



BA295S

Backflow Preventer

Compact construction with threaded connectors

APPLICATION

Backflow preventers of this type are suitable for the protection of drinking water systems against back pressure, backflow and back syphonage.

They can be used for residential buildings, industrial and commercial purposes within the scope of their specification. Fluids up to and including liquid category 4 to EN 1717 are protected.

APPROVALS

- DVGW
- NF
- WRAS
- KIWA
- BELGAQUA
- VR

SPECIAL FEATURES

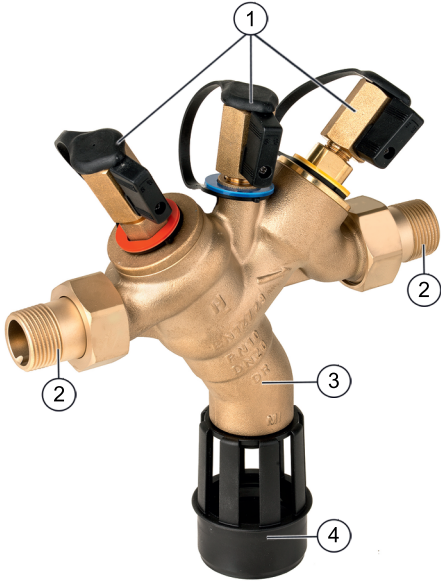
- Approved according to EN 12729 except BA295S-1B
- Optimal protection of the drinking water supply system
- Integrated inlet strainer
- Inlet check valve and discharge valve are combined in one cartridge
- Low maintenance effort - cartridge insert and valve insert are completely replaceable
- Optimized design prevents water stagnation in normal operation
- Compact construction
- Easy access to all internal components
- Low pressure loss and high flow rate
- ACS certified
- All materials are KTW approved
- Approved by TÜV LGA for low noise, Group 1 without limitation



TECHNICAL DATA

| Media | |
|------------------------------------|----------------------------------------------------------------------------------|
| Medium: | Drinking water |
| Connections/Sizes | |
| Connection size: | 1/2" - 2" |
| Discharge pipe connection: | DN50 for connection sizes 1/2" - 1 1/4" DN70 for connection sizes 1 1/2" - 2" |
| Pressure values | |
| Inlet pressure: | 1.5 bar - 10.0 bar |
| Operating temperatures | |
| Max. operating temperature medium: | 65 °C (WRAS 60 °C) |
| Specifications | |
| Installation position: | Horizontal with discharge valve downwards |

CONSTRUCTION

| Overview | | Components | Materials |
|-----------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------|-------------------------------------------------|
|  | 1 | Three ball valves for the connection of a differential pressure gauge | Brass |
| | 2 | Connection fittings | Brass |
| | 3 | Housing | Dezincification-resistant brass |
| | 4 | Discharge connection | High-quality synthetic material |
| | Not depicted components: | | |
| | | Integral strainer, mesh size approx. 200 µm | Stainless steel |
| | | Valve cartridge with integral check valve and discharge valve | High-grade synthetic material |
| | | Outlet check valve | High-grade synthetic material |
| | | Sealing elements | Elastomer materials suitable for drinking water |

METHOD OF OPERATION

BA type backflow preventers are divided into three pressure zones. The pressure in zone① is higher than in zone ② , which in turn is higher than in zone ③ . A discharge valve is connected to zone ② which opens at the latest when the differential pressure between zones ① and ② drops to 0.14 bar. The water from zone ② discharges to atmosphere, both check valves close and therefore separate zone ② from zone ① and ③ . In this way the danger of back pressure or back syphonage into the supply network is prevented. The pipework connection is interrupted and the drinking water network is protected.

TRANSPORTATION AND STORAGE

Keep parts in their original packaging and unpack them shortly before use.
The following parameters apply during transportation and storage:

| Parameter | Value |
|---------------------------------|--------------------------|
| Environment: | clean, dry and dust free |
| Min. ambient temperature: | 5 °C |
| Max. ambient temperature: | 55 °C |
| Min. ambient relative humidity: | 25 % * |
| Max. ambient relative humidity: | 85 % * |

