

Type R622 Pressure Reducing Regulator

Introduction

Type R622 direct-operated, spring-loaded regulators provide economical pressure reducing control in a variety of residential, commercial, and industrial applications. These regulators can be used with natural, manufactured, or liquefied petroleum gases and have the same inlet and outlet pressure capabilities.

In addition, Type R622 regulators have internal relief across the diaphragm to help minimize overpressure. Any outlet pressure above the start-to-discharge point of the nonadjustable relief valve spring moves the diaphragm off the relief valve seat, allowing excess pressure to bleed out through the screened spring case vent.

Body Size and End Connection Style

1/2-inch (DN 15) inlet and outlet NPT

Maximum Allowable Inlet Pressure

Operating: 125 psig (8,62 bar)

Emergency: 125 psig (8,62 bar)

Except 2-inches w.c. (5 mbar) spring which has operating pressure of 60 psig (4,14 bar) and emergency pressure of 60 psig (4,14 bar)

Relief Performance

Figure 3

Features

- Compact Design
- High Capacity
- Protective Inlet Screen
- Internal Relief
- Light Weight
- Inlet and Out Pressure Gauge Taps

Maximum Allowable Outlet (Casing) Pressure

Operating to Avoid Internal Part Damage:

3 psid (0,21 bar d) above outlet pressure setting

Emergency: 20 psi (1,36 bar)

Outlet Pressure Ranges

See Table 2

Orifice Sizes and Flow Coefficients

1/8-inch (3,18 mm) orifice

Wide-Open C_g for relief sizing = 12.5

Flow Capacities

See Table 3

Pressure Registration

Internal

Maximum Temperature Capabilities

-20° to 160°F (-29° to 71°C)

Approximate Weight

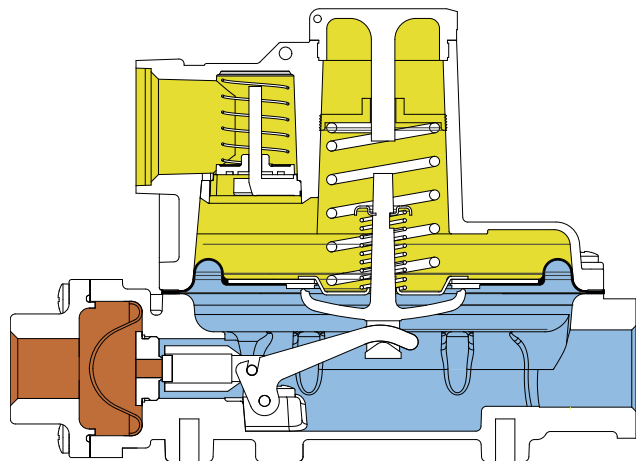
2.35 pounds (1,1 kg)

Additional Technical Data

For more technical information, contact your local sales office and request an R622 Product Bulletin. To locate product literature or your local sales office, log on to: www.FISHERregulators.com



