



Installation and User Manual



CORTINA

Dear Customer,

Thank you for having chosen our product.

To allow optimal operation and for you to enjoy the warmth and sense of wellbeing that the fire can convey in your home, we advise you to read this manual carefully before starting up the product for the first time.

This instruction manual is intended to help you install and operate the product safely, properly and economically. Keep all documentation supplied with this unit in a safe place for future reference. Should the manual be misplaced or ruined, request a copy from your retailer or directly from the authorised Technical Assistance Department.

Do not touch or interfere any part of the product other than those allowed.

The installation and commissioning of this product needs a qualified installer and/or an authorised service technician. Please contact your authorised dealer, if you have any questions.

For efficient and low-emission operation of your heating system, only use the fuels specified in this instruction manual. Only then can efficient, low-emission, and trouble-free operation of your heating system be guaranteed.

Carry out maintenance and cleaning work recommended on your heating system at regular intervals. Details can be found later in the instruction manual. By doing this, you will not only be ensuring the operational reliability of the heating system but also its efficient and low-emission operation.

Your pellet boiler will automatically adjust its output between 30 to 100% of the boiler's rated power. Your heating system may have a lower or higher heat demand than the boiler can deliver, for this reason we recommend a buffer tank is installed. The buffer tank ensures operational reliability of the appliance and improves heating response and energy saving. This ensures efficient and low-emission operation of your boiler.

THIS MANUAL REFERS TO FOLLOWING CORTINA MODELS

CORTINA 12S / CORTINA 12S-PACK / CORTINA 12X / CORTINA 12X-PACK

CORTINA 18S / CORTINA 18S-PACK / CORTINA 18X / CORTINA 18X-PACK

CORTINA 24S / CORTINA 24S-PACK / CORTINA 24X / CORTINA 24X-PACK

CORTINA 32S / CORTINA 32X

CORTINA 40S / CORTINA 40X

Manufacturer's Declaration of Conformity (EC)

We, "BOYSIS MAKINE TAAHHUT SANAYI VE TICARET A.S.", located at Şerifali Mahallesi Hüsrev Sokak No.2 Erişkenler Plaza Kat 3 34775 Ümraniye/İstanbul/Turkey (TR) hereby declare under our sole responsibility that

Products : Hot water boilers for pellets

Models : CT 12S / 18S / 24S / 32S / 40S

CT 12X / 18X / 24X / 32X / 40X

To which this declaration relates, is in conformity with the following standards;

EN 303/5 of 2012: Heating boilers for solid fuels, manually and automatically stoked, nominal heat output of up to 500 kW - Terminology, requirements, testing and marking

DIRECTIVE 2015/1189/EC of 2015; implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for solid fuel boilers

DIRECTIVE 2006/95/EC of 2006; on the harmonisation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits

DIRECTIVE 2004/108/EC of 2004; on the approximation of the laws of the Member States relating to electromagnetic compatibility

This declaration will become invalid in case the product has been subject to any modification without prior notice to the manufacturer.

Signed on 02rd of December, 2019 by

BOYSIS A.S.

1 INTRODUCTION AND DELIVERY

Cortina is a welded steel boiler designed for automatic burning of wood pellets to be used in hot water heating installations. Therefore, it can not be used for direct sanitary water supply. Main features and advantages of Cortina wood pellet boiler:

- Integrated fuel container
- Adjustable boiler output
- High efficiency and nature-friendly flue gas emissions
- Automatic ignition of wood pellets
- Automatic feeding
- Fire protection
- Stainless steel burning pot and fuel feeder
- PID control ensures a stable output where it is adjusted
- Exhaust fan speed modulation and speed control via encoder
- Fuel level monitoring window
- Flue thermostat
- Room thermostat option
- Domestic hot water pump or three-way mixing valve control
- Buffer tank option
- Manuel burner grate and heat exchanger (smoke pipes) cleaning (only on S-models)
- Automatic burner grate and heat exchanger (smoke tubes) cleaning (only on X-models)
- Integrated hydraulic kit (circulation pump, expansion tank, and safety valve) (Only for CT 12/18/24 S-PACK or X-PACK)
- Wi-fi kit (optional purchase)
- Additional fuel silo (optional purchase for CT 12/18/24)
- Outdoor temperature sensor (optional purchase)

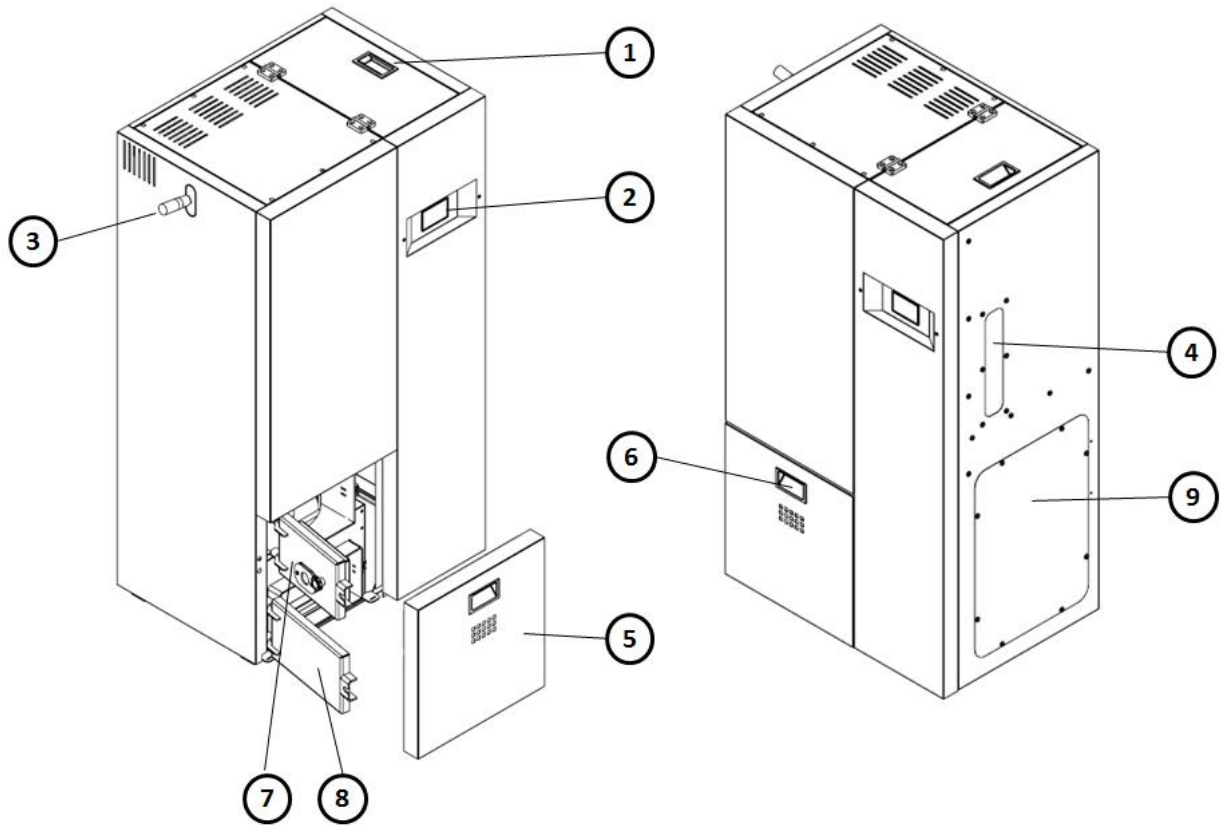
Your boiler is delivered in one single package secured on a wooden pallet, with all accessories and external cabinet fit before leaving factory. You can reach the cleaning equipment behind the ash cleaning cover of boiler.

NOTICE – Additional pellet silo

- You can add an additional silo with 250 liters pellet volume (approx 175 kg) and increase your usage period without re-fuelling (up to 8 days). This silo is available for 12 / 18 / 24 models, can be purchased separately, and later added to the working boiler system.

Main parts that are related to operation of boiler:

1	Fuel loading door	6	Flame inspection window
2	User interface (control panel)	7	Burning pot cleaning cover
3	Manual smoke tubes cleaning (only S-models)	8	Ash cleaning cover
4	Fuel level monitoring window	9	Service / electronic board cover
5	Cleaning cover shield		



2 WARRANTY CONDITIONS

THE MANUFACTURER guarantees the product, with the exception of elements subject to normal wear (listed below), for a period of 2 (two) years;

- Starting from date of start-up, which is proven by a commissioning document that contains the name of the seller and the date when the sale / first start-up took place
- If there is no service/commissioning report, standard guarantee period starts with the date when the sale took place.

The term 'warranty' refers to the (free-of-charge) replacement or repairs of parts acknowledged to be faulty due to manufacturing defects.

Furthermore, in order for the guarantee to be valid, the product must be installed and calibrated by qualified personnel. Installations that do not meet the current standards, improper use and lack of maintenance as expected by the manufacturer, void the product warranty. The warranty is valid on the condition that the instructions and warnings contained in this manual are observed, and therefore the product is used correctly.

The replacement of the entire system or the repair of one of its components does not extend the warranty period, and the original expiry date remains unchanged.

EXCLUSIONS FROM WARRANTY

Parts subject to normal wear such as gaskets, ceramic glass, cast iron grilles, vermiculite boards, fire bricks, fire stone burners, handles and electric cables, knobs, all parts which can be removed from the firebox, are excluded from the warranty

Any part that may be faulty as a result of negligence or careless use, incorrect maintenance or installation that does not comply with the manufacturer's instructions (see the relative chapters in user manuals of each product).

The warranty will be rendered null and void in the event of damage caused by tampering, atmospheric agents, natural disasters, vandalism, electrical discharges, fire, faults/defects in the electric and/or hydraulic system, and maintenance not being performed at all or as indicated by the manufacturer instructions

Non-regular electrical supplies, and electrical power cuts off too often, can cause severe damage on control system, sensors and actuators of the products carrying those components. We recommend installing 230 V 50 Hz AC voltage regulator for those products. Also installing a UPS for pumps can protect system from electrical cut-offs causing over heating of water.

The warranty does not cover malfunctions and/or damage to the appliance that arise due to the following causes:

- Damage caused during internal transportation and/or handling
- All parts that develop faults due to negligence or improper use, incorrect maintenance, installation that does not comply with the manufacturer's instructions (always refer to the installation manual provided with the product)
- Improper overheating of the equipment, use of fuels not conforming to the types and quantities indicated in the instructions provided
- Further damage caused by incorrect user interventions in an attempt to fix the initial fault
- Worsening of the damage caused by the user continuing to operate the appliance even after the fault has been noticed.
- In case of a boiler/hydro stove, any corrosion, incrustations or breakages caused by water flow, condensation, lack of water in the system, mud or limescale deposits
- Inefficiency of chimneys, flues or parts of the system affecting the appliance.
- Failure to have the annual product maintenance performed by an authorised technician or qualified personnel will result in the loss of the warranty.
- Save for the legal or regulatory limits, the warranty does not cover the containment of atmospheric and acoustic pollution.

THE MANUFACTURER declines all liability for any damage which may be caused, directly or indirectly, to persons, animals or objects as a consequence of non compliance with any provision specified in the manual, especially warnings regarding installation, use and maintenance of the appliance.

SPARE PARTS

Only use original spare parts. The retailer or service centre can provide all necessary information regarding spare parts. We do not recommend waiting for the parts to get worn out before having them replaced. It is important to perform regular maintenance.

The Manufacturer declines all liability if the product and any other accessory is used improperly or modified without authorisation. All parts must be replaced with original spare parts. Warranty cover is valid if the product is installed and tested by a qualified installer, according to the detailed instructions provided in the instruction manual supplied with the product. The term 'warranty' refers to the (free-of-charge) replacement or repairs of parts acknowledged to be faulty due to manufacturing defects.

3 SAFETY WARNINGS

3.1 Basic safety instructions

- Never get yourself into danger; give own safety the utmost priority.
- Keep children away from the boiler room and fuel storage room.
- Observe all instructions related to operation, maintenance, servicing and cleaning.
- The pellet heating system should be installed and started up for the first time by an authorised installer. It is essential for safe and economical operation.
- Never make any changes to the heating system or flue gas system.
- Never close or remove safety valves.

DANGER – Risk of poisoning

- Make sure that the pellet boiler is supplied with sufficient combustion air.
- The openings in the combustion air inlet must never be partially or completely closed.
- Ventilation systems, central vacuum cleaning systems, extractor fans, air conditioning systems, flue gas blowers, dryers or similar equipment must never be allowed to draw air from the boiler room and cause a drop in pressure.
- The boiler must be connected tight to the chimney using a flue gas tube.
- Clean the chimney and the flue gas tube at regular intervals.
- Boiler room and pellet storage room must be sufficiently supplied with air and ventilated.

