GAS BURNERS

TBG 35 - 35 P - 35 MC - 35 ME

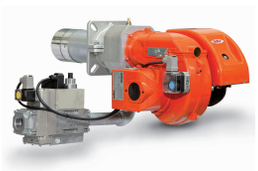
Energy for People

kW **80 - 410**

SERIES **TBG**

LOW NOX

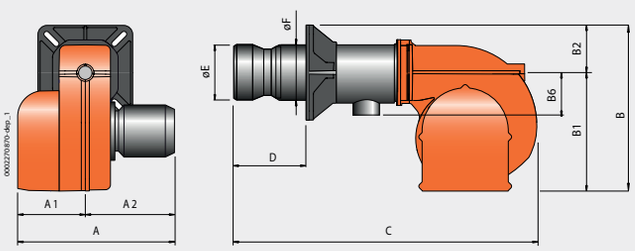
CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | COMMISSION REGULATION ErP 2013/811/UE AND ErP 2013/813/UE | REFERENCE STANDARD EN676. CE 0085

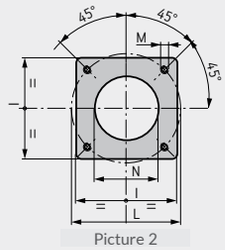


TBG 35

TBG 35 P

Gas burner compliant with European standard EN676. Operation:	TBG 35 single-stage	TBG 35 P two-stage	TBG 35 MC mechanical two-stage progressive	TBG 35 ME electronic two-stage progressive
Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe)			•	•
Modulation ratio:			1:5	1:5
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3	class 3	class 3
Adjusting the combustion head	•	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	electric servomotor	mechanical cam	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney		•	•	•
CE version gas train is complete with operation and safety valve with electromagnetic drive, minimum pressure switch, pressure regulator and gas filter	•			
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, minimum pressure switch, pressure regulator and gas filter		•	•	
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter				•
Possibility to choose gas train with valve tightness control	•	•	•	
Fail proof connectors for burner/gas train connection	•	•	•	•
Gas train outlet:	up/down	down	down	up/down
Flame detection by ionisation electrode with connector for microamperometer	•	•	•	•
Electric protection rating:	IP40	IP40	IP40	IP40





Picture 2

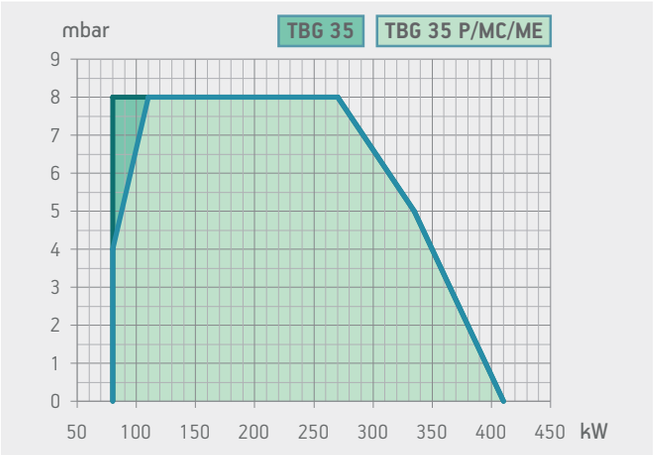
Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Z mm	Z1 mm	Z2 mm	Pic.
TBG 35	440	210	230	378	270	108	160	860	140 ÷ 300	137	133	215	200 ÷ 245	M12	145	-	-	-	2
TBG 35 P	440	210	230	378	270	108	160	860	140 ÷ 300	137	133	215	200 ÷ 245	M12	145	-	-	-	2
TBG 35 MC	520	290	230	420	270	150	160	860	140 ÷ 300	137	133	215	200 ÷ 245	M12	145	-	-	-	2
TBG 35 ME	465	180	285	377	260	117	160	840	140 ÷ 300	137	133	215	200 ÷ 245	M12	145	-	-	-	2

kW **80 - 410**

SERIES **TBG**

CE 0085



Model	Size of packaging L	P	H	Weight
	mm			kg
TBG 35	1000	600	510	38
TBG 35 P	1000	600	510	38
TBG 35 MC	1000	600	510	40
TBG 35 ME	1000	600	510	40

