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Сочи (862)225-72-31
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Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
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KYRA D 30 SI UNIT

EN

INSTRUCTIONS FOR USE, INSTALLATION AND MAINTENANCE

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The unit and its accessories must be appropriately disposed of in compliance with current regulations.

1. ADVERTENCIAS GENERALES

- Carefully read the warnings in this instruction booklet
- Once the boiler is installed, show its operation to the user and deliver this instruction manual, which is an integral and essential part of the product and must be carefully stored so that it can be consulted at any time.
- Installation and maintenance must be carried out by professionally qualified personnel, according to current regulations and the manufacturer's instructions. It is forbidden to handle any sealed regulation device.
- Incorrect installation or poor maintenance can cause damage or physical injury. The manufacturer declines any responsibility for damage caused by errors in installation and use or by failure to follow the manufacturer's instructions. Before carrying out any cleaning or maintenance operation, disconnect the unit from the power supply using the system switch and/or the special cut-off devices.
- Before carrying out any cleaning or maintenance operation, disconnect the unit from the power supply using the system switch and/or the special cut-off devices.
- In case of a fault and/or poor operation, deactivate the unit and do not try to repair it or directly intervene. Contact professionally qualified personnel. Any repair/re-placement of the products must only be carried out by qualified personnel using genuine parts. Failure to comply with the above can compromise the safety of the unit. This unit must only be used for its intended purpose.
- This unit must only be used for its intended purpose
- Any other use is deemed improper and therefore hazardous.
- Do not leave the packaging elements within the reach of children as they are dangerous.
- The unit can be used by children aged at least 8 years and by persons with reduced physical, sensory or mental capabilities, or lacking experience or the necessary knowledge, only if under supervision or they have received instructions on its safe use and the related risks. Children must not play with the unit. Cleaning and maintenance intended to be done by the user can be carried out by children aged at least 8 years only if under supervision.
- The unit and its accessories must be appropriately disposed of in compliance with current regulations.
- The images given in this manual are a simplified representation of the product. In this representation there may be slight and insignificant differences with respect to the product supplied.

2. OPERATING INSTRUCTIONS

2.1 Introduction

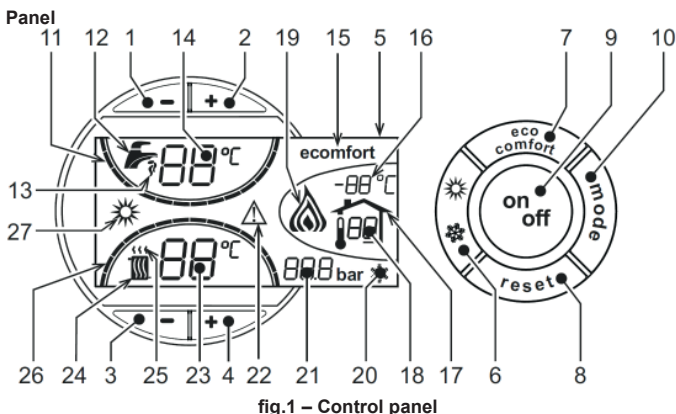
Dear Customer,

Thank you very much for choosing **KYRA D 30 SI UNIT**, a **LAMBORGHINI** standing boiler with advanced design, state-of-the-art technology, high reliability and constructive quality. Please read this manual carefully, as it provides important information about installation, use and maintenance.

KYRA D 30 SI UNIT is a thermal generator for heating, with **condensation**, high performance and low emission level.

The **body of the boiler** is made of sheet metal, and it has a **pressurized diesel burner**.

2.2 Control panel



Panel key

- 1 = DHW temperature setting decrease button
- 2 = DHW temperature setting increase button
- 3 = Heating system temperature setting decrease button
- 4 = Heating system temperature setting increase button
- 5 = Display
- 6 = Summer / Winter mode selection button
- 7 = Economy / Comfort mode selection button
- 8 = Reset button

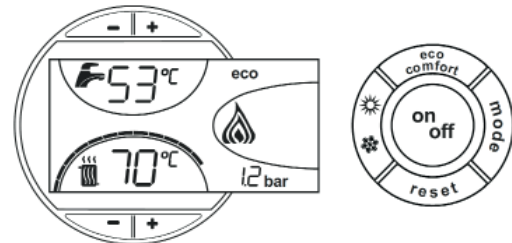
- 9 = Unit On / Off button
- 10 = "Sliding Temperature" menu button
- 11 = Set DHW temperature reached
- 12 = DHW symbol
- 13 = DHW mode
- 14 = DHW outlet temperature / setting
- 15 = Eco (Economy) or Comfort mode
- 16 = External sensor temperature (with optional external probe)
- 17 = Appears on connecting the external Probe or the Remote Timer Control (optionals)
- 18 = Room temperature (with optional Remote Timer Control)
- 19 = Burner On
- 20 = Antifreeze operation
- 21 = Heating system pressure
- 22 = Fault
- 23 = Heating delivery temperature/setting
- 24 = Heating symbol
- 25 = Heating mode
- 26 = Set heating delivery temperature reached
- 27 = Summer mode

Indication during operation

Heating

A heating demand (generated by the Room Thermostat or Remote Timer Control) is indicated by flashing of the hot air above the radiator (details 24 and 25 - fig.1).

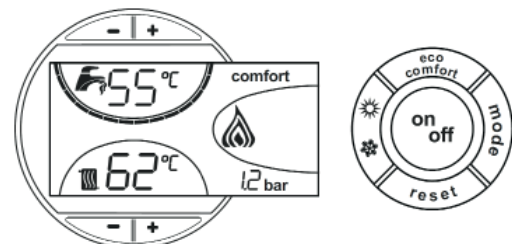
The heating graduation marks (detail 26 - fig.1) light up as the heating sensor temperature reaches the set value.



DHW (Comfort)

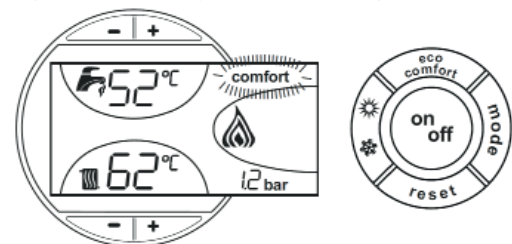
A DHW demand (generated by drawing domestic hot water) is indicated by flashing of the hot water under the tap (details 12 and 13 - fig.1).

The DHW graduation marks (detail 11 - fig.1) light up as the DHW sensor temperature reaches the set value.



Comfort mode (to have DHW service the Comfort must be activated)

The need to reset the internal temperature of the boiler (Comfort mode) is signaled by the blinking of the respective symbol (15 and 13 - Fig.1)



2.3 Lighting and turning off

Boiler not electrically powered

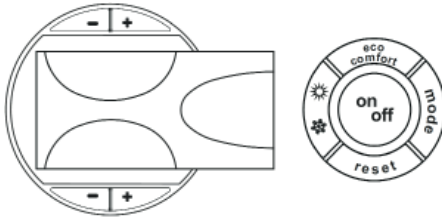


fig.5 - Boiler not electrically powered



The antifreeze system does not work when the power and/or gas to the unit are returned off. To avoid damage caused by freezing during long idle periods in winter, it is advisable to drain all water from the boiler, DHW circuit and system; or drain just the DHW circuit and add a suitable antifreeze to the heating system, complying with that prescribed in sec.3.3.

Boiler lighting

- Open the fuel on-off valves.
- Switch on the power to the unit.

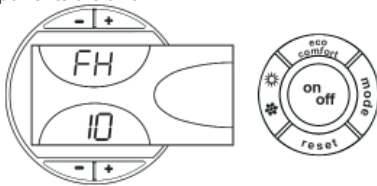


fig.6 - Boiler lighting

- For the following 120 seconds the display will show FH which identifies the heating system air venting cycle.
- During the first 5 seconds the display will also show the card software version.
- When the message FH disappears, the boiler is ready to operate automatically whenever domestic hot water is drawn or in case of a room thermostat demand.

Turning the boiler off

Press the on/off button (detail 9 - fig.1) for 1 second.

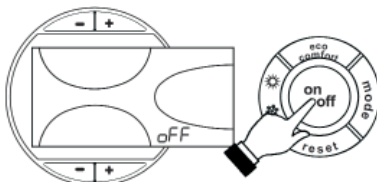


fig.7 - Turning the boiler off

When the boiler is turned off, the PCB is still powered.

Domestic hot water and heating are disabled.

The antifreeze system remains activated. To relight the boiler, press the on/off button (detail 9 - fig.1) again for 1 second.

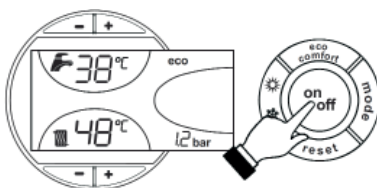


fig.8

The boiler will be immediately ready to operate whenever domestic hot water is drawn or in case of a room thermostat demand.

