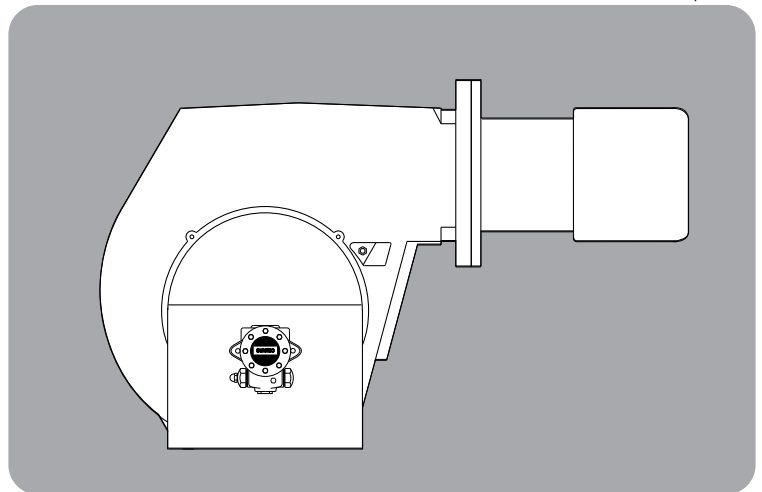


OIL BURNER

Ecoflam

MODELS



MAIOR P 150.1 AB

MAIOR P 200.1 AB

DRYER

HYDRAULIC SYSTEM
230 / 400 V 50 Hz

Three stage



420010374501

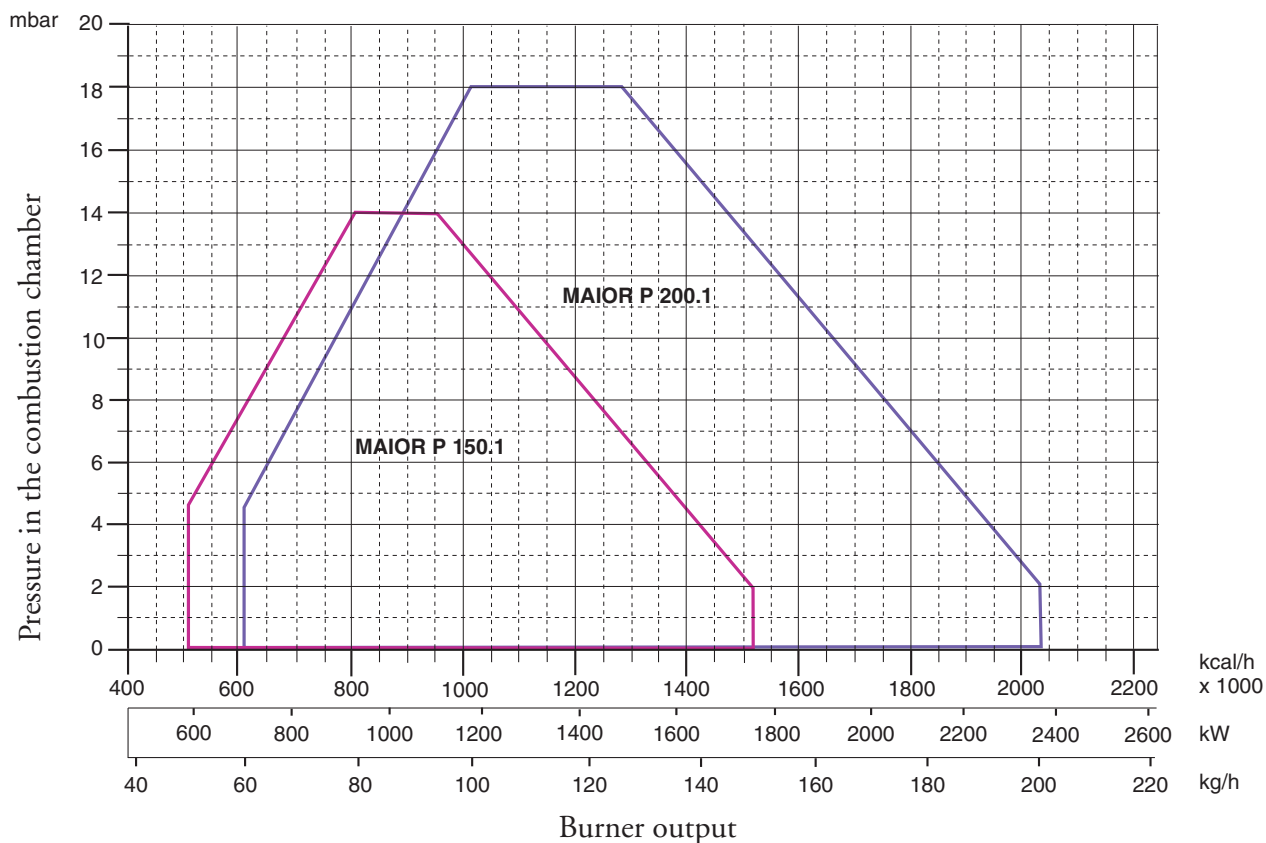
420010374501

26.11.2012

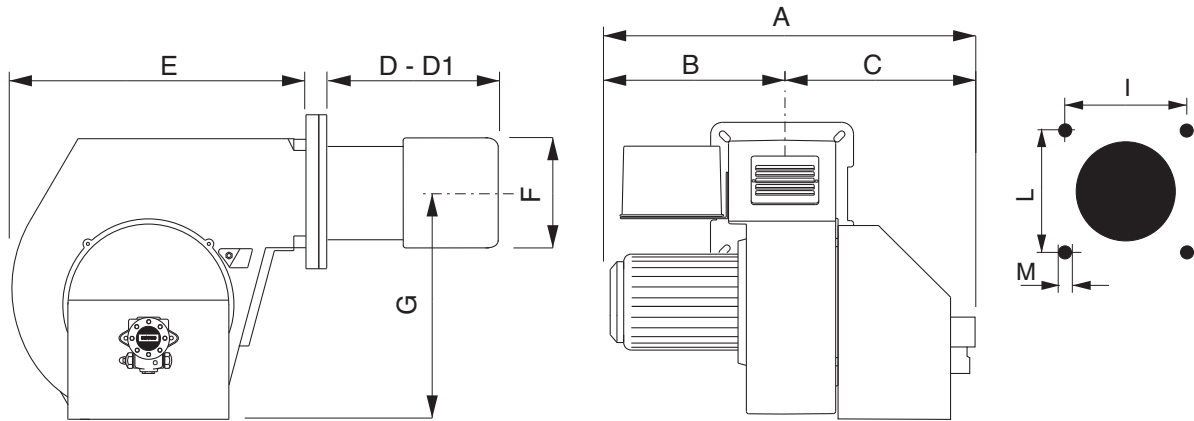
TECHNICAL DATA

MODELS		MAIOR P 150.1 AB	MAIOR P 200.1 AB
Thermal power max.	kcal/h	1.530.000	2.040.000
	kW	1.780	2.372
Thermal power min.	kcal/h	510.000	612.000
	kW	592	710
