CPS - Cervical Plate System

Surgical Technique

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BIOTECH

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"Movement is Life"

The use of **BIOTECH Cervical Plate System (CPS)** is indicated in anterior spine surgery, where stability and solid bony fusion is to be achieved after surgery for disc herniation, cervical canal stenosis, fractures with or without dislocation, metastatic bone tumours, primary bone tumors, vertebral instability, or cervical distonia. Long-term postoperative complications like graft instability or pseudoarthrosis can be reduced significantly with the application of the system.

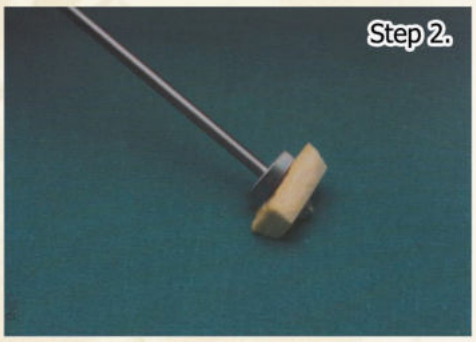
Design and size range of the CPS plates and screws
The cervical spine plate has a curved design both in longitudinal and lateral cross section.
This design enables the plate to fit perfectly over the anterior surface of the spinal vertebrae and ensure the cervical lordosis at the same time.
The size of the plates start from 25 mm and ends at 95 mm. The plate has four holes, one on each corner and according to the size different number of centrally placed round holes.
The angle stabilised screws for the plate are available in standard 4 mm diameter, made of titanium alloy. The surface of the screw is sandblasted for better fixation. The length of the screws vary between 14 to 22 mm in length, in 2 mm increments.

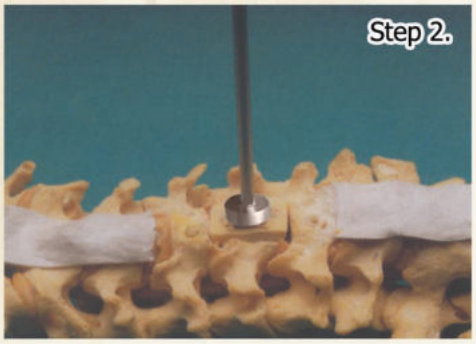
Advantages:
- precise adjustment onto the anterior surface
- high level consideration of the physiological cervical lordosis
- angle stabilised screw fixation
- intact posterior cortex
- solid graft fixation to the plate and to the vertebral body
- MR compatibility

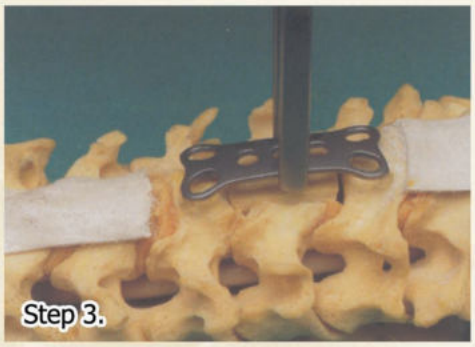
SURGICAL TECHNIQUE

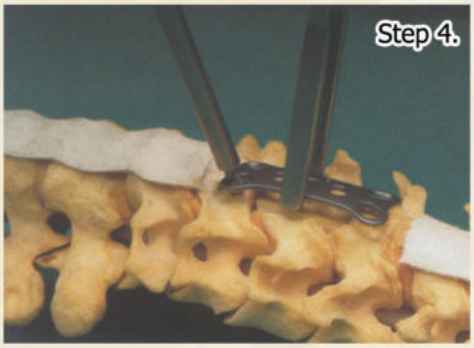
• **STEP 1**
Following the discectomy procedure, and the partial removal of bodies of the adjacent vertebrae, measure the length of the graft to be introduced, using a special graft gauge.

• **STEP 2**
Using a graft holder, introduce the multi-cortical graft into the inter-vertebral space created in the first stage, until the graft is leveled with the plane of the anterior cortex. Use a mallet to lightly tap the graft into its place. Intervertebral space can be slightly widen, by applying traction force to the patient's chin.
Graft should be 5mm longer than the original measurment obtained by the gauge, so that it can be shaped and trimmed during its introduction to best fitting result.



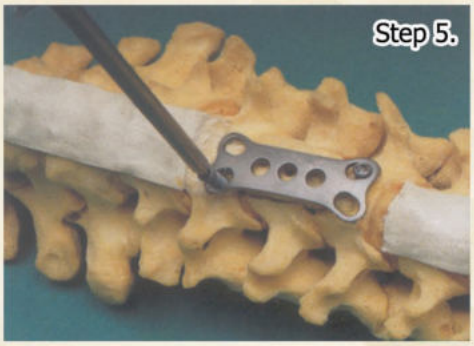






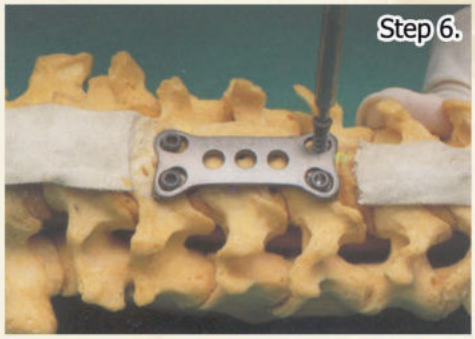
• **STEP 3**
Select the appropriate plate, and introduce onto position with the help of the plate holder.

• **STEP 4**
Using a manual drill, make a hole in the vertebral body through one of the four existing corner holes in the plate, then thread the hole for the screw

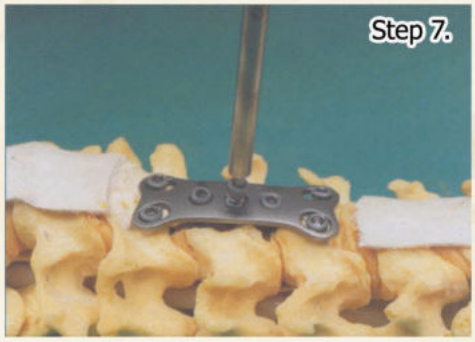


• **STEP 5**
The first screw is then introduced through the plate into the hole, with the help of a screw driver. Avoid extra tightening at this stage, or contact with the posterior cortex.

Repeat steps 4 and 5 for the each of the remaining screws.



• **STEP 6**
After all four screws have been introduced, tighten them firmly.



• **STEP 7**
Finally, the graft is drilled through the center holes of the plate, graft holes are threaded, and screws are introduced into each central hole.

729-0007-0016 Drill Bit 2.0 mm

729-0007-0017 Drill Bit 2.0 mm (long)

729-0009-48 Measuring clamp

729-0014-0005 Graftholder

729-0005-0010
Screwdriver 2,5 mm

729-0010-0020
Plate Holder Forceps

729-0010-0021
Plate Holder *

729-0004-0010 Hammer

729-0007-0018 Tap 4,0 mm

729-0007-0015
Drill Holder quick connect

* optional

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