

# CAST STEEL GATE VALVES - API 150/BS 1414

No:	Parts	Material
1	Body	ASTM A216 Gr.WCB
2	Seat ring	ASTM A105+STL No.6
3	Wedge	ASTM A216 WCB+13Cr
4	Stem	ASTM A182 F6a
5	Gasket	304S.S.Jacketed Graphite
6	Bonnet bolt	ASTM A193 Gr.B7
7	Bonnet nut	ASTM A194 Gr.2H
8	Bonnet	ASTM A216 Gr.WCB
9	Back seat	ASTM A276 410
10	Packing	Graphite
11	Pin	C.S.
12	Gland bolt	ASTM A193 Gr. B7
13	Gland nut	ASTM A194 Gr.2H
14	Gland	ASTM A276 410
15	Gland flange	ASTM A216 Gr.WCB
16	Stem nut	Aluminum Bronze
17	Retaining nut	C.S.
18	Handwheel	Malleable Iron
19	H.W.lock nut	C.S.
20	Lubricator	Assem.

### Features

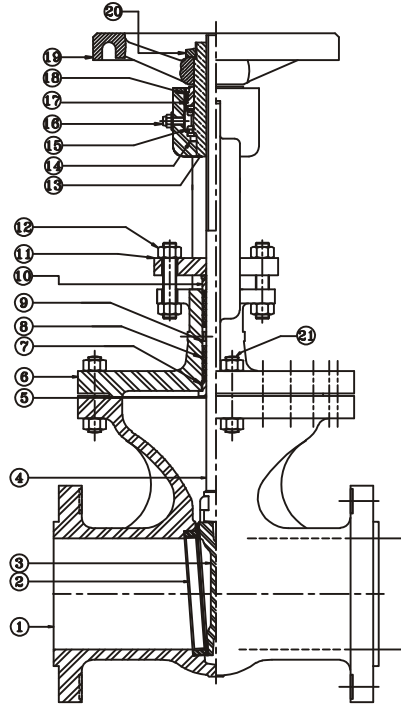
Face to face and end to end dimension: 36" and smaller to ASME B16.10 40" and larger to manufacturer's standard	Shell Wall thickness: 24" and smaller to API 600 28" and larger to manufacturer's standard
Flange dimension: 24" and smaller to ASME B16.5 28" and larger to ASME B16.47 series A	B.W. end to ASME B16.25
	8" and smaller valves have a one-piece bonnet and yoke design 10" and larger valves have a two-piece bonnet and yoke design.

### Dimensions and Weights

Valve size	in	11/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	28	30	32	36
size	mm	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	750	800	900
L	in	6.5	7	7.5	8	9	10	10.5	11.5	13	14	15	16	17	18	20	24	24	26	28
(RF)	mm	165	178	190	203	229	254	267	292	330	356	381	406	432	457	508	610	610	660	711
L1	in	6.5	8.5	9.5	11.13	12	15	15.88	16.5	18	19.75	22.5	24	26	28	32	36	36	38	40
(BW)	mm	165	216	241	283	305	381	403	419	457	502	572	610	660	711	813	914	914	965	1016
L2	in	7.0	7.5	8	8.5	9.5	10.5	11	12	13.5	14.5	15.5	16.5	17.5	18.5	20.5	24.5	24.5	26.5	28.5
(RTJ)	mm	178	191	203	216	242	267	279	305	343	368	394	419	445	470	521	622	622	673	724
H	in	15.7	16.13	18.56	20.94	24.13	27.94	31.75	39	46.69	55.31	63.56	71.31	78.19	87	106.25	119.31	130.56	137.25	150.56
(open)	mm	392	409	472	532	612	710	806	990	1186	1405	1615	1811	1986	2210	2698	3030	3317	3487	3825
W	in	7.86	7.86	7.86	9.86	9.86	11.81	11.81	13.75	17.69	19.69	18.13	18.13	18.13	24	24	24	24	24	30
	mm	200	200	200	250	250	300	300	350	450	500	460	460	460	610	610	610	610	610	760
WT	RF	18.5	20	30	36	53	71	85	136	220	323	387	553	660	810	1250	1931	2380	2490	3600
(kg)	BW	15.5	17	26	29	46	66	77	116	202	294	350	506	575	720	1130	1765	2028	2280	3080



