



*Confeo* **Premix**

**CONFEO PREMIX  
CONDENSING COMBI BOILER**

**CONFEO PREMIX P  
14/20/24/28/30/35 HM/HCH/HST**

**OPERATING &  
INSTALLATION  
MANUAL**



<b>1- INTRODUCTION.....</b>	<b>4</b>
<b>2- GUARANTEE AND SERVICE.....</b>	<b>4</b>
<b>3- DEFINITIONS OF SYMBOLS.....</b>	<b>4</b>
<b>4- SAFETY RULES AND WARNINGS.....</b>	<b>5</b>
4.1- Safety Instructions.....	5
4.2- Water Systems & Gas Supply Line.....	5
4.3- Gas Type Conversion.....	5
4.4- Installation.....	5
4.5- Boiler Start Up.....	5
4.6 - Usage and Maintenance.....	6
<b>5-PRODUCT.....</b>	<b>6</b>
5.1- General Specifications.....	6
5.2- Notations of Product.....	7
5.3- Detailed View and List of Components.....	8
5.4- Electrical Diagram.....	10
<b>6- BOILER PACKAGING.....</b>	<b>11</b>
<b>7-FLUES.....</b>	<b>12</b>
7.1- Flue Sizes.....	12
7.2- Flue Types.....	12
7.3- Distances for Placement of Flues.....	13
<b>8-INSTALLATION.....</b>	<b>14</b>
8.1- Selection of Installation Location of Device.....	14
8.2- Independent Operation from Ambient Air (Type C).....	15
8.3- Mounting the Boiler.....	15
<b>9-CONNECTIONS.....</b>	<b>16</b>
9.1- Condensate Discharge Connection.....	16
9.2- Gas and Water Connections.....	17
9.3- Electrical Connection.....	18
9.4- Room Thermostat.....	19
9.5- Outdoor Temperature Sensor.....	20
9.6- Room Thermostat and Outdoor Temperature Sensor Connection.....	21
<b>10- COMMISSIONING, USE AND TURNING OFF THE BOILER.....</b>	<b>22</b>

10.1- Commissioning, Filling Water into Boiler and Heater Installation.....	22
10.2- Using the Device.....	23
<b>11- CONTROL PANEL.....</b>	<b>23</b>
11.1- Icons of Buttons.....	23
11.2- LCD Screen.....	23
11.3- Operation Functions.....	23
<b>12- ERROR CODES AND DESCRIPTIONS.....</b>	<b>27</b>
<b>13- USEFUL INFORMATION ON PRODUCT.....</b>	<b>29</b>
13.1- Information on the Efficient Use of the Combi Boiler in Terms of Safety and Energy Consumption.....	30
13.2- Clogging in Installation.....	30
13.3- Cleaning of Boiler.....	30
<b>14- ANNEXES.....</b>	<b>30</b>
14.1- Characteristic Curve Of Water Pressure Height Of The Pump (Pump Headflow Rate).....	30
<b>15- INSTALLATION TEMPLATE.....</b>	<b>32</b>
15.1- HM Model.....	32
15.2- HCH Model.....	33
15.3- HST Model.....	34
<b>16- ERP GUIDE.....</b>	<b>35</b>
16.1- Technical Specifications Table.....	35
16.2- CE Marking.....	36
16.3- Product Information Sheet (ErP).....	36
16.4- Package information card stating the central heating energy efficiency of the package.....	37
<b>17- REMOVAL INFORMATION.....</b>	<b>39</b>
17.1- Unpacking the New Device.....	39
17.2- Compliance with AEEE Regulation and Disposal of Waste Product.....	39

## 1- INTRODUCTION

First of all, we would like to thank you for choosing E.C.A brand. E.C.A. Confeo Premix condensing boilers have been designed for an efficient, safe and comfortable central heating and hot water requirement. The Confeo Premix condensing boilers can possibly use natural gas and LPG (G31-propane) according to the desired fuel preference.

**HM Model:** It is designed for both Central Heating (CH) and Domestic Hot Water (DHW).

**HCH Model:** It is designed for Central Heating (CH).

**HST Model:** It is designed for both Central Heating (CH) and Domestic Hot Water (DHW). Boiler connection must be used for Domestic Hot Water (DHW) requirement.

The assembly and usage information of 14-20-24-28-30-35 kW Confeo Premix condensing boilers are available in this manual. Detailed information have been provided in the guide regarding the technical specifications of the devices, selection of the boiler location, fitting its water, gas, flue and electric supply connections, maintenance information and resolution of possible failures. Please carefully read the manual in order to benefit from all the features of your device. Keep all the documents provided by your device in order to refer when required.

## 2- GUARANTEE AND SERVICE

- The appliance has guarantee period against faulty workmanship or material in condition that the instructions and precautions in this manual must be obeyed. The service operations and general maintenance must be carried out only qualified person.
- The warranty certificate must be registered by Service in the installation day.
- Your appliance needs not any repairs if operated according to this manual. For assistance for additional information, consult qualified person, installer or gas supplier.

## 3- DEFINITIONS OF SYMBOLS

The following symbols have been placed at required points in the text in order to draw attention to significant points regarding the usage and assembly of the device. The meaning of symbols have been specified below.



Indicates that the situation that can only be interfered by qualified person.



**Information**

Explanations containing information that should be considered by the user.



**CAUTION:** It means that you may suffer from material damage or slight personal injury.

**DANGER:** It means that you may suffer from sever personal injury.



## **4- SAFETY RULES AND WARNINGS**

### **4.1- Safety Instructions**

When a gas leak is found or suspected;

- Turn off the gas valve of the boiler and the valves of all other devices operating with gas.
- Shut off the stove, oven and similar appliances to put their flame out.
- Do not light matches, lighter etc, and stub out your cigarette.
- Ventilate the environment by opening doors and windows.
- Do not ever touch the buttons and plugs of your electrical appliances.
- Turn off the gas valves in the apartment and building entrance.
- Do not use the phones at places where the gas leak is suspected.
- Call your qualified person as soon as possible.
- Do not place and use flammable and explosive liquid or materials around the boiler.
- Keep materials such as water, foam away from electrical connections during operations such as cleaning, gas leak test etc.
- Do not lay the LPG container down
- Do not block air vents, openings made in the walls of the room which provide fresh air to the installation room.

### **4.2- Water Systems & Gas Supply Line**

Before installation of the boiler, the water systems (CH & DHW circuit) and gas supply line must be completed in accordance with the relevant regulations and standards by user.

### **4.3- Gas Type Conversion**

- The appliances should be purchased depending on operating gas type. In case of a demanding gas type conversion, this is made with charge.
- Gas type conversion should be performed by the authorized service. Gas leak test should be made after the conversion operation.
- The self-adhesive conversion label must be placed on the boiler after gas type conversion.

### **4.4- Installation**

- The boiler must be installed in accordance with national and local requirements, gas safety regulations, relevant standards and this manual by qualified installer.
- The appliance should be mounted against a closed wall.
- The appliance should not be positioned having direct contact to steam, detergent or gases.
- Any change of flue position must not be made without consulting qualified person.
- Sunlight can cause color change on the exterior of your device over time.
- The device must be installed in indoor spaces under normal conditions. However, it can be operated in a suitable cabinet in places such as garage, open balcony. Please consult E.C.A for proper cabine sizes.
- If device is located in an unheated area, it should be connected to mains, switched on, and pressure of installation should be within operation range so that freeze protection would be activated. Even if device is OFF position, freeze protection stays activated.
- Be careful due to the fact that the front panel is glass during the assembly of the device, pointed / piercing etc. Care should be taken that objects do not hit the windshield panel.

### **4.5- Boiler Start Up**

- If the user requests gas conversion after purchasing the device, this process is subject to a fee.
- Gas conversion should be done by an authorized service. Gas leakage test must be done after conversion. Boiler start up must be performed certainly by qualified person.
- Gas Type (Natural Gas or LPG), gas supply pressure (mbar), maximum DHW operating water pressure (bar) and electricity supply voltage on the information plate must be suitable with mains supply conditions. This is checked by qualified person.
- After boiler start up, you should request information about operating the boiler and safety precautions from qualified person.



**CAUTION:** The 2-amp bipolar fuse with a minimum contact opening of 3 mm must be used in the electrical connection of the boiler.

## 4.6 - Usage and Maintenance

- Read carefully instructions and precautions in this manual against wrong usage which causes unsafe conditions.
- The boiler should be checked and serviced for general maintenance once a year. Maintenance and service operations must be carried out only qualified person.
- Only a damp cloth should be used for cleaning the outer surface of the boiler and then the surfaces should be dried completely. Do not use chemical substances or solutions which cause rust and scratches in your appliances.



**CAUTION:** This device is not intended to be used by persons with physical, sensory or mental disabilities (even children) or persons with inadequate experience and knowledge, unless the person responsible for the safety of the device provides supervision and management of the use of the device. Children must be kept under surveillance to ensure that they do not play with the device. Cleaning and user maintenance should not be done by unattended children.



**CAUTION:** This device is not intended for use by persons (including children) who are low physical or sensory and mental capacity and inexperienced persons without informing and supervising the use of the device by responsible persons. Ensure that children do not play with the appliance.



**CAUTION:** If device is used incorrectly or for other than its intended use, it may present a life hazard and may cause material damage to the product and its surroundings.



**CAUTION:** This appliance can be used by children aged from 8 years and above and 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 understand the hazards involved.

## 5- PRODUCT

### 5.1- General Specifications

Control panel is ergonomic and easy to use. The Confeo Premix condensing combi boiler with elegant glass touch panel and advanced LCD screen provides ease of use and service. On a LCD display with black instrument panel; you can see the operating state icons, heating and domestic hot water set temperature, water pressure level, failure codes and actions to be taken. With the safety systems available in your device, safety of both you and your device are fully ensured.

These safety systems;

- Flame Failure Safety System
- Boiler Over-Heat Safety System (95 ° C)
- DHW (Domestic Hot Water) Over-Heat System (71 ° C)
- High Water Pressure Protection System (3 bar)
- Low Water Pressure Protection System (0.4 bar)
- Low Voltage Protection System (170 VAC)

- Thermal Accumulation Protection System (with by-pass circuit and “pump over-run”)
- Frost Protection System (for both CH and DHW circuit)
- Domestic Hot Water Flow Control (only for HM Model)
- Pump Anti-sticking Function
- 3 Way Valve Anti-sticking Function (except HCH Model)
- Automatic Air Vent
- Expansion Vessel (8 liters)
- Protection System Against Penetration of Water Through Flue
- Maintenance Reminder Function (Yearly)
- Anti-legionella Protection (only for HST Model)
- Voice Alert System in Case of Error
- Child Lock
- Predictive Maintenance Features (In cases where there is a risk of error, giving warning before error occurs)

### 5.2- Notations of Product

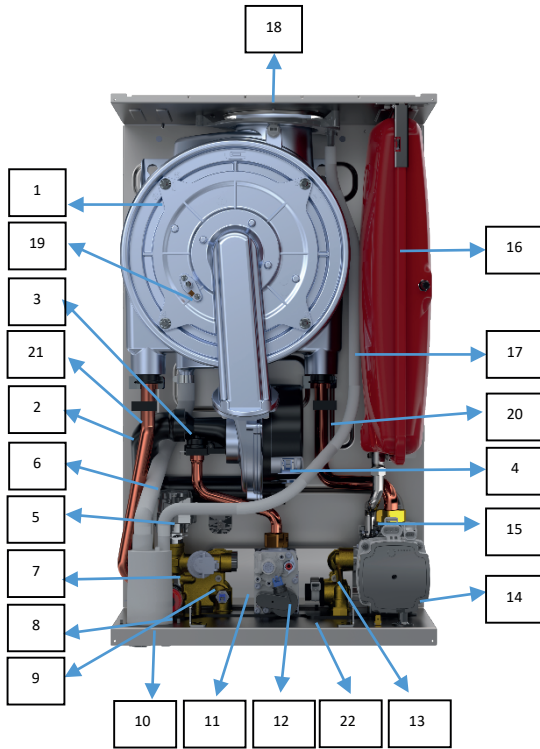
NOTATION	DESCRIPTION
Confeo Premix P 14-20-24-28-30-35 kW HM	Confeo Premix P Hermetic Monotermic Condensing Boiler
Confeo Premix P 14-20-24-28-30-35 kW HCH	Confeo Premix P Hermetic Central Heating Condensing Boiler
Confeo Premix P 14-20-24-28-30-35 kW HST	Confeo Premix P Hermetic Storage Tank Condensing Boiler

