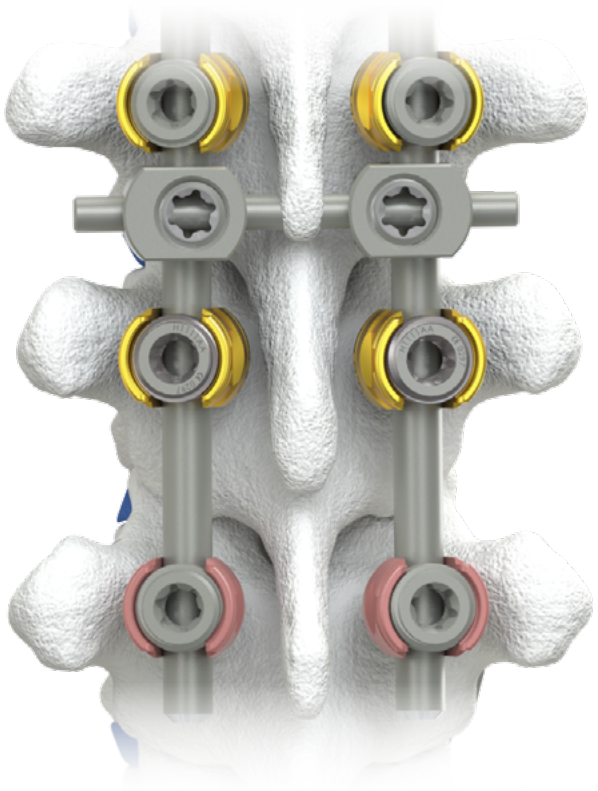
HumanTech Spine



VENUS™ Fixation

Spinal Fixation System

Brochure & Surgical Technique

Content

Made in Germany

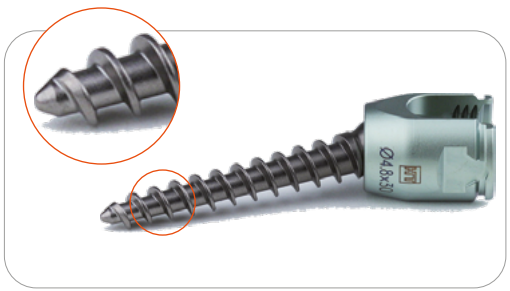
The VENUS™ screw-rod fixation system was developed to stabilise the thoracic and lumber spine.

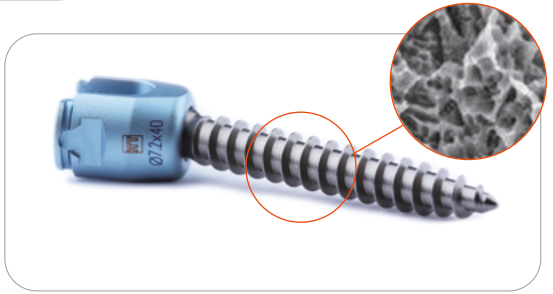
Implants for primary fusion and revision procedures

The system stands out due to its high degree of biomechanical stability. It features add-on modules such as long-head and fenestrated screws, multiple threaded screws (6T screws), connectors and various types of rods. The variety of implants and instrument systems allow fusion and revision procedures for various spinal diseases.









Standard pedicle screws

The self-tapping thread design removes the need for separate cutting outlines. The macrostructure on the head of the screw shaft is designed to increase the rod friction and thus the systems biomechanical stability. The variety of screws is designed to treat all types of bone quality.

6T Pedicle screws

The main feature of 6T pedicle screws is the thread design of the screw shaft. 6T pedicle screws are available for individual use and come in four different designs:

- Polyaxial screw
- Polyaxial screw, fenestrated
- Long headed screws
- Revision screws with a large diameter

6T pedicle screws can be used with both VENUS™ open fixation system as well as with VENUS™mini. The advanced thread profile offers the following advantages over standard systems:

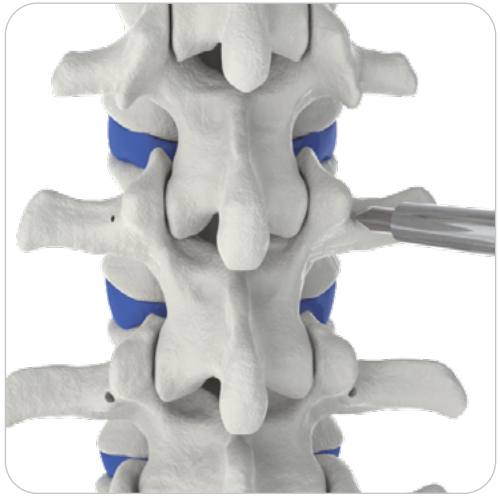
- Improved protection against screw loosening (due to bigger core diameter of 6T-screws allowing greater physical pressure)
- Improved hold in osteoporotic bones (due to different thread configurations and the availability of fenestrated screws for augmentation with bone cement)
- Improved primary stability in the cortical bone and pedicle due to four-ridge fine thread with bigger core diameter and simultaneous hold in cancellous bone due to the two-ridge thread

Cortical thread

Four-ridge fine thread for improved primary stability in the cortical bone and pedicle

Cancellous thread

Two-ridge thread for improved hold in cancellous bone



Preparing the pedicle

Set the pedicle insertion point. Open the pedicle canal using the Awl.

Note:
The Awl is available with and without stop and also in cannulated form. The variants of the Awl without stop should be used only for the initial preparation of the pedicle. The deeper the preparation is carried out, the larger the core hole will be at the entry point.

Awling and probing

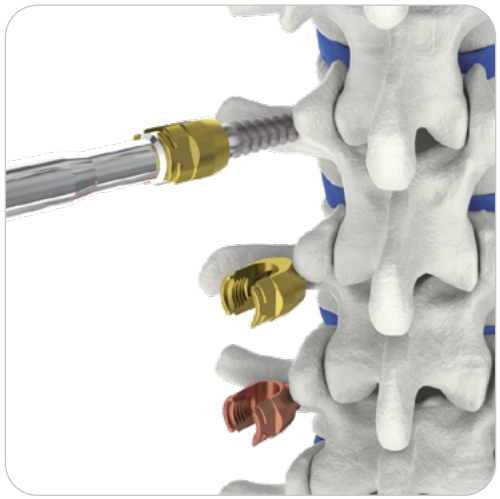
The pedicle canal is awled. Using light pressure, the Pedicle Probe is carefully advanced into the pedicle canal in half rotations.

Note:
There are two types of Pedicle Probe available: straight and curved.

Tapping

All pedicle screws are self-tapping. However, we recommend using taps in cases with dense bone structure. These are available for all screw diameters.

Note:
For 6T screws we offer special taps to prepare cancellous and cortical thread. We always recommend using the tap that corresponds to the diameter of the pedicle screw.

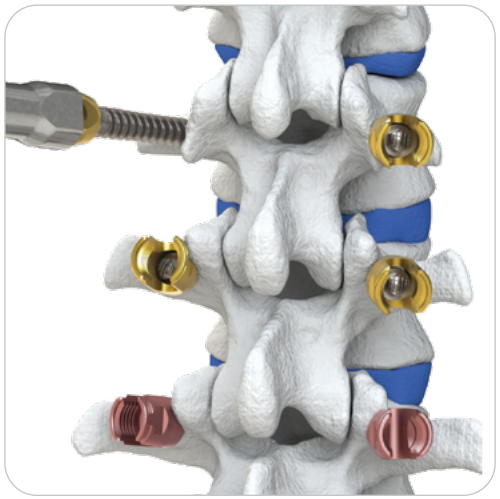


Inserting the pedicle screws I

Monoaxial screw:
The tip of the Monoaxial Screw Driver Ø 5,5 mm clicks into the screw head and secures the screw. The screw is screwed into the pedicle canal.

Note:
It has to be ensured that the recess in the screw head is oriented cranial/caudal in order to succesfully insert the rod.

Polyaxial screw:
First, insert the tip of the Polyaxial Screw Driver (inner shaft) into the screw head and attach it to the outer hexagon of the screw shaft. Then connect the outer guide to the screw head by screwing it into the inner thread of the screw head.



Inserting the pedicle screws II

When using the Polyaxial Screw Driver, you must push the locking adapter forward and lock it into the connection geometry. You must also check the button of the locking adapter. (See assembly/ disassembly instructions of the Polyaxial Screw Driver.)

