

## FGP 75/M - FGP 100/M EVO - FGP 130/M EVO

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.

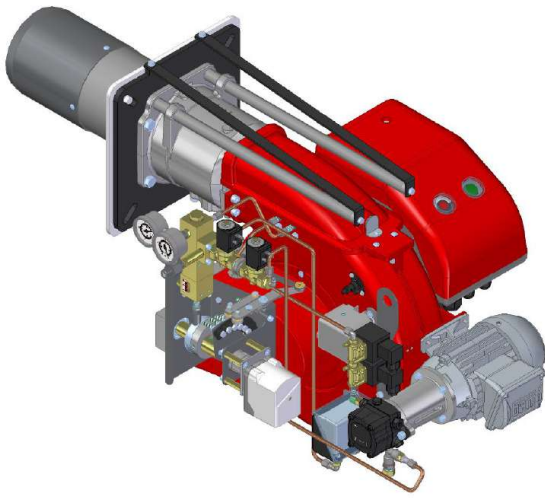


Fig. 1 FGP 75/M

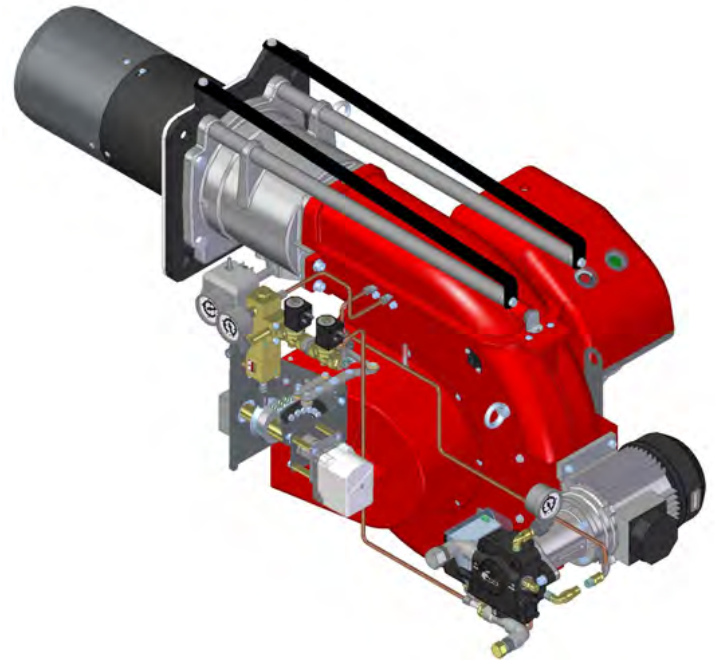


Fig. 3 FGP 130/M EVO

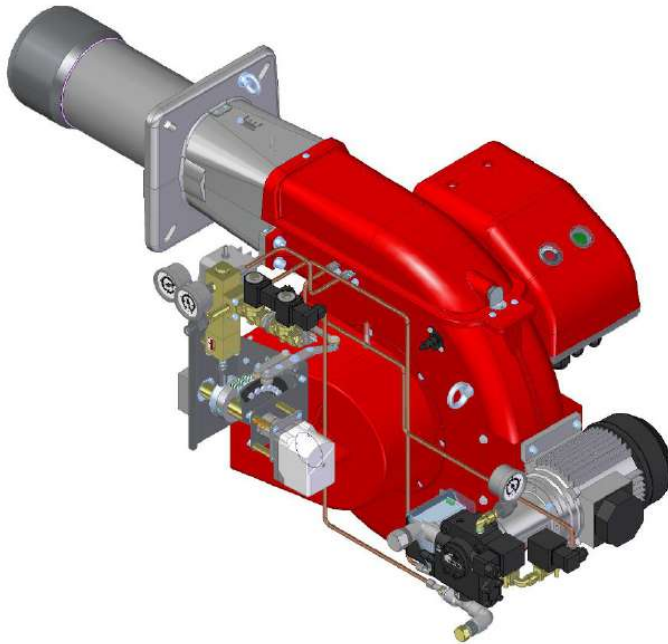


Fig. 2 FGP 100/M EVO

**TECHNICAL DATA FGP 75/M - FGP 100/M EVO**

MODEL		FGP 75/M	FGP 100/M EVO
Thermal power min. 1°st. /min. 2°st. - max. 2°st. *	[Mcal/h]	178/357-816	164.2/408-1020
Thermal power min. 1°st. /min. 2°st. - max. 2°st. *	[kW]	207/415-949	190/474-1186
Flow min. 1°st. / min. 2°st. - max. 2°st. *	[kg/h]	17.5/35-80	16.1/40-100
Fuel:	LIGHT-OIL 1.5°E at 20°C = 6.2 cSt = 35 sec Redwood N°1		
<b>Intermitted working operation (min. 1 stop every 24 hours) two stages progressive or modulating</b>			
Environmental conditions operation / storage:	-15...+40°C / -20...+70°C, rel. humidity max. 80%		
Max. temperature combustion air	[°C]	60	60
Nominal electric power	[kW]	2.2	2.4
Fan motor	[kW]	1.5	1.5
Pump motor	[kW]	0.55	0.75
Nominal fan motor current absorption	[A]	3.4	4.5
Nominal pump motor current absorption	[A]	1.6	1.6
Nominal auxiliary absorption	[A]	0.82	0.82
Power supply:	3~400V,1/N~230V-50Hz		
Electric protection degree:		IP40	IP40
Noisiness min. - max. **	[dBA]	78-82.5	82-83.6

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

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

## TECHNICAL DATA FGP 130/M EVO

MODEL	FGP 130/M EVO	
Thermal power min. 1°st. /min. 2°st. - max. 2°st. *	[Mcal/h]	289/612-1326
Thermal power min. 1°st. /min. 2°st. - max. 2°st. *	[kW]	336/712-1542
Flow min. 1°st. / min. 2°st. - max. 2°st. *	[kg/h]	28.3/60-130
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
Nominal electric power	[kW]	3
Fan motor	[kW]	2.2
Pump motor	[kW]	0.75
Nominal fan motor current absorption	[A]	4.35
Nominal pump motor current absorption	[A]	1.9
Power supply:	3~400V, 1/N~230V-50Hz	
Electric protection degree:	IP40	
Noisiness min. - max. **	[dBA]	84.4-85.4

