



# ELECTRIC PANEL HEATER



**MCH 1000**

**MCH 2000**

**MCH 1500**

**MCH 2500**

## USER'S INSTRUCTIONS MANUAL

Please read these instructions carefully before first using product  
and retain for future reference.



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## 1. SAFETY PRECAUTIONS



Read all instructions before use and save this manual for future reference.



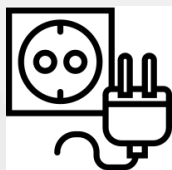
In order to avoid overheating, do not cover the heater. Do not dry wet clothes on the heater.



Electric Panel Heater are designed for indoor use **ONLY**. Do not operate the heater outside, where it may be affected from moisture, dust and other external factors.



The surfaces of the device heats up during operation. **DO NOT** touch the surfaces with with bare hands to avoid burns.



The heater can **ONLY** be operated in a power outlet which is in accordance with the power rating of your heater and with proper grounding.



The heater can only be operated in electric installations which have a suitable Residual Current Device (RCD). RCD device provides critical safety against any current leakage.

- Do not operate the heater without mounting the feet firmly (for stand alone operation) or mounting the heater on the wall. Always operate the heater in upright position.
- Make sure that the power supply to the socket which the heater will be plugged is in accordance with the power rating of the heater.
- Use your heater ONLY on grounded power sockets.
- Use your heater ONLY if a suitable RCD device is present on the electric installation.
- Do not use multiple heaters on a single power outlet. Do not use extension cables which do not have proper grounding. Do not use wall socket multipliers to plug-in other electric devices on the same outlet with your heater.
- Make sure the power cord is not in contact with the hot body of the heater during operation.
- Make sure the power cord is not placed on walking aisles to avoid people walking to trip on the cord.
- Do not use this heater in high moisture and wet areas such as bathrooms, showers or poolside. Do not use this heater where it can be affected from rain such as open balcony or terraces.
- The heater is designed for indoor use ONLY.
- In order to avoid overheating, do not cover the heater.
- Do not hang wet clothes on the heater. Moisture and water dripping from wet clothes will damage your heater and can cause electric shock risk.
- Do not place the heater on carpets with deep pile.
- Always ensure the heater is placed on a firm level surface during operation.
- Do not place the heater close to curtains or other flammable materials. Make sure the heater is operated at least 1 meter away from all flammable materials.
- Do not operate the heater in areas where flammable substances such as gasoline, paint or other flammable liquids (fumes) are present.
- Protect the energy supply cable from damages which may be caused by tension. Do not pull the cord to unplug the heater.
- Do not clean the heater with wet cloth. Do not allow any liquid to enter inside the heater which can cause an electric shock hazard.
- Do not touch the appliance with wet hands. Make sure your hands are dry when making adjustments on the control panel of the heater. Do not touch the electric plug with wet hands.
- Do not use the heater other than its intended use. Do not use the heater to dry clothes.

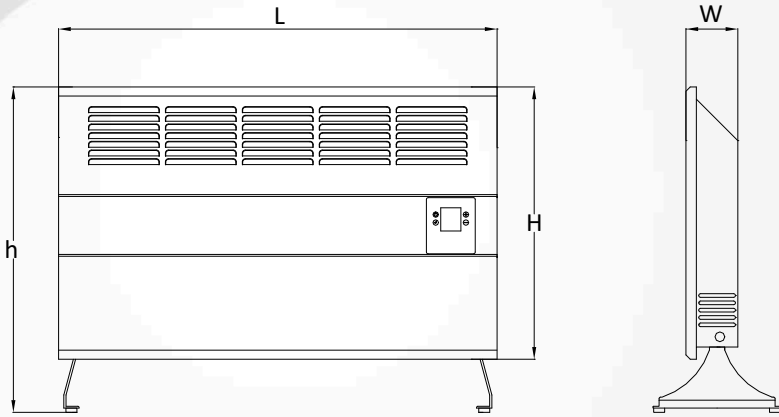
- Make sure the air flow in and out of the heater is not restricted. The cool air intake grills and the hot air outlet grills should not be obstructed during operation.
- Do not operate the heater if the power cord is damaged. Call authorized service for repairs. Do not open the front panel of the heater for any reason and do not attempt to repair the device in case of a malfunction.
- The surfaces of the device heats up during operation. DO NOT touch the surfaces with with bare hands to avoid burns.
- If the heater will be used in presence of unattended small children, such as children rooms, day cares or schools, make sure to set the limit surface temperature to minimum from the control panel. This will limit the surface temperature of the heater and avoid accidental burns.
- Clean the outside surface of the heater with a dry cloth. Always make sure to unplug the heater and let it cool down before cleaning or moving the heater to another place.
- We recommend to use a vacuum cleaner to clean the dust accumulated inside the heater by placing the vacuum on the cool air intake and hot water outlet grills.
- Do not insert any objects from any of the openings of the heater. Do not allow any metal parts or object to be inserted or entered from the openings of the heater. This may cause electric shock risk and fire hazard.
- When mounted on the wall, do not place the heater directly below a power outlet.
- This appliance is not intended for use by people (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.
- We recommend that the surface temperature of the heater is set to minimum from the control panel when unattended children are present.