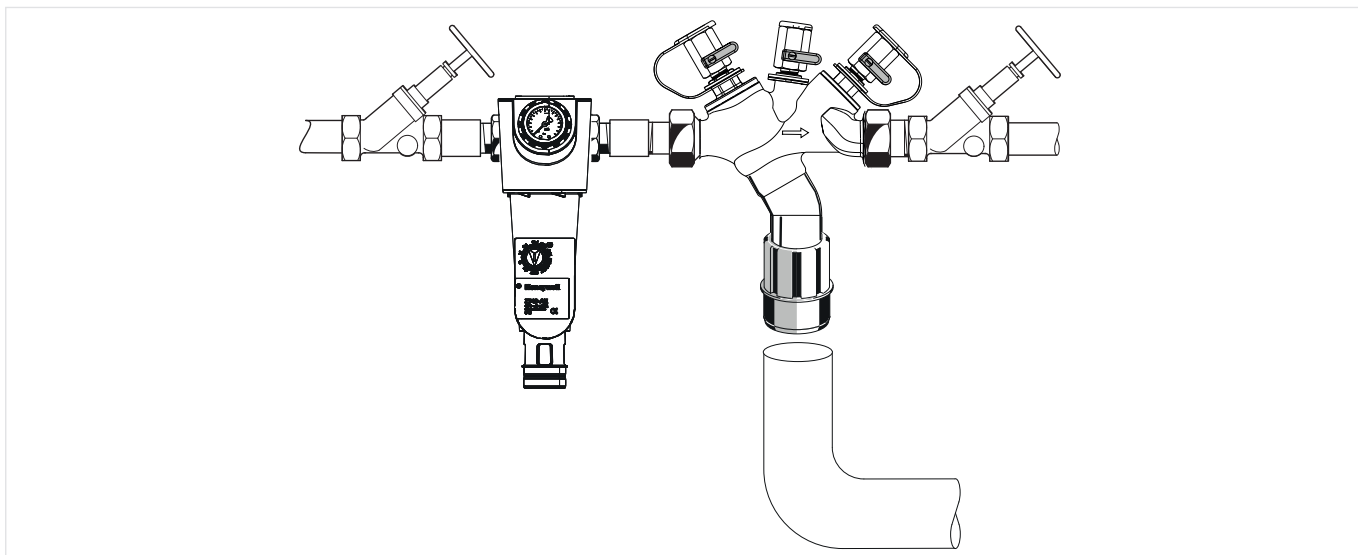
*non condensing

INSTALLATION GUIDELINES

Setup requirements

- Install shut-off valves before and after backflow preventer
- Install in horizontal pipework with the discharge valve downwards
- Ensure good access
 - Simplifies maintenance and inspection
- If a fine filter is not installed in the drinking water system, the installation of a filter with a mesh width of 100 µm is recommended in front of the backflow preventer
- In case of inlet-pressure fluctuations or a inlet pressure over 10 bar, we recommend to install a pressure reducing valve upstream of the backflow preventer
- Do not install in places where flooding can occur
- The installation environment should be protected against frost and ventilated well
- Install discharge pipework which has adequate capacity
- In order to avoid flooding, it is recommended to arrange a permanent, professionally dimensioned wastewater connection
- These armatures need to be maintained regularly

