



PROFACTOR®
DER DEUTSCHE QUALITÄTSSTANDARD

EN

TECHNICAL DATA SHEET AND USER MANUAL



PRODUCT CODE

PF RVS 376
PF RVS 377
PF RVS 376UR
PF RVS 377UR

PF RVA 378
PF RVA 379
PF RVA 378UR
PF RVA 379UR

RADIATOR PRESET VALVE

1. PURPOSE AND SCOPE

PROFACTOR® radiator preset valves, used together with thermostatic valves or radiator regulating valves, are designed for connecting heating devices and regulating the flow of the heat transfer medium through them in single-pipe and two-pipe heating systems.

The PROFACTOR® radiator preset valves are installed at the outlet of the heat transfer medium from the radiator and are used for the initial hydraulic balancing of the heating system. The valves also perform a shut-off function, allowing the radiator to be easily disconnected from the system. Thanks to the detachable connection, the radiator can be removed for maintenance or repair work.

2. TECHNICAL SPECIFICATIONS

Nominal size: DN15; Dn20

Connection to pipeline: Internal thread (G 1/2"; G 3/4") — cylindrical pipe thread

Connection to radiator: External thread (G 1/2"; G 3/4") — cylindrical pipe thread with O-ring seal, or conical pipe thread (R)

Maximum working pressure: 10 bar

Operating medium temperature: -20°C to +120°C

3. DESIGN

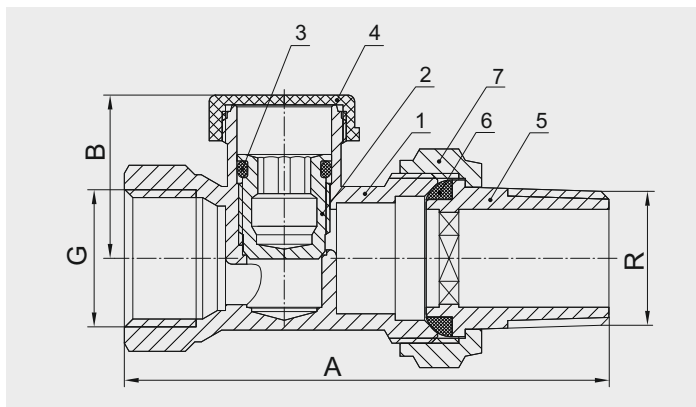
A significant advantage of this valve is its modern design, which eliminates the use of rubber seals in the shut-off mechanism. The valve operates on the cone-type shut-off principle, which considerably increases the reliability and service life of the product.

PROFACTOR® radiator preset valves are equipped with an internal cylindrical pipe thread for connection to the pipeline. Models PF RVS 376, PF RVS 377, PF RVA 378, PF RVA 379 feature an external conical pipe thread on the union (5) for connection to the radiator. Models PF RVS 376UR, PF RVS 377UR, PF RVA 378UR, PF RVA 379UR feature an external cylindrical pipe thread with an O-ring seal, which does not require additional sealing.

All cylindrical pipe threads are in accordance with ISO 228-1, and all conical pipe threads are in accordance with DIN EN 10226-1 (ISO 7-1).

