

GAS/LIGHT-OIL DUAL BURNERS

Ecoflam

CE



Multicalor TS 170.1 PAB

Multicalor TS 200.1 PAB

220/380 V 60 Hz



420010459201

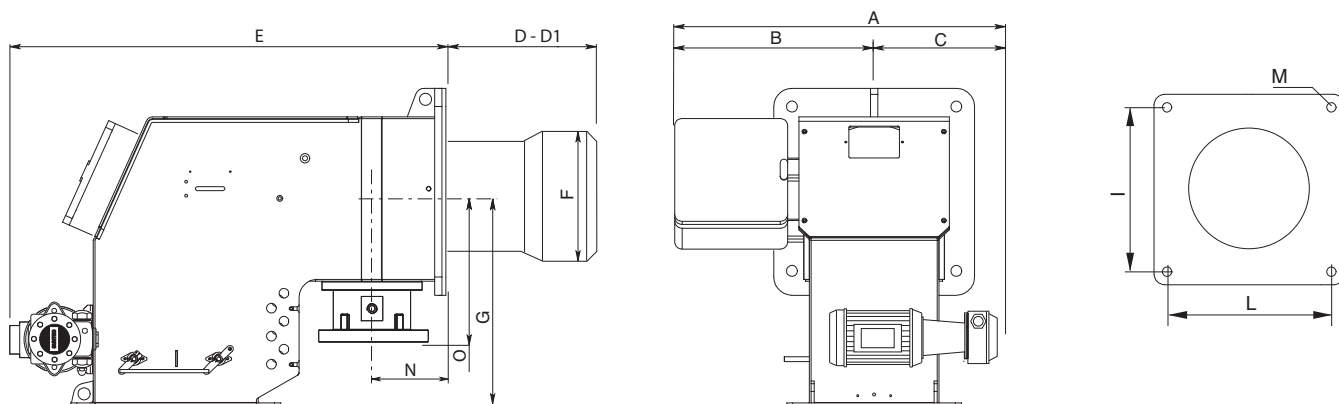
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30.10.2012

TECHNICAL DATA

Models		Multicalor TS 170.1 PAB	Multicalor TS 200.1 PAB
Thermal power max.	kW	1770	2150
	kcal/h	1.526.000	1.853.450
Thermal power min.	kW	342	414
	kcal/h	295.000	356.900
Gas pressure (Natural gas)	mbar	20÷700	23÷700
Gas pressure (LPG)	mbar	32÷500	40÷500
Voltage , 60 Hz	V	220/380	220/380
Fuel :	P.c.i. Natural gas = 35,9 MJ/Nm ³ = 8.570 kcal/Nm ³ P.c.i. light oil = 10.200 kcal/kg max 1,5° E a 20° C		

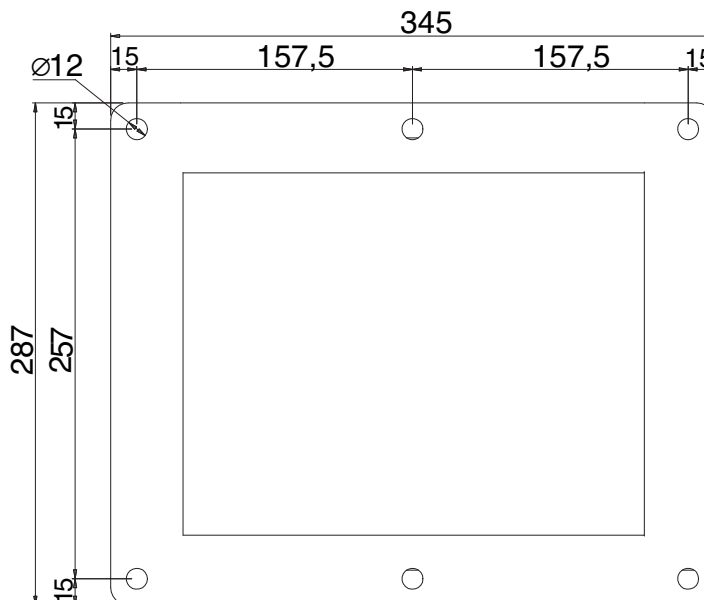
OVERALL DIMENSIONS



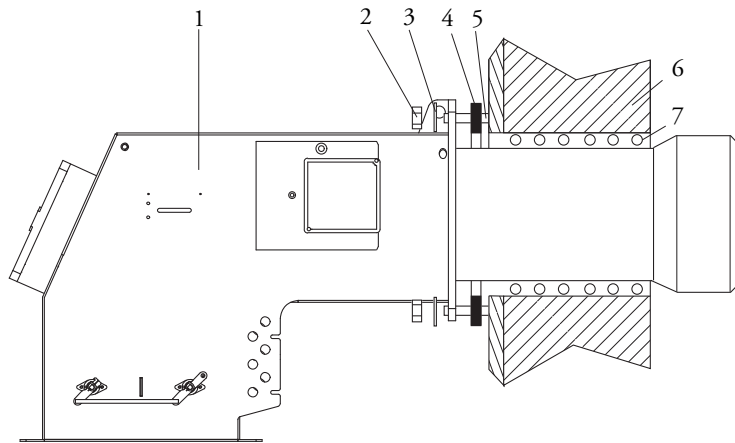
MODELS	A	B	C	D	D1	E	F	G	I	L	M	N	O
Multicalor TS 170.1 PAB	729	449	280	290	490	770	250	355	270	270	M16	125	250
Multicalor TS 200.1 PAB	729	449	280	290	490	770	270	355	270	270	M16	125	250

D = Short head D1 = Long head

AIR FLANGE



BURNER INSTALLATION



- 1 - BURNER
- 2 - NUT
- 3 - WASHER
- 4 - GASKET
- 5 - BOLT
- 6 - BOILER
- 7 - GASKET

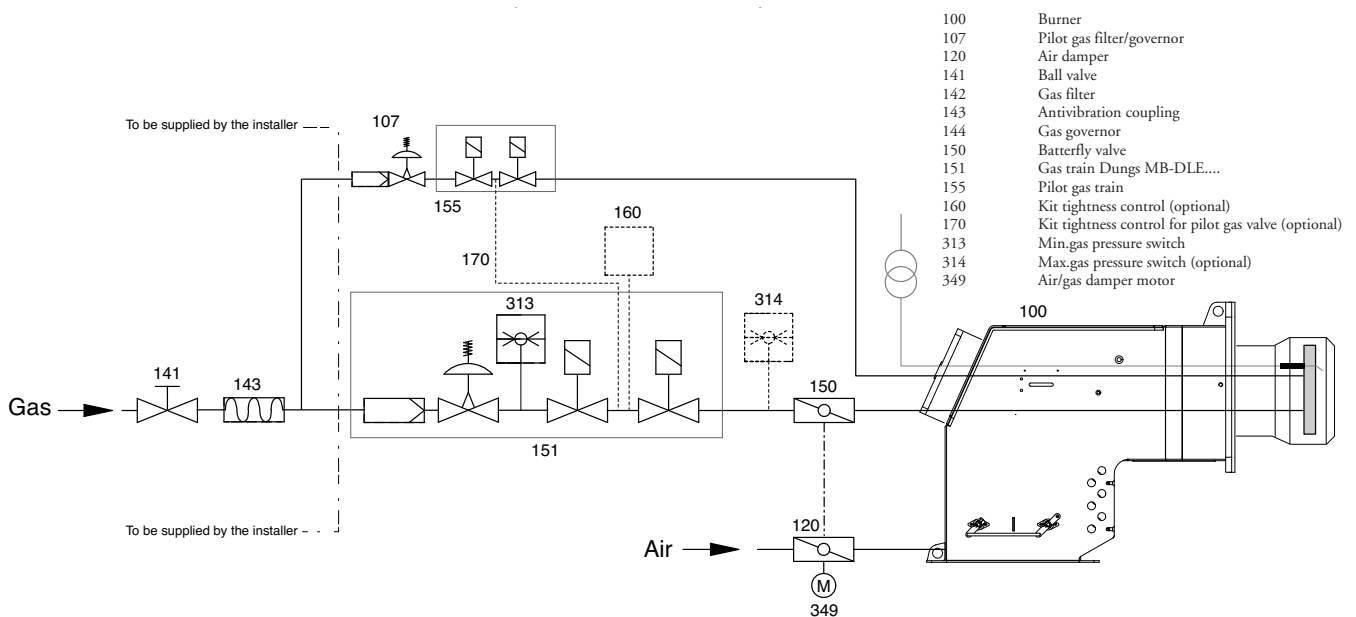
ELECTRICAL CONNECTIONS

All burners are factory tested and set at 380 V 60 Hz three-phase for motors and 220 V 60 Hz monophase with neutral for auxiliaries. If it is necessary to supply the burner at 220 V 60 Hz without neutral, make the necessary alterations referring to the wiring diagram of the burner and check that the thermal relay is within the absorption range of the motor. Also check that the fan motor rotates in the correct direction.

