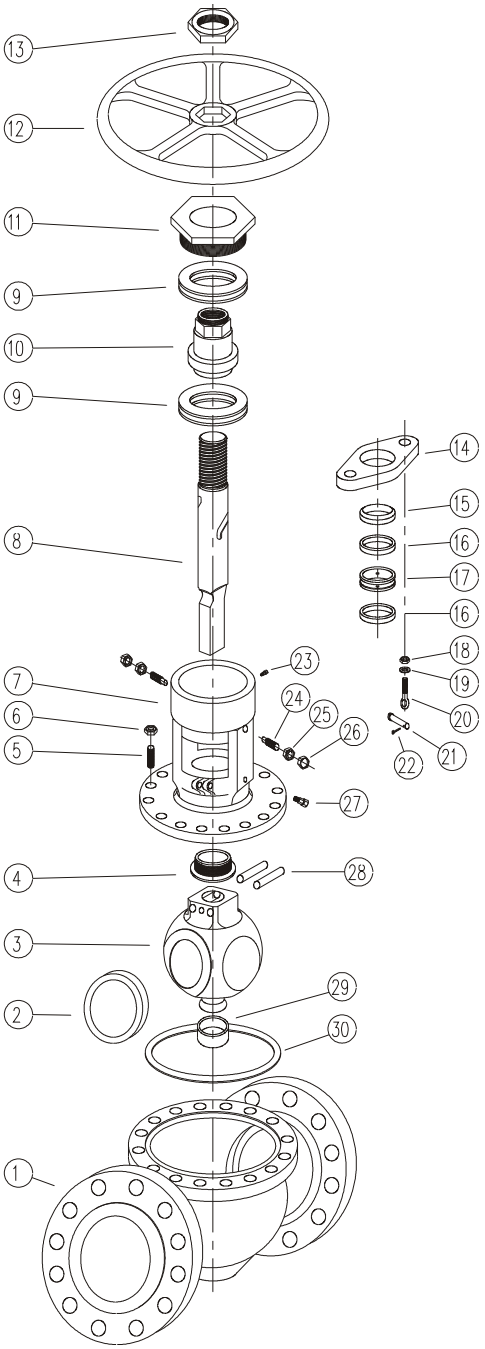
Orbit Ball Valve

1	Body
2	Seat
3	Ball
4	Upper Bearing Sleeve
5	Stud
6	Hexagon Nut
7	Bonnet
8	Stem
9	Flat Bearing
10	Stem Nut
11	Nut Gland
12	Handwheel
13	Orbed Nut
14	Packing Gland
15	Packing Ring
16	Packing
17	Isolating Ring
18	Hexagon Nut
19	Flat Washer
20	Eye Bolt
21	Hinge Pin
22	Outlet Pin
23	Grease Cup
24	Stop Screw
25	Hexagon Nut
26	Gland Nut
27	Sealant Fitting
28	Cylindrical Pin
29	Lower Bearing Sleeve
30	Anti–fire Gasket



Main Materials

Part Name	A	B	C	D	E	F
Body	WCB	WCB	WCB	CF8	CF8M	LCC
Seat	A105+STL	A304+STL	A316+STL	A304+STL	A316+STL	LF2+STL
Ball	A105+STL	A304+STL	A316+STL	A304+STL	A316+STL	LF2+STL
Stem	A105+ENP	A304	A316	A304	A316	LF2+ENP
Stud	B7M	B7M	B7M	B8M	B8M	L7
Nut	2HM	2HM	2HM	8M	8M	7M
Packing						
Anti–fire Gasket	304+GRAPHITE					