DANGER – Risk of electric shock

- Switch off the system before performing work on the boiler.
- THIS APPLIANCE MUST BE EARTHED!
- Electrical installation of this boiler must be completed in accordance with mandatory regulations, and codes of practice regarding the instructions given in this manual by authorized installer.

DANGER – Risk of explosion

- Never burn petrol, diesel, engine oil or other explosive materials in boiler or storage room
- Never use liquids or chemicals to ignite the pellets.
- Switch off the heating system before filling the storage room.

DANGER – Risk of fire

- Do not store any flammable materials in the boiler room.
- Do not hang out any washing in the boiler room.
- Always keep all boiler doors closed
- Store the pellets in another room, or leave a minimum distance of 80 cm between the boiler and the pellet pile.

CAUTION – Risk of cut injuries due to sharp edges

Use protective gloves for performing all work on the boiler.

WARNING – Risk of burns

- Do not touch the flue spigot or the flue gas tube.
- Do not reach into the ash chamber.
- Do not remove service cover due to volteged components under the cover
- Do not clean the boiler until it has been allowed to cool down.

NOTICE – Damage to propety

- Heat the pellet heating system using pellets that comply with the specifications below
- Do not use the heating system if it, or any of its components, come into contact with water.
- If water damage occurs, have the heating system checked by your authorised service stuff or approved technicians, and have any damaged parts replaced in case needed.

3.2 What to do in an emergency

What to do in the event of a fire

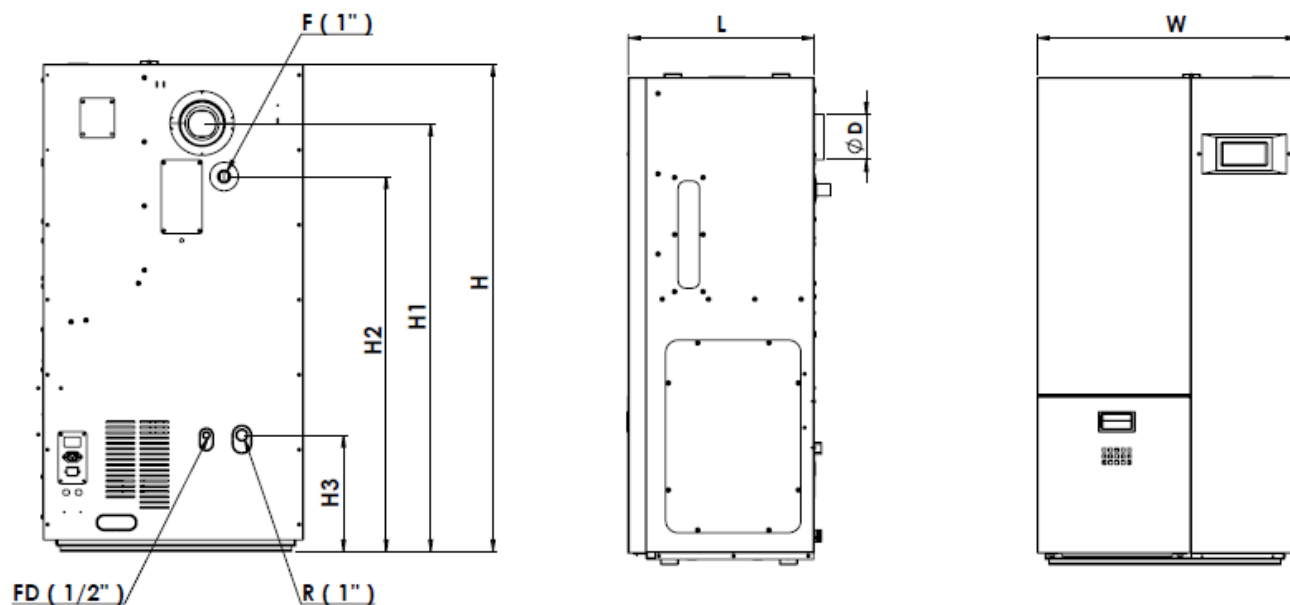
- Switch off the heating system.
- Call the fire brigade
- Use approved fire extinguishers.

What to do if you smell smoke

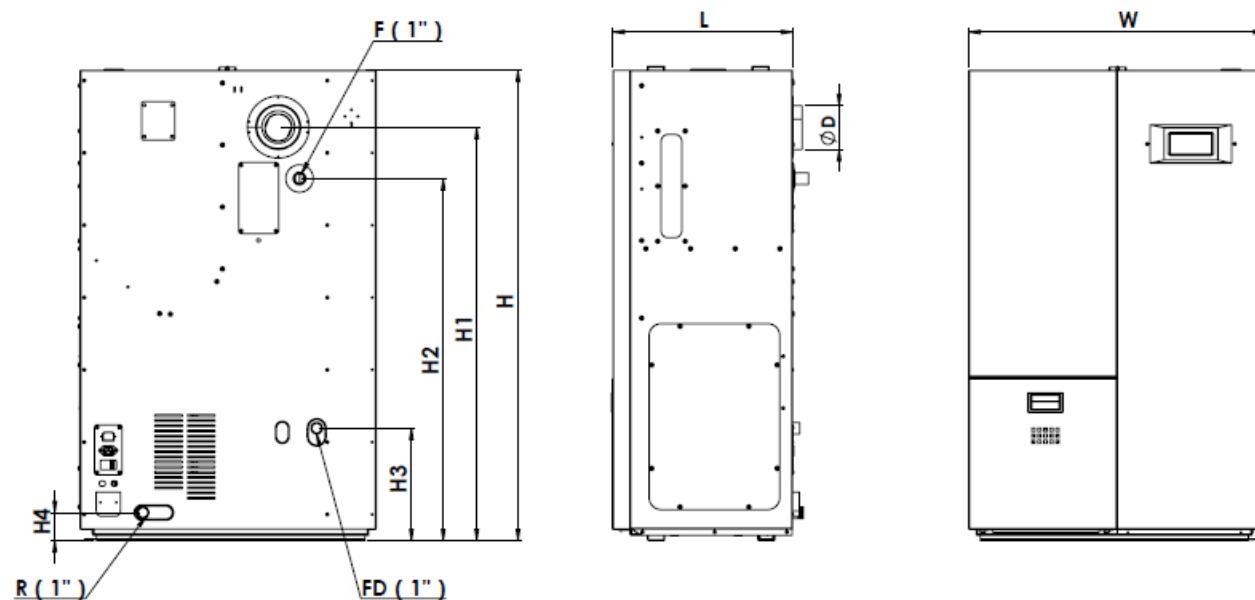
- Switch off the heating system.
- Close the doors leading to living areas.
- Ventilate the boiler room.

4 TECHNICAL DATA

Cortina 12 / 18 / 24 / 32 / 40



Cortina 12-PACK / 18-PACK / 24-PACK / 32-PACK / 40-PACK



Models		CT 12	CT 18	CT 24	CT 32	CT 40
Fuel specifications		Wood pellets size 6 mm Fuel parameters shall comply to EN 14961				
Boiler class		Class 5 acc to EN 303/5				
Operation mode		With fan at flue exhaust working under pressure				
Maximum power output	<i>kW</i>	15	20	26	34	45
Minimum power output	<i>kW</i>	4,5	5,7	7,8	10,2	13,5
Efficiency at max output	%	91,2	88,8	89	89,1	89,3
Efficiency at min output	%	89,3	88,9	89,2	88,4	89,5
Flue gas temperature at max power	$^{\circ}\text{C}$	116	119	125	124	113
Flue gas temperature at min power	$^{\circ}\text{C}$	84	73	80	90	79
Net weight	<i>kg</i>	160	165	185	225	250
Water content	<i>lt</i>	44	40	45	70	76
Fuel container capacity	<i>kg</i>	75		90	100	115
	<i>lt</i>	120		145	155	180
Fuel filling opening size	<i>mmXmm</i>	436x258			486x328	536x328
Combustion period	<i>h</i>	12				
Minimum return temperature	$^{\circ}\text{C}$	40 $^{\circ}\text{C}$ (with non-condensing working conditions)				
CO emission		EN 303/5 Class 5				
Required draft at chimney	<i>Pa</i>	8-10	10 - 12		12 – 15	
Temperature control range	$^{\circ}\text{C}$	45– 80				
Max operating temperature	$^{\circ}\text{C}$	80				
Max operating pressure	<i>bar</i>	3				
Water flow/return connections	<i>F, R</i>	1 " (male)				
Filling/draining connection	<i>FD</i>	$\frac{1}{2}$ " (male) / 1" (male) for S/X-PACK				
Burner design		Stainless steel cylindrical pot				
External dimensions						
Height of boiler H	<i>mm</i>	1365		1490	1620	1670
Width of boiler W	<i>mm</i>	850			850	900
Height, fluegas pipe H1	<i>mm</i>	1195	1235	1360	1490	1540
Height, outfeed pipe H2	<i>mm</i>	1050	1085	1210	1340	1390
Height,return feed pipe H3	<i>mm</i>	325			360	
Height,return feed pipe H4		80				
Depth of boiler L	<i>mm</i>	520			570	620
Exhaust Outlet Diameter D	<i>mm</i>	80			130	
Electrical supply		230V / 50Hz 6,3A				
Power consumption (fan+gear motors)	<i>W</i>	75 on S-models 125 on X-models				
Power consumption (pump)	<i>W</i>	50 (S/X-PACK models)				
Power consumption (ignitor)	<i>W</i>	165				

5 INSTALLATION

5.1 Handling the product

Cortina is a heavy product, and care should be taken when carrying the boiler to the room where it is going to be installed. Carrying equipment of the product must be of enough capacity to support the boiler weight.

NOTICE – Damage to property

- Do not use hard and sharp objects while removing the package around the boiler to prevent damage of the painted jackets.

5.2 Room selection

Cortina boilers must be installed in an individual boiler room particularly organized for heating. The boiler room should be of enough volume for installation, and maintenance of the boiler. There should be enough space from the wall for easy removing the geared motor and the shaft for service intervention. See “clearances around boiler” section.

There should be enough fresh air circulation for combustion, the chimney design must ensure an adequate draught for related boiler type, and must comply with construction criteria given further in this manual and in mandatory regulations. Your boiler must never be installed in open spaces or balconies, in spaces occupied by people like kitchen, living room, bathroom and bedroom, in spaces where there are explosive and combustible materials.

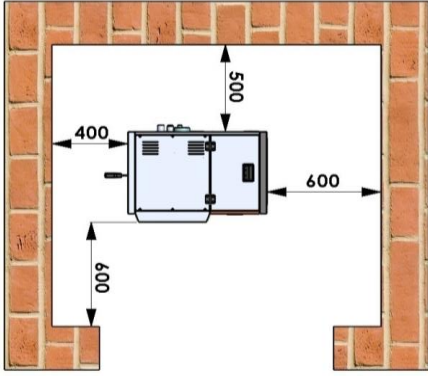
The boiler room should have air ventilation holes through outside to let fresh air in. One air ventilation hole must be built maximum 40 cm below the level of room ceiling; the other must be built maximum 50 cm above the floor level. These ventilation holes should always be kept open. The upper hole should be at least 40x40 cm in size, the lower hole at least 30x30 cm.

