GAS XP40/MCE - GAS XP60/MCE

Burners for gas 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.
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 working valve with flow adjustment, safety valve, minimum gas pressure switch and gas filter.
Complete of flange and gasket for installation on generator.



Fig. 1 GAS XP60/MCE

TECHNICAL DATA GAS XP40/MCE - GAS XP60/MCE

MODEL		GAS XP40/MCE	GAS XP60/MCE
Thermal power min. 1°st. / min. 2°st. - max. 2°st. *	[Mcal/h]	55/130-300	70/200-450
Thermal power min. 1°st. / min. 2°st. - max. 2°st. *	[kW]	63.8/151-348	81.4/232-523
Gas flow G20 (NATURAL GAS) min. 1°st. / min. 2°st. - max. 2°st. *	[Nm³/h]	6.4/15.2-35	8.2/23.4-52.6
Gas flow G31 (L.P.G.) min. 1°st. / min. 2°st. - max. 2°st. *	[Nm³/h]	2.5/5.8-13.5	3.2/9-20.3
Fuel: NATURAL GAS (second family) - L.P.G. (third family)			
Fuel category:		I2R,I2H,I2L,I2E,I2E+,I2Er,I2ELL,I2E(R) I3B/P,I3+,I3P,I3B,I3R	
Intermitted working operation (min. 1 stop every 24 hours) two stages progressive or modulating			
Environmental conditions operation / storage:		-15...+40°C / -20...+70°C, umidità rel. max. 80%	
Max. temperature combustion air	[°C]	60	60
Minimum pressure gas train D1"-S NATURAL GAS/L.P.G. **	[mbar]	29.5/28	47/30
Minimum pressure gas train D1"1/4-S NATURAL GAS/L.P.G. **	[mbar]	18.5/22	21/23
Minimum pressure gas train D1"1/2-S NATURAL GAS/L.P.G. **	[mbar]	14/-	16.1/16
Maximum pressure at the entry of valves (Pe. max)	[mbar]	360	360
Nominal electric power	[W]	690	935
Fan motor	[W]	370	740
Nominal motor current absorption	[A]	2.5	2
Nominal auxiliary absorption	[A]	0.5	0.5
Power supply:		1N~230V - 50Hz	3~400V, 1N~230V - 50Hz
Electric protection degree:		IP 40	IP 40
Noisiness *** min. - max.	[dB(A)]	69-73	73-76
Burner weight ****	[kg]	34	36

* 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).
**** For burner with long head add 1 kg to the weight.

OPERATING RANGE DIAGRAM

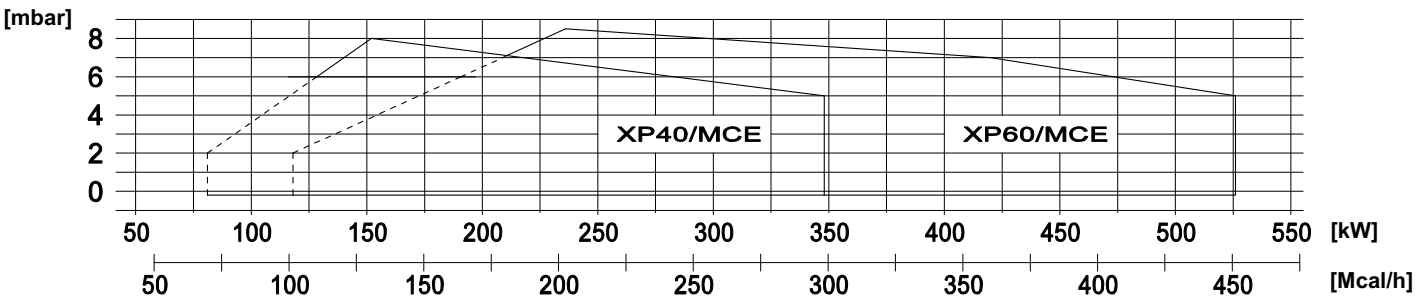


Fig. 2 X = Thermal power Y = Pression in the combustion chamber

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]

