

Introduction

This installation guide provides instructions for installation, startup, and adjustment. To receive a copy of the instruction manual, contact your local Fisher Sales Office or Sales Representative or view a copy at www.FISHERregulators.com. For further information refer to:

Types 66R and 66RR Instruction Manual, form 1737, D100248X012.

P.E.D. Categories

This product may be used as a safety accessory with pressure equipment in the following Pressure Equipment Directive 97/23/EC categories. It may also be used outside of the Pressure Equipment Directive using sound engineering practice (SEP) per table below.

PRODUCT SIZE	CATEGORIES	FLUID TYPE
DN 50-100 (2-4-inch)	SEP	1

Specifications

Body Sizes and End Connection Styles

Cast Iron:

DN 50 (2-inch): Screwed or Class 125 FF flanged
DN 80 and 100 (3 and 4-inch): Class 125 FF flanged

Steel:

DN 50 (2-inch): Screwed, Class 150 RF flanged or Class 300 RF flanged
DN 80 and 100 (3 and 4-inch): Class 150 RF flanged

Maximum Relief (Inlet) Pressures⁽¹⁾

Type 66R: 0,55 bar (7.25 psig), including buildup
Type 66RR: 0,69 bar (7.25 psig), including buildup

Relief Set Pressure Ranges⁽¹⁾

Type 66R: 5 mbar (2-inches w.c.) to 0,34 bar (5 psig) in 7 ranges; DN 50 (2-inch): 5 to 20 mbar (2 to 8 in. wc), 15 to 40 mbar (6 to 16 in. wc), 27 to 69 mbar (11 in. wc to 1 psig), 52 to 103 mbar (0.75 to 1.5 psig), 69 to 138 mbar (1 to 2 psig), 103 to 207 mbar (1.5 to 3 psig), 207 to 340 mbar (3 to 5 psig)⁽²⁾

Type 66RR: 7 mbar (3-inches w.c.) to 0,48 bar (7 psig) in 7 ranges; 10 to 22 mbar (4 to 9-inches w.c.)⁽³⁾, 12 to 37 mbar (5 to 15-inches w.c.)⁽³⁾, 30 to 70 mbar (12 to 28-inches w.c.)⁽³⁾, 0,062 to 0,17 bar (0.9 to 2.5 psig), 0,09 to 0,31 bar (1.3 to 4.5 psig), 0,26 to 0,48 bar (3.8 to 7 psig)

Allowable Emergency Outlet Pressure⁽¹⁾

Type 66R: 0,55 bar (7.25 psig)
Type 66RR: 0,69 bar (7.25 psig)

Proof Test Pressure

All Pressure Retaining Components have been proof tested per Directive 97/23/EC - Annex 1, Section 7.4

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 Fisher 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 male 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.

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.

1. The pressure/temperature limits in this installation guide and any applicable standard or code limitation should not be exceeded.
2. To use 207 to 340 mbar (3 to 5 psig) spring on 3-inch body size, do not use balancing diaphragm. 207 to 340 mbar (3 to 5 psig) not available with 4-inch.
3. Published ranges are with the spring case pointed up.



Types 66R and 66RR

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 outlet pressure, remove the closing cap or loosen the locknut and turn the adjusting screw clockwise to increase outlet pressure or counterclockwise to decrease pressure. Monitor the outlet 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

