Visualization and Instruments for Thoracic Spine Surgery
As part of a long and rich history of innovation in minimally invasive surgery, KARL STORZ has developed surgical access and visualization strategies exclusively for thoracic spine surgery. This product portfolio continues to grow and meanwhile covers the entire spectrum ranging from open surgery to keyhole interventions through to the percutaneous approach.

The VITOM® 3D in particular provides a revolutionary solution for the visualization of interventions in microsurgery and open surgery on the spine. Application possibilities are similar to that of the operating microscope. The surgeon can work comfortably via a 3D monitor which allows for a relatively free choice of working positions. The most important functions are controlled via the IMAGE1 PILOT, which is mounted on the OR table in the direct vicinity of the surgeon.

Source: Dr. Rosenthal, Hochtaunus-Kliniken, Bad Homburg, Germany
This brochure classifies all options according to product type. This makes it easy and convenient for the surgeon to assemble an instrument set to suit individual needs or to upgrade existing equipment.

To assemble an instrument set, the user can follow the steps shown below and choose from the different instrument categories:

- Visualization
- Access instruments
- Instruments for hemorrhage control
- Grasping instruments
- Hand instruments
- Accessories
Visualization

VITOM® 3D

VITOM® 3D, with zoom and focus function, integrated illumination and horizontal alignment, working distance 20-50 cm, fiber optic light transmission incorporated, wipe-disinfectable, for use with IMAGE1 S CONNECT™ + IMAGE1 S D3-LINK™ + IMAGE1 PILOT

IMAGE1 PILOT, control unit with 3D wheel, 4 programmable function keys and USB port, for intuitive control of camera systems and connected units, for use with IMAGE1 S™ and VITOM® 3D TH 200

Use of the IMAGE1 PILOT is mandatory for VITOM® 3D. VITOM® 3D and IMAGE1 PILOT are always used with a holding system.

Further information on holding systems is available in the final chapter of this brochure or in the Telepresence catalog.
Visualization

Overview of VITOM® 3D

Further information on compatible camera heads, video endoscopes and holding systems is available in the relevant product catalogs.
Visualization
VITOM® II Spine

**20916025 DA**  
**VITOM® Telescope 90° with Integrated Illuminator,**  
VITOM® HOPKINS® telescope 90°, working distance 25-75 cm, length 11 cm, **autoclavable,** with fiber optic light transmission incorporated and condenser lenses,  
color code: blue

**20916025 AA**  
**VITOM® Telescope 0° with Integrated Illuminator,**  
VITOM® HOPKINS® straight forward telescope 0°,  
working distance 25-75 cm, length 11 cm, **autoclavable,** with fiber optic light transmission incorporated and condenser lenses,  
color code: green

**20916020**  
**VITOM® 25 Telescope 0°,** VITOM® 25 HOPKINS® straight forward telescope 0°,  
working distance 25-75 cm, diameter 10 mm, length 11 cm, **autoclavable,** with fiber optic light transmission incorporated and condenser lenses,  
color code: green
Visualization

TIPCAM®1 S 3D

26605 AA  
TIPCAM®1 S 3D LAP, with two FULL HD image sensors, direction of view 0°, diameter 10 mm, length 32 cm, *autoclavable*, S-Technologies available, freely programmable camera head buttons, including video connecting cable, for use with IMAGE1 S™

26605 BA  
TIPCAM®1 S 3D LAP, with two distal FULL HD image sensors, direction of view 30°, diameter 10 mm, length 32 cm, *autoclavable*, S-Technologies available, freely programmable camera head buttons, including video connecting cable, for use with IMAGE1 S™
Visualization

HOPKINS® Telescopes

26003 AA  HOPKINS® Straight Forward Telescope 0°, enlarged view, diameter 10 mm, length 31 cm, autoclavable, fiber optic light transmission incorporated, color code: green

26003 BA  HOPKINS® Forward-Oblique Telescope 30°, enlarged view, diameter 10 mm, length 31 cm, autoclavable, fiber optic light transmission incorporated, color code: red

