

115

125

150

X-treme

Walleon

EN

INSTALLATION AND USER MANUAL



WALL HUNG CONDENSING BOILERS

Gassero
technology for your comfort

CE

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IMPORTANT

PLEASE READ INSTRUCTIONS BELOW CAREFULLY BEFORE THE INSTALLATION AND USAGE:

1. THIS MANUAL IS AN INSEPARABLE PART OF THE BOILER AND HAS TO BE STORED TOGETHER WITH THE BOILER. IF THIS MANUAL DAMAGED OR LOST CONTACT GASSERO FOR A NEW COPY.
2. THE INFORMATION AND INSTRUCTIONS THAT ARE SPECIFIED IN THIS USER'S MANUAL APPLY ONLY FOR THE BOILER MODELS SPECIFIED IN PAGE 2.
3. THE INSTALLATION OF THIS BOILER MUST BE MADE IN ACCORDANCE WITH THE CE DIRECTIVES AND THE LOCAL GAS ORGANIZATIONS' INSTRUCTIONS BY AUTHORIZED SERVICES.
4. SPECIFIED GAS MUST BE SUPPLIED BY AUTHORIZED GAS ORGANIZATIONS BEFORE THE COMMISSIONING OF THE BOILER.
5. COMMISSIONING OF THE BOILER MUST BE MADE BY GASSERO'S AUTHORIZED SERVICES. OTHERWISE BOILER WARRANTY WILL BE CANCELLED.
6. THE MANUFACTURER IS NOT THE RESPONSIBLE OF THE DAMAGE DUE TO WRONG OR IMPROPER INSTALLATION OF THE BOILER.
7. SOME PARTS OF THE PURCHASED BOILER COULD BE DIFFERENT THAN SHOWN BOILER PARTS IN THIS MANUAL.
8. MANUFACTURER (GASSERO) RESERVES THE RIGHT TO CHANGE THIS USER'S GUIDE WITHOUT NOTICE.
9. LIFE TIME OF THE BOILER IS 10 YEARS IF ALL OF THE INSTRUCTIONS FOLLOWED ACCORDING TO THIS USER MANUAL.
10. BOILER MAINTENANCE MUST BE MADE AT LEAST ONCE IN A YEAR.

1. MEANINGS OF THE SYMBOLS AND SAFETY

1.1 Meanings of the Symbols

The symbols which are used in this document and their meanings are as follows:



DANGER : Actions that are certainly not to be done. Material damage and severe personal damage may occur.



ELECTRICAL HAZARD: Danger of death or serious injury due to electric shock.



WARNING: Danger of material damage or damage to the environment.



Refers to the **Information / Recommendations** to be considered by the user

1.2 General Warnings



Your boiler must be used in accordance with the instructions and purposes specified in the user manual. The manufacturer cannot be held liable for damage to the people, animals and property due to improper installation, subsequent repairs and modifications.



Boiler may not be used by persons with inadequate physical, mental and perceptual capacity and without experience and knowledge.

1.3 SAFETY INSTRUCTIONS



IF GAS SMELLS:

- Do not open or close the power switches, do not touch the plugs or sockets.
- Do not smoke
- Do not use your phone
- Close the gas valve immediately
- Ventilate the space by opening the doors and windows.
- Notify everyone in the building.



- Call the emergency service of the gas distribution company you are connected to. Do not allow anyone to enter the boiler room until the emergency service arrives.
- If there is a sealing due to gas leakage, do not disassemble the seal, contact the gas distribution company to disassemble the seal after necessary repair.
- The smell of the waste gas formed after burning with natural gas may resemble each other. Never use the boiler in the event of a leak in the waste gas system.
- If the boiler is working with LPG, LPG will collapse to the bottom as it is heavier than air. Sweep the gas accumulated near the ground to the outside.

IF WATER LEAKAGE ACCOURS IN THE BOILER:

- Switch off the electrical and water connections of the boiler and notify the authorized service.
- Condensation water formed after combustion is corrosive and corrosive. In case of leakage or leakage of this water, inform the authorized service.

IF ELECTRICAL LEAK ACCOURS IN THE BOILER:

- Never touch the boiler.
- Lower the main switch on the board and notify the authorized service.
- Do not touch the pipes or the chimneys. (there may be a ground fault)
- Do not cut, pull, or bend the cables even if the switch is lowered and the power cut off.



DON'T TOUCH THE BOILER WHEN YOUR HANDS ARE WET OR STEPPING ON A WET AREA.

1.4 STANDARTS AND REGULATIONS

This boiler is manufactured in accordance with the following directives and standards:

EN 15502-2+A1

EN 15502-2-1+A1

Directives :

| | |
|-------------|----------------------------------|
| 2016/426/EU | Appliances Burning Gaseous Fuels |
| 2014/30/EU | Electromagnetic Compatibility |
| 2014/35/EU | Low Voltage Directive |
| 92/42/EEC | Boiler Efficiency Directive |

2. GENERAL

These installation and maintenance instructions are prepared for the wall hung condensing boilers specified below:

Wallcon X-treme 115

Wallcon X-treme 125

Wallcon X-treme 150



CE LABEL:

This boiler complies with the essential requirements of the relevant European directives. The CE marking certifies that the products meet the essential requirements of the applicable regulations in accordance with the type of label. Manufacturer can be consulted for the declaration of conformity.

WARRANTY PERIOD AND LIFE TIME:

Warranty is 2 years from the date of invoice.

Service life of the boiler is 10 years (this period can be change according to the installation, water quality and other environmental conditions).

CONSUMER RIGHTS:

Consumers can apply for complaints and appeals to consumer courts and consumer arbitration committees.

In case of defective goods;

a) Withdraw from the contract by stating that it is ready to return the product;

b) If all costs incurred do not incur excessive costs, to request free repair of the product,

c) Requesting the replacement of the product with a non-defective product,

One of the rights can be used.

2.1 PURPOSE OF DESIGN

Gassero Wallcon X-treme Wall Hung Condensing Boilers with Premix Burners are designed for heating purposes only. For hot water use, the boiler must also be connected to the DHW tank. Boiler can be used with in a cascade system or stand alone. Maximum 16 boilers can work together in cascade systems. Multi-purpose heating values can be achieved with cascade systems. For example;

16 units of 150 kW boiler can reach 2400 kW heating power with cascade system. Examples of stand alone and cascade systems are shown in the SAMPLE INSTALLATION DIAGRAMS section.

For cascade systems, special cascade accessories such as mounting frame, horizontal flue elements, connection pipes between the boilers, main gas pipe and hydraulic mixer (balance vessel) have been developed. Such accessories make the cascade system easier to install with less effort. For more detailed information on cascade systems, please contact your dealer or manufacturer.



This boiler is not suitable for commercial or industrial purposes. The manufacturer cannot be held responsible for the problems caused by the use except of the design purpose.

2.2 INTRODUCTION OF THE PRODUCT

WALLCON X-treme is a condensing boiler which is modulated with a stainless steel heat exchanger and pre-mix burner for central heating and (optional) hot water production.

BASIC FEATURES OF WALLCON X-TREME BOILERS:

- Stainless steel heat exchanger
- % 109.4 boiler efficiency through premix burner (See the technical table)
- 1/5 turndown ratio and NOx 6 emission class
- Through intelligent electronic control panel, it has 13 safety systems and 3 separate zone control options
- Room thermostat and outside temperature sensor provide comfortable economic heating
- Besides the ease of operation via smart digital panel, it provides fault and error detection
- Web server provides remote control of the boiler
- Solar systems and pool temperature can be operated on the same control panel

2.3 BOILER ROOM AND VENTILATION

- This boiler provides IPX4D electrical protection class. Check that the place where the boiler is located complies with this protection class.
- Boilers must be placed 200 mm away from flammable materials with flammability class B, C1, C2.
- Boilers must be placed 400 mm away from the easily flammable materials of the C3 class which can be ignited by themselves or by ignition sources.
- Never switch off the power supply of the boiler when the air temperature falls below 0°C against the risk of freezing. Read the FROST PROTECTION section.
- **Wallcon X-treme** condensing boilers must be installed in spaces that have the necessary ventilation openings according to current standards and applicable regulations

- Do not modify the ventilation openings, ventilation ducts, ventilation vents and do not block them after the commissioning.
- Never use the boiler in places where excessive amounts of dust are stored, where barber shops, corrosive, explosive chemicals are stored or used.
- If the boiler receives the combustion air from the environment, there should not be any low pressure due to other systems / boilers in the boiler room.
- If the boiler will operate with LPG, electrical equipments must be at least 500 mm above from the floor.
- The boiler must be installed in accordance with the electrical voltages, gas and water pressures specified in the technical table.
- Grounding of the electrical line is mandatory.
- Never switch off the mains when the boiler is in operation. Such behavior may cause abnormal heat build-up and damage the heat exchanger and other units of the system.

2.4 WARNING LABEL

WARNINGS !

- Read the technical instructions and user manual carefully before the commissioning.
- Commissioning must be made by an authorized Gassero service.
- The boiler must be located in a location that is separate from the living quarters and only in accordance with the ventilation legislation.





2.5 PACKAGING LABEL


Product Model : **Wallcon X-treme A**

Heat Output : **B**


Gas Type : **C**

Product Code :  MASTER
SLAVE

Serial Number : 



Countries of Destination



2.6 INFORMATION LABEL

Wallcon X-treme
Wall Hung Gas Condensing Boilers

  1015 18

Model : Wallcon Xtreme **A**

Efficiency Level : +A

Standards : EN 15502-1

Production Year :

NO_x Class : 6

Power Supply : 230V / 50 Hz

Power Consumption : **C**

IP Class : X4D

Max. Working Pressure(PMS) : bar

Max. Working Temperature : 80°C

Flue (appliance) Types : B23, C13, C33, C43, C53, C63, C83

Serial Number : 

Nominal Heat Input Q_n

Q_n Max. (kW): **E**

Q_n Min. (kW) : **D**

Nominal Useful Output at (80/60 °C)

P_n Max. (kW) : **G**

P_n Min. (kW) : **F**

Nominal Useful Output at (50/30 °C)

P_n Max. (kW) : **I**

P_n Min. (kW) : **H**

Product Code : 

 **ATTENTION** : The boiler is adjusted in the Factory to Gas Pressure of **G20 - 20 mbar** .



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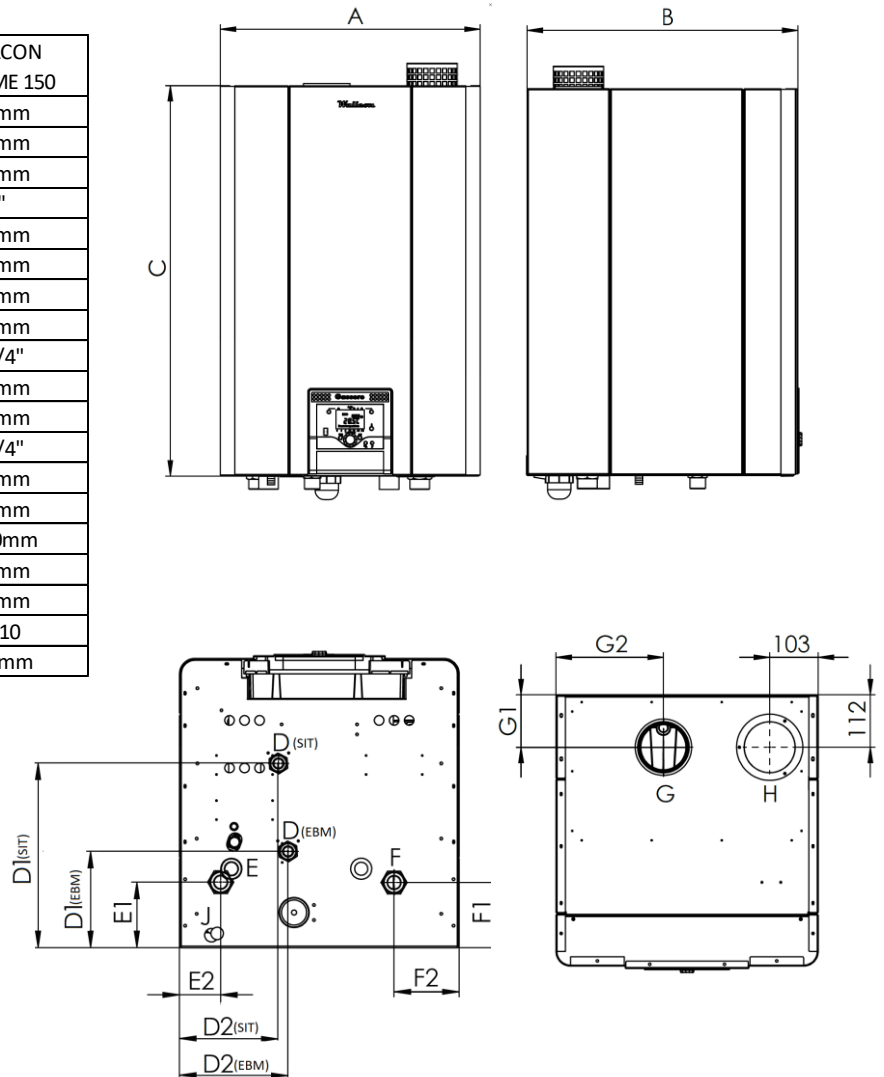
| | | |
|---|--------------|--------------|
| Countries of Destination | Gas Pressure | Gas Category |
| MASTER <input type="checkbox"/> SLAVE <input type="checkbox"/> | | |

| A | B | C | D | E | F | G | H | I |
|-----|-------|-----|----|-------|------|-------|------|-------|
| 115 | 115,5 | 350 | 27 | 108,5 | 26,1 | 105,4 | 29,5 | 115,5 |
| 125 | 126 | 360 | 17 | 121 | 16,6 | 116,2 | 18,4 | 126 |
| 150 | 150 | 460 | 21 | 143 | 19,5 | 138 | 22,7 | 150 |

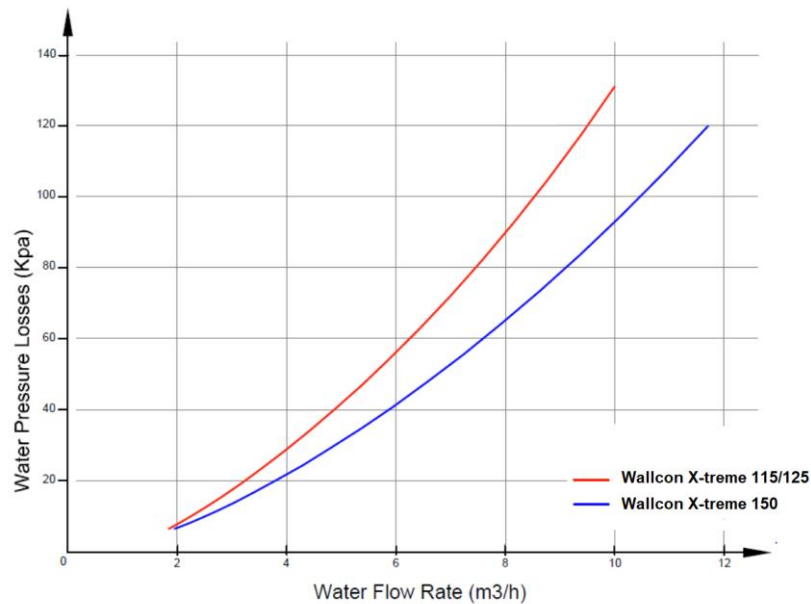
3 TECHNICAL SPECIFICATIONS

3.1 WALLCON X-treme DIMENSIONS

| | WALLCON X-TREME 115 | WALLCON X-TREME 125 | WALLCON X-TREME 150 |
|----------|---------------------|---------------------|---------------------|
| A | 557mm | 557mm | 557mm |
| B | 580mm | 580mm | 580mm |
| C | 865mm | 865mm | 865mm |
| D | 1" | 1" | 1" |
| D1 (SIT) | 398mm | 398mm | 444mm |
| D1 (EBM) | 192mm | 192mm | 269mm |
| D2 (SIT) | 197mm | 197mm | 197mm </td |
| D2 (EBM) | 217mm | 217mm | 217mm |
| E | 1 1/4" | 1 1/4" | 1 1/4" |
| E1 | 130mm | 130mm | 157mm |
| E2 | 82mm | 82mm | 103mm |
| F | 1 1/4" | 1 1/4" | 1 1/4" |
| F1 | 130mm | 130mm | 157mm |
| F2 | 130mm | 130mm | 195mm |
| G | Ø100mm | Ø100mm | Ø100mm |
| G1 | 112mm | 112mm | 112mm |
| G2 | 330mm | 330mm | 330mm |
| H | Ø110 | Ø110 | Ø110 |
| J | Ø25mm | Ø25mm | Ø25mm |

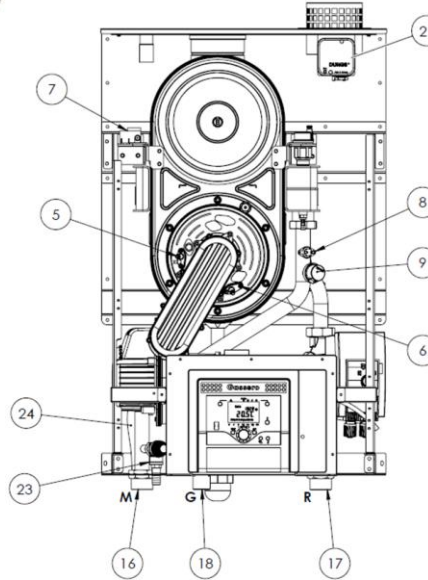
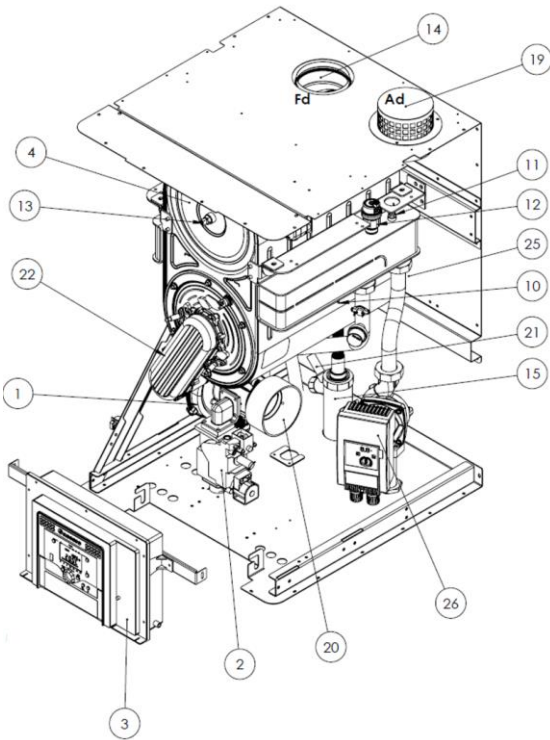


