

VARENA

Digital Electric Radiators – Daily and weekly programming



A73023342 – 2021-05



INSTRUCTIONS FOR USE & INSTALLATION

IMPORTANT:

- In order to avoid overheating, do not cover the heater. The heater itself is marked with the standard "Do not cover" symbol.



- You must not sit on the radiator.

- This appliance is not intended for outdoor use.

- 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.

- The radiator should not be located underneath an electrical connection. The electric supply line should be protected with a high sensitivity differential device (RCBO).

- The radiator must be installed so that around it there is sufficient space for proper circulation of hot air, with a minimum distance of 100 mm to curtains, furniture, etc.

Anyone who is in the bathtub or shower should not have access to the switches and other power operation devices. Always keep at least 0.6 m between the radiator and the bath or shower (UK: Outside zone 2, Ireland: Outside zone 3).

- Mounting is an important part of safety. To perform the correct installation, go to Mounting section.

- This heating apparatus holds a specific amount of special oil. Repairs where it is necessary to open the oil tank, must only be made by the manufacturer or ATC. ATC should be contacted in case of any oil leakage.

- A Fused Spur Switch must be included in the wiring to the heater according to the wiring rules.
- 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 using the appliance safely and understand the risks associated with the device. Children from 3 years and under 8 years old should not plug in, regulate, clean the appliance or perform maintenance.

CAUTION - Some parts of this product can become hot and cause burns. Pay particular attention when children and vulnerable people are present.

- If the radiator is discarded, ensure it is recycled responsibly and follow any local provisions concerning recycling of oil.
- A Safety Data Sheet is available from sales@atc.ie on request.

NOTE

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

This product is in conformity with the Directive 2012/19/EU.



The symbol of the “crossed-out wheeled bin” shown on the appliance indicates that, at the end of its working life, the product must be treated separately from domestic waste and must be disposed of in a selective collection centre for electrical and electronic appliances or must be returned to the distributor upon purchasing an equivalent new appliance.

Users are responsible for disposing of appliances at the end of their working life in established collection centres. The correct collection of the appliance, allowing for the appliance to be recycled at the end of its working life, its treatment and its environment-friendly dismantling help prevent any negative effects on the environment and on public health and favour the recycling of the product components.

For more detailed information on the collection systems available, contact the local collection facilities or the distributor where you made your purchase.

Packing List:

- 1x Varena Radiator
- 2x Metal Brackets
- 2x Plastic Covers (top)
- 2x Locking Plastic Covers
- 4x Grey Wall plugs
- 4x Hex-Head Fixings

Please contact sales@atc.ie if any of the above are missing.

Contents

VARENA	1
1. INTRODUCTION	7
2. LOCATION	7
3. ELECTRICAL CONNECTION.....	7
4. MOUNTING	8
5. OPERATION.....	10
5.1. Control panel.....	10
5.2. Turning the radiator on and off	11
5.3. Operating modes.....	11
5.4. Temperature display.....	13
5.5. Edit day, time and program	13
5.6. Manual mode.....	14
5.7. Open Window function	15
5.8. Adaptive Start control function.....	15
5.9. Keyboard lock.....	16
6. ERROR NOTIFICATIONS	16
7. MAINTENANCE AND CARE	16
8. CHARACTERISTICS TABLE.....	17
9. ECODESIGN TABLE.....	17
10. WARRANTY.....	20

VARENA DIGITAL ELECTRIC RADIATORS

1. INTRODUCTION

Dear customer,

Thank you for choosing ATC VARENA electric radiators, with their modern design, state-of-the-art technology, great reliability and great quality construction.

ATC VARENA electric radiators and all their materials and components have passed strict controls to ensure their quality.

Before installing and operating your heater, please read these instructions carefully as they will ensure the correct working order of the appliance features and ease of use. Keep them in a safe place for future reference.

2. LOCATION

The radiator should be fitted in the part of the room where the client wants it, depending on the space available, although preferably on or near outside walls, leaving enough space around the heater for correct hot air circulation and at least 100 mm, from curtains and furniture, etc. The distance should be at least 100 mm from the floor.

In bathrooms, the electric heater should be located outside of the protected area (Zone 1 & 2), as indicated by Figure 1. Keep the fitting away from bath and showers.

