

LOW NOx CLASS 3 EN676 \_ NOx<80mg/kWh

## GAS P 190/M-250/M CE-LX

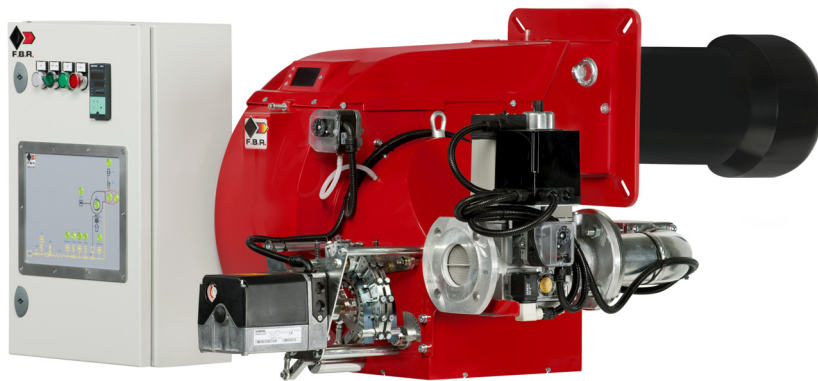
Burners for gas two stages progressive (hi-low flame) or modulating (PID fully modulating) with the addition of the optional system modulation kit plus feeder. Fan at high pressurisation, combustion head with adjustment at high efficiency and high flame stability. The valve proving system is installed as standard. Equipped as standard with UV sensor and pilot flame.

Disposition rationalized of the components with accessibility facilitated for the operations of setting and maintenance.

Available methane gas version (NATURAL GAS).

Gas train complete of working valve with flow adjustment, safety valve, gas pressure switch, filter stabiliser of gas pressure, completely assembled, electrically linked and tested.

Available versions with MECHANICAL CAM or ELECTRONIC CAM.





TECHNICAL DATA

| MODEL  |          | GAS P 190/M CE-LX                                  | GAS P 250/M CE-LX |
|--|----------|--|-------------------|
| Thermal power 1°st./min 2°st.-max 2°st. *                              | [Mcal/h] | 300/900-1900                                       | 400/1000-2500     |
| Thermal power 1°st./min 2°st.-max 2°st. *                              | [kW]     | 347/1044-2204                                      | 465/1160-2900     |
| Gas flow G20 /(NATURAL GAS) 1°st./min 2°st.-max 2°st. *                | [Nm³/h]  | 35/105-222   | 47/117-292        |
| Gas flow G31 /(LPG) 1°st./min 2°st.-max 2°st. *                        | [Nm³/h]  | 14/41-86   | 18/45-113         |
| Fuel   |          | Natural gas (second family) - LPG (third family)   |                   |
| Fuel category  |          | 2R 2H 2L 2E 2E+ 2Er 2ELL 2E(R)B 3B/P 3+ 3P 3B 3R   |                   |
| NOx**  | mg/KWh   | < 80 : classe 3 (EN676)                            |                   |
| Intermittent working operation (min. 1 stop every 24 hours) modulating |          |  |                   |
| Environmental conditions operation / storage                           |          | -15...+40°C / -20...+70°C , rel. humidity max. 80% |                   |
| Max temperature combustion air   | [°C]     | 60   | 60                |
| Minimum gas train pressure (D2" FS50 natural gas/LPG)**                | [mbar]   | 112/-  | 194/-             |
| Minimum gas train pressure (DN65 FS65 natural gas/LPG)**               | [mbar]   | 51/-   | 88/-              |
| Minimum gas train pressure (DN80-S F80 natural gas/LPG)**              | [mbar]   | 38/-   | 66/-              |
| Minimum gas train pressure (DN100-S F100 natural gas/LPG)**            | [mbar]   | 28/-   | 48/-              |
| Maximum supply gas pressure (Pe.max)                                   | [mbar]   | 500  | 500               |
| Nominal electric power   | [kW]     | 4.5  | 7                 |
| Fan motor  | [kW]     | 4  | 5.5               |
| Nominal absorption current (powers)                                    | [A]      | 8  | 12                |
| Nominal absorption current (auxiliary)                                 | [A]      | 0.4  | 0.4               |
| Power supply   |          | 3~400V-1/N~230V-50Hz                               |                   |
| Electric protection degree   |          | IP44   | IP44              |
| Sound level*** min-max   | [dB(A)]  | 79-82  | 81-85             |
| Burner weight  | [kg]     | 128  | 158               |