	Emissions class	Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Note
			Frequency 50 Hz				
	class 3	80 ÷ 410	**TBG 35**	**17320010**	1N AC 50Hz 230V	0,37	
	class 3	80 ÷ 410	**TBG 35 P**	**17330010**	1N AC 50Hz 230V	0,37	4)
	class 3	80 ÷ 410	**TBG 35 MC**	**17360010**	1N AC 50Hz 230V	0,37	4)
	class 3	80 ÷ 410	**TBG 35 ME**	**17350010**	1N AC 50Hz 230V	0,37	4)
			Frequency 60 Hz				
	class 3	80 ÷ 410	**TBG 35**	**17325410**	1N AC 60Hz 220V	0,37	
	class 3	80 ÷ 410	**TBG 35 P**	**17335410**	1N AC 60Hz 220V	0,37	4)
	class 3	80 ÷ 410	**TBG 35 MC**	**17365410**	1N AC 60Hz 220V	0,37	4)
	class 3	80 ÷ 410	**TBG 35 ME**	**17355410**	1N AC 60Hz 220V	0,37	4)

The working field of the burner, as expressed in the "Thermal output kW" column, depends on the characteristics of the gas train it works with (see burner/train match diagram).

MODULATING MODE

DESCRIPTION	PART NO.
TBG 35 35 MC: modulation kit	98000056
TBG 35 ME: modulation kit	98000059
TBG 35 MC/35 ME: modulating probe	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover	97980054

GAS BURNERS ACCESSORIES

TBG 35/35 P/35 MC: boiler coupling kit, plug for wiring.

TBG 35 ME: boiler coupling kit.

NOTE

4 Equipped with air closure device.

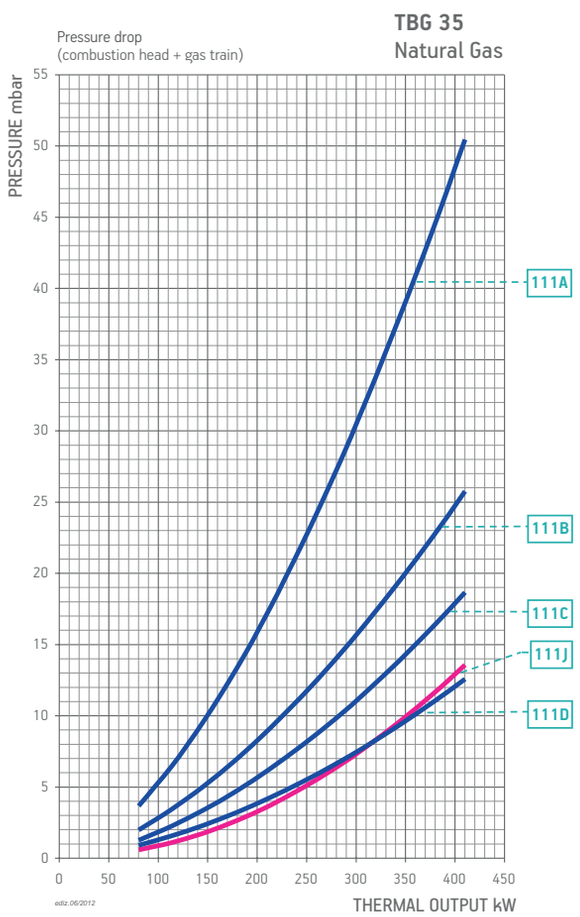
Net calorific value at reference conditions of 0°C, 1013mbar:

