



CASTED NON-RETURN AND SDNR GLOBE VALVES

Engineered for critical isolation service, to start, stop, and regulate fluid flow



Intentionally left blank

GLOBE VALVE

INTRODUCTION

FEATURES



INTRODUCTION

VALPRO cast globe valve offers standard straight type body by default with rising stem and hand wheel. It blocks the flow of pipeline through the rotation and lifting of hand wheel as well as stem to drive the lift of disc. The globe valve has the feature of long service life since there is no relative friction between disc and body sealing surface.

Bolted bonnet, pressure bonnet, bellow seal bonnet, high/low temperature extended bonnet and ISO 15848 fugitive emission designed valves are available upon different request of services.

Design of Disc

Single disc is normally adopted on cast globe valve, the medium flows from the bottom to the top; double disc is just applied while larger pressure difference or bigger size of valve, the medium flows from top to the bottom.

Plug type disc can be provided upon request.

Design of Seat

VALPRO cast globe valve is defaulted by non-renewable body seat, renewable seat is provided upon request only.

Design of Body -Bonnet Connection

Bolted bonnet is normally applied on CL150~CL900, body seal is defaulted by gasket and RTJ ring; Pressure seal bonnet is applied on CL1500~CL2500 with pressure seal ring for body seal.

Design of Packing

By default graphite packing is used, PTFE packing can be used on corrosive media. Thermoculite packing can be offered for high-temperature service.

Design of Backseat

Renewable back seat is applied on all carbon steel and low alloy steel valve, however, body back seat is only applied for stainless steel valve.

Design of Actuation

Hand wheel and gear box are normally designed for cast globe valve based on different size and pressure rating; Electric, pneumatic or Chain wheel operation can be provided upon request.



GLOBE VALVE

SCOPE OF PRODUCTS

Globe Valve

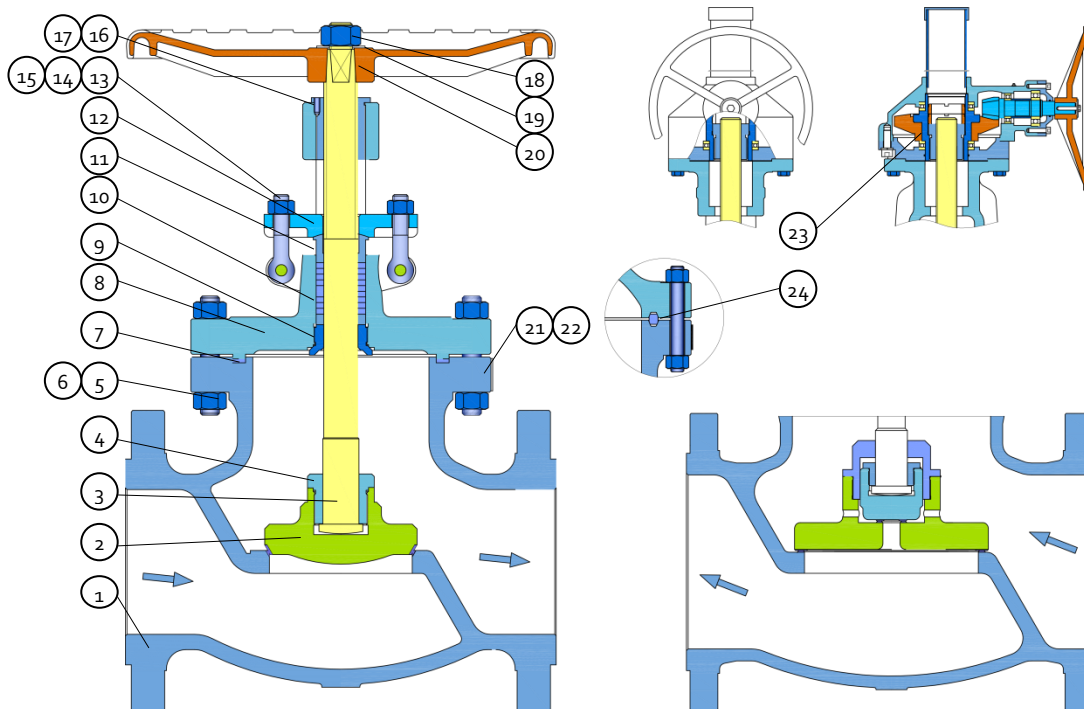
Legends: **A** –Available in Bolt Bonnet
B–Available in Pressure Seal Bonnet

Size in/mm	Class 150 PN 20	Class 300 PN 50	Class 600 PN 100	Class 900 PN 150	Class 1500 PN 250	Class 2500 PN 420
2 50	A	A	A	A, B	A, B	A, B
2 1/2 65	A	A	A	A, B	A, B	A, B
3 80	A	A	A	A, B	A, B	A, B
4 100	A,	A,	A,	A, B	A, B	A, B
6 150	A	A	A	A, B	A, B	A, B
8 200	A	A	A	A, B	A, B	A, B
10 250	A	A	A	A, B	A, B	A, B
12 300	A	A	A	A, B	A, B	A, B
14 350	A	A	A	A, B	A, B	
16 400	A	A	A	A, B	A, B	
18 450	A	A	A	A, B		
20 500	A	A	A	A, B		
22 550	A	A				
24 600	A	A				

1. The sizes listed above are normal diameters. Contact our sales representative if any other dimensions are requested.

GLOBE VALVE

OVERVIEW (Bolted Bonnet)



Single disc Type

Double disc Type

Part List

1 Body	7 Gasket	13 Eye Bolt	19 Washer
2 Disc	8 Bonnet	14 Nut	20 Handwheel
3 Stem	9 Backseat	15 Pin	21 Rivet
4 Sleeve	10 Packing	16 Stem Nut	22 Nameplate
5 Stud	11 Gland	17 Handwheel Nut	23 Gear
6 Nut	12 Gland Flange	18 Nut	24 Octagonal Ring

Standards

Design & Manufacture BS 1873, API 623, ASME B16.34

Face-to-face ASME B16.10

End Dimension ASME B16.5 (RF, RTJ),
ASME B16.47 (RF, RTJ)
ASME B16.25 (BW)

Test & Inspection API 598

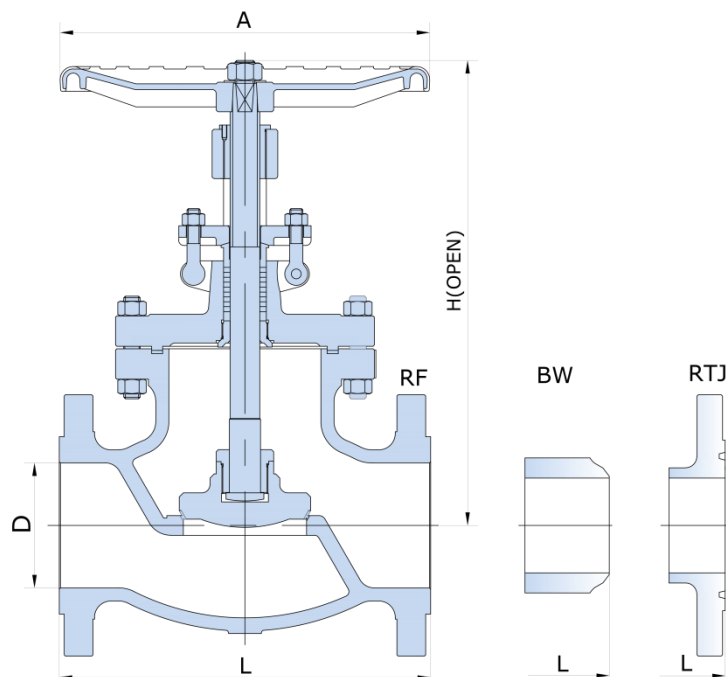
Typical Materials

Body, Bonnet, Disc	(Casting): A216 WCB, A351 CF3, CF8, CF3M, CF8M, A995 4A, 5A, A352 LCB, LCC, LC2
	(Forging): A105, A350 LF2, LF3, LF5, A182 F304, F304L, F316, F316L, F51, F53, F5, F11, F22, F91, Monel, Inconel, Hastelloy
Stem	A182 F6a, F304, F304L, F316, F316L, F51, F53, F55 Monel, Inconel, Hastelloy

GLOBE VALVE

DIMENSIONS AND WEIGHTS (Bolted Bonnet)

ASME CLASS 150 (PN 20)



ASME CLASS 150 (PN 20)

