ARMATUREN FERTIGUNGS- UND DIENSTLEISTUNGS GMBH

Gate valve S38

PN 40 - 100**, DN** 40 – 400**, T_{max}:** 540°C

Shut off gate valve with outsidescrew, rising stem, non-rising hand wheel, with bolted bonnet, with flanges or with butt weld ends, flexible or split wedge, non-asbestos gland packing and gasket
Meets the requirements of **PED 97/23/EC**, DIN 3352 part 7, EN 1984
According to customer requirements can be supplied according to valve ISO 10947:2011 (Fire Safe).

- **LONG SERVICE LIFE** - SEATS ARE HARD FACED WITH WEAR RESISTANT AND CORROSION PROOF METAL OR STELLITE EXCEPT OF STAINLESS STEEL
- **LEAK PROOF DESIGN** – SEATS ARE INTEGRAL WITH THE BODY
- **CUSTOMER RELATED SOLUTION** – DESIGN VARIANTS AND MATERIALS COMBINATION ON REQUEST, DIFFERENT CONNECTION TYPES
- **REDUCED ENCLOSURE –** NON-RISING HAND WHEEL
- **EASY OPERATION** – TREADED BUSH WITH BEARINGS

BASIC PARAMETERS

TYPE	S38 – gate valve						
PN	40 - 100						
DN	40 - 400						
APPLICATION	Water, steam, gas, oil, crude oil products, non-aggressive and aggressive substances						
OPERATING TEMPERATURE [°C]	-10 ÷ 400	-10 ÷ 540	-50 ÷ 300 3)	-105 ÷ 500 1), 2)	-30 ÷ 300	-60 ÷ 450	-10 ÷ 500
BODY MATERIALS	GP240GH (1.0619)	G17CrMo5-5 (1.7357)	GX5CrNiMo 19-11-2 (1.4408)	GX5CrNiNb 19-11 (1.4552)	G21Mn5 (1.1138)	42 2707.6, 42 2707.9 Alloy steel	G20Mo5 (1.5419)
OTHER MATERIALS ON REQUEST	1.7363, 1.4308 and other after ČSN, DIN, EN						
CONNECTION	Flanges, Butt weld ends acc. to EN, DIN, ČSN.						
FACE-TO-FACE DIMENSIONS	Flanges EN 558/26 (previously DIN 3202-1/F7) Butt weld ends EN 12982/26 (previously DIN 3202-2/S9)						
OPERATION	Hand wheel, electric actuator, spur gear drive, bevel gear drive , spur gear drive with actuator, and other						
DESIGN	**Shut off gate valve with outside screw** ▪ rising stem ▪ non-rising hand wheel ▪ with bolted bonnet			▪ with flanges or with butt weld ends ▪ flexible or split wedge ▪ non-asbestos gland packing and gasket ▪ Testing acc. to EN 12266-1			
BASIC DESIGN OPTIONS	▪ Other designs of flanged and butt-weld ends on your request ▪ Electric actuator ▪ Chain wheel ▪ spur gear drive or bevel gear drive, spur gear drive with actuator ▪ Position indicator ▪ Position switch ▪ Gland packing and gasket acc. to TA-LUFT ▪ Stem protection tube			▪ Drain stud or drain branch ▪ By-pass with shut off valve ▪ PTFE gland packing and gasket ▪ PTFE in body seat ▪ Gland packing with leakage suction ▪ Heating jacket ▪ Free from oil and grease ▪ Other testing requirements on request ▪ Delivery according to AD 2000 Merkblatt A4, TRD 110, TRD 201, GOST-R and other standards as required			

We reserve the right to make design changes without any previous announcement. We reserve the right to change the technical details and to use materials of equivalent and higher quality.

1) For use at temperatures lower than -50 °C the notched bar impact test at expected working temperature must be done.
2) According to norm SDO for temperature -105 up to +400 °C
3) Use on low temperature up to -196 °C on your request.