**CAST STEEL  
GATE VALVES-  
API 600/BS 1414,  
Bolted Bonnet  
OS & Yoke Type  
Rising Stem,  
Flanged/Butt  
Weld Ends**

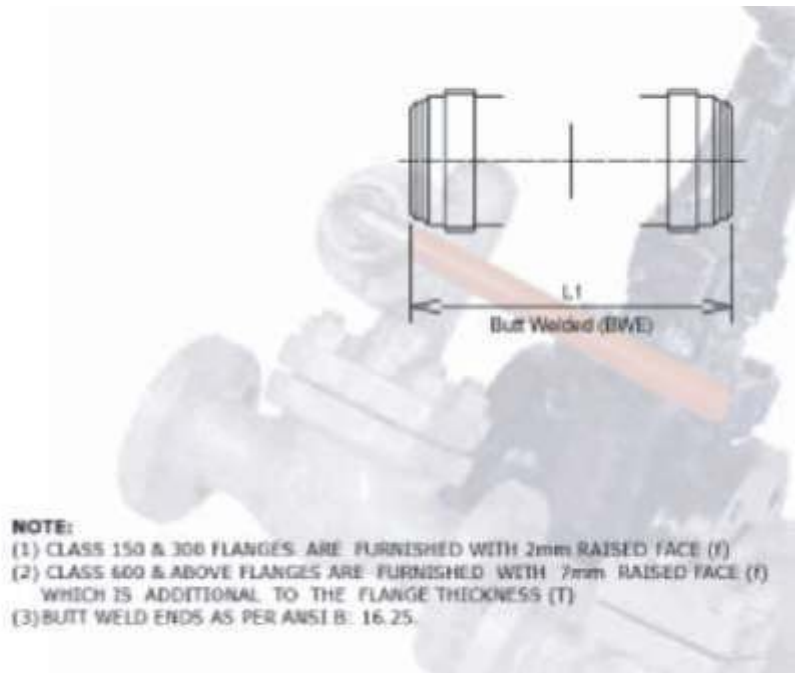
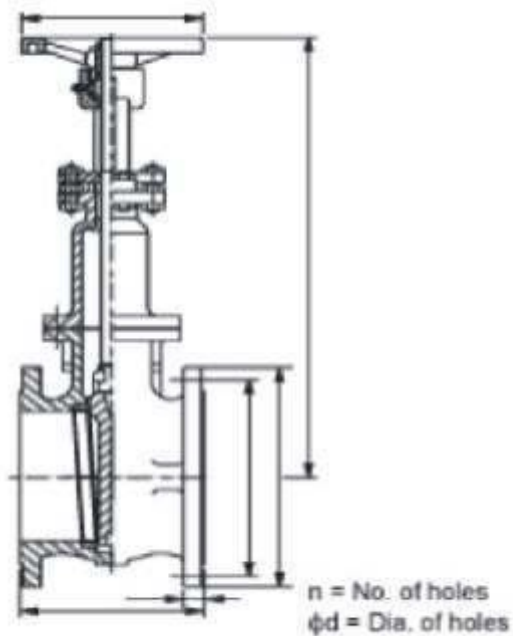