Max. capacity light oil	kg/h	150	200
Min. capacity light oil	kg/h	50	60
Voltage three phase 50 Hz	V	230/400	230/400
Motor	kW	4	4
Rpm	Nº	2.800	2.800
Ignition transformer	kV/mA	10/30	13/35
Control box	SIEMENS	LMO 44	LMO 44
Fuel : light oil		kcal/kg 10.200 max. visc 1,5°E a 20°C	

WORKING FIELDS



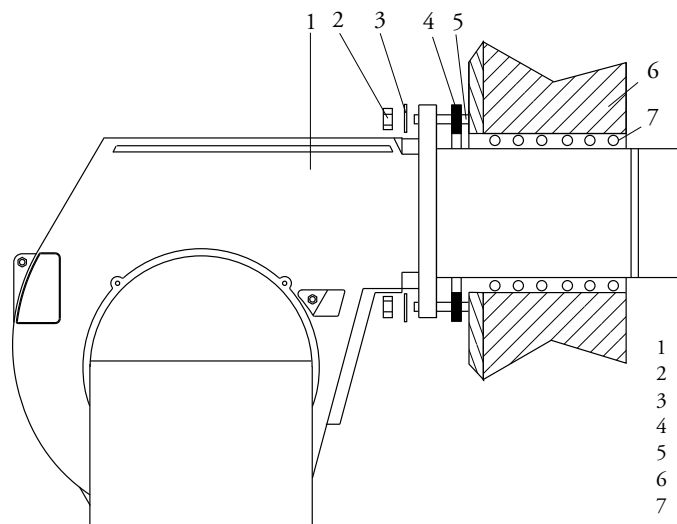
OVERALL DIMENSIONS



MODELS	A	B	C	D	D1	E	F	G	I	L	M
P 150.1 AB	795	405	390	285	485	660	250	398	240	240	M14
P 200.1 AB	795	405	390	285	485	660	270	398	240	240	M14

