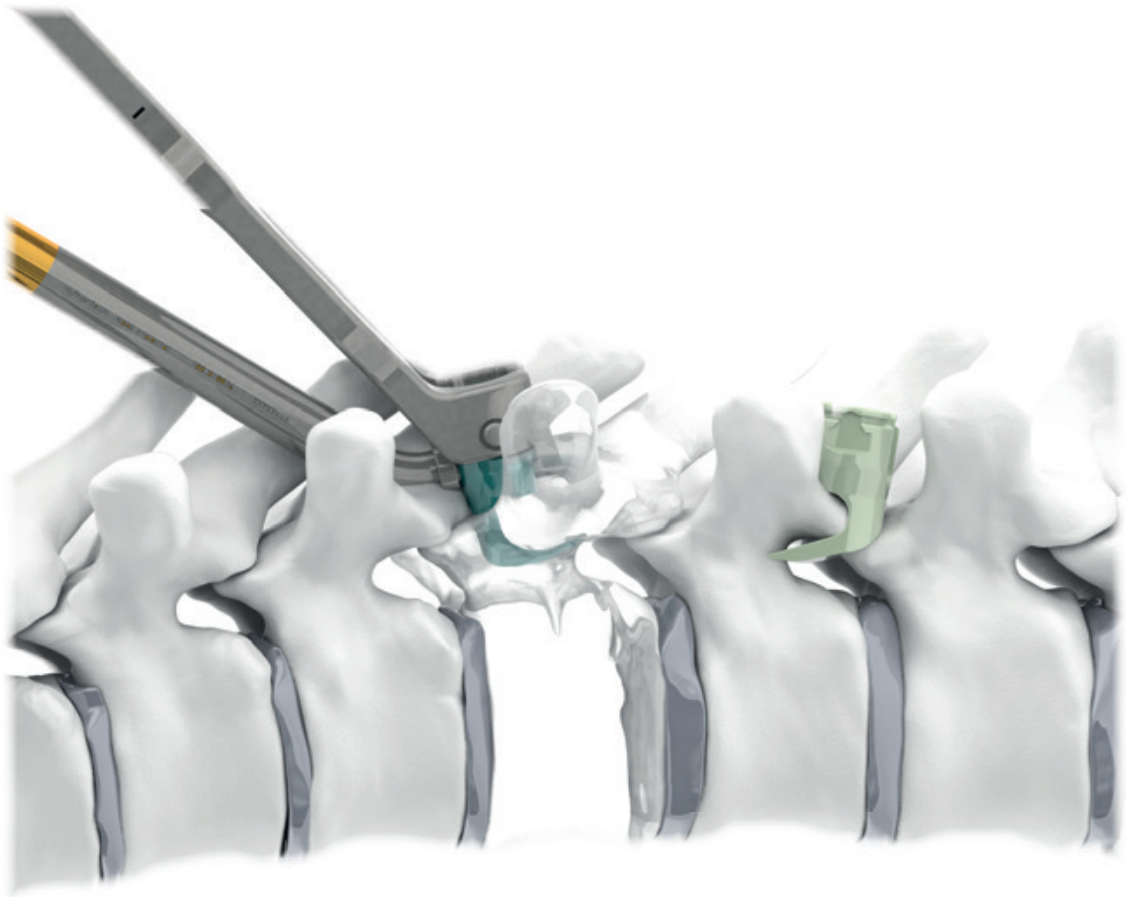
HumanTech Spine



VENUS®

Hooks

Hook System

VENUS® Hooks complements the innovative design features of the standard screws perfectly. They allow the correction and stabilization of the spine for particularly complex anatomy.

In the spine, there are 4 different approaches for hooks:
the pedicle, the transverse process as well as supra-and intralaminar.

Therefore VENUS® Hooks inter alia enables the repositioning of three-dimensional deformities, including kyphosis or scoliosis. The transparent and clear instruments increase the handling safety for known surgical techniques by proven high biomechanical stability.

The comprehensive selection of Pedicle-, Lamina- and Offset-Hooks maximize the surgeons intraoperative flexibility. To adapt to a variety of surgical situations several unique features are integrated.