3.2 HYDRAULIC DIAGRAM



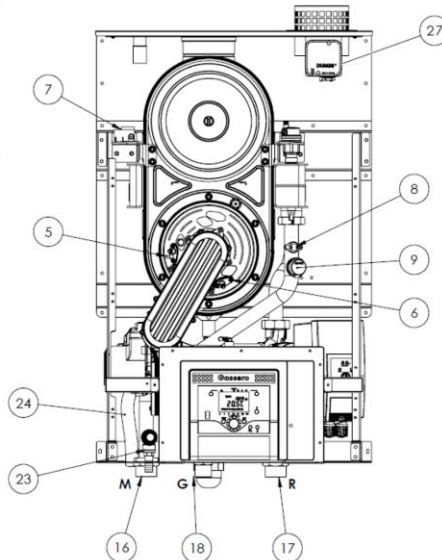
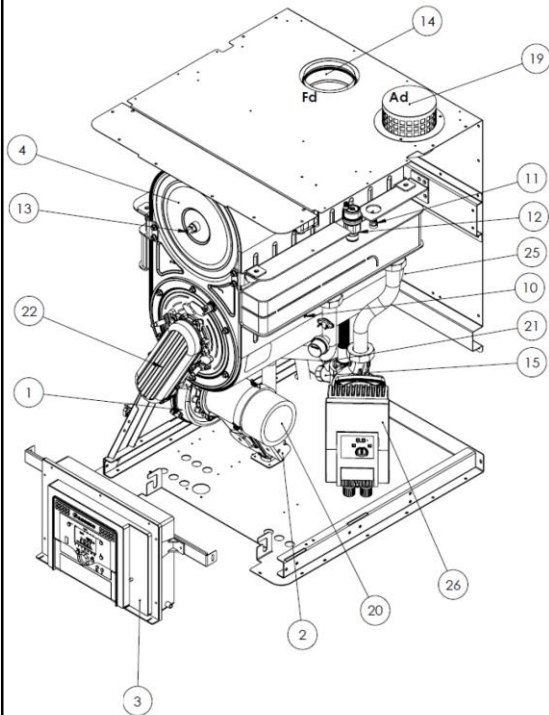
3.3 CONTENTS

Wallcon X-treme 115 – 125 – 150 (With SIT Gas Valve)



- 1 - Fan (SIT)
- 2 - Gas Valve (SIT)
- 3 - Control Panel
- 4 - Hat Exchanger
- 5 - Ionization Electrode
- 6 - Ignition Elektrode
- 7 - Ignition Transformer
- 8 - Limit Thermostat
- 9 - Pressure Sensor
- 10 - Flow NTC Sensor
- 11 - Return NTC sensor
- 12 - Automatic Air Vent
- 13 - Thermalfuse
- 14 - Flue Gas Outlet
- 15 - Syphon
- 16 - Water Outlet Connection
- 17 - Water Inlet Connection
- 18 - Gas Inlet
- 19 - Air Intake
- 20 - Venturi (SIT)
- 21 - Syphon Sensor
- 22 - Air Gas Mix Pipe
- 23 - Pressure Safety Valve
- 24 - Drain Hose
- 25 - Over Heat Sensor For Heat Exchanger
- 26 - Circulation Pump
- 27 - Air Pressure Switch

Wallcon X-treme 115 – 125 – 150 (With EBM Gas Valve)



- 1 - Fan (EBM)
- 2 - Gas Valve (EBM)
- 3 - Control Panel
- 4 - Hat Exchanger
- 5 - Ionization Electrode
- 6 - Ignition Elektrode
- 7 - Ignition Transformer
- 8 - Limit Thermostat
- 9 - Pressure Sensor
- 10 - Flow NTC Sensor
- 11 - Return NTC sensor
- 12 - Automatic Air Vent
- 13 - Thermalfuse
- 14 - Flue Gas Outlet
- 15 - Syphon
- 16 - Water Outlet Connection
- 17 - Water Inlet Connection
- 18 - Gas Inlet
- 19 - Air Intake
- 20 - Venturi (EBM)
- 21 - Syphon Sensor
- 22 - Air Gas Mix Pipe
- 23 - Pressure Safety Valve
- 24 - Drain Hose
- 25 - Over Heat Sensor For Heat Exchanger
- 26 - Circulation Pump
- 27 - Air Pressure Switch

3.4 TECHNICAL TABLE

| | Type | WALLCON X-treme 115 | | WALLCON X-treme 125 | | WALLCON X-treme 150 | |
|-----------------------------------|-------------------|---------------------|--------|---------------------|--------|---------------------|--------|
| | | min | max | min | max | min | max |
| FLUE TYPE | Type | B23-C43-C53-C63-C83 | | | | | |
| NOMINAL HEAT INPUT QN | kw | 27,0 | 108,5 | 17,0 | 121,0 | 21,0 | 143,0 |
| NOMINAL HEAT OUTPUT PN(80-60°C) | kw | 26,10 | 105,40 | 16,60 | 116,20 | 19,50 | 138,00 |
| NOMINAL HEAT OUTPUT PN(50-30°C) | kw | 29,30 | 115,50 | 18,40 | 126,00 | 22,70 | 150,00 |
| OPERATING WATER PRESSURE | bar | 0,8 | 6,0 | 0,8 | 6,0 | 0,8 | 6,0 |
| MAX. OPERATING TEMPERATURE | °C | 80 | | 80 | | 80 | |
| LIMIT TEMPERATURE | °C | 105 | | 105 | | 105 | |
| EFFICIENCY (80-60°C) | % | 97,31 | 97,26 | 95,27 | 97,09 | 96,49 | 97,01 |
| EFFICIENCY (50-30°C) | % | 107,19 | 106,53 | 106,11 | 106,19 | 106,49 | 105,30 |
| PARTIAL LOAD EFFICIENCY (36/30°C) | % | 108,00 | | 108,00 | | 108,34 | |
| FLUE TEMPERATURE (80-60°C) | °C | 58,9 | 78,3 | 57,6 | 80,1 | 62,9 | 83 |
| FLUE TEMPERATURE (50-30°C) | °C | 33,6 | 40,6 | 32,1 | 42,2 | 38,1 | 65,8 |
| CO2 EMISSION | % | 9,1 | 9,1 | 9,1 | 9,1 | 9,4 | 9,8 |
| TURNDOWN RATIO | | 1: 4 | | 1: 7 | | 1: 7 | |
| NOx CLASS | Class | 6 | | 6 | | 6 | |
| NOx VALUE | mg/kWh | 24 | | 35 | | 41 | |
| FLUE GAS MASS FLOW | g/sec | 12,00 | 47,00 | 8,00 | 49,00 | 9,00 | 60,00 |
| WATER FLOW | m ³ /h | 1,218 | 5,115 | 0,767 | 5,256 | 0,924 | 6,039 |
| HYDRAULIC LOSS | kPa | 40 | | 41 | | 39 | |
| GAS SUPPLY | m ³ /h | 2,65 | 10,7 | 1,66 | 11,42 | 2,12 | 14,19 |
| MAX. GAS SUPPLY PRESSURE | mBar | 21 | | 21 | | 21 | |
| MIN. GAS SUPPLY PRESSURE | mBar | 17 | | 17 | | 17 | |
| FLUE PRESSURE | Pa | 200 | | 190 | | 310 | |
| FLUE CONNECTION | mm | Ø100 | | Ø100 | | Ø100 | |
| NET WEIGHT | KG | 95 | | 95 | | 106 | |
| GROSS WEIGHT | KG | 102 | | 102 | | 113 | |

4 INSTALLATION INTRODUCTIONS

4.1 INSTALLATION

4.1.1 PACKAGING

The **Wallcon X-treme** boilers are fully assembled, tested and packed in a cardboard box which maintained with styrofoam.

PACKAGE CONTENTS :

- Outdoor sensor
- Wall hung equipments (2pcs. 12 mm wall plug and 2 pcs 12 mm hook)
- User manual / Warranty certificate
- Mounting template
- Cascade sensor
- DHW sensor (optional)
- Air inlet filter (optional)





When the boiler is unpacked, check the contents of the package, contact the dealer if there is any damage or missing components.

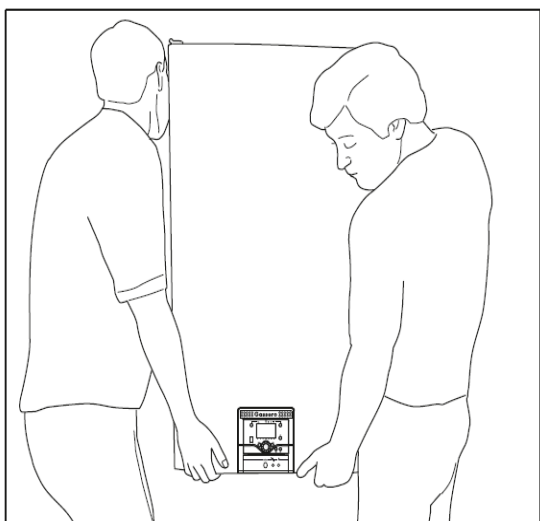


Disposing of packaging materials and leaving them accessible to children can be dangerous.



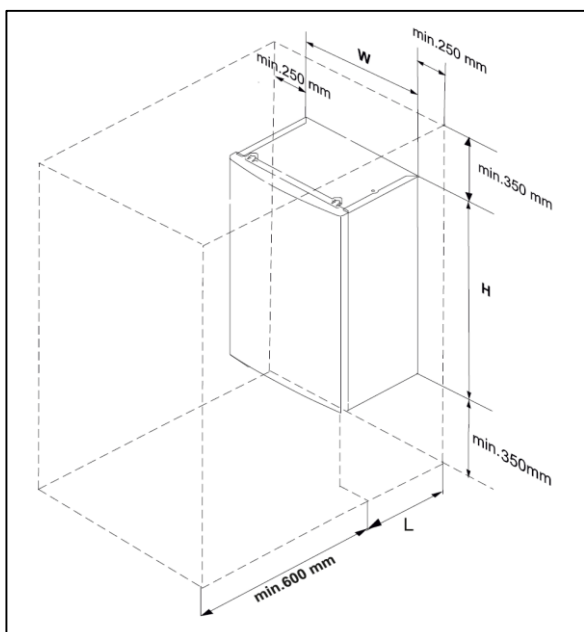
Disposing of packaging materials can be harmful for people, animals and the environment. Manufacturer is not liable for harmes that may arise from such situations. Such wastes must be treated according to current regulations.

4.1.2 CARRYING

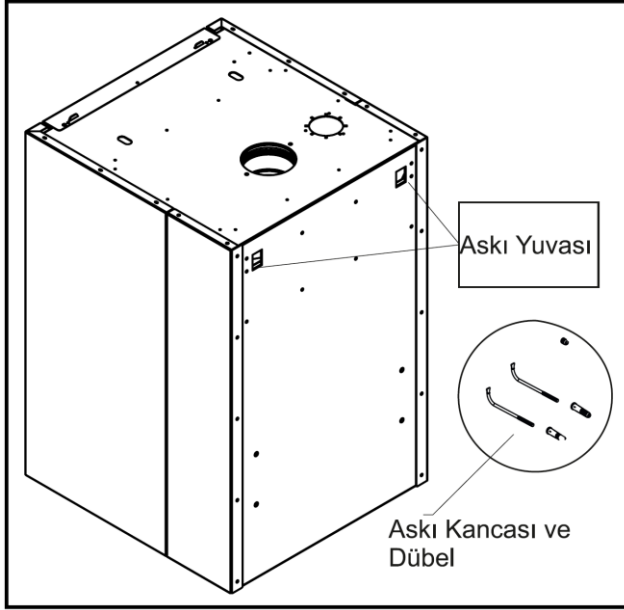


- Carry the boiler together at least two persons together by holding from the top and the bottom.
- Do not carry or lift the boiler by holding the control panel.
- After the boiler is removed from the box, it should not be placed on the gas, water and condensate connections.

4.1.3 MOUNTING



The wall must be strong enough to hold a water filled boiler. If the carrying capacity of the wall is not sufficient, an external suspension device must be provided. For example; a footed device may be used. For ease of service operation to the boiler, the necessary distances must be left around the boiler.


Wall Mount:

- For ease of installation, use the assembly template included in the package
- Drill the holes you marked with a 12 point drill.
- Screw the hooks and hanger hooks into place.
- Hang the boiler from the sling slots on the wall.

4.1.4 WATER QUALITY AND TREATMENTS

Paying attention to the following issues related to water quality will greatly reduce the problems that may arise during the life time of the boiler and ensure the continuity of the working efficiency:

- Piping and installation components must be cleaned before installation.
- In old installations, iron oxide, sludge, sediment and similar deposits should be cleaned.
- The water in the system should be analyzed in terms of hardness, pH, iron content and conductivity.



If all or a part of the heating installation is to be operated by UNDERFLOOR HEATING SYSTEM, PLATE HEAT EXCHANGER should be used and the system should be separated from each other as primary and secondary.



Faults that may arise if the water conditions are not in accordance with the values specified in the table, boiler will be considered out of warranty.

DYNAMIC AND CHEMICAL WASHING / FLUSHING:

In the newly established systems, to avoid the possible substances in the installation (metal shavings, some oils, residues of construction wastes etc.) flushing treatment is a mandatory.

Likewise, it is a mandatory to apply the flushing treatment without water given to the boiler in conversion of older systems.

The methods of flushing / flushing are described in detail in the manual GASSERO DYNAMIC AND CHEMICAL WASHING / FLUSHING.


Neutral-based, non-acidic, non-alkaline registered products can be used to clean the installation or keep the water conditions at desired levels. You can get information from GASSERO for cleaner, preservative or inhibitor type (stopper, preventive) products or you can contact with SENTINEL or FERNOX companies.

Gassero Water Specification

| | Total Hardness °d | pH | Iron (Not Diluted) | Conductivity |
|---------------------|----------------------|---------|-----------------------|--------------|
| STAINLESS EXCHANGER | 1,00 | 7,5-9,5 | <10ppm | ≤2000μS/cm |
| ALUMINUM EXCHANGER | 1,00 | 6,5-8,5 | <10ppm | ≤2000μS/cm |

4.2 HYDRAULIC CONNECTIONS

According to the current legislation; total heating capacity of the boiler or cascade system must be calculated to meet the building's heat demand. All necessary components must be installed and supplied correctly in the installation in a manner to perform their duty. Protective and safety devices must be used in the heating system as described in the current legislation.



In order to separate the boiler from the installation, two ball valves should be placed on the supply and the return lines.

4.2.1 EXPANSION TANK

Wallcon X-treme boilers do not have an expansion tank. So the capacity of the expansion tank should be selected according to the capacity of the heating system and the static pressure.



It is recommended to place the expansion tank on the turn of the central heating system.

4.2.2 SAFETY VALVE

Walcon X-treme boilers are equipped with a safety valve. The hose of this safety valve must be connected to a drain. Manufacturer cannot be held liable for damages caused by water flow into the boiler or on the ground when excessive pressure is generated in the heating installation.

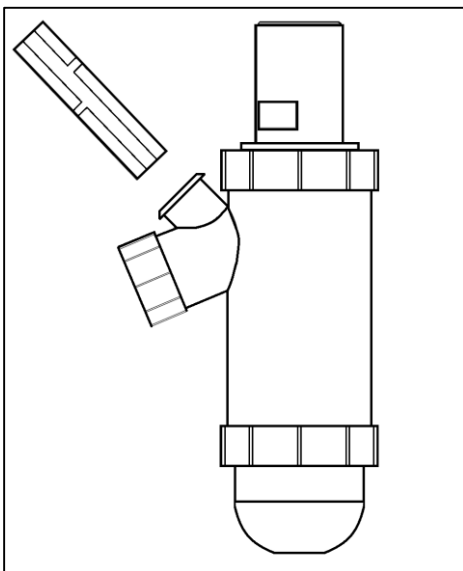


Safety valve must not be used as a means of draining water from the system.



Draining water of the safety valve can be very hot. Beware of scalding.

4.2.3 CONDENSATION WATER DRAIN

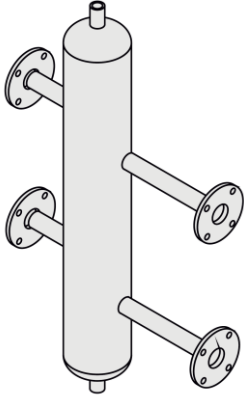


Condensation water which is generated during the combustion, transfers to the water drain connection by the syphon and drain hose.

Condensation water is acidic and corrosive (approx. 2 ph). So all of the connections which are made for condensation water must be made with PP type pipes. Condensation water must be transferred to the drain with the shortest way possible. For health and environmental reasons it mustn't transfer such places near people, animals and plants.

- Condensation water must not be connected to rain drain systems.
- The condensate drain line must have a slope of at least 3%.
- A neutralization tank should be used for condensate water occurring in systems with a total power of 200 kW and above.
- It is mandatory to comply with the relevant local regulations for the discharge of condensate water.

4.2.4 HYDRAULIC SEPERATOR



These are used to compensate the pressure differences in systems where multiple pumps and / or heating circuits are used, to eliminate excessive pressure differences between boiler's inlet and outlet water temperatures and to prevent thermal stresses in the boiler.

- Dimensions, input and output distances should be selected correctly.
- Via a sensor to be placed on it, the general temperature of the system is determined by the hydraulic seperator.
- There must be an automatic air relief valve on the hydraulic seperator.



In case the water in the system is dirty, chalky or corrosive, plate heat exchanger should be used instead of balance container.

4.2.5 PLATE HEAT EXCHANGER

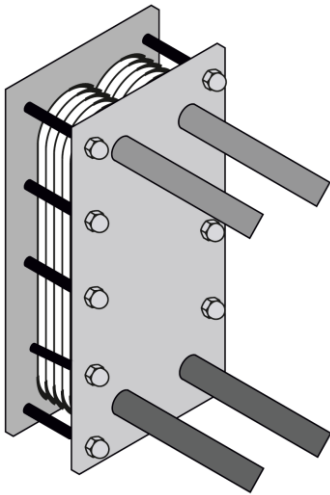


Plate heat exchangers are hydraulic equipments that separates the boiler and the installation (primary and secondary zones). Unlike the hydraulic separator circulating water in the plate heat exchanger never interfere with the water goes through the boiler and the water goes through the installation. Only heat transfer occurs here.

Preferred for many purposes;

- If the water in the system is very dirty, chalky or corrosive,
- If the working pressure of the system exceeds the working pressure of the boiler,
- If a part or all of the system is required to operate with lower temperature values. (eg. underfloor heating systems)



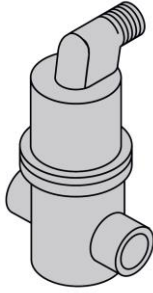
The plate heat exchanger must be used in the following cases and the system must be separated into primary and secondary.

- Heating systems which are consist of partly of fully floor heating,
- Used, older systems,
- Systems that are dirty, corrosive, bacterial and calcareous water.



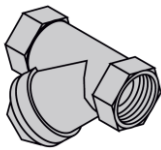
Periodic inspection and maintenance of the plate heat exchanger is highly important for the efficiency of the system.

