

67D Series Pressure Reducing Regulators



TYPE 67D OR 67DR REGULATOR



TYPE 67DF OR 67DFR FILTERED REGULATOR

Figure 1. 67D Series Pressure Reducing Regulators



WARNING

Failure to follow these instructions or to properly install and maintain this equipment could result in an explosion, fire and/or chemical contamination causing property damage and personal injury or death.

Fisher™ Regulators must be installed, operated and maintained in accordance with federal, state and local codes, rules and regulations and Emerson Process Management Regulator Technologies, Inc. instructions.

If the regulator vents gas or a leak develops in the system, service to the unit may be required. Failure to correct trouble could result in a hazardous condition.

Installation, operation and maintenance procedures performed by unqualified personnel may result in improper adjustment and unsafe operation. Either condition may result in equipment damage or personal injury. Use qualified personnel when installing, operating and maintaining the 67D Series Pressure Reducing Regulators.

Introduction

Scope of the Manual

This manual provides instructions for the installation, maintenance and parts ordering information for 67D Series Regulators. Instructions and parts lists for other equipment mentioned in this instruction manual, as well as for other 67 Series Regulators, are found in separate manuals.

67D Series

Specifications

This section lists the specifications for the 67D Series Regulator. Factory specification such as type, maximum inlet pressure and outlet pressure are stamped on the nameplate fastened on the regulator at the factory.

Available Configurations

- Type 67D:** Direct-operated regulator with aluminum body and without internal relief
- Type 67DR:** Aluminum body with internal relief
- Type 67DS:** Stainless steel body without internal relief
- Type 67DSR:** Stainless steel body with internal relief
- Type 67DF:** Aluminum body with filter and without internal relief
- Type 67DFR:** Aluminum body with filter and internal relief
- Type 67DFS:** Stainless steel body with filter and without internal relief
- Type 67DFSR:** Stainless steel body with filter and internal relief

Body Size, Inlet and Outlet Connection Style

1/2 NPT

Maximum Inlet Pressure (Body Rating)⁽¹⁾

- All filtered models:** 250 psig / 17.2 bar
- All unfiltered models:** 400 psig / 27.6 bar

Outlet Pressure Ranges

See Table 1

Maximum Emergency Outlet Pressure⁽¹⁾

150 psi / 10.3 bar over outlet pressure setting up to a maximum of 250 psi / 17.2 bar

Wide-Open Flow Coefficients

- Main Valve:** C_g : 45.24; C_v : 1.33; C_f : 35.02
- Internal Relief Valve:** C_g : 1.45; C_v : 0.045; C_f : 32.8

IEC Sizing Coefficient

X_i : 0.75

Types 67DR, 67DSR, 67DFR and 67DFSR

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 67D and 67DR:** 1.2 lbs / 0.5 kg
- Types 67DF and 67DFR:** 2.0 lbs / 1 kg
- Types 67DS and 67DSR:** 2.8 lbs / 1 kg
- Types 67DFS and 67DFSR:** 4.6 lbs / 2 kg

Smart Bleed™ Check Valve Setpoint

6 psi / 0.41 bar differential

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

Temperature Capabilities⁽¹⁾ (continued)

With Fluorocarbon (FKM)⁽⁵⁾:

- Polyethylene Filter⁽⁴⁾ (standard):**
0 to 180°F / -18 to 82°C
- Stainless steel or Glass Filter (optional):**
0 to 300°F / -18 to 149°C

With Silicone (VMQ)⁽²⁾ Diaphragm, Low Temperature Nitrile (NBR) O-rings and Low Temperature Bolting:

-60 to 180°F / -51 to 82°C

With Gauges: -20 to 180°F / -29 to 82°C

With Automatic Drain: 40 to 175°F / 4 to 79°C

Arctic/Extreme Low Temperature Construction⁽²⁾⁽⁷⁾:

- Low Temperature Silicone (VMQ)/Fluorosilicone (FVMQ)/Nitrile (NBR) and Low Temperature bolting:**
-76 to 140°F / -60 to 60°C

Types 67DF, 67DFR, 67DFS and 67DFSR

Filter Capabilities

Micron Rating:

- Polyethylene Filter⁽⁴⁾ (standard):** 5 microns
- Glass Fiber Filter (optional):** 5 microns
- Stainless steel Filter (optional):** 40 microns

Spring Case Vent Location

Aligned with inlet standard, other positions optional

Drain Valve Location

Aligned in the center of the dripwell

Pressure Registration

Internal

Options

All Types

- Handwheel adjusting screw
- NACE International MR0175 or MR0103⁽³⁾ construction
- 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 and valve plug
- Pipe plug in second outlet

Types 67DFR and 67DFSR

- Smart Bleed internal check valve⁽⁶⁾

Types 67DF, 67DFR, 67DFS and 67DFSR

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

3. Product complies with the material requirements of NACE International MR0175 or MR0103. Environmental limits may apply.

