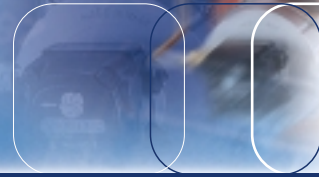


CE

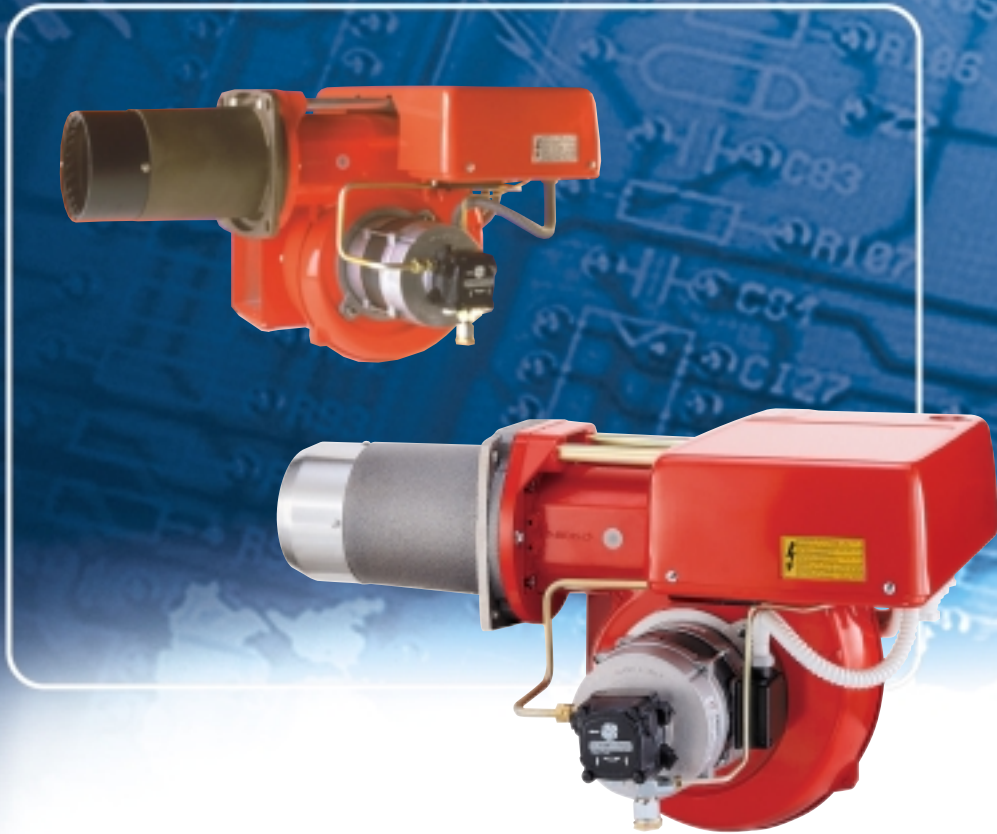
**RIELLO**  
**B**  
**BURNERS**



**TWO STAGE LIGHT OIL BURNERS**

▶ **PRESS G SERIES**

▶ <b>PRESS GW</b>	107/178 ÷ 356 kW
▶ <b>PRESS 1G</b>	130/190 ÷ 534 kW
▶ <b>PRESS 2G</b>	214/356 ÷ 712 kW
▶ <b>PRESS 3G</b>	273/534 ÷ 1168 kW
▶ <b>PRESS 4G</b>	415/830 ÷ 1660 kW



The PRESS G series of burners covers a firing range from 107 to 1660 kW and they have been designed for use in civil installations of average dimensions, like building areas and large apartment groups or for use in industrial applications, like small or medium plants. Operation is two stage; the combustion head, that can be set on the basis of required output, allows optimal performance ensuring good combustion and reducing fuel consumption. The main feature of these burners is their reliability due to a simple and strong construction, that permits operation without particular maintenance intervention. Simplified maintenance is achieved by the slide bar system, which allows easy access to all of the essential components of the combustion head. All electrical components are easily accessible only by dismounting a protection panel, thus guaranteeing a quick and simple intervention on components.

