

- BRUCIATORI A GAS PROGRESSIVI E MODULANTI
- MODULATING AND PROGRESSIVE GAS BURNERS
- BRULEURS GAZ PROGRESSIVES ET MODULANTS
- QUEMADOR DE GAS PROGRESIVOS EN MODULANTE



ISO 9001
registered by
GASTEC



BLU 5000.1 PR / MD

BLU 6000.1 PR / MD

G20 - 70÷300 mbar

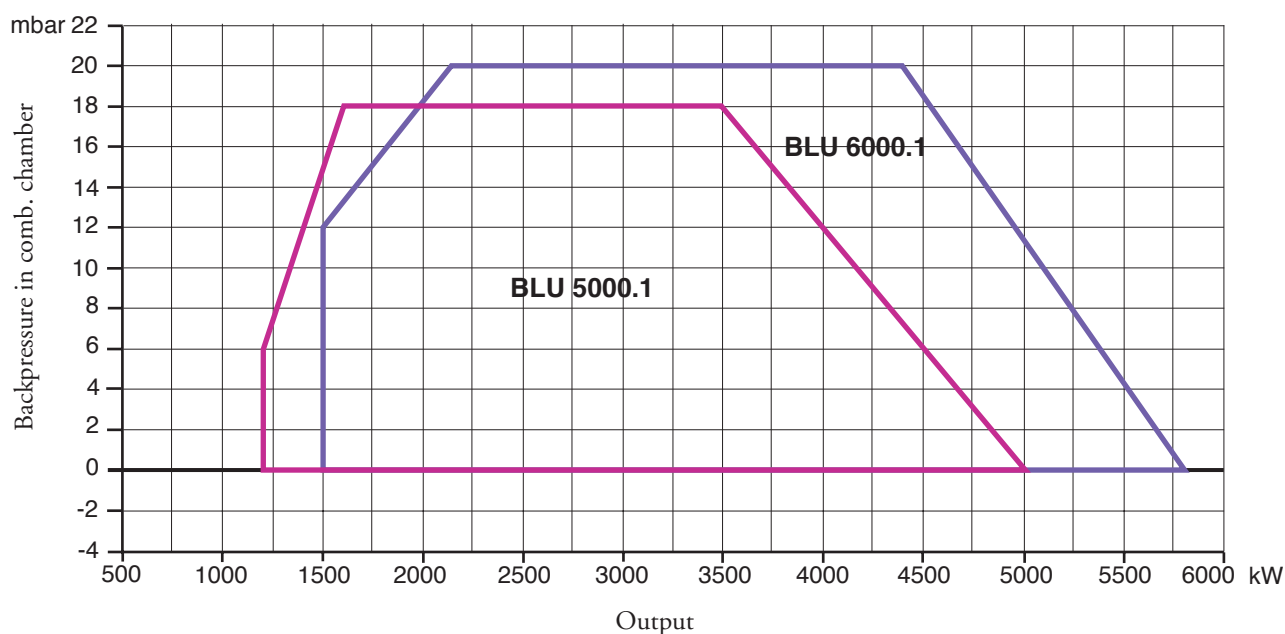


LB 832

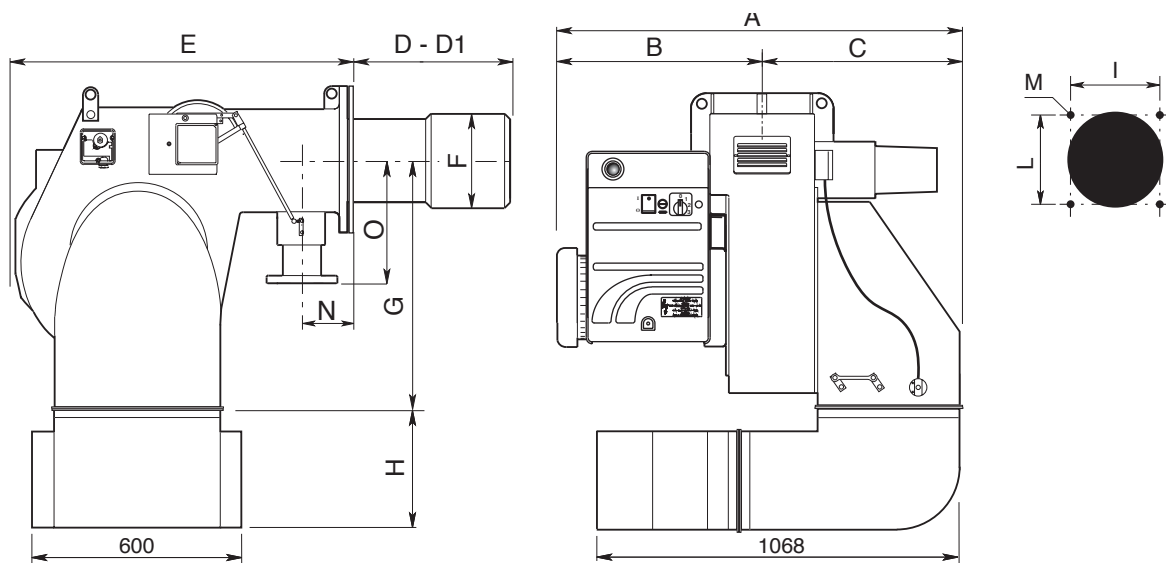
28.04.2004

Technical data		Blu 5000.1 PR	Blu 6000.1 PR	Blu 5000.1 MD	Blu 6000.1 MD
Thermal power max.	kW	5.000	5.800	5.000	5.800
	kcal/h	4.310.000	5.000.000	4.310.000	5.000.000
Thermal power min.	kW	1.200	1.500	1.200	1.500
	kcal/h	1.034.500	1.290.000	1.034.500	1.290.000
Max. natural gas capacity	Nm ³ / h	500	580	500	580
Min. natural gas capacity	Nm ³ / h	110	150	110	150
Natural gas pressure	mbar	70÷300	70÷300	70÷300	70÷300
Voltage 50 Hz	V	230/400	230/400	230/400	230/400
Motor power	kW	11	15	11	15
Rpm	N°	2800	2800	2800	2800
Fuel :		P.c.i. Natural gas = 35,9 MJ / Nm ³ = 8.570 kcal / Nm ³			

WORKING FIELDS



OVERALL DIMENSIONS



MODELS	A	B	C	D	D1	E	F	G	H	I	L	M	N	O
Blu 5000.1	1019	495	524	375	575	970	320	565	400	330	330	M16	195	250
Blu 6000.1	1069	545	524	375	575	970	320	565	400	330	330	M16	195	250
D= Short head D1= Long head														

CONNECTION TO THE GAS PIPELINE

Once connected the burner to the gas pipeline, it is necessary to control that this last is perfectly sealed. Also verify that the chimney is not obstructed. Open the gas cock and carefully bleed the piping through the pressure gauge connector, then check the pressure value through a suitable gauge. Power on the system and adjust the thermostats to the desired temperature. When thermostats close, the sealing control device runs a seal test of valves; at the end of the test the burner will be enabled to run the start-up sequence.

ELECTRICAL CONNECTIONS

All burners factory tested at 400 V 50 Hz three-phase for motors and 230 V 50 Hz monophase with neutral for auxiliary equipment. If mains supply is 230 V 50 Hz threephase without neutral, change position of connectors on burner as in fig. Protect burner supply line with safety fuses and any other devices required by safety standards obtaining in the country in question.

BURNER START-UP

Once connected the burner to the gas pipe make sure that there are no leakages. Air bleed the pipe through the pressure gauge fixing point and check the pressure with a pressure gauge. Turn the thermostats to the desired temperature.

PRELIMINARY CHECKS

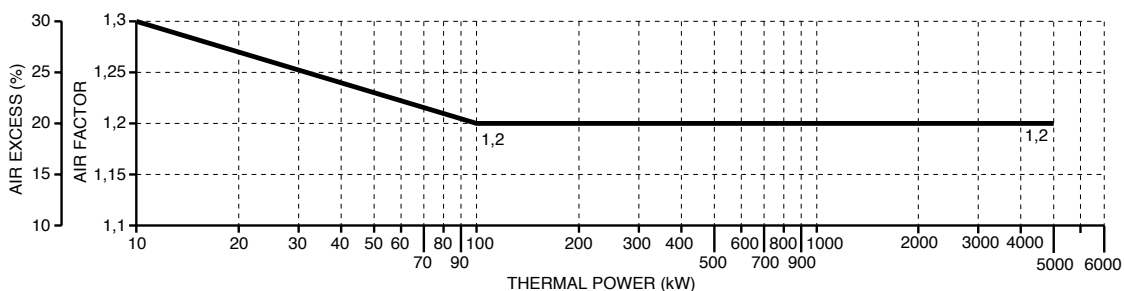
- Before starting up the boiler check the following: - gas type and feed pressure; - gas valves closed; - the seals in the pipe fittings; - gas pipe breather and input pressure; - that the cable complies with the diagram and the phase and neutral wires correspond; - that the burner shuts down when the boiler thermostat opens; - the seal of the boiler furnace which prevents air from entering; - the seal on the flue-boiler pipe fitting; - the condition of the flue (sealed, free from blockage, etc.). If all these conditions are present, start the burner. The control device starts the motor to carry out prewashing of the combustion chamber. During this prewash period (about 30 seconds) the device checks that air pressure is correct via the air pressure switch. At the end, it supplies power to the transformer and opens the gas valves. The flame must be lit and stabilize within 3 seconds, which is the device's safety time limit. Check to ensure the flame is lit before placing any control instrument in the flue. Adjust and check the gas flow necessary for the boiler at the meter. Adjust the air flow according to the gas flow to obtain correct combustion.

