TANA

TOPNOTCH MACHINE CO.,LTD.

API Globe Valve Series

Design Feature

Cast steel globe valve design is as per theAPI 600. BS1873 and the ASME 816 34
Face–to–Face dimension: ASME B16.10,BS 2080 and ISO 5752,JIS B2002.
Flanged End: ASME B16 .5,JIS B2212, B2214.
Butt–we d End: ASME B16.25.
She Wall Thickness: API 600 BS 1873.
Inspection and Test: API 598 BS EN 12266 ISO 5208,JIS B2003.

Casting Steel Material

Visual check for cast steel material includes: surface quality, dimension, chemical properties, mechanical performance, non–destructive testing to ensure that the comprehensive performance of raw materials comply with the relevant ASTM,BS,EN,JIS standards.

Body

The design provides the whole structure of low flow resistance channel structure， enables the body stiffness and strength to bear the nominal piping pressure and stress loading,the valve body wall thickness design complies with the API 600,BS 1873 with sufficient margin corrosion resistance for the medium.

Bonnet

Bonnet can be designed with a variety of seal structure of body connection to meet the needs of different operating conditions,the structure can be equipped to connect with Jacketed,flat,spiral wound or metal ring gasket,or pressure–seal valve bonnet for Calss 900/1500/2500.

Seat

Seat structure can be designed as per user requirements as a whole alloy steel materials pressed—in sealing structure,welding sealing,or screw connection in assembly. The austenitic stainless steel body material can be provided with integral seat.

Plate

Disc design applies conventional seal structure of rigid cone with plug–oriented， Plunger–seal structure,the pressure balance disc,large–sized valves can be provided with dual plates for easy operation.

Seat and other seal material

The choice of materials for the seat and other seal material can be as per API 600 standard,or users design and manufacturing requirements.

Stem

The stem is wholly forged,its T-shape connecting end is of good stiffness and strength to ensure its safe use and reliability.The stem transmission bearing structu re applies ACME trapezoidal thread to enable its up and down travel.

Backseat

All backseats are used on the valve seat seal design,they are replacable and for austenitic stainless steel material it can be integral backseat design.

Bonnet and Body seal structure

Class 150、300、600：spiral stainless steel and flexible graphite wound gasket Class 600, 900 and above：metal ring gasketChoice for bonnet and body seal can be based on the use of specific operating conditions(medium,medium temperature and pressure)

Stuffing box

Stuffing box is designed in accordance with API 600 standards with precise control of surfaoe finish in 32RMS below and its inner verticallty.

Packing gland/bushing

Packing gland/bushing are separate structure to ensure packing seal performance.

Stem Nut

Stem drive nut bearing structure is provided with sophisticated ACME trapezoidal thread. top entry connection design to the yoke,so even the valves are taken off the handwheel at service,the locking device can be ensured to be at original position and working.

Operator

The valve operators are normally handwheel gearbox,with clear open and close marking. Electric,or other operation device can be supplied according to customers requirements.

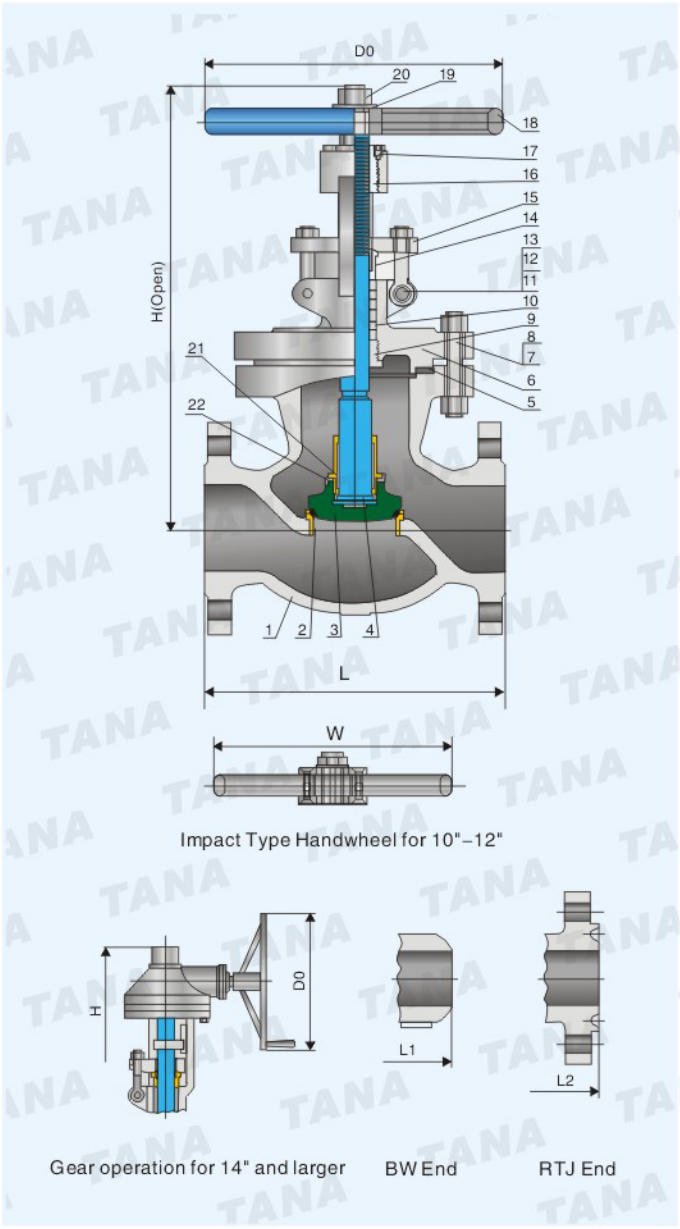
Class 150/JIS10K Bolted bonnet, outside screw & yoke, Rising stem, plug type disc

