



GATE VALVES



COMPANY PROFILE

The company ARMATURY Group a.s. is a leading Czech manufacturer and distributor of industrial valves, fittings and control systems for valves. The annual production is of more than 100 000 valves and 500 000 metallurgical stock items.

The company was established January 1, 2000. The tradition of our dynamically developing company is closely linked with the more than fifty-years' history of valve production in the Hlučín Region.

Our products have been supplied to local and foreign customers for the following industries:

- power engineering, nuclear power
- chemical and petrochemical
- gas supply
- metallurgical industry
- water supply



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Gate valves acc. to EN

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Gate valves acc. to ASME

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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, full bore with flexible wedge and 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,
- use of solid wedge.

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

Type	PN	DN																								
		40	50	65	80	100	125	150	200	250	300	350	400	500	600	700	800	900	1000	1100	1200	1300	1400	1600	1800	2000
S33.1 S33.C	16		*	*	*	*	*	*	*	*	*	*	*	*	*											
	25		*	*	*	*	*	*	*	*	*	*	*	*	*											
	40		*	*	*	*	*	*	*	*	*	*	*	*	*											
	63		*	*	*	*	*	*	*	*	*	*	*	*	*											
	100		*	*	*	*	*	*	*	*	*	*	*	*	*											
S33.2	6, 10, 16	*	*	*	*	*	*	*	*	*	*	*	*	*												
S33.3	16		*	*	*	*	*	*	*	*	*	*	*	*												
S33.4	2,5												*	*	*	*	*	*	*	*	*	*	*	*	*	*
	6												*	*	*	*	*	*	*	*	*	*	*	*	*	*
	10												*	*	*	*	*	*	*	*	*	*	*	*	*	*
	16												*	*	*	*	*	*	*	*						
	25												*	*	*	*	*	*	*	*						



DN 50-600 • PN 16-100 • Tmax 450 °C (595 °C)

Body design: yoke gate valve

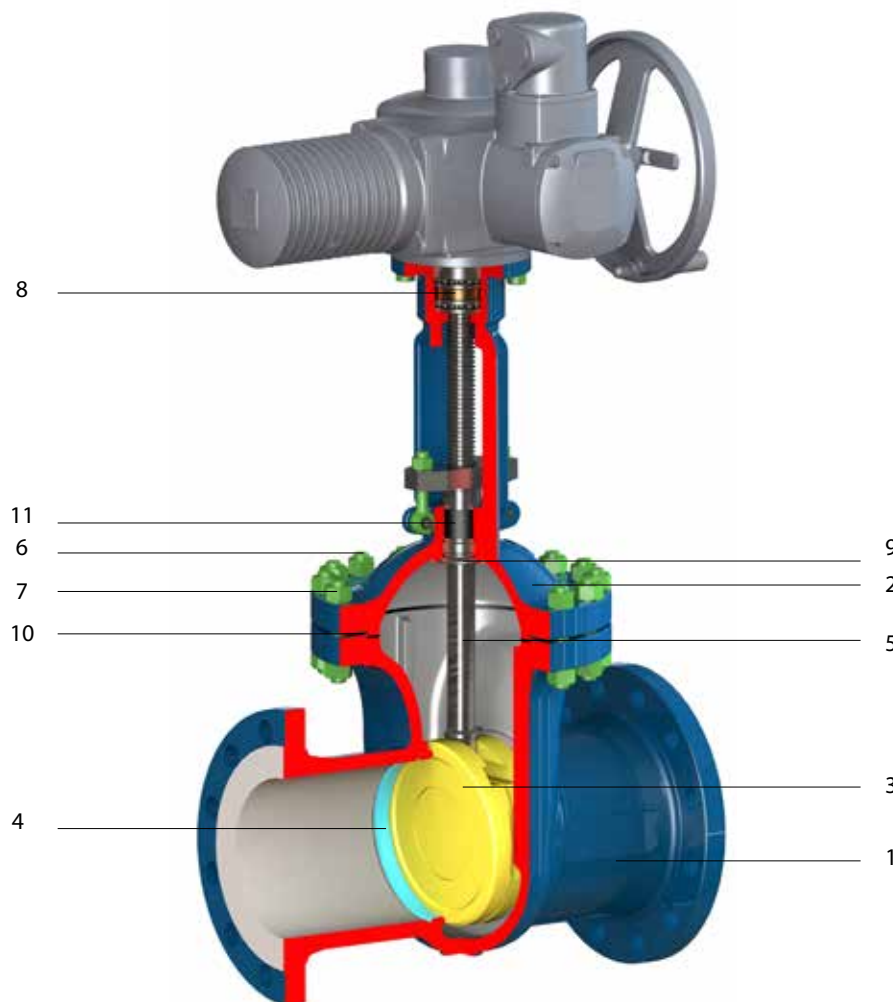
Body, bonnet, wedge: cast

Rising stem

Flexible wedge

Connection:  EN 1092-1 FLANGED ENDS

 EN 12 627 WELDED ENDS



Material acc. to EN

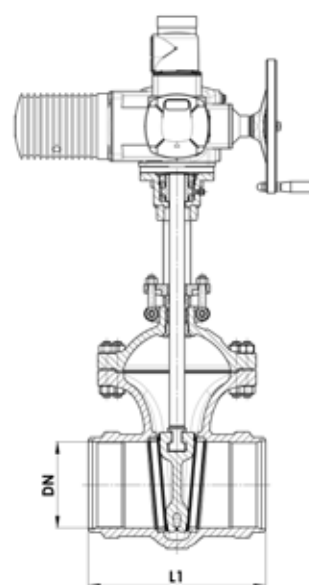
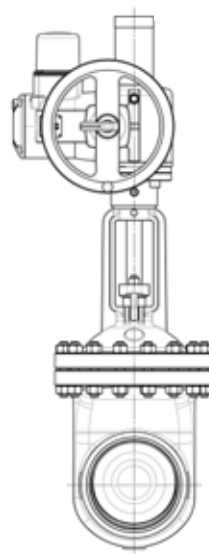
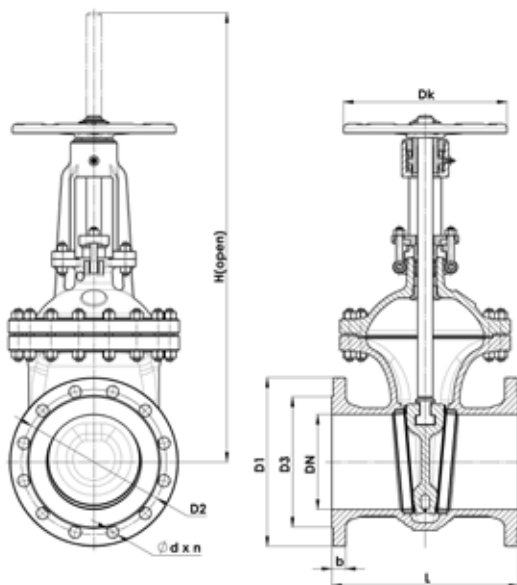
Position	Component	Carbon steel	Alloy steel	Carbon steel for low temperatures	Stainless steel
1	Body	1.0619	1.7357	1.6220	1.4408
2	Bonnet	1.0619	1.7357	1.6220	1.4408
3	Wedge + overlay	1.0619 + 13Cr	1.7357 + Stellite 6	1.6220 + F304	1.4408
4	Seat + overlay	1.0460 + 13Cr	1.7335 + Stellite 6	1.0566 + Stellite 6	1.4401
5	Stem	1.4021	1.4923	1.4301	1.4401
6	Bonnet bolts*	1.7218*	1.7709*	1.7225*	1.4401*
7	Bonnet nuts*	1.1191*	1.7709*	1.7225*	1.4401*
8	Stem nut	Ni-rezist, Al-bronze			
9	Back seat	1.4006 + Hard facing		1.4301 + Hard facing	1.4401 + Hard facing
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)	Dk	b	d x n	kg	BW	
										L1	kg
50	165	125	102	250	360	200	18	18x4	20	216	17
65	185	145	122	270	410	250	18	18x8	30	241	26
80	200	160	138	280	460	250	20	18x8	36	283	34
100	220	180	158	300	550	300	20	18x8	49	305	48
125	250	210	188	325	660	300	22	18x8	66	381	72
150	285	240	212	350	775	300	22	22x8	95	404	100
200	340	295	268	400	960	350	24	22x12	154	419	160
250	405	355	320	450	1175	400	26	26x12	225	457	240
300	460	410	378	500	1360	500	28	26x12	334	502	355
350	520	470	438	550	1525	550	30	26x16	445	762	490
400	580	525	490	600	1675	600	32	30x16	610	838	690
500	715	650	610	700	2050	700	44	33x20	1105	991	1070
600	840	770	725	800	2400	800	54	36x20	1190	1143	1660

PN 25

DN	D1	D2	D3	L	H (open)	Dk	b	d x n	kg	BW	
										L1	kg
50	165	125	102	250	360	200	20	18x4	20	216	17
65	185	145	122	270	410	250	22	18x8	32	241	26
80	200	160	138	280	460	250	24	18x8	39	283	34
100	235	190	162	300	550	300	24	22x8	53	305	48
125	270	220	188	325	660	300	26	26x8	71	381	72
150	300	250	218	350	775	300	28	26x8	101	404	100
200	360	310	278	400	960	350	30	26x12	160	419	160
250	425	370	335	450	1175	400	32	30x12	232	457	240
300	485	430	395	500	1360	500	34	30x16	345	502	355
350	555	490	450	550	1525	550	38	33x16	460	762	490
400	620	550	505	600	1675	600	40	36x16	645	838	690
500	730	660	615	700	2050	700	48	36x20	1166	991	1070
600	845	770	720	800	2450	800	58	39x20	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)	Dk	b	d x n	kg	BW	
										L1	kg
50	165	125	102	250	360	200	20	18x4	20	216	17
65	185	145	122	290	410	250	22	18x8	28	241	26
80	200	160	138	310	460	250	24	18x8	44	283	34
100	235	190	162	350	560	300	24	22x8	62	305	48
125	270	220	188	400	660	300	26	26x8	87	381	72
150	300	250	218	450	765	350	28	26x8	125	404	100
200	375	320	285	550	955	400	34	30x12	265	419	160
250	450	385	345	650	1185	450	38	33x12	405	457	240
300	515	450	410	750	1380	500	42	33x16	500	502	355
350	580	510	465	850	1510	500	46	36x16	725	762	490
400	660	585	535	950	1690	600	50	39x16	1280	838	690
500	755	670	615	1150	2065	600	52	42x20	1589	991	1070
600	890	795	735	1350	2465	700	60	48x20	1903	1143	1660

