

PORTFOLIO

For distribution in the USA only

With **PASSION**
for our partners and patients.



www.signus.com

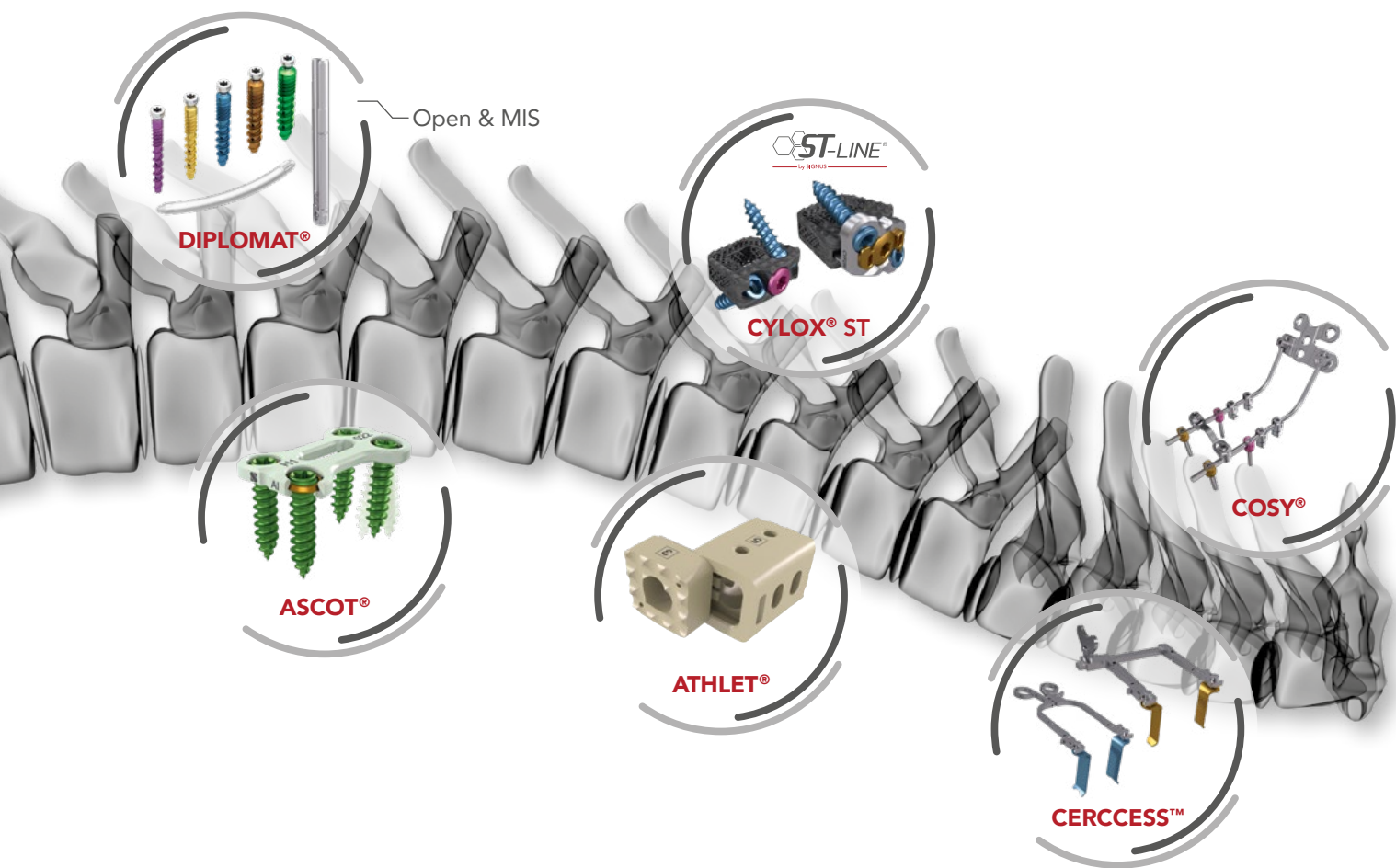
SIGNUS – THE SIGN FOR SPINE

PASSIONATE!

DYNAMIC!

WORLDWIDE!







SOCIAL MEDIA

LinkedIn, Instagram and Facebook ... follow SIGNUS on social media.

Learn more about our products and discover exciting stories about the family-owned company – Made in Germany!

SIGNews

Sign up exclusively on our website for the newsletter and never miss another SIGNUS update on important spine topics.

DO NOT WAIT ... FOLLOW US NOW!

REGISTER NOW!



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SIGNUS – THE SIGN FOR SPINE

PASSIONATE! DYNAMIC! WORLDWIDE!

High-end spine implants: for almost 30 years, SIGNUS has been the experienced specialist and provider of comprehensive solutions in surgical spine care. Surgeons around the world rely on our innovative product portfolio to provide their patients with the best possible mobility in everyday life. Our company was founded by Susanne and Uwe Siedler in Germany's Lower Franconian city of Alzenau in 1994. It currently employs approximately 80 people at sites in Germany, Australia, Switzerland and USA. In addition to Europe (CE) and the USA (FDA), we sell our certified implants throughout the world on every continent.

Strong Solutions for weak Vertebra

Degenerative changes of the spinal column, fractures, scoliosis or tumors – SIGNUS offers the complete range of products from the cervical spine to the sacroiliac joint as well as an exceptional service level in matters concerning the spine. To put it in the words of the company's founder and owner Uwe Siedler: "We do nothing else but spine – and this with dedication and passion."

Apart from many years of experience, consistent product advancements, the use of state-of-the-art technology and comprehensive practical expertise, it is the continuous dialogue with the users that makes SIGNUS a reliable global partner for physicians and healthcare practitioners.

From Alzenau into the World – Featuring Supreme Quality

The majority of our implants are manufactured in nearby production facilities of ProCon Medizintechnik in Alzenau, while a small part of the product portfolio is produced in the USA, Switzerland and France. In terms of the production in Germany and abroad, company owner Susanne Siedler, who is responsible for the division "Quality and Approval", places great emphasis on consistent process monitoring; from development and manufacturing through to delivery, the quality of SIGNUS implants as well as the subsequent processes are fully monitored and documented.

High-Tec meets Tradition

Producing innovative high-end products of supreme quality to supply orthopedists as well as trauma, spinal and neurosurgeons with customized optimum solutions for their patients has been our team's motivational force for more than two decades. The use of cutting-edge technologies, such as additive production, is incentive and challenge at once. Setting new standards in spinal surgery options is our top priority at all times.



Notwithstanding our pioneering role in this sector, our independent family-operated company relies heavily on traditional values – commitment and cooperation result in trust and excellence. We excel due to our receptiveness for new ideas and technologies for the benefit of our patients, our respectful relationship with our employees, customers and partners as well as the consistent implementation of targets.

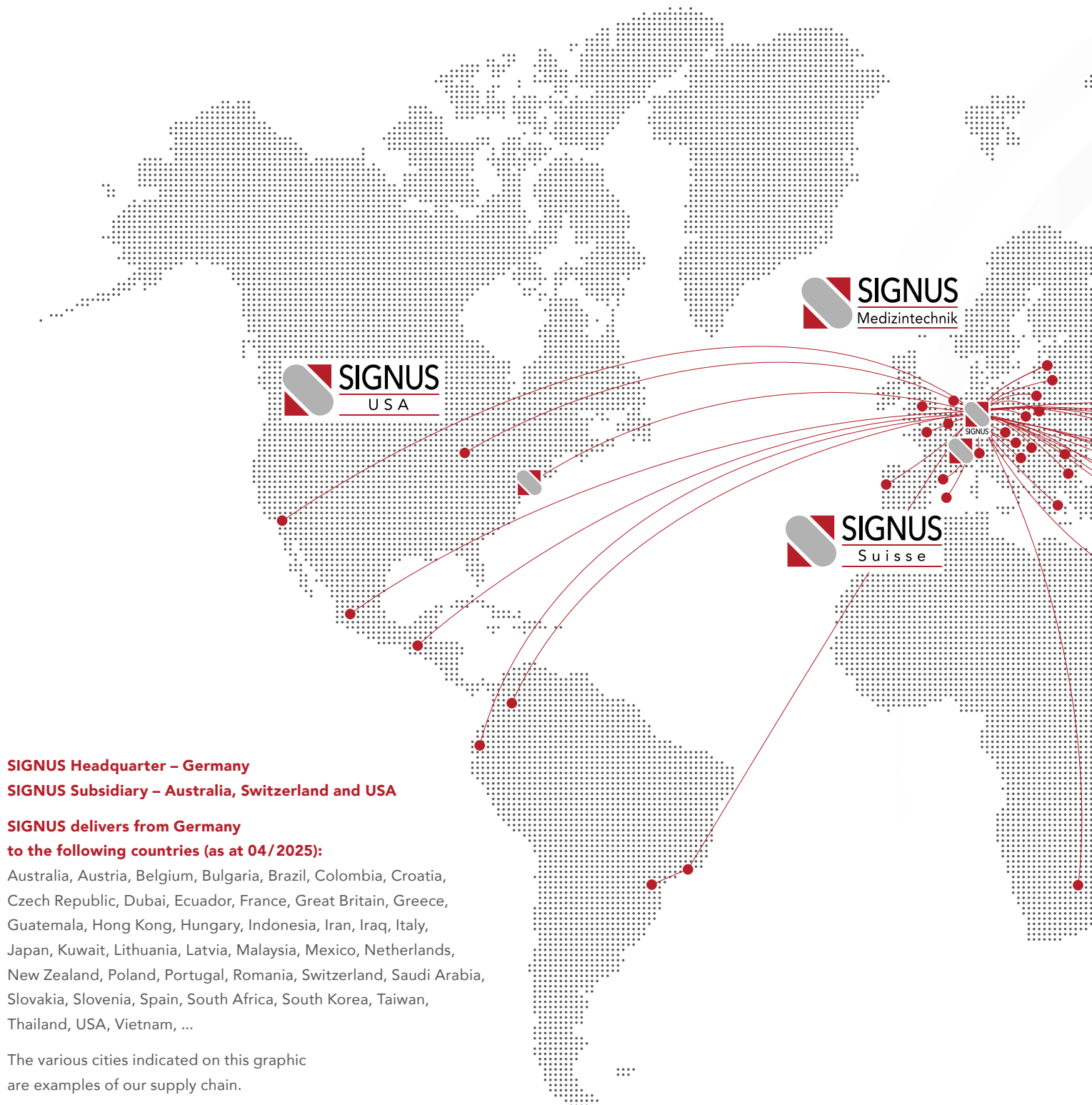
Always there for you!