# TECHNICAL DATA

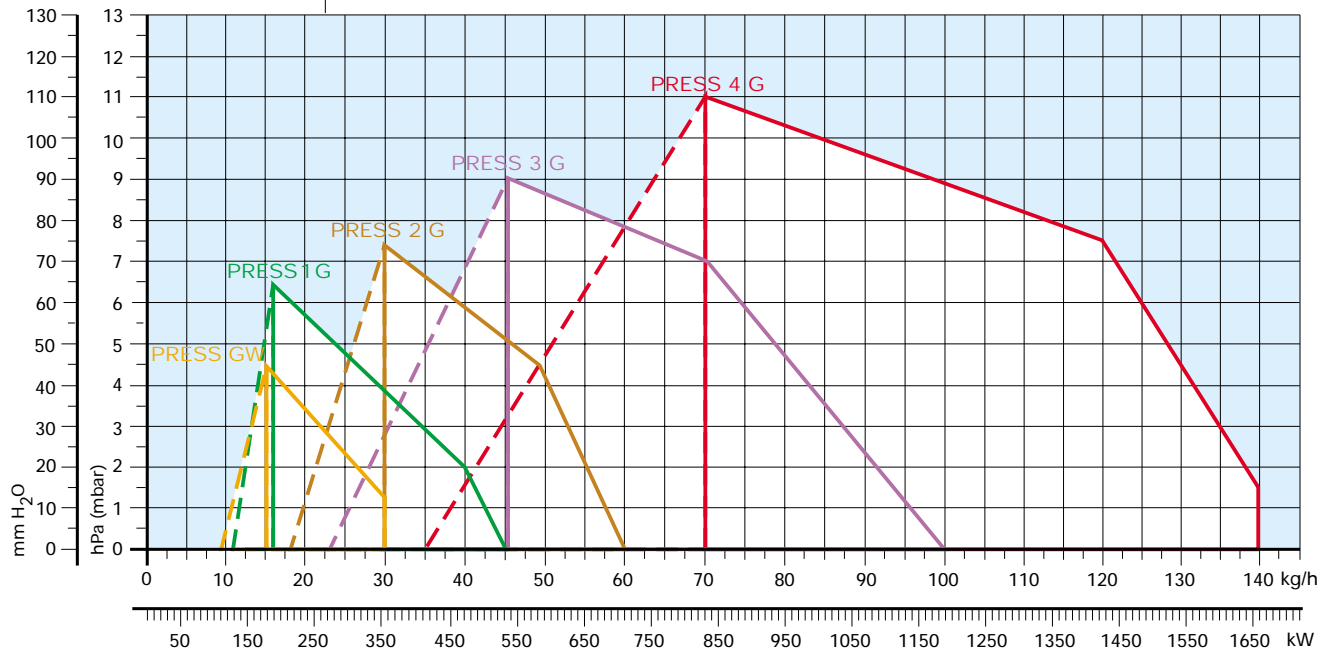
Model		▼ PRESS GW	▼ PRESS 1G	▼ PRESS 2G	▼ PRESS 3G	▼ PRESS 4G
Burner operation mode		Two stage				
Modulation ratio at max. output		2 ÷ 1				
Servomotor	type	--				
	run time	s				
Heat output	kW	107/178÷356	130/190÷534	214/356÷712	273/534÷1168	415/830÷1660
	Mcal/h	92/153÷306	112/163÷459	184/306÷612	235/459÷1004	357/714÷1428
	kg/h	9/15÷30	11/16÷45	18/30÷60	23/45÷100	35/70÷140
Working temperature		°C min./max. 0/40				
Net calorific value		kWh/kg 11,8				
		kcal/kg 10200				
Viscosity		mm <sup>2</sup> /s (cSt) 4 ÷ 6 (at 20°C)				
Pump	type	AN 67	AN 77	AN 77	J 6	J 7
	delivery	kg/h 65 (12 bar)	90 (12 bar)	90 (12 bar)	164 (12 bar)	244 (12 bar)
Atomised pressure		bar 12				
Fuel temperature		Max. °C 50				
Fuel pre-heater		NO				
Fan		type Centrifugal with forward curve blades				
Air temperature		Max. °C 60				
Electrical supply		Ph/Hz/V 1/50/230-(±10%)	3N/50/400-(±10%)			3/50/230-(±10%) △
Auxiliary electrical supply		Ph/Hz/V 1/50/230-(±10%)				
Control box		type RMO				
Total electrical power		kW 0,43	0,6	1,07	2,05	3,8
Auxiliary electrical power		kW 0,18	0,15	0,3	0,5	0,8
Protection level		IP 40				
Pump motor electrical power		kW --				
Rated pump motor current		A --				
Pump motor start up current		A --				
Pump motor protection level		IP --				
Fan motor electrical power		kW 0,25	0,45	0,75	1,5	3
Rated fan motor current		A 2,1	1,9 - 1,1	2,9 - 1,7	6 - 3,5	10,5 - 6
Fan motor start up current		A 4,8	9,5 - 5,5	14 - 8	28 - 16	55 - 32
Fan motor protection level		IP 54				
Ignition transformer		type --				
		V1 - V2 230 V - 8 kV				
		I1 - I2 1,8 A - 30 mA				
Operation		Intermittent (at least one stop every 24 h)				
Sound pressure		dBA 75,5	78	81,5	83	85
Sound power		W --				
CO emission		mg/kWh < 110				
Grade of smoke indicator		N° Bach. < 1				
C <sub>x</sub> H <sub>y</sub> emission		mg/kWh < 10 (after the first 20 s)				
NO <sub>x</sub> emission		mg/kWh < 250				
Directive		73/23 - 89/336 - 98/37 - 92/42 EEC				
Conforming to		EN 267				
Certification		--				


