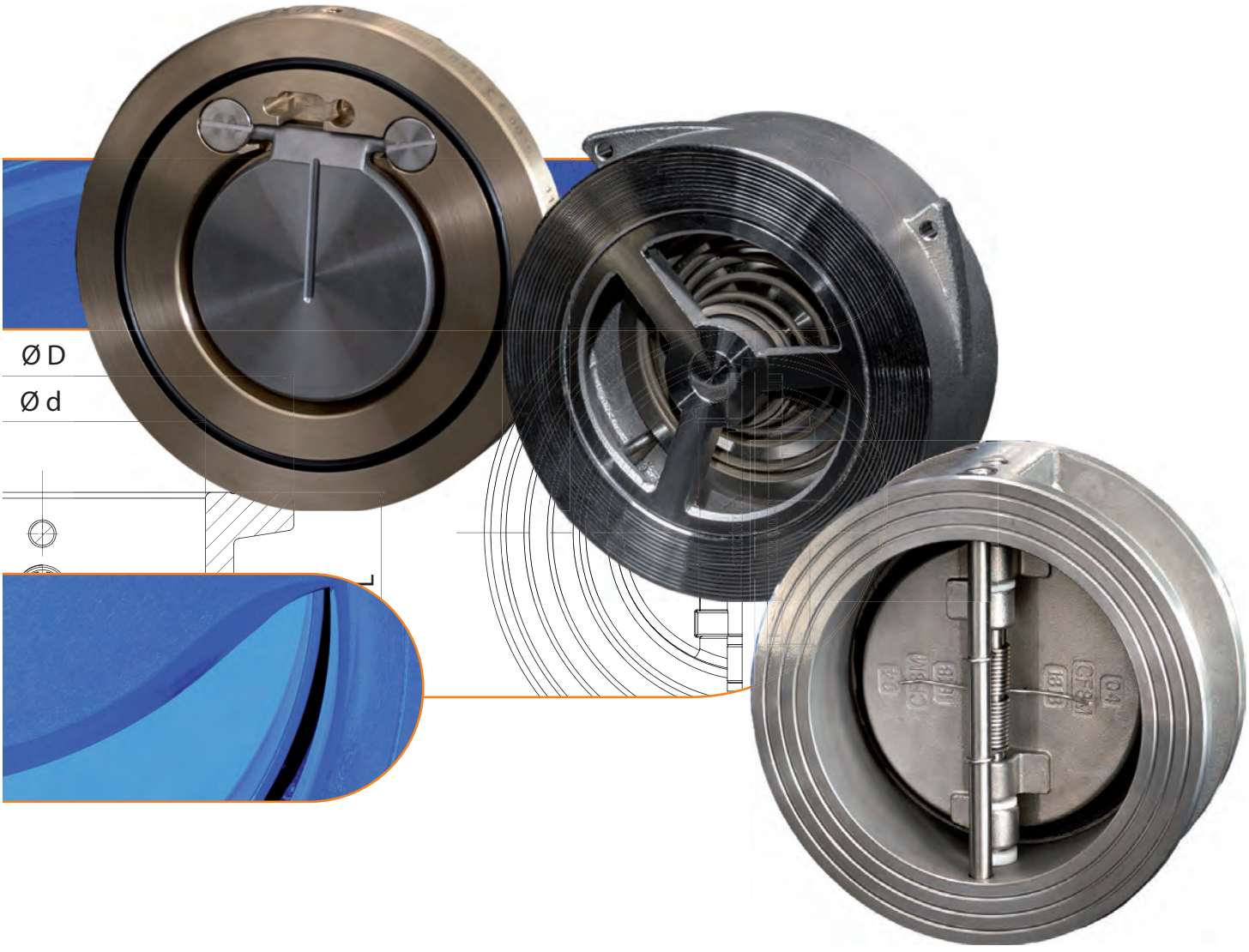
Check Valves



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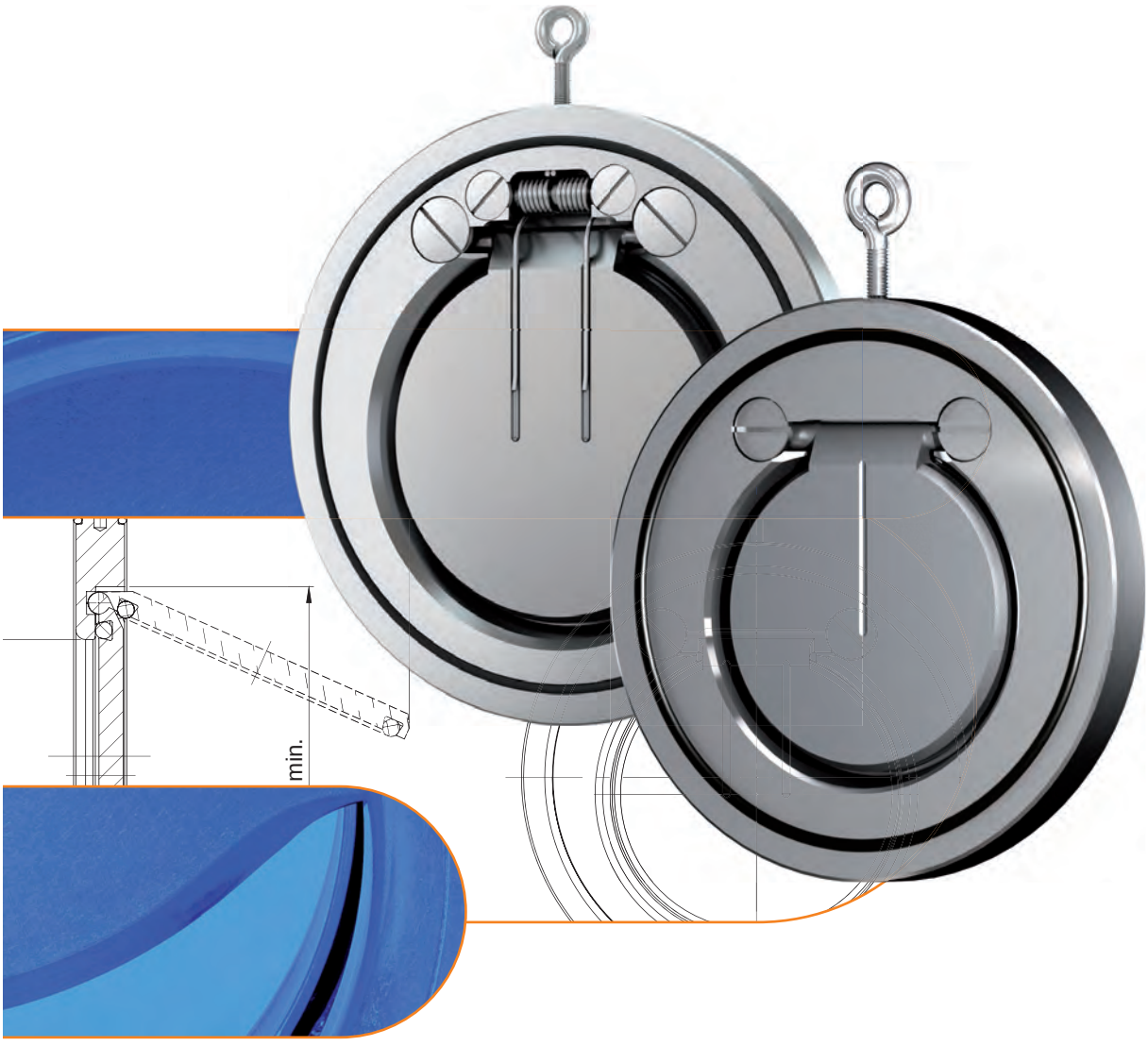
Swing Check Valves

Type ZRK / ZRKF



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General description

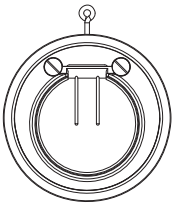
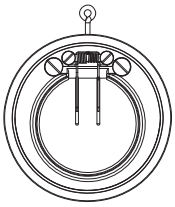
Description and intended purpose

Swing check valves wafer type are characterized by their simple and robust design. A key feature is their particular narrow FTF length – a major advantage compared to other designs in many installation situations in piping systems in insdustrial and building services. They can be installed directly between flanges (PN 6 – PN 40 or Class 150 – Class 399).
Swing check valves wafer type are maintenance-free.

Function

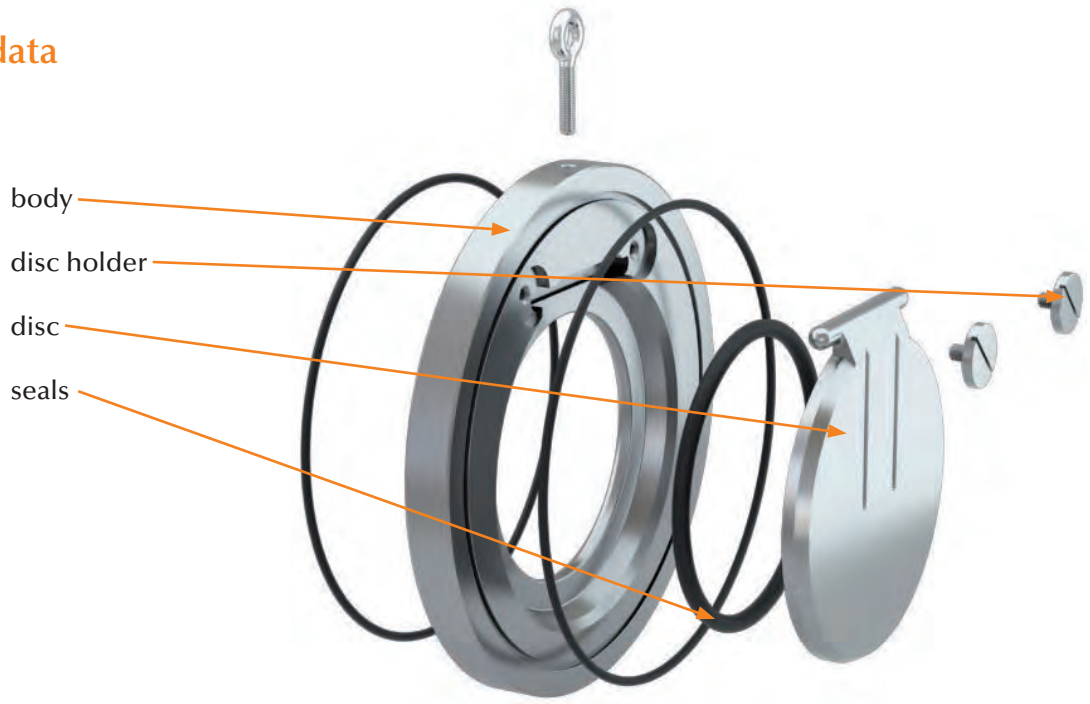
Swing check valves wafer type require a low opening pressure. The resulting opening force pusjes the disc against its self-weight and, if necessary, also an additional spring, so that the medium can flow. If the pressure drops or if the backpressure exceeds the inlet pressure, the valve closes and seals against the medium by means of the soft seat or the metal seat.

