



GAS BURNERS

BTG 28 - 28 P - 28 ME

07 | 2020



CONFORM TO: GAS DIRECTIVE 2009/142/CE | 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.  0085



BTG 28 - 28 P



BTG 28 ME

Gas burner compliant with European standard EN676.

Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Low NOx and CO emissions gas burner according to European standard EN676:

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:

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, 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:

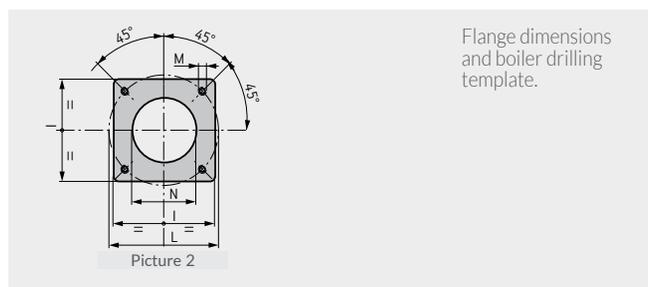
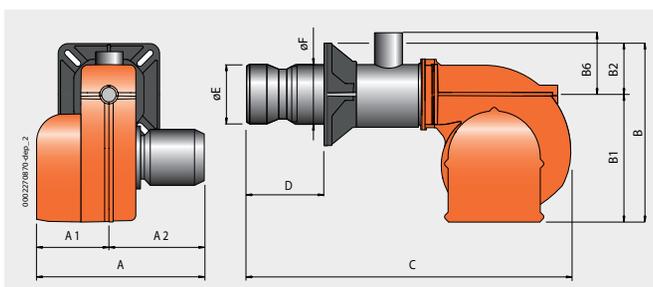
Flame detection by ionisation electrode with connector for microamperometer.

Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment.

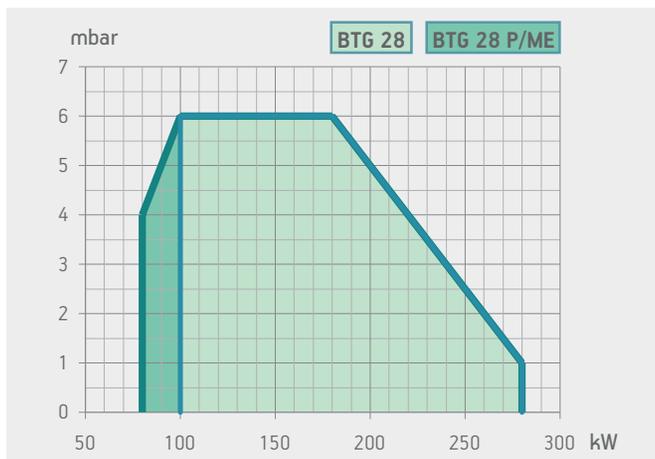
Electric protection rating:

Sound-proof plastic protective cover.

	BTG 28	BTG 28 P	BTG 28 ME
	single-stage	two-stage	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:			1:3
Low NOx and CO emissions gas burner according to European standard EN676:	class 2	class 2	class 2
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	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, 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	up	up
Flame detection by ionisation electrode with connector for microamperometer.	•	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment.			•
Electric protection rating:	IP40	IP40	IP40
Sound-proof plastic protective cover.	•	•	•



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 mm	N mm	Pic.
BTG 28	303	158	145	368	275	93	70	695	150 ÷ 300	135	114	185	170 ÷ 210	M10	145	2
BTG 28 P	303	158	145	368	275	93	70	695	150 ÷ 300	135	114	185	170 ÷ 210	M10	145	2
BTG 28 ME	303	158	145	368	275	93	70	695	150 ÷ 300	135	114	185	170 ÷ 210	M10	145	2



Model	Size of packaging			Weight kg
	L	P	H	
BTG 28	780	370	410	18
BTG 28 P	780	370	410	18
BTG 28 ME	780	370	410	18

GAS

	Emissions class	Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Notes
Frequency 50 Hz							
	class 2	100 ÷ 280	BTG 28	17140010	1N AC 50Hz 230V	0,18	1)
	class 2	80 ÷ 280	BTG 28 P	17150010	1N AC 50Hz 230V	0,18	1)
	class 2	80 ÷ 280	BTG 28 ME	17160020	1N AC 50Hz 230V	0,18	4)
Frequency 60 Hz							
	class 2	100 ÷ 280	BTG 28	17145410	1N AC 60Hz 220V	0,25	1)
	class 2	80 ÷ 280	BTG 28 P	17155410	1N AC 60Hz 220V	0,25	1)
	class 2	80 ÷ 280	BTG 28 ME	17165420	1N AC 60Hz 220V	0,25	4)