4.2.6 AUTOMATIC AIR RELIEF VALVE



Wallcon X-treme boilers have an automatic relief valve for the evacuation of the air accumulated in the heat exchanger. However, for the evacuation of the air that may occur in the installation, it is necessary to place one or more automatic air relief valves in the appropriate places of the installation. Local regulations must be followed in this regard.

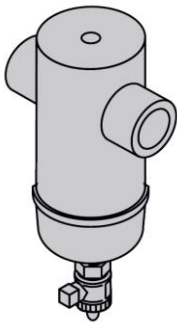
4.2.7 DEPOSIT AND DIRT SEPERATOR



To remove the dirt and particles form the water, a strainer or deposit nd dirt seperator must be placed on the return line of the boiler.

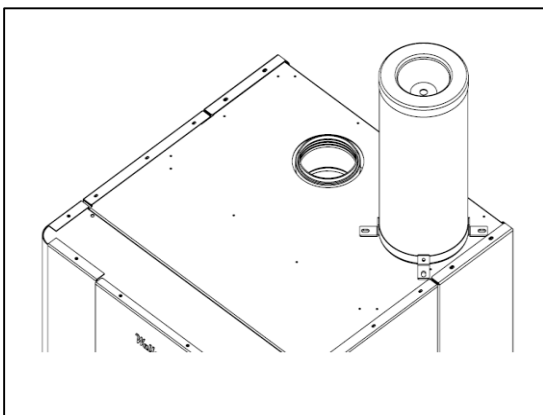
When the dirt, particles and similar deposits in the system water are not cleaned;

- The efficiency of the system decreases,
- Installation equipments (pumps, valves, plate heat exchanger, etc.) may be damaged due to overheating
- A boiler damage may occur due to heat exchanger clogging. Manufacturer cannot be held liable for damages that may occur in such cases.



Strainers or deposit and dirt sepeptors on the system should be checked frequently and cleaned if necessary.

4.2.8 AIR INLET FILTER (OPTIONAL)



If **Wallcon X-treme** boilers will be used in to a dirty air environment, they must be supported with the air inlet filters. This optional filter must be checked regularly.

When the air inlet filter becomes dirty;

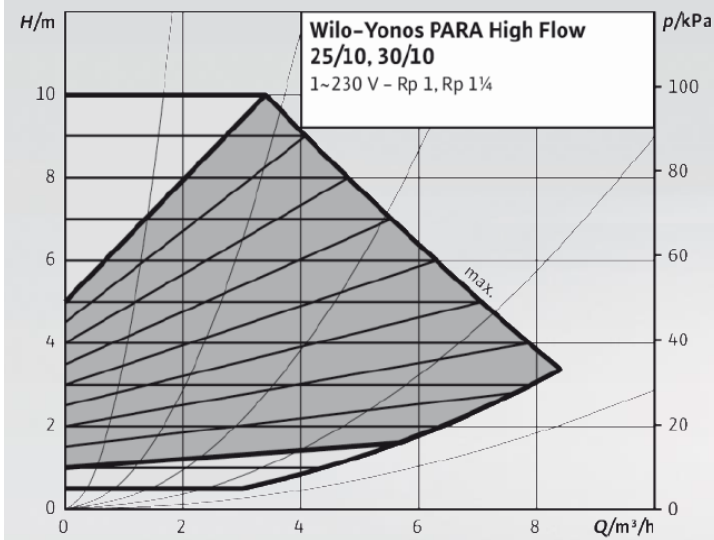
- Emission values would be deteriorated and efficient combustion wouldn't be achieved.
- The accumulation of soot occurs in the heat exchanger.
- Loud ignition and combustion occurs.
- Overheating, leakage and deformation would be observed in the flue system.



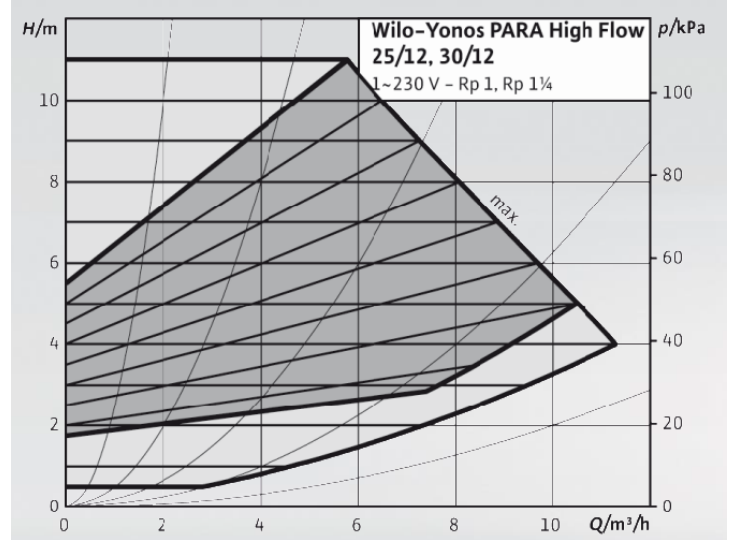
Manufacturer cannot be held liable for damages caused by dirty combustion air. Don't block the air filter partially or totally.

4.2.9 PUMP

Wallcon X-treme boilers are equipped with modulated pumps according to the last ErP regulation.



Wallcon X-treme 115
Wallcon X-treme 125



Wallcon X-treme 150

4.3 FLUE CONNECTIONS

Flue and chimney connections must be carried out in accordance with applicable regulations and relevant standards. Materials which are used for the flue and chimney must be resistant to the temperature, corrosive effect of condensation water and mechanical stresses and must be gas-tight.



Never use the new boiler with the flues which are used for solid/liquid fuel boilers or shunt chimneys.



Chimney system and the condensation drainage systems connected to it should be checked once a year and cleaned if necessary.

4.3.1 FLUE TYPES

B23 = It is a flue system that takes the combustion air from the environment and throws flue gas to the outside.

C13 = It is a flue system that takes the combustion air from the outside and throws flue gas to the outside with the horizontal concentric flue pipe system.

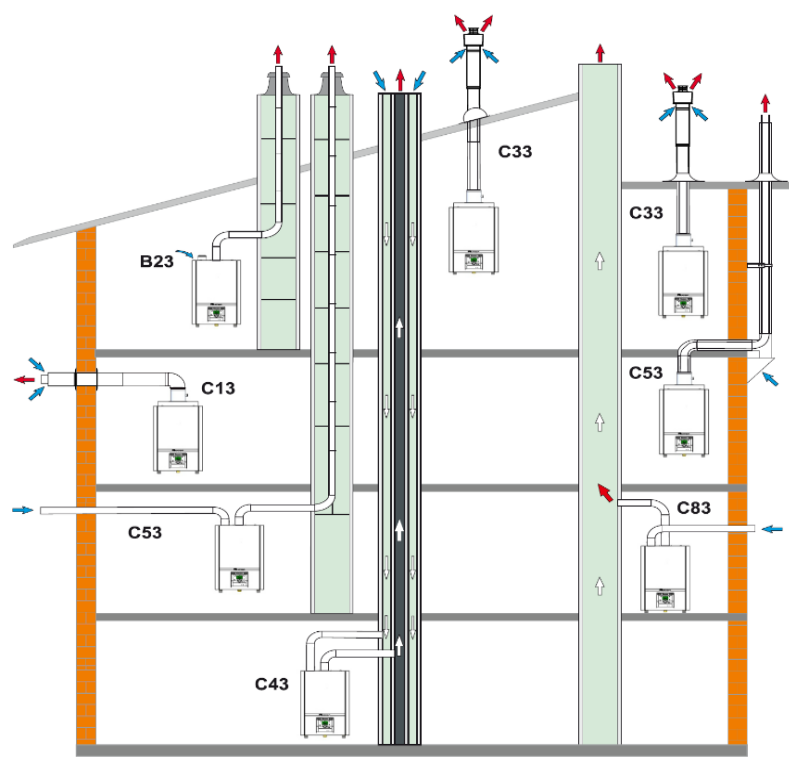
C33 = It is a flue system that takes the combustion air from the outside and throws flue gas to the outside with the vertical concentric flue pipe system.

C43 = It is a flue system that takes the combustion air from the outside and throws flue gas to the outside with separate flue pipes.

C53 = It is a flue system that takes the combustion air from the outside and throws flue gas to the outside with the vertical and horizontal concentric flue pipe system.

C63 = It is a flue system that flue pipes are not supplied by the manufacturer. It has to be applied according to one of the applicable flue systems which are mentioned in technical table in flue types section with CE certified flue pipes.

C83 = It is a flue system which takes the combustion air from the outside with horizontal flue pipes and throws flue gas to the self contained (negative pressure) chimney.



4.3.2 FLUE CONNCTIONS LENGTHS

| Wallcon X-Treme 115 | <i>C13</i> | <i>C33</i> | <i>C43,C53 C63,C83</i> |
|----------------------------|------------|------------|----------------------------|
| Air inlet | 150 mm | 150 mm | 150 mm |
| Flue | 100 mm | 100 mm | 100 mm |
| Max. length | 17 m | 17 m | 17 m |
| Max. output (Δp) | 100 Pa | 100 Pa | 100 Pa |

| Wallcon X-Treme 125 | <i>C13</i> | <i>C33</i> | <i>C43,C53 C63,C83</i> |
|----------------------------|------------|------------|----------------------------|
| Air inlet | 150 mm | 150 mm | 150 mm |
| Flue | 100 mm | 100 mm | 100 mm |
| Max. length | 17 m | 17 m | 17 m |
| Max. output (Δp) | 140 Pa | 140 Pa | 140 Pa |

| Wallcon X-Treme 150 | <i>C13</i> | <i>C33</i> | <i>C43,C53 C63,C83</i> |
|----------------------------|------------|------------|----------------------------|
| Air inlet | 150 mm | 150 mm | 150 mm |
| Flue | 100 mm | 100 mm | 100 mm |
| Max. length | 17 m | 17 m | 17 m |
| Max. output (Δp) | 300 Pa | 300 Pa | 300 Pa |

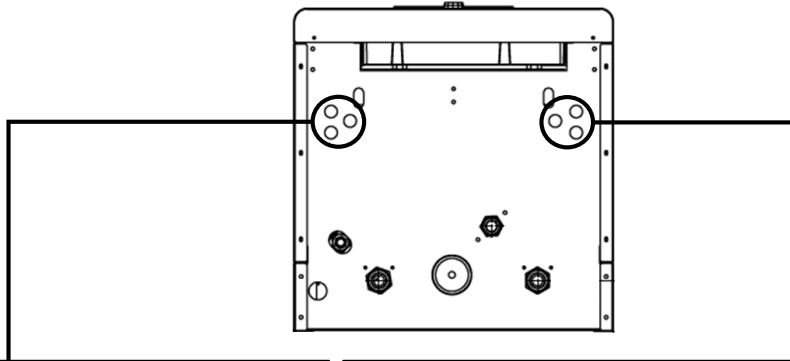
4.4 ELECTRICAL CONNECTIONS

- For the operation of the boiler, a grounded electrical supply 230 VAC 50Hz is required (tolerance must be between -15% ve +10%).
- Electric supply of the boiler must be cut off via a fuse during the maintenance.
- Electrical operations must be made by authorized technical personal in in accordance with regulations and standards.
- Electrical cables
- Cables should not be passed close to hot surfaces (such as hot water pipes).
- L (phase), N(neutral) and grounding connections must be made properly.
- All cables must be fitted with a ferrule.



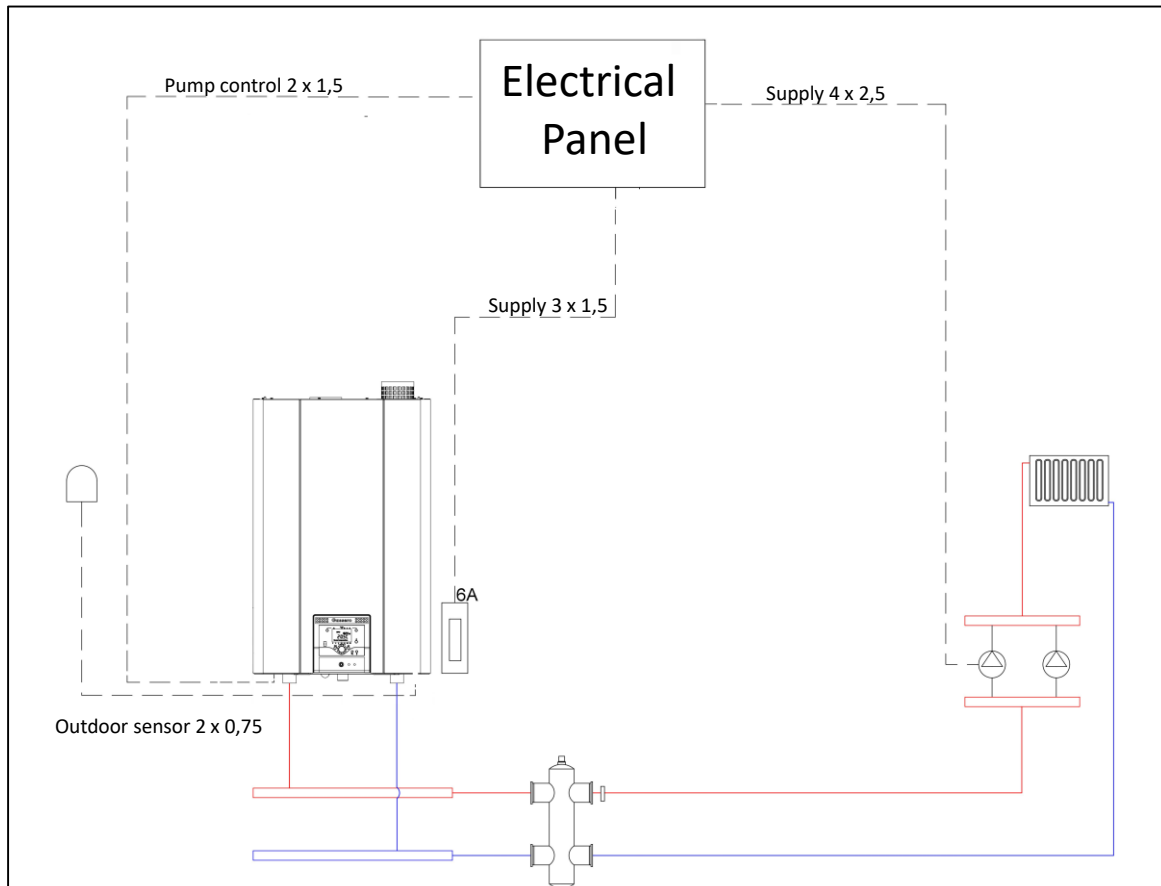
The manufacturer cannot be held liable for damages caused by negligence or incorrect operation in the earthing of the boiler.

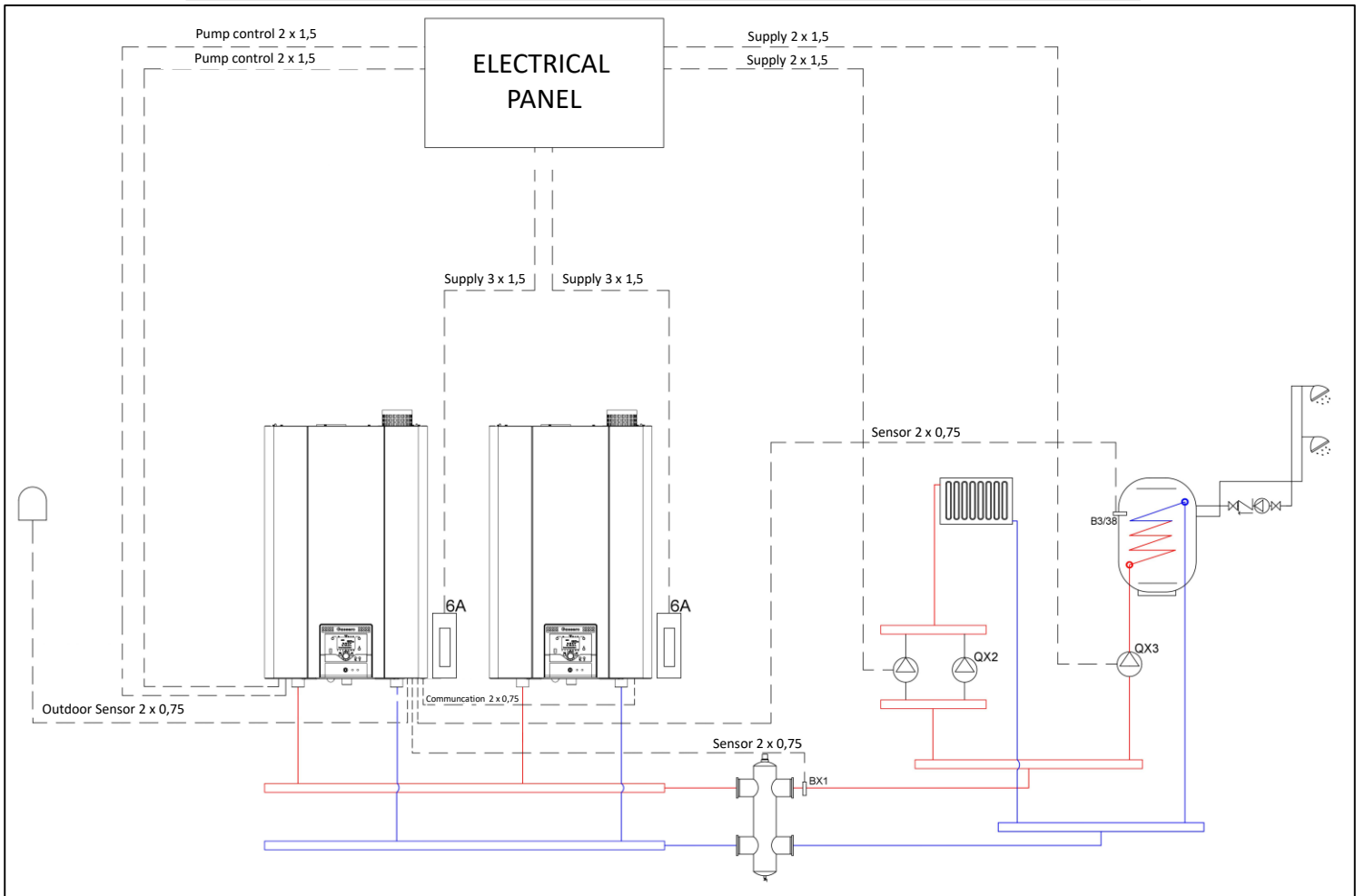
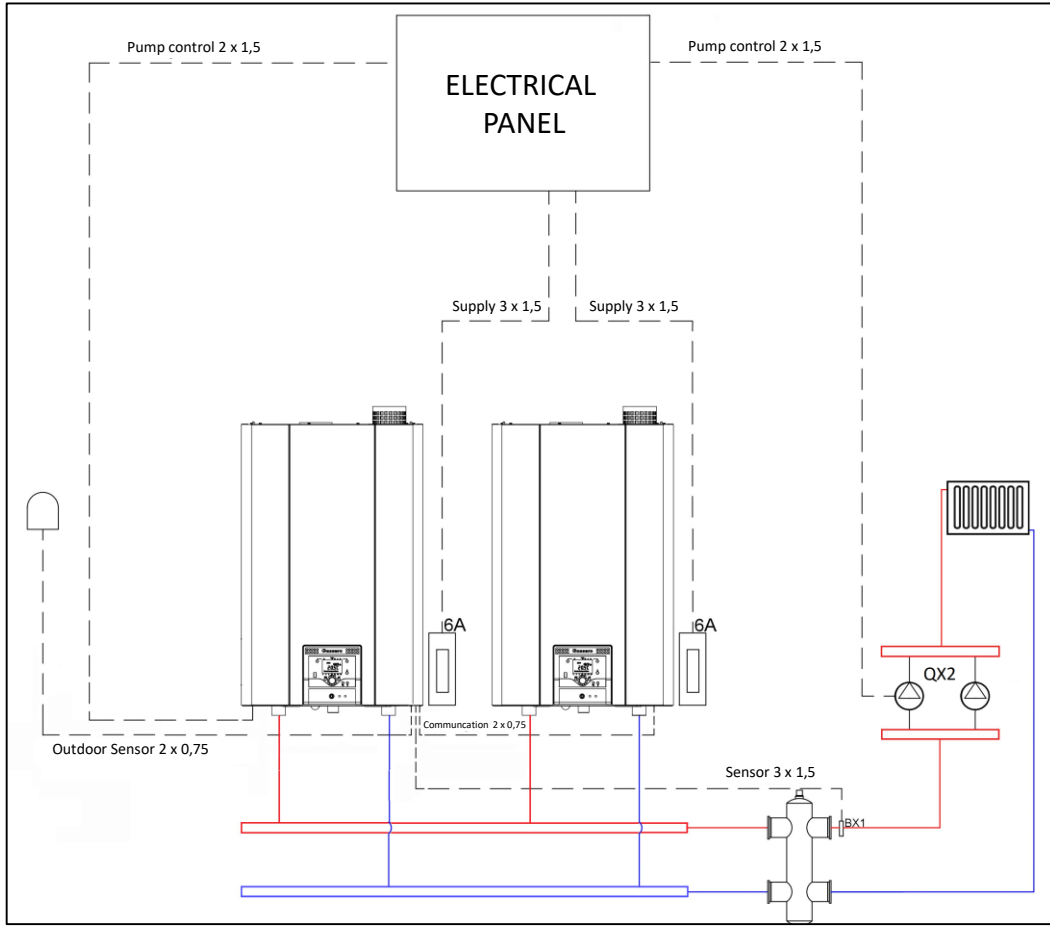
4.4.1 WIRING DIAGRAM

