

## Wafer Check Valve Type RSK 500

## Spring loaded Wafer Check Valve Type FRSK 501

- Corrosion resistant material PVC-U, PP or PVDF
- Spring return made of V4A (SS 1.4571) or Hastelloy (2.4610)
- Sealing elements in EPDM, NBR, FPM/PTFE-coated
- Sizes from DN 40 to DN 400
- Operating pressure up to PN 6
- Installation between flanges acc. to DIN 2501, PN 10
- Centring is made via the body diameter
- Sealing surface with O ring, no additional flange seals
- Space saving, maintenance-free design
- For mounting in vertical or horizontal position



### Function

Wafer style check valves are medium controlled and flow dependent shut off valves.

### Selection and applications

#### Type RSK 500:

Wafer check valves **without** spring return for application in vertical position. Direction of media bottom-up only.

#### Type FRSK 501:

Wafer check valves **with** return spring for application in horizontal position or for pulsating flow.

### Type of fluids

Neutral, aggressive or gaseous liquids provided that the selected materials are resistant at operating temperature. Refer to the ASV resistance guide. Abrasive media may negatively influence the sealing function.

### Mounting

Vertical or horizontal. Flow in the direction of arrow only.

### Connection

with **flat** flange adaptors or welding necks according to DIN/ISO.

#### Note:

At the **outlet side** the ASV installation adaptor should be mounted. In case of installing another fitting at the outlet side, the customer must ensure the correct opening and closing function of the flap. For this it may be necessary to chamfer the fitting at the inside.

**Attention:** The flap must lean against the interior wall of the fitting prior max. opening angle is reached. Otherwise risk of breakage.

### Service

On request we supply pre-assembled flap check valves.

### Accessories

ASV installation adaptor with spigot ends made of PVC-U, PP and PE (see page 2). Others on request. Flanges, flange adaptors or welding necks see ASV product range.

### Dimensioning and installation notes

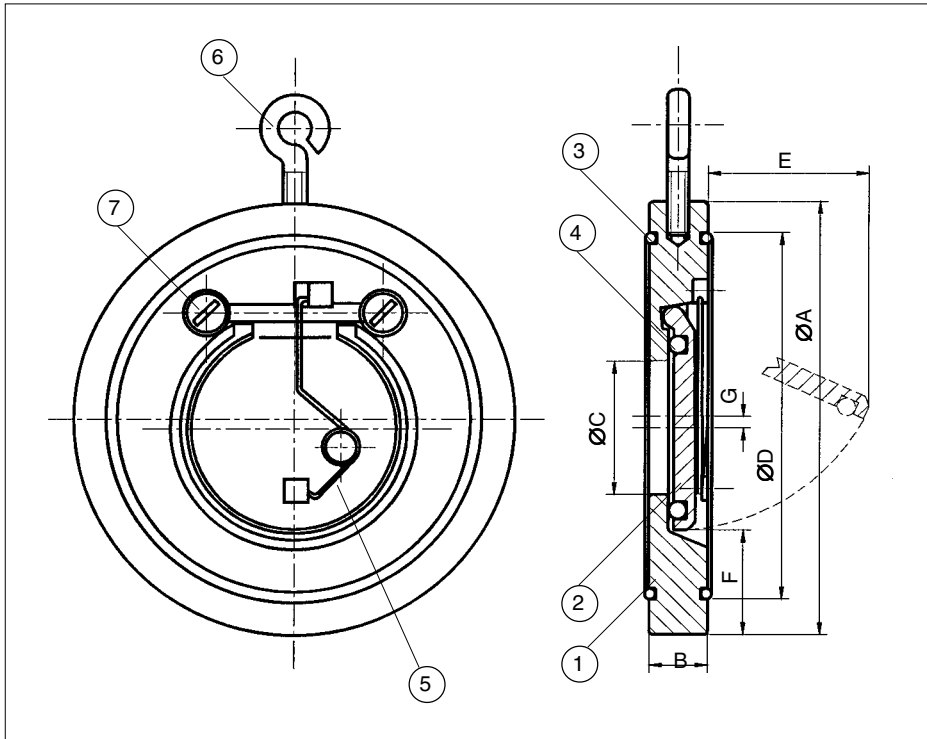
When deciding on the size of the wafer check valves take note of the lower effective diameter (see dimension C in the table on page 2) in comparison to the nominal diameter DN.

In order to avoid turbulent flow (fluttering of the flap) ensure a straight tube length of at least 5 x DN, better 10 x DN, upstream and downstream the flap as damping distance.

