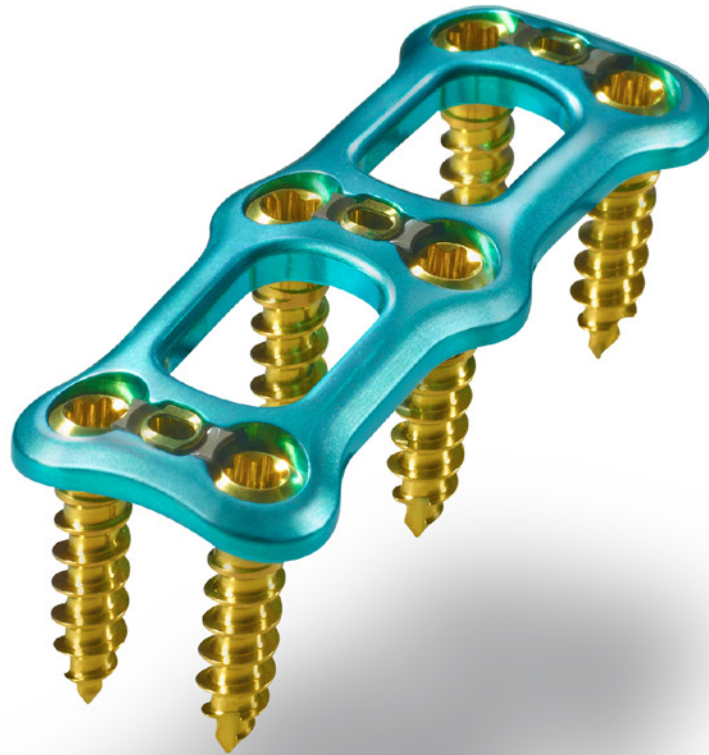




CABO[™] ACP

ANTERIOR CERVICAL PLATE SYSTEM
SURGICAL TECHNIQUE

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CABO™ ACP

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DESIGN RATIONALE

The Cabo™ ACP system was designed to provide surgeons with confidence in the surgical construct. The low-profile plate combined with large graft viewing windows and visual confirmation locking system, provide reassurance that accurate plate placement, minimal profile, and construct integrity are priority number one.



SYSTEM FEATURES



Simple Locking Mechanism

- ¼ turn cam lock
- Visible confirmation
- Tactile feel

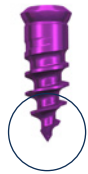


Large Graft Viewing Windows

- Visualize the endplates
- Minimize plate length
- Ensure maximum distance from adjacent level



Self-tapping



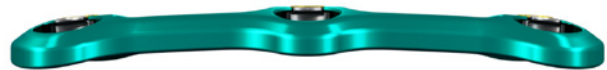
Self-drilling

High Performance Screws

- 4.0mm and 4.3mm diameter
- Fixed and variable
- Self-drilling and self-tapping
- Tapered thread design
- Up to 16° cranial/caudal angulation
- Up to 15° medial/lateral angulation

Low Profile Plate

- 2.1mm thickness
- 17mm width
- Smooth anterior surface
- Minimized profile around screws



Standard Screw Sizes—Fixed & Variable

Screw Type	Diameter (mm)	Length (mm)				
Self-tapping	4.0	10	12	14	16	18
	4.3	10	12	14	16	18
Self-drilling	4.0	10	12	14	16	18

STEP 1. SELECT PLATE

Once the anterior cervical spine has been prepped for fusion, select the desired Cabo™ plate to provide fixation (FIG. 1).

NOTE

Plate length is measured from the center of the most superior hole to the center of the most inferior hole (FIG. 2).

