

Braukmann SV300

Safety valve



APPLICATION

Safety valves of this type are controlled by the medium flowing through it via a pilot valve. It is preferably installed in branches of supply pipework and protects downstream parts of a system which are at risk from unacceptable excess pressure which can, for example, be caused by pumps.

If the inlet pressure to the valve rises up to the set opening pressure, then the valve opens immediately to the maximum flow position. If the pressure falls to the set pressure, then the valve closes slowly to prevent pressure shock loads.

APPROVALS

- DVGW
- WRAS (up to 23 °C)

SPECIAL FEATURES

- High flow capacity
- Powder-coated inside and outside - Powder used is physiologically and toxicologically safe
- Integral control circuit and ball valves
- Integral fine filter
- No external energy required for operation
- Compact construction
- Light weight



TECHNICAL DATA

Media	
Medium:	Drinking water
Connections/Sizes	
Connection size:	DN50 - DN450
Pressure values	
Max. operating pressure:	16 bar / 25 bar
Nominal pressure:	PN16 / PN25
Minimum pressure:	0.5 bar
Opening pressure:	3 - 15 bar / 3 - 19 bar
Operating temperatures	
Max. operating temperature medium:	80 °C
Specifications	
Safety valve sizing:	

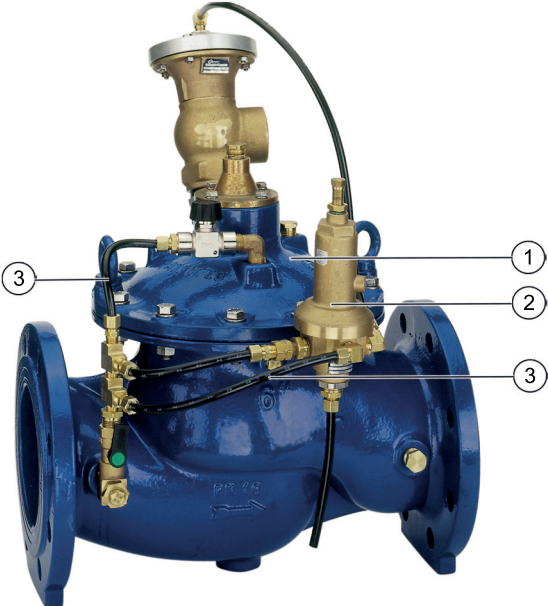
$$d[\text{mm}] \geq \sqrt{\frac{250 \times Q[\text{m}^3/\text{h}]}{P_{\text{set}}[\text{mmWS}]}}$$

e.g. 80 m³/h and 7 bar

$$d \geq \sqrt{\frac{250 \times 80}{\sqrt{70}}}$$

d ≥ 49 mm → DN50

CONSTRUCTION

Overview	Components	Materials
	1 Housing with flanges acc. to ISO 7005-2 / EN 1092-2	Ductile iron (ISO 1083), powder-coated
	2 Pilot valve	Brass
	3 Control circuit with integral rinsable filter insert and ball valves on inlet and outlet	High-quality synthetic material
Not depicted components:		
	Cover plate	Ductile iron (ISO 1083), powder-coated
	Diaphragm plate	Ductile iron (ISO 1083), powder-coated
	Diaphragm	EPDM
	Spring	Stainless steel
	Regulating cone	Stainless steel
	Valve seat	Stainless steel
	Compression fittings	Brass
	Pilot valve housing	Brass
	Filter insert	Stainless steel
	Seals	EPDM

METHOD OF OPERATION

Safety valves of this type limit the pressure in the pipework because any over pressure in the pipework causes the valve to open, which then balances the pressure. After rapid opening, the valve then closes slowly to prevent pressure shock loads.

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 downstream of the strainer
 - Protects against damage from coarse particles
 - Note flow direction (indicated by arrow)
- The installation location should be protected against frost and be easily accessible
 - Pressure gauge can be read off easily
 - Simplified maintenance and cleaning
- Requires regular maintenance in accordance with EN 806-5

