

FNDP 750-1000/M

MECHANICALMODULATION

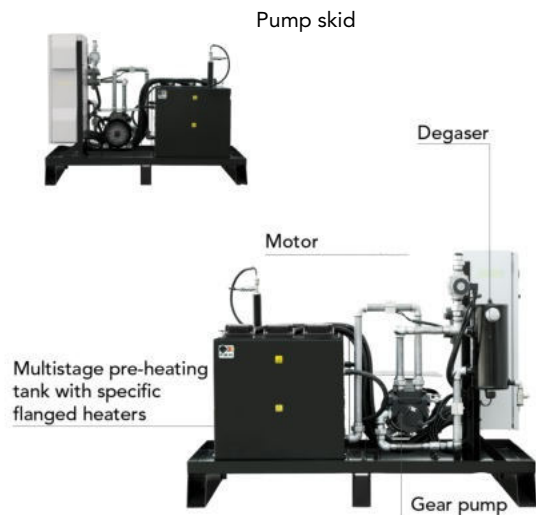
Heavy oil burners at 2 stages progressive (hi-low flame) or modulating (PID fully modulating) if equipped with modulation kit and probe.

Fan at high pressurization, high efficiency combustion head with adjustment and high flame stability, pump, multistage preheating tank and degaser skid. Suitable for heavy oil up to 50°E to 50°C and for BTZ heavy oil.

Rational disposal of components with easy accessibility for calibration and maintenance operations.

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

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



TECHNICAL DATA

MODEL		FNDP 750/M	FNDP 1000/M
Thermal power min.1 st . / min.2 st . - max.2 st . *	[Mcal/h]	1117/3400-7500	1117/3400-10000
Thermal power min.1 st . / min.2 st . - max.2 st . *	[kW]	1299/3953-8721	1299/3953-11628
HEAVY-OIL flow min.1 st . / min.2 st . - max.2 st . *	[kg/h]	114/347-765	114/347-1020
Fuel: Heavy-oil 5°-50°E a 50°C			
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
Nominal electric power	[kW]	22.5	31
Fan motor	[kW]	22	30
Pump motor	[kW]	3	5.5
Nominal electric power skid group	[kW]	58	69
Resistances	[kW]	54	63
Fan motor absorption	[A]	43	56
Pump motor absorption	[A]	6.5	11.7
Resistances absorption	[A]	240	273
Absorption burner auxiliary circuit	[A]	4	4
Absorption skid group auxiliary circuit	[A]	0.5	0.5
Power supply	3~400V, 1N~230V - 50Hz		
Burner degree of electric protection		IP40	IP40
Skid group degree of electric protection		IP40	IP40
Burner weight	[kg]	590	700
Skid group weight	[kg]	336	366

