

Gate, Globe & Check Valves



ASME Class 150 - 2500, (2" - 72") 50mm - 1800mm
API 600 | API 623 | API 594 | ASME B16.34 | API 603

Ordering Information

Valve Size mm (in)	Valve Type	ASME Pr. Class	End Connection	Trim Number
50 (2")	1 Gate	1 Class 150	3 Flanged RF	1
65 (2½")	4 Globe	3 Class 300	5 Flanged RTJ	2
80 (3")	7 Check	6 Class 600	6 Butt-weld	5
100 (4")		9 Class 900		8
125 (5")		A Class 1500		9
150 (6")				10
200 (8")				12
250 (10")				16
300 (12")				
350 (14")				
400 (16")				
450 (18")				
500 (20")				
600 (24")				
700 (28")				
750 (30")				
850 (34")				
900 (36")				
1050 (42")				
1200 (48")				
1500 (60")				
1600 (64")				

As a standard, L&T Valves are made in Carbon Steel to ASTM A216 Gr. WCB. For valves in other materials and for accessories like gear operation and electrical actuators, suffix suitable abbreviations to the above ordering code such as:

WC6 for ASTM A217 Gr. WC6
WC9 for ASTM A217 Gr. WC9
LCB for ASTM A352 Gr. LCB
LCC for ASTM A352 Gr. LCC
C5 for ASTM A217 Gr. C5
C12 for ASTM A217 Gr. C12

GO for Gear Operation
LA for Locking Arrangement
E for Electrical Actuator
EB for Extended Bonnet (Cryogenic valves)
ES for Extension Spindle
IBR for IBR Certification
FSJ for Full Steam Jacket
PSJ for Partial Steam Jacket

Refer table below on Trim Materials

Trim Materials

L&T Trim #	API 600 Trim #	Material of Construction			
		Stem	Seat Surface	Wedge / Disc Seating Surface	Back Seat
5	5	13% Cr.	HF*	HF*	13% Cr.
8	8	13% Cr.	HF*	13% Cr.	13% Cr.
9	9	Monel	Monel	Monel	Monel
12	12	SS 316	HF*	SS 316	SS 316
16	16	SS 316	HF*	HF*	SS 316@

@L&T Trim No. 16 will feature a back-seat of either SS 316 or SS 316 + HF*

* HF : Hard-faced with Stellite #6 (Co-Cr-W alloy) or equivalent.

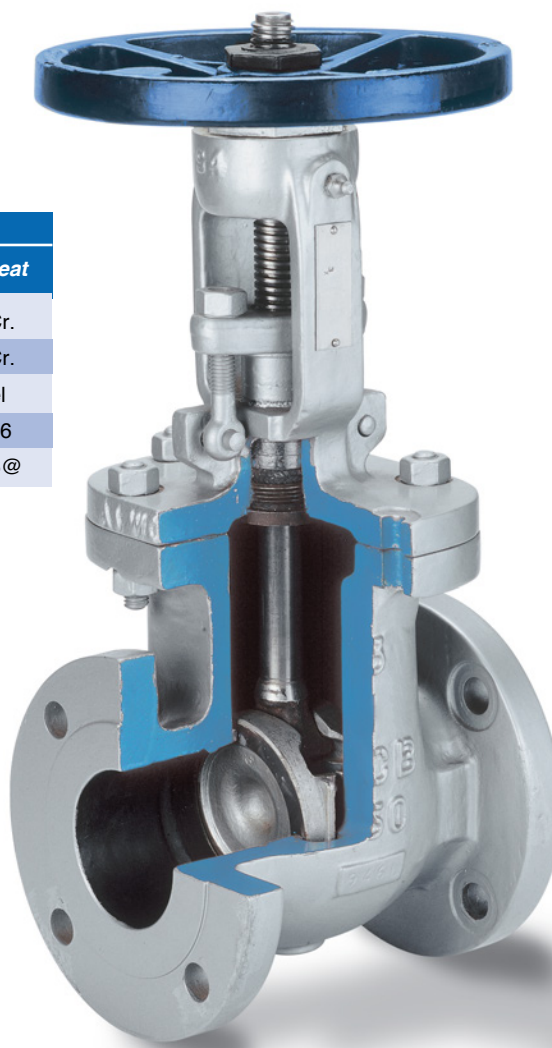
Trim 12 valves comply with NACE MR 01 75 for hardness and heat treatment requirements of wetted components.

Trim 8 valves can also be offered for NACE service on request.

