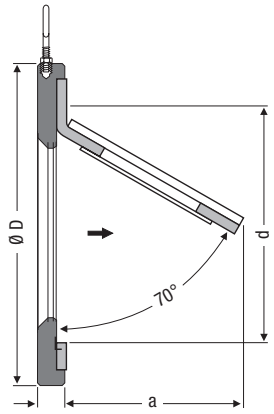
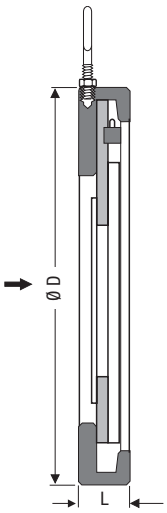
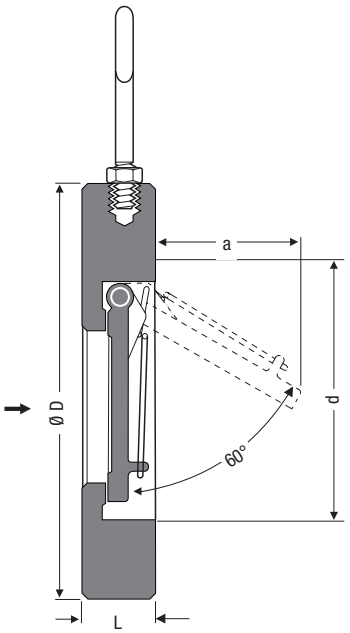


CB 14, DN 50 – 200 mm



CB 14, DN 250 – 300 mm



CB 24 S, CB 26, CB 26 A
DN 50 – 300 mm

Application and Features

Type	PN	Application for liquids, gases and vapours	Features
CB 14	PN 16	particulaly suitable for water and compressed air	rubber-elastic hinge, low weight
CB 24S	PN 16	for salty fluids such as sea water	compact design, 2 bow springs, flap disc with stop for pipe protection, approved by Germanischer Lloyd, CB 24S also approved by Bureau Veritas
CB 26	PN 40	for industrial applications	
CB 26A	PN 40	for low temperatures and aggressive fluids	

Materials

Type	Part designation	Nominal sizes DN	EN reference	ASTM [1] equivalent
CB 14	Body	50 – 300 mm	1.0460 galvanized	A 105 galvanized
	Flap	50 – 300 mm	NBR	NBR
CB 24 S	Body	50 – 100 mm	Bronze (CC 483K-GS)	B 505 C 90 700
		125 – 300 mm	Bronze (CC 332G)	B 148 Alloy 952
	Flap	50 – 300 mm	Bronze (CC 332G)	B 148 Alloy 952
CB 26	Body	50 – 200 mm	1.0460	A 105
		250 – 300 mm	1.0460	A 105
	Flap	50 – 150 mm	1.4581	A 351 CF 8 MC
		200 – 300 mm	5.3103	–
CB 26 A	Body	50 – 250 mm	1.4571	AISI 316 TI
		300 mm	1.4581	A 351 CF 8 MC
	Flap	50 – 300 mm	1.4581	A 351 CF 8 MC

[1]) Physical and chemical properties comply with EN grade.

Pressure/Temperature Ratings

Type	Nominal sizes DN	PN	p / T / [bar] / [°C]		
CB 14	50 – 300	PN 16	16 / -10	6.0 / 60	4.0 / 80
CB 24 S	50 – 300	PN 16	16 / - 200	16.0 / 90	15.6 / 250[2])
CB 26	50 – 150	PN 40	40 / -10	33.6 / 200	25.9 / 350[2])
	200 – 300	PN 40	40 / -10	33.3 / 200	27.6 / 300
CB 26 A	50 – 300	PN 40	40 / -10	35.8 / 200	28.0 / 450[2])[3])

[2]) Max. pressure/temperature rating for CB without springs.

[3]) If the operating temperatures exceed 300 °C intercrystalline corrosion may occur. Do not subject the equipment to operating temperatures higher than 300 °C unless intercrystalline corrosion can be ruled out.

CB Designs

Typ	Seat					Springs	
	metal-to-metal	NBR (–30 up to 110 °C)[4])	EPDM (–40 up to 150 °C)[4])	FPM (–25 up to 200 °C)[4])	PTFE[6]) (–25 up to 200 °C)[4])	without spring	special spring
CB 14	–	X[6])	–	–	–	X	–
CB 24S	0	X	0	0	–	0	–
CB 26	0	–	X	0	0	0	–
CB 26A	0	–	X	0	0	0	–

[4]) Observe pressure / temp. ratings of the equipment
[5]) Cover FPM ring with PTFE
[6]) Flap made from NBR (Perbunan) Temp. range: –10 °C up to 80 °C

X : standard
0 : optional
– : not available

Weights and Dimensions

Nominal size DN		Dimensions [mm]								Weight [kg]		
		CB 14				CB 24 S, CB 26, CB 26 A						
[mm]	[in]	D	L	a	d[7])	D	L	a	d[7])	CB14	CB 24 S	CB 26 CB 26 A
50	2	98	14	45	47	98	17	40	50	0.7	0.9	0.9
65	2½	118	14	60	64	118	20	50	64	1.0	1.4	1.4
80	3	132	14	70	75	132	24	58	75	1.4	2.0	2.0
100	4	154	14	90	98	154	27	72	99	1.5	3.1	3.1
125	5	184	16	115	124	184	32	88	125	2.5	5.2	5.3
150	6	209	16	145	148	209	32	112	144	3.3	6.7	6.9
200	8	264	18	185	196	264	42	150	198	5.5	13.7	14.1
250	10	319	35	220	242	319	47	182	244	11.2	22.9	23.6
300	12	375	43	270	288	375	52	216	292	14.0	32.8	33.8

[7]) Minimum flange bore and inside pipe diameter.

