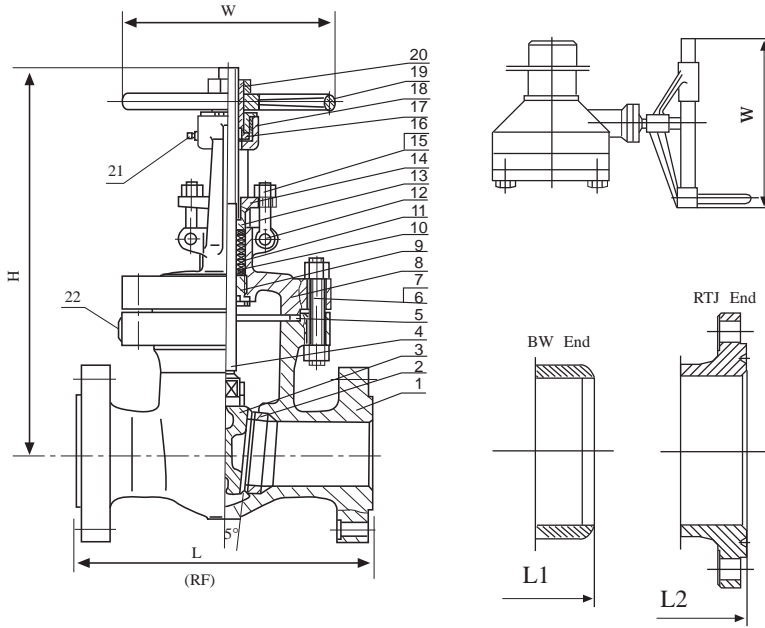


# CONTENTS

ANSI Cast Steel Gate Valve .....	1 , 2 , 3
ANSI Cast Steel Globe Valve .....	4 , 5
ANSI Cast Steel Check Valve .....	6 , 7
ANSI Pressure Seal Gate Valve .....	8
ANSI Pressure Seal Globe Valve.....	9
ANSI Pressure Seal Check Valve.....	10
ANSI Strainer .....	11 , 12
ANSI Forged Steel Gate Valve.....	13
ANSI Forged Steel Globe Valve .....	14
ANSI Forged Steel Check Valve .....	15
ANSI Floating Ball Valve .....	16
ANSI Trunnion Mounted Ball Valve.....	17 , 18
ANSI Butterfly Valve .....	19 , 20
ANSI Plug Valve .....	21 , 22 , 23
DIN Cast Steel Gate Valve .....	24
DIN Cast Steel Globe Valve.....	25
End Flange Dimensions .....	26
Ring Joint Facings And Rings.....	27
Butt-Welding Ends .....	28
Materials .....	29



**Trim Material to API 600**

Seat Ring Surface	Wedge Seat Surface	Stem	Backseat Bushing
Part No.2	Part No.3	Part No.4	Part No.9
F6	F6	F6	F6
Stellite	Stellite	F6	F6
Stellite	F6	F6	F6
F304	F304	F304	F304
F316	F316	F316	F316
Monel	Monel	Monel	Monel
Alloy 20	Alloy 20	Alloy 20	Alloy 20
Hastelloy B	Hastelloy B	Hastelloy B	Hastelloy B
Bronze	Bronze	Bronze	Bronze
R-PTFE (insert)	CF8	S.S.	S.S.

**Standard Materials of Parts**

Part Name	Carbon Steel to ASTM		Alloy Steel to ASTM				Stainless Steel to ASTM			
1 Body	A216WCB	A352LCB	A217WC1	A217WC6	A217WC9	A217C5	A351CF8	A351CF8M	A351CF3	A351CF3M
8 Bonnet	A216WCB	A352LCB	A217WC1	A217WC6	A217WC9	A217C5	A351CF8	A351CF8M	A351CF3	A351CF3M
6 Bolts	A193 B7	A320 L7	A193 B7	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8
7 Nuts	A194 2H	A194 4	A194 2H	A194 4	A194 4	A194 4	A194 8	A194 8	A194 8	A194 8
11 Lantern*	410	410	410	410	410	410	304	316	304L	316L
12 Pins	Steel	Steel	Steel	Steel	Steel	Steel	S.S.	S.S.	S.S.	S.S.
13 Gland	A182 F6	A182 F6	A182 F6	A182 F6	A182 F6	A182 F6	304	316	304L	316L
14 Gland Flange	A105	A350 LF2	A105	A105	A105	A105	304	316	304L	316L
15 Gland Eyebolts	A193 B7	A320 L7	A193 B7	A193 B7	A193 B7	A193 B7	A193 B8	A193 B8	A193 B8	A193 B8
16 Nuts	A194 2H	A194 4	A194 2H	A194 2H	A194 2H	A194 2H	A194 8	A194 8	A194 8	A194 8
5 Gasket	Reinforced Flat Graphite, or SS Spiral Wound W/Graphite or PTFE, or Reinforced PTFE									
10 Packing	Braided Graphite or Dieformed Graphite Ring or PTFE									
17 Stem Nut	A439-D2 or A276-410									
18 Lock Nut	Steel									
19 Handwheel	Ductile iron									
20 Handwheel Nut	Steel									
21 Lubricator	Steel									
22 Nameplate	Stainless Steel or Aluminum									

Other materials (Alloy 20, AISI 321, AISI 347, Monel, Hastelloy, etc.) on request. \*Class 150 gate valve is not provided with Lantern



OS&Y  
 Rising Stem  
 Flexible Solid Wedge  
 Bolted Bonnet  
 Threaded or Welded Seat Ring

**STANDARDS**

Basic Design: API600  
 Face to Face Dimension: ANSI B16.10  
 End to End Dimension: ANSI B16.10  
 End Flange Dimension:  
 2"-24" to ANSI B16.5  
 26"-36" to MISS SP-44  
 to API 605 on request  
 B.W.Ends to ANSI B16.25  
 Shell Wall Thickness:  
 2"-24" to API600  
 26"-36" to Manufacturer's Standard  
 Manufacturing to NACE MR-01-75 on request

**CLASS 150 Dimensions and Weights**

NPS	in	2	2-1/2	3	4	5	6	8	10	12	14	16	18	20	24	28	30	32	36
DN	mm	50	60	80	100	125	150	200	250	300	350	400	450	500	600	700	750	800	900
L	in	7	7-1/2	8	9	10	10-1/2	11-1/2	13	14	15	16	17	18	20	24	24	26	28
(RF)	mm	178	190	203	229	254	267	292	330	356	381	406	432	457	508	610	610	660	711
L1	in	8-1/2	9-1/2	11-1/8	12	15	15-7/8	16-1/2	18	19-3/4	22-1/2	24	26	28	32	36	36	38	40
(BW)	mm	216	241	283	305	381	403	419	457	502	572	610	660	711	813	914	914	965	1016
L2	in	7-1/2	8	8-1/2	9-1/2	10-1/2	11	12	13-1/2	14-1/2	15-1/2	16-1/2	17-1/2	18-1/2	20-1/2	24-1/2	24-1/2	26-1/2	28-1/2
(RTJ)	mm	191	203	216	241	267	279	305	343	368	394	419	445	470	521	622	622	673	724
H	in	16-1/8	18-9/16	20-15/16	24-1/8	27-15/16	31-3/4	39	46-11/16	55-5/16	63-9/16	71-5/16	78-3/16	87	106-1/4	119-5/16	130-9/16	137-1/4	150-9/16
(Open)	mm	409	472	532	612	710	806	990	1186	1405	1615	1811	1986	2210	2698	3030	3317	3487	3825
W	in	7-7/8	7-7/8	9-7/8	9-7/8	11-13/16	11-13/16	13-3/4	17-11/16	19-11/16	18-1/8	18-1/8	18-1/8	24	24	24	24	24	30
	mm	200	200	250	250	300	300	350	450	500	460*	460*	460*	610*	610*	610*	610*	610*	760*
WT	RF	20	30	36	53	71	85	136	220	323	387	553	660	810	1250	1931	2380	2490	3600
(KG)	BW	17	26	29	46	66	77	116	202	294	350	506	575	720	6130	1765	2028	2280	3080

**CLASS 300 Dimensions and Weights**

NPS	in	2	2-1/2	3	4	5	6	8	10	12	14	16	18	20	24	30
DN	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600	750
L-L1	in	8-1/2	9-1/2	11-1/8	12	15	15-7/8	16-1/2	18	19-3/4	30	33	36	39	45	55
(RF-BW)	mm	216	241	283	305	381	403	419	457	502	762	838	914	991	1143	1397
L2	in	9-1/8	10-1/8	11-3/4	12-5/8	15-5/8	16-1/2	17-1/8	18-5/8	20-3/8	30-5/8	33-5/8	36-5/8	39-3/4	45-7/8	56
(RTJ)	mm	232	257	298	321	397	419	435	473	518	778	854	930	1010	1165	1422
H	in	15-3/4	18-3/4	21-3/8	25-5/8	30-5/16	34-5/8	40-13/16	50-3/16	56-5/8	65	72-7/16	79-15/16	88-3/16	114-3/16	139-3/8
(Open)	mm	400	477	543	650	770	880	1037	1275	1438	1650	1840	2030	2240	2900	3540
W	in	7-7/8	9-7/8	9-7/8	11-13/16	11-13/16	13-3/4	17-11/16	19-11/16	22-1/16	18-1/8	18-1/8	24	24	24	30
	mm	200	250	250	300	300	350	450	500	560	460*	460*	610*	610*	610*	760*
WT	RF	30	39	55	83	92	137	240	333	536	699	1010	1205	1720	2800	3786
(KG)	BW	26	34	47	68	77	118	195	271	432	595	848	1025	1460	2294	3220

**CLASS 600 Dimensions and Weights**

NPS	in	2	2-1/2	3	4	6	8	10	12	14	16	18	18	20	24
DN	mm	50	65	80	100	150	200	250	300	350	400	450	450	500	600
L-L1	in	11-1/2	13	14	17	22	26	31	33	35	39	43	43	47	55
(RF-BW)	mm	292	330	356	432	559	660	787	838	889	991	1092	1092	1194	1397
L2	in	11-5/8	13-1/8	14-1/8	17-1/8	22-1/8	26-1/8	31-1/8	33-1/8	35-1/8	39-1/8	43-1/8	43-1/8	47-1/4	55-3/8
(RTJ)	mm	295	333	359	435	562	664	791	841	892	994	1095	1095	1200	1407
H	in	18-5/8	21-3/4	23-3/8	28-1/16	38-3/16	44-3/16	52-3/8	59-13/16	68-1/8	72-1/4	90-1/8	90-1/8	98-13/16	119
(Open)	mm	474	553	593	713	970	1122	1330	1519	1730	1835	2290	2290	2510	3022
W	in	9-7/8	9-7/8	11-13/16	13-3/4	19-11/16	22-1/16	28-3/8	24	24	24	24	24	30	30
	mm	250	250	300	350	500	560	720	610*	610*	610*	610*	610*	760*	760*
WT	RF	41	58	88	131	253	413	623	784	1288	1820	2150	2150	2540	4080
(KG)	BW	35	50	68	104	208	328	496	637	1120	1448	1828	1828	2201	3360

\*Manual gear operator is recommended



**CLASS 900 Dimensions and Weights**

NPS DN	in mm	2 50	2-1/2 65	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400
L-L1 (RF-BW)	in mm	14-1/2 368	16-1/2 419	15 381	18 457	24 610	29 737	33 838	38 965	40-1/2 1029	44-1/2 1130
L2 (RTJ)	in mm	14-5/8 371	16-5/8 422	15-1/8 384	18-1/8 460	24-1/8 613	29-1/8 740	33-1/8 841	38-1/8 968	40-7/8 1038	44-7/8 1140
H (Open)	in mm	21-9/16 547	27-9/16 700	25-1/2 648	28-11/16 729	41 1041	49-5/8 1260	62-5/8 1590	70-11/16 1795	79-3/4 2025	85-7/16 2170
W	in mm	11-13/16 300	14 355	15-3/4 400	17-11/16 450	22-1/16 560	18-1/8 460*	24 610*	24 610*	30 760*	30 760*
WT (KG)	RF BW	90 82	110 93	123 108	148 122	420 359	650 566	1160 980	1700 1450	2300 2000	2750 2390

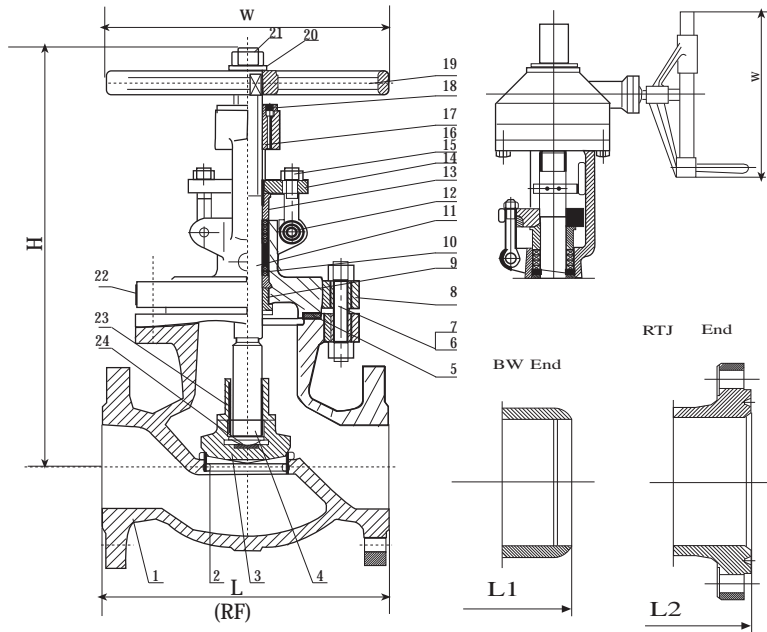
**CLASS 1500 Dimensions and Weights**

NPS DN	in mm	2 50	2-1/2 65	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400
L-L1 (RF-BW)	in mm	14-1/2 368	16-1/2 419	18-1/2 470	21-1/2 546	27-3/4 705	32-3/4 832	39 991	44-1/2 1130	49-1/2 1257	54-1/2 1384
L2 (RTJ)	in mm	14-5/8 371	16-5/8 422	18-5/8 473	21-5/8 549	28 711	33-1/8 841	39-3/8 1000	45-1/8 1146	50-1/4 1276	55-3/8 1407
H (Open)	in mm	22-5/8 574	27-9/16 700	31-3/4 806	34-15/16 887	42-1/2 1079	53-15/16 1370	59-13/16 1520	65 1651	76-9/16 1945	88-9/16 2250
W	in mm	13-3/4 350	15-3/4 400	17-3/4 450	22-1/16 560	12 305*	24 610*	30 760*	30 760*	30 760*	30 760*
WT (KG)	RF BW	117 93	175 144	240 185	337 285	680 584	1228 978	2278 1990	3260 2850	4100 3320	5960 4890

**CLASS 2500 Dimensions and Weights**

NPS DN	in mm	2 50	2-1/2 65	3 80	4 100	6 150	8 200	10 250
L-L1 (RF-BW)	in mm	17-3/4 451	20 508	22-3/4 578	26-1/2 673	36 914	40-1/4 1022	50 1270
L2 (RTJ)	in mm	17-7/8 454	20-1/4 514	23 584	26-7/8 683	36-1/2 927	40-7/8 1038	50-7/8 1292
H (Open)	in mm	27-9/16 700	29-1/2 750	34-5/8 887	42-1/2 1079	53-15/16 1370	60-1/4 1530	80-1/2 2045
W	in mm	13-3/4 350	17-3/4 450	22-1/16 560	28-3/8 720	18-1/8 460*	24 610*	30 760*
WT (KG)	RF BW	132 99	206 155	256 192	498 390	1550 1230	2395 1980	4460 3700

