Skull Base Surgery

Visualization

4K  HD  3D

Lens Irrigation System
ENDOMAT® SELECT
Instruments

- Instrument Set for Minimally Invasive Transnasal Skull Base Surgery
- UNIDRIVE® S III ENT
- DRILLCUT-X® II-35
  - Sinus Burr 35k
  - Sinus Burr 12k
  - Shaver Blades
- High-Speed Micro Motor
- High-Speed Drill Handpieces 100,000 rpm
- INTRA Handpieces 80,000 rpm
- INTRA Handpieces 40,000 rpm

Navigation

- Motor System
- NAV1® ELECTROMAGNETIC
- NAV1® OPTICAL
- NAV1® SINUSTRACKER™

Bleeding Management

Highlights OTORHINOLARYNGOLOGY | 1-2020
Skull Base Surgery
Endoscopes and Instruments for Minimally Invasive Transnasal Skull Base Surgery

The use of an endoscope in transnasal skull base surgery offers several advantages. These include a wide field of vision and improved light intensity which provide a clear visualization of deep-lying structures. Moreover, HOPKINS® rod lens telescopes with an angled direction of view (e.g., 30°, 45°) offer the possibility of a direct view of otherwise invisible areas, thus facilitating a surgical procedure under visual control.

The introduction of 4K video technology and 3D endoscopy provides good image quality in order to perform the procedure.
Intraoperative Visualization and Orientation

HOPKINS® Telescopes, with enlarged view

- **HOPKINS® Straight Forward Telescope 0°**, enlarged view, diameter 4 mm, length 18 cm, autoclavable, fiber optic light transmission incorporated, color code: green
- **HOPKINS® Forward-Oblique Telescope 30°**, enlarged view, diameter 4 mm, length 18 cm, autoclavable, fiber optic light transmission incorporated, color code: red
- **HOPKINS® Forward-Oblique Telescope 45°**, enlarged view, diameter 4 mm, length 18 cm, autoclavable, fiber optic light transmission incorporated, color code: black
- **HOPKINS® Lateral Telescope 70°**, enlarged view, diameter 4 mm, length 18 cm, autoclavable, fiber optic light transmission incorporated, color code: yellow

Access, Fine Dissection and Decompression

Osteotome, Mallet, Elevator and Knife

- **WALTER Osteotome**, flat, double-edged grinding, width 3 mm, length 19 cm
- **COTTLE Metal Mallet**, length 18 cm
- **MASING Elevator**, double-ended, graduated, sharp and blunt, length 22.5 cm
- **Sickle Knife**, pointed, length 19 cm
Antrum Punches

459051  STAMMBERGER Antrum Punch, right side downward and forward cutting, with cleaning connector, working length 10 cm

459052  STAMMBERGER Antrum Punch, left side downward and forward cutting, with cleaning connector, working length 10 cm

STAMMBERGER RHINOFORCE® II Antrum Punch

459030  STAMMBERGER RHINOFORCE® II Antrum Punch, small pediatric size, slender, upward backward cutting, with cleaning connector, working length 10 cm
KERRISON Bone Punches

662112 KERRISON Bone Punch, detachable, rigid, 90° downbiting, not through-cutting, size 2 mm, working length 17 cm

662102 KERRISON Bone Punch, detachable, rigid, 90° upbiting, not through-cutting, size 2 mm, working length 17 cm

Forceps

451001B GRÜNWALD-HENKE RHINOFORCE® II Nasal Cutting Forceps, straight, through-cutting, tissue-sparing, BLAKESLEY shape, size 1, width 3.5 mm, with cleaning connector, working length 13 cm

451501B GRÜNWALD-HENKE RHINOFORCE® II Nasal Cutting Forceps, 45° upturned, through-cutting, tissue-sparing, BLAKESLEY shape, size 1, width 3.5 mm, with cleaning connector, working length 13 cm

663231 Forceps, dismantling, straight, with round cupped jaws, diameter 2.5 mm, working length 18 cm

663241 Forceps, dismantling, straight, with round cupped jaws, diameter 4 mm, working length 18 cm

663237 Forceps, dismantling, 45° upturned, with round cupped jaws, diameter 2.5 mm, working length 18 cm

Further instruments can be found in the ENT catalog.
Management of Bleeding

Bleeding in the operative field impairs the view of the operation site and can, depending on the extent of bleeding, pose a risk to the health of the patient. Only successful hemostasis – Surgical Bleeding Management – makes it possible to continue surgery and to prevent complications caused by poor visibility.
STAMMBERGER Bipolar Suction Forceps

461010 STAMMBERGER Bipolar Suction Forceps, 15° upturned, with suction channel, for bipolar coagulation in paranasal areas, working length 12.5 cm, for use with Bipolar High Frequency Cords 847002E or 847002M/V/U/W