Stem Packing

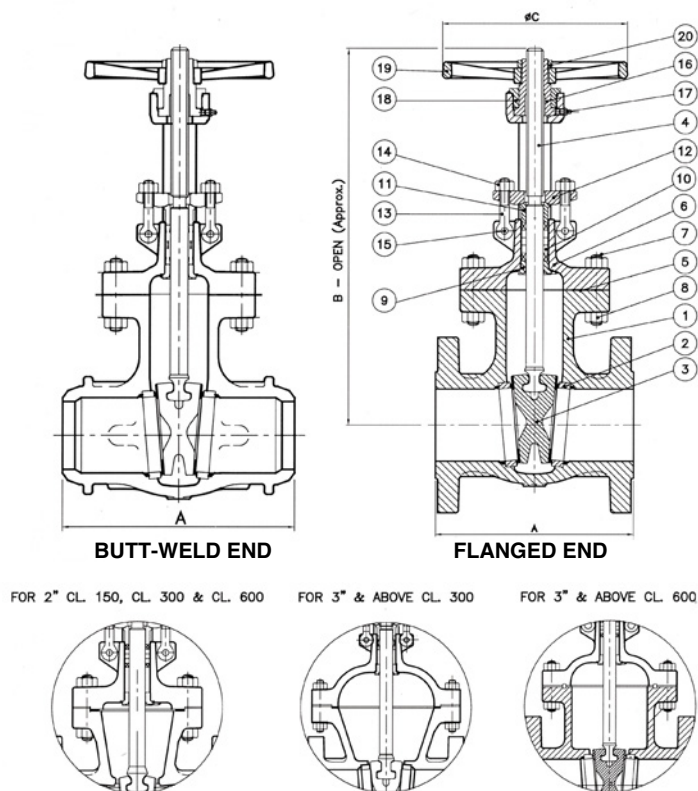
Construction	Max. temp.
Die-formed flexible Graphite rings with braided Graphite top & bottom rings*	649°C (1200°F)
Braided PTFE	204°C (400°F)

* L&T standard



Gate Valves - ASME Classes 150, 300 & 600

Figure Numbers 113-8, 133-8 & 163-8



Standard Materials of Construction

Sl. No.	Description	Material
01	Body	ASTM A216 Gr. WCB
02	Body Seat Ring	ASTM A105 + HF*
03	Wedge	ASTM A216 Gr. WCB + 13% Cr. Steel
04	Stem	ASTM A182 Gr. F6a
05	Gasket - Cl.150 Gasket - Cl.300 & 600	ASTM A308 Spirally-wound SS 304 with graphite filler
06	Bonnet	ASTM A216 Gr. WCB
07	Stud	ASTM A193 Gr. B7
08	Stud Nut	ASTM A194 Gr. 2H
09	Back-seat Bush	13% Cr. Steel
10	Packing	Graphite with braided end rings
11	Gland	Steel
12	Gland Flange	ASTM A105 / ASTM A216 Gr. WCB
13	Eye Bolt	Cr. - Mo Steel
14	Eye Bolt Nut	ASTM A194 Gr. 2H
15	Groove Pin	Steel
16	Yoke Sleeve (Stem Nut)	ASTM A439 Type D2
17	Grease Fitting	Steel
18	Retainer Nut	Steel / Ductile Iron / Malleable Iron
19	Handwheel	Steel / Ductile Iron / Malleable Iron
20	Handwheel Nut	SS 304
	Nameplate	SS 304

* HF - Hard-Faced with Stellite #6 or equivalent
For other body / bonnet materials, refer page 5

Dimensions (in mm, unless specified) & Weights (in kg)

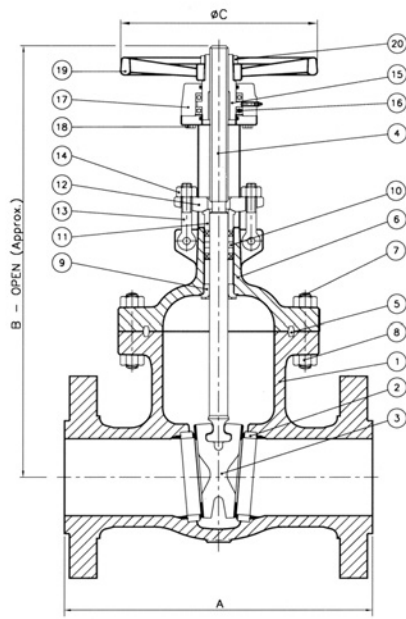
Valve Size	Class 150						Class 300						Class 600					
	A		B	C	Approx. Wt.		A		B	C	Approx. Wt.		A		B	C	Approx. Wt.	
	Fl.	B/W			Fl.	B/W	Fl.	B/W			Fl.	B/W	Fl.	B/W			Fl.	B/W
50 (2")	178	216	376	203	21	19	216	216	399	203	25	23	292	292	399	203	42	36
65 (2½")	191	241	480	229	32	27	241	241	505	229	48	34	-	-	-	-	-	-
80 (3")	203	283	480	229	35	27	283	283	505	229	53	41	356	356	541	254	67	63
100 (4")	229	305	584	254	53	43	305	305	604	254	78	55	432	432	635	305	119	112
125 (5")	254	381	750	254	75	64	381	381	850	356	135	105	-	-	-	-	-	-
150 (6")	267	403	790	305	87	77	403	403	850	356	158	111	559	559	874	457	252	225
200 (8")	292	419	996	356	139	118	419	419	1039	406	234	186	660	660	1044	457	418	365
250 (10")	330	457	1205	406	210	198	457	457	1265	457	355	284	787	787	1285	508	652	554
300 (12")	356	502	1410	457	302	271	502	502	1460	508	495	400	838	838	1476	610	1100	984
350 (14")	381	572	1539	508	410	365	762	762	1590	508	750	620	889	889	1565	610	1600	1465
400 (16")	406	610	1752	508	520	490	838	838	1791	610	958	850	991	991	2062	762	1955	1760
450 (18")	432	660	1956	610	690	665	914	914	2126	686	1310	1075	1092	1092	2062	762	2075	1840
500 (20")	457	711	2159	610	900	865	991	991	2261	686	1640	1525	1194	1194	3048	762	2150	1960
600 (24")	508	813	2565	686	1410	1375	1143	1143	2654	762	2460	2075	1397	1397	3150	762	3620	3180
700 (28")	610	991	3160	762	2060	1750	-	-	-	-	-	-	-	-	-	-	-	-
750 (30")	610	914	3429	762	3100	2850	1397	1397	4267	1016	4750	-	-	-	-	-	-	-
850 (34")	711	-	3650	762	3350	2950	-	-	-	-	-	-	-	-	-	-	-	-
900 (36")	711	-	3734	762	3980	3000	1727	-	3975	-	-	-	-	-	-	-	-	-
1050 (42")	813	1118	4200	-	*	4500	-	-	-	-	-	-	2438	-	4420	-	-	-
1200 (48")	864	1118	4990	-	*	6000	-	-	-	-	-	-	-	-	-	-	-	-
1500 (60")	1143	-	6175	-	*	-	-	-	-	-	-	-	-	-	-	-	-	-

