



**COVISION**  
ORTHOPAEDICS

Orion Spine System

# Introduction



The Orion Spinal System represents the latest advancement in spinal implant technology. At Covision we have incorporated the ease of use of the superior closure mechanism of the buttress thread and managed to create a reduced implant profile whilst maintaining excellent biomechanical strength. We also added additional features to the system to maximize its use in even the most complex spinal pathologies.

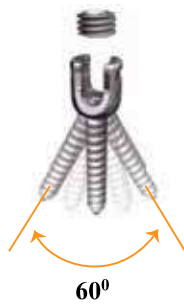
The Orion Spinal System is a comprehensive system of implants and instruments for stabilization of the spine in the thoracic, lumbar and sacral regions. In developing the Orion Spinal System, the design features are:

- \* **Overall reduced profile and implant volume:** Profile of the Orion Polyaxial and Monoaxial screws is now among the lowest of competitive spinal systems
- \* **Superior trapezoid buttress thread closure mechanism:** Designed for ease of use and to provide optimal surface contact with the rod for construct security
- \* **Smart, ergonomically designed instruments:** Designed to fit the surgeon's hand comfortably and securely
- \* **Comprehensive implant offering:** A comprehensive offering of implants to address even the most complex spinal pathology
- \* **Material Choice:** The Orion Spinal System is available in titanium

## Key Design Features:



- Low profile head, color coded matched with rods diameter 5.5mm and 6.0mm
- Synchronized screw and set screw for best quality control, screws and set screws have the same code
- 60 degrees polyaxial freedom
- Icline of screw thread is 7 degrees with trapezoid shaped threads.
- 4 knots inner screw's head compatible to screw driving instrument
- Set screws desinged with 4 lines of threads for the best fixation.



### Polyaxial Angulation

Degrees measured in cephalad/caudal or medial/lateral plane

Polyaxial angulation occurs in one plane



### Self Tapping

Cutting flute to initiate threads into bone

### Cortical Threads

- Tapered minor diameter results in shallower thread form at the proximal half of the screw which generates greater insertion torque into cortical bone.
- Once implanted, the shallower minor diameter at the proximal portion of the screw creates optimal compression of the pedicle bone, press fitting the screw into the bone creating solid cortical bone screw fixation.

**Reduction Screws** are designed to assist in persuading the rod down the tulip head without the need for an additional persuader instrument. Once the blocker is locked down, the tabs must be snapped off.

**Dual-Lead Thread Screws** utilize a steeper lead angle while also widening the pitch. This allows a second lead to be placed on the screw making it "Dual-Lead." The result is a screw that advances twice the distance with the same number of turns as a standard screw.

# Screw Terminology

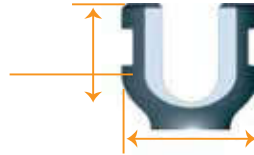
## Tulip



### Run-on-Rod

Largest distance the screw takes up on the rod measuring upward

### Height Distance



### Diameter

Distance measuring through the center

## Screw Dimensions

### Tulip Dimensions

#### Monoaxial



	Height	Diameter	Run-on-Rod
(4.5)	14.5mm	13.9mm	9.4mm
(5.0)	14.5mm	13.9mm	9.4mm
(5.5)	14.5mm	13.9mm	9.4mm
(6.5)	14.5mm	13.9mm	9.4mm
(7.5)	14.5mm	13.9mm	9.4mm
(8.5)	14.5mm	13.9mm	9.4mm
(9.5)	14.5mm	13.9mm	9.4mm

#### Poliaxial



	Height	Diameter	Run-on-Rod
(4.5)	15.3mm	13.9mm	9.58mm
(5.0)	15.3mm	13.9mm	9.58mm
(5.5)	15.3mm	13.9mm	9.58mm
(6.5)	15.3mm	13.9mm	9.58mm
(7.5)	15.3mm	13.9mm	9.58mm
(8.5)	15.3mm	13.9mm	9.58mm
(9.5)	15.3mm	13.9mm	9.58mm

#### Reduction Monoaxial



	Height	Diameter	Run-on-Rod
(4.5)	30mm	13.9mm	25.80mm
(5.5)	30mm	13.9mm	25.80mm
(6.5)	30mm	13.9mm	25.80mm
(7.5)	30mm	13.9mm	25.80mm

