

Technical description

Swing check valves are designed and manufactured to ensure maximum durability and reliability. Valves meet requirements of API 6D and EN 12516-1 standards.

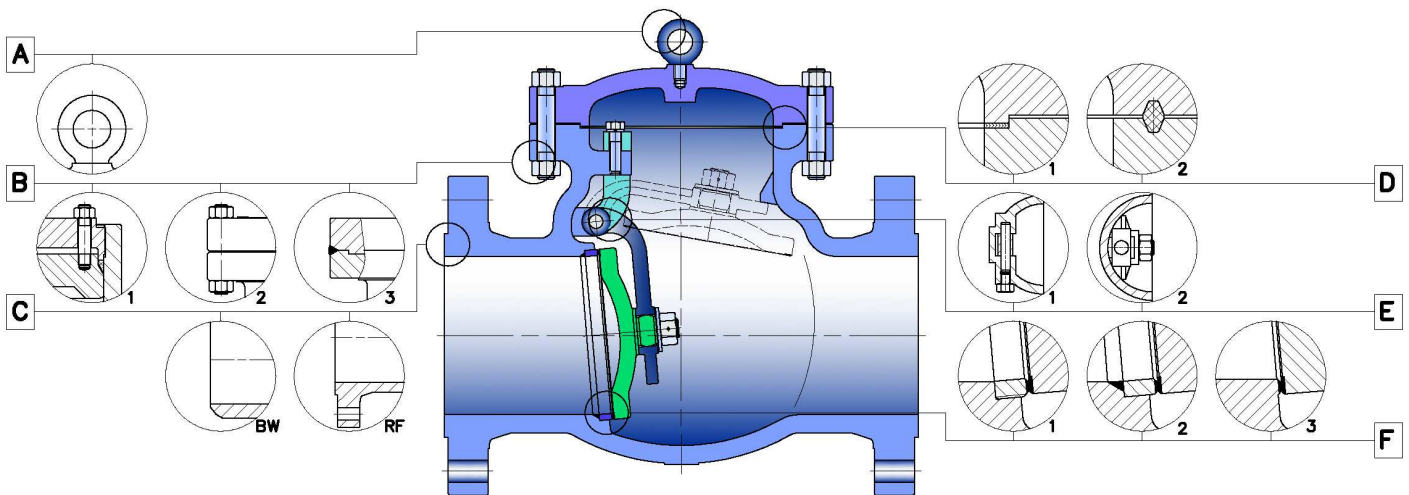
Material specification

Swing check valves are made from carbon, alloy and stainless steels. Material execution of check valves can be selected according to the customer's request so that it suits as much as valve service conditions.

Application

The steel swing check valves, flanged or with welding-on ends, are piping valves automatically avoiding backward flowing of the operating medium. They are used for non-aggressive liquids, water, steam, oil, crude oil and crude oil products, gas and others.

STRUCTURAL DESIGN OF SWING CHECK VALVE



■ - The handling eye bolt

- PN 10 - PN 63 from DN 200
- PN 100 from DN 150
- PN 160, 250 from DN 100

■ - Bonnet execution

- The bolted bonnet to the body
- The bonnet welded to the body
- Pressure seal bonnet is used for high pressures, temperatures and operation with cyclic changes of pressure

■ - Connection into piping

- Flanged
 - with rough or smooth raised face
 - with male / female facing
 - with tongue / groove facing
- Welding-on
 - with welding-ends according to customer's requirements

■ - Bonnet sealing

- up to PN 63 – by gasket for male / female body/bonnet connection
- PN 100, 160 – by RTJ ring
- PN 250 — by pressure seal bonnet

