

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"	
	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

Materials of Construction

	P289 1" & 3/4" x 1"	P289 2"
Body, Bonnet	Aluminum	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 space	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	Zinc

P289 1" Part Matrix

P289	0	0	0	0	0	0	0	0	0
	▲	▲	▲	▲	▲	▲	▲	▲	▲
									Body Size
07									3/4" x 1" NPT
08									1"
									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



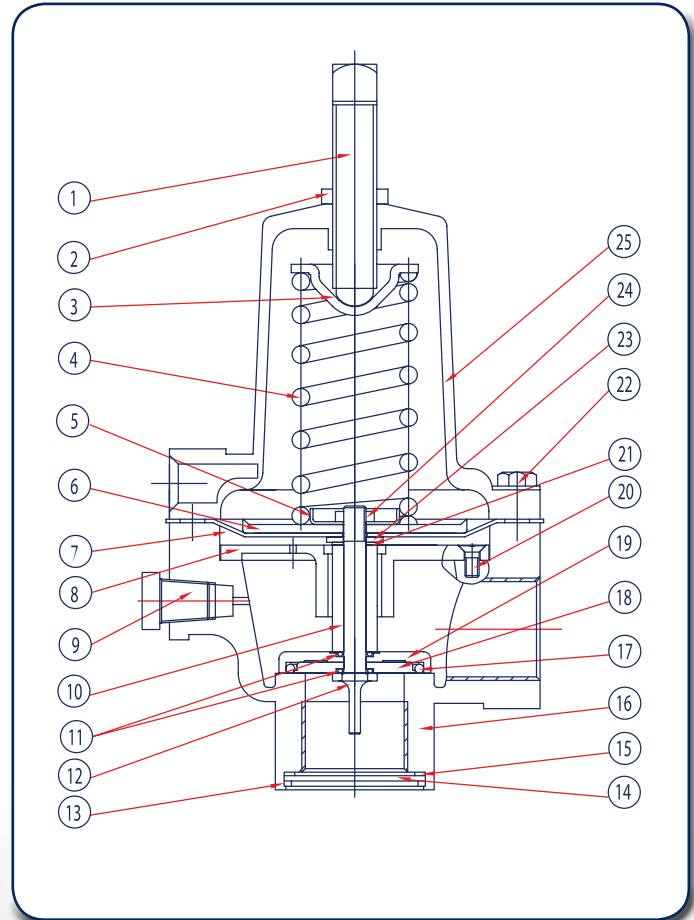
P289 2" Part Matrix

P289	16	0	0	0	0	0	0	0	0
	▲	▲	▲	▲	▲	▲	▲	▲	▲
									Body Size
16									2"
									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