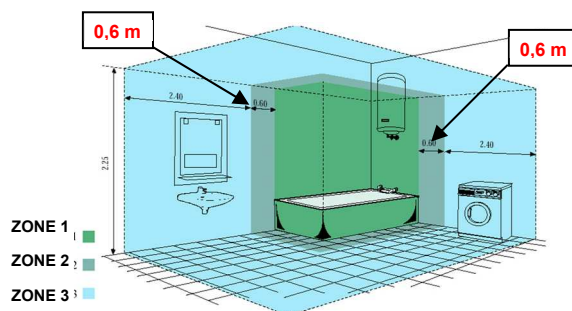


Figure 1: Areas of the bathroom

3. ELECTRICAL CONNECTION

The Varena radiator must be connected to the mains supply (230 V ~ 50 Hz).

The maximum permissible impedance of the mains at the connection point will be: $Z_{\max} = 0.18 \Omega$. It is required to install a switched spur for each heater. In addition, the following warnings must be considered:

- **The electric radiator should not be located underneath a light switch where you need to stretch over the heater to reach or operate the switch.**
- **The electric line should be protected with a high sensitivity differential device (RCBO).**
- **It is necessary to de-energise or disconnect the power from the fixed wiring before installation.**

Connecting wires:

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

The connecting wires must be of the appropriate cross section, with regard to the length of cable, type of cable and power rating of the appliance.

The appliance must be connected into a **fused** connection box fitted with an appropriately sized fuse for the radiator (see Characteristics Table on page 15). We recommend that the connecting box is positioned 10 cm to the right of the appliance and 40 cm above the floor.

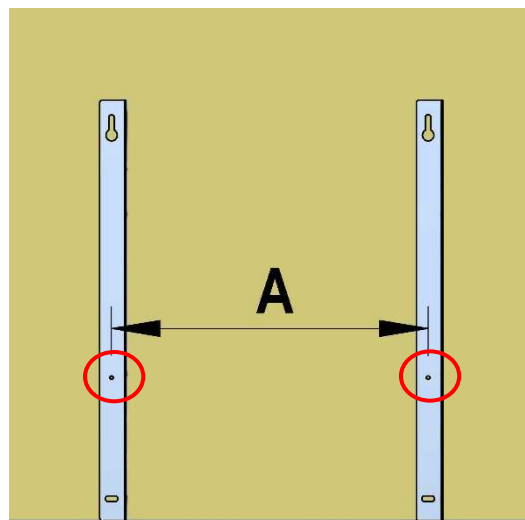
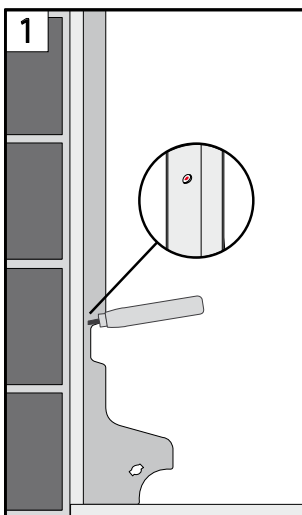
According to regulations, the appliance must be connected to the power supply by means of an all-pole circuit breaker with a contact gap of at least 3 mm or by a thermal-magnetic circuit breaker. It is recommended to install the heaters on a circuit protected by an RCBO.

4. MOUNTING

The electric radiator should be fixed to the wall by the adjustable brackets supplied with the radiator, using the cardboard template printed on the box.

If for any reason cardboard template is missing, you can follow the instructions below:

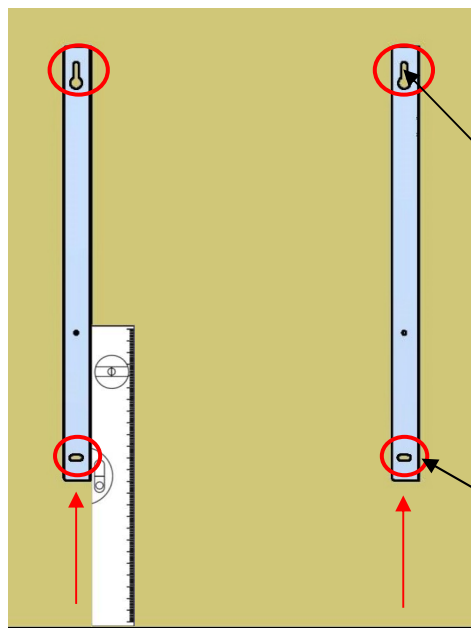
1. Place the two metal brackets provided on the floor and against the wall as shown in image 1 below. Ensure the MB stamp on the metal bracket is at the top.
2. Check Table 1 for the “A” distance between the brackets for your VARENA model.
3. Mark the small hole in the metal brackets on the wall with a pencil. These two marked points determine the position of the two lower drill holes.



