



Full Hard Temper, TIG welded and drawn, 304 Stainless Steel. All OD/ID/ wall dimensions in inches. Wall dimensions reference only (except fractional sizes) All RW, TW, XT, XX, X & ½ gauges stocked in 316 SS. Metric sizes stocked in 316 SS only. Millions of feet of non standard sizes available or can be made to spec with minimal lead times!

GAUGE	OD	ID	WALL	OD TOL	ID / WALL TOL
16.0 X 15.0	.629	.59	.020	±.0039	±.0039
12.0 X 11.0	.472	.433	.020	±.0039	±.0039
10.0 X 9.0	.393	.354	.020	±.0039	±.0039
3/8 OD X .035	.375	.305	.035	+0.004/-0.002	±10% WALL
3/8 OD X .028	.375	.319	.028	+0.004/-0.002	±10% WALL
3/8 OD X .020	.375	.335	.020	+0.004/-0.002	±10% WALL
3/8 OD X .015	.375	.345	.015	+0.004/-0.002	±10% WALL
3/8 OD X .010	.375	.355	.010	+0.004/-0.002	±10% WALL
8.0 X 7.0	.314	.275	.020	±.0039	±.0039
8.0 X 7.2	.314	.283	.016	±.0039	±.0039
8.0 X 7.5	.314	.295	.010	±.0039	±.0039
5/16 OD X .035	.312	.242	.035	+0.004/-0.002	±10% WALL
5/16 OD X .028	.312	.256	.028	+0.004/-0.002	±10% WALL
5/16 OD X .020	.312	.272	.020	+0.004/-0.002	±10% WALL
5/16 OD X .015	.312	.282	.015	+0.004/-0.002	±10% WALL
5/16 OD X .010	.312	.292	.010	+0.004/-0.002	±10% WALL
9/32 OD X .035	.281	.211	.035	+0.004/-0.002	±10% WALL
9/32 OD X .028	.281	.225	.028	+0.004/-0.002	±10% WALL
9/32 OD X .020	.281	.241	.020	+0.004/-0.002	±10% WALL
9/32 OD X .015	.281	.251	.015	+0.004/-0.002	±10% WALL
9/32 OD X .010	.281	.261	.010	+0.004/-0.002	±10% WALL
9/32 OD X .005	.281	.271	.005	+0.004/-0.002	±10% WALL
7.0 X 6.0	.275	.236	.020	±.0039	±.0039
7.0 X 6.2	.275	.244	.016	±.0039	±.0039
7.0 X 6.5	.275	.255	.010	±.0039	±.0039
3XT	.259	.239	.010	±.002	±.002
3TW	.259	.229	.015	±.002	±.002
3RW	.259	.219	.020	±.002	±.003
1/4 OD X .035	.250	.180	.035	+0.004/-0.002	±10% WALL
1/4 OD X .028	.250	.194	.028	+0.004/-0.002	±10% WALL
1/4 OD X .020	.250	.210	.020	+0.004/-0.002	±10% WALL
1/4 OD X .015	.250	.220	.015	+0.004/-0.002	±10% WALL
1/4 OD X .010	.250	.230	.010	+0.004/-0.002	±10% WALL
1/4 OD X .005	.250	.240	.005	+0.004/-0.002	±10% WALL
3 ½	.249	.219	.015	±.001	±.003
4XT	.238	.218	.010	±.002	±.002
4TW	.238	.208	.015	±.002	±.002
4RW	.238	.198	.020	±.002	±.003
6.0 X 5.0	.236	.196	.020	±.0039	±.0039
6.0 X 5.2	.236	.204	.016	±.0039	±.0039
6.0 X 5.5	.236	.216	.010	±.0039	±.0039
4 ½	.228	.198	.015	±.001	±.003
5XT	.219	.205	.007	±.002	±.002
5TW	.219	.199	.010	±.002	±.002
