



# STAINLESS STEEL

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- FLATS
- ROUNDS
- ANGLES
- SQUARES
- SHEETS
- PIPES
- TOLERANCES

# STAINLESS FLATS

## T 304

Sizes in Inches	Est. Wt. Lbs.		Sizes in Inches	Est. Wt. Lbs.	
	Per Foot	12-Ft. Bar		Per Foot	12-Ft. Bar
<b>1/8 x</b>			<b>5/16 x</b>		
1/4	0.1060	1.280	3/8	.3988	4.786
3/8	0.1600	1.910	1/2	.5318	6.382
1/2	0.2127	2.552	5/8	.6647	7.976
5/8	0.2659	3.191	3/4	.7976	9.571
3/4	0.3191	3.829	1	1.064	12.76
7/8	0.3722	4.466	1-1/4	1.329	15.95
1	0.4254	5.105	1-1/2	1.595	19.14
1-1/4	0.5318	6.381	1-3/4	1.861	22.33
1-1/2	0.6381	7.657	2	2.127	25.52
1-3/4	0.7445	8.933	2-1/4	2.393	28.71
2	0.8508	10.21	2-1/2	2.659	31.91
2-1/2	1.064	12.76	2-3/4	2.925	35.10
3	1.276	15.31	3	3.191	38.29
4	1.702	20.42	4	4.254	51.05
6	2.552	30.62	5	5.318	63.82
8			6	6.381	76.57
<b>3/16 x</b>			<b>3/8 x</b>		
1/4	0.1600	1.910	1/2	.6381	7.657
3/8	0.2390	2.870	5/8	.7976	9.571
1/2	0.3191	3.829	3/4	.9572	11.49
5/8	0.3990	4.590	1	1.276	15.31
3/4	0.4786	5.743	1-1/4	1.595	19.14
7/8	0.5563	6.676	1-3/8	1.755	21.06
1	0.6381	7.657	1-1/2	1.914	22.97
1-1/4	0.7976	9.572	1-3/4	2.233	26.80
1-1/2	0.9572	11.49	2	2.552	30.63
1-3/4	1.117	13.40	2-1/4	2.871	34.46
2	1.276	15.31	2-1/2	3.191	38.29
2-1/4	1.436	17.23	2-3/4	3.510	42.11
2-1/2	1.595	19.14	3	3.829	45.94
2-3/4	1.755	21.06	3-1/2	4.467	53.60
3	1.914	22.97	4	5.105	61.26
4	2.552	30.63	4-1/2	5.743	68.91
6	3.829	45.95	5	6.381	76.57
8			5-1/2	7.019	84.23
<b>1/4 x</b>			6	7.657	91.89
3/8	0.3191	3.829	8	10.21	122.5
1/2	0.4254	5.105	<b>1/2 x</b>		
5/8	0.5318	6.381	5/8	1.064	12.77
3/4	0.6381	7.657	3/4	1.276	15.31
7/8	0.7445	8.934	7/8	1.489	17.87
1	0.8508	10.21	1	1.702	20.42
1-1/4	1.064	12.76	1-1/4	2.127	25.52
1-1/2	1.276	15.31	1-1/2	2.552	30.63
1-3/4	1.489	17.87	1-3/4	2.978	35.73
2	1.702	20.42	2	3.403	40.84
2-1/4	1.914	22.97	2-1/4	3.829	45.94
2-1/2	2.127	25.52	2-1/2	4.254	51.05
2-3/4	2.340	28.08	2-3/4	4.679	56.15
3	2.552	30.63			
3-1/2	2.978	35.73			
4	3.403	40.84			
4-1/2	3.829	45.94			
5	4.254	51.05			
6	5.105	61.26			
8	6.806	81.68			