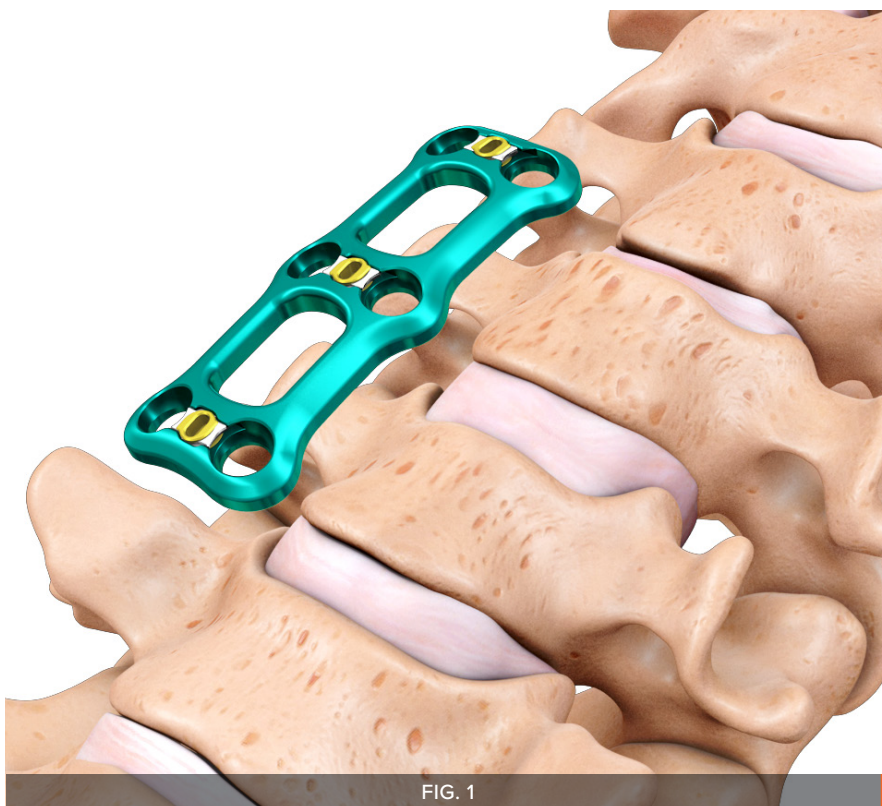


FIG. 1

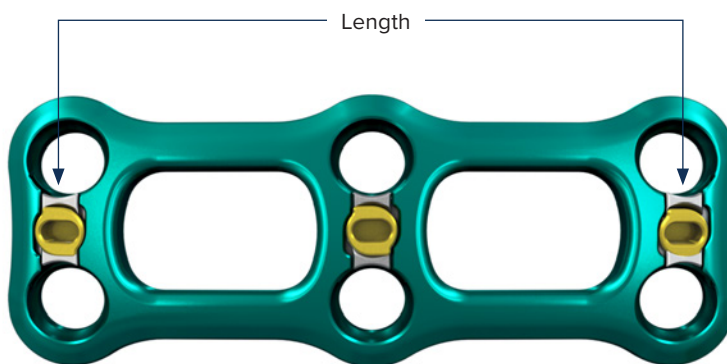
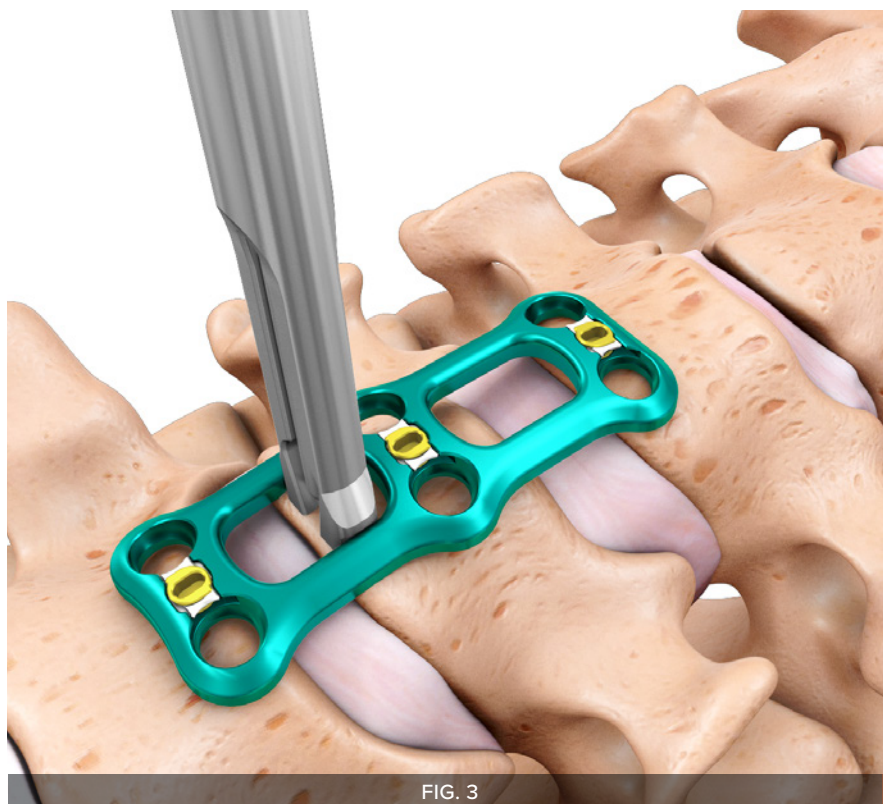


FIG. 2

STEP 2. TRIAL POSITION PLATE

Use the plate holder to position the plate into the operative site for placement and sizing verification. Fluoroscopy can be used to confirm plate position (FIG. 3).



STEP 3. CONTOUR PLATE–OPTIONAL

The Cabo™ plate is pre-contoured with lordosis. Should additional contouring be required, the plate can be contoured to the desired degree of lordosis utilizing the plate bender (FIG. 4).

If more lordosis is desired, insert a Cabo plate into the plate bender over the graft windows as shown (FIG. 5). Next, squeeze the handles of the plate bender together to achieve the desired contour of the plate.

NOTE

When contouring the plate care should be taking not to scratch, notch or dent the surface or locking mechanism, as the implant strength may be compromised. Plates 26mm or shorter should not be contoured.

CAUTION

Do not bend plate over locking mechanism. This could damage its function.

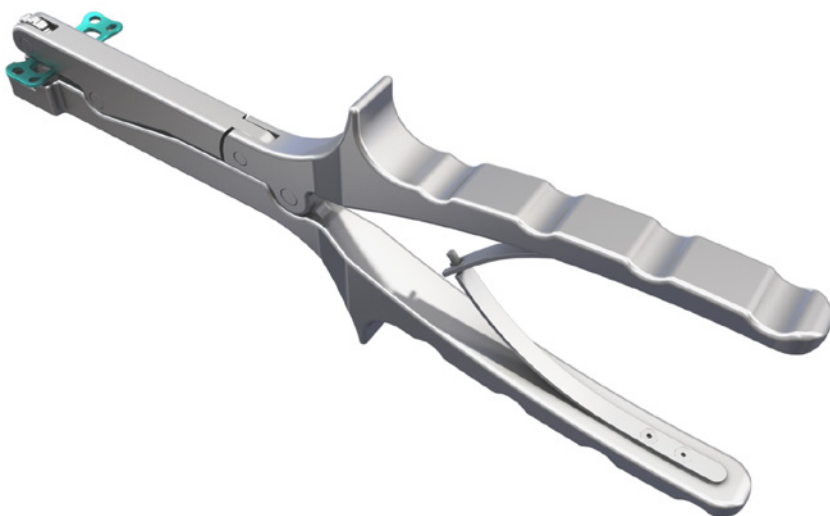


FIG. 4

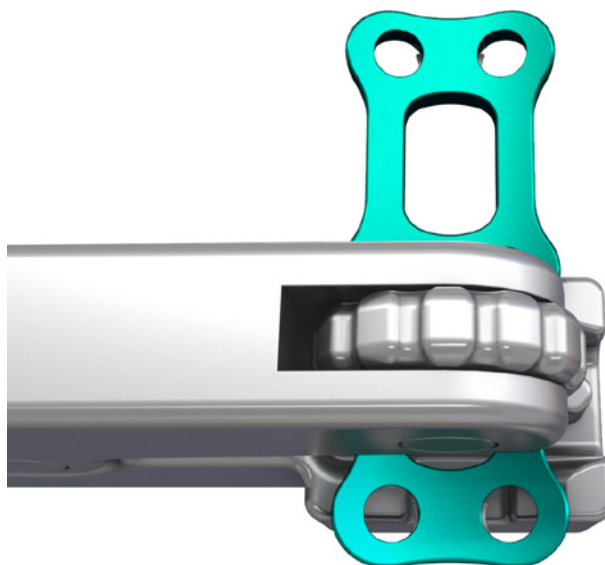


FIG. 5

STEP 4. TEMPORARY FIXATION OF PLATE

Ensure the plate is properly aligned with respect to the endplates (FIG. 6).

