

Top loading pedicle screw system
for posterior stabilization

URS Degen

Surgical Technique

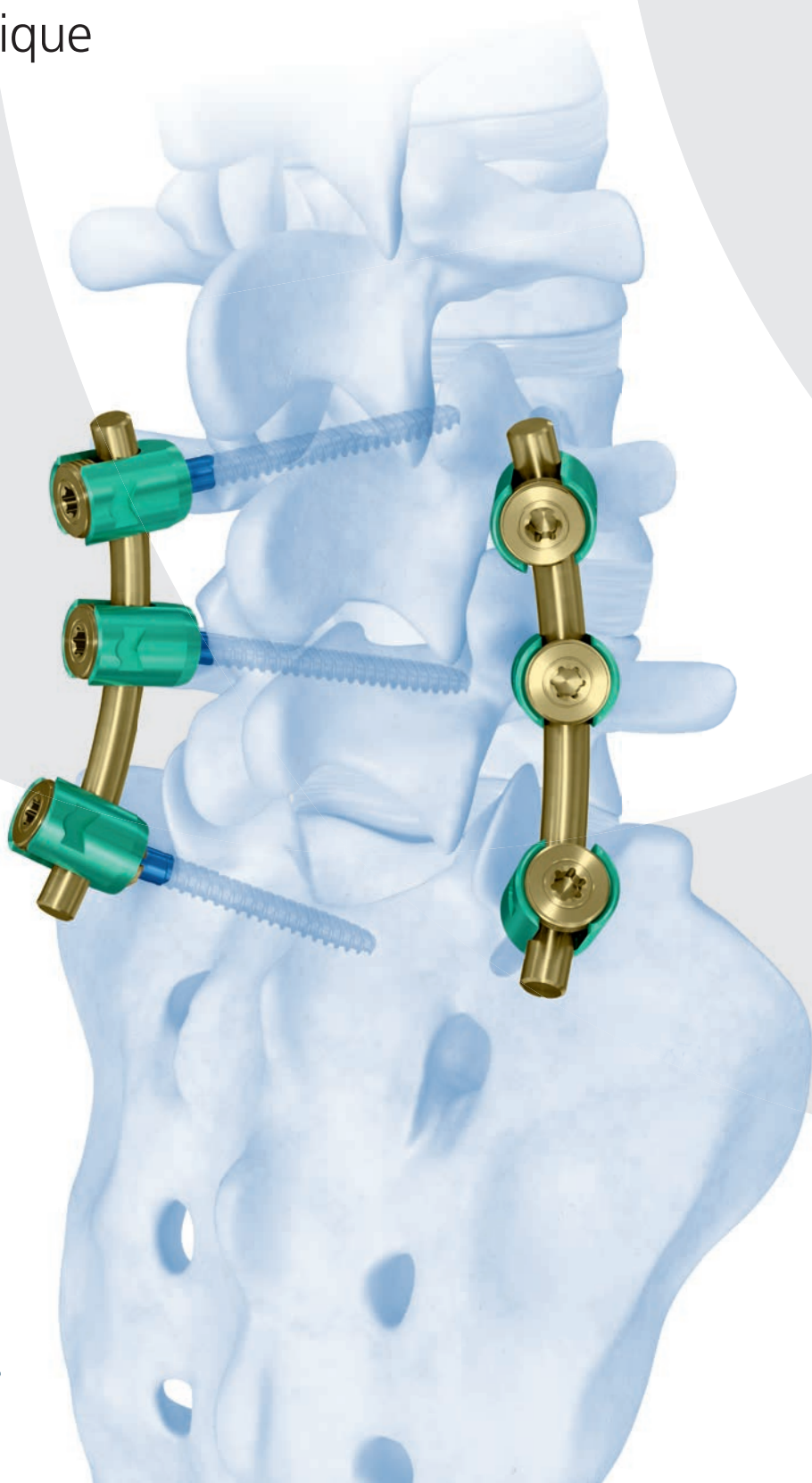




Image intensifier control

This description alone does not provide sufficient background for direct use of DePuy Synthes products. Instruction by a surgeon experienced in handling these products is highly recommended.

Processing, Reprocessing, Care and Maintenance

For general guidelines, function control and dismantling of multi-part instruments, as well as processing guidelines for implants, please contact your local sales representative or refer to:

<http://emea.depuyshnthes.com/hcp/reprocessing-care-maintenance>

For general information about reprocessing, care and maintenance of Synthes reusable devices, instrument trays and cases, as well as processing of Synthes non-sterile implants, please consult the Important Information leaflet (SE_023827) or refer to:

<http://emea.depuyshnthes.com/hcp/reprocessing-care-maintenance>

Table of Contents

Introduction	URS Degen	2
	AO Principles	5
	Indications and Contraindications	6

Surgical Technique	Screw Insertion	7
	Rod Insertion	13
	Rod Reduction	15
	Locking Cap Insertion	18
	Distraction and Compression	22
	Final Tightening	25
	Two-Step Locking Cap Removal / Remobilization	28
	Tab Removal	29
	Transverse Connector (Optional)	30

Product Information	Implants	31
	Instruments	34
	Screwdriver Instructions	38

Bibliography		40
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URS Degen.
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Implants

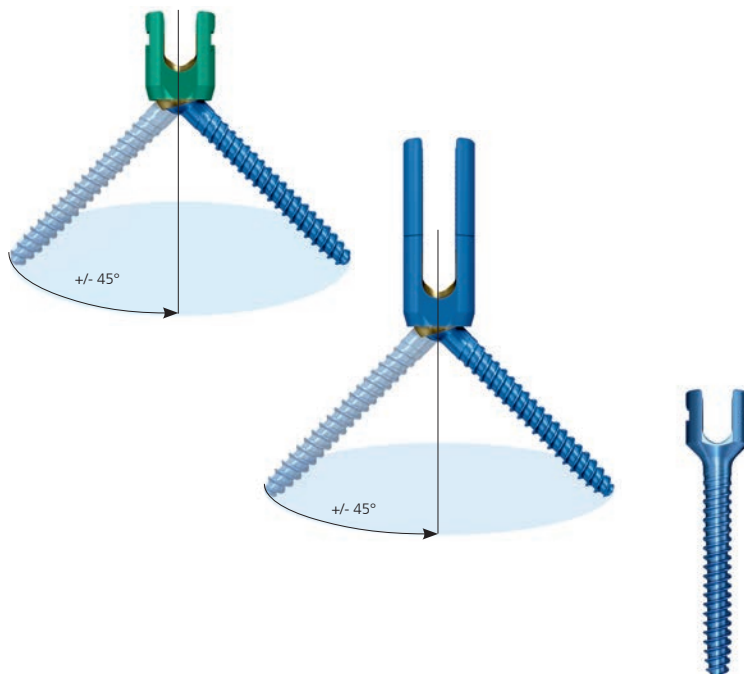
Pedicle screw

Universal Degen Screw (UDS)

Universal Reduction Screw (URS)

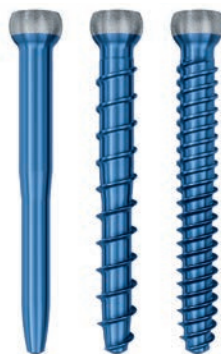
Monoaxial Screw

- UDS, degenerative screw
- URS, reduction tab screw allows for 16 mm rod reduction
- Both UDS and URS screws allow for screw angulations up to $\pm 45^\circ$
- Monoaxial screw, increased angular stability and low profile



Unique Dual Core/Double Lead Screw Design

- Fast and controlled insertion
- Increased pull-out resistance due to optimal bone purchase
- Safe handling thanks to atraumatic tip and self-tapping screw



Locking caps

One-step locking cap

Two-step locking cap

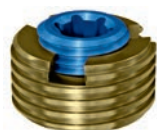
- One-step locking cap allows for complete fixation in one-step (polyaxiality and rod fixation)
- Two-step locking cap allows for vertebral body derotation for lordotic as well as parallel compression/distraction to control sagittal balance