**STANDARD MATERIAL COMBINATION**

P. NO.	PART DESCRIPTION	Carbon steel to ASTM		Alloy steel to ASTM					Stainless steel to ASTM			
		Type WCB	Type LCB	Type WC1	Type WC6	Type WC9	Type C5	Type C12	Type CF8	Type CF8M	Type CF3	Type CF3M
1	BODY	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Seat Ring	As per Trim Material Combination										
3	Wedge	As per Trim Material Combination										
4	Stem	As per Trim Material Combination										
5	GASKET	Stainless steel + Graphoil										
6	BONNET	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
7	Back Seat Bush	As per Trim Material Combination										
8	PACKING	To Suit Service conditions										
9	Lantern Ring	As per Trim Material Combination										
10	GLAND	A182 F6a	A182 F304	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	F-304	F-316	F-304L	F-316L
11	GLAND FLANGE	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351CF8M	A351 CF3	A351CF3M
12	NUTS	A194 2H	A194 Gr.4	A194 Gr.4	A194 Gr.4	A194 Gr.4	A194 Gr.4	A194 Gr.4	A194 Gr.8	A194 Gr.8	A194 Gr.8	A194 Gr.8
13	YOKE SLEEVE	AI. Bronze BS1982 CC331G or Ni - resist to A439 D2										
14	OIL SEAL	EPDM/BUNA 'N' RUBBER										
15	THRUST BEARING	STEEL										
16	LUBRICATOR	STEEL										
17	YOKE SLEEVE RETAINING NUT	STEEL							IS:2062			
18	LOCKING SCREW	STEEL							IS:2062			
19	HANDWHEEL	D1 A536 80-55-D6 OR MI 1S 2108 BM 290/ASTMA338										
20	HANDWHEEL RETAINING NUT	STEEL							IS:2062			
21	STUDS	A193 B7	A320 L7	A193 B16	A193 B16	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8

NOTE: The above data is subject to change without notice due to our continuing product improvement program.

## CAST STEEL GATE VALVES- API600/BS 1414





# CAST STEEL GATE VALVES-API 600

•All dimensions in mm

## DIMENSIONAL DATA CLASS-300

DN	40	50	65	80	100	125	150	200	250	300*	350*	400*	450*	500*	600*	650*	750*	900*
NPS	1 ½"	2"	2½"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	26"	30"	36"
L	190	216	241	282	305	381	403	419	457	502	762	838	914	991	1143	1245	1397	1727
L1	190	216	241	282	305	381	403	419	457	502	762	838	914	991	1143	----	----	----
L2	204	232	257	296	321	397	419	435	473	518	778	854	930	1010	1165	1270	1422	1755
kD	155	165	190	210	255	280	320	380	445	520	585	650	710	775	915	867	990.6	1270
T	19.1	20.7	23.9	27	30.2	33.4	35	39.7	46.1	49.3	54.4	55.6	58.8	62	68.3	89	93.7	104.6
K(PCD)	114.3	127	149.2	168.3	200	235	269.9	330.2	387.4	450.8	514.4	571.5	628.7	685.8	812.8	803.2	920.8	1168.4
n	04	08	08	08	08	08	12	12	16	16	20	20	24	24	24	32	36	36
kd	22.2	19	22.2	22.2	22.2	22.2	22.2	25.4	28.6	31.8	31.8	35	35	35	41	35	38.1	53.8
~H(Close)	357	382	416	432	520	760	746	919	1169	-	-	-	-	-	--	-	-	-
~H (Open)	397	432	481	512	620	885	896	1119	1419	-	-	-	-	-	-	-	-	-
~H1	-	-	-	-	-	-	-	-	-	1237	1915	2000	2146	2760	3125	-	-	4450
kHW	210	210	210	225	310	310	400	450	450	450	-	-	-	-	-	-	-	-
Aprox.wt.â	24.5	29	47.1	55	80.5	161.6	167.6	263	458	610	920	1056	1145	2055	2730	-	-	-