\*Manual gear operator is recommended



**Trim Material to API 600**

Seat Ring Surface Part No.2	Disc Seat Surface Part No.3	Stem Part No.4	Backseat Bushing Part No.9
F6	F6	F6	F6
Stellite	Stellite	F6	F6
Stellite	F6	F6	F6
F304	F304	F304	F304
F316	F316	F316	F316
Monel	Monel	Monel	Monel
Alloy 20	Alloy 20	Alloy 20	Alloy 20
Hastelloy B	Hastelloy B	Hastelloy B	Hastelloy B
Bronze	Bronze	Bronze	Bronze

OS&Y, Rising Stem, Plug Type Disc  
Bolted Bonnet, Threaded Seat Ring

**STANDARDS**

Basic Design: BS1873  
Face to Face Dimension: ANSI B16.10  
End to End Dimension: ANSI B16.10  
B.W.Ends: ANSI B16.25  
Shell Wall Thickness:  
2"-12" to API600  
Manufacturing to NACE MR-01-75 on request

**Standard Materials of Parts**

Part Name		Carbon Steel to ASTM		Alloy Steel to ASTM				Stainless Steel to ASTM			
1	Body	A216WCB	A352LCB	A217WC1	A217WC6	A217WC9	A217C5	A351CF8	A351CF8M	A351CF3	A351CF3M
8	Bonnet	A216WCB	A352LCB	A217WC1	A217WC6	A217WC9	A217C5	A351CF8	A351CF8M	A351CF3	A351CF3M
6	Bolt	A193 B7	A320 L7	A193 B7	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8
7	Nut	A194 2H	A194 4	A194 2H	A194 4	A194 4	A194 4	A194 8	A194 8	A194 8	A194 8
11	Lantern	410	410	410	410	410	410	304	316	304L	316L
12	Pins	Steel	Steel	Steel	Steel	Steel	Steel	S.S.	S.S.	S.S.	S.S.
13	Gland	A182 F6	A182 F6	A182 F6	A182 F6	A182 F6	A182 F6	304	316	304L	316L
14	Gland Flange	A105	A350 LF2	A105	A105	A105	A105	304	316	304L	316L
15	Gland Eyebolts	A193 B7	A320 L7	A193 B7	A193 B7	A193 B7	A193 B7	A193 B8	A193 B8	A193 B8	A193 B8
16	Nuts	A194 2H	A194 4	A194 2H	A194 2H	A194 2H	A194 2H	A194 8	A194 8	A194 8	A194 8
23	Disc	A182 F6	A182 F304	A182 F6	A182 F6	A182 F6	A182 F6	A182 F304	A182 F304	A182 F304	A182 F304
5	Gasket	SS Spiral Wound W/graphite, or SS Spiral Wound W/PTFE, or Reinforced PTFE									
10	Packing	Braided Graphite or Die-formed Graphite Ring or PTFE									
16	Lubricator	Steel									
17	Stem Nut	A439-D2 or A276-410									
19	Handwheel	Ductile iron									
20	Handwheel Washer	Steel									
21	Handwheel Nut	Steel									
22	Nameplate	Stainless Steel or Aluminum									
24	Thrust Washer	A182F6									

Other materials (Alloy 20, AISI 321, AISI 347, Monel, Hastelloy, etc.) on request.

**CLASS 150 Dimensions and Weights**

NPS	in	2	2-1/2	3	4	5	6	8	10	12
DN	mm	50	65	80	100	125	150	200	250	300
L-L1	in	8	8-1/2	9-1/2	11-1/2	14	16	19-1/2	24-1/2	27-1/2
(RF-BW)	mm	203	216	241	292	356	406	495	622	698
L2	in	8-1/2	9	10	12	14-1/2	16-1/2	20	25	28
(RTJ)	mm	216	229	254	305	368	419	508	635	711
H	in	14-11/16	15-3/8	16-9/16	20-1/4	21-3/16	22-5/16	24-5/8	28	39
(Open)	mm	373	390	421	515	538	567	626	712	990
W	in	7-7/8	9-7/8	9-7/8	11-13/16	11-13/16	13-3/4	15-3/4	17-3/4	24
	mm	200	250	250	300	300	350	400	450	610
WT	RF	22	29	42	64	77	105	154	288	507
(KG)	BW	19	25	34	49	65	82	131	249	430

**CLASS 300 Dimensions and Weights**

NPS	in	2	2-1/2	3	4	5	6	8	10	12
DN	mm	50	65	80	100	125	150	200	250	300
L-L1	in	10-1/2	11-1/2	12-1/2	14	15-3/4	17-1/2	22	24-1/2	28
(RF-BW)	mm	267	292	318	356	400	444	559	622	711
L2	in	11-1/8	12-1/8	13-1/8	14-5/8	16-3/8	18-1/8	22-5/8	25-1/8	28-5/8
(RTJ)	mm	283	308	333	371	416	460	575	638	727
H	in	15-11/16	17-1/8	18-3/16	22-1/16	24-3/8	27-5/16	38-5/8	44-1/2	41-5/16
(Open)	mm	398	436	462	560	620	694	982	1130	1049
W	in	7-7/8	9-7/8	9-7/8	13-3/4	15-3/4	17-3/4	22-1/16	34	18-1/8
	mm	200	250	250	350	400	450	560	864	460*
WT	RF	31	43	57	86	130	168	280	385	724
(KG)	BW	26	38	44	68	110	138	228	329	618

**CLASS 600 Dimensions and Weights**

NPS	in	2	2-1/2	3	4	6	8	10	12
DN	mm	50	65	80	100	150	200	250	300
L-L1	in	11-1/2	13	14	17	22	26	31	33
(RF-BW)	mm	292	330	356	432	559	660	787	838
L2	in	11-5/8	13-1/8	14-1/8	17-1/8	22-1/8	26-1/8	31-1/8	33-1/8
(RTJ)	mm	295	333	359	435	562	664	791	841
H	in	16-3/4	19-3/4	20-1/2	24-3/8	34-7/8	36-11/16	41	50-3/8
(Open)	mm	425	502	521	620	886	932	1040	1280
W	in	9-7/8	11-13/16	13-3/4	17-3/4	28-3/8	18-1/8	24	30
	mm	250	300	350	450	720	460*	610*	760*
WT	RF	39	58	73	120	327	482	700	900
(KG)	BW	33	48	61	95	261	385	588	795

**CLASS 900 Dimensions and Weights**

NPS	in	2	2-1/2	3	4	6	8
DN	mm	50	65	80	100	150	200
L-L1	in	14-1/2	16-1/2	15	18	24	29
(RF-BW)	mm	368	419	381	457	610	737
L2	in	14-5/8	16-5/8	15-1/8	18-1/8	24-1/8	29-1/8
(RTJ)	mm	371	422	384	460	613	740
H	in	9-7/16	10-1/4	10-1/4	12-5/8	15	20-7/8
(Open)	mm	240	260	260	320	382	530
W	in	13-3/4	15-3/4	17-3/4	22-1/16	18-1/8	24
	mm	350	400	450	560	460*	610*
WT	RF	100	118	131	218	452	710
(KG)	BW	75	94	105	185	340	630

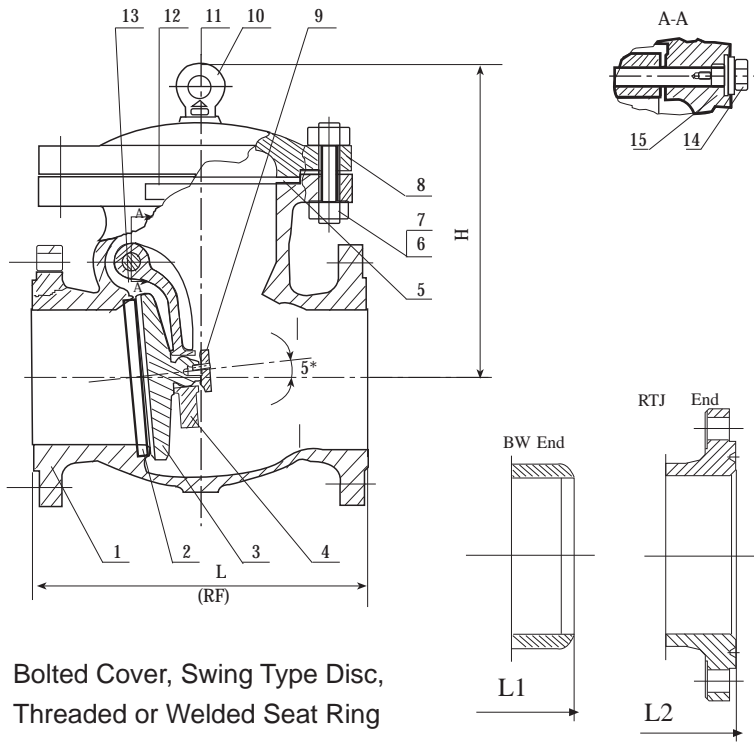
**CLASS 1500 Dimensions and Weights**

NPS	in	2	2-1/2	3	4	6	8
DN	mm	50	65	80	100	150	200
L-L1	in	14-1/2	16-1/2	18-1/2	21-1/2	27-3/4	32-3/4
(RF-BW)	mm	368	419	470	546	705	832
L2	in	14-5/8	16-5/8	18-5/8	21-5/8	28	33-1/8
(RTJ)	mm	371	422	473	549	711	841
H	in	23-5/16	26	27-1/4	35-11/16	40	45-1/16
(Open)	mm	592	660	692	907	1015	1145
W	in	13-3/4	15-3/4	17-3/4	18-1/8	24	24
	mm	350	400	450	460*	610*	610*
WT	RF	112	141	228	336	822	720
(KG)	BW	84	115	183	277	715	615

**CLASS 2500 Dimensions and Weights**

NPS	in	2	2-1/2	3	4
DN	mm	50	65	80	100
L-L1	in	17-3/4	20	22-3/4	26-1/2
(RF-BW)	mm	451	508	578	673
L2	in	17-7/8	20-1/4	23	26-7/8
(RTJ)	mm	454	514	584	683
H	in	27-1/4	29-1/2	31-1/2	47-1/4
(Open)	mm	692	750	800	1200
W	in	15-3/4	19-11/16	24	30
	mm	400	500	610*	760*
WT	RF	182	290	340	820
(KG)	BW	153	230	272	670

\*Manual gear operator is recommended



Bolted Cover, Swing Type Disc,  
Threaded or Welded Seat Ring

**Trim Material to API 600**

Seat Ring Surface Part No.2	Disc Seat Surface Part No.3	Hinge Pin Part No.13
F6	F6	F6
Stellite	Stellite	F6
Stellite	F6	F6
F304	F304	F304
F316	F316	F316
Monel	Monel	Monel
Alloy 20	Alloy 20	Alloy 20
Hastelloy B	Hastelloy B	Hastelloy B
Bronze	Bronze	Bronze

**STANDARDS**

Basic Design: BS1868  
 Face to Face Dimension: ANSI B16.10  
 End to End Dimension: ANSI B16.10  
 Flange Ends:  
 2"-24" to ANSI B16.5  
 24" to MSS SP-44  
 to API 605 on request  
 B.W. Ends: ANSI B16.25  
 Shell Wall Thickness:  
 2"-24" to API 600  
 >24" to Manufacturer's Standard  
 Manufacturing to NACE MR-01-75  
 on request

**Standard Materials of Parts**

Part Name		Carbon Steel to ASTM		Alloy Steel to ASTM				Stainless Steel to ASTM			
1	Body	A216WCB	A352LCB	A217WC1	A217WC6	A217WC9	A217C5	A351CF8	A351CF8M	A351CF3	A351CF3M
8	Cover	A216WCB	A352LCB	A217WC1	A217WC6	A217WC9	A217C5	A351CF8	A351CF8M	A351CF3	A351CF3M
4	Hinge	A216WCB	A352LCB	A217WC1	A217WC6	A217WC9	A217C5	A351CF8	A351CF8M	A351CF3	A351CF3M
6	Bolt	A193 B7	A320 L7	A193 B7	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8
7	Nut	A194 2H	A194 4	A194 2H	A194 4	A194 4	A194 4	A194 8	A194 8	A194 8	A194 8
9	Disc Nut	410	410	410	410	410	410	316	316	316	316
11	Set Screw	410	410	410	410	410	410	316	316	316	316
14	Plug	Steel	Steel	Steel	Steel	Steel	Steel	S.S.	S.S.	S.S.	S.S.
5	Gasket	SS Spiral Wound W/graphite, or SS Spiral Wound W/PTFE, or Reinforced PTFE									
10	Hook Screw	Steel									
15	Seal Ring	316L									
12	Name plate	Stainless Steel or Aluminum									

Other materials (Alloy 20, AISI 321, AISI 347, Monel, Hastelloy, etc.) on request.

