Profactor Armaturen GmbH

EN

PROFACTOR®
DER DEUTSCHE QUALITÄTSSTANDARD

TECHNICAL DATA SHEET AND USER MANUAL

PRODUCT CODE

PF UBV 278
PF UBV 279
PF UBV 280
PF UBV 281

BALL VALVE "STRONG" WITH UNION NUT

1. PURPOSE AND SCOPE

The PROFACTOR® STRONG ball valve with union nut is used as shut-off equipment on pipelines for drinking water, domestic, and industrial applications, hot water supply, heating, compressed air, liquid hydrocarbons, as well as on process pipelines conveying fluids that are non-corrosive to the valve materials. The valve with a union nut enables the creation of easily detachable connections in pipeline plumbing systems.

PROFACTOR® STRONG valves are designed for installation in plumbing systems requiring the highest category of reliability: high-rise buildings, main pipelines with elevated nominal pressure, and special-purpose facilities.

2. TECHNICAL SPECIFICATIONS

Table 1

Parameter	Value	Standard
Nominal Size (DN)	DN15 – DN32	ISO 6708
Connection Thread (G)	1/2" – 1¼"	ISO 228/1, DIN 259
Nominal Pressure (PN), бар	25 – 64 (see Table 3)	—
Operating Temperature, °C	–30°C to +120°C (see chart)	—
Seat Tightness Class	“A”	—
Effective Diameter Ratio (Valve Bore to Pipe Bore)	>95 Full bore valve	—
Average Service Life (cycles)	40 000	—
Repairability	Repairable	IEC 60050 (191):1990-12, NEQ
Average Service Life (years)	40	—

The valves are in an accordance with DIN EN 13828.

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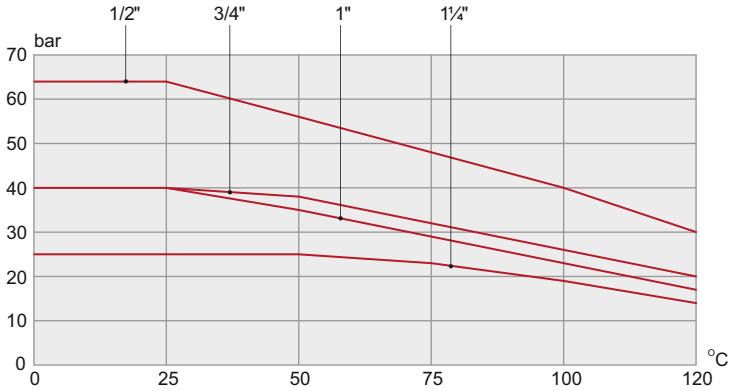
Chart of Maximum Working Pressure vs. Temperature:



3. DESIGN

The valve body is made of two nickel-plated brass parts (1) and (2), connected by a thread secured with an anaerobic polymer adhesive that has WRAS approval (approved for contact with potable water).

The nickel-plated brass union (12) is connected to the body via a nickel-plated brass union nut (11). An O-ring (10) ensures the seal of this connection. This design results in an easily detachable assembly, which is very convenient for installation and operation.

The valve's shut-off mechanism consists of a chrome-plated brass ball (4), actuated by a vertical nickel-plated brass stem (5). The seal seats use PTFE rings (3). The valve stem is non-rising, as it is inserted from inside the body (1) and features a positive stop shoulder. A PTFE stem packing (6), tightened by a nickel-plated threaded gland (7), ensures stem sealing. The handle (8) is attached to the stem using a self-locking nut (9) with a nylon insert and has a special provision for sealing/tamper-proofing. A blue or red silicone cap (13) is placed over the nut. The handle is aluminum with a paint coating.

Flow shut-off is achieved by turning the handle 90° clockwise. For better grip of the thread sealing material during installation, the external connecting thread of the valve union has knurling.

A design feature of the valve is the presence of special thickened sections on the body at points of increased mechanical stress, which ensures the integrity of the product during installation and operation.