# STAINLESS FLATS

## T 304

Sizes in Inches	Est. Wt. Lbs.		Sizes in Inches	Est. Wt. Lbs.	
	Per Foot	12-Ft. Bar		Per Foot	12-Ft. Bar
<b>1/2x</b>			<b>1x</b>		
3	5.105	61.26	3	10.21	122.5
3-1/4	5.530	66.36	3-1/2	11.91	142.9
3-1/2	5.956	71.47	4	13.61	163.4
3-3/4	6.381	76.57	4-1/2	15.31	183.8
4	6.806	81.68	5	17.02	204.2
4-1/2	7.657	91.98	6	20.42	245.0
5	8.508	102.1	8	27.23	326.7
5-1/2	9.359	112.3	<b>1-1/4x</b>		
6	10.21	122.5	1-1/2	6.381	76.57
8	13.61	163.4	2	8.508	102.1
<b>5/8x</b>			2-1/2	10.64	127.6
3/4	1.595	19.14	3	12.76	153.1
1	2.127	25.52	3-1/2	14.89	178.7
1-1/4	2.659	31.91	4	17.02	204.2
1-1/2	3.191	38.29	5	21.27	255.2
1-3/4	3.722	44.67	6	25.52	306.2
2	4.254	51.05	<b>1-1/2x</b>		
2-1/4	4.786	57.43	1-3/4	8.933	107.2
2-1/2	5.318	63.81	2	10.21	122.5
2-3/4	5.849	70.19	2-1/2	12.76	153.1
3	6.381	76.57	3	15.31	183.8
<b>3/4x</b>			3-1/2	17.87	214.4
1	2.552	30.63	4	20.42	245.0
1-1/4	3.191	38.29	5	25.52	306.2
1-1/2	3.829	45.94	6	30.63	367.6
1-3/4	4.467	53.60	<b>1-3/4x</b>		
2	5.105	61.26	2	11.91	142.9
2-1/4	5.743	68.91	2-1/2	14.89	178.7
2-1/2	6.381	76.57	3	17.87	214.4
2-3/4	7.019	84.23	4	23.82	285.8
3	7.657	91.89	6	35.73	428.8
3-1/2	8.933	107.2	<b>2x</b>		
4	10.21	122.5	2-1/2	17.02	204.2
4-1/2	11.49	137.8	3	20.42	245.0
5	12.76	153.1	4	27.23	326.7
6	15.31	183.8	5	34.04	408.4
8	20.42	245.0	6	40.84	490.1
<b>1x</b>			<b>2-1/2x</b>		
1-1/4	4.254	51.05	3	25.52	306.2
1-1/2	5.105	61.26	4	34.03	408.4
1-3/4	5.956	71.47	5	42.54	510.5
2	6.806	81.68	6	51.05	612.6
2-1/4	7.657	91.89	<b>3x</b>		
2-1/2	8.508	102.1	3-1/2	35.73	428.8
			4	40.84	490.1
			5	51.05	612.6

## STAINLESS ROUNDS T304

### STOCK LENGTHS 12'

Sizes in Inches	Est. Wt. Lbs.		Sizes in Inches	Est. Wt. Lbs.	
	Per Foot	12-Ft. Bar		Per Foot	12-Ft. Bar
1/8	0.0418	0.5012	1-1/2	6.014	72.17
5/32	0.0653	0.7831	1-9/16	6.526	78.31
3/16	0.0940	1.128	1-5/8	7.058	84.70
7/32	0.1279	1.535	1-3/4	8.186	98.23
1/4	0.1671	2.005	1-7/8	9.397	112.8
5/16	0.2610	3.132	2"	10.69	128.3
11/32	0.3158	3.790	2-1/8	12.07	144.8
3/8	0.3759	4.510	2-3/16	12.79	153.5
7/16	0.5116	6.139	2-1/4	13.53	162.4
1/2	0.6682	8.019	2-5/16	14.29	171.5
5/8	1.044	12.53	2-3/8	15.08	180.9
1/2	0.6682	8.019	2-1/2	16.71	200.5
9/16	0.8457	10.15	2-5/8	18.42	221.0
5/8	1.044	12.53	2-3/4	20.21	242.6
11/16	1.263	15.16	2-7/8	22.09	265.1
3/4	1.504	18.04	3"	24.06	288.7
13/16	1.765	21.17	3-1/8	26.10	313.2
7/8	2.046	24.56	3-1/4	28.23	338.8
15/16	2.349	28.19	3-3/8	30.45	365.3
1"	2.673	32.07	3-1/2	32.74	392.9
1-1/16	3.017	36.21	3-5/8	35.12	421.5
1-1/8	3.383	40.59	3-3/4	37.59	451.0
1-3/16	3.769	45.23	3-7/8	40.14	481.6
1-1/4	4.176	50.12	4"	42.77	513.2
1-5/16	4.604	55.25	4-1/4	48.28	579.3
1-3/8	5.053	60.64	4-1/2	54.13	649.5
1-7/16	5.523	66.28	4-5/8	57.18	686.1
			4-3/4	60.31	723.7
			5"	66.82	801.9