D = SHORT HEAD D1 = LONG HEAD

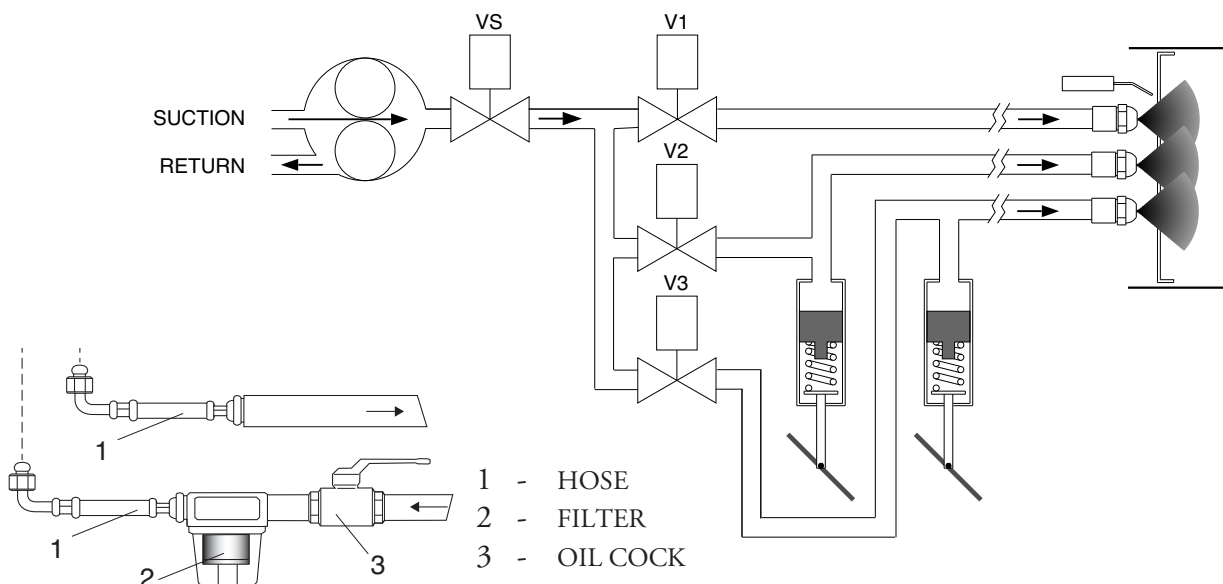
BURNER INSTALLATION



Attach the burner to the boiler as in fig. Fill the gap between the burner blast tube and door with asbestos rope.

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

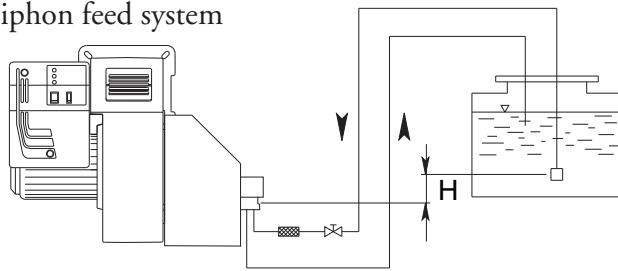
HYDRAULIC CIRCUIT



- 1 - HOSE
- 2 - FILTER
- 3 - OIL COCK

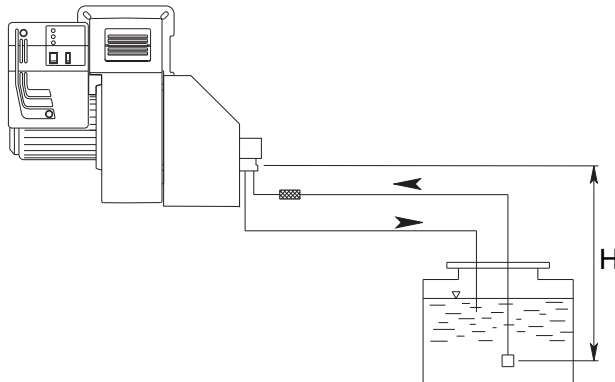
MAXIMUM LENGTH OF SUCTION LINES FOR TWO-PIPE SYSTEM

Two-pipe siphon feed system



H (m)	Pipe length			
	AJ 6 (m)		J 7 (m)	
	ø 14 mm	ø 16 mm	ø 14 mm	ø 16 mm
0	22	38	16	29
0,5	25	45	18	33
1	30	50	20	37
2	35	60	25	44
3	38	70	29	52
3,5	40	80	31	55

Two-pipe lift system



H (m)	Pipe length			
	AJ 6 (m)		J 7 (m)	
	ø 14 mm	ø 16 mm	ø 14 mm	ø 16 mm
0	25	45	16	29
0,5	20	38	14	26
1	18	33	12	22
2	10	20	7	14
3	5	10	3	7
3,5	2	4	1	4

Length indicated (intersection of horizontal lines and columns) is with 4 right angle elbows, 1 stop valve; if additional constraints exist, the length must be reduced accordingly.

