

FGP 50/M - FGP 70/M - FGP 100/M - FGP 120/M - FGP 150/M

Burners for light-oil two stages progressive (hi-low flame) or modulating (PID fully modulating) if equipped with addition of optional modulation kit and probe.

They are composed by: fan at high pressurisation and combustion head with adjustment at high efficiency and high flame stability.

Compact overall dimensions and disposition rationalized of the components with accessibility facilitated for the operations of setting and maintenance.

Complete of nozzle, flexible pipes and line filter.

Complete of flange and gasket for installation on generator.



Fig. 1 FGP 50/M

TECHNICAL DATA FGP 50/M - FGP 70/M - FGP 100/M - FGP 120/M - FGP 150/M

MODEL		FGP 50/M	FGP 70/M	FGP 100/M	FGP 120/M	FGP 150/M
Flow min. 1 st . / min. 2 st . - max. 2 st . *	[kg/h]	10.5/20-50	18/35-70	20.5/40-100	29/60-120	38.5/75-150
Thermal power min. 1 st . / min. 2 st . - max. 2 st . *	[Mcal/h]	106.5/204-510	183/357-714	208.5/407.5-1020	295.5/612-1224	393/764.5-1500
Thermal power min. 1 st . / min. 2 st . - max. 2 st . *	[kW]	124/237-593	213/415-830	243/474-1186	344/712-1423	457/889-1744
Fuel: LIGHT-OIL 1.5°E at 20°C = 6.2 cSt = 35 sec Redwood N°1						
Intermittent working operation (min. 1 stop every 24 hours) two stages progressive or modulating						
Environmental conditions operation / storage:	-15...+40°C / -20...+70°C, rel. humidity max. 80%					
Max. temperature combustion air	[°C]	60	60	60	60	60
Nominal electric power	[kW]	1.1	1.5	2.2	3	4
Fan motor	[kW]	1.1	1.5	2.2	3	4
Nominal motor current absorption	[A]	2.7	3.6	5.4	6.4	8.6
Nominal auxiliary absorption	[A]	0.3	0.3	0.3	0.3	0.3
Power supply:	3~400V, 1N~230V - 50Hz					
Electric protection degree:		IP 40	IP 40	IP 40	IP 40	IP 40
Burner weight **	[kg]	51	62	78	89	92

* Reference conditions: Environment temperature 20°C - Barometric pressure 1013 mbars - Altitude 0 metre (sea level).

** For burner FGP 50/M with long head add 1 kg to the weight / For burner FGP 70/M ÷ FGP 150/M with long head add 3 kg to the weight.

