

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: Types 66R and 66RR Instruction Manual, D100248X012.

PED Categories

This product may be used as a safety accessory with pressure equipment in the following Pressure Equipment Directive categories. It may also be used outside of the Pressure Equipment Directive using sound engineering practice (SEP) per table below. For information on the current PED revision see Bulletin: [D103053X012](#).

PRODUCT SIZE	CATEGORIES	FLUID TYPE
DN 50 to 100 / 2 to 4 in.	SEP	1

Specifications

Body Sizes and End Connection Styles

Cast Iron:

DN 50 / 2 in.: NPT or CL125 FF flanged

DN 80 and 100 / 3 and 4 in.: CL125 FF flanged

Steel:

DN 50 / 2 in.: NPT, CL150 RF and

CL300 RF flanged

DN 80 and 100 / 3 and 4 in.: CL150 RF flanged

Maximum Relief (Inlet) Pressures⁽¹⁾

Type 66R: 0.55 bar / 8 psig, including buildup

Type 66RR: 0.69 bar / 10 psig, including buildup

Relief Set Pressure Ranges⁽¹⁾

Type 66R: 5 mbar to 0.34 bar / 2 in. w.c. to 5 psig in 7 ranges

Type 66RR: 10 mbar to 0.48 bar / 4 in. w.c. to 7 psig
See Table 1

Allowable Emergency Outlet Pressure⁽¹⁾

Type 66R: 0.55 bar / 8 psig

Type 66RR: 0.69 bar / 10 psig

Proof Test Pressure

All Pressure Retaining Components have been proof tested per Directive

Temperature Capabilities

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

High-Temperature Elastomers: -18 to 177°C / 0 to 350°F

Installation



WARNING

Only qualified personnel should install or service a regulator. Regulators 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 regulator vents fluid or a leak develops in the system, it indicates that service is required. Failure to take the regulator 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 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 limits.

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

Clean out all pipelines before installation of the regulator and check to be sure the regulator 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 regulator 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.

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

Types 66R and 66RR

Table 1. Type T208RR Pilot Control Spring Selection

MAIN VALVE CONSTRUCTION	RELIEF SET PRESSURE RANGE		Color Code	PILOT CONTROL SPRING			
	bar	psig		Wire Diameter		Free Length	
				mm	In.	mm	In.
Standard	10 to 22 mbar ⁽¹⁾	4 to 9 in. w.c. ⁽¹⁾	Red	2.16	0.085	92.1	3.625
	12 to 37 mbar ⁽¹⁾	5 to 15 in. w.c. ⁽¹⁾	Olive drab	2.67	0.105	95.3	3.750
	30 to 70 mbar ⁽¹⁾	12 to 28 in. w.c. ⁽¹⁾	Yellow	2.90	0.114	106	4.188
	0.06 to 0.17	0.9 to 2.5	Light green	3.96	0.156	103	4.060
	0.09 to 0.31	1.3 to 4.5	Light blue	4.75	0.187	100	3.938
Special	0.26 to 0.48	3.8 to 7	Black	5.54	0.218	101	3.980
1. Published ranges are with the spring case pointed up.							

1. Published ranges are with the spring case pointed up.

Note

It is important that the regulator be installed so that the vent hole in the spring case is unobstructed at all times. For outdoor installations, the regulator 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 regulator beneath eaves or downspouts and be sure it is above the probable snow level.

Overpressure Protection

The recommended pressure limitations are stamped on the regulator 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 regulator inlet pressure is greater than the safe working pressure of the downstream equipment.

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

Startup

The regulator 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 set pressure, remove the closing cap or loosen the locknut and turn the adjusting screw clockwise to increase set pressure or counterclockwise to decrease pressure. Monitor the set 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 regulator from all pressure before attempting disassembly.