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

FIRING RATES

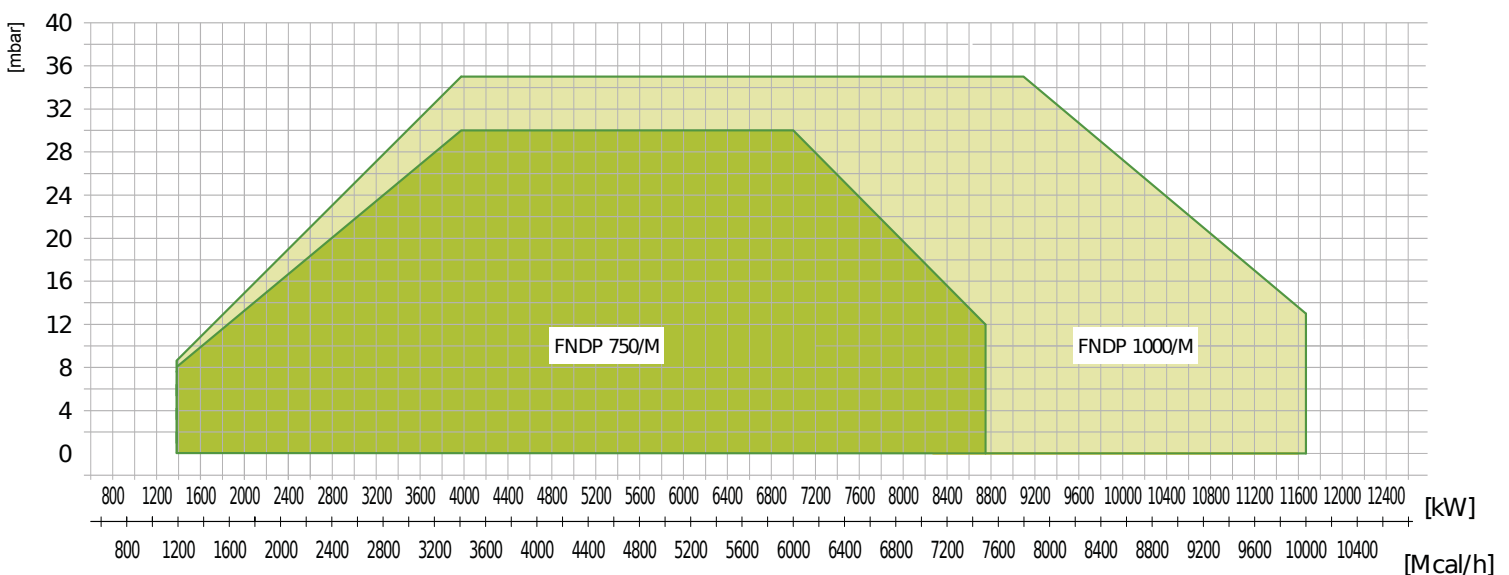


Fig. 1 X = Thermal power (kW - Mcal/h) Y = Pression in the combustion chamber (mbar)

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.

DIMENSIONS [mm]

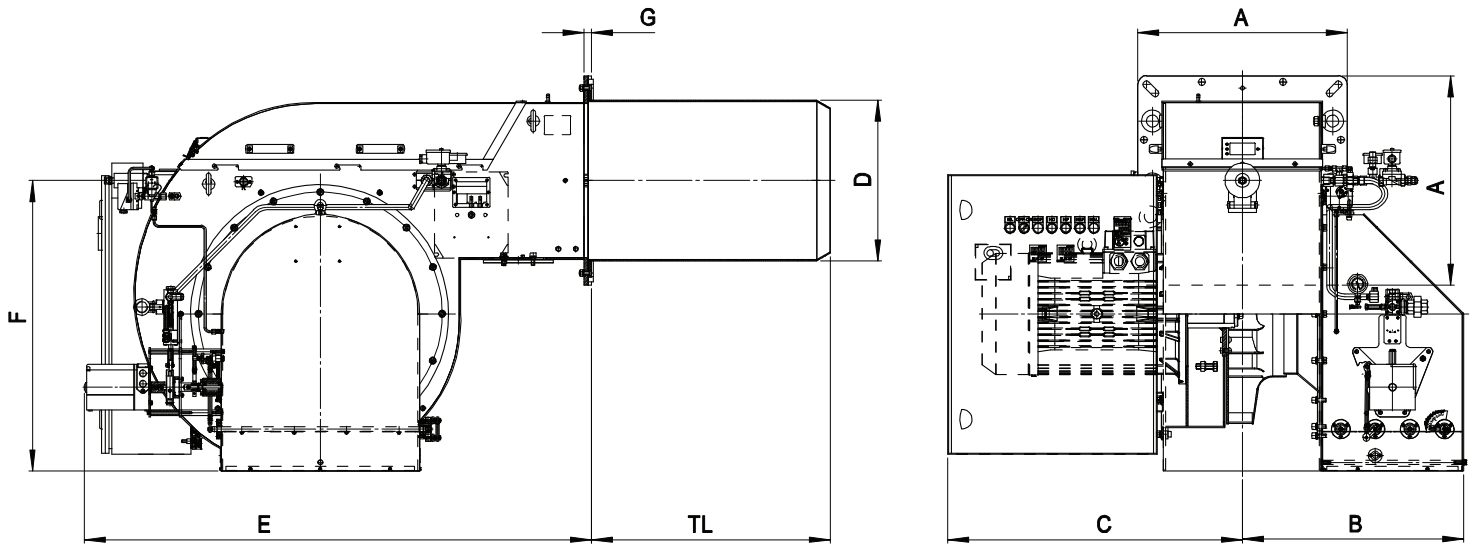
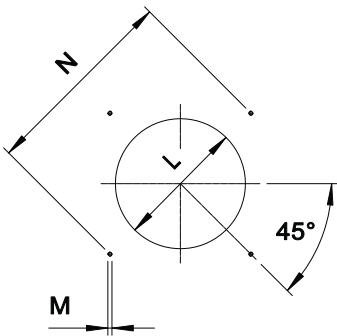