All hydraulic and electrical circuits must be arranged by authorized staff in accordance with mandatory regulations specified by legal organizations. Pellets should be stored by keeping minimum 800 mm distance from the boiler. We recommend you to keep the solid fuel in another room. Cortina boiler should be installed on a concrete plinth made of a fireproof material. For minimum sizes of the plinth following table should be referred:

Model	CT 12 / 18 / 24	CT 32 / 40
Plinth height (mm)	50	
Plinth width (mm)	900	900
Plinth length (mm)	600	650

5.3 Clearances around boiler

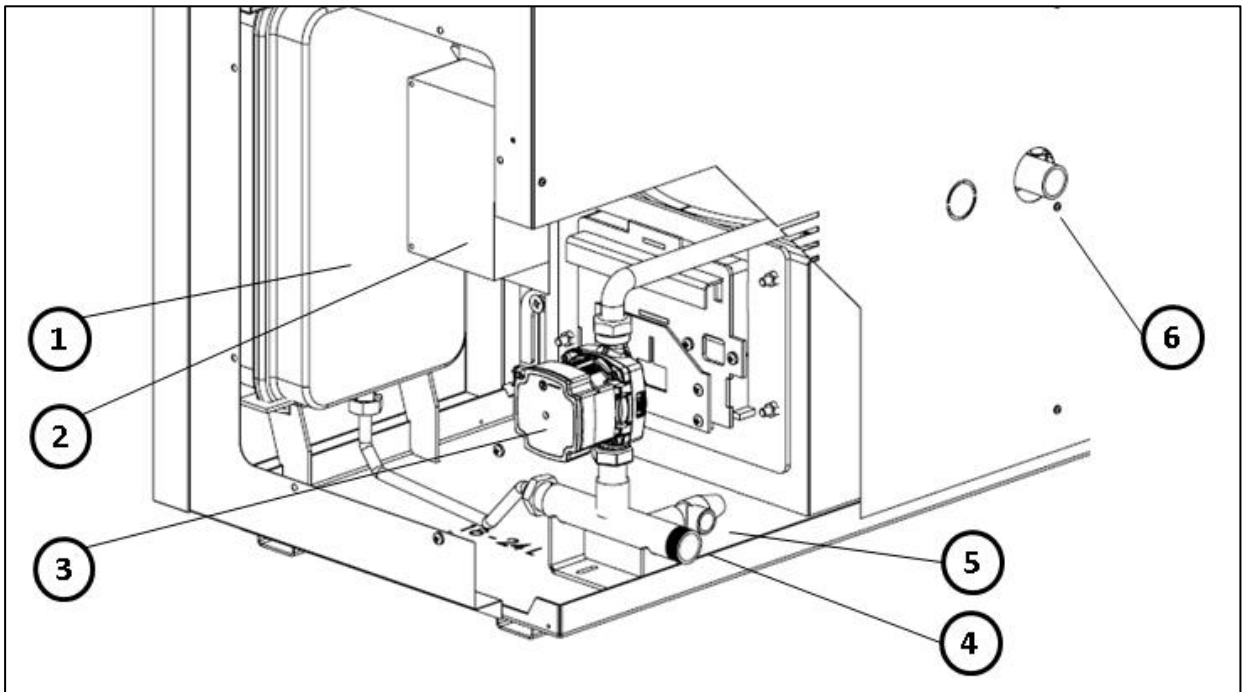
At least the following clearances should be achieved around the boiler. When the boiler is placed to the boiler room, enough distance should be left for easy fuel loading to bunker, easy removing the geared motor and auger and easy servicing.



5.4 Circulation pump

We recommend building a forced water circulation system accompanied with a sufficient pump. Refer to the system diagrams given further in this manual to find the right position of the pump within the hydraulic circuit. Your boiler automatically switches the pump on and off according to the program stored in its PCB. That is why circulation pump must be driven by the control panel. Wiring to the pump is supplied at the back of the boiler.

On S/X-PACK models, circulation pump is integrated inside the boiler cabinet together with an expansion tank (10 liters) and a 3 bar safety valve which is outboard the rear panel. Please see the following sketch for S/X-PACK model accessories:



1	Expansion tank	4	Boiler return pipe for S/ X-PACK model
2	Boiler main controller (PCB)	5	Safety valve
3	Circulation pump	6	Filling/draining port for S/X-PACK model

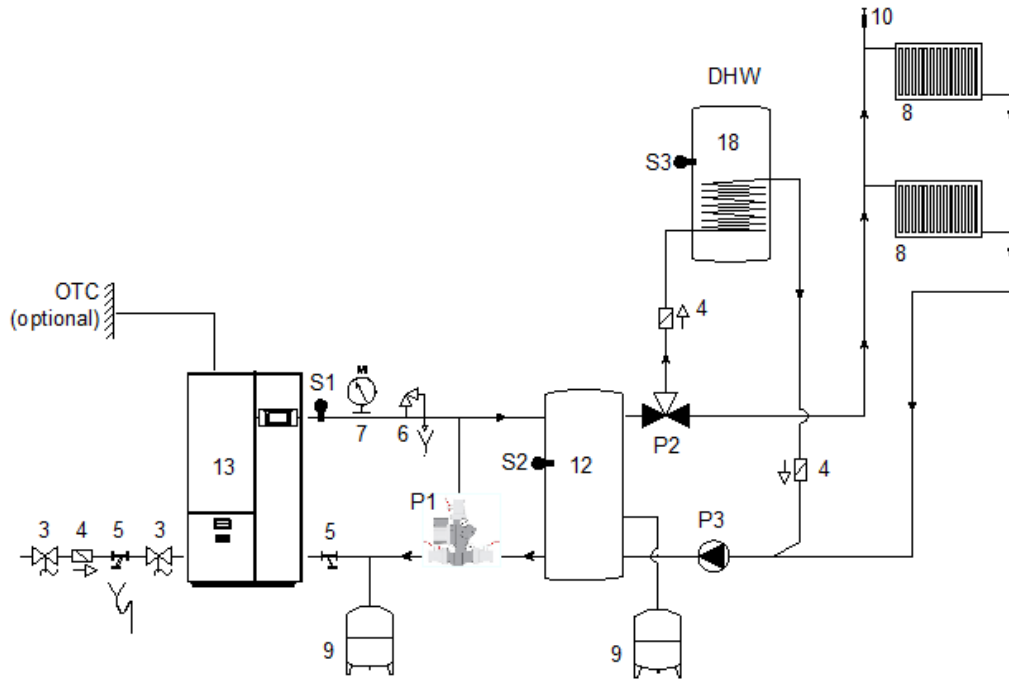
5.5 Rules for hydraulic circuit

Cortina boiler can be installed in a pressurized heating circuit with addition of a closed expansion tank in respect with one of the following schemes. If heat demand of building differs from the nominal capacity of boiler, we recommend a buffer tank between primary circuit and heating installation. Hydraulic circuit should have at least the equipments listed below:

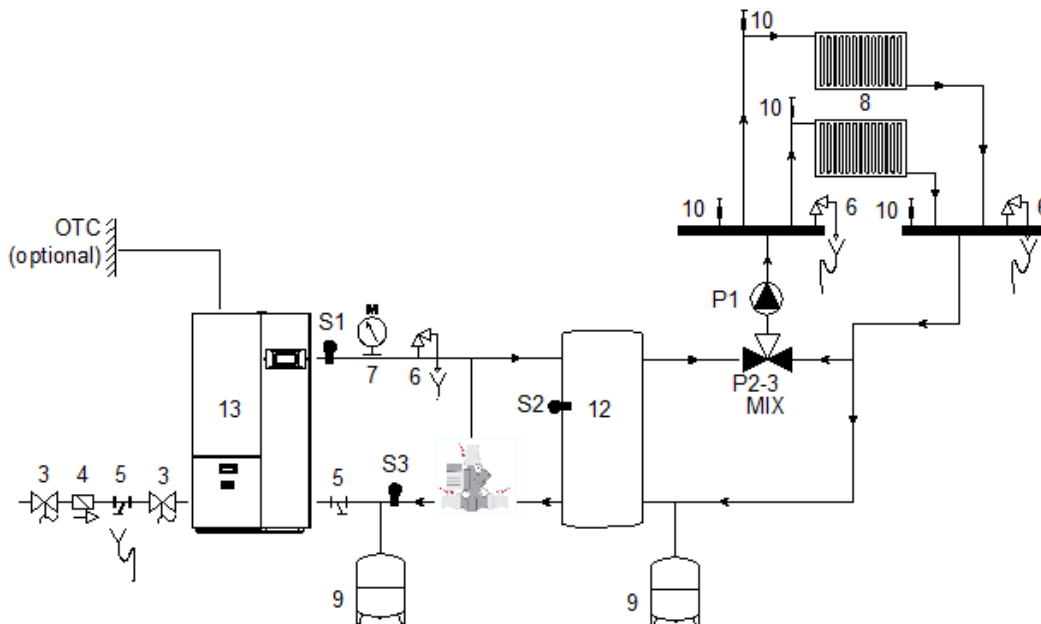
P1	Primary circuit pump / return (boiler protection line) pump	8	Radiator
P2	DHW circuit pump / 3-way diverter valve	9	Expansion tank
P3	Secondary circuit pump	10	Air relief valve
P2-3	Mixing valve	12	Buffer tank

- | | | | |
|---|-----------------------|----|---------------------------|
| 2 | Globe valves (open) | 13 | Cortina boiler |
| 3 | Globe valves (closed) | S1 | Boiler probe |
| 4 | Check valve | S2 | Buffer probe |
| 5 | Strainer | S3 | Return probe / Flow probe |
| 6 | Safety valve | LV | Load valve / 3-way valve |
| 7 | Manometer | | |

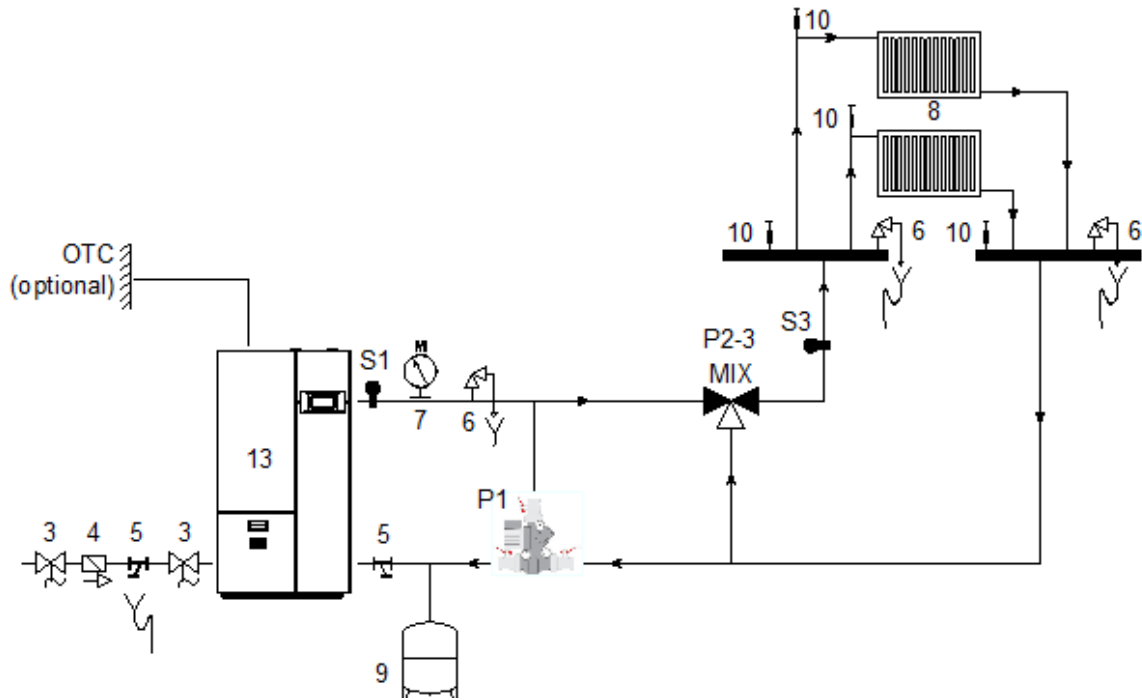
You can refer following hydraulic circuits diagrams with basic parameters attached:



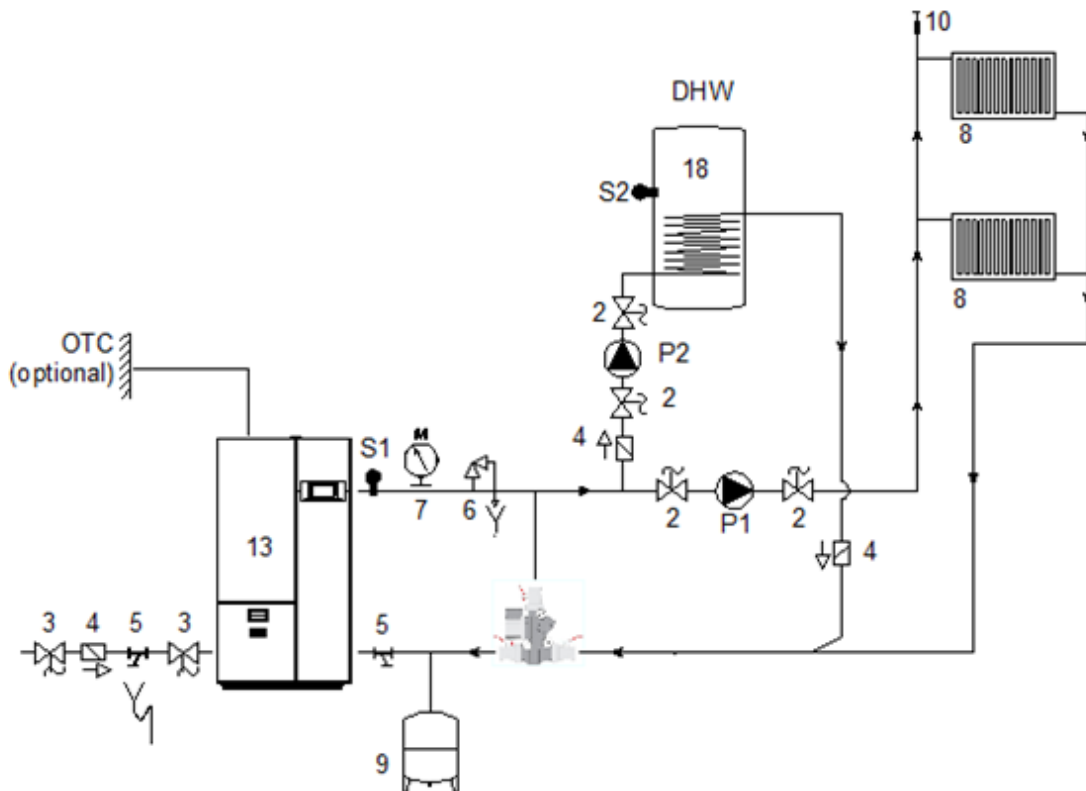
Configuration example 1



Configuration example 2



Configuration example 3

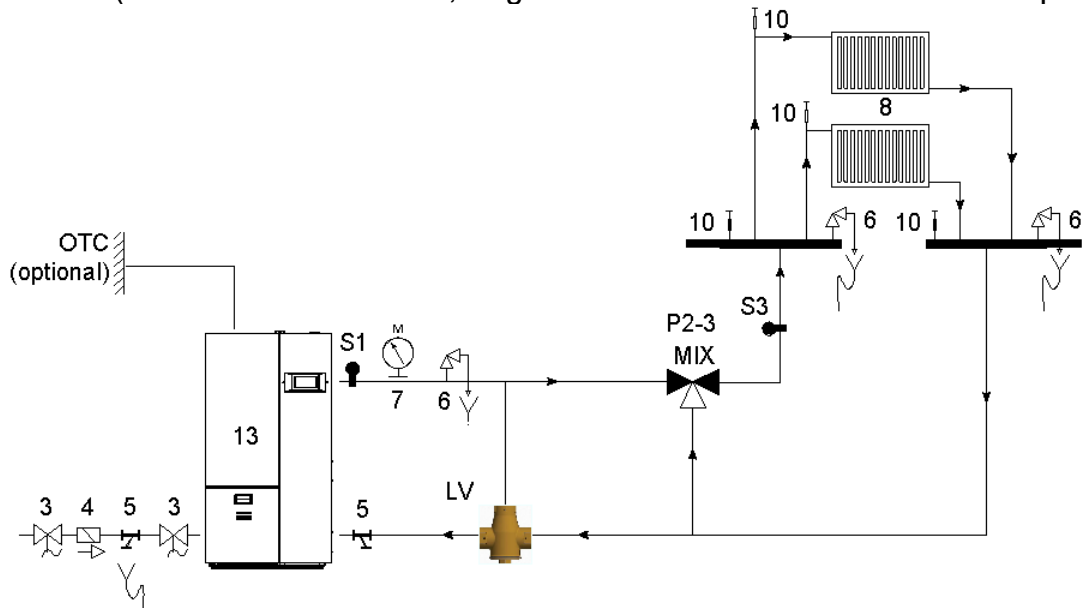


Configuration example 4

	P26	IN3	IN5
Configuration 1	10	8	9
Configuration 2	8	8	9
Configuration 3	9	8	0
Configuration 4	3	8	0

On S/X-PACK models, circulation pump is installed on the return line. Above circuits are valid for X-PACK models as well, excluding pump and expansion vessel. You can install

a thermostatic THREE-WAY LOAD VALVE to protect the boiler from condensation as shown below (one advice for this item, Regulus TCV3B with 55°C activation temperature)



We recommend a buffer storage tank capacity of 25 to 50 litres per kW boiler output. For correct sizing of expansion tank, refer to calculations supplied by the manufacturer.

NOTICE – Safety of heating circuit

- Install a ½" safety valve with a maximum relief pressure of 3 bars.
- Install a manometer to follow and check water pressure in the system. When water is cold, system pressure should be set at 1 - 1,5 bars.

CAUTION

For new installations

- System should be sized and designed accordingly, in order to minimize fresh water addition. Make sure that no part of the system is made of material that is permeable to gases. The original system filling water and any topping-up water must always be filtered (using synthetic or metal mesh filters with a filtration rating of no less than 50 microns) to prevent sludge from forming and triggering deposit induced corrosion. Minimum water pressure in a pressurized heating circuit must always be kept above atmospheric pressure

For a new boiler installed on an old heating circuit

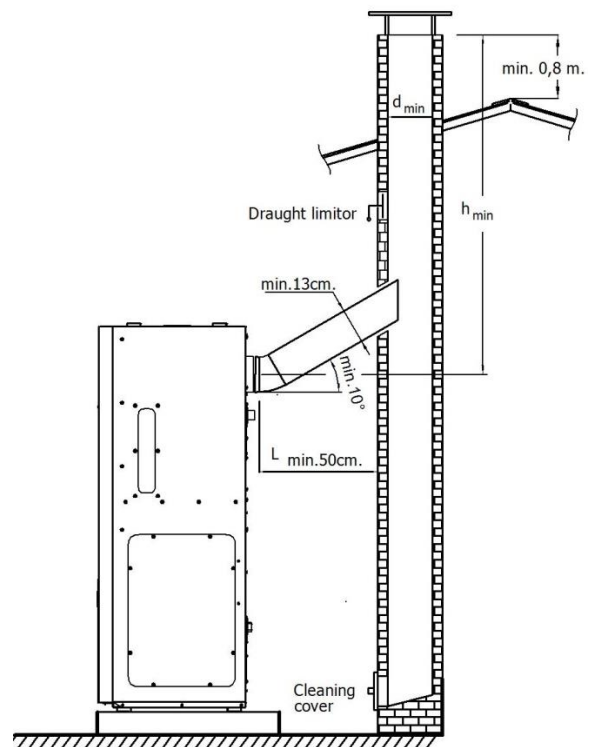
- In old systems used for a long time, a protective coating (black magnetite) has been built on all metal surfaces contact with water. This coating protects the system against further corrosion. When new boiler is installed in old system, new parts with metal surfaces, particularly boiler surfaces will inevitably become sacrificial anode for entire heating system, in other words, they come in the first place where corrosion starts. That is why, following precautions should be added to above, for a new boiler in an old system:
 - If the old system has an open expansion tank, this may be converted to pressurized system with all necessary safety measures.
 - The old system must be fully washed up from all substitutes and particules contained on the surfaces.
 - Air separator with manual vent should be installed at the highest level of circuit.

WARNING – Risk of corrosion on boiler and circuit

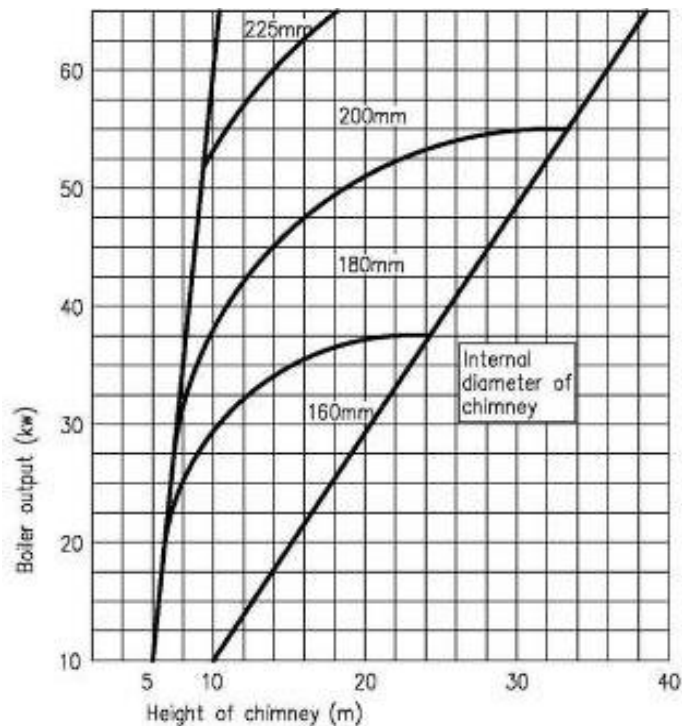
- Boiler is quite strong against corrosion. However, all metal surfaces in heating circuit should be protected against corrosion like pipes/radiators. The oxygen in heating water will cause rust and then material loss on iron-based metal surfaces by means of oxidation.
- During the first water make-up, oxygen must be fully discharged from the system. Generally, oxidation will not be a problem, if all measures are taken into account during first water make-up. Oxidation will take place because of fresh water addition to the system during operation of the boiler. Leak points in a system will cause oxygen to be absorbed inside the heating water. For this reason, minimum water pressure in a pressurized heating circuit must be above atmospheric pressure. Besides, pressure level should always be checked periodically.

5.6 Chimney connection

Cortina boiler must be connected to an individual chimney that will provide at least the minimum draught requested. Flue duct between boiler and the chimney should be insulated using a glass wool material. Flue duct to chimney and chimney must be made of steel or an equivalent material that can resist temperatures up to 400 °C. All connections on flue system must be sealed in order to perform a good combustion and efficiency. The flue duct must be connected to chimney using the shortest way and in accordance with the dimensions given in the following scheme. Horizontal connections and equipment that will increase the pressure loss such as elbows should be avoided. At the lowest level of chimney, there should be a cleaning cover which is made of steel, and sealed for any leakage. The length of flue duct between the boiler and the chimney should not exceed $\frac{1}{4}$ height of chimney. The size of flue duct and chimney should not be less than the size of the boiler flue gas outlet connection.



For the total height and the minimum internal diameter of the chimney, following diagram should be referred in respect with boiler output power, if otherwise stated in mandatory regulations.



5.7 Electrical installation

The boiler is fed with 230 V. A regulator must be used in installations where the power supply is below 205 V or above 230 V.

WARNING

All electrical installations must be carried out by authorized persons in accordance with mandatory regulations and codes of practice. Only qualified personnel may open the control panel on the boiler. Any unauthorized interference with the wiring in the control panel will invalidate the warranty.

Connecting the power cord

Control panel should be connected to a wall plug with an efficient ground system, which is placed not far more than 50 cm. to boiler with a circuit breaker which has at least 3 mm gap between contacts. Use the power cord supplied with the boiler.



CAUTION

If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer or its service agent.

Connecting CH and DHW pumps

Use the socket given attached with the boiler to make the pump connection. Incorrect core termination can cause severe injuries and damage to the equipment. Take care not to interchange wires "L1" and "N". Recommended connecting cable H05VV-F3G 0.50 mm²



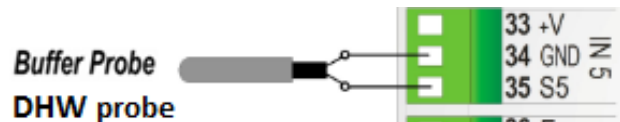
3-way valve connection

If the 3-way valve connection is wanted remove the DHW pump cable connections from the pins 22-23 and connect the 3-way valve as seen in the diagram.



Buffer and DHW NTC probes

Buffer and DHW probes are not supplied with the boiler. In case of buffer or DHW tank installation the probes should be purchased separately.



