

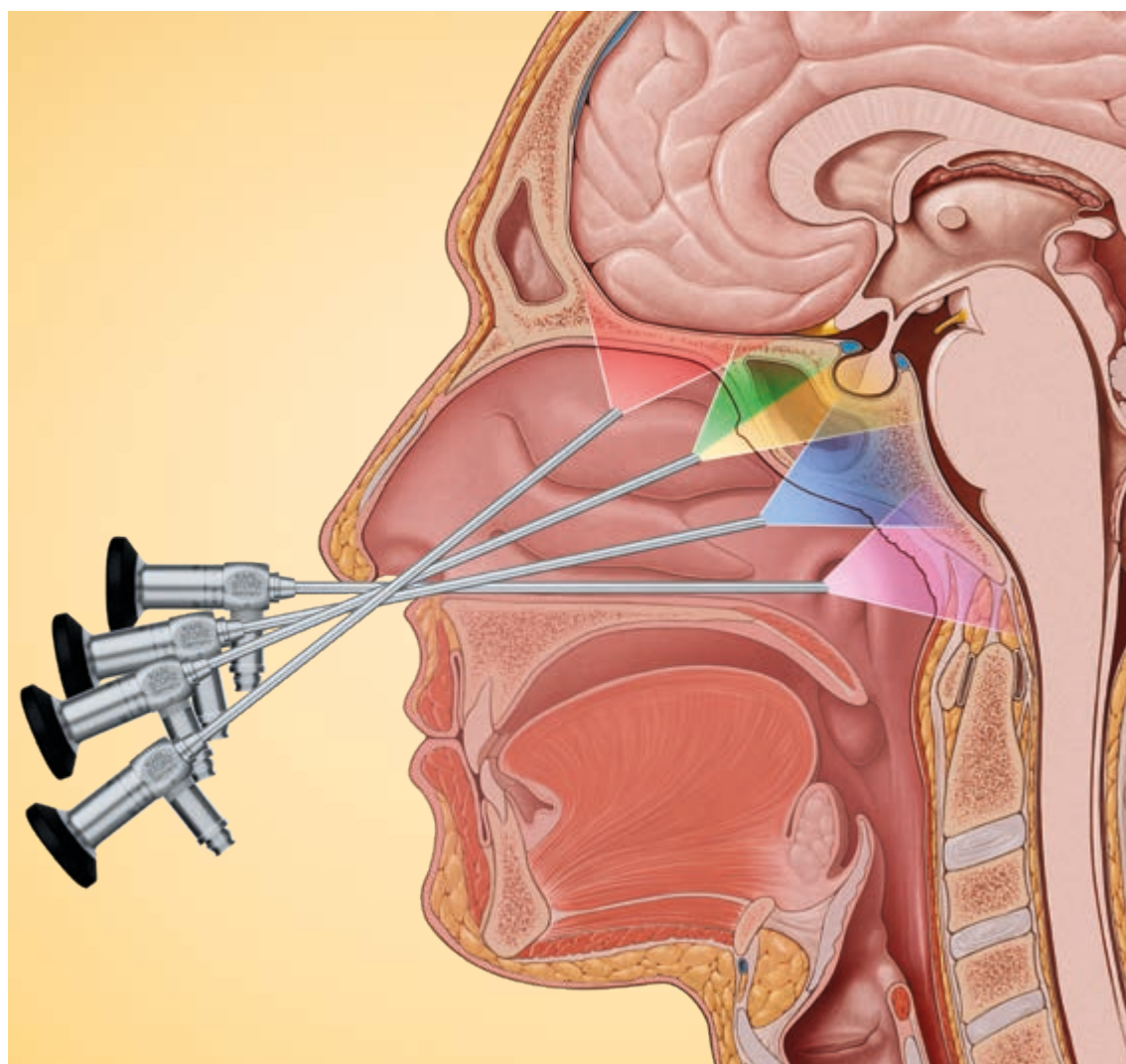
# All Instruments for Endonasal Skull Base Surgery Endoscopy and Microsurgery



## Endonasal Instruments

Over the years, the development of the endonasal corridor to the pituitary gland and to the skull base fueled the design of an entirely new line of instruments dedicated to these surgical techniques. In four decades, we went from the pioneers' tools made in the local workshop to the industrial quality available around the world nowadays. With many changes! Today KARL STORZ offers a full range of instruments for all techniques with a focus on the endoscopic trays.

As surgical techniques continue to evolve, the need for new solutions remains as important as ever before. Trends keep the endonasal field continuously evolving. New instruments are regularly introduced, and trays updated. We recently extended our product offering to include the new NIR/ICG 4mm telescopes.



## Compiling an Instrument Set for Endonasal Pituitary and Skull Base Surgery

To compile an instrument set for endonasal surgery, the user can follow the steps below and choose from various instrument categories or sub-sets.