## STAINLESS ANGLE

### T 304

Sizes in Inches	Weight Per Ft. Lbs.	Est. Weight Per 20' R
3/4 x 3/4 x 1/8	0.59	11.8
1 x 1 x 1/8	0.80	16.0
1 x 1 x 3/16	1.16	23.2
1 x 1 x 1/4	1.49	29.8
1-1/4 x 1-1/4 x 1/8	1.01	20.2
1-1/4 x 1-1/4 x 3/16	1.48	29.6
1-1/4 x 1-1/4 x 1/4	1.92	38.4
1-1/2 x 1-1/2 x 1/8	1.23	24.6
1-1/2 x 1-1/2 x 3/16	1.80	36.0
1-1/2 x 1-1/2 x 1/4	2.34	46.8
2 x 2 x 1/8	1.65	33.0
2 x 2 x 3/16	2.44	48.8
2 x 2 x 1/4	3.19	63.8
2 x 2 x 3/8	4.70	94.0
2-1/2 x 2-1/2 x 3/16	3.07	61.4
2-1/2 x 2-1/2 x 1/4	4.10	82.0
2-1/2 x 2-1/2 x 3/8	5.90	118.0
3 x 3 x 1/4	4.90	98.0
3 x 3 x 3/8	7.20	144.0
4 x 4 x 1/4	6.60	132.0
4 x 4 x 3/8	9.80	196.0
4 x 4 x 1/2	12.80	256.0

# TYPE 304 SQUARES

## STOCK LENGTHS 10' - 12'

COND. A - ANNEALED

Sizes in Inches	Est. Wt. Lbs.		Sizes in Inches	Est. Wt. Lbs.	
	Per Foot	12-Ft. Bar		Per Foot	12-Ft. Bar
3/16	0.1196	1.436	2	13.61	163.4
1/4	0.2127	2.552	2-1/4	17.23	206.7
5/16	0.3323	3.988	2-1/2	21.27	255.2
3/8	0.4786	5.743	2-3/4	25.74	308.8
7/16	0.6514	7.817	3	30.63	367.5
1/2	0.8508	10.21	3-1/4	35.95	431.4
5/8	1.329	15.95	3-1/2	41.69	500.3
3/4	1.914	22.97	3-3/4	47.86	574.3
7/8	2.606	31.27	4	54.45	653.4
1	3.403	40.84	4-1/2	68.91	827.0
1-1/8	4.307	51.69	5	85.08	1021
1-1/4	5.318	63.81	5-1/2	102.9	1235
1-3/8	6.434	77.21	6	122.5	1470
1-1/2	7.657	91.89			
1-5/8	8.987	107.8			
1-3/4	10.42	125.1			
1-7/8	11.96	143.6			

