

February 2015

Types 95L, 95H, 95HP and 95HT Pressure Reducing Regulators

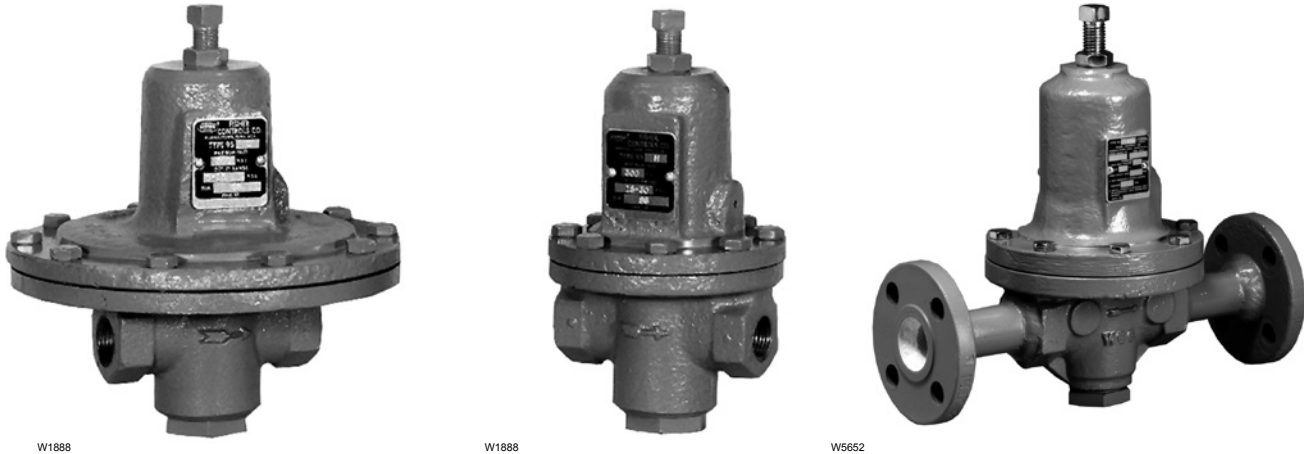


Figure 1. Type 95L NPT Body (Left), Type 95H NPT Body (Middle), and Type 95H Flanged Body (Right) Pressure Reducing Regulators

WARNING

Failure to follow these instructions or to properly install and maintain this equipment could result in an explosion, fire and/or chemical contamination causing property damage and personal injury or death.

Fisher® regulators must be installed, operated and maintained in accordance with federal, state and local codes, rules and regulations and Emerson Process Management Regulator Technologies, Inc. instructions.

If the regulator vents gas or a leak develops in the system, service to the unit may be required. Failure to correct trouble could result in a hazardous condition.

Call a gas service person to service the unit. Only a qualified person must install or service the regulator.

Introduction

Types 95L, 95H, 95HP and 95HT direct-operated pressure regulators are suitable for pressure control of steam, air, gas, water, oil and similar fluids requiring constant outlet pressures between 2 and 400 psig / 0.14 and 27.6 bar. Typical 95L and 95H regulators are shown in Figure 1.

Description

Type 95L—Pressure reducing regulator suitable for controlling many gases and liquids. Cast iron, steel or stainless steel bodies are available. Outlet pressure range is from 2 to 30 psig / 0.14 and 2.1 bar with three

Types 95L, 95H, 95HP and 95HT

Specifications

This section lists the specifications for the Types 95L, 95H, 95HP and 95HT regulators. Factory specification are stamped on the nameplate fastened on the regulator at the factory.

Available Configurations

Type 95L: Low-pressure regulator for 2 to 30 psig / 0.14 to 2.1 bar outlet pressures

Type 95H: High-pressure regulator for 5 to 150 psig / 0.34 to 10.3 bar outlet pressures

Type 95HP: High-pressure regulator for 15 to 400 psig / 1.0 to 27.6 bar outlet pressures (soft-seated)

Type 95HT: High-pressure/high temperature regulator for 15 to 300 psig / 1.0 to 20.7 bar outlet pressures (metal seat) and up to 650°F / 343°C

Body and Orifice Sizes

NPS 1/4 body: 1/4 in. / 6.4 mm orifice

NPS 1/2 / DN 15 body: 3/8 in. / 9.5 mm orifice

NPS 3/4 and 1 / DN 20 and 25 bodies: 9/16 in. / 14 mm orifice

NPS 1-1/2 and 2 / DN 40 and 50 bodies: 1-1/16 in. / 27 mm orifice

End Connection Styles

NPT, ASME flanged; all sizes are fabricated with slip-on flanges and are 14 in. face-to-face (EN flanged-356 mm face-to-face), CL150 RF, CL300 RF, PN 16/25/40 or SWE

Maximum Cold Working Pressures of Body Size and Material

See Table 2

Outlet Pressure Ranges

See Table 1

Maximum Temperature Ranges of Diaphragm and Seat Materials⁽¹⁾⁽²⁾

| MATERIAL | TEMPERATURE RANGE | |
|-----------------------------------|-------------------|------------|
| | °F | °C |
| Nitrile (NBR) | -40 to 180 | -40 to 82 |
| Neoprene (CR) | -40 to 180 | -40 to 82 |
| Fluorocarbon (FKM) ⁽³⁾ | 0 to 300 | -18 to 149 |
| Ethylenepropylene (EPDM) | -40 to 275 | -40 to 135 |
| Perfluoroelastomer (FFKM) | 0 to 425 | -18 to 218 |
| Polytetrafluoroethylene (PTFE) | -40 to 400 | -40 to 204 |
| Stainless Steel | -40 to 650 | -40 to 343 |

Maximum Temperature Ranges of Body Materials⁽¹⁾⁽²⁾

| REGULATOR | BODY AND SPRING CASE MATERIAL | TEMPERATURE RANGE | |
|-----------|-------------------------------|-------------------|------------|
| | | °F | °C |
| Type 95L | Cast Iron | -40 to 406 | -40 to 208 |
| Type 95H | Steel | -20 to 450 | -29 to 232 |
| | Stainless Steel | -40 to 450 | -40 to 232 |
| Type 95HP | Steel | -20 to 450 | -29 to 232 |
| | Stainless Steel | -40 to 450 | -40 to 232 |
| Type 95HT | Steel | -20 to 650 | -29 to 343 |
| | Stainless Steel | -40 to 550 | -40 to 288 |

Pressure Setting Adjustment

Adjusting screw (standard), Handwheel/Tee handle (optional): NPS 1/2 / DN 15 body has a handwheel, all other sizes have tee handles

Pressure Registration

Internal

Shutoff Classification Per ANSI/FCI 70-3-2004

Metal Seats: Class IV

Elastomer Seats: Class VI or better

PTFE: Class IV

Approximate Weights

Types 95H, 95HP and 95HT:

NPS 1/4 body: 4 lbs / 2 kg

NPS 1/2 / DN 15 body: 8 lbs / 4 kg

NPS 3/4 and 1 / DN 20 and 25 bodies:

20 lbs / 9 kg

NPS 1-1/2 and 2 / DN 40 and 50 bodies:

73 lbs / 33 kg

Type 95L:

NPS 1/4 body: 6 lbs / 3 kg

NPS 1/2 / DN 15 body: 12 lbs / 5 kg

NPS 3/4 and 1 / DN 20 and 25 bodies: 32 lbs / 15 kg

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

2. Pressures and/or the body end connection may decrease these maximum temperatures.

3. Fluorocarbon (FKM) is limited to 200°F / 93°C hot water.

Types 95L, 95H, 95HP and 95HT

Table 1. Outlet Pressure Ranges

| TYPE | BODY SIZE, NPS / DN | OUTLET PRESSURE RANGE | | SPRING WIRE DIAMETER | | SPRING FREE LENGTH | | SPRING PART NUMBER | COLOR | |
|-------------------|---------------------|-----------------------|--------------|----------------------|-------|--------------------|-------------|--------------------|-------------|-----------|
| | | psig | bar | In. | mm | In. | mm | | | |
| 95L | 1/4 | 2 to 6 | 0.14 to 0.41 | 0.148 | 3.76 | 2.00 | 50.8 | 1E392527022 | Yellow | |
| | | 5 to 15 | 0.34 to 1.0 | 0.172 | 4.37 | 2.00 | 50.8 | 1E392627012 | Green | |
| | | 13 to 30 | 0.90 to 2.1 | 0.207 | 5.26 | 1.93 | 49.2 | 1E392727142 | Red | |
| | 1/2 / 15 | 2 to 6 | 0.14 to 0.41 | 0.207 | 5.26 | 2.50 | 63.5 | 1E395627022 | Yellow | |
| | | 5 to 15 | 0.34 to 1.0 | 0.234 | 5.94 | 2.57 | 65.2 | 1D7455T0012 | Green | |
| | | 13 to 30 | 0.90 to 2.1 | 0.281 | 7.14 | 2.44 | 62.0 | 1E395727192 | Red | |
| 3/4, 1 / 20, 25 | 2 to 6 | 0.14 to 0.41 | 0.306 | 7.77 | 4.00 | 102 | 1E398927022 | Yellow | | |
| | 5 to 15 | 0.34 to 1.0 | 0.343 | 8.71 | 4.00 | 102 | 1E399027142 | Green | | |
| | 13 to 30 | 0.90 to 2.1 | 0.406 | 10.3 | 4.00 | 102 | 1E399127162 | Red | | |
| 95H | 1/4 | 15 to 30 | 1.0 to 2.1 | 0.148 | 3.76 | 2.00 | 50.8 | 1E392527022 | Yellow | |
| | | 25 to 75 | 1.7 to 5.2 | 0.172 | 4.37 | 2.00 | 50.8 | 1E392627012 | Green | |
| | | 70 to 150 | 4.8 to 10.3 | 0.207 | 5.26 | 1.93 | 49.2 | 1E392727142 | Red | |
| | 1/2 / 15 | 15 to 30 | 1.0 to 2.1 | 0.207 | 5.26 | 2.50 | 63.5 | 1E395627022 | Yellow | |
| | | 25 to 75 | 1.7 to 5.2 | 0.234 | 5.94 | 2.57 | 65.2 | 1D7455T0012 | Green | |
| | | 70 to 150 | 4.8 to 10.3 | 0.281 | 7.14 | 2.44 | 62.0 | 1E395727192 | Red | |
| | 3/4, 1 / 20, 25 | 15 to 30 | 1.0 to 2.1 | 0.306 | 7.77 | 4.00 | 102 | 1E398927022 | Yellow | |
| | | 25 to 75 | 1.7 to 5.1 | 0.343 | 8.71 | 4.00 | 102 | 1E399027142 | Green | |
| | | 70 to 150 | 4.8 to 10.3 | 0.406 | 10.3 | 4.00 | 102 | 1E399127162 | Red | |
| | 1-1/2, 2 / 40, 50 | 5 to 80 | 0.34 to 5.5 | 0.531 | 13.5 | 6.56 | 167 | 1E795327082 | Light Blue | |
| | | 60 to 120 | 4.1 to 8.3 | 0.562 | 14.3 | 6.56 | 167 | 1E795427082 | Light Gray | |
| | | 100 to 140 | 6.9 to 9.7 | 0.593 | 15.1 | 6.50 | 165 | 1E793327082 | Yellow | |
| 95HT | 1/4 | 15 to 100 | 1.0 to 6.9 | 0.192 | 4.88 | 1.96 | 49.8 | 14B9941X012 | Unpainted | |
| | | 80 to 300 | 5.5 to 20.7 | 0.282 | 7.16 | 1.96 | 49.8 | 14B9940X012 | Unpainted | |
| | | 15 to 100 | 1.0 to 6.9 | 0.282 | 7.16 | 2.50 | 63.5 | 14B9943X012 | Unpainted | |
| | 1/2 / 15 | 80 to 300 | 5.5 to 20.7 | 0.375 | 9.52 | 2.50 | 63.5 | 14B9942X022 | Unpainted | |
| | | 15 to 100 | 1.0 to 6.9 | 0.437 | 11.1 | 4.03 | 102 | 14B9944X022 | Unpainted | |
| | | 80 to 300 | 5.5 to 20.7 | 0.562 | 14.3 | 4.03 | 102 | 14B9945X022 | Unpainted | |
| | 1-1/2, 2 / 40, 50 | 15 to 100 | 1.0 to 6.9 | 0.625 | 15.9 | 6.70 | 170 | 17B1704X012 | Unpainted | |
| | | 60 to 260 | 4.1 to 17.9 | 0.812 | 20.6 | 6.70 | 170 | 17B1705X012 | Unpainted | |
| | 95HP | 1/4 | 15 to 100 | 1.0 to 6.9 | 0.192 | 4.88 | 1.96 | 49.8 | 14B9941X012 | Unpainted |
| | | | 80 to 400 | 5.5 to 27.6 | 0.282 | 7.16 | 1.96 | 49.8 | 14B9940X012 | Unpainted |
| | | 1/2 / 15 | 15 to 100 | 1.0 to 6.9 | 0.282 | 7.16 | 2.50 | 63.5 | 14B9943X012 | Unpainted |
| | | | 80 to 400 | 5.5 to 27.6 | 0.375 | 9.52 | 2.50 | 63.5 | 14B9942X022 | Unpainted |
| 3/4, 1 / 20, 25 | | 15 to 100 | 1.0 to 6.9 | 0.437 | 11.1 | 4.03 | 102 | 14B9944X022 | Unpainted | |
| | | 80 to 400 | 5.5 to 27.6 | 0.562 | 14.3 | 4.03 | 102 | 14B9945X022 | Unpainted | |
| 1-1/2, 2 / 40, 50 | | 15 to 100 | 1.0 to 6.9 | 0.625 | 15.9 | 6.70 | 170 | 17B1704X012 | Unpainted | |
| | | 60 to 300 | 4.1 to 20.7 | 0.812 | 20.6 | 6.70 | 170 | 17B1705X012 | Unpainted | |

Table 2. Maximum Cold Working Pressures of Body Size and Material⁽¹⁾⁽²⁾

| REGULATOR | BODY SIZE, NPS | BODY AND SPRING CASE MATERIAL | MAXIMUM INLET PRESSURE, psig / bar | MAXIMUM OUTLET PRESSURE, psig / bar |
|-----------|----------------------|-------------------------------|------------------------------------|-------------------------------------|
| Type 95L | All Sizes | Cast Iron | 250 / 17.2 | 50 / 3.4 |
| | | Steel | 300 / 20.7 | 125 / 8.6 |
| | | Stainless Steel | 300 / 20.7 | 125 / 8.6 |
| Type 95H | All Sizes | Cast Iron | 250 / 17.2 | 250 / 17.2 |
| | | Steel | 300 / 20.7 | 300 / 20.7 |
| | | Stainless Steel | 300 / 20.7 | 300 / 20.7 |
| Type 95HP | All Sizes | Steel | 600 / 41.4 | 600 / 41.4 |
| | | Stainless Steel | 600 / 41.4 | 550 / 37.9 |
| Type 95HT | 1/4 to 1 / DN 25 | Steel | 600 / 41.4 | 600 / 41.4 |
| | | Stainless Steel | 600 / 41.4 | 550 / 37.9 |
| | 1-1/2, 2 / DN 40, 50 | Steel | 600 / 41.4 | 450 / 31.0 |
| | | Stainless Steel | 600 / 41.4 | 450 / 31.0 |

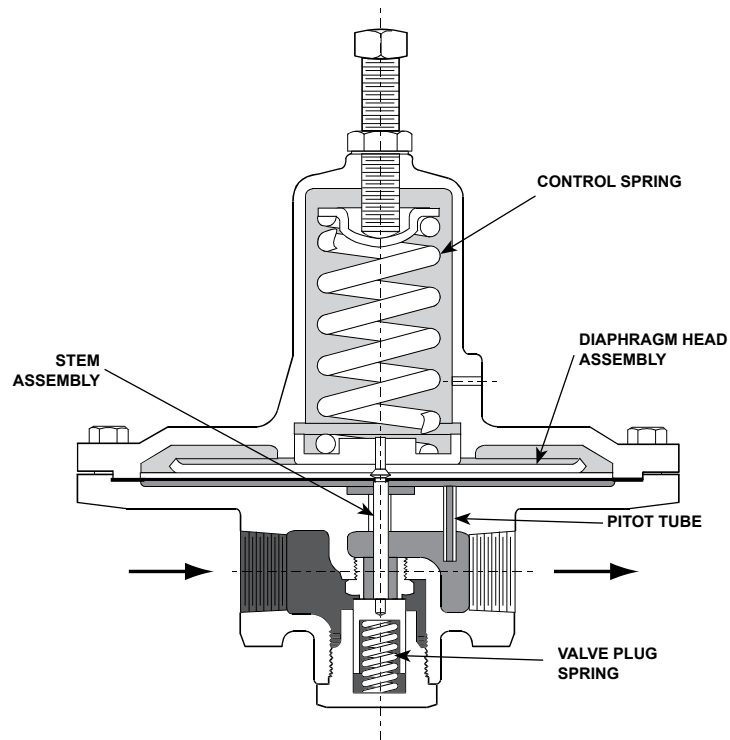
1. The pressure limits in this Instruction Manual, and any applicable standard or code limitation should not be exceeded.
 2. Temperature and/or the body end connection may decrease these maximum pressures.