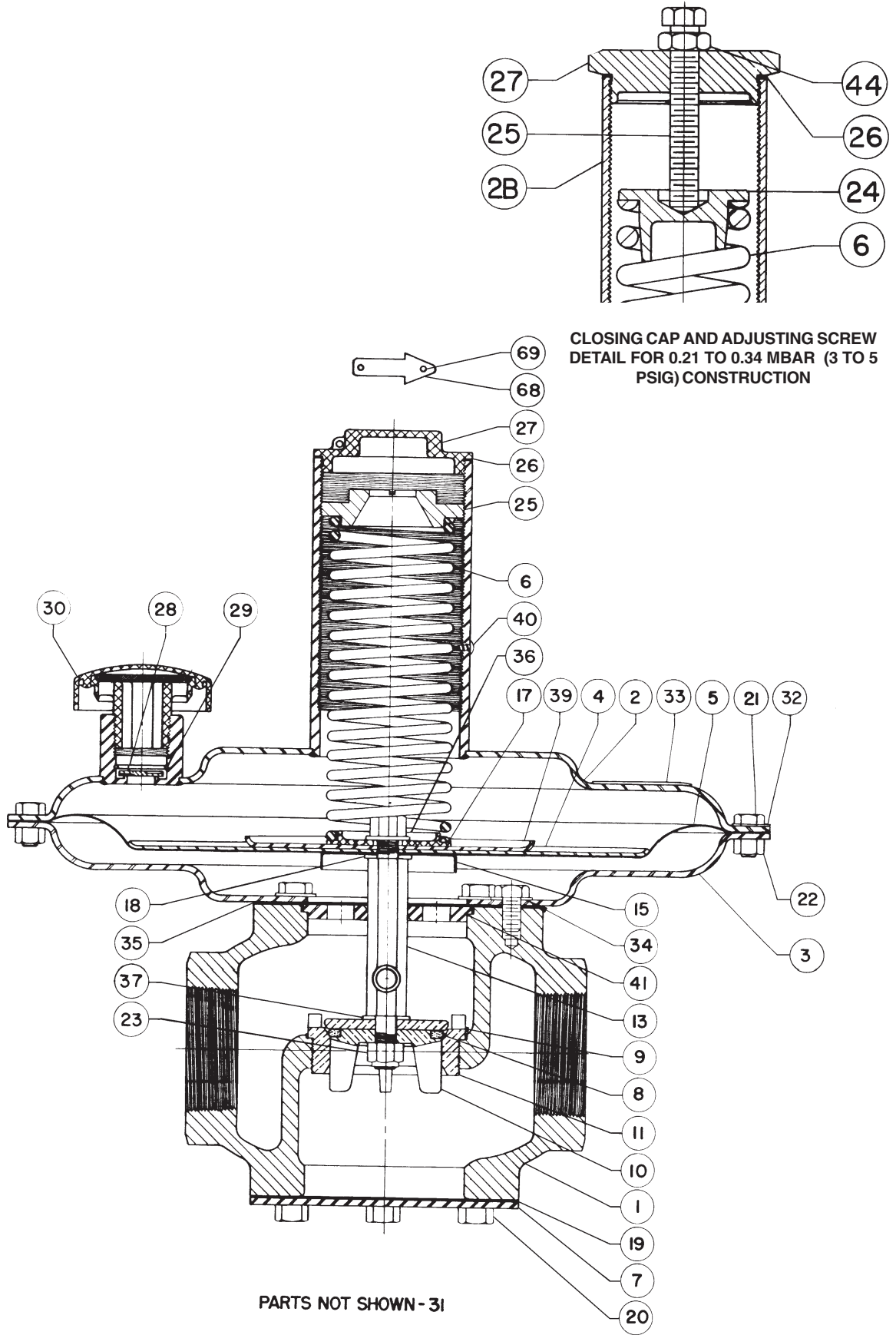
Type 66R Relief Valve, Type 66RR Main Valve Body

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

Type Y695RR Pilot

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

Types 66R and 66RR



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Figure 1. Type 66R Relief Valve

