Stelrad®

CIRCLE

USER AND INSTALLATION MANUAL FOR TOWEL RAIL MANUFACTURER OR PROFESSIONAL INSTALLER ONLY

CIRCLE SYSTEM
Heating element power regulator
Electronic control with electric heating element integrated. To be integrated with the towel rail.

Instructions leaflet
OPTIONAL PARTS:
- T-piece (dual fuel installation only)
- 3-bar valve

APPLICABLE EUROPEAN DIRECTIVES AND STANDARDS:

Applicable Directives:
2014/35/EU Low Voltage Directive (LVD), 2014/30/EU Electromagnetic Compatibility Directive (EMC), 2011/65/EU RoHS II Directive, Regulation REACH (EC 1907/2006)

Electrical tests according to (applicable clauses):
EN 60335-1, EN 60335-2-43, EN 62233, EN 55014-1, EN 55014-2, EN 61000-3-2, EN 61000-3-3

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GENERAL WARNINGS

1.1 Disclaimer
The manufacturer declines all responsibility for any inaccuracies in this document due to printing or transcription errors. It reserves the right to make any alterations to its products deemed necessary or useful. The manufacturer will not be held responsible for faults due to incorrect installation.
NOTE: according to the towel rail geometry, finishing, construction material and liquid type (water or water and glycol), the heat pattern on towel rail surface can be significantly different. For specific performance, you must refer to the towel rail manufacturer or carry out specific tests.

1.2 Warranty
CIRCLE is guaranteed against defects in materials and/or workmanship for a period of twelve (12) months from the date marked on the silver label attached on the controller. The guarantee will not be effective if the faults found are ascribable to the Buyer's carelessness and/or if the Products have not been used according to their technical specifications and in the event of wrong maintenance by non-authorized engineers, cleaning with unsuitable procedures or materials, improper storage, handling and transport, or any other circumstances that cannot be ascribed to manufacturing defects for which Irca s.p.a. is responsible.
The guarantee of CIRCLE is not valid in case of improper use or wrong installation.

1.3 Manufacturer Contact Details
Contacts of natural or legal person who manufactures the final product or has a product designed or manufactured, and markets the product under its name or trademark as responsible party in which this electronic control CIRCLE is used as a component must be clearly indicated here below.
Company: Zoppas Industries Limited.

1.4 Product compliance
APPLICABLE EUROPEAN DIRECTIVES AND STANDARDS
Applicable Directives
2014/35/EU Low Voltage Directive (LVD)
2014/30/EU Electromagnetic Compatibility Directive (EMC)
2011/65/EU RoHS II Directive, Regulation REACH (EC 1907/2006)
2012/19/EU WEEE Directive
Electrical tests according to (applicable clauses):
EN 60335-1, EN 60335-2-43, EN 62233
EN 55014-1, EN 55014-2, EN 61000-3-2, EN 61000-3-3

1.5 General Warnings
- Verification of compatibility of the final product, of any restrictions required by local administrative regulations, special or conventional requirements resulting from building regulations, constraints, laws or administration deeds must precede any other assembly or installation operation.
- Read the instructions carefully before installing and using the electronic control (hereinafter referred to as CIRCLE or appliance) and retain the instructions for future reference.
- Installation of CIRCLE must be performed only by qualified technicians which assume complete responsibility for the definitive installation and consequent good functioning of the product installed.
- Installation must be compliant with all applicable safety regulations and laws, national, regional, provincial and town council Standards present in force in the Country in which the final product has been installed, as well as the instructions contained in this manual. The Manufacturer cannot be held responsible for the failure to comply with such precautions.
- In case of any doubts or insufficient information or for any other technical details and requirements, please contact the manufacturer/importer/distributor/professional installer before installing or using CIRCLE controller.

1.6 Safety Warnings

- Children of less than 3 years must be kept away unless continuously supervised.
- This appliance can be used by children aged from 8 years or over and by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and they understand the hazards involved. Children shall not play with the appliance.
- Cleaning and user maintenance shall not be made by children without supervision.
- Children aged from 3 years and less than 8 years shall only switch on/off the appliance provided that it has been placed or installed in its intended normal operating position and they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children aged from 3 years and less than 8 years shall not plug in, regulate and clean the appliance or perform user maintenance.
- CAUTION — Some parts of this appliance can become hot and may cause burns. Precautions should be taken to ensure that prolonged contact with the towel rail cannot occur. Particular care should be taken in confined areas where accidental prolonged contact with the rail could be more likely to occur. Particular attention has to be given where children and vulnerable people are present.
- WARNING: In order to avoid a hazard for very young children, this appliance must be installed so that the lowest heated rail is at least 600 mm above the floor (see Figure 4 CIRCLE position).
- IMPORTANT: In order to disconnect the incoming supply for the purpose of isolation during installation and maintenance it is recommended for the distributor's service fuse to be withdrawn or the circuit breaker at the distribution board to be switched off whilst work is in progress.
- Do not install CIRCLE with an electric heating element not equipped with pre-set protection devices designed to prevent over-heating of the towel rail in abnormal conditions.
- Do not power CIRCLE on before it has been completely installed in a properly filled towel rail with the electric heating element recommended by the manufacturer
- Check that the electricity supply system is connected through an MCB (Magnetothermic Circuit Breaker) and a high sensitivity current differential and overcurrent relay of 30 mA RCCB (Residual Current Circuit Breaker) connected directly to the socket or connection box in use.
- If CIRCLE is not fitted with a supply cord with a plug, an omni-pole disconnection from the supply is required, incorporated in the fixed wiring, in accordance with the wiring rules. Switches intended to ensure all-pole disconnection must be directly connected with the supply terminals and must have a contacts distance of at least 3 mm in each pole. The switch intended to ensure all-pole disconnection must be dedicated exclusively to the appliance.
- CIRCLE is suitable for use on an A.C.~ electrical supply. Before installation check that the supply voltage corresponds with that marked on the electronic control.
- Do not insert metal objects or fingers or any other objects, even temporarily, into the connection areas where CIRCLE is connected to the towel rail.
- This appliance should only be used to dry fabrics washed in water using commonly available detergents. Avoid direct contact of CIRCLE with any chemical product or alcohol, including the liquid contained in the towel rail.

2. PRODUCT PRESENTATION

This product is an electrical / electronic component designed to be assembled, used and possibly replaced in case of failure uniquely in the specific equipment for which it is intended.

CIRCLE Electronic control:
CIRCLE is an electronic power regulator designed for regulating the thermal power of an electric heating element installed in a towel rail configured for drying towels washed in water. Any other use is strictly forbidden.