Table 1



Figure 1

### 5.3- Detailed View and List of Components



- 1- Main Exchanger
- 2- Silencer
- 3- Venturi
- 4- Fan
- 5- Motorized Valve
- 6- Condensing WaterHose
- 7- Outlet Manifold
- 8- 3 Bar Safety Valve
- 9- Pressure Sensor
- 10- Siphon
- 11- Plated Heat Exchanger
- 12- Gas Valve
- 13- Return Manifold
- 14- Pump
- 15- Flexible Connection Hose
- 16- Expansion Tank (8 liters)
- 17- Rainwater Hose
- 18- Rainwater Hood
- 19- Ignition Electrode
- 20- Return Temp. Sensor
- 21- Supply Temp. Sensor
- 22- DHW Flow Sensor
- 23- Mainboard Box
- 24- Front Glass Touch Panel

Figure 1.1

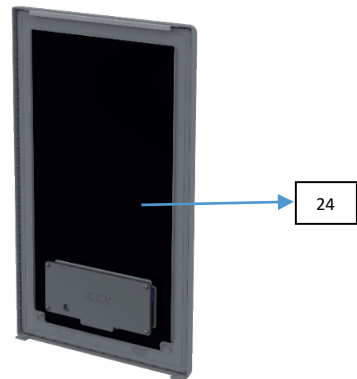
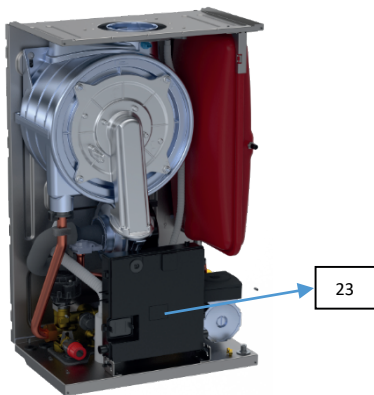


Figure 1.2

\* Components may be different for some appliance models.

### 5.3.1 - HM Model

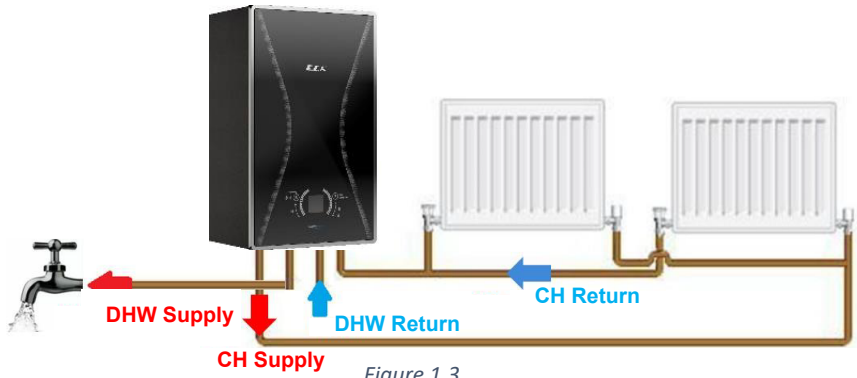


Figure 1.3

### 5.3.2 - HCH Model



Figure 1.4

### 5.3.3 - HST Model

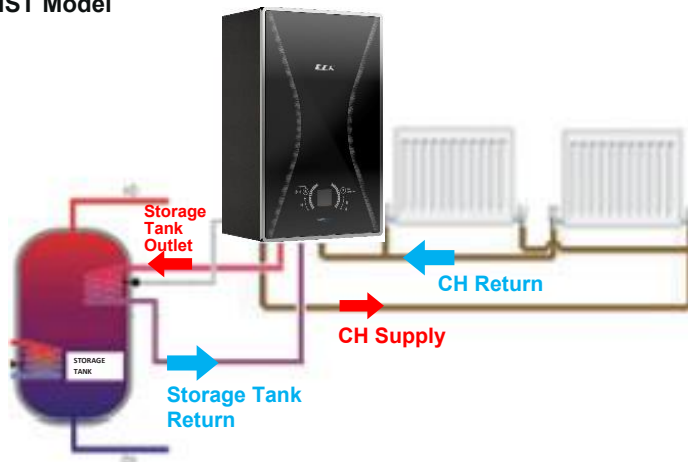


Figure 1.5

# 5.4- Electrical Diagram

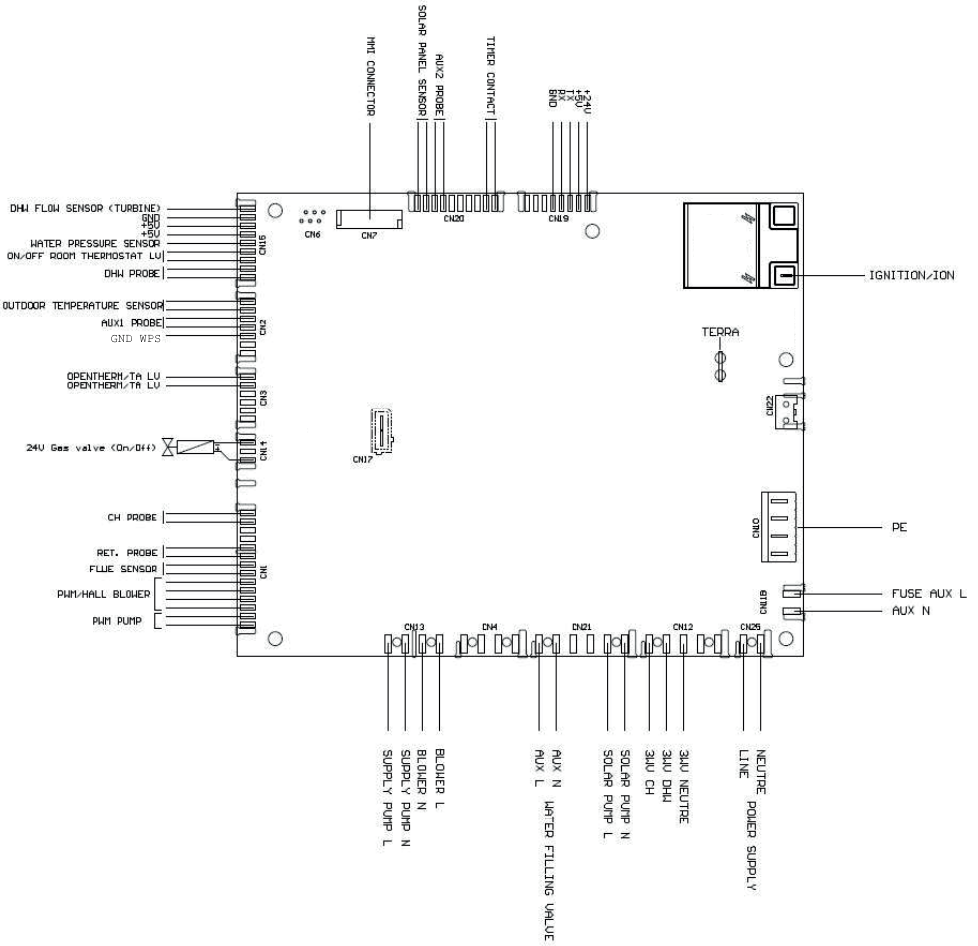


Figure 2

## 6- BOILER PACKAGING



**CAUTION:** Attention must be paid to warning on packaging regarding handling and storage.

- The device is delivered with a cardboard with dimensions of 735 x 345 x 490 (HxWxD) mm, supported by upper and lower styrofoams.

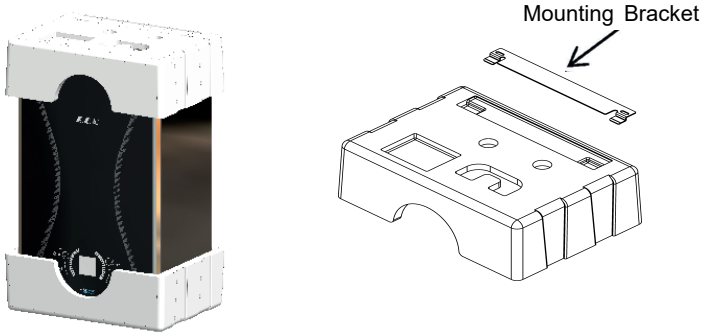


Figure 3

- Parts required for installation of the device (wall bracket, 5 gaskets for HM and HCH and 6 gaskets for HST water and gas connections, 2 anchors and 2 fixing screws) are placed on the top styrofoam.
- The hermetic flue set is delivered in a cardboard box separate from the device. The standard hermetic flue set (Ø60/100 or Ø80/125) consists of the following parts (Figure 4).

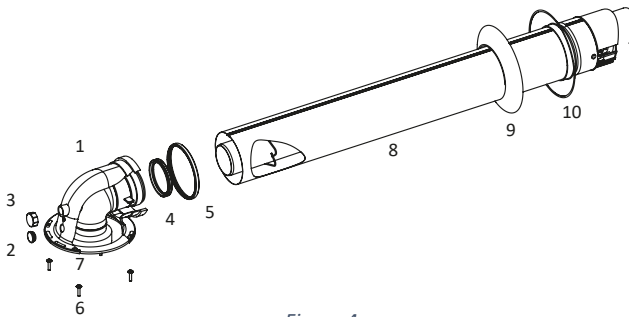


Figure 4

1-90° Elbow	6- Flange Screws
2- Exhausted Gas Tap	7- Flange Gaskets
3- Air Inlet Tap	8- Flue Exhaust Terminal
4- Sealing Gasket Ø60 or Ø80	9- Inner Wall Connection Flange
5- Sealing Gasket Ø100 or Ø125	10- Outer Wall Connection Flange (EPDM)

Table 2

## 7- FLUES

### 7.1- Flue Sizes

Flue gas connections between the boiler and the flue terminal must be made using original components specially designed for the condensing boiler to ensure that the device operates efficiently and correctly. Flue gas pipes and fittings of non-condensing boilers can not be used for exhausting gases from condensing boilers. In the horizontal concentric flues, the exhaust gas pipe (the inner pipe) facing outwards should be inclined upward and the fresh air pipe (outer pipe) should be inclined downward. When the original flue set is installed parallel to the ground, the exhaust gas pipe is automatically inclined upwards.

Equivalent length for each 90° elbow: 1 m  
 Equivalent length for each 45° elbow: 0.5 m

### 7.2- Flue Types

The terminals for the supply of combustion air and for the evacuation of combustion products shall not be installed on opposite walls of the building. Information for C43 flue type is given below.

	Confeo Premix P					
	14 kW	20 kW	24 kW	28 kW	30 kW	35 kW
Flue gas max flow rate (gr/sec)	5,8996	8,428	10,1136	11,7208	13,6808	13,9552
Flue gas min flow rate (gr/sec)	2,2638	3,234	3,8808	2,744	3,528	3,6064
Flue gas max temperature (C)	80	80	80	80	80	80
Flue gas min temperature (C)	30	30	30	30	30	30
Flue gas Pressure	100 Pa					

