Aesculap® activ C
Cervical Disc Prosthesis
Retain Mobility
activ C

Natural mobility
During surgery and in everyday life
Stability
The step into an eventful future supported by Clinical evidence

Back to life enjoyed to the full
V A T I O N
Retaining mobility of your patients
Physiological center of rotation

- COR in central position
- Close to COR of degenerated discs according to latest study results
  
Suchomel et al.: Sagittal segmental alignment after activ C cervical arthroplasty after 1 year follow-up, Abstract #35, ISASS 2012, Barcelona.


Reconstruction of lordosis

- Good balancing and alignment
- Significant correction of segmental angulation


Sustainable restoration of height

- Low profile
- Good contact to bone surface
- Anatomical adapted footprint and shape
- No subsidence
- No dislocation
- Restoration of Height


Meisel et al.: Does CTDR have a lower risk of device subsidence compared to ACDF? 2 year results of a prospective multicenter study, Abstract #249, ISASS 2012, Barcelona.
activ C

During surgery and in everyday life

Multilevel treatment through intelligent implant design
### Multilevel treatment
- Combination of spikes and keel
- Treatment of 2 or 3 levels is possible. Prevention of vertebral body split caused by double keel prosthesis

### Safe midline positioning
- Keel on the inferior side
- Solid anchorage in the inferior vertebral body and accurate positioning in the midline

### Safe preparation of the keel bed
- Intelligent instrumentation and reamer guidance
- No chiseling
- Easy and gentle preparation of the keel bed; risk of spinal cord and blood vessel injuries reduced
activ C

Stability in every situation

High stability and accurate placement
<table>
<thead>
<tr>
<th>Anatomic design</th>
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<td>- Large contact area through convex shape of the superior prosthesis plate</td>
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<td>- Guided by the anatomy of the vertebral body, allowing accurate placement and fitting</td>
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<th>Solid anchorage cranial + caudal</th>
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<tr>
<td>- Spikes on the superior plate</td>
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<tr>
<td>- Keel on the inferior plate</td>
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<tr>
<td>- Improved anchorage in the dome - superior to keel anchorage</td>
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<tr>
<td>- Stable anchorage in the inferior vertebral body and solid support against rotation and lateral dislocation</td>
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<th>Rapid and safe osteointegration</th>
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<td>- Plasmapore® coating</td>
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<td>- Fast ingrowth of bone cells</td>
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Qualitative evaluation of study device

✓ All devices show ideal lateral placement (< 2 mm of midline placement in the m/l-direction)
✓ All devices intact (no device disassembled, loose or fractured)
✓ No device subsidence (≥ 3 mm) observed
✓ No device migration (> 3 mm) observed
✓ No device expulsion (≥ 50 % of the a/p dimension of the device extends beyond the anterior margin of the disc space)
Slight correction of degenerative instability directly post-OP

Very good maintenance of ROM over all time points

Significant restoration of disc height and maintenance of disc height from 6 weeks post-OP (after spike penetration) to all other time-points

Reduction of NDI over all time points

Significant reduction of NDI from pre-OP to 6 weeks and from 6 weeks to 6 month

Significant reduction of VAS Neck & Arm Pain from pre-OP to 6 weeks and from pre-OP to 1 year


Meisel et al.: Does CTDR have a lower risk of device subsidence compared to ACDF 2 year results of a prospective multi-center study, Abstract #249, ISASS 2012, Barcelona.