## DIMENSIONAL DATA CLASS-600

DN	40	50	65	80	100	125	150	200	250	300*	350*	400*	450*	500*	600*
NPS	1 ½	2	2 ½	3	4	5	6	8	10	12	14	16	18	20	24
L	241	292	330	356	432	508	559	660	787	838	889	99	1092	1194	1397
L1	241	292	330	356	432	508	559	660	787	838	889	99	1092	1194	1397
L2	241	295	333	359	235	511	562	663	790	841	890	993	1095	1200	1407
kD	155	165	190	210	275	330	355	420	510	560	605	685	745	815	940
T	22.7	25.4	28.6	31.8	38.1	44.5	47.7	55.6	63.5	66.7	69.9	76.2	82.6	88.9	101.6
K(PCD)	114.3	127	149.3	168.1	216	266.7	292.1	349.2	431.8	489	527	603.2	654	724	838.2
n	04	08	08	08	08	08	12	12	16	20	20	20	20	24	24
kd	22.2	19	22.2	22.2	25.4	28.6	28.6	31.8	34.9	34.9	38.1	41.1	44.5	44.5	50.8
~H(Close)	350	427	477	537	623	750	890	978	1040	-	-	-	-	-	-
~H(Open)	390	477	542	617	723	875	1040	1178	1290	-	-	-	-	-	-
~H1	-	-	-	-	-	-	-	-	-	1725	2100	2155	2810	2750	3257
kHW	229	229	229	254	356	406	508	508	610	450	450	450	700	700	700
Aprox.wt.â	32.9	46	75	80	153	264	298.5	593	677	1015	1321	1760	2415	2920	4400

**\*For Gear Operated Valves**

NOTE: The above data is subject to change without notice due to our continuing product improvement program. **(©WEIGHT GIVEN IN KGS)**

Flanges upto 24" as per ASME 16.5 and above 24" as per ASME 16.47 series A or B.



•All dimensions in mm

**DIMENSIONAL DATA CLASS-900**

DN	50	80	100	150*	200*	250*	300*	350*	400*	450*	500*	600*
NPS	2	3	4	6	8	10	12	14	16	18	20	24
L	368	381	457	610	737	838	965	1029	1130	1219	1321	1568
L1	368	381	457	610	737	838	965	1029	1130	1219	1321	1568
L2	371	421	473	549	711	841	968	1039	1140	1232	1334	1587
kD	215	240	290	380	470	545	610	640	705	787	855	1040
T	38.1	38.1	44.5	55.6	63.5	69.9	79.4	85.8	88.9	101.6	108	139.7
K (PCD)	165.1	190.5	234.5	317.5	393.7	469.9	533.4	558.8	615.9	685.8	749.3	901.7
n	08	08	08	12	12	16	20	20	20	20	20	20
kd	25.4	25.4	31.8	31.8	38.1	38.1	38.1	41.3	44.5	50.6	54	66.7
~H(Close)(H1)	480	595	665	1321	1530	1780	1885	2030	2400	2589	2858	3532
~H(Open)	530	675	765	-	-	-	-	-	-	-	-	-
kHW	300	300	400	450	700	700	700	700	700	1000	1000	1000
Aprox.wt. á	88	182	275	478	710	810	1330	1937.36	2710	-	-	7789

**DIMENSIONAL DATA CLASS-1500**

DN	50	65	80*	100*	150*	200*	250*	300*
NPS	2	2 ½	3	4	6	8	10	12
L	368	419	470	546	705	832	991	1130
L1	368	419	470	546	705	832	991	1130
L2	371	421	473	549	711	842	1001	1146
kD	215	245	265	310	395	485	585	675
T	38.1	41.3	47.7	54	82.6	92.1	108	123.9
K (PCD)	165.1	190	203.2	241.3	317.5	393.7	482.6	571.5
n	08	08	08	08	12	12	12	16
kd	25.4	28.6	31.8	35	38.1	44.5	50.8	54
~H(Close)(H1)	478	550	600	720	1144	1265	1385	1503
~H(Open)	528	615	-	-	-	-	-	-
kHW	300	350	400	450	700	700	700	700
Aprox.wt. á	93	140	173.5	327	633.81	1218	2405	3065

**\*For Gear Operated Valves**

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Flanges upto 24" as per ASME 16.5 and above 24" as per ASME 16.47 series A or B.

