



BGD258 Series BASOTROL® CE Approved Class A Gas Valve

The BGA158 Series multi-function gas control valve works in conjunction with an electronic sequence control unit to provide fully automatic control for commercial heating, cooking, drying, and other commercial applications.

Typical applications include freestanding and wall hung boilers for residential hydronic heating, commercial cooking appliances, and commercial tumbler dryers.



Figure 1: BGA158 Gas Control Valve

Features and Benefits	
<input type="checkbox"/> Various Voltages	12 VDC (CSA approved only) 25 VAC, 120 VAC and 240 VAC (CSA and CE approved)
<input type="checkbox"/> Compact Size	Permits installation in space-restrictive applications
<input type="checkbox"/> CE Compliant	Broadens applications to include markets in Europe

Overview

Valve Operation

The BGD258 is an on/off valve with spring-loaded seat discs that are operated by solenoids with protected rectifiers to ensure quiet operation.

When the valve is energized, the solenoid plunger is pulled into the coil, overcoming the force of the closeoff spring and the flow medium pressure. The valve seat discs are directly fixed to the plunger stem so the valve fully opens.

The plunger provides maintenance-free operation under permissible temperature and pressure specifications.

Valve Types

The BGD258 valve is available with 12 VDC, 25 VAC, 120 VAC and 240 VAC solenoids on 3/8 or 1/2-inch body thread inlet/outlet NPT or BSPP connections.

No Adjustment

The BGD258 Series has a blank plate mounted onto the bottom of the body casting for applications where adjustment control is not needed or for applications where separate adjustment control is already provided.

Mounting

The BGD258 valve may be mounted on a horizontal manifold with the magnetic operators (solenoid coils) pointed up (vertical) or in any position not exceeding 90° from the vertical (Figure 2)

The valve also may be mounted on a vertical manifold in any position around its axis. Do not install the solenoid actuator upside down. Install the valve on a horizontal manifold wherever possible.

Dimensions

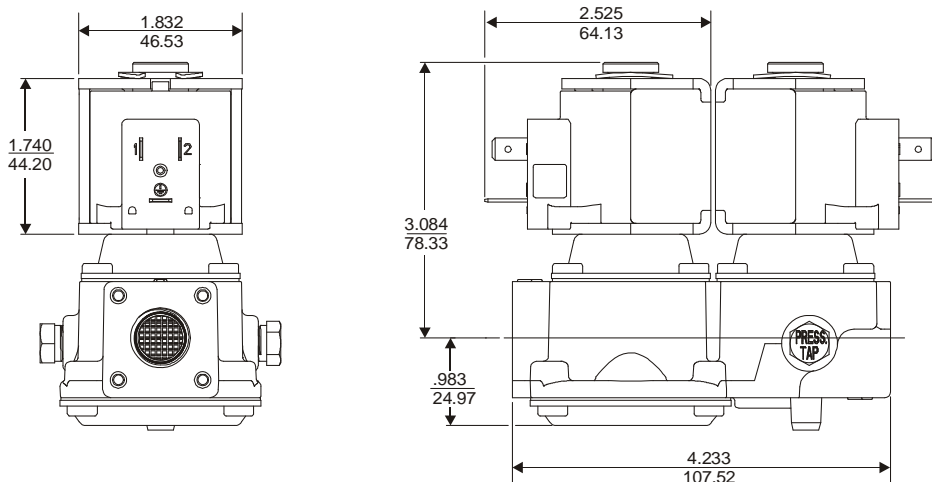
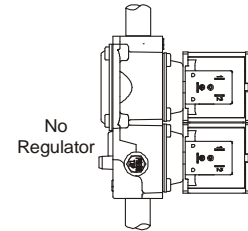
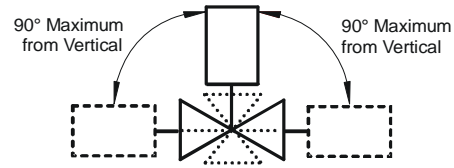


Figure 3: BDG258 Gas Valve, in. (mm)



Vertical mounting may be 360° around its axis with the gas flow either up or down, but always in the direction of the arrow.