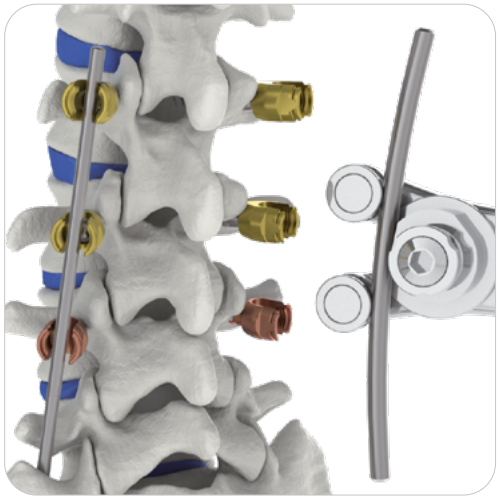
When using the Polyaxial Screw Inserter, secure the pedicle screw and then feed the guide wire over the screw head. The screw is screwed into the pedicle canal.

Note:
If desired, use the Reposition Screw Driver afterwards to correct the screw-in depth.

Determine the rod length

Determine the rod length. A Phantom Rod is included in the instrument set to aid in determining the rod length.

Widen the Rod Cutter so that the rod holders stay open. Depending on the relative diameter, slide the rod through the appropriate holder. With pressure, shorten the rod to the intended point.



Adjusting the rod

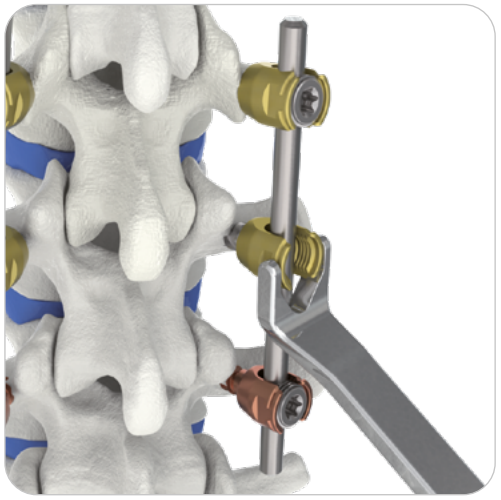
If required, bend the rod to the desired radius using the Rod Bender. Insert the rod into the screw heads using the Rod Inserter and, if necessary, with the help of your fingertips. If necessary, place the rod using a Rod Pusher or a Rocker to ensure the correct positioning in the screw head.

Note:
The rod should be adjusted in a way that it protrudes slightly beyond the screw heads on both ends.
It must be ensured that the rod is seated in the screw head as deep and straight as possible to ensure bilateral contact with the Setscrew.

Inserting the rod

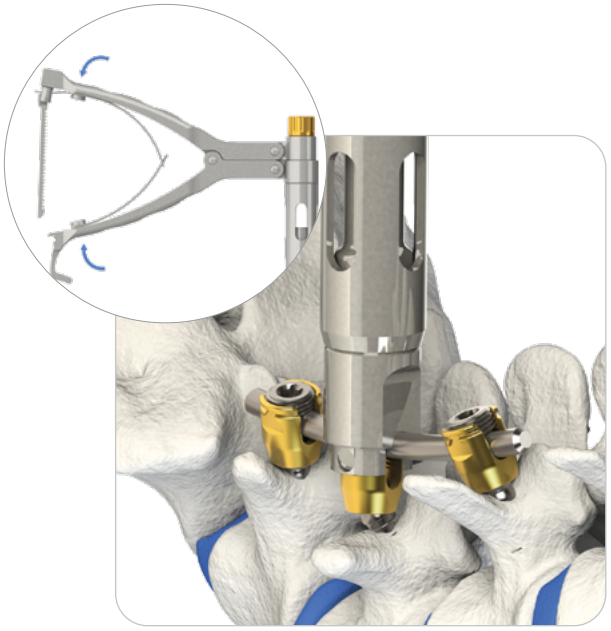
Once the rod is correctly positioned in the screw head, fix the rod in the screw head with a Setscrew using the Set Screw Inserter. To prevent cross-threading while inserting the Setscrew, first turn the screw counterclockwise until you clearly feel the thread “click into” the screw head.
Then continue to screw in the Setscrew.

Caution!
Be sure to only screw in the Setscrew loosely; the final torque is applied using the MIS Setscrew Driver.



Rod insertion (using the Rocker)

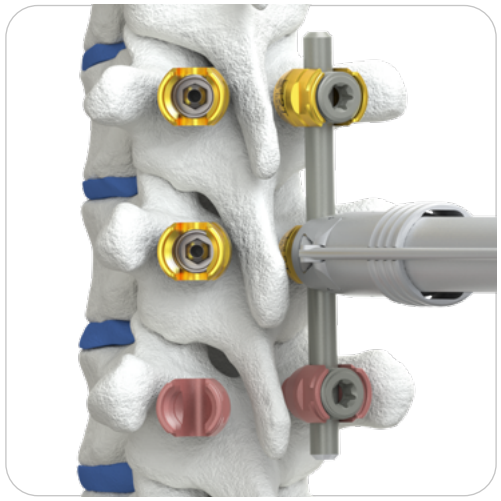
Position the Rocker on the screw head by inserting the fork ends into the lateral grooves of the screw head. Crank the rocker shaft until it lies on the rod. Then continue to crank it carefully, making visual and, if necessary, X-ray checks until the rod and the screw head are interlocked. Insert the Setscrews to fix the rod in the screw head.



Rod insertion (using the Persuader)

If required, the Persuader Forceps Style can also be used to reposition the moved spine or to position the rod in the screw head.

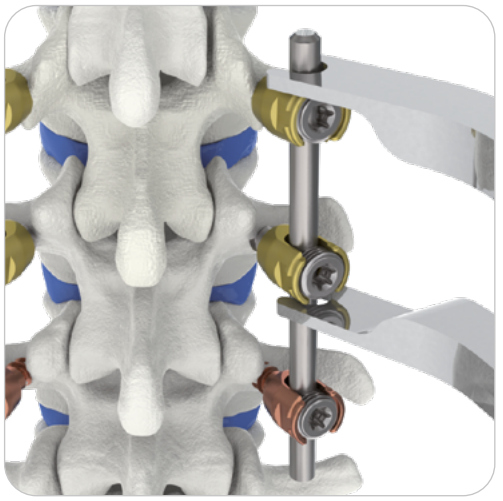
The instrument is driven over the implant head until distinct resistance is noticeable. Press the handle to lock the instrument onto the implant. Connection is guaranteed when the locking bar grips onto the screw head. Pressing the handle further repositions the spine and positions the rod into the screw head rod holder. The position is maintained by the toothed rod.



Rod insertion (using the Approximator)

Attach the instrument to the screw head. The instrument is guided over the implant head until distinct resistance is noticeable. Lock the instrument onto the implant by tilting the locking lever in the direction of the handle cage. Carefully turn the handle clockwise. Reposition the segment making visual and, if necessary, X-ray checks. Insert the Setscrews to fix the rod in the screw head.

Note:
The Approximator and the screw head must be connected gently and without force. In case of doubt, remove the Approximator and reposition it. Make sure when using the Approximator that the implant rod has to protrude at least 5 mm on both sides over the screw head so that the repositioning yoke has full contact with the rod.



Compression / Distraction

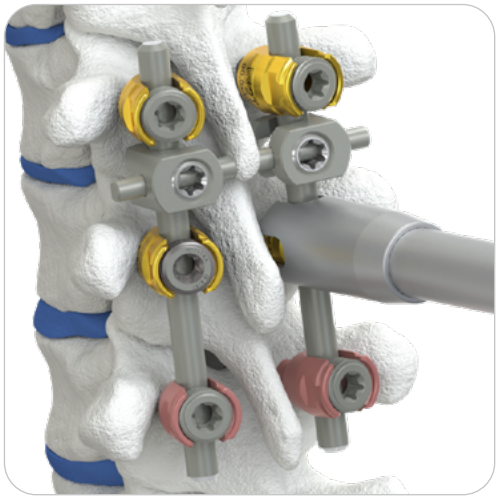
Position the Compressor or Distractor on the screw heads and carry out the compression or distraction procedure until the desired position has been achieved. To ensure the compression or distraction result, tighten with the MIS Setscrew Driver.

Note:
The Setscrews must not be fully tightened during this manoeuvre. If need be, loosen the set screws carefully using the MIS Setscrew Driver.

Transverse Connector

Attach a Transverse Connector using the Transverse Connector Inserter. Connect the second Transverse Connector with the Transverse Connector Rod which is inserted via the Transverse Connector Rod Holder and attach it to the second rod of the construction. Align the elements and connect the Transverse Connectors using the Transverse Connector Rod.

