OIL BURNERS

Ecoflam

MAX 15
Vent.Cont.

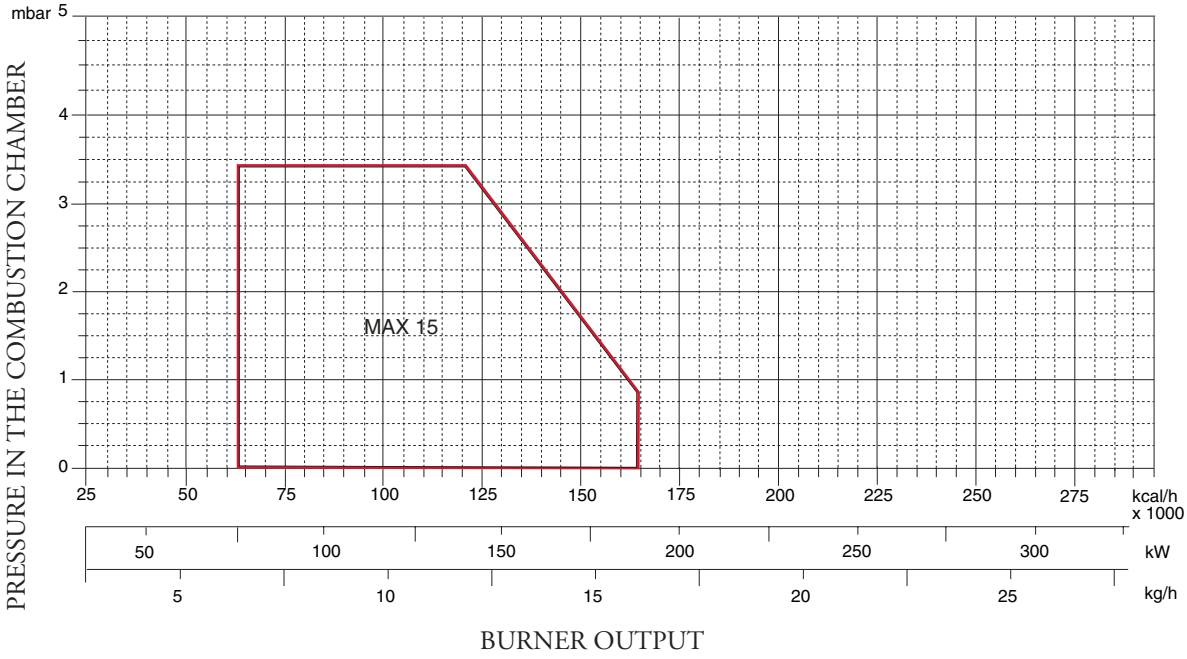
Light oil

LB 1534
07.12.2007

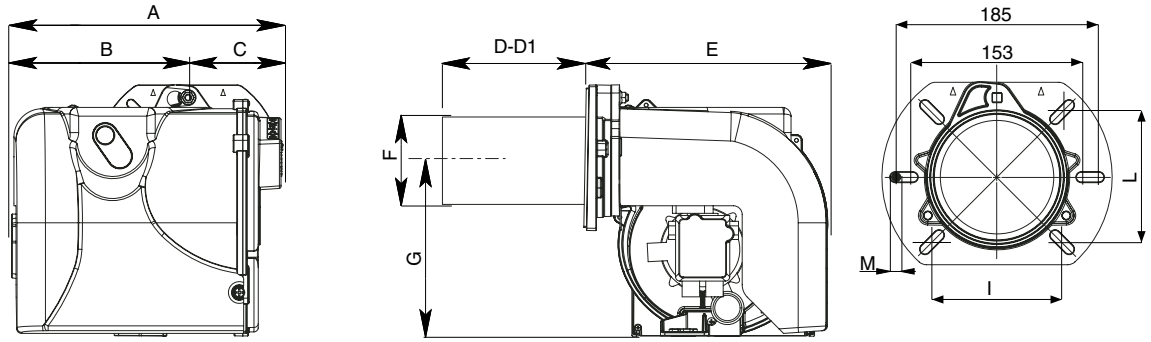
TECHNICAL DATA

MODEL		MAX 15
Thermal power max.	kcal/h	163.800
	kW	190
Thermal power min.	kcal/h	63.240
	kW	73,4
Max. flow rate light oil	kg/h	16
Min. flow rate light oil	kg/h	6,2
Feeding power	50 Hz V	220
Motor	W	130
Rpm	N°	2.800
Ignition transformer	kV/mA	8/20
Control box	LANDIS	LOA 24
Fuel: light oil	kcal/kg	10.200 max. visc 1,5°E a 20°C

WORKING FIELDS



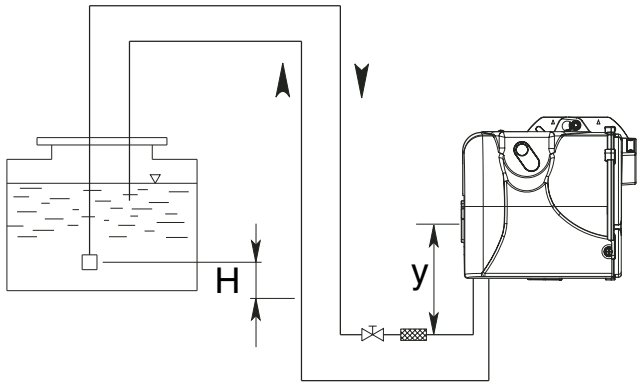
OVERALL DIMENSIONS



MODEL	A	B	C	D	D1	E	F	G	I	L	M
MAX 15	312	202	110	160	260	276	107	201	120-131	120-131	M8
D = short head D1 = long head											

