



ARMATURY GROUP
20TH ANNIVERSARY



GATE VALVES



COMPANY PROFILE

The company ARMATURY Group a.s. is a leading European manufacturer of industrial valves and distributor of pipings, technological units and accessories. The company started its operations on January 2000, however, the tradition of this dynamically developing company is closely related to the 50-year history of valve production in Moravia and Silesia.

Since 2019, ARMATURY Group a.s. has been part of the Vexve Armatury Group, which offers an extensive portfolio of valves for a wide range of industrial applications. ARMATURY Group a.s. specializes in tailor-made solutions for the gas, power and metallurgical sectors, while Vexve Oy supplies valves solutions for heating and cooling systems.

Both ARMATURY Group a.s. and Vexve Oy are known for the superior quality of their products, fast delivery times combined with first-class customer service. The companies deliver their products to over 70 countries and employ around 750 people with factories in Czech Republic, Finland and Russia. The combined turnover of the Vexve Armatury Group is over €100m. The group is owned by DevCo Partners Oy, a long-term investor, which is dedicated to building world's leading companies in selected niche markets.



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Application

Gate valves are isolating valves designed for full closing or opening of working media flow. If the gate valves are used for regulating or throttling purposes, the manufacturer does not guarantee tightness of the gate valves. For regulation we recommend to use special control gate valve type S33.C.

Working medium

- water
- non-corrosive liquids
- steam
- air
- gases of group 1 and 2
- petroleum and petroleum products

The service fluids shall not contain rough impurities.

Technical description

The gate valve is an outside-screw-and-yoke, with flexible or solid wedge, rising or non-rising stem. The body and the bonnet are made of castings and are connected by a flanged joint. The seating surfaces of the seats and the wedge are made in compliance with API 600. The seat rings are welded into the body. The gate valves are equipped with a back seat. The gate valves are a bi-directional sealing valves. The body-bonnet joint and the packing chamber are sealed with asbestos-free gasket and packing which guarantee a long life service. The requirement for an automatic body cavity pressure relief shall be specified in the purchase order. Pressure relief can be achieved by:

- drilling a hole through one disc of the wedge,
- special valve incorporated into the wedge,
- external bypass.

TA-Luft design on request.

Connection to the piping

- **flanged ends** - acc. to EN 1092-1 or GOST, face-to-face dimensions are acc. to EN 558, Series 14, 15 and 26 or GOST
- **welded ends** - acc. to EN 12627

Operation

The gate valves are delivered with a handwheel, a manual bevel gear, an electric actuator or bare stem ready for connection to an actuator. The standard connecting dimensions for connection to a manual gear or an electric actuator meet the requirements of ISO 5210.



Accessories

The gate valves can be equipped with the following accessories:

- drain valve,
- air-vent valve,
- by-pass valves,
- stand for remote control, including chains and chain wheels,
- vent plugs,
- gland packing „live loading“.

Testing

The gate valves are subjected to the following tests performed with water:

- shell strength test
- shell tightness test
- seat tightness test and operability test according to EN 12266.
- other tests by agreement.

Installation

The gate valves may be installed into the piping in vertical or horizontal position. In case of gate valves equipped with an electric actuator or a pneumatic actuator, must you follow instructions of the manufacturer of actuators.

Production range

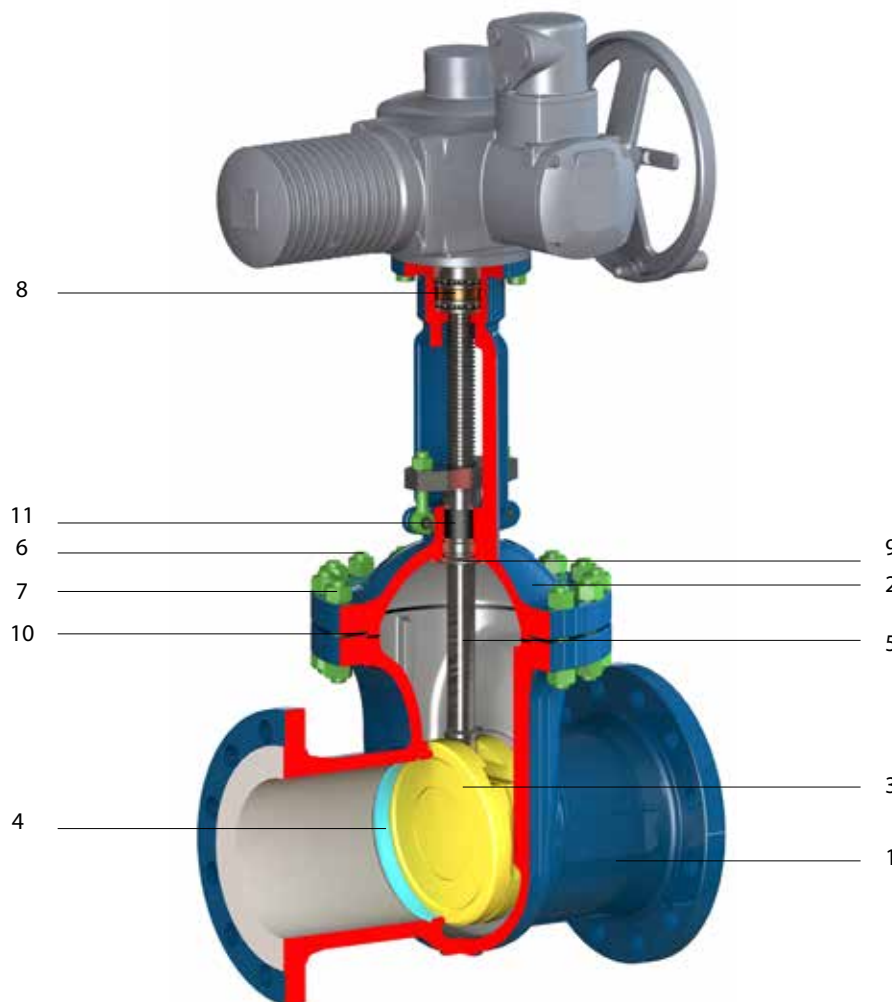
Typ	PN	DN																					
		50	65	80	100	125	150	200	250	300	350	400	500	600	700	800	900	1000	1200	1400	1600	1800	2000
S33.1 S33.C*	16	*	*	*	*	*	*	*	*	*	*	*	*	*									
	25	*	*	*	*	*	*	*	*	*	*	*	*	*									
	40	*	*	*	*	*	*	*	*	*	*	*	*	*									
	63	*	*	*	*	*	*	*	*	*	*	*	*	*									
	100	*	*	*	*	*	*	*	*	*	*	*	*	*									
S33.2	6, 10, 16	*	*	*	*	*	*	*	*	*	*	*	*	*									
S33.3	16	*	*	*	*	*	*	*	*	*	*	*	*	*									
	2,5												*	*	*	*	*	*	*	*	*	*	*
	6												*	*	*	*	*	*	*	*	*	*	*
	10												*	*	*	*	*	*	*	*	*	*	*
	16												*	*	*	*	*	*	*	*	*	*	*
S33.4 S33.C*	25												*	*	*	*	*	*	*	*	*	*	*
	10												*	*	*	*	*	*	*	*	*	*	*
	16												*	*	*	*	*	*	*	*	*	*	*
	25												*	*	*	*	*	*	*	*	*	*	*
	10												*	*	*	*	*	*	*	*	*	*	*
S33.5	16												*	*	*	*	*	*	*	*	*	*	*
	25												*	*	*	*	*	*	*	*	*	*	*

* DN 150 and higher in cast design (S33.1)

Up to DN 1200 in welded design (S33.4)

Flexible wedge

 EN 12 627 WELDED ENDS

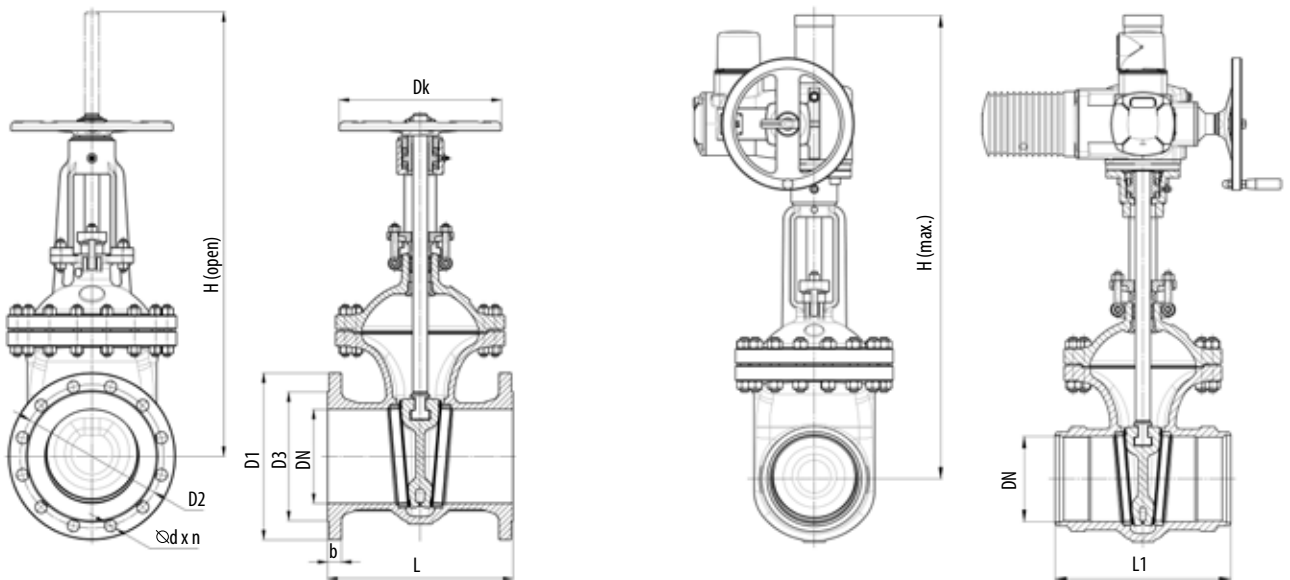


Position	Component	Carbon steel	Alloy steel	Carbon steel for low temperatures	Stainless steel
1	Body	1.0619 / A216 WCB	1.7357 / A217 WC6	1.6220 / A352 LCB	1.4408 / A351 CF8M
2	Bonnet	1.0619 / A216 WCB	1.7357 / A217 WC6	1.6220 / A352 LCB	1.4408 / A351 CF8M
3	Wedge + overlay	1.0619 / A216 WCB + 13Cr	1.7357 / A217 WC6 + Stellite 6	1.6220 / A352 LCB + F304	1.4408 / A351 CF8M
4	Seat + overlay	1.0460 / A105 + Stellite 6	1.7335 / A182 F11 + Stellite 6	1.0566 / A350 LF2 + Stellite 6	1.4401 / A182 F316
5	Stem	1.4021 / A182 F6a	1.4923 / A182 F6a	1.4301 / A182 F304	1.4401 / A182 F316
6	Bonnet bolts*	1.7218 / A193 B7	1.7709 / A193 B16	1.7225 / A320 L7	1.4401 / A193 B8
7	Bonnet nuts*	1.1191 / A194 2H	1.7709 / A194 4	1.7225 / A194 7	1.4401 / A194 8
8	Stem nut	Ni-resist, Al-bronze			
9	Back seat	1.4021 / A276 410T		1.4301 / A182 F304	1.4401 / A182 F316
10	Gasket	Graphite with stainless steel insert			
11	Packing	Pressed graphite			

** Equivalent or according to customer's request

DN 50-600 • PN 16-100 • Tmax 450 °C (595 °C)
Body design: yoke gate valve

Connection: EN 1092-1 FLANGED ENDS
 EN 12 627 WELDED ENDS



PN 16

DN	D1	D2	D3	L	H (open)	H (max.)*	Dk	b	Ød x n	kg	BW**	
											L1	kg
50	165	125	102	250	360	605	200	18	18 x 4	20	216	17
65	185	145	122	270	410	630	250	18	18 x 8	30	241	26
80	200	160	138	280	460	670	250	20	18 x 8	36	282	34
100	220	180	158	300	550	740	300	20	18 x 8	49	305	48
125	250	210	188	325	660	810	300	22	18 x 8	66	381	72
150	285	240	212	350	775	930	300	22	22 x 8	95	403	100
200	340	295	268	400	960	1070	350	24	22 x 12	154	419	160
250	405	355	320	450	1175	1245	400	26	26 x 12	225	457	240
300	460	410	378	500	1360	1430	500	28	26 x 12	334	502	355
350	520	470	438	550	1525	1550	550	30	26 x 16	445	762	490
400	580	525	490	600	1675	1720	600	32	30 x 16	610	838	690
500	715	650	610	700	2050	2080	700	44	33 x 20	1105	991	1070
600	840	770	725	800	2400	2480	800	54	36 x 20	1190	1143	1660

PN 25

DN	D1	D2	D3	L	H (open)	H (max.)*	Dk	b	Ød x n	kg	BW**	
											L1	kg
50	165	125	102	250	360	605	200	20	18 x 4	20	216	17
65	185	145	122	270	410	630	250	22	18 x 8	32	241	26
80	200	160	138	280	460	670	250	24	18 x 8	39	282	34
100	235	190	162	300	550	740	300	24	22 x 8	53	305	48
125	270	220	188	325	660	810	300	26	26 x 8	71	381	72
150	300	250	218	350	775	930	300	28	26 x 8	101	403	100
200	360	310	278	400	960	1070	350	30	26 x 12	160	419	160
250	425	370	335	450	1175	1245	400	32	30 x 12	232	457	240
300	485	430	395	500	1360	1430	500	34	30 x 16	345	502	355
350	555	490	450	550	1525	1550	550	38	33 x 16	460	762	490
400	620	550	505	600	1675	1720	600	40	36 x 16	645	838	690
500	730	660	615	700	2050	2080	700	48	36 x 20	1166	991	1070
600	845	770	720	800	2450	2480	800	58	39 x 20	1258	1143	1660



DN 50-600 • PN 16-100 • Tmax 450 °C (595 °C)
Body design: yoke gate valve

Connection:  EN 1092-1 FLANGED ENDS
 EN 12 627 WELDED ENDS

PN 40

DN	D1	D2	D3	L	H (open)	H (max.)*	Dk	b	Ød x n	kg	BW**	
											L1	kg
50	165	125	102	250	360	605	200	20	18 x 4	20	216	17
65	185	145	122	290	410	630	250	22	18 x 8	28	241	26
80	200	160	138	310	460	670	250	24	18 x 8	44	282	34
100	235	190	162	350	560	740	300	24	22 x 8	62	305	48
125	270	220	188	400	660	810	300	26	26 x 8	87	381	72
150	300	250	218	450	765	930	350	28	26 x 8	125	403	100
200	375	320	285	550	955	1070	400	34	30 x 12	265	419	160
250	450	385	345	650	1185	1245	450	38	33 x 12	405	457	240
300	515	450	410	750	1380	1430	500	42	33 x 16	500	502	355
350	580	510	465	850	1510	1550	500	46	36 x 16	725	762	490
400	660	585	535	950	1690	1720	600	50	39 x 16	1280	838	690
500	755	670	615	1150	2065	2080	600	52	42 x 20	1589	991	1070
600	890	795	735	1350	2465	2480	700	60	48 x 20	1903	1143	1660

PN 63

DN	D1	D2	D3	L	H (open)	H (max.)*	Dk	b	Ød x n	kg	BW**	
											L1	kg
50	180	135	102	250	420	655	280	26	22 x 4	37	292	28
65	205	160	122	290	470	735	280	26	22 x 8	46	330	37
80	215	170	138	310	525	770	300	28	22 x 8	49	356	38
100	250	200	162	350	620	835	350	30	26 x 8	86	432	75
125	295	240	188	400	715	910	350	34	30 x 8	129	508	113
150	345	280	218	450	815	980	400	36	33 x 8	150	559	132
200	415	345	285	550	1115	1205	500	42	36 x 12	360	660	320
250	470	400	345	650	1280	1360	640	46	36 x 12	570	787	500
300	530	460	410	750	1550	1570	680	52	36 x 16	815	838	720
350	600	525	465	850	1665	1680	-	56	39 x 16	1080	889	950
400	670	585	535	950	1820	1840	-	60	42 x 16	1460	991	1290
500	800	705	615	1150	2235	2250	-	68	48 x 20	2315	1194	2040
600	930	820	735	1350	2570	2590	-	76	56 x 20	3480	1397	3060

PN 100

DN	D1	D2	D3	L	H (open)	H (max.)*	Dk	b	Ød x n	kg	BW**	
											L1	kg
50	195	145	102	250	420	655	280	30	26 x 4	39	292	29
65	220	170	122	290	470	735	280	34	26 x 8	50	330	39
80	230	180	138	310	525	770	300	36	26 x 8	54	356	40
100	265	210	162	350	620	835	350	40	30 x 8	94	432	80
125	315	250	188	400	715	910	350	40	33 x 8	138	508	122
150	355	290	218	450	815	980	400	44	33 x 12	160	559	141
200	430	360	285	550	1115	1205	500	52	36 x 12	385	660	340
250	505	430	345	650	1280	1360	640	60	39 x 12	610	787	540
300	585	500	410	750	1550	1570	680	68	42 x 16	890	838	780
350	655	560	465	850	1665	1680	-	74	48 x 16	1190	889	1050
400	715	620	535	950	1820	1840	-	78	48 x 16	1570	991	1380
500	870	760	615	1150	2235	2250	-	90	56 x 20	2630	1194	2315
600	940	838	692	1350	2570	2590	-	105	52 x 24	3870	1397	3405

* H (max.) - Maximum height in standard operation design

** Butt weld ends with forged nipples on request

DN 50-600 • PN 6-16 • Tmax 450 °C (550 °C)

