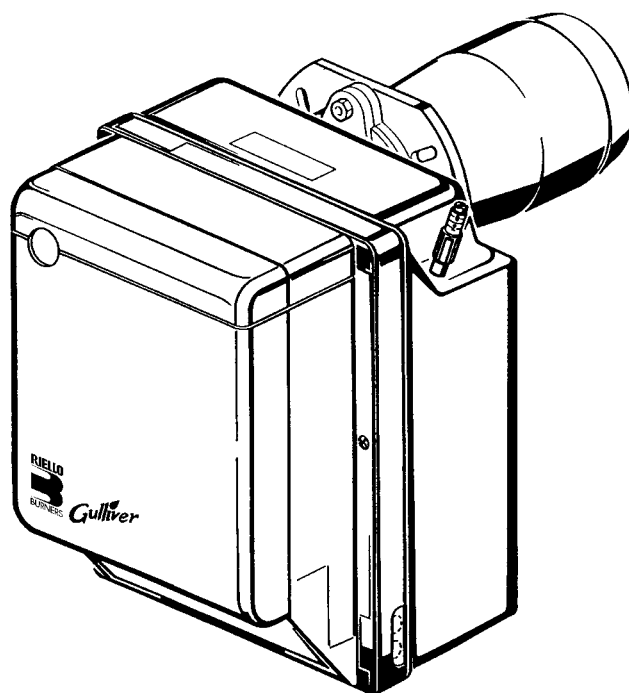


GB **Light oil burner**

One stage operation



Gulliver



CODE	MODEL	TYPE
3739354	RG3	393 T1

INDEX

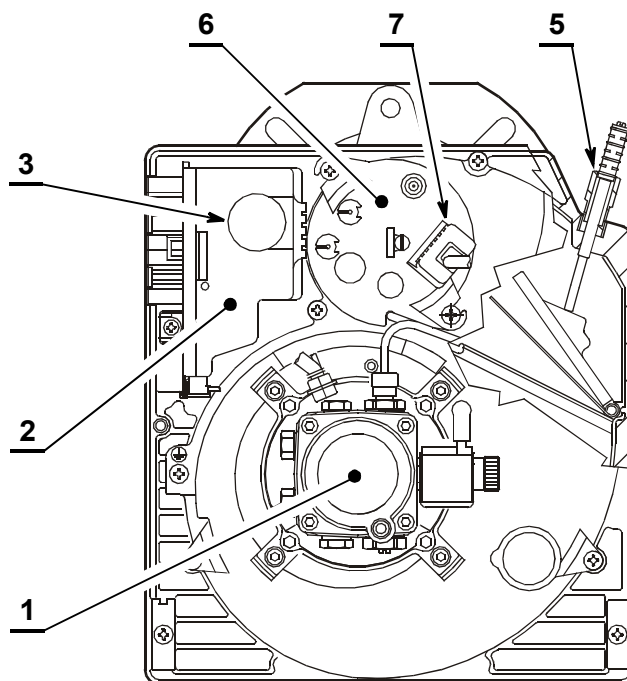
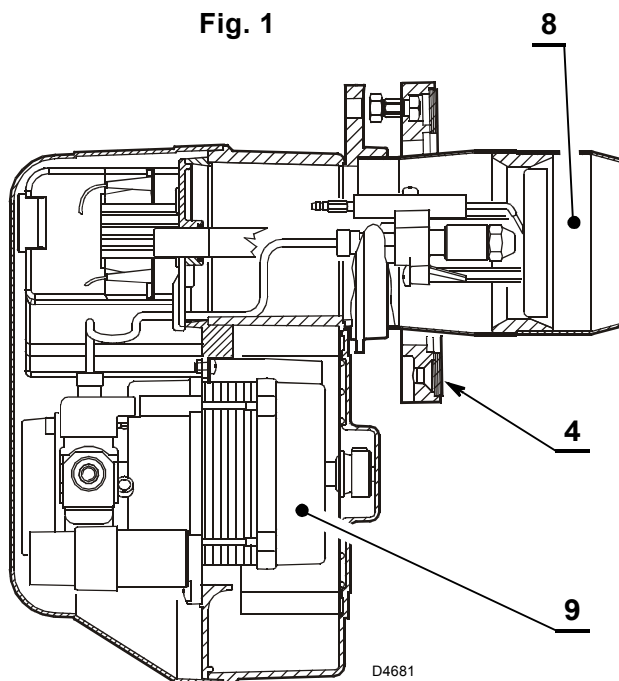
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1. BURNER DESCRIPTION

One stage light oil burner.

- CE Certification No.: **0036 0348/04** as 92/42/EEC.
- The burner meets protection level of IP XOD (IP 40), EN 60529.
- Burner with CE marking in conformity with EEC directives: EMC 89/336/EEC, Low Voltage 73/23/EEC, Machines 98/37/EEC and Efficiency 92/42/EEC.
- The burner is approved for intermittent operation as per Directive EN 267.

Fig. 1



- 1 – Oil pump
- 2 – Control-box
- 3 – Reset button with lock-out lamp
- 4 – Flange with insulating gasket
- 5 – Air damper adjustment assembly

- 6 – Nozzle holder assembly
- 7 – Flame detector
- 8 – Flame tube
- 9 – Motor

1.1 BURNER EQUIPMENT

Flange with insulating gasket No. 1
Screw and nuts for flange No. 1
Remote reset connection No. 1

Screws and nuts for flange to be fixed to boiler. . . No. 4
Flexible oil pipes with nipples No. 2

1.2 ACCESSORIES

SOFTWARE DIAGNOSTIC KIT

A special kit is available that, by an optical link to a PC, shows the burner life together with operating hours, type and number of failures, serial number, etc.

To visualise the diagnostics proceed as follows:

- Connect the kit supplied separately to the control box socket.
Reading of the information begins when the software programme included in the kit starts.

REMOTE RESET KIT

The burner has a remote reset kit (**RS**) consisting of a connection and a push-button operating at a distance of 20 metres max.

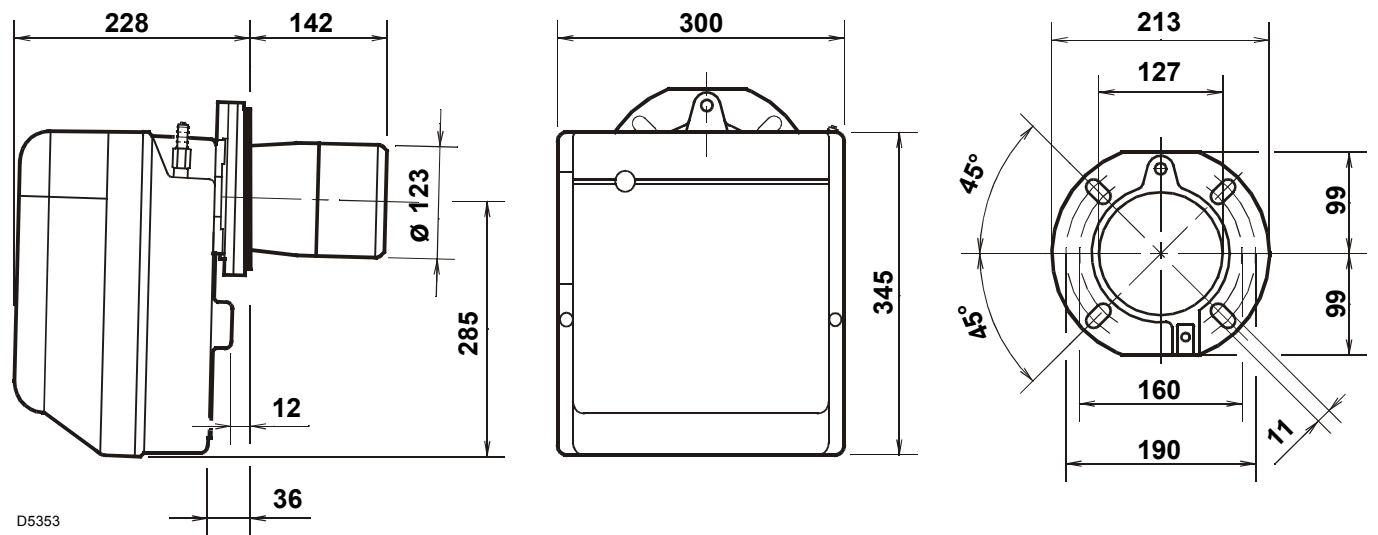
In order to install it remove the protective lock-out installed at the factory and insert the lock-out supplied with the burner (see electrical diagram on page 6).