ADJUSTING THE COMBUSTION PROCESS

IMPORTANT: to obtain the right adjustment of the combustion and thermal capacity it is important to analyze the products of combustion with the aid of suitable instruments. The combustion and thermal capacity adjustment is done simultaneously, together with the analysis of the products of combustion, making sure that the measured values are suitable and that they comply with current safety standards. On this matter, please refer to the table and figure below.

THESE OPERATIONS MUST BE DONE BY PROFESSIONALLY-QUALIFIED TECHNICIANS.

	Natural Gas
CO ₂	9,6%
CO	<50 ppm
	LPG
CO ₂	11,7%
CO	<50 ppm

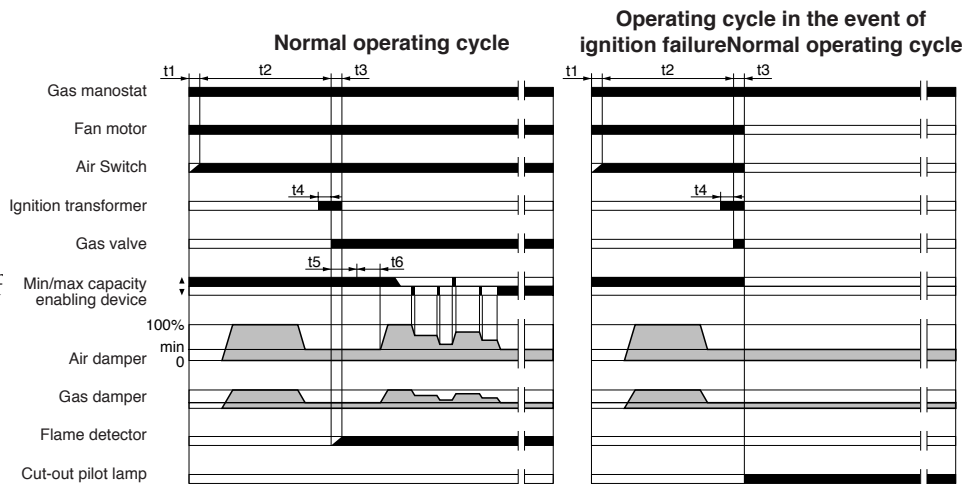


LANDIS & STAEEFA, Model LFL1.622 OPERATING CYCLE

Ref.	Description	Duration
t1	Duration Waiting time for confirmation of air pressure	8"
t2	Preventilation time	66"
t3	Safety time	2"
t4	Pressurizing time	4"
t5	Time for enabling operation of the main gas valve on minimum capacity	10"
t6	Time for enabling operation of the main gas valve on maximum capacity	10"

The control box starts the burner fan, to carry out the prepurging of the combustion chamber, and checks the vent air pressure through the air pressure switch. At the end of prepurging, the ignition transformer cuts-in and generates a spark between the electrodes. At the same time the two gas valves

open (Vs safety valve and V1 working valve). The total safety, in case of missed ignition or casual burner's flame-out, is granted by a ionisation probe which cuts-in and sets the burner shutdown within the safety time. In case of gas lack or a major pressure drop, the minimum air pressure switch shuts down the burner.



LANDIS & STAEEFA SQM 50.481A2 AIR DAMPER MOTOR

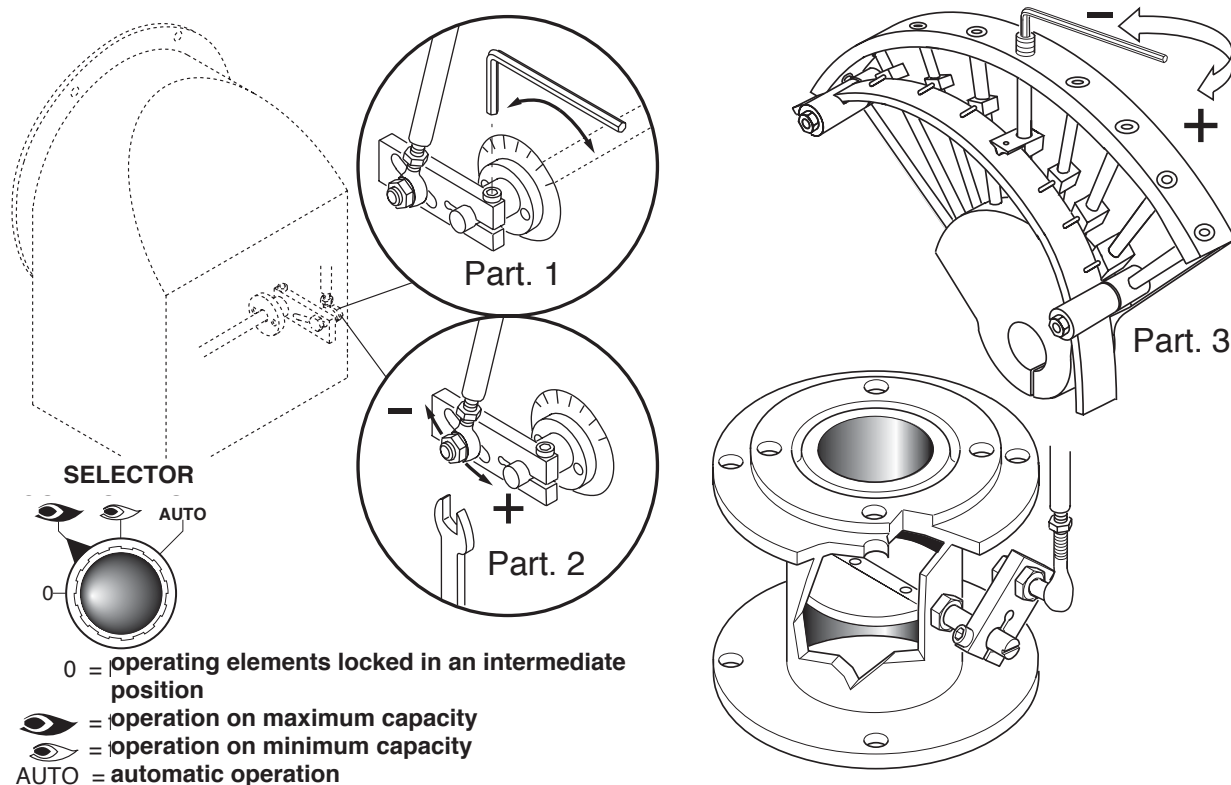
Remove cover to gain access to the adjusting cams. The cams are to be adjusted through the suitable key provided for. Description:



- I - High flame opening position adjusting cam (Air)
- II - Min. flame opening position adjusting cam (Air).
- III - Low flame opening position adjusting cam (Air)
- IV - Not used cam
- V - Not used cam
- VI - Not used cam
- VII - Not used cam
- VIII - Not used cam



AIR ADJUSTMENT



ADJUSTING THE MINIMUM CAPACITY OF THE BURNER – AIR and GAS

Position the selector placed on the control panel on position 2 and proceed as follows:

Adjust the minimum gas flow rate using a suitable wrench, turn the butterfly valve until you reach the correct gas flow, as established by analyzing the combustion process.

ADJUSTING THE MAXIMUM CAPACITY OF THE GAS

Position the selector, situated on the control panel, on position 1 and proceed as follows:

Adjusting the maximum gas flow rate (see figure on solenoid valve adjustments) or adjust the gas pressure in the governor.

ADJUSTING THE MAXIMUM AIR FLOW RATE

Adjusting the maximum air flow rate (see figure, detail 2). Loosen the nut holding the air damper transmission rod; The correct air flow as established by analyzing the combustion process.

ADJUSTING THE INTERMEDIATE BURNER CAPACITY

Using the selector, start the servomotor (closing or opening) and position on 0 to stop the stroke; the adjustment is made as outlined below. Repeat the operation for the other cam points.

Adjustment the intermediate gas flow rates (see figure, detail 3): - using a suitable Allen wrench, change the position of the cam guide blade; if you screw it down, the flow rate is reduced; if you unscrew it, the flow rate increases.