MODULATING MODE

DESCRIPTION	PART NO.
BTG 28 ME: modulation kit	98000059
BTG 28 ME: modulating probe (see page 294 Burners Catalogue)	

GAS BURNERS ACCESSORIES

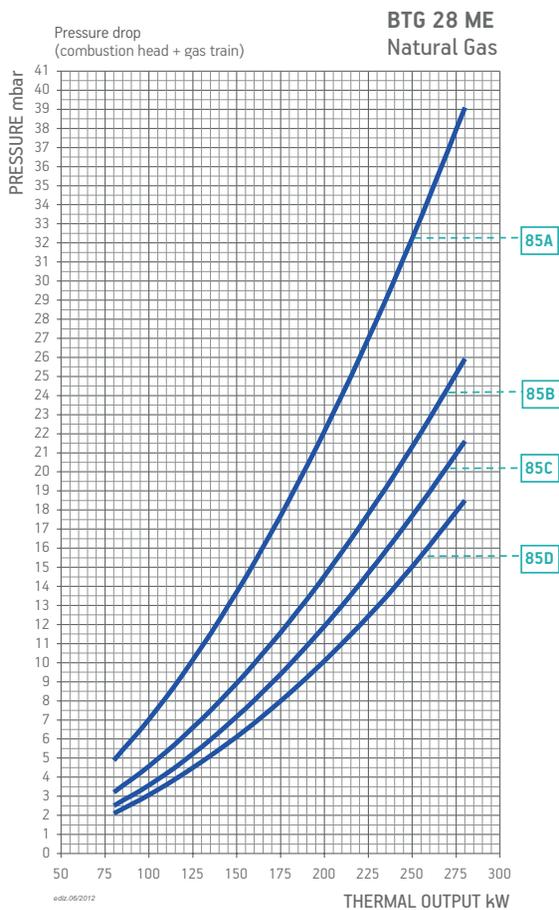
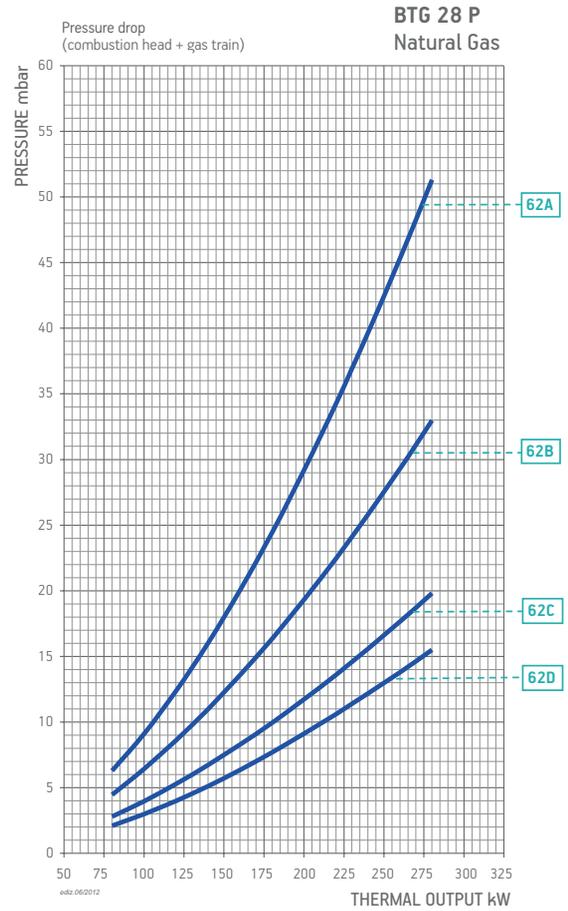
Boiler coupling kit, plug for wiring.

NOTES

- 1 Equipped with air closure device.
 - 4 Equipped with air closure device.
- Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: $H_i = 35,80 \text{ MJ/m}^3 = 8550 \text{ kcal/m}^3$,
 LPG: $H_i = 92 \text{ MJ/m}^3 = 22000 \text{ kcal/m}^3$.
- For different type of gas and pressure values, please get in contact with our commercial department.

