Introduction

This installation guide provides instructions for installation, startup and adjustment. To receive a copy of the Instruction Manual, contact your local Sales Office or view a copy at www.fisher.com. For further information refer to: 119 Series Instruction Manual, D100261X012.

PED/PE(S)R Categories

This product may be used as a safety accessory with pressure equipment in the following categories. It may also be used outside of these Directives using Sound Engineering Practice (SEP) per table below. For information on the current PED/PE(S)R revision, see Bulletin: *D103053X012*.

PRODUCT SIZE	CATEGORIES	FLUID TYPE
DN 20 and 25 / NPS 3/4 and 1	SEP	1

Specifications

Available Configuration

Type 119: Direct-operated valve used for on-off or throttling control of noncorrosive or mildly corrosive liquids and gases

Type 119EZ: Direct-operated valve with adjustable opening speed for reliable startup operation on gas burner systems

Type 119EZS: Type 119EZ equipped with solenoid for valve to be operated by local control system

Body Sizes and End Connection Styles

Type 119:

BODY SIZE, NPT	BODY MATERIAL
3/4	Cast iron, WCC steel
1	
1-1/4	Cast iron

Types 119EZ and 119EZS:

BODY SIZE, NPT	BODY MATERIAL
1	Cast iron, CF8M Stainless steel

Maximum Inlet Pressure(1)

10.3 bar / 150 psig

Spring Ranges

0.2 to 1.0 bar / 3 to 5 psig
0.3 to 1.4 bar / 5 to 20 psig
0.3 to 2.4 bar / 5 to 35 psig
2.1 to 4.1 bar / 30 to 60 psig

Maximum Control Pressure to Diaphragm

10.3 bar / 150 psig

Maximum Pressure Drop(1)

10.3 bar / 150 psig for all port diameters
7.9 bar / 115 psig for Type 119EZS with ASCO™ 8320 Series solenoid

Proof Test Pressure

All Pressure Retaining Components have been proof tested per Pressure Equipment Directive and Pressure Equipment (Safety) Regulation.

Material Temperature Capabilities(1)(2)

Type 119:

MATERIAL	TEMPERATURE RANGE
Nitrile (NBR)	-29 to 82°C / -20 to 180°F
Fluorocarbon (FKM)(3)	-18 to 121°C / 0 to 250°F

Types 119EZ and 119EZS:

MATERIAL	TEMPERATURE RANGE
Nitrile (NBR)(4)	-40 to 82°C / -40 to 180°F
Fluorocarbon (FKM)(3)	-18 to 121°C / 0 to 250°F

Type 119EZS Solenoid Temperature Capabilities(1)

ASCO 8320 Series Solenoid:
0 to 52°C / 32 to 125°F

ASCO 8314 Series Solenoid:
-25 to 55°C / -13 to 131°F

Installation

⚠ WARNING

Only qualified personnel should install or service a valve. Valves should be installed, operated and maintained in accordance with international and applicable codes and regulations, and Emerson Process Management Regulator Technologies Inc. instructions.

If the valve vents fluid or a leak develops in the system, it indicates that service is required. Failure to take the valve out of service immediately may create a hazardous condition.

Personal injury, equipment damage or leakage due to escaping fluid or bursting of pressure-containing parts may result if this valve is overpressured or is installed where service conditions could exceed the limits given in the Specifications section, or where conditions exceed any ratings of the adjacent piping or piping connections.

1. The pressure/temperature limits in this Installation Guide, ASCO solenoid documentation and any applicable standard or code limitation should not be exceeded.
2. Pressure and/or the body end connection may decrease these maximum temperatures.
3. Not for use with hot water or Ammonia (NH_3).
4. Minimum temperature for cast iron body is -29°C / -20°F.

To avoid such injury or damage, provide pressurerelieving or pressure-limiting devices (as required by the appropriate code, regulation or standard) to prevent service conditions from exceeding limits.

Additionally, physical damage to the valve could result in personal injury and property damage due to escaping fluid. To avoid such injury and damage, install the valve in a safe location.

Clean out all pipelines before installation of the valve and check to be sure the valve has not been damaged or has collected foreign material during shipping. For NPT bodies, apply pipe compound to the external pipe threads. For flanged bodies, use suitable line gaskets and approved piping and bolting practices. Install the valve in any position desired, unless otherwise specified, but be sure flow through the body is in the direction indicated by the arrow on the body.

Note

It is important that the valve be installed so that the vent hole in the spring case is unobstructed at all times. For outdoor installations, the valve should be located away from vehicular traffic and positioned so that water, ice and other foreign materials cannot enter the spring case through the vent. Avoid placing the valve beneath eaves or downspouts and be sure it is above the probable snow level.

Overpressure Protection

The recommended pressure limitations are stamped on the valve nameplate. Some type of overpressure protection is needed if the actual inlet pressure exceeds the maximum operating outlet pressure rating. Overpressure protection should also be provided if the valve inlet pressure is greater than the safe working pressure of the downstream equipment.