CALCULATING THE BURNER CAPACITY

To calculate the burner's capacity in kW, proceed as follows: Check the gas flow rate (in liters) on the counter and the time of the reading in seconds.

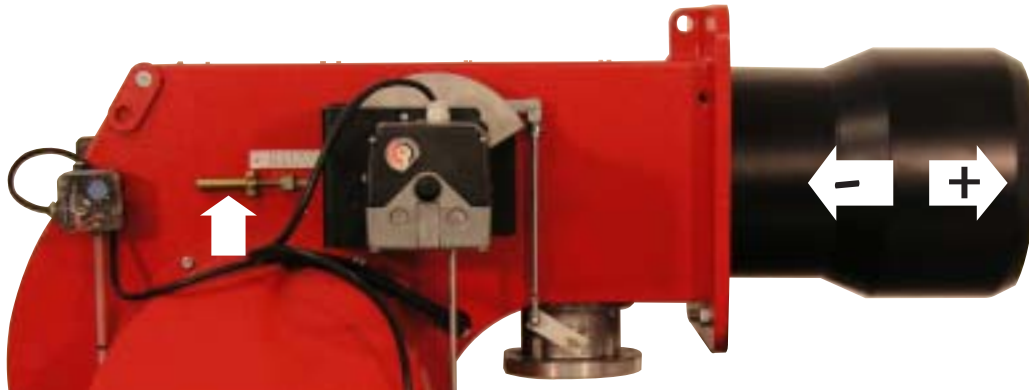
Proceed with the calculation using the following : $\frac{e}{\text{sec}} \times f = \text{kW}$

e	=	Litres gas
sec	=	Time in second
f	[	G20 = 34,02
		G30 = 116
		G31 = 88

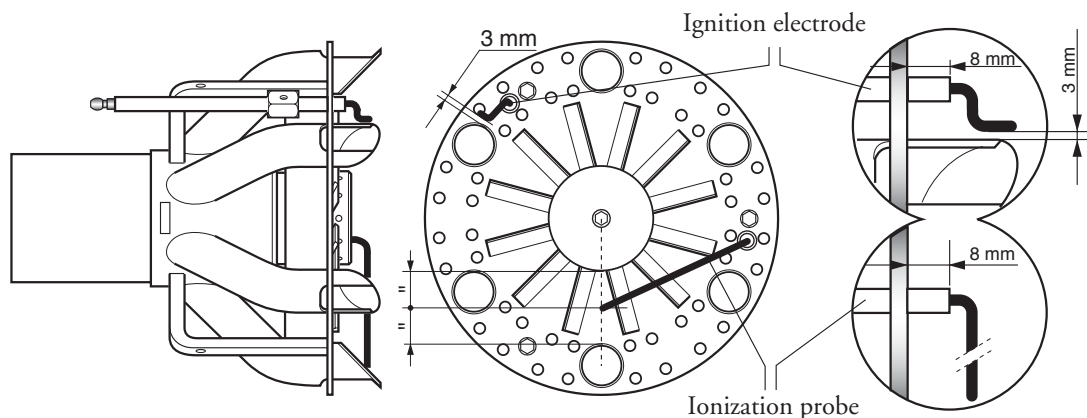
COMBUSTION ADJUSTMENT

WARNING: In order to have a correct combustion and thermal output adjustments, these must be carried out together with a combustion analysis, to be executed through suitable devices, taking care that the values are the correct ones and are in accordance with the local safety regulations. The adjustments must be carried out by qualified and skilled technicians authorised by Ecoflam S.p.A.

FIRING HEAD SETTING



IGNITION ELECTRODE



ADJUSTMENT OF GAS MINIMUM PRESSURE SWITCH

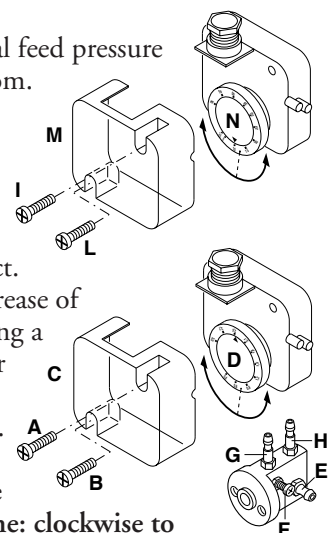
Unscrew off and remove cover M. - Set regulator N to a value equal to 60% of gas nominal feed pressure (i.e. for nat. gas nom. pressure = 20 mbar, set regulator to a value of 12 mbar; for L.P.G. nom. pressure of G30/G31- 30/37 mbar, set regulator to a value of 18 mbar). Screw up cover M

ADJUSTMENT OF THE AIR PRESSURE SWITCH

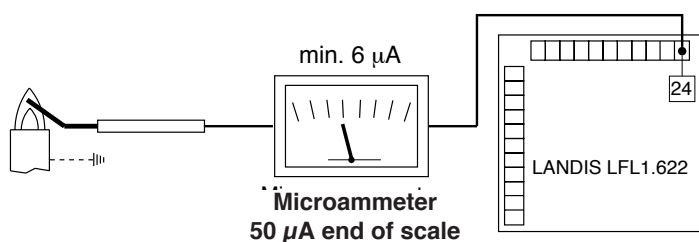
Unscrew screws A and B and remove cover C.- Set the pressure switch to the minimum by turning regulator D to position 1.

- Start the burner and keep in low flame running, while checking that combustion is correct. Through a small cardboard, progressively obstruct the air intake until to obtain a CO₂ increase of 0,5÷0,8% or else, if a pressure gauge is available, connected to pressure port E, until reaching a pressure drop of 1 mbar (10 mm of W.G.). - Slowly increase the adjustment value of the air pressure switch until to have the burner lockout. Remove the obstruction from the air intake, screw on the cover C and start the burner by pressing the control box rearm button.

Note: The pressure measured at pressure port E must be within the limits of the pressure switch working range. If not, loose the locking nut of screw F and gradually turn the same: clockwise to reduce the pressure; counterclockwise to increase. At the end tighten the locking nut.

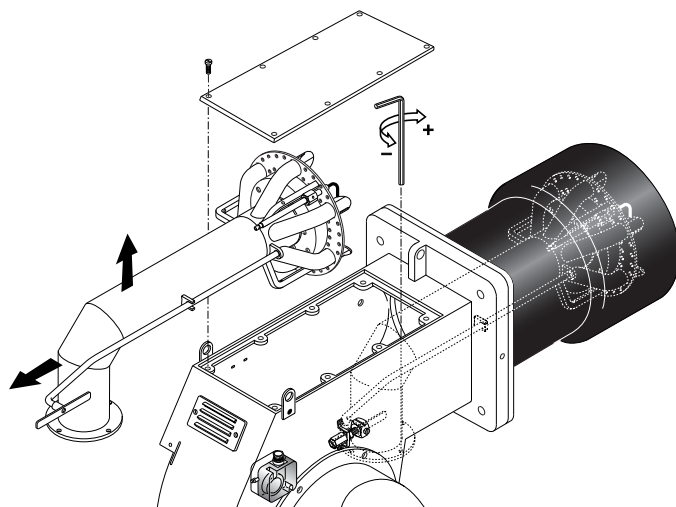


IONIZATION CURRENT

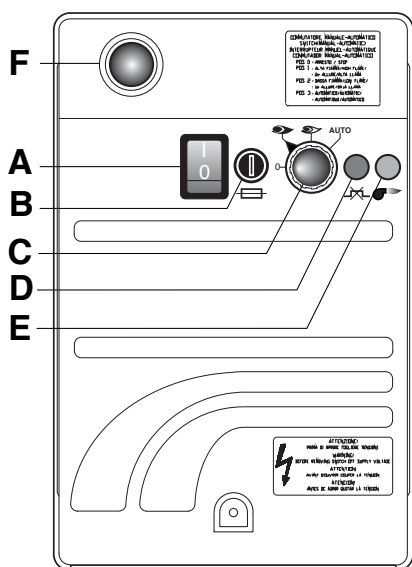


The ionization current is checked by inserting a microammeter with an end of scale of 50 μA (d.c.) in series with the ionization probe. A faulty position of the electrode can lead to a reduction in the ionization current and cause a safety cut-out of the burner due to a flame detection failure. In this case, check the position of the electrode, its electric connection and the earthing of the burner.