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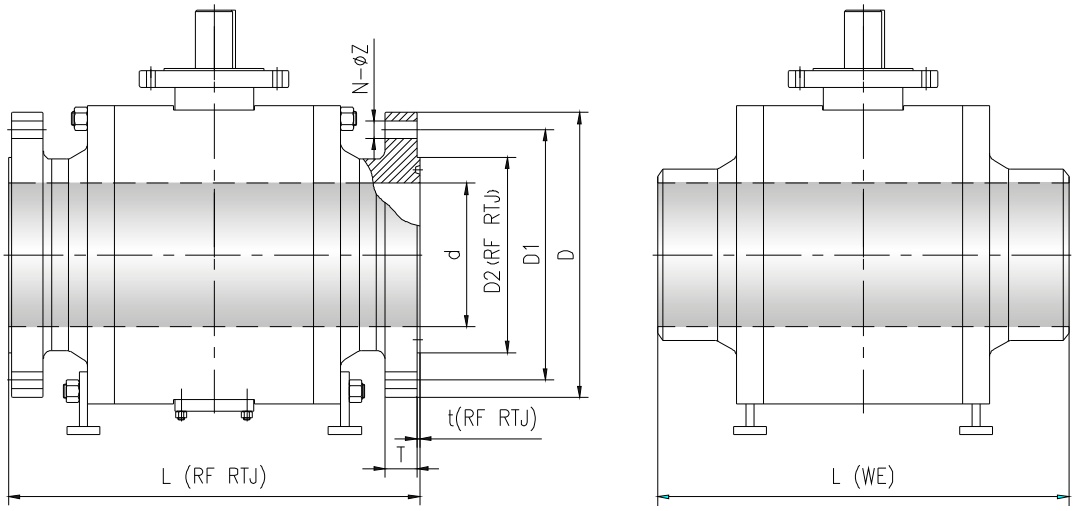
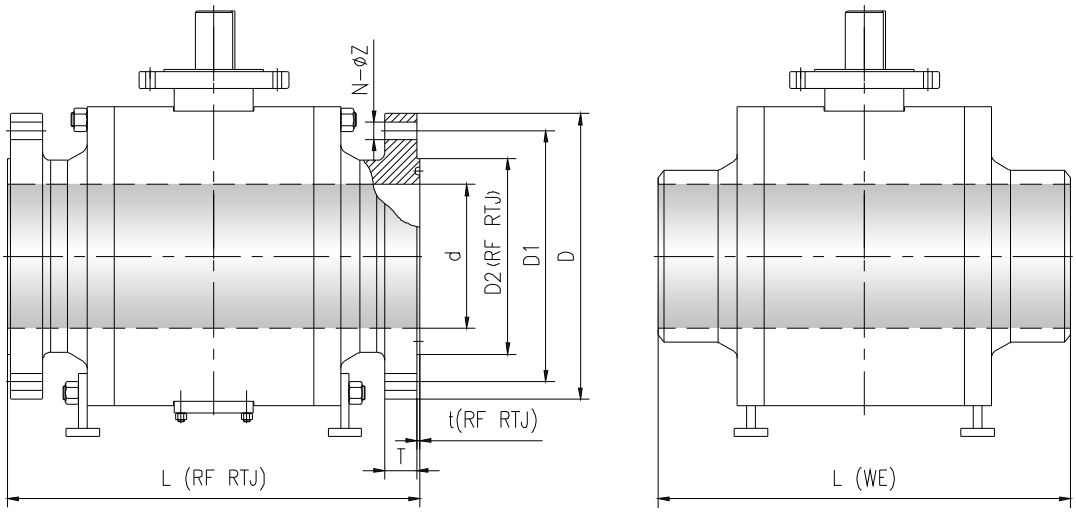
ANSI Class 150
285 psi