Table 3. Torque Specifications

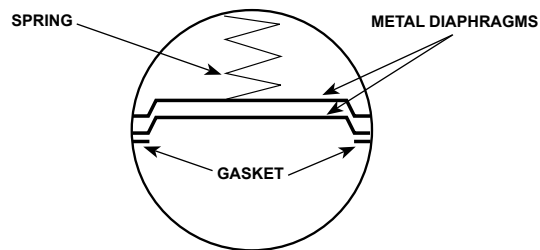
| BODY SIZE, NPS / DN | SPRING CASE BOLT ⁽¹⁾ | ORIFICE | PLUG GUIDE |
|---|---------------------------------|-------------------------|-------------------------|
| | Ft-Lbs / N·m | | |
| 1/4 1/2 / 15 3/4, 1 / 20, 25 1-1/2, 2 / 40, 50 | 6 to 8 / 8.1 to 11 | 8 to 12 / 11 to 16 | 42 to 58 / 57 to 79 |
| | 10 to 13 / 13 to 18 | 29 to 35 / 39 to 47 | 70 to 90 / 95 to 122 |
| | 24 to 30 / 33 to 41 | 33 to 42 / 45 to 57 | 130 to 160 / 176 to 217 |
| | 40 to 50 / 54 to 68 | 140 to 170 / 190 to 230 | 170 to 200 / 230 to 271 |

1. Reduce spring case bolt's torque by 30% when using Ethylenepropylene (EPDM) diaphragms.

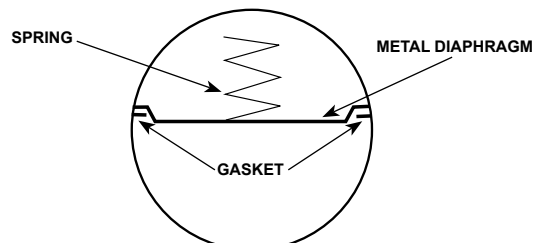
Types 95L, 95H, 95HP and 95HT



A6554



TYPE 95L WITH 2 METAL DIAPHRAGMS
(ALSO TYPICAL OF TYPE 95H OR 95HT, EXCEPT
ONLY TYPE 95L, NPS 1/4, 2 TO 6 psi / 0.14 to 0.41 bar RANGE)



TYPE 95L (NPS 1/4, 2 TO 6 psi / 0.14 to 0.41 bar RANGE)
WITH METAL DIAPHRAGM

Figure 2. Type 95L with Metal Seat and Diaphragm Operational Schematic (Also Typical of Type 95H or 95HT)

Types 95L, 95H, 95HP and 95HT

different springs available. Body sizes are available from NPS 1/4 through 1 / DN 25 with a variety of end connections. The standard orifice sizes are 1/4, 3/8 and 9/16 in. / 6.4, 9.5 and 14 mm diameter, dependent on body sizes.

Type 95H—Basically the same as Type 95L, but permits higher outlet pressure ranges from 15 to 150 psig / 1.0 to 10.3 bar for the NPS 1/4, 1/2, 3/4 and 1 / DN 15, 20 and 25 sizes. Also available in NPS 1-1/2 and 2 sizes with a 1-1/16 in. / 27 mm orifice to give outlet pressure ranges from 5 to 150 psig / 0.34 to 10.3 bar.

Type 95HP—Basically the same as Type 95H, but permits even higher outlet pressure ranges from 15 to 400 psig / 1.0 to 27.6 bar.

Type 95HT—Basically the same as Type 95H, but permits higher outlet pressures at higher temperatures. Outlet pressure ranges are available from 15 to 300 psig / 1.0 to 20.7 bar and temperatures up to 650°F / 343°C.

Principle of Operation

The 95 Series (refer to Figure 2) is a direct-operated regulator. Downstream pressure is registered internally through the body to the under side of the diaphragm. When the downstream pressure is at or above the set pressure, the disk is held against the orifice, and there is no flow through the regulator. When demand increases, downstream pressure drops slightly allowing the spring to extend, moving the stem down and the disk away from the orifice. This allows flow through the body to the downstream system. Types 95H, 95L, 95HP and 95HT use spring force to regulate outlet pressure.

Installation

Clean out all pipelines before installation of the regulator and check to be sure the regulator has not been damaged or collected foreign material during shipping. Apply pipe compound to the external pipe threads and install the regulator in any position desired, but be sure flow through the body is in the direction indicated by the arrow cast 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.

On NPS 1-1/2 or 2 / DN 40 or 50 95H Series regulators, the spring case vent is tapped so a vent line can be connected to provide venting to a remote location. On NPS 1/4, 1/2, 3/4 and 1 / DN 15, 20 and 25 95H Series body sizes, the tapped vent option is available on request. The exposed end of the vent pipe should be protected with a weather and insect resistant vent assembly.

All vents and remote vent lines should be checked periodically to ensure that they are unobstructed.

Overpressure Protection

The Types 95L, 95H, 95HP and 95HT regulators have an outlet pressure rating lower than the inlet pressure rating. 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 downstream equipment.

Some type of external overpressure protection should be provided if inlet pressure will be high enough to damage downstream equipment. Common methods of external overpressure protection include relief valves, monitoring regulators, shutoff devices and series regulation.

Regulator operation below the maximum pressure limitations does not preclude the possibility of damage from external sources or from debris in the pipeline. If the regulator is exposed to an overpressure condition, it should be inspected for any damage that may have occurred.

Startup

The regulator is set at the factory for the setpoint specified on the order, so no initial adjustment should be required to give the desired results. With proper installation completed and relief valves properly adjusted, slowly open the upstream and downstream shutoff valves.

Types 95L, 95H, 95HP and 95HT

Adjustment

The factory setting of the regulator can be varied within the pressure range stamped on the nameplate. To change the outlet pressure, loosen the locknut (key 17, Figure 3, 4 or 5) and turn the adjusting screw (key 15, Figure 3, 4 or 5) clockwise to increase outlet pressure, or counterclockwise to decrease it. Monitor the outlet pressure with a test gauge during the adjustment. Tighten the locknut to maintain the desired setting.

All regulator springs can be backed off to provide zero outlet. Recommended outlet pressure ranges available, maximum inlet pressures and temperatures, and color codes of the respective springs are shown in Tables 1 and 2.

Shutdown

Close the upstream shutoff valve. Close downstream shutoff valve. Open bleed valve between the regulator and the downstream shutoff valve. Without changing regulator spring adjustment, all pressure between the upstream and downstream shutoff valves will be released through the bleed valve, since the Type 95L or 95H regulator opens in response to the decreased outlet pressure.

Maintenance



WARNING

To avoid personal injury, property damage or equipment damage caused by sudden release of pressure or explosion of accumulated gas, do not attempt any maintenance or disassembly without first isolating the regulator from system pressure and relieving all internal pressure from the regulator.

Due to normal wear that may occur, parts must be periodically inspected and replaced if necessary. The frequency of inspection depends on the severity of service conditions. This section includes instructions for disassembly and replacement of parts. All key numbers refer to Figures 3, 4 and 5.

1. Unscrew the valve plug guide (key 5) from the body (key 1). The valve plug spring (key 10) and the valve plug (key 4) will normally come out of the body along with the valve plug guide. On NPS 1-1/2 or 2 / DN 40 or 50 units the stem (key 6, Figure 5) will also come out of the regulator body.

2. Inspect the seating surface of the valve plug (key 4), make sure that the elastomer, PTFE or polished metal surface of the valve plug is not damaged. Replace if damage is noted.
3. Inspect the seating edge of the orifice (key 3). If damage is noted, unscrew the orifice from the body and replace it with a new part. Torque per Table 3. If no further maintenance is required, reassemble the regulator in the reverse of the above steps. When installing the valve plug guide (key 5) coat the threads and sealing surface with sealant to ensure an adequate metal-to-metal seal. Reassembly torque per Table 3.
4. If diaphragm damage is suspected, or to inspect the diaphragm or other internal parts, loosen the locknut (key 17) and turn the adjusting screw (key 15) to remove all spring compression.

Steps 5 and 6 apply to Type 95L and sizes NPS 1/4 to 1 / DN 25 of the 95H Series. If the unit being disassembled is an NPS 1-1/2 to 2 / DN 40 and 50 size Type 95H, HP or HT, proceed to steps 7 and 8.

5. Remove the diaphragm case cap screws (key 16) and lift off the spring case (key 2). Remove the upper spring seat (key 9) and regulator spring (key 11). On NPS 1/4 to 1 / DN 25 sizes Type 95H units only, remove the lower spring seat (key 8). On Type 95L units, remove the diaphragm head assembly (key 21).
6. Remove the diaphragm(s) and examine for damage. Replace if damage is noted. Note that if the diaphragm is metal, two diaphragms should be used except for Type 95L, NPS 1/4 with 2 to 6 psi / 0.14 to 0.41 bar spring range which uses only one metal diaphragm.
7. Remove the diaphragm-diaphragm head assembly. It can be disassembled for inspection of the diaphragm (key 12) and two small diaphragm gaskets (key 47) or O-ring (key 45). Remove the locknut (key 31) from the pusher post (key 30) and separate the assembly. An O-ring is used to seal around the pusher post if an elastomer diaphragm is used, and the gaskets are used with stainless steel diaphragm(s).
8. Unscrew and remove the stem guide bushing (key 7). An O-ring (key 51) held in place by the packing follower (key 50) can then be examined for damage.
9. With diaphragm(s) removed, check to be sure the pressure registration hole (pitot tube, key 20, in NPS 3/4 / DN 20 and larger sizes) is completely open and free of all obstructions.