**Visualization**

**Lens Cleaning**

**Dissection and Decompression**

**Management of Bleeding**

**Suction**

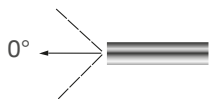


3D Telescopes

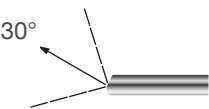


TIPCAM®1 S 3D NEURO  
3D telescope with 4 mm outer diameter

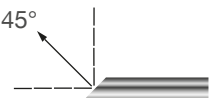
With TIPCAM®1 S 3D, KARL STORZ sets new standards in 3D endoscopy with its brilliant, three-dimensional display. As part of the modular IMAGE1 S™ camera platform, the existing system can be easily upgraded to 3D.



28164AA3D **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™



28164BA3D **TIPCAM®1 S 3D NEURO**, direction of view 30°, 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™














28164FA3D **TIPCAM®1 S 3D NEURO**, direction of view 45°, 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™

Telescopes with Straight Eyepieces



**HOPKINS® Telescopes, autoclavable**, fiber optic light transmission incorporated, color-coded according to direction of view

| Direction of View   | Order No. | Reversed Light Post | Outer Diameter | Length |
|---|-----------|---------------------|----------------|--------|
|    | 28132AA   | –                   | 4 mm           | 18 cm  |
|    | 28132BA   | –                   |                |        |
|  | 28132BVA  | ✓                   |                |        |
|  | 28132FA   | –                   |                |        |
|  | 28132FVA  | ✓                   |                |        |
|  | 28132CA   | –                   |                |        |
|  | 28132CVA  | ✓                   |                |        |
|  | 28132BWA  | –                   |                |        |
|  | 28164AA   | –                   | 2.7 mm         | 30 cm  |
|  | 28164BA   | –                   |                |        |
|  | 28018AA   | –                   |                | 18 cm  |

Angled Telescopes



**HOPKINS® Telescopes, autoclavable**, angled eyepiece,  
fiber optic light transmission incorporated, color-coded according to direction of view

| Direction of view   | Order No. | Outer Diameter | Length |
|---|-----------|----------------|--------|
|    | 28162AVA  | 4 mm           | 20 cm  |
|    | 28162BVA  |                |        |
|  | 28162FVA  |                |        |
|  | 28162AKA  | 2.7 mm         |        |
|  | 28162BKA  |                |        |
|  | 28162FKA  |                |        |
|  | 28162CKA  |                |        |


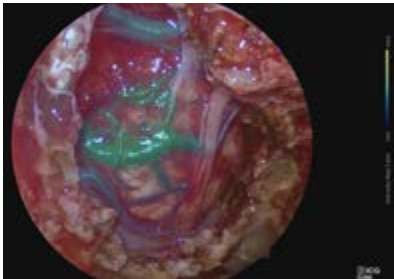

# IMAGE1 S<sup>®</sup> Rubina<sup>™</sup>

With 4 mm endoscopic near-infrared indocyanine green (NIR/ICG) it's possible to:

- Evaluate tissue perfusion intraoperatively and accurately predicted flap viability for the prevention of reconstructive complications<sup>1</sup>
- Identify critical neurovascular structures below tissue surface<sup>2,3</sup>
- Differentiate tissue planes between lesions and adjacent structures<sup>1,4,5</sup>
- Significantly reduce errors<sup>2,3</sup>

## 4K/NIR/ICG Visualization Modes

The RUBINA<sup>™</sup> components offer various new modes for visualizing the NIR/ICG signal. This includes the overlay of NIR/ICG data onto the standard white light image or alternatively the monochromatic visualization of the infrared signal alone.

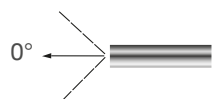
|   |  |   |
|---|--|---|
|    |                             |    |
| <b>Overlay</b><br>In Overlay mode, the regular white light image is combined with the NIR/ ICG data to generate an overlay image. | <b>Intensity Map</b><br>Displays the intensity of the NIR/ ICG signal using a color scale in an overlay image. | <b>Monochromatic</b><br>In this mode, the NIR/ICG signal alone is displayed in white on a black background to achieve the greatest possible differentiation |

*“The KARL STORZ IMAGE1 S<sup>™</sup> RUBINA<sup>™</sup> endoscopic ICG fluorescence system is the gold standard for nasoseptal flap perfusion assessment in endonasal skull base surgery. The system is also crucial for identifying critical arteries in and around tumors, from the carotid artery and perforators, it has helped me avoid catastrophic complications.”*