FIRING HEAD DISASSEMBLY



DESCRIPTION OF THE CONTROL PANEL OF THE BURNER



A- main switch I / O

B- fuse

C- selector :

0 = operating elements locked in an intermediate position



= operation on maximum capacity



= operation on minimum capacity

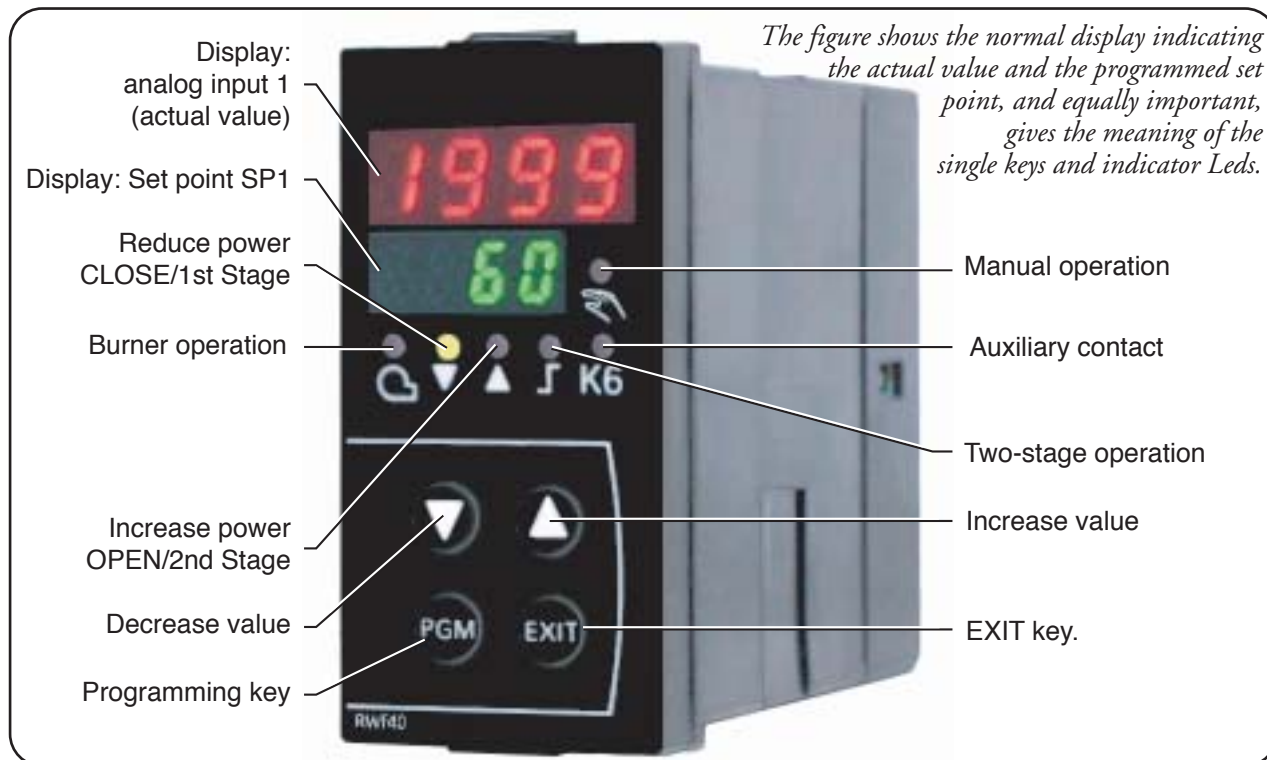
AUTO = automatic operation

D- thermal relaylock-out lamp

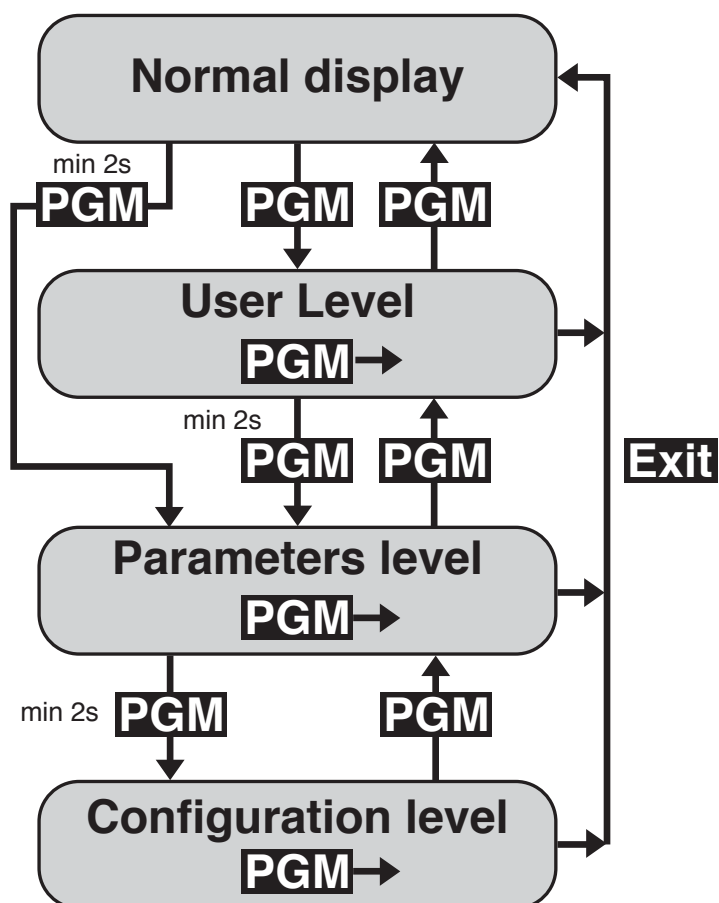
E - working lamp

F - reset key

RWF 40 MICROPROCESSOR REGULATOR

Description of display and keys on the RWF 40 microprocessor regulator

PROGRAMMING LEVELS



SETTING PARAMETERS

When the burner is ignited all displays of the regulator light up. The set point display will blink for about 10 seconds. The value in the upper field of the display (red) indicates the actual value. The value in the lower field of the display (green) indicates the set point currently programmed.

CHANGING THE SET POINT

To change the set point, proceed as follows: - Press the **PGM** button to access the user level. SP1* will appear in the lower display - Change the value of set point SP1 using the t and s keys. ▼ ▲. - After a 2 second delay the value set is stored automatically - To return to normal display press **EXIT**.

* The value of SP1 depends on the value set previously in configuration level C111.

SETTING PID PARAMETERS

PID parameters are factory set to standard mean values. The operation of the regulator can be self-adapted to suit the system by activating the "tunE" function. The regulator will set the PID parameters automatically. To activate the "tunE" function proceed as follows: - With the burner in operation, press **PGM** + ▼. - the caption "tunE*" will blink in the display. - When "tunE" stops blinking, the self-adaptation routine has been completed. - Confirm the computed parameters by pressing the ▲ key for 2 seconds.

* The "tunE" function cannot be activated in Manual mode, or when the burner is off.

The PID parameters can be corrected manually from the parameters level, working on the proportional band Pb1, the derivative action time dt and the integral action time rt.

To change parameters Pb1, dt and rt, proceeds as follows: - Press the **PGM** button to access the parameters level. - To move from one parameter to the next, press **PGM**. - When Pb1 is displayed, the value can be increased or decreased using the s and t keys. - Confirm the changed parameters by pressing **PGM**. - If confirmation is not given within 2 seconds the value will be stored automatically. - Press **PGM** to access the next parameter. - When dt is displayed, repeat the procedure described above. - Press **PGM** to access the next parameter. - When rt is displayed, repeat the procedure above. - To return to normal display press **EXIT**.

DIFFERENTIAL SETTING FOR IGNITION AND SHUTOFF

The regulator allows the selection of an adjustable switching differential that establishes burner ignition and shutoff values. HYS1 indicates the lower ignition limit, below which the regulator switches the burner to maximum power. HYS3 indicates the upper shutoff limit, above which the regulator switches the burner off. To set HYS1 and HYS3 proceed as follows: - Press the **PGM** key to access the parameters level. - To move from one parameter to the next, press **PGM**. - When HYS1 is displayed (burner ignition differential-stage II), increase or decrease the value using the ▼ and ▲ keys. - Confirm the changed parameters by pressing **PGM**. - If confirmation is not given within 2 seconds the value will be stored automatically. - Press **PGM** to access the next parameter. - When HYS2 is displayed (burner shutoff differential-stage II), repeat the procedure described above. - Press **PGM** to access the next parameter. - When HYS3 is displayed (upper shutoff differential) repeat the procedure described above. - To return to normal display press **EXIT**.