CIRCLE System – heating element power regulator
CIRCLE System consists of an electronic power regulator integrated with an electric heating element. The System is aimed at being installed in a towel rail configured for drying towels washed in water. Any other use is strictly forbidden.

CIRCLE System can be Class I or Class II. CIRCLE controls the thermal power of the towel rail with five different power levels. The type of regulation consists of an ON-OFF electronic open-loop controller. CIRCLE can be connected to a fully electric towel radiator or a hybrid electric-hot water heater (dual fuel, central heating radiator). The symmetric design makes it suitable both for ladder type electric towel rails and for traditional electric towel rails.

2.1 Identifying the product version

The product version is identified by the product label (Figure 1).
CIRCLE can be installed into an electric only radiator or into a hybrid dual-fuel radiator.

CIRCLE Insulation level	Class I Class II
CIRCLE interface	Black
CIRCLE external coating	Chrome
CIRCLE supply cord	With plug Without plug
Towel rail	Electric only Hybrid dual-fuel

Table 1

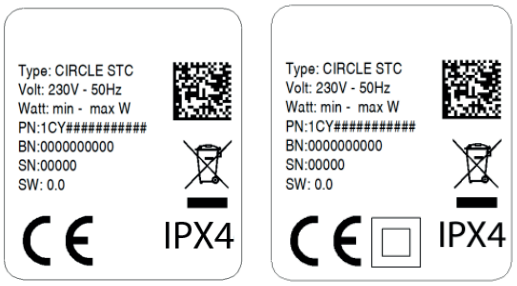


Fig. 1 Class I and Class II product label

3. SYMBOLS AND GLOSSARY

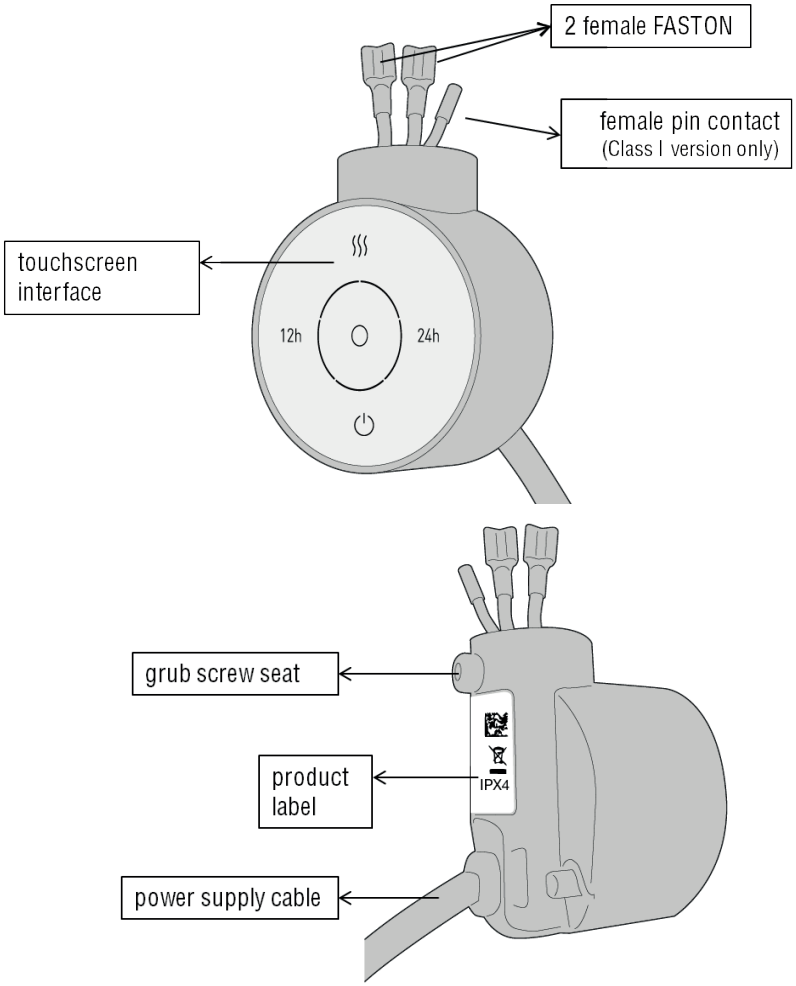


Figure 2. Components of CIRCLE regulating box (front and back view)

Component	Description
Female pin contact	Cylindrical connector for earth connection
2 female 6.3 Faston	230 V 6.3 Faston to power the electric heating element (live and neutral)
Touchscreen interface	Capacitive touchscreen interface displaying current system status (in black)
Grub screw seat	Position of the grub screw in order to fix CIRCLE to the Electric heating element connection
Product label	See 2.1
Power supply cable	230 V power supply cable with plug or without plug

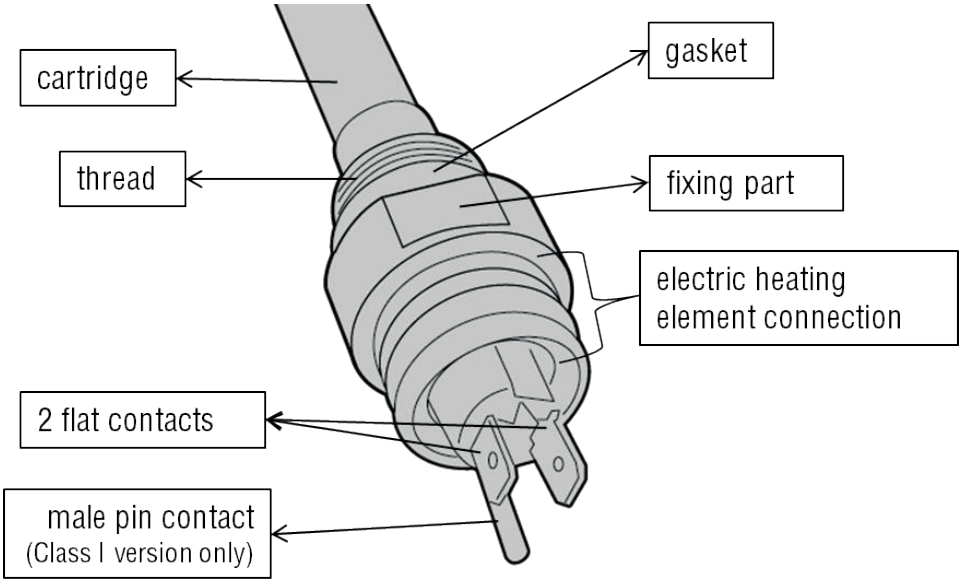
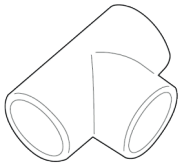
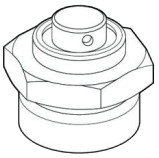