Pressure Drop Charts

The curves given in the chart are valid for water at 20 °C. To read the pressure drop for other fluids the equivalent water volume flowrate must be calculated and used in the graph $\dot{V}_W$.

The values indicated in the chart are applicable for spring-assisted valves with horizontal flow and to valves without spring installed in vertical pipes with upward flow.

$$\dot{V}_W = \dot{V} \cdot \sqrt{\frac{\rho}{1000}}$$

$\dot{V}_W$ = Equivalent water volume flow in [l/s] or [m³/h]
ρ = Density of fluid (operating condition) in [kg/m³]
$\dot{V}$ = Volume of fluid (operating condition) in [l/s] or [m³/h]

Opening Pressures

Differential pressures at zero volume flow.

Type	DN [mm]	Opening pressures [mbar] Direction of flow ↑	→	↓
CB 14	50 – 150	8	0	[1]
	200 – 300	15	0	

Type	DN [mm]	Opening pressures [mbar] Direction of flow without spring ↑	with spring ↑	→	↓
CB 24 S	50 – 150	5	12	7	
	200 – 300	8	15	7	
CB 26/	50 – 80	5	12	7	[1]
CB 26 A	100 – 150	11	18	7	
	200 – 300	18	25	7	

[1] Valves should not be used for downward flow applications, since the spring will not close the valve flap.

Minimum volume flow CB 14

DN	Minimum volume flows [m³] for full opening ↑	→
50	12	10
65	18	17
80	29	28
100	42	41
125	55	51
150	140	100
200	260	190
250	460	360
300	610	500

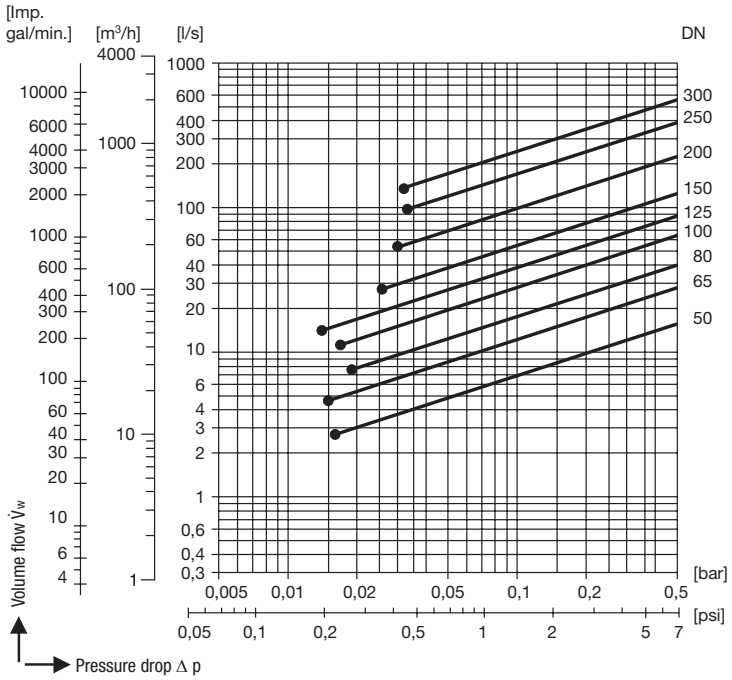
Values refer to water at 20°C.

Minimum volume flow CB 24 S, 26, 26 A

DN	Minimum volume flows [m³] for full opening without spring ↑	with spring ↑	→
50	4	6	6
65	7	10	12
80	10	20	20
100	18	30	30
125	30	40	48
150	60	70	80
200	90	150	160
250	160	220	260
300	200	300	360

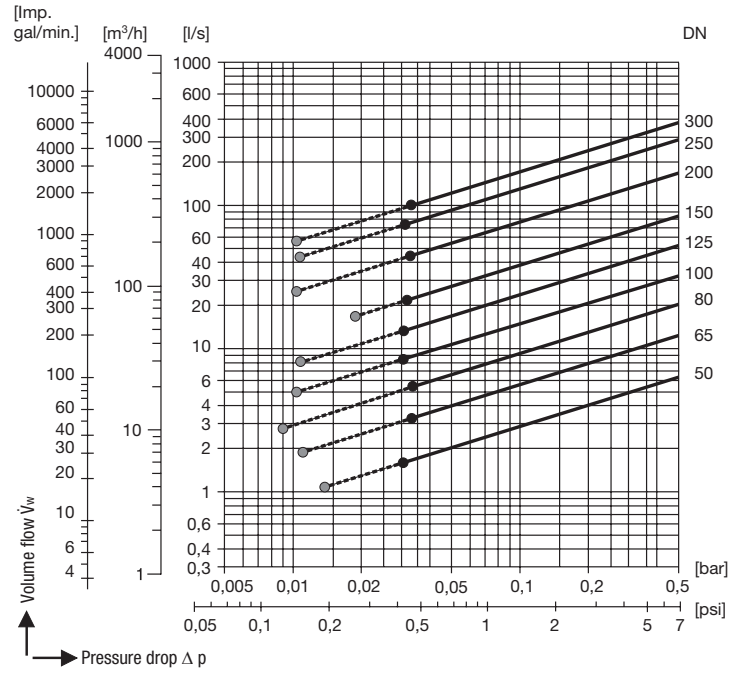
Values refer to water at 20°C.

CB 14



● Required minimum volume flow $\dot{V}_W$ for equipment installed in horizontal pipes.

CB 24 S, CB 26, CB 26 A



○ Required minimum volume flow V_W for equipment without spring installed in vertical pipes with upward flow.

● Required minimum volume flow $\dot{V}_W$ for equipment with standard spring and horizontal flow.