Model	A (mm)
VARENA 500	160
VARENA 750	240
VARENA 1000	320
VARENA 1200	400
VARENA 1500	400
VARENA 1800	720

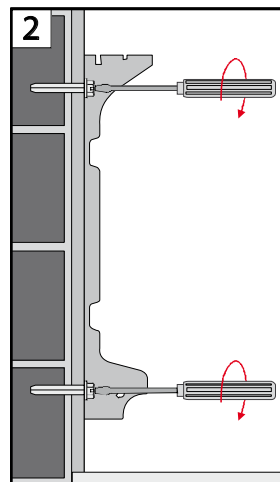
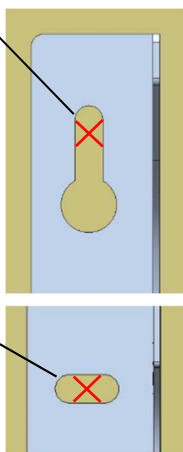
Table 1

4. With the help of a level, position the brackets matching their lower holes with the previously marked points and mark the upper holes with the pencil.

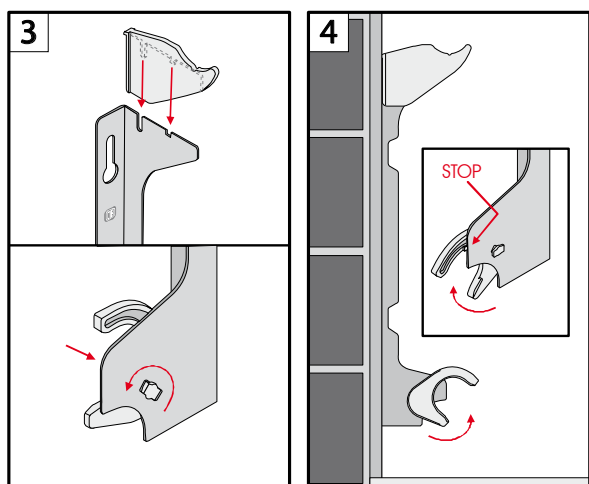


5. Drill the 4 marked holes. The grey plugs supplied require an 8 mm hole.

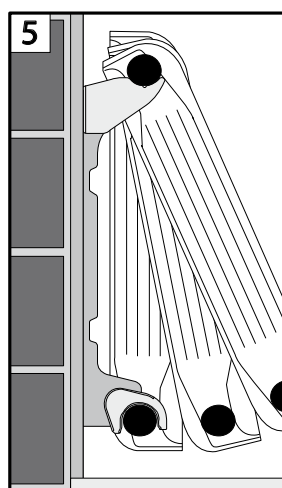
6. Insert the grey plugs into the pre-drilled holes. Screw the metal brackets to the wall with the screws provided.



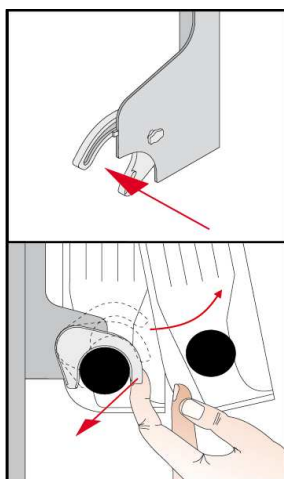
7. Attach the plastic pieces to the metal brackets:



8. Hang the heater as shown:



9. To detach the heater from the bracket:




1) Push the plastic bracket away from the metal bracket.

2) Lift the plastic bracket and pull the base of the heater forward away from the metal bracket.


