

**Flöriner**  
APPENDICES

# CHECK VALVE



# Why choose Floeriner?

Floeriner is a global valves manufacturer with innovative designed and advanced technology in marine and offshore, industries, petrochemical market. This in turn improves plant safety, increases the mechanical integrity of equipment and empower customers to gain a competitive advantage in the market place. The customer comes first is our principle, we have always strived to provide high quality products to our customers.

For check valves, we can supply butterfly check valves, flap check valves, swing check valves and so on.

## Advantage

### Easy Installation

If choose butterfly check valves with full rubber vulcanized, the widened rubber design ensures a perfect seal between the valve and the pipeline, without the need for any additional gaskets.

### Corrosion Resistant

The fully vulcanized butterfly check valve is specifically designed for corrosive liquids. The valve body material can be selected from more cost-effective options, such as ductile cast iron. If necessary, duplex stainless steel can also be chosen for enhanced durability.

### High Quality

We are committed to providing you with safe and reliable products. Quality is always our top priority, and our quality control program ensures that no defective or poorly crafted items are supplied. Our products can be tailored to meet the requirements and standards of international classification societies, including LR, DNV, ABS, BV, CCS and others, based on customer specifications.

### Professional

With many years of experience in marine field, our marketing and technical team can assure you that we can understand your requirement well and deal with your inquiry professionally.

### Reliable Partner

With a 95% client satisfaction rate, we are confident in becoming your reliable partner.

### One-Stop Service

We supply a wide range of marine valves and work diligently to ensure that everything, from securing the order to final delivery, meets your requirements and adheres to high-quality standards.

### Excellent Team

With our experienced marketing and technical team, we strive to respond to your product inquiries, including related services, within two working days. Your concerns are our top priority. We aim to provide you with optimal options that save both time and money, facilitating cost-effective decision-making for your business.

# CHECK VALVE

Floeriner check valves include butterfly check valves, flap check valves, ball check valves, and swing check valves. They are suitable for installation between flanges according to DIN, EN, ISO PN6~25, ASME 150#~300#, and JIS 5K~16K standards. These valves are widely used in shipbuilding, offshore industries and petrochemical applications. We offer a variety of designs and materials to accommodate working pressures ranging from 6 to 25 bar.



## Butterfly Check Valve

Full Vulcanized

Wafer Type

**Nominal Size:** DN40~DN1000

**Face to Face:** EN558-16

**Connection:** EN1092, ASME B16.5, JIS B2239&2220, GB/T 9119.

**Temperature Range:** -35 to 200°C

For size DN150 and above, lifting eyebolt option is provided.

Drain connections provided on demand.



## Butterfly Check Valve

Half Vulcanized

Wafer Type

**Nominal Size:** DN40~DN1000

**Face to Face:** EN558-16

**Connection:** EN1092, ASME B16.5, JIS B2239&2220, GB/T 9119.

**Temperature Range:** -35 to 200°C

For size DN150 and above, lifting eyebolt option is provided.

Drain connections provided on demand.



## Flap Check Valve

Thin Swing Type

Multi-flange Wafer Type

**Nominal Size:** DN40~DN600

**Connection:** EN1092, ASME B16.5, JIS B2239&2220, GB/T 9119.

**Temperature Range:** -35 to 200°C

Lifting eyebolt to be provided.



## Ball Check Valve

Flange or Thread Type

**Nominal Size:** DN40~DN600

**Face to Face:** EN558-1

**Connection:** EN1092, ASME B16.5, JIS B2239&2220, GB/T 9119.

**Temperature Range:** -35 to 130°C

Silent working, horizontal and vertical installation in the pipeline.



## Swing Check Valve

Flange Type

**Nominal Size:** DN20~DN500

**Connection:** EN1092, ASME B16.5, JIS B2239&2220, GB/T 9119.

**Temperature Range:** -10 to 300°C

Valve flap closes quickly and the water hammer pressure is small.

# Full Vulcanized Butterfly Check Valve

## Vulcanized Liner

The vulcanized liner features a large contact surface between the flange and the liner, ensuring no corrosion or leakage. With excellent resilience and a long service life, there is no need to add gaskets during installation.

## Body

Compact and space saving , maintenance free.

