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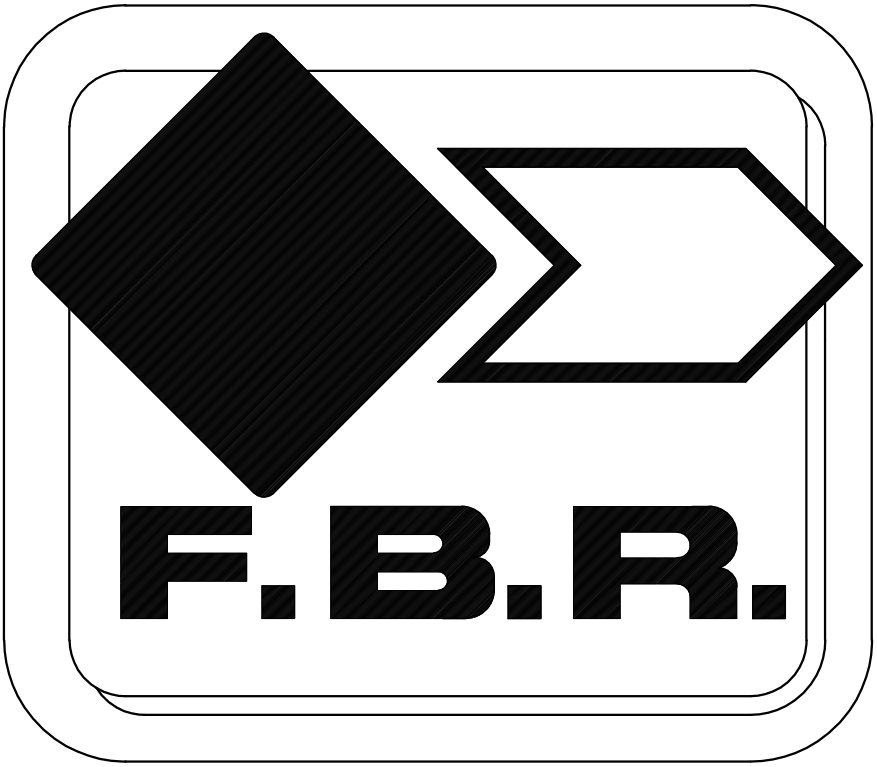


INSTRUCTIONS MANUAL FOR BURNERS MODEL:

G 0...–LX

G 1...–LX

Technical data 01
Installation of the burner 02
Electrodes positioning 03
Table of indicative calibrations - mod. G 0S-LX, G 0H-LX 04
Table of indicative calibrations - mod. G 1S-LX, G 1H-LX 05
Combustion control 06
Fault finding 07

