# GAS X5/2 CE-LX4

Burners for gas two stages low emissions certified in conformity with CE 676 class 4 (NOx ≤ 60 mg/kWh) composed by: die-cast aluminum body, fan at high pressurisation, combustion head with adjustment at high efficiency and high flame stability and protection cover with noise reduction plate.
Compact overall dimensions and disposition rationalized of the components with accessibility facilitated for operations of setting and maintenance.
Gas train complete of one-block system composed by: 1st stage valve class A, 2nd stage valve slow opening class A, filter, stabilizer and minimum gas pressure switch.
Complete of connector plug / socket 7 poles, connector plug / socket 4 poles (for the 2nd stage modulation), flange and gasket for installation on generator.

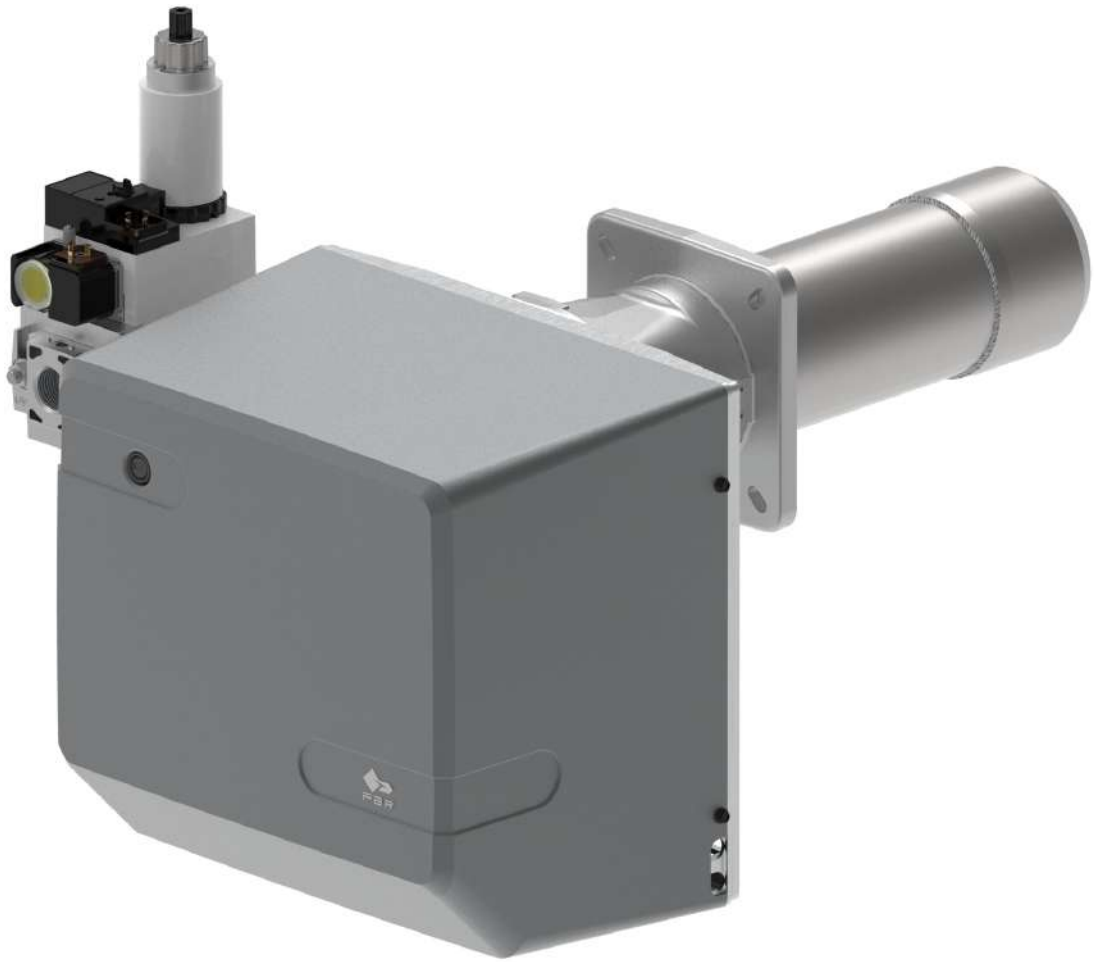


**Fig. 1** GAS X5/2 CE-LX4

## TECHNICAL DATA AND OPERATING RANGE DIAGRAM

| MODEL | | GAS X5/2 CE-LX4 |
|---|---|---|
| Thermal power min. 1°st. / min. 2°st. - max. 2°st. * | [Mcal/h] | 58.5/154.8-344 |
| Thermal power min. 1°st. / min. 2°st. - max. 2°st. * | [kW] | 68/180-400 |
| Gas flow G20 (NATURAL GAS) min. 1°st. / min. 2°st. - max. 2°st. * | [Nm³/h] | 6.8/18.1-40.2 |
| Gas flow G31 (L.P.G.) min. 1°st./ min. 2°st. - max. 2°st. * | [Nm³/h] | 3.3/7.0-15.6 |
| 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 | | |