NOZZLE OUTPUT

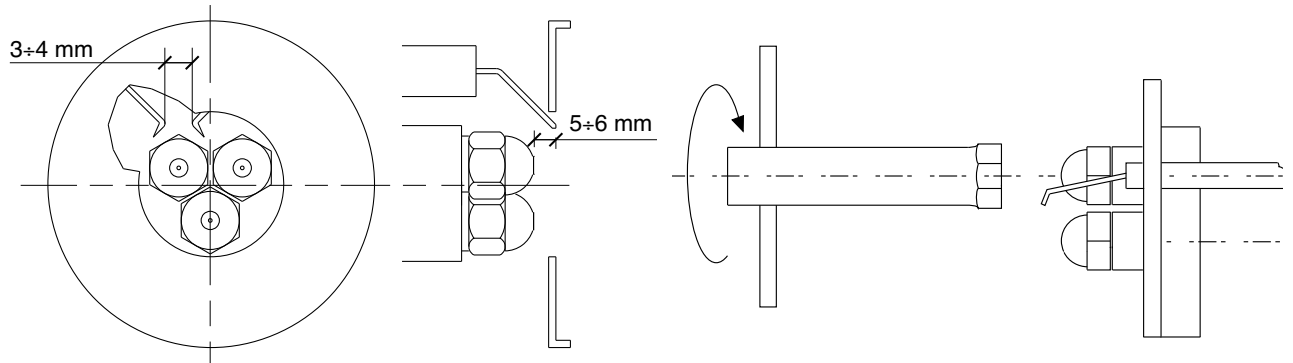
TYPE : DELAVAN B - MONARCH PLP

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						

NOZZLE REPLACEMENT

Use special box wrench provided for this operation. Remove the nozzle carefully taking great care not to damage the electrodes. Fit the new nozzle with care.

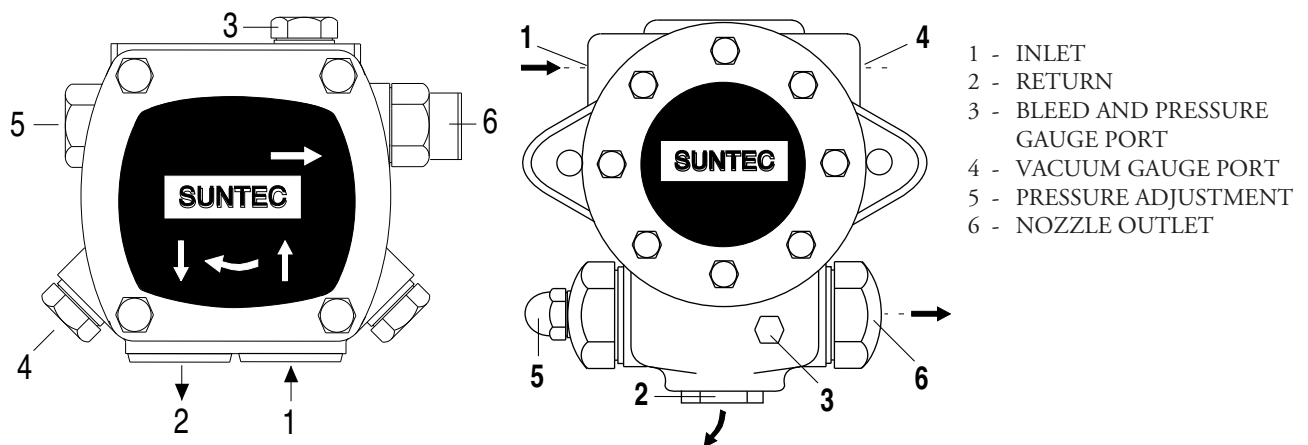
N.B. : Always check the position of the electrodes after replacing the nozzle(see plan). Be sure electrodes are positioned as shown in fig. Faulty regulation can result in oil impingement or ignition difficulties.