5. OPERATION

5.1. Control panel


The control panel is composed of a large TFT-LCD screen with orange backlight and white images for ease of legibility, and five keys as outlined below:




Temperature, day, hour
Parameters selection
Keyboard lock




Edit day, time and program
Selection of operating mode



Confirm day, time
Program parameters
Copy the program
Manual mode

TFT-LCD Screen



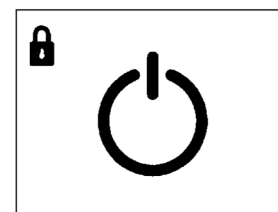
Standby key: switches the radiator between Standby and operational.

Exit Open Window mode

****The Standby key has a raised bump to easily identify it by touch.**

5.2. Turning the radiator on and off

Once the radiator is connected to the power supply (230 V ~ 50 Hz), the radiator is turned on by the switched spur; the standby icon or current operating mode will appear on the display. It is turned off by the switched spur.



If the radiator is in standby mode, to set it to operational, press the **Standby** key. The screen will light up and change from the standby screen to the previous operation mode.

To set it to Standby, press the **Standby** key; the standby icon will appear on the screen and the backlight will fade after 1.5 seconds. When the heater is in standby mode, if you press any key the standby screen will appear for 10 seconds. It is also possible to lock the radiator in Standby mode (see Keyboard lock section of this manual).

The Standby key is distinguished by its central position and the raised bump on its surface. Use to switch the radiator between Standby and Operating mode.

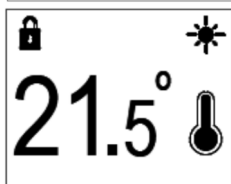
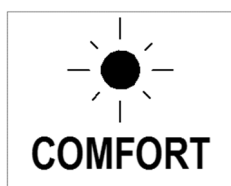
In case of any power failure or disconnection, the radiator will *always remember the previous mode of operation, the temperature, and the state (Standby / operational and locked / unlocked)*. If it is the first time that it is plugged in or has been disconnected **for more than 4 days**, it will be necessary to **set the day and time again**. If the disconnection is for **less than 4 days, the time and day of the week will be saved**.

Daily and weekly programs are never lost even when disconnected from power for long periods.

5.3. Operating modes

By repeatedly pressing the **mode** key the radiator is changed from one mode to another. To identify the mode, a mode screen is displayed for 2 seconds.

COMFORT:



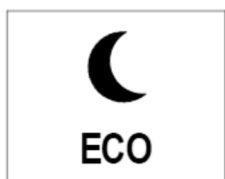
The first mode of operation that appears when the radiator is connected for the first time, and changed from Standby to operational, is "**comfort**".

In this mode, the desired room temperature is selected by - and + keys, **between 12 °C and 30 °C** in steps of 0.5 °C (if the keys are held, the temperature changes faster). When the temperature reaches either the maximum or minimum value it will stop.

Typical comfort temperature is 20-21 °C. The comfort mode is normally used during the hours the room is occupied.



ECONOMY:



The next mode that appears is "**economy**", which automatically sets a temperature between 0.5 °C and 4.5 °C less than the selected comfort temperature (the difference can be directly set by the user with the - and + keys). When the comfort temperature is raised or lowered, the ECO temperature automatically rises or falls by the same set amount.

While the comfort temperature can be set from 12 °C to 30 °C, the ECO temperature is from **7.5 °C to 29.5 °C**, but always between 0.5 °C and 4.5 °C below the comfort temperature.



Economy mode is used for short absence periods to prevent the temperature from falling excessively.

MODE

ANTI-FROST:



In this mode, the temperature setting is **7 °C** and is factory set. Anti-frost is usually used as an off set point and for long periods of absence when you want to avoid freezing.

PROGRAM:

MODE

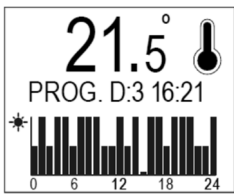


In **Program** mode, the radiator automatically switches between the 3 mode temperatures according to the **daily and weekly program** set by the user.

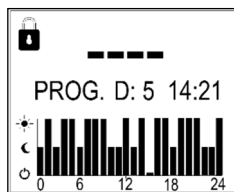
The bar chart is displayed permanently and displays the 24-hour program divided into one-hour intervals.

Each one-hour interval can be programmed as **comfort, eco** or **heating off**.

The bar showing the current time flashes to indicate to the user what the current set point is.

