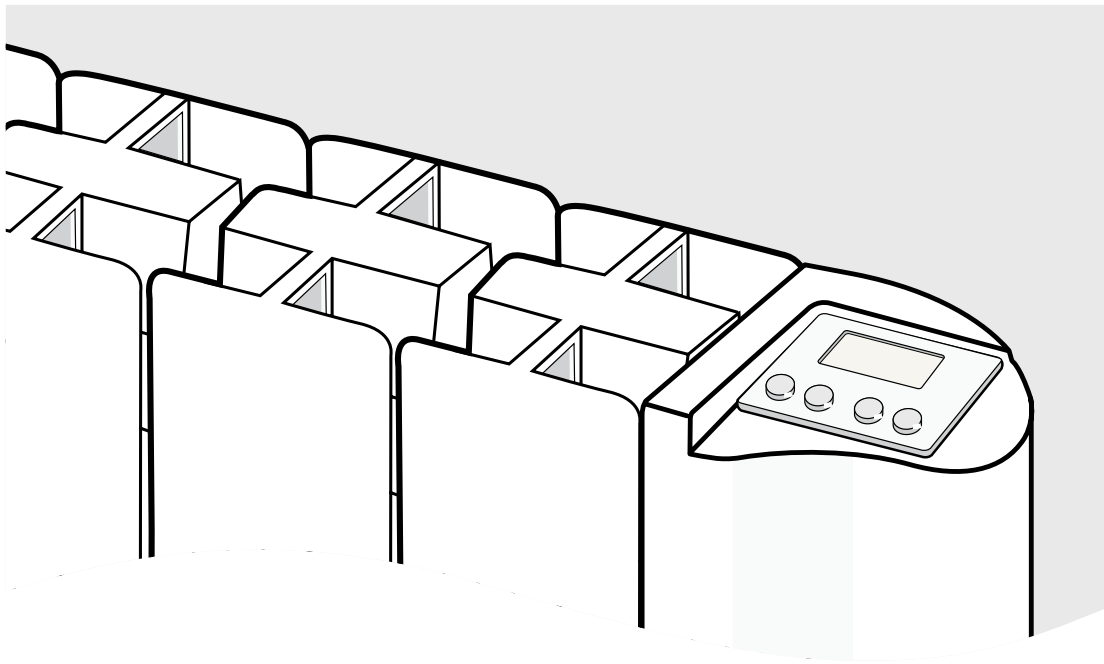


# INSTALLATION AND INSTRUCTION MANUAL

## CALI Avanti



Thermodynamic fluid filled  
electric radiator

EN

By  **IntelliHeat**  
Intelligent Heating Solutions

CE

Dear customer,



Thank you for choosing our product. Read this manual carefully before installing your radiator, as it provides useful information for installation, ensure proper maintenance of the appliance.

Remember that this manual must accompany the radiator should it be moved to a different installation location.

**THE PACKAGE INCLUDES:**

Aluminium radiator fitted with a thermostat with electronic regulation, kit made up of three mounting brackets and instruction manual.


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## 1. CHARACTERISTICS

### 1.1. Characteristics of the appliance

**IP24** : appliance protected against splashing water

 **Class II**: double insulated

### 1.2. Technical characteristics of the electronic part

Power supply	230V +/-10% AC 50 Hz
Electrical resistor capacity	1000 W
	1200 W
	1500 W
	1800 W
Insulation class	Class II
Water protection rating	IP24
Operating temperature	0 ÷ 40°C
Storage temperature	-20 ÷ 80°C
Relative humidity	RH 0 ÷ 85% without condensate
Regulation type	Proportional integral
Temperature range	7° ÷ 35°C
Temperature reading resolution	1/16°C
Maximum range	0.5°C
Maximum deviation	1.5 °C

## 2. DESCRIPTION AND TECHNICAL SPECIFICATIONS OF THE PRODUCT

The radiator has a die-cast EN AB 46100 aluminium alloy body containing a thermodynamic fluid to transmit heat internally. This thermodynamic fluid is made up of highly refined mineral oil with a high heat transmission coefficient, characterized by high oxygenation resistance for durability and low viscosity.

The internal thermodynamic fluid is heated by means of an electrical resistor with class II insulation, which has a control thermostat and safety thermal fuse.

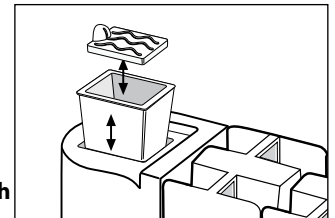
The control and regulation electronics make it possible to regulate the ambient temperature with great precision.

Includes humidifier and essential oil diffuser.

NB: All radiators are manufactured with an identifying label which guarantees their traceability. This label certifies that the appliance complies with European directives and electrical standards.

**The radiator must be installed and used in accordance with this manual and all UK regulations regarding such electrical appliances.**

Radiator colour: White RAL 9010.

