

March 2023

67C Series Instrument Supply Regulators



**TYPE 67CF FILTER REGULATOR
WITH OPTIONAL GAUGE**



TYPE 67C OR 67CR REGULATOR

Figure 1. 67C Series Regulators

Introduction

Scope of the Manual

This manual provides instructions and parts lists for 67C Series Instrument Supply Regulators. Instructions and parts lists for other equipment mentioned in this instruction manual, as well as for other 67C Series Regulators, are found in separate manuals.

Product Descriptions

The 67C Series Direct-operated Regulators are typically used to provide constantly controlled, reduced pressures to pneumatic and electro-pneumatic controllers and other instruments. They are suitable for most air or gas applications. Other applications include providing reduced pressures to air chucks, air jets and spray guns.

- The Types 67C and 67CS are the standard instrument supply regulators without a filter or internal relief.
- The Types 67CF and 67CFS are equipped with a filter for removing particles from the supply gas.

- The Types 67CR and 67CSR have an internal relief valve with a soft seat for reliable shutoff with no discernible leakage.
- The Types 67CFR and 67CFRS have a filter and internal relief valve with a soft seat for reliable shutoff with no discernible leakage.

Principle of Operation

Downstream pressure is registered internally on the lower side of the diaphragm. When the downstream pressure is at or above the set pressure, the valve plug is held against the orifice and there is no flow through the regulator. When demand increases, downstream pressure drops slightly allowing the spring to extend, moving the stem down and the valve plug away from the orifice. This allows flow through the regulator.

67C Series

Specifications

The Specifications section gives some general specifications for the 67C Series Regulator. A label on the spring case gives the control spring range for a given regulator as it comes from the factory.

Body Size, Inlet and Outlet Connection Style

1/4 NPT

Maximum Inlet Pressure (Body Rating)⁽¹⁾

All except Types 67CS and 67CSR: 250 psig / 17.2 bar

Types 67CS and 67CSR: 400 psig / 27.6 bar

Outlet Pressure Ranges

See Table 1

Maximum Emergency Outlet Pressure⁽¹⁾

50 psi / 3.4 bar over outlet pressure setting

Wide-Open Flow Coefficients

Main Valve: C_g : 11.7; C_v : 0.36; C_f : 32.2

Internal Relief Valve: C_g : 1.45; C_v : 0.045; C_f : 32.8

IEC Sizing Coefficients

Main Valve: X_T : 0.66; F_L : 0.89; F_D : 0.50

Accuracy

Inlet Sensitivity for Nitrile (NBR) and

Silicone (VMQ) Elastomers: Less than

0.2 psig / 14 mbar change in outlet pressure for every

25 psig / 1.7 bar change in inlet pressure

Inlet Sensitivity for Fluorocarbon (FKM) Elastomers:

Less than 0.4 psig / 28 mbar change in outlet pressure for

every 25 psig / 1.7 bar change in inlet pressure

Repeatability for Nitrile (NBR) and Silicone (VMQ)

Elastomers: 0.1 psig / 7 mbar⁽²⁾

Repeatability for Fluorocarbon (FKM) Elastomers:

0.3 psig / 21 mbar⁽²⁾

Air Consumption: Testing repeatedly shows

no discernible leakage

Types 67CR, 67CSR, 67CFR and 67CFSR

Internal Relief Performance

Low capacity for minor seat leakage only; other overpressure protection must be provided if inlet pressure can exceed the maximum pressure rating of downstream equipment or exceeds maximum outlet pressure rating of the regulator.

Approximate Weights

Types 67C, 67CR, 67CF and 67CFR: 1 lb / 0.5 kg

Types 67CS and 67CSR: 2.5 lbs / 1.1 kg

Types 67CFS and 67CFSR: 4 lbs / 1.8 kg

Temperature Capabilities⁽¹⁾

With Nitrile (NBR)

Standard Bolting: -20 to 180°F / -29 to 82°C

Stainless Steel Bolting: -40 to 180°F / -40 to 82°C

With Fluorocarbon (FKM)⁽⁶⁾:

Polyethylene Filter⁽⁵⁾ (standard):

0 to 180°F / -18 to 82°C

Polyvinylidene (PVDF), Stainless steel or Glass Filter

(Optional): 0 to 300°F / -18 to 149°C

Temperature Capabilities⁽¹⁾(continued)

With Silicone (VMQ)⁽³⁾

Diaphragm and Low Temperature bolting: -60 to 180°F / -51 to 82°C

With Gauges: -40 to 180°F / -40 to 82°C

Arctic/Extreme Low Temperature Construction⁽³⁾⁽⁸⁾

Low Temperature Silicone (VMQ)/

Fluorosilicone (FVMQ)/Nitrile (NBR) and Low

Temperature bolting: -76 to 140°F / -60 to 60°C

Smart Bleed™ Check Valve Setpoint

6 psi / 0.41 bar differential

Types 67CF, 67CFR, 67CFS and 67CFSR

Filter Capabilities

Free Area: 12 times pipe area

Micron Rating:

Polyethylene Filter⁽⁵⁾ (standard): 5 microns

Glass Fiber Filter (Optional): 5 microns

PVDF or Stainless Steel Filter (Optional): 40 microns

Drain Valve and Spring Case Vent Location

Aligned with inlet standard, other positions optional

Pressure Registration

Internal

Options

All Types

- Handwheel adjusting screw
- Inlet screen
- NACE MR0175 or NACE MR0103 construction⁽⁴⁾
- Panel mount (includes spring case with 1/4 NPT vent, handwheel and panel mounting nut)
- Closing cap (available on spring case with 1/4 NPT vent)
- Fluorocarbon (FKM) elastomers for high temperatures and/or corrosive chemicals
- Silicone (VMQ) elastomers for cold temperatures
- Fixed Bleed Restriction
- Triple scale outlet pressure gauge (Brass or Stainless steel)
- Stainless steel stem on the valve plug
- Tire valve or pipe plug in second outlet

Types 67CFR and 67CFSR only

- Smart Bleed internal check valve⁽⁷⁾
- Large dripwell with manual or automatic drain

Types 67CF and 67CFR only

- Stainless steel drain valve

1. The pressure/temperature limits in this Instruction Manual and any applicable standard or code limitation should not be exceeded.

2. Repeatability is the measure of the regulator's ability to return to setpoint consistently when traveling from steady state to transient to steady state.

3. Silicone (VMQ) is not compatible with hydrocarbon gas.

4. Product complies with the material requirements of NACE MR0175. Environmental limits may apply.

5. Do not use in high aromatic hydrocarbon service.

6. Consult factory for applications where the Smart Bleed unit will be at process temperatures above 180°F / 82°C for an extended period.

7. The Smart Bleed internal check valve is bubble tight at temperatures down to -40°F / -40°C. Leakage from P₁ to P₂ is possible at temperatures below -40°F / -40°C.

