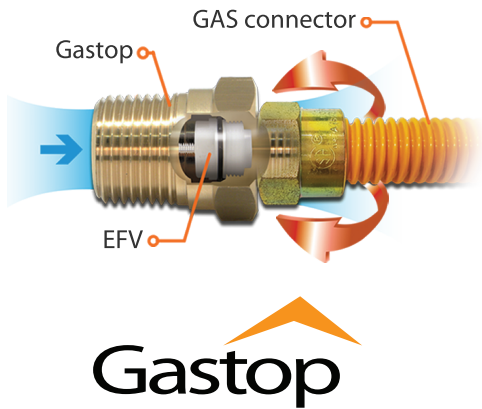


Stainless Steel Flexible Gas Connectors with EFV (Excess Flow Valve)



In the case of a gas line rupture or a disconnect from the appliance, Easyflex EFV detects increase of gas flow and immediately shut-off the supply of gas. Gas flow is controlled only at the appliance where the problem exists. The valve will remain activated until the gas line is properly repaired.

- Automatic Activation
- Automatic Reset
- No Battery Needed
- 100% Performance Tested

MATERIAL

Tubing	Stainless Steel 304
Coating	Epoxy
Fitting	Zinc-Plated Steel S45C

PRESSURE TEMPERATURE

Rated Operating Temperature	-40°F to 150°F (-40°C to 65°C)
Rated Pressure	0.5 psi

AVAILABILITY

Types	Stainless Steel (Uncoated) Yellow Epoxy Coated Stainless Steel Black Epoxy Coated Stainless Steel			Lengths	12", 18", 24", 30", 36", 48", 60", 72"
Flare End / Tube Dia.	3/8" OD (1/4" ID)	1/2" OD (3/8" ID)	5/8" OD (1/2" ID)		1" OD (3/4" ID)
Fittings	3/8" MIP EFV (1/4" Tapped FIP) 3/8" FIP EFV 1/2" MIP EFV (3/8" Tapped FIP) 1/2" FIP EFV	3/8" MIP EFV (1/4" Tapped FIP) 3/8" FIP EFV 1/2" MIP EFV (3/8" Tapped FIP) 1/2" FIP EFV	1/2" MIP EFV (3/8" Tapped FIP) 1/2" FIP EFV 3/4" MIP EFV (1/2" Tapped FIP) 3/4" FIP EFV	3/4" MIP EFV (1/2" Tapped FIP) 3/4" FIP EFV 1" MIP EFV (3/4" Tapped FIP) 1" FIP EFV	

CERTIFICATIONS

- ANSI Z 21.24/ CSA 6.10 Connectors for Gas Appliances
- ANSI Z 21.75/ CSA 6.27 Connectors for Outdoor Appliances and Manufactured Homes
- ANSI Z 21.93/ CSA 6.30 Excess Flow Valves for Natural and LP Gas with Pressures of Up to 5 psig

Required System Components

- Easyflex Gas Connector with EFV

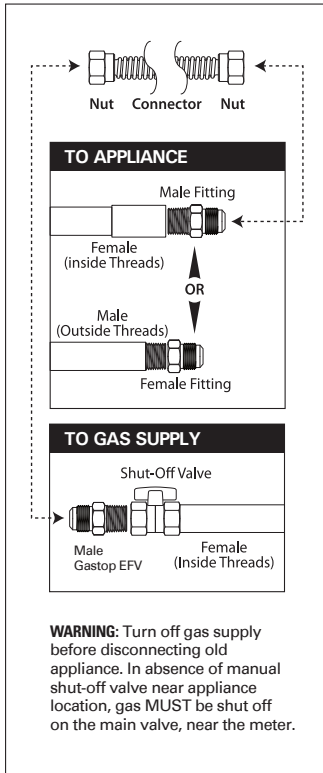
Required Tools

- Two 10" adjustable wrenches
- Leak detection solution
- Pipe thread sealant
- Cleaning rag

Note

- Fuel codes require installation of a manual shut-off valve in the same room that is within easy reach of the appliance (i.e within 6 feet).
- A shut-off valve is not included with this connector.

