

STEEL PIPE REFERENCE CHART PER ANSI/ASTM

Nom Size	O.D.	DN	Schedule 10		Schedule 20		Schedule 30		Standard		Schedule 40		Schedule 60		Extra Strong		Schedule 80		Schedule 100		Schedule 120		Schedule 140		Schedule 160		XX Strong	
			Wall	Lbs/Ft	Wall	Lbs/Ft	Wall	Lbs/Ft	Wall	Lbs/Ft	Wall	Lbs/Ft	Wall	Lbs/Ft	Wall	Lbs/Ft	Wall	Lbs/Ft	Wall	Lbs/Ft	Wall	Lbs/Ft	Wall	Lbs/Ft	Wall	Lbs/Ft	Wall	Lbs/Ft
1/8"	0.405	6	.049	0.19			.057	0.21	.068	0.24	.068	0.24			.095	0.31	.095	0.31										
1/4"	0.540	8	.065	0.33			.073	0.36	.088	0.43	.088	0.43			.119	0.54	.119	0.54										
3/8"	0.675	10	.065	0.42			.073	0.47	.091	0.57	.091	0.57			.126	0.74	.126	0.74										
1/2"	0.840	15	.083	0.67			.095	0.76	.109	0.85	.109	0.85			.147	1.09	.147	1.09							.188	1.31	.294	1.72
3/4"	1.050	20	.083	0.86			.095	0.97	.113	1.13	.113	1.13			.154	1.48	.154	1.48							.219	1.95	.308	2.44
1"	1.315	25	.109	1.41			.114	1.46	.133	1.68	.133	1.68			.179	2.17	.179	2.17							.250	2.85	.358	3.66
1 1/4"	1.660	32	.109	1.81			.117	1.93	.140	2.27	.140	2.27			.191	3.00	.191	3.00							.250	3.77	.382	5.22
1 1/2"	1.900	40	.109	2.09			.125	2.37	.145	2.72	.145	2.72			.200	3.63	.200	3.63							.281	4.86	.400	6.41
2"	2.375	50	.109	2.64			.125	3.01	.154	3.66	.154	3.66			.218	5.03	.218	5.03							.344	7.47	.436	9.04
2 1/2"	2.875	65	.120	3.53			.188	5.4	.203	5.80	.203	5.80			.276	7.67	.276	7.67							.375	10.02	.552	13.71
3"	3.500	80	.120	4.34			.188	6.66	.216	7.58	.216	7.58			.300	10.26	.300	10.26							.438	14.34	.600	18.60
3 1/2"	4.000	90	.120	4.98			.188	7.66	.226	9.12	.226	9.12			.318	12.52	.318	12.52										
4"	4.500	100	.120	5.62			.188	8.67	.237	10.80	.237	10.80			.337	15.00	.337	15.00			.438	19.02			.531	22.53	.674	27.57
5"	5.563	125	.134	7.78					.258	14.63	.258	14.63			.375	20.80	.375	20.80			.500	27.06			.625	32.99	.750	38.59
6"	6.625	150	.134	9.30					.280	18.99	.280	18.99			.432	28.60	.432	28.60			.562	36.43			.719	45.39	.864	53.21
8"	8.625	200	.148	13.41	.250	22.38	.277	24.72	.322	28.58	.322	28.58	.406	35.67	.500	43.43	.500	43.43	.594	51.00	.719	60.77	.812	67.82	.906	74.76	.875	72.49
10"	10.750	250	.165	18.67	.250	28.06	.307	34.27	.365	40.52	.365	40.52	.500	54.79	.500	54.79	.594	64.49	.719	77.10	.844	89.38	1.000	104.23	1.125	115.75	1.000	104.23
12"	12.750	300	.180	24.19	.250	33.41	.330	43.81	.375	49.61	.406	53.57	.562	73.22	.500	65.48	.688	88.71	.844	107.42	1.000	125.61	1.125	139.81	1.312	160.42	1.000	125.61
14"	14.000	350	.250	36.75	.312	45.65	.375	54.62	.375	54.62	.438	63.50	.594	85.13	.500	72.16	.750	106.23	.938	130.98	1.094	150.93	1.250	170.37	1.406	189.29		
16"	16.000	400	.250	42.09	.312	52.32	.375	62.64	.375	62.64	.500	82.85	.656	107.60	.500	82.85	.844	136.74	1.031	164.98	1.219	192.61	1.438	223.85	1.594	245.48		
18"	18.000	450	.250	47.44	.312	58.99	.438	82.23	.375	70.65	.562	104.76	.750	138.30	.500	93.54	.938	171.08	1.156	208.15	1.375	244.37	1.562	274.48	1.781	308.79		
20"	20.000	500	.250	52.78	.375	78.67	.500	104.23	.375	78.67	.594	123.23	.812	166.56	.500	104.23	1.031	209.06	1.281	256.34	1.500	296.65	1.750	341.41	1.969	379.53		
22"	22.000	550	.250	58.13	.375	86.69	.500	114.92	.375	86.69			.875	197.60	.500	114.92	1.125	251.05	1.375	303.16	1.625	353.94	1.875	403.38	2.125	451.49		
24"	24.000	600	.250	63.47	.375	94.71	.562	140.81	.375	94.71	.688	171.45	.969	238.57	.500	125.61	1.219	296.86	1.531	367.74	1.812	429.79	2.062	483.57	2.344	542.64		
26"	26.000	650	.312	85.68	.500	136.30			.375	102.72					.500	136.30												
28"	28.000	700	.312	92.35	.500	146.99	.625	182.90	.375	110.74					.500	146.99												
30"	30.000	750	.312	99.02	.500	157.68	.625	196.26	.375	118.76					.500	157.68												
32"	32.000	800	.312	105.69	.500	168.37	.625	209.62	.375	126.78	.688	230.29			.500	168.37												
34"	34.000	850	.312	112.36	.500	179.06	.625	222.99	.375	134.79	.688	245.00			.500	179.06												
36"	36.000	900	.312	119.03	.500	189.75	.625	236.35	.375	142.81	.750	282.62			.500	189.75												