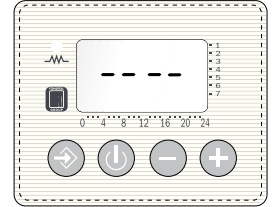


### 3. WARNINGS



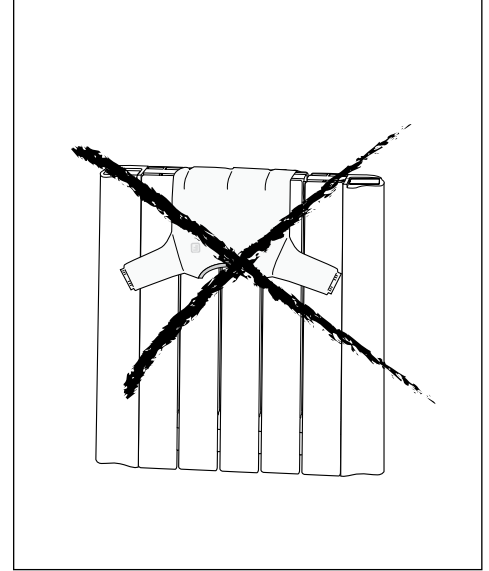
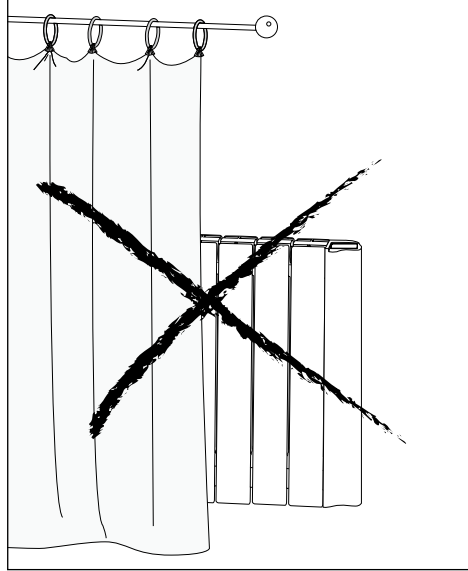
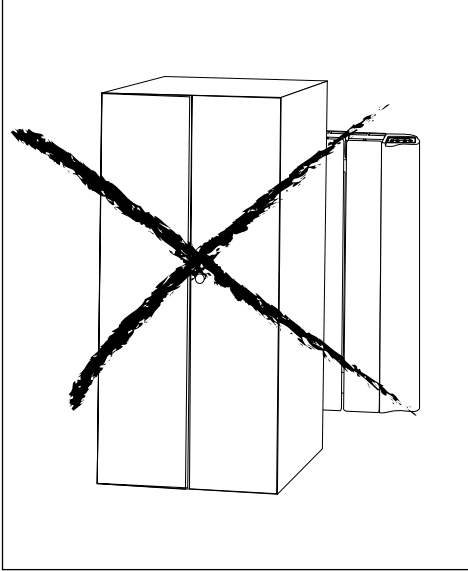
A label on the side of the radiator contains the symbol shown here. The meaning of this symbol is:  
In order to avoid overheating the appliance, **DO NOT COVER OR LAY** any material or object over/on the radiator.

**IMPORTANT:** in stand-by mode the electrical supply of the radiator is on and the display shows four segments: - - - -



The radiator must never be:

- partially or totally covered
- in direct contact with or a short distance from curtains, furniture, etc.



The radiator must never be installed:

- in an alcove
- less than 10 cm. from the corners of the room
- beneath a power point
- on a shelf

The radiator must be mounted on the wall using the standard mounting brackets included.

All work required on the appliance must be performed by a qualified professional.

Repairs which require opening the liquid reservoir must be made by the manufacturer, its representatives or customer service.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

## PLEASE PAY SPECIAL ATTENTION

Do not touch any part of the radiator when you are wet – Do not install outdoors.

This product is safe and water resistant. Nevertheless, do not touch the radiator or the thermostat when any part of you is wet. This product is for interior use only.

**Cleaning:** Ensure turned off at the main power source, and clean with a soft, non abrasive damp cloth. Never allow water to splash onto any part of the appliance.

Do not cover or lay any material or object over/on the radiator.

Do not lay any material over the radiator, especially if it is damp or wet. Never place any object against the radiator. Always ensure that the radiator is installed in an open area to allow the warmth to be radiated and not where curtains will be drawn over it.

Please take care when children are around.

Although this product is designed to ensure safety and ease of use, like with any other electrical or heating product, always exercise caution where children are concerned. We strongly advise you not to allow children or any unsuitable person to operate the controls or to tamper with any electrical connection.

Never hang from the radiator or load it with weight.

Never pull, sit on, hang from or load the radiator with any weight. Such practice may damage the radiator or cause it to come loose from the wall or the wall fitting attachments, which could cause serious injury. Also, to avoid such injury, check from time to time to ensure that the radiator is securely fixed to the wall.

Do not tamper with or modify this product.

Never attempt to alter or modify this product, paint it, or apply stickers. This will invalidate the warranty and may cause the product to malfunction or personal injury.



**DO NOT:** Connect the BLACK WIRE to any EARTH, LIVE or NEUTRAL terminal. The black wire must only be used for connection to an external Pilot-Wire Programmer. Connection of the black wire to any other terminal will destroy the thermostat. If the black wire is not used for connection to a Pilot-Wire programmer, it must be properly insulated and isolated. This appliance is Double Insulated, therefore it must not be Earthed. The cable contains: (BROWN: Live) (GREY/BLUE: Neutral) (BLACK: the Signal Wire).

### GENERAL GUIDELINES

1. INTELLI HEAT Ltd or any associated company or person cannot be held responsible for any fault, damage, or personal injury caused if these instructions have not been fully adhered to, or where non-original materials or accessories have been used. Non observance to these guidelines and all applicable regulations may invalidate the warranty.
2. This radiator is filled with a special Thermodynamic Fluid. Any repair involving opening the access to this fluid must be carried out by an electrician approved by the manufacturer. The manufacturer must be contacted in the unlikely event of any leakage of this fluid. Please note that all regulations for the disposal of heating fluid and electrical appliances must be fully adhered to.
3. If the cable or any other electrical part fails or becomes damaged, repair or replacement must be carried out by an electrician approved by the manufacturer, or by a suitably qualified, experienced electrician familiar with such products who has the necessary instructions.
4. This product must not be positioned below an electrical socket and all applicable regulations relating to the installation of electrical appliances must be fully adhered to. See pages 4 & 6 for further information and guidance.
5. During operation, it is normal for the radiator to make minor clicking sounds due to metal expansion/contraction, and for one end fin, or one each side not to heat up, this allows the flow and expansion of the thermodynamic fluid.

## 4. INSTALLATION

The radiator must not be installed in an alcove or beneath a power point or fuse spur.