For UDS / monoaxial screw



For URS



For UDS / URS

URS Degen.
Top loading pedicle screw system
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Instruments

5 key instruments for standard degenerative cases

- Compact set configuration
- Intuitive design and functionality



All-in-one screwdriver

- Universal Degen Screw (UDS)
- Universal Reduction Screw (URS)
- Monoaxial Screw
- One-step locking caps
- Inner screw of the two-step locking cap



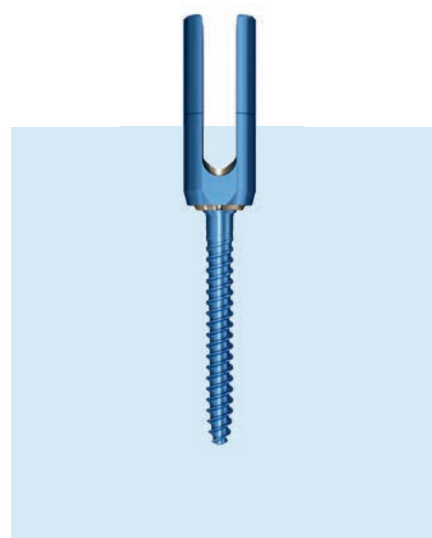
Reduction



Rocker Fork
8 mm, for simple reduction



Reduction Instrument
12 mm, one-handed reduction



Universal Reduction Screw (URS)
16 mm, no additional instrument
needed

AO Spine Principles

The four principles to be considered as the foundation for proper spine patient management underpin the design and delivery of the Curriculum: Stability – Alignment – Biology – Function.^{1,2}

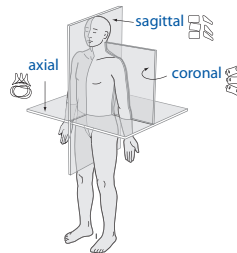
Stability

Stabilization to achieve a specific therapeutic outcome



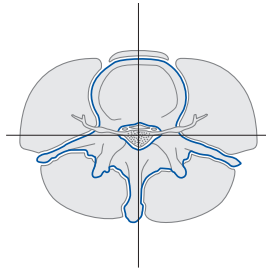
Alignment

Balancing the spine in three dimensions



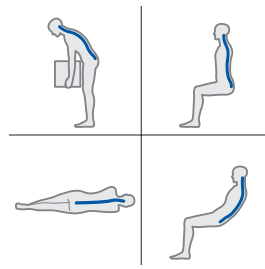
Biology

Etiology, pathogenesis, neural protection, and tissue healing



Function

Preservations and restoration of function to prevent disability



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¹ Aebi et al (1998)

² Aebi et al (2007)

Indications and Contraindications

The URS Degen system is a posterior pedicle screw fixation system (T1–S2) intended to provide precise and segmental stabilization of the spine in skeletally mature patients.

Indications

- Degenerative disc disease
- Spondylolisthesis
- Trauma (i.e. fracture or dislocation)
- Tumour
- Stenosis
- Pseudoarthrosis
- Failed previous fusion
- Deformities (i.e. scoliosis, kyphosis and/or lordosis, Scheuermann's disease)

Contraindications

- Osteoporosis
- In fractures and tumors with severe anterior vertebral body disruption, an additional anterior support or column reconstruction is required.

Screw Insertion

1. Prepare pedicles and determine screw length

Instruments

388.655	Pedicle Probe \varnothing 3.7 mm with Silicone Handle, length 240 mm, for Pedicle Screws \varnothing 5.0 to 7.0 mm
388.656	Pedicle Awl \varnothing 4.0 mm with Silicone Handle, length 255 mm, for Pedicle Screws \varnothing 4.0 to 7.0 mm
03.620.105	Tap for Pedicle Screws \varnothing 5.0 mm with dual core, length 230 mm, with Hexagonal Coupling
03.620.106	Tap for Pedicle Screws \varnothing 6.0 mm with dual core, length 230 mm, with Hexagonal Coupling
03.620.100	Handle with Ratchet, straight, with Quick Coupling, for Pangea
388.545	Feeler for Screw Channel, straight, \varnothing 2.3 mm, length 275 mm

Optional Instrument

388.546	Feeler for Screw Channel, curved, \varnothing 2.3 mm, length 275 mm
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- Locate pedicles and use the awl to perforate the cortex. Use the probe to open the pedicle canal. Using radiographic imaging, confirm pedicle location, orientation and depth by inserting the probe. When selecting the appropriate length screw, use the markings on the probe to determine the pedicle depth. Use the feeler to check whether the pedicle canal is ready for screw insertion.

All pedicle screws are self-tapping; however, if tapping is preferred, use the appropriate tap.

Note: Do not use the pedicle probe for screws that are smaller or bigger than the recommended size.



2. Assemble screwdriver

Instruments

03.689.001 Screwdriver Shaft Stardrive, T25, for Universal Screws

03.689.002 Holding Sleeve for Screwdriver Shaft for No. 03.689.001

03.620.061 T-Handle with Ratchet Wrench and with Torque Limiter, 10Nm

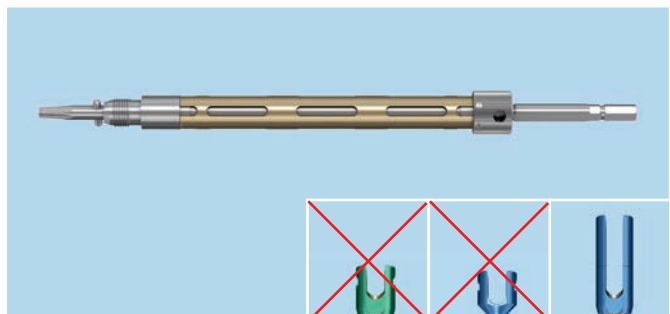
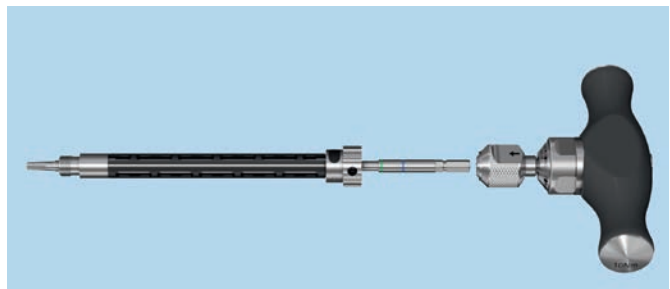
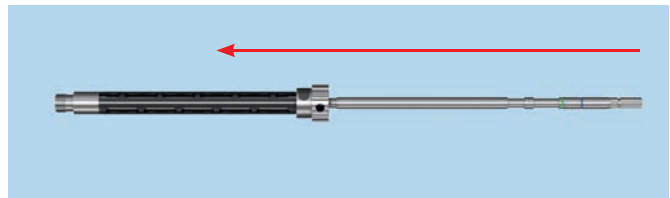
Optional Instrument

03.620.100 Handle with Ratchet, straight, with Quick Coupling, for Pangea

Slide URS Degen sleeve on the screwdriver shaft by pushing the button on the larger upper part of the screwdriver sleeve and attach the handle.

The black holding sleeve (03.689.002) and the matching screwdriver shaft (03.689.001) are compatible with URS, UDS and monoaxial screw.

Precaution: The golden URS screwdriver (03.636.001, 03.636.002) is compatible with only the URS screws.