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

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

## OPERATING RANGE DIAGRAM FGP 75/M

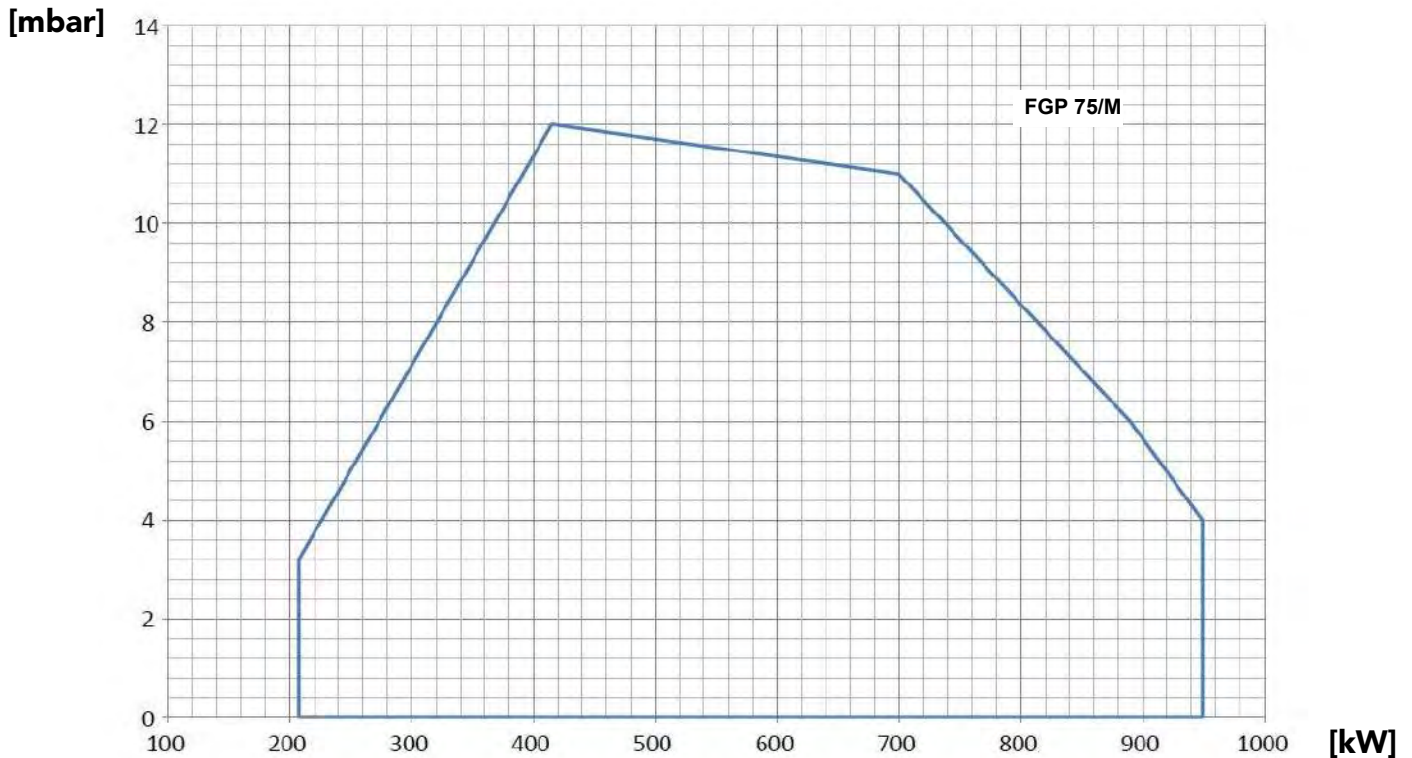


Fig. 4 X = Thermal power Y = Pressure in the combustion chamber