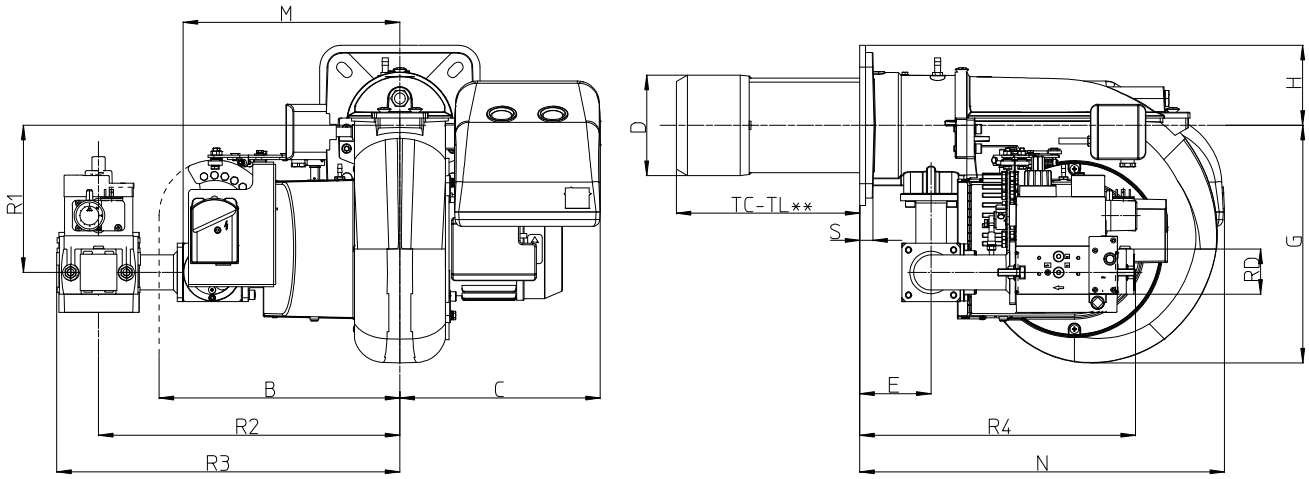
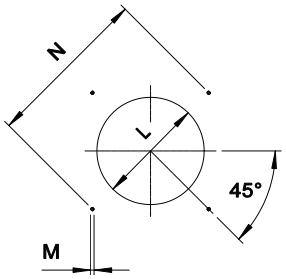


Fig. 3 Dimensions GAS XP40/MCE - GAS XP60/MCE

MODEL	B	C	D	E	G	H	M	N	S	R1	R2	R3	R4	RD
GAS XP40/MCE - D1"-S	331	275	138	98	326	110	298	501	18	202	404	462	346	Rp 1
GAS XP40/MCE - D1"1/4-S	331	275	138	98	326	110	298	501	18	202	404	462	346	Rp 1 1/4
GAS XP40/MCE - D1"1/2-S	331	275	138	98	326	110	298	501	18	202	414	469	458	Rp 1 1/2
GAS XP60/MCE - D1"-S	331	275	150	98	326	110	298	501	18	202	414	472	442	Rp 1
GAS XP60/MCE - D1"1/4-S	331	275	150	98	326	110	298	501	18	202	414	472	442	Rp 1 1/4
GAS XP60/MCE - D1"1/2-S	331	275	150	98	326	110	298	501	18	202	414	469	458	Rp 1 1/2

**TC-TL: see "flame tube length"

BOILER PLATE



* Suggested dimension of connection between burner and generator.

Fig. 4 Boiler plate

MODEL		L *	M	N min	N max
GAS XP40/MCE	mm	148	M10	205	226
GAS XP60/MCE	mm	160	M10	205	226

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 **
GAS XP40/MCE	mm	250	335
GAS XP60/MCE	mm	250	335

