

# MINERWA 25

CONDENSING COMBI BOILER  
USER MANUAL





# MINERWA 25

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# 1. DEAR WARMHAUS CUSTOMER

We congratulate you for preferring the Warmhaus combi boiler to maintain your heating and hot use water comfort for long years and thank for your trust. Warmhaus combi boiler, manufactured in accordance with EU standards and advanced technology, are also being imported to many countries. You can benefit from our Authorized Technical Service network having occupational competency certificate for all kinds of ordinary maintenance requirements for this product manufactured with rigorous studies. Our Authorized Services guarantee protection of your device performance as they always provide original spare parts service. Read this guide carefully in order to use the combi boiler in an economic, comfortable and efficient way and keep as a source of application.

In order to ensure efficient use, we initially recommend you to have the installation performed by a certified dealer experienced and competent in installation by the local gas authority.

## 1.1. GENERAL WARNINGS

Guide Book is an inseparable and integral part of the product and should be delivered to the new user when the device is transferred. This book should be carefully protected and referred to when necessary, as it contains important information regarding installation and operation of the product.



Radiator and DHW installations should be performed by a competent and certified engineering company in accordance with measurements defined based on laws by considering legal regulations in force.



Installation and Maintenance operations should be performed by the expert personnel having adequate technical knowledge in installations sector and occupational competency certificate in accordance with legal regulations in force. As the result of a false installation, dangers may occur which the manufacturer company cannot be held responsible for and may damage people, other live beings (animals, plants) or commodities.



Natural Gas Installation Project; One of the dealers authorized by a gas company located at your city should be preferred for performing project and etude studies.



In order to enable use of the combi boiler with LPG bottles or LPG tanks, conversation of the combi boiler should be performed by our authorized Warmhaus service. Project design and application for LPG use should be performed by the company supplying the tank in accordance with local and legal rules.

# 1.2. GENERAL WARRANTY CONDITIONS



The Manufacturer company shall not have any responsibilities within or out of the agreement scope due to failures arising from failing to follow legal regulations in force and standards and information given in this guide book (and information and instructions provided by the manufacturer under any circumstances) during installation, use or maintenance operations and device warranty shall also be void.



Only the authorized Warmhaus Service is authorized to make the electrical connection of combi boiler and supplying electricity to the combi boiler.

The maintenance and repairs as the result of failure of the product within the warranty period due to material, production and installation errors shall be performed as free of charge without claiming any workmanship costs and spare part payments.

(Also See: 3.5. ISSUES REQUIRED TO BE TAKEN INTO CONSIDERATION BY USERS FOR WARRANTY CONDITIONS)



This device should only be used for its designed intended purposes (to be used in closed-circuit heater installation and production of open circuit domestic hot water production). All kinds of other uses are not suitable and may create a potential danger.

Manufacturer shall not be responsible for damages occurring due to interventions, false installation and initial starting performed by unauthorized persons and warranty scope shall be void. As the combi boiler is a device having heating system, domestic hot water, natural gas/LPG and electrical connections, do not make and have any interventions made without the authorized service.



Any interference with a sealed component is forbidden.



Device maintenance operations should be performed by the authorized and expert technical personnel.



Children must not operate the combi boiler.



This device has been manufactured to be installed in the country given on the technical registry label. Performing the installation in countries other than the country written on the table may damage individuals, animals and commodities.

Combi boilers bear CE mark in accordance with below given directives:

- GAR Regulation (EU) 2016/426
- Boiler Efficiency Directive 92/42/EEC
- Low Voltage Directive 2014/35/EU
- Electromagnetic Compatibility Directive 2014/30/EU

The boiler was tested according to these Standards: ČSN EN 15502-1+A1:2017, ČSN EN 15502-2-1+A1:2017, ČSN EN 55014-1 ed. 4:2017, ČSN EN 55014-2 ed. 2:2017, ČSN EN 60335-1 ed. 3:2012, ČSN EN 60335-2-102 ed. 2:2016, ČSN EN 61000-3-2 ed. 5:2019, ČSN EN 61000-3-3 ed. 3:2014, ČSN EN 61000-6-3 ed. 2:2007, ČSN EN 62233:2008.

Please visit the below given web site of Warmhaus for acquiring more detailed information regarding legal regulations on installation of gas fired heating devices: [www.warmhaus.com](http://www.warmhaus.com)

**Manufacturer:** WARMHAUS Isıtma ve Soğutma Sistemleri Tic. A.Ş. Bursa Işıktepe OSB Mah. Park Cad. No:10 16140 Nilüfer-Bursa / Türkiye

#### **WARMHAUS**

Warmhaus Authorized Technical Service Centres maintain an assurance regarding quality and professionalism. WARMHAUS is not responsible for damages arising from repairs, part replacements and maintenances performed by third persons and companies and product remains out of the warranty scope under such conditions.



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WARMHAUS A.Ş. reserves the right to make all kinds of technical and commercial amendments without giving information and rejects all responsibilities depending on misspelling.

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### 1.3. GAS LEAKAGES

HOW TO MOVE WHEN NATURAL GAS ODOUR IS DETECTED..



Do not use lighter - matches.



Do not light on and off lamps and other electrical devices or pull off the plug.



Ventilate the environment by opening doors and windows.



Close valves of devices operating with natural gas and your gas meter.



Do not use the door bell.



Do not use phones in case of a natural gas leakage. It may create sparks.



Immediately evacuate the place with gas odour.



Natural Gas Emergency Line from your neighbour or another suitable place.



Do not make any intervention on installation.



Never close culverts ensuring discharge of the gas from the environment in case of a natural gas leakage.

### DURING EMERGENCIES



NATURAL GAS EMERGENCY



FIRE DEPARTMENT



AMBULANCE



POLICE

**INFORMATION:** You can visit web sites of local gas authorities and **NATURAL GAS EMERGENCY** sections.

**Advice:** Please take note local emergency phone numbers.



## 2. USER'S SECTION

### 2.1. GENERAL WARNINGS FOR USER

#### 2.1.1. Use of Combi Boiler

If a gas odour is available in the environment, close home entrance line and gas valves of your combi boiler or close the LPG tank valve or bottle valve if bulk gas is used. Do not shut on-off electricity buttons and do not do anything those may create sparks. Call the gas company or Authorized Service. (See 1.4. GAS LEAKAGES, Page 8)

First start should be performed by the Warmhaus Authorized Service for your safety and preventing void warranty scope. Our Authorized Service will give you required information about use of the boiler after performing initial controls and starting for the first time.