Features

Design and manufacture:API 600 and BS 1873.
Face–to–Face dimension:ASME B16.10,JIS B2002.
Flanged End:ASME B16.25,JIS B2212, B2214.
B.W.End:ASME B16.25
Shell Wall Thickness:API 600 BS 1873
Inspection & Test: API 598

Parts List

No	Parts	Material
1	Body	ASTM A216 Gr.WCB
2	Seat ring	ASTM A105+13Cr
3	Disc	ASTM A105+13Cr
4	Stem	ASTM A182 F6a
5	Gasket	304S.S.Jacketed Graphite
6	Bonnet	ASTM A216 Gr.WCB
7	Stud	ASTM A193 Gr.B7
8	Nut	ASTM A194 Gr.2H
9	Backseat	ASTM A276 410
10	Packing	Graphite
11	Gland bolt	ASTM A193 Gr.B7
12	Gland nut	ASTM A194 Gr.2H
13	Pin	C.S
14	Bushing	ASTM A276 410
15	Gland	ASTM A216 Gr.WCB
16	Stem nut	Aluminum Bronze
17	Screw	C.S.
18	Handwheel	Malleable Iron
19	Washer	C.S.
20	Nut	C.S.
21	Disc cover	ASTM A276 410
22	Washer	S.S.



Impact Type Handwheel for 10"–12"

Gear operation for 14" and larger

BW End

RTJ End

Dimensions & Weights

Valve Size	in. mm	1–1/2 40	2 50	2–1/2 65	3 80	4 100	5 125	6 150	8 200	10 250	12 300	14 350	16 400
L–L1 (RF–BW)	in. mm	6.5 165	8 203	8.5 216	9.5 241	11.5 292	14 356	16 406	19.5 495	24.5 622	27.5 698	31 787	36 914
L2 (RTJ)	in. mm	7.0 178	8.5 216	9 229	10 254	12 305	14.5 369	16.5 419	20 508	25 635	28 711	31.5 800	36.5 927
H (open)	in. mm	14.25 326	14.69 373	15.38 390	16.56 421	20.25 515	21.19 538	22.31 567	24.63 626	28 712	39 990	51 1295	63.75 1619
Do	in. mm	7.88 200	7.88 200	9.88 250	9.88 250	11.81 300	11.81 300	13.75 350	15.75 400	17.75 450	20 500	24 610	24 610
WT (kg)	RF BW	19 16	22 19	29 25	42 34	64 49	77 65	105 82	154 131	288 249	507 430	690 600	950 850

Class 300/JIS20K Bolted bonnet, outside screw & yoke, Rising stem, plug type disc

