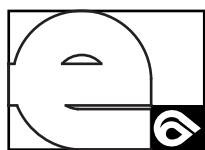


GAS / LIGHT-OIL DUAL BURNERS



Ecoflam

techniques for energy saving

MODEL



ISO 9001
registered by
GASTEC



Multicalor 500.1 PR

Multicalor 600.1 PR

Light oil / Natural Gas 500 mbar

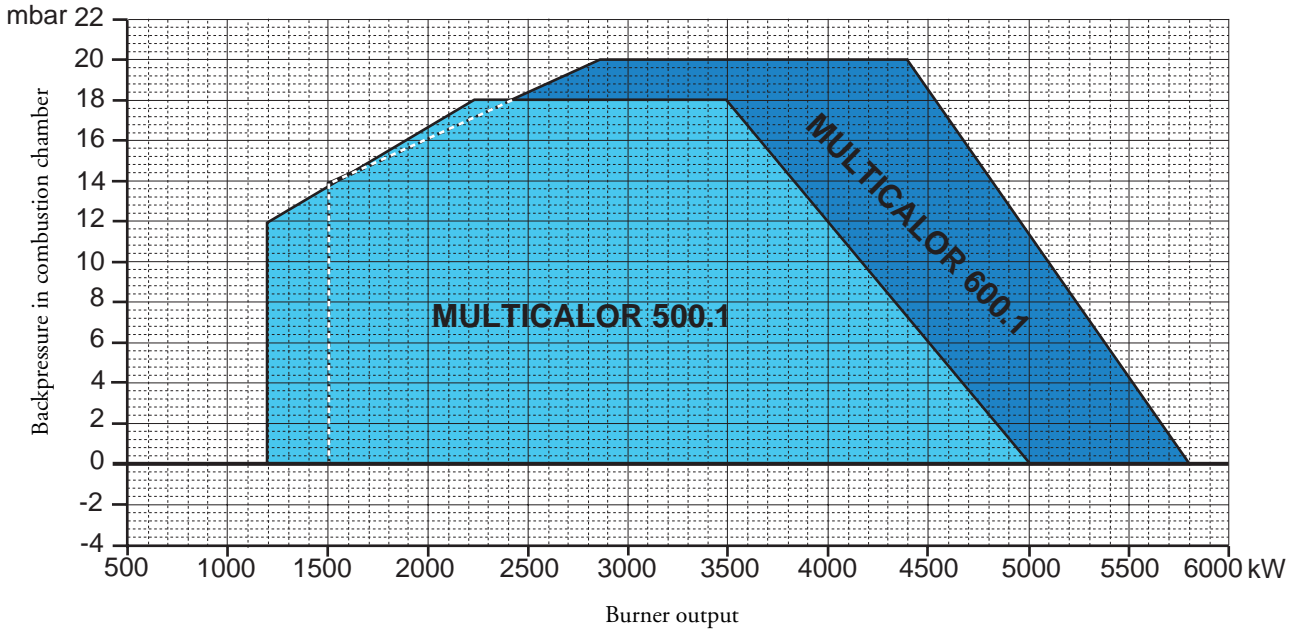


LB1291

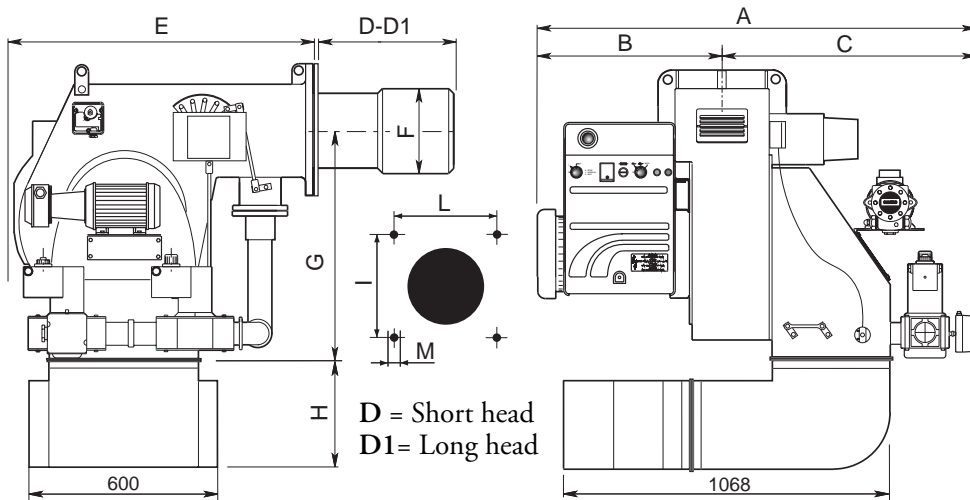
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Models		MULTICALOR 500.1 PR	MULTICALOR 600.1 PR
Thermal power max.	kW	5000	5800
	kcal/h	4.310.000	5.000.000
Thermal power min.	kW	1200	1500
	kcal/h	1.034.500	1.290.000
Max. capacity (Natural Gas)	Nm ³ /h	500	580
Min. capacity (Natural Gas)	Nm ³ /h	120	150
Gas pressure	mbar	500	500
Max. light oil flow rate	kg/h	421,6	489
Min. light oil flow rate	kg/h	101	126,5
Voltage 50 Hz	V	230/400	230/400
Motor	kW	11	15
Rpm	N°	2800	2800
Fuels: Nat. Gas LHV = 35,9 MJ/Nm ³ = 8.570 kcal/Nm ³ ; Light Oil LHV = 10.200 kcal/kg max. 1,5° at 20 °C			

WORKING FIELDS



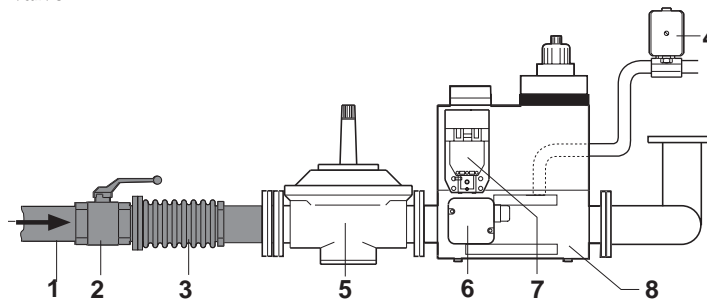
OVERALL DIMENSIONS



MODELS	A	B	C	D	D1	E	F	G	H	I	L	M
Multicalor 500.1	1426	543	883	375	575	910	320	600	400	330	330	M16
Multicalor 600.1	1426	543	883	375	575	910	320	600	400	330	330	M16

GAS TRAIN INSTALLATION

- 1 - Main gas pipe
- 2 - Ball valve
- 3 - Antivibration coupling
- 4 - Pilot gas valve
- 5 - Gas governor and filter
- 6 - Gas pressure switch
- 7 - Leakage control
- 8 - Working gas valve



ELECTRICAL CONNECTIONS

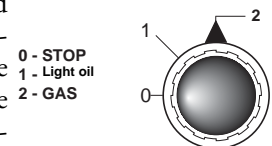
All burner motors are tested at 400 V 3phase at 50 Hz, whilst auxiliaries are tested at 230V 1phase at 50 Hz. Should it be necessary to power the burners at 230V/50Hz 3phase without neutral, carry out the necessary modifications according to the burner's wiring diagram, and check that the thermal relay is within the absorption field of the motor.