#### Perform below given controls prior to use:

- Ensure that radiator/heating system, tap water and gas valves located under your combi boiler are open, the radiator installation pressure is between 1 - 1,5 bar on the manometer located under the combi boiler and system air is discharged,
- Gas is available in your gas line (you can control by igniting one of your gas ovens),
- Combi boiler electrical fuse is open,
- No flammable materials and products are available near to the combi boiler,
- Exhaust gas flue set output is not blocked,
- If a room thermostat or control device is connected, ensure that it is at ON position.

#### If you will shut-off the combi boiler for a long period, perform below written operations:

- Discharge the radiator installation water not containing anti-freeze,
- Close combi boiler electrical fuse, gas valve, radiator and tap water valves!

#### If you will shut-off the combi boiler for a short period, perform below written operations:

- Do not close combi boiler electrical fuse, gas valve, radiator and tap water valves!
- Leave the combi boiler at Summer position and activate its Frost Protection function,

Shut-off the combi boiler during maintenance and repair operations to be performed around exhaust gas discharge flues. After operations are completed, have the combi boiler controlled by Warmhaus Authorized Service before using it again.

#### Follow below given main rules:

- Do not clean external frame of combi boiler while is functioning and do not use easily flammable materials.
- Do not hold the combi boiler with wet hands or feet; also without shoes and with bare feet.
- Do not pick electricity cables.
- In case cables are damaged, shut-off the boiler and fuse switches and do not use the combi boiler.
- Electrical cables of combi boiler and its accessories should be replaced by the Authorized Service.
- Do not expose the combi boiler to direct vapour those may arise from cooking places.
- Prevent use of combi boiler by children and inexperienced persons. Touch-Buttons & Screen Symbols



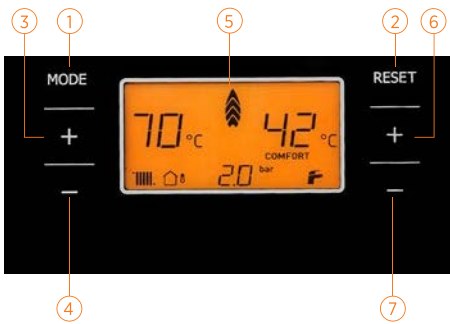


Figure 1 Control panel of Minerwa 25 Combi Boiler

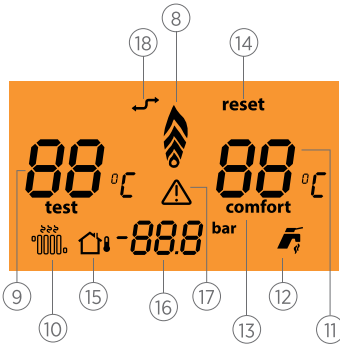


Figure 2 Control Panel with Touch Screen of Minerwa 25 Combi Boiler

1. **MODE**, selection button.
2. **RESET** button.
3. Radiator (CH) water temperature increasing button.
4. Radiator (CH) temperature decreasing button.
5. Digital display screen
6. Domestic Hot Water temperature increasing button.
7. Domestic Hot Water temperature decreasing button.
8. Flame modulation indicator
9. Radiator (CH) water actual temperature
10. Radiator (CH) mode operating indicator
11. Domestic Hot Water actual temperature
12. Domestic Hot Water operating indicator
13. Comfort mode operation
14. Failure status **RESET** requirement.
15. External Weather Temperature Sensor connection
16. Digital manometer
17. Failure indicator.
18. Room thermostat (OpenTherm-OT) connection indicator

The temperature value displayed on the digital screen has a  $\pm 3^\circ\text{C}$  tolerance depending on environmental conditions not arising from the combi boiler. Screen of Minerwa 25 combi boiler model consist of amber coloured backlight LCD screen and 6 touch sensitive buttons : RESET, MODE, CH (+), CH (-), DHW (+), DHW (-).

**RESET:** It is used for re-starting the combi boiler and eliminating the failure in case of combi boiler failure.

**MODE:** Used for Winter/Summer/OFF mode adjustment.

### Operating modes and related notifications:

#### OPERATING MODES EXPLANATIONS:

- **CLOSED** or **OFF**
- **WINTER**► Radiator temperature + °C + tap + radiator is displayed.
- **SUMMER**► Radiator temperature + °C + tap is displayed.
- **CH ON**► Radiator Temperature + °C + tap + flashing radiator (symbol) is displayed.
- **DHW ON**► DHW temperature + °C + flashing tap (symbol) is displayed.
- **CH FROST PROTECTION**► Radiator temperature + °C + flashing radiator (symbol) + when boiler is ignited flame (symbol) is displayed.
- **DHW FROST PROTECTION**► CH temperature + °C flashing radiator and tap (symbol) + when boiler ignited flame (symbol)
- **CH/DHW SETTING CHANGE**► CH adjustment change will be activated when radiator symbol rapidly flashes. DHW adjustment change will be activated when tap symbol rapidly flashes.
- Service technician function radiator + tap displayed. (Only for authorized service, wait for the function to end without touching.)

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**CH:** (System) Central Heating

**DHW:** Domestic Hot Water

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### 2.1.2. Selection of On/Off/Stand-by and Summer/Winter Modes

The combi boiler panel does not have **ON/OFF** button. The combi boiler must be turned on/off by using the V circuit breaker to be connected to the boiler circuit.

### 2.1.3. On/Off/Stand-by Positions

The combi boiler panel does not have **ON/OFF** button. The boiler must be turned on/off by using the V circuit breaker connected to the boiler circuit.



When the combi boiler is started for the first time, screen displays nG letter and then a number (for instance 25) indicating kW power of the device.



Then, OFF letter is displayed,



and screenlight is closed. Now, combi boiler is at STANDBY position. The temperature value when electricity is supplied to the device is the temperature value of water in the installation

### 2.1.4. Operation in Winter Mode

At that position, combi boiler operates both for heating the environment and providing Domestic Hot Water. Radiator (CH) temperature adjustment is made with (3) and (4) numbered buttons in Figure 1, Domestic Hot Water temperature adjustment is made with (6) and (7) numbered buttons and this temperature is indicated with (9) numbered indicator for Radiator (CH) and with (11) numbered indicator for Domestic Hot Water.



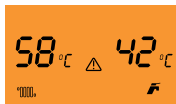
In such case, combi boiler initially gets into Radiator position, its symbol flashes on the left bottom corner of screen and tap symbol is seen at

right bottom corner. A digital manometer indicating the installation pressure is located at lower middle section of the screen and also existing radiator installation temperature is seen on the screen at the same time and screen light is turned off.

When combi boiler is started, flame modulation symbol is seen at the middle section of the screen. At that position, you can increase and decrease the temperature with CH temperature adjustment buttons (see. Figure 2) (3) between 35 - 80 °C, screen lights when buttons are pressed and °C symbol flashes besides the CH temperature value.