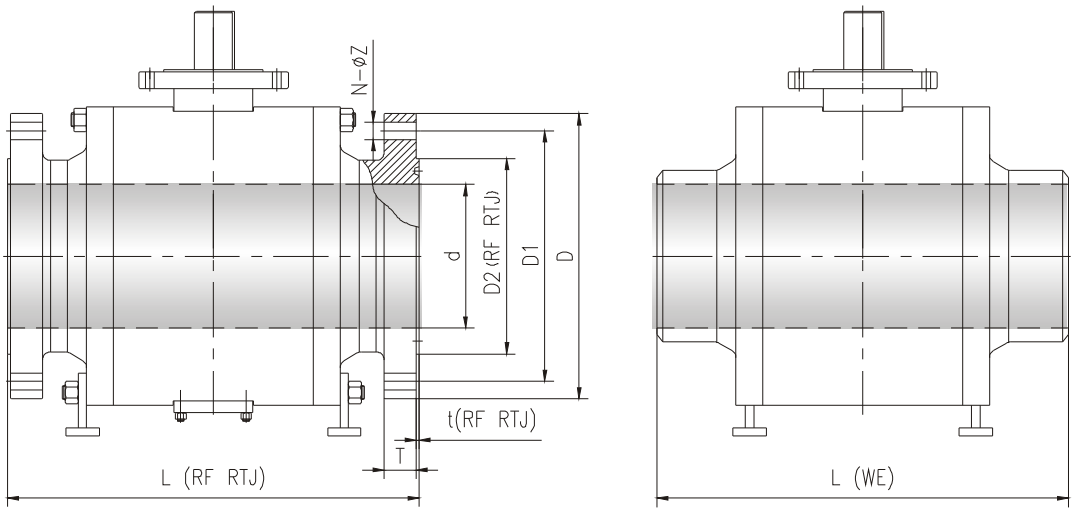
Nominal Size		(RF)								(RTJ)				(BW)
DN	NPS	d	L(RF)	D	D1	D2(RF)	T	t(RF)	N-ΦZ	L(RTJ)	D2(RTJ)	t(RTJ)	R	L(WE)
150	6	150	394	280	241.5	216	24	2.0	8-Φ22	406	219	6.4	R43	457
200	8	201	457	345	298.5	270	27	2.0	8-Φ22	470	273	6.4	R48	521
250	10	252	533	405	362	324	29	2.0	12-Φ25	546	330	6.4	R52	559
300	12	303	610	485	432	381	30	2.0	12-Φ25	622	406	6.4	R56	635
350	14	334	686	535	476	413	33	2.0	12-Φ28.5	699	425	6.4	R59	762
400	16	385	762	600	540	470	35	2.0	16-Φ28.5	775	483	6.4	R64	838
450	18	436	864	635	578	533	38	2.0	16-Φ32	876	546	6.4	R68	914
500	20	487	914	700	635	584	41	2.0	20-Φ32	927	597	6.4	R72	991
550	22	538	1016	750	692	641	44	2.0	20-Φ35	–	–	–	–	1092
600	24	589	1067	815	749.5	692	46	2.0	20-Φ35	1080	711	6.4	R76	1143
650	26	633	1143	870	806.5	749	67	2.0	24-Φ35	–	–	–	–	1245
700	28	684	1245	925	863.6	800	70	2.0	28-Φ35	–	–	–	–	1346
750	30	735	1295	985	914.4	857	73	2.0	28-Φ35	–	–	–	–	1397
800	32	779	1372	1060	978	914	79	2.0	28-Φ41	–	–	–	–	1524
850	34	830	1473	1110	1028.7	965	81	2.0	32-Φ41	–	–	–	–	1626
900	36	874	1524	1170	1086	1022	89	2.0	32-Φ41	–	–	–	–	1727
950	38	925	1840	1240	1149.4	1073	86	2.0	32-Φ41	–	–	–	–	–
1000	40	976	1900	1290	1200	1124	89	2.0	36-Φ41	–	–	–	–	–
1050	42	1020	2050	1346	1257.3	1194	95	2.0	36-Φ41	–	–	–	–	–
1150	46	1120	2100	1455	1365.3	1295	103	2.0	40-Φ41	–	–	–	–	–
1200	48	1166	2180	1511	1422.4	1359	106	2.0	44-Φ41	–	–	–	–	–

