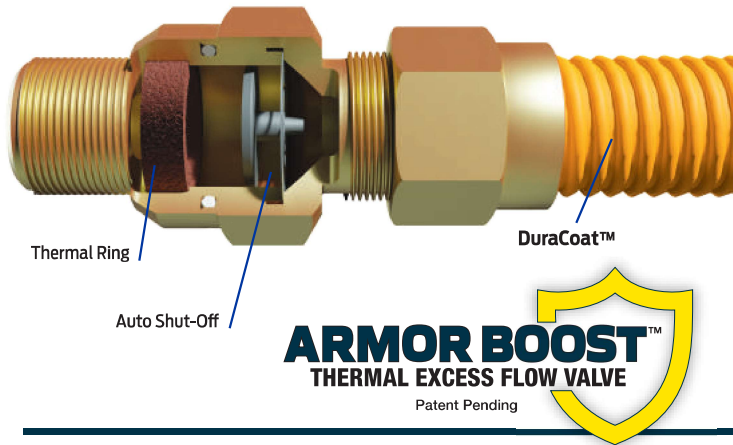


MAKE THE RIGHT CHOICE



BOOST YOUR PEACE OF MIND.

Eastman has designed a safety valve to help protect you and your family from catastrophic ruptures or disconnects in your gas line. The ArmorBoost valve immediately restricts gas flow to help protect you from build-up of flammable gas. The valve will remain activated until the gas line is properly repaired. For added protection, ArmorBoost is armed with a special fire safe thermal ring that expands to stop gas flow when extreme temperatures of 350° + are reached.

High Performance **DuraCoat™** Epoxy Coating provides extra protection from corrosion, chemical stains from common household products, UV rays and is approved for indoor/out-door use.

MADE RIGHT. MADE TO LAST.

In the case of a gas line rupture or a disconnect from the appliance, the Eastman ARMOR BOOST™ thermal excess flow valve will immediately shut-off the supply of gas. The flow of gas is controlled only at the appliance where the problem exists. The valve will remain in the closed position until the gas line has been properly repaired.

• Activates Automatically • Resets Automatically • Heat activated shut-off • 100% Performance Tested

Connector Types			Connector Lengths			
Stainless Steel (Uncoated)			12", 18", 24", 30", 36", 48", 60", 72"			
Yellow Epoxy Coated Stainless Steel						
Black Epoxy Coated Stainless Steel						
EFV Model #	Nominal OD Flare	Inlet	Maximum flow capacity	Flow Capacity @ 0.5" WC PD	Rated Trip Flow Horizontal, Vertical Up, Vertical Down	Maximum bypass flow rate at 0.5 psi
1050VB	3/8" OD Flare (5/8"-18UNF-2A)	1/2" MIP (tapped 3/8" FIP)	75,000 Btu/h @ 0.63 PD	66,800 Btu/h	101,000 Btu/h	2.5 SCFH
1050FB						
1051VB		1/2" FIP				
1051FB						
1053VB		3/8" FIP				
1053FB						
2050VB	1/2" OD Flare (3/4"-16UNF-2A)	1/2" MIP (tapped 3/8" FIP)	123,000 Btu/h @ 0.74 PD	111,000 Btu/h	223,000 Btu/h	2.5 SCFH
2050FB						
2051VB		1/2" FIP				
2051FB						
2055VB		3/4" FIP				
2055FB						
2054VB		3/4" MIP (tapped 1/2" FIP)				
2054FB						
Pressure & Temperature			For use with natural & LP gas with pressure up to 5 psig EFV Type: EFVB			
Rated Operating Temperature			-40°F to 150°F (-40°C to 65°C)			
Max Operating Pressure			0.5 psi			
Min. Operating Pressure			0.14 psi			

Connector Types			Connector Lengths			
Stainless Steel (Uncoated)			12", 18", 24", 30", 36", 48", 60", 72"			
Yellow Epoxy Coated Stainless Steel						
Black Epoxy Coated Stainless Steel						
EFV Model #	Nominal OD Flare	Inlet	Maximum flow capacity	Flow Capacity @ 0.5" WC PD	Rated Trip Flow Horizontal, Vertical Up, Vertical Down	Maximum bypass flow rate at 0.5 psi
3054VB	5/8" OD Flare (15/16"-16UNF-2A)	3/4" MIP (tapped 1/2" FIP)	180,000 Btu/h @ 1.21 PD	122,500 Btu/h	217,000 Btu/h	2.5 SCFH
3054FB						
3050VB		1/2" MIP (tapped 3/8" FIP)				
3050FB						
3051VB		1/2" FIP				
3051FB						
3055VB		3/4" FIP				
3055FB						
4054VB	1" OD Flare (1- 1/8"-16UNF-2A)	3/4" MIP (tapped 1/2" FIP)	260,000 Btu/h @ 1.96 PD	159,000 Btu/h	290,000 Btu/h	2.5 SCFH
4054FB						
4055VB		3/4" FIP				
4055FB						
4056VB		1"MIP(tapped 3/4" FIP)				
4056FB						
4057VB		1" FIP				
4057FB						
Pressure & Temperature			For use with natural & LP gas with pressure up to 5 psig EFV Type: EFVB			
Rated Operating Temperature			-40°F to 150°F (-40°C to 65°C)			
Max Operating Pressure			0.5 psi			
Min. Operating Pressure			0.14 psi			
Certifications						

ANSI Z 21.24/ CSA 6.10 Connectors for Gas Appliances

ANSI Z 21.75/ CSA 6.27 Connectors for Outdoor Appliances and ANSI Z 21.93/ CSA 6.30 Excess Flow Gas Valves

ANSI Z 21.93/ CSA 6.30 Excess Flow Gas Valves

The excess flow valve has a rated trip flow that is higher than the open-ended flow of the piping system.