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.

BURNER START-UP

Before starting the burner, make sure it is mounted correctly. Then check connections are correct according to the diagram and piping is appropriate to the system. Before connecting the burner to the electricity supply, make sure voltage corresponds to burner plate data. The connection diagram and start-up cycle are shown separately. For wiring from control box to burner, see the enclosed connection diagram. Pay particular attention to neutral and phase connections : never exchange them!. Vent air and impurities of gas pipe. Check gas pressure conforms to the limits stated on the burner plate when connecting a master gauge to the test port provided on the burner. Blower motor starts and pre-purging begins. Since pre-purging has to be carried out with the max. air delivery, the burner control circuit turns the air damper to the max. delivery position by the air servocontrol in approximately 30 seconds time. When the servocontrol is fully open, a signal to the electronic control unit starts the 66 seconds pre-purge cycle. At the end of the prepurging time, the air servocontrol gets to the Low Flame position so that burner ignition is ensured at min. output. Simultaneously the ignition transformer receives voltage and after 3 seconds (pre-ignition) opens the pilot gas valve. Fuel flows to the combustion head and ignites. Two seconds after pilot gas valves have opened, the ignition transformer is excluded from the circuit. In case of no ignition the burner goes to lock-out within two seconds. After 6 sec. open the working gas valve, governed by the gas firing butterfly valve. Now the burner is operating at the min. firing rate (about 30% of the max. firing rate). The air servocontrol runs at the Low Flame position and in case the temperature control has to be set at the max. output it goes to a fully open position of air damper and butterfly valve. During the burner-off periods the air damper closes up fully.



ADJUSTING THE COMBUSTION PROCESS

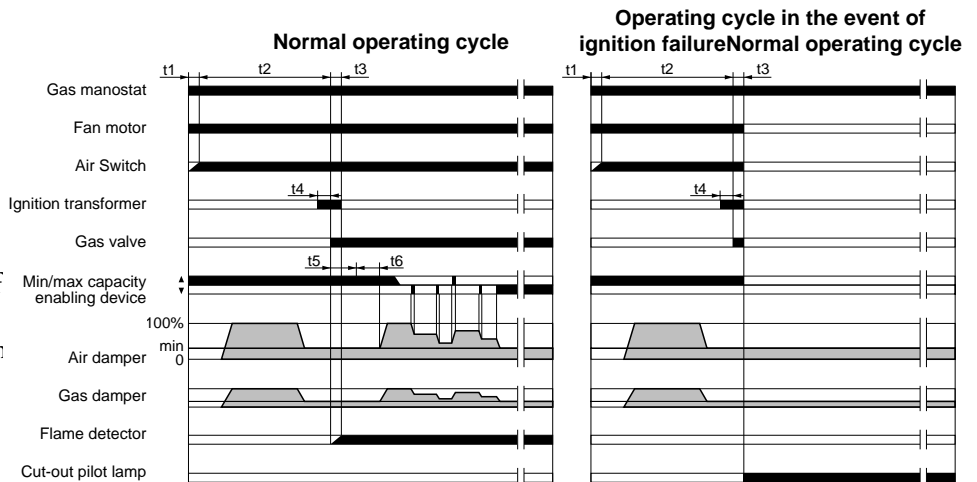
IMPORTANT: to obtain the right adjustment of the combustion and thermal capacity it is important to analyze the reducts of combustion with the aid of suitable instruments. The combustion and thermal capacity adjustment is done simultaneously, together with the analysis of the products of combustion, 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.**

NOTE: ALL SAFETY DEVICES (AIR PRESSURE SWITCH, MINIMUM GAS PRESSURE SWITCH, GAS SOLENOID VALVES AND GAS GOVERNOR) SHALL BE DULY SEALED AFTER CALIBRATION AND BURNER START UP BY ECOFLAM'S TECHNICIANS.

LANDIS & STAEEFA, Model LFL1.622 OPERATING CYCLE

Ref.	Description	Duration
t1	Duration Waiting time for confirmation of air pressure	8"
t3	Preventilation time	66"
t4	Safety time	2"
t5	Pressurizing time	4"
	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 VI 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.



CALCULATING THE BURNER CAPACITY

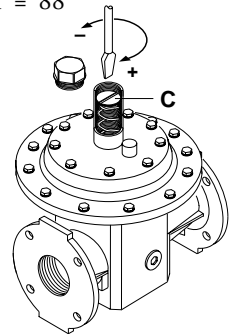
To calculate the burner's capacity in kW, proceed as follows: Check the gas flow rate (in liters) on the counter and the time of the reading in seconds.

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

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

ADJUSTING THE PRESSURE REGULATOR

The pressure regulator, complete with its incorporated filter, must be installed to avoid contaminants reaching the gas valve. It is important to ensure certain conditions: The pressure of the gas must not exceed the established maximum pressure. To increase the pressure of the gas supply, tighten screw C; to reduce the pressure, loosen screw C. After making any adjustments, put the cap back in place.

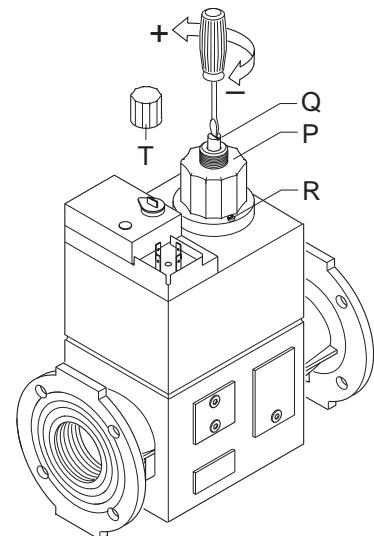
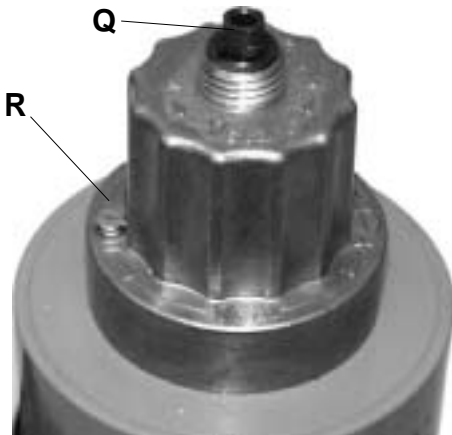


ADJUSTMENT OF GAS SOLENOID VALVES

The ignition flow rate is carefully adjusted, during test phase to 1/3 of the maximum flow rate (according to specifications). Operations for eventual further adjustment must be carried out by skilled personnel authorized by ECOFLAM.

