

SWING CHECK VALVE L30

PN 16–100; DN 50–400; T_{MAX} : 540 °C



SWING CHECK VALVE L30

APPLICATION

- water, steam, gas, oil, petroleum products, non-aggressive and aggressive substances

CONNECTION

- flanged, weld ends

OPERATION

- self-acting control

DESCRIPTION

- with lever and weight
- without lever and weight
- complies with the requirements of the directive 2014/68/EU
- testing is carried out according to standard EN 12266-1; part 2

BASIC DESIGN OPTIONS

- drain plug
- with by-pass, without by-pass
- delivery on request according to TRD 201

PRESSURE-TEMPERATURE-RATINGS

Material	PN	Admissible operating pressure PS [bar] at operating temperature TS [°C]															
		-10	50	100	150	200	250	300	350	400	450	475	500	510	520	530	540
GP240GH (1.0619)	16	16	16	14,9	13,9	12,4	11,4	10,3	9,6	9,2	-	-	-	-	-	-	-
	25	25	25	23,3	21,7	19,4	17,8	16,1	15	14,4	-	-	-	-	-	-	-
	40	40	40	37,3	35	30,2	28,4	25,8	24	23,1	-	-	-	-	-	-	-
	63	63	63	58,8	54,6	47,6	44,8	40,6	37,8	36,4	-	-	-	-	-	-	-
	100	100	100	93,3	86,7	75,6	71,1	64,4	60	57,8	-	-	-	-	-	-	-
G17CrMo5-5 (1.7357)	16	16	16	16	16	16	15,6	14,6	13,5	12,8	12,1	11,9	9,7	8,2	6,7	5,5	4,5
	25	25	25	25	25	25	24,4	22,8	21,1	20,0	18,9	18,7	15,2	12,9	10,4	8,7	7,1
	40	40	40	40	40	40	39,1	36,4	33,8	32	30,2	29,9	24,4	20,6	16,7	13,9	11,4
	63	63	63	63	63	63	61,6	57,4	53,2	50,4	47,6	47	38,4	32,5	26,3	21,8	18,0
	100	100	100	100	100	100	97,8	91,1	84,4	80	75,6	74,7	60,9	51,6	41,8	34,7	28,6

Material	PN	Admissible operating pressure PS [bar] at operating temperature TS [°C]																
		-105	-50	-10	50	100	150	200	250	300	350	400	450	460	470	480	490	500
GX5CrNiMo 19-11-2 (1.4408)	16	-	16	16	16	14,8	14	12,8	11,8	10,8	-	-	-	-	-	-	-	-
	25	-	25	25	25	23	21	19,2	18,2	17,2	-	-	-	-	-	-	-	-
	40	-	40	40	40	37	35	32	29,5	27	-	-	-	-	-	-	-	-
	63	-	63	63	63	42	40	38	36	35	-	-	-	-	-	-	-	-
	100	-	100	100	100	66	63	60	58	56	-	-	-	-	-	-	-	-
GX5CrNiNb 19-11 (1.4552)	16	16	16	16	16	13,8	12,7	11,6	11,0	10,4	10,0	9,6	9,3	9,1	9,0	9,0	8,9	8,8
	25	25	25	25	25	21,5	19,8	18,1	17,2	16,3	15,6	15,0	14,5	14,3	14,1	14,0	13,9	13,8
	40	40	40	40	40	34,5	31,7	29,0	27,5	26,0	25,0	24,0	23,2	22,8	22,6	22,4	22,2	22,0
	63	63	63	63	63	54,3	50,0	45,7	43,3	41,0	39,4	37,8	36,5	35,9	35,6	35,3	35,0	34,7
	100	100	100	100	100	86,2	79,3	72,5	68,7	65,0	62,5	60,0	59,0	58,0	58,0	57,5	57,0	56,5