PN 63

DN	D1	D2	D3	L	H (open)	Dk	b	d x n	kg	BW	
										L1	kg
50	180	135	102	250	420	280	26	22x4	37	292	28
65	205	160	122	290	470	280	26	22x8	46	330	37
80	215	170	138	310	525	300	28	22x8	49	356	38
100	250	200	162	350	620	350	30	26x8	86	432	75
125	295	240	188	400	715	350	34	30x8	129	508	113
150	345	280	218	450	815	400	36	33x8	150	559	132
200	415	345	285	550	1115	500	42	36x12	360	660	320
250	470	400	345	650	1280	640	46	36x12	570	787	500
300	530	460	410	750	1550	680	52	36x16	815	838	720
350	600	525	465	850	1665	-	56	39x16	1080	889	950
400	670	585	535	950	1820	-	60	42x16	1460	991	1290
500	800	705	615	1150	2235	-	68	48x20	2315	1194	2040
600	930	820	735	1350	2570	-	76	56x20	3480	1397	3060

PN 100

DN	D1	D2	D3	L	H (open)	Dk	b	d x n	kg	BW	
										L1	kg
50	195	145	102	250	420	280	30	26x4	39	292	29
65	220	170	122	290	470	280	34	26x8	50	330	39
80	230	180	138	310	525	300	36	26x8	54	356	40
100	265	210	162	350	620	350	40	30x8	94	432	80
125	315	250	188	400	715	350	40	33x8	138	508	122
150	355	290	218	450	815	400	44	33x12	160	559	141
200	430	360	285	550	1115	500	52	36x12	385	660	340
250	505	430	345	650	1280	640	60	39x12	610	787	540
300	585	500	410	750	1550	680	68	42x16	890	838	780
350	655	560	465	850	1665	-	74	48x16	1190	889	1050
400	715	620	535	950	1820	-	78	48x16	1570	991	1380
500	870	760	615	1150	2235	-	90	56x20	2630	1194	2315
600	940	838	692	1350	2570	-	105	52x24	3870	1397	3405



DN 40-600 • PN 6-16 • Tmax 450 °C

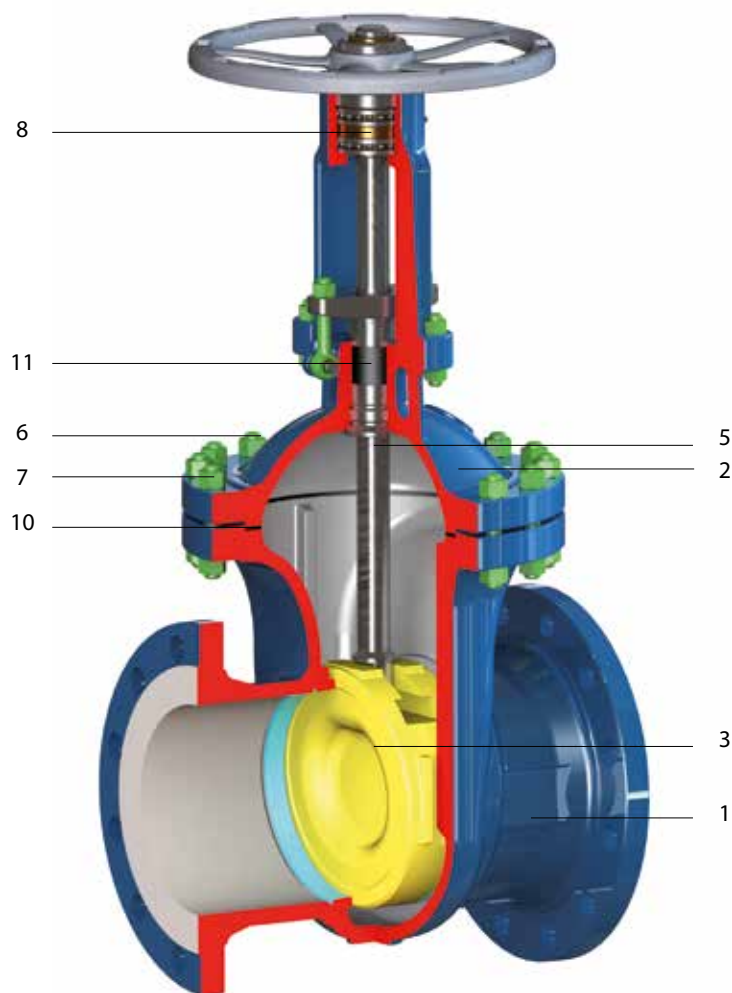
Body design: yoke gate valve

Body, bonnet: cast

Rising stem

Solid wedge

Connection: Ⓢ EN 1092-1 FLANGED ENDS



Material acc. to EN

Position	Component	Carbon steel	Stainless steel
1	Body + overlay	1.0619 + 13Cr	1.4408
2	Bonnet	1.0619	1.4408
3	Wedge + overlay	1.0619 + 13Cr	1.4408
5	Stem	1.4021	1.4401
6	Bonnet bolts*	1.7218*	1.4301*
7	Bonnet nuts*	1.1191*	1.4301*
8	Stem nut	Ni-rezist, Al-bronze	
10	Gasket	Graphite	
11	Packing	Graphite	

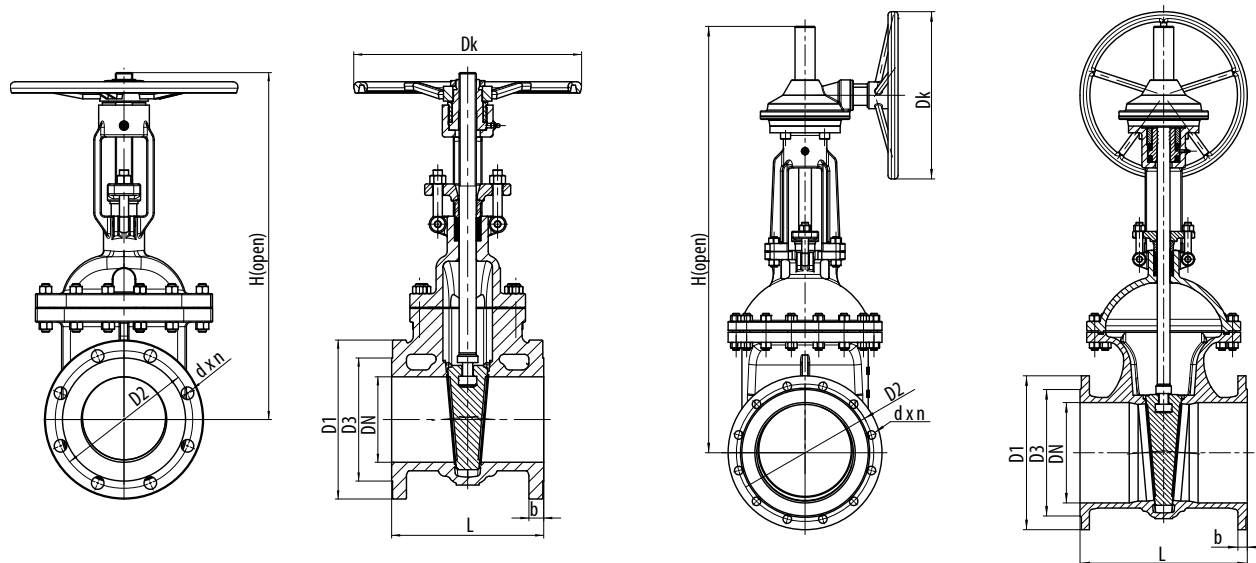
* equivalent or according to customer's request

Buttweld ends on request.



DN 40-600 • PN 6-16 • Tmax 450 °C
Body design: yoke gate valve

Connection: ☉ EN 1092-1 FLANGED ENDS



PN 6

DN	D1	D2	D3	L	H(open)	Dk	b	d x n	kg
40	130	100	80	140	340	160	14	14 x 4	14
50	140	110	90	150	405	160	14	14 x 4	16
65	160	130	110	170	480	160	14	14 x 4	18
80	190	150	128	180	510	160	16	18 x 4	23
100	210	170	148	190	600	200	16	18 x 4	36
125	240	200	178	200	640	200	18	18 x 8	48
150	265	225	202	210	785	200	18	18 x 8	60
200	320	280	258	230	980	250	20	18 x 8	97
250	375	335	312	250	1190	320	22	18 x 12	166
300	440	395	365	270	1400	400	22	22 x 12	210
350	490	445	415	290	1585	450	22	22 x 12	345
400	540	495	465	310	1720	500	22	22 x 16	480
500	645	600	570	350	2095	500	24	22 x 20	645
600	755	705	670	390	2680	600	30	26 x 20	895