Overview matrix

	ZRK	ZRKF
		
nominal sizes *1	DN 32 –DN 1000	DN 32 – DN 400
flange connection *2	PN 6 / PN 10 / PN 16 / PN 25 / PN 40 Class 150 / Class 300 JIS 10K	
max. pressure	16 to 50 bar *3	
temperature ranges	-273 °C to +500 °C	-200 °C to +450 °C
materials available *4	steal / stainless steal / alu-bronze / superduplex	
seals available	metal / NBR / EPDM / FKM / PTFE	

*1 other nominal sizes on request
*2 other flange connections on request
*3 depending on nominal size and design
*4 other materials on request

Technical data



Design	Body	Disc	Max. allowable pressure*1				
ST-ST	1.0460, zinc plated	1.0619 / 1.0460, zinc plated	DN 32 - 40 40 bar		DN 50 25 bar	DN 65 - 1000 16 bar	
ST-VA	1.0460, zinc plated	1.4408	DN 32 - 40 40 bar		DN 50 25 bar	DN 65 - 1000 16 bar	
VA-VA	1.4408	1.4408	DN 32 - 50 40 bar	DN 65 30 bar	DN 80 -100 20 bar	DN 125 - 1000 16 bar	
VA1-VA1	1.4571	1.4571	DN 32 - 50 50 bar	DN 65 40 bar	DN 80 30 bar	DN 100 -150 25 bar	DN 200 - 1000 20 bar
AB-DU	CC333G (2.0975)	1.4469 (Superduplex)	DN 32 - 50 40 bar	DN 65 - 125 30 bar	DN 150 - 300 20 bar	DN 350 - 1000 10 bar	
DU-DU	1.4469 (Superduplex)	1.4469 (Superduplex)	DN 32 - 65 50 bar	DN 80 - 100 40 bar	DN 125 - 150 30 bar	DN 200 - 1000 20 bar	

*1 max. allowable pressure is dependent on the temperature

Seal	Design	Temperature	Leckage rate*2
Metal seated *3	ST-VA VA-VA VA1-VA1 AB-DU DU-DU	-10 °C to +400 °C -196 °C to +400 °C -273 °C to +500 °C -10 °C to +250 °C -10 °C to +250 °C	G
NBR*4	-	-30 °C to +100 °C	A
EPDM*4	-	-65 °C to +150 °C	A
FKM*4	-	-30 °C to +230 °C	A
PTFE*4	-	-200 °C to +250 °C	A

*2 acc. to EN 12266-1

*3 metal seated valves are supplied without O-rings in body as standard

*4 for some designs, the temperature range is additionally limited by the temperature range of the metallic parts (see temperature range for metal seated)

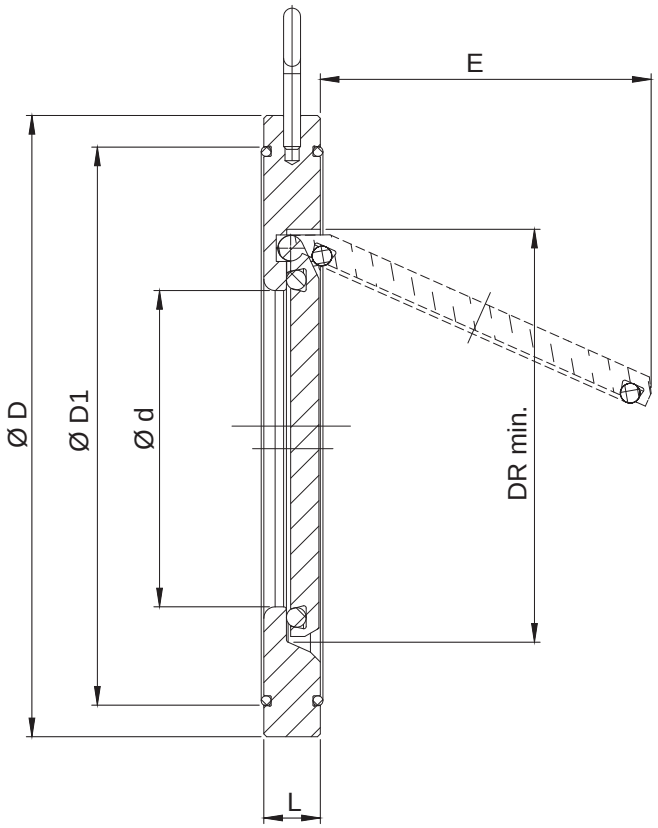
Seals for valves up to and including DN 300 comply with the following approvals / conformities:

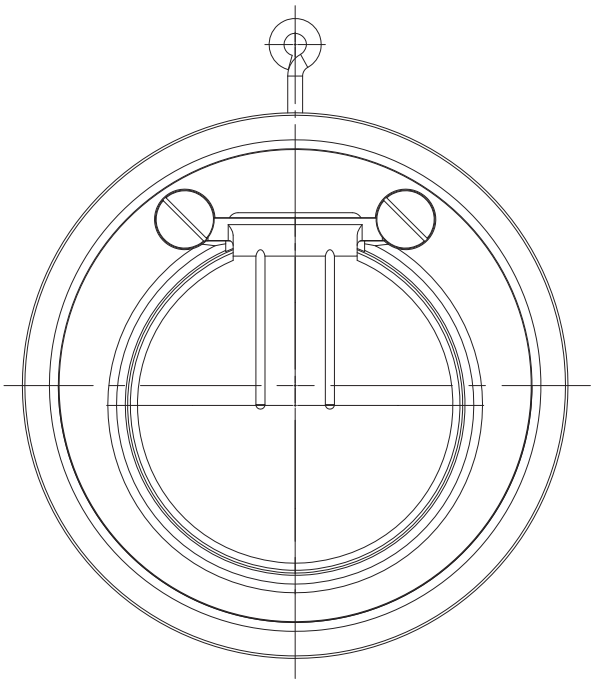
NBR: DIN EN 549, BAM, REACH, RoHS etc.

EPDM: KTW UBA, DVGW W 270, WRAS, NSF, FDA, BfR XXI Kat. 4, ADI-free, 3A, USP Cl. 6, BAM, REACH, RohS etc.

FKM: DIN EN 549, ADI-free, REACH, RoHS etc.

PTFE: KTW UBA, DVGW W 270, WRAS, FDA, BfR, ADI-free, EU 10/2011, 3A, USP Cl. 6, REACH, RoHS etc.





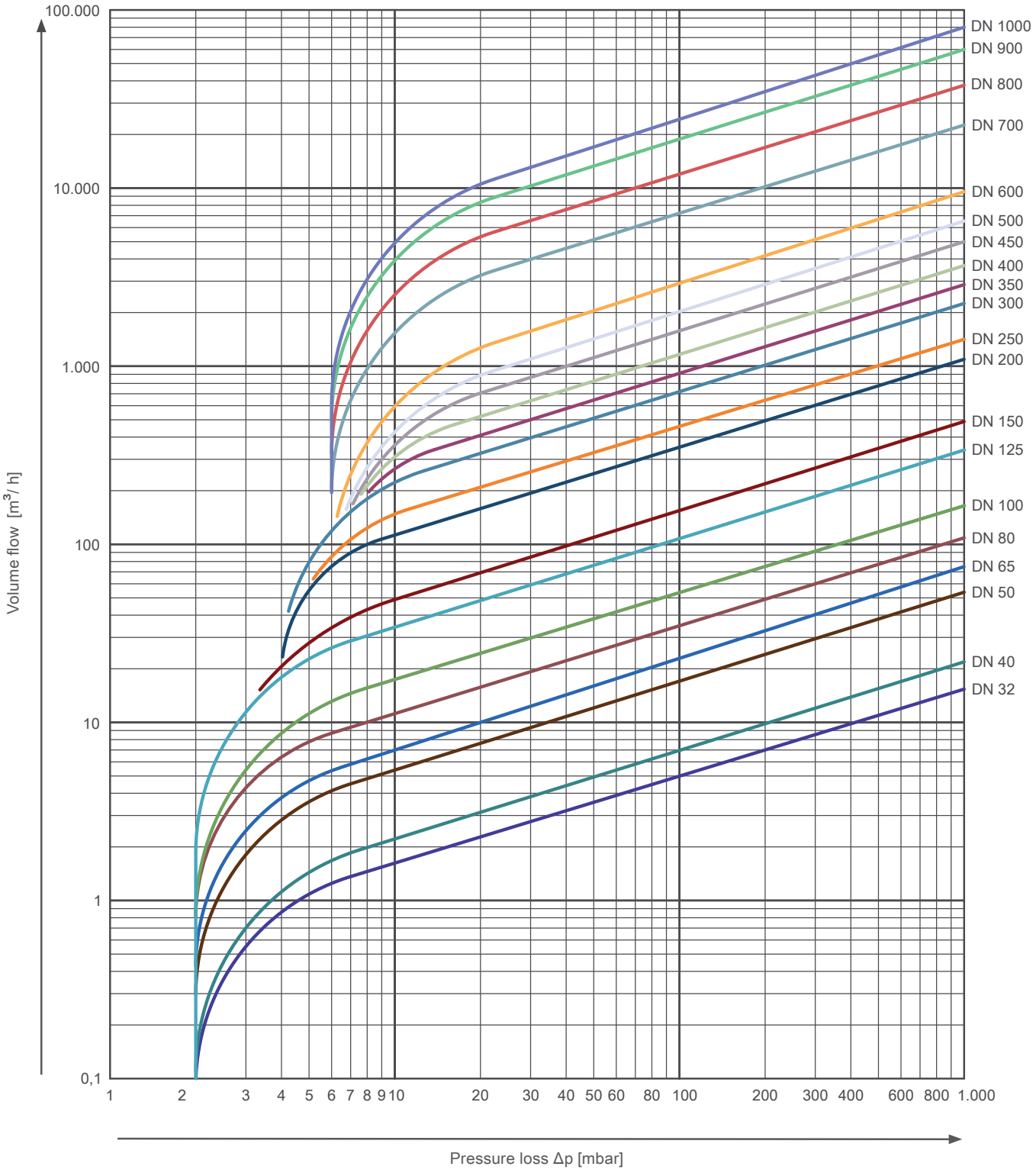
Nominal size	Ø D*5								L	Ø d	Ø D1	E	DR	Kv value	Opening pressure [mbar]		Weight*6
	PN 6	PN 10	PN 16	PN 25	PN 40	ANSI 150	ANSI 300	JIS 10K						[m³/h]	⟷	↑	[kg]
DN 32	79	85	85	85	85	74	85	85	15	18	59	22	37	16,2	~ 2	~ 10	0,67
DN 40	89	95	95	95	95	83	95	91	16	22	72	25	43	22,2	~ 2	~ 10	0,85
DN 50	98	109	109	109	109	105	112	105	14	32	86	37	54	54	~ 2	~ 10	0,91
DN 65	118	129	129	129	129	124	129	124	14	40	109	50	70	75	~ 2	~ 10	1,2
DN 80	134	144	144	144	144	137	150	135	14	54	119	61	82	112	~ 2	~ 10	1,5
DN 100	154	164	164	170	170	175	181,5	160	18	70	146	77	106	172	~ 2	~ 10	2,4
DN 125	184	195	195	196	196	197	216,5	191	18	92	173	98	131	342	~ 2	~ 10	3,4
DN 150	209	220	220	226	226	222	251,5	220	20	112	197	120	159	490	~ 2	~ 10	4,7
DN 200	264	275	275	286	294	279	308	271	22	154	255	160	207	1128	~ 4	~ 14	7,7
DN 250	319	330	331	344	356	340	362	330	26	192	312	190	260	1500	~ 4	~ 14	13
DN 300	375	380	386	404	421	410	423	380	32	227	363	220	309	2290	~ 4	~ 14	21
DN 350	425	440	446	461	478	451	487	424	38	266	416	250	341	2890	~ 6	~ 18	33
DN 400	475	491	499	518	550	514	541	487	44	310	467	290	392	3700	~ 6	~ 18	46
DN 450	530	541	558	568	575	549	598	541	52	350	520	340	442	5000	~ 6	~ 18	67
DN 500	580	596	621	628	632	606	655	596	58	400	550	390	493	6550	~ 6	~ 24	89
DN 600	681	698	738	735	751	718	775	698	62	486	660	470	594	9550	~ 6	~ 26	128
DN 700	785	813	807	836	-	-	-	-	67	588	770	563	693	23000	~ 6	~ 26	190
DN 800	893	920	914	945	-	-	-	-	78	622	-	680	795	38000	~ 6	~ 30	292
DN 900	993	1020	1014	1045	-	-	-	-	95	720	-	750	889	60000	~ 6	~ 32	412
DN 1000	1093	1127	1131	1159	-	-	-	-	105	810	-	840	991	80000	~ 6	~ 36	550

*5 in order to realise the flange connection diameters, flange center-rings may be used

*6 weight refers to valve suitable for PN 10 flanges and may vary slightly, depending on the design

Pressure-loss diagram

The diagram values are valid for water at a temerature of 20 °C and for valfes with face-to-face dimensions in accordance with DIN EN 558, suitable for flanges in accordance with PN 10 – PN 40. At the opening of the valve, the curves apply to operation in horizontal pipelines. For calculation for other fluids or temperatures, please contact us.