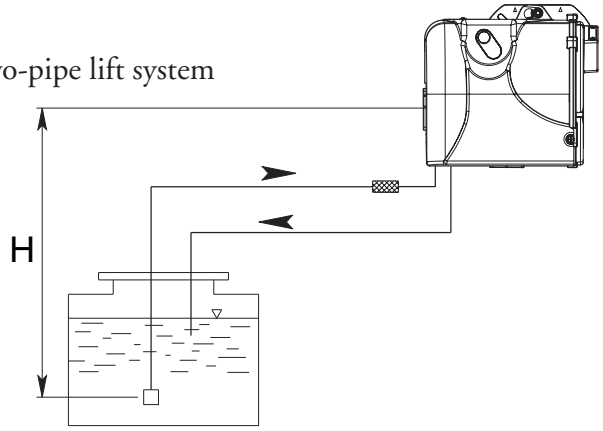
MAXIMUM LENGTHS OF SUCTION LINES FOR TWO-PIPE SYSTEM SUNTEC AS 47 AK

Two-pipe siphon feed system



H (m)	Length pipe (m)	
	ø 8 mm	ø 10 mm
0,5	30	65
1	35	70
1,5	40	75
2	45	80
2,5	50	85
3	55	90
3,5	60	95

Two-pipe lift system



H (m)	Length pipe (m)	
	ø 8 mm	ø 10 mm
0,5	23	55
1	21	50
1,5	19	45
2	17	40
2,5	14	34
3	9	28
3,5	4	22

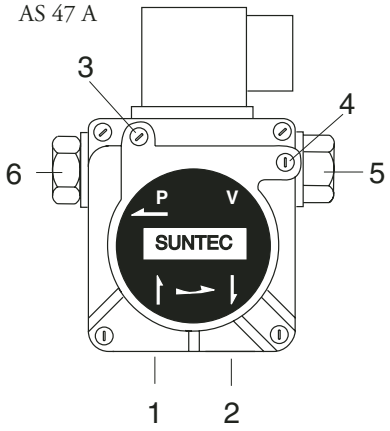
ADJUSTMENT DATA

	NOZZLE		PUMP	OUTPUT	FIRING HEAD SETTING	AIR DAMPER ADJUSTMENT
	gph	spry	bar	kg/h	Pos.	Pos.
MAX 15	1,50	60°	12	6,2	0	
	1,65	60°	12	7,0	1	
	1,75	60°	12	7,6	2	
	2,00	60°	12	8,3	2,5	
	2,25	60°	12	9,3	3	
	2,50	60°	12	10,4	3,5	
	2,75	60°	12	11,5	4	
	3,00	60°	12	12,5	4,5	
	3,50	60°	12	14,9	5	
	4,00	60°	11	16,0	5	

