

P289 Back Pressure Regulator



- Throttling Type Relief
- Compact
- Tight Shutoff
- High Flow Rates
- Reliability Due to Simplicity

The Type P289 Back Pressure Regulator functions as a high flow relief valve with an adjustable set point. The P289 can be used in place of a standard relief valve to provide protection against over pressurization in the downstream system. The design of a large diaphragm area and a pitot tube booster allow the valve to respond quickly and relieve the excessive pressure smoothly, especially in low-pressure settings.

Applications

- Fuel Gas Relief
- Gas Gathering Relief

Specifications

Port Size	P289 1" & 3/4" x 1"		P289 2" & L289	
	1 NPT		2 NPT	
Maximum Relief Inlet Pressure	100 PSIG	6.9 BAR	25 PSIG	1.7 BAR
Relief Set Pressure Ranges	1-4.5 PSIG	.07-0.3 BAR	7-18" W.C.	0.017-0.045 BAR
	4-15 PSIG	.28-1.0 BAR	0.5-2.25 PSIG	0.035-0.16 BAR
	10-20 PSIG	0.7-1.4 BAR	1.75-7 PSIG	0.12-0.5 BAR
	15-50 PSIG	1-3.5 BAR	4-10 PSI	0.28-0.7 BAR
	45-75 PSIG	3.1-5.2 BAR		
Temperature Range	-20-150°F with Nitrile and Neoprene		-20-150°F with Nitrile and Neoprene Elastomers	
	0-300 °F with Fluoroelastomer		0-300°F with Fluoroelastomer	
Approximate Weight	2 lbs.	0.907 kg	15 lbs.	6.803 kg

P289 1" Part Matrix

P289	0	0	0	0
07				
08				
				Body Size
				3/4" x 1" NPT
				1" NPT
				Spring Range
				PSIG BAR
004				1 - 4.5 0.07 - 0.3
015				4 - 15 0.3 - 1.0
020				10 - 20 0.69 - 1.4
050				15 - 50 1.0 - 3.4
075				45 - 75 3.1 - 5.2
				O-ring Material
		0		Nitrile
		1		Fluoroelastomer
				Diaphragm Material
		0		Nitrile
		1		Fluoroelastomer



Materials of Construction

	P289 1" & 3/4" x 1"	L289 & P289 2"
Body, Bonnet	Aluminum	L289 - Aluminum Body with Aluminum Bonnet P289 - Cast Iron Body with Aluminum Bonnet
Diaphragm	Nitrile or Fluoroelastomer	Nitrile or Fluoroelastomer
Gaskets	Neoprene	Neoprene/Composite
O-rings	Nitrile or Fluoroelastomer	Nitrile or Fluoroelastomer
O-ring Piston and Spacer	Aluminum	N/A
Seat Washer	N/A	Stainless Steel
Pitot Tube	Aluminum	Brass or Stainless Steel
Main Seat	N/A	Brass or Stainless Steel
Spring	Zinc-plated steel	Zinc-Plated Steel
Diaphragm Piston	Zinc-plated steel	Zinc-Plated Steel
Closing Cap	N/A	Acetal

L289 Part Matrix

L289	0	9
		Body Size
05		3/4" x 2" NPT
11		1" x 2" NPT
16		2" x 2" NPT
		Spring Range
		W.C. or PSIG mBAR
051		5 - 10" W.C. 12.45 - 24.90
001		7 - 18" W.C. 17.43 - 44.83
003		12 - 40" W.C. 29.89 - 99.63
002		0.5 - 2.25 PSIG 34.47 - 155.03
007		1.75 - 7 PSIG 120.65 - 482.63
010		4 - 10 PSIG 275.79 - 689.47
		Main Seat Material
	0	Brass
	1	Stainless Steel
		O-ring Material
		Nitrile
	1	Fluoroelastomer
		Diaphragm Material
		Nitrile
	1	Fluoroelastomer
		Pilot Tube Material
	0	Brass
	1	Stainless Steel
		Body Material
		9 Aluminum