** 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:

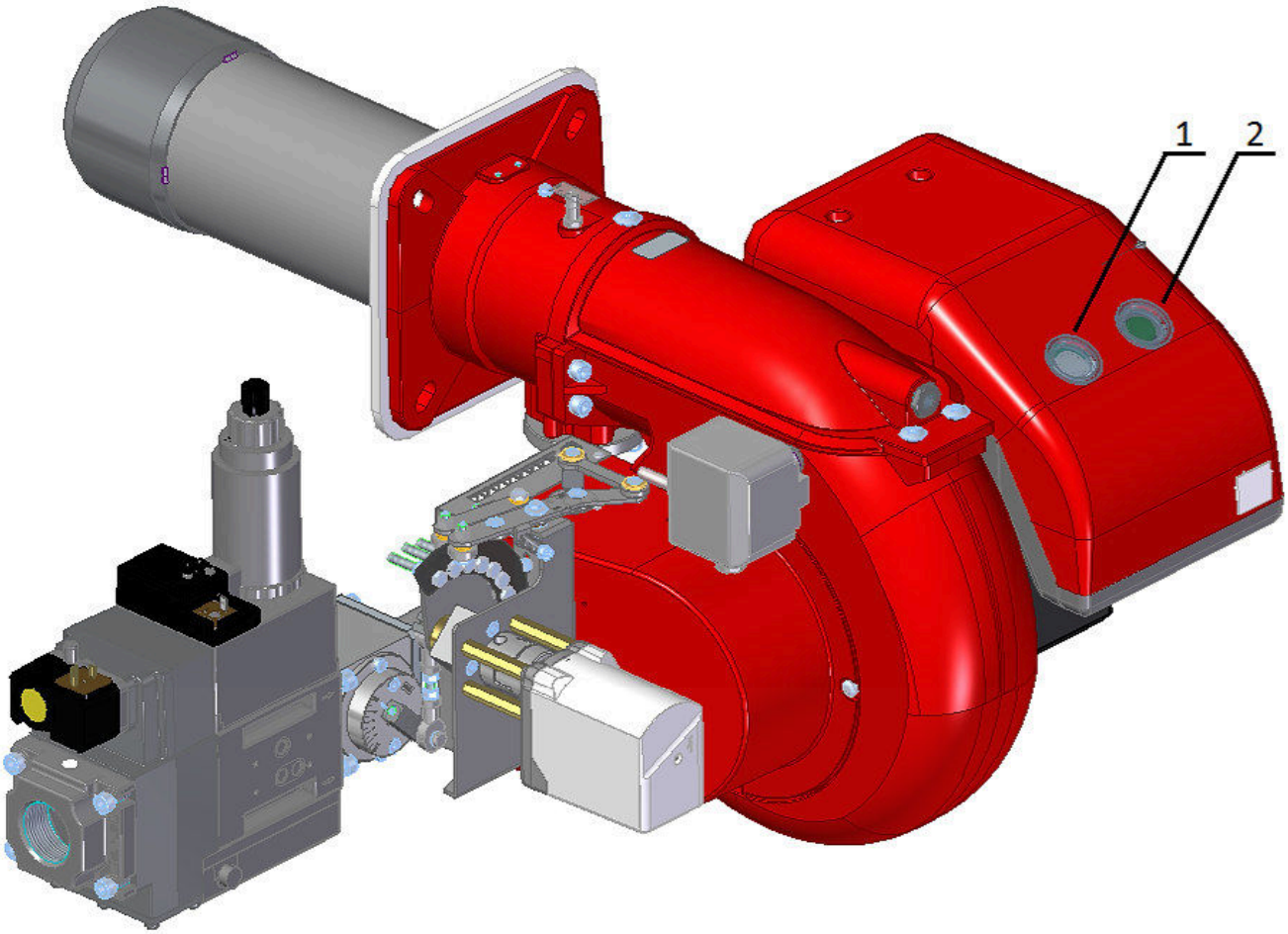


Fig. 5 Burner signal description

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-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

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

DETAILED SPECIFICATION

Burner for gas 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 equipped with inox steel blast tube and steel flame disc;
- Flange and insulating gasket for fixing at boiler;
- Single phase power supply GAS XP40/MCE, three-phase power supply GAS XP60/MCE;
- Safety air pressure switch to stop the burner in lock-out in case of failed or anomalous fan operation;
- Gas train with safety valve class A, adjustment valve class A;
- Ionisation probe for flame detection;
- IP 40 electric protection level;
- Spherical gas valve servo-controlled; progressive start and free way passage with total opening;
- Servomotor for air shutter and for the spherical gas valve;
- Moving shutter with total closure when idle in order to reduce at the least energy losses related to boiler cooling down;
- Easy extraction of combustion head without get off the burners by bolier;
- 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.;
- 2006/42/CE - 2006/42/EG - 2006/42/EC Directive M.D.;
- GAS 2016/426/UE Regulation;
- Reference rules: EN676 (gas) – EN 746-2 (industrial thermoprocessing equipment).

STANDARD EQUIPMENT

- Isomart gasket;
- 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;
- Antivibration couplings;
- Handle gas taps.

The illustrations and data here shown are indicative. F.B.R. Bruciatori S.r.l. reserves the right to bring, without any obligation of warning, any changes that would be appropriate to the continuing development of their products.