FIGURE 1



CAUTION & WARNING

- The installation MUST BE compliant with the National Fuel Gas Code (ANSI Z233.1) and local installation codes.
- The installation and testing MUST be performed by a qualified professional. Make sure that gas supply and gas valves of the appliances are shut off before the installation of gas connector.
- **DO NOT REUSE any connectors, fittings and valves.** They are designed for use on original installation only. Removal of connector and any additional handling may damage connector making it unsafe and unreliable for reuse.
- **DO NOT use this connector if it has been in a fire.** Fire can damage the connector making it unsafe for reuse.
- **DO NOT use this connector on appliances equipped with rollers or casters.** This connector is designed for limited movement after installation. Repeated bending, flexing or extreme vibration can cause metal fatigue and must be avoided.
- **DO NOT use connectors to make a direct connection to LP gas containers.** Connection MUST be made to the regulator device only.
- **DO NOT use connector on appliance in moving vehicles** such as RV's, trailers, etc. However, this product may be used in manufactured housing, like permanent residence mobile homes.
- **DO NOT use this connector with infrared radiant tube heaters.** Cyclic movement of heater may cause connector to fail.
- **Keep cleaning solvents containing ammonia or chlorine away from uncoated or damaged gas connectors. DO NOT store** these solutions near connectors or use the connectors near a swimming pool or hot tub. If exposed to these chemical products, rinse the connectors thoroughly with water.
- **DO NOT join two or more connectors to make a longer connector.**
- **DO NOT stretch connector to make it fit.** Connector should be of adequate length to reach from the gas supply line to the appliance without stretching.
- **DO NOT conceal connector or run connector through enclosed outdoor BBQ pits, walls, partitions, floors or appliance panels.** The gas outlet must be in the same room as appliance.
- **DO NOT assemble gas connector nuts directly to male pipe threads** of gas supply pipe or appliance. Install connector using the fittings provided. (See FIGURE 1)

SIZING THE CONNECTOR TO APPLIANCE

Using the chart below, select the gas connector with the minimum flow capacity that is HIGHER than the input rating of the appliance. However, select the gas connector with the flow capacity that is CLOSEST TO the input rating of the appliance. If the gas connector is not properly sized to the appliance, the Gastop EFV may not activate in the event of a gas line rupture or disconnection. If the gas connector is under sized for the appliance, EFV may activate prematurely restricting gas flow during normal operation of the appliance. **DO NOT CONNECT Gastop EFV DIRECTLY TO THE APPLIANCE.** The EFV must be installed between the gas supply pipe (Inlet) and the flexible gas connector as shown on Figure1 above.

CONNECTOR MINIMUM FLOW CAPACITY

Straight Length Capacity (BTU/Hr., 0.64 Sp Gr., 1,000 BTU per cubic ft. at 0.5 inch W.C. pressure drop)

Series	Nominal OD	Nominal ID	12"	18"	24"	30"	36"	48"	60"	72"
014	3/8"	1/4"	48,000	43,800	40,000	36,400	33,400	28,300	24,900	23,100
038	1/2"	3/8"	102,000	93,100	85,000	77,100	71,100	60,500	53,200	49,100
012	5/8"	1/2"	180,000	164,200	150,000	136,000	125,000	106,000	93,200	86,000
034	1"	3/4"	290,900	290,900	290,900	270,500	255,900	215,000	197,400	173,900

The above flow capacities are the minimum performance requirement per ANSI Z21.24 CSA 6.10 & ANSI Z21.75-CSA 6.27. Easyflex Gas Connectors exceed these minimum flow capacity requirements.

INSTALLATION INSTRUCTIONS

1. Clean all pipe threads with a soft bristle brush and rag to ensure connections are free of any debris such as metal shaving, rust, dirt, oil, or water.
2. Apply pipe thread sealant to the male pipe threads of connection. DO NOT apply grease, oil, sealant, or tape to flare ends of fitting or shut-off valve. Sealant and tape will prevent this connection from sealing properly.