8. The arctic/extreme low temperature construction passed Emerson laboratory testing for lockup and external leakage down to -76°F / -60°C. Some internal relief valve venting may occur at temperatures below -58°F / -50°C.

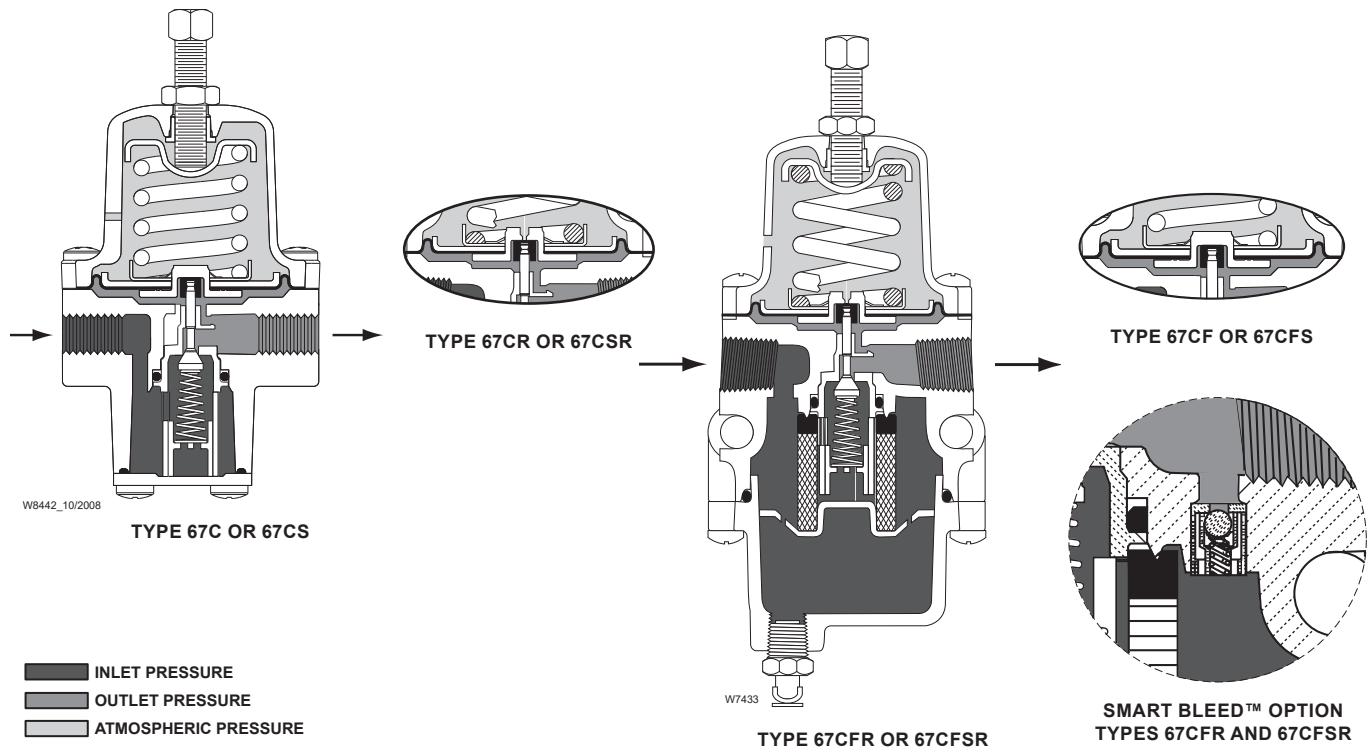


Figure 2. 67C Series Operational Schematics

Internal Relief (Types 67CR, 67CSR, 67CFR and 67CFSR)

If for some reason, outside of normal operating conditions, the downstream pressure exceeds the setpoint of the regulator, the force created by the downstream pressure will lift the diaphragm until the diaphragm is lifted off the relief seat. This allows flow through the token relief. The relief valve on the Type 67CR, 67CSR, 67CFR or 67CFSR is an elastomer plug that prevents leakage of air from the downstream to atmosphere during normal operation, thereby conserving plant air.

Smart Bleed Airset

Recommended for fail-safe actuators, no bleed applications and dead-end service.

In some cases, it is desired to exhaust downstream pressure if inlet pressure is lost or drops below the setpoint of the regulator. For example, if the regulator is installed on equipment that at times has no flow demand but is expected to backflow on loss of inlet pressure. The Types 67CFR and 67CFSR can be ordered with the Smart Bleed option which includes an integrated soft seat check valve. During operation, if inlet pressure is lost or decreases below the setpoint of the regulator, the downstream pressure will back

flow upstream through the regulator and check valve. This option eliminates the need for a fixed bleed downstream of the regulator, thereby conserving plant air. In addition, the soft seat feature of the check valve eliminates leakage while the airset is in the lock-up position, preventing pressure build-up that could trip safety loop functions on valves.

Overpressure Protection

The 67C Series Regulators have maximum outlet pressure ratings that are lower than their maximum inlet pressure ratings. A pressure relieving or pressure limiting device is needed if inlet pressure can exceed the maximum outlet pressure rating.

Types 67CR, 67CSR, 67CFR and 67CFSR have a low capacity internal relief valve for minor seat leakage only. Other overpressure protection must be provided if the maximum inlet pressure can exceed the maximum pressure rating of the downstream equipment or exceeds the maximum outlet pressure rating of the regulator.

Table 1. Outlet Pressure Ranges and Control Spring Data

TYPE	OUTLET PRESSURE RANGES		CONTROL SPRING DATA						
			Color	Material	Part Number	Wire Diameter		Free Length	
	psig	bar				In.	mm	In.	mm
67C, 67CR, 67CF and 67CFR	0 to 20	0 to 1.4	Green stripe	Music Wire	GE07809T012	0.135	3.43	1.43	36.2
	0 to 35	0 to 2.4	Silver		T14059T0012	0.156	3.96	1.43	36.2
	0 to 60	0 to 4.1	Blue stripe		T14058T0012	0.170	4.32	1.43	36.2
	0 to 125	0 to 8.6	Red stripe		T14060T0012	0.207	5.26	1.43	36.2
	0 to 35	0 to 2.4	Silver stripe	Inconel®	T14113T0012	0.156	3.96	1.43	36.2
	0 to 60	0 to 4.1	Blue		T14114T0012	0.172	4.37	1.43	36.2
	0 to 125	0 to 8.6	Red		T14115T0012	0.207	5.26	1.43	36.2
			Black		10C1730X012	0.250	6.35	1.77	44.9
67CS, 67CSR, 67CFS and 67CFSR	0 to 20	0 to 1.3	Green	Inconel®	10C1729X012	0.135	3.43	1.50	38.1
	0 to 35	0 to 2.4	Silver stripe		T14113T0012	0.156	3.96	1.43	36.2
	0 to 60	0 to 4.1	Blue		T14114T0012	0.172	4.37	1.43	36.2
	0 to 125	0 to 8.6	Red		T14115T0012	0.207	5.26	1.43	36.2
	0 to 150	0 to 10.3	Black		10C1730X012	0.250	6.35	1.77	44.9

Installation

Note

If the regulator is shipped mounted on another unit, install that unit according to the appropriate Instruction Manual.



