The LOTTA® System for Intracranial Neuroendoscopy

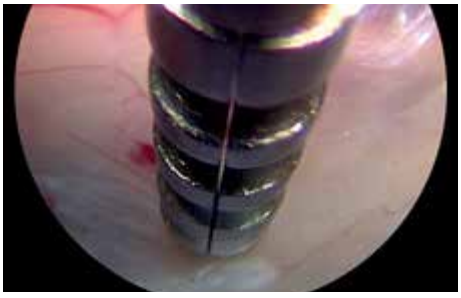
KARL STORZ — ENDOSKOPE

The SCHROEDER **LOTTA® System for Intracranial Neuroendoscopy**

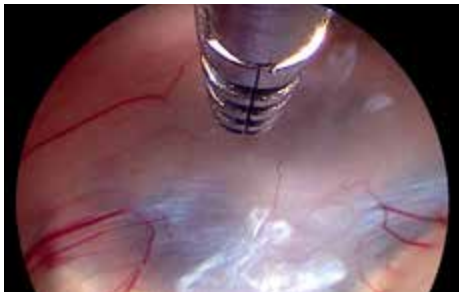
The LOTTA® system has been designed for performing the full range of endoscopic intracranial interventions in adults and children. The cornerstone of the system is based on the two ventriculoscopes Little LOTTA® and LOTTA®. These enable the treatment of all forms of obstructive hydrocephalus, intraventricular tumors and cysts as well as arachnoid and intraparenchymal cysts. An all-round solution, the LOTTA® system offers a free choice between the Little LOTTA® with its smaller diameter, more convenient handling and use in a wide range of applications such as ventriculostomies, septostomies, tumor biopsies and cyst fenestrations and the LOTTA® with its larger dimensions, which is not only suitable for the therapies mentioned above but is also particularly effective for the removal of colloid cysts, tumor resections, stent implantations as well as aqueductoplasties with subsequent stenting.

The somewhat larger diameter of the LOTTA® ventriculoscope allows the surgeon to perform bimanual dissection using two instruments. These can be used simultaneously in separate channels to enable more technically sophisticated procedures. Furthermore, the resection of larger tissue samples is possible, which benefits therapies such as tumor resection or cyst removal.

All intracranial procedures can thus be carried out. However, there are situations where a 30° viewing angle proves useful. A 30° viewing angle directed on the working channel allows earlier visualization of instruments. Therefore, the use of the LOTTA® 30° in narrow structures is beneficial. In addition, neighboring structures can easily be viewed during resections of cysts or tumors, for example, during the treatment of colloid cyst of the attachment point at the tela choroidea in the roof of the 3rd ventricle.



LOTTA® 30°



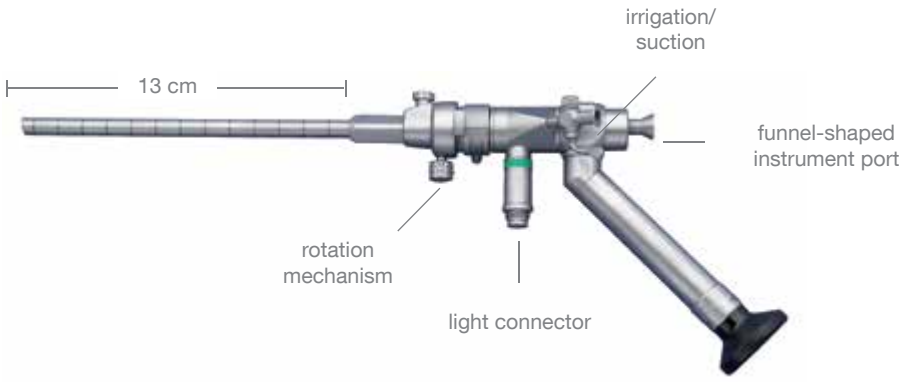
LOTTA® 6°

LOTTA® 30°

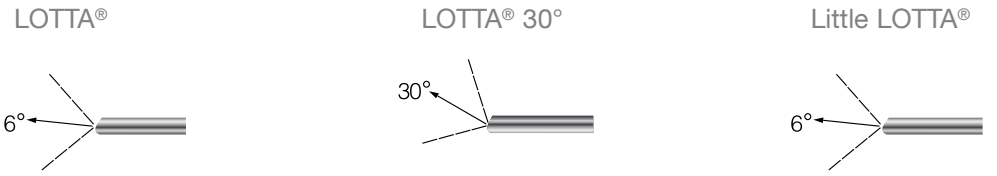
LOTTA® 6°

The LOTTA® 30° is particularly recommended for the resection of colloid cysts and intraventricular tumors. It can also be used for all other endoscopic procedures such as ventriculostomies, septostomies, tumor biopsies, cyst fenestrations and stent placements

