Highlights 2021

Laparoscopy









The New Trocar Generation from KARL STORZ

The new trocar generation combines single-use and reusable components. In line with the KARL STORZ company philosophy, the cannulas and trocars were designed with reusable components in mind. The valve seal is intended for single use.

- One-piece sealing system for single use, sterile
- Minimal friction between the valve seal and the instrument
- Total weight reduced thanks to the newly designed plastic trocar housing
- Color coding for identification of different sizes
- Available in the sizes 2.5 mm 13.5 mm

Size	2.5 mm	3.5	mm
Working length	5 cm	5 cm	10 cm
Color code	blue	green	green
Trocar, with pyramidal tip including valve seal, sterile, for single use, package of 10	11603GZS	30114GZS	30114GZG
Trocar, with blunt conical tip including valve seal, sterile, for single use, package of 10		30114GNS	30114GNG
Trocar, with conical tip including valve seal, sterile, for single use, package of 10		30114GYS	30114GYG

Size	6 r	nm	11 mm
Working length	5 cm	10 cm	10 cm
Color code	black	black	green
Trocar, with pyramidal tip including valve seal, sterile, for single use, package of 10	30160GZS	30160GZG	30103GZG
Trocar, with blunt conical tip including valve seal, sterile, for single use, package of 10	30160GNS	30160GNG	30103GNG
Trocar, with conical tip including valve seal, sterile, for single use, package of 10	30160GYS	30160GYG	30103GYG

Size	13.5 mm
Working length	10 cm
Color code	blue
Trocar, with pyramidal tip including valve seal, sterile, for single use, package of 10	30108GZG
Trocar, with blunt conical tip including valve seal, sterile, for single use, package of 10	30108GNG
Trocar, with conical tip including valve seal, sterile, for single use, package of 10	30108GYG

Valve Seals, for single use, package of 10

	STERILE (2)	
For trocars size 2.5 mm	021099-10	
For trocars size 3.5 mm	021199-10	mto
For trocars size 6 mm	021299-10	<u>.</u>
For trocars size 11 mm	021399-10	
For trocars size 13.5 mm	021499-10	

30141RS **Reducer,** to reduce from 11 mm to 5 mm 30142RS **Reducer,** to reduce from 13.5 mm to 5 mm



S-PORT

S-PORT is a single-port platform that is suitable for performing hybrid procedures (LAP/Single Port) where the single-port entry can also be used as an extraction site.

- Modular system
- Freedom of movement thanks to four working portals
- Platform for precise control of telescopes and instruments
- Possibility to extract resected tissue
- Cost-effective and reusable, except for the wound protector
- Can be combined with ROTATIP® instruments featuring jaw and sheath rotation

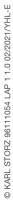
23030PA **S-PORT,** single portal surgery access system, adaptable in sizes 15-45 mm,

including wound protector (package of 10)

23030FA **Wound Protector,** hole size 7 mm, sterile, package of 10

For use with:

- HOPKINS® Forward-Oblique Telescope 30°, diameter 5 mm, length 50 cm (item no. 26048BSA)
- Instrumentation specially adapted for single-port surgery (ROTATIP® instruments with various sheath curves) or alternatively with standard instrumentation for laparoscopy





S-PILOT® - The Solution for your Smoke Management System

Regulated suction and filtering of surgical smoke during endoscopic interventions:

- Activation via footswitch or the device for controlled fluid transport
- Individual adjustment of suction flow from the sterile field
- Customizable integration into existing systems
- Modular design allows combination with pressure-regulated insufflators
- Automatic activation with KARL STORZ AUTOCON® III 400 and other HF units

UP501S1 S-PILOT®, incl. footswitch, power supply 100-240 VAC, 50/60 Hz

031447-10* Tubing Set for Smoke, Gas and Fluid Suction, sterile, STERILE (2

for single use, package of 10

031111-10* Smoke Evacuation Filter, unsterile, for single use, package of 10



As an alternative, KARL STORZ offers a smoke evacuation filter set that can be used in combination with all trocars with a LUER-Lock connector. This smoke evacuation filter is used to evacuate smoke and reduces the risk of viruses, bacteria and hazardous substances for the patient and the surgical team.



031110-10* Smoke Evacuation Filter Set, with 50 cm tube

with male LUER-Lock, sterile, for single use, package of 10, for use with trocars with LUER-Lock connector









EndoCAMeleon® Telescope with Variable Direction of View

The ENDOCAMELEON® HOPKINS® telescope with rod lens system and a rigid 10 mm sheath offers a variable direction of view. This allows adjustment of the viewing direction to any OR situation.

