

## **Cobalt Chrome Alloy**

Strength Without Size...  
Achieving Rigid Fixation  
Without the Bulk

- Cobalt Chrome Alloy  
Rod, 5.5mm Diameter
- Polaris™ Deformity System
- Trivium™ Derotation System

**BIOMET**<sup>®</sup>  
SPINE

## Customizable Spinal Deformity Correction

The Polaris™ Deformity System is available in Titanium and Stainless Steel in both 5.5mm and 6.35mm diameter rods. We now offer three tensile strengths of Cobalt Chrome Alloy in 5.5mm diameter rods. Our rod options offer you the ability to customize deformity correction based on curve type, curve stiffness and rigidity, and desired curve correction.

**Polaris™ Cobalt Chrome Alloy and Stainless Steel rods are offered in three tensile strengths.**

### Cobalt Chrome Alloy

- Available in 5.5mm
- Imaging advantages due to its use with titanium screws and hooks
- Maintaining high strength without compromising profile



Low



High

### Stainless Steel

- Available in 5.5mm and 6.35mm
- Retains the initial bend and provides rigid fixation



Standard

**Titanium rods are offered in three grades.**

### Titanium

- Available in 5.5mm and 6.35mm
- Offered in Titanium alloy and Commercially Pure Titanium
- Less exertion required for bending
- Imaging advantages



CP Ti 5.5mm and 6.35mm



Ti Alloy 5.5mm



Ti Alloy 6.35mm

### Material Comparison

Characteristics	Cobalt Chrome Alloy	Stainless Steel	Titanium
Stiffness	High	High	Low
Strength	High	High	Medium
Corrosion Resistance	Medium	Low	High
Notch Sensitivity	Medium	Low	High
Imaging Compatibility	Medium	Low	High

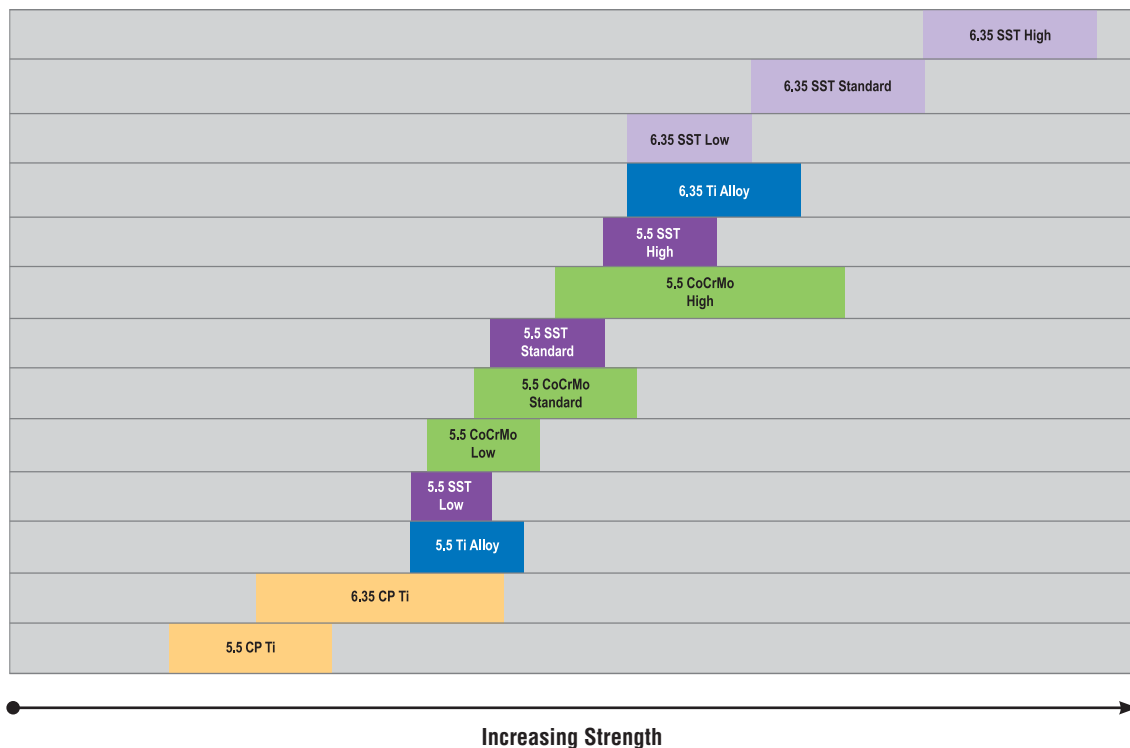
## Cobalt Chrome Alloy for Spinal Deformity Correction

The Polaris™ Deformity System offers a 5.5mm diameter Cobalt Chrome Alloy (CoCrMo) rod, which is offered in three tensile strengths for use with Polaris™ Titanium Implants. CoCrMo has a history of use in various orthopedic implants, and provides rigid fixation while maintaining imaging capability.

