

INNOVATION  SIS

▶ EXCELLA MIS™

Spinal System



Excella MIS™ Spinal System

▶ INDICATIONS FOR USE

The Innovasis® Excella MIS™ Spinal System is intended for use in the non-cervical area of the spine.

WARNING:

The safety and effectiveness of pedicle screw systems have been established only for spinal conditions with significant mechanical instability or deformity requiring fusion with instrumentation. These conditions are significant mechanical instability or deformity of the thoracic, lumbar, and sacral spine secondary to severe spondylolisthesis (grade 3 and 4) of the L5-S1 vertebra, degenerative spondylolisthesis with objective evidence of neurological impairment, fracture, dislocation, scoliosis, kyphosis, spinal tumor, and failed previous fusion (pseudoarthrosis). The safety and effectiveness of these devices for any other conditions are unknown.

 *Note: The Excella MIS™ Spinal System has not been evaluated for safety and compatibility in the MR environment. The Excella MIS™ Spinal System has not been tested for heating or migration in the MR environment. The safety of the Excella MIS™ Spinal System in the MR environment is unknown.*

 **CAUTION:** Federal Law (U.S.A.) restricts these devices to sale by or on order of a physician.



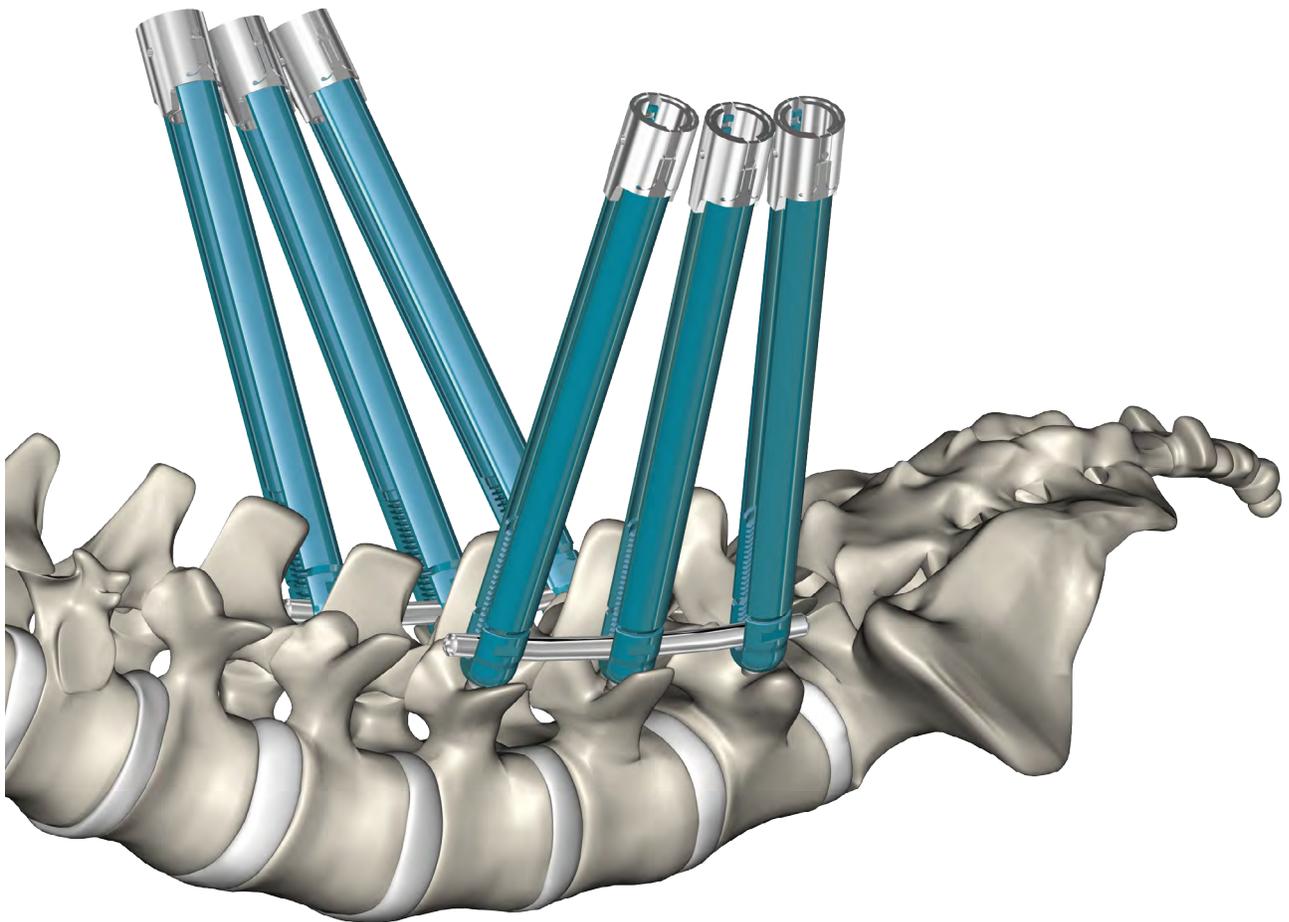
Excella MIS™ Spinal System

▶ CONTRIBUTING SURGEONS

Ken Yonemura, MD - Salt Lake City, UT

▶ PRODUCT OVERVIEW

The Excella MIS™ Spinal System is a thoracolumbar system designed to facilitate percutaneous screw and rod placement. The cannulated pedicle screws and extended reduction tabs allow for easy rod placement and minimal tissue disruption. The system was designed to minimize the number and complexity of procedural steps.



IMPLANT OVERVIEW

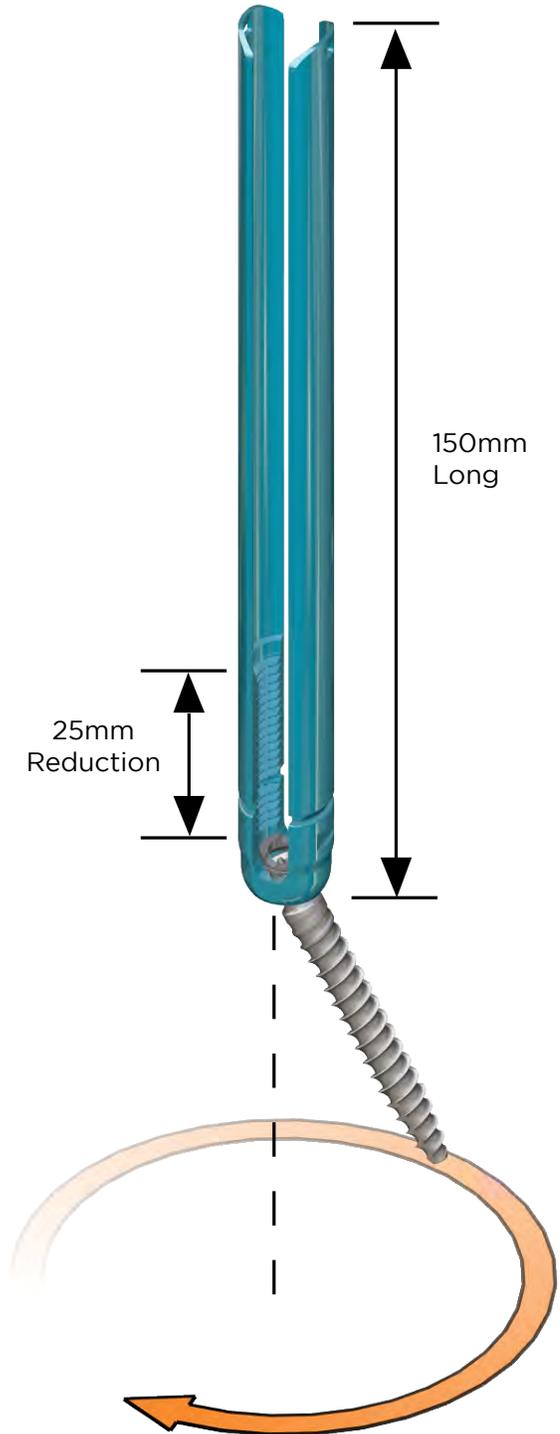
PEDICLE SCREWS

► SCREWS

- Break-away extended tabs present a minimal profile
- 150mm tall extensions accommodate a variety of patient sizes
- Integrated reduction threads provide 25mm of reduction
- Polyaxial head with +/- 30° screw angulation (60° Total)
- Cannulated, self-tapping bone screws with tapered tip
- Aggressive thread profile for maximizing purchase
- Double-lead thread to reduce insertion time
- Intuitive instrumentation to ease procedure

► SIZES

Screw Diameter	Length (5mm increments)	Color
5.5 mm	35-55 mm	Green
6.5 mm	35-60 mm	Platinum
7.5 mm	35-60 mm	Blue



IMPLANT OVERVIEW

ROD OPTIONS

▶ RODS

- Straight or Pre-Curved options
- Percutaneous and Standard options
- Pre-Curved rods provided with alignment line for direct visualization
- 5.5mm in diameter
- Provided in a variety of lengths from 35mm to 125mm



INSTRUMENTS OVERVIEW

INSTRUMENTS



LS-277 Jamshidi, Trochar Tip
(LS-278 Jamshidi, Bevel Tip)