TECHNICAL DATA

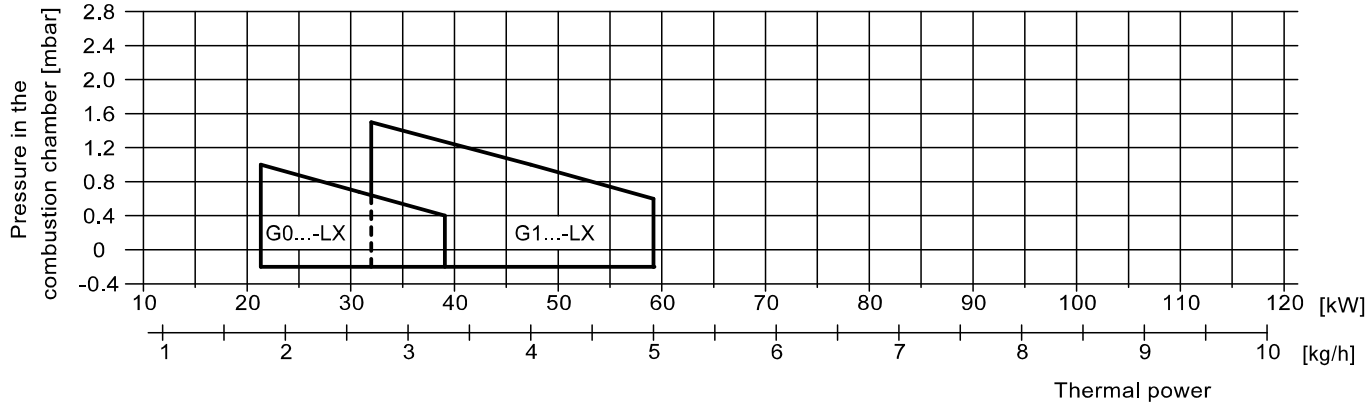
MODEL		G0S-LX G0H-LX	G1H-LX G1S-LX
Flow min-max *	[kg/h]	1,8-3,3	2,7-5,0
Thermal power min-max *	[Mcal/h]	18,4-33,7	27,5-51
Thermal power min-max *	[kW]	21,3-39	31,9-59,2
Fuel : LIGHT-OIL 1.5° E to 20° C = 6.2 cSt = 35 sec Redwood N° 1			
NOx	[mg/kWh]	< 120 : class 3 (EN 267)	
Intermittent working operation (min. 1 arrest every 24 hours) one stage			
Environmental conditions operation / storage : -15...+40°C / -20...+70°C , rel. humidity max. 80%			
Max temperature combustion air	[°C]	60	60
Nominal electric power	[W]	120	130
Motor fan	[W]	90	100
Nominal absorption	[A]	0.6	0,6
Power supply:		1/N~230V-50Hz	1/N~230V-50Hz
Degree of electric protection:		IP40	IP40
Noisiness ** min-max	[dBA]	56-58	57-59
Weight burner ***	[kg]	8	10

* Conditions of reference: Environment temperature 20°C - barometric pressure 1013 mbars - Altitude 0 m o.s.l.

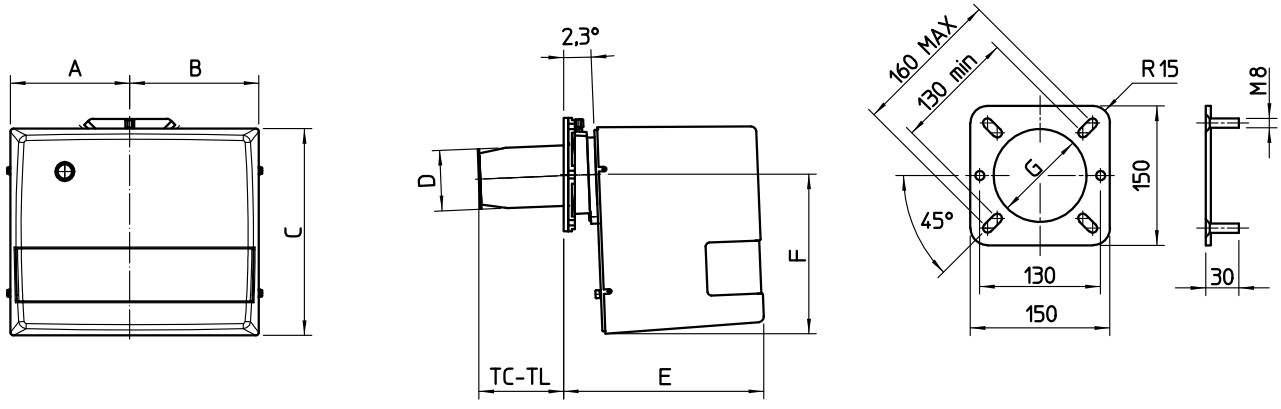
** Measured sonorous pressure in the combustion laboratory , with functional burner on beta boiler to 1m of distance. (UNI EN ISO 3746).