■ - Pin placing

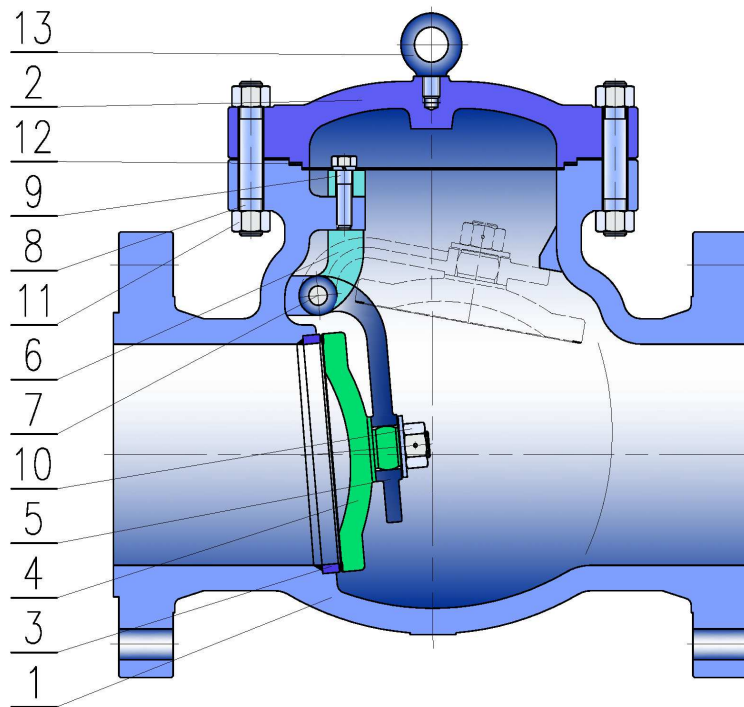
- The pin can be embedded in the special yoke, which is inserted into the body and fixed by bolt.
- The pin can be inserted directly into the body. This option allows for lever connection with counter weight or damper.

■ - Seat execution

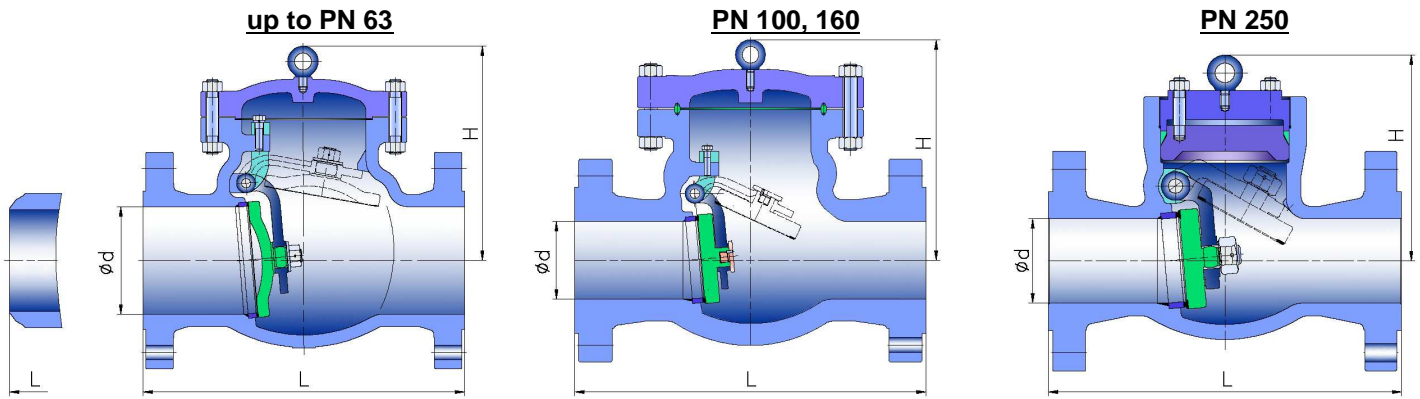
- the seat is screwed in the body
- the seat is inserted into the body and welded-on
- the seat overlay is welded on overlay on the body

Basic standard for design

Basic design.....	API 6D, EN 12516-1
Building length.....	EN 558-1, EN 12982
Flange dimensions.....	EN 1092-1
Dimensions of welding-on ends.....	EN 12627
Testing.....	EN 12266-1
Pressure-temperature dependence....	EN 12516-1
Special	NACE MR-0175

Material specification


Pos.	Designation	WCB	LCC	WC6	WC9	C5	C12	CF8 / 304	CF8M / 316
1	Body	A216 WCB	A352 LCC	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351 CF8M
2	Bonnet	A216 WCB	A352 LCC	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351 CF8M
3	Seat	A105 + overlay	A350 LF2 + overlay	A182 F5 + overlay	A182 F5 + overlay	A182 F5 + overlay	A182 F5 + overlay	A351 CF8 + overlay	A351 CF8M + overlay
4	Disc	A216 WCB + overlay	A352 LCC + overlay	A217 WC6 + overlay	A217 WC9 + overlay	A217 C5 + overlay	A217 C12 + overlay	A351 CF8 + overlay	A351 CF8M + overlay
5	Hinge	A216 WCB	A352 LCC	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351 CF8M
6	Yoke	A216 WCB	A352 LCC	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351 CF8M
7	Pin	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316
8	Bolt	A193 B7	A320 L7	A193 B16	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8M
9	Bolt	A193 B7	A320 L7	A193 B16	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8M
10	Nut	A194 2H	A194 4	A194 B8M	A194 B8M	A194 B8M	A194 B8M	A194 8	A194 8M
11	Nut	A194 2H	A194 4	A194 B8M	A194 B8M	A194 B8M	A194 B8M	A194 8	A194 8M
12	Gasket	304 + graphite	304 + graphite	304 + graphite	304 + graphite	304 + graphite	304 + graphite	304 + graphite	316 + graphite
13	Eye bolt	A181	A181	A181	A181	A181	A181	A181	A181