2.4 Adjustments

Summer/Winter Switchover

Press the summer/winter button (detail 6 - fig.1) for 1 second.

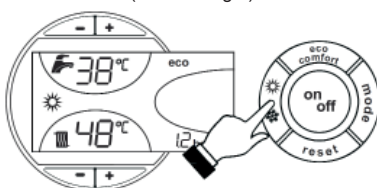


fig.9

The display activates the Summer symbol (detail 27 - fig.1): the boiler will only deliver domestic hot water. The antifreeze system remains activated.

To deactivate the Summer mode, press the summer/winter button (part. 6 - fig.1) again for 1 second.

Heating temperature setting

Use the heating buttons (details 3 and 4 - fig.1) to adjust the temperature from a min. of 30°C to a max. of 80°C.

In any case it is advisable not to operate the boiler below 45°C.

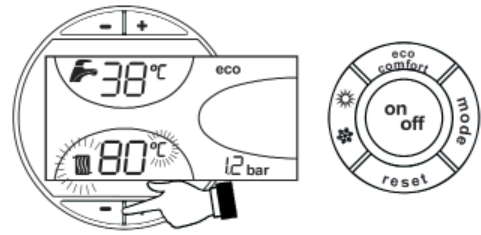


fig.10

DHW temperature adjustment

Use the DHW buttons -/+ (details 1 and 2 - fig.1) to adjust the temperature from a min. of 10°C to a max. of 65°C.

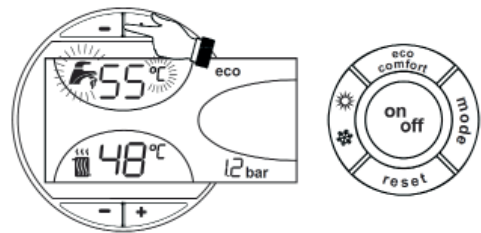


fig.11

Room temperature adjustment (with optional room thermostat)

Using the room thermostat, set the temperature desired in the rooms. If the room thermostat is not installed the boiler will keep the heating system at its setpoint temperature.

Room temperature adjustment (with optional remote timer control)

Using the remote timer control, set the temperature desired in the rooms. The boiler unit will set the system water according to the required room temperature. For information on the remote timer control, please refer to its user's manual.

Sliding temperature

When the optional external probe is installed the control panel display (detail 5 - fig.1) shows the actual outside temperature read by the probe. The boiler control system operates with "Sliding Temperature". In this mode, the temperature of the heating system is adjusted according to the outside weather conditions, in order to ensure high comfort and energy saving throughout the year. In particular, as the outside temperature increases, the system delivery temperature is decreased according to a specific "compensation curve".

With Sliding Temperature adjustment, the temperature set with the heating buttons -/+ (details 3 and 4 - fig.1) becomes the maximum system delivery temperature. It is advisable to set a maximum value to allow system adjustment throughout its useful operating range.

The boiler must be adjusted at the time of installation by qualified personnel. Possible adjustments can in any case be made by the user to improve comfort.

Compensation curve and curve offset

Press the mode button (detail 10 - fig.1) once to display the actual compensation curve (fig.11), which can be modified with the DHW buttons (details 1 and 2 - fig.1).

Adjust the required curve from 1 to 10 according to the characteristic (fig.13).

By setting the curve to 0, sliding temperature adjustment is disabled.

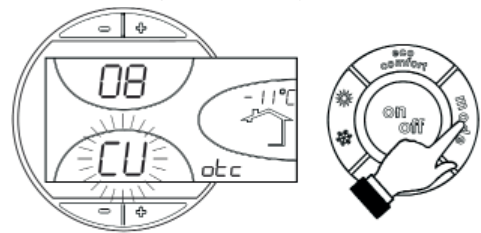


fig.12 - Compensation curve

Press the heating buttons (details 3 and 4 - fig.1) to access parallel curve offset (fig.14), modifiable with the DHW buttons (details 1 and 2 - fig.1).

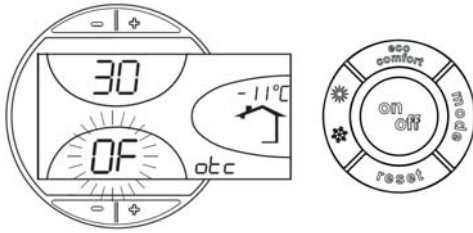


fig.13 - Curve parallel offset

Press the **mode** button (detail 10 - fig.1) again to exit parallel curve adjustment mode.

If the room temperature is lower than the required value, it is advisable to set a higher order curve and vice versa. Proceed by increasing or decreasing in steps of one and check the result in the room.

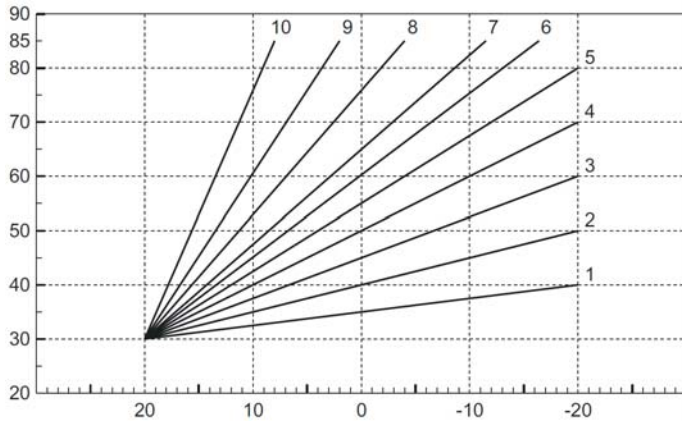


fig.14 - Compensation curves

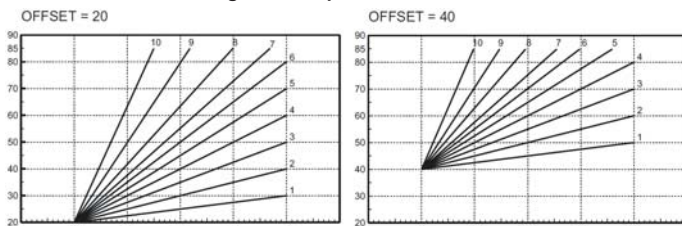


fig.15 - Example of compensation parallel curve offset

Adjustments from Remote Timer Control

If the Remote Timer Control (optional) is connected to the boiler, the above adjustments are managed according to that given in table 1.

Also, the control panel display (detail 5 - fig.1) shows the actual room temperature detected by the Remote Timer Control.

Table. 1

Heating temperature setting	Adjustment can be made from the Remote Timer Control menu and the boiler control panel.
DHW temperature adjustment	Adjustment can be made from the Remote Timer Control menu and the boiler control panel.
Summer/Winter Switchover	Summer mode has priority over a possible Remote Timer Control heating demand.
Eco/Comfort selection	On disabling DHW from the Remote Timer Control menu, the boiler selects the Economy mode. In this condition, the button 7 - fig.1 on the boiler panel is disabled
	On enabling DHW from the Remote Timer Control menu, the boiler selects the Comfort mode. In this condition it is possible to select one of the two modes with the button 7 - fig.1 on the boiler panel.
Sliding Temperature	Both the Remote Timer Control and the boiler card manage Sliding Temperature adjustment: of the two, the Sliding Temperature of the boiler card has priority.

Water system pressure adjustment

The filling pressure with system cold, read on the display, must be approx. 1.0 bar. If the system pressure falls to values below minimum, the boiler card will activate fault F37 (fig.16).

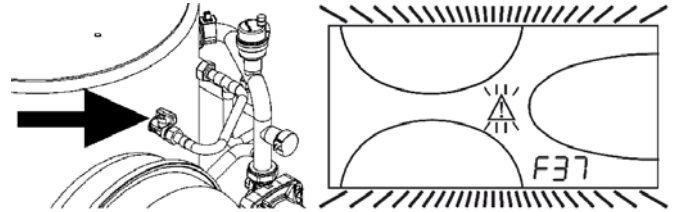


fig.16 - Low system pressure fault

Once the system pressure is restored, the boiler will activate the 120-second air venting cycle indicated on the display by FH.

3. INSTALLATION OF THE APPLIANCE

3.1 General Instructions

BOILER INSTALLATION MUST ONLY BE PERFORMED BY QUALIFIED PERSONNEL, IN ACCORDANCE WITH ALL THE INSTRUCTIONS GIVEN IN THIS TECHNICAL MANUAL, THE PROVISIONS OF CURRENT LAW, THE PRESCRIPTIONS OF NATIONAL AND LOCAL STANDARDS AND THE RULES OF PROPER WORKMANSHIP.

