

GM X0 - GM X1 - GM X3 - GM X4

Dual fuel gas/light-oil burners at single stage.

They are composed by: aluminium frame, fan at high pressurisation, protection cover with noise reduction plate 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.

Available in the versions METHANE (natural gas) or L.P.G. (to specify at the order) on demand specific versions for town gas, coal gas or biogas.

Gas train completely assembled and tested; complete of single-stage working valve with flow adjustment, safety valve, minimum gas pressure switch.

Complete of plug/socket 7 poles, flange and gasket for installation on generator.

Complete of nozzle, flexible pipes and line filter.



Fig. 1 GM X4

TECHNICAL DATA AND OPERATING RANGE DIAGRAM GM X0 - GM X1 - GM X3 - GM X4

MODEL		GM X0	GM X1	GM X3	GM X4
Thermal power min. - max. *	[Mcal/h]	19-29	24,5-60	49.5-129,5	99,5-199,5
Thermal power min. - max. *	[kW]	22,6-34,3	29-69,8	58.1-151	116-232
Gas flow G20 (NATURAL GAS) min. - max. *	[Nm³/h]	2,3-3,4	2,9-7	5.8-15.2	11,6-23,2
Gas flow G31 (L.P.G.) min. - max. *	[Nm³/h]	0,9-1,3	1,1-2,7	2.2-5.9	4,5-9
Fuel: NATURAL GAS (second family) - L.P.G. (third family)					
Fuel category:		I2R,I2H,I2L,I2E,I2E+,I2Er,I2ELL,I2E(R)B/I3B/P,I3+,I3P,I3B,I3R			
Minimum pressure gas train D1/2" - S NATURAL GAS/LPG **	[mbar]	10/20	28/33	-	-
Minimum pressure gas train D1" - S NATURAL GAS/LPG **	[mbar]	-	-	21/30	18/33
Maximum pressure at the entry of valves (Pe. max)		60mbar SIT; 360mbar DUNGS			
LIGHT-OIL flow min. - max. *	[kg/h]	2-3	2,5-6	5-13	10-20
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) one stage					
Environmental conditions operation / storage:		-15...+40°C / -20...+70°C, rel. humidity max. 80%			
Max. temperature combustion air	[°C]	60	60	60	60
Nominal electric power	[W]	150	150	200	250
Fan motor	[W]	100	100	150	200
Nominal absorption fan motor	[A]	0,72	0,72	1,1	1,35
Power supply:		1/N~230V-50Hz			
Electric protection degree:		IP 40	IP 40	IP 40	IP 40
Noisiness *** min. - max.	[dB(A)]	56-58	57-59	65-66	67-68
Burner weight	[kg]	16	17	18	19

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

** Minimal feeding-gas pressure to the gas train to get the maximum power of the burner, considering counter-pressure in combustion chamber of value 0 (zero).

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

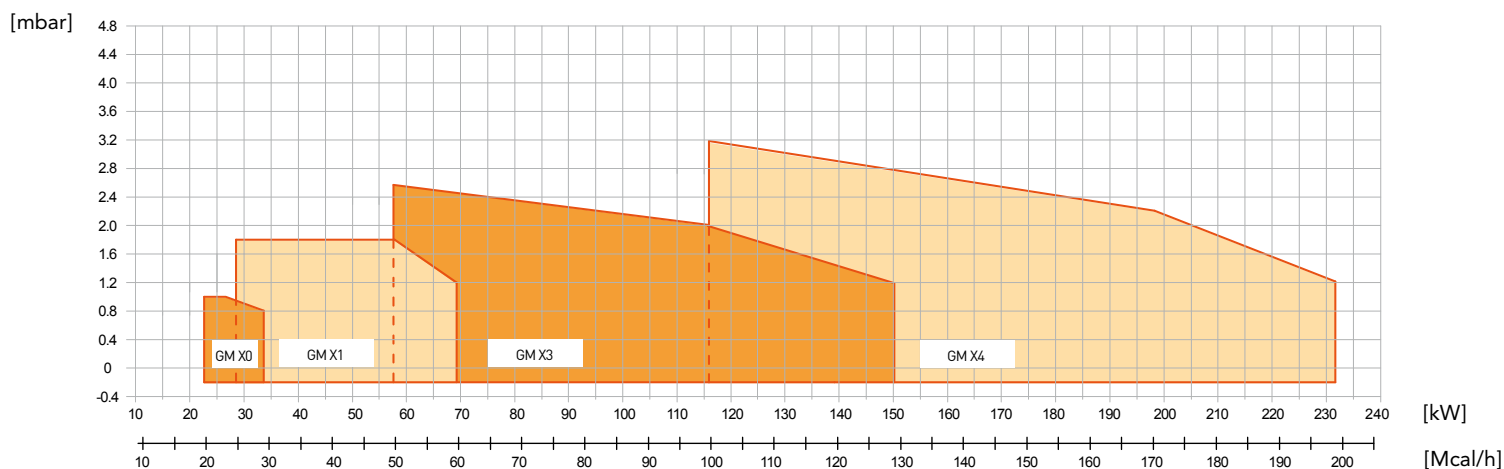
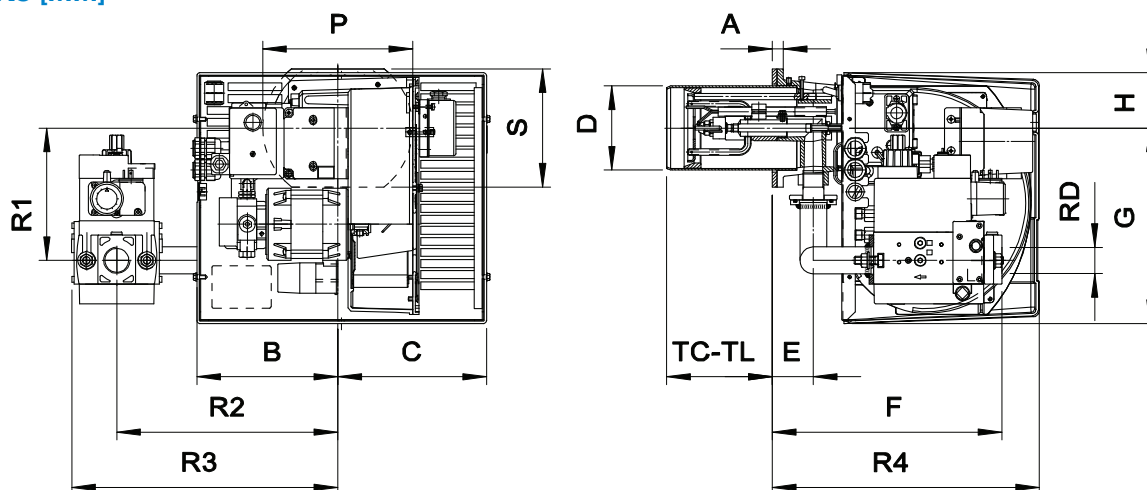