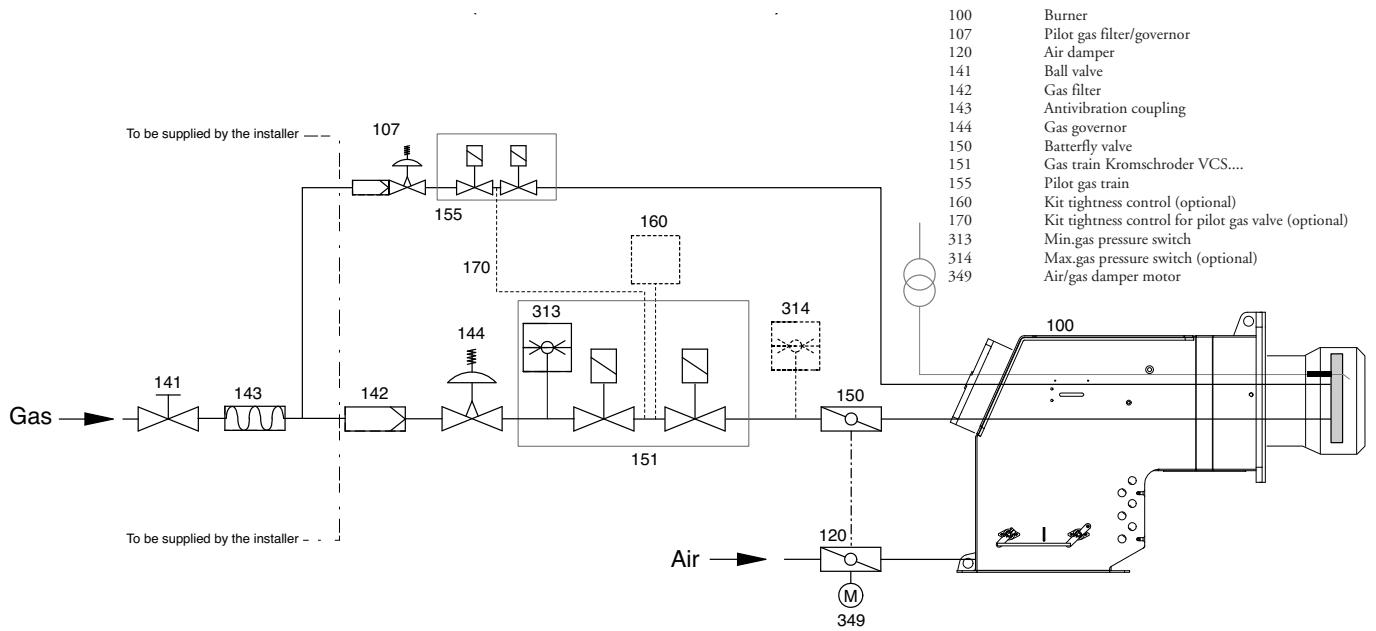
CONNECTION TO THE GAS PIPELINE

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.

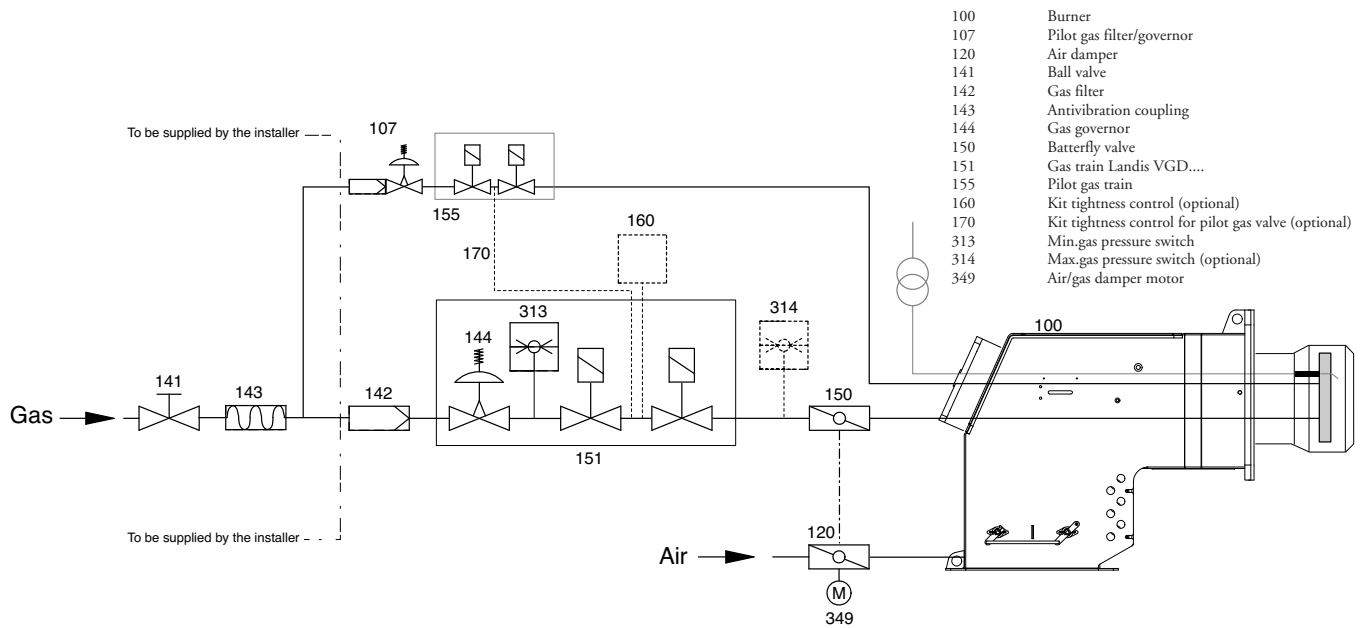
CONNECTION DIAGRAM FOR BURNERS WITH SEPARATE PILOT (gas train Dungs MB-DLE...)



**CONNECTION DIAGRAM FOR BURNERS WITH SEPARATE PILOT
(gas train Kromschroder VCS...)**

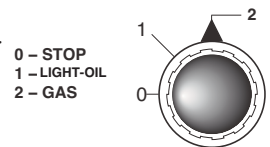


**CONNECTION DIAGRAM FOR BURNERS WITH SEPARATE PILOT
(gas train Landis VGD...)**



OPERATION OF BURNER WITH GAS

Dual fuel gas/light-oil fuel burners must always be adjusted for light-oil as first ignition. After having installed the burner, check the following points: - Burner's power and protection fuses. - Motors connections. - That pipe length is the suitable one and relevant sealing. - That the fuel type is suitable for the burner. - Thermostats connections and the safety devices. - The direction of motors rotation. - The correct adjustment of motors protections. - That the nozzles flow rates are the suitable ones related to boiler's output. Connect a manometer to the light-oil pump. When all the above conditions are met, it is possible to proceed with the first ignition of the burner. Switch on the burner. The control box powers the light-oil pump, as well as the fan, thus starting the prepurging phase of the combustion chamber with the max. air flow rate. At the end of prepurging, the air damper gear motor sets to the 1st light-oil stage (Low flame) whilst the control box powers the ignition transformer and opens the safety and the 1st stage solenoid valves. The burner ignites in Low flame. After a safety period of 3 seconds from the ignition, the transformer is switched off and after 10 seconds the air damper gear motor sets the burner to High flame (2nd stage). In case of a faulty ignition, the control box switches the burners to lockout safety condition within 3 seconds. In this case, the burner must be rearmed manually. In order to obtain the best combustion it is necessary to adjust the burner in both Low and High flame stages, according to the instructions supplied with (air damper gear motor and firing head adjustments). During this phase, it is possible to manually switch from Low flame to High flame and back through the High/Low manual selector switch. At the end of the adjustment operations, set the selector to High position. For a correct adjustment of the burner, it will be necessary to carry out some combustion analyses at the chimney.