WARNING

Personal injury, property damage, equipment damage or leakage due to escaping gas or bursting of pressure-containing parts may result if this regulator 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. To avoid such injury or damage, provide pressure-relieving or pressure-limiting devices (as required by the appropriate code, regulation or standard) to prevent service conditions from exceeding those limits.

The internal relief valve of the Type 67CR, 67CSR, 67CFR or 67CFSR does not provide full overpressure protection. The internal relief valve is designed for minor seat leakage only. If maximum inlet pressure to the regulator exceeds maximum pressure ratings of the downstream equipment or exceeds maximum allowable outlet pressure of the regulator, additional overpressure protection is required.

A regulator may vent some gas to the atmosphere. In hazardous or flammable gas service, vented gas may accumulate and cause personal injury, death or property damage due to fire or explosion. Vent a regulator in hazardous gas service to a remote, safe location away from air intakes or any hazardous area. The vent line or stack opening must be protected against condensation or clogging.

Before installing a Type 67C, 67CR, 67CS, 67CSR, 67CF, 67CFR, 67CFS or 67CFSR Regulator, be sure the installation complies with the following installation guidelines:

1. Regulator operation within ratings does not preclude the possibility of damage from debris in the lines or from external sources. Regulators should be inspected for damage periodically and after any overpressure condition.
2. Only personnel qualified through training and experience should install, operate and maintain a regulator. Make sure that there is no damage to or foreign material in the regulator. Also ensure that all tubing and piping is free of debris.
3. Install the regulator so that flow is from the IN to the OUT connection as marked on the regulator body.
4. For best drainage, orient the drain valve (key 2) to the lowest possible point on the dripwell (key 5). This orientation may be improved by rotating the dripwell with respect to the body (key 1).
5. A clogged spring case vent hole may cause the regulator to function improperly. To keep this vent hole from being plugged (and to keep the spring case from collecting moisture, corrosive chemicals or other foreign material), orient the vent to the lowest possible point on the spring case or otherwise protect it.

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Inspect the vent hole regularly to make sure it is not plugged. Spring case vent hole orientation may be changed by rotating the spring case with respect to the body. A 1/4 NPT spring case vent may be remotely vented by installing obstruction-free tubing or piping into the vent. Protect the remote vent by installing a screened vent cap on the remote end of the vent pipe.

6. For use in regulator shutdown, install upstream block and vent valves and downstream block and vent valves (if required) or provide some other suitable means of properly venting the regulator inlet and outlet pressures. Install a pressure gauge to monitor instruments on startup.
7. Apply a good grade of pipe compound to the external pipe threads before making connections, making sure not to get the pipe compound inside the regulator.
8. Install tubing fitting or piping into the 1/4 NPT inlet connection on the body (key 1) and into the 1/4 NPT body outlet connection.
9. The second 1/4 NPT outlet can be used for a gauge or other use. If not used, it must be plugged.

Installing a 67CF Series Regulator in an Existing Installation

When installing a 67CF Series Regulator in an existing installation, it may be necessary to use spacers (key 34, Figure 13) to adapt the installation. If the mounting bolts are too long, place a spacer on the bolt (see Figure 13). To be sure the regulator is secure, the bolts should have at least two full threads of engagement.

Startup and Adjustment

Key numbers are referenced in Figures 3 through 9.

1. With proper installation completed and downstream equipment properly adjusted, slowly open the upstream and downstream shutoff valve (when used) while using pressure gauges to monitor pressure.



WARNING

To avoid personal injury, property damage or equipment damage caused by bursting of pressure containing parts or explosion of accumulated gas, never adjust the control spring to produce an outlet pressure higher than the upper limit of the outlet pressure range for that particular spring. If the desired outlet pressure is not within the range of the control spring, install a spring of the proper range according to the diaphragm parts maintenance procedure.

2. If outlet pressure adjustment is necessary, monitor outlet pressure with a gauge during the adjustment procedure. The regulator is adjusted by loosening the locknut (key 18), if used, and turning the adjusting screw or handwheel (key 19) clockwise to increase or counterclockwise to decrease the outlet pressure setting. Retighten the locknut to maintain the adjustment position.

Shutdown

First, close the nearest upstream block valve and then close the nearest downstream block valve (when used). Next, open the downstream vent valve. Since the regulator remains open in response to the decreasing downstream pressure, pressure between the closed block valves will be released through the open vent valve.

Maintenance

Regulator parts are subject to normal wear and must be inspected and replaced as necessary. The frequency of inspection and replacement of parts depends on the severity of service conditions and applicable codes and government regulations. Open the Type 67CF, 67CFR, 67CFS or 67CFSR drain valve (key 2) regularly to empty accumulated liquid from the dripwell (key 5).

Note

If sufficient clearance exists, the body (key 1) may remain mounted on other equipment or in a line or panel during maintenance unless the entire regulator will be replaced.



WARNING

To avoid personal injury, property damage or equipment damage caused by sudden release of pressure or explosion of accumulated gas, do not attempt any maintenance or disassembly without first isolating the regulator from system pressure and relieving all internal pressure from the regulator.

67C Series

Types 67C, 67CR, 67CS and 67CSR

Trim Maintenance

Key numbers are referenced in Figures 3, 4 and 12.

1. Remove four bottom plate screws (key 3) from the bottom plate (key 39) and separate the bottom plate and O-ring (key 4) from the body (key 1).
2. Inspect the removed parts for damage and debris. Replace any damaged parts.
3. To remove the valve cartridge assembly, grasp the end of cartridge (key 10) and pull it straight out of body (key 1). Replace with new cartridge assembly. The cartridge assembly may be disassembled and parts may be cleaned or replaced. If the soft seat (key 15) was removed, make sure it is properly snapped into place before installing the valve cartridge assembly.
4. Check O-ring (key 14) for wear and replace, if necessary. Apply lubricant to the O-ring and place in the body. Align cartridge key to keyway in body and insert. Reinstall the O-ring (key 4), secure the bottom plate (key 39) with screws (key 3) and torque to 15 to 30 in-lbs / 1.7 to 3.4 N•m.

Diaphragm Maintenance

Key numbers are referenced in Figures 3 and 4.