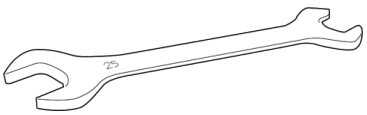
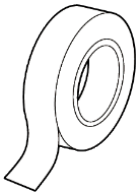
Figure 3: Electric heating element components

Electric Heating Element Component	Description
Cartridge	Heating part of the electric heating element
Thread	Connection part to be fitted into the towel rail
Fixing part	Necessary part to tighten the electric heating element into the towel rail with a 25mm wrench
Gasket	O-ring gasket designed to be compressed between the electric heating element connection and the upper plastic part of the CIRCLE in order to prevent water leakage
Electric heating element connection	part necessary for coupling with CIRCLE
2 Flat contacts	Contacts for 230 V Female 6.3 Faston to power the electric heating element (live and neutral)
Male pin contact (class I only)	Cylindrical connector for earth connection

STANDARD PROVIDED KIT ADDITIONAL ELEMENTS

Element	Description	
T-piece (dual-fuel installation only)	In case of Dual fuel installation, a T-piece of 40mm maximum length (male thread excluded) is required	
3 bar valve	a self relief pressure valve which limits the pressure at 3 bar	

TOOLS NOT INCLUDED

Element	Description	
25mm wrench	Wrench for tightening the electric heating element	
Teflon tape	It is recommended to wrap a small quantity of PTFE tape in order to prevent leakage	

4. TECHNICAL SPECIFICATION TABLES

CIRCLE and the electric heating element power must be carefully selected in proportion to towel rail size and thermal output. To select CIRCLE and the heating element electrical power, please refer to the towel rail manufacturer instructions, when a certification related to the complete system (according to EN 60335-2-43) issued by an European recognized institute (like SEMKO, VDE, IMQ...) is available. In case of missing towel rail manufacturer certification, refer to EN 60335-2-43 to determine the correct CIRCLE and electric heating element power to be installed in the towel rail. The installer shall verify that CIRLCLE System operates in conformity with Table 3.

IRCA Electric heating element

Power (W)	150	300	600
Length (mm)	300	440	720

Table 2

CIRCLE System

Power supply	230 V +/-10% AC 50 Hz
Electric Heating element power	150 ÷ 600 W
Insulation class	Class I
Colours and finishing	Metal
Touch interface display	Black
Dimensions	61.5 x 70 x 50 mm
Water protection rating	IPX4
Maximum altitude above sea level	2000m
Operating ambient temperature	0°C ÷ 40°C
Storage temperature	-20°C ÷ 70°C
Max Humidity Level	RH 85% at 25°C (without condensation)
Power regulation range	5 levels adjustable by settings based on electric heating element power capacity Level 1: 20% of maximum power Level 2: 40% of maximum power Level 3: 60% of maximum power Level 4: 80% of maximum power Level 5: 100% of maximum power
Thermal Fuse (heater)	128°C standard

Table 3

5. INSTALLATION – QUALIFIED TECHNICIANS ONLY

ALL ELECTRICAL INSTALLATION WORK SHOULD BE CARRIED OUT BY A QUALIFIED ELECTRICIAN

Read the general warnings and safety warnings before installation.
IMPORTANT: Always disconnect the electricity supply from the mains during installation and maintenance. It is recommended that the fuse is withdrawn or circuit breaker switched off at the distribution board while work is in progress (turning off the switch is not sufficient).
During installation, de-installation and maintenance, ensure working place safety until the operation is completed.

5.1 Before you start

- Avoid collisions during the handling. Do not deform.
- Avoid the contact of cables and of parts of the CIRCLE with sharping corners and do not cause squashing.
- Do not subject the cables to traction. Do not apply concentrated pressures on the CIRCLE surface.
- Any contact between plastic parts of CIRCLE and chemical products or alcohol (including the water or the mixture water+ glycol inside the tower rail) must be avoided.
- Check the pack to ensure you have all of the parts listed at paragraph 3 with no visible signs of damage. Make sure that CIRCLE parts are completely dry and have no defects. If any of the part is missing or appears damaged, you should return the device to the point of purchase.
- Check that you have the correct size of electric heating element and of CIRCLE for your towel rail. It is essential that the correct sized electric heating element and CIRCLE are installed in line with the recommendation stated on the packaging or instruction of your towel rail CERTIFIED BY A EUROPEAN RECOGNISED APPROVAL INSTITUTE. IF YOU ARE NOT SURE OF THAT, PLEASE REFER TO CONTACTS SECTION.
- When you are ready to start, make sure that you have the right tools at hand, plenty of space and a clean dry area for assembly.
- Installation must be carried out in accordance with current standards and laws in force in the country in which the system is installed.
- Before installation, never switch the on to verify functioning effectiveness.
- Make sure that the towel rail female ½" GAS thread is sufficiently deep (minimum 10mm) in order to secure a watertight gasket.
- Don't use the regulating box to lean the electrical towel rail on the floor as you can damage the plastic housing and water can penetrate inside with a risk of electrical shock.

5.2 Towel Rail Warnings

- The electrical towel rail use is intended only for drying towels washed in water. Any other use is forbidden.
- The heating element must be fitted in the towel rail before mounting the rail to the wall.
- The towel rail has to be mounted parallel to the wall using the brackets recommended by the towel rail manufacturer. In order to avoid a hazard for younger children, the electrical towel rail should be installed so that its bottom part is at least 600mm above the floor according to EN 60335-2-43/A1.
- It is recommended to use in any installation (Electric only and Dual fuel) a self relief pressure valve (like a 3 Bar valve) on the top part of the rail in the opposite side where the CIRCLE is installed. In case of valve intervention, it is quite normal for liquid relief and water excess to possibly reach the floor. Please, take this aspect into consideration.
- In Electric only CIRCLE installation, fill the towel rail with a certain percentage of water according to the towel rail manufacturer instructions. In case of missing instructions, we recommend to fill the towel rail approximately 90% with pure water to allow for expansion; making sure that the CIRCLE heating element is completely immersed in water. Addition of 10% glycol is recommended, as part of this percentage mix.
- In case of Dual fuel installation, a T-piece of 40mm maximum length (male thread excluded) is required: we recommend to wrap a small quantity of PTFE tape around the heating element thread and the T-piece thread.
- In Dual-fuel installation with central heating and CIRCLE, at least one of the rail valves must always be left open, when the electrical element is switched on.
- In Electric only CIRCLE installation the towel rail must have a sufficient air gap to allow for water expansion.
- All metallic parts of the electrical towel rail fitted with CIRCLE and powered must not exceed the temperature limits according to the applicable standard EN 60335-2-43 also in case of CIRCLE continuously powering the electric heating element.