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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)	40	40	40	37.3	34.7	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)	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)	40	-	40	40	40	37,3	33,8	31,1	29,3	27,6	-	-	-	-	-	-	-	-
	63	-	63	63	63	58,8	53,2	49	46,2	43,4	-	-	-	-	-	-	-	-
	100	-	100	100	100	93,3	84,4	77,8	73,3	68,9	-	-	-	-	-	-	-	-
GX5CrNiNb 19-11 (1.4552)	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)	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	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)	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

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
GX5CrNi 19-10 (1.4308)	40	-	40	40	38,4	35,8	32,5	29,9	27,6	25,7	-	-	-	-	-	-	-	-
	63	-	63	63	60,5	56,5	51,1	47,1	43,5	40,5	-	-	-	-	-	-	-	-
	100	-	100	100	96,1	89,6	81,1	74,7	69,0	64,2	-	-	-	-	-	-	-	-

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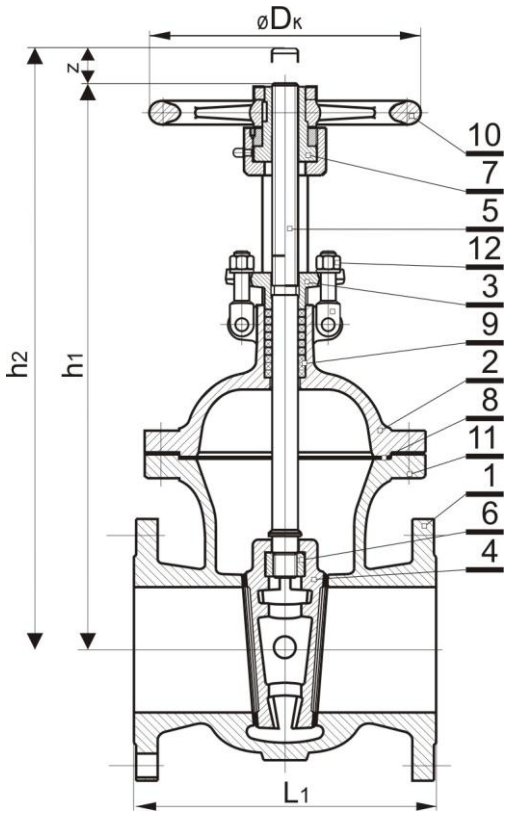
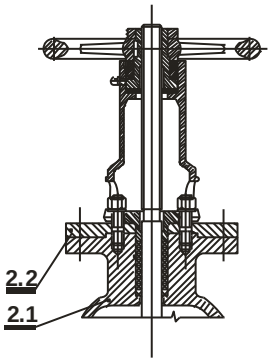
MATERIALS:

Flanged	PN 40 DN ≥400, PN 63 DN ≥ 300, PN 100 DN ≥ 350





Notice to material 1.7357: Sealing surface with Stellite only up to PN40/DN350 and PN63, 100/DN250

Pos.	Part	Material			
1	**Body**	GP240GH (1.0619)	G17CrMo5-5 (1.7357)	G20Mo5 (1.5419)	GX5CrNiNb19-11 (1.4552)
	Sealing surface - body	13Cr	Stellite 6	13Cr	-
2	**Bonnet**	GP240GH (1.0619)	G17CrMo5-5 (1.7357)	G20Mo5 (1.5419)	GX5CrNiNb19-11 (1.4552)
2.1	**Yoke**	GP240GH (1.0619)	G17CrMo5-5 (1.7357)	G20Mo5 (1.5419)	GX5CrNiNb 19-11 (1.4552)
2.2	**Bonnet**	GP240GH (1.0619)	G17CrMo5-5 (1.7357)	G20Mo5 (1.5419)	GX5CrNiNb19-11 (1.4552)
4	**Wedge**	GP240GH (1.0619)	G17CrMo5-5 (1.7357)	G20Mo5 (1.5419)	GX5CrNiNb19-11 (1.4552)
	Sealing surface - wedge	13Cr	Stellite 6	13Cr	X10CrNiMn18-8-6
5	**Stem**	X20Cr13 (1.4021)	X22CrMoV12-1 (1.4923)	X22CrMoV12-1 (1.4923)	X6CrNiMoTi17-12-2 (1.4571)
7	**Yoke nut**	9S20K (1.0711)			
8	**Gasket**	PN40 – Graphite sealing RGS3, PN63, PN100 – Cammprofile sealing with expanded graphite			
9	**Stuffing-box packing**	Graphite			
11	**Bolt/Nut**	25CrMo4/C35E+QT	21CrMoV5-7/ /25CrMo4	21CrMoV5-7/25CrMo4	A2-70/A2-70
12	**Bolt/Nut (Gland)**	25CrMo4/C35E+QT	25CrMo4/C35E+QT	25CrMo4/C35E+QT	A4-80/A4-80