3. Choose the appropriate screw

Instruments

03.689.001	Screwdriver Shaft Stardrive, T25, for Universal Screws
03.689.002	Holding Sleeve for Screwdriver Shaft for No. 03.689.001
03.620.061	T-Handle with Ratchet Wrench and with Torque Limiter, 10Nm

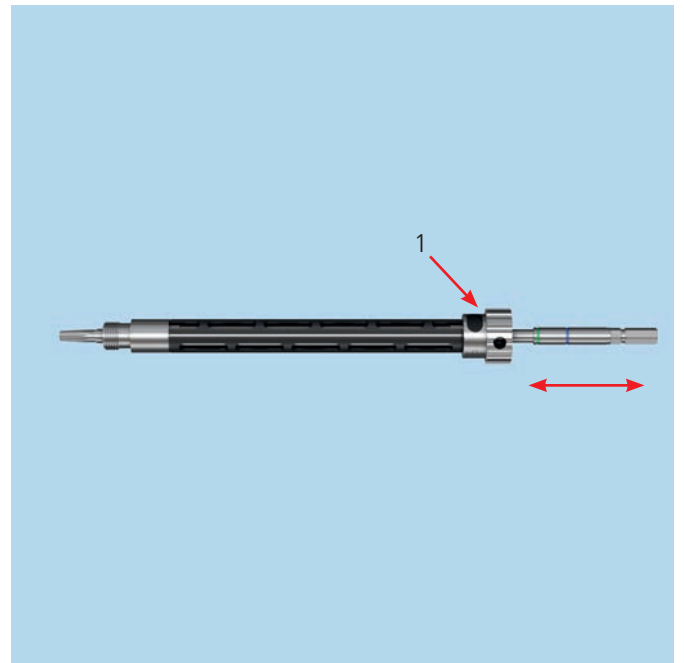
Optional Instrument

03.620.100	Handle with Ratchet, straight, with Quick Coupling, for Pangea
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Choose a polyaxial or a monoaxial screw of the appropriate screw diameter and length based on probe feedback.

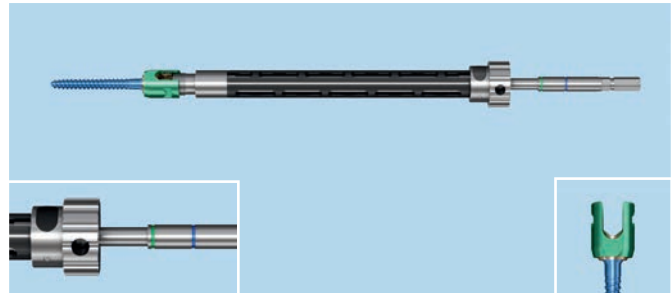
Note: When reduction over a screw or a reduction distance of 12–16 mm is needed, use a URS screw.

The shaft position can be changed by pushing the button on the larger upper part of the screwdriver sleeve (1). There are two screwdriver positions.



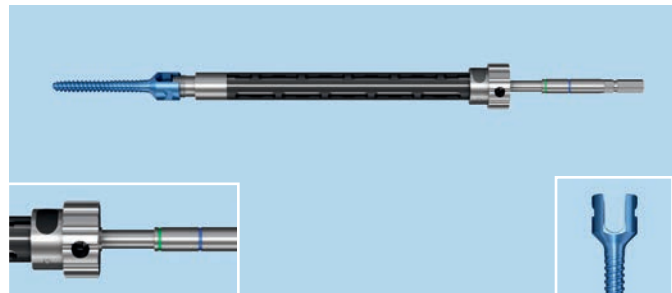
For use with the UDS screw, pull the shaft out until both the green and blue lines are visible.

Note: In the UDS position the blue and green lines are visible.



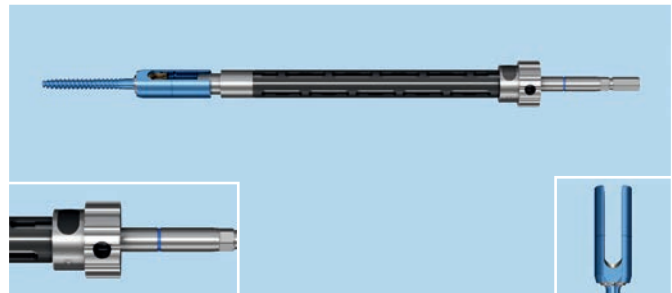
For use with the monoaxial screw, pull the shaft out until both the green and blue lines are visible.

Note: In the monoaxial screw position the blue and green lines are visible.



For use with the URS screw, the shaft has to be pushed until the blue line is only visible.

Note: In the URS position only the blue line is visible.



For more details on the screwdriver, please read the screwdriver instructions.

4. Pick up screw

Instruments

03.689.001	Screwdriver Shaft Stardrive, T25, for Universal Screws
03.689.002	Holding Sleeve for Screwdriver Shaft for No. 03.689.001
03.620.061	T-Handle with Ratchet Wrench and with Torque Limiter, 10Nm

Optional Instrument

03.620.100	Handle with Ratchet, straight, with Quick Coupling, for Pangea
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Check if the screwdriver is in the correct position and connect it to the appropriate screw.

Insert the tip of the screwdriver shaft into the screw head (1). Make sure the tip of the screwdriver is fully seated in the recess of the screw head (2).

Hold the ratchet handle with one hand and turn the larger upper part of the sleeve clockwise with the other hand until the tip of the sleeve is firmly attached to the screw head.

Verify the screw length with the template on the loading station (3).



5. Insert screw

Instruments

03.689.001	Screwdriver Shaft Stardrive, T25, for Universal Screws
03.689.002	Holding Sleeve for Screwdriver Shaft for No. 03.689.001
03.620.061	T-Handle with Ratchet Wrench and with Torque Limiter, 10Nm

Optional Instruments

03.620.100	Handle with Ratchet, straight, with Quick Coupling, for Pangea
03.620.001	Screwdriver Stardrive, T25, with T-Handle, for Pangea

Insert the screw.

Note: Hold the black part of the holding sleeve during screw insertion.

Remove the screwdriver by turning the larger upper part of the sleeve counterclockwise until the tip of the sleeve disengages from the screw thread. If the screw head turns while attached to the sleeve, hold the screw head firmly to disengage the screwdriver sleeve.



Rod Insertion

1. Determine rod length

Instruments

03.636.005	Tab Remover / Alignment Tool
03.620.020	Rod Bender for Rods \varnothing 6.0 mm, with Radius Adjustment

Use the alignment tool to rotate and align the screw head.

Choose the appropriate rod. Use the rod bender to contour the rod if needed.

Note: Do not reverse bend rods. Reverse bending may produce internal stresses, which may become the focal point for eventual breakage of the implant.

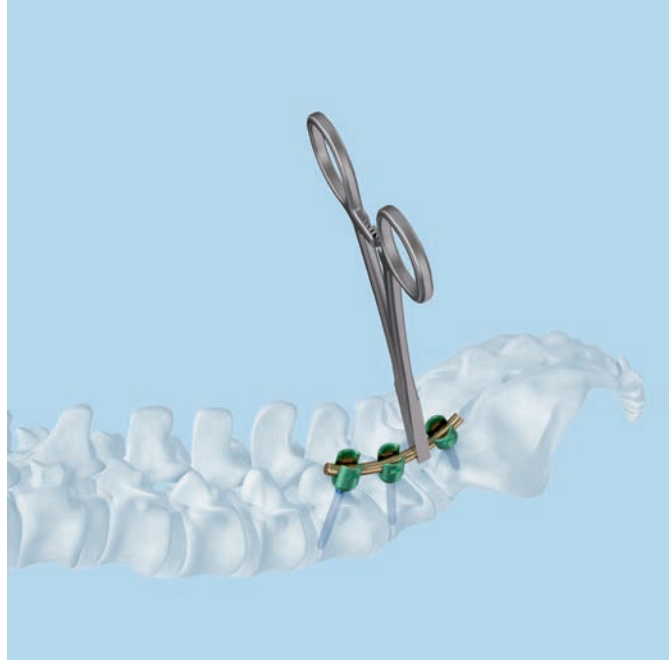


2. Insert rod

Instrument

328.028	Holding Forceps, straight, with Scissors Grip, for Rods \varnothing 6.0mm
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Insert the rod using the rod holding forceps.



