



## Braukmann D15SN

Diaphragm-actuated pressure reducing valve with cartridge insert, low pressure pattern

### APPLICATION

According EN 806-2 pressure reducing valves of this type protect household water installations against excessive pressure from the supply. They can also be used for industrial or commercial applications within the range of their specification.

By installing a pressure reducing valve, pressurisation damage is avoided and water consumption is reduced.

The set pressure is also maintained constant, even when there is wide inlet pressure fluctuation.

Reduction of the operating pressure and maintaining it at a constant level minimizes flow noise in the installation.

### APPROVALS

- WRAS (up to 23 °C)

### SPECIAL FEATURES


- Inlet pressure balancing – no influence on outlet pressure by fluctuating inlet pressure
- Patented cartridge solution for easy assembly and maintenance
- Two cartridge insert fits all nominal widths, making warehousing efficient
- High corrosion resistance due to stainless steel cartridge and PA coating
- The adjustment spring is not in contact with the drinking water
- With inlet and outlet pressure gauge
- Functionality and performance have been confirmed by an accelerated life test with over 400.000 cycles (requirement acc. to EN 1567: 200.000 cycles)
- Lead content of all materials is below permissible limits specified by DIN 50930-6
- All materials are UBA conform
- ACS certified
- All materials WRAS approved



### TECHNICAL DATA

<b>Media</b>	
Medium:	Drinking water
<b>Connections/Sizes</b>	
Connection sizes:	2" - 4"
Nominal sizes:	DN50 - DN100
<b>Pressure values</b>	
Max. inlet pressure:	16 bar
Outlet pressure:	0.5 - 2 bar
Nominal pressure:	PN 16
Min. pressure drop:	1 bar
<b>Operating temperatures</b>	
Max. operating temperature medium:	65 °C
Max. operating temperature medium accord. to EN 1567:	30 °C

## CONSTRUCTION

Overview	Components	Materials
	<b>1</b> Spring bonnet with adjustment screw	Ductile cast iron (EN-GJS-400-15 EN 1563), coated with PA (polyamide)
	<b>2</b> Pressure gauge	-
	<b>3</b> Screws and nuts	Stainless steel
	<b>4</b> Housing with PN16 flanges per ISO 7005-2, EN 1092-2	Ductile cast iron (EN-GJS-400-15 EN 1563), coated with PA (polyamide)
<b>Not depicted components:</b>		
	Adjustment spring	Spring steel
	Diaphragm and seals	EPDM
	Groove ring and sealing disc	EPDM
	Cartridge insert	Stainless steel

## METHOD OF OPERATION

Spring loaded pressure reducing valves operate by means of a force equalising system. The force of a diaphragm operates against the force of an adjustment spring. If the outlet pressure and therefore diaphragm force fall because water is drawn, the then greater force of the spring causes the valve to open. The outlet pressure then increases until the forces between the diaphragm and the spring are equal again.

The inlet pressure has no influence in either opening or closing of the valve. Because of this, inlet pressure fluctuation does not influence the outlet pressure, thus providing inlet pressure balancing.

## 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 in horizontal pipework with spring bonnet directed upwards
- Installation in vertical pipework possible with increased maintenance effort
- Install shut-off valves
- The installation location should be protected against frost and be easily accessible
  - Pressure gauge can be read off easily
  - Simplified maintenance and cleaning
- Install downstream of the filter or strainer
  - This position ensures optimum protection for the pressure reducing valve against dirt
- Provide a straight section of pipework of at least five times the nominal valve size after the pressure reducing valve (in accordance with EN 806-2)
- Requires regular maintenance in accordance with EN 806-5