MANUAL/AUTOMATIC MODE

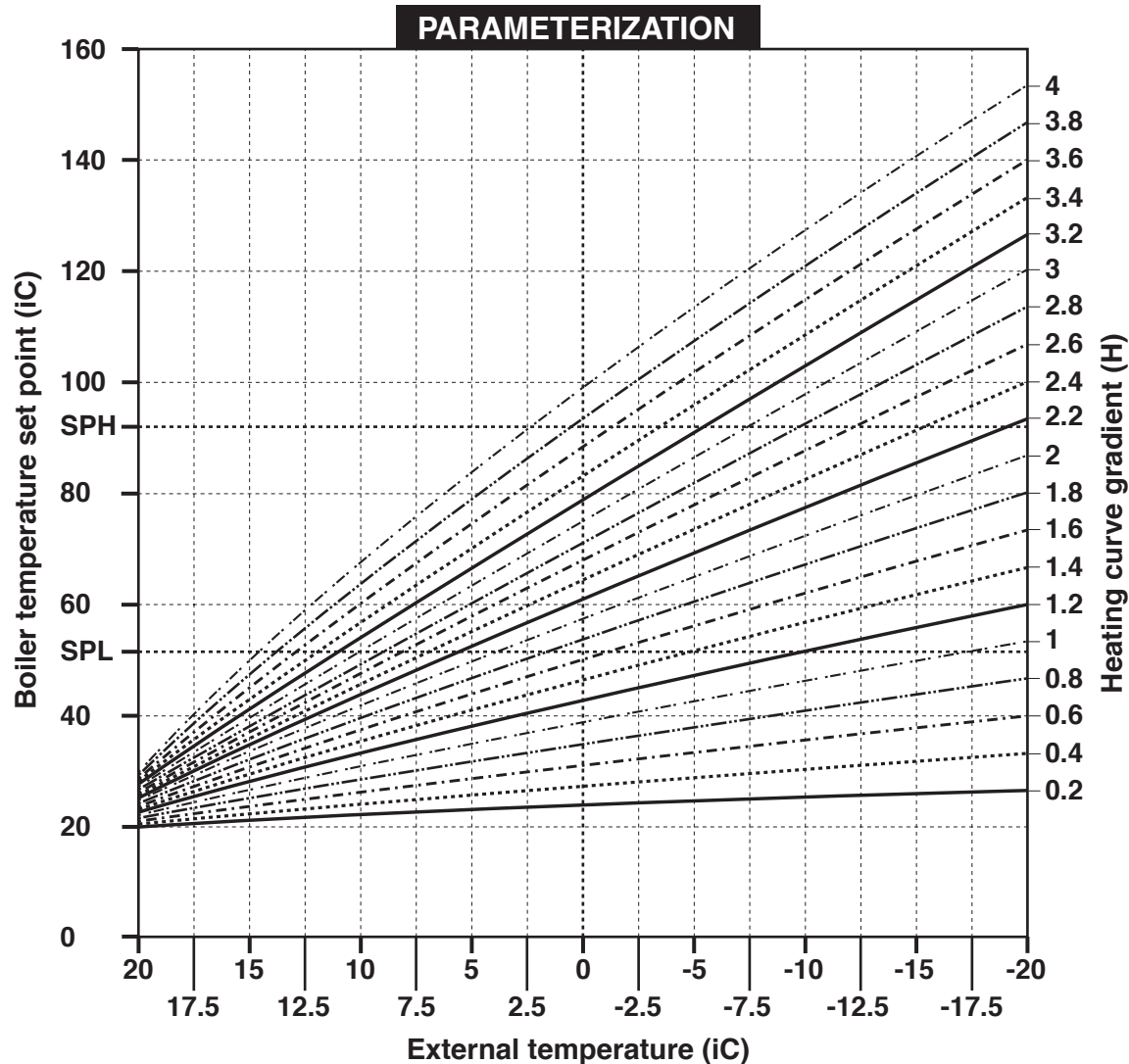
To access "MANUAL" mode, press and hold **EXIT** for at least 5 seconds. Manual mode can only be selected when the burner is in operation. It is deactivated automatically when the burner shuts off. When the LED above the hand symbol is alight, the regulator is in manual mode and the position of the servocontrol can be changed using the ▼ and ▲ keys. The LEDs on the front of the regulator indicate whether the servocontrol OPEN or CLOSE command is currently active. Pressing the ▼ key the servocontrol OPENS. Pressing the ▲ key the servocontrol CLOSES. To select automatic mode press and hold **EXIT** for at least 5 seconds. The LED above the hand symbol goes out and the regulator reverts to automatic.

CLIMATIC COMPENSATION

The RWF 40 regulator can be set with the set point interlocked to the external probe. To select this operating mode, proceed as follows: - Connect the required probe as in the wiring diagram. - Change the regulator settings. When using an external probe the regulator must be set as follows: - Press the **PGM** key to access the configuration level. When the caption C111 (XXXX) is displayed, use the ▲ key to access the second figure (XXXX). Use the ▼ key to select the type of probe (XX3X). - Confirm the change of parameters by pressing **PGM**. If this is not done within 2 seconds, the value is stored automatically - Press **PGM** to access the configuration level. When the display reads C112 (XXXX), use the ▲ key to access the second figure (XXXX). Press the ▼ key to set the type of probe (XX3X). - Confirm the changed parameters by pressing **PGM**. - If confirmation is not given within 2 seconds the value will be stored automatically.

- To return to normal display press **EXIT**. To establish the heating curve, proceed as follows:

- Press **PGM** to access the parameters level. - Press **PGM** to move from one parameter to the next. - When the letter H is displayed (heating curve gradient), increase or decrease the value using the ▼ and ▲ keys. - Confirm the changed parameters by pressing **PGM**. - If confirmation is not given within 2 seconds the value will be stored automatically. - To return to normal display press **EXIT**.

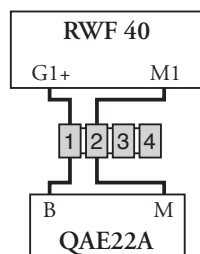


PROBE CONNECTION DIAGRAMS

Cod. S721



Connection for probe
QAE2..(passive probe)
Water probe
Configuration code
C111 = 9XXX

Cod.
S704

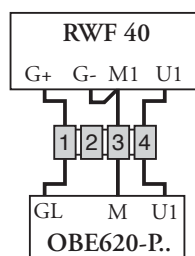
Connection for probe
FT-TP/..(passive probe)
(Degusa probe)
Configuration code
C111 = 5XXX

Cod.

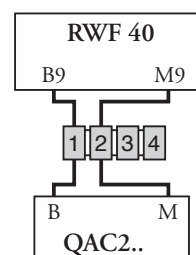
S731
S731/1
S731/2
S731/3
S731/4



Connection for probe
QBE620-P..(active probes)
Configuration code
C111 = GXXX
S731 - 0...4 bar / 0...400 kPa
QBE620-P4
S731/1 - 0...10 bar / 0...1 MPa
QBE620-P10
S731/2 - 0...16 bar / 0...1.6 MPa
QBE620-P16
S731/3 - 0...25 bar / 0...2.5 MPa
QBE620-P25
S731/4 - 0...40 bar / 0...4 MPa
QBE620-P40

Cod.
S720/1

Connection for probe
QAC22 (passive probe)
Configuration code
C111 = XX3X
C112 = XX1X



C111 – C112 INPUT CONFIGURATION INDICATIONS

Analog input 1 (actual value)	
Pt1000, 2-wire, Landis & Staefa IEC 751 FT-TP/... (passive probe)	5
Ni1000, 2-wire, Landis & Staefa QAE2 ... (passive probe - water probe)	9
Standard Signal DC 0...10 V QBE620P... (active probe - pressure probe)	G



Analog Input 3 (external temperature)	
No function (probe not active)	0
External probe Pt 1000, 2-wire, QAC22 (passive probe)	1

AUXILIARY CONTACT, TYPE OF REGULATOR, SET POINT "SP1" BLOCK C112. Parameter configuration



Set point "SP1"	
Set point SP1 - data input from keys	0
Set point SP1 - interlocked to external probe (configure)	1

ERROR/FAULT INDICATION NUMBERS BLINKING IN DISPLAY



- **Situation** - The number *1999* *blinks* in the display as the actual value, with the set point value displayed normally.
- **Cause** - The real value is not being measured. This means that the upper or lower limit of the measurement range on analog input 1 (real value) has been exceeded.
- **Remedy** - Check the electrical connections and the state of the probe. If the probe is faulty, the regulator will not indicate the real value of the physical quantity monitored. This will result in automatic shutdown (failsafe), **deactivation of the self-adapt function and inhibition of manual operation**. The response of the auxiliary contact will depend on the configuration of parameter C113.