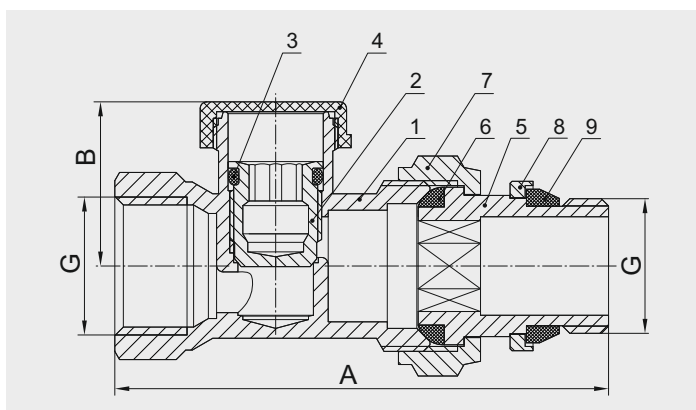


Radiator preset valve, straight type, PF RVS 376, PF RVS 377



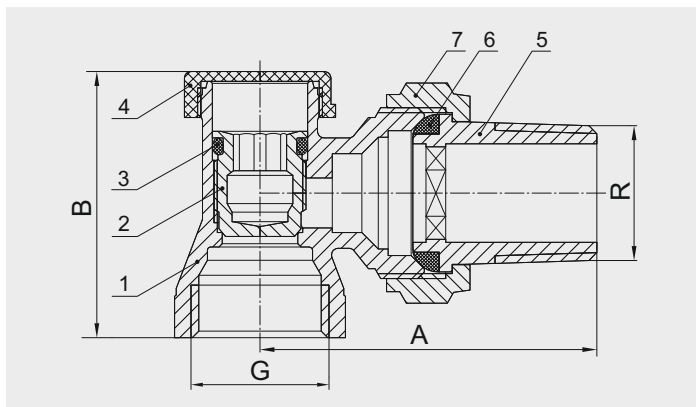
- | | |
|---------------------|---------------|
| 1 – Body | 5 – Union |
| 2 – Regulating cone | 6 – O-ring |
| 3 – O-ring | 7 – Union nut |
| 4 – Cap | |

Radiator preset valve, straight type, with union conical O-ring, PF RVS 376UR, PF RVS 377UR



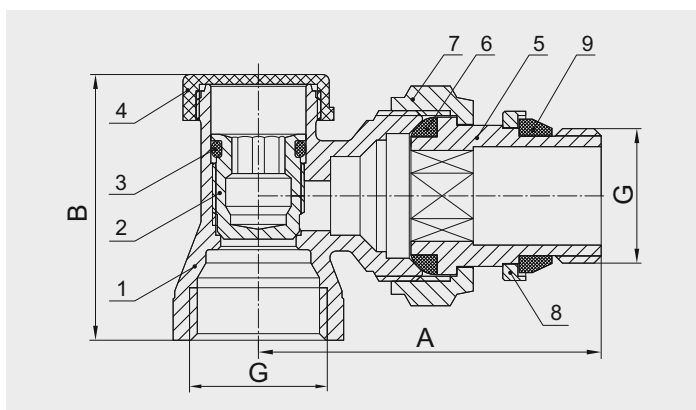
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|---------------------|--------------------|
| 1 – Body | 6 – O-ring |
| 2 – Regulating cone | 7 – Union nut |
| 3 – O-ring | 8 – Retaining ring |
| 4 – Cap | 9 – O-ring |
| 5 – Union | |

Radiator preset valve, angle type, PF RVA 378, PF RVA 379



- 1 – Body
- 2 – Regulating cone
- 3 – O-ring
- 4 – Cap

- 5 – Union
- 6 – O-ring
- 7 – Union nut

Radiator preset valve, angle type, with union conical O-ring,
PF RVA 378UR, PF RVA 379UR

- 1 – Body
- 2 – Regulating cone
- 3 – O-ring
- 4 – Cap
- 5 – Union

- 6 – O-ring
- 7 – Union nut
- 8 – Retaining ring
- 9 – O-ring

4. MATERIALS

Parts 1, 5, 7, 8 — Brass CW617N (DIN EN 12165-2011) with nickel-plated surfaces

Adjusting cone (2) — Brass CW617N (DIN EN 12165-2011)

Cap (4) — ABS

Sealing rings (3, 6, 9) — EPDM

5. PRINCIPLE OF OPERATION

The operating principle of the preset radiator valve is based on controlling the flow by means of a conical shut-off element (adjusting cone 2).

The valve body is equipped with an internal thread along which the adjusting cone (2) moves from its uppermost position (valve open) to its lowermost position (valve closed). In the lowermost position, the adjusting cone (2) fits tightly against the brass surface inside the valve body, completely closing the flow passage.

Tight shut-off of the flow is achieved through a “metal-to-metal” seal, ensured by high-precision machining of the adjusting cone and the corresponding seat surface inside the body.

6. NOMENCLATURE AND DIMENSIONS

Preset radiator valve, straight type:

Product code	DN	A, mm	B, mm	G/R	Weight, g
PF RVS 376	15	74	25	1/2"	165
PF RVS 377	20	82	33	3/4"	290

Preset radiator valve, straight type, with union conical O-ring:

Product code	DN	A, mm	B, mm	G/R	Weight, g
PF RVS 376UR	15	75	25	1/2"	175
PF RVS 377UR	20	83	33	3/4"	305

Preset radiator valve, angled type:

Product code	DN	A, mm	B, mm	G/R	Weight, g
PF RVA 378	15	51	41	1/2"	140
PF RVA 379	20	58,5	52	3/4"	270

Preset radiator valve, angled type, with union conical O-ring:

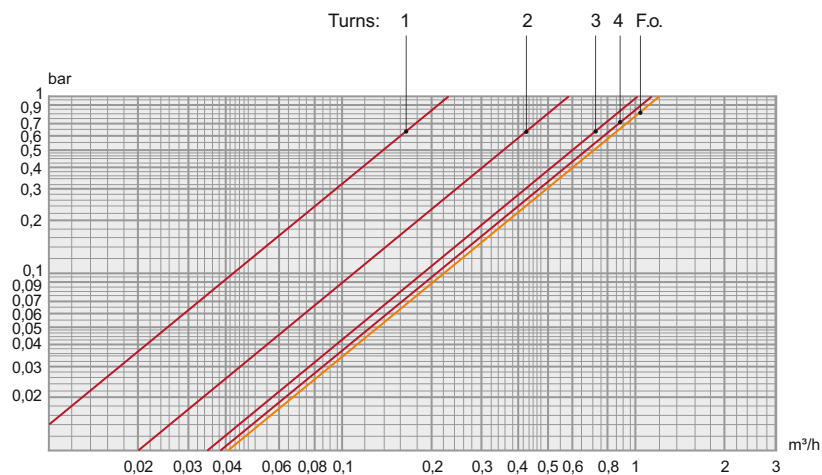
Product code	DN	A, mm	B, mm	G/R	Weight, g
PF RVA 378UR	15	52	41	1/2"	150
PF RVA 379UR	20	60	52	3/4"	280

7. HYDRAULIC CHARACTERISTICS

Preset radiator valve, straight type (PF RVS 376, PF RVS 376UR):

Number of turns	1	2	3	4	5	6	Full open
Kvs, m³/h	0,23	0,57	1,02	1,10	1,14	1,18	1,20

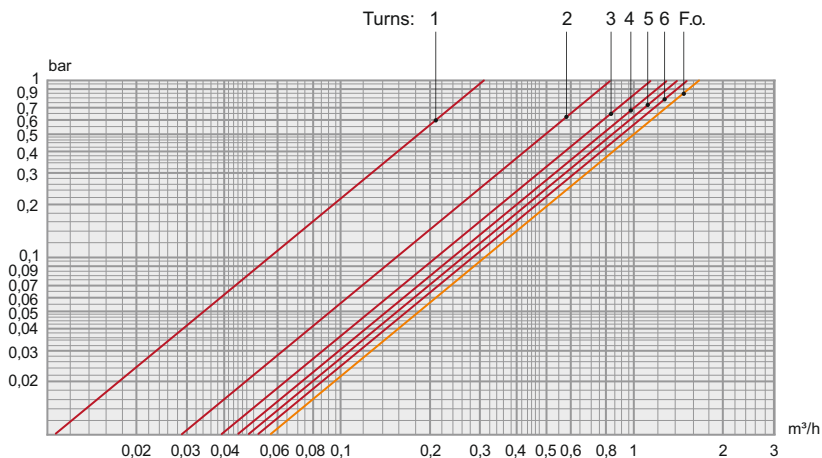
Flow rate and pressure drop chart:



Preset radiator valve, angled type (PF RVS 377, PF RVS 377UR):

Number of turns	1	2	3	4	5	6	Full open
Kvs, m³/h	0,31	0,82	1,15	1,28	1,40	1,50	1,66

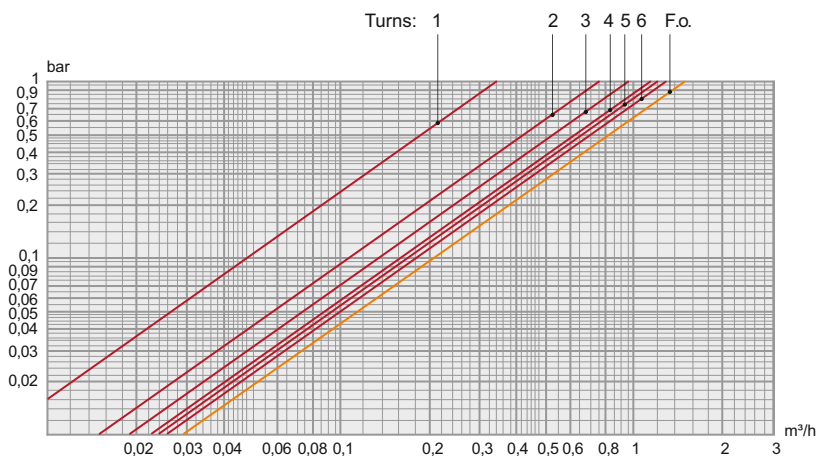
Flow rate and pressure drop chart:



Preset radiator valve, angled type (PF RVA 378, PF RVA 378UR):

Number of turns	1	2	3	4	5	6	Full open
Kvs, m³/h	0,34	0,75	0,95	1,10	1,20	1,28	1,45

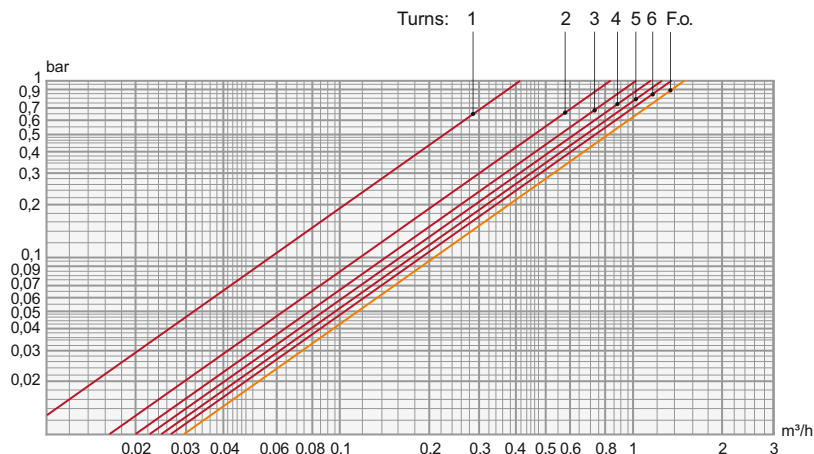
Flow rate and pressure drop chart:



Preset radiator valve, angled type (PF RVA 379, PF RVA 379UR):

Number of turns	1	2	3	4	5	6	Full open
Kvs, m³/h	0,41	0,82	1,01	1,16	1,26	1,35	1,50

Flow rate and pressure drop chart:



8. INSTALLATION INSTRUCTIONS

The valve is supplied to the customer fully assembled and ready for operation; no additional assembly is required.

Before installing the valve, the pipeline must be cleaned of scale and rust. Heating, heat supply, internal cold and hot water supply systems, and boiler pipelines must be flushed with water after installation until the water runs clear, without mechanical impurities.

The valve must not be subjected to loads from the pipeline (bending, compression, tension, torsion, misalignment, vibration, or uneven tightening of fittings). If necessary, supports or compensators should be provided to reduce the load on the valve from the pipeline. The permissible bending moment for 1/2" valves must not exceed 120 Nm, and for 3/4" valves — not more than 180 Nm.

The valve must be securely fastened to the pipeline; any leakage of the working fluid through the threaded part is not permitted. When the valve is used in central heating systems with a high content of mechanical impurities in the heat carrier, the installation of additional filtration equipment at the inlet is mandatory.

The valve may be installed in any position. During installation, the union half with the cap nut should be connected first. The integrity of its O-ring seal must be checked. No special tools are required for installing or removing the valve from the pipeline, except for the installation of the union half. The union half should be installed using a 13 mm hex key (for DN15) or a 16 mm hex key (for DN20). After hand-tightening the union nut, it should be additionally tightened with a wrench by no more than half a turn.

9. OPERATING AND MAINTENANCE

Installation and removal of the product, as well as any repair operations, must be carried out when the system is not under pressure. Allow the equipment to cool down to ambient temperature before starting work.

To perform preliminary system balancing:

1. Unscrew the cap (4).
2. Screw in the adjusting cone (2) clockwise until it stops, using an 8 mm hex key.
3. Unscrew the adjusting cone (2) counterclockwise by the required number of turns.
4. Screw the cap (4) back on.

10. WARRANTY OBLIGATIONS

The warranty period is 24 months from the date of sale to the end user. During the entire warranty period, the manufacturer guarantees proper operation of the product and its compliance with safety requirements, provided that the consumer complies with the specified rules for storage, transportation, installation, operation, and maintenance. The warranty covers all defects that occur due to 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 product materials;
- Mechanical damage;
- Damage caused by fire, natural disasters, or other force majeure circumstances;
- Damage caused by incorrect actions of the consumer;
- Evidence of unauthorized interference with the product's design.



The product described in this technical passport is a technically complex device that must be installed by a specialist possessing the appropriate qualifications and experience in working with such equipment.

Installation and commissioning must be carried out by an authorized and certified company.

Profactor Armaturen GmbH reserves the right to make design modifications that do not affect the technical specifications or functional characteristics of the device.



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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