PRIMING AND ADJUSTMENT OF THE PUMP

SUNTEC AJ 6 C 1000

SUNTEC J 7 C 1000



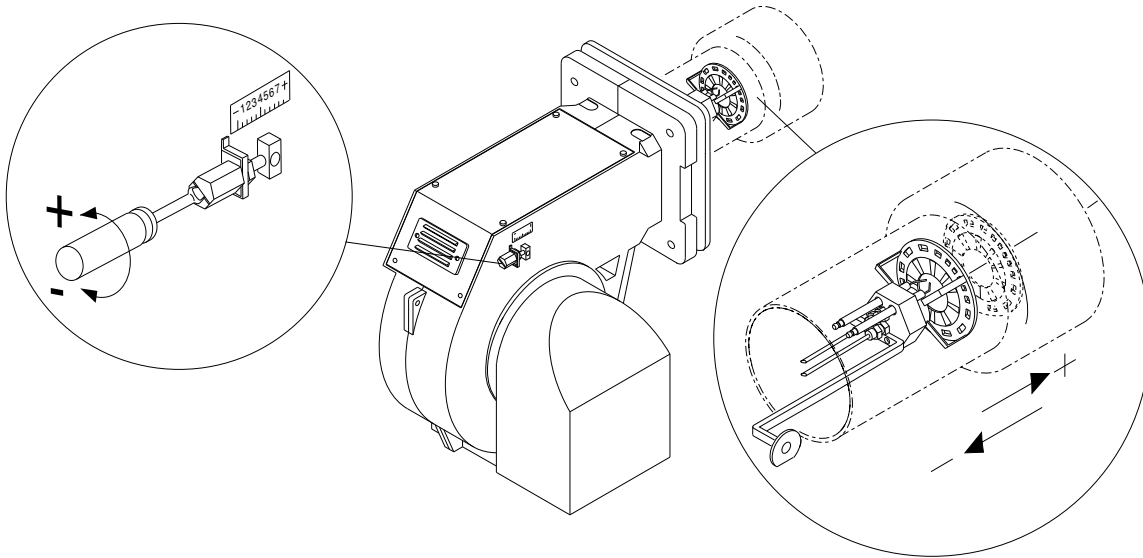
To prime the pump first of all start the burner and bleed air from the pump through the gauge port. If the burner goes to lock-out after the prepurging time due to lack of pressure in the oil pump, restart the burner.

NOTE : before starting up the burner, make sure that the return pipe is clear. Check that the pipes do not leak. It is advisable to use copper pipes. Do not exceed the depression limit of 4 mt.(0,45 bar) to keep low noise levels. The return pipe must reach the same level as the check valve at the bottom of the oil tank.

BURNER START-UP

After connecting the hoses to the oil pipes make sure that there are no leakages. Air bleed the pipe through the pump operating on the gauge connection (see fig.). Install a suitable nozzle for the needed capacity. Turn thermostat to the desired temperature. The burner will purge for about 20 sec.. At this point the first stage oil valve and the safety oil valve opens and the transformer ignites. After an interval of approx. 3 sec. the second stage oil valve opens and in the same time the first air damper goes to full opening position. Put the TAB switch in close position, the third valve opens and at the same time the second air damper goes to full opening position. Required air capacity for the 1st , 2nd and 3rd stage is adjusted operating on Hydraulic System. In case of no ignition the burner goes to lock-out within 5 sec.

FIRING HEAD SETTING



The main feature is the capability to adjust the head to obtain maximum result from different types of plant. The position of the mixing head determines the speed of the air flow according to pressure upstream from the diffuser.

AIR ADJUSTMENT

FIRST STAGE

To adjust air delivery for "Low flame" loosen the screw D and hand-move the damper C to the desired set-point. After adjustment, make sure the lock-screw D is tight.

SECOND STAGE

"High flame" adjustment is attained by loosening the screw 1 and move the hydraulic system as desired.

This will cause the damper C to shift and requested air delivery will be obtained.

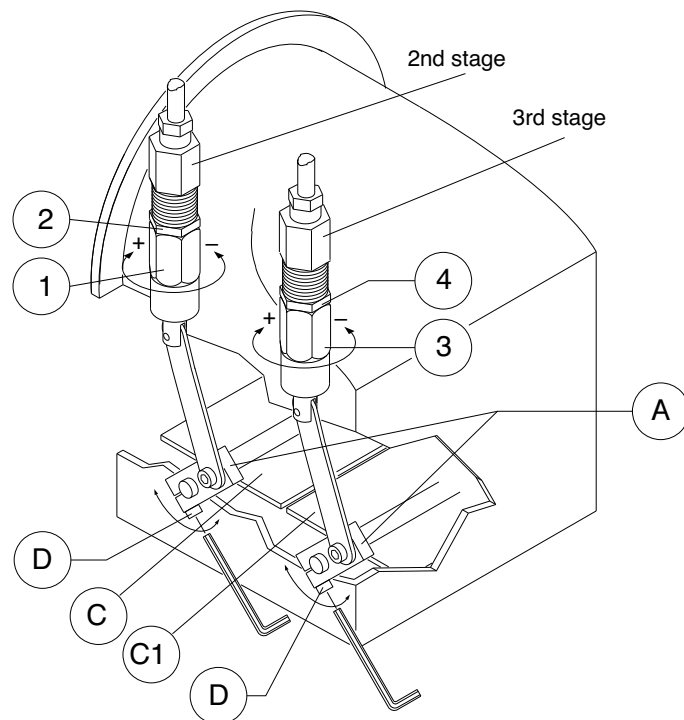
After adjustment, make sure the lock-screw 2 is tight.

