

For constant pressure and high levels of safety

Shutoff, back-pressure and pressure relief valves



Constant pressure and high levels of safety

Back-pressure and pressure-relief valves are fittings for dosing systems. Depending on the task involved, they are used to increase the dosing accuracy or to protect the system against excess pressure. If the delivery pressure is higher than the dosing pressure, dosing without a back-pressure valve is not possible.

With the dosing of fluids, back-pressure valves generate a defined back pressure on the pressure side of a dosing pump.

This is required in the following cases:

- Strongly fluctuating pressure. Exact dosing results are impossible without a back-pressure valve.
- The pressure on the suction side is higher than on the pressure side.
- Dosing in a pressureless line is required.

Pressure relief valves have an important safety function for protecting the dosing pump and the associated pipes and fittings. The dosing pump can generate a pressure that is many times the rated one.

Various reasons, e.g. soiling or operating errors can result in blocked pressure lines. At an appropriate pressure, a pressure relief valve opens a bypass line and protects the system in this way from damage caused by over-pressure.

A shutoff valve (A) enables the dosing system to separate the non-return valve from the pressurized system.

The shutoff valve enables the maintenance of the non-return valve after separation from the system and should be closed before longer down times because the leak-free nature of the non-return valve could be restricted through soiling particles or wear.

Functions

- Output range from 75 – 1500 l/h, up to 250 bar
- Deployment in a potentially explosive atmosphere is possible (spring-loaded seat valve DN6 200 bar and DN10 250 bar)
- Assembly in any installation location (only spring-loaded seat valves must be installed vertically)
- Installation of a pressure-relief valve with return to the dosing tank possible

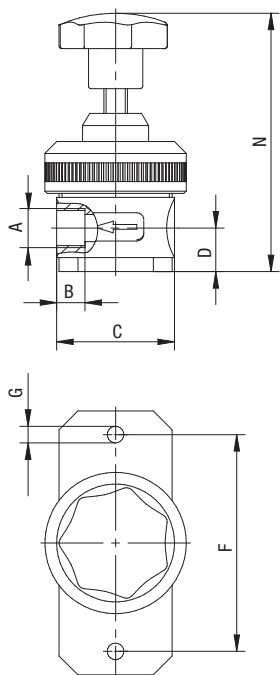
Technical data

Valve type	Nominal width	Nominal pressure	Nominal flow	max. temperature
Diaphragm shut-off valve	DN6	PN16	75 l/h	PVC: 35 °C PP-GF, PVDF and stainless steel: 50 °C
	DN10	PN10	200 l/h	
	DN15		500 l/h	
Needle shutoff valve	DN6	PN200	75 l/h	Stainless steel: 120 °C
	DN10		200 l/h	
Back-pressure and pressure-relief valve (Diaphragm valve with spring loading)	DN6	PN16	75 l/h	PVC: 35 °C PP-GF, PVDF and stainless steel: 50 °C
	DN10	PN10	200 l/h	PVC: 35 °C PP, PVDF and stainless steel: 50 °C
	DN15		500 l/h	
	DN25	PN10 (PN16)	850 l/h	PP, stainless steel 50 °C
	DN32		1400 l/h	
	DN40		2250 l/h	
	DN50		3600 l/h	
DN65	5000 l/h			
Pressure-relief valve (spring-loaded seat valve)	DN6	PN200	40 l/h	Stainless steel: 120 °C
	DN10	PN250	480 l/h (10 bar) 1500 l/h (100 bar)	Stainless steel: 280 °C

Dimensions

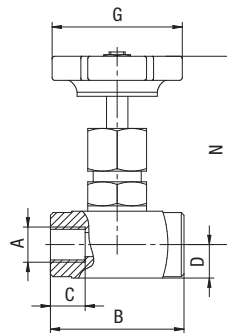
Diaphragm shutoff valve DN6, DN10, DN15

All dimensions in mm



Needle shutoff valve DN6, DN10

All dimensions in mm



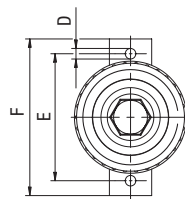
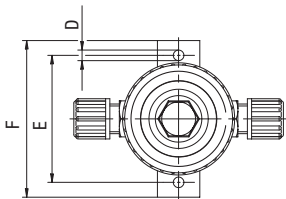
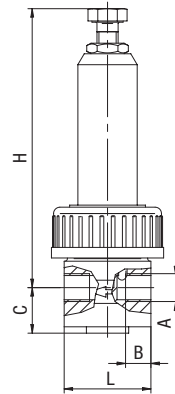
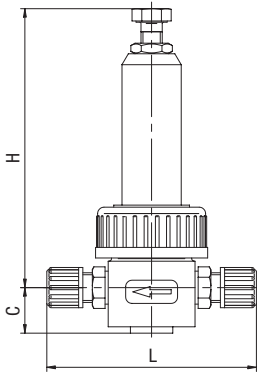
Nominal width	A	B	C	D	N	F	Ø G
DN6	G1/4	10	40	23	102	46.5	4.5
DN10	G3/8	12	55	19	107	72	7
DN15	G1/2	16	75	22	102	92	7

