

**TABLE 15 Forged Flat Bars
(Width Tolerances)**

Specified Widths, in. (mm)	Width Tolerances, in. (mm)	
	Under	Over
Over 1 to 3 (25.4 to 76), incl	0.031 (0.79)	0.078 (1.98)
Over 3 to 5 (76 to 127), incl	0.062 (1.57)	0.125 (3.18)
Over 5 to 7 (127 to 178), incl	0.125 (3.18)	0.187 (4.75)
Over 7 to 9 (178 to 229), incl	0.187 (4.75)	0.312 (7.92)

Specified Widths, in. (mm)	Thickness Tolerances for Specified Thicknesses, in. (mm)									
	To 1 (25.4), incl		Over 1 to 3 (25.4 to 76), incl		Over 3 to 5 (76 to 127), incl		Over 5 to 7 (127 to 178), incl		Over 7 to 9 (178 to 229), incl	
	Under	Over	Under	Over	Under	Over	Under	Over	Under	Over
Over 1 to 3 (25.4 to 76), incl	0.016 (0.41)	0.031 (0.79)	0.031 (0.79)	0.078 (1.98)	...	...	...	...	...	...
Over 3 to 5 (76 to 127), incl	0.031 (0.79)	0.062 (1.57)	0.047 (1.19)	0.094 (2.39)	0.062 (1.57)	0.125 (3.18)	...	...	...	...
Over 5 to 7 (127 to 178), incl	0.047 (1.19)	0.094 (2.39)	0.062 (1.57)	0.125 (3.18)	0.078 (1.98)	0.156 (3.96)	0.125 (3.18)	0.187 (4.75)	...	...
Over 7 to 9 (178 to 229), incl	0.062 (1.57)	0.125 (3.18)	0.078 (1.98)	0.156 (3.96)	0.094 (2.39)	0.187 (4.75)	0.156 (3.96)	0.219 (5.56)	0.187 (4.75)	0.312 (7.92)

**TABLE 16 Cold Drawn Square and Flat Bars
(Size Tolerances)**

Size Range, in. (mm)	Tolerance, in. (mm) Plus and Minus
¼ to ¾ (6.4 to 19.1), incl	0.002 (0.05)
Over ¾ to 1½ (19.1 to 38.1), incl	0.003 (0.08)
Over 1½ (38.1)	0.004 (0.10)

**TABLE 17 Drill Rod, Rounds, Polished or Ground
(Size Tolerances)^A**

NOTE—Out-of-round to be ½ of total tolerance maximum.

Specified Size, in. (mm)	Standard Manufacturing Tolerance, in. (mm), plus and minus	Precision Tolerance, in. (mm), plus and minus
Up to 0.124 (3.15), incl	0.0003 (0.008)	0.0002 (0.005)
0.125 to 0.499 (3.18 to 12.7), incl	0.0005 (0.013)	0.00025 (0.006)
0.500 to 1.500 (12.7 to 38.1), incl	0.001 (0.025)	0.0005 (0.013)

^A Out-of-round tolerances to be one half of the total tolerance.

**TABLE 18 Drill Rod, Shapes Other than Rounds, Cold Drawn
(Size Tolerances)^A**

Specified Size, in. (mm)	Tolerances, in. (mm), plus and minus
Up to ¼ (6.4), excl	0.0005 (0.013)
¼ to ¾ (6.4 to 19.0), excl	0.001 (0.025)
¾ to 1 (19.0 to 25.4), incl	0.0015 (0.038)

^A Out-of-round tolerances to be one half of the total tolerance.

**TABLE 19 Precision Ground Square and Flat Bars
(Thickness and Width Tolerances)**

NOTE—Surface Finish, 35 µin. (0.89 µm) rms maximum. Free of decarburization.

Thickness, in. (mm)	Tolerance, in. (mm)	
	Under	Over
Thickness		
Up to ¼ (31.8), incl	0.001 (0.03)	0.001 (0.03)
Over ¼ to 2 (31.8 to 50.8), incl	0.002 (0.05)	0.002 (0.05)
Width		
½ to 14 (12.7 to 355.6), incl	0.000	0.005 (0.13)

**TABLE 20 Hot-Rolled or Forged Bars and Billets
(Tolerances for Machine Cut Lengths)**

Specified Sizes Apply to Rounds, Squares, Hexagons, Octagons, and Width of Flats, in. (mm)	Tolerances for Specified Lengths, 14 ft (4.27 m) max, in. (mm)	
	Over	Under
To 9 (229), incl	⅜ (9.5)	0
Over 9 to 12 (229 to 305), incl	½ (12.7)	0
Over 12 to 18 (305 to 457), incl	¾ (19.1)	0
Over 18 (457)	1 (25.4)	0