VENUS® HOOKs allows the surgeon an enhanced precision with fast and safe implantation and has the following outstanding product specific advantages:

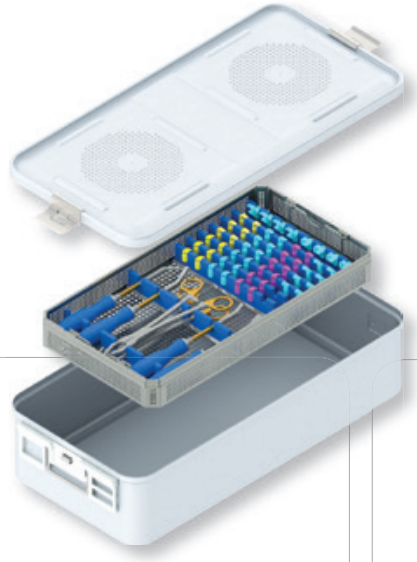
safe
- Thoracic and lumbar correction options
- Simplified surgical technique through open implants
- Simple secondary correction options
- Top loading system for easy operation

anatomic
- Low profile - low volume
- Advanced compression options

transparent
- Color-coded implants
- Clear and simple tools

stable
- Increased stability with reduced risk
- Immediate and long-term stability
- Fixation with primary load capability
- Load-optimized design

flexible
- Multiple applications and techniques
- Large selection of implants
- Various sections of the spine
- Optimal adaptability to anatomy
- Compatible with all VENUS® implants

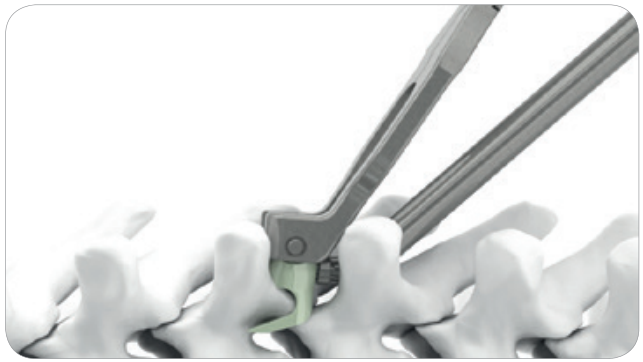


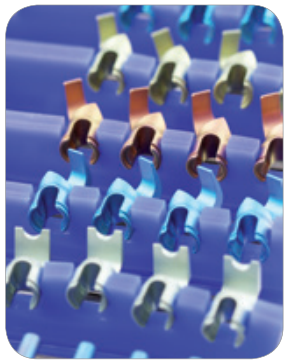
Made in Germany

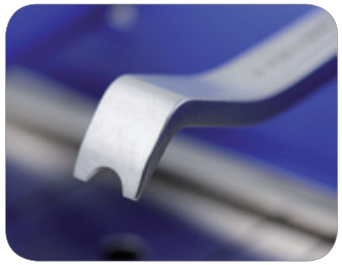
Hook System

VENUS®

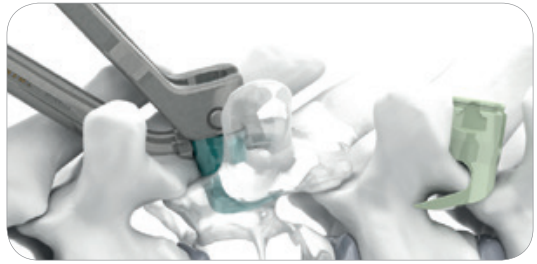
Product-specific Advantages





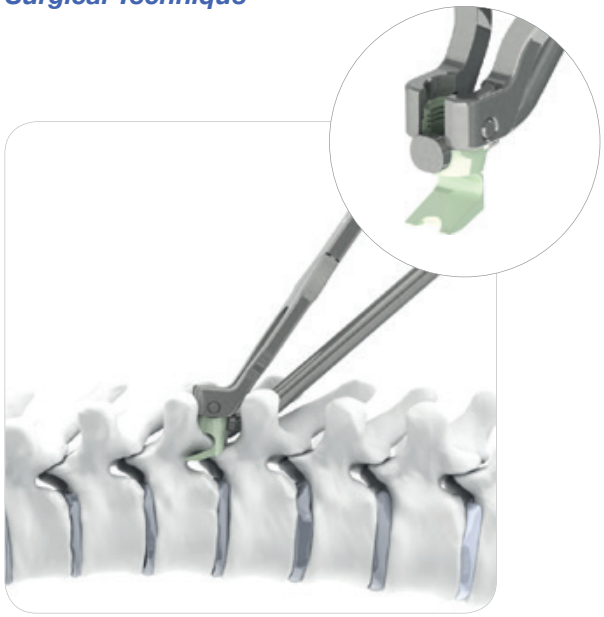


- anatomic
- transparent
- stable
- flexible
- safe



Preparation of the Pedicle Hook-Fit

Pedicle hooks are only used in the thoracic region in a cranial direction. Therefore the caudal facet joint is perpendicularly resected. Below the cranial joint facet of the caudal positioned vertebra is visible. By reaching under the facette of the cranial vertebra on top of the visible caudal facette, the pedicle is palpated with an instrument.