- Variable direction of view 0° 90°
- Enhanced illumination*
- Adjustment knob for selecting the direction of view, now with fin
- Combines the familiar handling of the HOPKINS® telescope with the advantages and potential of a telescope offering various directions of view
- Particularly suitable for use in anatomically narrow working spaces

^{*} in comparison to previous models

26003EC ENDOCAMELEON® HOPKINS® Telescope, diameter 10 mm, length 31 cm, autoclavable,

variable direction of view 0° - 90°, with adjusting knob with fin for selecting the direction of view,

fiber optic light transmission incorporated,

color code: gold

495NCSC Fiber Optic Light Cable, with straight connector, extremely heat-resistant, enhanced light

transmission, with safety lock, diameter 4.8 mm, length 250 cm

39501BEC Wire Tray for Cleaning, Sterilization and Storage of one ENDOCAMELEON®,

length 32 cm, and one light cable, including holder for light post adaptor,

silicone telescope holder and lid, external dimensions (w x d x h): 480 x 125 x 54 mm

General and Visceral Surgery



Bariatric Surgery

Sleeve gastrectomy

- Complete visualization of the gastroesophageal junction
- 45°-90°

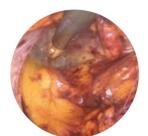
Prof. Carus, Germany



Liver Segment Resection

- Better visualization of the postero-superior segments of the liver
- 45°

Prof. Abu Hilal, Italy



Hernia Surgery

TEP

- Complete visualization of the hernial sac
- 45°

Prof. Boni, Italy



Colorectal Surgery

Rectum resection

- Complete visualization of the anastomosis
- 30° 90°

Dr. Kanehira, Japan





Adenectomy

- Better visualization of various adhesions for easier adhesiolysis
- 90°

Dr. Wojdat, Germany





VATS Lobectomy

- Better visualization during lymph node resection
- 45°

Dr. Kugler, Germany

The ENDOCAMELEON® can also be useful for urological laparoscopy.

Here you can view our product trailer ENDOCAMELEON® – The Next Generation





IMAGE1 S™ 4U Rubina™ - The New 4K NIR/ICG Camera Head

IMAGE1 S™ 4U RUBINA™ combines 4K imaging technology as well as fluorescence imaging in the near infrared range for the display of indocyanine green (ICG) and for autofluorescence. 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 purely near infrared mode in monochromatic color display for the clear delineation of structures.

- Native 4K image resolution with very good image brightness and rich color detail
- OPAL1® NIR/ICG technology with new functionalities
- S-Technologies in white light and the overlay modes Overlay and Intensity Map
- Enhanced* NIR/ICG telescopes and new models
- Laser-free LED light source for white light and NIR/ICG excitation

^{*} in comparison to previous models

26003FRA

26003FREA

26046ARA

26046BRA

26046FRA

26003BRA	HOPKINS® RUBINA™ 30°, NIR/ICG, forward-oblique telescope 30°, enlarged view, diameter 10 mm, length 31 cm, autoclavable, for indocyanine green (ICG), fiber optic light transmission incorporated
26003ARA	HOPKINS® RUBINA™ 0°, NIR/ICG, straight-forward telescope 0°, enlarged view, diameter 10 mm, length 31 cm, autoclavable, for indocyanine green (ICG), fiber optic light transmission incorporated
NIR/ICG Te	lescopes:
TM343	32" 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
TM440	58" 4K Monitor, screen resolution 3840 \times 2160, image format 16:9, power supply 100-240 VAC, 50/60 Hz, wall-mounted with VESA 400 \times 400 and VESA 400 \times 200 adaptors
TM350	32" 4K/3D Monitor, screen resolution 3840 x 2160, image format 16:9, power supply 100-240 VAC, 50/60 Hz, 5V DC output (1 A), wall-mounted with VESA 100 adaptor
TM450	55" 4K/3D Monitor, power supply 100-240 VAC, 50/60 Hz, 5V DC output (5V/8W and 12V/20W), wall-mounted with VESA 200/300 adaptor
UF101	One-Pedal Footswitch, one-stage
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, 50/60Hz
TH121**	IMAGE1 S™ 4U RUBINA™ , OPAL1® NIR/ICG, S-Technologies available, progressive scan, soakable, low-temperature sterilization, 2 freely programmable camera head buttons, for use with IMAGE1 S™ 4U-LINK
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
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

