

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"		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"	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	08	0	0	0	0	0	0	0	0	0
	▲	▲	▲	▲	▲	▲	▲	▲	▲	Body Size
	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



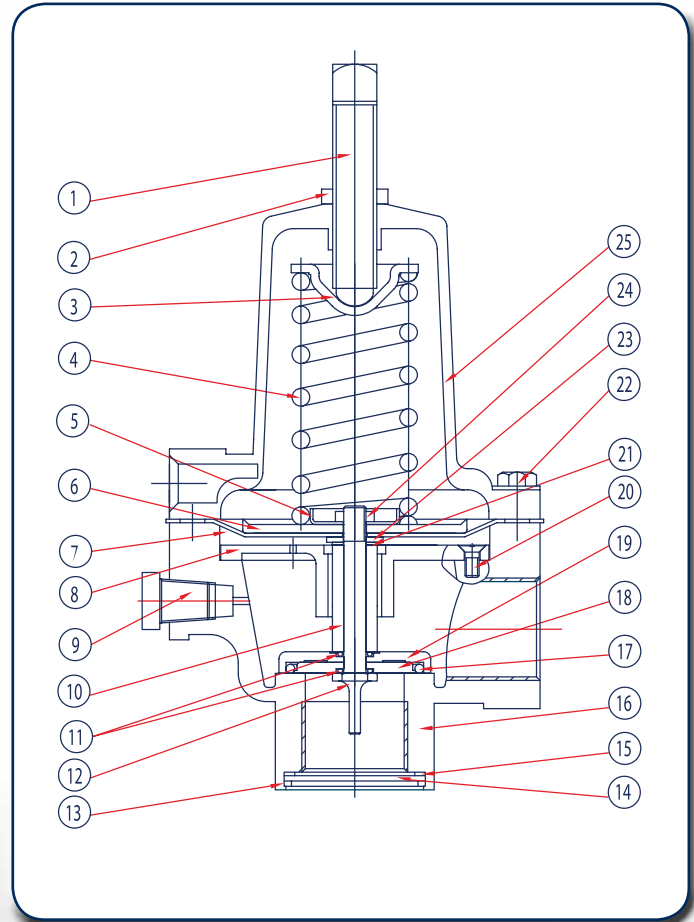
P289 2" Part Matrix

P289	16	0	0							
	▲	▲	▲	▲	▲	▲	▲	▲	▲	Body Size
	16									2"
										Spring Range
										W.C. or PSIG BAR
		001								7 - 18" W.C. 0.02 - .05
		002								.05 - 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
										Pitot Tube Material
			0							Brass
			1							Stainless Steel

