

High-Sensitivity, Spring-Loaded Pressure-Reducing Regulators—LPRS10 and LPRS15 Series

Features

- Balanced poppet design
- Diaphragm sensing
- High flow and high accuracy
- Suction tube for reduced droop
- Ideal as second-stage regulator

Options

- Antitamper
- NACE MR0175/ISO 15156-compliant models
- Special cleaning to ASTM G93 Level C



Technical Data

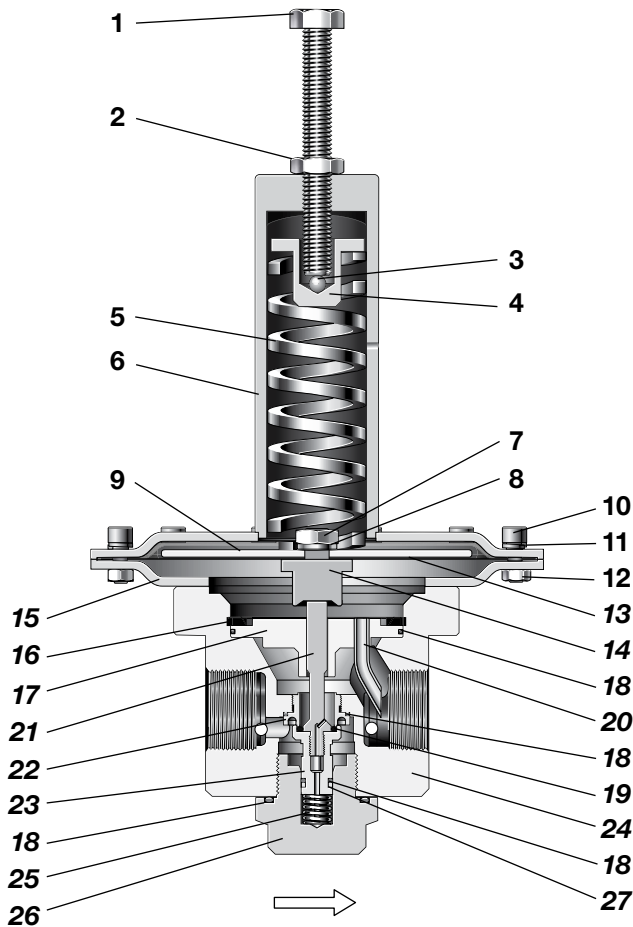
Series	Maximum Inlet Pressure psig (bar)	Maximum Outlet Control Pressure psig (bar)	Sensing Type	Temperature Range °C (°F)	Flow Coefficient (C _v)	Seat Diameter in. (mm)	Connections			Weight (Without Flanges) lb (kg)
							Inlet and Outlet		Gauge	
							Size	Type		
LPRS10	232 (16.0)	43.0 (3.0)	Diaphragm	-4 to 176 (-20 to 80) See Pressure-Temperature Ratings , page 8.	3.79	0.55 (14.0)	1 in. DN25	NPT ISO/BSP parallel thread ASME or EN flange	1/4 in. NPT or ISO/BSP parallel thread ^①	17.6 (8.0)
LPRS15							1 1/2 in. DN40			22.0 (10.0)

See pages 29 and 29 for flow data.

① Regulators with NPT inlet / outlet connections have 1/4 in. NPT gauge connections.

Materials of Construction

LPRS10 Series Regulator



Component	Material / Specification
1 Adjusting screw	A2-70
2 Nut	A2
3 Ball	Commercial stainless steel
4 Spring guide	316L SS / A479 or EN10088
5 Set spring	CR50V4
6 Spring housing assembly	316L SS / A479 or EN10088
7 Nut	A2
8 Washer	A4
9 Diaphragm plate	316L SS / A479 or EN10088
10 Cap screw	A4-80
11 Washer	A2
12 Nut	A2
13 Diaphragm	<i>PTFE, FKM, EPDM, or nitrile</i>
14 Diaphragm screw	316L SS / A479 or EN10088
15 Bottom cover	316L SS / A479 or EN10088
16 Retaining ring	Commercial stainless steel
17 Body plate	316L SS / A479 or EN10088
18 O-rings	<i>EPDM, FKM, or nitrile</i>
19 Seat seal	<i>EPDM, FKM, or nitrile</i>
20 Suction tube	316L SS / A479 or EN10088
21 Poppet	316L SS / A479 or EN10088
22 Seat	316L SS / A479 or EN10088
23 Poppet housing	316L SS / A479 or EN10088
24 Body	316L SS / A479 or EN10088
25 Poppet spring	302 SS / A240
26 Body plug	316L SS / A479 or EN10088
27 Backup ring	PTFE

Wetted components listed in *italics*.

Gauge plugs (not shown): 431 SS / A276.

