

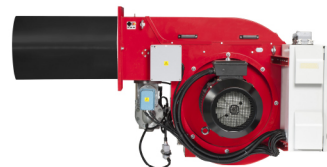
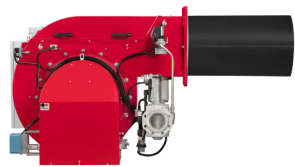
GAS P 750/M EL

GAS P 1000/M EL

GAS P 1300/M EL

GAS P 1500/M EL

GAS P 1800/M EL



Burners for gas two stages progressive (hi-low flame) or modulating (PID fully modulating) equipped with electronic camme (Lamtec Etamatic). Fan at high pressurisation, combustion head with adjustment at high efficiency and high flame stability. Equipped with ignition pilot flame.

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

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.

Optional accessories Inverter, O2 control, CO control, Profibus.

With the addition of optional accessories (power modulating kit and probe) thanks to the most advanced systems for automatic modulation in mechanical or electronic version, the burner constantly ensures the proper gas / air ratio. The maximum efficiency of the returns in each combustion point derived from the punctual adaptation of the thermal load to the heat requirements of the burner at any instant of operation.

In the version with the electronic cam the fuel / combustion air curve, more extended, is fully exploited, guaranteeing excellent performance in terms of accuracy and speed, even during the calibration phase. A microprocessor monitors the different stages of the process and allows the correct repetition of the sequences of operation.

MODEL		GAS P 750/M-EL	GAS P 1000/M-EL	GAS P1300/M-EL
Thermal power 1°st./min 2°st.-max 2°st. *	[Mcal/h]	1200/3400-7500	1200-3400-10000	1700/3600-11500
Thermal power 1°st./min 2°st.-max 2°st. *	[kW]	1395/3953-8721	1395-3953-11628	1978/4186-13372
Gas flow G20 //(NATURAL GAS) 1°st./min 2°st.-max 2°st. *	[Nm³/h]	140/398-877	140/398-1170	199/421-1345
Gas flow G31 //(LPG) 1°st./min 2°st.-max 2°st. *	[Nm³/h]	54/153-338	54/153-450	77/162-518
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		
<b>Intermittent working operation (min. 1 stop every 24 hours) modulating</b>				
Environmental conditions operation / storage		-15...+40°C / -20...+70°C , rel. humidity max. 80%		
Max temperature combustion air	[°C]	60	60	60
Minimum gas train pressure (DN65-S F65 natural gas/ LPG)**	[mbar]	271/105	-	-
Minimum gas train pressure (DN80-S F80 natural gas/ LPG)**		156/60	285/110	366/141
Minimum gas train pressure (DN100-S F100 natural gas/ LPG)**	[mbar]	101/39	176/68	248/95
Minimum gas train pressure (DN125-S F125 natural gas/ LPG)**	[mbar]	-	130/50	180/70
Maximum supply gas pressure (Pe.max)	[mbar]	500	500	500
Nominal electric power	[kW]	22.2	30.2	37.2
Fan motor	[kW]	22	30	37
Nominal absorption current (powers)	[A]	42	56	67
Nominal absorption current (auxiliary)	[A]	0.4	0.4	0.4
Power supply		3~400V-1/N~230V-50Hz		
Electric protection degree		IP54	IP54	IP54
Sound level*** min-max	[dB(A)]	84-88	86-92	86-93
Burner weight	[kg]	540	570	590

MODEL		GAS P1500/M-EL	GAS P1800/M-EL
Thermal power 1°st./min 2°st.-max 2°st. *	[Mcal/h]	1700/3600-13000	2000/5000-15000
Thermal power 1°st./min 2°st.-max 2°st. *	[kW]	1978/4186-15116	2325/5814-17441
Gas flow G20 //(NATURAL GAS) 1°st./min 2°st.-max 2°st. *	[Nm³/h]	199/421-1521	234/585-1754
Gas flow G31 //(LPG) 1°st./min 2°st.-max 2°st. *	[Nm³/h]	77/162-585	90/225-676
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	
<b>Intermittent working operation (min. 1 stop every 24 hours) modulating</b>			
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 (DN80-S F80 natural gas/ LPG)**		460/177	-
Minimum gas train pressure (DN100-S F100 natural gas/ LPG)**	[mbar]	310/119	370/-
Minimum gas train pressure (DN125-S F125 natural gas/ LPG)**	[mbar]	225/87	307/-
Minimum gas train pressure (DN150-S F150 natural gas/ LPG)**	[mbar]	206/79	287/-

MODEL		GAS P1500/M-EL	GAS P1800/M-EL
Maximum supply gas pressure (Pe.max)	[mbar]	500	500
Nominal electric power	[kW]	45.5	55.5
Fan motor	[kW]	45	55
Nominal absorption current (powers)	[A]	78	96
Nominal absorption current (auxiliary)	[A]	0.4	0.4
Power supply		3~400V-1/N~230V-50Hz	
Electric protection degree		IP54	IP54
Sound level*** min-max	[dB(A)]	87-93	88-94
Burner weight	[kg]	660	870

\* 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 1m of distance (UNI EN ISO 3746).

