

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

	P289 1" & 3/4" x 1"		P289 2" & L289	
Port Size	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								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	
	↑	↑	↑	↑	↑	↑	↑	
05								Body Size
11								3/4" x 2" NPT
16								1" x 2" NPT
								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

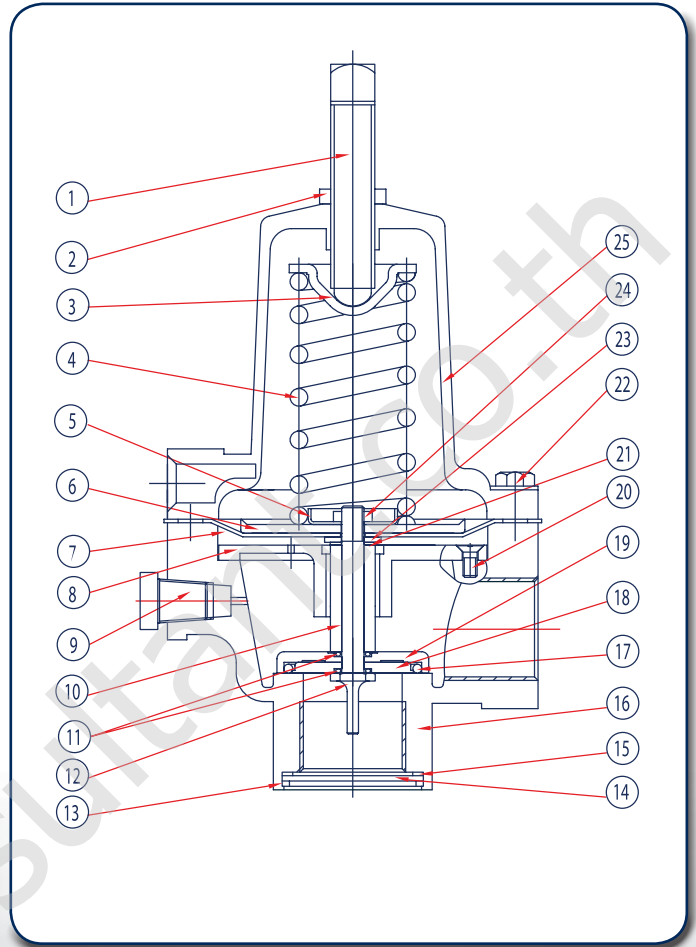
P289 2" Part Matrix

P289			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
							0	Nitrile
							1	Fluoroelastomer
								Diaphragm Material
							0	Nitrile
							1	Fluoroelastomer
								Pilot Tube Material
							0	Brass
							1	Stainless Steel

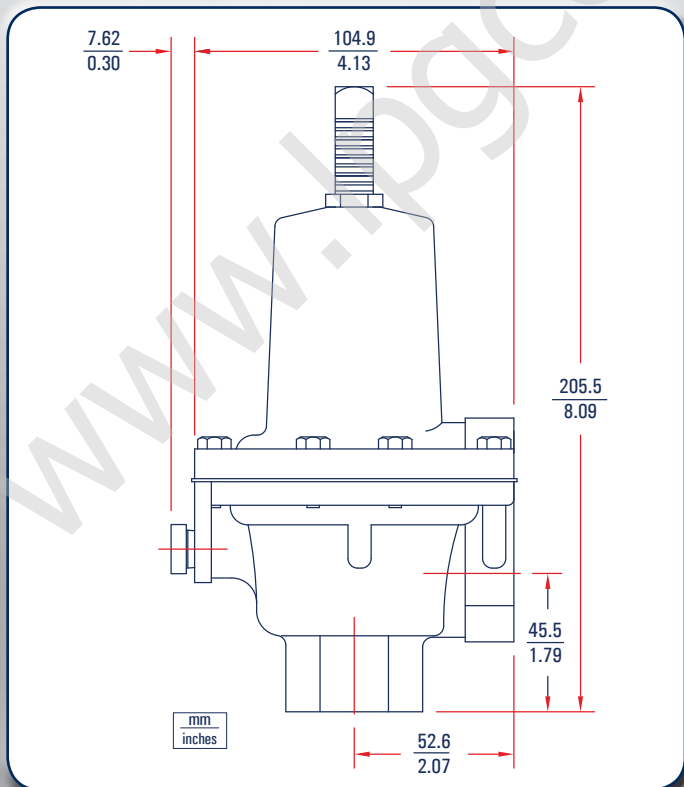


P289 1" Parts

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	1-4.5 PSIG (0.1-0.3 BAR), Pink	1	655-688-000
	4-15 PSIG (0.3-1 BAR), Red		655-689-000
	10-20 PSIG (0.7-1.4 BAR), Silver		655-676-000
	15-50 PSIG (1-3.4 BAR), & 45-75 PSIG (3.1-5.2 BAR), Green		655-690-000
5	Piston Retainer, Plated Steel	1	643-191-000
6	Plated Steel (All Output Pressures other than 45-75 PSIG)	1	637-306-000
	Range 45-75 PSIG		637-319-000
7	P289 1" Nitrile	1	600-497-000
	P289 1" Fluoroelastomer		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	Nitrile	2	649-000-003
	Fluoroelastomer		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	1	664-295-000
	Body, Aluminum, 3/4" x 1" NPT		664-386-000
17	Nitrile	1	649-293-000
	Fluoroelastomer		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