Table 3

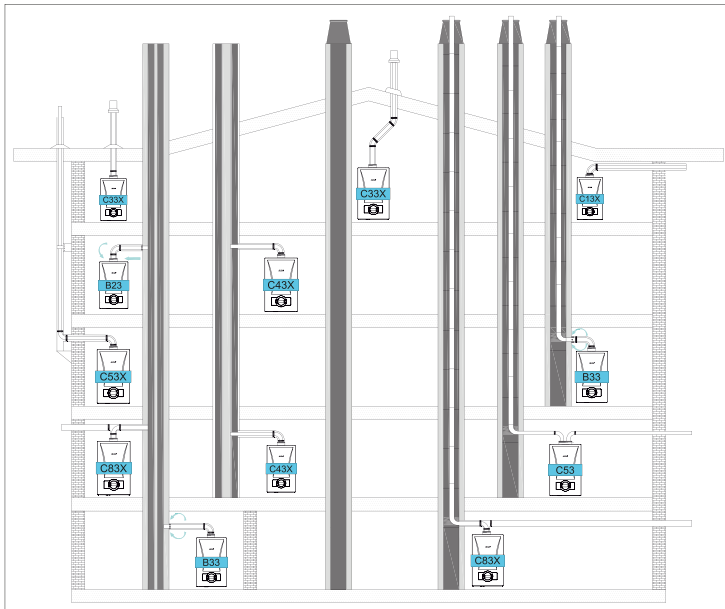


Figure 5



### 7.3- Distances for Placement of Flues

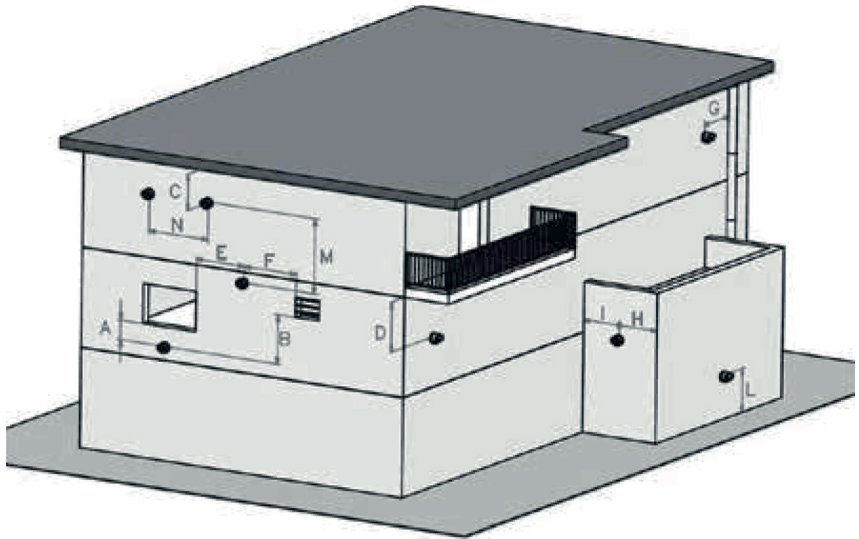


Figure 6

POSITION	DISTANCE(cm)	POSITION	DISTANCE(cm)
A- Below a window	60	G- Next to vertical or horizontal pipe	60
B - Below an air vent	60	H- Below the distance grille from the outside of the building	30
C- Below rain channel	30	I- Distance from the inner corner of the building	100
D- Under the balcony	30	L- From the ground or from the floor	180
E- Next to a window	40	M- Vertical distance of two flue outlets	150
F- Next to an air grill	60	N- Horizontal distance of two flue outlets	100

Table 4

Places where it is undesirable to install the chimney outlet of type C (hermetic) devices are stated in the following articles:

- Passages and corridors,
- Narrow eaves gaps,
- Ventilation and light spaces of buildings,
- Inner parts of balconies,
- Elevator shafts,
- Vents that provide fresh air to other units,
- In places that may be directly exposed to wind resistance.

Underground, basement etc. chimneys of the products installed in the spaces; It should be installed in a way that it will not endanger living spaces and that no person can intervene. If such an installation is not possible, the chimney outlet should be extended to the roof.

## 8- INSTALLATION

### 8.1- Selection of Installation Location of Device

The boiler must be installed in accordance with gas safety regulations and relevant standards. Additionally, the clearance around the boiler should be as shown in fig 7. In order to make service, maintenance and usage easier.

**Figure 7:** It shows the minimum distances required from the top and sides of the device (Dimensions given in cm).

The installation must comply with the following minimum distances so that servicing and maintenance of the boiler can be performed correctly. The position of the boiler must be checked against technical requirements.

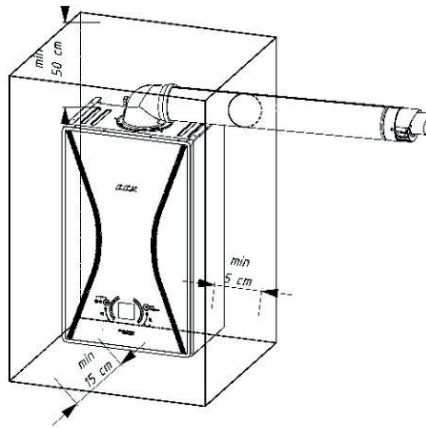


Figure 7

- Information** • The device can be used at altitudes up to 2000 m above sea level.
- Information** • There is no need to remove side panels in the combi boiler service operations. Minimum 5 cm clearances are given taking into consideration the share of possible side panel sheet changes.
- Information** • Do not install your boilers in locations that will be exposed to direct sunlight. Sunlight can cause color change on the exterior of your device over time.
- Information** • Ambient temperature of device's installation location should be between 5-35°C.

Since the outside temperature of the device does not rise above 85 ° C at the maximum heating power, no special protective measures are required against the combustible construction materials and components.

## 8.2- Independent Operation from Ambient Air (Type C)



**DANGER:** For room sealed operation, the boiler location and air/flue terminal position must obey national and local requirements, gas safety regulations and relevant standards



**DANGER:** Non-approved combustion air / flue gas flow pipes may pose a risk of injury. Only use the manufacturer's original combustion air / flue gas flow pipes. It is not appropriate to interfere with the original chimney kits (cutting, adding, etc.).



**DANGER:** During installation, the combi boiler chimney set and accessories must be fixed in a way to maintain their tightness, taking into account the effects and impacts that may come from the outside. Otherwise, the CO (carbon monoxide) gas that will leak from the chimney connections will cause poisoning and pose a life-threatening risk.

- A chimney clamp should be used for each chimney and vertical section transition points, and a distance of less than 2 m should be left between the two chimney clamps. The chimney system must be rigidly fixed to the wall with the chimney clamp.
- IPX4D protection class devices are not suitable for unprotected outdoor installations. These devices must be installed inside of the building or installed with proper boiler cabinet to the outdoor.
- In case of gas leakage, it is necessary to vent the installation room according to national and local requirements, although the room sealed operation boilers are independent of room volume and ventilation.



**DANGER:** Do not block the air vents which provide fresh air to the installation room.

The chimney outlet terminal must be opened to an external environment where air inlet and flue gas outlet can be provided uninterruptedly.

- The minimum acceptable dimensions from the terminal to obstructions and ventilation openings must obey national and local requirements.
- All horizontally fitted ducts (air/flue) should be fitted 2° or 3° upwards incline to allow condensate water drain to the boiler.



**Information**

- The flue ducts are always wet.



**Information**

- Under cold or excessive humid weather conditions the water vapor inside the waste gas may condensate while leaving the flue.

## 8.3- Mounting the Boiler

After determination of boiler mounting location follow the instructions given below;

- The points of lock screws of wall bracket and assembly bracket are marked by using the assembly template inside installation and user's operating instructions of the device (pages 34-35-36).
- After drilling the marked points, wall assembly bracket and assembly bracket are fixed on the wall by the dowel and lock screws which are inside the packaging of the device.
- Final , the boiler is hanged on the wall by placing the assembly bracket on the back side of the boiler on the mounting bracket assembled on the wall.

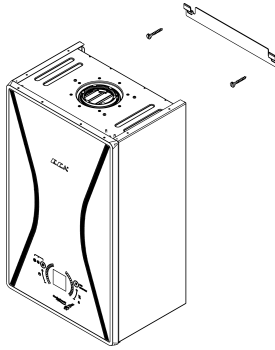


Figure 8

## 9- CONNECTIONS

### 9.1- Condensate Discharge Connection



In condensing combi boilers, condensation occurs during combustion. The amount of condensate varies depending on the operating conditions of the device. By consuming 1 m<sup>3</sup> of natural gas, a maximum of 1.7 liters of condensate occurs.

- Condensate must be connected to a drain using a plastic hose connected to the end of the siphon. The drain hose supplied with the device is recommended for drain connection. 1 cable tie should be added to the hose for fixing.
- If the discharge hose will be connected to a drain outside the building, insulation must be made if necessary to prevent the hose from freezing.
- The condensate drain hose and its connecting parts must be made of plastic material.
- To ensure good flow in the discharge hose, all horizontal hose connections should be made with a 2° and 3° downward inclination.



Figure 9

## 9.2- Gas and Water Connections

Water and gas supply connections between the boiler and the mounting bracket can be fixed with the pipes and the nipples.

### 9.2.1- HM Model

- a) CH flow  $\frac{3}{4}$ " (hot)
  - b) DHW outlet  $\frac{1}{2}$ " (hot)
  - c) Gas inlet  $\frac{3}{4}$ "
  - d) DHW inlet  $\frac{1}{2}$ " (cold)
  - e) CH return  $\frac{3}{4}$ " (cold)
- A suitable valve should be mounted on the gas inlet and CH & DHW water circuit. In addition, a water filter must be mounted on CH ( $\frac{3}{4}$ " return) and DHW ( $\frac{1}{2}$ " inlet).
  - A plastic pipe should be fixed the outlet tap of the three bar relief valve and the pipe should be connected to the drain line.
  - The connection between the appliance and gas supply must be made with a flexible pipe.
  - National and local requirements must be taken into consideration.

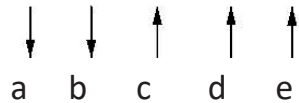
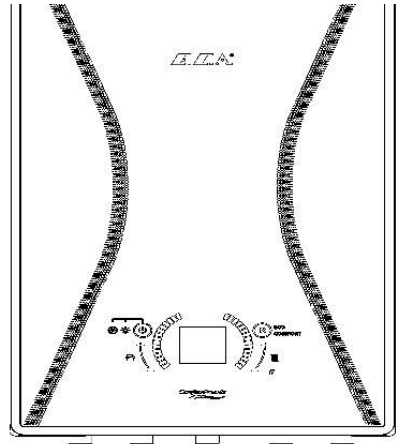


Figure 10

### 9.2.2- HCH Model

- a) CH flow  $\frac{3}{4}$ " (hot)
- b) Water filling line  $\frac{1}{2}$ "
- c) Gas inlet  $\frac{3}{4}$ "
- d) CH return  $\frac{3}{4}$ " (cold)

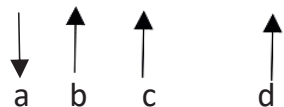
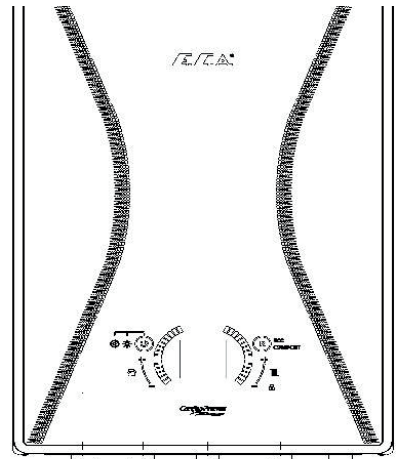


Figure 11

### 9.2.3- HST Model

- a) CH flow  $\frac{3}{4}$ " (hot)
- b) Boiler supply water (hot)
- c) Gas inlet  $\frac{3}{4}$ "
- d) Boiler return (cold)
- e) Water Filling Line  $\frac{1}{2}$ "
- f) CH return  $\frac{3}{4}$ " (cold)

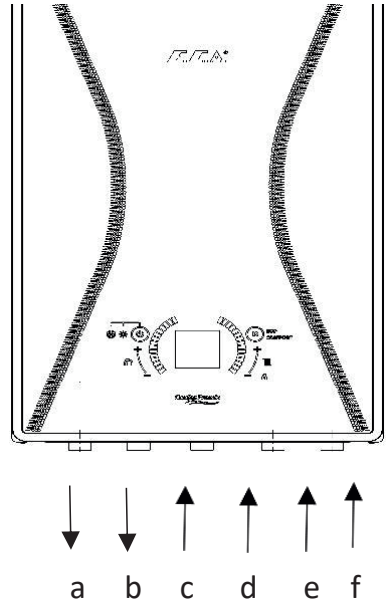


Figure 12

### 9.3- Electrical Connection

Electrical installation must be made according to the national and local instructions. The boiler must be earthed and a standard 230 V AC – 50 Hz supply is required.



**CAUTION:** When connecting the device to electricity, care should be taken to ensure that there is no voltage on the electrical line.



**CAUTION:** If the supply cable is damaged, it must be replaced by the manufacturer or its authorized service or an equally qualified person.



**CAUTION:** A 2 Ampere double pole fuse with a minimum contact opening of 3 mm must be used in the electrical installation connection of the boiler.



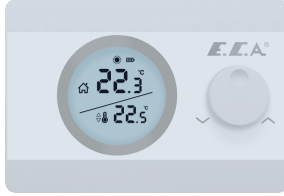
**CAUTION:** The electrical installation cable diameter (including insulation) in which the device will be installed must be at least 14 mm and the pipe diameter used must be at least 16 mm.

## 9.4- Room Thermostat

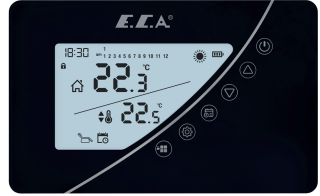
One of the optional room thermostats compatible with your device can be used to control heating of the space.