HOPKINS® RUBINA™ 45°, NIR/ICG, forward-oblique telescope 45°, enlarged view, diameter 10 mm,

HOPKINS® RUBINA™ 45°, NIR/ICG, forward-oblique telescope 45°, enlarged view, diameter 10 mm, length 42 cm, autoclavable, for indocyanine green (ICG), fiber optic light transmission incorporated HOPKINS® RUBINA™ 0°, NIR/ICG, straight-forward telescope 0°, enlarged view, diameter 5 mm,

length 31 cm, autoclavable, for indocyanine green (ICG), fiber optic light transmission incorporated

length 29 cm, autoclavable, for indocyanine green (ICG), fiber optic light transmission incorporated

HOPKINS® RUBINATM 30°, NIR/ICG, forward-oblique telescope 30°, enlarged view, diameter 5 mm,

HOPKINS® RUBINATM 45°, NIR/ICG, forward-oblique telescope 45°, enlarged view, diameter 5 mm,

length 29 cm, autoclavable, for indocyanine green (ICG), fiber optic light transmission incorporated

length 29 cm, autoclavable, for indocyanine green (ICG), fiber optic light transmission incorporated

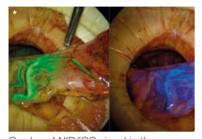
^{*} Also available in the following languages: DE, ES, FR, IT, PT, RU

^{**} For use with HOPKINS® RUBINATM NIR/ICG telescopes

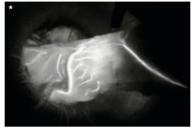
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Fluorescence Imaging with the NIR/ICG System

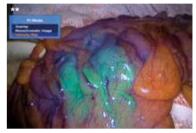
Visualization of perfusion, e.g., for colorectal anastomoses



Overlay of NIR/ICG signal in the white light image



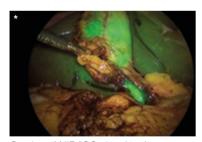
NIR/ICG mode in monochromatic color display



Display of NIR/ICG signal intensity

- Visualization of perfusion of a planned resection zone, e.g., for colon anastomoses, esophagus anastomoses and gastric bypass anastomoses
- NIR/ICG fluorescence imaging enables ischemic areas, perfusion, and vascular structures to be displayed in real time

Visualization of the gallbladder and bile ducts



Overlay of NIR/ICG signal in the white light image

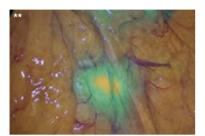


Monochromatic color display

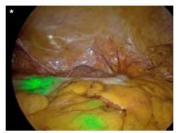
Following intravenous administration, ICG naturally collects in the gallbladder and bile ducts. This allows the rapid and reliable identification of gallbladder and bile duct anatomy.

- Supports visualization for the differentiation between the cystic duct and the common bile duct
- Intraoperative leaks displayed with ICG
- Shortened surgical duration with ICG compared to standard cholangiography

Visualization of the lymphatic system



Display of NIR/ICG signal intensity

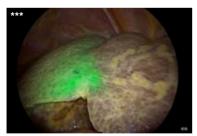


Overlay of NIR/ICG signal in the white light image

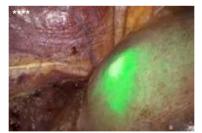
NIR/ICG imaging enables non-radioactive visualization of the lymph system surrounding a tumor in real time.

- Detection rates compare favorably with established methods of lymph node visualization
- Multidisciplinary use, for example, in gynecology, urology and general surgery

Use in liver surgery



Overlay of NIR/ICG signal in the white light image



Visualization of liver metastases in a superimposed NIR/ICG signal in the white light image



Display of NIR/ICG signal intensity

- The NIR/ICG system enables the visualization of liver metastases, primary liver tumors and bile leakage
- In liver segmentectomy, the NIR/ICG system can be used to visualize the course of vessels in individual liver segments