*** For burner with cover in steel (F) to add kg 2 to the weight.

OPERATING RANGE DIAGRAM: Thermal power-Pressure in the combustion chamber

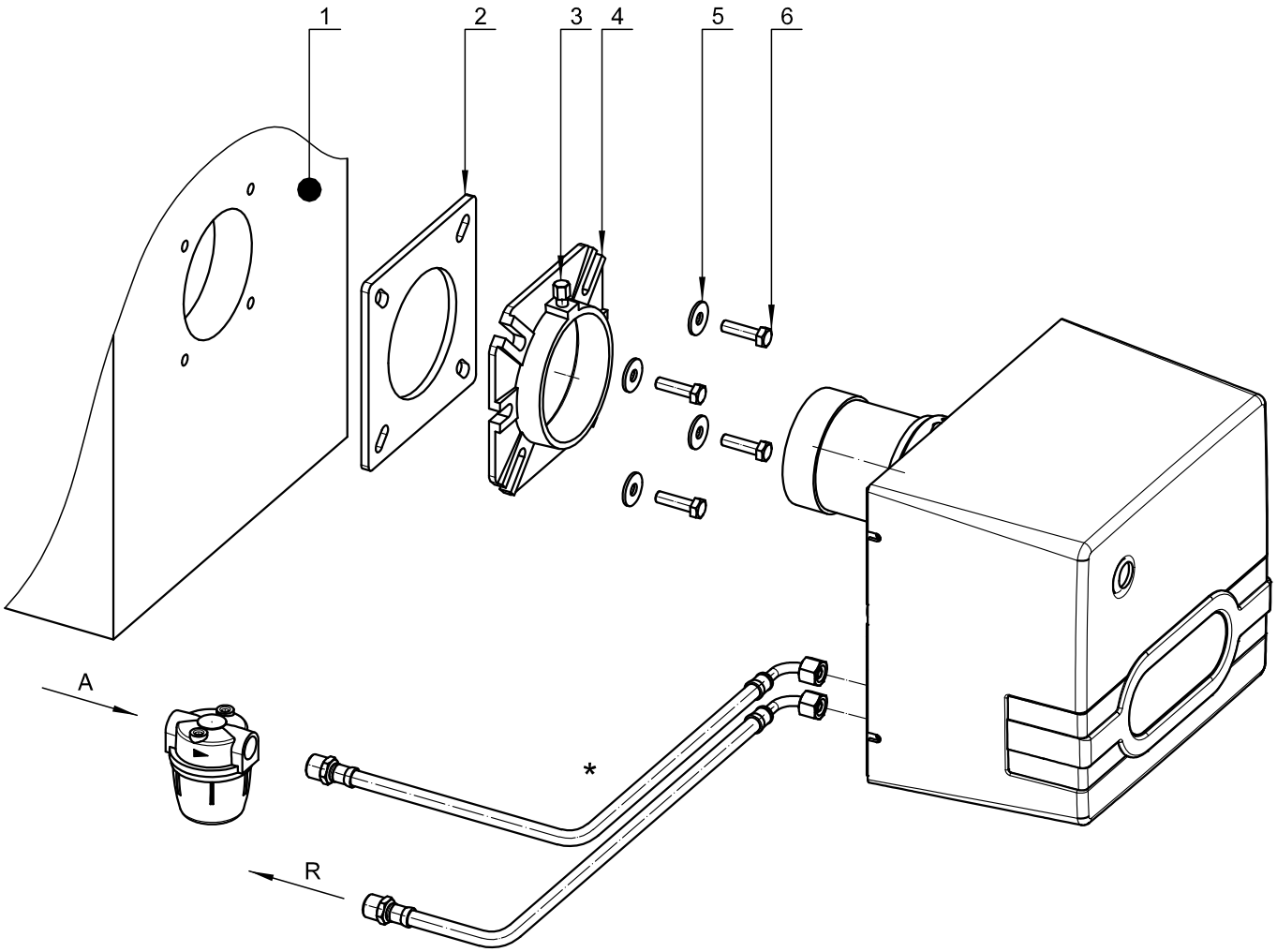


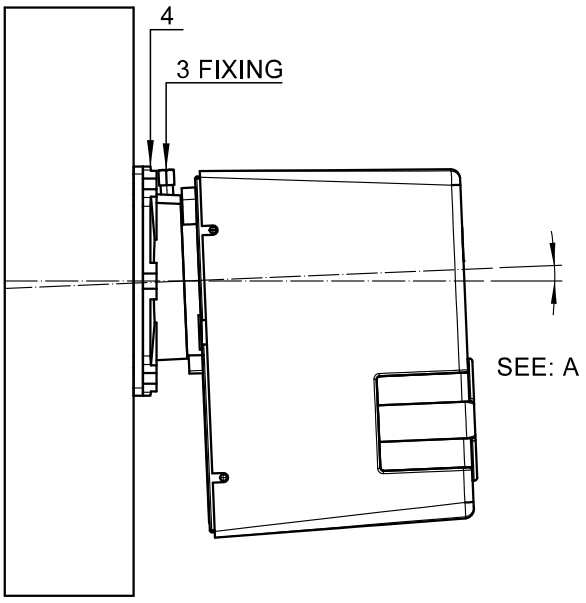
DIMENSIONS [mm.]



MODEL	A	B	C	D	E	F	G	TXC	TC	TL
G0...-LX	137	137	240	80	223	169	90	85	120	160
G1...-LX	157	170	275	90	265	210	100	-	120	160

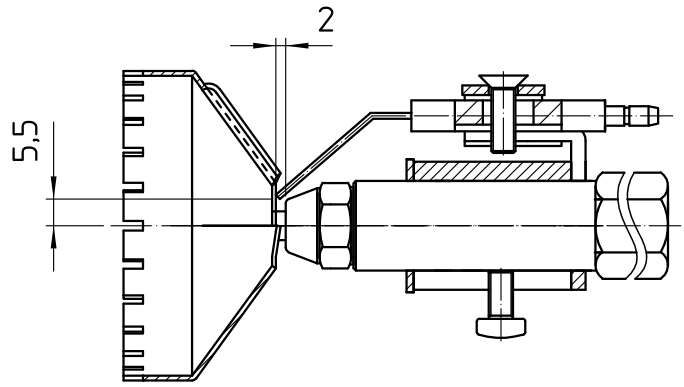
