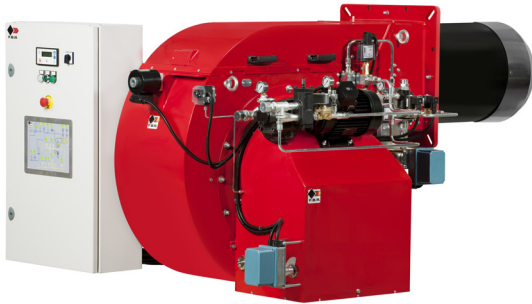


**K 750-1000-1300-1500-1800/M-EL**



Dual fuel burners for gas and light oil at 2 stages progressive (hi-low flame) or PID fully modulating.

Equipped with Lamtec ETAMATIC OEM electronic camme. Fan at high pressurization, high efficiency combustion head with adjustment and high flame stability. Available versions for natural gas or LPG (to be specified at the order).

Gas train includes working valve, safety valve, minimum gas pressure switch, gas pressure filter-stabilizer and is supplied already assembled, connected and tested.

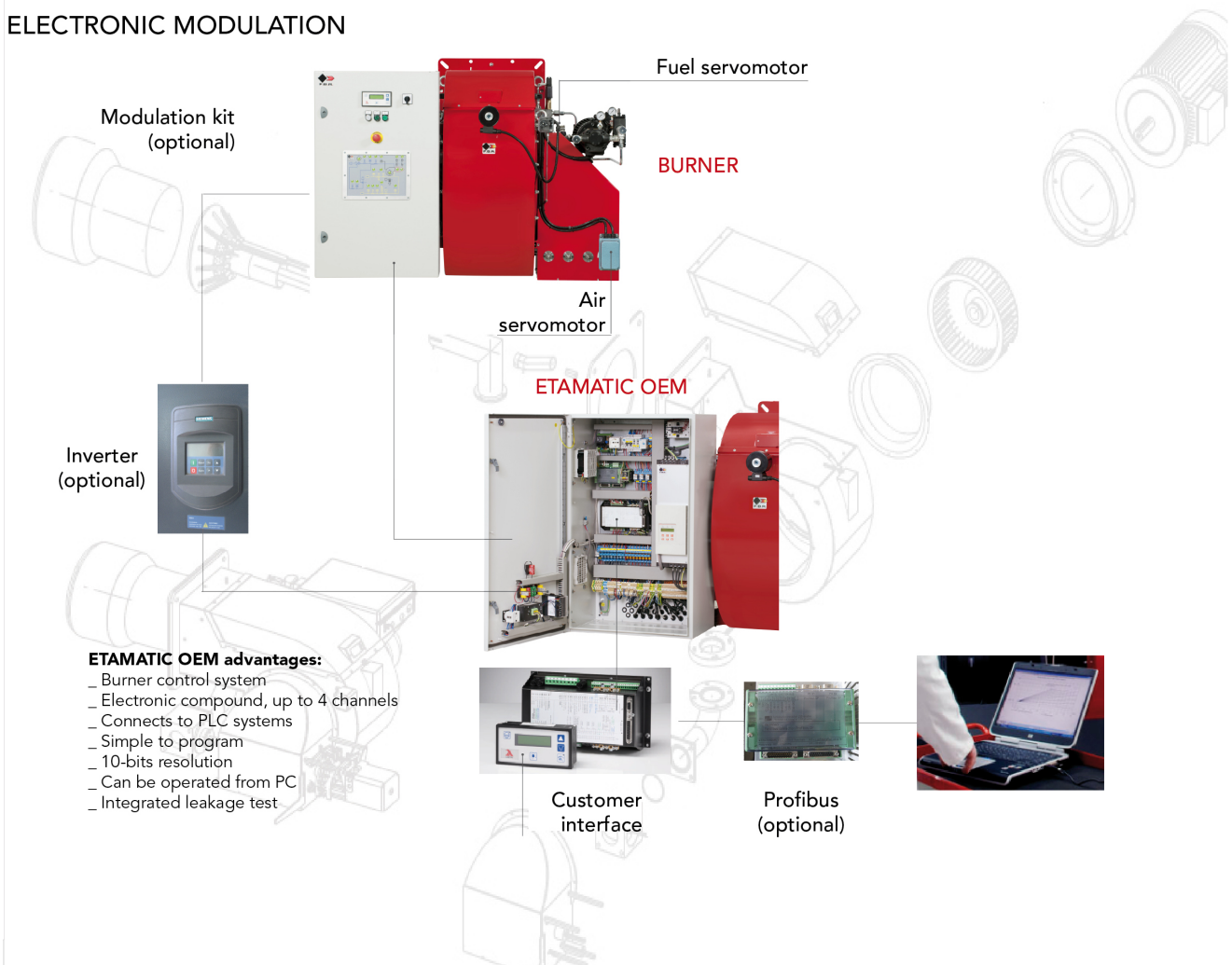
The adoption of strong metal components makes the burner durable also in heavy duty conditions.

