

Ball Check Valves

DN 15 – DN 200 (PN 10) or else ANSI ½ " – 8 " (150 lbs.)

Check Valves

Spring loaded

DN 15 – DN 100 (PN 10) or else ANSI ½ " – 4 " (150 lbs.)

Swing Disc Type (without spring)

- **Slim Line Type SCF2**

DN 40 – DN 300 (PN 10) or else ANSI 1½ " – 12 " (150 lbs.)

- **Extended Type (3 parts)**

DN 40 – DN 450 (PN 10) or else ANSI 1½ " – 18 " (150 lbs.)

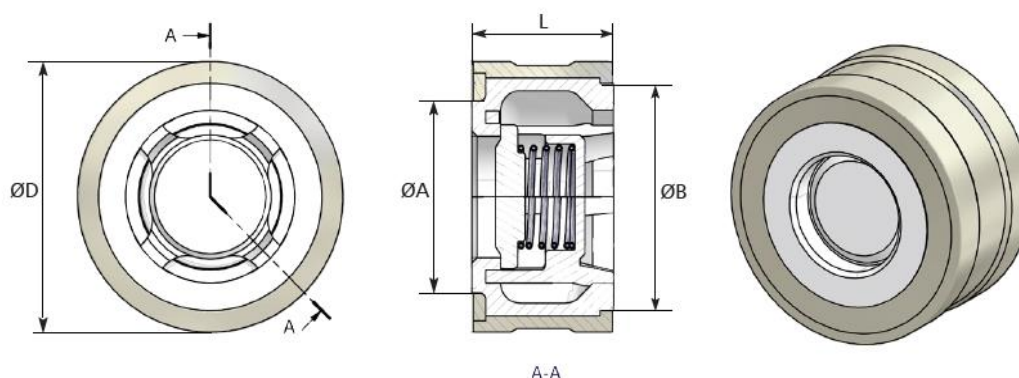
Steel/PFA/PTFE-Valves

DIN

Check Valve DIN PN 10, spring loaded

DN 15 - DN 150

Pos.	Part	Material	Standard
1	Body	Stainless Steel SS 304 (1.4301) PTFE/Glass-coated ¹⁾	EN 10028-7, EN 10217-7
2	Sealing Plate	Stainless Steel SS 304 (1.4301) PTFE/Glass-coated ¹⁾	EN 10028-7, EN 10217-7
3	Disc	PTFE/Glass (25 % ²⁾)	ASTM D 4894
4	Spring	Hastelloy C 4 (2.4610) PFA-coated	



Application: Usage for caustic liquidities, gases and vapor for process technologies

Features: Wetted parts consist of PTFE/Glas (25 %) or/else. TFM/PTFE or/else PFA (electrostatically conductive).

Loaded Spring: Hastelloy C4 (2.4610) (PFA-incapsulated)

Supplementary gaskets for requests of intensified tightness

Tailor Made Modifications upon request

DN	D	d	l ³⁾	kg	Product Code
15	51	17	25	0,2	DTEF-75 75-M-015
20	61	21	32	0,4	DTEF-75 75-M-020
25	71	24	35	0,5	DTEF-75 75-M-025
32	82	32	40	0,6	DTEF-75 75-M-032
40	92	39	45	0,8	DTEF-75 75-M-040
50	107	49	56	1,4	DTEF-75 75-M-050
65	127	63	63	2,0	DTEF-75 75-M-065
80	142	77	71	2,5	DTEF-75 75-M-080
100	162	99	80	3,6	DTEF-75 75-M-100
125	192	122	90	5,0	DTEF-75 75-M-125
150	218	146	106	7,0	DTEF-75 75-M-150