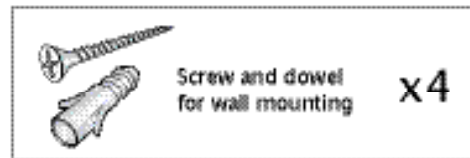
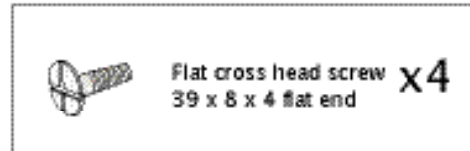
Curtains, furniture and objects which may obstruct proper heat distribution must be placed a minimum of 50 cm. from the front of the radiator.

The radiator must be installed with a minimum distance of 120 mm between the floor and the lowest part of the radiator.

### 4.1. Wall installation of the radiator

The radiator must be fixed to the wall with the support brackets supplied.

The fixing kit comprises the following tools:



#### HOW TO MOUNT THE SUPPORT BRACKETS:

- Determine the exact position of the radiator.
- The H value identifies where to position the support bracket (holes 1 and 3) 120 mm above the finished floor. Make sure the 120 mm clearance takes into account the radiator skirting value.
- Mount the support bracket vertically in its final position. Mark the lower point H to identify hole 1, keeping to the 120 mm clearance between floor and radiator.
- Drill hole 1 in accordance with the value D shown in the diagram and tables below. Mount the support bracket in position but do not fix it.
- Select value C in the table corresponding to the number of radiator elements and drill hole 3, taking into account the value A used for the first support brackets. Drill and mount the second support bracket, but do not fix it.
- Position the support bracket vertically and mark hole 2, value B, at the top. Drill and secure the support bracket firmly in position, considering the inclination of the radiator brackets.
- Make sure the distance between the two bracket supporting points is always a multiple of 80 mm (table, value C).
- Secure the radiator in position at the bottom using the locking bracket (Figures 1 and 2).

	Number of elements / Heat output			
	7/1000W	9/1200W	11/1500W	12/1800W
VALUE A	595	595	595	595
VALUE B	390	390	390	390
VALUE C	360	520	520	600
VALUE D	182	182	262	262

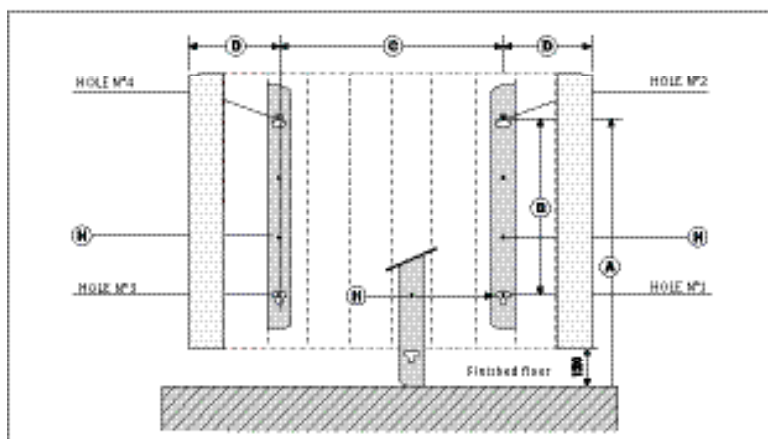


Fig. 1

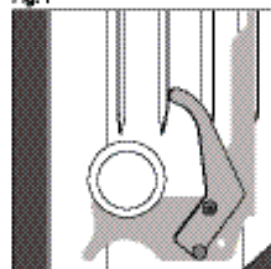
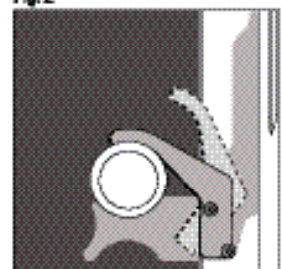


Fig. 2



## 5. ELECTRICAL CONNECTIONS

 **IMPORTANT**  
During installation, maintenance and cleaning, the appliance must be disconnected from the power supply.

The appliance must be attached to a 230 VAC power supply only. Follow the colours indicated:

Brown	Phase
Blue or grey	Neutral
Black	Pilot Wire

**Note:**  
If the (black) pilot wire is not in use, regulations require that it be isolated. Never connect it to any earth terminal.

A multi-pole circuit breaker must be installed. The distance between the contacts must be at least 3 mm.

The appliance's power circuit must be protected by a **RCD high sensitivity differential protection device**.

The power cord must be connected to the power supply using a shunt box located 25 cm from the ground, without the use of an electrical plug.

Never insert metal objects into or attempt to pierce the side of the radiator containing the regulation system (right side).

If the power cord is damaged, it must be replaced by a qualified electrician only.