Types 95L, 95H, 95HP and 95HT

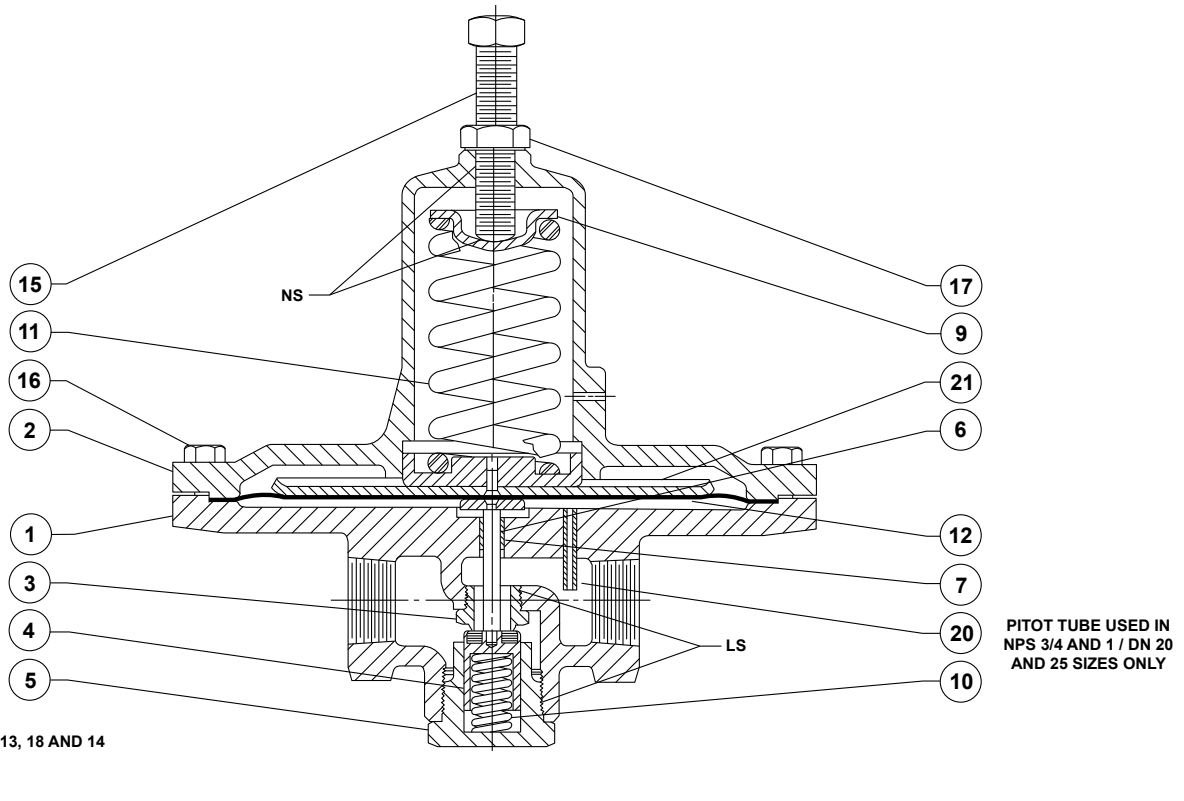


Figure 3. Type 95L with Elastomer Seat, NPS 1/4 to 1 / DN 25 Sizes Assembly

10. If the unit has metal diaphragms,

a. (Applicable only for the lower diaphragm head of Type 95H/HT, NPS 1-1/2 to 2)

Find the pusher post (key 30) and place on a surface with the larger flat surface down and the thread stem up (metal diaphragm pusher post has a recessed diameter in the bottom surface). Then, find one smaller elastomer (or graphite) gaskets (key 47) and fit it over the threaded end of the pusher post. Find and take one of the diaphragm heads and slip it over the threaded end of the pusher post with the chamfered side of the diaphragm head toward the gasket. Take a second gasket and place it over the threaded end of the pusher post on top of the diaphragm head.

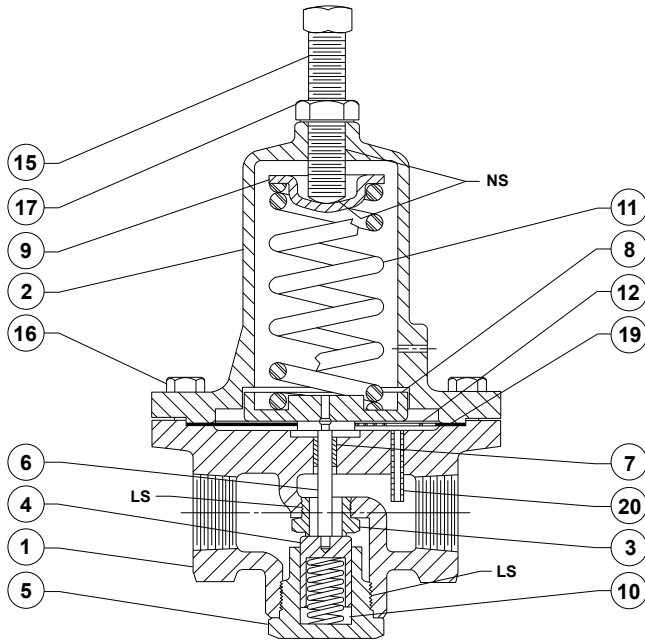
b. Replace the large diaphragm gasket (key 19) on the surface of the body that will support the diaphragms. There will be two diaphragms used per regulator, except for 95L, NPS 1/4 with 2 to

6 psi / 0.14 to 0.41 bar outlet setting which uses only one metal diaphragm. The raised surfaces of the metal diaphragms should be placed in the unit so that they are facing toward the assembler (toward the spring) except only when one diaphragm is being used then the raised surface should be facing down (towards the body). See Figures 2 and 4 as references.

11. Reassemble in the reverse of the above procedures. Lubricate the upper spring seat and the exposed threads of the adjusting screw with Anti-Seize lubricant.

Before tightening cap screws (key 16) be sure to install the adjusting screw, if completely removed, and turn it down so that diaphragm slack is obtained. This allows proper positioning of the diaphragm to permit full travel of the valve plug. Torque diaphragm cap screws per Table 3. Complete reassembly procedures and turn the adjusting screw to produce the desired outlet pressure. Tighten the locknut to maintain the desired setting.

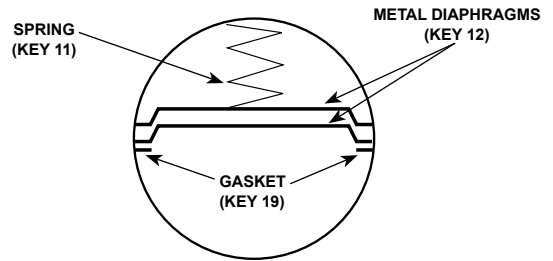
Types 95L, 95H, 95HP and 95HT



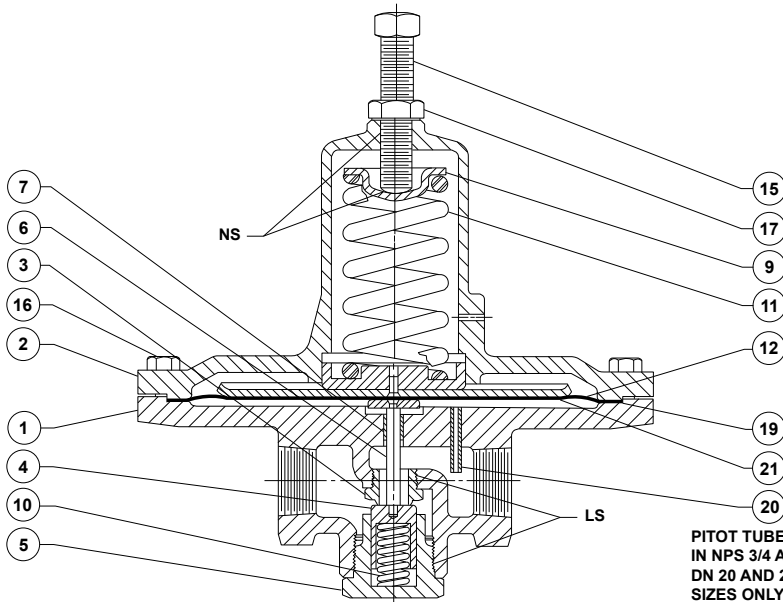
30A7000

TYPE 95H

PITOT TUBE USED IN
NPS 3/4 AND 1 / DN 20 AND 25
SIZES ONLY



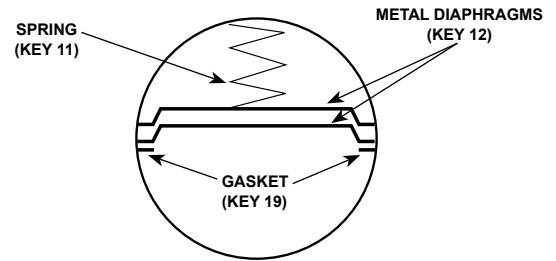
TYPE 95H WITH 2 METAL DIAPHRAGMS



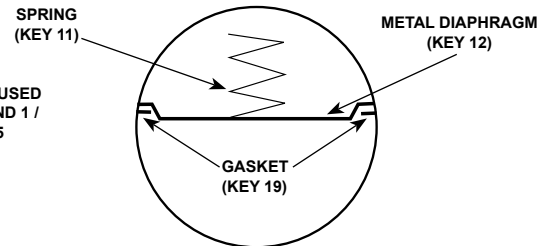
30A6996_B

TYPE 95L

PITOT TUBE USED
IN NPS 3/4 AND 1 /
DN 20 AND 25
SIZES ONLY



TYPE 95L WITH 2 METAL DIAPHRAGMS
(EXCEPT ONLY TYPE 95L,
NPS 1/4, 2 TO 6 psi / 0.14 to 0.41 bar RANGE)



TYPE 95L (NPS 1/4, 2 TO 6 psi / 0.14 to 0.41 bar RANGE)
WITH METAL DIAPHRAGM

PARTS NOT SHOWN:
13, 18 AND 14

NS - NEVER-SEEZ®
LS - LEAD SEAL

Figure 4. 95 Series with Metal Seat Assemblies

Never-Seez® is a mark owned by Bostik Corp.