Use the temporary fixation pins to hold the plate stationary for screw placement.

Load the temporary fixation pins onto the temporary fixation pin inserter by pulling back the spring loaded sleeve on the temporary fixation pin inserter (FIG. 7).

With the temporary fixation pin fully engaged, advance it into the screw hole until it is fully seated in the plate (FIG. 8).

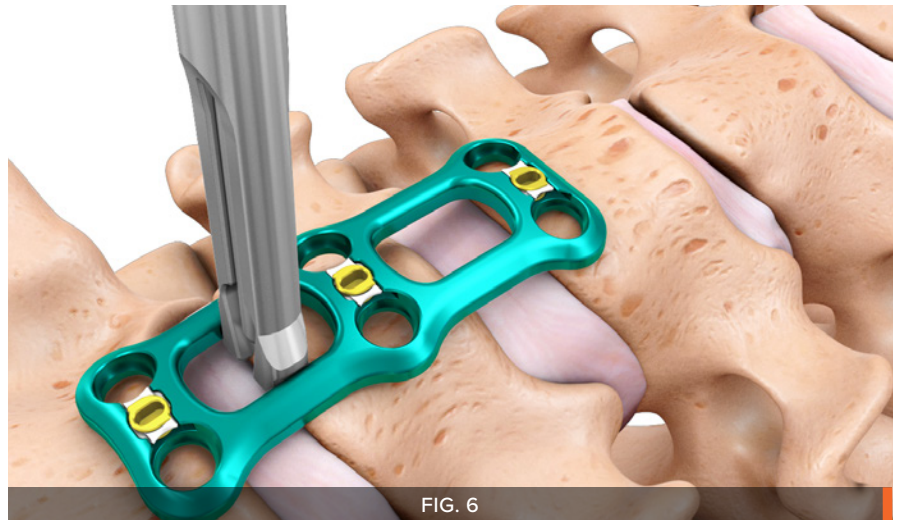


FIG. 6

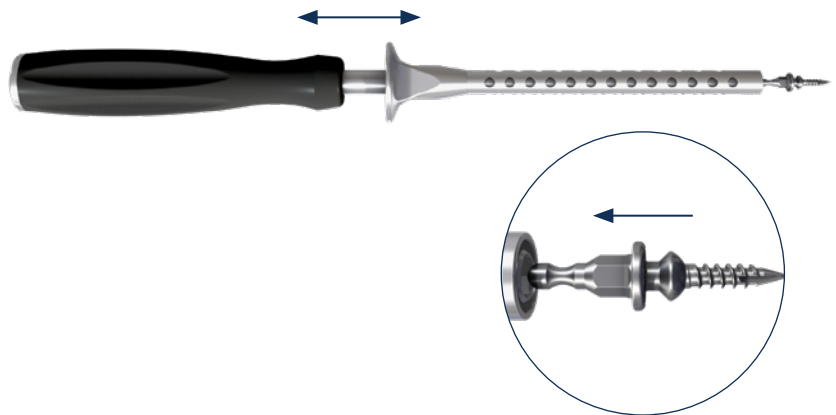


FIG. 7



FIG. 8

STEP 5. SCREW PREP

With the Cabo™ ACP system the surgeon has three options to prep and place the screws.

Option 1: Spring Loaded Awl

The surgeon can insert the shielded spring loaded awl into the screw hole and lightly tap through the cortical surface to create a pilot hole (FIG. 9).

Remove the shielded spring loaded awl by pulling straight up on the instrument.

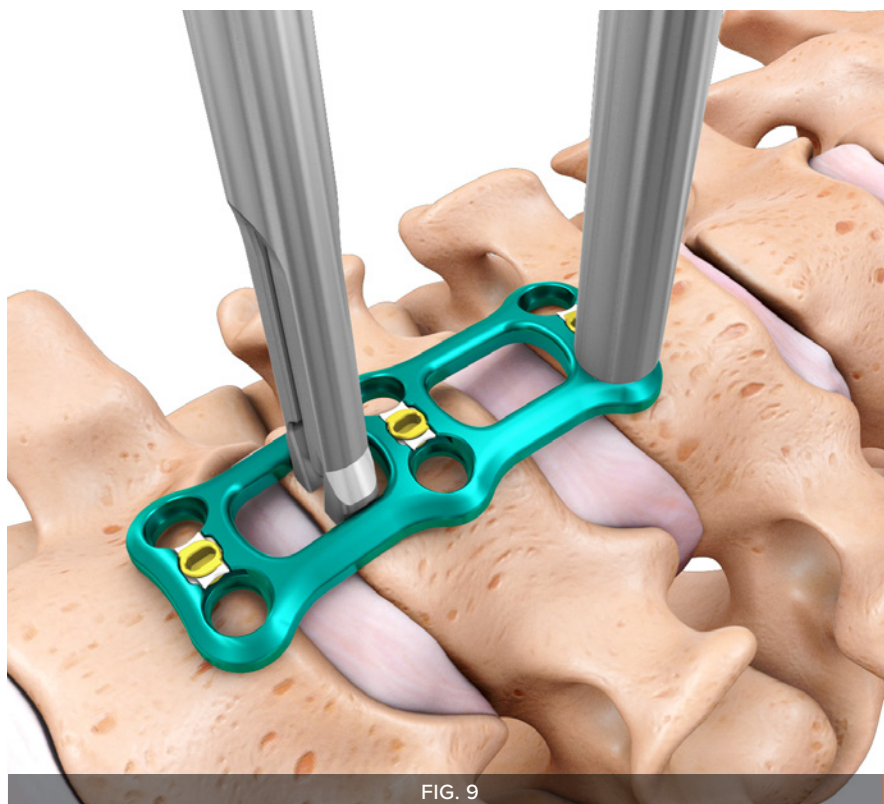


FIG. 9

STEP 5. SCREW PREP CONTINUED

Option 2: Variable/Fixed Drill Guides

The surgeon can select the corresponding color-coded drill guide based on the type of screw and angle desired (fixed or variable angle) (FIG. 10).

