

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:

Type Type 95L and 95H instruction manual (form 1151, D100256X012), Type 95B instruction manual (form 5490, D102669X012), or Type 95LD and 95HD instruction manual (form 1396, D100257X012).

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 8-25 (1/4-1-inch)	SEP	1
DN 40 and 50 (1-1/2 and 2 inch)	I, II	

Specifications

Available Constructions

95H: Pressure reducing regulator suitable for controlling gasses and liquids. DN 8, 15, 20, 25, 40 and 50 (1/4, 1/2, 3/4, 1, 1 1/2, and 2-inch) body sizes are available in cast iron/ductile iron, steel, or stainless steel.

95BH: Bronze version of Type 95H. Not available in DN 8 (1/4-inch) body size.

95HD: Differential pressure version of the Type 95H.

Maximum Inlet and Outlet Pressures⁽¹⁾

Cast Iron/Ductile Iron: - NPT: 17,2 bar (250 psig)

Steel: ANSI Class 150 RF: 19,7 bar (285 psig)

Stainless Steel: ANSI Class 150 RF: 18,9 bar (25 psig)

Steel and Stainless Steel

NPT, ANSI Class 300 and 600 RF, DIN PN 10/40 RF, or SWE: 20,7 bar (300 psig)

Bronze: 24,1 bar (350 psig)

Proof Test Pressure

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

Outlet Pressure Ranges⁽¹⁾

DN 8, 15, 20, and 25 (1/4, 1/2, 3/4, and 1-inch):

1,0 to 2,1 bar (15 to 30 psig), 1,7 to 5,2 bar (25 to 75 psig), and 4,8 to 10,3 bar (70 to 150 psig)

DN 40 and 50 (1-1/2 and 2-inch):

0,34 to 5,5 bar (5 to 80 psig), 4,1 to 8,3 bar (60 to 120 psig), 6,9 to 9,7 bar (100 to 140 psig), and 8,3 to 10,3 bar (120 to 150 psig)

Temperature Capabilities⁽¹⁾

Elastomer Parts

Nitrile/Neoprene: -40 to 82°C (-40 to 180°F)

Fluoroelastomer: -18 to 149°C (0 to 300°F) hot water limited to 82°C (180°F)

Ethylene propylene: -40 to 149°C (-40 to 300°F)

Teflon (PTFE): -198 to 232°C (-325 to 450°F)

Perfluoroelastomer: -29 to 232°C (-20 to 550°F)

Metal Parts

Cast Iron/Ductile Iron: -40 to 208°C (-40 to 406°F)

Steel and Stainless Steel: -29 to 232°C (-20 to 450°F)

Bronze and Brass: -198 to 177°C (-325 to 350°F)

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

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.

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



Types 95H, 95BH, and 95HD

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

Types 95H and 95BH:

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.

Type 95HD:

The Type 95HD setting may be adjusted by turning the handwheel (key 38).

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

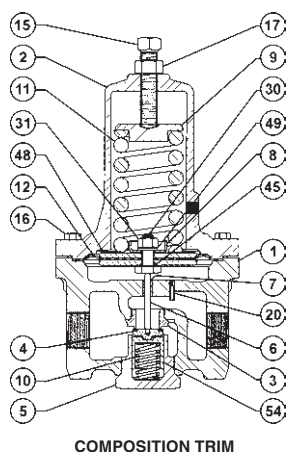
Key	Description	Key	Description
1	Regulator Body	10	Valve Plug Spring
2	Spring Case	11	Regulator Spring
3	Orifice	12	Diaphragm
4	Valve Plug	15	Adjusting Screw
5	Valve Plug Guide	16	Cap Screw
6	Stem Assembly	17	Locknut
7	Stem Guide Bushing	19	Diaphragm Gasket
8	Lower Spring Seat	20	Pilot Tube
9	Upper Spring Seat		

The following parts are for the DN 40 and 50 (1-1/2 and 2-inch) body sizes only:

Key	Description	Key	Description
30	Pusher Post	47	Diaphragm Gasket
31	Locknut	48	Diaphragm Head
45	O-Ring	49	Lockwasher

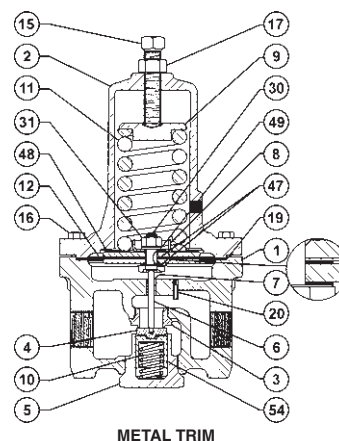
The following parts are for the Type 95HD only:

Key	Description
32	Packing Box
33	Adjusting Screw
34	Packing Follower
35	Packing Box Nut
36	Packing
37	Packing Box Gasket
38	Handwheel
39	Female Adapter
40	Male Adapter
41	Machine Screw
42	Spring
43	Washer
44	Washer



A7250

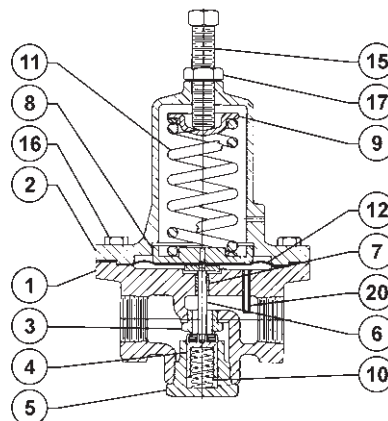
COMPOSITION TRIM



A7251

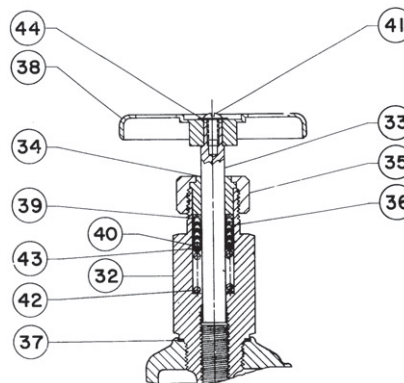
METAL TRIM

Figure 3. Type 95H, Sizes DN 40 and 50 (1-1/2 and 2-inch)



A7249

Figure 1. Type 95H, Sizes DN 15, 20, and 25 (1/2, 3/4, and 1-inch) Composition Trim



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Figure 2. Type 95HD Handwheel Assembly

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