OPERATING RANGE DIAGRAM FGP 50/M - FGP 70/M - FGP 100/M - FGP 120/M - FGP 150/M

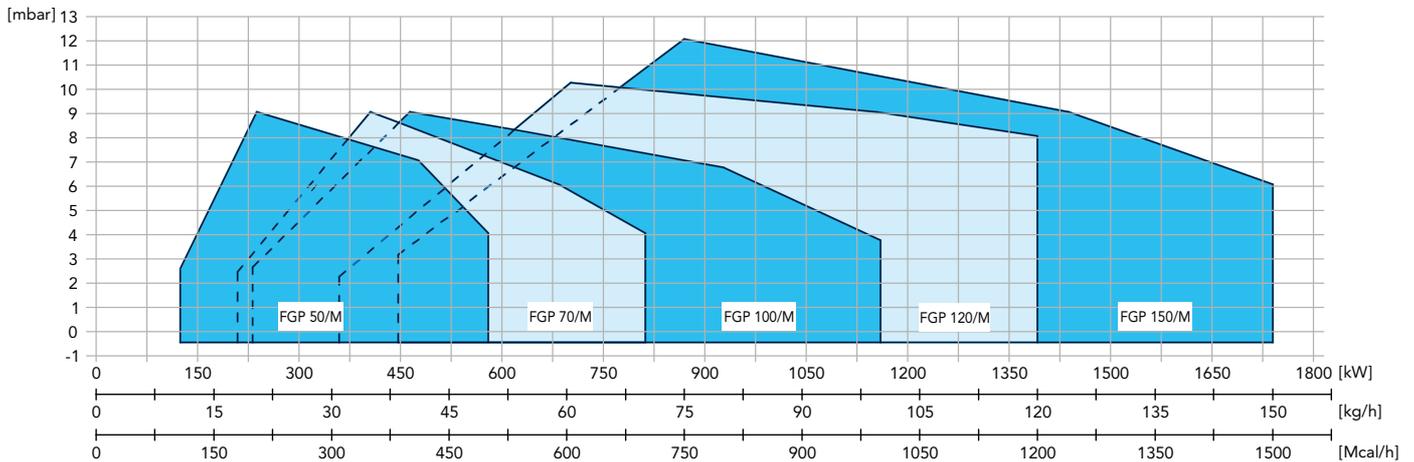


Fig. 2 X = Thermal power Y = Pression in the combustion chamber

The firing rates has been obtained based on test boilers in accordance with EN267 standards and are indicative of matching the burner to the boiler. For the correct operation of the burner, combustion chamber dimensions must be in accordance with current regulation. In case of non-compliance, contact the manufacturer.

DIMENSIONS [MM]

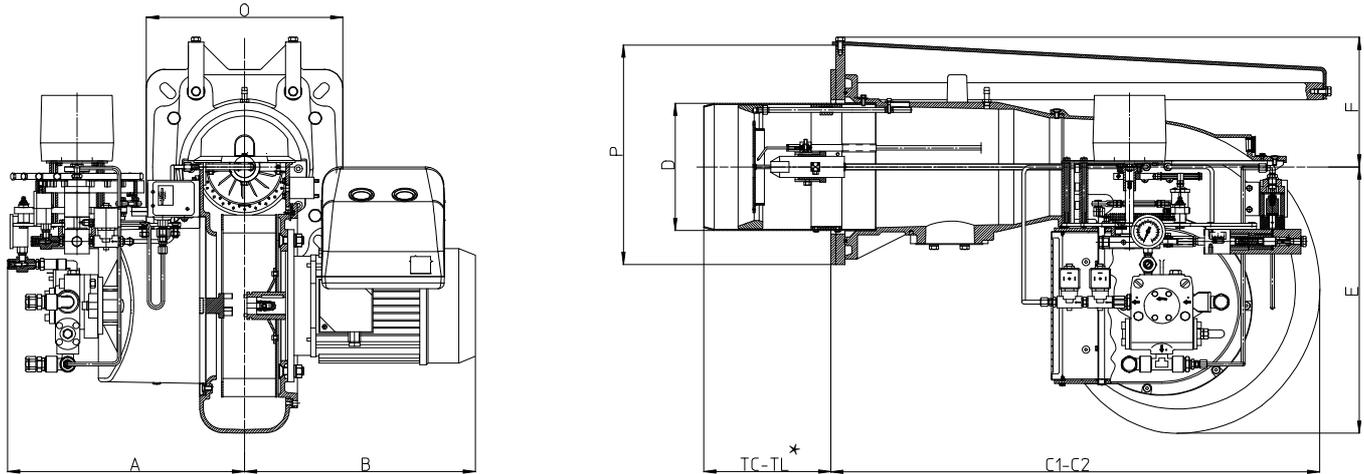


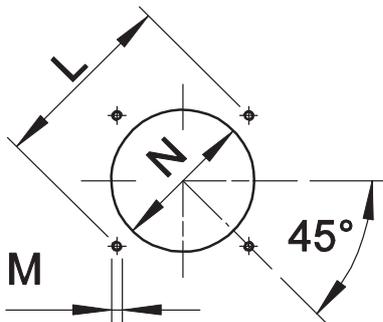
Fig. 3 Dimensions FGP 50/M - FGP 70/M - FGP 100/M - FGP 120/M - FGP 150/M

MODEL	A	B	C1	C2	D	E	F	O	P
FGP 50/M	350	220	530	-	150	327	145	220	220
FGP 70/M	350	283	700	1140	165	327	171	320	320
FGP 100/M	386	350	651	1150	175	438	173	320	320
FGP 120/M	386	376	815	1395	209	438	213	320	320
FGP 150/M	386	397	815	1395	209	438	213	320	320

C2: Overall dimension with the burner out in position of maintenance.