## FIRING RATES

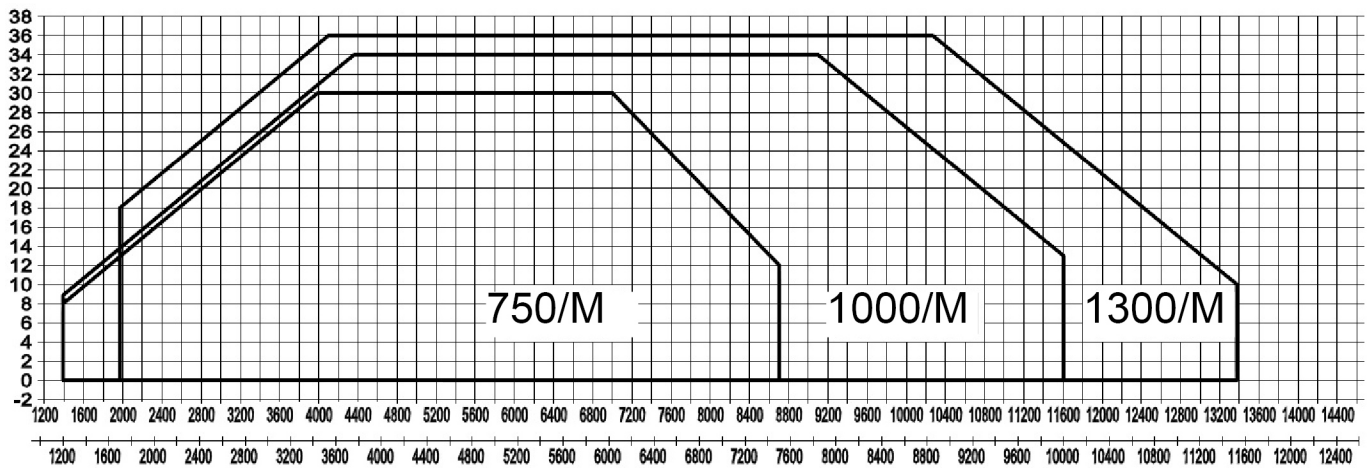


Fig. 1 X = Thermal power [kg/h - Mcal/h] Y = Pression in the combustion

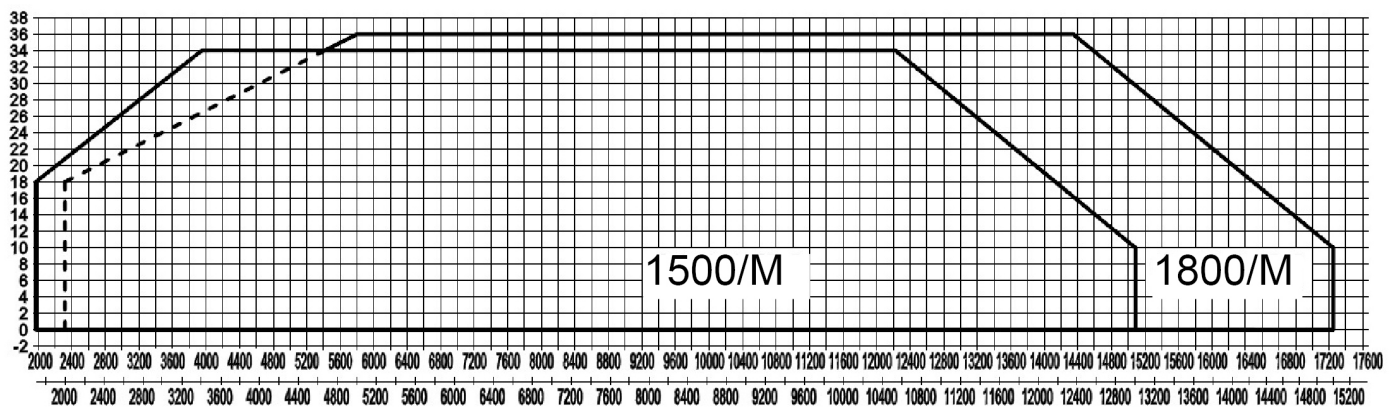


Fig. 2 X = Thermal power [kg/h - Mcal/h] Y = Pression in the combustion

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.

**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. Fan at high pressurisation, combustion head with adjustment at high efficiency and high flame stability. Equipped with ignition pilot flame.

**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:

- burner frame made of steel completed by specific boiler plate
- combustion head with adjustment at high efficiency and high flame stability equipped with blast tube made of stainless steel and flame stability disk made of steel
- safety air pressure switch -air side- that stops the burner in case of failed or irregular fan operation
- spherical gas valve servo-controlled; progressive start and free way passage with total opening
- servomotor for air flaps and spherical gas valve
- moving shutter with total closure when idle in order to reduce at the least energy losses related to boiler cooling down
- ionisation probe for flame detection
- control panel
- high performance centrifugal fan with backward curved blades for low noise
- complete with A class safety gas valve and A class adjustment gas valve
- valve proving system
- 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 minimum and the maximum value based on instantaneous loading request

**CONFORMING TO:**

- CE rules
- IP 54 electric protection level
- 2006/42/CE - 2006/42/EG - 2006/42/EC directive (MD)
- 2014/30/UE directive (E.M.C.)
- 2014/35/UE directive (L.V.)
- Approval: EN 746-2 (INDUSTRIAL THERMOPROCESSING EQUIPMENT)

**OPTIONAL**

- Power modulating kits for temperatures
- Power modulating kits for pressures
- Temperature probe 0°C-400°C (PT 100  $\Delta$  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.