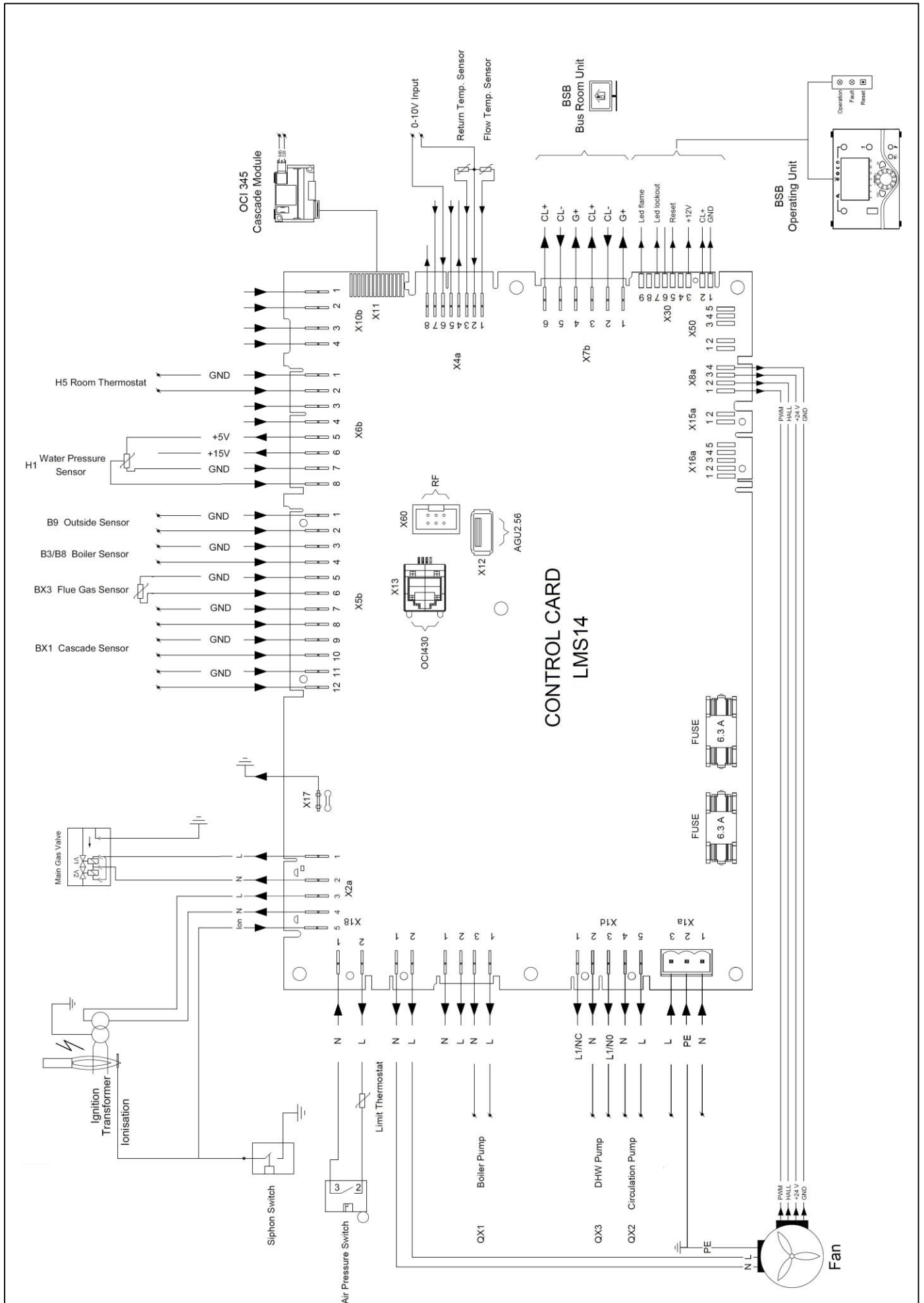


| BOILER SIDE CONNECTIONS | CABLE SECTION | CONNECTION | EXPLANATION |
|-------------------------------|---------------|----------------------|--|
| BROWN YELLOW/GREEN BLUE | 3 X 1,5 | SUPPLY CABLE | BROWN = PHASE , BLUE = NEUTRAL , YELLOW = GROUND has to be connected to a 6A fuse. |
| BROWN YELLOW/GREEN BLUE | 2 x 1,5 | Q2 SYSTEM PUMP CABLE | Using for system pump control via master boiler. 2 X 1,5 cable has to be connected to SYSTEM PUMP contactor's phase terminal on the electrical panel. Electrical panel connections will be made by the installation services. Boiler connections from the electrical panel will be made by authorized Gassero service. |
| BROWN YELLOW/GREEN BLUE | 2 x 1,5 | Q3 DHW PUMP CABLE | Using for DHW pump control via Master boiler. 2 X 1,5 cable has to be connected to DHW PUMP contactor's phase terminal on the electrical panel. Electrical panel connections will be made by the installation services. Boiler connections from the electrical panel will be made by authorized Gassero service. |

| BOILER SIDE CONNECTIONS | CABLE SECTION | PICTURE | CONNECTION | EXPLANATION |
|-------------------------|---------------|---------|---|---|
| RED RED/BLACK | 2 X 0,75 | | Outside Sensor: | Boiler or cascade system operates according to the outside air temperature. Maximum 50 m length connection is possible. It operates in the range of -50 ° C to 70 ° C (with + 1 / -1 K tolerance) |
| BLACK BLACK/WHITE | 2 X 0,75 | | Cascade Module: | It provides communication between boilers in cascade systems. 16 boilers can be communicate with each other. |
| YELLOW YELLOW/BLACK | 2 X 0,75 | | Room Thermostat: | Room comfort setting and operation mode can be adjusted. Maximum 50 m length connection is possible. |
| BROWN BROWN/BLACK | 2 X 0,75 | | Immersion Type Cascade Temperature Sensor | Connects to the supply collector, the hydraulic separator or the plate heat exchanger. Measures the flow temperature. It operates from 0 ° C to 95 ° C. (with + 0.5 / - 0.5 K tolerance). |
| BLUE BLUE/BLACK | 2 X 0,75 | | Immersion Type DHW Temperature Sensor | Measures the DHW tank temperature. It can operate from 0 ° C to 95 ° C. (with + 0.5 / - 0.5 K tolerance.) |
| PURPLE GREY | 2 X 0,75 | | PUMP PWM 0 - 10 V CONTROL | Connected to the 0-10 V sockets of the frequency-controlled (modulated) system pumps. Controls the modulation of the pump. |





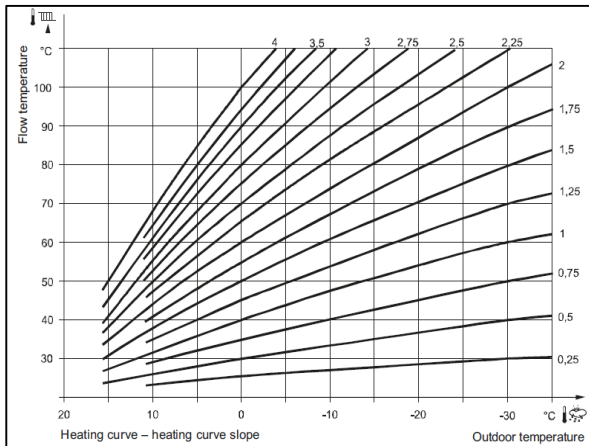


4.4.2 OUTSIDE TEMPERATURE SENSOR

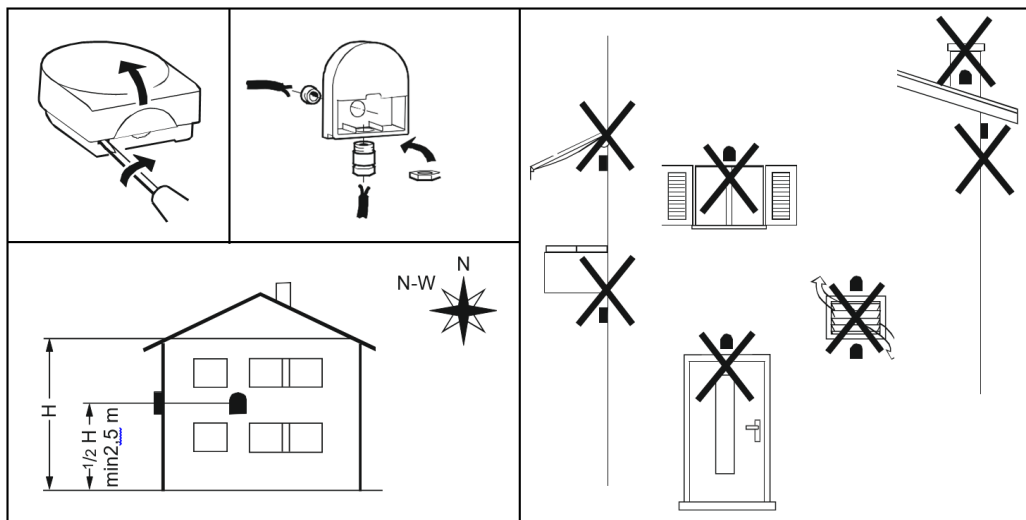
When an outside temperature sensor installed, boiler will adjust supply temperature according to the outside temperature in order to provide energy saving without compromise the comfort.

Outside Temperature Sensor must be Installed;

- north or north-west direction of outside of the building,
- at a height of minimum 2,5m from the ground,
- not exposed to direct sunlight,
- straight side of the wall,
- in a place away from doors, windows, chimneys and vents.



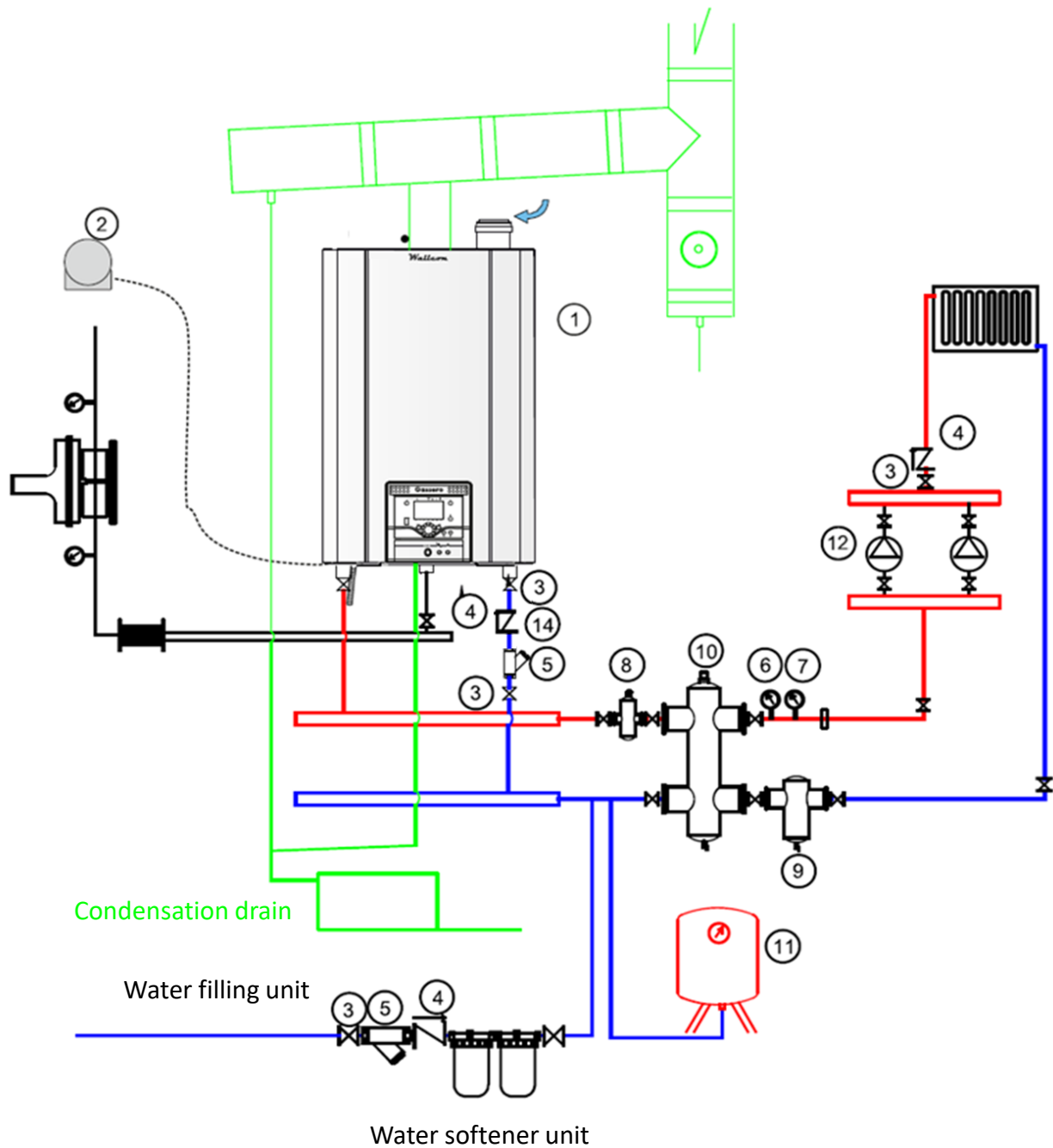
- Open the sensor housing cover by turning it counterclockwise to access the sensor connection terminal and the wall fixing holes.
- Mark the fixing points on the wall and drill the wall using the storage box as a template.
- Secure the box to the wall using the two anchors provided.
- Connect the two-wire cable from the boiler to the terminal box (nonpolar).
- Tighten the nut in the housing box to ensure water-tightness of the cable connection.
- Maximum length between the control panel and the outside temperature sensor is 50 meters.
- Sensor cable has to be used as a single cable as possible. Aware of multiple additions as far as possible.