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.

### OPERATING RANGE DIAGRAM FGP 100/M EVO

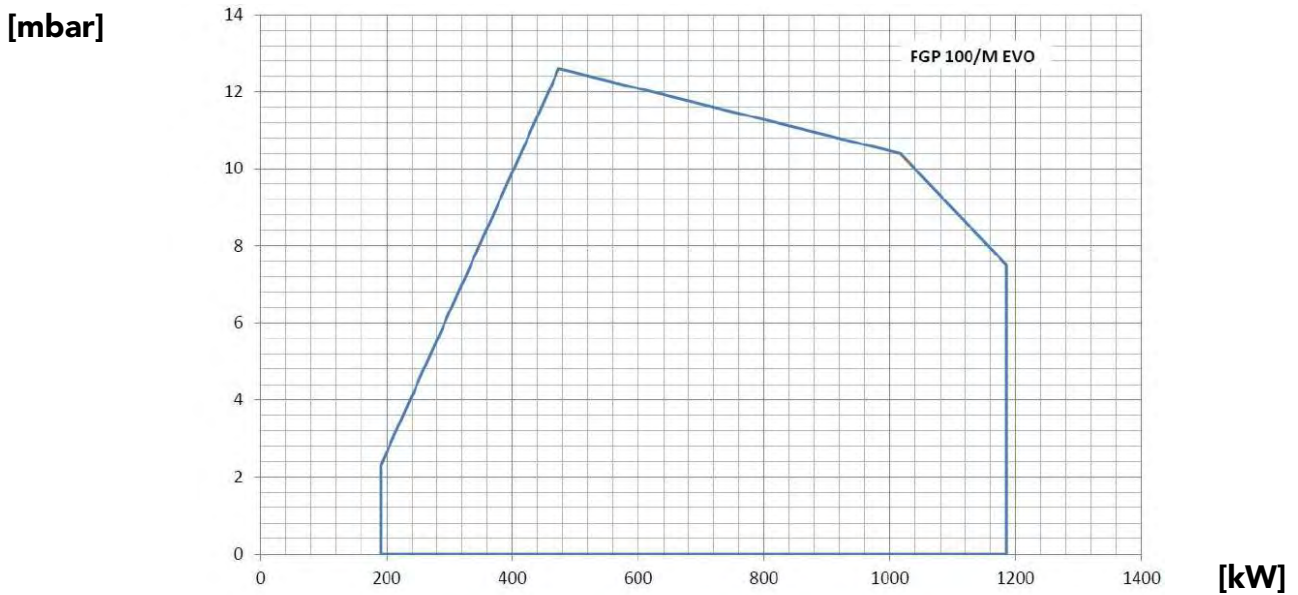


Fig. 5 X = Thermal power Y = Pression in the combustion chamber

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.