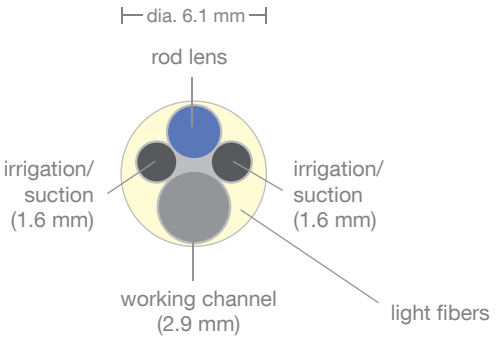
With a similar, yet more slender design, the Little LOTTA®, with the same viewing angle of 6° as the LOTTA®, proves to be particularly valuable for treating patients with a narrow foramen of Monro. In ventriculostomies in both children and adults, the prepontine cistern can be reached directly through the ventriculostomas and, if necessary, the arachnoid membranes can be transected to establish the cerebrospinal fluid (CSF) flow. Although too slender for the simultaneous use of two instruments, the Little LOTTA® offers the same range of functions as its two larger counterparts.



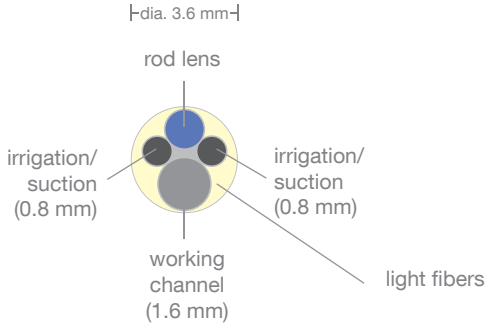
Viewing Angle



LOTTA and LOTTA 30°



Little LOTTA®



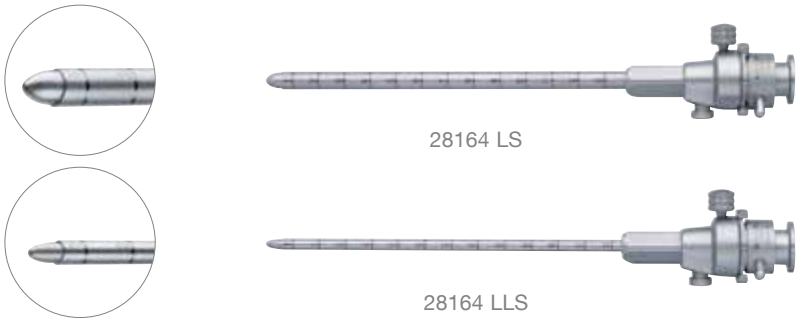
The ventriculoscopes are equipped with a HOPKINS® wide-angle straightforward telescope with a high light-transmitting capacity which delivers unsurpassed image quality and safe orientation, even in protein-rich or bloody CSF fluid. The central working channel is flanked on both sides with two side channels with a smaller diameter. One is used for irrigation/ suction and the other for the use of a second instrument.

The irrigation function ensures that continuous cleaning is maintained in the area in front of the endoscope, even when visibility is hindered (cloudy CSF in the case of ventriculitis and/or ventricle bleeding). The drainage channel always remains open to prevent critical intracranial pressure increase caused by excessive irrigation. To facilitate insertion of the instruments into the working channel, a funnel-shaped enlargement has been integrated at the entrance to the working channel. Thanks to this stable construction, both ventriculoscopes are less susceptible to damage during cleaning, sterilization and storage.

All ventriculoscopes have operating sheaths featuring rotational stability so that they can be fixed to the holding arm to prevent the telescope from sliding down and/or undesired rotational movements where the angle ratios are unfavorable.

However, the ventriculoscopes can still be rotated inside the sheath without having to alter the position on the holding arm – a considerable advantage for bimanual dissection. Furthermore, the operating sheaths can be taken apart for cleaning and sterilization. The LOTTA® system can, of course, be used “freehand”.

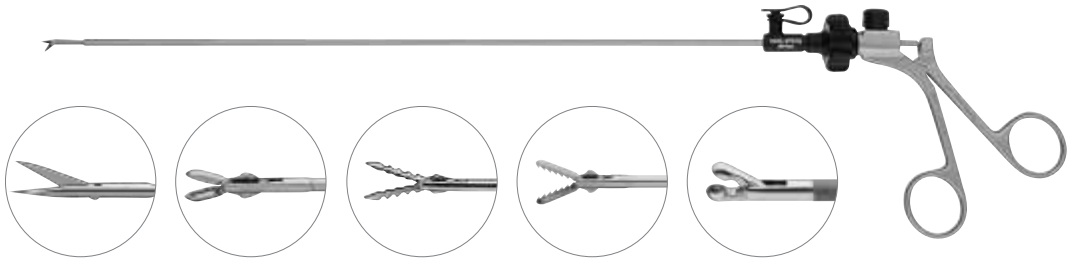
An obturator is inserted and locked into the working sheath before introduction. With its atraumatic distal tip, the obturator is required to facilitate introduction of the sheath into the ventricle or cysts. An optical obturator can also be used for this purpose, if necessary. A very slender HOPKINS® 0° telescope is introduced through the obturator in order to position the operating sheath under visual control.