26003 AE  ENDOCAMeleon® HOPKINS® Telescope, diameter 10 mm, length 32 cm, autoclavable, variable direction of view from 0°-120°, adjustment knob for selecting the desired direction of view, fiber optic light transmission incorporated, color code: gold
Access Instruments

Trocars

<table>
<thead>
<tr>
<th>Size:</th>
<th>6 mm</th>
<th>11 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working length:</td>
<td>8.5 cm</td>
<td>8.5 cm</td>
</tr>
<tr>
<td>Color code:</td>
<td>black</td>
<td>green</td>
</tr>
<tr>
<td><strong>Trocar</strong>, with blunt tip including: <strong>Cannula</strong>, flexible, with silicone leaflet valve <strong>Trocar only</strong></td>
<td>30120 NOL</td>
<td>30123 NOL</td>
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<tr>
<td></td>
<td>30120 NL</td>
<td>30123 NL</td>
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<tr>
<td></td>
<td>30120 NO</td>
<td>30123 NO</td>
</tr>
<tr>
<td><strong>Trocar</strong>, with blunt tip, flexible cannula, autoclavable including: <strong>Cannula</strong> <strong>Trocar only</strong></td>
<td>40120 NAL</td>
<td></td>
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<tr>
<td></td>
<td>40120 NL</td>
<td>40120 A</td>
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<tr>
<td><strong>Accessories</strong>: Plastic Cannula, autoclavable, for flexible trocars, size 6 mm, package of 5</td>
<td>30120 X</td>
<td>30123 X</td>
</tr>
</tbody>
</table>

Note: Instruments with curved jaws or distally angled sheaths must be used with trocars with flexible cannulas!

For KARL STORZ trocars only the individual components are numbered. The catalog number for the entire assembled trocar, as shown above in bold print, does not appear on the instrument.
Access Instruments

Trocars

Size 6 mm
for use with instruments size 5 mm

<table>
<thead>
<tr>
<th>Size:</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Working length</td>
<td>8.5 cm</td>
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<tr>
<td>Color code</td>
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<td>Trocar, with conical-blunt tip, including:</td>
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<tr>
<td>Cannula, flexible, with LUER-Lock connector</td>
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<tr>
<td>Valve Seal, for single use, package of 10</td>
<td>30160-XV5</td>
</tr>
<tr>
<td>Accessories:</td>
<td></td>
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<tr>
<td>Plastic Cannula, autoclavable, for flexible trocars, package of 5</td>
<td>30120 X</td>
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</tbody>
</table>

Size 11 mm
for use with instruments size 10 mm

<table>
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<tbody>
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<td>Working length</td>
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</tr>
<tr>
<td>Color code</td>
<td>green</td>
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<tr>
<td>Trocar, with conical-blunt tip, including:</td>
<td>30103 NOL</td>
</tr>
<tr>
<td>Cannula, flexible, with LUER-Lock connector</td>
<td>30103 NL</td>
</tr>
<tr>
<td>Trocar only</td>
<td></td>
</tr>
<tr>
<td>Valve Seal, for single use, package of 10</td>
<td>30103 NO</td>
</tr>
<tr>
<td>Accessories:</td>
<td></td>
</tr>
<tr>
<td>Plastic Cannula, autoclavable, for flexible trocars, package of 5</td>
<td>30123 X</td>
</tr>
</tbody>
</table>
Access Instruments
Retractors, Specula

801701 KOCHER-LANGENBECK Retractor, size 25 x 6 mm, length 21.5 cm

801702 Same, size 35 x 8 mm

801703 Same, size 35 x 11 mm

801708 Same, size 65 x 14 mm

801800 LANGENBECK Retractor, size 33 x 14 mm, length 22 cm

28163 BSM Speculum, blade length 6 cm, diameter 11 mm in closed position, distension width 19 mm, with ratchet between the branches

