Braukmann R295SP-F

Mechanical disconnector electrically actuated GB type according to EN 1717

APPLICATION

Mechanical disconnectors of this type are suitable for the protection of drinking water systems as required by EN 1717 "The technical regulation of drinking water systems".

Their purpose is to protect systems against back pressure, back flow and back syphonage of non-potable water into the public water supply network.

Mechanical disconnectors of this type can be used to provide protection up to and including liquid category 4 (toxic, very toxic, carcinogenic and radioactive substances).

The changeover from shut-off to flow positions can be by meansof an hydraulic or electrical/electronic actuator.

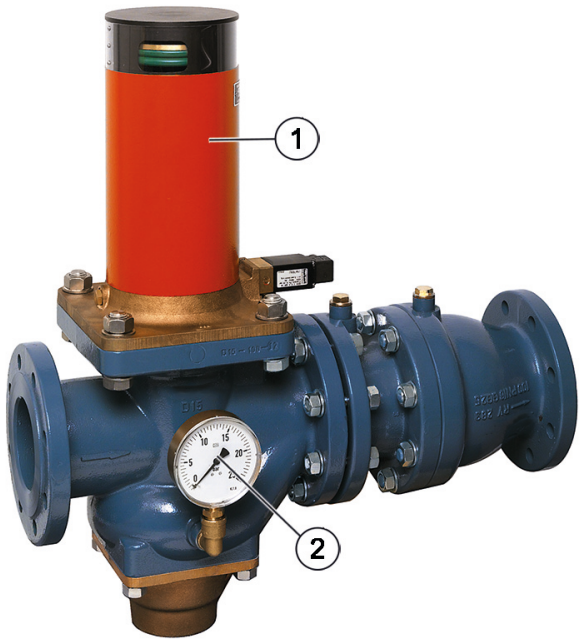
SPECIAL FEATURES

- Optimal 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
- Powder-coated inside and outside - Powder used is physiologically and toxicologically safe
- All materials are KTW approved
- Low pressure loss

TECHNICAL DATA

Media	
Medium:	Cold drinking water
Connections/Sizes	
Connection size:	DN65 - DN200
Pressure values	
Max. inlet pressure:	10 bar
Opening pressure:	DN65 - DN100: 0.5, 1 or 1.5 bar as required DN125 - DN200: 0.5, 1 bar as required
Min. inlet pressure:	Opening pressure + 1 bar
Operating temperatures	
Max. operating temperature medium:	40 °C
Specifications	
Installation position:	Horizontal with spring bonnet upwards
Electrical connection:	230 V~ / 50 Hz Special Versions available on request

CONSTRUCTION

Overview		Components	Materials
	**1**	Spring bonnet	Steel
	2	Housing with pressure gauge	Grey cast iron housing, powder-coated inside and outside
		Not depicted components:	
		Outlet check valve	-
		PN 16 flanged connections to ISO 7005-2, DIN EN 1092-2	Grey cast iron
		Drain connector	Red bronze drain connector up to DN100
		Valve insert with spring	Stainless steel valve stem and spring
		Spindle guide with double O-ring seal	-
		Balanced-seat piston	Stainless steel
		Seals	NBR
		Bearing surfaces for sliding internal parts	High-grade synthetic material
		Electrically actuated changeover valve	Brass
		Internal parts	Red bronze

METHOD OF OPERATION

When the electrically actuated changeover valve receives an electrical signal, for example from a pressure or flow switch or water level indicator, the mechanical disconnector is hydraulically changed over to the flow position.

This occurs because the exposure of the upper part of the piston in the backflow preventer to atmospheric pressure is interrupted and the inlet pressure is then applied to it and this in turn pushes the piston so that it moves to the flow position.

When the draw off stops, the signal operates the electronic actuator in the reverse direction. The upper side of the piston is then depressurised and the spring pushes the piston back to the shut-off position.

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 % *

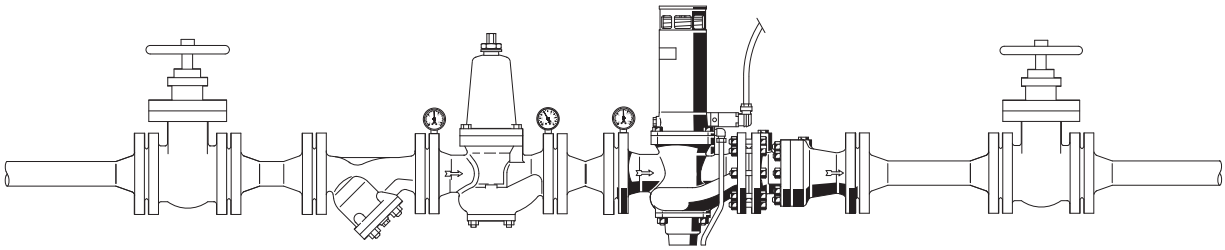
*non condensing

INSTALLATION GUIDELINES

Setup requirements

- Install shut-off valves
- Install in horizontal pipework with spring bonnet directed upwards
  - This position ensures optimum filter efficiency
- Ensure good access
  - Pressure gauge can be read off easily
  - Simplifies maintenance and inspection
- Install a strainer upstream of the mechanical disconnector
  - To protect the mechanical disconnector from dirt
- No further unprotected mains water supply may be connected downstream of the mechanical disconnector
- Mechanical disconnectors must not be fitted in any areas or ducts where poisonous gases or vapours may be present or where flooding can occur
- 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