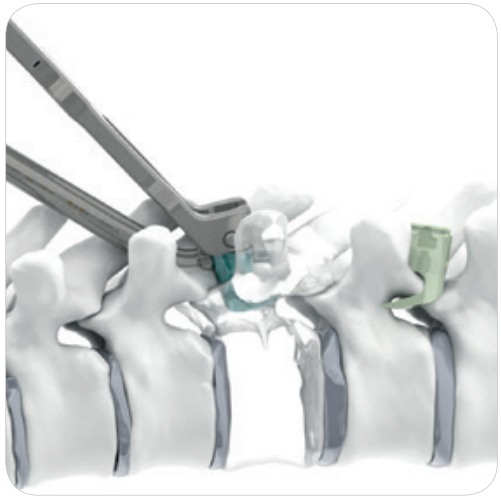


Insertion of the Pedicle Hook

In order to facilitate the insertion of the pedicle hook, remove a small part of the lower facet with an osteotome. Connect the Hook Holder curved with the hook by fixing the instrument to the lateral instrument seats of the hook. Afterwards position the Hook Impactor into the rod fit of the hook. Using this instrument combination the Pedicle hook can easily be implanted into the fit of the Pedicle hook. If necessary used mild hammer blows to support the correct positioning. Move the Hook Holder lateral and cranial to test on the perfect fit of the Pedicle Hook. Don‘t push it medial.

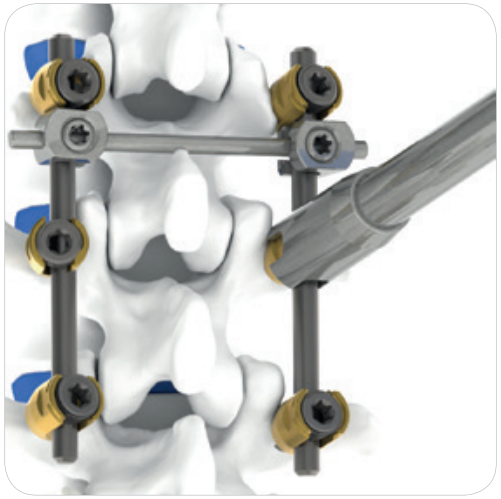
Preparation of the Lamina Hook-Fit

Lamina hooks can be used in the lumbar as well as in the thoracic region (caudal-cranial, cranial-caudal and at the transverse processes). At the transverse process the hook fit is prepared by cranial circling the transverse process with a Lamina Finder. For caudally implanting the Lamina hooks, in the thoracic as well as in the lumbar region, a partial excision of the ligamentum flavum is done before implanting the Lamina hook supra laminar.



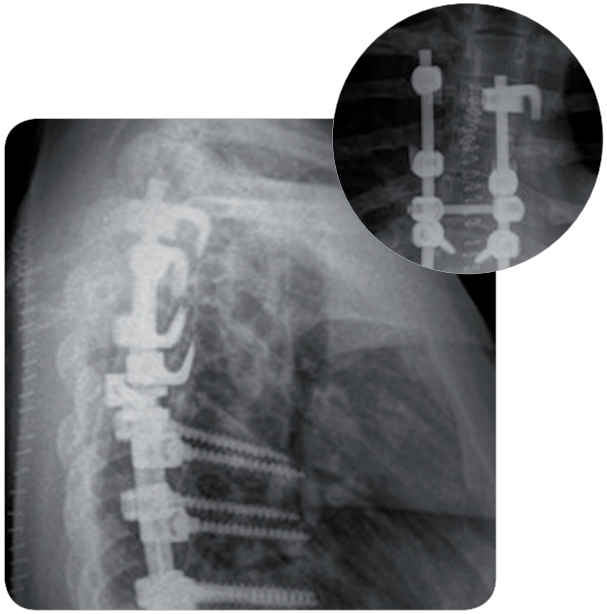
Insertion of the Lamina Hook

For a secure identification and placement of the hook fit, the ligamentum flavum is removed with a rongeur until the dura is visible at one point. The hooks are inserted with the instrument combination Hook Holder and Hook Impactor. Make sure that the hook is not implanted too deep or presses onto the spinal cord.



Implanting of the rod and final tightening

Insertion and preliminary fixation of the rod see surgical technique VENUS®Fixation. For the final tightening of the set screws, the Counter Holder must be placed over the screw head until it‘s in contact with the rod. Make sure that the distal recesses of the Counter Holder engage the implanted rod. Assembly of the Set Screw Driver and the Torque Driver. Insertion of the mounted instrument through the positioned Counter Holder. Final tightening of the set screw clockwise. Same procedure for all other set screws.



Final Assembly and Final Check

Final check on the construction with X-ray control images taken in two planes.
Cleaning of the surgical area and closure of the wound.