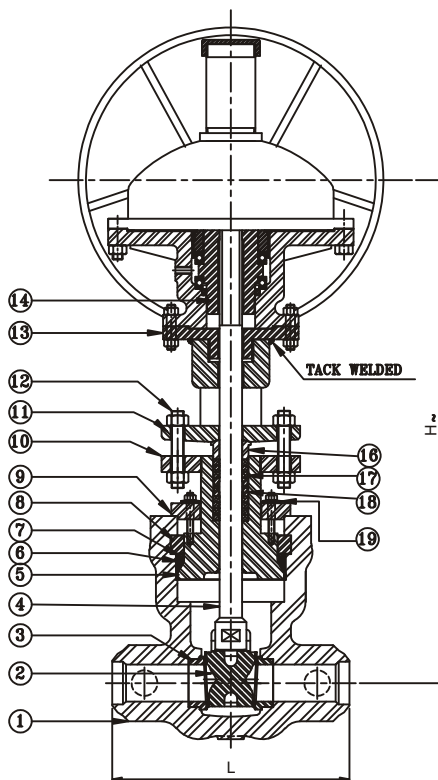
**TEST PRESSURES**

CLASS	SHELL TEST (HYDROSTATIC)		SEAT TEST			
			HYDROSTATIC		PNEUMATIC	
150	30 Bar	435 Psi g	22 Bar	319 Psi g	6.9 bar	100 Psi g
300	77 Bar	1102 Psi g	57 Bar	780 Psi g	6.9 bar	100 Psi g
600	154 Bar	2175 Psi g	113 Bar	1595 Psi g	6.9 bar	100 Psi g
900	230 Bar	3350 Psi g	169 Bar	2451 Psi g	6.9 bar	100 Psi g
1500	384 Bar	5568 Psi g	282 Bar	4075 Psi g	6.9 bar	100 Psi g





**CAST STEEL  
GATE VALVES  
ASME B 16.34  
PRESSURE SEAL  
BONNET  
OS & YOKE TYPE  
RISING STEM,  
BUTT WELD/  
FLANGED ENDS**



**STANDARD MATERIAL COMBINATION**

P. NO.	PART DESCRIPTION	Carbon steel to ASTM		Alloy steel to ASTM					Stainless steel to ASTM			
		Type WCB	Type LCB	Type WC1	Type WC6	Type WC9	Type C5	Type C12	Type CF8	Type CF8M	Type CF3	Type CF3M
1	BODY	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	WEDGE	As per Trim Material Combination										
3	SEAT RING	As per Trim Material Combination										
4	STEM	As per Trim Material Combination										
5	BONNET	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
6	PRESSURE SEAL GASKET	Graphoil										
7.	Pressure Seal Ring	A182 F6a	A182 F304	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	F-304	F-316	F-304L	F-316L
8.	Segmented Ring	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
9	BONNET RETAINER PLATE	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351CF8M	A351 CF3	A351CF3M
10	CLAMP	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
11	GLAND FLANGE	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351CF8M	A351 CF3	A351CF3M
12	STUD & NUTS	A194 2H	A194 Gr.4	A194 Gr.4	A194 Gr.4	A194 Gr.4	A194 Gr.4	A194 Gr.4	A194 Gr.8	A194 Gr.8	A194 Gr.8	A194 Gr.8
13	MOUNTING GEAR PLATE	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351CF8M	A351 CF3	A351CF3M
14	YOKE SLEEVE	Al. Bronze BS1982 CC333G or Ni - resist to A439 D2										
15	THRUST BEARING	STEEL										
16	GLAND	A182 F6a	A182 F304	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	F-304	F-316	F-304L	F-316L
17	PACKING	To Suit Service conditions										
18	LOCKING SCREW								STEEL		IS:2062	
19	BELLEVILLE WASHER								STEEL		IS:2062	

NOTE: The above data is subject to change without notice due to our continuing product improvement program.