For horizontal and vertical assembly

Different spring loads available; Standard: 25 mbar; 13 mbar upon request

¹⁾ or ²⁾ Electrostatically conductive lining upon request

³⁾ Face-to-face lengths acc. to DIN 3202 Part 3 Section K5 or DIN EN 558-1

DN	15	20	25	32	40	50	65	80	100	125	150
Lining Thickness	3,0	3,0	3,0	3,0	3,0	3,0	3,5	4,0	4,0	4,0	4,0

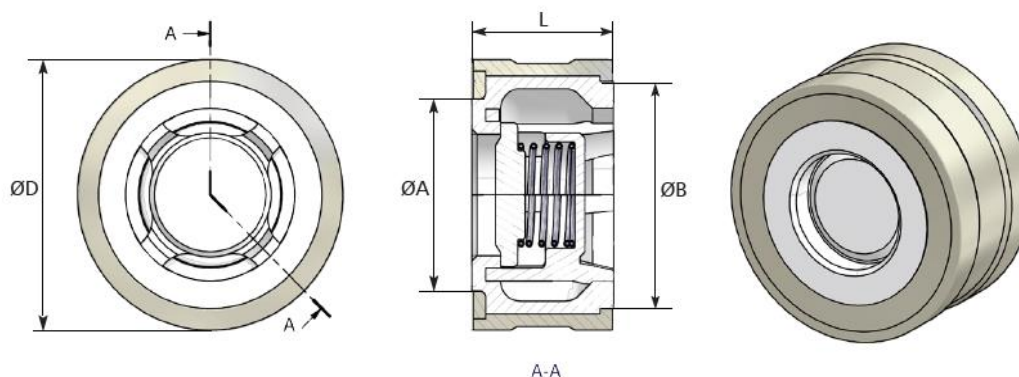
Steel/PFA/PTFE-Valves

ANSI 150 lbs

Check Valve ANSI 150 lbs, spring loaded

1/2" - 6" ANSI 150

Part	Material	Standard
Body	Stainless Steel SS 304 (1.4301) PTFE/Glass-coated ¹⁾	EN 10028-7, EN 10217-7
Sealing Plate	Stainless Steel SS 304 (1.4301) PTFE/Glass-coated ¹⁾	EN 10028-7, EN 10217-7
Disc	PTFE/Glass (25 %) ²⁾	ASTM D 4894
Spring	Hastelloy C 4 (2.4610) PFA-coated	



Application: Usage for caustic liquidities, gases and vapor for process technologies

Characteristics: Wetted parts consist of PTFE/Glas (25 %) or/else. TFM/PTFE or/else PFA (electrostatically conductive).
 Loaded Spring: Hastelloy C4 (2.4610) (PFA-incapsulated)
 Supplementary gaskets for requests of intensified tightness

Tailor Made Modifications upon request

Dimension	D	d	l ³⁾	weight	Product Code
1/2"	48	17	25	0,2	DTEF-75 75-M-1/2"
3/4"	57	21	32	0,4	DTEF-75 75-M-3/4"
1"	67	24	35	0,5	DTEF-75 75-M-1"
1 1/4"	76	32	40	0,6	DTEF-75 75-M-1 1/4"
1 1/2"	85	39	45	0,8	DTEF-75 75-M-1 1/2"
2"	105	49	56	1,4	DTEF-75 75-M-2"
2 1/2"	124	63	63	2,0	DTEF-75 75-M-2 1/2"
3"	136	77	71	2,5	DTEF-75 75-M-3"
4"	170	99	80	3,6	DTEF-75 75-M-4"
5"	192	122	90	5,0	DTEF-75 75-M-5"
6"	218	146	106	7,0	DTEF-75 75-M-6"

For horizontal and vertical assembly
 Different spring loads available; Standard: 25 mbar; 13 mbar upon request

¹⁾ or ²⁾ Electrostatically conductive lining upon request
³⁾ Face-to-face lengths acc. to DIN 3202 Part 3 Section K5 or DIN EN 558-1

Dimension	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
Lining Thickness	3,0	3,0	3,0	3,0	3,0	3,0	3,5	4,0	4,0	4,0	4,0