INSTALLATION



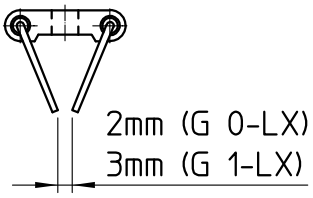


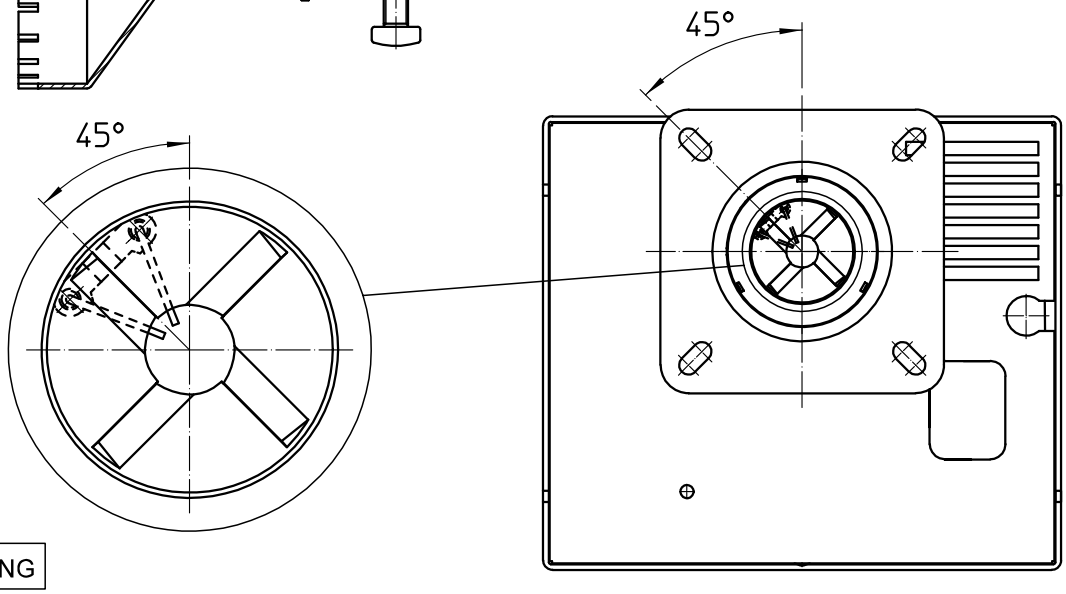
Fix the flange (4) to the boiler door (1) through the washers (5) and the screws (6),
putting in the middle the insulating sheet (2). Then put the burner on the flange (4) and tighten the screw (3).
After finishing the installation, verify that the burner is lightly inclined (see A).