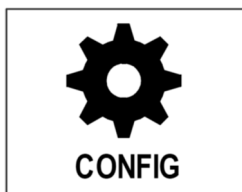


MODE



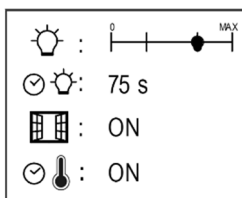
The configuration screen is at the end of the modes sequence, before entering the initial comfort mode.

CONFIGURATION:



You can configure 4 parameters; the active parameter is flashing:

- 1 – Screen backlight level at rest, **from 0 to maximum (100%)**
- 2 – Screen backlight time **from 1 s to 240 s**
- 3 - **Open Window** Function **ON** or **OFF**
- 4 - **Adaptive start control** function **ON** or **OFF**



To modify a parameter, use the - and + keys. To move from one parameter to the next, press the **OK** key. The system exits this mode by pressing the **mode** key at any time, by waiting 30 seconds without pressing any key or by pressing the **OK** key on the last parameter.

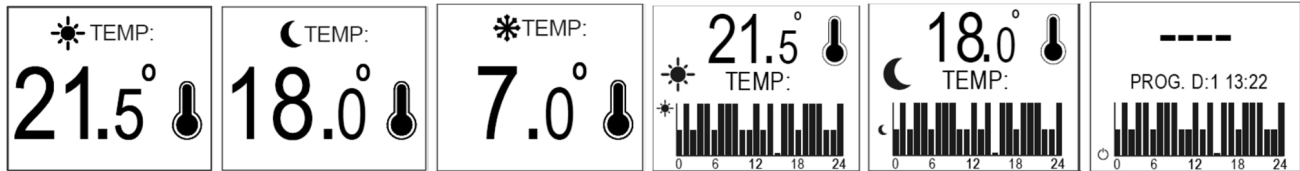
To show the user that the radiator is heating there is a symbol of a thermometer being filled as follows:



When the room temperature is below the temperature set point the radiator will turn the element on to raise the room temperature.

5.4. Temperature display

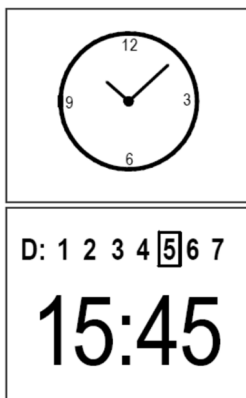
The room temperature is normally displayed on the TFT display. The set point temperature is only displayed when the user attempts to change it; after the setting has been adjusted the display will revert to the room temperature:



The **comfort** and **eco** set point temperatures can be modified both from comfort and economy modes. The comfort and eco mode can be changed within program mode if they are active at the time (the anti-frost set point can never be modified).

5.5. Edit day, time and program

To edit the day, time and program, press and hold the **mode** key for 2.5 seconds (from any mode) until the clock icon appears on the screen:



Editing of the day of the week, time and program starts. This screen will also be automatically displayed when the radiator loses the time after being disconnected from the power supply for more than 4 days.

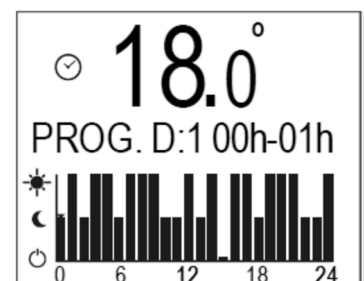
First, the day of the week is selected with the - and + keys (indicated by a flashing box). To confirm and set the day, press the **OK** key and the radiator now asks for the hour of the day by flashing the hour digits.

To change the hour, use the - and + keys. To confirm and set the hour, press the **OK** key. When the minute digits are flashing, change to the appropriate time with the - and + keys and confirm by pressing the **OK** key. The radiator will now edit the program. **Note: If the radiator had simply lost the time and day, it does not enter the program, but returns to the last active mode.*

In the program editing screen, information about the selected interval and its set point temperature are displayed at the top.

For example "PROG. D: 1 00h-01h" indicates day 1 of the week and hour from 00h to 01h.

"18.0 °C" indicates the set point temperature of day 1 from 00h to 01h, which in this case is the eco set point. The "00h-01h" interval is flashing to indicate that it can be modified with - and + keys.