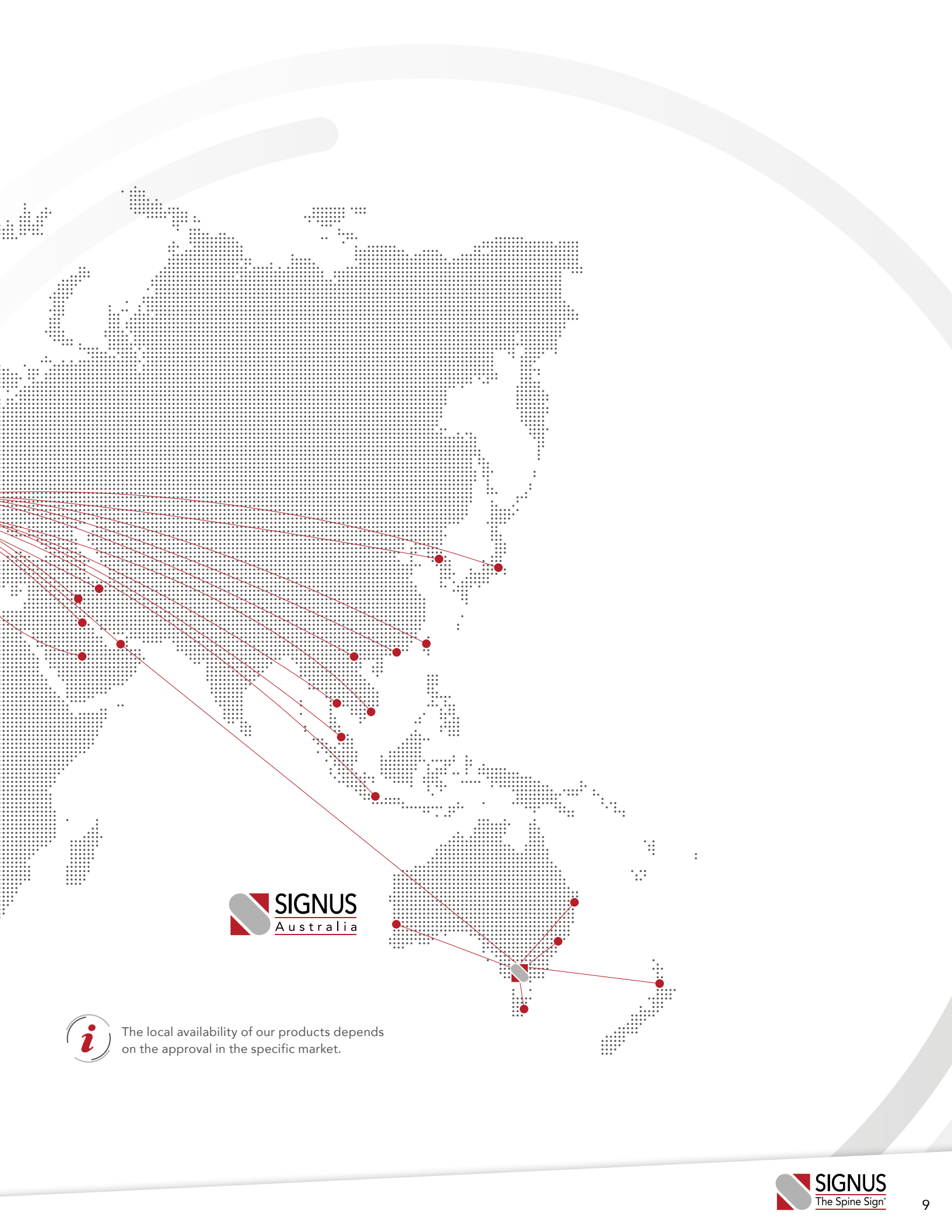
"Spinal systems develop their quality and full potential only when the surgeon's mind and hand are fully prepared for them," is the experience of Uwe Siedler. Therefore, the comprehensive service provided by SIGNUS also includes regular advanced training sessions, an international training and observation program as well as surgery consultations. Susanne Siedler confirms, "The trusting cooperation between the company and the users shall remain our decisive formula for success in the future."

The entire SIGNUS Portfolio with detailed information and descriptions is available for you online at www.signus.com



SIGNUS WORLDWIDE



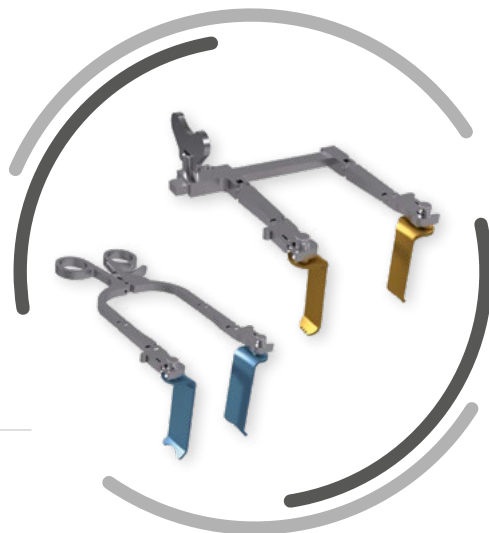


The local availability of our products depends on the approval in the specific market.

CERCESS™

Cervical Retractor System

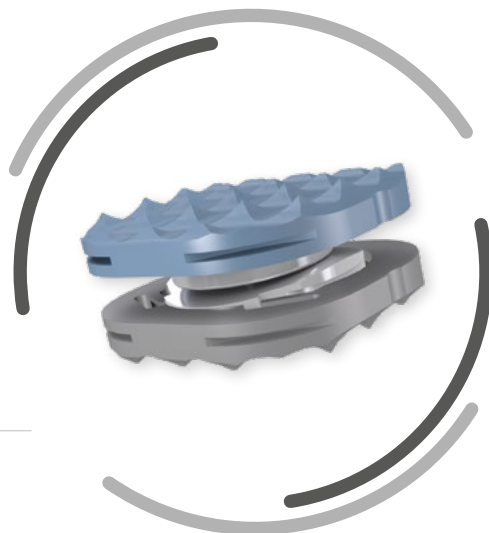
- Side load mechanism with snap-in lock
- Multi-segment distractor with drill guide
- Comprehensive range of retractor blades specially designed for cervical spine applications



ROTAIO®

Cervical Disc Prosthesis

- Posteriorly-oriented, one-piece prosthesis design
- Variable centre of rotation
- Proven surface teeth fixation
- Pre-mounted
- Implantable like a cage
– moves like a disc



Anatomical range of motion

The range of motion should be defined by the anatomical structures and not by the disc prosthesis. For this reason ROTAIO® completely restores the physiological range of motion.