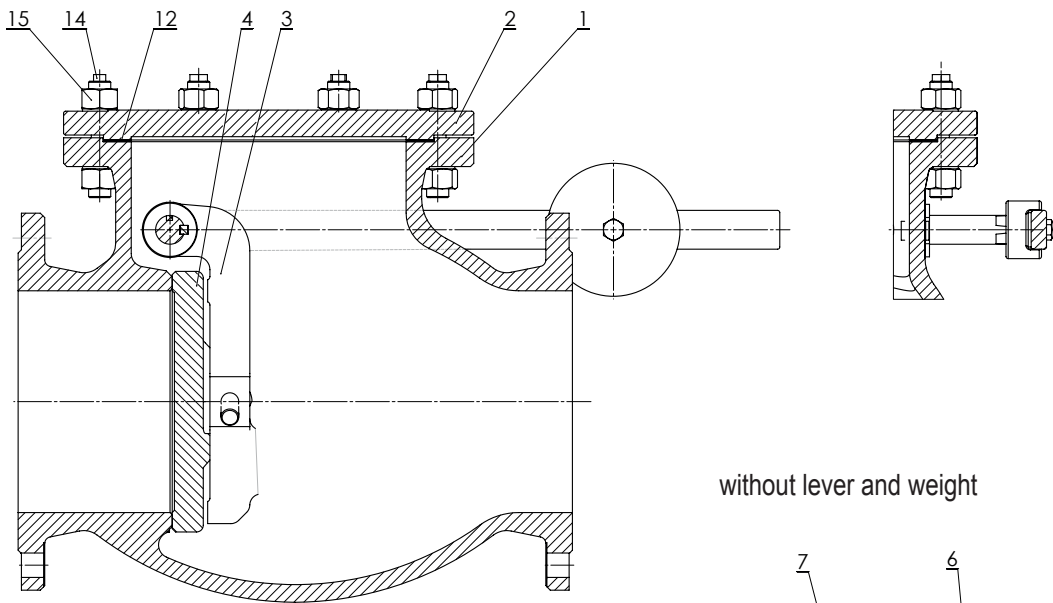
Material	PN	Admissible operating pressure PS [bar] at operating temperature TS [°C]															
		-50	-30	-10	50	100	150	200	250	300	350	400	450	475	500	510	520
G21Mn5 (1.1138)	16	-	16	16	16	14,8	14	12,8	11,8	10,8	-	-	-	-	-	-	-
	25	-	25	25	25	23	21	19,2	18,2	17,2	-	-	-	-	-	-	-
	40	-	40	40	40	37	35	32	29,5	27	-	-	-	-	-	-	-
	63	-	63	63	63	42	40	38	36	35	-	-	-	-	-	-	-
	100	-	100	100	100	66	63	60	58	56	-	-	-	-	-	-	-

Material	PN	Admissible operating pressure PS [bar] at operating temperature TS [°C]															
		-60	-30	-10	50	100	150	200	250	300	350	400	450	475	500	510	520
42 2707.6, 42 2707.9	16	16	16	16	16	16	10,1	9,6	9,3	9,1	7,7	7,5	7,2	-	-	-	-
	25	25	25	25	25	25	15,8	15	14,5	14,2	12,1	11,7	11,3	-	-	-	-
	40	40	40	40	40	40	25,3	24	23,2	22,7	19,4	18,7	18,0	-	-	-	-
	63	63	63	63	63	63	39,9	37,8	36,5	35,7	30,5	29,4	28,4	-	-	-	-
	100	100	100	100	100	100	63,3	60	58	56,7	48,4	46,7	45,1	-	-	-	-