| Environmental conditions operation / storage: | -15...+40°C / -20...+70°C, rel. humidity max. 80% | |
| Max. temperature combustion air | [°C] | 60 |
| Min. pressure gas train D1"-S NAT. GAS/L.P.G. ** | [mbar] | 55.2/36.5 |
| Min. pressure gas train D1"1/4-S NAT. GAS/L.P.G. ** | [mbar] | 31.5/27.4 |
| Min. pressure gas train D1"1/2-S NAT. GAS/L.P.G. ** | [mbar] | 15.9/21.1 |
| Max. pressure at the entry of valves (Pe. max) | [mbar] | 360 |
| Nominal electric power | [W] | 540 |
| Fan motor | [W] | 370 |
| Nominal motor current absorption | [A] | 2.4 |
| Power supply: | | 1/N~230V-50Hz |
| Electric protection degree: | | IP 40 |
| NOx class, NATURAL GAS (Gas second family): | | 4 |
| NOx class, L.P.G. (Gas third family): | | 4 |
| Noisiness *** min. - max. | [dB(A)] | 67-71 |
| Burner weight **** | [kg] | 26 |

* 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 - method of control Class 3 - The tollerance of the measured pressure can be taken equal to ± 1 [dB(A)]).
**** For burner with cover in steel (F) add 5 kg to the weight.

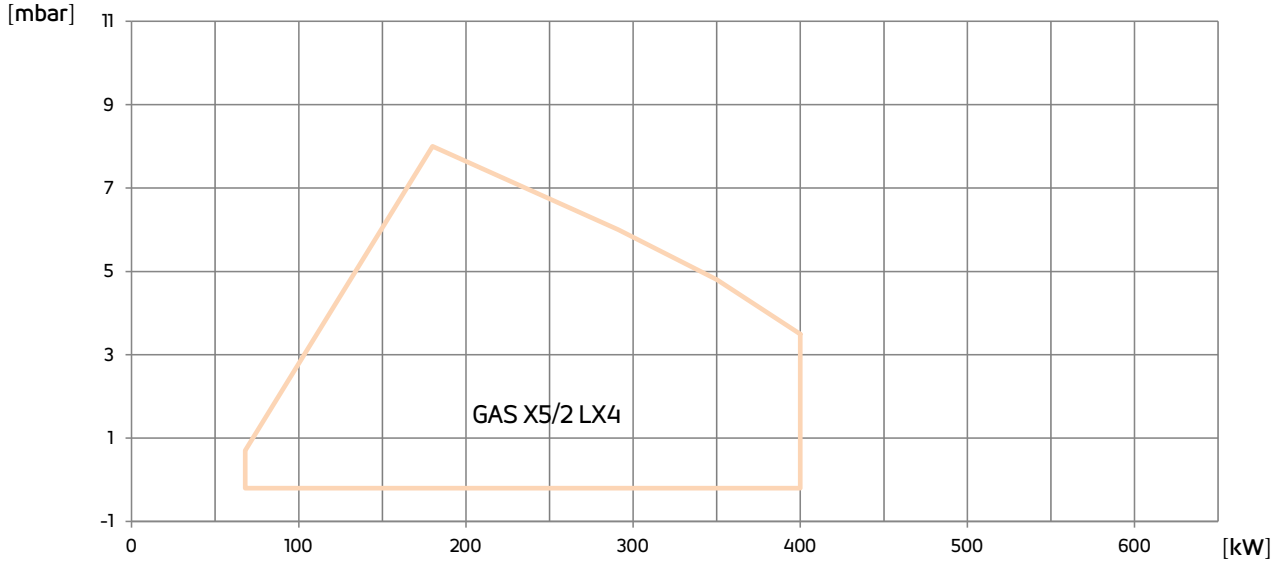



**Fig. 2** X = Thermal power Y = Pression in the combustion chamber

For L.P.G. min. thermal power 1° stage: 73 Mcal/h - 85 kW.
The firing rates has been obtained based on test boilers in accordance with EN676 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]