## **2. INTRODUCTION OF THE DEVICE**

### **2.1 DESIGN FEATURES OF THE ELECTRIC PANEL HEATER**

- Compact dimensions and wide capacity range from 1000W up to 2500W.
- Heats up rapidly and provides high volume air flow to heat the room quickly with convection principle.
- Built in electronic control panel with LCD screen.
- ERP Lot20 compliant.
- Weekly and daily 24h timer functions.
- Open window detection function.
- Energy saving mode: Eco mode is designed for low energy consumption.
- Rapid heating mode: Boost mode can be used to heat up the room rapidly in maximum capacity.
- Equipped with 2 temperature sensors, monitoring the room temperature and heater surface temperature separately.
- Electronic room temperature control: Built in room temperature sensor enables automatic operation according to adjusted room temperature.
- Manual operation mode, in which the heater operates according to the adjusted heater surface temperature.
- Low surface temperature operation function in which you can limit the surface temperature of the heater to a desired value.
- Child safety function to limit the surface temperature to avoid accidental burns.
- High efficiency X-shaped aluminum heating element provides comfortable heating. The heater does not have any red glow parts, therefore it does not burn the oxygen in the room and provides high air quality heating.
- %100 quiet operation, no fan or moving parts make the heater completely silent.
- Can be used as free standing by placing the heater on its feet or it can be mounted on the wall. (Heater feet and wall hanger is supplied with the product)
- Overheat protection with safety thermostat.
- Tip over protection, the heater shuts off when its not placed in upright position.
- Does not require periodic maintenance.

## 2.2 GENERAL OVERVIEW AND DIMESIONS



### 2.2.1 TECHNICAL TABLE

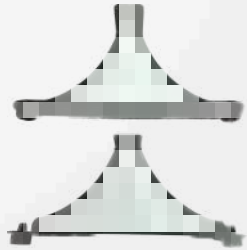
Model	MCH 1000	MCH 1500	MCH 2000	MCH 2500
Capacity (W)	1000	1500	2000	2500
L (mm)	530	720	880	980
H (mm)	440	440	440	440
h (mm)	530	530	530	530
W (mm)	81	81	81	81
Weight (kg)	5.9	7.6	9.1	10.2
Voltage/Frequency (V/Hz)	220/50	220/50	220/50	220/50
Drawn Current (A)	4.5	6.8	9.1	11.4
Main Cable Dimension (pcs / mm <sup>2</sup> )	3 x 1.5	3 x 1.5	3 x 2.5	3 x 2.5
Electric Protection Degree (IP)	X4D	X4D	X4D	X4D

### 2.2.2 PACKAGE CONTENT

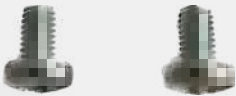
No	Part Description	Quantity
1	Electric Heater	1
2	Floor Stand	2
3	Floor Stand M4 Fixing Bolt	2
4	Bolt Washer	2
5	Wall Mounting Plate	1
6	Wall Plug	2
7	Wall Screw	2



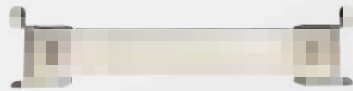
(1)



(2)



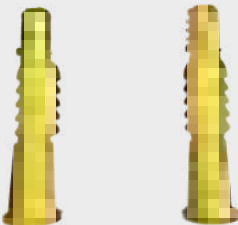
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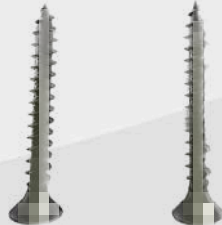
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(4)



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(7)



# 3. MOUNTING AND INSTALLATION INSTRUCTIONS

## 3.1 WALL MOUNTING

Place the wall mounting plate on the wall. Use a spirit level to make sure the plate is horizontally parallel to floor. Mark the drilling holes on the wall with a marker.

Put the wall mounting plate aside and use a drill with a 8mm drilling bit to make holes on the marks.

Insert the wall plugs in the holes.

Place the wall mounting plate on the wall and insert the screws inside the plugs. Tightly fix the wall mounting plate on the wall.

Place the heater on the wall mounting plate by slightly tilting the heater and hang it using the hanger holes on the back of the heater. Plug in the heater and start operation.

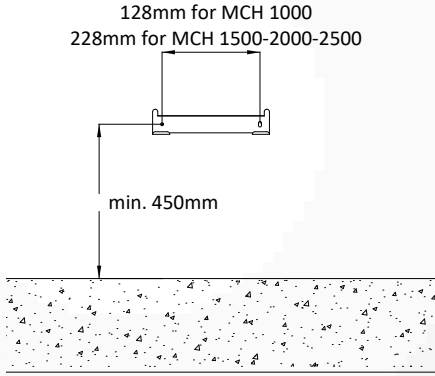


Mind the electric cables and water pipes when drilling holes on the wall.