ADJUSTING THE COMBUSTION PROCESS

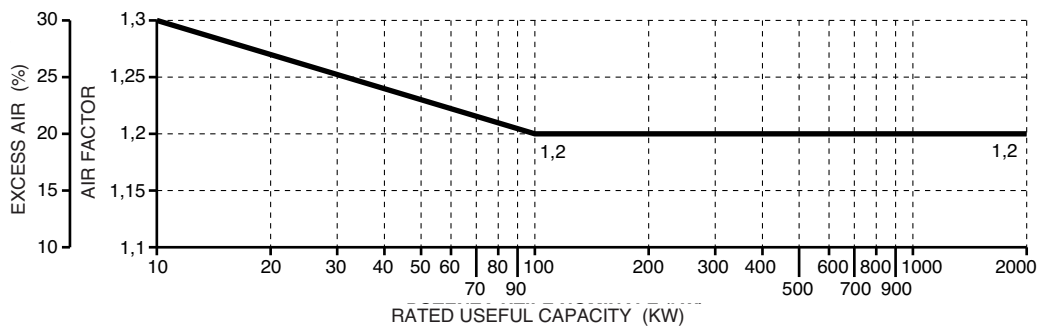
IMPORTANT: to obtain the right adjustment of the combustion and thermal capacity it is important to analyze the reducts of combustion with the aid of suitable instruments. The combustion and thermal capacity adjustment is done simultaneously, together with the analysis of the products of combustion,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

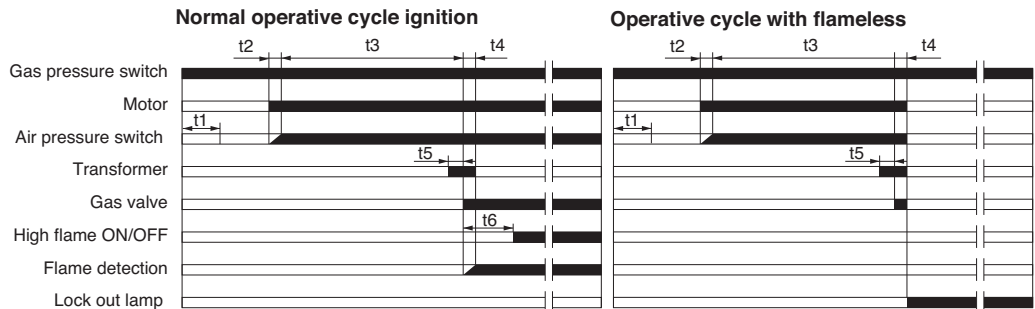
SUGGESTED REFERENCE VALUES

	Natural Gas
CO ₂	9,6%
CO	<100 ppm



LANDIS LGB 22 UP-CYCLE

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 Low flame 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.



Description	Time
t1 pressure switch control time-out	9"
t2 time-out for air pressure confirmation	3"
t3 prewashing time	30"
t4 safety time	3"
t5 preignition time	3"
t6 time-out to enable fuel 2nd valve	8"

CALCULATION OF WORKING OUTPUT OF THE BURNER

To calculate the burner's working output, in kW, proceed as follows:

- Check at the meter the quantity of supplied litres and the duration, in seconds, of the reading, then calculate the burner's output through the following formula:

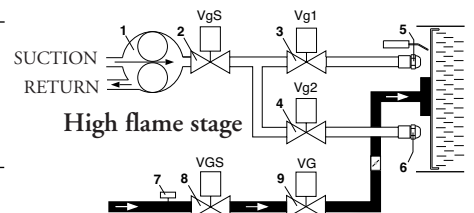
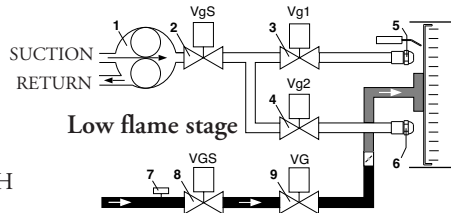
$$\frac{e}{s} \times f = kW$$

e = Litres of gas
s = Time in seconds

f	G20 = 34,02
	G25 = 29,25
	G30 = 116
	G31 = 88

GAS CIRCUIT

- 1 - PUMP
- 2 - SAFETY LIGHT-OIL VALVE
- 3 - LOW FLAME LIGHT-OIL VALVE
- 4 - HIGH FLAME LIGHT-OIL FLAME
- 5 - LOW FLAME NOZZLE
- 6 - HIGH FLAME NOZZLE
- 7 - MINIMUM GAS PRESSURE SWITCH
- 8 - SAFETY GAS VALVE
- 9 - GAS VALVE



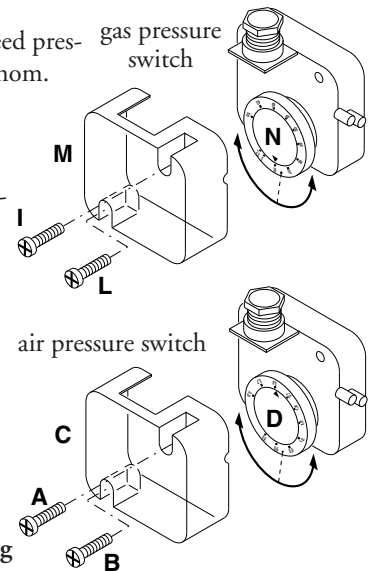
ADJUSTMENT OF GAS MINIMUM PRESSURE SWITCH

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.

LANDIS & STAEEA SQN 30 151A2700 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 - Limit switch for air damper "High Flame" position adjustment (Max. power).
- II - Limit switch for the air damper position at burner's shut down
- III - Limit switch for air damper "Low Flame" position adjustment (Min. power).
- V - Limit switch for 2nd stage's solenoid valve opening release

NOTE : Cam V (to allow the 2nd stage's solenoid valve opening) must be adjusted to an intermediate position between the Low and High Flame ones (to an angle approximately 5° greater than the low flame position).

"PAB" VERSION GAS BURNERS GAS TRAIN INSTALLATION AND SETTING INSTRUCTIONS

Fix the gas train to burner body by means of the screws of the flange, pay attention to set correctly the gasket. Connect electrically the gas train with the 6 pole plug.

Switch on the burner (it has already been tested in the factory, so it is pre set on average values) and verify the tightness of gas train connections made during installation. Act as follows to adapt the burner output to the boiler.

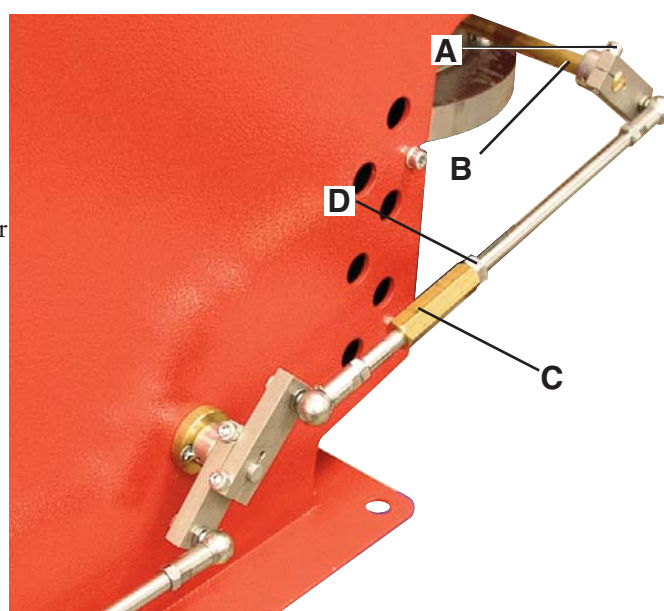
High flame

1. Bring the burner in high flame, air inlet must be set at 75° (maximum opening position).
To adjust air capacity operate on the combustion head position. Just in peculiar case it is necessary to reduce the air flow in high flame closing air intake damper.
2. The position of gas butterfly valve must be lower than 90° (typically 85°. It is important not get over 90° to obtain a perfect combustion during passage from high to low flame). Eventually adjust this position by shaft B after loosening the screw A.
3. Regulate gas capacity in high flame through the gas governor, or operate on the adjustable gas valve.

Attention: the instructions for gas valves setting are included in the gas train manual.

Low flame

4. Choose the first stage position on the servocontrol (normally between 10°-30°) on the basis of the reduced charge output required and switch the burner to low flame.
5. Regulate gas capacity, to obtain optimal combustion. To adjust the butterfly valve position act upon hexagonal bar C after loosening nuts D.

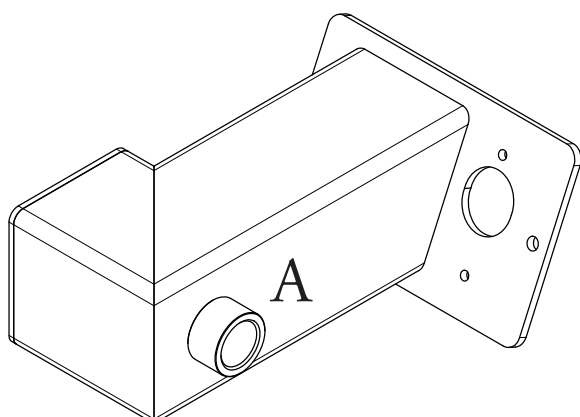
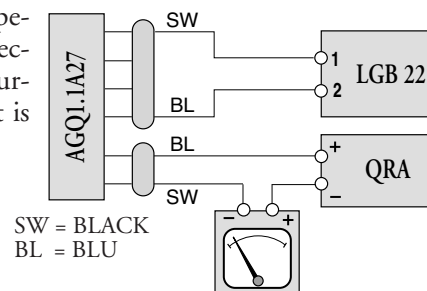


Final operations

6. Bring the burner in high flame again, if necessary adjust again gas flow (as shown in point n.2).
7. If necessary repeat operations described on point n. 5 and n. 6 until You obtain the exact position of the gas flow both in high and low flame.
8. Fix the nuts.