Figure 1. Type R622 Pressure Reducing Regulators



- INLET PRESSURE
- OUTLET PRESSURE
- ATMOSPHERIC PRESSURE

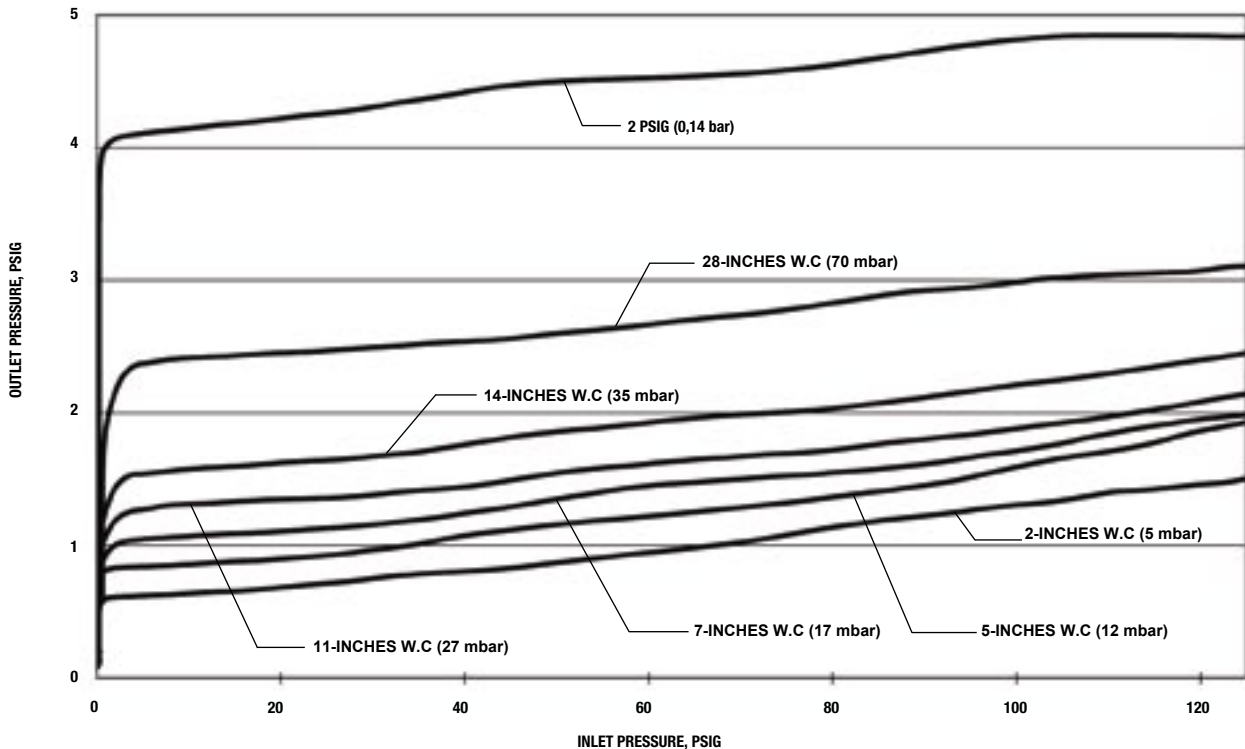
Figure 2. Type R622 Regulator Construction Features

NATURAL GAS PRODUCTS

Type R622 Pressure Reducing Regulator

Table 1. Construction Materials	
PART NAME	MATERIAL
Body, Spring Case, Diaphragm Plate, and Orifice	Aluminum
Diaphragm, Disc, and O-ring	Nitrile (NBR)
Adjusting Screw and Pushpost	Delrin
Closing Cap	ASA Thermoplastic (UV-Ray Resistant)
Control Spring	Spring wire
Inlet Screw, Flange Screw, Spring Seat and Lever	Plated steel
Valve Stem	Zinc
Relief Valve Spring, Relief Spring Retainer, Lever Pin and Vent Screen	Stainless steel

Table 2. Outlet Pressure Ranges			
REGULATOR TYPE NUMBER	OUTLET PRESSURE RANGE	CONTROL SPRING PART NUMBER	CONTROL SPRING COLOR CODE
R622	1.8 to 2.2-inches w.c (4 to 5 mbar) 5 to 7-inches w.c (12 to 17 mbar) 6.5 to 9-inches w.c (16 to 22 mbar) 9 to 13-inches w.c (22 to 32 mbar) 13 to 20-inches w.c (32 to 48 mbar) 16 to 35-inches w.c (40 to 87 mbar) 1 to 2.2 psig (69 to 152 mbar)	T14453T0012 T14398T0012 T14399T0012 T14400T0012 T14401T0012 T14402T0012 T14403T0012	Purple Orange Yellow Silver Gray Pink Light Blue