**Installation Example**

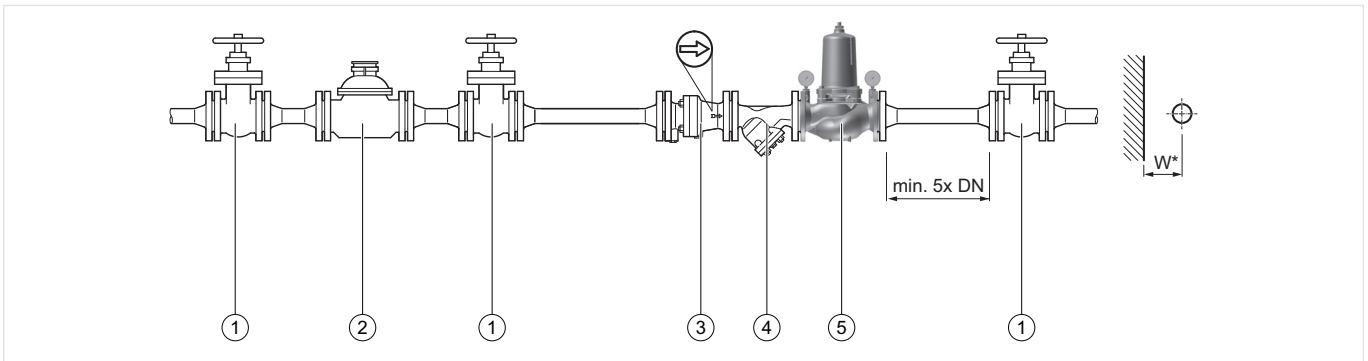


Fig. 1 Standard installation example for the pressure reducing valve

- 1 Shut-off valve
- 2 Water meter
- 3 Non return valve
- 4 Strainer
- 5 Pressure reducing valve

Connection sizes:				
DN	50	65	80	100
inch	2"	2 1/2"	3"	4"
Distance in mm (W*):	110	120	130	145

\* Required installation distances between the centerline of the pipework and the surrounding in dependency of the connection size.

**TECHNICAL CHARACTERISTICS**

**kvs-Values**

Connection sizes:				
DN	50	65	80	100
Inch	2"	2 1/2"	3"	4"
kvs-value (m <sup>3</sup> /h):	18	49	51	56