5 INSTALLATION EXAMPLES

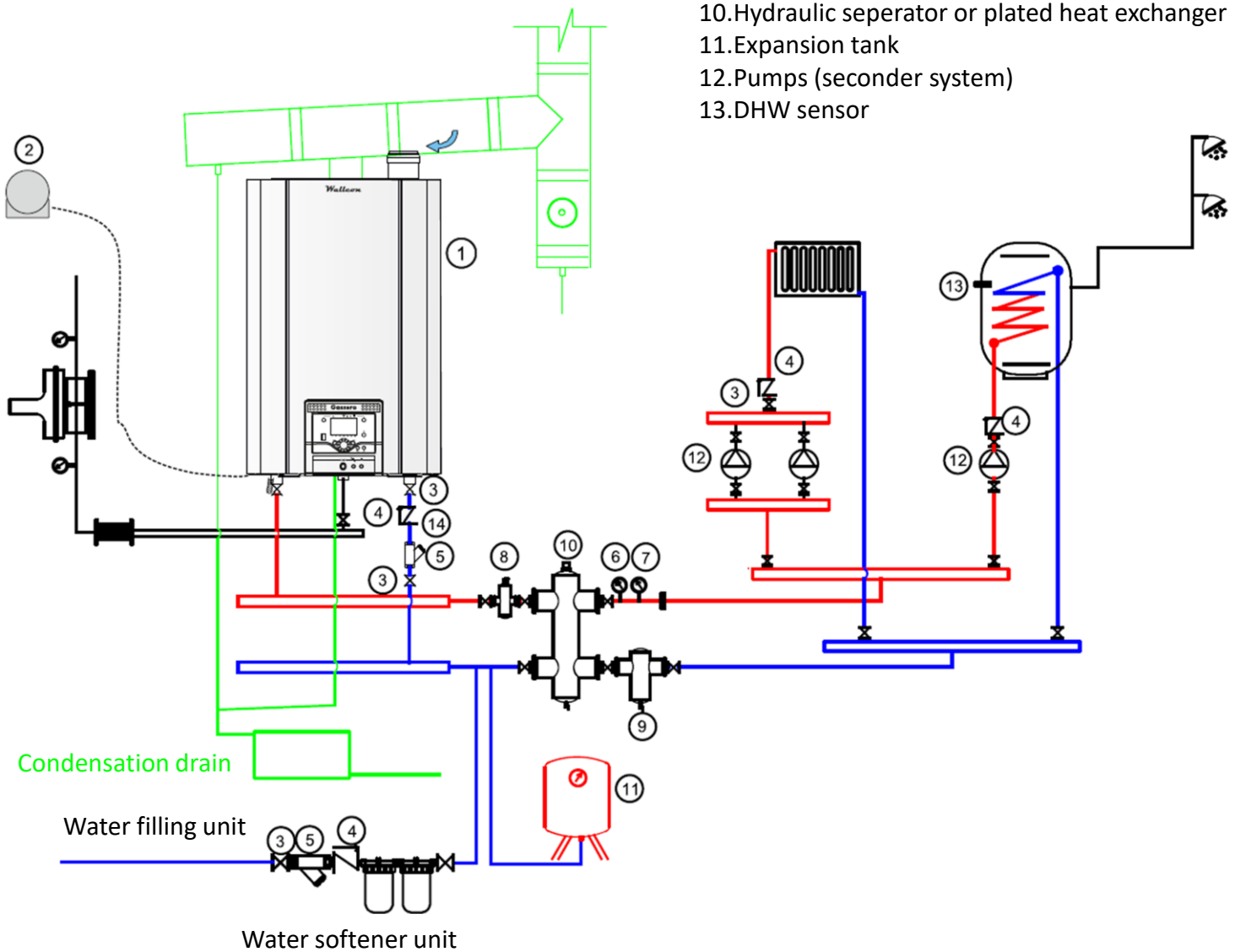
1. Wallcon X-treme

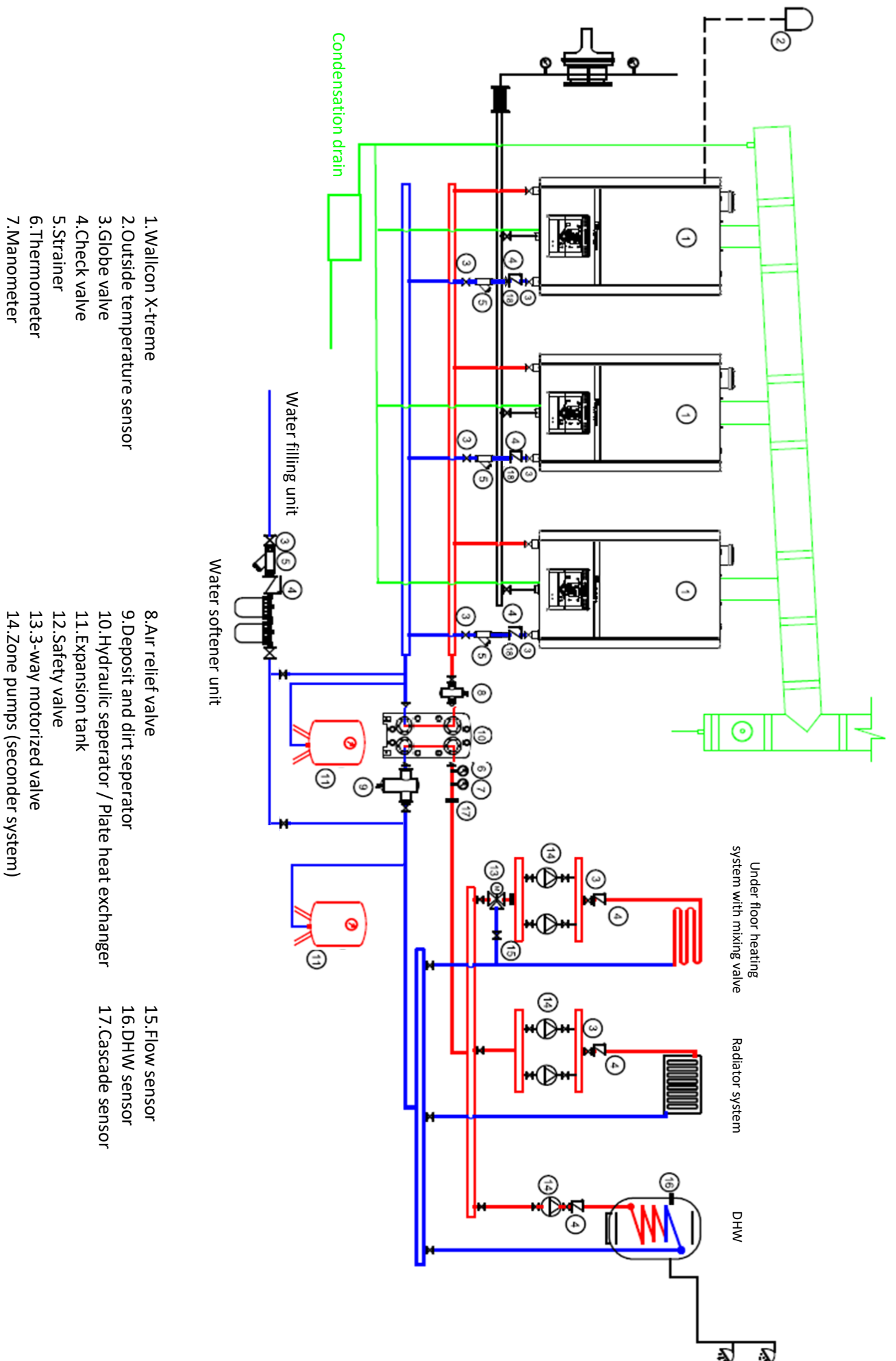
2. Outside temperature sensor
3. Globe valve
4. Check-Valve
5. Strainer
6. Thermometer
7. Manometer
8. Air separator
9. Deposit and dirt separator
10. Hydraulic separator or plated heat exchanger
11. Expansion tank
12. Pumps (second system)
13. DHW sensor



1. Wallcon X-treme

- 2. Outside temperature sensor
- 3. Globe valve
- 4. Check-Valve
- 5. Strainer
- 6. Thermometer
- 7. Manometer
- 8. Air separator
- 9. Deposit and dirt separator
- 10. Hydraulic separator or plated heat exchanger
- 11. Expansion tank
- 12. Pumps (secondar system)
- 13. DHW sensor





6 OPERATION

6.1 GENERAL

Wallcon X-treme boilers;

- Controls 3 heating zones. It could be increase with placing additional zone modules.
- Calculates exact temperatures for each zone via sensors and outside temperature sensor.
- Saves and display the fault and error history.
- Integrated with cascade control system to work with multiple boilers according to heat demand equally.
- Integrated with frost and legionella protection systems.
- Can be control via internet or BMS systems with additional modules.



All comissioning, installation, maintenance etc. must be performed by authorized personnel.



Improper interventions may cause loss of life and property, increased fuel consumption, and deterioration in safe and comfortable operation.



Manufacturer cannot be held liable for any problems caused by incorrect adjustments and interventions.

Display symbols:



Comfort setting for heating



Reduced heating setting for heating



Frost protection setting for heating



In progress – Please wait



Change the battery



Burner on



Info menü activated

PROG Programming menu activated

ECO ECO funtion activated



Holiday function activated



Heating referance

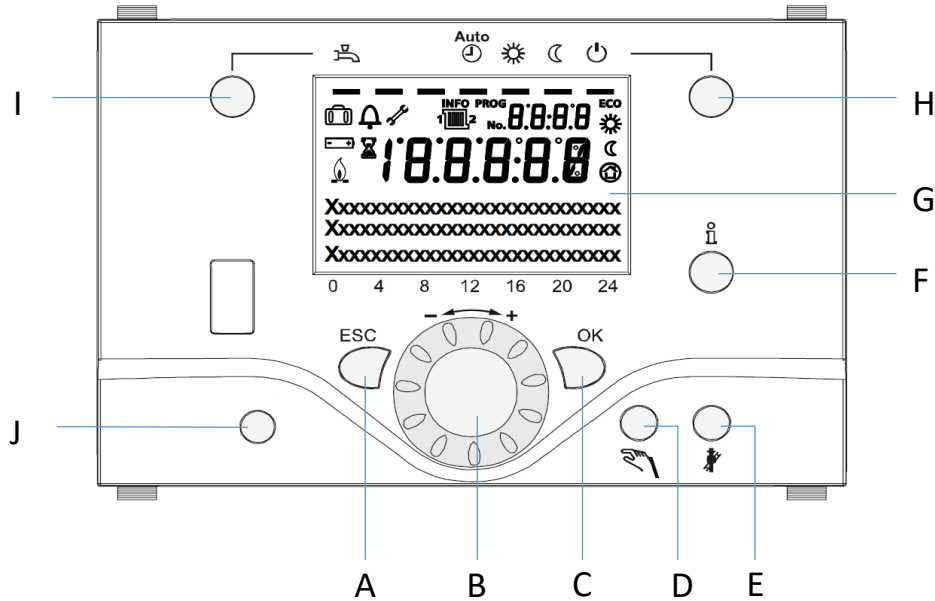


Maintenance mode



Error

6.2 DISPLAY AND BUTTONS



DISPLAY (G)

Backlight display automatically turn off without operation. Push any button to turn it on again.

Screen displays information / settings below:

- Operation modes
- Temperatures
- Parameters
- Faults / errors

HEATING MODE BUTTON (H)

Used for to choose and select 4 different heating modes.

DHW MODE BUTTON (I)

Used for to turn on or off the DHW mode.

NAVIGATION AND ADJUSTMENT KNOB (B)

Changes comfort temperature setting. Additionally it also used for;

increase / decrease temperatures,
choose and select sub menus,
Change the settings.

OK BUTTON (C)

Used for to apply selected value or setting. In the parameters section this button is used for the further menu options.

CANCEL BUTTON – ESC (A)

Used for to cancel the settings and return to upper menu section.

MANUAL CONTROL BUTTON (D)

Used for to run to boiler manually. During the manual operation all pumps will be ran, but mixing valves wouldn't be operated. Burner temperature will be held at adjusted temperature while the commissioning. Pushing to this button more than 3sec will be operated the air relief function. During this function burner will held into standby mode, pumps will be energised periodically, mixing valves ran into middle position. This function will be turned off automatically after the cycle.

FLUE FUNCTION (E)

Used for flue gas emission measuring. During this function boiler will be operated according to maximum adjusted temperature until it reach the exact value. Then this function will be turned off automatically.

INFO BUTTON (F)

Used for the display boiler information such as temperatures, operating modes, error codes etc.

RESET BUTTON (J)

Used for to reset any fault and error which caused to stop the boiler.

6.3 OPERATING MODE SELECTION

HEATING MODE SELECTION :

Press the appropriate button to select between different heating modes:



Auto : Boiler will be operated according to adjusted time program.



Comfort Temperature : Boiler will be operated according to adjusted comfort temperature permanently.



Reduced Temperature : Boiler will be operated according to adjusted reduced temperature permanently.

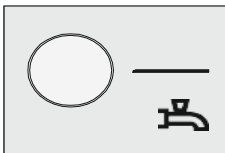


Standby : Heating will be turned off, but frost protection still activated unless the power supply is disconnected.

DHW MODE SELECTION :

When the corresponding button is used, the boiler is switched on to operate synchronously with the units that produce hot water (DHW tank, plate heat exchanger, etc.). This function can be switched off or on.

Pressing the button once will activate the boiler to heat the DHW tank. Pressing it again disables DHW tank heating. Pressing the button for 3 seconds activates the Quick Water Heating Mode for faster hot water production.



ADJUSTING THE ROOM TEMPERATURE :

Turn the setting knob to change the comfort temperature and push the OK button to set the temperature.

REDUCED TEMPERATURE : It is a defined lower temperature limit so that the room temperature does not fall below a certain degree. Adjusting this value too high can cause unnecessary operation of the boiler.

FROST PROTECTION :

It will be activated when the temperature of the water in the boiler falls below 4°C and activates the primary circulation pump. In order for the frost protection mode to be active, boiler's electrical switch must be switched on and the system water must be full.



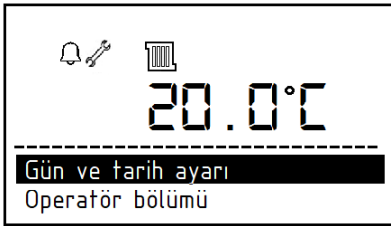
Frost Protection function is valid only for boiler, can not protect the installation.

6.4 PROGRAMMING

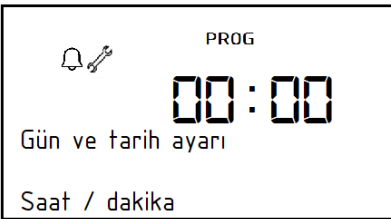
If there is no other control panel (cascade control unit, etc.) in the system, all personalized settings, parameters, fault resets will be made via the control panel.

E.g. ;

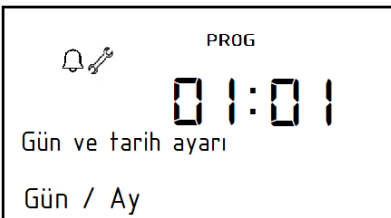
Date and time adjustment:



Push **OK** button. Select «**Date and time setting**» then push **OK** button again.



Push **OK** button for adjustment. Push **OK** button to adjust hour and minute settings.





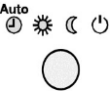











Turn the adjustment knob one click and set month and day with pushing **OK** button.



Push **OK** button to adjust the year as a final step. Push **ESC** button to return the home screen.

6.5 MAIN FUNCTIONS

| Button | Action | Procedure | Display / Function |
|---|---|---|--|
|  | Set room temperature | Zone 1 and zone 2 Actuate rotary knob left/right Turn rotary knob Confirm with OK button or wait 5 sec. or press | Comfort setpoint with blinking temperature Blinking temperature in 0,5 °C steps from 10 to 30 °C Comfort setpoint saved Comfort setpoint cancelled - after 3 sec. Main menu appears |
|  | Set room temperature for zone 1 or zone 2 | Zone 2 independent from zone 1 Actuate rotary knob left/right Confirm with OK button Actuate rotary knob left/right Confirm with OK button or wait 5 sec. or press  | Choose heating zone Heating zone is chosen Blinking temperature in 0,5 °C steps from 10 to 30 °C Comfort setpoint saved Comfort setpoint cancelled - after 3 sec. Main menu appears |
|  | Switch on /off DHW operation | Press button | DHW mode on / off (see indication below DHW symbol) - On: DHW mode by time programm - Off: no DHW operation - Safety functions activated |
|  | Change heating operation mode | Factory setting | Automatic mode on, with: - Heating by time programm - Temperature setpoint by heating programm - Safety functions activated - Summer/Winter automatic switching activated - ECO-functions activated (see indication below operation symbol) Continuous COMFORT heating on, with: - Heating without time programm by comfort setpoint - Safety functions activated Continuous REDUCED heating on, with: - Heating without time programm by reduced setpoint - Safety functions activated - Summer/Winter automatic switching activated - ECO-functions activated Safety mode on, with: - Heating off - Temperature by frost protection - Safety functions activated |
| | | Press button 1x Press button 1x again Press button 1x again | |
| | Controller Stop Mode | Press button > 3 sec. Press button > 3 sec. again | 304: Controller Stopp mode insert setpoint after 3 sec. Main menu appears |
|  | Info display | Press button 1x Press button 1x again Press button 1x again Press button 1x | INFO Segment displayed - Status Boiler - room temperature - room temperature minimum - Status DHW - room temperature maximum - Status zone 1 - outside temperature - Status zone 2 - outside temperature minimum Time / Date - DHW temperature 1 - Error indication - Boiler temperature - Maintenance indication - Flow temperature (Info display depends on configuration) Back to main menu; INFO Segment disappears |
|  | Operation by manual setpoint Change factory setting boiler temperature | Press button 1x Press button  Press button  Turn rotary knob -/+ Press button  Press button  Press button  | Manual mode on (spanner symbol appears) - Heating by fixed setpoint (factory setting = 60 °C) 301: Manual mode insert setpoint? blinking temperature set value Status boiler Manual mode off (spanner symbol disappears) |
| | Deaeration | Press button > 3 sec. Press button > 3 sec. again | 312: Deaeration on Deaeration off |
|  | Activate chimney sweeper mode | Press button (< 3 sec.) Press button again (< 3 sec.) | Chimney sweeper mode on Chimney sweeper mode off |
|  | Temporary reduction of reduced temperature on QAA75 | Press button Press button again | Heating by reduced setpoint Heating by comfort setpoint |
| RESET | Reset button | Press button (< 3 sec.) Press button again > 3 sec. | Boiler manually blocked, no release Boiler released, Alarm symbol disappears |

7 PARAMETERS

Parameters of **Wallcon X-treme** boilers are divided into 4 groups according to their level:

- END USER PARAMETERS
- COMMISSIONING
- ENGINEER
- OEM



Due to incorrect adjustments energy saving operation may not be observed and the whole system or some parts of the units may be damaged.

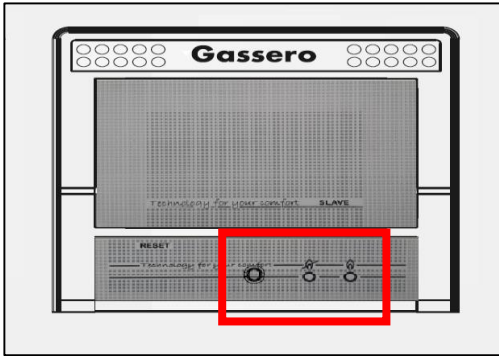


Manufacturer cannot be held liable for malfunctions and damages resulting from incorrect settings made by unauthorized persons.