Select the appropriate length drill bit with stop and attach it to the quick connect handle.

Insert the drill guide by pushing it into the desired screw hole of the plate (FIG. 11).

Insert the drill guide by pushing it into the desired screw hole of the plate (FIG. 11).

The depth stop will limit the drilling depth by contacting the drill guide.

Once the hole has been created, remove the drill guide by pulling up to disengage it from the plate.

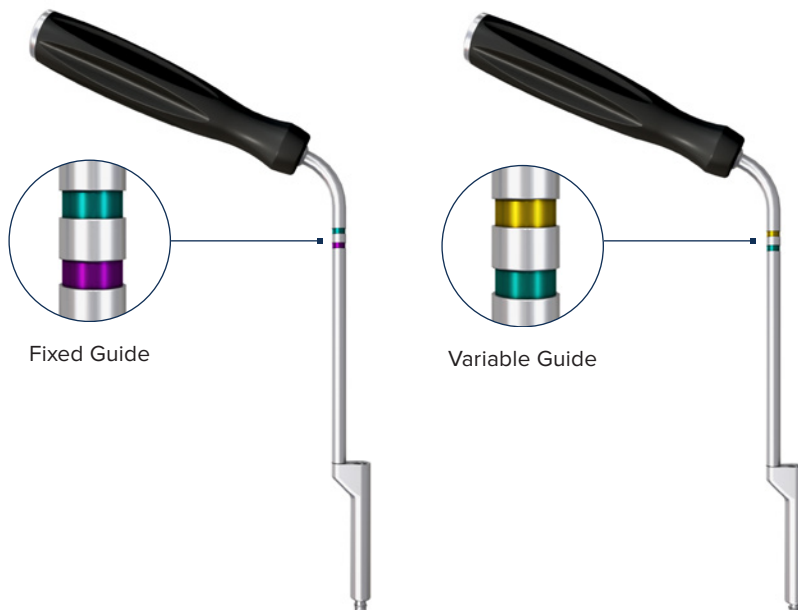


FIG. 10

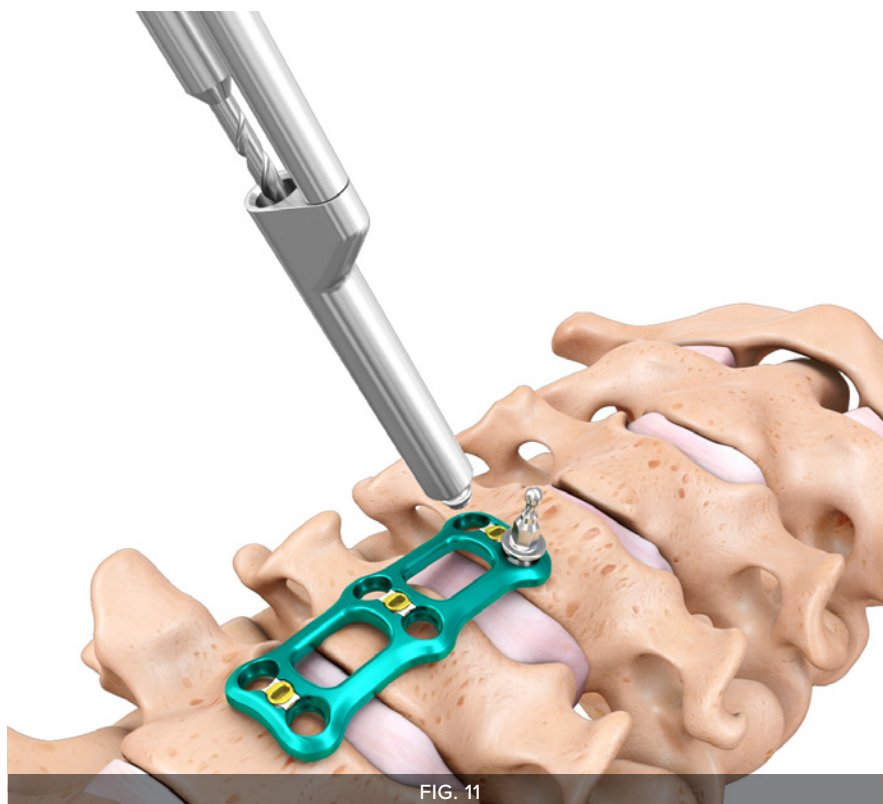


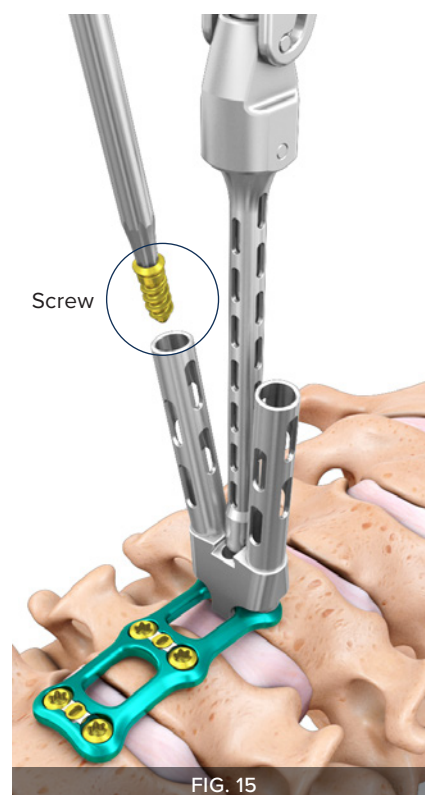
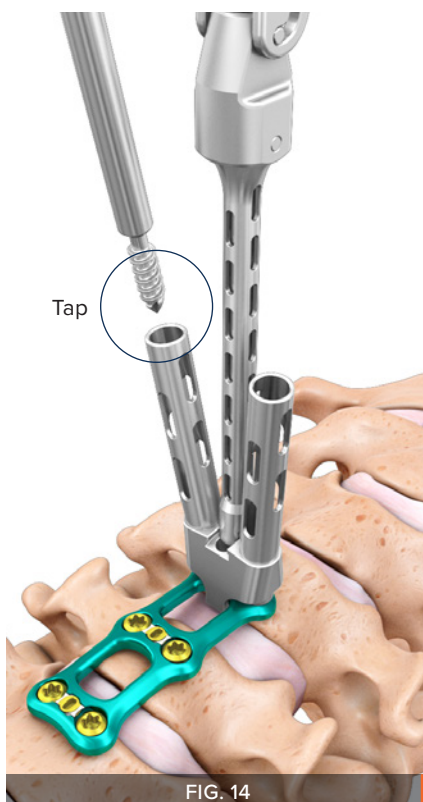
FIG. 11