### 5.1. Details of bathroom installation

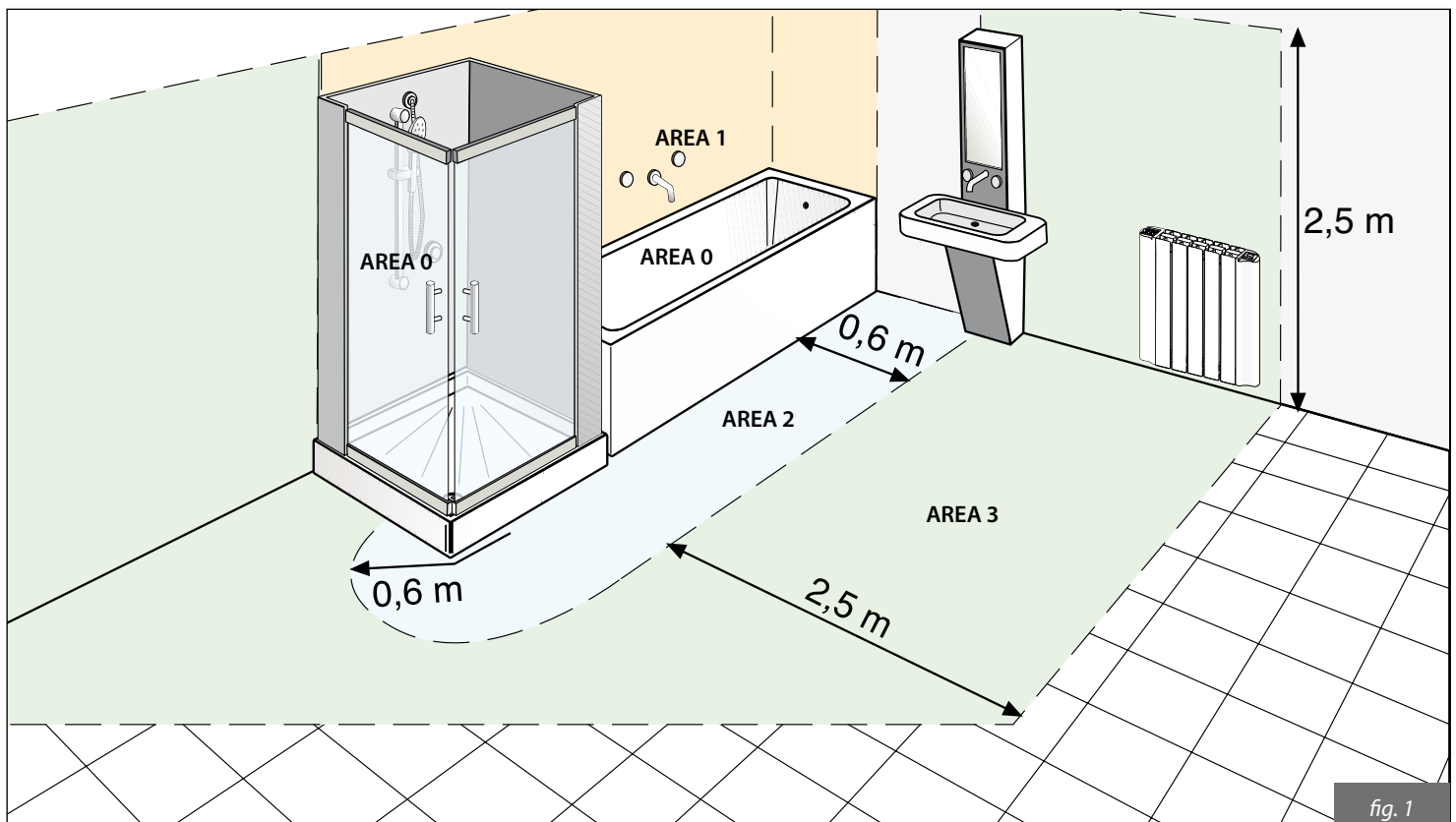
The appliance must be installed according to current regulations and laws in the country of use.

The radiator is class II and has IP24 electrical protection. In bathrooms, it can be installed in area/zone 3 (see figure 1) on condition that the control device is not within reach of people using the shower or bathtub.

For your safety, installation should only be undertaken by a competent person in accordance with current I.E.E. Regulations.

 In the bathroom, protect the power line with a 30 mA high sensitivity differential device.

Install a multi-pole circuit breaker. The distance between the contacts must be at least 3 mm.

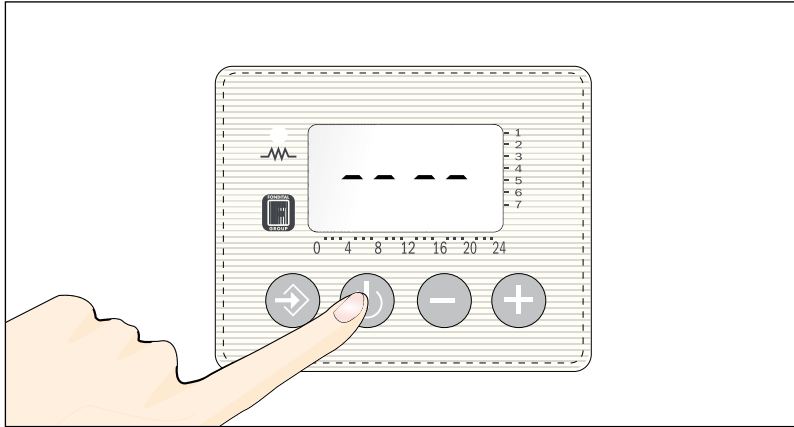


Please contact your INTELLI HEAT Representative for further assistance or information.

## 6. REGULATION AND PROGRAMMING

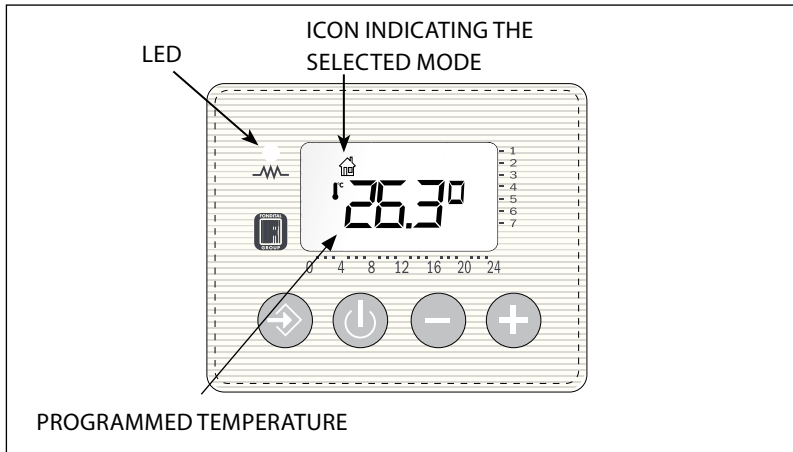
### 6.1. Turning the radiator on

The appliance is regulated using four keys, as shown in the figure. When the appliance is in stand-by mode the display shows four segments. To turn the radiator on, press the 'on/off' key, as shown in the following figure:



The radiator has various operating modes, as shown in the table on page 12.

