



Breakaway couplings ABVC series

The breakaway coupling for cryogenic media

Even under normal circumstances, the process of loading fluid media requires a high standard of safety technology in the area of fittings. When the temperature factor is added to the mix, for example for cryogenic media, the requirements enter a new dimension. For low-temperature applications, RS Roman Seliger has the ABVC breakaway coupling, which also supports RS safety standards for the unique challenges posed by cryogenics.



The ABVC breakaway coupling protects the hose line from unwanted breakaway, thus protecting humans and the environment from uncontrolled product leakages.

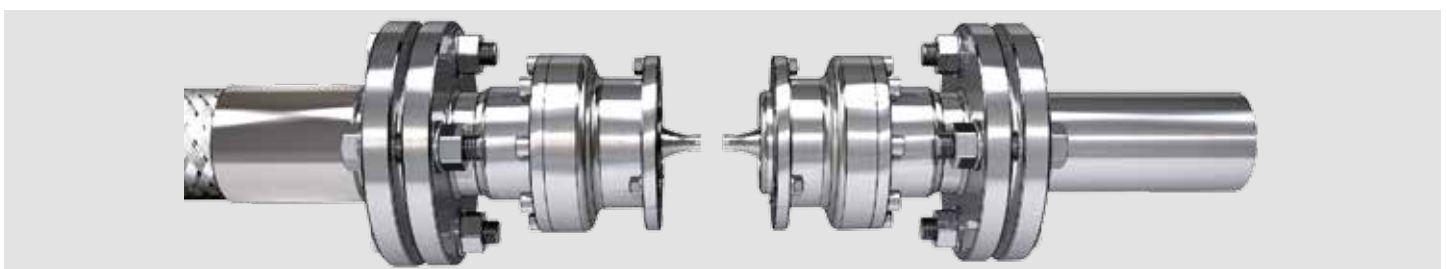
Separation by force limitation

As well as ensuring compliance with the corresponding leak rates, using our breakaway coupling offers guaranteed production for the hose line used and the plant components across the entire temperature range from -196 °C to 60 °C.

It's not just the low temperature, but also the particular hazard potential associated with cryogenic media such as LNG or liquid oxygen that calls for safe handling of the load line.



ABVC series before emergency separation.



ABVC series after emergency separation.