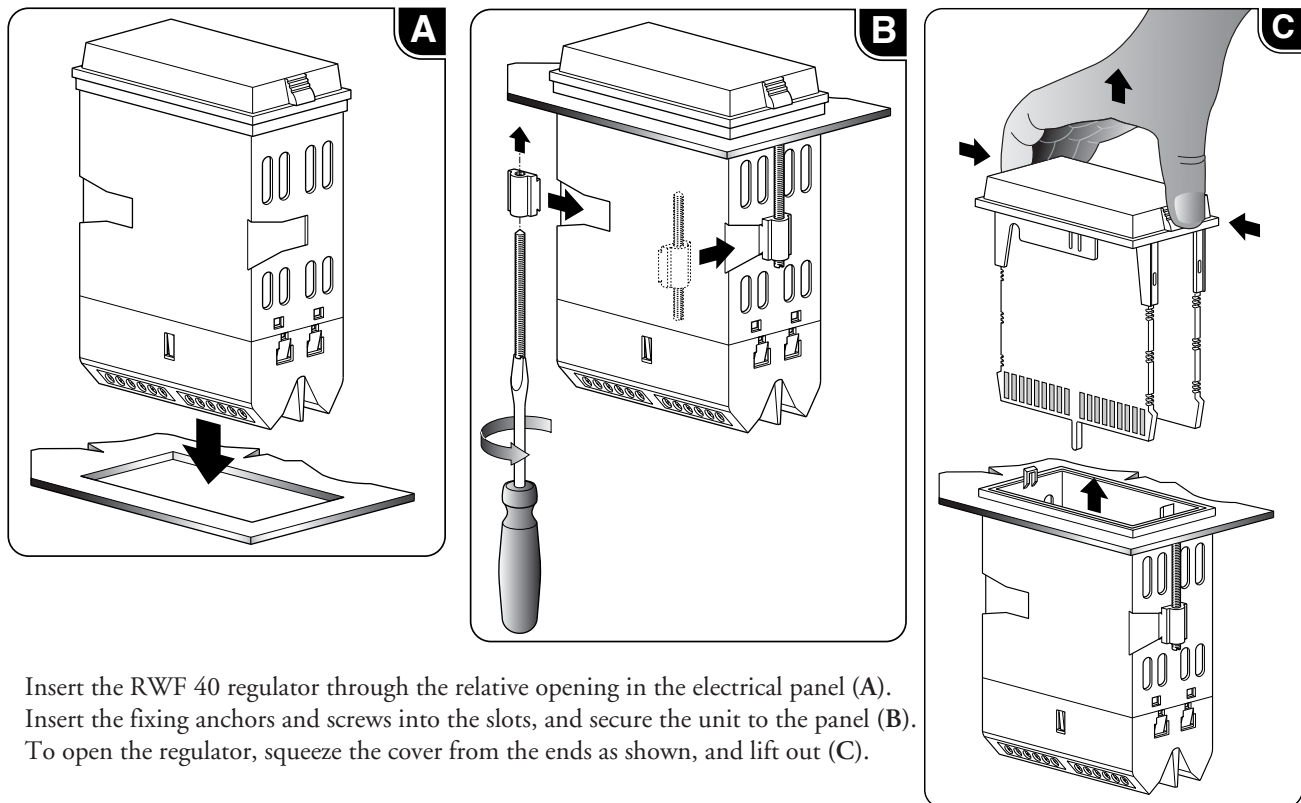


- **Situation** - The number *1999* *blinks* in the display as the actual value, with tR showing in the set point field.
- **Cause** - The external temperature is not being measured. This means that the upper or lower limit of the measurement range on analog input 3 (real value) has been exceeded.
- **Remedy** - Check the electrical connections and the state of the probe. If the probe is faulty, the regulator will not indicate the real value.



- **Situation** - The number *1999* *blinks* in the display as the actual value, with SP .E showing in the set point field.
- **Cause** - The external set point value is not being measured. This means that the upper or lower limit of the measurement range on analog input 2 (real value) has been exceeded.
- **Remedy** - Check the electrical connections and the external set point signal. If the probe is faulty, the regulator will not indicate the real value of the physical quantity monitored. This will result in automatic shutdown (failsafe), **deactivation of the self-adapt function and inhibition of manual operation**.

WHEN REPLACEMENT IS NECESSARY, PROCEED AS SHOWN IN FIGURES A-B-C BELOW



Insert the RWF 40 regulator through the relative opening in the electrical panel (A).
Insert the fixing anchors and screws into the slots, and secure the unit to the panel (B).
To open the regulator, squeeze the cover from the ends as shown, and lift out (C).

MAINTENANCE

ANNUAL CHECK

The burner (combustion head, electrodes, etc.) must be checked regularly by an authorized technician, once or twice a year, depending on how much it is used. Before proceeding with the maintenance check-up on the burner, it is advisable to check the general condition of the burner and take the following steps: Disconnect the burner (remove the plug).

- Close the gas shut-off cock.
- Remove the cover from the burner, clean the fan and air intake.
- Clean the combustion head and check the position of the electrodes.
- Re-install the parts.
- Check the seal on the gas connectors.
- Check the state of the flue.
- Start the burner.
- Check the combustion parameters

BEFORE TAKING ANY ACTION, CHECK:

- that there is power in the circuit and the burner is connected;
- that the gas pressure is right and the gas shut-off cock is open;
- that the control systems are properly connected. If all these conditions have been satisfied, start the burner by pressing the reset button. Check the burner cycle.

IF THE BURNER FAILS TO START:

check the switch, the thermostats, the motor and the gas pressure.

IF THE BURNER PROCEEDS WITH PREVENTILATION BUT CUTS OUT AT THE END OF THE CYCLE:

check the air pressure and the fan. Check the air pressure switch.

IF THE BURNER PROCEEDS WITH PREVENTILATION BUT DOES NOT LIGHT:

check the installation and position of the electrodes. Check the ignition cable.
Check the ignition transformer. Check the safety device.

IF THE BURNER LIGHTS BUT CUTS OUT AFTER THE SAFETY INTERVAL:

check that the phase and neutral wires are connected correctly.
Check the gas solenoid valve. Check the position and connection of the detector electrode.
Check the detector electrode. Check the safety device.

IF THE BURNER LIGHTS BUT CUTS OUT AFTER OPERATING FOR A FEW MINUTES:

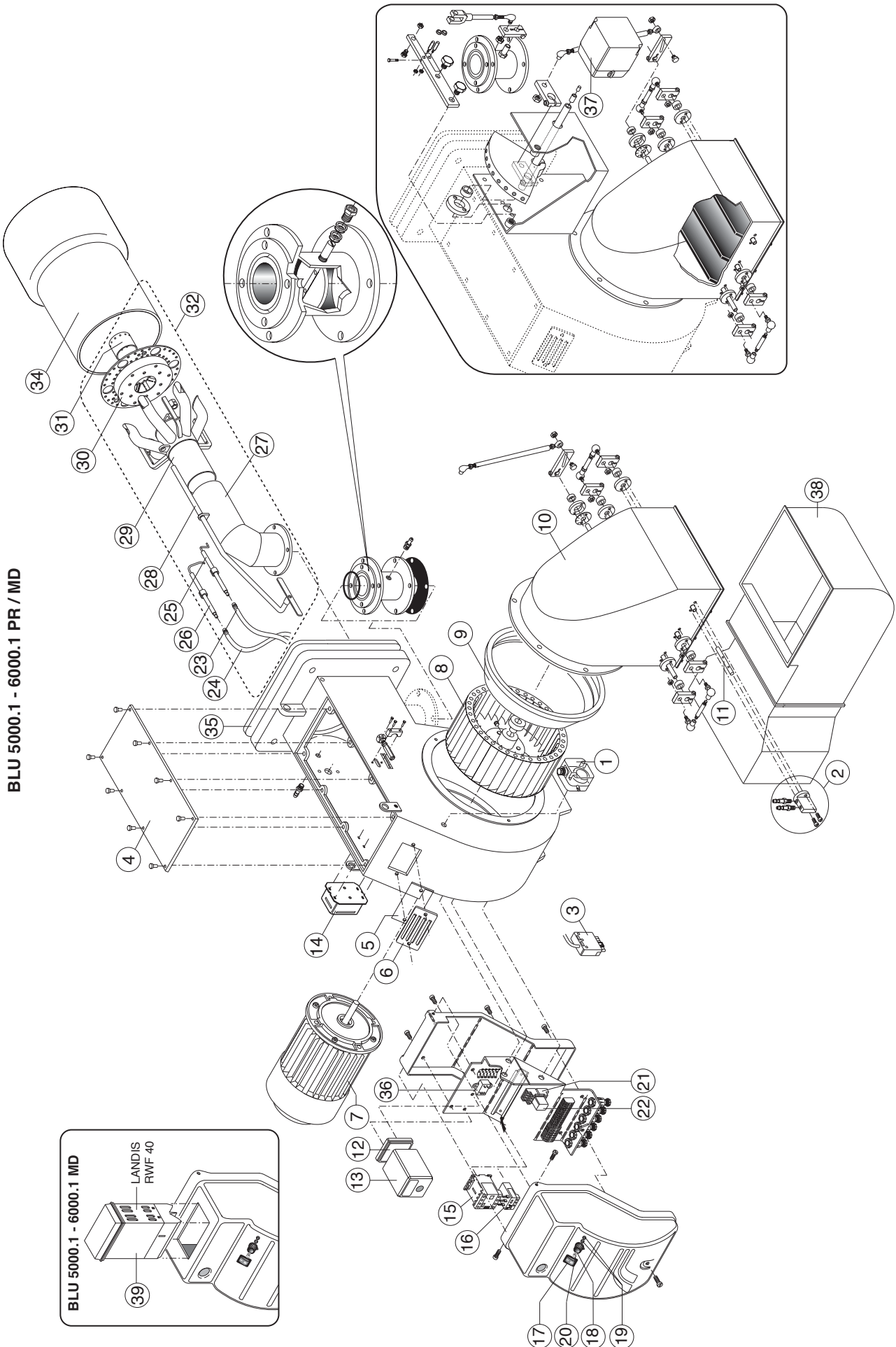
check the pressure regulator and gas filter. Check the gas pressure with a pressure gauge. Check the detector value (at least 6 μ A).