**CLASS 150 Dimensions and Weights**

NPS	in	2	2-1/2	3	4	5	6	8	10	12	14	16	18	20	24	30	36
DN	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600	750	900
L-L1 (RF-BW)	in	8	8-1/2	9-1/2	11-1/2	13	14	19-1/2	24-1/2	27-1/2	31	34	38-1/2	38-1/2	51	60	77
	mm	203	216	241	292	330	356	495	622	698	787	864	978	978	1295	1524	1955
L2 (RTJ)	in	8-1/2	9	10	12	13-1/2	14-1/2	20	25	28	31-1/2	34-1/2	39	39	51-1/2	60-1/2	77-1/2
	mm	216	229	254	305	343	368	508	635	711	800	876	991	991	1308	1537	1968
H	in	5-7/8	6-5/8	7-1/16	8-1/4	9-1/16	10-13/16	13-3/8	14	16-1/8	18-11/16	21-3/4	23-5/8	26	29-1/8	38-5/8	40-3/4
	mm	150	168	180	210	230	275	340	355	410	475	552	600	660	740	980	1035
WT (KG)	RF	17	21	29	42	69	74	108	177	282	372	570	665	900	1359	2120	3344
	BW	13	17	24	36	57	62	96	158	238	324	483	548	782	1150	1890	2940

**CLASS 300 Dimensions and Weights**

NPS	in	2	2-1/2	3	4	5	6	8	10	12	14	16	18	20	24	30
DN	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600	750
L-L1	in	10-1/2	11-1/2	12-1/2	14	15-3/4	17-1/2	21	24-1/2	28	33	34	38-1/2	40	53	62-3/4
(RF-BW)	mm	267	292	318	356	400	444	533	622	711	838	864	978	1016	1346	1594
L2	in	11-1/8	12-1/8	13-1/8	14-5/8	16-3/8	18-1/8	21-5/8	25-1/8	28-5/8	33-5/8	34-5/8	39-1/8	40-3/4	53-7/8	63-3/4
(RTJ)	mm	283	380	333	371	416	460	549	638	727	854	879	994	1035	1368	1619
H	in	7-1/16	7-1/4	8-1/4	10-5/8	13-9/16	14-3/16	14-9/16	15-1/8	17-5/16	20-7/16	21-13/16	23-1/4	24-3/16	27-15/16	34-1/16
	mm	180	185	210	270	345	360	370	385	440	520	554	590	614	614	865
WT	RF	21	32	43	61	84	131	213	384	449	680	840	1025	1320	1960	3270
(KG)	BW	16	24	35	44	61	105	167	272	375	560	710	828	1070	1586	2830

**CLASS 600 Dimensions and Weights**

NPS	in	2	2-1/2	3	4	6	8	10	12	14	16	18	20	24
DN	mm	50	65	80	100	150	200	250	300	350	400	450	500	600
L-L1	in	11-1/2	13	14	17	22	26	31	33	35	39	43	47	55
(RF-BW)	mm	292	330	356	432	559	660	787	838	889	991	1092	1194	1397
L2	in	11-5/8	13-1/8	14-1/8	17-1/8	22-1/8	26-1/8	31-1/8	33-1/8	35-1/8	39-1/8	43-1/8	47-1/4	55-3/8
(RTJ)	mm	295	333	359	435	562	664	791	841	892	994	1095	1200	1407
H	in	7-3/4	8-1/8	9-1/8	11-1/16	14-1/4	17-3/16	19-5/16	20-3/4	22-1/2	26	28-3/8	29-3/8	37-13/16
	mm	197	207	231	281	362	437	490	528	572	660	720	746	960
WT	RF	36	49	68	111	230	416	673	875	944	1220	1620	2120	3100
(KG)	BW	28	40	57	83	191	361	543	770	773	1015	1350	1750	2520

**CLASS 900 Dimensions and Weights**

NPS	in	2	2-1/2	3	4	6	8	10	12	14	16
DN	mm	50	65	80	100	150	200	250	300	350	400
L-L1	in	14-1/2	16-1/2	15	18	24	29	33	38	40-1/2	44-1/2
(RF-BW)	mm	368	419	381	457	610	737	838	965	1029	1130
L2	in	14-5/8	16-5/8	15-1/8	18-1/8	24-1/8	29-1/8	33-1/8	38-1/8	40-7/8	44-7/8
(RTJ)	mm	371	422	384	460	613	740	841	968	1038	1140
H	in	9-7/16	10-1/4	10-1/4	12-5/8	15	20-7/8	22-1/16	23-1/4	24-13/16	27-9/16
	mm	240	260	260	320	382	530	560	590	630	700
WT	RF	69	93	91	145	259	565	900	1200	1500	2130
(KG)	BW	52	74	70	112	218	448	733	975	1240	1760

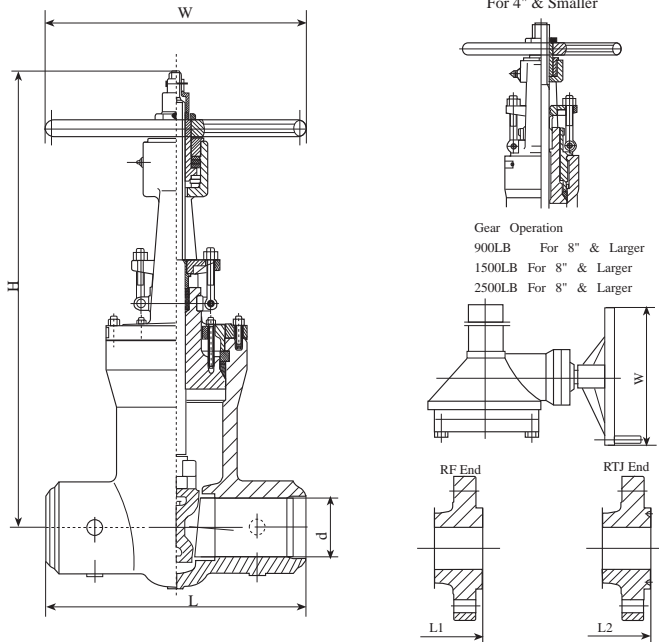
**CLASS 1500 Dimensions and Weights**

NPS	in	2	2-1/2	3	4	6	8	10	12	14	16
DN	mm	50	65	80	100	150	200	250	300	350	400
L-L1	in	14-1/2	16-1/2	18-1/2	21-1/2	27-3/4	32-3/4	39	44-1/2	49-1/2	54-1/2
(RF-BW)	mm	368	419	470	546	705	832	991	1130	1257	1384
L2	in	14-5/8	16-5/8	18-5/8	21-5/8	28	33-1/8	39-3/8	45-1/8	50-1/4	55-3/8
(RTJ)	mm	371	422	473	549	711	841	1000	1146	1276	1407
H	in	12-1/4	12-1/4	13	14	15-3/4	20-7/8	22-1/16	25-5/8		
	mm	310	310	330	355	400	530	560	650		
WT	RF	69	93	140	232	490	990	1490	1970		
(KG)	BW	49	74	111	185	375	803	1250	1625		

**CLASS 2500 Dimensions and Weights**

NPS	in	2	2-1/2	3	4	6	8
DN	mm	50	65	80	100	150	200
L-L1	in	17-3/4	20	22-3/4	26-1/2	36	40-1/4
(RF-BW)	mm	451	508	578	673	914	1022
L2	in	17-7/8	20-1/4	23	26-7/8	36-1/2	40-7/8
(RTJ)	mm	454	514	584	683	927	1038
H	in	15-3/4	16-1/2	17-5/16	18-7/8	20-1/16	27-1/4
	mm	400	420	440	480	510	692
WT	RF	143	236	345	660	1435	2485
(KG)	BW	115	189	278	545	1167	2110



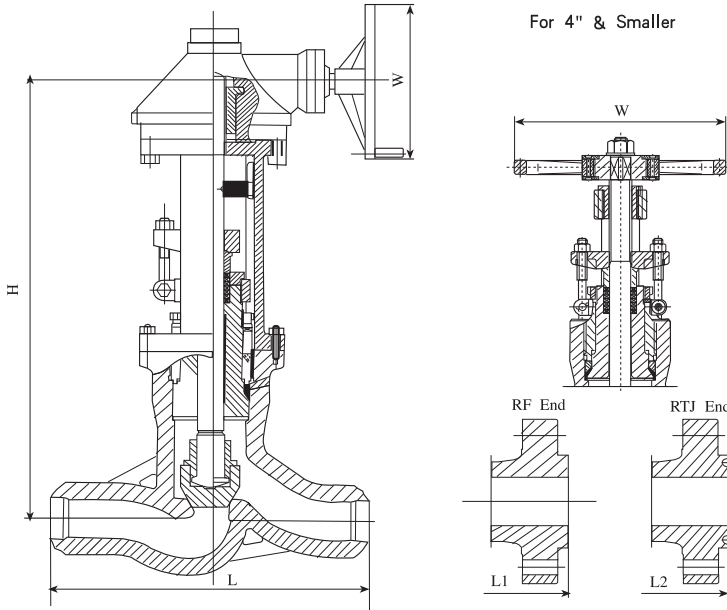


**Standard materials of parts**

Parts	Materials
Body	ASTM A216-WCB
Bonnet	ASTM105+STL.Overlay
Stem	ASTM A182-F6a
Wedge	ASTM A216-WCB+STL.Overlay
Yoke	ASTM A216-WCB
Yoke sleeve	ASTM A439 D-2
Gland flange	ASTM A216-WCB
Gland	ASTM A276-420
Handwheel	Ductile iron
Seat ring	ASTM A105+STL.Overlay
Gasket	ASTM A182-304
Packing	Reinforced graphite
Bonnet stud/nut	ASTM A193-B7/A194-2H
Gland bolt/nut	ASTM A193-B7/A194-2H
Spacer ring	ASTM A276-420
Thrust ring	ASTM A276-420
Supporting cover	ASTM A276-420
Handwheel nut	Carbon steel

**Dimensions and Weights**

	NPS	2	2-1/2	3	4	6	8	10	12	14	16
	DN	50	65	80	100	150	200	250	300	350	400
900LBS	L	8.5	10	12	14	20	26	31	36	39	43
	(BW)	216	254	305	356	508	660	787	914	991	1092
	L1	14.5	16.5	15	18	24	29	33	38	40.5	44.5
	(RF)	368	419	381	457	610	737	838	965	1029	1130
	L-2	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	40.88	44.88
	(RTJ)	371	422	384	460	613	740	841	968	1038	1140
	W	10	10	12	14	20	24	24	24	24	24
1500LBS	(mm)	250	250	300	350	500	600	610	610	610	610
	H	23	30	30	34	40	50	61	70	80	89
	(Open)	594	753	756	864	1013	1276	1543	1781	2026	2261
	WT	63	99	107	158	294	693	1008	1418	1785	2520
	(KG)	42	67	84	105	194	520	772	1103	1470	2048
	L	8.5	10	12	16	22	28	34	39	42	47
	(BW)	216	254	305	406	559	711	864	991	1067	1192
2500LBS	L1	14.5	16.5	18.5	21.5	27.75	32.75	39	44.5	49.5	54.5
	(RF)	368	419	470	546	705	832	991	1130	1257	1384
	L-2	14.62	16.62	18.62	21.26	28.00	33.13	39.38	45.12	50.25	55.38
	(RTJ)	371	422	473	549	711	842	1000	1146	1276	1407
	W	10	12	14	20	24	18	18	24	24	24
	(mm)	250	300	350	500	600	458	458	610	610	610
	H	23	30	30	34	39	53	58.3	73.6	87	92
900LBS	(Open)	594	753	756	864	994	1349	1480	1870	2216	2331
	WT	63	99	126	218	504	956	1481	2184	2741	3780
	(KG)	42	67	84	155	367	718	1071	1523	1890	2888
	L	11	13	14.5	18	24	30	36	41	-	-
	(BW)	279	330	368	457	610	762	914	1041	-	-
	L1	17.75	20	22.75	26.5	36	40.25	50	56	-	-
	(RF)	451	508	578	673	914	1022	1270	1422	-	-
1500LBS	L-2	17.88	20.25	23.00	26.88	36.50	40.88	50.88	56.88	-	-
	(RTJ)	454	514	584	683	927	1038	1292	1445	-	-
	W	14	18	18	20	24	24	24	24	-	-
	(mm)	350	450	450	500	610	610	610	610	-	-
	H	23	30	30	34	44	55	69	74	-	-
	(Open)	594	753	756	870	1129	1389	1748	1873	-	-
	WT	89	142	173	346	851	1386	2493	3091	-	-
(KG)	53	95	100	200	488	850	1680	2330	-	-	

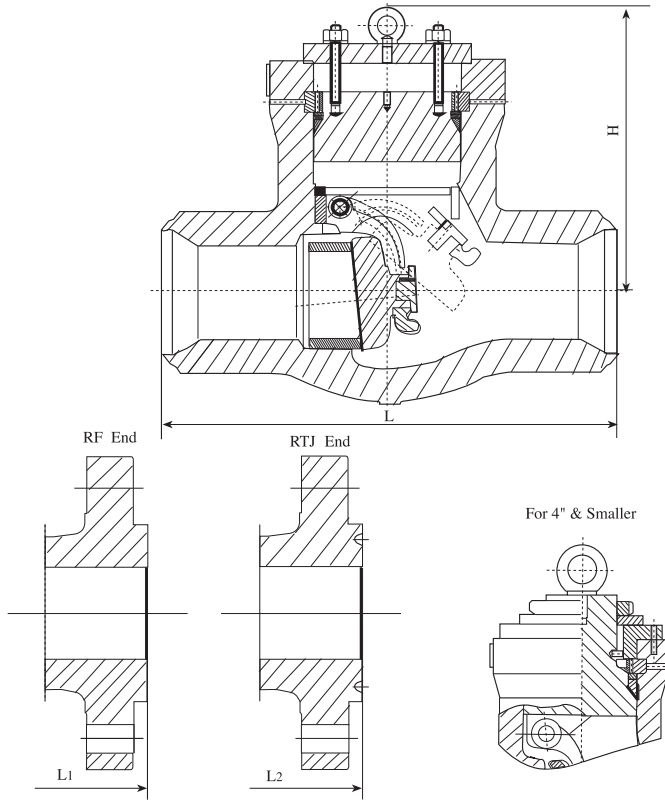


**Standard materials of parts**

Parts	Materials
Body	ASTM A216-WCB
Bonnet	ASTM105+STL.Overlay
Stem	ASTM A182-F6a
Disc	ASTM A216-WCB+STL.Overlay
Yoke sleeve	ASTM A439 D-2
Gland flange	ASTM A216-WCB
Handwheel	Ductile iron
Impact block	Ductile iron
retain plate	Carbon steel
seat ring	ASTM A105+STL.Overlay
Disc nut	ASTM A276-420
spacer ring	ASTM A276-420
Gland	ASTM A276-420
Packing	Graphite
Yoke	ASTM A216-WCB
Bonnet stud/nut	ASTM A193-B7/A194-2H
stem washer	ASTM A276-420
Bonnet stud/nut	ASTM A193-B7/ASTM A194-2H
Gasket	ASTM A182-F304

**Dimensions and Weights**

	NPS	in	2	2-1/2	3	4	6	8
	DN	mm	50	65	80	100	150	200
<b>900LBS</b>	L-L1	in	14.5	16.5	15	18	24	29
	(BW-RF)	mm	368	419	381	457	610	737
	L2	in	14.62	16.62	15.12	18.12	24.12	29.12
	(RTJ)	mm	371	422	384	460	613	740
	W	in	14	14	18	20	24	24
		mm	350	350	450	500	610	610
<b>1500LBS</b>	H	in	24.4	25.5	28.4	33.5	48.5	53.1
	(Open)	mm	619	641	721	850	1225	1350
	WT	RF	84	116	110	179	441	1050
	(KG)	BW	58	84	84	137	378	945
	L-L1	in	14.5	16.5	18.5	21.5	27.75	32.75
	(BW-RF)	mm	368	419	470	546	705	832
<b>2500LBS</b>	L2	in	14.62	16.62	18.62	21.62	28.00	33.13
	(RTJ)	mm	371	422	473	549	711	842
	W	in	14	14	20	22	24	24
		mm	350	350	500	560	610	610
	H	in	24.4	25.2	32.9	33.7	48.4	70.9
	(Open)	mm	619	641	835	857	1230	1800
<b>2500LBS</b>	WT	RF	84	116	143	236	918	1764
	(KG)	BW	58	84	100	168	781	1502
	L-L1	in	17.75	20	22.75	26.5	36	40.25
	(BW-RF)	mm	451	508	578	673	914	1022
	L2	in	17.88	20.25	23.00	26.88	36.50	40.88
	(RTJ)	mm	454	541	584	683	927	10.38
<b>2500LBS</b>	W	in	16	20	22	24	24	24
		mm	400	500	560	610	610	610
	H	in	24.3	30.7	31.5	51.2	53.9	85
	(Open)	mm	616	781	800	1300	1370	2160
	WT	RF	105	163	221	525	1313	2520
	(KG)	BW	74	116	147	368	973	2100