BOLT REFERENCE CHARTS FOR ASME B16.5 FLANGES

CLASS 150

NPS	Outside Diameter of Flange	Diameter of Bolt Circle	Diameter of Bolt Holes	Number of Bolts	Diameter of Bolts	Length of Stud Bolts [Note (1)]	
						Raised Face 0.06 in	Ring Joint
1/2	3 1/2	2 3/8	5/8	4	1/2	2 1/4	-
3/4	3 7/8	2 3/4	5/8	4	1/2	2 1/2	-
1	4 1/4	3 1/8	5/8	4	1/2	2 1/2	3
1 1/4	4 5/8	3 1/2	5/8	4	1/2	2 3/4	3 1/4
1 1/2	5	3 7/8	5/8	4	1/2	2 3/4	3 1/4
2	6	4 3/4	3/4	4	5/8	3 1/4	3 3/4
2 1/2	7	5 1/2	3/4	4	5/8	3 1/2	4
3	7 1/2	6	3/4	4	5/8	3 1/2	4
3 1/2	8 1/2	7	3/4	8	5/8	3 1/2	4
4	9	7 1/2	3/4	8	5/8	3 1/2	4
5	10	8 1/2	7/8	8	3/4	3 3/4	4 1/4
6	11	9 1/2	7/8	8	3/4	4	4 1/2
8	13 1/2	11 3/4	7/8	8	3/4	4 1/4	4 3/4
10	16	14 3/4	1	12	7/8	4 1/2	5
12	19	17	1	12	7/8	4 3/4	5 1/4
14	21	18 3/4	1 1/8	12	1	5 1/4	5 3/4
16	23 1/2	21 1/4	1 1/8	16	1	5 1/4	5 3/4
18	25	22 3/4	1 1/4	16	1 1/8	5 3/4	6 1/4
20	27 1/2	25	1 1/4	20	1 1/8	6 1/4	6 3/4
24	32	29 1/2	1 1/4	20	1 1/4	6 3/4	7 1/4

Dimensions in Inches

CLASS 300

NPS	Outside Diameter of Flange	Diameter of Bolt Circle	Diameter of Bolt Holes	Number of Bolts	Diameter of Bolts	Length of Stud Bolts [Note (1)]	
						Raised Face 0.06 in	Ring Joint
1/2	3 3/4	2 5/8	5/8	4	1/2	2 1/2	3
3/4	4 5/8	3 1/4	3/4	4	5/8	3	3 1/2
1	4 7/8	3 1/2	3/4	4	5/8	3	3 1/2
1 1/4	5 1/4	3 7/8	3/4	4	5/8	3 1/4	3 3/4
1 1/2	6 1/8	4 1/2	7/8	4	3/4	3 1/2	4
2	6 1/2	5	3/4	8	5/8	3 1/2	4
2 1/2	7 1/2	5 7/8	7/8	8	3/4	4	4 1/2
3	8 1/4	6 5/8	7/8	8	3/4	4 1/4	4 3/4
3 1/2	9	7 1/4	7/8	8	3/4	4 1/4	5
4	10	7 7/8	7/8	8	3/4	4 1/2	5
5	11	9 1/4	7/8	8	3/4	4 3/4	5 1/4
6	12 1/2	10 5/8	7/8	12	3/4	4 3/4	5 1/2
8	15	13	1	12	7/8	5 1/2	6
10	17 1/2	15 1/4	1 1/8	16	1	6 1/4	6 3/4
12	20 1/2	17 3/4	1 1/4	16	1 1/8	6 3/4	7 1/4
14	23	20 1/4	1 1/4	20	1 1/8	7	7 1/2
16	25 1/2	22 1/2	1 3/8	20	1 1/4	7 1/2	8
18	28	24 3/4	1 3/8	24	1 1/4	7 3/4	8 1/4
20	30 1/2	27	1 3/8	24	1 1/4	8	8 3/4
24	36	32	1 5/8	24	1 1/2	9	10