Technical data

Design	Body	Disc	Spring	Max. allowbale pressure*1				
ST-ST	1.0460, zinc plated	1.0619 / 1.0460, zinc plated	1.4571	DN 32 - 40 40 bar		DN 50 25 bar	DN 65 - 400 16 bar	
ST-VA	1.0460, zinc plated	1.4408	1.4571	DN 32 - 40 40 bar		DN 50 25 bar	DN 65 - 400 16 bar	
VA-VA	1.4408	1.4408	1.4571	DN 32 - 50 40 bar	DN 65 30 bar	DN 80 -100 20 bar	DN 125 - 400 16 bar	
VA1-VA1	1.4571	1.4571	1.4571	DN 32 - 50 50 bar	DN 65 40 bar	DN 80 30 bar	DN 100 -150 25 bar	DN 200 - 400 20 bar
AB-DU	CC333G (2.0975)	1.4469 (Superduplex)	Hastelloy C4 (2.4610)	DN 32 - 50 40 bar	DN 65 - 125 30 bar	DN 150 - 300 20 bar	DN 350 - 400 10 bar	
DU-DU	1.4469 (Superduplex)	1.4469 (Superduplex)	Hastelloy C4 (2.4610)	DN 32 - 65 50 bar	DN 80 - 100 40 bar	DN 125 - 150 30 bar	DN 200 - 400 20 bar	

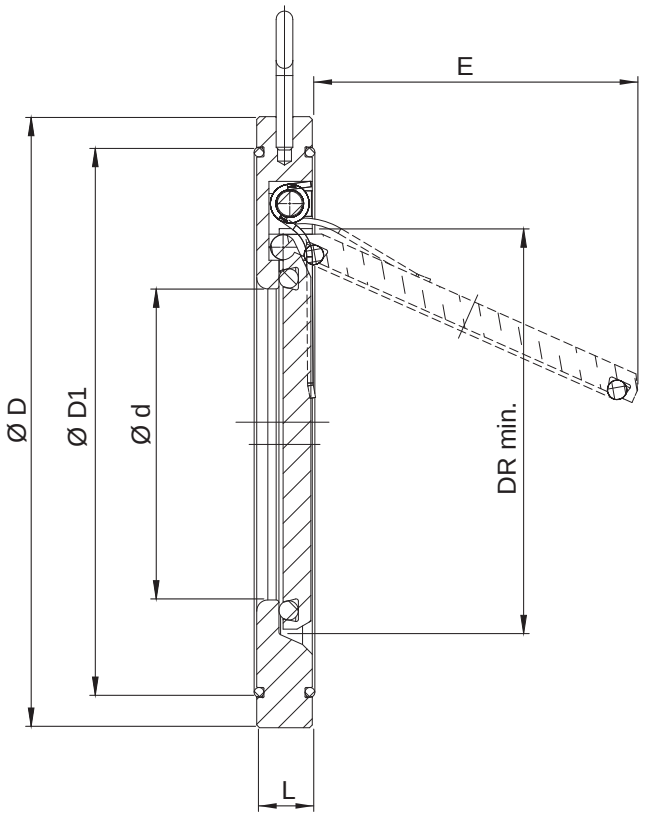
*1 max. allowable pressure is dependent on the temperature

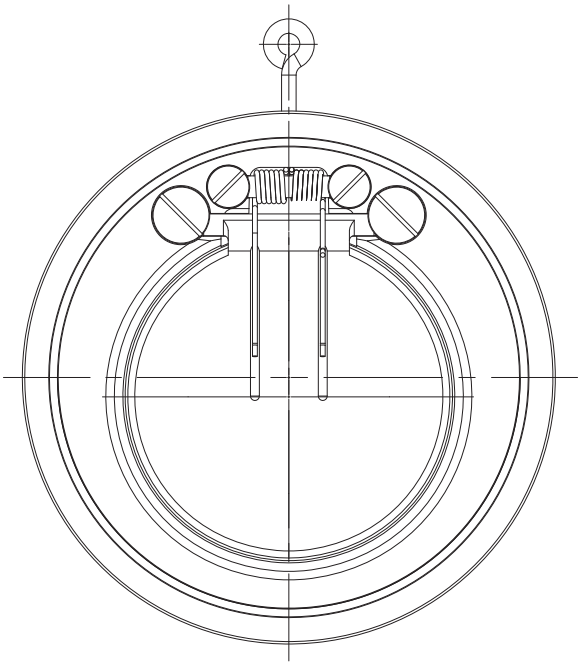
Seal	Design	Temperature	Leakage rate*2
Metal seated*3	ST-VA VA-VA VA1-VA1 AB-DU DU-DU	-10 °C to +300 °C*4 -196 °C to +300 °C*5 -200 °C to +300 °C*6 -10 °C to +250 °C -10 °C to +250 °C	G
NBR*7	-	-30 °C to +100 °C	A
EPDM*7	-	-65 °C to +150 °C	A
FKM*7	-	-30 °C to +230 °C	A
PTFE*7	-	-200 °C to +250 °C	A

*2 acc. to EN 12266-1
*3 metal seated valves are supplied without O-rings in body as standard
*4 optional with spring made of Hastelloy C4: -10 °C to +450 °C
*5 optional with spring made of Hastelloy C4: -100 °C to +400 °C
*6 optional with spring made of Hastelloy C4: -100°C to +450 °C
*7 for some designs, the temperature range is additionally limited by the temperature range of the metallic parts (see temperature range for metal seated)

Seals for valves up to and including DN 300 comply with the following approvals / conformities:

NBR: DIN EN 549, BAM, REACH, RoHS etc.
EPDM: KTW UBA, DVGW W 270, WRAS, NSF, FDA, BfR XXI Kat. 4, ADI-free, 3A, USP Cl. 6, BAM, REACH, RohS etc.
FKM: DIN EN 549, ADI-free, REACH, RoHS etc.
PTFE: KTW UBA, DVGW W 270, WRAS, FDA, BfR, ADI-free, EU 10/2011, 3A, USP Cl. 6, REACH, RoHS etc.





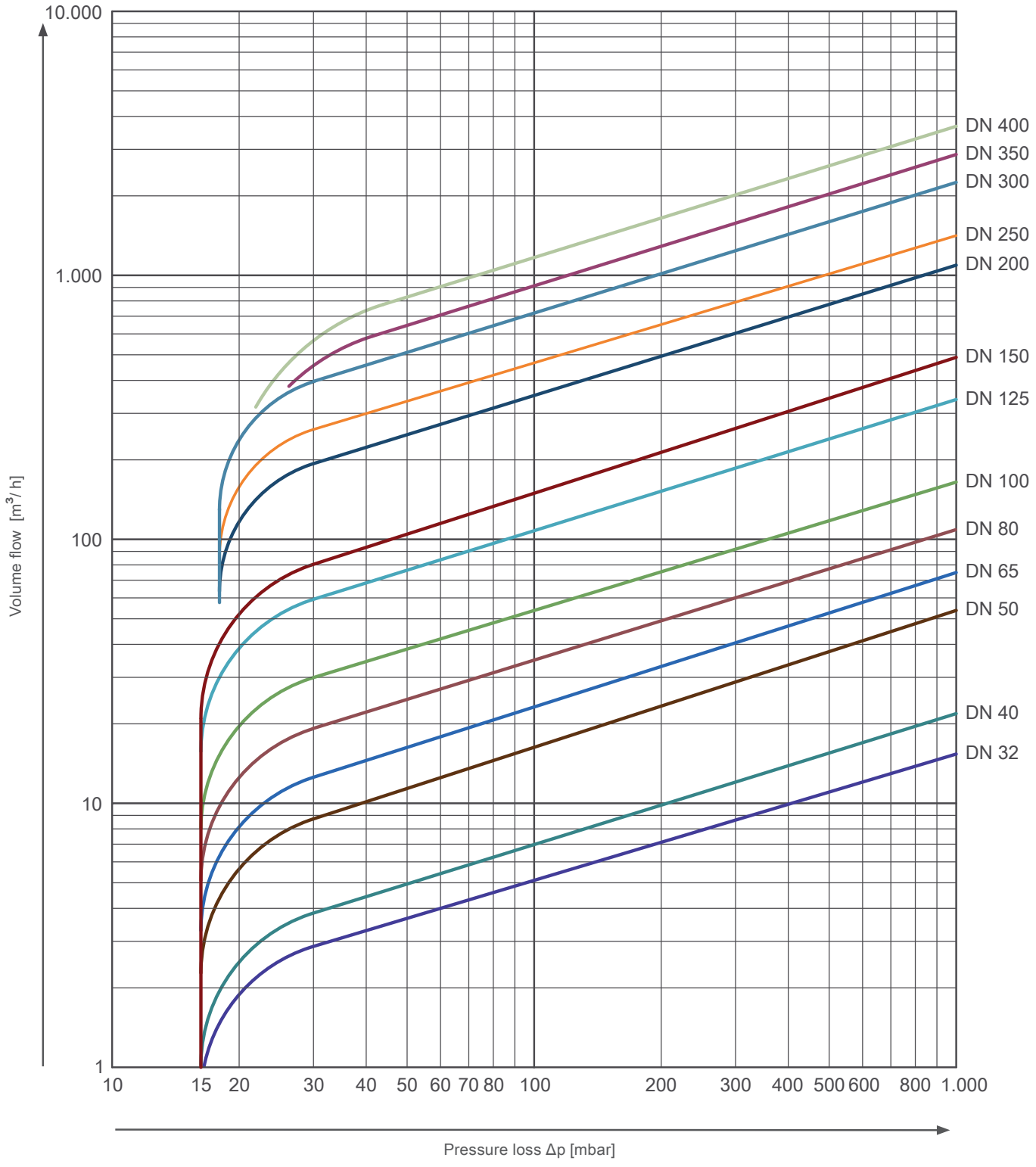
Nominal size	Ø D*8								L	Ø d	Ø D1	E	DR	Kv value	Opening pressure [mbar]		Weight*9
	PN 6	PN 10	PN 16	PN 25	PN 40	ANSI 150	ANSI 300	JIS 10K						[m³/h]	⟷	↑	[kg]
DN 32	79	85	85	85	85	74	85	85	15	18	59	22	37	16,2	~ 15	~ 25	0,67
DN 40	89	95	95	95	95	83	95	91	16	22	72	25	43	22,2	~ 15	~ 25	0,85
DN 50	98	109	109	109	109	105	112	105	14	32	86	37	54	54	~ 15	~ 25	0,91
DN 65	118	129	129	129	129	124	129	124	14	40	109	50	70	75	~ 15	~ 25	1,2
DN 80	134	144	144	144	144	137	150	135	14	54	119	61	82	112	~ 15	~ 25	1,5
DN 100	154	164	164	170	170	175	181,5	160	18	70	146	77	106	172	~ 15	~ 25	2,4
DN 125	184	195	195	196	196	197	216,5	191	18	92	173	98	131	342	~ 15	~ 25	3,4
DN 150	209	220	220	226	226	222	251,5	220	20	112	197	120	159	490	~ 15	~ 25	4,7
DN 200	264	275	275	286	294	279	308	271	22	154	255	160	207	1128	~ 17	~ 25	7,7
DN 250	319	330	331	344	356	340	362	330	26	192	312	190	260	1500	~ 17	~ 25	13
DN 300	375	380	386	404	421	410	423	380	32	227	363	220	309	2290	~ 17	~ 25	21
DN 350	425	440	446	461	478	451	487	424	38	266	416	250	341	2890	~ 18	~ 27	33
DN 400	475	491	499	518	550	514	541	487	44	310	467	290	392	3700	~ 18	~ 28	46

*8 in order to realise the flange connection diameters, flange center-rings may be used

*9 weight refers to valve suitable for PN 10 flanges and may vary slightly, depending on the design

Pressure-loss diagram

The diagram values are valid for water at a temerature of 20 °C and for valfes with face-to-face dimensions in accordance with DIN EN 558, suitable for flanges in accordance with PN 10 – PN 40. At the opening of the valve, the curves apply to operation in horizontal pipelines. For calculation for other fluids or temperatures, please contact us.