LS-212 K-Wire, 500mm Lg, 1.4mm Dia



LS-208 K-Wire Depth Gage



LA-184 Universal Ratchet Handle



LS-182 Dilator #1



LS-183 Dilator #2



LS-184 Dilator #3



LS-187 Bone Tap



INSTRUMENTS OVERVIEW

INSTRUMENTS



LS-185 MIS Pedicle Driver



LS-188 Pedicle Screw Adjustor



LS-213 Head Positioner



LS-175 Snap Ring/Sleeve Remover



LS-176 Snap Ring



LS-177 Snap Sleeve

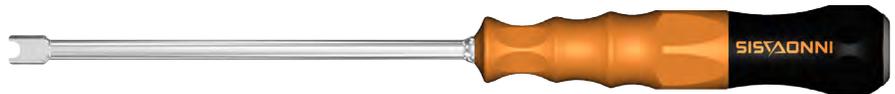


INSTRUMENTS OVERVIEW

INSTRUMENTS



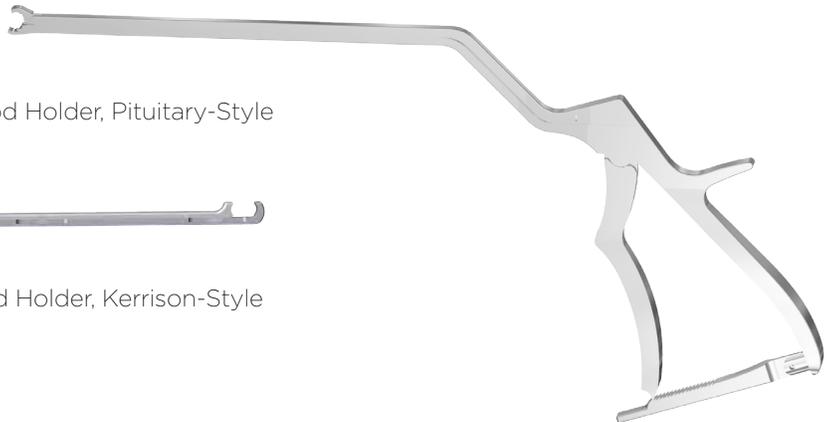
LS-196 Dissector



LS-195 Rod Pusher



LS-220 Awl



LS-190 Rod Holder, Pituitary-Style



LS-191 Rod Holder, Kerrison-Style



LS-221 Percutaneous Rod Holder



INSTRUMENTS OVERVIEW

INSTRUMENTS



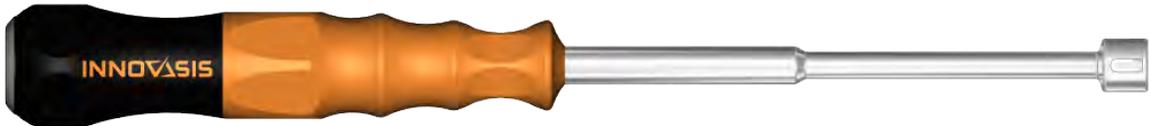
LS-207 Rod Caliper



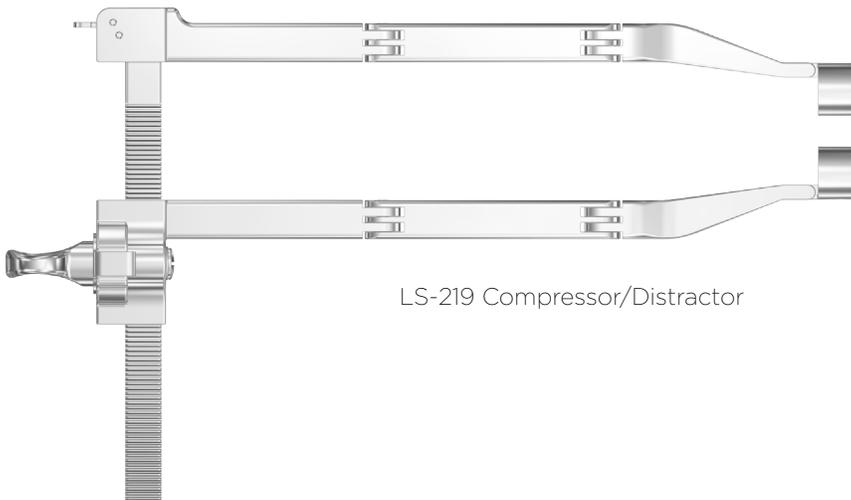
LS-198 Starter Driver



LS-197 Double Starter Driver



LS-214 Tab Remover

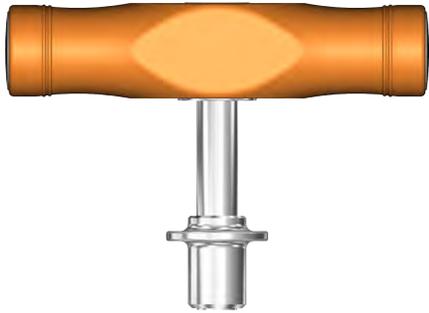


LS-219 Compressor/Distractor

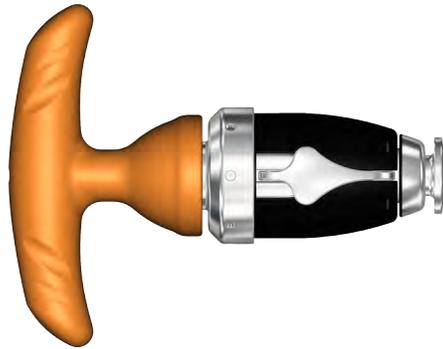


INSTRUMENTS OVERVIEW

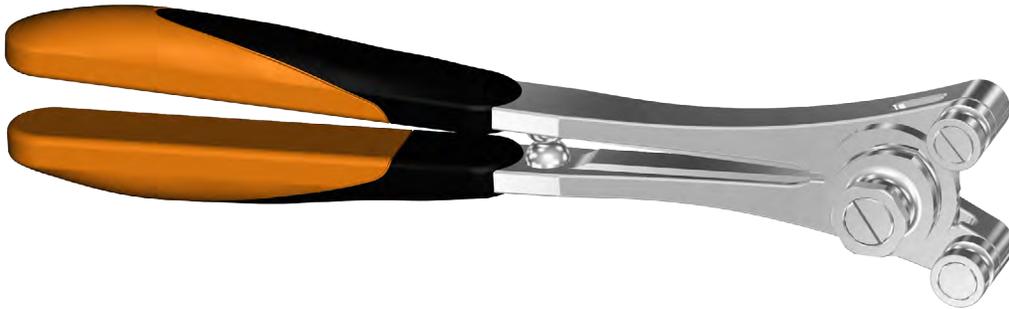
INSTRUMENTS



LA-T100 Torque Wrench, 100 in-lb



LS-180 Speed Driver, 1:1 and 3.5:1 Ratio



LS-276 Rod Bender



LS-193 Anti-Torque, Internal



LS-194 Anti-Torque, External



SURGICAL TECHNIQUE

APPROACH

Preoperative planning is critical to determining the optimal approach, including A/P and lateral radiographic evaluation. The appropriate implants must be selected based on patient anatomy and desired correction.

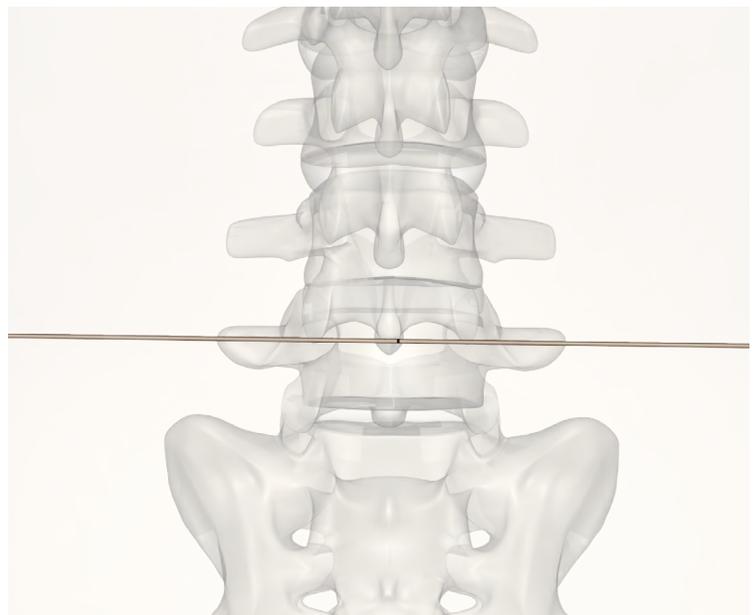
The patient should be placed under general anesthesia and positioned prone on a radiolucent table. The table should allow unobstructed rotation of the C-Arm to obtain necessary lateral, oblique, and A/P views during the procedure.

PEDICLE TARGETING

Adjust orientation of the C-Arm until a true A/P view is obtained (endplates parallel, spinous process centered between pedicle centers)

Place a guidewire across the vertebral body so that its projection splits the pedicle in the A/P fluoro image. Mark these locations on the skin, extending 3-4 cm from the midline.

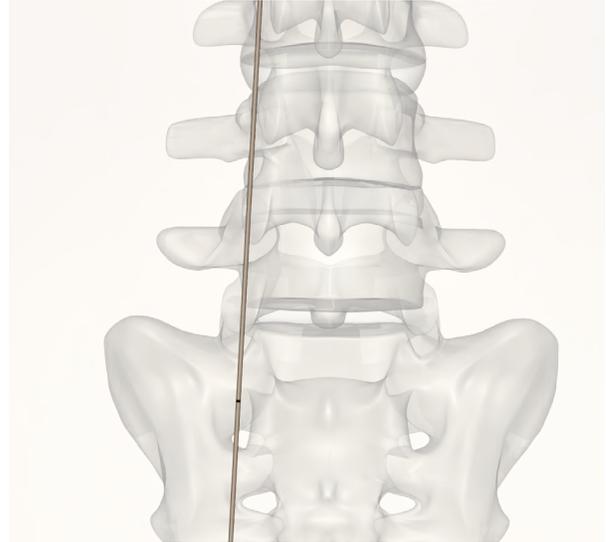
⚠ Note: *The C-Arm may require adjustment of its orientation for each vertebral body*



SURGICAL TECHNIQUE

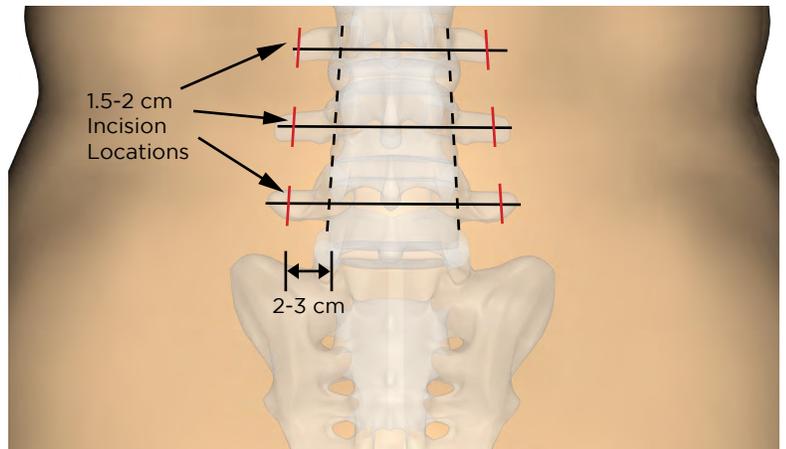
PEDICLE TARGETING

Place a guidewire oriented in the cephalad-caudal direction so that its projection is in-line with the lateral pedicle wall of the targeted level AND adjacent levels. This plane allows for the pedicle screws to lay in-line for easy rod placement. Mark this location on the skin.



Make a second mark 2-3 cm lateral to the targeted pedicle location. This is the incision location.

Repeat for the remaining pedicles to be targeted.



SURGICAL TECHNIQUE

JAMSHIDI NEEDLE PLACEMENT

Make a 1.5 - 2.0cm longitudinal incision at location marked on the patient. Insert Jamshidi needle to contact the pedicle surface.

Tip: Pulling back the trochar from the Jamshidi can allow the sheath-tip to be used to palpate the bony anatomy.

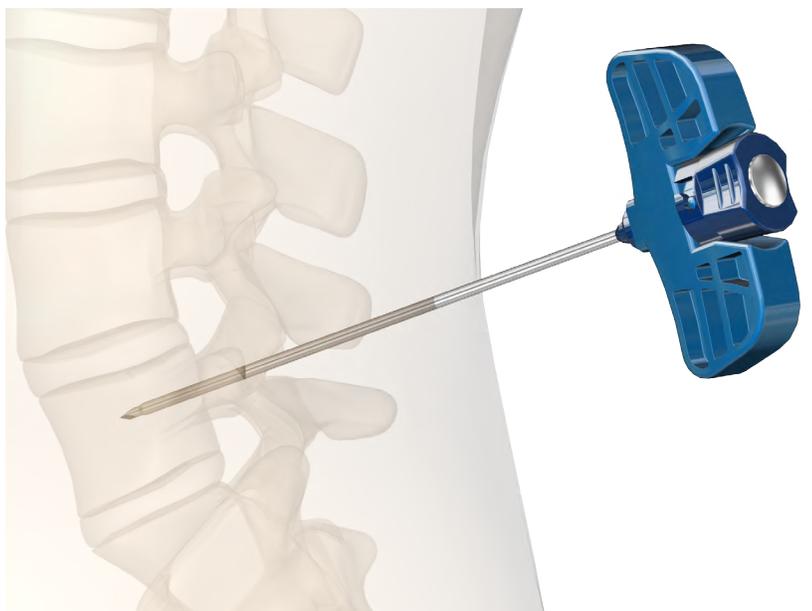
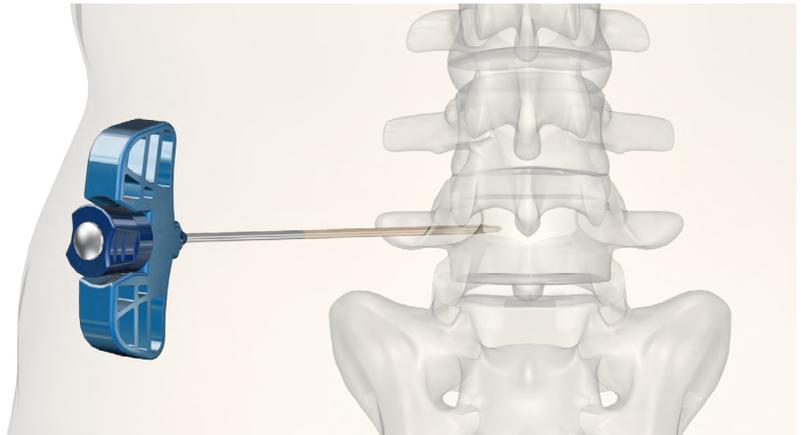
Confirm position and orientation of Jamshidi by using fluoroscopy. Entry should be centered along the lateral border of the pedicle in the A/P view.