28164 LS

28164 LLS

The LOTTA® system is equipped with very stable instruments that can be used through the central working channel. A further feature is the marking on the upper part of the sheath which shows when the distal tip is emerging from the working channel. This minimizes the danger of unintentional and uncontrolled movements during instrument introduction. Furthermore, the jaws can be aligned by rotating the adjustment wheel, without having to rotate the entire instrument.



28164 LB 28164 LC 28164 LD 28164 LE 28164 LF

The instrument section of this brochure offers you a range of different sets containing all the instruments required for performing the most common endoscopic procedures such as, for example, ventriculostomies, aqueductoplasties, septostomies, foraminoplasties, tumor resections and cyst fenestrations. A full set configuration includes additional diagnostic telescopes with different angles of view that ensure better orientation in the ventricular system.

Customized sets can, of course, be arranged to suit individual requirements.

Prof. Dr. med. Henry W. S. SCHROEDER
Department of Neurosurgery
Universitätsmedizin Greifswald
Germany

Documentation of Findings
LOTTA® Neuroendoscope

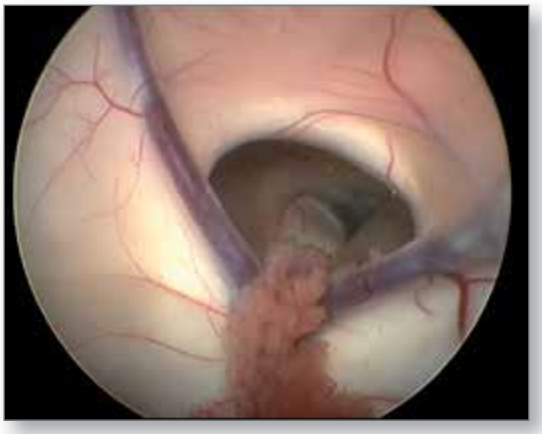


Fig. 7: Foramen of Monro

Fig. 8: Foramen of Monro with suprasellar arachnoid cyst

Fig. 9: Tumor in foramen of Monro

Fig. 10: Biopsy of a tumor in foramen of Monro

Fig. 11: Bimanual dissection by cutting into the membrane of a suprasellar arachnoid cyst with forceps and scissors

