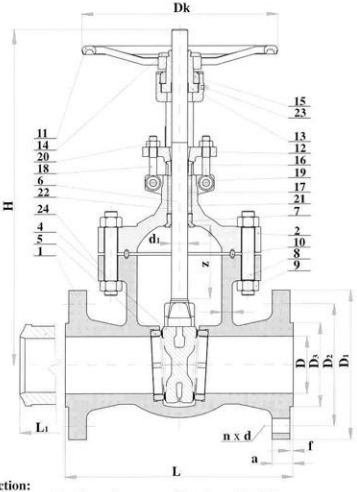
Gate valve

C 09.2 [S 09] CLASS 300



Connection:
Main and connecting dimensions are evident from table Below.

Materials:
Gate valves are made of the following materials:
ASTM A 216 WCB, A 352 LCC, A 352 LCB, A 217 WC6, A 217 C5, A 217 C12. Standard gate valve trims are TRIM 1, 5, 8, 10, 11 and 12 according to API 600.

Testing:
Gate valves are pressure tested according to API 598:
shell test, backseat tightness test, closure tightness by low pressure, closure tightness by high pressure (if requested in an order).

Application:
As a shut-off valve for: non-corrosive liquids, water, saturated steam, oil, air, crude oil and crude oil products. Operation parameters are in accordance with ASME/ANSI B 16.34 standard. Application for other working media or higher temperatures must be consulted with the manufacturer. Standard ambient temperature: from -13˚F to + 122˚F (-25˚C to +50˚C). Application for different working conditions must be discussed with the manufacturer.

Characteristics of working conditions for materials:
Pressure-temperature ratings per ANSI B16.34.

Technical description:
Steel gate valve design complies to API 600 and BS 1414.
Gate valves are yoke, flanged or with butt-weld ends, with full bore, flexible wedge. Bodies, bonnets and yokes are cast. Wedges may be cast or forged. All wedges are guided. Sealing seats are screwed or welded into a body. Seats have hard-metal overlay.
The valves have rising, non-rotary stem bolted body-bonnet joint. Standard stem threads are Acme 2G-LH.
Gate valves are controlled by handwheel. After agreement they can be supplied with bevel gear box or electric servomotor. Larger sizes 8"of gate valves provided with bearings for easier operation.
Packing material - die formed rings of expanded graphite and braided graphite rings. Gate valve packing meet requirements of Clean Air Amendment Act of 1990.
Upon special customer´s requirement, gate valves may be equipped with: drainage, deaeration, - bypassing from interspace, bypasses.

CLASS 300

NPS	D	D_1	D_2	D_3	$L=L_1$	a	f	n	d	H	z	Dk	d_1	kg
2"	51	165	127	92	216	23	2	8	19	360	72	200	3/4"	27
2 1/2"	64	190	149,2	105	241	26	2	8	19	435	87	250	1"	37
3"	76	210	168	127	283	29	2	8	22	465	92	250	1"	44,5
4"	102	254	200	157	305	32	2	8	22	520	117	250	1"	65
6"	152	318	270	216	404	37	2	12	22	705	170	400	1 1/4"	134
8"	203	381	330,2	270	419	42	2	12	25,5	887	234	450	1 3/8"	227
10"	254	444	387,4	324	457	48	2	16	28,5	1048	286	500	1 5/8"	357
12"	305	521	450,9	381	502	51	2	16	32	1120	330	500	1 5/8"	550
14"	337	584	514,4	413	762	54	2	20	32	1244	363	560	1 3/4"	770
16"	387	648	571,5	470	838	58	2	20	35	1417	420	630	2"	1015
18"	432	711	628,7	533	914	61	2	24	35	1550	470	630	2"	1270
20"	483	775	685,8	584	991	64	2	24	35	1719	520	710	2 3/8"	1670
24"	584	914	812,8	692	1143	70	2	24	41	2030	625	800	2 3/4"	2650
30"	737	1092	997	857	1397*	92	2	28	48	2612	798	900	3 1/4"	4325

Installation
Yoke gate valves can be installed into pipeline in any position.