Flow Data

The graphs illustrate the change or “droop” in outlet pressures as the flow rate increases. For more flow curve information, contact your authorized Swagelok representative.

LPRS10 Series

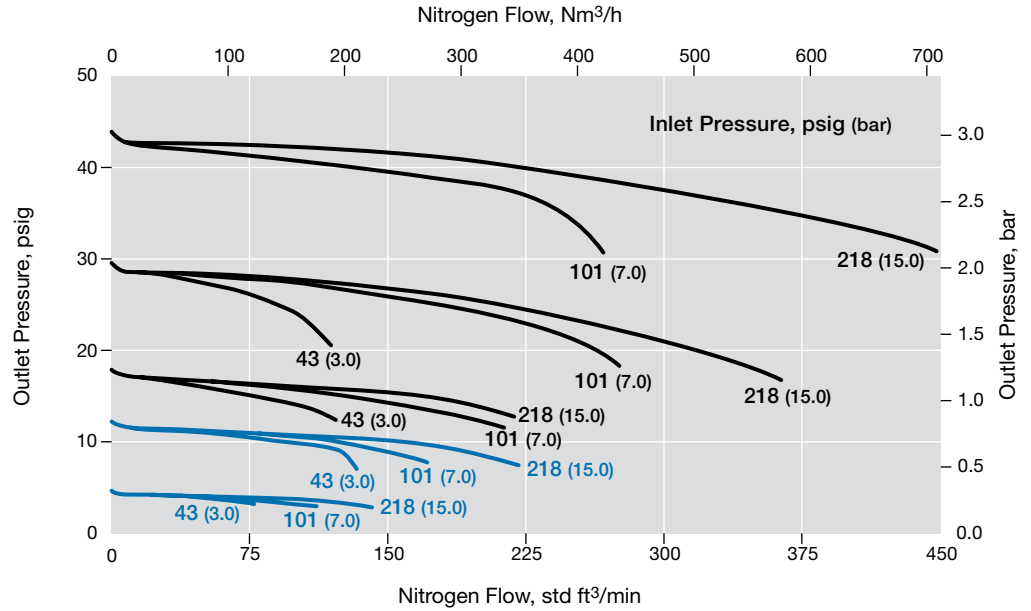
Flow Coefficient: 3.79

Maximum Inlet Pressure: LPRS10—232 psig (16.0 bar)

Outlet Pressure Control Range: 1.4 to 43 psig (0.10 to 3.0 bar)

Pressure Control Range

- 1.4 to 14.0 psig (0.10 to 1.0 bar)
- 4.3 to 43 psig (0.30 to 3.0 bar)



LPRS15 Series

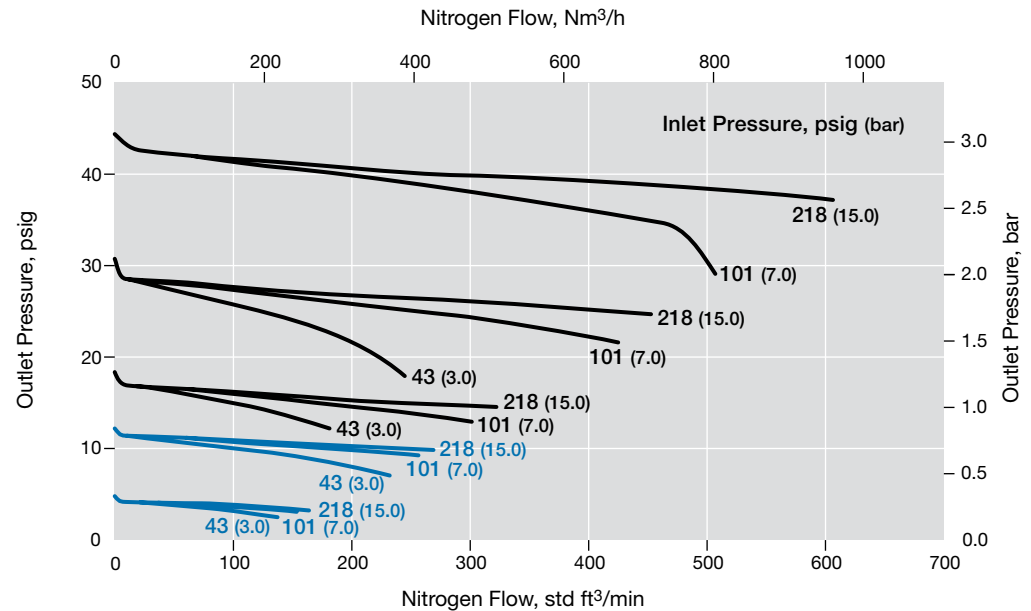
Flow Coefficient: 7.3

Maximum Inlet Pressure: LPRS15—232 psig (16.0 bar)