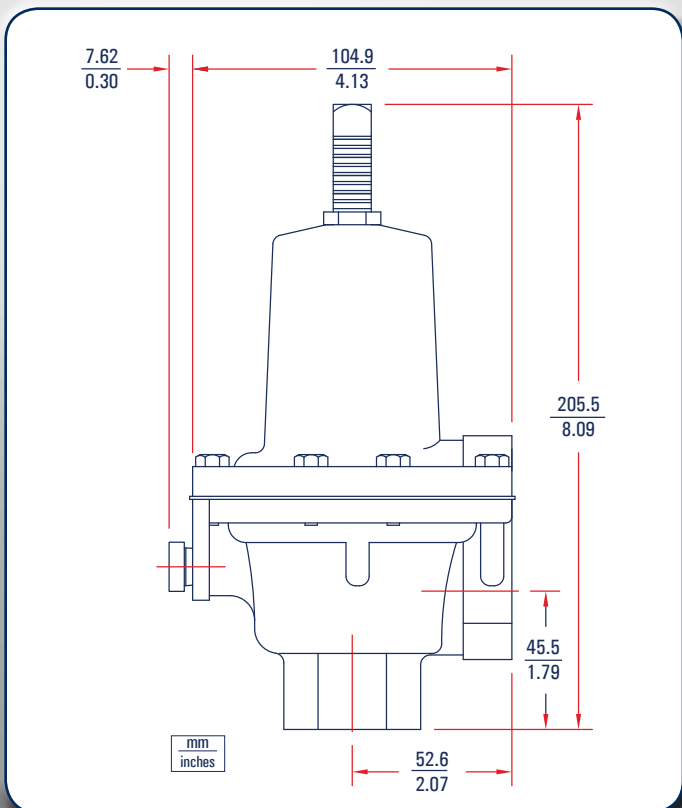


P289 1" Parts

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)	Range 45-75 PSIG	637-306-000
		P289 1" Nitrile	600-497-000
7	Diaphragm	P289 1" Fluoroelastomer	600-497-001
			600-497-000
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	664-295-000	
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)	648-466-004	
23	Washer, Steel	662-204-000	
24	Hex Nut, Plated Steel	634-162-000	
25	Bonnet, Aluminum	604-221-000	