Separation instead of emergency

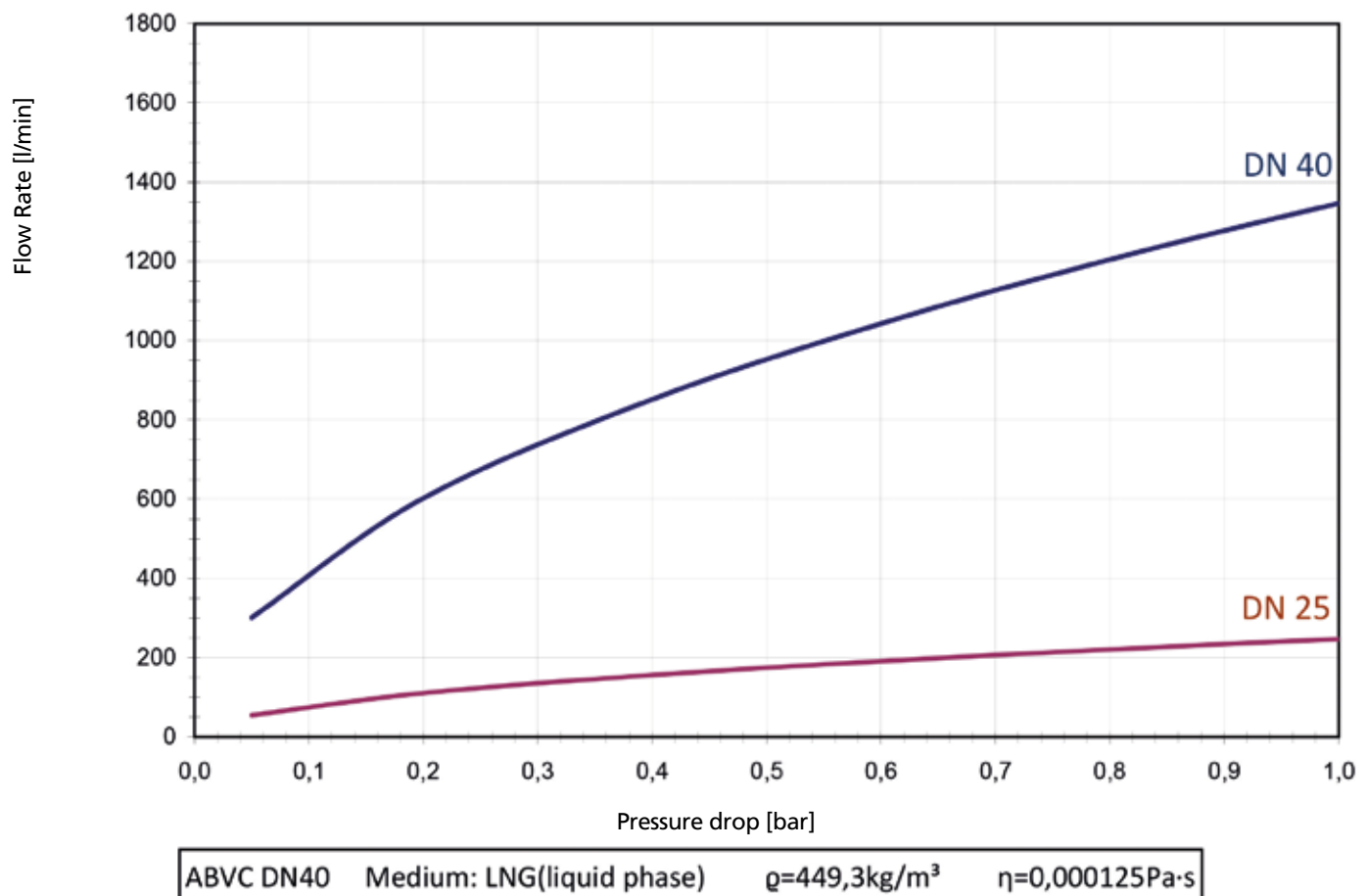
Attributes

- Developed for low temperatures down to -196 °C
- Streamlined design
- High flow rate
- Low pressure loss

Your benefits at a glance

- Safe function in the temperature range from -196 °C to 60 °C
- Small residual amount thanks to swift valve closure
- Safe triggering at breakaway angles of up to 90°
- Controlled separation through breaking pins
- Protects the hose and flanged-mounted systems from damage

Pressure losses



Additional technical information

Technical data

- Seals: PTFE

- Materials: Stainless steel (1.4571)
Others on request

- Connection: Flange in accordance with EN 1092 or ASME

- Nominal widths: DN 25, DN 40, DN 50, DN 80, DN 100
Others on request

- Temperature range: -196 °C to 60 °C

- Pressure area: DN 25 to DN 100: 0,8 to 40 bar
DN 40: 0,8 to 16 bar

- Triggering forces: 13 kN
Others on request

Approvals/certificates

Currently in planning

Triggering forces

Type ABVC (DN)	25		
Triggering force	PN 16	PN 25	PN 40
unpressurised [kN] RT	7,0	12,0	18,0
unpressurised [kN] -196°C	10,7	18,4	27,5
16 bar [kN] RT	7,0	--	--
16 bar [kN] -196°C	10,7	--	--
25 bar [kN] RT	--	12,0	--
25 bar [kN] -196°C	--	18,4	--
40 bar [kN] RT	--	--	18,0
40 bar [kN] -196°C	--	--	27,5

Type ABVC (DN)	40	
Triggering force	PN 16	PN 25
unpressurised [kN] RT	13,0	20,0
unpressurised [kN] -196°C	19,9	30,6
16 bar [kN] RT	13,0	--
16 bar [kN] -196°C	19,9	--
25 bar [kN] RT	--	20,0
25 bar [kN] -196°C	--	30,6
40 bar [kN] RT	--	--
40 bar [kN] -196°C	--	--

Type ABVC (DN)	50		
Triggering force	PN 16	PN 25	PN 40
unpressurised [kN] RT	10,0	16,0	26,0
unpressurised [kN] -196°C	15,3	24,5	39,8
16 bar [kN] RT	10,0	--	--
16 bar [kN] -196°C	15,3	--	--
25 bar [kN] RT	--	16,0	--
25 bar [kN] -196°C	--	24,5	--
40 bar [kN] RT	--	--	26,0
40 bar [kN] -196°C	--	--	39,8