* The burner is arranged to receive the light oil feeding pipes from right side, left side, upward or down word indifferently.



ELECTRODES POSITIONING



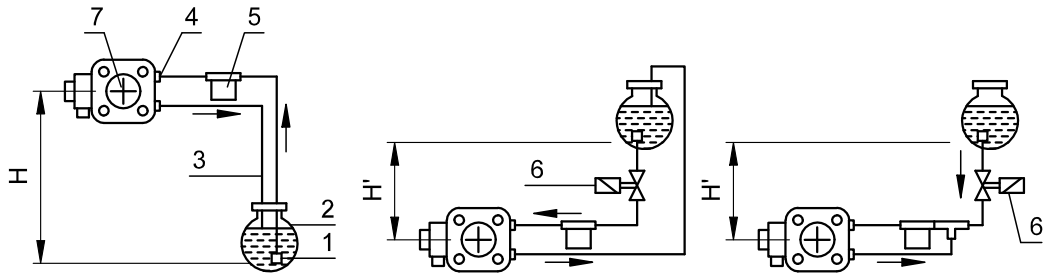


PUMP PRIMING

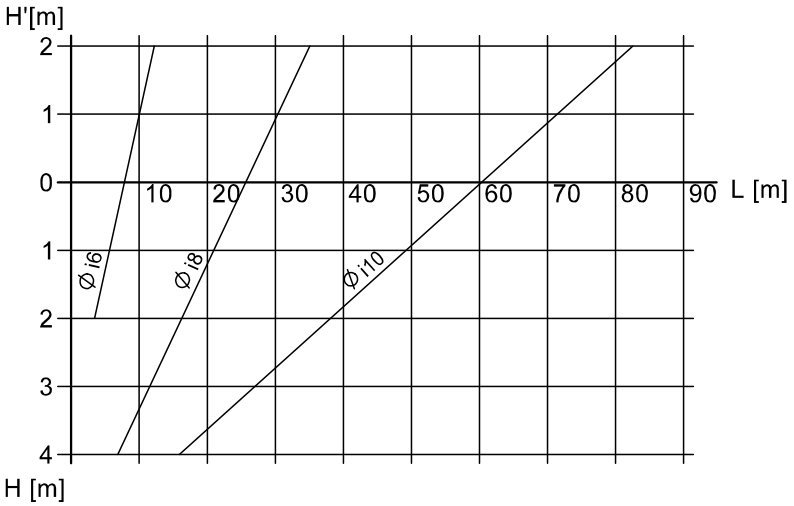
Connect correctly the suction and the return pipes (see the arrows on the pump), make sure that no closed gates exist on the return, then ignite the burner by keeping lighted the photoresistance and by bleeding from the pressure switch connection up until the light-oil comes out.

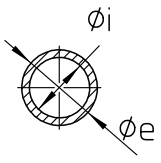
HYDRAULIC SYSTEM SCHEME AND PIPE DIAMETERS

1 : Filter
2 : Tank
3 : Return
4 : Suction
5 : Line filter
6 : Valve
7 : Pump



THE INSTALLATION MUST BE IN CONFORMITY WITH LOCAL LEGISLATION.