P289 1" Dimensions



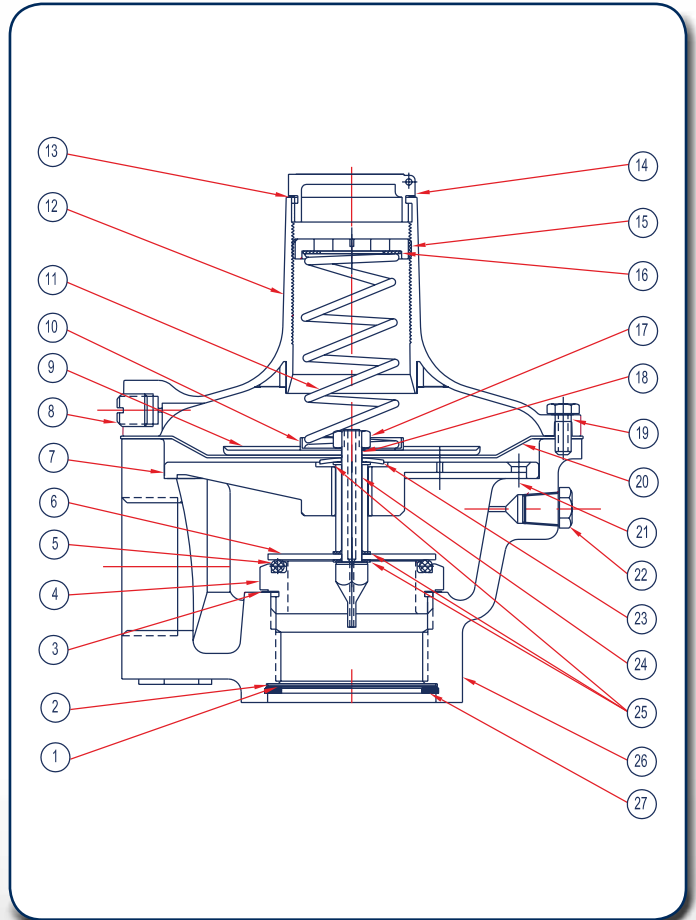
P289 1" Regulator Rebuild Kits

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

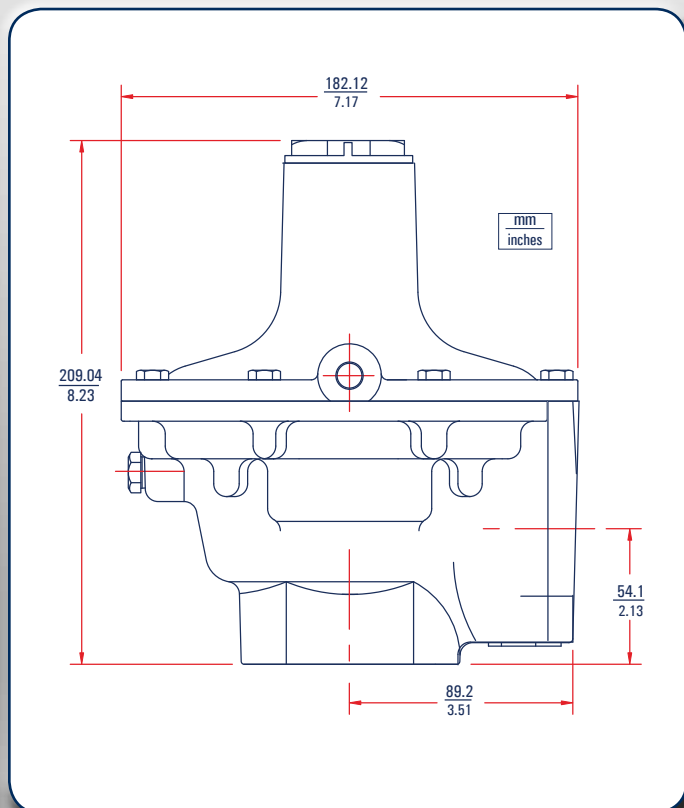


P289 2" Parts

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

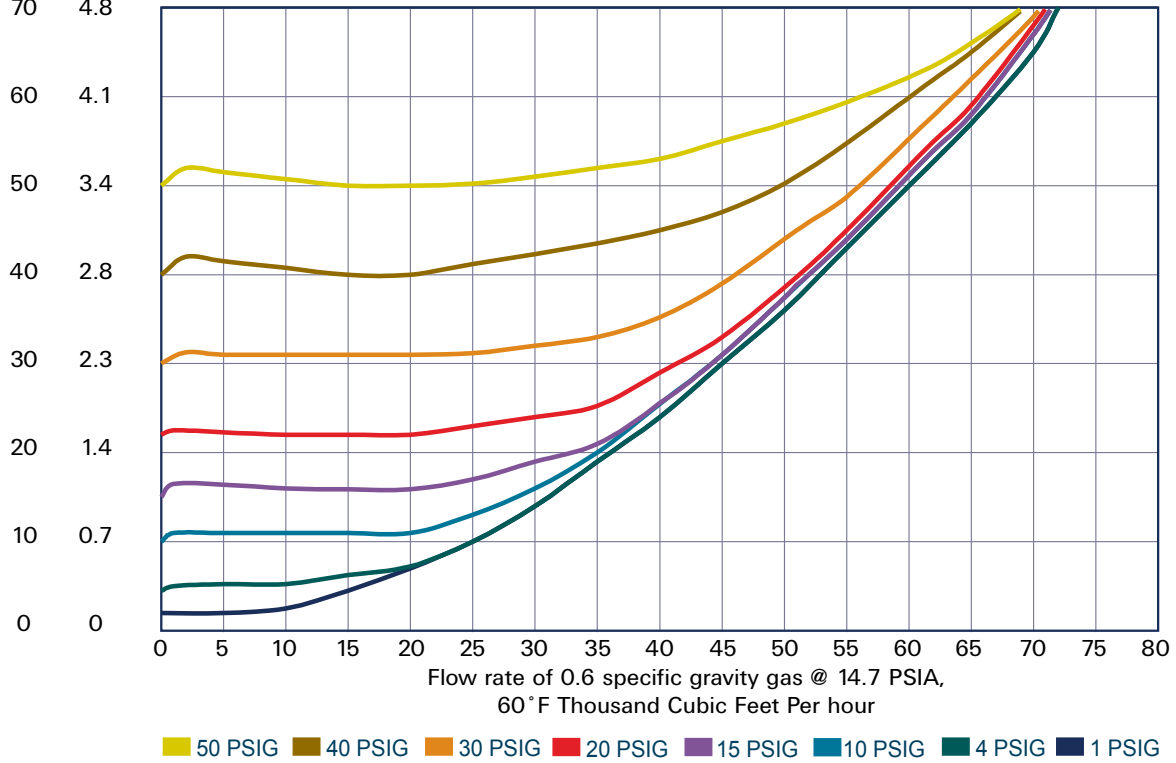
	Kit Includes	Part Number
P289 2"	Nitrile Diaphragms, Screen, Screen Gasket (Neoprene), Composite Gaskets (Qty.3)	971-289-002
P289 2"	Fluorocarbon Diaphragm, Screen, Screen Gasket (Neoprene), Composite Gaskets (Qty. 3)	971-289-003



P289 Flow Rates

Inlet Pressure
PSIG BAR

P289 1" NPT Vent Screen Installed



Inlet Pressure
PSIG BAR

P289 2" NPT Vent Screen Installed

