



MEDACTA UNIVERSAL SCREW TECHNOLOGY

ULTIMATE VERSATILITY IN ONE SYSTEM



Brochure

Joint

Spine

Sports Med

The **M.U.S.T. pedicle screw system** is a comprehensive solution for fixation of the thoracolumbar and sacral spine. The variety of screw types, rod shapes, connectors, and hooks gives surgeons the **flexibility needed to tailor the construct to the patient's anatomy** and pathology that is to be treated.

NEW UNIPLANAR
SCREWS

NEW HA COATED
S2AI SCREWS

A VERSATILE SYSTEM

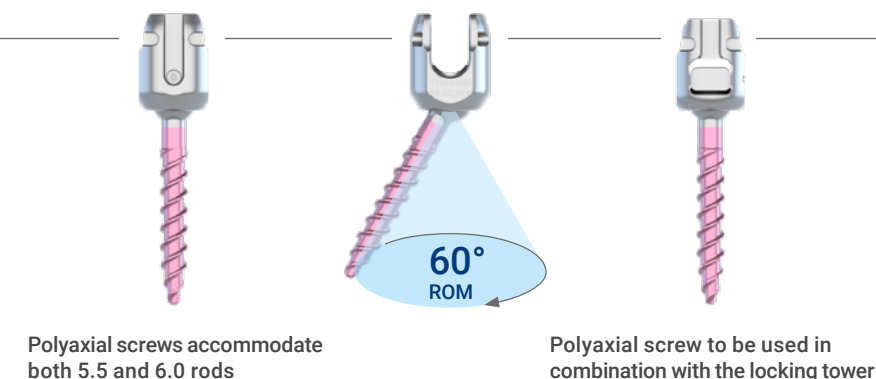
The system's compatibility with various rod sizes and screw types offers surgeons flexibility in selecting the most suitable implants for each patient to accommodate different surgical preferences and techniques.

Available options include:

- Degenerative and deformity cases
- Primary and revision cases
- High degree reduction

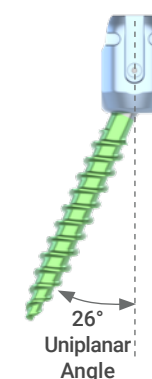
POLYAXIAL SCREWS

These screws provide flexibility and ease of use in various spinal surgeries, making them suitable for addressing complex spinal pathologies.



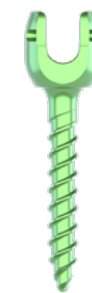
UNIPLANAR SCREWS

Medacta's uniplanar screw offers a uniplanar feature independent of the screw's depth, enabling easy rotation of the tulip head to align the slot for the rod. With a **26° uniplanar angle**, the screw allows controlled motion in one plane while providing rigidity in another. This design is beneficial for maintaining stability in specific directions, particularly in deformity corrections and other targeted spinal procedures.



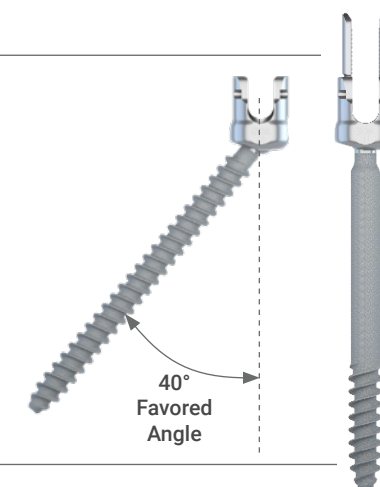
MONOAXIAL SCREWS

Monoaxial screws provide rigid fixation with no movement in any plane. These screws are ideal for situations where absolute stability is required, such as in primary and revision cases, or where minimal adjustment post-placement is needed. Their straightforward design facilitates placement and secure fixation.



S2AI SCREWS

S2AI (Sacro-Iliac) screws are designed with a **40° favored angle** to facilitate placement in the sacroiliac region. These screws are particularly useful for achieving strong pelvic fixation, aiding in cases requiring high degrees of stability and load-bearing capacity, such as in complex deformity corrections and fusion procedures.