# STAINLESS SHEETS - T304

## 304 STAINLESS SHEETS

### Annealed (Physical Condition A)

No. 2B Finish - Bright Cold Rolled  
No. 3 Finish - Polished One Side

No. 2D Finish - Dull Cold Rolled  
No. 4 Finish - Polished One Side

Thickness	Width & Length Inches	Est. Wt. Lbs Per Sheet	Thickness	Width & Length Inches	Est. Wt. Lbs Per Sheet	
<b>.016" (28 GA)</b>	.627LB SQ FT		<b>.060" (16 GA)</b>	2.520 LB SQ FT		
	36 x 120	20.2		36 X 96	60.5	
<b>.0161" (27GA)</b>	.676 LB SQ FT			36 X 120	75.6	
	36 x 120	20.3		36 X 144	90.7	
<b>.018" (26 GA)</b>	.756 LB SQ FT			48 X 96	80.6	
	36 x 96	18.1		48 X 120	100.8	
	36 x 120	22.7		48 X 144	121.2	
<b>.020" (25 GA)</b>	.840 LB SQ FT			60 X 120	126.0	
	36 x 120	25.2	<b>.075" (14 GA)</b>	3.150 LB SQ FT		
<b>.024" (24 GA)</b>	1.008 LB SQ FT				36 X 96	75.6
	36 x 96	24.2		36 X 120	94.5	
	36 x 120	30.2		48 X 96	100.8	
	48 x 96	32.3		48 X 120	126.0	
	48 x 120	40.3		48 X 144	151.2	
<b>.030" (22GA)</b>	1.260 LB SQ FT		<b>.090" (13 GA)</b>	3.780 LB SQ FT		
	36 x 96	30.2			36 X 96	90.7
	36 x 120	37.8			36 X 120	113.4
	48 x 96	40.3			48 X 96	121.0
	48 x 120	50.4		48 X 120	151.2	
<b>.0351" (20 GA)</b>	1.474 LB SQ FT		<b>.105" (12 GA)</b>	4.410 LB SQ FT		
	36 x 96	35.4			36 X 96	105.8
	36 x 120	44.2			36 X 120	132.3
	48 x 96	47.2			48 X 96	141.1
	48 x 120	59.0			48 X 120	176.4
<b>.040" (20 GA)</b>	1.680 LB SQ FT			48 X 144	211.7	
	36 x 120	50.4		60 X 144	264.6	
<b>.048" (18 GA)</b>	2.016 LB SQ FT		<b>.120" (11 GA)</b>	5.040 LB SQ FT		
	36 x 96	48.4			36 X 96	121.0
	36 x 120	60.5			36 X 120	151.2
	48 x 96	64.5			48 X 96	161.2
	48 x 120	80.6			48 X 120	201.6
				48 X 144	241.9	
				60 X 120	252.0	
			<b>.135" (10 GA)</b>	5.670 LB SQ FT		
					36 X 96	136.1
					36 X 120	170.1
					48 X 96	181.4
					48 X 120	226.8
				48 X 144	272.2	
				60 X 120	283.5	

## TYPES 302, 304, & 304L PLATES

Hot Rolled, Annealed and Pickled  
Stocked in Thicknesses from 3/16" through 4-1/2"  
Widths from 48" to 96", and lengths up to 20'