7.1 END USER PARAMETERS

| MENU | LINE NO | OPERATING LINE | UNIT | MIN. | MAX. | FACTORY SETTINGS |
|--|---------|--------------------------------------|-------|--|--------------------------|------------------|
| Time of day and date | 1 | Hours / Minutes | hh:mm | 00:00 | 23:59 | ---:-- |
| | 2 | Day / Month | tt:MM | 1.01. | 31.12. | ---:-- |
| | 3 | Year | jjjj | 2004 | 2099 | ---:-- |
| Operator section | 20 | Language | - | English, Deutsch, Français, Italiano, Dansk, Nederlands, Español, Český, Slovenský, Türkçe | | English |
| | 29 | Birimler | - | °C, bar, °F, PSI | | °C, bar |
| Time program HC 1 | 500 | Preselection | - | Mo-Su, Mo-Fr, Sa-Su, Mo,Tu,We,Th,Fr,Sa,Su | | Mo-Su |
| | 501 | Mo-Su: 1. Phase On | hh:mm | 00:00 | 24:00 | 06:00 |
| | 502 | Mo-Su: 1. Phase Off | hh:mm | 00:00 | 24:00 | 22:00 |
| | 503 | Mo-Su: 2. Phase On | hh:mm | 00:00 | 24:00 | ---:-- |
| | 504 | Mo-Su: 2. Phase Off | hh:mm | 00:00 | 24:00 | ---:-- |
| | 505 | Mo-Su: 3. Phase On | hh:mm | 00:00 | 24:00 | ---:-- |
| | 506 | Mo-Su: 3. Phase Off | hh:mm | 00:00 | 24:00 | ---:-- |
| | 516 | Default values | - | Yes, No | | No |
| Time program HC 2 (When activated) | 520 | Preselection | - | Mo-Su, Mo-Fr, Sa-Su, Mo,Tu,We,Th,Fr,Sa,Su | | Mo-Su |
| | 521 | Mo-Su: 1. Phase On | hh:mm | 00:00 | 24:00 | 06:00 |
| | 522 | Mo-Su: 1. Phase Off | hh:mm | 00:00 | 24:00 | 22:00 |
| | 523 | Mo-Su: 2. Phase On | hh:mm | 00:00 | 24:00 | ---:-- |
| | 524 | Mo-Su: 2. Phase Off | hh:mm | 00:00 | 24:00 | ---:-- |
| | 525 | Mo-Su: 3. Phase On | hh:mm | 00:00 | 24:00 | ---:-- |
| | 526 | Mo-Su: 3. Phase Off | hh:mm | 00:00 | 24:00 | ---:-- |
| | 536 | Default values | - | Yes, No | | No |
| Time program 4/DHW | 560 | Preselection | - | Mo-Su, Mo-Fr, Sa-Su, Mo,Tu,We,Th,Fr,Sa,Su | | Mo-Su |
| | 561 | Mo-Su: 1. Phase On | hh:mm | 00:00 | 24:00 | 06:00 |
| | 562 | Mo-Su: 1. Phase Off | hh:mm | 00:00 | 24:00 | 22:00 |
| | 563 | Mo-Su: 2. Phase On | hh:mm | 00:00 | 24:00 | ---:-- |
| | 564 | Mo-Su: 2. Phase Off | hh:mm | 00:00 | 24:00 | ---:-- |
| | 565 | Mo-Su: 3. Phase On | hh:mm | 00:00 | 24:00 | ---:-- |
| | 566 | Mo-Su: 3. Phase Off | hh:mm | 00:00 | 24:00 | ---:-- |
| | 576 | Default values | - | Yes, No | | No |
| Holidays HC1 | 641 | Preselection | - | Period 1, 2, 3, 4, 5, 6, 7, 8 | | Period 1 |
| | 642 | Period Start Day / Month | tt.MM | 01.01 | 31.12 | ---:-- |
| | 643 | Periode End Day / Month | tt.MM | 01.01 | 31.12 | ---:-- |
| | 648 | Operating level | - | Frost protection, Reduced | | Frost protection |
| Holidays HC2 (When activated) | 651 | Preselection | - | Period 1, 2, 3, 4, 5, 6, 7, 8 | | Period 1 |
| | 652 | Period Start Day / Month | tt.MM | 01.01 | 31.12 | ---:-- |
| | 653 | Periode End Day / Month | tt.MM | 01.01 | 31.12 | ---:-- |
| | 658 | Operating level | - | Frost protection, Reduced | | Frost protection |
| Holidays HC3 (When activated) | 661 | Preselection | - | Period 1, 2, 3, 4, 5, 6, 7, 8 | | Period 1 |
| | 662 | Period Start Day / Month | tt.MM | 01.01 | 31.12 | ---:-- |
| | 663 | Periode End Day / Month | tt.MM | 01.01 | 31.12 | ---:-- |
| | 668 | Operating level | - | Frost protection, Reduced | | Frost protection |
| HC1 | 710 | Comfort setpoint | °C | Value from Line no. 712 | 35 | 20 |
| | 712 | Reduced setpoint | °C | 4 | Value from Line no. 710 | 16 |
| | 714 | Frost protection setpoint | °C | 4 | Value from Line no. 712 | 10 |
| | 720 | Heating curve slope | - | 0,1 | 4 | 1,5 |
| | 730 | Summer/winter heating limit | °C | ---/8 | 30 | 20 |
| HC2 (When activated) | 1010 | Comfort setpoint | °C | Value from Line no. 1012 | 35 | 20 |
| | 1012 | Reduced setpoint | °C | 4 | Value from Line no. 1010 | 16 |
| | 1014 | Frost protection setpoint | °C | 4 | Value from Line no. 1012 | 4 |
| | 1020 | Heating curve slope | - | 0,1 | 4 | 1,5 |
| | 1030 | Summer/winter heating limit | °C | ---/8 | 30 | 20 |
| DHW | 1600 | DHW Çalışma modu | - | Açık, Kapalı,Eko | | Açık |
| | 1610 | DHW sıcaklığı Nominal ayar değeri | °C | Bakınız : 1612 | Bakınız : 1614 | 55 |
| | 1612 | DHW sıcaklığı Azaltılmış ayar değeri | °C | 8 | Bakınız : 1610 | 40 |
| Swimming pool | 2055 | Pool setpoint solar heating | °C | 8 | 80 | 26 |
| | 2056 | Pool sepoint boiler heating | °C | 8 | 80 | 22 |
| Boiler | 2214 | Setpoint manual control | °C | 10 | 90 | 80 |
| Fault | 6705 | SW Diagnose Code | - | - | - | Indication only |
| | 6706 | Burner ctrl phase lockout pos | - | - | - | Indication only |

8 ERROR / FAULT CODES



Wallcon X-treme boilers are equipped with a fault diagnosis system. When a malfunction code is displayed on both the Master and Slave boilers, the red light on the bottom of the control panel flashes with the no flame sign.

Malfunction codes are given below.

| Error Code | Error Description |
|------------|--|
| 10 | Outside temperature sensor error |
| 20 | Boiler temperature 1 sensor error |
| 26 | Common flow temperature sensor error |
| 28 | Flue gas temperature sensor error |
| 30 | Flow temperature 1 sensor error |
| 38 | Flow temperature primary controller sensor error |
| 40 | Return temperature 1 sensor error |
| 46 | Return temperature cascade sensor error |
| 47 | Common return temperature sensor error |
| 50 | DHW temperature 1 sensor error |
| 52 | DHW temperature 2 sensor error |
| 54 | DHW primary controller sensor error |
| 57 | DHW circulation temperature sensor error |
| 60 | Room temperature 1 sensor error |
| 65 | Room temperature 2 sensor error |
| 70 | Buffer storage tank temperature 1 sensor error |
| 71 | Buffer storage tank temperature 2 sensor error |
| 72 | Buffer storage tank temperature 3 sensor error |
| 73 | Collector temperature 1 sensor error |
| 78 | Water pressure sensor error |
| 82 | LPB address collision |
| 83 | BSB wire short-circuit |
| 84 | BSB address collision |
| 85 | BSB RF communication error |
| 91 | EEPROM error lockout information |
| 98 | Extension module 1 error (collective error) |
| 99 | Extension module 2 error (collective error) |
| 100 | 2 clocktime masters (LPB) |
| 102 | Clocktime master without reserve (LPB) |
| 103 | Communication error |
| 105 | Maintenance message |
| 109 | Boiler temperature supervision |
| 110 | STB lockout |
| 111 | TW cutout |
| 117 | Water pressure too high |
| 118 | Water pressure too low |
| 119 | Water pressure switch has cut out |
| 121 | Flow temperature 1 (HC1) supervision |
| 122 | Flow temperature 2 (HC2) supervision |
| 125 | Pump supervision error |
| 126 | DHW charging supervision |
| 127 | Legionella temperature not reached |
| 128 | Loss of flame during operation |
| 129 | Fan error or LP error |

| Error Code | Error Description |
|------------|--|
| 130 | Flue gas temperature limit exceeded |
| 132 | GP or LP error |
| 133 | No flame during safety time |
| 146 | Configuration error collective message |
| 151 | Internal error |
| 152 | Parameterization error |
| 153 | Unit manually locked |
| 160 | Fan error |
| 162 | LP error, does not close |
| 164 | Error heating circuit flow switch |
| 166 | LP error, does not open |
| 169 | Sitherm Pro system error |
| 170 | Error water pressure sensor, primary side |
| 171 | Alarm contact H1 or H4 active |
| 172 | Alarm contact H2 (EM1, EM2 or EM3) or H5 active |
| 173 | Alarm contact H6 active |
| 174 | Alarm contact H3 or H7 active |
| 176 | Water pressure 2 too high |
| 177 | Water pressure 2 too low |
| 178 | Limit thermostat heating circuit 1 |
| 179 | Limit thermostat heating circuit 2 |
| 183 | Unit in parameterization mode |
| 195 | Maximum duration of the refill per charging |
| 196 | Maximum duration of the refill per week exceeded |
| 209 | Fault heating circuit |
| 214 | Monitoring of motor |
| 215 | Fault fan air diverting valve |
| 216 | Fault boiler |
| 217 | Fault sensor |
| 218 | Pressure supervision |
| 241 | Flow sensor or solar sensor error |
| 242 | Return sensor solar sensor error |
| 243 | Swimming pool temperature sensor error |
| 260 | 217 Flow temperature 3, sensor error |
| 270 | Limit function |
| 317 | Mains frequency outside permissible range |
| 320 | DHW charging temperature sensor error |
| 321 | 217 DHW outlet temperature, sensor error |
| 322 | 218 Water pressure 3 too high |
| 323 | 218 Water pressure 3 too low |
| 324 | BX same sensors |
| 325 | BX / extension module same sensors |
| 326 | BX / mixing group same sensors |
| 327 | Extension module same function |

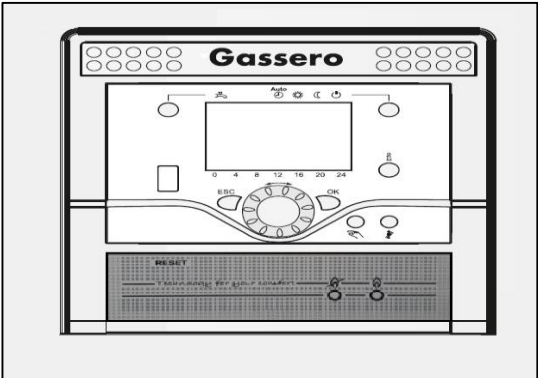
| Error Code | Error Description |
|------------|--|
| 328 | 146 Mixing group, same function |
| 329 | 146 Extension module/mixing group, same |
| 330 | Sensor BX1 no function |
| 331 | Sensor BX2 no function |
| 332 | Sensor BX3 no function |
| 333 | Sensor BX4 no function |
| 335 | Sensor BX21 no function (EM1, EM2 or EM3) |
| 336 | Sensor BX22 no function (EM1, EM2 or EM3) |
| 339 | Collector pump Q5 not available |
| 340 | Collector pump Q16 not available |
| 341 | Solar Collector sensor B6 not available |
| 342 | DHW sensor B31 not available |
| 343 | Solar integration not available |
| 344 | Solar controlling element buffer K8 not available |
| 345 | Solar ctrl element swimming pool K18 not |
| 346 | Solid fuel boiler pump Q10 not available |
| 347 | Solid fuel boiler comparison sensor not available |
| 348 | Solid fuel boiler address error |
| 349 | Buffer return valve Y15 not available |
| 350 | Puffer address sensor |
| 351 | Primary controller / system pump address error |
| 352 | Pressureless header address error |
| 353 | Common flow sensor B10 not available |
| 371 | Flow temperature 3 (heating circuit 3) supervision |
| 372 | Limit thermostat heating circuit 3 |
| 373 | Extension module 3 error (collective error) |
| 374 | 169 Sitherm Pro calculation |
| 375 | 169 BV stepper motor |
| 376 | 169 Drift test limit value |
| 377 | 169 Drift test prevented |
| 378 | 151 Internal repetition |
| 382 | 129 Repetition speed |
| 384 | 151 Extraneous light |
| 385 | 151 Mains under-voltage |
| 386 | Fan speed has lost valid range |
| 387 | 129 Air pressure tolerance |
| 388 | DHW error no function |
| 426 | Feedback flue gas damper |
| 427 | Configuration flue gas damper |
| 429 | 218 Dynamic water pressure too high |
| 430 | 218 Dynamic water pressure too low |
| 431 | Sensor primary heat exchanger |
| 432 | Functional earth not connected |
| 433 | Temperature primary heat exchanger to high |

9 CASCADE

Wallcon X-treme boilers can be used as a single boiler or as cascade for up to 16 boilers.

Particularly during the season passes, the heat requirement of the system may be very low. Cascade systems run only 1 boiler to meet this low heat requirement and provide efficient operation. In the same way, cascade systems, can activate all of the boilers when heat demand increased, saves energy by operating in a wide range of modulation.

Boilers in the cascade system share the heat load evenly. Master Boiler's EQUAL AGING function ensures that each boiler works evenly, ensuring high efficiency and long life time.



MASTER

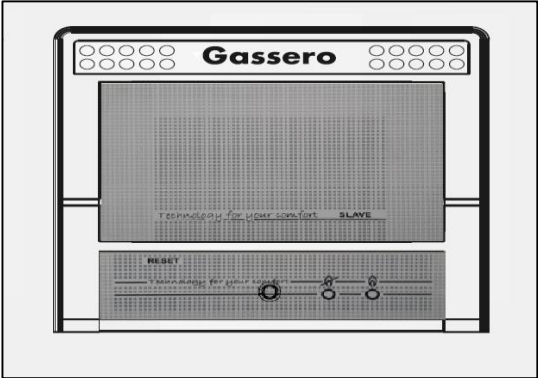
In cascade systems, one of the boilers is used as MASTER (LEADER), others are used as SLAVES (FOLLOWERS). While all settings of the cascade system are done via the MASTER boiler, SLAVE boilers work under the control of the MASTER boiler.

MASTER boiler has a display.

In the MASTER and SLAVE boilers, the RESET button is located in different places.

MASTER and SLAVE boilers have different softwares. The communication between the MASTER boiler and the other boilers is carried out with the cascade module which is standard in all boilers.

For detailed information about the installation of the cascade system please contact nearest authorized service center or GASSERO.



SLAVE

10 COMBUSTION ADJUSTMENTS



These combustion settings mentioned below must be issued by authorized GASSERO services.

Wallcon X-treme boilers are offer to sale after all required combustion, efficiency and safety controls. Emission settings mustn't be changed which are made by GASSERO. However, if there is a deviation in the values which are given below, emission settings should be changed by GASSERO authorized service.



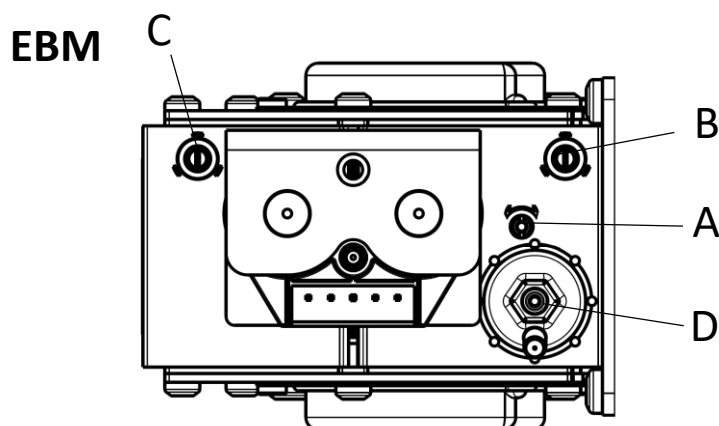
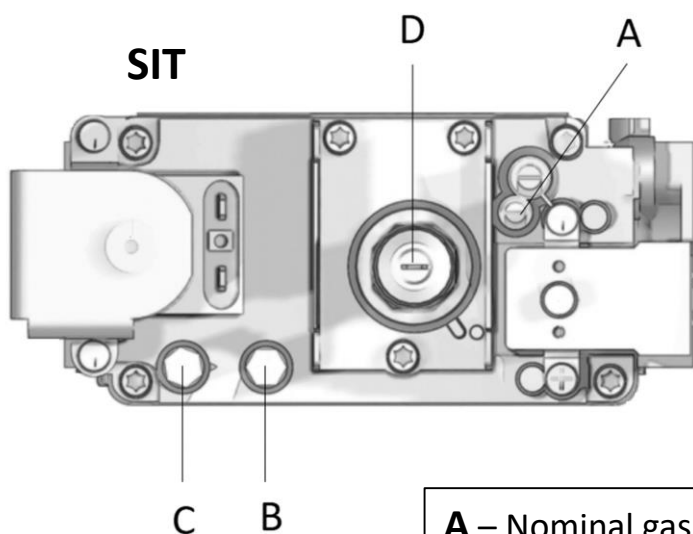
Flue gas analyzer must be used during to the combustion adjustments.

NATURAL GAS EMISSION VALUES

| G20 | | <i>Wallcon X-treme 115</i> | | <i>Wallcon X-treme 125</i> | | <i>Wallcon X-treme 150</i> | |
|--------------------------|-------------------|----------------------------|-------------|----------------------------|-------------|----------------------------|-------------|
| | | <i>min.</i> | <i>max.</i> | <i>min.</i> | <i>max.</i> | <i>min.</i> | <i>max.</i> |
| CO ₂ emission | % | 9,1 | 9,1 | 9,1 | 9,1 | 9,4 | 9,8 |
| Gas consumption | m ³ /h | 1,22 | 5,12 | 0,77 | 5,26 | 0,92 | 6,04 |
| Flue gas mass flow | g/sec. | 12,00 | 47,00 | 8,00 | 49,00 | 9,00 | 60,00 |

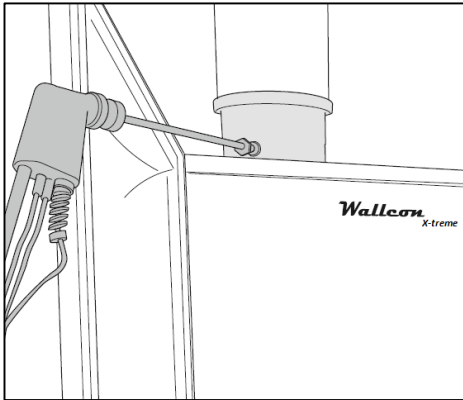
10.1 EMISSION SETPOINTS

Wallcon X-treme boilers have two different gas valve options. **SIT** and **EBM** gas valve setpoints are mentioned below:



- A** – Nominal gas flow adjustment screw
- B** – Burner gas inlet measurement point
- C** – Main gas inlet measurement point
- D** – Minimum gas flow adjustment screw

10.2 NOMINAL LOAD EMISSION SETTINGS

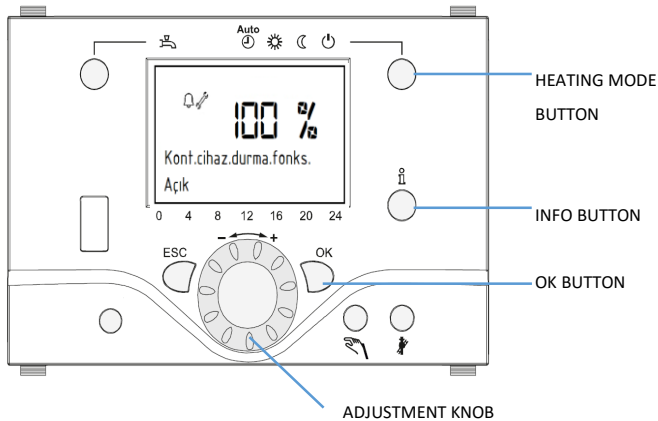


Connect the Flue Gas Analyzer probe to the sampling point on the flue adapter.