For all other aspects, refer to EN 60335-1 and EN 60335-2-43.

5.3 Power supply Warnings

- Do not connect CIRCLE to the power supply until the installation into a properly filled towel rail is completed.
- Make sure that the power lines are appropriate for the load required according to technical specification tables (see par. 4).
- Class I CIRCLE (with yellow-green wire or earthed plug) must ONLY be connected to sockets or connector blocks with earthed contacts according to national standards and wiring regulations in force
- Protect the electricity supply with an RCCB (Residual Current Circuit Breaker) device.
- The electrical heating element must be connected to a suitable electricity supply by way of the cable provided. This should be via a fused spur in accordance with the IEE Wiring Regulations (BS7671). If sited in the bathroom, the Fused Connection Unit must be located out of reach of persons using the basin, shower or bath. If in doubt, consult a qualified electrician.
- Connect the CIRCLE control unit to the mains using a BS Fused Connection Unit.
- The Fused Connection Unit should be fitted with a 5 Amps fuse to BS1362.

CIRCLE supply cord

WITH plug

The socket and electricity supply must be appropriate for the required power. Do not use extensions. The socket must be compatible with the CIRCLE supply cord plug. Do not use adapters.

WITHOUT plug

If CIRCLE is not fitted with a supply cord with a plug, an all-pole disconnection from the supply is required, incorporated in the fixed wiring, in accordance with the wiring rules. Switches intended to ensure all-pole disconnection must be directly connected with the supply terminals and must have a contacts distance of at least 3 mm in each pole. The switch intended to ensure all-pole disconnection must be dedicated exclusively to the appliance.

• Follow the conventional colors for wiring operations (see below): CIRCLE yellow/green earth wire must be connected to the corresponding yellow/green ground wire of the electricity supply at the mains. (THIS PRODUCT MUST BE EARTHED)

Brown =	Live Wire
Blue =	Neutral Wire
Yellow - Green =	Earth

5.4 CIRCLE position

CIRCLE must be fitted into the towel rail BEFORE mounting the towel rail to the wall.

5.4.1 TOWEL RAIL POSITION

WARNING: In order to avoid a hazard for very young children, this appliance should be installed so that the lowest heated rail is at least 600 mm above the floor (Figure 4).

- Do not install CIRCLE into a towel rail fitted in ZONE 0 or ZONE 1 (Zone definition IEC 60364-7-701 in Figure 4).
- Do not install the heater below a socket-outlet.
- The towel rail must be installed in a completely vertical wall.
- The towel rail has to be mounted parallel to the wall using the brackets recommended by the towel rail manufacturer.
- CIRCLE is protected against water ingress according to its IPX4 degree of protection. The towel rail where CIRCLE is fitted must be mounted inside the zone of the bathroom according to its IP degree of protection and electrical legislation in force. In case of doubt about the correct installation zone, refer to the relevant public institution.
- CIRCLE must not be within reach of people using the basin, shower or bath.

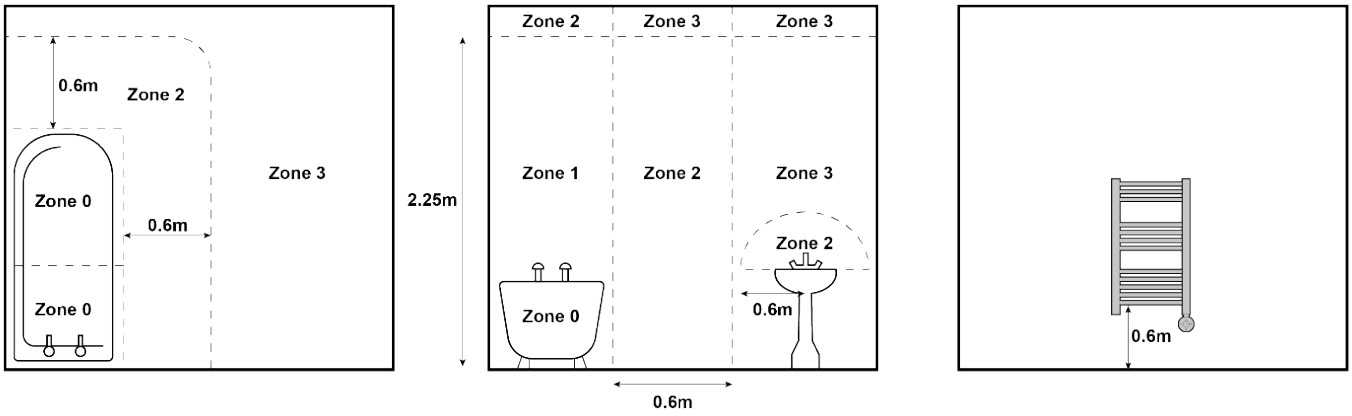


Fig. 4

5.4.2 SUPPLY CORD POSITION

The supply cord must be connected to a proper socket or to a non-switched fused spur (without an intermediate plug for CIRCLE supplied without plug, see 5.3) which must be at least 25 cm from the floor according to the wiring regulations in force in the country where the installation is carried out. Figure 5 shows examples of positioning of the system.

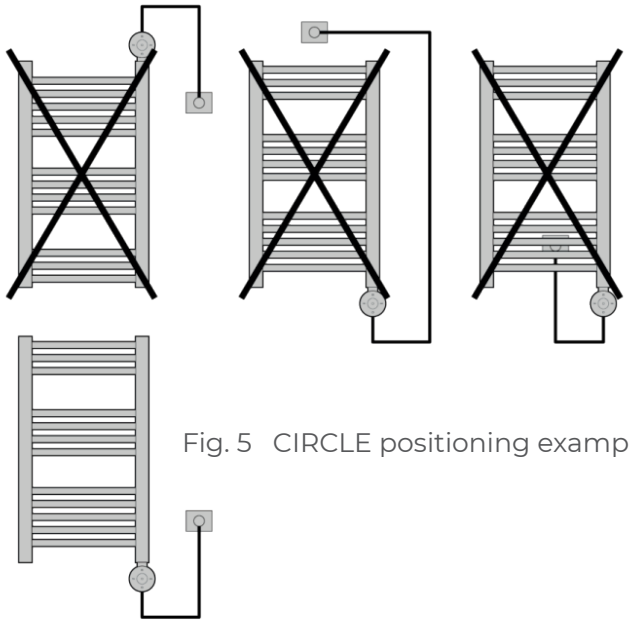


Fig. 5 CIRCLE positioning examples

5.4.3 CIRCLE REGULATING BOX POSITION

- CIRCLE must only be fitted vertically in the bottom part of the towel rail.
- Electrical towel rail must NOT be installed with the CIRCLE regulating box located at the top. This can seriously damage the control box and create a dangerous situation with a risk of fire.
- It is recommended to use in any installation a self relief pressure valve (like a 3 Bar valve) on the top part of the rail in the opposite side where the CIRCLE is installed.
- CIRCLE must be installed at a distance of 40 mm (minimum) and 80 mm (maximum) from the wall (Figure 6).
  Figure 6 shows the optimal positions for the CIRCLE.