At the bottom of the screen a 24 bar chart is displayed corresponding to one full day divided in the 24 intervals of 1 hour. The bar of the selected interval has a small triangle just above it and is flashing to indicate that it can be modified with the **mode** key. The length of each bar indicates the mode:

Tall bar= **Comfort**. Mid length bar = **Economy**. Short length bar = **Heating off**.

On the left axis of the bar chart are the 3 mode icons; the mode chosen for the interval being programmed also flashes at the same time as the bar. To change the mode (comfort, economy, Off) of each interval, press the **mode** key. To move to the next or previous hour, press **+** or **-** respectively.

By pressing the **OK** key, the current program is saved and the program advances to the next day. **By pressing and holding the OK key the program of the current day is copied to the next day.** After Day 7, when confirming with **OK** key, the radiator exits the program edition, and returns to the mode in which it was in prior to commencing editing the time and program.

To finish editing the program at any time you can press and hold the **mode** key for 2.5 seconds.

5.6. Manual mode

The manual mode allows the user to manually operate the radiator and override the current setting. It can boost the heater to heat (On) or not (Off) for a set amount of time. After the time expires the radiator will return to the previous mode of operation.



The manual mode is designed to allow a user to override the Program mode without having to change the program itself. For example, if you arrive when the heater is normally unheated, you can heat the space to a comfortable temperature, and then have the heater return to its normal mode without changing the program.

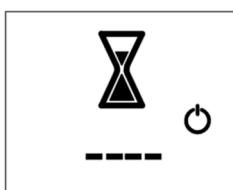


To enter Manual mode press and hold the **OK** key for 2.5 seconds, then using the **-** and **+** keys enter the amount of time you want to force the radiator to heat or not.



The editing is circular, from half an hour to 365 days; after 365 days the radiator reverts to 00:30. The steps are:

- Half an hour from 00:30 to 12:00 hours
- 1 hour from 12:00 to 1 d
- 1 day from 1 d to 365 d



To confirm the time required, press the **OK** key.

The desired temperature can then be set using the **-** and **+** keys; any temperature between 7 °C to 30 °C (in steps of 0.5 °C) can be entered.

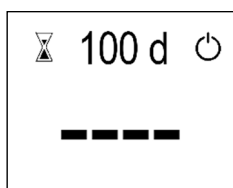
Unheated mode (Off) can be entered from either 7 °C or 30 °C by entering **-** or **+** keys once from each extreme.



Unheated is indicated by the standby icon and 4 dashes on the screen (----). If no key is pressed within 30 seconds before final confirmation, the radiator will return to the previous mode of operation.

When the desired temperature is entered confirm with the **OK** key.

“ON” will be displayed.



The selected time will remain on the display and count down until it is finished, and with the standby or sun icon depending on whether temperature set point or unheated mode has been selected. The actual room temperature will be

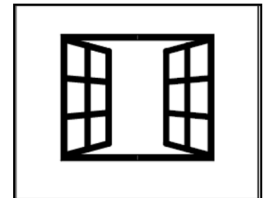
shown when forcing the heating on. Although you cannot change the set time, it is possible to change the set point temperature during the operation of manual mode using the - and + keys.

Once the set time has elapsed, the radiator will automatically return to the previous mode of operation.

To exit manual mode at any time, press the **OK** key. "OFF" will be displayed.

5.7. Open Window function

When the Open Window function is enabled in the configuration menu the radiator automatically stops heating when it detects a sudden drop in temperature (4 °C in 20 minutes). This is normally caused when a window or door is opened to the outside without turning off the radiator.



When the Open Window function has been activated it is indicated on the display by a single screen with an open window. In order to enable the heating again the user must press the **Standby** key. The radiator will then return to the previous mode of operation.

Note: In installations where this function is activated very frequently, it may be appropriate to keep it disabled.

*** This function is considered by Directive 2009/125/EC regulations and will give the unit more efficiency during operation.**

5.8. Adaptive Start control function

When the Adaptive Start control function is enabled in the configuration menu, the radiator automatically starts heating prior to the programmed time (a maximum of 2 hours before), to ensure that the next "on" set point is at the required temperature on time.

The radiator analyses the next two hours, and if there is a set point higher than the current room temperature within that time period, and knowing the heating speed of the unit, the software calculates when it needs to start heating. This calculation is made each 5 minutes.