Outlet Pressure Control Range: 1.4 to 43 psig (0.10 to 3.0 bar)

Pressure Control Range

- 1.4 to 14.0 psig (0.10 to 1.0 bar)
- 4.3 to 43 psig (0.30 to 3.0 bar)

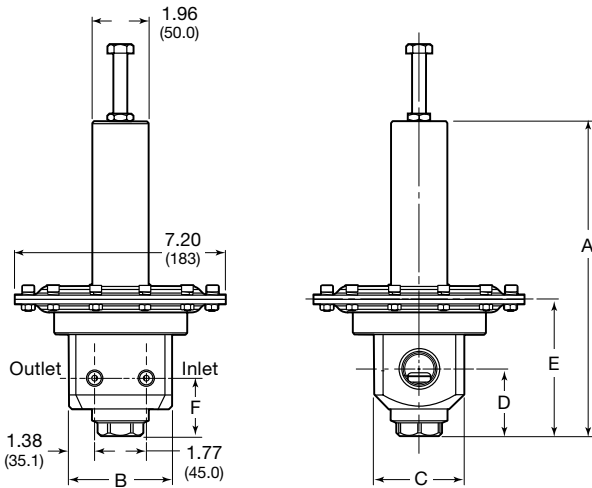


Dimensions

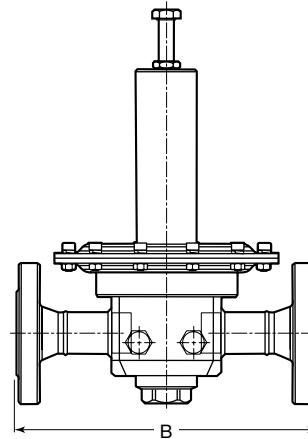
Dimensions, in inches (millimeters), are for reference only and are subject to change.

Series	End Connection Size and Type	Dimensions, in. (mm)					
		A	B	C	D	E	F
LPRS10	1 in. NPT or ISO/BSP parallel thread	10.8 (275)	3.54 (90.0)	3.07 (78.0)	2.28 (58.0)	4.69 (119)	2.00 (50.8)
	DN25 PN40—EN 1092		9.69 (246)				
	1 in. ASME class 150—B16.5		9.65 (245)				
LPRS15	1 1/2 in. NPT or ISO/BSP parallel thread	11.3 (286)	4.53 (115)	3.78 (96.0)	2.44 (62.0)	5.12 (130)	2.03 (51.6)
	DN40 PN40—EN 1092		11.0 (280)				
	1 1/2 in. ASME class 150—B16.5		12.4 (314)				

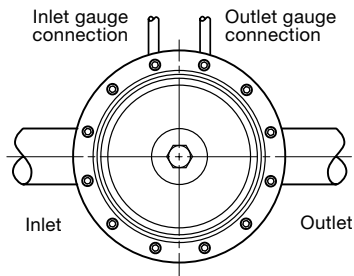
Regulators with Pipe Connections



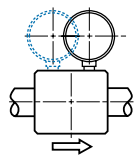
Regulators with Flange Connections



Configuration Top



Gauge Connection



Only one gauge with a 50 mm (2 in.) or larger dial size fits directly into the body.



Shown with tubing for clarity; tubing not included.

Ordering Information

Build an LPRS10 and LPRS15 series regulator ordering number by combining the designators in the sequence shown below.

1 2 3 4 5 6 7 8 9 10 11
LPRS FA 10 A 1 - 02 - 2 - V V V - G93

1 Series

LPRS = 232 psig (16.0 bar) maximum inlet pressure

2 Inlet / Outlet

B = Female ISO/BSP parallel thread
N = Female NPT
FA = ASME B16.5 flange
FD = EN 1092 (DIN) flange

3 Size

10 = 1 in. / DN25
15 = 1 1/2 in. / DN40

4 Pressure Class

Omit designator if flanges are not ordered.
A = ASME class 150
N = DN class PN40

5 Flange Facing

Omit designator if flanges are not ordered.
1 = Raised face smooth

6 Body Material

02 = 316L SS

7 Pressure Control Range

2 = 1.4 to 14.5 psig (0.10 to 1.0 bar)
3 = 4.3 to 43 psig (0.30 to 3.0 bar)

8 Seal Material

V = Fluorocarbon FKM
N = Nitrile
E = EPDM

9 Diaphragm

V = Fluorocarbon FKM
N = Nitrile
E = EPDM

10 Seat Seal Material

V = Fluorocarbon FKM
N = Nitrile
E = EPDM

11 Options

A = Antitamper
N = NACE MR0175/ISO 15156
G93 = ASTM G93 Level C-cleaned