Any other position is the responsibility of the installer and must be tested.

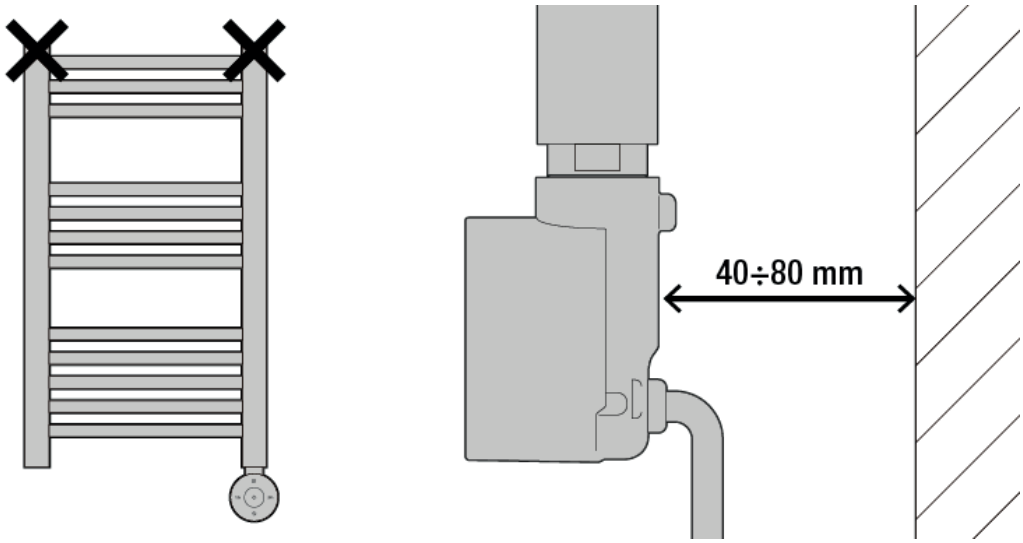


Fig. 6 CIRCLE positioning

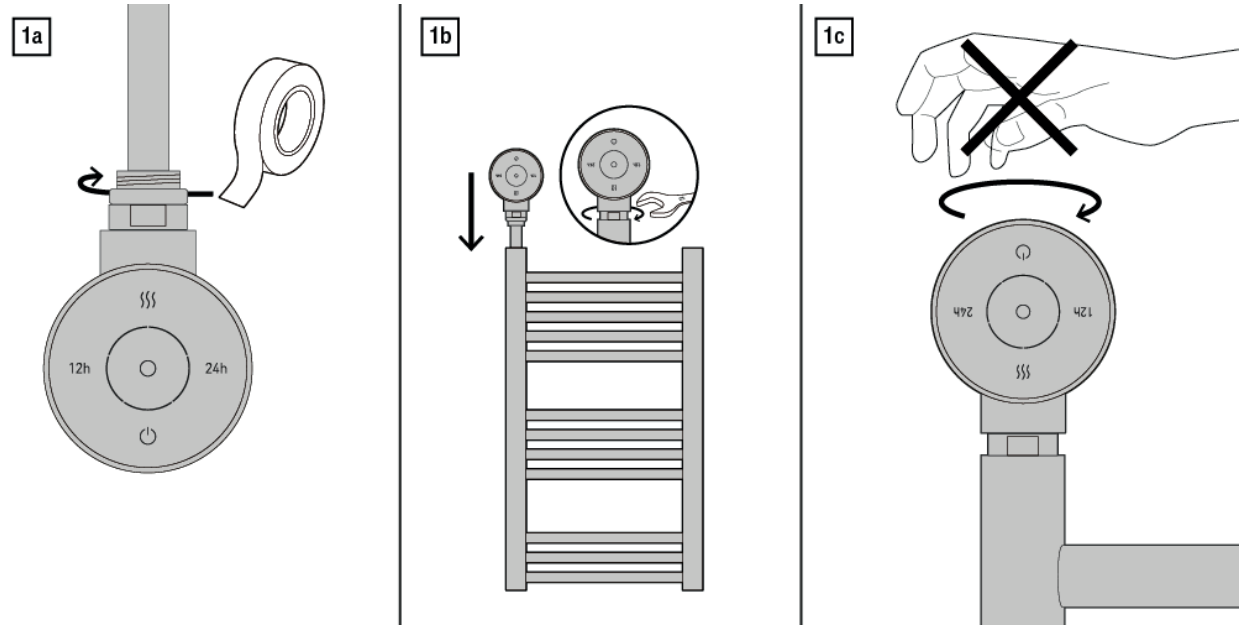
5.4.4 IF CIRCLE REGULATING BOX IS CONNECTED TO THE HEATING ELEMENT (CIRCLE SYSTEM VERSION)

1. HEATING ELEMENT INSERTION IN TOWEL RAIL

a. In order to minimize the risk for leakage it is recommended to use a thread tape or similar product to prevent leakage.

b. Make sure to select the female ½" GAS thread of the towel rail in the opposite vertical tube to where the 3 Bar valve is installed and screw in the HEATING ELEMENT using a 25 mm wrench (not included)

c. If the display is facing the wall after tightening the heater, adjust the heating element by turning it anti-clockwise with a 25mm wrench. The seal is designed to adjust to a certain amount of releasing without starting to leak.



2. TOWEL RAIL INSTALLATION

- Install properly the electrified towel rail with the CIRCLE into the wall according to towel rail manufacturer instructions (par 5.2.).

DUAL FUEL ONLY

TOWEL RAIL FILLING

- Open all valves and bleed the radiator.
- At least one of the rail valves must always be left open, when the electrical element is switched on.

3. CONNECTION TO THE MAINS

a. Connect the CIRCLE cable to the mains power according to current wiring regulations in force in the country where the product is installed. Make sure that the power lines are appropriate for the load required.

b. Activate the electric element on "max" and check the fluid level in the towel rail after approx. one hour.

c. Check electric strength on the appliance after fitting CIRCLE to the electric towel rail according to the instructions in Appendix A of EN60335-1: "Routine tests".

d. In case of Class I controls, check earthing continuity on the appliance after fitting CIRCLE to the electric towel rail according to the instructions in Appendix A of EN60335-1: "Routine tests".