* see "flame tube length"

BOILER PLATE



* Suggested dimension of connection between burner and generator.

Fig. 4 Boiler plate

MODEL		L min	L max	M	N min	N *	N max
FGP 50/M	mm	205	226	M10	160	160	180
FGP 70/M	mm	310	368	M12	180	180	250
FGP 100/M	mm	340	368	M12	190	190	250
FGP 120/M	mm	340	368	M12	230	230	250
FGP 150/M	mm	340	368	M12	230	230	250

FLAME TUBE LENGTH

Flame tube length must be selected based on the specifications supplied by boiler manufacturer and, in any case, it must be greater than the thickness of the boiler door included its insulation.
In case of boilers with flame inversion or front flue combustion chambers, it is necessary to insulate the area between the flame tube and front door with refractory material. This protection material must not impede flame tube extraction.

MODEL		TC	TL **
FGP 50/M	mm	250	335
FGP 70/M	mm	250	335
FGP 100/M	mm	235	370
FGP 120/M	mm	200	400
FGP 150/M	mm	200	400

** For different flame lengths, please contact our Technical-Sales Department.

BURNER SIGNAL DESCRIPTION

In the picture below there are indicated all the signalation present on the burner:

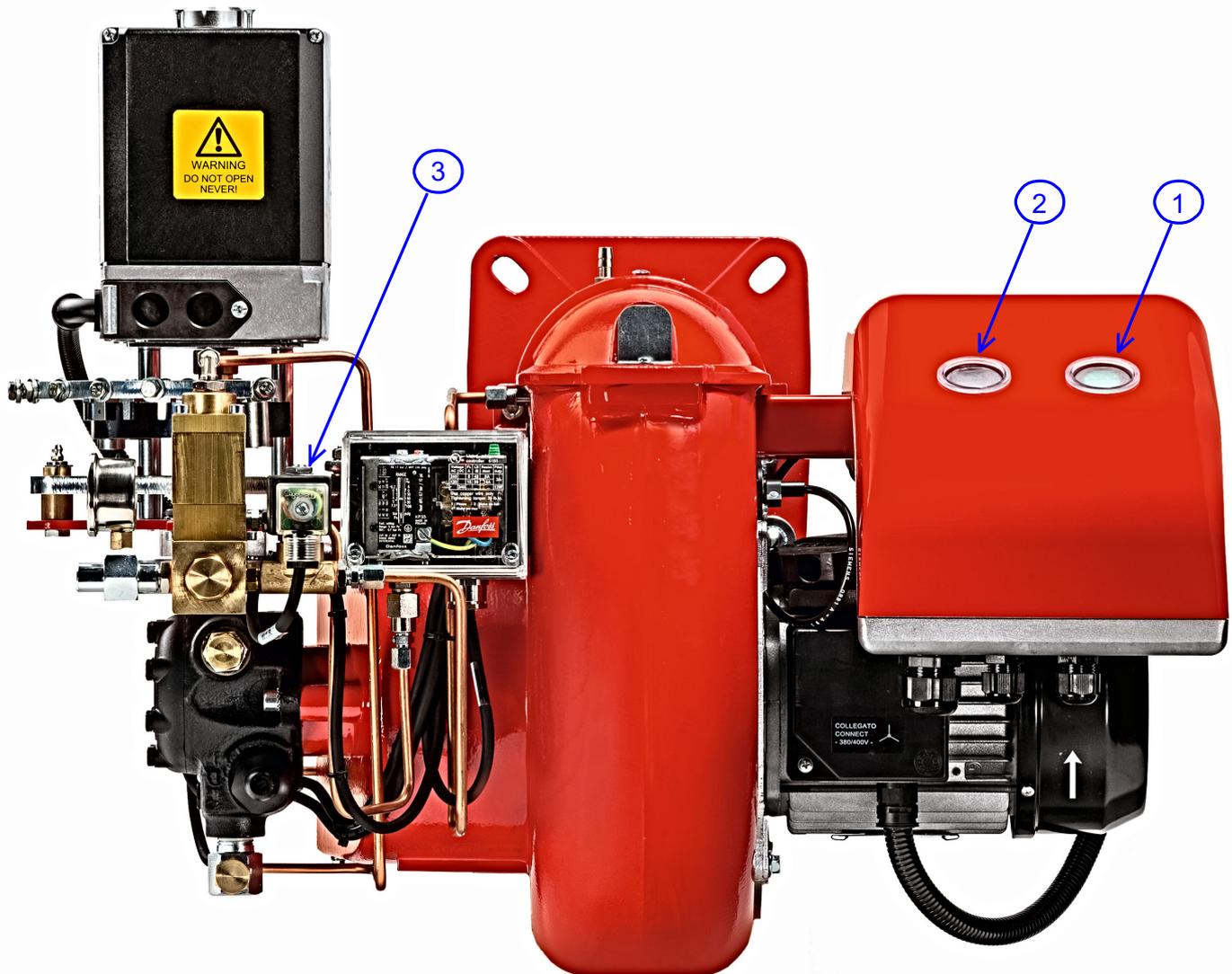


Fig. 5 Burner signal description - 1

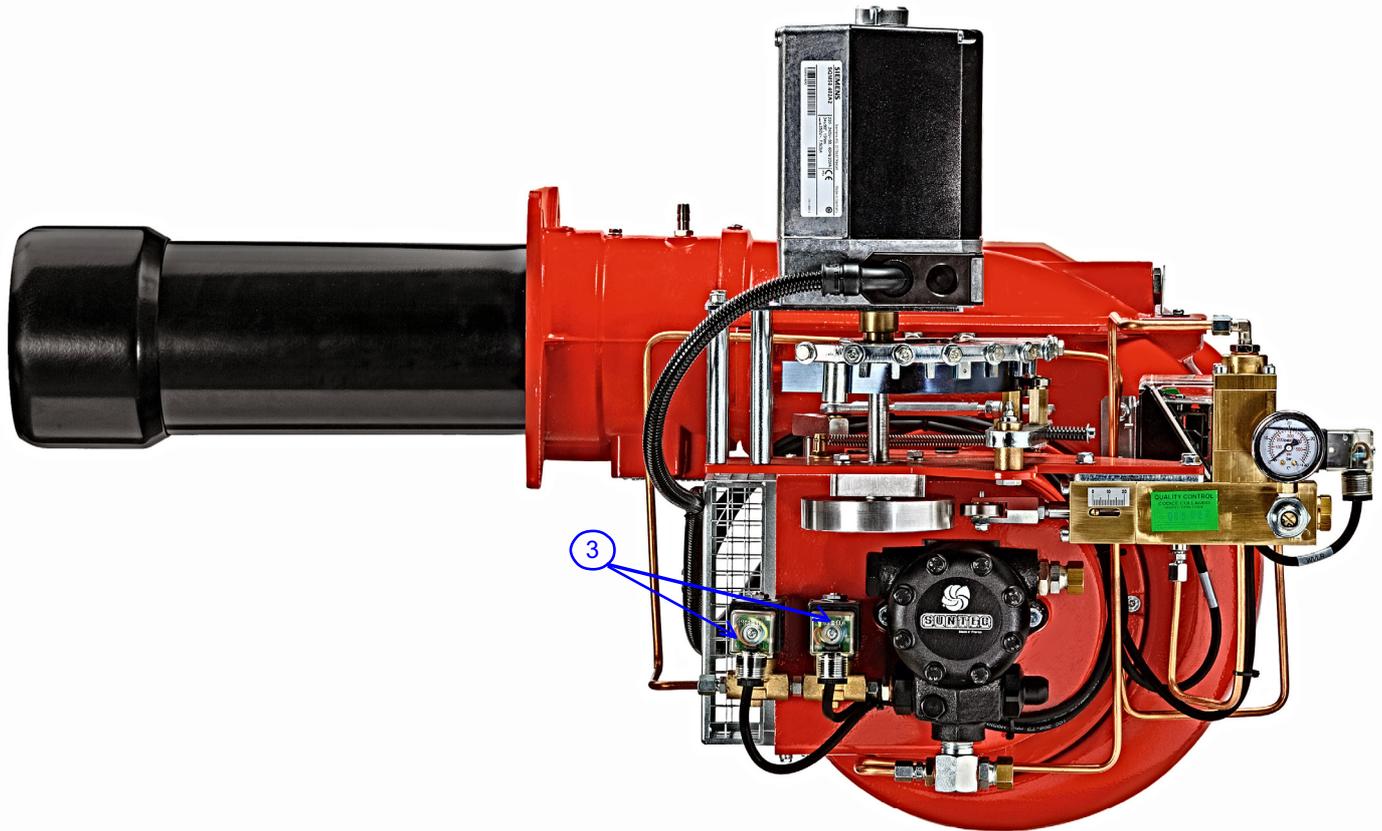


Fig. 6 Burner signal description - 2

LEGEND

- 1) ON/OFF button
- 2) Reset from lockout button + status lamp
- 3) Valve led ON

💡 The multicolor signal lamp in the lockout reset button (pos.2) is the key indicating element for visual diagnostics and interface diagnostics.

