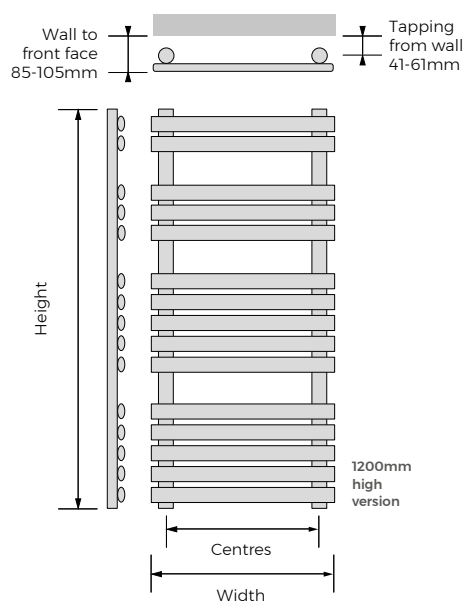# OVAL
Polished

- 50mm x 25mm oval tubes
- Central Heating, Dual Fuel & Electric versions
- Smart IP44 rated electric element with 12 & 24 hour timer settings
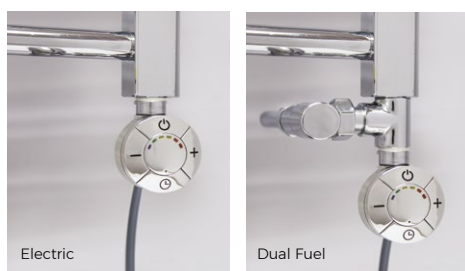
Sizes	1

Material	**Stainless Steel**
Stocked Finish	**Polished**

Operating up to *(bar)*	6
Guarantee *(years)*	5*

Delivery	**3-5 days**

Electric options available	⚡

	Code			Height mm	Width mm	Wall To Face mm	Tapping From Wall mm	Centres mm	Heat Output Δt 50°C		Matching Element (watts)	Dry Weight kg	Water Content ltrs
									Watts	BTUs			
POLISHED													
Central Heating	PAP-120-H-50			1200	500	85-105	41-61	450	805	2747	-	11.50	6.76
Dual Fuel	PAP-120-D-50			1200	500	85-105	41-61	406 #	805	2747	600	11.50	6.76
Electric	PAP-120-E-50			1200	500	85-105	-	-	600	-	-	18.26	-

*2 year warranty on electrical components # Measurement assuming both tee pieces supplied facing inwards

Wall to
front face
85-105mm

Tapping
from wall
41-61mm

Height

Centres

Width

1200mm
high
version

Smart timer thermostatic element

Electric

Dual Fuel

Polished detail

1200mm high version shown in Polished finish with Chrome Studio angled manual valves

MHS Smart timer thermostatic element

MHS Smart is an electronic thermostat for the automatic control of electric towel radiators. An internal sensor ensures the temperature of the towel radiator is kept to a set level.

Operating modes: Comfort, Boost, Standby/Antifreeze, Timer12 and Timer24.

"Comfort" mode: The thermostat keeps the internal temperature at the level set by the user.

"Boost" mode: In "Boost" mode, the heating element is activated for a period of 2 hours independently of the configured temperature. However, the temperature is automatically controlled so it does not exceed 65°C. At the end of the 2 hour period, the device returns to "Comfort" mode.

"Timer" mode: The control system enters into "Boost" mode for 2 hours; after that, it returns into "Comfort" mode for 22 or 10 hours (period set by the user) and then it re-enters "Boost" mode for 2 hours. This sequence is repeated endlessly.

"Standby/Antifreeze" mode: In this mode, the device goes into standby. However, as soon as the measured temperature falls below 10°C, the control system activates the heating element in order to prevent the internal liquid from freezing.

MHS Smart is a certified product: CE

MHS Smart is compliant with the following standards:

- Eco-design Directive for Energy-using Products, 2005/32/EC (<0,5W)

- EN 60335-1:2012 - EN 60335-2-30:2011 - EN 60335-2-43:2005

- EN 61000-3-2:2004 - EN 61000-3-3:1995

- EN 50366:2003

- EN 55014-1:2008 - EN 55014-2:1998

Instructions

On/Standby button

Heating element

"Comfort Bar":
Indicates the selected temperature and further accessory information

