

## STAINLESS PLATES

### RECOMMENDED MACHINING ALLOWANCES FLAME CUT PLATES

Including Circles, Rings, and Sketched  
Stainless and Heat Resisting Steels  
(ASTM A480)

Specified Thickness, In. (mm)	Machining Allowance Per Edge, Inc. (mm)	
2 (50.80) and under	1/4	(6.35)
Over 2 (50.80) to 3 (76.20), incl.	3/8	(9.52)
Over 3 (76.20) to 6 (152.4), incl.	1/2	(12.70)

The above minimum recommended machining allowances are to be added by the purchaser to each edge on all flame cut plates.

### DIAGONAL (SHEARED MILL PLATES)

THICKNESS Inches	DIAGONAL Inches
3/16 to 1/2 incl. . . . .	3/16 max.
Over 1/2 to 3/4 incl. . . . .	1/4 max.
Over 3/4 to 1 incl. . . . .	3/8 max.

### ABRASIVE CUT PLATES

THICKNESS Inches	PLUS or MINUS Inches
1 1/4 and under . . . . .	1/16
Over 1 1/4 . . . . .	1/8

### EDGE MACHINED PLATES

THICKNESS Inches	PLUS or MINUS Inches
1 1/4 and under . . . . .	1/16
Over 1 1/4 to 2 1/2 . . . . .	1/8
Over 2 1/2 . . . . .	On Application

## STAINLESS STEEL PLATES

### STANDARD SIZES - BILLING WEIGHTS\*

Size	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"
<i>Lb. Per Sq. Ft.</i>	8.579	11.162	13.746	16.496	21.663	26.831	32.123	42.665
36 x 96	205.90	267.89	329.90	395.90	519.91	643.94	770.95	1023.96
36 x 120	257.37	334.86	412.38	494.88	649.89	804.93	963.69	1279.95
48 x 96	274.53	357.18	439.87	527.87	693.22	858.59	1027.94	1366.28
48 x 120	343.16	446.48	549.84	659.84	866.52	1073.24	1284.92	1706.60
48 x 144	411.79	535.78	659.81	791.81	1039.82	1287.89	1541.90	2047.92
48 x 240	686.32	892.96	1099.68	1319.68	1733.04	2146.48	2569.84	-----
60 x 120	428.95	558.10	687.30	824.80	1083.15	1341.55	1606.15	2133.25
60 x 144	514.74	669.72	824.76	989.76	1299.78	1609.86	1927.38	2559.90
60 x 240	857.90	1116.20	1374.60	1649.60	2166.30	2683.10	3212.30	-----
72 x 120	517.74	669.72	824.76	989.76	1299.78	1609.86	1927.38	2559.90
72 x 144	617.68	803.66	988.71	1187.71	1559.74	1931.83	2312.86	3071.88
72 x 240	1029.48	1339.44	1649.52	1979.52	2599.56	3219.72	-----	-----
84 x 120	600.53	781.34	962.22	1154.72	1516.41	1878.17	2248.61	2986.55
84 x 144	720.64	937.61	1154.66	1385.66	1819.69	2253.80	2698.33	-----
84 x 240	1201.06	1562.68	1924.44	2309.44	3032.82	-----	-----	-----

#### Billing Weights\* Chromium Nickel Grades

The above Table shows the Plate Weights for various commonly ordered Plate Thicknesses which will be used for billing purposes. Plates will be billed at these Weights; therefore, it is recommended that these Weights be used for estimating purposes.

For plates over 1 inch to 2 inches in thickness, Billing Weights are calculated by using the factor of .2871 of a pound per cubic inch based on ordered gauge plus the tolerance factor of .032 of an inch.

Note: When computing square feet use three figures beyond decimal. When computing cubic inches, use four figures beyond decimal. Adjust all Billing Weights to nearest full pounds.

## STAINLESS STEEL PLATES

### Standard Manufacturing Tolerances Thickness Tolerances

<i>Specified thickness—inches</i>	<i>Thickness Tolerance—Over Variation*—Inches</i>	
	<i>Widths to 84 Inches Incl.</i>	<i>Widths Over 84 Inches to 120 Inches Incl.</i>
3/16 to 3/8 excl.	.046	.050
3/8 to 3/4 excl.	.054	.058
3/4 to 1 excl.	.060	.064
1 to 2 incl.	.070	.074

\*No plate shall vary more than 0.01" under the thickness ordered. Spot grinding not to exceed 0.01" under the specified thickness is permitted to remove surface imperfections.

