



PROFACTOR®
DER DEUTSCHE QUALITÄTSSTANDARD

EN

TECHNICAL DATA SHEET AND USER MANUAL



PRODUCT CODE

PF SG 861-6
PF SG 861-10
PF SG 861-16
PF SG 862-6
PF SG 864

PRESSURE GAUGES

1. PURPOSE AND SCOPE

PROFACTOR® pressure gauges are designed for measuring the pressure of liquid and gaseous media that are moderately viscous and non-crystallizing, and non-aggressive to copper alloys, in water supply, heating, and cooling systems. The pressure of the medium to be measured must not exceed the maximum value indicated on the gauge scale.

2. TECHNICAL SPECIFICATIONS

Connection thread, G: 1/4"M

Connection type:

PF SG 861, 862 — radial

PF SG 864 — axial

Continuous pressure: 75% of the maximum scale value

Fluctuating pressure: 65% of the maximum scale value

Short-term pressure: 110% of the maximum scale value

Accuracy class: 2.5 (according to EN 837-1)

Protection class: IP31

Medium temperature: up to +80°C

Ambient temperature: -20°C to +60°C

Scale range:

Product Code	PF SG 861-6	PF SG 861-10	PF SG 861-16	PF SG 862-6	PF SG 864
Scale range	0 – 6	0 – 10	0 – 16	0 – 6	

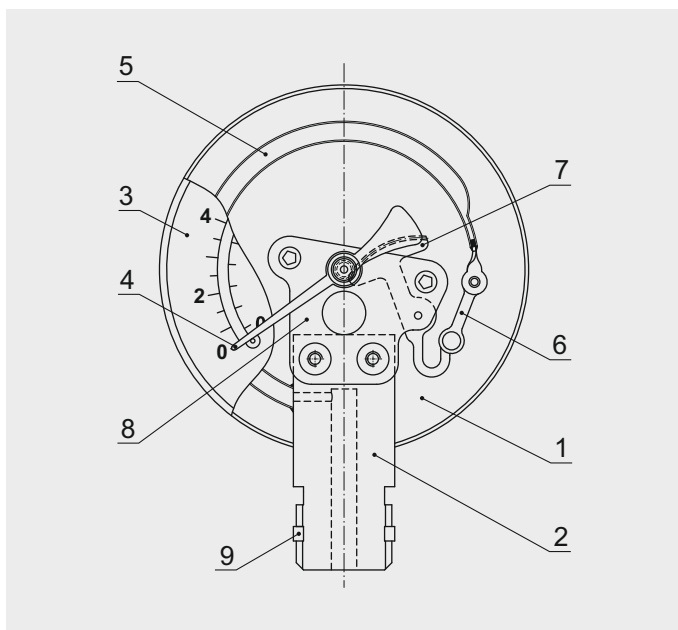
3. DESIGN

All PROFACTOR® pressure gauges are in an accordance with DIN EN 837-1. The connection thread is an accordance with ISO 228-1 and DIN 259.

The main measuring element of the pressure gauge is the Bourdon tube (5) — a circularly bent hollow tube with an oval cross-section.

The pointer face is black, while the dial face is white. All PROFACTOR® pressure gauges feature dual scales for reading the measured pressure: black for (bar) and red for (psi).

The entire mechanism of the pressure gauge is mounted inside the housing (1) and protected by an acrylic front cover.



1 – Housing

2 – Connection fitting

3 – Dial with scale

4 – Pointer

5 – Bourdon tube

6 – Link

7 – Gear segment

8 – Support plate

9 – Sealing ring

4. MATERIALS

Housing (1) — Steel, black enamel coated

Connection fitting (2), Link (6), Gear segment (7) — Brass CW614N (DIN EN 12165)

Dial (3), Pointer (4) — Aluminum

Bourdon tube (5) — Copper alloy

Support plate (8) — Steel

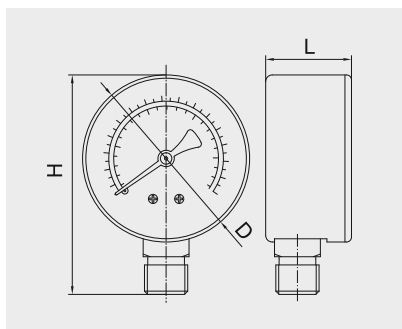
Sealing ring (9) — PTFE

5. OPERATING PRINCIPLE

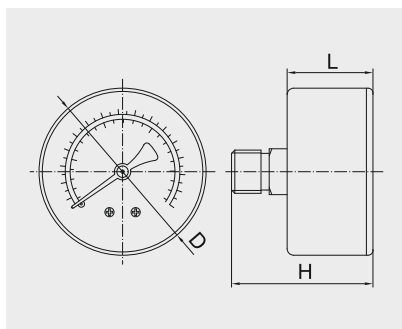
The pressure of the measured medium acts on the inner side of the Bourdon tube, causing the oval cross-section of the tube to become more circular. This deformation generates circumferential stresses that tend to straighten the Bourdon tube. As a result, the free end of the tube moves in proportion to the applied pressure and pulls the connecting link, which in turn rotates the gear segment. The gear segment drives the pointer shaft mechanism, causing the pointer to move and indicate the system pressure on the dial.