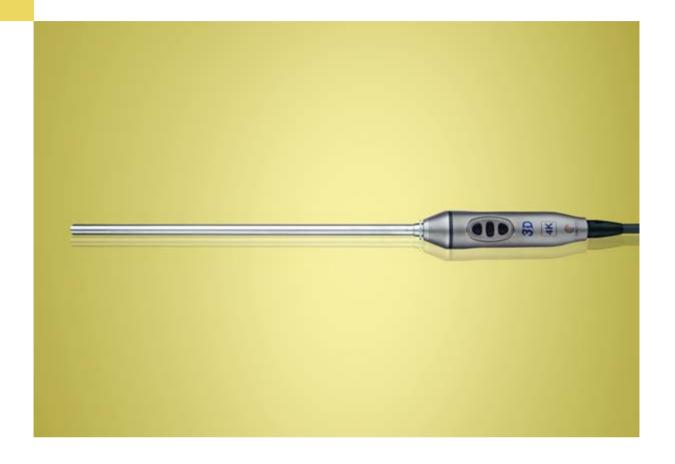
^{*} Source: Prof. Luigi Boni, IRCCS - Ca' Granda, Policlinico Hospital, University of Milan, Milan, Italy

^{**} Source: Prof. Salvador Morales Conde, Quirónsalud Sagrado Corazón Hospital, Seville, Spain

^{***} Source: Prof. Mohammed Abu Hilal, Poliambulanza Foundation Hospital, Brescia, Italy

^{****} Source: Prof. Robert Sutcliffe, University Hospital Birmingham, Birmingham, United Kingdom

^{*****} Source: Dr. Tran Cong Duy Long, University Medical Center, Ho Chi Minh City, Vietnam



TIPCAM®1 Rubina™ – The New 4K-3D NIR/ICG Videoendoscope

TIPCAM®1 RUBINA™ provides surgeons with excellent depth perception.

This stereoscopic system offering 3D in 4K quality is particularly helpful when performing activities that require spatial vision. Thanks to the modular system design, existing IMAGE1 S™ 2D systems can be upgraded to 3D.

- Automatic horizon control for better orientation and handling
- 4K-3D NIR/ICG videoendoscopes with 10 mm diameter as well as 0° and 30° directions of view
- Easy toggle from 3D to 2D
- OPAL1® NIR/ICG visualization modes
- Easy integration into the IMAGE1 S[™] platform

NIR/ICG Functionalities

The NIR/ICG functionalities of the TIPCAM®1 RUBINA™ will be available with a subsequent software update of IMAGE 1 S™ in 2D and 3D.

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 KARLSTORZ-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
26606ACA	TIPCAM®1 RUBINATM, OPAL1® NIR/ICG, 4K/3D, high-resolution videoendoscope with two distally integrated video chips, for NIR/ICG fluorescence imaging in combination with POWER LED RUBINATM, 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 connecting cable, for use with IMAGE1 S CONNECT® II and IMAGE1 STM 4U-LINK
26606BCA	Same, direction of view 30°
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 \times 2160, image format 16:9, power supply 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
TM350	32" 4K/3D Monitor, screen resolution 3840 \times 2160, image format 16:9, power supply 100-240 VAC, 50/60 Hz, wall mount with VESA 100 adaptor
TM003	3D Polarization Glasses, fogless, passive, for use with 3D monitors
9800C	3D Clip-on Glasses, circularly polarized
495TIP	Fiber Optic Light Cable, with straight connector, extremely heat-resistant, enhanced light transmission, with safety lock, diameter 4.8 mm, length 300 cm
39501XTC	Wire Tray, for cleaning, sterilization and storage of TIPCAM®1 S 3D Videoendoscopes 26605AA/BA or TIPCAM®1 RUBINA™ 3D/4K Videoendoscopes 26606ACA/BCA, 26616ACA/BCA and one light cable, autoclavable , external dimensions (w x d x h): 640 x 220 x 87 mm

 $^{^{\}ast}$ Also available in the following languages: DE, ES, FR, IT, PT, RU



Scope Warmer for Single Use

For warming the scope for fog-free work

- Warmer activated to heat endoscope via a metal plate
- Suitable for all rigid endoscopes
- Available in two different sizes (12 x 20 cm and 12 x 36 cm)
- No other heat source (electricity, warm water, etc.) required
- Product is sterile on delivery and is ready for immediate use
- Two scopes can be heated in the warmer at the same time

100120-15* **Scope Warmer,** 12 x 20 cm, sterile, for single use, package of 15, for use with all standard rigid endoscopes featuring optical systems with lengths that fit into the pad



100121-10* **Scope Warmer,** 12 x 36 cm, sterile, for single use, package of 10, for use with all standard rigid endoscopes, featuring optical systems with lengths that fit into the pad







CLICKline Single-Use Scissors

The single-use scissor inserts 34310MA-D and 34310MS-D can be combined with all reusable handles in the KARL STORZ CLICKLINE series, providing a practical solution for regular use or as a backup system.