FLAME DETECTOR SYSTEM CHECK

The control of the detector current shall be carried out by plugging a microammeter with full scale at 1000 µA (D.C.) in series with the UV-cell. If the detector current is too low verify the connection between phase and neutral of the burner and the grounding of the burner itself. Minimum required detector current is 200 µA.



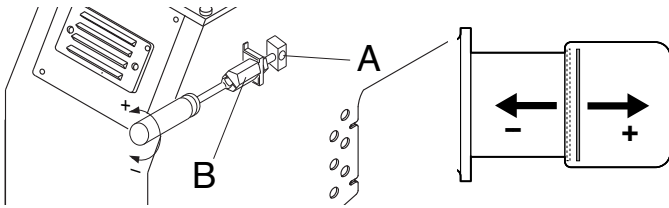
Attention :

The support of UV-cell A must be connected with the pipe to the fan ventilator before heat exchanger (this pipe is very important in order to put the fresh air into the UV-cell). If you not connected this pipe the UV-cell can damage.

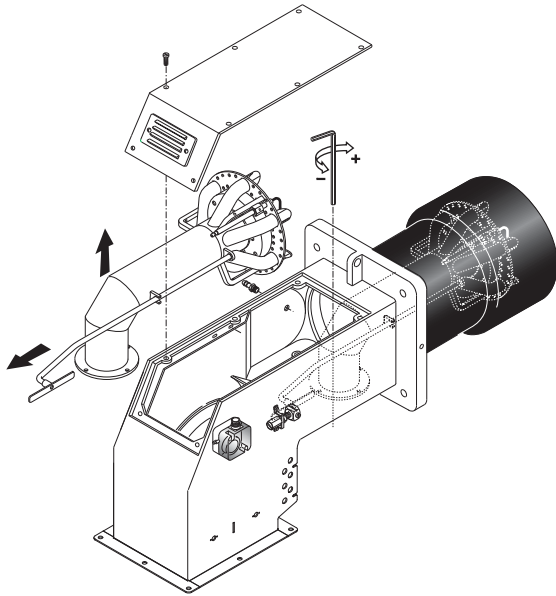
SETTING THE FIRING HEAD

The firing head position adjustment is made in order to obtain the best combustion efficiency. When used with minimum outputs the firing head is adjusted in rear position. With high output, the firing head is adjusted in forward position.

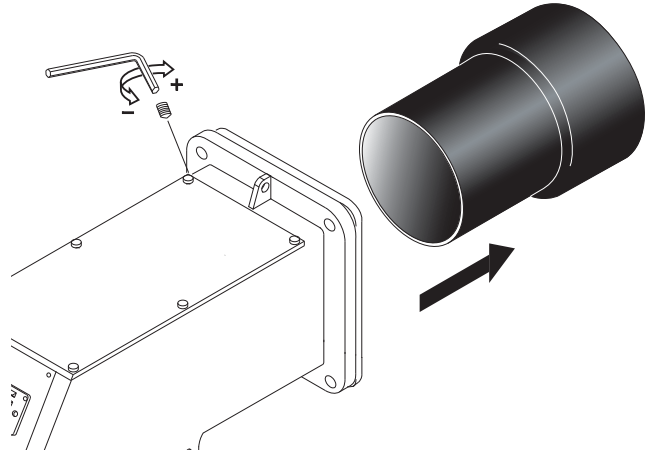
Adjustment: - Loosen screw A through a suitable Allen key.- By a screwdriver act on the hex. head screw B until is reached the desired position. - Tighten screw A



REMOVING THE FIRING HEAD

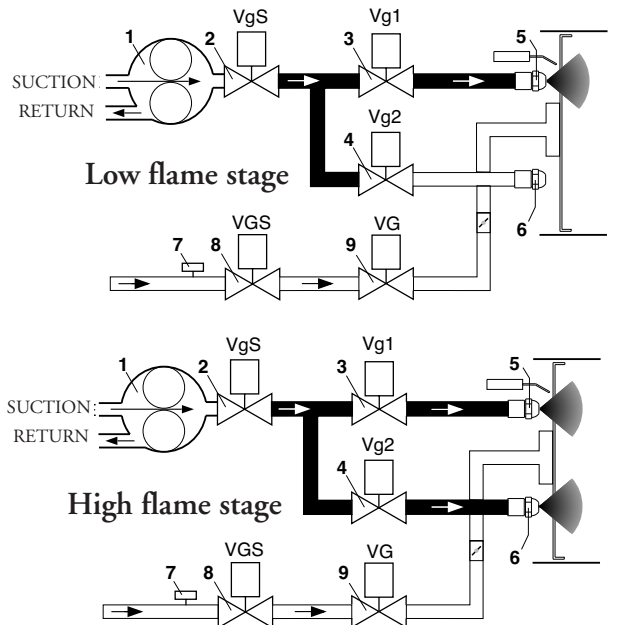
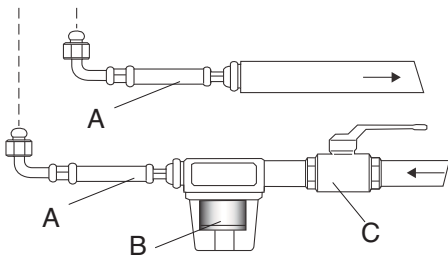


REMOVING THE BLAST TUBE

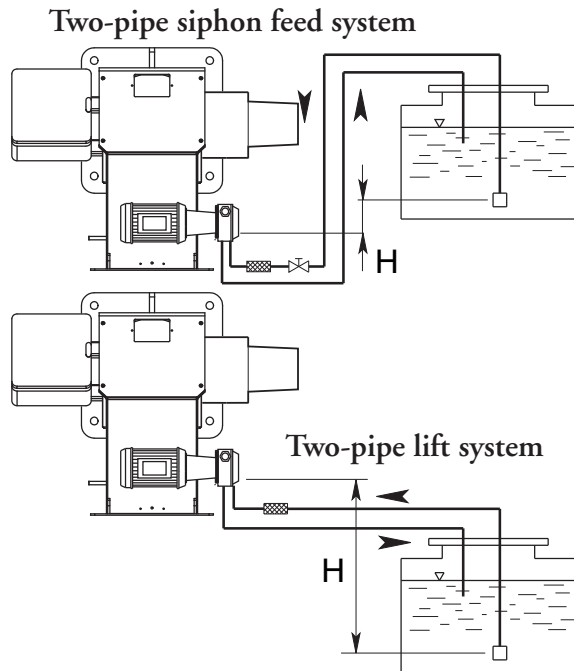


LIGHT-OIL CIRCUIT

- A - HOSE
- B - OIL FILTER
- C - OIL COCK
- 1 - PUMP
- 2 - SAFETY LIGHT-OIL VALVE
- 3 - LOW FLAME LIGHT-OIL VALVE
- 4 - HIGH FLAME LIGHT-OIL FLAME
- 5 - LOW FLAME NOZZLE
- 6 - HIGH FLAME NOZZLE
- 7 - MINIMUM GAS PRESSURE SWITCH
- 8 - SAFETY GAS VALVE
- 9 - GAS VALVE



SUCTION LINE LENGTHS MAX. FOR TWO - PIPE SYSTEMS



H (m)	Copper pipe	
	J 7	
	ø 14 mm	ø 16 mm
0	16	29
0,5	18	33
1	20	37
2	25	44
3	29	52
3,5	31	55

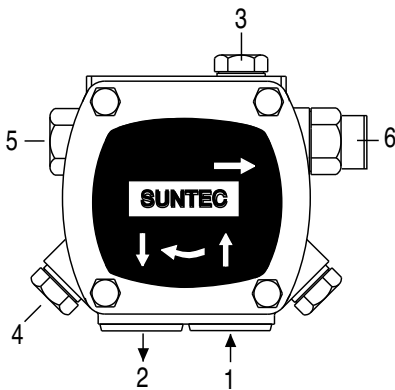
H (m)	Copper pipe	
	J 7	
	ø 14 mm	ø 16 mm
0	16	29
0,5	14	26
1	12	22
2	7	14
3	3	7
3,5	1	4

To calculate the length of the pipework all the straight parts, curves, up and down pipes must be taken into consideration. The static suction height is the distance between the standing valve and the axis of the burner pump.

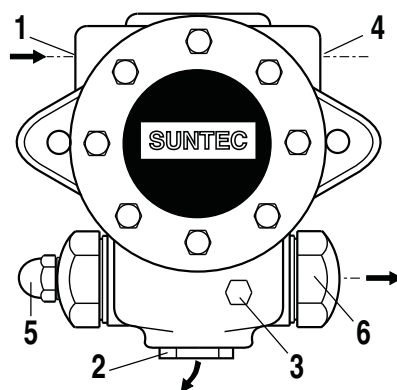
Pressure must not exceed 0,45 bar; if pressure is greater pump operation may become faulty, leading to an increase in mechanical noise and perhaps even breakage.