NOTE: TESTED UNDER THE FOLLOWING CONDITIONS: 10 PSIG (0,69 bar) INLET PRESSURE, 7-INCHES W.C. (17,00 mbar) OUTLET PRESSURE SETTING, AND 50 SCFH (1,34 Nm³/h) OF 0.6 SPECIFIC GRAVITY NATURAL GAS

Figure 3. Industrial Relief Performance

Type R622 Pressure Reducing Regulator

Table 3. Typical Regulating Capacities in SCFH (Nm ³ /h) of 0.6 Specific Gravity Natural Gas for Type R622 Regulator		
OUTLET PRESSURE SETTING, CONTROL SPRING RANGE, SPRING PART NUMBER, AND DROOP	INLET PRESSURE, psig (bar)	1/2-INCH INLET AND 1/2-INCH OUTLET
Setting: 2-inches w.c (5 mbar) Range: 1.8 to 2.2 inches w.c. (4,00 to 5,00 mbar) T14453T0012, Purple Droop: 1 inch w.c. (2,5 mbar)	5 (0,34)	287 (7,69)
	10 (0,69)	380 (10,18)
	25 (1,7)	451 (12,08)
	50 (3,4)	493 (13,21)
Setting: 5-inches w.c (12 mbar) Range: 5 to 7 inches w.c. (12 to 17 mbar) T14398T002, Orange Droop: 1 inch w.c. (2,5 mbar)	60 (4,14)	506 (13,56)
	5 (0,34)	271 (7,26)
	10 (0,69)	367 (9,84)
	25 (1,7)	468 (12,54)
Setting: 7-inches w.c (17 mbar) Range: 6.5 to 9 inches w.c. (16 to 22 mbar) T14399T0012, Yellow Droop: 1 inch w.c. (2,5 mbar)	50 (3,4)	484 (12,97)
	60 (4,14)	428 (11,47)
	75 (5,2)	444 (11,90)
	100 (6,9)	536 (14,36)
Setting: 11-inches w.c (27 mbar) Range: 9 to 13 inches w.c. (22 to 32 mbar) T14400T0012, Silver Droop: 2 inch w.c. (5 mbar)	125 (8,63)	536 (14,36)
	5 (0,34)	274 (7,34)
	10 (0,69)	401 (10,75)
	25 (1,7)	623 (16,70)
Setting: 14-inches w.c (35 mbar) Range: 13 to 20 inches w.c. (32 to 50 mbar) T14401T0012, Grey Droop: 2-inches w.c. (5 mbar)	50 (3,4)	708 (18,97)
	60 (4,14)	735 (19,70)
	75 (5,2)	676 (18,12)
	100 (6,9)	721 (19,32)
Setting: 1-psig (0,069 mbar) Range: 16 to 35 inches w.c. (40 to 87 mbar) T14402T0012, Pink Droop: 10%	125 (8,63)	738 (19,78)
	5 (0,34)	246 (6,59)
	10 (0,69)	347 (9,30)
	25 (1,7)	451 (12,09)
Setting: 2-psig (0,14 bar) Range: 1.2 to 2.2 inches w.c. (0,08 to 0,15 bar) T14403T0012, Light Blue Droop: 10%	50 (3,4)	923 (24,74)
	60 (4,14)	976 (26,16)
	75 (5,2)	1007 (26,99)
	100 (6,9)	1285 (34,44)
Setting: 14-inches w.c (35 mbar) Range: 13 to 20 inches w.c. (32 to 50 mbar) T14401T0012, Grey Droop: 2-inches w.c. (5 mbar)	125 (8,63)	1028 (27,55)
	5 (0,34)	222 (5,95)
	10 (0,69)	381 (10,21)
	25 (1,7)	630 (16,88)
Setting: 1-psig (0,069 mbar) Range: 16 to 35 inches w.c. (40 to 87 mbar) T14402T0012, Pink Droop: 10%	50 (3,4)	679 (18,20)
	60 (4,14)	708 (18,97)
	75 (5,2)	756 (20,26)
