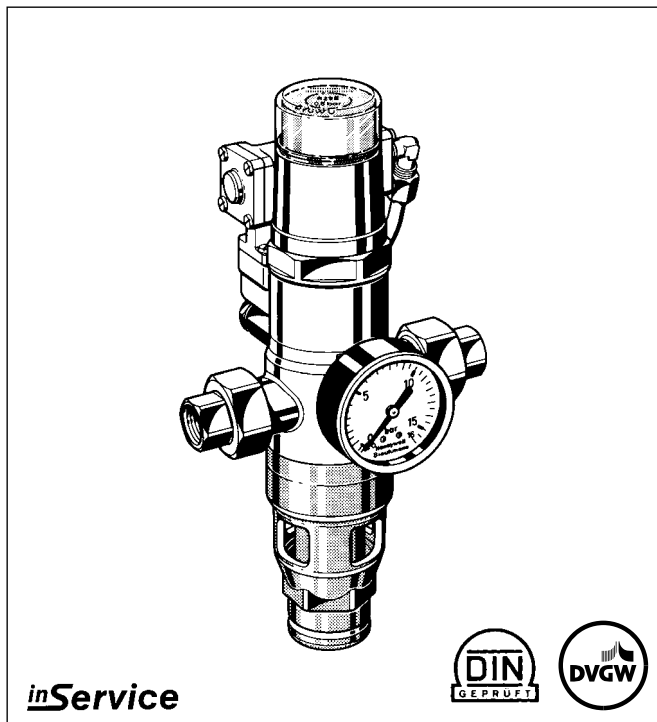


R 295 H

Backflow preventers with union connectors, DIN type 2 for high risk protection, with fully automatic differential pressure control

Product specification sheet



Construction

The backflow preventer comprises:

- Housing with pressure gauge
- Outlet pressure signal transmitter
- Threaded union connectors
- Hydraulically controlled changeover valve
- Pressure shock damper
- Valve insert with spring
- Drain connection
- Spring bonnet
- Spindle guide with double 'O' ring seal

Materials

- Red bronze housing
- Brass union nuts
- Red bronze threaded union connectors (brass for 2")
- High grade synthetic material spring bonnet
- Red bronze changeover valve
- NBR seals
- Stainless steel valve stem and spring
- High quality corrosion resistant synthetic material for other internal parts
- High quality synthetic material drain connection
- High quality synthetic material outlet pressure signal transmitter

Application

R 295 H backflow preventers are suitable for the protection of drinking water systems as required by EN 1717 "The technical regulation of drinking water systems" and correspond to type 2 construction in those regulations. Their purpose is to protect systems against back pressure, back flow and back syphonage of non-potable water into the public water supply network.

R 295 H backflow preventers can be used to provide protection up to and including liquid category 4 (toxic, very toxic, carcinogenic and radioactive substances).

Special Features

- DIN/DVGW approvals in all connection sizes
- Optimum protection of the drinking water supply system
- Enhanced protection against back pressure, back flow and back syphonage into the water supply network
- Shut-off position visually indicated on the spring bonnet
- Compact construction
- Standardised discharge connection
- **inService** - maintenance and service without removal from the pipework
- Meets KTW requirements
- Reliable, tried and tested
- Low pressure drop

Range of Application

Medium	Cold Water
Inlet pressure	Max. 16.0 bar

Technical Data

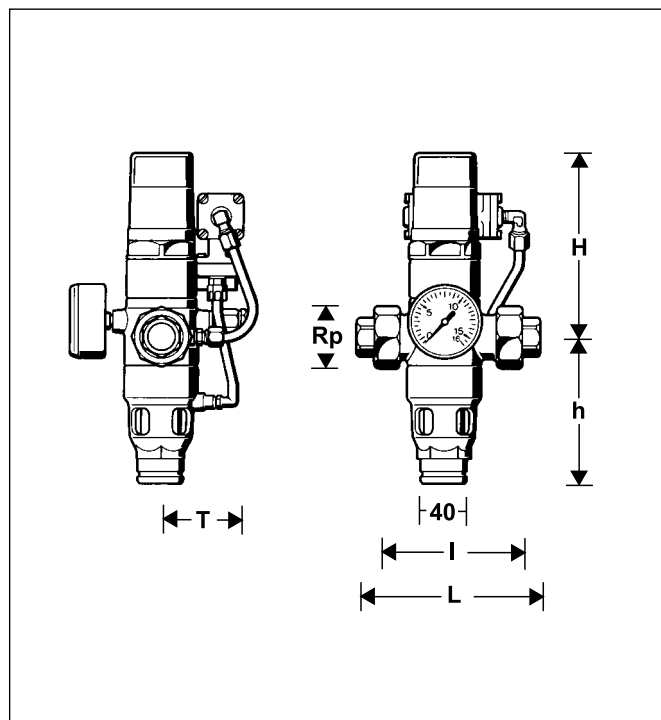
Installation position	Horizontal with spring bonnet upwards
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Operating temperature Up to 40 °C

