

Type K05

DN 65 – 600
PN 63 – 400

Swing Check Valve

Butt-Welded, Flanged

Data Sheet

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Application

- Self-acting check valve
- **Fluids**
Water, steam
- **Industry**
Power engineering, chemical industry
- **Environments**
Normal, tropical, explosive, seismic

Technical description

- Valve body is die or free forgings
- Body seats are pressed in the body and seal welded
- Seat faces are hardfaced with Stellite
- Sealing ring is made from expanded graphite
- Body made of one piece or with the welded extension for larger diameters
- For the forged valves, the flanges are welded to the body or are part of the body

Testing

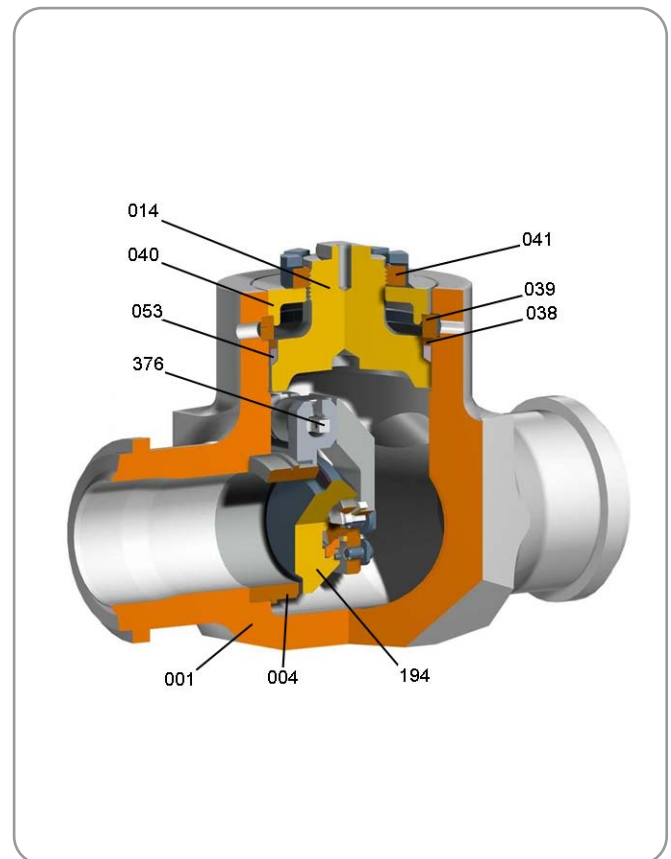
- Valves are pressure tested with water, steam or air for strength and tightness in accordance with working parameters and material according to EN 12266 – 1
- Minimum pressure for the strength test is 1,5 x PN

Connection

- Butt-welded and flanged type according to ČSN, EN, DIN, ANSI, GOST

Operation

- Self-acting



Installation

- Valves can be installed in horizontal pipelines, with pressure seal cover upwards
- Direction of flow is under the disc

Materials of main parts

Pos.	Name	Material										
		Non alloy		Low alloy steel				High alloy steel		Stainless steel		
001	Body	11 416	P250GH (C22.8)	15 128	14MoV6-3	16Mo3 (15Mo3)	13CrMoV4-5	11CrMo9-10 (10CrMo910)	15NiCuMoNb5-6-4	X10CrMoVNb9-1	X6CrNiTi18-10	08X18H10T
004	Seat											
005	Flange											
194	Disc											
014	Pressure sealed	11416		11CrMo9-10 (10CrMo910)								
039	Segmented ring											
038	Retaining ring											
040	Cover	11 416, P250GH		15 128, 42 2744, GS-17CrMo5-5, 10CrMo9-10, 11CrMo9-10								
041	Nut	11 600, E335										
053	Sealing ring	Expandovaný grafit										
376	Pin	X22CrMoV12-1										
	Hardfacing	Typ Stellite 6(C1111)										