### Standard Manufacturing Tolerances Flatness

<i>Specified thickness, inches</i>	<i>Variations from a flat surface for thickness and widths given, inches</i>									
	<i>48 or under</i>	<i>48 excl. to 60 excl.</i>	<i>60 to 72 excl.</i>	<i>72 to 84 excl.</i>	<i>84 to 96 excl.</i>	<i>96 to 108 excl.</i>	<i>108 to 144 excl.</i>	<i>120 to 144 excl.</i>	<i>144 and over</i>	
3/16 to 1/4, excl.	3/4	1 1/16	1 1/4	1 3/8	1 5/8	1 5/8	1 7/8	2		
1/4 to 3/8, excl.	11/16	3/4	15/16	1 1/8	1 3/8	1 7/16	1 9/16	1 7/8		
3/8 to 1/2, excl.	1/2	9/16	11/16	3/4	15/16	1 1/8	1 1/4	1 7/16	1 3/4	
1/2 to 3/4, excl.	1/2	9/16	5/8	5/8	13/16	1 1/8	1 1/8	1 1/8	1 3/8	
3/4 to 1, excl.	1/2	9/16	5/8	5/8	3/4	13/16	15/16	1	1 1/8	
1 to 1 1/2, excl.	1/2	9/16	9/16	9/16	11/16	11/16	11/16	3/4	1	
1 1/2 to 4, excl.	3/16	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	
4 to 6, excl.	1/4	3/8	1/2	9/16	5/8	3/4	7/8	1	1 1/8	

Permissible variations in above table apply to plates up to 15 ft. length, or to any 15 ft. of longer plates.

If the longer dimension is under 36 in. the permissible variation shall not be greater than 1/4 in.

The shorter dimension specified shall be considered the width and the permissible variation in flatness across the width shall not exceed the tabular amount for that dimension.

The maximum deviation from a flat surface does not customarily exceed the tabular tolerance for the long dimension specified.

### Width and Length Tolerances Sheared

<i>Specified dimensions inches</i>		<i>Variations in inches over specified width and length for thicknesses</i>					
<i>Widths</i>	<i>Lgths.</i>	<i>Under 3/8</i>		<i>3/8 to 1/2 incl.</i>		<i>Over 1/2</i>	
		<i>Width</i>	<i>Lgth.</i>	<i>Width</i>	<i>Lgth.</i>	<i>Width</i>	<i>Lgth.</i>
48 and Under . . . . .	144	1/8	3/16	3/16	1/4	5/16	3/8
Over 48 to 60 incl. . . . .	and	3/16	1/4	1/4	5/16	3/8	7/16
Over 60 to 84 incl. . . . .	Under	1/4	5/16	5/16	3/8	7/16	1/2
Over 84 to 108 incl. . . . .		5/16	3/8	3/8	7/16	1/2	9/16
Over 108 . . . . .		3/8	7/16	7/16	1/2	5/8	11/16
48 and Under . . . . .	Over	3/16	3/8	1/4	1/2	5/16	5/8
Over 48 to 60 incl. . . . .	144	1/4	7/16	5/16	5/8	3/8	3/4
Over 60 to 84 incl. . . . .	to	3/8	1/2	7/16	11/16	1/2	3/4
Over 84 to 108 incl. . . . .	240	7/16	9/16	1/2	3/4	5/8	7/8
Over 108 . . . . .		1/2	5/8	5/8	7/8	11/16	1
48 and Under . . . . .	Over	1/4	1/2	5/16	5/8	3/8	3/4
Over 48 to 60 incl. . . . .	240	5/16	5/8	3/8	3/4	1/2	3/4
Over 60 to 84 incl. . . . .	to	7/16	11/16	1/2	3/4	5/8	7/8
Over 84 to 108 incl. . . . .	360	9/16	3/4	5/8	7/8	3/4	1
Over 108 . . . . .		5/8	7/8	11/16	1	7/8	1

Permissible variation under specified width and length, 1/4 inch.

$$\text{Camber} = \frac{1}{8} \text{ in.} \times \frac{\text{Number of feet of length}}{5}$$

### Sheared Circular Plates

<i>Specified diameter, inches</i>	<i>Permissible variation over specified diameter for thicknesses given, inch</i>		
	<i>To 3/8, excl.</i>	<i>3/8 to 5/8 excl.</i>	<i>5/8 and over*</i>
To 60, excl. . . . .	1/4	3/8	1/2
60 to 84, excl. . . . .	5/16	7/16	9/16
84 to 108, excl. . . . .	3/8	1/2	5/8
108 to 130, excl. . . . .	7/16	9/16	11/16

No permissible variation under.

\*Circular and sketch plates over 5/8" in thickness are not commonly sheared and are machined or otherwise cut.