461015 STAMMBERGER Bipolar Suction Forceps, 45° upturned, with suction channel, for bipolar coagulation in paranasal areas, working length 12.5 cm, for use with Bipolar High Frequency Cords 847002E or 847002M/V/U/W

Suction Cannulas

83930 BRINER Bipolar Coagulation Suction Cannula, angular, insulated, length of electrodes 3.5 mm, with cut-off hole, outer diameter 4.5 mm, working length 11 cm, for use with Bipolar High Frequency Cords 847000E or 847000M/V/W

839325 BRINER Bipolar Coagulation Suction Cannula, angular, insulated, length of electrodes 3.2 mm, with cut-off hole, outer diameter 3.5 mm, working length 11 cm, for use with Bipolar High Frequency Cords 847000 or 847000A/E/M/V

839320 BRINER Bipolar Coagulation Suction Cannula, curved upwards, insulated, length of electrodes 3.2 mm, with cut-off hole, outer diameter 3.5 mm, working length 16 cm, for use with Bipolar High Frequency Cords 847000 or 847000E/M/V/W

839310N Coagulation Suction Cannula, for the nose, straight, outer diameter 3 mm, working length 10 cm

839312 SIMMEN Coagulation Suction Cannula, for nose and epistaxis, angular, insulated, malleable, distal with uninsulated horn for coagulation, with cut-off hole, outer diameter 3.5 mm, working length 12 cm, for use with Unipolar High Frequency Cords 26005M, 26004M, 26002M, 26006M

839313 SIMMEN Coagulation Suction Cannula, for nose and epistaxis, angular, insulated, malleable, distal with uninsulated horn for coagulation, with cut-off hole, outer diameter 4.5 mm, working length 12 cm, for use with Unipolar High Frequency Cords 26005M, 26004M, 26002M, 26006M

Coagulation Forceps with Bridge

844524 Bipolar Forceps, bayonet-shaped, with bridge, tip 0.7 mm, length 23 cm

844525 Bipolar Forceps, bayonet-shaped, angled, with bridge, tip 0.7 mm, length 23 cm

TAKE-APART® Bipolar Forceps

462020 TAKE-APART® CASTELNUOVO Bipolar Forceps, with fine jaws, distally angled 45°, with irrigation connector for cleaning, width 2 mm, outer diameter 3.4 mm, working length 14 cm including:
  - Bipolar Ring Handle
  - Outer Sheath
  - Inner Sheath
  - Bipolar Forceps Insert

462023 TAKE-APART® CASTELNUOVO Bipolar Forceps, with fine, short jaws, distally angled 45°, with irrigation connector for cleaning, width 2 mm, outer diameter 3.4 mm, working length 14 cm including:
  - Bipolar Ring Handle
  - Outer Sheath
  - Inner Sheath
  - Bipolar Forceps Insert
UNIDRIVE® S III ENT

One unit – six functions

- Shaver
- Sinus Burr (up to 35,000 rpm)
- High-speed Micro Motor
- High-performance EC Micro Motor II
- Micro Saw
- Dermatome
40701601-1  **UNIDRIVE® S III ENT SCB**, motor control unit with color display, touch screen, two motor outputs, integrated irrigation pump and integrated SCB module, power supply 100-240 VAC, 50/60 Hz including:

- **Mains Cord**
- **Irrigator Rod**
- **Two-Pedal Footswitch**
- **SCB Connecting Cable**, length 100 cm
- **Single-use Tubing Set**, sterile, package of 3

### Optional Accessories

280053  **Universal Spray**, 6x 500 ml bottles, - HAZARDOUS GOODS – UN 1950 including:

- **Spray Nozzle**

280053C  **Spray Nozzle**, for the reprocessing of INTRA burr handpieces, for use with Universal Spray 280053B

031131-10*  **Tubing Set**, sterile, for single use, package of 10, for use with UNIDRIVE® ENT/ECO/NEURO, UNIDRIVE® S III ENT/ECO/NEURO
DRILLCUT-X® II-35 – When Power Meets Precision

Handpiece for the UNIDRIVE® S III ENT motor system

The DRILLCUT-X® II-35 handpiece, in conjunction with the 35k sinus burrs, represents an innovative addition to the KARL STORZ product portfolio and is specially optimized for the highest speeds.

- Up to 35,000 rpm
- Five different burr inserts available
- Handpiece and burr inserts can be used with the existing UNIDRIVE® S III ENT motor system
- Handpiece can also be used with shaver attachments
DRILLCUT-X® II-35 Shaver Handpiece, for use with UNIDRIVE® S III ENT/NEURO

DRILLCUT-X® II-35 N Shaver Handpiece, with adaptation possibilities for Optical Shaver Tracker 40800122, for use with UNIDRIVE® S III ENT/NEURO and NAV1® PICO or NAV1® OPTICAL.