{If you have a floor heating system, as our Authorized Service adjust your combi for “Low Temperature Operation”, maximum temperature shall be limited with the Radiator (CH) temperature adjustment button (3) (e.g. maximum 47 °C)}.



### Domestic Hot Water Adjustment at Winter Position;

You can adjust the hot tap water temperature value between 35 -60 °C with (6) and (7) numbered buttons under the RESET button. Screen lights during temperature change, °C and symbol flashes besides the DHW temperature value. Screen light turns off after adjustment.

### 2.1.5. Operation in Summer Mode

Combi boiler only operates for heating the domestic hot water in this mode.. In order to switch to tap water position;



If you are starting the combi for the first time hold **MODE** button, and release the button after the cycle is completed on the screen, initially combi switches to radiator position, its symbol will flash on left top corner of the screen existing radiator installation temperature and screen light will turn off.



In order to switch to tap water position, hold **MODE** button and release the button after completion of cycle on the screen. At that position, symbol flashes at right bottom corner of the screen and existing tap water temperature will be seen on the screen and screen light will turn off.



At that position, you can adjust the Domestic Hot Water temperature between 35 - 60 °C with (7) and (8) numbered buttons below the RESET button.

Screen lights during temperature change, °C symbol flashes besides the DHW temperature value. Adjustment value is confirmed after screen light turned off following the adjustment.

### 2.1.6. Shutting off the Combi Boiler

To bring the combi boiler to OFF position while it is in SUMMER position;



When the **MODE** button is hold, while screen light is on after the cycle **OFF** is completed, **OFF** letter seen on the screen, screen light turns off, now the combi boiler is in OFF mode.



To bring combi boiler in **OFF** mode while it is in **WINTER**;



When the **MODE** button is hold, while screen light is on after the cycle **OFF** is completed, **SUMMER** boiler will switch to **SUMMER** mode.



Then, when the same transaction is repeated, after cycle is completed **OFF** letter is seen on the screen screen light turns off, your combi is now at **STANDBY** position.

## 2.2. USE WITH ROOM THERMOSTAT (OPTIONAL)

Combi boiler has initial preparation for remote control connection via environment thermostats being sold as optional sets. All Warmhaus thermostats can be connected with dual-wired cables. Carefully read user's and installation instructions given in the Accessory set. Thanks to control units with room thermostat having program clock, you can control your combi boiler at installation place, operating based on room temperature and also adjust different uses depending on each day of the week.

### General Utilisation Type

- Please consult our authorized services for room thermostats compatible with Warmhaus combi boiler.
- Do not remove device components during operation.
- Do not place at a position allowing direct sunlight exposure or near heat sources.
- Manufacturer company shall not be responsible for below given situations:
  - a) Faulty installation
  - b) Making intervention on the device by unauthorized persons
  - c) Failing to follow instructions given in this book and room thermostat booklets

**Installation Instruction:** Device installation shall only be performed by the Warmhaus Authorized Service. The dual cable required for installation is supplied by the dealer/consumer.



**Important:** It is compulsory to have two different lines according to legal regulations being in force regarding electrical installations in case of using a thermostat On/Off on the Remote Control. It is not allowed to use any pipe or hose of the combi boiler as electricity or phone earthing line. That must be ensured prior to making electrical connections of the combi boiler.



Room thermostat should be installed at 1,25 and 1,50 m height from ground and at least 30 cm distance.



At least 30 cm distance should be available from doors and windows open for air circulation.

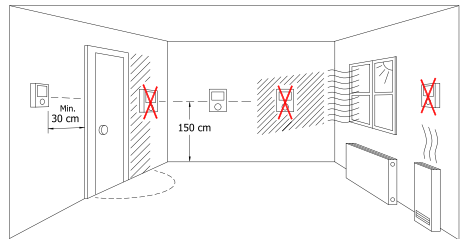


Figure 3 Thermostat position

**Maintenance and Service Life:** Warmhaus room thermostat should not come into contact with water or excessive humidity. Unless an external damage occurs, the room thermostat does not require any maintenance.

## 2.3. USE OF OUTSIDE TEMPERATURE SENSOR (OPTIONAL)

Outside Weather Temperature Sensor (optional) can be installed in your combi boiler by our Authorized Service (see: Installation Section; Accessory Connection Scheme), and you can enable automatic temperature adjustment for the radiator with immediate responses to outside weather temperature changes via smart and comfort operation. Therefore, it maintains an efficient and economic operation by reducing the radiator water temperature when outside weather temperature increases and gradually increasing the radiator water temperature when outside weather temperature decreases and sets you free from making radiator temperature adjustments.

This sensor is activated when connected independently from the typology or availability of used thermostat, the relation between output temperature and outside temperature is defined according to curves given in the graphic below based on position of button located on the combi boiler panel.

After connecting the Outside Sensor, adjustment is made according to average external weather temperature of your province with P04 parameter. Our authorized service will make this adjustment during installation.

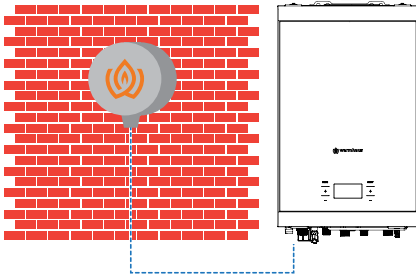


Figure 4 Combi boiler controlled by Outside Sensor

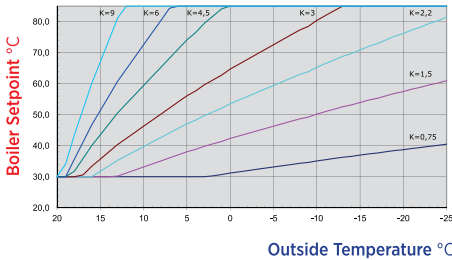


Figure 5 Outside weather temperature sensor operation curves

## 2.4. CUSTOMIZING COMBI BOILER FEATURES

As your combi boiler has an advanced electronic card, operation conditions and certain parameters related with your preferences may be changed by our Authorized Service. Please consult our authorized service when any changes requested in below given parameters.

### (P07) Controlled Power Increase Period.

When combi boiler starts, it uses a controlled period defined for reaching the adjusted maximum heating power. This period is adjusted as 10 minutes as standard and can be increased up to 10 minutes.

### (P08) Radiator (Heating) Power.

The combi boiler automatically operates with variable gas flow rates depending on heat load of installation between the minimum and maximum power.

