

English - April 2021

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: Type 92S Instruction Manual, D100637X012.

PED/PE(S)R Categories

This product may be used as a safety accessory with pressure equipment in the following categories. It may also be used outside of these Directives using Sound Engineering Practice (SEP) per table below. For information on the current PED/PE(S)R revision, see Bulletin: [D103053X012](#).

PRODUCT SIZE	CATEGORIES	FLUID TYPE
DN 25 / 1 in.	SEP	1
DN 40, 50, 65, 80, 100 and 150 x 100 / 1-1/2, 2, 2-1/2, 3, 4 and 6 x 4 in.	II	

Specifications

Main Valve Body Sizes and End Connection Styles⁽¹⁾

BODY SIZE		END CONNECTION STYLE AND RATING	
DN	In.	Cast Iron Body	Steel or Stainless Steel Body
25, 40 and 50	1, 1-1/2 and 2	NPT	NPT
25, 40, 50, 65, 80 and 100	1, 1-1/2, 2, 2-1/2, 3 and 4	CL125 FF or CL250 RF	CL150 RF, CL300 RF, CL600 RF or PN 10/25/40
150 x 100 ⁽¹⁾	6 x 4 ⁽¹⁾	Not available	CL300 RF, CL600 RF or PN16/25/40/64/100

Maximum Inlet and Pilot Supply Pressure⁽¹⁾

Cast Iron Main Valve and Pilot: 17.2 bar / 250 psig or body rating limit, whichever is lower

Steel or Stainless Steel Main Valve and Pilot: 20.7 bar / 300 psig or body rating limit, whichever is lower

Minimum and Maximum Differential Pressures⁽¹⁾

BODY SIZE		MINIMUM DIFFERENTIAL PRESSURE		MAXIMUM DIFFERENTIAL PRESSURE	
DN	In.	bar	psi	bar	psi
25, 40, 50	1, 1-1/2, 2	1.0	15	13.8 bar or body rating limit, whichever is lower	200 psi or body rating limit, whichever is lower
65, 80, 100, 150 X 200 ⁽¹⁾	2-1/2, 3, 4, 6 X 4 ⁽¹⁾	1.4	20	12.1 bar or body rating limit, whichever is lower	175 psi or body rating limit, whichever is lower

Maximum Inlet and Outlet Pressures⁽²⁾

See Table 1

Proof Test Pressure

All Pressure Retaining Components have been proof tested per Pressure Equipment Directive and Pressure Equipment (Safety) Regulation.

Outlet (Control) Pressure Ranges⁽²⁾

PILOT TYPE	OUTLET PRESSURE RANGE	
	bar	psig
6492L	0.14 to 0.41 0.34 to 1.0 0.90 to 1.7	2 to 6 5 to 15 13 to 25
6492H	0.69 to 2.1 1.7 to 5.2 4.8 to 10.3	10 to 30 25 to 75 70 to 150
6492HT	1.0 to 6.9 5.5 to 17.2	15 to 100 80 to 250

Maximum Allowable Loading Pressure for Pilot with Tapped Spring Case⁽²⁾

Combination of pilot control spring setting and spring case loading pressure must not exceed 10.3 bar / 150 psig for Type 6492H pilot or 1.7 bar / 25 psig for Type 6492L pilot and 17.2 bar / 250 psig for Type 6492HT.

Maximum Material Temperature Capabilities⁽²⁾

Cast Iron Construction: 208°C / 406°F

Steel Construction: 260°C / 500°F

High Temperature Optional Steel and Stainless Steel Construction: 343°C / 650°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.

1. The two-number designation indicates end connection size by trim size.

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

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Table 1. Maximum Inlet and Outlet Pressures⁽¹⁾

PILOT TYPE	MAXIMUM ALLOWABLE INLET PRESSURE				MAXIMUM OPERATING OUTLET PRESSURE		MAXIMUM EMERGENCY OUTLET PRESSURE			
	Cast Iron		Steel or Stainless Steel				Cast Iron Main Valve and Pilot Body		Stainless Steel or Steel Main Valve and Pilot Body	
	bar	psig	bar	psig			bar	psig	bar	psig
6492L	17.2	250	20.7	300	1.7	25	6.90	100	6.90	100
6492H	17.2	250	20.7	300	10.3	150	17.2 bar or main valve body rating limit, whichever is lower	250 psig or main valve body rating limit, whichever is lower	20.7 bar or main valve body rating limit, whichever is lower	300 psig or main valve body rating limit, whichever is lower
6492HT	----		20.7	300	17.2	250	----		20.7 bar or main valve body rating limit, whichever is lower	300 psig or main valve body rating limit, whichever is lower

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.