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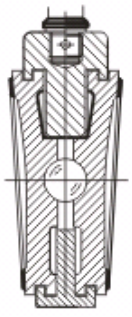
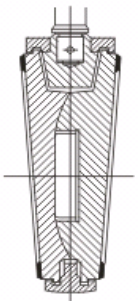
Pos.	Part	Material		
1	**Body**	G21Mn5 (1.1138)	42 2707.6, 42 2707.9	GX5CrNiMo19-11-2 (1.4408)
	Sealing surface - body	13Cr	13Cr	-
2	**Bonnet**	G21Mn5 (1.1138)	42 2707.6, 42 2707.9	GX5CrNiMo19-11-2 (1.4408)
2.1	**Yoke**	G21Mn5 (1.1138)	42 2707.6, 42 2707.9	GX5CrNiMo19-11-2 (1.4408)
2.2	**Bonnet**	G21Mn5 (1.1138)	42 2707.6, 42 2707.9	GX5CrNiMo19-11-2 (1.4408)
4	**Wedge**	G21Mn5 (1.1138)	42 2707.6, 42 2707.9	GX5CrNiMo19-11-2 (1.4408)
	Sealing surface - wedge	13Cr	13Cr	X10CrNiMn18-8-6
5	**Stem**	X6CrNiMoTi17-12-2 (1.4571)	X6CrNiMoTi17-12-2 (1.4571)	X6CrNiMoTi17-12-2 (1.4571)
7	**Yoke nut**	9S20K (1.0711)		
8	**Gasket**	PN40 – Graphite sealing RGS3, PN63, PN100 – Cammprofile sealing with expanded graphite		
9	**Stuffing-box packing**	Graphite		
11	**Bolt/Nut**	A2-70/A2-70	A2-70/A2-70	A2-70/A2-70
12	**Bolt/Nut (Gland)**	A4-80/A4-80	A4-80/A4-80	A4-80/A4-80

DESIGN VARIANTS:

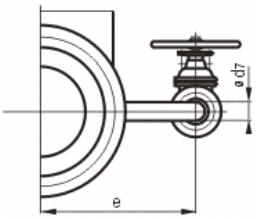
Split wedge PN40/ DN40-300, PN63, PN100/DN40-200



Split wedge PN40/DN 350, 400, PN63, PN100/DN250, 350, 400



By - pass



PTFE body seat ring

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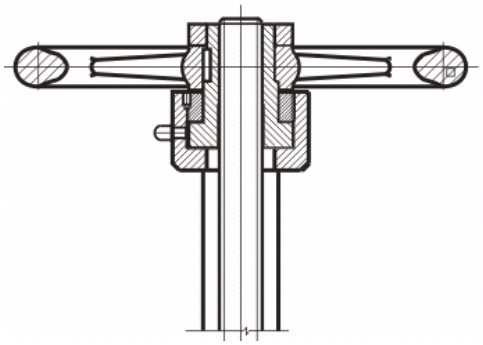
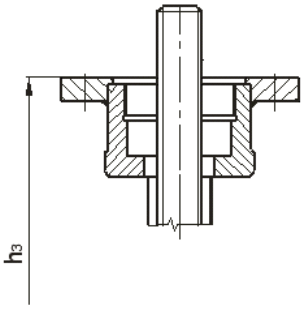
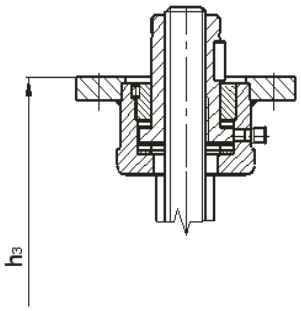
PN40/DN 40...150
PN63, 100/DN40...125