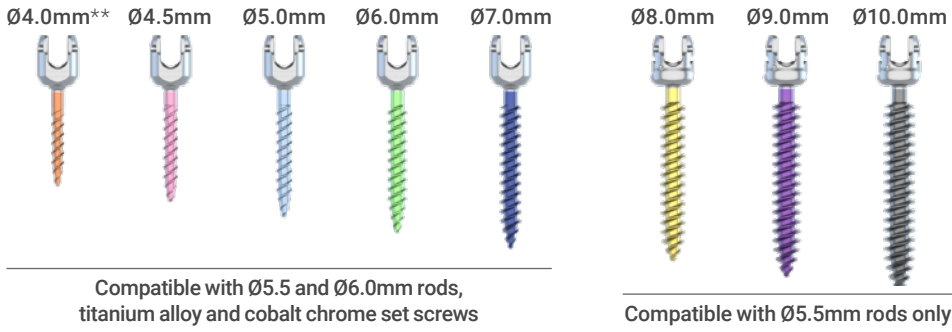
COMPREHENSIVE PORTFOLIO

SCREW OPTIONS

The range of diameters and lengths covers the thoracolumbar, sacral and sacro-iliac fixation needs. The screws are **dual-thread lead** for a **rapid** and **controlled insertion**.

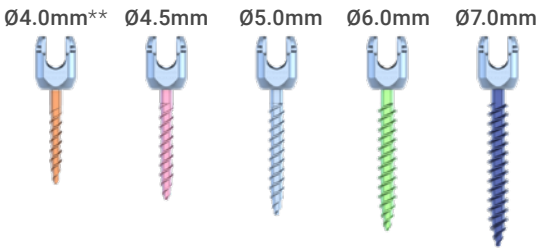
Polyaxial

- Solid and Cannulated
- Standard and Reduction tulip
- 25mm of reduction power with our reduction screw
- Length 20-90mm*
- $\pm 30^\circ$ angulation (60° of ROM)
- Material: $\varnothing 4-7$ titanium alloy; $\varnothing 8-10$ cobalt-chrome and titanium alloy



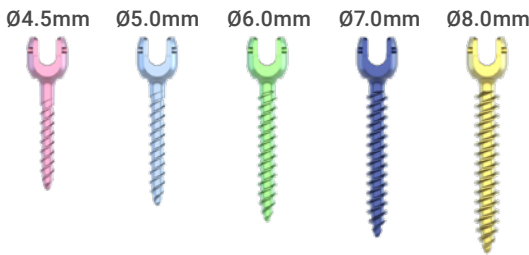
Uniplanar

- Solid and Cannulated
- Standard and Reduction tulip
- 25mm of reduction power with our reduction screw
- Length 20-90mm*
- **Compatible with Ø5.5 and Ø6.0mm rods**
- $\pm 25^\circ$ up to $\pm 26^\circ$ angulation in the uniplanar plane according to the diameter of the screw ($50^\circ-60^\circ$ of ROM)
- Compatible with titanium alloy and cobalt chrome set screws
- Material: titanium alloy



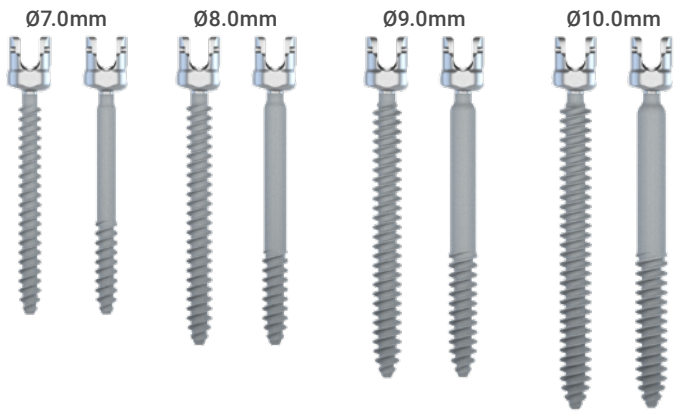
Monoaxial

- Solid
- Standard tulip only
- Length 25-90mm*
- Compatible with Ø5.5 rod only
- Compatible with the cobalt chrome set screws only
- Material: titanium alloy



S2AI

- Polyaxial Cannulated only
- Standard and Reduction tulip
- 15mm of reduction power with our reduction screw
- Partially and Fully threaded
- **HA coating**
- Length 30-120mm*
- **Compatible with Ø5.5 and Ø6.0mm rods**
- 40° as favored angle (according to the screw's diameter)
- Compatible with titanium alloy and cobalt chrome set screws
- Material: titanium alloy