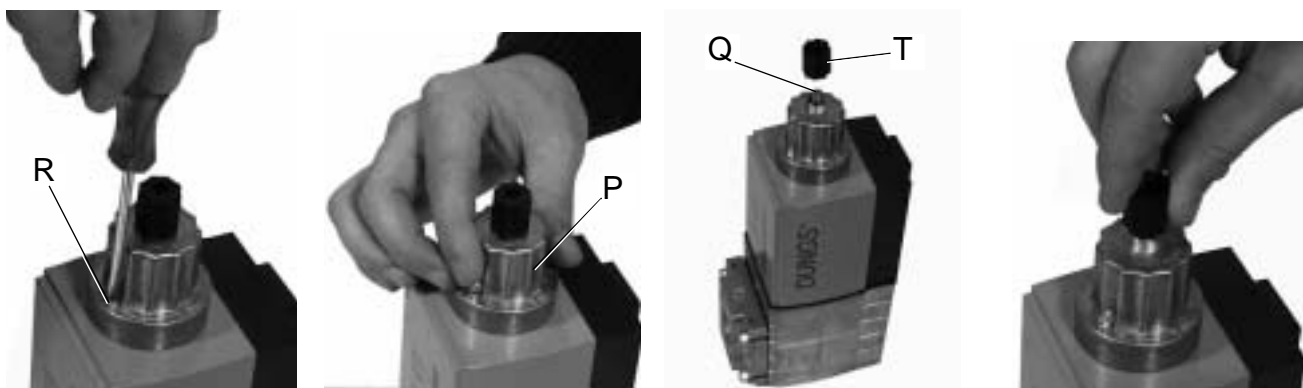
DUNGS DMV-DLE

To adjustment gas output, loosen the screw R and turn the knob P as required. To reduce output, turn knob clockwise, to increase it turn knob counterclockwise. Tighten the screw R. For fast opening adjustment, remove the cap T and insert it in the pin Q with its groove up. To reduce firing output screw it up, to increase, unscrew it.



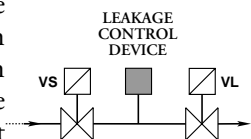
DUNGS SV-DLE

To adjustment gas output, loosen the screw R and turn the knob P as required. To reduce output, turn knob clockwise, to increase it turn knob counterclockwise. Tighten the screw R. For fast opening adjustment, remove the cap T and insert it in the pin Q with its groove up. To reduce firing output screw it up, to increase, unscrew it.



LEAKAGE CONTROL DEVICE DUNGS VPS 504-VDK 200

When the thermostats are closed, the gas leakage control device checks the valve seals by pressurizing the circuit between the two gas valves. When test pressure is reached the device remains in stand-by for about 25 seconds. At the end of the test the yellow pilot light on the control device lights up and the burner is enabled to carry out the start-up cycle. If the seal on one of the valves is faulty and this causes a drop in test pressure, the device puts the system into the safety condition and the red pilot light on the device lights up. The flame control device starts the burner fan to carry out prewashing of the combustion chamber, checking fan air pressure via the air pressure switch. After pre-ventilation the ignition transformer starts operating, generating a spark between the electrodes and simultaneously the gas valves open (safety gas valve VS and first stage operating valve VL). If the flame does not ignite or goes out, total safety is ensured by an ionization detection probe. The safety time limit in the event of no flame is less than 2 seconds at start-up and less than 1 during operation. In the event of no gas being supplied or of a considerable drop in pressure the minimum gas pressure switch interrupts burner operation. About 20/30 seconds after ignition the flame control device commands operation of the second stage via the gas valve and air servocontrol, thus taking the burner to maximum power.



LANDIS & STAЕFA SQM 50.381A2 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:



Manual change

- I - High flame operating opening position adjusting cam (Light-Oil /Gas)
- II - Ignition flame opening position adjusting cam (Gas).
- III - Low flame operating opening position adjusting cam (Gas)
- IV - Ignition flame opening position adjusting cam (Light-Oil)
- V - Low flame operating opening position adjusting cam (Light-Oil)
- VI - Not used cam
- VII - Not used cam
- VIII - Not used cam



ADJUSTMENT OF GAS MINIMUM PRESSURE SWITCH

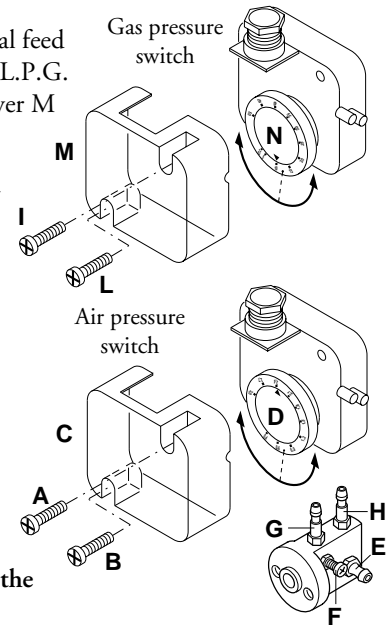
Unscrew off and remove cover M. - Set regulator N to a value equal to 60% of gas nominal feed pressure (i.e. for nat. gas nom. pressure = 20 mbar, set regulator to a value of 12 mbar; for L.P.G. nom. pressure of G30/G31- 30/37 mbar, set regulator to a value of 18 mbar).Screw up cover M

