



# G195 Model Rev.B Series BASOTROL Combination Gas Valve with Manual Shutoff Valve

## Installation

**IMPORTANT:** These instructions are intended as a guide for qualified personnel installing or servicing BASO Gas Products. Carefully follow all instructions in this guide and all instructions on the appliance. Limit repairs, adjustments, and servicing to the operations listed in this guide or on the appliance.

**WARNING: Risk of Fire or Explosion.**  
The system must meet all applicable local, national, and regional regulations. Improper installation may cause gas leaks, explosions, property damage, and injuries.

**WARNING: Risk of Fire or Explosion.**  
To prevent leakage of upstream gas, shut off the gas supply at the main manual shutoff valve before installing or servicing the G195 Model Rev.B valve. Failure to shut off the gas supply can result in the release of gas during installation or servicing, which can lead to an explosion or fire, and may result in severe personal injury or death.

## Mounting

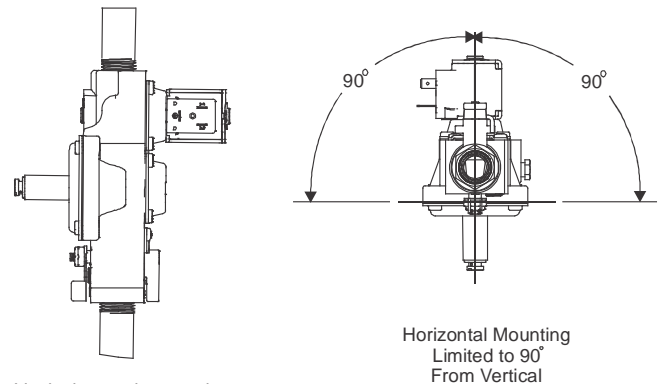
**CAUTION: Risk of Equipment Damage.**  
To prevent damage to the valve when mounting to pipework, do not use a wrench on any surface other than the casting flats provided at the inlet and outlet ends of the valve body.

To install the G195 valve:

1. Shut off power to the appliance.
2. Shut off the gas at the main manual shutoff valve.
3. Label each wire with the correct terminal designation prior to disconnection.
4. Compare the voltage on the valve with the power source voltage to ensure the correct unit is being installed. For valves with 25-volt coils, use a National Electrical Code (NEC) Class 2 transformer.

**Note:** The transformer must be mounted to a grounded metal enclosure.

5. Mount the valve. The G195 Model Rev.B valve may be mounted on a horizontal manifold with the solenoid coil pointed up (vertical) or in any position not exceeding 90° from vertical. The valve may also be mounted on a vertical manifold in any position around its axis (See Figure 1). **Do not** install the solenoid coil upside down. Install vertically wherever possible.



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

**Figure 1: G195 Mounting Positions**

6. Thread pipe (the amount shown in Table 1) for insertion into the control. Do not thread the pipe too far. Valve distortion or malfunction may result if the pipe is inserted too deeply.

**Table 1: NPT Pipe Thread Length into Valve**

Pipe Size (NPT)	Thread Pipe Amount (in.)	Maximum Depth Pipe (in.)
3/8	1/2	3/8
1/2	3/4	1/2
3/4	13/16	3/4

7. For any threaded connections, threads of pipe and nipples must be smooth and free of tears and burrs. Steam clean all inside diameters of piping to remove foreign substances such as cutting oil or thread chips before installing into the valve. Apply a moderate amount of good quality pipe compound (do not use Teflon tape) to pipe only, leaving two end threads bare (see Figure 2). On LP installations use compound resistant to LP gas. A sediment trap should also be installed in accordance with the National Fuel Gas Code (ANSI Z223.1).

CORRECT



APPLY A MODERATE AMOUNT OF PIPE COMPOUND TO PIPE ONLY (LEAVE TWO END THREADS BARE).

WRONG

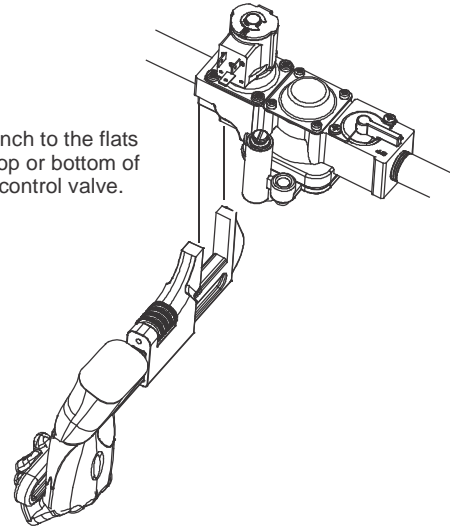


CAUTION: EXCESSIVE COMPOUND MAY BLOCK DISC OFF VALVE SEAT CAUSING LEAKS.