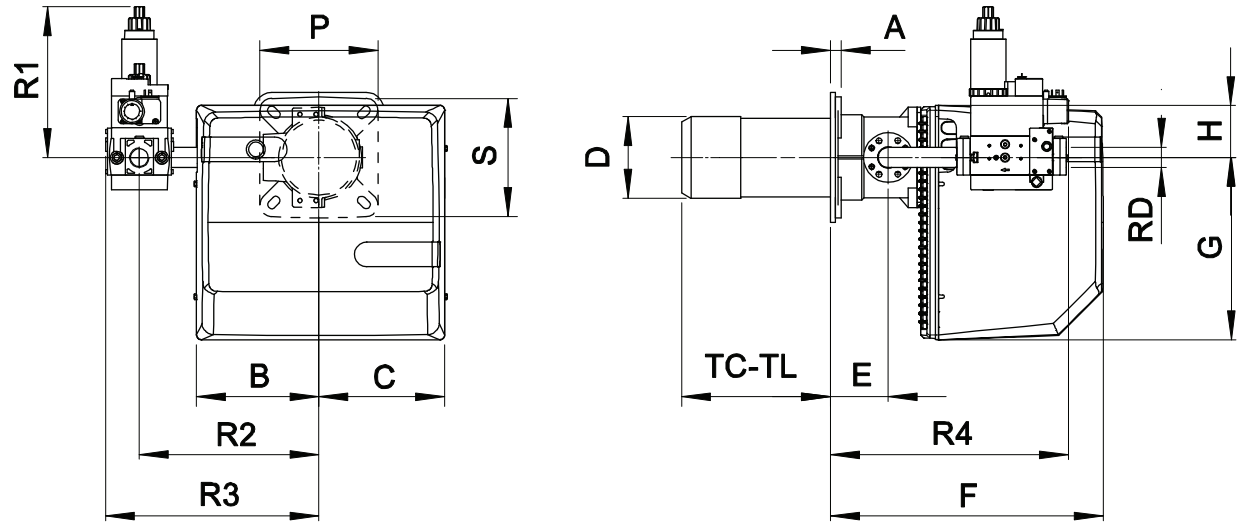
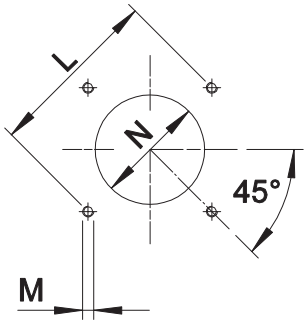



**Fig. 3** Dimensions GAS X5/2 CE-LX4

| MODEL | A | B | C | D | E | F | G | H | P | S | R1 | R2 | R3 | R4 | RD | Gas train weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GAS X5/2CE-LX4 D1"-S | 18 | 207 | 213 | 138 | 98 | 462 | 310 | 90 | 200 | 200 | 260 | 305 | 362 | 403 | Rp 1 | 9 , 5 kg |
| GAS X5/2CE-LX4 CT - D1"-S | 18 | 207 | 213 | 138 | 98 | 462 | 310 | 90 | 200 | 200 | 260 | 305 | 480 | 403 | Rp 1 | 10,5 kg |
| GAS X5/2CE-LX4 D1"1/4-S | 18 | 207 | 213 | 138 | 98 | 462 | 310 | 90 | 200 | 200 | 260 | 305 | 362 | 450 | Rp 1 1/4 | 9,5kg |
| GAS X5/2CE-LX4 CT-D1"1/4-S | 18 | 207 | 213 | 138 | 98 | 462 | 310 | 90 | 200 | 200 | 260 | 305 | 480 | 450 | Rp 1 1/4 | 10,5 kg |
| GAS X5/2CE-LX4 D1"1/2-S | 18 | 207 | 213 | 138 | 98 | 462 | 310 | 90 | 200 | 200 | 270 | 305 | 485 | 550 | Rp 1 1/2 | 12,5 kg |
| GAS X5/2CE-LX4 CT - D1"1/2-S | 18 | 207 | 213 | 138 | 98 | 462 | 310 | 90 | 200 | 200 | 270 | 305 | 485 | 550 | Rp 1 1/2 | 13,5 kg |

TC-TL: see "flame tube length"

## BOILER PLATE




* Suggested dimension
** Suggested dimension of connection between burner.

**Fig. 4** Boiler plate

| MODEL | | L min | L * | L max | M | N min | N * * | N max |
|---|---|---|---|---|---|---|---|---|
| GAS X5/2 CE-LX4 | mm | 205 | 215 | 226 | M10 | 150 | 150 | 180 |

## 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 X5/2 CE-LX4 | mm | 250 | 335 |

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

# PRODUCT SPECIFICATION

## SHORT DESCRIPTION

Burners for gas two stages low emissions certified in conformity with CE 676 class 4 (NOx ≤ 60 mg/kWh).

## DETAILED SPECIFICATION

Burners for gas two stages low emissions certified in conformity with CE 676 class 4 (NOx ≤ 60 mg/kWh).; composed by:

- Aluminum body;
- Fan at high pressurisation;
- Combustion head with adjustment at high performance and elevated flame stability equipped with steel blast tube and steel flame disc;
- Protection cover with noise reduction plate;
- Flange and insulating gasket for fixing at boiler;
- Single phase power supply;
- Safety air pressure switch to stop the burner in lock-out in case of failed or anomalous fan operation;
- Gas train complete of one-block system composed by: 1st stage valve class A, 2nd stage valve slow opening class A, filter, stabilizer and minimum gas pressure switch;
- Ionisation probe for flame detection;
- IP 40 electric protection level;
- Servomotor for air shutter and for the consent of the 2nd stage gas valve;
- Moving shutter with total closure when idle in order to reduce at the least energy losses related to boiler cooling down.

## 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

- 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.