

## Data Sheet

# P5500 and P6500 Low Pressure Diaphragm Gauges

### FEATURES

- “Dry cell” mechanism
- Ranges from 10 Inches of Water
- Overpressure protection up to 10 times range (OPT.)
- Available dry or liquid filled
- Optional ATEX certification
- Threaded or flanged process connections

### TYPICAL USES

- Oil & gas
- Chemical and petrochemical
- Food and beverage
- Vacuum pumps
- Pulp and paper



EAC CE UK CA Ex (optional)

### SPECIFICATIONS

Accuracy:	±1.6% of span
Size:	100 mm, 160 mm
Range:	10 IW to 300 psi including vacuum ranges
Process Conn. Location:	Lower, threaded or flanged
Process Conn. Size:	
Threaded:	¼ NPT Male, ½ NPT Male
Flanged:	½", 1", 2", and 3"
Case Style:	P5500: Open front with pressure relief disc and ventable fill plug on top P6500: Solid front with pressure relief back and ventable fill plug on top
Movement:	304 stainless steel
Window Material:	Safety glass (STD.), acrylic (OPT.)
Diaphragm Material:	≤ 80 IW - 316Ti, ≥ 80 IW - Duratherm® (NiCrCo alloy) Hastelloy® C-276 (OPT.)
Dial:	Aluminum, white background, black figures and intervals
Pointer:	Aluminum black
Overpressure Protection:	5 times and 10 times (OPT.), up to 580 psi
Weather Protection:	Dry: IP66 and NEMA 4x Liquid filled/hermetically sealed: IP66/67 and NEMA 4X
Mounting:	Stem, flanged

### WETTED COMPONENTS

Diaphragm	Lower Housing	Other
316Ti SS Hastelloy® C-276 Duratherm®	316 Stainless steel Hastelloy® C-276	O-Ring, Viton™

### KEY BENEFITS

- Uses a “dry cell” mechanism with no system fill fluid to avoid possible media contamination
- IP66 for use outdoors or humid environments
- 10X full scale range over pressure capability (XHP Option)

### NON-WETTED COMPONENTS

Case	Bayonet Ring	Window
316L SS (STD.)	316L SS (STD.)	Safety glass (STD.) Safety glass, acrylic (OPT.)

### MIN/MAX TEMPERATURE LIMITS

Version	Ambient	Process	Storage
Dry	-4 °F to 140 °F (-20 °C to 60 °C)	-4 °F to 185 °F (-20 °C to 85 °C)	-40 °F to 158 °F (-40 °C to 70 °C)
Glycerin	19 °F to 140 °F (-7 °C to 60 °C)	19 °F to 185 °F (-7 °C to 85 °C)	-4 °F to 158 °F (-20 °C to 70 °C)
Silicone	-4 °F to 140 °F (-20 °C to 60 °C)	-20 °F to 140 °F (-29 °C to 60 °C)	-40 °F to 158 °F (-40 °C to 70 °C)
ATEX	-4 °F to 140 °F (-20 °C to 60 °C)	-4 °F to 185 °F (-20 °C to 85 °C)	-4 °F to 140 °F (-20 °C to 60 °C)

\*Accuracy at temperatures above or below the reference ambient temperatures of 68 °F (20 °C) will be affected by approximately 0.8% per 25 °F.

## Data Sheet

### P5500 and P6500 Low Pressure Diaphragm Gauges

ORDERING CODE	Example:	10P5500	S	S	D	T	04	L	00	00000	10IW	XPD
<b>Dial Size/Model Code</b>												
10P5500 - 100 mm open front diaphragm pressure gauge		10P5500										
16P5500 - 160 mm open front diaphragm pressure gauge												
10P6500 - 100 mm solid front diaphragm pressure gauge												
16P6500 - 160 mm solid front diaphragm pressure gauge												
<b>Diaphragm</b>												
H - Hastelloy® C-276												
S - 316Ti Stainless steel, Duratherm®			S									
<b>Lower Housing</b>												
H - Hastelloy® C-276												
S - 316 Stainless steel				S								
<b>Case Design</b>												
D - Dry case						D						
L - Liquid filled case, glycerin (STD.), (for ranges ≥ 40 IW only)												
<b>Process Connection Type</b>												
T - Threaded							T					
F - Flanged												
<b>Process Connection Sizes</b>												
00 - Flanged process connection												
02 - ¼ NPT Male												
04 - ½ NPT Male							04					
<b>Process Connection Location</b>												
L - Lower								L				
<b>Flange Connection Sizes</b>												
00 - Threaded process connection									00			
50 - ½" NPS												
10 - 1" NPS												
15 - 1½" NPS												
20 - 2" NPS												
30 - 3" NS												
<b>Flange Ratings</b>												
00000 - Threaded process connection										00000		
150RF - 150# Raised Face Flange												
300RF - 300# Raised Face Flange												
<b>Range (coding example only, see range table on page 3 for all standard ranges)</b>												
10IW - 10 Inches of water											10IW	
<b>Options (If choosing an option(s) must include an "X" (for more options, see table 2 on page 4)</b>												
PD - Acrylic window												X__
												PD