Handle, adjustable, for use with DRILLCUT-X® II N shaver handpiece

Optional Accessories

Cleaning Adaptor, Luer-Lock, for cleaning DRILLCUT-X®/DRILLCUT-X® II/DRILLCUT-X® II-35 handpieces

Wire Tray, provides safe storage of accessories for KARL STORZ paranasal sinus shaver systems during cleaning and sterilization, for storage of up to 7 shaver attachments and a connecting cable

<table>
<thead>
<tr>
<th>Detail</th>
<th>Sinus Burr 35k, with integrated irrigation, length 12 cm, sterile, for single use, package of 5, color code: red</th>
</tr>
</thead>
<tbody>
<tr>
<td>41335RN</td>
<td>curved 15°, bud drill, burr diameter 4 mm, shaft diameter 4 mm</td>
</tr>
<tr>
<td>41335W</td>
<td>curved 40°, cylindrical, burr diameter 3 mm, shaft diameter 4 mm</td>
</tr>
<tr>
<td>41335DW</td>
<td>curved 40°, diamond head, burr diameter 5 mm, shaft diameter 4 mm</td>
</tr>
<tr>
<td>41335DS</td>
<td>curved 40°, diamond head, burr diameter 4 mm, shaft diameter 4 mm</td>
</tr>
<tr>
<td>41335DT</td>
<td>curved 70°, diamond head, burr diameter 3.6 mm, shaft diameter 4 mm</td>
</tr>
</tbody>
</table>

12k Sinus Burrs and Shaver Blades can be found in the ENT catalog.
High-Performance EC Micro Motor II with INTRA Drill Handpieces

- Self-cooling and brushless high-performance EC Micro Motor II
- Autoclavable and can be reprocessed in a cleaning machine
- Possible to adjust the number of revolutions to 80,000 rpm with the appropriate handles
- Detachable irrigation tubes
### High-Performance EC Micro Motor II

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>20711033</td>
<td><strong>High-Performance EC Micro Motor II</strong>, for use with UNIDRIVE® II/UNIDRIVE® ENT/OMFS/NEURO/ECO and Connecting Cable 20711073 or for use with UNIDRIVE® S III ENT/ECO/NEURO and Connecting Cable 20711173</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>20711173</td>
<td>Connecting Cable, to connect High-Performance EC Micro Motor II 20711033 to UNIDRIVE® S III ENT/ECO/NEURO</td>
</tr>
</tbody>
</table>

### INTRA Drill Handpieces, 80,000 rpm, angled

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>252573</td>
<td>INTRA Drill Handpiece, angled, length 12.5 cm, transmission 1:2 (80,000 rpm)</td>
</tr>
<tr>
<td>252574</td>
<td>INTRA Drill Handpiece, angled, length 15 cm, transmission 1:2 (80,000 rpm)</td>
</tr>
<tr>
<td>252575</td>
<td>INTRA Drill Handpiece, angled, length 18 cm, transmission 1:2 (80,000 rpm)</td>
</tr>
</tbody>
</table>

### INTRA Drill Handpieces, 40,000 rpm, straight

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>252590</td>
<td>INTRA Drill Handpiece, straight, length 11 cm, transmission 1:1 (40,000 rpm)</td>
</tr>
<tr>
<td>252591</td>
<td>INTRA Drill Handpiece, straight, length 13 cm, transmission 1:1 (40,000 rpm)</td>
</tr>
<tr>
<td>252592</td>
<td>INTRA Drill Handpiece, straight, length 17 cm, transmission 1:1 (40,000 rpm)</td>
</tr>
</tbody>
</table>

### INTRA Drill Handpieces, 40,000 rpm, angled

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>252570</td>
<td>INTRA Drill Handpiece, angled, length 12.5 cm, transmission 1:1 (40,000 rpm)</td>
</tr>
<tr>
<td>252571</td>
<td>INTRA Drill Handpiece, angled, length 15 cm, transmission 1:1 (40,000 rpm)</td>
</tr>
<tr>
<td>252572</td>
<td>INTRA Drill Handpiece, angled, length 18 cm, transmission 1:1 (40,000 rpm)</td>
</tr>
</tbody>
</table>

### Optional Accessories

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>39130AR</td>
<td>Cleaning Adaptor, Luer-Lock connector, for use with INTRA and High-Speed Handpieces 2525xx, 2526xx</td>
</tr>
</tbody>
</table>

Suitable burr inserts can be found in the ENT catalog.
High-Speed Micro Motor with High-Speed Drill Handpieces

High-speed motor system for otorhinolaryngology

Special Features:

- Continuously variable high-speed handpieces with up to 100,000 rpm
- Malleable handpieces available
- Burr inserts for single use
40701601-1  **UNIDRIVE® S III ENT SCB**, motor control unit with color display, touch screen, two motor outputs, integrated irrigation pump and integrated SCB module, power supply 100-240 VAC, 50/60 Hz