ADJUSTMENT OF THE AIR PRESSURE SWITCH

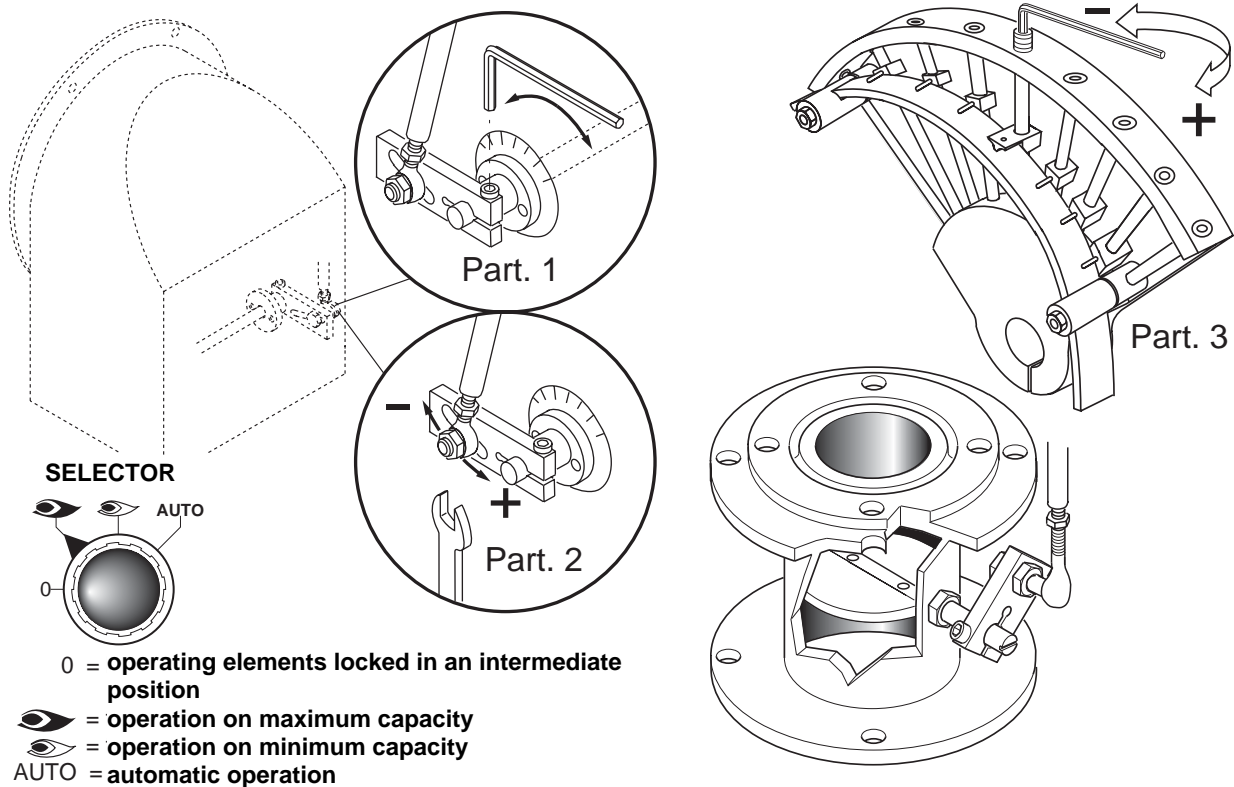
Unscrew screws A and B and remove cover C.- Set the pressure switch to the minimum by turning regulator D to position 1.

- 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.



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

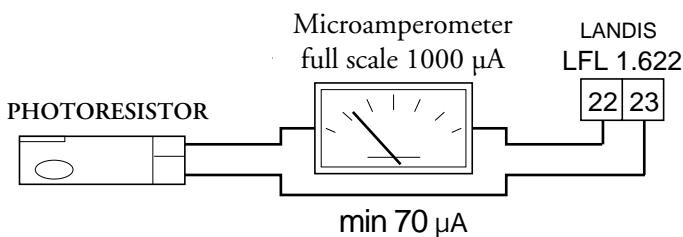
Adjusting the maximum air flow rate (see figure, detail 2). Loosen the nut holding the air damper transmission rod; The correct air flow as established by analyzing the combustion process.

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.

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.

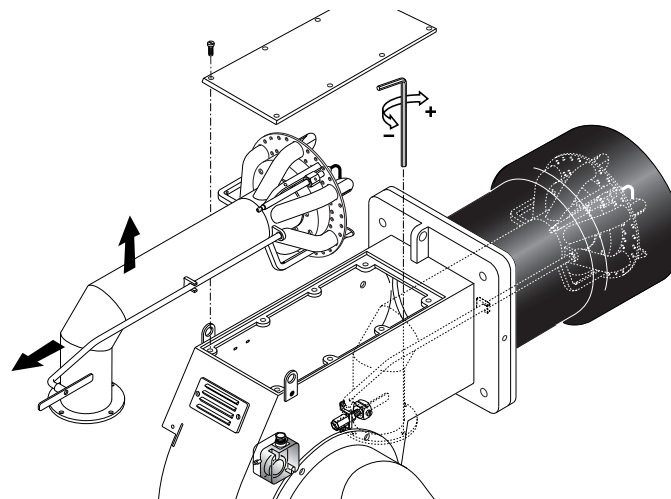
A faulty position of the electrode can lead to a reduction in the ionization current and cause a safety cut-out of the burner due to a flame detection failure. In this case, check the position of the

electrode, its electric connection and the earthing of the burner. The ionization current is normally $> 20 \mu\text{A}$.

SETTING THE FIRING HEAD



REMOVING THE FIRING HEAD

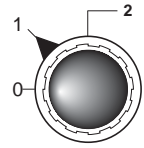


OPERATION OF BURNER WITH LIGHT-OIL FUEL

Once having installed the burner, check the following items:

- The burner power feeding and the main line protection fuses
- The correct length of pipes and that the same are sealed.
- The type of fuel, which must be suitable for burner.
- The connection of boiler's thermostats and all the safeties.
- The motor rotation direction.
- The correct calibration of the motor's thermal protection.

0 - STOP
1 - Light oil
2 - GAS



When all the above mentioned conditions are checked and accomplished, it is possible to go on with burner's tests. Power the burner. The control box feeds the ignition transformer and the burner's motor at the same time, which will run a prepurging of the combustion chamber for about 20 sec.

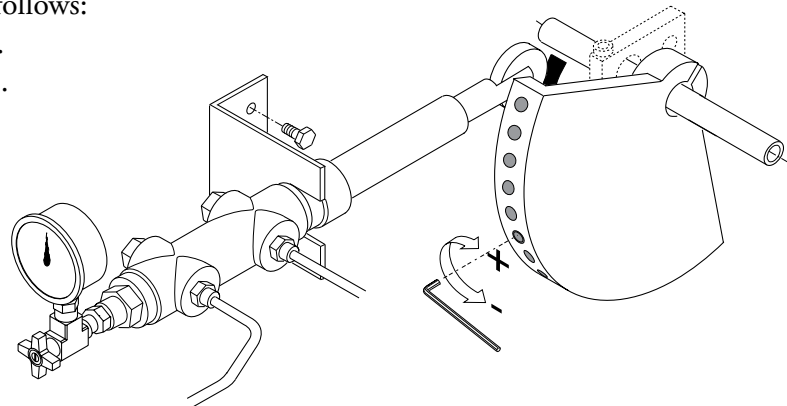
At the end of prepurging, the control box opens solenoid valves and the burner starts. After a safety interval of 5 seconds and a correct ignition, the control box turns off the ignition transformer and, 10 seconds later, sets the motorised air damper to its maximum opening (High flame). In case of faulty ignition, the control box switches the burner into safety condition within 5 second. In such a case, the manual rearming of the burner shall not take place before 30 seconds have elapsed from the burner's safety shutdown. In order to obtain an optimal combustion, it is necessary adjust the LOW - HIGH flame air flow, according to the instruction given further on. During such a phase, it will be possible to manually switch between HIGH and LOW flame and viceversa, through the High/Low flame switch. At the end of the adjusting phase, leave the switch in position AUTO.