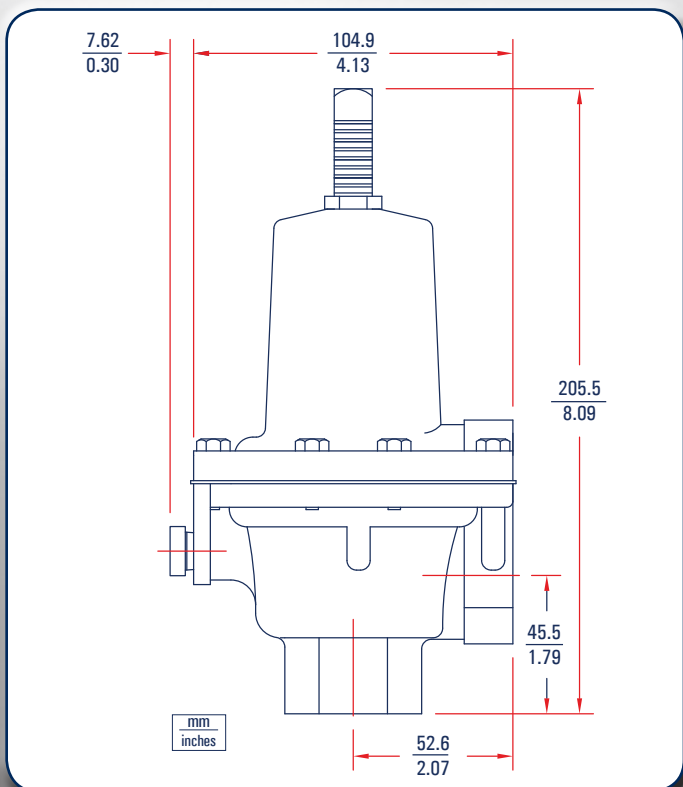


P289 1" Parts

Item	Description	Part Number	
1	Adjusting Screw, Plated Steel	648-487-000	
2	Hex Nut, Plated Steel	634-154-000	
3	Spring Guide, plated steel	626-079-000	
4	Spring	1-4.5 PSIG (0.1-0.3 BAR), Pink	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	643-191-000	
6	Piston,	Plated Steel (All Output Pressures other than 45-75 PSIG)	637-306-000
		Range 45-75 PSIG	637-319-000
7	Diaphragm	P289 1" Nitrile	600-497-000
		P289 1" Fluoroelastomer	600-497-001
8	Stem Guide Assembly	814-014-000	
9	Pipe Plug, Plated Steel	639-099-000	
10	Spacer Tube, Stainless Steel	654-178-000	
11	O-ring	Nitrile (2 Required)	649-000-003
		Fluoroelastomer(2 Required)	649-000-343
12	Pitot Tube, Aluminum	660-051-000	
13	Retaining Ring, plated steel	644-051-000	
14	Screen, Stainless Steel	647-018-000	
15	Gasket, Neoprene	624-063-000	
16	Body, Aluminum, 1" NPT		664-295-000
		Body, Aluminum, 3/4" x 1" NPT	664-386-000
17	O-ring	Nitrile	649-293-000
		Fluoroelastomer	649-293-001
18	O-ring Spacer, Aluminum	654-177-000	
19	O-ring Piston, Aluminum	637-311-000	
20	Machine Screw, Stainless Steel (2 Required)	648-488-000	
21	Gasket, Composite (2 Required)	624-062-000	
22	Machine Screw (8 Required)	648-466-005	
23	Washer, Steel	662-204-000	
24	Hex Nut, Plated Steel	634-162-000	
25	Bonnet, Aluminum	604-221-000	



P289 1" Dimensions



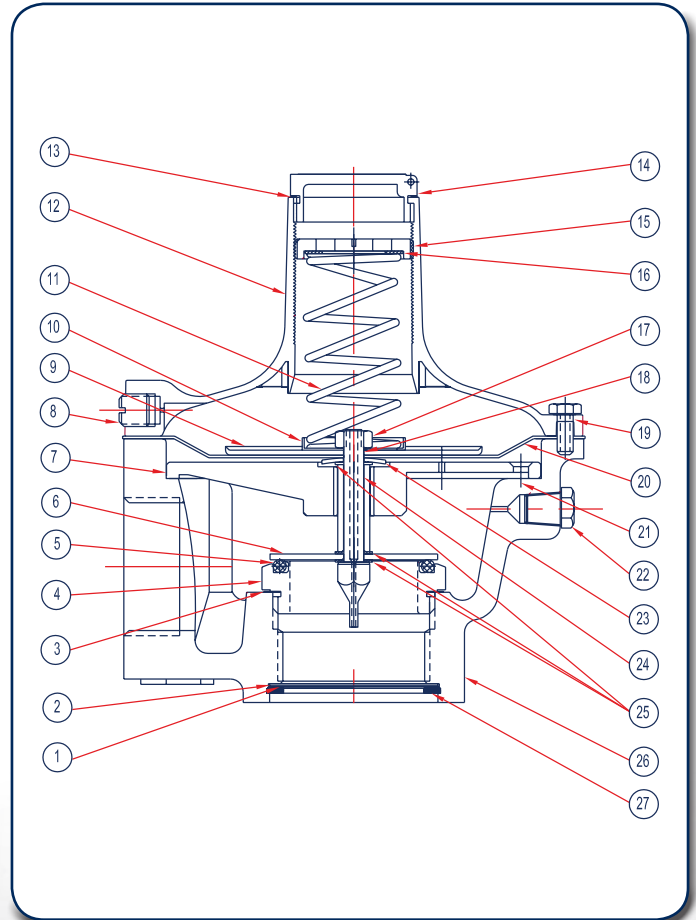
P289 1" & 3/4" x 1" Regulator Rebuild Kits