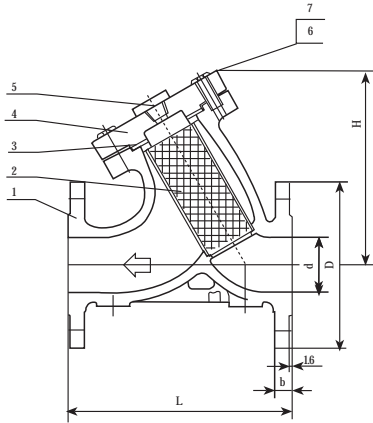
**Standard materials of parts**

Parts	Materials
Body	ASTM A216-WCB
Cover	ASTM105+STL Overlay
Disc	ASTM A216-WCB+STL Overlay
Hinge	ASTM A216-WCB
Seat ring	ASTM105+STL Overlay
Hinge pin	ASTM A276-420
Washer	ASTM A276-420
Disc nut	ASTM A276-420
Gasket	ASTM A182-F304
Spacer ring	ASTM A276-420
Thrust ring	ASTM A276-420
Supporting cover	ASTM A216-WCB
Bonnet stud/nut	ASTM A193-B7/A194-2H
Washer	Carbon steel
Hook screw	Carbon steel

**Dimensions and Weights**

	NPS	in	2	2-1/2	3	4	6	8	10	12	14	16
	DN	mm	50	65	80	100	150	200	250	300	350	400
900LBS	L	in	8.5	10	12	14	20	26	31	36	39	43
	(BW)	mm	216	254	305	356	508	660	787	914	991	1092
	L1	in	14.5	16.5	15	18	24	29	33	38	40.5	44.5
	(RF)	mm	368	419	381	457	610	737	838	965	1029	1130
	L2	in	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	40.88	44.88
	(RTJ)	mm	371	422	384	460	613	740	841	968	1038	1140
	H	in	9.5	10.4	10.6	12.5	15.7	23.1	23.9	27.4	29.5	28.7
	mm	241	264	270	318	400	587	606	695	749	730	
	WT	RF	42	58	55	110	242	599	89.	1365	1628	1733
	(KG)	BW	21	34	32	68	168	462	725	1071	1281	1418
1500LBS	L	in	8.5	10	12	16	22	28	34	39	42	47
	(BW)	mm	216	254	305	406	559	711	864	991	1067	1194
	L1	in	14.5	16.5	18.5	21.5	27.75	32.75	39	44.5	49.5	54.5
	(RF)	mm	368	419	470	546	705	832	991	1130	1257	1384
	L2	in	14.62	16.62	18.62	21.62	28.00	33.13	39.38	45.12	50.25	55.38
	(RTJ)	mm	371	422	473	549	711	842	1000	1146	1276	1407
	H	in	9.5	10.4	10.8	12.5	16.6	18.9	23.3	25.4	28	29.5
	mm	241	264	274	318	422	479	591	645	711	749	
	WT	RF	42	58	105	147	360	641	1103	1628	2205	2730
	(KG)	BW	21	34	42	74	233	504	777	1155	1481	1680
2500LBS	L	in	11	13	14.5	18	24	30	36	41	-	-
	(RW)	mm	279	330	368	457	610	762	914	1041	-	-
	L	in	17.75	20	22.75	26.5	36	40.25	50	56	-	-
	(RF)	mm	451	508	578	673	914	1022	1270	1422	-	-
	L2	in	17.87	20.25	23.00	26.88	36.50	40.87	50.88	56.88	-	-
	(RTJ)	mm	454	514	587	683	927	10.8	1292	1445	-	-
	H	in	9.6	10.4	10.6	12.5	17.8	22	22.7	25.6	-	-
	mm	245	264	270	318	451	559	578	656	-	-	
	WT	RF	89	124	163	299	588	1071	1676	2772	-	-
	(KG)	BW	53	74	89	173	285	598	783	1512	-	-

**Y-STRAINER**



**Standard materials of parts**

No.	Part Name	Material
1	Body	ASTM A216 WCB
2	Screen	ASTM A276 Type 304
3	Gasket	Soft iron
4	Bonnet	ASTM A216 WCB
5	Plug	ASTM A105
6	Stud Bolt	ASTM A193 GR B7
7	Nut	ASTM A194 GR 2H

**CLASS 150 Dimensions and Weights**

SIZE(IN)	2	2 1/2	3	4	6	8	10	12
L(MM)	203	216	241	292	406	495	622	698
D	152.4	177.8	190.5	228.6	279.4	342.9	406.4	482.6
b	16	18	19	24	25	28	30	32
H(MM)	145	183	206	228	329	440	507	594
Wt(Kg)	12	18	21	32	48	105	169	215

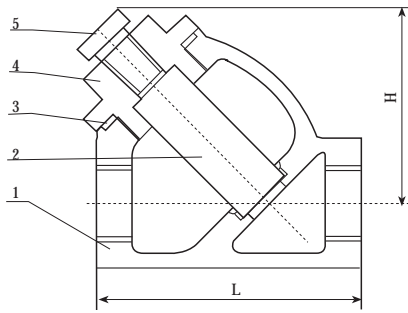
**CLASS 300 Dimensions and Weights**

SIZE(IN)	2	2 1/2	3	4	6	8	10	12
L(MM)	267	292	381	356	446	559	622	711
D	165.1	190.5	209.5	254.0	317.5	381.0	444.5	520.7
b	22.2	25.4	28.6	31.7	36.5	41.3	47.6	50.8
H(MM)	170	184	234	290	377	447	577	667
Wt(Kg)	15	18	35	51	92	182	285	307

**CLASS 600 Dimensions and Weights**

SIZE(IN)	2	2 1/2	3	4	6	8	10	12
L(MM)	292	330	356	432	559	660	788	838
D	165.1	190.5	209.5	273	355.6	419.1	508.0	558.8
b	25.4	28.6	31.7	38.1	47.6	55.6	63.5	66.7
H(MM)	145	183	206	228	329	440	507	594
Wt(Kg)	12	19	25	34	53	105	169	235

**NPT STRAINER**



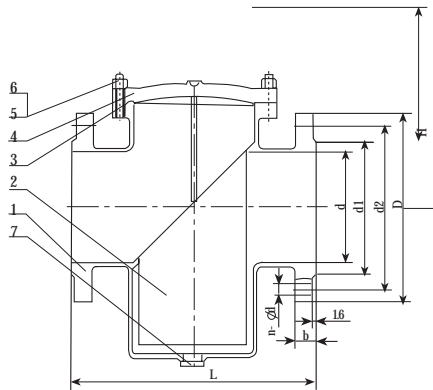
**Standard materials of parts**

No.	Part Name	Material
1	Body	WCB
2	Screen	304SS
3	Gasket	304 Wound Grafoil
4	Bonnet	WCB
5	Plug	A29 1025

**Dimensions and Weights**

SIZE	in	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3
L	in	3.25	3.68	4.25	5.26	6.12	7.64	8.37	9.51
	mm	82.5	93.5	108	133.5	155.5	194	212.5	241.5
H	in	2.44	2.99	3.50	4.02	4.53	6.30	6.57	7.80
	mm	62	76	89	102	115	160	167	198
WT	kg	0.8	1.3	1.6	2.3	3.5	6.5	8.6	13

**CLASS 150 BASKET STRAINER**

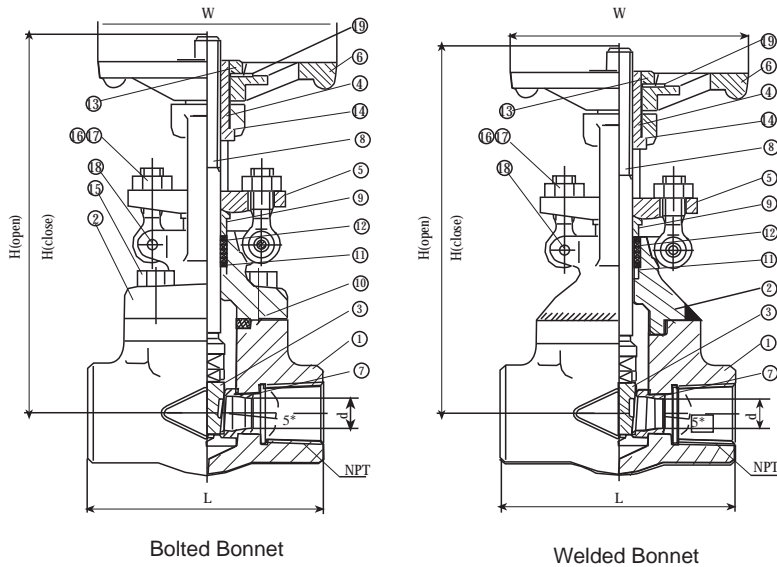


**Standard materials of parts**

No.	Part Name	Material
1	Body	WCB
2	Screen	304SS
3	Gasket	304 Wound Grafoil
4	Bonnet	WCB
5	Gasket	A193 B7
6	Plug	A194 2H
7	Nut	A29 1035

**Dimensions and Weights**

NPS	in	2	2-1/2	3	4	6	8	10	12
d	mm	51	63.5	76	102	152	203	254	305
L	in	8.62	10.26	11.61	14.25	18.62	24.37	25.98	30.37
RF	mm	219	260.5	295	362	473	619	660	771.5
d1	in	3.62	4.13	5.00	6.18	8.50	10.63	12.76	15.00
	mm	92	105	127	157	216	270	324	381
d2	in	4.74	5.49	6.00	7.50	9.51	11.75	14.25	17.01
	mm	120.5	139.5	152.5	190.5	241.5	298.5	362	432
D	in	5.98	7.01	7.48	9.02	10.98	13.50	15.98	19.02
	mm	152	178	190	229	279	343	406	483
b	in	0.75	0.87	0.94	0.94	1.02	1.14	1.18	1.26
	mm	19	22	24	24	26	29	30	32
n-ød	in	4-0.75	4-0.75	4-0.75	8-0.75	8-0.87	8-0.87	12-0.98	12-0.98
	mm	4-19	4-19	4-19	8-19	8-22	8-22	12-25	12-25
H	in	5.71	7.20	8.11	8.98	12.95	17.32	19.96	23.39
	mm	145	183	206	228	329	440	507	594
WT	Kg	9.5	15	18	29	46	102	152	210



**Standard Materials of Parts**

No.	Part Name	Qty.	Material
1	Body	1	ASTM A105
2	Bonnet	1	ASTM A105
3	Wedge	1	ASTM A217-CA15
4	Stem Nut	1	ASTM A439-D2
5	Gland Flange	1	ASTM A105
6	Handwheel	1	Ductile iron
7	Seat Ring	2	A105/Stellite Overlay
8	Stem	1	ASTM A182-F6a
9	Gland	1	ASTM A276-420
10	Gasket	1	304SS/Graphite Spiral Wound
11	Packing	4	Graphite
12	Packing	2	304+Graphite
13	Nut	1	Carbon Steel
14	Thrust Washer	1	ASTM A182-F304
15	Bolt	4	ASTM A193-B7
16	Bolt	2	ASTM A193-B7
17	Nut	2	ASTM A194-2H
18	Pin	2	Carbon Steel
19	Nameplate	1	Aluminum

NOTE:1 Body material LF2, F11, F5, 304, 304L  
316 and 316L also available.  
2 Socket-weld ends on request.

ASTM A105  
Bolted or Welded Bonnet  
OS&Y  
Threaded Ends  
Rising Stem  
Rolled-in Seat Ring

**STANDARDS**

End Threads: ANSI B1.20.1  
Socket-weld: ANSI B16.11  
Basic Design: API 602  
Test: API 598

**Dimensions and Weights**

(Full Port)

CLASS	SIZE	L(MM)	D(MM)	W(mm)	H open(mm)	H close(mm)	Weight(Kg)
1500LBS	1/4"	76	6.4	80	214	198	4
	3/8"	76	6.4	80	214	198	4
	1/2"	86	12.7	80	218	202	4.5
	3/4"	102	15.9	110	239	218	6.5
	1"	127	22.2	150	275	245	9.5
	1-1/4"	152	27	150	290	255	11
	1-1/2"	171	34.9	150	313	272	14.5
	2"	210	38.1	180	365	317	20

**Dimensions and Weights**

(Full Port)

CLASS	SIZE	L(MM)	D(MM)	W(mm)	H open(mm)	H close(mm)	Weight(Kg)
800LBS	1/4"	76	6.4	80	146	132.5	2
	3/8"	76	6.4	80	146	132.5	2
	1/2"	86	12.7	80	157	140	2.5
	3/4"	102	17.5	110	194	173	3.5
	1"	118	23.8	150	239	209	7
	1-1/4"	118	28.6	150	263	228	7
	1-1/2"	132	36.5	150	290	247	10.5
	2"	178	44.5	180	328	270	15

(Regular Port)

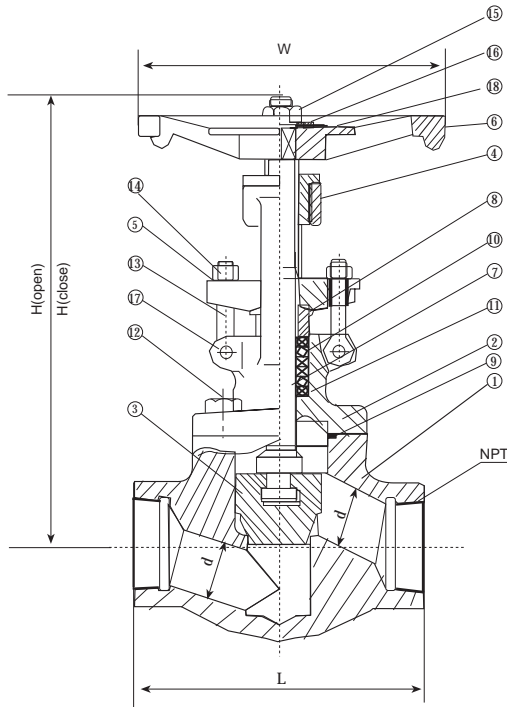
CLASS	SIZE	L(MM)	D(MM)	W(mm)	H open(mm)	H close(mm)	Weight(Kg)
1500LBS	1/4"	76	6.4	80	214	198	4
	3/8"	76	6.4	80	214	198	4
	1/2"	76	9.5	80	214	198	4
	3/4"	86	12.7	80	218	202	4.5
	1"	102	15.9	110	239	218	6.5
	1-1/4"	127	22.2	150	275	245	9.5
	1-1/2"	152	27	150	290	255	11
	2"	171	34.9	150	313	272	14.5

(Regular Port)

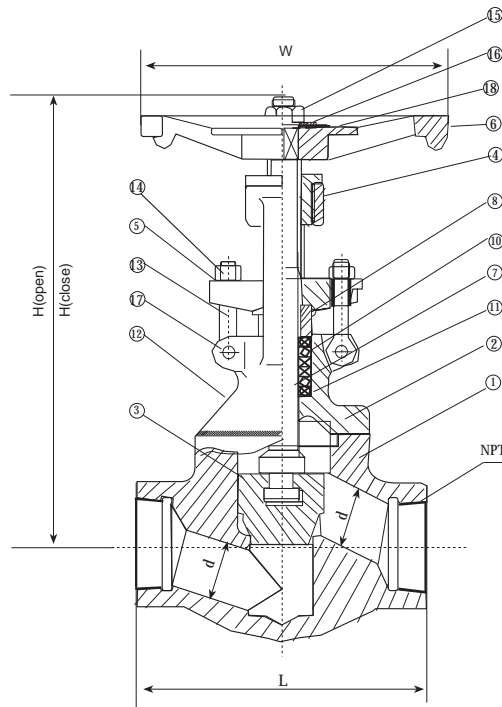
CLASS	SIZE	L(MM)	D(MM)	W(mm)	H open(mm)	H close(mm)	Weight(Kg)
800LBS	1/4"	76	6.4	80	146	132.5	2
	3/8"	76	6.4	80	146	132.5	2
	1/2"	76	9.5	80	146	132.5	2
	3/4"	86	12.7	80	157	140	2.5
	1"	102	17.5	110	194	173	3.5
	1-1/4"	118	23.8	150	239	209	7
	1-1/2"	118	28.6	150	263	228	7
	2"	132	36.5	150	290	247	10.5