Reference conditions:  
 Temperature: 20°C  
 Pressure: 1013.5 mbar  
 Altitude: 100 m a.s.l.  
 Noise measured at a distance of 1 meter.


Since the Company is constantly engaged in the production improvement, the aesthetic and dimensional features, the technical data, the equipment and the accessories can be changed.  
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# FIRING RATES



 Useful working field for choosing the burner

 1<sup>st</sup> stage operating rate

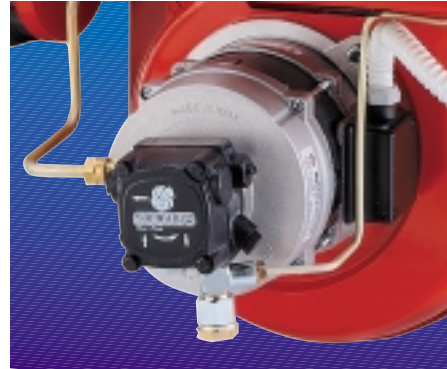
Test conditions conforming to EN 267:  
 Temperature: 20°C  
 Pressure: 1013.5 mbar  
 Altitude: 100 m a.s.l.



# FUEL SUPPLY

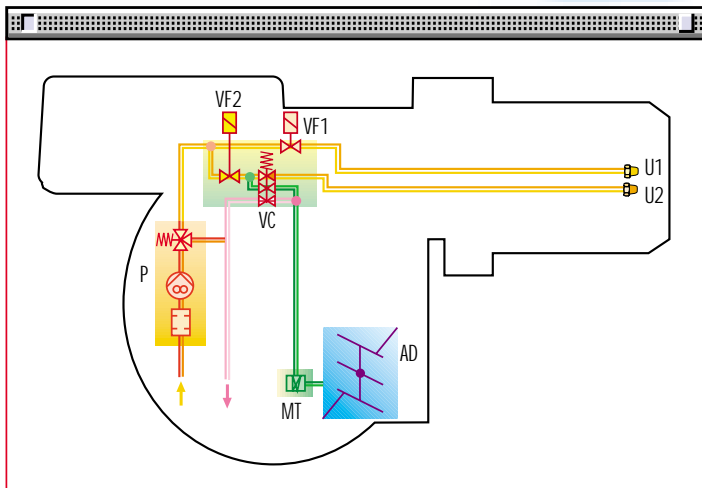
## HYDRAULIC CIRCUITS

The burners are fitted with two oil delivery valves. A control device, on the basis of required output, regulates oil delivery valves opening, allowing light oil passage through the valves and the nozzles. 2nd stage delivery valve opening supplies the hydraulic ram which opens the air damper in relation to the fuel burnt on 2nd stage. All burners are fitted with a self-priming pump with filter and pressure regulator.

