



ZIMMER BIOMET

Your progress. Our promise.™



Cervical Solutions

Lineum[®] OCT Spine System

The Lineum System is an occipital-cervico-thoracic (OCT) spinal fixation system featuring game-changing Translation™ Screw Technology designed to ease rod introduction and encourage optimal screw placement.

GAME-CHANGING

Technology



Efficiency

- Game-changing Translation Screw provides 3mm of medial/lateral translation intended to reduce rod manipulation and ease rod introduction.
- Adjustable-depth drill and tap guides allow for quick adjustment and easy confirmation of desired depth.
- Rocket™ Rod Reducers support controlled, sequential rod reduction.
- Ratcheting rod cutter quickly cuts rods with ease.
- Pre-cut rods are designed to reduce procedure time.
- Occipital plates with angled and translating rod seats are designed to ease plug insertion.
- Transition rods allow a single rod to be used for a long construct extending to the thoracic spine.



Flexibility

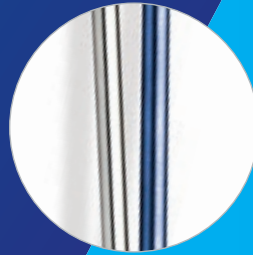
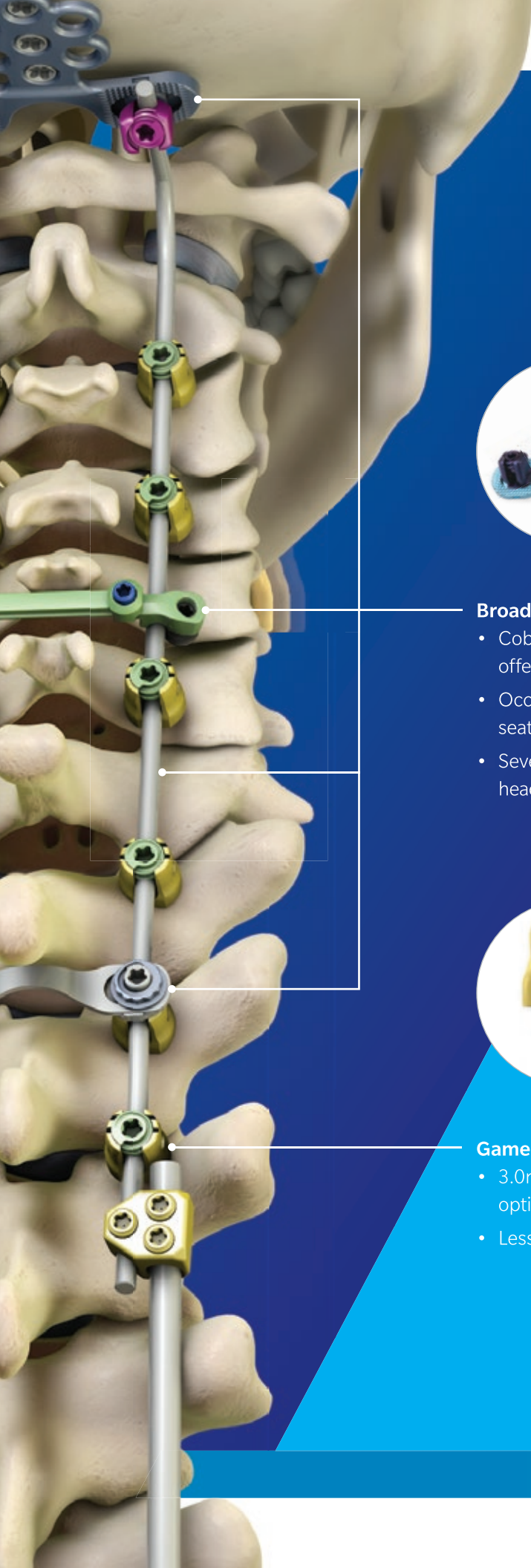
- The Translation Screw encourages optimal screw placement.
- The Lineum System offers a broad range of construct options.
- Cobalt chrome and titanium alloy rod materials offer strength and flexibility.
- Screws in multiple lengths and diameters, as well as smooth shank screws, are intended to meet anatomic needs.
- Occipital plates are available in three sizes and have seven different points of fixation.
- Several connectors including rod-to-rod, head-to-head and lateral connectors, are available.
- Occipital drills and taps are available in both rigid and flexible options.