	100 (6,9)	762 (20,42)
Setting: 2-psig (0,14 bar) Range: 1.2 to 2.2 inches w.c. (0,08 to 0,15 bar) T14403T0012, Light Blue Droop: 10%	125 (8,63)	796 (21,33)
	5 (0,34)	174 (4,66)
	10 (0,69)	337 (9,03)
	25 (1,7)	533 (14,28)
Setting: 7-inches w.c (17 mbar) Range: 6.5 to 9 inches w.c. (16 to 22 mbar) T14399T0012, Yellow Droop: 1 inch w.c. (2,5 mbar)	50 (3,4)	679 (18,20)
	60 (4,14)	708 (18,97)
	75 (5,2)	756 (20,26)
	100 (6,9)	762 (20,42)
Setting: 11-inches w.c (27 mbar) Range: 9 to 13 inches w.c. (22 to 32 mbar) T14400T0012, Silver Droop: 2 inch w.c. (5 mbar)	125 (8,63)	796 (21,33)
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Table 3. Typical Regulating Capacities in SCFH (Nm ³ /h) of 0.6 Specific Gravity Natural Gas for Type R622 Regulator (continued)		
OUTLET PRESSURE SETTING, CONTROL SPRING RANGE, SPRING PART NUMBER, AND DROOP	INLET PRESSURE, psig (bar)	1/2-INCH INLET AND 1/2-INCH OUTLET
Setting: 2-inches w.c (5 mbar) Range: 1.8 to 2.2 inches w.c. (4,00 to 5,00 mbar) T14453T0012, Purple Droop: 1 inch w.c. (2,5 mbar)	5 (0,34)	246 (6,59)
	10 (0,69)	364 (9,76)
	25 (1,7)	551 (14,77)
	50 (3,4)	641 (17,18)
Setting: 5-inches w.c (12 mbar) Range: 5 to 7 inches w.c. (12 to 17 mbar) T14398T002, Orange Droop: 1 inch w.c. (2,5 mbar)	60 (4,14)	661 (17,72)
	5 (0,34)	271 (7,26)
	10 (0,69)	367 (9,84)
	25 (1,7)	468 (12,54)
Setting: 7-inches w.c (17 mbar) Range: 6.5 to 9 inches w.c. (16 to 22 mbar) T14399T0012, Yellow Droop: 1 inch w.c. (2,5 mbar)	50 (3,4)	484 (12,97)
	60 (4,14)	428 (11,47)
	75 (5,2)	444 (11,90)
	100 (6,9)	536 (14,36)
Setting: 11-inches w.c (27 mbar) Range: 9 to 13 inches w.c. (22 to 32 mbar) T14400T0012, Silver Droop: 2 inch w.c. (5 mbar)	125 (8,63)	536 (14,36)
	5 (0,34)	246 (6,59)
	10 (0,69)	347 (9,30)
	25 (1,7)	451 (12,09)
Setting: 14-inches w.c (35 mbar) Range: 13 to 20 inches w.c. (32 to 50 mbar) T14401T0012, Grey Droop: 2-inches w.c. (5 mbar)	50 (3,4)	469 (12,57)
	60 (4,14)	477 (12,78)
	75 (5,2)	445 (11,93)
	100 (6,9)	507 (13,59)
Setting: 1-psig (0,069 mbar) Range: 16 to 35 inches w.c. (40 to 87 mbar) T14402T0012, Pink Droop: 10%	125 (8,63)	511 (13,70)
	5 (0,34)	222 (5,95)
	10 (0,69)	381 (10,21)
	25 (1,7)	630 (16,88)
Setting: 2-psig (0,14 bar) Range: 1.2 to 2.2 inches w.c. (0,08 to 0,15 bar) T14403T0012, Light Blue Droop: 10%	50 (3,4)	923 (24,74)
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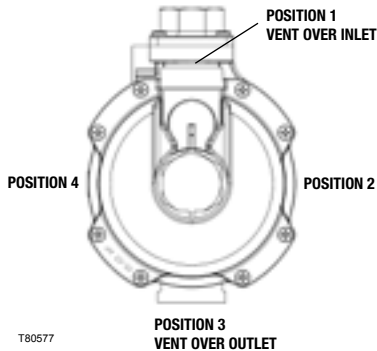