## P5500 and P6500 Low Pressure Diaphragm Gauges

**TABLE 1 - STANDARD RANGES**

Other ranges and engineering units available

psi	inH <sub>2</sub> O	mbar	bar	kPa	mPa	kg/cm <sup>2</sup>	mmH <sub>2</sub> O	cmH <sub>2</sub> O	mmHG
N0.2/0.2#	N16/0IW	N16/0MB	N1/0BR	N2.5/0KP	N0.01/0.01MP	N1/0KG	N160/0MW	N100/100CW	N600/0 MM
N0.4/0.25#	N40/0IW	N25/0MB	N0.6/0BR	N4/0KP	N0.0016/0MP	N0.0125/0.0125KG	N250/0MW	N400/400CW	0/100 MM
N5/5#	N5/5IW	N40/0MB	N0.1/0BR	N6/0KP	0/0.016MP	N0.05/0.05KG	N400/0MW		0/160 MM
N14.5/43.5#	N10/10IW	N60/0MB	N0.1/0.1BR	N10/0KP	0/0.04MP	N0.1/0.1KG	N600/0MW		0/200 MM
N14.5/130.5#	N10/20IW	N100/0MB	N0.1/0.15BR	N16/0KP	0/0.06MP	N0.5/0.5KG	N1000/0MW		0/300 MM
N2/0#	N10/40IW	N250/0MB	N0.1/2BR	N40/0KP	0/0.4MP	N1/2KG	N1600/0MW		
N3.6/0#	N15/15IW	N400/0MB	N0.15/0.25BR	N60/0KP	0/0.6MP	N1/5KG	N2500/0MW		
N6/0#	N20/20IW	N600/0MB	N0.2/0.2BR	N100/0KP	0/1MP	N1/24KG	N4000/0MW		
N15/0#	N50/50IW	N10/10MB	N0.5/0.5BR	N0.8/0.8KP	0/1.6MP	0/0.04KG	N6000/0MW		
0/1#	N100/100IW	N12.5/12.5MB	N1/0.6BR	N1/1KP	0/2.5MP	0/0.1KG	N1000/0MW		
0/3#	0/10IW	N15/10MB	N1/1BR	N3/3KP		0/0.2KG	N50/200MW		
0/4#	0/15IW	N16/16MB	N1/3BR	N4/4KP		0/0.6KG	N50/500MW		
0/5#	0/30IW	N20/20MB	N1/4BR	N10/10KP		0/1KG	N100/150MW		
0/6#	0/40IW	N30/30MB	N1/5BR	N12.5/12.5KP		0/2.5KG	N100/400MW		
0/8#	0/50IW	N40/40MB	N1/24BR	N20/20KP		0/4KG	N100/500MW		
0/9#	0/100IW	N50/50MB	0/0.025BR	N30/30KP		0/10KG	N100/1000MW		
0/10#	0/160IW	N60/60MB	0/0.06BR	N100/100KP		0/16KG	N125/125MW		
0/15#		N80/80MB	0/0.1BR	N100/2400KP		0/25KG	N500/500MW		
0/30#		N100/100MB	0/0.15BR	N1250/1250KP			0/160MW		
0/35#		N250/250MB	0/0.16BR	0/1.6KP			0/200MW		
0/60#		N1000/1000MB	0/0.2BR	0/5KP			0/250MW		
0/85#		0/16MB	0/0.25BR	0/6KP			0/400MW		
0/100#		0/25MB	0/0.3BR	0/10KP			0/500MW		
0/140#		0/30MB	0/0.4BR	0/20KP			0/600MW		
0/200#		0/40MB	0/0.6BR	0/40KP			0/750MW		
0/220#		0/60MB	0/1BR	0/60KP			0/1000MW		
0/232#		0/100MB	0/1.6BR	0/100KP			0/1210MW		
0/300#		0/160MB	0/2BR	0/160KP			0/1600MW		
		0/200MB	0/2.5BR	0/250KP			0/2000MW		
		0/250MB	0/4BR	0/400KP			0/2500MW		
		0/400MB	0/6BR	0/600KP			0/3000MW		
		0/500MB	0/7BR	0/1000KP			0/4000MW		
		0/600MB	0/10BR	0/1600KP			0/5000MW		
		0/1000MB	0/11BR	0/2500KP			0/6000MW		
		0/1600MB	0/14BR	0/4000KP					
			0/16BR						
			0/20BR						
			0/25BR						