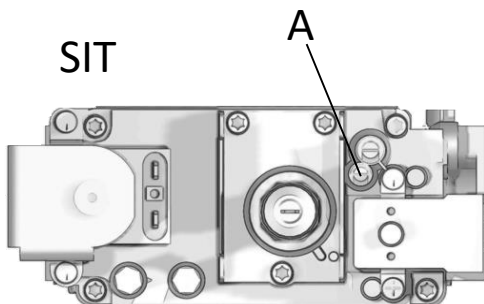
Make sure that the Flue Gas Analyzer which will be used to adjust the combustion settings is calibrated and functioning correctly.

Nominal load emission setting is done by measuring the CO₂ value in the flue gas. The following steps should be followed for this instant measurement on a boiler operating at nominal capacity.

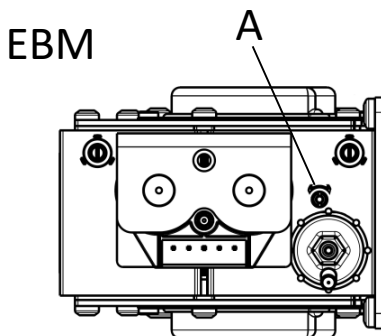


To run the boiler at nominal load;

- Press and hold Heating Mode button for 3 sec.
- «Controller Stop Function On» will be mentioned on the screen
-  Modulation rate will be displayed in % by pressing the Info button.
-  Press OK button and change the modulation rate to %100 by turning the Adjustment Knob.
-  Press OK button to apply.



Turn the Nominal Gas Flow Adjustment Screw (A) clockwise to increase the CO₂ value. If you turn it counterclockwise, the gas flow rate will decrease and therefore the CO₂ value will decrease.

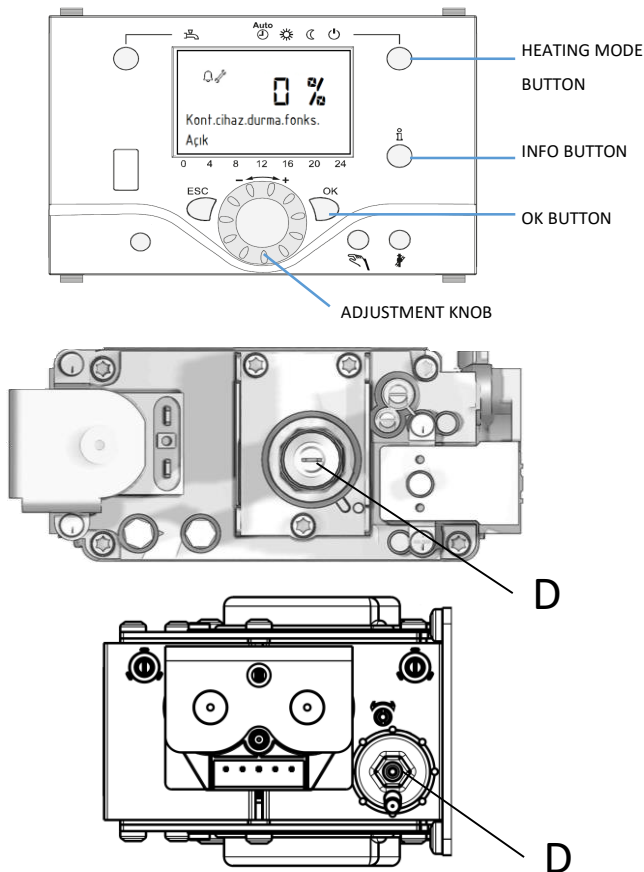


Before operating the boiler at nominal load, ensure that the valves in the system are open, the condensate drain line is open, the flue connections are gas-tight and the pumps are running.






Due to the danger of burning and scalding, be careful of the boiler and plumbing pipes which will become very hot.

10.3 MINIMUM LOAD EMISSION SETTINGS



Minimum load emission setting is done by measuring the CO₂ value in the flue gas. The following steps should be followed for this instant measurement on a boiler operating at minimum capacity.

To run the boiler at minimum load;

- Press and hold Heating Mode button for 3 sec.
- «Controller Stop Function On» will be mentioned on the screen
-  Modulation rate will be displayed in % by pressing the Info button.
-  Press OK button and change the modulation rate to %0 by turning the Adjustment Knob.
-  Press OK button to apply.

Turn the Minimum Gas Flow Adjustment Screw (D) clockwise to increase the CO₂ value. If you turn it counterclockwise, the gas flow rate will decrease and therefore the CO₂ value will decrease.

11 LPG CONVERSION



Gas conversion process which is mentioned below must be issued by authorized GASSERO services only on Wallcon X-treme 125 and Wallcon X-treme 150 boilers.

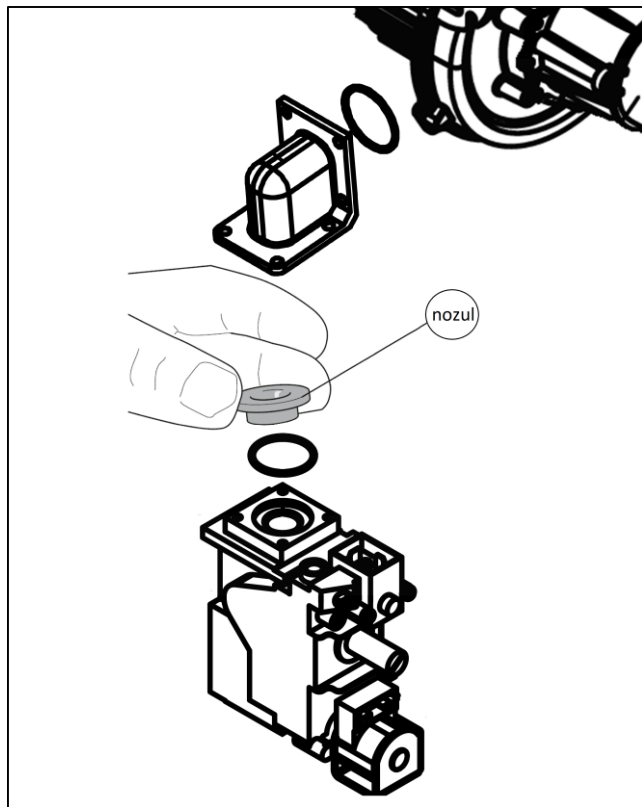
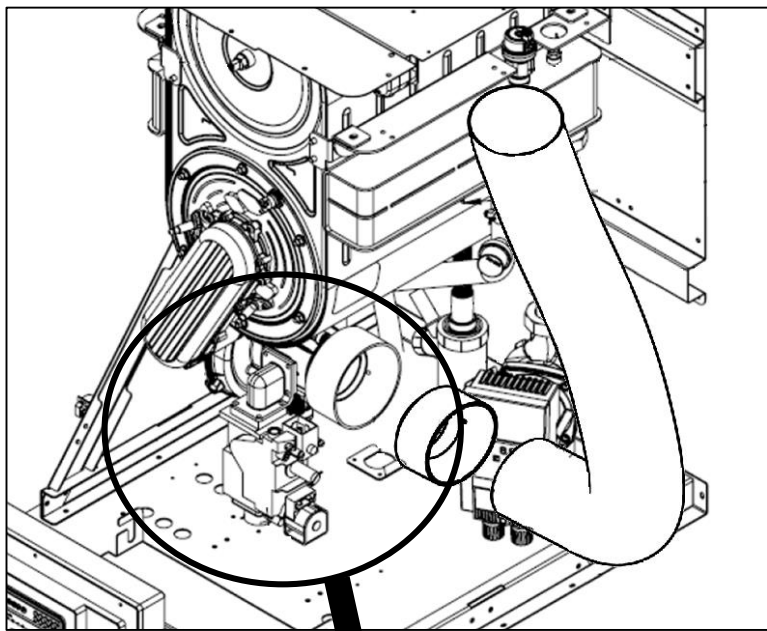
Wallcon X-treme boilers are manufactured to work with natural gas. **Wallcon X-treme 125** and **Wallcon X-treme 150 boilers** can be converted into LPG.

If the boiler will be used with LPG, it must be adjusted by Gassero authorized services according to the following combustion values and parameters.

LPG EMISSION SETTINGS

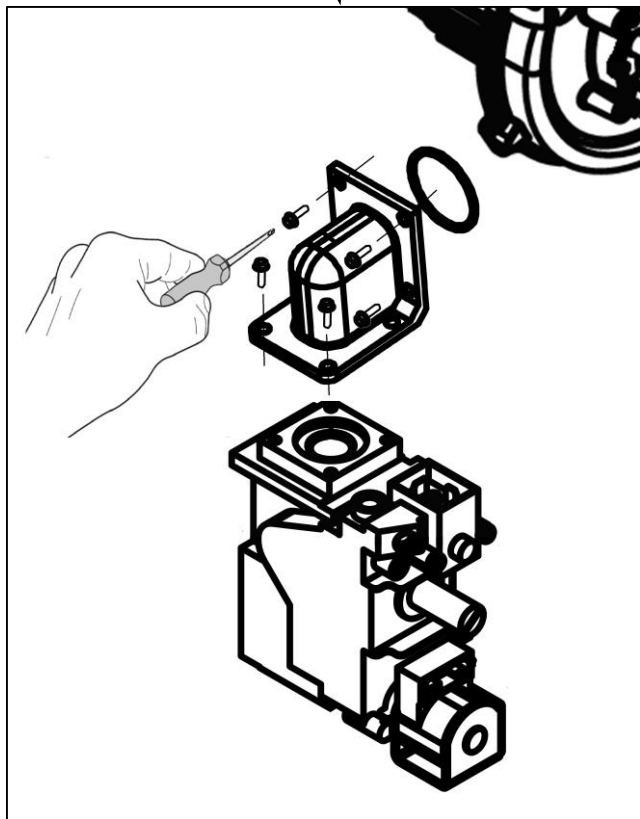
| G31 | | <i>Wallcon X-treme 125</i> | | <i>Wallcon X-treme 150</i> | |
|--------------------------|-------------------|----------------------------|-------------|----------------------------|-------------|
| | | <i>min.</i> | <i>max.</i> | <i>min.</i> | <i>max.</i> |
| CO ₂ emission | % | 9,01 | 11,61 | 11,09 | 11,11 |
| Gas consumption | m ³ /h | 0,53 | 3,83 | 0,65 | 4,41 |
| Gas nozzle | mm | 9,00 | | 9,00 | |

11.1 SIT GAS VALVE LPG CONVERSION



2) Place the nozzle between the gas valve and the flange (with the O-ring) according to the boiler model.

3) Replace the disassembled components after the nozzles installed with the care of tightness. Use the flue gas analyzer to provide the values which are given in the table of values for LPG.

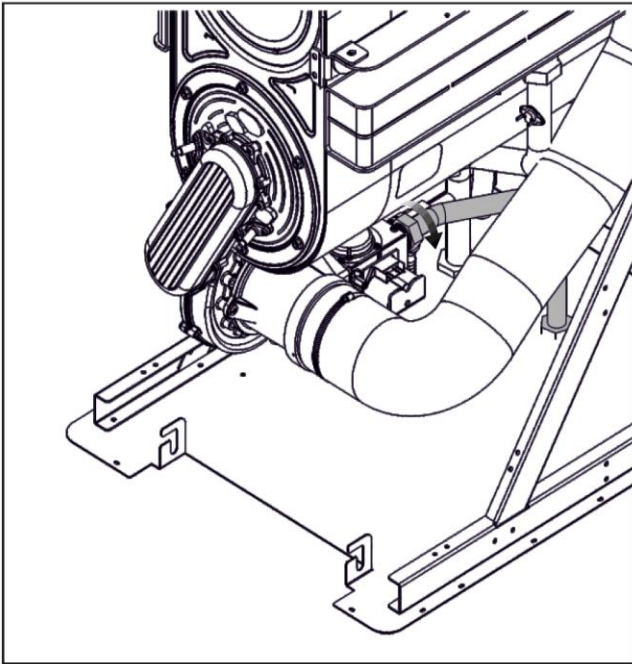


1) Remove 8 screws and separate the gas valve from the flange.

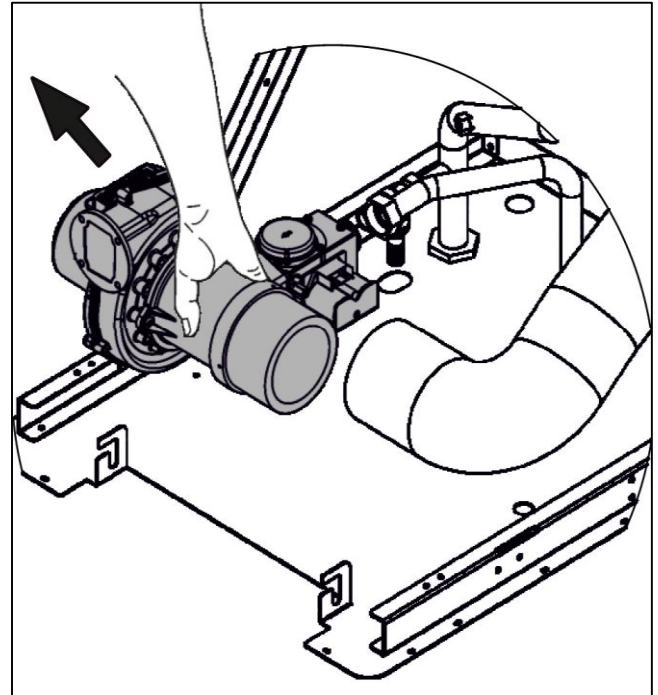


Before the commissioning of the boiler, all parameters must be regenerated according to the LPG. This process must be made by authorized Gassero services.

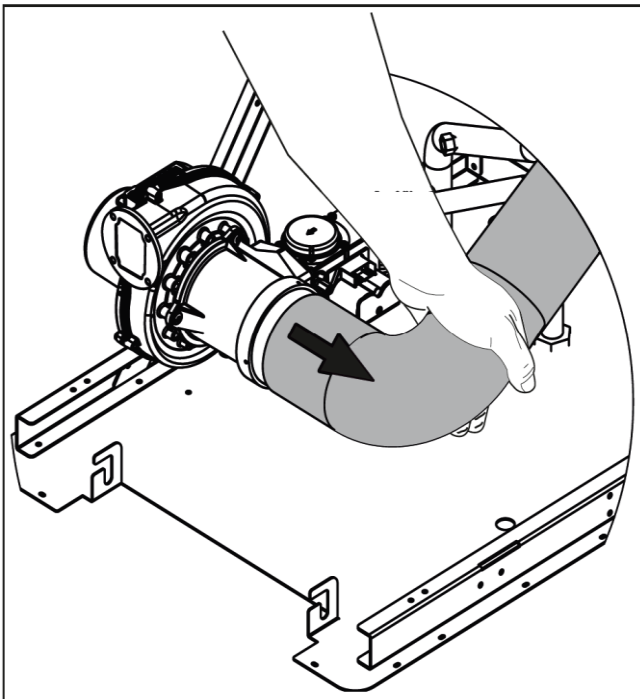
11.2 EBM GAS VALVE LPG CONVERSION



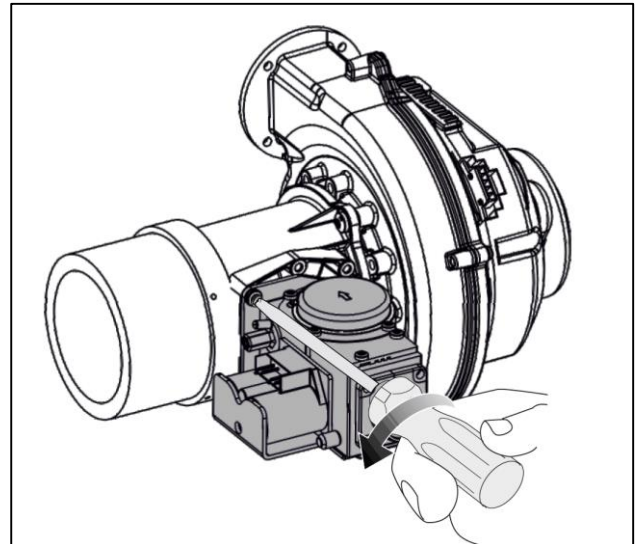
1) Separate the gas valve and gas supply pipe.



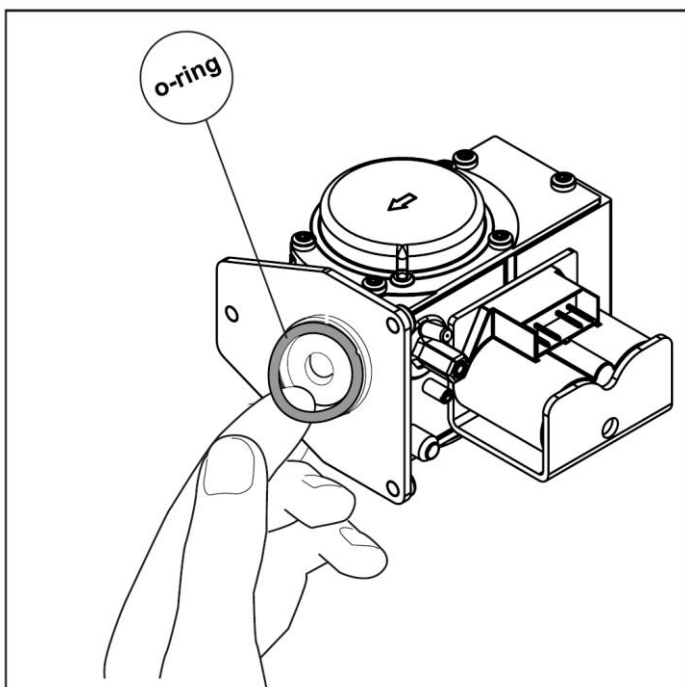
3) Remove the group of fan, venturi and gas valve



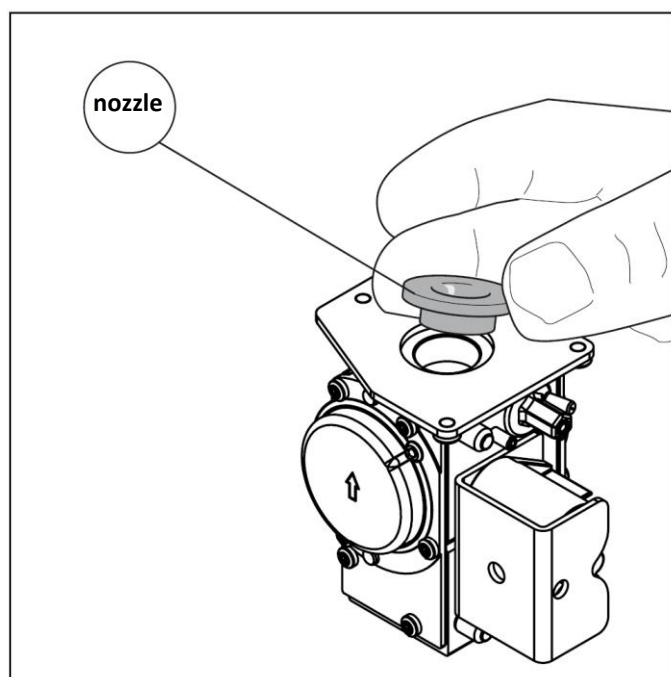
2) Separate the air inlet pipe and the venturi



4) Remove the 3 screws on the gas valve



5) Remove the O-ring and the nozzle



6) Place the nozzle between the gas valve and the flange (with the O-ring) according to the boiler model.