NOZZLE : DANFOSS H÷S 80°÷60°; DELAVAN W 60°; STEINEN S 60°

PRIMING AND ADJUSTMENT OF OIL PUMP

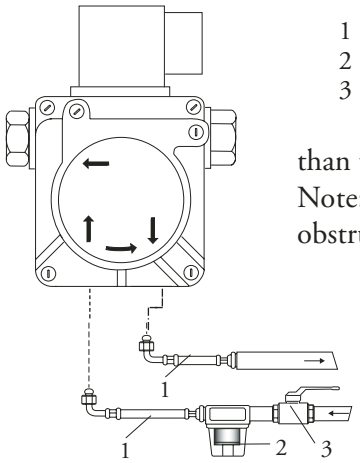
SUNTEC
AS 47 A



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.

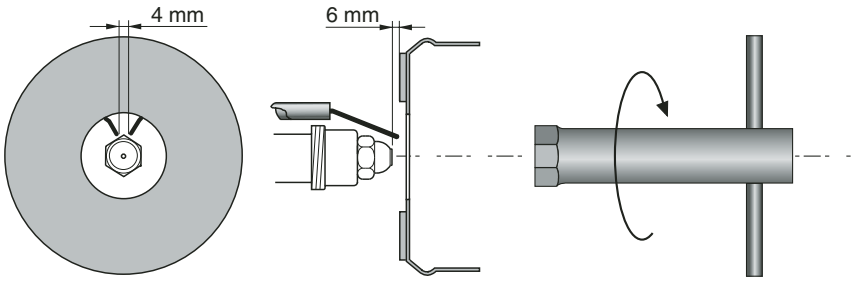


1 - HOSE
2 - OIL FILTER
3 - OIL COCK

Note: before starting the burner, check that the return pipe is open. An eventual obstruction could damage the pump sealing device.

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

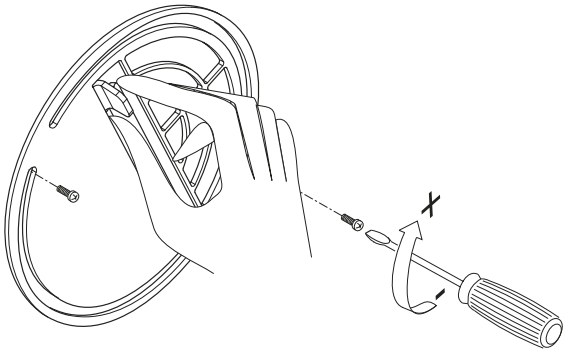


BURNER START-UP AND ADJUSMENT

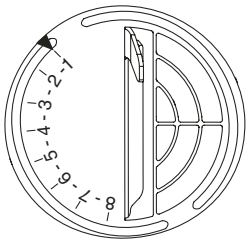
Once having installed the burner, check the following items:
- The burner power feeding and the main line protection fuses.
- The correct electrical connections.
- The correct length of pipes and that the same are sealed.
- The type of fuel, which must be suitable for burner.
- The connection of boiler's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

When all said conditions are checked and accomplished, it is possible to go on with burner's tests.
Power the burner. The control box feeds at the same time the ignition transformer and the burner's motor, which will run a prepurging of the combustion chamber for about 12 seconds. At the end of prepurging, the control box opens the fuel pump solenoid valve, the ignition transformer produces a spark and the burner ignites. After a safety interval of 5÷10 seconds and a correct ignition, the control box turns off the ignition transformer. In case of faulty ignition, the control box switches the burner into safety condition within 10 secs. The fuel pump feeding pressure, must keep around 12 bar.
Note: With preheated version, the burner runs a preheating of the combustion head for about 1 minute. In such a case, at the boiler's thermostats make, the ignition signal shall be done by the thermostat mounted on the preheater itself.