## Disc

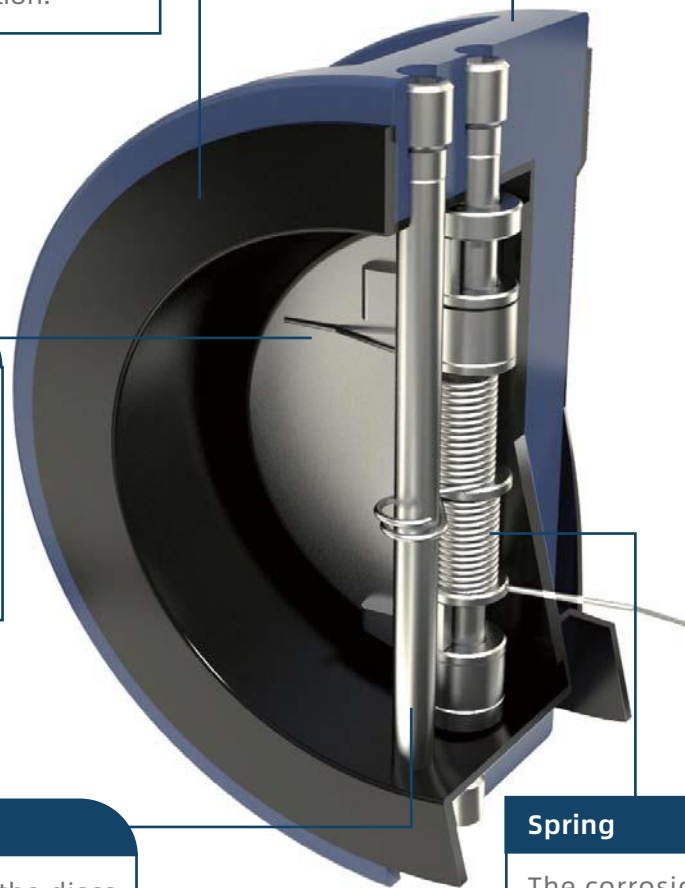
The self-acting pivoting check valve with a double disc features a superior closing response that effectively prevents backflow before any flow occurs.

## Stopper Pin

The stopper pin prevents the discs from coming into contact with each other, thereby avoiding any potential disc damage. Additionally, it ensures that the discs do not exceed the full-open position, which helps prevent spring failure.

## Spring

The corrosion-resistant springs are engineered to quickly close the valve at zero flow, preventing undesirable pressure surges. The valve automatically opens again when flow resumes.



# Butterfly Check Valve with Full Vulcanized

Floeriner wafer type butterfly check valve features a rubber liner that is fully vulcanized and integrated into the valve body, extending along the valve faces to eliminate the need for gaskets. This valve can be installed in a horizontal position.

It is suitable for use in general industrial and maritime piping systems, handling various media such as seawater, water, oil, and corrosive substances.

## Material Specification

Body	Disc	Shaft	Spring	Liner
<input type="checkbox"/> Nodular Cast Iron	<input type="checkbox"/> SS304	<input type="checkbox"/> SS304	<input type="checkbox"/> SS316	<input type="checkbox"/> NBR
<input type="checkbox"/> SS304	<input type="checkbox"/> SS316	<input type="checkbox"/> SS316	<input type="checkbox"/> SS316L	<input type="checkbox"/> EPDM
<input type="checkbox"/> SS316	<input type="checkbox"/> SS316L	<input type="checkbox"/> SS316L	<input type="checkbox"/> Duplex SS	<input type="checkbox"/> FPM/ FKM
<input type="checkbox"/> SS316L	<input type="checkbox"/> Al-Bronze	<input type="checkbox"/> Al-Bronze	<input type="checkbox"/> Inconel	<input type="checkbox"/> PTFE
<input type="checkbox"/> Duplex SS	<input type="checkbox"/> Duplex SS	<input type="checkbox"/> Duplex SS	<input type="checkbox"/> Hastelloy	

Material Temperature			
NBR -25°C-100°C	EPDM -35°C-130°C	FPM/ FKM (Viton) -20°C-200°C	PTFE -55°C-190°C

## Dimension

DN	ΦA							ΦC	ΦE	B	GR	ΦK	Vertical Opening Pressure (Kpa)	Horizontal Opening Pressure (Kpa)
	EN 1092				JIS 2220									
	PN6	PN10	PN16	PN25	JIS 5K	JIS 10K	JIS 16K							
DN40	86	92	92	92	80	86	86	92	65	43	29	40	120	100
DN50	96	107	107	107	90	101	101	96	65	43	29	40	120	100
DN65	116	127	127	127	115	121	121	114	80	46	36	48	120	100
DN80	131	142	142	142	126	131	137	129	94	64	43	64	120	100
DN100	151	162	162	168	146	156	162	151	117	64	53	82	120	100
DN125	181	192	192	193	181	187	192	177	145	70	66	108	120	100
DN150	206	218	218	223	211	217	218	204	170	76	79	128	120	100
DN200	261	273	273	283	257	267	273	256	224	89	104	174	120	100
DN250	316	328	328	340	322	328	328	311	267	114	127	199	120	100
DN300	372	378	383	400	367	375	378	361	310	114	148	249	120	100
DN350	422	438	442	456	410	420	438	417	360	127	173	290	120	100
DN400	472	489	495	513	470	483	489	464	410	140	198	330	120	100
DN450	527	539	555	563	530	538	539	514	450	152	218	370	120	100
DN500	577	594	617	623	580	593	594	568	505	152	241	424	120	100
DN600	679	695	734	730	688	695	695	670	624	178	292	519	120	100
DN700	782	810	804	832	793	807	810	795	720	229	342	619	120	100
DN800	889	910	910	941	897	910	910	880	825	241	393	721	120	100
DN900	989	1010	1018	1041	997	1010	1010	990	925	241	445	825	120	100
DN1000	1089	1123	1127	1154	1097	1121	1123	1100	1050	300	515	965	120	100

Note: Other flange standards can also be provided upon request.