Fl. - Flanged ; B/W - Butt-weld. * Depends on flange dimensions. Intermediate sizes 22", 26", 32", 38", 40", 44", 46" in Class 150 are also offered.

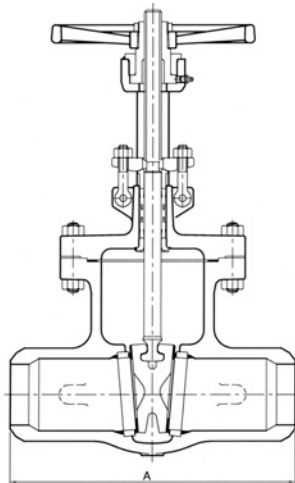
Class 600 gate valves can also be given in pressure seal bonnet design, in sizes from 80mm (3") up to 300mm (12"). For details of pressure seal bonnet arrangement, see page 18.

Gate Valves - ASME Classes 900 & 1500

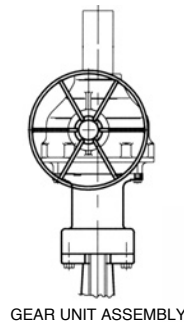
Figure Numbers 193-8 & 1A3-8



FLANGED END



BUTT-WELD END



GEAR UNIT ASSEMBLY

Standard Materials of Construction

Sl. No.	Description	Material
01	Body	ASTM A216 Gr. WCB
02	Body Seat Ring	ASTM A105 + HF*
03	Wedge	ASTM A216 Gr. WCB + 13% Cr. Steel
04	Stem	ASTM A182 Gr. F6a
05	Gasket RTJ	Soft Iron
06	Bonnet	ASTM A216 Gr. WCB
07	Stud	ASTM A193 Gr. B7
08	Stud Nut	ASTM A194 Gr. 2H
09	Back-seat Bush	13% Cr. Steel
10	Packing	Graphite with braided end rings
11	Gland	13% Cr. Steel
12	Gland Flange	ASTM A105 / ASTM A216 Gr. WCB
13	Eye Bolt	13% Cr. Steel
14	Eye Bolt Nut	ASTM A194 Gr. 2H
15	Yoke Sleeve (Stem Nut)	ASTM A439 Type D2
16	Bearing	Steel
17	Yoke Cap	Ductile Iron
18	Screw	Steel
19	Handwheel	Steel / Ductile Iron /
20	Handwheel Nut	Malleable Iron
	Nameplate	SS 304

* HF - Hard-Faced with Stellite #6 or equivalent
For other body / bonnet materials, refer page 5

Dimensions (in mm, unless specified) & Weights (in kg)

Valve Size	Class 900						Class 1500					
	A		B	C	Approx. Wt.		A		B	C	Approx. Wt.	
	Fl.	B/W			Fl.	B/W	Fl.	B/W			Fl.	B/W
50 (2")	-	-	-	-	-	-	368	368	570	229	128	115
80 (3")	381	381	700	305	138	126	470	470	720	305	255	245
100 (4")	457	457	800	356	216	196	546	546	850	356	315	285
150 (6")	610	610	1100	508	426	375	705	705	1200	508	643	570
200 (8")	737	737	1500	508	723	625	832	832	1600	508	1258	1120
250 (10")	838	838	1800	762	1173	1040	991	991	1950	762	2008	1760
300 (12")	965	965	2000	762	1792	1610	1130	1130	2150	762	2963	2580
400 (16")	1130	-	2000	762	2535	-	-	-	-	-	-	-

Fl. - Flanged ; B/W - Butt-weld.

Sizes 18", 20" and 24" are also offered.

