

Fundamentals for special valves

Pressure reducing valve V82

Technical data V82

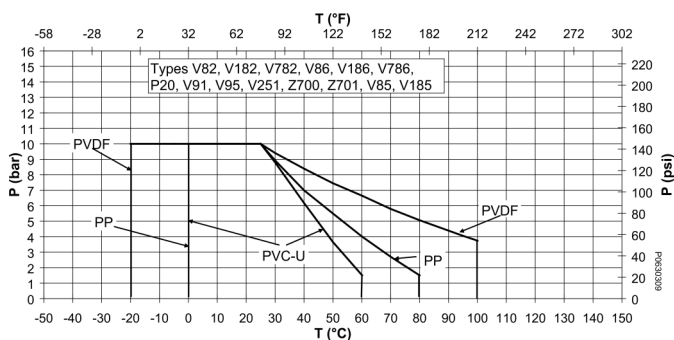
Available materials

Valve housing:	PVC-U, PP, PVDF
Diaphragm:	EPDM, EPDM-PTFE-coated
Pressure ranges:	DN10 - DN50; 0.5-10 bar
	DN65 - DN80; 0.5-6 bar
	DN100; 0.5-4 bar

Allowable working temperature

PVC-U	0 to + 60 °C
PP	0 to + 80 °C
PVDF	-20 to + 100 °C

Working pressure



P Permissible pressure in bar, psi

T Temperature in °C, °F

Hysteresis

approx. 0.4 to 1.0 bar

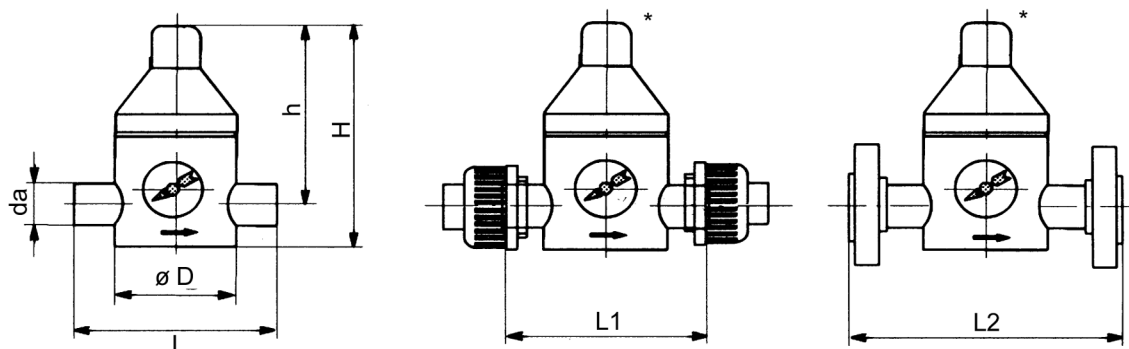
Pressure difference between inlet and outlet

1 bar

Adjustment range on outlet with an inlet pressure of 10 bar

0.5 to 9.0 bar

Dimensions and weight V82



* special versions on request

da	DN	D	h	H	L: PVC-U cement spigots PP/ PVDF fu- sion spig- ots	L: PVDF-HP/ PP Butt fusion spigots BCF/ IR
16	10	70	100	130	134	-
20	15	70	100	130	134	150
25	20	100	134	180	174	190
32	25	100	134	180	174	190
40	32	130	175	230	224	240
50	40	130	175	230	224	240
63	50	150	210	285	244	260
75	65	200	250	350	300	300
90	80	250	305	425	360	360
110	100	300	345	495	420	420