Body design: yoke gate valve

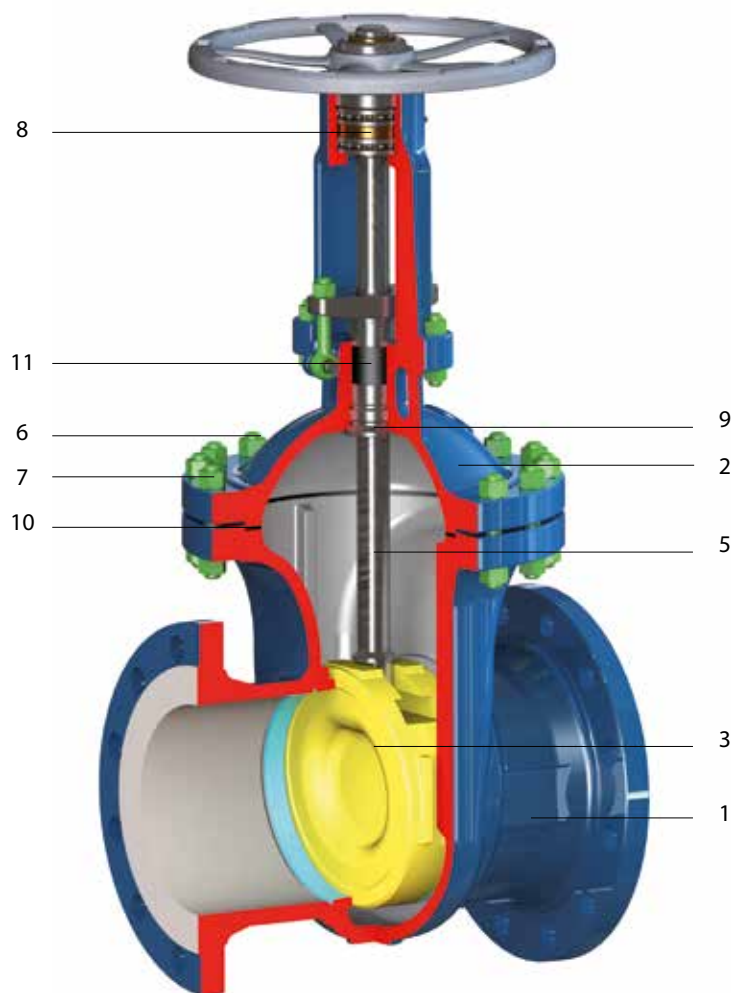
Body, bonnet, wedge: cast

Rising stem

Solid wedge

Connection:  EN 1092-1 FLANGED ENDS

 EN 12 627 WELDED ENDS



Material acc. to EN

Position	Component	Carbon steel	Stainless steel
1	Body + overlay	1.0619 / A216 WCB + 13Cr	1.4408 / A351 CF8M
2	Bonnet	1.0619 / A216 WCB	1.4408 / A351 CF8M
3	Wedge + overlay	1.0619 / A216 WCB + 13Cr	1.4408 / A351 CF8M
5	Stem	1.4021 / A182 F6a	1.4401 / A182 F316
6	Bonnet bolts*	1.7218 / A193 B7	1.4401 / A193 B8
7	Bonnet nuts*	1.1191 / A194 2H	1.4401 / A194 8
8	Stem nut	Ni-rezist, Al-bronze	
9	Back seat	Overlay 13Cr / 1.4021 / A276 410T	Overlay F316 / 1.4401 / A182 F316
10	Gasket	Graphite with stainless steel insert	
11	Packing	Braided graphite cord + formed graphite rings	

* Other TRIMs according to API 600

** Equivalent or according to customer's request

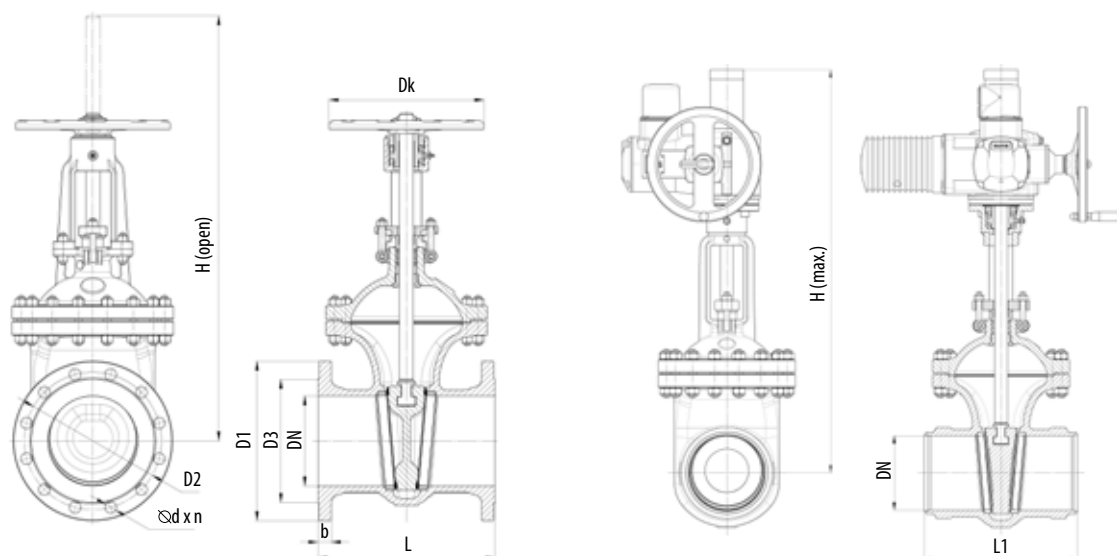


DN 50-600 • PN 6-16 • Tmax 450 °C (550 °C)

Body design: yoke gate valve

Connection: ☉ EN 1092-1 FLANGED ENDS

☼ EN 12 627 WELDED ENDS



PN 6

DN	D1	D2	D3	L	H (open)	H (max.)*	Dk	b	Ød x n	kg	BW**	
											L1	kg
50	140	110	90	150	360	605	160	14	14 x 4	16	-	-
65	160	130	110	170	430	650	160	14	14 x 4	18	-	-
80	190	150	128	180	470	680	160	16	18 x 4	23	-	-
100	210	170	148	190	545	735	200	16	18 x 4	36	-	-
125	240	200	178	200	650	790	200	18	18 x 8	48	-	-
150	265	225	202	210	720	885	200	18	18 x 8	60	-	-
200	320	280	258	230	950	1060	250	20	18 x 8	97	-	-
250	375	335	312	250	1170	1240	320	22	18 x 12	166	-	-
300	440	395	365	270	1430	1500	400	22	22 x 12	210	-	-
350	490	445	415	290	1540	1565	450	22	22 x 12	345	-	-
400	540	495	465	310	1755	1800	500	22	22 x 16	480	-	-
500	645	600	570	350	2195	2230	500	24	22 x 20	645	-	-
600	755	705	670	390	2660	2740	600	30	26 x 20	895	-	-

PN 10

DN	D1	D2	D3	L	H (open)	H (max.)*	Dk	b	Ød x n	kg	BW**	
											L1	kg
50	165	125	102	150	360	605	200	18	18 x 4	17	-	-
65	185	145	122	170	430	650	200	18	18 x 8	19	-	-
80	200	160	138	180	470	680	250	20	18 x 8	25	-	-
100	220	180	158	190	545	735	280	20	18 x 8	36	-	-
125	250	210	188	200	650	790	300	22	18 x 8	52	-	-
150	285	240	212	210	720	885	300	22	22 x 8	62	-	-
200	340	295	268	230	950	1060	350	24	22 x 8	88	-	-
250	395	350	320	250	1170	1240	400	26	22 x 12	180	-	-
300	445	400	370	270	1430	1500	450	26	22 x 12	230	-	-
350	505	460	430	290	1630	1565	500	26	22 x 16	380	-	-
400	565	515	482	310	1755	1800	600	26	26 x 16	505	-	-
500	670	620	585	350	2195	2230	600	28	26 x 20	700	-	-
600	780	725	685	390	2660	2740	600	34	30 x 20	985	-	-

PN 16

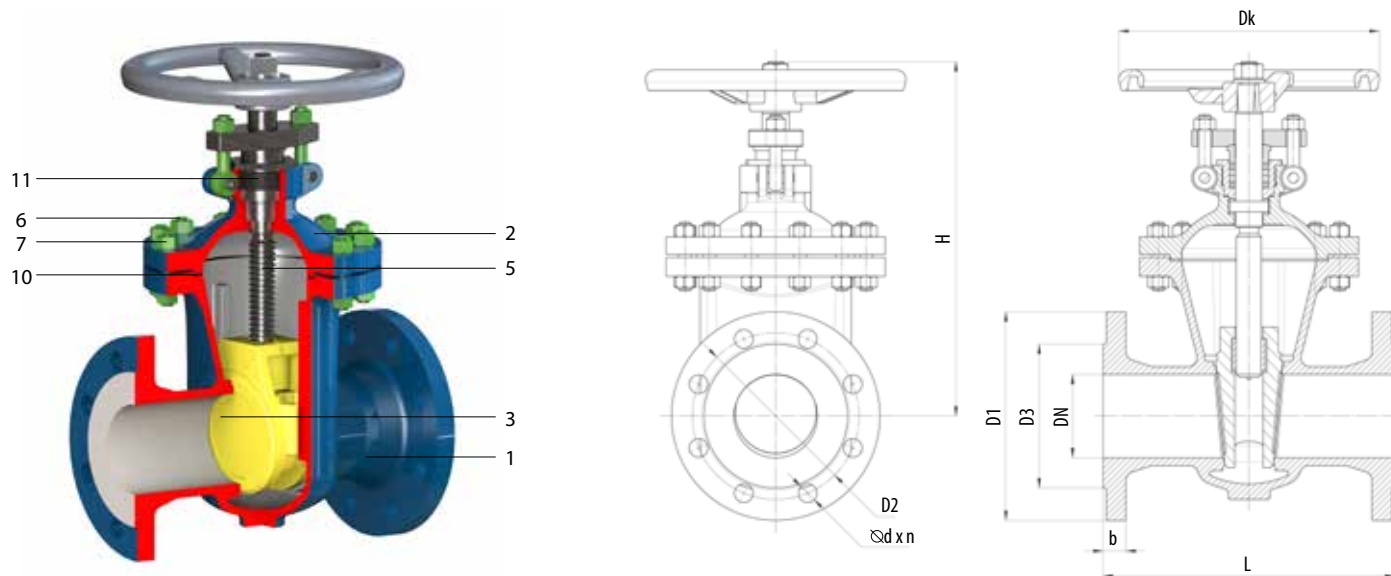
DN	D1	D2	D3	L	H (open)	H (max.)*	Dk	b	Ød x n	kg	BW**	
											L1	kg
50	165	125	102	180	360	645	200	18	18 x 4	20	250	19
65	185	145	122	200	430	730	200	18	18 x 8	21	270	29
80	200	160	138	210	470	740	200	20	18 x 8	32	280	34
100	220	180	158	230	545	790	250	20	18 x 8	40	300	48
125	250	210	188	255	650	780	250	22	18 x 8	49	325	68
150	285	240	212	280	720	930	320	22	22 x 8	74	350	92
200	340	295	268	330	953	1060	400	24	22 x 12	117	400	155
250	405	355	320	450	1225	1295	450	26	26 x 12	210	450	240
300	460	410	378	500	1440	1510	500	28	26 x 12	300	500	355
350	520	470	438	550	1650	1675	600	30	26 x 16	510	550	450
400	580	525	490	600	1820	1865	600	32	30 x 16	670	600	630
500	715	650	610	700	2080	2110	700	44	33 x 20	930	700	990
600	840	770	725	800	2560	2640	800	54	36 x 20	1310	800	1500

*H(max.) - Maximum height in standard operation design

** Butt weld ends with forged nipples on request. Butt weld ends PN 16 on request.

DN 50-600 • PN 16 • Tmax 250 °C
Body design: bonnet gate valve
Body, bonnet, wedge: cast
Non-rising stem

Connection: ☉ EN 1092-1 FLANGED ENDS



Material acc. to EN

Position	Component	Carbon steel
1	Body + overlay	1.0619 / A216 WCB + 13Cr
2	Bonnet	1.0619 / A216 WCB
3	Wedge + overlay	1.0619 / A216 WCB + 13Cr
5	Stem	1.4021 / A182 F6a
6	Bonnet bolts*	1.7218 / A193 B7
7	Bonnet nuts*	1.1191 / A194 2H
10	Gasket	Graphite with stainless steel insert
11	Packing	Braided graphite cord + formed graphite rings

* Equivalent or according to customer's request

PN 16

DN	D1	D2	D3	L	b	Ød x n	H	Dk	kg
50	165	125	102	180	18	18 x 4	325	200	24
65	185	145	122	200	18	18 x 8	330	200	33
80	200	160	138	210	20	18 x 8	355	200	38
100	220	180	158	230	20	18 x 8	410	200	54
125	250	210	188	255	22	18 x 8	520	250	75
150	285	240	212	280	22	22 x 8	550	250	102
200	340	295	268	330	24	22 x 12	650	300	145
250	405	355	320	450	26	26 x 12	750	350	245
300	460	410	378	500	28	26 x 12	948	550	315
350	520	470	438	550	30	26 x 16	1065	600	380
400	580	525	490	600	32	30 x 16	1234	600	480
500	715	650	610	700	44	33 x 20	1420	460	815
600	840	770	725	800	54	36 x 20	1625	460	1200