Type code

	DN		Material			
type	DN	design	body	disc	spring	seal
ZRK	32 - 1200	ST-ST	1.0460, galvanized	1.0619 / 1.0460, galvanized		Metal seated (M)
		ST-VA	1.0460, galvanized	1.4408		NBR (N)
		VA-VA	1.4408	1.4408		EPDM (E)
		VA1-VA1	1.4571	1.4571		FKM (F)
		AB-DU	CC333G (2.0975)	1.4469 (Superduplex)		PTFE (Teflon) (T)
		DU-DU	1.4469 (Superduplex)	1.4469 (Superduplex)		
ZRKF	32 - 400	ST-ST	1.0460, galvanized	1.0619 / 1.0460, galvanized	1.4571 (F1)*1	
		ST-VA	1.0460, galvanized	1.4408	1.4571 (F1)*1	
		VA-VA	1.4408	1.4408	1.4571 (F1)*1	
		VA1-VA1	1.4571	1.4571	1.4571 (F1)*1	
		AB-DU	CC333G (2.0975)	1.4469 (Superduplex)	Hastelloy C4 (F2)	
		DU-DU	1.4469 (Superduplex)	1.4469 (Superduplex)	Hastelloy C4 (F2)	

1* For temperatures above 300 °C, a compression spring made of Hastelloy (F2) is required for metal-seated fittings.

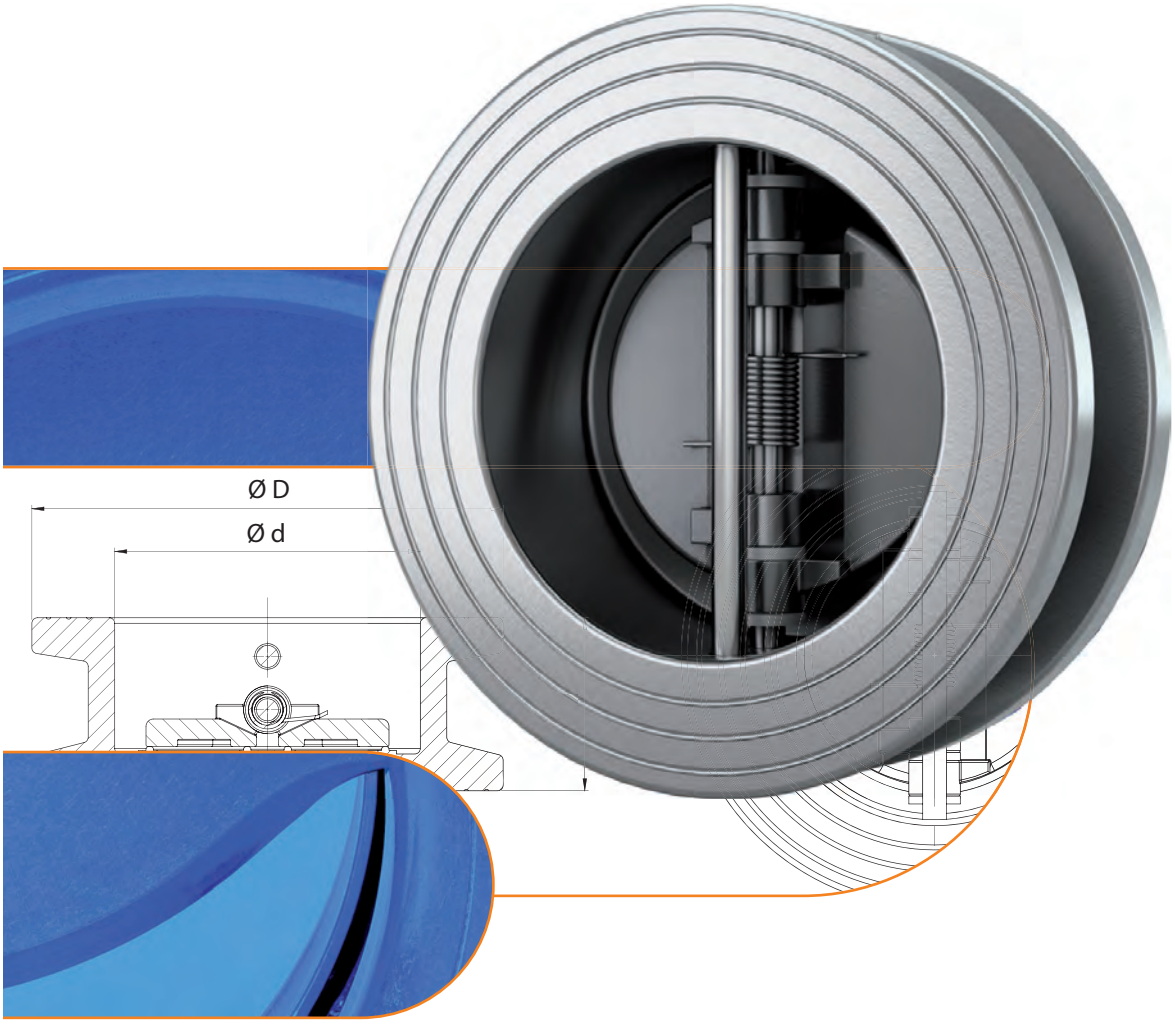
Order example

ZRKF - VA - VA - 100 - N - F1

Type of valve	Wafer check valve
Type	ZRKF
Nominal size	DN 100
Body / disc	1.4408
Seal	NBR
Spring	Stainless steel 1.4571 (F1)

Dual Plate Check Valves

Type 915



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General description

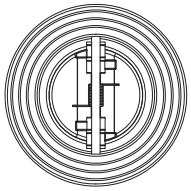
Description and intended purpose

Dual plate check valves impress with their simlpe design and short overall lengths (in accordance with DIN EN 558 series 16 or API 594). They also feature particularly high flow rates thanks to their low flow resistance. They can be installed directly between flanges (PN 10 – PN 40 oder Class 150 – Class 600).
Dual plate check valves are maintenance-free.

Function

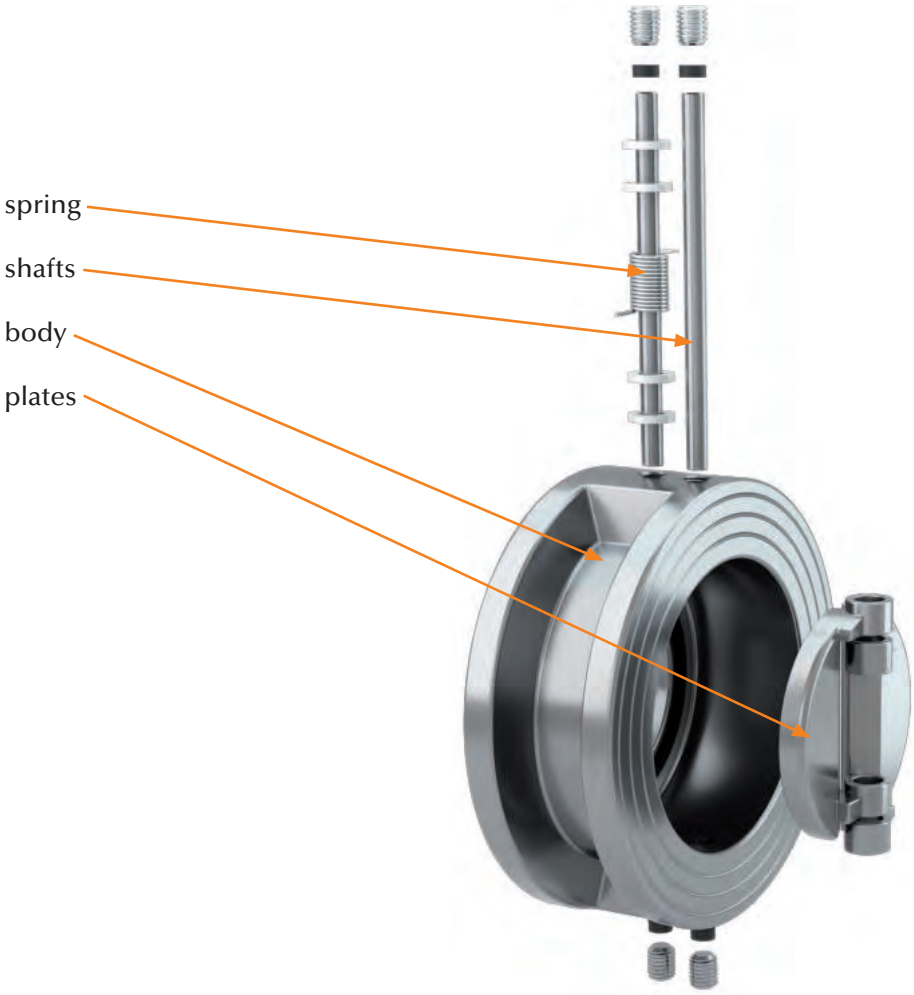
Dual plate check valves require only a low opening pressure. The resulting operating presure and, if necessary the weigth of the plates (depending on the installation position), forces the plates against a spring, thus releasing the medium. If the inlet pressure drops or the outlet pressure exceeds the inlet pressure, the valve closes an seals against the medium by means of a vulcanised seal in the body or by means of the metal seat.

Overview matrix

	915
	
nominal sizes *1	DN 50 –DN 900 / 2“ – 36“
flange connection *2	PN 10 / PN 16 / PN 25 / PN 40 Class 150
max. pressure *3	FTF dimensions in acc. with DIN EN 558: max. 16 bar FTF dimensions in acc. with API 594: max. 20 bar
temperature ranges	-10 °C bis +200 °C
materials available *4	ductile iron / stainless steel / Duplex / Aluminium bronze
seals available	NBR / EPDM / FKM

*1 larger nominal sizes on request
*2 other flange connecions on request
*3 higher pressures on request
*4 other materials on request

Technical data



Design	Body	Plates	Shafts	Spring	Pressure range*1
1	EN-GJS-400-15*2	EN-GJS-400-15*3	1.4401	1.4571	FTF acc. to DIN EN 558: DN 50 - DN 250: 0 to max. 16 bar DN 300 - DN 900: 0 to max. 10 bar FTF acc. to API 594: 0 to max. 20 bar
2	EN-GJS-400-15*2	Aluminium bronze	1.4401	1.4571	
3	EN-GJS-400-15*2	1.4408	1.4401	1.4571	
4	1.4408	1.4408	1.4401	1.4571	
6	Aluminium bronze	Aluminium bronze	Aluminium bronze	Inconel 600	
7	1.4469	1.4469	Inconel 600	Inconel 600	

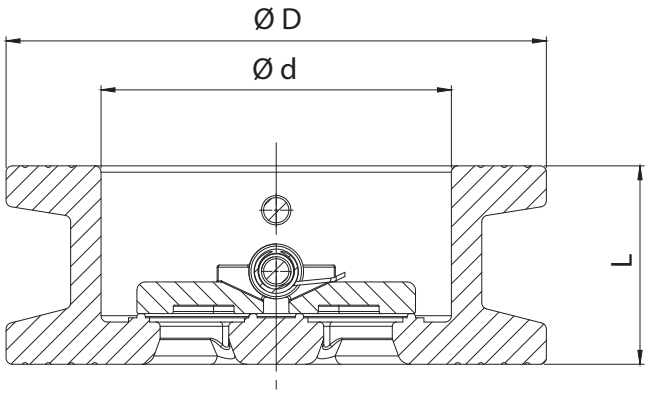
*1 max. allowable pressure is dependent on the temperature
*2 Epoxy-resin coated, with DVGW approval for coating
*3 nickel-plated