Nominal Size: DN40~DN1000

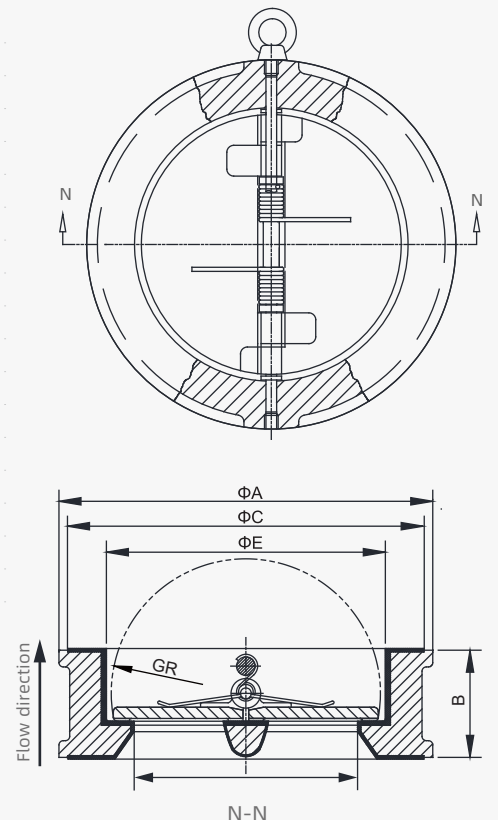
Face to Face: EN558-16

Connection: EN1092, ASME B16.5, JIS B2239&2220, GB/T 9119.

Temperature Range: -35 to 200°C

For size DN150 and above, lifting eyebolt option is provided.

Drain connections provided on demand.



# Butterfly Check Valve with Half Vulcanized

Floeriner wafer type butterfly check valve features a rubber liner that is half vulcanized and integrated into the valve body seat.

This type of check valve is suitable for use in general industrial and maritime piping systems, handling various media such as seawater, water, oil, and corrosive substances.

## Material Specification

Body	Disc	Shaft	Spring	Liner
<input type="checkbox"/> Nodular Cast Iron	<input type="checkbox"/> SS304	<input type="checkbox"/> SS304	<input type="checkbox"/> SS316	<input type="checkbox"/> NBR
<input type="checkbox"/> SS304	<input type="checkbox"/> SS316	<input type="checkbox"/> SS316	<input type="checkbox"/> SS316L	<input type="checkbox"/> EPDM
<input type="checkbox"/> SS316	<input type="checkbox"/> SS316L	<input type="checkbox"/> SS316L	<input type="checkbox"/> Duplex SS	<input type="checkbox"/> FPM/ FKM
<input type="checkbox"/> SS316L	<input type="checkbox"/> Al-Bronze	<input type="checkbox"/> Al-Bronze	<input type="checkbox"/> Inconel	<input type="checkbox"/> PTFE
<input type="checkbox"/> Duplex SS	<input type="checkbox"/> Duplex SS	<input type="checkbox"/> Duplex SS	<input type="checkbox"/> Hastelloy	

Material Temperature			
NBR -25°C-100°C	EPDM -35°C-130°C	FPM/ FKM (Viton) -20°C-200°C	PTFE -55°C-190°C

