

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.emersonprocess.com/regulators. For further information refer to: Y695A Series Instruction Manual (form 5466, D102596X012).

The Y695A Series vapor recovery regulators are used to maintain a constant inlet (blanket) pressure with the outlet flowing to a system whose pressure is lower than that at the inlet.

P.E.D. Category

This product may be used as a pressure 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 20 to 25 (3/4-inch to 1-inch)	SEP	1

Specifications

Available Constructions

Type Y695A: The Type Y695A has internal registration requiring no downstream control line.

Type Y695AM: The Type Y695AM has a blocked throat and a downstream control line connection for external registration.

Body Sizes

DN 20 or 25 (3/4-inch or 1-inch)

End Connection Styles⁽²⁾

Ductile Iron: NPT

CF8M Stainless steel: NPT, ANSI Class 150 RF, ANSI Class 300 RF, PN 16/25/40

CF8M Stainless steel with Carbon steel flanges: ANSI Class 150 RF, ANSI Class 300 RF, PN 16/25/40

Hastelloy C: ANSI Class 150 RF

Maximum Inlet and Outlet Pressures⁽¹⁾

10,3 bar (150 psig)

⁽¹⁾Spring ranges based on spring case installed pointed down. When installed pointing up, the spring ranges increase by 5 mbar (2-inches w.c.). Do not use fluoroelastomer (FKM) diaphragm with these springs at diaphragm temperatures lower than 16°C (60°F).

1. The pressure/temperature limits in this installation guide and any applicable standard or code limitation should not be exceeded.
2. All flanges are welded on except Hastelloy C. All flange dimensions are 356 mm (14-inches) face-to-face.

Maximum Emergency Inlet Pressure to Avoid Internal Parts Damage⁽¹⁾

10,3 bar (150 psig)

Control Pressure Ranges⁽¹⁾

Relief Set Pressure Range

5 to 16 mbar* (2 to 7-inches w.c.),
7 to 33 mbar* (3 to 13-inches w.c.),
25 to 65 mbar (10 to 26-inches w.c.),
62 to 172 mbar (0.9 to 2.5 psig),
0,09 to 0,31 bar (1.3 to 4.5 psig), and
0,26 to 0,48 bar (3.8 to 7 psig)

Proof Test Pressure

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

Temperature Capabilities⁽¹⁾

Nitrile: -29° to 82°C (-20° to 180°F)

Fluoroelastomer (FKM): 4° to 149°C
(40° to 300°F)

Perfluoroelastomer (FFKM): -29° to 149°C
(-20° to 300°F)

Ethylenepropylene (EPDM): -29° to 149°C
(-20° to 300°F)

Installation

WARNING

Only qualified personnel should install or service a backpressure regulator. Backpressure regulators should be installed, operated, and maintained in accordance with international and applicable codes and regulations, and Fisher instructions.

If the backpressure regulator vents fluid or a leak develops in the system, it indicates that service is required. Failure to take the backpressure 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 backpressure 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.



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

Clean out all pipelines before installation of the backpressure regulator and check to be sure the backpressure 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 backpressure 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 backpressure regulator be installed so that the vent hole in the spring case is unobstructed at all times. For outdoor installations, the backpressure 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 backpressure regulator beneath eaves or downspouts, and be sure it is above the probable snow level.

Overpressure Protection

Maximum inlet pressures depend upon body materials and temperatures. Refer to the nameplate for the maximum inlet pressure of the valve. The valve should be inspected for damage after any overpressure condition. **Fisher backpressure regulators are NOT ASME safety relief valves.**

Startup

The backpressure 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)