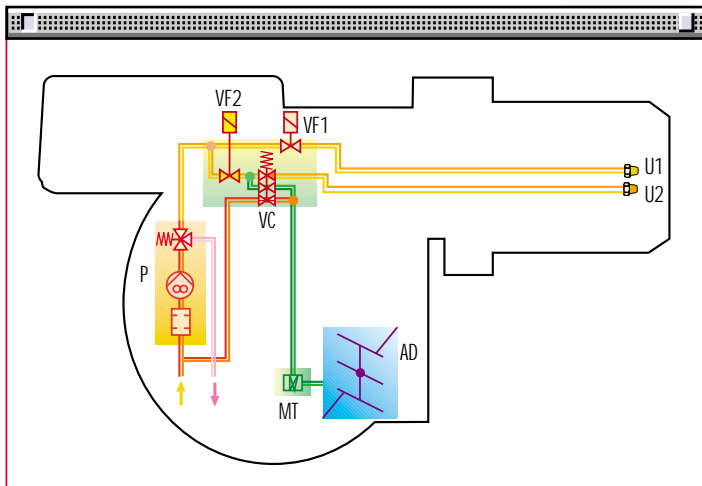


Example of self-priming pump of PRESS G burners

### PRESS GW - 1G - 2G



### PRESS 3G - 4G



P	Pump with filter and pressure regulator on the output circuit
VF1	1st stage valve
VF2	2nd stage valve
VC	2nd stage control device
MT	Hydraulic ram
AD	Air damper
U1	1st stage nozzle
U2	2nd stage nozzle

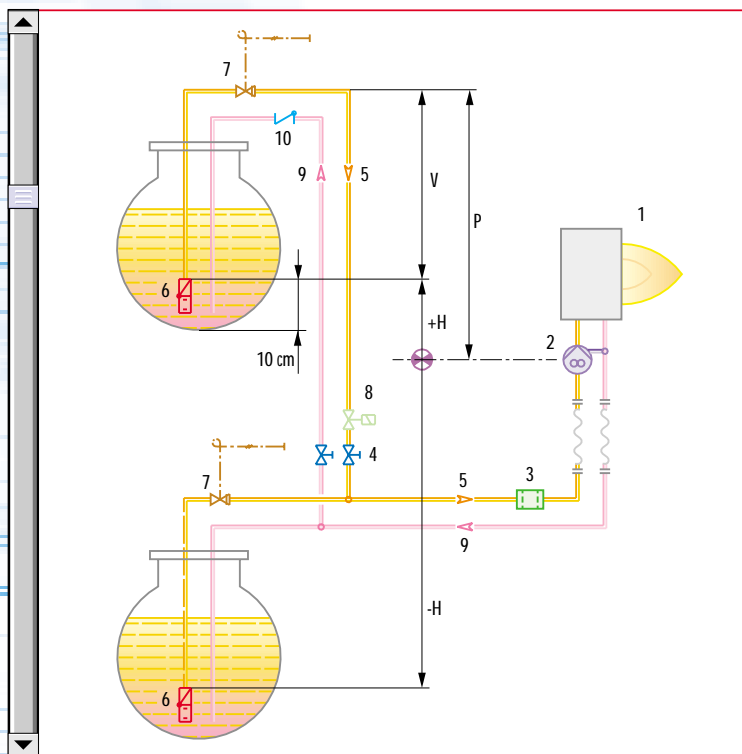


## SELECTING THE FUEL SUPPLY LINES

The fuel feed must be completed with the safety devices required by the local norms.

The table shows the choice of piping diameter for the various burners, depending on the difference in height between the burner and the tank and their distance.