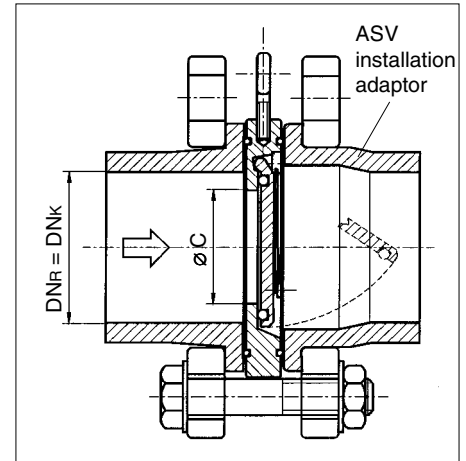
Do not fit the wafer check valves directly to pump flanges or downstream bends or elbows.

Wafer check valves type RSK are not suitable for pulsating flow. For this application we recommend wafer check valves type FRSK 501.

### Dimensions (mm)



### Example for installation

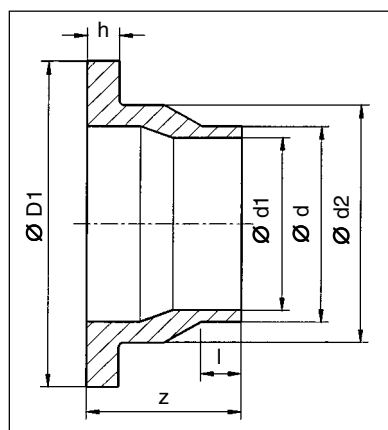


### Part list

Item	Qty.	Description
1	1	body
2	1	flap
3	2	O-ring
4	1	O-ring
5 <sup>3)</sup>	1	spring
6	1	screw
7	2	screw

size			A	B	C	D	E	F	G	opening pressure mbar				weight kg		
d	DN	inch	mm	mm	mm	mm	mm	mm	mm	vert. <sup>1)</sup> ↑	hor. <sup>1)</sup> →	vert. <sup>2)</sup> ↑	hor. <sup>2)</sup> →	PVC	PP	PVDF
50	40	1 1/2	95	16	22	72	25	28	1,5	4	1	12	7	0,16	0,10	0,21
63	50	2	109	18	32	86	37	29	3,2	4	1	12	7	0,25	0,17	0,33
75	65	2 1/2	129	20	40	105	50	31	3,5	4	1	12	7	0,32	0,22	0,42
90	80	3	144	20	54	119	61	32	3,5	7	1	20	7	0,39	0,26	0,51
110	100	4	164	23	70	146	77	31	6,0	7	1	20	7	0,55	0,37	0,71
140	125	5	195	23	92	173	94	35	7,5	7	1	20	7	0,75	0,50	0,97
160	150	6	220	26	112	197	115	35	8,0	7	1	20	7	1,10	0,74	1,42
225	200	8	275	35	154	255	152	38	11,0	12	1	27	8	2,10	1,40	2,71
280	250	10	330	40	192	312	180	41	12,5	12	1	27	8	3,50	2,40	4,52
315	300	12	380	45	227	363	215	41	20,0	12	1	27	8	5,30	3,52	6,90
355	350	14	440	49	266	416	245	54	16,0	16	1	35	9	7,50	5,10	9,70
400	400	16	491	58	310	467	285	55	19,0	16	1	35	9	11,00	7,30	14,30

### ASV installation adaptor PN 10

	size			dimensions mm								installation adaptor made of PE <sup>4)</sup> Id.-No.
	d	DN	inch	D1	d1	d2	h	z		l		
								PVC	PP/PE	PVC	PP/PE	
	50	40	1 1/2	90	40,8	61,0	12	71	48	33	10	121503
	63	50	2	105	51,4	77,0	14	84	54	40	10	119135
	75	65	2 1/2	125	61,0	91,0	16	89	58	46	15	121454
	90	80	3	140	73,6	108,0	17	110	72	53	15	119137
	110	100	4	160	90,0	131,0	18	137	92	63	18	119139
	140	125	5	190	114,0	155,0	25	158	100	78	20	119141
	160	150	6	215	130,8	187,0	25	188	120	88	20	121456
	225	200	8	270	184,0	235,0	32	261	165	121	25	121458

1) wafer check valves without spring    2) wafer check valves with spring    3) for wafer check valves with spring