20712033  **High-Speed Micro Motor**, max. speed 60,000 rpm, including connecting cable, for use with UNIDRIVE® S III ENT/NEURO

252680  **High-Speed Handpiece**, short, angled, 100,000 rpm

252681  **High-Speed Handpiece**, medium, angled, 100,000 rpm

252682  **High-Speed Handpiece**, long, angled, 100,000 rpm

252660  **High-Speed Handpiece**, extra short, angled, 60,000 rpm

252661  **High-Speed Handpiece**, short, angled, 60,000 rpm

252662  **High-Speed Handpiece**, medium, angled, 60,000 rpm

252663  **High-Speed Handpiece**, long, angled, 60,000 rpm

252690  **High-Speed Handpiece**, extra short, straight, 60,000 rpm

252691  **High-Speed Handpiece**, short, straight, 60,000 rpm

252692  **High-Speed Handpiece**, medium, straight, 60,000 rpm

252671  **High-Speed Handpiece**, extra long, malleable, slim, angled, 60,000 rpm

252672  **High-Speed Handpiece**, super long, malleable, slim, angled, 60,000 rpm

**Optional Accessories**

39130AR  **Cleaning Adaptor**, Luer-Lock connector, for use with INTRA and High-Speed Handpieces 2525xx, 2526xx

Suitable burr inserts can be found in the ENT catalog.
The IMAGE1 S™ 4U camera system allows the operating surgeon to make optimal use of the benefits offered by 4K technology. A notable feature is the image quality: High image brightness, impressive colors, greater richness of detail and a significantly improved depth effect characterize this system. Thanks to the system’s modularity, 4U components can be easily integrated into the existing IMAGE1 S™ camera platform. Consequently, the system is still compatible with existing technologies (e.g., rigid, flexible, fluorescence and 3D endoscopy) and can be adapted to meet individual customer needs.

- IMAGE1 S™ 4U impresses with outstanding, razor-sharp images
  - Excellent image brightness
  - First-rate color rendition
  - Greater richness of detail

- Three innovative visualization technologies for tissue differentiation:
  - CLARA: Homogeneous illumination
  - CHROMA: Contrast enhancement
  - SPECTRA*: Spectral color shift and switch

- Easy integration into the IMAGE1 S™ camera platform

* not for sale in the U.S.
TC201EN*  IMAGE1 S CONNECT® II, connect module, for use with up to 3 link modules, resolution 3840 x 2160 and 1920 x 1080 pixels, with integrated KARL STORZ-SCB or KS HIVE and digital Image Processing Module, power supply 100-240 VAC, 50/60 Hz

TC304  IMAGE1 S™ 4U-LINK, link module, for use with IMAGE1 S™ 4U camera heads, power supply 100-240 VAC, 50/60 Hz, for use with IMAGE1 S CONNECT® TC200 or IMAGE1 S CONNECT™ II TC 201

TH121  IMAGE1 S™ 4U RUBINA, OPAL1® NIR/ICG, two-chip 4K UHD camera head, S-Technologies available, for NIR/ICG fluorescence imaging in combination with POWER LED RUBINA, OPAL1® NIR/ICG, progressive scan, low-temperature sterilization, focal length f = 19 mm, 2 freely programmable camera head buttons, for use with IMAGE1 S CONNECT® II and IMAGE1 S™ 4U-LINK

TH120  IMAGE1 S™ 4U One-Chip 4K UHD Camera Head, S-Technologies available, progressive scan, soakable, EO sterilization, H₂O₂ (hydrogen peroxide), focal length f = 18 mm, 2 freely programmable camera head buttons, for use with IMAGE1 S™ 4U-LINK

TM440  58” 4K Monitor, screen resolution 3840 x 2160, image format 16:9, power supply 100-240 VAC, 50/60 Hz, wall mount with VESA 400 x 400 and VESA 400 x 200 adaptors

TM 342**  31” 4K Monitor, screen resolution 3840 x 2160, image format 16:9, power supply 100-240 VAC, 50/60 Hz, wall mount with VESA 100 and VESA 200 adaptors

TM450  55” 4K/3D Monitor, screen resolution 3840 x 2160, image format 16:9, power supply 100-240 VAC, 50/60 Hz, 100-240 VAC, 50/60 Hz, wall mount with VESA 200 and VESA 300 adaptors

TM009  Signal Converter Set, 12G-SDI – 4x 3G-SDI, for use with 55” 4K/3D Monitor TM450

Suitable equipment cart for TM440 and TM450:

WA10007  OR1™ Cart for Monitor, Set, height-adjustable, for 42-64” monitor, VESA pattern min. 100/100, max. 400/400, monitor weight max. 60 kg, monitor holder height-adjustable on 1.8 m high column, four castors, floor area (in mm): 980 x 830, total height: 1.95 m