Figure 2: BGD258 Mounting Positions

Repairs and Replacement

Table 1: Replacement Solenoid Coil

Part Number	Description
RSDA16A-12	12 VDC; 50/60 Hz; 2-pin 15 VA Coil
RSDA16A-25	25 VAC; 50/60 Hz; 3-pin 15 VA Coil
RSDA16A-120	120 VAC; 50/60 Hz; 3-pin 15 VA Coil
RSDA16A-240	240 VAC; 50/60 Hz; 3-pin 15 VA Coil

Do not make field repairs except for the replacement of the solenoid coils.

For a replacement coil or gas valve, contact the original equipment manufacturer or the nearest BASO Gas Products distributor.

Wiring

The BGD278 valve is supplied with 3-tab or 2-tab electrical connections. The tabs of the solenoid coil are male tag terminals, and electrical connections should be made using 6.35 x 0.8 mm (1/4 in.) female, fully insulated push-on terminals. The earth ground terminal is clearly labeled with the earth ground symbol.

The electrical wiring to a twin solenoid valve from an electronic intermittent proven pilot ignition system is comprised of two lines; a common and an independent earth ground. Wiring can be done using a single 4-wire cable. The wiring connections for a 4-wire cable are shown in Figure 4.

Route the electrical cable for the valve solenoid from the burner sequence control to the valve and make wiring connections in accordance with Figure 4.

Electrical connections can also be made using pre-wired electrical plugs (DIN 43650 [ISO 4400]).

All wiring must be in accordance with national and local electrical codes and regulations.

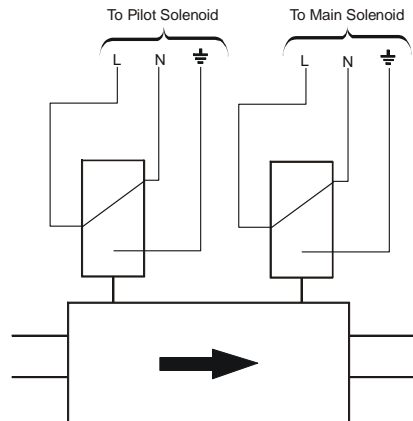
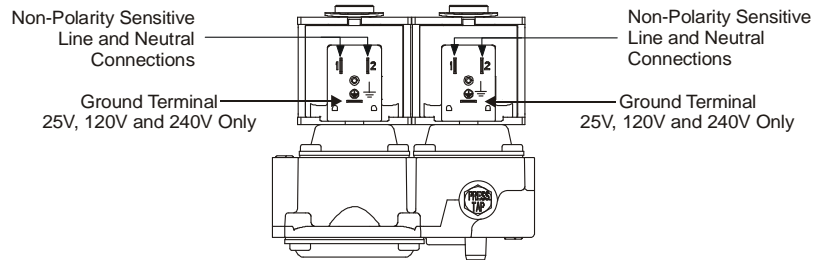
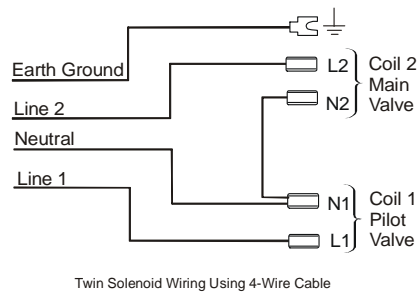


Figure 4: 3-Pin Electrical Connections

Ordering Information

B	G	D	2	5	8	-	-	-	-	-	-	-	-	-	-	-	-
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See the next page for Customer Specific Requirements.