#### Reduction Polyaxial

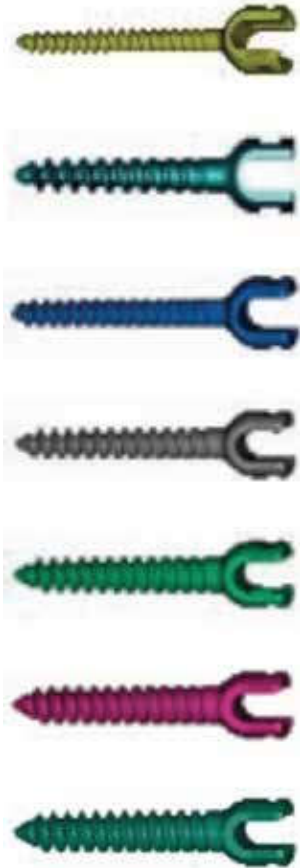


(4.5)	30mm	13.9mm	25.80mm
(5.5)	30mm	13.9mm	25.80mm
(6.5)	30mm	13.9mm	25.80mm
(7.5)	30mm	13.9mm	25.80mm

## Implant & Instrument Overview

Material: Ti6Al4V ELI  
Standard: ASTM F136-13

### Orion Adult Stabilization System Monoaxial Peadulticular Screw



Code	Size
43.2020	Ø4.5 X20mm (Yellow)
43.2025	Ø4.5 X25mm (Yellow)
43.2030	Ø4.5 X30mm (Yellow)
43.2035	Ø4.5 X35mm (Yellow)
43.2040	Ø4.5 X40mm (Yellow)
43.2045	Ø4.5 X45mm (Yellow)
43.2125	Ø5.5 X25mm (Blue)
43.2130	Ø5.5 X30mm (Blue)
43.2135	Ø5.5 X35mm (Blue)
43.2140	Ø5.5 X40mm (Blue)
43.2145	Ø5.5 X45mm (Blue)
43.2150	Ø5.5 X50mm (Blue)
43.2155	Ø5.5 X55mm (Blue)
43.2225	Ø6.5 X25mm (Grey)
43.2230	Ø6.5 X30mm (Grey)
43.2235	Ø6.5 X35mm (Grey)
43.2240	Ø6.5 X40mm (Grey)
43.2245	Ø6.5 X45mm (Grey)
43.2250	Ø6.5 X50mm (Grey)
43.2255	Ø6.5 X55mm (Grey)
43.2260	Ø6.5 X60mm (Grey)
43.2265	Ø6.5 X65mm (Grey)
43.2270	Ø6.5 X70mm (Grey)
43.2280	Ø6.5 X80mm (Grey)
43.2290	Ø6.5 X90mm (Grey)
43.2330	Ø7.5 X30mm (Green)
43.2335	Ø7.5 X35mm (Green)
43.2340	Ø7.5 X40mm (Green)
43.2345	Ø7.5 X45mm (Green)
43.2350	Ø7.5 X50mm (Green)
43.2355	Ø7.5 X55mm (Green)
43.2360	Ø7.5 X60mm (Green)
43.2365	Ø7.5 X65mm (Green)
43.2370	Ø7.5 X70mm (Green)
43.2380	Ø7.5 X80mm (Green)
43.2390	Ø7.5 X90mm (Green)
43.2395	Ø7.5 X95mm (Green)
43.2425	Ø8.5 X25mm (Violet)
43.2430	Ø8.5 X30mm (Violet)
43.2435	Ø8.5 X35mm (Violet)
43.2440	Ø8.5 X40mm (Violet)
43.2445	Ø8.5 X45mm (Violet)
43.2450	Ø8.5 X50mm (Violet)
43.2455	Ø8.5 X55mm (Violet)
43.2460	Ø8.5 X60mm (Violet)
43.2465	Ø8.5 X65mm (Violet)
43.2470	Ø8.5 X70mm (Violet)
43.2480	Ø8.5 X80mm (Violet)
43.2490	Ø8.5 X90mm (Violet)
43.2500	Ø8.5 X100mm (Violet)
43.2505	Ø8.5 X105mm (Violet)
43.2510	Ø8.5 X110mm (Violet)
43.2540	Ø9.5 X40mm (Yellow)
43.2545	Ø9.5 X45mm (Yellow)
43.2550	Ø9.5 X50mm (Yellow)
43.2555	Ø9.5 X55mm (Yellow)
43.2560	Ø9.5 X60mm (Yellow)
43.2565	Ø9.5 X65mm (Yellow)
43.2570	Ø9.5 X70mm (Yellow)
43.2580	Ø9.5 X80mm (Yellow)
43.2590	Ø9.5 X90mm (Yellow)
43.2600	Ø9.5 X100mm (Yellow)
43.2605	Ø9.5 X105mm (Yellow)
43.2610	Ø9.5 X110mm (Yellow)

