

FIG. 6012/6013

DESCRIPTION

Cast carbon steel gate valves 600 pound pressure class with bolted bonnet, outside screw and yoke, FLEX-WEDGE and seal welded seat rings manufactured in accordance with API 600.

APPLICATION

These gate valves are used in pipelines and in facilities for water, steam, non-aggressive gases, naphtha, naphtha derivatives and in other power and process installations, in operating conditions upto 800°F (427°C), in accordance with Table No. 1. Data included in this table meet the pressure-temperature ratings of ANSI B16.34.

TECHNICAL DATA

The basic dimensions of the gate valves are in accordance with Table No. 4. Face to face dimensions of the gate valves are in accordance with ANSI B16.10. The pipe flanges are regularly furnished faced and drilled with 0.25" (6.44mm) raised faces, in accordance with ANSI B16.5 (See Note). The raised faces of the pipe flanges are machined in accordance with MSS SP-6. The wedges are of the single wedge flexible type providing greater sealing capability and lower torque requirements. Operation is performed by a non-rising hand wheel; the closing direction is to the right. Upon request, gate valves are made with enclosed bevel gearing. For remote control, these valves can be equipped with electric or air motor operating units.

The wedges have accurate guide slots, assuring true alignment and providing full guidance during operation.

The seat rings are seal welded in the body and are made of carbon steel with hard faced seat surfaces. The seat faces on the wedges are made by welding on 13 CR Stainless Steel.

The gate valves are provided with a backseat bushing, in the bonnet, enabling the replacement of the stem packing when the valve is in the wide open position.



PRESSURE-TEMPERATURE RATINGS				Table 1
Temperature		Working Pressure		
(° F)	(° C)	(psi)	(bar)	
100	38	1480	102,0	
200	93	1350	93,1	
300	149	1315	90,7	
400	204	1270	87,6	
500	260	1200	82,8	
600	316	1095	75,5	
650	343	1075	74,1	
700	371	1065	73,4	
750	399	1010	69,6	
800	427	825	56,9	

Asbestos free packing or flexible graphite as per request.

Valves nominal size 6" and larger are equipped with bearing type yoke nut to facilitate operation at higher pressures.

The gate valves are delivered protected against corrosion. The raised faces on the pipe flanges are protected against damage during shipment.

Cast on the gate valve bodies are the Lunkenheimer Trade Mark, nominal pressure class, nominal size, and material designation all in accordance with MSS SP-25.

TESTS

The gate valves are hydrostatically and pneumatically tested in accordance with Table No. 2, meeting the requirements of API 598.

NOTE: Other flange facings and finishes in accordance with ANSI B16.5 are available on request. Butt weld ends will be furnished in accordance with ANSI B16.25, unless otherwise specified.

TEST PRESSURES						Table 2
Hydrostatic				Pneumatic		
Shell		Seat		Seat		
(psig)	(bar-gage)	(psig)	(bar-gage)	(psig)	(bar-gage)	
2250	153,4	1650	112,4	80	5,5	

