Bourdon tube pressure gauge, Hastelloy
For the process industry, high corrosion resistance
Model PG28, NS 100 [4"] and 160 [6"]

for further approvals see page 3

Applications

- With case filling for applications with high dynamic pressure loads and vibrations
- For gaseous and liquid aggressive media that are not highly viscous or crystallising, also in aggressive environments
- Oil and gas industry, chemical and petrochemical industries

Special features

- Wetted parts from Hastelloy C276
- Excellent resistance against corrosive media such as sulphuric acid, nitric acid, chlorine gas etc.
- Also available as safety version “S3” per EN 837-1
- Scale ranges from 0 … 0.6 to 0 … 700 bar [0 … 10 to 0 … 10,000 psi]

Bourdon tube pressure gauge, model PG28

Description

The model PG28 Bourdon tube pressure gauge with wetted parts from Hastelloy C276 is particularly suitable for applications with aggressive media.

Hastelloy C276 belongs to the group of highly corrosion-resistant nickel-chromium-molybdenum-tungsten alloys and is notable for its high resistance to crevice corrosion, pitting corrosion and stress corrosion cracking in corrosive, oxidising and reducing media.

WIKA manufactures the model PG28 per EN 837-1 both in the “S1” version and in the “S3” safety version. The safety version is made up of a non-splintering window, a solid baffle wall between measuring system and dial and a blow-out back. In the event of a failure, the operator is protected at the front side, as media or components can only be ejected via the back of the case.

For harsh operating conditions (e.g. vibrations), all instruments are also available with an optional liquid filling.

As an alternative, WIKA offers diaphragm seals of models 990.34 and 990.10 as well as model 4 diaphragm pressure gauges in a Hastelloy version. Diaphragm seals are always the first choice for safety-relevant applications.

Data sheets showing similar products:
Bourdon tube pressure gauge, stainless steel, NS 63, 100 and 160, models 232.50, 233.50; see data sheet PM 02.02
Bourdon tube pressure gauge, stainless steel, safety version, NS 63, 100 and 160, models 232.30, 233.30; see data sheet PM 02.04

Part of your business

Model PG28	
Design	Per EN 837-1 and ASME B40.100
Nominal size (NS) in mm [in]	■ 100 [4"] ■ 160 [6"]
Accuracy	Class 1.0 per EN 837-1, ±1.0 % of measuring span per ASME B40.100 (grade 1A)
Scale ranges	0 ... 0.6 to 0 ... 700 bar [0 ... 10 to 0 ... 10,000 psi]
	or all other equivalent vacuum or combined pressure and vacuum ranges
Pressure limitation	
Steady	Full scale value
Fluctuating	0.9 x full scale value
Short time	1.3 x full scale value
Permissible temperature	
Ambient	■ -40 ... +60 °C [-40 ... +140 °F] for unfilled instruments ■ -20 ... +60 °C [-4 ... +140 °F] for instruments with glycerine filling ■ -40 ... +60 °C [-40 ... +140 °F] for instruments with silicone oil filling
Medium	■ ≤ 200 °C [≤ 392 °F] for unfilled instruments ■ ≤ 100 °C [≤ 212 °F] for filled instruments
Temperature effect	When the temperature at the measuring system deviates from the reference temperature +20 °C [68 °F]: ≤ ±0.4 %/10 K [≤ ±0.4 %/18 °F] of full scale value
Ingress protection per IEC/EN 60529	IP65 [1]
Process connection	
Material	Hastelloy C276
Connection location	■ Lower mount (radial) ■ Lower back mount [2]
Thread	■ G ½ B male (SW 22) ■ ½ NPT male (SW 22) ■ M20 x 1.5 male (SW 22) Others on request
Pressure element	Hastelloy C276 C-type or helical type
Movement	
Material	Stainless steel
Dial	
Material	Aluminium
Colour	White
Scale colour	Black
Pointer	
Material	Aluminium
Colour	Black
Case	
Material	■ Stainless steel 1.4301 ■ Stainless steel 1.4571
Design	■ Version “S1” with blow-out device in case back (per EN 837) ■ Safety version “S3” with solid baffle wall (Solidfront) and blow-out back (per EN 837) Scale ranges ≤ 0 ... 16 bar [0 ... 232 psi] with compensating valve to vent case
Window	Laminated safety glass
Ring	Bayonet ring, stainless steel