4. Do not use in high aromatic hydrocarbon service.

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

6. 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.

7. 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.

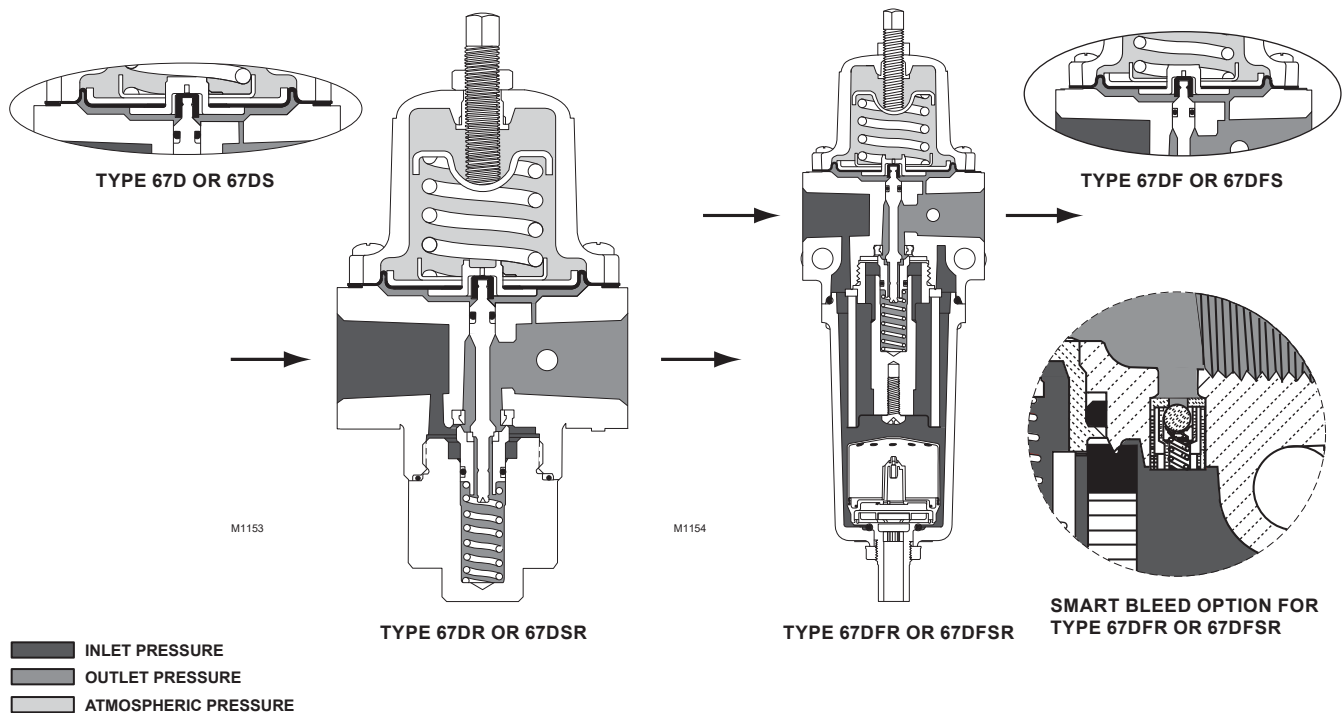


Figure 2. 67D Series Operational Schematics

Product Descriptions

The 67D Series Direct-Operated Regulators are typically used to provide constantly controlled, reduced pressures. They are suitable for most air or gas applications.

- The Types 67D and 67DS are the standard instrument supply regulators without a filter or internal relief.
- The Types 67DF and 67DFS are equipped with a filter for removing particles from the supply gas.
- The Types 67DR and 67DSR have an internal relief valve with a soft seat for reliable shutoff with no discernible leakage.
- The Types 67DFR and 67DFSR 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.

Internal Relief (Types 67DR, 67DSR, 67DFR and 67DFSR)

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 67DR, 67DSR, 67DFR or 67DFSR 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 67DFR and 67DFSR can be ordered with the Smart Bleed option which includes an integrated soft seat check valve for this application. 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.