**Figure 2: Pipe Compound Application**

8. Ensure the gas flows through the valve body in the direction indicated by the arrow on the body. If the valve is installed with the gas flow in the opposite direction of the arrow, leakage can occur. Connect piping to the gas control inlet and outlet. Use a wrench on the square ends of the control. If a flange is used, place the wrench on the flange rather than on the control. **This process should be used for both the install and removal of the valve in a gas system** (see Figure 7). **Do not use the solenoids as leverage**
9. Connect the pilot tubing (when necessary) to the threaded pilot connection on the valve body and run the tube to the pilot burner within the appliance.

Apply wrench to the flats from the top or bottom of the gas control valve.



**Figure 3: Proper Use of a Wrench on a Gas Control**

**DO NOT USE THE SOLENOIDS FOR LEVERAGE**

**! WARNING: Risk of Explosion or Fire.** Verify that there are no gas leaks by testing with appropriate equipment. Never use a match or lighter to test for the presence of gas. Failure to test properly can lead to an explosion or fire and may result in severe personal injury or death.

10. Check for leakage before making any valve adjustments.
- a. Shut off the gas at the main manual shutoff valve and open the pressure connection between the manual shutoff valve and the G195 valve.
  - b. Connect air tubing with a maximum pressure of 1½ times the valve's maximum operating pressure (as indicated on the valve) to the open pressure connection.
  - c. Paint all valve body connections with a rich soap and water solution. If bubbles do not occur, remove the air tubing and close the pressure connection. If bubbles occur, this is an indication of a leak. To stop a leak, tighten joints and connections. The part must be replaced if the leak cannot be stopped.
11. Perform the *Checkout* section before leaving the installation.

## Wiring



### **CAUTION: Risk of Electric Shock.**

Disconnect power supply before making electrical connection to avoid electric shock or equipment damage. Ensure that the operating voltage is identical to the information on the product identification label.

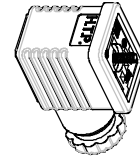
The G195 valve is supplied with a 3-tab electrical connection. The solenoid coil has male tabs and electrical connections should be made using 6.35 x 0.8 mm (1/4 in.) female, fully insulated, push-on terminals. The earth ground is clearly labeled.

The electrical wiring to a single 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 3-wire cable.

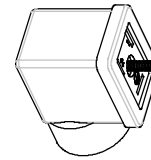
Route the electrical cable for the valve solenoid actuators from the burner sequence control to the valve and make wiring connections .

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

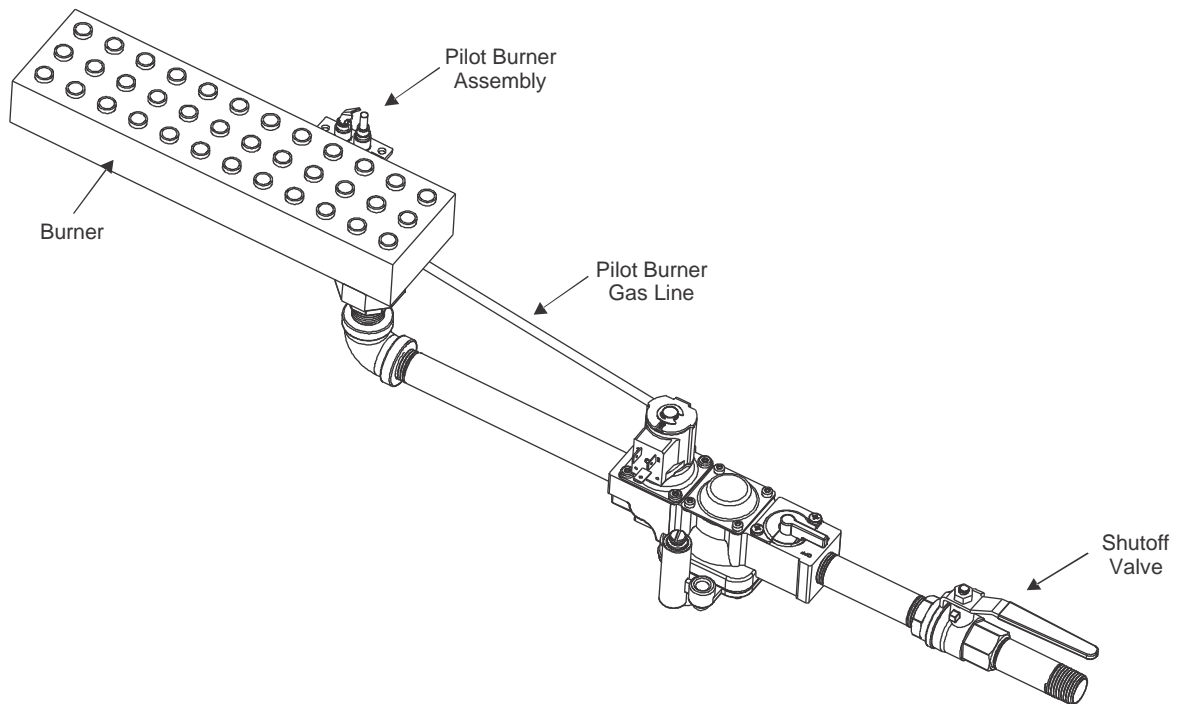
**Note:** All wiring must be in accordance with national and local electrical codes and regulations.