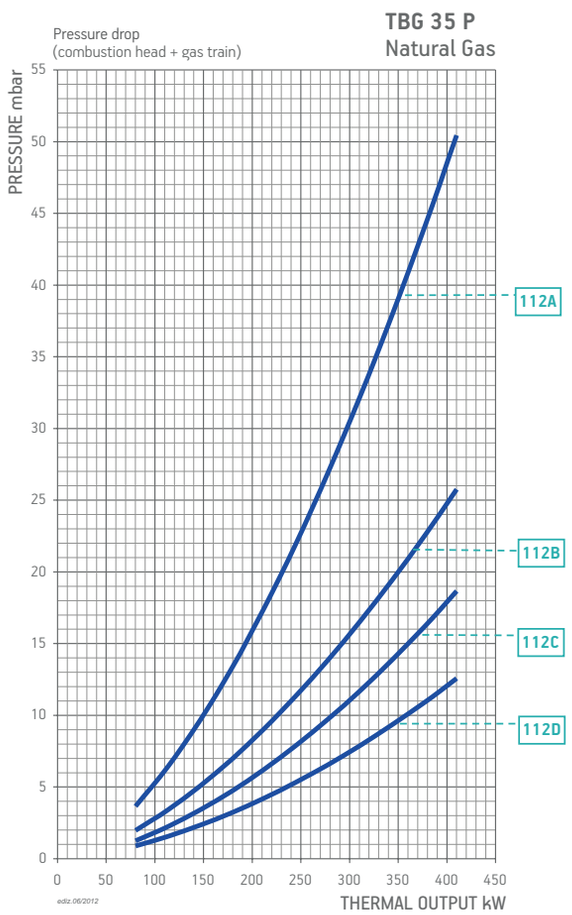
Natural gas: Hi = 35,80 MJ/m^3 = 8550 kcal/m^3,

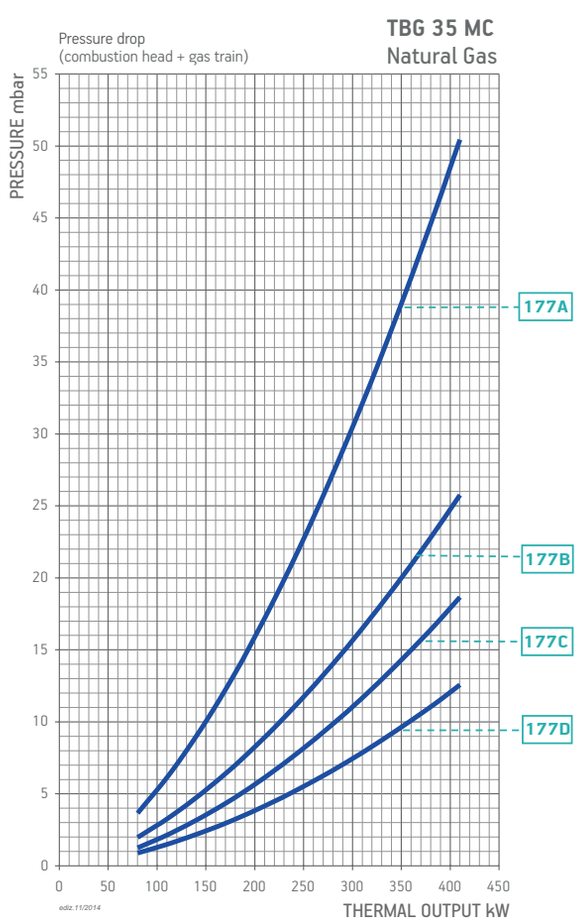
LPG: Hi = 92 MJ/m^3 = 22000 kcal/m^3.