5.5 Cleaning

To clean CIRCLE, use only a dry and clean soft cloth.
Make small locally round movements.
Apply a light pressure especially to the chrome plastic surfaces to avoid potential scratches.
Do not clean CIRCLE with aggressive products.
Do not wet CIRCLE in an attempt to clean it. Do not immerse in water.
When cleaning CIRCLE, it must be disconnected from the power supply.

5.6 Uninstalling CIRCLE

ALL ELECTRICAL WORK SHOULD BE CARRIED OUT BY A QUALIFIED ELECTRICIAN.

Do not touch the metallic parts of CIRCLE if it is powered; before maintenance and de-installation operation wait the necessary time to ensure it is cold after it is switched off.

During installation, de-installation and maintenance, ensure working place safety until the operation is completed.

TOWEL RAIL

ELECTRIC ONLY

1. Switch off the mains and disconnect the cable from the mains power

TO DISCONNECT CIRCLE FROM THE ELECTRIC HEATING ELEMENT:
- Loosen the grub screw on the back of CIRCLE
- Remove CIRCLE from the electric heating element connection and disconnect the electrical wirings.

2. Remove the electrical towel rail from the wall and reverse it carefully leaning it on a soft cloth/surface.
3. Using a 25 mm spanner unscrew the CIRCLE, rotating it anticlockwise until the CIRCLE thread is completely off from towel rail ½" GAS female thread.
4. Remove the CIRCLE from the towel rail.

DUAL FUEL

1. Switch off the mains and disconnect the cable from the mains power

TO DISCONNECT CIRCLE FROM THE ELECTRIC HEATING ELEMENT:
- Loosen the grub screw on the back of CIRCLE
- Remove CIRCLE from the electric heating element connection and disconnect the electrical wirings.

2. Close both rail valves, remove the water from the towel rail and dry the working area.
3. Remove the towel rail from the wall and reverse it carefully leaning it on a soft cloth/surface.
4. Using a 25 mm spanner unscrew the T-piece with screwed the CIRCLE, rotating it anticlock wise until T-piece thread is completely off from towel rail ½" GAS female thread.
5. Remove T-piece with screwed the CIRCLE from the towel rail.

WARNING: AFTER DISCONNECTING, CIRCLE CANNOT BE USED

5.7 Notes for disposal of CIRCLE valid for the European Union

The crossed-out wheeled-bin symbol on the towel rail to which CIRCLE is installed, reminds you that in the European Union all electrical and electronic products and batteries must be taken to separate collection at the end of their working life. Do not dispose of these products as unsorted municipal waste. Return the products to collection to prevent possible harm to the environment or human health from uncontrolled waste disposal and to promote the sustainable reuse of material resources. Collection information is available from the product retailer, local waste authorities or national producer responsibility organizations. For more information, see product country-specific information.

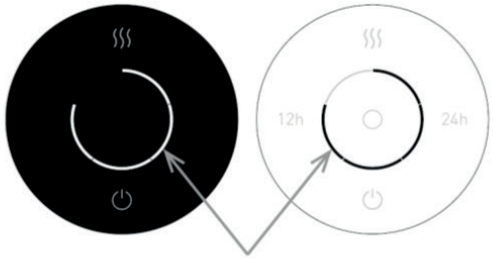
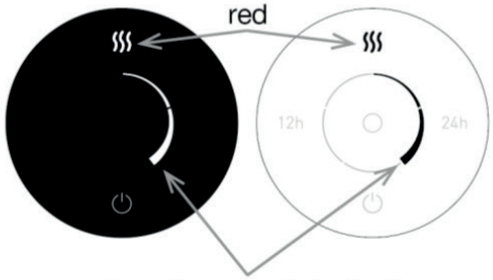
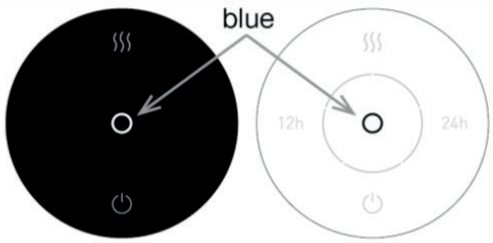
6. USE AND FUNCTIONING

All uses different from the ones described in this section are to be intended as improper usage. In case of doubts refer to the seller.

- The electrical towel rail is intended only for drying towels washed in water. Any other use is forbidden
- CIRCLE is intended to be used and installed into a towel rail. Any other use is strictly forbidden and potentially dangerous.
- do not switch on CIRCLE unless the heating element is properly immersed in the liquid inside the towel rail.
- CIRCLE is intended to work only if the electric heating element - connected to CIRCLE and fitted into the towel rail - is completely immersed in the liquid (water) inside the towel rail.
- CIRCLE is designed for use with water or water+glycol filled towel rails.
- Do not use CIRCLE before it has been completely and correctly installed. If CIRCLE is not firmly fixed to the towel rail, disconnect the mains turning off the circuit breaker switch and contact the manufacturer in order to avoid hazard.
- Do not cut the power supply cable to stop regulation or to switch CIRCLE OFF.
- Once connected to the heating element, CIRCLE regulating box MUST NOT be disconnected from the heating element.
- Do not cover CIRCLE, even partially, even temporarily.

7. DESCRIPTION OF USE

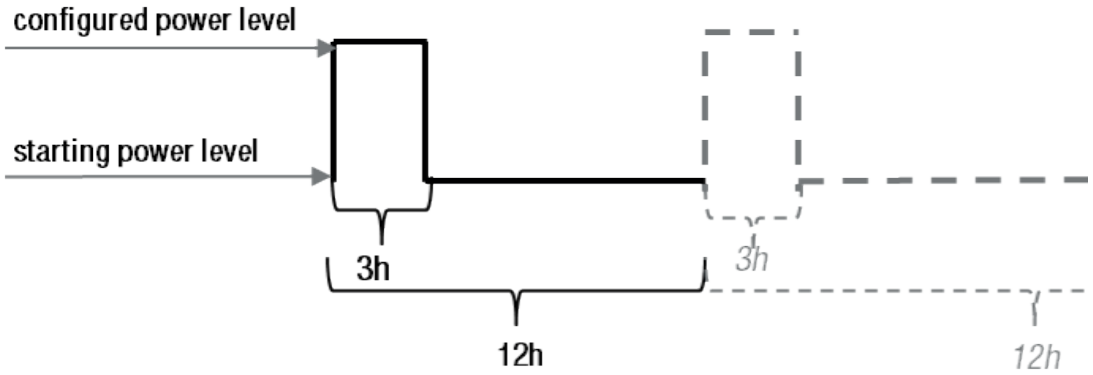
7.1 Basic Operating modes and statuses

MODE	OPERATIONS	CURRENT STATUS DISPLAYED (black display and white display)
STAND-BY		
	Touch ⏻ to turn STAND-BY ON/OFF.	The display is ready to receive commands for 30 seconds. After that, the display shows the CURRENT STATUS of the system. To activate again the display, tap ○.
MANUAL		
Constant power level 1-5 (see 7.3 to edit default values)	Tap ○ to set the desired power level.	 number of segments indicating the power level.
BOOST		
Constant maximum power for 1-5h you can activate BOOST mode even when the device is in STAND-BY mode	Tap ≋ until the icon turns red Tap ○ to customize the countdown value (from 1 to 5 hours. Default value is 2 hours). At the end of the countdown, the system will automatically set to the previous mode. To go back to previous mode: Tap ≋ until the icon turns white.	 number of segments indicating how many hours to the end of countdown.
ANTIFREEZE		
Constant power to prevent freezing (7±3°C)	In MANUAL mode: Tap ○ until the icon turns blue.	