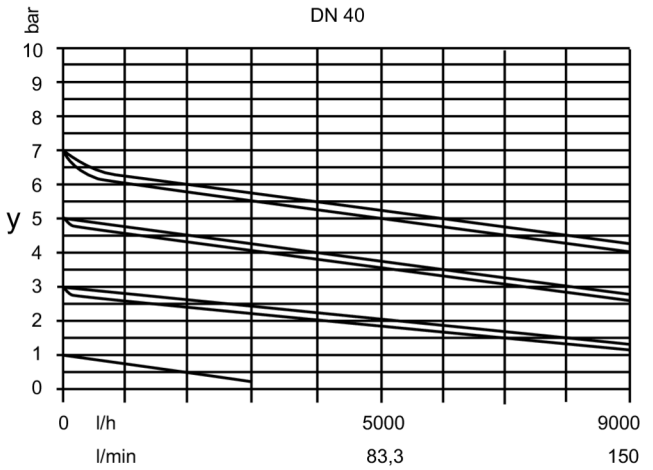
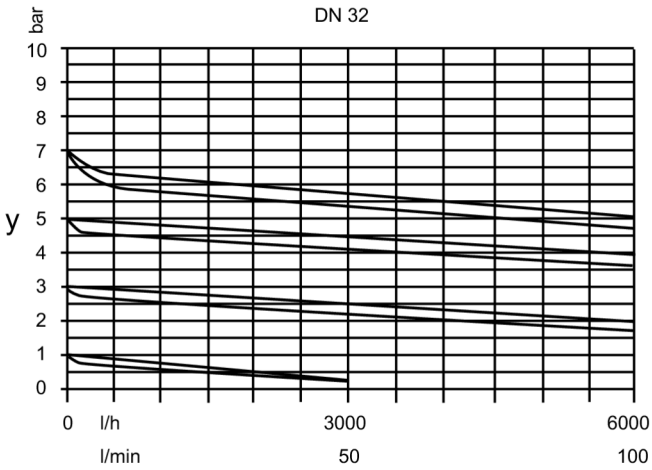
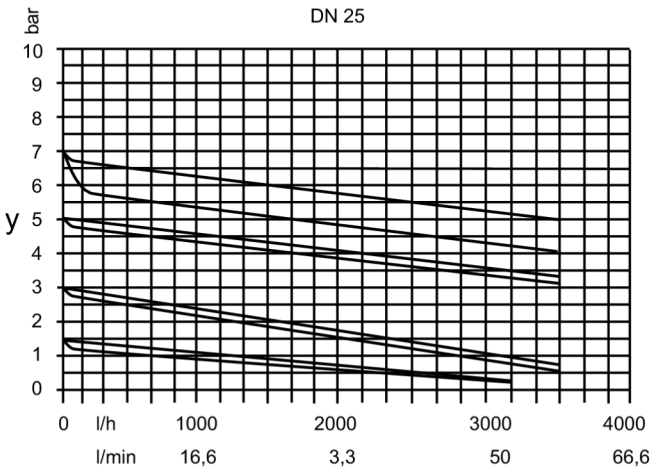
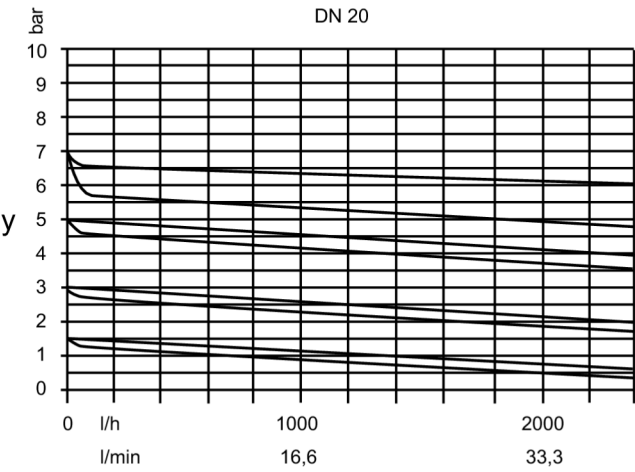
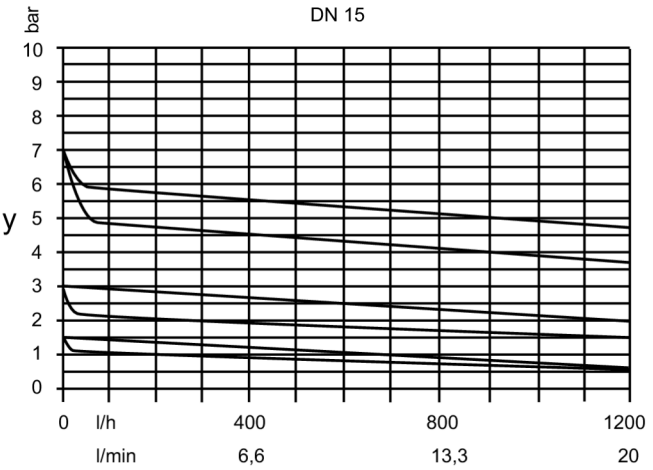
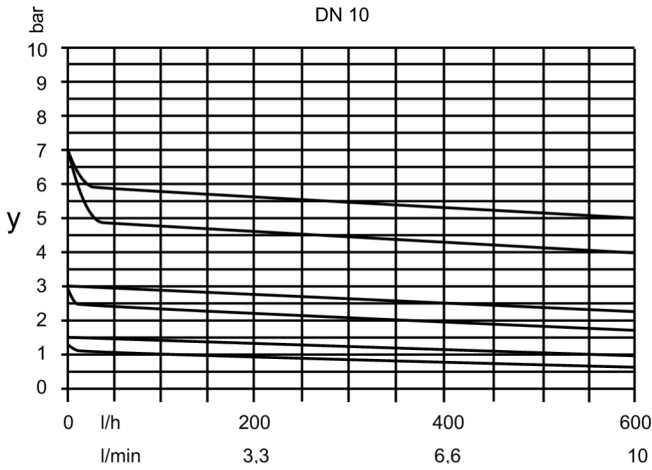
da	DN	PVC-U, PP/ PVDF	PVC-U, PP/ PVDF	Weight (kg) - PVC-U		
		L1	L2	L	L1	L2
16	10	154	140	0.68	0.73	0.84
20	15	154	140	0.68	0.76	0.88
25	20	185	180	1.35	1.49	1.64
32	25	185	180	1.63	1.56	1.75
40	32	248	230	2.96	3.32	3.62
50	40	252	230	2.96	3.38	3.74
63	50	280	250	5.18	5.90	6.175
75	65	-	306	10.43	-	11.77
90	80	-	370	19.63	-	21.25
110	100	-	430	31.64	-	33.76

