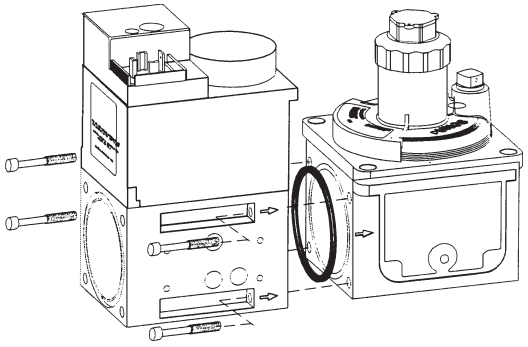
INSTALLATION

- **Read these instructions carefully._**
- **Failure to follow them and/or improper installation may cause explosion, property damage, and injuries.**
- **Installation must be done with the supervision of a licensed burner technician.**
- **The system must meet all applicable national and local code requirements.**
- **Check the ratings given in the specifications and on the regulator to make sure that it is suitable for your application.**
- **Never perform work if gas pressure or power is applied, or in the presence of an open flame.**
- **Protect surfaces. Make sure that seals and O-rings are clean and in good condition.**
- **Once installed, perform a complete checkout including a gas leak test.**
- **Verify proper operation after servicing.**
- **The main gas supply must be shut off before starting the installation.**
- **Examine the regulator for shipping damage.**
- **The inside of the regulator and piping must be clean and free of dirt.**
- **Remove all dirt and debris before installing the regulator. Failure to remove dirt/debris could result in regulator damage or improper performance.**

Recommended Procedure to Mount the Regulator to a Double Shutoff Valve

- Replace the O-ring from the groove on the side of the valve body with the O-ring supplied with the mounting kit.
- Make sure the O-ring and the groove are clean and in good condition.
- Install the regulator and valve with the gas flow matching the direction indicated by the arrows on the castings.



- **CAUTION**: If the flow is not in the same direction of the arrows, the regulator and/or the valve may not operate properly.
- Attach the regulator to the valve body using the socket cap screws supplied in the mounting kit.
- Use a 5 mm/6 mm ball head Allen wrench for the mounting screws.
- Tighten the screws clockwise.
- Do not overtighten the screws. Follow the maximum torque values listed below.

screw size	M6	M8
max. torque (lb-in.)	62	134

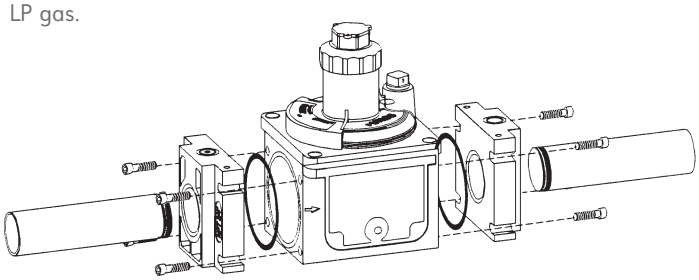
- After installation is completed perform a leak test to verify that no leakage occurs.

Mounting kits:

	R690-2910 to R947-3010	**R690-2905 to R947-3020**
1 O-ring	57 × 3 × 5.5 mm	76 × 3.5 × 6.7 mm
4 socket head screws	M6 × 35 mm	M8 × 45 mm
Order #	D 219 967	D 219 968

Recommended Procedure to Mount the Flange

- Use new, properly reamed pipe free of chips.
- Apply good quality pipe dope, putting a moderate amount on the male threads only. If pipe dope lodges on the regulator seat, it will prevent proper operation. If using LP gas, use pipe dope resistant to action of LP gas.



- Do not thread pipe too far. Regulator distortion and/or malfunction may result from excess pipe in the regulator.
- Apply counter pressure when screwing the pipe into the flanges.
- Apply a parallel jaw wrench only to the flat on the flange.
- Do not overtighten the pipe. Follow the maximum torque values listed below.

NPT pipe size	½"	¾"	1"	1¼"	1½"	2"
torque (lb-in.)	375	560	750	875	940	1190

- Make sure the O-ring and the groove are clean and in good condition.
- Insert the 57 × 3 mm (76 × 3.5 mm) O-ring(s) supplied with the regulator mounting kit into the grooves on the side of the regulator body.
- Install the regulator with the gas flow matching the direction indicated by the arrows on the casting.
- **CAUTION:** If the flow is not in the same direction of the arrows, the regulator may not operate.
- Clean the mounting surface of the flange. Make sure it is in good condition.
- Attach the regulator to the flange using the socket cap screws supplied in the mounting kit.
- Use the screws as indicated on the label on the mounting kit.
- Use a 5 mm/6 mm hex key wrench for the mounting screws.
- Do not overtighten the screws. Follow the maximum torque values listed.
- Perform a leak test to verify that no leakage occurs.

Vent Line

- On indoor installations requiring venting outdoors, run the piping as short and direct as possible.
- With natural gas or other hazardous gases, vent to a safe place outdoors in case gas should accidentally be discharged.
- Screen and protect the opening outdoors to guard against any blocking of the vent line.
- **CAUTION**: Where vent lines are used it is the users responsibility to assure that each regulator is individually vented.