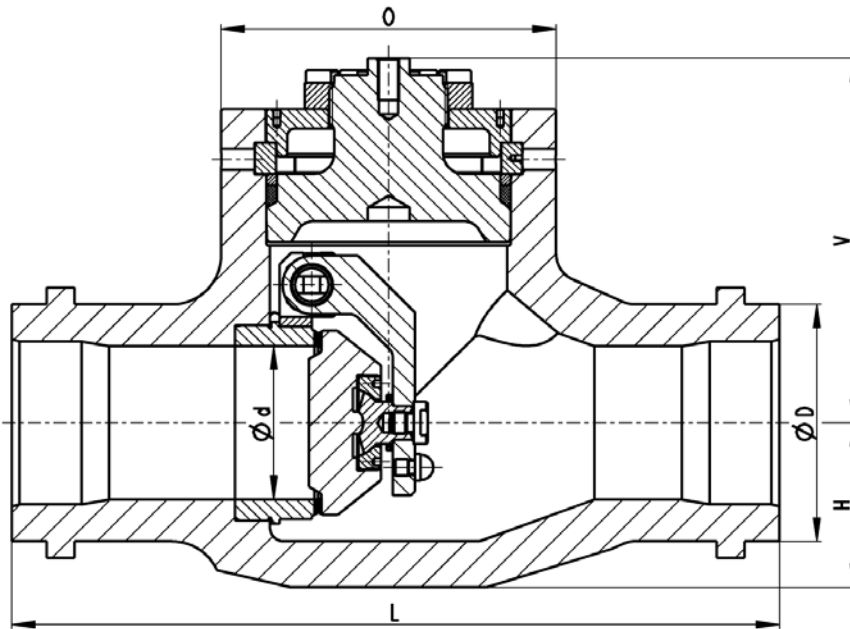
Operating data

Material of body	PN	Working pressure MPa / Working temperature °C											
		200	250	300	350	400	450	500	520	540	560	580	600
P250GH (C22.8) (W.Nr. 1.0460)	63	5,7	4,9	4,2	3,7	2,9	2,2	-	-	-	-	-	-
	100	9,0	7,8	6,7	5,8	4,6	3,5	-	-	-	-	-	-
	160	14,4	12,5	10,7	9,3	7,4	5,6	-	-	-	-	-	-
	250	22,5	19,6	16,7	14,5	11,6	8,7	-	-	-	-	-	-
	320	28,8	25,0	21,3	18,6	14,8	11,1	-	-	-	-	-	-
	400	35,9	31,3	26,7	23,2	18,6	13,9	-	-	-	-	-	-
11416	63	6,3	5,6	4,8	4,1	3,6	2,5	-	-	-	-	-	-
	100	10,0	8,8	7,7	6,6	5,7	4,0	-	-	-	-	-	-
	160	16,0	14,1	12,2	10,5	9,1	6,4	-	-	-	-	-	-
	250	24,9	22	19,1	16,4	14,2	10,0	-	-	-	-	-	-
	320	31,9	28,2	24,5	21,0	18,2	12,8	-	-	-	-	-	-
	400	39,9	35,2	30,6	26,2	22,7	16,0	-	-	-	-	-	-
15NiCuMoNb5-6-4 (W.Nr. 1.6368)	63	6,3	6,3	6,3	6,3	6,3	6,3	-	-	-	-	-	-
	100	10,0	10,0	10,0	10,0	10,0	10,0	-	-	-	-	-	-
	160	16,0	16,0	16,0	16,0	16,0	16,0	-	-	-	-	-	-
	250	25,0	25,0	25,0	25,0	25,0	25,0	-	-	-	-	-	-
	320	32,0	32,0	32,0	32,0	32,0	32,0	-	-	-	-	-	-
	400	40,0	40,0	40,0	40,0	40,0	40,0	-	-	-	-	-	-
16Mo3 (15Mo3) (W.Nr. 1.5415)	63	6,3	6,0	5,3	5,1	4,9	4,7	3,4	2,2	-	-	-	-
	100	10,0	9,6	8,4	8,1	7,8	7,5	5,4	3,4	-	-	-	-
	160	16,0	15,3	13,4	13	12,5	12,1	8,6	5,5	-	-	-	-
	250	25,0	23,9	21,0	20,3	19,6	18,8	13,5	8,6	-	-	-	-
	320	32,0	30,6	26,9	26,0	25,0	24,1	17,3	10,9	-	-	-	-
	400	40,0	38,3	33,6	32,5	31,3	30,1	21,6	13,7	-	-	-	-
13CrMo4-5 (W.Nr. 1.7335)	63	6,3	6,3	6,3	6,0	5,8	5,5	5,0	3,4	2,2	1,5	-	-
	100	10,0	10,0	10,0	9,6	9,3	8,7	7,9	5,4	3,5	2,3	-	-
	160	16,0	16,0	16,0	15,3	14,8	13,9	12,7	8,7	5,7	3,7	-	-
	250	25,0	25,0	25,0	23,9	23,2	21,7	19,9	13,6	8,8	5,8	-	-
	320	32,0	32,0	32,0	30,6	29,7	27,8	25,4	17,4	11,3	7,4	-	-
	400	40,0	40,0	40,0	38,3	37,1	34,8	31,8	21,8	14,1	9,3	-	-
11CrMo9-10 (W.Nr. 1.7383)	63	6,3	6,3	6,3	6,3	6,3	6,0	4,9	3,8	2,8	2,1	1,6	1,2
	100	10,0	10,0	10,0	10,0	10,0	9,6	7,8	6,0	4,5	3,4	2,6	2,0
	160	16,0	16,0	16,0	16,0	16,0	15,3	12,5	9,6	7,2	5,4	4,1	3,2
	250	25,0	25,0	25,0	25,0	25,0	23,9	19,6	14,9	11,3	8,4	6,4	4,9
	320	32,0	32,0	32,0	32,0	32,0	30,6	25,0	19,1	14,5	10,8	8,2	6,3
	400	40,0	40,0	40,0	40,0	40,0	38,3	31,3	23,9	18,1	13,4	10,2	7,9
10CrMo9-10 (W.Nr. 1.7380)	63	6,3	6,3	6,3	6,3	6,0	5,7	4,9	3,8	2,8	2,1	1,6	1,2
	100	10,0	10,0	10,0	10,0	9,6	9,0	7,8	6,0	4,5	3,4	2,6	2,0
	160	16,0	16,0	16,0	16,0	15,3	14,4	12,5	9,6	7,2	5,4	4,1	3,2
	250	25,0	25,0	25,0	25,0	23,9	22,5	19,6	14,9	11,3	8,4	6,4	4,9
	320	32,0	32,0	32,0	32,0	30,6	28,8	25,0	19,1	14,5	10,8	8,2	6,3
	400	40,0	40,0	40,0	40,0	38,3	35,9	31,3	23,9	18,1	13,4	10,2	7,9
14MoV6-3 (W.Nr. 1.7715)	63	6,3	6,3	6,3	6,3	6,3	6,3	6,3	5,4	4,1	3,1	-	-
	100	10,0	10,0	10,0	10,0	10,0	10,0	10,0	8,6	6,6	5,0	-	-
	160	16,0	16,0	16,0	16,0	16,0	16,0	16,0	13,8	10,5	8,0	-	-
	250	25,0	25,0	25,0	25,0	25,0	25,0	25,0	21,6	16,4	12,5	-	-
	320	32,0	32,0	32,0	32,0	32,0	32,0	32,0	27,6	21,0	16,0	-	-
	400	40,0	40,0	40,0	40,0	40,0	40,0	40,0	34,6	26,2	19,9	-	-