Installation Example

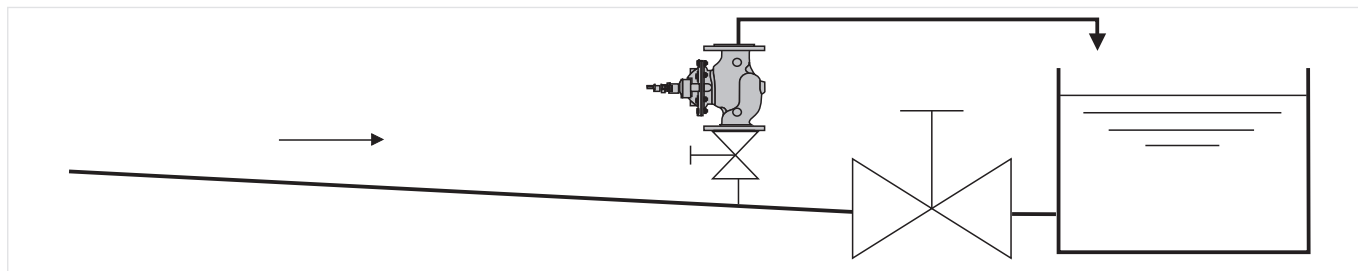


Fig. 1 Standard installation example for the safety valve

Connection sizes:	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"	16"	18"
Distance in mm (W*):	100	110	120	130	160	190	220	250	270	310	330

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

TECHNICAL CHARACTERISTICS

kvs-Values

Connection sizes:	50	65	80	100	150	200	250	300	350	400	450
k_{VS} -value (m^3/h):	43	43	103	167	407	676	1160	1600	2000	3000	3150
Flow rate (Q_{max}) in m^3/h - $V=5.5 m/s$:	40	40	100	160	350	620	970	1400	1900	2500	3100

Pressure drop characteristics

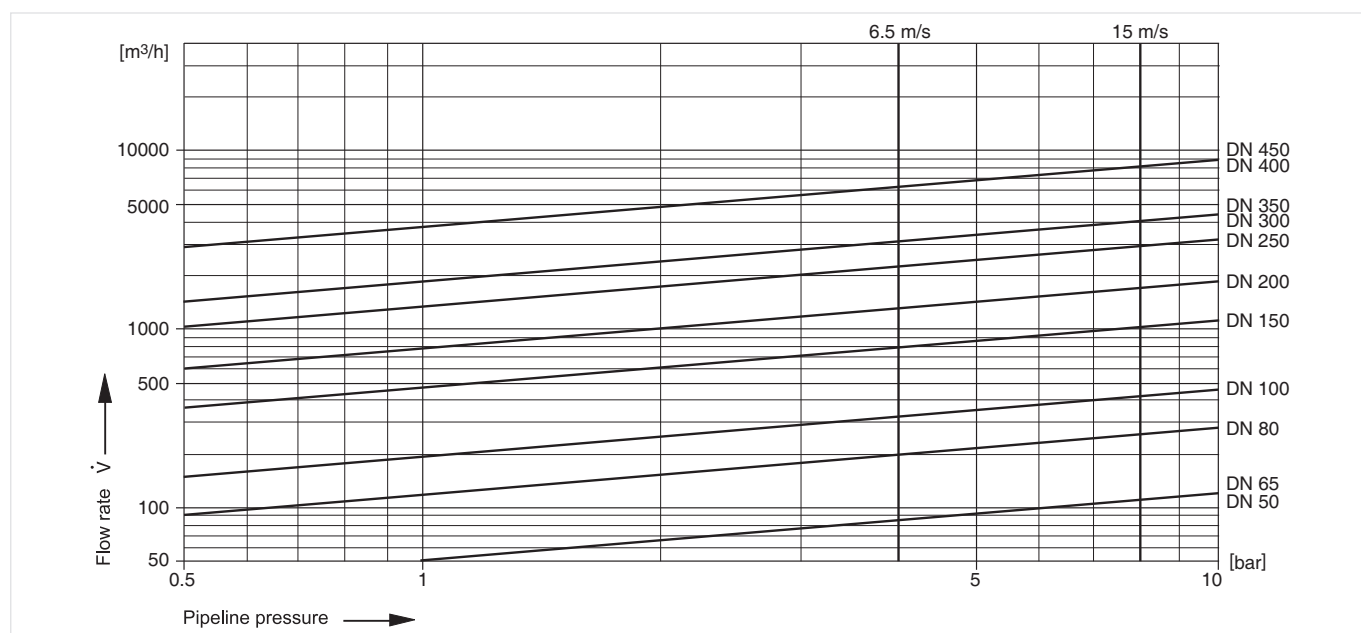
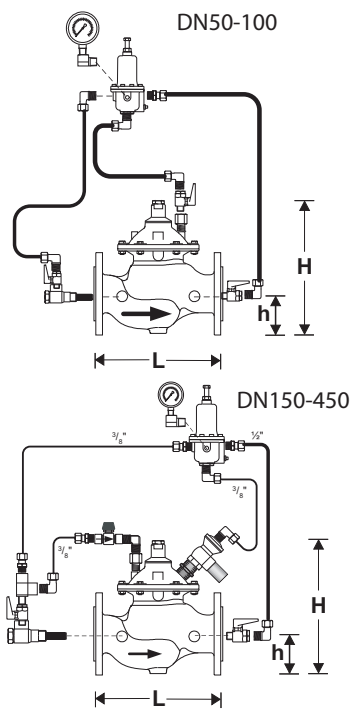