Fig. 12: Bimanual dissection using forceps and bipolar electrode

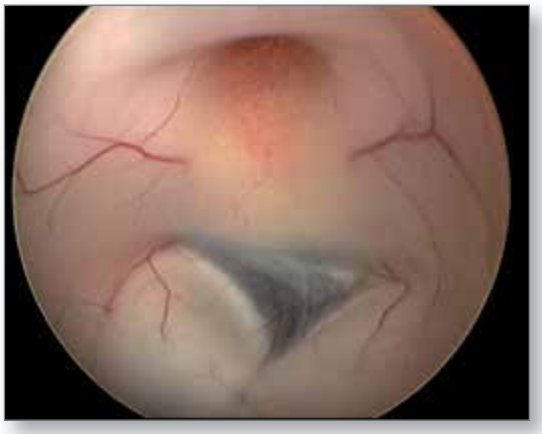


Fig. 13: Floor of the third ventricle

Fig. 14: Choroid plexus in the lateral ventricle

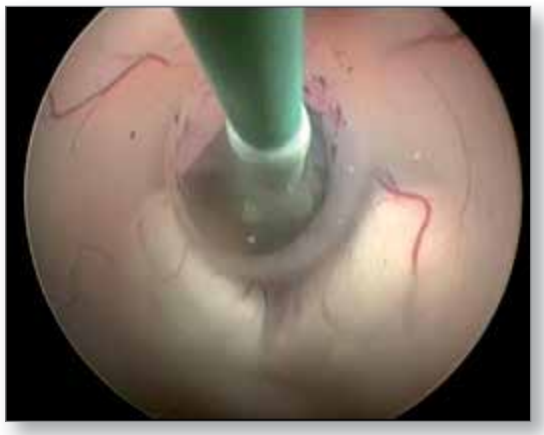


Fig. 15: Ventriculostomy with balloon catheter

Fig. 16: Pellucid septum

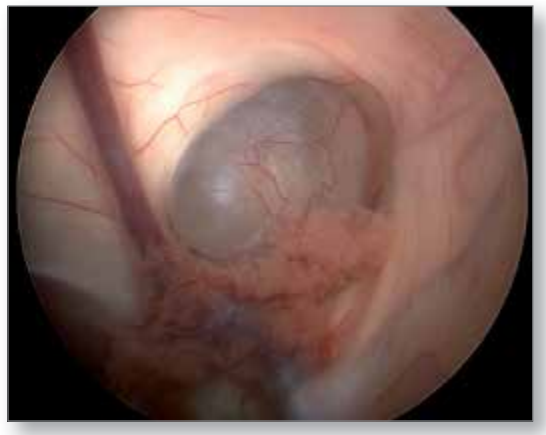


Fig. 17: Colloid cyst

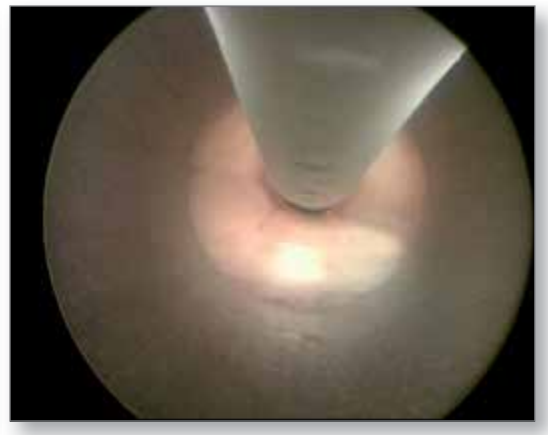


Fig. 18: Stent in the aqueduct

LOTTA® Neuroendoscope

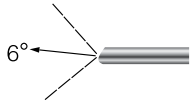
SCHROEDER **Recommended Set**

28164 LA/28164 LS

28164 LO

28164 LP

28008 AA

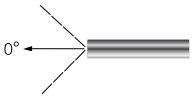


28164 LA **LOTTA® Ventriculoscope with HOPKINS® Wide Angle Straight Forward Telescope 6°,** angled eyepiece, outer diameter 6.1 mm, length 18 cm, working channel diameter 2.9 mm, irrigation/suction channel diameter 1.6, **autoclavable,** fiber optic light transmission incorporated,
color code: green

28164 LS **Operating Sheath,** graduated, rotating, outer diameter 6.8 mm, working length 13 cm, for use with LOTTA® Ventriculoscope 28164 LA

28164 LO **Obturator,** for use with Operating Sheaths 28164 LS and 28164 LSB

28164 LP **Optical Obturator,** for positioning Operating Sheaths 28164 LS and 28164 LSB under visual control, for use with HOPKINS® Telescope 28008 AA



28008 AA **HOPKINS® Straight Forward Telescope 0°,** diameter 2 mm, length 26 cm, **autoclavable,** fiber optic light transmission incorporated,
color code: green

LOTTA® Neuroendoscope 30°

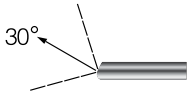
SCHROEDER **Recommended Set**

28164 LAB/28164 LSB

28164 LO

28164 LP

28008 AA

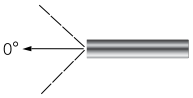


28164 LAB **LOTTA® Ventriculoscope, HOPKINS® wide angle telescope 30°,** angled eyepiece, outer diameter 6.1 mm, length 18 cm, working channel diameter 2.9 mm, irrigation/suction channel diameter 1.6 mm, **autoclavable,** fiber optic light transmission incorporated, color code: red

28164 LSB **Operating Sheath,** graduated, rotating, outer diameter 6.8 mm, working length 13 cm, for use with LOTTA® Ventriculoscope 30° 28164 LAB

28164 LO **Obturator,** for use with Operating Sheaths 28164 LS and 28164 LSB

28164 LP **Optical Obturator,** for positioning Operating Sheaths 28164 LS and 28164 LSB under visual control, for use with HOPKINS® Telescope 28008 AA



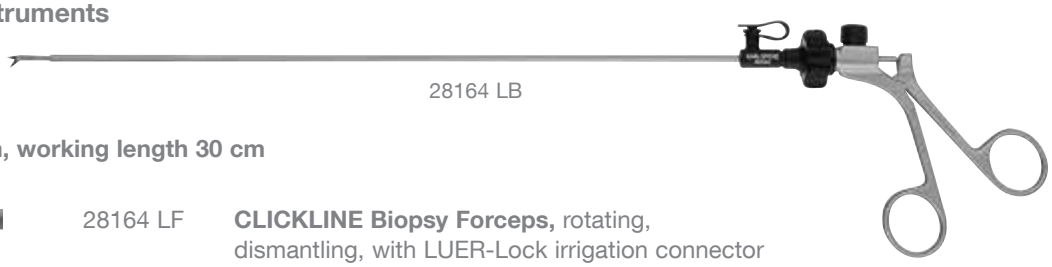
28008 AA **HOPKINS® Straight Forward Telescope 0°,** diameter 2 mm, length 26 cm, **autoclavable,** fiber optic light transmission incorporated,
color code: green