### (P21) Low temperature region selection.

This parameter should be adjusted as 1 for ground heating or heating systems operating with low temperature. 0 (zero) value is selected for radiator systems to operate at high temperatures as standard.

### (P24) Child Protection

This parameter is not active as standard, please consult our Authorized Service for activating the parameter (Protection lock is activated when parameter is adjusted as 1). Buttons are locked after 2 minutes following use of buttons when the function is active. Keylock is opened when the MODE button is hold until cycle is completed for getting off the child protection. Your combi boiler is under control after setting changes upon activation of this feature.

### (P40) CH ignition delay period.

Combi boiler is equipped with an electronic timer for preventing frequent ignition. This period is adjusted as 2 minutes as standard and can be increased up to 10 minutes.

### (P42) Ready Hot Water (Pre-Heating passive/ active).

In order to rapidly prepare DHW faster and reducing the cold water consumption during waiting, grid water is heated in the plate exchanger and ready hot water is stored.

Activation of this function is performed with parametric adjustment by our Authorized Service depending on your request.

### Air Deaeration Function

The boiler has to be switched to OFF mode first. It is possible to activate deaeration function pressing RESET and "-" for circle time.

**“Air” will be displayed on the screen. Boiler will start the Deaeration function.**

During this function pump and 3-way valve are activated/deactivated in order to have deaeration of the hydraulic plant.

This function ends pushing again RESET and "-" for circle time or at the end of deaeration time: 12 minutes.



Figure 6 Ending the deairation function

## 2.5. TROUBLESHOOTING

Error Code	Description of the Error	Malfunction	Probable Cause	Solution(s)
E 01	Intervention of exhaust Thermostat (Open Combustion Chamber boiler )	Boiler does not work, E01 error code flashing on the screen	> Flue Sensor faulty	1-) Reset & Restart boiler 2-) Call for authorised service
E 02	Low water pressure in the system/ system parameter wrongly setted	Boiler does not work, E02 error code flashing on the screen	> Water pressure in the boiler not enough	1-) Fill the boiler 1,2-1,5 bar according to manual 2-) Check if the system pressure 1,2 - 1,5 bar from the manometer located right & bottom of the boiler 3-) Reset & Restart boiler 4-) If problem persist Call for authorised service
E 03	High water pressure in the system	Boiler does not work, E03 error code flashing on the screen	> High Water pressure in the boiler higher than >2,8 bar	1) First check the filling tap of the boiler and make sure it is closed. 2) During boiler operation, the safety valve may continue to drain water from the drain line, so make sure that this line is connected to a drain line. 3) If your plumbing line has a drain cock; first turn the boiler off and let the pressure drop to 1-1.5 bar, then switch it on again. 4) If the pressure increase occurs again, call an authorized service.
E 04	Domestic heating water temperature sensor faulty	Boiler does not work on DHW mode but still work on Central heating mode, E04 error code flashing on the screen	> Domestic heating water temperature sensor faulty	1-) Call for authorised service
E 05	Central heating FLOW temperature sensor faulty	Boiler does not work, E05 error code flashing on the screen	> Central heating FLOW temperature sensor faulty	1-) RESET boiler at first check if problem removed 2-) Check other gas devices if they are working 3-) Check main gas supply valve is open or not 4-) Check boiler gas supply valve below the boiler is open or not 5-) RESET boiler at first check if problem removed 6-) Call for authorised service
E 06	No ignition	Boiler does not work, E06 error code flashing on the screen	> Gas supply failure	1-) RESET boiler at first check if problem removed 2-) Check boiler central heating valves are open if they are closed open all 3-) Check all radiator valves are open if they are closed open minimum 3 meters of radiator must be open 4-) RESET boiler and check if problem removed 5-) Call for authorised service

Error Code	Description of the Error	Malfunction	Probable Cause	Solution(s)
E 07	Safety thermostat intervention	Boiler does not work, E07 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Lack of water on the system</li> <li>&gt; Pump blockage</li> <li>&gt; Pump failure</li> <li>&gt; Pump harness</li> <li>&gt; Installation blockage</li> </ul>	<ul style="list-style-type: none"> <li>1-) RESET boiler at first check if problem removed</li> <li>2-) Check boiler central heating valves are open if they are closed open all</li> <li>3-) Check all radiator valves are open if they are closed open minimum 3 meters of radiator must be open</li> <li>4-) RESET boiler and check if problem removed</li> <li>5-) Call for authorised service</li> </ul>
E 08	Flame circuit failure	False flame signal from combustion or electrode	<ul style="list-style-type: none"> <li>&gt; Water blockage on syphon</li> <li>&gt; Electronic board</li> </ul>	<ul style="list-style-type: none"> <li>1-) Call for authorised service</li> </ul>
E 09	No water circulation in the system	Boiler does not work, E09 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Lack of water on the system</li> <li>&gt; Pump blockage</li> <li>&gt; Pump failure</li> <li>&gt; Pump harness</li> <li>&gt; Installation blockage</li> </ul>	<ul style="list-style-type: none"> <li>1-) RESET boiler at first check if problem removed</li> <li>2-) Check boiler central heating valves are open if they are closed open all</li> <li>3-) Check all radiator valves are open if they are closed open minimum 3 meters of radiator must be open</li> <li>4-) RESET boiler and check if problem removed</li> <li>5-) Call for authorised service</li> </ul>
E 11	Gas valve modulator disconnected	Boiler does not work, E11 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Gas valve harness</li> </ul>	<ul style="list-style-type: none"> <li>1-) Call for authorised service</li> <li>2-) Check gas valve between board and gas valve</li> </ul>
E 13	Exhaust temperature probe over-temperature alarm	Boiler does not work, E13 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Over temperature flue gas outlet value &gt; 105 C°</li> </ul>	<ul style="list-style-type: none"> <li>1-) Call for authorised service at first</li> </ul>
E 14	Exhaust ( FLUE ) temperature probe fault	Boiler does not work, E14 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Central heating FLUE temperature sensor faulty</li> </ul>	<ul style="list-style-type: none"> <li>1-) Reset &amp; Restart boiler</li> <li>2-) Call for authorised service</li> </ul>
E 15	Fan failure (feedback/supply)	Boiler does not work, E15 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Fan harness</li> </ul>	<ul style="list-style-type: none"> <li>1-) Reset &amp; Restart boiler</li> <li>2-) Call for authorised service</li> </ul>
E 16	Central heating temperature RETURN sensor faulty	Boiler does not work, E16 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Central heating RETURN temperature sensor faulty</li> </ul>	<ul style="list-style-type: none"> <li>1-) Reset &amp; Restart boiler</li> <li>2-) Call for authorised service</li> </ul>
E 17	Temperature difference between FLOW and LIMIT NTC (Double Heating Probe) faulty	FLOW and LIMIT sensor (DOUBLE NTC) malfunction	<ul style="list-style-type: none"> <li>&gt; FLOW and LIMIT Sensor ( double NTC ) faulty</li> </ul>	<ul style="list-style-type: none"> <li>1-) Reset &amp; Restart boiler</li> <li>2-) Call for authorised service</li> </ul>
E 19	Water flow meter input reading	Lack of domestic heating water on request	Wrong parameters settled on TsP menu	<ul style="list-style-type: none"> <li>1-) Call for authorised service at first</li> <li>2-) Only authorised service must adjust TsP Parameter P01=0 with default value</li> </ul>