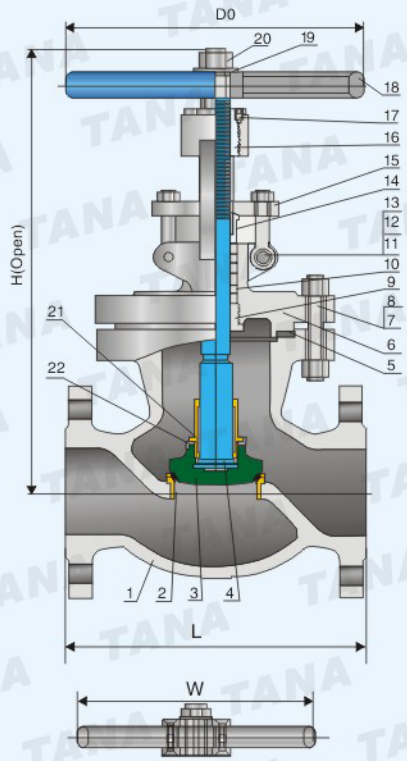
TANA
www.topnotch-machine.com

Features

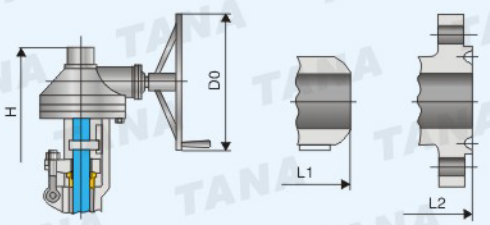
Design and manufacture:API 600 and BS 1873.
Face–to–Face dimension:ASME B16.10,JIS B2002.
Flanged End:ASME B16.25,JIS B2212, B2214.
B.W.End:ASME B16.25
Shell Wall Thickness:API 600 BS 1873
Inspection & Test: API 598

Parts List

No	Parts	Material
1	Body	ASTM A216 Gr.WCB
2	Seat ring	ASTM A105+13Cr
3	Disc	ASTM A105+13Cr
4	Stem	ASTM A182 F6a
5	Gasket	304S.S.Jacketed Graphite
6	Bonnet	ASTM A216 Gr.WCB
7	Stud	ASTM A193 Gr.B7
8	Nut	ASTM A194 Gr.2H
9	Backseat	ASTM A276 410
10	Packing	Graphite
11	Gland bolt	ASTM A193 Gr.B7
12	Gland nut	ASTM A194 Gr.2H
13	Pin	C.S
14	Bushing	ASTM A276 410
15	Gland	ASTM A216 Gr.WCB
16	Stem nut	Aluminum Bronze
17	Screw	C.S.
18	Handwheel	Malleable Iron
19	Washer	C.S.
20	Nut	C.S.
21	Disc cover	ASTM A276 410
22	Washer	S.S.



Impact Type Handwheel for 10"–12"



gear operation for 14" and larger BW End RTJ End

Dimensions & Weights

Valve Size	in. mm	1–1/2 40	2 50	2–1/2 65	3 80	4 100	5 125	6 150	8 200	10 250	12 300	14 350	16 400
L–L1 (RF–BW)	in.	9	10.5	11.5	12.5	14	15.75	17.5	22	24.5	28	33	34
	mm	229	267	292	318	356	400	444	559	622	711	838	864
L2 (RTJ)	in.	9.5	11.12	12.12	13.12	14.62	16.37	18.12	22.62	25.12	28.62	33.62	34.62
	mm	242	283	308	334	372	416	460	575	638	727	854	880
H (open)	in.	14.17	15.69	17.13	18.19	22.06	24.38	27.31	38.63	44.5	41.31	61.25	67
	mm	360	398	436	462	560	620	694	982	1130	1049	1556	1700
Do	in.	7.88	7.88	9.88	9.88	13.75	15.75	17.75	22.06	34	24	24	24
	mm	200	200	250	250	350	400	450	560	860	610	610	610
WT (kg)	RF	26	31	43	57	86	130	168	280	385	724	1500	2200
	BW	21	26	38	44	68	110	138	228	329	618	1350	2000

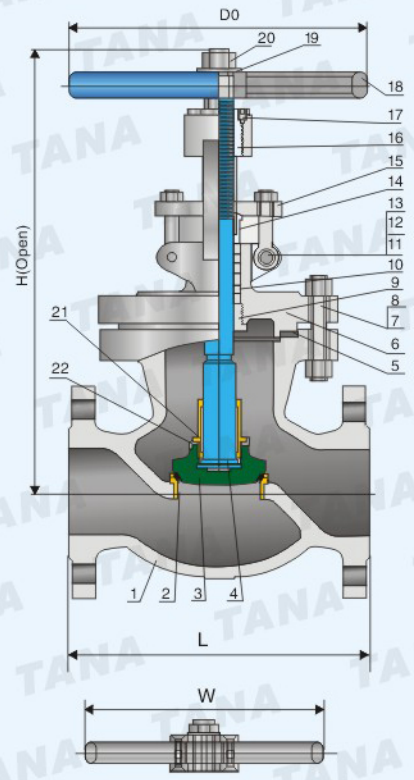
Class 600 Bolted bonnet, outside screw & yoke, Rising stem, plug type disc