PRIMING AND ADJUSTMENT OF OIL PUMP

SUNTEC AJ 6 C-C



SUNTEC J7



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

VERIFY:

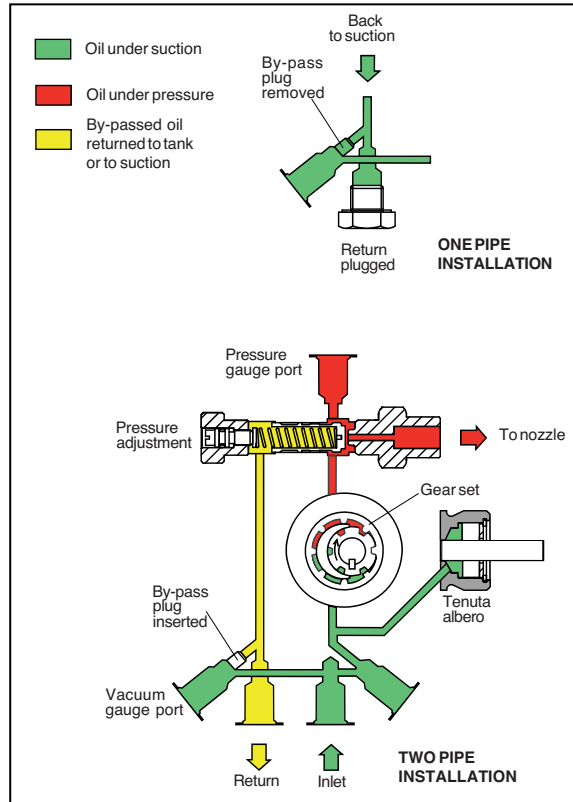
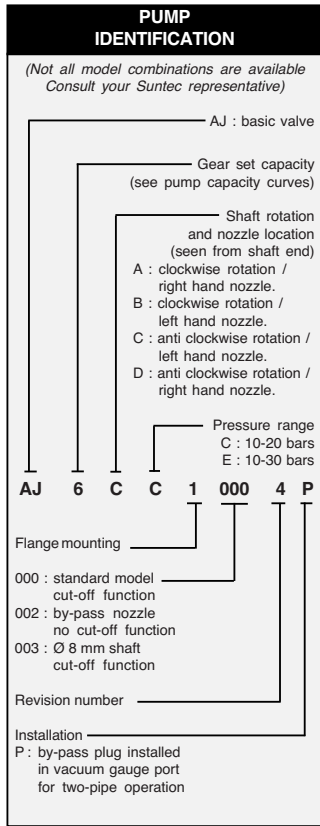
- That piping system is perfectly sealed;
- That the use of hoses is avoided whenever is possible (use copper pipes preferably);
- That depression is not greater than 0,45 bar, to avoid pump's cavitation;

- That check valve is suitably designed for the duty;

The pump pressure is set at a value of 12 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.

PUMP SUNTEC AJ TECHNICAL DATA

NB : For one-pipe installation, the by-pass plug must be removed from the vacuum gauge port and the return port sealed by steel plug and washer.



TECHNICAL DATA

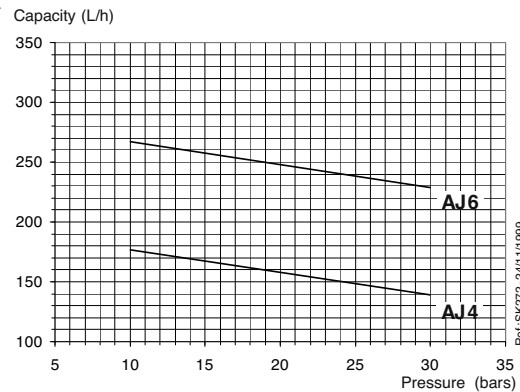
General

Mounting	Flange according to EN 225
Connection threads	Cylindrical according to ISO 228/1
Inlet and return	G 1/4
Nozzle outlet	G 1/8
Pressure gauge port	G 1/8
Vacuum gauge port	G 1/8
Valve function	Pressure regulating and cut-off* (* except for 1002 models).
Strainer	Open area : 30 cm ² Opening size : 120 x 150 µm ²
Shaft	AJ 1000/1002 : Ø 11mm (7/16") AJ 1003 : Ø 8 mm according to EN 225.
By-pass plug	Inserted in vacuum gauge port for 2 pipe system; to be removed with a 4 mm Allen key for 1 pipe system.
Weight	1,7 kg

Hydraulic data

Nozzle pressure range	C : 10 - 20 bars E : 10 - 30 bars
Delivery pressure setting	12 bars
Operating viscosity	2 - 75 mm /s (cSt)
Oil temperature	0 - 60°C in the pump.
Inlet pressure	2 bars max.
Return pressure	2 bars max.
Suction height	0,45 bars max. vacuum to prevent air separation from oil.
Rated speed	3600 rpm max.
Torque (@ 45 rpm)	0,30 N.m

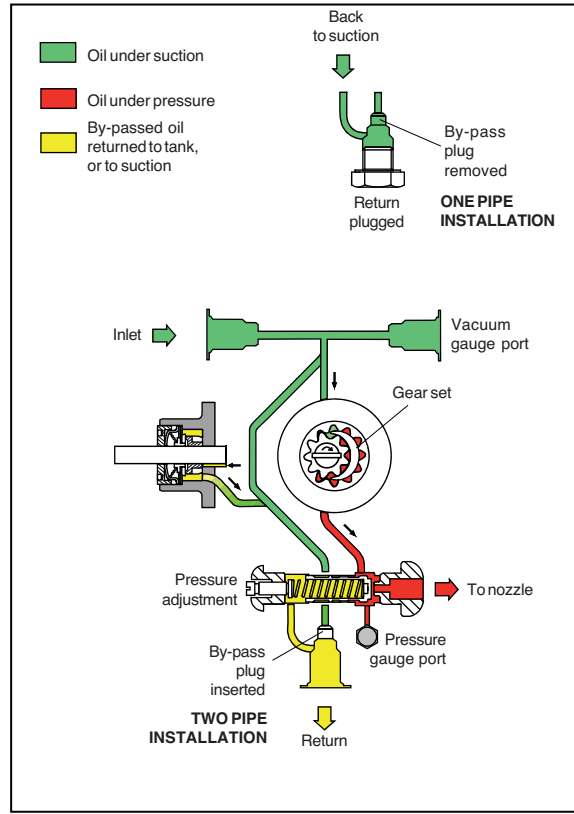
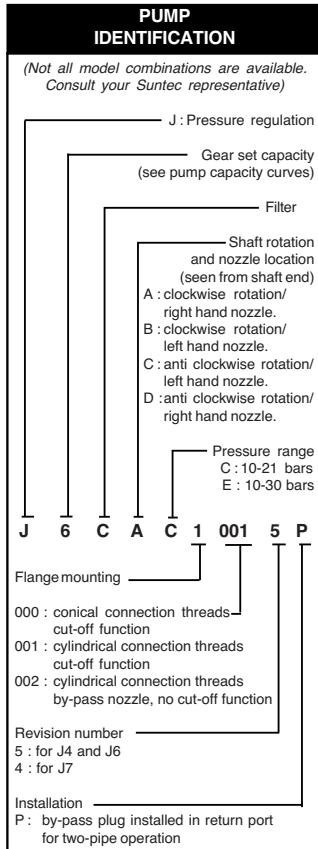
Pump capacity



Viscosity = 5 cSt - rated speed = 2850 rpm
 Data shown take into account a wear margin.
 Do not oversize the pump when selecting the gear capacity.

PUMP SUNTEC J TECHNICAL DATA

NB : For one-pipe installation, the by-pass plug must be removed from the return port and the return port sealed by steel plug and washer.



TECHNICAL DATA

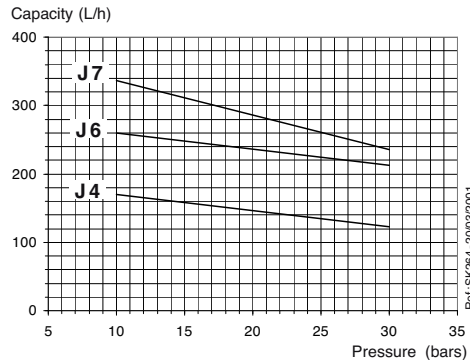
General

Mounting	Flange mounting according to EN 225.	
	Model 1000	Models 1001/1002
Connection threads	Conical	Cylindrical (according to ISO 228/1)
Inlet and return	1/4"NPTF	G 1/2
Nozzle outlet	1/8"NPTF	G 1/4
Pressure gauge port	1/8"NPSF	G 1/8
Vacuum gauge port	1/4"NPTF	G 1/2
Valve function	Pressure regulating and cut-off (except for 1002 models).	
Strainer	Open area : 45 cm Opening size : 170 μm	
Shaft	Ø 11mm according to EN 225.	
By-pass plug	Inserted in return port for 2 pipe system; to be removed with a 3/16" Allen key for 1 pipe system.	
Weight	4 kg	

Hydraulic data

Nozzle pressure range	C : 10 - 21 bars E : 10 - 30 bars
Delivery pressure setting	12 bars
Operating viscosity	2 - 75 mm ² /s (cSt)
Oil temperature	0 - 90°C in the pump.
Inlet pressure	1,5 bars max.
Return pressure	1,5 bars max.
Suction height	0,45 bars max. vacuum to prevent air separation from oil.
Rated speed	3600 rpm max.
Torque (@ 45 rpm)	0,30 N.m

Pump capacity



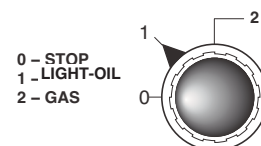
Viscosity = 5 cSt - rated speed = 2850 rpm
Data shown take into account a wear margin.
Do not oversize the pump when selecting the gear capacity.