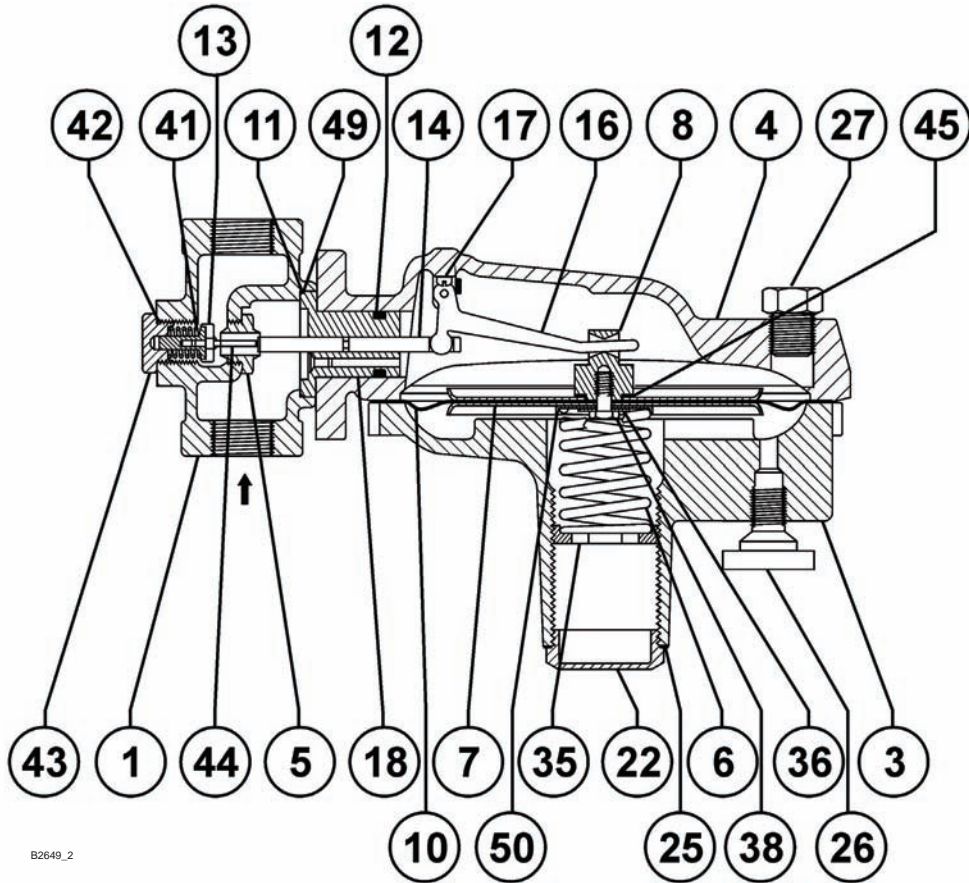


WARNING

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

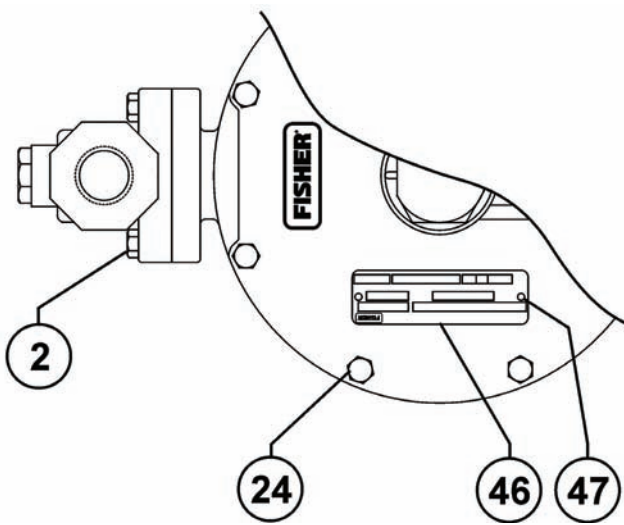
Parts List

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
13	Disk Assembly
14	Stem
16	Lever Assembly
17	Machine Screw
18	Guide Insert
22	Closing Cap
23	Hex Nut
24	Cap Screw
25	Closing Cap Gasket (Steel and Stainless steel Closing Cap only)
26	Vent Assembly
27	Pipe Plug
30	Stem Seal (Type Y695AM only)
31	Throat Seal (Type Y695AM only)
33	Machine Screw (Type Y695AM only)
35	Adjusting Screw
36	Washer
38	Cap Screw
41	Back Disk Spring
42	Back Body Seal
43	Back Body Cap
44	Disk Spacer
45	Diaphragm Head Gasket
46	Nameplate
47	Drive Screw
49	Backup Ring
50	Lower Spring Seat



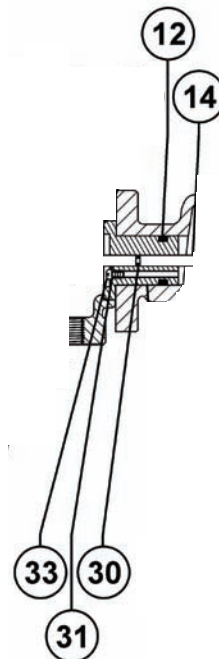
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Figure 1. Type Y695A Assembly



B2649_1

Figure 2. Types Y695A and Y695AM Assembly Detail



B2650_1

Figure 3. Type Y695AM Assembly

Y695A Series

Industrial Regulators

USA - Headquarters
McKinney, Texas 75050 USA
Tel: 1-800-558-5856
Outside U.S. 1-469-293-4201

Asia-Pacific
Shanghai, China 201206
Tel: 86-21-5899 7887

Europe
Bologna, Italy 40013
Tel: 39 051 4190611

Natural Gas Technologies

USA - Headquarters
McKinney, Texas 75050
Tel: 1-800-558-5856
Outside U.S. 1-469-293-4201

Asia-Pacific
Singapore, Singapore 128461
Tel: +65 6777 8211

Europe
Bologna, Italy 40013
Tel: 39 051 4190611
Gallardon, France 28320
Tel: +33 (0)2 37 33 47 00

Industrial/High Purity

TESCOM
Elk River, Minnesota 55330 USA
Tel: 1-763-241-3238
Selmsdorf, Germany 23923
Tel: +49 (0) 38823 31 0

For further information visit www.emersonprocess.com/regulators

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