- Inserts sterile-packed in individual blister packs and delivered in packages of 10 in a dispenser box
- Proven scissor blade designs
- Cost-effective solution: "Single-use meets reusable"
- Color coding allows clear identification of the single-use components



CLICK/ine Single-Use Scissors with Outer Sheath, size 5 mm, length 36 cm, sterile, for single use







34310MA-D

CLICKLINE Scissors Insert with Outer Sheath, curved, double action jaws, spoon-shaped jaws,

length of blades 17 mm, sterile, for single use, package of 10



34310MS-D

CLICKLINE METZENBAUM **Scissors Insert with Outer Sheath,** curved, double action jaws, length of blades 12 mm, sterile, for single use, package of 10

For use with reusable handles in the CLICKLINE series, e.g.



33151

CLICKLINE Plastic Handle, without ratchet, with larger contact area at the finger ring, with connector pin for unipolar coagulation



CLICKLINE Plastic Handle, axial, without ratchet, double action shanks, rotating, insulated, with connector pin for unipolar coagulation

Further handles for combination with the single-use scissors can be found in the Laparoscopy catalog.



RoBi® – Rotating Bipolar Grasping Forceps and Scissors in sizes 3.5 mm and 5 mm

The ROBI® instruments allow precise work on tissue. The enhanced instrument design and the materials used ensure high mechanical stability.

- Available in sizes 3.5 and 5 mm
- Ideal in combination with the high-end HF unit AUTOCON® III 400 with a mode specially adapted to ROBI® instruments
- Can be dismantled into individual components

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RoBi® Bipolar Grasping Forceps and Scissors, size 3.5 mm



Rotating, 2-part, dismantling, with connector pin for bipolar coagulation, CLERMONT-FERRAND model

Operating instruments, **length 36 cm**, for use **with trocars size 3.5 mm**

Working Insert with Outer Sheath	Handle
	38151
36 cm	

Double action jaws

Double action jaws	
Working Insert with Outer Sheath	Complete Instrument
38910MD	38951 MD
├ 12 mm ┤	ROBI® KELLY Grasping Forceps, CLERMONT-FERRAND model, especially suitable for dissection, color code: light blue
38910ON	38951 ON
├ 12 mm ┤	ROBI® Grasping Forceps, CLERMONT-FERRAND model, with especially fine atraumatic serration, fenestrated jaws, color code: light blue
38910MW	38951 MW
├ 13 mm ┤	ROBI® Scissors, CLERMONT-FERRAND model, curved blades, color code: light blue

Jaw length in mm (approximate measurements)

RoBi® Bipolar Grasping Forceps, size 5 mm

Rotating, 3-part, dismantling, with connector pin for bipolar coagulation, CLERMONT-FERRAND model



Operating instruments, **lengths 36 cm** and **43 cm**, for use **with trocars size 6 mm**

Out on Charth	Handle
Outer Sheath	38151
36 cm	•
43 cm	90

Double action jaws

Working Insert	Complete Instrument
38610ON	38651ON
38710ON	38751ON
├ 18 mm -	ROBI® Grasping Forceps, CLERMONT-FERRAND model, with especially fine atraumatic serration, fenestrated jaws, color code: light blue
38610CL	38651CL
├ 14 mm ┤	ROBI® Grasping Forceps, CLERMONT-FERRAND model, wide jaws, for dissection, grasping and bipolar coagulation of large vessels and tissue layers, color code: light blue
38610MD	38651MD
38710MD	38751MD
- 19 mm	ROBI® KELLY Grasping Forceps, CLERMONT-FERRAND model, especially suitable for dissection, color code: light blue
38610ML	38651ML
24 mm	ROBI® KELLY Grasping Forceps, long, CLERMONT-FERRAND model, especially suitable for dissection, color code: light blue

Jaw length in mm (approximate measurements)

Further bipolar grasping forceps and additional information can be found in the Laparoscopy catalog.

