



# Materials Tapered/Constant Section Rings

Standard material for Rotor Clip retaining rings is carbon spring steel (SAE 1060-1090/UNS G10600-G10900). Rings can also be produced in our standard stainless steel (PH 15-7 Mo/UNS S15700) with 420 type cold rolled stainless steel (UNS S42000) as an option and in our standard beryllium copper (Alloy #25/UNS C17200) with copper alloy C72900 and phosphor bronze (Alloy#5218/UNS C52180) as options.

Please note that the availability of rings in the stainless steel and copper materials is subject to prior inquiry and acceptance of a formal quotation.

Rotor Clip can also produce rings one gauge thicker or thinner than standard sizes. Again, such orders are subject to prior inquiry and acceptance of a formal quotation.

Characteristics of each material follow:

**CARBON SPRING STEEL** - This steel is known for its high strength, and reliability in retaining ring applications. Since carbon spring steel is subject to corrosion, Rotor Clip treats all such rings with a protective coating to ensure some corrosion resistance. For long-term corrosion protection, a zinc plating or non-metallic finish should be applied over the steel. (See "Finishes" section).

## STAINLESS STEEL -

• **PH 15-7 Mo** is an extra strength corrosion-resistant steel, capable of preventing atmospheric oxidation at temperatures up to 900° F. It also offers the following advantages:

1. Minimal distortion due to unique heat-treating process.
2. A minimum of 225,000 psi for high ultimate tensile strength.
3. High creep strength.

*Note: We reserve the right to substitute PH 17-7 stainless steel material for PH 15-7 Mo on larger rings.*

• **TYPE 420** - A less expensive alternative to PH 15-7. Since general corrosion resistance for this material is less than PH-15-7, use of this material depends upon the application. Contact Technical Sales for assistance.

• **DIN 1.4122** - A grade of stainless steel for retaining rings ordered in / for European countries.

• **DIN 1.4110** - For DIN stainless steel retaining rings ordered in the United States.

**BERYLLIUM COPPER ALLOY#25** - Applications that require conductivity are best served by this material. It is also characterized by excellent corrosion resistance and is particularly effective in sea air and seawater atmospheres.

**PHOSPHOR BRONZE ALLOY#5218** - The least expensive copper material Rotor Clip offers. This type exhibits higher strength compared to standard phosphor bronze materials with the same tin percentages. It is also characterized by very good stress relaxation characteristics. (Note: Rotor Clip can also supply phosphor bronze material to DIN standard 17 662, Material Number 2.1020. Contact Rotor Clip Technical Sales for more information).

Material	Rotor Clip Code
<b>Carbon Spring Steel</b> SAE 1060-1090 (UNS G10600-G10900)	ST
<b>Stainless Steel</b> PH 15-7 Mo (Grade 632 - UNS S15700) 17-7 PH (Grade 631 - UNS S17700) 420 (UNS S42000) DIN 1.4122 DIN 1.4110	SS SS* SC SG SA
<b>Beryllium Copper</b> UNS C17200	BC
<b>Phosphor Bronze</b> UNS C52180	PB

\*Note: Large stainless steel rings may be supplied from 17-7 due to material availability. Contact factory for details.