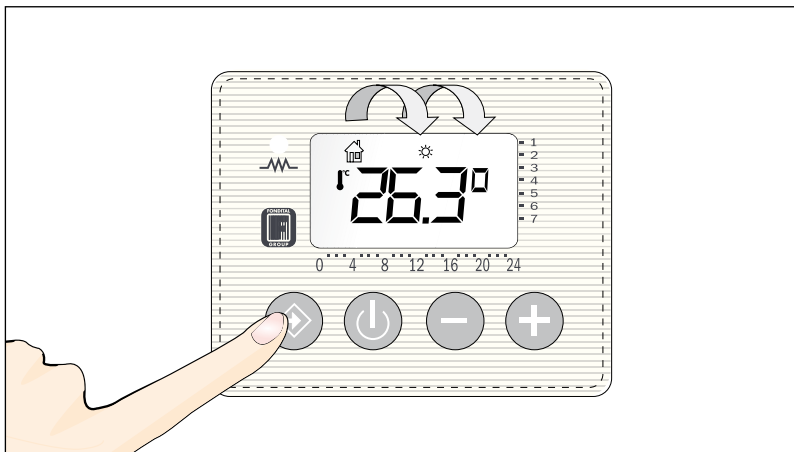
When the radiator is in clock mode, the screen shows the time; in the other modes it shows the programmed temperature. A small icon indicates the current mode.



There is an LED light on the control panel: when the system is in heating mode and the room temperature has not yet reached the desired temperature programmed by the user, the LED is RED. Once the room reaches the programmed temperature, the LED turns GREEN.

### 6.2. Changing the mode

Press the 'mode' key to select the desired mode:

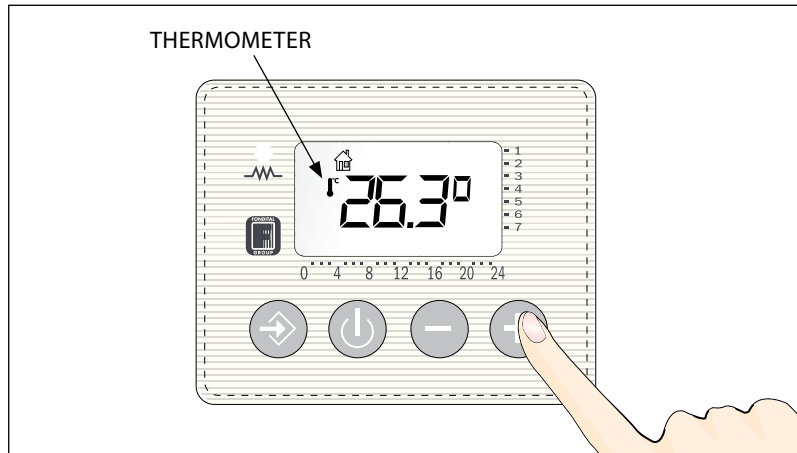




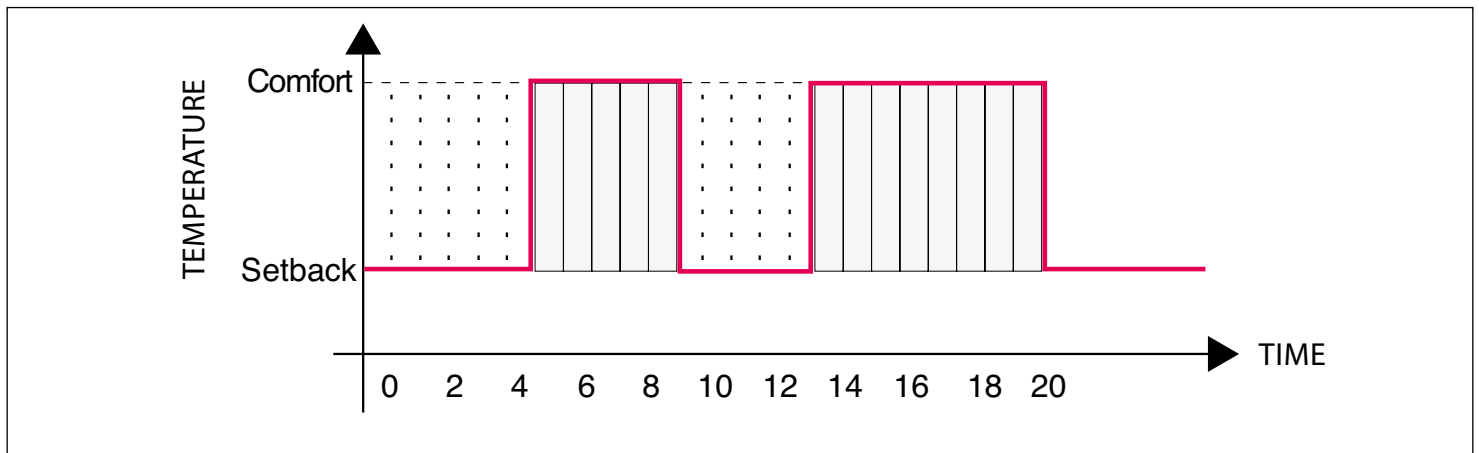
### 6.3. Programming Comfort temperature and Set back temperature

It is possible to programme two separate temperature levels: Comfort temperature is the desired ambient temperature during operation in Comfort and Pilot Wire mode or when programming; Set back temperature is the ambient temperature in Night-time Reduction mode. These two temperature levels can be programmed using the plus and minus keys. A blinking temperature icon on the screen indicates that the temperature is being programmed.

Comfort temperature can be programmed in Comfort mode, Set back temperature can be programmed in Night-time Reduction mode.