Minimum inlet pressure 1.5 bar

Minimum flow rate 1.0 litre/min

Connection sizes 1/2" - 2"



Method of Operation

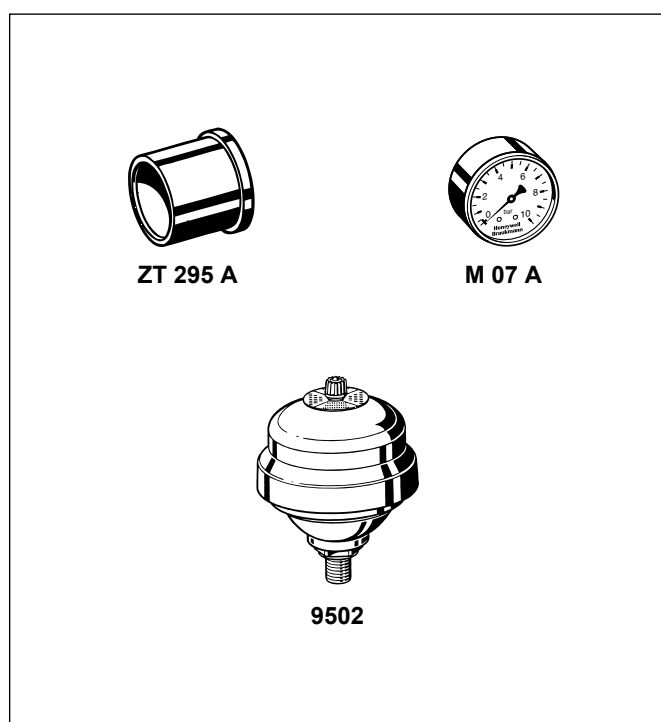
R 295 H type 2 backflow preventers are normally in the shut-off position. When water is drawn from the downstream system, the differential pressure in the backflow preventer rises. If the differential pressure rises above 0.5 bar, the hydraulic operator causes the control valve to changeover the backflow preventer into the flow position. When the draw-off stops, the differential pressure then falls again and the pressure sensor transmits a signal to the control valve, which then returns the backflow preventer to the normal shut-off position.

Options

R 295 H - ... A = With female threaded union connectors, differential pressure 0.5 bar, self-adjusting
Special versions available on request

Connection size

Connection sizes	Rp	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Weight (Approx. kg)		1.4	1.6	1.8	4.3	4.9	5.3
Dimensions (mm)							
L		151	153	159	216	228	241
I		105	105	105	150	160	165
H		153	155	155	232	231	224
h		125	123	123	155	159	166
T		76	80	80	93	93	98
Nominal flow rate (m ³ /h)							
at Δp = 0.8 bar		2.2	3.1	3.6	8.9	12.5	14.3
kvs-value (full flow)		2.5	3.5	4.0	10.0	14.0	16.0
ξ value		13.0	20.9	39.0	16.8	20.9	39.0
DIN/DVGW Approval No.		569 VE	570 VE	571 VE	572 VE	573 EV	574 VE



Accessories

ZT 295 A Soldered union connectors (pack of 2)

ZT 295 A - 1/2" (for 15 mm Ø pipe)
 ZT 295 A - 3/4" (for 22 mm Ø pipe)
 ZT 295 A - 1" (for 28 mm Ø pipe)
 ZT 295 A - 1 1/4" (for 35 mm Ø pipe)
 ZT 295 A - 1 1/2" (for 42 mm Ø pipe)
 ZT 295 A - 2" (for 54 mm Ø pipe)