kvs-Values

Connection sizes:	65	80	100	125	150	200
k_{VS}-value:	50	62	125	208	274	362
ξ-value:	11	17	10	9	10	19

Pressure drop characteristics

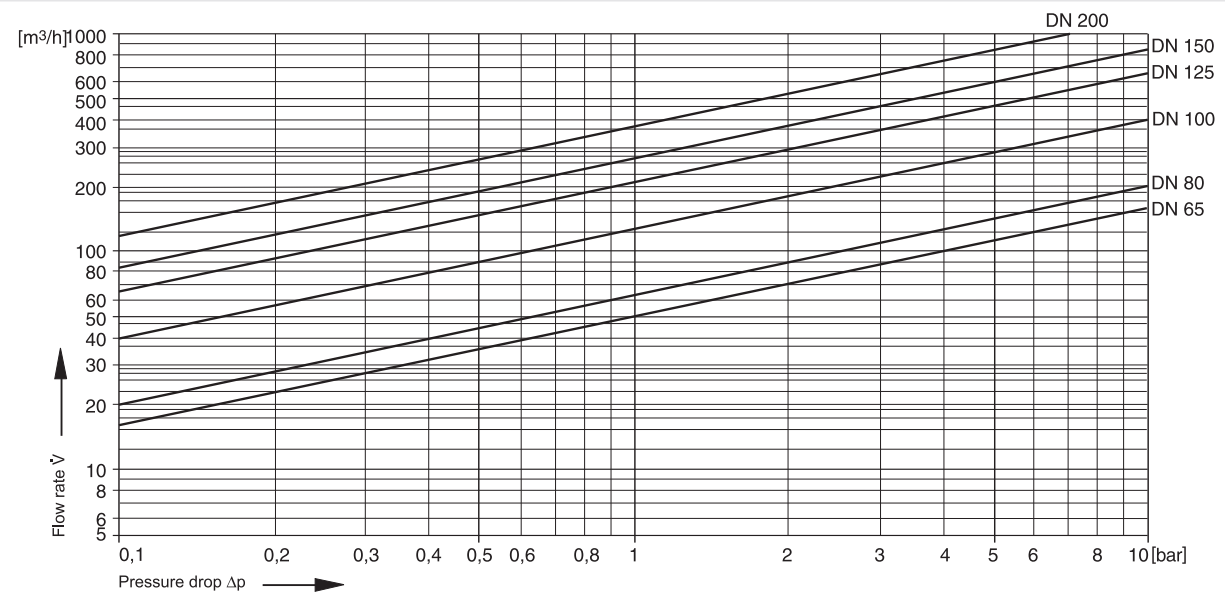
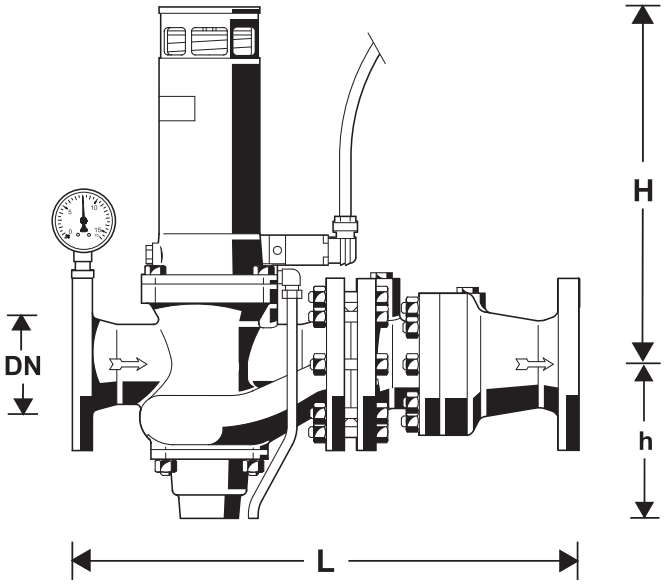


Fig. 1 Pressure drop within the valve in dependency of the flow rate and the used connection size

DIMENSIONS

Overview



Parameter		Values					
Connection size:	DN	65	80	100	125	150	200
Weight:	kg	49	68	90	146	207	409
Dimensions:	L	532	572	652	752	882	1102
	H	380	495	475	528	563	851
	h	165	208	232	280	313	438
Nominal flow rate at Δp = 0.8 bar:	m^3/h	45	55	112	186	245	324
Opening pressure:	bar	0.5, 1.0 or 1.5 bar as required			0.5 or 1.0 bar as required		

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 amatures are available in the following sizes: DN65, DN80, DN100, DN125, DN150 and DN200.