Installation Example



TECHNICAL CHARACTERISTICS

Pressure drop characteristics

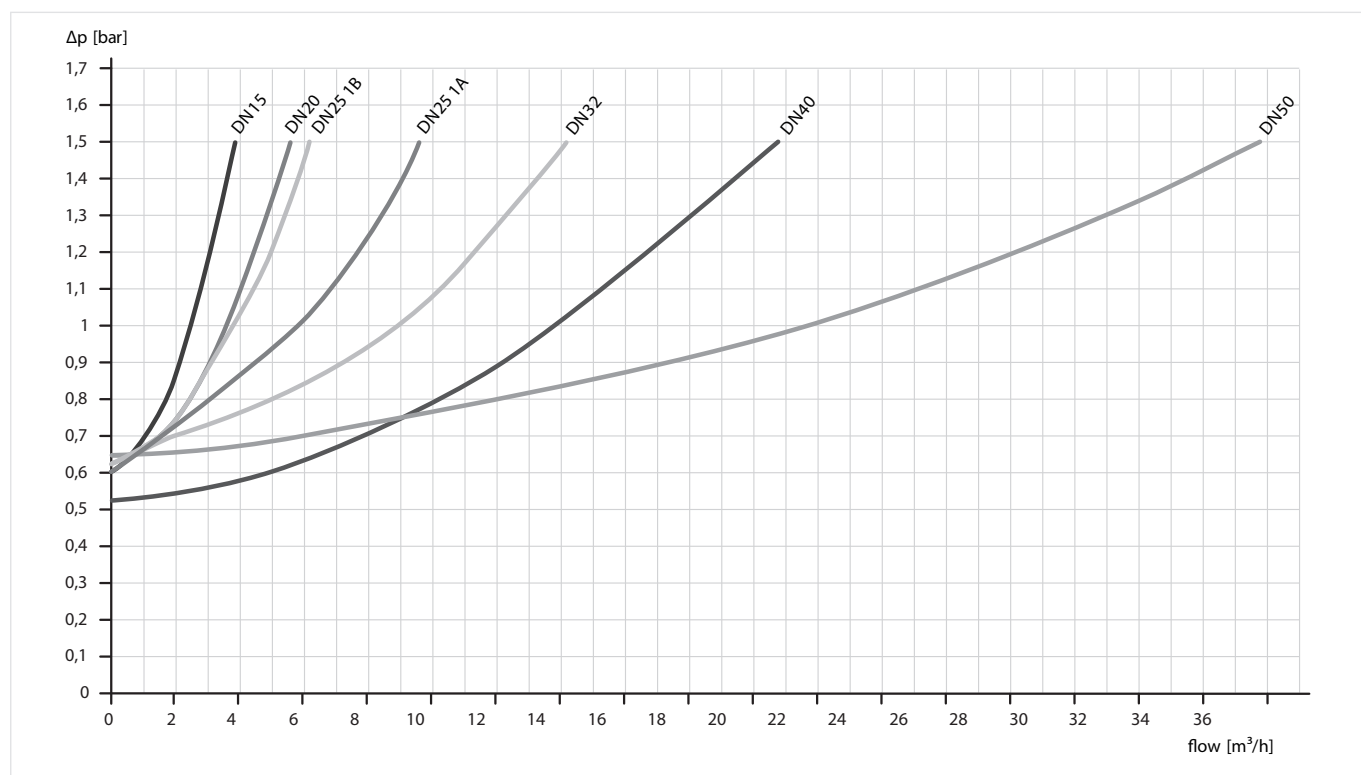
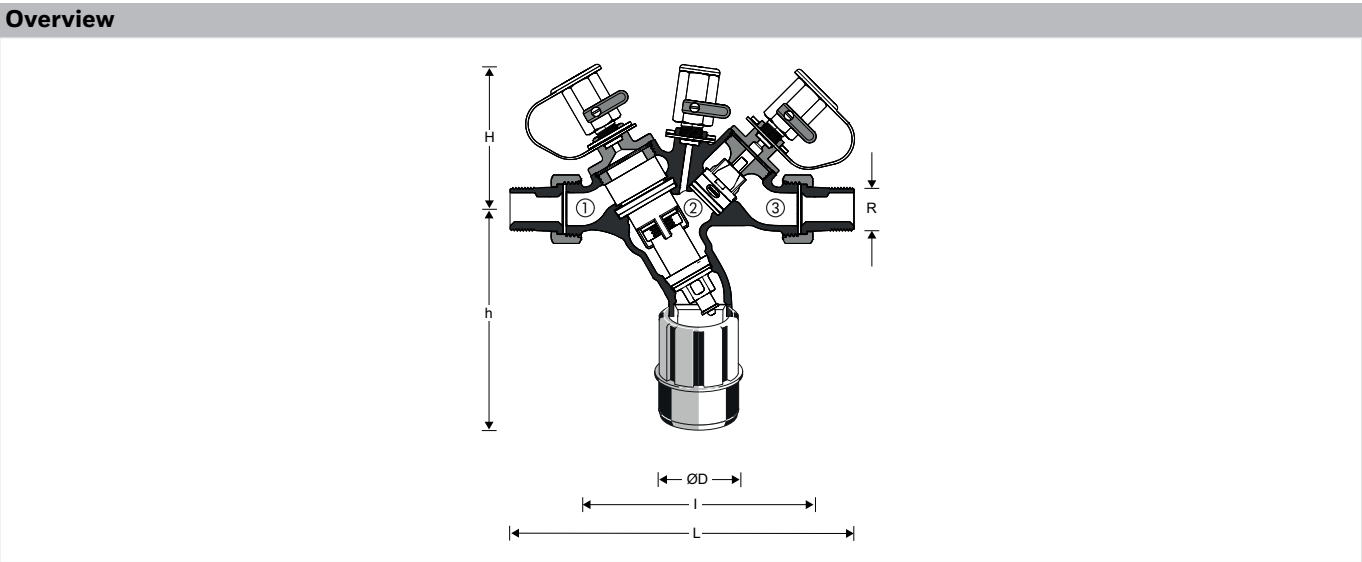