Using A/P fluoroscopy, advance the Jamshidi tip toward the pedicle's center. The tip of the Jamshidi should not extend beyond three-quarters across the pedicle.

Using lateral fluoroscopy, confirm the Jamshidi needle tip enters the vertebral body and remains centered in the pedicle.

Advance the Jamshidi until its tip is within the vertebral body.

Tip: A Bevel-Tip Jamshidi can be used to steer the needle if needed.

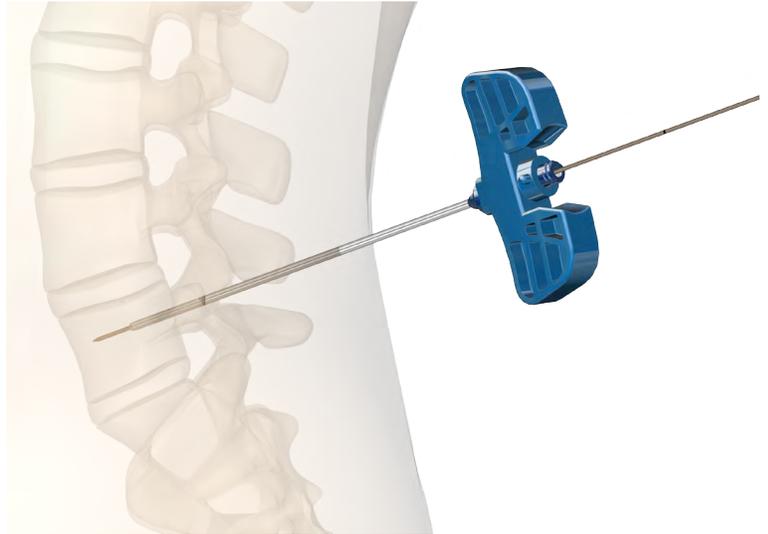


SURGICAL TECHNIQUE

K-WIRE PLACEMENT

Remove inner stylet from the Jamshidi.

Place K-wire through the Jamshidi and advance it into the vertebral body at or 2-3mm beyond the desired pedicle screw tip location. The provided K-Wire driver can be used to assist in pushing the K-wire into place.



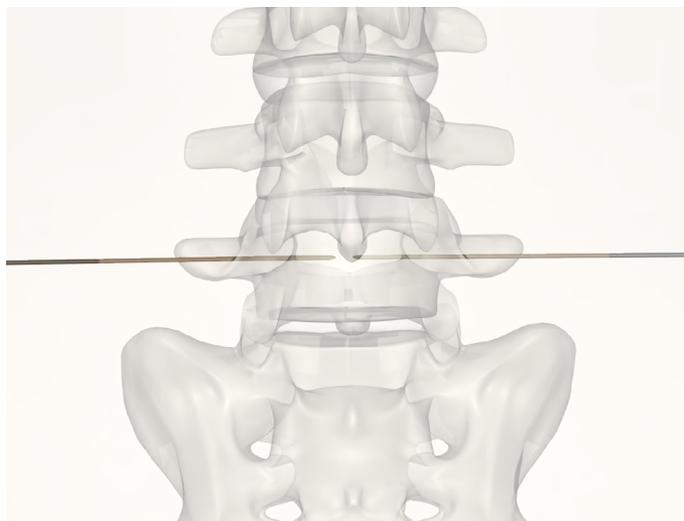
⚠ Note: Visualize the K-wire with x-ray. The wire should be straight, without any bend or curve. A curve could cause cannulated instruments or the pedicle screw to bind on the wire and inadvertently advance the K-wire anteriorly, beyond the anterior cortex of the vertebral body into the patient's abdomen.



Carefully remove the Jam-Shidi while holding the K-Wire to ensure it remains in position.

Repeat K-wire placement on contralateral side.

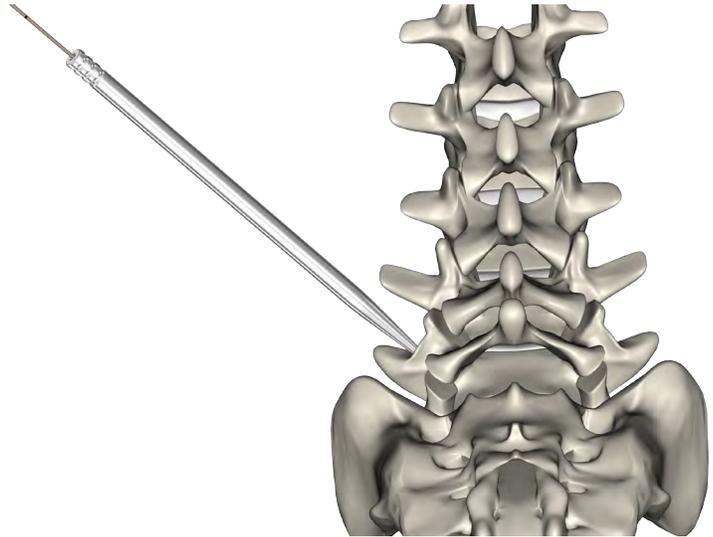
⚠ Note:
Wiltse Approach: Do not place K-Wires at adjacent levels.
Percutaneous Approach: Place K-Wires at adjacent levels.



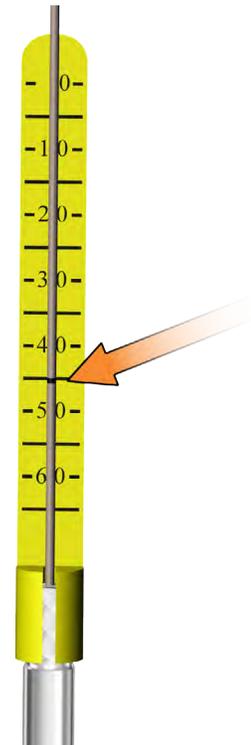
SURGICAL TECHNIQUE

DILATION AND TAPPING

Slide Dilator #1 over the K-Wire until the tip contacts the pedicle.



Place K-Wire Depth Gage on back of Dilator #1. The laser mark on the K-Wire against the gage will indicate the depth of the K-wire from the top of the pedicle. This measurement can be used to determine the desired length of screw.



SURGICAL TECHNIQUE

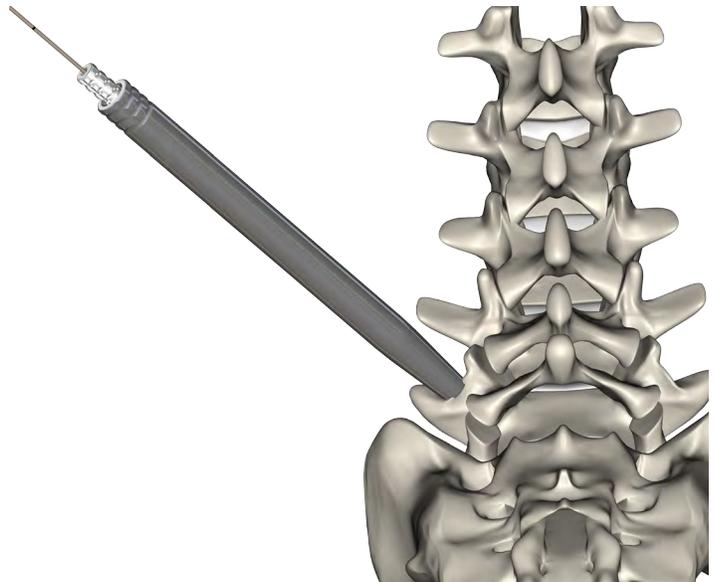
DILATION AND TAPPING

Slide Dilator #2 over Dilator #1 until the tip contacts the pedicle. Remove Dilator #1 while holding the K-wire in place. Dilator #2 is made of a radiolucent polymer for ease of instrument visualization and nerve monitoring.

Optional: Advance Cannulated Awl over the K-wire and through Dilator #2 to enlarge the cortical opening. Remove the Awl while holding the K-wire in place.

Attach a Handle to the Cannulated Tap. Advance the tap over the K-Wire and tap to the desired depth.

⚠ Note: The taps are marked their actual size. They are provided 0.5mm undersized relative to the pedicle screw size (i.e. a 6.0mm tap for a 6.5mm screw).



SURGICAL TECHNIQUE

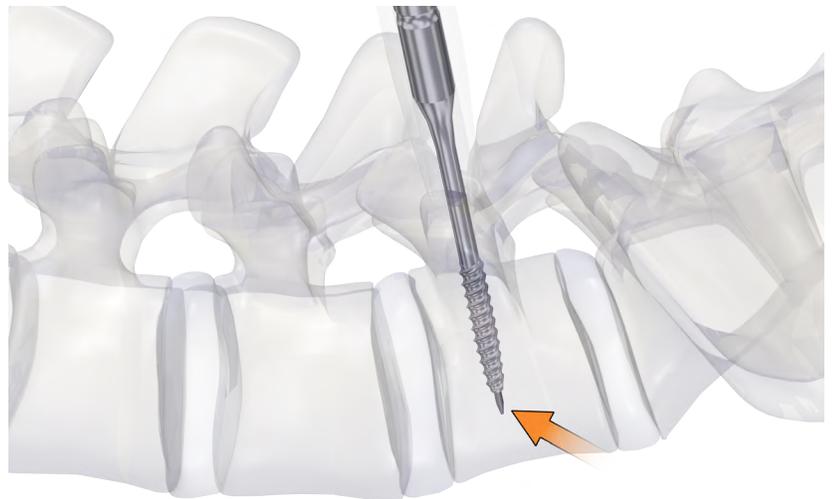
DILATION AND TAPPING

Tap depth is measured from the top of the #2 dilator to the tap's depth marks.

⚠ Note: Fluoroscopy should be used to visualize the tap and K-wire positions during tapping. Use care to ensure the wire is not bent, kinked or advanced anterior during tapping.

⚠ Note: Do not advance the tap beyond the tip of the K-wire to prevent bone from plugging the cannula, rendering the tap non-functional for subsequent pedicles.

⚠ Note: Minimize toggling of the tap to prevent the tap from bending or breaking.