Neuroendoscope Operating Instruments

SCHROEDER **Recommended Set**

For use with LOTTA® Ventriculoscope 28164 LA/28164 LAB and Operating Sheath 28164 LS/28164 LSB

CLICKLINE Instruments



28164 LB

Diameter 2.7 mm, working length 30 cm

28164 LF **CLICKLINE Biopsy Forceps,** rotating, dismantling, with LUER-Lock irrigation connector for cleaning, single action jaws, diameter 2.7 mm, working length 30 cm
including:
Metal Handle, without ratchet
Outer Sheath, with forceps insert

Diameter 2 mm, working length 30 cm

28164 LB **CLICKLINE Scissors,** pointed, rotating, dismantling, with LUER-Lock irrigation connector for cleaning, single action jaws, diameter 2 mm, working length 30 cm

28164 LC **CLICKLINE Biopsy Forceps,** rotating, dismantling, with LUER-Lock irrigation connector for cleaning, double action jaws, diameter 2 mm, working length 30 cm

28164 LD **CLICKLINE Ventriculostomy Forceps,** rotating, dismantling, with LUER-Lock irrigation connector for cleaning, diameter 2 mm, working length 30 cm

28164 LE **CLICKLINE Grasping Forceps,** rotating, dismantling, with LUER-Lock irrigation connector for cleaning, double action jaws, diameter 2 mm, working length 30 cm

28160 TV

Diameter 1.7 mm, working length 30 cm

28162 EM **Scissors,** pointed, lightly curved jaws, double action jaws, diameter 1.7 mm, working length 30 cm

Diameter 1.3 mm, working length 30 cm

28162 FP **Scissors,** pointed, single action jaws, diameter 1.3 mm, working length 30 cm

Diameter 1 mm, working length 30 cm

28160 TV **Forceps,** for ventriculostomy, flexible, double action jaws, diameter 1 mm, working length 30 cm

28160 ZJ **Biopsy Forceps**, flexible, double action jaws, diameter 1 mm, working length 30 cm

Neuroendoscope Operating Instruments

SCHROEDER **Recommended Set**

For use with LOTTA® Ventriculoscope 28164 LA/28164 LAB and Operating Sheath 28164 LS/28164 LSB

bipolar

Outer diameter 2.4 mm, working length 30 cm

28164 BDV

28164 BDV **TAKE-APART® Bipolar Forceps,** long, flat jaws, outer diameter 2.4 mm, including
Bipolar Ring Handle
Outer Sheath
Bipolar Insert, for single use, package of 5

28164 LG

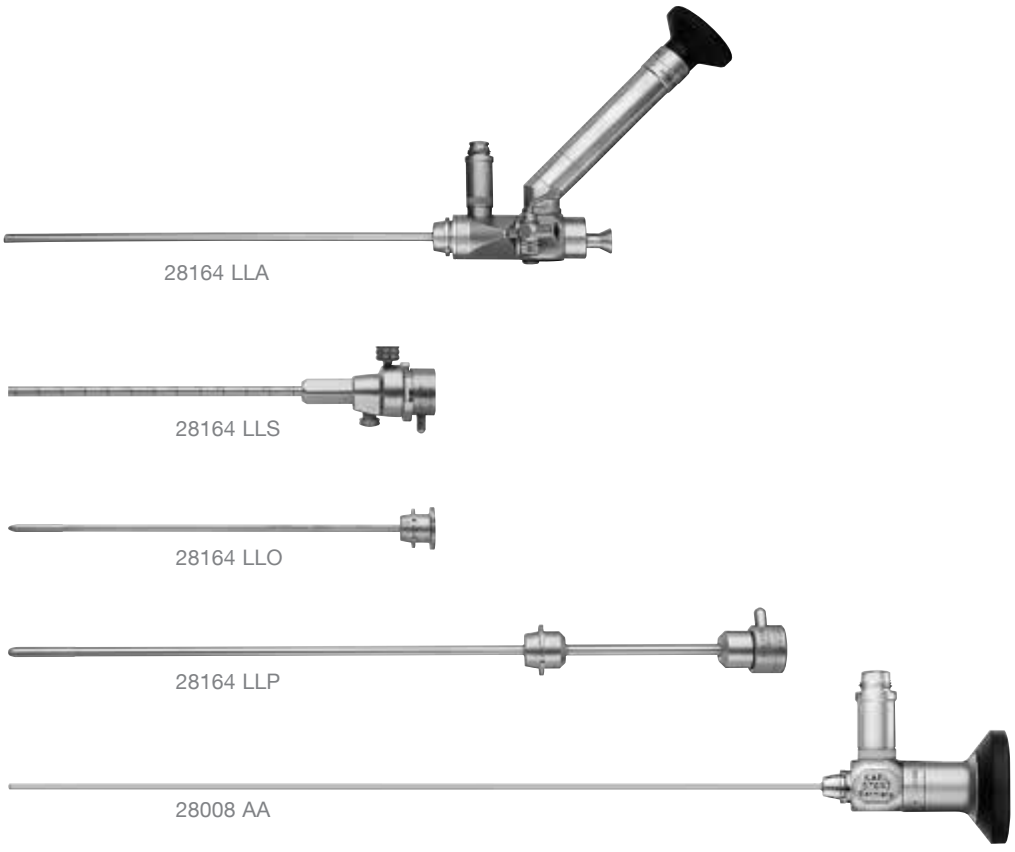
28164 LG **Guillotine Knife,** outer diameter 2.7 mm, working length 30 cm, including:
Handle
Guillotine Knife Insert

