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® SINISTRACKER™ 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:
- NAV1® Module
- NAV1® ELECTROMAGNETIC Module
- NAV1® ELECTROMAGNETIC Field Generator
- Headband, for navigation, for single use
- EM Patient Tracker
- EM Probe
- 2x Mains Cord, length 300 cm
- Module Connecting Cable
- Optical Mouse
Electromagnetic Navigated Instruments for FESS Surgery, reusable 30 times

40820105  **EM Navigation Probe**, with atraumatic tip, bayonet-shaped, for patient registration, tip diameter 1.9 mm, cable length 250 cm, working length 10.5 cm, *autoclavable*, for use with NAV1® ELECTROMAGNETIC

40820110  **EM Navigation Probe**, with atraumatic tip, malleable, straight, tip diameter 1.7 mm, cable length 250 cm, working length 8.5 cm, *autoclavable*, for use with NAV1® ELECTROMAGNETIC

40820112  **EM Navigation Probe**, with atraumatic tip, malleable, curved 63°, tip diameter 1.7 mm, cable length 250 cm, working length 8.5 cm, *autoclavable*, for use with NAV1® ELECTROMAGNETIC

40820111  **EM Frontal Sinus Probe**, with atraumatic tip, curved 77°, tip diameter 1.2 mm, cable length 250 cm, working length 7 cm, *autoclavable*, for use with NAV1® ELECTROMAGNETIC

40820145  **EM Suction Tube**, with cut-off hole, straight, LUER, outer diameter 3.5 mm, cable length 250 cm, working length 10 cm, *autoclavable*, for use with NAV1® ELECTROMAGNETIC

40820165  **EM Suction Tube**, with cut-off hole, curved 60°, LUER, outer diameter 3.5 mm, cable length 250 cm, working length 10 cm, *autoclavable*, for use with NAV1® ELECTROMAGNETIC

**NEW** 40820163  **EM Navigated Suction Tube**, curved, outer diameter 3 mm, *autoclavable*, for use with NAV1® ELECTROMAGNETIC

**Benefits:**
- Slim diameter of 3 mm
- Lateral suction hole for regulating suction power

**NEW** 40820175  **EM Navigated Suction Tube**, double curved, outer diameter 3 mm, *autoclavable*, for use with NAV1® ELECTROMAGNETIC

**Benefits:**
- Slim diameter of 3 mm
- Double curve specially adapted for access to the frontal sinuses
- Probe tip allows tissue to be mobilized or removed during suction
Electromagnetic Navigated Instruments for Ear Surgery

**Bone Anchor**, for KARL STORZ navigation, autoclavable, for use with Patient Tracker, Patient Tracker II, Patient Tracker III or EM Patient Tracker

**EM Patient Tracker**, with verification adaptor and fixation screw, dimensions 55 x 30 x 8 mm, cable length 250 cm, autoclavable, for use with NAV1® ELECTROMAGNETIC

**EM Navigation Probe**, with atraumatic tip, bayonet-shaped, for patient registration, tip diameter 1.9 mm, cable length 250 cm, working length 10.5 cm, autoclavable, reusable 30 times, for use with NAV1® ELECTROMAGNETIC

**EM Navigation Probe**, with atraumatic tip, malleable, curved 63°, tip diameter 1.7 mm, cable length 250 cm, working length 8.5 cm, autoclavable, reusable 30 times, for use with NAV1® ELECTROMAGNETIC

**Wire Tray**, provides safe storage of up to 4 EM navigation instruments (408201xx) and one EM patient tracker during cleaning and sterilization, external dimensions (w x d x h): 460 x 150 x 80 mm
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
SINUSTRACKER™, additional software module for the NAV1® family, compatible with software version 6.0.0 or higher
NAV1® Endoscope Tracker

Augmented FESS endoscopy with the new electromagnetic navigated endoscope adaptor

Using augmented endoscopy, which was specially developed for the NAV1® SINUSTRACKER™, the real-time endoscopic image can be enhanced with information obtained from the preoperative virtual planning of the access route. Adaptor 40820150/40820151 is used in conjunction with KARL STORZ HOPKINS® telescopes with 0° (7230AA), 30° (7230BA) or 45° (7230FA) directions of view for augmentation. The position and direction of view of the employed telescope is displayed in the radiology images in such a way that the endoscopic image can be precisely assigned to the exact location in-situ.