ANSI Class 300
740 psi



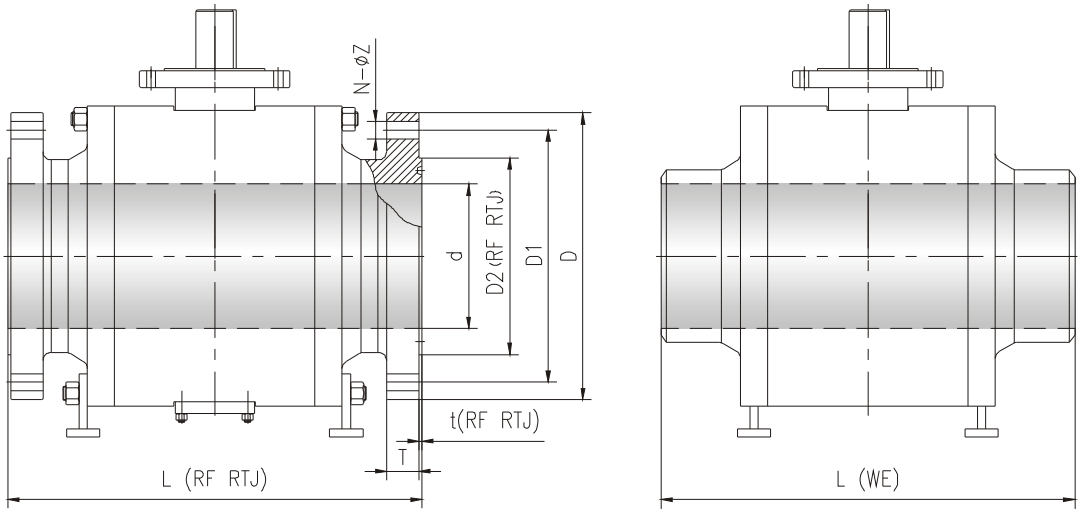
Nominal Size		(RF)								(RTJ)				(BW)
DN	NPS	d	L(RF)	D	D1	D2(RF)	T	t(RF)	N-ΦZ	L(RTJ)	D2(RTJ)	t(RTJ)	R	L(WE)
150	6	150	403	320	270	216	35	2.0	12-Φ22	419	241	8	R45	403
200	8	201	502	380	330	270	40	2.0	12-Φ25	518	302	8	R49	521
250	10	252	568	445	387.5	324	46	2.0	16-Φ28.5	584	356	8	R53	559
300	12	303	648	520	451	381	49	2.0	16-Φ32	664	413	8	R57	635
350	14	334	762	585	514.5	413	52	2.0	20-Φ32	778	457	8	R61	762
400	16	385	838	650	571.5	470	56	2.0	20-Φ35	854	508	8	R65	838
450	18	436	914	710	628.5	533	59	2.0	24-Φ35	930	575	8	R69	914
500	20	487	991	775	686	584	62	2.0	24-Φ35	1010	635	9.5	R73	991
550	22	538	1092	840	743	641	65	2.0	24-Φ41	1114	685	11.2	R81	1092
600	24	589	1143	915	813	692	68	2.0	24-Φ41	1165	749	11.2	R77	1143
650	26	633	1245	970	876.3	749	78	2.0	28-Φ44.5	1270	810	12.7	R93	1245
700	28	684	1346	1035	940	800	84	2.0	28-Φ44.5	1372	861	12.7	R94	1346
750	30	735	1397	1090	997	857	90	2.0	28-Φ48	1422	918	12.7	R95	1397
800	32	779	1524	1150	1054	914	97	2.0	28-Φ51	1553	984	14.3	R96	1524
850	34	830	1626	1205	1105	965	100	2.0	28-Φ51	1654	1035	14.3	R97	1626
900	36	874	1727	1270	1168.4	1022	103	2.0	32-Φ54	1756	1092	14.3	R98	1727
950	38	925	1840	1170	1092	1029	106	2.0	32-Φ41.3	–	–	–	–	–
1000	40	976	1900	1240	1155.7	1086	113	2.0	32-Φ44.5	–	–	–	–	–
1050	42	1020	2050	1290	1206.5	1137	118	2.0	32-Φ44.5	–	–	–	–	–
1150	46	1120	2100	1415	1320.8	1245	129	2.0	28-Φ51	–	–	–	–	–
1200	48	1166	2180	1465	1371.6	1302	132	2.0	32-Φ51	–	–	–	–	–