1) IP54 for back mount (safety version “S3”)
2) For NS 160 [6"], lower back mount, only version “S1” is available

Model PG28		
Case filling	■ Without ■ Glycerine ■ Glycerine-water mixture, for scale ranges ≤ 0 ... 2.5 bar [≤ 0 ... 40 psi] ■ Silicone oil	
Weight	Version “S1”	Safety version “S3”
NS 100 [4“]	0.60 kg [1.32 lbs]	0.90 kg [1.98 lbs]
NS 160 [6“]	1.10 kg [2.43 lbs]	2.00 kg [4.41 lbs]

Approvals

Logo	Description	Country
CE Ex	**EU declaration of conformity** ■ Pressure equipment directive PS > 200 bar, module A, pressure accessory ■ ATEX directive (option) Ignition protection type “c”, constructive safety	European Union

Certificates (option)

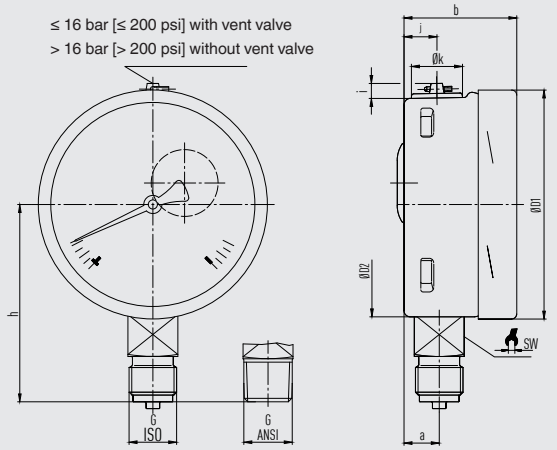
- 2.2 test report per EN 10204 (e.g. state-of-the-art manufacturing, material proof)
- 3.1 inspection certificate per EN 10204 (e.g. material proof for wetted metal parts)

Approvals and certificates, see website

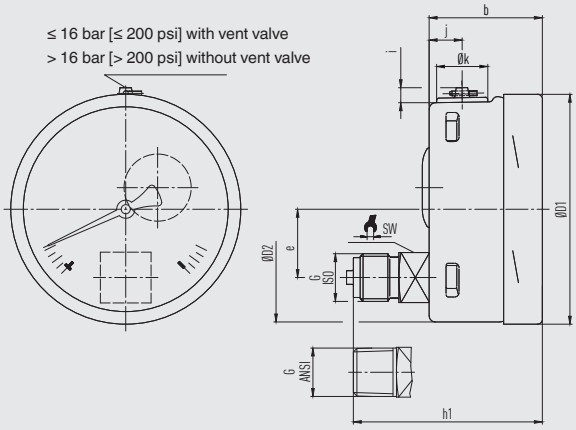
Dimensions in mm [in]

Model PG28, version “S1”

NS 100 [4"], 160 [6"], lower mount (radial)