Details are referred to installatios without strugglings and perfectly sealing.
Copper pipes are recommended.
Negative pressure must not be higher than max. 0.4 bar.

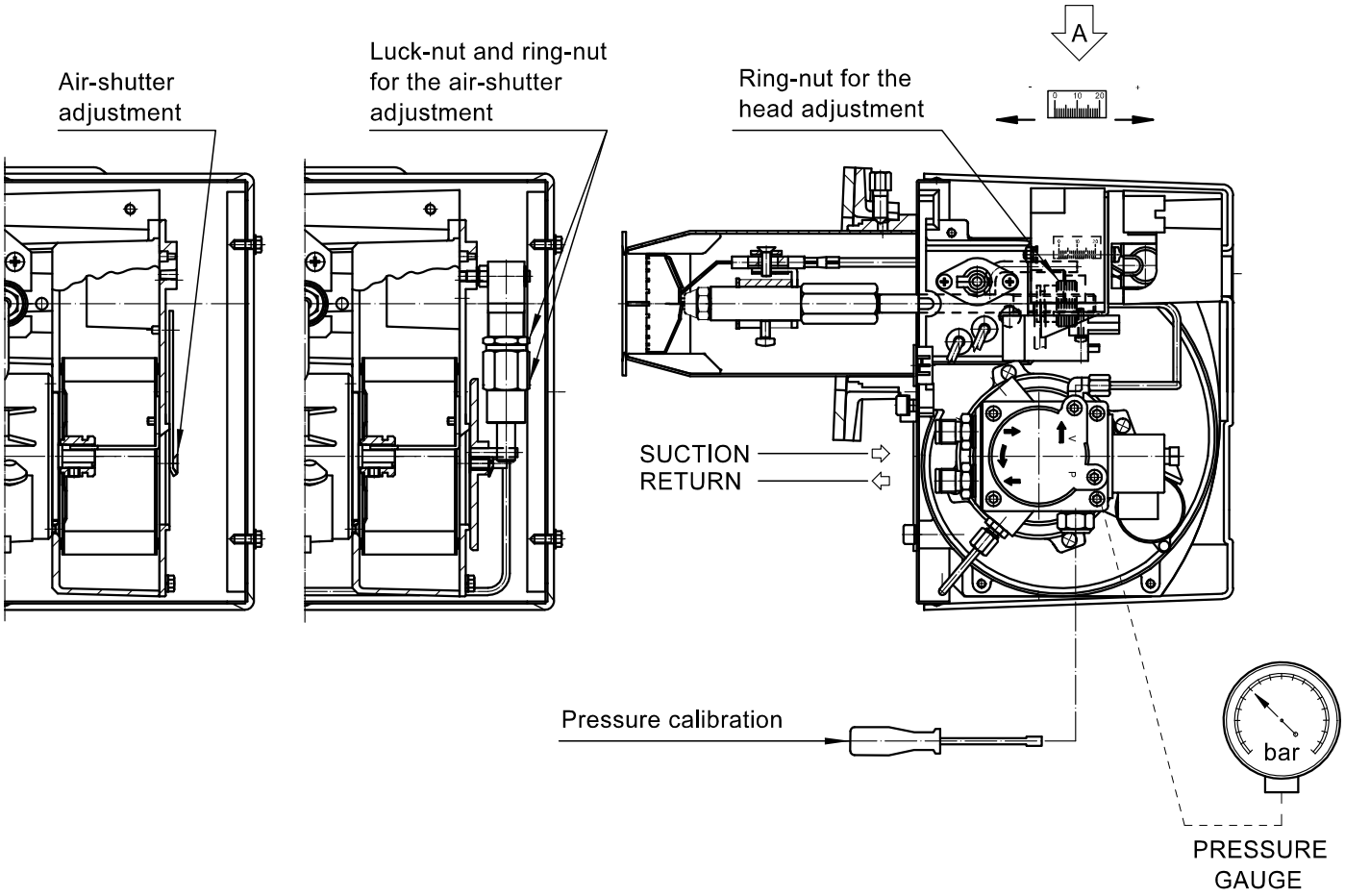
TABLE OF INDICATIVE CALIBRATIONS

Calibrations effected with pressure in chamber 0,1 mbar.
The definitive calibration must be done in operation by means of a combustion analiser.