Dr. Paul Gardner, Neurosurgeon

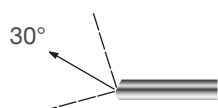


## NIR/ICG Telescopes



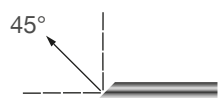
28164AC

**HOPKINS® Straight Forward Telescope 0°**, enlarged view, diameter 4 mm, length 18 cm, **autoclavable**, for indocyanine green (ICG), fiber optic light transmission incorporated, color code: green



28164BC

**HOPKINS® Straight Forward Telescope 30°**, enlarged view, diameter 4 mm, length 18 cm, **autoclavable**, for indocyanine green (ICG), fiber optic light transmission incorporated, color code: red



28164FC

**HOPKINS® Forward-Oblique Telescope 45°**, enlarged view, diameter 4 mm, length 18 cm, **autoclavable**, fiber optic light transmission incorporated, with integrated ICG filter, color code: black

<sup>1</sup> Geltzeiler M, Nakassa ACI, Turner M, Setty P, Zenonos G, Hebert A, Wang E, Fernandez-Miranda J, Snyderman C, Gardner P. Evaluation of Intranasal Flap Perfusion by Intraoperative Indocyanine Green Fluorescence Angiography. Oper Neurosurg (Hagerstown). 2018 Dec 1;15(6):672-676. doi: 10.1093/ons/opy002. PMID: 29554360; PMCID: PMC7263840.

<sup>2</sup> Hide T, Yano S, et al. Usefulness of the indocyanine green fluorescence endoscope in endonasal transsphenoidal surgery. J Neurosurg. 2015 May;122(5):1185-92. Published online February 27, 2015. doi: 10.3171/2014.9.JNS14599.

<sup>3</sup> Catapano, G. et al; (2017). Multimodal use of indocyanine green endoscopy in neurosurgery: a single-center experience and review of the literature. Neurosurgical Review, 1-14.

<sup>4</sup> Babgi M, Alsaleh S, Babgi Y, Baeesa S, Ajlan A. Intracranial Intradural Vascular Injury during Endoscopic Endonasal Transsphenoidal Surgery: A Case Report and Literature Review. J Neurol Surg Rep. 2020 Jul;81(3):e52-e58. Epub 2020 Sep 24.

<sup>5</sup> Bajaj J, Chandra P S. Recent Developments in Endoscopic Endonasal Approach for Pituitary Adenomas. Neurol India [serial online] 2020 [cited 2020 Oct 9];68, Suppl S1:79-84. Available from: <https://www.neurologyindia.com/text.asp?2020/68/7/79/287671>.









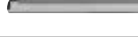










Lens Irrigation Systems  
For Intraoperative Cleaning of the Front Lens



**Irrigation Sheath**, proximally reinforced, for use with  
Clamping Jaw 28272UKN



**Compatible HOPKINS® Telescopes**

|   | Order No. | Outer Diameter | Working Length | Compatible Telescope | Direction of View | Outer Diameter | Length |
|---|-----------|----------------|----------------|----------------------|-------------------|----------------|--------|
|    | 28164CAA  | 3.8 mm         | 15 cm          | 28018AA              | 0°                | 2.7 mm         | 18 cm  |
|    | 28164ASA  | 5 mm           | 24 cm          | 28164AA              | 0°                | 4 mm           | 30 cm  |
|    | 28164BSA  |                |                | 28164BA              | 30°               |                |        |
|  | 28164CBA  |                | 14 cm          | 28132AA              | 0°                |                | 18 cm  |
|  | 28164CBB  |                |                | 28164AA3D            |                   |                |        |
|  | 28164CBB  |                |                | 28132BA              | 30°               |                |        |
|  | 28164CBF  |                |                | 28164BA3D            |                   |                |        |
|  | 28164CBF  |                |                | 28132FA              | 45°               |                |        |
|  | 28164CBC  |                |                | 28164FA3D            |                   |                |        |
|  | 28164CBC  | 28132CA        | 70°            |                      |                   |                |        |
|  | 28162AVS  | 5 mm           | 18 cm          | 28162AVA             | 0°                | 4 mm           | 20 cm  |
|  | 28162BVS  |                |                | 28162BVA             | 30°               |                |        |
|  | 28162FVS  |                |                | 28162FVA             | 45°               |                |        |
|  | 28164CAK  | 3.8 mm         | 15 cm          | 28162AKA             | 0°                | 2.7 mm         |        |
|  | 28164CBK  |                |                | 28162BKA             | 30°               |                |        |
|  | 28164CFK  |                |                | 28162FKA             | 45°               |                |        |
|  | 28164CCK  |                |                | 28162CKA             | 70°               |                |        |