**Figure 4: SVC200 Wire Connect Strain Relief DIN Type Connector**



**Figure 5: SVC210 Conduit 1/2 NPT DIN Type Connector**



**Figure 6: Typical G195 Gas Valve Installation**

## Setup and Adjustments

### Checkout



#### **WARNING: Risk of Explosion or Fire.**

Follow this or an equivalent checkout procedure after installation. Before leaving the installation, verify that the gas valve functions properly and that the system has no gas leaks. Gas leaks can lead to an explosion or fire, and may result in severe personal injury or death.

Make sure all components are functioning properly by performing the following test:

1. Test all joints and connections for leaks with a rich soap and water solution.
2. Close the main upstream shutoff valve and wait at least 5 minutes for unburned gas to leave the appliance, then reopen the shutoff valve.
3. Turn on the main electrical power switch and close the thermostat contacts. The appliance should operate in accordance with the manufacturer's specified sequence of operation.
4. Turn the thermostat to a low dial setting to open the contacts. All burner flames should be extinguished.
5. Repeat Steps 3 and 4 three or more times.
6. Return the thermostat to a normal setting before leaving the installation.

### Regulator Adjustment

**IMPORTANT:** All adjustments must be made in conjunction with the gas appliance and in accordance with the appliance manufacturer's instructions. Only authorized personnel should make adjustments.

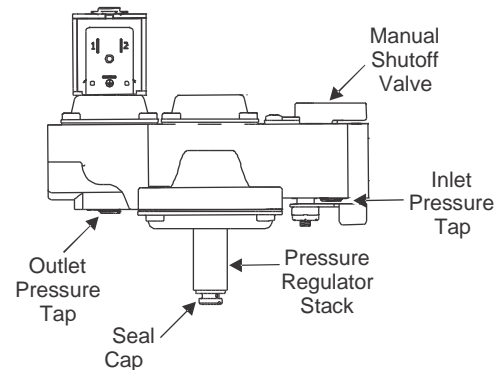


#### **WARNING: Risk of Explosion or Fire.**

The minimum flow rate of the valve must not be adjusted below the minimum safe working rate of the appliance. This may cause gas leaks, which can lead to an explosion or fire and may result in severe personal injury or death.

The pressure regulator has been set to a specified setting. The pressure regulator is adjustable. To apply a different setting follow these instructions:

1. Shut off all gas to the appliance.
2. Turn the thermostat to the lowest setting or the Off position.
3. Remove the pressure tap plug at the valve outlet (Figure 7) or in the manifold pipe downstream of the valve.



**Figure 7: G195 Redundant Combination Gas Valve Features**

4. The G195 valve can have a bottom adjust, right or left-handed top adjust spring pressure regulator. Right-hand or left-hand orientation is determined by the position of the adjustment when looking into the inlet connection of the valve.
5. The regulator controls the gas pressure at the valve outlet by positioning the regulator poppet for selected throughput flow and pressure. The valve outlet pressure acts on the regulator diaphragm, which balances against the preset regulator spring. Adjustment of the spring compression determines the valve outlet pressure and the throughput flow rate.
6. To adjust the outlet pressure, remove the leak-limiting seal cap to expose the adjusting screw (see Figure 7). Turn the screw (using a suitable screwdriver) in the clockwise direction to increase, or in the counterclockwise direction to decrease the outlet pressure of the valve.