E.C.A. Poly COMFORT  
200B Thermostat  
**7006903007**



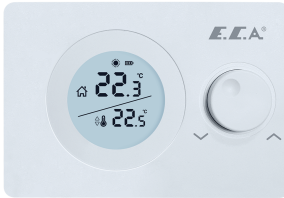
Poly Plus 100 Wireless  
Room Thermostat  
**7006903002**



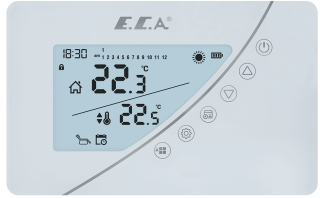
E.C.A. Poly TOUCH  
400B Thermostat  
**7006903006**



E.C.A. Poly COMFORT  
200W Thermostat  
**7006903004**



E.C.A. Poly PURE  
100W Thermostat  
**7006903003**



E.C.A. Poly TOUCH  
400W Thermostat  
**7006903005**



E.C.A. Circle 100 W  
On/Off Wireless  
Room Thermostat  
**7006903000**



E.C.A. Poly 100W  
On/Off Wireless  
Room Thermostat  
**7006903001**



E.C.A. Wireless  
Room Thermostat  
On/Off  
**7006907522**



E.C.A. Programmable  
Digital Room Thermostat  
-CM707  
**7006901313**

Figure 13

## 9.5- Outdoor Temperature Sensor

To connect the room thermostat or outdoor sensor to the device, the connections behind the control panel are used. For the room thermostat, the bridged cable connection on the back of the control panel is removed and the outer air sensor is connected to free sockets on the terminal.



- It can be provided as an option according to boiler models.
- It allows operation of combi boiler adjusted to outside temperature.

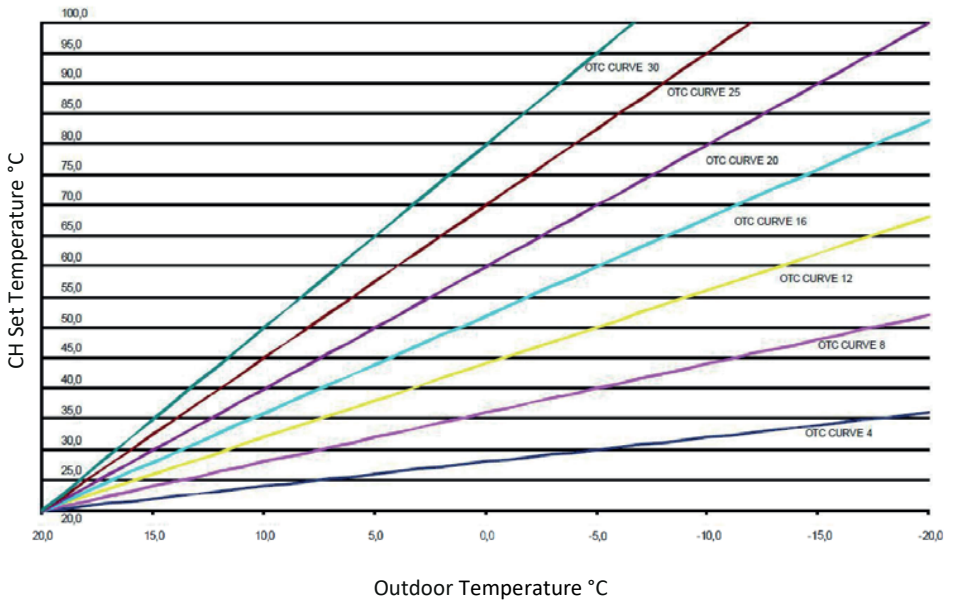


Figure 14



## 9.6- Room Thermostat and Outdoor Temperature Sensor Connection

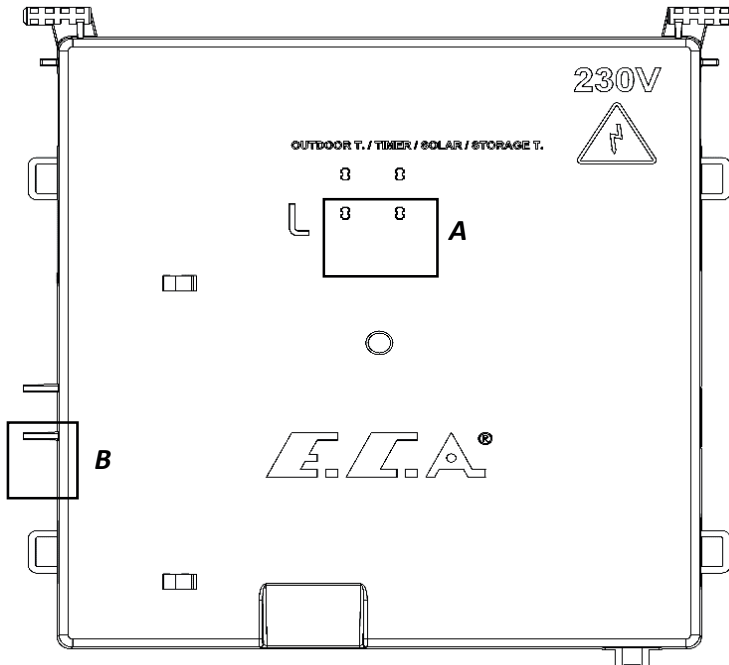
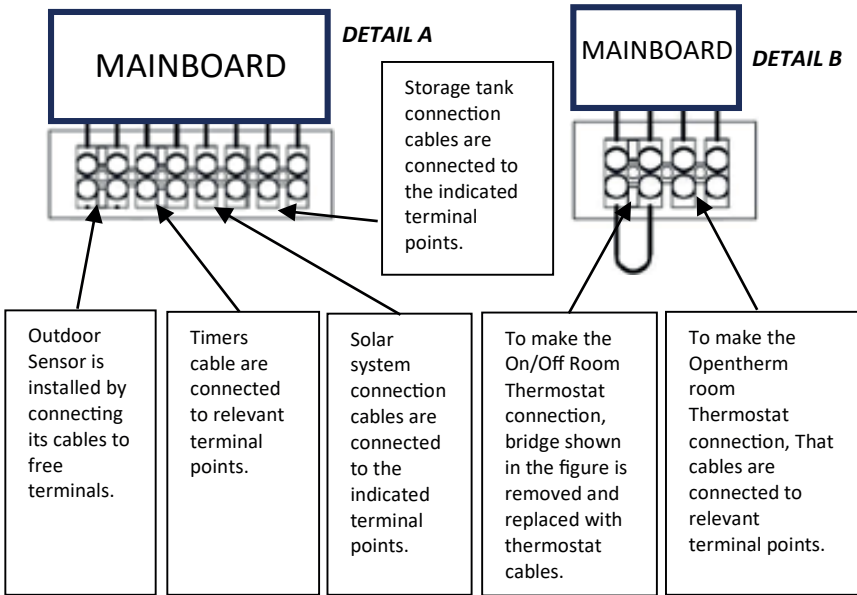


Figure 15

- In your combi only E.C.A. Room thermostats approved by authorized services should be used.
- Otherwise, it may cause your device to malfunction. No liability is accepted in such cases.



The connections of room thermostat, outdoor sensor and timer must be performed certainly by qualified person. For Room Thermostat activation, special parameter adjustment must be done by qualified person.

## 10- COMMISSIONING, USE AND TURNING OFF THE BOILER

### 10.1- Commissioning, Filling Water into Boiler and Heater Installation

First of all, the boiler electrical connection is made. The electrical connection of the device must be connected to a grounded socket line that can provide sufficient voltage (230 VAC 50 Hz) for the device.

- All radiator valves are opened.
- The valves of the boiler's heating flow and return lines must be open. Please check.
- After all these procedures, filling valve is slowly opened and filling procedure is initiated.

The filling process continues until the water pressure of 1.5-2 bar is seen on the LCD display and then the filling valve is closed.

- When the water pressure increases to 0.8 bar, the LCD will show "AP" and the boiler will switch to automatic air vent mode. In this case you should definitely wait for 160 seconds without pressing "RESET".

- Check water pressure on pressure indicator frequently and ensure that the pressure is between 1.5 and 2 bar when system is cold. If the pressure drops frequently, it means that there is a water leak in the system. In such case, it is necessary to call a plumber.

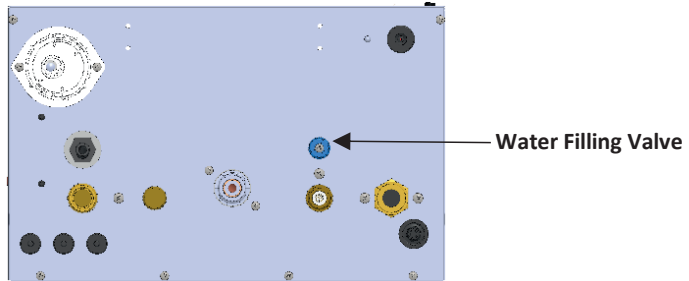


Figure 16



**ATTENTION** : Always close the water filling valve, the installation water may leak and damage the environment.

- To discharge air out of CH installation, purgers of the radiator is loosened and air is discharged until water comes out of radiators. This procedure is done for all radiators.
- Pressure is checked again on LCD screen. The filling valve is opened and again pressure is raised to 1.5 – 2 bar level.
- Radiator purgers are checked again to see if there is any air left inside of heating installation. For full efficient heating, all air must be discharged.
- Please repeat AP mode after electricity off and on.
- Finally, check for any leaks in the radiator and piping.



**ATTENTION:** In order to prevent calcification of the heat exchanger, you are advised not to use well water, natural spring water instead of mains water.

- Check the domestic water installation by opening the hot water tap. Check for any leaks in the plumbing pipes.
- The exhaust gas flue assembly must be installed from the original parts in accordance with the instructions.
- Gas supply must be checked by the qualified gas company.
- Must be called authorized service to start up the boiler after all these processes are completed.
- Commissioning must be strictly performed by authorized service.
- At the end of the commissioning of the device after installation, please ask for information of authorized service on operating the device and relevant safety devices on device.

## 10.2- Using the Device

### 10.2.1- Switching off the Device

You can switch off the boiler by holding down the ON/ OFF button for 5 seconds. LCD light will be reduced to %75 after 1 minute.

**Anti freeze fuction remains active.**

## 11- CONTROL PANEL

### 11.1- Icons of Buttons

The control panel consists of the relevant elements as shown in figure 17 below.

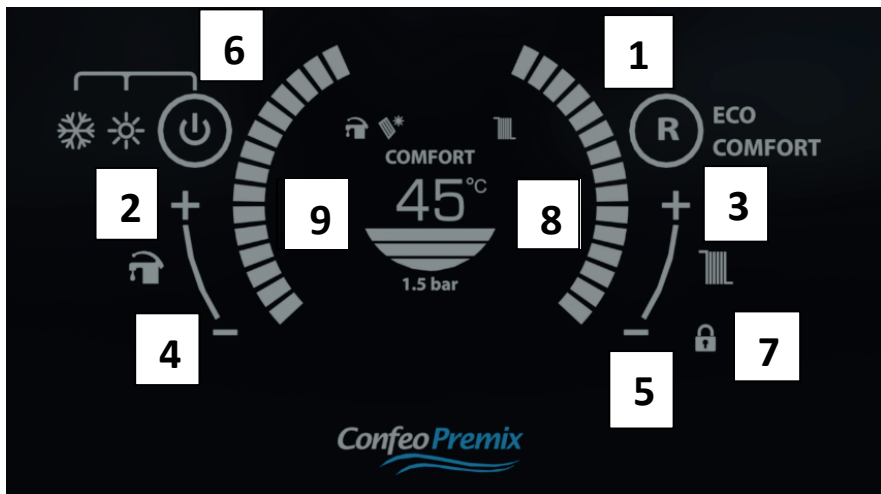


Figure 17

## **1 Nu. Button: Reset Button**

Main Functions :

- Exit from lockout error (EXX)
- ECO mode activation
- Comfort mode activation

When your device fails, the error code will start flashing on the display. There are 2 types of errors, lockout (EXX) and blocking (FXX) error. When a lockout error condition occurs (EXX), the error must firstly be corrected so that the error code can be removed from the LCD screen. After pressing the "Reset" key once, the device can switch back to normal operation state. As for a blocking error, the fault cannot be removed from the LCD display pressing the "Reset" button (FXX). When this error is corrected, error code is automatically disappears from LCD screen. The first time the device starts, it will start operation in Comfort mode.