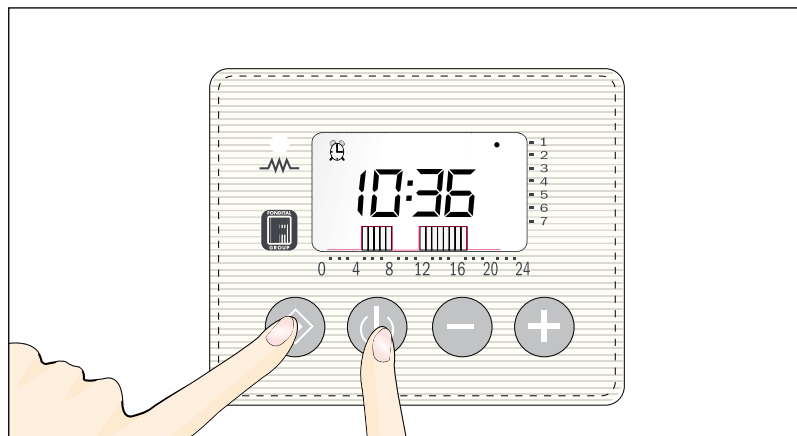
The two temperature levels are also used when programming:



Comfort temperature is the desired ambient temperature during the time periods selected; Set back temperature is the (reduced) desired temperature outside the selected time periods.

### 6.4. Setting times and weekly programming

Press the 'stand-by' and 'mode' keys at the same time and hold for three seconds.

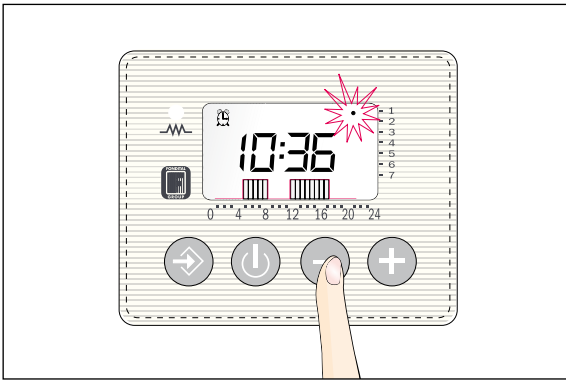


A dot will blink on the screen next to the days of the week (1-7). The current day can be selected using the plus or minus key. Use the 'mode' key to confirm the selection.

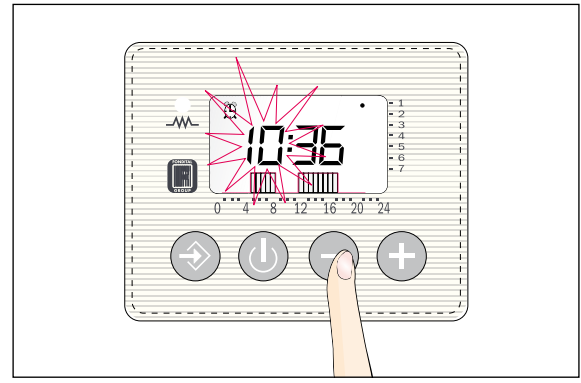
The number corresponding to the hour will blink. Programme the correct time using the plus and minus keys. Confirm the selection with the 'mode' key.

The number corresponding to the minutes will blink. Programme the correct minutes using the plus and minus keys. Confirm the selection with the 'mode' key.

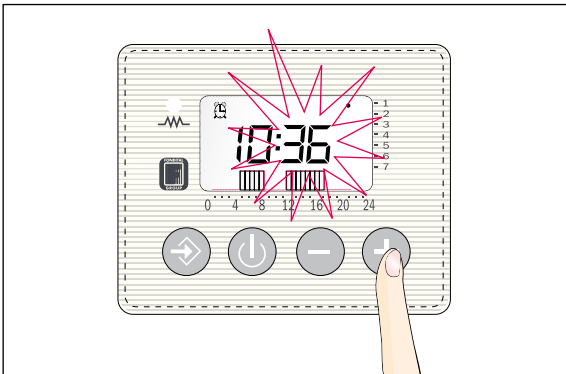
### PROGRAMME DAY



### PROGRAMME HOUR

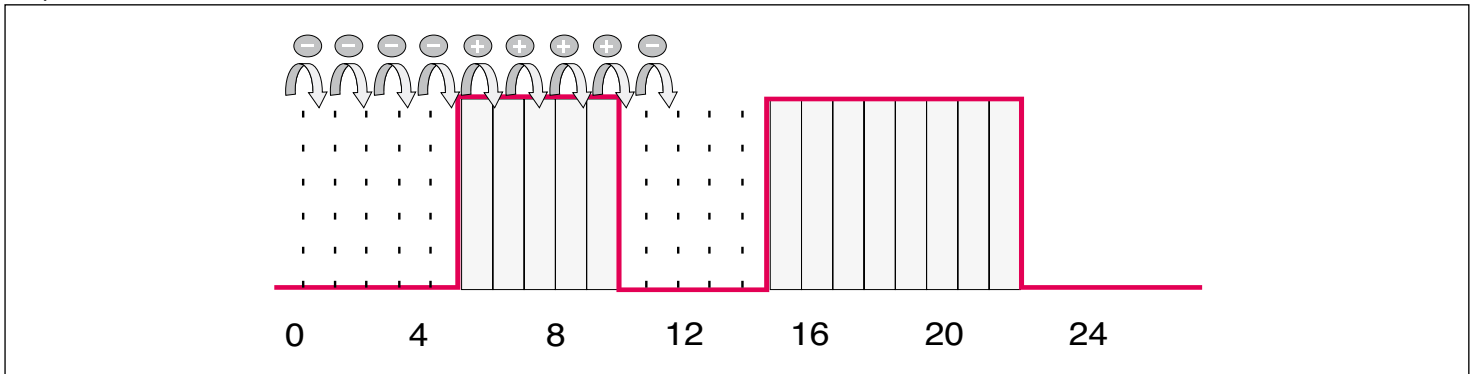


### PROGRAMME MIN.



You can now assign a programme to each day of the week. When a segment appears between two times on the programming bar (at the bottom of the screen), this indicates that the Comfort temperature level has been selected for this period. The absence of a segment indicates that during this period, the radiator will keep the temperature at the Set back temperature level.