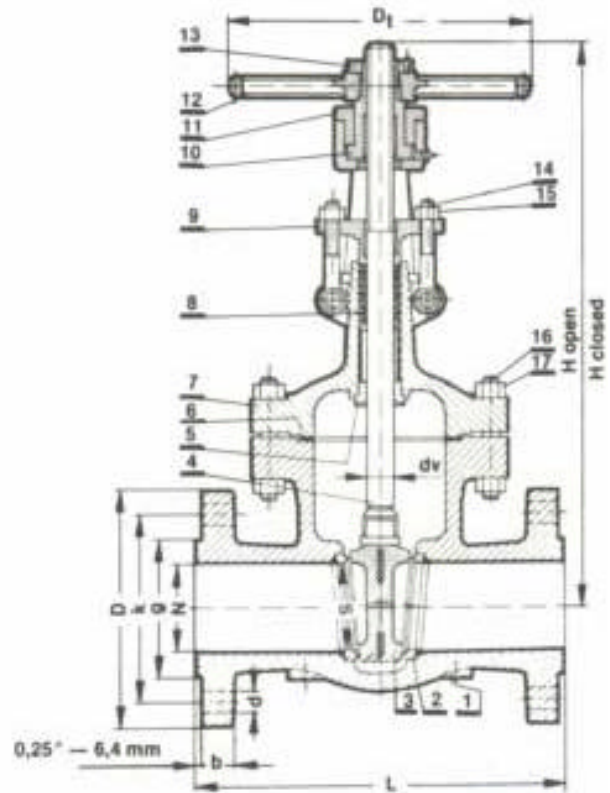


WITH UNIVERSAL TRIM

PARTS AND MATERIALS

Table 3

Key	Part	Material Specification
1	Body	ASTM A216 Gr. WCB
2	Seat Ring	ASTM A108 Gr. 1018-1020 w/Cr-Co-W Facing
3	Wedge	ASTM A216 Gr. WCB w/13Cr Facing
4	Stem	ASTM A582 Type 410
5	Backseat Bushing	ASTM A276 Type 410
6	Gasket	Spiral wound gasket asbestos free
7	Bonnet	ASTM A216 Gr. WCB
8	Packing	Asbestos - Free
9	Gland	ASTM A216 Gr. WCB
10	Yoke Nut	ASTM A439 Type D2
11	Yoke Nut Retaining Nut Yoke Cap 6" and larger	ASTM A536 Gr. 65-45-12
12	Handwheel	ASTM A47 Gr. 32510
13	Handwheel Nut	ASTM A47 Gr. 32510
14	Gland Eyebolt	Steel, Mild Carbon
15	Gland Eyebolt Nut	ASTM A307 Gr. B
16	Body - Bonnet Stud Bolt	ASTM A193 Gr. B7
17	Body - Bonnet Stud Bolt Nut	ASTM A194 Gr. 2H



GENERAL DIMENSIONS

Table 4

Valve Size	Port		Line flange					Face to Face L (in.) (mm)	Height			Line flange bolts		Turns to open	Hand-wheel Dia. Dt (in.) (mm)	Weight Approx (lbs.) (kg)
	Dia.	Dia.	Dia.	Thick-ness min.	Bolt Circle Dia.	Hole Dia.	Raised Face Dia.		Open	Closed	Stem Dia.	No.	Size (in.) (mm)			
	N (in.) (mm)	S (in.) (mm)	D (in.) (mm)	b (in.) (mm)	k (in.) (mm)	d (in.) (mm)	g (in.) (mm)		H (in.) (mm)	H (in.) (mm)	dv (in.) (mm)					
2	2.00 50,8	2.00 50,8	6.50 165,1	1.00 25,4	5.00 127,0	0.75 19,1	3.62 91,9	11.50 292,1	20.65 524,5	17.70 449,6	7/8 22,2	8	5/8 15,9	10.3	9.00 228,6	107 48,5
3	3.00 76,2	3.00 76,2	8.25 209,6	1.25 31,8	6.62 168,1	0.88 22,4	5.00 127,0	14.00 355,6	25.20 640,1	21.25 539,8	1 25,4	8	3/4 19,1	11.8	10.00 254,0	175 79,4
4	4.00 101,6	4.00 101,6	10.75 273,1	1.50 38,1	8.50 215,9	1.00 25,4	6.19 157,2	17.00 431,8	31.30 795,0	26.55 674,4	1 1/4 31,8	8	7/8 22,2	9.5	14.00 355,6	308 139,7
6	6.00 152,4	6.00 152,4	14.00 355,6	1.88 47,8	11.50 292,1	1.12 28,4	8.50 215,9	22.00 558,8	42.50 1079,5	35.80 909,3	1 1/2 38,1	12	1 25,4	13.4	18.00 457,2	740 335,7
8	7.87 199,9	8.00 203,2	16.50 419,1	2.19 55,6	13.75 349,3	1.25 31,8	10.62 269,7	26.00 660,4	50.80 1290,3	42.10 1069,3	1 3/4 44,5	12	1 1/8 28,6	17.4	20.00 508,0	1212 549,8