Burners are supplied with nozzle, fuel switch, gasket for installation on boiler, flexible hoses, line filter.

Optional accessories:

- Frequency control (inverter)
- Ventilation system on control panel
- Can/bus or Profibus interface
- PC interface
- Programming unit (handset).

**ELECTRONIC MODULATION**



**ETAMATIC OEM advantages:**

- \_ Burner control system
- \_ Electronic compound, up to 4 channels
- \_ Connects to PLC systems
- \_ Simple to program
- \_ 10-bits resolution
- \_ Can be operated from PC
- \_ Integrated leakage test

**BURNER**



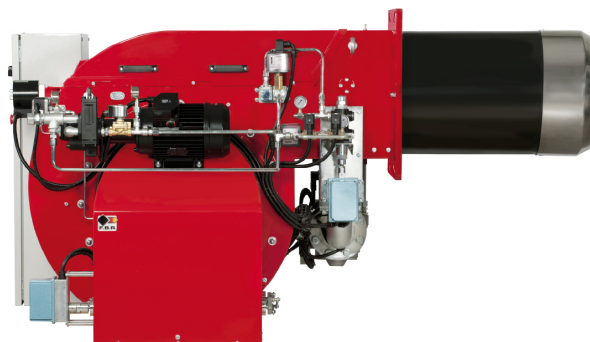
Ventilation system  
(optional)

Lamtec ETAMATIC OEM



Soft start

PID Modulation control  
(optional)





TECHNICAL DATA

MODEL		K 750/M-EL	K 1000/M-EL	K 1300/M-EL
Thermal power min 1°st./min 2°st.-max 2°st. *	[Mcal/h]	1200/3400-7500	1200/3400-10000	1700/3600-11500
Thermal power min 1°st./min 2°st.-max 2°st. *	[kW]	1395/3953-8721	1395/3953-11628	1977/4186-13372
Gas flow G20 (natural gas) min 1°st./min 2°st.-max 2°st. *	[Nm³/h]	140/398-877	140/398-1170	199/421-1345
Gas flow G31 (L.P.G.) min 1°st./min 2°st.-max 2°st. *	[Nm³/h]	54/153-338	54/153-450	77/162-518
Fuel		Natural gas (second family) - L.P.G. (third family)		
Fuel category		I <sub>2R</sub> , I <sub>2H</sub> , I <sub>2L</sub> , I <sub>2E</sub> , I <sub>ER</sub> , I <sub>2ELL</sub> - I <sub>3BP</sub> , I <sub>3+</sub> , I <sub>3P</sub> , I <sub>3B</sub> , I <sub>3R</sub>		
Intermittent working operation (min, 1 stop every 24 hours) two stages progressive or modulating				
Enviromental conditions operation/storage		-15...+40°C / -20...+70°C ,relative humidity max. 80%		
Max temperature combustion air	[°C]	60	60	60
Minimum pressure gas train (DN80-S F80 natural gas/L.P.G.) **	[mbar]	280/107	-/-	-/-
Minimum pressure gas train (DN80-S F80 natural gas/L.P.G.) **	[mbar]	164/63	292/112	366/141
Minimum pressure gas train (DN100-S F100 natural gas/L.P.G.) **	[mbar]	110/40	184/71	248/95
Minimum pressure gas train (DN125-S F125 natural gas/L.P.G.) **	[mbar]	81/31	145/56	180/70
Maximum pressure at the entry of the valves (Pe.max)	[mbar]	500	500	500
LIGHT-OIL flow min 1°st./min 2°st.-max 2°st. *	[kg/h]	118/333-735	118/333-980	167/353-1127
Fuel		Light-oil 1.5°E at 20°C = 6.2cSt = 35sec Redwood N°1		
Nominal electric power	[kW]	25.5	34.5	41.5
Fan motor	[kW]	22	30	37
Pump motor	[kW]	3	4	4
Power supply		3~400V-1/N~230V-50Hz	3~400V-1/N~230V-50Hz	3~400V-1/N~230V-50Hz
Degree of electric protection		IP54	IP54	IP54
Noiseness***	[dB(A)]	89	91	93