STEP 5. SCREW PREP CONTINUED

Option 3: Drill, Tap and Screw DTS Guides

If maximum screw control is desired, the surgeon can also choose a DTS single or double barrel guide to drill, tap and place the screws (FIG. 12).

To utilize the all-in-one DTS guides, ensure that the clamping knob is in the “open” position (away from handle). Place the guide over the screw holes and flush with the plate. Finally, pull the clamping handle to the closed position to positively engage the plate. Drill, tap and screw as needed (FIG. 13–15).



STEP 6. SCREW INSERTION

Load the appropriate length screw onto the screwdriver. Advance the screw until the head of the screw is fully seated into the plate (FIG. 16).

CAUTION

Take care not to over-angulate the screws past 16° cranially.

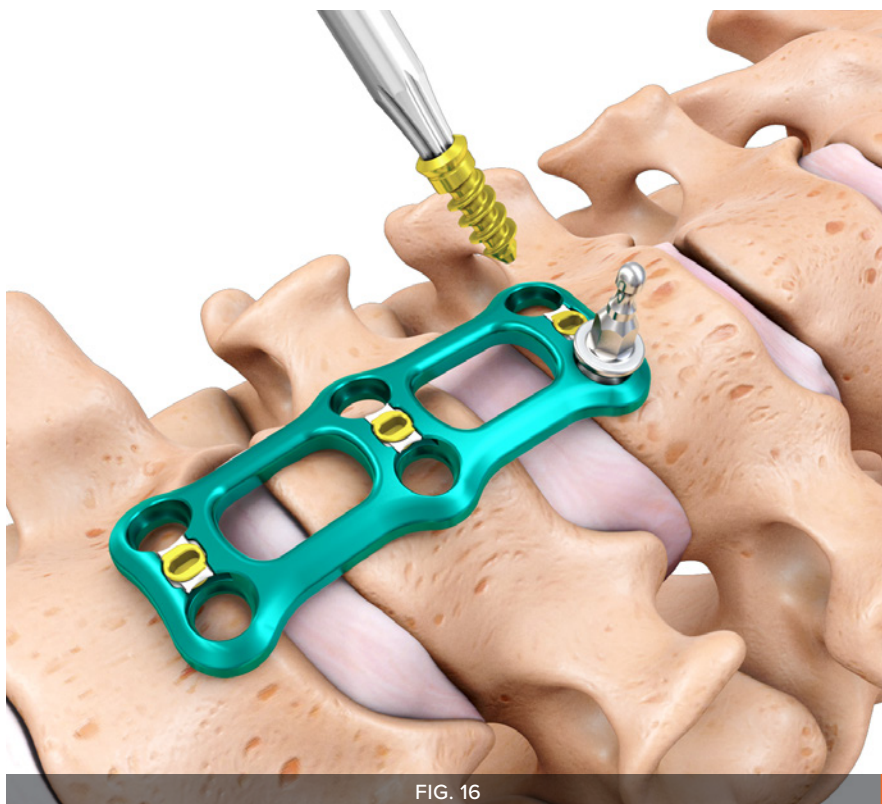


FIG. 16

STEP 7. VERIFY ALIGNMENT & LOCKING MECHANISM

Ensure that the screws are fully seated and underneath the blocking wings (FIG. 17).