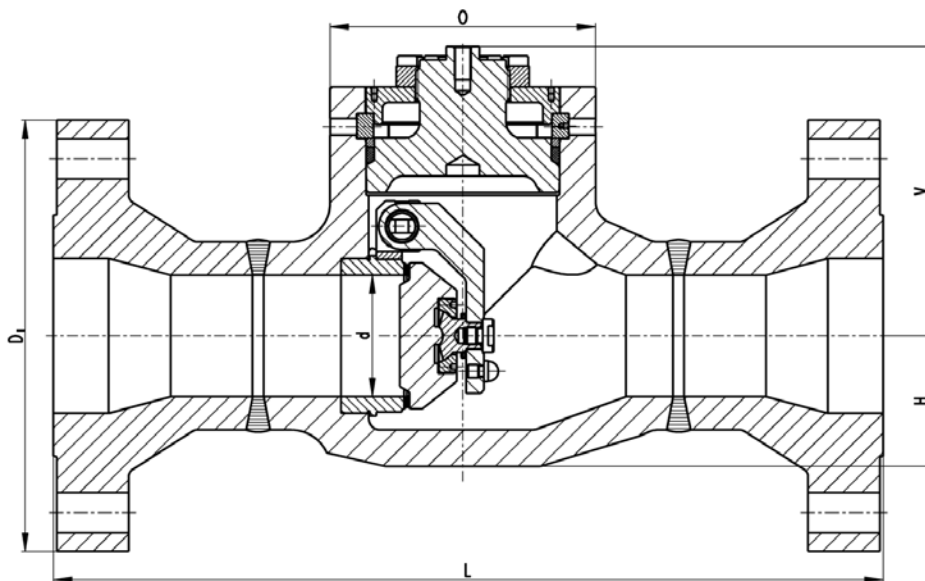
Material of body	PN	Working pressure MPa / Working temperature °C PN											
		200	250	300	350	400	450	500	520	540	560	580	600
15128	63	6,3	6,3	6,3	6,3	6,3	6,3	6,2	4,8	3,7	2,8	-	-
	100	10,0	10,0	10,0	10,0	10,0	10,0	9,8	7,6	5,9	4,5	-	-
	160	16,0	16,0	16,0	16,0	16,0	16,0	15,7	12,2	9,4	7,2	-	-
	250	25,0	25,0	25,0	25,0	25,0	25,0	24,5	19,0	14,6	11,3	-	-
	320	32,0	32,0	32,0	32,0	32,0	32,0	31,4	24,3	18,7	14,5	-	-
	400	40,0	40,0	40,0	40,0	40,0	40,0	39,2	30,4	23,4	18,1	-	-
X10CrMoVNb9-1 (W.Nr. 1.4903)	63	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	5,5	4,4	3,4
	100	10,0	10,0	10,0	10,0	10,0	10,0	10,0	10,0	10,0	8,7	7,0	5,4
	160	16,0	16,0	16,0	16,0	16,0	16,0	16,0	16,0	16,0	13,9	11,1	8,7
	250	25,0	25,0	25,0	25,0	25,0	25,0	25,0	25,0	25,0	21,7	17,4	13,6
	320	32,0	32,0	32,0	32,0	32,0	32,0	32,0	32,0	32,0	27,8	22,3	17,4
	400	40,0	40,0	40,0	40,0	40,0	40,0	40,0	40,0	40,0	34,8	27,8	21,8

