

STANDARD MILL PRACTICE

Rectangular sheared plates and Universal mill plates

WIDTH AND LENGTH TOLERANCE FOR SHEARED PLATES (1½ in. and under in thickness)

LENGTH TOLERANCE ONLY FOR UNIVERSAL MILL PLATES (2½ in. and under in thickness)

Specified Dimensions, In.		Variations over Specified Width and Length for Thicknesses, In., and Equivalent Weights, lb. per sq. ft. Given							
Length	Width	To ¾ excl.		¾ to 5/8, excl.		5/8 to 1, excl.		1 to 2, incl. ^a	
		To 15.3, exc.		15.3 to 25.5, excl.		25.5 to 40.8, excl.		40.8 to 81.7, Incl.	
		Width	Length	Width	Length	Width	Length	Width	Length
To 120, excl.	To 60 excl.	3/8	1/2	7/16	5/8	1/2	3/4	5/8	1
	60 to 84, excl.	7/16	5/8	1/2	11/16	5/8	7/8	3/4	1
	84 to 108, excl.	1/2	3/4	5/8	7/8	3/4	1	1	1 1/8
	108 and over	5/8	7/8	3/4	1	7/8	1 1/8	1 1/8	1 1/4
120 to 240, excl.	To 60 excl.	3/8	3/4	1/2	7/8	5/8	1	3/4	1 1/8
	60 to 84, excl.	1/2	3/4	5/8	7/8	3/4	1	7/8	1 1/4
	84 to 108, excl.	9/16	7/8	11/16	15/16	13/16	1 1/8	1	1 3/8
	108 and over	5/8	1	3/4	1 1/8	7/8	1 1/4	1 1/8	1 3/8
240 to 360, excl.	To 60 excl.	3/8	1	1/2	1 1/8	5/8	1 1/4	3/4	1 1/2
	60 to 84, excl.	1/2	1	5/8	1 1/8	3/4	1 1/4	7/8	1 1/2
	84 to 108, excl.	9/16	1	11/16	1 1/8	7/8	1 3/8	1	1 1/2
	108 and over	11/16	1 1/8	7/8	1 1/4	1	1 3/8	1 1/4	1 3/4
360 to 480, excl.	To 60 excl.	7/16	1 1/8	1/2	1 1/4	5/8	1 3/8	3/4	1 5/8
	60 to 84, excl.	1/2	1 1/4	5/8	1 3/8	3/4	1 1/2	7/8	1 5/8
	84 to 108, excl.	9/16	1 1/4	3/4	1 3/8	7/8	1 1/2	1	1 7/8
	108 and over	3/4	1 3/8	7/8	1 1/2	1	1 5/8	1 1/4	1 7/8
480 to 600, excl.	To 60 excl.	7/16	1 1/4	1/2	1 1/2	5/8	1 5/8	3/4	1 7/8
	60 to 84, excl.	1/2	1 3/8	5/8	1 1/2	3/4	1 5/8	7/8	1 7/8
	84 to 108, excl.	5/8	1 3/8	3/4	1 1/2	7/8	1 5/8	1	1 7/8
	108 and over	3/4	1 1/2	7/8	1 5/8	1	1 3/4	1 1/4	1 7/8
600 to 720, excl.	To 60 excl.	1/2	1 3/4	5/8	1 7/8	3/4	1 7/8	7/8	2 1/4
	60 to 84, excl.	5/8	1 3/4	3/4	1 7/8	7/8	1 7/8	1	2 1/4
	84 to 108, excl.	5/8	1 3/4	3/4	1 7/8	7/8	1 7/8	1 1/8	2 1/4
	108 and over	7/8	1 3/4	1	2	1 1/8	2 1/4	1 1/4	2 1/2
720 and over	To 60 excl.	9/16	2	3/4	2 1/8	7/8	2 1/4	1	2 3/4
	60 to 84, excl.	3/4	2	7/8	2 1/8	1	2 1/4	1 1/8	2 3/4
	84 to 108, excl.	3/4	2	7/8	2 1/8	1	2 1/4	1 1/4	2 3/4
	108 and over	1	2	1 1/8	2 3/8	1 1/4	2 1/2	1 3/8	3

^aPermissible variations in length apply also to Universal Mill plates up to 12 in. in width for thicknesses over 2 to 2½ in., incl. except for alloy steels up to 2¾ in. thick.

Notes: Permissible variations under specified width and length, 1/4 in. Table applies to all steels listed in ASTM A6.

WIDTH TOLERANCE FOR UNIVERSAL MILL PLATES (15 in. and under in thickness)

Specified Width In.	Variations Over Specified Width for Thickness, in., and Equivalent Weights, lb. per sq. ft. Given					
	To ¾, excl.	¾ to 5/8, excl.	5/8 to 1, excl.	1 to 2 Incl.	Over 2 to 10 Incl.	Over 10 to 15 Incl.
	To 15.3, excl.	15.3 to 25.5, excl.	25.5 to 40.8, excl.	40.8 to 81.7 incl.	81.7 to 409.0 incl.	409.0 to 613.0, incl.
Over 8 to 20 excl.	1/8	1/8	3/16	1/4	5/8	1/2
20 to 36, excl.	3/16	1/4	5/16	3/8	7/16	9/16
36 and over	5/16	3/8	7/16	1/2	9/16	5/8

Notes: Permissible variation under specified width, 1/8 in. Table applies to all steels listed in ASTM A6.