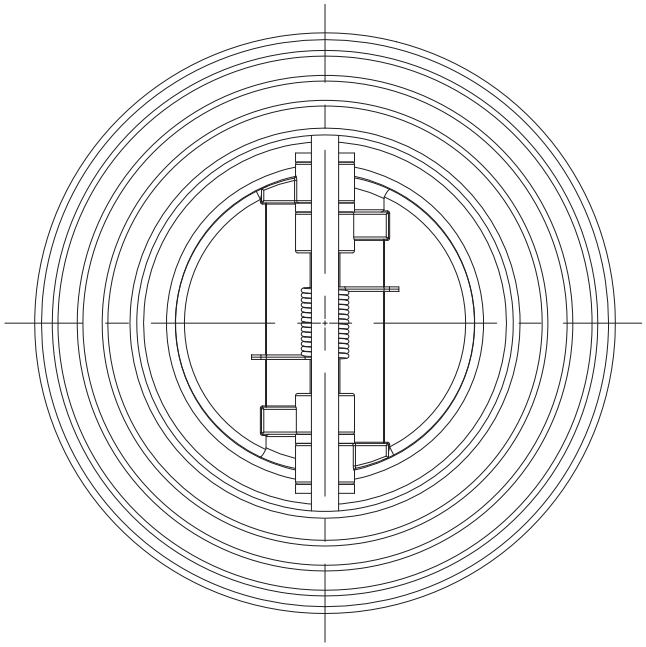
Seal	Temperature	Leakage rate*4
NBR	-10 °C to +90 °C	A
EPDM*5	-10 °C to +120 °C	A
FKM	-10 °C to +200 °C	A

*4 acc. to EN 12266-1 / in order to achieve the specified leakage rate, a back pressure of at least 1 bar is required
*5 approval for drinking water up to +85 °C

Additiona quality features:

– Approval for drinking water in accordance with WRAS for EPDM seal
– DVGW approval for epoxy coating (design 1 – 3)





Nominal size		Ø D*6					Ø d	L	Kv value	Opening pressure [mbar]			Weight*7
		PN 10	PN 16	PN 25	PN 40	Class 150		EN 558	[m³/h]	⟷	↑	↓	[kg]
DN 50	2"	107				101	70,5	43	63	~ 15	~ 20	~ 10	1.5
DN 65	2 1/2"	127				121	80	46	109	~ 15	~ 20	~ 10	2.3
DN 80	3"	142				134	98	64	172	~ 15	~ 20	~ 10	3.6
DN 100	4"	162		170		171	117	64	289	~ 15	~ 20	~ 10	4.4
DN 125	5"	192				192	145	70	476	~ 15	~ 20	~ 10	6.0
DN 150	6"	218		226		218	172	76	750	~ 15	~ 20	~ 10	8.6
DN 200	8"	273		285		273	221	89	1330	~ 15	~ 20	~ 10	15
DN 250	10"	328		345		340	275.5	114	2080	~ 15	~ 20	-	24
DN 300	12"	378	383	404		406	325.5	114	3676	~ 15	~ 20	-	35
DN 350	14"	438	444	458		448	361	127	5274	~ 15	~ 20	-	58
DN 400	16"	489	495	516		514	412	140	7306	~ 15	~ 30	-	75
DN 450	18"	539	555	566		546	468	152	9246	~ 15	~ 30	-	98
DN 500	20"	594	617	626		603	515	152	11410	~ 15	~ 30	-	125
DN 600	24"	695	734	734	-	714	624	178	17570	~ 15	~ 30	-	170
DN 700	28"	807	802	-	-	828	722	229	23920	~ 15	~ 40	-	250
DN 800	32"	917	912	-	-	936	824	241	31250	~ 15	~ 40	-	366
DN 900	36"	1016	1012	-	-	1044*9	924	241	39540	~ 15	~ 40	-	513

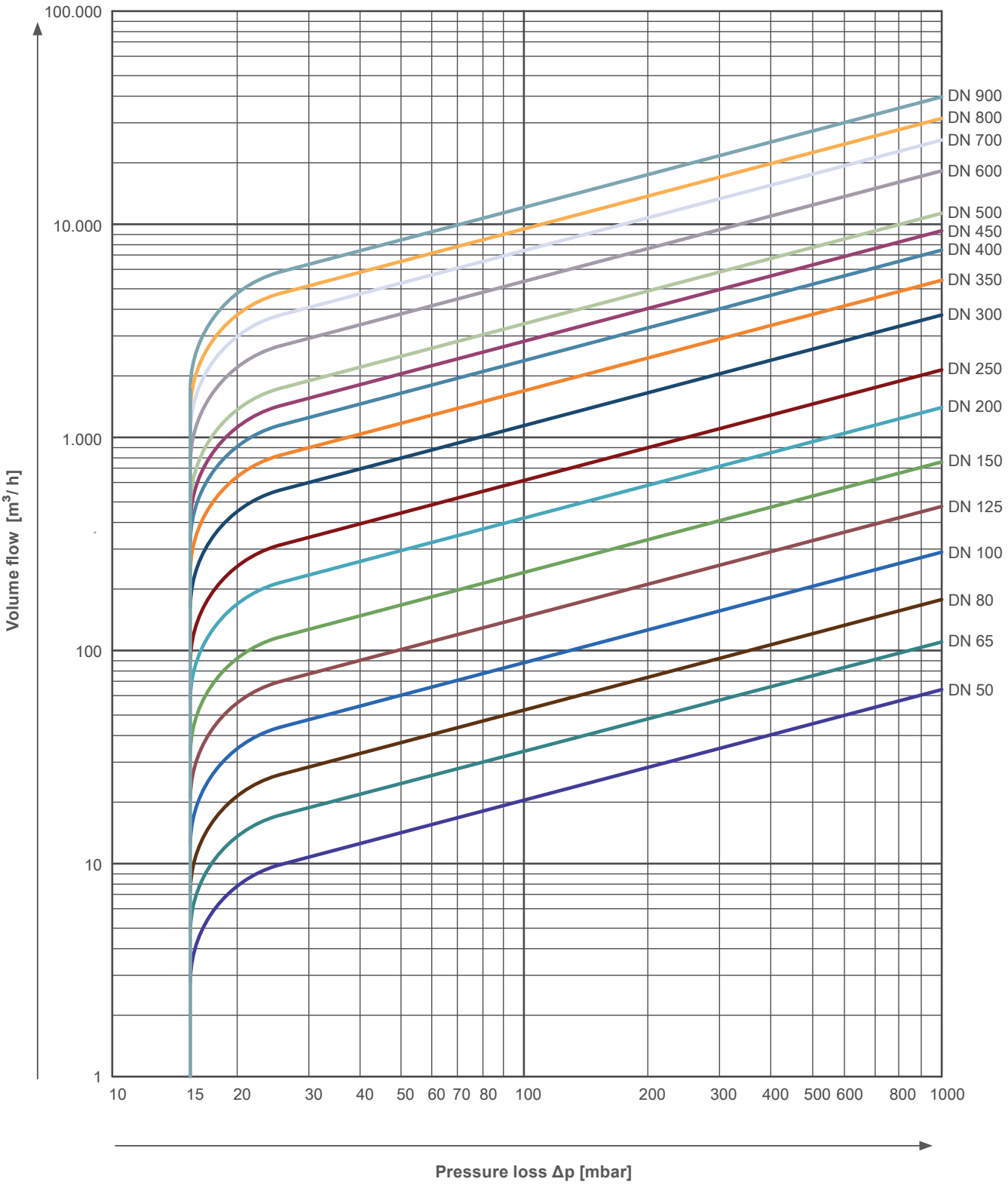
*6 flange centering rings can be used to achieve the flange connection dimensions

*7 weight refers to valve suitable for PN 10 flanges and may vary slightly, depending on the design

*9 DN 900 with flange connection dimension and FTF dimension in accordance with Class 125

Pressure-loss diagram

The diagram values are valid for water at a temerature of 20 °C and for valfes with face-to-face dimensions in accordance with DIN EN 558, suitable for flanges in accordance with PN 10 – PN 40. At the opening of the valve, the curves apply to operation in horizontal pipelines. For calculation for other fluids or temperatures, please contact us.



Type code

type	DN	design	body	plates	shafts	spring	seal
915	50–900	1	EN-GJS-400-15 *1	EN-GJS-400-15 *2	1.4401	1.4571 (F1)	NBR (N) EPDM (E) FKM (F)
		2	EN-GJS-400-15 *1	Aluminium bronze	1.4401	1.4571 (F1)	
		3	EN-GJS-400-15 *1	1.4408	1.4401	1.4571 (F1)	
		4	1.4408	1.4408	1.4401	1.4571 (F1)	
		6	Aluminium bronze	Aluminium bronze	Aluminium bronze	Inconel 600 (F4)	
		7	1.4469	1.4469	Inconel 600	Inconel 600 (F4)	

*1 Epoxy resin-coated *2 nickel-plated

Order example

DF-RSK 915 / 100 / 1 / N / F1

Type of valve	Dual plate check valve
Type	915
Nominal size	DN 100
Body / disc	EN-GJS-400-15
Seal	NBR
Spring	stainless steel 1.4571 (F1)

Disco Check Valves

Type 930 / 932

MARTIN LOHSE GmbH
Unteres Paradies 63 · D-89522 Heidenheim
phone +49 7321 755-42
sales@lohse-gmbh.de
www.lohse-gmbh.de

General description

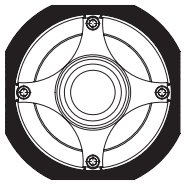
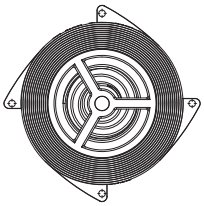
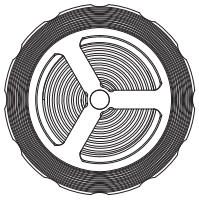
Description and intended purpose

Disco check valves are suitable for universal use in piping systems for the transport of liquid an gaseous substances as well as in plants or environments in which paticularly high demands are placed on the material. They can be installed directly between flanges (PN 6 – PN 160 or Class 150 – Class 900).
Disco check valves are maintenance-free.

Function

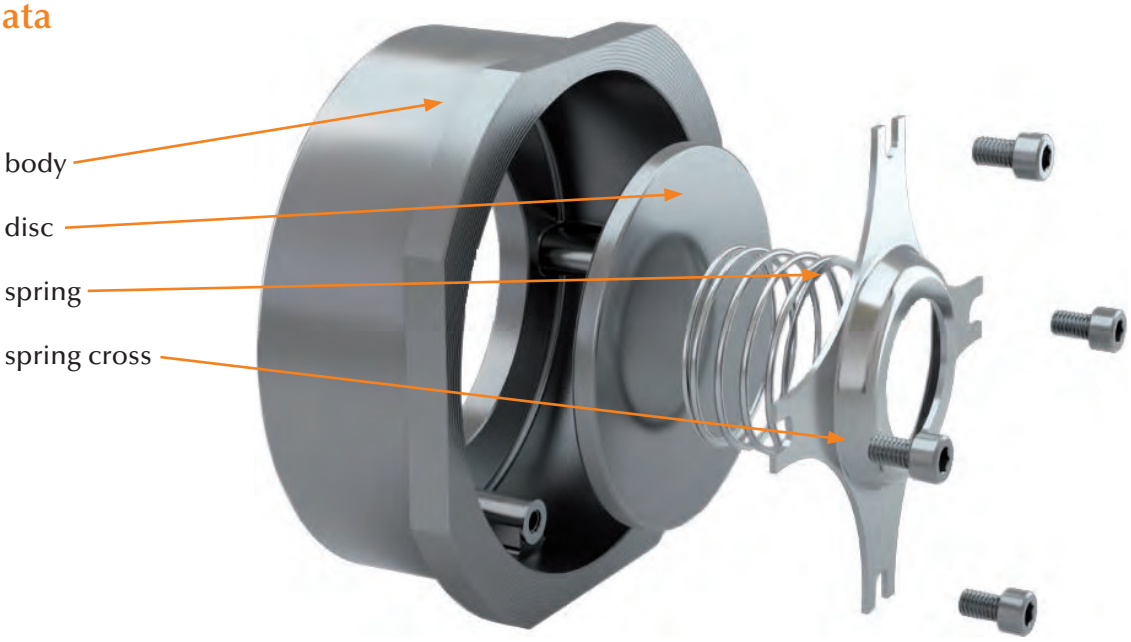
Disco check valves require a low opening pressure. The resulting opening force pushes the disc against a spring and, if necessary, also the weight force of the disc (depending on the installation position), so that the medium can flow. If the inlet pressure, the valve closes and seals against the medium by means of the soft seat or the metal seat.