(Regular Port)

CLASS	SIZE	L(MM)	D(MM)	W(mm)	H open(mm)	H close(mm)	Weight(Kg)
2500LBS	1/2"	127	9.5	130	214	198	6
	3/4"	127	12.7	130	239	218	7
	1"	127	17.5	130	253	230	13.5
	1-1/2"	235	28.6	180	419	380	24.5
	2"	235	36.5	180	429	390	32



**Bolt Bonnet**



**Welded Bonnet**

ASTM A105  
Bolted or Welded Bonnet  
OS&Y  
Threaded Ends  
Rising Stem  
Integral HF Seat

**STANDARDS**

End Threads: ANSI B1.20.1  
Socket-weld: ANSI B16.11  
Basic Design: API 602  
Test: API 598

**Dimensions and Weights**

CLASS	SIZE	L(MM)	D(MM)	W(mm)	H open(mm)	H close(mm)	Weight(Kg)
800LBS	1/4"	76	6.4	80	146	135	2
	3/8"	76	6.4	80	146	135	2
	1/2"	76	9.5	80	146	135	2
	3/4"	86	12.7	80	154	142	2.5
	1"	102	17.5	110	195	183	3.5
	1-1/4"	140	23.8	150	195	183	8
	1-1/2"	140	28.6	150	231	214	8
	2"	170	36.5	150	277	254	11.5

CLASS	SIZE	L(MM)	D(MM)	W(mm)	H open(mm)	H close(mm)	Weight(Kg)
1500LBS	1/4"	76	6.4	100	211	195	4
	3/8"	76	6.4	100	211	195	4
	1/2"	76	9.5	100	211	195	4
	3/4"	86	12.7	100	218	200	4.5
	1"	111	15.9	125	243	220	6.5
	1-1/4"	152	22.2	160	277	248	9
	1-1/2"	152	27	160	290	255	12
	2"	171	34.9	180	316	275	16.5

CLASS	SIZE	L(MM)	D(MM)	W(mm)	H open(mm)	H close(mm)	Weight(Kg)
2500LBS	1/2"	127	9.5	130	176	148	7
	3/4"	155	12.7	130	242	218	9
	1"	170	15.9	130	257	230	14.5
	1-1/2"	235	27	180	429	385	34
	2"	235	34.9	225	434	392	37

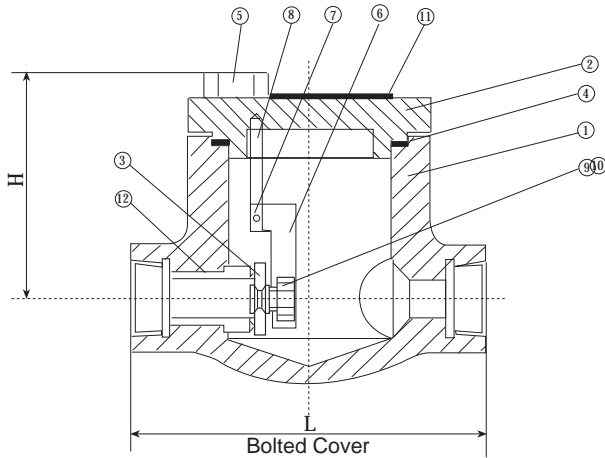
**Standard Materials of Parts**

No.	Part Name	Qty.	Material
1	Body	1	A105/Stellite Overly
2	Bonnet	1	ASTM A105
3	Disc	1	ASTM A182-F6a
4	Stem Nut	1	ASTM A439-D2
5	Gland Flange	1	ASTM A105
6	Handwheel	1	Ductile iron
7	Stem	1	ASTM A182-F6a
8	Gland	1	ASTM A276-420
9	Gasket	1	304SS/Graphite Spiral Wound
10	Packing	4	Graphite
11	Packing	2	304+Graphite
12	Bolt	4	ASTM A193-B7
13	Bolt	2	ASTM A193-B7
14	Nut	2	ASTM A194-2H
15	Nut	1	Carbon Steel
16	Washer	1	Carbon Steel
17	Rivet	2	Carbon Steel
18	Nameplate	1	Aluminum

NOTE: 1. Body material LF2, F11, F5, 304, 304L  
316 and 316L also available.  
2. Socket-weld ends on request.



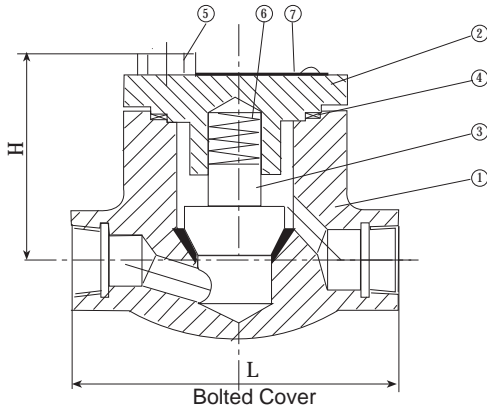
**ANSI Forged Steel Swing Check Valve**



**Dimensions and Weights**

CLASS	SIZE	L(MM)	H (mm)	Weight(Kg)
800LBS	1/2"	79	57	1.5
	3/4"	92	61	2
	1"	111	74	2.5
	1-1/2"	121	97	4
	2"	140	110	6

**ANSI Forged Steel Piston Check Valve**



**Dimensions and Weights**

CLASS	SIZE	L(MM)	H (mm)	Weight(Kg)
800LBS	1/4"	79	51	1.5
	3/8"	79	51	1.5
	1/2"	79	51	1.5
	3/4"	92	55	2
	1"	120	69	2.5
	1-1/4"	152	103	5.5
	1-1/2"	152	103	5.5

CLASS	SIZE	L(MM)	H (mm)	Weight(Kg)
1500LBS	1/4"	79	51	2
	3/8"	79	51	2
	1/2"	79	51	2
	3/4"	92	55	2.5
	1"	120	69	4
	1-1/4"	152	103	8
	1-1/2"	152	103	8

ASTM A105

Bolted Cover

Threaded Ends

Swing Type Disc

Rolled-in Seat Ring

**STANDARDS**

End Threads: ANSI B1.20.1

Socket-Weld: ANSI B16.11

Shell Wall Thickness: API 602

Test: API 598

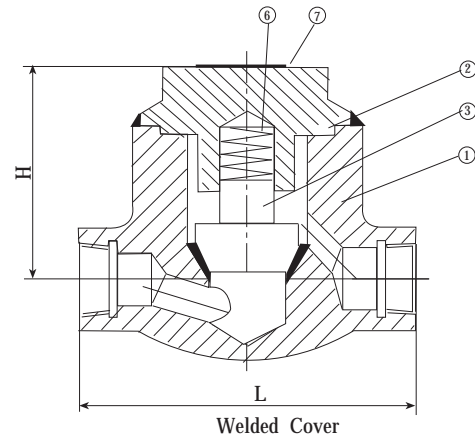
**Standard Materials of Parts**

NO.	Part Name	Qty.	Material
1	Body	1	ASTM A105
2	Bonnet	1	ASTM A105
3	Disc	1	ASTM A182-F6a
4	Gasket	1	304SS/Graphite Spiral Wound
5	Bolt	1	ASTM A193-B7
6	Hinge	4	ASTM A105
7	Hinge Pin	1	ASTM A276-420
8	Holder	1	ASTM A276-420
9	Nut	1	ASTM A276-420
10	Washer	1	ASTM A276-420
11	Nameplate	1	Aluminum
12	Seat Ring	1	ASTM A105/Stellite Overlay

NOTE:1 Body material LF2, F11, F5, 304, 304L

316 and 316L also available.

2 Socket-weld ends on request.



ASTM A105

Bolted Cover

Threaded Ends

Piston Type Disc

Integral HF Seat

**STANDARDS**

End Threads: ANSI B1.20.1

Socket-weld: ANSI B16.11

Shell Wall Thickness:API 602

Test: API 598

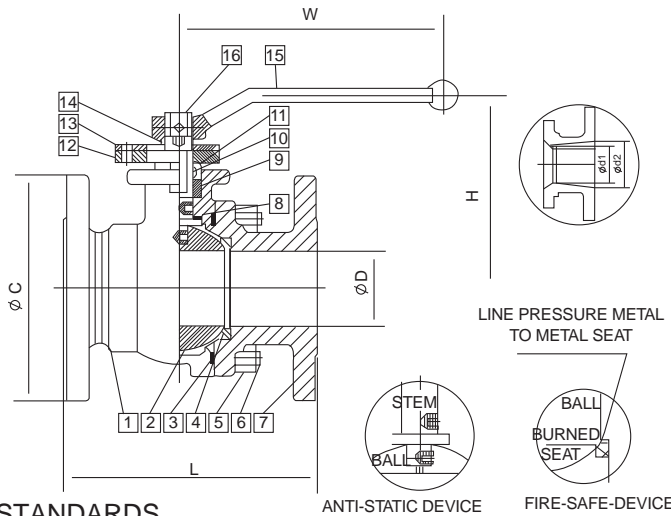
**Standard Materials of Parts**

NO.	Part Name	Qty.	Material
1	Body	1	ASTM A105/Stellite Overlay
2	Bonnet	1	ASTM A105
3	Disc	1	ASTM A182-F6a
4	Gasket	1	304SS/Graphite Spiral Wound
5	Bolt	4	ASTM A193-B7
6	Spring	1	Stainless Steel
7	Nameplate	1	Aluminum

NOTE:1 Body material LF2, F11, F5, 304, 304L 316 and 316L also available.

2 Socket-weld ends on request.





**Standard Materials of Parts**

NO.	Part Name	Material
1	Body	ASTM A216 GR WCB
2	Ball	ASTM A351 GR CF8M
3	Gasket	316SS+Graphite Filler
4	Seats	R-PTFE
5	Stud Bolt Nuts	ASTM A194 GR 2H
6	Stud Bolts	ASTM A193 GR B7
7	Cap	ASTM A 216 GR WCB
8	Thrust Bearing	PTFE
9	Packing	PTFE
10	Stem Bearing	PTFE
11	Gland	ASTM A276 Type 316
12	Gland Flange	AISI-1035
13	Stopper	AISI-1035
14	Bottom Circlip	ASTM A686 W1-8
15	Lever	Ductile Iron
16	Stem	ASTM A276 Type 316

**STANDARDS**

Basic Design: API6D, BS5351  
 Face To Face: ANSI B16.10  
 End To End: ANSI B16.10  
 End Flanges: ANSI B16.5

**CLASS 150LBS Dimensions and Weights**

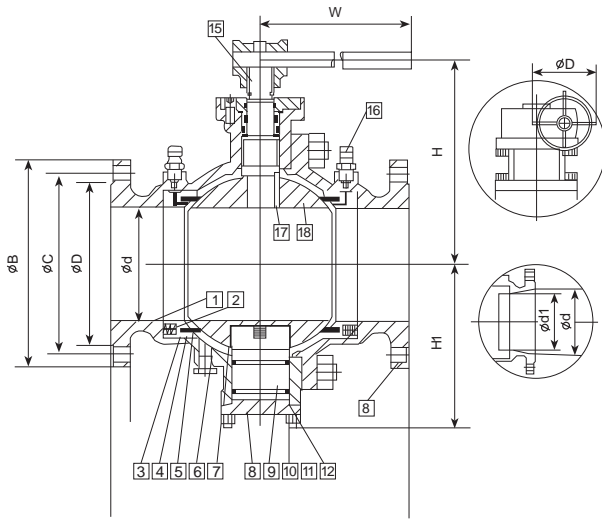
SIZE	1 1/2	2	3	4	6	8	10
L(mm)	241	292	356	432	559	660	787
d1(mm)	28	36	57	75	98	144	187
d2(mm)	40	50	80	100	150	200	250
C(mm)	156	165	210	273	356	419	508
D(mm)	40	50	80	100	150	200	250
H(mm)	113	125	182	234	340	395	500
W(mm)	215	215	350	450	1000	1100	1100
Wt(kg)	13	32	55	90	230	390	650

**CLASS 300LBS Dimensions and Weights**

SIZE	1 1/2	2	3	4	6	8	10
L(mm)	190	216	283	305	403	502	568
d1(mm)	28	36	57	75	98	144	187
d2(mm)	40	50	80	100	150	200	250
C(mm)	156	165	210	254	217	381	445
D(mm)	40	50	80	100	150	200	250
H(mm)	113	125	182	217	315	380	447
W(mm)	215	215	350	450	1000	1100	1100
Wt(kg)	12	14	33	50	108	184	244

**CLASS 600LBS Dimensions and Weights**

SIZE	1 1/2	2	3	4	6	8	10
L(mm)	165	178	203	229	394	457	533
d1(mm)	28	36	57	75	98	144	187
d2(mm)	40	50	80	100	150	200	250
C(mm)	127	152	190	229	279	343	406
D(mm)	40	50	80	100	150	200	250
H(mm)	113	125	207	217	294	380	447
W(mm)	215	215	350	450	1000	1100	1100
Wt(kg)	7.5	10.5	24	37	84	150	225



**SATANDARDS**

Basic Design: API6D, BS5351  
 Face To Face: ANSI B16.10  
 End to End: ANSI B16.10  
 End Flanges: ANSI B16.5

**Standard Materials of Parts**

No.	Part Name	Material
1	Body	ASTM A216 GR WCB
2	Spring	INCONEL X-750
3	O-ring	VITON
4	Seat Retainer	ASTM A276 Type 410
5	Seat	PTFE
6	Plug	ASTM A105 ENP
7	Bearing	PTFE
8	Adapter	ASTM A216 GR WCB
9	Axes	PTFE
10	Stud Bolt Nuts	ASTM A193 GR B7
11	Stud Bolt Nuts	ASTM A194 GR 2H
12	Gasket	PTFE
13	Ring	VITON
14	Bolt	ASTM A193 GR B7
15	Stem	ASTM A182 F6
16	Nipple	ASTM A105
17	Key	ASTM A182 F8A
18	Ball	ASTM A351 GR CF8M

**CLASS 150LBS (Lever Operated) Dimensions and Weights**

size	L	d	d1	D	C	B	t	H	W	WT(Kg)
2	178	50	36	92	121	152	19	165	215	20
3	203	80	57	127	153	190	23	195	350	35
4	229	100	75	157	191	229	24	230	450	60
6	267	150	98	216	242	279	26	330	1000	100
8	292	200	144	270	299	343	29	395	1100	200

**CLASS 150LBS (Gear Operated) Dimensions and Weights**

size	L	H	H1	d	D1	D	WT(Kg)
10	330	383	300	250	200	500	300
12	502	526	320	300	250	700	445
14	686	572	368	350	300	700	500
16	762	650	412	400	350	800	810
18	864	620	500	450	400	800	1020
20	914	680	555	500	450	800	1280
24	1067	870	700	600	500	800	2200