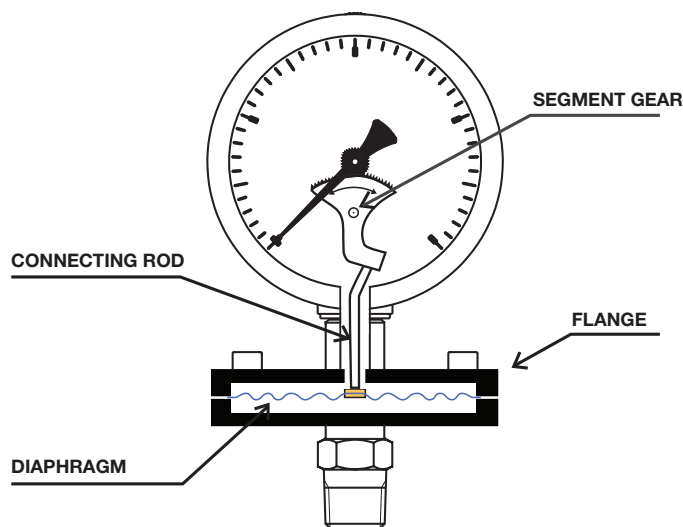
## Data Sheet

# P5500 and P6500 Low Pressure Diaphragm Gauges

TABLE 2 - OPTIONS

Code	Description	Notes
DA	Dial marking	Information is required by the customer
GV	Silicone case fill	
GX	Halocarbon® filled case	
HP	Overpressure protection 10-times F.S.	Maximum protection up to 580 psi. Available for ranges 10IW – 100IW. Not available for vacuum or compound ranges.
5G	Instrument assembled to accessory	
MQ	Positive material certificate (PMI)	
NH	Stainless steel tag wired to case	Information is required by the customer
PD	Polycarbonate window	
C3	Certificate according to EN 10204 3.1 C3	
C4	<a href="#">Traceable calibration certificate</a>	
HY	Hydrostatic pressure test HY	Only available with overload protection (Option HP)
EP	Maximum pointer	With acrylic window only, 100 mm only
AX	ATEX Approval	
E6	Six O'clock stop pin	
VS	Underload stop	40inH <sub>2</sub> O and above only
MP	Micrometer adjustable pointer	
EA	External zero	Standard with liquid filled gauge not available with option code MP

### PRINCIPLE OF "DRY CELL" OPERATION



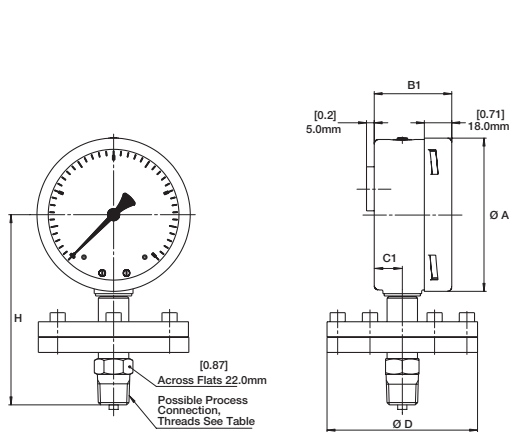
# Data Sheet

## P5500 and P6500 Low Pressure Diaphragm Gauges

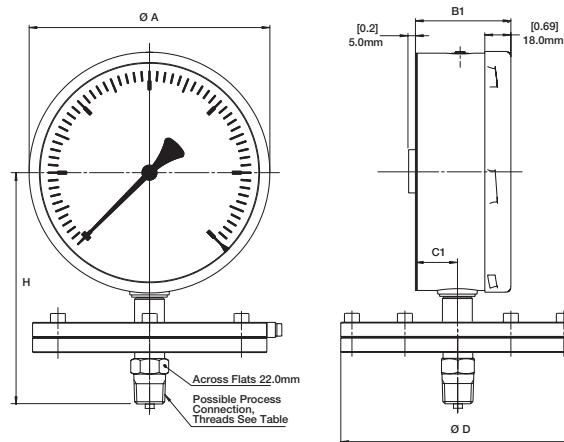
**DIMENSIONS** in [ ] are decimal inches

For reference only, consult Ashcroft for specific dimensional drawings.