### OPERATING RANGE DIAGRAM FGP 130/M EVO

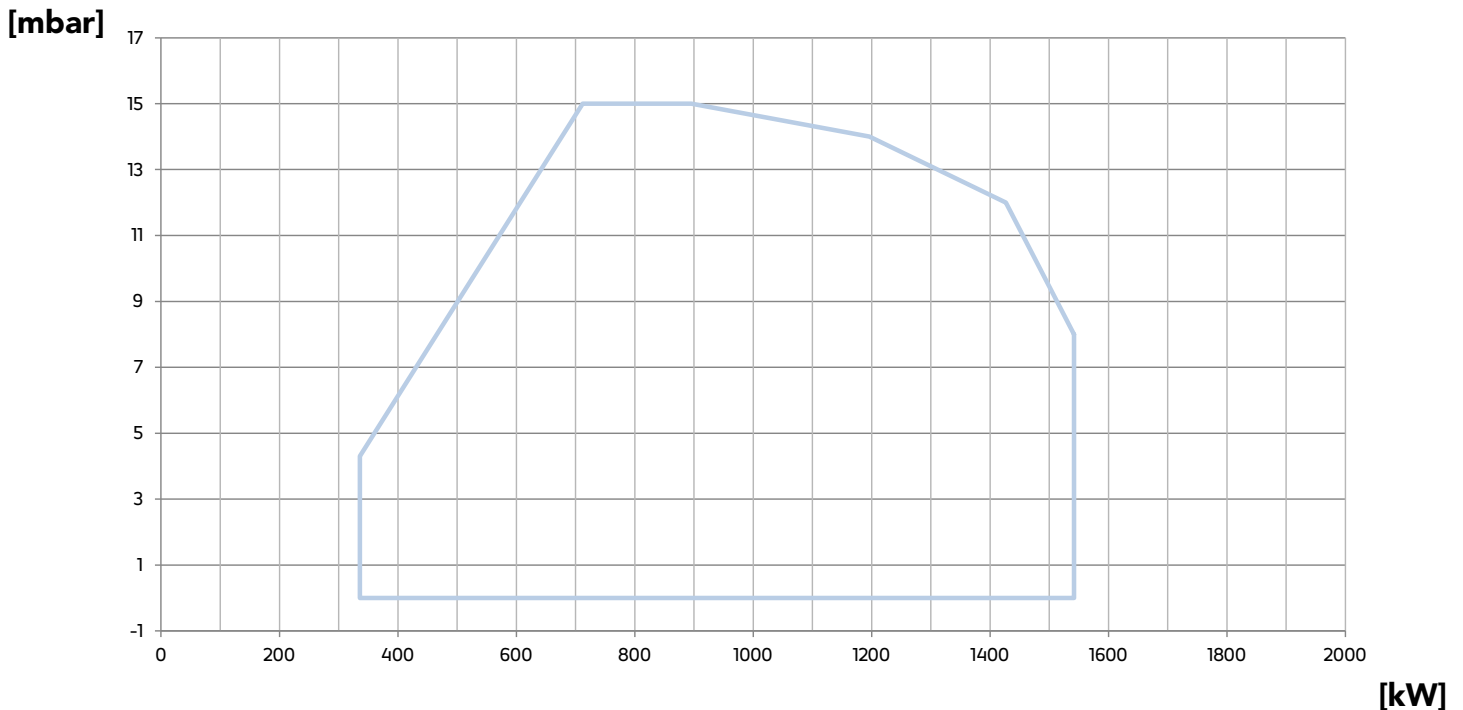