Dimensions in Inches

CLASS 600

NPS	Outside Diameter of Flange	Diameter of Bolt Circle	Diameter of Bolt Holes	Number of Bolts	Diameter of Bolts	Length of Stud Bolts [Note (1)]	
						Raised Face 0.06 in	Ring Joint
1/2	3 3/4	2 5/8	5/8	4	1/2	3	3
3/4	4 5/8	3 1/4	3/4	4	5/8	3 1/2	3 1/2
1	4 7/8	3 1/2	3/4	4	5/8	3 1/2	3 1/2
1 1/4	5 1/4	3 7/8	3/4	4	5/8	3 3/4	3 3/4
1 1/2	6 1/8	4 1/2	7/8	4	3/4	4 1/4	4 1/4
2	6 1/2	5	3/4	8	5/8	4 1/4	4 1/4
2 1/2	7 1/2	5 7/8	7/8	8	3/4	4 3/4	4 3/4
3	8 1/4	6 5/8	7/8	8	3/4	5	5
3 1/2	9	7 1/4	1	8	7/8	5 1/2	5 1/2
4	10 3/4	8 1/2	1	8	7/8	5 3/4	5 3/4
5	13	10 1/2	1 1/8	8	1	6 1/2	6 1/2
6	14	11 1/2	1 1/8	12	1	6 3/4	6 3/4
8	16 1/2	13 3/4	1 1/4	12	1 1/8	7 1/2	7 3/4
10	20	17	1 3/8	16	1 1/4	8 1/2	8 1/2
12	22	19 1/4	1 3/8	20	1 1/4	8 3/4	8 3/4
14	23 3/4	20 3/4	1 1/2	20	1 3/8	9 1/4	9 1/4
16	27	23 3/4	1 5/8	20	1 1/2	10	10
18	29 1/4	25 3/4	1 3/4	20	1 5/8	10 3/4	10 3/4
20	32	28 1/2	1 3/4	24	1 5/8	11 1/4	11 1/2
24	37	33	2	24	1 7/8	13	13 1/4

Dimensions in Inches

API600 TRIM NUMBER REFERENCE CHART

**Data provided in this chart is for informational purposes only. Always consult current API publications to verify information and trim data.*

API TRIM #	MATERIAL	SEAT/	DISC	BACKSEAT	STEM	
1	410/ 13CR	410 (13CR)	410 (13CR)	410 (13CR)	410 (13CR)	
2	304	304	304	304	304	
3	F310	310	310	310	310	
4	HARD 410	HARD 410	HARD 410	410 (13CR)	410 (13CR)	SEATS 750 BHN MIN
5	410 (13CR) / FHF (full hard face)	STELLITE (HF)	STELLITE (HF)	410 (13CR)	410 (13CR)	
5A	410/FHF (NI-CR) (full hard face)	NI-CR	NI-CR	410 (13CR)	410 (13CR)	
6	410 (13CR) AND CU-NI	CU-NI	CU-NI	410 (13CR)	410 (13CR)	
7	410 (13CR) AND HARD 410	HARD 410	HARD 410	410 (13CR)	410 (13CR)	SEATS 750 BHN MIN
8	410 (13CR) / HFS (half hard face)	STELLITE (HF)	410 (13CR)	410 (13CR)	410 (13CR)	
8A	410/HFS (NI-CR) (half hard face)	NI-CR	410 (13CR)	410 (13CR)	410 (13CR)	
9	MONEL	MONEL	MONEL	MONEL	MONEL	
10	316	316	316	316	316	
11	MONEL / HFS (half hard face)	STELLITE (HF)	MONEL	MONEL	MONEL	
12	316 / HFS (half hard face)	STELLITE (HF)	316	316	316	
13	ALLOY 20	ALLOY 20	ALLOY 20	ALLOY 20	ALLOY 20	
14	ALLOY 20 / HFS (half hard face)	STELLITE (HF)	ALLOY 20	ALLOY 20	ALLOY 20	
15	304 / FHF (full hard face)	STELLITE (HF)	STELLITE (HF)	304	304	
16	316 / FHF (full hard face)	STELLITE (HF)	STELLITE (HF)	316	316	
17	347 / FHF (full hard face)	STELLITE (HF)	STELLITE (HF)	347	347	
18	ALLOY 20 / FHF (full hard face)	STELLITE (HF)	STELLITE (HF)	ALLOY 20	ALLOY 20	

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