5RW	.219	.189	.015	±.002	±.003
7/32 OD X .035	.219	.148	.035	+0.004/-0.002	±10% WALL
7/32 OD X .028	.219	.162	.028	+0.004/-0.002	±10% WALL
7/32 OD X .020	.219	.178	.020	+0.004/-0.002	±10% WALL
7/32 OD X .015	.219	.188	.015	+0.004/-0.002	±10% WALL
7/32 OD X .010	.219	.198	.010	+0.004/-0.002	±10% WALL
7/32 OD X .005	.219	.208	.005	+0.004/-0.002	±10% WALL
5 ½	.211	.189	.011	±.001	±.003
6X	.203	.189	.007	±.001	±.002
6TW	.203	.183	.010	±.001	±.002
6RW	.203	.173	.015	±.001	±.003
5.0 X 4.0	.196	.157	.020	±.0039	±.0039
5.0 X 4.2	.196	.165	.016	±.0039	±.0039
5.0 X 4.5	.196	.177	.010	±.0039	±.0039
6 ½	.188	.168	.010	±.001	±.003
3/16 OD X .035	.188	.118	.035	+0.004/-0.002	±10% WALL
3/16 OD X .028	.188	.132	.028	+0.004/-0.002	±10% WALL
3/16 OD X .020	.188	.148	.020	+0.004/-0.002	±10% WALL
3/16 OD X .015	.188	.158	.015	+0.004/-0.002	±10% WALL
3/16 OD X .010	.188	.168	.010	+0.004/-0.002	±10% WALL
3/16 OD X .005	.188	.178	.005	+0.004/-0.002	±10% WALL
7XX	.180	.173	.0035	±.001	±.001

GAUGE	OD	ID	WALL	OD TOL	ID / WALL TOL
7X	.180	.166	.007	±.001	±.002
7TW	.180	.160	.010	±.001	±.002
7RW	.180	.150	.015	±.001	±.003
7HV	.180	.131	.0245	±.001	±.003
7 ½	.172	.150	.011	±.001	±.003
8XXX	.165	.156	.0045	±.001	±.002
8XX	.165	.150	.0075	±.001	±.0025
8TW	.165	.145	.010	±.001	±.002
8RW	.165	.135	.015	±.001	±.003
8HV	.165	.117	.024	±.001	±.003
4.0 X 3.0	.157	.118	.020	±.0039	±.0039
4.0 X 3.2	.157	.125	.016	±.0039	±.0039
4.0 X 3.5	.157	.137	.010	±.0039	±.0039
8 ½	.156	.136	.010	±.001	±.003
5/32 OD X .035	.156	.086	.035	+0.004/-0.002	±10% WALL
5/32 OD X .028	.156	.100	.028	+0.004/-0.002	±10% WALL
5/32 OD X .020	.156	.116	.020	+0.004/-0.002	±10% WALL
5/32 OD X .015	.156	.126	.015	+0.004/-0.002	±10% WALL
5/32 OD X .010	.156	.136	.010	+0.004/-0.002	±10% WALL
5/32 OD X .005	.156	.146	.005	+0.004/-0.002	±10% WALL
9XXX	.148	.137	.0055	±.001	±.002
9XX	.148	.135	.0065	±.001	±.002
9TW	.148	.128	.010	±.001	±.002
9RW	.148	.118	.015	±.001	±.003
9HV	.148	.098	.025	±.001	±.003
9 ½	.141	.119	.011	±.001	±.002
10UT	.134	.122	.006	±.001	±.002
10XT	.134	.118	.008	±.001	±.002
10TW	.134	.114	.010	±.001	±.002
10RW	.134	.106	.014	±.001	±.002
10HV	.134	.100	.017	±.001	±.002
10 ½	.126	.106	.010	±.001	±.002
1/8 OD X .035	.125	.055	.035	+0.004/-0.002	±10% WALL
1/8 OD X .028	.125	.069	.028	+0.004/-0.002	±10% WALL