OIL DELIVERY ADJUSTMENT

The diagram illustrates the fuel feeding system of these types of burners, which incorporates a by-pass nozzle with oil flow regulation on its return pipe. The oil supply is varied by acting on the nozzle through the pressure in the return line. Max. oil supply is therefore reached when the pressure in the pump line is about 22 bar and the return line is fully closed; min. oil supply when the return line is fully open. Relevant pressure readings in the return line are as follows:

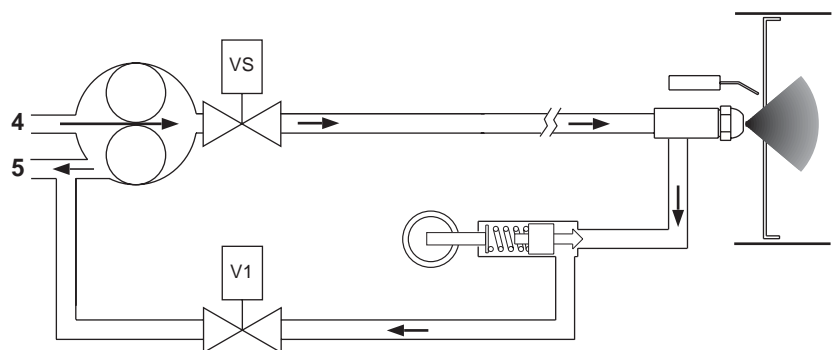
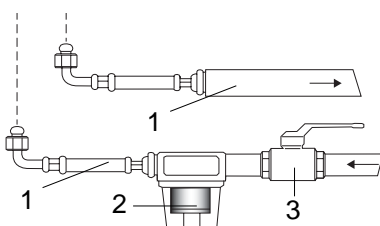
- max. oil supply: 22-24 bar in the pump.
14-15 bar in the return.
- min. oil supply: 3-4 bar.

Rate of adjustment: 1 to 3 bar.

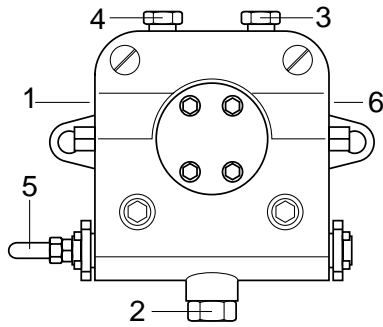


HYDRAULIC CIRCUIT

- 1 - HOSE
- 2 - OIL FILTER
- 3 - OIL COCK
- 4 - SUCTION
- 5 - RETURN



PRIMING AND ADJUSTMENT OF OIL PUMP



SUNTEC TA3C40105

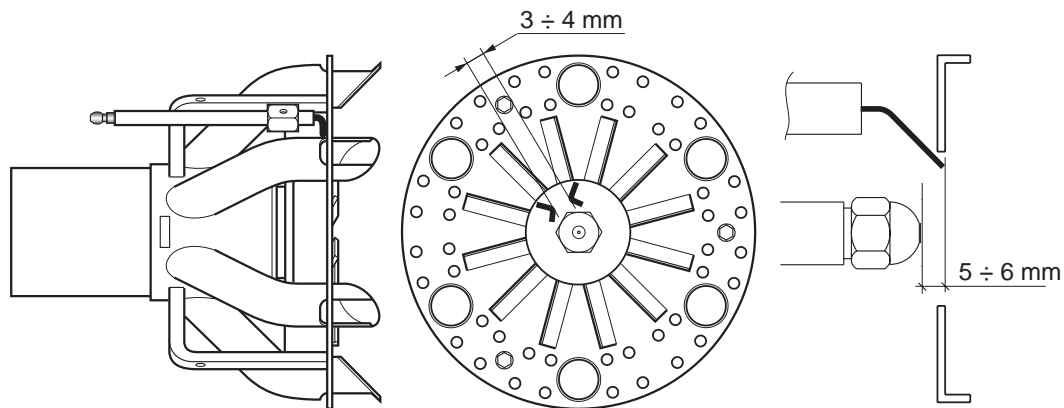
- 1 - INLET
- 2 - RETURN
- 3 - BLEED AND PRESSURE GAUGE PORT
- 4 - VACUUM GAUGE PORT
- 5 - PRESSURE ADJUSTMENT
- 6 - TO NOZZLE

VERIFY:

- That piping system is perfectly sealed;
- That the use of hoses is avoided whenever is possible (use copper pipes preferably);
- That depression is not greater than 0,45 bar, to avoid pump's cavitation;
- That check valve is suitably designed for the duty;

The pump pressure is set at a value of 22-24 bar during the testing of burners. Before starting the burner, bleed the air in the pump through the gauge port. Fill the piping with light-oil to facilitate the pump priming. Start the burner and check the pump feeding pressure. In case the pump priming does not take place during the first prepurging, with a consequent, subsequent lock-out of the burner, rearm the burner's lock-out to restart, by pushing the button on the control box. If, after a successful pump priming, the burner locks-out after the prepurging, due to a fuel pressure drop in the pump, rearm the burner's lock-out to restart the burner. Do never allow the pump working without oil for more than three minutes. Note: before starting the burner, check that the return pipe is open. An eventual obstruction could damage the pump sealing device.

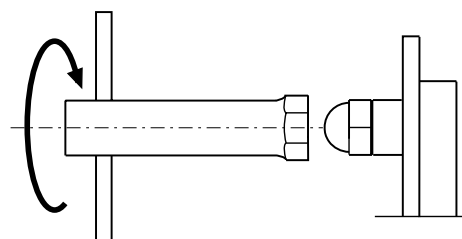
POSITION OF IGNITION ELECTRODES



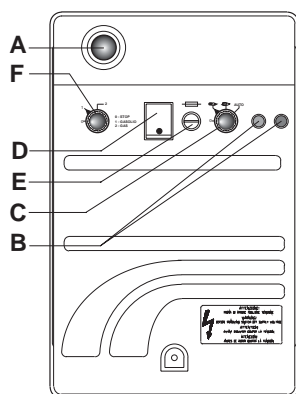
NOZZLE CLEANING AND REPLACEMENT



Use only the suitable box wrench provided for this operation to remove the nozzle, taking care to not damage the electrodes. Fit the new nozzle with the same care.

Note: Always check the position of electrodes after having replaced the nozzle (see illustration). A wrong position could cause ignition troubles.



DESCRIPTION OF CONTROL PANEL



- A** - main switch I/O
B - operating lamps (orange=light-oil; green= gas)
C - Selector switch:
0 = Locking of devices for operating at intermediate outputs
 = Operation at max. output
 = Operation at min. output
AUTO = Automatic operation
D - ON/OFF switch
E - Fuse holder
F - Selector:
0 = STOP
1 = Light-oil operation
2 = Gas operation

MAINTENANCE

YEARLY CHECKS

The burner's periodical check (firing head, electrodes etc.) must be carried out by authorised personnel one or two times per year, depending on the utilisation. Before going on with the maintenance controls of the burner, it should be advisable to check its general conditions, according to the following steps:

Unplug the burner; close the fuel cock; shut down the gas supply; remove burner's cover and clean the fan and air intake; clean the firing head and check the electrode's position; reassemble all the parts; check the connection's sealing; check the chimney; start the burner and check the combustion flue ($CO_2 = 9.5 \div 9.8$; $O =$ lower than 75 ppm).