3.2 Place of installation

The boiler unit must be installed in a specific room with ventilation openings to the outside as prescribed by current regulations. If there are several burners or suction units that can work together in the same room, the ventilation openings must be sized for simultaneous operation of all the units. The place of installation must be free of flammable materials or objects, corrosive gases, powders or volatile substances that, conveyed by the burner fan, can obstruct the internal lines of the burner or the combustion head. The room must be dry and not exposed to rain, snow or frost.

If the unit is enclosed in a cabinet or mounted alongside, a space must be provided for removing the casing and for normal maintenance operations.

3.3 Plumbing connections

The heating capacity of the unit must be previously established by calculating the building's heat requirement according to the current regulations. The system must be provided with all the components for correct and regular operation.

It is advisable to install shutoff valves between the boiler and heating system allowing the boiler to be isolated from the system if necessary.



The safety valve outlet must be connected to a funnel or collection pipe to prevent water spurring onto the floor in case of overpressure in the heating circuit. Otherwise, if the discharge valve cuts in and floods the room, the boiler manufacturer cannot be held liable.

Do not use the water system pipes to earth electrical appliances.

Antes de instalar la caldera, lavar cuidadosamente todos los tubos de la instalación para eliminar los residuos o impurezas, que pueden comprometer el funcionamiento correcto del aparato.

Efectuar las conexiones a los correspondientes empalmes de acuerdo con el (capítulo 5.1) y los símbolos presentes en el aparato.

High efficiency circulating pump

Circulating pump adjustment with boiler connected to an external hot water storage tank

For proper operation of the boiler KYRA D 30 SI UNIT with it connected to an external hot water storage tank, the speed selector (see fig.17) must be set to position III.

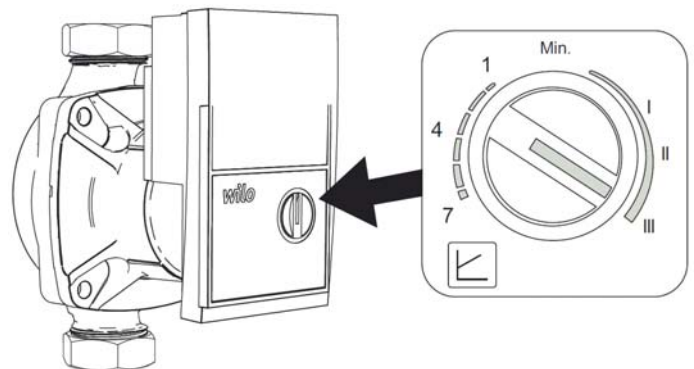
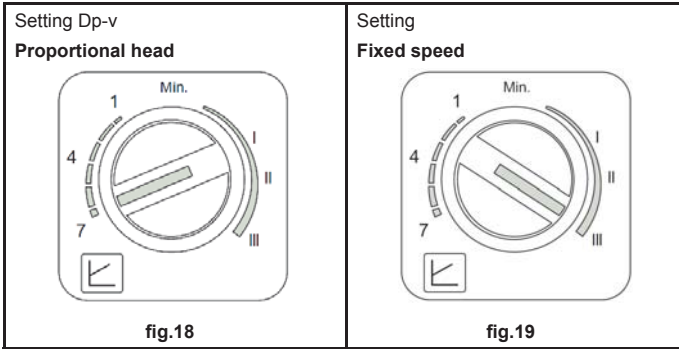


fig.17 - Boiler without electrical power

Circulating pump adjustment without a connection to an external hot water storage tank

The factory setting is suitable for all installations; however a different operation strategy can be set, depending on the characteristics of the system.



- Setting Dp-v Proportional head (fig.18)

The circulating pump head will be automatically reduced with the decrease in flow rate required by the system. This setting is optimum for systems with radiators (2 pipes or single pipe) and/or thermostatic valves.

The strong points are the reduction in power consumption with the decrease in system demand and reduction of noise in radiators and/or thermostatic valves. The operating range is from min. (1) to max. (7).

- Setting Fixed speed (fig.19)

The circulating pump does not modulate its power. The operating principle is that of conventional 3-speed circulating pumps (with a reduction in power consumption compared to them). The operating range goes from speed 1 (I) to speed 3 (III).

Water system characteristics

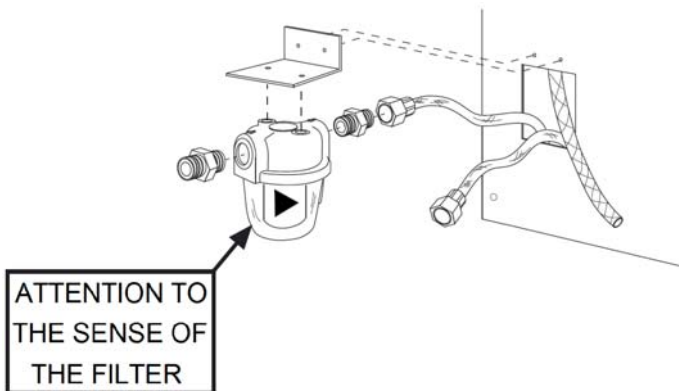
In the presence of water harder than 25° Fr (1°F = 10ppm CaCO₃), use suitably treated water in order to avoid possible scaling in the boiler. Treatment must not reduce the hardness to values below 15°F (Decree 236/88 for uses of water intended for human consumption). Treatment of the water used is indispensable in case of very large systems or with frequent introduction of replenishing water in the system.

Antifreeze system, antifreeze fluids, additives and inhibitors

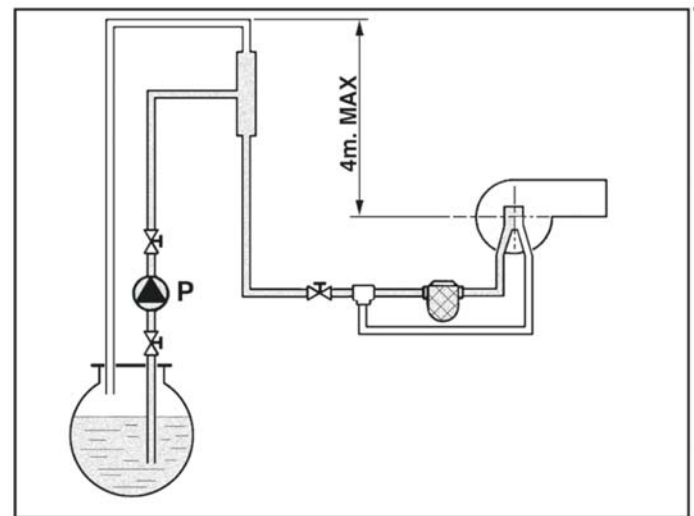
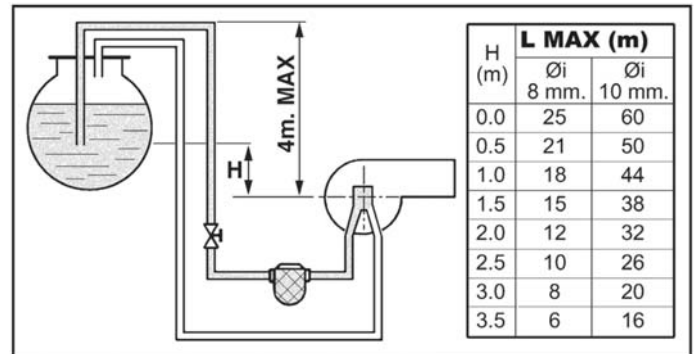
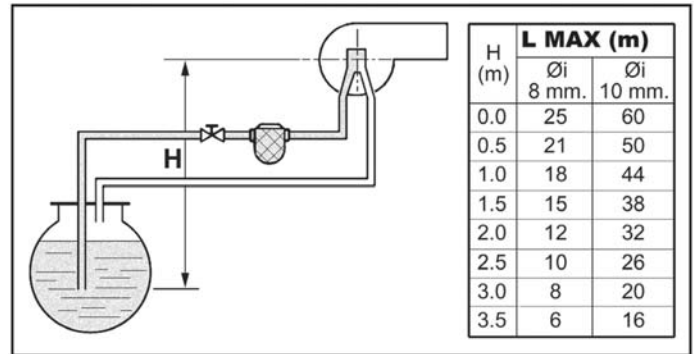
The boiler is equipped with an antifreeze system that turns on the boiler in heating mode when the system delivery water temperature falls under 6°C. The device will not come on if the electricity and/or gas supply to the unit are cut off. If it becomes necessary, it is permissible to use antifreeze fluid, additives and inhibitors only if the manufacturer of these fluids or additives guarantees they are suitable for this use and cause no damage to the heat exchanger or other components and/or materials of the boiler unit and system. It is prohibited to use generic antifreeze fluid, additives or inhibitors that are not expressly suited for use in heating systems and compatible with the materials of the boiler unit and system.

3.4 Burner connection

The burner is equipped with flexible pipes and a filter for connection to the oil feed line. Run the flexible pipes out of the back and install the filter as indicated in fig.20.



The oil feed circuit must be made according to one of the following diagrams, without exceeding the pipe lengths (LMAX) given in the table.