CAMBER TOLERANCE FOR CARBON STEEL SHEARED AND GAS CUT RECTANGULAR PLATES

Maximum permissible camber, in. (all thicknesses) = 1/8 in. x (total length, ft./5)

CAMBER TOLERANCE FOR CARBON STEEL UNIVERSAL MILL PLATES, HIGH-STRENGTH AND HIGH-STRENGTH LOW—ALLOY STEEL SHEARED AND GAS CUT RECTANGULAR PLATES, UNIVERSAL MILL PLATES, SPECIAL CUT PLATES

Dimension in.		Camber for Thicknesses and Widths Given
Thickness	Width	
To 2, incl.	All	1/8 in. x (total length, ft./5)
Over 2 to 15, incl.	To 30, incl.	3/16 in. x (total length, ft./5)
Over 2 to 15, incl.	Over 30 to 60, incl.	1/2 in. x (total length, ft./t)

FLATNESS TOLERANCES (CARBON STEEL ONLY)

Specified Thickness, in.	Flatness Tolerances for Specified Widths, In.							
	To 36, excl.	36 to 48, excl.	48 to 60, excl.	60 to 72, excl.	72 to 84, excl.	84 to 96, excl.	96 to 108, excl.	108 to 120, excl.
To 1/4, excl.	9/16	3/4	15/16	1 1/4	1 3/8	1 1/2	1 5/8	1 3/4
1/4 to 3/8, excl.	1/2	5/8	3/4	15/16	1 1/8	1 1/4	1 3/8	1 1/2
3/8 to 1/2, excl.	1/2	5/8	3/4	15/16	1 1/8	1 1/4	1 3/8	1 1/2
1/2 to 3/4, excl.	7/16	1/2	9/16	5/8	7/8	1	1 1/8	1
3/4 to 1, excl.	7/16	1/2	9/16	5/8	7/8	1	1 1/8	1
1 to 2, excl.	3/8	1/2	1/2	9/16	9/16	5/8	5/8	5/8
2 to 4, excl.	5/16	3/8	7/16	1/2	1/2	1/2	1/2	9/16
4 to 6, excl.	3/8	7/16	1/2	1/2	9/16	9/16	5/8	3/4
6 to 8, excl.	7/16	1/2	1/2	5/8	11/16	3/4	7/8	7/8

General Notes:

- The longer dimension specified is considered the length, and permissible variations in flatness along the length should not exceed the tabular amount for the specified width in plates up to 12 ft. in length.
- The flatness variations across the width should not exceed the tabular amount for the specified width.
- When the longer dimension is under 36 in., the permissible variation should not exceed 1/4 in. When the longer dimension is from 36 to 72 in., incl., the permissible variation should not exceed 75% of the tabular amount for the specified width, but in no case less than 1/4 in.
- These variations apply to plates which have a specified minimum tensile strength of not more than 60,000 psi or compatible chemistry or hardness. The limits in the table are increased 50% for plate specified to a higher minimum tensile strength or compatible chemistry or hardness.

FLATNESS TOLERANCES (HIGH-STRENGTH LOW ALLOY AND ALLOY STEEL, HOT ROLLED OR THERMALLY TREATED)

Specified Thickness, in.	Flatness Tolerances for Specified Widths, In.							
	To 36, excl.	36 to 48, excl.	48 to 60, excl.	60 to 72, excl.	72 to 84, excl.	84 to 96, excl.	96 to 108, excl.	108 to 120, excl.
To 1/4, excl.	13/16	1 1/8	1 7/8	2	2 1/4	2 5/8	2 5/8	2 1/4
1/4 to 3/8, excl.	3/4	15/16	1 1/8	1 3/8	1 3/4	1 7/8	2	2 1/4
3/8 to 1/2, excl.	3/4	7/8	15/16	15/16	1 1/8	1 5/16	1 1/2	1 5/8
1/2 to 3/4, excl.	5/8	3/4	13/16	7/8	1	1 1/8	1 1/4	1 3/8
3/4 to 1, excl.	5/8	3/4	7/8	7/8	15/16	1	1 1/8	1 5/16
1 to 2, excl.	9/16	5/8	3/4	13/16	7/8	15/16	1	1
2 to 4, excl.	1/2	9/16	11/16	3/4	3/4	3/4	3/4	7/8
4 to 6, excl.	9/16	11/16	3/4	3/4	7/8	7/8	15/16	1 1/8
6 to 8, excl.	5/8	3/4	3/4	15/16	1	1 1/8	1 1/4	1 5/16

General Notes:

- The longer dimension specified is considered the length, and variations from a flat surface along the length should not exceed the tabular amount for the specified width in plates up to 12 ft. in length.
- The flatness variation across the width should not exceed the tabular amount for the specified width.
- When the longer dimension is under 36 in., the variation should not exceed 3/8 in. When the larger dimension is from 36 to 72 in. incl. the variation should not exceed 75% of the tabular amount for the specified width.