2. TECHNICAL DATA

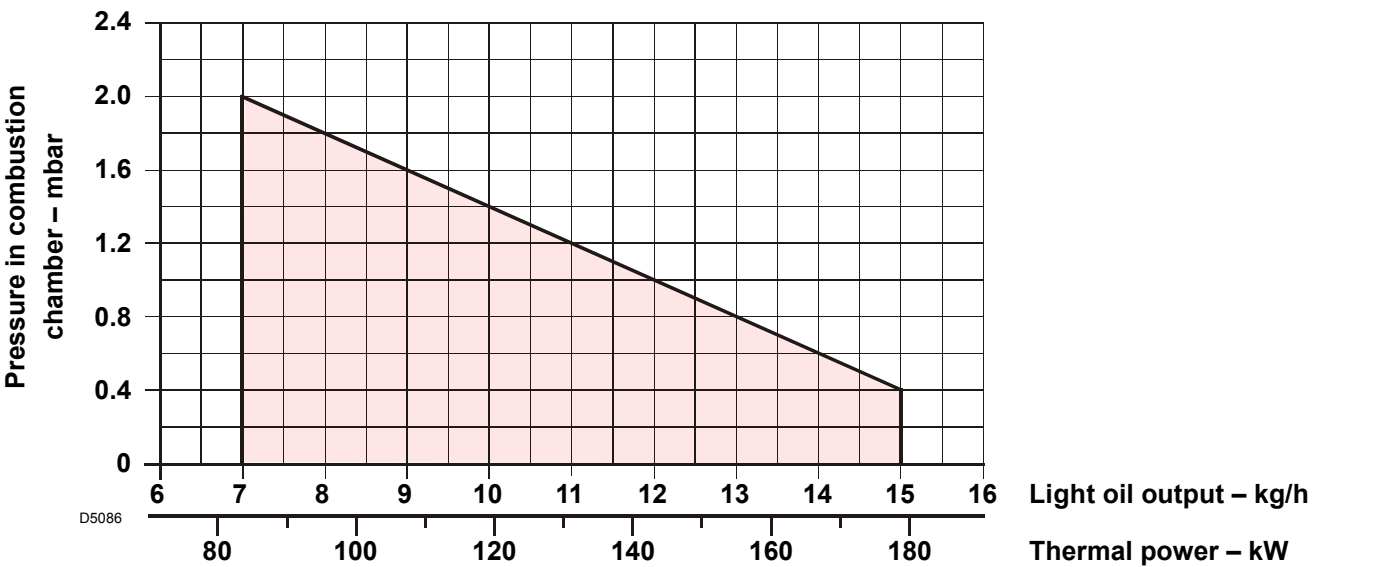
2.1 TECHNICAL DATA

TYPE	393 T1
Output - Thermal power	7 – 15 kg/h – 83 – 178 kW
Fuel	Light oil, viscosity 4 – 6 mm ² /s at 20 °C
Electrical supply	Single phase, ~ 50Hz 230V ± 10%
Motor	Run current 1.9A – 2750 rpm – 289 rad/s
Capacitor	6.3 µF
Ignition transformer	Secondary 8 kV – 16 mA
Pump	Pressure: 8 – 15 bar
Absorbed electrical power	0.385 kW

2.2 OVERALL DIMENSIONS



2.3 FIRING RATES (as EN 267)



3. INSTALLATION

THE BURNER MUST BE INSTALLED IN CONFORMITY WITH LEGISLATION AND LOCAL STANDARDS.

3.1 WORKING POSITION

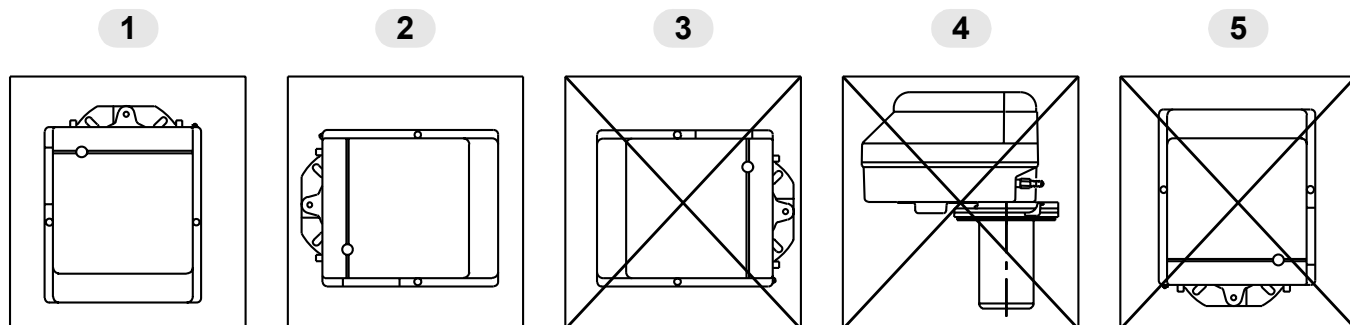
The burner is programmed to operate only in positions 1 and 2.

Installation 1 is to be preferred since it is the only position where maintenance can be carried out as described in this manual.

With installation 2, operation is ok but maintenance cannot be carried out with the burner hooked to the boiler.

Any other installation would affect the burner operation.

Installations 3, 4 and 5 are forbidden on safety grounds.



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3.2 BOILER FIXING

To fit the burner to the boiler it is necessary to carry out the following:

- Put on the flange (1) the screw and two nuts, (see fig. 3).
- Widen, if necessary, the insulating gasket holes (4).
- Fix the flange (1) to the boiler door (3) using screws (5) and (if necessary) the nuts (2) **interposing the insulating gasket (4)**, (see fig. 2).
- After installation ensure that burner is lightly inclined as in fig. 4.

