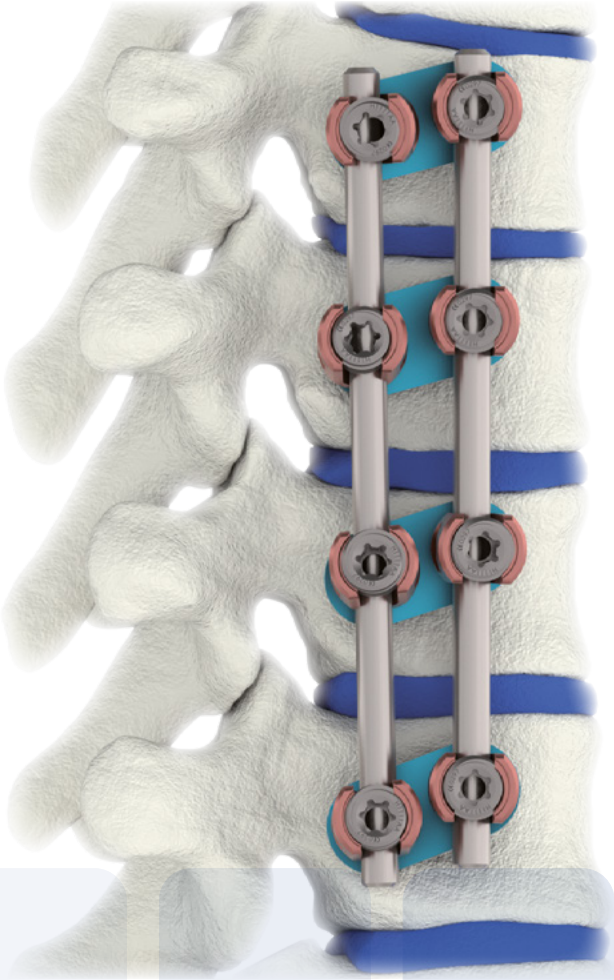
HumanTech Spine



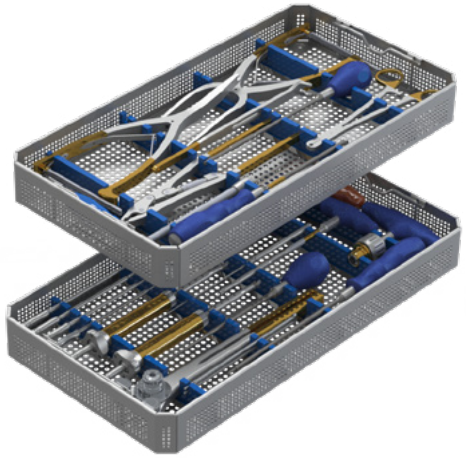
VENUS® nanoVDS

Ventral Derotation Spondylodesis

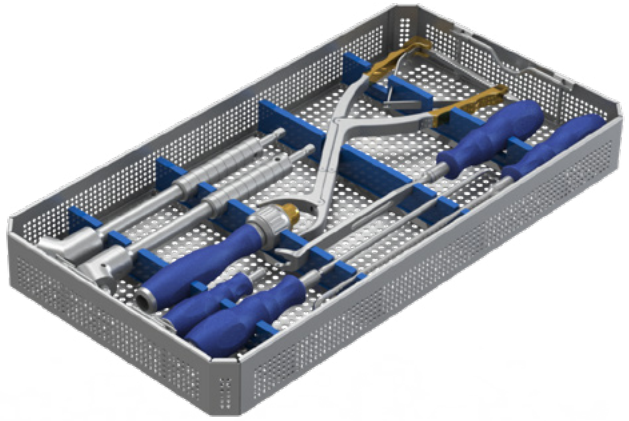
Brochure & Surgical Technique

Content

Made in Germany



VENUS®nano

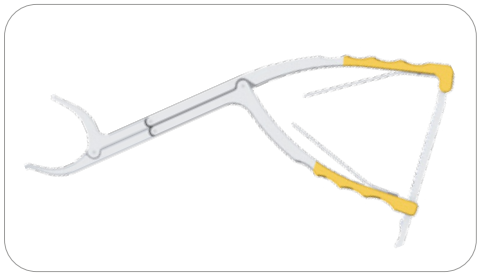


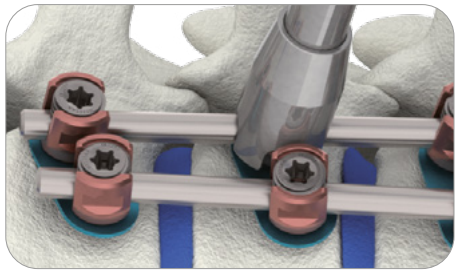
VENUS®nanoVDS

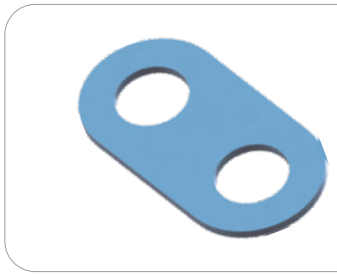
The VENUS®nano VDS system is an extension kit for use with the VENUS®nano system.
The VENUS®nano VDS was developed for use in the area of the thoracic and lumbar spine in children and adults of small stature. The system is designed for the treatment of ventral derotation spondylodesis. The system allows a