

5503 Differential Pressure Gauge

Features

- Stainless steel case
- Dry or liquid filled
- Available with diaphragm seals
- Electric contacts (optional)
- Flow measurement dial (optional)
- Ranges from 10 in. H₂O to 600 psid

Typical Uses

- Refineries
- Chemical and petrochemical plants
- Mining and metals
- Filtration monitoring, level and flow measurement



5503
 100 mm (4"),
 160 mm (6") dial sizes

Specifications

Accuracy:	±1.6% of span (standard), ±0.5% or ±1% upscale (optional)
Dial Sizes:	100 mm (4") or 160 mm (6")
Static Pressure:	1,450 psi (standard) 3,625 psi for ranges <6 psid (optional) 5,801 psi for ranges ≥8 psid (optional) (750 psi when LH option is specified)
Process Connection:	¼ NPT, ½ NPT, G ¼ B Male
Process Connection Location:	Lower
Case Style:	Open front case
Pointer:	Black painted aluminum
Weather Protection:	IP65: Dry case (standard) IP66: Hermetically sealed (optional)
Mounting:	Stem (standard), wall, pipe (optional)
Liquid Fill:	Glycerin (standard), silicone, Halocarbon® (optional)
Electrical Contact:	High and Low, Double High, Double Low (optional)
Certificates:	NACE, EN 10204 3.1 (optional)
Approvals:	CRN, CE (standard), ATEX (optional) ATEX Conformity according to RL 2014/34/EU appendix X for mechanical equipment in potential hazardous areas.



II 2 GD c 95°C IP65 (Ta -20°C ... +60°C) File No.
 35106158 at notified body 0044 TUV NORD CERT

Non-Wetted Components

Case	Ring	Window
304 Stainless steel	Bayonet ring	Safety glass
316 Stainless steel (OPT.)		



Key Benefits

- High static pressure with low differential pressure
- Perfect solution for challenging applications and installation requirements
- Robust design with dual diaphragms for safety
- NACE compliant (optional)
- Direct mounts to V02 3 or 5 valve manifold

Wetted Components

Diaphragm	Housing	O-Ring
316Ti: 15 in. H ₂ O to 6 psid	316L SS	Viton™
Duratherm®: 8 psid to 40 psid	316L SS	Viton™
Inconel®: >40 psid	316L SS	Viton™
Hastelloy® C-276	Hastelloy® C-276	Viton™
Hastelloy® C-276	316L SS	Viton™
Monel®: 10 psid and above	316L SS	Viton™

Min/Max Temperature Limits

Version	Ambient	Process	Storage
Dry	-4 °F to 176 °F (-20 °C to 80 °C)	-4 °F to 185 °F (-20 °C to 85 °C)	-40 °F to 140 °F (-40 °C to 60 °C)
Glycerin Fill	20 °F to 150 °F (-7 °C to 66 °C)	20 °F to 150 °F (-7 °C to 66 °C)	0 °F to 150 °F (-18 °C to 66 °C)
Silicone Fill	-40 °F to 150 °F (-40 °C to 66 °C)	-40 °F to 200 °F (-40 °C to 93 °C)	-40 °F to 150 °F (-40 °C to 66 °C)

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5503 Differential Pressure Gauge