# TYPE 304 SQUARES

## STOCK LENGTHS 10' - 12'

### COND. A - ANNEALED

AISI		304		316
ASTM		A312		A312
Nominal Pipe Size	OD (inches)	ID (inches)	Wall Thickness	Pounds (per ft.)
<b>SCHEDULE 10</b>				
1/2	0.840	0.674	0.083	0.671
3/4	1.050	0.884	0.083	0.857
1	1.315	1.097	0.109	1.42
1-1/4	1.660	1.442	0.109	1.806
1-1/2	1.900	1.682	0.109	2.10
2	2.375	2.157	0.109	2.66
3	3.500	3.260	0.120	4.37
4	4.500	4.260	0.120	5.67
5	5.563	5.295	0.134	7.84
6	6.625	6.357	0.134	9.38
<b>SCHEDULE 40</b>				
1/8	0.405	0.269	0.068	0.250
1/4	0.540	0.364	0.088	0.430
3/8	0.675	0.493	0.091	0.570
1/2	0.840	0.622	0.109	0.860
3/4	1.050	0.824	0.113	1.140
1	1.315	1.049	0.133	1.70
1-1/4	1.660	1.380	0.140	2.290
1-1/2	1.900	1.610	0.145	2.740
2	2.375	2.067	0.154	3.700
2-1/2	2.875	2.469	0.203	5.850
3	3.500	3.068	0.216	7.650
4	4.500	4.026	0.237	10.890
5	5.563	5.047	0.258	14.750
6	6.625	6.065	0.280	19.150
<b>SCHEDULE 80</b>				
1/4	0.540	0.302	0.119	0.540
3/8	0.675	0.423	0.126	0.750
1/2	0.840	0.546	0.147	1.100
3/4	1.050	0.742	0.154	1.490
1	1.315	0.957	0.179	2.190
1-1/4	1.660	1.278	0.191	3.030
1-1/2	1.900	1.500	0.200	3.670
2	2.375	1.939	0.218	5.070

# STAINLESS STEEL BAR TOLERANCES

STAINLESS ROUNDS (CF) DRAWN, TURNED OR CENTERLESS GROUND

Specified Size (inches)	Over (inches)	Under (inches)
1/8 up to 5/16	0.001	0.001
5/16 up to 1/2	0.0015	0.0015
1/2 up to 1	0.002	0.002
1 up to 1-1/2	0.0025	0.0025
1-1/2 up to 4	0.003	0.003
4 thru 4-1/2	+0.0310 / +0.0510	
Over 4-1/2 to 6	+0.0310 / +0.0650	
Over 6 to 6-5/8	+0.0520 / +0.0820	
Over 6-3/8 to 6-6/8	+0.0520 / +0.0930	
Over 6-5/8 and up	+0.0625 / +0.1250	

## STAINLESS HEX AND SQUARES (CF)

Specified Size (inches)	Over (inches)	Under (inches)
1/8 up to 5/16	0.000	0.002
5/16 up to 1/2	0.000	0.003
1/2 thru 1	0.000	0.004
Over 1 to 2	0.000	0.006
Over 2 to 3	0.000	0.008
Over 3	0.000	0.010
4 to 4-1/2	+0.0310 / +0.0510	
4-1/2 to 6	+0.0310 / +0.0650	
6 to 6-3/8	+0.0520 / +0.0820	
6-3/8 to 6-5/8	+0.0520 / +0.0930	
6-5/8 and up	+0.0625 / +0.1250	

## STAINLESS STEEL SHEET TOLERANCES

### Thickness

Gage	Nominal Decimal	Tolerance Plus / Minus
10	.1350	.006
11	.1200	.005
12	.1054	.005
13	.0900	.004
14	.0751	.004
16	.0595	.003
18	.0480	.003
19	.0420	.003
20	.0355	.002
22	.0293	.002
24	.0235	.0015
26	.0178	.0015
28	.0151	.0015

## STAINLESS STEEL SHEET TOLERANCES STRETCHER LEVEL FLATNESS

Thickness (inches)	Width (inches)	Length (inches)	Flatness Tolerances
under 3/16	thru 48	up to 96	1/8
under 3/16	thru 48	over 96	1/4
under 3/16	over 48	thru 96	1/4
under 3/16	over 48	over 96	1/4

\*Flatness is defined as maximum deviation from a horizontal flat surface.