# CAST STEEL GATE VALVES PRESSURE SEAL BONNET ASME B16.34

## TRIM MATERIAL COMBINATION (ON REQUEST)

Trim No.	Seat Ring Face	Wedge Seat Face	Stem	Backseat Bush	Lantern Ring
1	F6a/13%Cr.	F6a/13%Cr.	F6a/AISI410	F6a/AISI410	F6a/AISI410
2	F304	F304	F304/AISI304	F304/AISI304	F304/AISI304
5	STELLITE	STELLITE	F6a/AISI410	F6a/AISI410	F6a/AISI410
8	STELLITE	F6a/13%Cr.	F6a/AISI410	F6a/AISI410	F6a/AISI410
9	MONEL	MONEL	MONEL	MONEL	MONEL
10	F316	F316	F316/AISI316	F316/AISI316	F316/AISI316
12	316+STELLITE	316	F316/AISI316	F316/AISI316	F316/AISI316
13	ALLOY 20	ALLOY 20	ALLOY 20	ALLOY 20	ALLOY 20

NOTE: Other Trim Combination of API 600 Can Be Provided on Request. Lantern Ring Can Be Provided If Required.

Flanges as per ASME B16.5. Butt Weld Ends as per ANSI B 16.25.

## DIMENSIONAL DATA CLASS-900

•All dimensions in mm

DN	50	80	100	150*	200*	250*	300*	350*	400*	450*	500*	600*
NPS	2	3	4	6	8	10	12	14	16	18	20	24
L	368	381	457	610	737	838	965	1029	1130	1219	1321	1568
L1	368	381	457	610	737	838	965	1029	1130	1219	1321	1568
L2	371	421	473	549	711	841	968	1039	1140	1232	1334	1587
kD	215	240	290	380	470	545	610	640	705	787	855	1040
T	38.1	38.1	44.5	55.6	63.5	69.9	79.4	85.8	88.9	101.6	108	139.7
K (PCD)	165.1	190.5	234.5	317.5	393.7	469.9	533.4	558.8	615.9	685.8	749.3	901.7
n	08	08	08	12	12	16	20	20	20	20	20	20
kd	25.4	25.4	31.8	31.8	38.1	38.1	38.1	41.3	44.5	50.6	54	66.7
~H(Close)(H1)	480	595	665	1321	1530	1780	1885	2030	2400	2589	2858	3532
~H(Open)	530	675	765	-	-	-	-	-	-	-	-	-
kHW	300	300	400	450	700	700	700	700	700	1000	1000	1000
Aprox.wt. â	88	182	275	478	710	810	1330	1937.36	2710	-	-	7789

## DIMENSIONAL DATA CLASS-1500

DN	50	65	80*	100*	150*	200*	250*	300*
NPS	2	2 ½	3	4	6	8	10	12
L	368	419	470	546	705	832	991	1130
L1	368	419	470	546	705	832	991	1130
L2	371	421	473	549	711	842	1001	1146
kD	215	245	265	310	395	485	585	675
T	38.1	41.3	47.8	54	82.6	92.1	108	123.9
K (PCD)	165.1	190	203.2	241.3	317.5	393.7	482.6	571.5
n	08	08	08	08	12	12	12	16
kd	25.4	28.6	31.8	35	38.1	44.5	50.8	54
~H(Close)(H1)	478	550	600	720	1144	1265	1385	1503
~H(Open)	528	615	-	-	-	-	-	-
kHW	300	350	400	450	700	700	700	700
Aprox.wt. â	93	140	173.5	327	633.81	1218	2405	3065



