

Anterior Cervical Plate System

Surgical Technique



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Warning

This instruction is for reference only.
Operation must be performed under the guides of professional doctors.

Anterior Cervical Plate System

Introduction

Anterior cervical plate has been used for the operative treatment of disc degeneration and trauma for several years. With its extensive application, this kind of plate is required to be on a higher level of lower profile and narrower width. In order to minimize its irritation on peripheral tissues, we must ensure the plate to be stabilized firmly, without the screw migration in the long term of activity. Therefore, an antimigration mechanism must be added into cervical plate system. Anterior Cervical Plate system has been designed to answer the growing need for a lower profile and stiff plate, more importantly, offering the self-locking mechanism to reduce the surgical steps and time for the facilitation of surgery. It also provides two kinds of screws for different operations.

Indications

- Trauma
- Degenerative disc disease
- Tumor
- Congenital disease
- Deformity
- Pseudarthrosis

Contraindications

- Spinal posterior column fracture for trauma
- Spinal core posterior compression for cervical spondilosis or fracture
- Congenital spinal stenosis
- More than 3 levels of ossification of posterior longitudinal ligament

Features & Benefits

- Low profile anatomical contoured plates and smooth surface reduce potential for irritation
- Fixed angled and variable angled screw option for optimal screw insertion trajectory



Instruments



Anterior Cervical Plate System

Instruments(Continued)



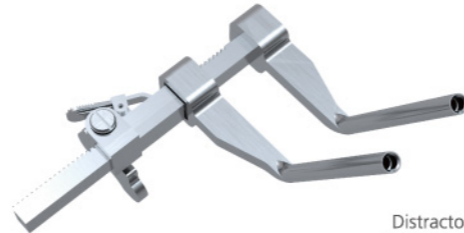
Drill Bit
13901300E



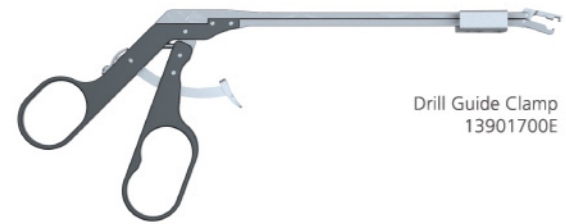
Drill Guide
13901400E



Unlocking Screwdriver
13901500E



Distractor
13901600E



Drill Guide Clamp
13901700E

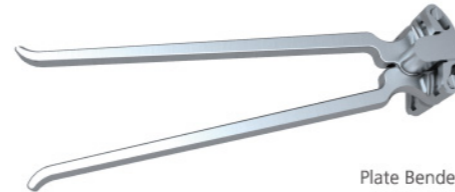


Plate Bender
13901800E



Distraction Pin Driver
13901900E



Distraction Pin
13902000E



Small Gauge (option)
13902100E



Medium Gauge (option)
13902200E



Large Gauge (option)
13902300E



Quick connect Handle
12302500E

Surgical Technique

Step1. Patient position

The patient is placed in the supine position with the head in slight extension. The posterior cervical spine is supported to establish and maintain normal cervical lordosis and avoid occipitalia compression. The patient's head is fixed with adhesive tape and shoulders are fixed and pulled caudal with adhesive tape to facility C6-7 fluoroscopy.