Letter	Regulation Configuration
A =	No Adjustment

Letter	Solenoid Rating
E =	12 VDC, 15 VA
F =	25 VAC, 50/60 Hz, 15 VA
G =	120 VAC, 50/60 Hz, 15 VA
H =	240 VAC, 50/60 Hz, 15 VA

Letter	Capacity @ 0.2 PSI Pressure Drop Rating		Inlet and Outlet (Strainer)
	Btu/hr	kW	
A =	300,000	88	3/8-18 x 3/8-18 in. NPT (With Inlet Strainer)
B =	350,000	102.5	1/2-14 x 1/2-14 in. NPT (With Inlet Strainer)
D =	300,000	88	3/8-19 x 3/8-19 BSPP (With Inlet Strainer)
E =	350,000	102.5	1/2-14 x 1/2-14 BSPP (With Inlet Strainer)

Figure 5: BGD258 Valve Ordering Matrix

Ordering Information (Continued)

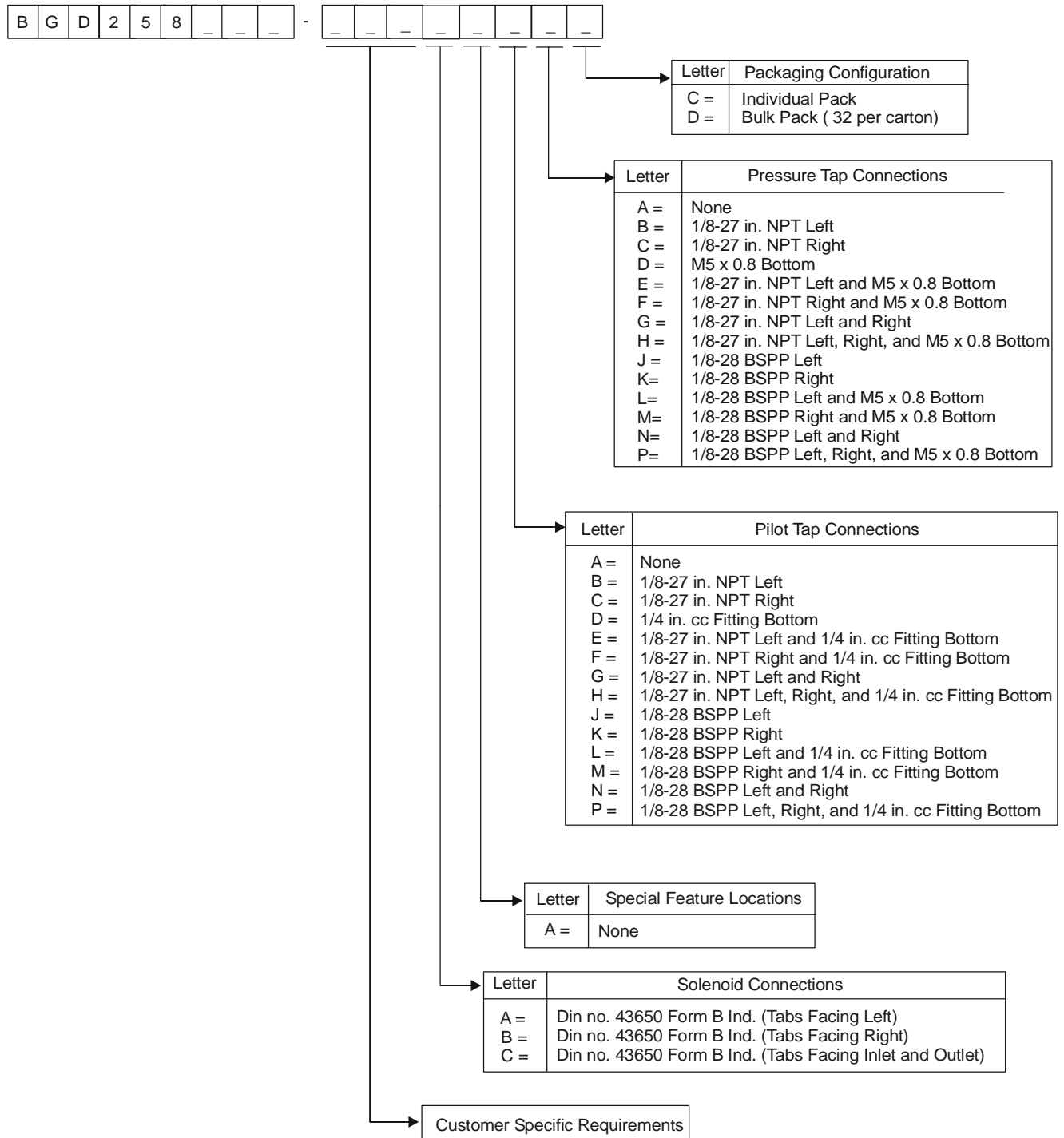


Figure 6: BGD258 Valve Ordering Matrix

Technical Specifications

Product	BGD258 Series BASOTROL CE Approved Class A Gas Valve
Types of Gas	2nd (Natural Gas), and 3rd (LP Gas) Family Gases
Permissible Ambient (Surface) Temperature	-29 to 79°C (-20 to 175°F)
Electrical Ratings	12 VDC, 1 .0A (not CE approved) 25 VAC, 50/60 Hz, 0.595A 120 VAC, 50/60 Hz, 0.13A 240 VAC, 50/60 Hz, 0.063A
Maximum Operating Pressure	North America: 2 psi Europe: 138 mbar
Reverse Pressure Ratings	150 mbar (15 kPa) (60 in. W.C.); Class A (EN 161)
Inlet Pipe Size	3/8 in. NPT or 1/2 in. NPT, 3/8 BSPP or 1/2 BSPP
Outlet Pipe Size	3/8 in. NPT or 1/2 in. NPT, 3/8 BSPP or 1/2 BSPP
Valve Torsion Group	Group 2 (EN 161)
Pressure Connection	1/8 in. NPT or M5 x 0.8 thread bottom
Dirt Strainer	0.9 mm (0.035 in.) Mesh
Operating Time Rating	100% Continuous
Valve Timings	Closing Time: ≤ 1 Second Opening Time: ≤ 1 Second Dead Time: < 1 Second
Power Rating	15 VA per Coil