In normal operation, the different operating states are indicated in the form of color codes; please refer to electrical device handbook supplied with the present instructions.

💡 After a non-alterable lockout, the red signal lamp in the lockout reset button (pos.2) lights up. By pressing the lockout reset button (pos.2) for more than 3 seconds, the visual diagnostics of the cause of fault can be activated; please refer to electrical device handbook supplied with the present instructions.

For close the diagnostics mode and for switch on the burner again, it is necessary to reset the burner control. Press the lockout reset button (pos.2) for about 1 second (<3 seconds).

💡 After a non-alterable lockout, the red signal lamp in the lockout reset button (pos.2) lights up. For reset the control box press the lockout reset button (pos.2) for about 1 second (<3 seconds).

PRODUCT SPECIFICATION**SHORT DESCRIPTION**

Light-oil burners two stages progressive (hi-low flame) or modulating (PID fully modulating) if equipped with addition of optional modulation kit and probe.

DETAILED SPECIFICATION

Light-oil burner two stages progressive (hi-low flame) or modulating (PID fully modulating) if equipped with addition of optional modulation kit and probe; composed by:

- Fan at high pressurisation;
- Combustion head with adjustment at high performance and elevated flame stability;
- Flange and insulating gasket for fixing at boiler;
- Three-phase power supply;
- Photoresistance for flame detection;
- IP 40 electric protection level;
- Servomotor for air shutter and for the pressure regulator;
- Supports and tierods for burner extraction FGP 70/M - FGP 100/M - FGP 120/M - FGP 150/M;
- Easy extraction of combustion head without get off the burners by bolier;
- Maximum light-oil pressure switch to stop the burner in case of the light-oil pressure on the return is higher then the set point value;
- Set up for the additional specific kit that transforms burner operation as modulating i.e. the modulating kit allows to supply any power between the minimum and the maximum value based on instantaneous loading request.

CONFORMING TO:

- CE rules;
- 2014/30/UE Directive E.M.C.;
- 2014/35/UE Directive L.V.;
- 2014/68/EU Directive M.D.;
- 97/23/CE Directive P.E.D.;
- Reference rules: EN267 (liquid fuel) - EN746-2 (industrial thermoprocessing equipment).

STANDARD EQUIPMENT

- Flexible hoses for connection;
- Line filter;
- Isomart gasket;
- Nozzle;
- Flange with insulating gasket;
- Burner nameplate;
- Warranty;
- Instruction handbook for installation, use and maintenance.

OPTIONAL

- Power modulating kits for temperatures;
- Power modulating kits for pressures;
- Temperature probe 0°C-400°C (PT 100 a 0° C);
- Temperature probe 0°C-1200°C (K probe);
- Pressure probe 0-3 bar, 0-6 bar. 0-16 bar, 0-20 bar, 0-30 bar;
- Noise protection.