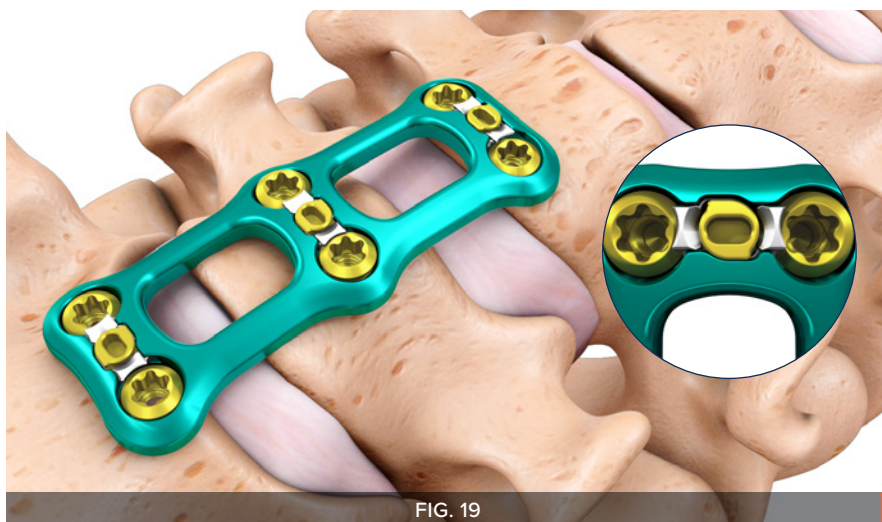
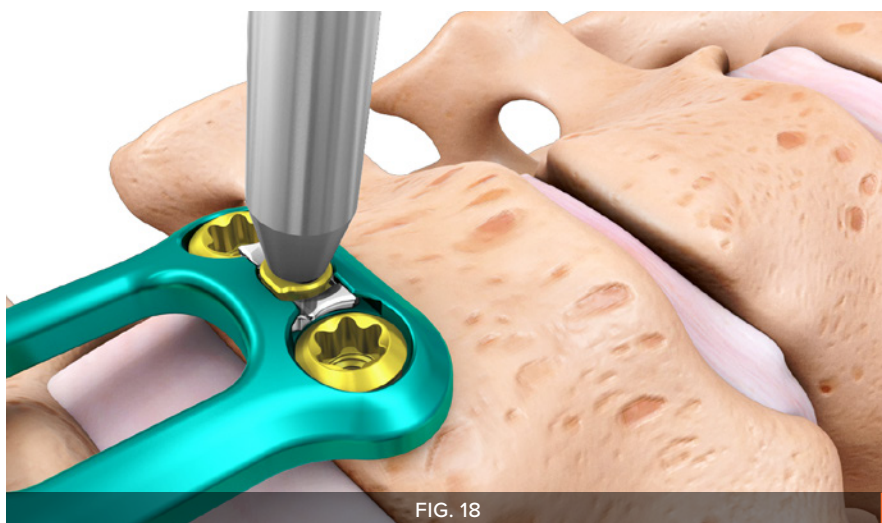
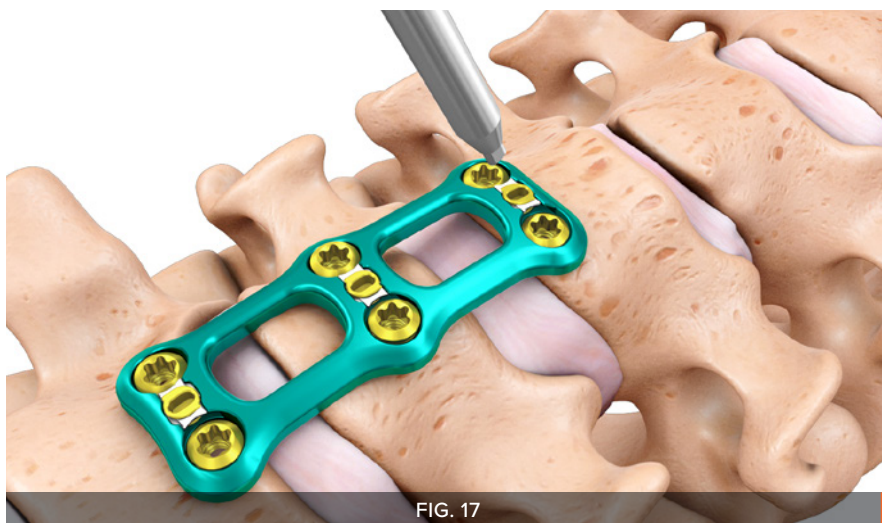
Rotate the locking mechanism $\frac{1}{4}$ turn clockwise to the locked position (FIG. 18).

CAUTION

The locking mechanism requires only minimal effort (two fingers) to lock. Do not force into position.

Surgeon can verify that the blocking wings are over the screws and that the locking mechanism is in the horizontal position (FIG. 19).

Check the final position of the plate and screws both visually and radiographically. Ensure the locking mechanism is in the horizontal position.



STEP 8. FINAL POSITION

Surgeon should check the final position of the plate and screws (FIG. 20).

Lateral fluoroscopy can be used to ensure all screws are seated properly below the locking mechanism.

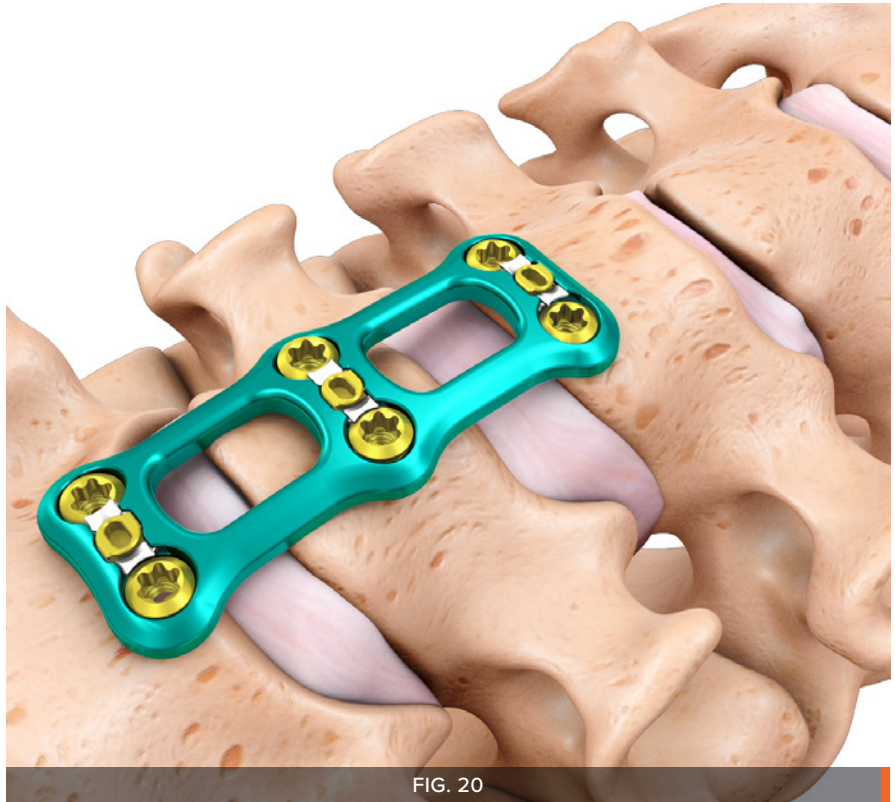


FIG. 20

REVISION OPTION. SCREW & PLATE REMOVAL

Ensure that the lock is turned to the unlock position prior to screw removal (vertical position) (FIG. 21).

Insert the tip of the removal tool into the head of the desired screw. Ensure the tip is fully seated within the screw head. Thread the inner shaft of the removal driver clockwise into the screw's internal threads capturing the screw.