Features

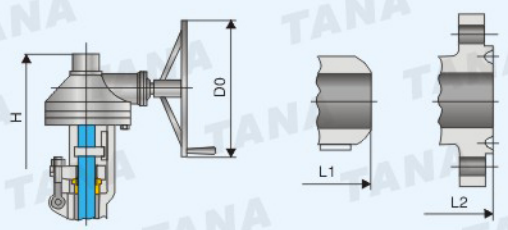
Design and manufacture:API 600 and BS 1873.
Face-to-Face dimension:ASME B16.10.
Flanged End:ASME B16.25.
B.W.End:ASME B16.25
Shell Wall Thickness:API 600 BS 1873
Inspection & Test: API 598

Parts List

No	Parts	Material
1	Body	ASTM A216 Gr.WCB
2	Seat ring	ASTM A105+13Cr
3	Disc	ASTM A105+13Cr
4	Stem	ASTM A182 F6a
5	Gasket	304S.S.Jacketed Graphite
6	Bonnet	ASTM A216 Gr.WCB
7	Stud	ASTM A193 Gr.B7
8	Nut	ASTM A194 Gr.2H
9	Backseat	ASTM A276 410
10	Packing	Graphite
11	Gland bolt	ASTM A193 Gr.B7
12	Gland nut	ASTM A194 Gr.2H
13	Pin	C.S
14	Bushing	ASTM A276 410
15	Gland	ASTM A216 Gr.WCB
16	Stem nut	Aluminum Bronze
17	Screw	C.S.
18	Handwheel	Malleable Iron
19	Washer	C.S.
20	Nut	C.S.
21	Disc cover	ASTM A276 410
22	Washer	S.S.



Impact Type Handwheel for 10"-12"



Gear operation for 14" and larger BW End RTJ End

Dimensions & Weights

Valve Size	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.	11.5	13	14	17	22	26	31	33	35	39
	mm	292	330	356	432	559	660	787	838	889	991
L2 (RTJ)	in.	11.62	13.12	14.12	17.12	22.12	26.12	31.12	33.12	35.12	39.12
	mm	295	333	359	435	562	663	790	841	892	994
H (open)	in.	16.75	19.75	20.5	24.38	34.88	36.69	41	50.38	70.88	76
	mm	425	502	521	620	886	932	1040	1280	1800	1930
Do	in.	9.88	11.81	13.75	17.75	28.38	18.13	24	30	30	30
	mm	250	300	350	450	720	460	610	760	760	760
WT (kg)	RF	39	58	73	120	327	482	700	900	2700	3600
	BW	33	48	61	95	261	385	588	795	2510	3350

Class 900/1500/2500 Bolted bonnet, outside screw & yoke, Rising stem, plug type disc

