

# PRODUCT DATA SHEET

## Engelsberg Type BAS 302, 202 - Swing check valves



**Ramén Valves**

We know the flow



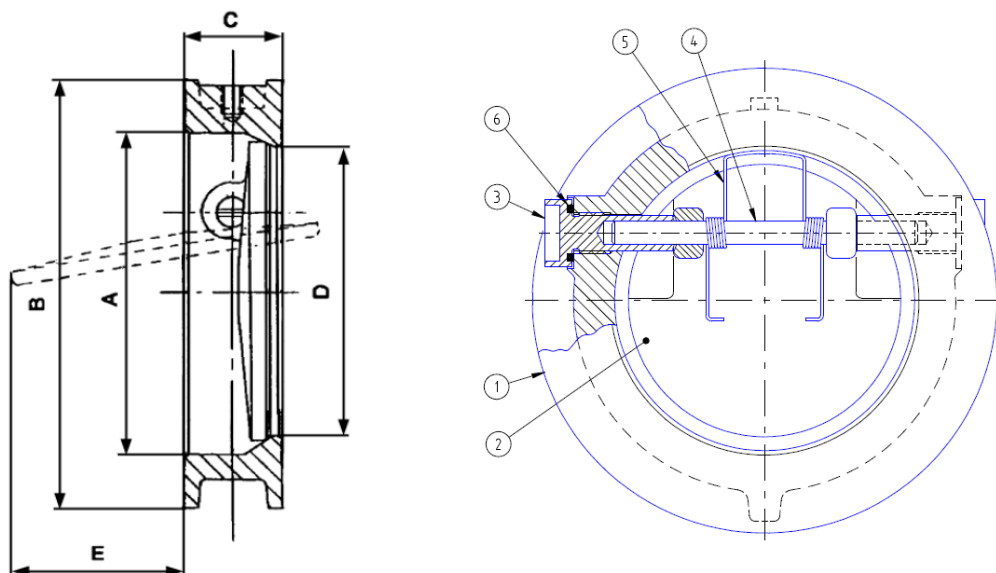
Engelsberg BAS check valve type 102 for liquid and gas flow. Designed for quick shut-off to prevent backflow and open at the smallest flowrates to maintain stable process conditions. Robust spring loaded, metal to metal design to withstand high temperature and harsh conditions. Still offering the highest possible leakage class and minimum maintenance. Engelsberg BAS check valves are available in all commonly used steel alloys and titanium for industrial applications. The correct material is selected based on the application and media, in order to provide the best corrosion resistance and the longest lifetime. Wafer type design for easy mounting between flanges in DN80 to DN600.

Technical information	Type 202	Type 302
Design	Spring loaded, metal seat	
Connection	Wafer, DIN PN10 - PN100 and ANSI 150 - 600	
Nominal sizes	DN350-DN600 (14"-24")	DN80-DN300 (3"-12")
Material	EN 1.4408 (Stainless steel)	
Nominal pressure	PN25 (ANSI class 150) <sup>(2)</sup>	PN40 (ANSI class 150/300)
Leakage class	Rate A acc. to EN12266-1	
Temperature range	-50°C to 350°C (Duplex max 250°C)	
Approvals	CE-marked acc. to PED 2014/68/EU, Category II, Module D1 <sup>(1)</sup>	
Options	Material body Hastelloy C- 276 904L (EN 1.4539) 254 SMO (EN 1.4547) Duplex (EN 1.4470) Super Duplex (EN 1.4469)	

<sup>(1)</sup> Higher on request

<sup>(2)</sup> Max recommended differential pressure 20 bar

# Type 302 - Spring loaded swing check valve



Parts and material of construction			
No.	Part	Material	
1	Body	EN 1.4408 (Stainless steel)	
2	Disc		
3	Plug		
4	Shaft		
5	Spring		
6	Plug seal	PTFE or Copper <sup>(1)</sup>	