## CAST STEEL GATE VALVES PRESSURE SEAL BONNET ASME B16.34

### DIMENSIONAL DATA CLASS-2500

DN	50	80*	100*	150*	200*	250*	300*
NPS	2	3	4	6	8	10	12
L	451	578	673	914	1022	1270	1422
L1	451	578	673	914	1022	1270	1422
L2	454	584	684	928	1038	1292	1445
kD	235	305	355	485	550	675	760
T	50.9	66.7	76.2	108	127	165.1	184.2
K(PCD)	171.5	228.6	273	368.3	438.2	539.8	619.2
n	08	08	08	08	12	12	12
kd	28.6	35	41.3	53.9	53.8	66.5	73.2
~H(Close)(H1)	357	500	530	670	730	810	970
~H(Open)	407	-	-	-	-	-	-
kb	38	57	73	111	146	184	219
Aprox.wt.å	110.7	217.2	340.5	637	1097	1865	2767

**\*For Gear Operated Valves**

NOTE: The above data is subject to change without notice due to our continuing product improvement program. (©WEIGHT GIVEN IN KGS)

Flanges upto 24" as per ASME 16.5 and above 24" as per ASME 16.47 series A or B. H1 for gear operated valves.

### TEST PRESSURES

CLASS	SHELL TEST (HYDROSTATIC)					
900	230 Bar	3350 Psi g	169 Bar	2451 Psi g	6.9 bar	100 Psi g
1500	384 Bar	5568 Psi g	282 Bar	4075 Psi g	6.9 bar	100 Psi g
2500	639 Bar	9372 Psi g	469 Bar	6785 Psi g	6.9 bar	100 Psi g



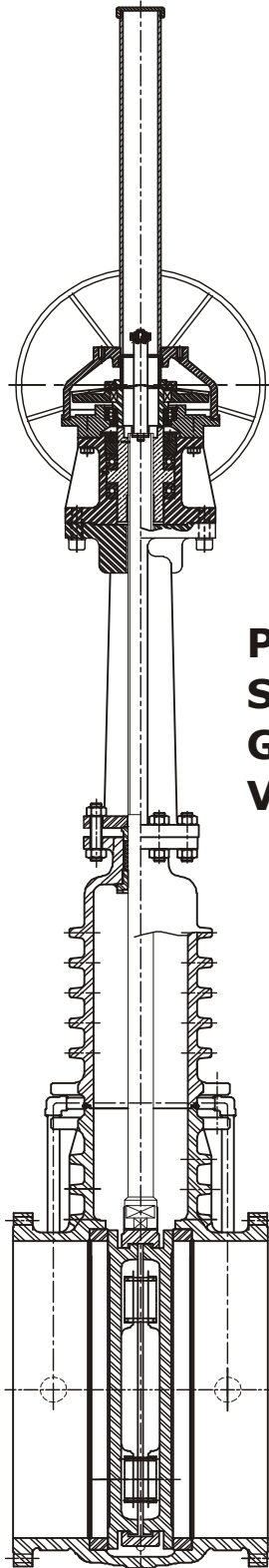
# CAST STEEL PARALLEL SLIDE GATE VALVES

## Features and benefits

- Self cleaning action between disk & seat  
Welded in seats hard faced with Stellite or Equivalent.
- Low cost Maintenance  
Lower operating forces than wedge gate design.
- Lower Pressure drop characteristic than wedge gate valve.
- Minimised flow turbulence
- Improved sealing assisted by line pressure.

## Typical Applications

- Spray Water
- Blow Off Service
- Blow Down Service
- H.P Feed Heater Isolation & By-Pass
- Main Steam Isolation
- Boiler Feed Pump Isolation
- Steam Turbine Inlet Isolation



**Parallel  
Slide  
Gate  
Valve**



## CAST STEEL LOW TEMPERATURE CRYOGENIC GATE VALVES API 600, BS: 6364, EXTENDED BONNET

### Features and benefits

- Adapted to Special Service
- Extended bonnets with sufficient gas column length, are supplied for all valves to keep stem packing at sufficient distance away from the cold fluid to remain functional.
- Flexible wedges with Stellite seating faces for cryogenic service.
- Cleaning: All cryogenic valves are thoroughly degreased and cleaned and pipe ends are sealed to prevent contamination.