Figure 4. Vent Location

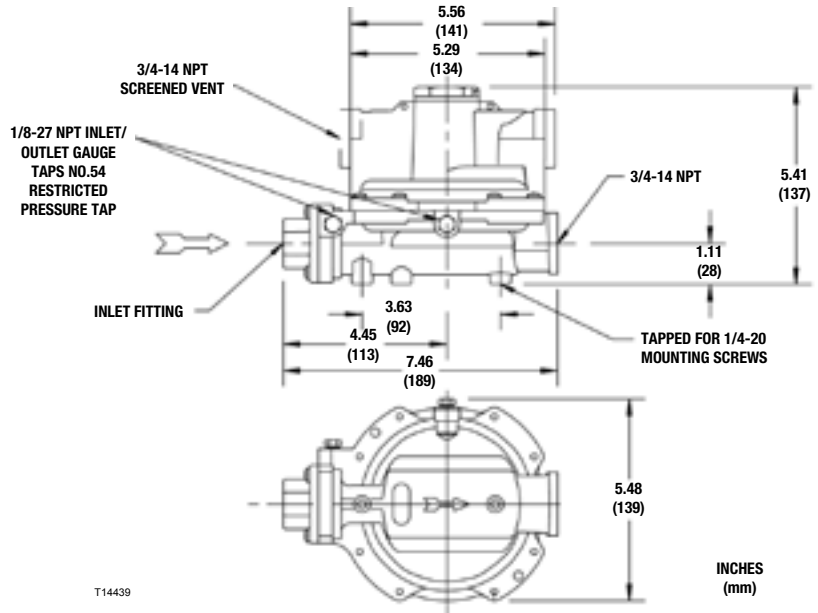


Figure 5. Dimensions

Ordering Guide

Outlet Pressure Range (Select One)

- 1.8 to 2.2-inches w.c. (4 to 5 mbar)***
- 5 to 7-inches w.c. (12 to 17 mbar)***
- 6.5 to 9-inches w.c. (16 to 22 mbar)***
- 9 to 13-inches w.c. (22 to 32 mbar)***
- 13 to 20-inches w.c. (32 to 48 mbar)***
- 16 to 35-inches w.c. (40 to 87 mbar)***
- 1 to 2.2-psig (69 to 152 mbar)***

Vent Position (Select One)

- Position 1 (vent over inlet)***
- Position 2
- Position 3 (vent over outlet)
- Position 4

To order this product, complete this page or complete the Specification Worksheet and forward to your sales office.

If the construction you need is not offered on this page, contact your local sales office.

To locate your local sales office, log on to: www.FISHERregulators.com

Fisher Regulators Quick Order Guide	
***	Standard - Readily Available for Shipment
**	Non-Standard - Allow Additional Time for Shipment
*	Special Order, Constructed from Non-Stocked Parts. Consult your Fisher Sales Representative for Availability.
Availability of the product being ordered is determined by the component with the longest shipping time for the requested construction.	

Specification Worksheet

Application:

Specific Use _____

Line Size _____

Fluid Type _____

Specific Gravity _____

Temperature _____

Does the Application Require Overpressure Protection?

Yes No

Pressure:

Maximum Inlet Pressure _____

Minimum Inlet Pressure _____

Differential Pressure _____

Set Pressure _____

Maximum Flow _____

Accuracy Requirements:

Less Than or Equal To:

5% 10% 20% 40%

Construction Material Requirements (if known):