Parts List

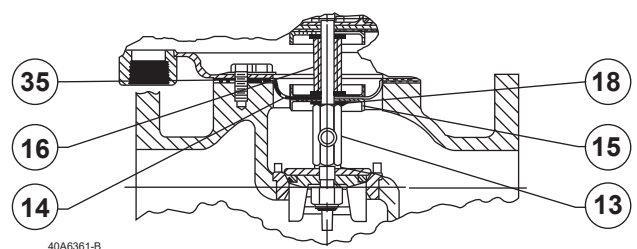
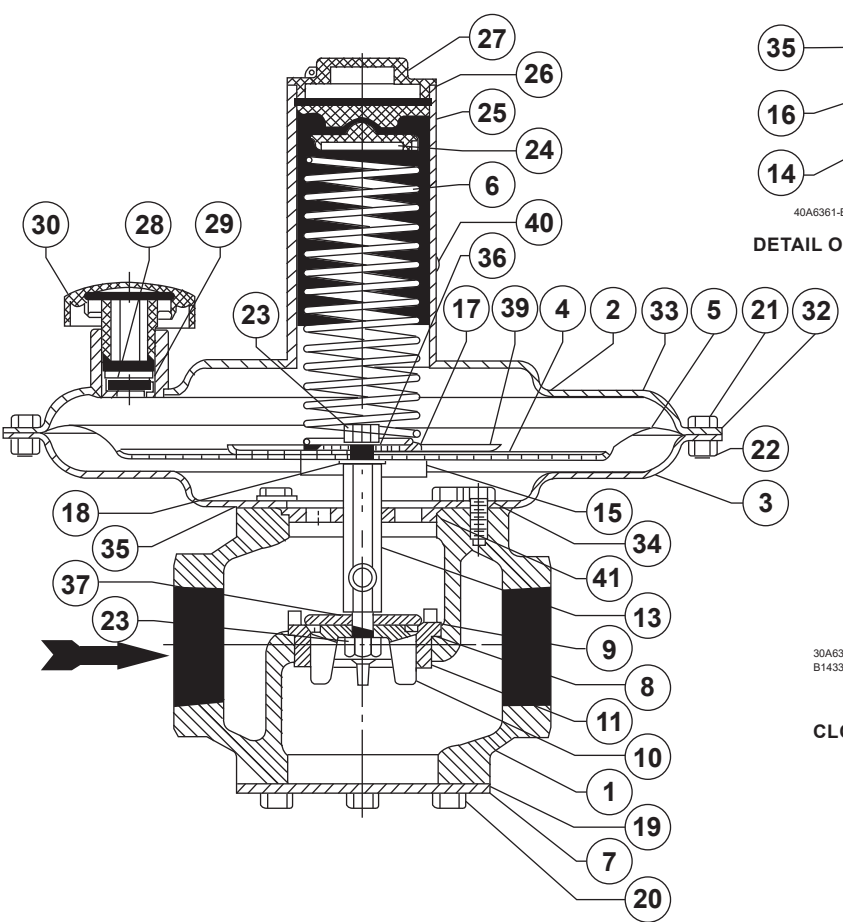
Type 66R Relief Valve,

Type 66RR Main Valve Body

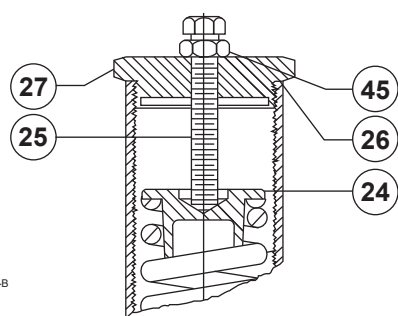
Key	Description	Key	Description
1	Body	28	Flapper Valve
2	Spring Case	29	Snap Ring
3	Diaphragm Case	30	Type Y602-10 Vent Assembly
4	Upper Diaphragm Plate	31	Pipe Plug
5	Diaphragm	32	Nameplate
6	Spring	33	Nameplate
7	Bottom Flange	34	Washer
8	O-ring	35	Diaphragm Case Gasket
9	O-ring Retainer	36	Spring Seat Washer
10	Valve Plug Skirt	37	Seal Washer
11	Seat Ring	39	Stiffener Plate
13	Valve Stem	40	Drive Screw
14	Sealing Diaphragm	41	Stem Guide
15	Lower Diaphragm Plate	45	Locknut for 207 to 340 mbar / 3 to 5 psig
16	Diaphragm Spacer	60	U-Bolt (for type 66RR only)
17	Lower Spring Seat	61	U-Bolt
18	Stem Gasket	62	Mounting Bar
19	Bottom Flange Gasket	63	Pipe Union
20	Cap Screw		(for Type 66RR only)
21	Cap Screw	64	Pipe Nipple
22	Hex Nut		(for Type 66RR only)
23	Stem Nut	65	Hex Nut
24	Upper Spring Seat	66	Diaphragm Gasket
25	Adjusting Screw	67	Pipe Nipple
26	Closing Cap Gasket		
27	Closing Cap		