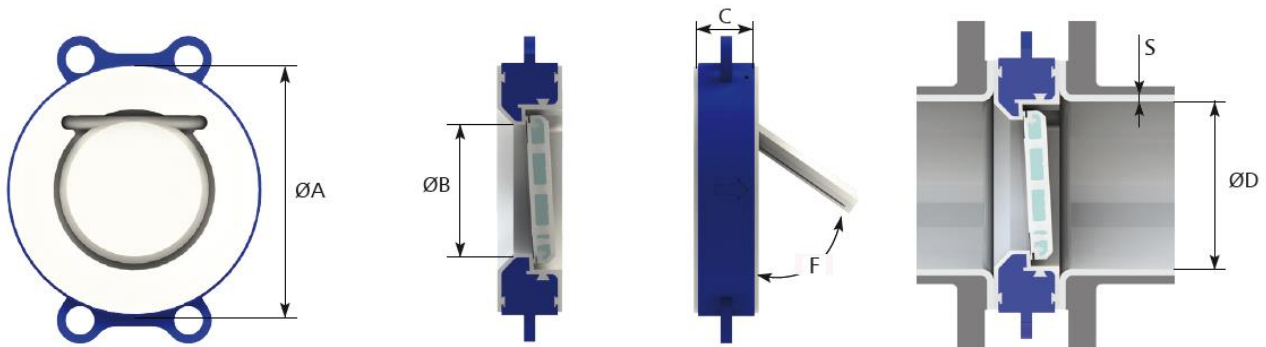
Steel/PFA-Valves

DIN

Swing Check Valve SCF2 - DIN PN 10

DN 40 - DN 300

Pos.	Part	Material	Standard
1	Body ¹⁾	C-Steel S355J2G3 (1.0570) Epoxy-coated	EN 10025
2	Lining	PFA or PFA-C (electrostatically conductive)	ASTM D 3307
3	Swing Disc ⁵⁾	Duplex Steel (1.4462) PFA-encapsulated (incl. screw locking device)	EN 100028-7
4	Assembly Support ²⁾	C-Steel Epoxy-coated	



DN	Valve-Code	ØA	ØB	C ³⁾	F° ⁴⁾	ØD	S	kg
40	PRFWFC3500015	92	22	33	40	34	3,0	1,1
50	PRFWFC3500016	107	30	43	58	46	3,2	2,2
80	PRFWFC3500017	142	51	46	55	70	3,5	3,5
100	PRFWFC3500018	160	68	52	55	92	5,0	5,9
150	PRFWFC3500019	217	111	56	55	143	5,5	9,2
200	PRFWFC3500020	268	155	60	59	190	6,0	14,7
250	PRFWFC3500021	325	205	68	62	240	7,0	21,3
300	PRFWFC3500022	375	255	78	50	290	7,0	31,7

CE Conformity acc. to European Pressure Equipment Directive (PED 2014/68/EU)

SCF2-Swing Check Valve available for ANSI B16.5 Flanges from 1 ½" up to 12"

Operating Conditions: Temperature: - 40 °C to + 200 °C (dependent upon body material)

Pressure Rating: Full vacuum up to 6 bars

Observe dependence of pressure/temperature ratio

Resistance to pressure load and tightness acc. to EN 12266-1, Leakage rate A

¹⁾ Body material S355J2G3-Cr (1.0570) for cryogenic use

²⁾ Assembly support for dimensions 4" to 12" only

³⁾ Face-to-face length acc. to DIN EN 558-1 (FTF)