**Ident number**

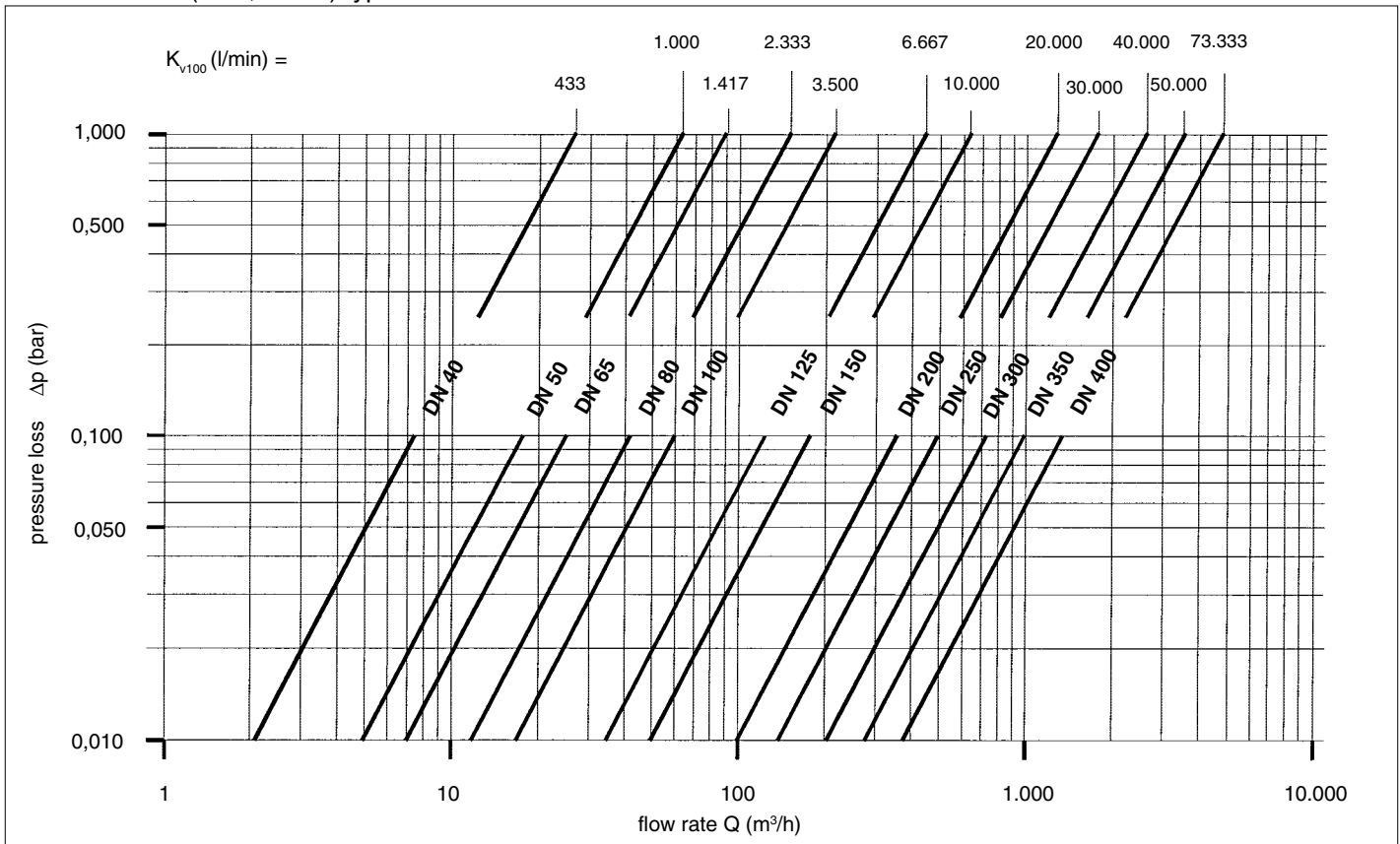
body spring			PVC-U -		PVC-U V4A (SS 1.4571)		PVC-U Hastelloy		installation adaptor made of PVC-U
O-ring			EPDM	FPM	EPDM	FPM	EPDM	FPM	
d	DN	inch	Id.-No.	Id.-No.	Id.-No.	Id.-No.	Id.-No.	Id.-No.	Id.-No.
50	40	1½	41460	41039	44088	44124	49744	49756	121629
63	50	2	41461	41040	44089	44125	49745	49757	121630
75	65	2½	41462	41041	44090	44126	49746	49758	121631
90	80	3	41463	41042	44091	44127	49747	49759	121632
110	100	4	67940	41043	44092	44128	49748	49760	121633
140	125	5	67941	41044	44093	44129	49749	49761	121634
160	150	6	67942	41045	44094	44130	49750	49762	121635
225	200	8	41464	41046	44095	44131	49751	49763	121636
280	250	10	41465	41047	44096	44132	49752	49764	on request
315	300	12	41466	41048	44097	44133	49753	49765	on request
355	350	14	41467	41049	44098	44134	49754	49766	on request
400	400	16	41468	41050	44099	44135	49755	49767	on request