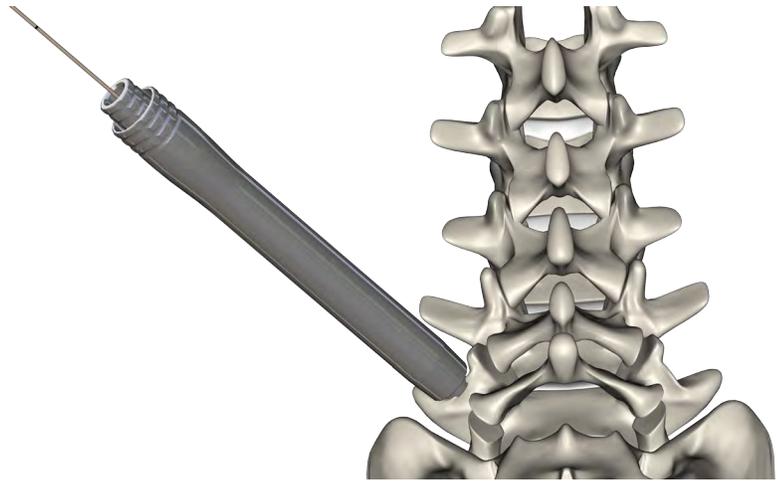
SURGICAL TECHNIQUE

SCREW PLACEMENT

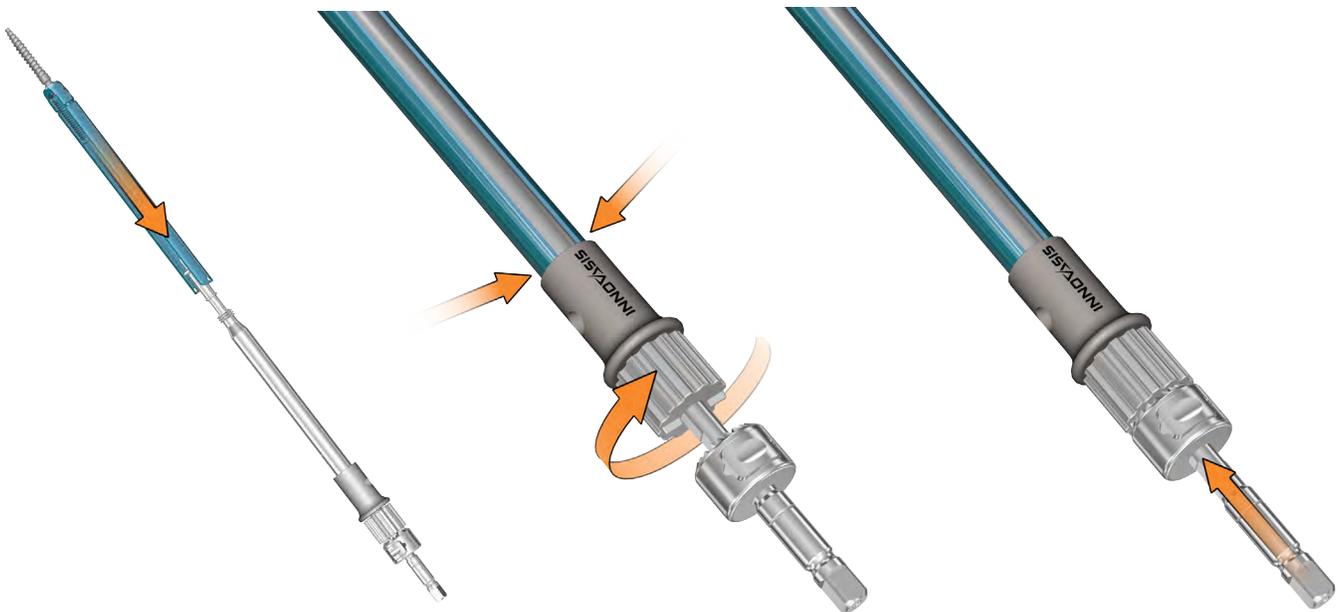
Place Dilator #3 over Dilator #2. Remove Dilator #2. Dilator #3 is made of a radiolucent polymer for ease of instrument visualization and nerve monitoring.

Optional: Dilator #2 can be removed and the pedicle screw placed directly over-the-wire without using the #3 dilator, if desired.

Attach the pedicle screw driver to the pedicle screw.



⚠ ASSEMBLY: Slide screw onto driver and engage hexalobe drive, capture tabs in the driver's sleeve and tighten the thumb wheel, then advance the lock to prevent thumb wheel from loosening.



SURGICAL TECHNIQUE

SCREW PLACEMENT

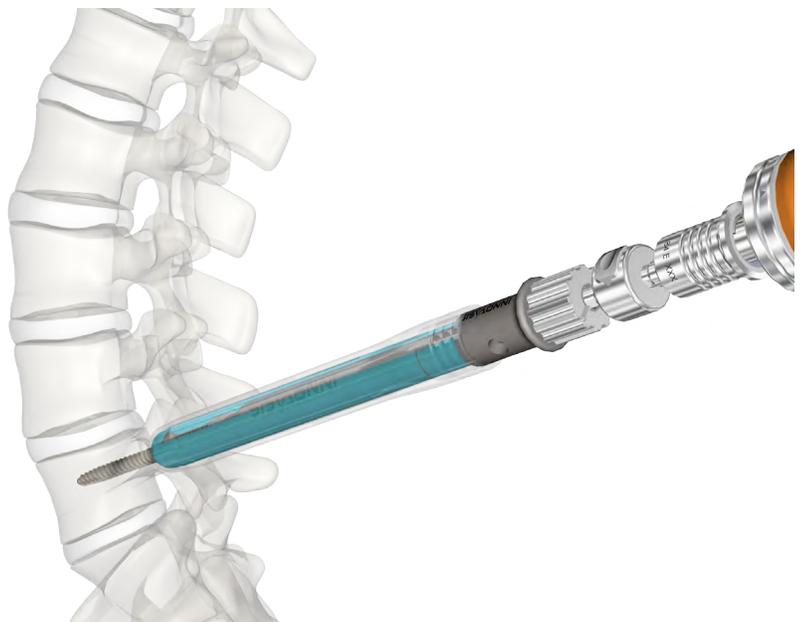
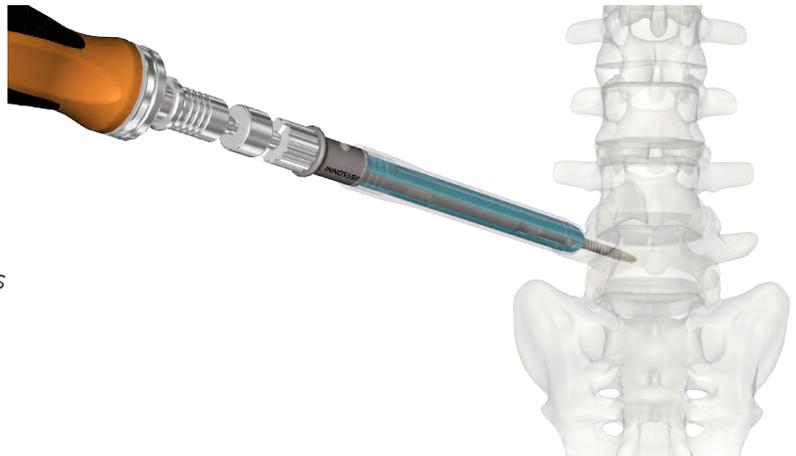
Advance the assembly over the K-wire until the screw contacts the pedicle surface, then advance the screw until the head lightly contacts the pedicle.

⚠ *Note: once the screw tip has been advanced into the pedicle, the K-wire should be removed to ensure the wire is not advanced anterior.*

⚠ *Note: binding the screw head against the pedicle will eliminate polyaxial motion of the screw and increase the difficulty of rod placement.*

Unlock the thumbwheel, then rotate the thumbwheel counterclockwise until the pedicle driver can be removed. Maintain colinear alignment with the screw to ease driver removal.

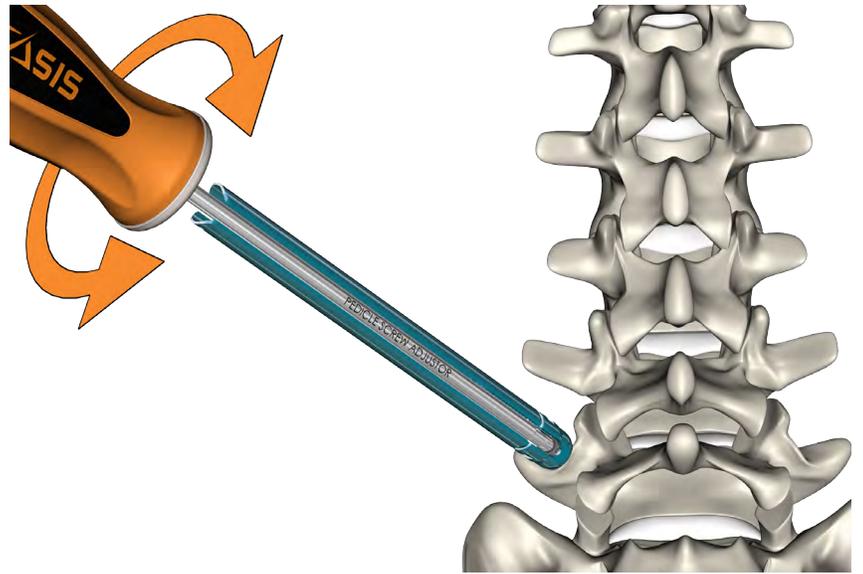
Remove Dilator #3.



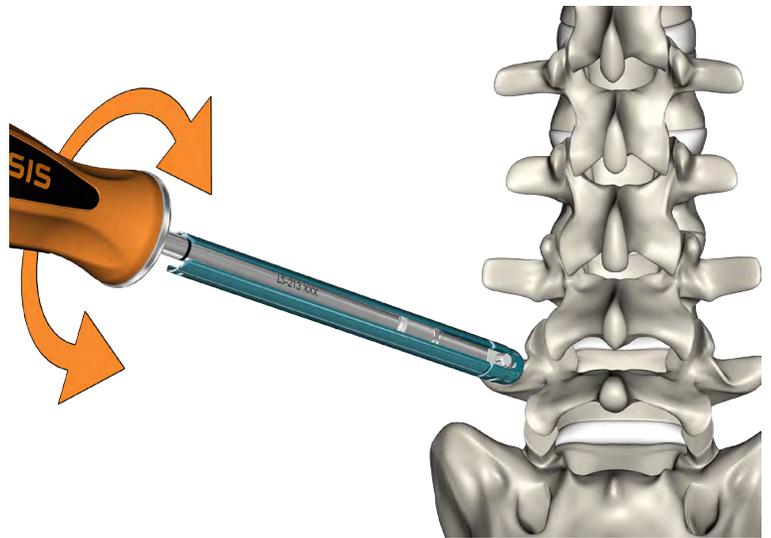
SURGICAL TECHNIQUE

SCREW PLACEMENT

⚠ Note: *the Pedicle Screw Adjustor can be used to adjust the height of the screw after the Pedicle Screw Driver has been removed.*



⚠ Note: *The Head Positioner can be used to adjust orientation of the extended tabs.*



SURGICAL TECHNIQUE

SCREW PLACEMENT

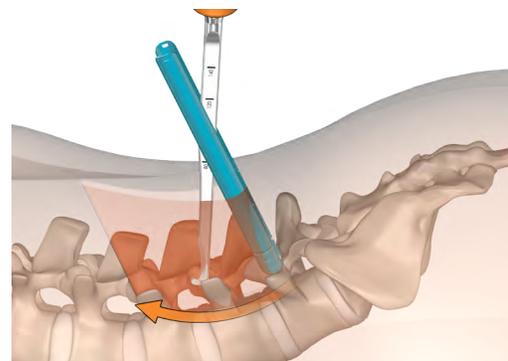
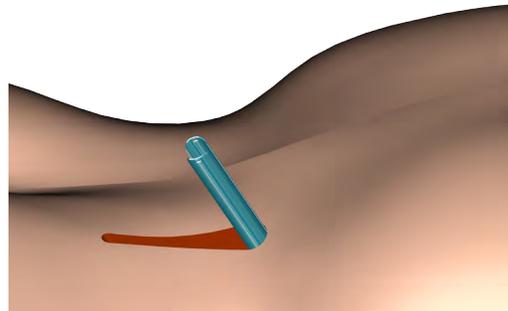
WILTSE APPROACH

⚠ Note: A muscle plane should be created prior to placing subsequent screws to ensure all screws and rod will lie in the same muscle plane.

Extend the skin incision to remaining pedicles.