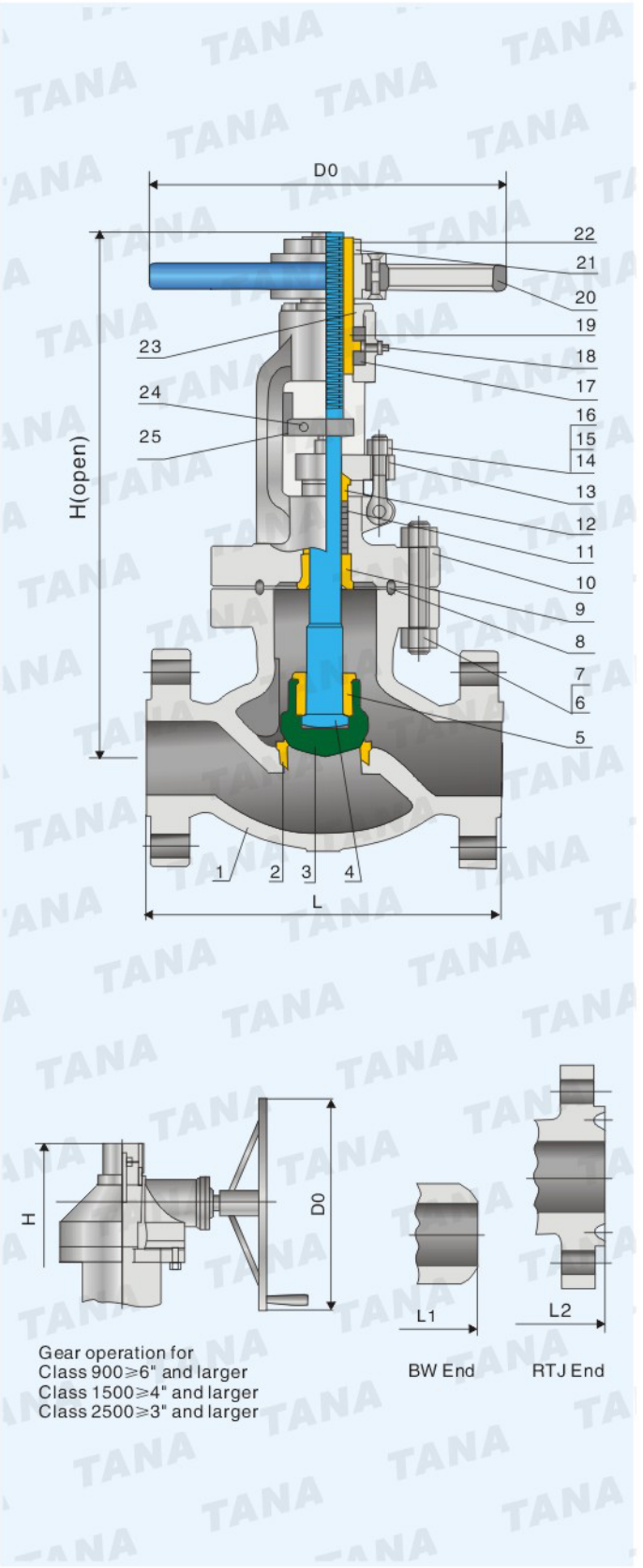
TANA
www.topnotch-machine.com

Features

Design and manufacture:API 600 and BS 1873.
Face–to–Face dimension:ASME B16.10.
Flanged End:ASME B16.25.
B.W.End:ASME B16.25
Shell Wall Thickness:API 600 BS 1873
Inspection & Test: API 598

Parts List

No	Parts	Material
1	Body	ASTM A216 Gr.WCB
2	Seat ring	ASTM A105+13Cr
3	Disc	ASTM A105+13Cr
4	Stem	ASTM A182 F6a
5	Disc cover	ASTM A276 410
6	Stud	ASTM A193 Gr B7
7	Nut	ASTM A194 Gr.2H
8	Gasket	Soft Iron
9	Backseat	ASTM A276 410
10	Bonnet	ASTM A216 Gr.WCB
11	Packing	Graphite
12	Bushing	ASTM A276 410
13	Gland	ASTM A216 Gr.WCB
14	Gland bolt	ASTM A193 Gr B7
15	Gland nut	ASTM A194 Gr.2H
16	pin	C.S.
17	Bearing	Assemly
18	Lubricator	Assemly
19	Stem nut	Aluminum Bronze
20	Hand wheel	Malleable Iron
21	H.W.lock nut	C.S.
22	Screw	C.S
23	Retaining nut	C.S.
24	Bolt	C.S
25	Guide block	C.S.