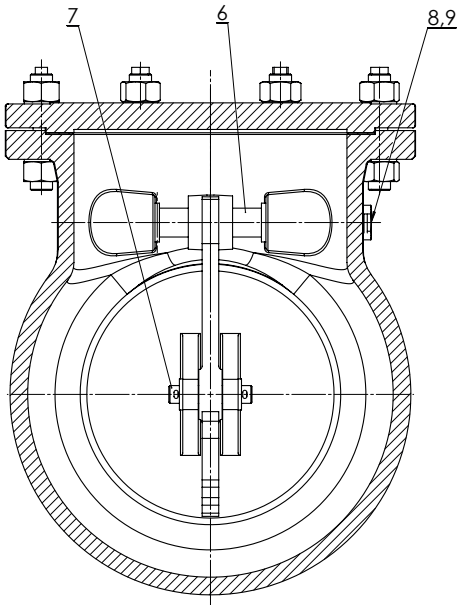
Material	PN	Admissible operating pressure PS [bar] at operating temperature TS [°C]															
		-10	20	50	100	150	200	250	300	350	400	450	460	470	480	490	500
G20Mo5 (1.5419)	16	16	16	16	16	16	16	14,8	13,7	12,9	11,9	11,0	10,2	9,4	8,6	7,8	7,0
	25	25	25	25	25	25	24,0	22,0	20,0	19,2	18,6	17,2	16,0	14,7	13,5	12,3	11,0
	40	40	40	40	40	40	40	37,0	34,2	32,3	29,9	27,6	25,6	23,6	21,6	19,7	17,7
	63	63	63	63	63	61	59,0	55,0	51,0	48,0	46,0	43,5	40,3	37,2	34,1	31,0	27,9
	100	100	100	100	95,0	89,0	83,0	79,0	75,0	71,0	68,0	63,0	61,0	59,1	54,2	49,2	44,2

USED MATERIALS

with lever and weight



without lever and weight



Pos.	Part	Material			
1	Body	GP240GH (1.0619)	G17CrMo5-5 (1.7357)	G20Mo5 (1.5419)	GX5CrNiNb19-11 (1.4552)
	Hard facing of body sealing surface	13Cr	Stellite 6	13Cr	-
2	Flange cover	GP240GH (1.0619)	G17CrMo5-5 (1.7357)	G20Mo5 (1.5419)	GX5CrNiNb19-11 (1.4552)
3	Hinge	GP240GH (1.0619)	G17CrMo5-5 (1.7357)	G20Mo5 (1.5419)	GX5CrNiNb19-11 (1.4552)
4	Disc	GP240GH (1.0619)	G17CrMo5-5 (1.7357)	G20Mo5 (1.5419)	GX5CrNiNb19-11 (1.4552)
	Hard facing of sealing surface	13Cr	Stellite 6	13Cr	X10CrNiMn18-8-6 (1.4370)
6, 7	Pin	X20Cr13 (1.4021)	X39CrMo17-1 (1.4122)	X6CrNiTi18-10 (1.4541)	X6CrNiTi18-10 (1.4541)
8	Plug (DN50-300)	21CrMoV5-7 (1.7709)	21CrMoV5-7 (1.7709)	A2 (A4)	A2 (A4)
9	Gasket (DN50-300)	ST/ISOPLAN			
12	Gasket	Graphite			
14	Stud	25CrMo4 (1.7218)	21CrMoV5-7 (1.7709)	21CrMoV5-7 (1.7709)	A2-70
15	Nut	C35E+QT (1.1181+QT)	25CrMo4 (1.7218)	25CrMo4 (1.7218)	A2-70

Pos.	Part	Material		
1	Body	G21Mn5 (1.1138)	42 2707.6, 42 2707.9	GX5CrNiMo19-11-2 (1.4408)
	Hard facing of body sealing surface	13Cr	13Cr	-
2	Flange cover	G21Mn5 (1.1138)	42 2707.6, 42 2707.9	GX5CrNiMo19-11-2 (1.4408)
3	Hinge	G21Mn5 (1.1138)	42 2707.6, 42 2707.9	GX5CrNiMo19-11-2 (1.4408)
4	Disc	G21Mn5 (1.1138)	42 2707.6, 42 2707.9	GX5CrNiMo19-11-2 (1.4408)
	Hard facing of sealing surface	13Cr	13Cr	X10CrNiMn18-8-6 (1.4370)
6, 7	Pin	X20Cr13 (1.4021)	X6CrNiMoTi17-12-2 (1.4571)	X6CrNiMoTi17-12-2 (1.4571)
8	Plug (DN50-300)	21CrMoV5-7 (1.7709)	A2 (A4)	A2 (A4)
9	Gasket (DN50-300)	ST/ISOPLAN		
12	Gasket	Graphite		
14	Stud	A2-70	A2-70	A2-70
15	Nut	A2-70	A2-70	A2-70