⁴⁾ Valve aperture limited by diameter of pipe

⁵⁾ Swing Discs DN 40 and DN 50 consist of pure PFA

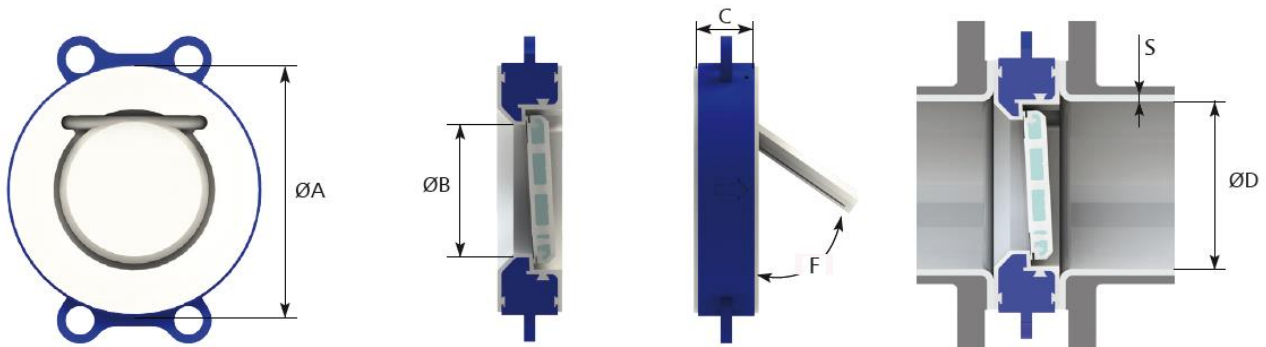
Steel/PFA-Valves

ANSI

Swing Check Valve SCF2 ANSI 150 lbs

1 1/2" - 12"

Pos.	Part	Material	Standard
1	Body ¹⁾	C-Steel S355J2G3 (1.0570) Epoxy-coated	EN 10025
2	Lining	PFA or PFA electrostatically conductive	ASTM D 3307
3	Swing Disc ⁵⁾	Duplex Steel (1.4462) PFA-encapsulated (incl. screw locking device)	EN 100028-7
4	Assembly Support ²⁾	C-Steel Epoxy-coated	



Dimension	Valve-Code	ØA	ØB	C ³⁾	F° ⁴⁾	ØD	S	kg
1 1/2"	PRFWFC3500015	82	19	33	40	34	3,0	1,1
2"	PRFWFC3500016	102	30	43	58	46	3,2	2,2
3"	PRFWFC3500017	133	55	46	55	70	3,5	3,5
4"	PRFWFC3500018	172	72	52	55	92	5,0	5,9
6"	PRFWFC3500019	219	116	56	55	143	5,5	9,2
8"	PRFWFC3500020	276	150	60	59	190	6,0	14,7
10"	PRFWFC3500021	337	191	68	62	240	7,0	21,3
12"	PRFWFC3500022	407	236	78	50	290	7,0	31,7

CE Conformity acc. to European Pressure Equipment Directive (PED 2014/68/EU)

SCF2-Swing Check Valve available for ANSI B16.5 Flanges from 1 1/2" up to 12"

Operating Conditions: Temperature: - 40 °C to + 200 °C (dependent upon body material)

Pressure Rating: Full vacuum up to 6 bar

Observe dependence of pressure/temperature ratio

Resistance to pressure load and tightness acc. to EN 12266-1, Leakage rate A

¹⁾ Body material S355J2G3-Cr (1.0570) for cryogenic use

²⁾ Assembly support for 4" to 12" only

³⁾ Face-to-face length acc. to DIN EN 558-1 (FTF)