TM350  32” 4K 3D Monitor, screen resolution 3840 x 2160, image format 16:9, power supply 100-240 VAC, 50/60 Hz, wall mount with VESA 100 adaptor

TL400  Cold Light Fountain POWER LED RUBINA, for NIR/ICG fluorescence imaging and standard endoscopic diagnosis, with two LEDs and one KARL STORZ light cable connection, with integrated unit communication via KS HIVE, power supply 100-125/220-240 VAC, 50/60 Hz

TL300  Cold Light Fountain POWER LED 300 SCB, with integrated KARL STORZ-SCB, high-performance LED module and one KARL STORZ light outlet, power supply 100-240 VAC, 50/60 Hz

495NAC  Fiber Optic Light Cable, with straight connector, extremely heat-resistant, with safety lock, enhanced light transmission, can be used for ICG applications, diameter 3.5 mm, length 230 cm

495NCSC  Same, diameter 4.8 mm, length 250 cm

495TIP  Same, diameter 4.8 mm, length 300 cm

* Also available in the following languages: DE, ES, FR, IT, PT, RU
** TM342 not available in USA, Japan & China
IMAGE1 S™ – As Individual as Your Requirements

The IMAGE1 S™ camera platform offers surgeons a single system for all applications. As a modular camera platform, IMAGE1 S™ combines various technologies (e.g., rigid, flexible and 3D endoscopy) in one system and can therefore be adapted to individual customer needs. Furthermore, near infrared (NIR/ICG) for fluorescence imaging, the integration of operating microscopes and the use of VITOM® 3D is possible via the camera platform.

- Individual modules can be selected according to user requirements, e.g., for rigid, flexible and 3D technology
- Three innovative visualization technologies for easy tissue differentiation in 2D and 3D:
  - CLARA: Homogeneous illumination
  - CHROMA: Contrast enhancement
  - SPECTRA*: Color shift and exchange
- Automatic light source control
- Natural color rendition

* not for sale in the U.S.
Comparison of S-Technologies:

Standard image CLARA

Standard image CHROMA

Standard image SPECTRA*

* not for sale in the U.S.
TC201EN* IMAGE1 S CONNECT® II, connect module, for use with up to 3 link modules, resolution 3840 x 2160 and 1920 x 1080 pixels, with integrated KARL STORZ-SCB or KS HIVE and digital Image Processing Module, power supply 100-240 VAC, 50/60 Hz

TC304 IMAGE1 S™ 4U-LINK, link module, for use with IMAGE1 S™ 4U camera heads, power supply 100-240 VAC, 50/60 Hz, for use with IMAGE1 S CONNECT® TC200 or IMAGE1 S CONNECT® II TC201

TC302 IMAGE1 S D3-LINK®, link module, for use with TIPCAM® S 3D and VITOM® 3D, power supply 100-120 VAC/200-240 VAC, 50/60 Hz, for use with IMAGE1 S CONNECT® TC200 or IMAGE1 S CONNECT® II TC201

TC301 IMAGE1 S™ X-LINK, link module, for use with flexible videoendoscopes and one-chip camera heads (up to FULL HD), power supply 100-120 VAC/200-240 VAC, 50/60 Hz, for use with IMAGE1 S CONNECT® TC200 or IMAGE1 S CONNECT® II TC201

TC300 IMAGE1 S™ H3-LINK, link module, for use with IMAGE1 FULL HD three-chip camera heads, power supply 100-120 VAC/200-240 VAC, 50/60 Hz, for use with IMAGE1 S CONNECT® TC200 or IMAGE1 S CONNECT® II TC201

TH120 IMAGE1 S™ One-Chip 4K UHD Camera Head, S-Technologies available, progressive scan, soakable, EO sterilizable, H₂O₂ (hydrogen peroxide), focal length f = 18 mm, 2 freely programmable camera head buttons, for use with IMAGE1 S™ 4U-LINK

TH121 IMAGE1 S™ 4U RUBINA™, OPAL1® NIR/ICG, two-chip 4K UHD camera head, S-Technologies available, for NIR/ICG fluorescence imaging in combination with POWER LED RUBINA™, OPAL1® NIR/ICG, progressive scan, low-temperature sterilization, focal length f = 19 mm, 2 freely programmable camera head buttons, for use with IMAGE1 S CONNECT® II and IMAGE1 S™ 4U-LINK

TH113 IMAGE1 S™ HX-P Fi One-Chip FULL HD Pendulum Camera Head, S-Technologies (CHROMA, SPECTRA**** A and B) available, OPAL1® technologies (PDD) in combination with light source D-LIGHT C or D-LIGHT C/AF, with pendulum system and fixed focus, progressive scan, soakable, EO sterilizable, H₂O₂ (hydrogen peroxide), focal length f = 16 mm, 2 freely programmable camera head buttons, for use with IMAGE1 S™ X-LINK