Micro Scissors



Scissors

|  | Order No. | Description  | Working Length |
|--|-----------|--|----------------|
|  | 28164MZB  | <b>Scissors</b> , straight, with small handle, with cleaning connector                   | 18 cm          |
|  | 28164MZC  | <b>Scissors</b> , curved to right, with small handle, with cleaning connector            |                |
|  | 28164MZD  | <b>Scissors</b> , curved to left, with small handle, with cleaning connector             |                |
|  | 28164MZE  | <b>Scissors</b> , angled upwards, with small handle, with cleaning connector             |                |
|  | 28164SAD  | <b>Scissors</b> , upturned 45°, delicate, sheath 360° rotatable, with cleaning connector |                |





SEPEHRNIA Micro Scissors

|  | Order No. | Description  | Working Length |
|--|-----------|--|----------------|
|  | 28164SBA  | <b>Micro Scissors</b> , bayonet-shaped, sharp/sharp, straight            | 10 cm          |
|  | 28164SBB  | <b>Micro Scissors</b> , bayonet-shaped, sharp/sharp, curved to left      |                |
|  | 28164SBC  | <b>Micro Scissors</b> , bayonet-shaped, blunt/blunt, jaw straight        |                |
|  | 28164SBD  | <b>Micro Scissors</b> , bayonet-shaped, sharp/sharp, jaw curved to right |                |
|  | 28164SBE  | <b>Micro Scissors</b> , bayonet-shaped, sharp/sharp, jaw horizontal      |                |

SEPEHRNIA Micro Forceps






SEPEHRNIA Spoon Forceps

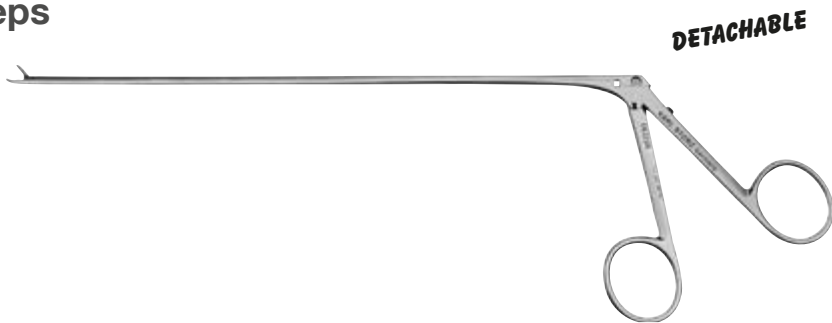
|   | Order No. | Description   | Spoon Diameter | Working Length |
|---|-----------|---|----------------|----------------|
|  | 28164PBB  | <b>Micro Forceps</b> , bayonet-shaped                   | 2 mm           | 10 cm          |
|   | 28164PBE  |   | 4 mm           |                |
|   | 28164PBF  |   | 6 mm           |                |
|  | 28164PBG  | <b>Micro Forceps</b> , bayonet-shaped, spoon horizontal | 2 mm           |                |
|   | 28164PBH  |   | 4 mm           |                |
|   | 28164PBI  |   | 6 mm           |                |







SEPEHRNIA Grasping Forceps

|   | Order No. | Description   | Size    | Working Length |
|---|-----------|---|---------|----------------|
|  | 28164PBA  | <b>Micro Grasping Forceps</b> , bayonet-shaped, straight jaws, smooth   | 0.5 mm  | 10 cm          |
|  | 28164PBC  | <b>Micro Grasping Forceps</b> , bayonet-shaped, straight jaws, serrated | 3 mm    |                |
|  | 28164PBD  | <b>Micro Grasping Forceps</b> , bayonet-shaped, jaws curved to left     | 0.75 mm |                |

Micro Forceps



Double Spoon Miniature Forceps

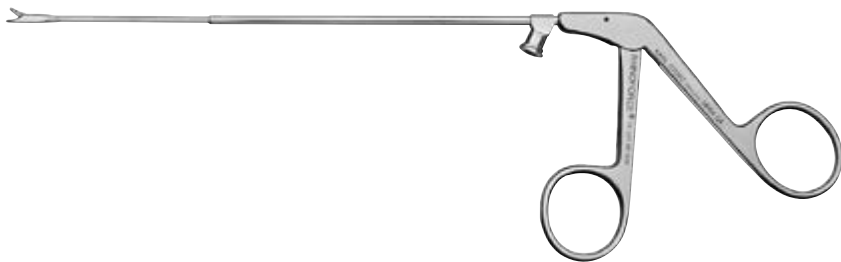
|   | Order No. | Description  | Spoon Diameter | Working Length |
|---|-----------|--|----------------|----------------|
|    | 28164TD   | <b>Forceps</b> , round cupped jaws, extra delicate, straight       | 0.6 mm         | 18 cm          |
|    | 28164T    | <b>Forceps</b> , oval cupped jaws, extra delicate, straight        | 0.9 mm         |                |
|    | 28164TA   | <b>Forceps</b> , oval cupped jaws, extra delicate, upturned        |                |                |
|  | 28164TE   | <b>Forceps</b> , oval cupped jaws, extra delicate, curved to right | 0.6 mm         |                |
|  | 28164TF   | <b>Forceps</b> , oval cupped jaws, extra delicate, curved to left  |                |                |