⁴⁾ Valve aperture limited by diameter of pipe

⁵⁾ Discs 1 1/2" and 2" consist of pure PFA

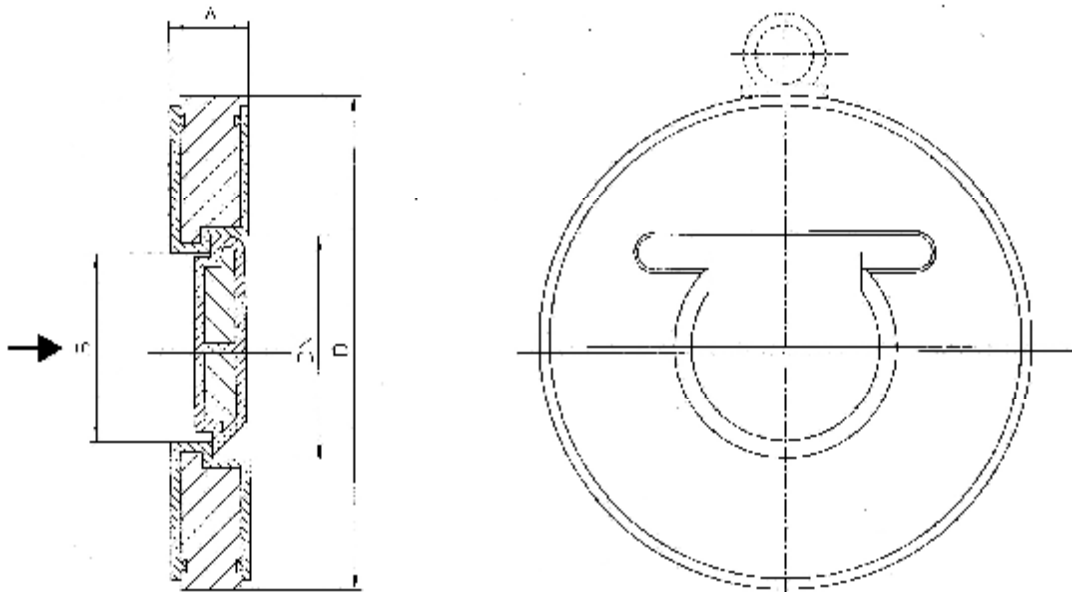
Steel/PFA-Valves

ANSI

Swing Check Valve ANSI 150 lbs

1 1/2" - 18"

Pos.	Part	Material	Standard
1	Body *)	C-Steel S355J2G3 (1.0570) Epoxy-coated	EN 10025
2	Lining	PFA or PFA electrostatically conductive	ASTM D 3307
3	Swing Disc	Stainless Steel SS 316 L (1.4435) PFA-encapsulated	EN 100028-7
4	Assembly Hook **)	C-Steel Epoxy-coated	



Size	Code	A ¹⁾	B	D	kg
1 1/2"	VNRA-W-KL2-040-2R-FVS	33	22	82	2.8
2"	VNRA-W-KL2-050-2R-FVS	43	30	102	3.0
3"	VNRA-W-KL2-080-2R-FVS	46	55	133	4.5
4"	VNRA-W-KL2-100-2R-FVS	52	72	172	7.8
6"	VNRA-W-KL2-150-2R-FVS	56	110	245	11.0
8"	VNRA-W-KL2-200-2R-FVS	60	150	300	16.5
10"	VNRA-W-KL2-250-2R-FVS	68	200	365	27.5
12"	VNRA-W-KL2-300-2R-FVS	78	250	435	39.0
14"	VNRA-W-KL2-350-2R-FVS	92	275	480	48.0
16"	VNRA-W-KL2-400-2R-FVS	102	305	545	54.0
18"	VNRA-W-KL2-450-2R-FVS	114	355	580	60.0