RoBi® Bipolar Scissors 5 mm

Rotating, 3-part, dismantling, with connector pin for bipolar coagulation, CLERMONT-FERRAND model



Operating instruments, lengths 36 cm and 43 cm, for use with trocars size 6 mm

Outon Cheetle	Handle
Outer Sheath	38151
36 cm	•
43 cm	90

Single action jaws

Working Insert	Complete Instrument
38610MT	38651MT
├─ 23 mm ─	ROBI® Scissors, CLERMONT-FERRAND model, straight jaws, for cutting vessels and tissue layers, color code: light blue
38610MZ	38651MZ
- 23 mm -	ROBI® Scissors, CLERMONT-FERRAND model, straight jaws, serrated, color code: light blue

Double action jaws

38610MW	38651MW		
38710MW	38751MW		
- 20 mm -	ROBI® METZENBAUM Scissors , CLERMONT-FERRAND model, curved jaws, slender scissor blades, color code: light blue		

— Jaw length in mm (approximate measurements)



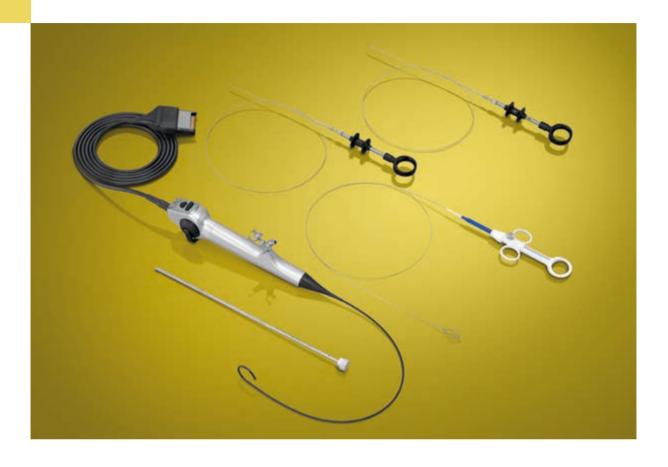
Instrument Set for Minilaparoscopy

Minilaparoscopy has now become a popular surgical technique as this method – also in hybrid procedures with standard instruments (diameter 5 mm) – represents a steep learning curve for the user and enhanced cosmetic results for the patient.

- Complete instrument set for minilaparoscopy (diameter 3.5 mm) available: Trocars, unipolar and bipolar instruments, suction-irrigation systems, suture and ligature instruments
- Modular design: 3-part dismantling instruments for high hygiene requirements and variability
- Diverse combination possibilities thanks to a wide range of jaws with various outer sheaths and CLICKLINE handles
- Rotating bipolar instruments (ROBI®, diameter 3.5 mm)

26046BA	HOPKINS® Forward-Oblique Telescope 30°, diameter 5 mm, length 29 cm, autoclavable, fiber optic light transmission incorporated
or	
26007BA	HOPKINS® Forward-Oblique Telescope 30°, enlarged view, diameter 3.3 mm, length 25 cm, autoclavable, fiber optic light transmission incorporated
533TVB	Adaptor, autoclavable, permits telescope changing under sterile conditions
30160GYG	Trocar, with conical tip, with LUER-Lock connector for insufflation, size 6 mm, working length 10 cm
3x 30114GYG	Trocar, with conical tip, with LUER-Lock connector for insufflation, size 3.5 mm, working length 10 cm
Alternative:	
3x 30217KAK	CARVALHO Trocar, with blunt tip, without LUER-Lock connector for insufflation, length 10 cm, for use with instruments size 3.5 mm
31352ML	CLICKLINE KELLY Dissecting and Grasping Forceps, rotating, dismantling, insulated, with connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, double action jaws, long, size 3.5 mm, length 36 cm
31362ONM	CLICKLINE Grasping Forceps, rotating, dismantling, without connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, single action jaws, fenestrated, with especially fine atraumatic serration, size 3.5 mm, length 36 cm
31351MW	CLICKLINE Scissors, rotating, dismantling, insulated, with connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, double action jaws, serrated, curved, conical, size 3.5 mm, length 36 cm
31351MD	CLICKLINE KELLY Dissecting and Grasping Forceps, rotating, dismantling, insulated, with connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, double action jaws, size 3.5 mm, length 36 cm
31361ULM	CLICKLINE REDDICK-OLSEN Dissecting and Grasping Forceps, rotating, dismantling, without connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, double action jaws, robust, size 3.5 mm, length 36 cm
25775CNL	CADIERE Coagulation and Dissection Electrode, L-shaped, with cm-marking, distal tip tapered, with connector pin for unipolar coagulation, size 3.5 mm, length 36 cm
38951MD	ROBI® KELLY Grasping Forceps, CLERMONT-FERRAND model, with connector pin for bipolar coagulation, double action jaws, size 3.5 mm, length 36 cm
38951ON	ROBI® Grasping Forceps, CLERMONT-FERRAND model, with connector pin for bipolar coagulation, fenestrated, double action jaws, size 3.5 mm, length 36 cm
33120G	Rotating Wheel, for CLICKLINE and ROBI® handles, autoclavable, package of 5
37113A	Handle, pistol grip, with clamping valve, for suction and irrigation, autoclavable
26167ANL	Suction and Irrigation Tube, with lateral holes, size 3.5 mm, length 36 cm
26167RNL	KOH Ultramicro Needle Holder, jaws curved to right, with tungsten carbide insert, straight handle, with disengageable ratchet, size 3.5 mm, length 36 cm