Ordering Code	Example:	10	5503	SS	L	02	L	XAJ	10IW
Dial Size									
10 - 100mm (4")		10							
16 - 160mm (6")									
Model									
5503 - 304 Stainless steel open front case			5503						
Diaphragm & Housing Material									
HH - Hastelloy® C-276 diaphragm and housing (NACE compliant)									
HS - Hastelloy® C-276 diaphragm, 316 Stainless steel housing									
PS - Monel® diaphragm and 316 Stainless steel housing									
SS - 316 Stainless steel diaphragm and housing for ranges of 5 psi and below High strength cobalt alloy (Duratherm 600®) for ranges of 10 psi and above				SS					
Case Fill									
D - Dry									
L - Glycerin fill (N/A with electrical contacts)					L				
Process Connection									
00 - Special connection must be used when ordering XLH									
02 - ¼ NPT Male, ¼ - 18 NPT Male; DIN EN837						02			
04 - ½ NPT Male, ½ - 14 NPT Male; DIN EN837									
13 - G ¼ B Male, DIN EN837									
15 - G ½ B Male; DIN EN837									
25 - ¼ NPT, ¼ - 18 NPT Female									
27 - G ¼ B Female, DIN EN837									
50 - ½ NPT, ½ - 14 NPT Female									
51 - G ½ Female (must be used when direct mounting to a V02 3 or 5 valve manifold)									
Process Connection Location									
L - Lower							L		
Options (If choosing an option(s) must include an "X") (See Table 1 on page 3 for more options)								X _ _	
Dampening									
GT- NAPVIS Fill for use with magnetic electrical contacts (Add to list price of glycerin filled gauge)									
GV - Silicone Fill (Add to list price of glycerin filled gauge)									
GX - Halocarbon® Fill (N/A with electrical contacts. Add to list price of glycerin filled gauge)									
Accuracy									
AJ - 0.5% Upscale (NA with XSP high static, electric contacts or ranges below 250 mbar)									
AN- 1% Upscale (NA with XSP high static, electric contacts or ranges below 250 mbar)									
Window & Case									
E6 - 6 o'clock stop pin									
LJ - Weatherproof/Hermetically sealed case (IP66)									
PD - Acrylic window									
YW - 316 Stainless steel case and ring (N/A with electrical contacts)									
Mounting									
FW - Wall mounting bracket									
TM- 2" pipe mounting bracket									
Marking/Tagging									
AX - ATEX (N/A with electrical contacts)									
CS- Dual scale									
DA - Dial marking - text marking on dial									
MN - Stainless steel tag bonded to case									
NH - Stainless steel tag wired to case									
SS - Special scale flow dial									

5503 Differential Pressure Gauge

Ordering Code (continued)	Example:	10	5503	SS	L	02	L	XAJ	10IW
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Magnetic Electrical Contacts

M1000 - Single setpoint - contact closes
 M2000 - Single setpoint - contact opens
 M1100 - Dual setpoint - both contacts close
 M2200 - Dual setpoint - both contacts open
 M1200 - Dual setpoint - contact 1 closes, contact 2 opens

Special Cleaning

6B - Cleaned for oxygen service (Teflon® coated Viton® O-rings standard)

Testing/Certification

HY - Hydrostatic testing
 MQ - Positive Material Identification (PMI)
 WO - Wetted parts of western origin (must be ordered with C3 option)
 C3 - Material certificate per EN 10204 3.1
 C4 - Traceable calibration certificate

Other

DU - Welded connections
 LH - Use when attaching to 700 series diaphragm seal when range is between 60IW (3 psid) - 160IW (6 psid)
IMPORTANT NOTE - Static pressure is reduced to 750# with this option (process connection must be 00 and XDU needed for welded connections)
 SP - Static pressure to 3,625 psi for ranges <6 psid or 5,801 psi for ranges >8 psid (not available with LH option)

Certification (miscellaneous charges not included within model code)

CD-1 - Certificate of Conformance to Specifications and/or Drawings (Standard)
 CD-1A - Certificate of Conformance to Specifications and/or Drawings (Non-Standard) cost per list/order
 CD- 43 - Typical Material Certification per EN 10204 2.2
 CD-5 - Certificate of Compliance for refineries to NACE MR0103-2010 and for oilfields (production) to NACE MRO175/ISO 15156-2009

Range (coding examples only, see range table on page 4 for all standard ranges)

10IW - 10 IWD	10IW
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When selecting a diaphragm seal or isolation ring, refer to the [Min/Max Guide](#) for compatibility with this gauge or scan the QR code to the right.



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5503 Differential Pressure Range Table			
psid	mbard	bard	in. H ₂ O
-	-	-	10 IW
-	-	-	15 IW
-	40 MB	-	-
-	60 MB	-	-
-	-	-	30 IW
-	100 MB	-	-
-	160 MB	-	60 IW
-	250 MB	-	100 IW
-	-	-	150 IW
-	400 MB	-	-
-	-	-	200 IW
1#	-	-	-
5#	-	-	-
10#	-	0.6 BR	-
15#	-	1 BR	-
-	-	1. BR	-
30#	-	-	-
-	-	2.5 BR	-
60#	-	4 BR	-
-	-	6 BR	-
100#	-	-	-
-	-	10 BR	-
160#	-	-	-
200#	-	-	-
-	-	16 BR	-
300#	-	-	-
-	-	25 BR	-
400#	-	-	-
600#	-	-	-