THIRD STAGE

"High flame" adjustment is attained by loosening the screw 3 and move the hydraulic system as desired.

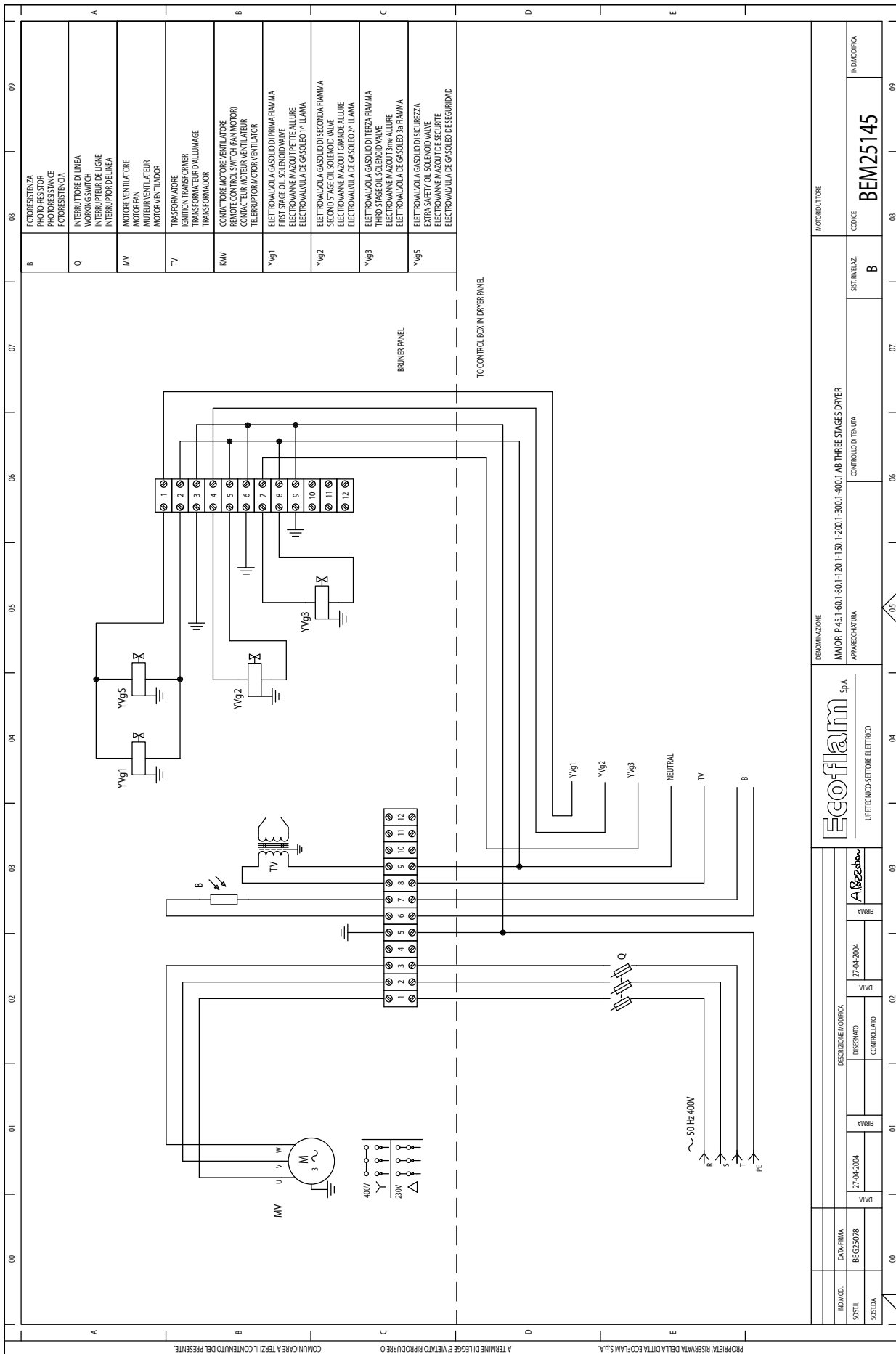
This will cause the damper C1 to shift and requested air delivery will be obtained.