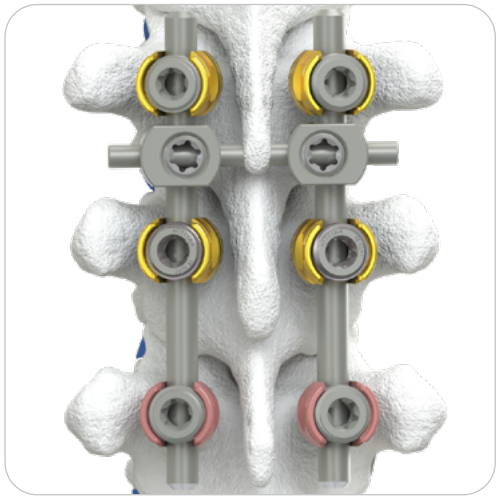
Tigthen the Setscrews all the way into the Transverse Connector using the Set Screw Driver.



Final tightening

The Counter Holder is guided over the screw head and pushed all the way onto the rod. Ensure that the notches at the distal end of the Counter Holder take up the inserted rod. Couple the MIS Setscrew Driver and the Torque Driver - 12. Place the combined instruments through the fitted Counter Holder. Tighten the set screw in a clockwise direction. Follow the same approach for all other set screws.

Note:
The full torque of 12 Nm is reached when you hear a clicking sound in the Torque - Driver 12.



Final construction

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

Universal cement application

The HumanTech cement application consists of the Bone Filler, that due to the standardized Luer-Lock connection, can be filled with the Luer-Lock syringes that are commonly used in kyphoplasty and vertebroplasty. The system for cement application consists of the Cementadapter CPS, the Cementadapter Inserter and Cementadapter Extractor.

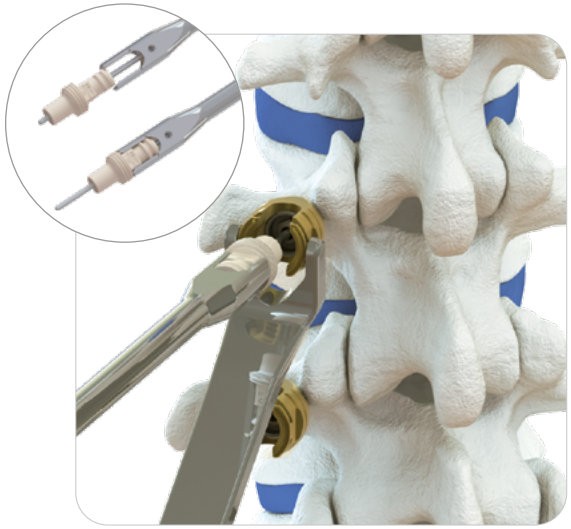
The cement application available in the open VENUS™ system and in the percutaneous system VENUS™mini 2.0 is used in conjunction with the following pedicle screw types:

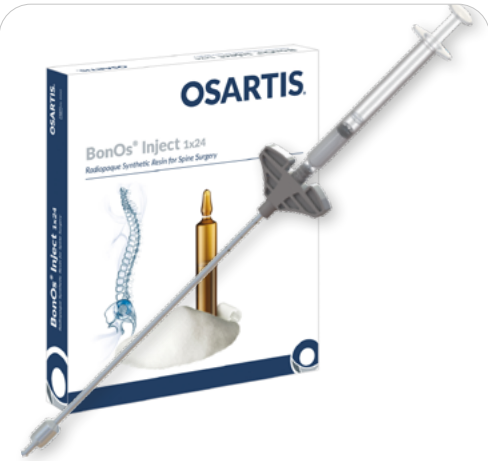
- fenestrated 2T Polyaxial Screws
- fenestrated 6T Polyaxial Screws
- fenestrated 2T Revision Screws
- fenestrated 6T Revision Screws
- fenestrated 2T Monoaxial Screws
- fenestrated 2T Iliac Screws

⚠ VENUS™ Reduction screws are not compatible with the VENUS™ cement adapter and bone filler and cannot be cement augmented this way!

The Cementadapter CPS facilitates the connection of the Bone Filler to the fenestrated pedicle screws and injection of the cement.

	Item no.	Name	Image
non-sterile	1006020600	Cementadapter CPS	
sterile	1006020600-S	Cementadapter CPS sterile	
	1006020603	Bone Filler	
non-sterile	1006020601	Cementadapter Inserter	
	1006020602	Cementadapter Extractor	





BonOs™ Inject is a registered trademark of OSARTIS GmbH

Inserting the Cementadapter CPS

Push the Cementadapter CPS over the guide wire on the Cementadapter Inserter and lock it into the instrument holder. Insert the equipped Cementadapter Inserter into the cannula of the pedicle screw via the guide wire. Turn the Cementadapter Inserter half a turn to the left and then screw the Cementadapter CPS into the polyaxial screw head to the end position. If the polyaxial screw head cannot move freely, use the Monoaxial Screw Driver and perform turning motions to allow the polyaxial head to be aligned with the screw.

Note:
Never use the Cementadapter Inserter for the alignment of the screw head, since the guide wire may bend, preventing the Cementadapter CPS from being positioned correctly!

Filling the Bone Filler

Mix the bone cement according to the manufacturer's instructions for use and fill the Bone Filler using a syringe.

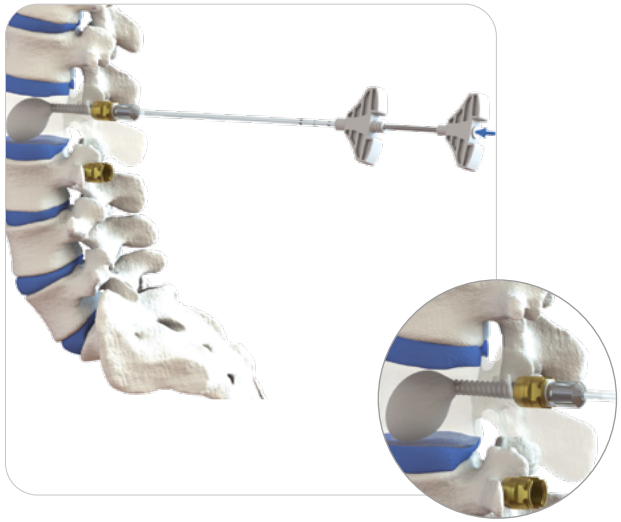
Recommendation:
Use a moderate to high viscose bone cement with a quick curing time. We recommend the use of BonOs™ Inject bone cement, which has the optimal consistency for use with the Bone Filler and, through the addition of zirconium dioxide (ZrO_2), achieves optimal displayability in the X-ray image.

Note:
It is recommended to fill the Bone Filler as soon as possible after mixing the cement.

Applying the Bone Filler

Screw the Bone Filler onto the Cementadapter CPS.

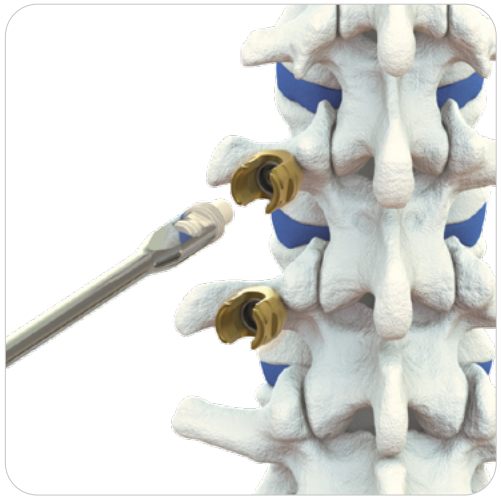
Note:
The Bone Filler applied to the Cementadapter CPS must not be used for subsequent correction of the screw-in depth of the pedicle screw as this may adversely affect the connection between the instrument and the implant.



Cement injection

When injecting the cement using the Bone Filler, a predefined amount (1.5 ml) is applied. While doing so, make sure that the injection is carried out evenly and without excessive pressure, to prevent the cement from flowing back.
Only one Bone Filler may be used for each Cementadapter CPS and screw. Premature removal of the Bone Filler or screwing it into the Cementadapter CPS a second time and/or screwing the Cementadapter CPS onto the screw a second time can result in unwanted cement discharge in the region of the polyaxial screw head.

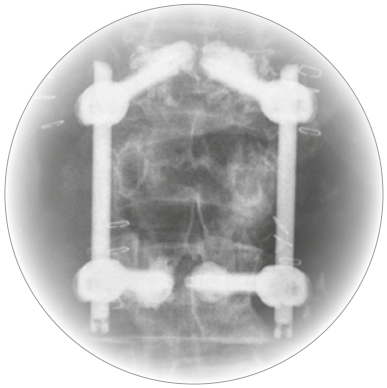
Note:
Once the cement has been applied, an X-ray control is required to monitor the volume of injected cement.