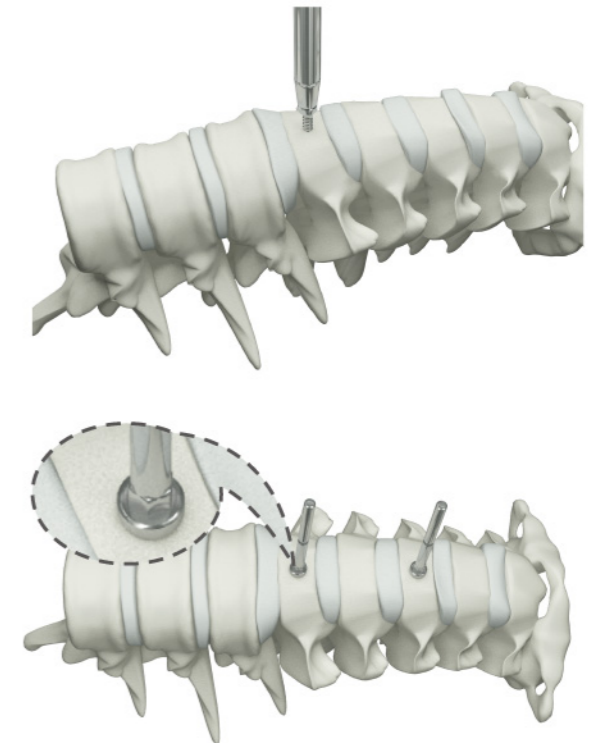
Step2. Incision and exposure

Used transverse-type skin incision along cervical transverse striation (An incision along sternocleidomastoid medial border for multi levels operations). Sterilizing skin and spreading drape. Cut open the skin and platysma, blunt dissection between arterial sheath and visceral sheath right to vertebral body front.



Step3. Decompression and Fusion

Retract soft tissues with self-retaining retractors. Obtain a localization radiograph. Use a prebent spinal needle to mark the disc space before proceeding with disc excision or corpectomy. Use bipolar mark out the midpoint of superior and inferior vertebra borders. Insert distraction pins and connect. self-retaining retractors to retract intervertebral space appropriate. Remove the anterior anulus, cutting toward the midline from uncovertebral joint. Remove the anulus with pituitary rongeurs and curets to allow exposure of unciniate process. Place interbody cage after thorough decompression of spinal cord.

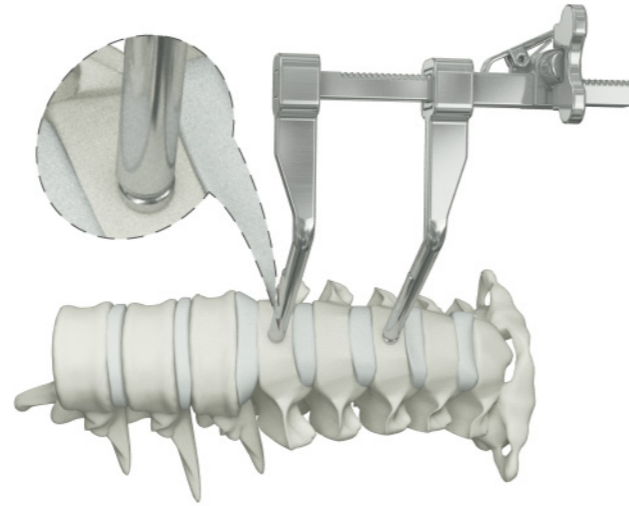


Anterior Cervical Plate System

Surgical Technique(Continued)

Instruments

P/N	Description
13901900E	Distraction Pin Holder
13902000E	Distraction Pin
13901600E	Spreader