TH110 IMAGE1 S™ HX One-Chip FULL HD Camera Head, 50/60 Hz, fixed focus, progressive scan, soakable, gas and plasma sterilizable, focal length f = 16 mm, 2 freely programmable camera head buttons, for use with IMAGE1 S™ X-LINK

TH102 IMAGE1 S™ H3-Z Fi Three-Chip FULL HD Camera Head, for white light applications and the identification of anatomical structures with indocyanine green (ICG) in conjunction with light source D-LIGHT P, progressive scan, with integrated Parfocal Zoom Lens, focal length f = 15-31 mm (2x), 2 freely programmable camera head buttons, for use with IMAGE1 S™ H3-LINK and IMAGE 1 HUB HD/IMAGE1 HD

TH100 IMAGE1 S™ Three-Chip FULL HD Camera Head, 50/60 Hz, S-Technologies available, progressive scan, soakable, EO sterilizable, H₂O₂ (hydrogen peroxide), with integrated Parfocal Zoom Lens, focal length f = 15-31 mm (2x), 2 freely programmable camera head buttons, for use with IMAGE1 S™ H3-LINK TC300 and IMAGE 1 HUB HD/IMAGE1 HD

26606ACA TIPCAM® RUBINA™, OPAL1® NIR/ICG, 4K/3D, high-resolution videoendoscope with two distal integrated video chips, for NIR/ICG fluorescence imaging in combination with POWER LED RUBINA™, OPAL1® NIR/ICG and Sync Connecting Cable TL006, direction of view 0°, diameter 10 mm, length 32 cm, autoclavable, S-Technologies available, freely programmable camera head buttons, including video connection cable, for use with IMAGE1 S CONNECT® II and IMAGE1 S™ 4U-LINK

26606BCA Same, direction of view 30°
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™

TIPCAM®1 S 3D ORL, direction of view 0°, diameter 4 mm, length 18 cm, two FULL HD image sensors, autoclavable, S-Technologies available, freely programmable camera head buttons, including video connecting cable, for use with IMAGE1 S™

TIPCAM®1 S 3D NEURO, direction of view 0°, diameter 4 mm, length 18 cm, two FULL HD image sensors, autoclavable, S-Technologies available, freely programmable camera head buttons, including video connecting cable, for use with IMAGE1 S D3-LINK®

TM440 58" 4K Monitor, screen resolution 3840 x 2160, image format 16:9
TM342*** 31" 4K Monitor, screen resolution 3840 x 2160, image format 16:9
TM450 55" 4K/3D Monitor, screen resolution 3840 x 2160, image format 16:9
TM009 Signal Converter Set, 12G-SDI – 4x 3G-SDI, for use with 55" 4K/3D Monitor TM450
TM350 32" 4K/3D Monitor, screen resolution 3840 x 2160, image format 16:9
TM220 27" FULL HD Monitor, screen resolution 1920 x 1080, image format 16:9
TL300 Cold Light Fountain POWER LED 300, with integrated KARL STORZ-SCB, high-performance LED module and one KARL STORZ light outlet
495NCSC Fiber Optic Light Cable, with straight connector, extremely heat-resistant, enhanced light transmission, with safety lock, diameter 4.8 mm, length 250 cm
495NAC Fiber Optic Light Cable, with straight connector, extremely heat-resistant, with safety lock, enhanced light transmission, can be used for ICG applications, diameter 3.5 mm, length 230 cm

* Also available in the following languages: DE, ES, FR, IT, PT, RU
** Currently not available on CE markets
*** TM342 not available in USA, Japan & China
**** not for sale in the U.S.
IMAGE1 S™ 4U Rubina™ – The New 4K NIR/ICG Camera Head

IMAGE1 S™ 4U RUBINA™ combines 4K imaging technology with fluorescence imaging for displaying NIR/ICG or autofluorescence in the near infrared range. The technology features very good image quality as well as new NIR/ICG fluorescence modes. The new modes, e.g. the superimposed NIR/ICG signal in the white light image, provide the user with valuable information. In addition, IMAGE1 S™ RUBINA™ offers the display intensity of a NIR/ICG signal and a pure near infrared mode in monochromatic color display for the clear delineation of structures.