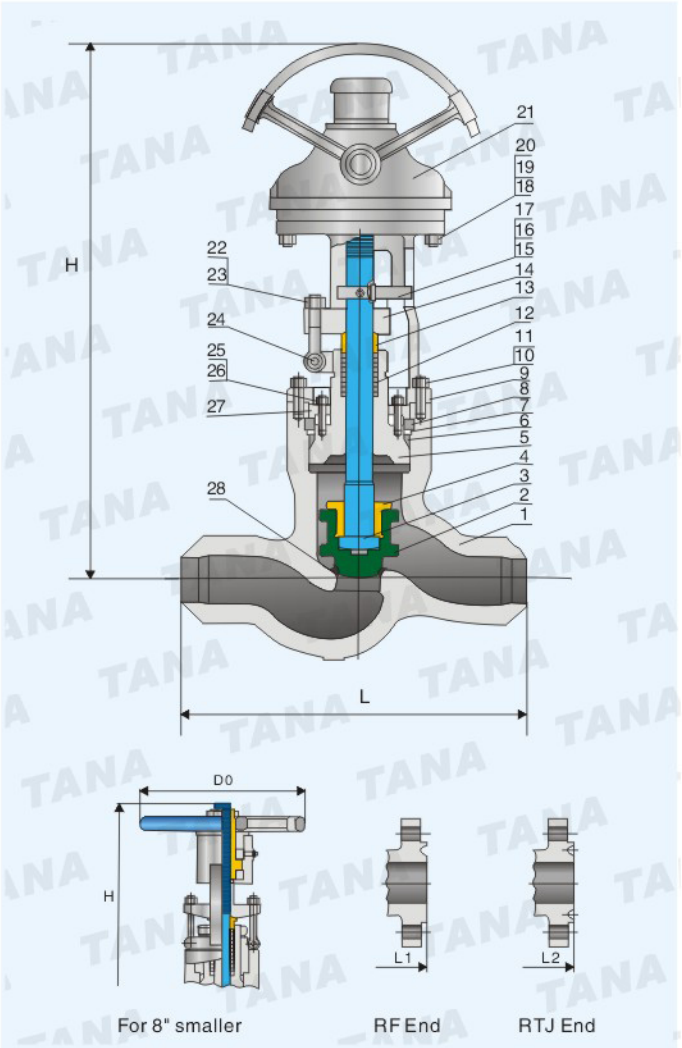


Dimensions & Weights

Class900	ValveSize	in.	2	2-1/2	3	4	6	8	10
		mm	50	65	80	100	150	200	250
	L-L1 (RF-BW)	in.	14.5	16.5	15	18	24	29	33
		mm	368	419	381	457	610	737	838
	L2 (RTJ)	in.	14.62	16.62	15.12	18.12	24.12	29.12	33.12
		mm	371	422	384	460	613	740	841
	H (open)	in.	9.44	10.25	10.25	12.63	15	20.88	27.17
		mm	240	260	260	320	382	530	690
	Do	in.	13.75	15.75	17.75	22.06	24	24	24
		mm	350	400	450	560	610	610	610
	WT (kg)	RF	100	118	131	218	452	710	2050
		BW	75	94	105	185	340	630	1870
Class1500	L-L1 (RF-BW)	in.	14.5	16.5	18.5	21.5	27.75	32.75	--
		mm	368	419	470	546	705	832	
	L2 (RTJ)	in.	14.62	16.62	18.62	21.62	28	33.13	--
		mm	371	422	473	549	711	842	
	H (open)	in.	23.31	26	27.25	35.69	40	4506	--
		mm	592	660	692	907	1015	1145	
	Do	in.	13.75	15.75	17.75	22.06	24	24	--
		mm	350	400	450	560	610	610	
	WT (kg)	RF	112	141	228	336	822	990	--
		BW	84	115	183	277	715	830	
Class2500	L-L1 (RF-BW)	in.	17.75	20	22.75	26.5	36	--	--
		mm	451	508	578	673	914		
	L2 (RTJ)	in.	17.87	20.25	23	26.88	36.5	--	--
		mm	454	514	584	683	927		
	H (open)	in.	27.25	29.5	31.5	47.25	75	--	--
		mm	692	750	800	1200	1905		
	Do	in.	15.75	19.69	24	30	30	--	--
		mm	400	500	610	760	750		
	WT (kg)	RF	182	290	340	820	2300	--	--
		BW	153	230	272	670	2000		

Features

Design and manufacture: API 600 and ASME B16.34 BS 1873
Face–to–Face dimension: ASME B16.10
Flanged End: ASME B16.25
B.W.End: ASME B16.25
Shell Wall Thickness: API 600 BS 1873
Inspection & Test: API 598



Parts List

No	Parts	Material
1	Body	ASTM A216 Gr.WCB
2	Disc	ASTM A105+13Cr
3	Stem	ASTM A182 F6a
4	Disc nut	ASTM A276 410
5	Bonnet	ASTM A216 Gr.WCB
6	Sealing ring	ASTM A182 F304
7	Spacer ring	ASTM A182 F6a
8	Sealing ring	ASTM A182 F6a
9	Yoke	ASTM A216 Gr.WCB
10	Bolt	ASTM A193 Gr.B7
11	Nut	ASTM A194 Gr.2H
12	Packing	Graphite
13	Bushing	ASTM A276 410
14	Gland	ASTM A216 Gr.WCB
15	Pin	C.S.
16	Bolt	C.S.
17	Stem guide collar	C.S.
18	Bolt	C.S.
19	Nut	C.S.
20	Washer	C.S.
21	Gear box	Assemly
22	Gland bolt	ASTM A193 Gr.B7
23	Gland nut	ASTM A194 Gr.2H
24	Pin	ASTM A276 410
25	Stud	ASTM A193 Gr.B7
26	Nut	ASTM A194 Gr.2H
27	Supporting plate	ASTM A105
28	Seat surface	STL No.6

