



GESTRA® Non-Return Valves · Product Range Group A2

CB 24s

DISCO Swing Check Valve CB 24s PN 6/10/16 DN 50 – 300 mm (2" – 12")

Application: for liquids, gases, vapours, sea water, drinking and swimming-pool water.
Low temperatures.

Pressure/Temperature Rating for valves with metal-to-metal seat

Nominal sizes	DN	50 – 300 mm (2" – 12")			
Nominal pressure	PN	16 ¹⁾			
Design		with bronze springs	without springs		
Max. service pressure	[bar g] [psi g]	16 230	16 230	14 200	13 185
Related temperature	[°C] [°F]	90 194	120 248	200 392	250 482
Minimum temperature ²⁾		–200 °C (–328 °F)			

¹⁾ Also rated for ANSI classes 125 and 150, but see flange details below.

²⁾ Minimum temperature for nominal pressure rating.

Soft seats

NBR (acrylonitrile butadiene rubber): –30 to +110 °C (–22 to +230 °F).

But also note valve pressure/temperature rating in the above table.



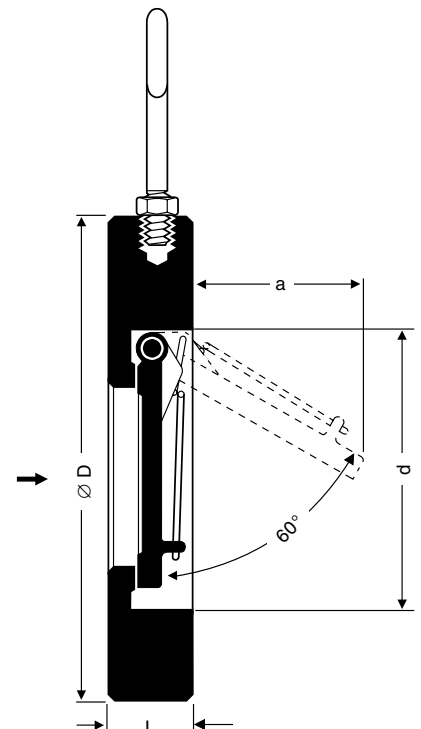
DN 50 – 300 mm
(2" – 12")

Connections of wafer-type valves

Standard valves for fitting between flanges to		
DIN	BS	ANSI
DIN 2501 PN 6/10/16	BS 10 tables D, E (DN 65 mm (2½") not suitable)	ANSI B 16.1 class 125 FF ANSI B 16.5 class 150 RF

Dimensions

DN		Dimensions [mm]			Weight [kg]
[mm]	[in]	L	D	a	
50	2	17	98	40	0.9
65	2½	20	118	50	1.4
80	3	24	132	58	2.0
100	4	27	154	72	3.1
125	5	32	184	88	5.2
150	6	32	209	112	6.7
200	8	42	264	150	13.7
250	10	47	319	182	22.9
300	12	52	375	216	32.8



Swing Check Valve CB 24s

PN 6/10/16

DN 50 – 300 mm

(2" – 12")

Opening pressures

Differential pressures at zero volume flow.

DN		Opening pressures in [mbar]			
		Direction of flow			
		without springs	with springs		
[mm]	[in]	↑	↑	→	↓
50 to 150	2 to 6	5	12	7	3)
200 to 300	8 to 12	8	15	7	

3) Valves may not be used for downward flow applications, since the spring will not close the valve flap.

1 mbar \triangleq 0.0145 psi \triangleq 10 mm w.g. \triangleq 0.4 in w.g.

Enquiry Specification

GESTRA DISCO swing check valves CB. Wafer design with extremely short overall length. Valve flap opening through 60°. Metal hinge. Two springs.

Suitable for fitting between flanges to DN, BS or ANSI.

Indications on pressure, nominal size (DN), material. Metal-to-metal seat or soft seat (NBR).

Order Specifications

Type CB 24s, nominal size DN...

Metal-to-metal or soft seat (NBR).

Fluid, flowrate, pressure and temperature. Type of flanges.

Note

The valves should not be used on compressors or where pulsating flow exists. For these applications please consult us.

Supply in accordance with our general terms of business.

