

TOLERANCE GRADES FOR COLD FINISHED BARS

ISO Tolerances

The tolerances shown below are normally applied to metric sizes of drawn, turned and ground finish bright steel bars.

TOLERANCES IN MILLIMETRES

The total tolerance is taken as plus zero, minus the following;

Nominal Sizes in mm	h11 Turned & Polished square / hex / flat	h10 Cold Drawn	h9 Cold Drawn	h8 Precision Ground	h7 Precision Ground
> 1 to 3	0.060	0.040	0.025	0.014	0.010
> 3 to 6	0.075	0.048	0.030	0.018	0.012
> 6 to 10	0.090	0.058	0.036	0.022	0.015
> 10 to 18	0.110	0.070	0.043	0.027	0.018
> 18 to 30	0.130	0.084	0.052	0.033	0.021
> 30 to 50	0.160	0.100	0.062	0.039	0.025
> 50 to 80	0.190	0.120	0.074	0.046	0.030
> 80 to 120	0.220	0.140	0.087	0.054	0.035
> 120 to 180	0.250	0.160	0.100	0.063	0.040
> 180 to 250	0.290	0.185	0.115	0.072	0.046
> 250 to 315	0.320	0.210	0.130	0.081	0.052

TOLERANCES IN INCHES

The total tolerance is taken as plus zero, minus the following;

Nominal Sizes in inches	h11 Turned & Polished square / hex / flat	h10 Cold Drawn	h9 Cold Drawn	h8 Precision Ground	h7 Precision Ground
> 3/64 to 1/8	0.00240	0.00157	0.00098	0.00055	0.00039
> 1/8 to 15/64	0.00295	0.00189	0.00118	0.00071	0.00047
> 15/64 to 25/64	0.00354	0.00228	0.00142	0.00087	0.00059
> 25/64 to 45/64	0.00433	0.00275	0.00169	0.00106	0.00071
> 45/64 to 1 3/16	0.00511	0.00331	0.00205	0.00130	0.00082
> 1 3/16 to 2	0.00629	0.00393	0.00224	0.00153	0.00098
> 2 to 3 1/8	0.00748	0.00474	0.00291	0.00181	0.00118
> 3 1/8 to 4 3/4	0.00866	0.00551	0.00342	0.00213	0.00137
> 4 to 7 3/32	0.00984	0.00629	0.00393	0.00248	0.00157