PN 10

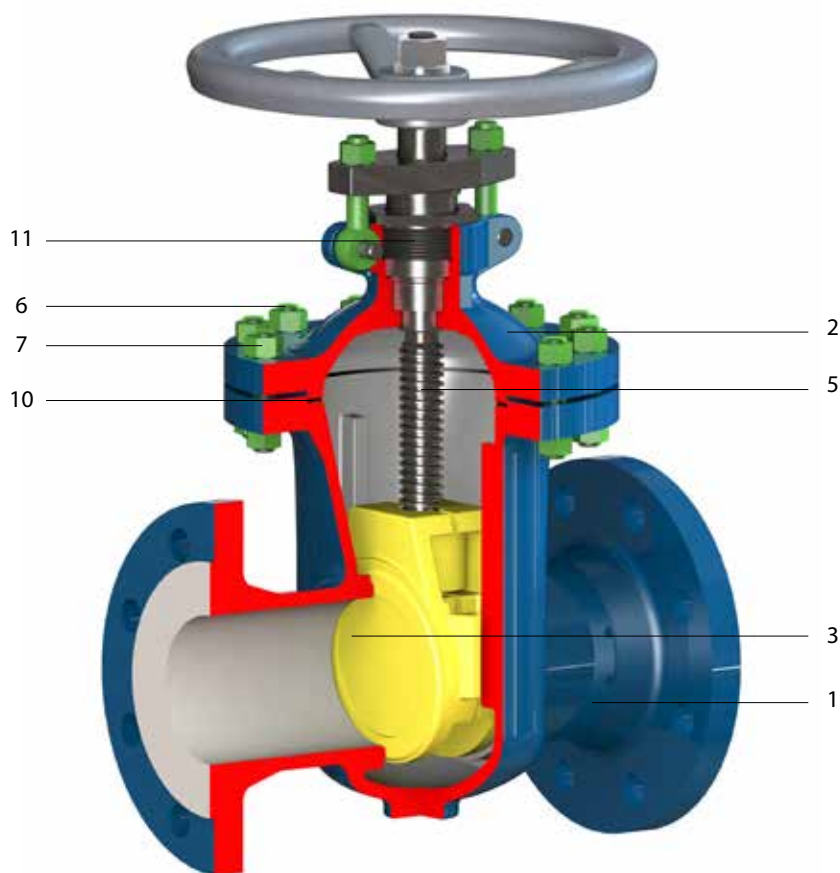
DN	D1	D2	D3	L	H(open)	Dk	b	d x n	kg
40	150	110	88	140	340	200	18	18 x 4	15
50	165	125	102	150	405	200	18	18 x 4	17
65	185	145	122	170	480	200	18	18 x 8	19
80	200	160	138	180	510	250	20	18 x 8	25
100	220	180	158	190	600	280	20	18 x 8	36
125	250	210	188	200	640	300	22	18 x 8	52
150	285	240	212	210	785	300	22	22 x 8	62
200	340	295	268	230	980	350	24	22 x 8	88
250	395	350	320	250	1190	400	26	22 x 12	180
300	445	400	370	270	1400	450	26	22 x 12	230
350	505	460	430	290	1585	500	26	22 x 16	380
400	565	515	482	310	1720	600	26	26 x 16	505
500	670	620	585	350	2095	600	28	26 x 20	700
600	780	725	685	390	2680	600	34	30 x 20	985

PN 16

DN	D1	D2	D3	L	H(open)	Dk	b	d x n	kg
40	150	110	88	170	360	160	18	18 x 4	16
50	165	125	102	180	405	200	18	18 x 4	20
65	185	145	122	200	480	200	18	18 x 8	21
80	200	160	138	210	510	200	20	18 x 8	32
100	220	180	158	230	605	250	20	18 x 8	40
125	250	210	188	255	640	250	22	18 x 8	49
150	285	240	212	280	785	320	22	22 x 8	74
200	340	295	268	330	980	400	24	22 x 12	117
250	405	355	320	450	1015	450	26	26 x 12	210
300	460	410	378	500	1190	500	28	26 x 12	300
350	520	470	438	550	1350	600	30	26 x 16	510
400	580	525	490	600	1460	600	32	30 x 16	670
500	715	650	610	700	1800	700	44	33 x 20	930
600	840	770	725	800	2200	800	54	36 x 20	1310

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

Connection: ☉ EN 1092-1 FLANGED ENDS



Material acc. to EN

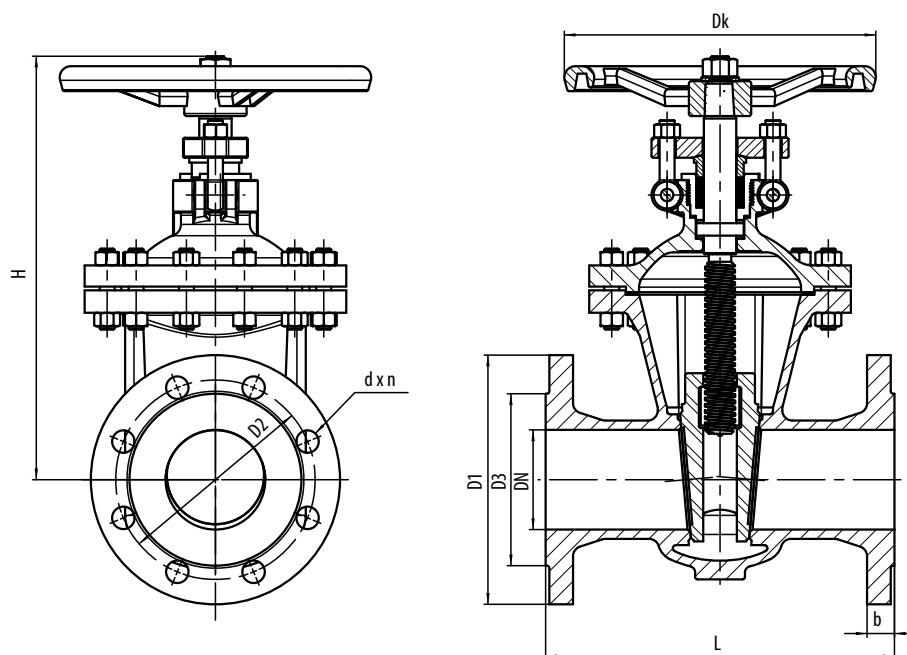
Position	Component	Carbon steel
1	Body + overlay	1.0619 + 13Cr
2	Bonnet	1.0619
3	Wedge + overlay	1.0619 + 13Cr
5	Stem	1.4021
6	Bonnet bolts*	1.7218 *
7	Bonnet nuts*	1.1191 *
10	Gasket	Graphite
11	Packing	Graphite

* equivalent or according to customer's request



DN 50-600 • PN 16 • Tmax 250 °C
Body design: bonnet gate valve

Connection: Ⓢ EN 1092-1 FLANGED ENDS



PN 16

DN	D1	D2	D3	L	b	d 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
450	640	585	550	650	40	30 x 20	1380	680	670
500	715	650	610	700	44	33 x 20	1420	460	815
600	840	770	725	800	54	36 x 20	1625	460	1200