67D Series

Table 1. Outlet Pressure Ranges and Control Spring Data

TYPE	OUTLET PRESSURE RANGE		CONTROL SPRING DATA						
			Part Number	Color	Material	Wire Diameter		Free Length	
	psig	bar				In.	mm	In.	mm
67D, 67DR, 67DF and 67DFR	0 to 20	0 to 1.4	GE07809T012	Green stripe	Music Wire	0.135	3.43	1.43	36.2
	0 to 35	0 to 2.4	T14059T0012	Unpainted		0.156	3.96	1.43	36.2
	0 to 60	0 to 4.1	T14058T0012	Blue stripe		0.170	4.32	1.43	36.2
	0 to 125	0 to 8.6	T14060T0012	Red stripe		0.207	5.26	1.43	36.2
	0 to 35	0 to 2.4	T14113T0012	Silver stripe	Inconel®	0.156	3.96	1.43	36.2
	0 to 60	0 to 4.1	T14114T0012	Blue		0.172	4.37	1.43	36.2
0 to 125	0 to 8.6	T14115T0012	Red	0.207		5.26	1.43	36.2	
67DS, 67DSR, 67DFS and 67DFSR	0 to 20	0 to 1.4	10C1729X012	Green	Inconel®	0.135	3.43	1.50	38.1
	0 to 35	0 to 2.4	T14113T0012	Silver stripe		0.156	3.96	1.43	36.2
	0 to 60	0 to 4.1	T14114T0012	Blue		0.172	4.37	1.43	36.2
	0 to 125	0 to 8.6	T14115T0012	Red		0.207	5.26	1.43	36.2
	0 to 150	0 to 10.3	10C1730X012	Black		0.250	6.35	1.77	44.9

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.

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.

Installation

Note

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

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.



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 67DR, 67DSR, 67DFR or 67DFSR does not provide full overpressure protection. The internal relief valve is designed for minor seat leakage only.

Before installing a Type 67D, 67DR, 67DS, 67DSR, 67DF, 67DFR, 67DFS or 67DFSR 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 the 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. 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

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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. 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.

5. 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.
6. 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.
7. Install tubing fitting or piping into the 1/2 NPT inlet connection on the body (key 1) and into the 1/2 NPT body outlet connection.
8. The two 1/4 NPT outlets can be used for a gauge or other use. If not used, they must be plugged.

Overpressure Protection

The 67D 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 67DR, 67DSR, 67DFR and 67DFSR 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.

Startup and Adjustment

Key numbers are referenced in Figures 3 through 8.

1. With proper installation completed and downstream equipment properly adjusted, slowly open the upstream and downstream block 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 hex nut (key 19), if used, and turning the adjusting screw or handwheel (key 18) clockwise to increase or counterclockwise to decrease the outlet pressure setting. Retighten the hex nut 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 67DF, 67DFR, 67DFS or 67DFSR 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.

Types 67D, 67DR, 67DS and 67DSR

Trim Maintenance

Key numbers are referenced in Figures 3 and 4.

1. Unscrew the spring retainer (key 48) and separate the spring retainer and O-ring (key 14) from the body (key 1).
2. Remove the valve plug (key 57) from the spring retainer (key 48). Inspect the removed parts for damage and debris. Replace any damaged parts. Apply a high quality lubricant to the O-ring (key 49) before reassembling.
3. To remove the valve stem (key 11), grasp the end and pull it straight out of the body (key 1). Inspect the parts for damage and debris. Replace any damaged parts. The valve stem 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 stem. Apply a high quality lubricant to the O-ring (key 50) before reinstalling the valve stem.
4. Slide valve plug (key 57) onto valve stem (key 11). Apply lubricant to O-ring (key 14) and thread in spring retainer (key 48). Torque spring retainer to 10 to 12 ft-lbs / 14 to 16 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 57) 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 / 1.9 to 3.9 N•m.

Note

On Types 67DS and 67DSR, 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 hex nut (key 19) if used, and install the closing cap (key 33) if used.

Types 67DF, 67DFR, 67DFS and 67DFSR

Filter Element and Trim Maintenance

Key numbers are referenced in Figures 5 and 6.

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). Remove the screw (key 65) that retains the filter (key 6) and remove the filter and filter gasket (key 66).
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 inspect the valve plug (key 57), valve stem (key 11) and the valve seat (key 58), unscrew the spring retainer (key 48) and separate from the body (key 1). To remove the valve plug, grasp the valve plug and pull it straight out of the spring retainer. To remove the valve stem (key 11), grasp the end and pull it straight out of the body (key 1). Inspect the parts for damage and debris. Inspect the valve seat (key 58) for damage or wear.

