Braukmann
D15SH

Diaphragm-actuated pressure reducing valve

with cartridge insert, high 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, pressurization 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.

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Approvals

- DVGW
- WRAS

Special Features

- LEAD-FREE: Pb content of all materials in contact with medium less than 0.1 %
- 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)
- All materials are UBA conform
- ACS certified
- All materials WRAS approved
- 5-year warranty



Technical Data

Medium	
Medium:	Drinking water
Connections/Sizes	
Connection size:	2" - 4"
Nominal sizes:	DN50 - DN100
Pressure values	
Max. inlet pressure:	25 bar
Outlet pressure:	3 - 10 bar
Nominal pressure:	PN25
Min. pressure drop:	1 bar
Operating temperatures	
Max. operating temperature medium:	65 °C
Max. operating temperature medium accord. to EN 1567:	30 °C

Construction

Overview


	Components	Materials
1	Spring bonnet with adjustment screw	Ductile cast iron (EN-GJS-400-15 EN 1563), coated with PA (polyamide)
2	Pressure gauge	-
3	Screws and nuts	Stainless steel
4	Housing with flanges per ISO 7005-2, EN 1092-2	Ductile cast iron (EN-GJS-400-15 EN 1563), coated with PA (polyamide)
	Not depicted components:	
	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

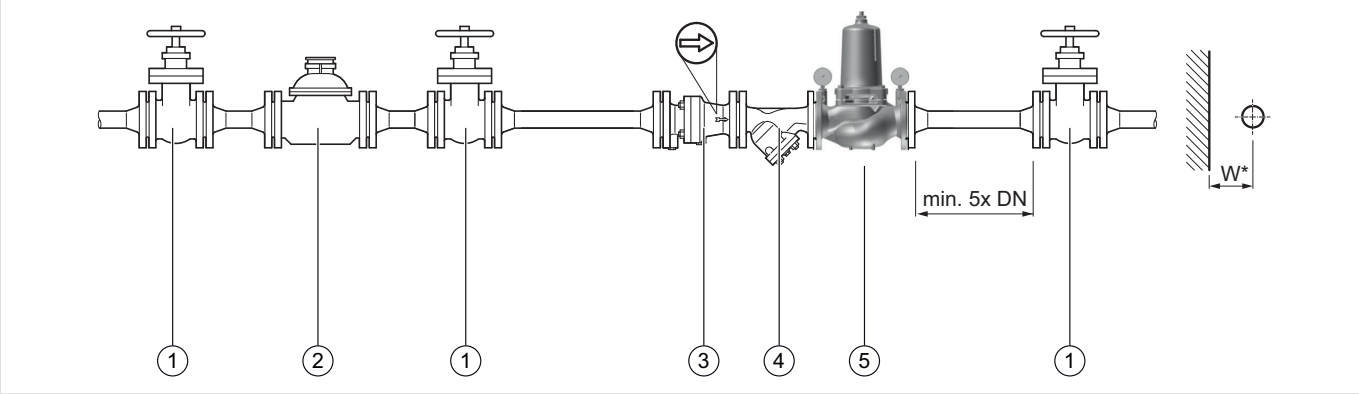


Fig. 1 Standard installation example for the pressure reducing valve

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

Connection size:				
DN	DN50	DN65	DN80	DN100
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 size:				
DN	DN50	DN65	DN80	DN100
Inch	2"	$2^1/_2$"	3"	4"
k_{vs}-value (m^3/h):	18	49	51	56