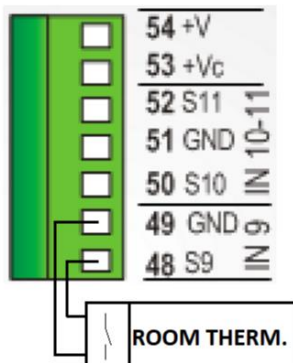
NTC probe specifications:

NTC 10K @25 °C: 120 °C Max



External thermostat

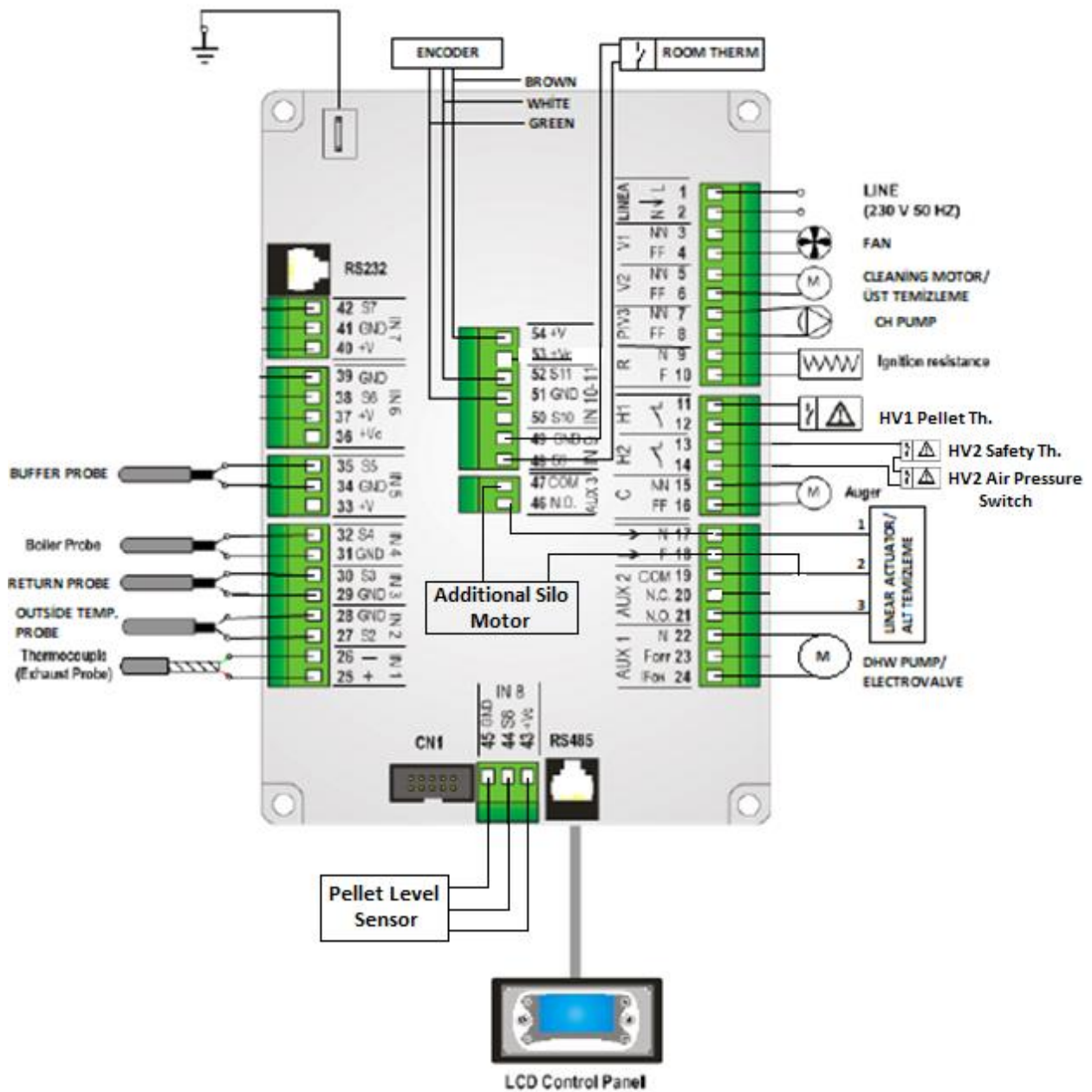
The external thermostat can be used to turn the combustion system on and off. In this case the controller ignores all internal temperature thresholds and is operating exclusively with the thermostat input. To configure this option, connect the external thermostat to : IN9, pins 48 - 49.



WARNING

If the external thermostat is not used don't forget to bridge the terminals

Boiler Control Panel Electrical Scheme



WARNING

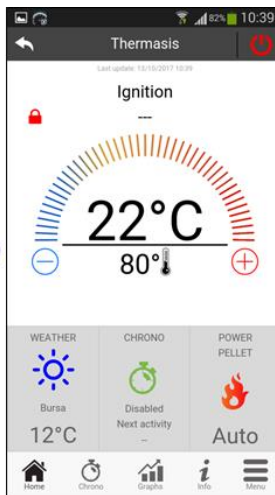
- Before doing any work on the boiler related with electricity, ensure that the power supply cable is disconnected from the network electricity or turn off the main switch located at the back of the boiler
- Sensor wires, sensors and keyboard wires must be mounted so that they cannot be accessed without disassembling the combustion device.
- Earth connection must be connected to the controller and to the metal part of the combustion device.
- Some of the wires carry dangerous voltages. Disconnect the controller from the mains power supply prior to any service or mounting operation.
- Do not exchange high voltage and low voltage connectors during mounting of the controller.

5.8 Optional accessories

5.8.1. Wi-fi module

Thermasis 4HEAT wi-fi module can control all Cortina pellet boilers via smart phones or tablets (IOS and Android). It can be added to a boiler system, which is already installed, and only needs stable wi-fi network or ethernet connection. You can:

- Read temperatures (boiler, exhaust and buffer)
- Read status of boiler (OFF, Ignition, Stabilization, Run Mode, Blocks etc.)
- Can see graphics of temperatures
- Can see weather temperature (internet resources)
- Set boiler temperature
- Set boiler power
- Manage chrono thermostat



5.8.2. Additional silo

CB 125 / 225 fuel silos are designed to work with Cortina 12 / 18 / 24 S/X boilers. CB 125 matches dimensions of CT12/18, and CB 225 matches CT24 model. Delivery package has all items needed to connect CB tanks to Cortina boiler. Main advantages:

- Designed particularly to match boiler external dimensions, and ensure longer operation time without refuelling
- 250 liters (175 kg) additional fuel volume
- Pellet level sensor ensures auto refuelling when boiler original fuel container is empty
- Together with boiler's original tank, system can work up to 8/10 days without refuelling
- Additional silo is purchased separately, and can be added later to the boiler in operation.
- Package has all materials needed to connect the silo to original boiler



6 FUELS

Wood pellets are natural wood (dried sawdust or waste from machining) that has been formed into pellets under high pressure. They have a very low moisture content and very high calorific value.

6.1 Pellet quality

Pellets must comply with Class A1 or A2 according to one of the following standards:

- EN Plus
- EN 14961
- ISO 17225-2

With the specifications

Diameter (mm)	6 ± 1
Length (mm)	Max 40
Moisture (w)	$\leq 10\%$
Ash (w)	$\leq 1,5\%$
Net Calorific Value (kWh/kg)	≥ 4.4

To guarantee combustion without problems, the pellets must be kept in a dry place. Poor quality pellets or others that do not comply with that specified previously compromises the operation of your product and can therefore render the warranty and product liability null and void.

WARNING – Damage to property

- Use of improper pellets in Cortina boiler can block air entrance to burner, can cause damage on boiler and chimney. Use of these kind fuels will make warranty of the boiler invalid.

7 OPERATION INSTRUCTIONS FOR USER AND INSTALLERS

7.1 Control Panel buttons and leds



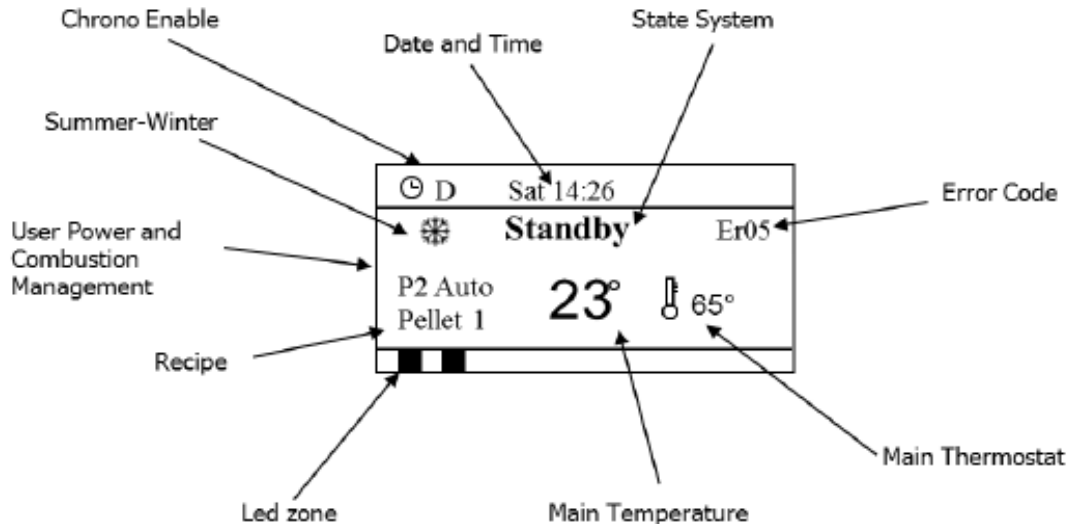
- Buttons

Function	Description	Button
On/Off	Ignition and Extinguishing of the boiler/stove pushing the button for 3 seconds until the acoustic signal	P2
Unblock	Unblocked of system pushing the button for 3 seconds until the acoustic signal	
Modify Menu Values	In modify mode change parameter's value	P4 P6
Run on Menu and Submenu	Run on Submenu and Menu	
Visualizations	Enter and run in Visualization Menu	
Esc	Function exit	P1
Menu	Function enter in Menu or Submenu	P3
Modify	Enter in modify mode into a Menu	
Set	Save data	
Edit Function (local key only)	In Off allows you to change the operation of the system if P11 = 2, 3, 4	P5

- Leds

Function	Description	Button
Heating Resistance	Led On: Heating Resistance On	
Auger	Led On: Auger in the On interval	
"	Led On: Pump On	L3
Valve	Led On: Valve On	L4
Output V2	Led On: Output V2 On	L5
Output Aux2	Led On: Output Aux2 On	L6
Output Aux3	Led On: Output Aux3 On	L7
Pellet Level	Led On: lack of pellet	
External Thermostat	Led On: contact open	
Flow switch	Led On: Sanitary Water demand (contact closed)	

Values Displayed in the main screen: The main temperature and the main thermostat. If the keyboard is set as the local one, they are to be considered as the temperature of the boiler probe and the value set for the boiler thermostat respectively. On the other hand, if the keyboard is set as the remote one, they are to be considered the temperature of the room probe in the keyboard itself and the value set for room thermostat.

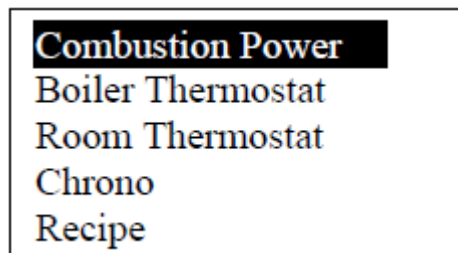


Operating states : Check Up, Ignition, Stabilization, Modulation, Standby, Normal, Safety, Extinguishing, Recover Ignition, Block, Off.

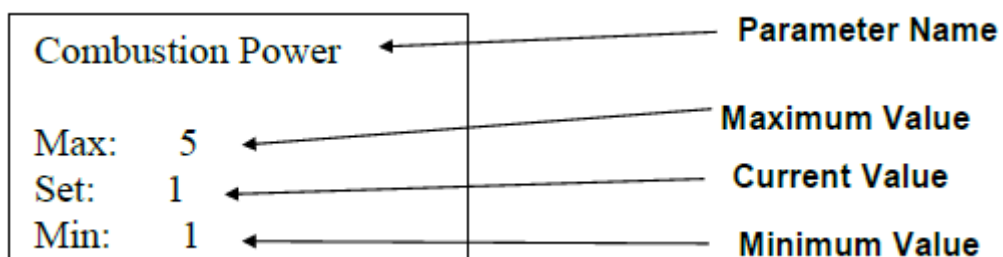
7.2 The Menu

The menu of control panel consists of a User Menu and a Technical Menu in which you can modify the operating parameters, test the outputs, check the history of the system.

Browsing Menu: Push P3 button to enter in the User Menu.

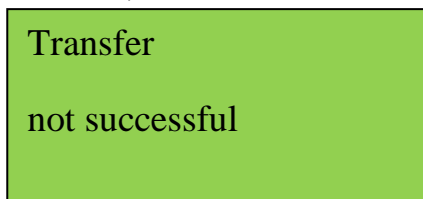


Using P4 and P6 buttons it is possible to select desired Menu or Submenu. Push P3 button to enter in the desired Menu or Submenu.



The Setting menu consists of the parameter names (first/second row), the minimum, the maximum and the value ("Set") current. By pressing again button P3 you enter edit mode (the "Set" field flashes); to decrease or increase value, push the buttons P4 or P6; to save the new value, push the button P3; to cancel the modified and restore the old parameter's

value push the button P1. If a parameter value is changed, the new value is sent to the control board; if the transmission failure appears the message:



In that case modify again the parameter's value.