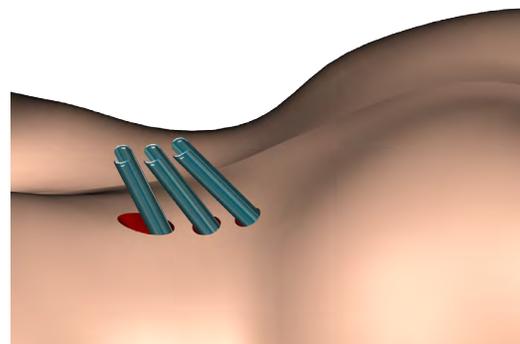
Use Dissector to create a working plane and path for rod placement then place remaining screws through the muscle plane created.

⚠ Note: Care should be taken to ensure the dissector is not pushed below the level of the transverse processes while creating the muscle plane.



PERCUTANEOUS APPROACH

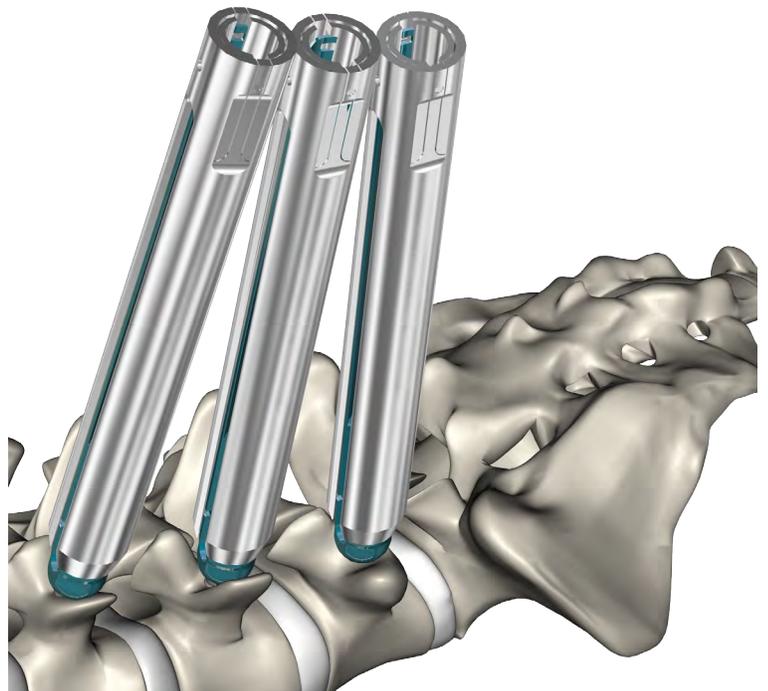
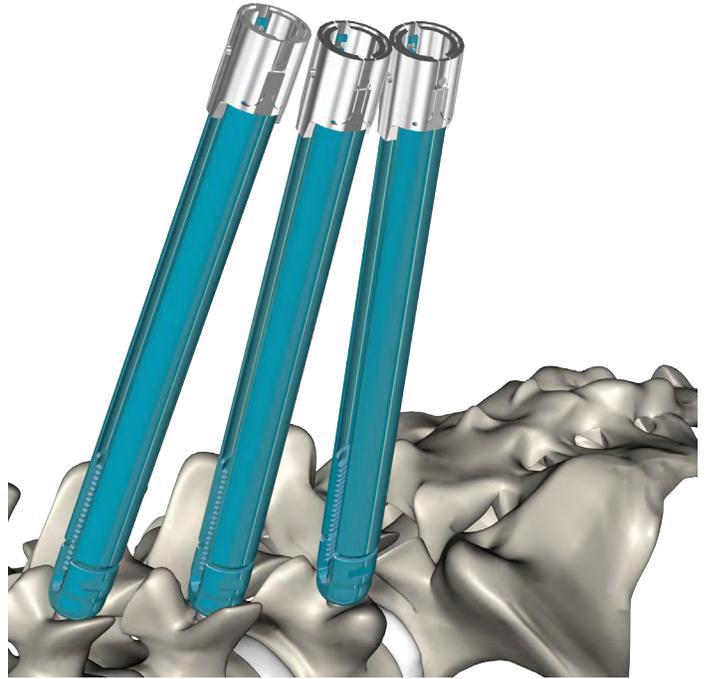
Place all screws through 1.5 to 2 cm stab incisions



SURGICAL TECHNIQUE

SCREW PLACEMENT

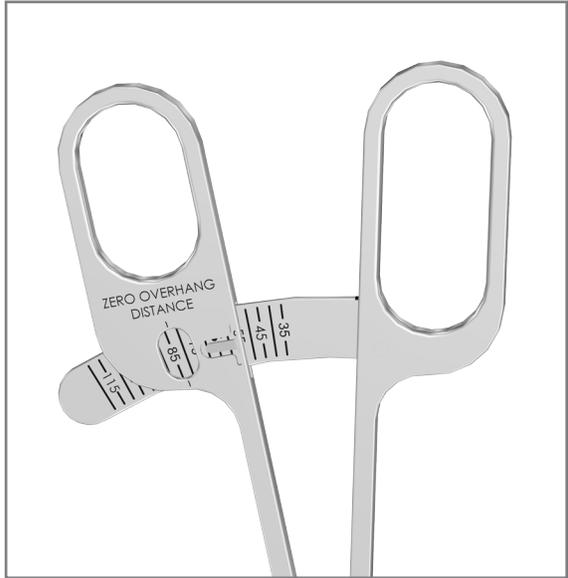
Attach optional rings or sleeves to the screw extensions. Use of these instruments will reduce potential for inadvertent tab separation during rod placement and/or screw manipulation.



SURGICAL TECHNIQUE

ROD PLACEMENT

Place rod calipers down towers until the spherical balls are seated in the screw head. The resulting measurement is the zero overhang distance between screw heads. 10-15mm should be added to this measurement to ensure adequate overhang of the rod.



SURGICAL TECHNIQUE

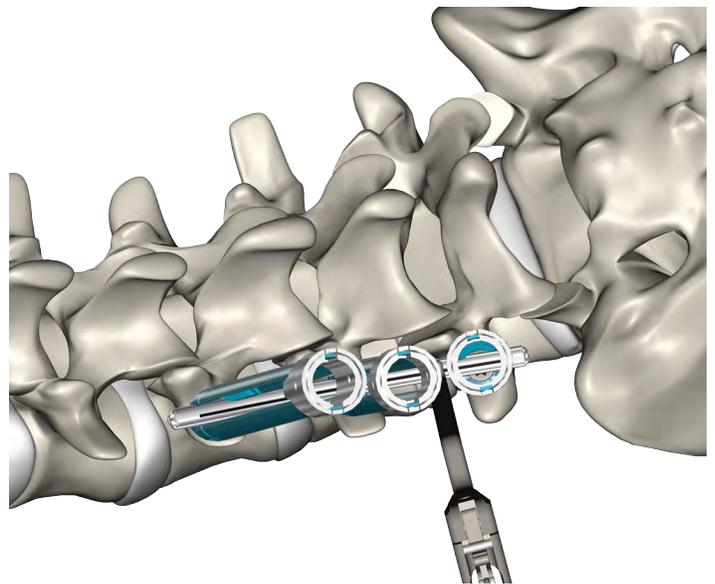
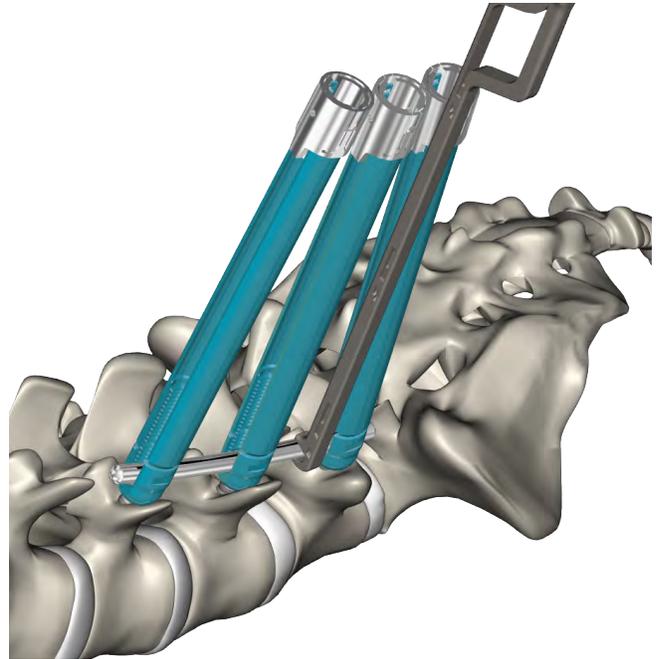
ROD PLACEMENT

WILTSE APPROACH

Choose straight or pre-bent rod and contour if necessary.

⚠ *Note: pre-bent rods are provided with an alignment line along the inside of the curve.*

Using either rod holder option, grasp the rod 20mm from its end. Advance the rod down the towers until seated in the screw heads.



SURGICAL TECHNIQUE

ROD PLACEMENT

PERCUTANEOUS APPROACH

Choose straight or pre-bent rod and contour if necessary.

⚠ *Note: pre-bent rods are provided with an alignment line along the inside of the curve.*

Loosen thumb-wheel on rod holder, push button and load rod as shown.

Tighten thumb-wheel to secure rod.

Laser marks on rod holder will align when rod is properly loaded.



SURGICAL TECHNIQUE

ROD PLACEMENT

PERCUTANEOUS APPROACH

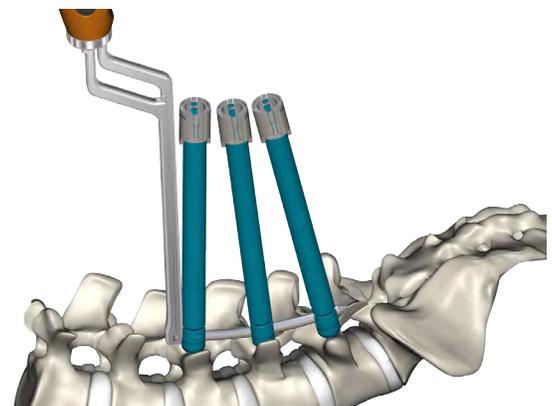
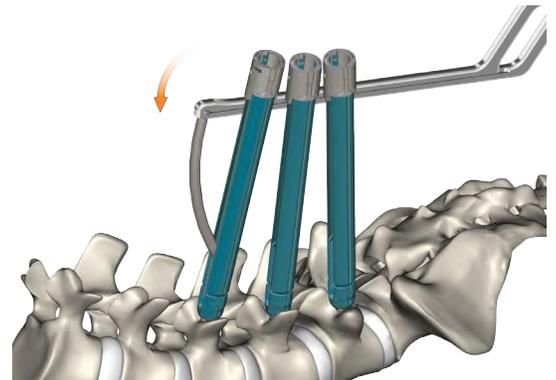
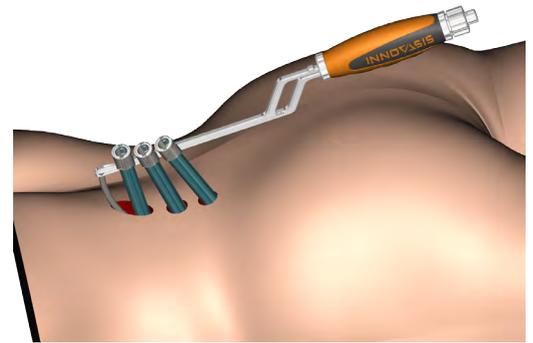
Orient Rod Holder as shown and insert rod into cephalad screw. Touch tip of rod to saddle of screw.

⚠ Note: *Ensure rod is below the fascia.*

While rotating the rod, guide it toward the next screw channel. Visualize entry into the next screw.

Note: Do not release rod from Rod Holder until locking cap screws have been inserted and provisionally tightened.