**CLASS 300LBS (Lever Operated) Dimensions and Weights**

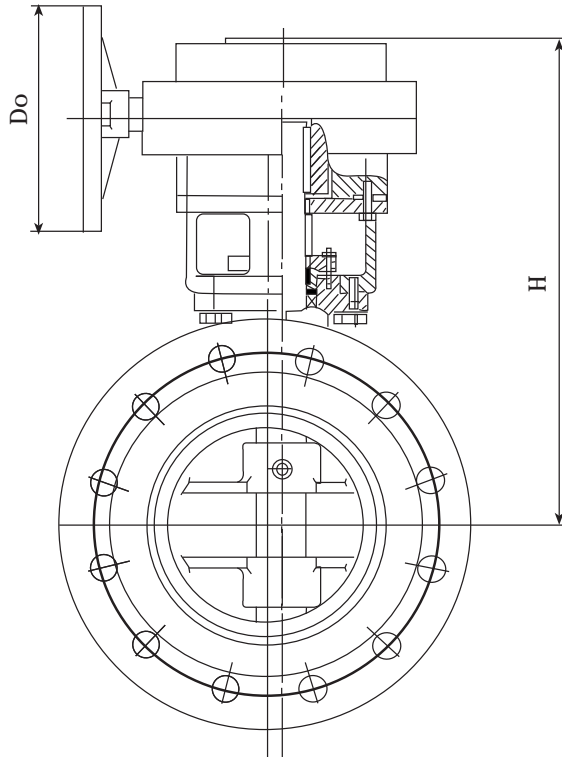
size	L	d	d1	D	C	B	t	H	W	WT(Kg)
2	216	50	36	92	127	165	23	165	215	22
3	283	80	57	127	169	210	29	195	350	42
4	305	100	75	157	200	254	32	230	450	73
6	403	150	98	216	270	318	37	330	1000	160
8	420	200	144	270	330	381	42	395	1100	280

**CLASS 300LBS (Gear Operated) Dimensions and Weights**

size	L	H	H1	d	D1	D	WT(Kg)
10	568	405	325	250	200	500	365
12	648	455	365	300	250	700	535
14	762	490	400	350	300	700	740
16	838	550	440	400	350	800	1030
18	914	620	500	450	400	800	1280
20	991	680	555	500	450	800	1540
24	1143	870	700	600	500	800	2600

**CLASS 600LBS (Gear Operated) Dimensions and Weights**

size	L	H	H1	d	D1	D	WT(Kg)
2	292	168	115	50	50	500	25
3	356	197	133	80	50	700	49
4	432	235	159	100	80	700	80
6	559	327	215	150	100	800	220
8	660	374	294	200	150	800	350
10	787	445	370	250	200	800	600
12	838	515	420	300	250	800	820
14	889	550	460	350	300	800	1130
16	991	615	505	400	350	800	1150
18	1092	700	560	450	400	800	2100
20	1194	810	630	500	450	800	2800
24	1397	1010	825	600	500	800	5300



**STANDARDS**

Flanged End Butterfly Valves: MSS SP-67  
 Wafer Butterfly Valves: MSS SP-68 or API609  
 Face to face dimensions: ANSI B16.10 MSS SP-67 and MSS SP-68 or 609  
 Test: API 598

**End flange dimensions**

NPS 11/2-24: ANSI B16.5  
 NPS 30-72: MSS SP-44 or API 605

**Type of construction**

Flanged End Butterfly Valves(Hard face and soft face)  
 Wafer Butterfly Valves(Hard face and soft face)

**Type of connection**

RF and RTJ flange ends: ANSI B16.5 or API 605  
 and MSS SP-44 standard

**Type of operation**

Lever  
 Worm Gear actuator, Electric actuator, Pneumatic actuator.  
 Actuator dimensions to ISO 5211 standard.

**Standard Materials of Parts**

NO.	Part Name	Carbon Steel		Alloy Steel			Stainless Steel			
		WCB	LCB	WC6	WC9	C5	CF8	CF8M	CF3	CF3M
1	Body	A216WCB	A352LCB	A217WC6	A217WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Butterfly Plate	A216WCB	A352LCB	A217WC6	A217WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
3	Seat Ring	PTFE or Stainless steel and graphite spiral wound								
4	Axle	A182 F6	A182 F6	A182 F304	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L
5	Below Axle bush	A439 D2 or A436 Austenite iron								
6	Top axle bush	A439 D2 or A436 Austenite iron								
7	Lock Ring	A105	A182 F6	A182 F22	A182 F22	A182 F22	A182 F304	A182 F304	A182 F304L	A182 F316L
8	Axle packing									
9	Gland	A182 F6	A182 F6	A182 F304	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L
10	Gland flange	A216WCB	A352LCB	A217WC6	A217WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
11	York	A216WCB	A352LCB	A217WC6	A217WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
12	Bolt	PTFE or Graphite								
13	Below Cap	A216WCB	A352LCB	A217WC6	A217WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
14	Bolt	A193 B7 A302 L7 A193 B16 Alloy steel								
15	Pin	Carbon Steel or Alloy Steel								
16	Sealing-face overlay	Soft face(PTFE) Hard face(13Cr and 18Cr-8Ni or Co-Cr-a)								

## Dimensions and Weights

		CLASS 125											
DN NPS	mm	400	450	500	600	700	900	1050	1200	1350	1500	1650	1800
	in	16	18	20	24	30	36	42	48	54	60	66	72
L	mm	203.2	203.2	203.2	203.2	304.8	304.8	304.8	381.0	381.0	381.0	457.2	457.2
	in	8	8	8	8	12	12	12	15	15	15	18	18
L1	mm	79.3	101.6	127	154	165.1	200.2	251	276.4				
	in	3.12	4	5	6.06	6.5	7.88	9.88	10.88				
H	mm	481	521	568	398	903	1031	1122	1180	1425	1545	1624	1750
	in	19	20.5	22.4	27.5	35.6	40.6	44.2	46.5	56.1	60.8	64	69
Do(W)	mm	300	400	450	500	*350	*350	*350	*350	*350	*350	*350	*350
	in	11.8	15.8	17.7	19.7	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8
F(Kg) W(Kg)		230	274	375	595	1030	1985	2100	3420	3670	3880	4100	4250
		200	248	334	510	880	1580	1680	2736				

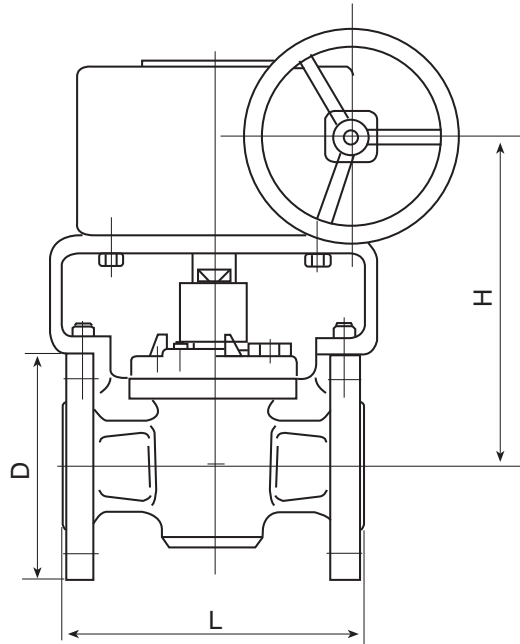
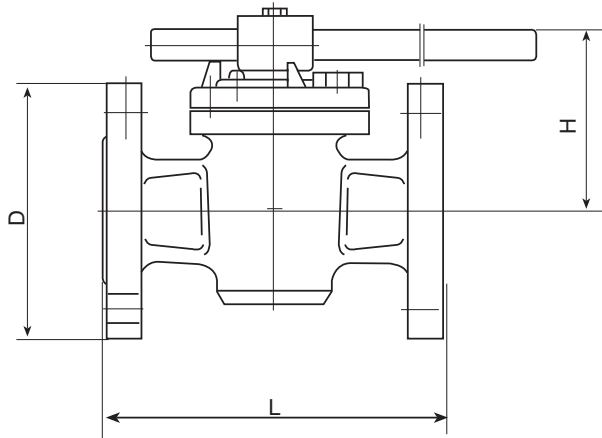
		CLASS 150											
DN NPS	mm	40	50	65	80	100	125	150	200	250	300	350	400
	in	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16
L	mm				127	127	127	127	152	203.2	203.2	203.2	203.2
	in				5	5	5	5	6	8	8	8	8
L1	mm	38.1	46	50.8	48	54	63.5	57	63.5	71.5	81.0	92.0	101.5
	in	1.5	1.81	2	1.88	2.13	2.5	2.25	2.50	2.81	3.19	3.62	4.00
H	mm	185	190	220	229	239	252	284	307	337	392	435	481
	in	7.28	7.48	8.7	9	9.4	9.9	11.2	12	13.3	15.4	17.1	19
Do(W)	mm	160	160	160	160	160	160	160	200	200	250	250	300
	in	6.3	6.3	6.3	6.3	6.3	6.3	6.3	7.9	7.9	9.8	9.8	11.8
F(Kg) W(Kg)					12.5	13.5	17	38	72	105	148	182	230
		8	9	10	10	11	14.5	34.2	66	98	134	168	200

		CLASS 150											
DN NPS	mm	450	500	600	750	900	1050	1200	1350	1500	1650	1800	
	in	18	20	24	30	36	42	48	54	60	66	72	
L	mm	203.2	203.2	203.2	304.8	304.8	304.8	381.0	381.0	381.0	457.2	457.2	
	in	8	8	8	12	12	12	15	15	15	18	18	
L1	mm	114.5	127	154	165.1	200.2	251	276.4					
	in	4.50	5.00	6.06	6.50	7.88	9.88	10.88					
H	mm	521	568	698	903	1031	1122	1180	1425	1545	1624	1750	
	in	20.5	22.4	27.5	35.6	40.6	44.2	46.5	56	60.8	64	69	
Do(W)	mm	400	450	500	*350	*350	*350	*350	*350	*350	*350	*350	
	in	15.8	17.7	19.7	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	
F(Kg) W(Kg)		274	375	595	1030	1985	2100	3420	3875	3980	4210	4335	
		248	334	510	880	1580	1680	2736					

		CLASS 300											
DN NPS	mm	40	50	65	80	100	125	150	200	250	300	350	400
	in	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16
L	mm				127	127	127	127	152.4	203.2	203.2	203.2	203.2
	in				5	5	5	5	6	8	8	8	8
L1	mm	38.1	46	50.8	48	54	57.2	59	73	82.5	92	117.5	133.5
	in	1.5	1.81	2.0	1.88	2.12	2.25	2.31	2.88	3.25	3.62	4.62	5.25
H	mm	185	190	220	229	248	258	301	318	365	415	458	510
	in	7.28	7.48	8.7	9	9.8	10.2	11.9	12.5	14.4	16.3	18	20
Do(W)	mm	160	160	160	160	160	160	200	200	250	300	400	450
	in	6.3	6.3	6.3	6.3	6.3	6.3	7.9	7.9	9.8	11.8	15.8	17.7
F(Kg) W(Kg)					12.5	15.7	19.8	42	97	167	182	268	287
		9	10.5	11.5	12.5	13.2	17.6	39.8	88	143	157	222	253

\* Manual gear operator is recommended  
 L-face to face dimension of the flanged end butterfly valve  
 L1-face to face dimension of the wafer butterfly valve

SELF-LUBRICATED PLUG VALVE (TOP ENTRY)



**STANDARDS**

- BASIC DESIGN: API6D, API599, API6A, ANSIB16.34
- FACE TO FACE: ANSI B16.10, API6A
- END FLANGE DIMENSION:ANSI B16.5, API6A
- BUTT WELDING ENDS: ANSI B6.25
- THREADED ENDS: ANSI B2.1, API5B
- SOCKET WELDED ENDS: ANSI B16.11
- PRESSURE TEST: API 598, API6D
- FIRE SAFE TEST: API 607, API 6FA, BS6755, ISO 10497
- CORROSION RESISTING:NACE-MR-0175

**Standard Materials of Parts**

Part Name	Material
Body	A216 Gr WCB, A352LCB, A351 CF8 (A182 F304), A351 CF8M (A182 F304L), A351 CF3 (A182 F316), A351 CF3M (A182 F316L)
Cover	A216 Gr WCB, A352 LCB, A351 CF8 (A182 F304), A351 CF8M (A182 F304L),A351 CF3 (A182 F316), A351 CF3M (A182 F316L)
Stem	A182 F6, A182 F304, A182 F304L, A182 F316, A182 F316L
Plug	A216 Gr WCB PLATED, A352 LCB PLATED, A351 CF8, A351 CF8M, A351 CF3, A351 CF3M
Diaphragm gasket	PTFE
Bushing	PTFE
Bolt	A193 B7, B8M, B8, A307 B
Nut	A194 2H, B8, A307 B

**CLASS 150LBS (Wrench operated) Dimensions**

TYPE		1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"
THREADED	L	115	115	119	150	165	195	254	292	-
RF	L	108	117	127	165	178	191	203	229	268
RTJ	L	108	117	140	178	191	204	216	242	281
WELDED	L	140	149	172	241	267	305	330	256	457
SOCKET WELDED	L	345	339	339	364	-	-	-	-	-
CENTER TO TOP	H	89	89	114	112	228	251	276	276	218
FLANGE OUSIDE DIMENSION	D	92	102	108	127	152	178	190	229	279

**CLASS 150LBS (Gear operated) Dimensions**

TYPE		8"	10"	12"	14"	16"
RF	L	292	330	356	381	406
RTJ	L	305	343	369	394	419
WELDED	L	521	559	635	762	838
CENTER TO TOP	H	381	444	584	622	622
FLANGE OUTSIDE DIMENSION	D	343	406	483	533	597

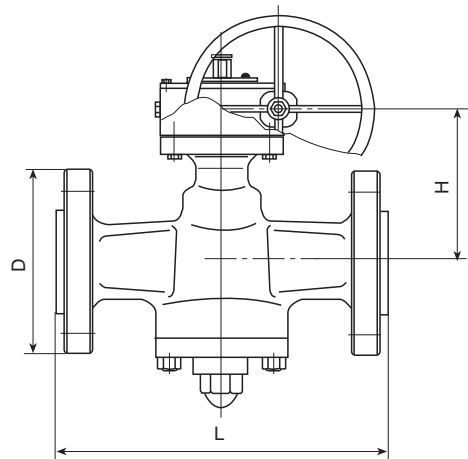
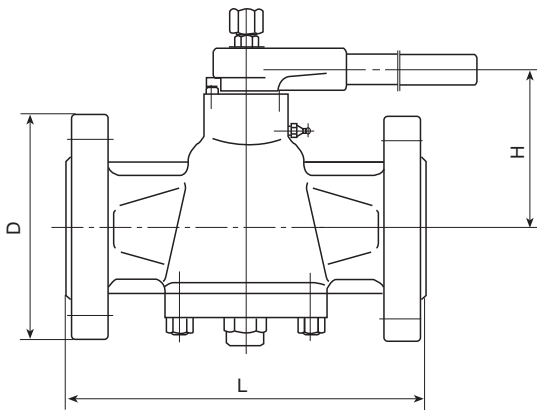
**CLASS 300LBS (Wrench operated) Dimensions**

TYPE		1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"
THREADED	L	102	102	119	155	185	250	270	330	-
RF	L	140	152	165	191	216	241	283	305	403
RTJ	L	151	165	178	204	232	257	299	321	419
WELDED	L	140	149	172	241	267	305	330	356	457
CENTER TO TOP	H	89	89	114	112	228	251	276	276	318
FLANGE OUTSIDE DIMENSION	D	95	117	124	156	165	190	210	254	318