Required System Components

- Eastman Gas Connector with EFV

Required Tools

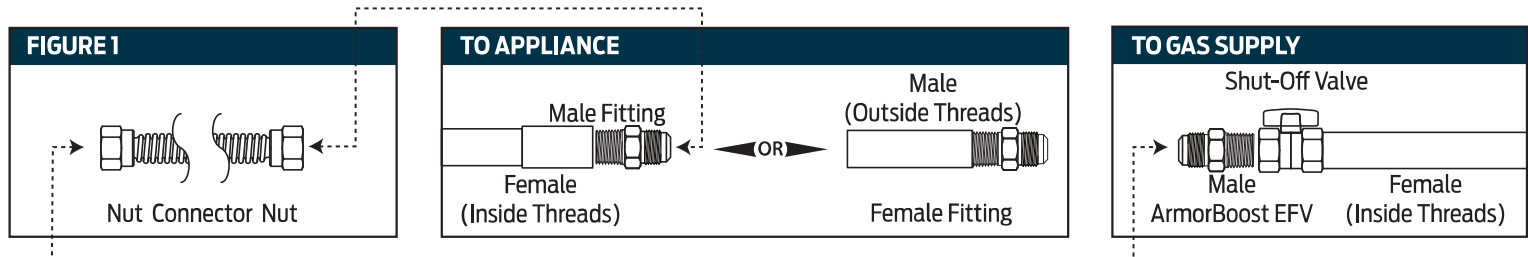
- Two 10" adjustable wrenches
- Leak detection solution
- Pipe thread sealant
- Cleaning rag

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.

CAUTION & WARNING

- The installation MUST BE complaint 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.
- The excess flow valve shall be for use only in its original installation and location. **DO NOT REUSE** the excess flow valve for another installation or move it to a different location within the same piping system.
- **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)
- If the excess flow valve has been damaged and is no longer in operating condition, the excess flow valve must be replaced.



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

Measure

Determine the length needed to reach from the appliance inlet to the gas supply. Allow additional length to access behind the appliance.

*Local codes may limit the maximum length, check all local and applicable codes before installation.

Check Appliance

Identify the manufacturer label on your appliance to determine the gas input rating. Select the correct length and Btu/hr rating that is greater than your appliance. (See below chart)

Match

Make sure fittings included match up to the gas supply and inlet of the appliance.

Be SAFE

Read and understand the installation instructions! Failure to follow the instructions can result in product failure, property damage and/or personal injury.

Mide

Determina la longitud necesaria para llegar desde la entrada del aparato hasta el suministro de gas. Agregar largo suficiente para permitir el acceso detrás del electrodoméstico.

*Los códigos locales pueden limitar la longitud máxima, verifica todos los códigos locales y aplicables antes de la instalación.

Verifica el Electrodoméstico

Busca la etiqueta de fabricación de tu electrodoméstico para determinar la clasificación de entrada de gas. Selecciona la longitud correcta y la clasificación de Btu/h que sea mayor que la de tu electrodoméstico. (Vea el cuadro a continuación)

Correspondencia

Asegúrate de que los conectores incluidos correspondan con el suministro de gas y la entrada del aparato.

Ten CUIDADO

¡Lee y comprende las instrucciones de instalación! No seguir las instrucciones puede resultar en fallas del producto, daños a la propiedad y/o lesiones personales.

OD (in)	ID (in)	Straight Length Capacity in BTU/HR							
		12"	18"	24"	30"	36"	48"	60"	72"
3/8"	1/4"	48,000	43,800	40,000	36,400	33,400	28,300	24,900	23,100
1/2"	3/8"	102,000	93,100	85,000	77,100	71,100	60,500	53,200	49,100
5/8"	1/2"	180,000	164,200	150,000	136,000	125,000	106,000	93,200	86,000
1"	3/4"			290,900	270,500	255,900	215,000	197,400	173,900

This connector meets or exceeds the minimum allowable capacity as determined under test condition specified in ANSI Z21.24/CSA6.10. These connectors with the highlighted capacities above are not suitable for radiant tube heaters in the US. Select a connector on the chart above that has a larger flow capacity than the gas rating of your appliance.

Este conector cumple o excede la capacidad mínima permitida según se determina en la condición de prueba especificada en ANSI Z21.24/CSA6.10. Estos conectores con las capacidades resaltadas anteriormente no son adecuados para calentadores de tubo radiante en los EE. UU. Selecciona un conector en la tabla anterior que tenga una capacidad de flujo mayor que la clasificación de gas de tu electrodoméstico.

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

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 tighten. 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 ARMOR BOOST™ 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.
- The above testing should be performed in accordance with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, Section 8.2, Piping system, appliance and equipment leakage test, and Section 8.3, Purging.

WARNING – The open end of the piping systems being tested shall not discharge into confined areas where there are ignition sources.

DISCLAIMER: ARMOR BOOST™ 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 ARMOR BOOST™ EFV 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 ARMOR BOOST™ EFV is in the wrong direction. The device must be installed so that the arrows point in the direction of gas flow.
- The ARMOR BOOST™ EFV has been damaged, exposed to fire or there has been installation error.
- A partial break in the downstream gas line is not large enough to allow an open-ended flow of gas and activate the excess flow valve.

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