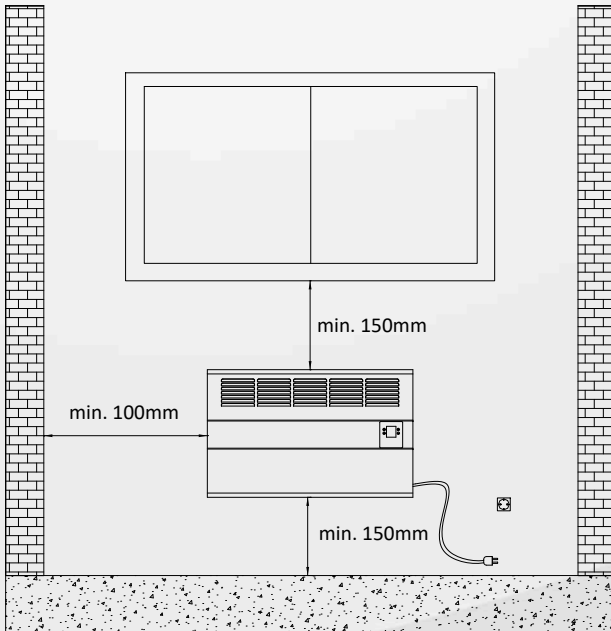


### 3.1.1 WALL MOUNTING PLATE PLACEMENT

Mounting Holes Distances



### 3.1.2 MINIMUM SPACES FOR WALL MOUNTING



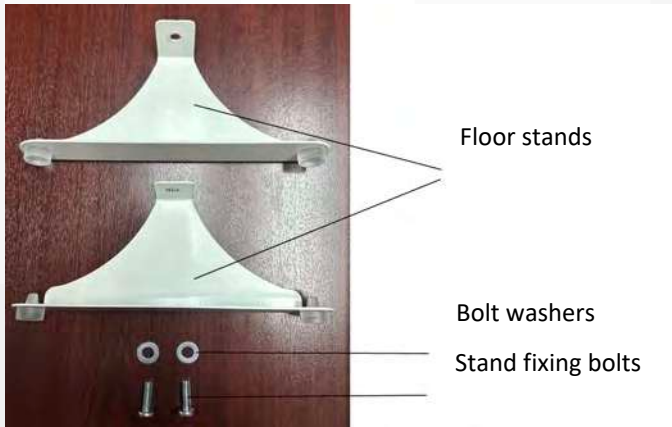
## 3.2 FLOOR STANDING OPERATION

### 3.2.1 MOUNTING THE FLOOR STANDS

Place the heater on a flat surface on it's back.. Place the heater feet on the bottom of the heater aligned with the feet fixing holes.

Place the washer onto the bolt and insert the bolt inside the fixing holes. Screw the bolts in tightly.

Place the heater in upright position on its feet. Plug in and start operation.





Place washer onto the bolt and put them together into the fixing slot of the heater feet.

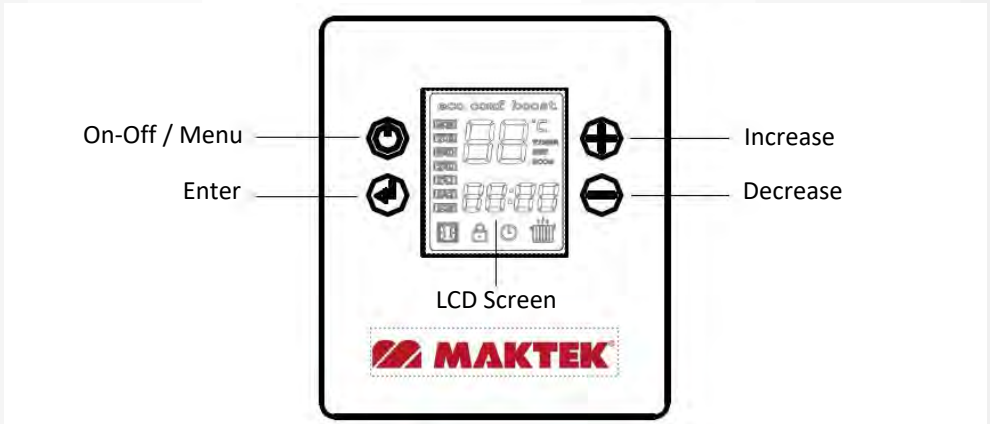
Align the slot on the heater feet with the fixing hole on the bottom of the heater. Fasten the bolt tightly.



The feet should be positioned as the above picture

## 4. OPERATION INSTRUCTIONS

### 4.1 CONTROL PANEL



#### 4.1.1 BUTTON EXPLANATIONS

**On-Off / Menu Button:** Press and hold for 3 second to turn on or off the heater. Press to switch between menus and operation modes.