Overview matrix

	930	932	
			
nominal sizes	DN 15 – DN 100	DN 15 – DN 100	DN 125 – DN 300
flannge connection *1	PN 6 *2 / PN 10 / PN 16 / PN 25 / PN 40 Class 150 *2	PN 6 / PN 10 / PN 16 / PN 25 / PN 40 Class 150 / Class 300	PN 10 / PN 16 / PN 25 / PN 40 Class 150 / Class 300 *2
max. pressure	40 bar	50 bar	
temperature ranges	-20 °C to +300 °C	-196 °C to +400 °C *3	
materials availabel *4	stainless steel	stainless steel / alu bronze / carbon steel / superduplex	stainless steel / carbon steel / superduplex
seals available	metal / NBR / EPDM / FKM / PTFE	metal / NBR / EPDM / FKM / PTFE	
special options	–	different opening pressures available	

*1 other flange connections on request
*2 not for all nominal sizes
*3 higher or lower temoeratures on request
*4 other materials on request

Technical data



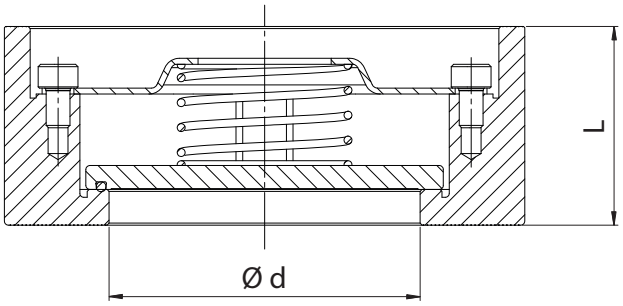
Design	Body	Disc	Spring cross	Spring	Pressure range*1
1	1.4408	1.4408 *2	1.4436	1.4436	0 to max. 40 bar

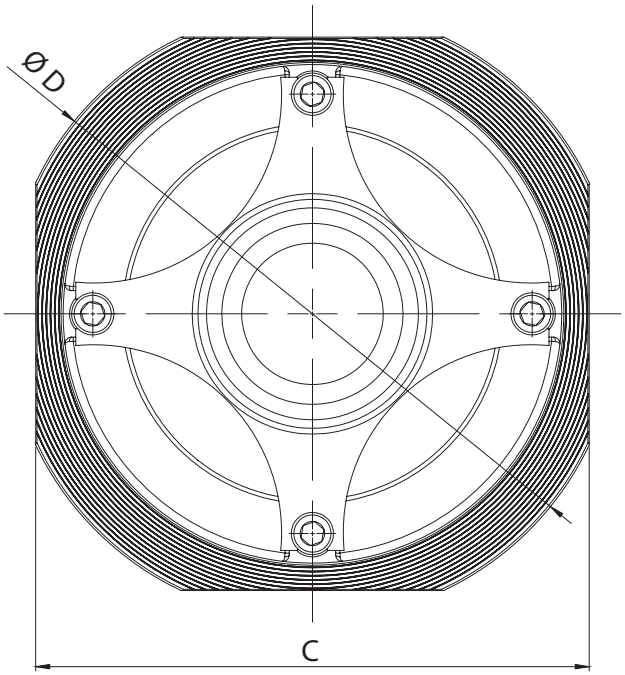
*1 max. allowable pressure is dependent on the temperature
*2 soft sealing valve with disc made of 1.4571

Nominal size	Suitable flanges					
	PN 6	PN 10	PN 16	PN 25	PN 40	ANSI 150
DN 15	-	x	x	x	x	-
DN 20	x	x	x	x	x	-
DN 25	x	x	x	x	x	-
DN 32	-	x	x	x	x	-
DN 40	x	x	x	x	x	-
DN 50	x	x	x	x	x	x
DN 65	x	x	x	x	x	-
DN 80	x	x	x	x	x	x
DN 100	x	x	x	x	x	x

Seal	Temperature	Leakage rate*3
Metal seated	-20 °C to +300 °C	≥G
NBR	-20 °C to +100 °C	A
EPDM	-20 °C to +150 °C	A
FKM	-15 °C to +200 °C	A
PTFE	-20 °C to +250 °C	A

*3 acc. to EN 12266-1

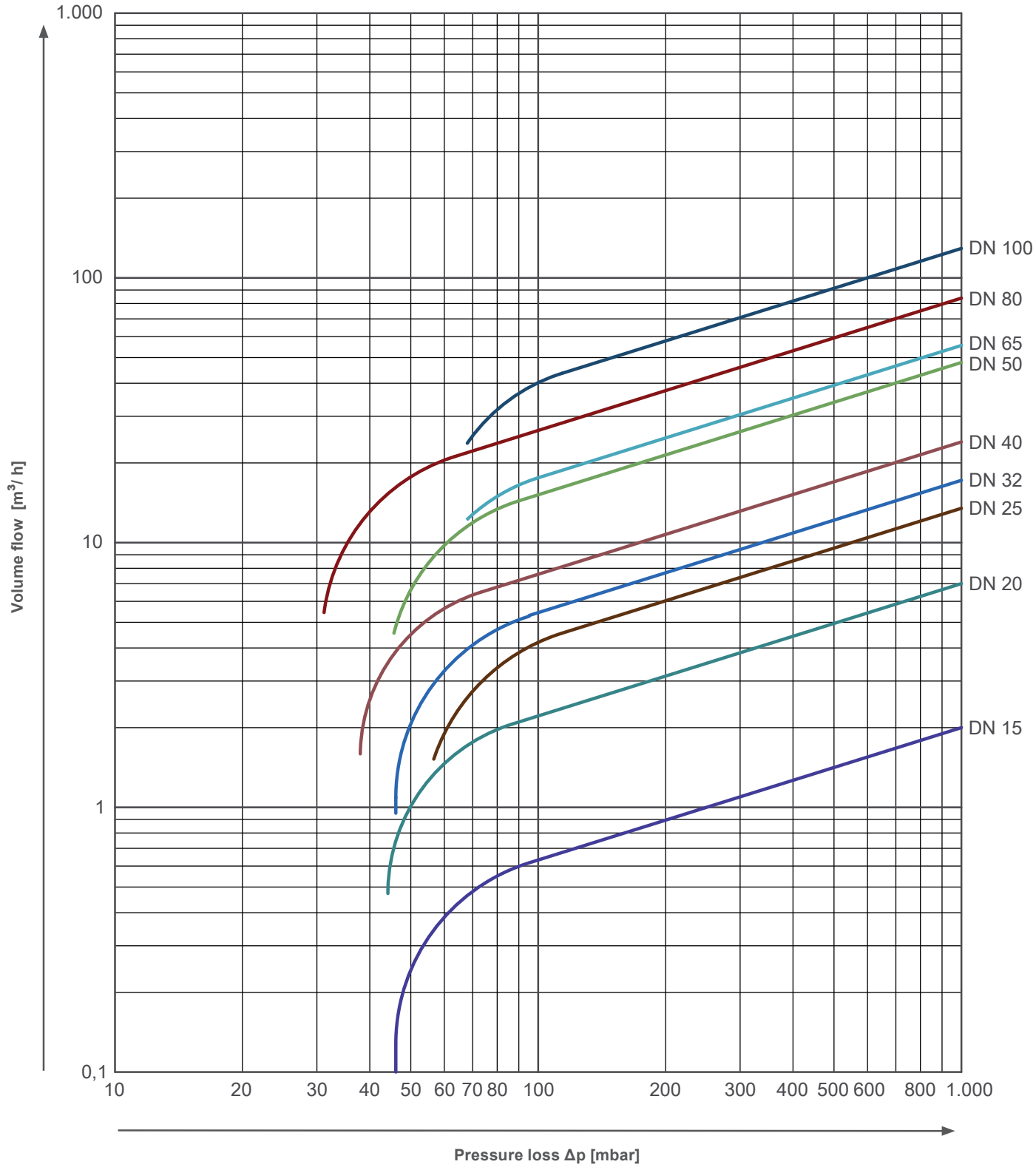




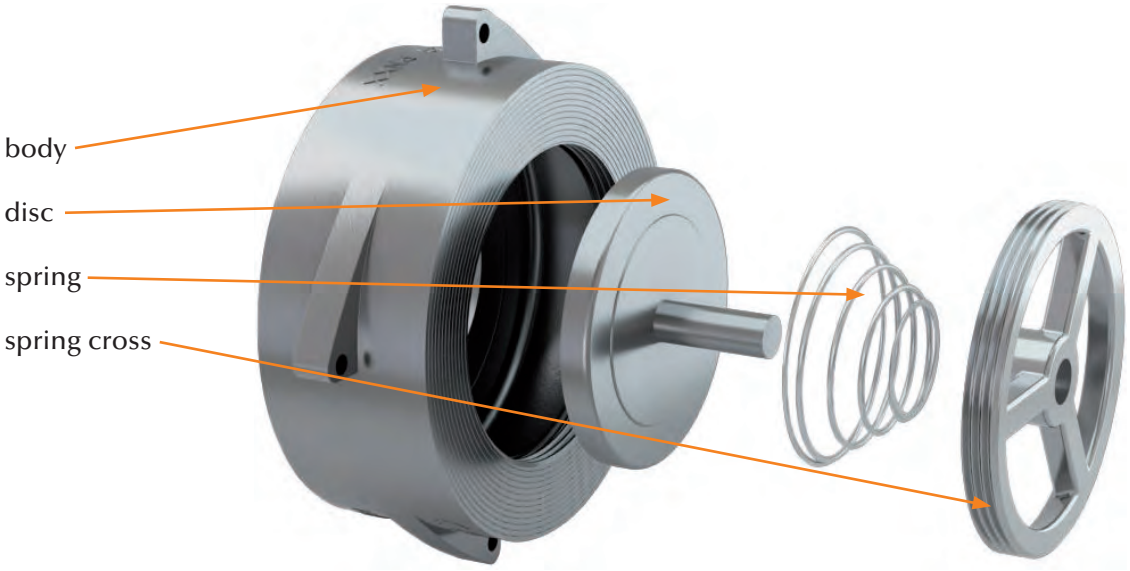
Nominal size	Ø D	Ø d	C	L	Kv value	Opening pressure [mbar]			w/o spring	Weight
					[m³/h]	⟷	↑	↓	↑	[kg]
DN 15	53	15	43	16	2	~ 47	~ 51	~ 43	~ 4	0.10
DN 20	63	20	53	19	7	~ 44	~ 48	~ 40	~ 4	0.16
DN 25	73	25	63	22	13	~ 57	~ 61	~ 53	~ 4	0.28
DN 32	84	30	75	28	17	~ 47	~ 52	~ 42	~ 5	0.52
DN 40	94	38	86	31.5	23	~ 38	~ 43	~ 33	~ 5	0.70
DN 50	107	47	95	40	48	~ 45	~ 52	~ 38	~7	1.10
DN 65	126	62	115	46	55	~ 50	~ 55	~ 45	~ 5	1.58
DN 80	145	77	131	50	83	~ 31	~ 38	~ 24	~7	1.78
DN 100	164	96	150	60	127	~ 55	~ 65	~ 45	~ 10	3.30

Pressure-loss diagram

The diagram values are valid for water at a temerature of 20 °C and for valfes with face-to-face dimensions in accordance with DIN EN 558, suitable for flanges in accordance with PN 10 – PN 40. At the opening of the valve, the curves apply to operation in horizontal pipelines. For calculation for other fluids or temperatures, please contact us.



