

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Bourdon Tube Pressure Gauges

with type designation(s)

212.20, 213.40, 213.53, 232.30, 232.50, 233.30, 233.50, 262.30, 262.50, 263.30 and 263.50

Issued to

WIKA Alexander Wiegand SE & Co. KG
Klingenberg a. Main, Bayern, Germany

is found to comply with

DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Temperature range: see certificate

Max. working press.: see certificate

Sizes: see certificate

Issued at **Hamburg** on **2021-04-14**

This Certificate is valid until **2026-04-13**.

for **DNV**

DNV local station: **Augsburg**

Approval Engineer: **Ana Cristina Do Carmo Insfran**

Olaf Drews
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

Bourdon tube pressure gauges. Accuracy and technical conformity according to EN 837-1.

Technical data:

MODEL 213.53 - STAINLESS STEEL CASE WITH LIQUID FILLING

Nominal size	50, 63 and 100 mm
Design standard	acc. to EN 837-1
Accuracy class	1.6 / 1.0 acc. to EN 837-1
Protection	IP65 acc. to EN 60 529
Scale ranges	acc. to EN 837-1 or other equivalent units / pressure or vacuum
Operating temperature	-20°C to 60°C (ambient), max. 60°C (medium)
Working pressure (50 and 63 mm)	3/4 of full-scale value (steady), 2/3 of full-scale value (fluctuating), full-scale value (short time)
Working pressure (80 and 100 mm)	Full-scale value (steady), 0.9 x full-scale value (fluctuating), 1.3 x full scale value (short time)
Pressure elements	Cu-alloy, stainless steel, acc. to manufacturer's specification

MODEL 212.20 - INDUSTRIAL SERIES

Nominal size	100 and 160 mm
Design standard	acc. to EN 837-1
Accuracy class	1.0 acc. to EN 837-1
Protection	IP54 acc. to EN 60 529
Scale ranges	acc. to EN 837-1 or other equivalent units / pressure or vacuum
Operating temperature	- 40°C up to 80°C (ambient) max. 80°C (medium)
Working pressure	full scale value (steady), 0.9 x full scale value (fluctuating), 1.3 x full scale value (short time)
Pressure elements	Cu-alloy, stainless steel acc. to manufacturer's specification

MODEL 232.30, 232.50, 262.30, 262.50 - PROCESS INDUSTRY SERIES

Nominal size	63, 100 and 160 mm
Design standard	acc. to EN 837-1
Accuracy class	1.6 / 1.0 acc. to EN 837-1
Protection	IP54 acc. to EN 60 529
Scale ranges	acc. to EN 837-1 or other equivalent units / pressure or vacuum
Operating temperature	- 40°C up to 60°C (ambient), max. 200°C (medium)
Working pressure (63 mm)	3/4 of full-scale value (steady), 2/3 of full-scale value (fluctuating), full-scale value (short time)
Working pressure (100 and 160 mm)	Full-scale value (steady), 0.9 x full-scale value (fluctuating), 1.3 x full-scale value (short time)
Pressure elements	stainless steel or nickel-copper alloy acc. to manufacturer's specification

MODEL 213.40 - FORGED BRASS CASE WITH LIQUID FILLING

Nominal size	63 and 100 mm
Design standard	acc. to EN 837-1
Accuracy class	1.6 / 1.0 acc. to EN 837-1
Protection	IP65 acc. to EN 60 529
Scale ranges	acc. to EN 837-1 or other equivalent units / pressure or vacuum
Operating temperature	-20°C up to 60°C (ambient), max. 60 °C (medium)
Working pressure (63 mm)	3/4 of full-scale value (steady), 2/3 of full-scale value (fluctuating), full-scale value (short time)
Working pressure (100 mm)	Full-scale value (steady), 0.9 x full-scale value (fluctuating), 1.3 x full-scale value (short time)
Pressure elements	Cu-alloy, stainless steel acc. to manufacturer's specification

MODEL 233.30, 233.50, 263.30, 263.50 - PROCESS INDUSTRY SERIES WITH LIQUID FILLING

Nominal size	63, 100 and 160 mm
Design standard	acc. to EN 837-1
Accuracy class	1.6 / 1.0 acc. to EN 837-1
Protection	IP65 acc. to EN 60 529
Scale ranges	acc. to EN 837-1 or other equivalent units / pressure or vacuum
Operating temperature	-20°C up to 60°C (ambient), max. 100°C (medium)
Window material	NS 63: Polycarbonate / NS 100, 160: laminated glass
Operating temperature	-20°C up to 60°C (ambient), max. 150°C (medium)
Window material	Makrolon 2807, Polycarbonate
Working pressure (63 mm)	3/4 of full-scale value (steady), 2/3 of full-scale value (fluctuating), full-scale value (short time)
Working pressure (100 and 160 mm)	Full-scale value (steady), 0.9 x full-scale value (fluctuating), 1.3 x full-scale value (short time)
Pressure elements	stainless steel or nickel-copper alloy acc. to manufacturer's specification

Application

The above specified pressure gauges are approved and may be used in piping systems on ships, offshore units and other structures classed by DNV.

Operating media:

For gaseous and liquid media that will not obstruct the pressure system or attack copper alloy and stainless-steel parts.

Note 1:

The selection of the pressure gauges for the corresponding service conditions (pressure, temperature, type of flowing media) as well as the proper assembly and installation is to be carried out in accordance with the instructions of the manufacturer.

Limitation

The measuring range 2.5 [bar] and less of the model 212.20 may not be used for adverse conditions where pulsation or vibration exist.

Type Approval documentation

Tests carried out

Functional test

Marking of product

For traceability to this type approval certificate the products are to be marked in accordance with EN 837-1:

- Model name
- Individual serial number
- Manufacturer's trademark
- Pressure range
- Pressure unit
- Accuracy class
- DNV Mark on product or packing

Place of Manufacturing

The Type Approval Certificate covered by this certificate for above listed pressure gauge types has been confirmed with additional DNV manufacturer's audit for the following place of manufacturing:

WIKA Polska spółka z ograniczoną odpowiedzialnością sp. k.

Łęgska 29/35

87-800 Włocławek

Products type designed: 213.53, 212.20, 213.40

WIKA Polska spółka z ograniczoną odpowiedzialnością SGF sp. k.

ul. Kawka 6

87-800 Włocławek

Products type designed: 232.30, 232.50, 262.30, 262.50, 233.30, 233.50, 263.30, 263.50

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the Type Approval are complied with Refer to DNVGL-CP-0338, Sec.4.

The certificate is only valid if required periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>

END OF CERTIFICATE