Flexion/Extension

C5–C6: 20°¹

ROTAIO®: 20° (ROTAIO® 5 mm: 18°)



Lateral bending

C5–C6: 16°¹

ROTAIO®: 16°



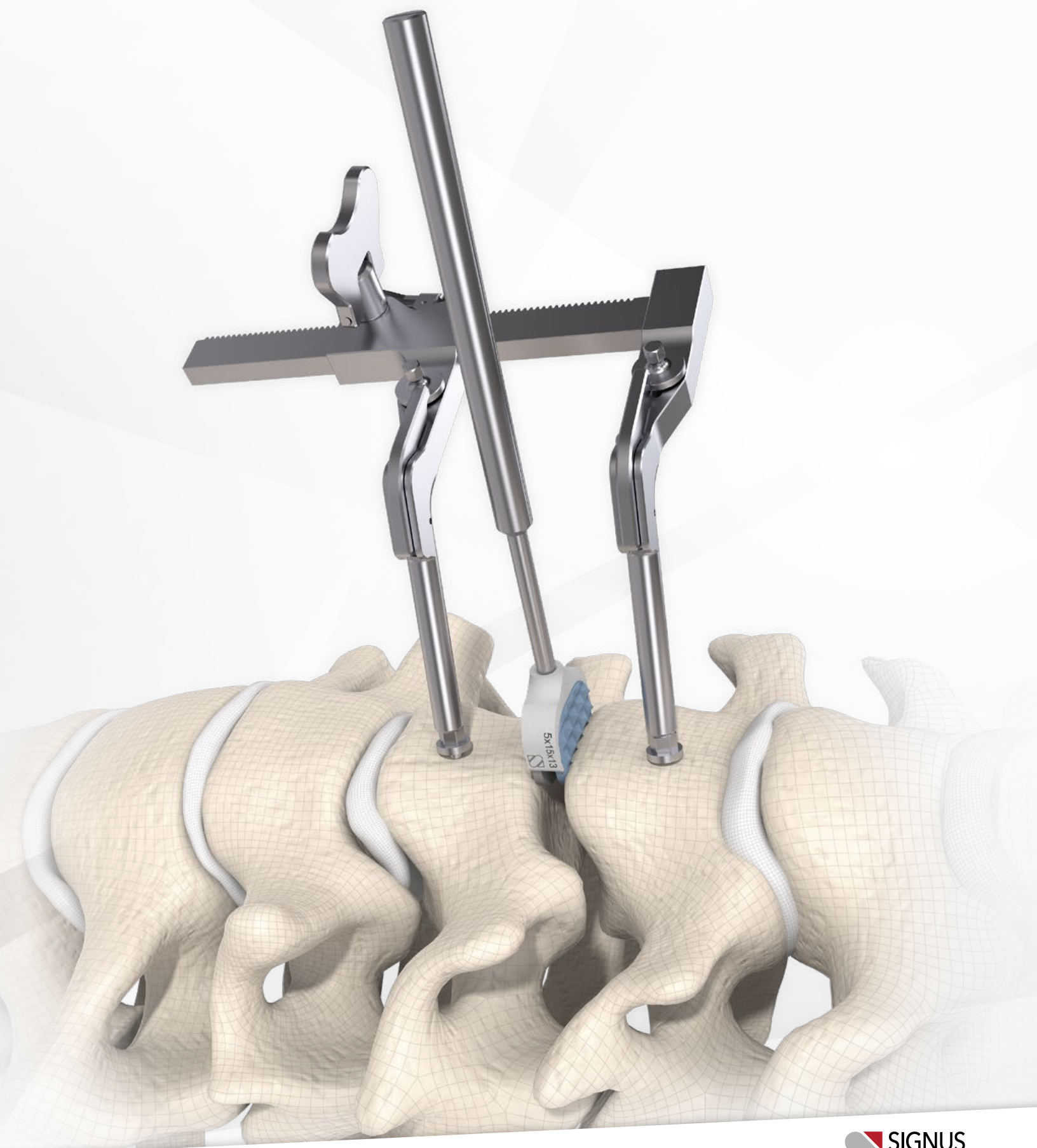
Axial rotation

C5–C6: 14°¹

ROTAIO®: 360°



¹ White A., Panjabi M.: Clinical Biomechanics of the Spine, 2nd edition (1990): 98

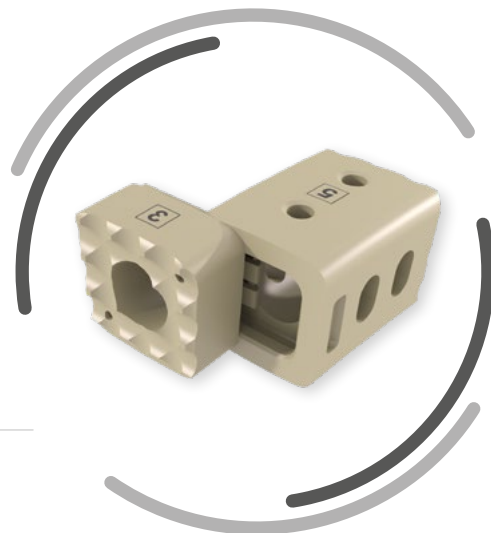


ATHLET®

Cervical Vertebral Body Replacement

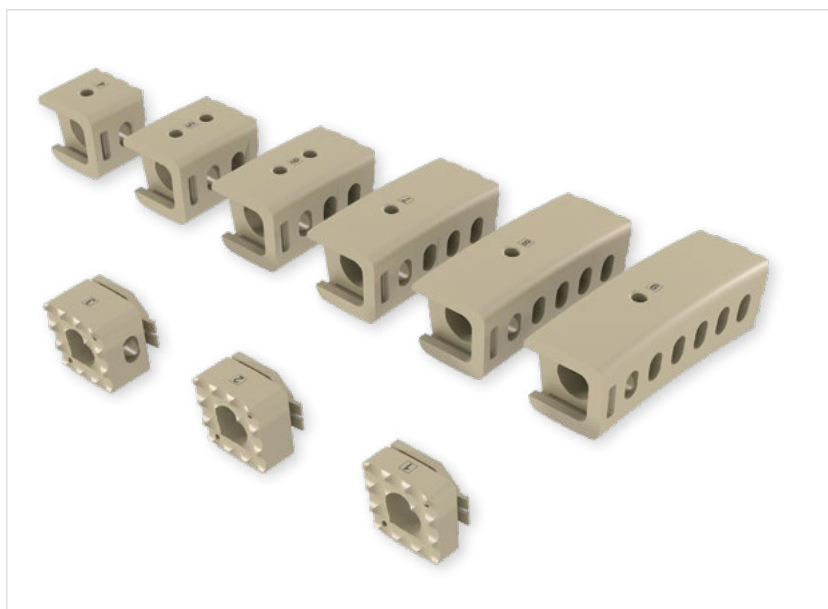


- PEEK-OPTIMA®
- Large contact area, generous fenestration
- Lordotic implant angulation



1 treatment = 1 basic body + 1 end body

Nine implant components and four instruments enable both efficiency in the OR and individual patient requirements to be satisfied thanks to fine height gradations of 16 to 50 mm. The simple click mechanism ensures that the implant components are securely fixed.



9 implant components, 18 heights: 6 basic and 3 end bodies



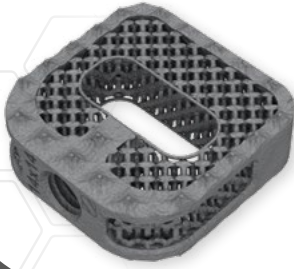
Perfectly compatible with the pre-contoured ASCOT® or TOSCA® CS plates, which can be screwed onto the ATHLET® implant

CERVICAL | ACDF

JASPIS® ST

Anterior Cervical Fusion

ST-LINE
by SIGNUS



- ST (Structural Titanium)
- Large contact area with the vertebral body
- Smooth lateral surfaces
- 0°/8° lordosis

CERVICAL | ACDF

NUBIC®

Anterior Cervical Fusion



- PEEK-OPTIMA®
- Curved surface
- Anatomic design

CERVICAL | ACDF

RABEA®

Anterior Cervical Fusion



- PEEK-OPTIMA® and medical titanium alloy
- Toothed surface
- 0°/5° Lordosis

ASCOT®

Anterior Cervical Stabilization

- Semi-rigid design with large angular variability
- Variable angle screw, self drilling
- Thin plate design of 1.8 mm



Automatic locking mechanism

An integrated locking mechanism and self-drilling screws enable screw placement and locking in a single step, making the system efficient to handle and safe for the patient.



TOSCA®

Anterior Cervical Stabilization

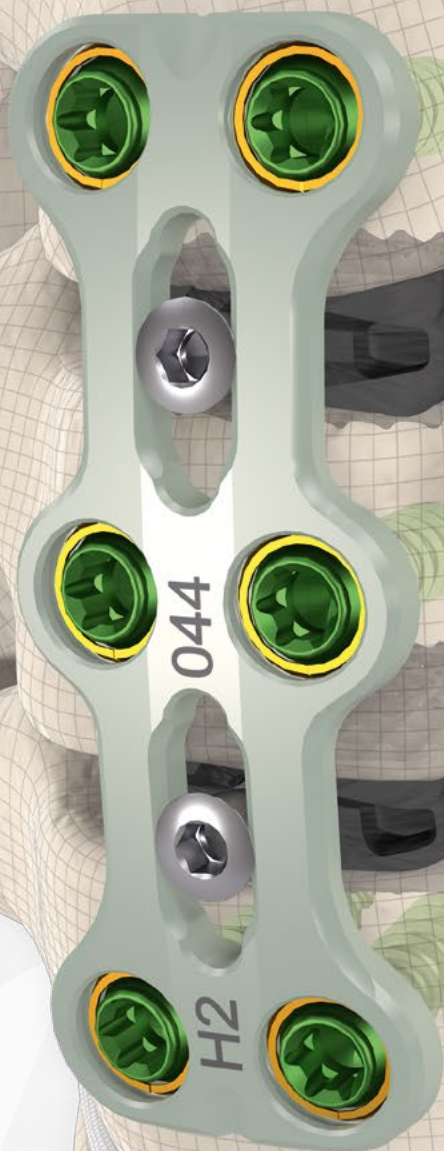
- Standard and expansion screws
- Semi-rigid design with large angular variability
- Mono- and bicortical screw fixation
- Self-tapping fixed-angle and variable-angle bone screws
- Thin plate design of 1.6 mm