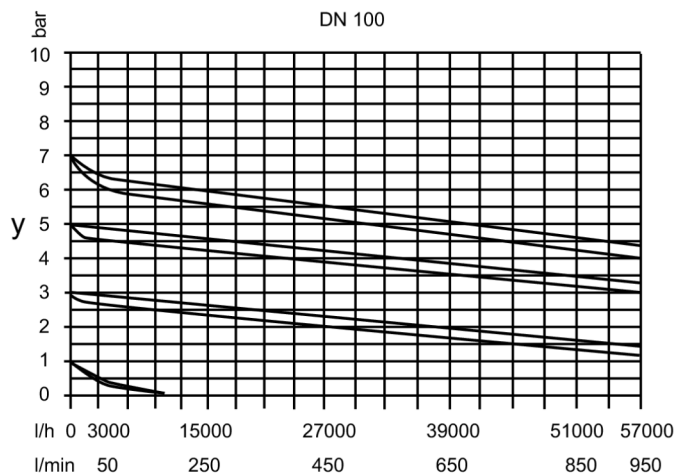
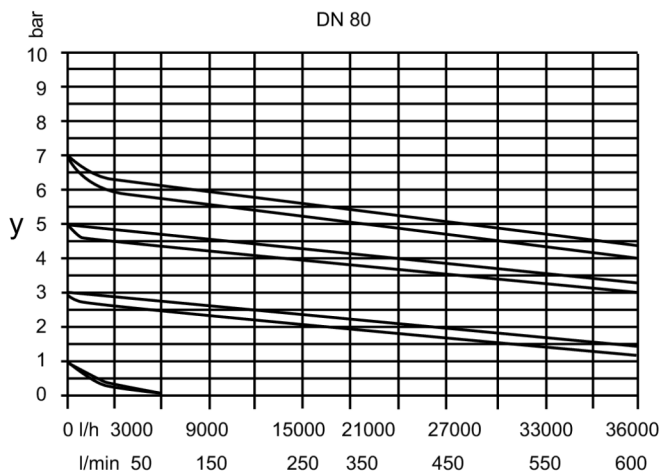
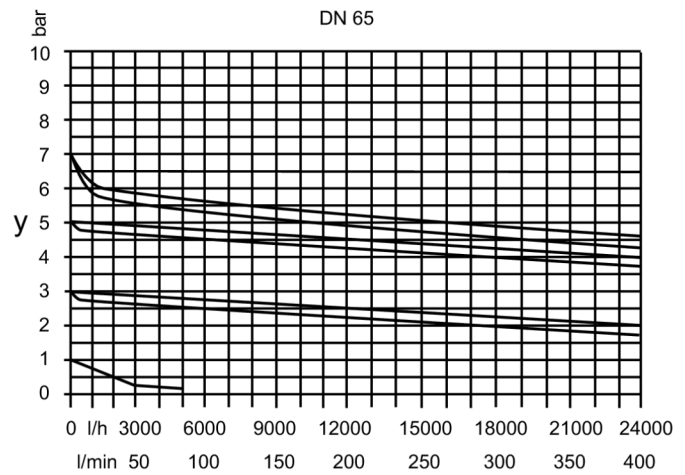
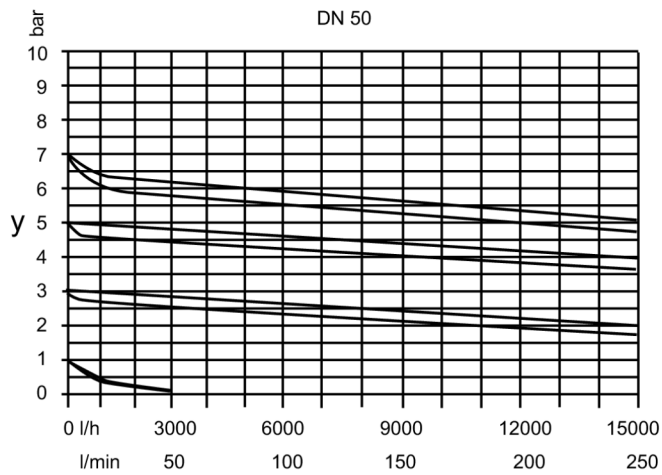
Cement and fusion spigots ac-
cording to DIN/ISO