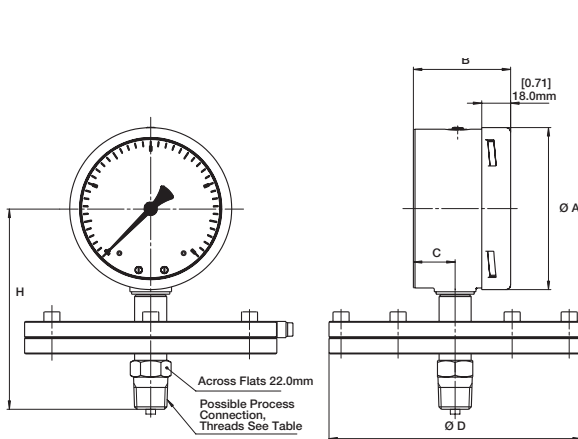
**P5500, 100 mm, (Range < 15 psi)**



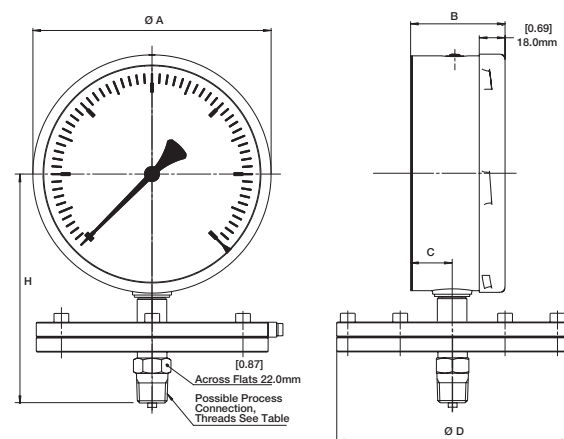
**P5500, 160 mm (Range < 15 psi)**



**P5500, 100 mm, (Range ≥ 15 psi)**



**P6500, 160 mm (Range ≥ 15 psi)**



PRESSURE RANGE	SIZE	Ø A	B	B1	C	C1	Ø D	H
≥ 0.6 bar	100	[3.97] 101	[2.01] 51	[2.38] 61	[0.73] 18.5	[1.02] 26	[3.90] 99	[5.04] 128
	160	[6.35] 161	[1.96] 50	[2.52] 64	[0.76] 17	[1.11] 28	[3.90] 99	[5.04] 128
≤ 400 mbar	100	[3.97] 101	[2.01] 51	[2.38] 61	[0.73] 18.5	[1.02] 26	[6.18] 157	[4.92] 125
	160	[6.35] 161	[1.96] 50	[2.52] 64	[0.76] 17	[1.11] 28	[6.18] 157	[4.92] 125

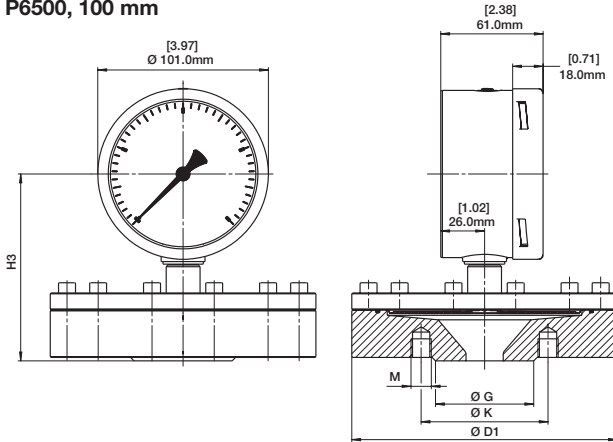
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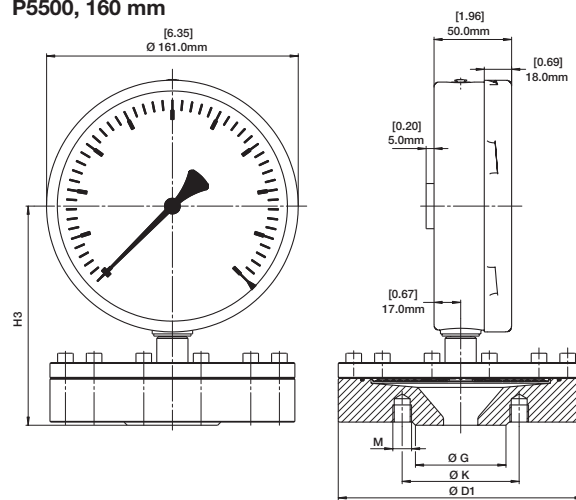
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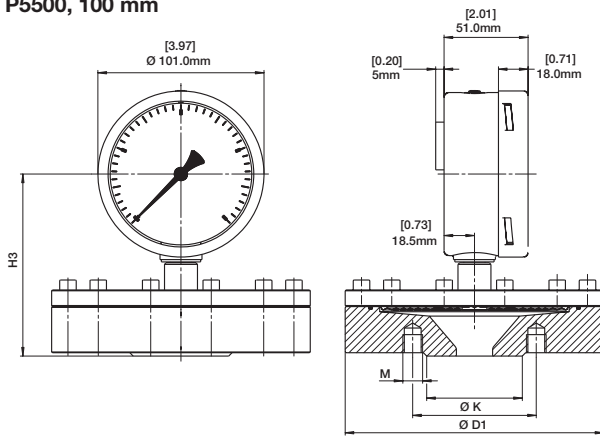
**P6500, 100 mm**