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

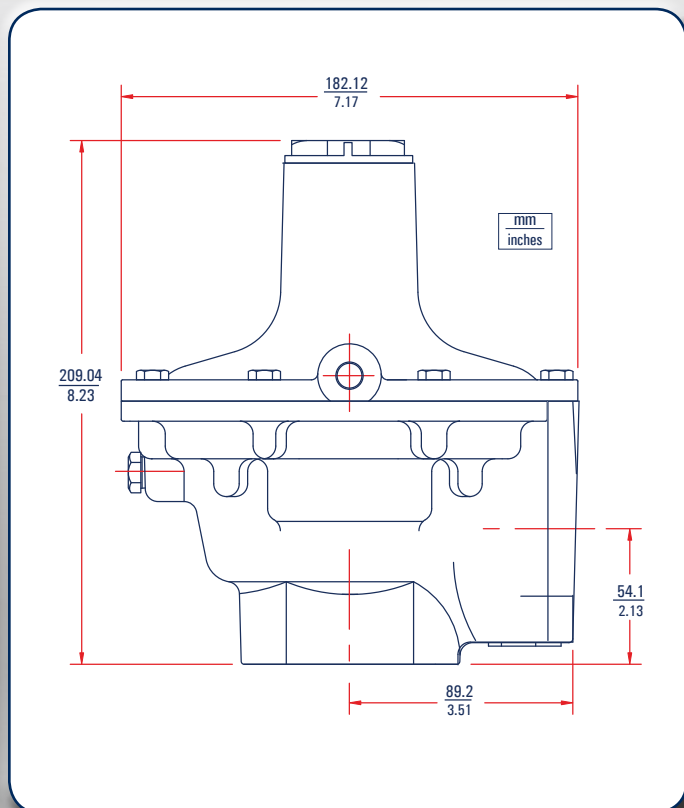


P289 2" Parts

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



P289 2" Dimensions



P289 2" Regulator Rebuild Kits

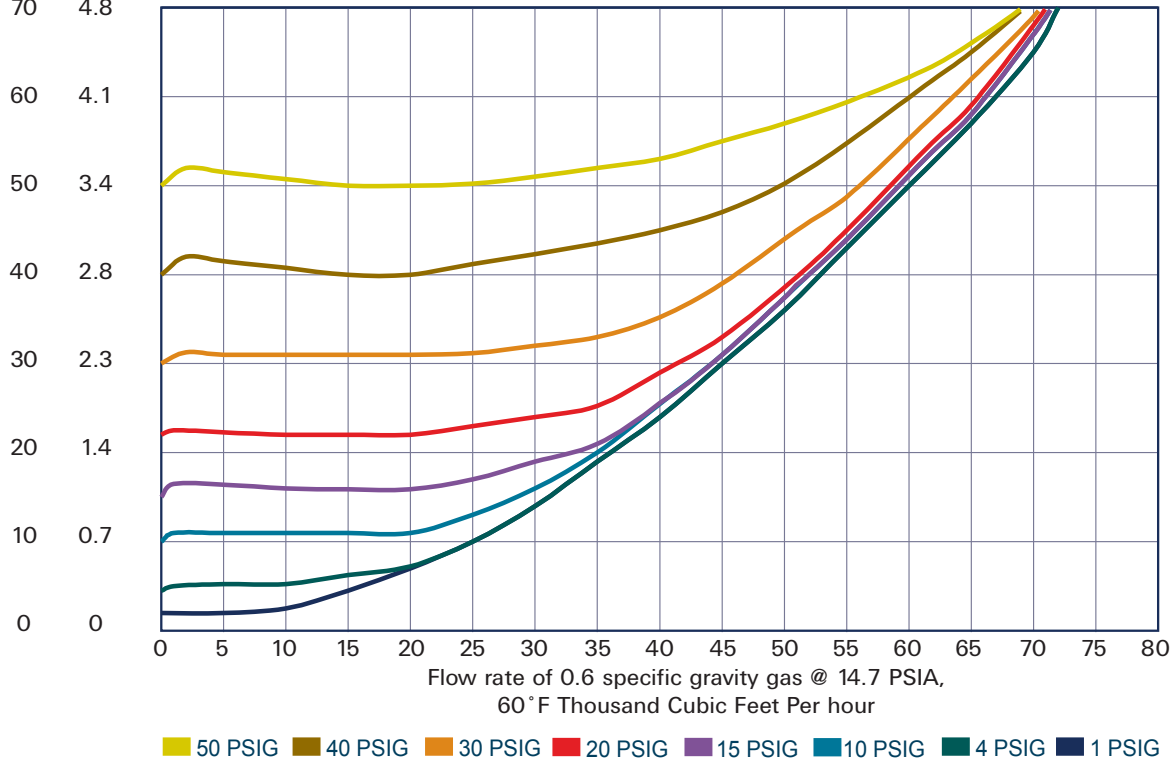
	Kit Includes	Part Number
P289 2"	Nitrile Diaphragms, Screen, Screen Gasket (Neoprene), Composite Gaskets (Qty.3)	971-289-002
P289 2"	Fluorocarbon Diaphragm, Screen, Screen Gasket (Neoprene), Composite Gaskets (Qty. 3)	971-289-003



P289 Flow Rates

Inlet Pressure
PSIG BAR

P289 1" NPT Vent Screen Installed



Inlet Pressure
PSIG BAR

P289 2" NPT Vent Screen Installed