1/8 OD X .020	.125	.085	.020	+0.004/-0.002	±10% WALL
1/8 OD X .015	.125	.095	.015	+0.004/-0.002	±10% WALL
1/8 OD X .010	.125	.105	.010	+0.004/-0.002	±10% WALL
1/8 OD X .005	.125	.115	.005	+0.004/-0.002	±10% WALL
11XX	.120	.112	.004	±.001	±.002
11X	.120	.106	.007	±.001	±.002
11TW	.120	.100	.010	±.001	±.002
11RW	.120	.094	.013	±.001	±.002
11HV	.120	.090	.015	±.001	±.002
3.0 X 2.0	.118	.078	.020	±.0039	±.0039
3.0 X 2.2	.118	.086	.016	±.0039	±.0039
3.0 X 2.5	.118	.098	.010	±.0039	±.0039
11 ½	.115	.0945	.0103	±.001	±.0015
12XX	.109	.100	.0045	±.001	±.001
12XT	.109	.095	.007	±.001	±.002
12TW	.109	.091	.009	±.001	±.002
12RW	.109	.085	.012	±.001	±.002
12H	.109	.077	.016	±.001	±.002
12 ½	.100	.082	.009	±.001	±.002
13XX	.095	.090	.0025	±.001	±.001
13X	.095	.085	.005	±.001	±.001
13TW	.095	.077	.009	±.001	±.002
13RW	.095	.071	.012	±.001	±.002
13HV	.095	.064	.0155	±.001	±.002
3/32 OD X .035	.0938	.0238	.035	+0.004/-0.002	±10% WALL
3/32 OD X .028	.0938	.0378	.028	+0.004/-0.002	±10% WALL
3/32 OD X .020	.0938	.0538	.020	+0.004/-0.002	±10% WALL
3/32 OD X .015	.0938	.0638	.015	+0.004/-0.002	±10% WALL
3/32 OD X .010	.0938	.0738	.010	+0.004/-0.002	±10% WALL
3/32 OD X .005	.0938	.0838	.005	+0.004/-0.002	±10% WALL
13 ½	.089	.071	.009	±.001	±.002
14XX	.083	.077	.003	±.001	±.001



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GAUGE	OD	ID	WALL	OD TOL	ID / WALL TOL
14UT	.083	.0745	.0043	±.001	±.0015
14XT	.083	.072	.0055	±.001	±.001
14TW	.083	.067	.008	±.001	+0.0015/-0.001
14RW	.083	.063	.010	±.001	±.002
14H	.083	.049	.017	±.001	±.002
14XH	.083	.039	.022	±.001	±.002
14 ½	.078	.063	.0075	±.001	±.001
2.0 X 1.0	.078	.039	.020	±.0039	±.0039
2.0 X 1.2	.078	.047	.016	±.0039	±.0039
2.0 X 1.5	.078	.059	.010	±.0039	±.0039
15XXX	.072	.0695	.0012	±.0005	±.0005
15UT	.072	.0645	.0038	±.0005	±.001
15XTS	.072	.063	.0045	±.0005	±.001
15TW	.072	.060	.006	±.0005	+0.0015/-0.0005
15RW	.072	.054	.009	±.0005	±.0015
15H	.072	.050	.011	±.0005	±.002
15 ½	.068	.054	.007	±.0005	±.0015
16XX	.065	.060	.0025	±.0005	+0.001/-0.0015
16UT	.065	.0575	.0038	±.0005	±.001
16XT	.065	.055	.005	±.0005	+0.0015/-0.0005
16TW	.065	.053	.006	±.0005	+0.0015/-0.0005
16RW	.065	.047	.009	±.0005	±.0015
16H	.065	.033	.016	±.0005	±.002
16 ½	.062	.052	.005	±.0005	±.0015
1/16 OD X .026	.062	.010	.026	+0.004/-0.002	±10% WALL
1/16 OD X .025	.062	.012	.025	+0.004/-0.002	±10% WALL