Fig. 2

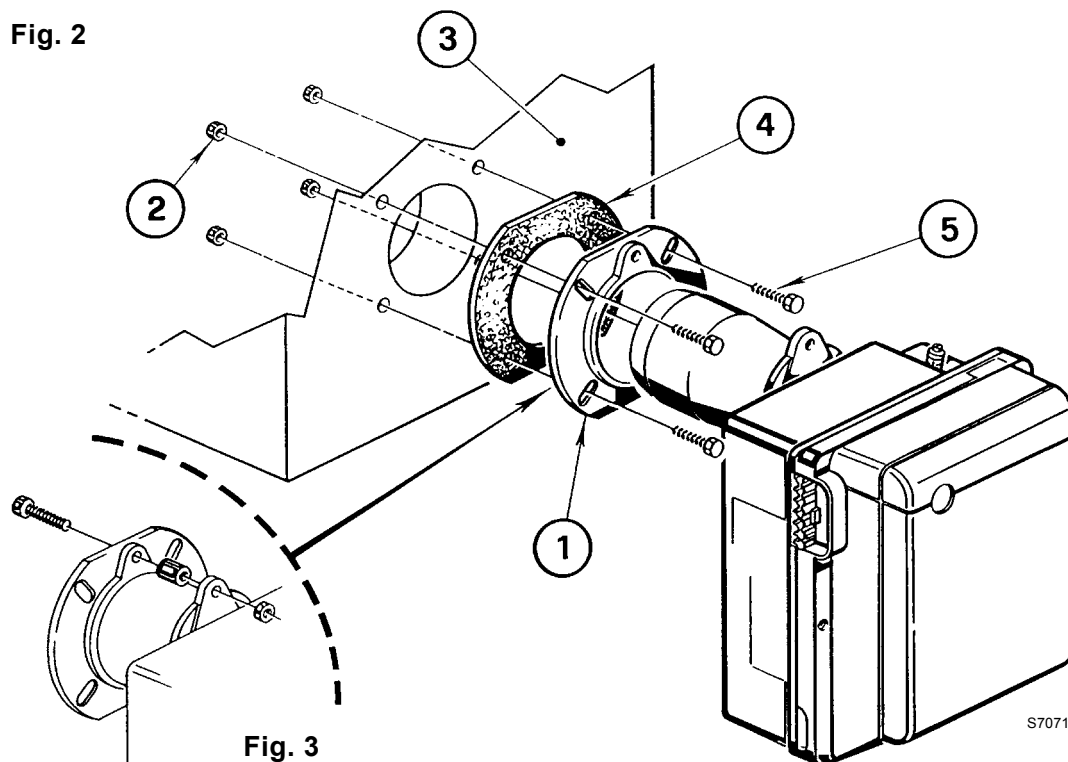


Fig. 3

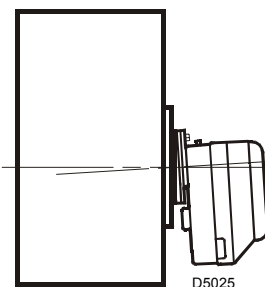


Fig. 4

D5025

S7071

3.3 HYDRAULIC SYSTEMS

WARNING:

- The burner is designed to allow installation of the oil lines on either side of the burner.
- It is necessary to install a filter on the fuel supply line.
- The pump is designed for use with a two-pipe system. In order to obtain one-pipe working, it is necessary to unscrew the return plug (2), remove the by-pass screw (3) and then screw the plug (2) up again, (see fig. 5).
- Before starting the burner make sure that the return pipeline is not clogged. An excessive back pressure would cause the damage of the pump seal.

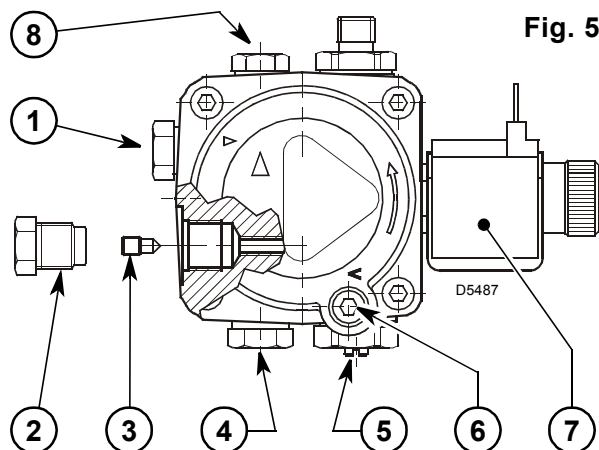
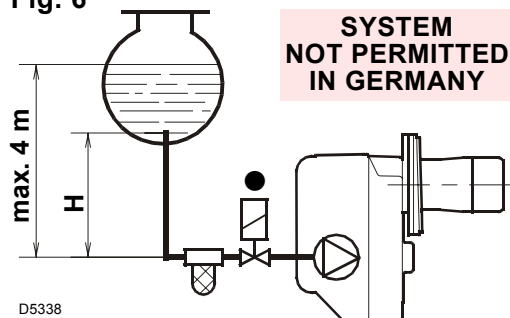


Fig. 5

Fig. 6



H meters	L meters	
	I. D. 8 mm	I. D. 10 mm
0.5	10	20
1	20	40
1.5	40	80
2	60	100

- 1 - Suction line
- 2 - Return line
- 3 - By-pass screw
- 4 - Gauge connection
- 5 - Pressure adjuster
- 6 - Suction gauge connection
- 7 - Valve
- 8 - Auxiliary pressure test point

PRIMING PUMP:

On the system in fig. 6 it is sufficient to loosen the suction gauge connection (5, fig. 6) and wait until oil flows out.

On the systems in fig. 7 and 8 start the burner and wait for the priming. Should lock-out occur prior to the arrival of the fuel, await at least 20 seconds before repeating the operation.

The pump suction should not exceed a maximum of 0.4 bar (30 cm Hg). Beyond this limit gas is released from the oil. Oil pipes must be completely tight. In the vacuum systems (fig. 9) the return line should terminate within the oil tank at the same level as the suction line. In this case a non-return valve is not required. Should however the return line arrive over the fuel level, a non-return valve is required. This solution however is less safe than previous one, due to the possibility of leakage of the valve.

H meters	L meters	
	I. D. 8 mm	I. D. 10 mm
0	35	100
0.5	30	100
1	25	100
1.5	20	90
2	15	70
3	8	30
3.5	6	20

