




### Description & Features:

- Versatile high static low differential pressure gauges
- Four types of sensing elements for a large variety of ranges
- Switches available for actuation
- ASME B40.100 compliant
- IP65 enclosure rating
- 5 year warranty

### Applications:

- Used for filtration systems, low pressure gas installations and for leak detection in low pressure, high static systems

Specifications	Piston Gauge (PPD)	Rolling Diaphragm Gauge (PRD)	Small Convoluted Diaphragm Gauge (PSD)	Convoluted Diaphragm Gauge (PVD)
<b>Dial</b>	2.5" (63mm), 3.5" (90mm), 4.5" (115mm)	2.5" (63mm)	2.5" (63mm), 3.5" (90mm), 4.5" (115mm)	3.5" (90mm), 4.5" (115mm)
<b>Case</b>	Aluminum or engineered plastic	Engineered plastic	Aluminum or engineered plastic	Aluminum or engineered plastic
<b>Lens</b>	Shatter resistant acrylic (standard), safety glass (optional)	Shatter resistant acrylic (standard), safety glass (optional)	Shatter resistant acrylic (standard), safety glass (optional)	Shatter resistant acrylic (standard), safety glass (optional)
<b>Line Connection Locations</b>	In-line, back or bottom	In-line (only)	In-line, back, dual top & bottom or bottom	Dual top & bottom
<b>Connections</b>	1/4" NPTF (standard), 1/2" NPTF, 7/16"-20 SAE	1/4" NPTF (only)	1/4" NPTF (standard), 1/2" NPTF, 7/16"-20 SAE	Dual 1/4" NPTF
<b>Wetted Parts Materials</b>	SS piston with ceramic magnet (standard), Aluminum, Bronze or Monel® piston (optional)	SS parts with Buna N seals	SS parts with Buna N seals	SS parts with Buna N seals (standard), Hastelloy® C parts with Buna N seals (optional)
<b>Body Material</b>	SS, aluminum, bronze or Monel®	SS, aluminum or acetal	SS, aluminum or brass	SS, aluminum, brass, engineered plastic or Hastelloy® C
<b>Internals/Movement</b>	Magnetic coupling using piston & spring	Magnetic coupling with rolling diaphragm sensor	Magnetic coupling with convoluted diaphragm sensor	Magnetic coupling with convoluted diaphragm sensor
<b>Migration of Media</b>	Marginal	Zero	Zero	Zero
<b>Seal</b>	Buna N (standard), PTFE, FKM, neoprene	Buna N (standard), FKM	Buna N (standard), FKM, silicone, neoprene	Buna N (standard), FKM, silicone, neoprene
<b>Standard Differential Ranges</b>	0-5 thru 110 psid (0.4-8 bar)	0-5 thru 50 psid (0.4-3 bar)	0-25 thru 100 psid (1.5-7 bar)	0-5 thru 400" H <sub>2</sub> O (12.4 mbar-1 bar)
<b>Maximum System Pressure</b>	Aluminum: 3,000 psi (200 bar) Bronze, Monel®: 5,000 psi (350 bar) SS: 6,000 psi (400 bar)	Aluminum, SS: 1,000 psi (70 bar) Acetal: 500 psi (35 bar)	Aluminum, SS: 3,000 psi (200 bar) Brass: 1,500 psi (100 bar)	Aluminum, brass, SS: 500 psi (35 bar) Engineered plastic: 300 psi (20 bar) Hastelloy® C: 500 psi (35 bar)
<b>Ambient Temperature</b>	-40°F to 200°F (-40°C to 93°C)	-40°F to 200°F (-40°C to 93°C)	-40°F to 200°F (-40°C to 93°C)	-40°F to 200°F (-40°C to 93°C)
<b>Accuracy</b>	±2% of full scale value	±5% of full scale value	±2% of full scale value	0-5 thru 9.9" H <sub>2</sub> O: ±5% of full scale 0-10 thru 400" H <sub>2</sub> O: ±2% of full scale
<b>Warning (brass internals only)</b>	N/A	N/A	 <b>WARNING:</b> This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> .	

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**Piston Type (PPD)**

- Most suitable for general purpose applications including filters, pumps and chillers. Uses a piston as a sensor to separate high & low pressure in response to pressure differentiation.
- Standard Differential Range: 0/5 thru 110 psid (0.4/8 bar)
- Maximum System Pressure Aluminum: 3,000 psi (200 bar)
- Maximum System Pressure Bronze, Monel®: 3,000 psi (200 bar)
- Maximum System Pressure SS: 6,000 psi (400 bar)
- Accuracy  $\pm 2\%$  full scale ascending

**Rolling Diaphragm Gauge (PRD)**

- Operates on rolling diaphragm as a sensor, which assures complete separation of the high and low pressure ports. Suitable for use on dissimilar fluids, wet gas and process fluids with particulates present. Used in high line pressure and differential pressure ranges up to 50 psid.
- Standard Differential Range: 0/5 thru 50 psid (0.4/3 bar)
- Maximum System Pressure Aluminum, SS: 1,000 psi (70 bar)
- Maximum System Pressure Acetal: 500 psi (35 bar)
- Accuracy  $\pm 5\%$  full scale ascending

**Small Convoluted Diaphragm Gauge (PSD)**

- Operates on a convoluted diaphragm as a sensor which separates high and low pressure ports. Ideally suited for use on dissimilar fluids and wet gas or fluids with high concentration of particles. Suitable for use with a diaphragm/chemical seal.
- Standard Differential Range: 0/25 thru 100 psid (1.5/7 bar)
- Maximum System Pressure Aluminum, SS: 3,000 psi (200 bar)
- Maximum System Pressure Brass: 1,500 psi (100 bar)
- Accuracy  $\pm 2\%$  full scale ascending

