

Data sheet



Document Number: **9000014397**

Rev.: A

Date: 2015-06-24

Supplier:

Make: SPIROL

Ordering Code: Series SD200- Spring Dowels 6 x 20

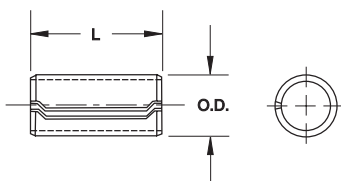
Item: SPRING ALIGNMENT DOWEL/BUSHING

Note:



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						
								.375	.500	.750	1.000	1.250	1.500	1.750
		Min.	Max.	Min.	Max.			3/8	1/2	3/4	1	1-1/4	1-1/2	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.							
	.625 5/8	.781	.786	.791	.801	.070	16,500 lbs.	LENGTH TOLERANCE +.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						
								10mm	12mm	20mm	25mm	30mm	35mm	40mm
		Min.	Max.	Min.	Max.									
	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 + 0.0mm - 1.0mm						
	16mm	19.85	19.95	20.10	20.35	1.78	73.5 kN							

Series SD200 - Spring Dowels

INCH	Nominal Dowel Diameter	Tolerance Range for Holes		O.D.		Wall Thickness	Minimum Single Shear	Length					
								.375	.500	.750	1.000	1.250	1.500
		Min.	Max.	Min.	Max.			3/8	1/2	3/4	1	1-1/4	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 +.000" -.030"					
	.625 5/8	.625	.630	.635	.645	.057	11,050 lbs.						

METRIC	Nominal Dowel Diameter	Tolerance Range for Holes		O.D.		Wall Thickness	Minimum Single Shear	Length					
								10mm	12mm	20mm	25mm	30mm	35mm
		Min.	Max.	Min.	Max.								
	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 + 0.0mm - 1.0mm					
	16mm	16	16.13	16.25	16.5	1.45	49.6 kN						

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



**Innovative fastening solutions.
Lower assembly costs.**



Challenge Us!

SPIROL Application Engineers will review your application needs and work with your design team to recommend the best solution. One way to start the process is to visit our **Optimal Application Engineering** portal at www.SPIROL.com.

ISO/TS 16949 Certified
ISO 9001 Certified

Technical Centers

Americas Spirol International Corporation
30 Rock Avenue
Danielson, Connecticut 06239 U.S.A.
Tel. +1 860 774 8571
Fax. +1 860 774 2048

Spirol Shim Division
321 Remington Road
Stow, Ohio 44224 U.S.A.
Tel. +1 330 920 3655
Fax. +1 330 920 3659

Spirol West
1950 Compton Avenue, Unit 111
Corona, California 92881 U.S.A.
Tel. +1 951 273 5900
Fax. +1 951 273 5907

Spirol Canada
3103 St. Etienne Boulevard
Windsor, Ontario N8W 5B1 Canada
Tel. +1 519 974 3334
Fax. +1 519 974 6550

Spirol Mexico
Carretera a Laredo KM 16.5 Interior E
Col. Moisés Saenz
Apodaca, N.L. 66613 Mexico
Tel. +52 81 8385 4390
Fax. +52 81 8385 4391

Spirol Brazil
Av. Vitória Rossi Martini
1441, SL 1 - Distrito Industrial
CEP 13347-650 Indaiatuba, SP, Brazil
Tel. +55 19 3936 2701
Fax. +55 19 3936 7121

Europe Spirol France
Cité de l'Automobile ZAC Croix Blandin
18 Rue Léna Bernstein
51100 Reims, France
Tel. +33 3 26 36 31 42
Fax. +33 3 26 09 19 76

Spirol United Kingdom
17 Princewood Road
Corby, Northants
NN17 4ET United Kingdom
Tel. +44 1536 444800
Fax. +44 1536 203415

Spirol Germany
Briener Strasse 9
80333 Munich, Germany
Tel. +49 931 454 670 74
Fax. +49 931 454 670 75

Spirol Spain
08940 Cornellà de Llobregat
Barcelona, Spain
Tel. +34 93 193 05 32
Fax. +34 93 193 25 43

Spirol Czech Republic
Sokola Tůmy 743/16
Ostrava-Mariánské Hory 70900
Czech Republic
Tel/Fax. +420 417 537 979

Asia Pacific Spirol Asia Headquarters
1st Floor, Building 22, Plot D9, District D
No. 122 HeDan Road
Wai Gao Qiao Free Trade Zone
Shanghai, China 200131
Tel. +86 21 5046 1451/1452
Fax. +86 21 5046 1540

e-mail: info@spirol.com

SPIROL.com