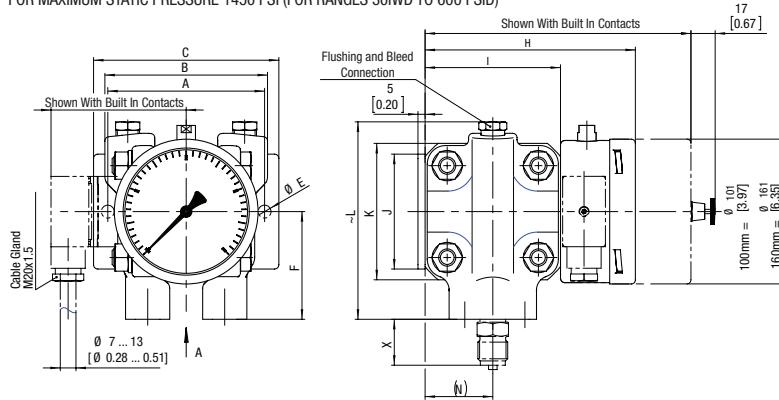
*More ranges available upon request

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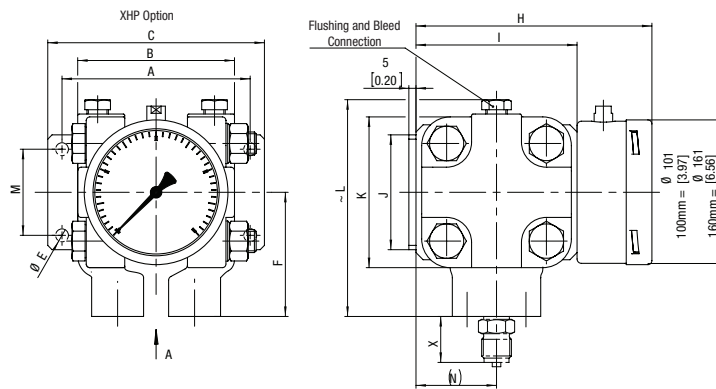
DIMENSIONS are identified in [inches] and millimeters

For reference only, consult Ashcroft for specific dimensional drawings.

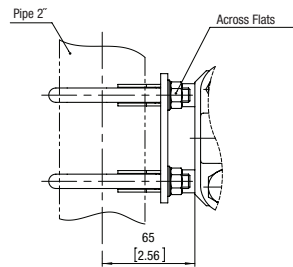
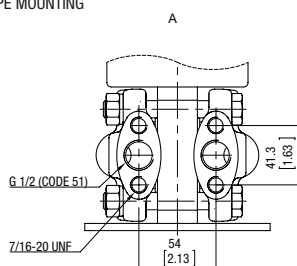
FOR MAXIMUM STATIC PRESSURE 1450 PSI (FOR RANGES 30IW TO 600 PSID)



FOR MAXIMUM STATIC PRESSURE 5801 PSI (FOR RANGES >8 PSI)



PIPE MOUNTING



Range	Static Pressure	A	B	C	D	E	F	G	H	I	J	K	~L	M	(N)
<6 psid	1,450 psi	132 [5.20]	108 [4.25]	152 [5.98]	120 [4.72]	4 X Ø 9 [0.35]	100 [3.94]	239.5 [9.43]	193.5 [7.62]	141 [5.55]	80 [3.15]	141 [5.55]	181 [7.11]	60 [2.36]	70.5 [2.78]
≥8 psid	1,450 psi	110 [4.33]	114 [4.49]	130 [5.12]	90 [3.54]	2 X Ø 9 [0.35]	75 [2.95]	184.5 [7.26]	145.5 [5.73]	93 [3.66]	80 [3.15]	93 [3.66]	136 [5.33]	-	46.5 [1.83]
Range	XSP High Static Option	A	B	C	D	E	F	G	H	I	J	K	~L	M	(N)
<6 psid	3,625 psi	170 [6.69]	148 [5.83]	200 [7.87]	-	4 X Ø 11 [0.43]	120 [4.72]	-	227.5 [8.96]	175 [6.89]	100 [3.94]	170 [6.69]	219 [8.62]	60 [2.36]	87.5 [3.44]
≥8 psid	5,801 psi	132 [5.20]	110 [4.33]	152 [5.98]	-	2 X Ø 9 [0.35]	86.5 [3.41]	-	165.5 [6.52]	113 [4.45]	80 [3.15]	105 [4.13]	151 [5.94]	-	56.5 [2.22]

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