minimally-invasive access to the anterior region due to specially designed instruments, even in the case of long-segment treatments.

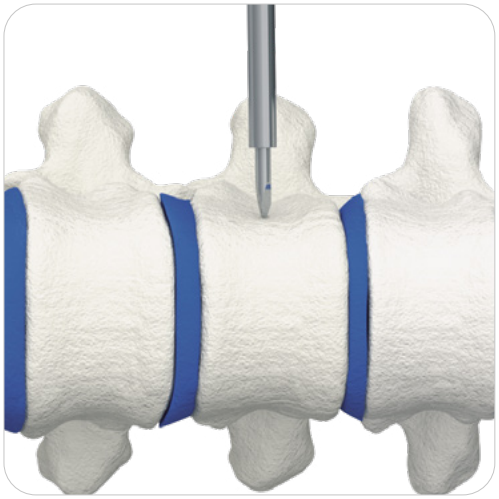
Implants for primary fusion and revision surgery

It is suitable for both single-rod and doublerod treatments.







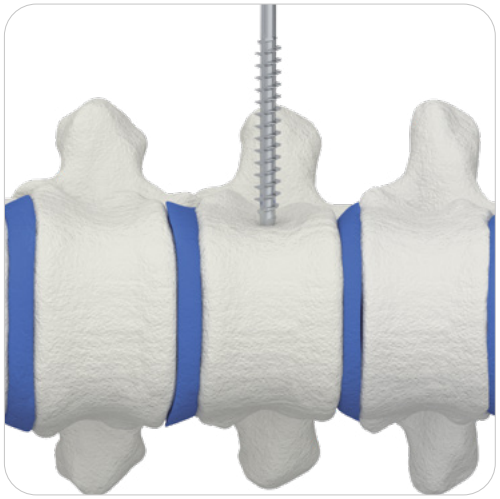


Preparation

In order to perform the ventral derotation spondylodesis a thoracotomy is performed with access to the spinal segments to be treated. Set the screw insertion point. Open the vertebral body using the LP Awl.

Awling and probing

The pedicle canal is awled. Using light pressure, the Pedicle Probe 2.5mm is advanced into the pedicle canal carefully in half rotations.