PARAMETERS

Parameter	Display	Ecoflam setting (passive probe)	Ecoflam setting (passive probe)	Ecoflam setting (active probe)
		QAE22	FT-TP/1000	QBE620-P...
Limit value of limit comparator	AL	0	0	0
Switching differential for limit comparator	HYS1	0	0	0
Proportional band	Pb.1	8	8	1
Derivative time	dt	20	20	3
Integral action time	rt	80	80	15
Dead band (neutral zone)	db	0.5	0.5	0.5
Actuator running time (sec.)	tt	25	25	25
Switch-on threshold burner / stage II	HYS1	-2	-2	-0.2
Switch-off level stage II	HYS2	0	0	0
Upper switch-off threshold	HYS3	5	5	0.5
Response threshold	q	0	0	0
Heating curve slope	H	2	2	2
Parallel displacement	P	0	0	0

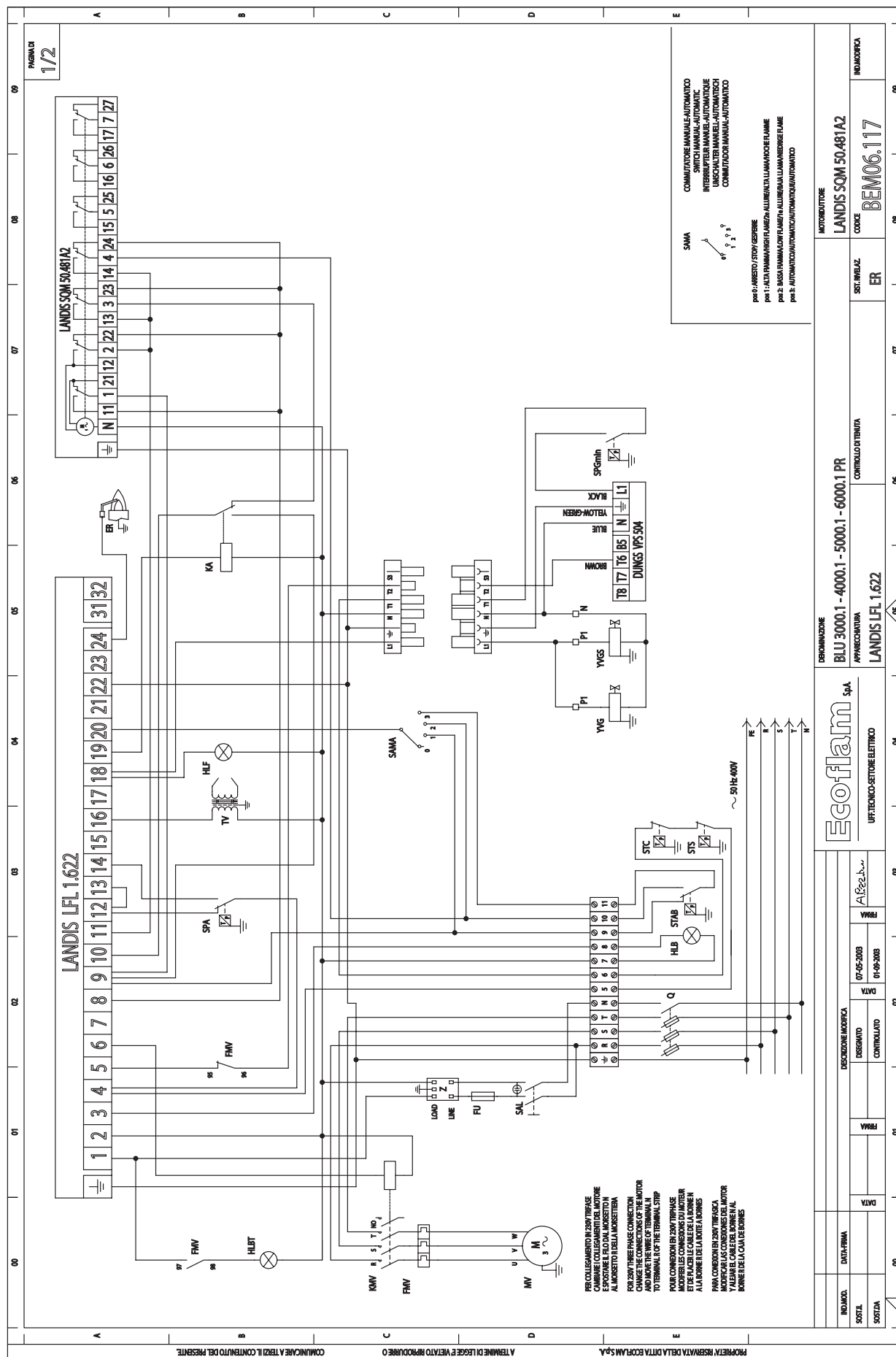
CONFIGURATION

Parameter	Display	Ecoflam setting						
		(passive probe)		(active probe) QBE620-P...				
		QAE22	FT-TP/1000	-P4	-P10	-P16	-P25	-P40
Analog input 1, 2 and 3; setpoint changeover / shift	C111	9030	5030	G000	G000	G000	G000	G000
Limit comparator; controller type; setpoint 1; locking	C112	0010	0010	0010	0010	0010	0010	0010
Unit address; decimal place / unit, signal for out-of-range	C113	0110	0110	0110	0110	0110	0110	0110
Measured value range start analog input 1	SCL	0	0	0	0	0	0	0
Measured value range analog input 1	SCH	100	100	4	10	16	25	40
Measured value range analog input 2	SCL2	0	0	0	0	0	0	0
Measured value range analog input 2	SCH2	0	0	0	0	0	0	0
Lower setpoint limit	SPL	60	60	0	0	0	0	0
Upper setpoint limit	SPH	88	88	4	10	16	25	40
Actual value correction,analog input 1	OFF1	0	0	0	0	0	0	0
Actual value correction,analog input 2	OFF2	0	0	0	0	0	0	0
Actual value correction,analog input 3	OFF3	0	0	0	0	0	0	0
Filter time constant for digital filter, analog input 1	dF1	1	1	0	0	0	0	0



N°	DESCRIPTION	Modulair P 5000.1 BLU PR 5000.1 code	Modulair P 6000.1 BLU PR 6000.1 code
1	- AIR PRESSURE SWITCH DUNGS LGW10 A2P	Q120	Q120
2	- AIR INTAKE SET	GRPA100	GRPA100
3	- PLUG WIELAND 6 pin	E226	E226
4	- COVER	BFC09252/038	BFC09252/038
5	- GLASS	BFC02004	BFC02004
6	- PEED WINDOM FRAME	BFC02006	BFC02006
7	- MOTOR 11 k W	M176/1	-
	15 k W	-	M170/3
8	- FAN 360 x 135	BFV10305/001	-
	380 x 135	-	BFV10306/001
9	- AIR CONVEYOR	BFC08255	BFC08255
10	- AIR INTAKE	GRCA380	GRCA380
11	- AIR INTAKE PIPE	BFS02208/201	BFS02208/201
12	- CONTROL BOX BASE LANDIS	A401	A401
13	- CONTROL BOX LANDIS LFL1.622	A113	A113
14	- IGNITION TRANSFORMER COFI 820 PM	T106/4	T106/4
15	- REMOTE CONTROL SWITCH BF40.00	R616	R616
16	- MOTOR THERMAL RELAY Lovato RF95 20-33 A	R510/7	R510/7
17	- MAIN SWITCH cod.40100I1509	R1020	R1020
18	- MANUAL / AUTOMATIC SELECTOR	R1020/5	R1020/5
19	- LAMP Elettrospring EL/N-SC4	E1510	E1510
20	- FUSE SUPPORT FUSIT FH-B528	E802/2	E802/2
21	- RELAY BASE Finder 5532	R905	R905
22	- RELAY Finder 5532	R711	R711
23	- IGNITION CABLE TC		
	TL	BFE01402/5	BFE01402/5
24	- IONIZATION CABLE TC		
	TL	E1102/28	E1102/28
25	- IGNITION ELECTRODE	BFE01057/1	BFE01057/1
26	- IONIZATION PROBE	BFE01057/2	BFE01057/2
27	- PIPE TC	BFT14015/101	BFT14015/101
	TL	BFT14015/201	BFT14015/201
28	- ROD TC	BFA08021/101	BFA08021/101
	TL	BFA08021/201	BFA08021/201
29	- FIRING HEAD	BFT14016/001	BFT14016/001
30	- FRONT DISC	BFD03020	BFD03020
31	- FRONT PIPE	BFT12113/3	BFT12113/3
32	- INNER ASSEMBLY TC		
	TL		
34	- BLAST TUBE TC	BFB07022/103	BFB07022/103
	TL	BFB07022/203	BFB07022/203
35	- GASKET	BFG04052/1	BFG04052/1
36	- ANTIJAMMING FILTER	S132/4	S132/4
37	- AIR DAMPER MOTOR SQM50.481A2	M212/91	M212/91
38	- SILENCER	GRSIL07	GRSIL07
Only Modulating gas burners:		Modulair P 5000.1	Modulair P 6000.1
39	- MODULATING UNIT LANDIS RWF 40	E1215	E1215