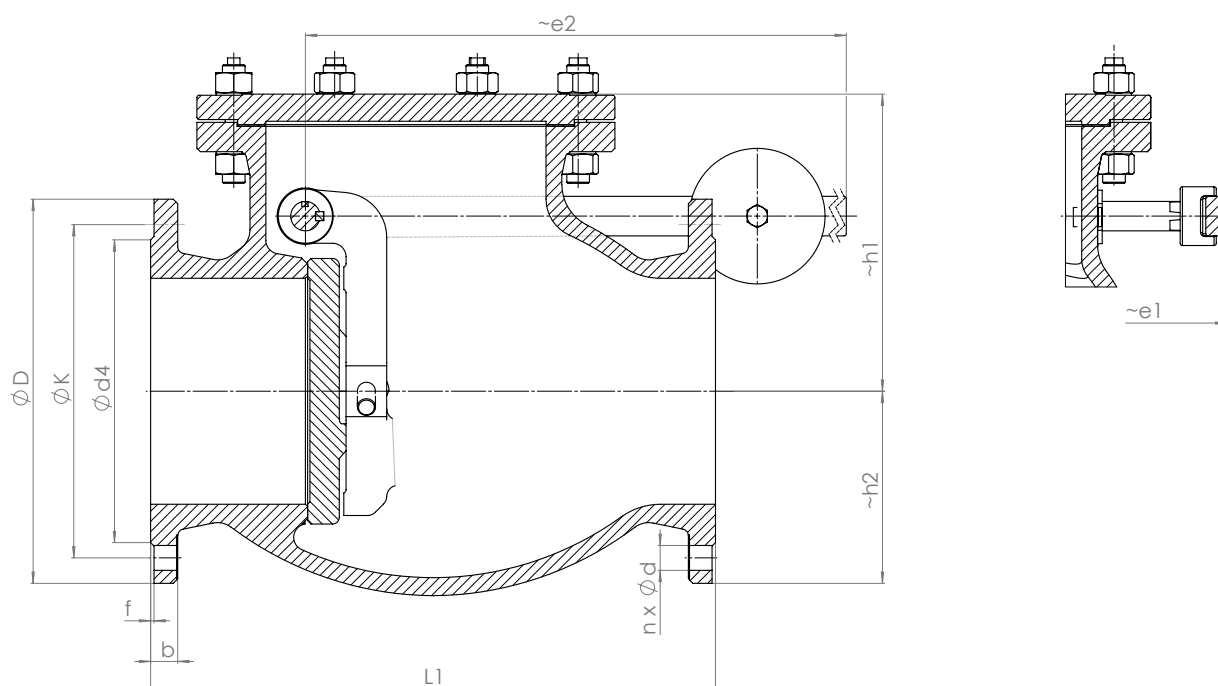
VALVE DIMENSIONS

1. Flanged

Face-to-face dimensions: EN 558
Flanges: EN 1092-1

2. Weld ends

Face-to-face dimensions: as per table
Dimensions of welding ends: DIN 3239 – part 1
Groove form: DIN 2559 – sheet 1 – form 22