* for information purposes

DN 500-2000 • PN 2,5-25 • Tmax 300°C

Body design: yoke gate valve

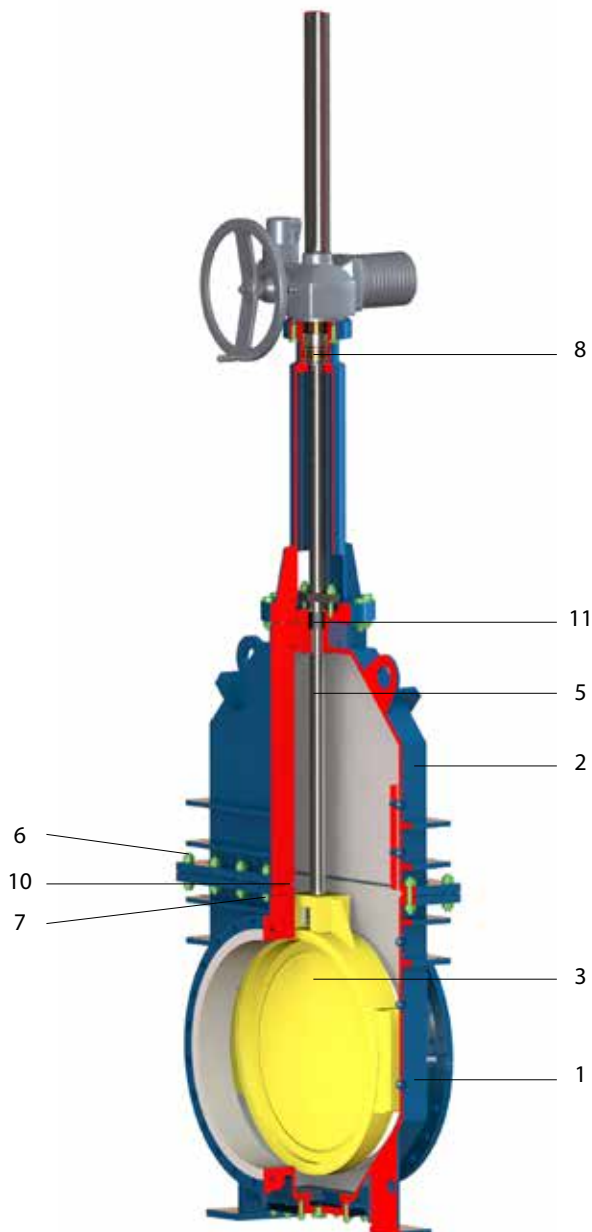
Body, bonnet: fabricated

Rising stem

Solid wedge

Connection:  EN 1092-1 FLANGED ENDS

 EN 12 627 WELDED ENDS



Material acc. to EN

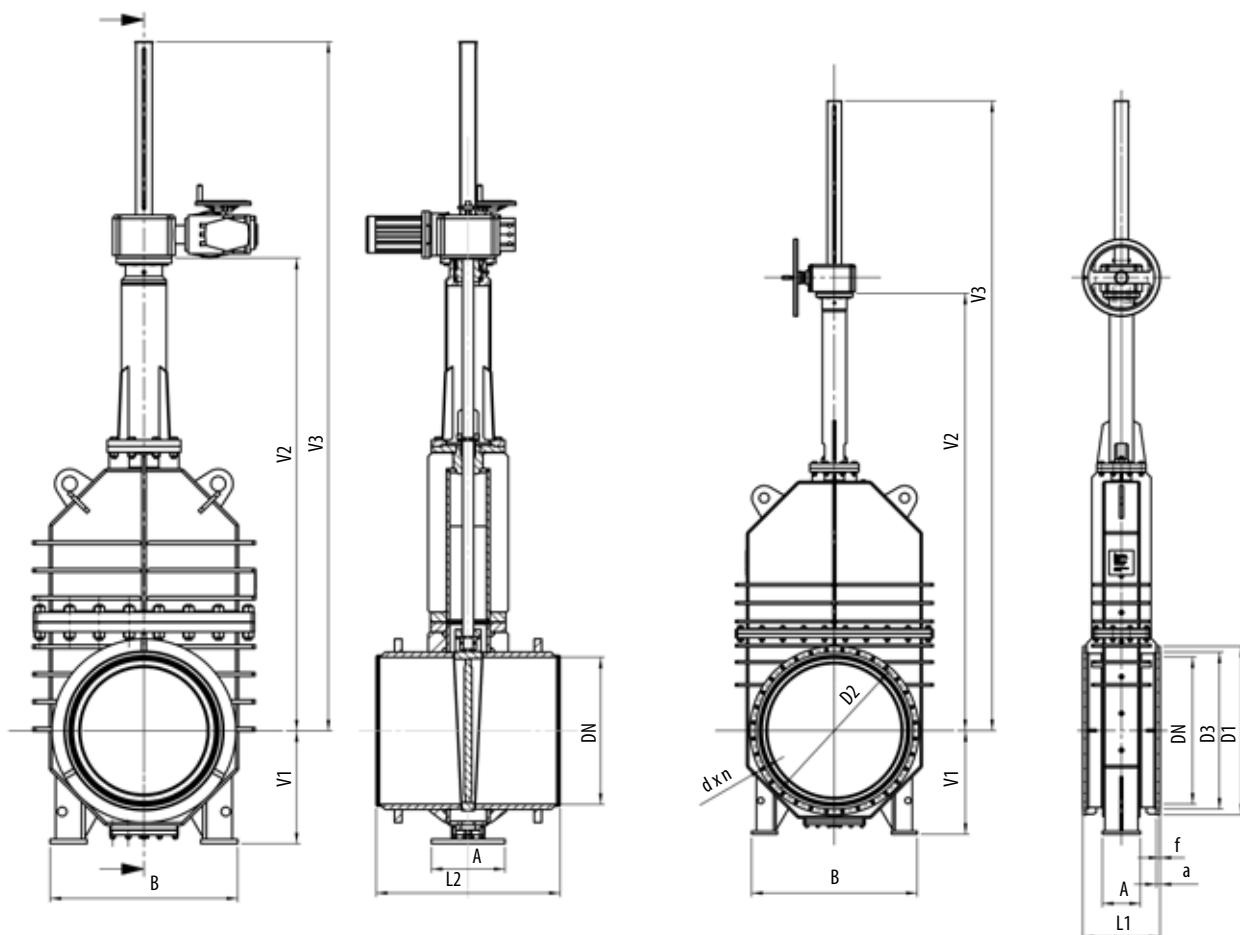
Position	Component	Carbon steel	Carbon steel for low temperatures
1	Body + overlay	1.0425 + 13Cr	1.0566 + 13Cr
2	Bonnet	1.0425	1.0566
3	Wedge + overlay	1.0425 + 13Cr	1.0566 + 13Cr
5	Stem	1.4021	1.4021
6	Bonnet bolts*	1.7218*	1.7225*
7	Bonnet nuts*	1.1191*	1.7225*
8	Stem nut	A439 D2 (Ni-rezist), Al-bronze	
10	Gasket	Graphite with stainless steel insert	
11	Packing	Pressed graphite	

* equivalent or according to customer's request



DN 500-2000 • PN 2,5-25 • Tmax 300 °C
Body design: yoke gate valve

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



PN 2,5

DN	L1	L2	D1	D2	D3	a	n	d	V1	V2	V3	kg	
												flanged ends	welded ends
500	350	700	645	600	570	29	20	22	540	1758	2410	750	726
600	390	800	755	705	670	30	20	26	560	1996	2757	972	941
700	430	900	860	810	775	30	24	26	565	2248	3285	1290	1249
800	470	1000	975	920	880	30	24	30	739	2550	3687	1520	1472
900	510	1100	1075	1020	980	32	28	30	790	2860	3800	1820	1805
1000	550	1200	1175	1120	1080	32	28	30	830	2998	4335	2180	2111
1100	590	1300	1275	1220	1180	35	32	30	965	3289	4510	2560	2510
1200	630	1400	1375	1320	1280	35	32	30	940	3568	5137	2950	2856
1300	670	1400	1470	1420	1380	38	32	30	980	3910	5590	3560	
1400	710	1400	1575	1520	1480	40	36	30	1054	4210	5892	3910	
1600	790	1400	1790	1730	1690	43	40	30	1155	4683	6691	5445	
1800	870	1400	1990	1930	1890	50	44	30	1300	5000	7225	7900	
2000	950	1400	2190	2130	2090	55	48	30	1380	5720	7845	9420	



DN 500-2000 • PN 2,5-25 • Tmax 300 °C
Body design: yoke gate valve

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

PN 6

DN	L1	L2	D1	D2	D3	a	n	d	V1	V2	V3	kg	
												flanged ends	welded ends
500	350	700	645	600	570	29	20	22	510	1746	2410	810	784
600	390	800	755	705	670	30	20	26	620	1996	2757	980	949
700	430	900	860	810	775	30	24	26	670	2338	3285	1315	1273
800	470	1000	975	920	880	30	24	30	730	2488	3687	1550	1501
900	510	1100	1075	1020	980	38	28	30	790	2860	3800	1850	1802
1000	550	1200	1175	1120	1080	38	28	30	830	2998	4335	2210	2140
1100	590	1300	1290	1230	1190	40	32	30	965	3289	4510	2670	2560
1200	630	1400	1405	1340	1295	45	32	33	940	3568	5137	3162	3061
1300	670	1400	1520	1450	1405	45	32	33	980	3910	5590	3820	
1400	710	1400	1630	1560	1510	50	36	36	1035	4103	5620	4320	
1600	790	1400	1830	1760	1710	50	40	36	1160	4780	6600	5850	
1800	870	1400	2045	1970	1920	65	44	39	1300	5000	7225	8120	
2000	950	1400	2265	2180	2125	80	48	42	1380	5720	7845	9910	

PN 10

DN	L1	L2	D1	D2	D3	a	n	d	V1	V2	V3	kg	
												flanged ends	welded ends
500	700	700	670	620	585	34	20	26	510	1746	2410	1480	1433
600	800	800	780	725	685	35	20	30	560	1996	2757	1715	1660
700	900	900	895	810	800	38	24	30	565	2248	3317	2020	1956
800	1000	1000	1015	950	905	48	24	33	739	2550	3719	2238	2167
900	1100	1100	1115	1050	1005	53	28	33	780	2788	3824	2550	2452
1000	1200	1200	1230	1160	1110	63	28	36	830	3032	4440	3100	3001
1100	1300	1300	1345	1270	1220	73	28	36	965	3289	4510	3370	
1200	1400	1400	1455	1380	1330	78	32	39	940	3568	5137	3850	
1300	1400	1400	1565	1485	1435	85	32	39	980	3910	5590	4520	
1400	1400	1400	1675	1590	1535	93	36	42	1035	4103	5620	5020	
1600	1400	1400	1915	1820	1760	103	40	48	1160	4780	6600	6550	

PN 16

DN	L1	L2	D1	D2	D3	a	n	d	V1	V2	V3	kg	
												flanged ends	welded ends
500	700	700	715	650	610	42	20	33	510	1746	2410	1510	1462
600	800	800	840	770	725	53	20	36	560	1996	2757	1745	1690
700	900	900	910	840	800	58	24	36	650	2333	3717	2055	1990
800	1000	1000	1025	950	905	63	24	39	739	2550	3719	2285	2212
900	1100	1100	1125	1050	1000	68	28	39	780	2788	3824	2860	2750
1000	1200	1200	1255	1170	1110	83	28	42	840	3032	4440	3200	3098
1100	1300	1300	1370	1280	1220	93	28	42	975	3299	4520	3480	
1200	1400	1400	1485	1390	1330	98	32	48	950	3578	5147	4550	

PN 25

DN	L1	L2	D1	D2	D3	a	n	d	V1	V2	V3	kg	
												flanged ends	welded ends
500	700	700	730	660	615	52	20	36	510	1746	2410	2000	1936
600	800	800	845	770	720	65	20	39	560	1996	2757	2250	2178
700	900	900	960	875	820	73	24	42	565	2248	3356	2550	2469
800	1000	1000	1085	990	930	83	24	48	615	2550	3758	2960	2866
900	1100	1100	1185	1090	1030	83	28	48	749	2560	3729	3560	
1000	1200	1200	1320	1210	1140	103	28	56	790	2798	3834	3950	
1100	1300	1300	1425	1315	1245	108	28	56	985	3399	4530	4180	
1200	1400	1400	1530	1420	1350	112	32	56	960	3588	5157	5250	

* F ISO 5210 form C



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 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.

The gate valves are made as cast-type valves. Materials and main design and face-to-face/end-to-end dimensions are identical to those of gate valves with type designation S33.

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.

Connection to the piping

- flanged ends
- welding ends

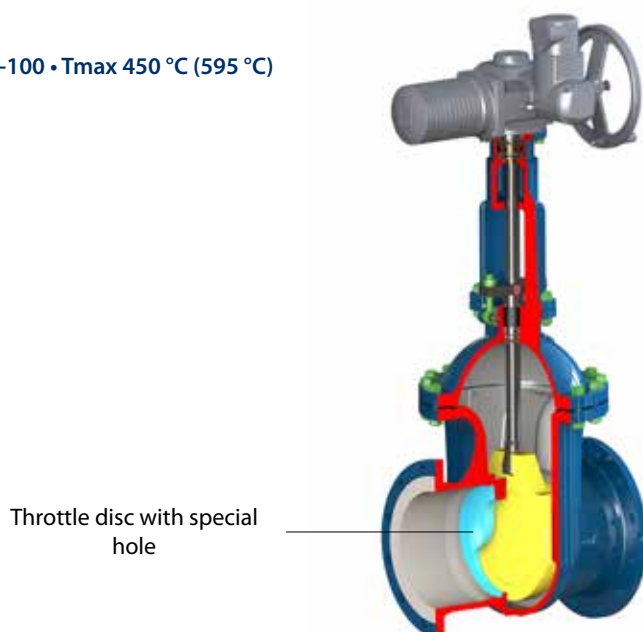
Installation

The gate valves can be installed into the piping in any position.