**Pressure drop characteristics**

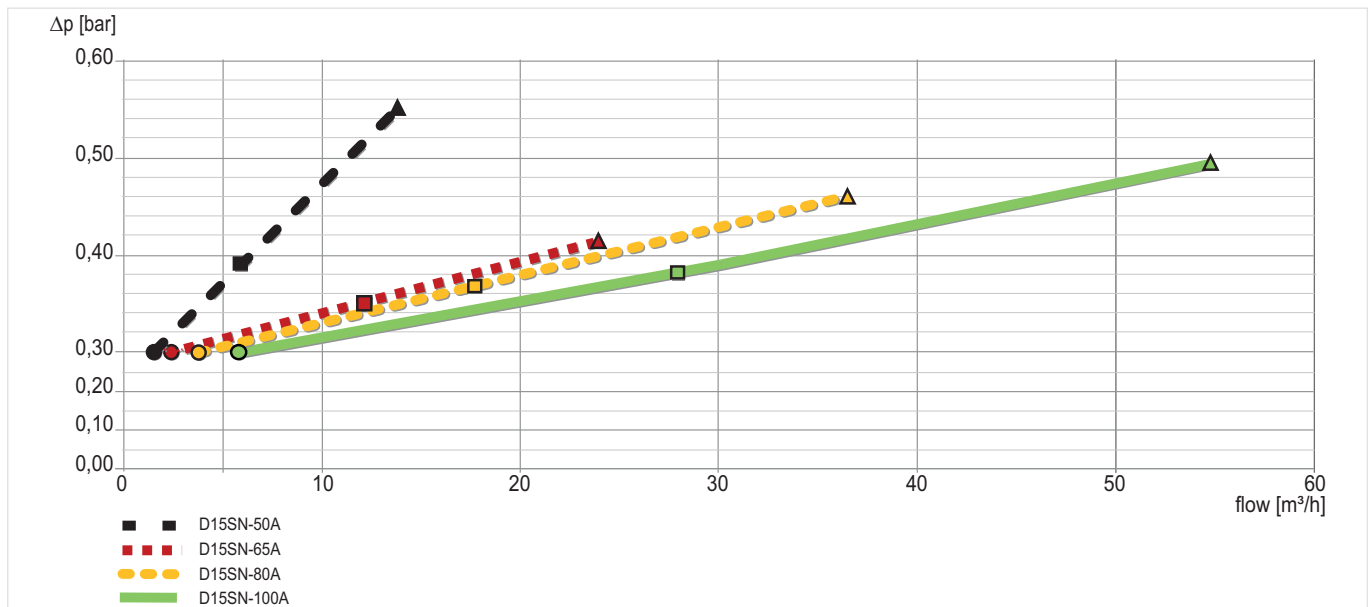


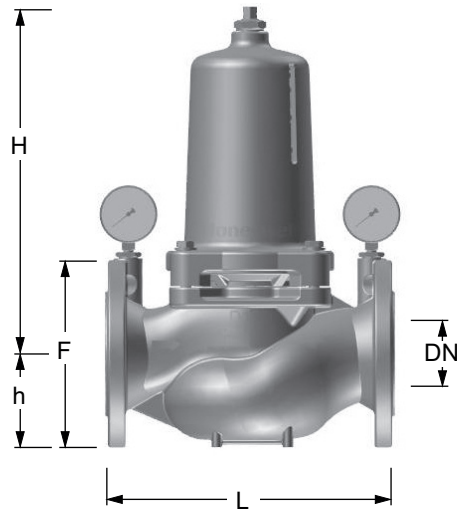
Fig. 2 Pressure drop within the valve in dependency of the flow rate and the used connection size (Sizes 50-100).

Pressure setting: P1: 8bar, P2: 2bar

	DN50	DN65	DN80	DN100
● $\triangleq$ 10% of standard flow	1.4 m <sup>3</sup> /h	2.4 m <sup>3</sup> /h	3.6 m <sup>3</sup> /h	5.6 m <sup>3</sup> /h
■ $\triangleq$ 1m/s flow rate	7 m <sup>3</sup> /h	12 m <sup>3</sup> /h	18 m <sup>3</sup> /h	28 m <sup>3</sup> /h
▲ $\triangleq$ 2m/s flow rate = QN	14 m <sup>3</sup> /h	24 m <sup>3</sup> /h	36 m <sup>3</sup> /h	56 m <sup>3</sup> /h
Flow rate at 4m/s flow velocity	28 m <sup>3</sup> /h	48 m <sup>3</sup> /h	72 m <sup>3</sup> /h	112 m <sup>3</sup> /h

## DIMENSIONS

### Overview



Parameter		Values			
Connection sizes:	Inch	2"	2 1/2"	3"	4"
Nominal size diameter:	DN	50	65	80	100
Weight:	kg	14	30.5	32	34.5
Dimensions:	L	230	290	310	350
	H	296	370	370	370
	h	83	93	100	110
	F	165	185	200	220

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

- standard
- not available

		D15SN-...A
Flanges:	PN16, ISO 7005-2, EN 1092-2, face to face length acc. EN 558-1	•
Housing:	Ductile cast iron (EN-GJS-400-15 EN 1563), coated with PA (polyamide)	•

Note: ... = space holder for connection size

Note: Ordering number example for 2 1/2" and type A valve: D15SN-21/2A

**Spare Parts**

Pressure Reducing Valve D15SN.

Overview	Description	Dimension	Part No.
	<b>1 Valve insert complete</b>		
		DN50	0904175
	until 03/2020	DN65 - DN100	D15S-SET-OT
	as of 03/2020	DN65 - DN100	0904220
	<b>2 Set of seals complete</b>		
		DN50	0904176
		DN65 - DN100	0904221
	<b>3 Pressure gauge</b>		
		0 - 4 bar	M39M-A04
	<b>4 Pressure gauge</b>		
		0 - 16 bar	M39M-A16



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