Safety

- Translation Screw Technology allows screws to be placed in the preferred anatomic location.
- Helical Flange® locking mechanism minimizes cross threading and seat splay while enhancing the strength of the locking mechanism.
- Adjustable-depth drill and tap guides provide easy confirmation of desired depth.
- Smooth-shank screws reduce nerve root irritation.
- Transition rods allow a single rod to be used for a long construct extending to the thoracic spine.





Broad Range of Construct Options

- Cobalt chrome and titanium alloy rod materials offer strength and flexibility.
- Occipital plates with angled and translating rod seats are designed to ease plug insertion.
- Several connectors including rod-to-rod, head-to-head and lateral connectors are available.



Game-changing Translation Screw

- 3.0mm of medial/lateral translation encourages optimal screw placement.
- Less rod manipulation, easier rod introduction.

TRANSLATION SCREW: GAME-CHANGING TECHNOLOGY

Few products can truly be deemed game changing. Zimmer Biomet's Translation Screw Technology is one of those rare innovations. Zimmer Biomet's Translation Screw incorporates technology that allows the screw head to translate up to 3.0mm medial/lateral relative to the screw shaft to ease rod introduction and encourage optimal screw placement.

Optimal Screw Placement

Screw placement no longer needs to be compromised to accommodate rod insertion. Translation Screw Technology allows screws to be placed in the surgeon's preferred anatomic location.

3.0mm of Medial/Lateral Screw Translation

1.5mm Translation



Left Translation



Centered

1.5mm Translation



Right Translation

Multi-axial Angulation



10° Angulation
Non-preferred Angle



40° Angulation
Preferred Angle



36° Medial/Lateral
Angulation

BROAD RANGE OF CONSTRUCT OPTIONS

Since every surgeon develops individual preferences for construct materials, Zimmer Biomet Spine offers rod material options in cobalt chrome and titanium alloys.

Titanium Alloy



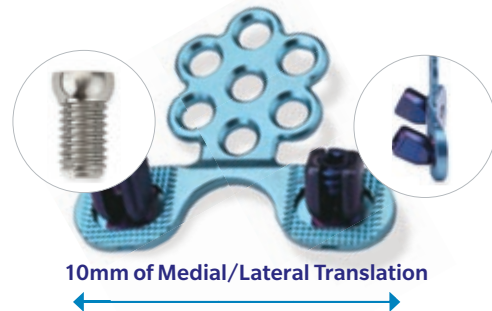
Cobalt Chrome

3.5mm Rod Options Offer Strength and Flexibility

Both the cobalt chrome and titanium alloy rod material options were chosen to provide strength and flexibility in a 3.5mm rod diameter.

Impressive Properties of Cobalt Chrome Alloy Rods

Cobalt chrome alloy rods offer valuable attributes. The high-strength material resists wear and corrosion and has excellent bending characteristics.



Occipital plate (left Inset, occipital screw; right Inset, side view of plate). Angled rod seat eases plug insertion during challenging anatomic situations

Translation Screw Choices

The Lineum System offers translation screws in three diameters and two styles (fully threaded and smooth shank) to meet anatomic needs.

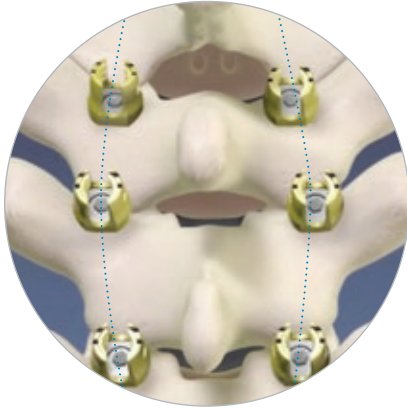
Occipital Plate with Angled Rod Seats

The Lineum System's low-profile occipital plate with 30° angled rod seats and up to 10mm of medial/lateral translation is designed to ease plug insertion. The plate features three midline fixation points (where the most bone purchase can be obtained) and seven total points of fixation, along with a machined radius to conform to the contour of the skull. The occipital screws possess a spherical head that allows them to be placed within a 20° cone of angulation relative to the plate.