Advantages

- guaranteed metal-to-metal tightness in either flow direction
- 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 50-600 • PN 16-100 • Tmax 450 °C (595 °C)



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

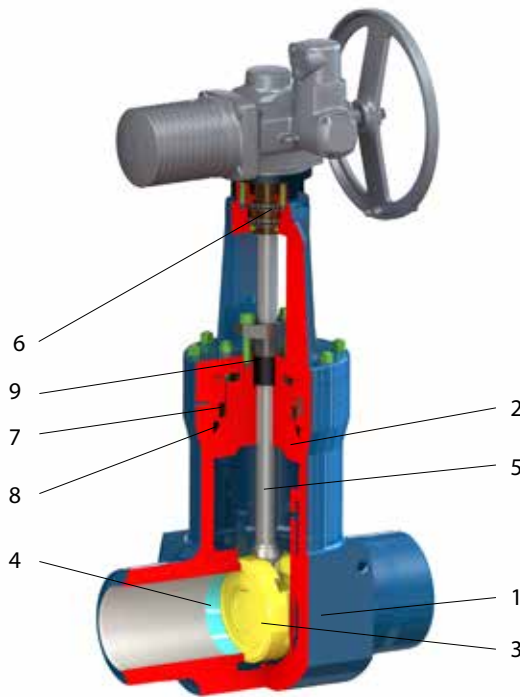
- water
- steam
- gas
- other fluids

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

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



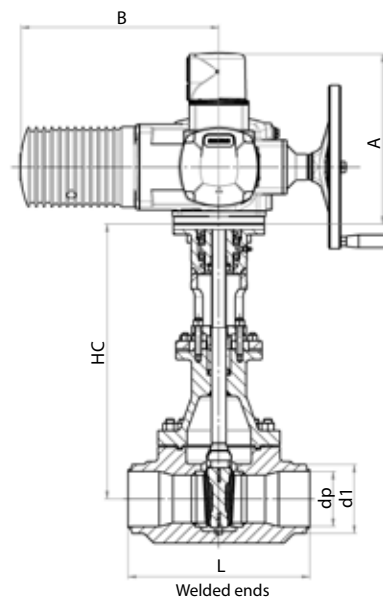
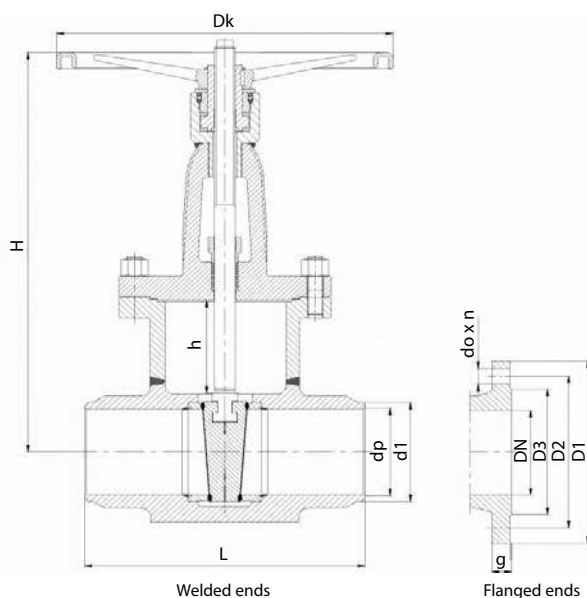
DN 50-350 • PN 63-100 • Tmax 600 °C (450 °C)

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

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

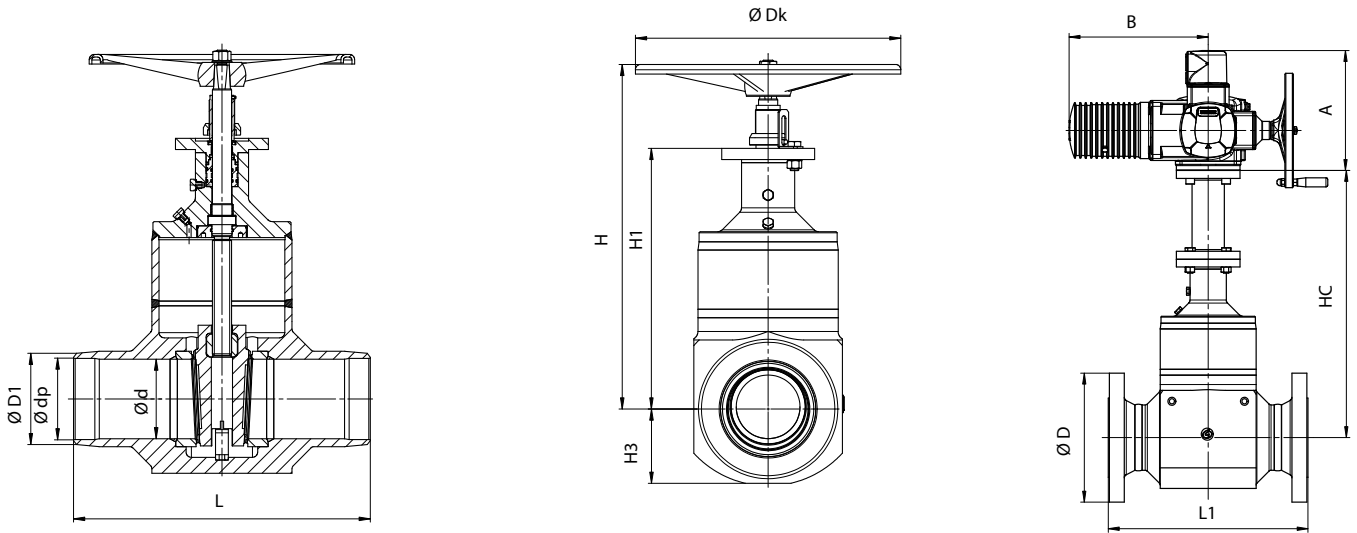
PN 63-100

Flanged ends														
DN	L	D3	PN 63						PN 100					
			D1		D2	to x n	g	kg	D1		D2	to 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



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	bronze	bronze	bronze
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	Dk	kg	A	B	C	D	ISO 5210
50	49	60,3	Acc. to order	340	250	65	380	292	250	41	*	*	-	-	F10
80	74	114,3		382	280	87	440	356	320	56	*	*	-	-	F14
100	100	139,7		510	371	120	590	432	400	72	*	*	-	-	F14
150	150	219,1		650	491	140	736	559	500	169	*	*	-	-	F14
200	201	273		748	586	175	840	660	630	312	*	*	-	-	F16
250	252	323,9		1305	740	210	895	787	400	485	*	*	360	410	F25
300	303	406,4		1380	850	265	970	838	400	670	*	*	360	410	F25
400	385	457		1524	980	320	1100	991	500	1250	*	*	380	424	F30

* Dimensions A and B depend on the particular actuator type.

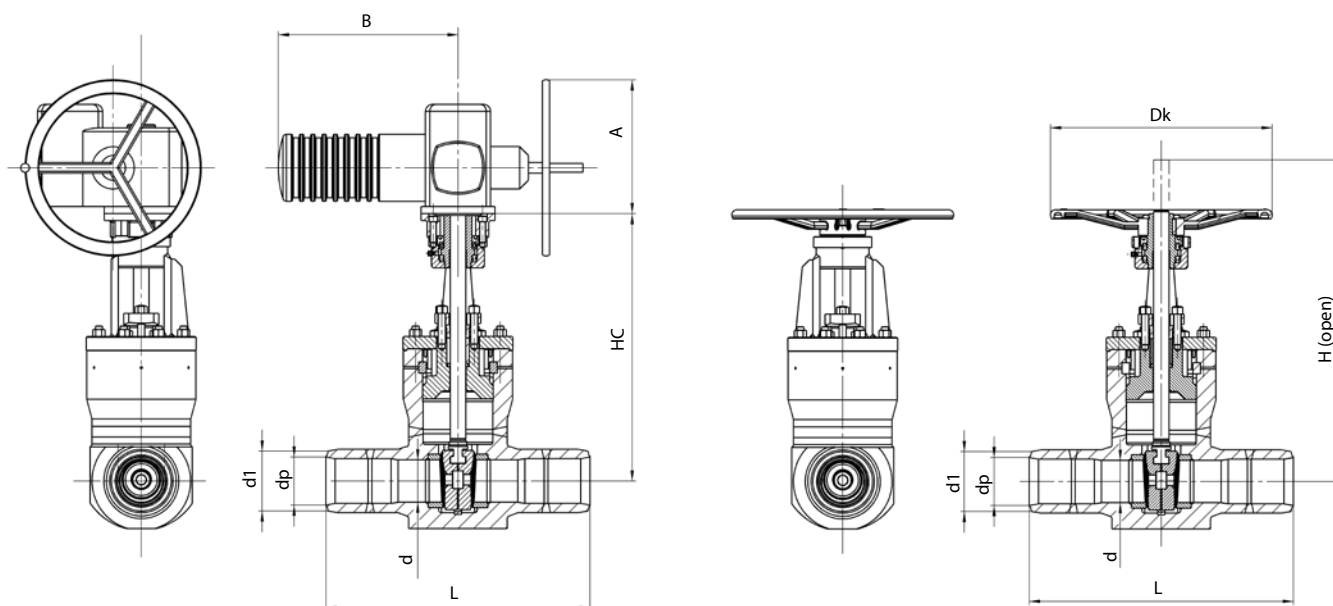
Note: DN 250 up to DN 400 are supplied only with gear and handwheel.

