

# 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
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	

## P289 1" Part Matrix

P289	0	0	0	0	0	0	0
07							Body Size
08							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
		0	Nitrile
		1	Fluoroelastomer
			Diaphragm Material
		0	Nitrile
		1	Fluoroelastomer
			Pilot Tube Material
		0	Brass
		1	Stainless Steel
			Body Material
		9	Aluminum

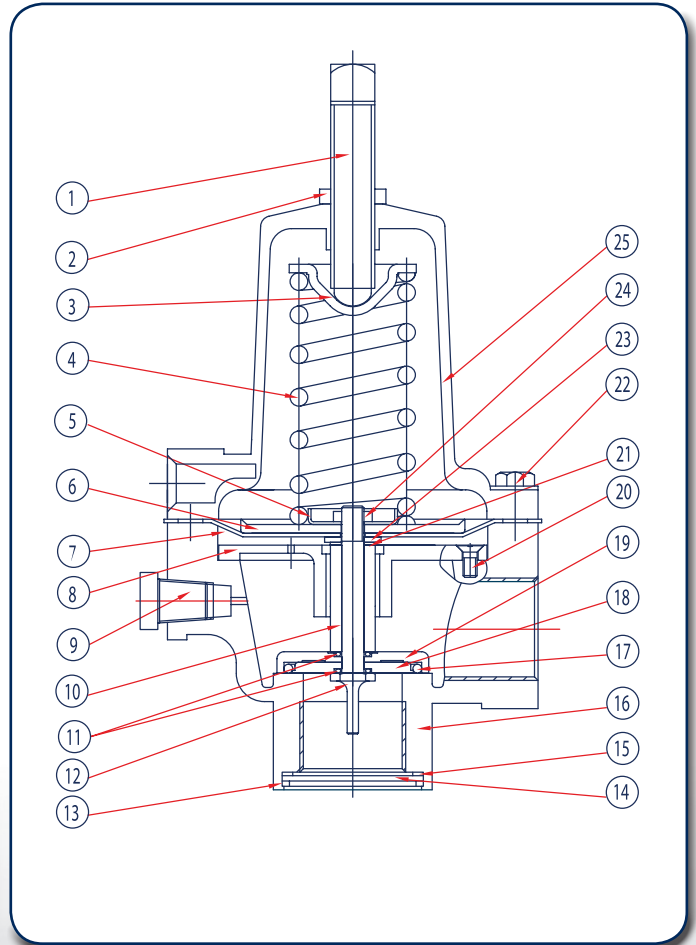
## P289 2" Part Matrix

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

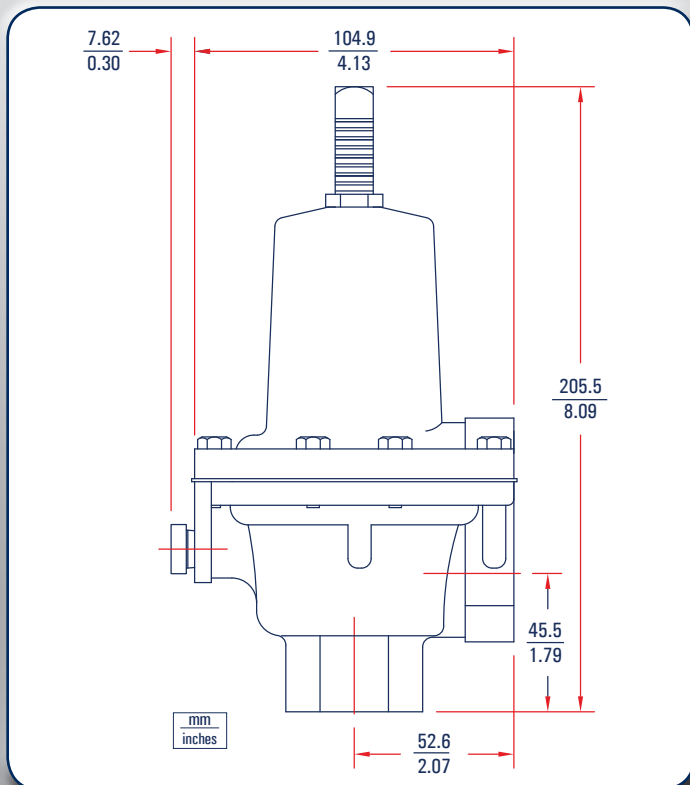


## P289 1" Parts

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 1-4.5 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	1	655-688-000
			655-689-000
			655-676-000
			655-690-000
5	Piston Retainer, Plated Steel	1	643-191-000
6	Piston, Plated Steel (All Output Pressures other than 45-75 PSIG) Range 45-75 PSIG	1	637-306-000
			637-319-000
7	Dia- phragm P289 1" Nitrile P289 1" Fluoroelastomer	1	600-497-000
			600-497-001
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 Nitrile Fluoroelastomer	2	649-000-003
			649-000-343
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 Body, Aluminum, 3/4" x 1" NPT	1	664-295-000
			664-386-000
17	O-ring Nitrile Fluoroelastomer	1	649-293-000
			649-293-001
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