⚠ Note: *Fluoroscopy should be used to confirm the rod is positioned correctly and there is adequate overhang of the rod tip.*

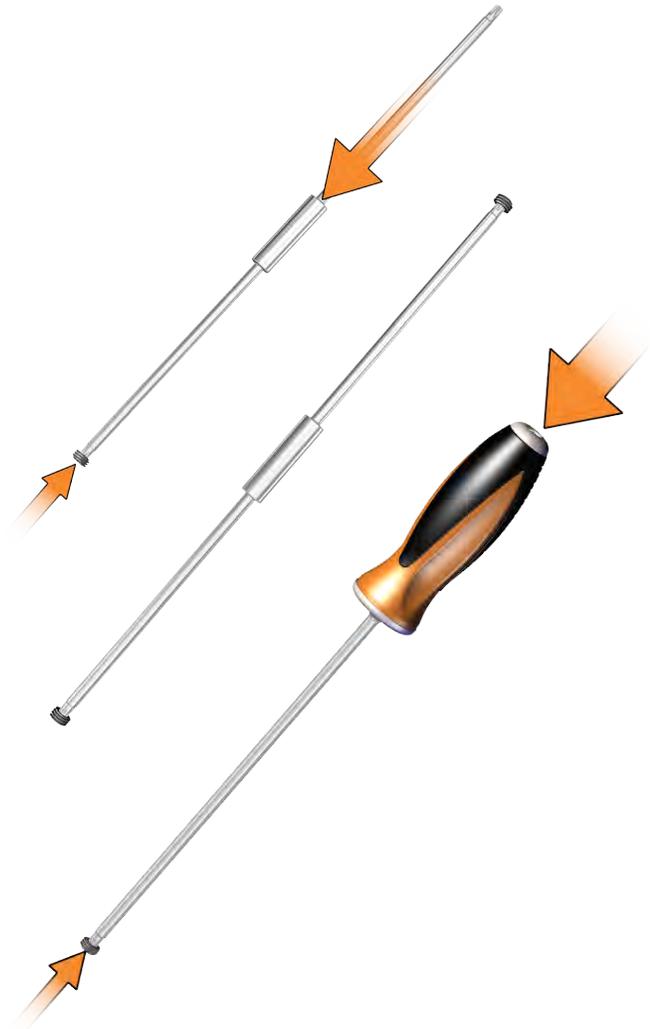


SURGICAL TECHNIQUE

ROD PLACEMENT

Attach locking caps to either Starter Driver option. Caps are held to the driver using a taper fit; hence, they are attached by a stab-to-grab action.

⚠ Note: failure to adequately 'stab' locking cap can result in the caps falling off the driver inadvertently.



⚠ CAUTION: Locking cap MUST be installed top side up. This is identified by the tapered hexalobe and by the part and lot numbers etched on the top surface.

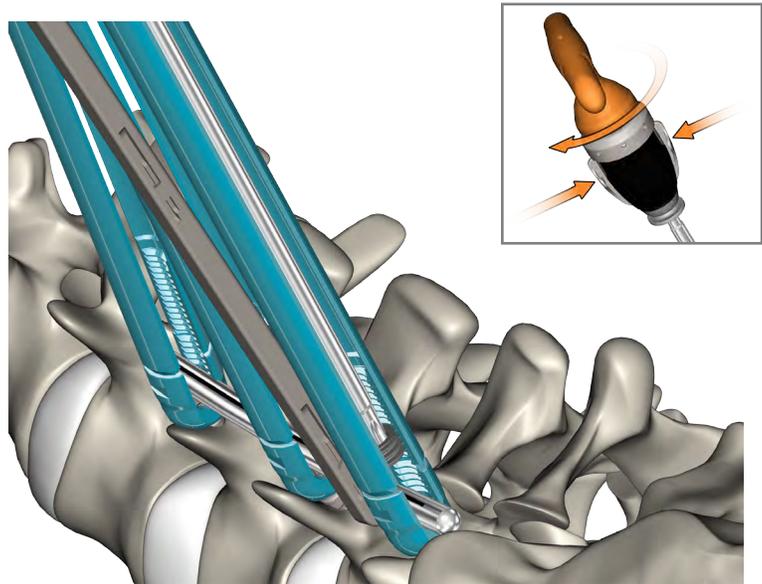


SURGICAL TECHNIQUE

ROD REDUCTION

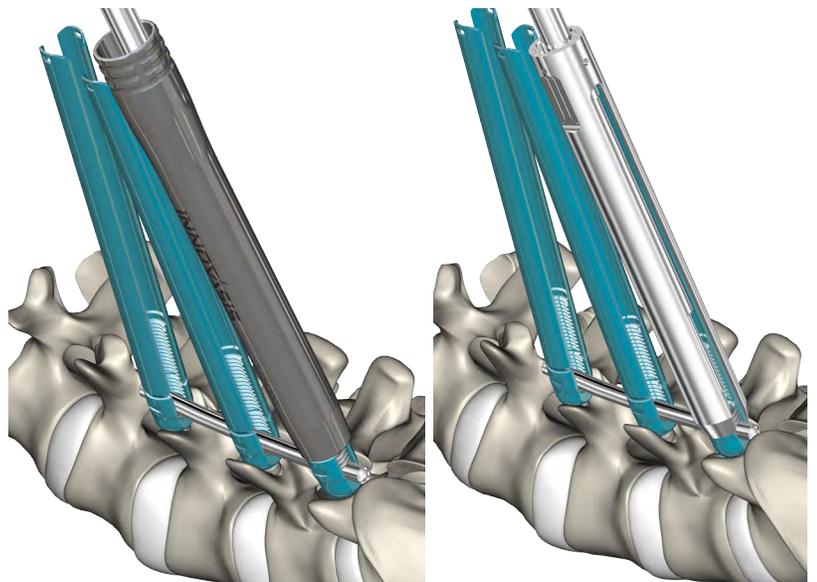
Advance locking cap down the tower, ensuring the driver is colinear with the tower. Engage the threads of the tower with the locking cap. Continue to rotate clockwise until the cap secures the rod.

Optional: Attach Final Tightener to the Speed Driver for quick advancement of locking cap



⚠ Note: Reduction threads on the screw allow for 25mm of rod reduction. For challenging spondylolisthesis correction, the snap sleeves should be used to support the towers. Alternatively, the #3 dilator can be used to support the tower. Failure to support the tower can result in inadvertent extension separation and/or cross-threading of locking cap.

⚠ Note: Reduction threads are a forceful means to achieve reduction. Adequate bone quality and screw security is required. Otherwise, reduction forces will cause screw pull-out from the pedicle. 10 in-lbs of torque on the locking cap is approximately 100 lbs of reduction force (and equivalently, pull-out force on the screw).



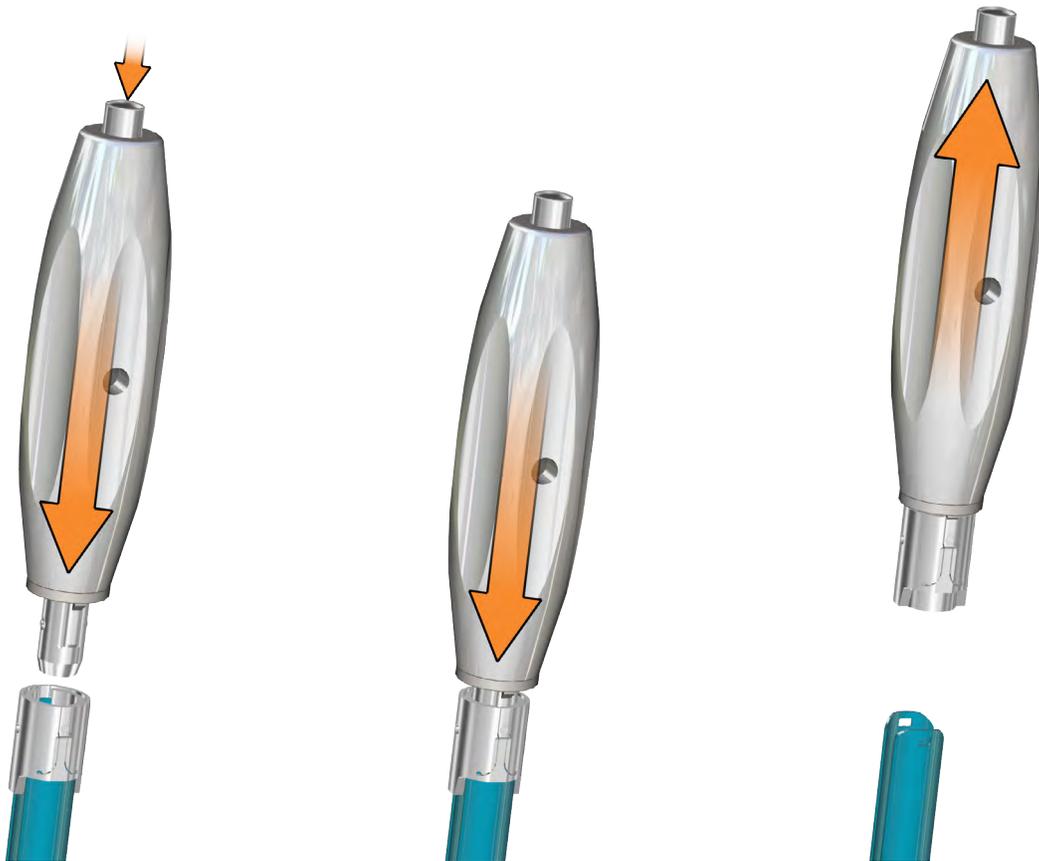
SURGICAL TECHNIQUE

RING/SLEEVE REMOVAL

After the rod has been reduced and locking caps are provisionally tight, remove the snap rings/sleeves, if used.

⚠ To remove rings/sleeves:

- Align remover with slots ring/sleeve
- Press button on back of remover and advance remover slightly
- Release button and continue advancing remover until the remover 'snaps' into position
- Lift ring/sleeve and remover out as a unit
- Press button to release ring/sleeve from remover



SURGICAL TECHNIQUE

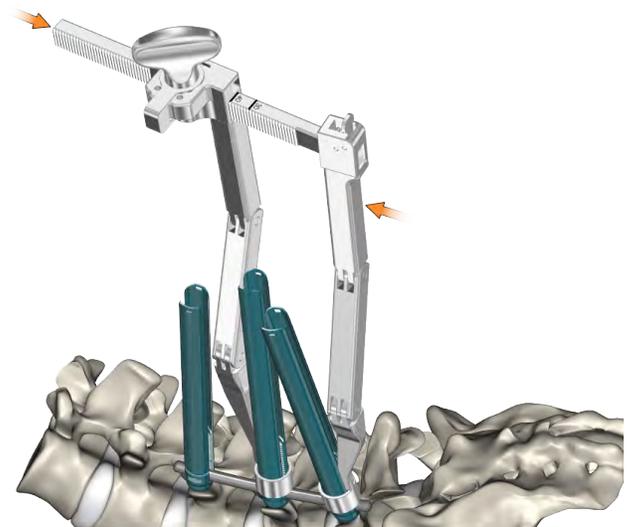
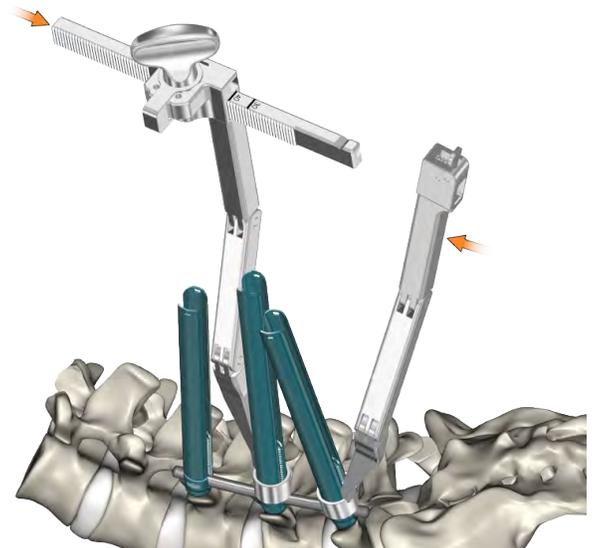
COMPRESSION / DISTRACTION

Throw toggle switch to 'unlocked'.
Adjust rack to the 'zero overhang distance' measured during rod sizing (In this example, 40mm). Throw the toggle switch to 'lock'.