7.2 Advanced operating modeses

7.2.1 12h TIMER functioning

Configured power level (1-5) that repeats every 12 hours (for timer duration customization see 7.3).
Use this mode if you wish to warm up your towel rail at a configured power level automatically every 12 hours as shown below. Activate this mode at the exact time you wish to warm up your towel rail at a configured power level (for 3 hours duration according to factory settings).



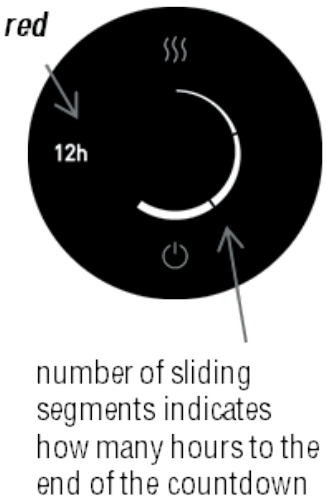
In MANUAL mode or in ANTIFREEZE mode:

NOTE: after 10 seconds of no interaction, the device will go back to previous modality without saving any operation.
1. press and hold ◯ until timer icons flash
2. tap 12h to select the timer
3. tap ◯ until your desired power level
4. tap 12h again to confirm.

At the end of timer countdown, 12h icon will turn white to indicate that a 12h timer is scheduled.

To cancel 12h TIMER: Press and hold 12h for 5 seconds.

CURRENT STATUS displayed (black display)



you can **change the configured power** level anytime while the 12h icon is red (during timer functioning) without loosing the starting time of the timer. The device will save the last configured power level.

even during 12 h timer you can **activate BOOST** mode

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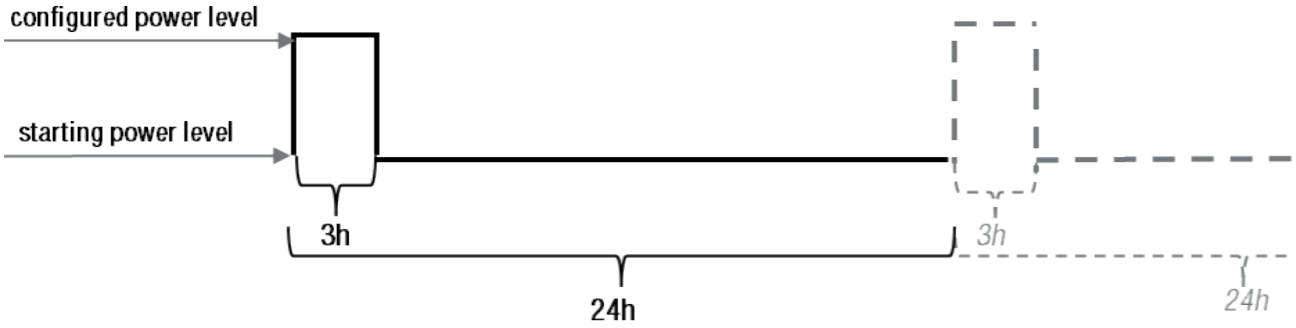
7.2.2 24h TIMER functioning

Configured power level (1-5) that repeats every 24 hours (for timer duration customization see 7.3).
Use this mode if you wish to warm up your towel rail at a configured power level automatically every 24 hours as shown below. Activate this mode at the exact time you wish to warm up your towel rail at a configured power level (for 3 hours duration according to factory settings).



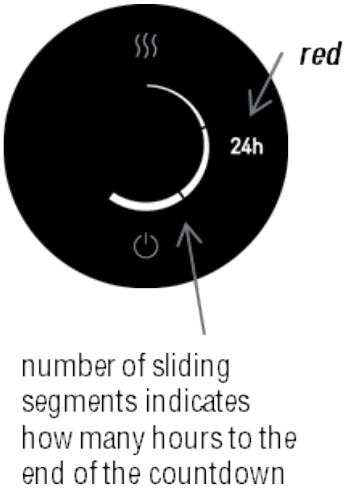
In MANUAL mode or in ANTIFREEZE mode:

NOTE: after 10 seconds of no interaction, the device will go back to previous modality without saving any operation.
1. press and hold ◯ until timer icons flash
2. tap 24h to select the timer
3. tap ◯ until your desired power level
4. tap 24h again to confirm.

At the end of timer countdown, 24h icon will turn white to indicate that a 24h timer is scheduled.

To cancel 24h TIMER: Press and hold 24h for 5 seconds.

CURRENT STATUS displayed (black display)



you can **change the configured power** level anytime while the 24h icon is red (during timer functioning) without loosing the starting time of the timer. The device will save the last configured power level.

even during 24h timer you can **activate BOOST** mode

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7.3 Settings and other functions

7.3.1 Power range setting

Choose your preferred working power range among 5 different sets: CIRCLE will work within the power range you set (minimum power level is 20% in every set, maximum and intermediate power variates according to the table below).

	Power ranges					setting
default set →	***20%***	***40%***	***60%***	***80%***	***100%***	***5 segments***
4TH RANGE	16%	32%	48%	64%	80%	4 segments
3RD RANGE	14%	28%	42%	56&	70%	3 segments
2ND RANGE	10%	20%	30%	40%	50%	2 segments
1ST RANGE	8%	16	24%	32%	40%	1 segments

In ANTIFREEZE mode:

NOTE: after 10 seconds of no interaction, the device will go back to previous modality without saving any operation.

1. press and hold))) until ⏻ starts flash
2. tap ○ and select your desired power range as shown in the table
3. tap))) to save.