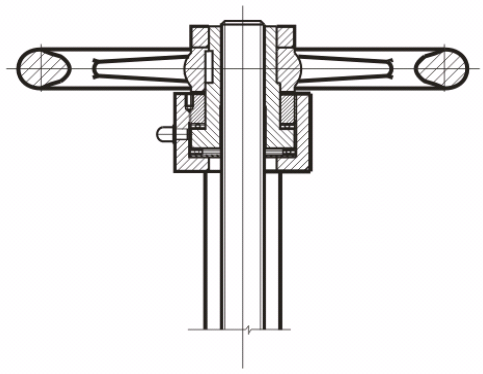
E-actuator, Form A



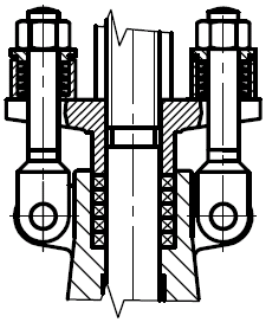
E-actuator, Form B



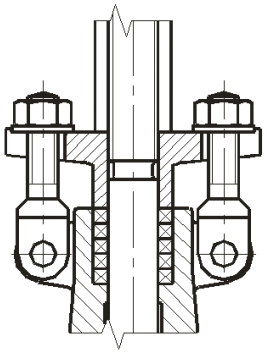
PN40/DN200...350
PN63, 100/DN 150...300



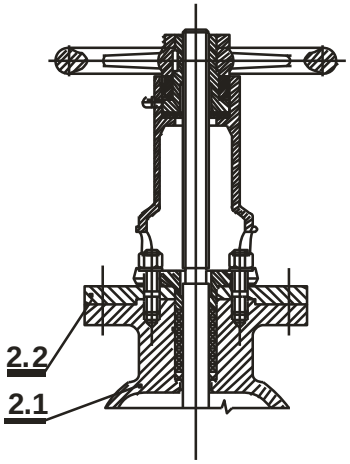
TA – Luft design
spring loaded packing



TA – Luft design without
spring loaded packing

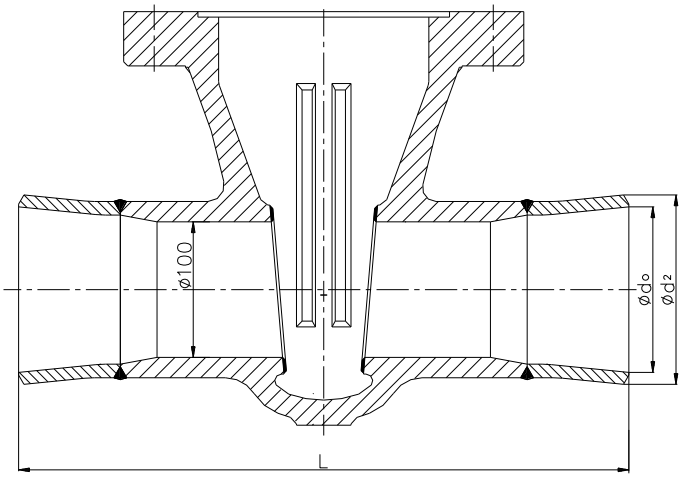


Bonnet design
PN 40 DN ≥400, PN 63 DN ≥ 300,
100 DN ≥ 350



PN

Body design
DN125/PN100



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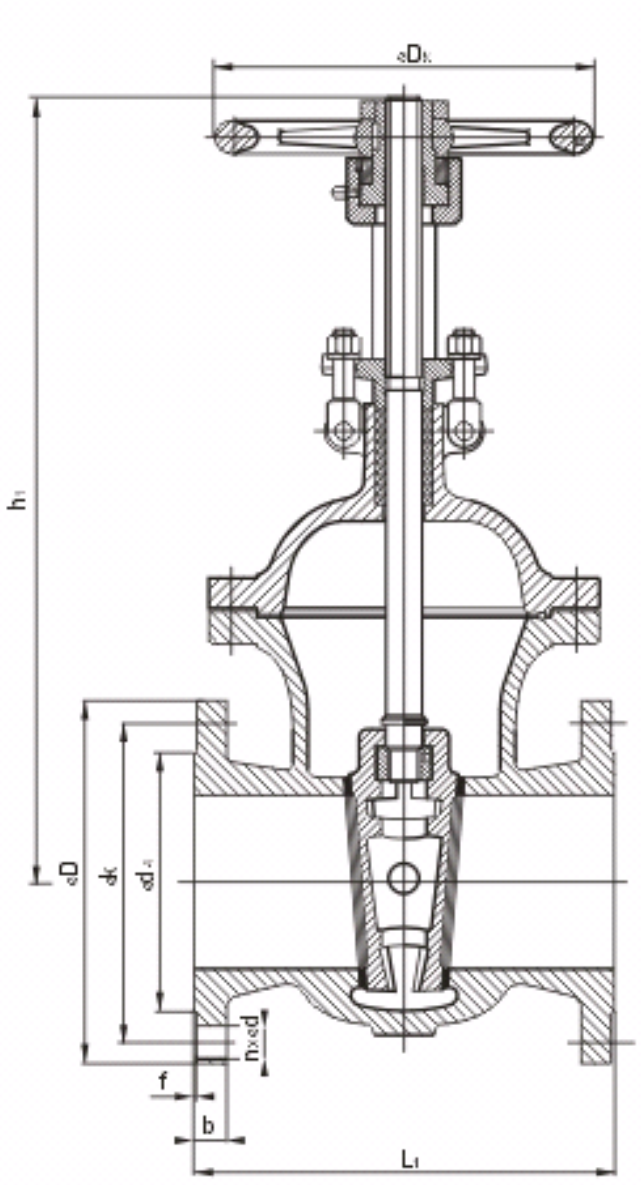
VALVE DIMENSIONS:

Flanged

Face-to-face dimensions:	EN 558
Flanges:	EN 1092-1
Raised face:	EN 1092-1 (previously DIN 2526/1975 – Form C (PN40) or E
Design variants on request:	ČSN 13 1160 and other
	Other flanges design variants on your request



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VALVE DIMENSIONS

Nominal pressure	Nominal size	Face-to-face	Stroke	Hand wheel	Centre-to-top-height			Number of bolt holes	Bolt hole diameter	Bolt pitch circle	Flange	Flange thickness	Raised face	Weight appr.
PN	DN	L1 (mm)	z (mm)	øDk (mm)	h1 (mm) Closed	h2 (mm) Open	h3 (mm) E-actuator	n (mm)	ød (mm)	øk (mm)	øD (mm)	b (mm)	$ød_4xf$ (mm)	m (kg)
40	40	240	58	200	360	418	311,5	4	18	110	150	18	88x3	26
	50	250	60	200	365	425	319,5	4	18	125	165	20	102x3	26
	65	290	92	250	468	560	417,5	8	18	145	185	22	122x3	39
	80	310	92	250	468	560	417,5	8	18	160	200	24	138x3	42
	100	350	115	315	522	637	471,5	8	22	190	235	24	162x3	62
	125	400	115	315	522	637	471,5	8	26	220	270	26	188x3	90
	150	450	165	315	656	821	602,5	8	26	250	300	28	218x3	126