Types 95L, 95H, 95HP and 95HT

Parts Ordering

When corresponding with your local Sales Office about this equipment, always reference the equipment serial number or FS number that can be found on the nameplate.

When ordering replacement parts, reference the key number of each needed part as found in the following parts list. Separate kits containing all recommended spare parts are available.

Parts List

Note

In this parts list, parts marked NACE are intended for corrosion-resistant service as detailed in the NACE International Standard MR0175.

| Key | Description | Part Number |
|-----|--|--|
| | Parts Kit (Included are keys 3, 4, 10, 12 and 19 (for All Metal Trim only)) Types 95H and 95HP For Brass and Neoprene (CR) Trim, NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies For 416 Stainless steel and Neoprene (CR) Trim, NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies NPS 1-1/2 and 2 / DN 40 and 50 bodies For All Metal Trim, NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies NPS 1-1/2 and 2 / DN 40 and 50 bodies Extra parts for NPS 1-1/2 and 2 / DN 40 and 50 bodies include keys 47, 51 and 52 | |
| | Type 95L For Brass and Neoprene (CR) Trim, NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies For 416 Stainless steel and Neoprene (CR) Trim, NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies For All Metal Trim, Trim 1 or 4A NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies | R95HX000012 R95HX000022 R95HX000032 R95HX000102 R95HX000112 R95HX000122 R95HX000042 R95HX000052 R95HX000062 R95HX000072 R95HX000082 R95LX000012 R95LX000022 R95LX000032 R95LX000102 R95LX000112 R95LX000122 R95LX000042 R95LX000052 R95LX000062 |
| | Type 95HT, All Metal Trim, NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies NPS 1-1/2 and 2 / DN 40 and 50 bodies | R95HTX000012 R95HTX000022 R95HTX000032 R95HTX000042 |
| 1 | Regulator Body | See Following Table |
| 2 | Spring Case | See Following Table |
| 3* | Orifice Metal Seat (Types 95L, 95H and 95HT) 416 Stainless steel NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies NPS 1-1/2 and 2 / DN 40 and 50 bodies 316 Stainless steel NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies NPS 1-1/2 and 2 / DN 40 and 50 bodies Brass NPS 1-1/2 and 2 Elastomer Seat (Types 95L, 95H and 95HP) Brass (Types 95L and 95H only) NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies NPS 1-1/2 and 2 / DN 40 and 50 bodies 416 Stainless steel NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / 20 and 25 bodies NPS 1-1/2 and 2 / DN 40 and 50 bodies 316 Stainless steel, NACE NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies NPS 1-1/2 and 2 / DN 40 and 50 bodies, NACE | 1E391646172 1E395046172 1E398046172 2P787046172 1E391635072 1E395035072 1E398035072 2P787035072 2P787046172 1E393214012 1E396214012 1E399514012 1P7860X0092 1E393235132 1E396235132 1E399535132 1P786035132 1E393235072 1E396235072 1E399535072 1P7860X00A2 1P7860X00A2 |
| 4* | Valve Plug | See Following Table |
| 5 | Valve Plug Guide NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies NPS 1-1/2 and 2 / DN 40 and 50 bodies 416 Stainless steel NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies NPS 1-1/2 and 2 / DN 40 and 50 bodies 316 Stainless steel, NACE NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies NPS 1-1/2 and 2 / DN 40 and 50 bodies 304 Stainless steel NPS 1-1/2 and 2 / DN 40 and 50 bodies Type 95H Type 95HP/HT | 1E391814012 1E395214012 1E398214012 19B9067X022 1E391835132 1E395235132 1E398235132 19B9067X012 1E391835072 1E395235072 1E398235072 19B9067X102 19B9067X092 19B9067X012 |
| 6 | Stem Assembly 416 Stainless steel NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies 316 Stainless steel NPS 1/4 body NPS 1/2 body NPS 3/4 and 1 316 Stainless steel, NACE NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies | 1F2113000A2 1F2114000A2 1F2115000A2 1F2113000C2 1F2114000C2 1F2115000C2 1F2114X0082 1F2115000C2 |
| 6 | Stem 416 Stainless steel NPS 1-1/2 and 2 / DN 40 and 50 bodies 316 Stainless steel, NACE NPS 1-1/2 and 2 / DN 40 and 50 bodies | 1P785335232 1P7853X00A2 |