3.5 Electrical connections

Connection to the electrical grid



The unit's electrical safety is only guaranteed when correctly connected to an efficient earthing system executed according to current safety standards. Have the efficiency and suitability of the earthing system checked by professionally qualified personnel. The manufacturer is not responsible for any damage caused by failure to earth the system. Also make sure that the electrical system is adequate for the maximum power absorbed by the unit, as specified on the boiler data plate.

The boiler is prewired and provided with a Y-cable and plug for connection to the electricity line. The connections to the grid must be made with a permanent connection and equipped with a bipolar switch whose contacts have a minimum opening of at least 3mm, interposing fuses of max. 3A between the boiler and the line. It is important to respect the polarities (LINE: brown wire / NEUTRAL: blue wire / EARTH: yellow-green wire) in making connections to the electrical line. During installation or when changing the power cable, the earth wire must be left 2 cm longer than the others.



The user must never change the unit's power cable. If the cable gets damaged, switch off the unit and have it changed solely by professionally qualified personnel. If changing the electric power cable, use solely "HAR H05 VV-F" 3x0.75mm² cable with a maximum outside diameter of 8 mm.

Room thermostat (optional)(remove the existing bridge terminals 17-18)



IMPORTANT: THE ROOM THERMOSTAT MUST HAVE VOLTAGE-FREE CONTACTS. CONNECTING 230 V TO THE ROOM THERMOSTAT TERMINALS WILL PERMANENTLY DAMAGE THE ELECTRONIC BOARD.

When connecting time controls or a timer, do not take the power supply for these devices from their breaking contacts. Their power supply must be by means of direct connection from the mains or with batteries, depending on the kind of device. a las pilas, según el tipo de dispositivo.

Accessing the electrical terminal block

Undo the two screws "A" located on the top part of the control panel and remove the cover.

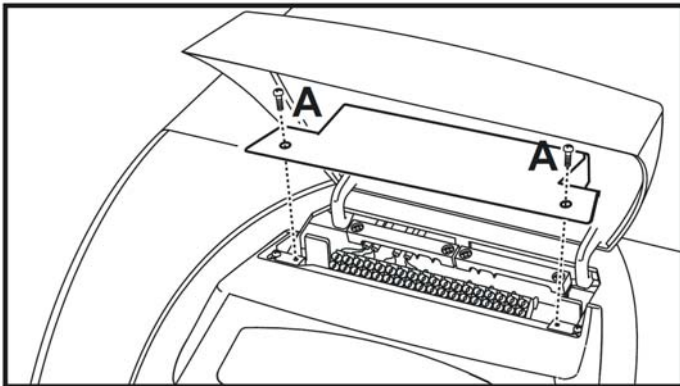


fig.24 – Accessing the terminal block

3.6 Connection to the flue

The unit must be connected to a flue designed and built in compliance with the current regulations. The pipe between the boiler and flue must be made from material suitable for the purpose, i.e. heat and corrosion resistant. Ensure the seal at the joints. At the points of union it is recommended to check the tightness and thermally insulate the entire duct between the boiler and chimney, in order to avoid the formation of condensation.

4. SERVICE AND MAINTENANCE

Todas las operaciones de regulación, transformación, puesta en servicio y mantenimiento que se describen a continuación deben ser efectuadas exclusivamente por un técnico autorizado, por ejemplo del Servicio de Asistencia local.

LAMBORGHINI declines any liability for damage and/or injury caused by unqualified and un-authorized persons tampering with the unit.

4.1 Adjustments

TEST mode activation

Press the **heating buttons** (details 3 and 4 - fig.1) together for 5 seconds to activate the **TEST** mode. The boiler switches on irrespective of the system or DHW request.

The heating symbol (detail 24 - fig.1) and DHW symbol (detail 12 - fig.1) flash on the display. (In case of configuration for DHW)

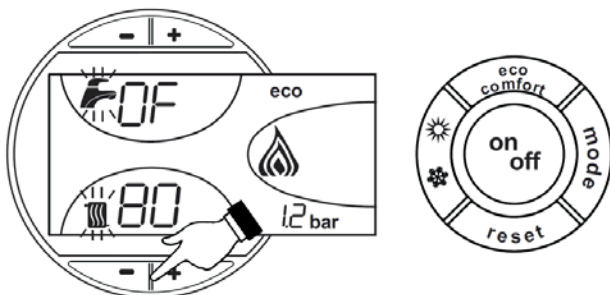


fig.25 - TEST mode

To deactivate the Test mode, repeat the activation sequence.

The TEST mode is automatically disabled in any case after 15 minutes.

Burner adjustment

The burner is factory-set as given in table 4. The burner can be set to a different output by acting on the pump pressure, nozzle, head adjustment, and air adjustment as per the following paragraphs. In any case, the new adjusted output must fall within the boiler's nominal operating range. After making any adjustments, using a combustion analyser check that the CO₂ content in the fumes is between 11% and 12%.

Tabla de caudales de los inyectores para gasóleo

En la tabla 2 se indican los caudales de gasóleo (en kg/h) al variar la presión de la bomba y de los inyectores.

N.B. - The values given below are only approximate, since nozzle flow rates can vary by $\pm 5\%$. Also, with burners having a preheater, the fuel flow rate decreases by about 10%.

Table. 2

NOZZLE G.P.H.	Pump pressure (bar)						
	8	9	10	11	12	13	14
0,40	1,32	1,40	1,47	1,54	1,61	1,68	1,75
	16,6	16,6	17,43	18,26	19,09	19,92	20,75
0,50	1,57	1,65	1,73	1,81	1,89	1,97	2,05
	18,62	19,57	20,51	21,5	22,42	23,36	24,31
0,60	1,93	2,01	2,23	2,32	2,42	2,52	2,64
	22,89	23,83	26,44	27,51	28,7	29,88	31,31
0,65	2,12	2,25	2,4	2,63	2,74	2,8	2,91
	25,14	26,68	28,46	31,19	32,49	33,21	34,51
0,75	2,50	2,65	2,8	2,95	3,07	3,2	3,33
	29,65	31,43	33,21	34,99	36,41	37,95	39,49
0,85	2,92	3,1	3,27	3,45	3,6	3,75	3,9
	34,63	36,76	38,78	40,92	42,69	44,47	46,25
1,00	3,30	3,5	3,67	3,85	4,02	4,2	
	39,13	41,51	43,52	45,66	47,67	48,72	51,95

Flow rate at nozzle outlet in kg/h

Pump pressure adjustment

The pump is factory-set to 14 bar. Use an oil bath gauge to check the pressure. The pressure can be adjusted between 11 and 14 bar.

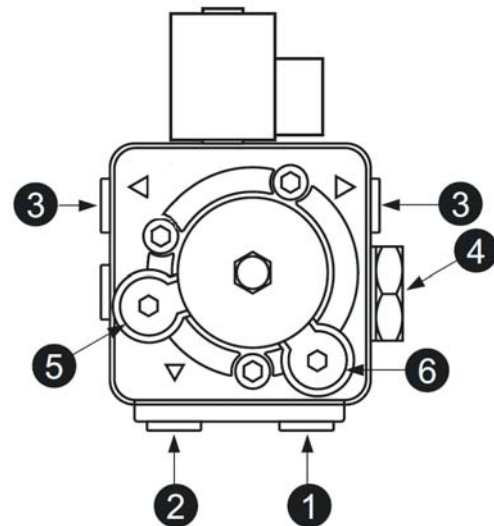


fig.26 - Pump ITALPUMP

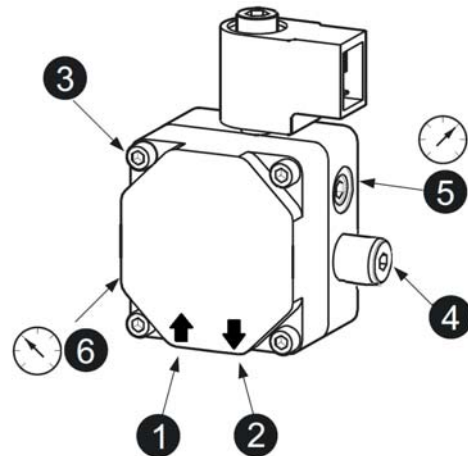


fig.27 - Pump DANFOSS

1. Suction Ø1/4"
2. Return Ø1/4"
3. Oil delivery Ø1/8"
4. Pressure adjustment
5. Pressure gauge connection Ø1/8"
6. Vacuum gauge connection Ø1/8"

Combustion head adjustment

The head is adjusted by means of the screw 1, according to the indications of the pointer 2.