Once the Reset button is pressed when operating in Comfort mode, the device will switch to Eco mode. Then when Reset button is pressed again, the unit will switch to Comfort mode.

## **2 Nu. Button: Domestic Hot Water Increase Temperature Button**

The temperature of the domestic water can be increased up to 65 °C thanks to the domestic water temperature increase button.

## **3 Nu. Button: Central Heating Water Increase Temperature Button**

The temperature of the heating water can be increased up to 80 °C thanks to the heating water temperature increase button.

## **4 Nu. Button: Domestic Hot Water Decrease Temperature Button**

The temperature of the domestic water can be decreased down to 30 °C thanks to the domestic water temperature decrease button.

## **5 Nu. Button: Central Heating Water Decrease Temperature Button**

The temperature of the heating water can be decreased down to 30 °C thanks to the heating water temperature decrease button.

## **6 Nu. Button: Position Selection Button (On/Off and Summer/Winter Switch Button)**

Main functions;

The position can be changed by pressing the position selection button once to change between the winter mode and the summer mode. If the button is pressed for 5 seconds, the device will switches into "standby" position. It will suffice to press the button once to get the device in operation position.

## **7 Nu. Button: Child Lock Button**

It is active when the Child Lock Button is kept pressed for 5 seconds and no touch button on the screen performs its function. Just press and hold for 5 seconds to remove it from the child lock.

## **8 Nu. Button: Central Heating Slider Temperature Button**

The temperature of the heating water can be adjust between 30°C – 80 °C thanks to the central heating slider temperature button.

## **9 Nu. Button: Domestic Hot Water Slider Temperature Button**

The temperature of the domestic water can be adjust between 30°C – 65 °C thanks to the domestic hot water slider temperature button.

## 11.2- LCD Screen

LCD screen display icons described here below.

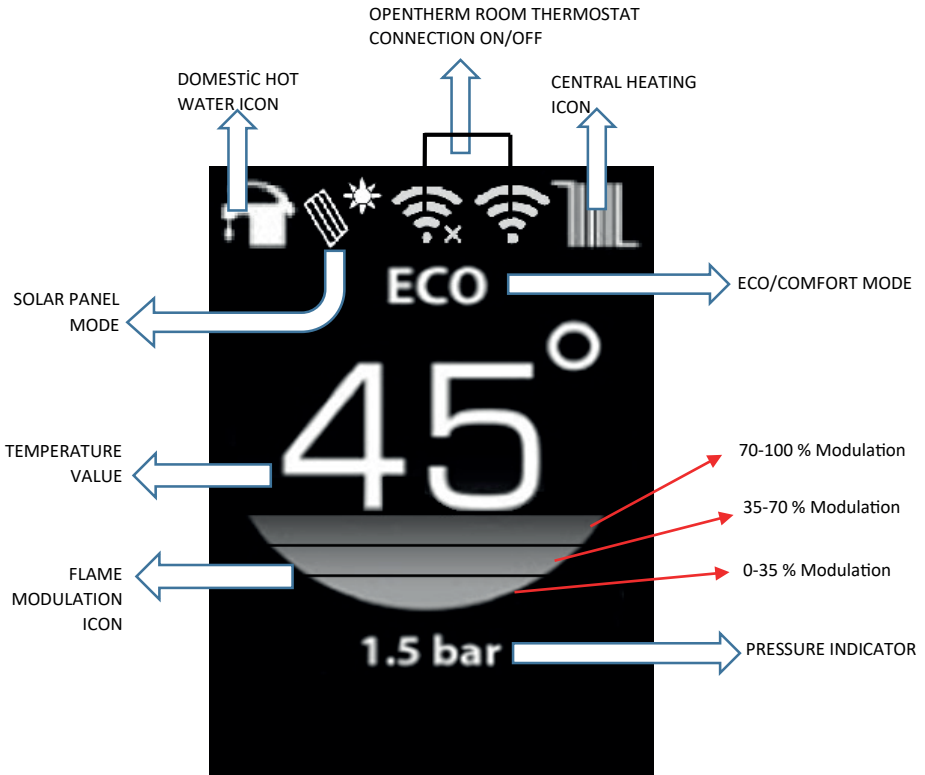


Figure 18

### 11.2.1- Flame Icon

When operating between 0% and 35% capacity range, the icon is displayed on the LCD screen as single bar, whereas it is displayed as two bars when operating between 35% -70% capacity range. If it is displayed as three bars when operating between 70% -100% capacity range.

## 11.3- Operation Functions

### 11.3.1- Standby (OFF Mode)

It is the mode in which the device can be placed in standby. When this mode is taken, central heating and domestic water heating demands are not made. To switch to OFF mode, it is necessary to hold the button "6" (position selection button) continuously for 5 seconds.

The mode is activated when the word "OFF" appears on the screen.

### 11.3.2- Air Discharge Mode (AP Mode)

It is the process that the device applies automatically to discharge the air in the central heating installation for 160 seconds. "AP" appears on the display during this mode. The circulation pump runs for 15 seconds every 20 seconds and stops for 5 seconds. The three-way valve motor also changes positions between CH-DHW every 40 seconds. The situations where this mode is applied are listed below.

- Once the device is powered for the first time or after the electricity has been switched off and on,
- After the reset operation following the overheating fault (E03),
- After elimination of high water pressure (F40) or low water pressure (F37) error,



**Information** Do not press 'RESET' while AP mode is active.

### 11.3.3- Winter mode - Radiator Heating

If the device in the standby position is set to the winter position, the appliance will heat the water in the heating circuit until the domestic water is needed. In the winter mode, both the tap and the radiator icon are displayed on the LCD screen.. When a request for heating is made for radiator, radiator icon flashes (once/second), tap icon stays fixed. When a request for domestic water is made, tap icon flashes (once/second), radiator icon stays fixed. In this mode, radiator heating circuit's temperature can be set between 30-80 °C. For under floor heating applications, the temperature range can be set between 30-45 °C.

### 11.3.4- Summer Mode

If the device in the OFF position is set to the summer position, the device will only respond to the domestic hot water demands. In summer mode, the tap symbol appears fixed on the LCD screen, the radiator icon does not appear. When the domestic hot water is heating request, the tap symbol flashes (1 time / second). In this mode, the domestic hot water temperature can be adjusted between 30-65 °C.

### 11.3.5- Comfort Mode

The standard operating mode of the device is Comfort mode. By pressing the "Reset" button, Eco-Comfort modes can be switched. When Comfort mode is active, "Comfort" icon is displayed on the LCD screen. Comfort mode is only for radiator heating circuit. It has no effect on use of domestic water circuit. In this mode, the device responds to fast heating demands by running in modulation.

### 11.3.6- ECO Mode

By pressing the "Reset" button, Eco-Comfort modes can be switched. When Eco mode is active, "Eco" icon is displayed on the LCD screen. Eco mode is only for radiator heating circuit. It has no effect on use of domestic water circuit. This mode allows fuel saving by performing on-off operation.

### 11.3.7- Maintenance Reminder Mode



It is the mode where a reminder for yearly maintenance is activated. When this mode is active, only "ASE" is displayed on screen and device continues to meet heating requests. When you see "ASE" on screen, please get in contact with E.C.A authorized services for yearly maintenance.

### 11.3.8- Frost Protection Mode

During the winter season, when the installation water temperature falls below 6 ° C, the anti-freeze function is activated and the device continues to operate until the water rises to 15 ° C. In order to keep activated frost protection, the following conditions must be checked and ensured by the customer.

- The power supply of the device must be switched on.
- The gas valve and radiator valves must be open.
- Water pressure of system must be at appropriate level.
- The anti-freeze function helps protect your device, it does not protect your installation.
- If device will not be operated for a while in places where there is risk of freezing, then it is necessary to drain the water or to use an anti-freeze agent.

### 12- ERROR CODES VE DESCRIPTIONS

Error Code	Error Type	Possible Cause	Troubleshooting
E01	Ignition Fault	No gas connection for combi boiler.	1- Check that the gas valve is open. 2- Check if there is gas in installation. 3- Press reset button. 4- If the error is still present (or persists) after reset, notify authorized service of E.C.A.
E02	False Flame Signal	It is triggered if flame is detected in the burner while gas valve is closed.	1- Press reset button. 2- If the error is still present (or persists) after reset, notify authorized service of E.C.A.
E03	Over Temperature Warning	It will occur if the temperature of return and supply water exceeds 90°C.	1- Check that water valves of boiler installation are open. 2- If the combi boiler triggers this error in winter mode, check that at least 1 radiator is open. 3- Press reset button. 4- If the error is still present (or persists) after reset, notify authorized service of E.C.A.
E15	Measurement deviation fault of temperature sensors	Temperature sensors might be defective.	1- Press reset button. 2- If the error is still present (or persists) after reset, notify authorized service of E.C.A.
E16	Error on Temperature Sensor for Supply Water	No temperature is detected by temperature sensor for supply water.	1- Press reset button. 2- If the error is still present (or persists) after reset, notify authorized service of E.C.A.
E17	Error on Temperature Sensor for Return Sensor	No temperature is detected by temperature sensor for return sensor.	1- Press reset button. 2- If the error is still present (or persists) after reset, notify authorized service of E.C.A.
E18	Temperature Sensor Error	The temperature change on the temperature sensor is too high (> 30°C)	1- Press reset button. 2- If the error is still present (or persists) after reset, notify authorized service of E.C.A.
E33	Error on Temperature Sensor for Return Sensor	The return water temperature sensor is in short or open circuit state.	1- Press reset button. 2- If the error is still present (or persists) after reset, notify authorized service of E.C.A.
E35	Error on Temperature Sensor for Supply Water Temperature	The outgoing water temperature sensor is in short or open circuit state.	1- Press reset button. 2- If the error is still present (or persists) after reset, notify authorized service of E.C.A.
E38	Low water pressure error 1 week after last water filling	Water leakage in plumbing or boiler	1- Press reset button. 2- If the error is still present (or persists) after reset, notify authorized service of E.C.A.
E44	Valve provides no feedback	The gas valve may be failed.	1- Press reset button. 2- If the error is still present (or persists) after reset, notify authorized service of E.C.A.

E64	Hardware Faults 1	Specific fault in hardware	1- Switch off and on the boiler. 2- If the error is still present (or persists) after switch off/on, notify authorized service of E.C.A.
E65	Hardware Faults 2	Specific fault in hardware	1- Switch off and on the boiler. 2- If the error is still present (or persists) after switch off/on, notify authorized service of E.C.A.
E80	Temperature difference error between return water temperature and supply water temperature sensor	Temperature detected by temperature sensor for return water is higher than temperature detected by temperature sensor for supply sensor	1- Press reset button. 2- If the error is still present (or persists) after reset, notify authorized service of E.C.A.
E82	Flame failure (more than 12 flame loss in one hour)	Flame detection problem	1- Press reset button. 2- If the error is still present (or persists) after reset, notify authorized service of E.C.A.
E83	High Temperature Error for Flue Gas ( twice F07 error in last month)	Main Exchanger problem	1- Press reset button. 2- If the error is still present (or persists) after reset, notify authorized service of E.C.A.
E98	Hardware Faults 3	Specific fault in hardware	1- Switch off and on the boiler. 2- If the error is still present (or persists) after switch off/on, notify authorized service of E.C.A.
E99	Hardware Faults 4	Specific fault in hardware	1- Switch off and on the boiler. 2- If the error is still present (or persists) after switch off/on, notify authorized service of E.C.A.
F05	Fan Feedback Fault	Failure of fan or fan cable	1- Press reset button. 2- If the error is still present (or persists) after reset, notify authorized service of E.C.A.
F07	Over Temperature Error for Flue Gas	It occurs when the temperature of the flue gas exceeds 95 °C.	1- Notify authorized service of E.C.A.
F10	Insufficient water circulation error	Clogging in installation	1- Notify authorized service of E.C.A.
F13	Repeated Reset Fault	Pressing of Reset button more than 5 times in an hour	1- Notify authorized service of E.C.A.
F34	Low Supply voltage	It occurs when the supply voltage falls below 170V.	1- Notify authorized service of E.C.A.
F36	Main Frequency Fault	Main (electricity) problem	1- Notify authorized service of E.C.A.
F37	Low Water Pressure Fault	It occurs when water pressure sensor detects a relatively low water pressure (0.4 bar) for your device.	1- Check water pressure in heater installation of your device. 2- Fill the system with water until the pressure reaches 1.5-2 bar (device will eliminate error when the pressure is over 0,8 bar). 3-Check your valves and installation against leaks. 4- If the problem is still present (or persists), notify authorized service of E.C.A.
F39	Outdoor Temperature Sensor Fault	Outdoor temperature sensor might be defective.	1- Press reset button. 2- If the error is still present (or persists) after reset, notify authorized service of E.C.A.
F40	High Water Pressure Fault	It occurs when water pressure sensor detects a relatively high water pressure (2,9 bar) for your device.	1- Check water pressure in heater installation of your device. 2- Tur off the device and restart it. 3- If the error is still present (or persists) after reset, notify authorized service of E.C.A.
F41	Water Filling (Auto) Running	Automatic water willing is continuing	1- Notify authorized service of E.C.A.
F42	Water Filling (Auto) Not Completed	Water filling valve may be failed or mains water pressure may be insufficient.	1- Notify authorized service of E.C.A.