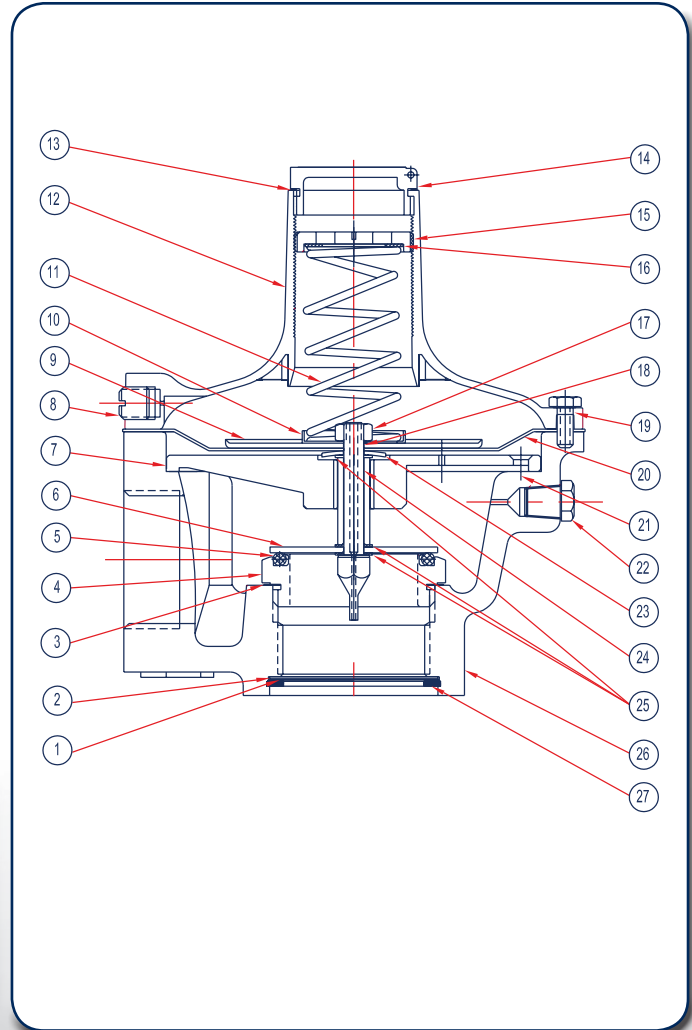
## P289 1" & 3/4" x 1" Regulator Rebuild

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

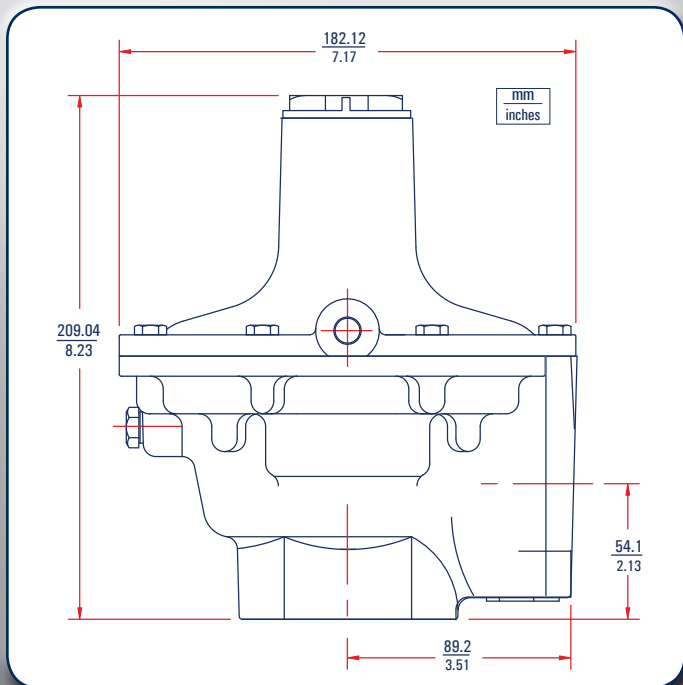


## L289 & P289 2" Parts

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	650-132-000
	Brass		650-133-000
5	O-ring	1	Nitrile
			Fluoroelastomer
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
			7 to 18" W.C. , Dark Blue
			12 to 40" W.C. , White
			0.5 to 2.25 PSIG (.03 to .15 BAR), Grey
			1.75 to 7 PSIG (.12 to .48 BAR), Dark Green
	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
			Stainless Steel
19	Machine Bolt, Stainless Steel	8	648-466-000
20	Dia-phragm	1	Nitrile
			Fluoroelastomer
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
			Stainless Steel
25	Gasket, Neoprene	3	624-065-000



## P289 2" Dimensions



## P289 2" Regulator Rebuild Kits

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



**L289 & P289 Flow Rates**