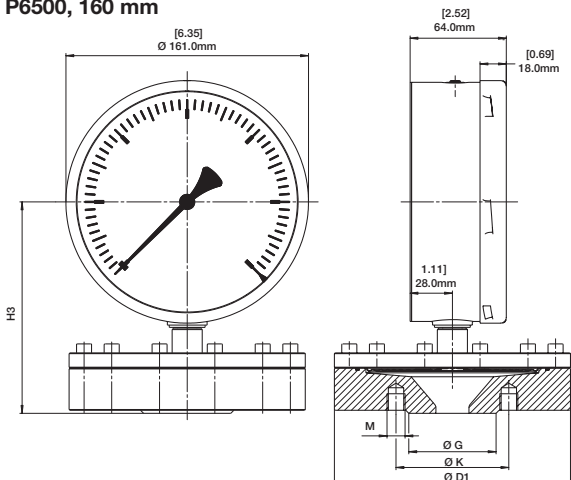
**P5500, 160 mm**



**P5500, 100 mm**



**P6500, 160 mm**



SIZE FLANGE RATING*	Ø D1		Ø G	H3	Ø K	M
	≥ 0.6 bar	≤ 400 mbar				
1" 150	-	[4.25] 108	[2.00] 50.8	[5.75] 146	[3.12] 79.2	4 x ½-13 UNC
	[4.25] 108	-	[2.00] 50.8	[5.79] 147	[3.12] 79.2	4 x ½-13 UNC
1" 300	-	[4.88] 123.9	[2.00] 50.8	[5.94] 151	[3.50] 88.9	4 x ⅝-11 UNC
	[4.88] 123.9	-	[2.00] 50.8	[5.98] 152	[3.50] 88.9	4 x ⅝-11 UNC
1½" 150	-	[4.92] 125.0	[2.87] 73.0	[5.83] 148	[3.87] 98.4	4 x ½-13 UNC
	[4.92] 125.0	-	[2.87] 73.0	[5.87] 149	[3.87] 98.4	4 x ½-13 UNC
1½" 300	-	[6.10] 155.0	[2.87] 73.0	[5.63] 143	[4.50] 114.3	4 x ¾-10 UNC
	[6.10] 155.0	-	[2.87] 73.0	[5.67] 144	[4.50] 114.3	4 x ¾-10 UNC
2" 150	-	[6.18] 157.0	[3.63] 92.1	[6.02] 153	[4.75] 120.7	4 x ⅝-11 UNC
	[6.0] 152.4	-	[3.63] 92.1	[5.47] 139	[4.75] 120.7	4 x ⅝-11 UNC
2" 300	-	[6.50] 165.0	[3.63] 92.1	[5.63] 143	[4.75] 120.7	8 x ⅝-11 UNC
	[6.50] 165.0	-	[3.63] 92.1	[5.28] 134	[4.75] 120.7	8 x ⅝-11 UNC
3" 150	-	[7.52] 190.9	[5.00] 127	[5.47] 139	[6.00] 152.4	Through Hole [0.75] 8 x ⅝-11 UNC
	[7.52] 190.9	-	[5.00] 127	[5.47] 139	[6.00] 152.4	Through Hole [0.75] 8 x ⅝-11 UNC

\* 1½" Process connection not available with P6500