NOZZLE FLOW RATE (DELAVAN B - MONARCH PLP)

NOZZLE GPH	PUMP PRESSURE (bar)						
	10	11	12	13	14	15	16
2,50	9,50	9,97	10,41	10,83	11,24	11,64	12,02
3,00	11,40	11,96	12,49	13,00	13,49	13,96	14,42
3,50	13,30	13,95	14,57	15,17	15,74	16,29	16,83
4,00	15,20	15,94	16,65	17,33	17,99	18,62	19,23
4,50	17,10	17,94	18,73	19,50	20,24	20,95	21,63
5,00	19,00	19,93	20,82	21,67	22,48	23,27	24,04
5,50	20,90	21,92	22,90	23,83	24,73	25,60	26,44
6,00	22,80	23,92	24,98	26,00	26,98	27,93	28,84
6,50	23,70	25,91	27,06	28,17	29,23	30,26	31,25
7,00	26,60	27,90	29,14	30,33	31,48	32,58	33,65
7,50	28,50	29,90	31,22	32,50	33,73	34,91	36,05
8,30	31,54	33,08	34,55	35,97	37,32	38,63	39,90
9,50	36,10	37,87	39,55	41,17	42,72	44,22	45,67
10,50	40,06	41,73	43,74	45,41	47,20	48,90	50,50
12,00	45,60	47,80	50,00	52,00	54,00	55,90	57,70
13,80	52,40	55,00	57,50	59,80	62,10	64,20	66,30
15,30	58,10	61,00	63,70	66,30	68,80	71,10	73,60
17,50	66,50	69,80	72,90	75,80	78,70	81,50	84,10
19,50	74,10	77,70	81,20	84,50	87,70	90,80	93,70
21,50	81,70	85,70	89,50	93,20	96,70	100,10	103,40
24,00	91,20	95,70	99,90	104,00	107,90	111,70	115,40
28,00	106,40	111,60	116,60	121,30	125,90	130,30	134,60
30,00	114,00	119,60	124,90	130,00	134,90	139,60	144,20
GPH	OUTPUT kg/h						

WORKING OF THE BURNER WITH LIGHT-OIL FUEL

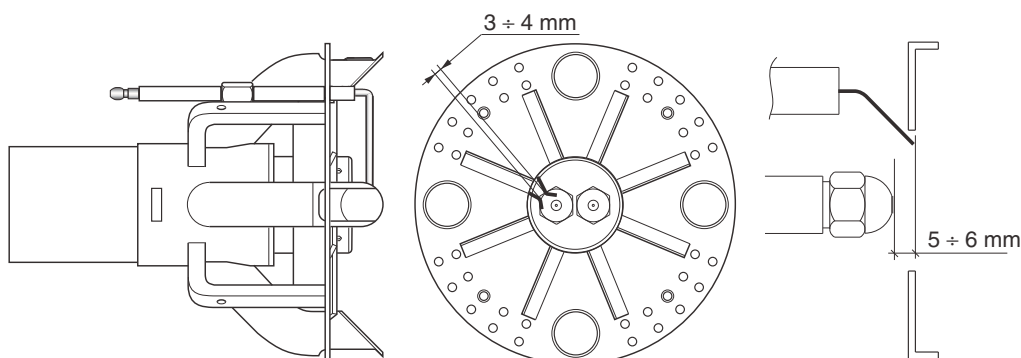
- Once having installed the burner, check the following items:
- The burner power feeding and the main line protection fuses
 - The correct length of pipes and that the same are sealed.
 - The type of fuel, which must be suitable for burner.
 - The connection of boiler's thermostats and all the safeties.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



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.

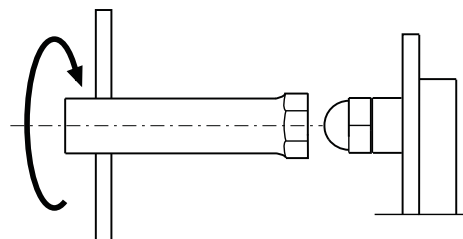
POSITION OF IGNITION ELECTRODES



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.



MAINTENANCE

YEARLY CONTROLS

The periodical check of the burner (firing head, electrodes etc.) must be carried out one or two times a year, by authorised personnel only. Before proceeding with the controls for the maintenance, it should be advisable to check the general status of the burner as follows: - Disconnect the burner from the power supply - Turn off the gas cut-off cock - Remove the burner's cover and clean fan and the air intake - Clean the firing head and check the electrodes position - Reassemble the whole - Check the piping sealing - Check the chimney - Start the burner while verifying the combustion parameters.

FAULT FINDINGS BEFORE ANY INTERVENTION VERIFY WHAT FOLLOWS:

The burner must be duly connected to power supply - cut-off cock must be open and the gas pressure is the correct one. The control and safety devices must be duly connected - If the above conditions are met, start the burner by pushing the lockout disable button and check the burner's cycle.

THE BURNER DOES NOT START

Verify the ON/OFF switch, the thermostats, the motor and the gas pressure. The selector switch is set to 0 position. The fuses are blown. The control box is faulty.

THE BURNER PRE-PURGES THEN STOPS

Check the air pressure and the fan - Check the air pressure switch - Check control box (faulty) - The ignition transformer is faulty - Check the ignition cable - Check electrodes (dirty, faulty or in a wrong position) - Check nozzles (clogged or worn out) - Check filters (clogged) - Light-oil pressure too low - Air flow rate too high for nozzle's output.

THE BURNER PRE-PURGES BUT DOES NOT IGNITES

Check the correct position of the electrodes - Check the ignition cable - Check the ignition transformer - Check the control box.

THE BURNER IGNITES THEN STOPS AFTER THE SAFETY TIME

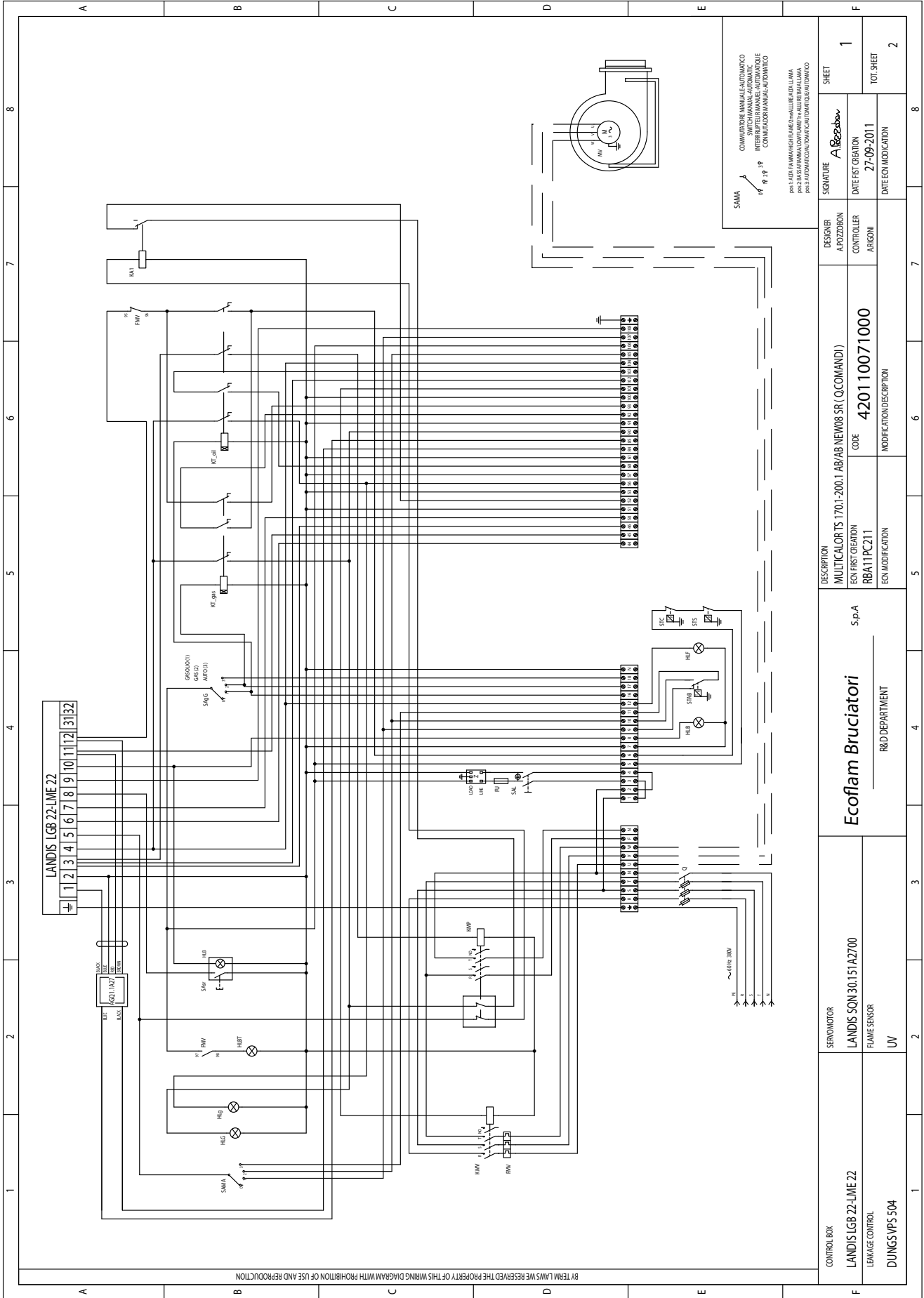
Check that phase and neutral are connected in the right way - Check gas solenoid valve - Check the position of ionisation probe and related connection - Check control box - Check nozzles (clogged or worn out) - The photoresistor does not "see" the flame - Check filters (clogged) - Light-oil pressure too low - Combustion air flow rate too high for the nozzle's output.