ANSI Class 600
1480 psi



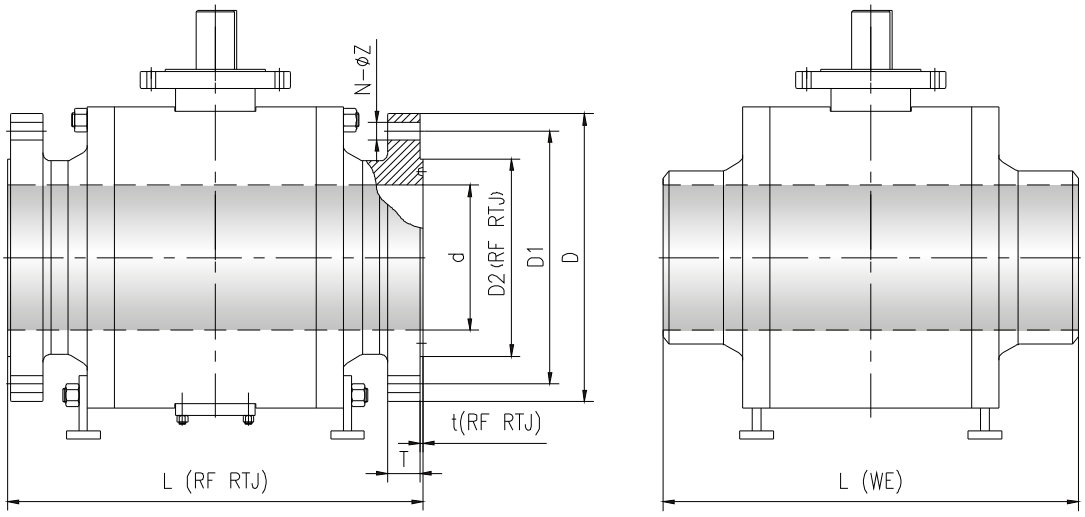
Nominal Size		(RF)								(RTJ)				(BW)
DN	NPS	d	L(RF)	D	D1	D2(RF)	T	t(RF)	N–ΦZ	L(RTJ)	D2(RTJ)	t(RTJ)	R	L(WE)
50	2	49	292	165	127	92	26	7.0	8–Φ19	295	108	8	R23	292
65	2 1/2	62	330	190	149	105	29	7.0	8–Φ22	333	127	8	R26	330
80	3	74	356	210	168.5	127	32	7.0	8–Φ22	359	146	8	R31	356
100	4	100	432	275	216	157	38	7.0	8–Φ25	435	175	8	R37	432
150	6	150	559	355	292	216	48	7.0	12–Φ29	562	241	8	R45	559
200	8	201	660	420	349	270	56	7.0	12–Φ32	664	302	8	R49	660
250	10	252	787	510	432	324	64	7.0	16–Φ35	791	356	8	R53	787
300	12	303	838	560	489	381	67	7.0	20–Φ35	841	413	8	R57	838
350	14	334	889	605	527	413	70	7.0	20–Φ38	892	457	8	R61	889
400	16	385	991	685	603	470	77	7.0	20–Φ41	994	508	8	R65	991
450	18	436	1092	745	654	533	83	7.0	20–Φ44	1095	575	8	R69	1092
500	20	487	1194	815	724	584	89	7.0	20–Φ44	1200	635	9.5	R73	1194
550	22	538	1295	870	777.7	641	95	7.0	24–Φ48	1305	685	11.2	R81	1295
600	24	589	1397	940	838	692	102	7.0	24–Φ52	1407	749	11.2	R77	1397
650	26	633	1448	1015	914.4	749	108	7.0	28–Φ51	1461	810	12.7	R93	1448
700	28	684	1549	1075	965	800	111	7.0	28–Φ54	1562	861	12.7	R94	1549
750	30	735	1651	1130	1022.4	857	114	7.0	28–Φ54	1664	918	12.7	R95	1651
800	32	779	1778	1195	1073	914	117	7.0	28–Φ60.5	1794	984	14.3	R96	1778
850	34	830	1930	1245	1130.3	965	121	7.0	28–Φ60.5	1946	1035	14.3	R97	1930
900	36	874	2083	1315	1194	1022	124	7.0	28–Φ66.5	2099	1092	14.3	R98	2083
950	38	925	1900	1270	1162	1054	152	7.0	28–Φ60.5	–	–	–	–	–
1000	40	976	1960	1320	1213	1111	159	7.0	32–Φ60.5	–	–	–	–	–
1050	42	1020	2100	1405	1282.7	1168	168	7.0	28–Φ66.5	–	–	–	–	–
1150	46	1120	2180	1510	1390.7	1276	179	7.0	32–Φ66.5	–	–	–	–	–
1200	48	1166	2400	1595	1460.5	1333	189	7.0	32–Φ73	–	–	–	–	–