On black display

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7.3.2 Default timer duration in 12h-24h timer

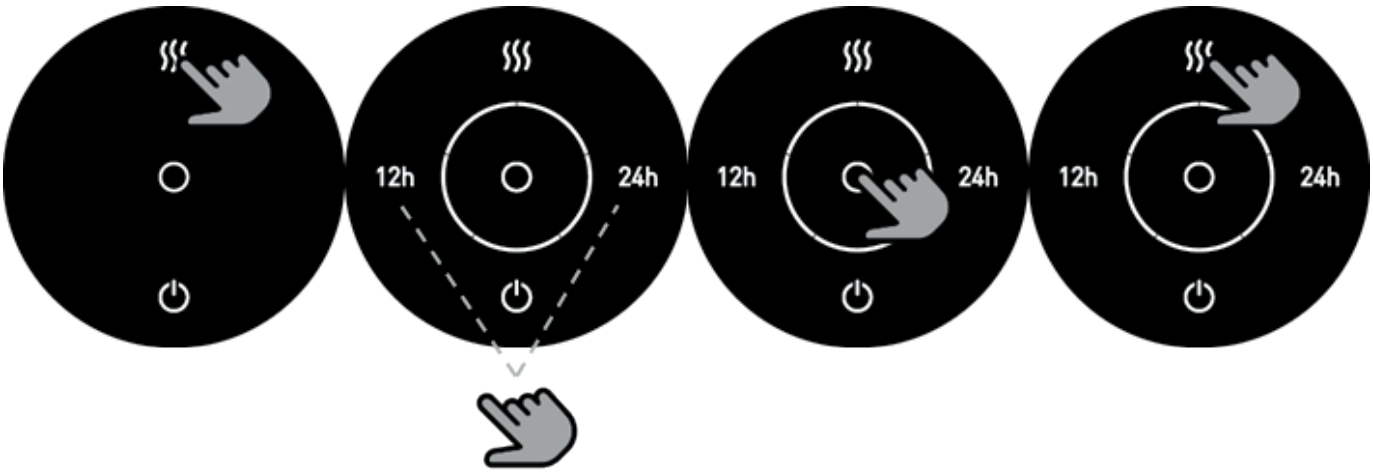
Customizes timer duration of 12h and 24h timer

In ANTIFREEZE mode:

NOTE: after 10 seconds of no interaction, the device will go back to previous modality without saving any operation.

1. press and hold))) until ⏻ starts flash
2. select 12h or 24h to customize the selected timer: the selected icon will start flashing
3. tap ○ until desired timer duration value
4. tap))) to save.

On black display



7.3.3 Lock screen

In MANUAL, ANTIFREEZE or TIMER mode, limits the functioning to standby ON/OFF.

In MANUAL, ANTIFREEZE or TIMER mode:

• press and hold and together for 5 seconds until the device beeps twice

To unlock:

• press and hold and together for 5 seconds until the device beeps twice

NOTE: once lock screen is activated, icon will be always on.

7.3.4 Factory reset

Restore to factory settings:

- Boost duration = 2 hours
- 12h Timer duration and 24h Timer duration = 3 hours
- Maximum power level = 100%

In STAND-BY mode:

• press and hold 12h and 24h together for 5 seconds until beep.

8. MAINTENANCE

Switch off the mains before any installation, de-installation or maintenance operation on CIRCLE.

- During installation, de-installation and maintenance, ensure working place safety until the operation is completed.
- Do not touch the metallic parts of CIRCLE if it is powered; before maintenance and de-installation operation wait the necessary time to ensure it is cold after it is switched off. IMPORTANT: Always disconnect the electricity supply from the mains during installation and maintenance. It is recommended that the fuse is withdrawn or circuit breaker switched off at the distribution board while work is in progress (turning off the switch is not sufficient).
- Never try to modify or repair the CIRCLE in any of its parts by yourself. Never try to remove any part of the CIRCLE as water can penetrate inside the regulation box resulting in a risk of electrical shock. Never knock the CIRCLE against anything. Handle with extreme care during every operation and never leave it in wet areas.

IMPORTANT: In case of doubts, please, contact the Seller or refer to Contacts section.

8.1 Ordinary Maintenance

CIRCLE doesn't need any particular scheduled maintenance operation by qualified technicians. However, it is recommended to check the proper functioning of the system by:

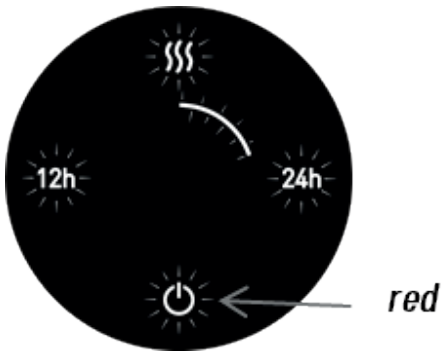
- Making it work at maximum and minimum level
- Paying particular attention to verify that there is no water leakage checking the visible and exposed CIRCLE parts.

If any of above controls fails, contact the customer service.

9. DIAGNOSTICS

Description of fault	Operations
CIRCLE regulation mode is selected at maximum power level and the towel rail doesn't heat at all	The product must be replaced, please contact customer service.
LEDs are ON but the towel rail doesn't heat	• Wait for 2 hours • If the situation doesn't change, contact the customer service
In case of anomalous or strange working condition or if CIRCLE has visible signs of damage	• Disconnect the CIRCLE from the mains • switch off the omnipolar switch immediately • send CIRCLE to the seller for investigation or replacement.

DISPLAYED ERROR:
flashing icons



FAULTY NTC BOARD

- CIRCLE internal temperature is anomalous
  OR
- CIRCLE has an issue

- Switch off the 230 V mains
- If the problem keeps occuring, send CIRCLE to the seller for investigation or replacement.

Once the problem is solved, the display will stop flashing.

10. SUPPLIED ACCESSORIES, CONSUMABLES AND SPARE PARTS

In the event of malfunctioning or damage, the whole CIRCLE must be replaced. No spare parts are available. If the CIRCLE regulating box shows some plastic cracks, please contact the seller for replacement.

CIRCLE power supply cable cannot be repaired. If it is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard. Never try to modify or repair the CIRCLE in any of its parts by yourself. Never try to remove any part of the CIRCLE as water can penetrate inside the regulation box resulting in a risk of electrical shock. Never knock the CIRCLE against anything. Handle with extreme care during every operation and never leave it in wet areas.

APPLICABLE EUROPEAN STANDARDS AND DIRECTIVES

Electrical tests according to (applicable clauses):
EN 60335-1, EN 60335-2-43.
EN 55014-1, EN 55014-2, EN 61000-3-2, EN 61000-3-3, EN 62233
2014/35/EU Low Voltage Directive (LVD),
2014/30/EU Electromagnetic Compatibility Directive (EMC), 2011/65/EU RoHS II Directive

CODE: X012345 – Rev. 1.0
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