Type ABVC (DN)	80		
Triggering force	PN 16	PN 25	PN 40
unpressurised [kN] RT	24,0	38,0	58,0
unpressurised [kN] -196°C	36,7	58,1	88,7
16 bar [kN] RT	24,0	--	--
16 bar [kN] -196°C	36,7	--	--
25 bar [kN] RT	--	38,0	--
25 bar [kN] -196°C	--	58,1	--
40 bar [kN] RT	--	--	58,0
40 bar [kN] -196°C	--	--	88,7

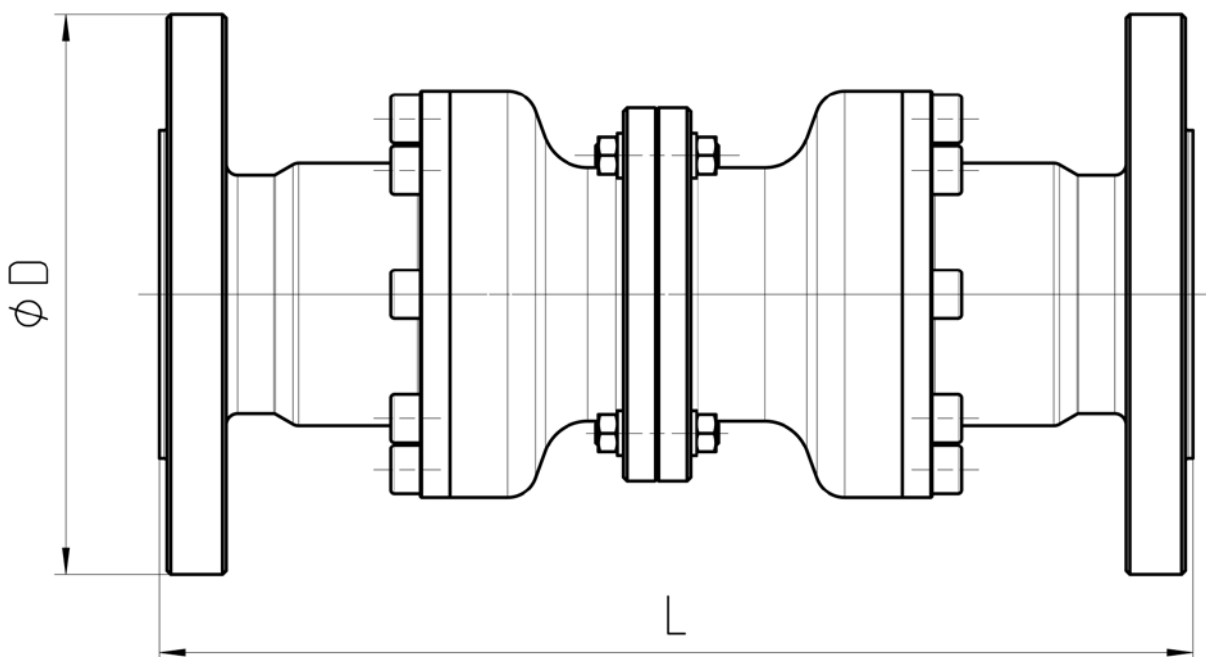
Additional technical information

Dimensions and weights

Type ABVL (DN)	25						40					
Connection	1" NPT female			ASA 150 PSI - 1"			ASA 150 PSI 1,5"	ASA 300 PSI 1,5"	EN 1092-B	ASA 150 PSI 3"	ASA 150 PSI 2"	ASA 300 PSI 2"
	PN16	PN25	PN40	PN16	PN25	PN40	PN16					
D (mm)	70	70	70	108	108	108	127	155	150	190,5	152,4	165,1
L1 (mm)	200	200	200	180	180	180	277	277	277	287	277	277
L2 (mm)	179,4	179,4	179,4	--	--	--	--	--	--	--	--	--
SW	38	38	38	--	--	--	--	--	--	--	--	--
Weight* (kg)	2,2	2,2	2,2	3,5	3,5	3,5	8,6	10,7	10,0	14,9	10,3	11,7

Type ABVL (DN)	50			80			100		
Connection	2" NPT female			3" NPT female			4" NPT female		
	PN16	PN25	PN40	PN16	PN25	PN40	PN16	PN25	PN40
D (mm)	111	111	111	165	165	165	196	196	196
L1 (mm)	177	177	177	268	268	268	291	291	291
L2 (mm)	155	155	155	229	229	229	248	248	248
SW	65	65	65	100	100	100	125	125	125
Weight* (kg)	4,0	4,0	4,0	10,9	10,9	10,9	17,1	17,1	17,1

*The weight applies to stainless steel only.
Other Dimensions and weights on request.



In use