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

\*\* In order to obtain low Nox emission as declared, burner must be matched to the proper boiler for this application: boiler with 3 turns for the exhaust gas, condensing boilers and any generator with direct exhaust outlet and the thermal load that is not higher than 1,8 MW/m³

\*\*\* Minimum pressure of gas feeding to the gas train in order to obtain the maximum power of the burner considering the back pressure in combustion chamber to a value of 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)

FIRING RATES

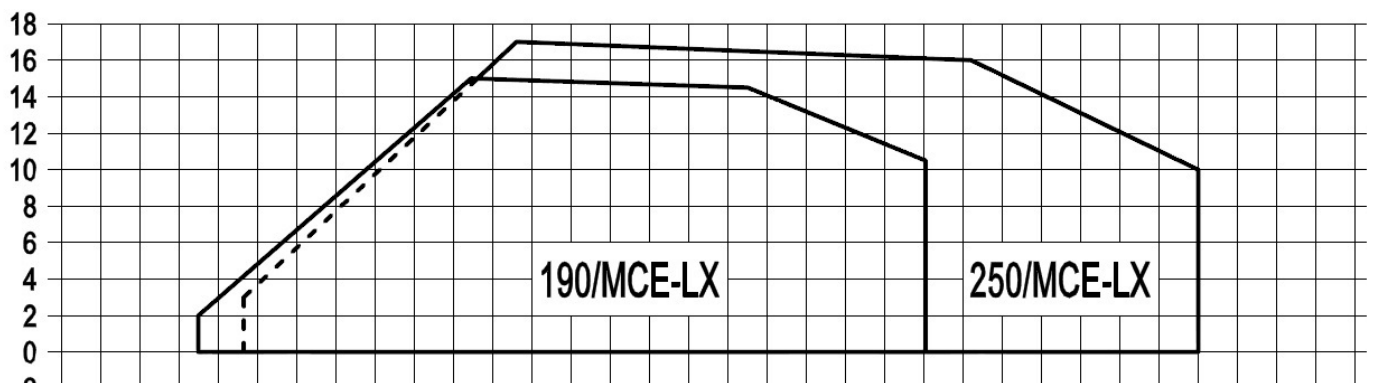
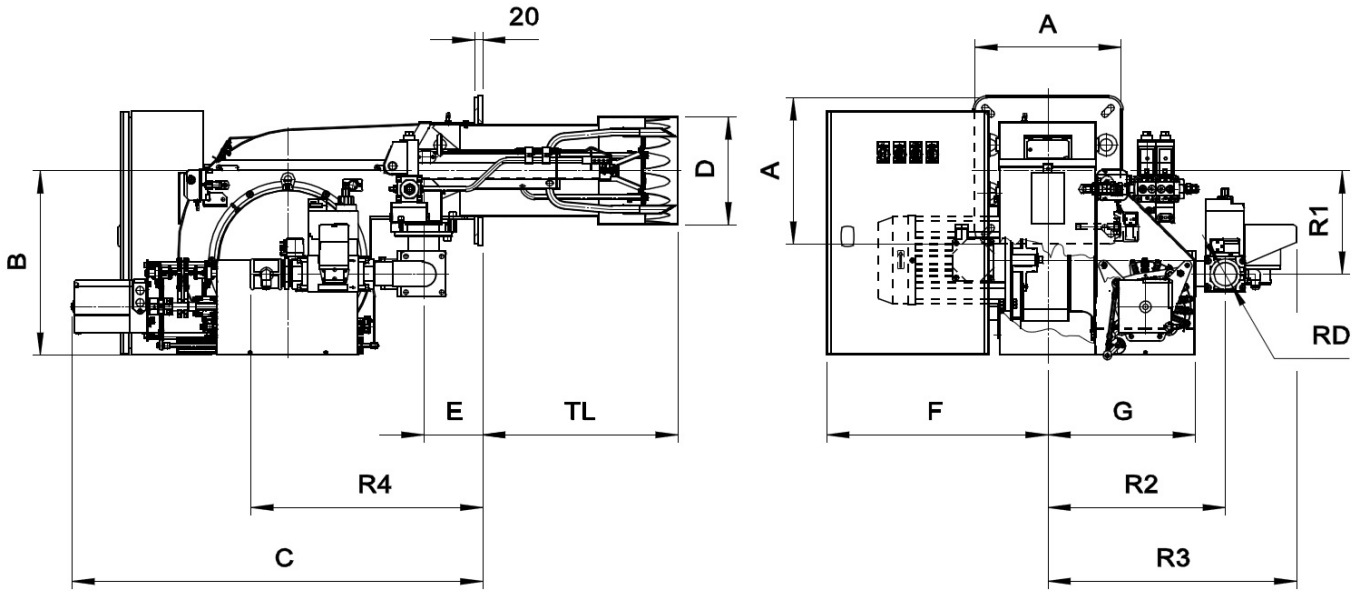