*Recommended spare parts

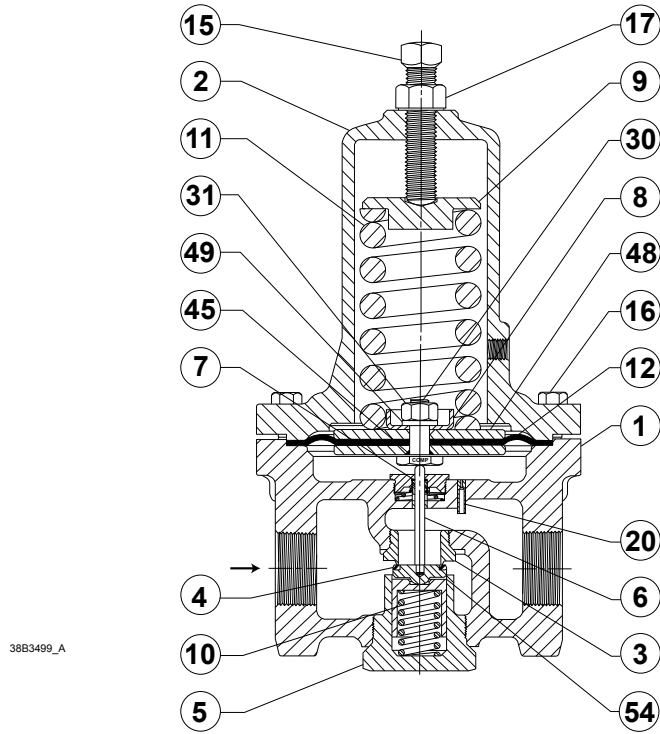
Types 95L, 95H, 95HP and 95HT

Key 1, Regulator Body Part Numbers

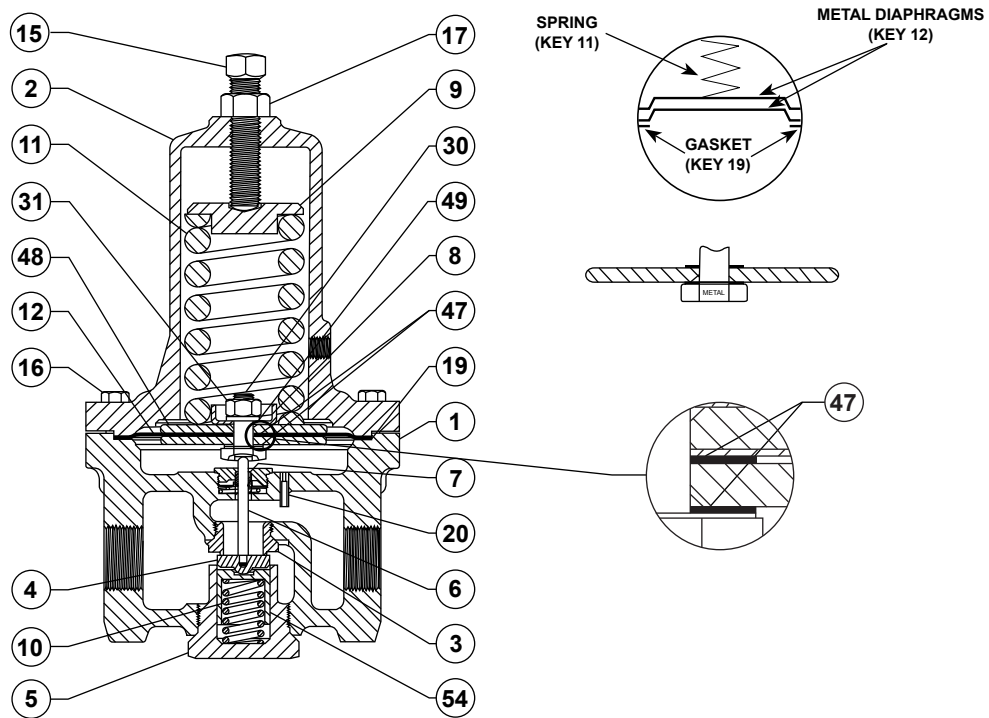
| BODY SIZE, NPS / DN | BODY MATERIAL | | | | | | | | |
|---------------------|---------------|-------------|-------------|-------------|-------------|-----------------|-------------|-------------|-------------|
| | Cast Iron | Steel | | | | Stainless Steel | | | |
| | NPT | NPT | SWE | CL150 | CL300 | NPT | SWE | CL150 | CL300 |
| TYPE 95L | | | | | | | | | |
| 1/4 | 1E391119012 | 1J127722012 | ----- | ----- | ----- | 1J127733092 | ----- | ----- | ----- |
| 1/2 / 15 | 2E394519012 | 2L908022012 | 2P518522012 | 2V5673X0022 | 20A4569X012 | 2L908033092 | 2P5185X0012 | 2V5673X0012 | 20A4569X022 |
| 3/4 / 20 | 2E397419012 | 2E863722012 | 2K632722012 | 2V4262X0012 | 20A3088X012 | 2E863733092 | 2K632733092 | 2V4262X0022 | 20A3088X032 |
| 1 / 25 | 2E397519012 | 2E863822012 | 2H160622012 | 2V3546X00A2 | 2U7969X0022 | 2E863833092 | 2H1606X00A2 | 2V3546X0012 | 2U7969X0092 |
| TYPE 95H | | | | | | | | | |
| 1/4 | 1E391019012 | 1J127322012 | ----- | ----- | ----- | 1J127333092 | ----- | ----- | ----- |
| 1/2 / 15 | 1E394319012 | 2L907722012 | 2N693922012 | 16A6787X012 | 12B5376X012 | 2L907733092 | 2N6939X0012 | 16A6787X022 | 12B5376X022 |
| 3/4 / 20 | 2E397219012 | 2E408422012 | 2H852022012 | 2V9941X0012 | 20A4013X012 | 2E408433092 | 2H8520X00A2 | 2V9941X0032 | 20A4013X022 |
| 1 / 25 | 2E397319012 | 2E408522012 | 2F485522012 | 2V3879X00A2 | 2V3944X0012 | 2E408533092 | 2F4855X0012 | 2V3879X0012 | 2V3944X0042 |
| 1-1/2 / 40 | 3P784319012 | 3P784322012 | 3V388022012 | 1V4939X0012 | 2V3881X0012 | 3P784333092 | 3V388033092 | 1V4939X0032 | 2V3881X0062 |
| 2 / 50 | 3P784219012 | 3P784222012 | 3V279622012 | 2V5703X0012 | 20A1091X012 | 3P784233092 | 3V2796X0012 | 2V5703X0032 | 20A1091X022 |
| TYPE 95HP | | | | | | | | | |
| 1/4 | ----- | 1J127322012 | ----- | ----- | ----- | 1J127333092 | ----- | ----- | ----- |
| 1/2 / 15 | ----- | 2L907722012 | 2N693922012 | 16A6787X012 | 12B5376X012 | 2L907733092 | 2N6939X0012 | 16A6787X022 | 12B5376X022 |
| 3/4 / 20 | ----- | 2E408422012 | 2H852022012 | 2V9941X0012 | 20A4013X012 | 2E408433092 | 2H8520X00A2 | 2V9941X0032 | 20A4013X022 |
| 1 / 25 | ----- | 2E408522012 | 2F485522012 | 2V3879X00A2 | 2V3944X0012 | 2E408533092 | 2F4855X0012 | 2V3879X0012 | 2V3944X0042 |
| 1-1/2 / 40 | ----- | 3P784322012 | 3V388022012 | 1V4939X0012 | 2V3881X0012 | 3P784333092 | 3V388033092 | 1V4939X0032 | 2V3881X0062 |
| 2 / 50 | ----- | 3P784222012 | 3V279622012 | 2V5703X0012 | 20A1091X012 | 3P784233092 | 3V2796X0012 | 2V5703X0032 | 20A1091X022 |
| TYPE 95HT | | | | | | | | | |
| 1/4 | ----- | 1J127322012 | ----- | ----- | ----- | 1J127333092 | ----- | ----- | ----- |
| 1/2 / 15 | ----- | 2L907722012 | 2N693922012 | 16A6787X012 | 12B5376X012 | 2L907733092 | 2N6939X0012 | 16A6787X022 | 12B5376X022 |
| 3/4 / 20 | ----- | 2E408422012 | 2H852022012 | 2V9941X0012 | 20A4013X012 | 2E408433092 | 2H8520X00A2 | 2V9941X0032 | 20A4013X022 |
| 1 / 25 | ----- | 2E408522012 | 2F485522012 | 2V3879X00A2 | 2V3944X0012 | 2E408533092 | 2F4855X0012 | 2V3879X0012 | 2V3944X0042 |
| 1-1/2 / 40 | ----- | 3P784322012 | 3V388022012 | 1V4939X0012 | 2V3881X0012 | 3P784333092 | 3V388033092 | 1V4939X0032 | 2V3881X0062 |
| 2 / 50 | ----- | 3P784222012 | 3V279622012 | 2V5703X0012 | 20A1091X012 | 3P784233092 | 3V2796X0012 | 2V5703X0032 | 20A1091X022 |

| Key | Description | Part Number | Key | Description | Part Number |
|-----|---|--|-----|--|--|
| 6 | Stem (continued) 304 Stainless steel NPS 1-1/2 and 2 / DN 40 and 50 | 1P785335042 | 8 | Lower Spring Seat (continued) Types 95HP and 95HT only NPS 1/4 body | 14B9947X012 |
| 7 | Stem Guide Bushing 416 Stainless steel NPS 1/4 and 1/2 / DN 15 bodies NPS 3/4 and 1 / DN 20 and 25 bodies NPS 1-1/2 and 2 / DN 40 and 50 bodies | 1E392235132 1E398535132 1P785435132 | 9 | Upper Spring Seat, Steel Types 95L and 95H only NPS 1/4 body | 14B9948X012 17B8733X012 1P787724152 |
| | 304 Stainless steel NPS 1-1/2 and 2 / DN 40 and 50 bodies | 1P785435042 | | NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies NPS 1-1/2 and 2 body / 40 and 50 bodies | 1B798525062 1D667125072 1E398725072 1P787624092 |
| 8 | Lower Spring Seat Type 95H only NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies NPS 1-1/2 and 2 / DN 40 and 50 bodies | 1E392309012 1E395408012 1E398608012 1P787724152 | 10 | Valve Plug Spring Stainless steel NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies NPS 1-1/2 and 2 / DN 40 and 50 bodies | 14B9950X012 14B9951X012 14B9952X012 1P787624092 |

Types 95L, 95H, 95HP and 95HT



ELASTOMER SEAT



METAL SEAT

Figure 5. 95H Series, NPS 1-1/2 and 2 / DN 40 and 50 Sizes Assemblies (Also Typical of 95HT)

Types 95L, 95H, 95HP and 95HT

Key 2, Spring Case Part Numbers

| BODY SIZE, NPS / DN | VENT STYLE | TYPE 95L | | | TYPE 95H | | |
|------------------------|------------|-------------|-------------|-----------------|-------------|-------------|-----------------|
| | | Cast Iron | Steel | Stainless Steel | Cast Iron | Steel | Stainless Steel |
| 1/4 | Drilled | 2E391319012 | 2J127922012 | 2J1279X0022 | 2E391219012 | 2J127522012 | 2J1275X0012 |
| | Tapped | ----- | 2L442822012 | 2L4428X0012 | 2L442919012 | 2L443022012 | 2L4430X0012 |
| 1/2 / 15 | Drilled | 3J496319012 | 3L416122012 | 3L4161X0022 | 2J496219012 | 2L416322012 | 2L416333092 |
| | Tapped | 3L442119012 | 3L442222012 | 3L4422X0012 | 2L441919012 | ----- | 2L4420X0012 |
| 3/4 or 1 / 20 or 25 | Drilled | 4E397919012 | 4E592922012 | 4E592933092 | 3E397819012 | 3E408722012 | 3E4087X0012 |
| | Tapped | 4L461019012 | 4L460922012 | 4L4609X0032 | 3L460819012 | 3L460722012 | 3L4607X0022 |
| 1-1/2 or 2 / 40 or 50 | Tapped | ----- | ----- | ----- | 4P784019012 | 3P790422012 | 3P7904X0012 |