Replace part if damaged. The valve stem 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 stem. Apply a high quality lubricant to the O-ring (key 50) before reinstalling the valve stem.

- Slide valve plug (key 57) onto valve stem (key 11). Apply lubricant to O-ring (key 14) and thread in spring retainer (key 48). Torque spring retainer to 10 to 12 ft-lbs / 14 to 16 N•m. Reinstall the filter gasket (key 66) and filter (key 6) and secure it with the filter retainer (key 9) and screw (key 65) and torque to 15 to 30 in-lbs / 1.7 to 3.4 N•m. 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.

- Back out the adjusting screw or handwheel (key 18) until compression is removed from the spring (key 17).
- 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).
- Remove the diaphragm assembly (key 16), inspect the diaphragm and replace the assembly, if necessary.
- 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 57) 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.

- Stack the control spring (key 17) and upper spring seat (key 20) onto the diaphragm assembly (key 16).
- 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 67DFS and 67DFSR, lubricate the adjusting screw (key 18) thread to reduce galling of stainless steel.

- 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 hex nut (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.

When ordering replacement parts, reference the key number of each needed part as found in the following parts list. Separate kit containing all recommended spare parts is available.

Parts List

Key	Description	Part Number
Parts Kits		
Types 67D, 67DR, 67DS and 67DSR -		
Includes seat (key 58), O-rings (keys 14, 49 and 50), soft seat (key 15) and diaphragm assembly (key 16).		
Type 67D (without relief)	Brass and Nitrile (NBR) seat	R67DX000012
Type 67DR (with relief)	Brass and Nitrile (NBR) seat	R67DRX00012
Types 67D NACE, 67DS and 67DS NACE (without relief)	316L Stainless steel and Nitrile (NBR) seat	R67DSX00N12
Types 67DR NACE, 67DSR and 67DSR NACE (with relief)	316L Stainless steel and Nitrile (NBR) seat	R67DSRX0N12
Types 67DF, 67DFR, 67DFS and 67DFSR -		
Includes seat (key 58), O-rings (keys 14, 49 and 50), soft seat (key 15), diaphragm assembly (key 16), 5 micron polyethylene filter (key 6), filter gasket (key 66), dripwell O-ring (key 4) and four screws (key 3).		
Type 67DF (without relief)	Brass and Nitrile (NBR) seat	R67DFX00012
Type 67DFR (with relief)	Brass and Nitrile (NBR) seat	R67DFRX0012
Standard kit		R67DFRX0012
Low temperature kit (-60°F / -51°C)		R67DFRX0022
Types 67DF NACE, 67DFS and 67DFS NACE (without relief)	316L Stainless steel and Nitrile (NBR) seat	R67DFSX0N12
Types 67DFR NACE, 67DFSR and 67DFSR NACE (with relief)	316L Stainless steel and Nitrile (NBR) seat	R67DFSRXN12
Automatic Drain Conversion Kits		
Types 67DF, 67DFR, 67DFS and 67DFSR -		
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 67DF and 67DFR	Nitrile (NBR)	R67ADNX0012
	Fluorocarbon (FKM)	R67ADFX0012