Optional Instrument

388.440	Holding Forceps with broad Tip, length 290 mm, for Rods \varnothing 6.0 mm
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Rod Reduction

1a. Reduce rod with a rocker fork (for reduction up to 8 mm)

Instrument

03.689.004 Rocker Fork for Universal Degen Screws

Use a rocker fork to lever the rod into the head of the pedicle screw.



1b. Reduce rod with a reduction instrument (for reduction up to 12 mm)

Instrument

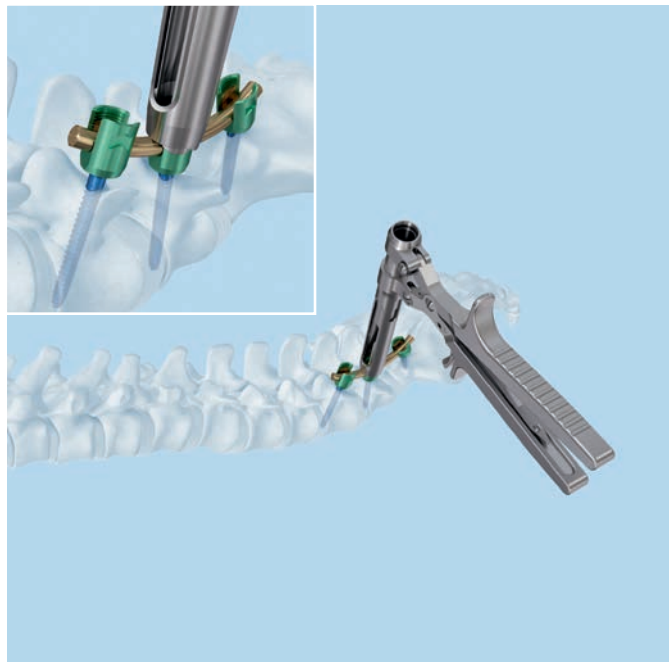
03.689.003 Reduction Instrument
for Universal Degen Screws

Ensure that the ratchet handle is fully open. Place the reduction instrument over the rod and onto the screw head. Press down firmly until the tips of the reduction instrument engage the screw head. Squeeze the handle to seat the rod into the pedicle screw head.



Once reduction has been achieved, the ratchet handle will remain in the reduced position. Compress the reduction instrument in the closed position until the locking cap is attached to the screw.

To remove the reduction instrument from the screw, ensure the ratchet handle is fully open. Hold the lower part of the instrument with one hand and press it against the screw head so that one tip disengages from the screw head. Then carefully tilt the reduction instrument downward.



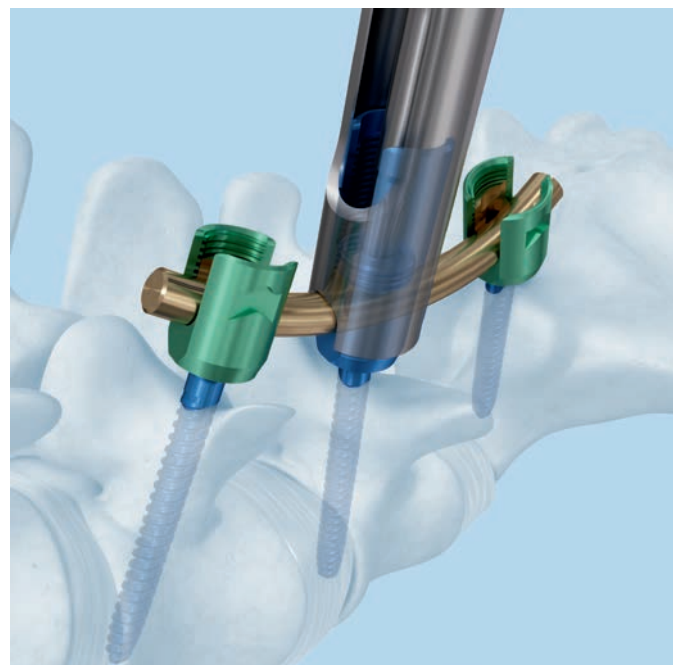
1c. Reduce rod with URS screws (for reduction up to 16 mm)

Instrument

03.636.007 Rod Pusher / Counter Torque
for Universal Reduction Screw

Align the URS screw with the rod. Place the counter torque over the screw head. Insert the locking cap through the counter torque, turn the locking cap to reduce the rod into the screw.

Note: For locking cap insertion / rod reduction in combination with the URS screw, always use the counter torque for better guidance. If the locking cap is cross-threaded, a turn back will re-align the locking cap for proper insertion.



Locking Cap Insertion

1a. Insert one-step locking cap

Instruments

03.689.001	Screwdriver Shaft Stardrive, T25, for Universal Screws
03.689.002	Holding Sleeve for Screwdriver Shaft for No. 03.689.001
03.620.061	T-Handle with Ratchet Wrench and with Torque Limiter, 10Nm
03.636.007	Rod Pusher / Counter Torque for Universal Reduction Screw

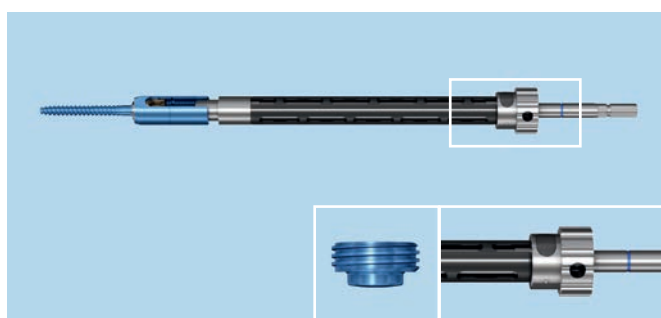
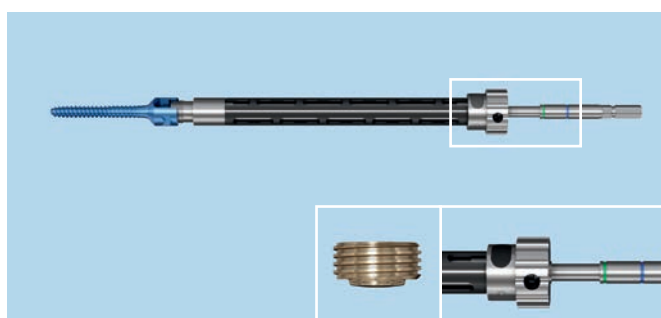
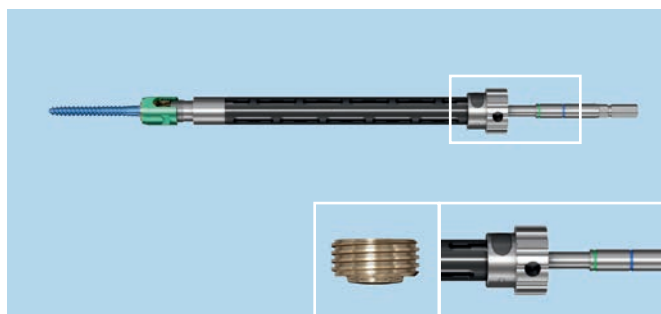
Optional Instruments

03.689.003	Reduction Instrument for Universal Degen Screws
03.620.100	Handle with Ratchet, straight, with Quick Coupling, for Pangea

Verify that the screwdriver shaft is in the correct position. In combination with the UDS and monoaxial screw, the blue and green lines should be visible. When using the URS screw, only the blue line has to be visible.

Precaution: Verify that the screwdriver shaft is in the correct position. In combination with the UDS and monoaxial screw, the blue and green lines should be visible. When using the URS screw, only the blue line has to be visible.