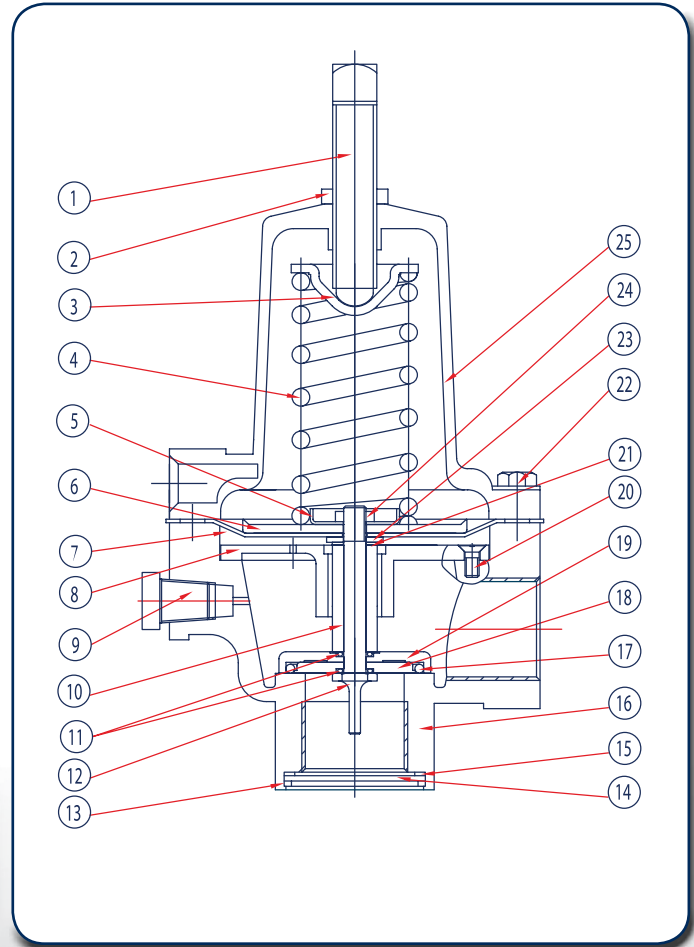
P289 2" Part Matrix

P289	16	0	0
16			
			Body Size
			2" NPT
			Spring Range
			W.C. or PSIG BAR
001			7 - 18" W.C. 0.02 - .05
002			0.5 - 2.25 PSIG 0.04 - 0.16
007			1.75 - 7 PSIG 0.12 - 0.48
010			4 - 10 PSIG 0.28 - 0.7
			Main Seat Material
		0	Brass
		1	Stainless Steel
			O-ring Material
			Nitrile
		1	Fluoroelastomer
			Diaphragm Material
			Nitrile
		1	Fluoroelastomer
			Pilot Tube Material
		0	Brass
		1	Stainless Steel