*) Body material S355J2G3-Cr (1.0570) for cryogenic use

**) Assembly hook only for 10" to 18"

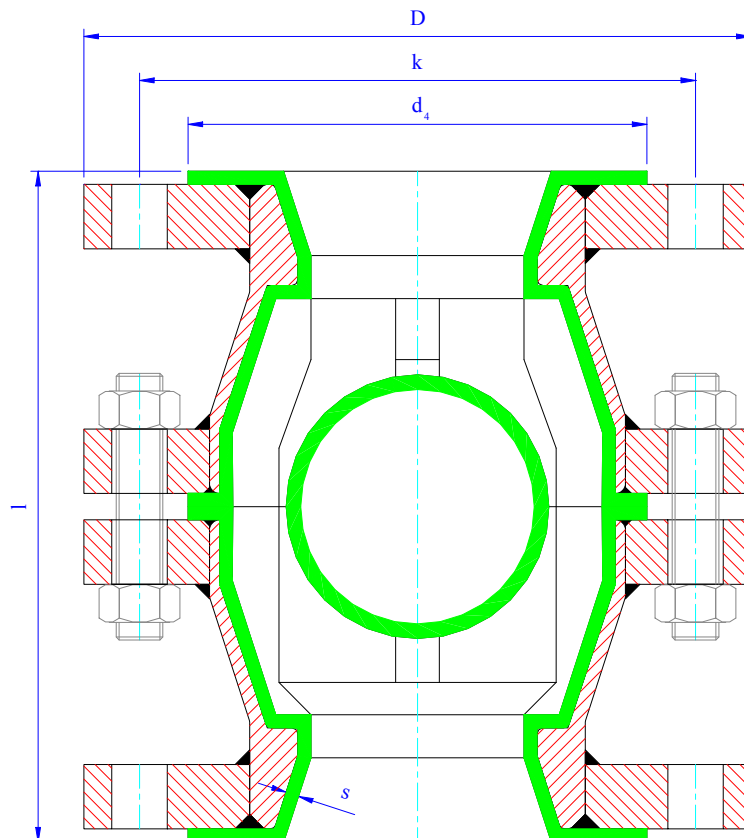
¹⁾ Face-to-face length acc. to DIN EN 558-1 (FTF)

Size	1 1/2"	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"
Thickness PFA-Lining	3.0	3.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0

BALL CHECK VALVE according to ANSI B 16.5 Class 150 for horizontal and vertical assembly

Material specification: Steel frame: ASTM A 105 according to ANSI B 16.5
St 52.0 according to DIN 1629
Flanges: ASTM A 105 according to ANSI B 16.5
Lining: Virgin PTFE according to ASTM-D 4894
Delivery terms: according to DIN 2874

Dimensions expressed in mm



DN	s	d ₄	k	D	I
½"	3	35	60.3	88.9	108.0
¾"	3	43	69.8	98.4	117.5
1"	3	51	79.4	107.9	127.0
1¼"	3	64	88.9	117.5	140.0
1½"	3	73	98.4	127.0	165.0
2"	3	92	120.6	152.4	178.0
2½"	3.5	105	139.7	177.8	190.5
3"	4	127	152.4	190.5	203.0
4"	4.5	157	190.5	228.6	229.0
6"	5	216	241.3	279.4	267.0
8"	6	270	298.4	342.9	292.0

Upon request combined ball check valves - sight glasses are available in dimensions 1" to 4"
Ball check valves are regularly delivered with full ptfе sphere: additional types of spheres can be supplied
Vent holes at Manufacturer's discretion