Removing the Cementadapter CPS

Remove the Bone Filler and unscrew the Cementadapter CPS using the Cementadapter Extractor immediately after applying the cement. To prevent the polyaxial screw head from rotating, a Rocker from the VENUS™ system can be used as a counter-holder.

Note:
The Cementadapter CPS is only intended for single use.



Monoaxial Screws

Item no. non-sterile	Item no. sterile	Description	
VL-MS-5-4830	sterile version not available	Monoaxial Screw Ø4.8 mm x 30 mm	Ø 4.8
VL-MS-5-4835		Monoaxial Screw Ø4.8 mm x 35 mm	
VL-MS-5-4840		Monoaxial Screw Ø4.8 mm x 40 mm	
VL-MS-5-4845		Monoaxial Screw Ø4.8 mm x 45 mm	
VL-MS-5-5525		Monoaxial Screw Ø5.5 mm x 25 mm	Ø 5.5
VL-MS-5-5530		Monoaxial Screw Ø5.5 mm x 30 mm	
VL-MS-5-5535		Monoaxial Screw Ø5.5 mm x 35 mm	
VL-MS-5-5540		Monoaxial Screw Ø5.5 mm x 40 mm	
VL-MS-5-5545		Monoaxial Screw Ø5.5 mm x 45 mm	
VL-MS-5-5550		Monoaxial Screw Ø5.5 mm x 50 mm	
VL-MS-5-5555		Monoaxial Screw Ø5.5 mm x 55 mm	
VL-MS-5-6535		Monoaxial Screw Ø6.5 mm x 35 mm	Ø 6.5
VL-MS-5-6540		Monoaxial Screw Ø6.5 mm x 40 mm	
VL-MS-5-6545		Monoaxial Screw Ø6.5 mm x 45 mm	
VL-MS-5-6550		Monoaxial Screw Ø6.5 mm x 50 mm	
VL-MS-5-6555		Monoaxial Screw Ø6.5 mm x 55 mm	
VL-MS-5-7240		Monoaxial Screw Ø7.2 mm x 40 mm	Ø 7.2
VL-MS-5-7245		Monoaxial Screw Ø7.2 mm x 45 mm	
VL-MS-5-7250		Monoaxial Screw Ø7.2 mm x 50 mm	
VL-MS-5-7255		Monoaxial Screw Ø7.2 mm x 55 mm	
VL-MS-5-7260		Monoaxial Screw Ø7.2 mm x 60 mm	

Notice
When ordering all kind of sterile implants, add "sterile" to the end of the article description!
Example: **XX XXX XXXXXXXX Screw Ø5.5x40mm sterile**
Or use our current order forms.

2T Cannulated Monoaxial Screws

Item no. non-sterile	Item no. sterile	Description	
4000115525	4000115525-S	2T Can. Monoaxial Screw Ø5.5x25mm	Ø 5.5
4000115530	4000115530-S	2T Can. Monoaxial Screw Ø5.5x30mm	
4000115535	4000115535-S	2T Can. Monoaxial Screw Ø5.5x35mm	
4000116525	4000116525-S	2T Can. Monoaxial Screw Ø6.5x25mm	Ø 6.5
4000116530	4000116530-S	2T Can. Monoaxial Screw Ø6.5x30mm	
4000116535	4000116535-S	2T Can. Monoaxial Screw Ø6.5x35mm	

2T Fenestrated Monoaxial Screws

Item no. non-sterile	Item no. sterile	Description	
4000145540	4000145540-S	2T Fen. Monoaxial Screw Ø5.5x40mm	Ø 5.5
4000145545	4000145545-S	2T Fen. Monoaxial Screw Ø5.5x45mm	
4000145550	4000145550-S	2T Fen. Monoaxial Screw Ø5.5x50mm	
4000145555	4000145555-S	2T Fen. Monoaxial Screw Ø5.5x55mm	
4000146540	4000146540-S	2T Fen. Monoaxial Screw Ø6.5x40mm	Ø 6.5
4000146545	4000146545-S	2T Fen. Monoaxial Screw Ø6.5x45mm	
4000146550	4000146550-S	2T Fen. Monoaxial Screw Ø6.5x50mm	
4000146555	4000146555-S	2T Fen. Monoaxial Screw Ø6.5x55mm	
4000147240	4000147240-S	2T Fen. Monoaxial Screw Ø7.2x40mm	Ø 7.2
4000147245	4000147245-S	2T Fen. Monoaxial Screw Ø7.2x45mm	
4000147250	4000147250-S	2T Fen. Monoaxial Screw Ø7.2x50mm	
4000147255	4000147255-S	2T Fen. Monoaxial Screw Ø7.2x55mm	
4000147260	4000147260-S	2T Fen. Monoaxial Screw Ø7.2x60mm	

Notice
When ordering all kind of sterile implants, add "sterile" to the end of the article description!
Example: **XX XXX XXXXXXXX Screw Ø5.5x40mm sterile**
Or use our current order forms.

2T Polyaxial Screws

Item no. non-sterile	Item no. sterile	Description	
4000024825	4000024825-S	2T Polyaxial Screw Ø4.8x25mm	Ø 4.8
4000024830	4000024830-S	2T Polyaxial Screw Ø4.8x30mm	
4000024835	4000024835-S	2T Polyaxial Screw Ø4.8x35mm	
4000024840	4000024840-S	2T Polyaxial Screw Ø4.8x40mm	
4000024845	4000024845-S	2T Polyaxial Screw Ø4.8x45mm	
4000025525	4000025525-S	2T Polyaxial Screw Ø5.5x25mm	Ø 5.5
4000025530	4000025530-S	2T Polyaxial Screw Ø5.5x30mm	
4000025535	4000025535-S	2T Polyaxial Screw Ø5.5x35mm	
4000025540	4000025540-S	2T Polyaxial Screw Ø5.5x40mm	
4000025545	4000025545-S	2T Polyaxial Screw Ø5.5x45mm	
4000025550	4000025550-S	2T Polyaxial Screw Ø5.5x50mm	
4000025555	4000025555-S	2T Polyaxial Screw Ø5.5x55mm	
4000026525	4000026525-S	2T Polyaxial Screw Ø6.5x25mm	Ø 6.5
4000026530	4000026530-S	2T Polyaxial Screw Ø6.5x30mm	
4000026535	4000026535-S	2T Polyaxial Screw Ø6.5x35mm	
4000026540	4000026540-S	2T Polyaxial Screw Ø6.5x40mm	
4000026545	4000026545-S	2T Polyaxial Screw Ø6.5x45mm	
4000026550	4000026550-S	2T Polyaxial Screw Ø6.5x50mm	
4000026555	4000026555-S	2T Polyaxial Screw Ø6.5x55mm	
4000027235	4000027235-S	2T Polyaxial Screw Ø7.2x35mm	Ø 7.2
4000027240	4000027240-S	2T Polyaxial Screw Ø7.2x40mm	
4000027245	4000027245-S	2T Polyaxial Screw Ø7.2x45mm	
4000027250	4000027250-S	2T Polyaxial Screw Ø7.2x50mm	
4000027255	4000027255-S	2T Polyaxial Screw Ø7.2x55mm	
4000027260	4000027260-S	2T Polyaxial Screw Ø7.2x60mm	

2T Cannulated Screws

Item no. non-sterile	Item no. sterile	Description	
4000014825	4000014825-S	2T Cannulated Screw Ø 4.8 x 25mm	Ø 4.8
4000014830	4000014830-S	2T Cannulated Screw Ø 4.8 x 30mm	
4000014835	4000014835-S	2T Cannulated Screw Ø 4.8 x 35mm	
4000014840	4000014840-S	2T Cannulated Screw Ø 4.8 x 40mm	
4000014845	4000014845-S	2T Cannulated Screw Ø 4.8 x 45mm	
4000015525	4000015525-S	2T Cannulated Screw Ø 5.5 x 25mm	Ø 5.5
4000015530	4000015530-S	2T Cannulated Screw Ø 5.5 x 30mm	
4000016525	4000016525-S	2T Cannulated Screw Ø 6.5 x 25mm	Ø 6.5
4000016530	4000016530-S	2T Cannulated Screw Ø 6.5 x 30mm	
4000017235	4000017235-S	2T Cannulated Screw Ø 7.2 x 35mm	Ø 7.2