User Menu

To access the settings menu press P3. The menu is as follows:

MENU		DESCRIPTION
Combustion Management	Functioning	Menu to change the combustion modality.
	Pellet Power	Menu to modify the combustion power in Pellet modality.
	Pellet Recipe	Menu to set the pellet combustion recipe.
	Auger Calibration	Menu to modify the Auger's work time.
	Fan Calibration	Menu to modify the Combustion Fan speed.
Heating Management	Boiler Thermostat	Menu to modify the Boiler Thermostat value.
	Buffer Thermostat	Menu to modify the Buffer Thermostat value.
	DHW Thermostat	Menu to modify the Domestic Buffer Thermostat.
	Flow Thermostat	Menu to modify the Flow Thermostat value.
	Summer-Winter	Menu to select the Winter or Summer modality
	Climatic Function	Menu to manage the climatic function.
	Mixer Valve	Menu to manage the Mixer Valve.
Chrono	Menu to select the Chrono's program modality and the timers of Ignition/Extinguishing of the boiler/stove	
Load	Menu to load the Auger	
Reset Service	This menu allows you to reset the message of Function 2 Maintenance system.	

Summer - Winter

Menu for modifying the plumbing plant functioning according to the season. On display appears one of these symbols: ❄️ or ☀️ .

Chrono Menu

Menu to set the time to turn on/off the system.

Chrono Modality

<i>Description</i>	<i>Buttons</i>	<i>Display</i>
The current modality blinks		
Enter in modify mode	P3	
Select the favourite modality	P4 and P6	
Cancel the modifies and restore the old modality	P1	
Save the new setting	P3	
Exit from Menu	P1	

Chrono Program

<i>Choice Program</i>	<i>Buttons</i>	<i>Display</i>
The current modality blinks		
Enter in the Submenu	P3	
Select the favourite program	P4 and P6	
Exit from Menu	P1	

The three types of programming are stored separately: if for example the Daily modality is set, the other modalities aren't changed. **After making the programming it is necessary to select the desired mode from the Modality Menu to turn on/off the system by Chrono.**

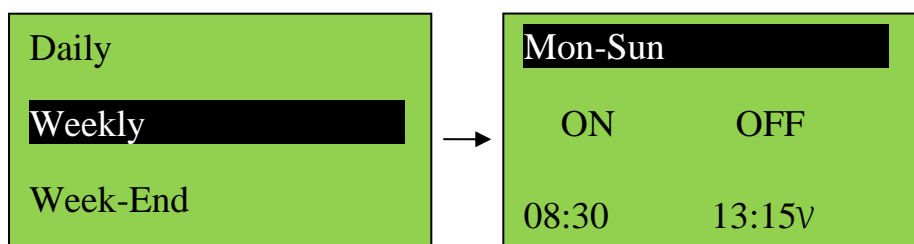
Choose the type of programming to set:

- **Daily:** select the day of week and program the times to switch on and off the system; for each day there are 3 time slots.

Weekly	Tuesday	ON OFF
Week-End	Wednesday	09:30 11:15 v
	Thursday	00:00 00:00
	Friday	00:00 00:00

Program across midnight: set the hour of extinguishing of a day at 23:59 and set the hour of ignition for the next day at 00:00

- **Weekly:** program the times to switch on and off the system (there are 3 time slots).



- **Week-End:** choose between 'Monday-Friday' and 'Saturday-Sunday'. There are 3 time slots for each period.

Daily	Sat-Sun	ON OFF
Weekly		10:00 12:15
Week-End		

PROGRAM CHRONO

Buttons

After choosing the favourite program, select the programming time	P4 or P6
Enter in modify mode (the selected time blinks)	P3
Modify the timers	P4 or P6
Save program	P3
Enable a program (a "V" appears) or disable a program (a "V" disappears)	P5
Exit	P1

Load Menu

This menu allows load manually the Auger or the brazier. **The system has to be in Off state to do the loading.** When the Auger is manually started the Exhaust Fan switches on in order to close pins 13-14 (HV2) for the power supply of the Auger.

Time and Date Menu

This Menu allows to set time and date. Push the button P4 and P6 to select hours, minutes, year, month and day. Push P3 to enter editing, P4 and P6 button to change the value. Push P3 to save and P1 to exit.

Language Selection Menu

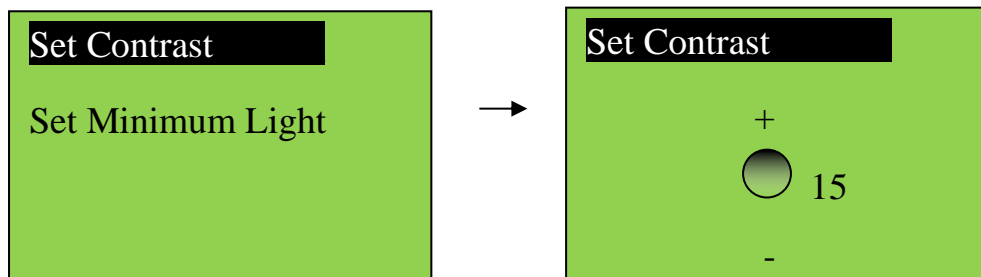
This Menu allows changing the language of LCD panel. The highlighted language is currently set.

Keyboard Menu

MENU	DESCRIPTION
Set Contrast	Menu to set the contrast of LCD panel
Set Minimum Light	Menu to set the light of LCD panel

Set Contrast

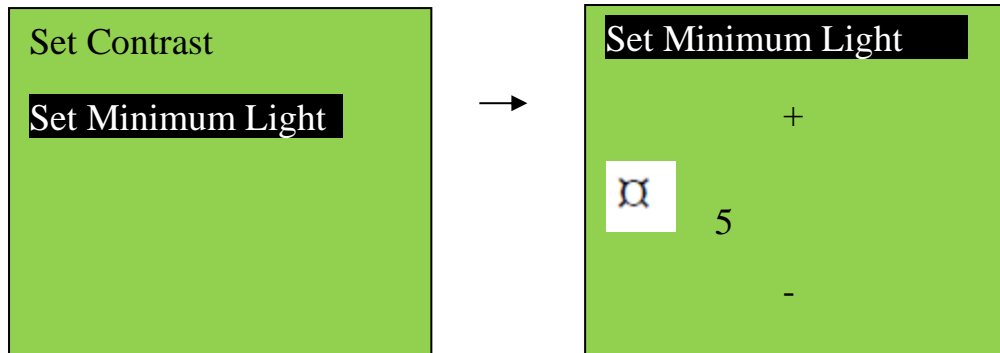
This Menu allows to set the display contrast.



Push the buttons P4 and P6 to increase or decrease the contrast; P3 to save and exit, P1 to exit without save.

Set Minimum Light

This Menu allows setting the display light when any button is pushed.



Push the buttons **P4** and **P6** to increase or decrease the light (minimum 0, maximum 20); **P3** to save and exit, **P1** to exit without save.

Supply Voltage Lack Management

In case of supply voltage lack, the system saves the most important functioning data. With the return of the supply voltage, the system evaluates the saved data and:

- If the lack is less than 60 s the system returns to the state in which it was previously
- If the system was in a On state and lack of voltage is less than 50 min and greater than 60 s, the system goes in Recover Ignition
- In case of prolonged absence of Supply Voltage the systems goes in Block with error message **Er15**

Pump and Valve Anti-Lock Function

If the Pump is off for the time **T42** it will switch on for the time **T41**. If the Valve is off for the time **T42** it will switch on for the time **T46**.

7.3. Start-up

Switching ON the boiler

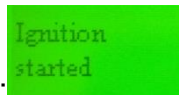
Check the boiler to be in “OFF” position.



Switch ON the boiler with a long pushing of the button P2.



Display on the LCD when the boiler is ON:



1. The Ignition is signalled by the word “**ignition**”
2. The Work state is signalled by the word “**run mode**”
3. The Modulation state is signalled by the word “**modulation**”

If the ignition is not succeed during the predefined time (time out) the controller will turned OFF and the error message “Err12” will be displayed.

WARNING

- An odour of the paint can be felt while the boiler fired up for the first time.
- Do not open the combustion chamber door during operation.
- Never fill the burner pot with pellets by hand. Excessive combustion material in the burner pot means that the pellets will not be ignited optimally.



Switch OFF the boiler

Switch OFF the boiler with a long pushing of the button P2.

Words status when the boiler is switched OFF:

1. The Extinguishing is signalled by **Extinguish.**
2. The Extinguishing finished = OFF state is **OFF** signalled by

NOTICE

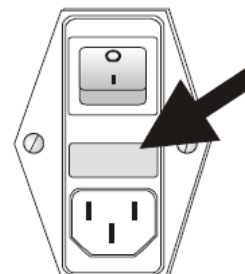
- When the boiler is switched OFF the fan continues running until the flue gas temperature falls below the set trash hold and then the fan is turned off.

Shutting the boiler down (end of season)

At the end of season, before shutting down the boiler, we recommend completely removing pellets from the hopper with the use of a vacuum cleaner with an extension.

During periods of disuse, the boiler must be unplugged and placed in a dry place protected from the elements. For greater safety, especially if there are children around, we recommend removing the supply cable from the rear of the boiler.

Upon re-start, when pressing the main switch (located on the back of the boiler) does not make the control panel display light up, it could mean that the service fuse needs replacing. On the rear of the boiler there is a fuse holding compartment which is located underneath the supply socket. Use a screwdriver to open the fuse-holder compartment and if necessary replace them (5 AT delayed)



8 INSTRUCTIONS FOR INSTALLERS ONLY

8.1. Error messages

Both the keyboard touch screen and LCD you can view the messages on the main screen such as error messages:

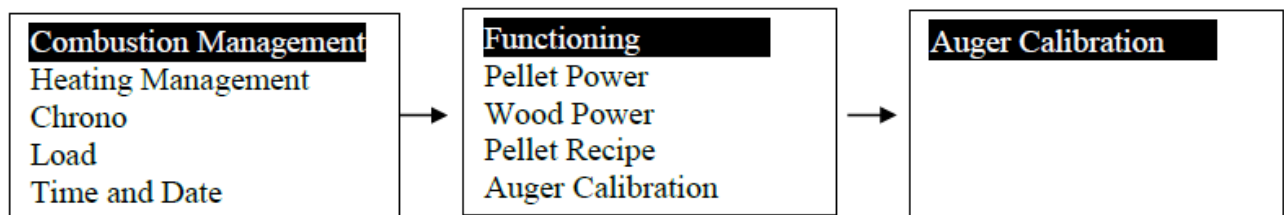
Er01	Security Error High Voltage 1. It may also intervene with the system off.
Er02	Security Error High Voltage 2. It can only intervene if the fan Combustive is active.
Er03	Extinguishing for low exhaust temperature
Er04	Shutdown over temperature water
Er05	Extinguishing due to high exhaust temperature
Er07	Encoder Error. The error may occur due to lack signal Encoder
Er08	Encoder Error. The error can occur due to problems of adjustment of the number of revolutions
Er09	Water pressure low
Er10	Water pressure high
Er11	Clock Error. The error occurs due to problems with internal clock.
Er12	Extinguish for ignition failure.
Er15	Extinguishing due to power failure for more than 50 minutes
Er16	RS485 communication error
Er17	Adjusting the Air Flow Failed
Er18	Exhaustion Pellet
Er23	Boiler probe or Back boiler probe or probe Buffer open
Er25	Engine cleaning broken
Er26	Engine cleaning 2 broken
Er27	Depression below the minimum threshold
Er34	Depression above the maximum threshold
Er52	Error Module I/O I2C

Other Messages

Sond	Displaying the status of the Temperature Sensors. The message is displayed during the check-up and indicates that the temperature reading on one or more probes is equal to the minimum value or the maximum value (depending on the probe considered). Check that the probes are not open (read the minimum value of the temperature scale) or short (read the maximum value of the temperature scale).
Service	Message that signals the achievement of scheduled operating hours. It's necessary to call for service.
Cleaning	Message that signals the achievement of scheduled operating hours. It's necessary to clean the stove or boiler.
Ignition Block	Message that appears if the system is not manually turned off during Power On (after preload): the system will turn off only when it is arrived at running.
Er20	Sensor Grid closed with system in operation Pellets
Port	Door open
Er06	Thermostat Pellet open
Link Error	Lack of communication between keyboard and control board

8.2. Combustion Management Menu

Menu to change the combustion parameters.