Cutting Forceps

|   | Order No. | Description                               | Spoon Diameter | Working Length |
|---|-----------|---|----------------|----------------|
|  | 28164MZF  | <b>Spoon Forceps</b> , single action jaws | 3 x 10 mm      | 17 cm          |

Micro Forceps




Miniature Forceps, through-cutting

|   | Order No. | Description  | Bite | Working Length |
|---|-----------|--|------|----------------|
|  | 28164GS   | <b>Miniature Forceps</b> , straight, through-cutting, with fine flat jaws        | 1 mm | 18 cm          |
|  | 28164GR   | <b>Miniature Forceps</b> , curved to right, through-cutting, with fine flat jaws |      |                |
|  | 28164GL   | <b>Miniature Forceps</b> , curved to left, through-cutting, with fine flat jaws  |      |                |
|  | 28164GU   | <b>Miniature Forceps</b> , curved upwards, through-cutting, with fine flat jaws  |      |                |



Cutting Forceps

|   | Order No. | Description   | Size | Working Length |
|---|-----------|---|------|----------------|
|  | 28164MZA  | <b>Grasping Forceps</b> , fine serration, straight, with cleaning connector | –    | 18 cm          |

Nasal Forceps



**RHINOFORCE® II**, through-cutting

|   | Order No. | Description   | Bite   | Working Length |
|---|-----------|---|--------|----------------|
|    | 28164UA   | <b>RHINOFORCE® II Nasal Forceps</b> , with extra fine flat jaws, through-cutting, tissue-sparing, straight sheath, straight jaws, with cleaning connector             | 1.5 mm | 18 cm          |
|    | 28164UB   | <b>RHINOFORCE® II Nasal Forceps</b> , with extra fine flat jaws, through-cutting, tissue-sparing, straight sheath, jaws angled upwards 45°, with cleaning connector   |        |                |
|   | 28164UE   | <b>RHINOFORCE® II Nasal Forceps</b> , with extra fine flat jaws, through-cutting, tissue-sparing, straight sheath, jaws angled downwards 45°, with cleaning connector |        |                |
|  | 28164UD   | <b>RHINOFORCE® Nasal Forceps</b> , with extra fine, flat jaws, through-cutting, tissue-sparing, sheath end curved upwards 25°, jaws angled downwards 45°              |        |                |

Micro Dissectors



Dissectors



|   | Order No. | Description   | Width  | Working Length | Length |
|---|-----------|---|--------|----------------|--------|
|    | 28164DA   | <b>Dissector</b> , sharp, tip angled 45°, round spatula, with round handle                | 2 mm   | 15 cm          | 25 cm  |
|   | 28164DB   |   | 3 mm   |                |        |
|    | 28164DF   | <b>Dissector</b> , sharp, tip angled 15°, flat long spatula, with round handle            | 1.5 mm |                |        |
|    | 28164DT   | <b>Dissector</b> , semi sharp, slightly curved spatula, tip angled 15°, with round handle | 1 mm   |                |        |
|   | 28164DS   | <b>Dissector</b> , sharp, tip angled 15°, with round handle                               | 2 mm   |                |        |
|  | 28164DM   | <b>Dissector</b> , sharp, slightly curved spatula, straight, with round handle            | 3 mm   | 13 cm          | 23 cm  |
|  | 28164DLB  | <b>Dissector</b> , tip angled 45°   | 1 mm   |                |        |
|  | 28164DLC  | <b>Dissector</b> , tip angled 90°   |        |                |        |



Micro Raspatories and Dissectors



Micro Raspatories

|   | Order No. | Description   | Width | Working Length | Length |
|---|-----------|---|-------|----------------|--------|
|  | 28164EL   | <b>Micro Raspatory</b> , single curved to left                        | 2 mm  | 17 cm          | 27 cm  |
|  | 28164ER   | <b>Mintz Micro Raspatory</b> , 2 mm wide, curved, right, length 27 cm |       |                |        |