TOSCA® Standard



TOSCA® Expansion



CYLOX® ST

Anterior Cervical Fusion

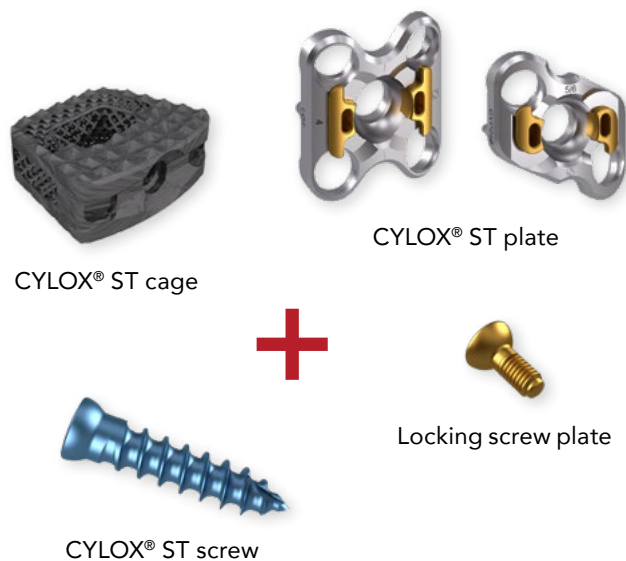
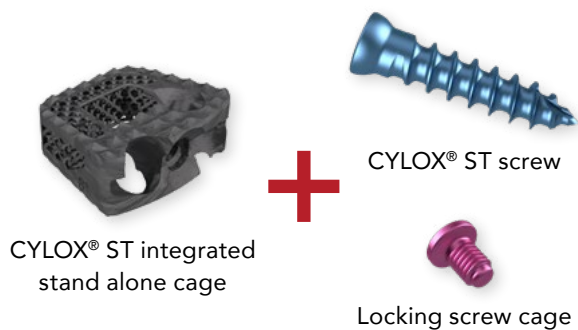
- Stand alone cage or cage plus plate
- ST (Structural Titanium)
- Integrated locking mechanism
- Large screw options

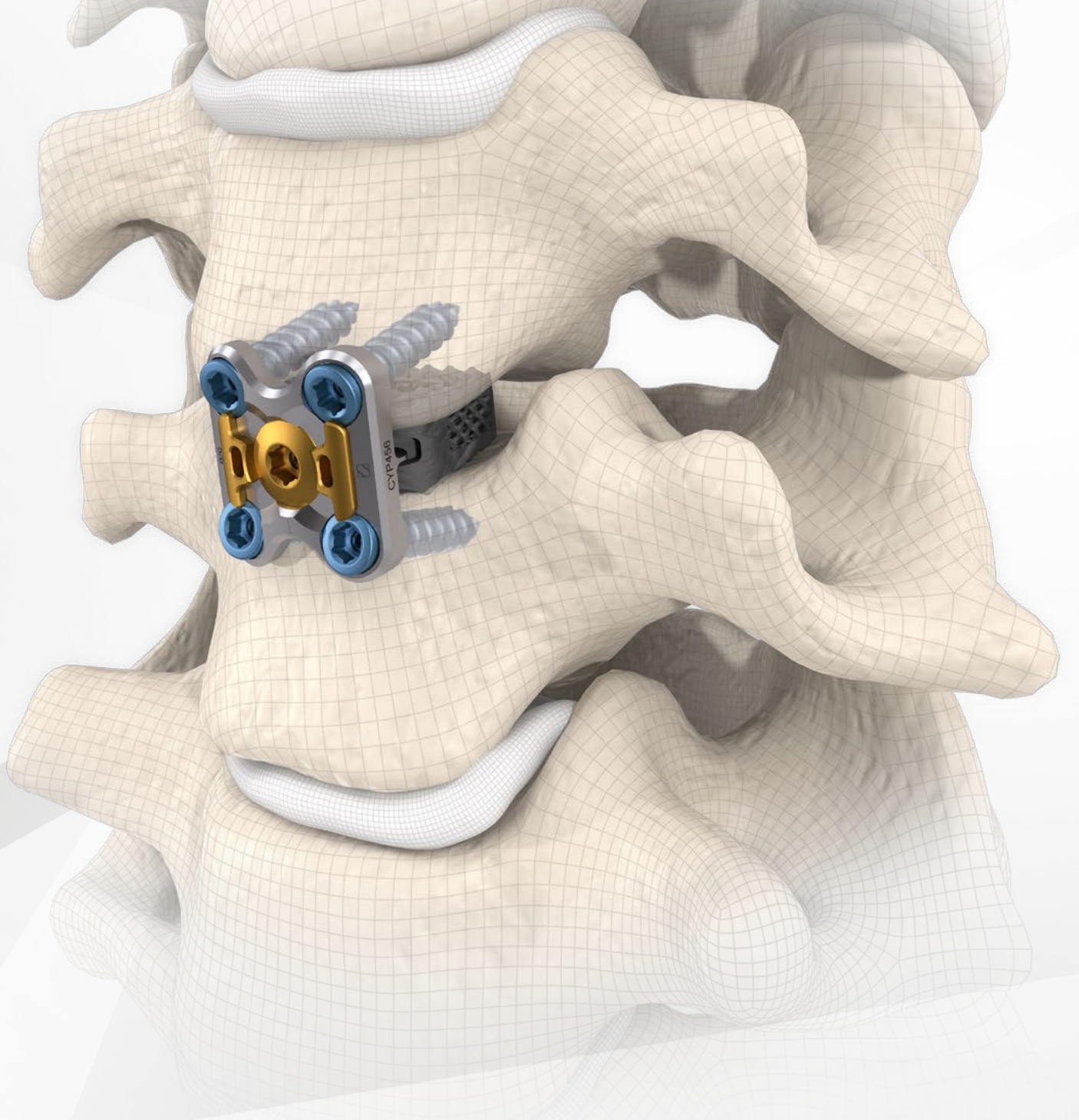


Your Patient – Your choice

With CYLOX® ST the surgeon can choose to implant a stand alone cage, add integrated screws or implant a cage plus plate construct.

One lean product portfolio covers all clinical needs for monosegmental ACDF.





COSY®**Cervicothoracic Occipital Screw-Rod System**

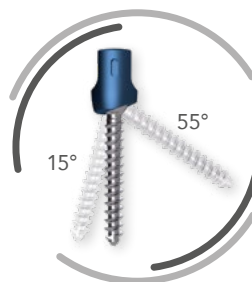
- Fixation from Occiput to Thoracic spine
- Versatile Screw and Tulip Options for Tailored Solutions
- Extensive Configuration Options with Connector Family
- Compatible with DIPLOMAT® screw-rod system

**Large screw selection**

The Large range of screw sizes and types for different surgical requirements. Angulation up to 70° in any direction for greater flexibility in screw placement. All screws have a low profile, are cannulated and come with friction fit to maintain position.

Variable angle

70° angulation in ANY direction

Fixed angle

15° / 55° angulation

Colour coded tulips

Ø 3.5 mm
magenta



Ø 4.0 mm
gold



Ø 4.5 mm
silver



Ø 3.5 and Ø 4.0 mm
blue

Optional Occiput Fixation

For stabilisation and fusion of the occipitocervical junction the system provides occipital plates with corresponding screws and rods in various sizes.

The fixation of the occiput can be extended to the thoracolumbar area with the transition rods.



Connection to DIPLOMAT®

Transition rods and connectors provide transition between cervical and thoracolumbar constructs.

VERTACONNECT[®]

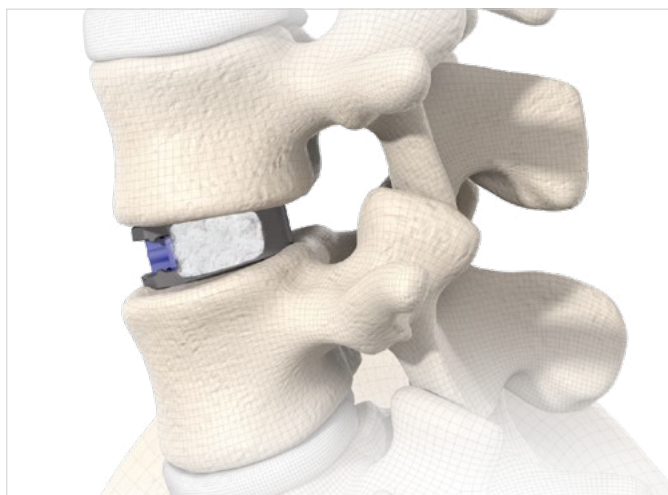
Transforaminal Lumbar Interbody Fusion

- Expandable cage until 15° lordosis
- Diagonal implant placement
- Open implant design promotes osseointegration
- Easy to use
- Optimal restoration of the sagittal alignment



Open implant design

VERTACONNECT[®] is characterised by stable contact areas, toothed surfaces and a large fenestration for easy filling with bone material. The open design of the implant encourages the growth of bone into the disc space.