Throw thumb switch on right arm to separate it from the rack.

Slide each arm over adjacent towers, ensuring proper orientation as illustrated.

Snap the rack into the right arm.



SURGICAL TECHNIQUE

COMPRESSION / DISTRACTION

Turn toggle switch to compression or distraction position as desired.

Slide driver down desired tower and loosen locking cap, then rotate the thumb wheel to achieve desired level of compression/distraction.

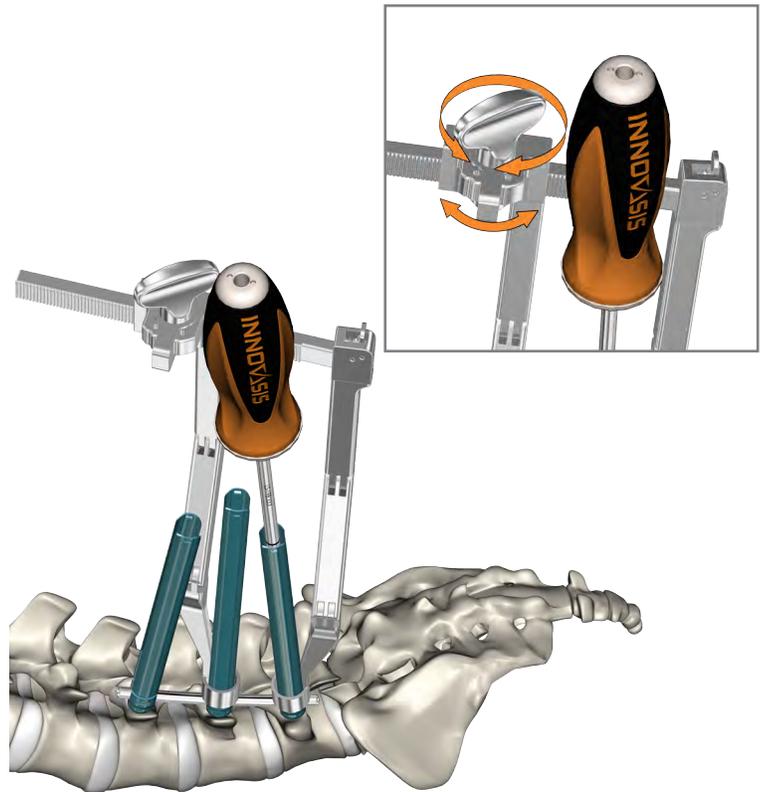
Re-tighten the locking cap.

Turn toggle switch to the 'unlocked' position and rotate thumb wheel to release tension.

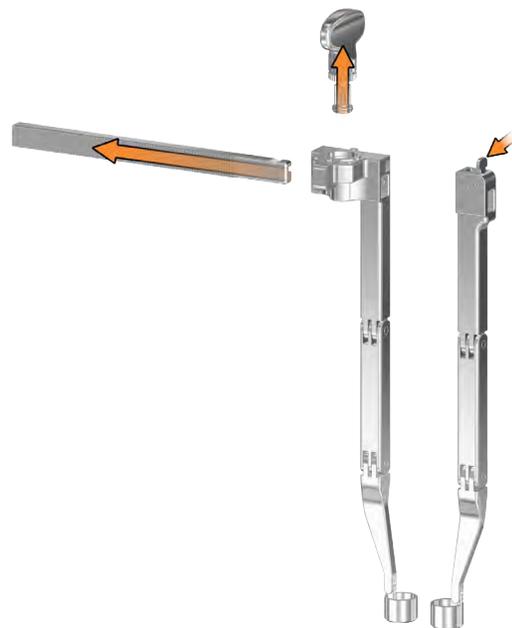
Turn toggle switch to 'lock'. Throw thumb switch to release right arm from rack.

Remove each arm from the towers.

Repeat for adjacent levels and/or contralateral side.



⚠ CLEANING: The Compressor/Distractor must be disassembled prior to cleaning. To disassemble, turn toggle switch to the unlocked position, release the rack and pull free. Then, pull up firmly on the thumb wheel to release it from the assembly.



SURGICAL TECHNIQUE

FINAL TIGHTENING

Place either of the provided Anti-Torques over the extended tabs. Use laser marking on tubes to ensure the anti-torque is properly seated.

⚠ Note: Failure to ensure proper assembly could result in construct damage and/or screw pull-out.

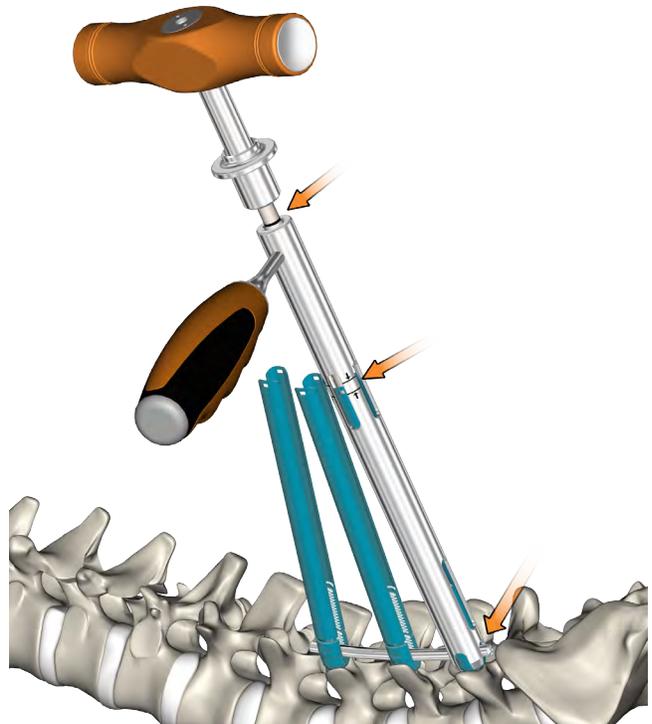
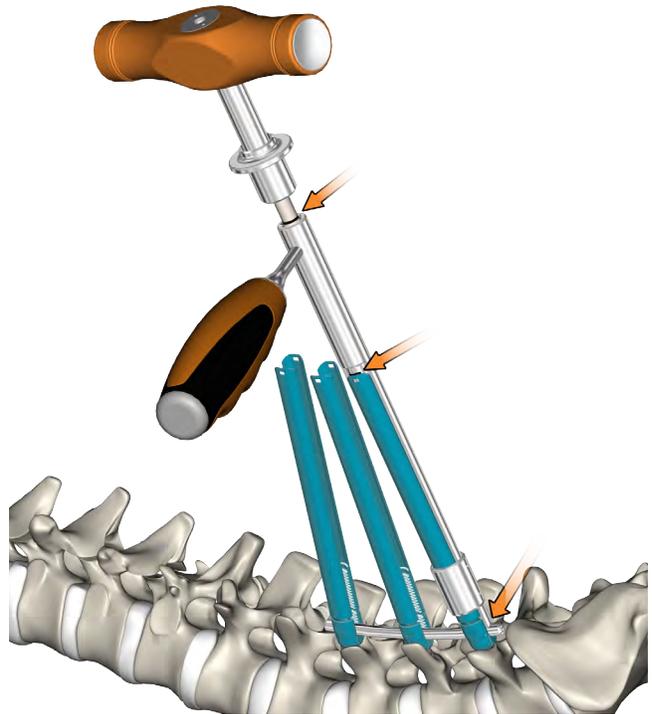
Attach the 100 in-lb T-Handle Torque Wrench to the Final Tightener and engage the Locking Cap. Laser marking on the Final Tightener should be used to ensure the Locking Cap is properly engaged.

⚠ Note: Failure to ensure proper Locking Cap engagement could result in damage to the Locking Cap.

Hold the Anti-Torque handle and final tighten the construct until the Torque Wrench clicks, indicating final tightening is complete.

⚠ Note: Gently rock the anti-torque in the cranial-caudal direction while tightening the locking cap. This will ensure the rod is seated in the tulip. Failure to seat the rod may result in loosening of the construct when the patient moves.

Repeat for remaining screws.



SURGICAL TECHNIQUE

TAB REMOVAL AND CLOSURE

Slide Tab Remover over the screw's tab and ensure laser mark is coincident with the top of the tab.

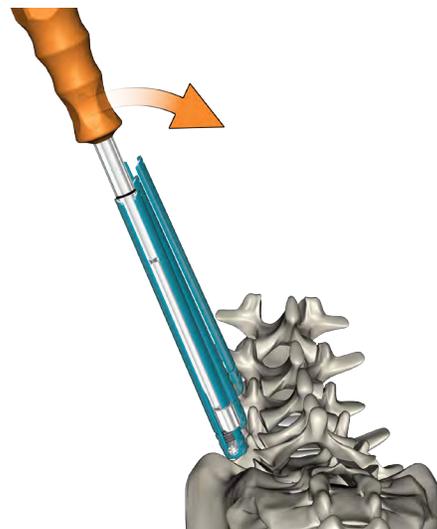
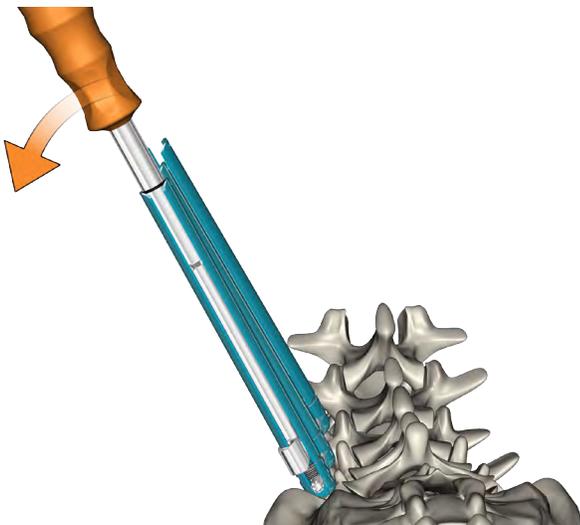
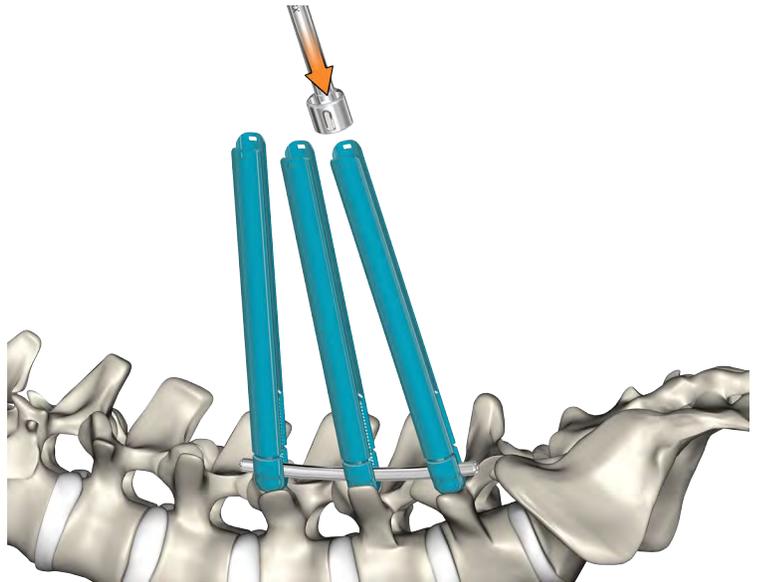
⚠ Note: Failure to ensure the Tab Remover is fully seated can result in improper tab removal.

