

TANA
TOPNOTCH MACHINE CO.,LTD.

API Check
Valve Series



■ Design Feature

Cast steel swing check valve design is in accordance with the API 600, BS 1868 and the ASME B16.34, standards.
Face-to-Face dimension: ASME B16.10, BS 2080 and ISO 5752, JIS B2002.
Flanged End: ASME B16.5, 26" and larger sizes according to ASME B16.47 Series A or Series B, JIS B2212, B2214.
Butt-weld End: ASME B16.25.
Shell Wall Thickness: BS1868.
Inspection and Test: API 598, BS EN 12266, ISO 5208

■ 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 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 Class 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 components

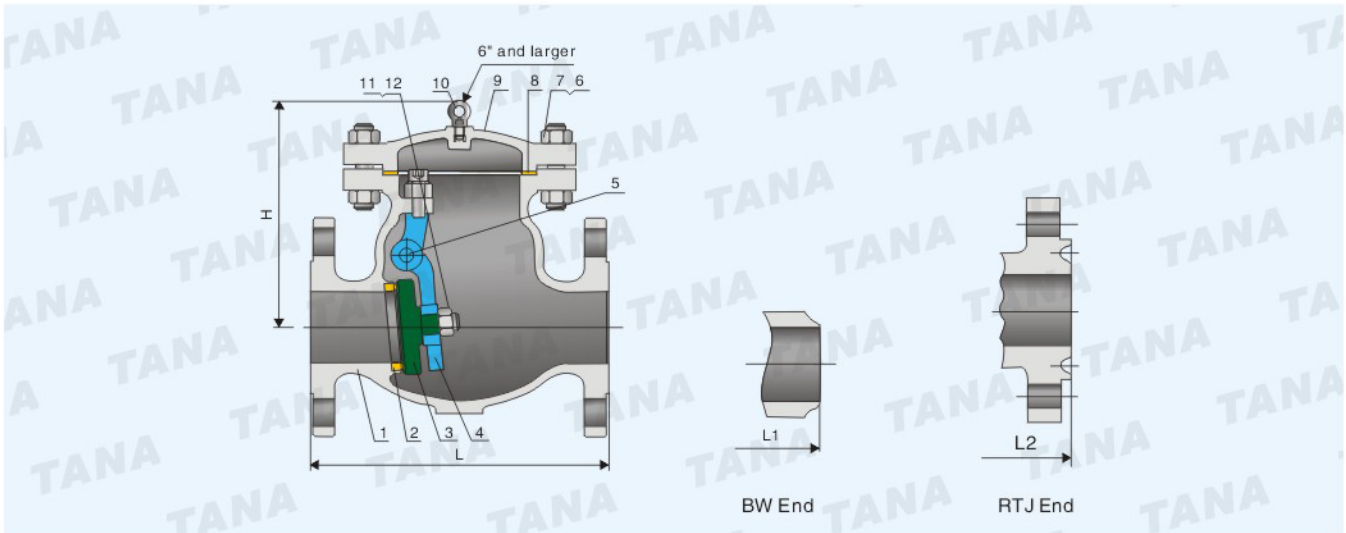
Plate components include: plate, hanger, washer, gland or locking nut, locking pin. Swing check valve can be maintained on pipeline directly, and its plate design applies often the conventional rigid parallel seal structure.

■ 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.

■ Bonnet and body seal structure

Class 150, 300, 600: spiral stainless steel and flexible graphite wound gasket
Class 900 and above: metal ring gasket
According to specific operating conditions (medium, medium temperature and pressure), other sealing material can be applied.