Dy	PN 10, 16					PN 25					PN 40					PN 63					PN 100				
	L		d	H	(kg)	L		d	H	(kg)	L		d	H	(kg)	L		d	H	(kg)	L		d	H	(kg)
	RF	BW				RF	BW				RF	BW				RF	BW				RF	BW			
40	200	200	43.1	120	8	200	200	43.1	95	8	200	200	43.1	95	13	260	260	42.5	150	14	260	260	42	150	14
50	230	230	54.5	134	16	230	230	54.5	135	16	230	230	54.5	135	21	300	300	53.5	175	28	300	300	51	170	28
65	290	290	70.3	140	21	290	290	70.3	140	21	290	290	70.3	140	36	340	340	69.7	190	40	340	340	64	190	40
80	310	310	82.5	175	28	310	310	82.5	175	28	310	310	82.5	175	41	380	380	81.7	210	68	380	380	76	210	68
100	350	350	107.1	180	46	350	350	107.1	195	46	350	350	107.1	195	62	430	430	106.3	245	117	430	430	102	245	117
125	400	400	131.7	195	59	400	400	131.7	205	59	400	400	131.7	205	81	500	500	130.7	260	155	500	500	127	260	155
150	480	480	159.3	300	69	480	480	161.5	305	69	480	480	161.5	305	131	550	550	158.3	337	192	550	550	152	337	192
200	600	600	206.5	350	132	600	600	206.5	350	132	600	600	206.5	350	191	650	650	204.9	397	340	650	650	203	397	340
250	730	730	260.4	395	219	730	730	258.2	425	219	730	730	258.2	425	298	775	775	255.2	455	515	775	775	254	455	515
300	850	850	309.7	465	232	850	850	307.9	475	323	850	850	307.9	475	452	900	900	301.9	542	750	900	900	305	542	750
350	980	980	339.6	470	382	980	980	337.6	515	382	980	980	337.9	515	642	1025	1025	334.6	568	890	1025	1025	322	568	890
400	1100	1100	390	485	562	1100	1100	388.8	540	562	1100	1100	384.4	540	852	1150	1150	382.6	634	1303	1150	1150	373	643	1303
450	1200	1200	439	505	632	1200	1200	439.4	590	632	1200	1200	432.0	600	1032	1219	1219	423	680	1800	1219	1219	418	680	1800
500	1250	1250	492	565	772	1250	1250	488	640	772	1250	1250	479.6	640	1332	1400	1400	471	750	2150	1400	1400	471	750	2150
600	1450	1450	590	650	962	1450	1450	591	775	962	1450	1450	591	775	1952	1600	1600	586	852	3200	1549	1549	522	880	3200
700	1650	1650	691	700	1580	1650	1650	684	830	1580	1650	1650	684	830	2600	-	-	-	-	-	-	-	-	-	-

Dy	PN 160					PN 250				
	L		d	H	(kg)	L		d	H	(kg)
	RF	BW				RF	BW			
40	260	260	43	150	24	-	-	-	-	-
50	300	300	51	180	48	300	300	51	250	48
65	340	340	64	180	75	340	340	64	283	75
80	380	380	76	240	95	380	380	76	320	95
100	430	430	102	240	135	430	430	102	356	135
125	500	500	127	320	200	500	500	127	362	200
150	550	550	144	320	264	550	550	144	430	264
200	650	650	192	390	424	650	650	192	470	424
250	775	775	239	490	730	750	750	239	515	730
300	900	900	287	550	1070	991	991	287	660	1070

Type designation

L10 XYZ - M PN

L10 - Valve type – Swing check valve

X - Pipeline connection

- 1...Flanged
- 2...Welding-on ends
- 3...Combined

Y - Extra equipment

- 0...Without extra equipment
- 1...With lever and counter weight
- 6...With bypass
- 7...Combination of lever with counter weight and bypass

Z - Control method

- 0...Without control

M - Body material

- 0...Stainless steel
- 1...Modular cast iron
- 2...Alloy steel
- 5...Carbon steel
- 6...Cast iron