Type T208RR Pilot

Key	Description	Key	Description
1	Body	23	Hex Nut
2	Cap Screw	24	Cap Screw
3	Spring Case Assembly	25	Gasket
4	Diaphragm Casing	26	Vent
5	Orifice	35	Adjusting Screw
6	Spring	36	Washer
7	Diaphragm Head	38	Cap Screw
8	Pusher Post	41	Back Disk Spring
10	Diaphragm	42	Back Body Seal O-ring
11	Body Seal O-ring	43	Back Body Cap
12	Insert Seal O-ring	44	Disk Spacer
13	Disk Assembly	45	Lower Head Gasket
14	Stem	47	Drive Screw
16	Lever Assembly	48	Flow Arrow
17	Machine Screw	49	Backup Ring
18	Guide Insert	50	Lower Spring Seat
22	Closing Cap		



DETAIL OF OPTIONAL CAST IRON CONSTRUCTION WITH SEALING DIAPHRAGM AND TAPPED DIAPHRAGM CASE



CLOSING CAP AND ADJUSTING SCREW DETAIL FOR 0.21 TO 0.34 bar / 3 TO 5 psig CONSTRUCTION

COMPLETE STANDARD ASSEMBLY WITH INTERNAL REGISTRATION

Figure 1. Type 66R Relief Valve

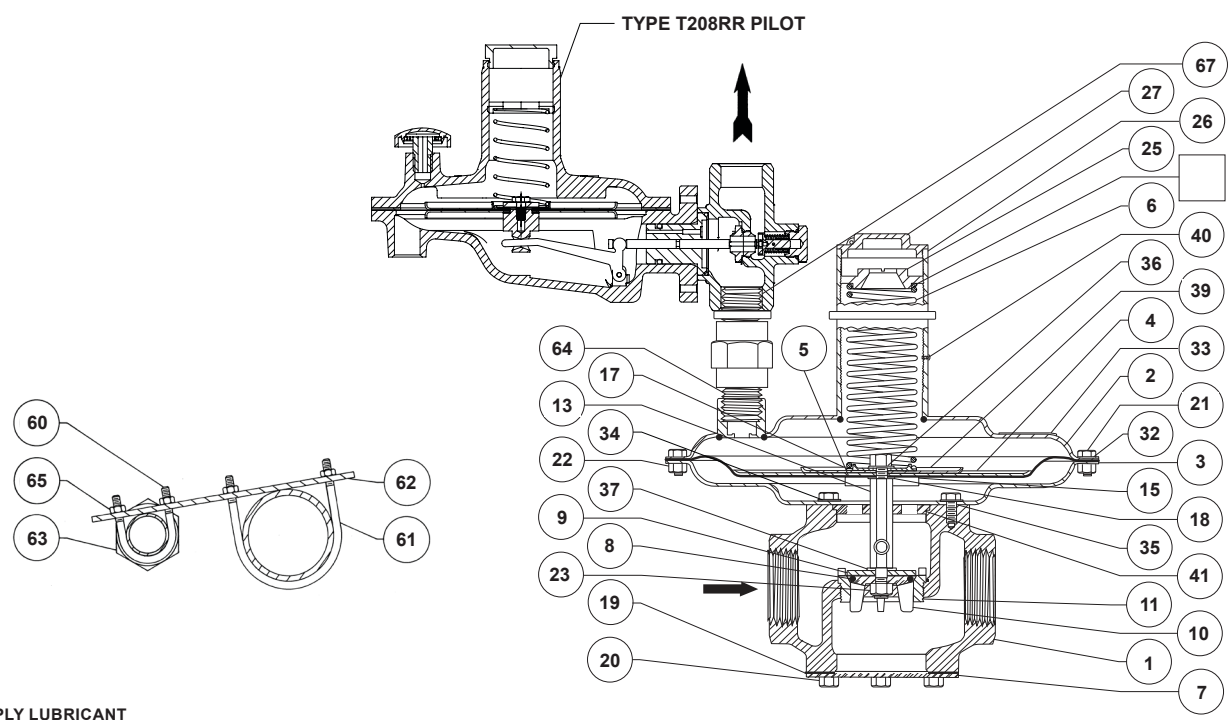


Figure 2. Type 66RR Main Valve and Pilot Mounting Parts

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□ APPLY LUBRICANT

Types 66R and 66RR

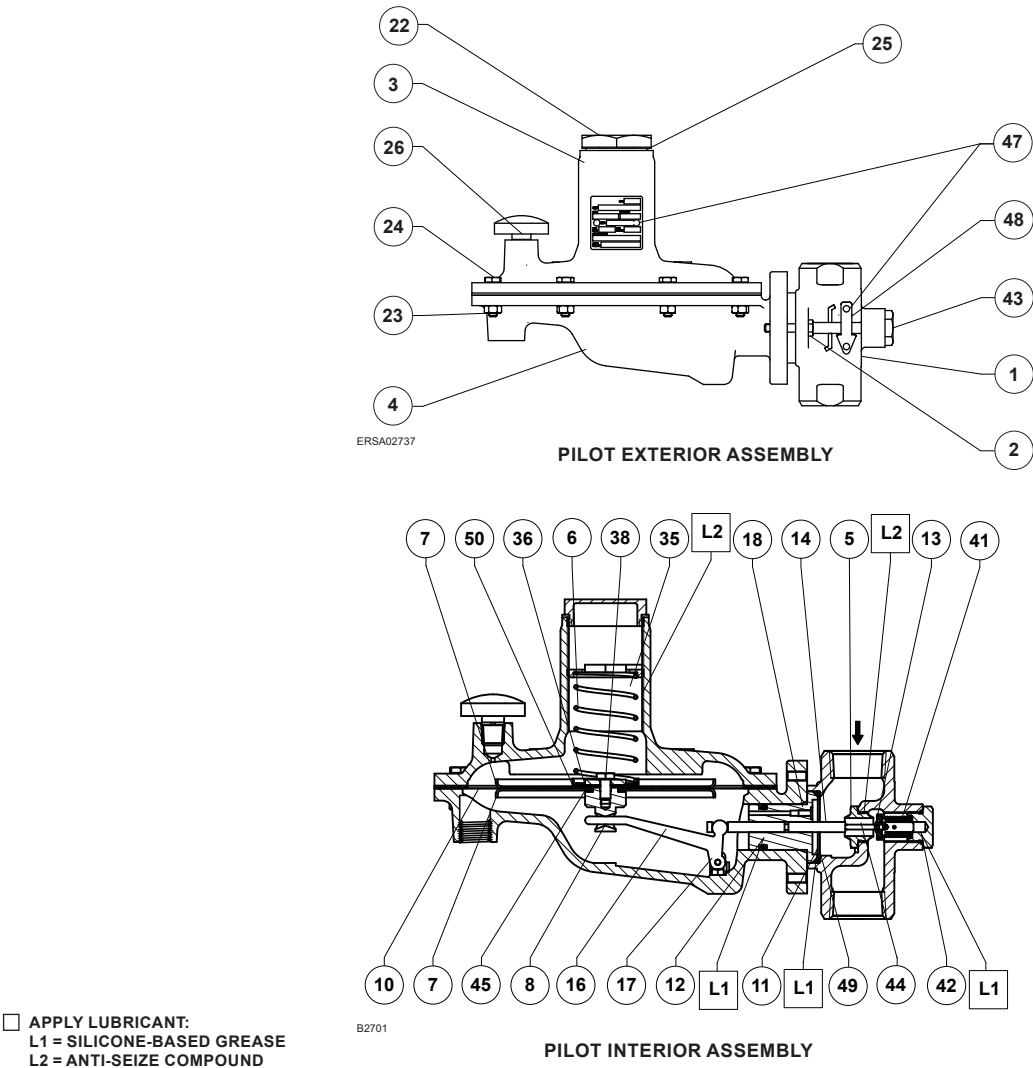


Figure 3. Type T208RR Pilot Assembly

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For further information on the current
PED revision see Bulletin: [D103053X012](#)
or scan the QR code.

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