Size in/mm	D	L			H	W	Weight
		RF	RTJ	BW			RF/BW (lb/kg)
2	2	8	8.5	8	14.3	7.87	37/34
50	51	203	216	203	363	200	17/15.5
2 1/2	2.5	8.5	9	8.5	15.55	9.84	53/48
65	64	216	229	216	395	250	24/22
3	3	9.5	10	9.5	16.65	9.84	75/68
80	76	241	254	241	423	250	34/31
4	4	11.5	12	11.5	19	11.81	104/95
100	100	292	305	292	483	300	47/43
5	5	14	14.53	14	20.67	15.75	154/141
125	125	356	369	356	525	400	70/64
6	6	16	16.5	16	22.52	15.75	187/172
150	150	406	419	406	572	400	85/78
8	8	19.5	20	19.5	26.65	17.72	275/220
200	203	495	508	495	677	450	125/110
10	10	24.5	25	24.5	32.87	19.69	557/524
250	250	622	635	622	835	500	253/238
12	12	27.5	28	27.5	39.17	23.62	802/753
300	305	698	711	698	995	600	364/342
14	14	31	31.5	31	40.16	-	1123/1048
350	337	787	800	787	1020	-	510/476
16	15.24	36	36.5	36	41.34	-	1630/1487
400	387	914	927	914	1050	-	740/675
18	17.24	38.5	39	38.5	50.6	-	1773/1652
450	438	978	991	978	1285	-	805/750
20	19.25	38.5	39	38.5	58.27	-	1872/1729
500	489	978	991	978	1480	-	850/785
24	23.27	51	51.5	51	68.11	-	2709/2434
600	591	1295	1308	1295	1730	-	1230/1105

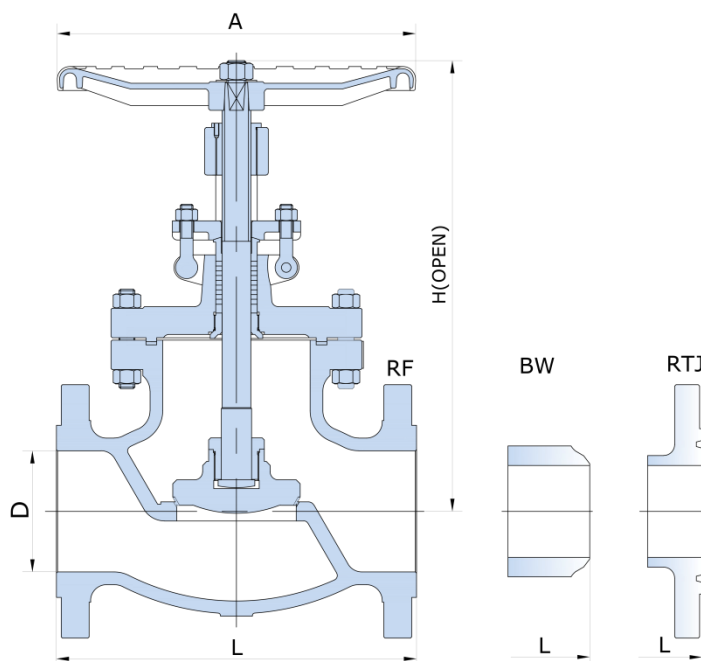
The dimension and weights are for reference only and subject to change without notice.

1. For more dimensional information, please contact our sales representative.
2. "W" on above schematic is the diameter for hand wheel, the one without dimension on the table above is defaulted by gear operation.

GLOBE VALVE

DIMENSIONS AND WEIGHTS (Bolted Bonnet)

ASME CLASS 300 (PN 50)



ASME CLASS 300 (PN 50)

Size in/mm	D	L			H	W	Weight
		RF	RTJ	BW			RF/BW (lb/kg)
2	2	10.5	11.14	10.5	14.72	7.87	64/57
50	51	267	283	267	374	200	29/26
2 1/2	2.5	11.5	12.13	11.5	15.55	9.84	84/68
65	64	292	308	292	395	250	35/31
3	3	12.5	13.15	12.5	17.76	11.81	104/90
80	76	318	334	318	451	300	47/41
4	4	14	14.65	14	20.16	13.78	123/112
100	100	356	372	356	512	350	56/51
5	5	15.75	16.38	15.75	21.26	13.78	148/130
125	125	400	416	400	540	350	67/59
6	6	17.5	18.11	17.5	25	17.72	278/253
150	150	444	460	444	635	450	126/115
8	8	22	22.64	22	26.85	19.7	529/474
200	203	559	575	559	682	500	240/215
10	10	24.5	25.12	24.5	32.87	19.7	1233/1167
250	250	622	638	622	835	500	560/530
12	12	28	28.62	28	33.66	19.7	1586/1482
300	305	711	727	711	855	500	720/673
14	14	33	33.62	33	37.4	-	-
350	337	838	854	838	950	-	-
16	15.24	34	34.65	34	43.3	-	-
400	387	864	880	864	1100	-	-
18	17	38.5	39.13	38.5	45.28	-	-
450	432	978	994	978	1150	-	-
20	19	40	40.75	40	47.24	-	-
500	483	1016	1035	1016	1200	-	-
24	23	53	53.86	53	51.18	-	-
600	584	1346	1368	1346	1300	-	-

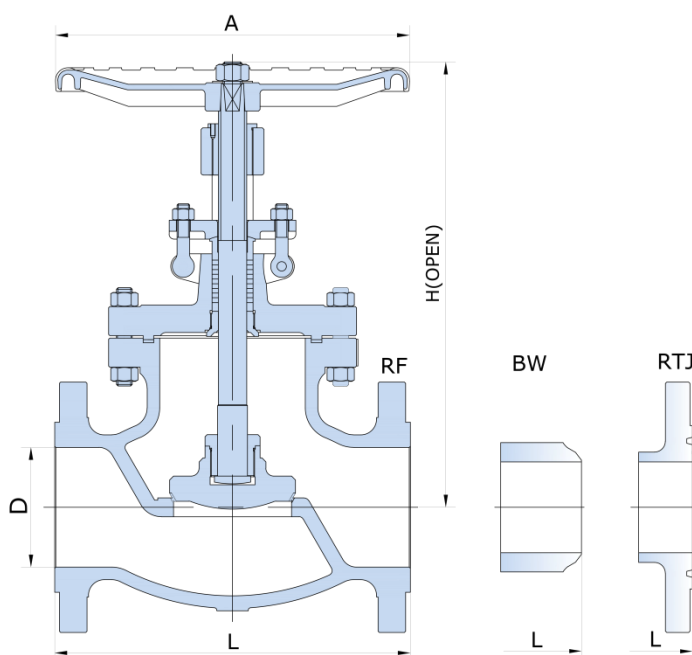
The dimension and weights are for reference only and subject to change without notice.

- For more dimensional information, please contact our sales representative.
- "W" on above schematic is the diameter for hand wheel, the one without dimension on the table above is defaulted by gear operation.

GLOBE VALVE

DIMENSIONS AND WEIGHTS (Bolted Bonnet)

ASME CLASS 600 (PN 100)



ASME CLASS 600 (PN 100)

Size in/mm	D	L			H	W	Weight
		RF	RTJ	BW			RF/BW (lb/kg)
2	2	11.5	11.63	11.5	15.16	441	75/66
50	51	292	295	292	385	200	34/30
2 1/2	2.5	13	13.13	13	16.93	551	99/88
65	64	330	333	330	430	250	50/45
3	3	14	14.13	14	18.7	617	152/137
80	76	356	359	356	475	280	69/62
4	4	17	17.13	17	26.97	661	286/267
100	100	432	435	432	685	300	130/121
5	5	20	20.12	20	30.31	881	419/385
125	125	508	511	508	770	400	190/175
6	6	22	22.13	22	35.43	991	551/518
150	150	559	562	559	900	450	250/235
8	7.87	26	26.13	26	35.94	1100	1002/947
200	200	660	663	660	913	500	455/430
10	9.76	31	31.13	31	41.73	23.62	1806/1692
250	248	787	790	787	1060	600	820/768
12	11.73	33	33.13	33	48.23		
300	298	838	841	635	1225		
14	12.87	35	35.12	35	52.28	-	
350	327	889	891	889	1328	-	
16	14.76	39	39.13	39	61	-	
400	375	991	994	991	1550	-	
18	16.5	43	43.13	430	66.93	-	
450	419	1092	1095	1092	1700	-	
20	18.27	47	47.25	47	70.87	-	
500	464	1194	1200	1194	1800	-	

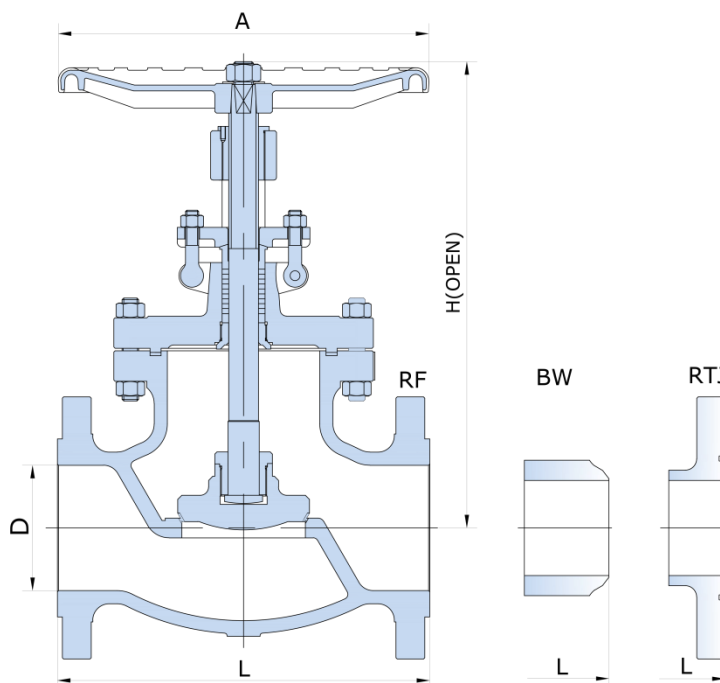
The dimension and weights are for reference only and subject to change without notice.