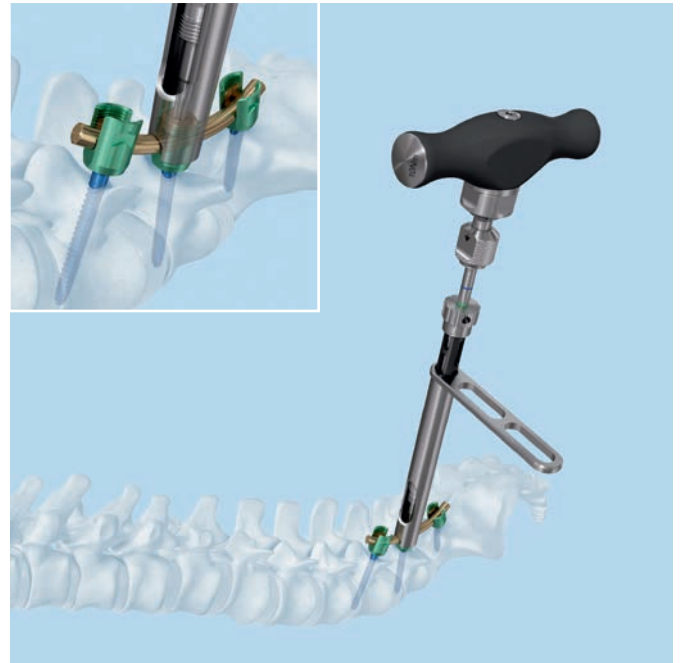
Insert the tip of the screwdriver shaft into the one-step locking cap. Press down firmly. The screwdriver is self-retaining. To ensure optimal cap alignment, insert the locking cap through the counter torque. Thread the locking cap clockwise into the screw head.



The one-step locking cap can also be inserted through the rod reduction instrument. Maintain the maximum compression during insertion and tightening of the one-step locking cap.

In combination with the rocker fork, insert the locking cap while maintaining reduction; use the counter torque for all further caps and further tightening.

Note: Always use the counter torque or reduction instrument for locking cap guidance.



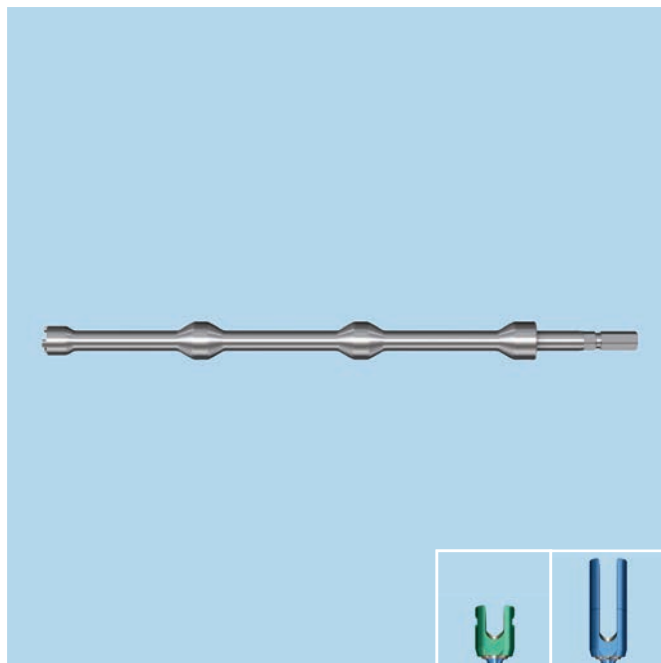
1b. Insert two-step locking cap

Instruments

03.636.003	Screwdriver Shaft for Locking Cap for Universal Reduction Screw
03.620.061	T-Handle with Ratchet Wrench and with Torque Limiter, 10Nm
03.636.007	Rod Pusher/Counter Torque for Universal Reduction Screw

Optional Instruments

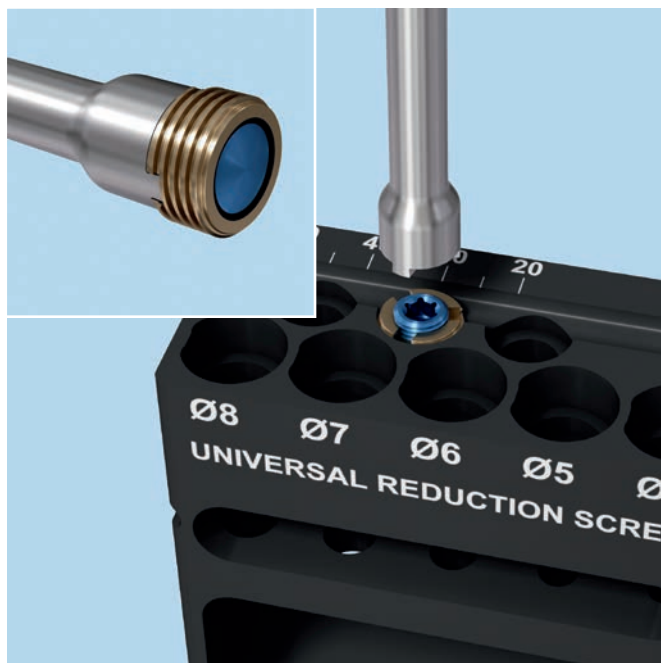
03.689.003	Reduction Instrument for Universal Degen Screws
03.636.004	Screwdriver, cannulated, for Locking Cap for Universal Reduction Screw
03.620.100	Handle with Ratchet, straight, with Quick Coupling, for Pangea



Attach the screwdriver shaft for the two-step locking cap to the torque limiting handle.

Insert the tip of the screwdriver into the two-step locking cap. Press down firmly. The screwdriver is self-retaining.

To ensure optimal cap alignment, insert the locking cap through the counter torque. Thread the locking cap clockwise into the screw head.



Precaution: Secure the outer screw first before tightening the inner screw.

The two-step locking cap can also be inserted through the rod reduction instrument. Maintain the maximum compression during insertion and tightening of the two-step locking cap.



Distraction and Compression

1. Distraction

Instruments

03.620.018	Distraction Forceps, for Lumbar Spine
03.689.001	Screwdriver Shaft Stardrive, T25, for Universal Screws
03.689.002	Holding Sleeve for Screwdriver Shaft for No. 03.689.001
03.620.061	T-Handle with Ratchet Wrench and with Torque Limiter, 10Nm
03.636.007	Rod Pusher / Counter Torque for Universal Reduction Screw

Precaution: Ensure all locking caps are fully reduced and provisionally tightened (see "Locking Cap Insertion"). Failure to do so could potentially lead to a misalignment.

Tighten one locking cap with the 10Nm torque limiter and counter torque to create a fixed point for distraction (see final tightening for the respective one- and two-step locking caps). Loosen the locking cap of the screw to be manipulated a quarter turn to allow for distraction.

Use the distraction forceps to distract the construct. Once in the desired position, tighten the locking caps with the screwdriver.

The rod holding forceps can be used as a temporary point of distraction when adjacent pedicle screws are too distant.

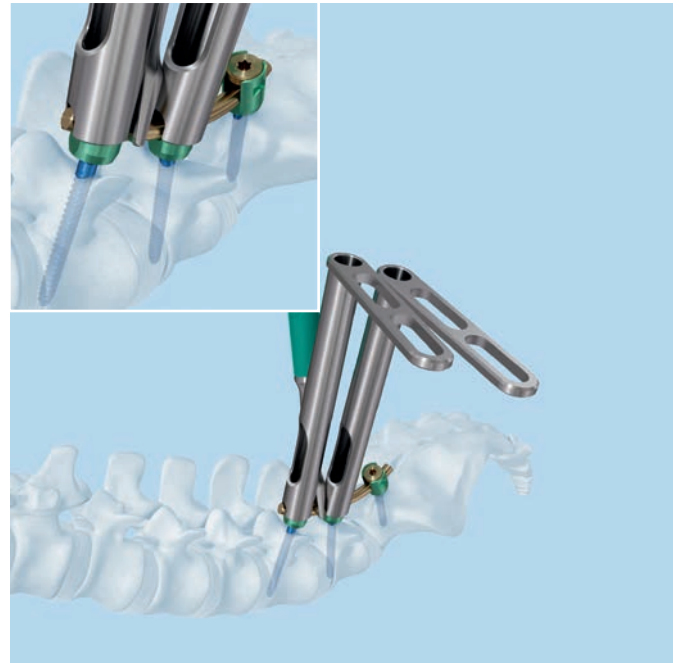
Note: Always remove the distraction forceps before final tightening.



