

Differential pressure gauge with diaphragm

working pressure up to 160 bar

Type series BD32../BD33..



Application area

- Machinery construction
- Chemical and petrochemical industry
- General process technology
- Shipping

Features

- Differential pressure gauge with diaphragm
- Nominal ranges 0...1 to 0...25 bar
- High quality case with bajonet ring NS 100/160
- Case and measuring flange of stainless steel, diaphragm of Duratherm
- Accuracy class 1.6 as per EN 837-3
- Working pressure up to 160 bar
- Overload limit plus- and minus sides up to max. working pressure
- Degree of protection IP 65

Options

- Approvals/Certificates
 - Explosion protection (ATEX/UKEX) for mechanical devices
 - Material certificate per EN 10204
 - Calibration certificate per EN 10204
- As per UKCA regulations
- Case with liquid filling
- Electrical contact device, see data sheet D3-035
- Extended temperature range
- Connection to Zone 0 (upon request)
- 3-way valve block

Application

For high-pressure ranges with particular requirements are placed on the overload limit. Universally suitable for measuring liquids and gases, and depending on design, for measuring aggressive media. Special models upon request. For use outdoors and in aggressive environments. Can be supplied in shock and shake proof design with liquid filling.

Technical data

Constructional design / case

Design:	High quality case with bayonet ring, material: st. steel mat.-no. 1.4301 (304) ventilation valve, material: PUR	
Nominal size:	NS 100 or NS 160	
Degree of protection per EN 60529:	■ Without case filling: IP 65 ■ With case filling: IP 66	
Case filling:	Option: Glycerine-water Further liquid fillings upon request.	
Case seal:	Material gasket: NBR	
Pressure chamber seal:	Material: NBR, optional PTFE. Further materials upon request.	
Window:	Non-splintering laminated glass. Option: Non-splintering plastic (Polycarbonate)	
Measuring element:	Diaphragm	
Movement:	Stainless steel segment	
Scale:	Pure aluminium, white with black inscription Optional with red marking or with fixed reference pointer. Special scale upon request	
Pointer:	Pure aluminium, black, with micro adjustment for zero point correction	
Mounting:	sturdy device holder	
Weights:	Without filling:	
	Radial or axial connection	approx. 14 kg
	Valve block design	approx. 17 kg
	Diaphragm seal design	approx. 22 kg

Process connection

Design:	■ G1/2 B axial, option: G3/8 screw-in thread, adaption per EN 61518, arranged vertically to measuring flange. ■ Valve block mounting per EN 61518 possible. ■ Diaphragm seal fitting with capillary.
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Material wetted parts

Measuring flange:	Stainless steel mat.no. 1.4571 (316Ti) and 1.4404 (316L)
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Nominal range

See order details, further ranges upon request

Overload limit:	Plus and minus sides up to max. working pressure.
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For information on definitions of terms regarding the Pressure Equipment Directive, see Technical Instruction TA_068.

Accuracy

Accuracy class:	1.6 per EN 837-3
Temperature influence:	Max. $\pm 0.8\%$ / 10K of measuring span per EN 837-3.
Working pressure:	160 bar
Influence working pressure:	$2 \times 10^{-5} \%$ of measuring range

Temperature ranges

	without filling	with filling
Ambient:	-20...50 °C	-20...50 °C
Media:	-20...100 °C	-20...100 °C
Storage:	-40...70 °C	-40...70 °C

Tests and certificates

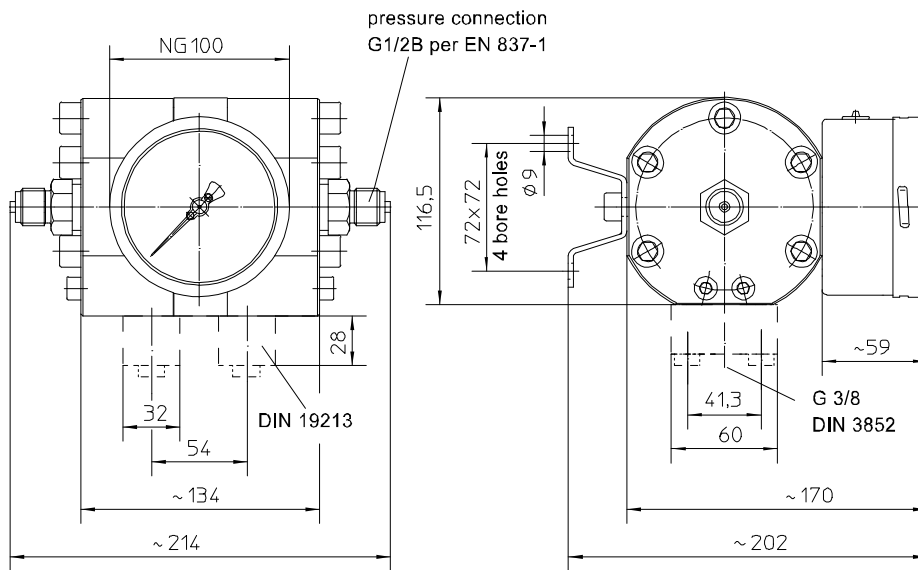
Explosion protection:	Ex-protection (ATEX/UKEX) for mechanical devices
	Ex II 2G Ex h IIC T1...T6 Gb X
	Ex II 2D Ex h IIIC Txx°C Db X

Further details see Ex Instructions XA_005.

Information on other models see order details or upon request.

Dimensions

Design with horizontally resp. vertically arranged connection to the measuring flange



All dimensions in mm

Connection dimensions for valve block design resp. diaphragm seal design upon request.

Order details

, Type series BD32../BD33..

Differential pressure gauge with diaphragm, working pressure up to 160 bar, NS 100/160			
BD3200	case design	NS100	IP 65
BD3240			IP 66 with case filling
BD3300		NS 160	IP 65
BD3340			IP 66 with case filling
E4...	working pressure / process connection	working pressure 160 bar	axial screwed connection G1/2 B
E5...			vertical screwed connection G3/8
E6...			prepared for valve block mounting
E2...			with flanged 3-way valve block
E3...			for diaphragm seal connection
053	nominal range [bar]	0...1	
054		0...1.6	
055		0...2.5	
056		0...4	
057		0...6	
058		0...10	
059		0...16	
060		0...25	

Additional features (to be indicated if required)		
S30	Ex-protection (ATEX/UKEX) for mechanical devices ¹	Ex II 2G Ex h IIC T1...T6 Gb X Ex II 2D Ex h IIIC Txx°C Db X
R2	window	non-splintering glass with maximum pointer ²
R3		non-splintering glass with adjustable reference pointer ²
R12		Polycarbonate with maximum pointer ³
R13		Polycarbonate with adjustable reference pointer ³
T2	marking	on scale (please specify)
T3		fixed reference pointer (please specify)
W1020	material certificate	per EN 10204-3.1, wetted parts
W1204	calibration certificate	per EN 10204-3.1, 3 measuring points
W1201		per EN 10204-3.1, 5 measuring points
W2660	as per UKCA regulations	

Order code (example): BD3240 – A4053 - ...

¹ for devices with non-splintering glass only

² for devices NS 100

³ not for devices with Ex-protection