Order specification
API 600 Standard applies for ordering. It is necessary to specify in an order:
type number, nominal diameter, pressure class, design (connection),
wedge type, type of control, body and bonnet material, trim material,
operating parameters, acceptance tests, accompanying documentation

Class	Design 1 Slide bearing	Design 2 Antifriction bearing	Design 3 Antifriction bearing	Design 4 Flooded seal	Design 5 Nonflooded seal	Design 6 Yoke bonnet	Design 7 Bonnet - yoke
150	2" - 12"	14" and larger	36"	**	basic design	2" - 12"	14" and larger
300	2" 10"	12" and larger	30"	basic design	**	2" 10"	12" and larger
600	2" 6"	8" 12"	6", 14" and larger	basic design	**	2" 6"	8" and larger
900							
1500	2" - 6"	6", 8" and larger	6", 8" and larger	basic design	**	2" - 6"	8" and larger

** After consultation with the manufacturer

Sealing materials (X)

Position	Name	Class	Body material				
			WCB	LCC	WC6	C5	C12
10	Cover sealing	150 300 600, 900 1500	Flat graphite gasket Spiral wound graphite RTJ rings soft lowcarbon steel		AISI 321		
21 22	Gland packing	150 - 1500 Braided graphite cord 150 - 1500 Die formed graphite rings					
(X) or according to customer's requirement							

Basic design standards

Basic design	API 600
Face-to-face dimensions	ASME B16.10
Flanges	ASME B 16.5 30" - 36" MSS SP44 (API605)
Butt-weld ends dimensions	ASME B 16.25
Testing	API 598
Pressure-temperature ratings	ASME B 16.34

TRIM - materials according to API 600

Pos.	Name	TRIM				
		1	5	8	11	12
4a	Wedge sealing surface	13 Cr overlay	Stellite 6	13 Cr overlay	Monel overlay	316 overlay
5a	Seat sealing surface	13 Cr overlay	Stellite 6	Stellite 6	Stellite 6	Stellite 6
6	Stem	A 276 410 T	A 276 410 T	A 276 410 T	Monel	A 182 F 316
7	Backseat insert - variants	A 182 F 6a Cl.4 A 217 CA 15 *	A 182 F 6a Cl.4 A 217 CA 15 *	A 182 F 6a Cl.4 A 217 CA 15 *	Monel	A 182 F 316 A 351 CF8 M
16	Stuffing box bushing	A 182 F 6a	A 182 F 6a	A 182 F 6a	Monel	A 182 F 316
	- variants	A 217 CA 15	A 217 CA 15	A 217 CA 15		A 351 CF8 M
17	Lantern	A 182 F 6a	A 182 F 6a	A 182 F 6a	Monel	A 182 F 316
	- variants	A 217 CA 15	A 217 CA 15	A 217 CA 15		A 351 CF8 M

* min. hardness 250 HB

Standard material specification (*)

Pos.	Name TRIM-Nr.	WCB 1, 5, 8, 11, 12	LCC 12	WC6 5, 8	C5 5	C12 5
1	Body	A 216 WCB	A 352 LCC	A 217 WC6	A 217 C5	A 217 C12
2	Bonnet	A 216 WCB	A 352 LCC	A 217 WC6	A 217 C5	A 217 C12
4	Disc - variants	A 182 F6a, A 182 F316 A 216 WCB + weld deposit A 105 + weld deposit	A 182 F 316 A 352 LCC + weld deposit	A 182 F6a A 182 F9 + weld deposit A 217 WC6 + weld deposit	A 182 F9 + weld deposit A 217 C5 + weld deposit	A 182 F9 + weld deposit A 217 C12 + weld deposit
5	Seat	A 106 B + weld deposit	A 350 LF2 mod. + weld deposit	A 182 F5 + weld deposit	A 182 F5 + weld deposit	A 182 F321+ weld deposit
8	Bolt -variants	A 193 B7 A 193 B7M	A 320 L7M	A 193 B7	A 193 B7	A 193 B7
9	Nut -variants	A 194 2H A 194 2H M	A 194 7M	A 194 2H	A 194 2H	A 194 2H
11	Handwheel	ASTM A 47, A 536				
12	Gland flange	A 105 [ČSN 41 1523]				
13	Stem nut	A 439 D2 (Ni - Resist)				
14	Handwheel nut	ASTM A 47				
15	Yoke nut	carbon steel [ČSN 41 1523]				
18	Eyebolt	A 307 Gr B				
19	Pin	carbon steel [ČSN 41 1523]				
20	Nut	A 194 2H				
23	Grease fitting	standart				
24	Name plate	AISI 304				
31	Yoke	A 216 WCB				

*- flanged type only