THE BURNER IGNITES THEN STOPS WITHIN FEW MINUTES OF WORKING

Check pressure governor and gas filter - Check gas pressure through a manometer - Check ionisation values (must be 200 μ A at least).

THE BURNER DOES NOT SWITCH TO HIGH FLAME

High/Low selector switch wrongly set - Check control box (faulty) - Oil valve's coil faulty - Light-oil pressure too low - Check filters (clogged) - Check nozzle (worn out or clogged) - Air damper motor jack faulty or wrongly adjusted.



CONTROL BOX LANDIS LGB 22-LME 22 LEAKAGE CONTROL DUNGS VPS 504	SEMIMOTOR LANDIS SON 30.151 A2700	Ecoflam Bruciatori S.p.A R&D DEPARTMENT	DESCRIPTION MULTICALOR TS 170.1-200.1 AB/AB NEW08 SR (COMANDI)	DESIGNER A. POZZOBON	DESIGNER SIGNATURE <i>A. Pozzobon</i>	SHEET 1
	FLAME SENSOR UV		ECH FIRST CREATION RBA11PC211	CODE 4201 10071000	CONTROLLER AB/COM	DATE FIRST CREATION 27-09-2011
			ECO MODIFICATION	MODIFICATION DESCRIPTION	DATE ECO MODIFICATION	

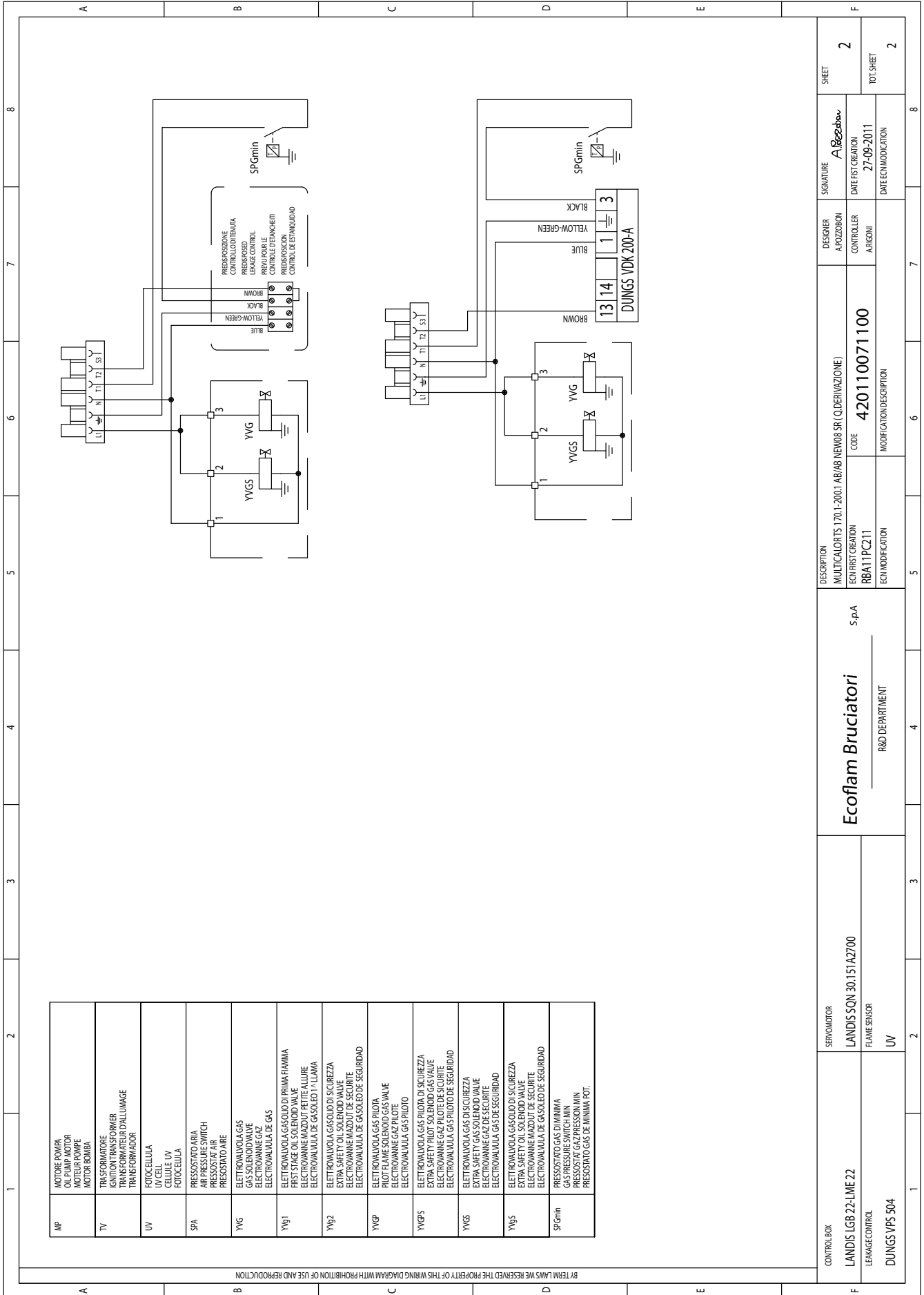
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08 2 19

COMANDO PER MANUALE E AUTOMATICO
INTERRUTTORE MANUALE AUTOMATICO
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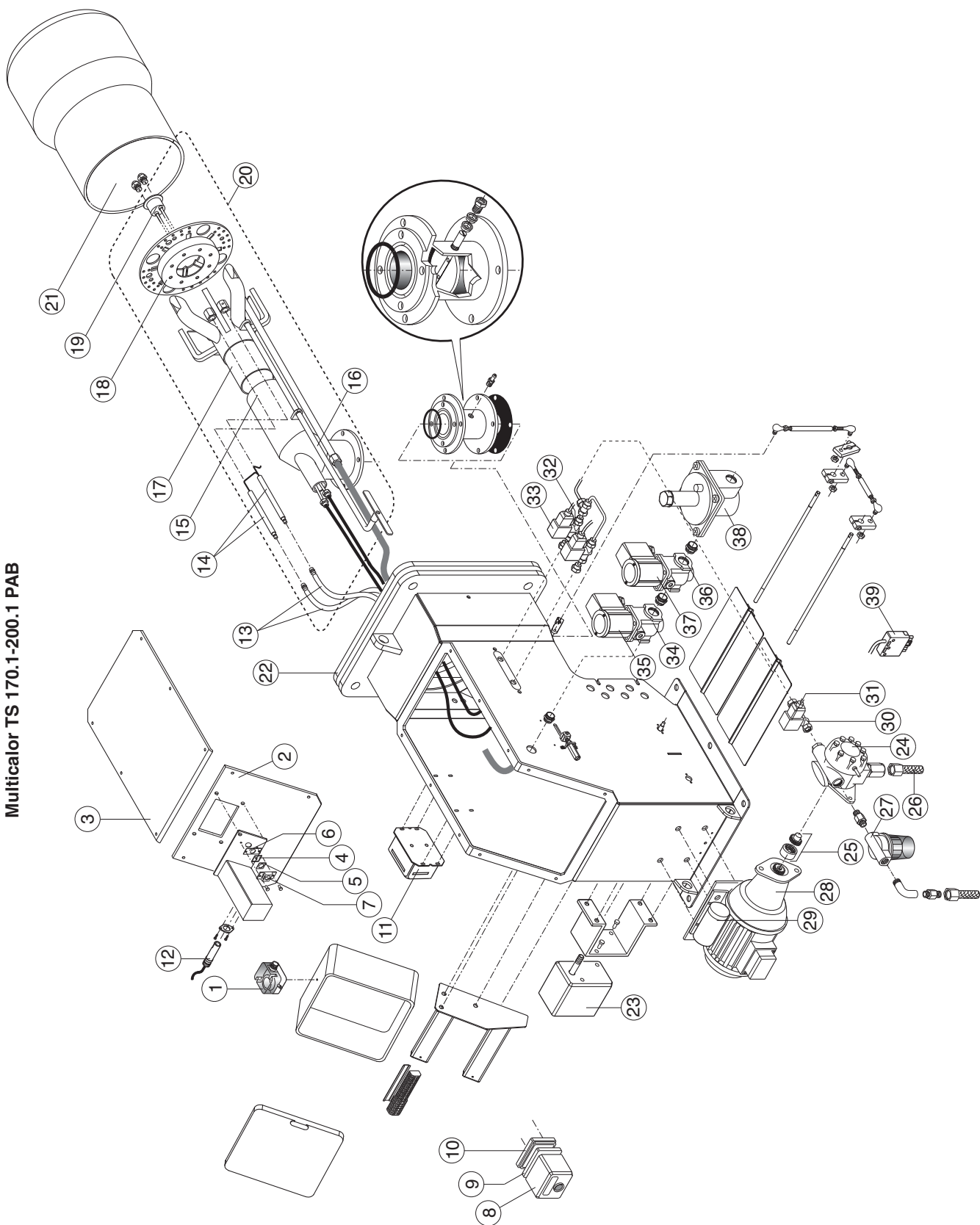
POS. 1. ADA FRAMMAGHIA E ZIMMALLER A DUE LAMME
POS. 2. BASSI FRAMMAGHIA E ZIMMALLER A DUE LAMME
POS. 3. FRAMMAGHIA E ZIMMALLER A DUE LAMME