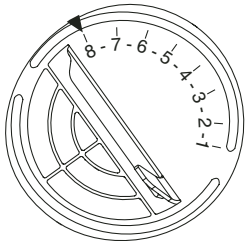
AIR REGULATION



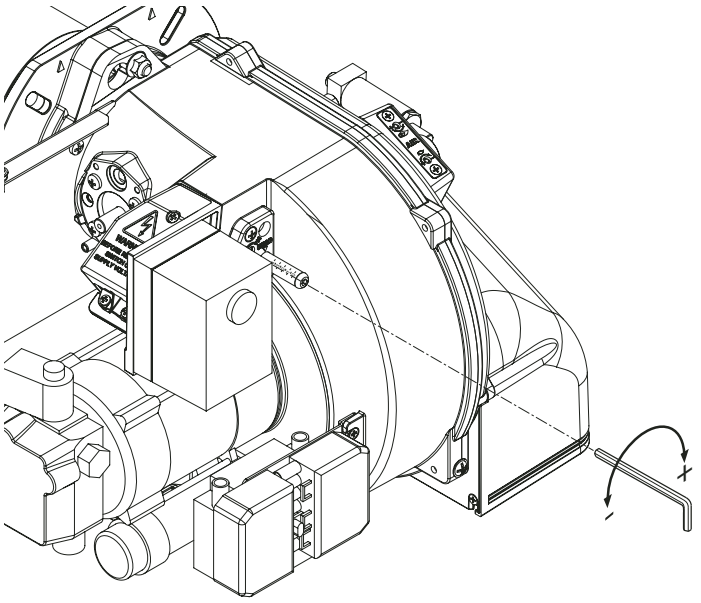
MIN



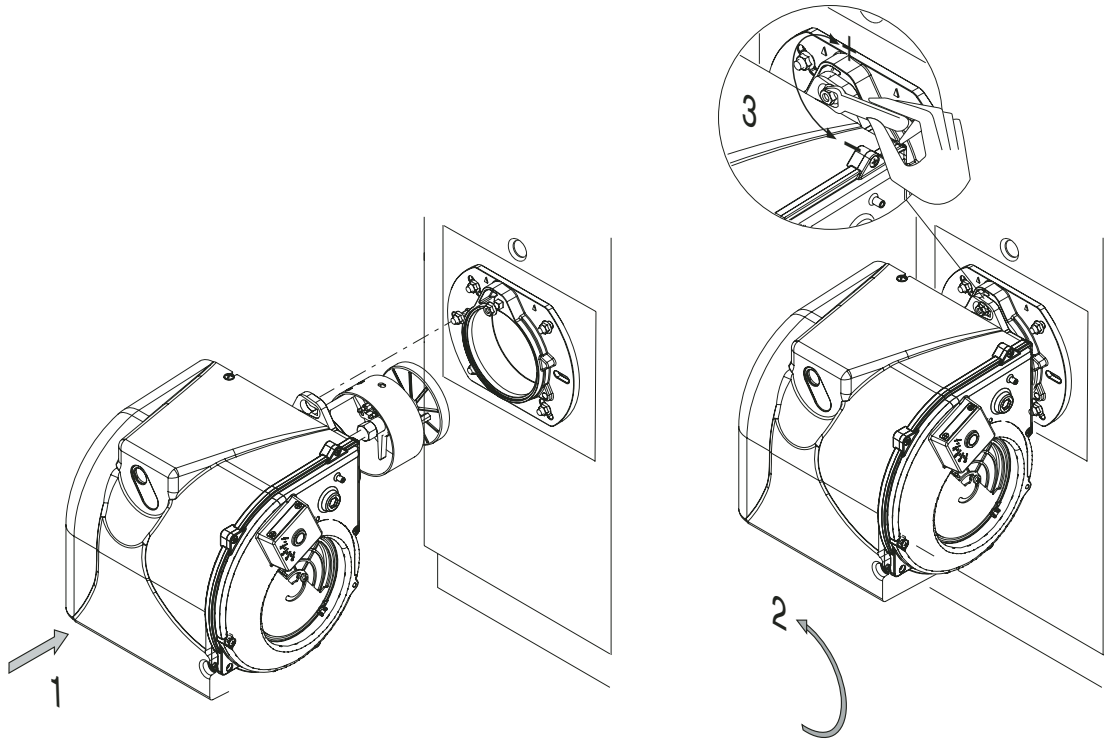
MAX



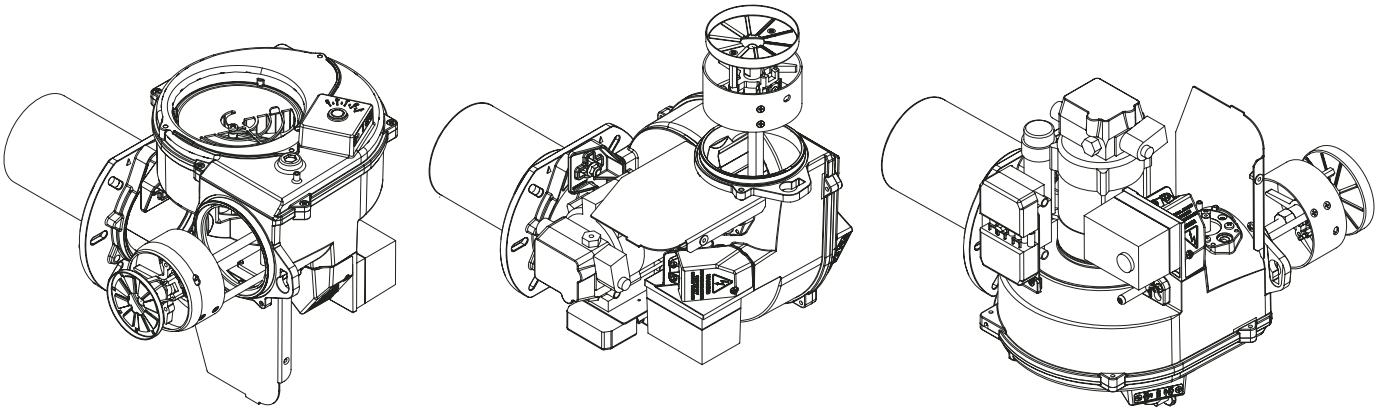
FIRING HEAD SETTING



MOUNTING TO THE BOILER

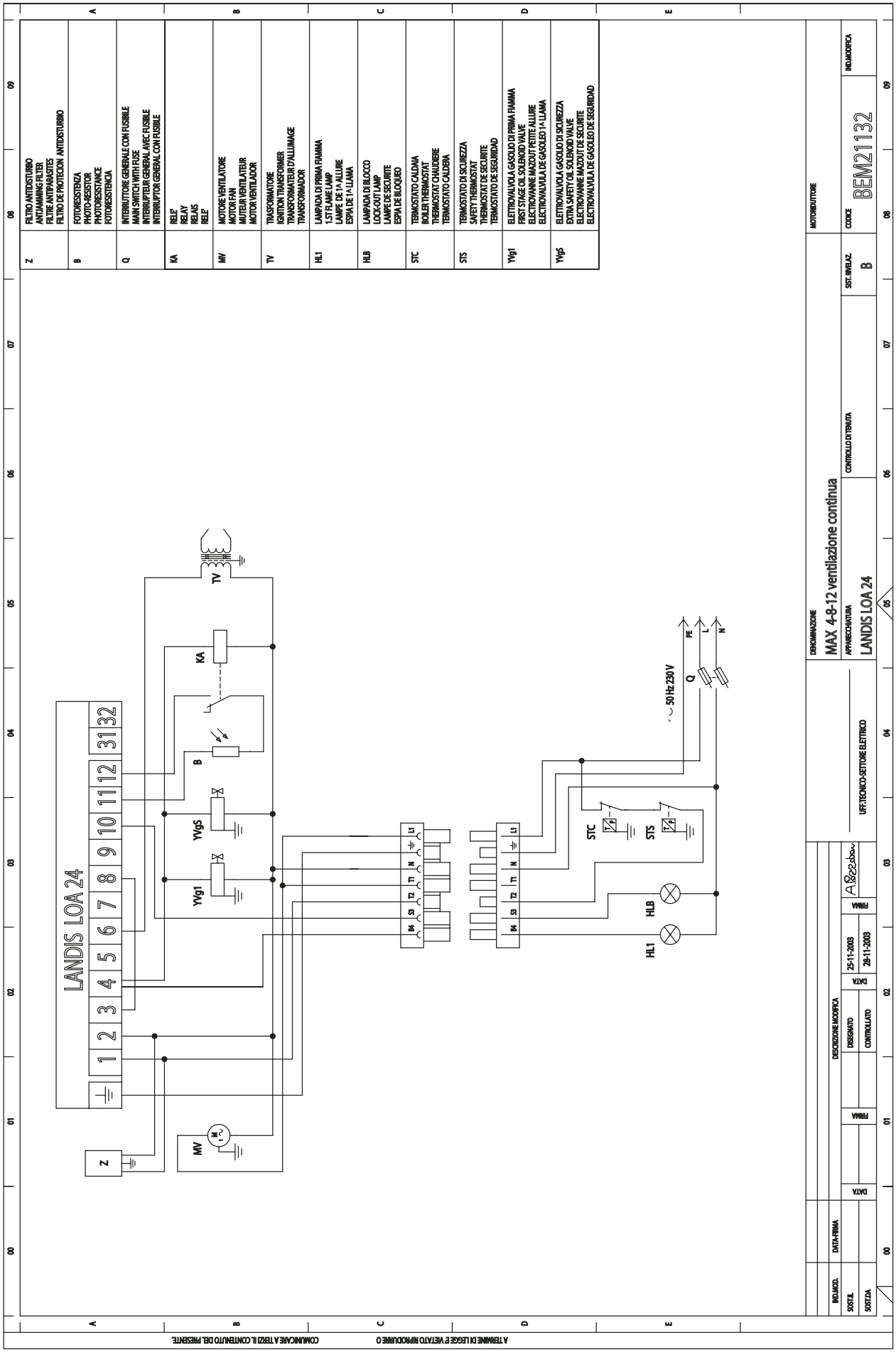


MAINTENANCE POSITION



FAULT FINDING

Burner does not start up	-	Mains switch not on.
	-	Blown fuse.
	-	Boiler thermostats not made.
	-	Fault in control box.
Burner pre-purges and stops	-	Fault in control box.
Burner does not ignite during cycle and stops	-	Fault in control box.
	-	Fault in photo-resistor.
Burner does not ignite	-	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.
Burner ignites and then stops	-	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.