**Enter Button:** Press to activate and deactivate the functions in the selected menus.

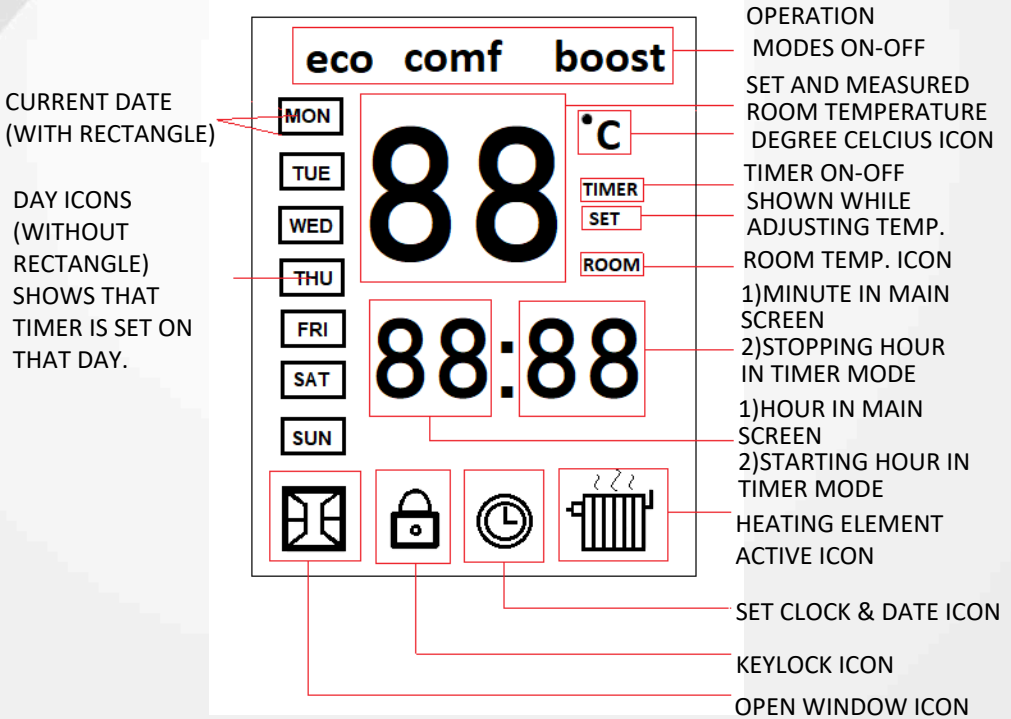
**Up Button:** Press to increase temperature, adjust clock, date and timer operation intervals.

**Down Button:** Press to decrease temperature, adjust clock, date and timer operation intervals.

**On/Off Button + Up Button:** Press and hold both buttons for 3 seconds to enter manual operation mode & surface temperature limit adjustment.

**Enter Button + Down Button:** Key Lock

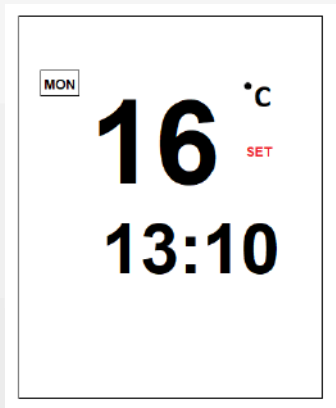
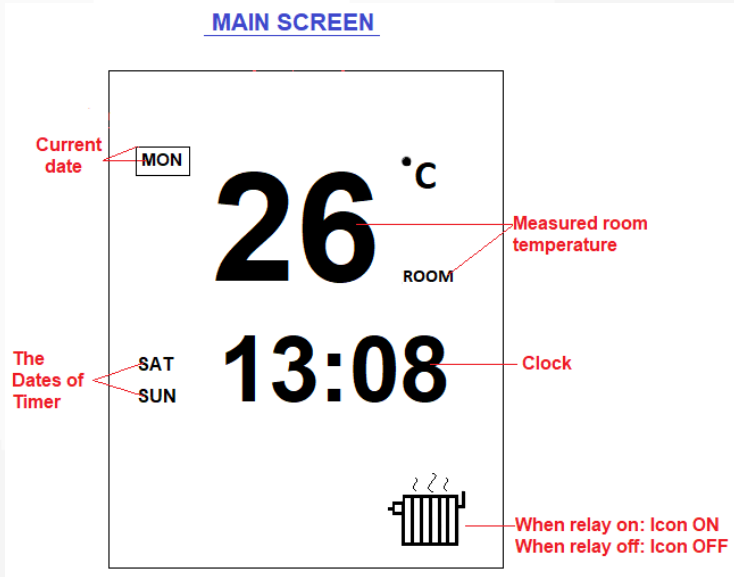
## 4.2 LCD SCREEN ICONS



## 4.3 MENUS AND OPERATION MODES

- MAIN SCREEN
- KEY LOCK
- ECONOMY MODE
- COMFORT MODE
- BOOST MODE
- OPEN WINDOW MODE
- SET CLOCK&DATE
- TIMER
- MANUAL OPERATION MODE


### 4.3.1 MAIN SCREEN AUTOMATIC OPERATION MODE




On the main screen, if pressed “up” and “down” buttons, device will show ‘set temperature value’ and **SET** icon appears on the LCD screen for 5 seconds. After that, the device will be back to main screen automatically. Setting temperature range can be adjusted between 7°C - 35°C.

### 4.3.2 KEY LOCK MODE



To activate, press and hold “enter” + “decrease” button together for 3 seconds  icon will be shown on the LCD screen when the key lock is active.

While the key lock is active, control panel buttons do not work. If a button is pressed while the key lock is active, the lock icon flashes on the LCD screen indicating the locked status. To deactivate the key lock, press again “enter” + “down” buttons for 3 seconds. The  icon will disappear and the buttons will become functional again.

### 4.3.3 ECONOMY MODE

Menu button is used to switch between operation modes. Select the **eco** mode by pressing menu button. **eco** icon will flash on the LCD screen, waiting to be activated. Push “enter” button once to activate the economy mode. **eco** icon will appear steadily on the LCD screen indicating that the heater is operating in economy mode. In this mode the room temperature adjustment is fixed at 18°C to ensure economic operation and heats up the room only up to 18°C. This mode can be used during the night in bedrooms while sleeping to maintain a healthy sleeping temperature and reduce the electric consumption.