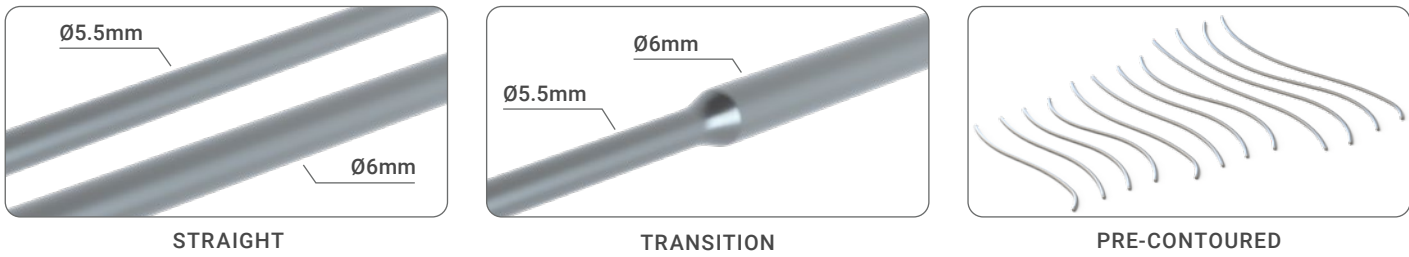


* Check the complete available lengths in the surgical techniques.
** Only in solid version.

RODS

The range of rods is designed to provide support and stability in posterior spinal fixation procedures. The portfolio includes both **Cobalt Chrome** and **Titanium rods**, allowing surgeons to tailor their approach based on patient needs. To further enhance personalization, the rods are available in **Ø5.5mm** and **Ø6.0mm**, **straight** or **pre-bent**, providing flexibility in addressing varying anatomical requirements.

- **Transition rods Ø5.5-6.0mm** for thoraco-lumbar fixation
- **Hex-ended straight and pre-contoured rods** to facilitate the derotation in deformity cases
- **Sixteen pre-bent rods** with single or double curvature to be used in combination with the **NextAR Rod Optimizer**, potentially reducing manual bending time in the OR
- **Z-Rods** for revision surgeries



“DOMINO” ROD-TO-ROD CONNECTORS

The M.U.S.T. rod-to-rod connectors offer a seamless fusion of **versatility** and **reliability**, enabling surgeons to tailor spinal interventions with precision. The rod-to-rod connectors come in **various shapes**, ensuring compatibility with diverse surgical requirements and accommodating the vast majority of procedural needs.

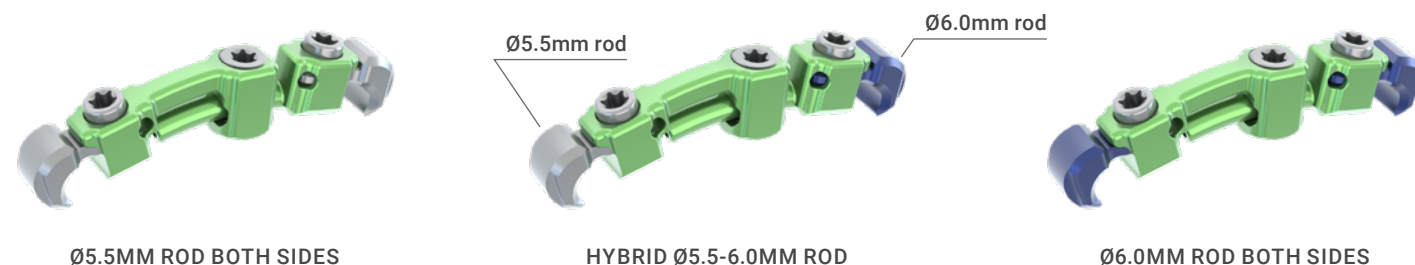
In addition to their diverse shapes, the M.U.S.T. rod-to-rod connectors come in different dimensions, allowing for compatibility with rods of various diameters. This flexibility ensures that surgeons can select the most appropriate combination for the unique anatomical characteristics of each patient.

One of the defining features of our **rod-to-rod connectors** is their capability to **connect cervical with thoraco-lumbar** constructs. This groundbreaking design facilitates seamless integration across different regions of the spine, offering **comprehensive solutions for complex cases** that require a continuum of support.



CROSS-CONNECTORS

The M.U.S.T. cross-connectors are designed to seamlessly integrate with the M.U.S.T. pedicle screw system, offering a reliable means of **connecting rods in different diameter configurations: Ø5.5mm or Ø6.0mm on both sides or Ø5.5mm and Ø6.0mm for a hybrid construct**. The unique design of these connectors, made of titanium alloy, reinforcing spinal fixation for a variety of surgical scenarios.



LATERAL CONNECTORS

The M.U.S.T. lateral connectors are made of titanium alloy and design to easily connect the iliac screw to the construct without bending the rod. **The connectors are available in different lengths, from 20mm up to 150mm** compatible with the Ø5.5mm rod only.



HOOKS

The use of **hooks** may reduce the risk of **Proximal Junction Kyphosis (PJK)** by providing a theoretical biomechanical advantage, as they require less violation of the facet joint and offer more dynamic fixation at the cranial aspect of the construct.^[1] **The wide variety of sizes, blade widths, and types** available in the M.U.S.T. system **are designed to meet the surgical needs of patients** and **accommodate all surgical techniques used by surgeons**.