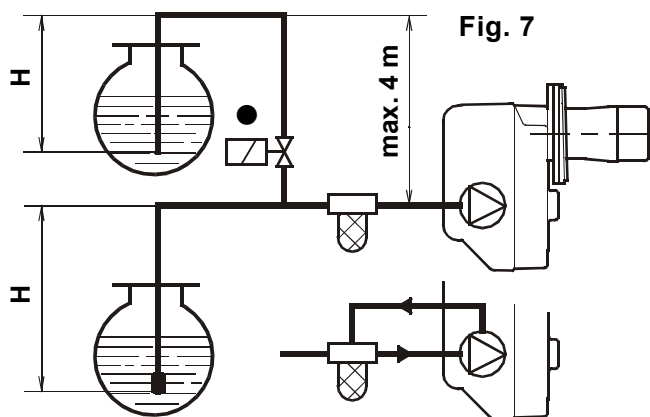


Fig. 7

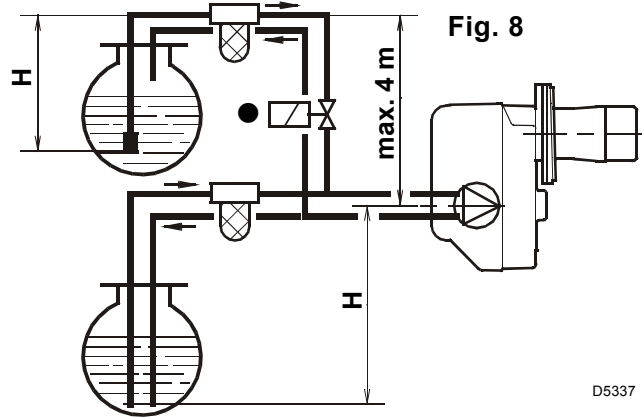


Fig. 8

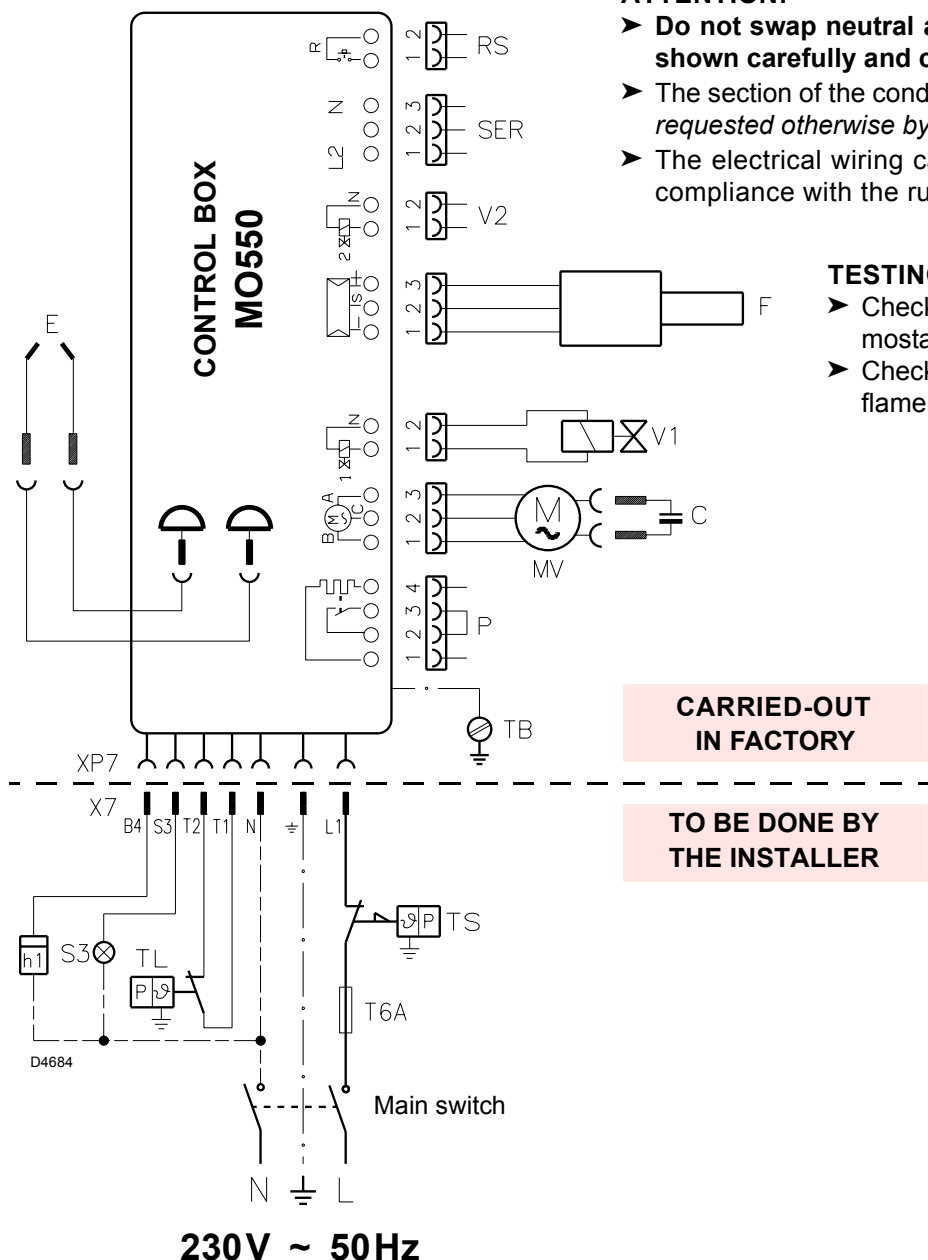
● **ONLY FOR ITALY:** Automatic cut-off device as per Ministry of Internal Affairs' regulation n° 73 dated 7/29/71.

H = difference of level;

L = max. length of the suction line;

ø i = internal diameter.

3.4 ELECTRICAL WIRING



ATTENTION:

- Do not swap neutral and phase over, follow the diagram shown carefully and carry out a good earth connection.
- The section of the conductors must be at least 1mm². (Unless requested otherwise by local standards and legislation).
- The electrical wiring carried out by the installer must be in compliance with the rules in force in the country.

TESTING

- Check the burner stops by opening the thermostats.
- Check the burner stops by shading the flame detector.

KEY TO LAY-OUT:

- C** – Capacitor
- E** – Electrode
- F** – Flame detector
- h1** – Hour counter
- MV** – Motor
- P** – Bridge socket
- RS** – Remote reset
- SER** – Safety lockout device
- S3** – Lock-out signal (230V - 0.5 A max)
- T6A** – Fuse
- TB** – Burner-earth
- TL** – Limit thermostat
- TS** – Safety thermostat
- V1** – Oil valve
- V2** – Safety lockout device
- X7** – 7 pin plug
- XP7** – 7 pole socket

CONTROL BOX, (see fig. 9)

To remove the control box from the burner it is necessary to:

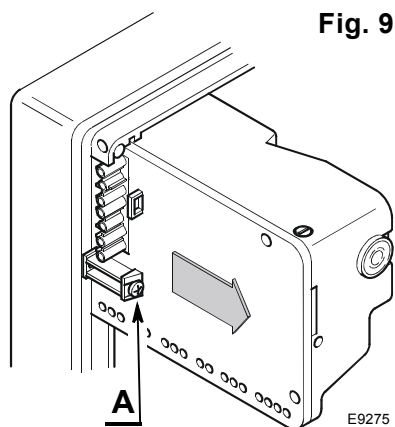
- disconnect all the connectors, the 7-pin plug, the high voltage cables and the earth wire (**TB**);
- unscrew the bolt (**A**) and pull the control box in the direction of the arrow.

To install the control box it is necessary to:

- screw the bolt (**A**) in at a torque of 1 - 1.2 Nm;
- reconnect all the connectors previously disconnected.

NOTES:

The burners have been type-approved for intermittent operation. This means they must stop at least once every 24 hours in order to allow the electrical control box to check its efficiency on start-up. The boiler limit thermostat (**TL**) normally ensures the burner halts. If this does not happen a time switch halting the burner at least once every 24 hours must be applied in series to (**TL**).



4. BURNER OPERATION

WARNING

QUALIFIED PERSONNEL WITH THE RIGHT INSTRUMENTS MUST HANDLE THE BURNER'S FIRST START-UP

4.1 COMBUSTION ADJUSTMENT

In conformity with Efficiency Directive 92/42/EEC the application of the burner on the boiler, adjustment and testing must be carried out observing the instruction manual of the boiler, including verification of the CO and CO₂ concentration in the flue gases, their temperatures and the average temperature of the water in the boiler.

To suit the required appliance output, choose the proper nozzle and adjust the pump pressure, the setting of the combustion head, and the air damper opening in accordance with the following schedule.

The values shown in the table are measured on a CEN boiler (as per EN 267).

They refer to 12.5% CO₂ at sea level and with light oil and room temperature of 20 °C.