**Convoluted Diaphragm Gauge (PVD)**

- Operates on a convoluted diaphragm sensor for low range flow, liquid and vacuum applications. Used in tank level, horizontal or vertical flow applications, filtering of very low pressure gases.
- Standard Differential Range: 0/5 thru 400" H<sub>2</sub>O (12.4 mbar/1 bar)
- Maximum System Pressure Aluminum, brass, SS: 500 psi (35 bar)
- Maximum System Pressure Engineered plastic: 300 psi (20 bar)
- Maximum System Pressure Hastelloy® C: 500 psi (35 bar)
- Accuracy 0/5 thru 9.9" H<sub>2</sub>O  $\pm 5\%$ , 0/10 thru 400" H<sub>2</sub>O  $\pm 2\%$

Note: Technical drawings are available upon request

# Piston Gauge (High Static Pressure Differential)

# PPD

## Series Number (for custom, non-standard product)

	P	P	D	-		-		-		-		-		-		-																						
<b>SERIES TYPE</b>	Aluminum body / Stainless Steel piston (Max system pressure 3,000 psi)	316 Stainless Steel body / Stainless Steel piston (Max system pressure 6,000 psi)	Monel body / Monel piston, 5% accuracy (Max system pressure 5,000 psi)	-> available differential ranges 0/10,15,20,25,30 only)	Aluminum Bronze body / Aluminum Bronze piston, 5% accuracy (Max system pressure 5,000 psi)	-> available differential ranges 0/10,15,20,25,30 only)	Special	A	S	M	N	Z																										
<b>DIAL SIZE</b>	2.5" Round Uni-directional dial, plastic case (standard)	4.5" Round Uni-directional dial, plastic case	4.5" Round Bi-directional dial, plastic case	3.5" Round Uni-directional dial, aluminum case	4.5" Round Uni-directional dial, aluminum case	4.5" Round Bi-directional dial, aluminum case	Special	A	C	D	E	G	H	Z																								
<b>SEAL</b>	Buna-N (standard)	Viton	Neoprene	PTFE	Ethylene Propylene	Special	0	1	2	4	5	Z																										
<b>CONNECTION</b>	1/4" NPTF Back (standard), not available with Gauge Options M & N	1/4" NPTF End / In-line	1/4" NPTF Bottom, not available with Gauge Options M & N	1/2" NPTF End	7/16"-20 SAE with "O" ring Back, with Gauge Options A & S	Special	0	2	3	4	6	Z																										
<b>OPTIONS</b>	No additional options required (standard)	Reversed High / Low process connections	Mounting Holes in gauge body for field mounting (switch options A & B only)	Mounting Holes in gauge body for field mounting (switch options L & M only)	Two (2) 1/4" - 20 mounting holes (not available for C & D switch options)	Carbon steel 2" pipe mounting kit (not available for C & D switch options)	Stainless steel 2" pipe mounting kit (not available for C & D switch options)	1/2" NPTF stainless steel adapters	Glycerin filled 2.5" case (not available with Safety glass or Maxi-pointer)	Glycerin filled 4.5" case (not available with Safety glass or Maxi-pointer)	Maxi-pointer 2.5" case (not available with Safety glass)	Maxi-pointer 4.5" case (not available with Safety glass)	NACE (for sour gas applications, not available in Bronze case)	CRN (Canadian Registration Number, aluminum or SS body only)	Safety glass (4.5" aluminum case only)	Oxygen cleaning	Stainless steel tag with SS wire	Stainless steel tag with SS screw	Wall mount kit (not available with Back Connections or C & D electrical options)	Special	O	A	C	D	E	F	G	K	L	M	N	Q	S	T	U	V	W	Z
<b>SWITCH</b>	No electrical options required (standard)	1 switch in standard enclosure with grommet wire seal	2 switches in standard enclosure with grommet wire seal	1 switch in standard enclosure with 1/4" NPTF electrical connection & NEMA 4X	2 switches in standard enclosure with 1/4" NPTF electrical connection & NEMA 4X	1 switch and Differential pressure gauge in NEMA 4X plastic enclosure (not available with End connections)	2 switch and Differential pressure gauge in NEMA 4X plastic enclosure (not available with End connections)	1 switch in standard enclosure with DIN plug connector (DIN43650 IP65)	2 switches in standard enclosure with DIN plug connector (DIN43650 IP65)	Special	O	A	B	C	D	G	H	L	M	Z																		
<b>ELECTRICAL</b>	No electrical options required (standard)	SPDT 3W, 0.25A 125VAC / VDC, adjustable range 10-90%	SPDT 60W, 3.0A 240VAC / VDC, Normally open, adjustable range 25-95%	SPDT 60W, 3.0A 240VAC / VDC, Normally closed, adjustable range 25-95%	SPDT 60W, 3.0A 240VAC / VDC, 1 x Normally open 1 x Normally closed, adjustable range 25-95%	SPDT 60W, 1.0A 240VAC / VDC, adjustable range 25-100 (price per switch)	Special	O	A	E	F	G	H	Z																								
<b>DIFF. RANGE</b>	Minimum differential range 0/5psid (example) - Maximum differential range 0/110psid - Maximum system pressure of 3,000 or 5,000 or 6,000psi (based on above)																0	0	5	psid																		

Differential