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 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

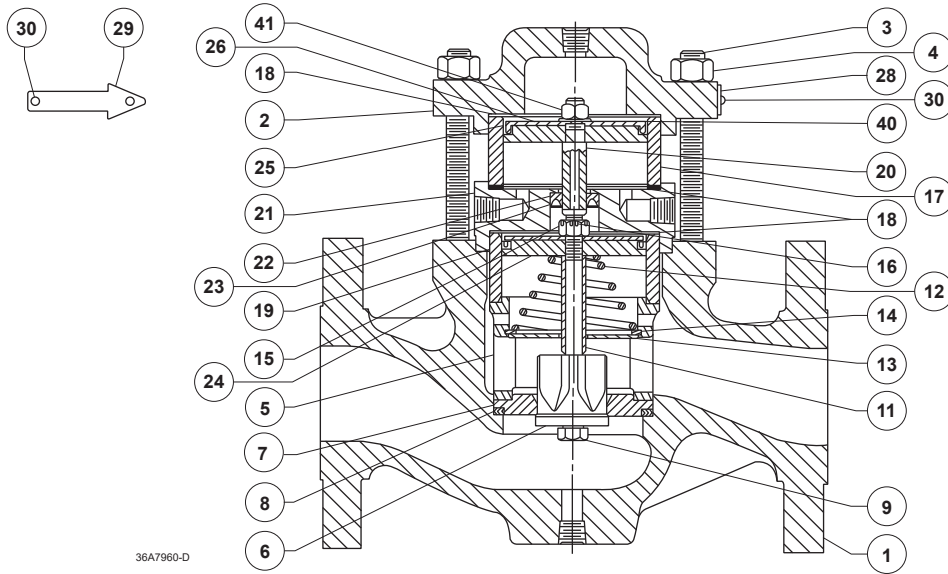
To avoid personal injury resulting from sudden release of pressure, isolate the regulator from all pressure before attempting disassembly.

Parts List

Type 92S Main Valve

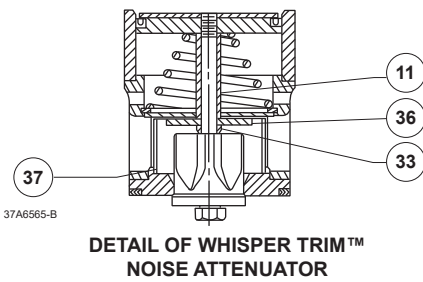
Key	Description	Key	Description
1	Body	21	Cylinder Spacer
2	Body Flange	22	Stem Seal
3	Cap Screw (For Cast Iron Body)	23	Stem Seal Retainer
3	Stud Bolt (For Steel Body)	24	Piston
4	Stud Nut	25	Piston Ring
5	Cage	26	Ring Retainer
6	Valve Plug	29	Flow Arrow
7	Seat Ring	32	Spring Seat
8	Spiral Wound Gasket	33	Plug Spacer
9	Lower Stem	34	Washer
11	Piston Spacer	35	Groove Pin
12	Spring	36	Deflector
13	Baffle	37	Screen (Noise Attenuation only)
14	Retaining Ring	38	O-ring
15	Stem Nut	40	Lockwasher
16	Cotter Pin	41	Hex Nut
17	Cylinder		
18	Cylinder Gasket		
19	Body Gasket		
20	Upper Stem		