VERTACONNECT[®] filled with bonegraft substitute

Endoscopic fusion

Percutaneous use of VERTACONNECT[®] through the Kambins Triangle pTLIF (percutaneous transforaminal lumbar interbody fusion) using the endoscopy based transforaminal posterolateral approach¹.



Placement through the Kambins Triangle

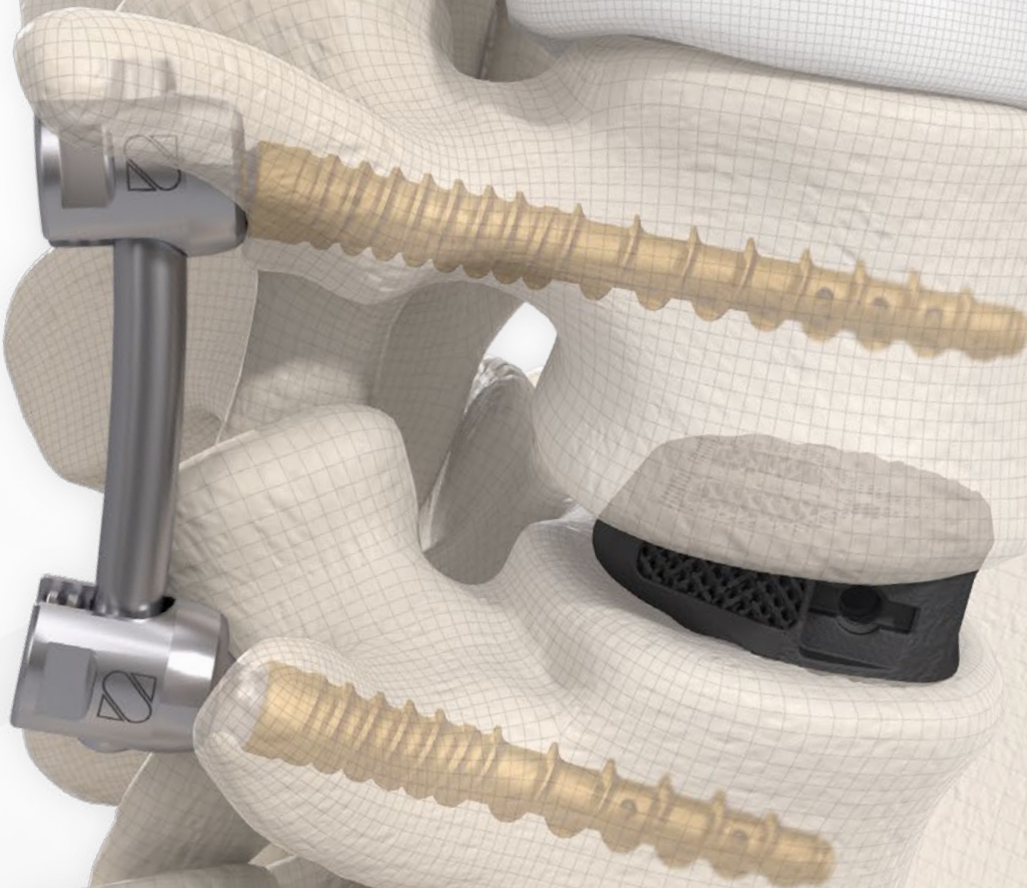
¹ Morgenstern C, Morgenstern R (2024): Stand-alone endoscopic/percutaneous TLIF for severe unilateral foraminal stenosis: feasibility and preliminary results. Poster presentation Global Spine Congress 2024, Bangkok

WOMBAT®**Transforaminal Lumbar Interbody Fusion**

- PEEK-OPTIMA® and ST
- Diagonal implant placement
- Biconvex design with or without lordosis
- Smooth lateral surfaces

MOBIS® II**Transforaminal Lumbar Interbody Fusion**

- PEEK-OPTIMA® and ST
- Controlled insertion at different angles
- Bullet nose
- Smooth lateral surfaces



BIG[®] ST**Anterior Lumbar Interbody Fusion**


ST-LINE[®]
by SIGNUS



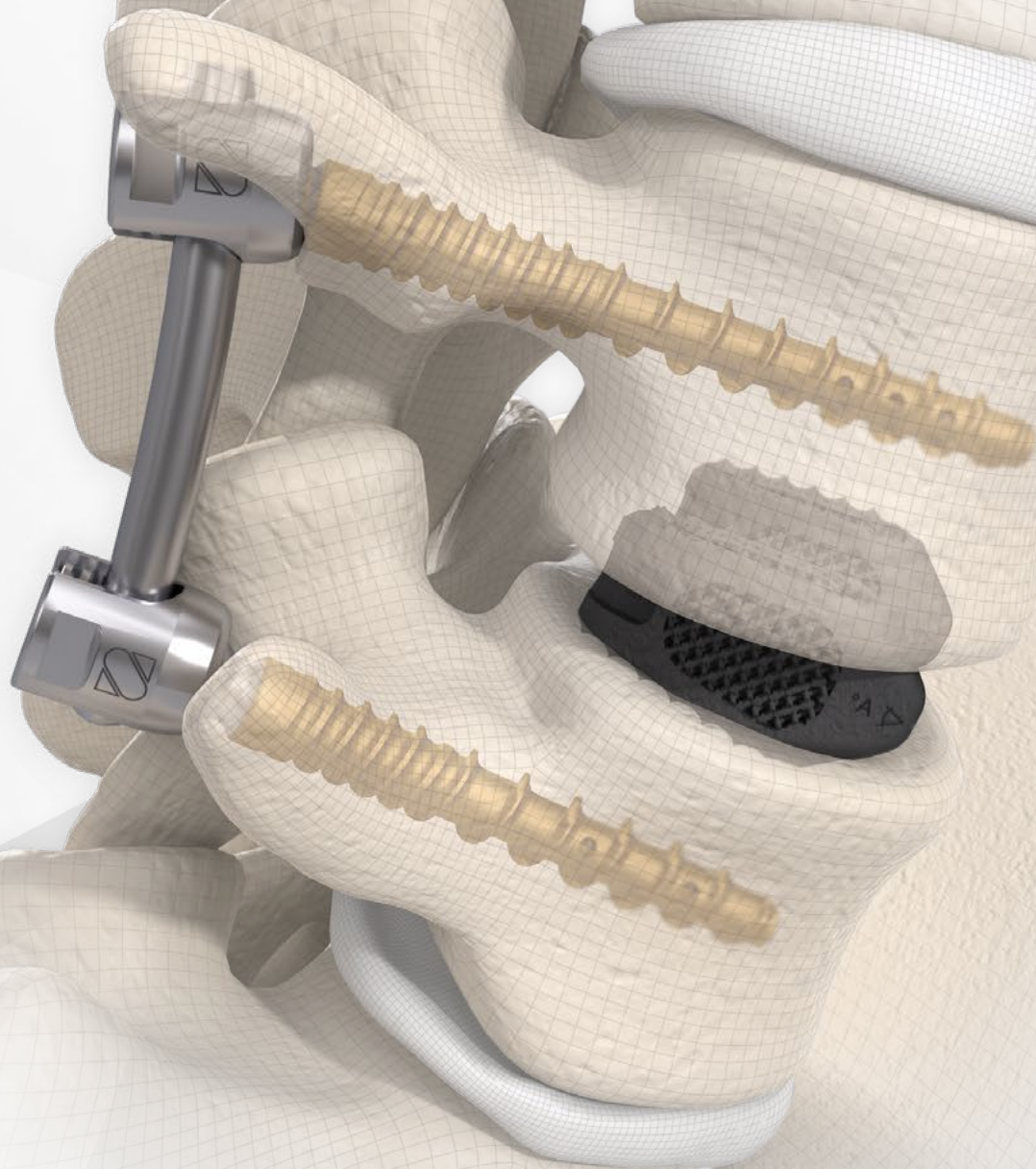
- ST (Structural Titanium)
- 8° / 12° / 16° lordosis for restoration of the sagittal profile
- 0° / 45° / 90° attachment for ALIF, OLIF and LLIF
- Optional: stand alone ALIF

TASMIN[®] R**Posterior Lumbar Interbody Fusion**

- PEEK-OPTIMA[®]
- Implantation using standard or 90° rotational technique
- Biconvex design with or without lordosis
- Proven SIGNUS toothed cage design

TETRIS[™] II**Posterior Lumbar Interbody Fusion**

- PEEK-OPTIMA[®]
- Artifact-free MRI imaging
- Proven SIGNUS toothed cage design



TETRIS™ ST**Posterior Lumbar Interbody Fusion**

ST-LINE™
 by SIGNUS


- ST (Structural Titanium)
- Implantation using standard or 90° rotational technique
- Increased roughness in conjunction with SIGNUS toothed cage design

TETRIS™ R ST**Posterior Lumbar Interbody Fusion**

ST-LINE™
 by SIGNUS


- Placement in the gold-standard PLIF technique
- ST (Structural Titanium)
- Increased roughness in conjunction with SIGNUS toothed cage design

**TETRIS™ ST****TETRIS™ R ST**

DIPLOMAT® – One system for all indications

More flexibility and efficiency in all matters – without compromises

Requirements for pedicle screw systems are high – regardless of indication. Simple and sophisticated spine restorations require highest level of safety and stability for optimal patient care and a comfortable and reliable range of instruments.

