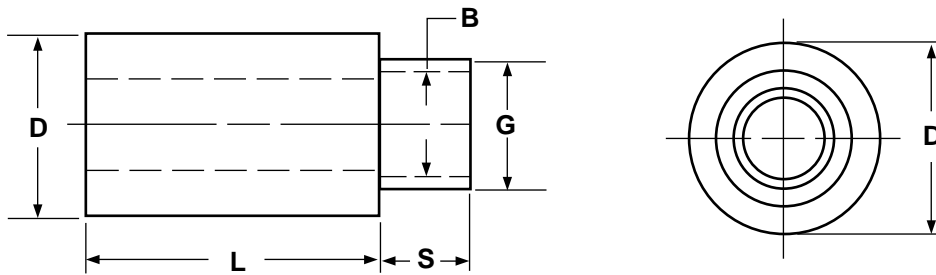


# Spacers & Standoffs

# Round Swage Spacers



ROUND SWAGE SPACERS																										
D Nominal Diameter	C Clearance Hole		S Swage Length		G Swage Diameter		B Bore Diameter		D Nominal Diameter	C Clearance Hole		S Swage Length		G Swage Diameter		B Bore Diameter										
	Max	Min	Max	Min	Max	Min	Max	Min		Max	Min	Max	Min	Max	Min	Max	Min									
1/4	.125	.115	.078	.072	.188	.185	.152	.149	5/16	.176	.166	.138	.132	.234	.231	.203	.200									
			.108	.102								.168	.162													
			.138	.132								.108	.102													
			.168	.162								.138	.132													
	.150	.140	.078	.072						.234	.231	.203	.200					3/8	.202	.192	.078	.072	.234	.231	.203	.200
			.108	.102																	.108	.102				
			.138	.132																	.138	.132				
			.168	.162																	.168	.162				
5/16	.125	.115	.078	.072	.234	.231	.203	.200	3/8					.150	.140	.078	.072		.234	.231	.203	.200				
			.108	.102												.108	.102									
			.138	.132												.138	.132									
			.168	.162												.168	.162									
	.150	.140	.078	.072						.234	.231	.203	.200	3/8	.176	.166	.078	.072					.234	.231	.203	.200
			.108	.102													.108	.102								
			.138	.132													.138	.132								
			.168	.162													.168	.162								
.176	.166	.078	.072	.234	.231	.203	.200	3/8	.202						.192	.078	.072	.234	.231	.203	.200					
		.108	.102													.108	.102									
		.138	.132													.138	.132									
		.168	.162													.168	.162									

Tolerance on Length

±.005

<b>Description</b>	A one-piece, cylindrical, unthreaded, mechanical device which has a protrusion at one end of the same shape but smaller in diameter.
<b>Applications/ Advantages</b>	Round swage spacers are mounted in circuit boards to keep the board at a given distance from another object. The spacer becomes an integral and permanently attached part of the board. Aluminum is popular for its light weight/ strength compromise. It is non-magnetic, performs well in severe temperatures, and has insulating properties. Brass is used in making high-quality swage spacers. It is conductive, resists corrosion, and is non-magnetic. It is costlier and heavier than aluminum and is usually plated zinc or nickel. Steel is used in applications requiring greater strength, but it is heavier than aluminum and does not resist corrosion like aluminum or brass.
<b>Material</b>	<p><b>Aluminum:</b> 2011 Aluminum (Copper: 5.0-6.0%; Silicon: 0.4% maximum; Iron: 0.7% maximum; Zinc: 0.3% maximum; Bismuth: 0.2-0.6%; Lead: 0.2-0.6%)</p> <p><b>Brass:</b> C36000 Brass (Copper: 60.00-63.00%; Lead: 2.50-3.70%; Iron: .35% maximum)</p> <p><b>Steel:</b> 12L14 Steel-Leaded Grade A (Carbon: .15% maximum; Manganese: .85-1.15%; Phosphorus: .04-.09%; Sulphur: .26-.35%)</p>