BEFORE EVERY INTERVENTION CHECK:

The electric system is duly powered and the burner is plugged in.

The gas pressure must be the suitable one and the gas cock open.

The control devices must be properly connected.

When all the above conditions are met, start the burner by pressing the lockout enable pushbutton.

Check the burner's cycle.

THE BURNER DOES NOT START:

Check the ON/OFF switch, the thermostats, the motor and the gas pressure.

The master switch is in position "0". Fuses are blown out.

The control box is faulty.

THE BURNER RUNS THE PREPURGING AND SWITCHES TO LOCKOUT AT THE END OF CYCLE:

Check the fan and the air pressure.

Check the air pressure switch.

Control box faulty. Ignition transformer faulty.

Check the ignition cable. Electrodes are dirty or in wrong position.

Nozzles are clogged or worn. Filters are clogged. Light-oil pressure is too low.

Combustion air's flow rate too high related to nozzle output.

THE BURNER RUNS THE PREPURGING BUT DOES NOT IGNITE:

Check the position of the electrodes; check the ignition cable;

Check the ignition transformer;

Check the control box.

THE BURNERS IGNITES BUT SWITCHES TO LOCKOUT AFTER THE SAFETY TIME:

Check phase and neutral for a correct connection.

Check gas solenoid valve.

Check the position of ionisation probe and its connection.

Check the control box.

Check nozzles (clogged or worn).

The photoresistor does not detect the flame.

The filters are clogged. Light-oil pressure too low.

Combustion air's flow rate too high related to nozzle output.

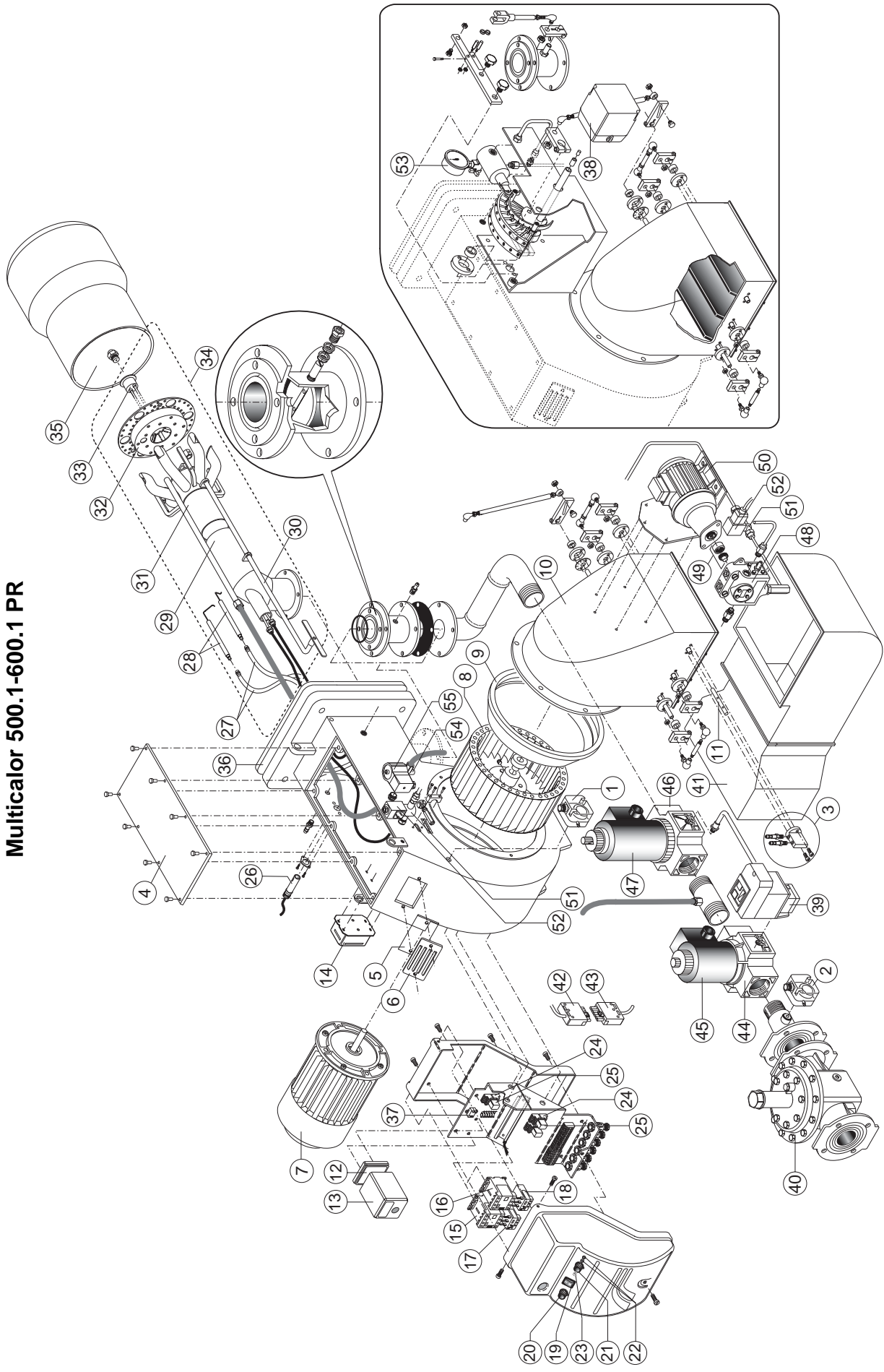
THE BURNERS IGNITES BUT SWITCHES TO LOCKOUT AFTER FEW MOMENTS:

Check gas governor and gas filter.
Check gas pressure through a manometer.
Check ionization value (min. 70 μ A).

THE BURNER DOES NOT SWITCHES TO HIGH FLAME:

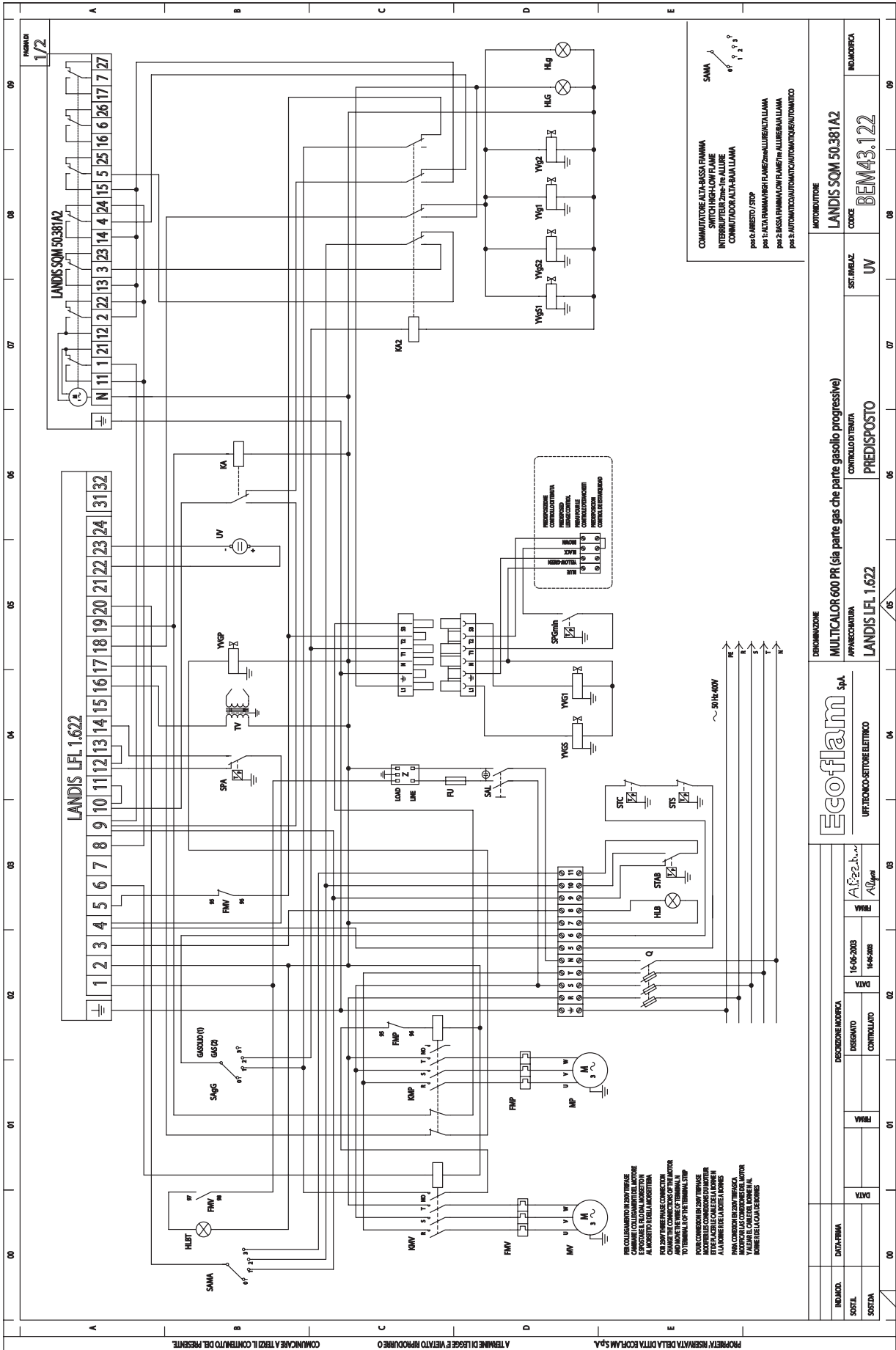
Manual selector switch in wrong position.
Faulty control box. High flame solenoid valve's coils faulty.
Air damper's jacket faulty or wrongly adjusted.

Multicalor 500.1-600.1 PR

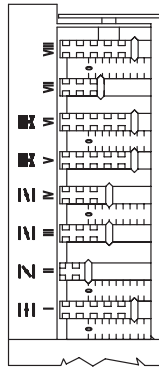
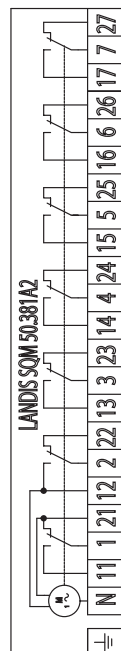


N°	DESCRIPTION	Natural gas 500 mbar	Multicalor 500.1 PR	Multicalor 600.1 PR code
1	AIR PRESSURE SWITCH	DUNGS LGW10 A2P		Q120
2	GAS PRESSURE SWITCH MIN.	DUNGS GW150 A4		Q107/2
3	AIR INTAKE SET			GRPA100
4	COVER			BFC09252/038
5	GLASS			BFC02004
6	PEED WINDOM FRAME			BFC02006
7	MOTOR	15 k W		M170/3
8	FAN	360 x 135		BFV10305/001
9	AIR CONVEYOR			BFC08255
10	AIR INTAKE			GRCA380
11	AIR INTAKE PIPE			BFS02208/201
12	CONTROL BOX BASE	LANDIS		A401
13	CONTROL BOX	LANDIS LFL1.622		A113
14	IGNITION TRANSFORMER	BRAHMA T8		T101
15	REMOTE CONTROL SWITCH	BF40.00		R616
16	REMOTE CONTROL SWITCH (PUMP)	MC9.10		R603/1
17	MOTOR THERMAL RELAY	Lovato RF95 20-33 A		R510/7
18	MOTOR THERMAL RELAY (PUMP)	Lovato RF9 2-3,3 A		R510/1
19	MAIN SWITCH	cod.40100I1509		R1020
20	GAS/LIGHT-OIL SELECTOR			R1020/5
21	SELECTOR			R1020/5
22	LAMP	Elettrospring EL/N-SC4		E1510
23	FUSE SUPPORT	FUSIT FH-B528		E802/2
24	RELÉ BASE	Finder 5532		R905
		Finder 5534		R906
25	RELÉ	Finder 5532		R711
		Finder 5534		R712
26	UV CELL	LANDIS QRA 2		A205
27	IGNITION CABLE	TC		
		TL		
28	IGNITION ELECTRODES SET			
29	PIPE	TC		
		TL		
30	ROD	TC		
		TL		
31	FIRING HEAD			
32	FRONT DISC			
33	NOZZLE HOLDER			
34	INNER ASSEMBLY	TC		
		TL		
35	BLAST TUBE	TC		BFB07022/103
		TL		BFB07022/203
36	GASKET ISOMART			BFG04052/1
37	ANTIJAMMING FILTER			S132/4
38	AIR DAMPER MOTOR	LANDIS SQM50.381A2		M212/9
39	LEAKAGE CONTROL	VPS 504 S02		V185
40	GAS FILTER	FSDR65/CE		S513/6
41	SILENCER			GRSIL07
42	WIELAND PLUG	7 poli		E225
43	WIELAND SOCKET	7 poli		E225/1
44	GAS VALVE	DUNGS MVD 220		V119
45	COIL	DUNGS		V214
46	GAS VALVE	DUNGS MVDLE 220		V120
47	COIL	DUNGS		V214
48	OIL PUMP	SUNTEC TA3C40105		P148/1
49	COUPLING			MP501/4
50	PUMP MOTOR	1100 W		M147/15
51	OIL VALVE	Parker SCEM 120		V175/7
52	COIL	Parker SCEM 120		V516/1
53	MANOMETER	CEWAL R1/4 D50-40BAR		S601/1
54	PILOT VALVE	BRAHMA E6GSRP		V109
55	COIL	BRAHMA		V209