Materials

DN 50 – 300 mm (2" – 12")		DIN reference		ASTM equivalent
Body	DN 50 – 100 mm	Bronze G-CuSn 12	2.1052.04	B 505 C 90 700
	DN 125 – 300 mm	Aluminium bronze G-CuAl 9 Ni	2.0970.01	B 148 Alloy 952
Flap		Aluminium bronze G-CuAl 9 Ni	2.0970.01	B 148 Alloy 952
Bow springs		Bronze CuSn 6 F 90	2.1020.39	B 159 C 51 000
Shaft and supports		Bronze CuSn 8 F 38	2.1030.10	B 139 C 52 100
Sleeves (only for DN 200 – 300 mm)		Bronze CuSn 8 F 38	2.1030.10	B 139 C 52 100

Pressure Drop Chart

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 flow-rate must be calculated and used in the graph.

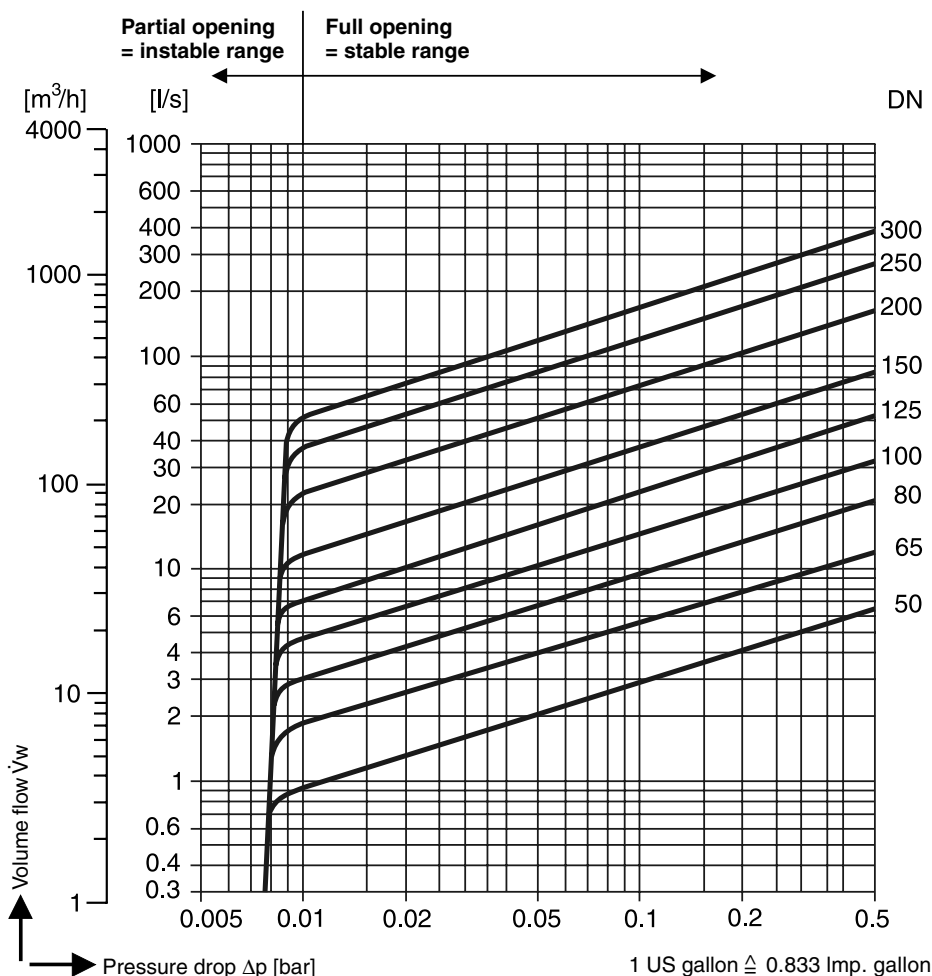
The values indicated in the chart are applicable to spring-loaded valves with horizontal flow. With vertical flow insignificant deviations occur only within the range of partial opening.

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

\dot{V}_w = Equivalent water volume flow in [l/s] etc.

ρ = Density of fluid (operating condition) in [kg/m³] etc.

\dot{V} = Volume of fluid (operating condition) in [l/s] etc.



GESTRA GmbH

Postfach 10 54 60, D-28054 Bremen
Münchener Str. 77, D-28215 Bremen

Telefon +49 (0) 421 35 03-0, Telefax +49 (0) 421 35 03-393

E-Mail gestra.gmbh@flowserve.com, Internet www.gestra.de



Flow Control Division