\* 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).

FIRING RATES

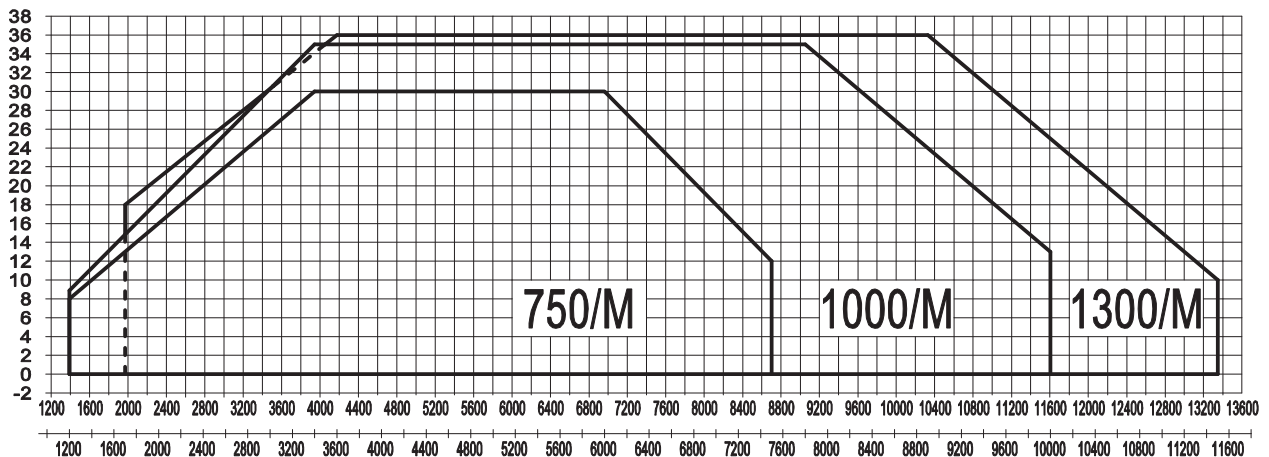


Fig. 1 X = Thermal power (kW - Mcal/h) Y = Pression in the combustion chamber (mbar)

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.