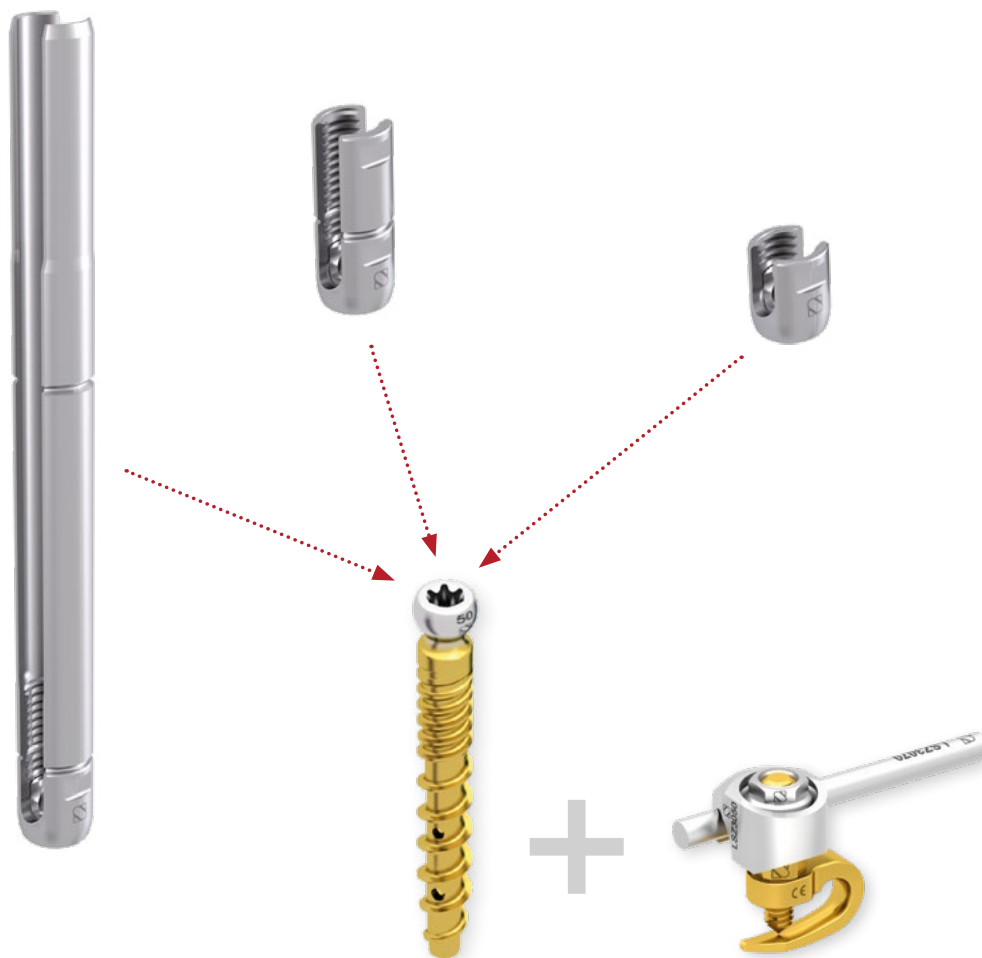
DIPLOMAT® is a safe, modular and economical fixation system for all indications with relevant characteristics.

From experts for experts

DIPLOMAT® was developed in collaboration with international spine surgeons and has proven itself in use of various indications.

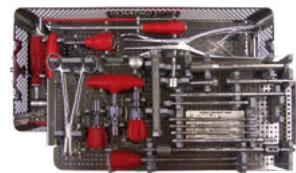
The focus of development was an optimal balance between clinical performance and ease of use – for maximum practicality and optimal patient care.

In-situ exchangeable tulips



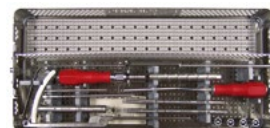
BASIC

1 basic set for open and reduction



MIS

1 small additional set for MIS



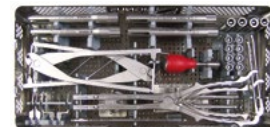
DEFORMITY

1 additional set for deformities



OPTIONAL

1 optional set for individual requirements



SCREW-ROD-SYSTEM

DIPLOMAT®

Posterior Instrumentation



- In-situ exchangeable tulips
- Augmentable cannulated and fenestrated screws
- Specially engineered thread design for ideal stability

SCREW-ROD-SYSTEM

DIPLOMAT® MIS

Minimally Invasive Posterior Instrumentation



- Minimal access due to narrow tulip design
- Less tissue damage
- Easy handling

SCREW-ROD-SYSTEM

DIPLOMAT® Deformity

Treatment of Spinal Deformities



- Hook-based system with rotationally stable fixation
- Secure anchorage even in damaged pedicles
- Solid correction of three-dimensional deformities

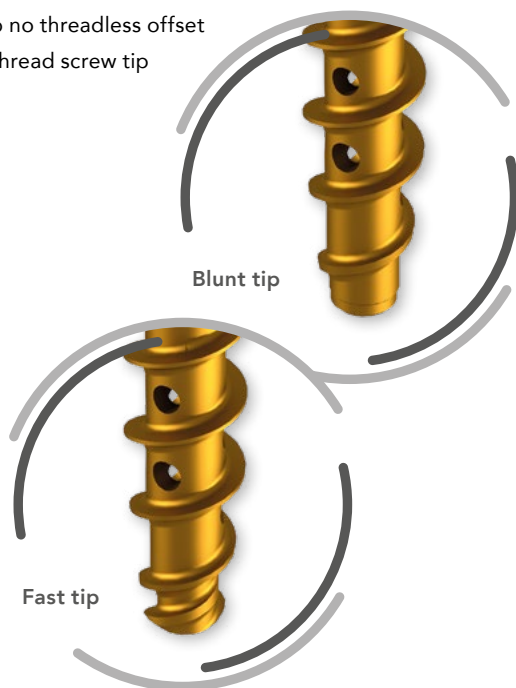
DIPLOMAT® – One solution for all indications and surgical techniques!

Blunt screw tip

- Protection of neural structures
- Screw tip threadless offset
- Single thread screw tip

Screw fast screw tip

- Protection of neural structures
- Screw tip no threadless offset
- Double thread screw tip