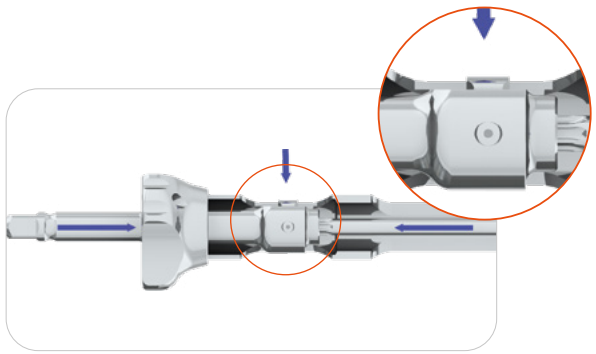


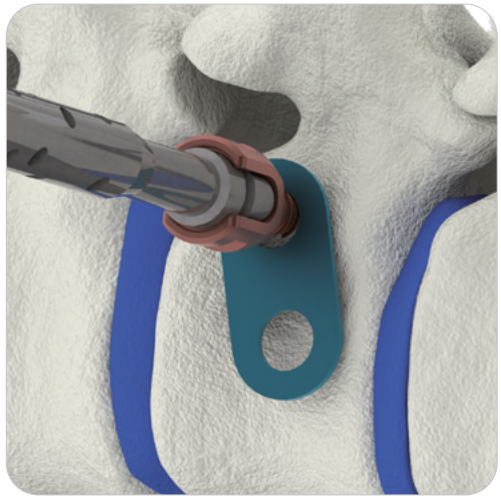
Tapping

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

Fitting the screws

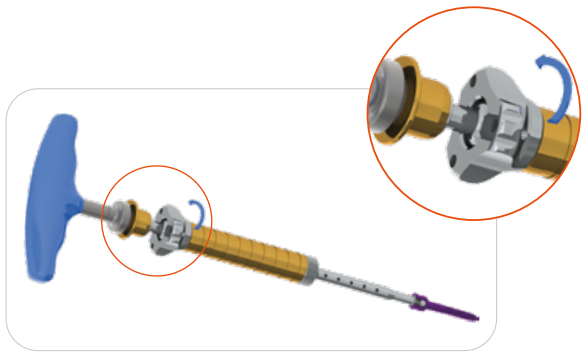
Insert the LP Shaft Monoaxial Screw Driver into the LP Mono/Polyaxial Screw Driver. Now insert the tip of the screwdriver into the screw head and connect the outer guide to the screw head by screwing it into the inner thread of the screw head.

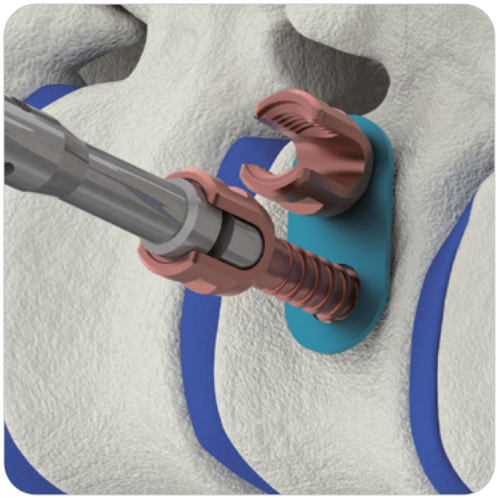




Inserting the mono-axial screw using the dual washer

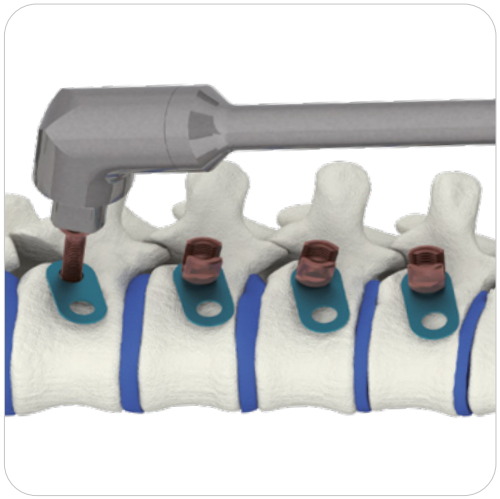
Position and hold the LP Dual Washer in place. Insert the monoaxial screw into the screw channel using the LP Mono/Polyaxial Screw Driver. After fully inserting the monoaxial screw, unscrew and remove the LP Mono/ Polyaxial ScrewDriver.





