

# DOWEL PINS



Nominal Size or Nominal Pin Diameter	A			B		C	R	Single Shear Load - Carbon Steel	Suggested Hole Diameter		
	Pin Diameter			Point Diameter		Crown Height	Crown Radius		lb.	Max	Min
	Basic	Max	Min	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
<b>Tolerance on Length</b>					±0.010 in. (all sizes and						

<b>Description</b>	A solid headless straight pin with a closely controlled diameter. One end is chamfered with the other end radiused to form a crown.
<b>Applications/ Advantages</b>	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: <i>Dowel pins should be installed by being pressed in, not struck with an impact force.</i>
<b>Material</b>	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.
<b>Heat Treatment</b>	Pins shall be hardened by quenching in oil from austenitizing temperature and tempering to meet the proper Rockwell hardness and case depth.
<b>Core Hardness</b>	Rockwell C 47 - 58
<b>Case Hardness</b>	Rockwell C 60 minimum
<b>Case Depth</b>	5/32 diameter & smaller: 0.010 in., minimum. 3/16 diameter and larger: 0.015 in. minimum.
<b>Finish</b>	See Appendix-A for information about the various finishes for dowel pins.