Pressure drop characteristics

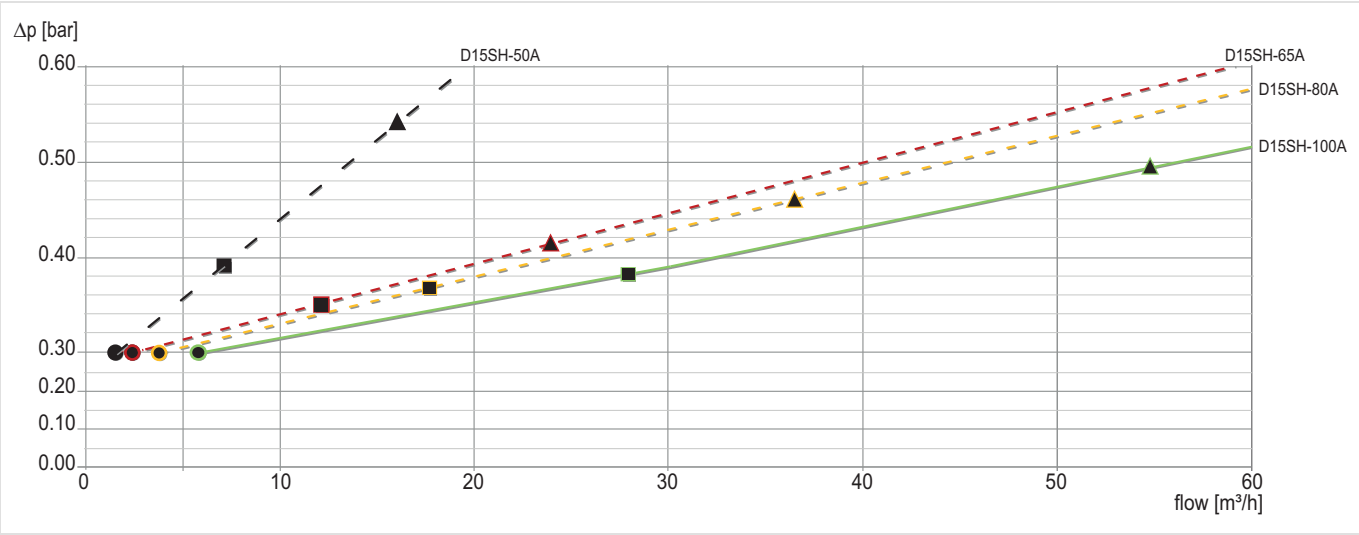


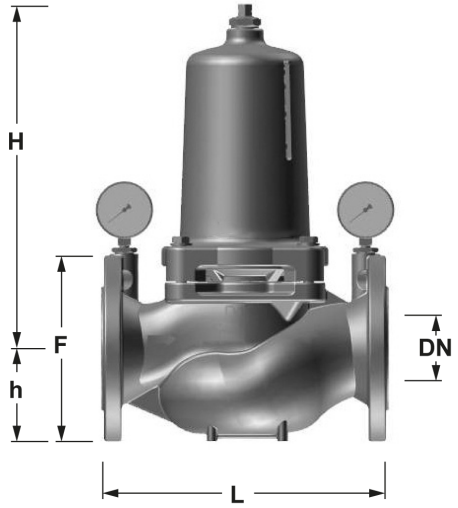
Fig. 2 Pressure drop within the valve in dependency of the flow rate and the used connection size (Sizes 50).
Pressure setting: P1: 8 bar, P2: 3 bar

Flow Rate

Nominal size diameter	DN50	DN65	DN80	DN100
● ≙ 10 % of standard flow	1.4 m^3/h	2.4 m^3/h	3.6 m^3/h	5.6 m^3/h
■ ≙ 1 m/s flow rate	7 m^3/h	12 m^3/h	18 m^3/h	28 m^3/h
▲ ≙ 2 m/s flow rate = QN	14 m^3/h	24 m^3/h	36 m^3/h	56 m^3/h
Flow rate at 4 m/s flow velocity	28 m^3/h	48 m^3/h	72 m^3/h	112 m^3/h

Dimensions

Overview



Parameter		Values			
Nominal sizes:	DN	50	65	80	100
Connection size:	Inch	2"	$2^1/_2$"	3"	4"
Weight:	kg	14	30.5	32	34.5
Dimensions:	L	230	290	310	350
	H	220	380	380	380
	h	85	95	100	110
	F	165	185	200	235

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.

Options

The valve is available in the following sizes: 2", $2^1/_2$", 3" and 4".

• standard

- not available

		D15SH-...B
Flanges:	PN25, 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: Item number example for DN50 and type B valve: D15SH-50B

Accessories

	Description		Dimension	Item No.
	**EXF125-A**	**Extension flange DN125** Adapter flanges DN100 to DN125 Ductile iron, PN16 acc. ISO 7005-2 and EN 1092-2. Overall length with adapter flanges (without bolts) DN125 L=416mm, including bolts, nuts and the seal disc.		
				EXF125-A

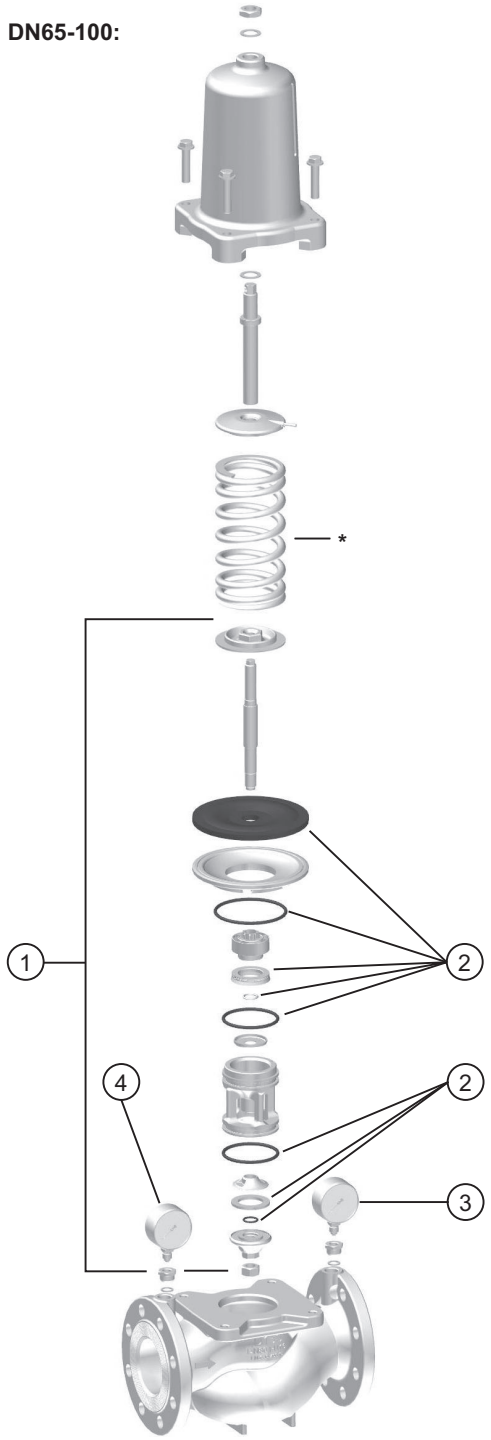
Spare Parts

Pressure Reducing Valve D15SH, from 2018 onwards

Overview

Schematic drawing

DN65-100:



	Description	Dimension	Item No.
1	**Valve insert complete**		
		DN50	0904175
		DN65 - DN100	0904220
2	**Set of seals complete**		
		DN50	0904176
		DN65 - DN100	0904221
3	**Pressure gauge**		
		0 - 16 bar	M39M-A16
4	**Pressure gauge**		
		0 - 25 bar	M39M-A25

* Inner spring only for D15SH

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Subject to change. EN0H-1060GE23 R1025
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