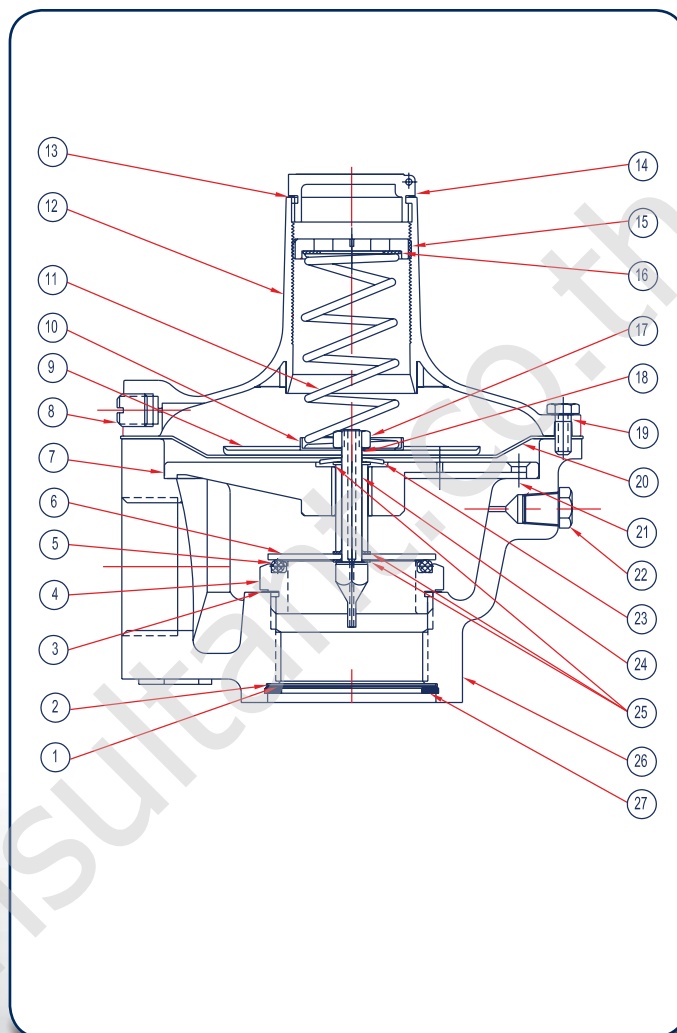
P289 1" & 3/4" x 1" Regulator Rebuild Kits

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

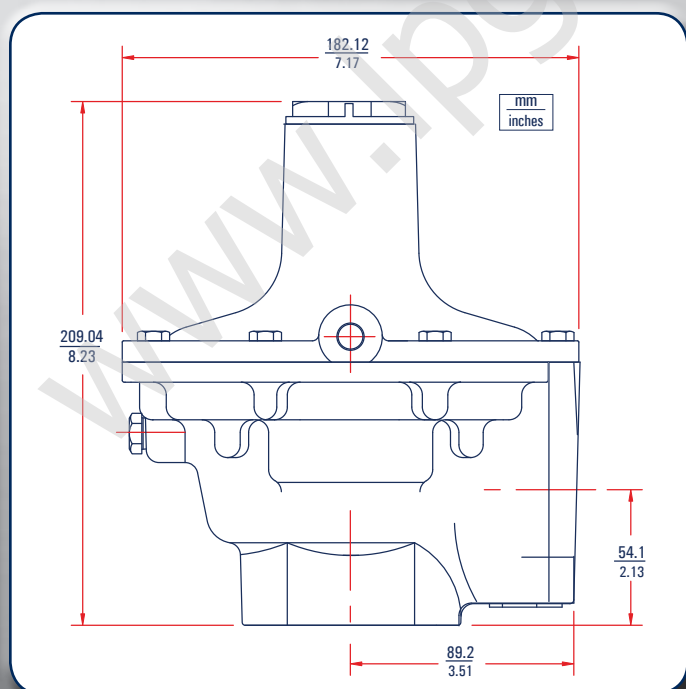


L289 & P289 2" Parts

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	650-132-000
	Brass		650-133-000
	Stainless Steel		650-133-000
5	O-ring	1	649-302-000
	Nitrile		649-301-000
	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	655-732-001
	5 to 10" W.C. , Olive		655-691-000
	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	660-053-000
	Brass		660-054-000
	Stainless Steel		660-054-000
19	Machine Bolt, Stainless Steel	8	648-466-000
20	Diaphragm	1	618-071-000
	Nitrile		618-071-001
	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	654-181-000
	Brass		654-182-000
	Stainless Steel		654-182-000
25	Gasket, Neoprene	3	624-065-000
26	Body	1	664-303-000
	3/4" x 2" Aluminum (L289)		664-303-001
	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