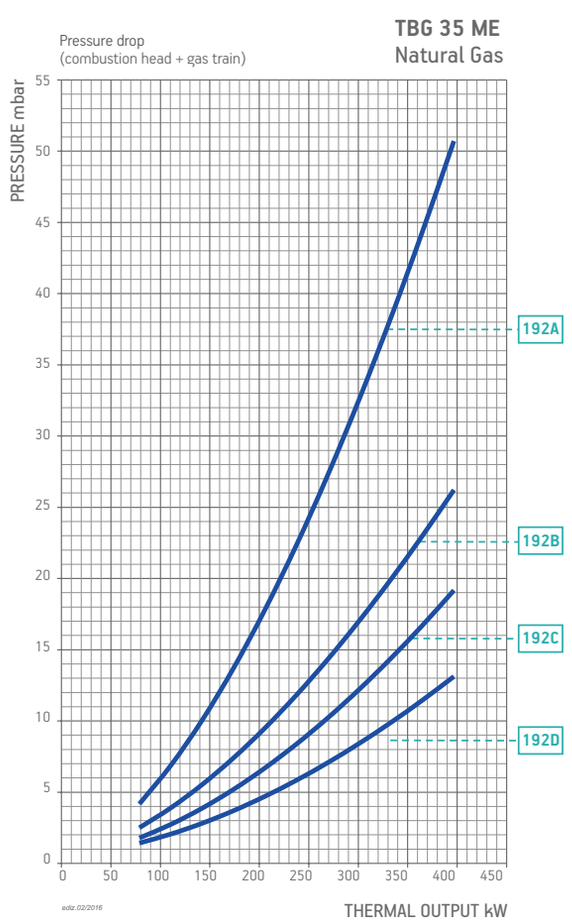
For different type of gas and pressure values, please get in contact with our commercial department.

BURNER/GAS TRAIN MATCH









BURNER/GAS TRAIN MATCH

CE gas train version complies with EN676, EXP gas train version is for extra-European markets

Burner model	Gas type	Curve on graph	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Notes
						Part no.	Part no.	Part no.	Part no.		
TBG 35	Natural gas	111A	CE/EXP	360		19990545	Included	96000005	–	M2	
					CTV	19990545	Included	96000005	98000100	M2	12)
		111B	CE/EXP	360		19990546	Included	96000004	–	M2	
					CTV	19990546	Included	96000004	98000100	M2	12)
		111C	CE/EXP	360		19990547	Included	96000004	–	M2	
					CTV	19990547	Included	96000004	98000100	M2	12)
		111D	CE/EXP	360		19990548	Included	–	–	M2	
					CTV	19990548	Included	–	98000100	M2	12)
		111J	EXP	40		19990134	–	96000006	–	ME1	
TBG 35 P	Natural gas	112A	CE/EXP	360		19990545	Included	96000005	–	B7	
					CTV	19990545	Included	96000005	98000100	B7	12)
		112B	CE/EXP	360		19990546	Included	96000004	–	B7	
					CTV	19990546	Included	96000004	98000100	B7	12)
		112C	CE/EXP	360		19990547	Included	96000004	–	B7	
					CTV	19990547	Included	96000004	98000100	B7	12)
		112D	CE/EXP	360		19990548	Included	–	–	B7	
					CTV	19990548	Included	–	98000100	B7	12)
TBG 35 MC	Natural gas	177A	CE/EXP	360		19990545	Included	96000005	–	B7	
					CTV	19990545	Included	96000005	98000101	B7	12)
		177B	CE/EXP	360		19990546	Included	96000004	–	B7	
					CTV	19990546	Included	96000004	98000101	B7	12)
		177C	CE/EXP	360		19990547	Included	96000004	–	B7	
					CTV	19990547	Included	96000004	98000101	B7	12)
		177D	CE/EXP	360		19990548	Included	–	–	B7	
					CTV	19990548	Included	–	98000101	B7	12)
TBG 35 ME	Natural gas	192A	CE/EXP	360	CTV	19990555	Included	96000005	Included	D2	
		192B	CE/EXP	360	CTV	19990556	Included	96000004	Included	D2	
		192C	CE/EXP	360	CTV	19990557	Included	96000004	Included	D2	
		192D	CE/EXP	360	CTV	19990558	Included	–	Included	D2	

Burner model	Gas type	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Notes
					Part no.	Part no.	Part no.	Part no.		
TBG 35	LPG	CE/EXP	360		19990545	Included	96000005	–	M2	
				CTV	19990545	Included	96000005	98000100	M2	12)
TBG 35 P	LPG	CE/EXP	360		19990545	Included	96000005	–	B7	
				CTV	19990545	Included	96000005	98000100	B7	12)
TBG 35 MC	LPG	CE/EXP	360		19990545	Included	96000005	–	B7	
				CTV	19990545	Included	96000005	98000101	B7	12)
TBG 35 ME	LPG	CE/EXP	360	CTV	19990555	Included	96000005	Included	D2	