Push/Pull the remover AWAY from the construct mid-plane to separate the tab. Once separated, remove tab from wound and then from the tool.

⚠ Note: IF tabs from one screw overlap a second screw, it may be necessary to push/pull TOWARD the construct to separate the tab.

Repeat for remaining tabs.

Close the wound in the customary manner.



SURGICAL TECHNIQUE

IMPLANT REMOVAL

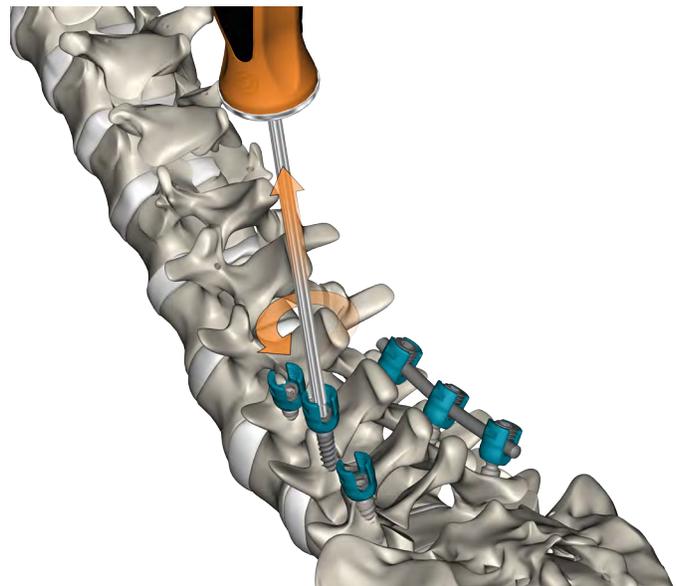
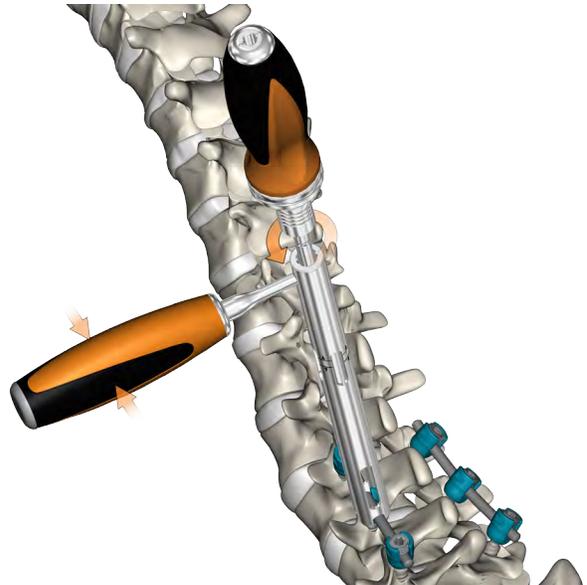
Excella MIS™ implants are removed in the same manner they are installed.

The locking caps should be loosened using the Anti-Torque, Universal Ratchet Handle and the Locking Cap Driver.

⚠ Note: *Torque Wrenches and Starter Drivers should never be used to loosen locking caps. However, after the locking cap is provisionally loosened, the Starter Driver can be used to engage the locking cap using the stab-and-grab feature retaining the cap to the driver and easing removal.*

Once the locking caps have been extracted, the rods should be removed.

After the rods have been removed, the pedicle screws can be removed using the Pedicle Screw Adjustor.



IMPLANTS

MIS Pedicle Screws

PART NO.	DESCRIPTION
EM5535	MIS POLYAXIAL PEDICLE SCREW, 5.5mm X 35mm, EXCELLA
EM5540	MIS POLYAXIAL PEDICLE SCREW, 5.5mm X 40mm, EXCELLA
EM5545	MIS POLYAXIAL PEDICLE SCREW, 5.5mm X 45mm, EXCELLA
EM5550	MIS POLYAXIAL PEDICLE SCREW, 5.5mm X 50mm, EXCELLA
EM5555	MIS POLYAXIAL PEDICLE SCREW, 5.5mm X 55mm, EXCELLA
EM6535	MIS POLYAXIAL PEDICLE SCREW, 6.5mm X 35mm, EXCELLA
EM6540	MIS POLYAXIAL PEDICLE SCREW, 6.5mm X 40mm, EXCELLA
EM6545	MIS POLYAXIAL PEDICLE SCREW, 6.5mm X 45mm, EXCELLA
EM6550	MIS POLYAXIAL PEDICLE SCREW, 6.5mm X 50mm, EXCELLA
EM6555	MIS POLYAXIAL PEDICLE SCREW, 6.5mm X 55mm, EXCELLA
EM6560	MIS POLYAXIAL PEDICLE SCREW, 6.5mm X 60mm, EXCELLA
EM7535	MIS POLYAXIAL PEDICLE SCREW, 7.5mm X 35mm, EXCELLA
EM7540	MIS POLYAXIAL PEDICLE SCREW, 7.5mm X 40mm, EXCELLA
EM7545	MIS POLYAXIAL PEDICLE SCREW, 7.5mm X 45mm, EXCELLA
EM7550	MIS POLYAXIAL PEDICLE SCREW, 7.5mm X 50mm, EXCELLA
EM7555	MIS POLYAXIAL PEDICLE SCREW, 7.5mm X 55mm, EXCELLA
EM7560	MIS POLYAXIAL PEDICLE SCREW, 7.5mm X 60mm, EXCELLA

Locking Caps

PART NO.	DESCRIPTION
E2002	LOCKING CAP



IMPLANTS

Percutaneous Rods

PART NO.	DESCRIPTION
MSR5535	MIS ROD, STRAIGHT, 5.5mm X 35mm
MSR5540	MIS ROD, STRAIGHT, 5.5mm X 40mm
MSR5545	MIS ROD, STRAIGHT, 5.5mm X 45mm
MSR5550	MIS ROD, STRAIGHT, 5.5mm X 50mm
MSR5555	MIS ROD, STRAIGHT, 5.5mm X 55mm
MSR5560	MIS ROD, STRAIGHT, 5.5mm X 60mm
MSR5570	MIS ROD, STRAIGHT, 5.5mm X 70mm
MSR5580	MIS ROD, STRAIGHT, 5.5mm X 80mm
MSR5590	MIS ROD, STRAIGHT, 5.5mm X 90mm
MSR55100	MIS ROD, STRAIGHT, 5.5mm X 100mm
MSR55110	MIS ROD, STRAIGHT, 5.5mm X 110mm
MSR55120	MIS ROD, STRAIGHT, 5.5mm X 120mm
MSR55130	MIS ROD, STRAIGHT, 5.5mm X 130mm
MPR5535	MIS ROD, PRE-BENT, 5.5mm X 35mm
MPR5540	MIS ROD, PRE-BENT, 5.5mm X 40mm
MPR5545	MIS ROD, PRE-BENT, 5.5mm X 45mm
MPR5550	MIS ROD, PRE-BENT, 5.5mm X 50mm
MPR5555	MIS ROD, PRE-BENT, 5.5mm X 55mm
MPR5560	MIS ROD, PRE-BENT, 5.5mm X 60mm
MPR5565	MIS ROD, PRE-BENT, 5.5mm X 65mm
MPR5570	MIS ROD, PRE-BENT, 5.5mm X 70mm
MPR5575	MIS ROD, PRE-BENT, 5.5mm X 75mm
MPR5585	MIS ROD, PRE-BENT, 5.5mm X 85mm
MPR5595	MIS ROD, PRE-BENT, 5.5mm X 95mm
MPR55105	MIS ROD, PRE-BENT, 5.5mm X 105mm
MPR55115	MIS ROD, PRE-BENT, 5.5mm X 115mm
MPR55125	MIS ROD, PRE-BENT, 5.5mm X 125mm

Standard Rods

PART NO.	DESCRIPTION
SR5535	ROD, STRAIGHT, 5.5mm X 35mm
SR5540	ROD, STRAIGHT, 5.5mm X 40mm
SR5545	ROD, STRAIGHT, 5.5mm X 45mm
SR5550	ROD, STRAIGHT, 5.5mm X 50mm
SR5555	ROD, STRAIGHT, 5.5mm X 55mm
SR5560	ROD, STRAIGHT, 5.5mm X 60mm
SR5570	ROD, STRAIGHT, 5.5mm X 70mm
SR5580	ROD, STRAIGHT, 5.5mm X 80mm
SR5590	ROD, STRAIGHT, 5.5mm X 90mm
SR55100	ROD, STRAIGHT, 5.5mm X 100mm
SR55110	ROD, STRAIGHT, 5.5mm X 110mm
SR55120	ROD, STRAIGHT, 5.5mm X 120mm
SR55460	ROD, STRAIGHT, 5.5mm X 460mm
PR5535	ROD, PRE-BENT, 5.5mm X 35mm
PR5545	ROD, PRE-BENT, 5.5mm X 45mm
PR5555	ROD, PRE-BENT, 5.5mm X 55mm
PR5565	ROD, PRE-BENT, 5.5mm X 65mm
PR5575	ROD, PRE-BENT, 5.5mm X 75mm
PR5585	ROD, PRE-BENT, 5.5mm X 85mm
PR5595	ROD, PRE-BENT, 5.5mm X 95mm
PR55105	ROD, PRE-BENT, 5.5mm X 105mm
PR55115	ROD, PRE-BENT, 5.5mm X 115mm
PR55125	ROD, PRE-BENT, 5.5mm X 125mm



CATALOG

INSTRUMENTS

PART NO.	DESCRIPTION
LS-277	JAMSHIDI NEEDLE, TROCHAR TIP, 11Ga x 6in, DISPOSABLE
LS-278	JAMSHIDI NEEDLE, BEVEL TIP, 11Ga x 6in, DISPOSABLE
LS-175	SNAP RING REMOVAL TOOL
LS-176	SNAP RING
LS-177	SNAP SLEEVE
LS-212	K-WIRE, 500mm, 1.4mm DIA, NITINOL
LA-184	UNIVERSAL RATCHET HANDLE, CUSTOM
LS-182	DILATOR, #1, 8 mm
LS-183	DILATOR, #2, 14 mm
LS-184	DILATOR, #3, 18-20.5 mm, STEPPED
LS-185	MIS PEDICLE DRIVER
LS-187-5	MIS BONE TAP, 5.0 mm
LS-187-6	MIS BONE TAP, 6.0 mm
LS-187-7	MIS BONE TAP, 7.0 mm
LS-188	PEDICLE SCREW ADJUSTOR, #25 HEXALOBE
LS-190	ROD HOLDER, PITUITARY-STYLE
LS-191	ROD HOLDER, KERRISON-STYLE
LS-196	DISSECTOR
LS-208	K-WIRE DEPTH GAGE
LS-213	HEAD POSITIONER
LS-218	K-WIRE DRIVER/PULLER
LS-220	AWL, CANNULATED
LA-T100	TORQUE WRENCH, 100 IN-LBS
LS-276	ROD BENDER
LS-180	SPEED DRIVER, 1:1 AND 3.5:1 RATIO
LS-192	LOCKING CAP DRIVER, FINAL TIGHTENING
LS-193	ANTI-TORQUE, INTERNAL
LS-194	ANTI-TORQUE, EXTERNAL
LS-195	ROD PUSHER
LS-197	DOUBLE STARTER DRIVER
LS-198	STARTER DRIVER
LS-207	ROD CALIPER
LS-214	TAB REMOVER
LS-219	COMPRESSOR & DISTRACTOR
LS-221	ROD HOLDER, MIS, PERCUTANEOUS



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