Fig. 2 X = Thermal power Y = pressure in combustion chamber

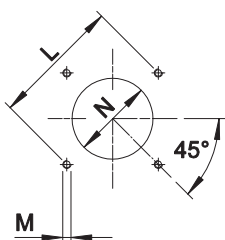
The firing rates has been obtained based on test boilers in accordance with EN267 standards and are indicative of matching the burner to the boiler. For the correct operation of the burner, combustion chamber dimensions must be in accordance with current regulation. In case of non-compliance, contact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

**FBR****DIMENSIONS [MM]****DUAL FUEL GAS/LIGHT-OIL BURNERS AT SINGLE STAGE**

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**Fig. 3** Dimensions: GM X0 - GM X1 - GM X3 - GM X4

MODEL	A	B	C	D	E	F	G	H	P	S	R1	R2	R3	R4	RD
GM X0 - D1/2" - S	15	162	175	90	43	305	210	65	150	150	133	200	254	240	Rp 1/2
GM X1 - D1/2" - S	15	162	175	90	43	305	210	65	150	150	133	200	254	240	Rp 1/2
GM X3 - D1" - S	16	185	195	108	54	340	248	70	190	150	168	280	337	291	Rp 1
GM X4 - D1" - S	20	185	195	125	78	368	248	70	200	200	173	280	337	319	Rp 1

BOILER PLATE**Fig. 4** Boiler plate

MODEL		L min	L *	L max	M	N min	N *	N max
GM X0	mm	130	150	170	M8	100	110	130
GM X1	mm	130	150	170	M8	100	110	130
GM X3	mm	150	170	170	M8	120	130	140
GM X4	mm	170	205	226	M10	130	140	160

*: Suggested dimension of connection between burner and generator.

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 **
GM X0	mm	90	150
GM X1	mm	90	150
GM X3	mm	130	250
GM X4	mm	160	280

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

GM X0 - GM X1 - GM X3 - GM X4

PRODUCT SPECIFICATION**SHORT DESCRIPTION**

Dual fuel gas/light-oil burners at single stage.

DETAILED SPECIFICATION

Dual fuel gas/light-oil burners at single stage, composed by:

- Aluminium frame;
- Fan at high pressurisation;
- Combustion head with adjustment at high performance and elevated flame stability equipped with blast tube and flame disc;
- Flange and insulating gasket for fixing at boiler;
- Single-phase power supply;
- Manual switch for the fuel selection gas/light-oil;
- Safety air pressure switch to stop the burner in lock-out in case of failed or anomalous fan operation;
- Models GM X0 - GM X1 with gas train with one-block valve class B;
- Models GM X3 - GM X4 with gas train with safety valve class A, adjustment 1st stage valve class A;
- UV probe for flame detection;
- IP 40 electric protection level.

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.;
- 2009/142/CE Directive GAS;
- Reference rules: EN676 (gas) - EN267 (liquid fuel) - EN746-2 (industrial thermoprocessing equipment).

STANDARD EQUIPMENT

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

OPTIONAL

- Noise protection;
- Antivibration couplings;
- Handle gas taps.