ANSI Class 900
2220 psi



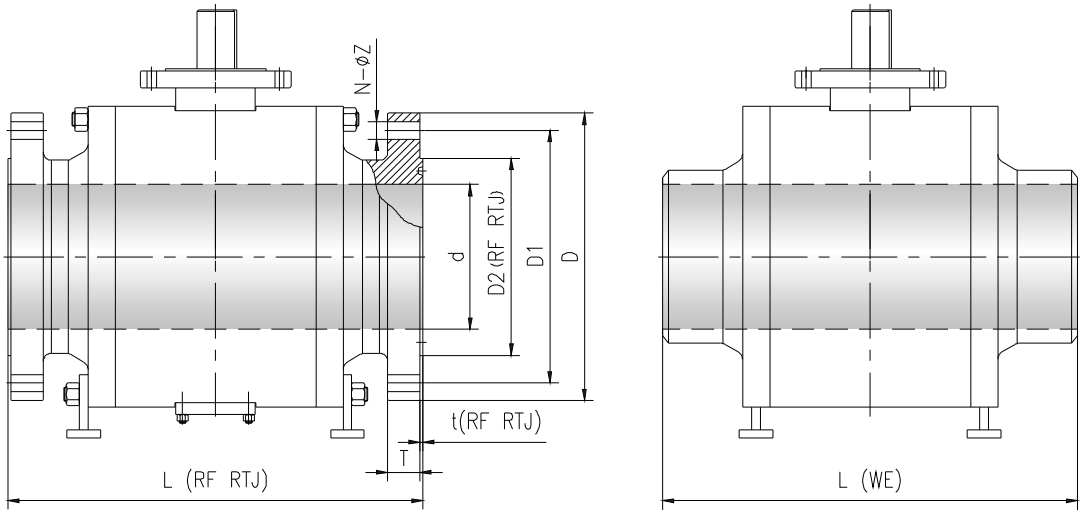
Nominal Size		(RF)								(RTJ)				(BW)
DN	NPS	d	L(RF)	D	D1	D2(RF)	T	t(RF)	N-ΦZ	L(RTJ)	D2(RTJ)	t(RTJ)	R	L(WE)
50	2	49	368	215	165	92	38.5	7.0	8-Φ26	371	124	7.9	R24	368
65	2 1/2	62	419	245	190.5	105	41.5	7.0	8-Φ29	422	137	7.9	R27	419
80	3	74	381	240	190.5	127	38.5	7.0	8-Φ26	384	156	7.9	R31	381
100	4	100	457	290	234.9	157	44.5	7.0	8-Φ32	460	181	7.9	R37	457
150	6	150	610	380	317.5	216	56	7.0	12-Φ32	613	241	7.9	R45	610
200	8	201	737	470	393.7	270	63.5	7.0	12-Φ39	740	308	7.9	R49	737
250	10	252	838	545	469.9	324	70	7.0	16-Φ39	841	362	7.9	R53	838
300	12	303	965	610	533.4	381	79.5	7.0	20-Φ39	968	419	7.9	R57	965
350	14	322	1029	640	558.8	413	86	7.0	20-Φ42	1038	467	11.1	R62	1029
400	16	373	1130	705	615.9	470	89	7.0	20-Φ45	1140	524	11.1	R66	1130
450	18	423	1219	785	685.8	533	102	7.0	20-Φ51	1232	594	12.7	R70	1219
500	20	471	1321	855	749.3	584	108	7.0	20-Φ54	1334	648	12.7	R74	1321
600	24	570	1549	1040	901.7	692	140	7.0	20-Φ67	1568	772	15.9	R78	1549
650	26	617	1727	1085	952.5	749	140	7.0	20-Φ73	1749	832	17.5	R100	1727
700	28	665	1753	1170	1022.4	800	143	7.0	20-Φ79	1775	889	17.5	R101	1753
750	30	712	1780	1230	1086	857	149	7.0	20-Φ79	1802	946	17.5	R102	1780
800	32	760	1850	1315	1155.7	914	159	7.0	20-Φ86	1872	1003	17.5	R103	1850
850	34	808	1900	1395	1225.6	965	165	7.0	20-Φ92	1929	1067	20.6	R104	1900
900	36	855	2050	1460	1289	1022	171.5	7.0	20-Φ92	2079	1124	20.6	R105	2050