28163 BSG Same, blade length 8 cm

28163 BSK Expandable Speculum, blade length 6 cm, diameter 11 mm in closed position, distension width 19 mm

28163 BSS Same, blade length 6 cm
Access Instruments

Dilation Rod

26020 OM  **Dilation Rod**, HEINKEL-SEMM Dilation Set 26020 HM and 26020 HP

Fan Retractors

28163 FPK  **Fan Retractor**, dismantling, retractable, size 10 mm, length 30 cm including:
- Outer Sheath
- Fan Retractor Insert

28163 BFP  **Articulating Fan Retractor**, diameter 10 mm, distally bendable to 30°, finger distension width 7.5 cm, total length 34 cm, autoclavable, for use with trocars size 11 mm
Instruments for Hemorrhage Control
Unipolar Coagulation

33351 ML  **CLICKLINE KELLY Dissecting and Grasping Forceps**, rotating, dismantling, insulated, with connector pin for unipolar coagulation, with Luer-Lock irrigation connector for cleaning, double action jaws, long, size 5 mm, length 36 cm

33351 UL  **CLICKLINE REDDICK-OLSEN Dissecting and Grasping Forceps**, rotating, dismantling, insulated, with connector pin for unipolar coagulation, with Luer-Lock irrigation connector for cleaning, double action jaws, robust, size 5 mm, length 36 cm

33351 R  **CLICKLINE Dissecting and Grasping Forceps**, rotating, dismantling, insulated, with connector pin for unipolar coagulation, with Luer-Lock irrigation connector for cleaning, double action jaws, right-angled, size 5 mm, length 36 cm

34351 MS  **CLICKLINE METZENBAUM Scissors**, rotating, dismantling, insulated, with connector pin for unipolar coagulation, with Luer-Lock irrigation connector for cleaning, double action jaws, curved, size 5 mm, length 36 cm

34351 EK  **CLICKLINE Hook Scissors**, rotating, dismantling, insulated, with connector pin for unipolar coagulation, with Luer-Lock irrigation connector for cleaning, single action jaws, tips of jaws not crossing, size 5 mm, length 36 cm
Instruments for Hemorrhage Control

Unipolar Coagulation

30775 UF  **Coagulation and Dissection Electrode**, L-shaped, with connector pin for unipolar coagulation, size 5 mm, length 36 cm

26775 C  **CADIERE Coagulation and Dissection Electrode**, insulated sheath, with connector pin for unipolar coagulation, L-shaped, with cm-marking, distal tip tapered, size 5 mm, length 36 cm
Instruments for Hemorrhage Control
Bipolar Coagulation

**TAKE-APART® Bipolar Coagulation Forceps**, with connector pin for bipolar coagulation, with movable inner sheath and non-retracting jaws, width of jaws 3 mm, size 5 mm, length 43 cm

**TAKE-APART® SCHNEIDER Bipolar Coagulation Forceps**, with connector pin for bipolar coagulation, with movable inner sheath and non-retracting jaws, width of jaws 3 mm, size 5 mm, length 33 cm

**ROBI® KELLY Dissecting and Grasping Forceps**, CLERMONT-FERRAND model, rotating, dismantling, with connector pin for bipolar coagulation, with Luer-Lock irrigation connector for cleaning, double action jaws, especially suitable for dissection, size 5 mm, length 36 cm
Instruments for Hemorrhage Control
Suction and Irrigation Tubes

28163 BSN  TAKE-APART® Bipolar Coagulation Suction Tube, with stopcock, size 5 mm, length 30 cm

37370 GC  GORDTS and CAMPO Coagulation Suction and Irrigation Tube, bipolar, diameter 5 mm, length 36 cm, for use with suction and irrigation handles

30804  Handle with Trumpet Valve, for suction or irrigation, autoclavable, for use with 5 mm coagulation suction tubes, 3 and 5 mm suction and irrigation tubes

26173 BN  Suction and Irrigation Tube, with lateral holes, anti-reflex surface, with two-way stopcock for single-hand control, size 5 mm, length 36 cm
Instruments for Hemorrhage Control
Clip Applicator and Needle Holder

30444 LR  **Clip Applicator**, dismantling, rotating, size 10 mm, length 36 cm, for PILLING-WECK Titanium Clips 30460 AL (medium-large), with ratchet to lock the jaw holding the clip.

