{max,c}$)	0.35kW	0.5 kW	0.75 kW	1.0 kW	1.25 kW	1.5 kW	1.8 kW
Auxiliary electricity consumption							
At nominal heat output (el_{max})	0.0008 kW	0.0008 kW	0.0008 kW	0.0008 kW	0.0008 kW	0.0008 kW	0.0008 kW
At minimum heat output (el_{min})	0.0008 kW	0.0008 kW	0.0008 kW	0.0008 kW	0.0008 kW	0.0008 kW	0.0008 kW
In standby mode (el_{SB})	0.0008 kW	0.0008 kW	0.0008 kW	0.0008 kW	0.0008 kW	0.0008 kW	0.0008 kW
Type of heat output/room temperature control:	Electronic room temperature control plus week timer						
Other control options:	Room temperature control, with open window detection. With adaptive start control. With distance control option.						

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MAINTENANCE AND CARE

Ducasa radiators require very little maintenance.

The surfaces of the radiator must not be cleaned with an abrasive product or those containing granular substances.

We recommend regular cleaning with PH neutral products.

In order to clean the radiator, it is recommended that the electric power is switched off.

CORRECT DISPOSAL OF THIS PRODUCT
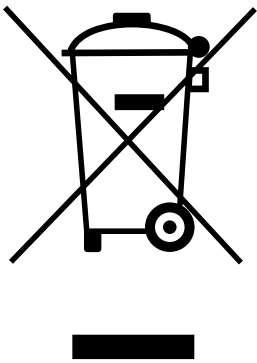
(**W**aste **E**lectrical & **E**lectronic **E**quipment)
(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed of with other household wastes at the end of its working life.

To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

EcoDesign
Lot 20: Energy Related Products
COMPLIANT

Ready for
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Tevolve.

UK Distributor of Ducasa Products:

Heattend Products Ltd

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Email: enquiries@heattend.co.uk