NOZZLE G.P.H. x a°	PRESSURE [bar]	FLOW [kg/h]	THERMAL POWER [kW-Mcal/h]	AIR [NOTCHES N°]	HEAD [NOTCHES N°]
* 0.45 x 45°	11	1.8	21.4-18.4	3	4
0.50 x 45°	10	1.9	22.5-19.4	3	5
	12	2	23.7-20.4	4	5
0.60 x 45°	10	2.4	28.4-24.5	5	8
	12	2.6	30.8-26.5	6	8
0.65 x 45°	10	2.7	31.9-27.5	7	10
	12	2.9	34.3-29.6	8	10
0.75 x 45°	10	3	35.5-30.6	7	12
	12	3.3	39.1-33.7	8	12

RECOMMENDED NOZZLES: Danfoss 45° H or Fluidics 45° HF

* Recommended nozzle Danfoss 45° S



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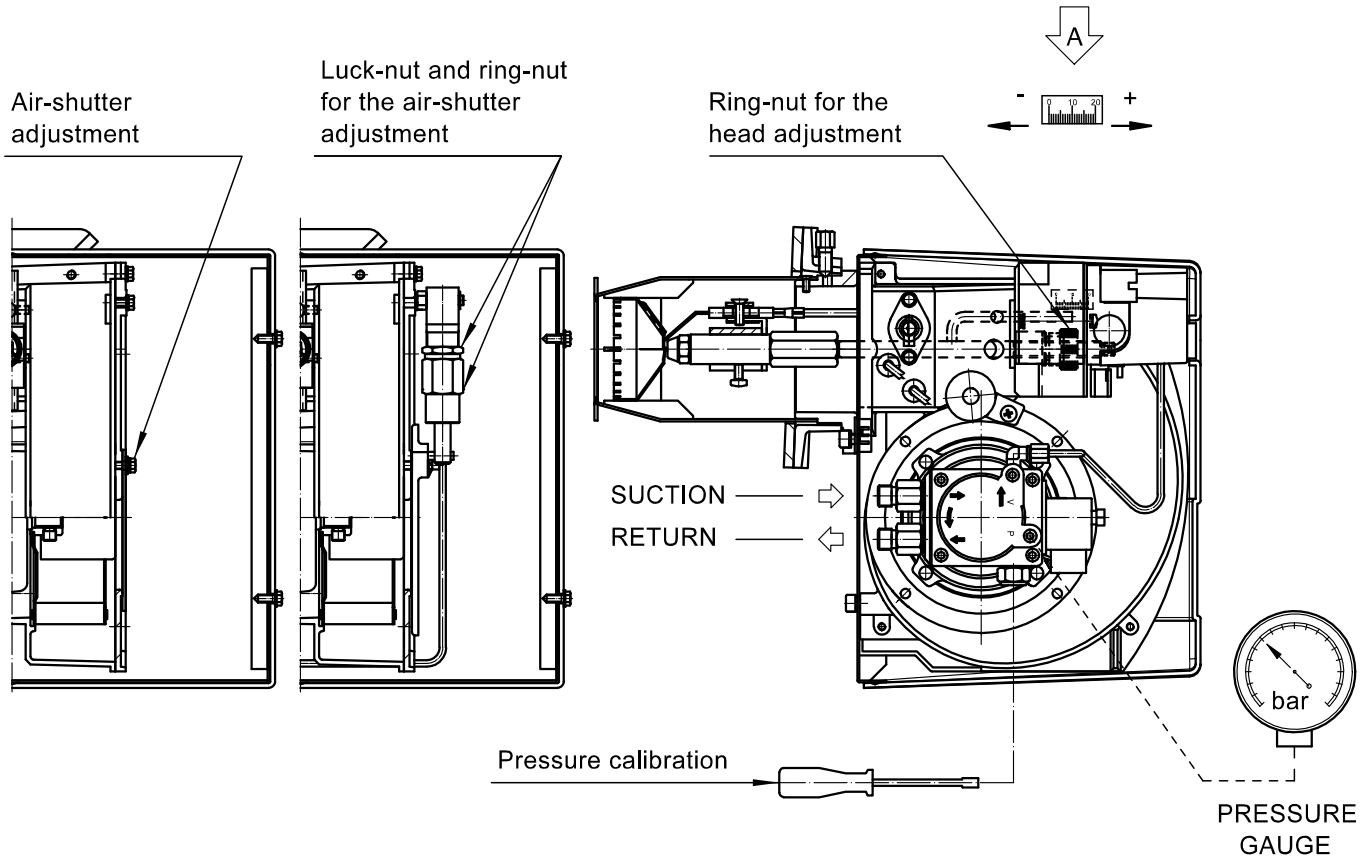
NOZZLE G.P.H. x a°	PRESSURE [bar]	FLOW [kg/h]	THERMAL POWER [kW-Mcal/h]	AIR [NOTCHES N°]	HEAD [NOTCHES N°]
0.60 x 45°	12	2.5	29.6 - 25.5	5	4
0.65 x 45°	12	3	35.5 - 30.6	8	5
0.75 x 45°	12	3.5	41.4 - 35.7	8.5	8
1.00 x 45°	12	4	47.4 - 40.8	9	10
	14	4.5	53.2 - 45.9	9	12
1.25 x 45°	12	5	60.3 - 52	9.5	15

