



PROFACTOR®
DER DEUTSCHE QUALITÄTSSTANDARD

EN

TECHNICAL DATA SHEET AND USER MANUAL



PRODUCT CODE

PF BYS 330
PF BYS 330W
PF BYS 331
PF BYS 331W
PF BYS 332
PF BYS 332W

**BALL VALVE
WITH STRAINER**

1. PURPOSE AND SCOPE

The ball valve with strainer combines the functions of a standard ball valve and a Y-type strainer, integrating both components into a single unit.

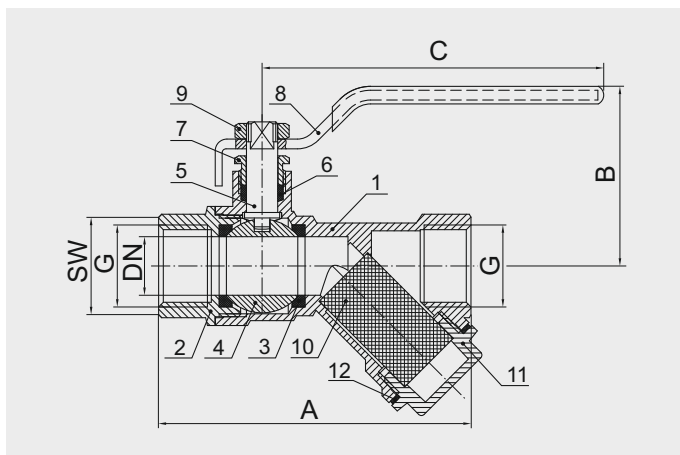
This valve is used as a shut-off device in pipelines for potable water systems, domestic and industrial applications, hot water supply, heating systems, compressed air, liquid hydrocarbons, and in process pipelines that transport fluids non-aggressive to the valve materials. It also serves to filter the working medium flow from mechanical impurities. Most commonly, such valves are installed at the inlet of cold and hot water supply lines in residential apartments.

2. TECHNICAL SPECIFICATIONS

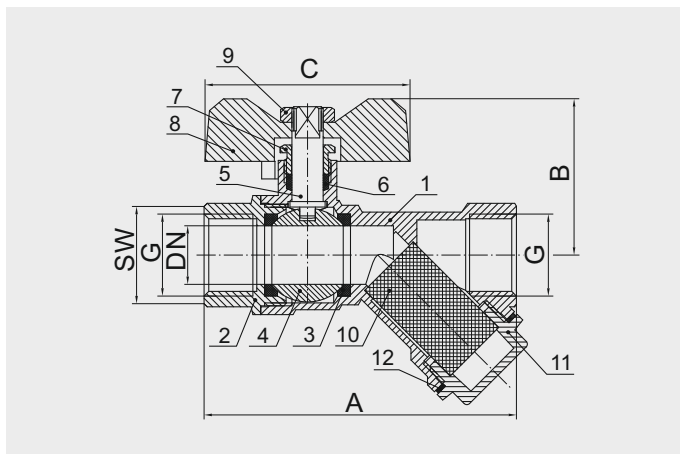
Product Code	PF BYS	330	331	332	330W	331W	332W
Handle type	—	lever handle			butterfly handle		
Nominal size	DN	15	20	25	15	20	25
	G1	1/2"	3/4"	1"	1/2"	3/4"	1"
Nominal (rated) pressure PN	bar	20					
Mesh size (filtration grade)	mm	400					
Operating medium temperature	°C	– 20°C to +120°C					
Flow capacity (Kvs at $\Delta p = 1$ bar)	m³/h	4,0	6,0	8,0	4,0	6,0	8,0
Average service life	cycles	30 000					
A	mm	80	92	107	80	92	107
B	mm	43	46	55	37	40,5	51,5
C	mm	87,5		104	52,5		63
Weight	g	273	450	650	256	434	626
Average service life	years	30					

3. DESIGN

Handle – lever



Handle – butterfly



1 – Body

2 – Body bushing

3 – Ball seat rings

4 – Ball

5 – Stem

6 – Stem packing

7 – Thrust sleeve

8 – Handle (lever or butterfly)

9 – Handle fixing nut

10 – Strainer element

11 – Inspection plug

12 – Plug gasket

The product consists of a ball valve and a Y-type strainer, mounted together in a single body. The body (1) is a pipe with an internal cylindrical thread (1/2") on one end, an internal metric thread for screwing in the bushing (2) on the other end, and two branches: one for the valve stem (5) and another for the strainer element (10).

The connection between the body (1) and bushing (2) is fixed using a polymer anaerobic adhesive approved by WRAS (permitted for use in contact with drinking water). The body and bushing are made of brass grade CW617N according to DIN EN 12165-2011.