Nominal pressure	Nominal size	Face-to-face	Centre-to-top			Flange	Pitch diameter	Number of holes	Hole	Sealing bar	Flange thickness	Approximate weight	
PN	DN	L	h1	e1	e2	øD	øk	n	ød	ød4xf	b	m1	m2
16	50	200	123,5	150	210	165	125	4	18	102x3	18	16,0	18,0
	65	240	139	165	280	185	145	8	18	122x3	18	26,0	29,0
	80	260	164,5	170	280	200	160	8	18	138x3	20	31,0	34,0
	100	300	176	185	350	220	180	8	18	158x3	20	41,0	44,0
	125	350	197	200	400	250	210	8	18	188x3	22	59,0	64,0
	150	400	235	240	430	285	240	8	22	212x3	22	89,0	94,0
	200	500	263	265	550	340	295	12	22	268x3	24	138,0	145,0
	250	600	300,5	315	730	405	355	12	26	320x3	26	200,0	210,0
	300	700	375,5	350	750	460	410	12	26	378x4	28	298,0	310,0
	350	800	407,5	455	830	520	470	16	26	438x4	30	483,0	502,0
25	400	900	444,5	505	930	580	525	16	30	490x4	32	610,0	635,0
	50	230	148,5	180	210	165	125	4	18	102x3	20	24,0	27,0
	80	310	175	215	280	200	160	8	18	138x3	24	44,0	48,0
	100	350	195	255	350	235	190	8	22	162x3	24	66,0	71,0
	150	480	258	290	430	300	250	8	26	218x3	28	115,0	122,0
	200	600	293	325	550	360	310	12	26	278x3	30	181,0	191,0
	250	730	330	355	730	425	370	12	30	355x3	32	326,0	338,0
	300	850	388,5	405	750	485	430	16	30	395x4	34	504,0	517,0
	350	980	490	510	830	555	490	16	33	450x4	38	693,0	712,0
	400	1100	515,5	545	930	620	550	16	36	505x4	40	847,0	872,0
40	50	230	148,5	180	210	165	125	4	18	102x3	20	24,0	27,0
	80	310	175	215	280	200	160	8	18	138x3	24	44,0	48,0
	100	350	195	255	350	235	190	8	22	162x3	24	66,0	71,0
	150	480	258	290	430	300	250	8	26	218x3	28	115,0	122,0
	200	600	304	325	550	375	320	12	30	285x3	34	181,0	191,0
	250	730	348	355	730	450	385	12	33	345x3	38	326,0	338,0
	300	850	406,5	405	750	515	450	16	33	410x4	42	504,0	517,0
	350	980	490	510	830	580	510	16	36	465x4	46	795,0	814,0
	400	1100	585	545	930	660	585	16	39	535x4	50	930,0	955,0