TECHNICAL DATA

MODEL		K 1500/M-EL	K 1800/M-EL
Thermal power min 1°st./min 2°st.-max 2°st. *	[Mcal/h]	1700/3600-13000	2000/5000-15000
Thermal power min 1°st./min 2°st.-max 2°st. *	[kW]	1977/4186-15116	2325/5815-17442
Gas flow G20 (natural gas) min 1°st./min 2°st.-max 2°st. *	[Nm³/h]	199/421-1520	234/585-1754
Gas flow G31 (L.P.G.) min 1°st./min 2°st.-max 2°st. *	[Nm³/h]	77/162-585	90/225-676
Fuel		Natural gas (second family) - L.P.G. (third family)	
Fuel category		I <sub>2R</sub> , I <sub>2H</sub> , I <sub>2L</sub> , I <sub>2E</sub> , I <sub>Er</sub> , I <sub>2ELL</sub> - I <sub>3BP</sub> , I <sub>3+</sub> , I <sub>3P</sub> , I <sub>3R</sub>	
Intermittent working operation (min, 1 stop every 24 hours) two stages progressive or modulating			
Enviromental conditions operation/storage		-15...+40°C / -20...+70°C ,relative humidity max. 80%	
Max temperature combustion air	[°C]	60	60
Minimum pressure gas train (DN80-S F80 natual gas/L.P.G.) **	[mbar]	-/142	-/-
Minimum pressure gas train (DN100-S F100 natual gas/L.P.G.) **	[mbar]	220/88	370/-
Minimum pressure gas train (DN125-S F125 natual gas/L.P.G.) **	[mbar]	191/70	307/-
Minimum pressure gas train (DN150-S F150 natual gas/L.P.G.) **	[mbar]	175/56	287/-
Maximum pressure at the entry of the valves (Pe.max)	[mbar]	500	500
LIGHT-OIL flow min 1°st./min 2°st.-max 2°st. *	[kg/h]	167/353-1274	196/490-1470
Fuel		Light-oil 1.5°E at 20°C = 6.2cSt = 35sec Redwood N°1	
Nominal electric power	[kW]	49.5	61
Fan motor	[kW]	45	55
Pump motor	[kW]	4	5.5
Power supply		3~400V-1/N~230V-50Hz	3~400V-1/N~230V-50Hz
Degree of electric protection		IP54	IP54
Noiseness***	[dB(A)]	97	101

\* 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).

FIRING RATES

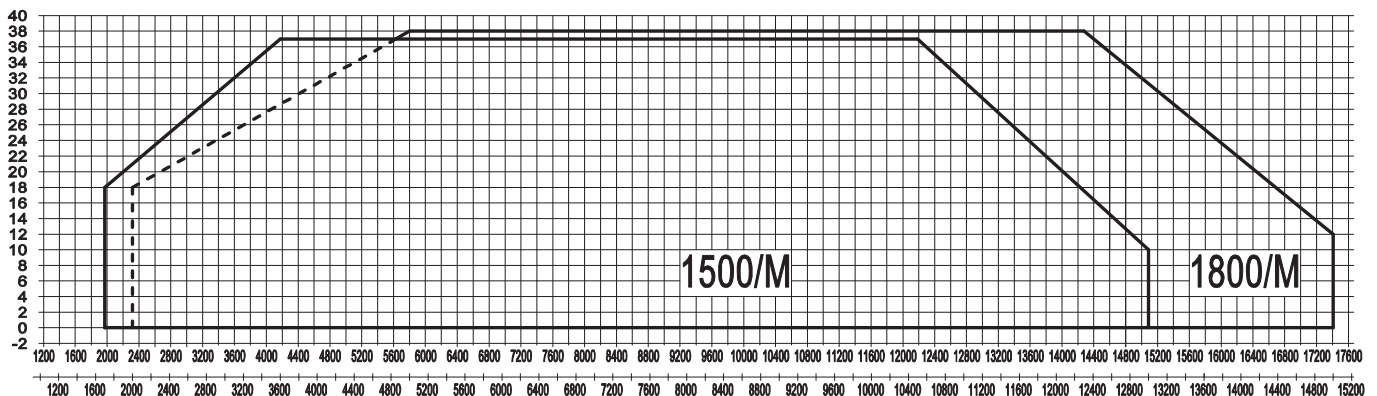
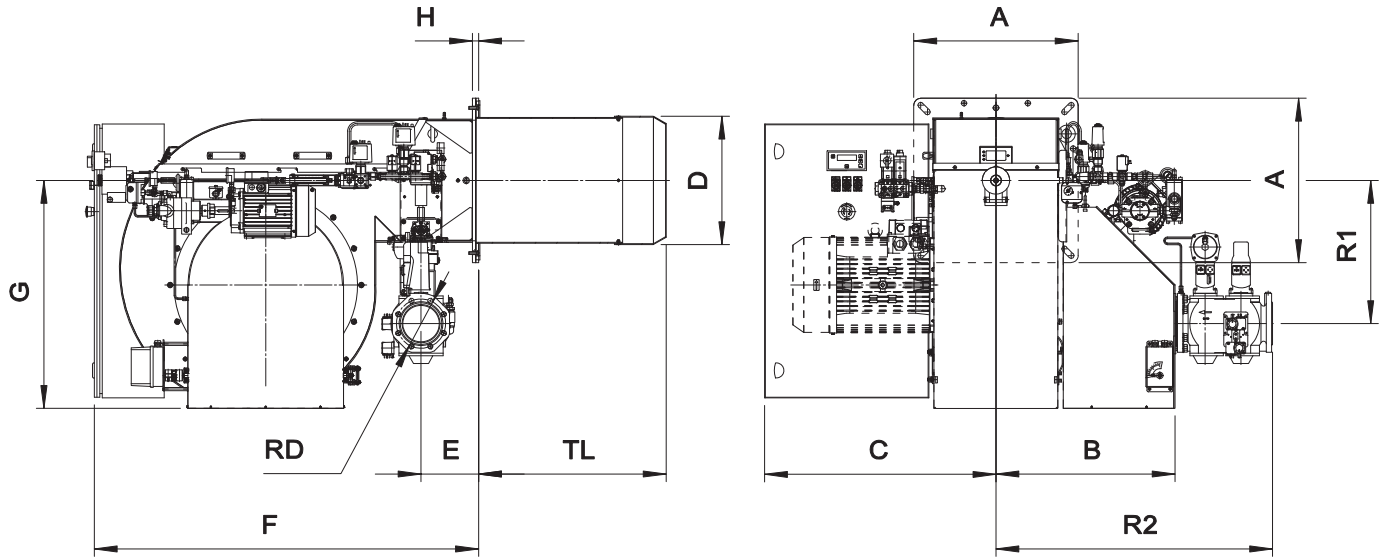