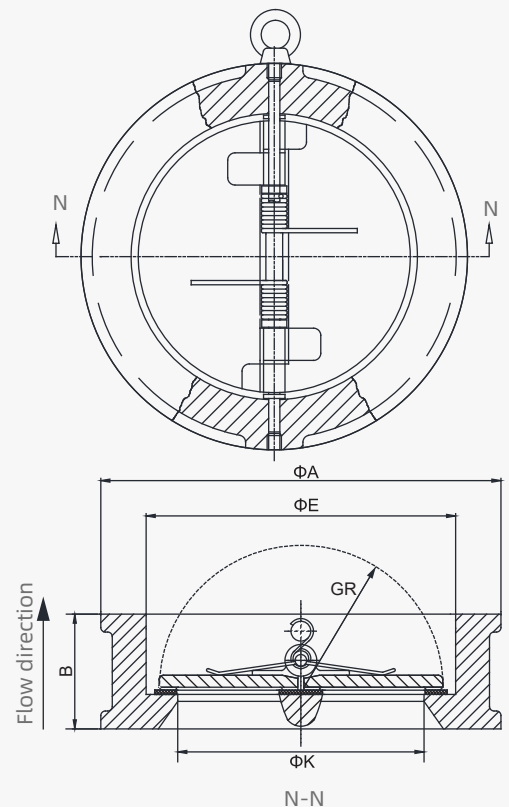
## Dimension

DN	ΦA							ΦE	B	GR	ΦK	Vertical Opening Pressure (Kpa)	Horizontal Opening Pressure (Kpa)
	EN 1092				JIS 2220								
	PN6	PN10	PN16	PN25	JIS 5K	JIS 10K	JIS 16K						
DN40	86	92	92	92	80	86	86	65	43	29	40	120	100
DN50	96	107	107	107	90	101	101	65	43	29	40	120	100
DN65	116	127	127	127	115	121	121	80	46	36	48	120	100
DN80	131	142	142	142	126	132	137	94	64	43	64	120	100
DN100	151	162	162	168	146	156	162	117	64	53	82	120	100
DN125	181	192	192	193	181	187	192	145	70	66	108	120	100
DN150	206	218	218	223	211	217	218	170	76	79	128	120	100
DN200	261	273	273	283	257	267	273	224	89	104	174	120	100
DN250	316	328	328	340	322	328	328	267	114	127	199	120	100
DN300	372	378	383	400	367	375	378	310	114	148	249	120	100
DN350	422	438	442	456	410	420	438	360	127	173	290	120	100
DN400	472	489	495	513	470	483	489	410	140	198	330	120	100
DN450	527	539	555	563	530	538	539	450	152	218	370	120	100
DN500	577	594	617	623	580	593	594	505	152	241	424	120	100
DN600	679	695	734	730	688	695	695	624	178	292	519	120	100
DN700	782	810	804	832	793	807	810	720	229	342	619	120	100
DN800	889	910	910	941	897	910	910	825	241	393	721	120	100
DN900	989	1010	1018	1041	997	1010	1010	925	241	445	825	120	100
DN1000	1089	1123	1127	1154	1097	1121	1050	1050	300	515	965	120	100

Note: Other flange standards can also be provided upon request.



Nominal Size: DN40~DN1000  
 Face to Face: EN558-16  
 Connection: EN1092, ASME B16.5, JIS B2239&2220, GB/T 9119.  
 Temperature Range: -35 to 200°C  
 For size DN150 and above, lifting eyebolt option is provided.  
 Drain connections provided on demand.



# Flap Check Valve

Floeriner wafer type flap check valve is an economical stainless steel check valve that can be installed in either a horizontal position or a vertical position with flow directed upwards.

The valve requires a low minimum pressure to open. It is widely used in general industrial and maritime piping systems for media such as seawater, water, oil, and corrosive substances. However, it is not recommended for pulp lines or compressor delivery lines.

## Material Specification

Body	Disc	Shaft	Liner
<input type="checkbox"/> SS304	<input type="checkbox"/> SS304	<input type="checkbox"/> SS304	<input type="checkbox"/> NBR
<input type="checkbox"/> SS316	<input type="checkbox"/> SS316	<input type="checkbox"/> SS316	<input type="checkbox"/> EPDM
<input type="checkbox"/> SS316L	<input type="checkbox"/> SS316L	<input type="checkbox"/> SS316L	<input type="checkbox"/> FPM/ FKM
<input type="checkbox"/> Duplex steel	<input type="checkbox"/> Duplex steel	<input type="checkbox"/> Duplex steel	
<input type="checkbox"/> Bronze	<input type="checkbox"/> Bronze	<input type="checkbox"/> Bronze	

### Material Temperature

NBR -25°C-100°C

EPDM -35°C-130°C

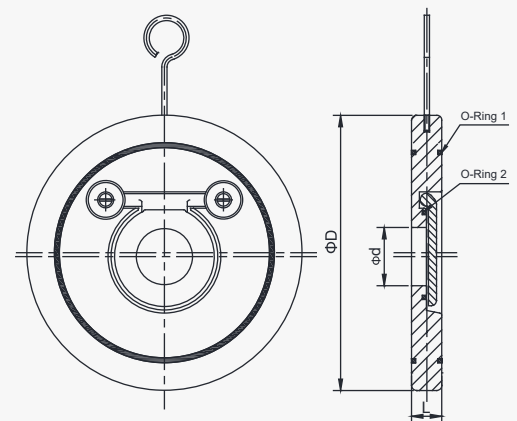
FPM/ FKM (Viton) -20°C-200°C

## Dimension

DN	L	$\phi D$	$\phi d$
DN40	14	92	22
DN50	14	107	32
DN65	14	127	40
DN80	14	142	54
DN100	18	162	70
DN125	18	192	92
DN150	20	218	114
DN200	22	273	154
DN250	26	328	200
DN300	28	378	235
DN350	38	438	280
DN400	44	489	316
DN450	50	532	360
DN500	56	585	405
DN600	62	690	486



Flap Check Valve  
Thin Swing Type  
Multi-flange Wafer Type  
Nominal Size: DN40~DN600  
Connection: EN1092, ASME B16.5,  
JIS B2239&2220, GB/T 9119.  
Temperature Range: -35 to 200°C  
Lifting eyebolt to be provided.



# Ball Check Valve

## Application

Pumping stations for clean, sewage water and loaded or viscous fluids.

## Technical Benefits

Full Bore Ensured; self Cleaning Ball;

Low Pressure Drop; silent.

Removable bonnet for cleaning or changing the with out of the pipeline.

Horizontal and vertical installation in the pipeline.

**Flanged Type:** EN 1092-2 PN10, PN16.

**Maximum Working Pressure:** 16bars.

**Operating Temperatures:** according to the material as below. Seating ace to category A standard ISO 5208.

**Minimum Backpressure for Tightness:** 0.3bar to 0.5bar.

Face to Face dimensions for flanged type according to EN558-1 series 48(DIN3202 F6).