Pellet Power

This Menu allows to set the system's combustion in automatic or manual mode in Pellet modality. If the manual mode is set, the user can choose the combustion power.

Combustion	Description
1 - Number of user power	Power manually set from 1 to Number of User Power (parameter P03)
Auto	Combustion Power set automatic by the system

Combustion Recipe

The Menu to select the combustion recipe in Pellet modality. The maximum value is the number of recipes visible to the user (parameter **P04**). If **P04**=1 the Menu isn't visible.

Auger Calibration

Menu to change the Auger's work time or speed. The system has 10 calibration's steps (0 value is set by the factory). **The calibration's effect is valid only in Run Mode and Modulation for the current recipe.** For each step the value is increased or decreased of a per cent value **P15** set in the Default Settings Menu.

Example Auger calibration without encoder (P81=0=): P15=10%, Step=-1

Default Values	C03 =2,0	C04 =3,0	C05 =4,0	C06 =5,0	C07 =6,0	C11 =1,0
Calibrated Values	C03 =1,8	C04 =2,7	C05 =3,6	C06 =4,5	C07 =5,4	C11 =0,9

Fan Calibration

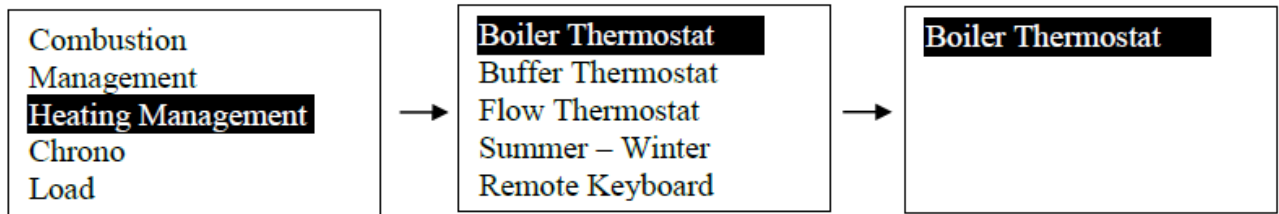
Menu to change the Combustion Fan speed. The system has 10 calibration's steps (the 0 value is set by the factory). **The calibration's effect is valid only in Run Mode and Modulation for the current recipe.** For each step the value is increased or decreased of a per cent value **P16** set in the Combustion Fan Menu.

Fan Calibration Example: **P16**=5%, Step=+3

Default Values	U03 =1000	U04 =1200	U05 =1400	U06 =1600	U07 =1800	U11 =900
Calibrated Values	U03 =1150	U04 =1380	U05 =1610	U06 =1840	U07 =2070	U11 =1030

Heating Fan Menu

Menu to change the system's heating parameters. It has some Submenu.



Boiler Thermostat

The menu which allows modifying the Boiler Thermostat's value. It is possible to program the minimum and the maximum value of the Boiler Thermostat setting the **Th26** and **Th27** Thermostats.

Buffer Thermostat

Menu which allows to modify the Domestic Buffer Thermostat value. This Menu is visible only setting the parameter P26=10 and P76=9.

Operation Phases

Check Up

This stage allows for the cleaning of the boiler and burner before the ignition phase.

- The exhaust fan on the burner run at full power to eliminate any dust or smoke (in the event of a hot restart) from the boiler.
- All the system sensors are checked for correct connections.

Pre-Heating

This stage brings the ignition element to the correct temperature before loading the burner with pellets.

Pre-Load

A pre-defined starting dose of pellets is given into the burner by the auger.

Variable Ignition

This stage starts the ignition process.

- The heat from the ignition element is directed at the pellets by the fan which runs at a relatively slow speed.
- At intervals the auger introduces more pellets once the flame has begun to establish.
- The flue gas temperature probe measures the temperature in the flue.
- At the end of this stage if the flue gas temperature is over a pre-defined temperature the process continues to the next stage (Stabilisation)
- If this variable are not satisfied then this stage continues for another minutes (second ignition attempt) and if the variable has not reached its value by the end of the second attempt, EXTINGUISHING will occur and an Er12 (Failed Ignition) will be displayed on the screen.

Stabilisation

This stage develops the flame even further before allowing the system to enter RUN mode.

- The auger introduces pellets more frequently into the burner.
- The combustion fan and exhaust fan increase in speed to speed up the combustion process.
- The ignition element remains on in this stage.

-At the end of this stage if the flue gas temperature is over a pre-defined temperature the process continues to the next stage. (Run mode)

-If this variable are not satisfied then this stage continues for another minutes (second ignition attempt) and if the variable has not reached its value by the end of the second attempt, EXTINGUISHING will occur and an Er12 (Failed Ignition) will be displayed on the screen.

Run Mode

During run mode the combustion rates are pre-set for the 5 different power levels.

-On entering this phase the system starts at Power Level 1 and after defined time intervals increases a Power Level each time until Power 5 is reached.

-The boiler will continue to run at Power 5 until the water temperature reaches within 8°C of the set point.

-The ignition element is off during this phase.

-The auger ON/OFF values are pre-set for each of the power levels.

-The circulation pump is activated by the controller once the water in the boiler reaches 40°C. The pump will turn off once the temperature drops to 38°C.

-If the unlikely event that the flue gas temperature decrease below pre-set low value for a period of time then Er13 will appear to indicate that the light has gone out. This may be due to a lack of pellets entering the combustion tube due to dust or poor quality pellets.

Modulation Mode

The modulation range has been pre-set so that the system starts reducing to a lower power level when the water temperature comes within 8°C of the set point.

Standby / Extinguishing / OFF

The system goes into STANDBY when the water in the buffer reaches its set temperature or the water in the boiler reaches its set temperature (whichever is sooner) and the system goes into an extinguishing mode.

-The auger stops feeding pellets to the burner.

-The exhaust fan will run at full power until all light in the burner has extinguished and the temperature in the flue has decreased to a safe temperature.

-Once the flame has been extinguished the system enters its Final Cleaning stage where the burner cleaning takes place (the fan runs in its maximum to eliminate the dust in the fire pot).

The system will sit in standby until the water temperature decreases to a pre-determined amount when it will restart again with the CHECK UP phase. The system will go into the OFF state when the system gets a signal from a room thermostat or if the system is turned off manually on the controller. The shutdown procedure is the same as STANDBY. Once the extinguishing phase has been completed the boiler will remain in the OFF state until a signal is given to the boiler to start.

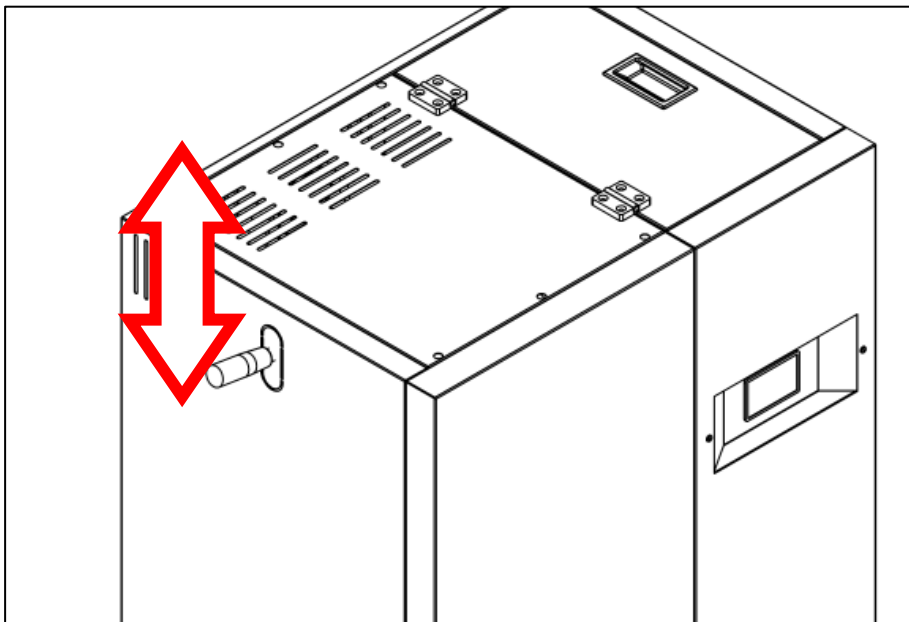
9 CLEANING

9.1 Periodic inspections

- Check your fuel supply regularly and allow suitable time for deliveries - try not to run out of fuel
- Check fuel level in the fuel container through inspection window at the right hand side of boiler, and refill before it is completely empty.
- Check the ash tray and empty it regularly.
- Inspect chimney, flue pipes, flue pipe joints, and flue pipe seals regularly to ensure that smoke and flue gases are not drawn into, and circulated by your home's air circulation system. If you observe rust or smoke leakage, replace the pipe immediately.
- Exercise the safety relief valve at least once a year.
- Check the water pressure is between 1 - 1,5 bar when boiler is cold - if water pressure is too low, top up system with fresh water.
- Check wiring to boiler and pump
- DO NOT clean heating system surfaces when the unit is hot.

8.2. Cleaning the smoke tubes (S-models)

Move smoke tube cleaning lever up and down a few times each day boiler is in operation to clean heat transfer surfaces of the boiler



9.2. Cleaning the burner pot

X-model burner has an auto grate cleaning system. However, both we recommend you to check ash and fuel residue on burner surfaces regularly.

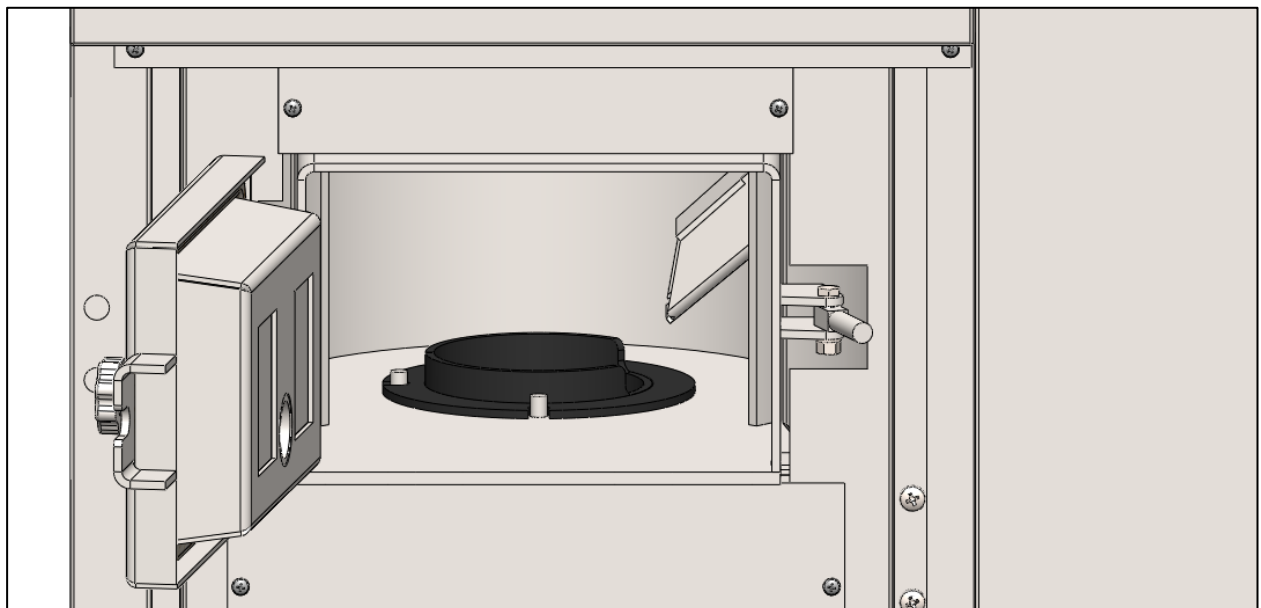
If you notice stuck air holes on burner surfaces, it should be cleaned. Remove cleaning cover shield, and open burning pot cleaning cover. Take the burner pot out, and brush its side faces to clean ash and residue.