Nozzle		Pump pressure	Burner output	Combustion head adjustment	Air damper adjustment
GPH	Angle	bar	kg/h \pm 4%	Set-point	Set-point
1.75	60°	12	7.0	0	1.3
2.00	60°	12	8.0	1	2.3
2.25	60°	12	9.0	3	2.6
2.50	60°	12	10.0	3.5	3.0
3.00	60°	12	12.0	5	3.5
3.50	60°	12	14.0	6	4.4
3.50	60°	14	15.2	6	5.6

4.2 RECOMMENDED NOZZLES:

Delavan type W - B ; Danfoss type S - B;

Monarch type R ; Steinen type S - Q.

For 3.00 - 3.50 GPH nozzles it is advisable to use full cones.

4.3 PUMP PRESSURE

The pump leaves the factory set at 12 bar.

To change it act on pump pressure adjust screw (4, fig. 5, page 5).

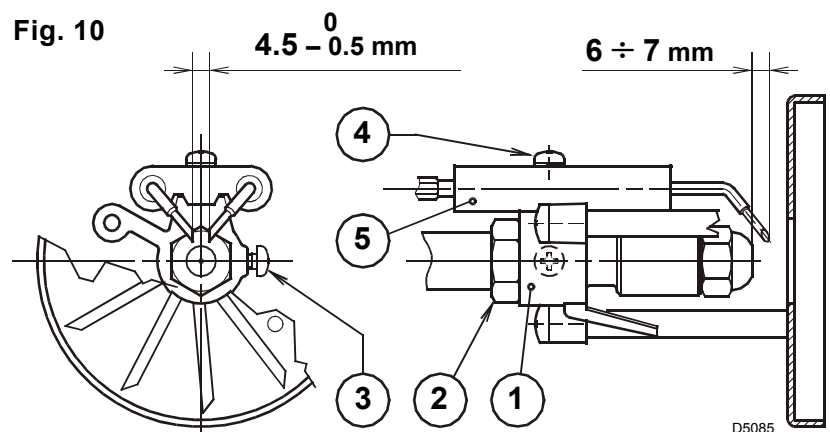
4.4 ELECTRODES ADJUSTMENT (see fig. 10)

WARNING MEASURES MUST BE RESPECTED

Lean the diffuser disc-holder assembly (1) on the nozzle-holder (2) and lock it by screw (3).

For prospective adjustments loosen screw (4) and move the electrodes assembly (5).

To have access to the electrodes carry out operation as described in **chapter "4.5 MAINTENANCE POSITION"** (page 8).



4.5 MAINTENANCE POSITION

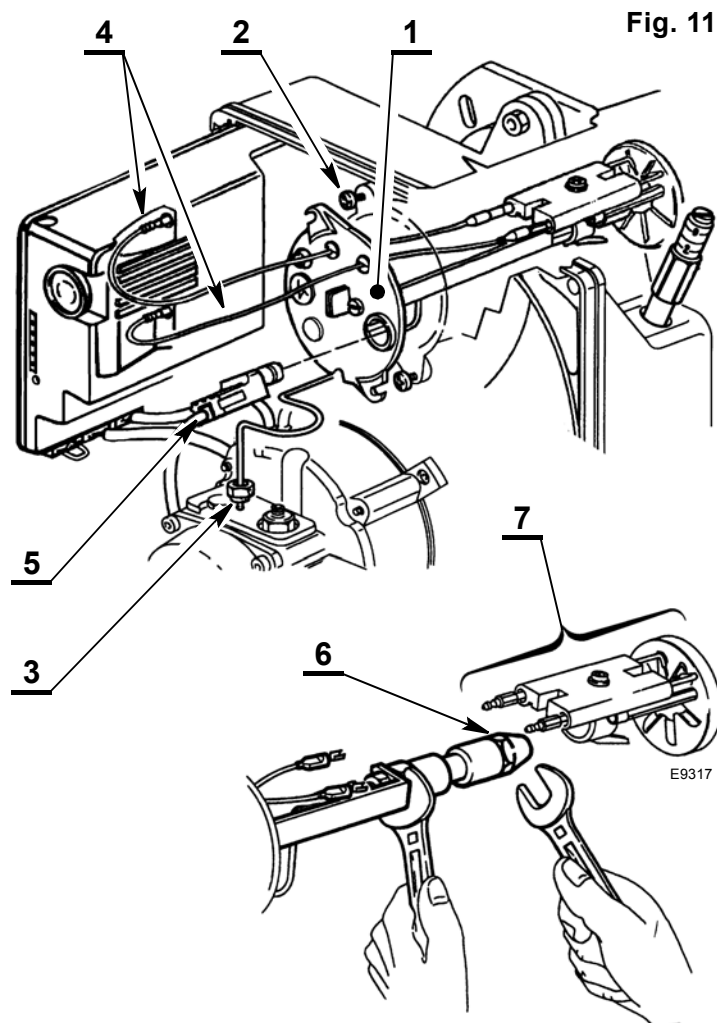
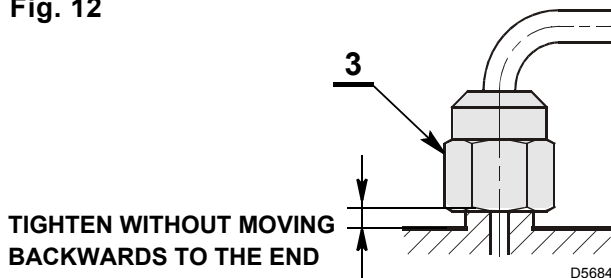
To access the nozzle, do the following:

- Undo the wires (4) from the control box, the flame detector (5) and undo the nut (3) from the pump.
- Loosen the screws (2) and extract the nozzle holder assembly (1) by turning to the right.
- Remove the small cables (4) from the electrodes, loosen the screw (3, fig. 10, page 7) and remove the diffuser disc-holder assembly (7) from the nozzle-holder assembly (1).
- Screw up the nozzle (6) holding the nozzle support with a spanner.
- Refit following the operations in the reverse order to the one described above.

ATTENTION

During the reassembly of the nozzle-holder assembly screw the nut (3) as shown in the figure below.

Fig. 12



4.6 COMBUSTION HEAD ADJUSTMENT, (see fig. 13)

The adjustment of the combustion head varies depending on the burner output.

Do the following to adjust it:

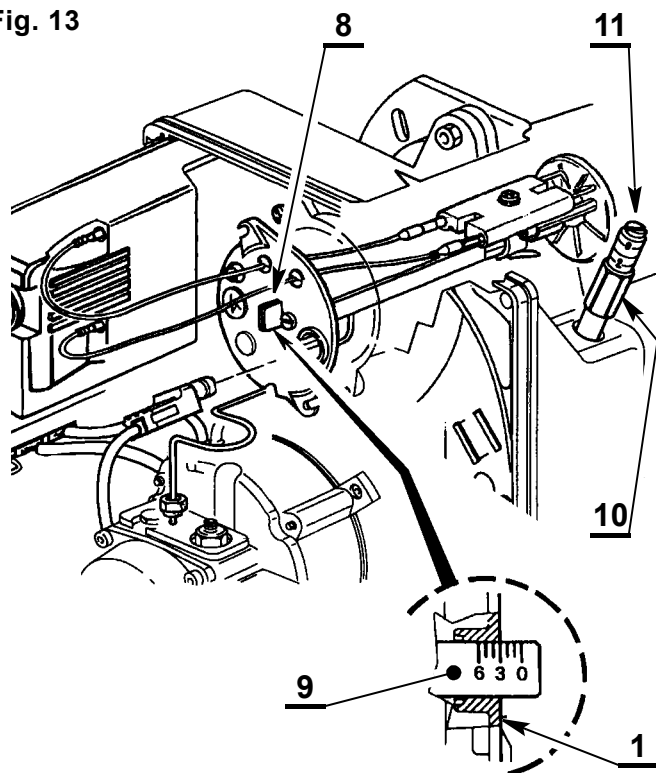
- Rotate the setting screw (8) clockwise or counter-clockwise until the set-point marked on the regulating rod (9) is level with the outside plane of the nozzle-holder assembly (1).
- In the example the regulating rod (9) is set at notch 3; this means that the burner is regulated for an output of 9 Kg/h with pump pressure at 12 bar and with the use of a nozzle of 2.25 GPH, as indicated in the reference table.