Types 66R and 66RR

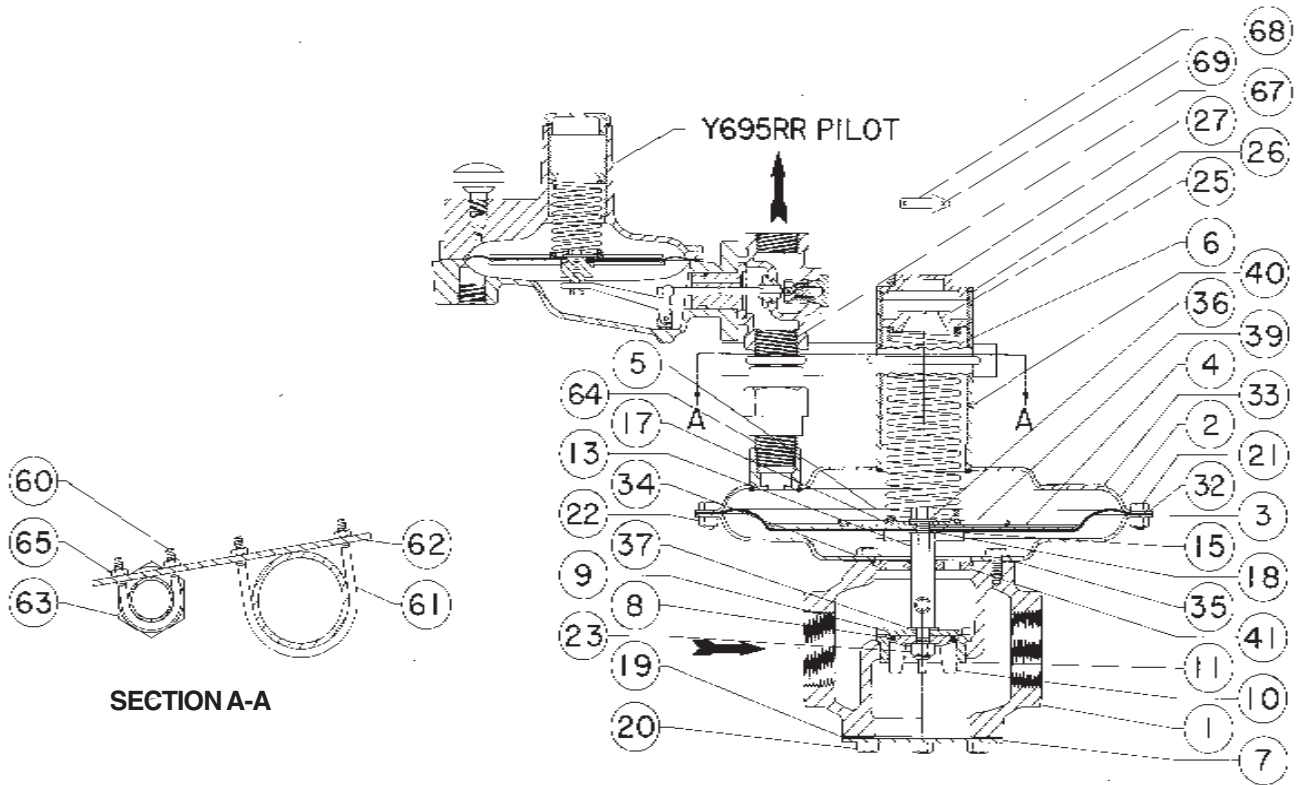


Figure 2. Type 66RR Main Valve and Pilot Mounting Parts

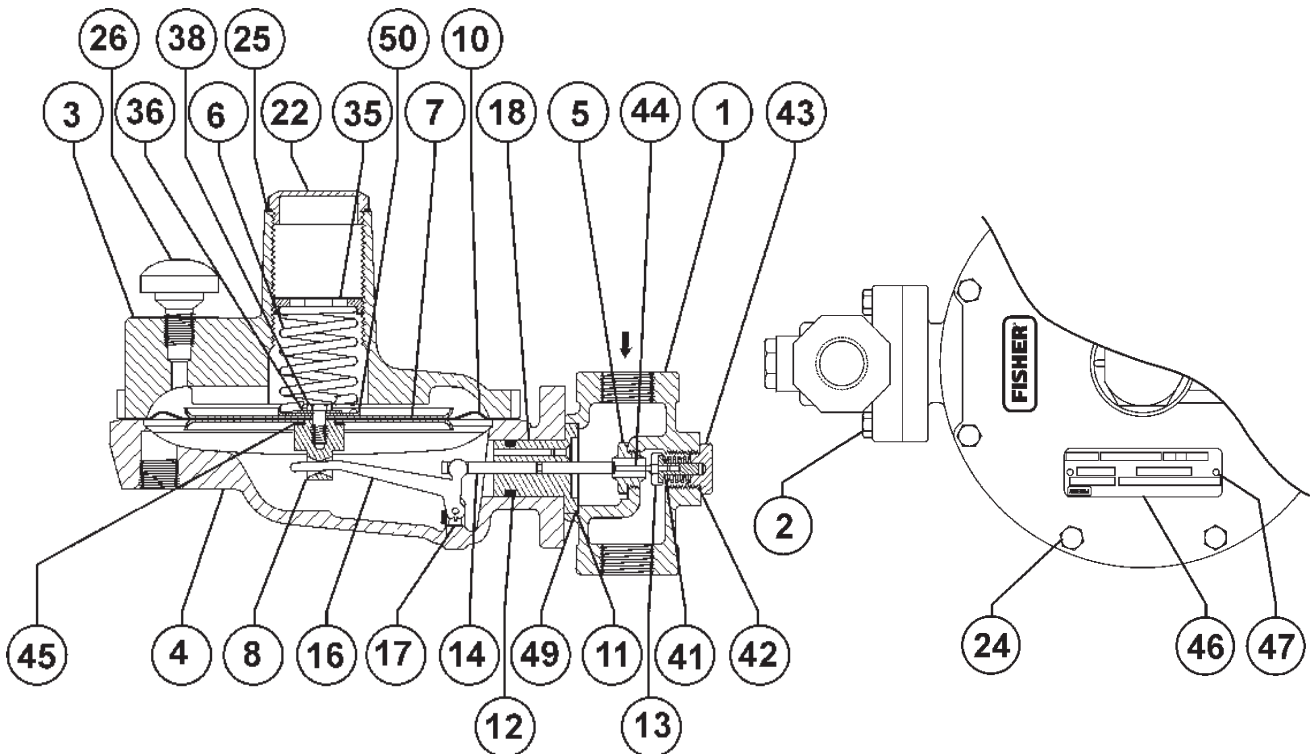


Figure 3. Type Y695RR Pilot Assembly

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