	200	550	224	400	825	1049	767,5	12	30	320	375	34	285x3	198
	250	650	279	500	1033	1312	966,5	12	33	385	450	38	345x3	322
	300	750	340	500	1223	1563	1157,5	16	33	450	515	42	410x4	550
	350	850	381	630	1378	1759	1292,5	16	36	510	580	46	465x4	850
	400	950	442	720	1507	1949	1419,5	16	39	585	660	50	535x4	1120
63	40	240	58	200	359	417	311,5	4	22	125	170	26	88x3	31
	50	250	61	200	366	425	319,5	4	22	135	180	26	102x3	31
	65	290	92	250	468	560	417,5	8	22	160	205	26	122x3	55
	80	310	92	250	468	560	417,5	8	22	170	215	28	138x3	60
	100	350	116	315	522	638	471,5	8	26	200	250	30	162x3	93
	125	400	115	315	522	637	471,5	8	30	240	295	34	188x3	93
	150	450	176	500	720	896	657,5	8	33	280	345	36	218x3	188
	200	550	224	500	898	1122	838,5	12	36	345	415	42	285x3	326
	250	650	271	630	1121	1392	1027,5	12	36	400	470	46	345x3	500
	300	750		720				16	36	460	530	52	410x4	860
	350	850		720				16	39	525	600	56	465x4	880
	400	950	446	720	1510	1956	1430	16	42	585	670	60	535x4	1180
100	40	240	58	200	359	417	311,5	4	22	125	170	26	88x3	35
	50	250	60	200	365	425	319,5	4	26	145	195	28	102x3	40
	65	290	92	250	468	560	417,5	8	26	170	220	30	122x3	56
	80	310	93	250	468	561	417,5	8	26	180	230	32	138x3	62
	100	350	114	315	524	638	471,5	8	30	210	265	36	162x3	90
	125	400	118	315	519	637	471,5	8	33	250	315	40	188x3	110
	150	450	184	500	712	896	654,5	12	33	290	355	44	218x3	227
	200	550	228	630	937	1165	838,5	12	36	360	430	52	285x3	460
	250	650	268	720	1124	1392	1027,5	12	39	430	505	60	345x3	609
	300	750	324	720	1117	1441	1207,5	16	42	500	585	68	410x4	1032
	350	850	412	720	1439	1851	1346,5	16	48	560	655	74	465x4	1320