Dimensions & Weights

Class 900	Valve Size	in. mm	2 50	2–1/2 65	3 80	4 100	6 150	8 200
	(RF–BW)(L–L1)	in. mm	14.5 368	16.5 419	15 381	18 457	24 610	29 737
	RTJ (L2)	in. mm	14.62 371	16.62 422	15.12 384	18.12 460	24.12 613	29.12 740
	Open (H)	in. mm	21.65 550	23.82 605	26.70 678	31.42 798	36.61 930	49.61 1260
	Do	in. mm	13.78 350	13.78 350	15.75 400	17.72 450	18.03 458	24 610
	WT (kg)	RF—BW	76 64	106 89	100 85	140 126	388 353	958 866
Class 1500	Valve Size	in. mm	14.5 368	16.5 419	18.5 470	21.5 546	27.75 705	32.75 832
	(RF–BW)(L–L1)	in. mm	14.62 371	16.62 422	18.62 473	21.62 549	28 711	33.13 842
	RTJ (L2)	in. mm	21.65 550	23.82 605	34.10 866	37.64 956	49.61 1260	49.72 1263
	Do	in. mm	15.75 400	15.75 400	17.72 450	22.05 560	24 610	24 610
	WT (kg)	RF—BW	83 75	108 99	132 120	228 207	658 593	1588 1438
Class 2500	Valve Size	in. mm	17.75 451	20 508	22.75 578	26.50 673	36 914	40.25 1022
	(RF–BW)(L–L1)	in. mm	17.87 454	20.25 514	23 584	26.88 683	36.50 927	40.87 1038
	RTJ (L2)	in. mm	22.05 560	28.35 720	29.72 755	48.43 1230	70.51 1791	82.13 2086
	Do	in. mm	15.75 400	17.72 450	22.05 560	12.2 310	24 610	30 760
	WT(kg)	RF—BW	138 98	166 116	245 178	618 436	1498 1146	3198 2592

Class 900/1500/2500 Pressure seal bonnet, piston type disc

Features

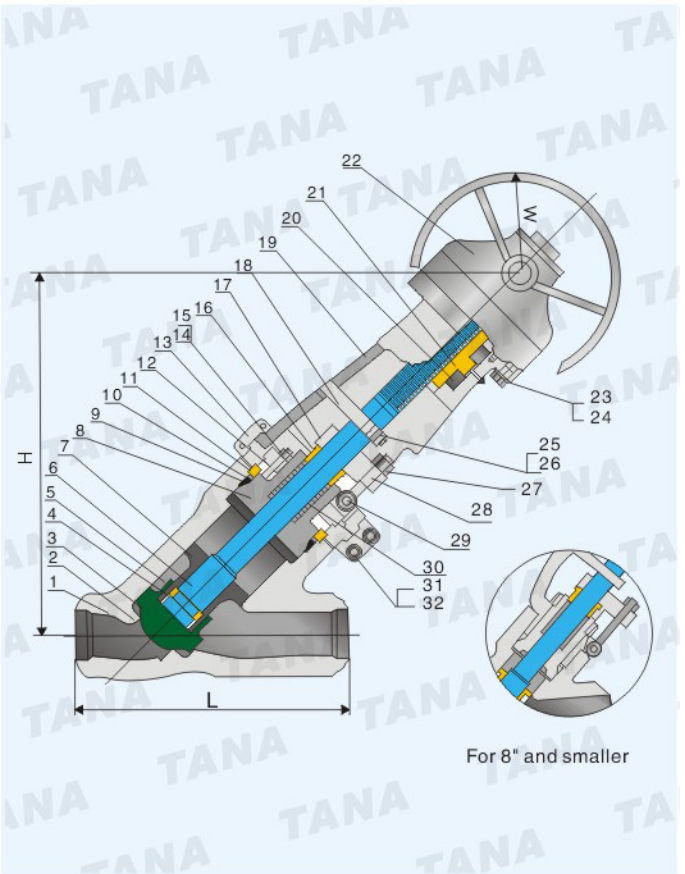
Design and manufacture:
BS 1873 and ASME B16.34
Stem indicator
Disc
Integral hard-surfaced seats
Guide ribs
Pressure seal gasket
B.W.End to ASME B 16.25
Low pressure drops