TC = SHORT HEAD TL = LONG HEAD



Q		Z		FU		IA		MP		MV		TV		UV		FMP		FMV		HLB		HLG		Hlg		IK2		IMP		IMV	
INTERUTTORE GENERALE CON FUSIBILE MANUAL-AUTOMATICO INTERRUPTEUR GENERAL AVEC FUSIBLE INTERRUPTOR GENERAL CON FUSIBLE		FILTRO ANTIDISTURBO AUTOMATING FILTER AUTOMATISCHER FILTER FILTRO DE PROTECCION ANTIDISTURBO		FUSIBILE FUSE FUSIBLE FUSIBLE		RELE RELAY RELAIS RELÉ		MOTORE POMPA OIL PUMP MOTOR MOTEUR POMPE MOTOR BOMBA		MOTORE VENTILATORE MOTOR FAN MOTEUR VENTILATEUR MOTOR VENTILADOR		TRASFORMATORE IGNITION TRANSFORMER TRANSFORMATEUR D'ALLUMAGE TRANSFORMADOR		FOTOCELLULA FOTOCELULA CELLULE UV FOTOCÉLULA		RELE TERMICO MOTORE POMPA MOTOR PUMP THERMAL RELAY RELAIS THERMIQUE MOTEUR POMPE RELE TERMICO MOTOR BOMBA		RELE TERMICO MOTORE VENTILATORE MOTOR THERMAL RELAY (FAN MOTOR) RELAIS THERMIQUE MOTEUR VENTILATEUR RELE TERMICO MOTOR VENTILADOR		LAMPADA DI BLOCCO LOCK-OUT LAMP LAMPE DE SECURITE ESPA DE BLOQUEO		LAMPADA GAS GAS LAMP LAMPE DE GAZ ESPA GAS		LAMPADA GASOLIO OIL LAMP THERMOMAXOUT ESPA GASOLIO		RELE RELAY RELAIS RELÉ		CONTROLORE MOTORE POMPA PUMP REMOTE CONTROL SWITCH MOTEUR THERMIQUE ESPALE MOTOR BOMBA		CONTROLORE MOTORE VENTILATORE REMOTE CONTROL SWITCH (FAN MOTOR) MOTEUR THERMIQUE THERMOMAXOUT MOTOR VENTILATEUR	
SAL		SPA		STC		STS		SAGS		SAMA		STAB		YV61		YV61		YV62		YV63		YV6P		SP6mh		IK3		YV61		YV62	
INTERUTTORE DI LINEA MANUAL-AUTOMATICO INTERRUPTEUR DE LIGNE INTERRUPTOR DE LIGNA		PRESSOSTATO ANNA AIR PRESSURE SWITCH ANNA PRESSOSTATO ANNE		TERMOSTATO CALDAMA BOILER THERMOSTAT THERMOSTAT CHAUDIERE THERMOSTATO CAUDERA		TERMOSTATO DI SICUREZZA SAFETY THERMOSTAT THERMOSTAT DE SECURITE THERMOSTATO DE SEGURIDAD		COMMUTATORE GASOLIO-GAS SWITCH (OIL-GAS) COMMUTADOR GASOLEO-GAS		COMMUTATORE MANUALE-AUTOMATICO SWITCH (MANUAL-AUTOMATIC) INTERRUPTEUR MANUEL-AUTOMATIQUE COMMUTADOR MANUAL-AUTOMATICO		TERMOSTATO DI ALTA BASSA FIAMMA HIGH/LOW FLAME THERMOSTAT THERMOSTAT GRANDE-PETITE ALLURE THERMOSTATO DE ALTA-BAJA LLAMA		ELETTRIVALVOLA GAS DI PRIMA FIAMMA FIRST STAGE GAS SOLENOID VALVE ELECTROVANNE GAZ PETITE ALLURE ELECTROVALVULA GAS DE 1ª LLAMA		ELETTRIVALVOLA GASOLIO DI PRIMA FIAMMA FIRST STAGE OIL SOLENOID VALVE ELECTROVANNE MAXOUT PETITE ALLURE ELECTROVALVULA DE GASOLEO 1ª LLAMA		ELETTRIVALVOLA GASOLIO DI SECONDA FIAMMA SECOND STAGE OIL SOLENOID VALVE ELECTROVANNE MAXOUT GRANDE ALLURE ELECTROVALVULA DE GASOLEO 2ª LLAMA		ELETTRIVALVOLA GAS DI SICUREZZA EXTRA SAFETY GAS SOLENOID VALVE ELECTROVANNE GAZ DE SECURITE ELECTROVALVULA GAS DE SEGURIDAD		ELETTRIVALVOLA GAS PILOTA PILOT FLAME SOLENOID GAS VALVE ELECTROVANNE GAZ PLOTE ELECTROVALVULA GAS PILOTO		PRESSOSTATO GAS DI MINIMA GAS PRESSURE SWITCH MIN PRESSOSTAT GAZ PRESSION MIN PRESSOSTATO GAS DE MINIMA POT.		RELE RELAY RELAIS RELÉ		ELETTRIVALVOLA GASOLIO DI SICUREZZA EXTRA SAFETY OIL SOLENOID VALVE ELECTROVANNE MAXOUT GRANDE ALLURE ELECTROVALVULA DE GASOLEO DE SEGURIDAD		ELETTRIVALVOLA GASOLIO DI SICUREZZA EXTRA SAFETY OIL SOLENOID VALVE ELECTROVANNE MAXOUT DE SECURITE ELECTROVALVULA DE GASOLEO DE SEGURIDAD	
DESCRIZIONE MODIFICA		DISSEGNATO		CONTROLLATO		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG	
INDICAZIONE		DATA-FIRMA		DESCRIZIONE MODIFICA		DISSEGNATO		CONTROLLATO		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG	
INDICAZIONE		DATA-FIRMA		DESCRIZIONE MODIFICA		DISSEGNATO		CONTROLLATO		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG	
INDICAZIONE		DATA-FIRMA		DESCRIZIONE MODIFICA		DISSEGNATO		CONTROLLATO		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG	
INDICAZIONE		DATA-FIRMA		DESCRIZIONE MODIFICA		DISSEGNATO		CONTROLLATO		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG		VIG	
MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)	
MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)		MULTICALOR 600.1 (gia parte gas che parte gasolio progressive)	
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- I: CAMMA DI REGOLAZIONE ARIA ALTA FIAMMA (GAS-GASOLIO)
- II: CAMMA DI REGOLAZIONE ARIA MINIMA POTENZA GAS
- III: CAMMA DI REGOLAZIONE ARIA BASSA FIAMMA GAS
- IV: CAMMA REGOLAZIONE ARIA MINIMA POTENZA GASOLIO
- V: CAMMA REGOLAZIONE ARIA BASSA FIAMMA GASOLIO
- VI: CAMMA NON UTILIZZATA
- VII: CAMMA NON UTILIZZATA
- VIII: CAMMA NON UTILIZZATA



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