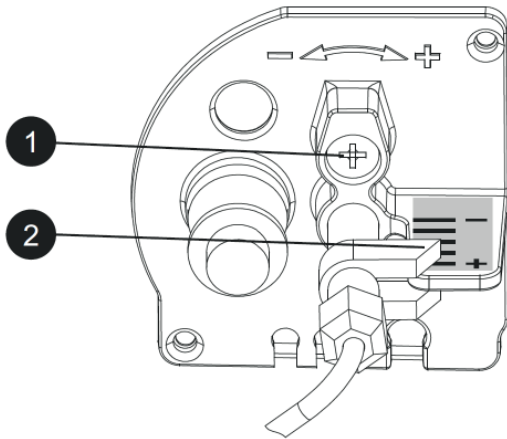


fig.28

Air damper adjustment

After loosening the screw 3, operating the screw 1, the combustion air is adjusted according to the indications of the pointer 2. After adjustment, lock the screw 3.

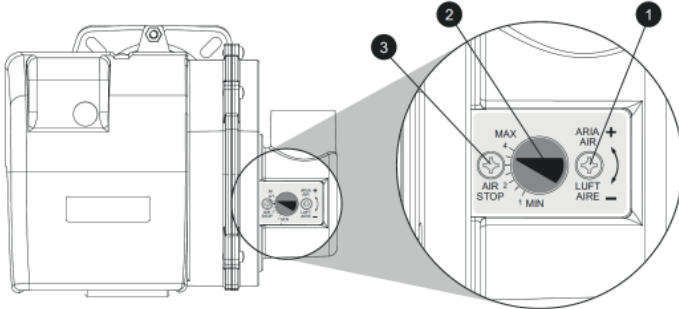


fig.29

Position of electrodes - baffle

After fitting the nozzle, check correct positioning of the electrodes and baffle, according to the dimensions given below. It is advisable to check the dimensions after each operation on the head.

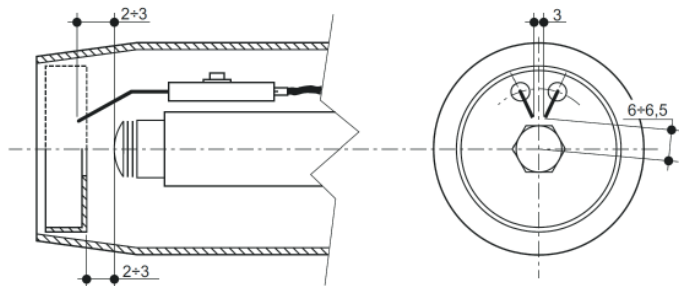


fig.30 - Position of electrodes - baffle

4.2 Commissioning



Checks to be made at first lighting, and after all maintenance operations involving disconnection from the systems or an operation on safety devices or parts of the boiler:

Before lighting the boiler

- Open any on-off valves between the boiler and the systems.
- Check the tightness of the fuel system.
- Check the pre-filling of the expansion tank
- Fill the water system and make sure that all air contained in the boiler and the system has been vented by opening the air vent valve on the boiler and any vent valves on the system.
- Make sure there are no water leaks in the system, hot water circuits, connections or boiler.
- Make sure the electrical system is properly connected and the earth system

works properly.

- Make sure there are no flammable liquids or materials in the immediate vicinity of the boiler.
- Fit the pressure gauge and the vacuum gauge on the pump (remove after starting of the burner).
- open the gate valves along the diesel pipe

Start-up

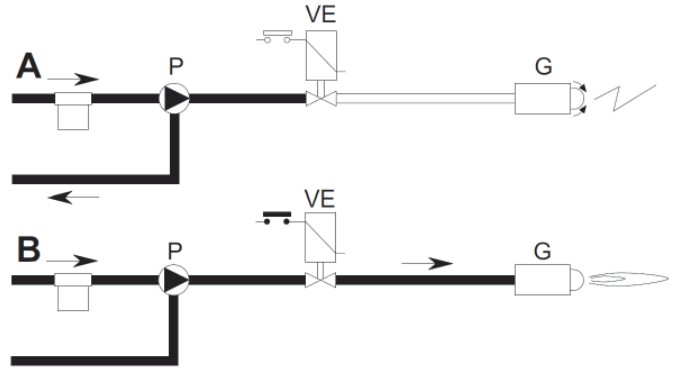


fig.31 - Starting

A

When the thermostatic line closes, the burner motor starts turning together with the pump: all the oil sucked is sent to the return. The burner blower and the ignition transformer are also working, therefore the following stages are carried out:

- firebox prevention.
- prewash of a part of the oil circuit.
- preignition, with discharge between electrode tips.

B

At the end of prewash, the unit opens the electromagnetic valve: the oil reaches the nozzle, where it is finely sprayed.

Its contact with the discharge between the electrode tips creates the flame.

The safety time begins simultaneously.

Unit cycle

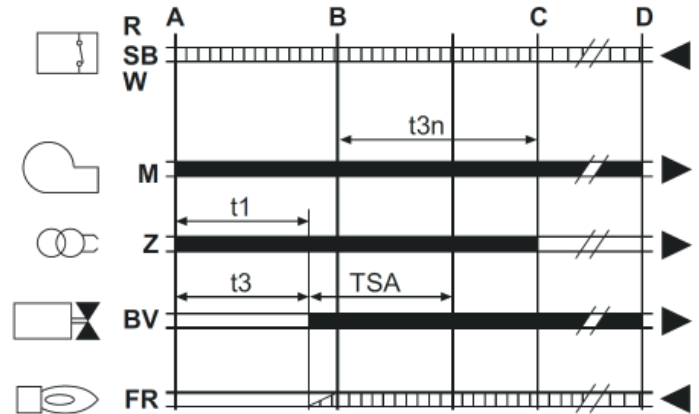


fig.32 - Unit cycle

- R-SB-W Thermostats/Pressure switches
- M Burner motor
- Z Ignition transformer
- BV Electromagnetic valve
- FR Photoresistance
- A' Starting with pre-heater
- A Starting without pre-heater
- B Flame present
- C Normal operation
- D Adjustment stop (TA-TC)
- t1 Pre-ventilation time
- TSA Safety time
- t3 Pre-ignition time
- t3n Post-ignition time
- tw Pre-heating time
- Output signals from the unit
- Necessary input signals

Checks during operation

- Ignite the appliance as described in sec.2.3.
- Check that the fuel circuit and water systems are airtight.
- Check the efficiency of the flue and air-fume ducts while the boiler is working.

- Check that the water is circulating properly between the boiler and the systems.
- Check the proper ignition of the boiler by performing various tests, turning it on and off with the room thermostat or remote control.
- Check that the burner door and fume chamber are tight.
- Check that the burner works properly.
- Analyse the combustion (with the boiler unit stable) and check that the content of CO₂ in the fumes is between 11% and 12%.
- Check the parameters are programmed correctly and perform any required customization (compensation curve, power, temperatures, etc.).

4.3 Maintenance

Periodical check

To ensure correct operation of the unit over time, have qualified personnel carry out a yearly check, providing for the following:

- The control and safety devices must function correctly.
- The fume exhaust circuit must be perfectly efficient.
- Check there are no obstructions or dents in the fuel supply and return pipes. - Clean the filter of the fuel suction line.
- Measure the correct fuel consumption
- Clean the combustion head in the fuel outlet zone, on the swirl disc.
- Leave the burner running at full rate for approximately ten minutes, then analyse the combustion, checking:
 - All the elements specified in this manual are set correctly
 - Temperatures of the fumes at the flue
 - CO₂ percentage content
- The air-fume end piece and ducts must be free of obstructions and leaks
- The burner and exchanger must be clean and free of deposits. For possible cleaning do not use chemical products or wire brushes.
- The gas and water systems must be airtight.
- The water pressure in the cold water system must be approx. 1 bar; otherwise, bring it to that value. • The circulating pump must not be blocked.
- The expansion tank must be filled.
- Check the magnesium anode and replace it if necessary.



The boiler casing, control panel and aesthetic parts can be cleaned with a soft damp cloth, if necessary soaked in soapy water. Do not use any abrasive detergents and solvents.

Cleaning the boiler

1. Disconnect the power supply to the boiler.
2. Remove the upper panel "A" and open the burner door.
3. Unscrew the nuts "B".
4. Remove the cover from the smoke chamber "E".
5. Remove the turbulators "C".
6. Wipe the outlet of the fumes with a brush "D" and an aspirator.
7. Remove all residues from the combustion chamber.
8. Reassemble all removed components.