- **WARNING:** Turn off gas supply before disconnection old appliance. In absence of manual shut-off valve near appliance location, gas **MUST** be shut off on the main valve, near the meter.



- **WARNING:** DO NOT USE matches, candles, open flames or other sources of ignition during product installation. A spark or flame may ignite gas vapors causing property damage and/or personal injury including death. Extinguish all pilot lights within 50ft. before proceeding with appliance installation.

3. Thread steel fitting to manual shut-off valve and other steel fitting onto appliance regulator. Thread flare nuts of gas connector onto shut-off valve and steel fitting. Wrench tighten all connections. DO NOT use a pipe wrench on the connector flare nut.

*If necessary, thread new manual shut-off valve onto gas supply pipe that is wrench tight. Use a wrench only on the hex surfaces or the fittings.



- **CAUTION:** DO NOT stretch the connector to make it fit. Connector must be long enough to allow the appliance to be positioned at its farthest anticipated connected distance from the gas supply without stretching, twisting, or bending that is smaller than a 1-1/2 internal diameter (i.e. approximately the diameter of a golf ball).
- **CAUTION:** DO NOT trap connector against sharp edges or corners.
- **CAUTION:** DO NOT kink, or bend connector sharply on right angles.

4. Turn manual shut-off valve on to allow gas to enter the system after installation.



- **WARNING:** DO NOT TURN ON APPLIANCE until all connections have been leak tested properly.
- **WARNING:** DO NOT USE lighters, matches, candles, open flames or other sources of ignition to leak test connections!
- **CAUTION:** Please be sure to open the manual gas shut-off valve **SLOWLY** and **GRADUALLY** to allow gas to enter the system. If gas enters system too quickly, the GASTOP EFV may activate pre-maturely. If this occurs, the EFV will re-open in less than 60 seconds with clicking sound.

5. Test all connections with non-corrosive gas leak test solution; bubbles with indicate a leak. If a leak is detected, turn off gas supply before further tightening connections. Water rinse and towel dry connection once test is complete.



TEST

Wait at least 10 minutes or more to be certain that all vapors have dissipated. If the leak test confirms connections do not leak gas and you do not smell any gas. THEN light pilot(s) and turn on appliance again.
If you smell gas, turn off the gas at main shut-off valve and call a licensed plumber to check for leaks and fix any other problems.

- **CAUTION:** Rinse gas connector with water and towel dry after leak testing connections. Soap and test solutions may cause an uncoated connector to corrode.
- **CAUTION:** Wait at least 10 minutes to light pilot(s) once you have leak tested all connections and have found no leaks, to be certain that all vapors have dissipated
- **DANGER:** Fuel gases are colorless, tasteless and in its pure state, odorless. They are odorized (rotten egg smell) so that their presence can be detected. LP gases are heavier than air and dissipate slower than natural or manufactured gases. LP gas, if released in quantity, will accumulate in low-lying areas such as a basement or crawl space

DISCLAIMER: GASTOP EXCESS FLOW VALVE WILL NOT ACTIVATE BY DESIGN UNDER THE FOLLOWING CIRCUMSTANCES:

- The gas connector assembly has small leaks such as pin hole leaks caused by cracks or loose connections that lead the gas flow to fall below normal operating capacity of the appliance.
- The gas appliance malfunctions.
- The EFV has been contaminated with chemical residues such as pipe thread sealant.
- The manual gas shut-off valve is partially opened. There is a pipe break or damage that has occurred upstream of the GASTOP excess flow valve, that prevents sufficient gas flow through the valve.
- There is an insufficient gas flow from an INCORRECTLY-sized gas piping system.
- The gas flow through the Gastop EFV is in the wrong direction. The device must be installed so that the arrows point in the direction of gas flow.
- The GASTOP EFV has been damaged, exposed to fire or there has been installation error.

PLEASE CAREFULLY REVIEW AND FOLLOW ALL INSTRUCTIONS THROUGHOUT THE ENTIRE INSTALLATION PROCESS! SHOULD YOU HAVE ANY QUESTIONS, PLEASE FEEL FREE TO CONTACT EASYFLEX.

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