- For more dimensional information, please contact our sales representative.
- "W" on above schematic is the diameter for hand wheel, the one without dimension on the table above is defaulted by gear operation.

GLOBE VALVE

DIMENSIONS AND WEIGHTS (Bolted Bonnet)

ASME CLASS 900 (PN 150)



ASME CLASS 900 (PN 150)

Size in/mm	D	L			H	W	Weight
		RF	RTJ	BW			RF/BW (lb/kg)
2	1.87	14.5	14.63	14.5	17.5	9.84	152/143
50	47.5	368	371	368	445	250	69/65
2 1/2	2.24	16.5	16.62	16.5	19.5	11.81	231/216
65	57	419	422	419	502	300	105/98
3	2.87	15	15.13	15	21	13.78	238/220
80	73	381	384	381	533	350	108/100
4	3.86	18	18.13	18	24.5	15.75	352/319
100	98	457	460	457	622	400	160/145
5	4.76	22	22.13	22	27.16	17.72	617/562
125	121	559	562	559	690	450	280/255
6	5.75	24	24.13	24	29.5	19.7	771/711
150	146	610	613	610	750	500	350/323
8	7.48	29	29.13	29	36.5	19.7	1564/1487
200	190	737	740	737	927	500	710/675
10	9.37	33	33.13	33	44.88	-	
250	238	838	841	838	1140	-	
12	11.1	38	38.13	38	53.12	-	
300	282	965	968	965	1350	-	
14	12.24	40.5	40.88	40.5	55.12	-	
350	311	1029	1039	1029	1400	-	
16	14	44.5	44.88	44.5	63	-	
400	356	1130	1140	1130	1600	-	
18	15.75	48	48.5	48	68.9	-	
450	400	1219	1232	1219	1750	-	
20	17.52	52	52.5	52	72.83	-	
500	445	1321	1334	1321	1850	-	

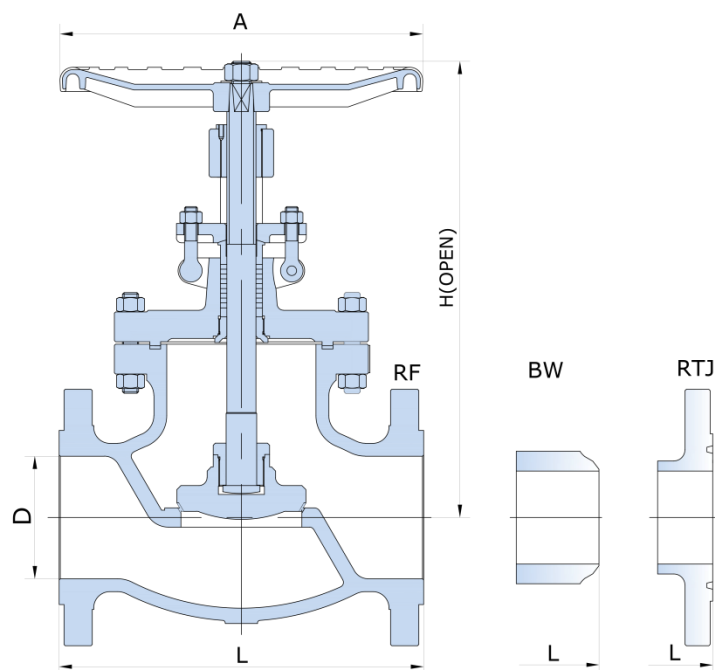
The dimension and weights are for reference only and subject to change without notice.

- For more dimensional information, please contact our sales representative.
- "W" on above schematic is the diameter for hand wheel, the one without dimension on the table above is defaulted by gear operation.

GLOBE VALVE

DIMENSIONS AND WEIGHTS (Bolted Bonnet)

ASME CLASS 1500 (PN 250)



ASME CLASS 1500 (PN 250)

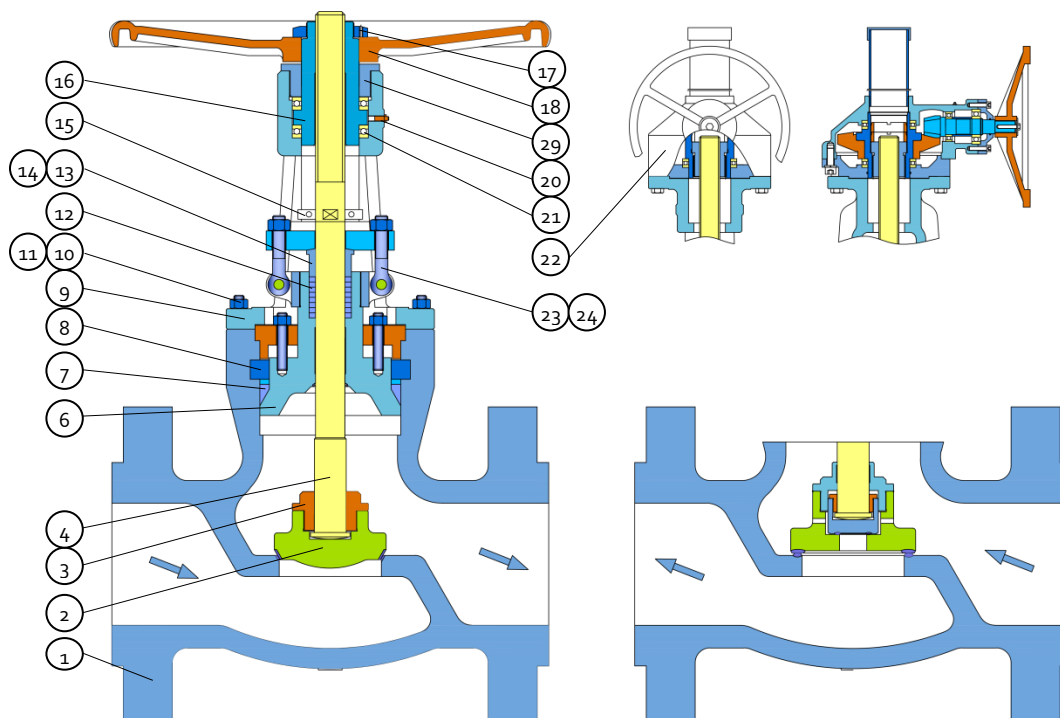
Size in/mm	D	L			H	W	Weight
		RF	RTJ	BW			RF/BW (lb/kg)
2	1.87	14.5	14.61	14.5	16.93	11.81	161/150
50	47.5	368	371	368	430	300	73/68
2 1/2	2.24	16.5	16.61	16.5	19.69	13.78	253/231
65	57	419	422	419	500	350	115/105
3	2.76	18.5	18.62	18.5	29.53	15.75	324/291
80	70	470	473	470	750	400	147/132
4	3.58	21.5	21.61	21.5	32.28	17.72	436/319
100	91	546	549	546	820	450	198/182
5	4.73	26.5	26.61	26.5	34.65	19.7	771/731
125	111	673	676	673	880	500	350/332
6	5.35	27.75	28	27.75	35.83	23.6	1123/1068
150	136	705	711	705	910	600	510/485
8	7	32.75	33.15	32.75	39.96	-	-
200	178	832	842	832	1015	-	-
10	8.74	39	39.41	39	40.75	-	-
250	222	991	1001	991	1035	-	-
12	10.35	44.5	45.12	44.5	53.15	-	-
300	263	1130	1146	1130	1350	-	-
14	11.38	49.5	50.24	49.5	57.48	-	-
350	289	1259	1276	1259	1460	-	-
16	13	54.5	55.35	54.5	61	-	-
400	330	1384	1406	1384	1550	-	-
18	14.61	60.5	61.38	60.5	64.57	-	-
450	371	1537	1559	1537	1640	-	-
20	16.38	65.5	66.38	65.5	66.93	-	-
500	416	1664	1686	1664	1700	-	-

The dimension and weights are for reference only and subject to change without notice.