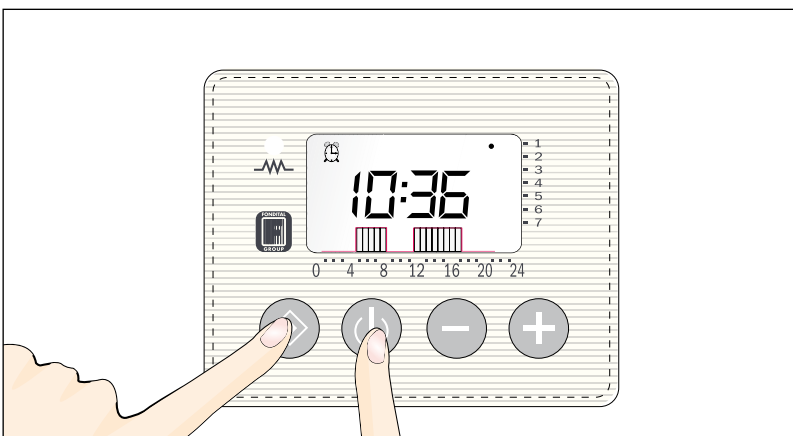
Starting from day 1, select the times when the Comfort temperature is desired. Pressing the + key activates the segment on the screen, and therefore Comfort temperature as well. Pressing the - key deactivates the segment and the programmed temperature will be equivalent to the Set back temperature level.



Confirm the selection using the 'mode' key. This same process must be repeated for each day of the week (1-7).

### 6.5. Child lock

The appliance can be locked to prevent improper or accidental use, to protect children, for example. In order to activate the lock, press and hold the plus and minus keys at the same time for three seconds: the keypad will be locked.

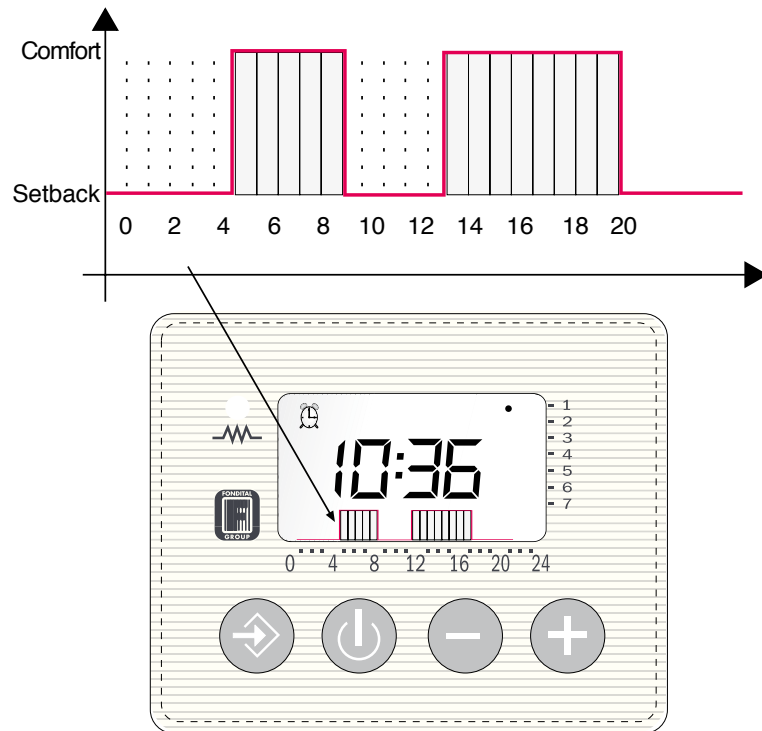


In order to unlock the keypad, press and hold both the plus and minus keys again for three seconds.

## 6.6. Description of operating modes

### 6.6.1. Programming mode

In this mode, the ambient temperature remains at the TH or Set back temperature level, depending on the times set by the user.




### 6.6.2. Pilot Wire mode (for radiators installed in France only)

This mode enables the user to control the radiator from a remote location.

1. Press the 'mode' key until the screen displays the icon 
2. Select the desired temperature using the + and - keys. The operating mode will be selected by the Pilot Wire control centre.


### 6.6.3. Comfort mode

This is the normal mode when the radiator is in use, keeping the ambient temperature at the programmed level.

1. Press the 'mode' key until the screen displays the icon 
2. Select the desired temperature using the + and - keys.

### 6.6.4. Setback mode

When this operating mode is selected, the radiator will keep the ambient temperature at the programmed Set back temperature. The desired Set back temperature is programmed as follows:

1. Press the 'mode' key until the screen displays the icon 
2. Select the desired Set back temperature using the + and - keys.








### 6.6.5. Frost protection mode

When this mode is selected, the ambient temperature will not drop below 7°C.

### 6.6.6. Stand-by mode

The radiator is in stand-by mode.

## Summary of operating modes:

Mode	Description
	<b>Programme:</b> Daily and weekly programming which sets the two temperature levels (Comfort and Night-time) defined by the user for each time of day
	<b>Pilot wire:</b> The temperature depends on the Pilot Wire control (for radiators installed in France only)
	<b>Stand-by:</b> The receiver is in stand-by
	<b>Comfort:</b> Comfort status and the temperature which the environment must be kept at are transmitted
	<b>Setback</b> Night-time status and the temperature which the environment must be kept at are transmitted
	<b>Frost protection:</b> Minimum safety temperature: a fixed value equivalent to 7°C is transmitted
	<b>Keypad lock:</b> Pressing on the keypad does not change functions; the keypad is not active
<b>Err S</b>	The temperature sensor is broken

## 7. CLEANING THE RADIATOR

For safety reasons, disconnect the power supply before cleaning the appliance.

Cleaning must be done when the radiator is turned off and is cold.