| Key | Description | Part Number | Key | Description | Part Number |
|-----|---|---|-----|---|---|
| 10 | Valve Plug Spring (continued) NACE, Inconel® NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies NPS 1-1/2 and 2 / DN 40 and 50 bodies | 19A2862X012 19A2861X012 1P8443X0012 19A7371X012 | 16 | Cap Screw, Steel (continued) Types 95HP and 95HT NPS 1/4 body (6 required) NPS 1/2 / DN 15 body (8 required) NPS 3/4 and 1 / DN 20 and 25 bodies (8 required) NPS 1-1/2 and 2 / DN 40 and 50 bodies (8 required) | 1A3917X0132 1A3816X0242 1A3418X0362 1K5684X0222 |
| 11 | Regulator Spring | See Following Table | 17 | Locknut, Steel NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies NPS 1-1/2 and 2 / DN 40 and 50 bodies | 1A352224122 1A353724122 1A319224122 1A368124112 |
| 12* | Diaphragm | See Following Table | 18 | Drive Screw, Stainless steel (2 required) | 1A368228982 |
| 14 | Diaphragm Protector, PTFE NPS 1/4 body Type 95L Type 95H NPS 1/2 / DN 15 body Type 95L Type 95H NPS 3/4 and 1 / DN 20 and 25 bodies Type 95L Type 95H NPS 1-1/2 and 2 Type 95H | 11A5126X012 11A5129X012 11A5127X012 11A5130X012 11A5128X012 11A5131X012 11A5527X012 | 19* | Diaphragm Gasket, Types 95L and 95H use composition, Type 95HT uses graphite (Use with metal diaphragm) NPS 1/4 body Type 95L Type 95H Type 95HT NPS 1/2 / DN 15 body Type 95L Type 95H Type 95HT NPS 3/4 and 1 / DN 20 and 25 bodies Type 95L Type 95H Type 95HT NPS 1-1/2 and 2 / DN 40 and 50 bodies Type 95H Type 95HT | 1E394004022 1E393104022 1E3931X0012 1E397004022 1E396104022 1E3961X0012 1E390404022 1E399304022 1E3993X0012 1P787904022 1P7879X0012 |
| 15 | Adjusting Screw, Steel NPS 1/4 body NPS 1/2 / DN 15 body NPS 1/2 / DN 15 body with handwheel NPS 3/4 and 1 / DN 20 and 25 bodies NPS 1-1/2 and 2 / DN 40 and 50 bodies | 1E639928992 1D995448702 1J496428982 1A330828982 1A680128992 | 20 | Pitot Tube NPS 3/4 and 1 / DN 20 and 25 bodies Copper (Types 95L and 95H only) 304 Stainless steel 316 Stainless steel, NACE NPS 1-1/2 and 2 / DN 40 and 50 bodies Copper (Types 95L and 95H only) 304 Stainless steel 316 Stainless steel, NACE | 1E399417012 1E399438072 1E399438092 1P7856X0032 1P785638072 1P7856X0012 |
| 16 | Cap Screw, Steel Type 95L NPS 1/4 body (10 required) NPS 1/2 / DN 15 body (10 required) NPS 3/4 and 1 / DN 20 and 25 bodies (12 required) Type 95H Cast iron bodies NPS 1/4 body (6 required) NPS 1/2 / DN 15 body (8 required) NPS 3/4 and 1 / DN 20 and 25 bodies (8 required) NPS 1-1/2 and 2 / DN 40 and 50 bodies (8 required) Steel or Stainless steel bodies NPS 1/4 body (6 required) NPS 1/2 / DN 15 body (8 required) NPS 3/4 and 1 / DN 20 and 25 bodies (8 required) NPS 1-1/2 and 2 / DN 40 and 50 bodies (8 required) | 1A407824052 1A381624052 1A336924052 1A407824052 1A381624052 1A336924052 1K568428982 1A391724052 1A381624052 1A341824052 1K568428982 | 21 | Diaphragm Head Assembly, Type 95L only Aluminum and Stainless steel NPS 1/4 body NPS 1/2 / DN 15 body NPS 3/4 and 1 / DN 20 and 25 bodies | 1E3936X0012 1E3967X0012 1E3907X0012 |

*Recommended spare parts
Inconel® is a mark owned by Special Metals Corporation.

Types 95L, 95H, 95HP and 95HT

Key 2, Spring Case Part Numbers (continued)

| BODY SIZE, NPS / DN | VENT STYLE | TYPE 95HP | | TYPE 95HT | |
|------------------------|------------|-------------|-----------------|-------------|-----------------|
| | | Steel | Stainless Steel | Steel | Stainless Steel |
| 1/4 | Drilled | 2J127522012 | 2J1275X0012 | 2J127522012 | 2J1275X0012 |
| | Tapped | 2L443022012 | 2L4430X0012 | 2L443022012 | 2L4430X0012 |
| 1/2 / 15 | Drilled | 2L416322012 | 2L416333092 | 2L416322012 | 2L416333092 |
| | Tapped | ----- | 2L4420X0012 | ----- | 2L4420X0012 |
| 3/4 or 1 / 20 or 25 | Drilled | 3E408722012 | 3E4087X0012 | 3E408722012 | 3E4087X0012 |
| | Tapped | 3L460722012 | 3L4607X0022 | 3L460722012 | 3L4607X0022 |
| 1-1/2 or 2 / 40 or 50 | Tapped | 3P790422012 | 3P7904X0012 | 3P790422012 | 3P7904X0012 |

| Key | Description | Part Number | Key | Description | Part Number |
|-----|---|-------------|-----|---|-------------|
| 22 | Adjusting Screw Assembly Steel (for tee-handle construction) NPS 1/4 body | 1F2236000A2 | 48 | Diaphragm Head (2 required) Type 95H, Steel | 1P788225012 |
| | NPS 3/4 and 1 / DN 20 and 25 bodies | 1F2238000A2 | | Stainless steel | 1P788235072 |
| | NPS 1-1/2 and 2 / DN 40 and 50 bodies | 1V4372X0012 | | Types 95HP and 95HT, Stainless steel | 1P788235072 |
| 23 | Handwheel, Zinc (NPS 1/2 / DN 15 body) | 1J496144012 | 49 | Lockwasher, Steel | 1A487828992 |
| 24 | Machine Screw, Steel (handwheel construction) | 16A5763X012 | 50 | Packing Follower 416 Stainless steel | 1P785535232 |
| 25 | Lockwasher, Steel (handwheel construction) | 1A352332992 | | 316 Stainless steel, NACE | 1P7855X00A2 |
| | The following parts are for the NPS 1-1/2 and 2 / DN 40 and 50 Types 95H, 95HP and 95HT only | | | 304 Stainless steel | 1P785535042 |
| 30 | Pusher Post, Stainless steel | | 51* | O-ring, PTFE | 1P785906242 |
| | Elastomer seat, 416 Stainless steel | 1P784935132 | 52 | Spring, Stainless steel | 1P785737012 |
| | Metal seat, 416 Stainless steel | 1P785135132 | 54 | Inner Valve Base 416 Stainless steel | 1U404046172 |
| | 304 Stainless steel | 1P785135042 | | 316 Stainless steel, NACE | 1U4040X00A2 |
| | 316 Stainless steel | 1P7851X0012 | | 304 Stainless steel | 1U404035042 |
| | 316 Stainless steel, NACE | 1P7849X00A2 | 56 | NACE Tag | ----- |
| 31 | Locknut, Steel | 1P788724122 | 57 | Tag Wire | ----- |
| 45* | O-ring, Nitrile (NBR) (Use with Neoprene (CR) diaphragm) | 1C782206992 | | | |
| 47* | Diaphragm Gasket Use with metal diaphragm (2 required) Type 95H (NPS 1-1/2 to 2 / DN 40 to 50 only), Composition | 1P788004022 | | | |
| | Type 95HT (NPS 1-1/2 to 2 / DN 40 to 50 only), Graphite | 1P7880X0012 | | | |

*Recommended spare parts

Types 95L, 95H, 95HP and 95HT

Key 4, Valve Plug Part Numbers

| VALVE PLUG MATERIAL | BODY SIZE, NPS / DN | | | |
|---|---------------------|-------------|-----------------------|-------------------------|
| | 1/4 | 1/2 / 15 | 3/4 and 1 / 20 and 25 | 1-1/2 and 2 / 40 and 50 |
| Metal Seat (Types 95L, 95H and 95HT) | | | | |
| 416 SST | 1E391746172 | 1E395146172 | 1E398146172 | 1U403746172 |
| 316 SST | 1E391735162 | 1E395135072 | 1E398135072 | 1U4037X0012 |
| 304 SST | ----- | ----- | ----- | 1U403735042 |
| Brass | ----- | 1E395146222 | 1E398146222 | 1U403746172 |
| Elastomer Seat (Types 95L, 95H and 95HP) | | | | |
| Brass/Neoprene (CR) | 1E3933000C2 | 1E3963000A2 | 1E3996000A2 | 1U4039X0052 |
| 416 SST/Neoprene (CR) | 1E3933000E2 | 1E3963000B2 | 1E3996000B2 | ----- |
| 316 SST/FKM | 1E3933X0242 | 1E3963X0192 | 1E3996X0342 | 1U4039X0182 |
| 316 SST/Neoprene (CR) (NACE) | 1E3933X0012 | 1E3963X0012 | 1E3996X0012 | 1U4039X0082 |
| 416 SST/EPDM | ----- | 1E3963X0182 | ----- | ----- |
| 416 SST/Nitrile (NBR) | ----- | ----- | ----- | 1U4039000A2 |
| Brass/FKM | 1E3933X0082 | 1E3963X0072 | 1E3996X0072 | ----- |
| 416 SST/FKM | 1E3933X0102 | 1E3963X0092 | 1E3996X0092 | 1U4039X00A2 |
| 316 SST/FKM (NACE) | 1E3933X0092 | 1E3963X0082 | 1E3996X0082 | 1U4039X0102 |
| Brass | ----- | 1E3963X00A2 | ----- | ----- |
| Brass/PTFE | 1E3933X0032 | 1E3963X0022 | 1E3996X0022 | ----- |
| 416 SST/PTFE | 1E3933000A2 | 1E3963000D2 | 1E3996000E2 | ----- |
| 316 SST/PTFE | 1E3933X0022 | 1E3963X00B2 | 1E3996000D2 | 1U4039X00B2 |