Internal NTC sensor:
Used for automatic temperature control

"Boost/Timer" LED:
Small red/green/ amber light indicator to indicate the current active mode
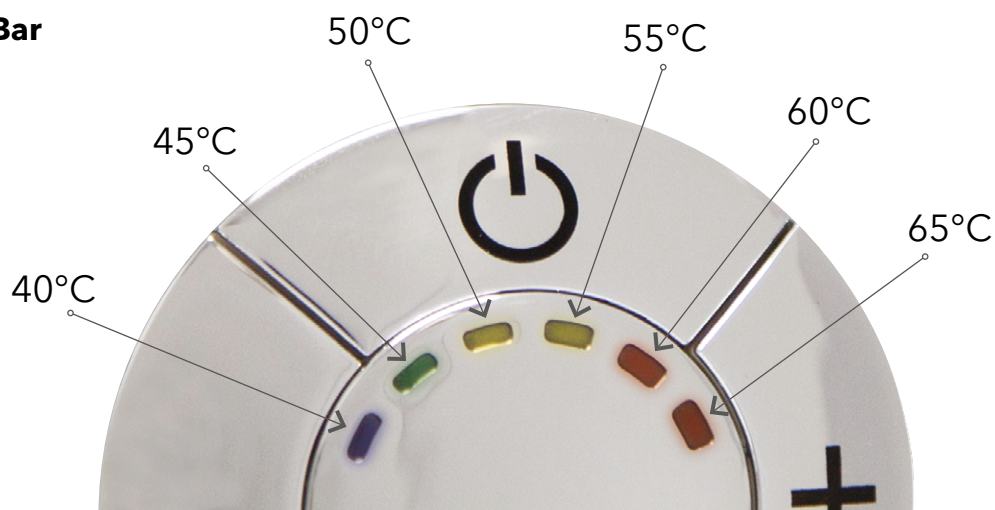
[+] and [-] buttons:
For setting the desired temperature

"Boost/Timer" Button:
To select one of "Boost", "Timer12" and "Timer24" modes

Power cord

Comfort Bar

40°C
45°C
50°C
55°C
60°C
65°C

Press the [On/Standby] button to turn on the device or to enter the "Standby/Antifreeze" mode.
NOTE: When the device is switched to "Standby/Antifreeze" mode, it beeps twice for 0.5 seconds. When the device is switched on, it beeps for 1 second.

"Comfort" mode: In this mode, the desired temperature of the radiator is selected. The temperature is set via the [+] and [-] buttons to one of the following values:
40°C, 45°C, 50°C, 55°C, 60°C, 65°C.

The rightmost lit or blinking LED in the "Comfort bar" indicates the selected temperature. A blinking LED indicates that the corresponding temperature has not yet been reached during the heating phase. When a certain temperature level is reached, the corresponding LED stops blinking and remains lit.
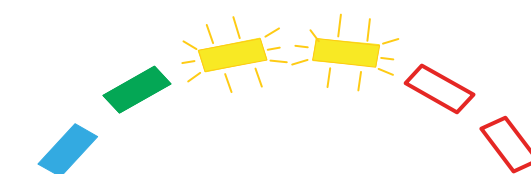
Example:
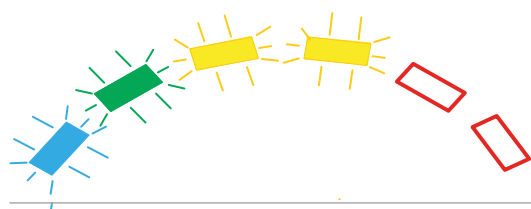
The device is firstly turned on. Pressing the [+] button 4 times sets the desired temperature at 55°C (the first 4 LEDs from the left start blinking).
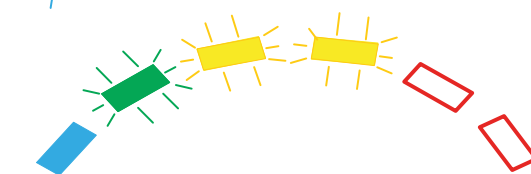
The radiator starts heating. When its temperature reaches 40°C the first (blue) LED stops blinking and remains lit.

After some time, the temperature reaches 45°C and the second (green) LED also stops blinking and remains lit.
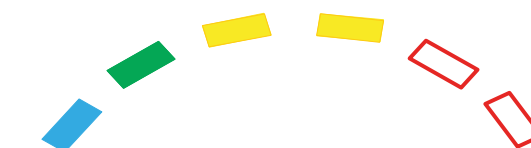
The same behavior applies to the two subsequent (yellow) LEDs, until the set temperature of 55°C is reached (all LEDs stop blinking).

"Standby/Antifreeze" mode: In this mode, the device goes into standby. However,as soon as the temperature of the radiator falls below 10°C, the heating element is automatically powered on.

Instructions

"Boost" mode: Press the [Boost/Timer] button to activate this mode.

This mode turns the heating element up to maximum power for 2 hours (for safety reasons, the maximum temperature is limited to 65°C). To exit the "Boost" mode press the **[Boost/timer]** button.

🕐 ☀️ **"Boost" mode indication:** "Boost/Timer" LED blinking red.

"Timer24" mode: Press the **[Boost/Timer]** button for 3 seconds to activate this mode.
The control system activates the "Boost" mode for 2 hours; after that, it returns into "Comfort" mode.
After 22 hours, the "Boost" mode is started again for 2 hours. This sequence will repeat endlessly. To exit the "Timer24" mode press the **[Boost/Timer]** button.

NOTE: During the first cycle, the duration of the "Comfort" mode is 21 hours.

🕐 ☀️ **"Timer24" indication during 2 hours "Boost":** "Boost/Timer" LED blinking green.

🕐 ● **During 22 hours "Comfort":** "Boost/Timer" LED permanently green.