- Native 4K image resolution with very good image brightness and richness of color and detail
- OPAL1® NIR/ICG technology with new functionalities
- S-Technologies in white light and the overlay modes Overlay and Intensity Map
- Laser-free LED light source for white light and excitation of NIR/ICG
TC201EN* **IMAGE1 S CONNECT® II**, connect module, for use with up to 3 link modules, resolution 3840 x 2160 and 1920 x 1080 pixels, with integrated KARL STORZ-SCB or KS HIVE and digital Image Processing Module, power supply 100-120 VAC/200-240 VAC, 50/60 Hz

TC304 **IMAGE1 S™ 4U-LINK**, link module, for use with IMAGE1 S™ 4U camera heads, power supply 100-240 VAC, 50/60 Hz, for use with IMAGE1 S CONNECT® TC200 or IMAGE1 S CONNECT® II TC201

TH121** **IMAGE1 S™ 4U RUBINA™**, OPAL1® NIR/ICG, two-chip 4K UHD camera head, S-Technologies available, for NIR/ICG fluorescence imaging in combination with POWER LED RUBINA™, OPAL1® NIR/ICG, progressive scan, low-temperature sterilization, focal length f = 19 mm, 2 freely programmable camera head buttons, for use with IMAGE1 S CONNECT® II and IMAGE1 S™ 4U-LINK

TL400 Cold Light Fountain POWER LED RUBINA™, for NIR/ICG fluorescence imaging and standard endoscopic diagnosis, with two LEDs and one KARL STORZ light cable connection, with integrated unit communication via KS HIVE, power supply 100-125/220-240 VAC, 50/60 Hz

UF101 One-Pedal Footswitch, one-stage

TM450 **55" 4K/3D Monitor**, screen resolution 3840 x 2160, image format 16:9, power supply 100-240 VAC, 50/60 Hz, wall-mounted with VESA 200 and VESA 300 adaptors

TM009 Signal Converter Set, 12G-SDI – 4x 3G-SDI, for use with 55" 4K/3D Monitor TM450

TM350 **32" 4K/3D Monitor**, screen resolution 3840 x 2160, image format 16:9, power supply 100-240 VAC, 50/60 Hz, wall-mounted with VESA 100 adaptor

TM440 **58" 4K Monitor**, screen resolution 3840 x 2160, image format 16:9, power supply 100-240 VAC, 50/60 Hz, wall-mounted with VESA 400 x 400 and VESA 400 x 200 adaptors

TM342*** **31" 4K Monitor**, screen resolution 3840 x 2160, image format 16:9, power supply 100-240 VAC, 50/60 Hz, wall-mounted with VESA 100 and VESA 200 adaptors

* Also available in the following languages: DE, ES, FR, IT, PT, RU
** For use with HOPKINS® RUBINA™ NIR/ICG telescopes
*** TM342 not available in USA, Japan and China
ENDOMAT® SELECT – The Choice is Yours

ENDOMAT® SELECT is an interdisciplinary roller pump for the irrigation or suction of fluids during surgical and diagnostic procedures. Depending on customer preferences, the pump can be equipped with various software packages so that it can be used for either individual or multiple disciplines.

Benefits at a glance:

- Cost-efficient pump as modular design supports basic functionality across various fields of application
- Easy handling thanks to tubing set for single hand control
- Safe use thanks to tubing set recognition
- Seamless integration into existing systems
- Software allows fields of application to be expanded at any time
UP210  ENDOMAT® SELECT SCB,
suction and irrigation pump, incl. mains cord,
power supply 100-240 VAC, 50/60 Hz

UP601  SURGERY Software, license,
allows selection of the procedures “LAP”, “THOR” and “PROCTO”,
for use with ENDOMAT® SELECT UP210

UP602  HYSTEROSCOPY Software, license,
allows selection of the procedure “HYS”,
for use with ENDOMAT® SELECT UP210

UP603  IBS® Shaver Software, license,
allows selection of the procedure “IBS™”,
for use with ENDOMAT® SELECT UP210

UP604  UROLOGY Software, license,
allows selection of the procedures “CYST”, “RES”, “URS”, “CALCUSON” and “PCN”,
for use with ENDOMAT® SELECT UP210

UP605  ARTHROSCOPY Software, license,
allows selection of the procedures “KNEE”, “HIP”, “SHOULDER” and “SMALL JOINTS”,
for use with ENDOMAT® SELECT UP210

UP606  ENT/NEURO Software, license,
allows selection of the procedure “CLEARVISION™”,
for use with ENDOMAT® SELECT UP210

UP607  SPINE Software, license,
allows selection of the procedures “LUMBAR” and “THORACAL”,
for use with ENDOMAT® SELECT UP210

UP610  ADVANCED Package, software, license,
extends functions of installed software packages,
for use with ENDOMAT® SELECT UP210

031524-10* Tubing Set, irrigation, flow-controlled,
sterile, for single use, package of 10,
for use with HAMOU® ENDOMAT® 26331120 and ENDOMAT® SELECT UP210

031523-10* Tubing Set, irrigation, pressure-controlled,
sterile, for single use, package of 10,
for use with HAMOU® ENDOMAT® 26331120 and ENDOMAT® SELECT UP210