MAXIMUM EQUIVALENT LENGTH FOR THE PIPING L[m]												
Model	▼ PRESS GW			▼ PRESS 1G - 2G			▼ PRESS 3G			▼ PRESS 4G		
Ø piping	Ø8mm	Ø10mm	Ø12mm	Ø10mm	Ø12mm	Ø14mm	Ø12mm	Ø14mm	Ø16mm	Ø12mm	Ø14mm	Ø16mm
+H, -H (m)	L <sub>max</sub> (m)	L <sub>max</sub> (m)	L <sub>max</sub> (m)	L <sub>max</sub> (m)	L <sub>max</sub> (m)	L <sub>max</sub> (m)	L <sub>max</sub> (m)	L <sub>max</sub> (m)	L <sub>max</sub> (m)	L <sub>max</sub> (m)	L <sub>max</sub> (m)	L <sub>max</sub> (m)
+4,0	35	90	152	63	144	150	71	139	151	44	88	158
+3,0	30	80	152	55	127	150	62	123	151	38	77	140
+2,0	26	69	152	48	111	150	53	106	151	33	66	121
+1,0	21	59	130	40	94	150	45	90	151	27	56	103
+0,5	19	53	119	37	86	150	40	82	151	24	50	94
0	17	48	108	33	78	150	36	74	137	21	45	85
-0,5	15	43	97	29	70	133	32	66	123	18	40	76
-1,0	13	37	86	25	62	118	28	58	109	15	34	66
-2,0	9	27	64	17	45	88	19	42	81	9	23	48
-3,0	4	16	42	10	29	58	10	26	53	-	13	30
-4,0	-	6	20	-	12	28	-	10	25	-	-	12



H	Difference in height pump-foot valve
Ø	Internal pipe diameter
P	Height 10 m
V	Height 4 m
1	Burner
2	Burner pump
3	Filter
4	Manual shut off valve
5	Suction pipework
6	Bottom valve
7	Remote controlled rapid manual shut off valve (compulsory in Italy)
8	Type approved shut off solenoid valve (Compulsory in Italy)
9	Return pipework
10	Check valve

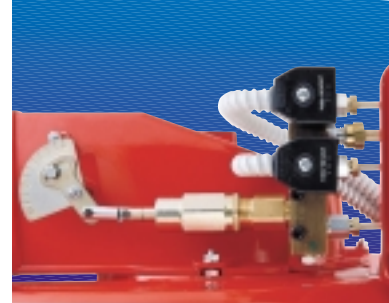
**note** With ring distribution oil systems, the feasible drawings and dimensioning are the responsibility of specialised engineering studios, who must check compatibility with the requirements and features of each single installation.



## VENTILATION

The ventilation circuit of PRESS burners is inserted in a extremely compact structure and it is provided with a forward blades centrifugal fan, which guarantees high pressure levels at the required air deliveries and permits installation flexibility.

Delivery oil valves opening supplies the adjustable hydraulic ram which regulates air delivery in relation to the fuel burnt on 2nd stage.



Example of air damper indexed selector and hydraulic ram of PRESS G burners



## COMBUSTION HEAD

For the PRESS G series of burners a special kit for increasing combustion head length is available.

The choice of using it depends on the thickness of the front panel and the type of boiler.

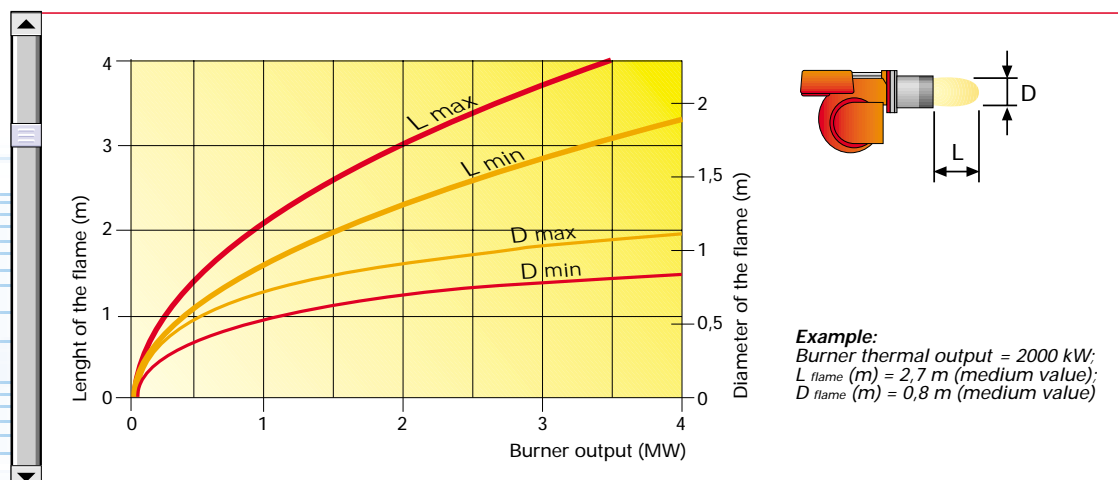
Depending on the type of generator, check that the penetration of the head into the combustion chamber is correct.