DN 500-2000 • PN 2,5-25 • Tmax 300°C

Body design: yoke gate valve

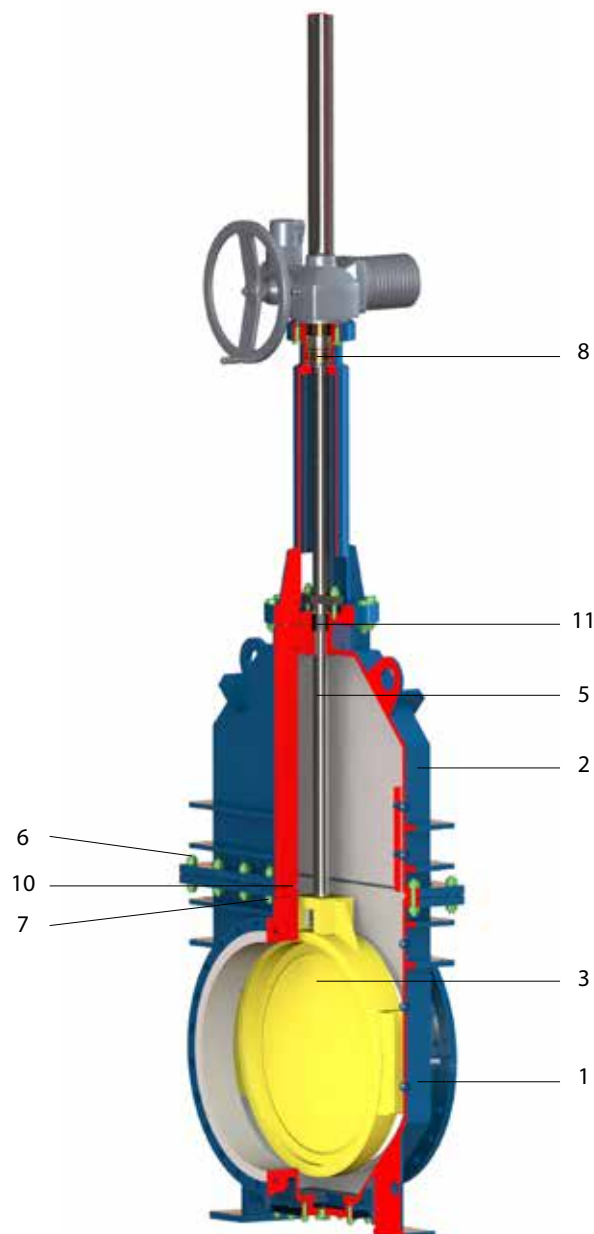
Body, bonnet, wedge: fully welded

Rising stem

Solid / flexible wedge

Connection:  EN 1092-1 FLANGED ENDS

 EN 12 627 WELDED ENDS



Material acc. to EN

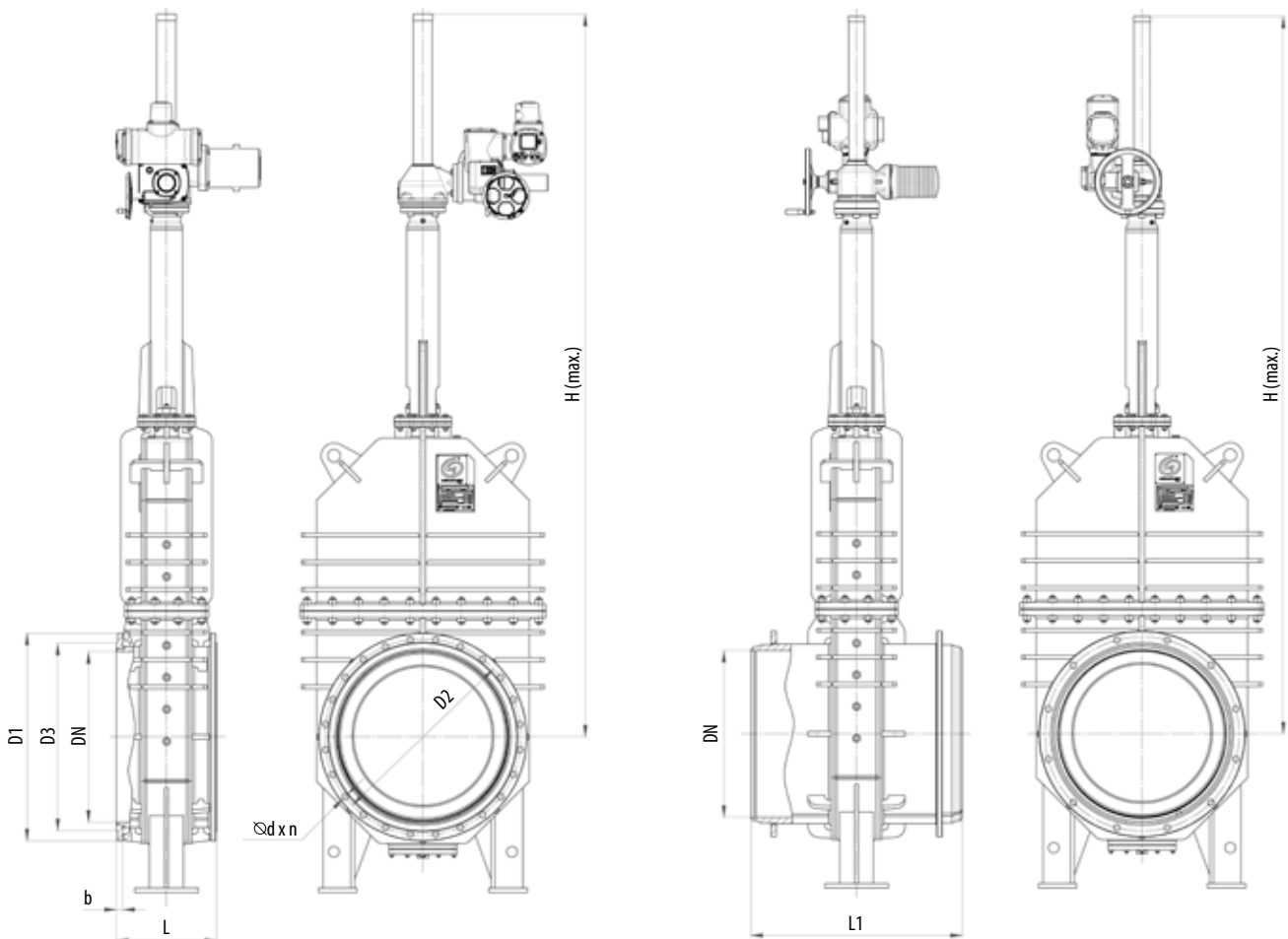
Position	Component	Carbon steel	Alloy steel	Carbon steel for low temperatures	Stainless steel
1	Body + overlay	1.0425 + 13Cr	1.5415 + 13Cr	1.0566 + 13Cr	1.4401
2	Bonnet	1.0425	1.5415	1.0566	1.4401
3	Wedge + overlay	1.0425 + 13Cr	1.5415 + 13Cr	1.0566 + 13Cr	1.4401 + 17Cr
5	Stem	1.4021 / 1.4923			1.4057
6	Bonnet bolts*	1.7218 / A193 B7	1.7709 / A193 B16	1.7225 / A320 L7	1.4401 / A193 B8
7	Bonnet nuts*	1.1191 / A194 2H	1.7709 / A194 4	1.7225 / A194 7	1.4401 / A194 8
8	Stem nut	42 3046 (Al-bronze) / A439 D2 (Ni-rezist)			
10	Gasket	Graphite with stainless steel insert			
11	Packing	Braided graphite cord + formed graphite rings			

* Other TRIMs according to API 600

** Equivalent or according to customer's request

DN 500-2000 • PN 2,5-25 • Tmax 400 °C (530 °C)
Body design: yoke gate valve

Connection: EN 1092-1 FLANGED ENDS
 EN 12 627 WELDED ENDS



PN 2,5

DN	D1	D2	D3	L	H (max.)*	b	Ød x n	kg	BW	
									L1	kg
500	645	600	570	350	2 450	30	22 x 20	850	700	990
600	755	705	670	390	2 850	30	26 x 20	1 040	800	1 190
700	860	810	775	430	3 250	30	26 x 24	1 250	900	1 490
800	975	920	880	470	3 650	30	30 x 24	1 540	1 000	1 890
900	1 075	1 020	980	510	4 050	30	30 x 24	1 990	1 100	2 150
1000	1 175	1 120	1 080	550	4 300	32	30 x 28	2 350	1 200	3 200
1200	1 375	1 320	1 280	630	5 100	35	30 x 32	3 250	1 400	4 090
1400	1 575	1 520	1 480	710	5 800	40	30 x 36	4 090	-	-
1600	1 790	1 730	1 690	790	6 600	45	30 x 40	5 300	-	-
1800	1 990	1 930	1 890	870	7 500	50	30 x 44	7 050	-	-
2000	2 190	2 130	2 090	950	8 200	55	30 x 48	9 500	-	-



DN 500-2000 • PN 2,5-25 • Tmax 400 °C (530 °C)
Body design: yoke gate valve

Connection: ☉ EN 1092-1 FLANGED ENDS
☼ EN 12 627 WELDED ENDS

PN 6

DN	D1	D2	D3	L	H (max.)*	b	Ød x n	kg	BW	
									L1	kg
500	645	600	570	350	2 450	30	22 x 20	850	700	990
600	755	705	670	390	2 850	30	26 x 20	1 040	800	1 150
700	860	810	775	430	3 250	30	26 x 24	1 250	900	1 490
800	975	920	880	470	3 650	30	30 x 24	1 540	1 000	1 890
900	1 075	1 020	980	510	4 050	30	30 x 24	1 990	1 100	2 150
1000	1 175	1 120	1 080	550	4 300	38	30 x 28	2 690	1 200	3 500
1200	1 405	1 340	1 295	630	5 100	45	33 x 32	3 500	1 400	4 390
1400	1 630	1 560	1 510	710	5 800	50	36 x 36	4 590	-	-
1600	1 830	1 760	1 710	790	6 600	50	36 x 40	6 200	-	-
1800	2 045	1 970	1 920	870	7 500	65	39 x 44	8 100	-	-
2000	2 265	2 180	2 125	950	8 200	80	42 x 48	10 190	-	-

PN 10

DN	D1	D2	D3	L	H (max.)*	b	Ød x n	kg	BW	
									L1	kg
500	670	620	585	700	2 450	30	26 x 20	1 050	700	1 010
600	780	725	685	800	2 850	35	30 x 20	1 250	800	1 190
700	895	840	800	900	3 300	40	30 x 24	1 890	900	2 750
800	1 015	950	905	1 000	3 700	45	33 x 24	2 400	1 000	2 120
900	1 115	1 050	1 005	1 100	4 100	50	33 x 28	3 090	1 100	2 790
1000	1 230	1 160	1 110	1 200	4 350	60	36 x 28	4 100	1 200	3 800
1200	1 455	1 380	1 330	1 400	5 200	75	39 x 32	5 300	1 400	4 950
1400	1 675	1 590	1 535	-	5 900	90	42 x 36	-	-	-
1600	1 915	1 820	1 760	-	6 700	100	48 x 40	-	-	-

PN 16

DN	D1	D2	D3	L	H (max.)*	b	Ød x n	kg	BW	
									L1	kg
500	715	650	610	700	2 500	45	33 x 20	1 190	700	1 100
600	840	770	725	800	2 900	50	36 x 20	1 390	800	1 290
700	910	840	795	900	3 400	55	36 x 24	2 250	900	2 050
800	1 025	950	900	1 000	3 750	65	39 x 24	3 090	1 000	2 690
900	1 125	1 050	1 000	1 100	4 150	70	39 x 28	4 050	1 100	3 700
1000	1 255	1 170	1 115	1 200	4 400	85	42 x 28	5 190	1 200	4 780
1200	1 485	1 390	1 330	1 400	5 300	105	48 x 32	6 850	1 400	7 390

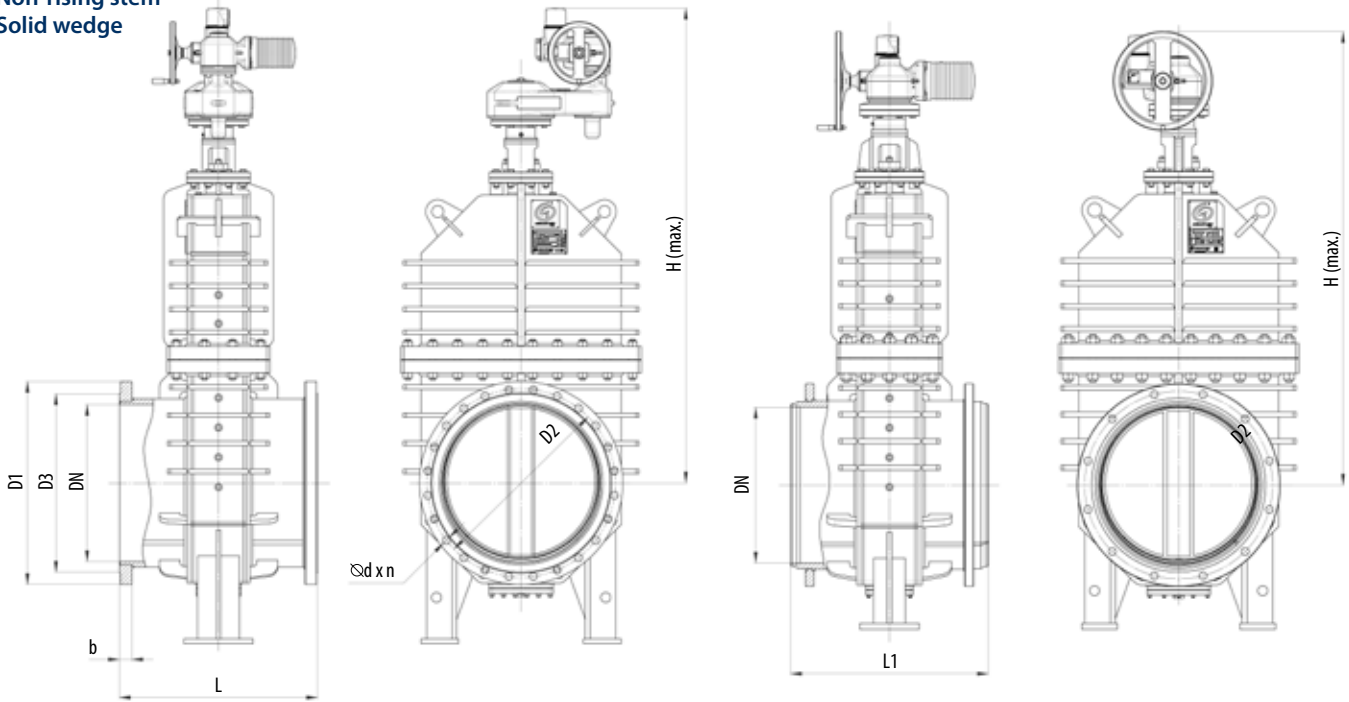
PN 25

DN	D1	D2	D3	L	H (max.)*	b	Ød x n	kg	BW	
									L1	kg
500	730	660	615	700	2 500	60	36 x 20	1 250	700	1 190
600	845	770	720	800	2 900	70	39 x 20	1 480	800	1 390
700	960	875	820	900	3 400	80	42 x 24	2 400	900	2 250
800	1 085	990	930	1 000	3 750	95	48 x 24	3 600	1 000	3 200
900	1 185	1 090	1 030	1 100	4 150	105	48 x 28	4 500	1 100	4 000
1000	1 320	1 210	1 140	1 200	4 400	120	56 x 28	5 790	1 200	5 150
1200	-	-	1 350	1 400	5 300	-	-	-	1 400	7 790

* H (max.) - Maximum height in standard operation design

DN 500-1200 • PN 10-25 • Tmax 250 °C
 Body design: bonnet gate valve
 Body, bonnet, wedge: fully welded
 Non-rising stem
 Solid wedge

Connection: EN 1092-1 FLANGED ENDS
 EN 12 627 WELDED ENDS



PN 10

DN	D1	D2	D3	L	H (max.)*	b	Ød x n	kg	BW	
									L1	kg
500	670	620	585	700	1 950	30	26 x 20	1 050	700	1 010
600	780	725	685	800	2 220	35	30 x 20	1 250	800	1 190
700	895	840	800	900	2 490	40	30 x 24	1 890	900	2 750
800	1 015	950	905	1 000	2 700	45	33 x 24	2 400	1 000	2 120
900	1 115	1 050	1 005	1 100	2 970	50	33 x 28	3 090	1 100	2 790
1 000	1 230	1 160	1 110	1 200	3 190	60	36 x 28	4 100	1 200	3 800
1 200	1 455	1 380	1 330	1 400	3 550	75	39 x 32	5 300	1 400	4 950

PN 16

DN	D1	D2	D3	L	H (max.)*	b	Ød x n	kg	BW	
									L1	kg
500	715	650	610	700	2 000	45	33 x 20	1 190	700	1 100
600	840	770	725	800	2 300	50	36 x 20	1 390	800	1 290
700	910	840	795	900	2 550	55	36 x 24	2 250	900	2 050
800	1 025	950	900	1 000	2 800	65	39 x 24	3 090	1 000	2 690
900	1 125	1 050	1 000	1 100	3 060	70	39 x 28	4 050	1 100	3 700
1 000	1 255	1 170	1 115	1 200	3 300	85	42 x 28	5 190	1 200	4 780
1 200	1 485	1 390	1 330	1 400	3 700	105	48 x 32	6 850	1 400	7 390

PN 25

DN	D1	D2	D3	L	H (max.)*	b	Ød x n	kg	BW	
									L1	kg
500	730	660	615	700	2 000	60	36 x 20	1 250	700	1 190
600	845	770	720	800	2 300	70	39 x 20	1 480	800	1 390
700	960	875	820	900	2 550	80	42 x 24	2 400	900	2 250
800	1 085	990	930	1 000	2 800	95	48 x 24	3 600	1 000	3 200
900	1 185	1 090	1 030	1 100	3 060	105	48 x 28	4 500	1 100	4 000
1 000	1 320	1 210	1 140	1 200	3 300	120	56 x 28	5 790	1 200	5 150
1 200	-	-	1 350	1 400	3 700	-	-	-	1 400	7 790

* H (max.) - Maximum height in standard operation design



DN 150-1200 • PN 2,5-100 • Tmax 450 °C

Body design: bonnet gate valve

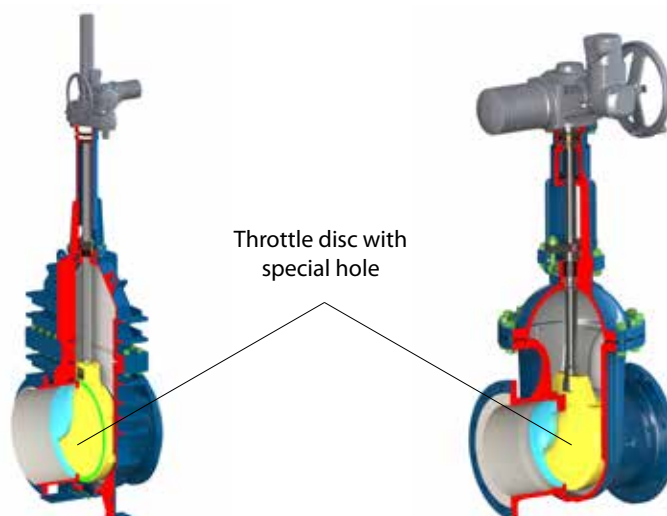
Body, bonnet, wedge: cast or fully welded

Rising stem

Control wedge

Connection: ☉ EN 1092-1 FLANGED ENDS

☼ EN 12 627 WELDED ENDS



Application

- Conventional and nuclear power engineering where a specified shape of the performance characteristic depending on the valve travel for different flow rates is required.
- Gas industry where pipings with different pressures are to be connected or where gas is to be discharged from the piping system in a defined way.
- Heat production and distribution where a defined quantity of the fluid is to be fed to the equipment in order to guarantee performance of the equipment.

Working medium

- water
- steam
- gases
- other fluids

Technical description

The control gate valves are valves used to control the flow of the service fluid which may flow in one direction. The control gate valves are not isolating valves. The design of control gate valves is based on the design of conventional gate valves. The control features of the gate valves are provided by the unique construction of the throttle plate, seats and guides. The throttle plate and the seats are equipped with special holes or grooves that overlap each other during the process of opening so that the regulating characteristic is guaranteed exactly in accordance with the customer's specification. The control gate valves made by ARMATURY Group are designed by means of sophisticated

computer programs for the performance characteristic of the gate valve to be in full conformance with requirements of the customer. The gate valves are made as cast or fully welded gate valve. Materials and main design and face-to-face/end-to-end dimensions of gate valves are identical to cast design with type designation S33.1 and for welded design with type S33.4.

Operation

- handwheel
- electric actuator
- pneumatic actuator
- remote operation

The gate valves can be equipped with a locking device.

Testing

The gate valves are subjected to the following tests performed with water:

- shell strength test
- shell tightness test
- seat tightness test and operability test according to EN 12266.
- other tests by agreement.

Installation

The gate valves may be installed into the piping in vertical or horizontal position. In case of gate valves equipped with an electric actuator or a pneumatic actuator, must you follow instructions of the manufacturer of actuators.

Production range

Type	PN	DN												
		150	200	250	300	350	400	500	600	700	800	900	1000	1200
S33.C	2,5							*	*	*	*	*	*	*
	6							*	*	*	*	*	*	*
	10							*	*	*	*	*	*	*
	16	*	*	*	*	*	*	*	*	*	*	*	*	*
	25	*	*	*	*	*	*	*	*	*	*	*	*	*
	40	*	*	*	*	*	*	*	*					
	63	*	*	*	*	*	*	*	*					
	100	*	*	*	*	*	*	*	*					

Application

Gate valves are shut-off valves. It is used especially in power engineering, chemical industry as well as other industries depending on material selection.