Z FILTRO ANTIDISTURBO ANTI JAMMING FILTER FILTRE ANTIPARASITES FILTRO DE PROTECION ANTIDISTURBIO
B FOTORESISTENZA PHOTO-RESISTOR PHOTORESISTANCE FOTORESISTENCIA
Q INTERRUTTORE GENERALE CON FUSIBILE MAIN SWITCH WITH FUSE INTERRUPTEUR GENERAL AVEC FUSIBLE INTERRUPTOR GENERAL CON FUSIBLE
KA RELE' RELAY RELAIS RELE'
MV MOTORE VENTILATORE MOTOR FAN MOTEUR VENTILATEUR MOTOR VENTILADOR
TV TRASFORMATORE IGNITION TRANSFORMER TRANSFORMATEUR D'ALLUMAGE TRANSFORMADOR
HL1 LAMPADA DI PRIMA FIAMMA 1.ST FLAME LAMP LAMPE DE 1^ ALLURE ESPIA DE 1^ LLAMA
HLB LAMPADA DI BLOCCO LOCK-OUT LAMP LAMPE DE SECURITE ESPIA DE BLOQUEO
STC TERMOSTATO CALDAIA BOILER THERMOSTAT THERMOSTAT CHAUDIERE TERMOSTATO CALDERA
STS TERMOSTATO DI SICUREZZA SAFETY THERMOSTAT THERMOSTAT DE SECURITE TERMOSTATO DE SEGURIDAD
YVg1 ELETTROVALVOLA GASOLIO DI PRIMA FIAMMA FIRST STAGE OIL SOLENOID VALVE ELECTROVANNE MAZOUT PETITE ALLURE ELECTROVALVULA DE GASOLEO 1^ LLAMA