Art.No.	Description	Width	Length
1004040109	Lamina Hook	5.8mm	9mm
1004040108	Lamina Hook	5.8mm	8mm
1004040107	Lamina Hook	5.8mm	7mm
1004040108R	Right Angled Lamina Hook	5.8mm	8mm
1004040108L	Left Angled Lamina Hook	5.8mm	8mm
1004050009	Pedicle Hook	10.5mm	9mm
1004050008	Pedicle Hook	10.5mm	8mm
1004050007	Pedicle Hook	10.5mm	7mm
1004060000L	Offset Hook Left	6.0mm	8mm
1004060000R	Offset Hook Right	6.0mm	8mm

Art.Nr.	Beschreibung
1004010033	Lamina Finder
1004010034	Supra Lamina Finder
1004010035	Pedicle Finder
1004010036	Hook Impactor
1004010038	Hook Holder curved

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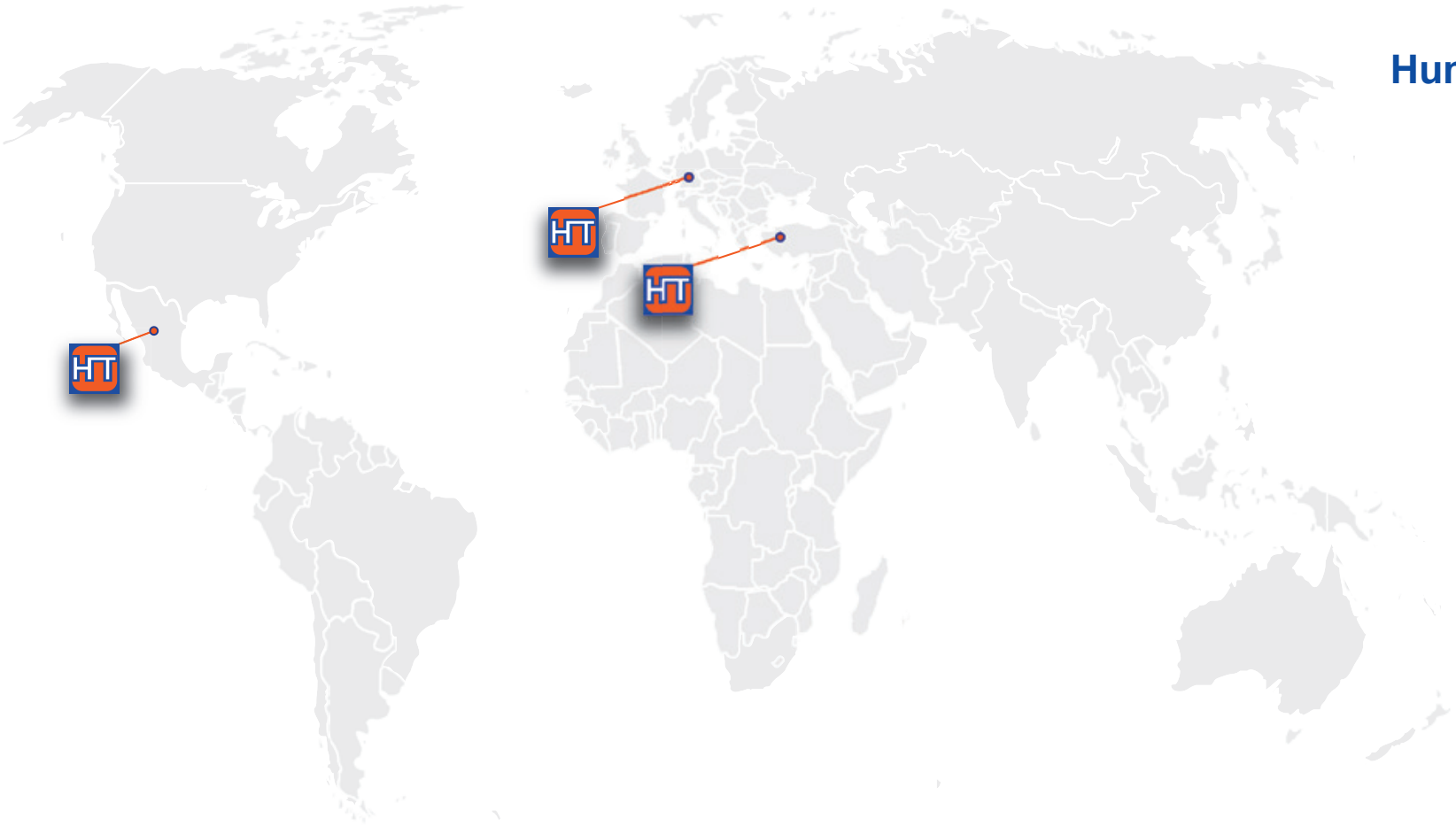

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