After adjustment, make sure the lock-screw 4 is tight.



FAULT FINDING

<u>Burner does not start up</u>	- Mains switch not on. - Blown fuse. - Boiler thermostats not made. - Fault in control box.
<u>Burner pre-purges and stops</u>	- Fault in control box.
<u>Burner does not ignite during cycle and stops</u>	- Fault in control box. - Fault in photo-resistor.
<u>Burner does not ignite</u>	- Dirty ignition electrodes. - Fault at electrodes. - Electrodes installed wrongly. - Faulty ignition transformer. - Blocked nozzle. - Nozzle needs replacing. - Oil pressure too low. - Blocked oil filter. - Excessive combustion air for nozzle capacity. - Fault in control box.
<u>Burner ignites and then stops</u>	- Faulty nozzle. - Photo-resistor does not "see" flame. - Excessive combustion air for nozzle capacity. - Fault in control box. - Oil pressure too low. - Blocked oil filter.
<u>No high flame at burner (2nd stage)</u>	- 2nd stage valve coil faulty. - Oil pressure too low - Dirty filter - 2nd stage nozzle dirty faulty - Fault in control box.
<u>No high flame at butner (3rd stage)</u>	- 3rd stage valve coil faulty. - oil pressure too low. - Dirty filter. - 3rd stage nozzle dirty faulty. - Faulty control box.



DESCRIZIONE		INDICAZIONE	
MAIOR P.45.1-60.1-80.1-120.1-150.1-200.1-300.1-400.1-AB THREE STAGES DRYER	SIST. INVEZ.	B	BEM25145
APPARECCHIATURA	CONTROLLO DI TENUTA	INDICAZIONE	

DESCRIZIONE		INDICAZIONE	
MAIOR P.45.1-60.1-80.1-120.1-150.1-200.1-300.1-400.1-AB THREE STAGES DRYER	SIST. INVEZ.	B	BEM25145
APPARECCHIATURA	CONTROLLO DI TENUTA	INDICAZIONE	

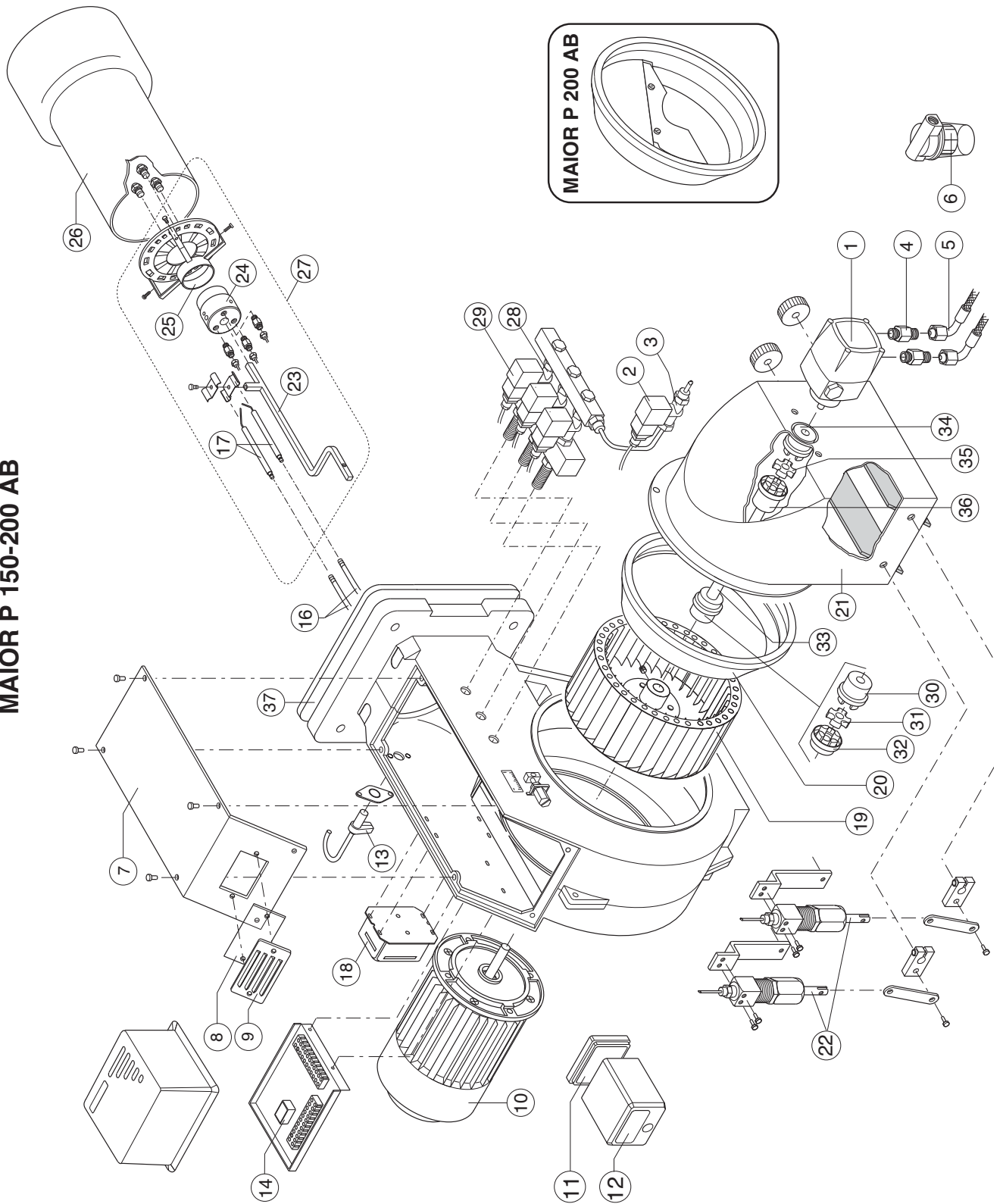
DESCRIZIONE		INDICAZIONE	
MAIOR P.45.1-60.1-80.1-120.1-150.1-200.1-300.1-400.1-AB THREE STAGES DRYER	SIST. INVEZ.	B	BEM25145
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APPARECCHIATURA	CONTROLLO DI TENUTA	INDICAZIONE	