CAUTION

Do not overtighten.

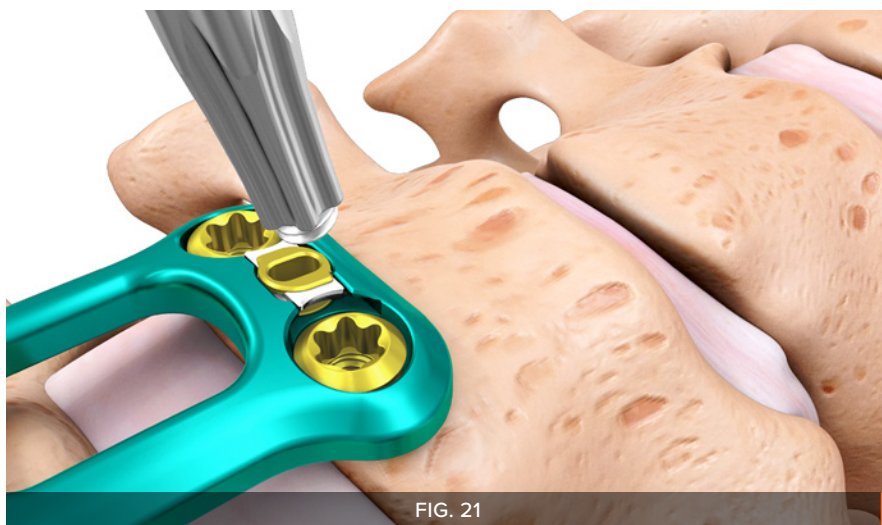


FIG. 21

Rotate the removal driver counter-clockwise to remove the screw. Continue turning the removal tool counterclockwise until the screw is removed from the plate (FIG. 22).

To remove the plate, repeat step above for all screws. Once the screws have been removed, the plate is no longer attached to bone and can be removed (FIG. 23).