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Ball Valve "STRONG" with Union Nut

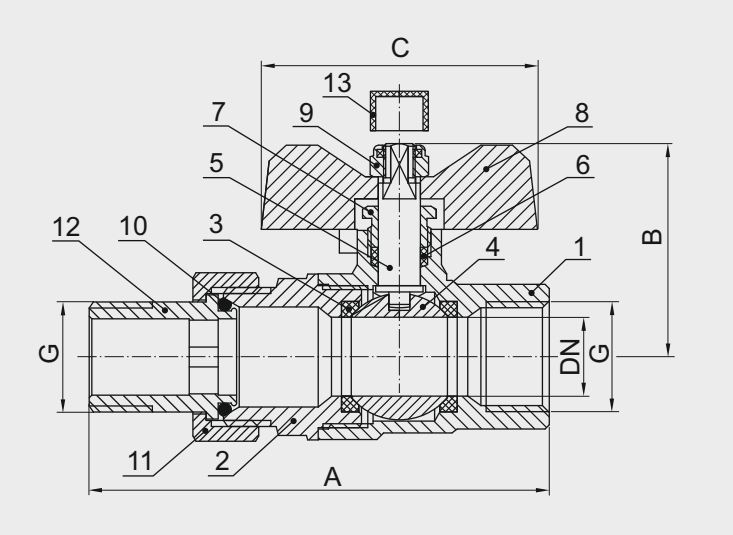

Table 2

Pos.	Name	Material	Standard
1	Body	Brass CW617N	DIN EN 12165
2	Body Insert	Brass CW617N	DIN EN 12165
3	Ball Seat Rings (O-rings)	PTFE	FDA21 CFR177.1550
4	Ball	Brass CW614N	DIN EN 12165
5	Stem	Brass CW614N	DIN EN 12165
6	Stem Packing	PTFE	FDA21 CFR177.1550
7	Gland Nut	Brass CW614N	DIN EN 12165
8	Handle	Aluminum Al	DIN EN 1676
9	Handle Nut	Stainless Steel AISI 304	DIN 985, ISO 10511
10	Union O-ring	EPDM	DIN ISO 3601
11	Union Nut	Brass CW617N	DIN EN 12165
12	Union	Brass CW617N	DIN EN 12165
13	Colored Cap	Silicone Rubber	—

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4. NOMENCLATURE AND DIMENSIONS

Table 3

Product Code	DN	G	PN, bar	A, mm	B, mm	C, mm	Weight, g
PF UBV 278	15	1/2"	64	87,5	40,5	52,5	288
PF UBV 279	20	3/4"	40	101,5	50,5	63	470
PF UBV 280	25	1"	40	120	54	63	750
PF UBV 281	32	1¼"	25	137	62,5	74,5	1010

5. INSTALLATION INSTRUCTIONS

The valve may be installed in any orientation. The valve must not be subjected to loads from the pipeline (bending, compression, tension, torsion, misalignment, vibration, pipe misalignment, uneven tightening of fasteners). If necessary, supports or compensators must be provided to reduce the load on the valve from the pipeline.

The misalignment of the connected pipelines must not exceed 3 mm for lengths up to 1 m, plus 1 mm for each subsequent 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. OPERATION AND MAINTENANCE

The valve must be operated without exceeding the pressure and temperature specified in p. 2. Operating the valve with a loose handle attachment nut is not permitted, as this may damage the stem end.

Using the valve in media containing abrasive components is not recommended, as this may shorten its service life. Therefore, if the valve is used in systems conveying media with a high content of mechanical impurities, the installation of additional filtering equipment upstream is required.

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For proper long-term operation, it is recommended to operate (open/close) the valve once a month as a preventive measure.

If a minor leak occurs from the stem seal under the handle during operation, the handle must be removed, and the gland packing nut must be tightened until the leak stops.

7. WARRANTY OBLIGATIONS

The warranty period is 120 months (10 years) 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.

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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 detailes:
- 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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