da	DN	PP L	PVDF L
16	10	0.55	0.79
20	15	0.51	0.78
25	20	1.03	1.62
32	25	1.02	1.59
40	32	2.24	5.32
50	40	2.24	5.32
63	50	3.96	9.33
75	65	7.91	13.76
90	80	12.91	-
110	100	23.30	-

Cement and fusion spig-
ots according to DIN/ISO

Characteristics V82





l/h, l/min flow volume H₂O

y outlet pressure (bar)

Characteristics are valid for a flow rate of 2 m/s.

Order number

DN	d	Adj. range in bar	PVC-U	
			EPDM	PTFE
10	16	0.5 - 9.0	199 041 012	199 041 022
15	20	0.5 - 9.0	199 041 013	199 041 023
20	25	0.5 - 9.0	199 041 014	199 041 024
25	32	0.5 - 9.0	199 041 015	199 041 025
32	40	0.5 - 9.0	199 041 016	199 041 026
40	50	0.5 - 9.0	199 041 017	199 041 027
50	63	0.5 - 9.0	199 041 018	199 041 028
65	75	0.5 - 6.0	199 041 019	199 041 029
80	90	0.5 - 6.0	199 041 020	199 041 030
100	110	0.5 - 4.0	199 041 021	199 041 031

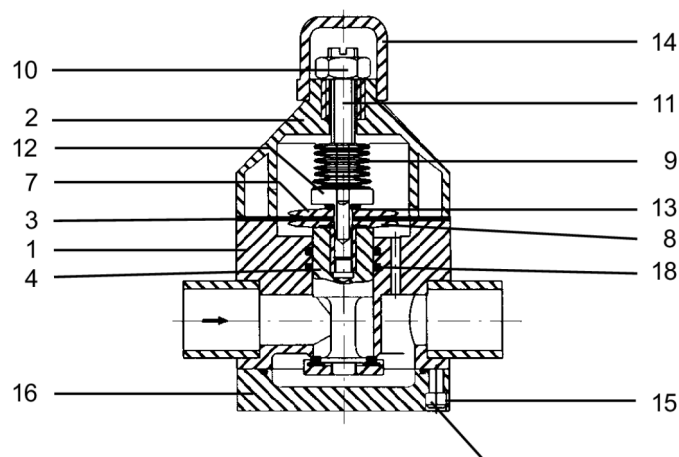
DN	d	Adj. range in bar	PP	
			EPDM	PTFE
10	16	0.5 - 9.0	199 041 032	199 041 042
15	20	0.5 - 9.0	199 041 033	199 041 043
20	25	0.5 - 9.0	199 041 034	199 041 044
25	32	0.5 - 9.0	199 041 035	199 041 045
32	40	0.5 - 9.0	199 041 036	199 041 046
40	50	0.5 - 9.0	199 041 037	199 041 047
50	63	0.5 - 9.0	199 041 038	199 041 048
65	75	0.5 - 6.0	199 041 039	199 041 049
80	90	0.5 - 6.0	199 041 040	199 041 050
100	110	0.5 - 4.0	199 041 041	199 041 051