## Material Specification

Body	Bonnet	Ball	Bonnet Gasket	Bolting
<input type="checkbox"/> Ductile Iron	<input type="checkbox"/> Ductile Iron	<input type="checkbox"/> Steel+NBR	<input type="checkbox"/> NBR	Stainless steel
		<input type="checkbox"/> Steel+EPDM	<input type="checkbox"/> EPDM	

Material Temperature	
NBR -25°C-100°C	EPDM -35°C-130°C

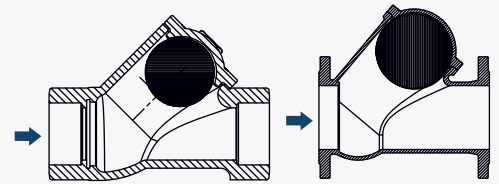
## Dimension

DN	L	EN 1092-1 PN10			EN 1092-1 PN16			b	H
		φD	φK	n-φd	φD	φK	n-φd		
DN40	180	150	110	4-18	150	110	4-18	19	90
DN50	200	165	125	4-18	165	125	4-18	19	100
DN65	240	185	145	8-18	185	145	4-18	19	125
DN80	260	200	160	8-18	200	160	8-18	19	136
DN100	300	220	180	8-18	220	180	8-18	19	185
DN125	350	250	210	8-18	250	210	8-18	19	196
DN150	400	285	240	8-22	285	240	8-22	19	265
DN200	500	340	295	8-22	340	295	12-22	20	340
DN250	600	395	350	12-22	405	355	12-26	22	420
DN300	700	445	400	12-22	460	410	12-26	24.5	480
DN350	800	505	460	16-22	520	470	16-26	26.5	615
DN400	900	565	515	16-26	580	525	16-30	28	680
DN450	1000	615	565	20-26	640	585	20-30	30	791
DN500	1150	670	620	20-26	715	620	20-33	31.5	866
DN600	1350	780	725	20-30	840	770	20-36	36	1110

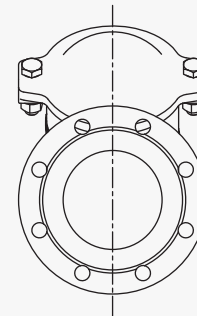
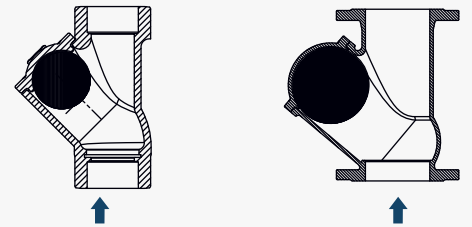


## Installation

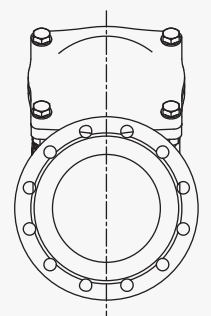
### Horizontal



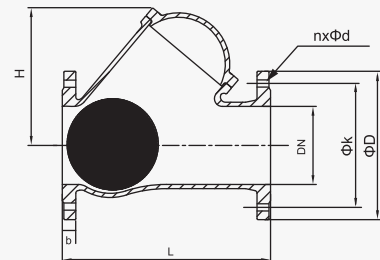
### Vertical



DN40-DN150



DN200-DN600





# Swing check valve

The swing check valve features a circular disc that swings on a hinge pin. It can be installed in both horizontal and vertical orientations, making it suitable for large diameter pipes. However, the preferred orientation is horizontal, as the disc may remain open if flow reversal occurs slowly.

## Technical Benefits

The valve flap closes quickly and the water hammer pressure is small.

Smooth flow path and low fluid resistance.

Short flap travel and low impact on valve closing.

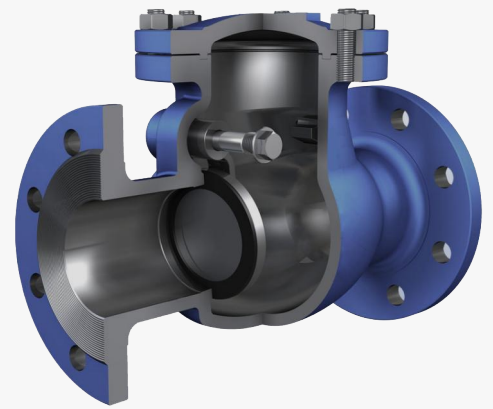
PN	DN
<input type="checkbox"/> 6	DN20-DN500
<input type="checkbox"/> 10	DN20-DN500
<input type="checkbox"/> 16	DN20-DN500

## Material Specification

Body	Disc	Seat sealing
<input type="checkbox"/> Cast iron	<input type="checkbox"/> SS304	<input type="checkbox"/> SS304
<input type="checkbox"/> Cast steel	<input type="checkbox"/> SS316	<input type="checkbox"/> SS316
<input type="checkbox"/> SS304	<input type="checkbox"/> SS316L	<input type="checkbox"/> SS316L
<input type="checkbox"/> SS316	<input type="checkbox"/> Bronze	<input type="checkbox"/> Bronze
<input type="checkbox"/> SS316L		
<input type="checkbox"/> Bronze		