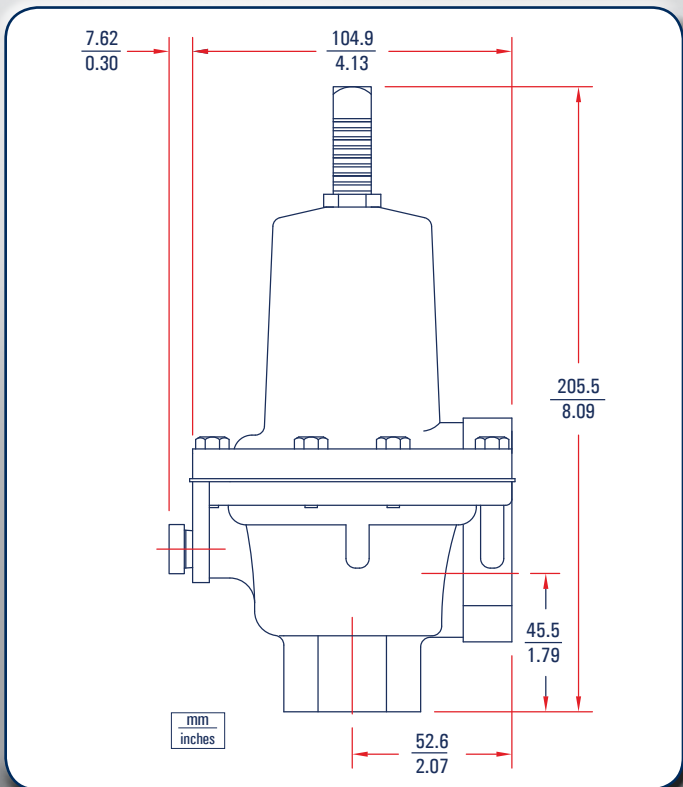


P289 1" Parts

Item	Description	Qty.	Part Number
1	Adjusting Screw, Plated Steel	1	648-487-000
2	Hex Nut, Plated Steel	1	634-154-000
3	Spring Guide, plated steel	1	626-079-000
4	Spring	1	1-4.5 PSIG (0.1-0.3 BAR), Pink
			4-15 PSIG (0.3-1 BAR), Red
			10-20 PSIG (0.7-1.4 BAR), Silver
			15-50 PSIG (1-3.4 BAR), & 45-75 PSIG (3.1-5.2 BAR), Green
5	Piston Retainer, Plated Steel	1	643-191-000
6	Piston, Plated Steel (All Output Pressures other than 45-75 PSIG)	1	637-306-000
			Range 45-75 PSIG
7	Diaphragm	1	P289 1" Nitrile
			P289 1" Fluoroelastomer
8	Stem Guide Assembly	1	814-014-000
9	Pipe Plug, Plated Steel	1	639-099-000
10	Spacer Tube, Stainless Steel	1	654-178-000
11	O-ring	2	Nitrile
			Fluoroelastomer
12	Pitot Tube, Aluminum	1	660-051-000
13	Retaining Ring, plated steel	1	644-051-000
14	Screen, Stainless Steel	1	647-018-000
15	Gasket, Neoprene	1	624-063-000
16	Body, Aluminum, 1" NPT	1	664-295-000
			Body, Aluminum, 3/4" x 1" NPT
17	O-ring	1	Nitrile
			Fluoroelastomer
18	O-ring Spacer, Aluminum	1	654-177-000
19	O-ring Piston, Aluminum	1	637-311-000
20	Machine Screw, Stainless Steel	2	648-488-000
21	Gasket, Composite	2	624-062-000
22	Machine Screw	8	648-466-005
23	Washer, Steel	1	662-204-000
24	Hex Nut, Plated Steel	1	634-162-000
25	Bonnet, Aluminum	1	604-221-000



P289 1" Dimensions



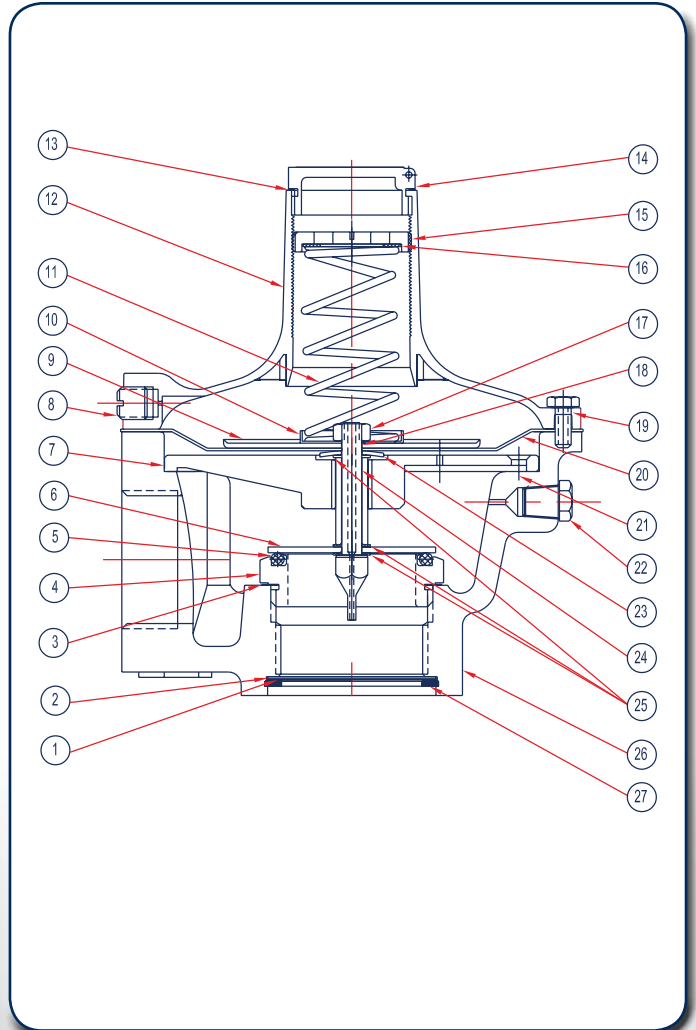
P289 1" & 3/4" x 1" Regulator Rebuild Kits

	Kit Includes	Part Number
P289 1"	Nitrile Diaphragms, Screen & Gasket	971-289-000
P289 1"	Fluorocarbon Diaphragm, Screen & Gasket	971-289-001