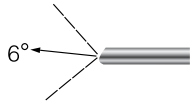
533 TV **Adaptor,** facilitates changing of telescopes in sterile conditions

28762 KB **Bipolar Coagulation Electrode,** diameter 1.7 mm, working length 30 cm

Little LOTTA® Neuroendoscope

SCHROEDER **Recommended Set**



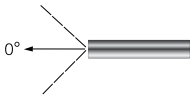


28164 LLA **Little LOTTA® Ventriculoscope, HOPKINS® Wide Angle Straight Forward Telescope 6°,** small, with angled eyepiece, outer diameter 3.6 mm, length 18 cm, working channel diameter 1.6 mm, with suction and irrigation channel diameter 0.8 mm, **autoclavable,** with irrigation adaptor, fiber optic light transmission incorporated, color code: green

28164 LLS **Operating Sheath,** small, outer diameter 4.5 mm, working length 13.3 cm, for use with SCHROEDER Ventriculoscope 28164 LLA

28164 LLO **Obturator,** for use with operating sheath 28164 LLS

28164 LLP **Optical Obturator,** for use with operating sheath 28164 LLS and HOPKINS® Telescope 28008 AA



28008 AA **HOPKINS® Straight Forward Telescope 0°,** diameter 2 mm, length 26 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green

Neuroendoscope Operating Instruments

SCHROEDER **Recommended Set**

For use with LOTTA® Ventriculoscope 28164 LLA and Operating Sheath 28164 LLS

CLICKLINE Instruments

28161 SC

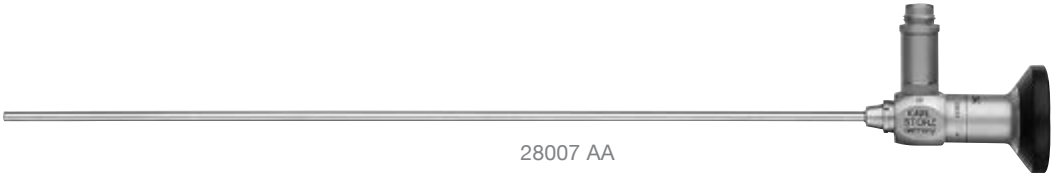
28161 SC **Scissors,** single-action jaws, diameter 1.3 mm, working length 30 cm

28161 SB **Biopsy Forceps,** double action jaws, diameter 1.3 mm, working length 30 cm

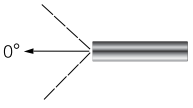
28161 SG **Grasping Forceps,** double-action jaws, diameter 1.3 mm, working length 30 cm

28161 SF **Bipolar Coagulation Electrode,** diameter 1.3 mm, working length 30 cm

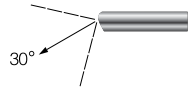
28160 TV **Forceps,** for ventriculostomy, flexible, double action jaws, diameter 1 mm, working length 30 cm



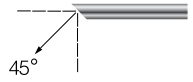
28007 AA



28007 AA **HOPKINS® Straight Forward Telescope 0°,** enlarged view, diameter 3.3 mm, length 25 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green



28007 BA **HOPKINS® Forward-Oblique Telescope 30°,** diameter 3.3 mm, length 25 cm, **autoclavable,** fiber optic light transmission incorporated, color code: red



28007 FA **HOPKINS® Telescope 45°,** enlarged view, diameter 3.3 mm, length 25 cm, **autoclavable,** fiber optic light transmission incorporated, color code: black