2T Fenestrated Screws

Item no. non-sterile	Item no. sterile	Description	
4000045535	4000045535-S	2T Fenestrated Screw Ø5.5x35mm	Ø 5.5
4000045540	4000045540-S	2T Fenestrated Screw Ø5.5x40mm	
4000045545	4000045545-S	2T Fenestrated Screw Ø5.5x45mm	
4000045550	4000045550-S	2T Fenestrated Screw Ø5.5x50mm	
4000045555	4000045555-S	2T Fenestrated Screw Ø5.5x55mm	
4000046535	4000046535-S	2T Fenestrated Screw Ø6.5x35mm	Ø 6.5
4000046540	4000046540-S	2T Fenestrated Screw Ø6.5x40mm	
4000046545	4000046545-S	2T Fenestrated Screw Ø6.5x45mm	
4000046550	4000046550-S	2T Fenestrated Screw Ø6.5x50mm	
4000046555	4000046555-S	2T Fenestrated Screw Ø6.5x55mm	
4000047240	4000047240-S	2T Fenestrated Screw Ø7.2x40mm	Ø 7.2
4000047245	4000047245-S	2T Fenestrated Screw Ø7.2x45mm	
4000047250	4000047250-S	2T Fenestrated Screw Ø7.2x50mm	
4000047255	4000047255-S	2T Fenestrated Screw Ø7.2x55mm	

2T Fenestrated Revision Screws

Item no. non-sterile	Item no. sterile	Description	
4000068545	4000068545-S	2T Fen. Rev. Screw 8,5x45mm	Ø 8.5
4000068550	4000068550-S	2T Fen. Rev. Screw 8,5x50mm	
4000068555	4000068555-S	2T Fen. Rev. Screw 8,5x55mm	
4000069545	4000069545-S	2T Fen. Rev. Screw 9,5x45mm	Ø 9.5
4000069550	4000069550-S	2T Fen. Rev. Screw 9,5x50mm	
4000069555	4000069555-S	2T Fen. Rev. Screw 9,5x55mm	
4000061045	4000061045-S	2T Fen. Rev. Screw 10,5x45mm	Ø 10.5
4000061050	4000061050-S	2T Fen. Rev. Screw 10,5x50mm	
4000061055	4000061055-S	2T Fen. Rev. Screw 10,5x55mm	

Notice
When ordering all kind of sterile implants, add "sterile" to the end of the article description!
Example: **XX XXX XXXXXXXX Screw Ø5.5x40mm sterile**
Or use our current order forms.

2T Reduction Screws

Item no. non-sterile	Item no. sterile	Description	
4000034830	4000034830-S	2T Reduction Screw Ø4.8x30mm	Ø 4.8
4000034835	4000034835-S	2T Reduction Screw Ø4.8x35mm	
4000034840	4000034840-S	2T Reduction Screw Ø4.8x40mm	
4000034845	4000034845-S	2T Reduction Screw Ø4.8x45mm	
4000035530	4000035530-S	2T Reduction Screw Ø5.5x30mm	Ø 5.5
4000035535	4000035535-S	2T Reduction Screw Ø5.5x35mm	
4000035540	4000035540-S	2T Reduction Screw Ø5.5x40mm	
4000035545	4000035545-S	2T Reduction Screw Ø5.5x45mm	
4000035550	4000035550-S	2T Reduction Screw Ø5.5x50mm	
4000035555	4000035555-S	2T Reduction Screw Ø5.5x55mm	
4000036535	4000036535-S	2T Reduction Screw Ø6.5x35mm	Ø 6.5
4000036540	4000036540-S	2T Reduction Screw Ø6.5x40mm	
4000036545	4000036545-S	2T Reduction Screw Ø6.5x45mm	
4000036550	4000036550-S	2T Reduction Screw Ø6.5x50mm	
4000036555	4000036555-S	2T Reduction Screw Ø6.5x55mm	
4000037240	4000037240-S	2T Reduction Screw Ø7.2x40mm	Ø 7.2
4000037245	4000037245-S	2T Reduction Screw Ø7.2x45mm	
4000037250	4000037250-S	2T Reduction Screw Ø7.2x50mm	
4000037255	4000037255-S	2T Reduction Screw Ø7.2x55mm	
4000037260	4000037260-S	2T Reduction Screw Ø7.2x60mm	

6T Reduction Screws

Item no. non-sterile	Description	
1005104825	Reduction Screw 6T 4,8x25mm	Ø 4.8
1005104830	Reduction Screw 6T 4,8x30mm	
1005104835	Reduction Screw 6T 4,8x35mm	
1005104840	Reduction Screw 6T 4,8x40mm	
1005105525	Reduction Screw 6T 5,5x25mm	Ø 5.5
1005105530	Reduction Screw 6T 5,5x30mm	
1005105535	Reduction Screw 6T 5,5x35mm	
1005105540	Reduction Screw 6T 5,5x40mm	
1005105545	Reduction Screw 6T 5,5x45mm	
1005105550	Reduction Screw 6T 5,5x50mm	
1005106530	Reduction Screw 6T 6,5x30mm	Ø 6.5
1005106535	Reduction Screw 6T 6,5x35mm	
1005106540	Reduction Screw 6T 6,5x40mm	
1005106545	Reduction Screw 6T 6,5x45mm	
1005106550	Reduction Screw 6T 6,5x50mm	
1005106555	Reduction Screw 6T 6,5x55mm	
1005107240	Reduction Screw 6T 7,2x40mm	Ø 7.2
1005107245	Reduction Screw 6T 7,2x45mm	
1005107250	Reduction Screw 6T 7,2x50mm	
1005107255	Reduction Screw 6T 7,2x55mm	

6T Fenestrated Reduction Screws

Item no. sterile	Description	
1005125540-S	6T Fen. Reduction Screw Ø 5.5mm x 40mm sterile	Ø 5.5
1005125545-S	6T Fen. Reduction Screw Ø 5.5mm x 45mm sterile	
1005125550-S	6T Fen. Reduction Screw Ø 5.5mm x 50mm sterile	
1005126540-S	6T Fen. Reduction Screw Ø 6.5mm x 40mm sterile	Ø 6.5
1005126545-S	6T Fen. Reduction Screw Ø 6.5mm x 45mm sterile	
1005126550-S	6T Fen. Reduction Screw Ø 6.5mm x 50mm sterile	
1005126555-S	6T Fen. Reduction Screw Ø 6.5mm x 55mm sterile	
1005127240-S	6T Fen. Reduction Screw Ø 7.2mm x 40mm sterile	Ø 7.2
1005127245-S	6T Fen. Reduction Screw Ø 7.2mm x 45mm sterile	
1005127250-S	6T Fen. Reduction Screw Ø 7.2mm x 50mm sterile	

⚠ VENUS™ Reduction screws are not compatible with the VENUS™ cement adapter and bone filler and cannot be cement augmented this way!

6T Polyaxial Screws

Item no. non-sterile	Item no. sterile	Description	
VL-PS2-5-4825	VL-PS2-5-4825-S	Polyaxial Screw 6T 4.8 x 25 mm	Ø 4.8
VL-PS2-5-4830	VL-PS2-5-4830-S	Polyaxial Screw 6T 4.8 x 30 mm	
VL-PS2-5-4835	VL-PS2-5-4835-S	Polyaxial Screw 6T 4.8 x 35 mm	
VL-PS2-5-4840	VL-PS2-5-4840-S	Polyaxial Screw 6T 4.8 x 40 mm	
VL-PS2-5-5525	VL-PS2-5-5525-S	Polyaxial Screw 6T 5.5 x 25 mm	Ø 5.5
VL-PS2-5-5530	VL-PS2-5-5530-S	Polyaxial Screw 6T 5.5 x 30 mm	
VL-PS2-5-5535	VL-PS2-5-5535-S	Polyaxial Screw 6T 5.5 x 35 mm	
VL-PS2-5-5540	VL-PS2-5-5540-S	Polyaxial Screw 6T 5.5 x 40 mm	
VL-PS2-5-5545	VL-PS2-5-5545-S	Polyaxial Screw 6T 5.5 x 45 mm	
VL-PS2-5-5550	VL-PS2-5-5550-S	Polyaxial Screw 6T 5.5 x 50 mm	
VL-PS2-5-5555	VL-PS2-5-5555-S	Polyaxial Screw 6T 5.5 x 55 mm	
VL-PS2-5-6525	VL-PS2-5-6525-S	Polyaxial Screw 6T 6.5 x 25 mm	Ø 6.5
VL-PS2-5-6530	VL-PS2-5-6530-S	Polyaxial Screw 6T 6.5 x 30 mm	
VL-PS2-5-6535	VL-PS2-5-6535-S	Polyaxial Screw 6T 6.5 x 35 mm	
VL-PS2-5-6540	VL-PS2-5-6540-S	Polyaxial Screw 6T 6.5 x 40 mm	
VL-PS2-5-6545	VL-PS2-5-6545-S	Polyaxial Screw 6T 6.5 x 45 mm	
VL-PS2-5-6550	VL-PS2-5-6550-S	Polyaxial Screw 6T 6.5 x 50 mm	
VL-PS2-5-6555	VL-PS2-5-6555-S	Polyaxial Screw 6T 6.5 x 55 mm	
VL-PS2-5-7240	VL-PS2-5-7240-S	Polyaxial Screw 6T 7.2 x 40 mm	Ø 7.2
VL-PS2-5-7245	VL-PS2-5-7245-S	Polyaxial Screw 6T 7,2 x 45 mm	
VL-PS2-5-7250	VL-PS2-5-7250-S	Polyaxial Screw 6T 7.2 x 50 mm	
VL-PS2-5-7255	VL-PS2-5-7255-S	Polyaxial Screw 6T 7.2 x 55 mm	
VL-PS2-5-7260	VL-PS2-5-7260-S	Polyaxial Screw 6T 7.2 x 60 mm	