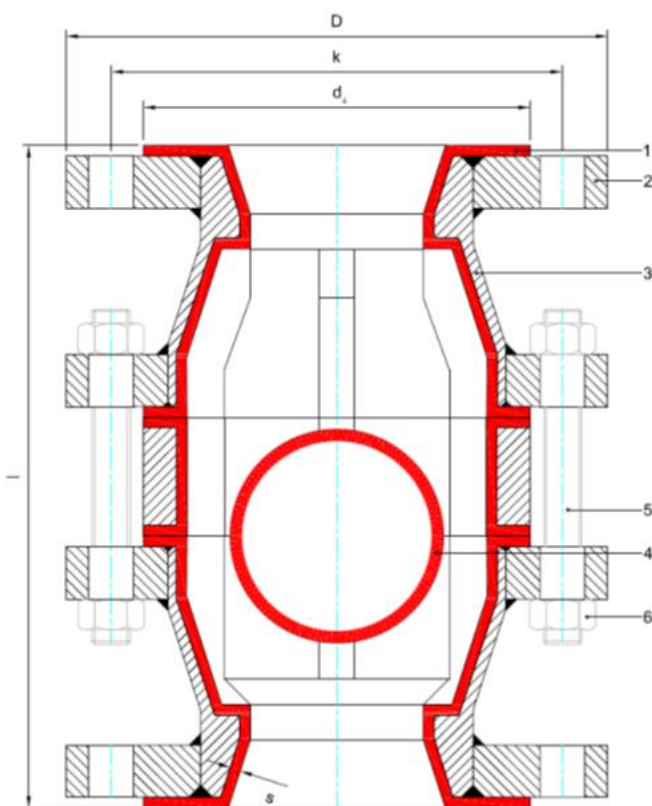
Carbon-Steel/PTFE-Valves

DIN

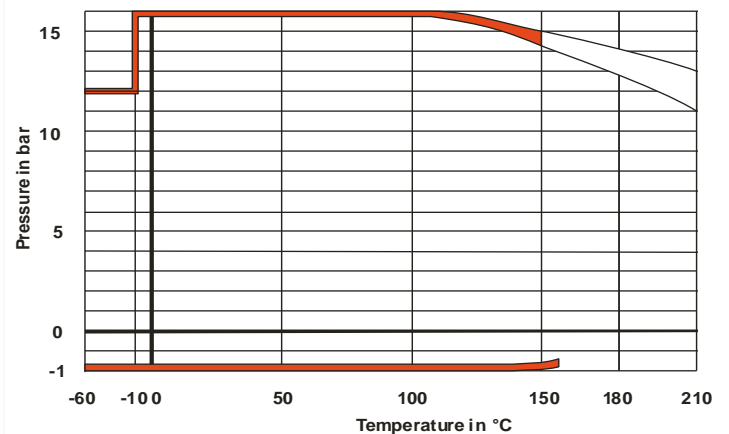
Ball Check Valve DIN PN 10

DN 15 - DN 200

Pos.	Parts	Materials	Standard
1	Lining	PTFE (Standard) or PTFE antistatic	ASTM D 4894
2	Flange	P235GH (1.0345), P245GH (1.0352)	DIN EN 10253-2, DIN EN 10222-2
3	Body	P235GH (1.0345), P265GH (1.0425)	DIN EN 10253-2
4.1	Full Ball	PTFE (Standard) or PTFE antistatic	ASTM D 4894
4.2	Hollow Sphere	PTFE (Standard) or PTFE antistatic	ASTM D 4894
5	Threaded Rod	Steel 8.8 galvanized	DIN 601
6	Hexagonal Nut	Steel 8.8 galvanized	DIN 934
Anti Corrosion Protection		Ball Blasting acc. to SIS 05 5900 SA 2 ½; Epoxivinyll-Priming	



Pressure - Temperature - Diagram



DN	D	k	d ₄	nxd ₂	l *)	kg
15	95	65	45	4 x 14	130	5.1
20	105	75	58	4 x 14	150	5.5
25	115	85	68	4 x 14	160	5.7
32	140	100	78	4 x 18	180	11.7
40	150	110	88	4 x 18	200	12.8
50	165	125	102	4 x 18	230	14.9
65	185	145	122	4 x 18	290	20.5
80	200	160	138	8 x 18	310	24.8
100	220	180	158	8 x 18	350	36.0
150	285	240	212	8 x 22	480	69.0
200	340	295	268	8 x 22	600	81.0

*) DIN EN 558-1; FTF Basic Series 1
Tailor made combined Sight Glass/Ball Check Valve available in several dimensions

DN	15	20	25	32	40	50	65	80	100	150	200
PTFE-Wall Thickness	3,0	3,0	3,0	3,0	3,0	3,0	3,5	4,0	4,5	5,0	6,0