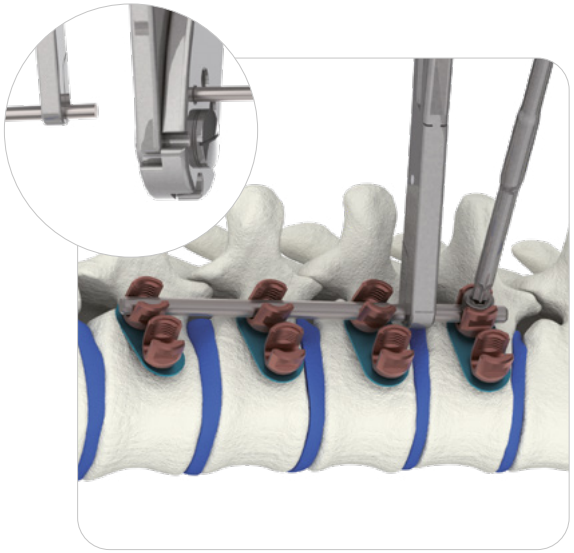
Inserting the second mono-axial screw using the dual washer

After the LP Dual Washer has been positioned, the second screw channel is prepared as described previously. The second monoaxial screw is screwed into the screw channel. After fully inserting the monoaxial screw, unscrew and remove the LP Mono/Polyaxial Screw Driver.



Inserting all screws

Insert the remaining monoaxial screws and dual washers according to the desired number of segments to be treated. If required, the LP Angled Mono Screw Driver MT can be used alternatively.



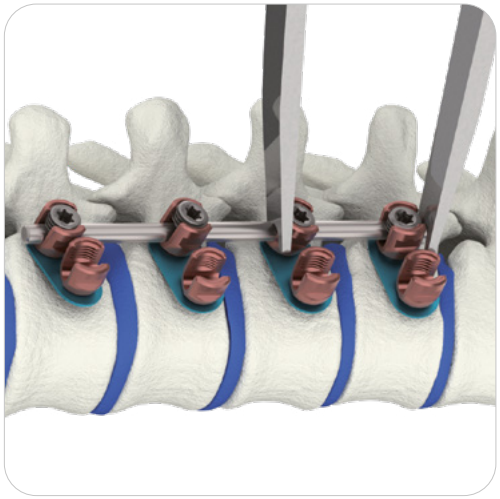
Inserting the rod

Determine the required rod length. A Phantom Rod 200mm is contained in the Venus nano instruments to facilitate determining the rod length. Insert the rod into the screw heads using the LP Rod Inserter and, if necessary, with the help of your fingertips. The rod profile can be changed with the use of the LP Rod Bender. If necessary, place the rod with the aid of the LP Rod Pusher or an LP Rocker with handle to ensure correct positioning in the screw head.

Fixing the rod

Fix the rod in the screw head with the LP Set Screw using the LP Set Screw Inserter. To prevent cross-threading while screwing in the LP Set Screw, first screw in a counterclockwise direction until you clearly feel the thread “click into” the screw head.
Then continue to screw in the LP Set Screw.

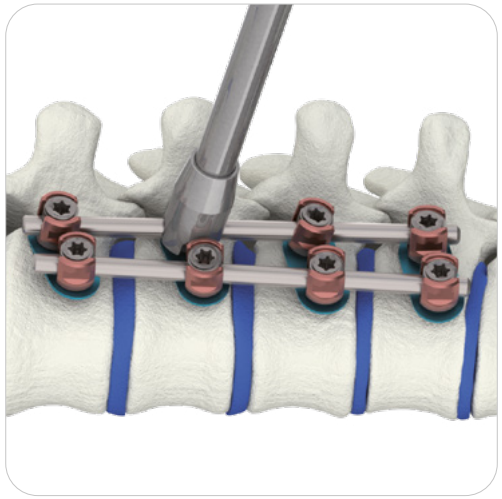
Caution!
Be sure to only screw in the LP Set Screw loosely; the final torque is applied using the LP Set Screw Driver.