### Cobalt Chrome Alloy

Cobalt Chrome Alloy is a wear resistant and corrosion resistant high strength material with stiffness similar to stainless steel. Biomet's Cobalt Chrome Alloy offers you the ability to customize deformity correction based on curve type, curve stiffness and rigidity, and desired curve correction.

Comparison of Strength Ranges



### Imaging

The benefit of using a Cobalt Chrome Alloy Rod as compared to a Stainless Steel construct is the imaging capability of the CoCrMo Rods. The Cobalt Chrome Alloy Rod in combination with Titanium Polaris™ implants allows a view of the instrumented levels with significantly less scatter. Cobalt Chrome Alloy provides surgeons clarity and confidence in implant placement.

### Cold Work

Cobalt Chrome Alloy is more susceptible to cold working than most implant materials. Cold work is introduced during bending of the rod; as a result the tensile strength is increased while ductility is lowered. Repeated bending of the CoCrMo rod is not recommended for this reason.

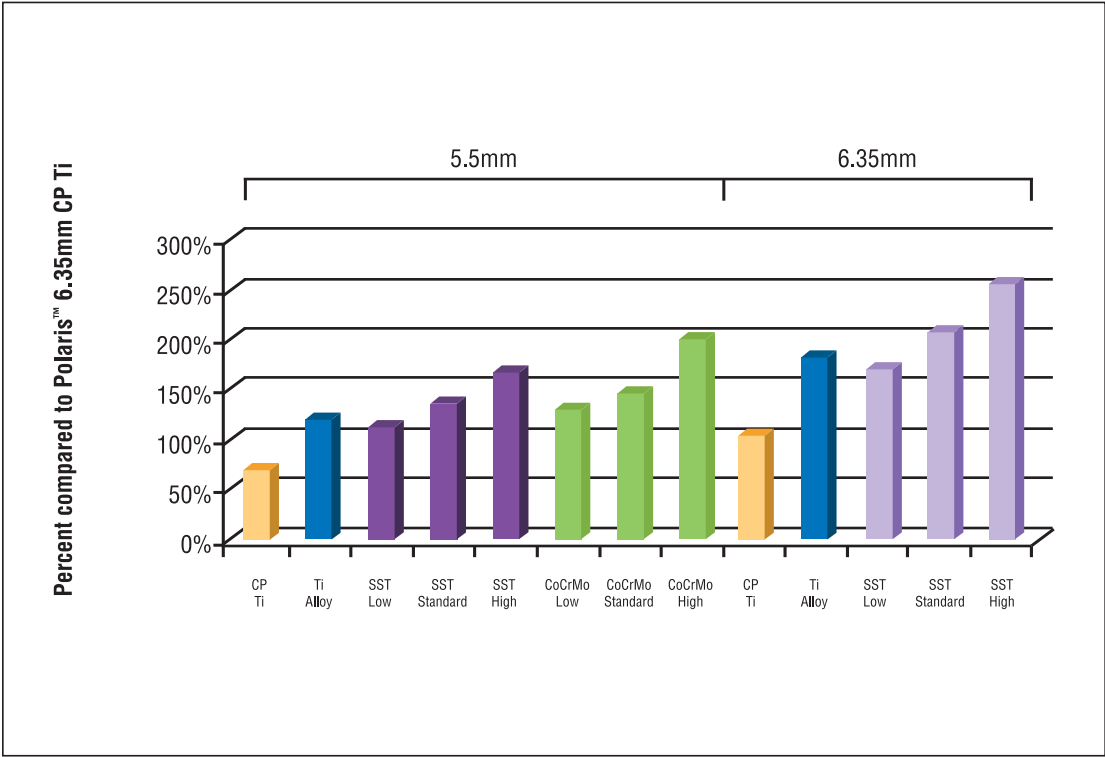
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*The Science of Strength*

**Strength** is the stress at which a material breaks or permanently deforms. Higher strength means that you have to exert more force while bending the stronger rod. Rod strength may be an issue if a patient loses correction over time. The higher the strength of the rod, the greater the amount of force required to permanently deform or break the rod.

**Cobalt Chrome Alloy Tensile Strength Compared to Other Polaris™ Rods**

**Strength**  
(Polaris™ Rods)



Polaris™ rod strengths are compared to the Polaris™ 6.35mm CP Ti.  
The Polaris™ 6.35mm CP Ti was randomly chosen.