Working medium

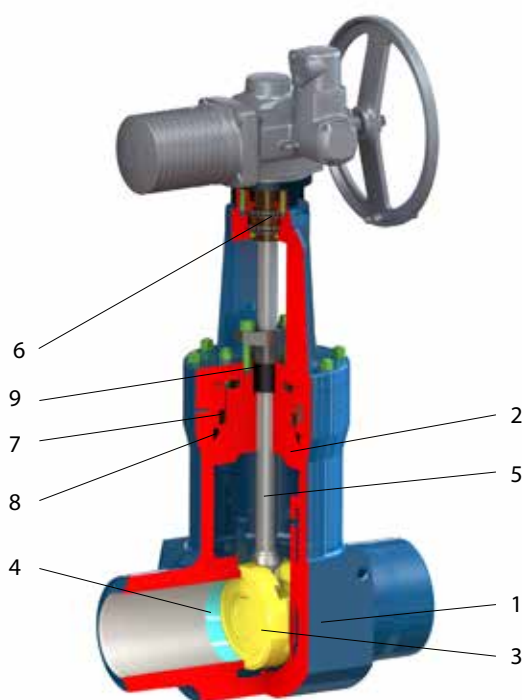
- water
- steam
- gas
- other fluids

Technical description

The body is a forging into which a flexible wedge is inserted through the yoke-type bonnet or through the pressure seal bonnet. The seating surfaces of the wedge are hard faced and proper seating of the wedge is provided for by precision-machined guides in the body. The seat rings are weld deposited in the body and hard faced as well. The bonnet and the stuffing box are sealed with special graphite gaskets and packing rings. The gate valves can be on request designed with pressure cavity released system against over pressurizing of body cavity. There is an option of drilling a hole on an input side of the disc, using diaphragm or safety valve or making a by-pass. Also upon request, the gate valve can be equipped with one to three bypass valves.

Connection to the piping

- **flanged ends** acc. to EN 1092-1, ISO 7005-1, GOST 33259-2015
- **welded ends** acc. to EN 12627



Operation

- manual (hand wheel)
- electric actuator
- pneumatic actuator
- actuator located out of the valve

Gate valves can be equipped with a locking device.

Testing

The gate valves are subjected to the following tests performed with water:

- shell strength test
- shell tightness test
- seat tightness test and operability test according to EN 12266
- other tests by agreement.

Installation

The gate valves may be installed into the piping in vertical or horizontal position. In case of gate valves equipped with an electric actuator or a pneumatic actuator, must you follow instructions of the manufacturer of actuators.

Position	Component
1	Body
2	Pressure seal bonnet
3	Wedge + overlay
4	Seat + overlay
5	Stem
6	Stem nut
7	Segmented ring
8	Gasket
9	Packing

Production range

Typ	PN	DN												
		50	65	80	100	125	150	200	250	300	350	400	500	600
S43.1	63	*	*	*	*	*	*	*	*	*	*			
	100	*	*	*	*	*	*	*	*	*	*			
S43.3	16	*	*	*	*	*	*	*	*	*	*	*		
	25	*	*	*	*	*	*	*	*	*	*	*		
	40	*	*	*	*	*	*	*	*	*	*	*		
	63	*	*	*	*	*	*	*	*	*	*	*		
	100	*	*	*	*	*	*	*	*	*	*	*		
S43.5	160		*	*	*	*	*	*	*	*	*	*	*	*
	250		*	*	*	*	*	*	*	*	*	*	*	*
	320		*	*	*	*	*	*	*	*	*	*	*	*
	400		*	*	*	*	*	*	*	*	*	*	*	*



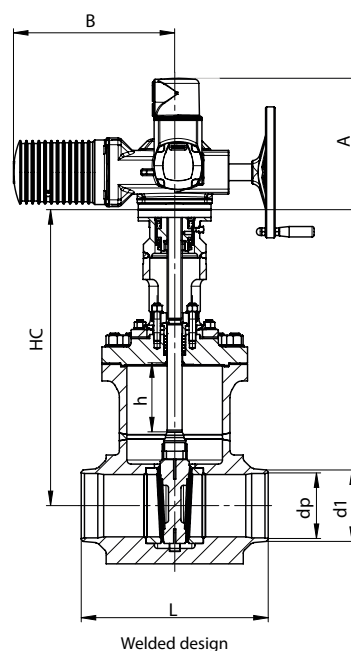
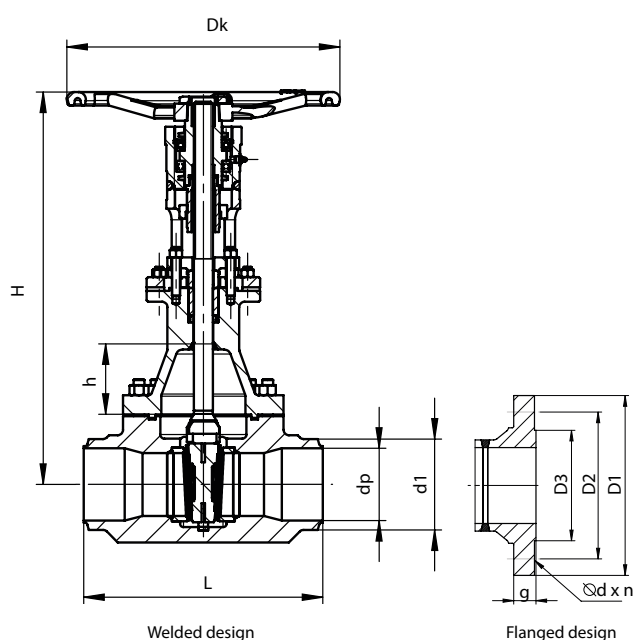
DN 50-350 • PN 63-100 • Tmax 600 °C (450 °C)

Body design: forged body, bolted bonnet

Gate valve can be supplied in cast design as well.

Rising stem

Connection: EN 1092-1, ISO 7005-1, GOST 33259-2015 FLANGED ENDS
 EN 12627 WELDED ENDS



Material acc. to EN

Component	T _{max} 450 °C	T _{max} 530 °C	T _{max} 560 °C	T _{max} 570 °C	T _{max} 600 °C
Body, bonnet, wedge	P250GH (1.0460)	16Mo3 (1.5415)	13CrMo4-5 (1.7335)	14MoV6-3 (1.7715)	11CrMo9-10 (1.7383)
Stem	X39CrMo17-1 (1.4122)				
Seat + overlay	1.0460 + Stellite	1.5415 + Stellite	1.7335 + Stellite	1.7715 + Stellite	1.7383 + Stellite
Wedge + overlay	1.0460 + Stellite	1.5415 + Stellite	1.7335 + Stellite	1.7715 + Stellite	1.7383 + Stellite
Packing ring	Graphite				

PN 63-100

DN	d1	dp		L	H	HC	HC	h	Dk	kg PN 63	kg PN 100
		PN 63	PN 100								
50	62	54		250	463	430	430	61	400	28,2	32,2
65	77	69		290	624	420	420	77	400	40,9	45,9
80	91	81		310	545	520	520	92	500	48,7	49,7
100	117	104		350	590	530	530	115	500	70,6	81,6
125	144	130,5	127	400	700	640	640	140	500	133,9	135,9
150	172	156,5	154	450	760	700	700	160	700	215,1	228,1
200	223	204,5	199,5	550	920	850	85	225	700	260,0	360,0
250	278	255	248,5	650	1180	980	980	270	850	440,2	591,4
300	329	301	295,5	750	1540	1450	1450	325	800	604,5	864,0
350	362		330	850	1395	1500	1500	355	630	814,6	963,8

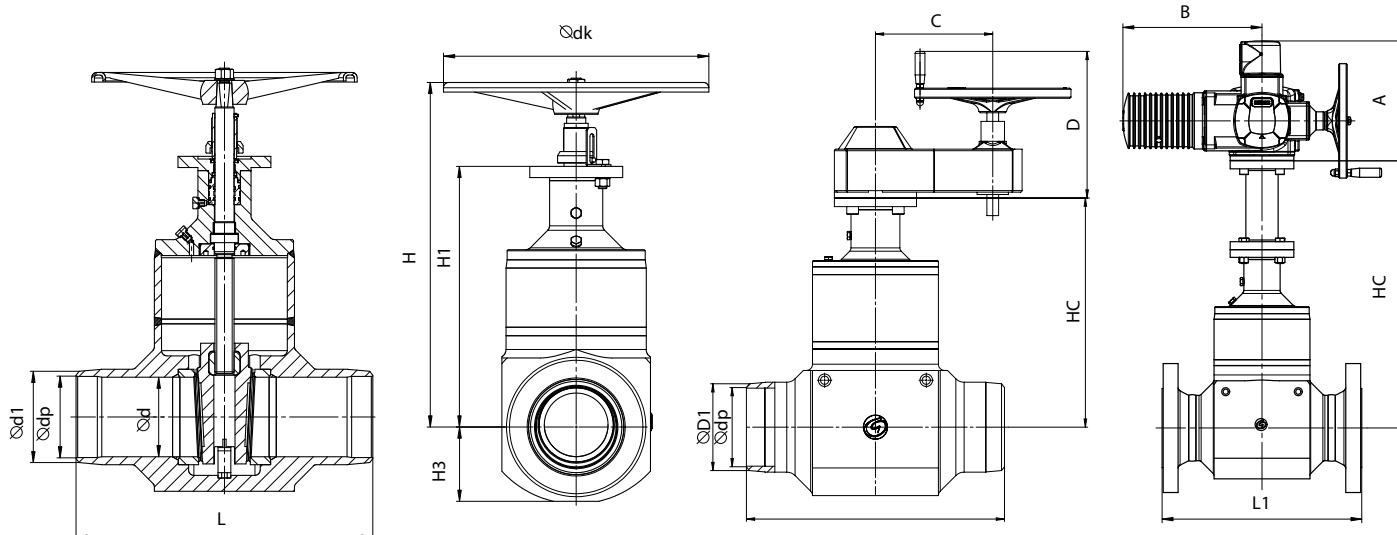
PN 63-100

Flanged ends														
DN	L	D3	PN 63						PN 100					
			D1		D2	Ød x n	g	kg	D1		D2	Ød x n	g	kg
			GOST	EN					GOST	EN				
50	250	102	175	180	135	22 x 4	26	39	195		145	26 x 4	30	43
65	290	122	200	205	160	22 x 8	26	56	220		170	26 x 8	34	61
80	310	138	210	215	170	22 x 8	28	62	230		180	26 x 8	36	63
100	350	162	250		200	26 x 8	30	97	265		210	30 x 8	40	108
125	400	188	295		240	30 x 8	34	164	310	315	250	33 x 8	40	166
150	450	218	340	345	280	33 x 12	36	265	350	355	290	33 x 12	44	278
200	550	285	405	415	345	36 x 12	42	335	430		360	36 x 12	52	437
250	650	345	470		400	36 x 16	46	498	500	505	430	39 x 12	60	692
300	750	410	530		460	36 x 16	52	677	585		500	42 x 16	68	1010
350	850	465	595	600	525	39 x 16	56	914	655		560	48 x 16	74	1158

Dimensions A and B depend on the particular actuator type.

DN 50-400 • PN 16-100 • Tmax 100 °C
Body design: fully welded gate valve
Non-rising stem

Connection: EN 12627 WELDED ENDS
 EN 1092-1, ISO 7005-1 FLANGED ENDS
(on request)



Material

Component	from - 46 °C to 100 °C	from - 46 °C to 100 °C	from - 46 °C to 100 °C
Body	A350 LF2	A350 LF2 Re340MPa	A350 LF2 Re340MPa
Extension	A350 LF2	A350 LF2 Re340MPa	A350 LF2 Re340MPa
Flanges	A350 LF2	A350 LF2 Re340MPa	A694 F52
Bonnet	A350 LF2	A350 LF2 Re340MPa	A350 LF2 Re340MPa
Wedge + overlay	A350 LF2 + Stellite	A350 LF2 + Stellite	A350 LF2 + Stellite
Stem nut	bronz	bronz	bronz
Seat + overlay	A350 LF2 + Stellite	A350 LF2 + Stellite	A350 LF2 + Stellite
Stem	1.4923	1.4923	1.4923
Stem sealing	1.4021	1.4021	1.4021
Actuator flange	1.0570	1.0570	1.0570
Vent plug	1.4021	1.4021	1.4021
Position indicator	1.0570	1.0570	1.0570

PN 16-100

S43.3 - welded ends, with handwheel															
DN	d	d1	dp	H	H1	H2	HC	L	L1 PN 16	L1 PN 100	Dk	kg	C	D	ISO 5210
50	49	60,3	Acc. to order	340	250	65	380	292	250	300	250	41	-	-	F10
80	74	114,3		382	280	87	440	356	310	380	320	56	-	-	F14
100	100	139,7		510	371	120	590	432	350	430	400	72	-	-	F14
150	150	219,1		650	491	140	736	559	450	550	500	169	-	-	F14
200	201	273		748	586	175	840	660	550	650	630	312	-	-	F16
250	252	323,9		1305	740	210	895	787	650	775	400	485	360	410	F25
300	303	406,4		1380	850	265	970	838	750	900	400	670	360	410	F25
400	385	457		1524	980	320	1100	991	950	1150	500	1250	380	424	F30

Dimensions A and B depend on the particular actuator type.

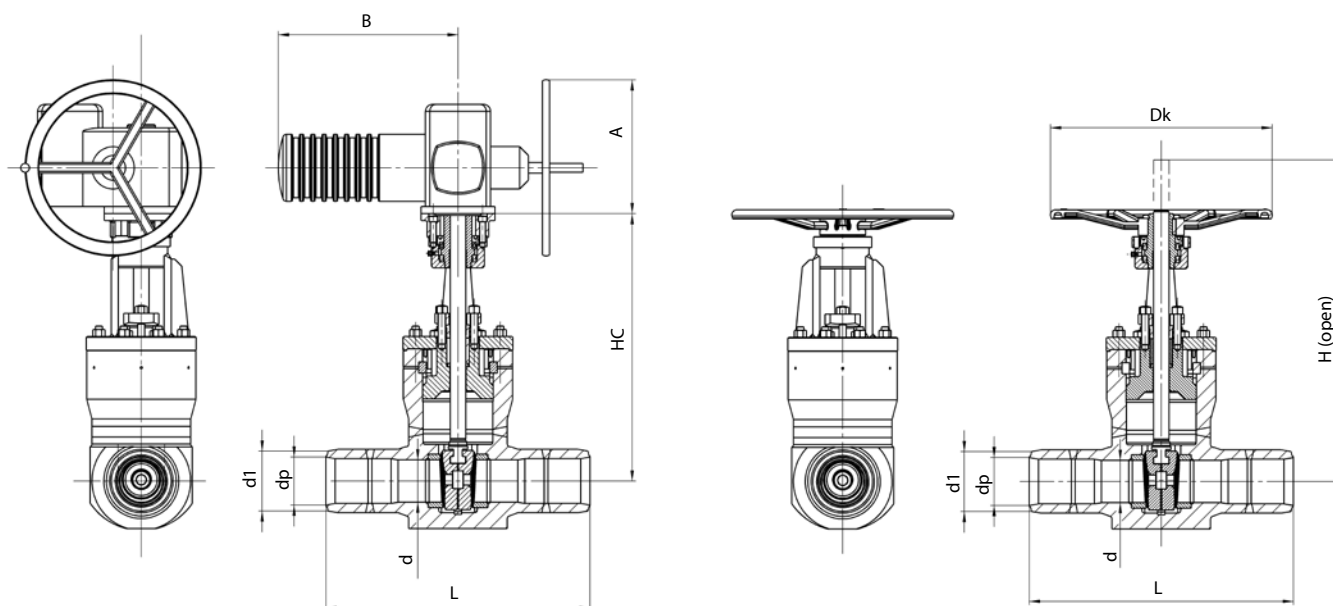
Note: DN 250 up to DN 400 are supplied only with gear and handwheel.

Weight [kg] is only approximate, depending on the actuator type.



DN 65-400 • PN 160-400 • T_{max} 650 °C (450 °C)
Body design: forged body, pressure seal bonnet
Rising stem

Connection:  EN 12627 WELDED ENDS
 EN 1092-1, ISO 7005-1 FLANGED ENDS
(on request)



Material acc. to EN

Component	T _{max} 450 °C	T _{max} 530 °C	T _{max} 570 °C	T _{max} 570 °C	T _{max} 600 °C	T _{max} 450 °C	T _{max} 650 °C
Body	P250GH (1.0460)	16Mo3 (1.5415)	13CrMo4-5 (1.7335)	14MoV6-3 (1.7715)	11CrMo9-10 (1.7383)	15NiCuMoNb5-6-4 (1.6368)	X10CrMoVNb9-1 (1.4903)
Pressure seal bonnet	1.0460	1.5415	1.7335	1.7715	1.7380	1.6368	1.4903
Wedge + overlay	1.0460 + Stellite	1.5415 + Stellite	1.7335 + Stellite	1.7715 + Stellite	1.7380 + Stellite	1.6368 + Stellite	1.4903 + Stellite
Seat + overlay	1.0460 + Stellite	1.5415 + Stellite	1.7335 + Stellite	1.7715 + Stellite	1.7380 + Stellite	1.6368 + Stellite	1.4903 + Stellite
Stem	X22CrMoV12-1 (1.4923)						
Stem nut	Bronze 42 3046						
Segmented ring	1.7715					1.6368	1.4903
Gasket	Pressed graphite						
Packing	Pressed graphite						

PN 160-400

DN/d	d1*	dp	L *	HC	kg operation free	Top flange	H (open)	Dk	kg with handwheel
65/50	77	Acc. to order	360	425	47, 49	F10, F14	490	400	48
80/75	90		450	550	105	F14	640	400	105
100/75	115		450	550	107	F14	640	400	106
125/110	141		500	696	244	F14	850	500	250
150/110	170		550	696	255, 262	F14, F16	850	500	254
175/125	180		650	769	317, 325	F14, F16	920	630	326
175/150	196		650	840	361, 372	F14, F16	1000	630	380
200/150	222		650	840	437, 448	F14, F16	1000	630	456
225/175	248		650	900	511, 590	F16, F25	1080	800	528
250/200	276		800	1120	850, 880	F16, F25	1300	800	840
250/225	303		900	1160	1140	F25	1350	F25	1150
300/225	325		900	1160	1170	F25	1350	F25	1180
300/250	325		1000	1330	1500, 1530	F25, F30	1540	F25, F30	1500
350/275	359		1000	1380	1700	F30	1680	F30	1700
400/300	411		1200	1550	2050	F30	1840	F30	2050
500/400	516		1350	1950	4500	F35		F35	
600/500 PN 250	619		1473	2115	6010	F40		F40	
600/550 PN 160	619		1473	2246	6440	F40		F40	

* Dimensions d1 and L can be adjusted acc. to customer request.
Dimensions A and B depend on the particular actuator type.