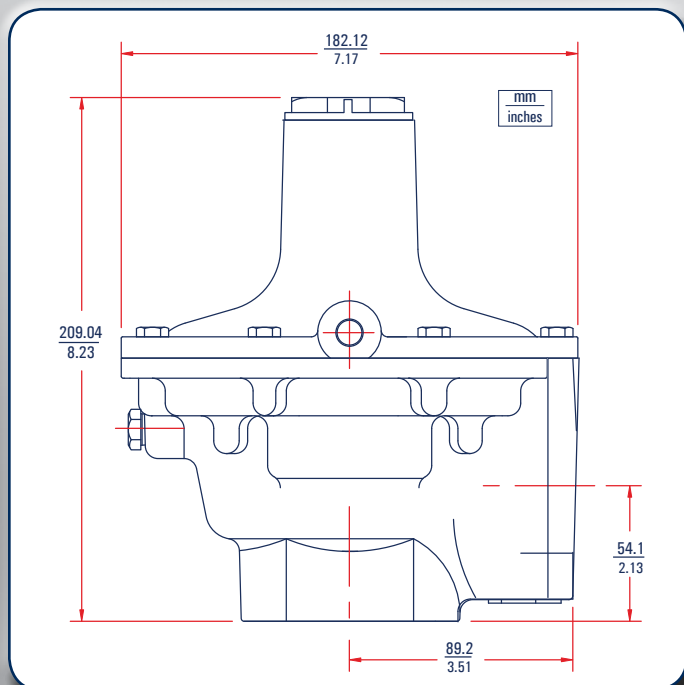


L289 & P289 2" Parts

Item	Description	Qty.	Part Number	
1	Gasket, Neoprene	1	624-066-000	
2	Screen, Stainless Steel	1	647-020-000	
3	Seat Gasket, Neoprene	1	624-071-000	
4	Main Seat	1	Brass	650-132-000
			Stainless Steel	650-133-000
5	O-ring	1	Nitrile	649-302-000
			Fluoroelastomer	649-301-000
6	O-ring, Washer, Stainless Steel	1	662-207-000	
7	Stem Guide Assembly, Cast Iron & Brass	1	814-015-000	
8	Upper Pipe Plug	1	639-102-000	
9	Diaphragm Head, Plated Steel	1	637-315-000	
10	Lower Spring Retainer, Zinc Plated Steel	1	643-197-000	
11	Spring	1	5 to 10" W.C. , Olive	655-732-001
			7 to 18" W.C. , Dark Blue	655-691-000
			12 to 40" W.C. , White	655-767-000
			0.5 to 2.25 PSIG (.03 to .15 BAR), Grey	655-692-000
			1.75 to 7 PSIG (.12 to .48 BAR), Dark Green	655-693-000
	4 to 10 PSIG (.27 to .69 BAR), Red Stripe	655-694-000		
12	Bonnet, Aluminum	1	604-558-000	
13	Closing Cap Gasket, Neoprene	1	624-069-000	
14	Closing Cap, Acetal	1	610-056-000	
15	Adjusting Screw, Zinc	1	648-499-000	
16	Upper Spring Seat Washer, Aluminum	1	662-206-000	
17	Hex Nut, Plated Steel	1	634-173-000	
18	Pitot Tube	1	Brass	660-053-000
			Stainless Steel	660-054-000
19	Machine Bolt, Stainless Steel	8	648-466-000	
20	Diaphragm	1	Nitrile	618-071-000
			Fluoroelastomer	618-071-001
21	Machine Screw, Stainless Steel	4	648-500-000	
22	Low Pipe Plug, Plated Steel	1	639-099-000	
23	Snap Washer, Plated Steel	1	662-208-000	
24	Spacer	1	Brass	654-181-000
			Stainless Steel	654-182-000
25	Gasket, Neoprene	3	624-065-000	
26	Body	1	3/4" x 2" Aluminum (L289)	664-303-000
			1" x 2" Aluminum (L289)	664-303-001
			2" x 2" Aluminum (L289)	664-303-002
			2" x 2" Iron (P289)	664-302-000
27	Retaining Ring, Plated Steel	1	644-054-000	



P289 2" Dimensions



P289 2" Regulator Rebuild Kits

	Kit Includes	Part Number
P289 2"	Nitrile Diaphragms, Screen, Screen Gasket (Neoprene), Composite Gaskets (Qty.3)	971-289-002
P289 2"	Fluorocarbon Diaphragm, Screen, Screen Gasket (Neoprene), Composite Gaskets (Qty. 3)	971-289-003



L289 & P289 Flow Rates

