

## Bourdon tube pressure gauge, high quality design case with liquid filling, (IP66) Type series BA4240(50)/BA4340(50)



### Application area

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

### Features

- Bourdon tube pressure gauge
- Nominal ranges -0.6...0 bar to -1...24 bar, 0...0.6 to 0...1600 bar
- High quality case with bajonet ring NS 100/160 with internal pressure compensation diaphragm per EN 837-1-S1
- Case and measuring element of stainless steel
- Degree of protection IP 66
- Accuracy class 1.0 or 1.6 per EN 837-1

### 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
- Mounting: Front flange for flush mounting, rear flange for surface mounting
- Connection to Zone 0
- EAC declaration (upon request)

### Application

The case is liquid filled and suitable especially for applications with high dynamic pressure pulsations or vibrations. An integrated pressure compensating diaphragm compensates the temperature related change of volume of the liquid filling. This high quality stainless steel version is suitable for measuring gaseous, liquid and aggressive media.

## Technical data

### Constructional design / case

Design:	High quality case with bajonet ring per EN 837-1 S1, material: stainless steel mat.-no. 1.4301 (304); with blow-out device (material: PUR) and internal pressure compensation diaphragm (material: silicone)
Nominal size:	NS 100 or NS 160
Degree of protection per EN 60529:	IP 66
Case filling:	Glycerine-water Further filling liquids upon request.
Pressure compensation:	To atmosphere via internal pressure compensation diaphragm
Case seal:	Material gasket: NBR
Window:	Non-splintering laminated glass. Option: Non-splintering plastic (Macrolon)
Measuring element:	Bourdon tube  < 60 bar: c-type ≥ 60 bar: spiral
Movement:	Stainless steel
Scale:	Pure aluminium, white with black inscription  Option: with red marking, special scale upon request.
Pointer:	Pure aluminium, black.  Option: with micro adjustment for zero point correction.
Mounting:	Via process connection. Optional with flange for surface mounting or for flush mounting with DIN mounting flange.
Weights:	NS 100: approx. 0.9 kg NS 160: approx. 1.8 kg

### Process connection

Design:	Per EN 837-1. G1/2 B, 1/2" NPT or M20 x 1.5, bottom or back eccentric connection.  Optional with throttle screw for system damping, further process connections upon request
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### Material wetted parts

Measuring element:	Bourdon tube and shanks stainless steel mat.-no. 1.4571 / 1.4404 (316Ti / 316L)
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### Nominal range

See order details, further ranges upon request

Overload-protection:	standard: 1.3 times higher overload protection see order details
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### Accuracy

Accuracy class:	1.0 per EN 837-1 (for nominal ranges < 1000 bar) 1.6 per EN 837-1 (for nominal ranges ≥ 1000 bar)
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Temperature influence:	Max. ± 0.4% / 10K of measuring span per EN 837-1
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### Temperature ranges

Ambient: -20...70 °C

Media: <sup>1,2</sup> -40...200 °C



Storage: -40...70 °C

<sup>1</sup> Nominal range ≤ 1 bar up to 100 °C

<sup>2</sup> Nominal range ≥ 200 bar up to 100 °C

Extended temperature range upon request

### Tests and certificates

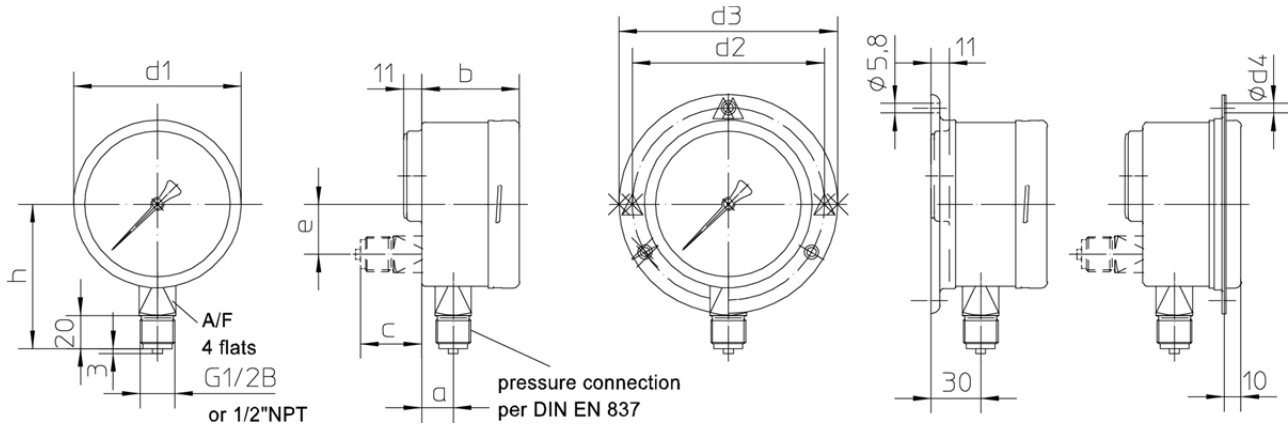
Explosion protection:	Ex-protection (ATEX) for mechanical devices  II 2G Ex h IIC T1...T6 Gb X  II 2D Ex h IIIC Txx°C Db X
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Further details see Ex Instructions XA\_005.