The set value and the measured room temperature value will be displayed alternatively on the LCD screen one after the other.

To deactivate eco mode, press and hold the “enter” button for 3 seconds. **eco** icon will disappear and the heater will resume operation on the main screen.





### 4.3.4 COMFORT MODE

Menu button is used to switch between operation modes. Select the comfort mode by pressing menu button. **comf** icon will flash on the LCD screen, waiting to be activated. Push “enter” button once to activate the comfort mode. **comf** icon will appear steadily on the LCD screen indicating that the heater is operating in comfort mode.

In this mode the room temperature adjustment is fixed at 24°C to ensure comfortable heating and brings the room to the comfort temperature of 24°C. The set value and the measured room temperature value will be displayed alternatively on the LCD screen one after the other.

To deactivate comfort mode, press and hold the “enter” button for 3 seconds. **comf** icon will disappear and the heater will resume operation on the main screen.



### 4.3.5 BOOST MODE

Menu button is used to switch between operation modes. Select the boost mode by pressing menu button. **boost** icon will flash on the LCD screen, waiting to be activated. Push “enter” button once to activate the boost mode. **boost** icon will appear steadily on the LCD screen indicating that the heater is operating in boost mode.



In this mode the room temperature adjustment is fixed at 35°C to ensure rapid heating and the heater operates at maximum power.

The set value and the measured room temperature value will be displayed alternatively on the LCD screen one after the other.


To deactivate boost mode, press and hold the “enter” button for 3 seconds. **boost** icon will disappear and the heater will resume operation on the main screen.



### 4.3.6 OPEN WINDOW DETECTION FUNCTION

Menu button is used to switch between operation modes. Select the open window mode by pressing menu button.  icon will flash on the LCD screen, waiting to be activated. Push “enter” button once to activate the open window mode.  icon will appear steadily on the LCD screen indicating that open window function is active.

The open window function prevents electricity energy waste. While this function is active the heater shuts off automatically when a window or door is opened (for ventilation) in the heating area. The electronic room temperature sensor detects the sudden decrease in room temperature and turns off the heater. This provides wast energy savings in situations when the user forgets to turn off the heater while they open windows to ventilate the room. After the windows and doors are closed and the room temperature stabilizes, the heater automatically resumes operation after 30 minutes.

To deactivate boost mode, press and hold the “enter” button for 3 seconds.  icon will disappear and the heater will resume operation on the main screen.

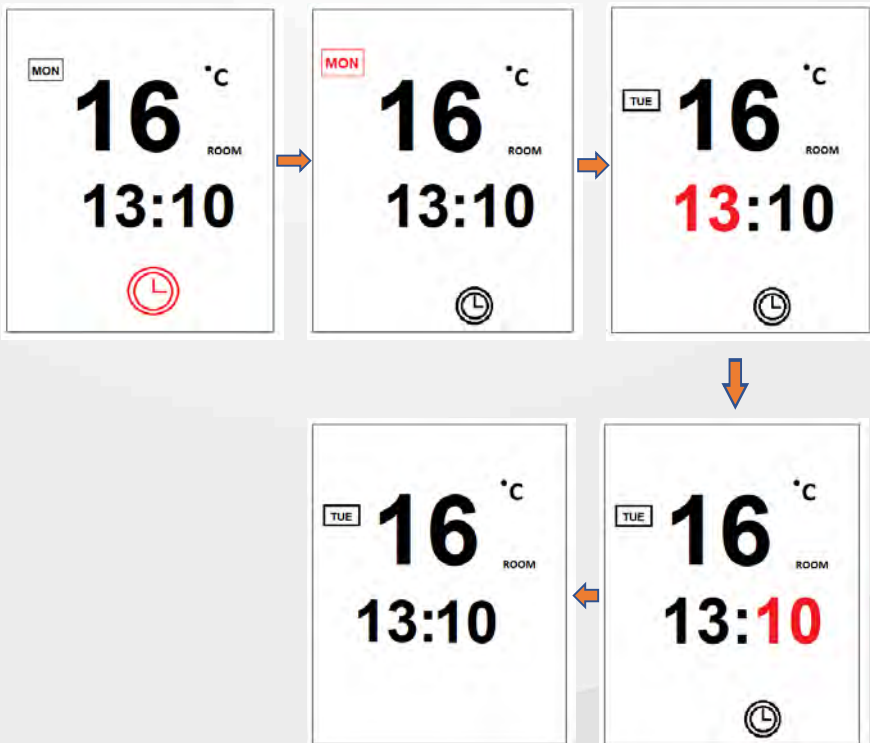


### 4.3.7 SETTING CLOCK & DATE

Menu button is used to switch between operation modes. Select the set clock&date mode by pressing menu button. 🕒 icon will flash on the LCD screen, waiting the adjustment menu to be activated. Push “enter” button once to activate the set clock&date mode. 🕒 icon will appear steadily on the LCD screen and **MON icon will start flashing in a rectangle**. Choose the current date by using the increase and decrease buttons (+ / -). Select the current date by pressing enter button. The selected date will be saved and appear steadily on the LCD screen.