4.7 AIR DAMPER ADJUSTMENT, (see fig. 13)

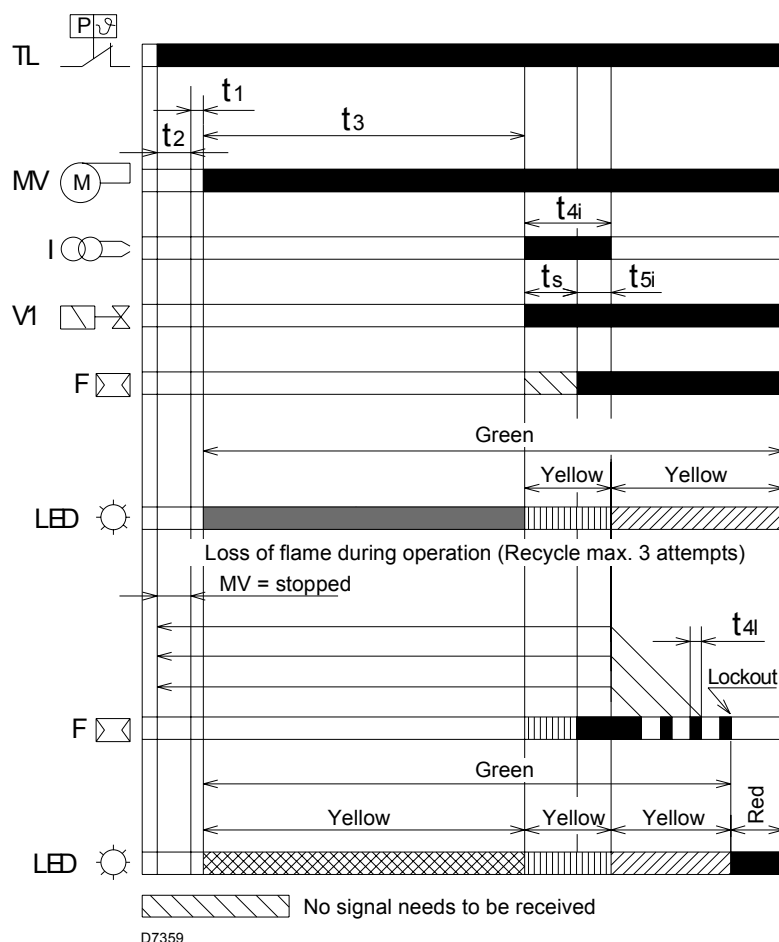
To regulate the air damper, do the following:

- Loosen the nut (10) and set the air damper by turning the screw (11).
- When burner shuts down the air damper automatically close still a max. chimney depressure of 0.5 mbar.
- When the adjustment is completed do the nut (10) up again.

Fig. 13

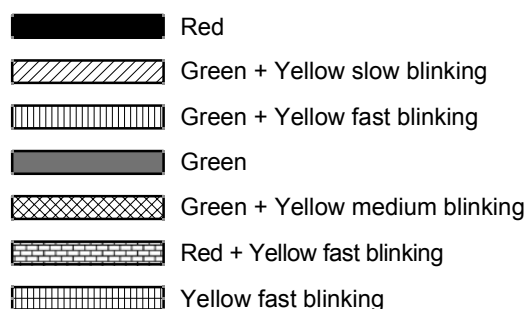


4.8.1 NORMAL OPERATION WITH PREHEATING



KEY TO LAY-OUT

F – Flame detector
I – Ignition transformer
LED – Reset button LED indicating operating status
MV – Fan motor
TL – Limit thermostat
V1 – Oil valve



OPERATING TIMES

t1	max	1
t1l	max	30
t2	-	3
t3	-	15
t3l	max	1
ts	-	5

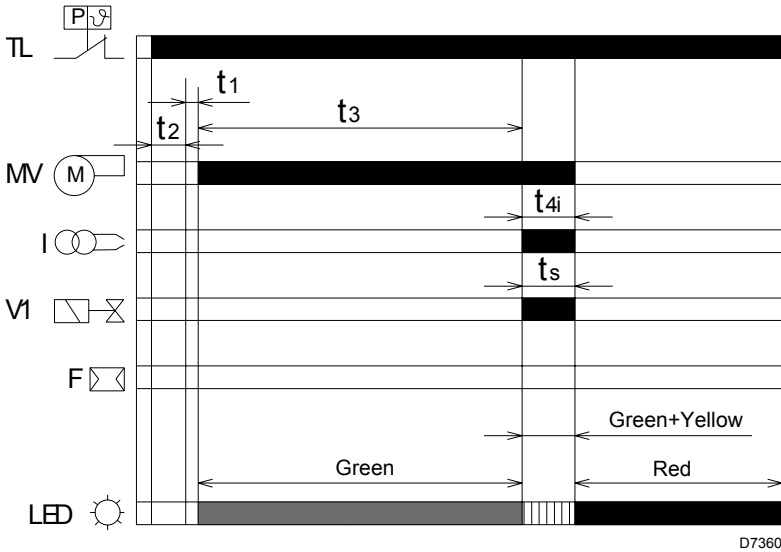
t4i	-	8
t5i	-	3
t4l	max	1
t6	max	360
t6l	max	30
t7	-	120

Time is expressed in seconds

t1	Waiting time of a control box input signal: reaction time, the control box stands still for the time t1 .
t1l	Presence of extraneous light before the heat request: if the presence of light during the t1l time, a block follows.
t2	Wait time after a request for heat: the control box stays still for the t2 time.
t3	Pre-purging time: start of the fan motor.
t3l	Presence of an extraneous light during pre-purging: immediate block.
ts	Safety time: if at the end of the ts time there is no flame, a block follows.

t4i	Transformer turn on time: total turn on time ts + t5i .
t5i	Transformer post- turn on time: additional turn on time after ts .
t4l	Flame loss in operation: maximum oil valve drop reaction time, after three recycle attempts a block follows.
t6	Post-purging time: additional purging time on the opening of the heat limit thermostat (TL)
t6l	Presence of an extraneous light during post-purging. if the presence of light lasts the t6l time, a block follows.
t7	Long pre-purging time: pre-purging time more than t3 .