Error Code	Description of the Error	Malfunction	Probable Cause	Solution(s)
E 20	CH vertemperature, Temperature Central Heating > TSP 81 value °C	Boiler does not work, E81 error code flashing on the screen	> Lack of water on the system > Pump blockage > Pump failure > Pump harness > Installation blockage	1-) RESET boiler at first check if problem removed 2-) Check boiler central heating valves are open if they are closed open all 3-) Check all radiator valves are open if they are closed open minimum 3 meters of radiator must be open 4-) RESET boiler and check if problem removed 5-) Call for authorised service
E 21	Delta Temperature Central Heating flow and Return > TSP 82 value °C	Boiler does not work, E21 error code flashing on the screen	> Lack of water on the system > Pump blockage > Pump failure > Pump harness > Installation blockage	1-) RESET boiler at first check if problem removed 2-) Check boiler central heating valves are open if they are closed open all 3-) Check all radiator valves are open if they are closed open minimum 3 meters of radiator must be open 4-) RESET boiler and check if problem removed 5-) Call for authorised service
E 28	Maximum allowed consecutive lock-out reset reached	Usable RESET number reached.	Too many consecutive lock-out failures (followed by reset) due to other possible causes	1-) Removing power supply reset will be allowed 2-) Check the root cause of Error code to solve 3-) If fault still persists call for authorised service
E 37	Low voltage anomaly	Boiler does not work, E37 error code flashing on the screen	Low voltage < 165 VAC +/- 5% on the supply network during normal operation OR < 182 VAC +/- 5% during Au-TO calibration mode	1-) Call for Electrical supply network provider 2-) Error will remove if supply voltage > 170 VAC +/- 5% 3-) If this failure is observed during calibration calibration can not be complete unless supply voltage > 188 VAC +/- 5%
E 40	Wrong network frequency survey	Boiler does not work, E40 error code flashing on the screen	Wrong frequency of the electric supply network. Value out of tolerance, 50 Hz +/- 5%	1-) Call for Electrical supply network provider 2-) Error will remove if supply frequency 50 Hz +/- 5%
E 41	Loss of flame more than 6 successive times	Boiler does not work, E41 error code flashing on the screen	> Too many domestic hot water request in short period ( 1 min ) > Low gas pressure	1-) Call for authorised service at first
E 42	Buttons anomaly	Boiler does not work, E42 error code flashing on the screen	Wrong parameters settled on Tsp menu	1-) Call For service

Error Code	Description of the Error	Malfunction	Probable Cause	Solution(s)
E 43	Opentherm Communication error	Boiler does not work, E43 error code flashing on the screen after 1 minute of communication error	Opentherm line disconnected	1-) Remove energy from boiler and re energize E43 will be removed and boiler & buttons will get back to functional 2-) Replace the room unit batteries with the fresh ones and reset from room unit 3-) Check cabling between boiler and room unit and re connect if any disconnection, if connection set up successfully then connection symbol (Figure 2, symbol 18) will be activated on the screen 4-) Call for authorised service to re connect opentherm connection
E 44	Cumulated intermittent ignition without reaching burner ignition.	Boiler does not work, E44 error code flashing on the screen	> Intermittent contacts on harness > Hammer effect on water net > Too many request from in shotr time from out side room units or thermosad bridge etc.	1-) Reset & Restart boiler 2-) Call for authorised service
E 62	Calibration request	Boiler does not work, E62 error code flashing on the screen	> Calibration not done > Replacing board but not service key from the board dismantled > Service key damaged or disconnected > Updating Software (probable)	1-) Call For service
E 72	Delta T heating at ignition not occurred	Boiler does not work, E72 error code flashing on the screen	> FLOW OR RETURN Sensor not on position	1-) Call for authorised service at first 2-) Check RETURN and FLOW sensor on position.
E 74	Second CH temperature Probe faulty	Boiler does not work, E74 error code flashing on the screen	> FLOW and LIMIT Sensor (double NTC ) faulty	1-) Reset & Restart boiler 2-) Call for authorised service.
E 77	Absolute current values reached	Boiler does not work, E77 error code flashing on the screen	> Gas inlet pressure > Aging or rust on the electrode > Recirculation on fluegas path > Blokage on flue or wrong flue > Electrode position > Cabling disconnections > Combustion calibration > Electronic board > Gas valve failure	1-) Call for authorised service at first



Error Code	Description of the Error	Malfunction	Probable Cause	Solution(s)
E 78	Max regulation current value reached	Boiler does not work, E78 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Gas inlet pressure</li> <li>&gt; Aging or rust on the electrode</li> <li>&gt; Recirculation on fluegas path</li> <li>&gt; Blokage on flue or wrong flue</li> <li>&gt; Electrode position</li> <li>&gt; Cabling disconnections</li> <li>&gt; Combustion calibration</li> <li>&gt; Electronic board</li> <li>&gt; Gas valve failure</li> </ul>	1-) Call for authorised service at first
E 79	Min regulation current value reached	Boiler does not work, E79 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Gas inlet pressure</li> <li>&gt; Aging or rust on the electrode</li> <li>&gt; Recirculation on fluegas path</li> <li>&gt; Blokage on flue or wrong flue</li> <li>&gt; Electrode position</li> <li>&gt; Cabling disconnections</li> <li>&gt; Combustion calibration</li> <li>&gt; Electronic board</li> <li>&gt; Gas valve failure</li> </ul>	1-) Call for authorised service at first
E 80	Problem on electronic gas valve driver	Boiler does not work, E80 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Electronic board</li> <li>&gt; Gas valve failure</li> </ul>	1-) Call for authorised service at first
E 81	Lock-out for combustion problem at starting (1)	Boiler does not work, E81 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Strong flue blokage</li> <li>&gt; Combustion problem</li> <li>&gt; Wrong flue</li> <li>&gt; Gas inlet pressure</li> <li>&gt; Aging or rust on the electrode</li> <li>&gt; Recirculation on fluegas path</li> <li>&gt; Electrode position</li> <li>&gt; Combustion calibration</li> </ul>	1-) Call for authorised service at first
E 84	Capacity reduction for detected (supposed) low gas inlet pressure	Boiler operates at limited capacity, E84 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Gas inlet pressure</li> <li>&gt; Combustion problem</li> </ul>	<p>1-) If there is strong wind (ie.wind storm) wait until the wind storm stop then RESET the boiler</p> <p>2-) IF problem persist Call for authorised service</p>
E 87	Problem on electronic gas valve circuit	Boiler does not work, E87 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Cabling disconnections</li> <li>&gt; Gas valve failure</li> </ul>	1-) Call for authorised service at first