Key 11, Regulator Spring Part Numbers

| TYPE | BODY SIZE, NPS / DN | OUTLET PRESSURE RANGE | | SPRING PART NUMBER | COLOR |
|-----------|---------------------|-----------------------|--------------|--------------------|------------|
| | | psig | bar | | |
| 95L | 1/4 | 2 to 6 | 0.14 to 0.41 | 1E392527022 | Yellow |
| | | 5 to 15 | 0.34 to 1.0 | 1E392627012 | Green |
| | | 13 to 30 | 0.90 to 2.1 | 1E392727142 | Red |
| 95L | 1/2 / 15 | 2 to 6 | 0.14 to 0.41 | 1E395627022 | Yellow |
| | | 5 to 15 | 0.34 to 1.0 | 1D7455T0012 | Green |
| | | 13 to 30 | 0.90 to 2.1 | 1E395727192 | Red |
| 95L | 3/4, 1 / 20, 25 | 2 to 6 | 0.14 to 0.41 | 1E398927022 | Yellow |
| | | 5 to 15 | 0.34 to 1.0 | 1E399027142 | Green |
| | | 13 to 30 | 0.90 to 2.1 | 1E399127162 | Red |
| 95H | 1/4 | 15 to 30 | 1.0 to 2.1 | 1E392527022 | Yellow |
| | | 25 to 75 | 1.7 to 5.2 | 1E392627012 | Green |
| | | 70 to 150 | 4.8 to 10.3 | 1E392727142 | Red |
| | 1/2 / 15 | 15 to 30 | 1.0 to 2.1 | 1E395627022 | Yellow |
| 25 to 75 | | 1.7 to 5.2 | 1D7455T0012 | Green | |
| 70 to 150 | | 4.8 to 10.3 | 1E395727192 | Red | |
| 95H | 3/4, 1 / 20, 25 | 15 to 30 | 1.0 to 2.1 | 1E398927022 | Yellow |
| | | 25 to 75 | 1.7 to 5.1 | 1E399027142 | Green |
| | | 70 to 150 | 4.8 to 10.3 | 1E399127162 | Red |
| | 1-1/2, 2 / 40, 50 | 5 to 80 | 0.34 to 5.5 | 1E795327082 | Light Blue |
| | 60 to 120 | 4.1 to 8.3 | 1E795427082 | Light Gray | |
| | 100 to 140 | 6.9 to 9.7 | 1E793327082 | Yellow | |
| | 120 to 150 | 8.3 to 10.3 | 1P788827082 | Black | |

Types 95L, 95H, 95HP and 95HT

Key 11, Regulator Spring Part Numbers (continued)

| TYPE | BODY SIZE, NPS / DN | OUTLET PRESSURE RANGE | | SPRING PART NUMBER | COLOR |
|-------------------|------------------------|-----------------------|-------------|-----------------------|-----------|
| | | psig | bar | | |
| 95HT | 1/4 | 15 to 100 | 1.0 to 6.9 | 14B9941X012 | Unpainted |
| | | 80 to 300 | 5.5 to 20.7 | 14B9940X012 | Unpainted |
| | 1/2 / 15 | 15 to 100 | 1.0 to 6.9 | 14B9943X012 | Unpainted |
| | | 80 to 300 | 5.5 to 20.7 | 14B9942X022 | Unpainted |
| 3/4, 1 / 20, 25 | 15 to 100 | 1.0 to 6.9 | 14B9944X022 | Unpainted | |
| | 80 to 300 | 5.5 to 20.7 | 14B9945X022 | Unpainted | |
| 1-1/2, 2 / 40, 50 | 15 to 100 | 1.0 to 6.9 | 17B1704X012 | Unpainted | |
| | 60 to 260 | 4.1 to 17.9 | 17B1705X012 | Unpainted | |
| 95HP | 1/4 | 15 to 100 | 1.0 to 6.9 | 14B9941X012 | Unpainted |
| | | 80 to 400 | 5.5 to 27.6 | 14B9940X012 | Unpainted |
| | 1/2 / 15 | 15 to 100 | 1.0 to 6.9 | 14B9943X012 | Unpainted |
| | | 80 to 400 | 5.5 to 27.6 | 14B9942X022 | Unpainted |
| 3/4, 1 / 20, 25 | 15 to 100 | 1.0 to 6.9 | 14B9944X022 | Unpainted | |
| | 80 to 400 | 5.5 to 27.6 | 14B9945X022 | Unpainted | |
| 1-1/2, 2 / 40, 50 | 15 to 100 | 1.0 to 6.9 | 17B1704X012 | Unpainted | |
| | 60 to 300 | 4.1 to 20.7 | 17B1705X012 | Unpainted | |

Key 12, Diaphragm Part Numbers

| BODY SIZE, NPS / DN | DIAPHRAGM MATERIAL | | | |
|-------------------------|-------------------------------------|---------------|------------------------------------|------------------------|
| | 302 Stainless Steel (2 Required) | Neoprene (CR) | Fluorocarbon (FKM) (2 Required) | Monel® (2 Required) |
| TYPE 95L | | | | |
| 1/4 | 1E393936012 ⁽¹⁾ | 1E394102112 | 1E394102402 ⁽²⁾ | 1E393941012 |
| 1/2 / 15 | 1E396936012 | 1E397102112 | 1E397102402 | 1E396941012 |
| 3/4 and 1 / 20 and 25 | 1E390536012 | 1E390302112 | 1E390302332 | 1E390541012 |
| TYPE 95H | | | | |
| 1/4 | 1E392836012 | 1E393502112 | 1E393502402 ⁽²⁾ | 1E392841012 |
| 1/2 / 15 | 1E395836012 | 1E396602112 | 1E396602402 | 1E395841012 |
| 3/4 and 1 / 20 and 25 | 1E399236012 | 1E399902112 | 1E399902402 | 1E399241012 |
| 1-1/2 and 2 / 40 and 50 | 1P787836012 | 1P788102192 | 11A1347X012 | 1P7878X00A2 |
| TYPE 95HP | | | | |
| 1/4 | ----- | 1E393502112 | 1E393502402 ⁽²⁾ | ----- |
| 1/2 / 15 | ----- | 1E396602112 | 1E396602402 | ----- |
| 3/4 and 1 / 20 and 25 | ----- | 1E399902112 | 1E399902402 | ----- |
| 1-1/2 and 2 / 40 and 50 | ----- | 1P788102192 | 11A1347X012 | ----- |
| TYPE 95HT | | | | |
| 1/4 | 1E392836012 | ----- | ----- | ----- |
| 1/2 / 15 | 1E395836012 | ----- | ----- | ----- |
| 3/4 and 1 / 20 and 25 | 1E399236012 | ----- | ----- | ----- |
| 1-1/2 and 2 / 40 and 50 | 1P787836012 | ----- | ----- | ----- |

1. Only one diaphragm required for Type 95L with 2 to 6 psig / 0.14 to 0.41 bar spring range.
 2. Only one diaphragm required for NPS 1/4 size.

Types 95L, 95H, 95HP and 95HT

Industrial Regulators

Emerson Process Management Regulator Technologies, Inc.

USA - Headquarters
McKinney, Texas 75070 USA
Tel: +1 800 558 5853
Outside U.S. +1 972 548 3574

Asia-Pacific
Shanghai 201206, China
Tel: +86 21 2892 9000

Europe
Bologna 40013, Italy
Tel: +39 051 419 0611

Middle East and Africa
Dubai, United Arab Emirates
Tel: +971 4811 8100

Natural Gas Technologies

Emerson Process Management Regulator Technologies, Inc.

USA - Headquarters
McKinney, Texas 75070 USA
Tel: +1 800 558 5853
Outside U.S. +1 972 548 3574

Asia-Pacific
Singapore 128461, Singapore
Tel: +65 6770 8337

Europe
Bologna 40013, Italy
Tel: +39 051 419 0611
Chartres 28008, France
Tel: +33 2 37 33 47 00

Middle East and Africa
Dubai, United Arab Emirates
Tel: +971 4811 8100

TESCOM

Emerson Process Management Tescom Corporation

USA - Headquarters
Elk River, Minnesota 55330-2445, USA
Tels: +1 763 241 3238
+1 800 447 1250

Europe
Selmsdorf 23923, Germany
Tel: +49 38823 31 287

Asia-Pacific
Shanghai 201206, China
Tel: +86 21 2892 9499

For further information visit www.fisherregulators.com

The Emerson logo is a trademark and service mark of Emerson Electric Co. All other marks are the property of their prospective owners. Fisher is a mark owned by Fisher Controls International LLC, a business of Emerson Process Management.

The contents of this publication are presented for informational purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. We reserve the right to modify or improve the designs or specifications of such products at any time without notice.

Emerson Process Management Regulator Technologies, Inc. does not assume responsibility for the selection, use or maintenance of any product. Responsibility for proper selection, use and maintenance of any Emerson Process Management Regulator Technologies, Inc. product remains solely with the purchaser.