

GAS P350/MCE - GAS P450/MCE - GAS P550/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 class A - safety valve class A - gas valve proving system - minimum gas pressure switch and gas filter.

Complete of flange and gasket for installation on generator.

Available with mechanical cam or with electronic cam.

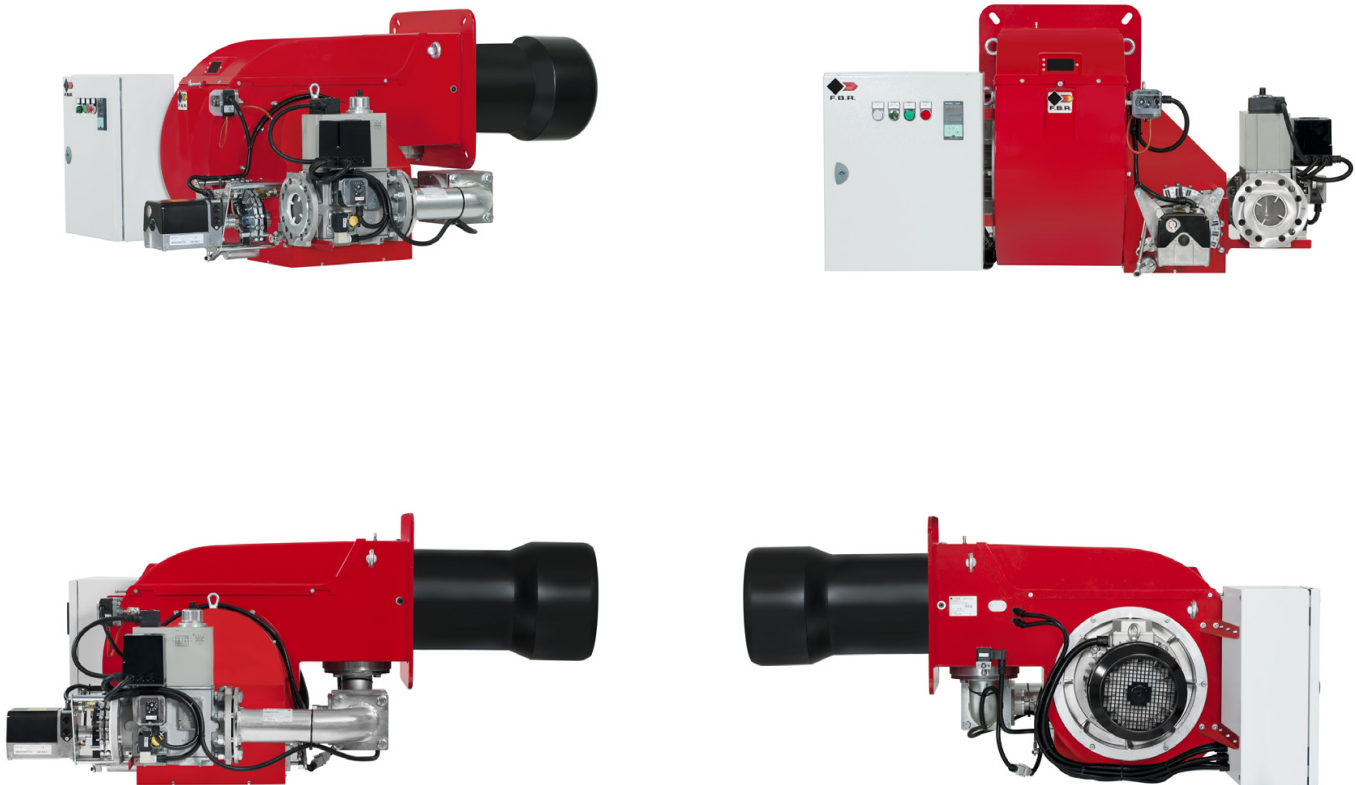


Fig. 1 GAS P350/MCE

TECHNICAL DATA GAS P350/MCE - GAS P450/MCE - GAS P550/MCE

MODEL		GAS P350/MCE	GAS P450/MCE	GAS P550/MCE
Thermal power min. 1°st. / min. 2°st. - max. 2°st. *	[Mcal/h]	400/1200-3490	500/1600-4500	600/2000-5500
Thermal power min. 1°st. / min. 2°st. - max. 2°st. *	[kW]	465/1395-4070	581/1860-5232	698/2325-6395
Gas flow G20 (NATURAL GAS) min. 1°st. / min. 2°st. - max. 2°st. *	[Nm³/h]	47/140-409	58/187-526	70/235-647
Gas flow G31 (L.P.G.) min. 1°st. / min. 2°st. - max. 2°st. *	[Nm³/h]	18/54-158	22/72-203	27/91-250
Fuel: NATURAL GAS (second family) - L.P.G. (third family)				
Fuel category:		I2R,I2H,I2L,I2E,I2E+,I2Er,I2ELL,I2E(R)B/I3B/P,I3+,I3P,I3B,I3R		
Intermittent working operation (min. 1 stop every 24 hours) two stages progressive or modulating				
Environmental conditions operation / storage:		-15...+40°C / -20...+70°C, rel. humidity max. 80%		
Max. temperature combustion air	[°C]	60	60	60
Minimum pressure gas train D2" FS50 NATURAL GAS/L.P.G. **	[mbar]	289/125	461/200	678/288
Minimum pressure gas train DN65 FS65 NATURAL GAS/L.P.G. **	[mbar]	139/72	202/96	310/137
Minimum pressure gas train DN80 FS80 NATURAL GAS/L.P.G. **	[mbar]	84/52	124/63	188/87
Minimum pressure gas train DN100 FS100 NATURAL GAS/L.P.G. **	[mbar]	52/40	67/43	105/54
Maximum pressure at the entry of valves (Pe. max)	[mbar]	500	500	500
Nominal electric power	[kW]	9.4	11.4	19
Fan motor	[kW]	9	11	18.5
Nominal motor current absorption	[A]	18.8	22	32.6
Nominal auxiliary absorption	[A]	0.6	0.6	0.6
Power supply:		3~400V, 1N~230V - 50Hz		
Electric protection degree NATURAL GAS/L.P.G.:		IP54/IP40	IP54/IP40	IP54/IP40
Noisiness *** min. - max.	[dB(A)]	84-85	85-85	86-89
Burner weight	[kg]	218	230	265

* 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).