Replace the disassembled components after the nozzles installed with the care of tightness. Use the flue gas analyzer to provide the values which are given in the table of values for LPG.



Before the commissioning of the boiler, all parameters must be regenerated according to the LPG. This process must be made by authorized Gassero services.

12 MAINTENANCE



Maintenance must be made by authorized GASSERO services.

Malfunctions resulting from unauthorized interventions will be considered out of warranty.

Wallcon X-treme boilers should be serviced at least once a year. Considering the operating conditions of the boiler, this maintenance period may be increased. Periodic maintenance;

- Contributes to the efficient and economical operation of the boiler.
- Makes possible to detect unpredictable faults in advance.
- Supports the protection of the environment and nature.

It is the responsibility of the operator / user to keep the place where the boiler is clean and tidy;

If you clean the surface of the boiler;

- Cut the boiler electrical supply via fuse,
- Do not use abrasive or chemical products to clean painted and plastic parts.
- Avoid water or liquid contact to the control panel and cables.

12.1 MAINTENANCE PROCEDURE



The following procedures and instructions must be applied by authorized Gassero services.

Service history :

Life time of the boiler, installation and environment must be take into account, information / error / fault histories should be evaluated.

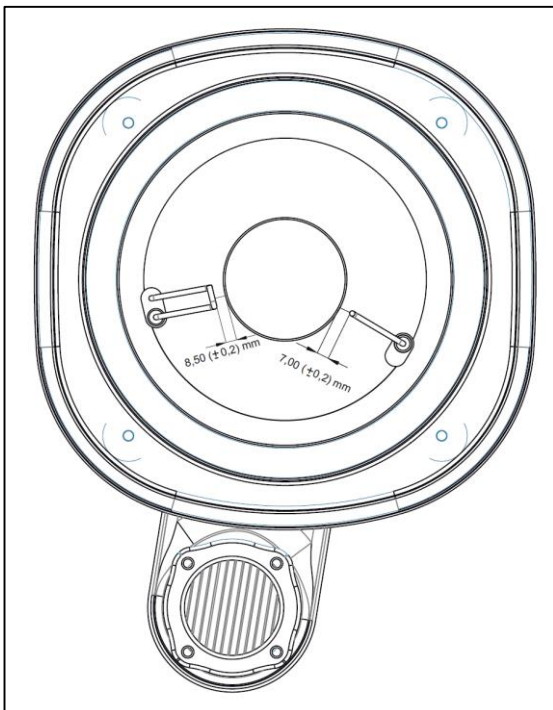
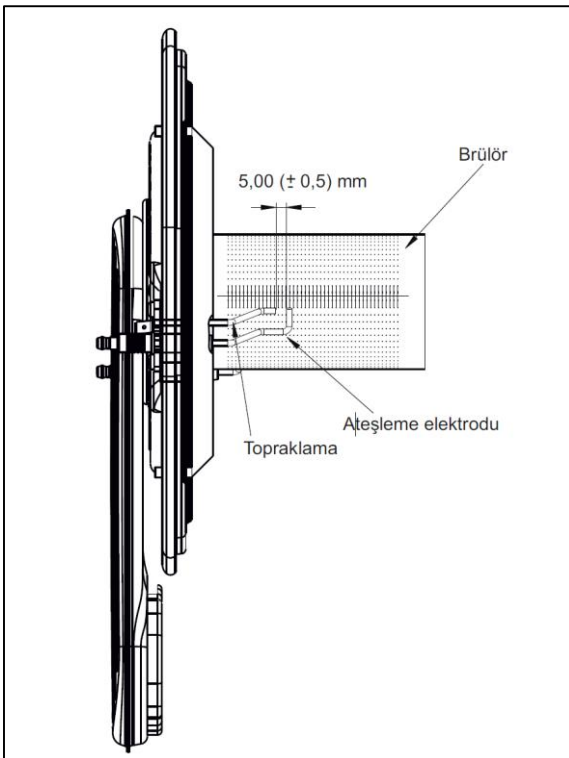
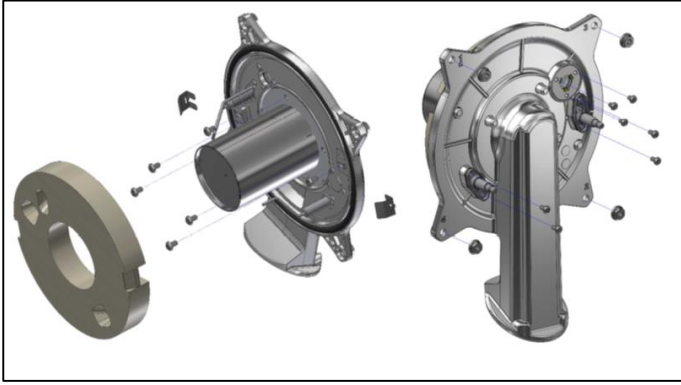
Issues such as fault history, operating times can be displayed via the display or PCB interface. Faults that may occur in the boiler can be determined by the service history.

This information should be added to the information provided by the consumer and the service history of the boiler should be established.

Authorized Gassero service responsible should inform the consumer about the defects in the installation or location and advise on the solution of these defects.

12.2 MAINTENANCE PROCESS

- Water inside the boiler will be drained. Do not use safety valve for drainage purposes except the drain valve. Results should be analyzed in terms of water quality by taking samples from the water inside the boiler (read the WATER QUALITY AND OPERATIONS section).
- Boiler filter will be cleaned. This filter is located at the bottom of the boiler. Cleaning of large filters in secondary system is the responsibility of installation / mechanical services.
- Water temperature and safety sensors on the supply and return line of the boiler will be removed, cleaned and replaced if necessary. Control of the sensors can be done by checking the temperature / resistance tables to detect that sensors are working properly.
- Burner and Heat Exchanger will be cleaned: Burner and heat exchanger surfaces / pores can be cleaned with a non-metal brush or compressed air. The burner gasket, or heat exchanger cap gasket (fuse) will be checked and has to be replaced if deformed.
- Siphon will be cleaned and the drain line will be checked. Once the condensate siphon has been cleaned, it must be filled with water again. If there is a congestion in the drainage line, the slope has to be checked.
- Ignition and ionization electrodes of the boiler will be removed and cleaned if necessary, replaced. Distances between the electrodes and the burner are very important in terms of ignition and flame detection.



- Distances which are shown below must be observed when adjusting the electrode distances.
- Electrodes with cracks in the ceramic parts must be replaced.
- Electrode gasket must be replaced if the electrode is cleaned or replaced.
- Gas pressure of the expansion tank will be checked and if there is an issue responsible will be warned about the completion of the gas (expansion tank is the responsibility of the installation / mechanical service).
- When filling the boiler with water, check that the water treatment units are running and active. A sample should be taken from the water filled in the boiler and the results of the analysis will be written to the service document.
- Water, gas, air, chimney and electrical connections will be checked.
- Gas leakage control will be made. For gas leakage control, a gas detector or leakage detection sprays may be used.
- Chimney connections will be checked for leakage of gas or condensation water.
- If there is an air inlet filter in the boiler, it will be checked and replaced if necessary.
- Electrical connections, sockets, grounding terminals will be checked.
- Automatic air relief valves, thermometers, manometers or similar control devices in the system will be checked, if any issues detected installation / mechanical service will be warned.
- After the boiler has been switched on, the burner must be checked with the analyzer and the emission settings will be re-made if necessary.
- Time / holiday settings which are made according to the requests of the consumer will be checked.
- Emission values (CO₂ and O₂) will be written to the service document by operating the boiler at nominal, minimum and partial load.

- **Boiler submission:** After all maintenance operations are carried out, the boiler will be submitted in a working position or stand-by position according to the request of the consumer. Display reminder for the next maintenance period will be programmed.
- **Creating a maintenance file:** A file should be created to remember the maintenance, date, replacement parts, recommendations and warnings about the boiler and store with the service documents.

13 ENERGY SAVING RECOMMENDATIONS

- **INSULATION:** Building insulation is one of the most important steps of energy saving. Insulated building allows you to get more energy using less fuel.
- **ADJUSTING RIGHT TEMPERATURE VALUES:** Selecting COMFORT and REDUCED TEMPERATURE values will save energy. Excessively selected COMFORT temperature will increase the energy consumption. To save more energy use REDUCED TEMPERATURE function more often.
- **CORRECT PROGRAMMING:** Selecting the correct operation ranges for automatic mode will save energy.
- **INSTALLATION INSULATION:** Insulation of pipes, collectors, boilers, storage tanks and chimneys in the boiler room saves energy. Installation pipes which will pass through unused spaces must also be insulated.
- **WATER QUALITY:** Water treatment will keep the water conditions under constant control and saves energy.
- **REGULAR MAINTENANCE:** Maintenance of the boiler once a year and reviewing the system periodically is also important for energy saving.

14 DISPOSAL

- When **Wallcon X-treme** boilers have to be disposed of, the procedures determined by the local authorities must be followed. Such wastes must be treated in accordance with the applicable regulations.
- Similarly, local regulations will be followed for the packaging wastes.




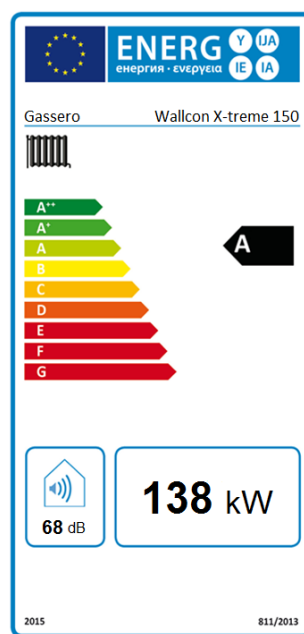
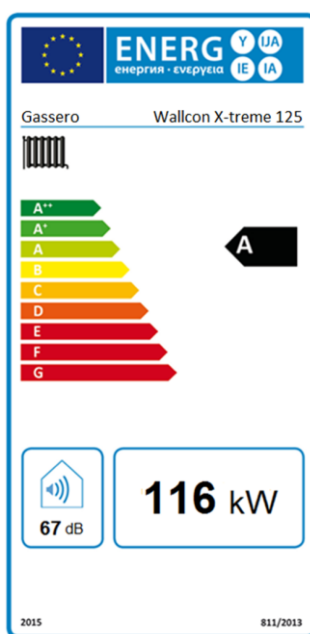
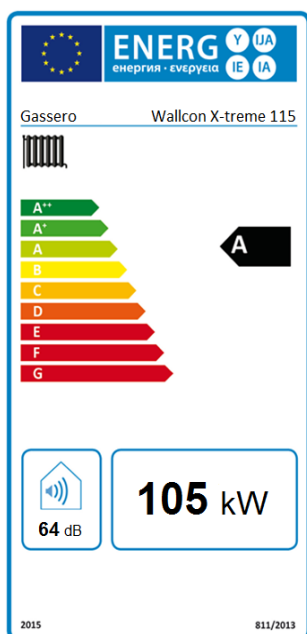
Leaving the non-functional units, spare parts and packaging materials in the environment and leaving them accessible to children can be dangerous. Such wastes must be treated in accordance with the applicable regulations.



Ignoring this warning may harm, people, animals and may cause property damage. Manufacturer is not liable for damages that may arise in such cases.

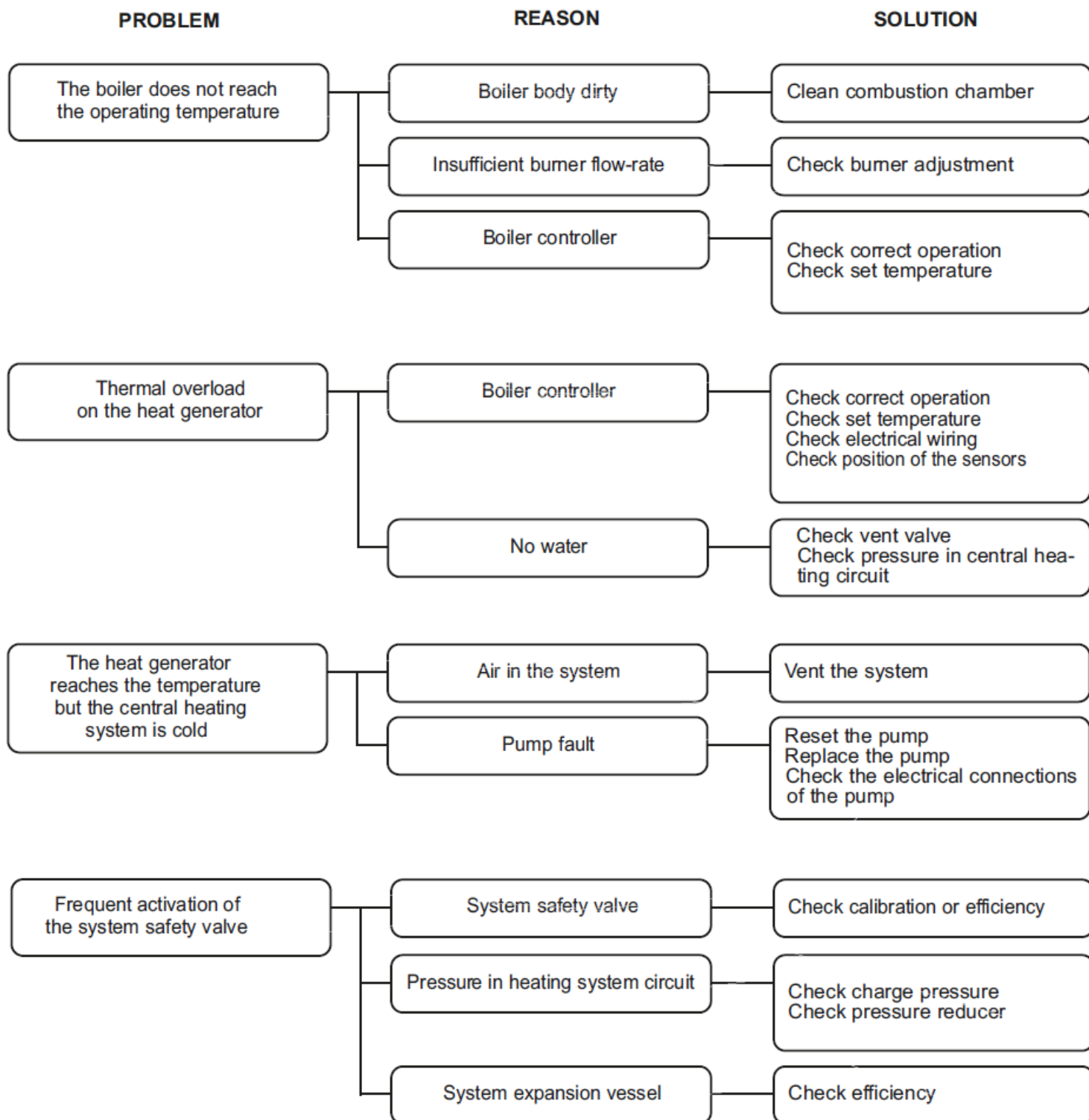
15 PRODUCT / ENERGY LABELS

| Product fiche / Product informaton | | | | |
|---|-------------|---|---------------------|---------------------|
| Supplier name | |  technology for your comfort | | |
| Model Name | | WALLCON X-treme 115 | WALLCON X-treme 125 | WALLCON X-treme 150 |
| Seasonal Space heating efficiency class | | A | A | A |
| Rated heat output | P_{rated} | 105,4 kW | 116,2 kW | 138,0 kW |
| Useful heat output at 100% of rated heat output | P4 | 101,3 kW | 107,9 kW | 133,1kW |
| Useful heat output at 30% of rated heat output | P1 | 20,8 kW | 21,4 kW | 26,6kW |
| Useful efficiency at 100% of rated heat output | η_4 | 87,60% | 87,40% | 88,00% |
| Useful efficiency at 30% of rated heat output | η_1 | 97,30% | 97,30% | 97,70% |
| Electricity Consumption | | | | |
| at full load | elmax | 0,268 kW | 0,331 kW | 0,461 kW |
| at part load | elmin | 0,135 kW | 0,193 kW | 0,207 kW |
| in stand by mode | Psb | 0,005 kW | 0,005 kW | 0,007 kW |
| Standby heat loss | Pstby | 0,965 kW | 0,970 kW | 0,970 kW |
| Ignition burner power consumption | Pign | NA | NA | NA |
| Emissions of Nitrogen Oxide | NOx | 24 mg / kWh | 35 mg / kWh | 37 mg / kWh |
| Seasonal Space heating efficiency | η_s | 95,80% | 95,80% | 96,20% |
| Annual energy consumption | QHE | 304,3 GJ | 324,6 GJ | 398,5 GJ |
| Sound power level indoors | LWA | 63,7 dB (A) | 67,1 dB (A) | 67,7 dB (A) |
| Condensing boiler | | yes | yes | yes |
| Low temperature boiler | | no | no | no |
| B1 boiler | | no | no | no |
| Combination heater | | no | no | no |
| Cogeneration space heater | | no | no | no |
| Temperature controls | | | | |
| Supplier name | | Siemens + TURKEY | Siemens + TURKEY | Siemens + TURKEY |
| Model name | | LMS 14.047B109 | LMS 14.047B109 | LMS 14.047B109 |
| Temperature control class ¹ | | VI | VI | VI |
| Contribution of temperature control to seasonal | | 4% | 4% | 4% |
| Due to lower efficiency, any other use of this boiler shall be avoided and would result in higher energy consumption and higher operating costs. | | | | |
| Before any assembly, disassembly, installation or maintenance, recycling and/or disposal at end-of-life the user and installation manual has to be read attentively and to be followed. | | | | |



16 TROUBLESHOOTING

| PROBLEM | REASON | SOLUTION |
|--|--|---|
| Smell of gas | Gas supply circuit | Check the tightness of the joints and that the pressure test points are closed |
| Smell of unburned gas | Flue gas circuit | Check: - The tightness of the joints - The absence of obstructions - The quality of combustion |
| Irregular combustion | Burner gas pressure | Check adjustment |
| | Diaphragm installed | Check diameter |
| | Condition of the burner and exchanger | Check they are clean |
| | Exchanger openings blocked | Check the openings are clean |
| | Fan fault | Check operation |
| Delays in ignition with pulsating operation of the burner | Burner gas pressure | Check adjustment |
| | Ignition electrode | Check positioning and condition |
| The boiler becomes dirty in a short time | Combustion | Check flame colour Check combustion adjustments |
| The burner does not start when receiving the signal from the boiler controller | Gas valve | Check that 230 V AC is present at the terminals on the gas valve; check wiring and connections |
| The boiler does not start | No power supply (the display is blank) | Check: - electrical connections - fuse |
| The pump does not start | Pump fault | Reset the pump Replace the pump Check the electrical connections of the pump |



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