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 *	Lmin *	HC	kg operation free	Top flange	A	B	H (open)	Dk	kg with handwheel
65/50	77	Acc. to order	360	216	425	47, 49	F10, F14	Acc. to actuator	Acc. to actuator	490	400	48
80/75	90		450	305	550	105	F14			640	400	105
100/75	115		450	406	550	107	F14			640	400	106
125/110	141		500	483	696	244	F14			850	500	250
150/110	170		550	559	696	255, 262	F14, F16			850	500	254
175/125	180		650	559	769	317, 325	F14, F16			920	630	326
175/150	196		650	660	840	361, 372	F14, F16			1000	630	380
200/150	222		650	660	840	437, 448	F14, F16			1000	630	456
225/175	248		650	660	900	511, 590	F16, F25			1080	800	528
250/200	276		800	787	1120	850, 880	F16, F25			1300	800	840
250/225	303		900	787	1160	1140	F25			1350	F25	1150
300/225	325		900	914	1160	1170	F25			1350	F25	1180
300/250	325		1000	991	1330	1500, 1530	F25, F30			1540	F25, F30	1500
350/275	359		1000	991	1380	1700	F30			1680	F30	1700
400/300	411		1200	1092	1550	2050	F30			1840	F30	2050

* dimensions d1 and L can be adjusted acc. to customer request

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

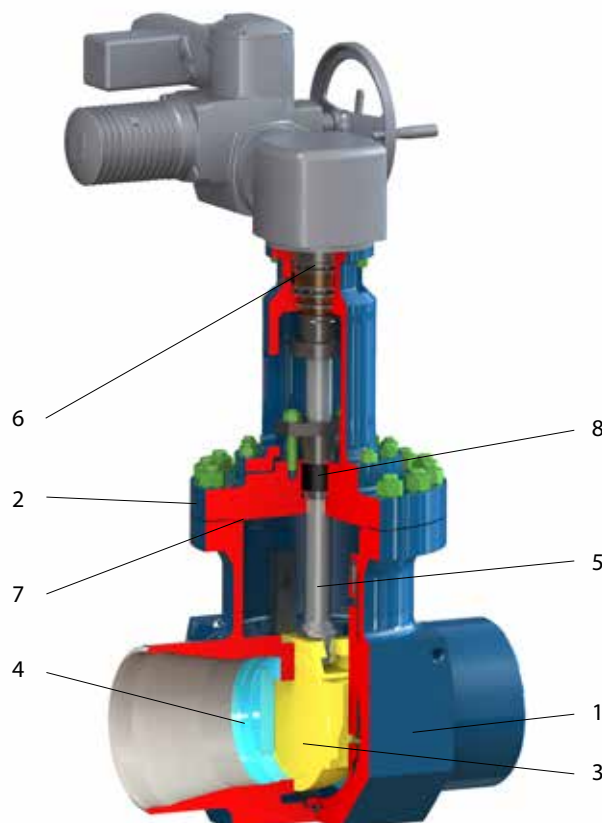
Gate valves may be installed in any position

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 50-400 • PN 63-400 • 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, full bore with flexible wedge and 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,
- use of solid wedge.

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.

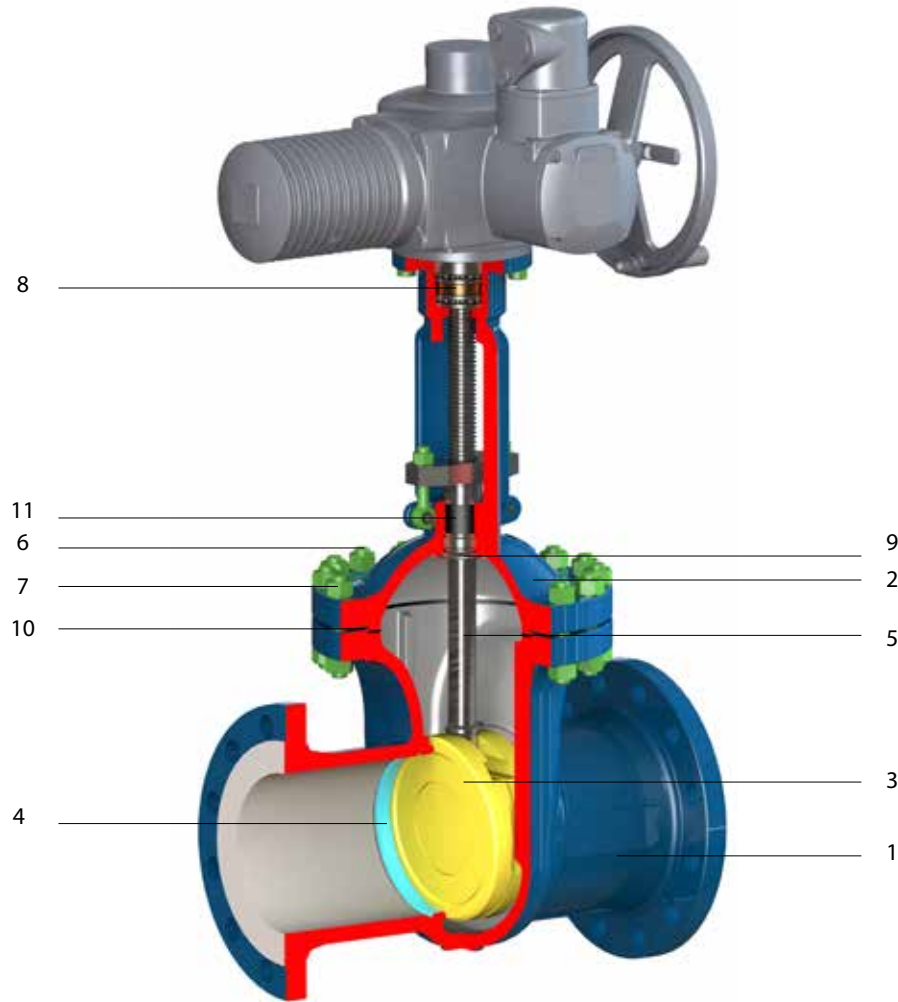
Production range

Class	NPS																		
	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	28	30	32	36	42	48
150	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
300	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
600	•	•	•	•	•	•	•	•	•	•	•	•	•						
900	•	•	•	•	•	•	•	•	•	•									
1500	•	•	•	•	•	•	•	•	•	•									



NPS 2-48 • Class 150-1500 • Tmax 450 °C (595 °C)
 Body design: yoke gate valve
 Body, bonnet, wedge: cast
 Rising stem
 Flexible wedge

Connection: ☉ ASME B16.5, ASME B16.47 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 LCC	A351 CF8M
2	Bonnet	A216 WCB	A217 WC6	A352 LCC	A351 CF8M
3	Wedge + overlay **	A216 WCB + 13Cr	A217 WC6 + Stellite 6	A352 LCC + F304	A351 CF8M
4	Seat + overlay **	A105 + 13Cr	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*	A 194 2H*	A194 4*	A194 7*	A194 8*
8	Stem nut	A439 D2 (Ni-rezist), Al-bronze			
9	Back seat	A182 F6a		A182 F304	A182 F316
10	Gasket	Graphite with stainless steel insert			
11	Packing	Pressed graphite			

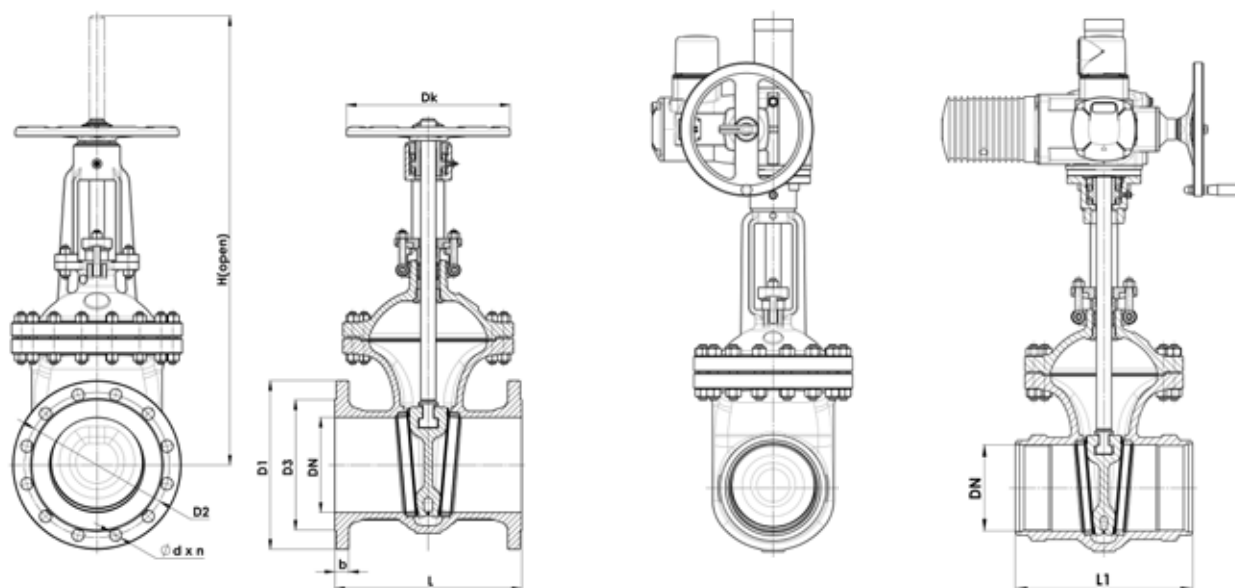
* equivalent or according to customer's request