030647-10* Tubing Set, suction, direct suction,
sterile, for single use, package of 10,
for use with ENDOMAT® SELECT UP210

031647-10* Tubing Set, suction, bottle suction,
sterile, for single use, package of 10,
for use with ENDOMAT® SELECT UP210

031529-10* Tubing Set, irrigation, CLEARVISION®,
sterile, for single use, package of 10,
for use with ENDOMAT® SELECT UP210

Day sets and reusable tubing sets are also available. Please contact your KARL STORZ representative for further information.
NAV1® electromagnetic
For precise navigation in FESS and ear surgery

- Low follow-up costs thanks to reusable EM instruments in proven KARL STORZ quality*
- High precision thanks to sensors in the instrument tips
- Compact design for easy integration into the OR
- Possible to update the system with the optical measurement technology
- User-friendly interface thanks to clearly defined control elements and menu navigation
- Possible to update NAV1® SINUSTRACKER™ planning software, the navigated endoscope and the navigated shaver tracker
- Planning and monitoring of risk structures with intraoperative Distance Control
- Automatic and reliable documentation of the navigated procedure
- Intraoperative re-registration enables manual correction of any inaccuracies, particularly in deeper regions

* Up to 30 applications guaranteed
Benefits of electromagnetic navigation compared to optical navigation:

- No restrictions as no clear line of sight to the instruments is required unlike optical measurement systems.
- All electromagnetic instruments can therefore be rotated and utilized according to the surgeon’s preferences (particularly advantageous for endoscopically assisted bimanual operating techniques).
- Malleable electromagnetic instruments can be manually adjusted to a specific anatomical surgical field.
- Less space required as no optical camera is attached to a videocart or mobile stand.

40820001 NAV1® ELECTROMAGNETIC
including:

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<th>NAV1® Module</th>
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<td>NAV1® ELECTROMAGNETIC Field Generator</td>
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<td>Headband, for navigation, for single use</td>
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<td>EM Patient Tracker</td>
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<td>2x Mains Cord, length 300 cm</td>
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<td>Module Connecting Cable</td>
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NAV1® SinusTracker™

The innovative planning software for new routes in FESS surgery

The NAV1® SINUSTRACKER™ planning software enhances the KARL STORZ NAV1® ELECTROMAGNETIC system with the automatic planning of access paths in paranasal sinus and skull base surgery. On the basis of a preoperatively set starting and destination point in the patient’s radiological data, the software allows the surgeon to determine a precise access path that is specially adapted to the individual anatomic structures of the patient. The physician then reviews and modifies the suggested access path at their discretion. Intraoperatively, the selected route is visualized on the navigation screen so that the actual position in the site is under constant control.

Benefits of the NAV1® SINUSTRACKER™

- Multiple Path Planning enables the preoperative planning and naming of up to eight access paths and alternatives
- Intraoperative visualization and control of access paths
- Less preoperative planning required thanks to automatic preplanning
- Flexible, pre- and intraoperative adaptation of the access path possible
Set waypoints by clicking into the 2D views.

40810600  **SINISTRACKER™**, additional software module for the NAV1® family, compatible with software version 6.0.0 or higher
NAV1® optical

The optical navigation system for FESS and ear surgery without any single-use products

Benefits of NAV1® OPTICAL

- Seamless integration as the basic unit can be attached to a ceiling supply unit or equipment cart
- Very economic thanks to patented autoclavable and therefore reusable glass spheres and instruments
- User-friendly interface thanks to clearly defined control elements and menu navigation
- Wide range of conventional as well as motor-driven navigation instruments in the proven KARL STORZ quality
- Possible to upgrade the system with the NAV1® ELECTROMAGNETIC module
- Intraoperative re-registration enables manual correction of any inaccuracies, particularly in deeper regions
40810001 NAV1® OPTICAL
including:
NAV1® Module
Navigation Camera
Stand, mobile
Module Connecting Cable, length 750 cm
Headband for Navigation, for single use
Patient Tracker III
Navigation Probe
Mains Cord
Optical Mouse

Optical Navigated Instruments for FESS Surgery

40800088 Patient Tracker III,
with verification adaptor, 3 incorporated glass marker spheres and fixation screw, autoclavable,
dimensions: 80 x 60 x 12 mm, for use with NAV1® PICO and NAV1® OPTICAL

40800110 Navigation Probe,
with 3 fixed glass marker spheres, autoclavable,
dimensions: 295 x 15 x 30 mm, for use with NAV1® PICO and NAV1® OPTICAL

40800111 Optical Navigated Frontal Sinus Probe,
for use with NAV1® PICO, NAV1® OPTICAL and Tool Tracker 40800120
It is recommended to check the suitability of the product for the intended procedure prior to use. Please note that the described products in this medium may not be available yet in all countries due to different regulatory requirements.
Shaping the Future of Endoscopy with you