6T Fenestrated Screws

Item no. non-sterile	Item no. sterile	Description	
1010045540	1010045540-S	Fenestrated 6T Screw Ø 5.5 x 40 mm	Ø 5.5
1010045545	1010045545-S	Fenestrated 6T Screw Ø 5.5 x 45 mm	
1010045550	1010045550-S	Fenestrated 6T Screw Ø 5.5 x 50 mm	
1010045555	1010045555-S	Fenestrated 6T Screw Ø 5.5 x 55 mm	
1010046540	1010046540-S	Fenestrated 6T Screw Ø 6.5 x 40 mm	Ø 6.5
1010046545	1010046545-S	Fenestrated 6T Screw Ø 6.5 x 45 mm	
1010046550	1010046550-S	Fenestrated 6T Screw Ø 6.5 x 50 mm	
1010046555	1010046555-S	Fenestrated 6T Screw Ø 6.5 x 55 mm	
1010047240	1010047240-S	Fenestrated 6T Screw Ø 7.2 x 40 mm	Ø 7.2
1010047245	1010047245-S	Fenestrated 6T Screw Ø 7.2 x 45 mm	
1010047250	1010047250-S	Fenestrated 6T Screw Ø 7.2 x 50 mm	
1010047255	1010047255-S	Fenestrated 6T Screw Ø 7.2 x 55 mm	
1010047260	1010047260-S	Fenestrated 6T Screw Ø 7.2 x 60 mm	

6T Cannulated Revision Screws

Item no. non-sterile	Item no. sterile	Description	
1006098535	1006098535-S	Cannulated Revision 6T Ø 8.5 mm x 35 mm	Ø 8.5
1006098540	1006098540-S	Cannulated Revision 6T Ø 8.5 mm x 40 mm	
1006098545	1006098545-S	Cannulated Revision 6T Ø 8.5 mm x 45 mm	
1006098550	1006098550-S	Cannulated Revision 6T Ø 8.5 mm x 50 mm	
1006098555	1006098555-S	Cannulated Revision 6T Ø 8.5 mm x 55 mm	
1006098560	1006098560-S	Cannulated Revision 6T Ø 8.5 mm x 60 mm	
1006098570	1006098570-S	Cannulated Revision 6T Ø 8.5 mm x 70 mm	
1006098580	1006098580-S	Cannulated Revision 6T Ø 8.5 mm x 80 mm	
1006098590	1006098590-S	Cannulated Revision 6T Ø 8.5 mm x 90 mm	
10060985100	10060985100-S	Cannulated Revision 6T Ø 8.5 mm x 100 mm	

2T Iliac Screws

Item no. non-sterile	Item no. sterile	Description	
1006117270	1006117270-S	Polyaxial Iliac Screw Ø 7.2mm x 70mm	Ø 7.2
1006117280	1006117280-S	Polyaxial Iliac Screw Ø 7.2mm x 80mm	
1006117290	1006117290-S	Polyaxial Iliac Screw Ø 7.2mm x 90mm	
10061172100	10061172100-S	Polyaxial Iliac Screw Ø 7.2mm x 100mm	
1006118570	1006118570-S	Polyaxial Iliac Screw Ø 8.5mm x 70mm	Ø 8.5
1006118580	1006118580-S	Polyaxial Iliac Screw Ø 8.5mm x 80mm	
1006118590	1006118590-S	Polyaxial Iliac Screw Ø 8.5mm x 90mm	
10061185100	10061185100-S	Polyaxial Iliac Screw Ø 8.5mm x 100mm	
10061185120	10061185120-S	Polyaxial Iliac Screw Ø 8.5mm x 120mm	

2T Fenestrated Iliac Screws

Item no. non-sterile	Item no. sterile	Description	
1006127270	1006127270-S	Fenestrated Iliac Screw Ø 7.2mm x 70mm sterile	Ø 7.2
1006127280	1006127280-S	Fenestrated Iliac Screw Ø 7.2mm x 80mm sterile	
1006127290	1006127290-S	Fenestrated Iliac Screw Ø 7.2mm x 90mm sterile	
10061272100	10061272100-S	Fenestrated Iliac Screw Ø 7.2mm x 100mm sterile	
1006128570	1006128570-S	Fenestrated Iliac Screw Ø 8.5mm x 70mm sterile	Ø 8.5
1006128580	1006128580-S	Fenestrated Iliac Screw Ø 8.5mm x 80mm sterile	
1006128590	1006128590-S	Fenestrated Iliac Screw Ø 8.5mm x 90mm sterile	
10061285100	10061285100-S	Fenestrated Iliac Screw Ø 8.5mm x 100mm sterile	

Notice
When ordering all kind of sterile implants, add "sterile" to the end of the article description!
Example: **XX XXX XXXXXXXX Screw Ø5.5x40mm sterile**
Or use our current order forms.

Straight Rods

Item no. non-sterile	Item no. sterile	Description
VL-RS-5-4	VL-RS-5-4-S	Rod Ø5.5 mm / 40 mm straight
VL-RS-5-5	VL-RS-5-5-S	Rod Ø5.5 mm / 50 mm, straight
VL-RS-5-7	VL-RS-5-7-S	Rod Ø5.5 mm / 70 mm, straight
VL-RS-5-9	VL-RS-5-9-S	Rod Ø5.5 mm / 90 mm straight
VL-RS-5-10	VL-RS-5-10-S	Rod Ø5.5 mm / 100 mm, straight
VL-RS-5-11	VL-RS-5-11-S	Rod Ø5.5 mm / 110 mm, straight
VL-RS-5-13	VL-RS-5-13-S	Rod Ø5.5 mm / 130 mm, straight
VL-RS-5-15	VL-RS-5-15-S	Rod Ø5.5 mm / 150 mm, straight
VL-RS-5-20	VL-RS-5-20-S	Rod Ø5.5 mm / 200 mm, straight
VL-RS-5-25	VL-RS-5-25-S	Rod Ø5.5 mm / 250 mm, straight
VL-RS-5-30	VL-RS-5-30-S	Rod Ø5.5 mm / 300 mm, straight
VL-RS-5-35	VL-RS-5-35-S	Rod Ø5.5 mm / 350 mm, straight
VL-RS-5-40	VL-RS-5-40-S	Rod Ø5.5 mm / 400 mm, straight
VL-RS-5-45	VL-RS-5-45-S	Rod Ø5.5 mm / 450 mm, straight
VL-RS-5-60	sterile version not available	Rod Ø5.5 mm / 600 mm, straight

CoCr - Rods

Item no. non-sterile	Item no. sterile	Description
1001090145	1001090145-S	CoCr Rod 450 mm

Curved Rods

Item no. non-sterile	Item no. sterile	Description
VL-RC-5-4	VL-RC-5-4-S	Rod Ø5,5 mm / 40 mm curved
VL-RC-5-4,5	VL-RC-5-4,5-S	Rod Ø5,5 mm / 45 mm curved
VL-RC-5-5	VL-RC-5-5-S	Rod Ø5,5 mm / 50 mm curved
VL-RC-5-6	VL-RC-5-6-S	Rod Ø5,5 mm / 60 mm curved
VL-RC-5-7	VL-RC-5-7-S	Rod Ø5,5 mm / 70 mm curved
VL-RC-5-8	VL-RC-5-8-S	Rod Ø5,5 mm / 80 mm curved
VL-RC-5-9	VL-RC-5-9-S	Rod Ø5,5 mm / 90 mm curved
VL-RC-5-10	VL-RC-5-10-S	Rod Ø5,5 mm / 100 mm curved
VL-RC-5-11	VL-RC-5-11-S	Rod Ø5,5 mm / 110 mm curved
VL-RC-5-12	VL-RC-5-12-S	Rod Ø5,5 mm / 120 mm curved
VL-RC-5-13	VL-RC-5-13-S	Rod Ø5,5 mm / 130 mm curved
VL-RC-5-14	VL-RC-5-14-S	Rod Ø5,5 mm / 140 mm curved
VL-RC-5-15	VL-RC-5-15-S	Rod Ø5,5 mm / 150 mm curved
VL-RC-5-20	VL-RC-5-20-S	Rod Ø5,5 mm / 200 mm curved
VL-RC-5-25	VL-RC-5-25-S	Rod Ø5,5 mm / 250 mm curved