UNIDRIVE® S III NEURO

407017 01-1 **UNIDRIVE® S III NEURO 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

High-Speed Micro-Motor

207120 33

207120 33 **High-Speed Micro-Motor,** max. speed 60,000 rpm, including connecting cable,
for use with UNIDRIVE® S III ENT/NEURO

Perforator

252640

252640 **Perforator Handpiece,** max. speed 1200 rpm, without perforator blade,
Hudson connector, for use with High-Speed Micro-Motor **20**7120 33

*mtp medical technical promotion gmbh, take-off GewerbePark 46,
78579 Neuhausen ob Eck/Germany, Tel.: +49 (0)7467 94504-0, Fax: +49 (0)7467 94504-99,
E-Mail: info@mtp-tut.com, www.mtp-tut.com

Craniotome

252645

252645 **Craniotome Handpiece,** max. speed 60,000 rpm, including medium dura protector, for use with High-Speed Micro-Motor **20**7120 33 as well as 3.17 mm craniotome burrs and suitable dura protector

252646 **Pediatric Dura Protector,**
for use with Craniotome Handpiece 252645

The medium dura protector is automatically delivered with the craniotome handpiece.

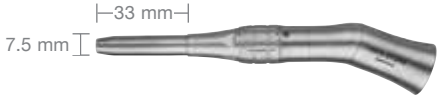
252647 **Medium Dura Protector,**
for use with Craniotome Handpiece 252645

252648 **Large Dura Protector,**
for use with Craniotome Handpiece 252645

	**High-Speed Craniotome Burrs,** 60,000 rpm, **for single use,** sterile, package of 5	
pediatric	**medium**	**long**
360000 S	360000 M	360000 L

High-Speed Handpieces – 100,000 rpm

252680

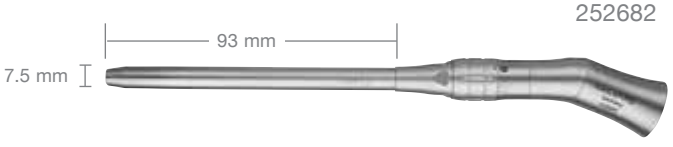


High-Speed Handpiece,
short, angled, 100,000 rpm, for use with High-Speed Micro-Motor **20**7120 33

252681

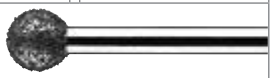
High-Speed Handpiece,
medium, angled, 100,000 rpm, for use with High-Speed Micro-Motor **20**7120 33

252682



High-Speed Handpiece,
long, angled, 100,000 rpm, for use with High-Speed Micro-Motor **20**7120 33

Burrs
for High-Speed Handpieces

	short: 252680	medium: 252681	long: 252682
Standard Burrs			
1.0 mm	350110 S	350110 M	
2.0 mm	350120 S	350120 M	350120 L
3.0 mm	350130 S	350130 M	350130 L
4.0 mm	350140 S	350140 M	350140 L
5.0 mm	350150 S	350150 M	350150 L
6.0 mm	350160 S	350160 M	350160 L
7.0 mm	350170 S	350170 M	350170 L
Diamond Burrs			
0.6 mm			
1.0 mm	350210 S	350210 M	
1.5 mm			
2.0 mm	350220 S	350220 M	350220 L
3.0 mm	350230 S	350230 M	350230 L
4.0 mm	350240 S	350240 M	350240 L
5.0 mm	350250 S	350250 M	350250 L
6.0 mm	350260 S	350260 M	350260 L
7.0 mm	350270 S	350270 M	350270 L
Diamond Burrs, coarse			
2.0 mm			
3.0 mm	350330 S	350330 M	350330 L
4.0 mm	350340 S	350340 M	350340 L
5.0 mm	350350 S	350350 M	350350 L
6.0 mm	350360 S	350360 M	350360 L
7.0 mm	350370 S	350370 M	350370 L
Acorn			
7.5 mm	350675 S	350675 M	
9.0 mm	350690 S	350690 M	
Barrel Burrs			
6.0 mm	350960 S	350960 M	
9.1 mm	350991 S	350991 M	
NEURO Fluted Burrs			
1.8 mm	350718 S	350718 M	350718 L
3.0 mm	350730 S	350730 M	350730 L

All burrs sterile, **for single use**, package of 5

Accessories

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

including:
Spray Nozzle

031131-10* **Tubing Set,** for irrigation,
for single use,
sterile, package of 10

* mtp medical technical promotion gmbh, take-off GewerbePark 46,
78579 Neuhausen ob Eck/Germany, Tel.: +49 (0)7467 94504-0, Fax: +49 (0)7467 94504-99,
E-Mail: info@mtp-tut.com, www.mtp-tut.com