Fig. 2 Pressure drop within the valve in dependency of the flow rate and the used connection size

DIMENSIONS

Overview



Parameter		Values											
Connection sizes:	DN	50	65	80	100	150	200	250	300	350	400	450	
Weight with pilot valve:	kg	14.0	15.0	24.0	39.0	82.0	159.0	247.0	407.0	512.0	824.0	947.0	
Weight without pilot valve:	kg	12.0	13.0	22.0	37.0	80.0	157.0	245.0	405.0	510.0	822.0	945.0	
Dimensions:	L	230	292	310	350	480	600	730	850	980	1100	1200	
	H	270	280	330	350	480	570	730	870	910	1150	1170	
	h	83	93	100	110	143	173	205	230	260	290	310	

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: DN50, DN65, DN80, DN100, DN150, DN200, DN250, DN300, DN350, DN400 and DN450.

- standard
- not available

		SV300-...A	SV300-...B
Connection type:	Flange PN16, ISO 7005-2, EN 1092-2	•	-
	Flange PN25, ISO 7005-2, EN 1092-2	-	•

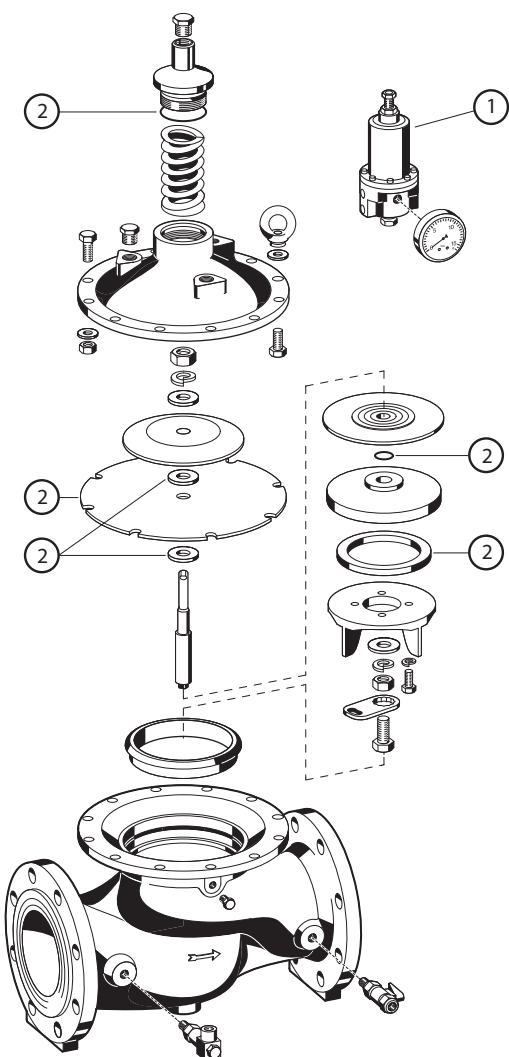
Note: ... = space holder for connection size
Note: Ordering number example for DN50 and type A valve: SV300-50A

Accessories

	Description	Dimension	Part 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, DVGW approved, including bolts, nuts and the seal disc.		
			EXF125-A

Spare Parts

Safety valve SV300, from 2002 onwards

Overview	Description	Dimension	Part No.
	1 Replacement pilot valve		
		DN50 - 450	CX-PS
	2 Set of seals		
		DN50	0903750
		DN65	0903751
		DN80	0903752
		DN100	0903753
		DN150	0903754
		DN200	0903755
		DN250	0903756
		DN300	0903757
		DN350	0903758
		DN400	0903759
		DN450	0903760



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