1. The two-number designation indicates end connection size by trim size.



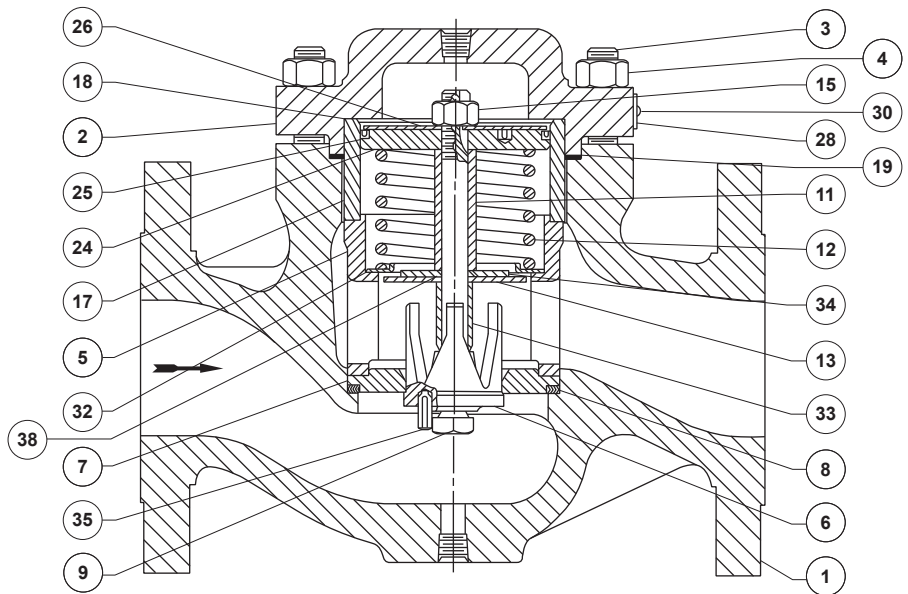
36A7960-D

DN 25, 40 OR 50 / 1, 1-1/2 OR 2 IN. BODY SIZE



37A6565-B

DETAIL OF WHISPER TRIM™
NOISE ATTENUATOR



37A1622-D

DN 65, 80, 100 OR 150 x 100 / 2-1/2, 3, 4 OR 6 x 4 IN. BODY SIZE

Figure 1. Type 92S Main Valve Assemblies

Types 6492L, 6492H and 6492HT Pilots

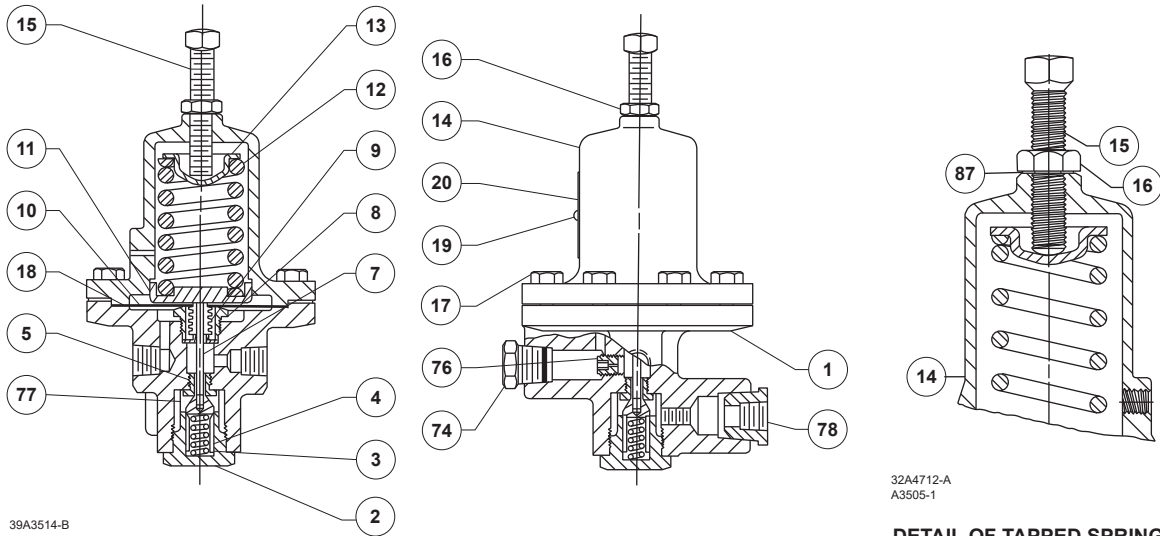
Key Description

- 1 Body
- 2 Valve Plug Guide
- 3 Valve Plug Spring
- 4 Inner Valve
- 5 Orifice
- 7 Valve Stem
- 8 Bellows Retainer
- 9 Bellows
- 10 Diaphragm
- 11 Lower Spring Seat
- 12 Control Spring
- 13 Upper Spring Seat
- 14 Spring Case

Key Description

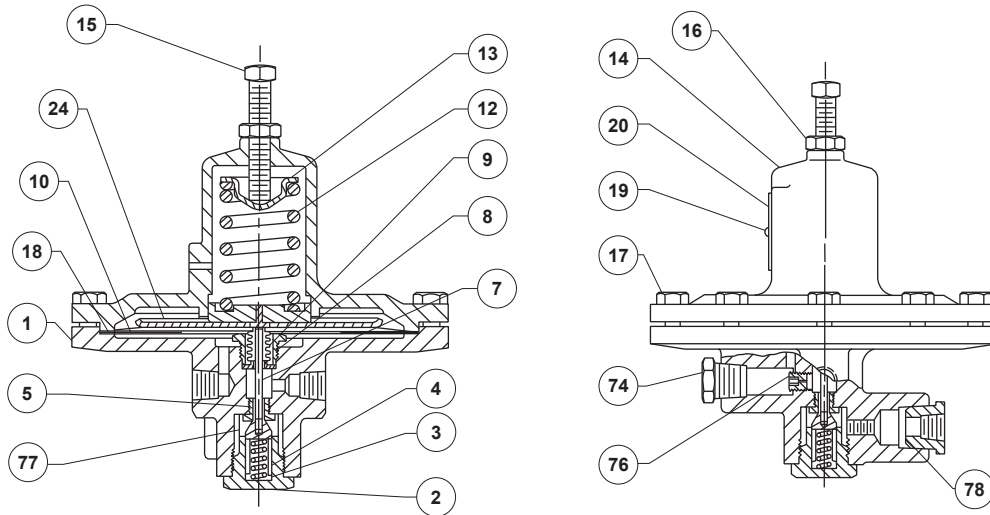
- 15 Adjusting Screw
- 16 Hex Nut
- 17 Cap Screw
- 18 Diaphragm Gasket
- 19 Drive Screw
- 24 Diaphragm Plate Assembly
- 74 Pipe Plug
- 76 Bleed Restriction
- 77 Screen
- 78 Reducing Bushing
- 87 Sealing Washer

Type 92S



TYPE 6492H OR 6492HT PILOT

DETAIL OF TAPPED SPRING CASE WITH SEALED ADJUSTING SCREW



TYPE 6492L PILOT
Figure 2. Pilot Assemblies

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

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