1/16 OD X .024	.062	.014	.024	+0.004/-0.002	±10% WALL
1/16 OD X .023	.062	.016	.023	+0.004/-0.002	±10% WALL
1/16 OD X .022	.062	.018	.022	+0.004/-0.002	±10% WALL
1/16 OD X .021	.062	.020	.021	+0.004/-0.002	±10% WALL
1/16 OD X .020	.062	.022	.020	+0.004/-0.002	±10% WALL
1/16 OD X .019	.062	.024	.019	+0.004/-0.002	±10% WALL
1/16 OD X .018	.062	.026	.018	+0.004/-0.002	±10% WALL
1/16 OD X .017	.062	.028	.017	+0.004/-0.002	±10% WALL
1/16 OD X .016	.062	.030	.016	+0.004/-0.002	±10% WALL
1/16 OD X .015	.062	.032	.015	+0.004/-0.002	±10% WALL
1/16 OD X .014	.062	.034	.014	+0.004/-0.002	±10% WALL
1/16 OD X .013	.062	.036	.013	+0.004/-0.002	±10% WALL
1/16 OD X .012	.062	.038	.012	+0.004/-0.002	±10% WALL
1/16 OD X .011	.062	.040	.011	+0.004/-0.002	±10% WALL
1/16 OD X .010	.062	.042	.010	+0.004/-0.002	±10% WALL
1/16 OD X .009	.062	.044	.009	+0.004/-0.002	±10% WALL
1/16 OD X .008	.062	.046	.008	+0.004/-0.002	±10% WALL
1/16 OD X .007	.062	.048	.007	+0.004/-0.002	±10% WALL
1/16 OD X .006	.062	.050	.006	+0.004/-0.002	±10% WALL
1/16 OD X .005	.062	.052	.005	+0.004/-0.002	±10% WALL
1/16 OD X .004	.062	.054	.004	+0.004/-0.002	±0.0005 WALL
1/16 OD X .003	.062	.056	.003	+0.004/-0.002	±0.0005 WALL
1/16 OD X .002	.062	.058	.002	+0.004/-0.002	±0.0005 WALL
1/16 OD X .001	.062	.060	.001	+0.004/-0.002	±0.0005 WALL
17XX	.059	.054	.0025	±.0005	+0.001/-0.0005
17SP	.059	.041	.009	±.0005	±.0015
17H	.059	.039	.010	±.0005	±.002
17UTS	.0585	.052	.0033	+0.0005/-0.001	±.001
17XT	.058	.050	.004	±.0005	±.001
17TW	.058	.048	.005	±.0005	+0.0005/-0.0015
17RW	.058	.042	.008	±.0005	±.0015
17 ½	.056	.046	.005	±.0005	±.0015
18XX	.050	.045	.0025	±.0005	±.001
18UTS	.050	.044	.003	+0.001/-0.0005	+0.0015/-0.001
18XT	.050	.042	.004	±.0005	±.001
18TW	.050	.038	.006	±.0005	+0.0015/-0.0005
18RW	.050	.033	.0085	±.0005	±.0015
18H	.050	.030	.010	±.0005	±.002
18 ½	.046	.034	.006	±.0005	±.0015
19XX	.0425	.0375	.0025	±.0005	±.001

GAUGE	OD	ID	WALL	OD TOL	ID / WALL TOL
19H	.0425	.0225	.010	±.0005	±.0015
19XT	.042	.035	.0035	±.0005	±.001
19TW	.042	.032	.005	±.0005	+0.0015/-0.0005
19RW	.042	.027	.0075	±.0005	±.0015
19 ½	.039	.027	.006	±.0005	±.0015
1.0 X 0.5	.039	.019	.010	±.0039	±.0039
20XX	.0355	.0305	.0025	+0.0005/-0	±.001
20XT	.0355	.0275	.004	+0.0005/-0	+0.001/-0.0005
20TW	.0355	.0255	.005	+0.0005/-0	+0.0015/-0
20RW	.0355	.0235	.006	+0.0005/-0	+0.001/-0.0005
