



| DOWEL PINS, STANDARD SERIES | | | | | | | | | | | ASME B18.8.2-2000 | |
|--------------------------------------|--------------|--------|--------|----------------|------------------------------------|--------------|--------------|---|-------------------------|--------|-------------------|--|
| Nominal Size or Nominal Pin Diameter | A | | | B | | C | R | Single Shear Load - Carbon or Alloy Steel | Suggested Hole Diameter | | | |
| | Pin Diameter | | | Point Diameter | | Crown Height | Crown Radius | | lb. | Max | Min | |
| | Basic | Max | Min | Max | Min | Max | Min | | | | | |
| 1/8 | .1250 | 0.1252 | 0.1253 | 0.1251 | 0.120 | 0.110 | 0.041 | 0.016 | 1,600 | 0.1250 | 0.1245 | |
| 3/16 | .1875 | 0.1877 | 0.1878 | 0.1876 | 0.180 | 0.170 | 0.062 | 0.023 | 3,600 | 0.1875 | 0.1870 | |
| 1/4 | .2500 | 0.2502 | 0.2503 | 0.2501 | 0.240 | 0.230 | 0.083 | 0.031 | 6,400 | 0.2500 | 0.2495 | |
| 5/16 | .3125 | 0.3127 | 0.3128 | 0.3126 | 0.302 | 0.290 | 0.104 | 0.039 | 10,000 | 0.3125 | 0.3120 | |
| 3/8 | .3750 | 0.3752 | 0.3753 | 0.3751 | 0.365 | 0.350 | 0.125 | 0.047 | 14,350 | 0.3750 | 0.3745 | |
| 7/16 | .4375 | 0.4377 | 0.4378 | 0.4376 | 0.424 | 0.409 | 0.146 | 0.055 | 19,550 | 0.4375 | 0.4370 | |
| 1/2 | .5000 | 0.5002 | 0.5003 | 0.5001 | 0.486 | 0.471 | 0.167 | 0.063 | 25,500 | 0.5000 | 0.4995 | |
| 5/8 | .6250 | 0.6252 | 0.6253 | 0.6251 | 0.611 | 0.595 | 0.208 | 0.078 | 39,900 | 0.6250 | 0.6245 | |
| 3/4 | .7500 | 0.7502 | 0.7503 | 0.7501 | 0.735 | 0.715 | 0.250 | 0.094 | 57,000 | 0.7500 | 0.7495 | |
| 7/8 | .8750 | 0.8752 | 0.8753 | 0.8751 | 0.860 | 0.840 | 0.293 | 0.109 | 78,000 | 0.8750 | 0.8745 | |
| 1 | 1.0000 | 1.0002 | 1.0003 | 1.0001 | 0.980 | 0.960 | 0.333 | 0.125 | 102,000 | 1.0000 | 0.9995 | |
| Tolerance on Length | | | | | ±0.010 in. (all sizes and lengths) | | | | | | | |

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| Description | A solid headless straight pin with a closely controlled diameter. One end is chamfered with the other end radiused to form a crown. |
| Applications/ Advantages | Wide variety of uses, including as a plug gage, hinge or shaft. Precise tolerances of dowel pins make them excellent for achieving proper alignment of parts in high-speed assemblies, or as roller bearings in bus/truck wheel housings. Important Note: Dowel pins should be installed by being pressed in, not struck with an impact force. |
| Material | Pins shall be made from any alloy steel capable of achieving the proper hardness requirements listed herein, having sulfur content of 0.05% maximum, and phosphorus content of 0.04% maximum. |
| Heat Treatment | Pins shall be hardened by quenching in oil from austenitizing temperature and tempering to meet the proper Rockwell hardness and case depth. |
| Core Hardness | Rockwell C 47 - 58 |
| Case Hardness | Rockwell C 60 minimum |
| Case Depth | 5/32 diameter & smaller: 0.010 in., minimum. 3/16 diameter and larger: 0.015 in. minimum. |
| Finish | See Appendix-A for information about the various finishes for dowel pins. |