ISO Dimensional Tolerances for Bar

Nominal Bar Size (mm)	Tolerance Class								
	6*	7*	8	9	10	11	12	13	14*
Up to 3	0.006	0.010	0.014	0.025	0.040	0.060	0.10	0.14	0.25
Over 3 to 6	0.008	0.012	0.018	0.030	0.048	0.075	0.12	0.18	0.30
Over 6 to 10	0.009	0.015	0.022	0.036	0.058	0.090	0.15	0.22	0.36
Over 10 to 18	0.011	0.018	0.027	0.043	0.070	0.110	0.18	0.27	0.43
Over 18 to 30	0.013	0.021	0.033	0.052	0.084	0.130	0.21	0.33	0.52
Over 30 to 50	0.016	0.025	0.039	0.062	0.100	0.160	0.25	0.39	0.62
Over 50 to 80	0.019	0.030	0.046	0.074	0.120	0.190	0.30	0.46	0.74
Over 80 to 120	0.022	0.035	0.054	0.087	0.140	0.220	0.35	0.54	0.87
Over 120 to 180	0.025	0.040	0.063	0.100	0.160	0.250	0.40	0.63	1.00
Over 180 to 250	0.029	0.046	0.072	0.115	0.185	0.290	0.46	0.72	1.15
Over 250 to 315	0.032	0.052	0.081	0.130	0.210	0.320	0.52	0.81	1.30
Over 315 to 400	0.036	0.057	0.089	0.140	0.230	0.360	0.57	0.89	1.40
Over 400 to 500	0.040	0.063	0.097	0.155	0.250	0.400	0.63	0.97	1.55

Notes

Units are millimetres.

h = all minus, k = all plus.

* This table shows h tolerances across all tolerance classes.
k tolerances are in accordance with this table for tolerances classes k8 to k13 only.
k tolerances are not standardised for k14 and above.

Tolerances are for shafts as per AS 1654.2 – 1995 / ISO 286-2:1988. The standard should be consulted for tolerances beyond the size and class range of this table for other letter tolerances.

Example

25.40mm diameter bright drawn bar to h9 tolerance = +nil, -0.052mm

90mm diameter peeled bar to k12 tolerance = +0.35mm, -nil

References

AS 1654.2 – 1995 / ISO 286-2:1988 “ISO system of limits and fits. Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts”.