Dimensions

Butt-welded type, PN 63 – 250, PN 30 – 400



Flanged type, PN 63 – 250



Butt-welded type, PN 63 – 250, PN 30 – 400

PN	DN/d	L mm	D mm	H mm	V mm	O mm	m kg
63 – 250	65/50	360	By ČSN, EN, DIN or by request of the customer	65	160	135	23
	65/55	360		65	160	135	23
	80/75	450		88	200	175	55
	100/75	450		88	200	175	53
	125/110	550		118	270	235	129
	150/110	550		118	270	235	126
	175/125	650		145	330	305	230
	175/150	650		150	335	305	250
	200/150	650		150	335	305	250
	225/175	700		175	377	360	357
	250/200	800		195	418	400	530
	275/200	850		195	418	400	613
	250/225	800		225	485	450	706
	275/225	850		225	485	450	733
	300/225	900		225	485	450	762
	300/250	1000		270	640	560	1320
	350/275	1000		280	640	560	1465
400/275	1000	280		640	560	1605	
320 – 400	65/50	360		80	300	180	55
	65/55	360		80	300	180	55
	80/55	360		80	300	180	54
	100/55	360		80	300	180	53
	80-100/75	450		-	-	-	-
	100-150/80	450		-	-	-	-
	125-150/100	500		-	-	-	-
	125-150/125	600		175	385	345	360
	175-200/125	600		175	385	345	365
	175-225/150	650		-	-	-	-
	200-250/175	650		-	-	-	-
	250-275/200	800		-	-	-	-
	250-300/225	900		-	-	-	-
	300/250	1000		-	-	-	-
	300/275	1000		-	-	-	-
	350-400/300	1200	-	-	-	-	
	400/350	1400	-	-	-	-	
	450/350	1500	420	1070	860	5874	
	500/400	1500	-	-	-	-	
	550/450	*	-	-	-	-	
600/500	*	-	-	-	-		