Fig. 1 Pressure drop within the valve in dependency of the flow rate and the used connection size

DIMENSIONS



| Parameter | | Values | | | | | | |
|-------------------------|-------------------|--------|------|---------------|---------------|--------|--------|------|
| Connection size: | R | 1/2" | 3/4" | 1", B-version | 1", A-version | 1 1/4" | 1 1/2" | 2" |
| Nominal size: | DN | 50 | 50 | 50 | 50 | 50 | 70 | 70 |
| k _{VS} -value: | m ³ /h | 2.4 | 3.5 | 3.5 | 5.8 | 8.5 | 13.5 | 21.0 |
| Weight: | kg | 1.6 | 1.8 | 2.1 | 2.8 | 3.3 | 5.9 | 7.2 |
| Dimensions: | L | 195 | 208 | 225 | 247 | 272 | 322 | 348 |
| | I | 135 | 140 | 146 | 168 | 180 | 226 | 231 |
| | H | 88 | 88 | 88 | 103 | 103 | 126 | 126 |
| | h | 143 | 143 | 143 | 174 | 174 | 217 | 217 |

Note: All dimensions in mm unless stated otherwise.

ORDERING INFORMATION

The following tables contain all the information you need to make an order of an item of your choice. When ordering, please always state the type, the ordering or the part number.

Options

The backflow preventer is available in the following sizes: 1/2", 3/4", 1", 1 1/4" 1 1/2" and 2".


- standard
- not available

| | | BA295S-...A | BA295S-1B | BA295S-...AGB |
|------------------|----------------------------------------------------------------------------------------------|-------------|-----------|---------------|
| Connection type: | Standard version acc. EN 12729 with threaded connections 1/2" - 2" | • | - | - |
| | Special version with threaded connections 1" | - | • | - |
| | Standard version acc. EN 12729, all materials acc. WRAS, with threaded connections 1/2" - 2" | - | - | • |

Note: ... = space holder for connection size

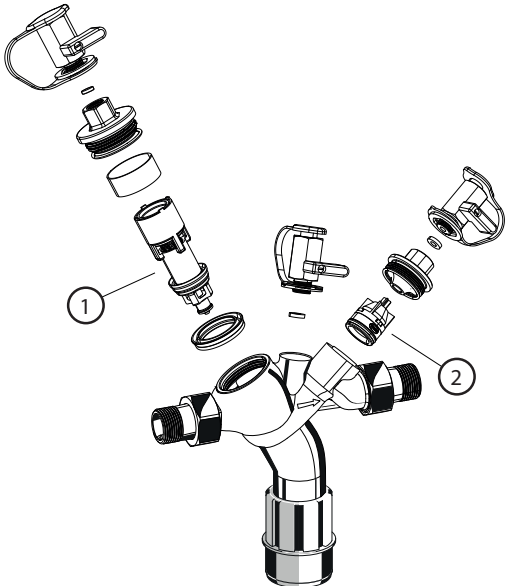
Note: Ordering number example for 1" and type A valve: BA295S-1A

Accessories

| | Description | Dimension | Part No. |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
|  | TK295 | Test kit | |
| | Electronic pressure measuring device with digital indicator, battery-operated. With case and accessories, ideal for inspection and maintenance of backflow preventer type BA. | | TK295 |

Spare Parts

Backflow preventer BA295S

| Overview | Description | Dimension | Part No. |
|------------------------------------------------------------------------------------|------------------------------------|--------------------------|----------|
|  | 1 Cartridge insert complete | | |
| | | 1/2", 3/4", 1" B-Version | 0904141 |
| | | 1" A-Version, 1 1/4" | 0904142 |
| | | 1 1/2", 2" | 0904143 |
| | 2 Check valve | | |
| | | 1/2", 3/4", 1" B-Version | 0904144 |
| | | 1" A-Version | 0904145 |
| | | 1 1/4" | 0904146 |
| | | 1 1/2" | 0904147 |
| | | 2" | 0904148 |

For more information

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