1. For more dimensional information, please contact our sales representative.
2. "W" on above schematic is the diameter for hand wheel, the one without dimension on the table above is defaulted by gear operation.

GLOBE VALVE

OVERVIEW (Pressure Seal Bonnet)



Single Disc Type

Double Disc Type

Part List

1 Body	6 Seal ring	11 Nut	16 Stem Nut	21 Bear
2 Disc	7 Split ring	12 Packing	17 Handwheel Nut	22 Gear
3 Disc Nut	8 Split ring	13 Gland	18 Handwheel	23 Eyes Bolt
4 Stem	9 Yoke	14 Gland flange	19 Bear Gland	24 Nut
5 Bonnet	10 Stud	15 Fixture Block	20 Grease Nipple Nut	

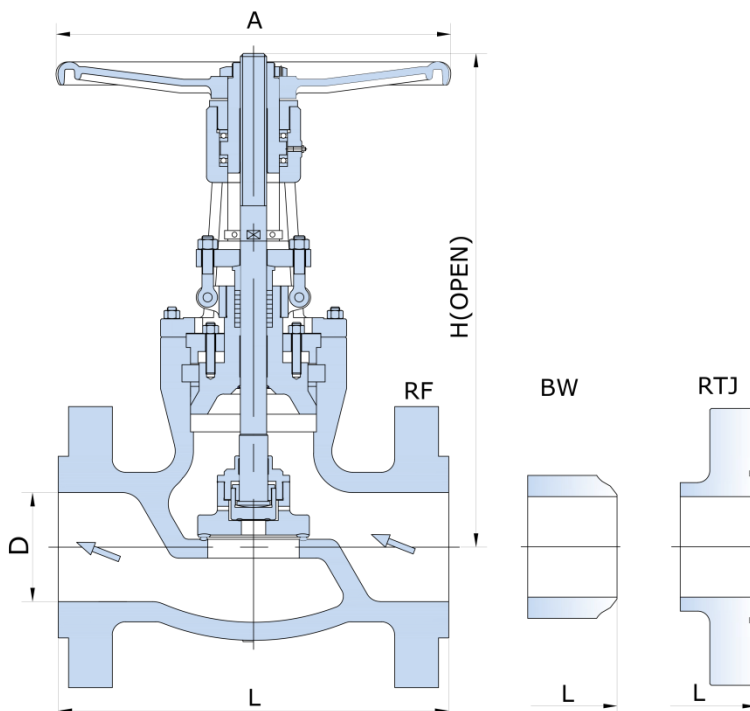
Standards

Design & Manufacture	ASME B16.34, MSS SP-144		
Face-to-face	ASME B16.10		
End Dimension	ASME B16.5(RF, RTJ) ASME B16.47(RF, RTJ) ASME B16.25 (BW)		
Test & Inspection	API 598, ASME B16.34		
Typical Materials	Body, Bonnet, Disc	(Casting) A216 WCB, A351 CF3, CF8, CF3M, CF8M, A995 4A, 5A, A352 LCB, LCC, LC (Forging) A105, A350 LF2, LF3, LF5, A182 F304, F304L, F316, F316L, F51, F53, F5, F11, F22, F91, Monel, Inconel, Hastelloy	
	Stem	A182 F6a, F304, F304L, F316, F316L, F51, F53, F55, Monel, Inconel, Hastelloy	

GLOBE VALVE

DIMENSIONS AND WEIGHTS (Pressure Seal Bonnet)

ASME CLASS 900 (PN 150)



ASME CLASS 900 (PN 150)

Size in/mm	D	L			H	W	Weight
		RF	RTJ	BW			RF/BW (lb/kg)
2	1.87	14.5	14.63	8.5	17.5	9.84	152/143
50	47.5	368	371	216	445	250	69/65
2 1/2	2.24	16.5	16.62	10	19.5	11.81	231/216
65	57	419	422	254	502	300	105/98
3	2.87	15	15.13	12	21	13.78	238/220
80	73	381	384	305	533	350	108/100
4	3.86	18	18.13	14	24.5	15.75	352/319
100	98	457	460	356	622	400	160/145
5	4.76	22	22.13	17	27.16	17.72	617/562
125	121	559	562	432	690	450	280/255
6	5.75	24	24.13	20	29.5	19.7	771/711
150	146	610	613	508	750	500	350/323
8	7.48	29	29.13	26	36.5	19.7	1564/1487
200	190	737	740	660	927	500	710/675
10	9.37	33	33.13	31	44.88	-	
250	238	838	841	787	1140		
12	11.1	38	38.13	36	53.12	-	
300	282	965	968	914	1350		
14	12.24	40.5	40.88	39	55.12	-	
350	311	1029	1038	991	1400		
16	14	44.5	44.88	43	63	-	
400	356	1130	1140	1092	1600		
18	15.75	48	48.5	-	68.9	-	
450	400	1219	1232		1750		
20	17.52	52	52.5	-	72.83	-	
500	445	1321	1334		1850		

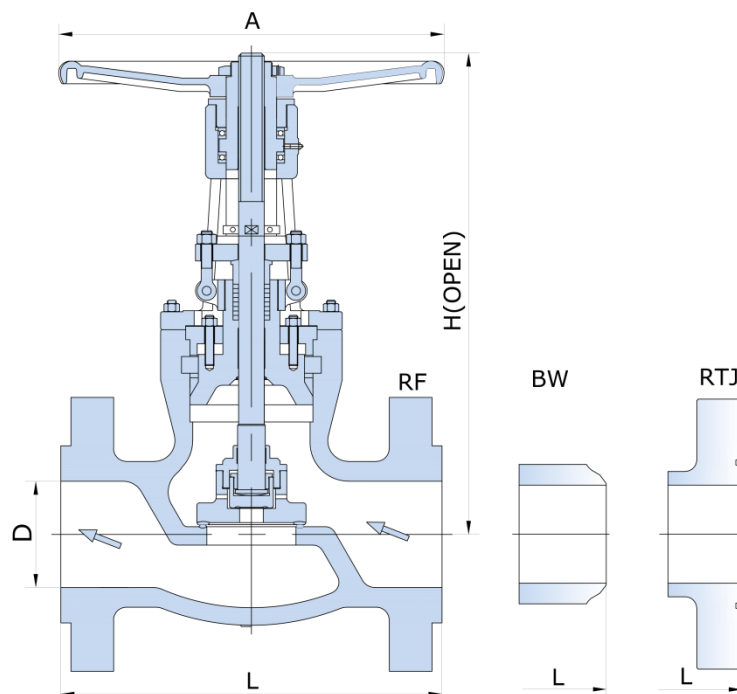
The dimension and weights are for reference only and subject to change without notice.

- For more dimensional information, please contact our sales representative.
- "W" on above schematic is the diameter for hand wheel, the one without dimension on the table above is defaulted by gear operation.

GLOBE VALVE

DIMENSIONS AND WEIGHTS (Pressure Seal Bonnet)

ASME CLASS 1500 (PN 250)



ASME CLASS 1500 (PN 250)

Size in/mm	D	L			H	W	Weight
		RF	RTJ	BW			RF/RTJ (lb/kg)
2	1.87	14.5	14.61	8.5	16.93	11.81	161/150
50	47.5	368	371	216	430	300	73/68
2 1/2	2.24	16.5	16.61	10	19.69	13.78	253/231
65	57	419	422	254	500	350	115/105
3	2.76	18.5	18.62	12	29.53	15.75	324/291
80	70	470	473	305	750	400	147/132
4	3.58	21.5	21.61	16	32.28	17.72	436/319
100	91	546	549	406	820	450	198/182
5	4.73	26.5	26.61	19	34.65	19.7	771/731
125	111	673	676	483	880	500	350/332
6	5.35	27.75	28	22	35.83	23.6	1123/1068
150	136	705	711	559	910	600	510/485
8	7	32.75	33.15	28	39.96	-	-
200	178	832	842	711	1015	-	-
10	8.74	39	39.41	34	40.75	-	-
250	222	991	1001	864	1035	-	-
12	10.35	44.5	45.12	39	53.15	-	-
300	263	1130	1146	991	1350	-	-
14	11.38	49.5	50.24	42	57.48	-	-
350	289	1259	1276	1067	1460	-	-
16	13	54.5	55.35	47	61	-	-
400	330	1384	1406	1194	1550	-	-
18	14.61	60.5	61.38	53	64.57	-	-
450	371	1537	1559	1346	1640	-	-
20	16.38	65.5	66.38	58	66.93	-	-
500	416	1664	1686	1473	1700	-	-