Fig. 2 Dimensions

MODEL	A	B	C	D	E	F	G	TL
FNDP 750/M	600	634	845	439	1453	832	22	685
FNDP 1000/M	600	634	845	459	1453	832	22	685

BOILER PLATE



The dimensions of the boiler plate (threaded holes or studs) must be as indicated in the drawing.

MODEL		M	N min	N *	N Max	L min	L max
FNDP 750/M	mm	M16	707	778	778	460	540
FNDP 1000/M	mm	M16	707	778	778	510	540

PUMP SKID: DIMENSIONS (mm)

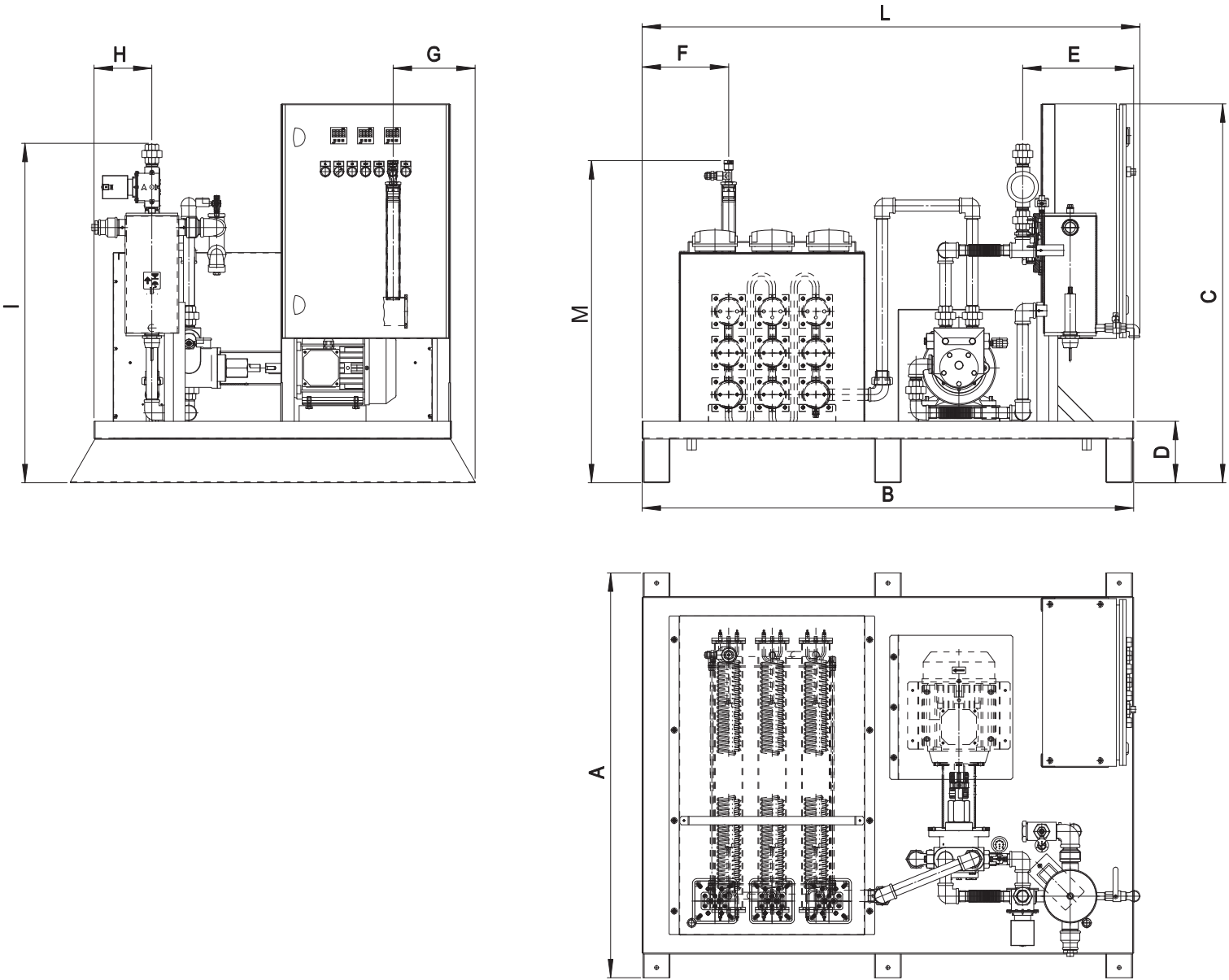


Fig. 3 Pump skid dimensions

MODEL	A	B	C	D	E	F	G	H	I	L	M
FNDP 750/M	1207	1466	1130	183	331	258	245	173	1013	1485	961
FNDP 1000/M	1207	1466	1130	183	331	258	245	173	1013	1485	961

PRODUCT SPECIFICATION

SHORT DESCRIPTION

Heavy oil burners at 2 stages progressive (hi-low flame) or PID fully modulating if equipped with modulation kit and probe. Available versions for heavy oil up to 50°E to 50°C and ecological heavy oil BTZ (low sulfur oil).

DETAILED SPECIFICATION

Heavy oil burners from 5 to 50°E at 50°C, 2 stages progressive (hi-low flame), with possibility of modulating working (PID fully modulating with optional modulation kit and probe). The burner is composed by:

- Burner frame made of steel completed by specific boiler plate;
- Centrifugal fan at high pressurization with reverse curved blades at low noisiness;
- Combustion head with adjustment at high performance and elevated flame stability equipped with steel blast tube and steel flame disc;
- Easy extraction of combustion head without get off the burners by bolier;
- Flange and insulating gasket for fixing at boiler/furnace;
- PID regulators for the control of fuel heaters;