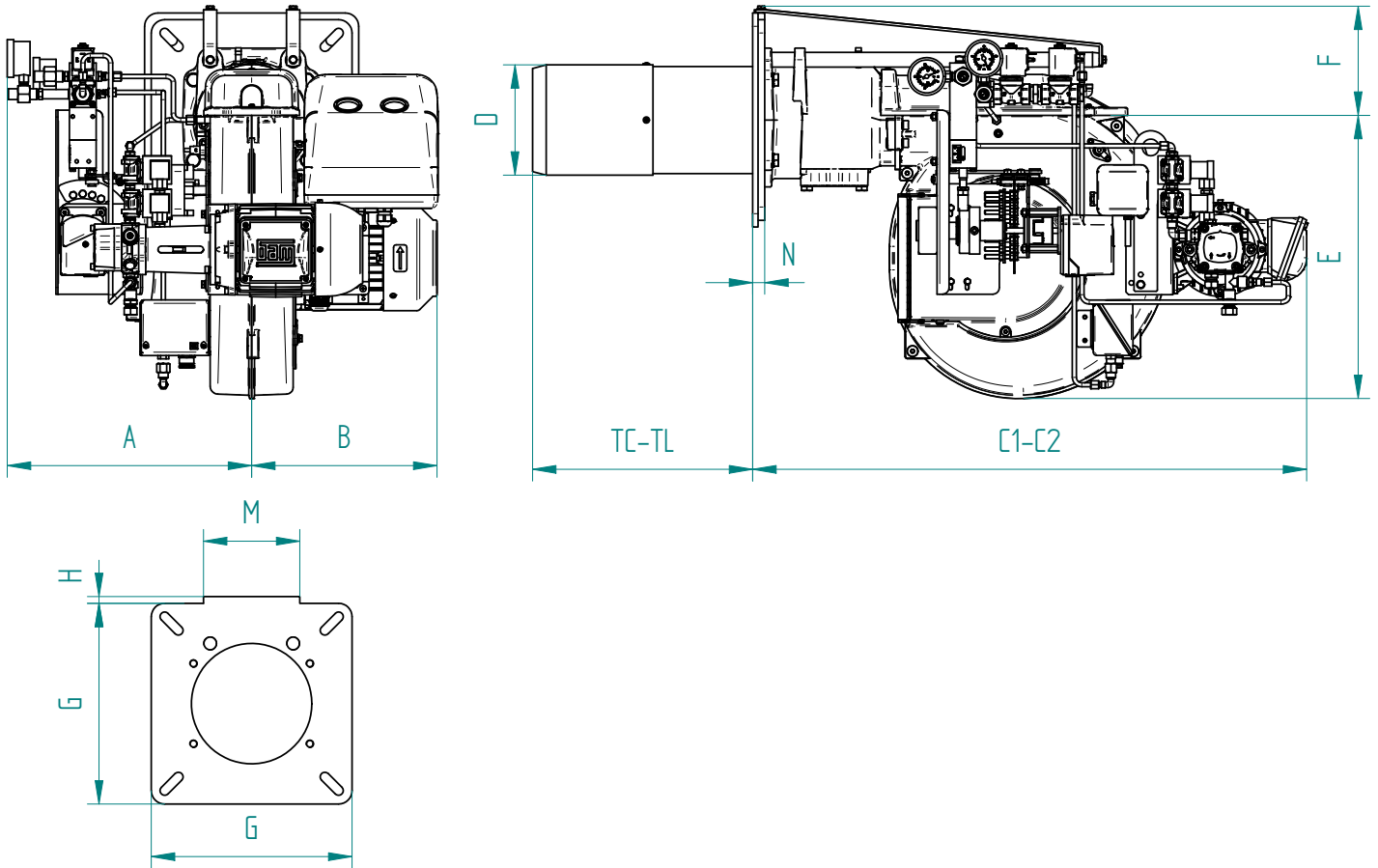