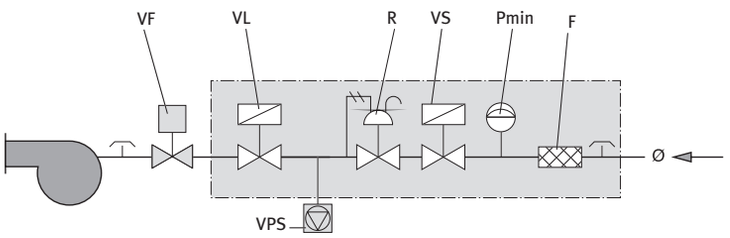
To choose the correct gas train please refer to the information on Burners Catalogue.

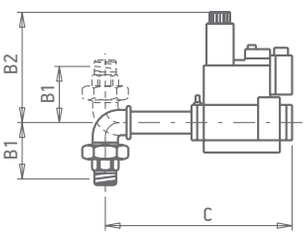
NOTES

9 The min feeding gas pressure at the inlet of the gas train can not be lower than 100 mbar.
12 Valve tightness control not required by EN676.
CTV Gas train with Valve Tightness Control.
**) Maximum gas inlet pressure at pressure regulator.

GAS TRAIN STRUCTURE AND COMPOSITION

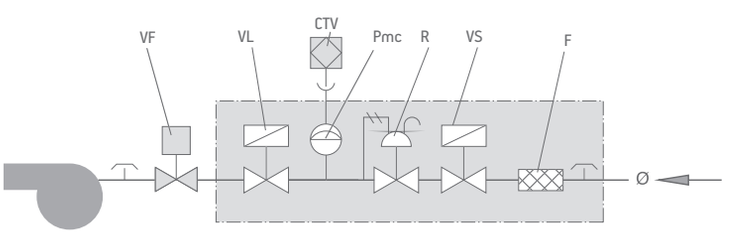
B7

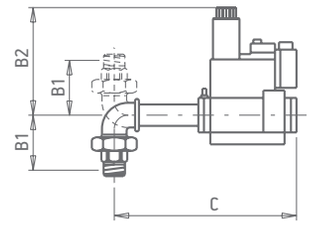




Gas train Part no.	F	Pmin	R	VF	VL	VPS	VS	Ø	Gas train dimensions mm B1	B2	C	Size of packaging mm L x P x H	Weight kg
19990545 (MB...407 - 3/4")	●	●	●	◆	●	■	●	3/4"	72	210	450	300 x 210 x 300	5
19990546 (MB...410 - 1")	●	●	●	◆	●	■	●	1"1/4	95	260	490	400 x 300 x 280	8
19990547 (MB...412 - 1"1/4)	●	●	●	◆	●	■	●	1"1/4	95	260	490	400 x 300 x 280	8
19990548 (MB...415 - 1"1/2)	●	●	●	◆	●	▲	●	1"1/2	103	170	600	460 x 250 x 460	11

D2





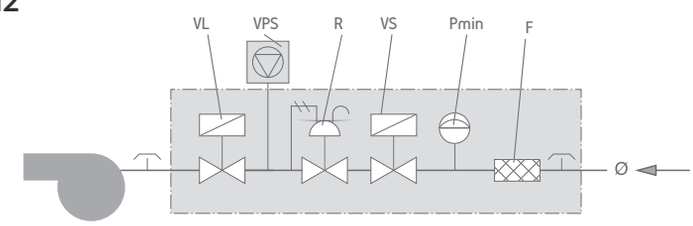
Gas train Part no.	Position CTV	F	Pmc	R	VF	VL	VS	Ø	Gas train dimensions mm B1	B2	C	Size of packaging mm L x P x H	Weight kg
19990555 (MB... 407 - 3/4")	●	●	●	●	◆	●	●	3/4"	72	140	350	300 x 210 x 300	5
19990556 (MB... 410 - 1")	●	●	●	●	◆	●	●	1"1/4	95	160	390	300 x 210 x 300	8
19990557 (MB... 412 - 1"1/4)	●	●	●	●	◆	●	●	1"1/4	95	160	390	300 x 210 x 300	8
19990558 (MB... 415 - 1"1/2)	●	●	●	●	◆	●	●	1"1/2	103	170	490	460 x 250 x 460	11