1. Back out the adjusting screw or handwheel (key 18) until compression is removed from the spring (key 17).
2. Remove the spring case screws (key 3) to separate the spring case (key 7) from the body (key 1). Remove the upper spring seat (key 20) and spring (key 17).
3. Remove the diaphragm assembly (key 16), inspect the diaphragm and replace the assembly, if necessary.
4. Place the diaphragm assembly (key 16) on the body (key 1) as shown in Figure 3 or 4. Push down on the diaphragm assembly to make sure the valve plug (key 11) strokes smoothly and approximately 1/16 in. / 1.6 mm.

Note

In step 5, if installing a control spring of a different range, be sure to delete the spring range originally appearing on the label and indicate the new spring range.

5. Stack the control spring (key 17) and upper spring seat (key 20) onto the diaphragm assembly (key 16).
6. Install the spring case (key 7) on the body (key 1) with the vent oriented to prevent clogging or entrance of moisture. Install the six spring case screws (key 3) using a crisscross pattern and torque to 15 to 30 in-lbs / 1.7 to 3.4 N•m.

Note

On Types 67CS and 67CSR, lubricate the adjusting screw (key 18) thread to reduce galling of the Stainless steel.

7. When all maintenance is complete, refer to the Startup and Adjustment section to put the regulator back into operation and adjust the pressure setting. Tighten the locknut (key 19) if used and install the closing cap (key 33) if used.

Types 67CF, 67CFR, 67CFS and 67CFSR

Filter Element and Trim Maintenance

Key numbers are referenced in Figures 5, 6 and 12.

1. Remove four dripwell screws (key 3) from the dripwell (key 5) and separate the dripwell and O-ring (key 4) from the body (key 1). The filter retainer (key 9), thrust washer (key 37), filter element (key 6) and gasket (key 26) may come off with dripwell. If not, remove these parts.
2. Inspect the removed parts for damage and debris. Replace any damaged parts. If a replacement is not available, the filter element may be cleaned.
3. To remove the valve cartridge assembly, grasp the end of cartridge and pull it straight out of body (key 1). Replace with new cartridge assembly. The cartridge assembly may be disassembled and parts may be cleaned or replaced. If the soft seat (key 15) was removed, make sure it is properly snapped into place before installing the valve cartridge assembly.
4. Check O-ring (key 14) for wear and replace, if necessary. Apply lubricant to the O-ring (key 14), then align cartridge key to keyway in body and insert. Reinstall the gasket (key 26), filter element (key 6), thrust washer (key 37) and filter retainer (key 9). Reinstall the O-ring (key 4), secure the dripwell with screws (key 3) and torque to 15 to 30 in-lbs / 1.7 to 3.4 N•m.

Diaphragm Maintenance

Key numbers are referenced in Figures 5 and 6.

5. Back out the adjusting screw or handwheel (key 18) until compression is removed from the spring (key 17).
6. Remove the six spring case screws (key 3) to separate the spring case (key 7) from the body (key 1). Remove the upper spring seat (key 20) and spring (key 17).
7. Remove the diaphragm assembly (key 16), inspect the diaphragm and replace the assembly, if necessary.
8. Place the diaphragm assembly (key 16) on the body (key 1) as shown in Figure 5. Push down on the diaphragm assembly to make sure the valve plug (key 11) strokes smoothly and approximately 1/16 in. / 1.6 mm.

Note

In step 5, if installing a control spring of a different range, be sure to delete the spring range originally appearing on the label and indicate the new spring range.

9. Stack the control spring (key 17) and upper spring seat (key 20) onto the diaphragm assembly (key 16).
10. Install the spring case (key 7) on the body (key 1) with the vent oriented to prevent clogging or entrance of moisture. Install the six spring case screws (key 3) using a crisscross pattern and torque to 15 to 30 in-lbs / 1.7 to 3.4 N•m.

Note

On Types 67CFS and 67CF SR, lubricate the adjusting screw (key 18) thread to reduce galling of Stainless steel.

11. When all maintenance is complete, refer to the Startup and Adjustment section to put the regulator back into operation and adjust the pressure setting. Tighten the locknut (key 19) if used and install the closing cap (key 33) if used.

Parts Ordering

When corresponding with the local Sales Office about this regulator, include the type number and all other pertinent information printed on the label. Specify the eleven-character part number when ordering new parts from the following parts list.

Parts List

Key	Description	Part Number
	Parts Kits	
	Types 67C, 67CR, 67CS and 67CSR	
	Includes valve cartridge assembly (contains keys 10, 11, 12, 13, 14 and 15), O-ring (key 4), diaphragm assembly (key 16), and four screws (key 3)	
	Type 67C (without relief)	
	Brass stem with Nitrile (NBR) plug	R67CX000012
	Aluminum stem with Nitrile (NBR) plug (NACE)	R67CX000N12
	Type 67CR (with relief)	
	Brass stem with Nitrile (NBR) plug	R67CRX00012
	Aluminum stem with Nitrile (NBR) plug (NACE)	R67CRX00N12
	Type 67CS (without relief)	
	Stainless steel stem with Nitrile (NBR) plug (NACE)	R67CSX00012
	Type 67CSR (with relief)	
	Stainless steel stem with Nitrile (NBR) plug (NACE)	R67CSRX0012
	Types 67CF, 67CFR and 67CF SR	
	Includes valve cartridge assembly (contains keys 10, 11, 12, 13, 14 and 15), diaphragm assembly (key 16), O-ring (key 4), filter element (key 6), filter gasket (key 26), thrust washer (key 37) and four screws (key 3)	
	Type 67CF (without relief)	
	Brass stem with Nitrile (NBR) plug	R67CFX00012
	Aluminum stem with Nitrile (NBR) plug (NACE)	R67CFX00N12
	Type 67CFR (with relief)	
	Brass stem with Nitrile (NBR) plug	R67CFRX0012
	Aluminum stem with Nitrile (NBR) plug (NACE)	R67CFRX0N12
	Type 67CF SR (with relief)	
	Stainless steel stem with Nitrile (NBR) plug (NACE)	R67CF SRX012
	Valve Cartridge Assembly Only ^{*(1)}	
	Type 67C, 67CR, 67CF or 67CFR	
	Brass stem with Nitrile (NBR) plug with Nitrile (NBR) O-ring	T14121T0012
	with Silicone (VMQ) O-ring	T14121T0032
	Aluminum stem with Fluorocarbon (FKM) plug	T14121T0022
	with Nitrile (NBR) plug	T14121T0042
	Aluminum stem (NACE) with Nitrile (NBR) plug	T14121T0052
	with Fluorocarbon (FKM) plug	T14121T0062
	Stainless steel stem with Nitrile (NBR) plug	T14121T0072
	Type 67CS, 67CSR, 67CFS or 67CF SR	
	316 Stainless steel stem with Nitrile (NBR) plug and O-rings (NACE)	T14121T0092
	with Fluorocarbon (FKM) plug and O-rings	T14121T0102
	with Nitrile (NBR) plug and Silicone (VMQ) O-rings	T14121T0112
	Automatic Drain Conversion Kits	
	Includes auto-drain (key 2), four flange screws (key 3), dripwell O-ring (key 4) and dripwell (key 5).	
	Note: Temperature rating is 40 to 175°F / 4 to 79°C.	
	Types 67CF and 67CFR	
	Nitrile (NBR)	R67ADNX0012
	Fluorocarbon (FKM)	R67ADFX0012
	Types 67CFS and 67CF SR	
	Nitrile (NBR)	R67ADNX0022
	Fluorocarbon (FKM)	R67ADFX0022

- continued -

*Recommended Spare Part.