DN	d	Adj. range in bar	PP/IR spigots	
			EPDM	PTFE
10	16	0.5 - 9.0	-	-
15	20	0.5 - 9.0	199 041 411	199 041 421
20	25	0.5 - 9.0	199 041 412	199 041 422
25	32	0.5 - 9.0	199 041 413	199 041 423
32	40	0.5 - 9.0	199 041 414	199 041 424
40	50	0.5 - 9.0	199 041 415	199 041 425
50	63	0.5 - 9.0	199 041 416	199 041 426
65	75	0.5 - 6.0	199 041 417	199 041 427
80	90	0.5 - 6.0	199 041 418	199 041 428
100	110	0.5 - 4.0	199 041 419	199 041 429

DN	d	Adj. range in bar	PVDF-PTFE Standard	HP-Version*
				BCF/IR spigots
10	16	0.5 - 9.0	199 041 052	-
15	20	0.5 - 9.0	199 041 053	199 041 184
20	25	0.5 - 9.0	199 041 054	199 041 185
25	32	0.5 - 9.0	199 041 055	199 041 186
32	40	0.5 - 9.0	199 041 056	199 041 187
40	50	0.5 - 9.0	199 041 057	199 041 188
50	63	0.5 - 9.0	199 041 058	199 041 189
65	75	0.5 - 6.0	199 041 059	-
80	90	0.5 - 6.0	-	-
100	110	0.5 - 4.0	-	-

* BCF fusion only possible up to DN 50 PVDF-PTFE Standard with IR spigots on request Flange and union versions on request

Sectional drawing V82



shown without
pressure gauge

shown offset

- 1 valve body
- 2 upper valve body
- 3 diaphragm
- 4* piston
- 7 V82: pressure plate (top)
- 8 V82: pressure plate (bottom)
- 9* compression spring
- 10 locknut
- 11 adjusting screw
- 12 hexagonal socket-head bolt
- 13 washer
- 14 cap
- 15 hexagonal socket-head bolt
- 16 valve bottom with O-ring
- 18* O-ring

* Parts subject to wear or recommended spare parts

Installation and operating advice

- Note the direction of flow! Indicated by the arrow on the valve.
- We recommend fitting the valve between 2 detachable pipe connections (flanges or screw fastenings).
- Can be installed in any position with no effect on functioning.
- Where the medium is dirty or particle-laden, we recommend installing a strainer to avoid any breakdowns.

Dismantling instructions

1. Dismantle the upper valve body:
 - 1.1 Put the valve in an upright position.
 - 1.2 Unscrew the cap (14).
 - 1.3 Undo the locknut on the adjusting screw (11) and undo the adjusting screw until the compression spring (9) is fully released.
 - 1.4 Undo the screws (15).
 - 1.5 Lift the upper body (2) upwards and remove the spring plate (6) and the spring (9).
- 2 Dismantle the lower valve body and the diaphragm:
 - 2.1 Carry out steps 1.1 to 1.5.
 - 2.2 Unscrew the vent plug (16).
 - 2.3 Lay the valve on its side.
 - 2.4 With a screwdriver on the underside of the piston (vent plug opening), prevent the piston from turning and at the same time use a hexagon socket screw key to unscrew the screw (12) in the pressure plate (5).
Remove the screw (12), pressure plate (5) and diaphragm(3).
 - 2.5 diaphragm(3).
 - 2.6 Remove the piston (4) downwards.

These steps are carried out in reverse order to re-assemble!

Operating faults and possible causes

Fault	Cause	Correction
Valve not sealed at the diaphragm	Diaphragm not pressed on hard enough	Tighten screws (15)
Pressure rises above the set value	Piston (4) not sealed	Check piston and piston position and possibly replace
	Diaphragm (3) not sealed	Replace diaphragm, dismantle upper valve body 1.1 - 2.5
	Control bores in housing soiled	Dismantle piston 1.1 - 2.6 and clean holes
Valve closed – will not open	Installed wrong way round	Turn valve round, check arrow indicating flow direction
Lower valve body not sealed at vent plug	O-ring not sealed	Dismantle vent plug, 2.2 and replace O-ring
Medium leaks out at the adjusting screw	Diaphragm is faulty	Replace diaphragm, dismantle lower valve body 1.1 - 2.5