Dissectors, bayonet-shaped, sharp

|   | Order No. | Description  | Width  | Working Length | Length |
|---|-----------|--|--------|----------------|--------|
|  | 28164GBO  | <b>Dissector</b> , bayonet-shaped, sharp, round spatula, tip angled upwards 45°, with round handle       | 3 mm   | 15 cm          | 25 cm  |
|   | 28164GBU  | <b>Dissector</b> , bayonet-shaped, sharp, round spatula, tip angled downwards 45°, with round handle     |        |                |        |
|  | 28164GFO  | <b>Dissector</b> , bayonet-shaped, sharp, flat long spatula, tip angled upwards 15°, with round handle   | 1.5 mm |                |        |
|   | 28164GFU  | <b>Dissector</b> , bayonet-shaped, sharp, flat long spatula, tip angled downwards 15°, with round handle |        |                |        |
|  | 28164DL   | <b>Dissector</b> , bayonet-shaped, sharp, curved to left   | 2 mm   | 13.5 cm        | 24 cm  |
|  | 28164DR   | <b>Dissector</b> , bayonet-shaped, sharp, curved to right  |        |                |        |

Elevators and Round Knives



Double Elevators

|  | Order No. | Description   | Width           | Length |
|--|-----------|---|-----------------|--------|
|  | 28164EA   | <b>CASTELNUOVO Double Elevator</b> , semisharp and blunt  | 2.2 mm / 3.0 mm | 26 cm  |
|  | 28164EB   | <b>CASTELNUOVO Double Elevator</b> , angled end shovel-shaped, semisharp, blunt end slightly curved | 2.2 mm / 3.0 mm |        |
|  | 28164EC   | <b>CASTELNUOVO Double Elevator</b> , blunt end angled, semisharp end slightly curved, graduated     | 2.2 mm / 3.3 mm |        |



Round Knives

|   | Order No. | Description            | Width | Working Length | Length |
|---|-----------|------------------------|-------|----------------|--------|
|  | 28164TLC  | <b>Round Knife 90°</b> | 1 mm  | 13 cm          | 23 cn  |
|  | 28164TLD  | <b>Round Knife 0°</b>  | 2 mm  |                |        |
|  | 28164TLF  | <b>Round Knife 90°</b> |       |                |        |

Spoon and Ring Curettes



Spoon Curettes

|   | Order No. | Description  | Size   | Working Length | Length |
|---|-----------|--|--------|----------------|--------|
|    | 28164KA   | <b>Curette</b> , round spoon, tip slightly angled, with round handle | 1 mm   | 15 cm          | 25 cm  |
|    | 28164KB   |  | 2 mm   |                |        |
|    | 28164KC   |  | 3 mm   |                |        |
|    | 28164KF   | <b>Curette</b> , round spoon, tip highly angled, with round handle   | 2 mm   |                |        |
|    | 28164KG   |  | 3 mm   |                |        |
|   | 28164KLF  | <b>Spoon Curette</b> , angled 90°, round handle                      | 0.8 mm | 13 cm          | 23 cm  |
|  | 28164KLH  | <b>Spoon Curette</b> , angled 45°                                    | 2 mm   |                |        |
|  | 28164KLI  | <b>Spoon Curette</b> , angled 90°                                    |        |                |        |



Ring Curettes

|   | Order No. | Description   | Inner Diameter | Working Length | Length |
|---|-----------|---|----------------|----------------|--------|
|  | 28164RN   | <b>Ring Curette</b> , with round wire, tip angled 45°, with round handle            | 3 mm           | 15 cm          | 25 cm  |
|   | 28164RO   |   | 5 mm           |                |        |
|   | 28164RP   |   | 7 mm           |                |        |
|   | 28164RE   | <b>Ring Curette</b> , with round wire, malleable, tip angled 45°, with round handle | 3 mm           | 15 cm          | 25 cm  |
|   | 28164RJ   |   | 5 mm           |                |        |

Spoon and Ring Curettes



Ring Curettes

|  | Order No. | Description   | Inner Diameter | Working Length | Length |
|--|-----------|---|----------------|----------------|--------|
|  | 28164RI   | <b>Ring Curette</b> , with round wire, tip angled 90°, with round handle                  | 3 mm           | 15 cm          | 25 cm  |
|  | 28164RG   |   | 5 mm           |                |        |
|  | 28164RB   | <b>Ring Curette</b> , with round wire, laterally curved sheath end, with round handle     | 3 mm           |                |        |
|  | 28164RA   |   | 5 mm           |                |        |
|  | 28164RV   | <b>Ring Curette</b> , with round wire, laterally curved sheath end 90°, with round handle | 3 mm           |                |        |
|  | 28164RD   |   | 5 mm           |                |        |
|  | 28164RW   |   | 7 mm           |                |        |
|  | 28164RF   | <b>Ring Curette</b> , with round wire, vertical, with round handle                        | 5 mm           |                |        |
|  | 28164FRA  | <b>Ring Curette</b> , distal end curved, vertical   | 2.6 mm         |                |        |
|  | 28164FRC  |   | 5 mm           |                |        |
|  | 28164FRB  | <b>Ring Curette</b> , distal end curved, horizontal                                       | 2.6 mm         |                |        |
|  | 28164FRD  |   | 5 mm           |                |        |