The internal position of the combustion head can easily be adjusted to the maximum defined output by adjusting a screw.



Example of a PRESS G burner combustion head

### Dimensions of the flame



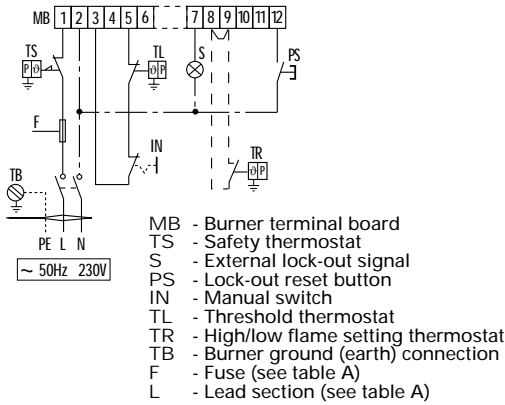
# WIRING DIAGRAMS

Electrical connections must be made by qualified and skilled personnel, according to the local norms.

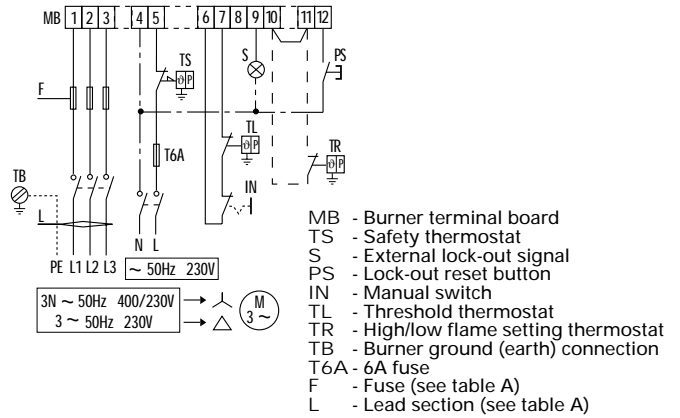


## TWO STAGE OPERATION

### PRESS GW single-phase electrical connection



### PRESS 1G - 2G - 3G - 4G three-phase electrical connection

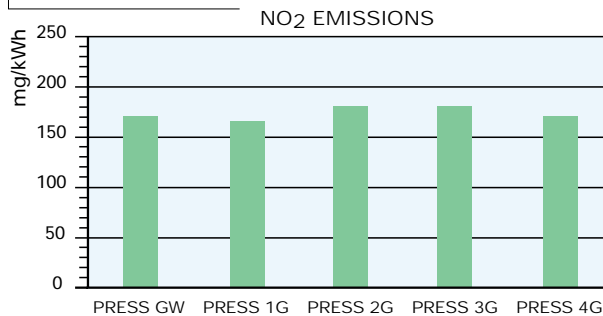
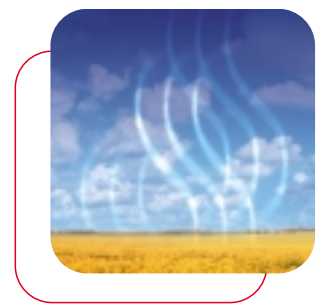


The following table shows the supply lead sections and the type of fuse to be used.

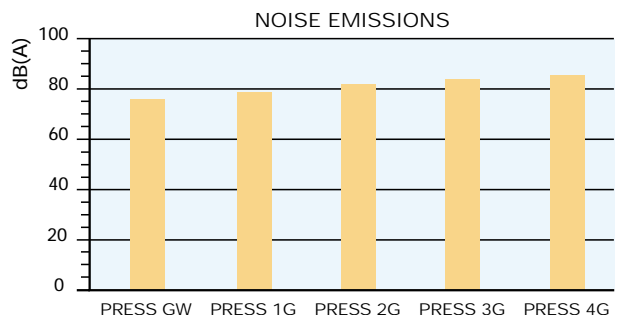
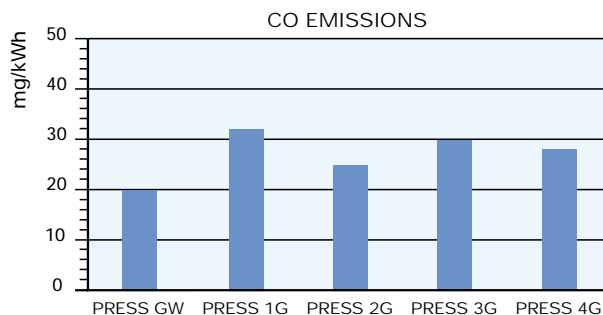
Table A

