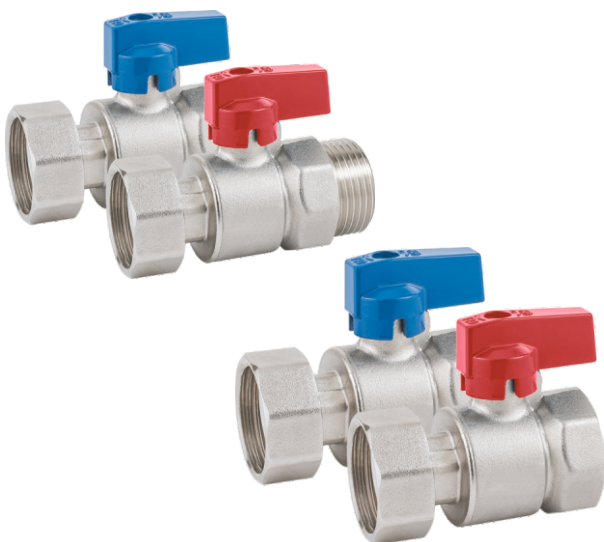




PROFACTOR®
DER DEUTSCHE QUALITÄTSSTANDARD

EN

TECHNICAL DATA SHEET AND USER MANUAL



PRODUCT
CODE

PF MB 853.25
PF MB 854.25

**BALL VALVE WITH UNION NUT
FOR MANIFOLD GROUPS**

1. PURPOSE AND SCOPE

The ball valve with union nut for manifold groups is used as a shut-off device in pipelines of potable, domestic, and industrial systems, including hot water supply, heating, compressed air, and liquid hydrocarbons, as well as in technological pipelines carrying liquids non-aggressive to the valve materials.

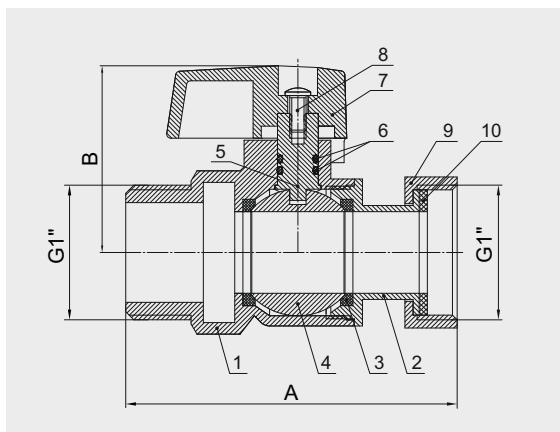
The union-nut ball valve allows the creation of easily detachable assemblies in plumbing and pipeline systems. Each product set is supplied with two valves — one with a red handle and one with a blue handle.

2. TECHNICAL SPECIFICATIONS

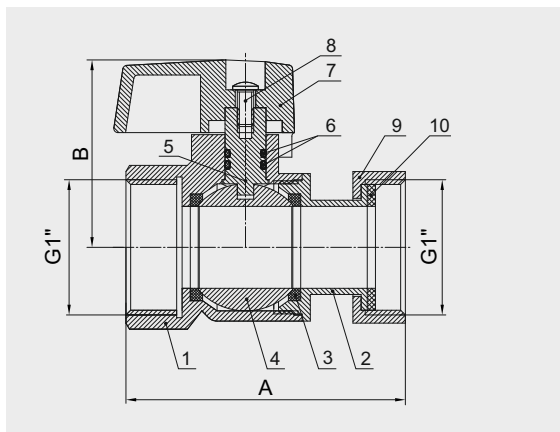
Product Code	PF MB	853.25	854.25
Nominal size	DN	25	
	G	1"	
Nominal pressure, PN	bar	25	
Operating medium temperature	°C	–20 °C to +120 °C	
Valve tightness class	—	“A”	
A	mm	86	71
B	mm	46	46
Weight	g	400	320
Average operating life	cycles	30 000	
Average service life	years	30	

3. DESIGN

Ball valve with union nut, F/M (PF MB 853.25):



Ball valve with union nut, F/F (PF MB 854.25):



- | | |
|---------------------|------------------------|
| 1 – Body | 6 – Stem sealing rings |
| 2 – Body bushing | 7 – Handle |
| 3 – Ball seat rings | 8 – Fixing screw |
| 4 – Ball | 9 – Union nut |
| 5 – Stem | 10 – Union gasket |

The body (1) is a tube with an internal cylindrical connection thread 1" on one end for item PF MB 854.25, and an external thread for item PF MB 853.25. It also has an internal metric thread on the opposite end for screwing in the body bushing (2), and a lateral top outlet for the valve stem (5). The connection between the body (1) and the bushing (2) is secured using a polymer anaerobic adhesive that is WRAS-approved (permitted for use in potable water systems).

The body bushing is connected to the pipeline by means of a nickel-plated brass union nut (9). The gasket (10) ensures the tightness of the connection between the bushing and the pipeline. This type of joint does not require any additional sealing materials. A valve of this design forms an easily detachable assembly, which is highly convenient for installation and maintenance.

The body (1), body bushing (2), and union nut (9) are made of brass CW617N (in accordance with DIN EN 12165:2011), with nickel-plated surfaces.

The valve's shut-off mechanism consists of a chrome-plated brass ball (4) operated by a vertical brass stem (5) and sealed with PTFE ball seats (3). The ball seats (3) are made of high-temperature-resistant fluoroplastic (PTFE – polytetrafluoroethylene). The stem sealing is provided by two O-rings (6).

The non-blowout stem is inserted from inside the valve body (1) and is secured by a retaining flange. The ball (4) and stem (5) are made of brass CW614N (DIN EN 12165:2011). The ball has chrome-plated surfaces, and the retaining ring is nickel-plated.

A handle (7) made of aluminum with a painted coating DIN EN 1676:2010 is attached to the stem using a fixing screw (8) made of structural steel S235JR (DIN EN 10025-2005).

The sealing elements (6, 10) are made of ethylene propylene rubber (EPDM).

All cylindrical pipe threads are in an accordance with ISO 228-1:2000, DIN 259, and all metric threads are in an accordance with ISO 261:1998.

4. OPERATING PRINCIPLE

Flow shut-off is performed by turning the handle 90° clockwise.

5. INSTALLATION INSTRUCTIONS

The valve can be installed in any mounting position. The valve must not be subjected to loads from the pipeline, such as bending, compression, tension, torsion, misalignment, vibration, or uneven tightening of fasteners. If necessary, supports or compensators must be provided to reduce the load transferred from the pipeline to the valve.

The misalignment of connected pipelines must not exceed 3 mm per meter of length, plus 1 mm for each additional meter.

Sealing of threaded connections must be performed using PTFE-tape (fluoropolymer sealing material – polytetrafluoroethylene), polyamide thread with silicone, flax with special pastes, or other sealing materials that ensure joint tightness at the design temperature and pressure of the working medium, and which are approved for use according to established procedures.

After installation, sanitary system assemblies must be tested for leaks. They must be subjected to hydrostatic (hydraulic) or bubble (pneumatic) testing.

6. OPERATING AND MAINTENANCE

The valve must be operated without exceeding the pressure and temperature limits specified in the Technical Specifications table. Operation with a loosened handle fixing screw is not permitted, as this may damage the stem tailpiece.

The valve is not recommended for use in media containing abrasive particles, as this may reduce the service life. When used in systems transporting media with a high content of mechanical impurities, an additional filter should be installed upstream of the valve.

To ensure long-term reliable operation, it is recommended to open and close the valve once a month as part of preventive maintenance.

7. 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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