The entire KARL STORZ product portfolio for minilaparoscopy and accessories can be found in the Laparoscopy catalog and the Minilaparoscopy catalog excerpt.



Flexible Video Choledochoscopes

The flexible video choledochoscopes from KARL STORZ allow exploration of both the intra- and extrahepatic bile ducts as well as the surgical removal of gallstones.

- "Chip-on-the-tip" technology for high image quality*
- Compatible with the IMAGE1 S[™] platform
- Menu navigation via camera head (e.g., Picture-in-Picture)
- Minimal sheath circumference 2.8 mm
- Infinitely adjustable deflection up to 270°
- Direct transmission of hand movements through to the distal end



11292VSK Flexible Video Choledochoscope IMAGE1 S™, steerable, for use with IMAGE1 S™

Deflection of distal tip: 270°/270°

Direction of view:

Angle of view:

Working channel inner diameter:

Sheath size:

2.8 mm

Working length:

50 cm

11292VSUK **Same,** with contrapositive deflection mechanism

Further accessories for intraoperative choledochoscopy and cholangiography:

Grasping Forceps, for guiding video choledochoscopes

33561PG CLICKLINE BERCI Grasping Forceps, size 10 mm, double action jaws, with silicone pads

Cholangiography Fixation Clamp

28378CH OLSEN Cholangiography Fixation Clamp, with channel for catheter 6 Fr., length 27 cm

Further information on flexible video choledochoscopes and accessories is available in the Laparoscopy catalog.

Further information on camera systems is available in the Telepresence catalog.



Rigid Choledochoscope with Distal Curvature

The rigid choledochoscope with distal curvature can be used as a supplement or cost-effective alternative to flexible choledochoscopes and thus allows the exploration of intra- and extrahepatic bile ducts as well as the surgical removal of gallstones.

- Cost-effective alternative to flexible choledochoscopy
- 2 working channels that allow the simultaneous introduction of both stone baskets and a laser probe
- Autoclavable

28021AA Rigid Choledochoscope, distally curved, diameter 3.5 mm, length 34 cm, autoclavable,

with irrigation connector, two working channels 3.4 Fr., with remote eyepiece,

fiber optic light transmission incorporated

30160NKL **Trocar,** flexible, size 6 mm

Further Accessories for Intraoperative Choledochoscopy and Cholangiography:

Cholangiography Fixation Clamp

28378CH OLSEN Cholangiography Fixation Clamp, with channel for catheter 6 Fr., length 27 cm

Wire Tray for Cleaning, Sterilization and Storage

39502ZL Wire Tray, long	, stackable, including	hole plate walls and	foldaway handles
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39100PS Fixation Pin, height 38 mm, package of 12

39360AS Silicone Tie-Downs, package of 12

39100SL Silicone Grid Insert LARGE DIAMOND GRID

39752A2 **Sterilization Container,** with MicroStop® microbiological barrier,

external dimensions (w x d x h): 600 x 300 x 160 mm



Flexible Choledocho-Fiberscopes

The flexible choledocho-fiberscopes from KARL STORZ allow the exploration of intra- and extrahepatic bile ducts as well as the surgical removal of gallstones.