■ **Parts List**

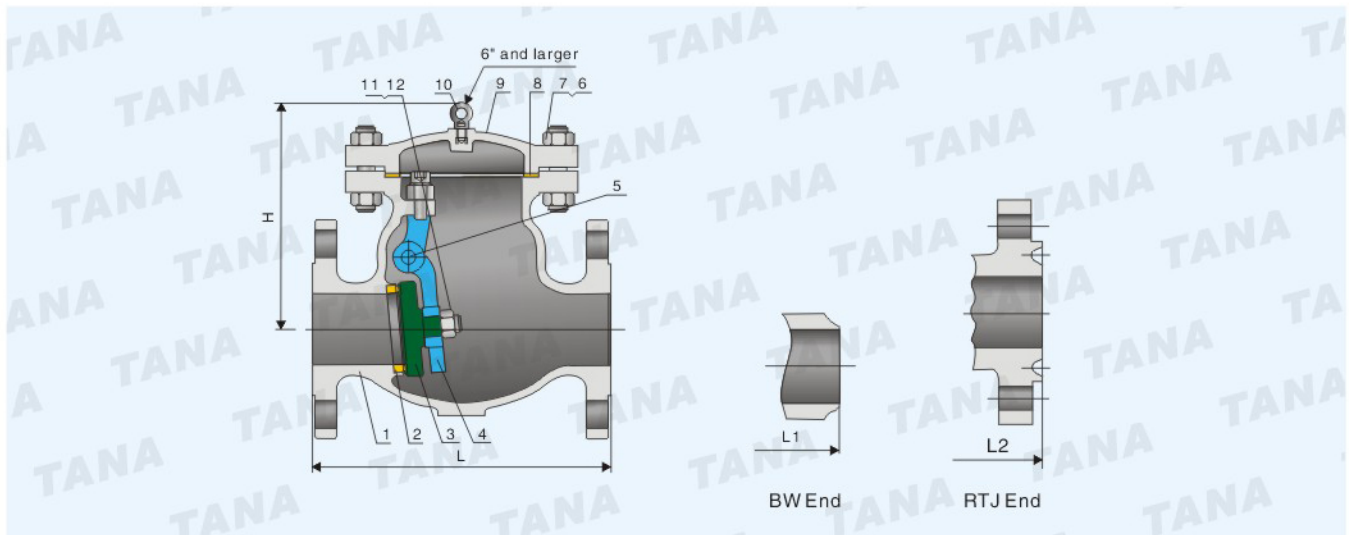
No	Parts	Material
1	Body	ASTM A216 Gr.WCB
2	Seat ring	ASTM A105+13Cr
3	Disc	ASTM A216 Gr.WCB+13Cr
4	Hinge	ASTM A276 410
5	Hinge pin	ASTM A193 Gr.B7
6	Cover bolt	ASTM A193 Gr.B7
7	Cover nut	ASTM A194 Gr.2H
8	Gasket	304S.S. Jacketed Graphite
9	Cover	ASTM A216 Gr.WCB
10	Eye bolt	C.S.
11	Nut	304S.S.
12	Washer	ASTM A276 410

■ **Features**

Design and manufacture: API 600 and BS 1868
 Face-to-Face dimension: ASME B16.10, JIS B2002
 Flanged dimension: 24" and smaller valves: ASME B16.5,
 26" and larger valves: ASME B 16.47 series A and B
 B. W. End: ASME B 16.25
 Shell Wall Thickness: 24" and smaller to API 600 BS 1868
 26" and larger to manufacturer s standard
 Inspection & Test: API 598

■ **Dimensions & Weights Class 150/10K**

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	18 450	20 500	24 600	30 750	36 900
L-L1 (RF-BW)	in. mm	6.5 165	8 203	8.5 216	9.5 241	11.5 292	13 330	14 356	19.5 495	24.5 622	27.5 698	31 787	34 864	38.5 978	38.5 978	51 1295	60 1524	77 1956
L2 (RTJ)	in. mm	7.0 178	8.5 216	9 229	10 254	12 305	13.5 343	14.5 369	20 508	25 635	28 711	31.5 800	34.5 877	39 991	39 991	51.5 1308	60.5 1537	77.5 1969
H开 (open)	in. mm	6.69 170	6.88 175	7 178	7.5 191	8.63 219	9.25 235	12.75 324	15.13 384	17.63 448	21.25 540	22 559	24.63 626	25.63 651	26.63 676	34.63 880	45.25 1149	53.13 1349
WT (kg)	RF	18	20	24	35	55	84	96	160	245	345	510	660	850	1050	1450	2350	3350
	BW	12	14	17	26	37	52	80	133	213	294	440	568	750	920	1270	2250	3150