1		2		3		4		5		6		7		8			
Q		INTERUTTORE GENERALE CONFUSIBILE MAIN SWITCH WITH FUSE INTERRUPTEUR GENERAL CONFUSIBLE		STAB		TERMOSTATO DI ALTA BASSA FIAMMA HIGH CONF LAME THERMOSTAT THERMOSTAT DE ALTA BASSA LLAMA											
Z		FILTRO ANTIDISTURBO ANTI JAMMING FILTER FILTRE ANTIDISTURBO FILTRO DE PROTECCION ANTIDISTURBO		HIBT		LAMPADA DI BLOCCO TERMICO THERMAL LOCK-OUT LAMP LAMPPE DE SECURITE TERMICO ESPIA DE BLOQUEO RELE TERMICO											
FU		FUSIBILE FUSE FUSIBLE FUSIBLE		KAI		RELE RELAY RELAIS RELE											
MV		MOTORE VENTILATORE MOTOR FAN MOTEUR VENTILATEUR MOTOR VENTILADOR		KT_gps		TEMPORIZZATORE TIMER TEMPORISATEUR TEMPORIZADOR											
TV		TRASFORMATORE IGNITION TRANSFORMER TRANSFORMATEUR D'ALLUMAGE TRANSFORMADOR		KT_oil		TEMPORIZZATORE TIMER TEMPORISATEUR TEMPORIZADOR											
UV		FOTOCELLULA UV CELL CELLULE UV FOTOCELULA		SA sr		PULSANTE DI SBLOCCO APPARECCHIATURA RESET LOCK OUT BUTTON BOUOTON DE DEBLOCAGE DU COFFRE DE SECURITE REANIME DE LA CENTRALINA											
FMY		RELE TERMICO MOTORE VENTILATORE MOTOR THERMAL RELAY (FAN MOTOR) RELAIS THERMIQUE MOTEUR VENTILATEUR RELE TERMICO MOTOR VENTILADOR															
HLB		LAMPADA DI BLOCCO LOCK-OUT LAMP LAMPPE DE SECURITE ESPIA DE BLOQUEO															
HIG		LAMPADA GAS GAS LAMPE LAMPPE DE GAZ ESPIA GAS															
Hig		LAMPADA GAS SOLIO OIL OR LAMP TEMON MAZOUT ESPIA GASOLEO															
KMP		CONTATTATORE MOTORE POMPA PUMP REMOTE CONTROL SWITCH CONTACTEUR MOTEUR POMPE EMPALME MOTOR BOMBA															
KMW		CONTATTATORE MOTORE VENTILATORE REMOTE CONTROL SWITCH (FAN MOTOR) CONTACTEUR MOTEUR VENTILATEUR TELERUPTOR MOTOR VENTILADOR															
SAL		INTERUTTORE DI LINEA WORKING SWITCH INTERRUPTEUR DE LIGNE INTERRUPTOR DE LINEA															
STC		TERMOSTATO CALDAIA BOILER THERMOSTAT THERMOSTAT CHAUDIERE TERMOSTATO CALDERA															
STS		TERMOSTATO DI SICUREZZA SAFETY THERMOSTAT THERMOSTAT DE SECURITE TERMOSTATO DE SEGURIDAD															
SagG		INTERUTTORE GAS SOLIO GAS-AUTO SWITCH OIL GAS-AUTO INTERRUPTEUR MAZOUT-GAZ-AUTO COMUTADOR GASOLEO-GAS-AUTO															
CONTROL BOX LANDIS LGB 22-LME 22		SERVOMOTOR LANDIS SON 30.15/AZ 700		Ecoflam Bruciatori S.p.A		MULTICALOR TS 170.1-200.1 AB/AB NEW 08 SR (O.COMANDI) EQUIPMENT CREATION RBA11PZ11		DESCRIPTION		MULTICALOR TS 170.1-200.1 AB/AB NEW 08 SR (O.COMANDI) CODE 420110071000		DESIGNER A.POZZORON		SIGNATURE A. Pozzoron		SHEET 2	
LEAKAGE CONTROL DUNGS VPS 504		FLAME SENSOR UV		R&D DEPARTMENT		ECON MODIFICATION		ECON MODIFICATION DESCRIPTION		CONTROLLER A.RIGONI		DATE OF CREATION 27-09-2011		DATE OF MODIFICATION		TOTAL SHEET 2	

BY THEM LAMPS WE RESERVE THE PROPERTY OF THIS WIRING DIAGRAM WITH PROHIBITION OF USE AND REPRODUCTION



Multicalor TS 170.1-200.1 PAB



N°	DESCRIPTION	MULTICALOR TS 170.1 PAB	
			code
1	AIR PRESSURE SWITCH	DUNGS LGW10A2P	65323047
2	DOWN COVER		65324969
3	UP COVER		65324970
4	GLASS		65321883
5	GASKET	28x28	65321948
6	GLASS	30x50	65321949
7	GLASS COVER		65321884
8	CONTROL BOX BASE	LANDIS	65320092
9	ADAPTER	LANDIS AGQ1.1A27	65322038
10	CONTROL BOX	LANDIS LGB22	65320034
11	IGNITION TRANSFORMER	BRAHMA T8 13000/35	65323241
12	UV CELL	LANDIS QRA 2	65320075
13	IGNITION CABLE		65320946
14	IGNITION ELECTRODES SET		65325155
15	PIPE	TC	65321674
		TL	65324593
16	ROD	TC	65320244
		TL	65320245
17	FIRING HEAD		65321677
18	FRONT DISC		65320821
19	NOZZLE HOLDER		65321807
20	INNER ASSEMBLY	TC	65325764
		TL	65325512
21	BLAST TUBE	TC	65320451
		TL	
22	GASKET ISOMART		65324971
23	AIR DAMPER MOTOR	LANDIS SQN 30.151A2700	65322897
24	OIL PUMP	SUNTEC AJ6CC10002P	65322950
25	COUPLING		65325387
26	HOSES	TN 14X1200	65323184
27	OIL FILTER	ATT. 3/4 70207	65324806
28	PUMP MOTOR	370 W	65322774
29	CONDENSATOR	14 µF	65321854
30	OIL VALVE	PARKER SCEM VE140AR	65323623
31	COIL	PARKER SCEM VE140AR	65323780
32	OIL VALVE	DELTA 1/8 F.84	65323754
33	COIL	DELTA 1/8 F.84	65323765
34	GAS VALVE	BRAHMA EG12SR GFD	65323595
35	COIL	BRAHMA	65323707
36	GAS VALVE	BRAHMA EG12SR GFD	65323595
37	COIL	BRAHMA	65323707
38	GAS GOVERNOR	1/2 FG1B 15	65325208
39	WIELAND PLUG	6 pin	65322072

TC = SHORT HEAD TL = LONG HEAD

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Ecoflam

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<http://www.ecoflam-burners.com> - e-mail: export@ecoflam-burners.com

"società soggetta alla direzione e al coordinamento della Ariston Thermo S.p.A., via A. Merloni, 45 - 60044 Fabriano (An) CF 01026940427"