- Mechanical control system for controlling and command the burner;
- Photoresistance for flame detection;
- Three-phase power supply;
- Fan motor start-up made by delta/star system;
- IP40 electric protection level;
- Safety air pressure switch to stop the burner in case of failed or anomalous fan operation;
- Maximum oil pressure switch to stop the burner in case of the oil pressure on the return is higher then the set point value;
- Servomotor for air shutter and for the heavy oil adjust;
- Mobile shutter with total closure when idle for minimize the energetic losses related at boiler cooling;
- Heavy oil gear pump operated by specific electric motor;
- Thermocouples for detecting the oil temperature;
- Button for the manual tank load;
- Multistage pre-heating tank with specific flanged heaters at low density (anticracking and antigas);
- Resistances (always on) for pump, nozzle and fuel valve;
- Pressure manometer on inlet pump;
- Nozzle assembly with magnet to control inlet/return needle nozzle;
- Double filter between pump and nozzle;
- 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 maximum value based on instantaneous loading request.

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.;
- Reference rules: EN267(liquid fuel) - EN746-2 (industrial thermoprocessing equipment)

STANDARD EQUIPMENT

- Flexible pipes for connection
- Line filter
- Isomart gasket
- Nozzle
- 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;
- Kit for input 4-20mA / 0-10Vdc;
- Temperature probe 0°C-400°C (PT 100 a 0° C);
- Temperature probe 0°C-350°C (J probe);
- 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.