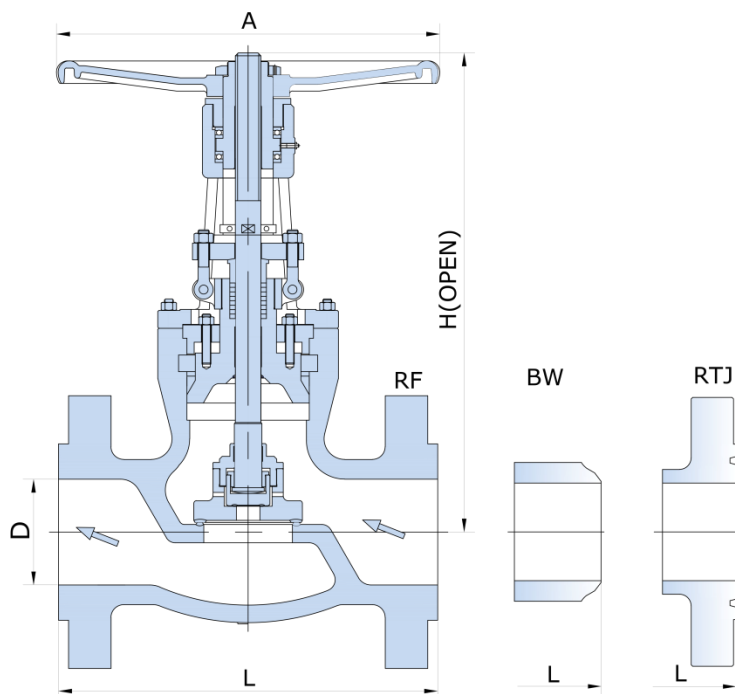
The dimension and weights are for reference only and subject to change without notice.

- For more dimensional information, please contact our sales representative.
- "W" on above schematic is the diameter for hand wheel, the one without dimension on the table above is defaulted by gear operation.

GLOBE VALVE

DIMENSIONS AND WEIGHTS (Pressure Seal Bonnet)

ASME CLASS 2500 (PN 420)



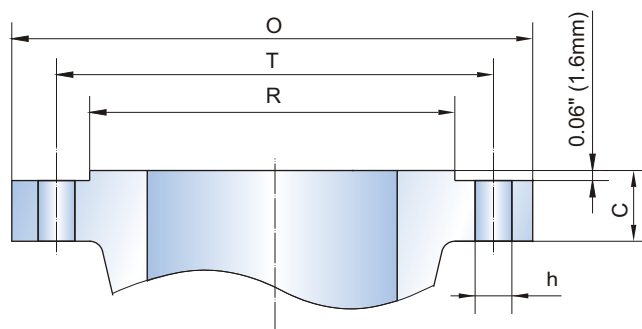
ASME CLASS 2500 (PN 420)

Size in/mm	D	L			H	W	Weight
		RF	RTJ	BW			RF/RTJ (lb/kg)
2	1.5	17.75	17.88	11	19.5	13.78	258/163
50	38	451	454	279	495	350	117/74
2 1/2	1.89	20.32	20.56	13	21.65	17.72	341/286
65	48	508	514	330	550	450	155/130
3	2.24	22.75	23	14.5	23.74	17.72	430/251
80	57	578	584	368	603	450	195/114
4	2.87	26.5	26.88	18	26.97	19.69	573/441
100	73	673	683	457	685	500	260/200
5	3.62	31.26	31.77	521	33.46	23.62	1674/1167
125	92	794	807	33	850	600	760/530
6	4.37	36	36.5	24	38.23	23.62	2737/1689
150	111	914	927	610	971	600	1238/767
8	5.75	40.25	40.88	30	43.31	-	-
200	146	1022	1038	762	1100	-	-
10	7.27	50	50.88	36	47.24	-	-
250	184	1270	1292	914	1200	-	-
12	8.62	56	56.88	41	60	-	-
300	219	1422	1444	1041	1524	-	-

The dimension and weights are for reference only and subject to change without notice.

1. For more dimensional information, please contact our sales representative.
2. "W" on above schematic is the diameter for hand wheel, the one without dimension on the table above is defaulted by gear operation.

CLASS 150 300 RF



CLASS	SIZE		O		R		C		T		h		Bolt	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	QTY.	Diameter
150	2	50	6.00	152	3.62	92	0.62	16	4.75	120.5	0.75	19	4	5/8
	2 1/2	65	7.00	178	4.12	105	0.69	18	5.50	139.5	0.75	19	4	5/8
	3	80	7.50	190	5.00	127	0.75	19	6.00	152.5	0.75	19	4	5/8
	4	100	9.00	229	6.19	157	0.94	24	7.50	190.5	0.75	19	8	5/8
	6	150	11.00	279	8.50	216	1.00	26	9.50	241.5	0.88	22	8	3/4
	8	200	13.50	343	10.62	270	1.12	29	11.75	298.5	0.88	22	8	3/4
	10	250	16.00	406	12.75	324	1.19	31	14.25	362	1.00	25	12	7/8
	12	300	19.00	483	15.00	381	1.25	32	17.00	432	1.00	25	12	7/8
	14	350	21.00	533	16.25	413	1.38	35	18.75	476	1.12	29	12	1
	16	400	23.50	597	18.50	470	1.44	37	21.25	540	1.12	29	16	1
	18	450	25.00	635	21.00	533	1.56	40	22.75	578	1.25	32	16	1 1/8
	20	500	27.50	699	23.00	584	1.69	43	25.00	635	1.25	32	20	1 1/8
	24	600	32.00	813	27.25	692	1.88	48	29.50	749.5	1.38	35	20	1 1/4
	26	650	34.25	870	29.50	749	2.69	69	31.75	806.5	1.38	35	24	1 1/4
	28	700	36.50	927	31.50	800	2.81	72	34.00	863.5	1.38	35	28	1 1/4
	30	750	38.75	984	33.75	857	2.94	75	36.00	914.5	1.38	35	28	1 1/4
	32	800	41.75	1060	36.00	914	3.19	81	38.50	978	1.62	41	28	1 1/2
	36	900	46.00	1168	40.25	1022	3.56	91	42.75	1086	1.62	41	32	1 1/2
300	40	1000	50.75	1289	44.25	1124	3.56	91	47.25	1200	1.62	41	36	1 1/2
	42	1050	53.00	1346	47.00	1194	3.81	97	49.50	1257.5	1.62	41	36	1 1/2
	48	1200	59.50	1511	53.50	1359	4.25	108	56.00	1422.5	1.62	41	44	1 1/2
	2	50	6.50	165	3.62	92	0.88	23	5.00	127	0.75	19	8	5/8
	2 1/2	65	7.50	190	4.12	105	1.00	26	5.88	149	0.88	22	8	3/4
	3	80	8.25	210	5.00	127	1.12	29	6.62	168.5	0.88	22	8	3/4
	4	100	10.00	254	6.19	157	1.25	32	7.88	200	0.88	22	8	3/4
	6	150	12.50	318	8.50	216	1.44	37	10.62	270	0.88	22	12	3/4
	8	200	15.00	381	10.62	270	1.62	42	13.00	330	1.00	25	12	7/8
	10	250	17.50	445	12.75	324	1.88	48	15.25	387.5	1.12	29	16	1
	12	300	20.50	521	15.00	381	2.00	51	17.75	451	1.25	32	16	1 1/8
	14	350	23.00	584	16.25	413	2.12	54	20.25	514.5	1.25	32	20	1 1/8
	16	400	25.50	648	18.50	470	2.25	58	22.50	571.5	1.38	35	20	1 1/4
	18	450	28.00	711	21.00	533	2.38	61	24.75	628.5	1.38	35	24	1 1/4
	20	500	30.50	775	23.00	584	2.50	64	27.00	686	1.38	35	24	1 1/4
	24	600	36.00	914	27.25	692	2.75	70	32.00	813	1.62	41	24	1 1/2
	26	650	38.25	972	29.50	749	3.12	80	34.50	876.5	1.75	45	28	1 5/8
	28	700	40.75	1035	31.50	800	3.38	86	37.00	940	1.75	45	28	1 5/8
	30	750	43.00	1092	33.75	857	3.62	92	39.25	997	1.88	48	28	1 3/4
	32	800	45.25	1149	36.00	914	3.88	98	41.50	1054	2.00	51	28	1 7/8
	36	900	50.00	1270	40.25	1022	4.12	105	46.00	1168.5	2.12	54	32	2

End Flange Dimensions:

Size 2"-24" to ASME B16.5, Size 26"-48" to ASME B16.47 A.

