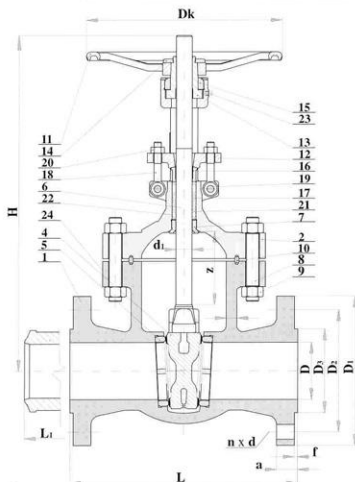


Gate valve

C 09.2 [S 09]

CLASS 600



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).

CLASS 600

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	292	26	7	8	19	360	72	200	3/4"	41
2 1/2"	64	190	150	105	330	29	7	8	22	438	87	250	1"	54
3"	76	210	168,5	127	356	32	7	8	22	457	92	250	1"	60
4"	102	273	216	157	432	39	7	8	25	549	117	300	1 1/8"	118
6"	152	356	292	216	559	48	7	12	28	795	185	500	1 5/8"	326
8"	200	419	349,3	270	660	56	7	12	32	865	225	500	1 5/8"	465
10"	248	508	431,8	324	787	64	7	16	35	1060	275	630	2"	775
12"	298	559	489	381	838	67	7	20	35	1184	330	630	2"	1030
14"	327	603	527	413	889	70	7	20	38	1400	375	710	2 3/8"	1153
16"	375	686	603	470	991	77	7	20	41	1545	435	710	2 3/8"	1435
18"	419	746	654	533	1092*	83	7	20	44	1760	500	800	2 3/4"	2418
20"	464	813	724	584	1194*	89	7	24	44	1870	540	800	2 3/4"	2973
24"	559	940	838	692	1397*	102	7	24	51	2180	630	900	3"	4108

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.

* - flanged type only

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	Design 2	Design 3	Design 4	Design 5	Design 6	Design 7
	Slide bearing	Antifriction bearing	Antifriction bearing	Flooded seal	Nonflooded seal	Yoke bonnet	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

Sealing materials (X)

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

** After consultation with the manufacturer

(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 (API 605)
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 182 F 6a Cl.4	A 182 F 6a Cl.4	Monel	A 182 F 316
		A 217 CA 15 *	A 217 CA 15 *	A 217 CA 15 *		A 351 CF8 M
16	Stuffing box bushing - variants	A 182 F 6a	A 182 F 6a	A 182 F 6a	Monel	A 182 F 316
		A 217 CA 15	A 217 CA 15	A 217 CA 15		A 351 CF8 M
17	Lantern - variants	A 182 F 6a	A 182 F 6a	A 182 F 6a	Monel	A 182 F 316
		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	WCB	LCC	WC6	C5	C12
	TRIM-Nr.	1, 5, 8, 11, 12	12	5, 8	5	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