Application

- Conventional and nuclear power engineering where a specified shape of the performance characteristic depending on the valve travel for different flow rates is required.
- Gas industry where piping with different pressures is to be connected or where gas is to be discharged from the piping system in a defined way.
- Heat production and distribution where a defined quantity of the fluid is to be fed to the equipment in order to guarantee performance of the equipment.

Working medium

- water
- steam
- gas
- other fluids

Technical description

The control gate valves are valves used to control the flow of the service fluid which may flow in either direction. The control gate valves are not isolating valves. The design of control gate valves is based on the design of conventional gate valves. The control features of the gate valves are provided by the unique construction of the throttle plate, seats and guides. The throttle plate and the seats are equipped with special holes or grooves that overlap each other during the process of opening so that the regulating characteristic is guaranteed exactly in accordance with the customer's specification. The control gate valves made by ARMATURY Group are designed by means of sophisticated computer programs and the throttling components of each gate valve have holes of different shapes for the performance characteristic of the gate valve to be in full conformance with requirements of the customer.

Body material

- Forged alloy and carbon steel
(1.0460, 1.5415, 1.7335, 1.7715, 1.7380, 1.6368, 1.4903)

Operation

- manual (hand wheel)
 - electric actuator
 - pneumatic actuator
 - actuator located out of the valve
- Gate valves can be equipped with a locking device.

Testing

The gate valves are subjected to the following tests performed with water:

- shell strength test
- shell tightness test
- seat tightness test and operability test according to EN 12266
- other tests by agreement.

Connection to the piping

- **flanged ends** acc. to EN 1092-1, ISO 7005-1, GOST 33259-2015
- **welded ends** acc. to EN 12627

Installation

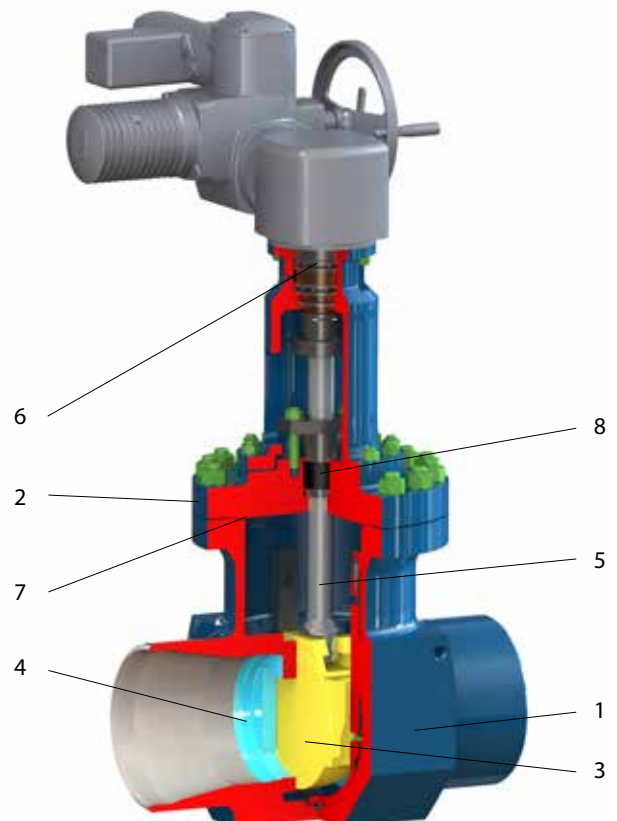
Gate valves may be installed in any position

Advantages

- low pressure loss which brings power savings of approximately 500 MWh annually in comparison with a DN 150 PN 250 control valve.
- use of special sealing material which meets the requirements of "Nuclear Spec. D50YP12 Rev. 2", TA Luft and VDI 2440.

DN 150-600 • PN 150-600 • Tmax 600 °C

Position	Component
1	Body
2	Bonnet
3	Wedge + overlay
4	Seat + overlay
5	Stem
6	Stem nut
7	Segmented ring
8	Gasket



Application

Gate valves are isolating valves designed for full closing or opening of working media flow. If the gate valves are used for regulating or throttling purposes, the manufacturer does not guarantee tightness of the gate valves.

Working medium

- water
 - non-corrosive liquids
 - steam
 - air
 - gases of group 1 and 2
 - petroleum and petroleum products
- The service fluids shall not contain rough impurities.

Technical description

The gate valve is an outside-screw-and-yoke, with flexible or solid wedge, rising or non-rising stem. The body and the bonnet are made of castings and are connected by a flanged joint. The seating surfaces of the seats and the wedge are made in compliance with API 600. The seat rings are welded into the body. The gate valves are equipped with a back seat. The gate valves are a bi-directional sealing valves. The body-bonnet joint and the packing chamber are sealed with asbestos-free gasket and packing which guarantee a long life service. The requirement for an automatic body cavity pressure relief shall be specified in the purchase order. Pressure relief can be achieved by:

- drilling a hole through one disc of the wedge,
- special valve incorporated into the wedge,
- external bypass.

TA-Luft design on request.

Connection to the piping

- **flanged ends** - according to ASME B16.5 a B16.47, face-to-face dimensions are according to ASME B16.10
- **welded ends** - according to ASME B16.25

Operation

The gate valves are delivered with a handwheel, a manual bevel gear, an electric actuator or bare stem ready for connection to an actuator. The standard connecting dimensions for connection to a manual gear or an electric actuator meet the requirements of ISO 5210.

Accessories

The gate valves can be equipped with the following accessories:

- drain valve,
- air-vent valve,
- by-pass valves,
- stand for remote control, including chains and chain wheels,
- vent plugs,
- gland packing „live loading“.

Testing

The gate valves are subjected to the following tests performed with water:

- shell strength test
- shell tightness test
- operability test according to API 598
- other tests by agreement

Installation

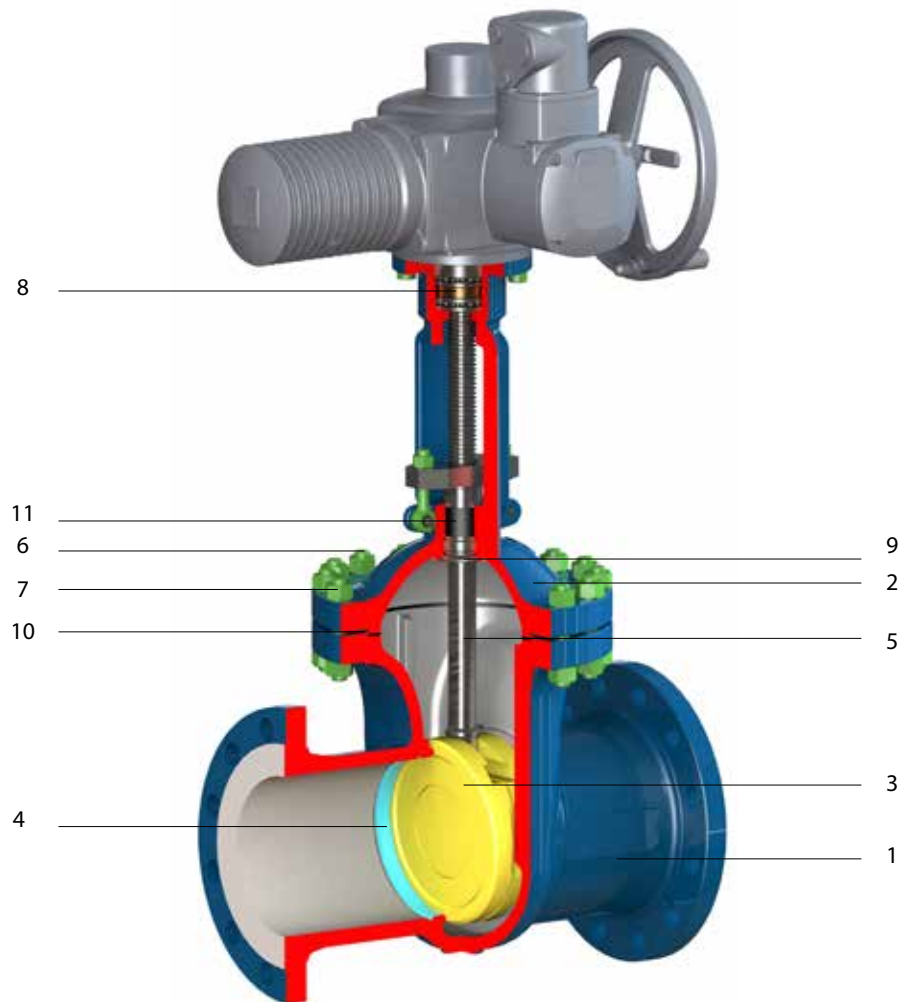
The gate valves may be installed into the piping in vertical or horizontal position. In case of gate valves equipped with an electric actuator or a pneumatic actuator, must you follow instructions of the manufacturer of actuators.

Production range

Type	Class	NPS																					
		2	2,5	3	4	6	8	10	12	14	16	18	20	24	26	28	30	32	34	36	40	42	48
S33.1	150	*	*	*	*	*	*	*	*	*	*	*	*										
	300	*	*	*	*	*	*	*	*	*	*	*	*										
	600	*	*	*	*	*	*	*	*	*	*	*	*										
S33.4	150											*	*	*	*	*	*	*	*	*	*	*	*

NPS 2-24 • Class 150-600 • Tmax 425 °C (595 °C)
Body design: yoke gate valve
Body, bonnet, wedge: cast
Rising stem
Flexible wedge

Connection:  **ASME B16.5 FLANGED ENDS**
 **ASME B16.25 WELDED ENDS**



Material acc. to ASTM

Position	Component	Carbon steel	Alloy steel	Carbon steel for low temperatures	Stainless steel
1	Body	A216 WCB	A217 WC6	A352 LCB	A351 CF8M
2	Bonnet	A216 WCB	A217 WC6	A352 LCB	A351 CF8M
3	Wedge + overlay *	A216 WCB + 13Cr	A217 WC6 + Stellite 6	A352 LCB + F304	A351 CF8M
4	Seat + overlay *	A105 + Stellite 6	A182 F11 + Stellite 6	A350 LF2 + Stellite 6	A182 F316
5	Stem	A182 F6a	A182 F6a	A182 F304	A182 F316
6	Bonnet bolts**	A193 B7	A193 B16	A320 L7	A193 B8
7	Bonnet nuts**	A194 2H	A194 4	A194 7	A194 8
8	Stem nut	A439 D2 (Ni-rezist), Al-bronze			
9	Back seat	A182 F6a / A276 410T		A182 F304	A182 F316
10	Gasket	Graphite with stainless steel insert			
11	Packing	Pressed graphite			

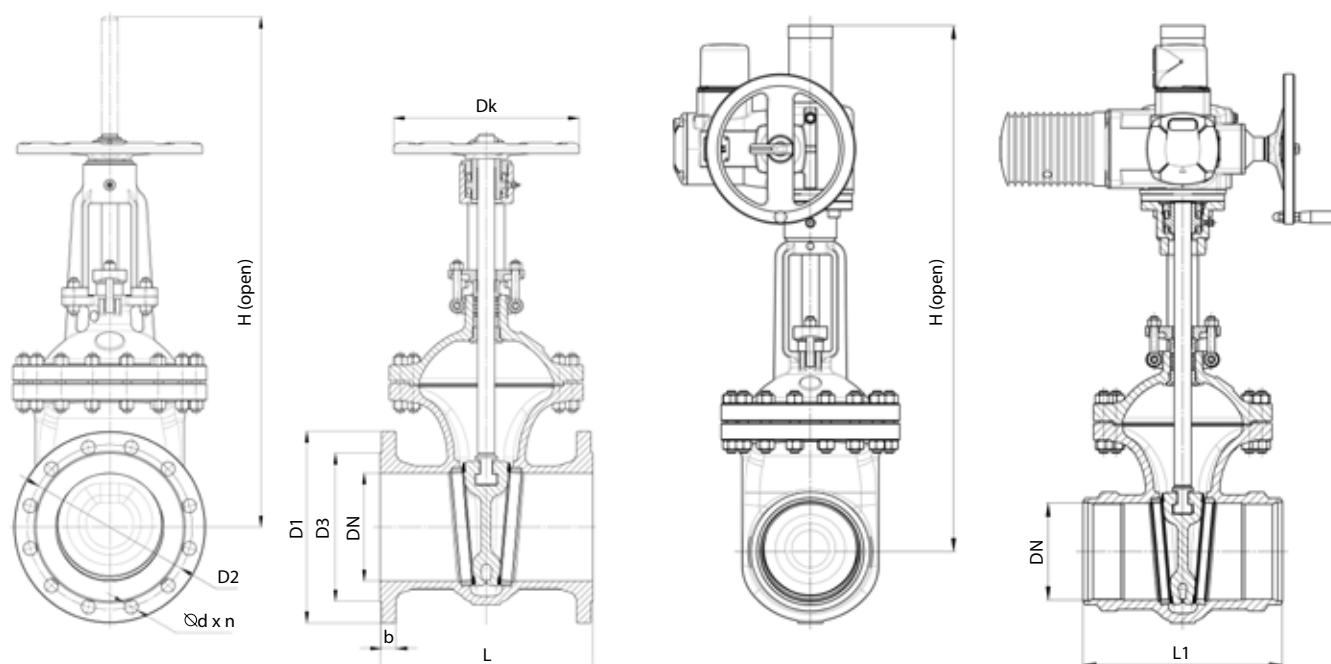
* Other TRIMs according to API 600

** Equivalent or according to customer's request



NPS 2-24 • Class 150-600 • Tmax 425 °C (595 °C)
Body design: yoke gate valve

Connection: ☉ ASME B16.5 FLANGED ENDS
☼ ASME B16.25 WELDED ENDS



Class 150

NPS	D1	D2	D3	L	H (open)	H (max.)*	Dk	b	Ød x n	kg	BW**	
											L1	kg
2	150	120,7	92,1	178	397	645	200	14,3	19,1 x 4	18	216	18
2,5	180	139,7	104,8	190	435	660	250	15,9	19,1 x 4	26	241	28
3	190	152,4	127	203	497	710	250	17,5	19,1 x 4	34	282	30
4	230	190,5	157,2	229	585	775	250	22,3	19,1 x 8	52	305	50
6	280	241,3	215,9	267	765	920	350	23,9	22,4 x 8	88	403	85
8	345	298,5	269,9	292	973	1130	350	27	22,4 x 8	144	419	128
10	405	362	323,8	330	1160	1270	400	28,6	25,4 x 12	197	457	220
12	485	431,8	381	356	1362	1370	450	30,2	25,4 x 12	298	502	310
14	535	476,3	412,8	381	1520	1550	500	33,4	28,6 x 12	406	572	450
16	595	539,8	469,9	406	1725	1780	560	35	28,6 x 16	524	610	550
18	635	577,9	533,4	432	1930	1980	560	38,1	31,8 x 16	626	660	700
20	700	635	584,2	457	2160	2220	610	41,3	31,8 x 20	789	711	910
24	815	749,3	692,2	508	2540	2600	610	46,1	35 x 20	1033	813	1130

* H (max.) - Maximum height in standard operation design

** Buttweld ends with forged nipples on request



NPS 2-24 • Class 150-600 • Tmax 425 °C (595 °C)
Body design: yoke gate valve

Connection: ASME B16.5 FLANGED ENDS
 ASME B16.25 WELDED ENDS

Class 300

NPS	D1	D2	D3	L	H (open)	H (max.)*	Dk	b	Ød x n	kg	BW**	
											L1	kg
2	165	127	92,1	216	422	670	200	20,7	19,1 x 8	24	216	19
2,5	190	149,2	104,8	241	446	695	250	23,9	22,4 x 8	31	241	29
3	210	168,3	127	282	512	725	250	27	22,4 x 8	52	282	38
4	255	200	157,2	305	603	790	250	30,2	22,4 x 8	76	305	57
6	320	269,9	215,9	403	804	955	350	35	22,4 x 12	146	403	118
8	380	330,2	269,9	419	1002	1170	400	39,7	25,4 x 12	218	419	183
10	445	387,4	323,8	457	1229	1345	400	46,1	28,6 x 16	352	457	278
12	520	450,8	381	502	1479	1550	460	49,3	31,8 x 16	460	502	406
14	585	514,4	412,8	762	1630	1680	560	52,4	31,8 x 20	857	762	565
16	650	571,5	469,9	838	1815	1855	460	55,6	35 x 20	1172	838	728
18	710	628,6	533,4	914	2000	2030	460	58,8	35 x 24	1281	914	806
20	775	685,8	584,2	991	2220	2230	560	62	35 x 24	1498	991	1231
24	915	812,8	692,2	1143	2620	2640	610	68,3	41,3 x 24	2282	1143	1890