Tolerances: Unit inch

Thickness C:

NPS ≤ 18" +0.12, -0

NPS ≥ 20" +0.19, -0

Drilling and Facing:

Bolt Circle Diameter h: ± 0.06

Center to Center of Adjacent Bolt Holes: ± 0.03

Eccentricity Between Bolt Circle Diameter and Machined Facing Diameters:

NPS ≤ 2 1/2" ± 0.03

NPS ≥ 3" ± 0.06

Outside Diameter R:

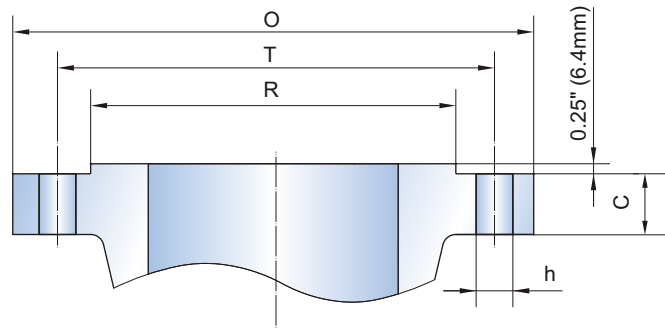
0.06 Raised Face: NPS 2"-24" ± 0.03

0.25 Raised Face: NPS 2"-24" ± 0.02

NPS ≥ 26" ± 0.08

NPS ≥ 26" ± 0.04

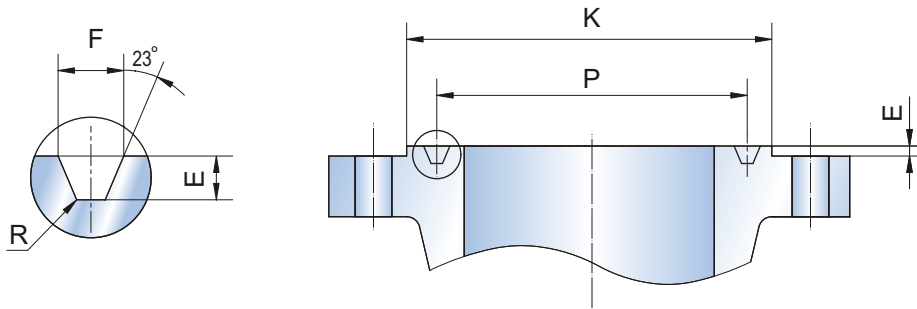
CLASS 600-2500 RF



CLASS	SIZE		O		R		C		T		h		Bolt	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	QTY.	Diameter
600	2	50	6.50	165	3.62	92	1.00	26	5.00	127	0.75	19	8	5/8
	2 1/2	65	7.50	190	4.12	105	1.12	29	5.88	149	0.88	22	8	3/4
	3	80	8.25	210	5.00	127	1.25	32	6.62	168	0.88	22	8	3/4
	4	100	10.75	273	6.19	157	1.50	38	8.50	216	1.00	25	8	7/8
	6	150	14.00	356	8.50	216	1.88	48	11.50	292	1.12	29	12	1
	8	200	16.50	419	10.62	270	2.19	56	13.75	349	1.25	32	12	1 1/8
	10	250	20.00	508	12.75	324	2.50	64	17.00	432	1.38	35	16	1 1/4
	12	300	22.00	559	15.00	381	2.62	67	19.25	489	1.38	35	20	1 1/4
	14	350	23.75	603	16.25	413	2.75	70	20.75	527	1.50	38	20	1 3/8
	16	400	27.00	686	18.50	470	3.00	77	23.75	603	1.62	41	20	1 1/2
	18	450	29.25	743	21.00	533	3.25	83	25.75	654	1.75	44	20	1 5/8
	20	500	32.00	813	23.00	584	3.50	89	28.50	724	1.75	44	24	1 5/8
	24	600	37.00	940	27.25	692	4.00	102	33.00	838	2.00	51	24	1 7/8
900	2	50	8.50	216	3.62	92	1.50	38.5	6.50	165.1	1.00	26	8	7/8
	2 1/2	65	9.62	244	4.12	105	1.62	41.5	7.50	190.5	1.12	29	8	1
	3	80	9.50	241	5.00	127	1.50	38.5	7.50	190.5	1.00	26	8	7/8
	4	100	11.50	292	6.19	157	1.75	44.5	9.25	234.9	1.25	32	8	1 1/8
	6	150	15.00	381	8.50	216	2.19	56.0	12.50	317.5	1.25	32	12	1 1/8
	8	200	18.50	470	10.62	270	2.50	63.5	15.50	393.7	1.50	39	12	1 3/8
	10	250	21.50	545	12.75	324	2.75	70.0	18.50	469.9	1.50	39	16	1 3/8
	12	300	24.00	610	15.00	381	3.12	79.5	21.00	533.4	1.50	39	20	1 3/8
	14	350	25.25	640	16.25	413	3.38	86.0	22.00	558.8	1.62	42	20	1 1/2
	16	400	27.75	705	18.50	470	3.50	89.0	24.25	615.9	1.75	45	20	1 5/8
	18	450	31.00	785	21.00	533	4.00	102.0	27.00	685.8	2.00	51	20	1 7/8
	20	500	33.75	855	23.00	584	4.25	108.0	29.50	749.3	2.12	54	20	2
	24	600	41.00	1040	27.25	692	5.50	140.0	35.50	901.7	2.62	67	20	2 1/2
1500	2	50	8.50	216	3.62	92	1.50	38.5	6.50	165.1	1.00	26	8	7/8
	2 1/2	65	9.62	244	4.12	105	1.62	41.5	7.50	190.5	1.12	29	8	1
	3	80	10.50	267	5.00	127	1.88	48.0	8.00	203.2	1.25	32	8	1 1/8
	4	100	12.25	311	6.19	157	2.12	54.0	9.50	241.3	1.38	35	8	1 1/4
	6	150	15.50	394	8.50	216	3.25	83.0	12.50	317.5	1.50	39	12	1 3/8
	8	200	19.00	483	10.62	270	3.62	92.9	15.50	393.7	1.75	45	12	1 5/8
	10	250	23.00	585	12.75	324	4.25	108.0	19.00	482.6	2.00	51	12	1 7/8
	12	300	26.50	675	15.00	381	4.88	124.0	22.50	571.5	2.12	54	16	2
	14	350	29.50	750	16.25	413	5.25	133.5	25.00	635.0	2.38	61	16	2 1/4
	16	400	32.50	825	18.50	470	5.75	146.5	27.75	704.8	2.62	67	16	2 1/2
	18	450	36.00	915	21.00	533	6.38	162.0	30.50	774.7	2.88	74	16	2 3/4
	20	500	38.75	985	23.00	584	7.00	178.0	32.75	831.8	3.12	80	16	3
	24	600	46.00	1170	27.25	692	8.00	203.5	39.00	990.6	3.62	93	16	3 1/2
2500	2	50	9.25	235	3.62	92	2.00	51.0	6.75	171.4	1.12	29	8	1
	2 1/2	65	10.50	267	4.12	105	2.25	57.5	7.75	196.8	1.25	32	8	1 1/8
	3	80	12.00	305	5.00	127	2.62	67.0	9.00	228.6	1.38	35	8	1 1/4
	4	100	14.00	356	6.19	157	3.00	76.5	10.75	273.0	1.62	42	8	1 1/2
	6	150	19.00	483	8.50	216	4.25	108.0	14.50	368.3	2.12	54	8	2
	8	200	21.75	550	10.62	270	5.00	127.0	17.25	438.1	2.12	54	12	2
	10	250	26.50	675	12.75	324	6.50	165.5	21.25	539.7	2.62	67	12	2 1/2
	12	300	30.00	760	15.00	381	7.25	184.5	24.38	619.1	2.88	74	12	2 3/4