Nominal width	A	B	C	D	N	Ø G
DN6	G1/4	50	12	12.5	max. 87.5	50
DN10	G3/8	57	15			

Dimensions

Back-pressure and pressure-relief valve DN6, DN10, DN15 (spring-loaded diaphragm valve)

All dimensions in mm



Plastic version

Stainless steel version

Nominal width	Material	A	B	C	D	E	F	H	L
DN6	Plastic	-	-	21.5	5	60	71	125 – 140	140
	Stainless steel*	-	-						100
	Stainless steel	G1/4	12						41
DN10	Plastic	G3/8	12	18.5	7	92	112	125 – 150	50
		Grommet Ø13	-						128
		Ø20	16						90
	Stainless steel	G3/8	18			49			
		G1/2	18			107			
DN15	Plastic	G1/2	17	21	7	92	112	130 – 160	70
		Grommet Ø16	-						156
		Ø20	16						112
		Ø25	19						120
	Stainless steel	G1/2	25	18	140 – 165	74			
		G3/4	25			130			

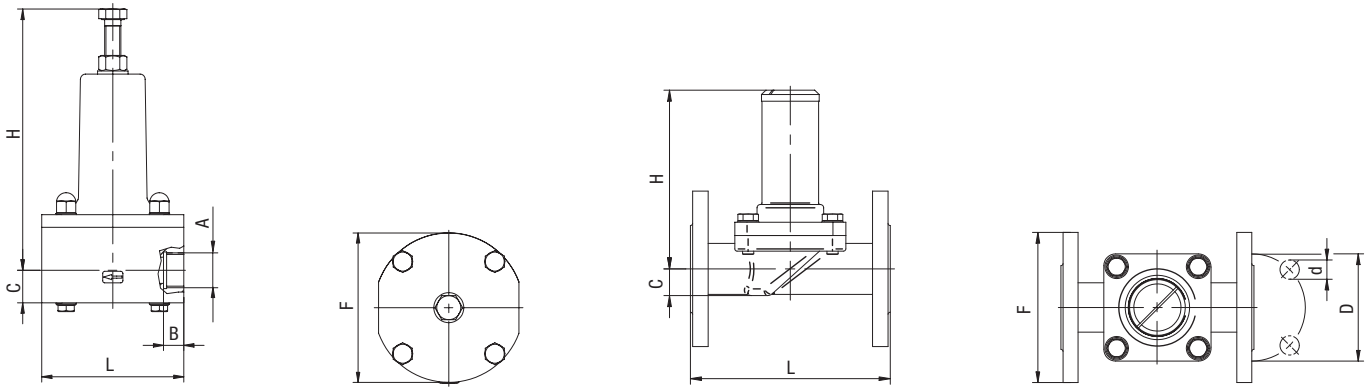
* with hose clamp connection in PVDF

Back-pressure valves are also available in combination with pressure-relief valves or shutoff valves.

Dimensions

Back-pressure and pressure-relief valves DN25, DN32, DN40, DN50, DN65 (spring-loaded diaphragm valves)

All dimensions in mm

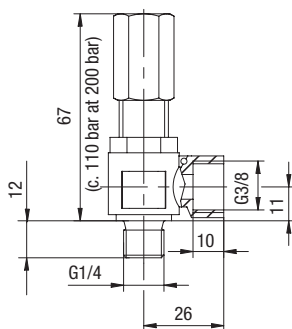


Nominal width	Material	A	B	C	D	d	F	H	L
DN25	Plastic	G1	20	32	-	-	149	220 – 255	140
		Ø 32	22						200
		Ø 40	32						220
	Stainless steel	G1	30	22					140
DN32	Plastic	G1 1/4	22	31	-	-	149	220 – 255	140
	Stainless steel	DN32	-	24	100	18	140	160	200
DN40	Plastic	G1 1/2	22	38	-	-	159	240 – 270	152
	Stainless steel	DN40	-	30	110	18	150	180	235
DN50	Plastic	G2	27	38	-	-	170	240 – 270	156
	Stainless steel	DN50	-	38	125	18	165	185	260
DN65	Plastic	G2 1/2	28	46	-	-	190	260 – 295	172

Dimensions

Pressure-relief valve DN6 (spring-loaded seat valve)

All dimensions in mm



Pressure-relief valve DN 10 (spring-loaded seat valve)

All dimensions in mm

