FIG. 1512/1513

DESCRIPTION

Cast carbon steel gate valves 150 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 up to 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 0.062" (1.5mm) 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 — **Table1**

Temperature		Working Pressure	
(°F)	(°C)	(psi)	(bar)
100	38	285	19,6
200	93	260	17,9
300	149	230	15,9
400	204	200	13,8
500	260	170	11,7
600	316	140	9,6
650	343	125	8,6
700	371	110	7,6
750	399	95	6,6
800	427	80	5,5

Asbestos free packing or flexible graphite as per request.

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 B 16.5 are available on request. Butt weld ends will be furnished in accordance with ANSI B16.25, unless otherwise specified.

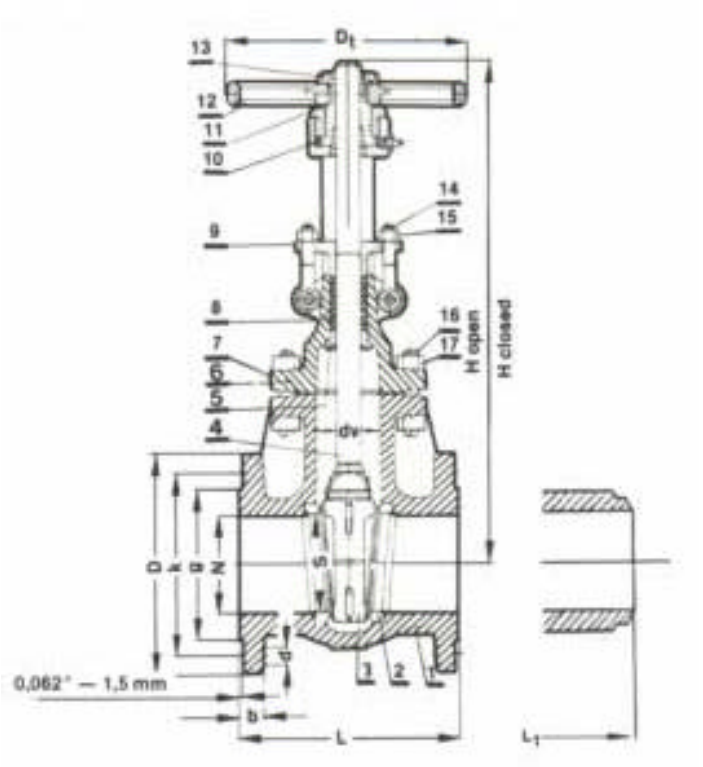
TEST PRESSURES — **Table 2**

Hydrostatic				Pneumatic	
Shell		Seat		Seat	
(psig)	(bar-gage)	(psig)	(bar-gage)	(psig)	(bar-gage)
450	31,0	325	21,7	80	5,5

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/13 Cr Facing
4	Stem	ASTM A582 Type 410
5	Backseat Bushing	ASTM A276 Type 410
6	Gasket	Soft Iron, Corrugated
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 10" and larger	ASTM A536 Gr. 65-4512 ASTM A216 Gr. WCB
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		Height			Line flange bolts		Turns to open	Hand-wheel Dia.	Weight Approx
	Dia. N (in.) (mm)	Dia. S (in.) (mm)	Dia. D (in.) (mm)	Thick-ness min. b (in.) (mm)	Bolt Circle Dia. k (in.) (mm)	Hole Dia. d (in.) (mm)	Raised Face Dia. g (in.) (mm)	L (in.) (mm)	L_1 (in.) (mm)	H Open (in.) (mm)	H Closed (in.) (mm)	Stem Dia. dv (in.) (mm)	No.	Size (in.) (mm)		Dt (in.) (mm)	(lbs.) (kg)
2	2.00 50,8	2.00 50,8	6.00 152,4	0.62 15,7	4.75 120,7	0.75 19,1	3.62 91,9	7.00 177,8	8.50 215,9	16.35 415,3	13.60 345,4	3/4 19,1	4	5/8 15,9	11,00	8.00 203,2	50 22,7
2 ½	2.25 63,5	2.25 63,5	7.00 177,8	0.69 17,5	5.50 139,7	.75 19,1	4.12 104,6	7.50 190,5	9.50 241,3	16.70 449,6	14.55 369,6	3/4 19,1	4	5/8 15,9	12.60	8.00 203,2	62 25,1
3	3.00 76,2	3.00 76,2	7.50 190,5	0.75 19,1	6.00 152,4	0.75 19,1	5.00 127,0	8.00 203,2	8.12 206,3	20.10 510,5	16.55 420,4	7/8 22,2	4	5/8 15,9	12,40	9.00 228,6	84 38,1
4	4.00 101,6	4.00 101,6	9.00 228,6	0.94 23,9	7.50 190,5	0.75 19,1	6.19 157,2	9.00 228,6	12.00 304,8	25.60 650,2	20.65 524,5	1 25,4	8	5/8 15,9	14,80	10.00 254,0	128 58,1
6	6.00 152,4	6.25 158,8	11.00 279,4	1.00 25,4	9.50 241,3	0.88 22,4	8.50 215,9	10.50 266,7	15.87 403,2	33.85 859,8	26.95 684,5	1 1/4 31,8	8	3/4 19,1	13,60	14.00 355,6	205 93,0
8	8.00 203,2	8.00 203,2	13.50 342,9	1.12 28,4	11.75 298,5	0.88 22,4	10.62 269,7	11.50 292,1	16.50 419,1	41.75 1060,5	33.45 849,6	1 3/8 34,9	8	3/4 19,1	16,50	16.00 406,4	354 160,6
10	10.00 254,0	10.00 254,0	16.00 406,4	1.19 30,2	14.25 361,9	1.00 25,4	12.75 323,9	13.00 330,2	18.00 457,2	51.55 1309,4	40.15 1019,8	1 1/2 38,1	12	7/8 22,2	22,80	18.00 457,2	540 244,9
12	12.00 304,8	12.00 304,8	19.00 482,6	1.25 31,8	17.00 431,8	1.00 25,4	15.00 381,0	14.00 355,6	19.75 501,6	59.85 1520,2	46.45 1179,8	1 5/8 41,3	12	7/8 22,2	26,80	20.00 508,0	767 347,9