## Implant & Instrument Overview

Material: Ti6Al4V ELI  
Standard: ASTM F136-13



### Orion Adult Stabilization System Polyaxial Pedicular Screw

Code	Size
43.2720	Ø4.5 X 20mm (Yellow)
43.2725	Ø4.5 X 25mm (Yellow)
43.2730	Ø4.5 X 30mm (Yellow)
43.2735	Ø4.5 X 35mm (Yellow)
43.2740	Ø4.5 X 40mm (Yellow)
43.2745	Ø4.5 X 45mm (Yellow)
43.2825	Ø5.5 X 25mm (Blue)
43.2830	Ø5.5 X 30mm (Blue)
43.2835	Ø5.5 X 35mm (Blue)
43.2840	Ø5.5 X 40mm (Blue)
43.2845	Ø5.5 X 45mm (Blue)
43.2850	Ø5.5 X 50mm (Blue)
43.2855	Ø5.5 X 55mm (Blue)
43.2925	Ø6.5 X 25mm (Grey)
43.2930	Ø6.5 X 30mm (Grey)
43.2935	Ø6.5 X 35mm (Grey)
43.2940	Ø6.5 X 40mm (Grey)
43.2945	Ø6.5 X 45mm (Grey)
43.2950	Ø6.5 X 50mm (Grey)
43.2955	Ø6.5 X 55mm (Grey)
43.2960	Ø6.5 X 60mm (Grey)
43.2970	Ø6.5 X 70mm (Grey)
43.2980	Ø6.5 X 80mm (Grey)
43.3030	Ø7.5 X 30mm (Green)
43.3035	Ø7.5 X 35mm (Green)
43.3040	Ø7.5 X 40mm (Green)
43.3045	Ø7.5 X 45mm (Green)
43.3050	Ø7.5 X 50mm (Green)
43.3055	Ø7.5 X 55mm (Green)
43.3060	Ø7.5 X 60mm (Green)
43.3070	Ø7.5 X 70mm (Green)
43.3080	Ø7.5 X 80mm (Green)
43.3090	Ø7.5 X 90mm (Green)
43.3095	Ø7.5 X 95mm (Green)
43.3130	Ø8.5 X 30mm (Violet)
43.3135	Ø8.5 X 35mm (Violet)
43.3140	Ø8.5 X 40mm (Violet)
43.3145	Ø8.5 X 45mm (Violet)
43.3150	Ø8.5 X 50mm (Violet)
43.3155	Ø8.5 X 55mm (Violet)
43.3160	Ø8.5 X 60mm (Violet)
43.3170	Ø8.5 X 70mm (Violet)
43.3180	Ø8.5 X 80mm (Violet)
43.3190	Ø8.5 X 90mm (Violet)
43.3200	Ø8.5 X 100mm (Violet)
43.3205	Ø8.5 X 105mm (Violet)
43.3210	Ø8.5 X 110mm (Violet)
43.3260	Ø9.5 X 60mm (Yellow)
43.3270	Ø9.5 X 70mm (Yellow)
43.3280	Ø9.5 X 80mm (Yellow)
43.3290	Ø9.5 X 100mm (Yellow)
43.3300	Ø9.5 X 105mm (Yellow)
43.3310	Ø9.5 X 110mm (Yellow)

## Implant & Instrument Overview

Material: Ti6Al4V ELI  
Standard: ASTM F136-13

### Orion Adult Stabilization System Polyaxial Spondylolisthesis Screw



Code	Size
43.3325	Ø4.5x25mm (Yellow)
43.3330	Ø4.5x30mm (Yellow)
43.3335	Ø4.5x35mm (Yellow)
43.3340	Ø4.5x40mm (Yellow)
43.3345	Ø4.5x45mm (Yellow)
43.3350	Ø4.5x50mm (Yellow)
43.3430	Ø5.5x30mm (Blue)
43.3435	Ø5.5x35mm (Blue)
43.3440	Ø5.5x40mm (Blue)
43.3445	Ø5.5x45mm (Blue)
43.3450	Ø5.5x50mm (Blue)
43.3455	Ø5.5x55mm (Blue)
43.3460	Ø5.5x60mm (Blue)
43.3530	Ø6.5x30mm (Grey)
43.3535	Ø6.5x35mm (Grey)
43.3540	Ø6.5x40mm (Grey)
43.3545	Ø6.5x45mm (Grey)
43.3550	Ø6.5x50mm (Grey)
43.3555	Ø6.5x55mm (Grey)
43.3560	Ø6.5x60mm (Grey)
43.3565	Ø6.5x65mm (Grey)
43.3630	Ø7.5x30mm (Green)
43.3635	Ø7.5x35mm (Green)
43.3640	Ø7.5x40mm (Green)
43.3645	Ø7.5x45mm (Green)
43.3650	Ø7.5x50mm (Green)
43.3655	Ø7.5x55mm (Green)
43.3660	Ø7.5x60mm (Green)
43.3665	Ø7.5x65mm (Green)
43.3670	Ø7.5x70mm (Green)