67D Series

Key	Description	Part Number	Key	Description	Part Number
	Automatic Drain Conversion Kits (continued)				
	Types 67DF, 67DFR, 67DFS and 67DFSR (continued)				
	Types 67DFS and 67DFSR		12*	Valve Spring	
	Nitrile (NBR)	R67ADNX0022		Stainless steel	GE31783X012
	Fluorocarbon (FKM)	R67ADFX0022		Inconel® (NACE)	GG00430X012
1	Body		14*	O-ring (Spring Retainer)	
	Type 67D or 67DR, Aluminum	GE31800TGY2		For Type 67D, 67DR, 67DS or 67DSR	
	Type 67DS or 67DSR, CF8M Stainless steel	GE31802TGY2		Nitrile (NBR)	10A3803X092
	Type 67DF or 67DFR, Aluminum	GE31786TGY2		Fluorocarbon (FKM)	10A3803X112
	Type 67DFS or 67DFSR, CF8M Stainless steel	GE31788X012		Silicone (VMQ)	10A3803X102
	Type 67DFR with Smart Bleed™, Aluminum	GE33158X012	15*	Soft Seat	
	Nitrile (NBR)	GE33158X022		Nitrile (NBR)	T14055T0012
	Fluorocarbon (FKM)	GE33158X032		Fluorocarbon (FKM)	T14055T0022
	Type 67DFSR with Smart Bleed, Stainless steel		16*	Diaphragm Assembly	
	Nitrile (NBR)	GE33159X022		For Type 67D or 67DF (without relief)	
	Fluorocarbon (FKM)	GE33159X032		Nitrile (NBR)	T14119T0022
2	Drain Valve			Fluorocarbon (FKM)	T14119T0042
	Type 67DF or 67DFR			For Type 67DR or 67DFR (with relief)	
	Brass	1K418918992		Nitrile (NBR)	T14119T0012
	316 Stainless steel	AH3946X0052		Fluorocarbon (FKM)	T14119T0032
	Type 67DFS or 67DFSR			Silicone (VMQ)	T14119T0052
	316 Stainless steel	AH3946X0052		For Type 67DS or 67DFS (without relief)	
	Type 67DF, 67DFR, 67DFS or 67DFSR			Nitrile (NBR)	T14119T0062
	Auto-drain, Nitrile (NBR)	GG00554X012		Fluorocarbon (FKM)	T14119T0072
	Auto-drain, Fluorocarbon (FKM)	GG00554X022		For Type 67DSR or 67DFSR (with relief)	
3	Flange Screw			Nitrile (NBR)	T14119T0082
	For Type 67D, 67DR, 67DF or 67DFR			Fluorocarbon (FKM)	T14119T0092
	Standard spring case and spring case			Silicone (VMQ)	T14119T0102
	with 1/4 NPT vent (6 or 10 required)	T13526T0012	17	Spring	
	Standard spring case for low			For Type 67D, 67DR, 67DF or 67DFR,	
	temperature service (6 required)	T13526T0042		Music wire (standard)	
	For wire seal			0 to 20 psig / 0 to 1.4 bar, Green stripe	GE07809T012
	Flange Screw (5 or 6 required)	T13526T0012		0 to 35 psig / 0 to 2.4 bar, Unpainted	T14059T0012
	Flange Screw (1 required)	14B3987X012		0 to 60 psig / 0 to 4.1 bar, Blue stripe	T14058T0012
	For Type 67DS, 67DSR, 67DFS or			0 to 125 psig / 0 to 8.6 bar, Red stripe	T14060T0012
	67DFSR (10 required)	T13526T0042		For Type 67DR, 67DF or 67DFR	
4*	O-ring (Dripwell)			(NACE), Inconel® (NACE)	
	For Type 67DF, 67DFR, 67DFS or 67DFSR			0 to 35 psig / 0 to 2.4 bar, Silver stripe	T14113T0012
	Nitrile (NBR)	T14057T0042		0 to 60 psig / 0 to 4.1 bar, Blue	T14114T0012
	Fluorocarbon (FKM)	T14057T0022		0 to 125 psig / 0 to 8.6 bar, Red	T14115T0012
	Silicone (VMQ)	T14057T0032		For Type 67DS, 67DSR, 67DFS or	
5	Dripwell			67DFSR, Inconel® (NACE)	
	For Type 67DF or 67DFR, Aluminum			0 to 20 psig / 0 to 1.4 bar, Green	10C1729X012
	Manual	GE34605X012		0 to 35 psig / 0 to 2.4 bar, Silver stripe	T14113T0012
	Auto-drain	GE34606X012		0 to 60 psig / 0 to 4.1 bar, Blue	T14114T0012
	For Type 67DFS or 67DFSR, Stainless steel			0 to 125 psig / 0 to 8.6 bar, Red	T14115T0012
	Manual	GE34607X012		0 to 150 psig / 0 to 10.3 bar, Black	10C1730X012
	Auto-drain	GE31792X012	18	Adjusting Screw	
6*	Filter Element			For Type 67D, 67DR, 67DF or 67DFR	
	For Types 67DF, 67DFR, 67DFS and 67DFSR			For standard spring case, Zinc-plated steel	
	Polyethylene (5 microns) (standard)	GE31794X012		Square head (standard)	T14061T0012
	Glass fiber (5 microns)	GE31795X012		Handwheel	T14102T0012
	Stainless steel (40 microns)	GE31809X012		Wire seal (not shown)	T14104T0012
7	Spring Case			For Type 67D, 67DR, 67DF or 67DFR (continued)	
	For Type 67D, 67DR, 67DF or 67DFR, Aluminum			For spring case with 1/4 NPT vent	
	Drilled hole vent (standard)	T14070T0012		Square head for closing cap, Stainless steel	T14101T0012
	1/4 NPT vent	T14070T0022		Handwheel, Zinc-plated steel	T14103T0012
	For Type 67DS, 67DSR, 67DFS or 67DFSR,			Wire seal (not shown), Steel	T14198T0012
	Stainless steel	20C1727X012		For Type 67DS, 67DSR, 67DFS or 67DFSR	
9	Filter Retainer, 316 Stainless steel			Square head with or without closing cap	
	For Type 67DF, 67DFR, 67DFS or 67DFSR	GE31796X012		Handwheel	
11*	Valve Stem			Stainless steel	T14101T0022
	For Types 67D, 67DR, 67DF and 67DFR			Zinc-plated steel	T14103T0012
	Brass	GE35519X012	19	Hex nut	
	Aluminum	GE35519X022		For Type 67D, 67DR, 67DF or 67DFR	
	For All			Zinc-plated steel	1A946324122
	Stainless steel	GE35519X032		For All	
				Stainless steel	1A9463X0042
			20	Upper Spring Seat	
				For Type 67D, 67DR, 67DF or 67DFR	
				Zinc-plated steel	T14051T0012
				For Type 67DS, 67DSR, 67DFS or 67DFSR	
				Stainless steel	10C1725X012