OPERATING RANGE DIAGRAM GAS P350/MCE - GAS P450/MCE - GAS P550/MCE

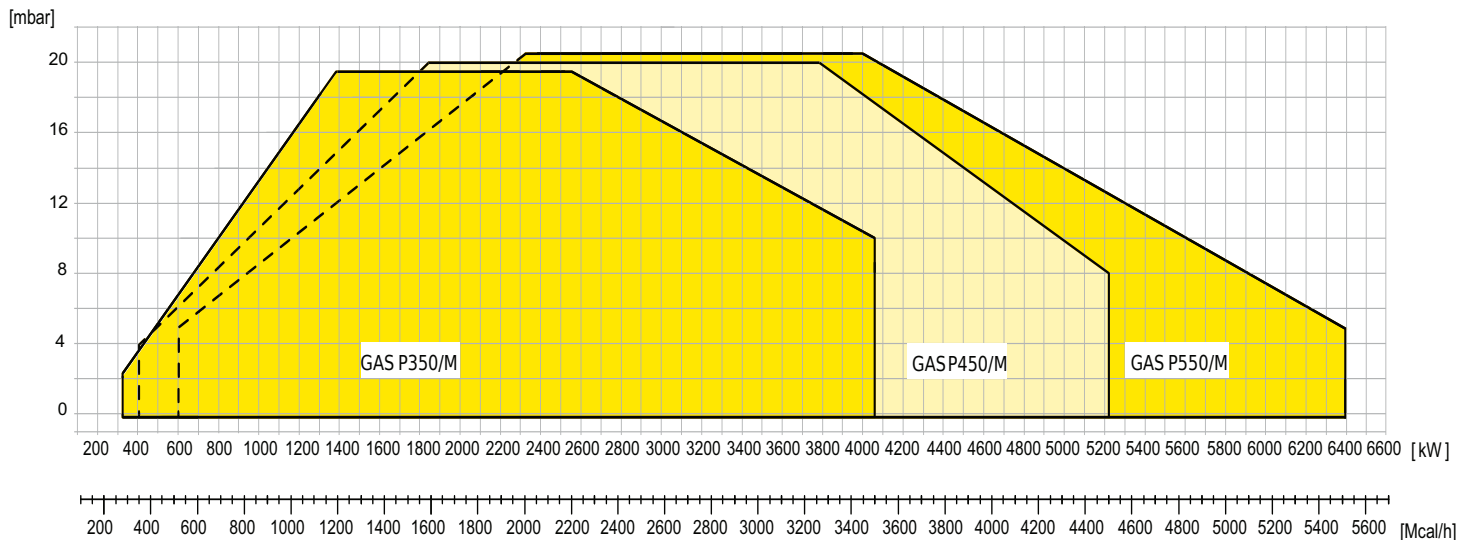


Fig. 2 X = Thermal power Y = Pression in the combustion chamber

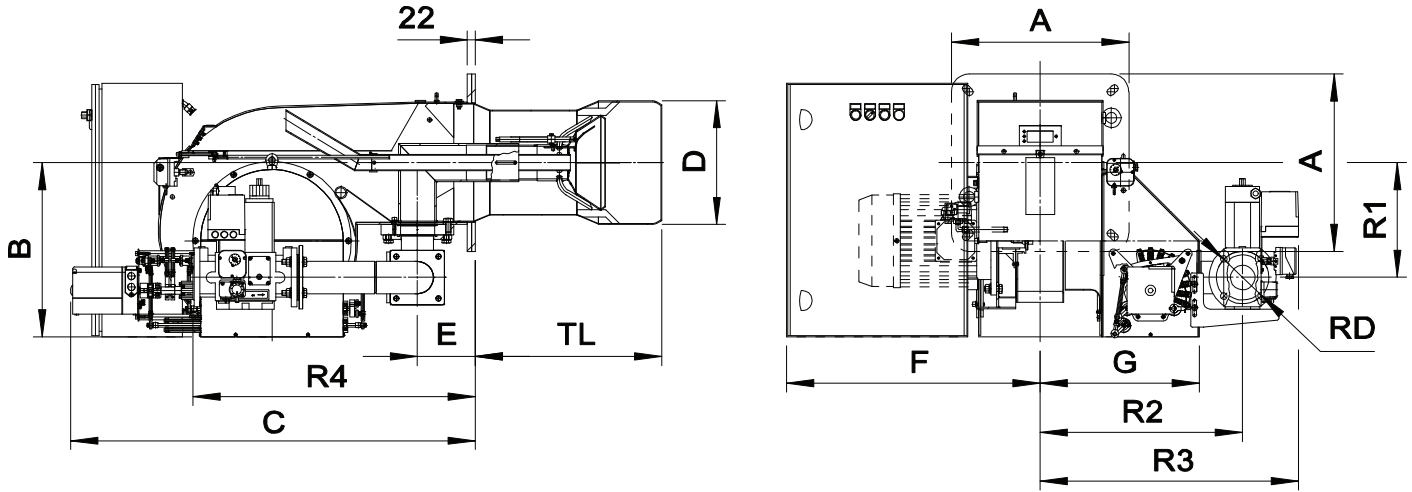
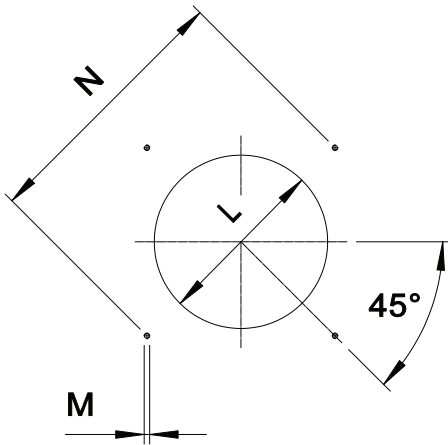


Fig. 3 Dimensions GAS P350/MCE - GAS P450/MCE - GAS P550/MCE

MODEL	A	B	C	D	E	F	G	R1	R2	R3	R4	RD	Gas train weight
GAS P350/MCE - D2" FS50	490	481	1118	342	160	700	440	317	535	660	570	Rp 2	22 kg
GAS P350/MCE - DN65 FS65	490	481	1118	342	160	700	440	317	560	714	780	DN65	37 kg
GAS P350/MCE - DN80 FS80	490	481	1118	342	160	700	440	317	560	727	800	DN80	47 kg
GAS P350/MCE - DN100 FS100	490	481	1118	342	160	700	440	317	590	765	840	DN100	57 kg
GAS P450/MCE - D2" FS50	490	481	1118	382	160	700	440	317	535	660	570	Rp 2	22 kg
GAS P450/MCE - DN65 FS65	490	481	1118	382	160	700	440	317	560	714	780	DN65	37 kg
GAS P450/MCE - DN80 FS80	490	481	1118	382	160	700	440	317	560	727	800	DN80	47 kg
GAS P450/MCE - DN100 FS100	490	481	1118	382	160	700	440	317	590	765	840	DN100	57 kg
GAS P550/MCE - D2" FS50	490	481	1118	402	160	700	440	317	535	660	570	Rp 2	22 kg
GAS P550/MCE - DN65 FS65	490	481	1118	402	160	700	440	317	560	714	780	DN65	37 kg
GAS P550/MCE - DN80 FS80	490	481	1118	402	160	700	440	317	560	727	800	DN80	47 kg
GAS P550/MCE - DN100 FS100	490	481	1118	402	160	700	440	317	590	765	840	DN100	57 kg



* Suggested dimension of connection between burner and generator.

Fig. 4 Boiler plate

MODEL		L min	L *	L max	M	N min	N *	N max
GAS P350/MCE	mm	350	360	450	M14	552	552	580
GAS P450/MCE	mm	390	400	450	M14	552	552	580
GAS P550/MCE	mm	410	420	450	M14	552	552	580

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		TL **
GAS P350/MCE	mm	515
GAS P450/MCE	mm	520
GAS P550/MCE	mm	520

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

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 steel blast tube and steel flame disc;
- Flange and insulating gasket for fixing at boiler;
- Three-phase power supply;
- 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 and valve proving system;
- Ionisation probe for flame detection for natural gas versions;
- UV probe for flame detection for L.P.G. versions;
- IP 54 electric protection level for natural gas versions;
- IP 40 electric protection level for L.P.G. versions;
- 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;
- Maximum gas pressure switch to stop the burner in lock-out in case of the gas pressure is higher then the set point value;
- 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.;
- 2014/68/EU Directive M.D.;
- 97/23/CE Directive P.E.D.;
- 2009/142/CE Directive GAS;
- Reference rules: EN676 (gas) - EN746-2 (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.