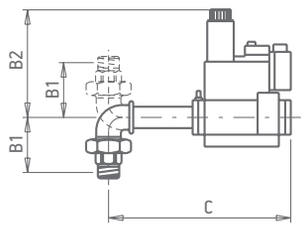
CTV Valve tightness control.
F Filter.
LDU LDU valve tightness control.
Pct Pressure switch for gas control.
Pmax Maximum pressure switch.
Pmc Minimum and control pressure switch gas leaks.
Pmin Minimum pressure switch.
R Pressure regulator.
RF Pressure regulator with filter.
RFP Pressure regulator with filter for pilot gas train.
RM Manual flow rate regulator.
RP Pneumatic regualtor.
VF Regulator throttle valve.
VL Operating valve.
VL2 Two-stage operating valve.
VLP Operating pilot valve.
VLR Operating valve with pressure regulator.
VP Pilot valve.
VPS VPS valve tightness control.
VS Safety valve.
VSP Safety pilot valve.
Ø Gas train diameter.
Ø1 Main gas train diameter.
Ø2 Pilot gas train diameter.

● As standard.
▲ As standard for burners with an output of more than 1200 kW, on request for burners with an output of less than 1200 kW.
■ On request.
◆ Mounted on burner.

GAS TRAIN STRUCTURE AND COMPOSITION

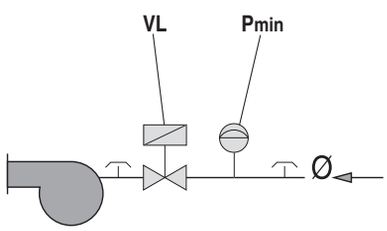
M2

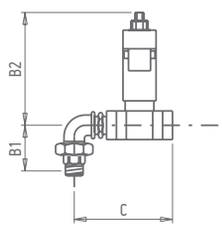




Gas train Part no.	Position							Gas train dimensions mm			Size of packaging mm	Weight
	F	Pmin	R	VL	VPS	VS	Ø	B1	B2	C	L x P x H	kg
19990545 (MB... 407 - 3/4")	●	●	●	●	■	●	3/4"	72	140	450	300 x 210 x 300	5
19990546 (MB... 410 - 1")	●	●	●	●	■	●	1"1/4	95	160	490	400 x 300 x 280	8
19990547 (MB... 412 - 1"1/4)	●	●	●	●	■	●	1"1/4	95	160	490	400 x 300 x 280	8
19990548 (MB... 415 - 1"1/2)	●	●	●	●	■	●	1"1/2	103	270	600	460 x 250 x 460	11

ME1





Gas train Part no.	Position			Gas train dimensions mm			Size of packaging mm	Weight
	Pmin	VL	Ø	B1	B2	C	L x P x H	kg
19990134	●	1"	1"	83	177	160	240 x 220 x 210	4

CTV Valve tightness control.
F Filter.
LDU LDU valve tightness control.
Pct Pressure switch for gas control.
Pmax Maximum pressure switch.
Pmc Minimum and control pressure switch gas leaks.
Pmin Minimum pressure switch.
R Pressure regulator.
RF Pressure regulator with filter.
RFP Pressure regulator with filter for pilot gas train.
RM Manual flow rate regulator.
RP Pneumatic regualtor.
VF Regulator throttle valve.
VL Operating valve.
VL2 Two-stage operating valve.
VLP Operating pilot valve.
VLR Operating valve with pressure regulator.
VP Pilot valve.
VPS VPS valve tightness control.
VS Safety valve.
VSP Safety pilot valve.
Ø Gas train diameter.
Ø1 Main gas train diameter.
Ø2 Pilot gas train diameter.

● As standard.
▲ As standard for burners with an output of more than 1200 kW, on request for burners with an output of less than 1200 kW.
■ On request.
◆ Mounted on burner.

Scheda tecnica Cod. 0001100308

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