*Recommended spare parts
Inconel® is a mark owned by Special Metals Corporation.

Key	Description	Part Number
22	Pressure Gauge (not shown) Triple Scale Pressure Connected Gauge (For Types 67D, 67DR, 67DF and 67DFR) 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 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 Triple Scale Pressure Top Connected Gauge (For Types 67D, 67DR, 67DF and 67DFR only) 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 11B8582X012 11B8582X022 11B8582X032
23	1/4 in. / 6.4 mm Pipe Plug (not shown) For Types 67D, 67DR, 67DF and 67DFR Socket head, Steel For All Types except Types 67DF and 67DFS Hex head, Stainless steel For Types 67DF and 67DFS Hex head, Stainless steel	1C333528992 1A767535072 1C3335X0012
30	NACE Tag (not shown)	-----
31	Panel Mounting Nut, Stainless steel	10B2657X012
32	Wire Seal (not shown) For Types 67D and 67DR, Stainless steel For Types 67DF and 67DFR	1U7581000A2 T14088T0012 23B9152X012
33	Closing Cap, Plastic	
45	Screen Vent (for Types 67DS, 67DSR, 67DFS and 67DFS only)	0L078343062
48	Spring Retainer For Type 67D or 67DR, Aluminum For Type 67DS or 67DSR, Stainless steel For Type 67DF or 67DFR, Zinc-plated steel For Type 67DFS or 67DFS, Stainless steel	GG03555X012 GE31803X022 GE31797X012 GE31797X022
49*	O-ring (Plug) Nitrile (NBR) Fluorocarbon (FKM) Low Temperature Nitrile (NBR)	T12946T0012 1C8538X0182 1C8538X0192
50*	O-ring (Stem) Nitrile (NBR) Fluorocarbon (FKM) Low Temperature Nitrile (NBR)	1H2926X0052 1H2926X0062 1H2926X0072
57	Valve Plug For Types 67D, 67DR, 67DF and 67DFR Brass Aluminum For All Stainless steel	GE31779X012 GE31779X022 GE31779X032
58*	Seat Stainless steel/Nitrile (NBR) Stainless steel/Fluorocarbon (FKM) For Types 67D, 67DR, 67DF and 67DFR Brass/Nitrile (NBR)	GE31782X012 GE31782X022 GE31782X032
65	Filter Retainer Screw For Types 67DF, 67DFR, 67DFS and 67DFS Stainless steel For Types 67DF and 67DFR Zinc-plated steel	T13526T0042 T13526T0012
66*	Filter Gasket For Types 67DF, 67DFR, 67DFS and 67DFS Nitrile (NBR) Fluorocarbon (FKM)	GG00752X012 GG00752X022