Note: *) Larger nominal dimensions and pressures are manufactured on demand

Flanged type, PN 63 – 250

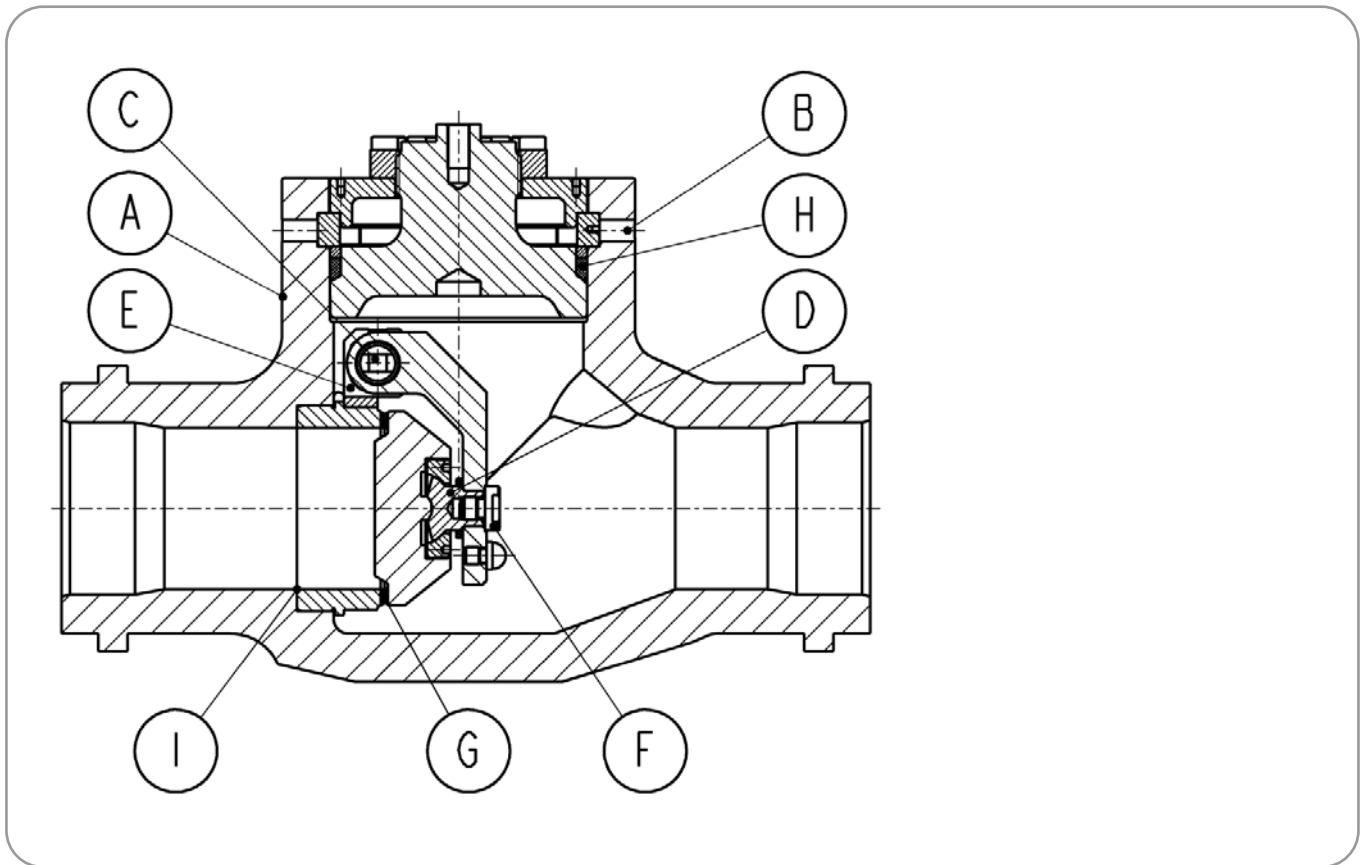
PN	DN/d	D ₁ mm	d mm	H mm	V mm	O mm	L ₁ mm	m kg
63	65/55	205	55	65	160	135	290	35
100		220					290	40
160		220					360	47
250		230					425	53
63	80/75	215	75	88	200	175	310	69
100		230					310	75
160		230					390	83
250		235					470	91
63	100/75	250	75	88	200	175	350	73
100		265					350	83
160		265					450	93
250		300					550	108
63	125/110	295	110	118	270	235	400	159
100		315					400	175
160		315					525	193
250		340					650	210
63	150/110	345	110	118	270	235	450	168
100		355					450	190
160		355					600	198
250		390					750	246
63	200/150	415	150	150	335	305	550	323
100		430					550	361
160		430					750	400
250		485					950	460
63	250/200	470	200	195	418	400	650	630
100		505					650	710
160		515					900	783
250		585					1150	906
63	300/225	530	225	225	485	450	750	632
100		585					750	762
160		585					1050	868
250		690					1350	*
63	300/250	530	250	270	640	560	750	*
100		585					750	*
160		585					1050	*
250		690					1350	*

Notes: Connection dimensions of flange types according to ČSN EN 1092-1.

Other flange type upon request.

*) upon request

Advantages of construction



A	Decreased forged body without sealing weld: Decrease the weight, exclude the defectoscopy of weld
B	Vents in the body in the place of segmented ring: Facilitate the dismounting of segmented ring
C	Pin of sling inside the body: Does not go through the body, does not influence external sealing
D	Connection „shoulder – disc“: Enables inclining. Perfect contact of sealing surfaces of closure
E	Hang of shoulder: Places in seat, does not influence external sealing
F	Connection „shoulder of the disc – pin“: Simple, reliable: easy mounting and dismounting
G	Seat faces are hardfaced with Stellite: Long-term life time, resistance against wearing-out
H	Sealing ring – expanded graphite: Reliable sealing, ecology
I	Seat placed in body: Put with overlap, connected by sealing weld

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