Benefits of augmented endoscopy

- Possible to display planning elements in the standard endoscopic image
- Visual navigation of non-navigated instruments along the preoperatively planned route
- Spatial mapping of the direction of view and the position of the telescope in the site
40820150 **EM Endoscope Tracker**, universal, cable length 250 cm, **autoclavable**, reusable 30 times, for use with NAV1® ELECTROMAGNETIC 40820001, HOPKINS® Telescope 0° 7230AA, HOPKINS® Telescope 30° 7230BA, HOPKINS® Telescope 45° 7230FA, NAV1® SINISTRACKER™ 40810600

40820151 **EM Endoscope Tracker 2.0**, universal, cable length 250 cm, **autoclavable**, reusable 30 times, for use with NAV1® ELECTROMAGNETIC 40820001, HOPKINS® Telescope 0° 7230AA, HOPKINS® Telescope 30° 7230BA/BLA/BVA, HOPKINS® Telescope 45° 7230FA/FLA/FVA, NAV1® SINISTRACKER™ 40810600

(The telescopes displayed here are not included in delivery)
EM Shaver Tracker

The new EM shaver tracker allows the electromagnetic navigation of motorized standard shaver blades and sinus burrs. Benefits of EM-navigated shaver blades and sinus burrs:

- Reusable tracker (up to 30 applications guaranteed)
- Customary handling of the shaver blades and sinus burrs by attaching the shaver tracker to the rotary wheel of the blade or burr
- Automatic detection of rotation
- Visualized geometry and ablation radius of the shaver attachments
- Precise locking to shaver blade to achieve greater accuracy
EM Shaver Tracker, cable length 200 cm, autoclavable, reusable 30 times, for use with NAV1® ELECTROMAGNETIC, DRILLCUT-X® II, DRILLCUT-X® II N and DRILLCUT-X® II-35 N as well as Sinus Burrs 41305D, 41305DW, 41303DT, 41335DT, 41335DW and Shaver Blades 41201KK, 41204KKB, 41301KK, 41304KKB

(The shaver handpiece shown here is not included in delivery)

Sinus Burrs, for use with DRILLCUT-X® II N Shaver Handpiece 40712055, DRILLCUT-X® II Shaver Handpiece 40712050 in combination with NAV1® PICO, NAV1® OPTICAL and Optical Shaver Tracker 40800122 as well as NAV1® ELECTROMAGNETIC and EM Shaver Tracker 40820123

- 41305D Sinus Burr, with integrated irrigation, curved 15°, diamond head, burr diameter 5 mm, shaft diameter 4 mm, length 12 cm, sterile, for single use, package of 5, color code: red-yellow
- 41305DW Same, curved 40°
- 41303DT Same, curved 70°, burr diameter 3.6 mm

Sinus Burrs, for use with DRILLCUT-X® II-35 Shaver Handpiece 40712035, DRILLCUT-X® II-35 N Shaver Handpiece 40712535 in combination with NAV1® PICO, NAV1® OPTICAL and Optical Shaver Tracker 40800122 as well as NAV1® ELECTROMAGNETIC and EM Shaver Tracker 40820123

- 41335DW Sinus Burr 35k, with integrated irrigation, curved 40°, diamond head, burr diameter 5 mm, shaft diameter 4 mm, length 12 cm, sterile, for single use, package of 5, color code: red
- 41335DT Same, curved 70°, burr diameter 3.6 mm

Shaver Blades, for use with DRILLCUT-X® II N Shaver Handpiece 40712055, DRILLCUT-X® II Shaver Handpiece 40712050 and DRILLCUT-X II-35 N Shaver Handpiece 40712535 in combination with NAV1® PICO, NAV1® OPTICAL and Optical Shaver Tracker 40800122 as well as NAV1® ELECTROMAGNETIC and EM Shaver Tracker 40820123

- 41201KK Shaver Blade, with integrated irrigation, straight, sterilizable, double serrated cutting edge, rectangular cutting window, diameter 4 mm, length 12 cm, color code: blue-yellow
- 41301KK Same, sterile, for single use, package of 5
- 41204KKB Shaver Blade, with integrated irrigation, curved 40°, sterilizable, cutting edge serrated backwards, double serrated, rectangular cutting window, diameter 4 mm, length 12 cm, color code: blue-yellow
- 41304KKB Same, sterile, for single use, package of 5
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.
75 Years

Shaping the Future of Endoscopy with you