m1 – mass of swing check valve without lever and weight

m2 – mass of swing check valve with lever and weight

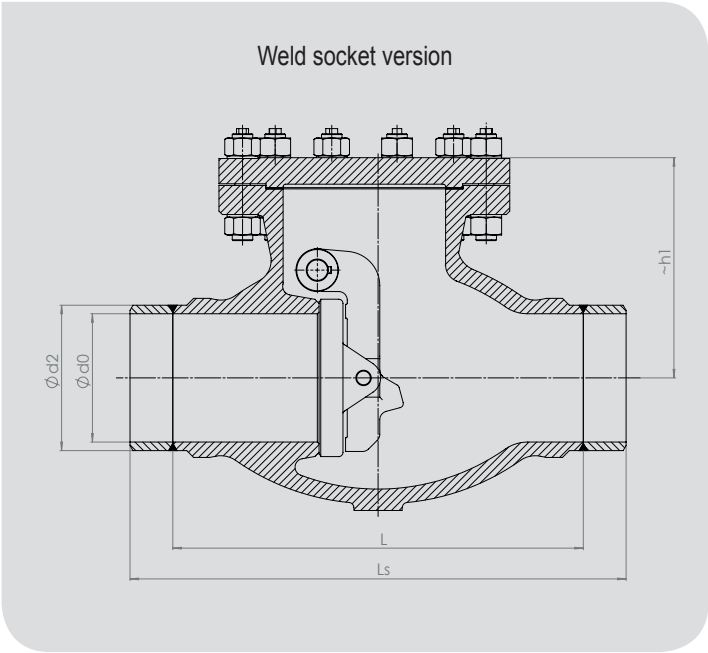
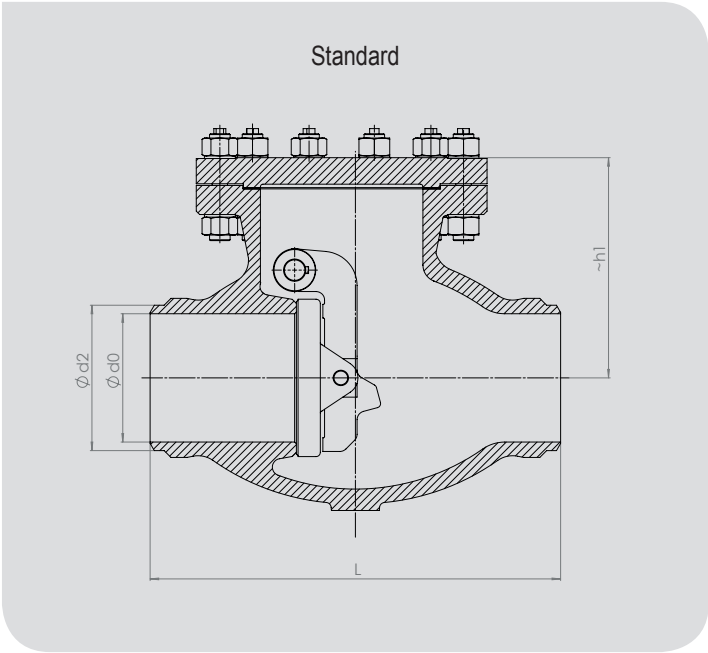
Nominal pressure	Nominal size	Face-to-face	Centre-to-top				Flange	Pitch diameter	Number of holes	Hole	Smooth bar	Flange thickness	Approximate weight	
PN	DN	L1	h1	h2	e1	e2	øD	øk	n	ød	ød4xf	b	m1	m2
63	50	300	157,5	90	*)		180	135	4	22	102x3	26	29	32
	65	340	197	102,5			205	160	8	22	122x3	26	46	50
	100	430	220	125	255	350	250	200	8	26	162x3	30	79,0	82,0
	150	550	284	172,5	295	430	345	280	8	33	218x3	36	191,0	196,0
	200	650	329	207,5	340	550	415	345	12	36	285x3	42	296,0	303,0
	250	775	364	235	355	730	470	400	12	36	345x3	46	406,0	416,0
	300	900	473,5	230	410	750	530	460	16	36	410x4	52	705,0	717,0
	350	1025	500	262,5	470	830	600	525	16	39	465x4	56	856,0	875,0
100	50	300	174,5	97,5	180	180	195	145	4	26	102x3	28	32,0	35,0
	65	340	201	110	200	211	220	170	8	26	122x3	30	45,0	48,0
	80	380	203,5	115	235	280	230	180	8	26	138x3	32	60,0	63,0
	100	430	236	132,5	255	350	265	210	8	30	162x3	36	104,0	107,0
	125	500	305	157,5	260	430	315	250	8	33	188x3	40	150,0	154,0
	150	550	309	177,5	295	430	355	290	12	33	218x3	44	233,0	238,0
	200	650	367	215	340	550	430	360	12	36	285x3	52	422,0	429,0
	250	775	424	252,5	395	750	505	430	12	39	345x3	60	627,0	637,0

