

Data Sheet

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 1,000 psid

TYPICAL USES

- Refineries
- Chemical and petrochemical plants
- Water and wastewater pressure control
- Mining and metals
- Filtration monitoring, level and flow measurement



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



SPECIFICATIONS

Accuracy: ±1.6% of span (standard), ±0.5% 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)

Set Point: High and Low, Double High, Double Low

Certificates: NACE, EN 10204 3.1 (optional)

Approvals: CRN, CE/UKCA (standard), ATEX (optional)
ATEX Conformity according to RL 2014/34/EU appendix X for mechanical equipment in potential hazardous areas.



11 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 SS open front case 316 SS (optional)	Bayonet ring	Safety glass

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)
- Designed for harsh services

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® C276	Hastelloy® C276	Viton™
Hastelloy® C276	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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Data Sheet

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									
SS - 316 SS diaphragm and housing for ranges of 5 psi and below High strength cobalt alloy (Duratherm 600®) for ranges of 10 psi and above				SS					
HS - Hastelloy® C 276 diaphragm, 316 stainless steel housing									
HH - Hastelloy® C 276 diaphragm and housing (NACE compliant)									
PS - Monel® diaphragm and 316 stainless steel housing									
Case Fill									
D - Dry									
L - Glycerin fill					L				
Process Connection									
00 - Special connection must 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									
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)									
AJ - Accuracy ±0.5% Upscale								X	
MN - Bonded stainless steel tag									AJ
NH - Stainless steel wired tag									
NN - Paper tag bonded to case									
Range (coding examples only, see range table on page 3 for all standard ranges)									
10IW - 10 IWD									10IW

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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TABLE 1

CODE	OPTION
DU	Capillary welded to gauge (must have connection code 00)
GV	Silicone fill
GX	Halocarbon fill
FW	Wall mounting bracket
TM	Pipe mounting bracket
YW	316 stainless steel case and ring
DA	Dial marking
LJ	Hermetically sealed case (IP66)
SP	Static pressure to 3,625 psi for ranges <6 psid or 5,801 psi ranges >8 psid (not available with LH option)
LH	Use when attaching to 700 series diaphragm seals when range is between 60IW/3# - 160IW/6#. IMPORTANT NOTE - Static pressure is reduced to 750# with this option (process connection becomes 00, XDU for welded connections and XSC for special fill fluid must be included in part number string)
ED	Dual setpoint, high and low contacts (Specify magnetic or inductive contacts)
EE	Dual setpoint, double high contacts (Specify magnetic or inductive contacts)
EF	Dual setpoint, double low contacts (Specify magnetic or inductive contacts)
CD-5	Certificate of Conformance to NACE (Hastelloy C diaphragm & housing required) (with Kalrez O-Rings standard) (must be ordered as a separate line item)
C4	Traceable calibration certificate
AX	ATEX Listed
C3	Material Certificate to EN 10204 3.1
6B	Oxygen Service (Teflon coated Viton o-rings standard)

RANGE TABLE

5503 Differential Pressure Ranges			
psid	mbard	bard	in. H ₂ O
-	-	-	10 in. H ₂ O
-	-	-	15 in. H ₂ O
-	40 mb	-	-
-	60 mb	-	-
-	-	-	3 in. H ₂ O
-	100 mb	-	-
-	160 mb	-	60 in. H ₂ O
-	250 mb	-	100 in. H ₂ O
-	-	-	150 in. H ₂ O
-	400 mb	-	-
-	-	-	200 in. H ₂ O
1#	-	-	-
5#	-	-	-
10#	-	0.6 bar	-
15#	-	1 bar	-
-	-	1. bar	-
30#	-	-	-
-	-	2.5 bar	-
60#	-	4 bar	-
-	-	6 bar	-
100#	-	-	-
-	-	10 bar	-
160#	-	-	-
200#	-	-	-
-	-	16 bar	-
300#	-	-	-
-	-	25 bar	-
400#	-	-	-
600#	-	-	-

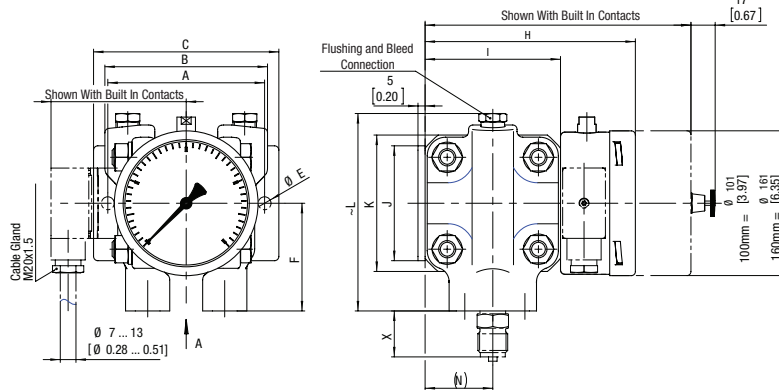
Data Sheet

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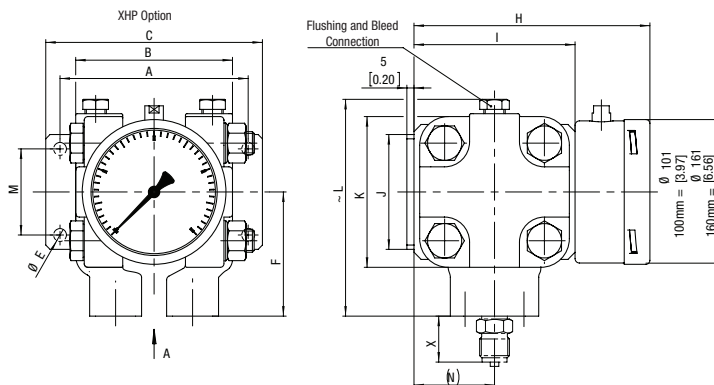
DIMENSIONS are identified in [inches] and millimeters

For reference only, consult Ashcroft for specific dimensional drawings.

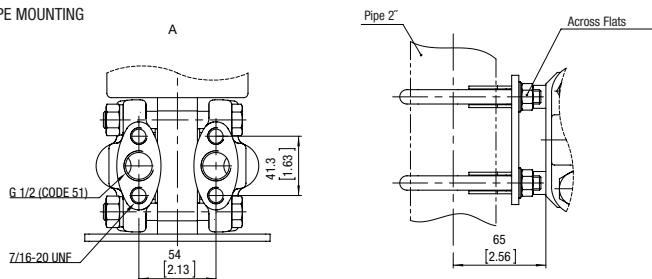
FOR MAXIMUM STATIC PRESSURE 1450 PSI (FOR RANGES 30IW TO 600 PSID)



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



PIPE MOUNTING



Weight (lbs)

	100mm	160mm
For Ranges ≤6 psid		
Dry	20	21
Liquid Filled	21	22
For Ranges ≥8 psid		
Dry	9	10
Liquid Filled	10	11

Weight with XSP High Static Option (lbs)

	100mm	160mm
For Ranges ≤6 psid		
Dry	38	39
Liquid Filled	39	41
For Ranges ≥8 psid		
Dry	14	14
Liquid Filled	15	17

NOTE: If range is between 60IW/3# - 160IW/6# AND attached to 700 series diaphragm seals utilizing XLH dimensionally changes to the smaller chamber unit. Use gauge dimensions as noted for ranges greater than 8 psi. See 700 series seal datasheet for any questions pertaining to the diaphragm seal.

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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