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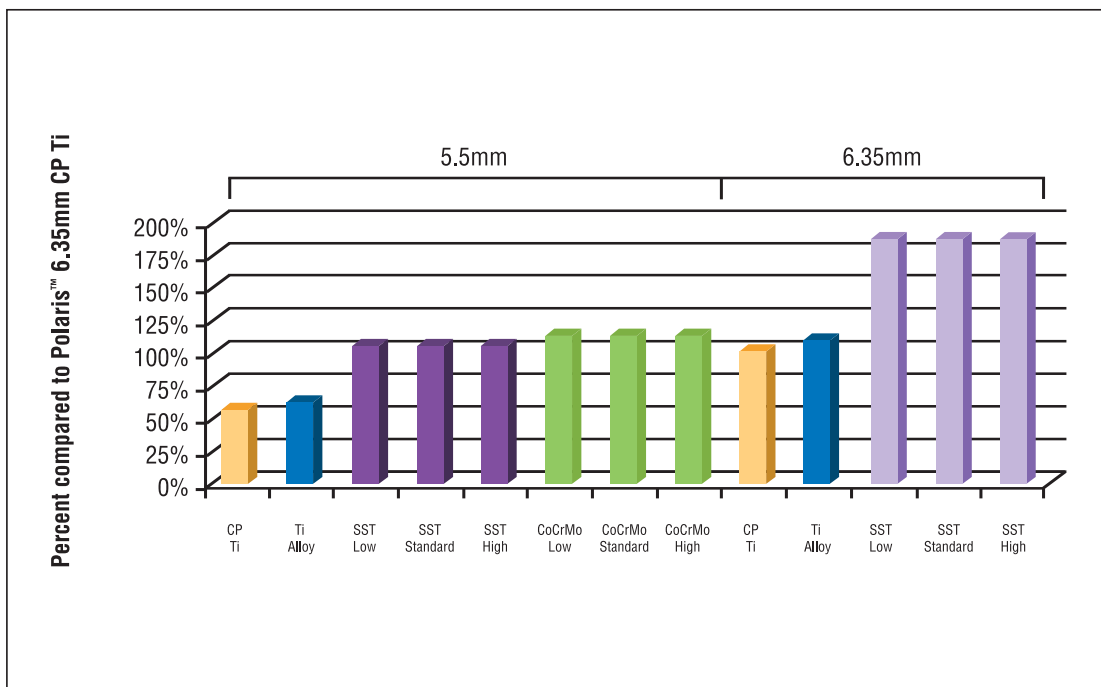
## The Science of Stiffness

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**Stiffness** is the ability of a material to resist temporary (elastic) deformation when a force is applied. High stiffness means you do not have to over-bend as much to account for rebound. Stiffness is related to how much over-bending is needed to achieve the desired curve. Stiffness of the rod can be seen if the patient loses a little bit of correction due to spring-back immediately after you release the rod.

### Cobalt Chrome Alloy Stiffness Compared to Other Polaris™ Rods

**Stiffness**  
(Polaris™ Rods)



Polaris™ rod stiffnesses are compared to the Polaris™ 6.35mm CP Ti.

The Polaris™ 6.35mm CP Ti was randomly chosen.

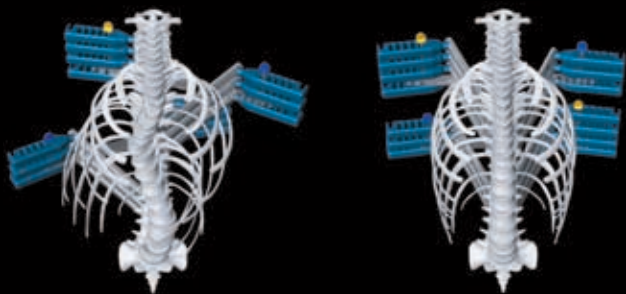
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At Biomet, engineering excellence is our heritage and our passion. For over 25 years, through various divisions worldwide, we have applied the most advanced engineering and manufacturing technology to the development of highly durable systems for a wide variety of surgical applications.

### **Trivium™ Derotation System**

The Trivium™ Derotation system enables a surgeon to address the axial plane of deformity with ease and equal distribution of power. The Derotation instruments engage the screws and allow the surgeon to manipulate the vertebral body. Attention to design of the system is focused on maximizing the ease of use by following a stepwise, non-regressive technique to minimize “fiddle-factor” and optimize efficiency.



To learn more about this product,  
contact your local Biomet Sales Representative today.

**BIOMET®**  
SPINE

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