Bourdon tube pressure gauge, copper alloy
Stainless steel case, case filling
Model 213.53, NS 50 [2"], 63 [2 ½"] and 100 [4"]

for further approvals,
see page 7

Applications

- For measuring locations with high dynamic pressure loads and vibrations
- For gaseous and liquid media that are not highly viscous or crystallising and will not attack copper alloy parts
- Hydraulics
- Compressors, shipbuilding

Special features

- Very good vibration and shock resistance
- Especially robust design
- Type approval for the shipbuilding industry
- Scale ranges to 0 ... 1,000 bar or 0 ... 15,000 psi



Bourdon tube pressure gauge, model 213.53.100, lower mount

Description

The liquid-filled model 213.53 mechanical Bourdon tube pressure gauge is constructed with a case from stainless steel and wetted parts from copper alloy.

WIKA manufactures and qualifies the pressure gauge in accordance with the standards EN 837-1 and ASME B40.100. As a safety function, this instrument has a blow-out device. In the event of a failure, overpressure can escape there.

Due to the case filling, the pressure element and movement are efficiently damped. Therefore, these instruments are particularly suited to measuring locations with high dynamic loads, such as fast load cycles or vibrations.

The cases of the model 213.53 are available in nominal sizes of 50 [2"], 63 [2 ½"] and 100 [4"] and fulfil IP65 ingress protection. With an accuracy of up to class 1.0, this pressure gauge is suitable for a wide range of applications in industry.

For mounting in control panels, the pressure gauges with a back mount process connection can be fitted with a mounting flange or with a triangular profile ring and mounting bracket.

Data sheets showing similar products:
Stainless steel case, liquid filling, NS 40, 80 and 100; model 113.53; see data sheet PM 01.08

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Specifications

Basic information		
Standard	■ EN 837-1 ■ ASME B40.100	
	For information on the “Selection, installation, handling and operation of pressure gauges”, see technical information IN 00.05.	
Further version	Special design, model 213.57	
Nominal size (NS)	■ Ø 50 mm [2"] ■ Ø 63 mm [2 ½"] ■ Ø 100 mm [4"]	
Connection location	■ Lower mount (radial) ■ Centre back mount (only for NS 50 [2"] and NS 63 [2 ½"]) ■ Lower back mount (only for NS 100 [4"])	
Window	■ Plastic, crystal-clear ■ Laminated safety glass	
Case		
Design	NS 50 [2"], 63 [2 ½"]	Safety level “S2” per EN 837-1: With blow-out device
	NS 100 [4"]	Safety level “S1” per EN 837-1: With blow-out device
	Position of blow-out device: NS 50 [2"]: Case back, at 12 o'clock NS 63 [2 ½"], 100 [4"]: Case circumference, at 12 o'clock Filling plug can be vented and resealed for internal pressure compensation Sealing towards process connection with O-ring	
Material	Stainless steel, natural finish	
Ring	Crimp ring, stainless steel	
Mounting	■ Without ■ Panel mounting flange, stainless steel [1] ■ Panel mounting flange, polished stainless steel [2] ■ Triangular profile ring with mounting bracket, polished stainless steel [3] ■ Surface mounting flange, stainless steel [4]	
Case filling	■ Glycerine ■ Glycerine-water mixture for scale range ≤ 0 ... 2.5 bar [≤ 0 ... 40 psi] ■ Silicone oil	
Movement	Copper alloy	

1) Only for back mount
2) Only for NS 63 [2 ½"] and NS 100 [4"], back mount
3) Only for NS 63 [2 ½"]
4) Only for NS 63 [2 ½"] and NS 100 [4"]

Measuring element		
Type of measuring element	Bourdon tube, C-type or helical type	
Material		
NS 50 [2"]	≤ 600 bar	Copper alloy
	> 600 bar	Stainless steel 316L
NS 63 [2 ½"], NS 100 [4"]	≤ 400 bar	Copper alloy
	> 400 bar	Stainless steel 316L
Leak tightness	Leakage rate: $< 5 \cdot 10^{-3}$ mbar l/s	