YVgS ELETTROVALVOLA GASOLIO DI SICUREZZA EXTRA SAFETY OIL SOLENOID VALVE ELECTROVANNE MAZOUT DE SECURITE ELECTROVALVULA DE GASOLEO DE SEGURIDAD
LANDIS LOA 24
1 2 3 4 5 6 7 8 9 10 11 12 31 32
TV
KA
B
YVgS
YVg1
MV
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~ 50 Hz 230 V
PE
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STS
HLB
HL1
L1 N T1 T2 S3 B4
DENOMINAZIONE MAX 4-8-12 ventilazione continua
APPARECCHIATURA LANDIS LOA 24
CONTROLLO DI TENUTA
SIST. INVIL.AZ. B
MOTOBRUCIATORE
CODICE BEM21132
UFF.TECNICO-SETTORE ELETTRICO
DESCRIZIONE MODIFICA
DISEGNATO
CONTROLLATO
DATA 25-11-2003 28-11-2003
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IND.MODIFICA
IND.MOD. DATA-FIRMA
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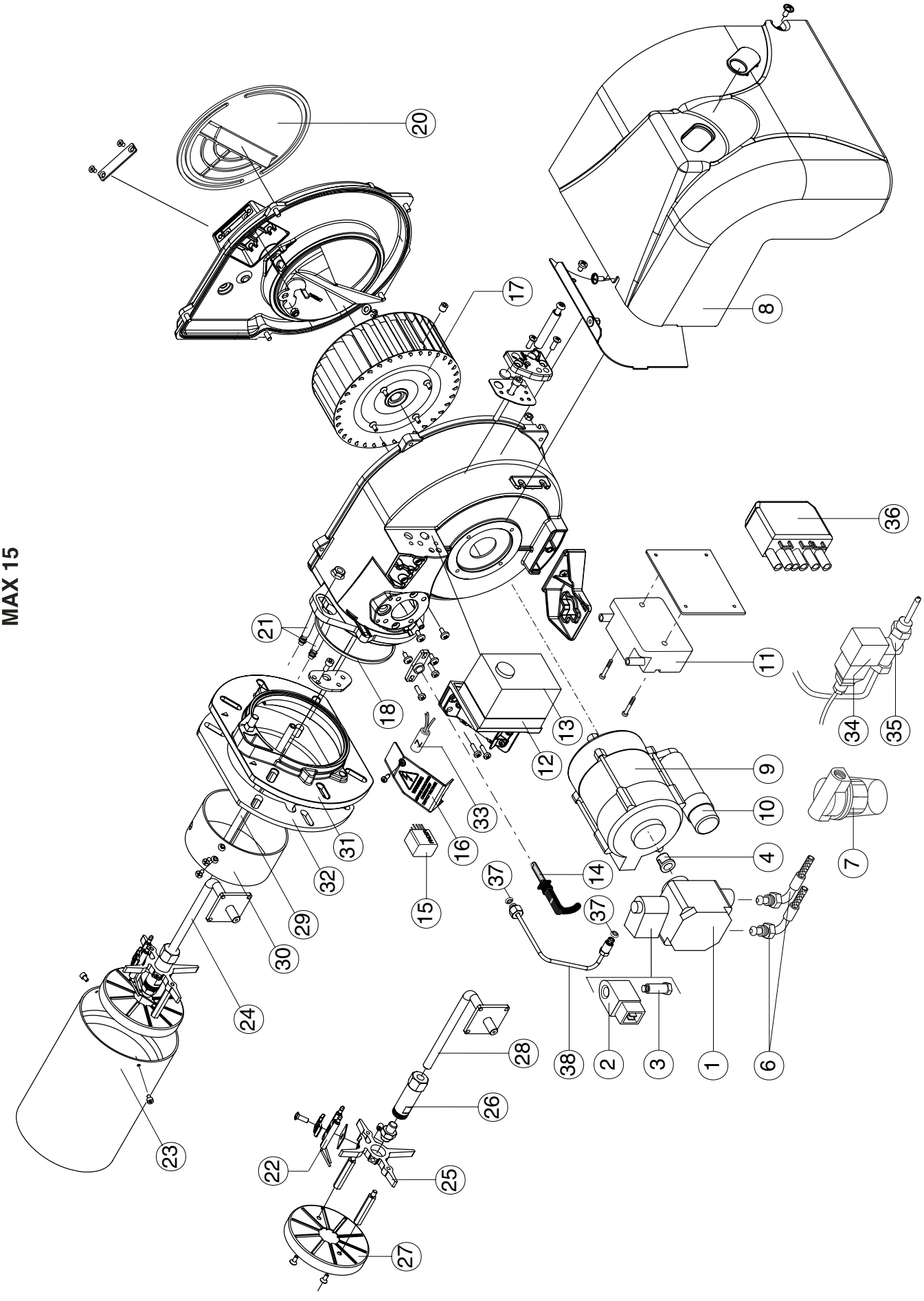
A TERMINE DI LEGGE E' VIETATO RIPRODURRE O COMUNICARE A TERZI IL CONTENUTO DEL PRESENTE