** other trims according to API 600



NPS 2-48 • Class 150-1500 • Tmax 450 °C (595 °C)
Body design: yoke gate valve

Connection: ☉ ASME B16.5, ASME B16.47 FLANGED ENDS
☼ ASME B16.25 WELDED ENDS



Class 150

NPS	DN	D1	D2	D3	d x n	L	b	H (open)	Dk	kg	BW	
											L1	kg
2	50	150	120,7	92,1	19,1x4	178	14,3	397	200	18	216	18
2,5	65	180	139,7	104,3	19,1x4	190	20,7	435	250	26	241	28
3	80	190	152,4	127	19,1x4	203	17,5	497	250	34	283	30
4	100	230	190,5	157,2	19,1x8	229	22,3	585	250	52	305	50
6	150	280	241,3	215,9	22,4x8	267	23,9	765	350	88	403	85
8	200	345	298,5	269,9	22,4x8	292	27	973	350	144	419	128
10	250	405	362	323,8	25,4x12	330	28,6	1160	400	197	457	220
12	300	485	431,8	381	25,4x12	356	30,2	1362	450	298	502	310
14	350	535	473,6	412,8	28,6x12	381	33,4	1520	500	406	572	450
16	400	595	539,8	469,9	28,6x16	406	35	1725	560	524	610	550
18	450	625	577,9	533,4	31,8x16	432	38,1	1930	560	626	660	700
20	500	700	635	584,2	31,8x20	457	41,3	2160	610	789	711	910
24	600	815	749,3	692,2	35x20	508	46,1	2540	610	1033	813	1130
28	700	925	863,6	800	35x28	610	69,9	2990	-	1905	914	1750
30	750	985	914,4	857	35x28	610	73,1	3070	-	2145	914	1960
32	800	1060	977,9	914	41,3x28	711	79,4	3460	-	3506	-	-
36	900	1170	1085,8	1022	41,3x32	711	88,9	3660	-	3575	-	-
42	1000	1345	1257,3	1194	41,3x36	813	88,9	4260	-	5123	-	-
48	1200	1510	1422,4	1356	41,3x44	884	95,3	4875	-	6668	-	-



NPS 2-48 • Class 150-1500 • Tmax 450 °C (595 °C)
Body design: yoke gate valve

Connection: ASME B16.5, ASME B16.47 FLANGED ENDS
 ASME B16.25 WELDED ENDS

Class 300

NPS	DN	D1	D2	D3	d x n	L	b	H (open)	Dk	kg	BW	
											L1	kg
2	50	165	127	92,1	19,1x8	216	20,7	422	200	24	216	19
2,5	65	190	149,2	104,3	22,4x8	241	23,9	446	250	31	241	29
3	80	210	168,3	127	22,4x8	282	27	512	250	52	282	38
4	100	244	200	157,2	22,4x8	305	30,2	603	250	76	305	57
6	150	320	269,9	215,9	22,4x12	403	35	804	350	146	403	118
8	200	380	330,2	269,9	25,4x12	419	39,7	1002	400	218	419	183
10	250	445	387,4	323,8	28,6x16	457	46,1	1229	400	352	457	278
12	300	520	450,8	381	31,8x16	502	49,3	1479	460	460	502	406
14	350	585	514,4	412,8	31,8x20	762	54,6	1630	560	857	762	565
16	400	650	571,5	469,9	35x20	838	55,6	1815	460	1172	838	728
18	450	710	628,6	533,4	35x24	914	58,8	2000	460	1281	914	806
20	500	775	685,8	584,2	35x24	991	62	2220	560	1498	991	1231
24	600	915	812,8	692,2	41,3x24	1143	68,3	2620	610	2282	1143	1890
30	750	1090	997	857	47,6x28	1397	73,1	3180	700	4495	1397	3686
36	900	1270	1168,4	1022	54x32	1727	88,9	3760	700	5833	1727	4784

Class 600

NPS	DN	D1	D2	D3	d x n	L	b	H (open)	Dk	kg	BW	
											L1	kg
2	50	165	127	92,1	19,1x8	292	25,4	441	250	46	292	31
2,5	65	190	149,2	104,3	22,4x8	330	28,6	510	300	62	330	57
3	80	210	168,3	127	22,4x8	356	31,8	574	300	72	356	65
4	100	275	215,9	157,2	25,4x8	432	38,1	700	350	128	432	87
6	150	355	292,1	215,9	28,6x12	559	47,7	804	450	216	559	169
8	200	420	349,2	269,9	31,8x12	660	55,6	1055	500	413	660	375
10	250	510	431,8	323,8	35x16	787	63,5	1314	640	754	787	604
12	300	460	489	381	35x20	838	66,7	1460	680	981	838	859
14	350	605	527	412,8	38,1x20	889	69,9	1750	610	1316	889	1154
16	400	685	603,2	469,9	41,3x20	991	76,2	1900	610	1672	991	1530
18	450	745	654	533,4	44,5x20	1092	82,6	2020	640	2780	1092	2282
20	500	815	723,9	584,2	44,5x24	1194	88,9	2172	700	3203	1194	2650
24	600	940	838,2	692,2	50,8x24	1397	101,6	2650	750	4069	1397	3340

Class 900

NPS	DN	D1	D2	D3	d x n	L	b	H (open)	Dk	kg	BW	
											L1	kg
2	50	216	165	92	25 x 8	368	39	500	280	70	368	63
3	80	241	190,5	127	25 x 8	381	39	660	300	140	381	126
4	100	292	235	157	32 x 8	457	45	750	350	200	457	180
6	150	381	317,5	215,9	32 x 12	610	56	1060	500	358	610	322
8	200	470	393,7	270	38 x 12	737	64	1140	650	550	737	495
10	250	546	469,9	324	38 x 16	838	70	1370	700	1000	838	900
12	300	610	533,4	381	38 x 20	965	79,3	1560	900	1215	965	1094
14	350	640	558,8	413	41 x 20	1029	86	1950	900	1600	1029	1440
16	400	705	616	470	44 x 20	1130	89	2100	900	2150	1130	1935

Class 1500

NPS	DN	D1	D2	D3	d x n	L	b	H (open)	Dk	kg	BW	
											L1	kg
2	50	216	165	92	25 x 8	368	39	510	280	70	368	63
3	80	267	203	127	32 x 8	470	48	670	350	175	470	158
4	100	311	241	157	35 x 8	546	54	770	400	270	546	243
6	150	394	317,5	215,9	38 x 12	705	83	1070	500	520	705	468
8	200	483	393,7	270	44 x 12	832	92	1180	750	820	832	738
10	250	584	482,6	324	51 x 12	991	108	1410	900	1560	991	1404
12	300	673	571,5	381	54 x 16	1130	124	1620	-	2730	1130	2457
14	350	750	635	413	60 x 16	1257	135	2020	-	-	1257	-
16	400	825	704,8	470	60 x 16	1384	146	2180	-	-	1384	-



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

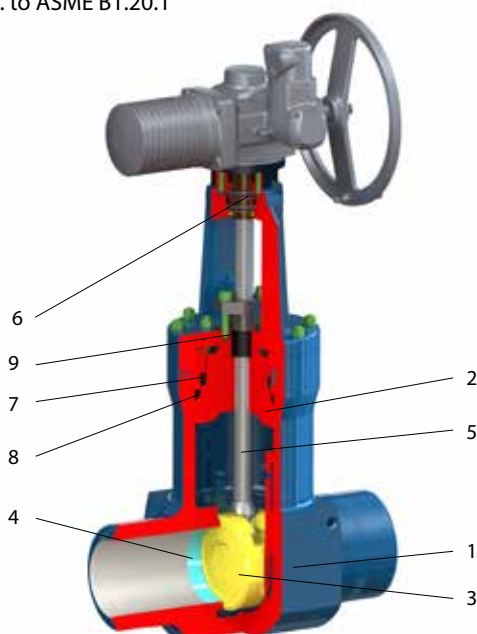
- water
- steam
- gas
- other fluids

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
- **socketed 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.

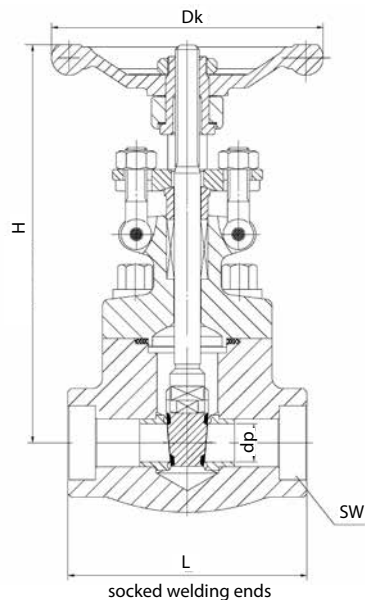
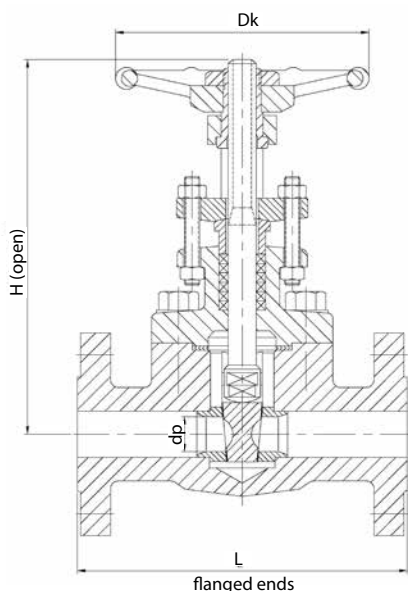
Position	Component
1	Body
2	Pressure seal bonnet
3	Wedge + overlay
4	Seat + overlay
5	Stem
6	Stem nut
7	Segmented ring
8	Gasket
9	Packing

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 • 538°C
Body design: forged body, bolted bonnet

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

Class 600

NPS	Flanged ends					Socketed 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	Socketed 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					Socketed 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

