



PROFACTOR®
DER DEUTSCHE QUALITÄTSSTANDARD

EN

TECHNICAL DATA SHEET AND USER MANUAL



PRODUCT
CODE

PF PRV 255
PF PRV 256

**PISTON-TYPE PRESSURE
REDUCING VALVE "STRONG"**

1. PURPOSE AND SCOPE

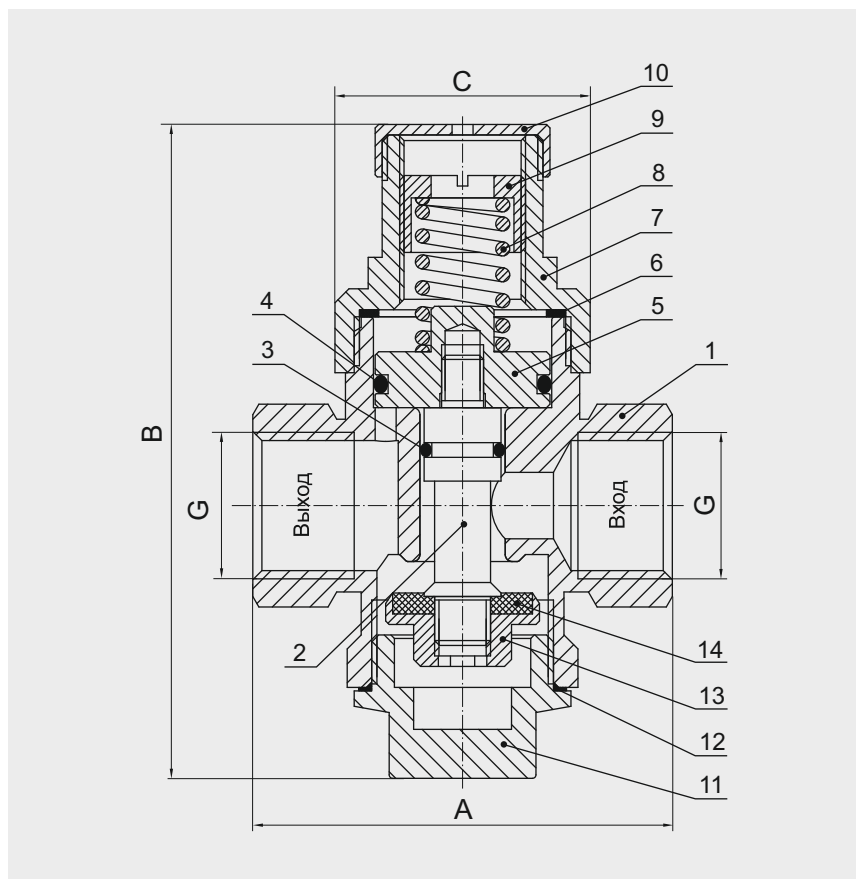
The “STRONG” piston-type pressure reducing valve is designed to reduce pressure in domestic and industrial water supply systems.

The reducer maintains a constant preset outlet pressure (adjustable as required) under both dynamic and static operating conditions, regardless of fluctuations in the inlet pressure.

2. TECHNICAL SPECIFICATIONS

Product Code	PF PRV	255	256
Nominal size	DN	15	20
	G	1/2"	3/4"
Maximum Inlet Working Pressure, PN	bar	16	
Maximum Operating Temperature	°C	80	
Maximum Pressure Reduction Ratio	—	1:8	
Adjustable Outlet Pressure Range	bar	1 – 6	
Factory Preset Outlet Pressure	bar	3	
Flow Capacity at 1.0 bar Differential Pressure, Kvs	m³/h	0,8	0,9
A	mm	93,5	
B	mm	60	62
C	mm	36,5	
Weight	g	437	485
Average Service Life	years	15	

3. DESIGN



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

The reducer body (1), cover (7), protective cap (10), and plug (11) are made of high-quality brass grade CW617N (according to European standard EN 12165) by casting, forging, and turning, with nickel-plated external surfaces.

Inside the body, there is a movable piston (2) with a valve (13) mounted on the same axis. These parts, as well as the adjusting sleeve (9), are made of the same brass grade using turning processes. The spring (8) is made of stainless steel grade AISI 304. The valve gasket (14), plug gasket (12), and both the small (3) and large (4) sealing rings are made of wear-resistant nitrile butadiene rubber (NBR).

4. PRINCIPLE OF OPERATION

When water enters the inlet chamber, it exerts equal force on the valve (13) and on the lower surface of the piston (2). The elastic force of the spring (8) keeps the valve open until the water pressure in the outlet chamber, acting on the upper piston plate (5), reaches the preset value.

At this point, the valve begins to close the passage between the chambers, increasing local resistance and reducing the outlet pressure to the specified level. By means of the adjusting sleeve (9), the pressure reducer can be readjusted to achieve an outlet pressure different from the factory setting.

5. PRESSURE ADJUSTMENT

All reducers are factory-set to an outlet pressure of 3 bar. Adjustment of the reducer can be carried out without disassembly. Before adjusting a reducer installed in the system, it is recommended to open as many water draw-off points as possible to remove air from the reducer.

Adjustment should be performed at zero flow rate, i.e. when all water draw-off valves in the system are closed. In the pipeline section between the reducer and the shut-off valve, a calibrated pressure gauge should be installed using a special tee or fitting. When all draw-off valves are closed, the pressure gauge will indicate the outlet pressure at zero flow.

To adjust the setting:

- Unscrew the protective cap (10).
- Using a screwdriver, turn the adjusting sleeve (9) to set the desired pressure. Turning clockwise increases the outlet pressure, while turning counterclockwise decreases it.
- After adjustment, reinstall the protective cap.

6. INSTALLATION INSTRUCTIONS

The pressure reducer may be installed in any position, however, the direction of water flow must correspond to the arrow indicated on the body.

When using sealing materials (such as PTFE-tape, polyamide thread, or flax fiber), make sure that excess material does not enter the inlet chamber of the reducer. Ingress of sealing material into the valve seat may cause malfunction or failure of the device.

The maximum tightening torque during installation must not exceed the following values: PF PRV 255 — 25 Nm; PF PRV 256 — 35 Nm

A coarse filter must be installed upstream of the reducer. The installation position should allow for easy adjustment and maintenance of the device.

7. OPERATION AND MAINTENANCE

The pressure reducers must be operated under the temperature and pressure conditions specified in this passport.

Maintenance of the reducer consists of periodic replacement of the small and large sealing rings. The need for replacement is indicated by a gradual increase in outlet pressure above the set value when all draw-off valves are fully closed. In this case, close the inlet valve, drain the water from the system (or the section where the reducer is installed), and replace the sealing rings and valve gasket. After replacement, the reducer must be re-adjusted to the required outlet pressure.

8. POSSIBLE MALFUNCTIONS AND TROUBLESHOOTING

Malfunction	Possible Cause	Corrective Action
In static mode, the pressure slowly rises above the set value	Wear of the small sealing ring	Replace the ring (3) $\varnothing 12 \times 2 \text{ mm}$
	Wear of the large sealing ring	Replace the ring (4) $\varnothing 26 \times 2,6 \text{ mm}$
	Wear of the valve gasket	Replace the gasket (14)
Leakage from under the protective cap	Wear of the large sealing ring	Replace the ring (4) $\varnothing 26 \times 2,6 \text{ mm}$
Leakage from under the plug	Damage to the plug gasket	Replace the gasket (12)

9. WARRANTY OBLIGATIONS

The warranty period is 24 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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