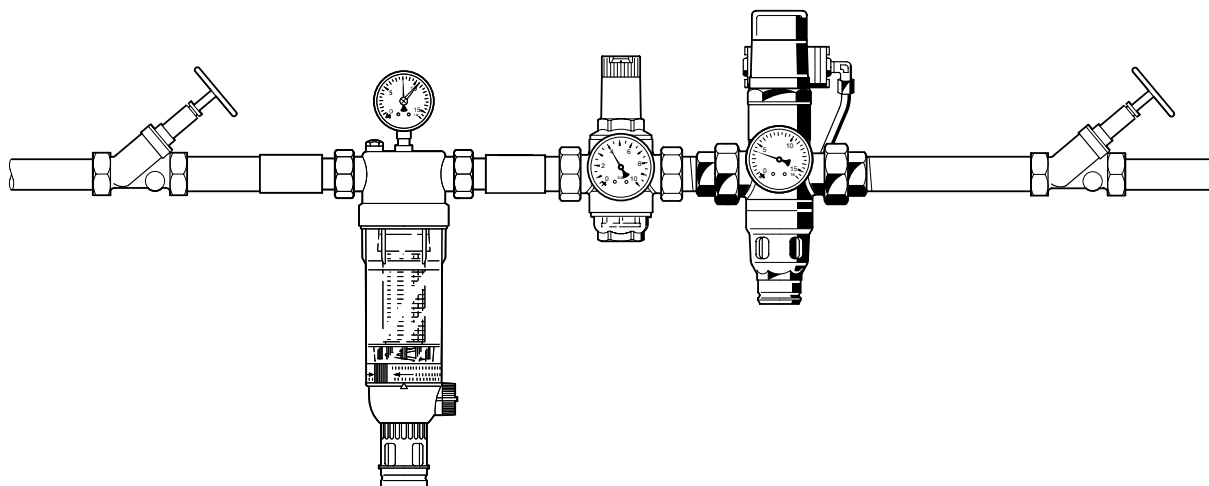
M 07 Pressure gauge

Housing 63 mm Ø, rear connection G 1/4"
 Range: 0 - 4 bar, 0 - 10 bar, 0 - 16 bar, 0 - 25 bar
 Please indicate upper value of pressure range when ordering

9502 Pressure shock damper

Diameter: 85 mm
 Bottom connection G 1/4"

Installation Example



Installation Guidelines

- Fit isolating valves
 - With isolating valves, **inService** is possible – maintenance and service without removal from the pipework
- Install in horizontal pipework with spring bonnet upwards.
 - This orientation ensures optimum performance
- Ensure good access
 - So that pressure gauge can be easily seen
 - Simplifies maintenance and inspection
- Fit a strainer upstream of the backflow preventer
 - To protect the backflow preventer from dirt
- No further unprotected mains water supply may be connected downstream of the backflow preventer.
- The backflow preventer must not be fitted in any areas or ducts where poisonous gases or vapours may be present or where flooding can occur.
- If pressure shock is anticipated in the outlet side of the backflow preventer, a pressure shock damper or expansion vessel must be fitted on the system downstream of the backflow preventer.