Once the date is set the clock hour digits will start to flash. Use the increase and decrease buttons (+ / -) to set the hour and press enter to save. Clock minute digits will flash afterwards. Set the minute by using increase and decrease buttons (+ / -) and press enter to save.

After the date and clock is set, the 🕒 icon will disappear and the LCD returns to main screen automatically after 5 seconds.



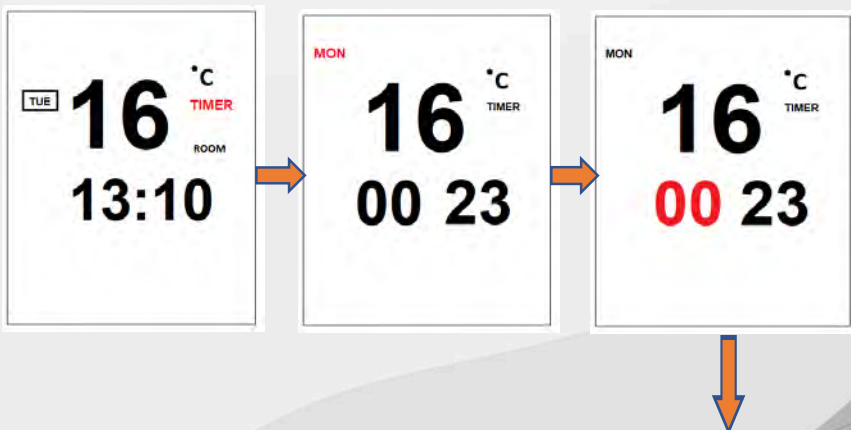
### 4.3.8 WEEKLY TIMER FUNCTION

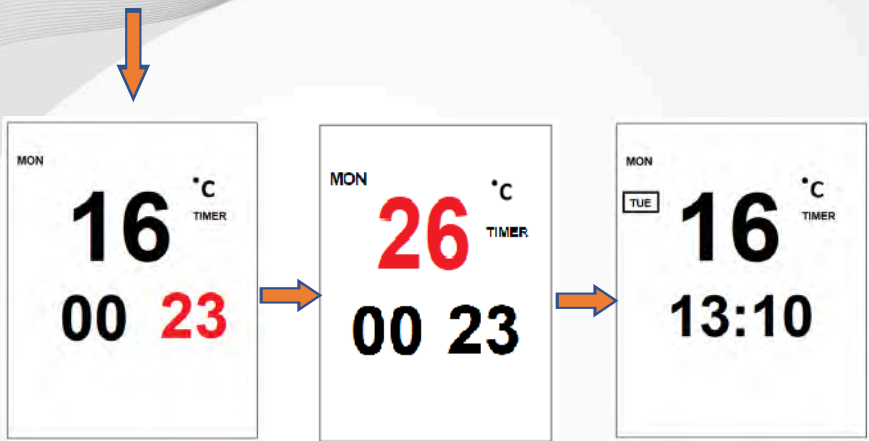
This function allows you to set time intervals for the heater to start and stop operation automatically. It provides comfort by enabling automatic operation without having to turn on/off the heater manually, Also it can provide energy savings by setting the closing times of the heater beforehand so even the user forgets to shut off the heater it will go off automatically.

Menu button is used to switch between operation modes. Select the timer function by pressing menu button. **TIMER** icon will flash on the LCD screen, waiting the timer adjustment menu to be activated. Push "enter" button once to activate the set timer function. **TIMER** icon will appear steadily on the LCD screen and **MON** icon will start flashing (without rectangle). Using the increase and decrease buttons (+ / -) choose the day you want to set the timer for. Push enter button to save the day and proceed to setting the on/off intervals for that day. First two digits of the clock will start flashing. These two digits indicate the starting hour for the heater USE the increase and decrease buttons (+ / -) to set the starting hour and press enter to save. The second two digits will start flashing now. These digits indicate the closing hour of the heater. Set the closing hour of the heater using increase and decrease buttons (+ / -) and press enter to save. In final step the temperature digits will start flashing. Set the desired room temperature for the timer mode using increase and decrease buttons (+ / -) and press enter button to save. You can make this adjustment for different days of the week using the same steps. After the adjustments are complete, the LCD will return to main screen and save all the adjustments.

On the main screen, you can see the days which timer is active are shown without a frame.