Fig. 2 X = Thermal power (kW - Mcal/h) Y = Pression in the combustion chamber (mbar)

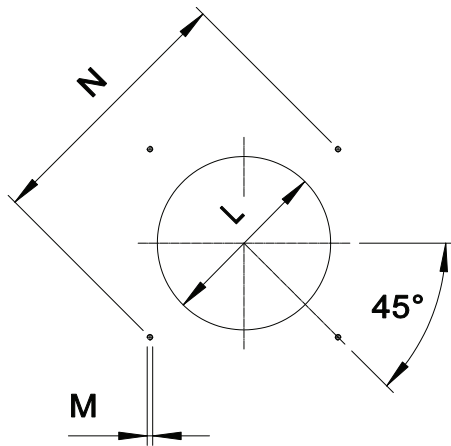
The firing rates has been obtained based on test boilers in accordance with EN267 standards and are indicative of matching the burner to the boiler. For the correct operation of the burner, combustion chamber dimensions must be in accordance with current regulation. In case of non-compliance, contact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

**DIMENSIONS [mm]**



MODEL	A	B	C	D	E	F	G	H	R1	R2	RD	TL
K 750/M-EL	600	654	845	448	210	1403	832	22	523	970-1060	DN...	685
K 1000/M-EL	600	654	845	468	210	1403	832	22	523	970-1060	DN...	685
K 1300/M-EL	600	634	845	499	210	1403	832	22	523	970-1060	DN...	655
K 1500/M-EL	600	634	845	499	210	1403	832	22	523	970-1060	DN...	655
K 1800/M-EL	700	680	875	540	222	1555	884	22	476	1008-1098	DN...	685

**BOILER PLATE**



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

MODEL	M	N min	N*	N Max	Lmin	Lmax
K 750/M-EL	mm M16	707	778	778	460	540
K 1000/M-EL	mm M16	707	778	778	480	540
K 1300/M-EL	mm M16	707	778	778	510	540
K 1500/M-EL	mm M16	707	778	778	510	540
K 1800/M-EL	mm M18	806	890	890	550	630

\* Suggested dimension

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.