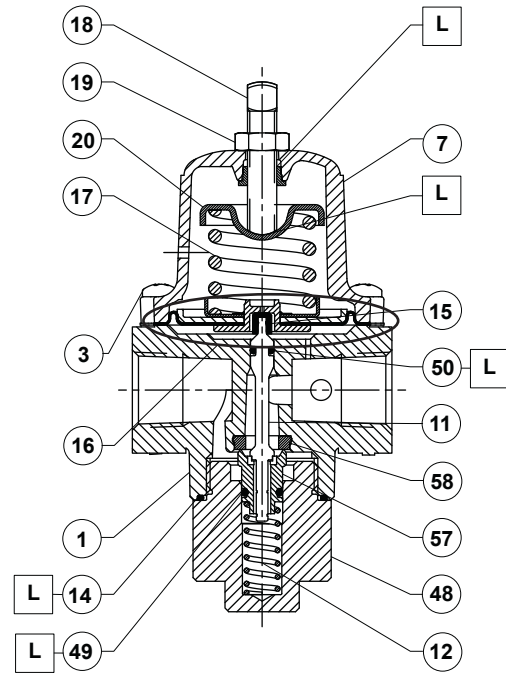


Figure 3. Type 67D or 67DR Assembly

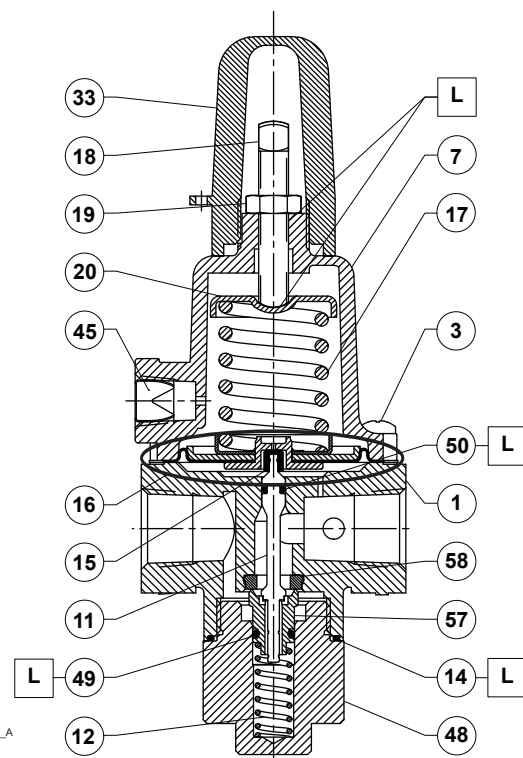
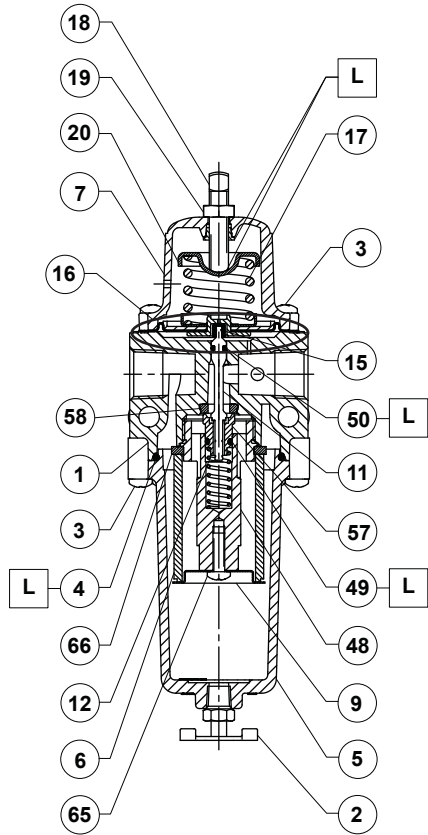


Figure 4. Type 67DS or 67DSR Assembly

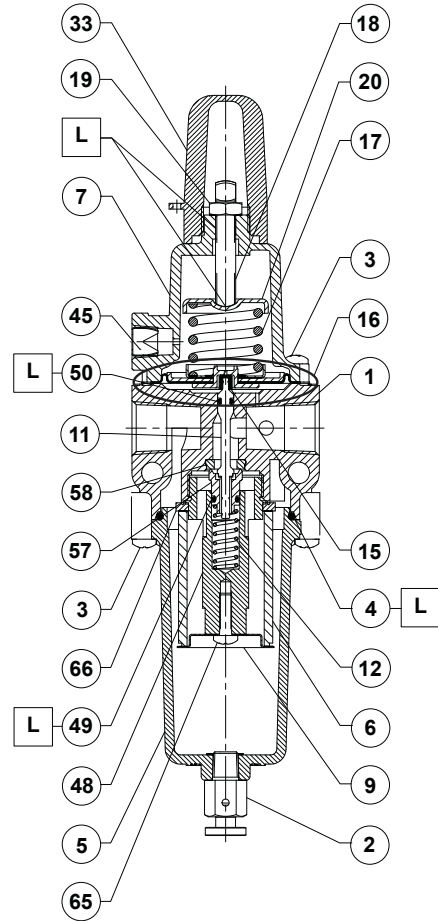
*Recommended spare parts
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PARTS NOT SHOWN: 25