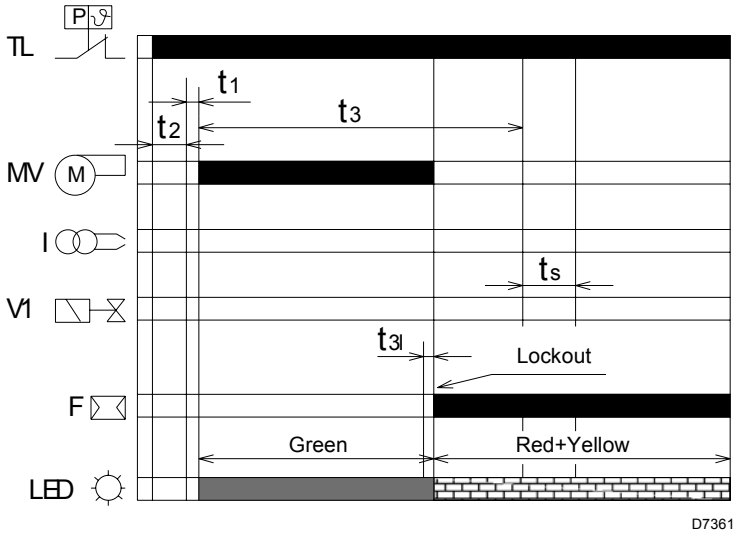
4.8.2 LOCKOUT DUE TO FIRING FAILURE



- KEY TO LAY-OUT**
- F** – Flame detector
 - I** – Ignition transformer
 - LED** – Reset button LED indicating operating status
 - MV** – Fan motor
 - TL** – Limit thermostat
 - V1** – Oil valve

- Red
- Green + Yellow slow blinking
- Green + Yellow fast blinking
- Green
- Green + Yellow medium blinking
- Red + Yellow fast blinking
- Yellow fast blinking

4.8.3 LOCKOUT DUE TO EXTRANEEOUS LIGHT DURING PRE-PURGING



OPERATING TIMES

t1	max	1	t4i	-	8
t1l	max	30	t5i	-	3
t2	-	3	t4l	max	1
t3	-	15	t6	max	360
t3l	max	1	t6l	max	30
ts	-	5	t7	-	120

Time is expressed in seconds

COLOUR CODE OF THE CONTROL BOX RESET BUTTON LED

Operating status		LED colour codes	Flashing speed	ON Seconds	OFF
Standby	○	LED unlit			
Pre-purging	●	Green			
Long pre-purging	●	Green			
Transformer ignition	●	Green + Yellow flashing	Fast	0.3	0.3
Regular flame	● ●	Green + Yellow flashing	Slow	0.3	2
Post-purging	● ●	Green + Yellow			
Recycle	● ●	Green + Yellow flashing	Medium	2	1
Continuous purging (*)	●	Green			
Extraneous light during standby	●	Yellow blinking	Fast	0.3	0.3
Extraneous light during post- or continuous purging (*)	● ●	Green + Yellow flashing	Fast	0.3	0.3
Extraneous light during lockout	● ●	Red + Yellow flashing	Fast	0.3	0.3
Lockout	●	Red			
Lockout with continuous purging (*)	● ●	Red + Green			

(*) only for applications where this is an option.

4.8.4 LOCKOUT TYPES AND TRIGGERING TIMES IN CASE OF BURNER MALFUNCTION

DESCRIPTION OF FAULT TYPES	LOCKOUT
Extraneous light when the burner is turned on and off	After max. 30 seconds
Extraneous light detected during pre-purging	Within 1 second
Extraneous light detected during post-purging or continuous purging (*)	After max. 30 seconds
Flame goes out during operation	After 3 recycles
No flame is detected after safety time	Immediate

(*) only for applications where this is an option.

4.8.5 CONTROL BOX RESET

To carry out the control box reset, proceed as follows:

- Hold the reset button down for between 1 and 2 seconds. If the burner does not restart, you must make sure the limit point thermostat (TL) is closed.
- **If the control box reset button keeps flashing, reporting the cause of the malfunction (RED LED), you must press the button again, holding it down for no more than 2 seconds.**

4.8.6 RE-CYCLE FUNCTION

The control box allows re-cycling, i.e. the complete repetition of the starting programme, for 3 attempts maximum, in the event the flame goes out during operation.

If the flame goes out again, this will cause the burner to lock out. If there is a new demand for heat during the recycle, the 3 attempts are reset when the limit thermostat (TL) switches.

4.8.7 LOGGING OF BURNER OPERATION PARAMETERS

With this control box, data - i.e. the number of lockouts that have occurred, the type of lockout that has occurred (just the last one) and the oil valve opening operating time - can be logged even when there is no power supply. That way, you can determine how much fuel has been consumed during operation.

To view these parameters, you will need to connect the software diagnostics kit, as described in section (1.2) on page 2.

4.9 ADDITIONAL PROGRAMMABLE CONTROL BOX FUNCTIONS

4.9.1 POST-PURGING FUNCTION (t6)

Post-ventilation is a function that maintains air ventilation even after the burner is switched off. The burner switches off when the limit thermostat (TL) opens, cutting off the fuel supply to the valves.

To use this function the reset button must be pressed when the limit thermostat is not switched over (burner switched off). Post-ventilation time can be set to a maximum of **6 minutes**. Proceed as follows:

- Press and hold the reset button for at least 5 seconds till the LED indicator changes to red.
- Set the desired time pressing the button repeatedly: **once = post-ventilation for 1 minute**.
- After 5 seconds the control box automatically shows the minutes set by the red LED flashing:
1 pulse = post-ventilation for 1 minute.

To reset this function, press and hold the button for at least 5 seconds, till the LED indicator changes to red then release it without carrying out any operation, then wait for 20 seconds for the burner to start.

If during post-purging there is a new request for heat, post-purging time is halted and a new operating cycle starts when the limit thermostat (TL) switches over.

If there is extraneous light during post-purging, the burner locks out after 30 seconds.

The control box leaves the factory with the following setting: **0 minutes = no post-purging**.

4.9.2 CONTINUOUS PURGING FUNCTION, (only for applications where this is an option)

Continuous purging is a function that keeps air purging on regardless of whether burner ignition is being requested. As soon as this mode is set, the motor keeps running both when the limit thermostat (TL) is not switched (burner off) and when the burner is locked out.

Only when the limit thermostat (TL) switches will the motor stop for the standby time of 4 seconds (standby position = $t_2 + t_1$).

The function can be set with the reset button, when the limit thermostat (TL) is not switched (burner off), following the procedure in section 4.9.1 post-purging function, by pressing the button **7 times = continuous purging**.

To reset this function, simply hold the button down for 5 seconds until the indicator LED goes red and release it without performing any operation, then wait at least 20 seconds to allow the burner to restart.

If there is extraneous light when the limit thermostat (TL) switches, the motor stops for as long as the extraneous light persists, after which there is a lockout.

The control box's factory setting is as follows: **0 minutes = no continuous purging**.

4.9.3 LONG PRE-PURGING FUNCTION (t7)

Long pre-purging is a feature that can be used to lengthen the air purging period to 2 minutes from when the limit thermostat (TL) switches to when the flame ignites. The function can be set with the reset button, when the limit thermostat (TL) is not switched (burner off), following the procedure in section 4.9.1 post-purging function, by pressing the button **8 times = long pre-purging**.

To reset this function, simply hold the button down for 5 seconds until the indicator LED goes red and release it without performing any operation, then wait at least 20 seconds to allow the burner to restart.

The control box's factory setting is as follows: **0 minutes = no long pre-purging**.