IND. MOD.	DATA FIRMA	DESCRIZIONE MODIFICA	FRAMA
SOSTIL	BEG25078	DESIGNIO	27-04-2004
SISTIDA		CONTROLIATO	

IND. MOD.	DATA FIRMA	DESCRIZIONE MODIFICA	FRAMA
SOSTIL	BEG25078	DESIGNIO	27-04-2004
SISTIDA		CONTROLIATO	

MAIOR P 150-200 AB



N°	DESCRIPTION		MAIOR P 150.1 AB	MAIOR P 200.1 AB
			code	code
1	OIL PUMP	SUNTEC AJ 6A C 1000	65322950	-
		SUNTEC J 7CCC 1000	-	65322951
2	COIL	SIRAI L120V02-ZA30A	65323742	65323742
3	OIL VALVE	SIRAI L120V02-ZA30A	65323741	65323741
4	NIPPLE		65323186	65323183
5	HOSES		65323184	65323182
6	FILTER	ATT. 3/4 70207	3142084	3142084
7	COVER		65320676	65320676
8	GLASS		65320487	65320487
9	PEEP WINDOW FRAME		65320488	65320488
10	MOTOR	4000 W	65322820	65322820
11	CONTROL BOX BASE	SIEMENS	65320092	65320092
12	CONTROL BOX	SIEMENS LMO44.255A2	65320024	65320024
13	PHOTORESISTOR	SIEMENS	65320076	65320076
14	ANTIJAMMING FILTER		65323170	65323170
15				
16	CABLE	TC	65320945	65320945
17	ELECTRODES		65325056	65325056
18	IGNITION TRANSFORMER	10 / 30	65323235	-
		BRAHMA T8 13000/35	-	65323222
19	FAN	280 x 140	65321798	65321798
20	AIR CONVEYOR		65320643	65320643
21	COVER AIR INLET		65320555	65320555
22	HYDRAULIC SYSTEM		65322333	65322333
23	ROD	TC	65324824	65324824
24	NOZZLE HOLDER		65320715	65320715
25	DIFFUSER		65320786	65320786
26	BLAST TUBE	TC	65320451	65320453
27	FIRING HEAD	TC		
28	OIL VALVE	SIRAI L120V02-ZA30A	65323741	65323741
29	COIL	SIRAI L120V02-ZA30A	65323742	65323742
30	COUPLING		65321790	65321790
31	UNION		65321791	65321791
32	FAN COUPLING		65321788	65321788
33	ROD			
34	PUMP COUPLING		65324165	65324165
35	COUPLING		65321786	65321786
36	COUPLING		65321782	65321782
37	GASKET		65321124	65321124

TC = SHORT HEAD

Lined page with horizontal ruling lines.

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