Fig. 6 X = Thermal power Y = Pression in the combustion chamber

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 FGP 75/M [mm]**



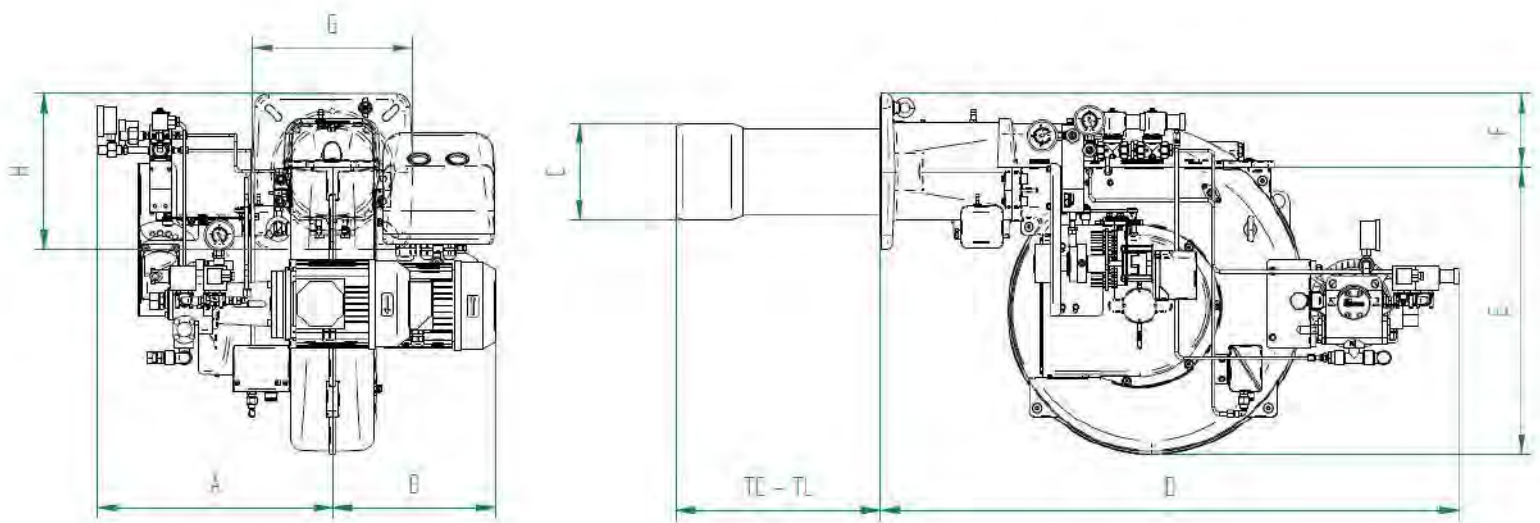
**Fig. 7** Dimensions FGP 75/M

MODEL	A	B	C1	C2 *	D	E	F	G	H	M	N
FGP 75/M	365	277	828	1263	165	423	163	300	10	144	18

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

TC-TL: see "flame tube length"