Optional Instrument

03.632.000 Distraction Fork

Note: Use the distraction fork to widen the gap between the screw heads when proper distraction with the forceps is not possible due to proximity of the heads. Insert the distraction fork between the screws and manipulate until the desired gap is obtained. Always remove the distraction fork before final tightening.



2. Compression

Instruments

388.422	Compression Forceps, length 335 mm, for Pedicle Screws
03.689.001	Screwdriver Shaft Stardrive, T25, for Universal Screws
03.689.002	Holding Sleeve for Screwdriver Shaft for No. 03.689.001
03.620.061	T-Handle with Ratchet Wrench and with Torque Limiter, 10Nm
03.636.007	Rod Pusher / Counter Torque for Universal Reduction Screw

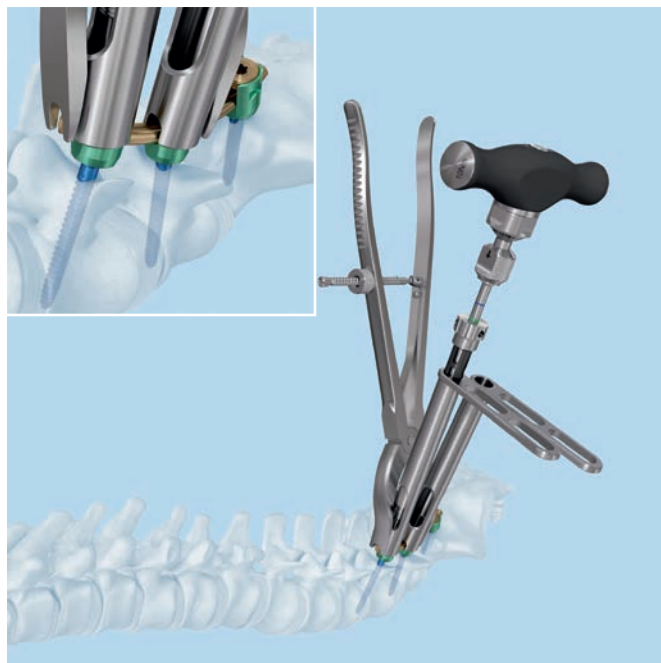
Precaution: Ensure all locking caps are fully reduced and provisionally tightened (see "Locking Cap Insertion"). Failure to do so could potentially lead to a misalignment.

Tighten one locking cap with the 10Nm torque limiter and counter torque to create a fixed point for compression (see final tightening for the respective one- and two-step locking caps). Loosen the locking cap of the screw to be manipulated a quarter turn to allow for compression.

Use the compression forceps to distract the construct. Once in the desired position, tighten the locking caps with the screwdriver.

The rod holding forceps can be used as a temporary point of compression when adjacent pedicle screws are too distant.

Note: Always remove the compression forceps before final tightening.



Final tightening

1a. Perform final tightening with the one-step locking cap

Instruments

03.689.001	Screwdriver Shaft Stardrive, T25, for Universal Screws
03.689.002	Holding Sleeve for Screwdriver Shaft for No. 03.689.001
03.620.061	T-Handle with Ratchet Wrench and with Torque Limiter, 10Nm
03.636.007	Rod Pusher / Counter Torque for Universal Reduction Screw

Attach the assembled screwdriver to the torque limiting handle. Verify that the screwdriver shaft is in the correct position. In combination with the UDS and monoaxial screw, the blue and green lines should be visible. When using the URS screw, only the blue line has to be visible.

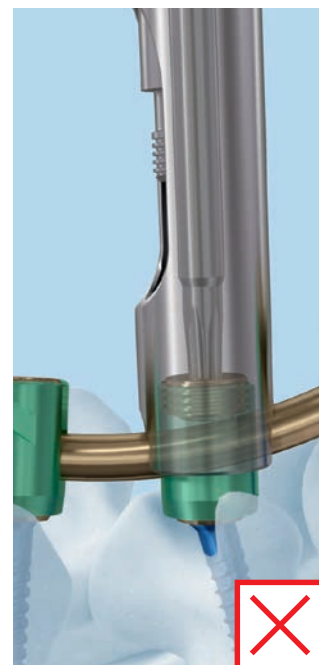
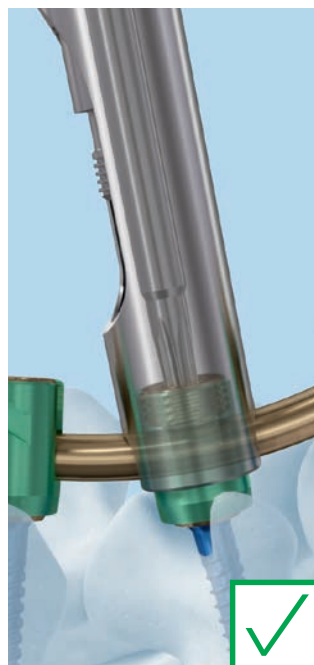
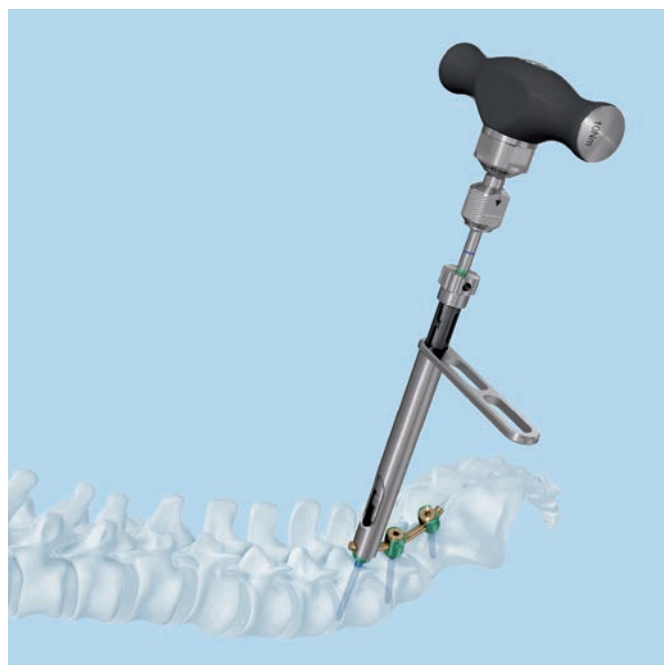
Place the rod counter torque over the screw head. Insert the screwdriver through the counter torque and turn until the torque limiting handle clicks. The click indicates that the locking cap is tightened with 10Nm.

Note: The 10Nm torque limiting handle and the counter torque must be used for final tightening.

The polyaxiality is blocked and the rod is fixed to the pedicle screw.

Note: Always fully seat the counter torque on the rod. The instrument must be perpendicular to the rod during final tightening. It is recommended to check and control all locking caps with counter torque and torque limiting handle prior to proceeding.

After initial final tightening of all screws, use the torque-limiting handle and counter torque to sequentially revisit all locking caps. Start at the caudal left screw of the construct and proceed clockwise to systematically repeat final tightening of all locking caps of the construct.