Class 600

NPS	D1	D2	D3	L	H (open)	H (max.)*	Dk	b	Ød x n	kg	BW**	
											L1	kg
2	165	127	92,1	292	420	630	250	25,4	19,1 x 8	46	292	31
2,5	190	149,2	104,8	330	470	670	300	28,6	22,4 x 8	62	330	57
3	210	168,3	127	356	525	720	300	31,8	22,4 x 8	72	356	65
4	275	215,9	157,2	432	620	820	350	38,1	25,4 x 8	128	432	87
6	355	292,1	215,9	559	715	900	450	47,7	28,6 x 12	216	559	169
8	420	349,2	269,9	660	815	1170	500	55,6	31,8 x 12	413	660	375
10	510	431,8	323,8	787	1115	1270	640	63,5	35 x 16	754	787	604
12	560	489	381	838	1280	1460	680	66,7	35 x 20	981	838	859
14	605	527	412,8	889	1550	1750	610	69,9	38,1 x 20	1316	889	1154
16	685	603,2	469,9	991	1665	1900	610	76,2	41,3 x 20	1672	991	1530
18	745	654	533,4	1092	1820	2020	640	82,6	44,5 x 20	2780	1092	2282
20	815	723,9	584,2	1194	2235	2150	700	88,9	44,5 x 24	3203	1194	2650
24	940	838,2	692,2	1397	2570	2650	750	101,6	50,8 x 24	4069	1397	3340

* H (max.) - Maximum height in standard operation design

** Butt-welded ends with forged nipples on request





NPS 20-48 • Class 150 • Tmax 425 °C (595 °C)

Body design: yoke gate valve

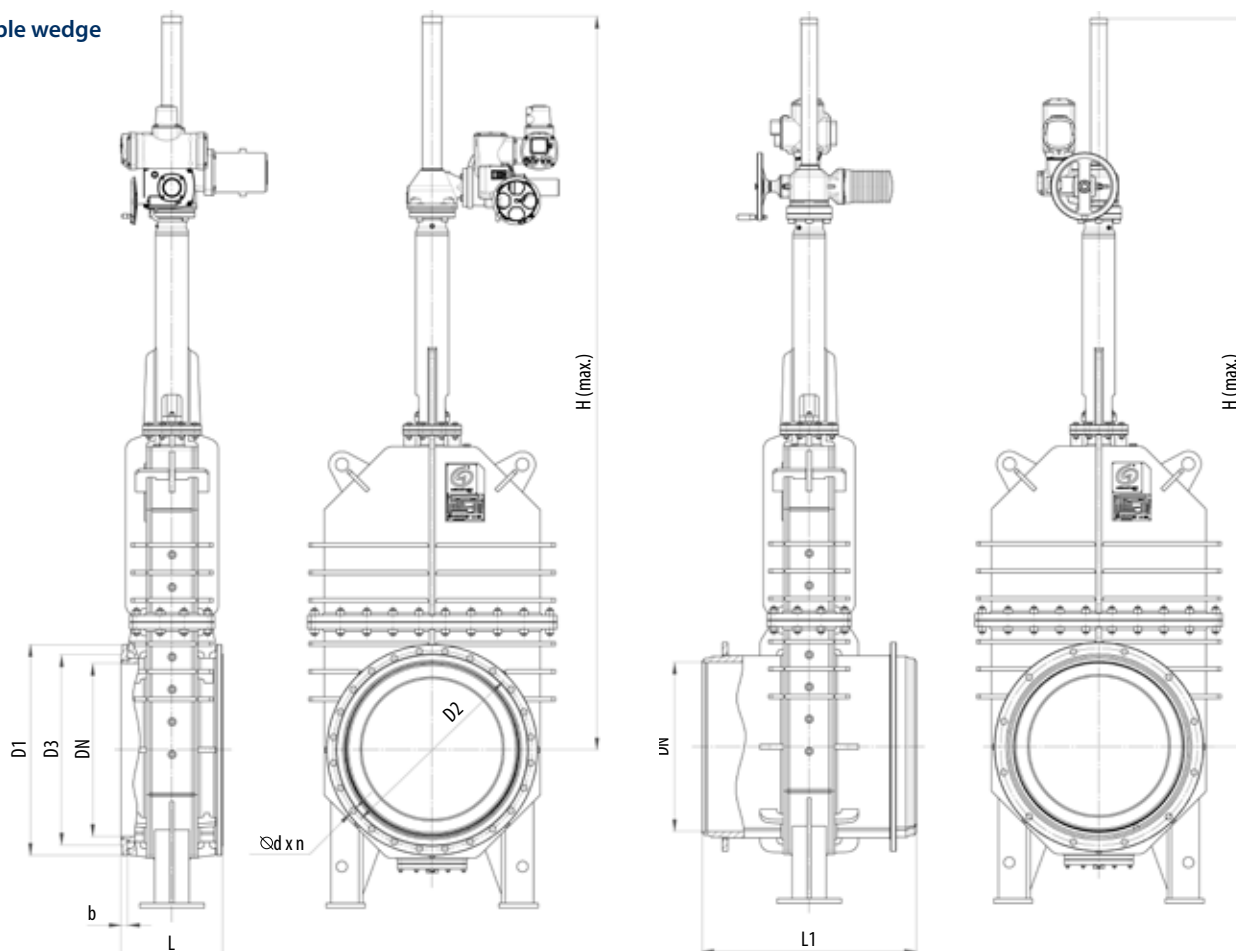
Body, bonnet, wedge: fully welded

Rising stem

Solid / flexible wedge

Connection: ☉ ASME B16.5, ASME B16.47 FLANGED ENDS

☼ ASME B16.25 WELDED ENDS



Material

Position	Component	Carbon steel	Alloy steel	Carbon steel for low temperatures	Stainless steel
1	Body + overlay	A516 60 + 13Cr	A387 11 + 13Cr	A350 LF2 + 13Cr	A240 316
2	Bonnet	A516 60	A387 11	A350 LF2	A240 316
3	Wedge + overlay	A516 60 + 13Cr	A387 11 + 13Cr	A350 LF2 + 13Cr	A240 316 + 17Cr
5	Stem	1.4021 / A182 F6a			1.4057 / A182 F431
6	Bonnet bolts*	A193 B7	A193 B16	A320 L7	A193 B8
7	Bonnet nuts*	A194 2H	A194 4	A194 7	A194 8
8	Stem nut	42 3046 (Al-bronze) / A439 D2 (Ni-rezist)			
10	Gasket	Graphite with stainless steel insert			
11	Packing	Braided graphite cord + formed graphite rings			

Class 150

NPS	D1	D2	D3	L	H (max.)*	b	Ød x n	kg	BW	
									L1	kg
20	700	635	584,2	457	2 500	50	32 x 20	1 250	711	1 240
24	815	749,3	692,2	508	2 900	60	35 x 20	1 450	813	1 390
26	870	806,4	749	559	3 150	65	35 x 24	1 790	864	1 500
28	925	863,6	800	610	3 400	70	35 x 28	2 380	914	2 100
30	985	914,4	857	610	3 600	75	35 x 28	2 840	914	2 660
32	1 060	977,9	914	660	3 750	80	41,3 x 28	3 400	965	2 970
34	1 110	1 028,7	965	711	3 950	85	41,3 x 32	3 820	1 000	3 610
36	1 170	1 085,8	1 022	711	4 150	90	41,3 x 32	4 350	1 016	3 900
40	1 290	1 200,2	1 124	762	4 400	100	41,3 x 36	5 500	1 067	4 990
42	1 345	1 257,3	1 194	787	4 700	110	41,3 x 36	6 350	1 118	5 880
48	1 510	1 422,4	1 359	914	5 300	130	41,3 x 44	8 400	1 270	7 400

* H (max.) - Maximum height in standard operation design

Application

Gate valves are shut-off valves. It is used especially in power engineering, chemical industry as well as other industries depending on material selection.

Working medium

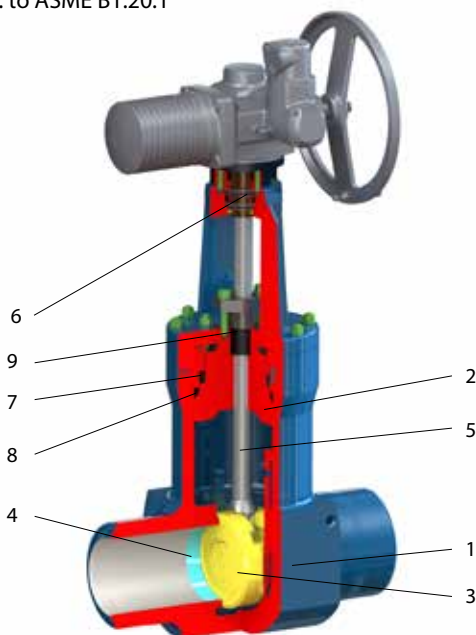
- water
- steam
- gas
- other fluids

Technical description

The body is a forging into which a flexible wedge is inserted through the yoke-type bonnet or through the pressure seal bonnet. The seating surfaces of the wedge are hard faced and proper seating of the wedge is provided for by precision-machined guides in the body. The seat rings are weld deposited in the body and hard faced as well. The bonnet and the stuffing box are sealed with special graphite gaskets and packing rings. The gate valves can be on request designed with pressure cavity released system against over pressurizing of body cavity. There is an option of drilling a hole on an input side of the disc, using diaphragm or safety valve or making a by-pass. Also upon request, the gate valve can be equipped with one to three bypass valves.

Connection to the piping

- **flanged ends** acc. to ASME B16.5
- **welded ends** acc. to ASME B16.25
- **socked welding ends** acc. to ASME B16.11
- **threaded ends** acc. to ASME B1.20.1



Operation

- manual (hand wheel)
 - electric actuator
 - pneumatic actuator
 - actuator located out of the valve
- Gate valves can be equipped with a locking device.



Testing

The gate valves are subjected to the following tests performed with water:

- shell strength test
- shell tightness test
- operability test
- other tests by agreement.

Installation

Gate valves may be installed in any position.

Position	Component
1	Body
2	Pressure seal bonnet
3	Wedge + overlay
4	Seat + overlay
5	Stem
6	Stem nut
7	Segmented ring
8	Gasket
9	Packing

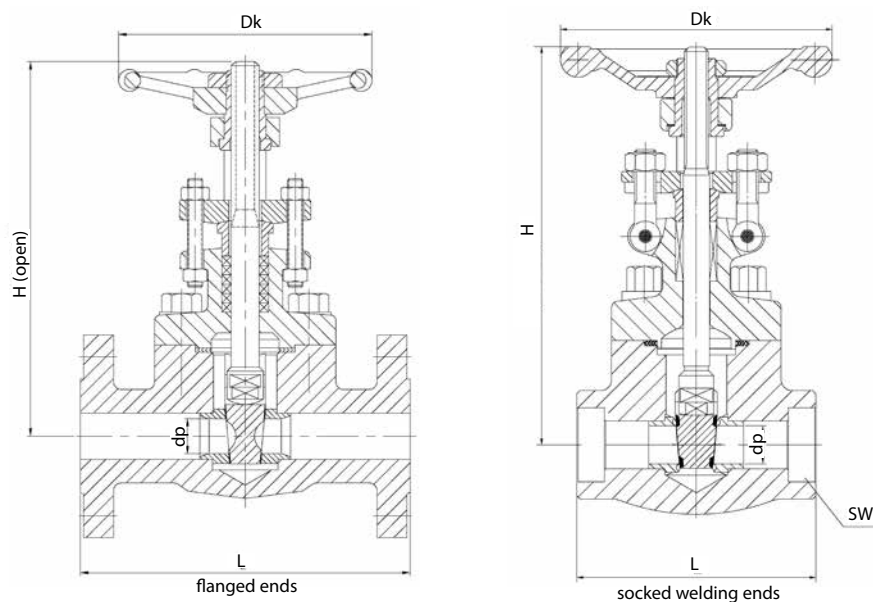
Production range

Type	Class	NPS													
		1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16
S43.1	150	.	.	.	.	.				
	300	.	.	.	.	.				
	600	.	.	.	.	.				
	800	.	.	.	.	.				
	900	.	.	.	.	.				
	1500	.	.	.	.	.				
S43.5	900	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	1500	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	2500	.	.	.	.	.	.	.	.	.	.	.	.	.	.



NPS ½-2 • Class 150-1500 • Tmax 595 °C
Body design: forged body, bolted bonnet

Connection:  ASME B16.5 FLANGED ENDS
 ASME B16.11 SOCKED WELDING ENDS
 ASME B1.20.1 THREADED ENDS (on request)



Material acc. to ASTM

Position	Component	Tmax 450 °C	Tmax 538 °C	Tmax 595 °C
1	Body	A105	A182 F316	A182 F22
2	Bonnet	A105	A182 F316	A182 F22
3	Wedge + overlay*	A276 410T	A182 F316 + Stellite	A182 F22 + Stellite
4	Seat + overlay*	SS410 + Stellite	A182 F316 + Stellite	A182 F22 + Stellite
5	Stem	A182 F6	A182 F316	A182 F6
6	Bolt	A193 B7	A193 B8	A193 B7

*Other TRIMs according to API 600

Class 150

NPS	Flanged ends					Socketed welding ends / SW				
	d	L	H	Dk	kg	d	L	H	Dk	kg
1/2	10,5	108	180	100	3,40	10,5	79	161	100	2,20
3/4	13	117	182	100	3,80	13,5	92	163	100	2,40
1	17	127	216	125	5,90	17	111	196	125	4,20
1 1/2	28	165	246	160	9,90	29	120	251	160	6,20
2	36	178	283	180	14,70	36,5	140	290	180	10,50

Class 300

NPS	Flanged ends					Socketed welding ends / SW				
	d	L	H	Dk	kg	d	L	H	Dk	kg
1/2	10,5	140	165	100	3,70	10,5	79	161	100	2,20
3/4	13	152	169	100	4,90	13,5	92	163	100	2,40
1	17	165	194	125	7,00	17	111	196	125	4,20
1 1/2	28	190	246	160	12,20	29	120	251	160	6,20
2	36	216	283	180	16,90	36,5	140	290	180	10,50



NPS ½-2 • Class 150-1500 • Tmax 538 °C
Body design: forged body, bolted bonnet

Connection:  ASME B16.5 FLANGED ENDS
 ASME B16.11 SOCKED WELDING ENDS
 ASME B1.20.1 THREADED ENDS (on request)

Class 600

NPS	Flanged ends					Socked welding ends / SW				
	d	L	H	Dk	kg	d	L	H	Dk	kg
1/2	10,5	165	165	100	4,10	10,5	79	161	100	2,20
3/4	13	190	169	100	5,50	13,5	92	163	100	2,40
1	17	216	194	125	8,00	17	111	196	125	4,20
1 1/2	28	241	246	160	10,80	29	120	251	160	6,20
2	36	292	283	180	20,60	36,5	140	290	180	10,50

Class 800

NPS	Socked welding ends / SW				
	d	L	H	Dk	kg
1/2	10,5	79	161	100	2,20
3/4	13,5	96	163	100	2,40
1	17	111	196	125	4,20
1 1/2	29	120	251	160	6,60
2	36,5	140	290	180	10,50

Class 900

NPS	Flanged ends					Socked welding ends / SW				
	d	L	H	Dk	kg	d	L	H	Dk	kg
1/2	10,5	216	191	125	6,90	10,5	111	191	125	4,80
3/4	12,5	229	192	125	7,00	13,5	111	192	125	4,90
1	17	254	219	160	15,10	17,5	120	219	160	5,90
1 1/2	28	305	296	200	21,90	29	140	296	180	11,20
2	36	371	316	220	27,60	36,5	178	316	200	17,20

Class 1500

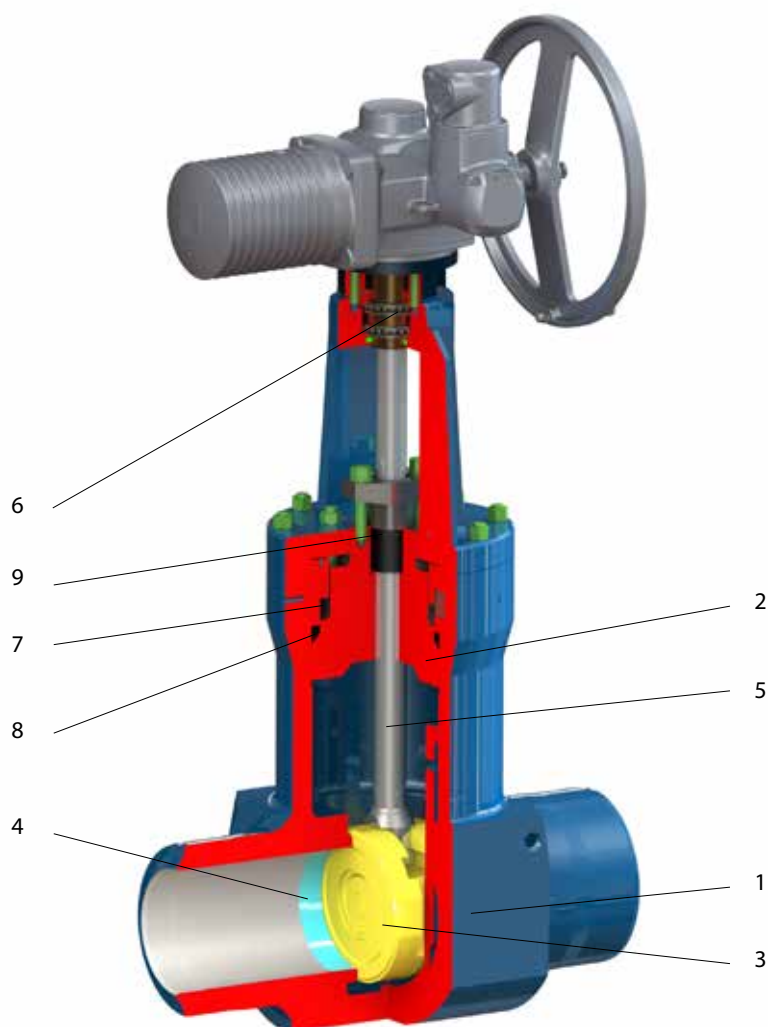
NPS	Flanged ends					Socked welding ends / SW				
	d	L	H	Dk	kg	d	L	H	Dk	kg
1/2	10,5	216	191	125	7,00	10,5	111	191	125	4,90
3/4	12,5	229	192	125	7,10	13,5	111	192	125	5,00
1	17	254	219	160	15,30	17,5	120	219	160	6,00
1 1/2	28	305	296	200	22,10	29	140	296	180	11,40
2	36	371	316	220	27,80	36,5	178	316	200	17,50