Notice: Bonnet/body flange round with spigot and recess.

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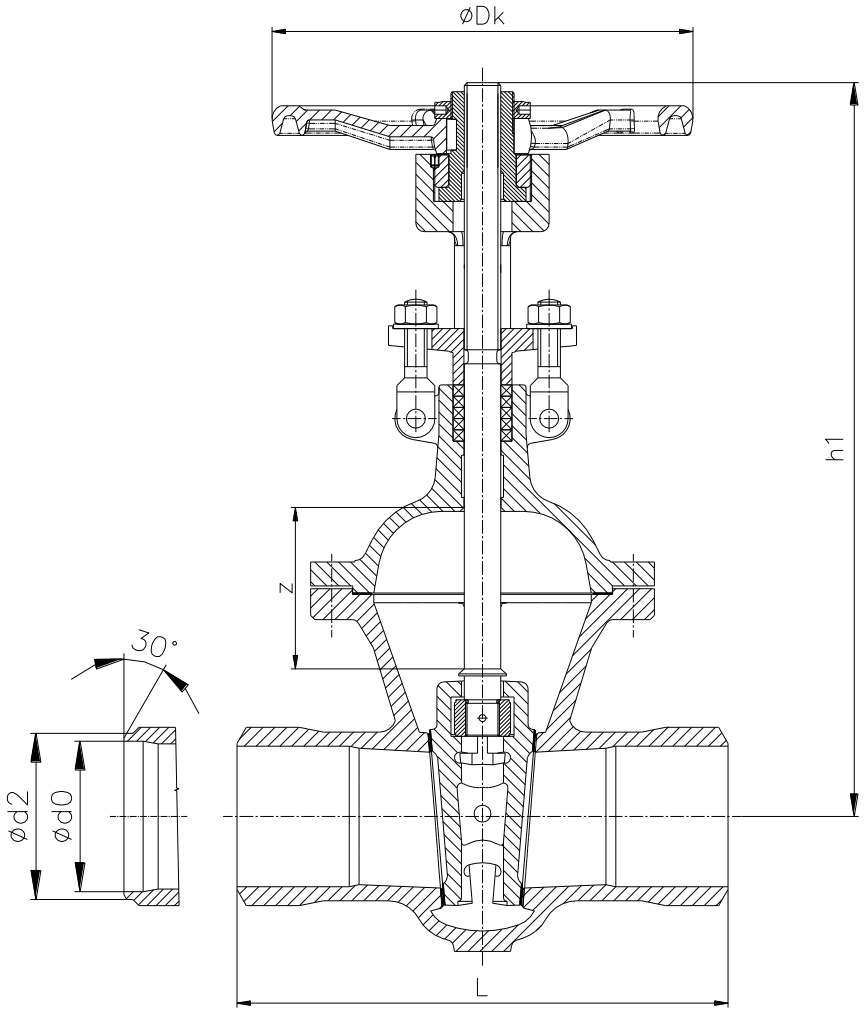
VALVE DIMENSIONS:

Weld ends

Face-to-face dimensions:	EN 12982 – Line 26, (previously DIN 3202- Part 2 – Line S9)
Weld ends:	DIN 3239–Part 1
Groove form:	DIN 2559 – Sheet 1, Form 22
Design variant:	ČSN 13 1075, EN 12 627, and other



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Nominal size	Face-to-face	Centre-to-top-height									Butt-weld ends acc. to DIN 3239-1 Groove forms to DIN 2559 – Sheet 1, Form 22				
		h1 [mm] Closed			h2 [mm] Open			h3 [mm] (E-actuator)				PN 40	PN63	PN100	
DN	**L**	**PN40**	**PN63**	**PN100**	**PN40**	**PN63**	**PN100**	**PN40**	**PN63**	**PN100**	**ød$_2$**	**ød$_0$**	**ød$_0$**	**ød$_2$**	**ød$_0$**
40	240	355	355	355	425	425	425	320	320	320	49	43	43	49	43
50	250	355	355	355	425	425	425	320	320	320	61	54	54	61	54
65	290	470	470	470	570	570	570	415	425	425	77	69	69	77	69
80	310	470	470	470	570	570	570	415	425	425	90	81	81	90	81
100	350	525	525	525	650	650	650	480	480	480	115	104	104	115	104
125	450	525	525	525	650	650	650	480	480	480	141	130,5	130,5	139,7	119,7
150	450	660	720	720	835	900	900	610	665	665	170	156,5	156,5	170	154
200	550	830	895	935	1065	1130	1170	775	835	870	222	204,5	204,5	222	199,5
250	650	990	1030	1100	1275	1300	1370	975	1035	1035	276	256,5	256,5	276	248,5
300	750	1170	1220	1210	1510	1540	1530	1165	1215	1215	325	308,5	308,5	325	295,5
350	850	1350	1485	1450	1740	1875	1865	1295	1410	1475	359	336,5	336,5	359	324
400	950	1505	1520	*)	1940	1965	*)	1500	1580	*)	411	383	377	*)	*)

Nominal size	But-weld ends unmachined						Weight gate valve appr. m1 [kg]			Associated pipe dimensions		
	PN40		PN63		PN100							
DN	Amax	Bmin	Amax	Bmin	Amax	Bmin	PN40	PN63	PN100	PN 40	PN63	PN100
40	68	37	75	37	75	37	24	27	31	48,3x2,6	48,3x2,6	48,3x2,6
50	80	49	90	49	90	49	24	27	34	60,3x3,2	60,3x3,2	60,3x3,2
65	*)	65	*)	65	*)	65	35	50	49	76,1x3,6	76,1x3,6	76,1x3,6
80	115	80	122	80	122	80	37	54	53	88,9x4,0	88,9x4,0	88,9x4,0
100	135	100	145	100	145	100	56	84	77	114,3x5,0	114,3x5,0	114,3x5,0
125	165	125	178	125	178	*)	81	84	89	139,7x4,5	139,7x4,5	139,7x6,3
150	192	147	204	147	204	147	115	167	199	168,3x5,6	168,3x5,6	168,3x7,1
200	252	200	264	200	264	*)	177	288	410	219,1x7,1	219,1x7,1	219,1x10,0
250	308	250	320	247	320	247	288	452	528	273x8,0	273x8,8	273x12,5
300	364	300	358	300	358	*)	503	793	914	323,9x8,0	323,9x11	323,9x14,2
350	420	*)	*)	*)	*)	*)	781	783	1152	355,6x8,8	355,6x12,5	355,6x16,0
400	470	*)	*)	*)	*)	*)	1022	1051	-	406,4x11,0	406,4x14,2	*)