F43	Low Water Pressure After Auto Water Filling Fault	Water filling valve may be failed or mains water pressure may be insufficient.	1- Notify authorized service of E.C.A.
F47	Water Pressure Sensor Error	Water pressure sensor is not plugged in or there is no contact.	1- Press reset button. 2- If the error is still present (or persists) after reset, notify authorized service of E.C.A.
F49	Modulation Room Thermostat Communication Fault	Room Thermostat may be failed or connection problem	1-Switch off and on the boiler. 2- Press reset button. 3- If the error is still present (or persists) after reset, notify authorized service of E.C.A.
F50	Storage Tank Sensor Fault	Storage tank sensor might be defective.	1- Press reset button. 2- If the error is still present (or persists) after reset, notify authorized service of E.C.A.
F51	PT1000 solar sensor error	PT1000 solar sensor might be defective.	1- Press reset button. 2- If the error is still present (or persists) after reset, notify authorized service of E.C.A.
F52	Error on temperature sensor for domestic water	Temperature sensor for domestic water might be defective.	1- Notify authorized service of E.C.A.
F53	Error on temperature sensor for flue gas	The flue gas temperature sensor is in short or open circuit state.	1- Notify authorized service of E.C.A.
F81	Temperature sensor deviation test delay	Temperature sensors might be defective.	1- Notify authorized service of E.C.A.
F201	Communication Fault Between Mainboard and MMI	Mainboard-MMI may be failed or communication cable may be failed.	1- Notify authorized service of E.C.A.
<b>PREDICTIVE MAINTENANCE WARNINGS</b>			
1	Flame Loss Risk	Estimates the device's loss of flame condition.	1- Please contact with authorized service.
2	High Water Pressure Risk	Estimates the device's safety valve opening status.	1- Drain water until the water pressure drops to 1.5-2 bar.
3	Low Water Pressure-Water Leakage Risk"	Plumbing / boiler estimates the water leak situation.	1- Please contact with authorized service.

Table 5

## 13- USEFUL INFORMATION ON PRODUCT

### 13.1- Information on the Efficient Use of the Combi Boiler in Terms of Safety and Energy Consumption

Isolation of your building is extremely important. Energy saving is achieved at a considerable degree since the heat loss is lowest in houses with double-glazed windows and insulated walls.

- The use of thermostatic valves in your radiators ensures that the room temperature is constant or allows you to save money.
- Turning radiator valves lower levels in the rooms which will not be used for a long time and keeping the doors closed keeps fuel consumption low.
- If you use the program clock with your device, the combi boiler operates at the times you set and consumes less fuel.
- If you use your boiler with room thermostat, it keeps the boiler temperature at the level you set and thus allows less fuel consumption.
- Covering the radiator top and sides with furniture-like things negatively affects hot air circulation, thus prevents the environment from overheating and increases fuel consumption.
- If you will leave your device in operation late at night, keeping water temperature of the heating circuit at low levels will ensure saving.
- If you feel that the room temperature is high, the radiator valves should be closed instead of opening windows.

### 13.2- Clogging in Installation

- In old installations with iron pipes, usually clogging occurs short time after the device is commissioned.
- If clogging in installation is encountered with, then inhibitor (Sentinel X 100, etc.) should be added to installation water.

### 13.3- Cleaning of Boiler

Keep the outer casing of the combi boiler clean by wiping it with a soft damped cloth. Do not use harsh, abrasive cleaning agents.

Having your boiler serviced during the warranty period and periodically after the warranty period expires, once a year before the winter season, will ensure safe use, save fuel and extend the life of the device. The relevant maintenance times will be automatically reminded by the boiler.

Periodic maintenance must be carried out by E.C.A. Have it done by Authorized Services.

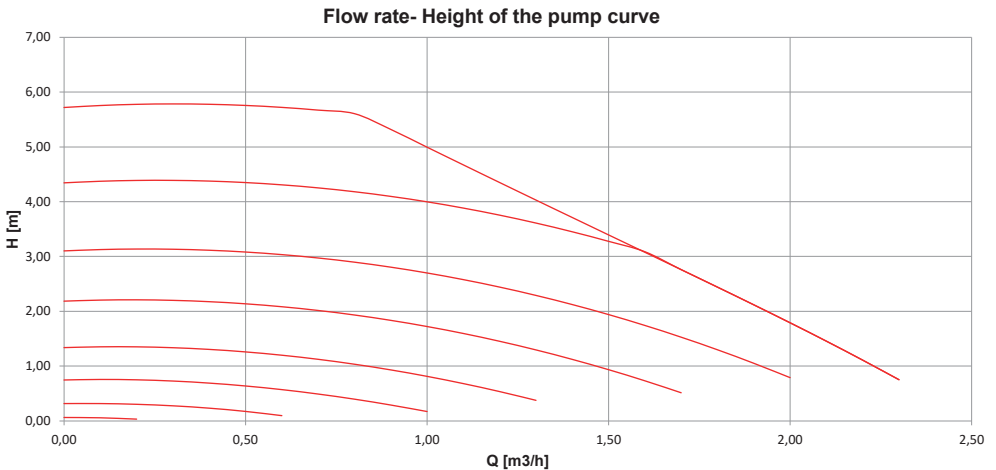
To ensure the longevity and safety of the device, use only original spare parts.

E.C.A. will not be liable for any damage that may occur to the device or surrounding objects and living things as a result of maintenance carried out by unauthorized service and persons. will not be responsible.

## 14- ANNEXES

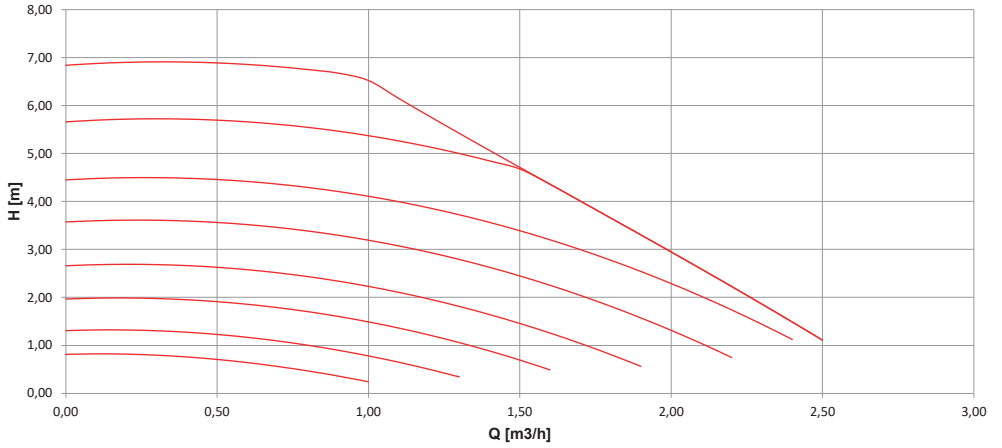
### 14.1- Characteristic Curve Of Water Pressure Height Of The Pump (Pump Headflow Rate)

#### 15- 60 (14-20-24-28-30 KW)



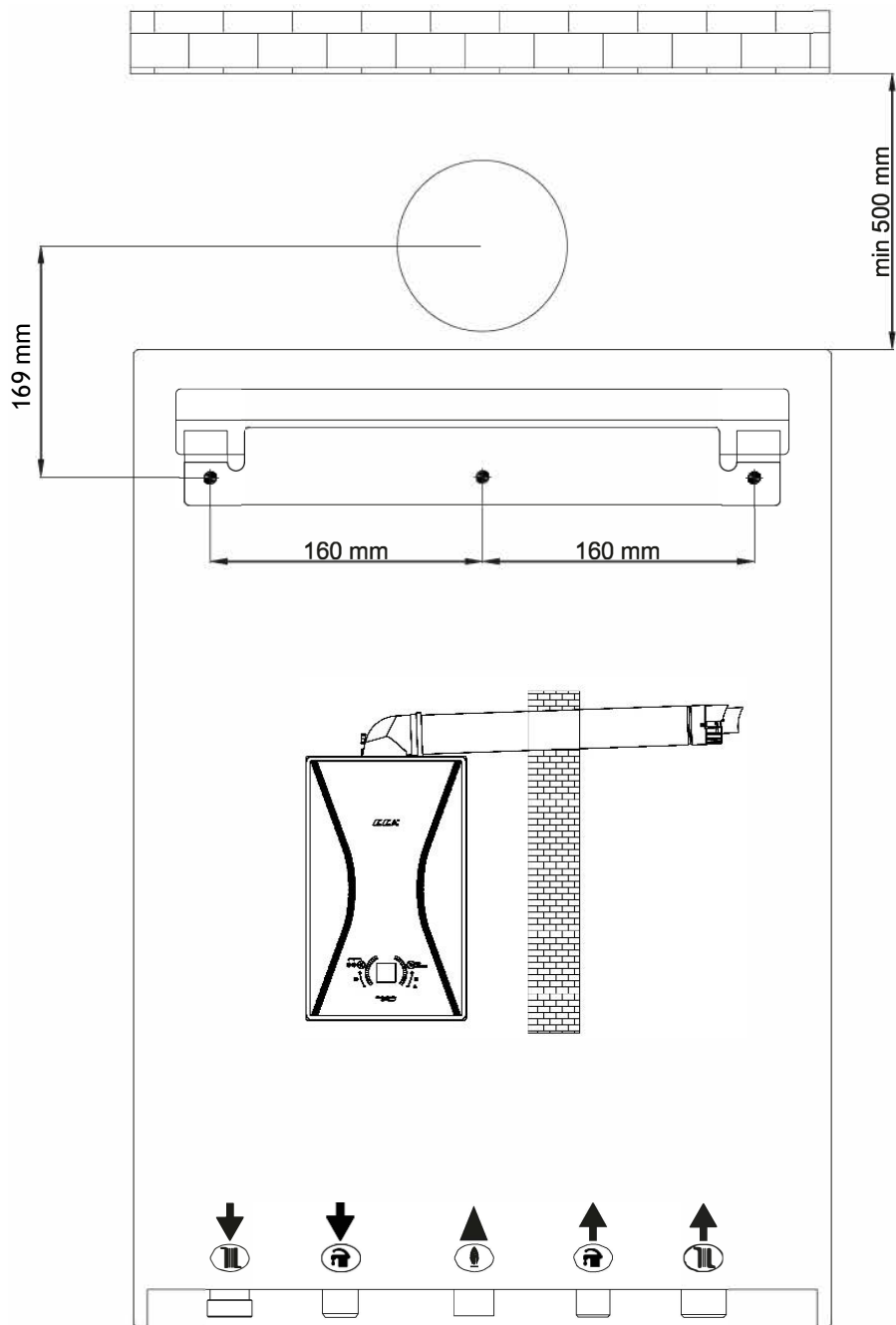
## 15-70 (35 kW)