GE32850_B

□ APPLY LUBRICANT (L)

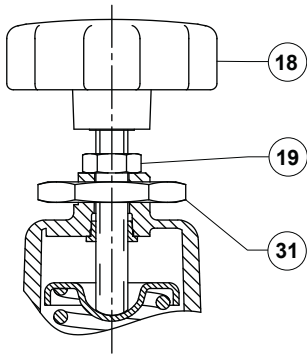


GE31805_B

□ APPLY LUBRICANT (L)

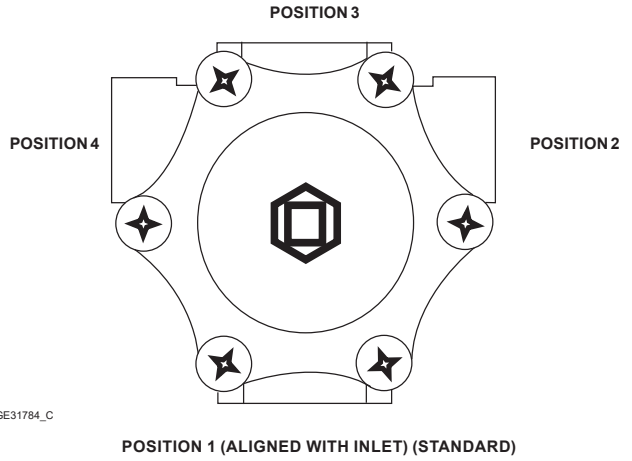
Figure 5. Type 67DF or 67DFR Assembly

Figure 6. Type 67DFS or 67DFS Assembly



40C1728_A

Figure 7. 67D Series Optional Panel Mount



GE31784_C

Figure 8. 67D Series Spring Case Vent Positions

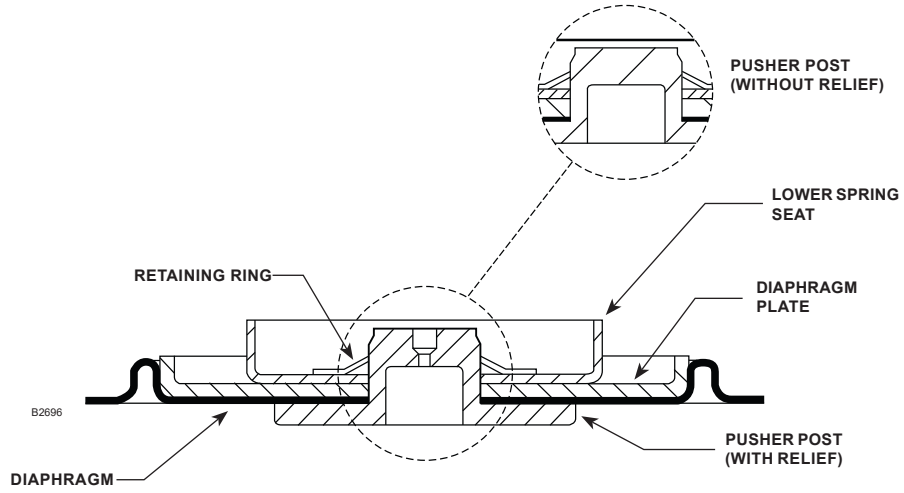
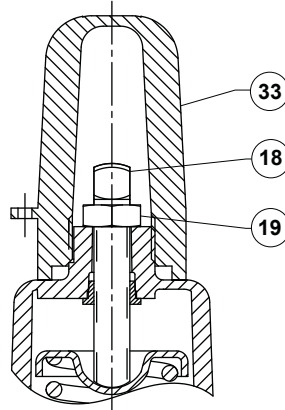
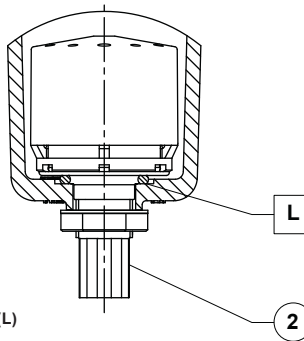


Figure 9. Key 16, Diaphragm Assembly



B2698

Figure 10. *Optional Closing Cap (Only Available with the 1/4 in. / 6.4 mm Spring Case Vent)*



□ APPLY LUBRICANT (L)

Figure 11. *Automatic Drain Option for Type 67DF, 67DFR, 67DFS or 67DFS R*

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