4.9.4 FUNCTION SETTING PROCEDURE USING RESET BUTTON

Control box function	Action with reset button	Reset button in enabled status
Reset	1 to 2 seconds	After control box lockout
Visual diagnostics of lockout causes (5.1)	3 seconds	After control box lockout
Post-purging (4.9.1)	5 seconds then press once = 1 minute	With limit thermostat (TL) not switched (burner off)
Continuous purging (4.9.2) (only for applications where this is an option)	5 seconds then press 7 times = continuous purging	With limit thermostat (TL) not switched (burner off)
Long pre-purging (4.9.3)	5 seconds then press 8 times = long pre-purging	With limit thermostat (TL) not switched (burner off)
Resetting set functions	5 seconds	With limit thermostat (TL) not switched (burner off)
Resetting operation parameters	5 seconds	With limit thermostat (TL) switched during pre-purging

5. MAINTENANCE

Disconnect the electric supply to the burner by switching off the main power switch and close the light oil shut-off valve before maintaining or checking the system.

The burner requires scheduled maintenance that must be carried out by qualified personnel and in compliance with local legislation.

Scheduled maintenance is vital for the smooth operation of the burner; it avoids waste of fuel and reduces harmful emissions into the atmosphere.

THE FUNDAMENTAL OPERATIONS TO CARRY OUT ARE AS FOLLOWS:

- Check there are no occlusions or obstructions in the inlet or return pipes, in the air suction areas and in the combustion product waste pipe.
- Check that the positioning of the combustion head is correct and that it is properly fixed to the boiler.
- Clean the combustion head at the fuel outlet.
- Clean the fuel suction line filter and the pump filter.
- Check that the burner electrical connections are correct.
- Clean the flame detector.
- Check for correct fuel consumption.
- Check that the combustion head (fig. 13, page 8) and the air damper (fig. 13, page 8) have been regulated properly.
- Replace the nozzle (fig. 11, page 8) if necessary and check the correct position of electrodes (fig. 10, page 7).
- Clean the fan.

Leave the burner working without interruptions for 10 min. and check the right settings at 1st and 2nd stage of all components stated in this manual. **Then carry out the analysis of the combustion by checking:**

- Smoke index as per the Bacharach scale;
- CO₂ percentage (%);
- CO content (ppm);
- NO_x content (ppm);
- Smoke temperature at the chimney.

5.1 CONTROL BOX VISUAL DIAGNOSTIC

The control box has a diagnostic function that can identify the likely causes of any malfunctions (indicator: **RED LED**).

In order to be able to use this function, press and hold the reset button for at least 3 seconds from when the appliance is made safe (**lock-out**).

The control box sends a sequence of pulses that are repeated at 2-second intervals.

RED LED illuminated press reset for 3 sec.	Pulses	Interval 2s	Pulses
	● ● ● ● ●		● ● ● ● ●

The sequence of pulses issued by the control box identifies the possible types of malfunction, which are listed in the table below.

SIGNAL	PROBABLE CAUSE
2 pulses ● ●	The flame does not stabilise at the end of the safety time: <ul style="list-style-type: none">– flame detector faulty or dirty;– oil valve faulty or dirty;– faulty ignition transformer;– poor burner regulation.
4 pulses ● ● ● ●	Light present in the chamber before the burner's switching on or off: <ul style="list-style-type: none">– presence of a strange light before or after the limit thermostat switching over;– presence of a strange light during pre-purging;– presence of a strange light during post-ventilation.

SIGNAL	PROBABLE CAUSE
7 pulses ● ● ● ● ● ● ●	Loss of flame during operations: – poor burner regulation (insufficient gas); – oil valve faulty or dirty; – flame detector faulty or dirty.
8 pulses ● ● ● ● ● ● ● ●	Check and monitor oil heater (if fitted): – check the correct position of the bridge socket "P".

ATTENTION To reset the control box after the diagnostics display, press the lockout-reset button.

6. FAULTS / SOLUTIONS

Below is a list of some of the causes and possible solutions to a series of problems that might be encountered and could cause a failure to start or irregular burner operation.

A fault usually makes the lock-out lamp light which is situated inside the reset button of the control box (3, fig. 1, page 2).

When lock out lamp lights the burner will attempt to light only after pushing the reset button. After this if the burner functions correctly, the lock-out can be attributed to a temporary fault.

However, if lockout continues, you must determine the cause of the problem and take the action illustrated in the solution column in the tables below.

6.1 START-UP PROBLEMS

FAULT	POSSIBLE CAUSES	SOLUTION
The burner doesn't start when the limit thermostat closes.	Lack of electrical supply.	Check presence of voltage in the L1 - N clamps of the 7 pin plug.
		Check the conditions of the fuses.
		Check that safety thermostat is not lock out.
	Bridge socket "P" missing or disconnected.	Connect it up properly.
	The connections in the control box are wrongly inserted.	Check and connect completely all the plugs.
The burner goes in safety lock-out before or during the pre-purge phase.	The flame detector sees strange light.	Eliminate the light.
Burner runs normally in the prepurge and ignition cycle and locks out after 5 seconds ca.	The flame detector is dirty.	Clear it.
	The flame detector is defective	Change it.
	Flame moves away or fails.	Check pressure and output of the fuel.
		Check air output.
		Change nozzle.
		Check the coil of solenoid valve.

FAULT	POSSIBLE CAUSES	SOLUTION
Burner starts with an ignition delay.	The ignition electrodes are wrongly positioned.	Adjust them according to the instructions of this manual.
	Air output is too high.	Set the air output according to the instructions of this manual.
	Nozzle dirty or worn.	Replace it.

6.2 OPERATING IRREGULARITIES

FAULT	POSSIBLE CAUSES	SOLUTION
Burner locks out during operation.	Flame disappears 4 times.	Clean or replace flame detector.
		Replace dirty or deteriorated nozzle.
	Does not shut down.	Check efficiency of flame detector.
		Check efficiency of pressure regulator's piston.
		Check efficiency of pump's on-off valve.

7. WARNINGS AND SAFETY

The dimension of the boiler's combustion chamber must respond to specific values, in order to guarantee a combustion with the lowest polluting emissions rate.

You are therefore advised to consult the Technical Assistance Department before choosing this type of burner for the combination with a boiler. Qualified personnel are those with the professional and technical requirements indicated by law No. 46 dated March 5, 1990 n° 46.

The commercial organisation has a widespread network of agencies and technical offices whose personnel participates periodically in instructional and refresher courses at the company training centre.

This burner must only be used for the purposes it has specifically been designed for.

All contractual and other liability on the part of the manufacturer is excluded for injury caused to people, animals or damage caused to property due to faulty installation, calibration, adjustment, maintenance or improper use.

7.1 BURNER IDENTIFICATION

The Identification Plate on the product gives the serial number, model and main technical and performance data. If the Identification Plate is tampered with, removed or missing, the product cannot be clearly identified thus making any installation or maintenance work potentially dangerous.

7.2 BASIC SAFETY MEASURES

- Children or inexperienced persons must not use the appliance.
- Under no circumstances must the intake grids, dissipation grids and ventilation vents in the installation room be covered up with cloths, paper or any other material.
- Unauthorised persons must not attempt to repair the appliance.
- It is dangerous to pull or twist the electric leads.
- Cleaning operations must not be performed if the appliance is not disconnected from the main power supply.
- Do not clean the burner or its parts with inflammable substances (e.g. petrol, alcohol, etc.). The cover must be cleaned with soapy water.
- Do not place anything on the burner.
- Do not block or reduce the size of the ventilation vents in the installation room.
- Do not leave containers and inflammable products in the installation room.



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