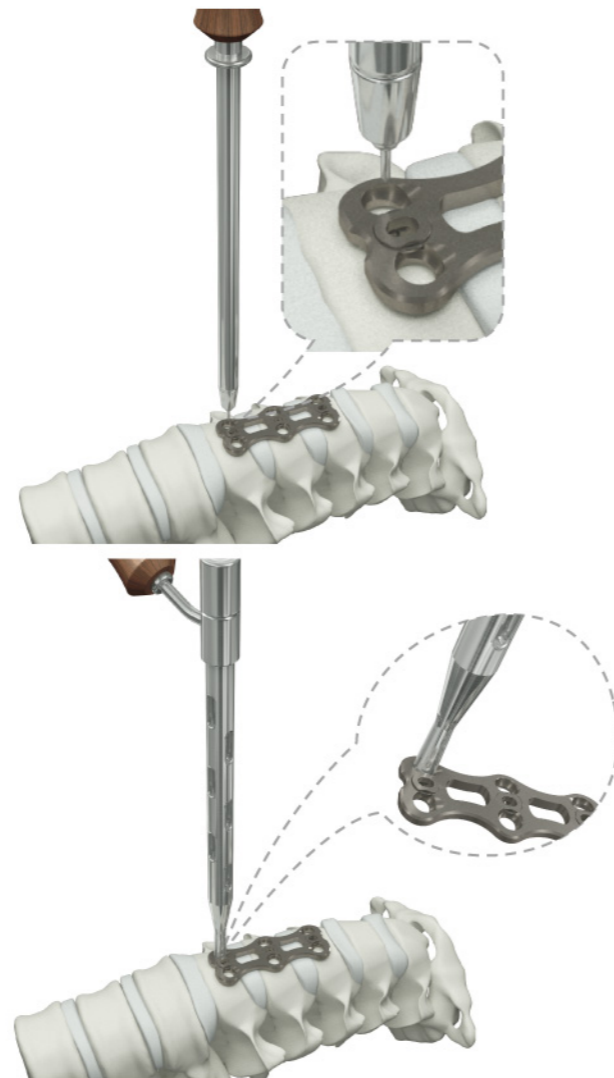


Step4. Plate selection and positioning

Remove anterior osteophytes of superior and inferior vertebra. Select suitable cervical plate and place it into place with the holder, prefix the plate with prefixation pins.

Instruments

P/N	Description
13900100E	Plate Holder
13901800E	Plate Bender
13900600E	Prefixation Pin Holder
13900700E	Prefixation Pin

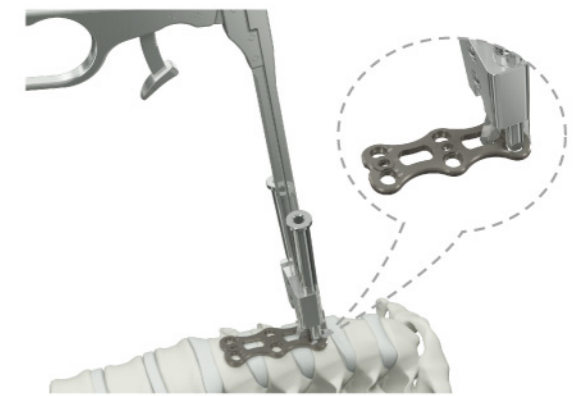
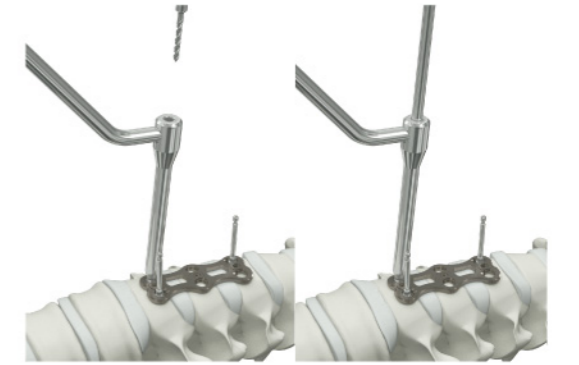


Step5. Screw placemen

Drill holes with the aid of single angle drill guide / variable angle drill guide. Place screws in diagonal plate holds. Remove off the prefixation pins with holder and place other screws. Place the screws under locking splinters of the plate (see step6)

Instruments

P/N	Description
13900500E	Drill Guide of Nonadjustable Screw
13900200E	Drill Guide of Adjustable Screw
13900800E	Depth Gauge
13902000E	Distraction Pin
13901000E	Screwdriver
13901100E	Adjustable Drill Bit
13901200E	Drill Stop
13901300E	Drill Bit
13901400E	Drill Guide