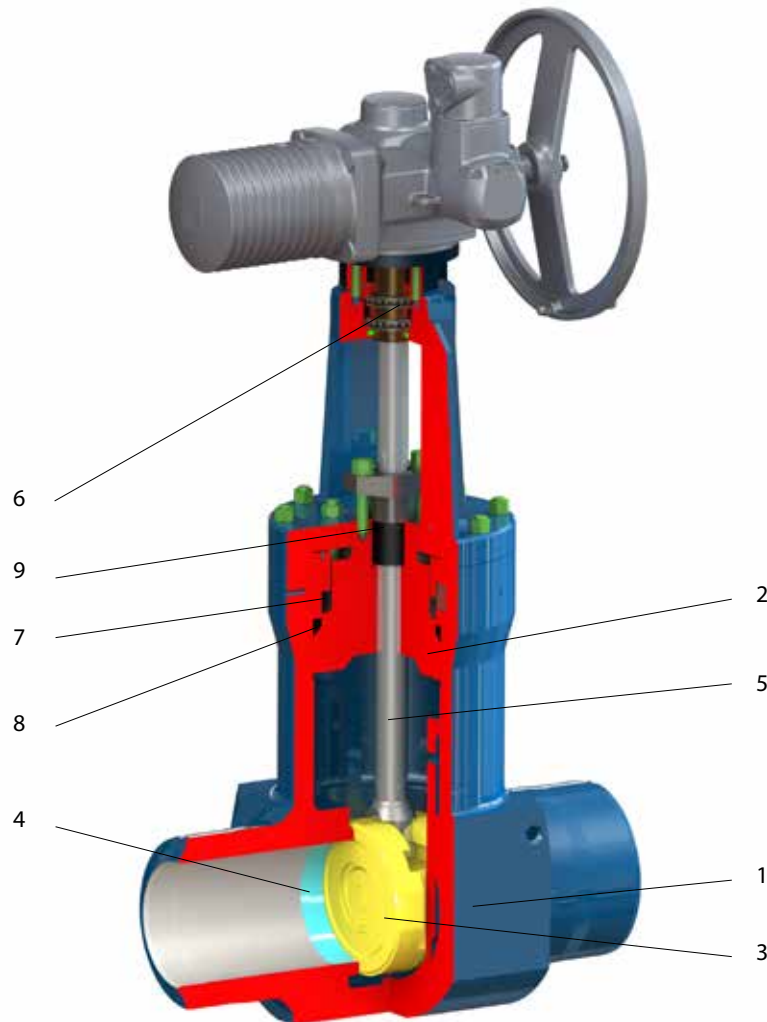
NPS	Flanged ends					Socketed welding ends / SW				
	d	L	H	Dk	kg	d	L	H	Dk	kg
1/2	10,5	216	191	125	7,00	10,5	111	191	125	4,90
3/4	12,5	229	192	125	7,10	13,5	111	192	125	5,00
1	17	254	219	160	15,30	17,5	120	219	160	6,00
1 1/2	28	305	296	200	22,10	29	140	296	180	11,40
2	36	371	316	220	27,80	36,5	178	316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



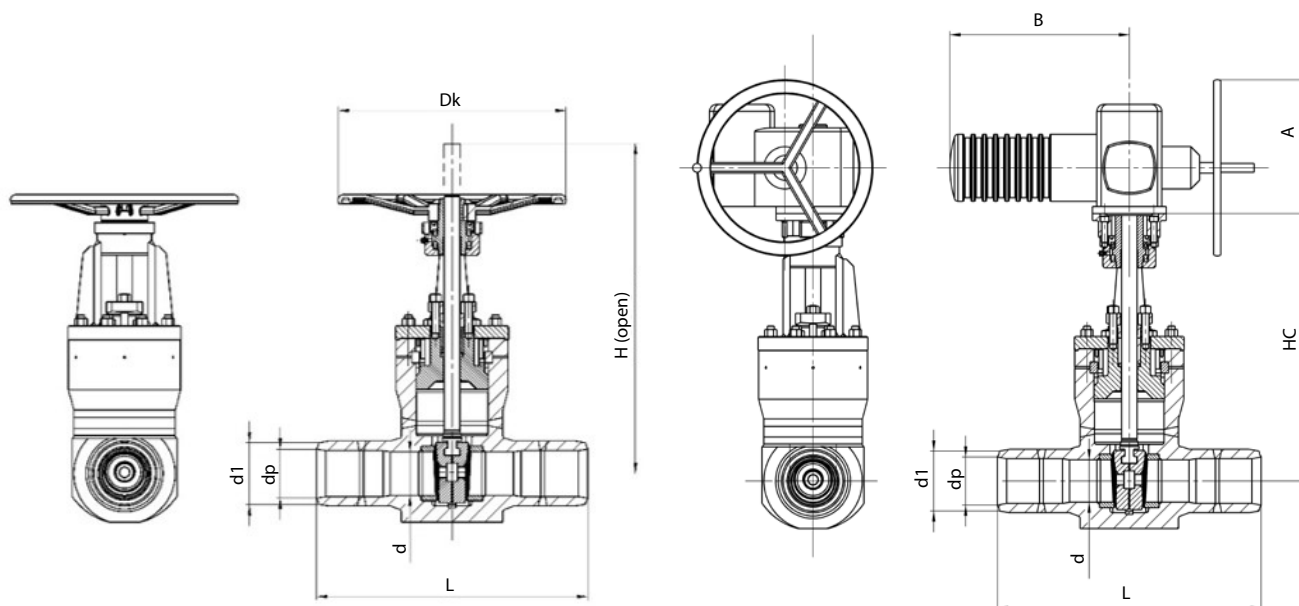
Material acc. to ASTM

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	A	B	H (open)	Dk	kg with handwheel
2	62	Acc. to order	216	425	42	F14	Acc. to actuator	Acc. to actuator	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	A	B	H (open)	Dk	kg with handwheel
2	62	Acc. to order	216	425	42	F14	Acc. to actuator	Acc. to actuator	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	A	B	H (open)	Dk	kg with handwheel
2	62	Acc. to order	279	425	44	F14	Acc. to actuator	Acc. to actuator	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



TABLE OF PRESSURE-TEMPERATURE RATINGS ACC. TO EN

PS values are acc. to flange connection standard EN 1092-1 (March 2008).

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	-	-	-	-	-

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	-	-

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	-	-

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	-	-

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	-	-

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
1.0619 (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 (G20Mn5)	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	184,5	160,7	136,9	107,1	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	236	206	175,2	137,1	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	295	257	219	171,4	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 B16.34-2013 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	1.1	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	16,2	14,8	13,7	12,1	10,2	8,4	6,5	5,5	4,6	2,8	-	-	-	-

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	1.1	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	1.1	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	1.1	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	1.1	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	1.1	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 97/23/EC for S33



Certificate acc. to PED 97/23/EC for S43



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



Quality Management System acc. to EN ISO 9001:2008



Environmental Management System acc. to EN ISO 14001:2004



Certificate of BS OHSAS 18001:2007



ASME NPT Certificate



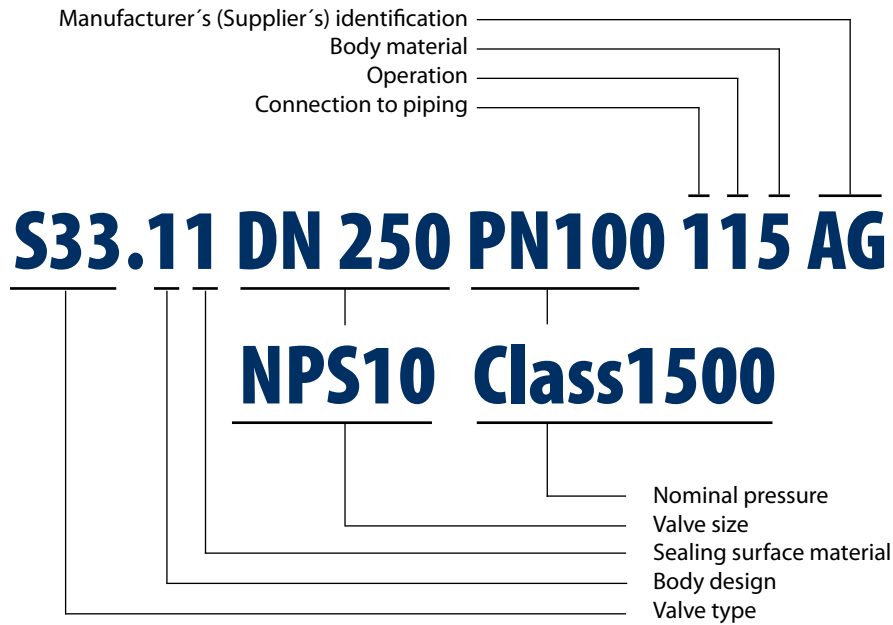
ASME N Certificate

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 wedge, cast body
- 4 – yoke gate valve, solid 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 – 13Cr x 13Cr
- 2 – stainless steel x stainless steel
- 3 – stainless steel x stellit
- 5 – stellit x stellit
- 8 – 13Cr x stellit

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 actuator
- 5 – bare stem

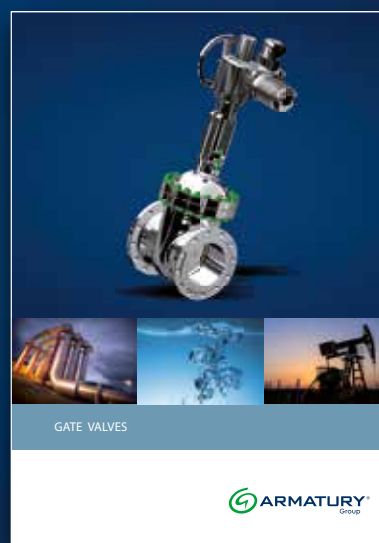
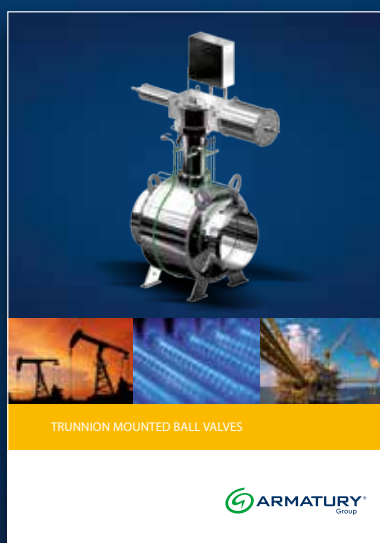
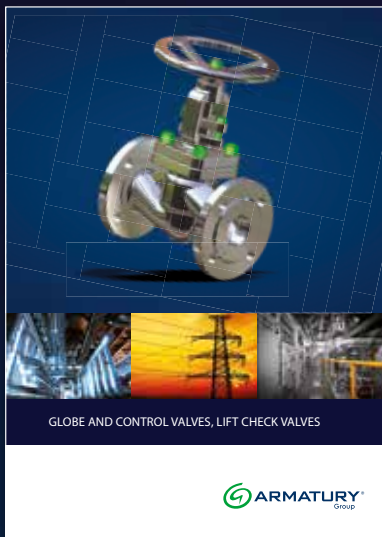
Body material

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



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