Error Code	Description of the Error	Malfunction	Probable Cause	Solution(s)
E 88	Fault of electronic gas valve managing circuit	Boiler does not work, E88 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Cabling disconnections</li> <li>&gt; Gas valve failure</li> </ul>	1-) Call for authorised service at first
E 89	Problem on combustion feedback signal	Boiler does not work, E89 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Aging or rust on the electrode</li> <li>&gt; Recirculation on fluegas path</li> <li>&gt; Blokage on flue or wrong flue</li> <li>&gt; Electrode position</li> <li>&gt; Cabling disconnections</li> <li>&gt; Combustion calibration</li> <li>&gt; Electronic board</li> <li>&gt; Gas valve failure</li> </ul>	1-) Call for authorised service at first
E 90	Unable to regulate combustion	Boiler does not work, E90 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Aging or rust on the electrode</li> <li>&gt; Recirculation on fluegas path</li> <li>&gt; Blokage on flue or wrong flue</li> <li>&gt; Electrode position</li> <li>&gt; Cabling disconnections</li> <li>&gt; Combustion calibration</li> <li>&gt; Electronic board</li> <li>&gt; Gas valve failure</li> </ul>	1-) Call for authorised service at first
E 92	Air compensation active	Boiler does not work, E92 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Possible wind presence</li> <li>&gt; Aging or rust on the electrode</li> <li>&gt; Recirculation on fluegas path</li> <li>&gt; Blokage on flue or wrong flue</li> <li>&gt; Electrode position</li> <li>&gt; Combustion calibration</li> <li>&gt; Min power adjustment</li> </ul>	1-) Call for authorised service at first
E 93	Unable to regulate combustion (temporarily)	Boiler does not work, E93 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Aging or rust on the electrode</li> <li>&gt; Recirculation on fluegas path</li> <li>&gt; Blokage on flue or wrong flue</li> <li>&gt; Electrode position</li> <li>&gt; Combustion calibration</li> <li>&gt; Gas valve failure</li> <li>&gt; Electronic board</li> </ul>	1-) Call for authorised service at first

Error Code	Description of the Error	Malfunction	Probable Cause	Solution(s)
E 94	Possible low gas pressure or exhaust recirculation	Boiler does not work, E94 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Gas inlet pressure LOW</li> <li>&gt; Recirculation on fluegas path</li> <li>&gt; Blokage on flue or wrong flue</li> <li>&gt; Aging or rust on the electrode</li> <li>&gt; Electrode position</li> <li>&gt; Combustion calibration</li> <li>&gt; Gas valve failure</li> <li>&gt; Electronic board</li> </ul>	1-) Call for authorised service at first
E 95	Intermittent combustion value	Boiler does not work, E95 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Harness on electrode and earth</li> <li>&gt; Aging or rust on the electrode</li> <li>&gt; Electrode position</li> <li>&gt; Combustion calibration</li> </ul>	1-) Call for authorised service at first
E 96	Flue or air suction way blockage	Boiler does not work, E96 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Blokage on flue</li> <li>&gt; Blokage on air suction path</li> </ul>	1-) Call for authorised service at first
E 98	SW error, board start-up error fault	Boiler does not work, E98 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Boiler software problem</li> </ul>	1-) Call for authorised service at first
E 99	Generic fault	Boiler does not work, E99 error code flashing on the screen	<ul style="list-style-type: none"> <li>&gt; Boiler electronic hardware problem</li> </ul>	<ul style="list-style-type: none"> <li>1-) Reset &amp; Restart boiler</li> <li>2-) Call for authorised service at first</li> </ul>

(1) Call the Authorized Service if failure continues.

(2) 81 numbered failure corresponds any blocking in the exhaust gas pipe. In such case, you should consult the authorized service technician before re-starting the combi boiler.

## 2.6. RECOMMENDATIONS FOR ECONOMICAL USE OF COMBI BOILER

Your combi boiler is adjusted at ECO mode for economic use, we recommend not to change.

### Correct Capacity Selection

Heat loss calculation of the combi boiler location should be made correctly and combi boiler capacity should comply with this calculation. Devices not having adequate capacity shall give late responses to heating requests, devices with higher capacity may cause discomfort and more fuel consumption as they more frequently opened and closed. Therefore, combi boiler capacities should be selected according to the place used.

### Insulation

Insulation of your building is the most important item reducing the heat loss and gas consumption. However, as your combi boiler has the highest thickness insulation of its class, heat loss is minimized.

### Radiators

Ensure balancing our pressure distribution of your radiator installation within the house by making reduction adjustments from radiator valves. Placing furnitures in front of radiators prevents air circulation and causes discomfort and more fuel consumption. Reducing radiator valves of rooms not used for a long period or if thermostatic radiator valve is used, bringing to the lowest position then, closing room doors will provide saving.

### Domestic Hot Water

Always adjust the domestic hot water temperature as (38-42 °C). Adjustment of temperature adjuster as low ensures a considerable power saving. In addition, high domestic hot water temperatures cause strong calcification and that negatively affects operation of the device (for instance, longer heating periods, less flow rate).

### Thermostatic Radiator Valves

You can both acquire savings and comfort by balancing the heat distribution among the house by using Thermostatic Radiator Valves.

### Room Thermostats

Your combi boiler will operate more economically as you will have the chance to adjust requested room temperature according to comfort and economy timings via room thermostats. Thus, you can adjust temperature of your room as you wish, and also you can acquire approximately 6% power saving with every degree of temperature decrease.

### Ventilation

Do not leave windows slightly open for ventilating room/rooms. In such case, continuous heat loss will occur and not having any certain improvement in the room air.

Fully opening windows for a short period provides a better result. Bring thermostatic radiator valves to lowest position when ventilating rooms.

### Cleaning And Maintenance

**Attention:** to preserve the boiler's integrity and keep the safety features, performance and reliability, which distinguish it, unchanged over time, you must at least execute maintenance operations on a yearly basis in compliance with what is stated in the relative point at "annual check and maintenance of the appliance", in compliance with national, regional, or local standards in force.