1. Valve cartridge assembly includes keys 10, 11, 12, 13, 14 and 15.

67C Series

Key	Description	Part Number	Key	Description	Part Number
1	Body		11*(1)	Valve Plug	
	Type 67C or 67CR, Aluminum	T40643T0RG2		Type 67C, 67CR, 67CF or 67CFR	
	Type 67CS or 67CSR, CF3M/CF8M			Brass stem, Nitrile (NBR) plug	T14053T0012
	Stainless steel	GE00909X012		Aluminum stem, Fluorocarbon (FKM) plug	T14053T0022
	Type 67CF or 67CFR, Aluminum	T80510T0012		Aluminum stem, Nitrile (NBR) plug	T14053T0032
	Type 67CFS or 67CFSR, CF3M/CF8M			Type 67CS, 67CSR, 67CFS or 67CFSR	
	Stainless steel	40C1887X012		Stainless steel stem, Nitrile (NBR) plug	T14053T0042
	Type 67CFR with Smart Bleed™, Aluminum			Stainless steel stem, Fluorocarbon (FKM) plug	T14053T0052
	Nitrile (NBR)	ERAA17101A0	12*(1)	Valve Spring	
	Fluorocarbon (FKM)	ERAA17101A1		Type 67C, 67CR, 67CF or 67CFR	
	Type 67CFSR with Smart Bleed, Stainless steel			302 Stainless steel	T14105T0012
	Nitrile (NBR)	ERAA17102A0		Inconel® (NACE)	T14116T0012
	Fluorocarbon (FKM)	ERAA17102A1		Type 67CS, 67CSR, 67CFS or 67CFSR,	
2	Drain Valve			Inconel® (NACE)	T14116T0012
	Manual Type 67CF or 67CFR		13*(1)	Valve Retainer, Rynite®	T14071T0012
	Brass	1K418918992	14*(1)	O-ring	
	316 Stainless steel	AH3946X0052		Nitrile (NBR)	T14063T0012
	Type 67CFS or 67CFSR			Fluorocarbon (FKM)	T14063T0022
	316 Stainless steel	AH3946X0052		Silicone (VMQ)	T14063T0032
	Automatic (only used with large capacity dripwell)		15*(1)	Soft Seat	
	Type 67CFS or 67CFSR			Nitrile (NBR)	T14055T0012
	Nitrile (NBR)	GG00554X012		Fluorocarbon (FKM)	T14055T0022
	Fluorocarbon (FKM)	GG00554X022	16*	Diaphragm Assembly	
3	Flange Screw			Type 67C or 67CF (without relief)	
	Type 67C, 67CR, 67CF or 67CFR			Nitrile (NBR)	T14119T0022
	Standard spring case and spring case			Fluorocarbon (FKM)	T14119T0042
	with 1/4 NPT vent (10 required)	T13526T0012		Type 67CR or 67CFR (with relief)	
	For wire seal			Nitrile (NBR)	T14119T0012
	Zinc-plated steel (9 required)	T13526T0012		Fluorocarbon (FKM)	T14119T0032
	Steel (with hole) (1 required)	14B3987X012		Silicone (VMQ)	T14119T0052
	Type 67CS, 67CSR, 67CFS or			Type 67CS or 67CFS (without relief)	
	67CFSR (10 required)	T13526T0042		Nitrile (NBR)	T14119T0062
4*	O-ring			Fluorocarbon (FKM)	T14119T0072
	Type 67C, 67CR, 67CS or 67CSR			Type 67CSR or 67CFSR (with relief)	
	Nitrile (NBR)	T14380T0012		Nitrile (NBR)	T14119T0082
	Fluorocarbon (FKM)	T14380T0022		Fluorocarbon (FKM)	T14119T0092
	Silicone (VMQ)	T14380T0032		Silicone (VMQ)	T14119T0102
	Type 67CF, 67CFR, 67CFS or 67CFSR		17	Spring	
	Nitrile (NBR)	T14057T0042		Type 67C, 67CR, 67CF or 67CFR,	
	Fluorocarbon (FKM)	T14057T0022		Plated steel (standard)	
	Silicone (VMQ)	T14057T0032		0 to 20 psig / 0 to 1.4 bar, Green stripe	GE07809T012
5	Dripwell			0 to 35 psig / 0 to 2.4 bar, Silver	T14059T0012
	Type 67CF or 67CFR, Aluminum			0 to 60 psig / 0 to 4.1 bar, Blue stripe	T14058T0012
	Standard	T21040T0012		0 to 125 psig / 0 to 8.6 bar, Red stripe	T14060T0012
	Large Capacity, manual drain	GE34605X012		Type 67CR or 67CFR (NACE), Inconel® (NACE)	
	Large Capacity, automatic drain	GE34606X012		0 to 35 psig / 0 to 2.4 bar, Silver stripe	T14113T0012
	Type 67CFS or 67CFSR,			0 to 60 psig / 0 to 4.1 bar, Blue	T14114T0012
	CF3M/CF8M Stainless steel			0 to 125 psig / 0 to 8.6 bar, Red	T14115T0012
	Standard	20C1726X012		Type 67CS, 67CSR, 67CFS or	
	Large Capacity, manual drain	GE34607X012		67CFSR, Inconel® (NACE)	
	Large Capacity, automatic drain	GE31792X012		0 to 20 psig / 0 to 1.3 bar, Green	10C1729X012
6*	Filter Element			0 to 35 psig / 0 to 2.4 bar, Silver stripe	T14113T0012
	(Types 67CF, 67CFR, 67CFS and 67CFSR)			0 to 60 psig / 0 to 4.1 bar, Blue	T14114T0012
	Polyethylene (5 microns) (standard)	GE32761X012		0 to 125 psig / 0 to 8.6 bar, Red	T14115T0012
	Glass fiber (5 microns)	17A1457X012		0 to 150 psig / 0 to 10.3 bar, Black	10C1730X012
	Polyvinylidene fluoride (PVDF) (40 microns)	GE32762X012	18	Adjusting Screw	
	316 Stainless steel (40 microns)	15A5967X022		Type 67C, 67CR, 67CF or 67CFR,	
7	Spring Case Assembly			Zinc-plated steel	
	Type 67C, 67CR, 67CF or 67CFR, Aluminum/Steel			For standard spring case	
	Drilled hole vent (standard)	T14070T0012		Square head (standard)	T14061T0012
	Single hole vent	T14070T0022		Handwheel	T14102T0012
	Type 67CS, 67CSR, 67CFS or 67CFSR,			Wire seal (not shown)	T14104T0012
	CF3M/CF8M Stainless steel	20C1727X012		Type 67C, 67CR, 67CF or 67CFR,	
9	Filter Retainer			Zinc-plated steel (continued)	
	Type 67CF or 67CFR, Zinc-plated	T14052T0012		For spring case with 1/4 NPT vent,	
	Type 67CFS or 67CFSR, 316 Stainless steel	T14052T0022		Zinc-plated steel	
10*(1)	Valve Cartridge	T80434T0012		Square head for closing cap,	T14101T0012
				Handwheel	T14103T0012
				Wire seal (not shown)	T14198T0012

*Recommended Spare Part.

