

High Static Pressure Differential Gauges

PPD, PRD
PSD, PVD



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)
Dial	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)
Case	Aluminum or engineered plastic	Engineered plastic	Aluminum or engineered plastic	Aluminum or engineered plastic
Lens	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)
Line Connection Locations	In-line, back or bottom	In-line (only)	In-line, back, dual top & bottom or bottom	Dual top & bottom
Connections	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
Wetted Parts Materials	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)
Body Material	SS, aluminum, bronze or Monel®	SS, aluminum or acetal	SS, aluminum or brass	SS, aluminum, brass, engineered plastic or Hastelloy® C
Internals/Movement	Magnetic coupling using piston & spring	Magnetic coupling with rolling diaphragm sensor	Magnetic coupling with convoluted diaphragm sensor	Magnetic coupling with convoluted diaphragm sensor
Migration of Media	Marginal	Zero	Zero	Zero
Seal	Buna N (standard), PTFE, FKM, neoprene	Buna N (standard), FKM	Buna N (standard), FKM, silicone, neoprene	Buna N (standard), FKM, silicone, neoprene
Standard Differential Ranges	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 ₂ O (12.4 mbar-1 bar)
Maximum System Pressure	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)
Ambient Temperature	-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)
Accuracy	±2% of full scale value	±5% of full scale value	±2% of full scale value	0-5 thru 9.9" H ₂ O: ±5% of full scale 0-10 thru 400" H ₂ O: ±2% of full scale
Warning (brass internals only)	N/A	N/A	 WARNING: 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 www.P65Warnings.ca.gov .	

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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" H₂O (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" H₂O $\pm 5\%$, 0/10 thru 400" H₂O $\pm 2\%$

Note: Technical drawings are available upon request

Series Number (for custom, non-standard product)

SERIES	TYPE	Pressure	Temperature	Material	Seal	Connection	Options	Switch	Electrical
ALUMINUM	Aluminum body / Stainless steel, Ceramic & Acetal moving components (Max system pressure 1,000 psi)	A							
	Acetal (plastic) body / Stainless steel, Ceramic & Acetal moving components (Max system pressure 500 psi)	P							
	Stainless steel body / Stainless steel, Ceramic & Acetal moving components (Max system pressure 1,000 psi)	S							
	Special	Z							
DIAL SIZE	2.5" Round Uni-directional dial, plastic case (standard)	A							
	Special	Z							
SEAL	Buna-N (standard)		0						
	FKM		1						
	Special		Z						
CONNECTION	1/4" NPTF End / In-line (standard)		2						
	Special		Z						
OPTIONS	Two (2) 10-32 mounting holes, spaced 1.75" apart x 0.330" deep					E			
	Special					Z			
SWITCH	No electrical options required (standard)							O	
	1 switch in standard enclosure with DIN plug connector (DIN43650 IP65), NENA 4X							L	
	Special							Z	
ELECTRICAL	No electrical options required (standard)								O
	SPDT 60W, 3.0A 240VAC / VDC, Normally open, adjustable range 40-95%								E
	Special								Z
Minimum differential range 0/5psid (example) - Maximum differential range 0/50psid - Maximum system pressure of 500psi or 1,000psi (based on above)									