Do not use abrasive or corrosive products to clean the body: use soapy water, for example, and dry the body with a soft cloth.

Clean plastic parts, controls and the humidifier with a dry cloth only and avoid contact with chemicals or alcohol.

## 8. TROUBLESHOOTING

If the appliance stops working, do not use it: disconnect from the power supply and contact only a qualified technician who is authorized to work on this type of product.

This appliance has been filled with an exact quantity of mineral oil.

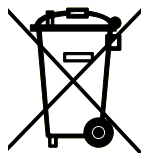
Repairs which require opening the liquid reservoir must be made by the manufacturer, its representatives or customer service.

The manufacturer accepts no responsibility for harm to persons, animals, and objects which may result from untrained handling of or improper work on the radiator.

### TABLE OF TECHNICAL PROBLEMS:

PROBLEM	RADIATOR STATUS	POSSIBLE CAUSE	SOLUTION
The radiator does not heat up	LCD not lit	Lack of power supply	Verify that power is flowing to the appliance
The radiator does not heat up	LCD lit in Programme mode	The radiator is set for the night-time level	Check programmed settings
The radiator does not heat up	LCD lit in Comfort or Programme mode	Malfunction in the electrical resistor or regulation board	Contact technical support for repair
The radiator does not heat up	LCD lit in Comfort / Programme / Night-time or Anti-freeze mode	The ambient temperature is higher than the programmed level	Check the temperature programmed
The room does not get hot enough in Comfort mode	LCD lit in the desired mode	The radiator is not large enough for the size of the room	Replace the radiator with one with greater output
Ineffective ambient temperature regulation	Err S	The temperature sensor is broken	Contact technical support for repair
The radiator is leaking oil	Any	Defect in the body or improperly closed connections	Contact technical support for repair

## 9. ENVIRONMENT



The symbol placed on the appliance and shown here indicates that the product is subject to separate collection of electrical appliances.

At the end of its useful life, it cannot be disposed of together with common municipal solid waste, but must be disposed of at a specific collection centre for the area or be given to the distributor when a new appliance of the same type is purchased for the same use.

Separate collection of electrical and electronic appliances is part of a policy aimed at defending, protecting and improving the quality of the environment, and at limiting the harmful effects on human health caused by the presence of substances considered hazardous according to the classification applied in European directives.



**Warning! Improper disposal of the appliance is subject to penalties.**

When disposing of the radiator, respect current regulations and laws for discarding the oil.

### WEEE DIRECTIVE:

The Waste Electrical and Electronic Equipment (WEEE) Directive came into force in the UK on the 1st July 2007. Under the legislation please take-back the radiator in a network of WEEE collection points (Edmundson, cef).

## WARRANTY / PURCHASE DETAILS

### WARRANTY

This product includes a free manufacturer's warranty covering five years for the body and two years for the electronics. This warranty starts from the date of purchase of the product and covers any miss-function that may arise due to the faulty manufacture of the product. It does not cover any fault caused by miss-use or damage caused by the purchaser or other persons, or incorrect installation, or non compliance with these instructions after delivery/receipt. This warranty exclusively covers the repair or replacement free of charge of parts/the product, or if necessary, full product replacement recognized as being faulty. INTELLI HEAT Ltd cannot be held responsible to undertake disassembly and assembly works or to refund any expenses incurred for such works, or for any direct or indirect damage to persons or property due to any miss-functioning of the product. Please ensure that you keep all documentation and invoice relating to this product as this will be required should you need to use this warranty. Thank you for choosing an INTELLI HEAT product and we wish you a lasting and enjoyable use of this product.



#### PLEASE ENSURE THAT YOU KEEP A RECORD OF THESE DETAILS

Date of purchase: \_\_\_\_\_

Date goods received: \_\_\_\_\_

Model/s purchased: \_\_\_\_\_

#### SUPPLIER DETAILS

Company / Supplier name: \_\_\_\_\_

Telephone numbers: \_\_\_\_\_

Email address: \_\_\_\_\_

Contact name: \_\_\_\_\_

#### INSTALLER DETAILS

Date of installation: \_\_\_\_\_

Company / Trading name: \_\_\_\_\_

Telephone numbers: \_\_\_\_\_

Email address: \_\_\_\_\_

Contact name: \_\_\_\_\_

## DECLARATION OF CONFORMITY

With the present,

**INTELLI HEAT Ltd**  
Company Registration Number 05950029  
Unit 18 Napier Place  
Stephenson Way, Thetford  
Norfolk IP24 3RL

hereby declares that the

### **ELECTRICAL RADIATORS FOR HEATING**

Model

### **CALI Avanti**

are manufactured in accordance with European directives

- DIRECTIVE 2006/95/CE of 12 December 2006 on the harmonisation of the laws of Member States relating to Electrical Equipment designed for use within certain voltage limits (low voltage)
- DIRECTIVE 2004/108/CE, for electromagnetic compatibility
- DIRECTIVE 2002/96/CE of 27 January 2003 on waste from electrical and electronic equipment (WEEE).

And in accordance with the following harmonized regulations:

- EN 60335-1 (2004-04): safety of electrical equipment for domestic or similar uses. General regulations.
- EN 60335-2-30 (2006-05): safety of electrical equipment for domestic or similar uses. Part 2: Specific regulations for electrical heating appliances for premises.
- EN 55014-1: 2000 + A1: 2001 + A2: 2002
- EN 61000-3-2: 2000
- EN 61000-3-3: 1995 + A1: 2001
- EN 55014-2: 1997 + A1: 2001
- EN 61000-4-2: 1995 + A1: 1999 + A2: 2001
- EN 61000-4-4: 1995 + A1: 2001 + A2: 2002
- EN 61000-4-5: 1995 + A1: 2001
- EN 61000-4-6: 1996 + A1: 2001
- EN 61000-4-11: 1994 + A1: 2001



**INTELLI HEAT Ltd**

Company Registration Number 05950029

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