Technical data
DN 15 – 100



Design	Body	Disc	Spring cross	Spring	Pressure range*1
1	1.4408	1.4408	1.4408	1.4571	0 to max. 50 bar
4	CC333G (2.0975)	CC333G (2.0975)	CC333G (2.0975)	Hastelloy C4 (2.4610)	0 to max. 50 bar
4.1	CC333G (2.0975)	1.4408	1.4408	1.4571	0 to max. 50 bar
5	1.0619, zinc plated	1.4408	1.4408	1.4571	0 to max. 40 bar
6	1.4469 (Superduplex)	1.4469 (Super-duplex)	1.4469 (Superduplex)	Hastelloy C4 (2.4610)	0 to max. 50 bar
6.1	1.4469 (Superduplex)	1.4408	1.4408	1.4571	0 to max. 50 bar

*1 max. allowable pressure is dependent on size and temperature

Seal	Design	Temperature	Leakage rate*2
Metal seated	1 4 / 4.1 5 6 / 6.1	-196 °C to +400 °C*3 -10 °C to +350 °C*3 -10 °C to +400 °C*3 -10 °C to +250 °C	G
NBR*4	–	-30 °C to +100 °C	A
EPDM*4	–	-65 °C to+150 °C	A
FKM*4	–	-30 °C to +230 °C	A
PTFE*4	–	-196 °C to +250 °C	A

*2 acc. to EN 12266-1

*3 temperatures above 300 °C require spring material Hastelloy C4 (low temperature limit for design 1: -100 °C)

*4 for some designs, the temperature range is additionally limited by the temperature range of the metallic parts (see temperature range for metal seated)

Seals comply with the following approvals / conformities:

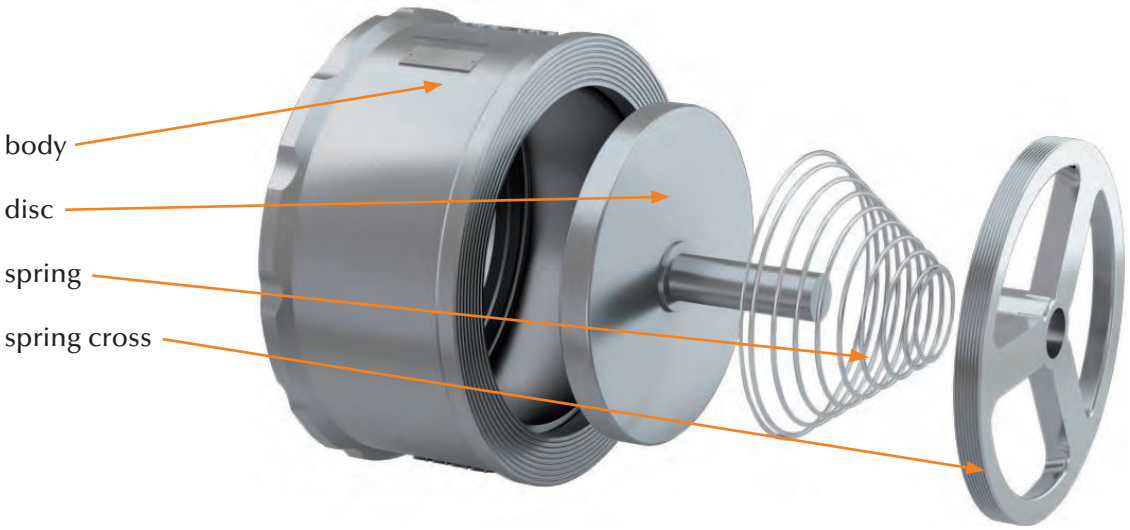
NBR: DIN EN 549, BAM, REACH, RoHS etc.

EPDM: KTW UBA, DVGW W 270, WRAS, NSF, FDA, BfR XXI Kat. 4, ADI-free, 3A, USP Cl. 6, BAM, REACH, RohS etc.

FKM: DIN EN 549, ADI-frei, REACH, RoHS etc.

PTFE: KTW UBA, DVGW W 270, WRAS, FDA, BfR, ADI-free, EU 10/2011, 3A, USP Cl. 6, REACH, RoHS etc.

Technical data
DN 125 – 300



Design	Body	Disc	Spring cross	Spring	Pressure range*1
1	1.4408	1.4408	1.4408	1.4571	0 to max. 50 bar
5	1.0619, zinc plated	1.4408	1.4408	1.4571	0 to max. 50 bar
6	1.4469 (Superduplex)	1.4469 (Super-duplex)	1.4469 (Superduplex)	Hastelloy C4 (2.4610)	0 to max. 50 bar
6.1	1.4469 (Superduplex)	1.4408	1.4408	1.4571	0 to max. 50 bar

*1 max. allowable pressure is dependent on size and temperature

Seal	Design	Temperature	Leakage rate*2
Metal seated	1 5 6 / 6.1	-196 °C to +400 °C*3 -10 °C to +400 °C*3 -10 °C to +250 °C	G
NBR*4	–	-30 °C to +100 °C	A
EPDM*4	–	-65 °C bis +150 °C	A
FKM*4	–	-30 °C to +230 °C	A
PTFE*4	–	-200 °C to +250 °C	A

*2 acc. to EN 12266-1

*3 temperatures above 300 °C require spring material Hastelloy C4 (low temperature limit for design 1: -100 °C)

*4 for some designs, the temperature range is additionally limited by the temperature range of the metallic parts (see temperature range for metal seated)

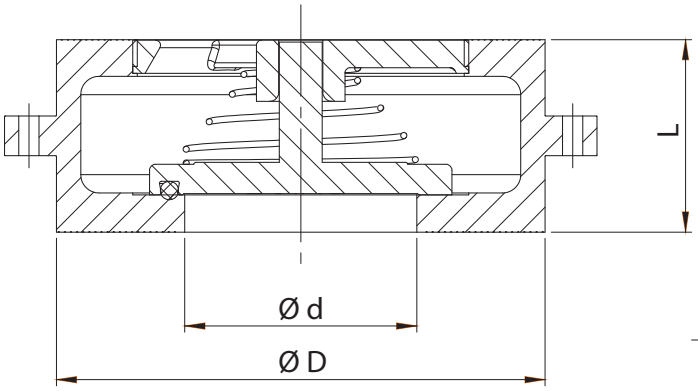
Seals comply with the following approvals / conformities:

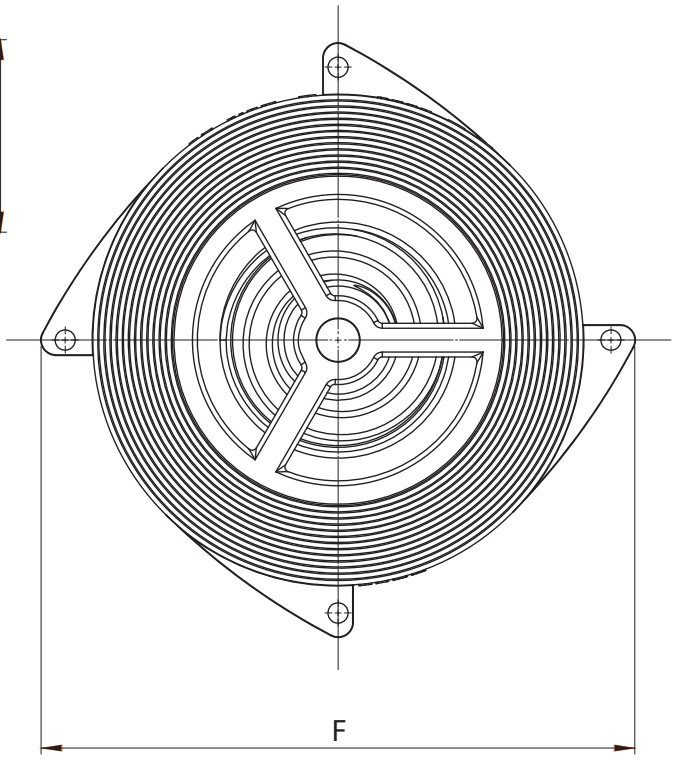
NBR: DIN EN 549, BAM, REACH, RoHS etc.

EPDM: KTW UBA, DVGW W 270, WRAS, NSF, FDA, BfR XXI Kat. 4, ADI-free, 3A, USP Cl. 6, BAM, REACH, RohS etc.

FKM: DIN EN 549, ADI-frei, REACH, RoHS etc.

PTFE: KTW UBA, DVGW W 270, WRAS, FDA, BfR, ADI-free, EU 10/2011, 3A, USP Cl. 6, REACH, RoHS etc.

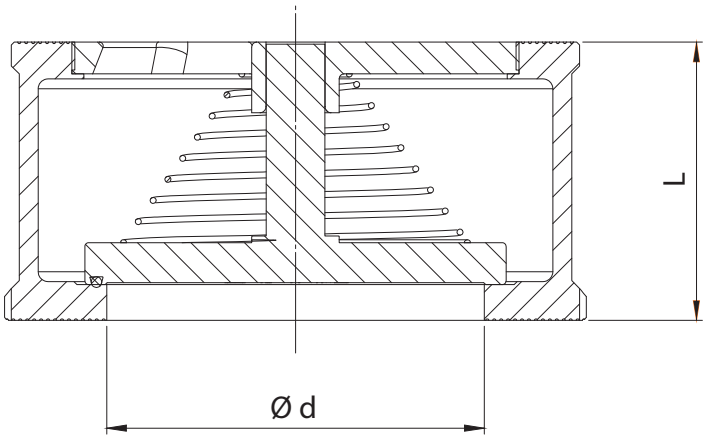


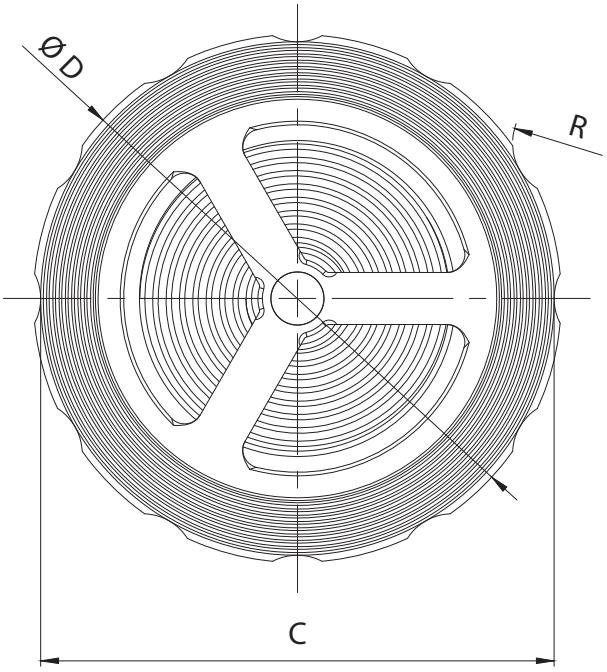


Nominal size	Ø D	Ø d	F	L	Kv value	Opening pressure*5 [mbar]			w/o spring	Weight*6
					[m³/h]	⟷	↑	↓	↑	[kg]
DN 15	43	15	57	16	4	~ 20	~ 24	~ 16	~ 4	0.12
DN 20	53	19	72	19	7	~ 20	~ 25	~ 15	~ 5	0.20
DN 25	63	25	79	22	10	~ 20	~ 25	~ 15	~ 5	0.32
DN 32	75	32	92	28	17	~ 20	~ 26	~ 14	~ 6	0.52
DN 40	80	38	97	31.5	24	~ 20	~ 27	~ 13	~ 7	0.62
DN 50	95	47	113	40	37	~ 20	~ 28	~ 12	~ 8	1.1
DN 65	115	63	137	46	61	~ 20	~ 29	~ 11	~ 9	1.7
DN 80	131	77	154	50	74	~ 20	~ 30	~ 10	~ 10	2.5
DN 100	150	97,5	186	60	115	~ 20	~ 33	~ 7	~ 13	4.0

*5 other opening pressures on request (for high opening pressures the Kv value may be reduced if disc springs must be used)