Flow rate- Height of the pump curve

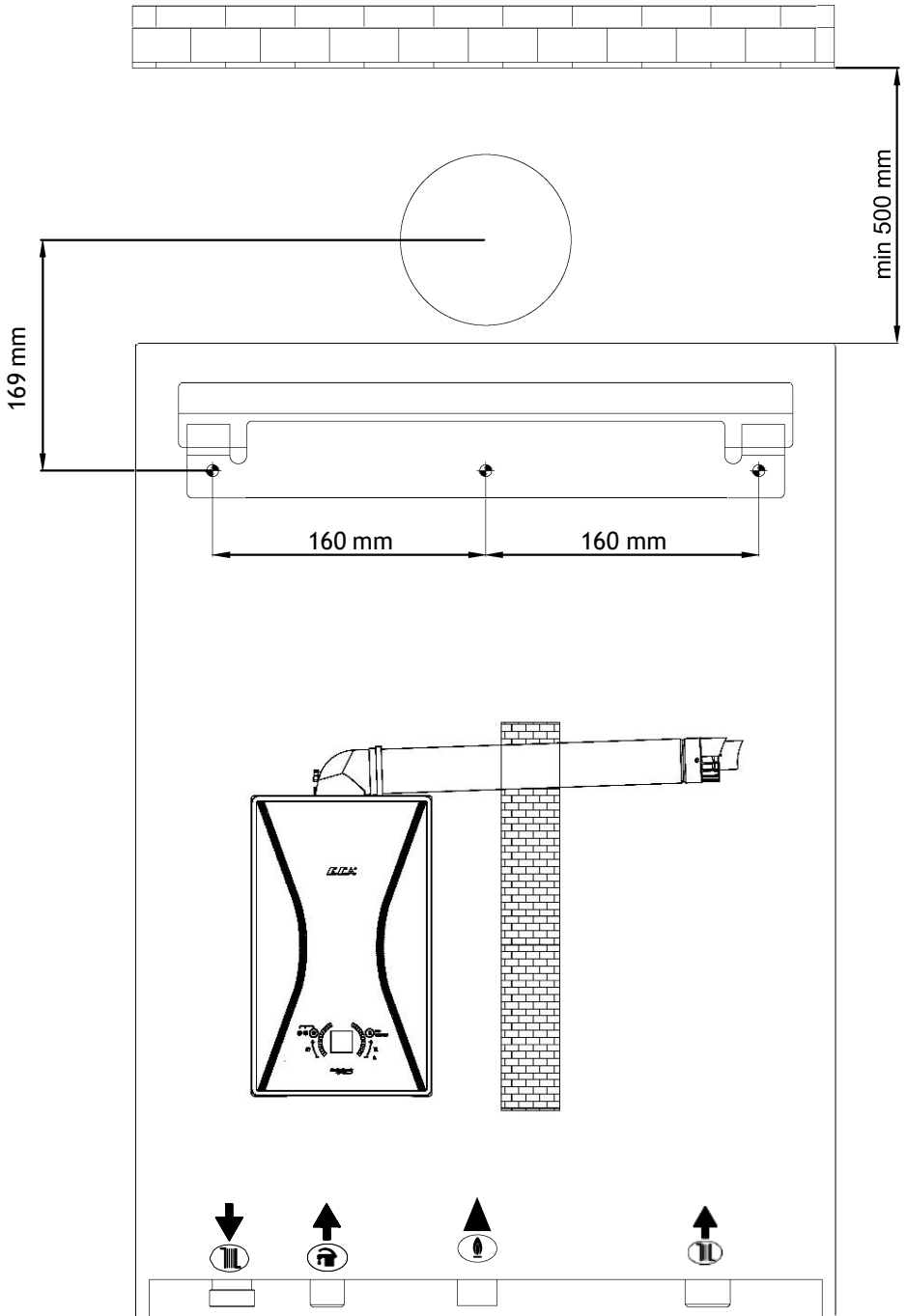


## 15- INSTALLATION TEMPLATE

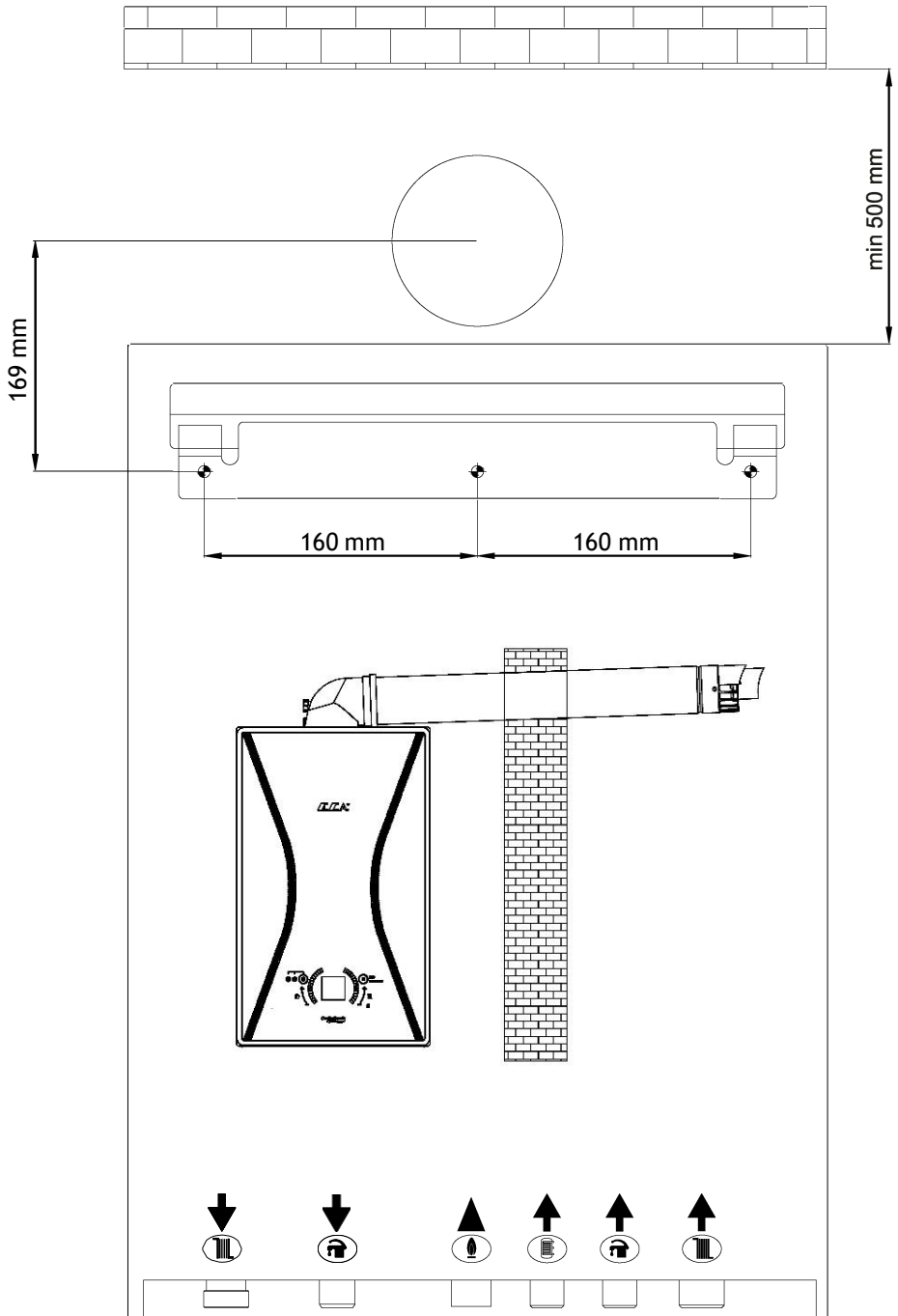
### 15.1- HM Model



## 15.2. HCH Model



### 15.3. HST Model



# 16. ERP GUIDE

## 16.1. Technical Specifications Table

Product Type	Unit	CONFEO	CONFEO	CONFEO	CONFEO	CONFEO	CONFEO
		PREMIX P 14 HM-HCH-HST	PREMIX P 20 HM-HCH-HST	PREMIX P 24 HM-HCH-HST	PREMIX P 28 HM-HCH-HST	PREMIX P 30 HM-HCH-HST	PREMIX P 35 HM-HCH-HST
Gas Category		I2H, I3P, I2Esi, I2E(S), I12L3P, I12H3P, I12ELL3P, I12Esi3P					
Flue Type		C13(X), C33(X), C43(X), C53(X), C63(X), C83(X), B23, B33					
Gas Input Pressure (Natural Gas-G20)	mbar	20					
Gas Input Pressure (LPG-G31)	mbar	37/50					
<b>Capacity-Efficiency</b>							
Min. Heating Power - (60°C min)	kW	5,6	5,6	5,6	6,4	6,9	8
Max. Heating Power - 80/60°C	kW	14,1	20,2	24,5	28	30	35
Min. Heating Power - (30°C min)	kW	6,7	6,7	6,7	7,7	8,3	9,6
Max. Heating Power - 50/30°C	kW	15	22,2	26	29,6	31,7	37
Min. Heat Input (min)	kW	6,2	6,2	6,2	7,2	7,7	9
Max. Heat Input (max)	kW	14,5	20,7	25,2	28,7	30,8	35,9
<b>Gas Consumption</b>							
Natural Gas (@Min-Max Capacity)	m <sup>3</sup> /h	0,65-1,53	0,65-2,2	0,65-2,65	0,75-3,02	0,81-3,25	0,94-3,79
Propane (@Min-Max Capacity)	kg/h	0,51-1,2	0,51-1,7	0,51-1,98	0,59-2,26	0,63-2,46	0,74-2,87
NO <sub>x</sub> Class		6	6	6	6	6	6
<b>Central Heating</b>							
Min. Water Pressure	bar	0,4	0,4	0,4	0,4	0,4	0,4
Max. Water Pressure	bar	3	3	3	3	3	3
Operation Range (Radiator Heating)	°C	30-80	30-80	30-80	30-80	30-80	30-80
Operation Range (Underfloor Heating)	°C	30-45	30-45	30-45	30-45	30-45	30-45
Max. Limit Temperature	°C	> 90	> 90	> 90	> 90	> 90	> 90
<b>Domestic Hot Water (*f)</b>							
Min. Flow Rate for Operation (*f)	L/dk	2,5 (±%10)	2,5 (±%10)	2,5 (±%10)	2,5 (±%10)	2,5 (±%10)	2,5 (±%10)
Min. Flow Rate for Closing (*f)	L/dk	2,0 (±%10)	2,0 (±%10)	2,0 (±%10)	2,0 (±%10)	2,0 (±%10)	2,0 (±%10)
Max. Flow Rate (*f)	L/dk	10 ±%15 (ΔT = 36,1°C)	10 ±%15 (ΔT = 36,1°C)	12 ±%15 (ΔT = 32,4°C)	12 ±%15 (ΔT = 37,6°C)	12 ±%15 (ΔT = 40,0°C)	14 ±%15 (ΔT = 36,8°C)
Min. Water Pressure (*f)	bar	0,4	0,4	0,4	0,4	0,4	0,4
Max. Water Pressure (*f)	bar	10	10	10	10	10	10
Operation Range (*f)	°C	30-65	30-65	30-65	30-65	30-65	30-65
Max. Limit Temperature (*f)	°C	≥ 71	≥ 71	≥ 71	≥ 71	≥ 71	≥ 71
<b>General</b>							
Electrical Supply	V AC-Hz	230 VAC-50 Hz					
Electrical Consumption (Max-HE Pump)	Watt	65	80	85	110	130	165
Protection Class		IPX4D					
Expansion Vessel	lt	8					
Weight (Net)	kg	31	31	31	32	32	34
Dimensions (HxWxD)	mm	678*410*288					
<b>Flue Lengths</b>							
C13 – 60/100 Max.	m	10	10	10	10	10	10
C13 – 80/125 Max.	m	20	20	20	20	20	20
C33 – 60/100 Max.	m	10	10	10	10	10	10
C33 – 80/125 Max.	m	20	20	20	20	20	20
C43 – 60/100 Max.	m	10	10	10	10	10	10
C53 – 60/100 Max.	m	10	10	10	10	10	10
C83 – 80/80 Max.	m	28	28	28	28	28	28
C83 – 80/80 Min.	m	3	3	3	3	3	3
B23 – 80 Max.	m	28	28	28	28	28	28
B33- 60/100 Max.	m	10	10	10	10	10	10
<b>Emission Values</b>							
CO <sub>2</sub> ratio (@max-G20)	%	9,2 ± 0,2	9,2 ± 0,2	9,3 ± 0,2	9,5 ± 0,2	9,5 ± 0,2	9,5 ± 0,2
CO <sub>2</sub> ratio (@min-G20)	%	8,7 ± 0,2	8,7 ± 0,2	8,7 ± 0,2	8,9 ± 0,2	8,9 ± 0,2	8,9 ± 0,2
CO <sub>2</sub> ratio (@max-G31)	%	10,4 ± 0,2	10,4 ± 0,2	10,4 ± 0,2	10,6 ± 0,2	10,6 ± 0,2	10,6 ± 0,2
CO <sub>2</sub> ratio (@min-G31)	%	9,6 ± 0,2	9,6 ± 0,2	9,6 ± 0,2	9,9 ± 0,2	9,9 ± 0,2	9,9 ± 0,2
<b>Boiler Circuit (*g)</b>							
Operation Range (*g)	°C	30-65	30-65	30-65	30-65	30-65	30-65
Max. Limit Temperature (*g)	°C	≤ 85	≤ 85	≤ 85	≤ 85	≤ 85	≤ 85

Table 6

(\*f) Applies to HM models.  
(\*g)Applies to HST models.