"Timer12" mode: Press the **[Boost/Timer]** button for more than 5 seconds to activate it.
The control system activates the "Boost" mode for 2 hours; after that, it returns into "Comfort" mode. After 10 hours, the "Boost" mode is started again for 2 hours. This sequence will repeat endlessly. To exit the "Timer12" mode press the **[Boost/Timer]** button.

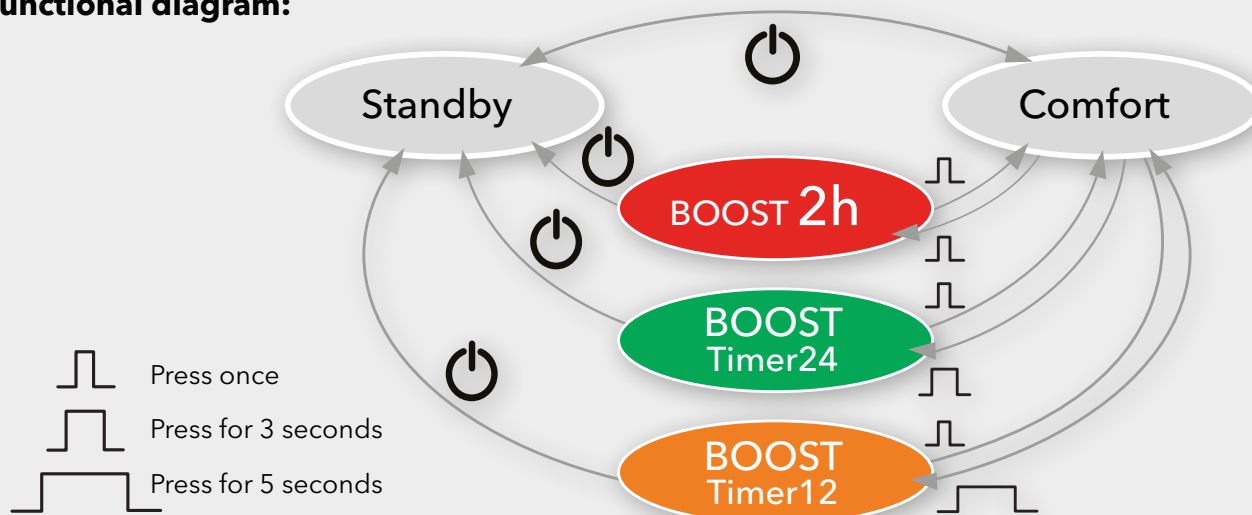NOTE: During the first cycle, the duration of the "Comfort" mode is of 9 hours.

🕐 ☀️ **"Timer12" indication during 2 hours "Boost":** "Boost/Timer" LED blinking amber.

🕐 ● **During 10 hours "Comfort":** "Boost/Timer" LED permanently amber.

NOTE: For safety reasons, the maximum temperature of the radiator during the 2 hour boost is limited to 65°C.

Functional diagram:

Boost/Timer LED functioning summary	
Blinking red	"Boost" mode active. The heating element is powered for 120 minutes (temperature of the radiator automatically limited to 65°C).
Blinking red	"Boost" function active in Timer24 mode. The heating element is powered for 120 minutes (temperature of the radiator automatically limited to 65°C).
Permanent green	"Comfort" function active for 22 hours in Timer24 mode.
Blinking amber	"Boost" function active in Timer12 mode. The heating element is powered for 120 minutes (temperature of the radiator automatically limited to 65°C).
Permanent amber	"Comfort" function active for 10 hours in Timer12 mode.

Key lock function: It is possible to lock the buttons of the device to avoid inadvertently altering the settings. Press [+] and [-] together for 3 seconds to lock all the buttons except [On/Standby].

To unlock the buttons, press [+] and [-] together again for 3 seconds. When key lock is activated, the device beeps twice. When key lock is deactivated, the device beeps four times.

Additional indications provided by the "Comfort Bar":

- The two central (yellow) LEDs blink when a button is pressed: Key lock is active.

- The external (blue and red) external LEDs blink: Failure on the temperature sensor, the heating element is deactivated. Please contact customer support.

Notes.

In the event of the power supply being interrupted, the system will recover from the previous operative mode*, with the exception of "Boost" and "Timer" modes.

*The status of the device is saved 5 seconds after a modification occurs.

Any repairs carried out by unauthorised personnel invalidate warranty.

The manufacturer reserves the right to make any changes to the product described in this manual, at any time, and without prior warning.
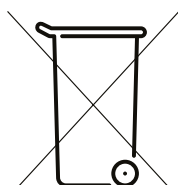
DISPOSAL

This product may not be treated as ordinary household waste. It has to be disposed of in proper waste collection sites. In case of replacement it shall be returned to the distributor.

Such an end-of-life treatment of the product will preserve the environment and reduce the consumption of natural resources.

This symbol applied to the present product indicates the obligation to bring it to a proper waste collection site, in order to let it be disposed according to 2002/96/CE (RAEE - WEEE) directives.