30460 AL  **PILLING-WECK Titanium Clip**, medium-large, box with 16 sterile cartridges, 10 clips each, for use with Clip Applicator 30444 LR.

30173 FAO  **KOH Macro Needle Holder**, dismantling, with LUER-Lock irrigation connector for cleaning, single action jaws, straight jaws, with tungsten carbide inserts, with ergonomic handle, axial, disengageable ratchet, ratchet position top, size 5 mm, length 33 cm.
Instruments for Hemorrhage Control

Knot Tier and Surgical Sponge Holder

26596 CL  **CICE Knot Tier**, CLERMONT-FERRAND model, for extracorporeal knotting, size 5 mm, length 36 cm

32540 PT  **Surgical Sponge Holder**, self-retaining, size 10 mm, length 30 cm
Grasping Instruments
Rongeurs and Bone Punches

28163 RKG  **Rongeur**, dismantling, graduated scale at the distal end, jaws 5 mm, round sheath diameter 10 mm, working length 30 cm

28163 RGG  **Rongeur**, dismantling, graduated scale at the distal end, jaws 8 mm, round sheath diameter 10 mm, working length 30 cm

28163 RKK  **Rongeur**, upturned 30°, dismantling, graduated scale at the distal end, jaws 5 mm, round sheath diameter 10 mm, working length 30 cm

28163 PKS  **KERRISON Bone Punch**, dismantling, graduated scale at the distal end, 40° upbiting, not through-cutting, 3 mm, round sheath diameter 10 mm, working length 30 cm

28163 PKG  **KERRISON Bone Punch**, dismantling, graduated scale at the distal end, 90° upbiting, not through-cutting, 3 mm, round sheath diameter 10 mm, working length 30 cm

28163 PGG  **KERRISON Bone Punch**, dismantling, graduated scale at the distal end, 90° upbiting, not through-cutting, 5 mm, round sheath diameter 10 mm, working length 30 cm
Grasping Instruments

Forceps

28163 UK  **Spoon Forceps**, round, single action jaws, diameter 2.5 mm, working length 30 cm

28163 FBM  **Grasping Forceps**, double action jaws, diameter 2.7 mm, working length 36 cm

28163 UM  **Spoon Forceps**, oval, single action jaws, diameter 2 mm, working length 30 cm

28163 FZ  **Grasping Forceps**, single action jaws, with 90° angle of view, diameter 3.5 mm, working length 36 cm
Hand Instruments
Curettes

28163 WC  Curette, sharp, spoon-shaped, oval, 3.5 x 5 mm, working length 30 cm

28163 WD  Curette, sharp, spoon-shaped, oval, 3.5 x 9 mm, working length 30 cm

28163 WE  Curette, sharp, spoon-shaped, oval, 5 x 6.5 mm, working length 30 cm

28163 WF  Curette, sharp, spoon-shaped, oval, 5.5 x 7.5 mm, working length 30 cm

28163 WK  Curette, sharp, spoon-shaped, round, diameter 5 mm, working length 30 cm

28163 WL  Curette, sharp, spoon-shaped, oblong, 2.5 x 6 mm, working length 30 cm

28163 WM  Curette, sharp, spoon-shaped, oblong, 3.5 x 9 mm, working length 30 cm

28163 SBK Curette, stirrup-shaped, for straightening end plates, size 10 mm, working length 30 cm
Hand Instruments

Curettes

28163 GI  
**Spoon Curette**, sharp, 4 x 6 mm, diameter 5 mm, 
working length 36 cm

28163 GK  
**Spoon Curette**, sharp, 3 x 4 mm, diameter 5 mm, 
working length 36 cm

28163 GL  
**Spoon Curette**, sharp, 3 x 4 mm, spoon angled 45°, diameter 5 mm, 
working length 36 cm

28163 WN  
**Ring Curette**, graduated, distal end slightly curved, size 10 mm, 
ring size diameter 8 mm, working length 30 cm