MAX 15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N°	DESCRIPTION		MAX 15 V.C. code
1	- OIL PUMP	SUNTEC AS 47 A	P122/1
2	- COIL	SUNTEC	V504
3	- OIL VALVE	SUNTEC	V410
4	- COUPLING	AEG	MP504
5	- NIPPLE		-
6	- HOSES	PARIGI NW 4 MG	S952/15
7	- FILTER	ART.70451-006PG	S105
8	- COVER		BFC06133/057
9	- MOTOR	130 W AEG	M181/32
10	- CAPACITOR	4 µF x 100-130 W AEG	C107/10
11	- IGNITION TRANSFORMER	DANFOSS CM	T130
12	- CONTROL BOX BASE	LANDIS	A402
13	- CONTROL BOX	LANDIS LOA 24	A117/1
14	- PHOTORESISTOR	LANDIS	A207/1
15	- RELAY	FINDER 5532	R711
16	- PROTECTION BOX		BFC09011/1
17	- FAN	160 x 52	W114/4
18	- ORING		BFG01029
19	- AIR DAMPER		BFS02061/043
20	- COVER AIR INLET		-
21	- CABLES	TC	BFE01401/4
		TL	BFE01401/6
22	- ELECTRODES		BFE01106
23	- BLAST TUBE	TC	BFB03010/007
		TL	BFB03011/007
24	- FIRING HEAD	TC	
		TL	
25	- NOZZLE HOLDER SUPPORT		BFC10027/001
26	- NOZZLE HOLDER		BFC11016
27	- DIFFUSER		BFD04020
28	- ROD	TC	BFA06415/001
		TL	BFA06416/001
29	- WAISTBAND ROD	TC	BFA06419/001
		TL	BFA06420/001
30	- WAISTBAND		BFA07107/007
31	- FLANGE		BFF01017/104
32	- GASKET		BFG02036/1
33	- ANTIJAMMING FILTER	D.E.M.	S132/3
34	- COIL	Parker Scem VE131IND	
35	- OIL VALVE	Parker Scem VE131IND	V175/2
36	- SOCKET WIELAND	7 pin	E225/1
37	- PIPE GASKET		BFG01042
38	- PIPE		BFT05253

TC = SHORT HEAD TL = LONG HEAD

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