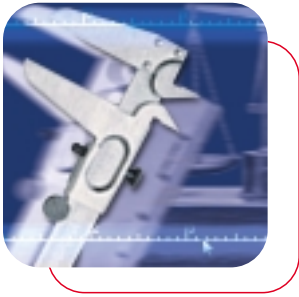
Model	▼ PRESS GW	▼ PRESS 1G	▼ PRESS 2G	▼ PRESS 3G	▼ PRESS 4G				
F A	gG6	T6	T6	T6	T6	T16	T10	T25	T16
L mm <sup>2</sup>	1,5	1,5	1,5	1,5	1,5	1,5	1,5	2,5	1,5

# EMISSIONS



The emission data has been measured in the various models at maximum output, conforming to EN 267 standard.

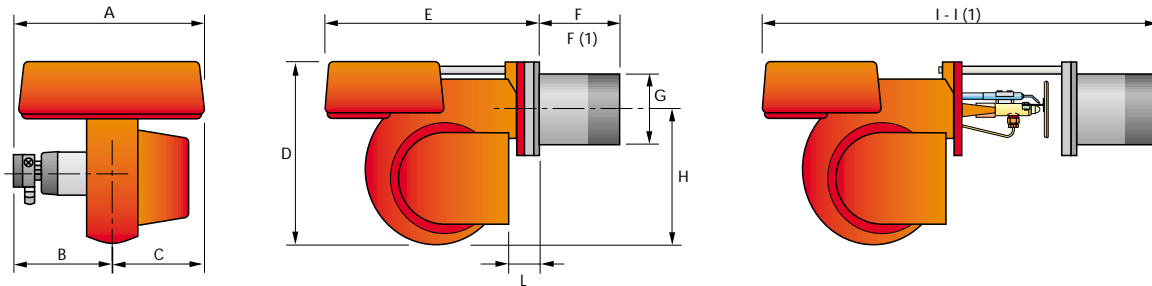




## OVERALL DIMENSIONS (mm)



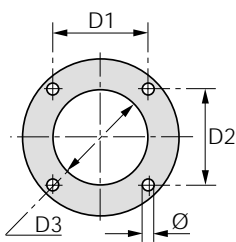
### BURNER



Model	A	B	C	D	E	F - F (1)	G	H	I - I (1)	L
▶ <b>PRESS GW</b>	439	234	205	397	473	185 - 320	140	292	930 - 1065	59
▶ <b>PRESS 1G</b>	475	270	205	397	473	237 - 370	150	292	980 - 1115	59
▶ <b>PRESS 2G</b>	475	270	205	437	506	245 - 403	155	332	1030 - 1190	89
▶ <b>PRESS 3G</b>	611	406	205	485	570	254 - 412	175	370	1100 - 1270	88
▶ <b>PRESS 4G</b>	675	354	316	590	720	266 - 426	205	445	1265 - 1425	175

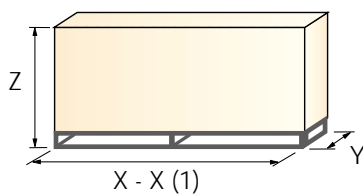
(1) Length with extended combustion head

### BURNER - BOILER MOUNTING FLANGE



Model	D1	D2	D3	Ø
▶ <b>PRESS GW</b>	160	160	155	M10
▶ <b>PRESS 1G</b>	160	160	165	M10
▶ <b>PRESS 2G</b>	160	160	165	M10
▶ <b>PRESS 3G</b>	195	195	185	M12
▶ <b>PRESS 4G</b>	230	230	210	M12

### PACKAGING



Model	X - X (1)	Y	Z	kg
▶ <b>PRESS GW</b>	695	542	468	37
▶ <b>PRESS 1G</b>	745	542	468	44
▶ <b>PRESS 2G</b>	800	542	515	44
▶ <b>PRESS 3G</b>	905	680	563	55
▶ <b>PRESS 4G</b>	1045	727	660	95

(1) Length with extended combustion head