

Tolerance Tables

Straightness Tolerance Table

Specified Diameters of Shafting — Over 15/16 inches (23.8mm) to 8 inches (203.2mm)
 Roller supports to be placed 2 inches from each end.

| SPECIFIED LENGTH OF BAR FEET (METERS) | INDUSTRY STANDARD (THROW IN ONE REVOLUTION FROM STRAIGHTNESS) INCHES (MILLIMETERS) | | WESTERN BRANCH STANDARD (THROW IN ONE REVOLUTION FROM STRAIGHTNESS) INCHES (MILLIMETERS) | |
|---|--|-------------|--|-------------|
| | INCHES | MILLIMETERS | INCHES | MILLIMETERS |
| up to 3' (0.9144) incl. | 0.005 | (0.1270) | 0.0025 | (0.0635) |
| over 3' (0.9144) to 4' (1.2192) incl. | 0.0065 | (0.1651) | 0.0025 | (0.0635) |
| over 4' (1.2192) to 5' (1.524) incl. | 0.0080 | (0.2032) | 0.003 | (0.0762) |
| over 5' (1.524) to 6' (1.8288) incl. | 0.0095 | (0.2413) | 0.003 | (0.0762) |
| over 6' (1.8288) to 7' (2.1136) incl. | 0.0110 | (0.2794) | 0.003 | (0.0762) |
| over 7' (2.1136) to 8' (2.4384) incl. | 0.0125 | (0.3175) | 0.003 | (0.0762) |
| over 8' (2.4384) to 9' (2.7432) incl. | 0.0140 | (0.3556) | 0.004 | (0.1016) |
| over 9' (2.7432) to 10' (3.0480) incl. | 0.0155 | (0.3937) | 0.005 | (0.1270) |
| over 10' (3.0480) to 11' (3.3528) incl. | 0.0170 | (0.4318) | 0.006 | (0.1524) |
| over 11' (3.3528) to 12' (3.6576) incl. | 0.0185 | (0.4699) | 0.007 | (0.1778) |
| over 12' (3.6576) to 13' (3.9624) incl. | 0.0200 | (0.5080) | 0.008 | (0.2032) |
| over 13' (3.9624) to 14' (4.2672) incl. | 0.0215 | (0.5461) | 0.008 | (0.2032) |
| over 14' (4.2672) to 15' (4.5720) incl. | 0.0230 | (0.5842) | 0.008 | (0.2032) |
| over 15' (4.5720) to 16' (4.8768) incl. | 0.0245 | (0.6223) | 0.008 | (0.2032) |
| over 16' (4.8768) to 17' (5.1816) incl. | 0.0260 | (0.6604) | 0.010 | (0.2540) |
| over 17' (5.1816) to 18' (5.4864) incl. | 0.0275 | (0.6985) | 0.010 | (0.2540) |
| over 18' (5.4864) to 19' (5.7912) incl. | 0.0290 | (0.7366) | 0.010 | (0.2540) |
| over 19' (5.7912) to 20' (6.0960) incl. | 0.0305 | (0.7747) | 0.010 | (0.2540) |
| over 20' (6.0960) to 21' (6.4004) incl. | 0.0320 | (0.8128) | 0.012 | (0.3048) |
| over 21' (6.4004) to 22' (6.7052) incl. | 0.0335 | (0.8509) | 0.012 | (0.3048) |
| over 22' (6.7052) to 23' (7.0100) incl. | 0.0350 | (0.8890) | 0.012 | (0.3048) |
| over 23' (7.0100) to 24' (7.3148) incl. | 0.0365 | (0.9271) | 0.012 | (0.3048) |
| over 24' (7.3148) to 25' (7.6196) incl. | 0.0380 | (0.9652) | 0.014 | (0.3556) |
| over 25' (7.6196) to 26' (7.9244) incl. | 0.0490 | (1.2446) | 0.014 | (0.3556) |
| over 26' (7.9244) to 27' (8.2291) incl. | 0.0505 | (1.2827) | 0.014 | (0.3556) |
| over 27' (8.2291) to 28' (8.5339) incl. | 0.0520 | (1.3208) | 0.014 | (0.3556) |
| over 28' (8.5339) to 29' (8.8387) incl. | 0.0535 | (1.3589) | 0.016 | (0.4064) |
| over 29' (8.8387) to 30' (9.1435) incl. | 0.0550 | (1.3970) | 0.016 | (0.4064) |

For diameters supplied in random lengths from which multiple finished shafts will be cut, please refer to the Industry Standard straightness above. Also, random lengths cut to length may go out of Industry Standard straightness due to relief of stresses.