We recommend stipulating a yearly cleaning and maintenance contract with an authorised local firm.

## 2.7. ISSUES REQUIRED TO BE TAKEN INTO CONSIDERATION FOR WARRANTY CONDITIONS

This warranty given by WARMHAUS does not cover elimination of failures arising from abnormal use of the product and also out of the warranty scope for below given situations

1. Damages and failures occurring in devices which are not first started by Warmhaus Authorized Services,
2. Damages and failures arising from use of the product contrary to items given in User's Manual and using out of its intended purpose.
3. Damages and failures arising from wrong type selection,
4. Damages and failures arising from maintenance and repairs performed by persons other than our Authorized Services,
5. Damages and failures occurring due to transportation, unloading, loading, storing, external physical (Crushing, scratches, fractures) and chemical factors following delivery of the Product,
6. Damages and failures arising from fire and lightning,
7. Damages and failures arising from false fuel use and fuel characteristics,
8. Low or excessive voltage; unearthed socket usage;
9. Damages and failures arising from faulty electricity installations,
10. Damages and failures arising from failing to perform timely annual maintenance and cleaning,
11. Defined periodical maintenance operations by our Authorized Services,

12. Damages and failures those may occur in the device or usage area due to other products and accessories used in a system with the device subject to the Warranty,
13. Damages and failures arising from frost/icing or occurring due to using in the outdoor places (open balcony, etc.).
14. Altering the Registry Label and Warranty Certificate,
15. Damages and failures arising from using water out of the water values defined in device user's guide,

Elimination of above mentioned failures shall be performed against payment.

Our distinguished customer,  
we believe the importance of providing good products to you as well as rendering good services.


### **Recommendations and Data to be Followed:**

1. When first start of your combi boiler is done, please keep the technical service document given by the Authorized Service and a copy of device invoice and the Warranty Document approved by your Authorized Dealer.
2. Use your product according to principles of installation and operation guide.
3. Keep the "SERVICE DOCUMENT" if received from your service technician following the service taken. The Service Document will be beneficial for you in any problems those may occur in your device in the future.

## 2.8. TECHNICAL TABLE

TECHNICAL DATA		UNIT				WARMHAUS			
		Minerwa-ErP 25							
CE certification		CE-1015CT0706							
<b>Gas Circuit</b>									
Gas type		<b>G20</b>		<b>G25</b>		<b>G30</b>		<b>G31</b>	
Gas supply pressure		mbar		20		25		30	
Gas Consumption at Maximum		m <sup>3</sup> /h		2,38*		2,85		0,728	
Gas Consumption at Minimum		m <sup>3</sup> /h		0,37*		0,43		0,107	
*(Natural Gas G20) Heat Load (Hu=10,56 kWh/m <sup>3</sup> )									
Premix System		Gas Adaptive							
Modulation Range		0:1:10							
Heat Exchanger Material		Stainless steel							
<b>Efficiency</b>		<b>G20</b>		<b>G25</b>		<b>G30</b>		<b>G31</b>	
(80/60 °C) Efficiency at Maximum Heat Output (GCV)		%		88.24		88.13		90.26	
(50/30 °C) Efficiency at Maximum Heat Output (GCV)		%		94.61		94.88		94.40	
Efficiency at 30% load at 36/30 °C (GCV)		%		97.48		97.50		96.56	
Seasonal space heating energy efficiency (expressed in terms of GCV)		%		92 (Class A)					
<b>Radiator Circuit</b>									
Maximum heat input Qn		kW		24,25		24,25		24,25	
Minimum heat input Qn		kW		3,5		3,5		2,8	
Maximum Heat Output Pn (80/60 °C)		kW		23,7		23,7		23,6	
Minimum Heat Output Pn (80/60 °C)		kW		3		3		3,2	
Maximum Heat Output Pn (50/30 °C)		kW		25		25		24,33	
Minimum Heat Output Pn (50/30 °C)		kW		3,6		3,6		3,55	
Temperature selection range (min÷max) high temperature		°C		25÷80					
Temperature selection range (min÷max) low temperature		°C		25÷47					
Operating Pressure (Maximum)		bar		3					
Operating Pressure (Minimum)		bar		0,5					
Expansion tank useful volume		bar		7					
Pump pressure (at 1000 l/h flow rate)		mH <sub>2</sub> O		7					
Pump pressure (at 500 l/h flow rate)		mH <sub>2</sub> O		7,3					
Max. Pump Flow Rate		l/h		2500					
Pump Energy Efficiency Index		EEI		≤ 0,20					
<b>Domestic Hot Water Circuit</b>									
Maximum DHW Heat Input		kW		31					
Minimum DHW Heat Input		kW		3,5					
Max. Domestic Hot Water flow rate (Δt: 35 °C)		l/min.		13					
Max. Domestic Hot Water flow rate (Δt: 30 °C)		l/min.		15					
Min. Domestic Hot Water flow rate (for the DHW function activation)		l/min.		1,5					
Maximum water pressure		bar		10					
Minimum water pressure		bar		0,5					
Temperature adjustment range		°C		35 - 60					
<b>Electricity Circuit</b>									
Electricity Supply		V AC-50 Hz		230 V +%10; -%15					
Electricity Consumption (Max./Min.)		Watt		95 / 55					
Protection Index		IP		IPX5D					
<b>Exhaust Gas Circuit</b>									
(80/60 °C) Exhaust gas temperature (Min. / Max.)		°C		69 / 71		65 / 70		57 / 70	
(50/30 °C) Exhaust gas temperature (Min. / Max.)		°C		49 / 51		48 / 49		43 / 57	
Maximum exhaust gas temperature [Maximum DHW mode]		°C		70					
NOx		Class		6					
Weighted value of Nox (GCV)		mg/kWh		20		19		42	
Flue mass flow rate (60/80°C - Qn) Nominal/Minimum		g/s		10,32 / 1,6		10,78 / 1,62		10,58 / 1,26	
Flue mass flow rate (60/80°C - Qn) [Maximum DHW mode]		g/s		14,01		14,04		13,58	
Fan head loss		Pa		35 + 140					
<b>General</b>									
Dimensions (H x W X D)		mm		595 x 379 x 260					
Sound Level		dB (A)		55					
Hydraulic Group Material		Brass							
Net Weight		kg		26					
Packed Device Weight		kg		29					
Type		C <sub>10</sub> , C <sub>20</sub> , C <sub>43</sub> , C <sub>50</sub> , C <sub>60</sub> , C <sub>80</sub> , C <sub>90</sub> , C <sub>100</sub> , B <sub>10</sub> , B <sub>20</sub> , B <sub>30</sub> , B <sub>40</sub> , B <sub>50</sub> , B <sub>60</sub>							
Category		I2H, I2E, I2E(S) - (G20=20 mbar), I2E+, I2L, I2ELL - (G25=25 mbar) I3P - (G31=37 mbar) I12ELL3B/P, I12H3B/P - (G30=30 mbar)							