TRANSLATION SCREW: GAME-CHANGING TECHNOLOGY

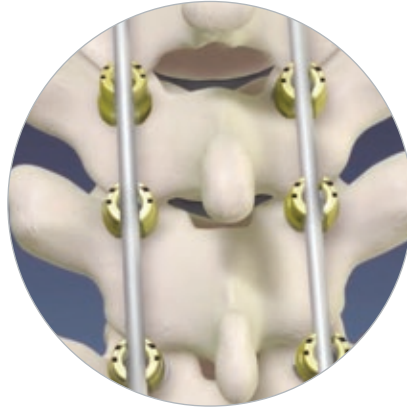
Less Rod Manipulation, Easier Rod Introduction

Medial/lateral screw translation allows for less rod manipulation and simplifies rod introduction. As a result, operating room efficiency may be increased.



Misaligned Screw Seats

Screws are placed in a preferred anatomic location, resulting in misaligned screw seats.



Aligned Screw Seats

Same screws after misaligned screw seats have been translated into alignment.

RELIABLE LOCKING TECHNOLOGY

Helical Flange Technology

The contact between the upward facing flange of the plug and the downward facing flange of the seat minimizes cross threading and seat splay while enhancing the strength of the locking mechanism.

More Than 200,000 Implantations

Since 2004, spine surgeons have implanted more than 200,000 Zimmer Biomet Spine screws with Helical Flange Technology.



PROCEDURALLY EFFICIENT INSTRUMENTATION

Lineum System instruments have been carefully engineered and validated to facilitate procedural efficiency during reconstruction of the cervical and upper thoracic spine.

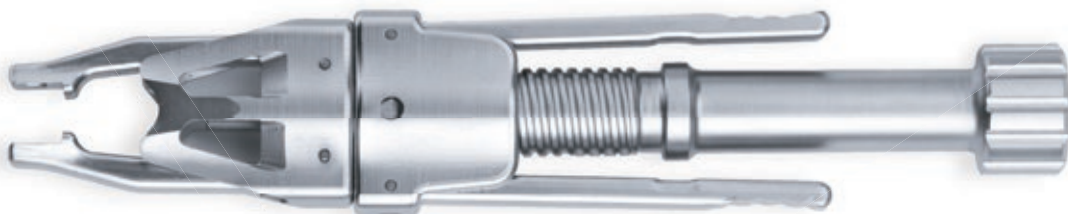


Adjustable-depth Drill Guides

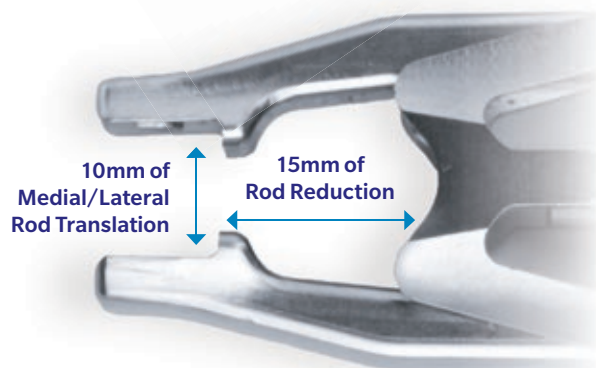
This truly unique drill guide allows surgeons to easily shift drill depth 2.0mm at a time. Additional confirmation of drill depth is provided by a drill depth window, which displays the current drill depth in millimeters. The rotating grip handle provides maneuverability for easy repositioning to maintain the appropriate drill trajectory.

Rocket Rod Reducer

Rocket Rod Reducers use spring-loaded tips for secure screw engagement and tactile feedback. The self-centering reduction design and adjustability provide controlled sequential rod reduction to fully position rods into screw or hook seats.



Rocket Rod Reducer





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