MY SOLUTIONS PERSONALIZED ECOSYSTEM



A network of advanced digital solutions designed to improve patient outcomes and healthcare efficiency

Medacta's MySolutions Personalized Ecosystem is designed around the patient's needs and expectations, in collaboration with an international network of expert surgeons, with the aim of delivering value throughout the entire patient journey.

Surgeons' advanced 3D planning is at the core of our platform, followed by highly accurate execution tools such as patient-matched surgical guides, as well as an augmented-reality-based surgical platform and verification software. Medacta has created a pathway to improve patients' surgical experience and support them during the continuum of care.

Why Medacta personalized enabling technologies?

PERSONALIZED 3D PLANNING

Leverage Medacta's surgeon experience with our personalized **3D planning tool**. The preoperative planning software offers solutions to accurately plan even the most challenging case.

PRECISE EXECUTION

Provide **complete and precise pre- and intraoperative guidance** for screw placement, allowing surgeons a personalized approach based on each **patient's unique anatomy**.

STREAMLINED WORKFLOW

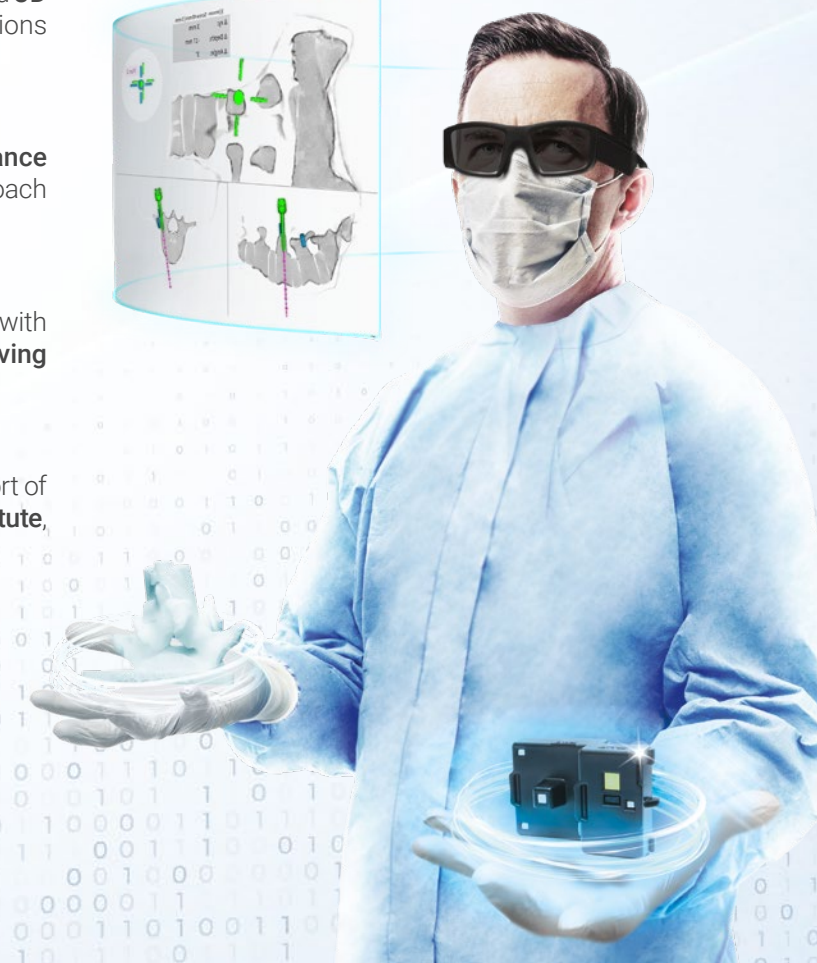
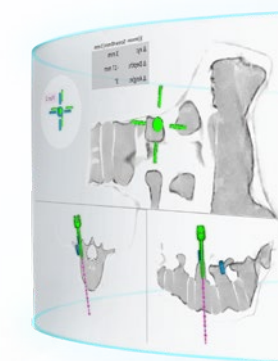
Surgeon's procedural workflow can be seamlessly integrated with Medacta's personalized enabling technology, potentially **saving O.R. space, setup time, and increasing operating efficiency**.

FULLY SUPPORTED ADOPTION

The **learning curve** can be limited to a few cases with the support of tailored **high-level educational pathways**. With the **M.O.R.E. Institute**, the surgeon is never alone when discovering new technologies.

SUSTAINABLE SOLUTION

Limited capital investment required.





**REDEFINING BETTER
IN ORTHOPAEDICS
AND SPINE SURGERY**

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M.U.S.T.®
Brochure

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