1. Valve cartridge assembly includes keys 10, 11, 12, 13, 14 and 15.

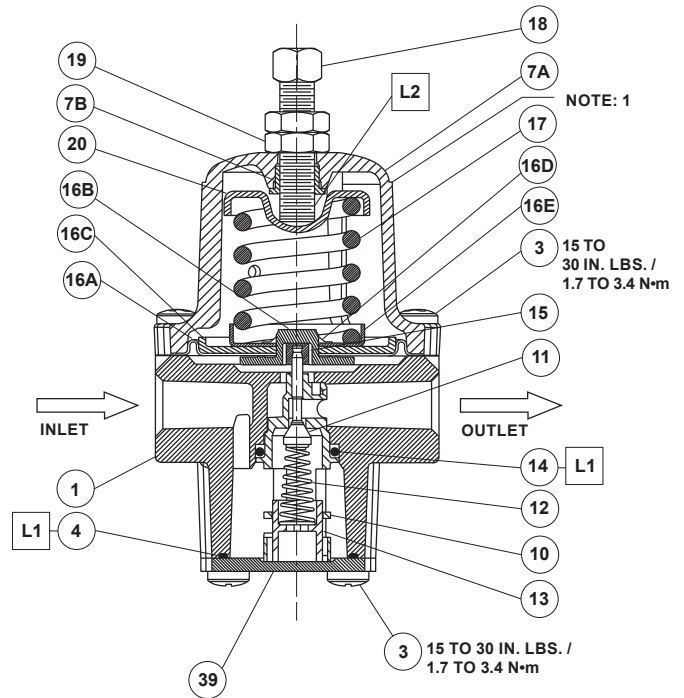
Inconel® is a mark owned by Special Metals Corporation.

Rynite® is a mark owned by E.I. du Pont de Nemours and Co.

Key	Description	Part Number
18	Adjusting Screw (continued) Type 67CS, 67CSR, 67CFS or 67CFSR Square head with or without closing cap, 316 Stainless steel Handwheel, Zinc-plated steel	T14101T0022 T14103T0012
19	Locknut Type 67C, 67CR, 67CF or 67CFR Zinc-plated steel 316 Stainless steel	1A946324122 1A9463X0042
20	Upper Spring Seat Type 67C or 67CR only 1/4 NPT Vent Type 67C, 67CR, 67CF or 67CFR Standard	1A9463X0042 T14051T0042 T14051T0012
22	Pressure Gauge (not shown) Type 67C, 67CR, 67CF or 67CFR, Brass 0 to 30 psig / 0 to 2.1 bar / 0 to 0.2 MPa 0 to 60 psig / 0 to 4.1 bar / 0 to 0.4 MPa 0 to 160 psig / 0 to 11.0 bar / 0 to 1.1 MPa For all types, Stainless steel 0 to 30 psig / 0 to 2.1 bar / 0 to 0.2 MPa 0 to 60 psig / 0 to 4.1 bar / 0 to 0.4 MPa 0 to 160 psig / 0 to 11.0 bar / 0 to 1.1 MPa	11B8579X022 11B8579X032 11B8579X042 11B9639X012 11B9639X022 11B9639X032
23	1/4 in. / 6.4 mm Pipe Plug (not shown) Type 67C, 67CR, 67CF or 67CFR Socket head, Steel For all types Hex head, Stainless steel	1C333528992 1A767535072
24	Tire Valve (not shown) Type 67C, 67CR, 67CF or 67CFR	1H447099022
26*	Filter Gasket Type 67CF, 67CFR, 67CFS or 67CFSR with Nitrile (NBR) O-ring with Fluorocarbon (FKM) O-ring	T14081T0012 T14081T0022
30	NACE Tag (not shown), 18-8 Stainless steel	19A6034X012
31	Panel Mounting Nut, 303 Stainless steel	10B2657X012
32	Wire Seal (not shown) Type 67C or 67CR 304 Stainless steel	1U7581000A2
33	Closing Cap, Resin	23B9152X012
34	Spacer (2 required) (Figure 13) Type 67CF or 67CFR, Steel Type 67CFS or 67CFSR, 18-8 Stainless steel	T14123T0012 T14123T0022
37*	Thrust Washer (Type 67CF, 67CFR, 67CFS or 67CFSR) with Nitrile (NBR) O-rings with Fluorocarbon (FKM) O-rings	T14196T0012 T14196T0022
39	Bottom Plate, 316 Stainless steel Type 67C or 67CR Type 67CS or 67CSR	GE03520XRG2 GE03520X012
45	Screen Vent, 18-8 Stainless steel Type 67CS, 67CSR, 67CFS or 67CFSR	0L078343062

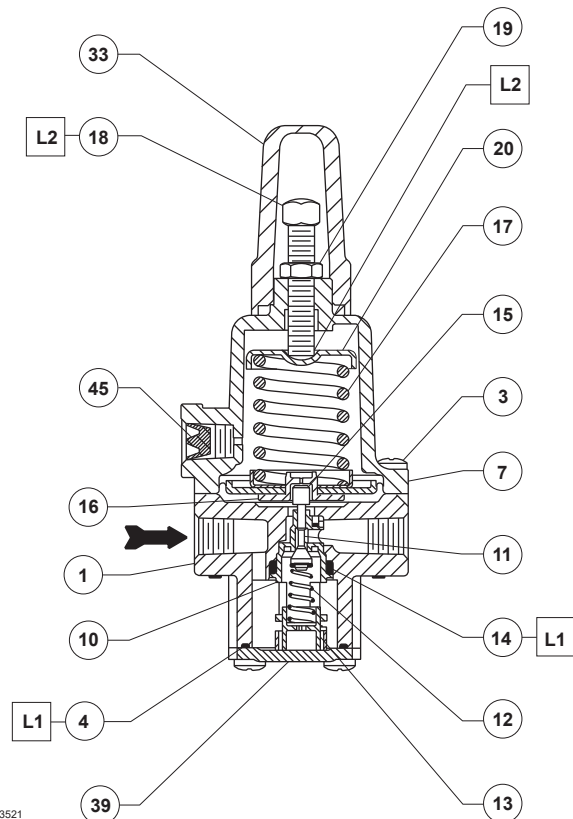
Parts for Mounting on Fisher™ 2500 Series Controller (Type 67CF or 67CFR)