RECOMMENDED NOZZLES: Danfoss 45 ° H or Fluidics 45 ° HF



COMBUSTION CONTROL

In order to obtain the best combustion performance and efficiency, and for respect of the environment, checks and adjustment of the combustion must be carried out, and with appropriate tools.
Basic values to be considered are:

CO_2 indicates the amount of excess air during combustion; if air is increased, CO_2% values decrease, and if combustion air is decreased, CO_2% values increase .

SMOKE SCALE (Bacharach) indicates that solid un-burnt particles are present in the smoke. If N°2 on the BH scale is exceeded the nozzle must be checked for faults and that it is adapt to the burner and boiler (trade, type, pulverization angle). Usually the BH scale number tends to decrease, increasing pump pressure, in this case keep the increasing combustion levels under control.

SMOKE TEMPERATURE is a level which indicates heat loss through the chimney; higher the temperature, greater is the loss and lower combustion efficiency. If the temperature is too high the quantity of burned light oil needs to be lowered.

IMPORTANT :

Existing laws in some countries can require a different adjustment to that given here and may also have different parameters. The burners are designed to meet the toughest international laws on energy saving and respect of the environment.

FAULT FINDING

PROBLEM	PROBABLE CAUSE	SOLUTION
Motor does not work.	No power supply.	a) check fuses. b) check thermostats.
Motor works but there is no flame formation and with lock-out.	a) electrodes are not discharged. b) nozzle is dented. c) it doesn't arrive combustible.	a) check correct position of tips and clean them. b) clean or replace nozzle. c) check light oil level in tank and that there are no shutters closed along the light oil line.
Burner starts and flame forms, there is flame formation and goes in lock-out.	a) photoresistance is dirty. b) nozzle is pulverizing badly.	a) clean the photoresistance. b) clean or replace nozzle.
Flame is irregular, small and with sparks.	a) nozzle is pulverizing badly. b) pump pressure is too low. c) water in the light-oil.	a) clean or replace nozzle. b) check and increase pressure. c) extract water from tank,clean the filters.
Flame is smokey.	a) nozzle is pulverizing badly. b) little air of combustion.	a) clean or replace nozzle. b) check atmospheric air flap opens normally. Clean the fan.