

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: Type 98HH Instruction Manual (form 1930, D100706X012).

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 6 to 25 (1/4 to 1-inch)	SEP	1

Specifications

End Connection Style

NPT, socket weld, or ANSI flanged-DIN flanged-356-mm face-to-face (14-inches face-to-face)

Body Sizes

DN 6, 15, 20, and 25 (1/4, 1/2, 3/4, and 1-inch)

Maximum Inlet Pressures⁽¹⁾⁽²⁾ (Set Pressure Plus Buildup)

Steel (WCB) or Stainless Steel Spring Case all Trims to 66°C⁽³⁾ (150°F): 27,6 bar (400 psig)

Cast Iron Spring Case:

All Trims to 66°C⁽⁴⁾ (150°F): 27,6 bar (400 psig)

Metal Trims to 157°C (315°F): 20,7 bar (300 psig)

Metal Trims to 208°C (406°F): 17,2 bar (250 psig)

Relief Pressure Ranges⁽¹⁾

10,3 to 25,9 bar (150 to 375 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 Parts: -29 to 93°C (-20 to 200°F)

Neoprene Parts: -40 to 66°C (-40 to 150°F)

Fluoroelastomer Parts:
-18 to 149°C (0 to 300°F)

Metal Diaphragm and Seat:

Cast Iron Body and Spring Case:

-40 to 208°C (-40 to 406°F)

Steel Body and Spring Case:

-29 to 232°C (-20 to 450°F)

Stainless Steel Body and Spring Case:

-40 to 232°C (-40 to 450°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 using a backpressure regulator on a hazardous or flammable fluid service, personal injury and property damage could occur due to fire or explosion of vented fluid that may have accumulated. To prevent such injury or damage, provide piping or tubing to vent the fluid to a safe, well-ventilated area or containment vessel. Also, when venting a hazardous fluid, the piping or tubing should be located far enough away from any buildings or windows so to not create a further hazard, and the vent opening should be protected against anything that could clog it.

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

1. The pressure/temperature limits in this installation guide and any applicable standard or code limitation should not be exceeded.
2. Pressure setting plus maximum allowable buildup over setting.
3. Or fluoroelastomer trims to 149°C (300°F) or metal trims to 232°C (450°F).
4. Or fluoroelastomer trims to 149°C (300°F).



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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 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

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 backpressure regulators properly adjusted, slowly open the upstream and downstream shutoff valves (if applicable).

Adjustment

To change the outlet pressure, remove 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 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	Spring Case
3	Orifice
4	Valve Plug
5	Valve Plug Guide
6	Pusher Post
7	Washer
8	Lower Spring Seat
9	Upper Spring Seat
10	Gasket
11	Relief Valve Spring
12	Diaphragm
15	Adjusting Screw
16	Cap Screw
17	Jam Nut
18	Drive Screw
19	Diaphragm Gasket
21	O-Ring Retainer
22	O-Ring
23	Lockwasher
24	Machine Screw
26	Locknut

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Industrial

USA - Headquarters
McKinney, Texas 75070 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 75070
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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