**DIMENSIONS FGP 100/M EVO [mm]**



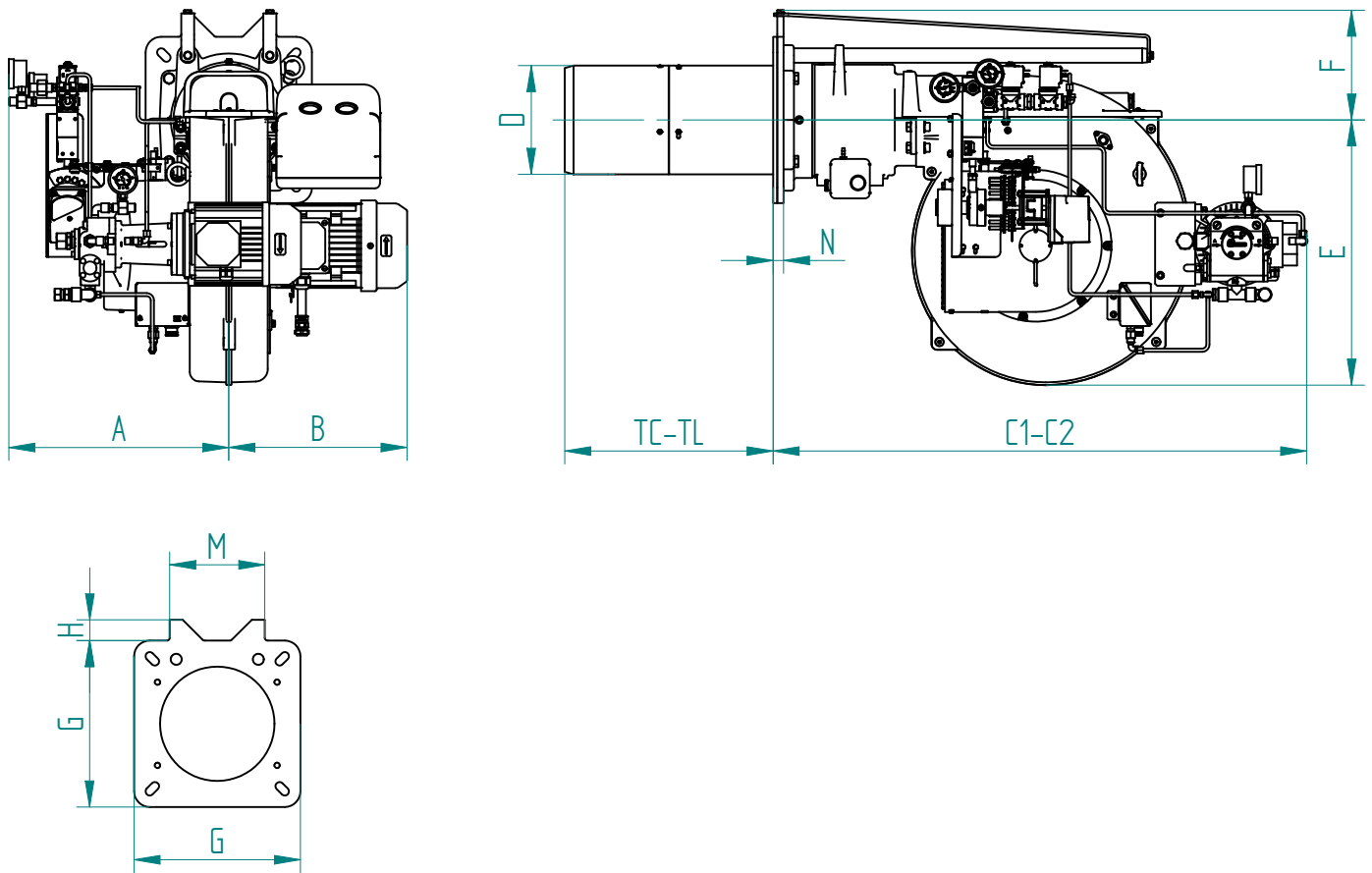
**Fig. 8** Dimensions FGP 100/M EVO

MODEL	A	B	C	D	E	F	G	H
FGP 100/M EVO	423.5	294.5	175	1046	518	132	290	280

TC-TL: see "flame tube length"

FGP 75/M - FGP 100/M EVO - FGP 130/M EVO

**DIMENSIONS FGP 130/M EVO [mm]**

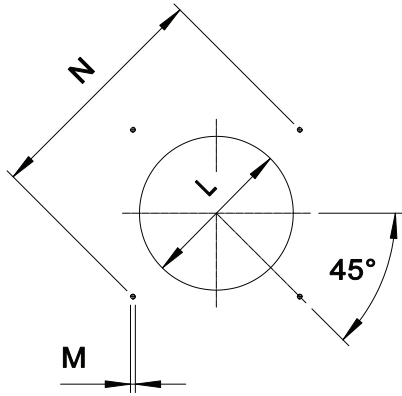


**Fig. 9** Dimensions FGP 130/M EVO

MODEL	A	B	C1	C2 *	D	E	F	G	H	M	N
FGP 130/M EVO	423	343	1026	1610	209	510	211	320	40	183	20

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

**BOILER PLATE**



\* Suggested dimension of connection between burner and generator.