Electrical Connection	3-Tab Solenoid Coil 2 x 6.35 mm (1/4 in.) Terminals + 6.35 mm (1/4 in.) Earth Ground Terminal 2-Pin Solenoid Coil 2 x 6.35 mm (1/4 in.) Terminals
Coil Insulation Class	Class F
Packaging	Bulk pack supplied to original equipment manufacturer (individual pack optional).
Bulk Pack Quantity	30 per carton
Bulk Pack Weight	35 kg (77 lb.) per carton
Agency Listings	CSA Certificate Number Pending EC Type Examination Certificate Number Pending
Specification Standards	EN 161 Standards Complying with the EMC Directive Standards Complying with the Low Voltage Directive ANSI Standards Z21.21 Canadian Standard CSA 6.5

Performance specifications are nominal and conform to acceptable industry standards. All agency certification of BASO products is performed under dry and controlled indoor environmental conditions. Use of BASO products beyond these conditions is not recommended and may void the warranty. Product must be protected if exposed to water (dripping, spraying, rain, etc.) or other harsh environments. The original equipment manufacturer or end user is responsible for the correct application of BASO products. Consult BASO Gas Products LLC for questionable applications. BASO Gas Products LLC shall not be liable for damages or product malfunctions resulting from misapplication or misuse of its products.

Refer to the *BGD Series BASOTROL CE Approved Gas Valve Installation Instructions (Part No. BASO-INS-GM7000)* for necessary information on the installation, use, and servicing of this product.



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Published in U.S.A.