*Class 2500 on request



NPS 2-16 • Class 900-2500 • Tmax 650 °C
Body design: forged body, pressure seal bonnet
Rising stem

Connection:  ASME B16.5 FLANGED ENDS
 ASME B16.25 WELDED ENDS



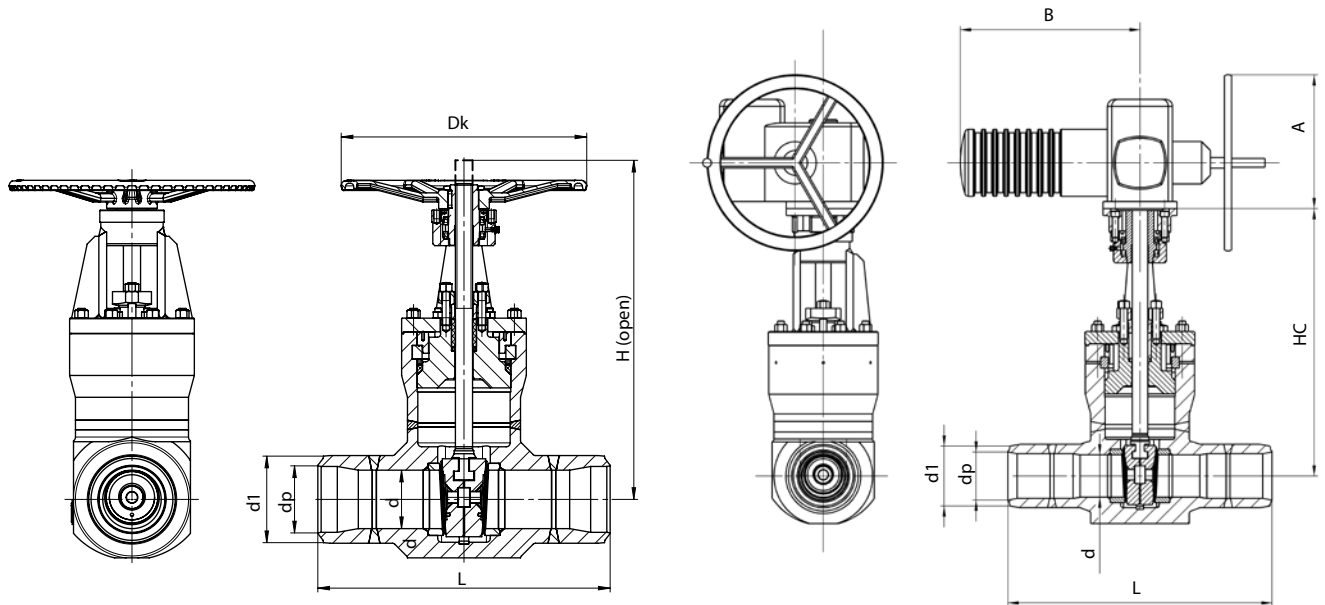
Material acc. to ASTM

Position	Component	Tmax 425 °C	Tmax 593 °C	Tmax 593 °C	Tmax 650 °C
1	Body	A105N	A182 F12	A182 F22	A182 F91
2	Pressure seal bonnet	A105	A182 F12	A182 F22	A182 F91
3	Wedge + overlay	A105 + Stellite	A182 F12 + Stellite	A182 F22 + Stellite	A182 F91 + Stellite
4	Seat + overlay	A105 + Stellite	A182 F12 + Stellite	A182 F22 + Stellite	A182 F91 + Stellite
5	Stem	X22CrMoV12-1			X20CrMoV11-1
6	Stem nut	Bronze 42 3046			
7	Segmented ring	A182 F22			A182 F91
8	Gasket	Pressed graphite			
9	Packing	Pressed graphite			



NPS 2-16 • Class 900-2500 • Tmax • 650 °C
Body design: forged body, pressure seal bonnet

Connection: ASME B16.5 FLANGED ENDS
 ASME B16.25 WELDED ENDS



Class 900

NPS	d1 *	dp	L *	HC	kg operation free	Top flange	H (open)	Dk	kg with handwheel
2	62	Acc. to order	216	425	42	F14	490	400	43
3	91		305	550	94	F14	640	400	95
4	117		356	550	97	F14	640	400	98
6	172		508	696	252	F14	850	500	251
8	223		660	840	385	F16	1000	630	380
10	278		787	1120	850,880	F16, F25	1300	800	840
12	329		914	1160	1170	F25	1350	F25	1235
14	362		991	1420	1700	F30	1680	F30	1820
16	413		1092	1550	2020	F30	1840	F30	2140

Class 1500

NPS	d1 *	dp	L *	HC	kg operation free	Top flange	H (open)	Dk	kg with handwheel
2	62	Acc. to order	216	425	42	F14	490	400	43
3	91		305	550	94	F14	640	400	95
4	117		406	550	97	F14	640	400	98
6	172		559	696	255	F14	850	500	254
8	223		711	840	390	F16	1000	630	385
10	278		864	1120	856,886	F16, F25	1300	800	845
12	329		991	1160	1180	F25	1350	F25	1245
14	362		1067	1420	1725	F30	1680	F30	1845
16	413		1194	1550	2050	F30	1840	F30	2170

Class 2500

NPS	d1 *	dp	L *	HC	kg operation free	Top flange	H (open)	Dk	kg with handwheel
2	62	Acc. to order	279	425	44	F14	490	400	45
3	91		368	550	96	F14	640	400	97
4	117		457	550	99	F14	640	400	100
6	172		610	696	258	F14	850	500	257
8	223		762	840	392	F16	1000	630	387
10	278		914	1120	860,890	F16, F25	1300	800	850
12	329		1041	1160	1190	F25	1350	F25	1255
14	362		1118	1420	1730	F30	1680	F30	1850
16	413		1245	1550	2080	F30	1840	F30	2200

* Dimensions d1 and L can be adjusted acc. to customer request.
Dimensions A and B depend on the particular actuator type.

TABLE OF PRESSURE-TEMPERATURE RATINGS ACC. TO EN

PS values are acc. to flange connection standard EN 1092-1.

PN 2,5

Body material	Material class	Maximum allowable working pressure - in bar												
Temperature		20 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C	450 °C	500 °C	550 °C	560 °C	570 °C
1.0425 (P265GH)	3E0	2,5	2,3	2,2	2,0	1,9	1,7	1,6	1,4	0,8	-	-	-	-
1.0566 (P355NL1)	7E1	2,5	2,5	2,5	2,5	2,5	2,4	2,2	1,9	-	-	-	-	-
1.5415 (16Mo3)	4E0	2,5	2,5	2,5	2,5	2,4	2,1	2,0	1,8	1,7	1,1	-	-	-
1.4401	14E0	2,5	2,5	2,2	2,1	1,9	1,8	1,7	1,7	1,6	1,6	1,6	-	-

PN 6

Body material	Material class	Maximum allowable working pressure - in bar												
Temperature		20 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C	450 °C	500 °C	550 °C	560 °C	570 °C
1.0425 (P265GH)	3E0	6,0	5,5	5,2	5,0	4,5	4,1	3,8	3,5	1,9	-	-	-	-
1.0566 (P355NL1)	7E1	6,0	6,0	6,0	6,0	6,0	5,8	5,4	4,7	-	-	-	-	-
1.0619 (GP240GH)	3E0	6,0	5,5	5,2	5,0	4,5	4,1	3,8	3,5	1,9	-	-	-	-
1.4408 (GX5CrNiMo19-11-2)	14E0	6,0	6,0	5,4	5,0	4,7	4,4	4,2	4,1	4,0	3,9	3,9	-	-
1.5415 (16Mo3)	4E0	6,0	6,0	6,0	6,0	5,8	5,1	4,8	4,4	4,1	2,6	-	-	-
1.4401	14E0	6,0	6,0	5,4	5,0	4,7	4,4	4,2	4,1	4,0	3,9	3,9	-	-

PN 10

Body material	Material class	Maximum allowable working pressure - in bar												
Temperature		20 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C	450 °C	500 °C	550 °C	560 °C	570 °C
1.0619 (GP240GH)	3E0	10,0	9,2	8,8	8,3	7,6	6,9	6,4	5,9	3,2	-	-	-	-
1.4408 (GX5CrNiMo19-11-2)	14E0	10,0	10,0	9,0	8,4	7,9	7,4	7,1	6,8	6,7	6,6	6,5	-	-
1.5415 (16Mo3)	4E0	10,0	10,0	10,0	10,0	9,7	8,5	8,0	7,4	6,9	4,4	-	-	-
1.4401	14E0	10,0	10,0	9,0	8,4	7,9	7,4	7,1	6,8	6,7	6,6	6,5	-	-

PN 16

Body material	Material class	Maximum allowable working pressure - in bar												
Temperature		20 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C	450 °C	500 °C	550 °C	560 °C	570 °C
1.0425 (P265GH)	3E0	16,0	14,8	14,0	13,3	12,1	11,0	10,2	9,5	5,2	-	-	-	-
1.0566 (P355NL1)	7E1	16,0	16,0	16,0	16,0	16,0	15,6	14,4	12,7	-	-	-	-	-
1.0619 (GP240GH)	3E0	16,0	14,8	14,0	13,3	12,1	11,0	10,2	9,5	5,2	-	-	-	-
1.7357 (G17CrMo5-5)	5E0	16,0	16,0	16,0	16,0	16,0	15,9	15,2	14,4	13,7	10,4	3,7	3,0	2,5
1.6220 (G20Mn5)	7E1	16,0	16,0	16,0	16,0	16,0	15,6	-	-	-	-	-	-	-
1.4408 (GX5CrNiMo19-11-2)	14E0	16,0	16,0	14,5	13,4	12,7	11,8	11,4	10,9	10,7	10,5	10,4	-	-
1.5415 (16Mo3)	4E0	16,0	16,0	16,0	16,0	15,6	13,7	12,9	11,9	11,0	7,0	-	-	-
1.4401	14E0	16,0	16,0	14,5	13,4	12,7	11,8	11,4	10,9	10,7	10,5	10,4	-	-

PN 25

Body material	Material class	Maximum allowable working pressure - in bar												
Temperature		20 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C	450 °C	500 °C	550 °C	560 °C	570 °C
1.0425 (P265GH)	3E0	25,0	23,2	22,0	20,8	19,0	17,2	16,0	14,8	8,2	-	-	-	-
1.0566 (P355NL1)	7E1	25,0	25,0	25,0	25,0	25,0	24,5	22,6	19,8	-	-	-	-	-
1.0619 (GP240GH)	3E0	25,0	23,2	22,0	20,8	19,0	17,2	16,0	14,8	8,2	-	-	-	-
1.7357 (G17CrMo5-5)	5E0	25,0	25,0	25,0	25,0	25,0	24,8	23,8	22,6	21,4	16,3	5,8	4,7	3,9
1.6220 (G20Mn5)	7E1	25,0	25,0	25,0	25,0	25,0	24,5	-	-	-	-	-	-	-
1.4408 (GX5CrNiMo19-11-2)	14E0	25,0	25,0	22,7	21,0	19,8	18,5	17,8	17,1	16,8	16,5	16,3	-	-
1.5415 (16Mo3)	4E0	25,0	25,0	25,0	25,0	24,4	21,4	20,2	18,6	17,2	11,0	-	-	-
1.4401	14E0	25,0	25,0	22,7	21,0	19,8	18,5	17,8	17,1	16,8	16,5	16,3	-	-

PN 40

Body material	Material class	Maximum allowable working pressure - in bar													
Temperature		20 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C	450 °C	500 °C	550 °C	560 °C	570 °C	
1.0619 (GP240GH)	3E0	40,0	37,1	35,2	33,3	30,4	27,6	25,7	23,8	13,1	-	-	-	-	
1.7357 (G17CrMo5-5)	5E0	40,0	40,0	40,0	40,0	40,0	39,8	38,0	36,1	34,2	26,0	9,3	7,6	6,2	
1.6220 (G20Mn5)	7E1	40,0	40,0	40,0	40,0	40,0	39,2	-	-	-	-	-	-	-	
1.4408 (GX5CrNiMo19-11-2)	14E0	40,0	40,0	36,3	33,7	31,8	29,7	28,5	27,4	26,9	26,4	26,0	25,7	25,4	

PN 63

Body material	Material class	Maximum allowable working pressure - in bar												
Temperature		20 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C	450 °C	500 °C	550 °C	560 °C	570 °C
1.0460 (P250GH (C22.8))	3E0	69,0	66,0	60,0	52,5	48,0	43,5	40,5	37,5	20,7	-	-	-	-
1.5415 (16Mo3)	4E0	77,4	70,5	63,0	57,0	52,5	45,0	43,5	42,0	40,5	27,9	-	-	-
1.7335 (13CrMo4-5)	5E0	76,2	72,0	67,5	63,0	60,0	55,5	52,5	49,5	46,5	41,1	14,7	12,0	9,9
1.7380 (10CrMo9-10)	6E0	75,0	70,4	67,4	64,5	61,5	58,5	55,5	52,5	49,5	40,5	20,4	17,4	15,3
1.7715 (14MoV6-3)		86,3	84,6	82,8	80,1	72,3	67,5	64,8	62,7	60,9	57,9	29,7	25,8	21,9
1.0619 (GP240GH)	3E0	63,0	58,5	55,5	52,5	48,0	43,5	40,5	37,5	20,7	-	-	-	-
1.7357 (G17CrMo5-5)	5E0	63,0	63,0	63,0	63,0	63,0	62,7	60,0	57,0	54,0	41,1	14,7	12,0	9,9
1.6220 (G20MnS)	7E1	63,0	63,0	63,0	63,0	63,0	61,8	-	-	-	-	-	-	-
1.4408 (GX5CrNiMo19-11-2)	14E0	63,0	63,0	57,3	53,1	50,1	46,8	45,0	43,2	42,4	41,7	41,1	40,5	40,0



PN 100

Body material	Material class	Maximum allowable working pressure - in bar												
Temperature		20 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C	450 °C	500 °C	550 °C	560 °C	570 °C
1.0619 (GP240GH)	3E0	100,0	92,8	88,0	83,3	76,1	69,0	64,2	59,5	32,8	-	-	-	-
1.7357 (G17CrMo5-5)	5E0	100,0	100,0	100,0	100,0	100,0	99,5	95,2	90,4	85,7	65,2	23,3	19,0	15,7
1.6220 (G20Mn5)	7E1	100,0	100,0	100,0	100,0	100,0	98,0	-	-	-	-	-	-	-
1.4408 (GX5CrNiMo19-11-2)	14E0	100,0	100,0	90,9	84,2	79,5	74,2	71,4	68,5	67,3	66,1	65,2	64,3	63,5

PN 160

Body material		Maximum allowable working pressure - in bar																			
Temperature		20 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C	450 °C	480 °C	500 °C	520 °C	530 °C	540 °C	550 °C	560 °C	570 °C	580 °C	590 °C	600 °C
P250GH (C22.8)	1.0460	175,2	167,6	152,4	133,3	121,9	110,4	102,8	95,2	52,6	-	-	-	-	-	-	-	-	-	-	-
16Mo3	1.5415	197	179	160	144,8	133,3	114,3	110,5	106,7	102,9	100,6	70,9	45	35,8	-	-	-	-	-	-	-
13CrMo4-5	1.7335	194	182,9	171,4	160	152,4	141	133,3	125,7	118,1	115,8	104,4	71,6	59,4	46,5	37,3	30,5	25,1	-	-	-
11CrMo9-10 (1.7383)	1.7380	190,5	178,7	171,2	163,8	156,2	148,6	141	133,3	125,7	121,1	102,9	78,5	68,6	59,4	51,8	44,2	38,9	33,5	29	25,9
14MoV6-3	1.7715	219	215	210	203	183,6	171,4	164,6	159,2	154,7	153,3	147	113,5	99,8	86,1	75,4	65,5	55,6	-	-	-
15NiCuMoNb5-6-4	1.6368	260	260	260	260	260	258	249	224	157	-	-	-	-	-	-	-	-	-	-	-
GP240GH	1.0619	160	149	141	133	122	110	103	95,2	52,5	-	-	-	-	-	-	-	-	-	-	-
G20Mo5	1.5419	160	160	160	160	156	137	130	122	118	89,7	70,8	44,9	35,8	-	-	-	-	-	-	-
G17CrMo5-5	1.7357	186,7	172,1	161,2	160	160	159	152	145	137	117	104	71,6	59,4	46,4	37,3	30,4	-	-	-	-

PN 250

Body material		Maximum allowable working pressure - in bar																			
Temperature		20 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C	450 °C	480 °C	500 °C	520 °C	530 °C	540 °C	550 °C	560 °C	570 °C	580 °C	590 °C	600 °C
P250GH (C22.8)	1.0460	274	262	238	208	190,4	172,6	160,7	148,8	82,1	-	-	-	-	-	-	-	-	-	-	-
16Mo3	1.5415	307	280	250	226	208	178,6	172,6	166,7	160,7	157,1	110,7	70,2	56	-	-	-	-	-	-	-
13CrMo4-5	1.7335	302	286	268	250	238	220	208	196	184,5	181	163,1	111,9	92,9	72,6	58,3	47,6	39,3	-	-	-
11CrMo9-10 (1.7383)	1.7380	298	279	268	256	244	232	220	208	196,4	189,3	160,7	122,6	107,1	92,9	81	69	60,7	52,4	45,2	40,5
14MoV6-3	1.7715	342	336	329	318	287	268	257	249	242	240	230	177,4	156	134,5	117,9	102,4	86,9	-	-	-
15NiCuMoNb5-6-4	1.6368	400	400	400	400	400	400	389	350	245	-	-	-	-	-	-	-	-	-	-	-

