

Differential pressure gauge with diaphragm

working pressure up to 500 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 500 bar
- Plus- and minus sides up to max. working pressure
- Degree of protection IP 65

Options

- Approvals/Certificates
 - Explosion protection (ATEX) for mechanical devices
 - Certificate of measuring equipment for Russian Federation
 - Material certificate per EN 10204
 - Calibration certificate per EN 10204
- Case with liquid filling
- Electrical contact device, see data sheet D3-035
- Extended temperature range
- Connection to Zone 0
- 3-way valve block
- EAC declaration (upon request)

Application

For high pressure ranges with particular requirements for overload protection. 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:	<ul style="list-style-type: none">■ 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 (Macrolon)
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:	<ul style="list-style-type: none">■ 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.
---------	--

Material wetted parts

Measuring element:	Diaphragm: Duratherm (similar resistance as mat.-no. 1.4571 (316Ti)) Measuring flange: stainless steel mat.-no. 1.4571 (316Ti)
--------------------	---

Nominal range

See order details, further ranges upon request

Overload protection	Plus and minus sides up to max. working pressure. Other designs upon request.
---------------------	---

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:	250 bar, 400 bar, 500 bar
Influence working pressure:	2×10^{-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) for mechanical devices II 2G Ex h IIC T1...T6 Gb X II 2D Ex h IIIC Txx°C Db X
-----------------------	--

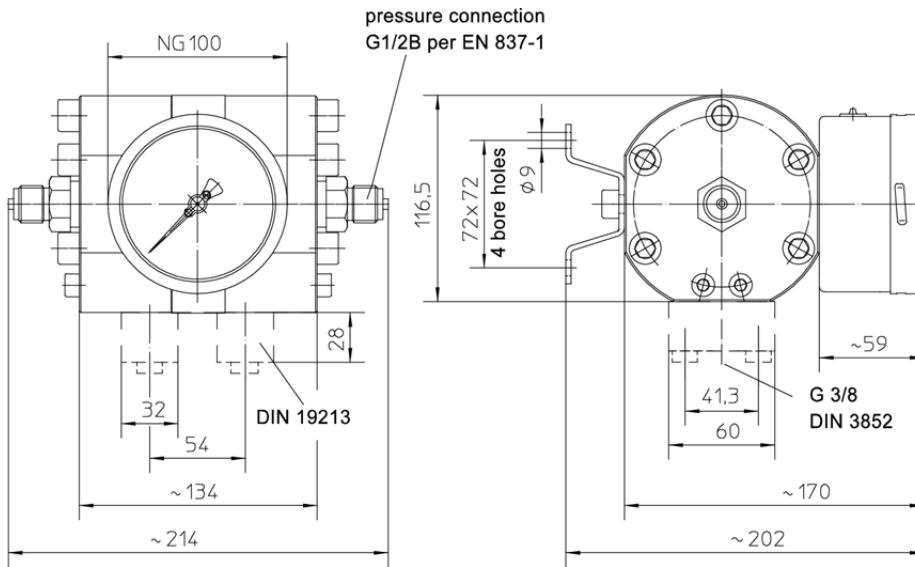
Further details see Ex Instructions XA_005.

- EAC declaration (upon request)
- Certificate of measuring equipment for Russian Federation

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

Differential pressure gauge with diaphragm highly overload resistant, NS 100/160, Type series BD32../BD33..

Order details BD32../BD33..			
BD3200	case design	NS100	IP 65
BD3240			IP 66 with case filling
BD3300		NS 160	IP 65
BD3340			IP 66 with case filling
A4...	working pressure / process connection	work. pr. 250 bar	axial screwed connection G1/2 B
A5...			vertical screwed connection G3/8
A6...			prepared for connection of valve block
A2...		with flanged 3-fold valve block	
A3...		for diaphragm seal connection	
C5...		work. pr. 400 bar	vertical screwed connection G3/8
C6...			prepared for connection of valve block
C2...			with flanged 3-fold valve block
C4...		work. pr. 500 bar	axial screwed connection G1/2 B
C3...	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) for mechanical devices ¹	 II 2G Ex h IIC T1...T6 Gb X  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		Makrolon with maximum pointer ³
R13		Makrolon 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
W2673	certificate of measuring equipment for Russian Federation	
Z1	connection to Zone 0 ⁴	with Zone 0 adapter (coupling element KF6)

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

⁴ for devices with Ex-protection only