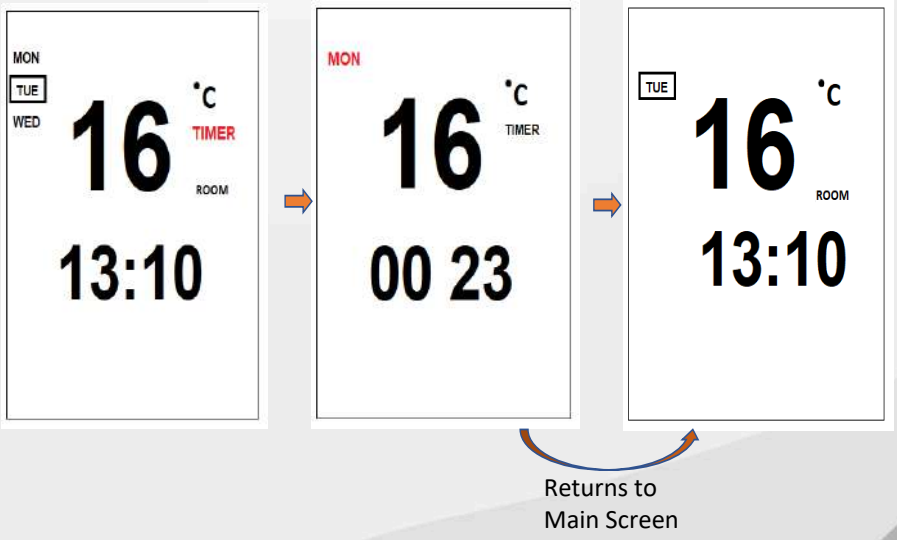
#### Setting Timer





**Erasing Timer Charts:**

In order to deactivate the timer function, select the timer mode as instructed previously. When the day selection icon is flashing press and hold the enter button for 3 seconds. The timer function will be deactivated and TIMER icon will disappear from the LCD screen. All saved timer adjustments will be erased. The heater will return to main screen after 5 seconds.



### 4.3.9 MANUAL OPERATION MODE

Manual operation mode disregards the room temperature reading from the room temperature sensor and the heater operates only according to the adjusted heater surface temperature. When the surface temperature reaches adjusted value the heater shuts off and when the surface temperature decreases 5°C the heater starts working again.

This mode is used for heating demands independent from the room temperature.

To activate manual operation mode press and hold the on/off and increase ( + ) buttons together for 3 seconds. The LCD screen will show the set surface temperature. Use increase and decrease buttons ( + / - ) to set the desired surface temperature. You can select from 40°C to 80°C in 5°C intervals. The selected value will be saved automatically and the LCD screen will switch to showing current surface temperature. Heater icon shows that heating is on.

You can switch back to automatic operation according to room temperature by pressing on/off and increase ( + ) buttons again for 3 seconds.

**IMPORTANT NOTE:** The surface temperature value is set at 80°C (max) as factory default setting. The adjusted surface temperature by the user is saved on memory and after you switch to automatic operation with room temperature control, the set surface temperature value is prioritized. The surface of the heater will only heat up to the adjusted value and even if the room temperature demand is not reached the heater will turn off when the limit surface temperature is reached.



a) Setting the surface limit temperature screen

b) Current heater surface temperature is displayed

### 4.3.10 LIMITING THE SURFACE TEMPERATURE FOR AUTOMATIC MODE

Maximum panel surface temperature can be adjusted in your heater. There is a separate temperature probe which measures the panel surface temperature continuously and the heater surface only heats up to the set limit value.

As a factory default setting, the surface limit temperature is set at 80°C. In order to change this setting press and hold on/off and (+) increase buttons for 3 seconds to switch to manual operation mode. In this menu you can adjust the set surface temperature using increase and decrease buttons (+ / -). You can set the limit value from 40°C to 80C in 5°C intervals. The selected value will be saved automatically and the LCD screen will switch to showing current surface temperature. After you set the limit value you can return to the automatic operation mode by pressing and holding the on/off and increase (+) buttons for 3 seconds. Now the heater will operate according to the new set limit surface temperature.

**Important Suggestion:** Limiting the heater surface temperature can prevent accidental burns. We recommend that the limit temperature is set to lower values if there are small children in the household.

## 5. CLEANING

Electric panel heater must be switched off and unplugged before cleaning. Make sure the heater cools down before cleaning.

Clean the outside surfaces of the heater with a slightly moist cloth. Do not let any water enter inside the heater from the air ducts during cleaning. Do not use any solvents, detergents, scratching liquids or powders on the appliance as these may damage the paint.

You can use a vacuum cleaner to clean the interior of the heater. Place the vacuum on the ducts on the front and bottom of the heater to clean dust inside.

## 6. SERVICE INSTRUCTIONS

Maktek Electric Panel heaters are designed to operate in top condition for many years without requiring any periodic maintenance.

In case of a malfunction, the end users should never try to repair the heater themselves. The front panel of the heater can only be opened by service personnel in case of a repair.

### 6.1 OPENING THE FRONT PANEL

To open the front panel, first remove the 2 screws on the back of the heater which are placed on top left and right corners. Then place the heater on a flat surface on its back and proceed as described below;

- a) Remove the screw on the bottom of the heater.
- b) Tilt the bottom of the front panel upwards and push the panel forward to remove from the slot.
- c) Open the front panel to the right side, minding the cables. Place the front panel on the right side of the heater vertically in order to be able to access all the components inside.





b)



c)

