



PROFACTOR®
DER DEUTSCHE QUALITÄTSSTANDARD

EN

TECHNICAL DATA SHEET AND USER MANUAL



PRODUCT
CODE

PF PRV 257.15
PF PRV 257.20

**PISTON-TYPE
PRESSURE REDUCING VALVE**

1. PURPOSE AND SCOPE

The PROFACTOR® PF PRV 257 piston-type pressure reducing valve is designed to reduce pressure in domestic and industrial water supply systems. It maintains a constant outlet pressure (adjustable) in both dynamic and static modes, independent of inlet pressure fluctuations. The valve is used in small individual systems and boilers, where compact dimensions and low noise levels are important.

2. TECHNICAL SPECIFICATIONS

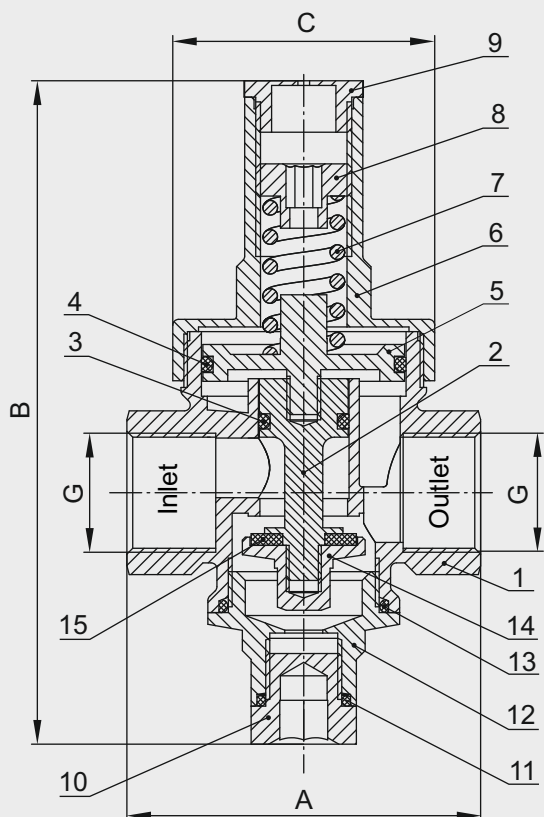
Product Code	PF PRV	257.15	257.20
Nominal size	DN	15	20
	G	1/2"	3/4"
Maximum inlet working pressure, PN	bar	16	
Maximum operating temperature	°C	80	
Adjustable outlet pressure range	bar	1 – 6	
Factory preset outlet pressure (at 8 bar inlet pressure)	bar	3±0,15	
A	mm	60,5	65,5
B	mm	115	
C	mm	44,5	
Weight	g	430	465

3. DESIGN

All cylindrical pipe threads are in accordance with ISO 228-1:2000, DIN 259.

Inside the valve body, there is a movable piston (2). On one side of its axis, a piston plate (5) is fixed, and on the other side — the valve (14).





- | | |
|------------------------|-------------------------|
| 1 – Body | 9 – Protective cap |
| 2 – Piston | 10 – End plug |
| 3 – Small sealing ring | 11 – End plug gasket |
| 4 – Large sealing ring | 12 – Drain screw |
| 5 – Piston plate | 13 – Drain screw gasket |
| 6 – Body cover | 14 – Valve |
| 7 – Spring | 15 – Valve gasket |
| 8 – Adjusting sleeve | |

4. MATERIALS

Reducer body (1), Cover (6), Protective cap (9), End plug (10), Drain screw (12)

— Brass CW617N (DIN EN 12165), nickel-plated surfaces

Movable piston (2), Piston plate (5), Valve (14), Adjusting sleeve (8)

— Brass CW617N (DIN EN 12165)

Spring (7) — Stainless steel AISI 304 (DIN EN 10088)

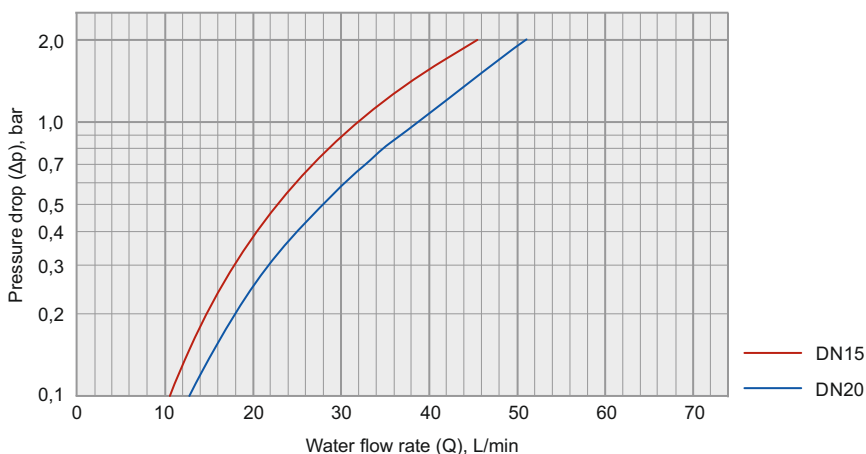
Sealing elements (3, 4, 11, 13, 15) — Ethylene propylene rubber (EPDM)

5. OPERATING PRINCIPLE

When water enters the inlet chamber, it exerts equal force on both the valve (14) and the lower surface of the piston. The spring (7) keeps the valve open until the water pressure in the outlet chamber, acting on the upper piston plate (5), becomes equal to the preset value.

At that moment, the valve partially closes the passage between the chambers, increasing local resistance and thereby reducing the outlet pressure to the desired level. By means of the adjusting sleeve (8), the pressure reducer can be readjusted to a required outlet pressure different from the factory preset setting.

6. HYDRAULIC CHARACTERISTICS



7. ADJUSTMENT

All reducers are factory-set to an outlet pressure of 3 bar at an inlet pressure of 8 bar.

The adjustment can be performed without disassembling the reducer. Before adjustment of an installed unit, it is recommended to open as many water outlets as possible to remove air from the reducer. Adjustment must be carried out at zero flow rate, meaning all water outlets must be closed.

A calibrated pressure gauge should be installed on the pipeline between the reducer and the shut-off valve using a special T-fitting or boss.

When all water outlets are closed, the gauge will display the outlet pressure at zero flow.

To adjust the pressure:

- Unscrew the protective cap (9).
- Using a hex key, rotate the adjusting sleeve (8) to set the desired outlet pressure. Turn clockwise to increase pressure, turn counterclockwise to decrease pressure.
- After adjustment, reinstall the protective cap.

8. INSTALLATION INSTRUCTIONS

The reducer can be installed in any position, but the direction of water flow must correspond to the arrow marked on the body.

When using thread-sealing materials (PTFE-tape, polyamide thread, or flax), ensure that excess material does not enter the inlet chamber, as this may cause debris to reach the valve seat and impair the reducer's operation.

A coarse filter must be installed upstream of the pressure reducer.

The reducer must be positioned to allow easy access for adjustment and maintenance.

Pressure reducers must be operated within the pressure and temperature limits specified in this manual.

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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