Key	Description	Part Number
35	Mounting adaptor plate, Steel (not shown)	T21043T0012
36	O-ring, Nitrile (NBR) (not shown)	1E591406992
38	Gasket, Neoprene (CR) (not shown)	1C898603012



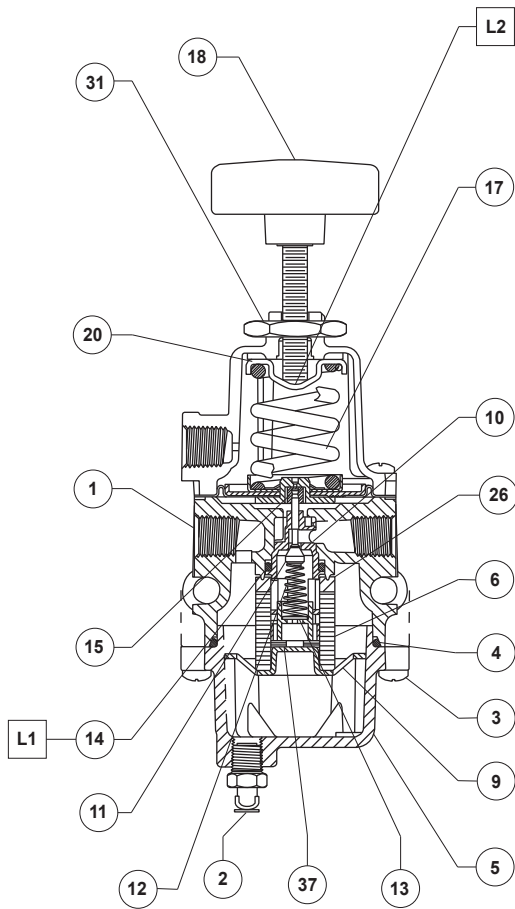
T40645
 APPLY LUBRICANT (L)
 L1 = MULTI-PURPOSE POLYTETRAFLUOROETHYLENE (PTFE) LUBRICANT
 L2 = ANTI-SEIZE COMPOUND

Figure 3. Type 67C or 67CR Assembly



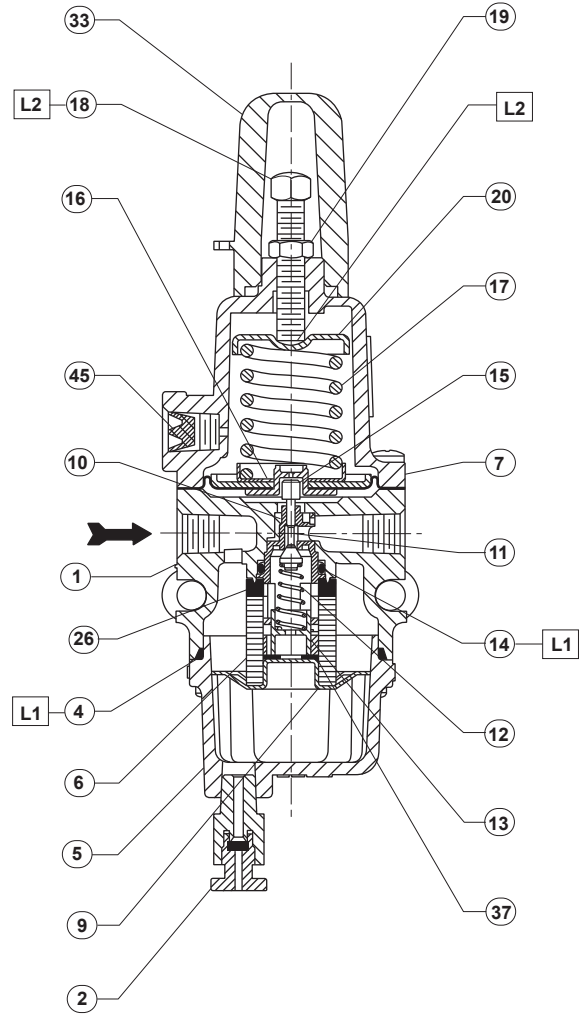
GE03521
 APPLY LUBRICANT (L):
 L1 = MULTI-PURPOSE POLYTETRAFLUOROETHYLENE (PTFE) LUBRICANT
 L2 = ANTI-SEIZE COMPOUND

Figure 4. Type 67CS or 67CSR Assembly



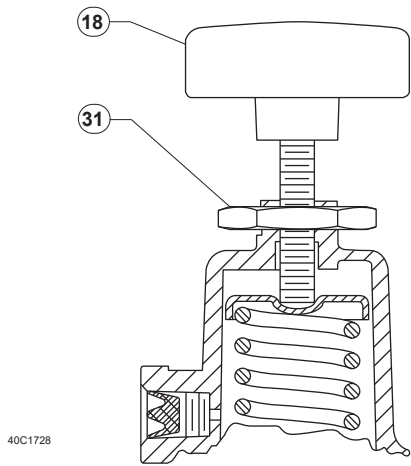
T40580
 APPLY LUBRICANT (L):
 L1 = MULTI-PURPOSE POLYTETRAFLUOROETHYLENE (PTFE) LUBRICANT
 L2 = ANTI-SEIZE COMPOUND

Figure 5. Type 67CF or 67CFR Assembly



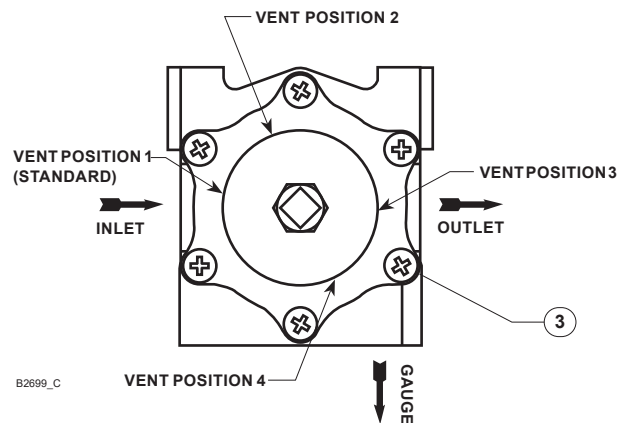
40C1728
 APPLY LUBRICANT (L):
 L1 = MULTI-PURPOSE POLYTETRAFLUOROETHYLENE (PTFE) LUBRICANT
 L2 = ANTI-SEIZE COMPOUND