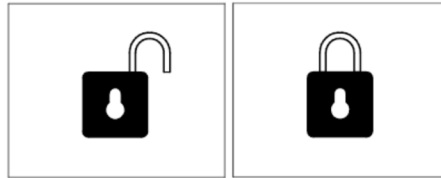
This function only runs when the radiator is in Program mode. When Adaptive Start is running, a flashing clock icon is displayed next to the thermometer symbol. The function will only run on temperature rise e.g. from heating off to eco / comfort, or from eco to comfort.

When Adaptive Start is running the radiator progressively increases the set point temperature until the next programmed set point is reached.

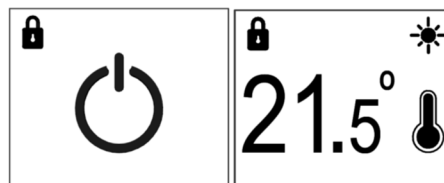
*** This function is considered by Directive 2009/125/EC regulations and will give the unit more efficiency during operation.**

5.9. Keyboard lock

The user can lock the keyboard on the Varena radiator by pressing and holding the - and + keys for 2.5 seconds. The unlock is performed in the same way. When the keypad is unlocked or locked, the screens are displayed:



This is possible in all modes of operation except in Configuration. The radiator can be also locked when is on Standby. When the radiator is locked, the padlock icon will appear in the upper left area of the screen:



6. ERROR NOTIFICATIONS

There are 3 types of errors that the electronics can detect; if an error is detected one of the codes below will be displayed on the screen until it is resolved:

ERROR CODE	DESCRIPTION
ERROR1	Failure in microcontroller or RTC (problems with the current time)
ERROR2	Failure of the NTC temperature probe (e.g. disconnected, short-circuited, etc.)
ERROR3	Failure of the EPROM memory



When recovering from an error, the radiator will always go to Standby mode; the radiator will not retain any previous mode or state.

If the radiator goes to Standby without any specific reason, it may have recovered from an error.

7. MAINTENANCE AND CARE

The Varena 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.

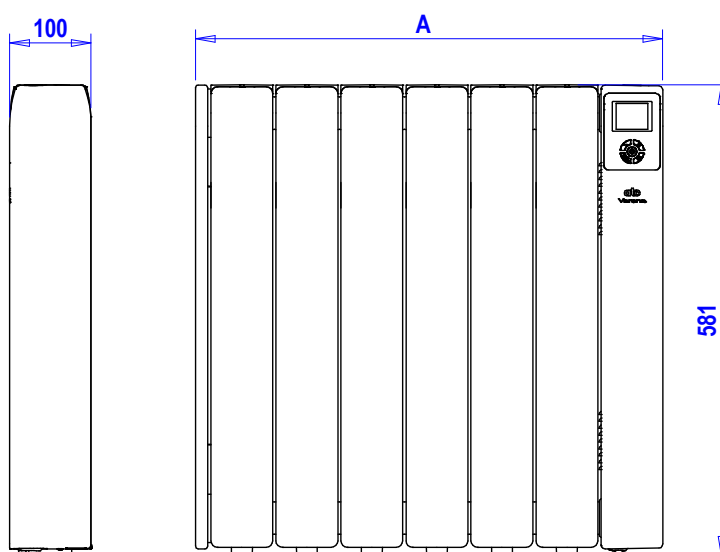
In order to clean the radiator, it is recommended that the electric power is switched off.

Failure to keep the Varena radiators clean may result in dust becoming burnt and depositing on the wall above the heater in the form of dark streaks or patches. This type of marking is expressly due to failure to keep the heater and surrounding area clean.

ATC take no responsibility for any such damage caused.