**Fig. 10** Boiler plate

MODEL		M	N min	N max	L min	L *	L max
FGP 75/M	mm	M12	310	368	180	180	250
FGP 100/M EVO	mm	M10	275	325	185	185	220
FGP 130/M EVO	mm	M14	340	368	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.

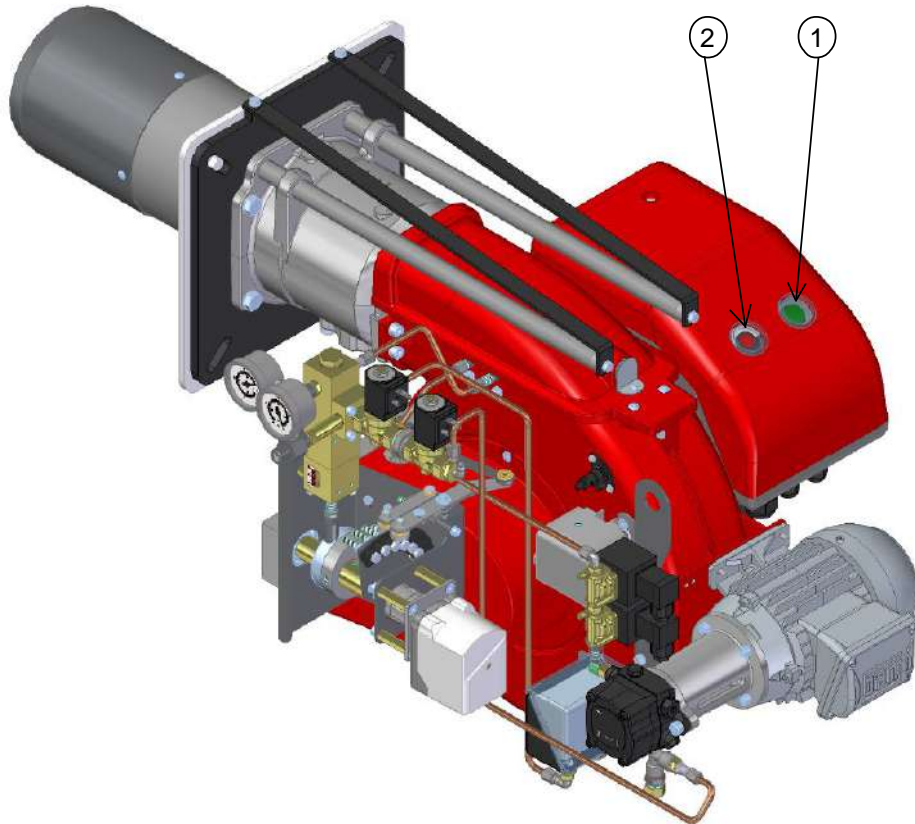
In case of boilers with flame inversion or front flue combustion chambers, it is necessary to insulate the area between the flame tube and front door with refractory material. This protection material must not impede flame tube extraction.

MODEL		TC	TL **
FGP 75/M	mm	250	335
FGP 100/M EVO	mm	235	370
FGP 130/M EVO	mm	210	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. 11** Burner signal description

**LEGEND**

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

💡 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-volatile 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-volatile 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).





# LIGHT-OIL BURNERS TWO STAGES PROGRESSIVE OR MODULATING

SK070090\_A\_gb

## 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 FGP 75/M;
- Fan at high pressurisation at reverse blades FGP 100/M EVO - FGP 130/M EVO;
- Combustion head with adjustment at high performance and elevated flame stability;
- Flange and insulating gasket for fixing at boiler;
- Three-phase power supply;
- Photodiode for flame detection;
- IP 40 electric protection level;
- Servomotor for air shutter and for the pressure regulator;
- Supports and tierods for burner extraction for FGP 75/M - FGP 130/M EVO;
- 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;
- Safety air pressure switch to stop the burner in lock-out (by stopping the pump motor) in case of failed or anomalous fan operation;
- Dedicated motor for the activation of the light-oil pump;
- 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 minimun 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.;
- 2014/68/UE (art.4, par.3) 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-350°C (J probe);
- 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.