## Dimension

DN	L	H	EN 1092-1 PN10			EN 1092-1 PN16		
			$\phi D$	$\phi K$	$n \times \phi d$	$\phi D$	$\phi K$	$n \times \phi d$
DN20	150	115	105	75	4x14	105	75	4x14
DN25	160	120	115	85	4x14	115	85	4x14
DN32	180	135	140	100	4x18	140	100	4x18
DN40	200	150	150	110	4x18	150	110	4x18
DN50	230	160	165	125	4x18	165	125	4x18
DN65	290	175	185	145	8x18	185	145	8x18
DN80	310	185	200	160	8x18	200	160	8x18
DN100	350	220	220	180	8x18	220	180	8x18
DN125	400	255	250	210	8x18	250	210	8x18
DN150	480	263	285	240	8x22	285	240	8x22
DN200	550	293	340	295	8x22	340	295	8x22
DN250	650	330	395	350	12x22	395	350	12x22
DN300	750	382	445	400	12x22	445	400	12x22
DN350	850	430	505	460	16x22	505	460	16x22
DN400	950	480	565	515	16x26	565	515	16x26
DN500	1150	560	670	620	20x26	670	620	20x26

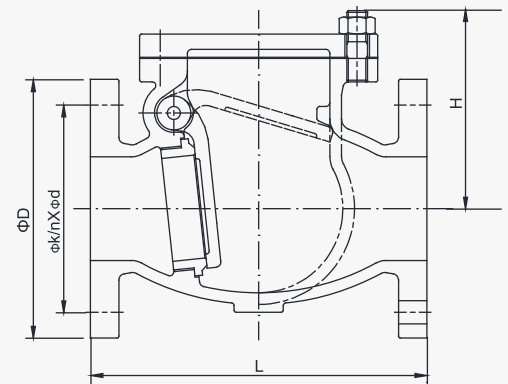


### Swing Check Valve

Nominal Size: DN20~DN500

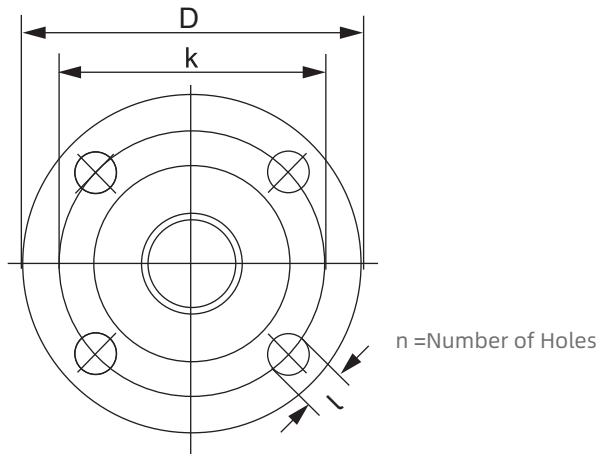
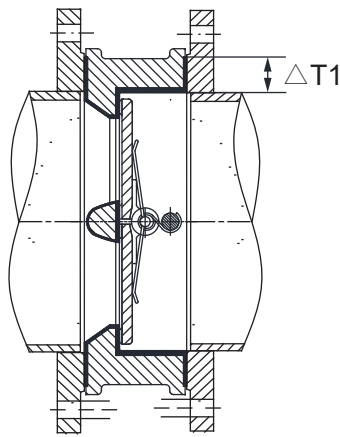
Connection: EN1092, ASME B16.5, JIS B2239&2220, GB/T 9119.