Valve operation below the maximum pressure limitations does not preclude the possibility of damage from external sources or debris in the line. The valve should be inspected for damage after any overpressure condition.

Startup

The valve is factory set at approximately the midpoint of the spring range or the pressure requested, so an initial adjustment may be required to give the desired results.

With proper installation completed and relief valves properly adjusted, slowly open the upstream and downstream shutoff valves.

Adjustment

To change the control pressure, remove the closing cap or loosen the locknut and turn the adjusting screw clockwise to increase control pressure or counterclockwise to decrease pressure. Monitor the control pressure with a test gauge during the adjustment. Replace the closing cap or tighten the locknut to maintain the desired setting.

Taking Out of Service (Shutdown)

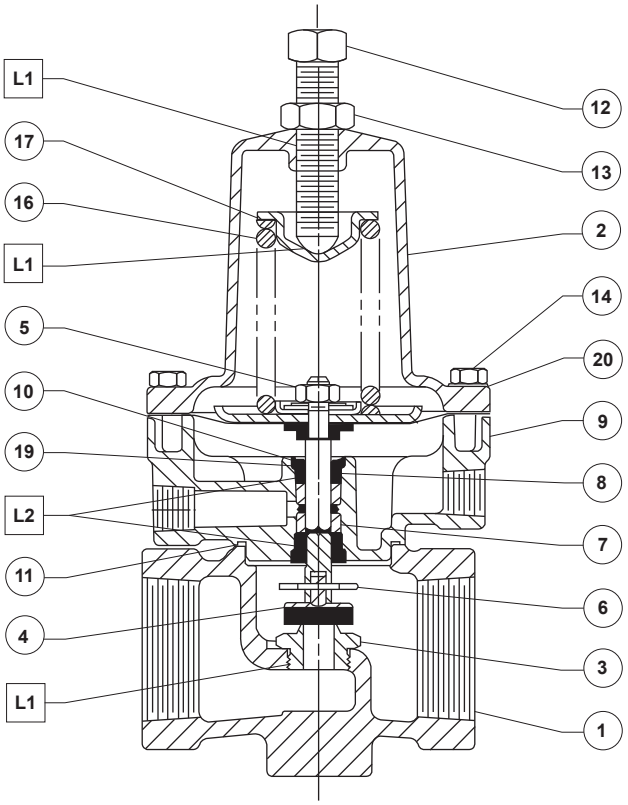
⚠ WARNING

To avoid personal injury resulting from sudden release of pressure, isolate the valve from all pressure before attempting disassembly.

Parts List

Key	Description
1	Valve Body
2	Spring Case
3*	Orifice
4*	Disk Holder Assembly
5*	Diaphragm/Stem Assembly
6	Hair Pin Clip
7	Bushing Spacer
8*	O-ring
9	Bonnet
10	Internal Retaining Ring
11*	Bonnet O-ring
12	Adjusting Screw
13	Locknut
14	Cap Screw
15	Cap Screw (not shown)
16	Actuator Spring
17	Upper Spring Seat
18	Type Y602-12 Vent (not shown)
19	Stem Wiper
20	Nameplate
23	Vent Screen (not shown)
24	NACE Tag
25	O-ring (Types 119EZ and 119EZS only)
26	Check Valve (Types 119EZ and 119EZS only)
27	Retaining Ring (Types 119EZ and 119EZS only)
28	Restrictor Screw (Types 119EZ and 119EZS only)
29	Solenoid Valve (Types 119EZ and 119EZS only)
30	Connector (Type 119EZS only)
31	Tubing (Type 119EZS only)
32	Tag Wire (not shown)
33	Drive Screw (not shown)
34	Flow Arrow (not shown)
35	Pipe Plug (Types 119EZ and 119EZS only)