Parts List

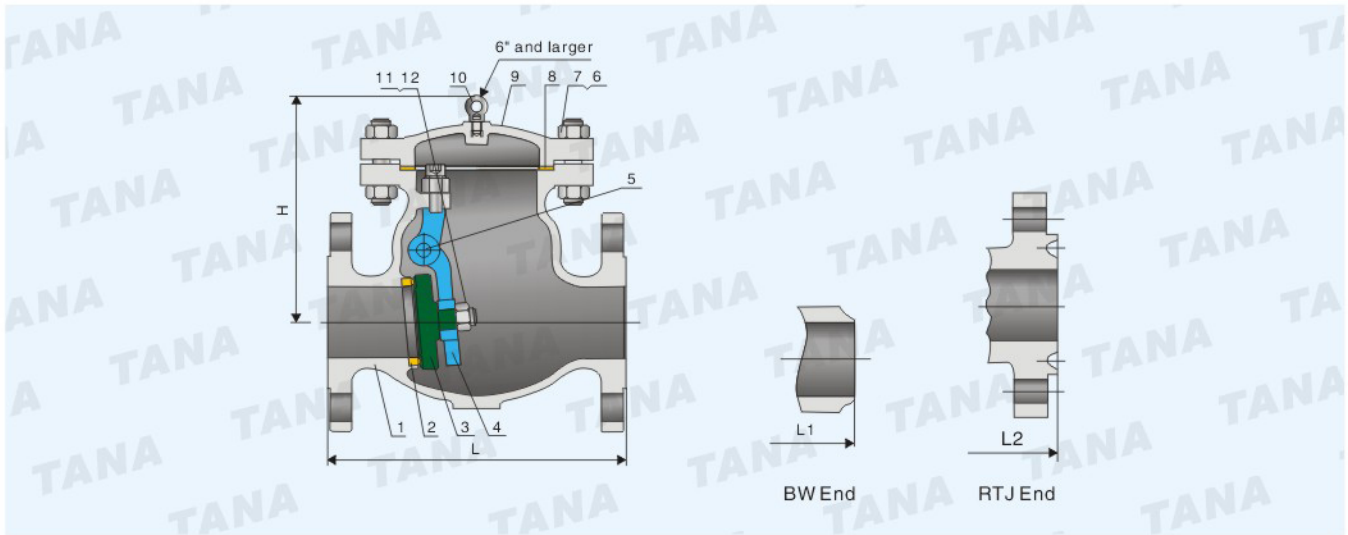
No	Parts	Material
1	Body	ASTM A216 Gr.WCB
2	Seat ring	ASTM A105+13Cr
3	Disc	ASTM A216 Gr.WCB+13Cr
4	Hinge	ASTM A276 410
5	Hinge pin	ASTM A193 Gr.B7
6	Cover bolt	ASTM A193 Gr.B7
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 26" and larger valves: ASME B 16.47 series A and B
 B. W. End: ASME B 16.25
 Shell Wall Thickness: 24" and smaller to API 600 BS 1868
 26" and larger to manufacturer's standard
 Inspection & Test: API 598

Dimensions & Weights Class 300/20K

Valve Size	in.	1-1/2	2	2-1/2	3	4	5	6	8	10	12	14	16	18	20	24	30	36
	mm	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	750	900
L-L1 (RF-BW)	in.	9.5	10.5	11.5	12.5	14	15.75	17.5	21	24.5	28	33	34	38.5	40	53	62.75	82
	mm	241	267	292	318	356	400	444	533	622	711	838	864	978	1016	1346	1594	2083
L2 (RTJ)	in.	10	11.12	12.12	13.15	14.62	16.37	18.12	21.62	25.12	28.62	33.62	34.62	39.12	40.75	53.88	63.75	83.11
	mm	254	283	308	334	372	416	460	549	638	727	854	880	994	1035	1368	1619	2111
H开 (open)	in.	7.4	7.75	8	8.75	10.88	11.63	13.25	16.25	18.25	22.13	23.5	25.38	29.88	33.63	37	50	60.63
	mm	188	197	203	222	276	295	337	413	464	562	597	645	759	854	940	1270	1540
WT (kg)	RF	31	35	37	60	82	110	155	268	380	495	710	950	1200	1350	2200	3400	5000
	BW	28	32	35	50	65	70	128	230	270	460	555	800	970	1070	1780	2950	4300