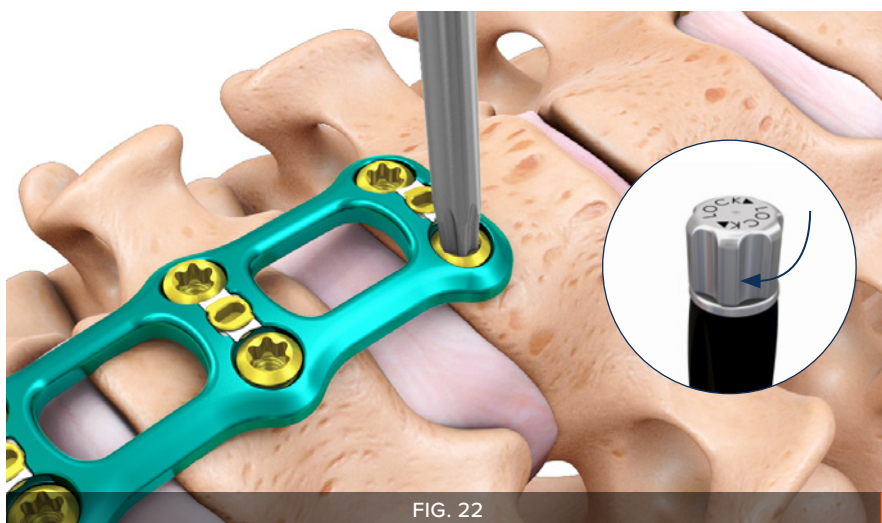


FIG. 22

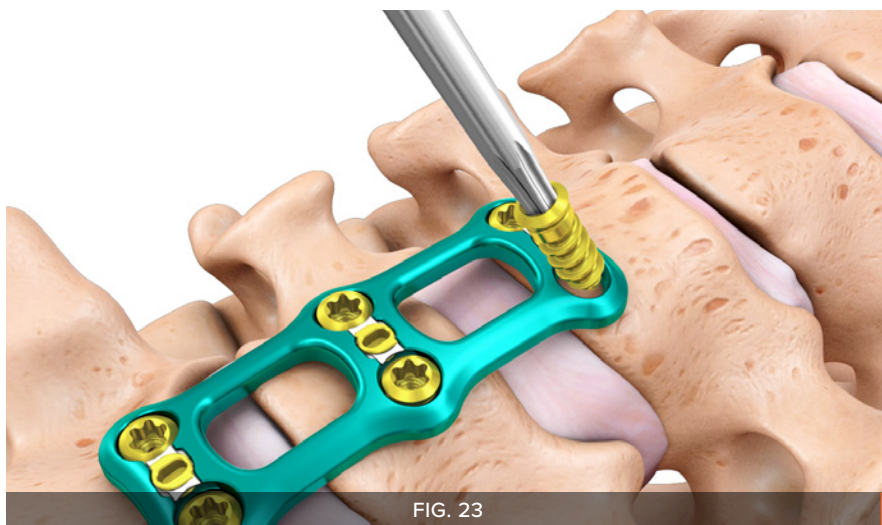


FIG. 23

ORDERING INFORMATION

INSTRUMENTATION

Plate Holder

PN 98-1007



Shielded Spring Loaded Awls

PN 98-1014



Fixed Angle Drill Guide

PN 98-1008



Variable Angle Drill Guide

PN 98-1010



Single Barrel DTS Guide

PN 98-1012



Dual Barrel DTS Guide

PN 98-1009



INSTRUMENTATION

Drill 10–18mm

PN 98-15XX



Tap 10mm

PN 98-1011



Screw Driver

PN 98-1001



Plate Locking Driver

PN 98-1002



Revision Driver

PN 981019



Axial Non-Ratcheting Handle

PN 98-1020



Plate Bender

PN 98-1005



Standalone Tap

PN 98-1016



CABO™ ACP IMPLANTS

CABOIMP Plates

Part Number	Part Description
81-0110	1 Level Plate 10mm
81-0112	1 Level Plate 12mm
81-0114	1 Level Plate 14mm
81-0116	1 Level Plate 16mm
81-0118	1 Level Plate 18mm
81-0120	1 Level Plate 20mm
81-0122	1 Level Plate 22mm
81-0124	1 Level Plate 24mm
81-0126	1 Level Plate 26mm
81-0224	2 Level Plate 24mm
81-0226	2 Level Plate 26mm
81-0228	2 Level Plate 28mm
81-0230	2 Level Plate 30mm
81-0232	2 Level Plate 32mm
81-0234	2 Level Plate 34mm
81-0237	2 Level Plate 37mm
81-0240	2 Level Plate 40mm
81-0243	2 Level Plate 43mm
81-0246	2 Level Plate 46mm
81-0339	3 Level Plate 39mm
81-0342	3 Level Plate 42mm
81-0345	3 Level Plate 45mm
81-0348	3 Level Plate 48mm
81-0351	3 Level Plate 51mm
81-0354	3 Level Plate 54mm
81-0357	3 Level Plate 57mm
81-0360	3 Level Plate 60mm
81-0363	3 Level Plate 63mm
81-0366	3 Level Plate 66mm
81-0369	3 Level Plate 69mm

CABO4IMP Plates

Part Number	Part Description
*81-0460	4 Level Plate 60mm
*81-0464	4 Level Plate 64mm
*81-0468	4 Level Plate 68mm
*81-0472	4 Level Plate 72mm
*81-0476	4 Level Plate 76mm
*81-0480	4 Level Plate 80mm
*81-0484	4 Level Plate 84mm

CABO5IMP Plates

Part Number	Part Description
*81-0585	5 Level Plate 85mm
*81-0590	5 Level Plate 90mm
*81-0595	5 Level Plate 95mm
*81-0599	5 Level Plate 100mm

*Optional size does not come standard in CABOIMP set. Please contact SeaSpine customer service.

CABO™ SCREWS

CABOIMP Screws

Part Number	Part Description
81-1110	Fixed—4.0mm Self Tapping 10mm
81-1112	Fixed—4.0mm Self Tapping 12mm
81-1114	Fixed—4.0mm Self Tapping 14mm
81-1116	Fixed—4.0mm Self Tapping 16mm
81-1118*	Fixed—4.0mm Self Tapping 18mm
81-1210	Variable—4.0mm Self Tapping 10mm
81-1212	Variable—4.0mm Self Tapping 12mm
81-1214	Variable—4.0mm Self Tapping 14mm
81-1216	Variable—4.0mm Self Tapping 16mm
81-1218*	Variable—4.0mm Self Tapping 18mm
81-1510	Fixed—4.0mm Self Drilling 10mm
81-1512	Fixed—4.0mm Self Drilling 12mm
81-1514	Fixed—4.0mm Self Drilling 14mm
81-1516	Fixed—4.0mm Self Drilling 16mm
81-1518*	Fixed—4.0mm Self Drilling 18mm
81-1610	Variable—4.0mm Self Drilling 10mm
81-1612	Variable—4.0mm Self Drilling 12mm
81-1614	Variable—4.0mm Self Drilling 14mm
81-1616	Variable—4.0mm Self Drilling 16mm
81-1618*	Variable—4.0mm Self Drilling 18mm
81-1710	Fixed—4.3mm Self Tapping 10mm
81-1712	Fixed—4.3mm Self Tapping 12mm
81-1714	Fixed—4.3mm Self Tapping 14mm
81-1716	Fixed—4.3mm Self Tapping 16mm
81-1718*	Fixed—4.3mm Self Tapping 18mm
81-1810	Variable—4.3mm Self Tapping 10mm
81-1812	Variable—4.3mm Self Tapping 11mm
81-1814	Variable—4.3mm Self Tapping 14mm
81-1816	Variable—4.3mm Self Tapping 16mm
81-1818*	Variable—4.3mm Self Tapping 18mm

*Optional size does not come standard in CABOIMP set. Please contact SeaSpine customer service.

INSTRUCTIONS FOR USE

Indications for Use

The Cabo™ ACP System is intended for anterior cervical fixation (C2–T1) for the following indications: degenerative disc disease (DDD) (defined as neck pain of discogenic origin with degeneration of the disc confirmed by history and radiographic studies), spondylolisthesis, trauma (i.e., fracture or dislocation), spinal stenosis, deformities or curvatures (i.e., scoliosis, kyphosis, and/or lordosis), tumor, pseudarthrosis, and failed previous fusion.

Contraindications

Any medical or surgical condition which would preclude the potential benefit of spinal implant surgery is a contraindication. The following conditions may reduce the chance of a successful outcome and should be taken into consideration by the surgeon. This list is not exhaustive:

Absolute contraindications:

- Infection in or around the operative site
- Allergy or sensitivity to implant materials
- Any case not described in the indication

Relative contraindications:

- Local inflammation
- Morbid obesity
- Pregnancy
- Fever or leukocytosis
- Prior fusion at the level(s) to be treated
- Rapid joint disease, bone absorption, osteopenia, and/or osteoporosis
- Elevation of sedimentation rate unexplained by other diseases, elevation of white blood count (WBC), or a marked left shift in the WBC differential count
- Any case not requiring bone graft and fusion or where fracture healing is not required
- Patients having inadequate tissue coverage over the operative site or where there is inadequate bone stock, bone quality, or anatomical definition
- Bone immaturity
- The patient's activity level, mental condition, occupation and/or a patient unwilling to cooperate with the postoperative instructions
- Any case where implant utilization would interfere with anatomical structures or expected physiological performance
- Use of incompatible materials from other systems

INSTRUCTIONS FOR USE

Cleaning & Sterilization for Instruments

The implants, components, and instrumentation in the Cabo™ ACP system are supplied “NON-STERILE” and must be decontaminated and sterilized.

RxOnly



CAUTION Federal law restricts this device to sale by or on the order of a physician or practitioner.



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QF-10-01-110-ENGL

SeaSpine Orthopedics Corporation does not practice medicine and does not recommend this or any other surgical technique for use on a specific patient. The surgeon who performs any procedure is responsible for determining and using the appropriate technique in each patient.

CABO™ ACP

ANTERIOR CERVICAL PLATE SYSTEM

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