Y-Pattern Stop Valves

Y-Pattern Stop Valves are available in stop configurations for critical high temperature /high pressure services,Many design features incorporated into stop valves-drop tight shut-off,low pressure drop,piping flexibility-are also included in stop valves.In addition, an Equalizer pipe is provided to help achieve full disk lift as well as reduce wear-producing turbulence.

Parts list

No	Parts	Material
1	Body	ASTM A216 Gr.WCB
2	Seat surface	13Cr
3	Disc	ASTM A105+13Cr
4	Split ring	ASTM A182 F6a
5	Bolt	S.S.
6	Stem	ASTM A182 F6a
7	Disc guide	ASTM A276 410
8	Bonnet	ASTM A216 Gr.WCB
9	Sealing ring	ASTM A182 F304
10	Spacer ring	ASTM A182 F6a
11	Sealing ring	ASTM A182 F6a
12	Supporting plate	ASTM A 105
13	Yoke lock ring	ASTM A216 Gr.WCB
14	Bolt	ASTM A193 Gr.B7
15	Nut	ASTM A194 Gr.2H
16	Gland	ASTM A276 410
17	Gland flange	ASTM A216 Gr.WCB
18	Stem guide collar	C.S.
19	Yoke	ASTM A216 Gr.WCB
20	Bushing	Assemly
21	Stem nut	Aluminum Bronze
22	Gear box	Assemly
23	Bolt	C.S.
24	Washer	C.S.
25	Pin	C.S.
26	Bolt	C.S.
27	Stud	ASTM A193 Gr.B7
28	Nut	ASTM A194 Gr.2H
29	Pin	C.S.
30	Packing	Graphite
31	Lock ring bolt	ASTM A193 Gr.B7
32	Lock ring nut	ASTM A194 Gr.2H



Dimensions & Weights

	Valve Size	in. / mm	2 / 50	2-1/2 / 65	3 / 80	4 / 100	6 / 150	8 / 200	10 / 250	12 / 300	14 / 350	16 / 400
Class 900	BW (L)	in. / mm	13.3 / 338	15.4 / 391	17 / 432	18.5 / 470	20 / 508	26 / 660	31 / 787	38 / 965	38 / 965	44.5 / 1130
	Open	in. / mm	15 / 380	16.5 / 420	18.11 / 460	23.23 / 590	32.28 / 820	41.34 / 1050	50 / 1270	58.27 / 1480	61.02 / 1550	70.08 / 1780
	W	in. / mm	12.2 / 310	12.2 / 310	18.11 / 460	18.11 / 460	18.11 / 460	24 / 610	24 / 610	24 / 610	24 / 610	24 / 610
	WT(kg)	kg	78	84	92	131	258	553	992	1603	1825	2579
Class 1500	BW (L)	in. / mm	13.3 / 338	15.4 / 391	17 / 432	18.5 / 470	27.75 / 705	30 / 762	36.25 / 921	43 / 1092	--	--
	Open	in. / mm	15 / 380	16.5 / 420	15.16 / 385	15.16 / 385	18.5 / 470	26.06 / 662	34.76 / 883	58.28 / 1480	--	--
	W	in. / mm	12.2 / 310	12.2 / 310	18.11 / 460	18.11 / 460	18.11 / 460	24 / 610	24 / 610	24 / 610	--	--
	WT(kg)	kg	83	95	115	148	362	759	1320	2062	--	--
Class 2500	BW (L)	in. / mm	13.3 / 338	15.4 / 391	17 / 432	18.5 / 470	27.75 / 705	30 / 762	36.25 / 9921	--	--	--
	Open	in. / mm	15 / 380	16.5 / 420	15.16 / 385	16.54 / 420	26.89 / 683	28.35 / 720	35.12 / 892	--	--	--
	W	in. / mm	12.2 / 310	18.11 / 460	18.11 / 460	18.11 / 460	18.11 / 460	24 / 610	24 / 610	--	--	--
	WT(kg)	kg	93	106	122	163	461	790	1330	--	--	--