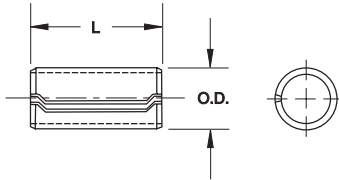


SPRING ALIGNMENT DOWELS/BUSHINGS



Dowel bushings are used to locate components in conjunction with bolts which pass through the inside of the bushing after it has been installed. Separate holes for locating pins are eliminated. The hardened bushings also absorb shear loads, isolating the bolts from these forces.

Spring alignment dowels are used to accurately locate components with respect to each other. They are formed around arbors to assure roundness. It is recommended that one half the hole tolerance be used for the fixed location of the dowel and one half for the hole in the mating part.

MATERIAL	FINISH	HARDNESS	INSPECTION METHODS
B Carbon Steel AISI 1070-1080 DIN 17722 CK67-75 BS 1449 CS70-80	K Plain, Oiled T Zinc Plated R Phosphated, Oiled	HV 420-545	O.D. - Micrometer Length - Caliper

The chamfer on dowel bushings and spring dowels is designed to facilitate insertion into minimum specified holes.

Series DB100 - Dowel Bushings

INCH	Nominal Bolt Diameter	Tolerance Range for Holes		O.D.		Wall Thickness	Min. Single Shear	Length							
		Min.	Max.	Min.	Max.			.375 3/8	.500 1/2	.750 3/4	1.000 1	1.250 1-1/4	1.500 1-1/2	1.750 1-3/4	
	#10	.250	.255	.260	.270	.022	1,660 lbs.								
	.250 1/4	.313	.318	.323	.333	.028	2,670 lbs.								
	.312 5/16	.391	.396	.401	.411	.035	4,200 lbs.								
	.375 3/8	.469	.474	.479	.489	.042	6,070 lbs.								
	.500 1/2	.625	.630	.635	.645	.057	11,050 lbs.	LENGTH TOLERANCE							
	.625 5/8	.781	.786	.791	.801	.070	16,500 lbs.	+ .000" - .030"							
	.750 3/4	.932	.937	.942	.952	.083	23,300 lbs.								

METRIC	Nominal Bolt Diameter	Tolerance Range for Holes		O.D.		Wall Thickness	Minimum Single Shear	Length							
		Min.	Max.	Min.	Max.			10mm	12mm	20mm	25mm	30mm	35mm	40mm	
	5mm	6.35	6.48	6.60	6.86	0.56	7.4 kN								
	6mm	7.67	7.80	7.92	8.18	0.71	11.4 kN								
	8mm	9.93	10.06	10.18	10.44	0.89	18.7 kN								
	10mm	12.50	12.63	12.75	13.01	1.07	28.5 kN								
	12mm	15.09	15.22	15.34	15.60	1.45	46.5 kN								
	14mm	17.40	17.55	17.65	17.90	1.55	56.1 kN	LENGTH TOLERANCE							
	16mm	19.85	19.95	20.10	20.35	1.78	73.5 kN	+ 0.0mm - 1.0mm							

Series SD200 - Spring Dowels

INCH	Nominal Dowel Diameter	Tolerance Range for Holes		O.D.		Wall Thickness	Minimum Single Shear	Length						
		Min.	Max.	Min.	Max.			.375 3/8	.500 1/2	.750 3/4	1.000 1	1.250 1-1/4	1.500 1-1/2	
	.250 1/4	.250	.255	.260	.270	.022	1,660 lbs.							
	.312 5/16	.313	.318	.323	.333	.028	2,670 lbs.							
	.375 3/8	.375	.380	.385	.395	.035	4,000 lbs.							
	.500 1/2	.500	.505	.510	.520	.042	6,530 lbs.	LENGTH TOLERANCE						
	.625 5/8	.625	.630	.635	.645	.057	11,050 lbs.	+ .000" - .030"						

METRIC	Nominal Dowel Diameter	Tolerance Range for Holes		O.D.		Wall Thickness	Minimum Single Shear	Length						
		Min.	Max.	Min.	Max.			10mm	12mm	20mm	25mm	30mm	35mm	
	6mm	6	6.13	6.25	6.5	0.56	6.9 kN							
	8mm	8	8.13	8.25	8.5	0.71	11.9 kN							
	10mm	10	10.13	10.25	10.5	0.89	18.9 kN							
	12mm	12	12.13	12.25	12.5	1.07	27.2 kN	LENGTH TOLERANCE						
	16mm	16	16.13	16.25	16.5	1.45	49.6 kN	+ 0.0mm - 1.0mm						

Standard Lengths

Note: .750" size does not require a staggered seam pattern to prevent interlocking. Larger and special diameters are available upon request.

Part Number: Product Type, Size x Length, Material, Finish, Series

Examples: BUSH .250 x .500 BK DB100 BUSH 10 x 20 BT DB100 BUSH .500 x 1.250 BK SD200 BUSH 10 x 20 BR SD200