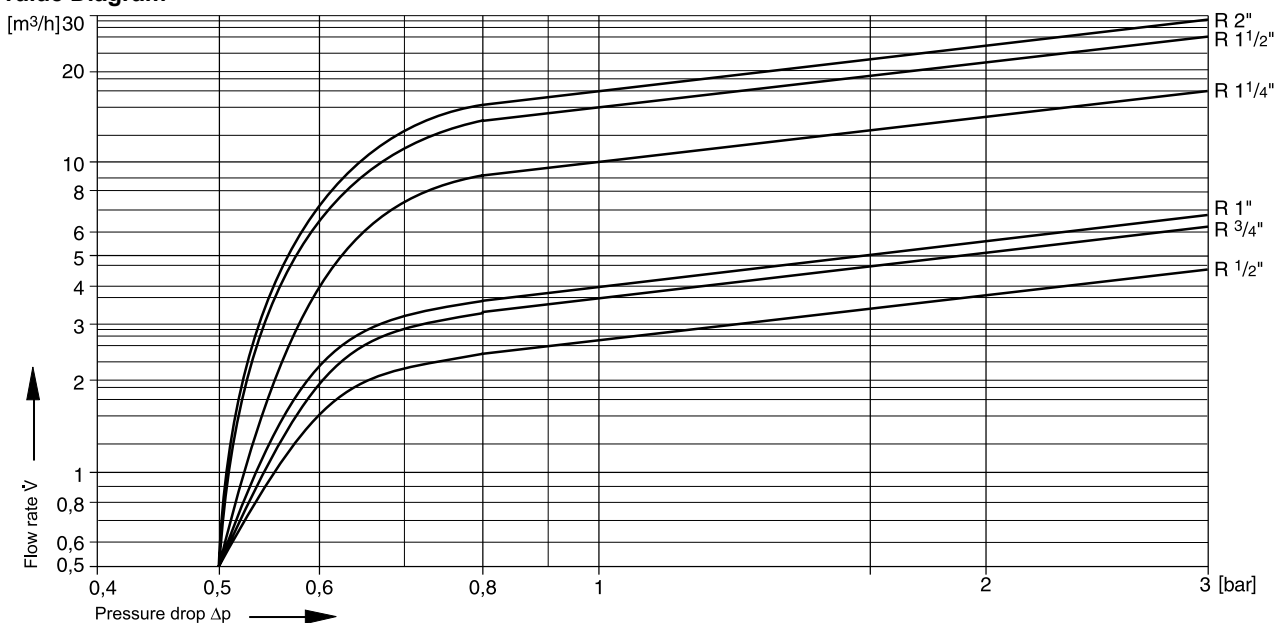
Typical Applications

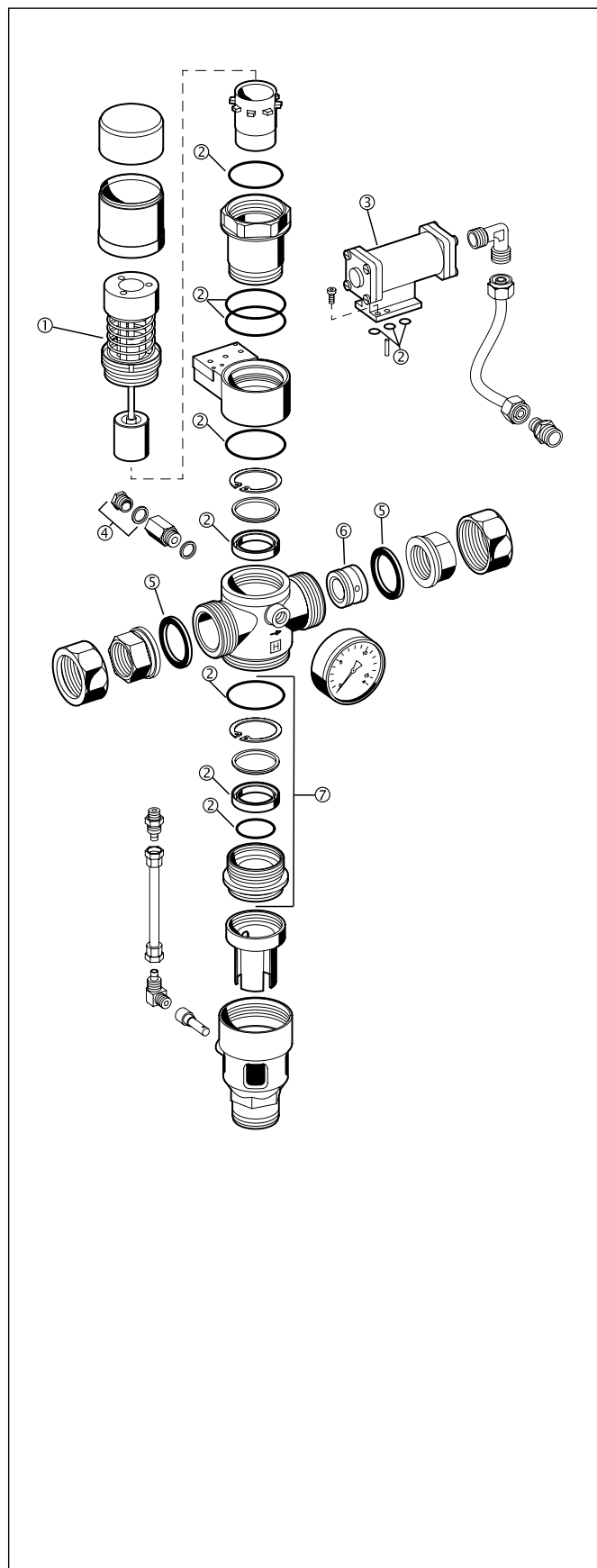
R 295 H backflow preventers are best suited for commercial and industrial applications. However they can also be used for installations in buildings within the scope of their specification.

The following are some typical uses:

- Chemical admixture plants
- Chemical cleaning plants
- Softening and deacidification plant without DVGW approval. Regeneration with or without acids or alkalines. Disinfection with Formalin.
- Film developing equipment, without DVGW approval
- Electroplating baths
- Automatic drink vending machines
- Hot water boilers, automatic pressure boilers
- Heating system filling assemblies without DVGW approval. Water with or without inhibitors.

kvs-value Diagram





Spare Parts R 295 H Backflow Preventers

Description	Nominal size	Part number
① Valve insert complete	1/2" - 1"	R 295 HA - 1A
	1 1/4" - 2"	R 295 HA - 2A
② Seal ring set	1/2" - 1"	0901015
	1 1/4" - 2"	0901016
③ Operating valve	1/2" - 2"	2184100
④ Hexagonal plug with seal ring (pack of 5)	1/2" - 2"	S 06 M - 1/4
⑤ Union seal ring	1/2"	5351200
	3/4"	5351300
	1"	5166300
	1 1/4"	5162900
	1 1/2"	5163000
	2"	5163100
⑥ Outlet pressure signal transmitter	1/2"	R 295 HR - 1/2A
	3/4"	R 295 HR - 3/4A
	1"	R 295 HR - 3/4A
	1 1/4"	R 295 HR - 1 1/4A
	1 1/2"	R 295 HR - 1 1/2A
	2"	R 295 HR - 2A
⑦ Drain connector	1/2" - 1"	0901340
	1 1/4" - 2"	0901341

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