Types 1301F and 1301G

English – September 2015

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: Types 1301F and 1301G Instruction Manual form 1111, D100341X012.

P.E.D. Categories

This product may be used as a safety accessory with pressure equipment in the following Pressure Equipment Directive categories. It may also be used outside of the Pressure Equipment Directive using sound engineering practice (SEP) per table below. For information on the current PED revision see Bulletin: *D103053X012*.

PRODUCT SIZE	CATEGORY	FLUID TYPE
1/4 NPT	SEP	1

Specifications

Body Size and End Connection Styles

1/4 NPT (one inlet and two or three outlet connections) CL300 RF, CL600 RF and CL1500 RF; or PN 25 RF (all flanges are 125 RMS)

Maximum Allowable Inlet Pressure(1)

Brass Body:

Air and Gas: 414 bar / 6000 psig at or below 93°C / 200°F and 69.0 bar / 1000 psig above 93°C / 200°F

Liquid:

Polytetrafluoroethylene (PTFE) Disk: 69.0 bar / 1000 psig

Nylon (PA) Disk:

Water: 69.0 bar / 1000 psig

Other Liquids: 138 bar / 2000 psig

Stainless Body:

Air and Gas: 414 bar / 6000 psig

Liquid:

Polytetrafluoroethylene (PTFE) Disk: 69.0 bar / 1000 psig

Nylon (PA) Disk:

Water: 69.0 bar / 1000 psig

Other Liquids: 138 bar / 2000 psig

Outlet Pressure Ranges(1)

Type 1301F: 0.69 to 5.2 bar / 10 to 75 psig, 3.4 to 10.3 bar / 50 to 150 psig and 6.9 to 15.5 bar / 100 to 225 psig

Type 1301G: 13.8 to 34.5 bar / 200 to 500 psig

Maximum Emergency Outlet Pressure(1)

Type 1301F: 17.2 bar / 250 psig

Type 1301G: 37.9 bar / 550 psig

Proof Test Pressure

All Pressure Retaining Components have been proof tested per Pressure Equipment Directive.

Material Temperature Capabilities(1)

Nylon (PA) Valve Disk and Neoprene (CR) Gaskets: -29 to 82°C / -20 to 180°F

PTFE Valve Disk and Fluorocarbon (FKM) Gaskets: -29 to 204°C / -20 to 400°F(2)

PTFE Valve Disk and Ethylenepropylene (EPDM) Gaskets: -40 to 149°C / -40 to 300°F

Low Temperature Service to -54°C / -65°F is available with low temperature bolting and special low temperature Nitrile (NBR) O-rings to replace the gaskets.

Service to -62°C / -80°F is available with low temperature bolting and special low temperature Fluorosilicone (FVQM) O-rings to replace the gaskets.

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.

1. The pressure/temperature limits in this Installation Guide and any applicable standard or code limitation should not be exceeded.
2. Fluorocarbon (FKM) is limited to 82°C / 180°F hot water

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 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 markings 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, 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. Tighten the locknut to maintain the desired setting.

Taking Out of Service (Shutdown)