20HV	.0355	.0195	.008	+0.0005/-0	±.0015
20 ½	.034	.0265	.0038	+0.0005/-0	±.001
21XX	.032	.029	.0015	+0.0005/-0	+0.0005/-0.001
21XT	.032	.025	.0035	+0.0005/-0	+0.001/-0.0005
21TW	.032	.023	.0045	+0.0005/-0	+0.001/-0.0005
21RW	.032	.020	.006	+0.0005/-0	+0.001/-0.0005
21H	.032	.0165	.0078	+0.0005/-0	±.0015
1/32 OD X .008	.032	.0165	.008	±.001	±10% WALL
1/32 OD X .006	.032	.020	.006	±.001	±10% WALL
1/32 OD X .0045	.032	.023	.0045	±.001	±10% WALL
1/32 OD X .0035	.032	.025	.0035	±.001	±10% WALL
1/32 OD X .0015	.032	.029	.0015	±.001	±10% WALL
21 ½	.030	.024	.003	+0.0005/-0	+0.0005/-0.001
22S	.0285	.006	.0113	±.0005	+0.001/-0.0005
22XX	.028	.0235	.0023	+0.0005/-0	±.0005
22XTS	.028	.021	.0035	+0.0005/-0	+0.001/-0.0005
22TW	.028	.020	.004	+0.0005/-0	+0.0005/-0.001
22RW	.028	.016	.006	+0.0005/-0	+0.001/-0.0005
22 ½	.026	.0205	.0028	+0.0005/-0	+0.0005/-0.001
23HV	.0255	.005	.0103	±.0005	±.001
23XX	.025	.020	.0025	+0.0005/-0	+0.001/-0.0005
23TW	.025	.017	.004	+0.0005/-0	+0.001/-0.0005
23RW	.025	.013	.006	+0.0005/-0	+0.001/-0.0005
23 ½	.023	.0175	.0028	+0.0005/-0	+0.0005/-0.001
24HV	.0225	.005	.0088	±.0005	+0.001/-0.0005
24XX	.022	.016	.003	+0.0005/-0	+0.001/-0.0005
24TW	.022	.014	.004	+0.0005/-0	+0.001/-0.0005
24RW	.022	.012	.005	+0.0005/-0	+0.001/-0.0005
24 ½	.021	.0165	.0023	+0.0005/-0	+0.0005/-0.001
25S	.0205	.006	.0073	±.0005	±.001
25XX	.020	.016	.002	+0.0005/-0	+0.001/-0.0005
25TW	.020	.012	.004	+0.0005/-0	+0.001/-0.0005
25RW	.020	.010	.005	+0.0005/-0	+0.001/-0.0005
25 ½	.019	.0145	.0023	+0.0005/-0	+0.0005/-0.001
26S	.0185	.0045	.007	±.0005	+0.001/-0.0005
26XV	.018	.0135	.0023	+0.0005/-0	+0.001/-0.0005
26TW	.018	.012	.003	+0.0005/-0	+0.001/-0.0005
26RW	.018	.010	.004	+0.0005/-0	+0.001/-0.0005
27XV	.016	.0115	.0023	+0.0005/-0	+0.001/-0.0005
27TW	.016	.010	.003	+0.0005/-0	+0.001/-0.0005
27RW	.016	.008	.004	+0.0005/-0	+0.001/-0.0005
28XV	.014	.0105	.0018	+0.0005/-0	+0.001/-0.0005
28TW	.014	.009	.0025	+0.0005/-0	+0.001/-0.0005
28RW	.014	.007	.0035	+0.0005/-0	+0.001/-0.0005
29RW	.013	.007	.003	+0.0005/-0	+0.001/-0.0005
30RW	.012	.006	.003	+0.0005/-0	+0.001/-0.0005
31RW	.010	.005	.0025	+0.0005/-0	+0.001/-0.0005
32RW	.009	.004	.0025	+0.0005/-0	+0.001/-0.0005
33RW	.008	.004	.002	+0.0005/-0	+0.001/-0.0005
34RW	.007	.003	.002	+0.0005/-0	+0.001/-0.0005
35RW	.005	.002	.0015	+0.0005/-0	+0.001/-0.0005