TC = SHORT HEAD TL = LONG HEAD

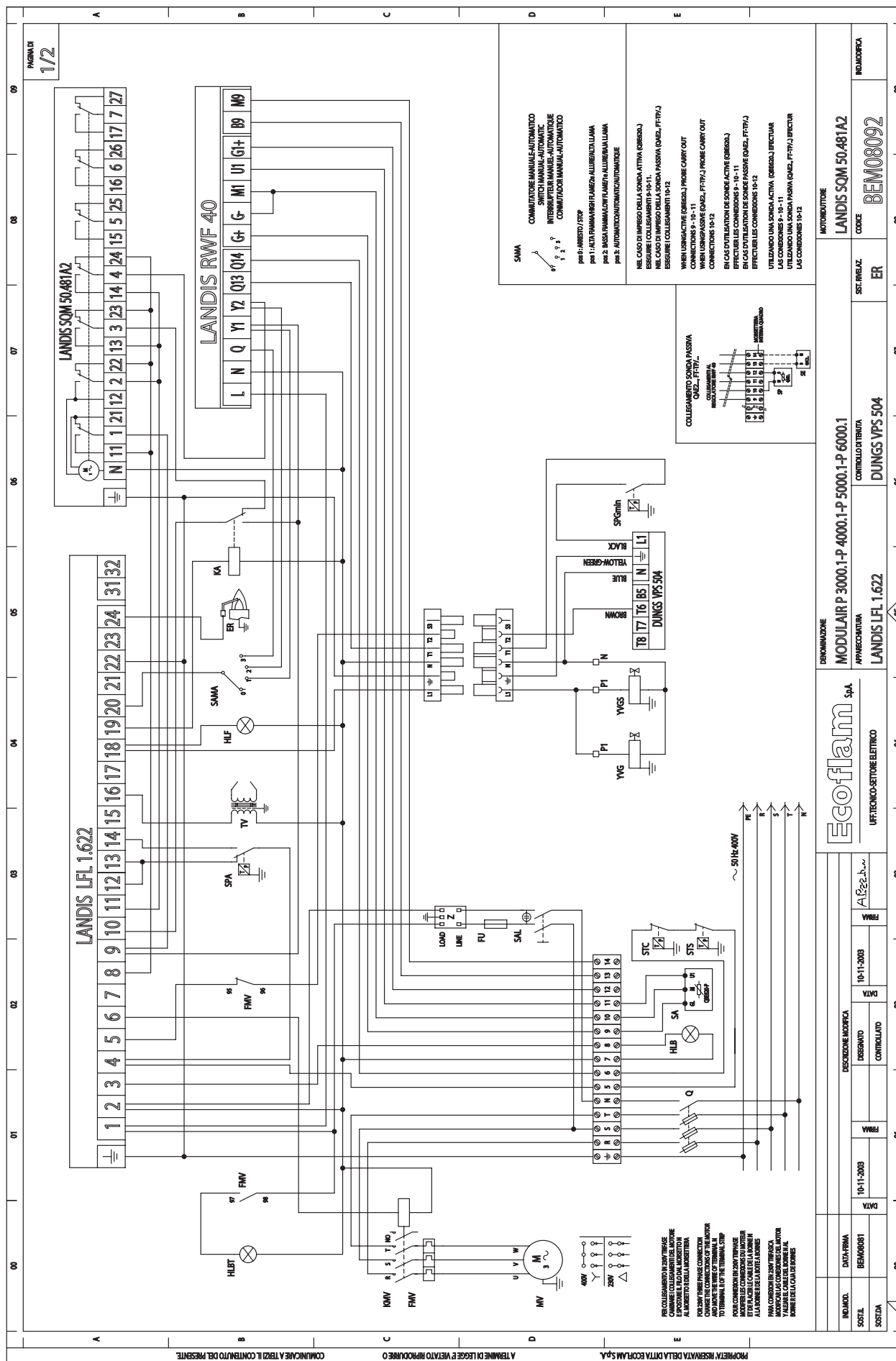




Q		INTERRUTTORE GENERALE CON FUSIBILE MAIN SWITCH WITH FUSE INTERRUPTEUR GENERAL AVEC FUSIBLE INTERRUPTOR GENERAL CON FUSIBLE	STAB	TERMOSTATO DI ALTA/BASSA FIAMMA HIGH-LOW FLAME THERMOSTAT THERMOSTAT GRANDE/PETITE ALLURE THERMOSTATO DE ALTA/BAJA LLAMA
Z		FILTRO ANTIDISTURBO ANTI-JAMMING FILTER FILTRE ANTIPARASITES FILTRO DE PROTECCION ANTIDISTURBO	YWG1	ELETTROVALVOLA GAS DI PRIMA FIAMMA FIRST STAGE GAS SOLENOID VALVE ELECTROVANNE GAZ PETITE ALLURE ELECTROVALVULA GAS DE 1ª LLAMA
FU		FUSIBILE FUSE FUSIBLE FUSIBLE	YWGS	ELETTROVALVOLA GAS DI SICUREZZA EXTRA SAFETY GAS SOLENOID VALVE ELECTROVANNE GAZ DE SECURITE ELECTROVALVULA GAS DE SEGURIDAD
KA		RELE RELAY RELAIS RELE	SPGmin	PRESSOSTATO GAS DI MINIMA GAS PRESSURE SWITCH MIN PRESSOSTAT GAZ DE MINIMUM POT. PRESSOSTATO GAS DE MINIMA POT.
MV		MOTORE VENTILATORE MOTOR FAN MOTEUR VENTILATEUR MOTOR VENTILADOR	HLF	LAMPADA DI FUNZIONAMENTO WORKING LAMP LAMPE DE FONCTIONNEMENT ESPA DE FUNCIONAMIENTO
TV		TRASFORMATORE IGNITION TRANSFORMER TRANSFORMATEUR D'ALLUMAGE TRANSFORMADOR	HLBT	LAMPADA DI BLOCCO TERMICO THERMAL LOCK-OUT LAMP LAMPE DE THERMAL DE SECURITE ESPA DE BLOQUEO RELE TERMICO
ER		ELETTRODO DI INNEZZIONE IGNITION PROBE ELECTRODE D'INJECTION ELECTRODO DE INYECCION		
FMV		RELE TERMICO MOTORE VENTILATORE MOTOR THERMAL RELAY (FAN MOTOR) RELAIS THERMIQUE MOTEUR VENTILATEUR RELE TERMICO MOTOR VENTILADOR		
HLB		LAMPADA DI BLOCCO LOCK-OUT LAMP LAMPE DE SECURITE ESPA DE BLOQUEO		
KMV		CONVITTORE MOTORE VENTILATORE REMOTE CONTROL SWITCH (FAN MOTOR) COMMANDEUR MOTEUR VENTILATEUR TELEINTERRUPTOR MOTOR VENTILADOR		
SAL		INTERRUTTORE DI LINEA WORKING SWITCH INTERRUPTEUR DE LIGNE INTERRUPTOR DE LINEA		
SPA		PRESSOSTATO ARIA AIR PRESSURE SWITCH PRESSOSTAT AIR PRESSOSTATO AIRE		
STC		TERMOSTATO CALDAIA BOILER THERMOSTAT THERMOSTAT CHAUDIERE TERMOSTATO CALDEIRA		
STS		TERMOSTATO DI SICUREZZA SAFETY THERMOSTAT THERMOSTAT DE SECURITE THERMOSTATO DE SEGURIDAD		
HLBT		LAMPADA DI BLOCCO TERMICO THERMAL LOCK-OUT LAMP LAMPE DE THERMAL DE SECURITE ESPA DE BLOQUEO RELE TERMICO		
SAMA		COMBUSTORE MANUALE/AUTOMATICO SWITCH MANUAL/AUTOMATIC COMBUSTEUR MANUEL/AUTOMATIQUE COMBUSTIVADOR MANUAL-AUTOMATICO		

A		B		C		D		E	

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