8. CHARACTERISTICS TABLE

Model	No. elements	Power (W)	A (mm)	Weight (kg)	Voltage	Class	Index of protection	Type of radiator
VARENA 500	3	500	335	6	230 V ~ 50 Hz	I	IP2X	FLUID
VARENA 750	5	750	495	8.7				
VARENA 1000	6	1000	575	10.1				
VARENA 1200	7	1200	655	11.6				
VARENA 1500	9	1500	815	14.2				
VARENA 1800	13	1800	1135	19.8				



9. ECODESIGN TABLE

Models	VARENA 500	VARENA 750	VARENA 1000	VARENA 1200	VARENA 1500	VARENA 1800
Heat output						
Nominal heat output (P_{nom})	0,5 kW	0,8 kW	1,0 kW	1,2 kW	1,5 kW	1,8 kW
Maximum continuous heat output ($P_{max,c}$)	0,5 kW	0,75 kW	1,0 kW	1,2 kW	1,5 kW	1,8 kW
Auxiliary electricity consumption						
At nominal heat output ($e_{l_{max}}$)	0,000 kW	0,000 kW	0,000 kW	0,000 kW	0,000 kW	0,000 kW
At minimum heat output ($e_{l_{min}}$)	0,000 kW	0,000 kW	0,000 kW	0,000 kW	0,000 kW	0,000 kW
In standby mode ($e_{l_{SB}}$)	0,0013 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					
ATC Electrical & Mechanical ATC House, Broomhill Drive, Tallaght, D24 EF99, IRELAND T: 00 353 1 4678 301 UK T: 0203 564 9164 F: 00 353 1 4520 887 Email: sales@atc.ie						

10. WARRANTY

USER
Name
Address

SELLER
Name
Address

Date of sale

Stamp and signature of the distributor

WARRANTY CERTIFICATE

GUARANTEE: ATC with address ATC House, Broomhill Drive, Tallaght, D24 EF99 Dublin, IRELAND

PRODUCT: This warranty is applicable to the products contained in this manual.

WARRANTY: 24 months from Date of Purchase (Proof of sale required)

ATC assures the electronics in the control panel have a warranty of 2 years from the date of purchase.

ATC assures the aluminium elements that make up the heater body are guaranteed for 10 years. There are excluded in this period the other components.

Unless proven otherwise, it shall be presumed that if not shown within six months of delivery that the product was fine when delivered.

There is a parts warranty of two years from the date of delivery of the appliance, apart from the aluminium frame which is guaranteed for 10 years.

This warranty applies, only and exclusively, to equipment sold and installed in Ireland and the United Kingdom.

Repairs will be carried out in the workshops of ATC or its nominated agent.

The material replaced in warranty becomes property of **ATC**.

SCOPE OF WARRANTY

Unless there are event(s) or object(s) that prove to the opposite, it will be assumed that the products acquired are suitable and good for the purpose that they are purchased for and that always happens under the following conditions:

- The guaranteed unit shall correspond to the manufacturer intended exclusively for Ireland and the United Kingdom and should be installed in Ireland and the United Kingdom.
- The spare parts which are necessary to be replaced, will be determined by our qualified service and in all cases, shall be original products from the manufacturer.
- The warranty is valid provided that normal maintenance operations described above in the instructions provided with the equipment have been carried out.
- The consumer must inform ATC of the lack of conformity of the goods, in a period of less than two months of them learning of it.

The warranty does not cover incidents caused by:

- The power supply of insufficient capacity or equipment with generators or any other system that is not a stable power supply.
- Products whose repairs have not been conducted by ATC qualified service personnel or their authorised agents.
- Corrosion, deformation, etc., caused by improper storage.
- Handling of the product by other personnel not employed by ATC during the warranty period.
- Installation not in accordance with the instructions provided with the equipment.
- Installation of equipment by unqualified personnel.
- Defects in electrical, hydraulic facilities, or by lack of flow, etc.
- Defects caused by improper treatment.
- Anomalies caused by atmospheric agents (ice, lightning, flooding, etc.) as well as erratic current or voltages.
- Improper maintenance, neglect or misuse.
- Damages caused to premises caused by lack of cleaning of the radiator (black streaks on walls).

Transport damages must be claimed by the user directly from the carrier.

VERY IMPORTANT: Radiators must be correctly sized for each room they are to heat. There is sizing information available on the website www.ATC.ie.

Draughty and badly insulated rooms will cause the radiator to use more power to reach the set temperature. Undersized radiators may not reach the set temperature and are costly to run.

To claim on the warranty here recognized, it will be required that the appliance is used as intended for household and commercial use only. Also, it will be necessary to deliver the radiator to the technical personnel of ATC at their premises or the premises of their nominated agent. A clear and legible copy of the invoice or receipt for the radiator together with the delivery slip must be supplied.

Note: All our technical assistance service officers have the corresponding accreditation by ATC.