• standard

- not available

		R295SP-...FA	R295SP-...FB	R295SP-...FC
Connection type:	With flanges, 0.5 bar opening pressure	•	-	-
	With flanges, 1.0 bar opening pressure (standard version)	-	•	-
	With flanges, 1.5 bar opening pressure	-	-	•

Note: Special Versions available on request

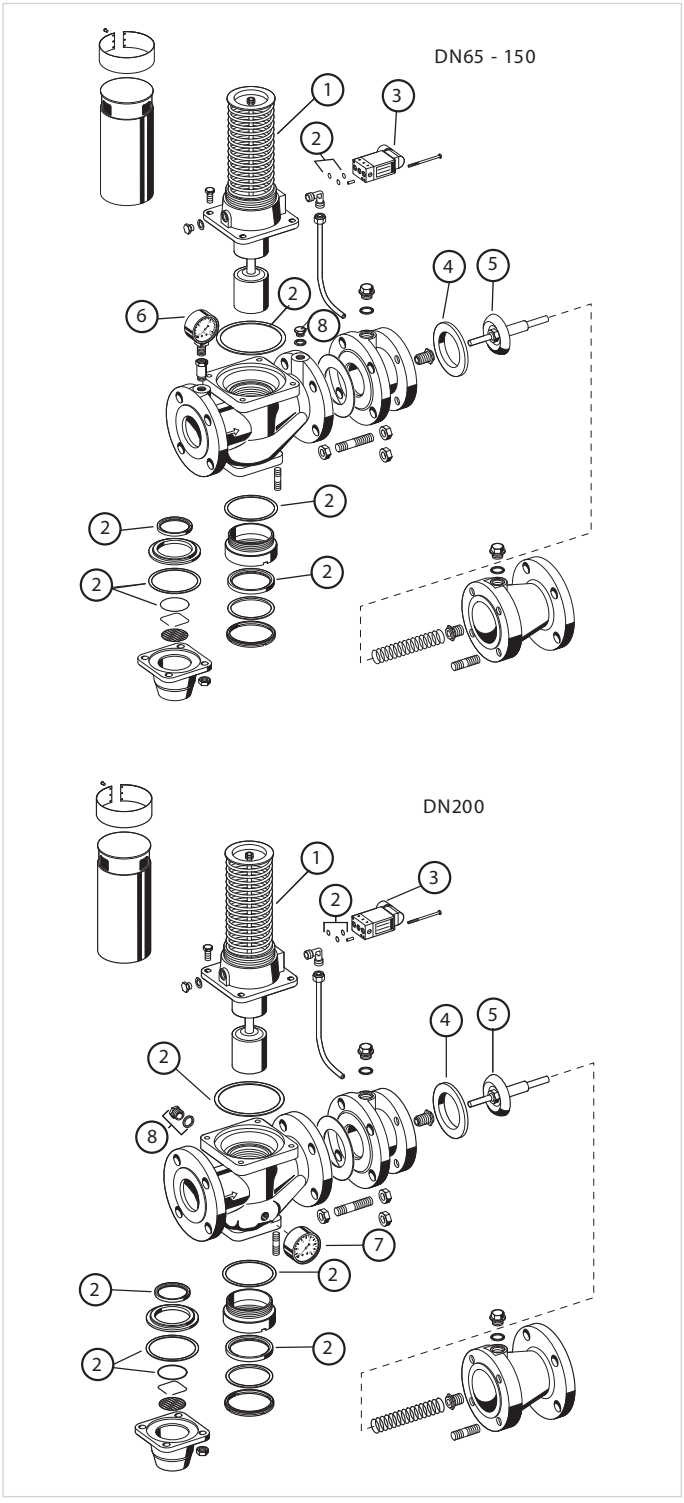
Note: ... = space holder for connection size