BURNER/GAS TRAIN MATCH

GAS



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.		
BTG 28	Natural gas	61A	CE/EXP	360	CTV	19990002	Included	-	-	M2	
						19990002	Included	-	98000100	M2	12)
		61B	CE/EXP	360	CTV	19990005	Included	-	-	M2	
						19990005	Included	-	98000100	M2	12)
		61C	CE/EXP	360	CTV	19990008	Included	96000031	-	M2	
19990008	Included					96000031	98000100	M2	12)		
61D	CE/EXP	360	CTV	19990166	Included	96000031	-	M2			
				19990166	Included	96000031	98000100	M2	12)		
		61J	EXP	40		19990134	-	96000028	-	ME1	
BTG 28 P	Natural gas	62A	CE/EXP	360	CTV	19990016	Included	-	-	B2	
						19990016	Included	-	98000100	B2	12)
		62B	CE/EXP	360	CTV	19990020	Included	-	-	B2	
						19990020	Included	-	98000100	B2	12)
		62C	CE/EXP	360	CTV	19990024	Included	96000031	-	B2	
19990024	Included					96000031	98000100	B2	12)		
62D	CE/EXP	360	CTV	19990168	Included	96000031	-	B2			
				19990168	Included	96000031	98000100	B2	12)		
BTG 28 ME	Natural gas	85A	CE/EXP	360	CTV	19990573	Included	-	Included	D2	
		85B	CE/EXP	360	CTV	19990574	Included	-	Included	D2	
		85C	CE/EXP	360	CTV	19990575	Included	-	Included	D2	
		85D	CE/EXP	360	CTV	19990576	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.		
BTG 28	LPG	CE/EXP	360	CTV	19990002	Included	-	-	M2	
					19990002	Included	-	98000100	M2	12)
BTG 28 P	LPG	CE/EXP	360	CTV	19990016	Included	-	-	B2	
					19990016	Included	-	98000100	B2	12)
BTG 28 ME	LPG	CE/EXP	360	CTV	19990573	Included	-	Included	D2	

To choose the correct gas train please refer to the information on page 20 Burners Catalogue.

NOTES

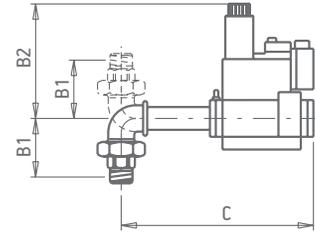
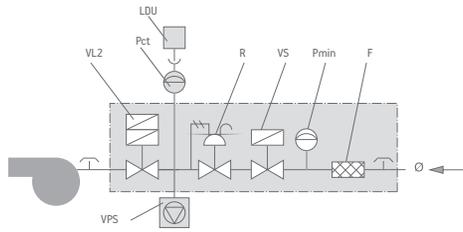
12 Valve tightness control not required by EN676.

CTV Gas train with Valve Tightness Control.

**) Maximum gas inlet pressure at pressure regulator.

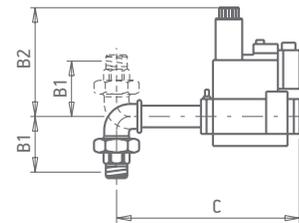
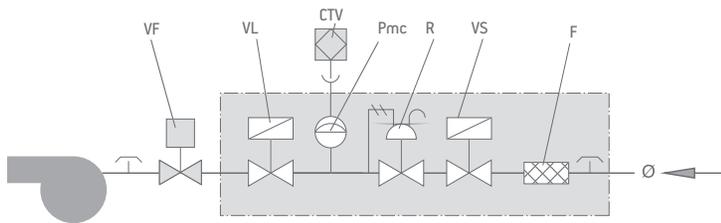
GAS TRAIN STRUCTURE AND COMPOSITION

B2



Gas train Part no.	Position									Gas train dimensions mm			Size of packaging mm	Weight kg
	F	LDU	Pct	Pmin	R	VL2	VPS	VS	Ø	B1	B2	C	L x P x H	
19990016 (MB... 405 - 1/2")	●			●	●	●	■	●	3/4"	72	210	204	300 x 210 x 300	5
19990020 (MB... 407 - 3/4")	●			●	●	●	■	●	3/4"	72	210	204	300 x 210 x 300	5
19990024 (MB... 410 - 1")	●			●	●	●	■	●	1"1/4	95	260	249	300 x 210 x 300	8
19990168 (MB... 412 - 1"1/4)	●			●	●	●	■	●	1"1/4	95	260	249	300 x 210 x 300	8