**CLASS 300LBS (Gear operated) Dimensions**

TYPE		8"	10"	12"	14"	16"	18"
RF	L	419	457	502	762	838	914
RTJ	L	435	473	518	778	854	930
WELDED	L	521	559	635	762	838	914
CENTER TO TOP	H	381	444	584	662	622	670
FLANGE OUTSIDE DIMENSION	D	381	445	521	584	648	711

**PLUG VALVE WITH BOTTOM-ENTRY**



**Standard Materials of Parts**

Part Name	Material
Body	A216 Gr WCB, A352LCB, A351 CF8 (A182 F304), A351 CF8M (A182 F304L), A351 CF3 (A182 F316), A351 CF3M (A182 F316L)
Cover	A216 Gr WCB, A352 LCB, A351 CF8 (A182 F304), A351 CF8M (A182 F304L), A351 CF3 (A182 F316), A351 CF3M (A182 F316L)
Stem	A182 F6, A182 F304, A182 F304L, A182 F316, A182 F316L
Plug	A216 Gr WCB PLATED, A352 LCB PLATED, A351 CF8, A351 CF8M, A351 CF3, A351 CF3M
Packing	PTFE, Graphite
Bolt	A193 B7, B8M, B8, A307 B
Nut	A194 2H, B8, A307 B

**CLASS 150LBS (Wrench operated) Dimensions**

TYPE		1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"
THREADED	L	115	115	119	150	165	195	254	292	-
RF	L	108	117	140	165	178	191	203	229	394
RTJ	L	-	-	152	178	191	203	216	241	406
WELDED	L	140	149	172	241	267	305	330	356	457
SOCKET WELDED	L	345	339	339	364	-	-	-	-	-
CENTER TO TOP	H	120	121	123	144	171	196	224	262	342
FLANGE OUTSIDE DIMENSION	D	92	102	108	127	152	178	190	229	279

**CLASS 150LBS (Gear operated) Dimensions**

TYPE		8"	10"	12"	14"	16"	18"	20"	24"
RF	L	475	533	610	686	762	864	914	1067
RTJ	L	470	546	622	699	775	876	927	1080
WELDED	L	521	559	635	762	838	914	991	1143
CENTER TO TOP	H	416	492	604	616	676	760	855	884
FLANGE OUTSIDE DIMENSION	D	343	406	483	533	597	635	699	813

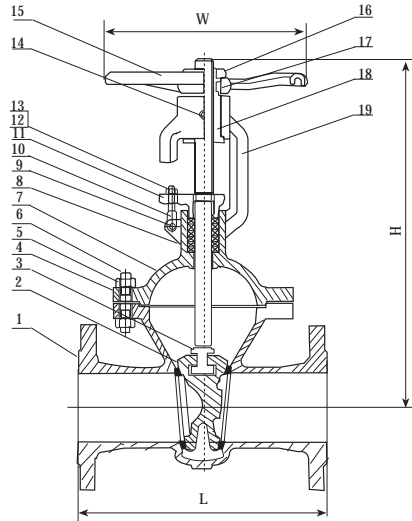
**CLASS 300LBS (Wrench operated) Dimensions**

TYPE		1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"
THREADED	L	102	102	119	155	185	250	270	330	-
RF	L	130	150	159	191	216	241	283	305	403
RTJ	L	143	163	173	204	229	254	296	318	419
WELDED	L	140	149	172	241	267	305	330	356	457
CENTER TO TOP	H	120	121	123	144	171	196	224	262	342
FLANGE OUTSIDE DIMENSION	D	95	117	124	156	165	190	210	254	318

**CLASS 300LBS (Gear operated) Dimensions**

TYPE		8"	10"	12"	14"	16"	18"	20"	24"
RF	L	502	568	711	762	838	914	991	1143
RTJ	L	518	584	727	778	854	930	1010	1165
WELDED	L	521	559	635	762	838	914	991	1143
CENTER TO TOP	H	416	492	604	616	676	760	855	979
FLANGE OUTSIDE DIMENSION	D	381	445	521	584	648	711	775	914





**STANDARDS**

BASIC DESIGN: DIN3352  
 FACE TO FACE/END TO END: DIN3202  
 END FLANGES/SEALING SURFACE: DIN2543~2544  
 INSPECTION & TEST: DIN3230

**Standard Materials of Parts**

No.	Part Name	Material
1	Body	GS-C25N
2	Gate	GS-C25N+13Cr
3	Stem	Stainless Steel
4	Gasket	Soft iron
5	Hex Nut	Carbon Steel(45#)
6	Double End Bolt	Alloy Steel(35CrMoA)
7	Bonnet	GS-C25N
8	Packing	Flexible Graphite
9	Pin	Steel(65Mn)
10	U Bolt	Carbon Steel(35#)
11	Gland Flange	Cast Steel(ZG230-450)
12	Backing Ring	Carbon Steel(45#)
13	Hex Nut	Carbon Steel(45#)
14	Grease Fitting	Carbon Steel(A3)
15	Handwheel	Malleable Iron(KHT 300-6)
16	Handwheel Nut	Carbon Steel(45#)
17	Flat Bond	Carbon Steel(45#)
18	Yoke Sleeve	Ductile CastIron(QT400-15)
19	Yoke	GS-C25N

**PN10/16 Dimensions and Weights**

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L(MM)	250	270	280	300	325	350	400	450	500	550	600	650	700	800
H(MM)	410	450	515	615	756	810	1010	1190	1370	1540	1750	1930	2070	2887
W(MM)	240	240	280	320	360	360	400	450	560	640	720	750	800	850
Wt(KG)	29	33	46	63	108	134	192	273	379	590	849	920	1200	1850

**PN25 Dimensions and Weights**

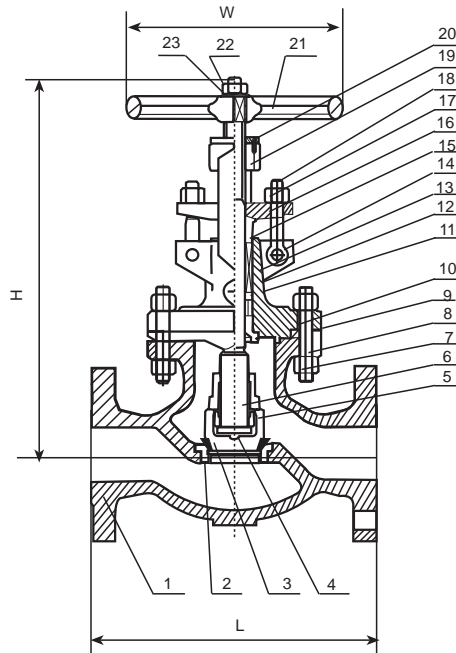
DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L(MM)	250	270	280	300	325	350	400	450	500	550	600	650	700	800
H(MM)	460	500	540	640	780	870	1045	1240	1425	1585	1850	1950	2170	2930
W(MM)	240	240	280	320	360	360	400	450	560	640	720	750	800	850
Wt(KG)	29	33	46	64	108	134	213	290	399	631	900	980	1300	1980

**PN40 Dimensions and Weights**

DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
L(MM)	130	130	160	200	200	250	290	310	350	400	450	550	650	750
H(MM)	240	285	305	320	365	438	473	550	669	776	883	1086	1298	1531
W(MM)	125	125	150	180	180	240	250	320	360	400	400	450	560	640
Wt(KG)	5	9	9	12	16	29	38	51	81	128	155	265	370	550

**PN64 Dimensions and Weights**

DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
L(MM)	130	130	160	200	200	250	290	310	350	400	450	550	650	750
H(MM)	285	285	305	365	365	438	473	550	669	772	893	1100	1332	1804
W(MM)	125	125	150	180	180	200	250	320	360	400	450	560	640	640
Wt(KG)	5.5	9	10	14	18	34	43	60	89	140	207	327	467	590



**STANDARDS**

BASIC DESIGN: DIN3356  
 FACE TO FACE/END TO END: DIN 3202 F1  
 END FLANGES/SEALING SURFACE: DIN 2543~2544

**Standard Materials of Parts**

No.	Part Name	Material
1	Body	GS-C25N
2	Seat	Carbon Steel(20#)+13CR
3	Disc	GS-C25N+13Cr
4	Disc Thrust Plate	Stainless Steel(1Cr13)
5	Disc Nut	Stainless Steel(1Cr13)
6	Stem	Stainless Steel(1Cr13)
7	Bonnet Stud Bolts	Alloy Steel(35CrMoA)
8	Stud Bolt Nuts	Carbon Steel(45#)
9	Gasket	Soft Iron
10	Bonnet Bushing	Stainless Steel(1Cr13)
11	Packing Ring	Stainless Steel(1Cr13)
12	Packing	Flexible Graphite
13	Bonnet	GS=C25N
14	Eye Bolt Pins	Carbon Steel
15	Gland	Stainless Steel(1Cr13)
16	Gland Flange	GS-C25N
17	Gland Eye Bolts	Carbon Steel(35#)
18	Eye Bolt Nuts	Carbon Steel(45#)
19	Yoke Sleeve	Ductile Cast Iron
20	Screw	Carbon Steel
21	Handwheel	Malleable Iron
22	Handwheel Nut	Carbon Steel
23	Backing Ring	

**PN16 Dimensions and Weights**

DN	15	20	25	32	40	50	65	80	100	125	150	200
L(MM)	130	150	160	180	200	230	290	310	350	400	480	600
H(MM)	118	118	146	171	187	200	231	381	428	486	566	648
W(MM)	50	50	80	100	100	120	140	200	240	280	320	360
Wt(kg)	2	2.8	3.7	6.1	8.2	11	28	34	43	70	95	170

**PN25 Dimensions and Weights**

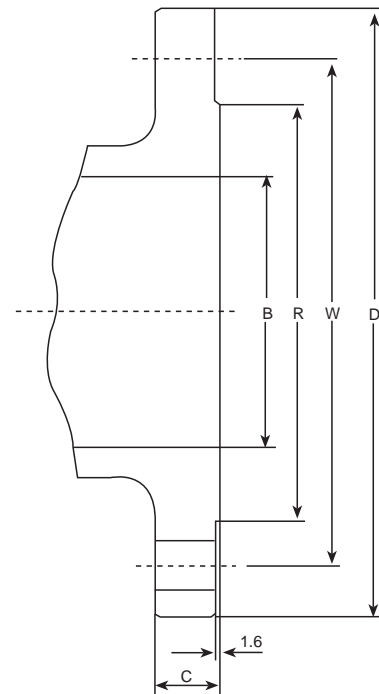
DN	15	20	25	32	40	50	65	80	100	125	150	200
L(MM)	130	150	160	180	200	230	290	310	350	400	480	600
H(MM)	230	275	295	335	380	398	433	468	520	608	692	806
W(MM)	120	140	160	180	240	240	280	320	360	400	400	400
Wt(kg)	4.9	7.0	8.7	12	18	23	32	43	60	89	98	169

**PN40 Dimensions and Weights**

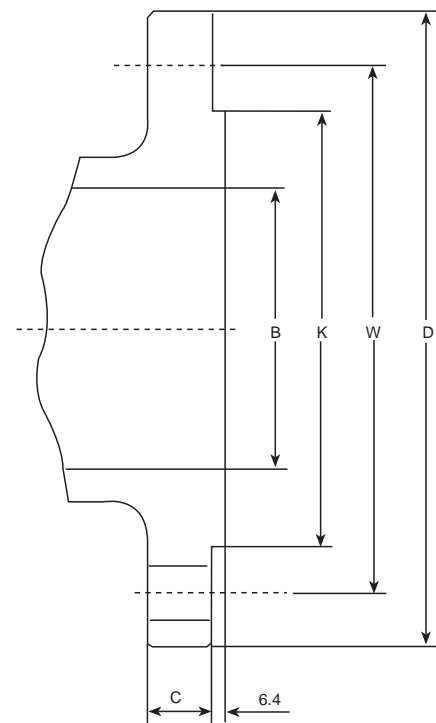
NOM SIZE DN	15	20	25	32	40	50	65	80	100	125	150
L(MM)	130	150	160	180	200	230	290	310	350	400	480
H(MM)	241	250	300	327	385	391	433	468	520	608	692
W(MM)	120	140	160	160	200	240	280	320	360	400	400
Wt(kg)	5	7	8.7	11.8	16.5	24	33	44	60	89	98

**END FLANGE DIMENSIONS**

DN (in)	B	D	W	R	C	Z- $\phi$ d
150Lb						
1 1/2"	38	127	98.6	73	14.3	4- $\phi$ 16
2"	51	152	120.7	92	15.8	4- $\phi$ 19
2 1/2"	64	178	139.7	105	17.6	4- $\phi$ 19
3"	76	190	152.4	127	19.1	4- $\phi$ 19
4"	120	229	190.5	157	23.9	8- $\phi$ 19
5"	127	254	215.9	186	25.2	8- $\phi$ 22.5
6"	152	279	241.3	216	25.4	8- $\phi$ 22.5
8"	203	343	298.5	270	28.5	8- $\phi$ 22.5
10"	254	406	362	324	30.3	12- $\phi$ 25.5
12"	305	483	431.8	381	31.8	12- $\phi$ 25.5
14"	337	533	476.3	413	35.1	12- $\phi$ 28.5
16"	387	597	539.8	470	36.6	16- $\phi$ 28.5
18"	438	635	577.9	533	39.7	16- $\phi$ 32
20"	489	698	635	584	43	20- $\phi$ 32
24"	591	813	749.3	692	47.8	20- $\phi$ 35
300Lb						
1 1/2"	38	155	114.3	73	20.6	4- $\phi$ 22.5
2"	51	165	127	92	22.4	8- $\phi$ 19
2 1/2"	64	190	149.4	105	25.4	8- $\phi$ 22.5
3"	76	210	168.1	127	28.5	8- $\phi$ 22.5
4"	102	254	200.2	157	31.8	8- $\phi$ 22.5
5"	127	280	235	186	35.1	8- $\phi$ 22.5
6"	152	318	269.8	216	36.6	12- $\phi$ 22.5
8"	203	381	330.2	270	41.2	12- $\phi$ 22.5
10"	254	445	387.4	324	47.8	16- $\phi$ 25.5
12"	305	521	450.9	381	50.8	16- $\phi$ 32
14"	337	584	514.4	413	53.9	20- $\phi$ 32
16"	387	648	571.5	470	57.2	20- $\phi$ 35
18"	432	711	628.7	533	60.5	24- $\phi$ 35
20"	483	775	685.8	584	63.5	24- $\phi$ 35
24"	584	914	812.8	692	69.9	24- $\phi$ 41
600Lb						
1 1/2"	38	155	114.3	73	22.4	4- $\phi$ 22.5
2"	51	165	127	92	25.4	8- $\phi$ 19
2 1/2"	64	190	149.4	105	28.5	8- $\phi$ 22.5
3"	76	210	168.1	127	31.8	8- $\phi$ 22.5
4"	102	273	215.9	157	38.1	8- $\phi$ 25.5
5"	127	330	266.7	186	44.5	8- $\phi$ 28.5
6"	152	356	292.1	216	47.8	12- $\phi$ 28.5
8"	200	419	349.3	270	55.6	12- $\phi$ 32
10"	248	508	431.8	324	63.5	16- $\phi$ 35
12"	299	559	489	381	66.5	20- $\phi$ 35
14"	327	603	527.1	413	69.9	20- $\phi$ 38
16"	375	686	603.3	470	76.2	20- $\phi$ 41
18"	419	743	654.1	533	82.6	20- $\phi$ 44.5
20"	464	813	723.9	584	88.9	24- $\phi$ 44.5
24"	559	940	838.2	692	101.6	24- $\phi$ 51
900Lb						
1 1/2"	40	178	124	73	31.8	4- $\phi$ 28.5
2"	51	216	165.1	92	38.1	8- $\phi$ 25.5
2 1/2"	64	244	190.5	105	41.2	8- $\phi$ 28.5
3"	73	241	190.5	127	38.1	8- $\phi$ 25.5
4"	98	292	235	157	44.5	8- $\phi$ 32
5"	121	349	279.4	186	51	8- $\phi$ 35
6"	146	381	317.5	216	55.6	12- $\phi$ 32
8"	191	470	393.7	270	63.5	12- $\phi$ 38
10"	238	546	469.9	324	69.9	16- $\phi$ 38
12"	283	610	533.4	381	79.3	20- $\phi$ 38
14"	311	641	558.8	413	85.9	20- $\phi$ 41
16"	356	705	616	470	88.9	20- $\phi$ 44.5
18"	400	787	685.8	533	101.6	20- $\phi$ 51
20"	445	857	749.3	584	108	20- $\phi$ 54
24"	533	1041	901.7	692	139.7	20- $\phi$ 66.5
1500Lb						
1 1/2"	34.9	177.8	123.8	73.0	31.8	4- $\phi$ 25.5
2"	47.6	215.9	165.1	92.1	38.1	8- $\phi$ 22.5
2 1/2"	57.2	244.5	190.5	104.8	41.3	8- $\phi$ 25.5
3"	69.9	266.7	203.2	127.0	47.6	8- $\phi$ 28.5
4"	92.1	311.2	241.3	157.2	54.0	8- $\phi$ 32
5"	111.1	347.7	292.1	185.5	73.0	8- $\phi$ 39
6"	136.5	393.7	317.5	215.9	82.6	12- $\phi$ 41
8"	177.8	482.6	393.7	269.9	92.1	12- $\phi$ 44
10"	223.0	584.2	482.2	323.9	108.0	12- $\phi$ 47
12"	263.5	673.1	571.5	381.0	123.8	16- $\phi$ 51