m1 – mass of swing check valve without lever and weight

m2 – mass of swing check valve with lever and weight

*) missing data on request

WELD ENDS



Nominal pressure	Nominal size	Face-to-face	Centre-to-top	Approximate weight	Nominal pressure	Nominal size	Face-to-face	Centre-to-top	Approximate weight
PN	DN	L	h1	m	PN	DN	L	h1	m
16	50	200	123,5	13,0	25	50	230	148,5	21,0
	65	240	139	23,0		65	-	-	-
	80	260	164,5	26,0		80	310	175	39,0
	100	300	176	36,5		100	350	195	59,0
	125	350	197	52,5		125	-	-	-
	150	400	235	81,0		150	480	258	103,0
	200	500	263	127,0		200	600	293	164,0
	250	600	300,5	183,0		250	730	330	302,0
	300	700	375,5	276,0		300	850	388,5	472,0
	350	800	407,5	451,0		350	980	490	645,0
	400	900	444,5	570,0		400	1100	515,5	784,0

Nominal pressure	Nominal size	Face-to-face	Centre-to-top	Approximate weight	Nominal pressure	Nominal size	Face-to-face	Centre-to-top	Approximate weight	Nominal pressure	Nominal size	Face-to-face	Centre-to-top	Approximate weight
PN	DN	L	h ₁	m	PN	DN	L	h ₁	m	PN	DN	L	h ₁	m
40	50	230	148,5	21,0	63	50	300	157,5	26,0	100	50	300	174,5	26,0
	65	-	-	-		65	340	197	38,0		65	340	201	38,0
	80	310	175	39,0		80	-	-	-		80	380	203,5	51,0
	100	350	195	59,0		100	430	220	70,0		100	430	236	91,0
	125	-	-	-		125	-	-	-		125	500	305	129,0
	150	480	258	103,0		150	550	284	170,0		150	550	309	205,0
	200	600	304	159,0		200	650	329	262,0		200	650	367	372,0
	250	730	348	290,0		250	775	364	358,0		250	775	424	546,0
	300	850	406,5	457,0		300	900	473,5	638,0		300	-	-	-
	350	980	490	726,0		350	1025	500	780,0		350	-	-	-
	400	1100	585	832,0		400	-	-	-		400	-	-	-