28163 WG  
**Ring Curette**, graduated, distal end slightly curved, size 10 mm, 
ring size diameter 6 mm, working length 30 cm
Hand Instruments
Dissector, Knife, Hooks and Palpation Rod

28163 FDW  **Dissector**, distally curved 45°, diameter 2.6 mm, working length 36 cm

26169 DO  **BERCI Micro Knife**, pointed, retractable, size 5 mm, length 31 cm

28163 WH  **Hook**, 90°, blunt, working length 30 cm

28163 GH  **Palpation Hook**, hook angled 90°, blunt, diameter 5 mm, working length 36 cm

28163 BT  **Blunt Palpation Rod**, scaled, diameter 5 mm, working length 30 cm, for use with trocars size 11 mm
**Hand Instruments**

**Raspatories, Chisels, Osteotome and Elevator**

- **28163 RR**  
  *Raspatory*, diameter 5 mm, working length 36 cm

- **28163 KR**  
  *Same*, diameter 2 mm

- **28163 MF**  
  *Raspatory*, for dissection, size 7 mm, working length 30 cm

- **28163 RP**  
  *Rasp*, for coarsening the bone surface, size 10 mm, working length 30 cm

- **28163 MS**  
  *Tappet*, blunt, grooved, for positioning the bone implant, size 10 mm, working length 30 cm

- **28163 BM**  
  *Chisel*, scaled, with straight cutting area, size 8 mm, working length 30 cm

- **28163 BN**  
  *Chisel*, scaled, with 10° curved cutting area, size 8 mm, working length 30 cm

- **28163 BO**  
  *Blunt Osteotome*, scaled, distally 10 mm, working length 30 cm, with silicone handle

- **28163 BE**  
  *Rib Head Elevator*, scaled, sickle-shaped cutting edge, size 10 mm, working length 30 cm, with silicone handle, for use with Speculum 28163 BSS or Speculum 28090 SG
Hand Instruments
Thoracic Meter, Collar and Mallet

28163 Bi  Thoracic Meter, to determine the distance between the vertebral bodies, with wheel handle and scale, diameter 5 mm, working length 30 cm

28163 MK  Collar, for deflecting the mallet, for use with Chisel 28163 MM

28163 CMS  Slit Mallet, with plastic replacement head on one side, silicone handle, length 25 cm

It is recommended to check the suitability of the product for the intended procedure prior to use.
Accessories

Wire Trays for Cleaning, Sterilization and Storage

Telescopes

39501 B2  **Wire Tray for Cleaning, Sterilization and Storage**
of two rigid endoscopes and one light cable, including holder for light post adaptors, silicone telescope holders and lid, external dimensions (w x d x h): 487 x 125 x 54 mm, for rigid endoscopes up to diameter 10 mm and working length 34 cm

39501 BEC  **Wire Tray for Cleaning, Sterilization and Storage**
of ENDOCAMELEON®, length 32 cm and one light cable, including holder for light post adaptor, silicone telescope holder and lid, external dimensions (w x d x h): 480 x 125 x 54 mm
Wire Tray for Cleaning, Sterilization and Storage
of TIPCAM®1 S 3D LAP Video Endoscopes 26605 AA/BA
and one light cable, autoclavable, external dimensions
(w x d x h): 640 x 150 x 87 mm

Instrument Rack for Cleaning, Sterilization and Storage
of up to 14 instruments with diameter 2.5 to 10 mm, including
variable bars with silicone holders, rack with Tray 39502 V
for drawer and Wire Tray 39502 X, external dimensions
(w x d x h): 480 x 250 x 125 mm

Same, for use with standard wire trays, external dimensions
(w x d x h): 463 x 238 x 125 mm