Note: Ordering number example for DN80 and type A valve: R295SP-80FA

Spare Parts

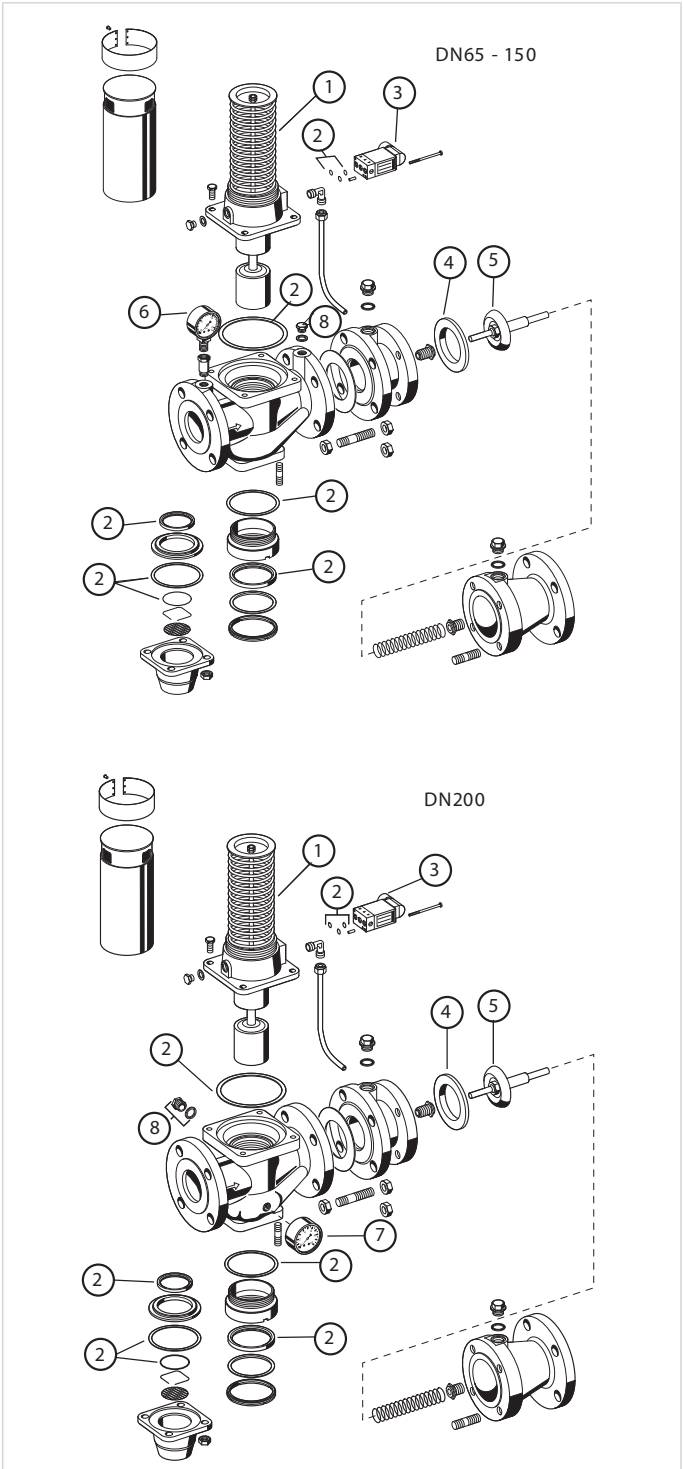
Mechanical disconnector R295SP-F

Overview



	Description	Dimension	Part No.
1	**Valve insert complete**		
	0.5 bar	DN65	R295AP-65FA
	0.5 bar	DN80	R295AP-80FA
	0.5 bar	DN100	R295AP-100FA
	0.5 bar	DN125	R295AP-125FA
	0.5 bar	DN150	R295AP-150FA
	0.5 bar	DN200	R295AP-200FA
	1.0 bar	DN65	R295AP-65FB
	1.0 bar	DN80	R295AP-80FB
	1.0 bar	DN100	R295AP-100FB
	1.0 bar	DN125	R295AP-125FB
	1.0 bar	DN150	R295AP-150FB
	1.0 bar	DN200	R295AP-200FB
	1.5 bar	DN65	R295AP-65FC
	1.5 bar	DN80	R295AP-80FC
	1.5 bar	DN100	R295AP-100FC
2	**Set of seals**		
		DN65	0901093
		DN80	0901094
		DN100	0901095
		DN125	0901143
		DN150	0901145
		DN200	0901147
3	**Changeover/Solenoid valve**		
		DN65 - DN100	0901407
		DN125 - DN200	0901412
4	**Lip seal ring**		
		DN65	5350000
		DN80	5350300
		DN100	5350400
		DN125	2070300
		DN150	2067300
		DN200	2238900

Overview



	Description	Dimension	Part No.
5	**Valve disc guide**		
		DN65	0900376
		DN80	0900377
		DN100	0900378
		DN125	0900379
		DN150	0900380
		DN200	0900381
6	**Pressure gauge**		
		0 - 16 bar	M39M-A16
7	**Pressure gauge**		
		0 - 16 bar	M07M-A16
8	**Hexagon-plug with copper sealing-ring R¼" (5 pcs.)**		
			S06M-1/4

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