Compression / Distraction

Position the LP Compressor or LP 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 LP Set Screw Driver.

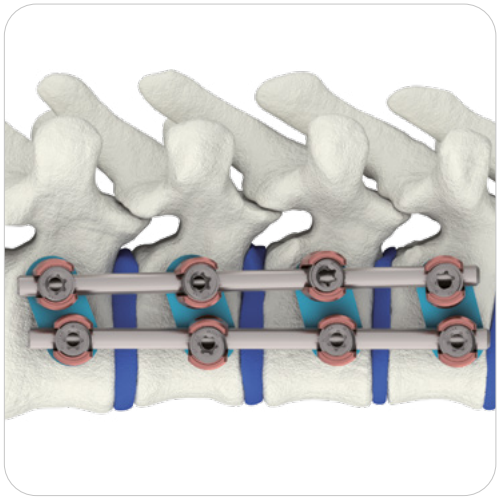
Note:
The LP Set Screws must not be fully tightened during this manoeuvre. If necessary, loosen the set screws carefully using the LP Set Screw Driver.



Subsequent tightening

Slot the LP Torque Driver-10 and the LP Counter Holder into one another. Attach the combined instrument to the screw head. It is also possible to attach the two instruments separately. Tighten the LP Set Screw. Same approach for all other LP Set Screws.

Note:
The full torque of 10 Nm is reached when an audible “click” is heard.



Final Structure

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

Monoaxial Screws

Art.No.	Description
	Monoaxial Screws Ø5 mm
2200065025	Monoaxial Screw LP Ø5x25mm
2200065030	Monoaxial Screw LP Ø5x30mm
2200065035	Monoaxial Screw LP Ø5x35mm
2200065040	Monoaxial Screw LP Ø5x40mm
2200065045	Monoaxial Screw LP Ø5x45mm
2200065050	Monoaxial Screw LP Ø5x50mm
	Monoaxial Screws Ø5.5 mm
2200065525	Monoaxial Screw LP Ø5.5x25mm
2200065530	Monoaxial Screw LP Ø5.5x30mm
2200065535	Monoaxial Screw LP Ø5.5x35mm
2200065540	Monoaxial Screw LP Ø5.5x40mm
2200065545	Monoaxial Screw LP Ø5.5x45mm
2200065550	Monoaxial Screw LP Ø5.5x50mm

Art.No.	Description
	Monoaxial Screws Ø6 mm
2200066025	Monoaxial Screw LP Ø6x25mm
2200066030	Monoaxial Screw LP Ø6x30mm
2200066035	Monoaxial Screw LP Ø6x35mm
2200066040	Monoaxial Screw LP Ø6x40mm
2200066045	Monoaxial Screw LP Ø6x45mm
2200066050	Monoaxial Screw LP Ø6x50mm

Rods and Setscrews

Art.No.	Description	
LP-PMS	LP Set Screw	
2200160010	LP Dual Washer SP	
2200160020	LP Dual Washer	

Art.No.	Description	
2200094510H	Rod straight LP Ø4.5x100mm Hex	
2200094515H	Rod straight LP Ø4.5x150mm Hex	
2200094520H	Rod straight LP Ø4.5x200mm Hex	
2200094548H	Rod straight LP Ø4.5x480mm Hex	

Art.No.	Description	
2200010047	LP Awl angled	
2200010042	LP Set Screw Driver angled	
2200010035	LP Rocker with Handle	
2200010026	LP Compressor angled 4.5	
2200010027	LP Angled Mono Screw Driver MT	
2200010052	LP Angled Set Screw Driver MT	

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