The shut-off mechanism of the valve consists of a chromium-plated brass ball (4) driven by a vertical brass stem (5) and sealed by seat rings (3).

The packing gland (6), together with a brass threaded thrust sleeve (7), ensures the tightness of the stem. The seat rings (3) and stem packing (6) are made of high-temperature-resistant elastic fluoroplastic (PTFE, polytetrafluoroethylene).

The valve stem is non-blowout, as it is inserted from the inside of the body (1) and features a retaining collar. The ball, stem, and thrust sleeve are made of brass grade CW614N (DIN EN 12165-2011), the ball surface is chrome-plated.

The handle (8) is attached to the protruding end of the stem using a nut (9) made of structural steel S235JR per DIN EN 10025-2005.

Models PF BYS 330, PF BYS 331, PF BYS 332 feature a nickel-plated lever handle with a PVC polymer coating, made of structural steel S235JR (DIN EN 10025-2005). Models PF BYS 330W, PF BYS 331W, PF BYS 332W are equipped with an aluminum butterfly handle with a painted coating (DIN EN 1676-2010). Both handle types have a special hole for sealing (tamper-proofing).

In the side branch of the body (1), positioned at a 45° angle to the main axis, there is a strainer element (10) — a cylindrical mesh made of stainless steel AISI 304 (DIN EN 10088-2005).

The inspection plug (11), made of brass CW617N (DIN EN 12165-2011), secures the strainer mesh and tightly seals the branch. Sealing is ensured by a gasket (12) made of fiber grade 3110 (DIN 7737).

All pipe cylindrical 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

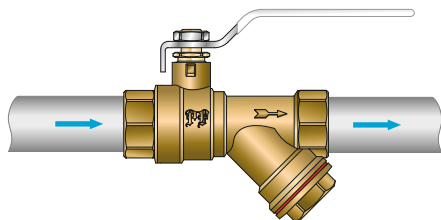
Flow shut-off is achieved by turning the handle 90° clockwise.

5. INSTALLATION INSTRUCTIONS

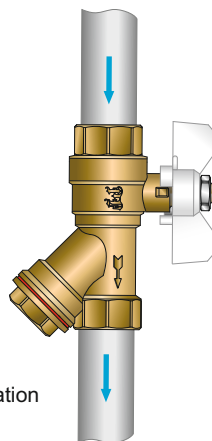
The ball valve with strainer can be installed in either a horizontal or vertical position. However, the inspection plug must always face downward, and the flow direction of the working medium must match the arrow marked on the valve body.

If the flow direction is from bottom to top, a horizontal section of the pipeline must be provided for filter installation. Before installing the valve, the pipeline must be cleaned of rust, dirt, scale, sand, and any other foreign particles that may affect the valve's performance.

Horizontal installation
of the valve



Vertical installation
of the valve



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

The misalignment of connected pipelines must not exceed 3 mm per 1 meter of length, plus 1 mm for each additional meter. The valve must be installed in such a way that free access to the operating handle is ensured.

The product must be securely fastened to the pipeline, and leakage of the working fluid through the threaded connections is not permitted. Threaded joints must be assembled using sealing materials such as PTFE sealing tape (PTFE-tape – polytetrafluoroethylene), polyamide thread with silicone, or flax (linen). It is important to ensure that excess sealing material does not enter the ball valve shut-off mechanism. Check the correctness of the installation.

After installation, all plumbing system components must be tested for tightness. The assemblies should be tested using hydrostatic (hydraulic) or bubble (pneumatic) methods.

6. OPERATION AND MAINTENANCE

The ball valve with strainer must be operated without exceeding the pressure and temperature limits specified in the technical specifications table. Installation and removal of the valve must be carried out only when the system is depressurized. Allow the equipment to cool down to ambient temperature before performing maintenance.

It is not permitted to operate the valve with a loosened handle fixing nut, as this may damage the stem tailpiece.

Use of the valve in environments containing abrasive components is not recommended, as this may shorten its service life. Therefore, when the valve is used in systems transporting media with a high content of mechanical impurities, it is recommended to inspect and clean the filter regularly. The need for cleaning may be indicated by a pressure drop across the strainer greater than 0.5 bar.

To clean the strainer, close the inlet shut-off ball valve, drain the section of the pipeline containing the strainer, then unscrew the inspection plug and clean the mesh. If the gasket of the inspection plug is damaged during maintenance, it must be replaced.

For long-term, trouble-free operation, it is recommended to open and close the valve once a month as preventive maintenance.

If during operation a slight leak appears around the valve stem under the handle, remove the handle and tighten the thrust sleeve of the packing gland until the leakage stops.

7. WARRANTY OBLIGATIONS

The warranty period is 84 months (7 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.



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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