Cross connector



Offset connector, open



Parallel connector



Extension sleeve



Parallel connector UU



Parallel connector OO



Parallel connector OC



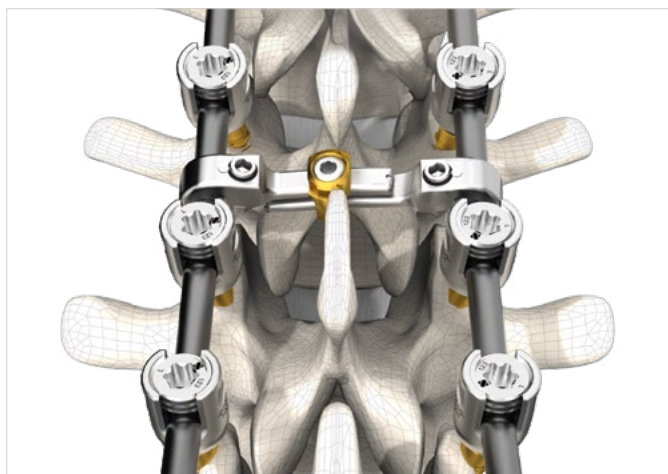
Parallel connector CC



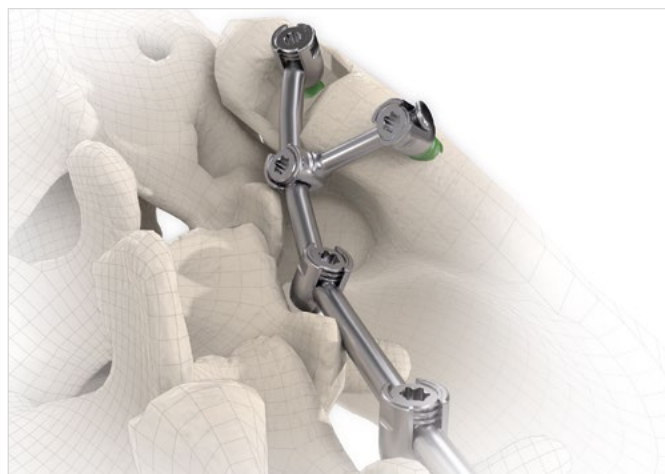
Parallel connector UO



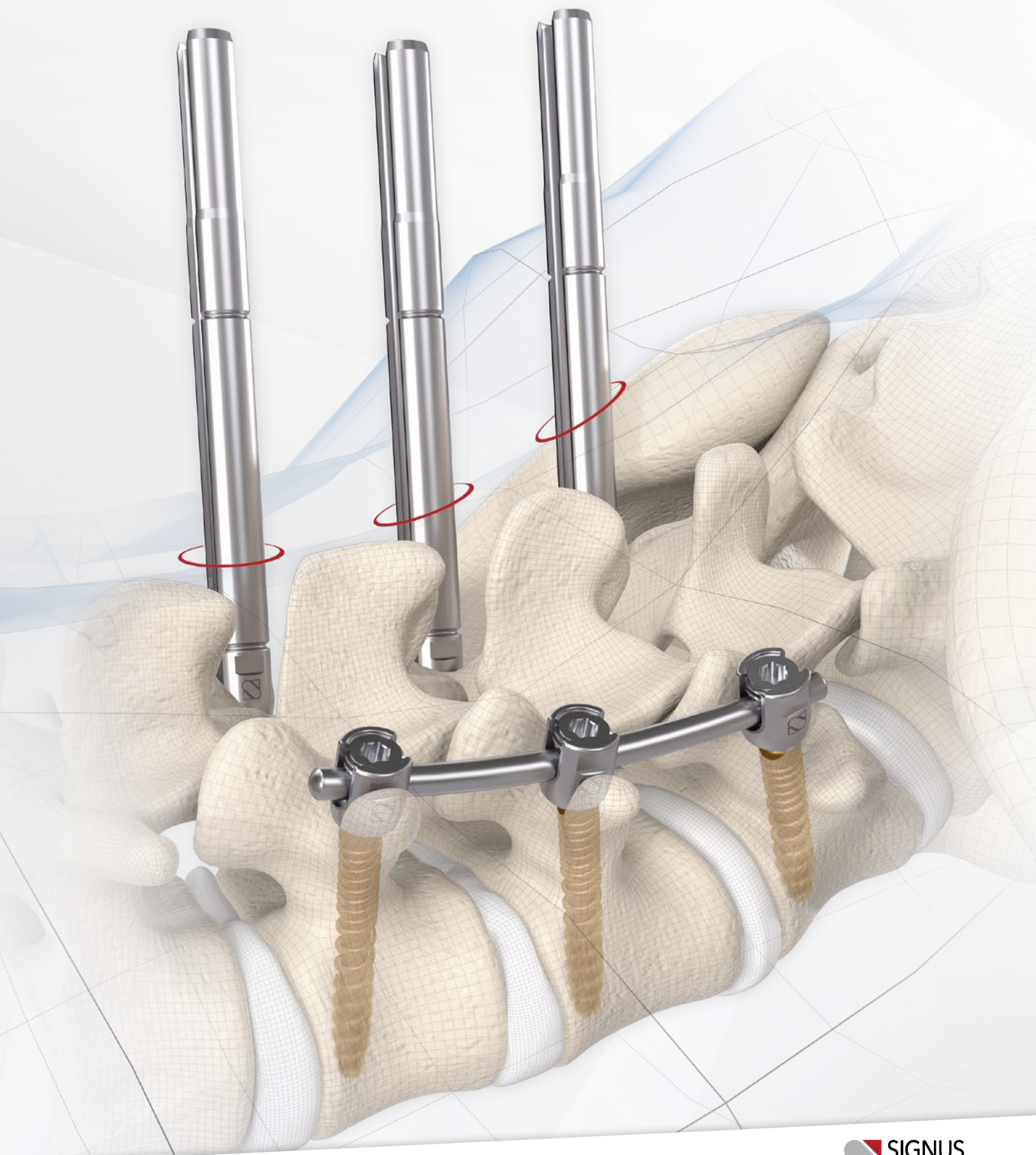
Parallel connector UC



DIPLOMAT® with cross connector



DIPLOMAT® with offset connector



PROTEUS®

Posterior lumbosacral retractor



- Slim design
- Modularity and flexibility
- Soft tissue retraction and distraction
- Reflection-free black coating



Versatile and precise

PROTEUS® is a versatile retractor system for use in the posterior lumbosacral spine and can be used for both soft tissue retraction as well as distraction.

Elements that are in situ are black to prevent reflections.



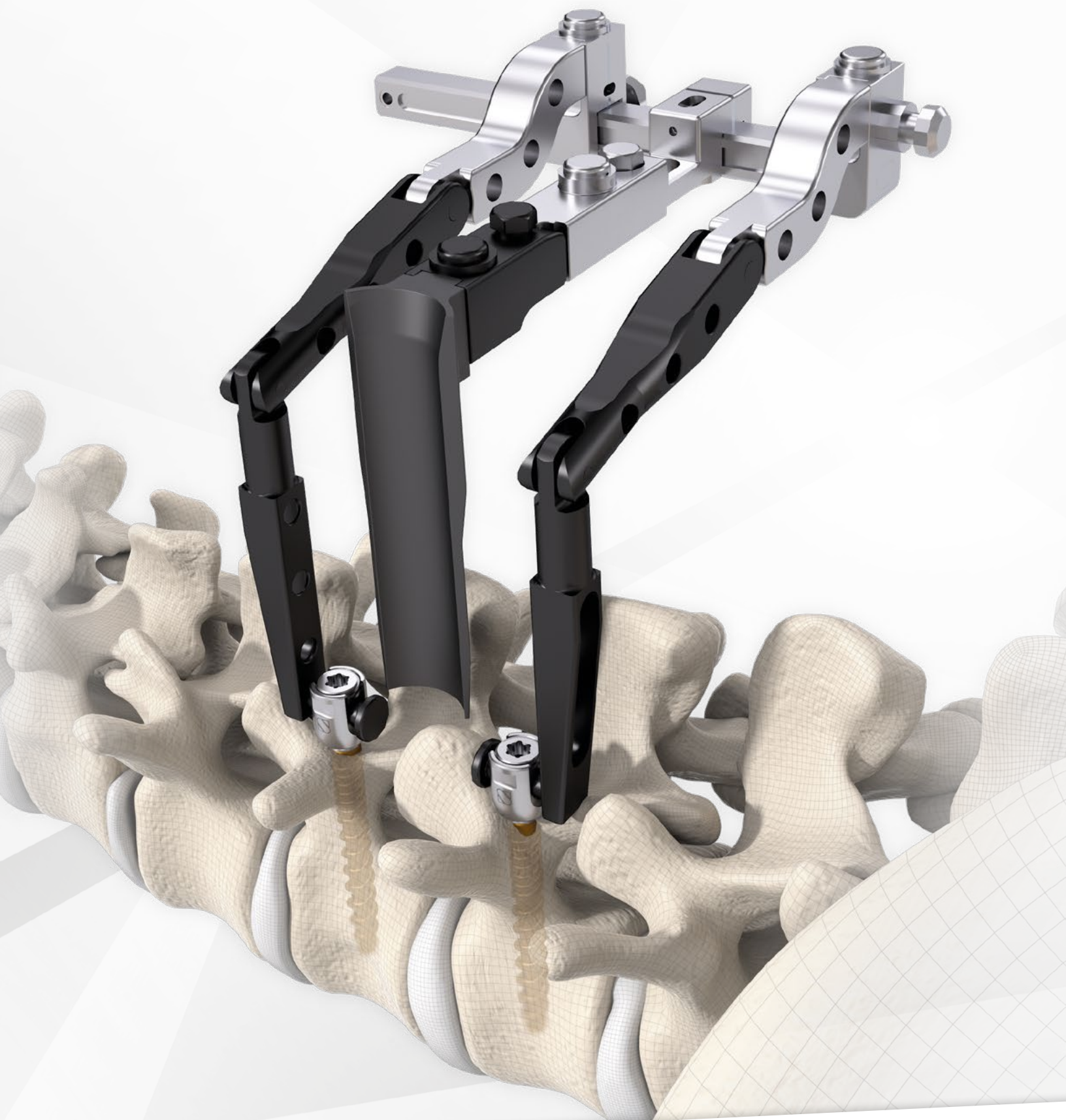
Can be used with screws without tulips – optionally with soft tissue retraction