End Flange Dimensions: ASME B16.5
Tolerances: the Same as Class 150 300

CLASS 150-2500 RTJ



CLASS	SIZE		Ring No.	P		E		F		R		K	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm
150	2	50	R22	3.250	82.55	0.250	6.35	0.344	8.74	0.03	0.8	4.00	102
	2 1/2	65	R25	4.000	101.60	0.250	6.35	0.344	8.74	0.03	0.8	4.75	121
	3	80	R29	4.500	114.30	0.250	6.35	0.344	8.74	0.03	0.8	5.25	133
	4	100	R36	5.875	149.22	0.250	6.35	0.344	8.74	0.03	0.8	6.75	171
	6	150	R43	7.625	193.68	0.250	6.35	0.344	8.74	0.03	0.8	8.62	219
	8	200	R48	9.750	247.65	0.250	6.35	0.344	8.74	0.03	0.8	10.75	273
	10	250	R52	12.000	304.80	0.250	6.35	0.344	8.74	0.03	0.8	13.00	330
	12	300	R56	15.000	381.00	0.250	6.35	0.344	8.74	0.03	0.8	16.00	406
	14	350	R59	15.625	396.88	0.250	6.35	0.344	8.74	0.03	0.8	16.75	425
	16	400	R64	17.875	454.02	0.250	6.35	0.344	8.74	0.03	0.8	19.00	483
	18	450	R68	20.375	517.52	0.250	6.35	0.344	8.74	0.03	0.8	21.50	546
	20	500	R72	22.000	558.80	0.250	6.35	0.344	8.74	0.03	0.8	23.50	597
	24	600	R76	26.500	673.10	0.250	6.35	0.344	8.74	0.03	0.8	28.00	711
300 600	2	50	R23	3.250	82.55	0.312	7.92	0.469	11.91	0.03	0.8	4.25	108
	2 1/2	65	R26	4.000	101.60	0.312	7.92	0.469	11.91	0.03	0.8	5.00	127
	3	80	R31	4.875	123.82	0.312	7.92	0.469	11.91	0.03	0.8	5.75	146
	4	100	R37	5.875	149.22	0.312	7.92	0.469	11.91	0.03	0.8	6.88	175
	6	150	R45	8.312	211.13	0.312	7.92	0.469	11.91	0.03	0.8	9.50	241
	8	200	R49	10.625	269.88	0.312	7.92	0.469	11.91	0.03	0.8	11.88	302
	10	250	R53	12.750	323.85	0.312	7.92	0.469	11.91	0.03	0.8	14.00	356
	12	300	R57	15.000	381.00	0.312	7.92	0.469	11.91	0.03	0.8	16.25	413
	14	350	R61	16.500	419.10	0.312	7.92	0.469	11.91	0.03	0.8	18.00	457
	16	400	R65	18.500	469.90	0.312	7.92	0.469	11.91	0.03	0.8	20.00	508
	18	450	R69	21.000	533.40	0.312	7.92	0.469	11.91	0.03	0.8	22.62	575
	20	500	R73	23.000	584.20	0.375	9.52	0.531	13.49	0.06	1.5	25.00	635
	24	600	R77	27.250	692.15	0.438	11.13	0.656	16.66	0.06	1.5	29.50	749
	26	650	R93	29.500	749.30	0.500	12.7	0.781	19.84	0.06	1.5	31.88	861
	28	700	R94	31.500	800.10	0.500	12.7	0.781	19.84	0.06	1.5	33.88	861
	30	750	R95	33.750	857.25	0.500	12.7	0.781	19.84	0.06	1.5	36.12	917
	32	800	R96	36.000	914.40	0.562	14.27	0.906	23.01	0.06	1.5	38.75	984
	36	900	R98	40.250	1022.35	0.562	14.27	0.906	23.01	0.06	1.5	43.00	1092

CLASS	SIZE		Ring No.	P		E		F		R		K	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm
900	2	50	R24	3.750	95.25	0.312	7.92	0.469	11.91	0.03	0.8	4.88	124
	2 1/2	65	R27	4.250	107.95	0.312	7.92	0.469	11.91	0.03	0.8	5.38	137
	3	80	R31	4.875	123.82	0.312	7.92	0.469	11.91	0.03	0.8	6.12	156
	4	100	R37	5.875	149.22	0.312	7.92	0.469	11.91	0.03	0.8	7.12	181
	6	150	R45	8.312	211.12	0.312	7.92	0.469	11.91	0.03	0.8	9.50	241
	8	200	R49	10.625	269.88	0.312	7.92	0.469	11.91	0.03	0.8	12.12	308
	10	250	R53	12.750	323.85	0.312	7.92	0.469	11.91	0.03	0.8	14.25	362
	12	300	R57	15.000	381.00	0.312	7.92	0.469	11.91	0.03	0.8	16.50	419
	14	350	R62	16.500	419.10	0.438	11.13	0.656	16.66	0.06	1.5	18.38	467
	16	400	R66	18.500	469.90	0.438	11.13	0.656	16.66	0.06	1.5	20.62	524
	18	450	R70	21.000	533.40	0.500	12.7	0.781	19.84	0.06	1.5	23.38	594
	20	500	R74	23.000	584.20	0.500	12.7	0.781	19.84	0.06	1.5	25.50	648
	24	600	R78	27.250	692.15	0.625	15.88	1.062	26.97	0.09	2.3	30.38	772
1500	2	50	R24	3.750	95.25	0.312	7.92	0.469	11.91	0.03	0.8	4.88	124
	2 1/2	65	R27	4.250	107.95	0.312	7.92	0.469	11.91	0.03	0.8	5.38	137
	3	80	R35	5.375	136.52	0.312	7.92	0.469	11.91	0.03	0.8	6.62	168
	4	100	R39	6.375	161.92	0.312	7.92	0.469	11.91	0.03	0.8	7.62	194
	6	150	R46	8.312	211.12	0.375	9.52	0.531	13.49	0.06	1.5	9.75	248
	8	200	R50	10.625	269.88	0.438	11.13	0.656	16.66	0.06	1.5	12.50	318
	10	250	R54	12.750	323.85	0.438	11.13	0.656	16.66	0.06	1.5	14.62	371
	12	300	R58	15.000	381.00	0.562	14.27	0.906	23.01	0.06	1.5	17.25	438
	14	350	R63	16.500	419.10	0.625	15.88	1.062	26.97	0.09	2.3	19.25	489
	16	400	R67	18.500	469.90	0.688	17.48	1.188	30.18	0.09	2.3	21.50	546
	18	450	R71	21.000	533.40	0.688	17.48	1.188	30.18	0.09	2.3	24.12	613
	20	500	R75	23.000	584.20	0.688	17.48	1.312	33.32	0.09	2.3	26.50	673
	24	600	R79	27.250	692.15	0.812	20.62	1.438	36.53	0.09	2.3	31.25	794
2500	2	50	R26	4.000	101.60	0.312	7.92	0.469	11.91	0.03	0.8	5.25	133
	2 1/2	65	R28	4.375	111.12	0.375	9.52	0.531	13.49	0.03	0.8	5.88	149
	3	80	R32	5.000	127.00	0.375	9.52	0.531	13.49	0.06	1.5	6.62	168
	4	100	R38	6.188	157.18	0.438	11.13	0.656	16.66	0.06	1.5	8.00	203
	6	150	R47	9.000	228.60	0.500	12.70	0.781	19.84	0.06	1.5	11.00	279
	8	200	R51	11.000	279.40	0.562	14.27	0.906	23.01	0.06	1.5	13.38	340
	10	250	R55	13.500	342.90	0.688	17.48	1.188	30.18	0.09	2.3	16.75	425
	12	300	R60	16.000	406.40	0.688	17.48	1.312	33.32	0.09	2.3	19.50	495

End Flange Dimensions:

Size 2"-24" to ASME B16.5, Size 26"-36" to ASME B16.47 A .

Tolerances: Unit inch

Depth E: + 0.016, -0

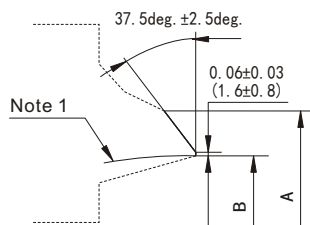
Width F: ± 0.008

Pith Diameter P: ± 0.005

Radius at Bottom R: $R \leq 0.06$ +0.03, -0

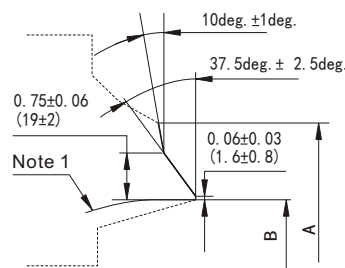
$R > 0.06$ ± 0.03

Angle 23 Deg.: ± 0.5 Deg.



Note 1 Internal surface may be as formed or machined for dimension B at root face. Contour within the envelope shall be in accordance with section.