Fig. 1 X = Thermal power [kW] Y = Pression in the combustion

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 bruciatore, combustion chamber dimensions must be in accordance with current regulation. In case of non-compliance, contact the manufacturer.

**DIMENSIONS [MM]**

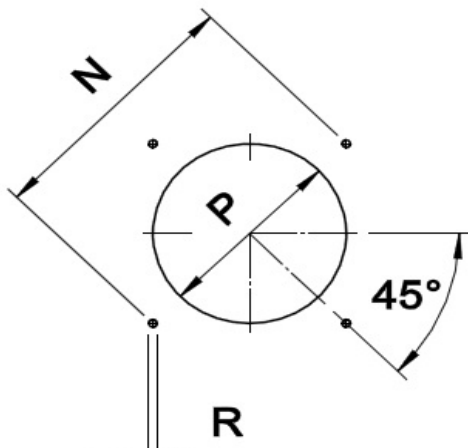


| MODEL                | A   | B   | C    | D   | E   | F   | G   | TL  |
|----------------------|-----|-----|------|-----|-----|-----|-----|-----|
| GAS P190/M CE-LX-D2" | 360 | 453 | 1010 | 265 | 145 | 545 | 363 | 481 |
| GAS P250/M CE-LX-D2" | 360 | 453 | 1010 | 265 | 145 | 545 | 363 | 481 |

| MODEL                | R1  | R2  | R3  | R4  | RD  | Gas train weight |
|----------------------|-----|-----|-----|-----|-----|------------------|
| GAS P190/M CE-LX-D2" | 254 | 437 | 613 | 571 | Rp2 | 22 kg            |
| GAS P250/M CE-LX-D2" | 254 | 437 | 613 | 571 | Rp2 | 22 kg            |

**BOILER PLATE**

The dimensions of the boiler plate must be as indicated in the drawing.



| MODEL                | N min | N*  | N max | P min | P*  | P max | R   |
|----------------------|-------|-----|-------|-------|-----|-------|-----|
| GAS P190/M CE-LX-D2" | 396   | 424 | 438   | 280   | 280 | 320   | M14 |
| GAS P250/M CE-LX-D2" | 396   | 424 | 438   | 280   | 280 | 320   | M14 |

\* Suggested dimension of connection between burner and generator



## 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, emissions lower than limits requested by EC standards (NOx <80 mg/kWh)

### DETAILED SPECIFICATION

Monoblock forced draught burners for gas with two stage progressive (hi-low flame) or modulating (PID fully modulating) operation, fully automatic, made up of:

- fan at high pressurisation
- combustion head with adjustment at high efficiency and high flame stability
- valve proving system installed as standard
- electrical panel with metal box
- gas valve completely metallic, spherical system with a proportional flow and total flow at the maximum aperture
- air shutters and high precision gas valve set on bearings
- equipped as standard with UV photocell and pilot flame
- disposition rationalized of the components with accessibility facilitated for the operations of setting and maintenance
- available methane gas version (NATURAL GAS)
- gas train complete of working valve with flow adjustment, safety valve, gas pressure switch, filter stabiliser of gas pressure, completely assembled, electrically linked and tested

### CONFORMING TO:

- CE rules
- degree of electric protection IP44
- directive Machinery 2006/42/EC
- directive E.M.C. 2004/108/EC
- directive L.V. 2006/95/EC
- directive PED 97/23/EC
- standards: EN676 (GAS)
- EN 746-2 (INDUSTRIAL THERMOPROCESSING EQUIPMENT)

### ACCESSORIES

- 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

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.