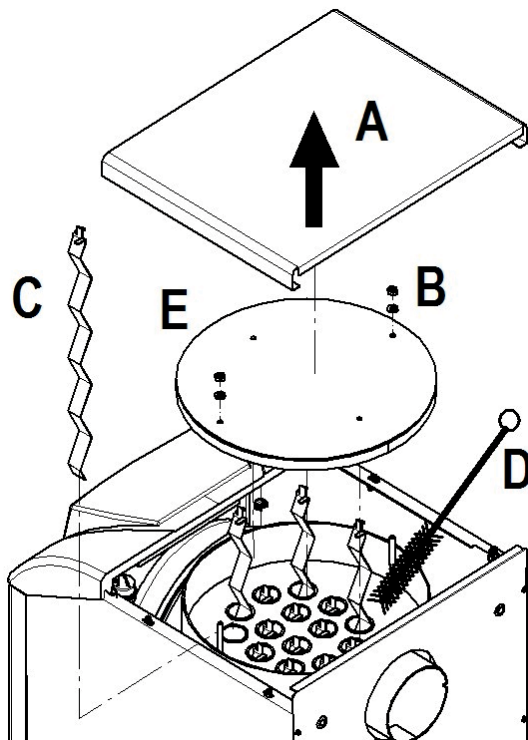


fig.33

Accessing the electrode and nozzle

- Disconnect the transformer electrode cables and remove the photoresistance 1, and the union 2 connecting the oil pipe to line 3 of the nozzle. Loosen the screws 4 and pull out the nozzle-baffle-electrode flange assembly.

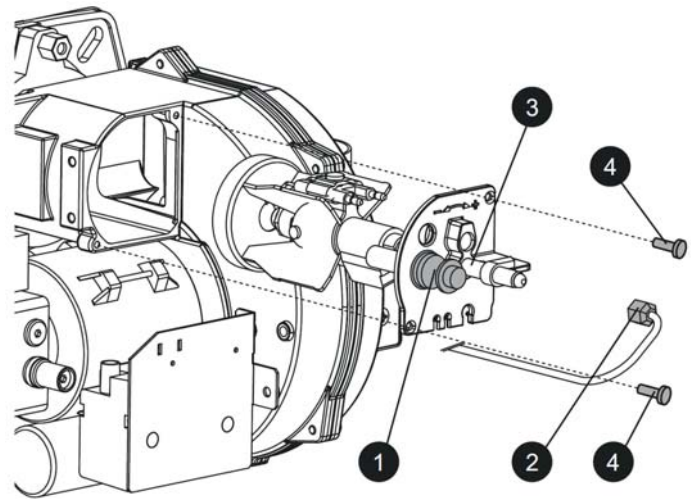


fig.34

- Undo the screw 5 to remove the baffle and screw 6 to remove the electrodes. Proper cleaning of the nozzle is obtained by removing the filter and cleaning the slots and spraying hole with petrol, rinsing it with fuel oil. When reassembling everything, pay attention to the correct positioning of the electrodes-baffle..

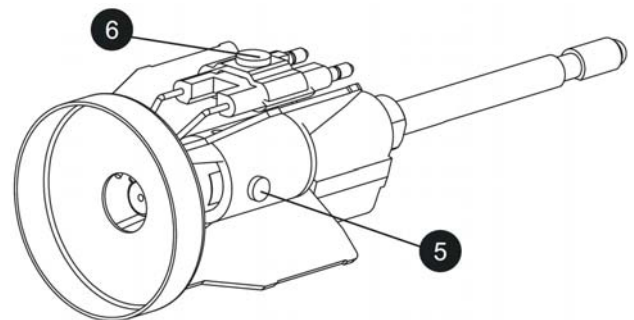


fig.35

4.4 Troubleshooting

Diagnostics

The boiler is equipped with an advanced self-diagnosis system. In case of a boiler fault, the display will flash together with the fault symbol (9 - fig.1) indicating the fault code.

There are faults cause permanent shutdowns (marked with the letter "A"): to restore operation, just press the **RESET** button (3 - fig.1) for 1 second or use the **RESET** on the remote timer control (optional) if installed; if the boiler does not restart, it is necessary to eliminate the fault indicated in the operation LEDs.

Other faults cause temporary shutdowns (marked with the letter "F") which are automatically reset as soon as the value returns within the boiler's normal working range.

Circulating pump diagnostics

Some faults linked to the circulating pump are signalled by the LED located around the speed selector (fig.38).



fig.36

Tabla. 3 - Circulating pump LED indications






	Off Circulating pump on STANDBY
	Green ON Circulating pump Working
	Green Flashing Air venting cycle
	Green/Red alternating Circulating pump blocked due to external causes: - Overvoltage (>270V) - Insufficient voltage (<160V) - Motor overload
	Red Flashing Circulating pump blocked due to internal causes: - Motor blocked - Damaged electronics

Tabla. 4 - Lista de anomalías

Fault code	Fault	Possible cause	Cure
A01	Bloqueo del quemador	Pump blocked	Replace
		Faulty electric motor	Replace
		Faulty oil valve	Replace
		No fuel in tank, or water on bottom	Refill with fuel or suck the water
		Oil line feed valves closed	Open
		Dirty filters (line-pump-nozzle)	Clean
		Pump unprimed	Prime and find the cause of unpriming
		Ignition electrodes not properly adjusted, or dirty	Adjust or clean them
		Nozzle clogged, dirty or deformed	Replace
		Unsuitable head and shutter adjustments	Adjust
		Faulty electrodes or earthed	Replace
		Faulty ignition transformer	Replace
		Faulty electrode wires or earthed	Replace
		Electrode wires deformed by high temperature	Replace and protect
		Faulty valve or transformer electrical connections	Check
		Broken pump-motor joint	Replace
Pump inlet connected to return pipe	Correct the connection		
Faulty photoresistance	Replace		
Dirty photoresistance	Clean the photoresistance		
A02	Flame present signal with burner off	Photoresistance short circuit	Replace the photoresistance
		Extraneous light strikes the photoresistance	Eliminate the light source
A03	Overtemperature protection activation	Heating sensor damaged	Check the correct positioning and operation of the heating sensor
		No water circulation in the system	Check the circulating pump.
		Air in the system	Vent the system
F07	Preheater fault (the contact does not close in 120 seconds)	Preheater failure	Check the preheater
		Wiring disconnected	Check the wiring
F10	Delivery sensor 1 fault	Sensor damaged	Check the wiring or replace the sensor
		Wiring shorted	
		Wiring disconnected	
F14	Delivery sensor 2 fault	Sensor damaged	Check the wiring or replace the sensor
		Wiring shorted	
		Wiring disconnected	
F34	Supply voltage under 170V.	Electric mains trouble	Check the electrical system
F35	Faulty mains frequency	Electric mains trouble	Check the electrical system
F37	Incorrect system water pressure	Pressure too low	Fill the system
		Sensor damaged	Check the sensor
F39	External probe fault	Probe damaged or wiring shorted	Check the wiring or replace the sensor
		Probe disconnected after activating the sliding temperature	Reconnect the external sensor or disable the sliding temperature
F40	Incorrect system water pressure	Pressure too high	Check the system
			Check the safety valve
			Check the expansion vessel
A41	Sensor positioning	Delivery sensor not inserted in boiler shell	Check the correct positioning and operation of the heating sensor
F42	Heating sensor fault	Sensor damaged	Replace the sensor
F47	System water pressure sensor fault	Wiring disconnected	Check the wiring

KYRA D 30 SI UNIT

5. TECHNICAL DATA AND CHARACTERISTICS

Legend of the figures chapter 5

- A4 = Smoke outlet Ø 100
- 8 = DHW outlet Ø 1/2"
- 9 = DHW input Ø 1/2"
- 10 = System delivery Ø 3/4"
- 11 = System return Ø 3/4"
- 14 = Safety valve Ø 1/2"
- 32 = Heating circulating pump
- 36 = Automatic air vent
- 38 = Flow switch
- 42 = DHW temperature sensor (optional)
- 56 = Expansion vessel
- 74 = Charging key
- 246 = Pressure transducer
- 275 = Key download heating circuit
- 278 = Double sensor (Safety + heating)
- 295 = Burner
- 338 = Smoke recuperator