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

**Information on other models see order details or upon request.**

## Dimensions





dimensions (mm)										
case	d1	a	b	d2	d3	d4	e	h	c	A/F
NS 100	100	21	59	116	132	4,8	30	87	37	22
NS 160	160	21	59	178	196	5,8	60	120	37	22

## Order details

### Bourdon tube pressure gauge, NS 100/160, high quality design case with liquid filling (IP 66), Type series BA42../BA43..

Order details BA42../BA43			
BA4240	case design with glycerin/water-case filling IP 66	NS 100	process connection bottom
BA4250			process connection at back
BA4340		NS 160	process connection bottom
BA4350			process connection at back
A2...	process connection	G1/2 B	
B2...		1/2" NPT	
C2...		M 20 x 1.5	
085	nominal range [bar]	-0.6...0	
086		-1...0	
087		-1...0.6	
088		-1...1.5	
089		-1...3	
090		-1...5	
091		-1...9	
092		-1...15	
093		-1...24	
052		0...0.6	
053		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	
061		0...40	
062		0...60	
063		0...100	
064	0...160		
065	0...250		
066	0...400		
068	0...600		
070	0...1000 <sup>1</sup>		
071	0...1600 <sup>1</sup>		

Additional features (to be indicated if required)		
<b>S30</b>	Ex –protection (ATEX) for mechanical devices <sup>2</sup>	 II 2G Ex h IIC T1...T6 Gb X
		 II 2D Ex h IIC Txx°C Db X
<b>H2</b>	overload protection	2 times (measuring range 1...4 bar)
<b>H3</b>		2 times (measuring range 6...40 bar)
<b>H4</b>		1.5 times (measuring range 60...160 bar)
<b>I2</b>	pointer	with micro adjusting advice
<b>R2</b>	window	non-splintering glass with maximum pointer
<b>R3</b>		non-splintering glass with adjustable reference pointer
<b>R12</b>		Makrolon with maximum pointer <sup>3</sup>
<b>R13</b>		Makrolon with adjustable reference pointer <sup>3</sup>
<b>T2</b>	marking	on scale (please specify)
<b>T3</b>		fixed reference pointer (please specify)
<b>U2</b>	system damping	0.3 mm restrictor screw
<b>U3</b>		0.6 mm restrictor screw
<b>U4</b>		1.0 mm restrictor screw
<b>V2</b>	mounting	rear flange for surface mounting
<b>V3</b>		front flange for flush mounting
<b>W1020</b>	material certificate	per EN 10204-3.1, wetted parts
<b>W1204</b>	calibration certificate	per EN 10204-3.1, 3 measuring points
<b>W1201</b>		per EN 10204-3.1, 5 measuring points
<b>W2673</b>	certificate of measuring equipment for Russian Federation <sup>3</sup>	
<b>Z1</b>	connection to Zone 0 <sup>4</sup>	with Zone 0 adapter (coupling element KF6)

Order code (example): BA4240 – A2057 – T2 – V2 - ...

<sup>1</sup> accuracy class 1.6 as per EN 837-1

<sup>2</sup> for devices with non-splintering glass only

<sup>3</sup> not for devices with Ex-protection

<sup>4</sup> for devices with Ex-protection only