## Implant & Instrument Overview

Material: Ti6Al4V ELI  
Standard: ASTM F136-13



### Orion Adult Stabilization System Monoaxial Spondylolisthesis Screw

Code	Size
43.3725	Ø4.5X25mm (Yellow)
43.3730	Ø4.5X30mm (Yellow)
43.3735	Ø4.5X35mm (Yellow)
43.3740	Ø4.5X40mm (Yellow)
43.3745	Ø4.5X45mm (Yellow)
43.3750	Ø4.5X50mm (Yellow)
43.3830	Ø5.5X30mm (Blue)
43.3835	Ø5.5X35mm (Blue)
43.3840	Ø5.5X40mm (Blue)
43.3845	Ø5.5X45mm (Blue)
43.3850	Ø5.5X50mm (Blue)
43.3855	Ø5.5X55mm (Blue)
43.3860	Ø5.5X60mm (Blue)
43.3930	Ø6.5X30mm (Grey)
43.3935	Ø6.5X35mm (Grey)
43.3940	Ø6.5X40mm (Grey)
43.3945	Ø6.5X45mm (Grey)
43.3950	Ø6.5X50mm (Grey)
43.3955	Ø6.5X55mm (Grey)
43.3960	Ø6.5X60mm (Grey)
43.4030	Ø7.5X30mm (Green)
43.4035	Ø7.5X35mm (Green)
43.4040	Ø7.5X40mm (Green)
43.4045	Ø7.5X45mm (Green)
43.4050	Ø7.5X50mm (Green)
43.4055	Ø7.5X55mm (Green)
43.4060	Ø7.5X60mm (Green)
43.4065	Ø7.5X65mm (Green)

## Implant & Instrument Overview

Material: Ti6Al4V ELI  
Standard: ASTM F136-13



### Orion Adult Stabilization System Vertebral Rod (Titanium)

Code	Size
43.5100	Ø6.0X40mm
43.5101	Ø6.0X50mm
43.5102	Ø6.0X60mm
43.5103	Ø6.0X70mm
43.5104	Ø6.0X80mm
43.5105	Ø6.0X90mm
43.5106	Ø6.0X100mm
43.5107	Ø6.0X110mm
43.5108	Ø6.0X120mm
43.5109	Ø6.0X130mm
43.5110	Ø6.0X140mm
43.5111	Ø6.0X150mm
43.5112	Ø6.0X180mm
43.5113	Ø6.0X200mm
43.5114	Ø6.0X480mm
43.5115	Ø6.0X500mm
43.5116	Ø6.0X600mm



### Orion Adult Stabilization System Vertebral Rod (Co-Cr)

Code	Size
43.5117	Ø6.0X200mm
43.5118	Ø6.0X400mm
43.5119	Ø6.0X600mm

Notes: Hexagon shaped one end rod optional are available



## Implant & Instrument Overview

Material: Ti6Al4V ELI  
Standard: ASTM F136-13



### Orion Adult Stabilization System Standard Multiaxial Connector

Code	Size
43.5120	29mm
43.5121	31mm
43.5122	35mm
43.5123	38mm
43.5124	39mm
43.5125	40mm
43.5126	41mm
43.5127	42mm
43.5128	43mm
43.5129	44mm
43.5130	45mm
43.5131	46mm
43.5132	47mm
43.5133	48mm
43.5134	49mm
43.5135	50mm
43.5136	51mm
43.5137	52mm
43.5138	53mm
43.5139	54mm
43.5140	55mm
43.5141	56mm
43.5142	57mm
43.5143	58mm
43.5144	59mm
43.5145	60mm
43.5146	61mm
43.5147	62mm
43.5148	63mm
43.5149	64mm
43.5150	65mm
43.5151	66mm

### Orion Adult Stabilization System Standard Multiaxial Connector(Mac)



Code	Size
43.9706	35x50mm
43.9707	45x65mm
43.9708	60x80mm
43.9709	75x100mm

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