■ **Parts List**

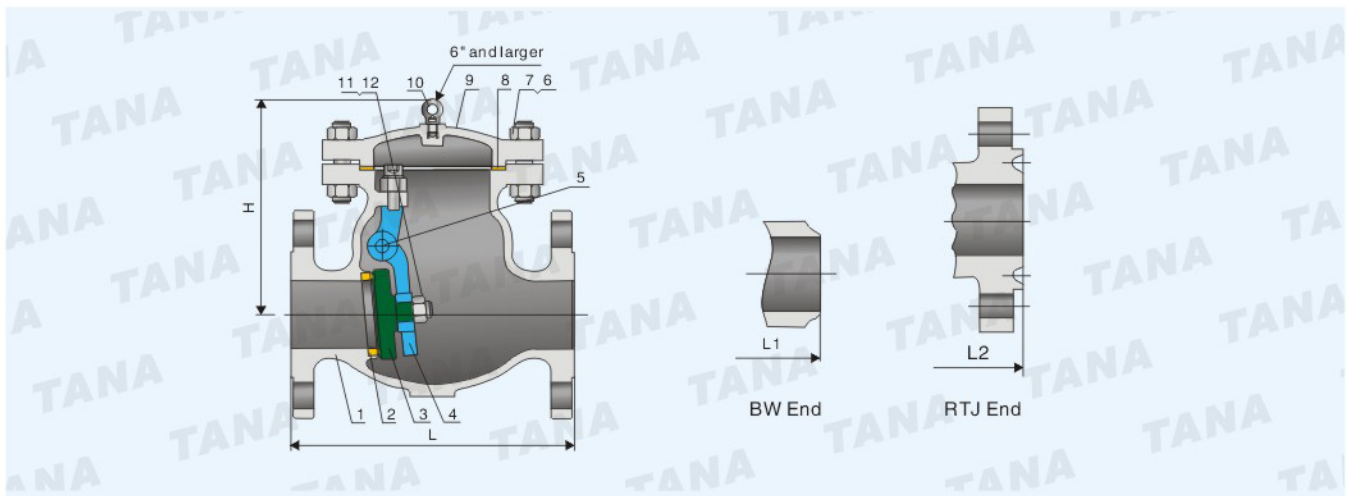
No	Parts	Material
1	Body	ASTM A216 Gr.WCB
2	Seat ring	ASTM A105+13Cr
3	Disc	ASTM A216 Gr.WCB+13Cr
4	Hinge	ASTM A276 410
5	Hinge pin	ASTM A193 Gr.B7
6	Cover bolt	ASTM A193 Gr.B7
7	Cover nut	ASTM A194 Gr.2H
8	Gasket	304S.S. Jacketed Graphite
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10	Eye bolt	C.S.
11	Nut	304S.S.
12	Washer	ASTM A276 410

■ **Features**

Design and manufacture: API 600 and BS 1868
 Face-to-Face dimension: ASME B16.10
 Flanged dimension: 24" and smaller valves: ASME B16.5
 26" and larger valves: ASME B 16.47 series A and B
 B. W. End: ASME B 16.25
 Shell Wall Thickness: 24" and smaller to API 600 BS 1868
 26" and larger to manufacturer s standard
 Inspection & Test: API 598

■ **Dimensions & Weights Class 300**

Valve Size	in.	2	2-1/2	3	4	6	8	10	12	14	16	18	20	24	26	28	30
	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	650	700	750
L-L1 (RF-BW)	in.	11.5	13	14	17	22	26	31	33	35	39	43	47	55	57	63	65
	mm	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	1448	1600	1651
L2 (RTJ)	in.	11.62	13.12	14.12	17.12	22.12	26.12	31.12	33.12	35.12	39.12	43.12	47.25	55.38	57.5	63.5	65.5
	mm	295	333	359	435	562	663	790	841	892	994	1095	1200	1407	1461	1613	1664
H开 (open)	in.	8.25	8.63	10.5	11.75	15	18.75	21.63	22.63	26.38	30.13	35.25	38.38	43.75	48	53.13	56.25
	mm	210	219	267	299	381	476	549	575	670	765	895	975	1111	1219	1349	1429
WT (kg)	RF	40	55	72	120	270	420	620	810	1100	1450	1800	2100	3000	3500	4100	5000
	BW	31	45	60	85	225	365	500	715	880	1140	1450	1650	2300	3000	3500	4300