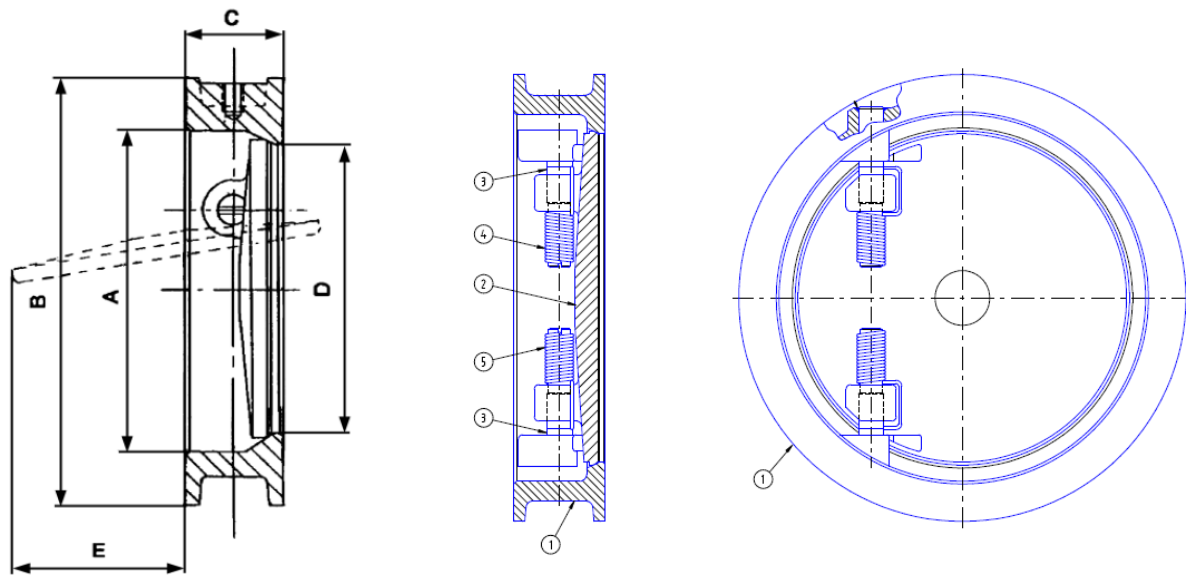
<sup>(1)</sup>Q = High temperature (above 200°C) option

Dimensions									
Size DN	PN	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Kv <sup>(1)</sup> [m <sup>3</sup> /h]	Cv <sup>(1)</sup> [gpm]	Weight <sup>(2)</sup> [kg]
80 (3")	40	82	135	40	72	37	358	410	2,4
100 (4")		102	158	40	88	49	560	650	3,1
125 (5")		127	184	45	110	65	870	1010	4,5
150 (6")		154	212	45	135	86	1250	1450	5,5
200 (8")		204	268	60	182	116	2300	2670	10,8
250 (10")		254	320	68	228	146	3500	4060	17
300 (12")		304	378	78	277	176	5000	5800	27,5

<sup>(1)</sup> For water:  $\Delta P = (Q/Kv)^2$ , with  $\Delta P$  in bar and Q in m<sup>3</sup>/h.  $Cv = Kv \cdot 1,16$

<sup>(2)</sup> Standard material

# Type 202 - Spring loaded swing check valve



Parts and material of construction			
Pos.	No.	Part	Material
1	1	Body	EN 1.4408 (Stainless steel)
2	1	Disc	
3	1	Shaft	
4, 5	2	Spring	

<sup>(1)</sup>Q = High temperature (above 200°C) option

Dimensions									
Size DN	PN	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Kv <sup>(1)</sup> [m <sup>3</sup> /h]	Cv <sup>(1)</sup> [gpm]	Weight <sup>(2)</sup> [kg]
350 (14")	25	352	438	90	308	191	6900	8000	43
400 (16")		402	490	100	360	226	9000	10440	56
500 (20")		502	585	120	457	290	14250	16530	82
600 (24")		602	685	130	553	350	20500	23780	138

<sup>(1)</sup> For water:  $\Delta P = (Q/Kv)^2$ , with  $\Delta P$  in bar and Q in m<sup>3</sup>/h. Cv = Kv\*1,16

<sup>(2)</sup> Standard material

## Ordering code type 302 and 202

Code example EB302-1248-150  
EB202-1948-500-X30

EB	Valve series (3-5)	Body & disc material (6-7)		End connection (8-9)		Size (10-12)	Options (13-14)		
EB	202, 302	12	316L (EN 1.4404)	02	Wafer PN 10/25, type 202	302	080	10	Cu plug seal for high temperature, type 302 only
		16	254 SMO (EN 1.4547)	48	Wafer PN40, type 302		100	20	Spring in Hastelloy C-276
		17	904L (EN 1.4539)				125	30*	Indicator
		19	Duplex (EN 1.4462)				150	40**	Counter weight damping
		20	Super Duplex (EN 1.4469)				200	50	Inductive position detector
							250	60***	DC type for low pressure, type 202 only
						300			
						350			
						400			
						450			
						500			
						600			

\*Simple indicator/pointer in SST mounted on the shaft to indicate position of the disc

\*\*A counter weight mounted on the shaft as damping, replacing spring load to prevent slamming due to large differences in flow.

\*\*\*DC type uses only one (1) spring for easier opening at low pressure.



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