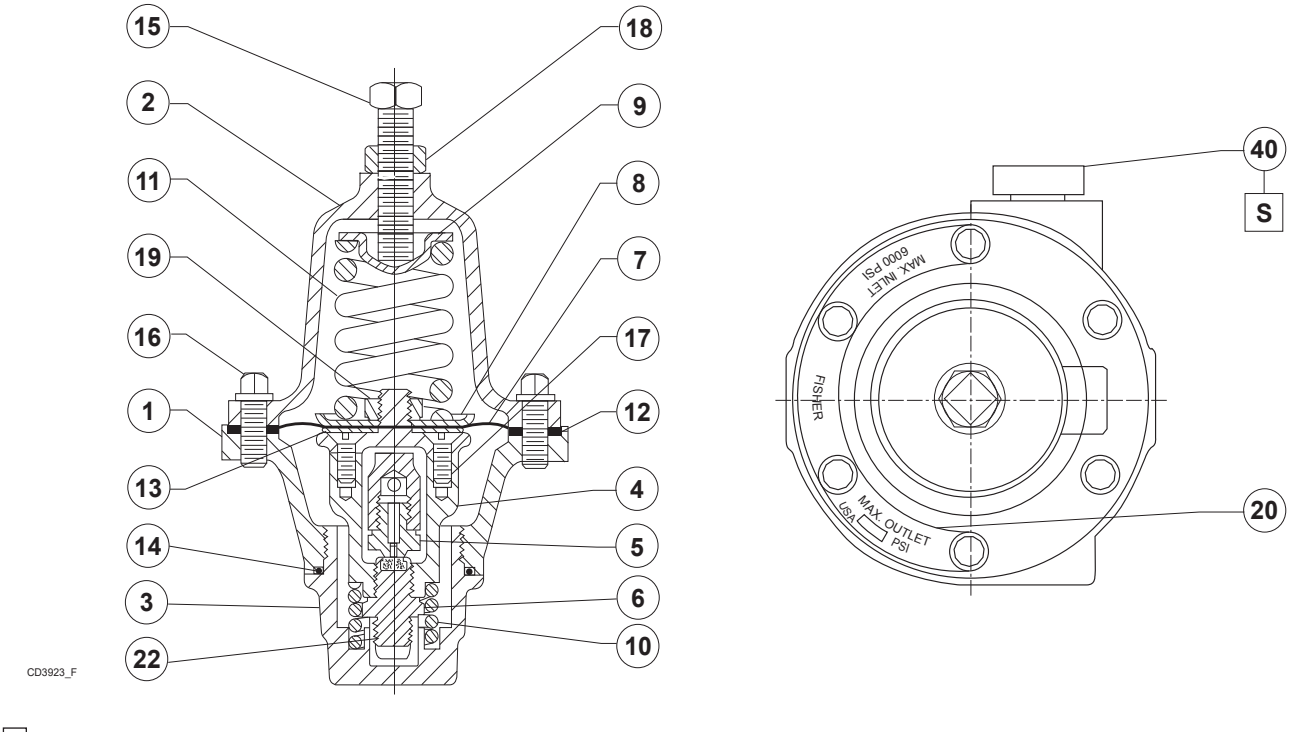
WARNING

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

Parts List

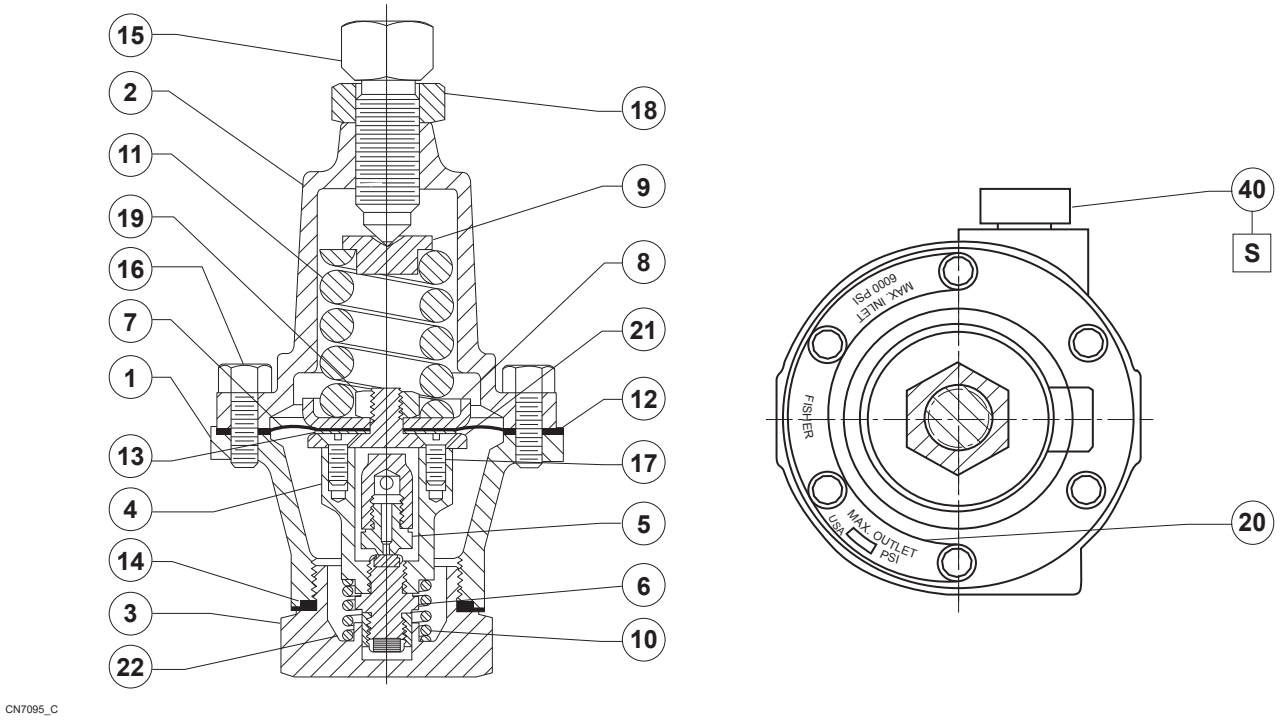
Key	Description
1	Body
2	Spring Case
3	Bottom Cap
4	Yoke
5*	Orifice
6*	Valve Disk Assembly
7*	Diaphragm
8	Diaphragm Plate
9	Upper Spring Seat
10	Valve Spring
11	Spring
12*	Body Gasket
13*	Diaphragm Plate Gasket
14*	Bottom Cap O-ring
15	Adjusting Screw
16	Spring Case Cap Screw
17	Machine Screw
18	Locknut
19	Diaphragm Locknut
21	Top Connector
22	Valve Disk Collar
24	Handwheel (Not shown)
26	Vent Screen (Not shown)
27	Mounting Post (Not shown)
28	Mounting Screw (Not shown)
29	Screw (Not shown)
30	Washer (Not shown)
32	Mounting Bracket (Not shown)
33	Bracket Cap Screw (Not shown)
34	Bracket Mounting Washer (Not shown)
35	NACE Tag (Not shown)
36	Tag Wire (Not shown)
38*	Body O-ring (Not shown)
39*	Top Connector O-ring (Not shown)
40	Pipe Plug

* Recommended spare part



☐ APPLY SEALANT (S)

Figure 1. *Type 1301F Regulator*



☐ APPLY SEALANT (S)

Figure 2. *Type 1301G Regulator*

Types 1301F and 1301G

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For further information on the current PED revision see Bulletin: *D103053X012* or scan the QR code.

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