## 16.2. CE Marking



The CE mark certifies that the products meet the essential requirements of the applicable regulations in line with the declaration of conformity. The manufacturer can be consulted for a declaration of conformity.

## 16.3. Product Information Sheet (ErP)

The product data presented below complies with the requirements of EU regulations 811/2013 and 813/2013 to supplement directives 92/42/EU and 92/42/EEC.

CE PIN Number: 0085DL0079

Product Data	Symbol	Unit	CONFEO PREMIX P 14 HM-HCH-HST	CONFEO PREMIX P 20 HM-HCH-HST	CONFEO PREMIX P 24 HM-HCH-HST	CONFEO PREMIX P 28 HM-HCH-HST	CONFEO PREMIX P 30 HM-HCH-HST	CONFEO PREMIX P 35 HM-HCH-HST
Condensing boiler			Yes	Yes	Yes	Yes	Yes	Yes
Low-temperature boiler(*b)			No	No	No	No	No	No
B1 boiler			No	No	No	No	No	No
Cogeneration Space Heater			No	No	No	No	No	No
Combination Heater			Yes (for HM models) / No (for HCH and HST models)					
<b>Useful Heat Output</b>								
Rated heat output (*e)	Prated	kW	14	20	24	28	30	35
At rated heat output and high temperature regime (*a)	P4	kW	14,1	20,2	24,5	28	30	35
At 30% of rated heat output and low temperature regime	P1	kW	4,7	6,6	8,1	9,2	9,9	11,5
<b>Auxiliary Electricity Consumption</b>								
At full load	elmax	kW	0,025	0,035	0,04	0,04	0,056	0,066
At part load	elmin	kW	0,012	0,012	0,012	0,012	0,013	0,013
In Standby mode	P5B	kW	0,004	0,004	0,005	0,004	0,004	0,004
<b>Space Heating Efficiency</b>								
Seasonal space heating energy efficiency class			A	A	A	A	A	A
Seasonal space heating energy efficiency	ηs	%	92	92,11	92,21	92,71	92,03	92,85
At rated heat output and high temperature regime (*c)	η4	%	87,9	87,9	87,9	87,9	87,9	87,9
At 30% of rated heat output and low temperature regime (*d)	η1	%	97,2	97,2	97,2	97,7	97,5	97,6
<b>For Combination Heaters (*f)</b>								
Temperature application (*f)			Medium	Medium	Medium	Medium	Medium	Medium
Declared load profile (*f)			XL	XL	XL	XL	XL	XL
Water heating energy efficiency class (*f)			A	A	A	A	A	A
Water heating energy efficiency (*f)	nwh	%	90,7	90,7	83,6	83,9	82,8	82,8
Daily fuel consumption (*f)	Qfuel	kWh	23,07	23,07	23,77	22,80	23,02	21,51
Annual fuel consumption (*f)	AFC	Gj	18	18	18	18	18	18
<b>Other Items</b>								
Standby Heat Loss	Pstby	kW	0,065	0,065	0,065	0,065	0,065	0,065
Ignition Burner Power Consumption	Pign	kW	0	0	0	0	0	0
Annual Energy Consumption	QHE	kWh	12267	17574	21315	24360	26100	30450
Daily Electricity Consumption	Qelec	kWh	0,200	0,200	0,210	0,220	0,240	0,212
Annual Electricity Consumption	AEC average	kWh	44	44	44	44	44	44
Sound Power Level	L <sub>wa</sub>	db(A)	44	46	47	49	50	52
Emission of Nitrogen Oxide	NOx	mg/kWh	33,35	38,06	32,27	21,29	37,40	25,05
Indication about ability working only during off-peak hours			No	No	No	No	No	No
Manufacturer	Emas Makina Sanayi A.Ş.							
Address of the Manufacturer	Mustafa Kemal Bulvarı Organize Sanayi Bölgesi 3. Kısım No: 13 45030 MANISA							

Table 7

(\*a) High-temperature regime means 60 °C return temperature at heater inlet and 80 °C feed temperature at heater outlet.

(\*b) Low temperature means for condensing boilers 30 °C, for low-temperature boilers 37 °C and for other heaters 50 °C return temperature (at heater inlet).

(\*c) High-temperature regime means 60 °C return temperature at heater inlet and 80 °C feed temperature at heater outlet.

(\*d) Low temperature means for condensing boilers 30 °C, for low-temperature boilers 37 °C and for other heaters 50 °C return temperature (at heater inlet).

(\*e) For heat pump heaters and combined heaters, the rated heat output Prated is the same as the standard load in heating mode Pdesignh. The rated heat output of a Psup auxiliary heating device is the same as the auxiliary heating power sup(Tj).

(\*f) valid for HM models.



## 16.4. Package information card stating the central heating energy efficiency of the package

### 16.4.1. Package Information - Combi Boiler

#### Seasonal Space Heating Energy Efficiency of the Combi Boiler (Table 8)

"I": The value of the seasonal heating efficiency of the primary central heater, expressed in %.

#### Temperature Controller

(Room Thermostat-Outdoor Air Sensor)

From the temperature controller information sheet

Class I = 1%, Class II = 2%, Class III = 1.5%,  
Class IV = 2%, Class V = 3%, Class VI = 4%,  
Class VII = 3.5%, Class VIII = 5%

$$\text{①} \quad \boxed{\text{"I"}} \quad \%$$

$$+ \boxed{\text{②}} \quad \%$$

#### Additional Combi

Seasonal space heating energy efficiency in %

From the combi boiler information form

$$\left( \boxed{\text{③}} - \text{"I"} \right) \times 0,1 = \pm \boxed{\text{④}} \quad \%$$

#### Solar Contribution

From the solar energy device data sheet

$$\left( \text{"III"} \times \boxed{\text{Collector size (m}^2\text{)}} + \text{"IV"} \times \boxed{\text{Tank Volume (m}^3\text{)}} \right) \times 0,9 \times \left( \boxed{\text{Collector Efficiency (\%)}} / 100 \times \boxed{\text{Tank Class}} \right) = + \boxed{\text{④}} \quad \%$$

Tank Class  
A\*=0,95, A = 0,91,  
B=0,86, C = 0,83,  
D - G = 0,81

"III": Value of mathematical expression:  $294/(11 \cdot \text{Prated})$ , where "Prated" refers to the preferred heater.

"IV": Value of mathematical expression:  $115/(11 \cdot \text{Prated})$ , where "Prated" refers to the preferred heater.

(1) If tank rating is above A, use 0.95.

#### Additional Heat Pump Additive

From the heat pump data sheet

"II": The preferred factor for weighting the heat output of a package's optional and additional heaters is given in table 8.

$$\left( \boxed{\text{Seasonal Space Heating Energy Efficiency (in \%)}} - \text{"I"} \right) \times \text{"II"} = + \boxed{\text{⑤}} \quad \%$$

#### Solar Additive and Additional Heat Pump

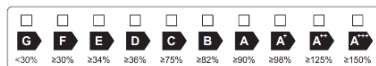
Choose the smaller value

$$0,5 \times \boxed{\text{④}} \quad \text{or} \quad 0,5 \times \boxed{\text{⑤}} = - \boxed{\text{⑥}} \quad \%$$

#### Seasonal Space Heating Energy Efficiency of the Package

$$\boxed{\text{⑦}} \quad \%$$

#### Seasonal Space Heating Energy Efficiency Class of the Package



#### Are the Boiler and Additional Heat Pump Mounted with 35°C Low Temperature Radiating Devices?

From the Heat Pump Data Sheet ⑦

$$\boxed{\text{⑦}} + (50 \times \text{"II"}) = \boxed{\text{⑧}} \quad \%$$

The energy efficiency of the products in the package provided for this data sheet (fiche) may not represent the actual energy efficiency when installed in a building, as the efficiency is affected by other factors such as heat loss in the distribution system and the sizing of the products depending on the size and characteristics of the building.

**Water Heating Energy Efficiency of Combination Heater (Table 9)**

Declared load profile:

①  
"1" %

**Solar Energy Device Contribution**

From the solar energy device data sheet

Auxiliary Electric

( 1.1 x 'I' - 10 % ) x 'II' -  - 'I' = +  %

②  
 %

**Water Heating Energy Efficiency of the Package under Average Climatic Conditions**

③  
 %

**Water Heating Energy Efficiency Class of the Package under Average Climatic Conditions**

	G	F	E	D	C	B	A	A <sup>+</sup>	A <sup>++</sup>	A <sup>+++</sup>
M	<27%	≥27%	≥30%	≥33%	≥36%	≥39%	≥65%	≥100%	≥130%	≥163%
L	<27%	≥27%	≥30%	≥34%	≥37%	≥50%	≥75%	≥115%	≥150%	≥188%
XL	<27%	≥27%	≥30%	≥35%	≥38%	≥55%	≥80%	≥123%	≥160%	≥200%
XXL	<28%	≥28%	≥32%	≥36%	≥40%	≥60%	≥85%	≥131%	≥170%	≥213%

**Water Heating Energy Efficiency of the Package under Average Climate Conditions**

Colder:  - 0,2 x  =  %

Hotter:  + 0,4 x  =  %

The energy efficiency of the products in the package provided for this data sheet may not represent the actual energy efficiency when installed in a building, as efficiency is affected by other factors such as heat loss in the distribution system and the sizing of the products depending on the size and characteristics of the building.

To evaluate the water heating energy efficiencies of combination heater, temperature control and solar device packages, the elements identified in Table 9 are included here:

- I: water heating energy efficiency value of the combination heater, expressed in %.
- II: Value of the mathematical expression (220.Qref)/Qnonsol. Here, Qref is taken from the product data sheet of the solar energy device in Annex VII and for the declared M, L, XL or XXL load profiles of the Qnonsol combination heater.
- III: Value of the mathematical expression (Qaux .2,5)/ (220.Qref) expressed as a %. Here, Qaux is taken from the product data sheet of the solar device and Qref is taken from Table 8 in Annex VII for the declared M, L, XL or XXL load profiles.

**Weighting of Combi Boilers**

**For Table 8 of this Annex, weighting of priority boiler space heater or boiler combination heater and auxiliary heater (\*)**

Psup / (Prated+Psup) <sup>(1)(2)</sup>	II, Package Without Hot Water Storage Tank	II, Package with Hot Water Storage Tank
0	0	0
0.1	0.3	0.37
0.2	0.55	0.70
0.3	0.75	0.85
0.4	0.85	0.94
0.5	0.95	0.98
0.6	0.98	1
≥ 0.7	1	1

(1) Intermediate values are calculated by linear interpolation between two adjacent values.  
 (2) Prated is primarily associated with central heating and combination heater.

## 17. REMOVAL INFORMATION

### 17.1. Unpacking the New Device



Packaging protects your device against transport damage. All materials used in packaging are environmentally friendly and can be reused. Please help: Dispose of the packaging in a way that will not harm the environment. To obtain information about current troubleshooting methods and methods, please contact your authorized dealer or your municipality.

### 17.2. Compliance with AEEE Regulation and Disposal of Waste Product

Dispose of the packaging material in accordance with environmental rules.

This product is T.R. It does not contain harmful and prohibited substances specified in the "Regulation on the Control of Waste Electrical and Electronic Equipment" published by the Ministry of Environment and Urbanization.

It complies with AEEE regulations.

This product is manufactured from high quality parts and materials that are recyclable and reusable. Therefore, do not dispose of the product with household or other waste at the end of its service life. Take it to a collection point for the recycling of electrical and electronic equipment. Ask your local government about these collection points. Help protect the environment and natural resources by recycling used products. Before disposing of the product, for the safety of children, cut off the power plug and break the lock mechanism, rendering it inoperable.



## **PRODUCTION**

---

### **EMAS MAKINA SANAYI A.S**

Organize Sanayi Bölgesi 3. Kısım

Mustafa Kemal Bulvarı No: 13 45030

MANİSA / TÜRKİYE

Tel: +90 236 213 00 21

Fax : +90 236 213 08 59

email: [emas@emas.com.tr](mailto:emas@emas.com.tr) [www.emas.com.tr](http://www.emas.com.tr)

7006910446 - 1.0