Rods, straight hex

Item no. non-sterile	Item no. sterile	Description
VL-RS-5-60-HEX	sterile version not available	Rod Ø5.5 mm / 600 mm, straight hex

Transverse Connector

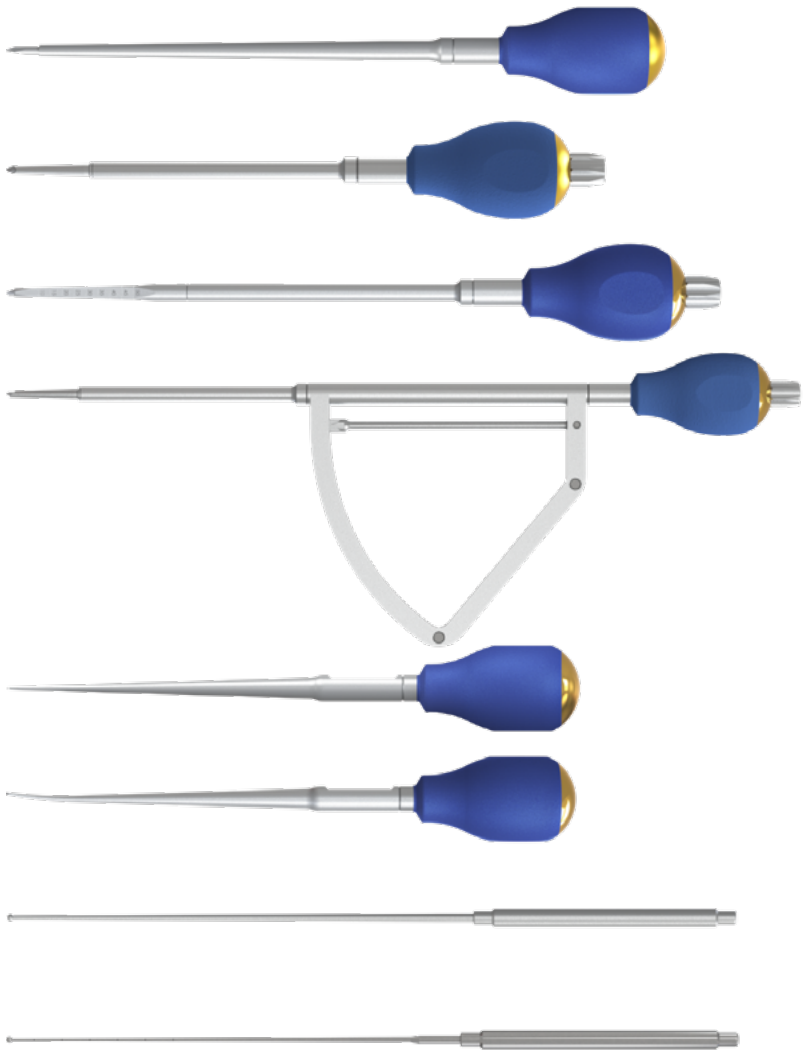
Item no. non-sterile	Item no. sterile	Description
1001050500	1001050500-S	Transverse Connector Ø5,5 mm V2
VL-TR-50	VL-TR-50-S	Transverse Connector Rod 50mm
VL-TR-60	VL-TR-60-S	Transverse Connector Rod 60mm
VL-TR-70	VL-TR-70-S	Transverse Connector Rod 70mm
VL-TR-80	VL-TR-80-S	Transverse Connector Rod 80mm
VL-TR-90	VL-TR-90-S	Transverse Connector Rod 90mm
VL-TR-100	VL-TR-100-S	Transverse Connector Rod 100mm

Additional Items

Item no. non-sterile	Item no. sterile	Description
VL-PMS	sterile version not available	Polyaxial/Monoaxial Setscrew
VL-PMS-M3	VL-PMS-M3-S	MIS Setscrew

Notice
When ordering all kind of sterile implants, add "sterile" to the end of the article description!
Example: **XX XXX XXXXXXXX Screw Ø5.5x40mm sterile**
Or use our current order forms.

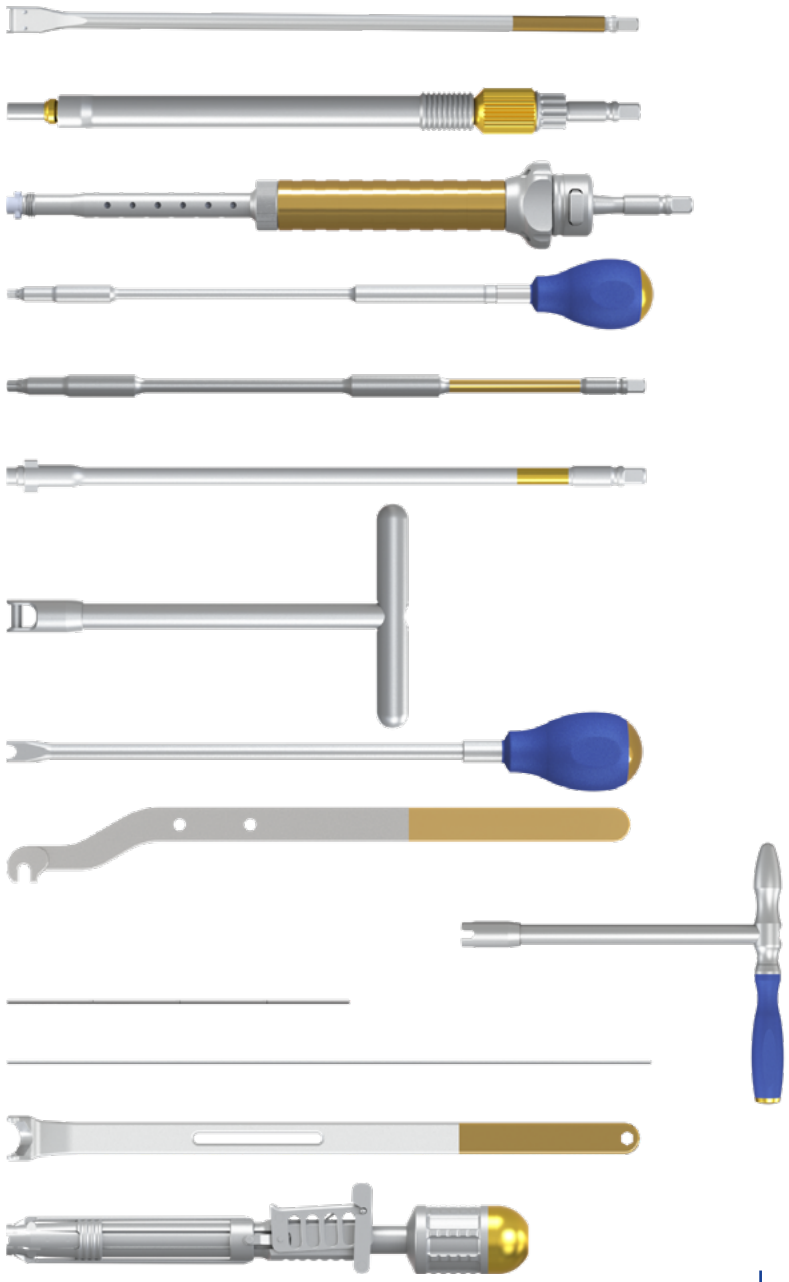
Item no.	Description
055068	Awl
1001010079	Cannulated Awl 30 optional
1106011101	Cannulated Awl without stop optional
1007010052	Goniometer- Awl optional
055217	Pedicle Probe
055271	Pedicle Probe Curved
055067	Pedicle Sounder
1001010059	Pedicle Sounder fine optional