Ring and Suction Currettes



Ring Currettes, bayonet-shaped

|   | Order No. | Description   | Outer Diameter | Working Length | Length |
|---|-----------|---|----------------|----------------|--------|
|    | 28164GGO  | <b>Ring Curette</b> , bayonet-shaped, round wire, tip angled upwards 90°, with round handle   | 5 mm           | 17 cm          | 25 cm  |
|   | 28164GGU  | <b>Ring Curette</b> , bayonet-shaped, round wire, tip angled downwards 90°, with round handle |                |                |        |
|    | 28164GKO  | <b>Ring Curette</b> , bayonet-shaped, blunt, tip angled upwards 45°, with round handle        | 4 mm           |                |        |
|   | 28164GKU  | <b>Ring Curette</b> , bayonet-shaped, blunt, tip angled downwards 45°, with round handle      |                |                |        |
|  | 28164GLL  | <b>Ring Curette</b> , bayonet-shaped, blunt, tip angled to left 90°, with round handle        | 3.3 mm         |                |        |
|   | 28164GLR  | <b>Ring Curette</b> , bayonet-shaped, blunt, tip angled to right 90°, with round handle       |                |                |        |



Suction Currettes

|  | Order No. | Description   | Size | Working Length | Length |
|--|-----------|---|------|----------------|--------|
|  | 28164RT   | <b>Suction Curette</b> , with basket, round, rotatable tube, LUER | 5 mm | 15 cm          | 25 cm  |
|  | 28164RSB  | <b>Suction Curette</b> , blunt, tip angled 45°, LUER              |      |                |        |

Hooks and Scalpels



Hooks

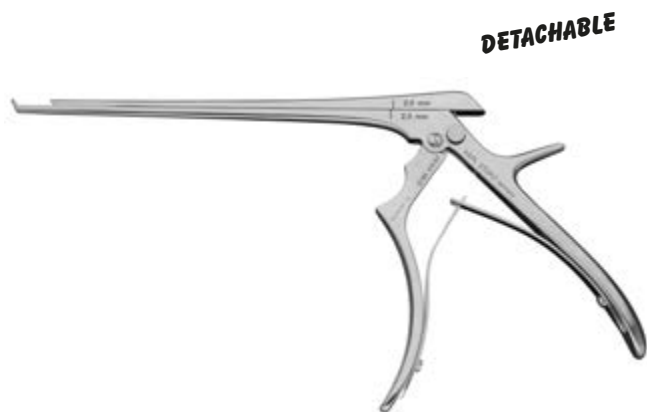
|  | Order No. | Description                                 | Width  | Working Length | Length |
|--|-----------|---|--------|----------------|--------|
|  | 28164H    | <b>Hook, 90°</b> , blunt, with round handle | 0.6 mm | 15 cm          | 25 cm  |
|  | 28164HA   | <b>Seeker</b> , angled 45°                  | 1 mm   |                |        |
|  | 28164HB   | <b>Seeker</b> , angled 90°                  | 0.4 mm |                |        |
|  | 28164HC   | <b>Seeker</b> , angled 90°                  | 1 mm   |                |        |












Scalpels

|  | Order No.  | Description  | Working Length | Length | Sterile Single-Use Repacment Blades |
|--|------------|--|----------------|--------|-------------------------------------|
|  | 28164M-KT  | de DIVITIIS-CAPPABIANCA <b>Scalpel</b> , with pointed retractable blade      | 13 cm          | 23 cm  | 28164MC-S                           |
|  | 28164KK-KT | de DIVITIIS-CAPPABIANCA <b>Scalpel</b> , with sickle shape retractable blade |                |        | 28164MS-S                           |

Bone Punches



KERRISON Bone Punches









|   | Order No. | Description   | Size | Working Length |
|---|-----------|---|------|----------------|
|    | 28164MKA  | <b>Bone Punch</b> , detachable, rigid, upbiting 60° forward   | 1 mm | 17 cm          |
|   | 28164MKB  |   | 2 mm |                |
|  | 28164MKC  |   | 3 mm |                |
|  | 28164MKK  |   | 4 mm |                |
|  | 28164MKL  |   | 5 mm |                |
|  | 28164MKD  | <b>Bone Punch</b> , detachable, rigid, downbiting 60° forward | 1 mm |                |
|  | 28164MKE  |   | 2 mm |                |
|  | 28164MKF  |   | 3 mm |                |
|  | 28164MKO  |   | 5 mm |                |