Wall Thickness not Over 0.88in (22mm)
Welding End Detail for Joint Without Backing Ring



Wall Thickness Over 0.88in (22mm)
Welding End Detail for Joint Without Backing Ring

Nominal Pipe Size		Schedule No. [Note(1)]	O.D. at Welding Ends				B		C [Note(3)]		t	
			Wrought or Fabricated Components,A [Note(1)]		Cast Steel Valves, A [Note(2)]							
DN	NPS		mm	in	mm	in	mm	in	mm	in	mm	in
65	2 1/2	40	73.0	2.88	75	2.96	62.5	2.469	62.93	2.479	5.16	0.203
		80					59	2.323	59.69	2.351	7.01	0.276
		160					54	2.125	55.28	2.178	9.53	0.375
		XXS					45	1.771	47.43	1.868	14.02	0.552
80	3	40	88.9	3.50	91	3.59	78	3.068	78.25	3.081	5.49	0.216
		80					73.5	2.900	74.53	2.934	7.62	0.300
		160					66.5	2.624	68.38	2.692	11.13	0.438
		XXS					58.5	2.300	61.19	2.409	15.24	0.600
90	3 1/2	40	101.6	4.00	105	4.12	90	3.548	90.52	3.564	5.74	0.226
		80					85.5	3.364	86.42	3.402	8.08	0.318
100	4	40	114.3	4.50	117	4.62	102	4.026	102.73	4.044	6.02	0.237
		80					97	3.826	98.28	3.869	8.56	0.337
		120					92	3.624	93.78	3.692	11.13	0.438
		160					87.5	3.438	89.65	3.530	13.49	0.531
		XXS					80	3.152	83.30	3.279	17.12	0.674
125	5	40	141.3	5.56	144	5.69	128	5.047	128.80	5.070	6.55	0.258
		80					122	4.813	123.58	4.866	9.53	0.375
		120					116	4.563	118.04	4.647	12.70	0.500
		160					109.5	4.313	112.47	4.428	15.88	0.625
		XXS					103	4.063	106.92	4.209	19.05	0.750
150	6	40	168.3	6.62	172	6.78	154	6.065	154.82	6.094	7.11	0.280
		80					146.5	5.761	148.06	5.828	10.97	0.432
		120					140	5.501	142.29	5.600	14.27	0.562
		160					132	5.187	135.31	5.326	18.26	0.719
		XXS					124.5	4.897	128.85	5.072	21.95	0.864
200	8	40	219.1	8.62	223	8.78	203	7.981	203.75	8.020	8.18	0.322
		60					198.5	7.813	200.02	7.873	10.31	0.406
		80					193.5	7.625	195.84	7.709	12.70	0.500
		100					189	7.437	191.65	7.544	15.09	0.594
		120					182.5	7.187	186.11	7.326	18.26	0.719
		140					178	7.001	181.98	7.163	20.62	0.812
		XXS					174.5	6.875	179.16	7.053	22.23	0.875
		160					173	6.813	177.79	6.998	23.01	0.906
250	10	40	273.0	10.75	278	10.94	254.5	10.020	255.74	10.070	9.27	0.365
		60					247.5	9.750	249.74	9.834	12.70	0.500
		80					243	9.562	245.55	9.670	15.09	0.594
		100					236.5	9.312	240.01	9.451	18.26	0.719
		120					230	9.062	234.44	9.232	21.44	0.844
		140					222	8.750	227.51	8.959	25.40	1.000
		160					216	8.500	221.95	8.740	28.58	1.125
300	12	STD	323.8	12.75	329	12.97	305	12.000	306.08	12.053	9.53	0.375
		40					303	11.938	304.72	11.999	10.31	0.406
		XS					298.5	11.750	300.54	11.834	12.70	0.500
		60					295	11.626	297.79	11.725	14.27	0.562
		80					289	11.374	292.17	11.505	17.48	0.688
		100					281	11.062	285.24	11.232	21.44	0.844
		120					273	10.750	278.31	10.959	25.40	1.000
		140					266.5	10.500	272.75	10.740	28.58	1.125
		160					257	10.126	264.45	10.413	33.32	1.312
350	14	STD	355.6	14.00	362	14.25	336.5	13.250	337.88	13.303	9.53	0.375
		40					333.5	13.124	335.08	13.192	11.13	0.438
		XS					330	13.000	332.34	13.084	12.70	0.500
		60					325.5	12.812	328.15	12.920	15.09	0.594
		80					317.5	12.500	321.22	12.646	19.05	0.750
		100					308	12.124	312.86	12.318	23.83	0.938
		120					300	11.812	305.93	12.044	27.79	1.094
		140					292	11.500	299.00	11.771	31.75	1.250
		160					284	11.188	292.07	11.498	35.71	1.406

Nominal Pipe Size		Schedule No. [Note(1)]	O.D. at Welding Ends				B		C [Note(3)]		t	
			Wrought or Fabricated Components, A [Note(1)]		Cast Steel Valves, A [Note(2)]							
DN	NPS		mm	in	mm	in	mm	in	mm	in	mm	in
400	16	STD	406.4	16.00	413	16.25	387.5	15.250	388.68	15.303	9.53	0.375
		40					381	15.000	383.14	15.084	12.70	0.500
		60					373	14.688	376.21	14.811	16.66	0.656
		80					363.5	14.312	367.84	14.482	21.44	0.844
		100					354	13.938	359.53	14.155	26.19	1.031
		120					344.5	13.562	351.18	13.826	30.96	1.219
		140					333.5	13.124	341.43	13.422	36.53	1.438
		160					325.5	12.812	334.50	13.170	40.49	1.594
450	18	STD	457.2	18.00	464	18.28	438	17.250	439.48	17.303	9.53	0.375
		XS					432	17.000	433.94	17.084	12.70	0.500
		40					428.5	16.876	431.19	16.975	14.27	0.562
		60					419	16.500	422.82	16.646	19.05	0.750
		80					409.5	16.124	414.46	16.318	23.83	0.938
		100					398.5	15.688	404.78	15.936	29.36	1.156
		120					387.5	15.250	395.03	15.553	34.93	1.375
		140					378	14.876	386.77	15.225	39.67	1.562
500	20	STD	508.0	20.00	516	20.31	489	19.250	490.28	19.303	9.53	0.375
		XS					482.5	19.000	484.74	19.084	12.70	0.500
		40					478	18.812	480.55	18.920	15.09	0.594
		60					467	18.376	470.88	18.538	20.62	0.812
		80					455.5	17.938	461.13	18.155	26.19	1.031
		100					443	17.438	450.02	17.717	32.54	1.281
		120					432	17.000	440.29	17.334	38.10	1.500
		140					419	16.500	429.17	16.896	44.45	1.750
550	22	STD	558.8	22.00	567	22.34	539	21.250	541.08	21.303	9.53	0.375
		XS					533	21.000	535.54	21.084	12.70	0.500
		60					514	20.250	518.86	20.428	22.23	0.875
		80					501	19.750	507.75	19.990	28.58	1.125
		100					488.5	19.250	496.63	19.553	34.93	1.375
		120					476	18.750	485.52	19.115	41.28	1.625
		140					463	18.250	474.41	18.678	47.63	1.875
		160					450.5	17.750	463.30	18.240	53.98	2.125
600	24	STD	609.6	24.00	619	24.38	590.5	23.250	591.88	23.303	9.53	0.375
		XS					584	23.000	586.34	23.084	12.70	0.500
		30					581	22.876	583.59	22.975	14.27	0.562
		40					574.5	22.624	577.97	22.755	17.48	0.688
		60					560.5	22.062	565.49	22.263	24.61	0.969
		80					547.5	21.562	554.38	21.826	30.96	1.219
		100					532	20.938	540.49	21.280	38.89	1.531
		120					517.5	20.376	528.03	20.788	46.02	1.812
650	26	10	660.4	26.00	670	26.38	645.5	25.376	645.50	25.413	7.92	0.312
		20					635	25.000	637.14	25.084	12.70	0.500
700	28	10	711.2	28.00	721	28.38	695.5	27.376	696.30	27.413	7.92	0.312
		20					686	27.000	687.94	27.084	12.70	0.500
		30					679.5	26.750	682.37	26.865	15.88	0.625
750	30	10	762.0	30.00	772	30.38	746	29.376	747.10	29.413	7.92	0.312
		20					736.5	29.000	738.74	29.084	12.70	0.500
		30					730	28.750	733.17	28.865	15.88	0.625
800	32	10	812.8	32.00	825	32.50	797	31.376	797.90	31.413	7.92	0.312
		20					787.5	31.000	789.54	31.084	12.70	0.500
		30					781	30.750	783.97	30.865	15.88	0.625
		40					778	30.624	781.17	30.755	17.48	0.688
850	34	10	863.6	34.00	876	34.50	848	33.376	848.70	33.413	7.92	0.312
		20					838	33.000	840.34	33.084	12.70	0.500
		30					832	32.750	834.77	32.865	15.88	0.625
		40					828.5	32.624	831.97	32.755	17.48	0.688
900	36	10	914.4	36.00	927	36.50	898.5	35.376	899.50	35.413	7.92	0.312
		20					889	35.000	891.14	35.084	12.70	0.500
		30					882.5	34.750	885.57	34.865	15.88	0.625
		40					876.5	34.500	880.02	34.646	19.05	0.750

NOTES:

(1) Letter designations signify

(a) STD = standard wall thickness

(b) XS = extra-strong wall thickness

(c) XXS = double extra-strong wall thickness

(2) The diameters listed are not requirements. They are provided for the convenience of the user.

(3) Internal machining for continuous backing rings for sizes DN 50 (NPS 2) and smaller is not contemplated.



Official commercial representative
of



CONTACT US

PETROGAS ENERGY SOLUCIONES

Calle Los Alcanfores 495

Miraflores, Lima, Peru

T: +51989598209

E: mail@petrogasperu.com