IMAGE1 SPIES™ Camera System

TC 200EN* **IMAGE1 CONNECT,** connect module, for use with up to 3 link modules, resolution 1920 x 1080 pixels, with integrated **KARL STORZ-SCB** and digital Image Processing Module, power supply 100-120 VAC/200-240 VAC, 50/60 Hz
including:
Mains Cord, length 300 cm
DVI-D Connecting Cable, length 300 cm
SCB Connecting Cable, length 100 cm
USB Flash Drive, 32 GB
USB Silicone Keyboard, with touchpad, US

TC 300 **IMAGE1 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 CONNECT TC 200EN
including:
Mains Cord, length 300 cm
Link Cable, length 20 cm

* **Also available in the following languages:** DE, ES, FR, IT, PT, RU

IMAGE1 SPIES™ Camera Heads

TH 100

IMAGE1 H3-Z SPIES™ Three-Chip FULL HD Camera Head, progressive scan, soakable, gas- and plasma-sterilizable, with integrated Parfocal Zoom Lens, focal length f = 15-31 mm (2x), 2 freely programmable camera head buttons, for use with IMAGE1 SPIES™ and IMAGE 1 HUB™ HD/HD

TH 102

IMAGE1 H3-Z FI SPIES™ Three-Chip FULL HD Camera Head, SPIES™ compatible, for perfusion diagnosis of tissues and organs 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 SPIES™ and IMAGE 1 HUB™ HD/HD

Monitors

9619 NB

9619 NB

19" HD Monitor, color systems PAL/NTSC,
max. resolution 1280 x 1024,
image format 4:3,
power supply 100-240 VAC, 50/60 Hz,
wall-mounted with VESA 100 adaptor
including:
External 24 VDC Power Supply
Mains Cord

9826 NB

9826 NB

26" FULL HD Monitor, color systems PAL/NTSC,
max. screen resolution 1920 x 1080, image format 16:9,
Video inputs: DVI, 3G-SDI, VGA, S-Video, Composite,
Video outputs: DVI, 3G-SDI, Composite,
power supply 100-240 VAC, 50/60 Hz, 5 V DC output (1 A),
wall mount with VESA 100 adaptor
including:
External 24 VDC Power Supply
Mains Cord

9627 NB

9627 NB

27" FULL HD Monitor, color systems PAL/NTSC,
max. screen resolution 1920 x 1080,
image format 16:9, Interface: RS 232,
power supply 85-264 VAC, 50/60 Hz,
wall mount with VESA 100 adaptor
including:
External 24 VDC Power Supply
Mains Cord

Light Sources

20 1331 01-1 **Cold Light Fountain XENON 300 SCB,**
with integrated KARL STORZ-SCB, including an integrated anti-fog pump, a 300 Watt Xenon bulb and KARL STORZ light connection,
power supply 100-125/220-240 VAC, 50/60 Hz
including:
Mains Cord
SCB Connecting Cable, length 100 cm

20 1330 27 **XENON Spare Lamp Module,** 300 W, 15 V

20 1330 28 **XENON Spare Lamp,** 300 W, 15 V

20 1340 01 **KARL STORZ Cold Light Fountain XENON NOVA 300,** with one 300 Watt XENON lamp and one KARL STORZ light outlet,
power Supply 100-125/220-240 VAC, 50/60 Hz
including:
Mains Cord

20 1330 28 **XENON Spare Lamp,** 300 W, 15 V

20 1337 01-1 **Cold Light Fountain D-LIGHT P SCB,**
with integrated KARL STORZ-SCB, high-performance light unit for perfusion assessment, autofluorescence and standard endoscopic diagnosis, including a 300 Watt Xenon bulb and KARL STORZ light cable connection,
power supply 100-125/220-240 VAC, 50/60 Hz
including:
Mains Cord
SCB Connecting Cable
One-Pedal Footswitch, digital, one-stage

Notes

Notes

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

KARL STORZ Endoscopy-America, Inc.
2151 East Grand Avenue
El Segundo, CA 90245-5017, USA
Phone: +1 424 218-8100
Phone toll free: 800 421-0837 (US only)
Fax: +1 424 218-8525
Fax toll free: 800 321-1304 (US only)
E-Mail: info@ksea.com

STORZ
KARL STORZ — ENDOSKOPE
THE DIAMOND STANDARD

KARL STORZ GmbH & Co. KG
Mittelstraße 8, 78532 Tuttlingen, Germany
Postbox 230, 78503 Tuttlingen, Germany
Phone: +49 (0)7461 708-0
Fax: +49 (0)7461 708-105
E-Mail: info@karlstorz.com

www.karlstorz.com

Health
made in Germany
www.health-made-in-germany.com

96022012 NEURO 12 6.0 10/2016/EW-E