Can be used with screws with tulips – optionally with soft tissue retraction



Optional: only soft tissue retraction



POSEIDON® ST

Expandable Vertebral Body Replacement

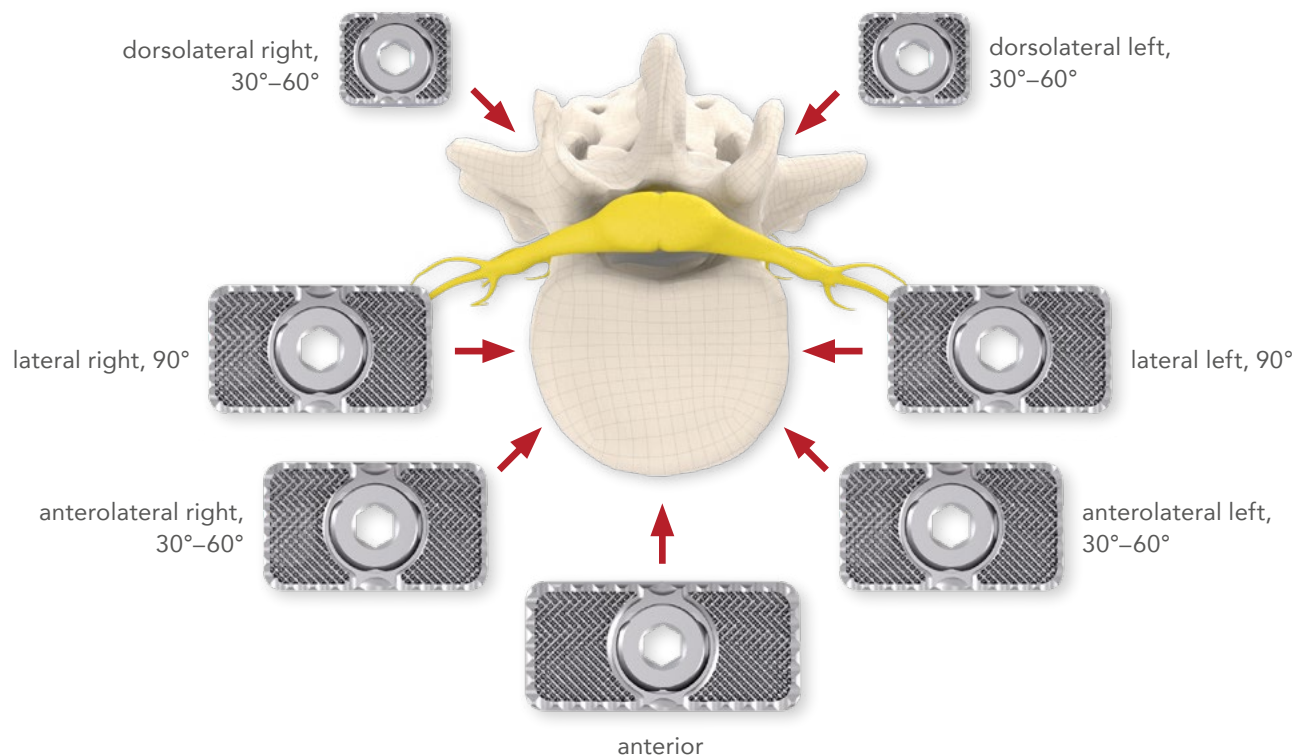
- Big endplates made of ST (Structural Titanium)
- Slim base body with a diameter of only 16 mm
- Free choice of approach in 30° increments
- Easy to use

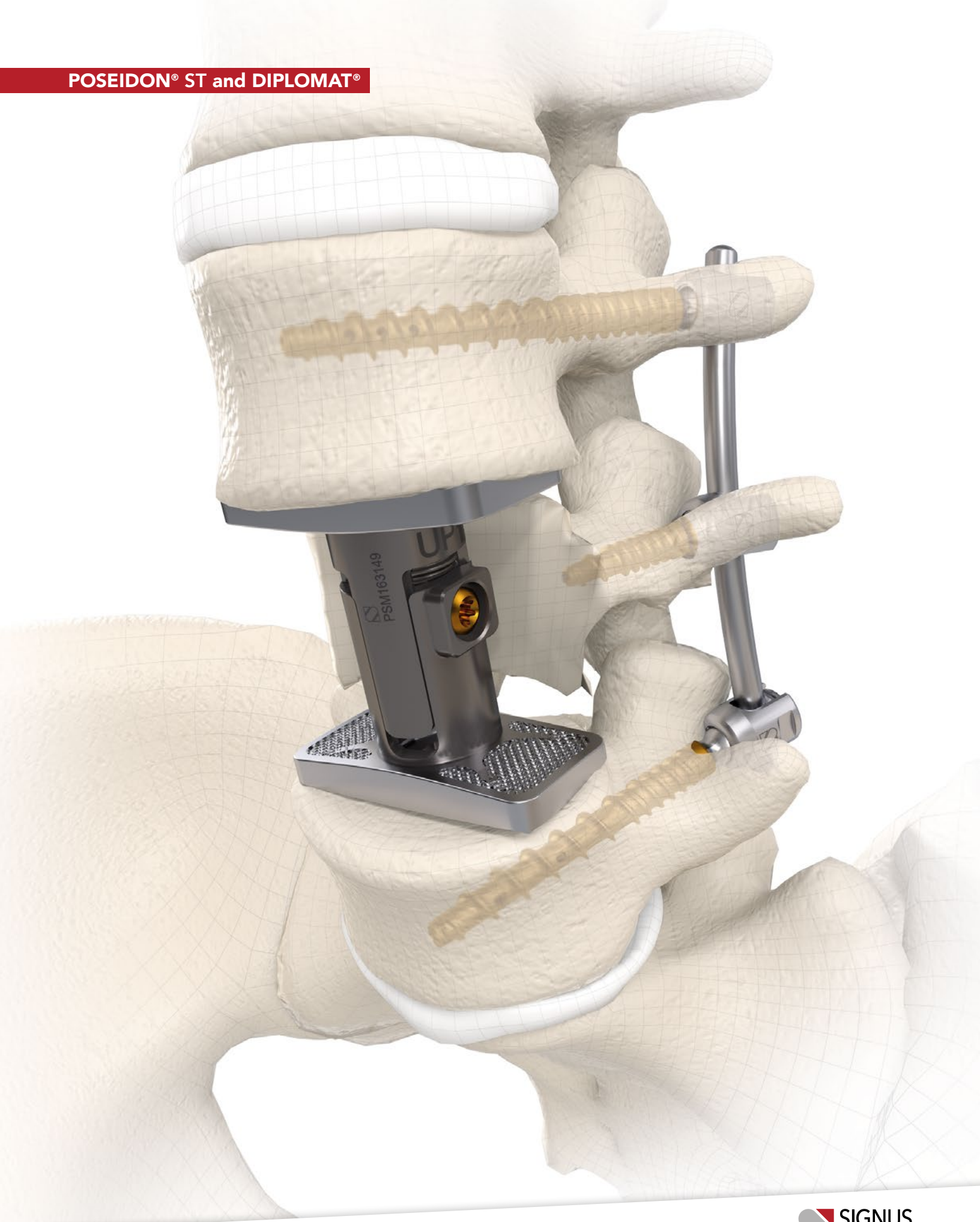


Highly modular design

From TH1 – L5 for all approaches (dorsal, lateral, dorsolateral, anterolateral or anterior).

With POSEIDON® ST up to 3 segments can be covered.





BIOMATERIAL

KAINOS®+

Bioactive Biphasic Bone Graft Material

- 100% synthetic
- Stimulates the osteogenesis
- Proven in clinical studies since more than 30 years (more than 600 publications)

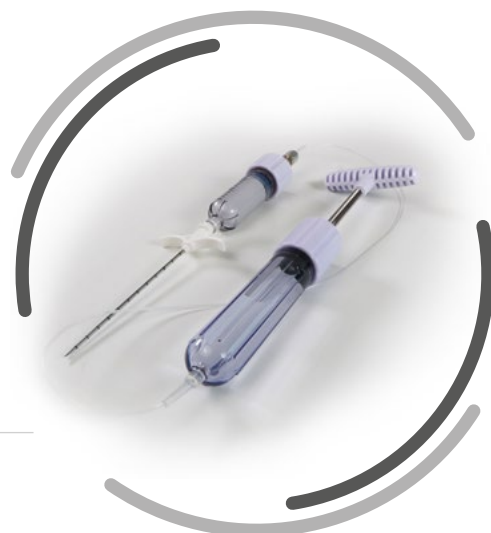


CEMENT

INTROX® HighV

Spinal Cement System

- High viscosity for controlled cement distribution
- Long application time
- Clear visibility in the X-ray



INTROX® HighV – All components in one package

TRIED AND TRUE SIGNUS INSTRUMENT SET

- Clear tray layout
- Minimal weight
- Easy handling
- User friendly
- Detachable





With its new ST-Line SIGNUS has applied the progress from endoprosthesis research to spinal surgery: Structural Titanium (ST) – an open-pore titanium matrix with anatomic parameters designed to optimize interbody fusion.

Safety

As stable as cortical bone and as porous as cancellous bone! Hence the rapid and seamless fusion of implant and adjacent bone are guaranteed. To achieve this, the ST-Line implants are made up of 70% pores but have the same mechanical strength as conventional interbody fusion implants. This has been verified by tests following ASTM standards.

Innovation

A sophisticated manufacturing process enables the ST-Line implants to be produced with a complex internal and external structure. Titanium powder is fused into a matrix using precision 3D printing techniques. Using this process, which is well-established in the aerospace industry, it is possible to precisely define and create the desired pore geometries. As a result, the natural structure and mechanical properties of bone can be used to guide development, achieving the optimal foundation for a rapid and solid fusion.

Stability

The open, porous structure maximizes the contact surface between the implant and endplate of the adjacent vertebral body. This, in combination with the surface roughness, minimizes the risk of migration and ensures excellent primary stability.

Additionally, the pore size, structure and surface roughness have been optimised to permit rapid vascularisation and bony integration. Further, the interconnectivity of the pores permits the bone to not just grow into intimate contact with the implant, but also through the structure to achieve a solid fusion and optimal stability of the fused segment.

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