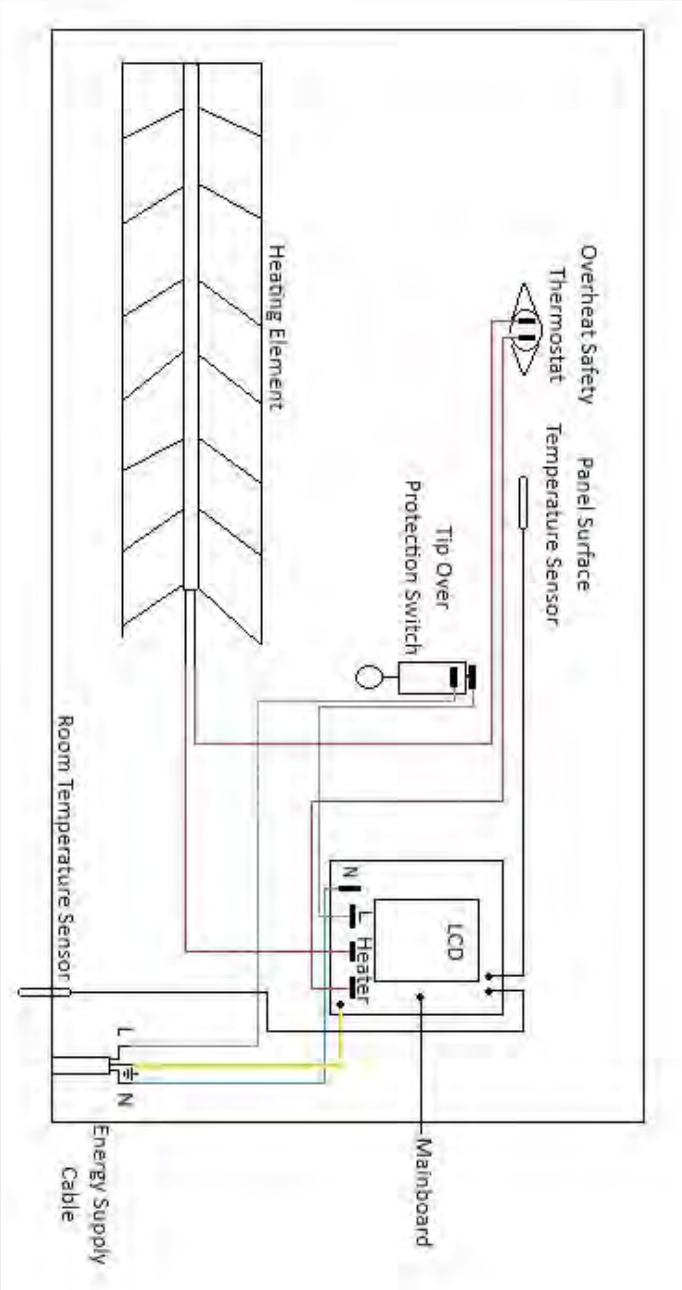


## 6.2 MAIN COMPONENTS OF THE HEATER



1. X type aluminum heating element
2. Overheat Safety Thermostat
3. Panel Surface Temperature Sensor
4. Mainbord and LCD
5. Tip over Protection Switch
6. Energy Supply Cable
7. Room Temperature Sensor

### 6.3 ELECTRIC CIRCUIT DIAGRAM



## 7. TRANSPORT AND STORAGE INFORMATION

- The heater package must be protected against impacts, collisions and excessive vibration during transport.
- The appliance should be protected against moisture, rain and dust during transport and storage.
- Do not place other objects on top of the heaters during transport.
- Maximum stocking pile is 5 units.
- After the box is opened and the heater is not going to be used for a long period, protect it from dust. Store in a clean and dry space.

## 8. GUARANTEE CONDITIONS

Maktek Electric Panel Heater is covered by manufacturer's warranty for 2 years starting from the purchase date of the appliance. The following conditions will be not covered by the warranty.

- Damages and failures due to use of heater for any other purpose than its intended use indicated in the manual.
- Damages and failures due to repairs or interventions by unqualified and unauthorized people.
- Units with altered or missing serial numbers on the technical label.
- Damages and failures caused during transport, loading, unloading, storage and exposure to external factors.
- Damages and failures due to the electricity supply, voltage fluctuations, lightning strike or peak voltage bursts from the electricity network.
- Damages or failures due to not following the rules stated in safety precautions section of this manual.
- Damages and failures due to improper electricity connection, improper wall mounting or use of the heater in an inappropriate location. (dust, exposure to very high or low temperatures, exposure to moisture)

## 9. SUGGESTIONS FOR ENERGY SAVING

- 1- Many factors such as the environment and climatic conditions, the size of the space where the radiator will be used and the state of isolation and the installation method of the radiator are effective in achieving the expected efficiency from the radiator. Do not forget that; the energy consumption of the heating appliance you use is proportional to the size of your home heat loss. The more heat loss from your home to the outdoor heat, the more energy the heater will consume to compensate for this heat loss. This reveals the importance of isolation. The heat loss of a modern building, in which the roof, outer wall, windows and doors are well insulated and various sealing measures have been taken, falls at a rate of up to 50%. This is returning to you as lower heating costs.
- 2- Room temperature should be kept at 20°C. Keeping the room temperature just 1°C lower saves up to 6% in heating costs.
- 3- Keeping curtains closed provides energy saving at night. is covered to keep the Close your curtains when the sun is out of your windows. Close these windows with blinds and windshields if you have, at nights.
- 4- Benefit from the advance settings of your heater. Using the economy mode when possible or activating open window detection function will generate substantial energy savings.



WASTE ELECTRICAL PRODUCTS SHOULD NOT BE DISPOSED OF WITH HOUSEHOLD WASTE. PLEASE RECYCLE WHERE FACILITIES EXIST. CHECK WITH YOUR LOCAL AUTHORITY FOR RECYCLING ADVICE

The CE mark signifies that this product has been assessed to meet the high safety, health, and environmental protection requirements of the harmonization legislation of the EU.