D2



Gas train Part no.	Position								Gas train dimensions mm			Size of packaging mm	Weight kg
	CTV	F	Pmc	R	VF	VL	VS	Ø	B1	B2	C	L x P x H	
19990573 (MB... 407 - 3/4")	●	●	●	●	DN20	●	●	3/4"	72	160	305	400 x 300 x 280	12
19990574 (MB... 410 - 1")	●	●	●	●	DN20	●	●	1"1/4	95	160	355	400 x 300 x 280	15
19990575 (MB... 412 - 1"1/4)	●	●	●	●	DN20	●	●	1"1/4	95	160	355	400 x 300 x 280	15
19990576 (MB... 415 - 1"1/2)	●	●	●	●	DN20	●	●	1"1/2	103	170	445	520 x 410 x 410	18

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.

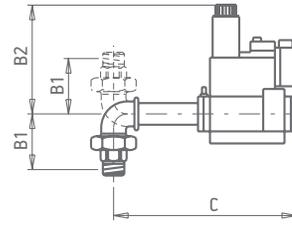
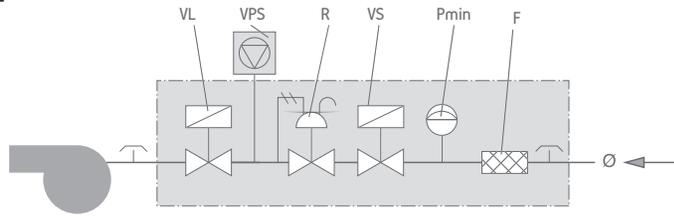
RFP Pressure regulator with filter for pilot gas train.
RM Manual flow rate regulator.
RP Pneumatic regulator.
VF Regulator throttle valve.
VL Operating valve.
VL2 Two-stage operating valve.
VLP Operating pilot valve.
VLR Operating valve with pressure regulator.

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.

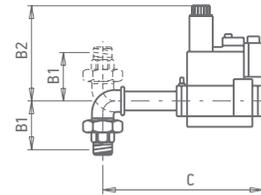
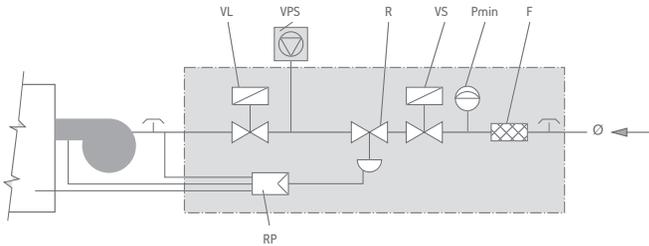
GAS TRAIN STRUCTURE AND COMPOSITION

M2



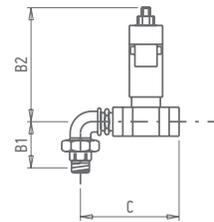
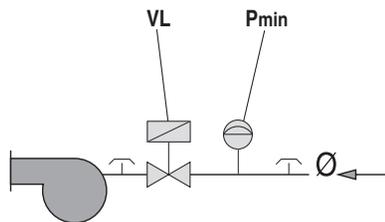
Gas train Part no.	Position							Gas train dimensions mm			Size of packaging mm	Weight
	F	Pmin	R	VL	VPS	VS	Ø	B1	B2	C	L x P x H	kg
19990002 (MB... 405 - 1/2")	●	●	●	●	■	●	3/4"	72	140	204	310 x 210 x 250	4
19990005 (MB... 407 - 3/4")	●	●	●	●	■	●	3/4"	72	140	204	310 x 210 x 250	4
19990008 (MB... 410 - 1")	●	●	●	●	■	●	1"1/4	95	160	249	310 x 210 x 250	7
19990166 (MB... 412 - 1"1/4)	●	●	●	●	■	●	1"1/4	95	160	249	310 x 210 x 250	7

D3



Gas train Part no.	Position								Gas train dimensions mm			Size of packaging mm	Weight
	F	Pmin	R	RP	VL	VPS	VS	Ø	B1	B2	C	L x P x H	kg
19990440 (MB... 407 - 3/4")	●	●	●	●	●	■	●	3/4"	72	160	455	540 x 300 x 320	6
19990441 (MB... 412 - 1"1/4)	●	●	●	●	●	▲	●	1"1/4	95	175	500	520 x 410 x 410	9
19990447 (MB... 407 - 3/4")	●	●	●	●	●	■	●	3/4"	72	160	455	540 x 300 x 320	6

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 regulator.
- 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.



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