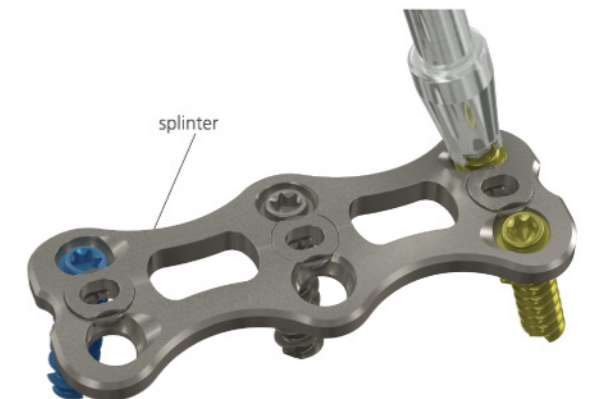


Step6. Screw removal

The screws are self-locking in the holes. Use unlocking screwdriver (its gap alignment to locking splinter) to unlock them if need.

Instruments

P/N	Description
13901500E	Unlocking Screwdriver



Anterior Cervical Plate System

Implants Ordering Information

Fixation Angle Self-tapping Screw

P/N	Dia	Length	Material
45614011E	Ø4.0mm	11mm	TA
45614013E	Ø4.0mm	13mm	TA
45614015E	Ø4.0mm	15mm	TA
45614017E	Ø4.0mm	17mm	TA
45614019E	Ø4.0mm	19mm	TA
45616011E	Ø4.5mm	11mm	TA
45616013E	Ø4.5mm	13mm	TA
45616015E	Ø4.5mm	15mm	TA
45616017E	Ø4.5mm	17mm	TA
45616019E	Ø4.5mm	19mm	TA
45616021E	Ø4.5mm	21mm	TA

Variable Axial Self-tapping Screw

P/N	Dia	Length	Material
45613011E	Ø4.0mm	11mm	TA
45613013E	Ø4.0mm	13mm	TA
45613015E	Ø4.0mm	15mm	TA
45613017E	Ø4.0mm	17mm	TA
45613019E	Ø4.0mm	19mm	TA
45615011E	Ø4.5mm	11mm	TA
45615013E	Ø4.5mm	13mm	TA
45615015E	Ø4.5mm	15mm	TA
45615017E	Ø4.5mm	17mm	TA
45615019E	Ø4.5mm	19mm	TA
45615021E	Ø4.5mm	21mm	TA

Anterior Cervical Plate

P/N	Holes	Length	Material
45610225E	4H	22.5mm	Ti
45610250E	4H	25mm	Ti
45610275E	4H	27.5mm	Ti
45610300E	4H	30mm	Ti
45610325E	4H	32.5mm	Ti
45610350E	4H	35mm	Ti
45610375E	6H	37.5mm	Ti
45610400E	6H	40mm	Ti
45610430E	6H	43mm	Ti

Anterior Cervical Plate

P/N	Holes	Length	Material
45610460E	6H	46mm	Ti
45610510E	8H	51mm	Ti
45610560E	8H	56mm	Ti
45610610E	8H	61mm	Ti
45610660E	8H	66mm	Ti
45610710E	8H	71mm	Ti
45610760E	8H	76mm	Ti
45610810E	8H	81mm	Ti

Instruments Ordering Information

P/N	Description	Quantity
13900100E	Plate Holder	1
13900200E	Drill Guide of Variable Angle	1
13900300E	Tap, Ø4.0	1
13900400E	Tap, Ø4.5	1
13900500E	Drill Guide of Fixed Angle	1
13900600E	Prefixation Pin Holder	1
13900700E	Prefixation Pin	4
13900800E	Depth Gauge	1
13900900E	Adjustable Tap	1
13901000E	Stardrive Screwdriver	1
13901100E	Adjustable Drill	1

P/N	Description	Quantity
13901200E	Drill Stop	1
13901300E	Drill Bit	1
13901400E	Drill Guide	2
13901500E	Unlocking Screwdriver	1
13901600E	Distractor	1
12302500E	Quick Connect Handle	1
13901700E	Drill Guide Clamp	1
13901800E	Plate Bneder	1
13901900E	Distraction Pin Driver	1
13902000E	Distraction Pin	2
13902400E	Instrument Case	1