

## Bourdon tube pressure gauge, precision instrument

degree of protection IP 65, NS 100/160

Type series BA6...



### Application area

- Machinery construction
- Chemical and petrochemical industry
- Power generation
- Test laboratory
- Shipping

### Features

- High quality case with bajonet ring NS 100/160 with rear blow-out device per EN 837-1 S1
- Nominal ranges -0.6...0 bar to -1...24 bar, 0...0.6 to 0...600 bar
- Case and measuring element of stainless steel
- Accuracy class per EN 837-1:
  - for NS 100/160 accuracy class 0.6
  - for NS 160 accuracy class 0.25 and 0.6

### 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
- Mounting: Front flange for flush mounting, rear flange for surface mounting
- Connection to Zone 0 by using the flame arrester MF21xx, see data sheet D6-025

### Application

The bourdon tube pressure gauge is suitable for use in various industries. High quality stainless steel design for measuring gaseous, liquid and aggressive media. Designed according to safety standards per EN 837-1.

## Technical data

### Constructional design / case

Design: High quality case with bayonet ring per EN 837-1 S1, material: stainless steel mat.-no.-1.4301 (304) ; with blow-out device, material: PUR, ventilation valve, material: PUR

Nominal size: NS 100 or NS 160

Degree of protection per EN 60529: IP 65

Case filling: Option for NS 160 only:  
Glycerine-water  
Further liquid fillings upon request

Atmosph. pressure compensation: Via ventilation valve.

Case seal: Material gasket: NBR

Window: Non-splintering laminated glass.  
Option: Non-splintering plastic (Macro-lon)

Measuring element: Bourdon tube

< 60 bar: c-type  
≥ 60 bar: spiral

Movement: Stainless steel segment

Scale: Mirror scale  
Optional with red marking or with fixed reference pointer. Special scale upon request.

Pointer: Knife edge pointer, black, 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 160:

Without filling: approx. 1.2 kg

With filling: approx. 2.4 kg

NS 100:

Without filling: approx. 0.7 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

### Material wetted parts

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

### Nominal range

See order details, further ranges upon request

Overload-protection: Accuracy class 0.6:  
Standard: 1.3 times  
For ranges ≥ 160 bar: 1.0 times  
Accuracy class 0.25:  
Standard: 1.0 times

### Accuracy

Accuracy class: 0.6 per EN 837-1 for NS 100/160  
0.25 per EN 837-1 for NS 160 (for ranges ≤ 40 bar and devices without case filling)

Temperature influence: Max. ± 0.4% / 10K of measuring span per EN 837-1

### Temperature ranges

	without filling	with filling
Ambient:	-20...60 °C	-20...60 °C
Media:	-20...60 °C	-20...60 °C
Storage:	-40...70 °C	-40...70 °C

### Tests and certificates

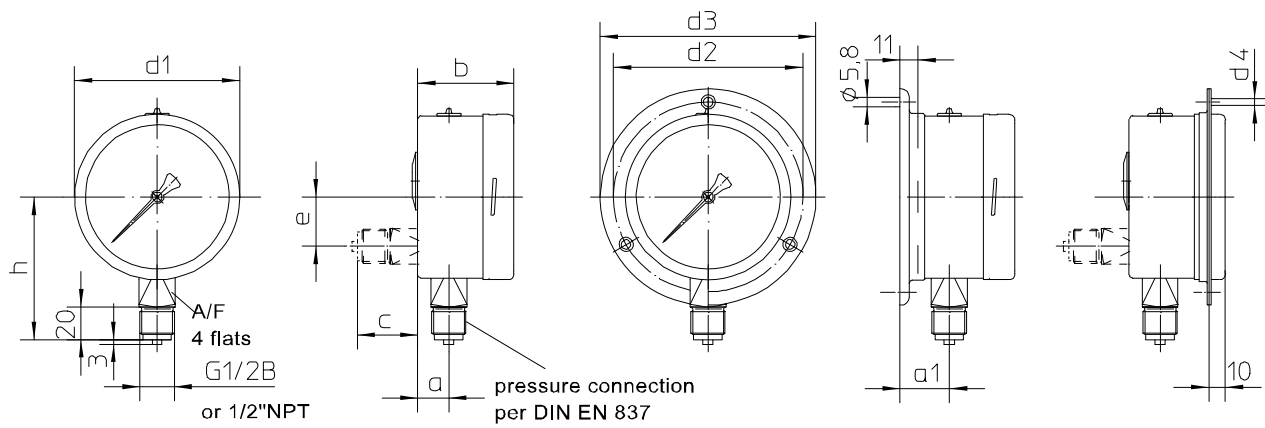
Explosion protection: Ex-protection (ATEX/UKEX) for mechanical devices  
⊕ II 2G Ex h IIC T1...T6 Gb X  
⊕ II 2D Ex h IIIC Txx°C Db X

Further details see Ex Instructions XA\_005.

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

## Dimensions

### Bourdon tube pressure gauges NS 160 per EN 837-1, safety case S1





Further process connections see order code

Dimensions (mm) BA63..											
case	d1	a	b	d2	d3	d4	e	h	a1	c	A/F
NS 100	100	19	55.5	116	132	4.8	30	83	30	37	22
NS 160	160	19	55.5	178	196	5.8	60	113	30	37	22

## Order details

### Bourdon tube pressure gauge, precision instrument, NS 100/160, EN 837-1 degree of protection IP 65, Type series BA6...

Order details BA6...			
BA6200	case design NS 100 per EN 837-1 S1	degree of protection IP 65	process connection bottom
BA6210			process connection at back
BA6300	case design NS 160 per EN 837-1 S1	degree of protection IP 65	process connection bottom
BA6310			process connection at back
BA6320		degree of protection IP 65, with case filling	process connection bottom
BA6330			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 <sup>1</sup>		
065	0...250 <sup>1</sup>		
066	0...400 <sup>1</sup>		
068	0...600 <sup>1</sup>		

Additional features (to be indicated if required)			
Q20	Accuracy class	0.25 per EN 837-1 <sup>2</sup>	
S30	Ex-protection (ATEX/UKEX) for mechanical devices	 II 2G Ex h IIC T1...T6 Gb X	
		 II 2D Ex h IIIC Txx°C Db X	
	window	non-splintering glass	
R11		Macrolon	
T2	marking	on scale (please specify)	
T3		fixed reference pointer (please specify)	
U2	damping	0.3 mm restrictor screw	
U3		0.6 mm restrictor screw	
U4		1.0 mm restrictor screw	
V2	mounting	rear flange for surface mounting	
V3		front flange for flush mounting	
W1020	material certificate	per EN 10204, 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): BA6300 – A2057 – T2 – V2 - ...

<sup>1</sup> Overload protection 1 times, for accuracy class 0.6

<sup>2</sup> For ranges  $\leq 40$  bar and devices without case filling