Parts List

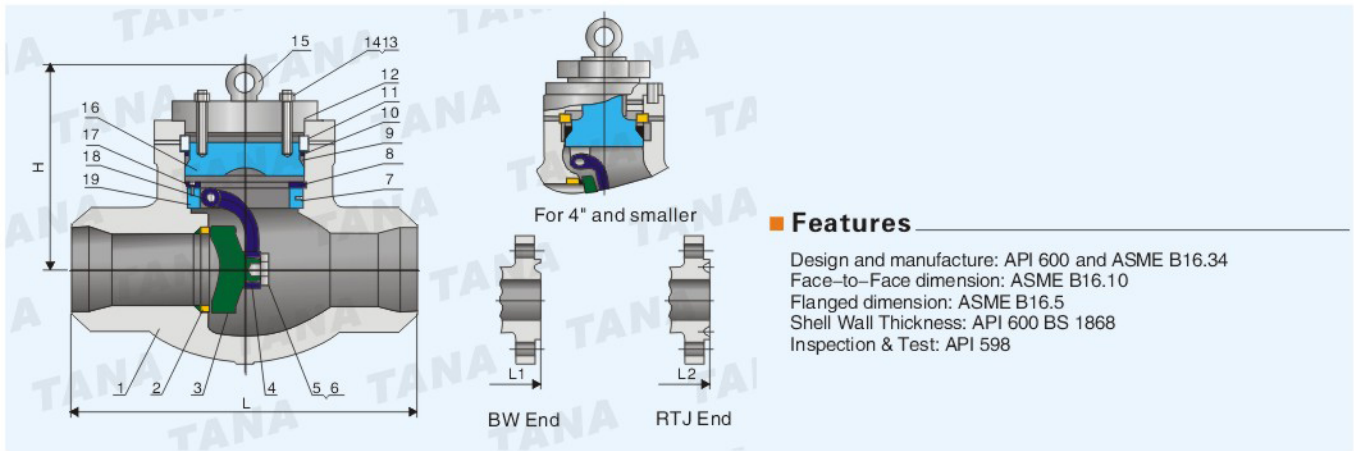
No	Parts	Material
1	Body	ASTM A216 Gr.WCB
2	Seat ring	ASTM A105+13Cr
3	Disc	ASTM A216 Gr.WCB+13Cr
4	Hinge	ASTM A276 410
5	Hinge pin	ASTM A193 Gr.B7
6	Cover bolt	ASTM A193 Gr.B7
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8	Gasket	304S.S. Jacketed Graphite
9	Cover	ASTM A216 Gr.WCB
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Features

Design and manufacture: API 600 and BS 1868
 Face-to-Face dimension: ASME B 16.10
 Flanged dimension: ASME B16.5
 B.W.End: ASME B16.25
 Shell Wall Thickness: API 600 BS 1868
 Inspection & Test: API 598

Dimensions & Weights

	Valve Size	in. mm	2	2-1/2	3	4	6	8	10	12
			50	65	80	100	150	200	250	300
Class 900	L-L1 (RF-BW)	in. mm	14.5 368	16.5 419	15 381	18 457	24 610	29 737	33 838	38 965
	L2 (RTJ)	in. mm	14.62 371	16.62 422	15.12 384	18.12 460	24.12 613	29.12 740	33.12 841	38.12 968
	H开 (open)	in. mm	12.63 321	13.75 349	12.63 321	16 406	18.88 479	22.25 565	26.13 664	30.5 775
	WT (kg)	RF BW	70 50	160 71	90 68	150 113	305 230	516 387	810 632	1120 901
	Class 1500	L-L1 (RF-BW)	in. mm	14.5 368	16.5 419	18.5 470	21.5 546	27.75 705	32.75 832	39 991
L2 (RTJ)		in. mm	14.62 371	16.62 422	18.62 473	21.62 549	28 711	33.15 842	39.4 1001	45.12 1146
H开 (open)		in. mm	12.63 321	13.75 349	14.38 365	16.5 419	20.13 511	26.75 680	29.75 756	33.75 857
WT (kg)		RF BW	70 50	110 87	170 135	300 245	695 560	1190 965	1850 1480	2750 2180
Class 2500	L-L1 (RF-BW)	in. mm	17.75 451	20 508	22.75 578	26.5 673	36 914	40.25 1022	50 1270	56 1422
	L2 (RTJ)	in. mm	17.87 454	20.25 514	23 584	26.88 683	36.5 927	40.87 1038	50.88 1292	56.88 1444
	H开 (open)	in. mm	16.38 416	16.5 419	17.38 441	18.88 479	20.13 511	28 711	33.5 851	39.38 1000
	WT (kg)	RF BW	150 120	240 195	350 280	650 540	1450 1200	2550 2200	3950 3150	5700 4550