1b. Perform final tightening with the two-step locking cap

Instruments

03.636.003 Screwdriver Shaft for Locking Cap for Universal Reduction Screw

03.620.061 T-Handle with Ratchet Wrench and with Torque Limiter, 10Nm

03.636.007 Rod Pusher/Counter Torque for Universal Reduction Screw

03.689.001 Screwdriver Shaft Stardrive, T25, for Universal Screws

03.689.002 Holding Sleeve for Screwdriver Shaft for No. 03.689.001

Optional Instrument

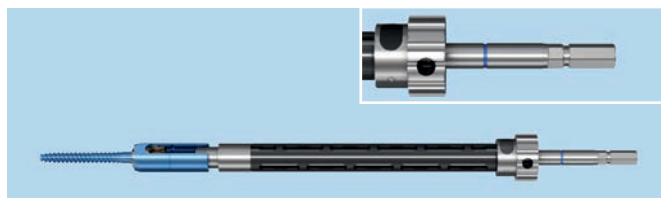
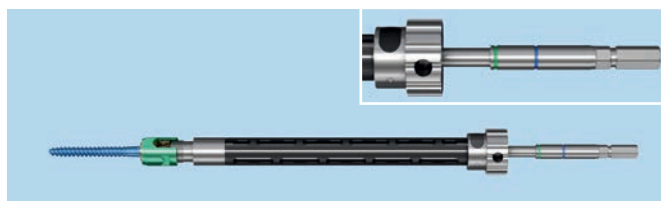
03.636.004 Screwdriver, cannulated, for Locking Cap for Universal Reduction Screw

Attach the two-step locking cap screwdriver to the torque limiting handle.

Place the counter torque over the screw head. Insert the screwdriver through the rod counter torque and turn until the torque limiting handle clicks. The click indicates that the outer part of the locking cap is tightened with 10Nm.

The polyaxiality is blocked but the rod can still move. In this position parallel distraction or compression is possible.

Note: The 10Nm torque limiting handle and the counter torque must be used for final tightening.



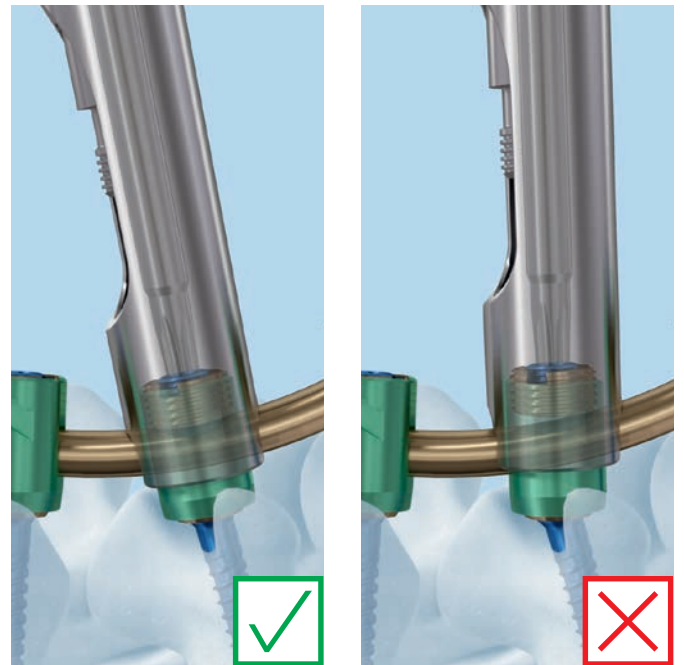
Attach the assembled screwdriver to a torque limiting handle. Verify that the screwdriver shaft is in the correct position. In combination with the UDS and monoaxial screw, the blue and green lines should be visible. When using the URS screw, only the blue line has to be visible.

Insert the assembled screwdriver through the counter torque and turn until the torque limiting handle clicks. The click indicates that the inner part of the locking cap is tightened with 10Nm.

The polyaxiality is blocked and the rod is fixed to the pedicle screw.

Note: Always fully seat the counter torque on the rod. The instrument must be perpendicular to the rod during final tightening.

After initial final tightening of all screws, use the torque-limiting handle and counter torque to sequentially revisit all locking caps. Start at the caudal left screw of the construct and proceed clockwise to systematically repeat final tightening of all locking caps of the construct.



Two-Step Locking Cap Removal/Remobilization

Remove / remobilize two-step locking cap

Instruments

03.620.001	Screwdriver Stardrive, T25, with T-Handle, for Pangea
03.636.004	Screwdriver, cannulated, for Locking Cap for Universal Reduction Screw
03.636.007	Rod Pusher / Counter Torque for Universal Reduction Screw

Remove the locking cap by using the cannulated screwdriver as a counter torque instrument and use the screwdriver T25 to loosen the inner part of the locking cap. (The polyaxial screw is now free for compression / distraction)

To completely remove the locking cap, remove the outer part of the locking cap with the cannulated screwdriver. The screwdriver is self-retaining so that the locking cap can easily be removed.

If the polyaxiality of the screw head is stuck in its position, use the rod pusher / counter torque or the derotation instrument to remobilize the screw head.

Precaution: For final tightening, use the rod pusher / counter torque to secure the outer screw first before tightening the inner screw.



Tab Removal

Remove extended URS tabs

Instrument

03.636.005 Tab Remover / Alignment Tool

Slide the tab remover over the first extended tab and break it off by tilting the instrument towards the outside or inside of the screw.

The extended tab breaks off and remains in the tab remover and must be removed from the instrument.

Slide the tab remover over the remaining extended tab and break it off by tilting towards the outside or inside of the screw.

Repeat for all remaining screws. All extended tabs must be removed before the incision is closed.

Note: Only break off the extended tabs once all reduction and correction maneuvers have been accomplished.



Transverse Connector (Optional)

Insert Transverse Connector

Instruments

03.620.018	Distraction Forceps, for Lumbar Spine
328.028	Holding Forceps, straight, with Scissors Grip, for Rods \varnothing 6.0mm
388.395	Screwdriver, hexagonal, long 2.5 mm, length 293 mm

Use the distraction forceps to estimate the distance between the two rods.

Select the appropriate transverse connector and attach it to the rods.

Insert the tip of the screwdriver into the fixation screw. The screwdriver should be fully seated in the recess of the screw.

Make sure the screw is fully tightened to ensure a stable construct.



Implants*

Universal Degen Screw

Standard sizes (length increases in 5 mm increments)

04.689.530 – Universal Degen Screw \varnothing 5.0 mm,
04.689.550 length 30 – 50 mm, Titanium Alloy (TAN)

04.689.630 – Universal Degen Screw \varnothing 6.0 mm,
04.689.650 length 30 – 50 mm, Titanium Alloy (TAN)

04.689.730 – Universal Degen Screw \varnothing 7.0 mm,
04.689.750 length 30 – 50 mm, Titanium Alloy (TAN)



Universal Reduction Screw

Standard sizes (length increases in 5 mm increments)

04.636.530 – Universal Reduction Screw \varnothing 5.0 mm,
04.636.550 length 30 – 50 mm

04.636.630 – Universal Reduction Screw \varnothing 6.0 mm,
04.636.650 length 30 – 50 mm

04.636.730 – Universal Reduction Screw \varnothing 7.0 mm,
04.636.750 length 30 – 50 mm



Monoaxial screw

Standard sizes (length increases in 5 mm increments)

04.666.530 – Universal Reduction Screw Monoaxial,
04.666.550 \varnothing 5.0 mm, length 30 – 50 mm

04.666.630 – Universal Reduction Screw Monoaxial,
04.666.650 \varnothing 6.0 mm, length 30 – 50 mm

04.666.730 – Universal Reduction Screw Monoaxial,
04.666.750 \varnothing 7.0 mm, length 30 – 50 mm



*Additional sizes are available on request. All implants are also available sterile packed. Add suffix S to article number.