ød$_0$ = ød$_p$ to DIN 3239
*) on your request

Gate valve S38, PN 40-100

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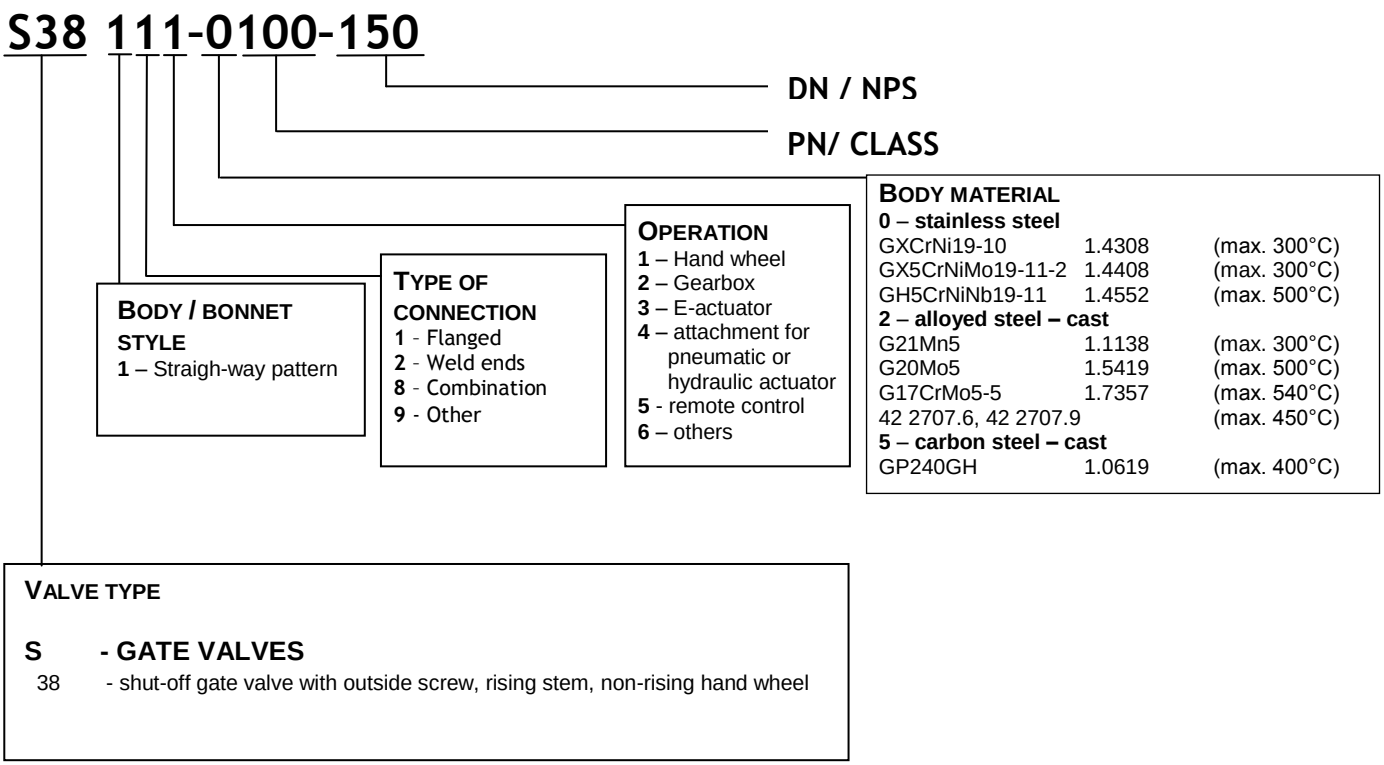
VALVE DESCRIPTION CODE



VALVE INSTALLATION:

During the installation and use of the valve following points have to be respected

- Maximum working parameters mustn't exceed the maximum values from the table above.
- Right function and service life duration of the valve depends on presence of impurities in the medium. Keep the medium and piping clean by use of strainers
- Medium has to be in correspondence with the corrosive resistance of the valve
- The valve must not be mechanical damaged during its service life

Duration of service life depends on regular maintenance.