* Recommended spare parts



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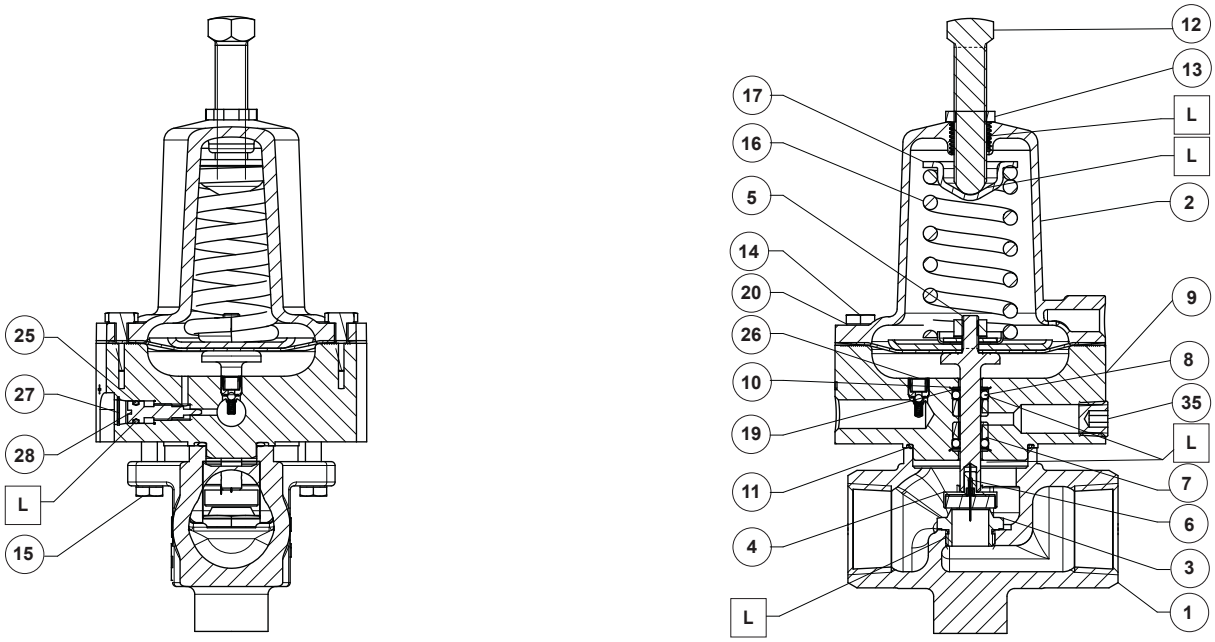
☐ **APPLY LUBRICANT**(1)
L1 = Anti-seize compound lubricant
L2 = Silicone grease lubricant

1. Lubricants must be selected such that they meet the temperature requirements.

Figure 1. *Type 119 Fuel Gas Valve Assembly*



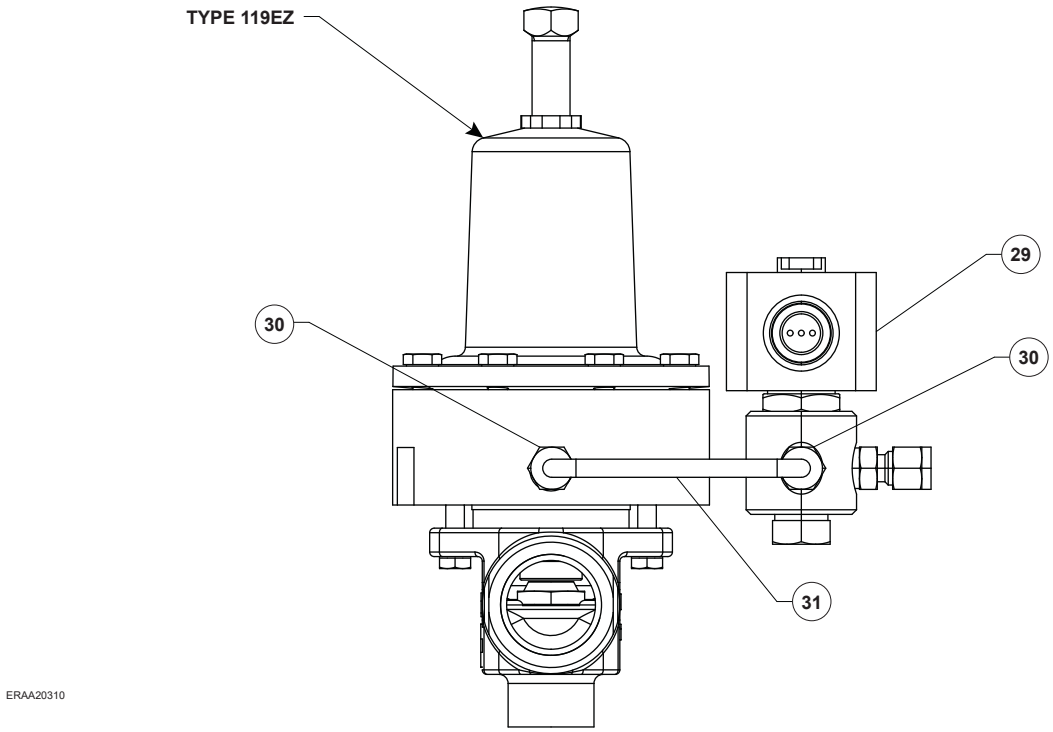
TYPE 119EZ

ERAA14665

☐ **APPLY LUBRICANT**(1)

1. Lubricant must be selected such that they meet the temperature requirements.

Figure 2. *Types 119EZ and 119EZS Fuel Gas Valve Assembly*



TYPE 119EZS

Figure 2. *Types 119EZ and 119EZS Fuel Gas Valve Assembly (continued)*

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For further information on the current PED/PE(S)R revision see Bulletin: *D103053X012*
or scan the QR code.

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