## STAINLESS STEEL PLATE TOLERANCES THICKNESS TOLERANCE for Stainless and Heat Resisting Steels

Specified Thickness (inches)	Width (inches)	
	Thru 84	Over 84 thru 120
3/16 up to 3/8	+ .045 / -.010	+ .050 / -.010
3/8 up to 3/4	+ .055 / -.010	+ .060 / -.010
3/4 up to 1	+ .060 / -.010	+ .065 / -.010
1 up to 2	+ .070 / -.010	+ .075 / -.010
2 up to 3	+ .125 / -.010	+ .150 / -.010
3 up to 4	+ .175 / -.010	+ .210 / -.010
4 up to 6	+ .250 / -.010	+ .300 / -.010
6 up to 8	+ .350 / -.010	+ .420 / -.010
8 thru 10	+ .450 / -.010	+ .540 / -.010

## FLATNESS TOLERANCE FOR ANNEALED STAINLESS AND HEAT RESISTING STEEL PLATE

Specified Thickness (inches)	Flatness Tolerance for Thickness & Widths				
	Width (inches)				
	Up thru 48	Over 48 up to 60	60 up to 72	72 up to 84	84 thru 96
3/16 up to 1/4	3/4	1-1/16	1-1/4	1-3/8	1-5/8
1/4 up to 3/8	11/16	3/4	15/16	1-1/8	1-3/8
3/8 up to 1/2	1/2	9/16	11/16	3/4	15/16
1/2 up to 3/4	1/2	9/16	5/8	5/8	13/16
3/4 up to 1	1/2	9/16	5/8	5/8	3/4
1 up to 1-1/2	1/2	9/16	9/16	9/16	11/16
1-1/2 up to 4	3/16	5/16	3/8	7/16	1/2
4 thru 6	1/4	3/8	1/2	9/16	5/8

## STAINLESS STEEL FLATS TOLERANCES SHEARED AND EDGED

Thickness	Width (any)
1/8 +.010 -.005	+ .031 -.031
3/16 +.025 -.010	+ .031 -.031
1/4 +.025 -.010	+ .031 -.031
3/8 +.060 -.010	+ .125 -.000
1/2 +.060 -.010	+ .125 -.000

### TRUE BAR

	Thickness Tolerances, Inches for Thicknesses Given, Over and Under			Width Tolerance (Inches)	
	1/8 thru 1/2	Over 1/2 thru 1	Over 1 thru 2	Over	Under
<b>Up thru 1</b>	0.008	0.010	-	0.015	0.015
<b>Over 1 thru 2</b>	0.012	0.015	0.031	0.031	0.031
<b>Over 2 thru 4</b>	0.015	0.020	0.031	0.062	0.031
<b>Over 4 thru 6</b>	0.015	0.020	0.031	0.093	0.062
<b>Over 6 thru 8</b>	0.016	0.025	0.031	0.125	0.156
<b>Over 8 thru 10</b>	0.021	0.031	0.031	0.156	0.187

### STAINLESS STEEL BAR TOLERANCES

Angles	
<b>Leg Tolerance (Length)</b>	+ / - 1/8"
<b>Weight Tolerance</b>	+ / - 7-1/2%
<b>Right Angle Tolerance</b>	+ / - 2°
<b>Straightness or Camber</b>	1/8" in 5'

### STAINLESS STEEL CHANNEL TOLERANCES

#### Section (Leg Tolerance)

Under 1" (Total) ..... 0.040

1" - 3" incl ..... 0.062

3" - 4" incl ..... 0.093

Over 4" ..... 0.125

.....

**Angular** ..... +/- 2"

**Corner Radii** ..... 1/4 or less

**Leg Radii** ..... 1/4 or less

**Transverse Flatness** ..... .010" per inch of width, .050" max.

**Length** .....

Up to 12' incl. ....

To 3' wide section .....

Over 3" to 6" incl. .... + 3/16 - .0

Over 6" ..... + 1/4 - .0

#### Over 12'

To 3" wide section ..... + 3/16 - .0

Over 3" to 6" incl ..... + 1/4 - .0

Over 6" ..... + 5/16 - .0

#### Camber

1/8 in any 5 feet, but not to exceed:

$$1/8 \times \frac{\# \text{ of ft in length}}{5}$$

#### Twist .....

**Width of Section** ..... Rise in 5ft.

1/2" to 1-1/2" incl. .... 1/8"

Over 1-1/2" to 4" incl. .... 3/16"

Over 4" ..... 5/16"