Temperature Range: -10 to 300°C



# Flanges

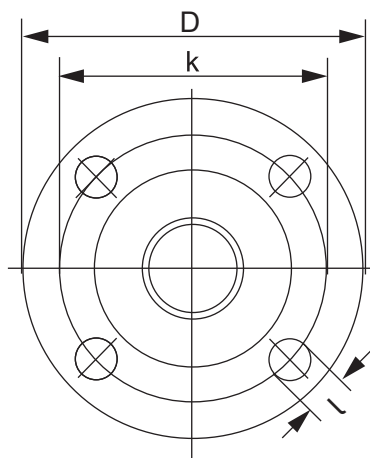
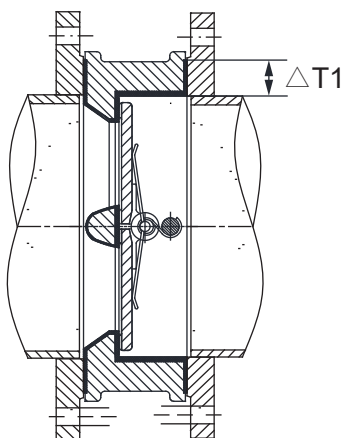
Flange Standard		DIN PN 6					DIN PN 10					DIN PN 16					DIN PN 25				
DN		D	k	n	l	$\Delta T1$	D	k	n	l	$\Delta T1$	D	k	n	l	$\Delta T1$	D	k	n	l	$\Delta T1$
mm	in.	mm	mm		mm	mm	mm	mm		mm	mm	mm	mm		mm	mm	mm	mm		mm	mm
40	1 1/2"	130	100	4	14	8	Identical with PN 16				11.5	150	110	4	18	12	150	110	4	18	12
50	2"	140	110	4	14	13					15.5	165	125	4	18	16	165	125	4	18	16
65	2 1/2"	160	130	4	14	15					17	185	145	4	18	21	185	145	8	18	17
80	3"	190	150	4	18	17					17.5	200	160	8	18	18	200	160	8	18	18
100	4"	210	170	4	18	16					17.5	220	180	8	18	18	235	190	8	22	18
125	5"	240	200	8	18	16					16	250	210	8	18	16	270	220	8	26	16
150	6"	265	225	8	18	16					16.75	285	240	8	22	17	300	250	8	26	17
200	8"	320	280	8	18	16	340	295	8	22	16	340	295	12	22	16	360	310	12	26	16
250	10"	375	335	12	18	18	395	350	12	22	17	405	355	12	26	17	425	370	12	30	17
300	12"	440	395	12	22	19	445	400	12	22	17	460	410	12	26	17	485	430	16	30	17
350	14"	490	445	12	22	28	505	460	16	22	29	520	470	16	26	29	555	490	16	33	45
400	16"	540	495	16	22	27	565	515	16	26	27	580	525	16	30	27	620	550	16	36	27
450	18"	595	550	16	22	26	615	565	20	26	26	640	585	20	30	26	670	600	20	36	26
500	20"	645	600	20	22	27	670	620	20	26	27	715	650	20	33	27	730	660	20	36	27
600	24"	755	705	20	26	23	780	725	20	30	23	840	770	20	36	23	845	770	20	39	23
700	28"	860	810	24	26	27	895	840	24	30	37	910	840	24	36	37	960	875	24	42	37
800	32"	975	920	24	30	28	1015	950	24	33	28	1025	950	24	39	28	1085	990	24	48	28
900	36"	1075	1020	24	30	27	1115	1050	28	33	32	1125	1050	28	39	32	1185	1090	28	48	33
1000	40"	1175	1120	28	30	15	1230	1160	28	36	25	1255	1170	28	42	35	1320	1210	28	56	25



Flange Standard		GB/T9119 PN 6					GB/T9119 PN 10					GB/T9119 PN 16					GB/T9119 PN 25				
DN		D	k	n	l	$\Delta T1$	D	k	n	l	$\Delta T1$	D	k	n	l	$\Delta T1$	D	k	n	l	$\Delta T1$
mm	in.	mm	mm		mm	mm	mm	mm		mm	mm	mm	mm		mm	mm	mm	mm		mm	mm
40	1 1/2"	130	100	4	14	8	Identical with PN 16				11.5	150	110	4	18	12	150	110	4	18	12
50	2"	140	110	4	14	13					15.5	165	125	4	18	16	165	125	4	18	16
65	2 1/2"	160	130	4	14	15					17	185	145	4	18	21	185	145	8	18	17
80	3"	190	150	4	18	17					17.5	200	160	8	18	18	200	160	8	18	18
100	4"	210	170	4	18	16					17.5	220	180	8	18	18	235	190	8	22	18
125	5"	240	200	8	18	16					16	250	210	8	18	16	270	220	8	26	16
150	6"	265	225	8	18	16					16.75	285	240	8	22	17	300	250	8	26	17
200	8"	320	280	8	18	16	340	295	8	22	16	340	295	12	22	16	360	310	12	26	16
250	10"	375	335	12	18	18	395	350	12	22	17	405	355	12	26	17	425	370	12	30	17
300	12"	440	395	12	22	19	445	400	12	22	17	460	410	12	26	17	485	430	16	30	17
350	14"	490	445	12	22	28	505	460	16	22	29	520	470	16	26	29	555	490	16	33	45
400	16"	540	495	16	22	27	565	515	16	26	27	580	525	16	30	27	620	550	16	36	27
450	18"	595	550	16	22	26	615	565	20	26	26	640	585	20	30	26	670	600	20	36	26
500	20"	645	600	20	22	27	670	620	20	26	27	715	650	20	33	27	730	660	20	36	27
600	24"	755	705	20	26	23	780	725	20	30	23	840	770	20	36	23	845	770	20	39	23
700	28"	860	810	24	26	27	895	840	24	30	37	910	840	24	36	37	960	875	24	42	37
800	32"	975	920	24	30	28	1015	950	24	33	28	1025	950	24	39	28	1085	990	24	48	28
900	36"	1075	1020	24	30	27	1115	1050	28	33	32	1125	1050	28	39	32					33
1000	40"	1175	1120	28	30	15	1230	1150	28	36	25	1255	1170	28	42	35					25