NS 100 [4"], lower back mount



Process connection with thread per ISO 1179-2

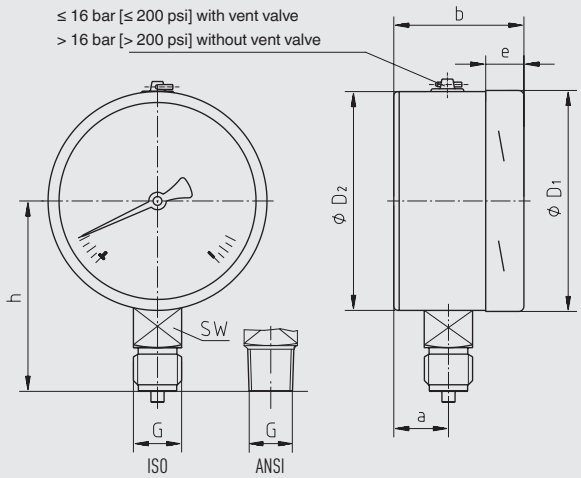
NS	G	Dimensions in mm [in]										
		h ±1	h1 ±1	a	b	D1	D2	e	i	j	k	SW
100 [4"]	G ½ B	87 [3.43]	83 [3.27]	15.5 [0.61]	49.5 [1.95]	101 [3.98]	99 [3.90]	30 [1.18]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	M20 x 1.5											
160 [6"]	G ½ B	118 [4.65]	-	15.5 [0.61]	49.5 [1.95]	161 [6.34]	159 [6.26]	-	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	M20 x 1.5											

Process connection with thread per ANSI/B1.20.1

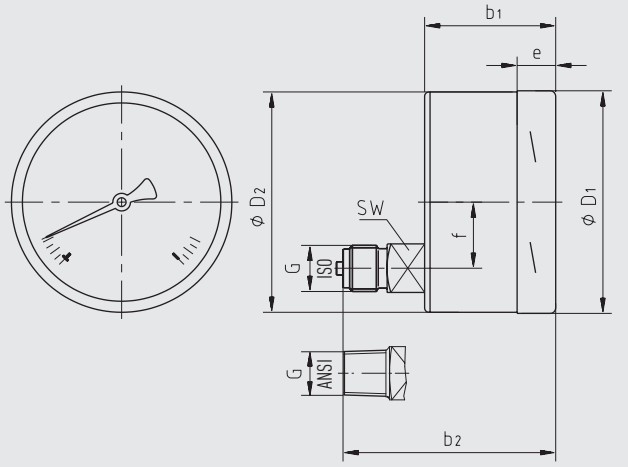
NS	G	Dimensions in mm [in]										
		h ±1	h1 ±1	a	b	D1	D2	e	i	j	k	SW
100 [4"]	½ NPT	86 [3.39]	82 [3.23]	15.5 [0.61]	49.5 [1.95]	101 [3.98]	99 [3.90]	30 [1.18]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
160 [6"]	½ NPT	117 [4.61]	-	15.5 [0.61]	49.5 [1.95]	161 [6.34]	159 [6.26]	-	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]

Model PG28, safety version “S3”

NS 100 [4"], 160 [6"], lower mount (radial)



NS 100 [4"], lower back mount



Process connection with thread per ISO 1179-2

NS	G	Dimensions in mm [in]									
		h ±1	a	b	b_1	b_2	D_1	D_2	e	f	SW
100 [4"]	G ½ B	87 [3.43]	25 [0.98]	59.5 [2.36]	59.5 [2.36]	93 [3.66]	101 [3.98]	100 [3.94]	17 [0.67]	30 [1.18]	22 [0.87]
	M20 x 1.5										
160 [6"]	G ½ B	118 [4.65]	27 [1.06] 1)	65 [2.56] 2)	-	-	161 [6.34]	159 [6.26]	17.5 [0.69]	-	22 [0.87]
	M20 x 1.5										

Process connection with thread per ANSI/B1.20.1

NS	G	Dimensions in mm [in]									
		h ±1	a	b	b_1	b_2	D_1	D_2	e	f	SW
100 [4"]	½ NPT	86 [3.39]	25 [0.98]	59.5 [2.36]	59.5 [2.36]	92 [3.62]	101 [3.98]	100 [3.94]	17 [0.67]	30 [1.18]	22 [0.87]
160 [6"]	½ NPT	118 [4.65]	27 [1.06]	65 [2.56]	-	-	161 [6.34]	159 [6.26]	17.5 [0.69]	-	22 [0.87]

Ordering information

Model / Nominal size / Scale range / Process connection / Connection location / Options

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