*6 weight may vary slightly, depending on the design





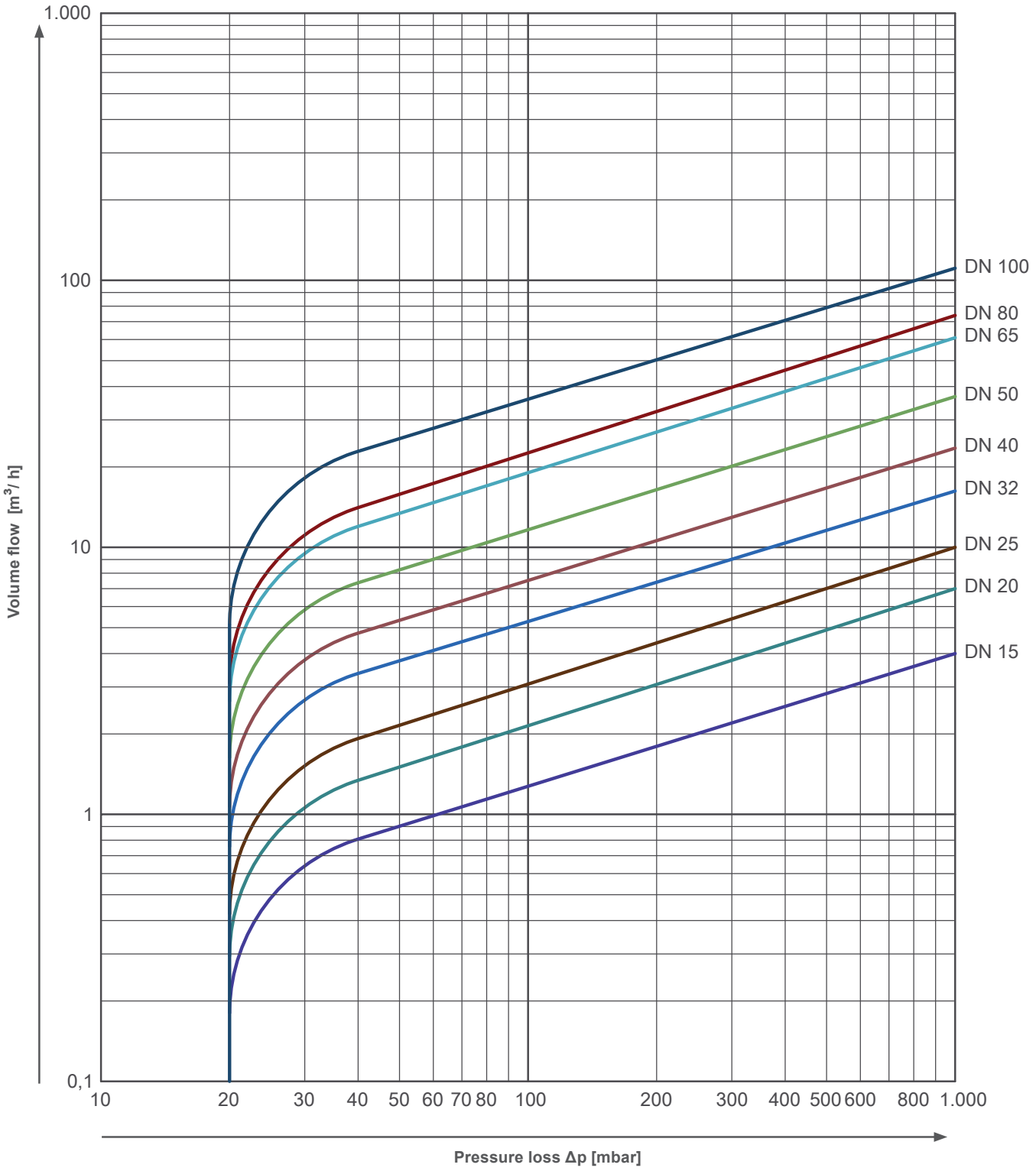
Nominal size	C	Ø D	Ø D	C	Ø D	R	R	Ø d	L	Kv value	Opening pressure*5 [mbar]			w/o spring	Weight*6
	PN 10/16	PN 10/16	150 lbs	PN 25	PN 40	PN 10/16	PN 25			[m³/h]	⟷	↑	↓	↑	[kg]
DN 125	194	194	194	194	194	-	-	118.5	90	201	~ 30	~ 46	~ 14	~ 16	8.4
DN 150	220	220	220	220	220	-	-	141	106	286	~ 30	~ 47	~ 13	~ 17	12.4
DN 200	275	280	280	286	294	11	30	190	140	553	~ 30	~ 51	~ 9	~ 21	23.9
DN 250	331	340	340	344	356	13	33	229	145	643	~ 40	~ 64	~ 16	~ 24	39.2
DN 300	380	386	404	404	421	11	33	280	160	867	~ 40	~ 68	~ 12	~ 38	58.3

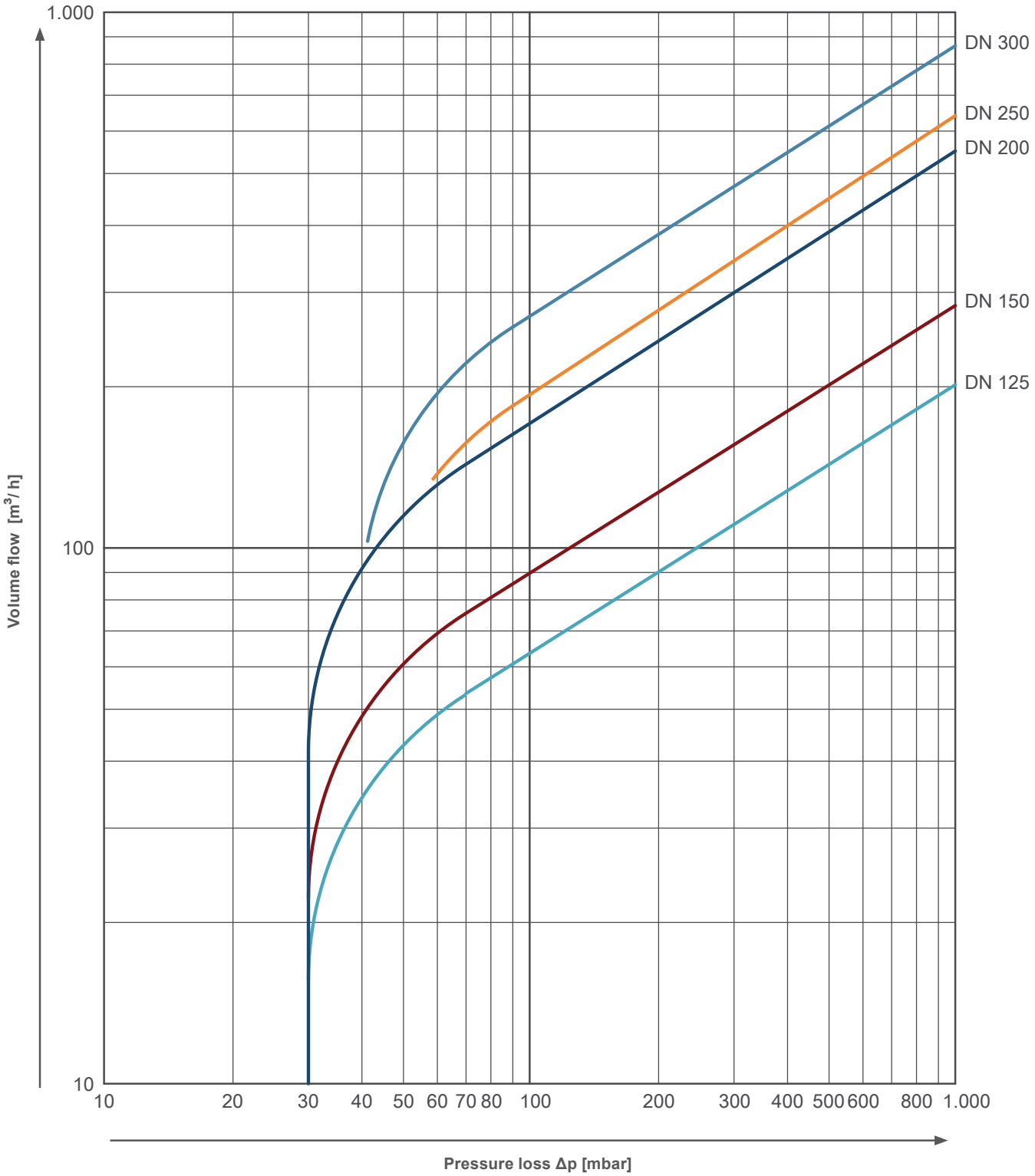
*5 other opening pressures on request (for high opening pressures the Kv value may be reduced if disc springs must be used)

*6 weight may vary slightly, depending on the design

Pressure-loss

The diagram values are valid for water at a temerature of 20 °C and for valfes with face-to-face dimensions in accordance with DIN EN 558, suitable for flanges in accordance with PN 10 – PN 40. At the opening of the valve, the curves apply to operation in horizontal pipelines. For calculation for other fluids or temperatures, please contact us.




1.000
100
10
Volume flow [m³/h]
DN 300
DN 250
DN 200
DN 150
DN 125
10
20
30
40
50
60
70
80
100
200
300
400
500
600
800
1.000
Pressure loss Δp [mbar]

Type codes

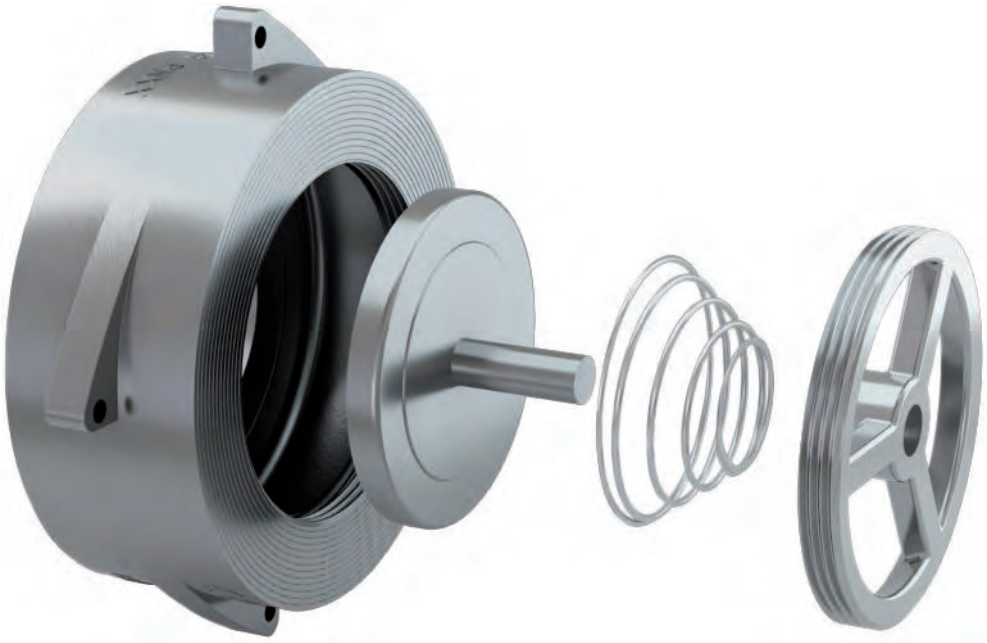
	DN			Material			
Type	**Nominal size**	**Design**	**Body**	**Disc**	**Spring cross**	**Spring**	**Seal**
930	15 - 100	1	1.4408	1.4408	1.4436	1.4436 (F5)	
932	15 - 100	1	1.4408	1.4408	1.4408	1.4571 (F1)*1	Metal seated (M)
		4	CC333G (2.0975)	CC333G (2.0975)	CC333G (2.0975)	Hastelloy C4 (F2)	
		4.1	CC333G (2.0975)	1.4408	1.4408	1.4571 (F1)*1	NBR (N)
		5	1.0619, galvanized	1.4408	1.4408	1.4571 (F1)*1	
		6	1.4469 (Superduplex)	1.4469 (Superduplex)	1.4469 (Superduplex)	Hastelloy C4 (F2)	EPDM (E)
		6.1	1.4469 (Superduplex)	1.4408	1.4408	1.4571 (F1)	FKM (F)
	125 - 300	1	1.4408	1.4408	1.4408	1.4571 (F1)*1	PTFE (Teflon) (T)*3
		5	1.0619, zinc plated	1.4408	1.4408	1.4571 (F1)*1	
		6	1.4469 (Superduplex)	1.4469 (Superduplex)	1.4469 (Superduplex)	Hastelloy C4 (F2)	
		6.1	1.4469 (Superduplex)	1.4408	1.4408	1.4571 (F1)	

*1 metal seated valves require spring material Hastelloy C4 for temperatures above 300 °C

Order example

Disco-RSV 932 / 100 / 1 / M / F1

Type of valve	Disco check valve
Type	932
Nominal size	DN 100
Body / disc	1.4408
Seal	metal seated
Spring	1.4571 (F1)



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