ANSI Class 1500
3750psi



Nominal Size		(RF)								(RTJ)				(BW)
DN	NPS	d	L(RF)	D	D1	D2(RF)	T	t(RF)	N-ΦZ	L(RTJ)	D2(RTJ)	t(RTJ)	R	L(WE)
50	2	49	368	215	165	92	38.5	7.0	8-Φ25.5	371	124	7.9	R24	368
65	2 1/2	62	419	245	190.5	105	41.5	7.0	8-Φ28.5	422	137	7.9	R27	419
80	3	74	470	265	203.2	127	48	7.0	8-Φ32	473	168	7.9	R35	470
100	4	100	456	310	241.3	157	54	7.0	8-Φ35	549	194	7.9	R39	456
150	6	144	705	395	317.5	216	83	7.0	12-Φ38	711	248	9.5	R46	705
200	8	192	832	485	393.7	270	93	7.0	12-Φ44.5	840	318	11.1	R50	832
250	10	239	991	585	482.6	324	108	7.0	12-Φ51	1000	371	11.1	R54	991
300	12	287	1130	675	571.5	381	124	7.0	16-Φ54	1146	438	14.3	R58	1130
350	14	315	1257	750	635	413	133.5	7.0	16-Φ60.5	1276	489	15.9	R63	1257
400	16	360	1384	825	704.8	470	146.5	7.0	16-Φ66.6	1407	546	17.5	R66	1384
450	18	405	1537	915	774.7	533	162	7.0	16-Φ73.2	1559	613	17.5	R71	1537
500	20	455	1664	985	831.8	584	178	7.0	16-Φ79.3	1686	673	17.5	R75	1664
600	24	530	2040	1170	990.6	692	203.5	7.0	16-Φ92	2071	794	20.6	R79	2040

ANSI Class 2500
6000 psi



Nominal Size		(RF)								(RTJ)				(BW)
DN	NPS	d	L(RF)	D	D1	D2(RF)	T	t(RF)	N-ΦZ	L(RTJ)	D2(RTJ)	t(RTJ)	R	L(WE)
50	2	42	451	235	171.4	92	51	7.0	8-Φ28.5	454	133	7.9	R26	451
65	2 1/2	52	508	265	196.8	105	57.5	7.0	8-Φ32	540	149	9.5	R28	508
80	3	62	578	305	228.6	127	67	7.0	8-Φ35	584	168	9.5	R32	578
100	4	87	673	355	273	157	76.5	7.0	8-Φ41.3	683	203	11.1	R38	673
150	6	131	914	485	368.3	216	108	7.0	8-Φ54	927	279	12.7	R47	914
200	8	179	1022	550	438.1	270	127	7.0	12-Φ54	1038	340	14.3	R51	1022
250	10	223	1270	675	539.7	324	165.5	7.0	12-Φ66.6	1292	425	17.5	R55	1270
300	12	265	1422	760	619.1	381	184.5	7.0	12-Φ73.2	1445	495	17.5	R60	1422