**Ident number**

body spring			PP -		PP V4A (SS 1.4571)		PP Hastelloy		installation adaptor made of PP
O-ring			EPDM	FPM	EPDM	FPM	EPDM	FPM	
d	DN	inch	Id.-No.	Id.-No.	Id.-No.	Id.-No.	Id.-No.	Id.-No.	Id.-No.
50	40	1½	64349	41062	44232	44268	49840	49852	121502
63	50	2	67195	41063	44233	44269	49841	49853	119134
75	65	2½	41086	41064	44234	44270	49842	49854	121453
90	80	3	41087	41065	44235	44271	49843	49855	119136
110	100	4	41088	41066	44236	44272	49844	49856	119138
140	125	5	41089	41067	44237	44273	49845	49857	119140
160	150	6	41090	41068	44238	44274	49846	49858	121455
225	200	8	41091	41069	44239	44275	49847	49859	121457
280	250	10	41092	41070	44240	44276	49848	49860	on request
315	300	12	41093	41071	44241	44277	49849	49861	on request
355	350	14	41094	41072	44242	44278	49850	49862	on request
400	400	16	41095	41073	44243	44279	49851	49863	on request

**Ident number**

body spring			PVDF -		PVDF V4A (SS 1.4571)		PVDF Hastelloy		installation adaptor made of PVDF
O-ring			FPM	FPM/PTFE	FPM	FPM/PTFE	FPM	FPM/PTFE	
d	DN	inch	Id.-No.	Id.-No.	Id.-No.	Id.-No.	Id.-No.	Id.-No.	Id.-No.
50	40	1½	41543	41531	44412	44448	49948	49960	on request
63	50	2	41544	41532	44413	44449	49949	49961	on request
75	65	2½	41545	41533	44414	44450	49950	49962	on request
90	80	3	41546	41534	44415	44451	49951	49963	on request
110	100	4	41547	41535	44416	44452	49952	49964	on request
140	125	5	41548	41536	44417	44453	49953	49965	on request
160	150	6	41549	41537	44418	44454	49954	49966	on request
225	200	8	41550	41538	44419	44455	49955	49967	on request
280	250	10	41551	41539	44420	44456	49956	49968	on request
315	300	12	41552	41540	44421	44457	49957	49969	on request
355	350	14	41553	41541	44422	44458	49958	49970	on request
400	400	16	41554	41542	44423	44459	49959	49971	on request

**Pressure loss (H<sub>2</sub>O, 20 °C) type FRSK 501**

**Pressure/temperature diagram**

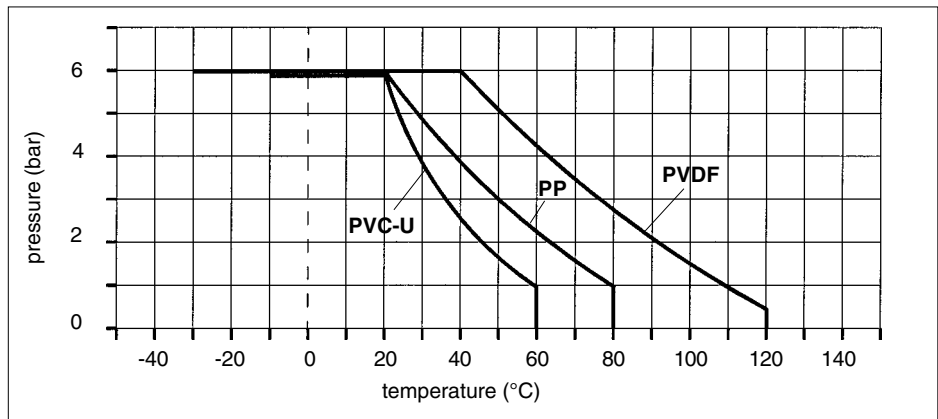
The pressure/temperature limits are applicable for the stated nominal pressures and a computed operating life factor of 25 years.

The values are a guide for harmless media (DIN 2403) the material of the valve is resistant against.

For other media see the ASV resistance guide.

Durability of wear and tear parts is depending on the operating conditions of the application.

Values below 0 °C (PP < +10 °C) on request with exact data of operation.


**Operating pressure**

see pressure/temperature diagram

**Operating temperature**

- PVC-U - 10 °C up to + 60 °C
- PP +10 °C up to + 80 °C
- PVDF - 30 °C up to +120 °C
- EPDM - 30 °C up to +120 °C
- FPM - 30 °C up to +120 °C
- PTFE - 30 °C up to +120 °C

**Operating instructions**


Safe operation of the valve can only be ensured if it is properly installed, operated, serviced or repaired by qualified personnel according to its intended use while observing the accident prevention regulations, safety regulations, relevant standards and technical regulations or data sheets like DIN, DIN EN, DIN ISO and DVS\* for example.

The intended use includes adhering to the specified limit values for

pressure and temperature as well as the chemical resistance referring to the operating conditions.

For this purpose, ensure that all components getting in contact with the media are "resistant" in accordance with the ASV resistance guide.

Non-observance of the specified information and safety instructions may lead to injuries and/or property damages.

The owner/operator bears the sole responsibility for the consequences.

\*DVS = German Association for Welding Technology

Technical alterations excepted