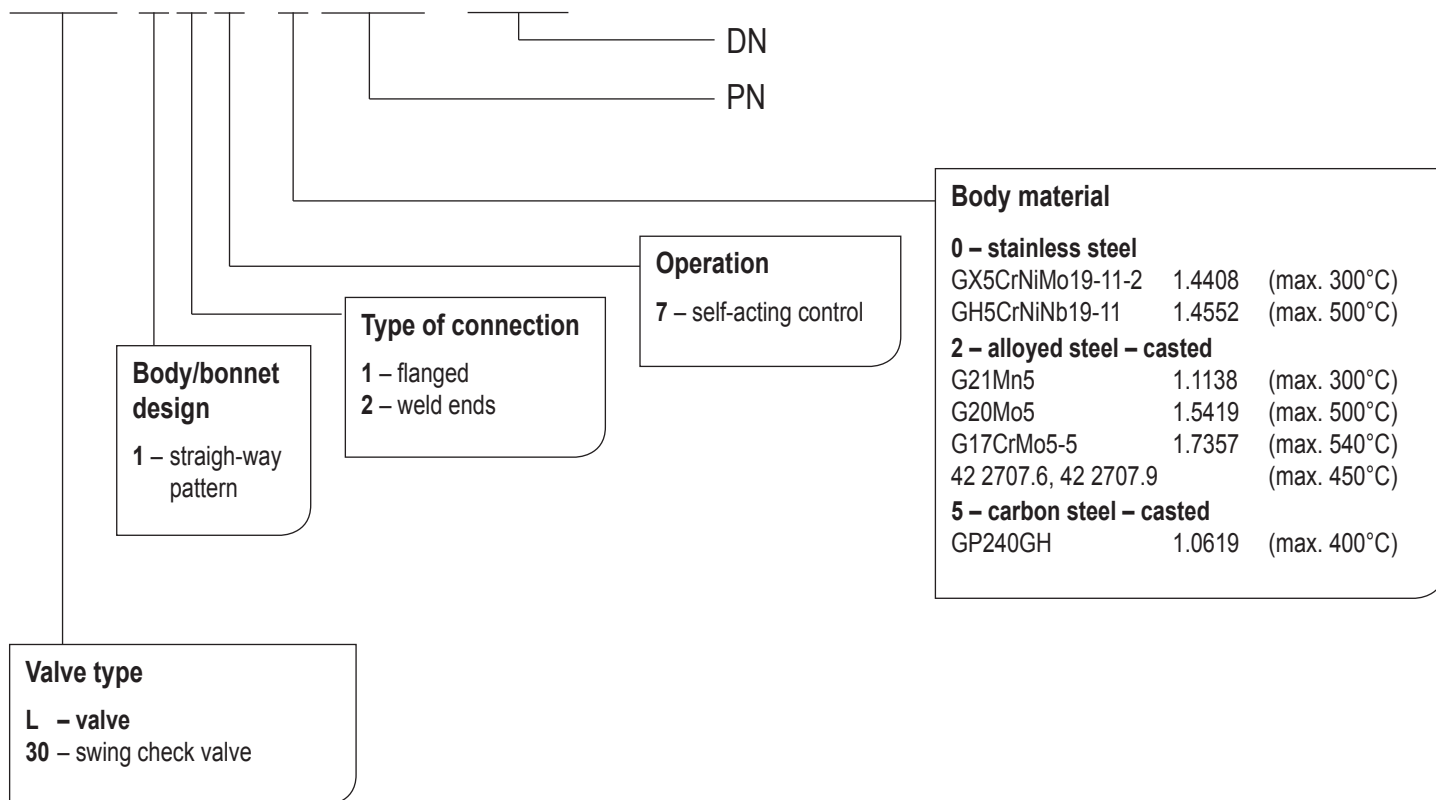
Nominal size	Weld ends according to DIN 3239-1 Groove form according to DIN 2559-sheet 1, form 22				Associated pipe dimension		
		PN16, PN25, PN40	PN 63	PN 100	PN16, PN25, PN40	PN 63	PN 100
DN	ø d ₂	ø d ₀ ¹⁾					
50	61	54,5	54	51,5	60,3x2,9	60,3x3,2	60,3x4,5
65	77	69,5	69	66,5	76,1x3,2	76,1x3,6	76,1x5,0
80	90	81,5	81	78	88,9x3,6	88,9x4,0	88,9x5,6
100	115	106	104	100	114,3x4,0	114,3x5,0	114,3x7,0
125	141	130,5	128,5	124	139,7x4,5	139,7x5,6	139,7x8,0
150	170	158	154	149	168,3x5,0	168,3x7,0	168,3x10,0
200	222	206	203	195	219,1x6,3	219,1x8,0	219,1x12,5
250	276	258	253	242,5	273x7,0	273x10,0	273x16,0
300	325	306,5	298,5	290	323,9x8,0	323,9x12,5	323,9x18,0
350	359	336,5	330	321	355,6x9,0	355,6x12,5	355,6x20,0
400	411	383	377	367	406,4x11,0	406,4x14,0	406,4x20,0

1) d₀ = d_p according to DIN 3239

Bold framed - ČSN 13 1075 (DIN3239-1 not stated)

VALVE DESCRIPTION CODE

L30 117-5100-150



VALVE INSTALLATION

The swing check valve should be installed horizontally (cover vertically up). Valves are mounted on straight sections of the pipeline with unobstructed flow of medium. Installation of the pipeline should exclude forces, moments and vibrations acting on valves.

It is necessary to consider the following points during assembly and operation:

- operating conditions must comply with operating parameters of the valve
- proper function of the valve is affected by the presence of impurities in the pipeline and flowing medium, therefore it is necessary keep working environment a pipeline clean, for example with using filters
- the medium used must be comply with the corrosion resistance of the valve material
- use of mechanically damaged valves during the operation is prohibited

The service life of valves significantly extends regular maintenance and minor repairs carried out by trained personnel.