Figure 6. Type 67CFS or 67CFSR Assembly



40C1728

Figure 7. 67C Series Optional Panel Mount



B2699_C

Figure 8. 67C Series Spring Case Vent Positions

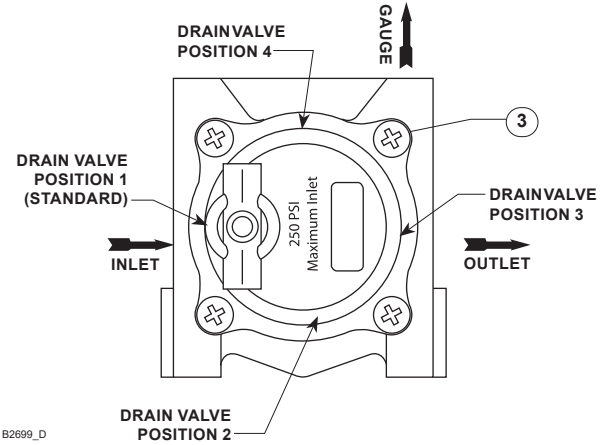


Figure 9. Types 67CF, 67CFR, 67CFS and 67CFSR Drain Valve Positions

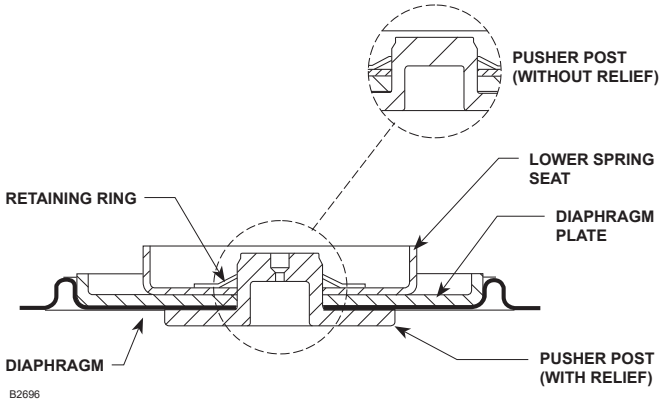


Figure 10. Diaphragm Assembly (key 16)

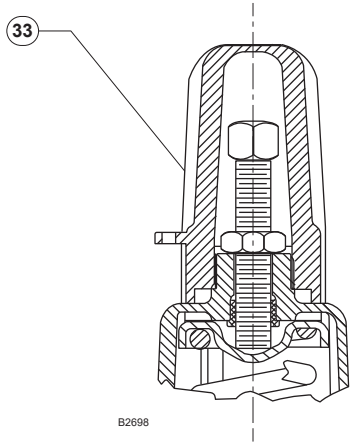


Figure 11. Optional Closing Cap (Only Available with the 1/4 in. / 6.4 mm Spring Case Vent)

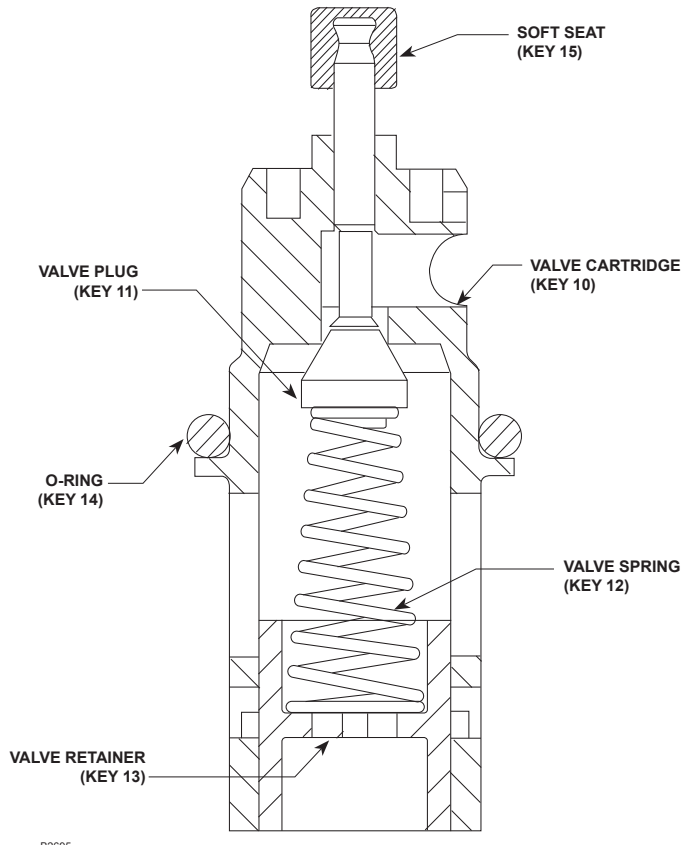


Figure 12. Valve Cartridge Assembly

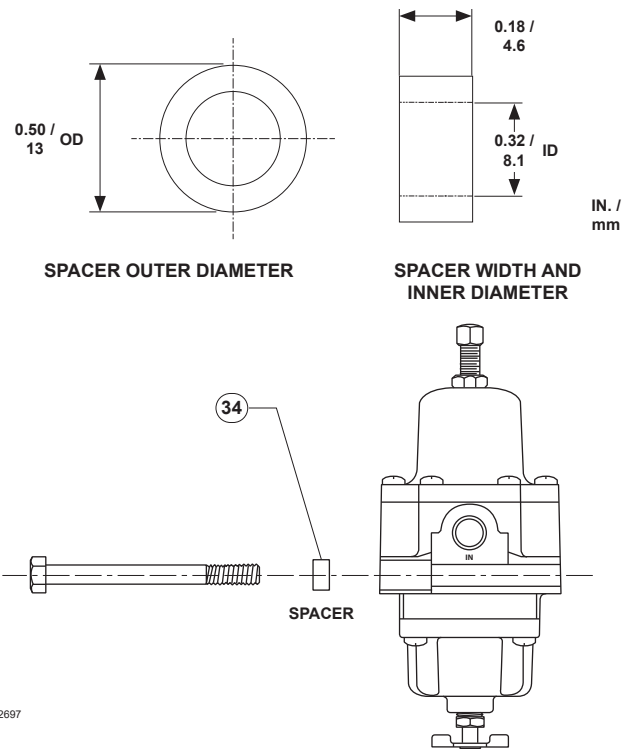


Figure 13. Spacer Diameter and Assembly
(For Installing in an Existing Installation if the Mounting Bolts are Too Long)

✉ Webadmin.Regulators@emerson.com

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Emerson Automation Solutions

Americas

McKinney, Texas 75070 USA
 T +1 800 558 5853
 +1 972 548 3574

Europe

Bologna 40013, Italy
 T +39 051 419 0611

Asia Pacific

Singapore 128461, Singapore
 T +65 6777 8211

Middle East and Africa

Dubai, United Arab Emirates
 T +971 4 811 8100

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