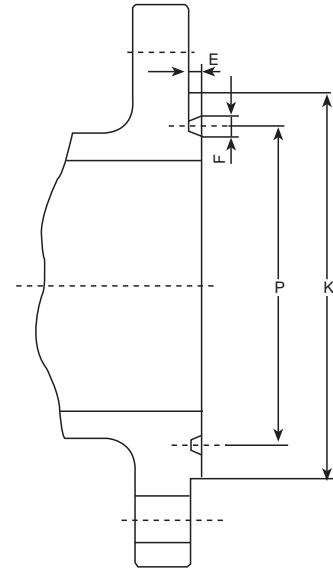
150-300Lb



600-900-1500Lb

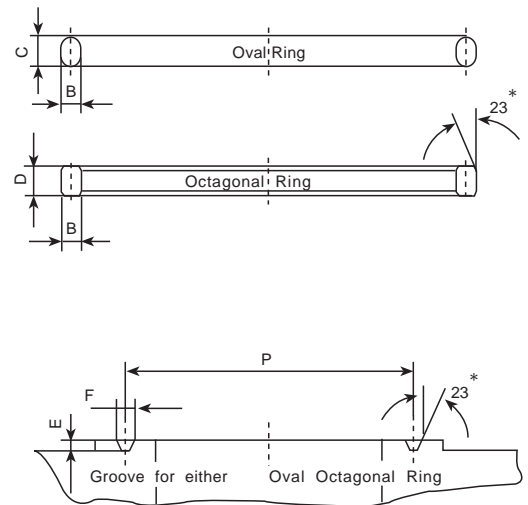
**RING JOINT FACINGS AND RINGS**

Class	Size	Ring NO.	P	B	C	D	F	E	K
300	1 1/2"	R20	2.688	0.312	0.562	0.500	0.344	0.250	3.56
	2"	R23	3.250	0.438	0.688	0.625	0.469	0.312	4.25
	2 1/2"	R26	4.000	0.438	0.688	0.625	0.469	0.312	5.00
	3"	R31	4.875	0.438	0.688	0.625	0.469	0.312	5.75
	3 1/2"	R34	5.188	0.438	0.688	0.625	0.469	0.312	6.25
	4"	R37	5.875	0.438	0.688	0.625	0.469	0.312	6.88
600	5"	R41	7.125	0.438	0.688	0.625	0.469	0.312	8.25
	6"	R45	8.312	0.438	0.688	0.625	0.469	0.312	9.5
	8"	R49	10.625	0.438	0.688	0.625	0.469	0.312	11.88
	10"	R53	12.750	0.438	0.688	0.625	0.469	0.312	14.00
	12"	R57	15.000	0.438	0.688	0.625	0.469	0.312	16.25
	14"	R61	16.500	0.438	0.688	0.625	0.469	0.312	18.00
	16"	R65	18.500	0.438	0.688	0.625	0.469	0.312	20.00
	18"	R69	21.000	0.438	0.688	0.625	0.469	0.312	22.62
	20"	R73	23.000	0.500	0.750	0.688	0.531	0.375	25



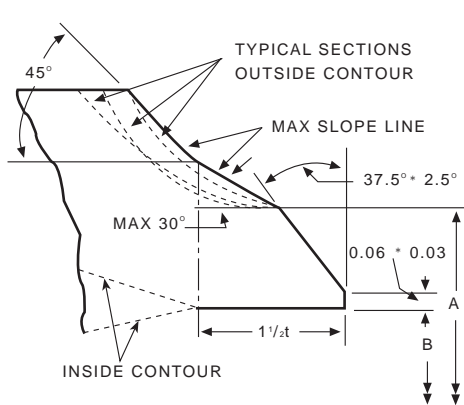
300-600-900-1500Lb

Class	Size	Ring NO.	P	B	C	D	F	E	K
900	1 1/2"	R20	2.688	0.312	0.562	0.500	0.344	0.250	3.62
	2"	R24	3.750	0.438	0.688	0.625	0.469	0.312	4.88
	2 1/2"	R27	4.25	0.438	0.688	0.625	0.469	0.312	5.39
	3"	R31	4.875	0.438	0.688	0.625	0.469	0.312	6.12
	4"	R37	5.875	0.438	0.688	0.625	0.469	0.312	7.12
	5"	R41	7.125	0.438	0.688	0.625	0.469	0.312	8.50
	6"	R45	8.312	0.438	0.688	0.625	0.469	0.312	9.50
	8"	R49	10.625	0.438	0.688	0.625	0.469	0.312	12.12
1500	10"	R53	12.750	0.438	0.688	0.625	0.469	0.312	14.25
	12"	R57	15.000	0.438	0.688	0.625	0.469	0.312	16.50
	1 1/2"	R20	2.688	0.438	0.562	0.500	0.344	0.250	3.62
	2"	R24	3.750	0.438	0.688	0.625	0.469	0.312	4.88
	2 1/2"	R27	4.250	0.438	0.688	0.625	0.469	0.312	5.38
	3"	R35	5.375	0.438	0.688	0.625	0.469	0.312	6.62
	4"	R39	6.375	0.438	0.688	0.625	0.469	0.312	7.62
	5"	R44	7.625	0.438	0.688	0.625	0.469	0.312	9.00
1500	6"	R46	8.312	0.500	0.750	0.688	0.531	0.375	9.75
	8"	R50	10.625	0.625	0.875	0.812	0.656	0.438	12.50
	10"	R54	12.750	0.625	0.875	0.812	0.656	0.438	14.62
	12"	R58	15.000	0.875	1.125	1.062	0.906	0.562	17.25

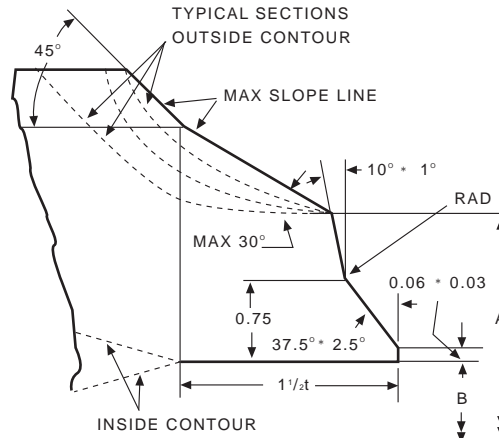


Oval rings fit grooves having either a flat or round bottom;  
 Octagonal rings only fit grooves having a flat bottom.

## BUTT-WELDING ENDS FOR CAST STEEL VALVES ANSI B16.25

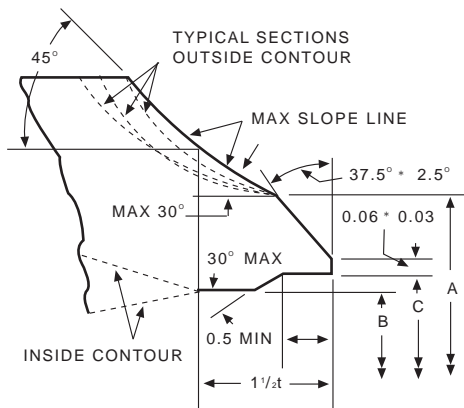


**Plain Bevel**  
Used when nominal pipe wall thickness is 0.88" or less

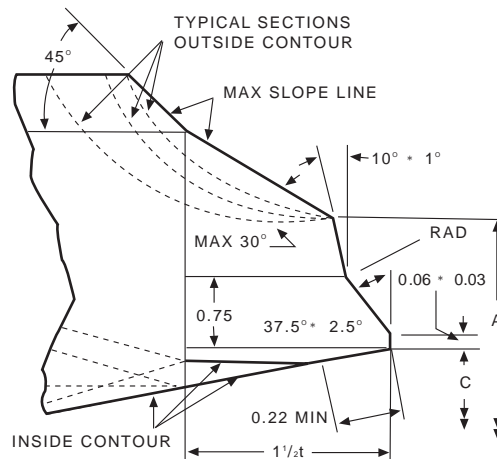


**Compound Bevel**  
Used when nominal pipe wall thickness is greater than 0.88"

### Welding End Details for Cast Components For use without Backing Ring or with Split Backing Ring



**Plain Bevel**  
Used when nominal pipe wall thickness is 0.88" or less



**Compound Bevel**  
Used when nominal pipe wall thickness is greater than 0.88"

### Welding End Details for Cast Components For use with Continuous Rectangular or Tapered Backing Ring

**B** = Nominal Inside Diameter of Pipe  
**t** = Nominal Pipe Wall Thickness  
**C** =  $B + 0.25t - 0.041$

**A** = Outside Diameter (Cast Steel Valves)

Nominal pipe size	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
A-inches	3.59	4.62	5.68	6.78	8.78	10.94	12.97	14.25	16.25	18.28	20.31	24.38

Class 150 and 300 valves 12-inch and smaller are regularly machined as shown in two upper illustrations. Unless otherwise specified, ends are bored to match Schedule 40 pipe in valves 10-inch and smaller and Standard wall pipe (0.375" thick) in 12-inch valves.

Orders for Class 150 and 300 butt-welding valves 14-inch and larger ... and for Class 400 and higher valves in all sizes ... must specify the inside diameter of the pipe with which the valves will be used, and the type of backing ring required.

*Other types of weld end preparation can be furnished when specified.*

## MATERIALS

ASTM Code	Chemical Compositions %										Mechanical Properties				Hardness
	C	Mn	P	S	Si	Cr	Mo	Ni	Cu	V	Tensile Mpa	Yield Mpa	Elongation %	Reduce Area %	Brinell
	max.	max.	max.	max.	max.						min.	min.			max.
A105	0.35	1.05	0.035	0.040	0.35	0.30	0.12	0.40	0.40	0.05	485	250	30	30	187
A216 WCB	0.30	1.00	0.040	0.045	0.60	0.50	0.20	0.50	0.30	0.03	485	250	22	35	
A216 WCC	0.25	1.20	0.040	0.045	0.60	0.50	0.20	0.50	0.30	0.03	485	275	22	35	
A217 WC1	0.25	0.80	0.040	0.045	0.60		0.65		0.50		450	240	24	35	
A217 WC6	0.20	0.80	0.040	0.045	0.60	1.50	0.65		0.50		485	275	20	35	
A217 WC9	0.18	0.70	0.040	0.045	0.60	2.75	1.20		0.50		485	275	20	35	
A217 C5	0.20	0.70	0.040	0.045	0.75	6.50	0.65		0.50		620	415	18	35	
A217 CA15	0.15	1.00	0.040	0.040	1.50	14.00	0.50	1.00			620	450	18	30	
A351 CF8	0.08	1.50	0.040	0.040	2.00	21.00	0.50	11.00			485	205	35		
A351 CF8M	0.08	1.50	0.040	0.040	1.50	21.00	3.00	12.00			485	205	30		
A351 CF3	0.03	1.50	0.040	0.040	2.00	21.00	0.50	12.00			485	205	35		
A351 CF3M	0.03	1.50	0.040	0.040	1.50	21.00	3.00	13.00			485	205	30		
A351 CN7M	0.07	1.50	0.040	0.040	1.50	22.00	3.00	30.50	4.00		425	170	35		
A352 LCB	0.30	1.00	0.040	0.045	0.60	0.50	0.20	0.50	0.30	0.03	450	240	24	35	
A352 LCC	0.25	1.20	0.040	0.045	0.60	0.50	0.20	0.50	0.30	0.03	485	275	22	35	
A182 F6a	0.15	1.00	0.040	0.030	1.00	13.50		0.50			585	380	18	35	229
A182 F304	0.08	2.00	0.045	0.030	1.00	20.00		11.00			515	205	30	50	
A182 F316	0.08	2.00	0.045	0.030	1.00	18.00	3.00	14.00			515	205	30	50	
A182 F304L	0.035	2.00	0.045	0.030	1.00	20.00		13.00			485	170	30	50	
A182 F316L	0.035	2.00	0.045	0.030	1.00	18.00	3.00	15.00			485	170	30	50	
A276 410	0.15	1.00	0.040	0.030	1.00	13.50					690	550	15	45	
A276 420	*0.15	1.00	0.040	0.030	1.00	14.00									241
A193 B7	0.49	1.10	0.035	0.040	0.35	1.20	0.25				860	720	16	50	321
A193 B7M	0.49	1.10	0.035	0.040	0.35	1.20	0.25				690	550	18	50	235
A193 B8	0.08	2.00	0.045	0.030	1.00	20.00		10.50			515	205	30	50	223
A193 B8M	0.08	2.00	0.045	0.030	1.00	18.00	3.00	14.00			515	205	30	50	223
A194 2H	0.40	1.00	0.040	0.050	0.40										352
A194 2HM	0.40	1.00	0.040	0.050	0.40										237
A320 L7	0.48	1.00	0.035	0.040	0.35	1.10	0.25				860	725	16	50	
A320 L7M	0.48	1.00	0.035	0.040	0.35	1.10	0.25				690	550	18	50	235
A194 8	0.08	2.00	0.045	0.03	1.00	20		10.50							300