One-step locking cap

04.689.199 Locking Cap for Universal Degen Screws,
Titanium Alloy (TAN)



04.689.121 Locking Cap, one-step for Universal
Reduction Screw, blue, Titanium Alloy
(TAN)



Two-step locking cap

04.636.001 Locking Cap for Universal Reduction Screw



Transverse Connector

497.795 Transverse Connector, low profile,
length 25.5 to 30.5 mm, for
Rods \varnothing 6.0 mm

497.796 Transverse Connector, low profile,
length 31.5 to 34 mm, for Rods \varnothing 6.0 mm,
Titanium Alloy (TAN)

497.797 Transverse Connector, low profile,
length 35 to 41 mm, for Rods \varnothing 6.0 mm,
Titanium Alloy (TAN)

497.798 Transverse Connector, low profile,
length 42 to 55 mm, for Rods \varnothing 6.0 mm,
Titanium Alloy (TAN)



Curved rods, soft

04.620.140 Rod \varnothing 6.0 mm, soft, curved,
length 40 mm, Pure Titanium



498.139 Click'X Rod \varnothing 6.0 mm, curved, normalized,
length 45 mm, Pure Titanium

04.620.150 Rod \varnothing 6.0 mm, soft, curved,
length 50 mm, Pure Titanium

498.140 Click'X Rod \varnothing 6.0 mm, curved, normalized,
length 55 mm, Pure Titanium

04.620.160 Rod \varnothing 6.0 mm, soft, curved,
length 60 mm, Pure Titanium

04.620.170 Rod \varnothing 6.0 mm, soft, curved,
length 70 mm, Pure Titanium

Straight rod, soft

498.154 Rod \varnothing 6.0 mm, soft, length 150 mm,
Pure Titanium



Instruments

URS Degen standard instruments

03.689.001 Screwdriver Shaft Stardrive, T25,
for Universal Screws



03.689.002 Holding Sleeve for Screwdriver Shaft
for No. 03.689.001



03.620.001 Screwdriver Stardrive, T25, with T-Handle,
for Pangea



03.620.061 T-Handle with Ratchet Wrench
and with Torque Limiter, 10Nm



03.620.100 Handle with Ratchet, straight,
with Quick Coupling, for Pangea



328.028 Holding Forceps, straight,
with Scissors Grip, for Rods \varnothing 6.0mm



03.636.007 Rod Pusher / Counter Torque
for Universal Reduction Screw



03.689.004 Rocker Fork for Universal Degen Screws



03.689.003 Reduction Instrument
for Universal Degen Screws



03.636.005 Tab Remover / Alignment Tool



388.395 Screwdriver, hexagonal, long, \varnothing 2.5 mm,
length 293 mm



03.636.003 Screwdriver Shaft for Locking Cap
for Universal Reduction Screw



03.636.004 Screwdriver, cannulated, for Locking Cap
for Universal Reduction Screw

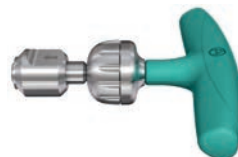


Optional

388.654 Ratchet with Handle,
with Hexagonal Quick Coupling \varnothing 6.0 mm



03.632.090 T-Handle with Ratchet Wrench,
with Hexagonal Coupling \varnothing 6.0 mm



388.870 Trial Rod \varnothing 6.0 mm, length 150 mm



URS Degen general instruments

388.656 Pedicle Awl \varnothing 4.0 mm
with Silicone Handle, length 255 mm,
for Pedicle Screws \varnothing 4.0 to 7.0 mm



388.655 Pedicle Probe \varnothing 3.7 mm
with Silicone Handle, length 240 mm,
for Pedicle Screws \varnothing 5.0 to 7.0 mm



388.546 Feeler for Screw Channel, curved,
 \varnothing 2.3 mm, length 275 mm



388.545 Feeler for Screw Channel, straight,
 \varnothing 2.3 mm, length 275 mm (optional)



388.440 Holding Forceps with broad Tip,
length 290 mm, for Rods \varnothing 6.0 mm
(optional)



388.422 Compression Forceps, length 335 mm,
for Pedicle Screws



03.620.018 Distraction Forceps, for Lumbar Spine



03.632.000 Distraction Fork



03.620.020 Rod Bender for Rods \varnothing 6.0 mm,
with Radius Adjustment



03.620.105 Tap for Pedicle Screws \varnothing 5.0 mm
with dual core, length 230 mm,
with Hexagonal Coupling



03.620.106 Tap for Pedicle Screws \varnothing 6.0 mm
with dual core, length 230 mm,
with Hexagonal Coupling



Screwdriver Instructions

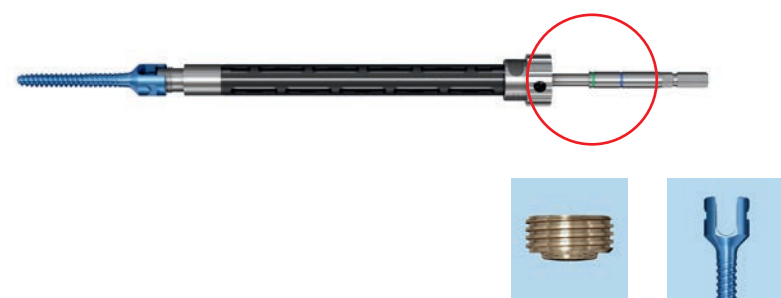
- 1 Verify screwdriver position**
Push the button on the larger upper part of the screwdriver sleeve and at the same time pull or push the screwdriver shaft to locate the UDS and monoaxial screw or URS position.



- 2 UDS position**
In the UDS position the blue and green lines are visible.



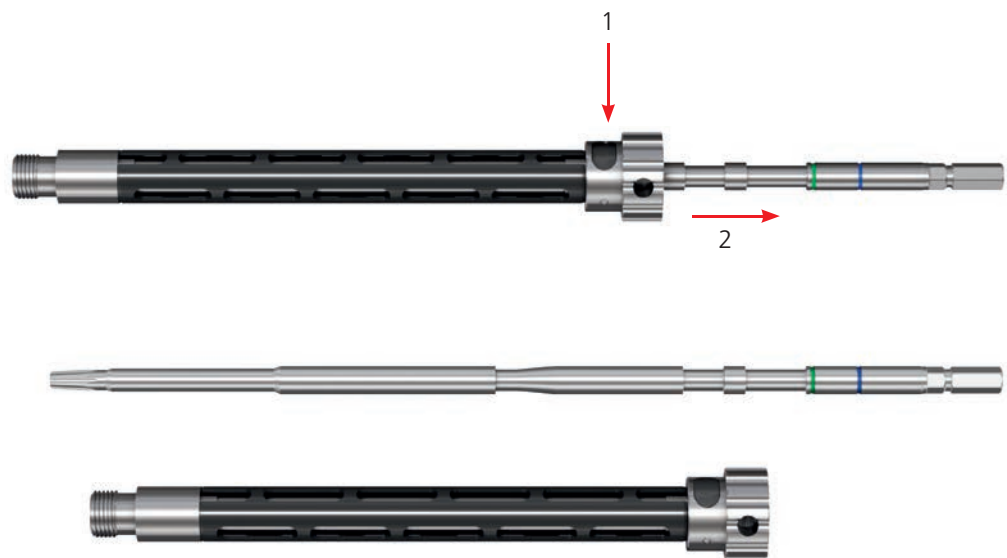
- 3 Monoaxial screw position**
In the monoaxial screw position the blue and green lines are visible.



- 4 URS position**
In the URS position the blue line is visible.



- 5** Press and hold the “release” button while removing the screwdriver shaft from the holding sleeve.



Bibliography

Aebi M, Thalgott JS, Webb JK (1998): AO ASIF Principles in Spine Surgery. Berlin: Springer.

Aebi M, Arlet V, Webb JK (2007): AOSPINE Manual (2 vols), Stuttgart, New York: Thieme.