5.1 Main components, dimensions and connections

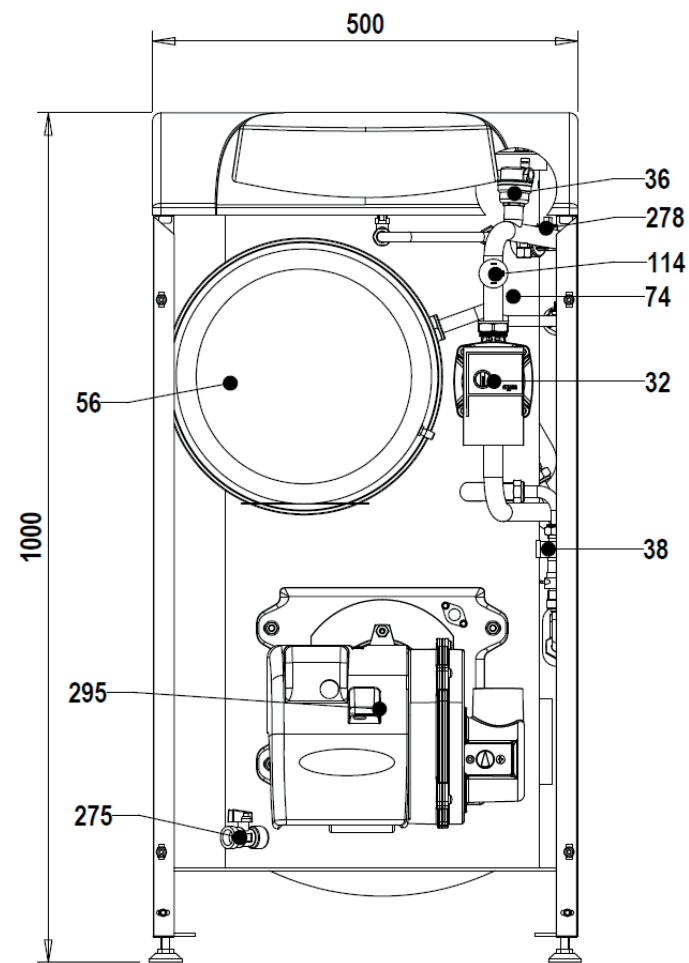


fig.37 - Front view

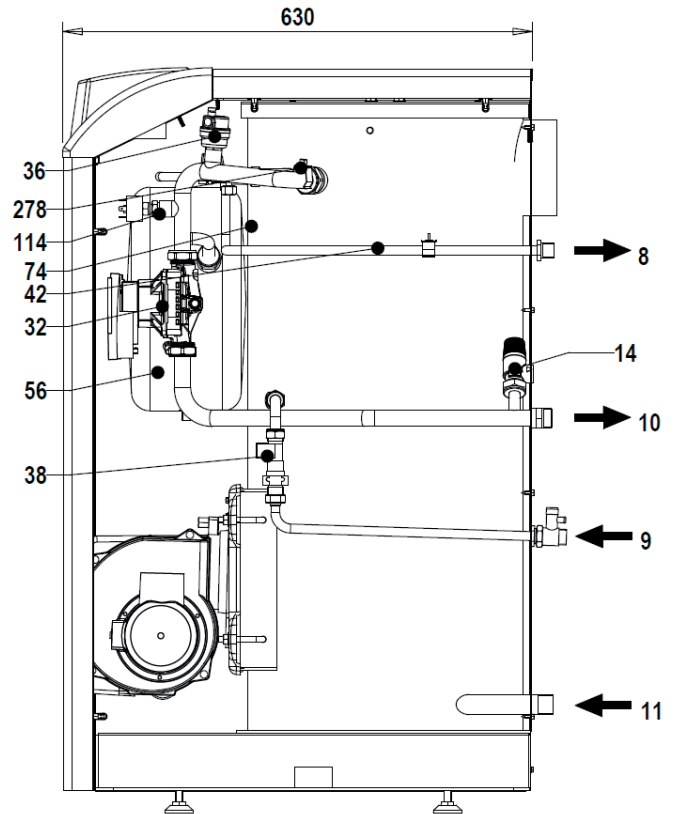


fig.38 - Side view

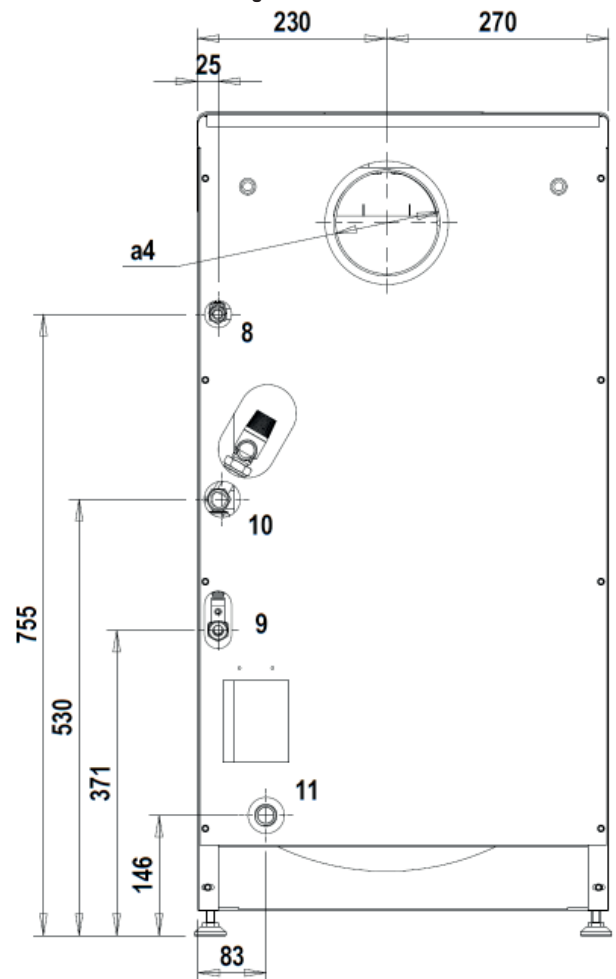


fig.39 - Rear view

5.2 Water circuit

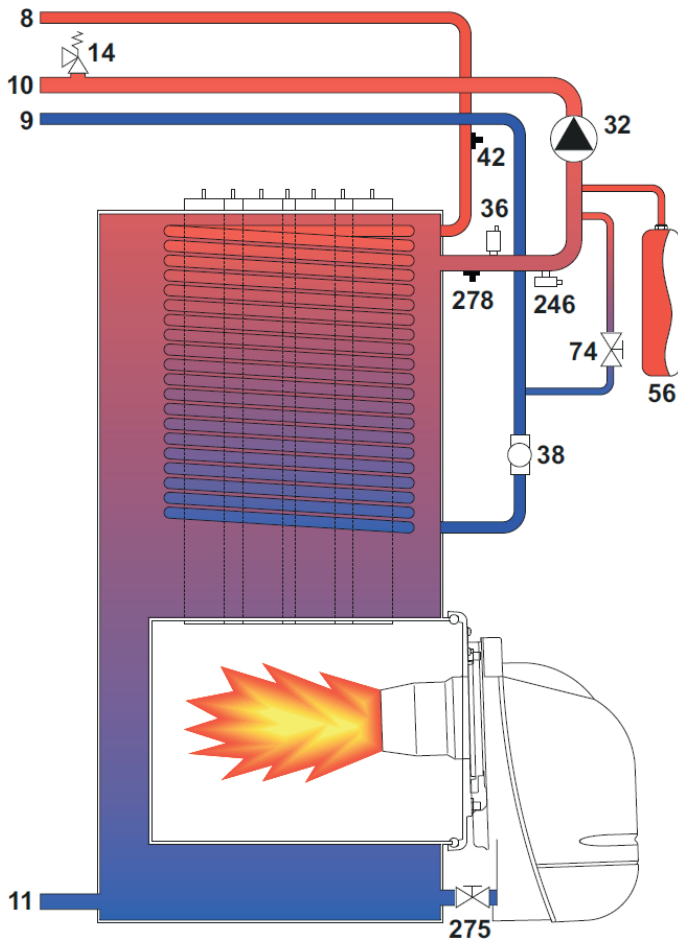


fig.40 - Water circuit

5.3 Diagrams

Circulating pumps Head/Pressure loss

- Circulating pump head with setting at "fixed speed".

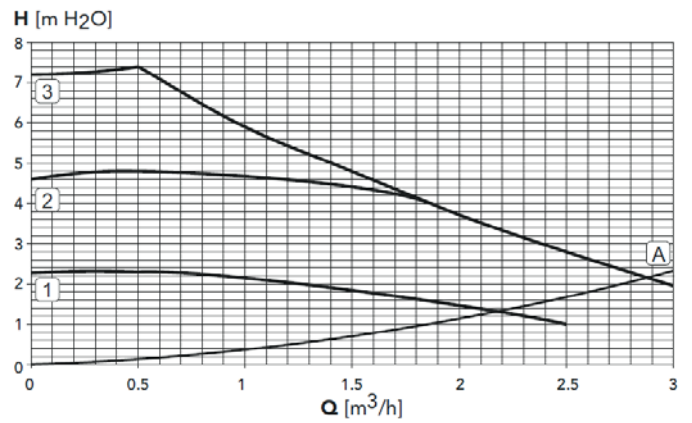
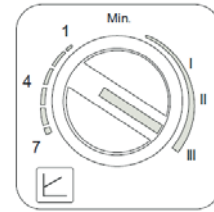


fig.41

A Boiler pressure losses
1 - 2 - 3 Circulating pump speed

- Circulating pump head with setting at "proportional head".