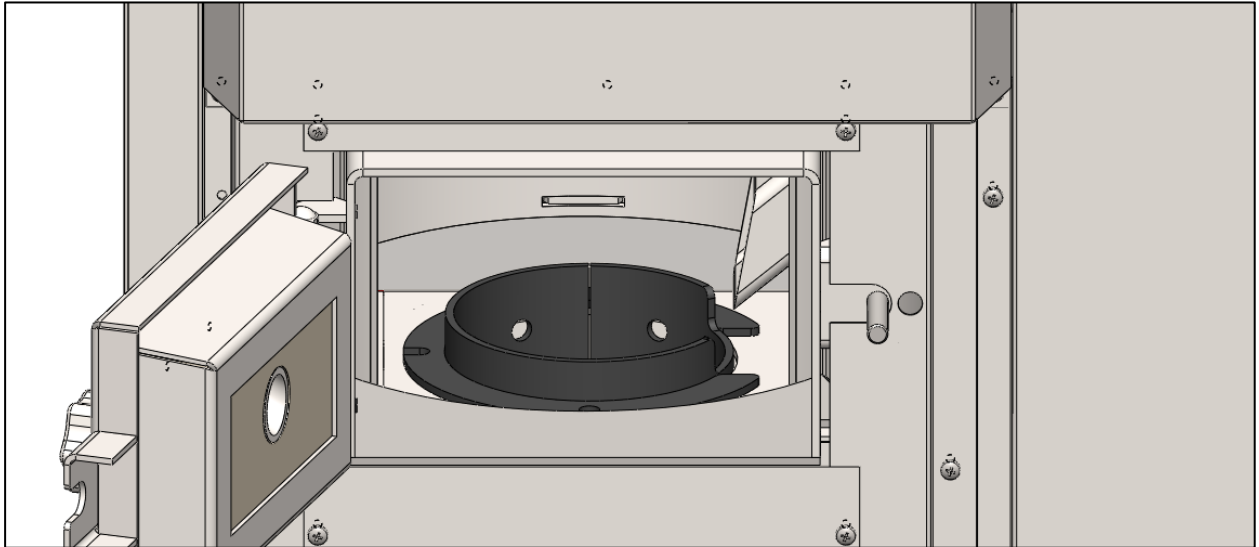
X-models

S-models

Cortina 12: Move ashes accumulated on burner plate out using a brush, collect them using a regular vacuum cleaner. Fit the burner pot back again in its original place.



Cortina 18 to 40: Move ashes on the burner plate downwards onto bottom of boiler (where ashtray is loaded) using the same brush. Fit the burner pot back again it original place:

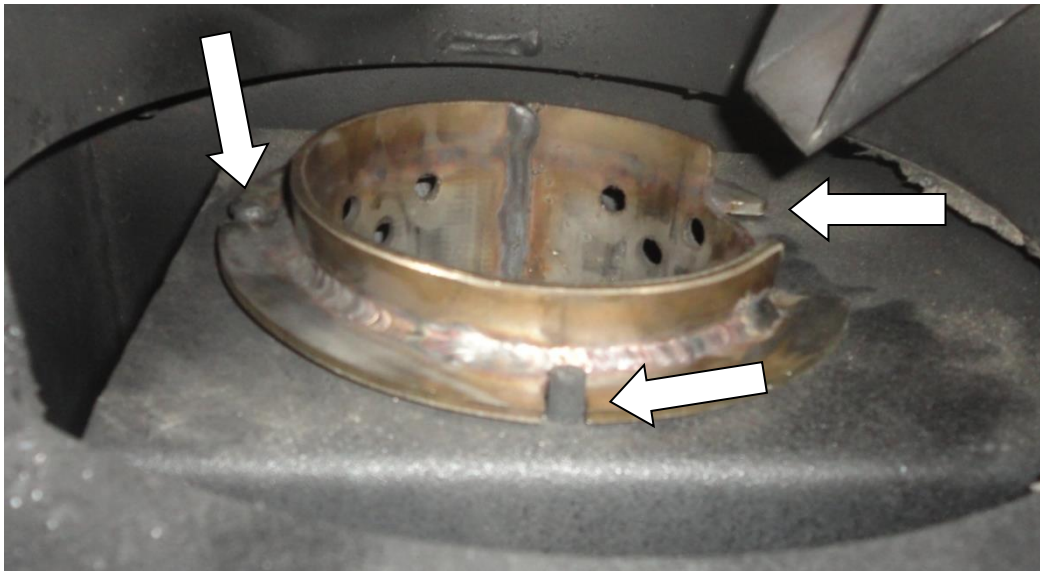


CAUTION

Before cleaning, let the boiler cool down completely leaving two hours after combustion terminated. Always wear a glove to protect your skin

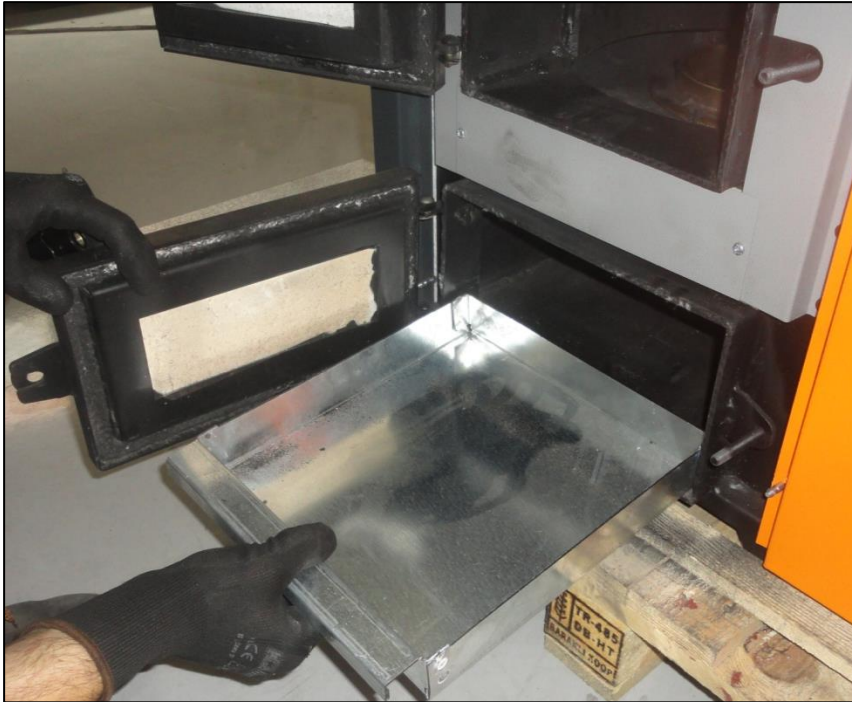
NOTICE

When replacing the burner pot back in its, make sure that holes around burner pot flange corresponds with the pins on burner plate, and the feeding part has the clearance for pellets.



9.3. Ash removal

Open ash cleaning door, take the ash tray out, and empty it into a steel container. Ash accumulated at the bottom of boiler should be wiped out



WARNING

Do not take ash tray or ashes out of boiler, when they are hot

10 MAINTENANCE

We recommend an annual maintenance contract with an authorized after sale staff approved by your dealer in your region. Before each new heating season, at least the following inspections and maintenance should be carried out:

- Cleaning of draught fan
- Control of boiler and flue thermostat
- Control of safety thermostat for back burning protection on fuel feeder
- Inspection of the smoke tube cleaning motor
- Cleaning of ashes accumulated on top of heat exchanger (under cast iron cover)
- Inspection of sealing on front doors, and top cast iron cover
- Test of ignition electrode
- Control of burner pot and pellet feeder inside combustion chamber
- Control of all wirings
- Control of chimney connection and draught in chimney
- Control of other system components such as pump, expansion tank, pipes and fittings
- Control of water pressure level, if necessary water make-up, and air vent

11 TROUBLESHOOTING

Error Code	Cause	Remedy
ER 01	Pellet Thermostat tripped	
	The pellet thermostat has detected heat travelling back up the drop tube into the burner	<p>Check that the exhaust fan is running Check for blockages in the flue, clear if found. Turn off power to the boiler Ensure the pellet drop tube is cool to the touch. Press the button on the pellet thermostat to reset the thermostat. Ensure that the connectors have connected with the pins on the thermostat. Turn power back on. Reset the boiler by pressing on-off button (P2) for 3 seconds for the error to clear. If error does not clear turn power off and re-check pin connectors If error does not clear call your installer</p>
ER 02	Safety Thermostat or Air Pressure Switch Tripped	
	The boiler safety thermostats have tripped due to high water temperature in the boiler or air pressure switch have tripped due to low draft on chimney	<p>Check the boiler and heating system is full of water. Check the boiler pump is working Check that there are no valves in the boiler primary circuit that may have been closed inadvertently. Reset high limit thermostats. (remove black caps and press red button with the tip of a ballpoint pen or similar until it clicks) Check the chimney is clear and well functioning. Reset the boiler by pressing on-off button (P2) for 3 seconds for the error to clear. If error does not clear call your installer</p>
ER 03	Accidental extinguishing due to low flame	
	The boiler has gone out unexpectedly!! It may have run out of fuel The pellets may be poor quality. The fire pot may be blocked	<p>Ensure the boiler is cool Open the fire door; remove the fire pot and clear with the brush. Note what you find: (typically unburned pellets but may be char or clinkers as well). Reset the boiler by pressing on-off button (P2) for 3 seconds for the error to clear. Restart the boiler. If the boiler does not relight: Refer to ER 12 and: Check there are enough pellets in the hopper Check that the pellets are not dusty. IF the pellets are dusty the hopper and auger will need to be cleared. call your installer</p>

Error Code	Cause	Remedy
ER 04	Water Over Temperature	
	The water in the boiler has reached a temperature of 95°C	Check that the boiler is full of water by: Checking that the system is at the correct operating pressure (sealed systems only) Check the pump is working. Reset the boiler by pressing in the manual high limit thermostat. Reset the boiler by pressing on-off button (P2) for 3 seconds for the error to clear. If error does not clear call your installer
ER 05	Exhaust Over Temperature	
	Flue gas temperature has exceeded pre-defined value.	IF the flue temperature has reached this high level it is likely that the heat exchanger is damaged or not working. Check when the boiler was last serviced. If the boiler was serviced less than 1200 hours ago check the target board for damage. In either case call your installer
ER 07	No encoder signal	
	The sensor is broken.	Call your installer.
ER 08	Fan regulation failed	
	The fan is damaged. The fan is blocked.	Call your installer.
ER 12	Ignition Failed	
	During the ignition cycle the boiler has not detected a flame The ignitor has failed OR the pellets have not lit for another reason	Ensure the boiler is cool Open the fire door; remove the fire pot and clear with the brush. Note what you find: (typically unburned pellets but may be char or clinkers as well). Check there are enough pellets in the hopper Check that the pellets are not dusty. IF the pellets are dusty the hopper and auger will need to be cleared. Check that the ignitor is functioning. If not call your installer.

REVISION NOTES

<i>Revision nr</i>	<i>Revision date</i>	<i>Revision detail</i>
<i>03</i>	<i>27.07.2017</i>	<i>All hydraulic schemes on Chapter 5.5 are modified together with item descriptions. Major parameter settings for each scheme are added.</i>
<i>04</i>	<i>09.12.2019</i>	<i>S and X versions collected in one single manual</i>
<i>05</i>	<i>23.02.2021</i>	<i>Warranty conditions updated, commissioning document added</i>

START-UP / COMMISSIONING FORM

1/2

END-USER INFORMATION

NAME / SURNAME	:	_____
ADDRESS	:	_____
CITY / PROVINCE	:	_____
COUNTRY	:	_____
E-MAIL / GSM	:	_____
SIGNATURE	:	_____

PRODUCT INFORMATION

PRODUCT MODEL	:	_____
EXTRAS 1	:	_____
EXTRAS 2	:	_____
INVOICE DATE and NUMBER	:	_____
SERIAL NUMBER	:	_____

COMMISSIONING OF THE DEVICE

DATE OF COMMISSIONING	:	_____
AUTHORIZED COMPANY for COMMISSIONING	:	_____
ADDRESS	:	_____
E-MAIL / GSM	:	_____
SERVISER NAME / SURNAME	:	_____
SERVISER STAMP and SIGNATURE	:	_____

- Warranty period is 2 (two) years, and starts with signing of this document
- One copy of this document shall be handed to end-user
- General checks on next page should be completed for future reference

START-UP / COMMISSIONING FORM

2/2

General Checks	Check	Comments
Wall plug voltage measurement	_____ V (AC)	
There is no damage because of transportation		
Chimney is clean, functioning well and meets the requirements defined in manuals		
Outputs are tested before start-up and working correctly		
Plumbing plant installation is made according to manuals, and necessary sensors are installed		
Optimization for auger / chimney calibration (if needed) is made		
Purchased optional elements are installed correctly, and tested		

End-User Notification	Check	Comments
User is informed about boiler/stove cleaning and service cycles		
User is informed about errors and how to act when they are shown		
User is informed about combustion power selection and setting necessary thermostats		
User is informed about boiler/stove functioning, operating, fuel quality and warranty conditions		

REMARKS / DIFFERENCES