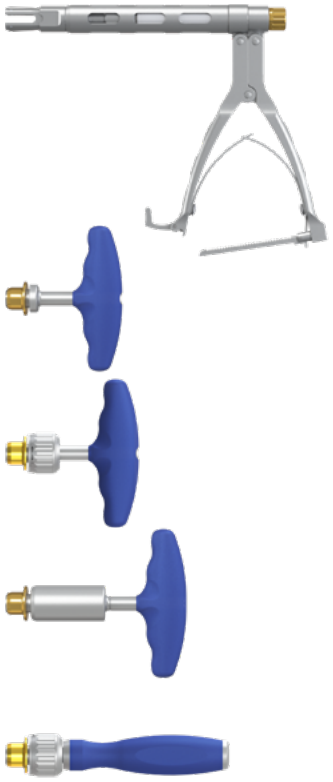
Taps

Item no.	Description	
1010030003 1010030000 1010030001 1010030002	6T Tap 4,8 6T Tap 5,5 6T Tap 6,5 6T Tap 7,2	
1010030015 1010030012 1010030013 1010030014 1010030010	Cannulated 6T Tap 4,8 Cannulated 6T Tap 5,5 Cannulated 6T Tap 6,5 Cannulated 6T Tap 7,2 Cannulated 6T Tap 8,5	optional
1010030008 1010030005 1010030006 1010030007	6T Tap 4,8 4T 6T Tap 5,5 4T 6T Tap 6,5 4T 6T Tap 7,2 4T	
1010030019 1010030016 1010030017 1010030018 1010030011	Cannulated 6T Tap 4,8 4T Cannulated 6T Tap 5,5 4T Cannulated 6T Tap 6,5 4T Cannulated 6T Tap 7,2 4T Cannulated 6T Tap 8,5 4T	optional

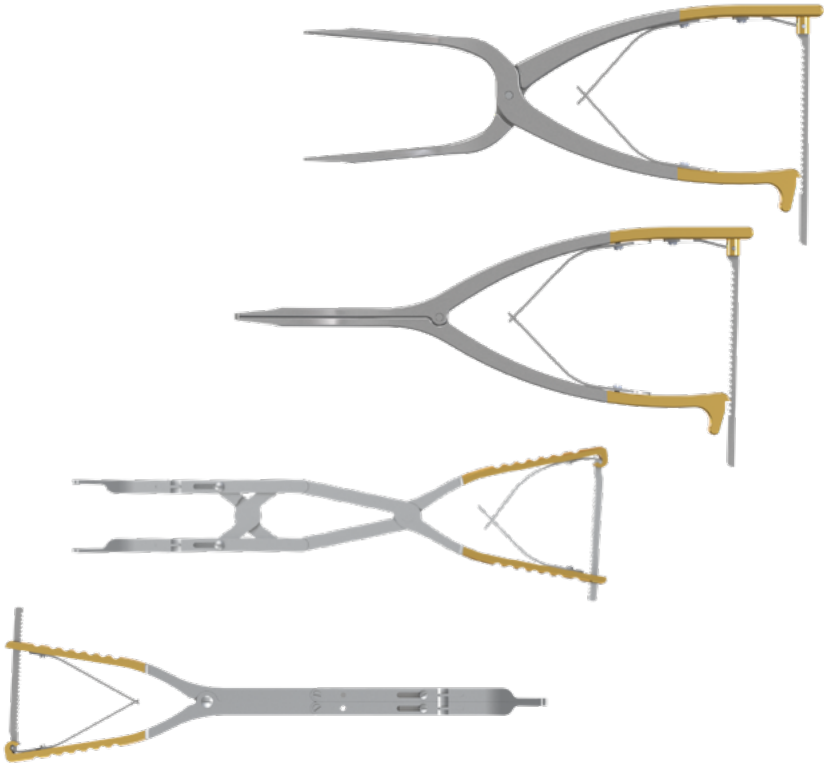
Item no.	Description
055059	Monoaxial Screw Driver Ø 5,5mm optional
1001011000	Polyaxial Screw Inserter
055061	Polyaxial Screw Driver
055065	Set Screw Inserter
1008010014	MIS Setscrew Driver
1001010065	Reposition Screw Driver optional
1010030009	Rescue Screw Driver
055081	Rod Pusher
055083	Bending Iron Ø 5,5 mm
055063	Counter Holder Ø 5,5mm
055057	Phantom Rod 200mm
055273	Phantom Rod 400mm - N optional
1001010048	Rocker
055071	Approximator Clamp ø 5,5mm



Item no.	Description
1007010058	Persuader Forceps Style
1006010600	T-Handle Cannulated
1006010701	Ratchet T-Handle Cann. T30 optional
1001012000	Torque Driver - 12
1006010801	Ratchet Handle Straight CanT30 optional

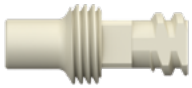


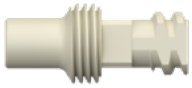
Item no.	Description
055259	Compressor
055262	Distractor
055293	Parallel Compressor AT
055294	Parallel Distractor AT



Item no.	Description
1001010050	Transverse Connector Inserter
1001010051	Transverse Connector Rod Holder
1001010052	Rod Inserter
055084	Rod Cutter
055069	Rod Bender
055072	Rod Holder

Item no.	Description
055325	Derotation Forceps
1001010080	Shaft Monoaxial Screw Driver
1006020601	Cementadapter Inserter
1006020602	Cementadapter Extractor
1006020600	Cementadapter CPS
1006020600-S	Cementadapter CPS sterile
1006020603	Bone Filler





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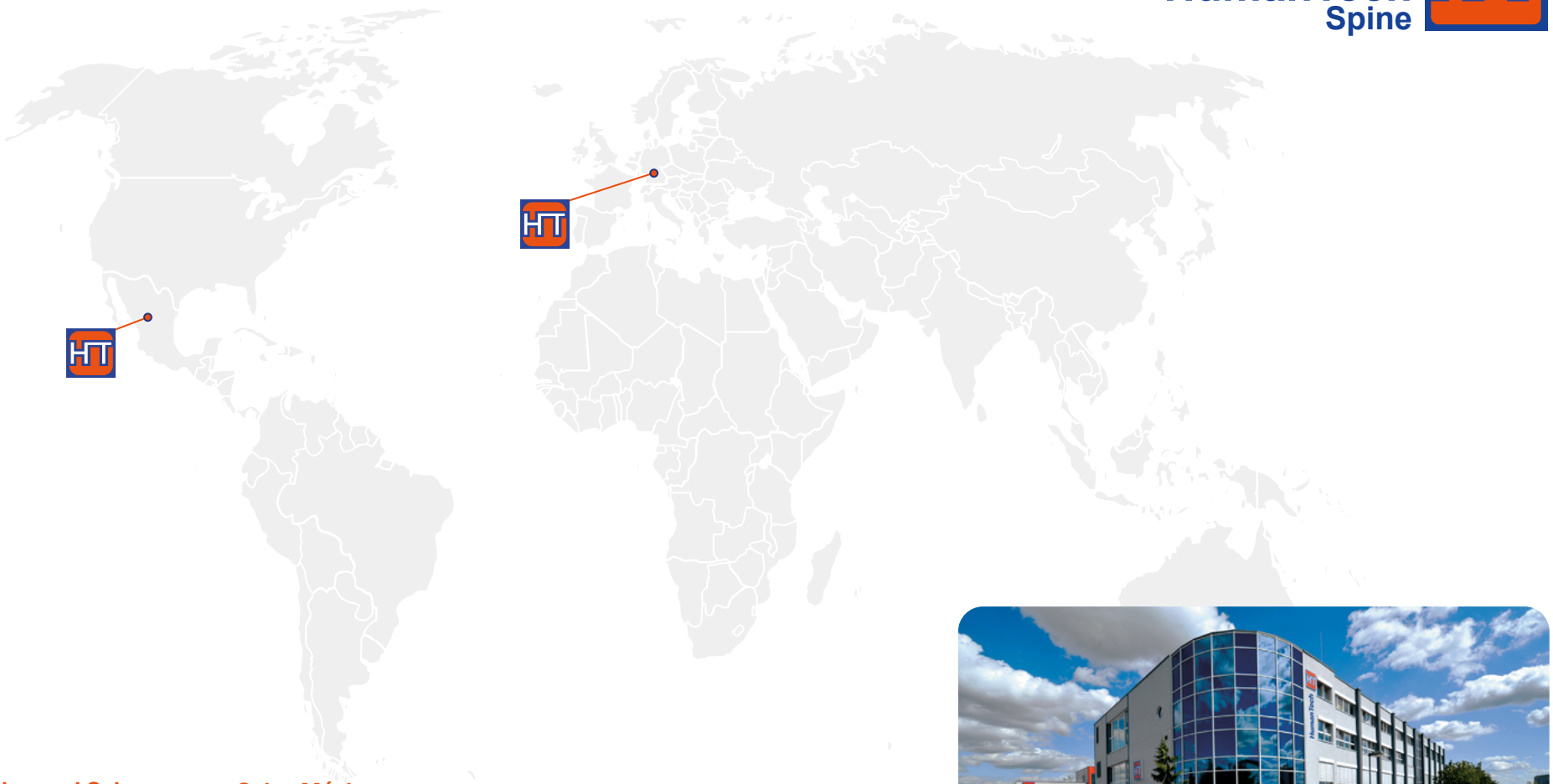

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