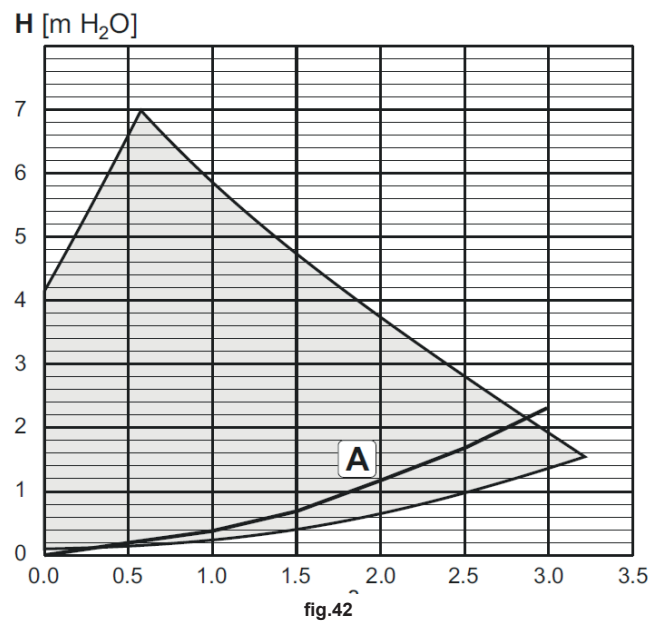
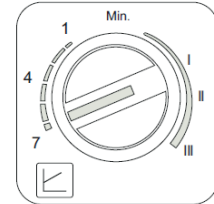


fig.42

A Boiler pressure losses

KYRA D 30 SI UNIT



5.4 Technical data table

Model	KYRA D 30 SI UNIT		
Max. heating capacity	kW	26,6	(Q)
Min. heating capacity	kW	21,1	(Q)
Max. heat output in heating (80/60)	kW	25,0	(P)
Min. heat output in heating (80/60)	kW	20,0	(P)
Efficiency Pmax (80-60°C)	%	94,0	
Efficiency Pmin (80-60°C)	%	95,0	
Efficiency 30%	%	98,1	
Clase de eficiencia según directiva 92/42 CE		★ ★ ★	
Max. working pressure in heating	bar	3	(PMS)
Min. working pressure in heating	bar	0,8	
Max. heating temperature	°C	100	(tmáx)
Heating water content	liters	49	
Heating expansion tank capacity	liters	10	
Heating expansion tank prefilling pressure	bar	1	
Max. working pressure in DHW	bar	6	(PMW)
Min. working pressure in DHW	bar	0,3	
Content of the DHW circuit	liters	1,7	
DHW flow rate Δt 25 °C	l/min	14,3	
DHW flow rate Δt 30°C	l/min	11,9	
Protection rating	IP	X0D	
Power supply voltage	V/Hz	230/50	
Electrical power input	W	190	
Electrical power input in sanitary	W	150	
Empty weight	kg	115	
Combustion chamber length	mm	280	
Combustion chamber diameter	mm	220	
Pressure losses, fume side	mbar	0,2	

ErP product fiche

MODEL: KYRA D 30 SI UNIT

Trademark: LAMBORGHINI			
Condensing boiler: NO			
Low-temperature boiler (**): SÍ			
B1 Boiler: NO			
Combination heater: SÍ			
Cogeneration space heater: NO			
Item	Symbol	Unit	Value
Seasonal space heating energy efficiency class (from A++ to G)			
Seasonal space heating energy efficiency class (from A++ to G)			B
Rated heat output	Pn	kW	25
Seasonal space heating energy efficiency	η_s	%	86
Useful heat output			
Useful heat output at rated heat output and high-temperature regime (*)	P4	kW	25,1
Useful heat output at 30% of rated heat output and low-temperature regime (**)	P1	kW	7,9
Useful efficiency			
Useful heat output at rated heat output and high-temperature regime (*)	η^4	%	88,3
Useful heat output at 30% of rated heat output and low-temperature regime (**)	η^1	%	92,1
Auxiliary electricity consumption			
At full load	elmax	kW	0,149
At part load	elmin	kW	0,061
In standby mode	PSB	kW	0,003
Other items			
Standby heat loss	Pstby	kW	0,100
Ignition burner power consumption	Pign	kW	0,000
Annual energy consumption	QHE	GJ	84
Sound power level	LWA	dB	62
Emissions of nitrogen oxides	NOx	mg/kWh	86
For combination heaters			
Declared load profile			XL
Water heating energy efficiency class (from A to G)			B
Daily electricity consumption	Qelec	kWh	0,234
Annual electricity consumption	AEC	kWh	51
Water heating energy efficiency	η_{wh}	%	69
Daily fuel consumption	Qfuel	kWh	29,180
Annual fuel consumption	AFC	GJ	21

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

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

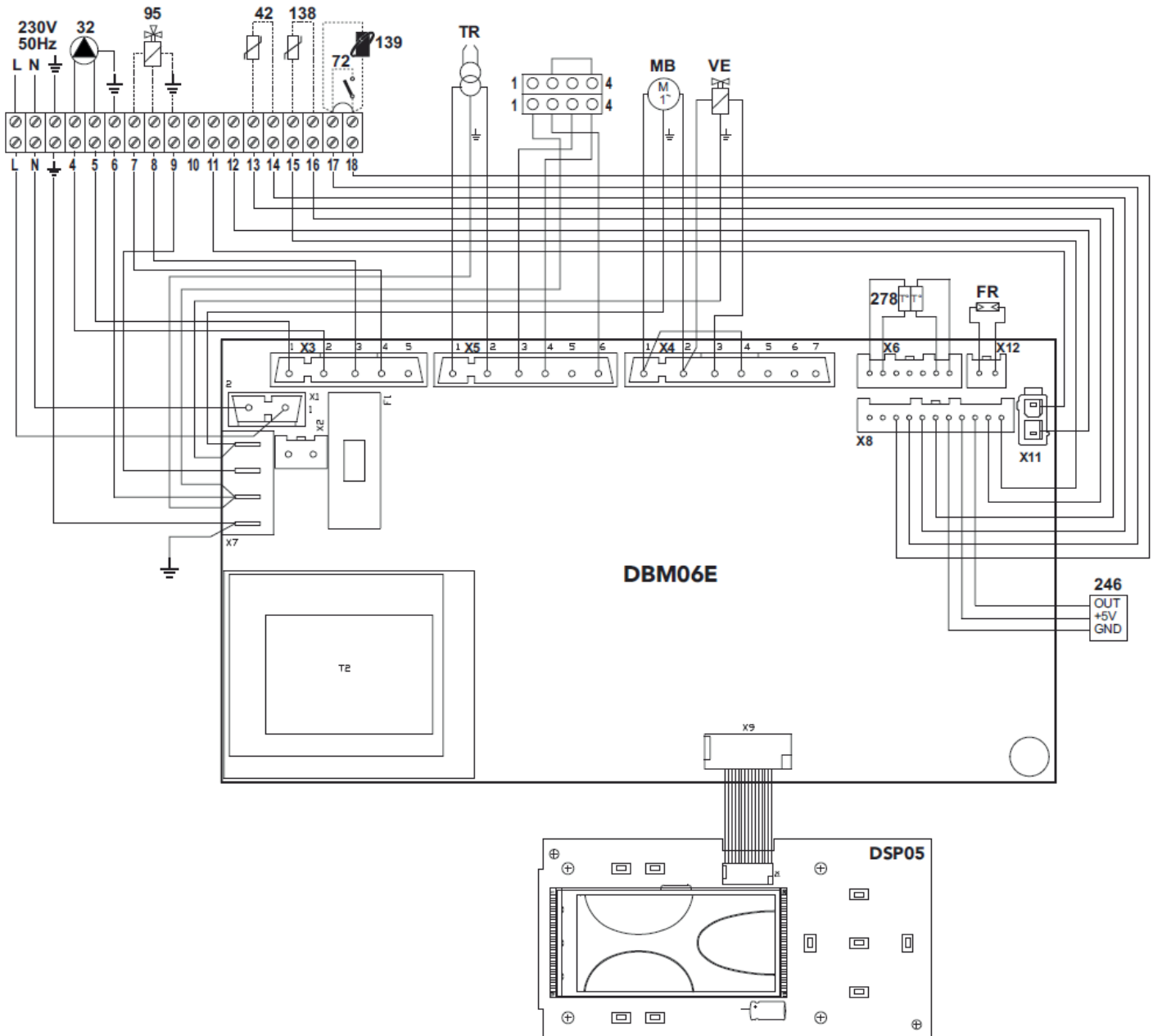


fig.43 - Wiring diagram

- 32 Heating circulating pump
- 38 Flow switch
- 42 DHW temperature sensor (optional)
- 72 Room thermostat (optional)
- 138 External probe (optional)
- 139 Remote Timer Control (optional)
- 191 Smoke temperature sensor
- 246 Pressure transducer
- 278 Double sensor (Safety + Heating)

- TR Ignition transformer
- FR Photoresistance
- MB Burner motor
- VE Electromagnetic valve

Архангельск (8182)63-90-72
 Астана (7172)727-132
 Астрахань (8512)99-46-04
 Барнаул (3852)73-04-60
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 Тула (4872)74-02-29
 Тюмень (3452)66-21-18
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