PN 320

Body material		Maximum allowable working pressure - in bar																			
Temperature		20 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C	450 °C	480 °C	500 °C	520 °C	530 °C	540 °C	550 °C	560 °C	570 °C	580 °C	590 °C	600 °C
P250GH (C22.8)	1.0460	350	335	305	267	243,8	220,9	205,7	190,4	105,1	-	-	-	-	-	-	-	-	-	-	-
16Mo3	1.5415	393	358	320	290	267	229	221	213	206	201	141,7	89,9	71,6	-	-	-	-	-	-	-
13CrMo4-5	1.7335	387	366	343	320	305	282	267	251	236	232	209	143,2	118,9	93	74,7	61	50,3	-	-	-
11CrMo9-10 (1.7383)	1.7380	381	357	342	328	312	297	282	267	251	242	206	157	137,1	118,9	103,6	88,4	77,7	67	57,9	51,8
14MoV6-3	1.7715	438	430	421	407	367	343	329	318	309	307	294	227	199,6	172,2	150,9	131	111,2	-	-	-
15NiCuMoNb5-6-4	1.6368	510	510	510	510	510	510	498	448	314	-	-	-	-	-	-	-	-	-	-	-

PN 400

Body material		Maximum allowable working pressure - in bar																			
Temperature		20 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C	450 °C	480 °C	500 °C	520 °C	530 °C	540 °C	550 °C	560 °C	570 °C	580 °C	590 °C	600 °C
P250GH (C22.8)	1.0460	438	419	381	333	304,7	276,1	257,1	238	131,4	-	-	-	-	-	-	-	-	-	-	-
16Mo3	1.5415	491	448	400	362	333	286	276	267	257	251	177,1	112,4	89,5	-	-	-	-	-	-	-
13CrMo4-5	1.7335	484	457	429	400	381	352	333	314	295	290	261	179	148,6	116,2	93,3	76,2	62,9	-	-	-
11CrMo9-10 (1.7383)	1.7380	476	447	428	410	390	371	352	333	314	303	257	196,2	171,4	148,6	129,5	110,5	97,1	83,8	72,4	64,8
14MoV6-3	1.7715	548	537	526	509	459	429	411	398	387	383	368	284	250	215	188,6	163,8	139	-	-	-
15NiCuMoNb5-6-4	1.6368	640	640	640	640	640	640	623	560	392	-	-	-	-	-	-	-	-	-	-	-

X10CrMoVNb9-1 1.4903		Maximum allowable working pressure - in bar																
Temperature		450 °C	480 °C	500 °C	520 °C	530 °C	540 °C	550 °C	560 °C	570 °C	580 °C	590 °C	600 °C	610 °C	620 °C	630 °C	640 °C	650 °C
PN 160		244	235	197	168	153	139,4	126,5	114,3	102,1	91,4	80,8	71,6	63,2	55,6	49,5	42,7	37,3
PN 250		381	367	307	262	239	218	198	179	160	142,9	126,2	111,9	98,8	86,9	77,4	66,7	58,3
PN 320		488	469	393	335	306	279	253	229	204	183	162	143,2	126,5	111,2	99	85,3	74,7
PN 400		610	587	491	419	383	349	316	286	255	229	202	179	158,1	139	123,8	106,7	93,3
PN 630		960	924	774	660	603	549	498	450	402	360	318	282	249	219	195	168	147

TABLE OF PRESSURE-TEMPERATURE RATINGS ACC. TO ASME

PS values are acc. to flange connection standard ASME B16.34 A-Standard Class.

Class 150

Body material	Material class	Maximum allowable working pressure - in bar														
Temperature		20 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C	425 °C	450 °C	500 °C	538 °C	575 °C	600 °C	650 °C
A 350 LF2	1.1	19,6	17,7	15,8	13,8	12,1	10,2	8,4	6,5	5,5	-	-	-	-	-	-
A 516 70	1.1	19,6	17,7	15,8	13,8	12,1	10,2	8,4	6,5	5,5	-	-	-	-	-	-
A 216 WCB	1.1	19,6	17,7	15,8	13,8	12,1	10,2	8,4	6,5	5,5	-	-	-	-	-	-
A 105	1.1	19,6	17,7	15,8	13,8	12,1	10,2	8,4	6,5	5,5	-	-	-	-	-	-
A182 F22 Cl. 3	1.10	19,8	17,7	15,8	13,8	12,1	10,2	8,4	6,5	5,5	4,6	2,8	1,4	1,4	-	-
A 352 LCC	1.2	19,8	17,7	15,8	13,8	12,1	10,2	8,4	-	-	-	-	-	-	-	-
A 217 WC6	1.9	19,8	17,7	15,8	13,8	12,1	10,2	8,4	6,5	5,5	4,6	2,8	1,4	1,4	1,4	-
A 351 CF8M	2.2	19,0	16,2	14,8	13,7	12,1	10,2	8,4	6,5	5,5	4,6	2,8	1,4	-	-	-
A182 F316	2.2	19,0	16,2	14,8	13,7	12,1	10,2	8,4	6,5	5,5	4,6	2,8	-	-	-	-
A 516 Gr.60	1.4	16,3	14,9	14,4	13,8	12,1	10,2	8,4	6,5	5,5	-	-	-	-	-	-
A 387 Gr.11 Cl.2	1.9	19,8	17,7	15,8	13,8	12,1	10,2	8,4	6,5	5,5	4,6	2,8	1,4	1,4	1,4	1,4
A 240 Gr.316	2.2	18,9	16,2	14,8	13,7	12,1	10,2	8,4	6,5	5,5	4,6	2,8	1,4	-	-	-

Class 300

Body material	Material class	Maximum allowable working pressure - in bar														
Temperature		20 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C	425 °C	450 °C	500 °C	538 °C	575 °C	600 °C	650 °C
A 350 LF2	1.1	51,1	46,6	45,1	43,8	41,9	39,8	37,6	34,7	28,8	-	-	-	-	-	-
A 516 70	1.1	51,1	46,6	45,1	43,8	41,9	39,8	37,6	34,7	28,8	-	-	-	-	-	-
A 216 WCB	1.1	51,1	46,6	45,1	43,8	41,9	39,8	37,6	34,7	28,8	-	-	-	-	-	-
A 105	1.1	51,1	46,6	45,1	43,8	41,9	39,8	37,6	34,7	28,8	-	-	-	-	-	-
A182 F22 Cl. 3	1.10	51,7	51,5	50,3	48,6	46,3	42,9	40,3	36,5	35,2	33,7	28,2	18,4	10,5	-	-
A 352 LCC	1.2	51,7	51,5	50,2	48,6	46,3	42,9	40,0	-	-	-	-	-	-	-	-
A 217 WC6	1.9	51,7	51,5	49,7	48,0	46,3	42,9	40,3	36,5	35,2	33,7	25,7	14,9	8,8	6,1	-
A 351 CF8M	2.2	49,6	42,2	38,5	35,7	33,4	31,6	30,3	29,4	29,1	28,8	28,2	25,2	-	-	-
A182 F316	2.2	49,6	42,2	38,5	35,7	33,4	31,6	30,3	29,4	29,1	28,8	28,2	-	-	-	-

Class 600

Body material	Material class	Maximum allowable working pressure - in bar														
Temperature		20 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C	425 °C	450 °C	500 °C	538 °C	575 °C	600 °C	650 °C
A 350 LF2	1.1	102,1	93,2	90,2	87,6	83,9	79,6	75,1	69,4	57,5	-	-	-	-	-	-
A 516 70	1.1	102,1	93,2	90,2	87,6	83,9	79,6	75,1	69,4	57,5	-	-	-	-	-	-
A 216 WCB	1.1	102,1	93,2	90,2	87,6	83,9	79,6	75,1	69,4	57,5	-	-	-	-	-	-
A 105	1.1	102,1	93,2	90,2	87,6	83,9	79,6	75,1	69,4	57,5	-	-	-	-	-	-
A182 F22 Cl. 3	1.10	103,4	103	100,3	97,2	92,7	85,7	80,4	73,3	70	67,7	56,5	36,9	21,1	-	-
A182 F91	1.15	103,4	103	100,3	97,2	92,7	85,7	80,4	73,3	70	67,7	56,5	50	47,9	39	19,9
A 352 LCC	1.2	103,4	103,0	100,3	97,2	92,7	85,7	80,0	-	-	-	-	-	-	-	-
A 217 WC6	1.9	103,4	103,0	99,5	95,9	92,7	85,7	80,4	73,3	70,0	67,7	51,5	29,8	17,6	12,2	-
A182 F11 Cl. 2	1.9	103,4	103	99,5	95,9	92,7	85,7	80,4	73,3	70	67,7	51,5	29,8	17,6	12,2	-
A 351 CF8M	2.2	99,3	84,4	77,0	71,3	66,8	63,2	60,7	58,9	58,3	57,7	56,5	50,0	-	-	-
A182 F316	2.2	99,3	84,4	77	71,3	66,8	63,2	60,7	58,9	58,3	57,7	56,5	-	-	-	-

Class 900

Body material	Material class	Maximum allowable working pressure - in bar														
Temperature		20 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C	425 °C	450 °C	500 °C	538 °C	575 °C	600 °C	650 °C
A 216 WCB	1.1	153,2	139,8	135,2	131,4	125,8	119,5	112,7	104,2	86,3	-	-	-	-	-	-
A 105	1.1	153,2	139,8	135,2	131,4	125,8	118,5	112,7	104,2	86,3	-	-	-	-	-	-
A182 F22 Cl. 3	1.10	155,1	154,6	150,6	145,8	139	128,6	120,7	109,8	105,1	101,4	84,7	55,3	31,6	-	-
A182 F91	1.15	155,1	154,6	150,6	145,8	139	128,6	120,7	109,8	105,1	101,4	84,7	75,2	71,8	58,5	29,8
A 352 LCC	1.2	155,1	154,6	150,5	145,8	139	128,6	120,1	-	-	-	-	-	-	-	-
A 217 WC6	1.9	155,1	154,4	149,2	143,9	139	128,6	120,7	109,8	105,1	101,4	77,2	44,7	26,4	18,3	-
A182 F11 Cl. 2	1.9	155,1	154,4	149,2	143,9	139	128,6	120,7	109,8	105,1	101,4	77,2	44,7	26,4	18,3	-
A 351 CF8M	2.2	148,9	126,6	115,5	107	100,1	94,9	91	88,3	87,4	86,5	84,7	75,2	-	-	-
A182 F316	2.2	148,9	126,6	115,5	107	100	94,9	91	88,3	87,4	86,5	84,7	-	-	-	-

Class 1500

Body material	Material class	Maximum allowable working pressure - in bar														
Temperature		20 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C	425 °C	450 °C	500 °C	538 °C	575 °C	600 °C	650 °C
A 216 WCB	1.1	255,3	233	225,4	219	209,7	199,1	187,8	173,6	143,8	-	-	-	-	-	-
A 105	1.1	255,3	233	225,4	219	209,7	199,1	187,8	173,6	143,8					-	-
A182 F22 Cl. 3	1.10	258,6	257,6	250,8	243,4	231,8	214,4	201,1	183,1	175,1	169	140,9	92,2	52,6	-	-
A182 F91	1.15	258,6	257,6	250,8	243,4	231,8	214,4	201,1	183,1	175,1	169	140,9	125,5	119,7	97,5	49,6
A 352 LCC	1.2	258,6	257,6	250,8	243,2	231,8	214,4	200,1	-	-	-	-	-	-	-	-
A 217 WC6	1.9	258,6	257,4	248,7	239,8	231,8	214,4	201,1	183,1	175,1	169	128,6	74,5	44	30,5	-
A182 F11 Cl. 2	1.9	258,6	257,4	248,7	239,8	231,8	214,4	201,1	183,1	175,1	169	128,6	74,5	44	30,5	
A 351 CF8M	2.2	248,2	211	192,5	178,3	166,9	158,1	151,6	147,2	145,7	144,2	140,9	125,5	-	-	-
A182 F316	2.2	248,2	211	192,5	178,3	166,9	158,1	151,6	147,2	145,7	144,2	140,9	-	-	-	-



Class 2500

Body material	Material class	Maximum allowable working pressure - in bar														
Temperature		20 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C	425 °C	450 °C	500 °C	538 °C	575 °C	600 °C	650 °C
A 105	1.1	425,5	388,3	375,6	365	349,5	331,8	313	289,3	239,7	-	-	-	-	-	-
A182 F22 Cl. 3	1.10	430,9	429,4	418,2	405,4	386,2	357,1	335,3	304,9	291,6	281,8	235	153,7	87,7	-	-
A182 F91	1.15	430,9	429,4	418,2	405,4	386,2	357,1	335,3	304,9	291,6	281,8	235	208,9	199,5	162,5	82,7
A182 F11 Cl. 2	1.9	430,9	429	414,5	399,6	386,2	357,1	335,3	304,9	291,6	281,8	214,4	124,1	73,4	50,9	-
A182 F316	2.2	413,7	351,6	320,8	297,2	278,1	263,5	252,7	245,3	242,9	240,4	235	-	-	-	-

CERTIFICATION



Certificate acc. to PED 2014/68/ EU Module H



Inspection certificate of Safety Integrity Level (SIL) of S33



Inspection certificate of Safety Integrity Level (SIL) of S43



QMS Certificate in welding acc. to EN ISO 3834-2



TA-Luft Certificate of emission reduction from industrial valves in refineries for S33



Quality Management System acc. to EN ISO 9001:2015



Environmental Management System acc. to EN ISO 14001:2015



Management System Certificate acc. to BS OHSAS 18001:2007



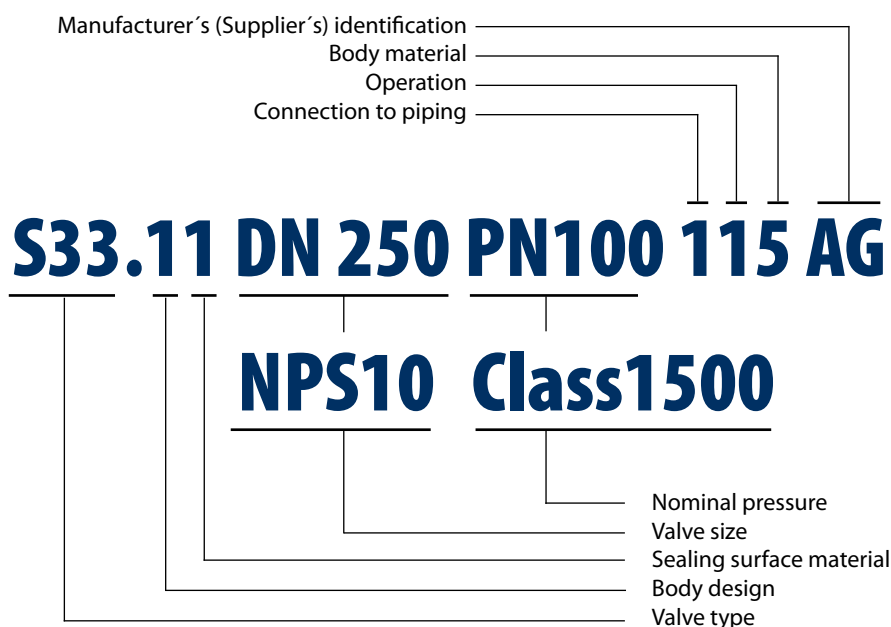
Certificate of gate valves S43 for the transport of gas acc. to EN 14141

TYPE NUMBER COMPOSITION

Type number uniquely describes the valve.

Type number is fixed by the manufacturer (supplier).

Type number serves to customers in subsequent communication with the manufacturer (supplier) valve.

**Type**

- S33 – steel gate valve
- S43 – steel gate valve

Body design - S33

- 1 – yoke gate valve, flexible wedge, cast body
- 2 – yoke gate valve, solid wedge, cast body
- 3 – bonnet gate valve, solid / flexible wedge, cast body
- 4 – yoke gate valve, solid / flexible wedge, fabricated body
- 5 – bonnet gate valve, solid / flexible wedge, fabricated body
- C – control gate valves, special throttle disc

Body design - S43

- 1 – bolted bonnet, forged body
- 3 – fully welded gate valve, non-rising stem
- 5 – pressure seal bonnet, forged body
- C – control gate valves, special throttle disc

Sealing surface material

- 1 - TRIM 1 / 13Cr x 13Cr
- 2 - TRIM 2 / 18Cr-8Ni (304) x 18Cr-8Ni (304)
- 3 - TRIM 12 / HF (Stellite 6) x 18Cr-8Ni-Mo (316)
- 5 - TRIM 5 / HF (Stellite 6) x HF (Stellite 6)
- 8 - TRIM 8 / HF (Stellite 6) x 13 Cr
- A - TRIM 10 / 18Cr-8Ni-Mo (316) x 18Cr-8Ni-Mo (316)

Connection to piping

- 1 – flanged ends
- 2 – welded ends
- 3 – threaded ends
- 4 – socked weldings ends

Operation

- 1 – handwheel
- 2 – gear-box
- 3 – electric actuator
- 4 – pneumatic or hydraulic actuator
- 5 – bare shaft
- 8 – lever with counterweight and hydraulic cylinder

Body material

- 0 – stainless steel
- 2 – alloy cast steel
- 3 – alloy forged steel
- 4 – carbon forged steel
- 5 – carbon cast steel

Manufacturer's (Supplier's) identification

- AG – ARMATURY Group a.s.

Data mentioned in the catalogue are not subject to changes, for an order and delivery of the goods are obligatory the data mentioned in order.

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