■ **Features**

Design and manufacture: API 600 and ASME B16.34
 Face-to-Face dimension: ASME B16.10
 Flanged dimension: ASME B16.5
 Shell Wall Thickness: API 600 BS 1868
 Inspection & Test: API 598

■ **Parts List**

No	Parts	Material	No	Parts	Material
1	Body	ASTM A216 Gr.WCB	11	Segment ring	ASTM A182 F6a
2	Seat ring	ASTM A105+13Cr	12	Cover	ASTM A216 Gr.WCB
3	Disc	ASTM A216 Gr.WCB+13Cr	13	Stud	ASTM A193 Gr.B7
4	Hanger	ASTM A216 Gr.WCB	14	Nut	ASTM A194 Gr.2H
5	Disc cover	ASTM A276 410	15	Eyebolt	C.S.
6	Screw	ASTM A276 410	16	Bonnet	ASTM A216 Gr.WCB
7	Locking pin	ASTM A276 410	17	Bolt	S.S.
8	Locking ring	ASTM A105	18	Pin	ASTM A276 410
9	Seal ring	ASTM A182 F304	19	Hinge	ASTM 216 Gr.WCB
10	Gasket	ASTM A182 F6a			

■ **Dimensions & Weights**

	Valve Size	in. mm	2	2-1/2	3	4	6	8	10	12	14	16
			50	65	80	100	150	200	250	300	350	400
Class 900	L (BW)	in. mm	8.5 216	10 254	12 305	14 356	20 508	26 660	30 787	36 914	39 991	43 1092
	L1 (RF)	in. mm	14.5 368	16.5 419	15 381	18 457	24 610	29 737	33 838	38 965	40.5 1029	44.5 1130
	L2 (RTJ)	in. mm	14.62 371	16.62 422	15.12 384	18.12 460	24.12 613	29.12 740	33.12 841	38.12 968	40.88 1038	44.88 1140
	H开 (open)	in. mm	7.4 188	8.27 210	8.27 210	8.5 216	14.5 368	20.12 511	24.17 614	27.76 705	28.98 736	29.76 756
	WT (kg)	RF	48	63	60	122	254	511	938	1448	1723	1832
	BW	33	44	42	76	177	383	703	1128	1353	1463	
Class 1500	L (BW)	in. mm	8.5 216	10 254	12 305	16 406	22 559	28 711	34 864	39 991	42 1067	47 1194
	L1 (RF)	in. mm	14.5 368	16.5 419	18.5 470	21.5 546	27.75 705	32.75 832	39 991	44.5 1130	49.5 1257	54.5 1384
	L2 (RTJ)	in. mm	14.62 371	16.62 422	18.62 473	21.62 549	28 711	33.13 841	39.38 1001	45.12 1146	50.25 1276	55.38 1407
	H开 (open)	in. mm	10.43 265	10.43 265	10.63 270	14.57 370	18.7 475	22.44 570	24.8 630	30.31 770	31.3 795	32.44 824
	WT (kg)	RF	58	73	71	128	332	588	1023	1528	1852	2058
BW	40	51	69	84	228	458	713	1148	1388	1542		
Class 2500	L (BW)	in. mm	11 279	13 330	14.5 368	18 457	24 610	30 762	36 914	41 1041	-	-
	L1 (RF)	in. mm	17.75 451	20 508	22.75 578	26.5 673	36 914	40.25 1022	50 1270	56 1422	-	-
	L2 (RTJ)	in. mm	17.87 454	20.25 514	23 584	26.88 683	36.5 927	40.87 1038	50.88 1292	56.88 1444	-	-
	H开 (open)	in. mm	11.02 280	12 305	12.2 310	14.57 370	19.1 485	21.42 544	27.95 710	31.5 800	-	-
	WT (kg)	RF	86	113	133	213	548	988	1598	2298	-	-
BW	52	88	93	158	383	638	1198	1723				