TAKE-APART® Bipolar Forceps



TAKE-APART® Bipolar Forceps



|   | Order No. | Description   | Width of Jaws | Working Length | Sterile Single-Use Forceps Insert |
|---|-----------|---|---------------|----------------|-----------------------------------|
|    | 28164BDB  | <b>TAKE-APART® Bipolar Forceps</b> , short, rounded tip, outer diameter 3.4 mm  | 2 mm          | 14 cm          | 28164FGB-S                        |
|   | 28164BDC  | <b>TAKE-APART® Bipolar Coagulation Forceps</b> , short, outer diameter 3.4 mm   |               |                | 28164FGC-S                        |
|  | 28164BDN  | <b>TAKE-APART® Bipolar Forceps</b> , rounded tip, outer diameter 3.4 mm   |               | 20 cm          | 28164FDN-S                        |
|  | 28164BDD  | <b>TAKE-APART® Bipolar Forceps</b> , distally angled 45°, horizontal closing, outer diameter 3.4 mm   |               |                | 28164FGD-S                        |
|  | 28164BDL  | <b>TAKE-APART® Bipolar Forceps</b> , with fine jaws, width 1 mm, distally angled 45°, vertical closing, diameter 3.4 mm, working length 20 cm | 1 mm          |                | 28164FGL-S                        |
|  | 28164BDM  | <b>TAKE-APART® Bipolar Forceps</b> , with fine jaws, distally angled 45°, horizontal closing, outer diameter 3.4 mm                           |               |                | 28164FGM-S                        |
|  | 28164BDG  | <b>TAN TAKE-APART® Bipolar Coagulation Forceps</b> , size 3.4 mm  | 1.8 mm        |                | 28164FGD-S                        |
|  | 28164BDK  | <b>TAKE-APART® Bipolar Forceps</b> , distally angled 45°, horizontal closing, size 3.4 mm   | 4 mm          |                | 28164FGK-S                        |

Available Bipolar High Frequency Cords (26176LV, 28164MGD-10) are selected in accordance with the generator used.

Unipolar Electrodes



Unipolar Coagulation Ball Electrodes

|   | Order No. | Description  | Diameter | Working Length |
|---|-----------|--|----------|----------------|
|  | 28164ED   | <b>Coagulation Ball Electrode,</b><br>laterally curved | 2 mm     | 13 cm          |
|  | 28164EF   | <b>Coagulation Ball Electrode,</b><br>laterally curved | 4 mm     |                |

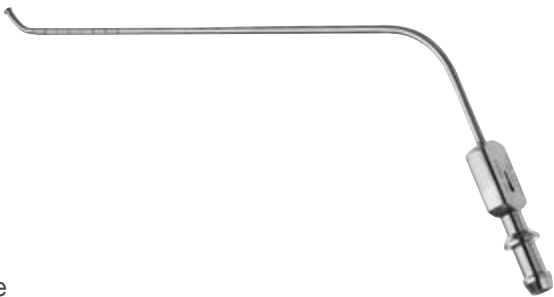
Unipolar High Frequency Cord 26006M.

Suction Tubes



Suction Tubes, malleable

|  | Order No. | Description   | Diameter | Working Length |
|--|-----------|---|----------|----------------|
|  | 649179A   | <b>Suction Tube</b> , malleable, with elongated cut-off hole and stylet, LUER | 4 Fr.    | 12 cm          |
|  | 649179B   |   |          | 15 cm          |
|  | 649179C   |   |          | 18 cm          |
|  | 649180A   |   | 6 Fr.    | 12 cm          |
|  | 649180B   |   |          | 15 cm          |
|  | 649180C   |   |          | 18 cm          |
|  | 649182A   |   | 8 Fr.    | 12 cm          |
|  | 649182B   |   |          | 15 cm          |
|  | 649182C   |   |          | 18 cm          |
|  | 649183A   |   | 10 Fr.   | 12 cm          |
|  | 649183B   |   |          | 15 cm          |
|  | 649183C   |   |          | 18 cm          |




Suction Tubes, short curve, with olive

|  | Order No. | Description  | Diameter | Working Length |
|--|-----------|--|----------|----------------|
|  | 28164XC   | <b>Suction Tube</b> , with cut-off hole, drop-shaped, with distance markings, LUER, conical distal end, tip curved upwards, ball end | 8 Fr.    | 15 cm          |





Suction Tubes, conical distal end with markings

|   | Order No. | Description  | Diameter | Working Length |
|---|-----------|--|----------|----------------|
|  | 28164XB   | <b>Suction Tube</b> , with cut-off hole, drop-shaped, with distance markings, LUER, conical distal end | 6 Fr.    | 15 cm          |
|   | 28164XA   |  | 8 Fr.    |                |



Suction Tubes, angular, with markings

|  | Order No. | Description   | Diameter | Working Length |
|--|-----------|---|----------|----------------|
| <br> | 28164XE   | <b>Suction Tube</b> , with cut-off hole, drop-shaped, with distance markings, LUER, conical distal end, malleable | 6 Fr.    | 15 cm          |
|  | 28164XD   |   | 8 Fr.    |                |

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.

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