## 2.9. PRODUCT FICHE & ERP DATA TABLES

Product FICHE & ErP Data				
		Manufacturer	Type-model / Technical data	
ErP Data		Warmhaus	Minerwa 25 Boiler	
All information in the ERP Data Sheet & Product Data Sheet is based on the test results of the SZU Test / BRNO laboratories.				
PRODUCT FICHE (according to EU regulation No 811/2013 and 814/2013 )				
			Minerwa 25	Minerwa 25
Space heating - Temperature application			High / Medium / Low	High / Medium / Low
Water heating - Declared load profile			L	XL
Seasonal space heating energy efficiency class			<b>A</b>	<b>A</b>
Water heating energy efficiency class			<b>A</b>	<b>A</b>
Rated heat output (Prated or Psup)		kW	24	24
Space heating - annual energy consumption	Q <sub>HE</sub>	GJ (**)	42,14	42,14
Water heating - Annual energy consumption		kWh (*)	26	37
		GJ (**)	11	18
Seasonal space heating energy efficiency		%	92	92
Water heating energy efficiency		%	81	84
Sound power level LWA indoors		dB	55	55
Option to only operate during low demand periods		—	—	—
Specific precautions for assembly, installation and maintenance			Before any assembly, installation or maintenance the user and installation manual has to be read attentively and to be followed	
All the data that is included in the product information was determined by applying the specifications of the relevant European directives. Differences to product information listed elsewhere may result in different test conditions. Only the data that is contained in this product information is applicable and valid.				
(*) Electricity				
(**) Fuel (Natural Gas - G20)				


### HANDING OVER

After completing the installation and commissioning of the system the installer should hand over to the householder by the following actions:

1. Make the householder aware that the user instructions are located in the pocket in the drop down door and explain his/her responsibilities under the relevant national regulations.
2. Explain and demonstrate the lighting and shutting down procedures.
3. The operation of the boiler and the use and adjustment of all system controls should be fully explained to the householder, to ensure the greatest possible fuel economy consistent with the household requirements of both heating and hot water consumption. Advise the User of the precautions necessary to prevent damage to the system and to the building, in the event of the system remaining inoperative during frosty conditions.
4. Explain the function and the use of the boiler heating and domestic hot water controls.

Explain that due to system variations and seasonal temperature fluctuations DHW flow rates/temperature rise will vary, requiring adjustment at the draw off tap. It is therefore necessary to draw the users attention to the section in the Users Instructions titled "Control of Water Temperature" and the following statement: "Additionally, the temperature can be controlled by the user via the draw-off tap: the lower the rate the higher the temperature, and vice versa".

ErP DATA (according to EU regulation No 813/2013 and 814/2013)

			Minerwa 25	Minerwa 25
Water heating - Declared load profile			L	XL
Rated Heat Output	Prated	kW	24	24
Useful heat output at rated heat output and high temperature regime (2)	**P <sub>d</sub>	kW	23,7	23,7
Useful heat output at 30% of rated heat output and low temperature regime (1)	**P <sub>1</sub>	kW	4,16	4,16
Seasonal Space Heating Energy Efficiency	η <sub>s</sub>	%	92	92
Useful efficiency at rated heat output and high temperature regime(2)	**η <sub>d</sub>	%	87,57	87,57
Useful efficiency at 30% of rated heat output and low temperature regime(1)	**η <sub>1</sub>	%	97,48	97,48
Auxiliary Electricity Consumption				
Full load	elmax	kW	0,43	0,43
Part load	elmin	kW	0,11	0,11
Standby mode	P <sub>SB</sub>	kW	0,005	0,005
Other Items				
Standby heat loss	P <sub>Stby</sub>	kW	0,027	0,027
Ignition burner power consumption	P <sub>ign</sub>	kW	0,000	0,000
Space heating - annual energy consumption	Q <sub>HE</sub>	GJ	42	42,14
Sound power level, indoors	L <sub>WA</sub>	dB	55	55
Emissions of nitrogen oxides	**NO <sub>x</sub>	mg/kWh	20	20
Domestic Hot Water Parameters				
Declared Load Profile			L	XL
Daily electricity consumption	Q <sub>elec</sub>	kWh	0,117	0,169
Annual electricity consumption*	AEC	kWh	26	37
Water Heating Energy Efficiency	h <sub>wh</sub>	%	81	84
Daily fuel consumption	Q <sub>fuel</sub>	kWh	14,809	23,152
Annual fuel consumption	AFC	GJ	11	18
Condensing boiler	—		Yes	Yes
Low temperature boiler	—		Yes	Yes
Combination boiler	—		Yes	Yes
BI Boiler	—		No	No
Room boiler with combined heat and power	—		No	No
Auxiliary boiler	—		No	No
Brand Name	Warmhaus			
Manufacturer adress	Warmhaus Isıtma ve Sogutma Sistemleri San. Tic. A.Ş. Işıktepe OSB Mah. Park Cad. No: 10 16140 Nilüfer - Bursa / Turkey			
Warnings 	All specific precautions for assembly, installation and maintenance are described in the operating and installation manual. Read and follow the operating and installation manual.			
	Read and follow the operating and installation manual regarding assembly, installation, maintenance, removal, recycling and/or disposal.			
* for average climatic conditions	**Natural Gas (G20)			
(1) 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).				
(2) High temperature regime means 60 °C return temperature at heater inlet and 80 °C feed temperature at heater outlet.				
As this is the property of Warmhaus Isıtma ve Sogutma Sistemleri San. Tic. A.Ş. It must not be passed on to any person not authorized by Warmhaus Isıtma ve Sogutma Sistemleri San. Tic. A.Ş or be copied or otherwise utilized by anybody without expressed written permission.				



## 2.10. ENERGY LABEL

**ENERG** Y IJA  
енергия · ενεργεια IE IA

**warmhaus** Minerwa 25

**A+++**  
**A++**  
**A+**  
**A** **A**  
**B**  
**C**  
**D**

**A+**  
**A** **A**  
**B**  
**C**  
**D**  
**E**  
**F**

**55 dB**

**25 kW**

2019 811/2013





# MINERWA

# CONDENSING COMBI BOILER USER MANUAL

Minerwa User Manual code: 15011606000142  
Revision Date: R00/11.2021