## Repair and Replacement

**Table 2: Replacement Solenoid Coils**

Part Number	Description
RSDA95A-25	25 VAC; 50/60 Hz; 3-tab 10.5 VA Coil
RSDA95A-120	120 VAC; 50/60 Hz; 3-tab 10.5 VA Coil

Any attempt to repair this assembly, excepting solenoid coil replacement, voids the manufacturer's warranty. For replacement coils or gas valves contact the original equipment manufacturer or the nearest BASO Gas Products distributor. Refer to Table 2 for BASO Gas Products replacement Solenoid Coils.

### Maintenance Schedule

Preventive maintenance programs are an important part of maintaining optimum and safe function of your BASO products. Commercial cooking and other heating equipment can place a heavy cycling demand on gas safety controls.

Maintenance programs should include frequent checkout of the gas controls. Review the procedures as described in the *Installation, Check for Leakage* and *Setup and Adjustments* sections of this document.

Exposure to water, chemicals, dirt, heat and grease can all contribute to premature shut down of the gas controls.

The frequency of the maintenance must be determined by the appliance manufacturer where the controls are installed and the end user for each individual application.

Things to consider when determining a preventive maintenance program:

- Number of cycles a gas control will see annually. If more than 20,000 cycles, then the gas control should be checked monthly. If less than 20,000 cycles, then the gas control should be checked before every shutdown and restart process.
- Heavy grease, high heat, wash down exposure, and/or corrosive environment areas should be checked with a higher frequency to prevent premature shutdown from rapid deterioration.

Implementing a scheduled maintenance program reduces the risk of costly, unexpected shutdowns.

In all cases, gas controls must be replaced by an authorized licensed gas contractor. Repair or replacement of a gas control by anyone other than an authorized licensed gas contractor voids the manufacturer's warranty.

## Technical Specifications

<b>Product</b>	G195 Model Rev.B Series BASOTROL Combination Gas Valve with Manual Shutoff Valve			
<b>Types of Gas</b>	2nd (Natural Gas), and 3rd (LP Gas) Family Gases			
<b>Permissible Ambient Temperature (Min./Max.)</b>	-20 to 175°F (-29 to 79°C)			
<b>Electrical Ratings</b>	<b>10.5 VA Coil</b> 25 VAC, 50/60 Hz, 0.42A 120 VAC, 50/60 Hz, 0.088A			
<b>Rated Inlet Pressure</b>	0.5 psi (35 mbar)			
<b>Regulator Adjustment Range</b>	Top Adjust Regulators:	3 to 6 in. W.C. (7.5 to 15 mbar)	6 to 12 in. W.C. (15 to 30 mbar)	
	Bottom Adjust Regulators:	3 to 6 in. W.C. (7.5 to 15 mbar)	8 to 12 in. W.C. (20 to 30 mbar)	
<b>Body Connections</b>	3/8 or 1/2 in. NPT inlet 3/8, 1/2, or 3/4 in. NPT outlet			
<b>Pressure Taps</b>	1/8 in. NPT, plugged, inlet and outlet			
<b>Pilot Outlet</b>	1/8 in. NPT, left or right (1/4 in. cc also available)			
<b>Valve Body</b>	Aluminum			
<b>Power Rating</b>	10.5 VA per Coil			
<b>Electrical Connection</b>	3-Tab Solenoid Coil: 2 x 6.35 mm (1/4 in.) + 6.35 mm (1/4 in.) Earth Ground			
<b>Coil Insulation Class</b>	Class F			
<b>Packaging</b>	Bulk pack supplied to original equipment manufacturer (individual pack optional)			
<b>Bulk Pack Quantity</b>	18 per carton			
<b>Bulk Pack Weight</b>	39 lb (18 kg) per carton			
<b>Accessories</b>	Conversion Kits	LP gas to Natural gas:	Top Adjust Regulator	Y71QH-2
			Bottom Adjust Regulator	Y71QH-3
		Natural gas to LP gas:	Top Adjust Regulator	Y71GF-4
			Bottom Adjust Regulator	Y71GF-3
		Regulated to non-regulated:	Top or Bottom Adjust	Y71AA-5
<b>Agency Listings</b>	CSA (AGA/CGA) Certificate Number 229521-1656041			
<b>Specification Standards</b>	Standards Complying with the Directive Standards Complying with the Low Voltage Directive Canadian Standards CSA 6.5 and 6.20 ANSI Standards Z21.21 and Z21.78			

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.



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