# Flanges

Flange Standard		ANSI B 16.5 150 lb/sq. in.						ANSI B 16.5 300 lb/sq. in.						SAE J518 c									
DN		D		k		n	l		$\Delta T1$	D		k		n	l		G	H	I	L	n	l	$\Delta T1$
mm	in.	mm	in.	mm	in.		mm	in.	mm	mm	in.	mm	in.		mm	in.	mm	mm	mm	mm	mm	mm	
40	1 1/2"	127	5"	98.4	3 7/8"	4	15.9	5/8"	4.075	155.6	6 1/8"	114.3	4 3/4"	4	22.2	3/4"	94	70	35.7	83	4	13	4.075
50	2"	152.4	6"	120.7	4 3/4"	4	19	3/4"	13.45	165.1	6 1/2"	127	5"	8	19	3/4"	102	78	42.9	97	4	13	13.45
65	2 1/2"	177.8	7"	139.7	5 1/2"	4	19	3/4"	12.3	190.5	7 1/2"	149.2	5 7/8"	8	22.2	7/8"	114	89	50.8	115	4	13	12.3
80	3"	190.5	7 1/2"	152.4	6"	4	19	3/4"	16.5	209.6	8 1/4"	168.3	6 5/8"	8	22.2	7/8"	135	106.4	61.9	131	4	17	16.5
100	4"	228.6	9"	190.5	7 1/2"	8	19	3/4"	18.5	254	10"	200	7 8/8"	8	22.2	7/8"	162	130.2	77.8	152	4	17	18.5
125	5"	254	10"	215.9	8 1/2"	8	22.2	7/8"	16	279.4	11"	235	9 1/4"	8	22.2	7/8"	184	152.4	92.1	181	4	17	16
150	6"	279.4	11"	241.3	9 1/2"	8	22.2	7/8"	22.95	317.5	12 1/2"	269.9	10 5/8"	12	22.2	7/8"							22.95
200	8"	342.9	13 1/2"	298.5	11 3/4"	8	22.2	7/8"	22.85	381	15"	330.2	13"	12	25.4	1"							22.85
250	10"	406.4	16"	361.9	14 1/4"	12	25.4	1"	28.4	444.5	17 1/2"	387.3	15 1/4"	16	28.6	1 1/8"							28.4
300	12"	482.6	19"	431.8	17"	12	25.4	1"	35.5	520.7	20 1/2"	450.8	17 3/4"	16	31.7	1 1/4"							35.5
350	14"	533.4	21"	476.2	18 3/4"	12	28.6	1 1/8"	28.5	584.2	23"	514.3	20 1/4"	20	31.7	1 1/4"							28.5
400	16"	596.9	23 1/2"	539.7	21 1/4"	16	28.6	1 1/8"	27	647.7	25 1/2"	571.5	22 1/2"	20	34.9	1 3/8"							27
450	18"	635	25"	577.9	22 3/4"	16	31.7	1 1/4"	32	711.2	28"	628.7	24 3/4"	24	34.9	1 3/8"							32
500	20"	698.5	27 1/2"	635	25	20	31.7	1 1/4"	31.5	774.7	30 1/2"	685.8	27"	24	34.9	1 3/8"							31.5
600	24"	812.8	32"	749.3	29 1/2"	20	34.9	1 3/8"	23	914.4	36"	812.8	32"	24	41.3	1 5/8"							23



n = Number of Holes

Flange Standard		JIS 5K					JIS 10K					JIS 16K				
DN		D	k	n	l	$\Delta T1$	D	k	n	l	$\Delta T1$	D	k	n	l	$\Delta T1$
mm	in.	mm	mm		mm	mm	mm	mm		mm	mm	mm	mm		mm	mm
40	1 1/2"	120	95	4	15	7	140	105	4	19	10	140	105	4	19	10
50	2"	130	105	4	15	12	155	120	4	19	16	155	120	8	19	16
65	2 1/2"	155	130	4	15	17	175	140	4	19	17	175	140	8	19	17
80	3"	180	145	4	19	16	185	150	8	19	18	200	160	8	23	18
100	4"	200	165	8	19	15	210	175	8	19	18	225	185	8	23	18
125	5"	235	200	8	19	16	250	210	8	23	16	270	225	8	25	16
150	6"	265	230	8	19	17	280	240	8	23	17	305	260	12	25	17
200	8"	320	280	8	23	16	330	290	12	23	16	350	305	12	25	16
250	10"	385	345	12	23	21	400	355	12	25	21	430	380	12	27	21
300	12"	430	390	12	23	20	445	400	16	25	20	480	430	16	27	20
350	14"	480	435	12	25	23	490	445	16	25	29	540	480	16	33	29
400	16"	540	495	16	25	27	560	510	16	27	27	605	540	16	33	27
450	18"	605	555	16	25	27	620	565	20	27	27	675	605	20	27	27
500	20"	655	605	20	25	29	675	620	20	27	29	730	660	20	33	29
600	24"	770	715	20	27	23	795	730	24	33	23	845	770	24	39	23
700	28"	875	820	24	27	33	905	840	24	33	38					38
800	32"	995	930	24	33	28	1020	950	28	33	28					28
900	36"	1092	1030	24	33	33	1120	1050	28	33	33					33
1000	40"	1195	1130	28	33	20	1235	1160	28	39	25					25



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# Flöriner APPENDICES