6. NOMENCLATURE AND DIMENSIONS

Pressure gauge with radial connection
PF SG 861 and PF SG 862:



Pressure gauge with axial connection
PF SG 864:



Product Code	PF SG 861	PF SG 862	PF SG 864
D, mm	53		
H, mm	69	70	44
L, mm	28	27,5	25,5
Weight, g	62	65	59

7. INSTALLATION INSTRUCTIONS

Before installing the pressure gauge, the pipeline must be cleaned of scale and rust. Heating systems, heat supply systems, internal cold and hot water supply systems, and boiler pipelines must be flushed with water after installation until the water runs clear and free of mechanical impurities.

Pressure gauges must be installed in locations protected from atmospheric precipitation. The instruments must be mounted in the same position in which they were calibrated. Before and during installation, the gauges should be protected from shocks and vibrations. They must be installed in easily accessible locations with good visibility of the dial. It is recommended to install a shut-off valve in front of the pressure gauge.

The upper limit of the gauge scale should exceed the maximum working pressure of the equipment by 25% to 100%.

Installation is carried out by screwing the pressure gauge into the corresponding mounting socket. Use the square fitting provided on the connection stem and a spanner wrench SW14. Do not apply force to the housing of the pressure gauge! No additional sealing materials are required, as the connection fitting is equipped with a special sealing ring.

If the pressure gauge is to be used under vibration conditions or with medium temperatures exceeding +80°C, the connection to the pipeline should be made remotely, using impulse tubes or diaphragm seals.

After installation, check all joints for tightness under the maximum working pressure.

8. OPERATING AND MAINTENANCE

The pressure gauge must be operated without exceeding the temperature and maximum pressure (scale upper limit) specified in paragraph 2. It is recommended to increase pressure gradually and avoid sudden pressure surges.

Installation, removal, repair, or adjustment of the device must be carried out only when the system is depressurized. Allow the equipment to cool down to ambient temperature before servicing.

During operation, regular inspections, calibrations, and technical tests must be performed in accordance with the rules and standards established by the operating organization.

To prevent excessive heating, protect the gauge from direct sunlight during operation.

All installation, removal, and repair operations must be carried out only by qualified personnel with appropriate training.

9. WARRANTY OBLIGATIONS

The warranty period is 12 months from the date of sale to the end consumer. Throughout the entire warranty period, the manufacturer guarantees the proper functioning of the product and its compliance with safety requirements, provided that the consumer follows the rules for storage, transportation, installation, operation, and maintenance of the product. The warranty covers all defects arising through the manufacturer's fault.

The warranty does not cover defects resulting from:

- Violation of storage, transportation, installation, operation, or maintenance conditions;
- Exposure to substances aggressive to the materials of the product;
- Signs of mechanical damage;
- Damage caused by fire, natural disasters, or other force majeure circumstances;
- Damage caused by improper actions of the user;
- Evidence of unauthorized interference with the product design.

The product described in this technical manual is a technically complex device that must be installed by a qualified specialist with appropriate experience working with this type of equipment.

Installation and commissioning must be carried out by an authorized and certified company.

Profactor Armaturen GmbH reserves the right to make changes to the product design that do not affect its technical characteristics or functional features.



INTERNATIONAL WARRANTY CARD

NAME OF THE PRODUCT

PRODUCT CODE, SIZE

QUANTITY

SELLER NAME AND ADDRESS

DATE OF PURCHASE

SELLER STAMP

SELLER SIGNATURE

For the warranty term refer to the Warranty obligation clause in the technical manual

FOLD LINE

FOLD LINE

In case of any claims to the product quality the following documents should be submitted:

1. Application with customer and product details:

- Name of the customer, actual address and phone number
- Article of the product
- Reason for the claim and photo
- Plumbing system where installed (name, address, phone number)

2. Invoice copy and receipt

3. Warranty card

RETURN/EXCHANGE COMMENTS

DATE

SIGNATURE



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