- Large working channel
- Large field of view and wide range of distal tip
- Compatible with all KARL STORZ camera systems

11292ADK1 **Choledocho-Fiberscope,** steerable, direction of view 0°, angle of view 90°, working channel

inner diameter 3.6 Fr., distal tip outer diameter 7.5 Fr., deflection up/down 160°/120°,

working length 50 cm

11292ADUK1 **Choledocho-Fiberscope,** steerable, with contrapositive deflection mechanism,

direction of view 0°, angle of view 90°, working channel inner diameter 3.6 Fr., distal tip

outer diameter 7.5 Fr., deflection up/down 160°/120°, working length 50 cm

11292DEK1 Choledocho-Fiberscope, steerable, direction of view 0°, angle of view 110°, working

channel inner diameter 6 Fr., distal tip outer diameter 15.5 Fr., deflection up/down 180°/100°,

working channel 36 cm

Further Accessories for Intraoperative Choledochoscopy and Cholangiography:

Grasping Forceps for Guiding Choledocho-Fiberscopes

33561PG CLICKLINE BERCI Grasping Forceps, size 10 mm, double action jaws, with silicone pads

Cholangiography Fixation Clamp

28378CH OLSEN **Cholangiography Fixation Clamp,** with channel for catheter 6 Fr., length 27 cm



NATHANSON Liver Retractors

The NATHANSON liver retractors are particularly characterized by a large and atraumatic surface area.

- Large surface area for retraction of the liver
- Fatigue-free retraction when used in conjunction with a mechanical holding system
- Available in three sizes

30623NAS NATHANSON **Liver Retractor,** small surface area, diameter 5 mm
30623NAM NATHANSON **Liver Retractor,** medium surface area, diameter 5 mm
30623NAL NATHANSON **Liver Retractor,** large surface area, diameter 6 mm

Optional Accessories:



Holding System, autoclavable, with quick release coupling KSLOCK.

The holding system comprises the following components:

28172HK **Socket,** to clamp to the OR table, for European and US standard rails, also suitable for rails 25 x 10 mm up to 35 x 8 mm, lateral clamp for height adjustment of the articulated stand

28272HB Articulated Stand, reinforced version, L-shaped, with one mechanical central clamp for all five joint

functions, height 48 cm, swivel range 52 cm, with quick release coupling KSLOCK (female)

28272UKN Clamping Jaw, metal, clamping range 4.8-12.5 mm, with quick release coupling KSLOCK (male),

for use with instrument and telescope sheaths



Retractors for Laparoscopic Colorectal Procedures

Advanced laparoscopic surgery and particularly laparoscopic rectal surgery are technically extremely challenging.

One of the key requirements for successfully performing these procedures while respecting oncological principles is optimal exposure and, consequently, good visualization of the surgical site.

- Useful for the visualization of different structures in the case of difficult anatomies (particularly obese male patients)
- Different retractor shapes for various anatomic conditions
- Stable design
- Easy to use thanks to rotating wheel for deflection

33541H CLICKLINE H-Retractor, long jaws with silicone pads 30510PY on the distal tip, double action

jaws, jaws open in parallel, autoclavable, ratchet engages while handle opens, size 10 mm,

length 36 cm including:

Metal Handle, with disengageable ratchet

Outer Sheath, insulated H-Retractor Insert Silicone Pad, package of 6

30623HA Articulating H-Retractor, long jaws, double action jaws, jaws open in parallel, bendable to 90°,

autoclavable, size 10 mm, length 36 cm

30623T **T-Retractor,** with rotation wheel for angling and extending the distal tip, with LUER-Lock connector

for cleaning, autoclavable, size 10 mm, length 30 cm

30623VL V-Retractor, with rotation wheel for angling and extending the distal tip, with LUER-Lock connector

for cleaning, autoclavable, size 10 mm, length 30 cm

30623I I-Retractor, with rotation wheel for angling and extending the distal tip, with LUER-Lock connector

for cleaning, autoclavable, size 10 mm, length 36 cm

Optional Accessories:

30623H Handle Attachment, autoclavable, for use with retractors for secure hold

Holding System, autoclavable, with quick release coupling KSLOCK.

The holding system comprises the following components:

28172HK Socket, to clamp to the OR table, for European and US standard rails, also suitable for rails

25 x 10 up to 35 x 8 mm, lateral clamp for height adjustment of the articulated stand

28272HB Articulated Stand, reinforced version, L-shaped, with one mechanical central clamp for all five joint

functions, height 48 cm, swivel range 52 cm, with quick release coupling KSLOCK (female)

28272UKN Clamping Jaw, metal, clamping range 4.8-12.5 mm, with quick release coupling KSLOCK (male),

for use with instrument and telescope sheaths



Needle Holder with Righting Function

KARL STORZ has expanded its portfolio to include a needle holder with a needle righting function. The needle, which is clamped flat in the needle holder, can be raised at the site by means of the rotary wheel.

- Righting function for the clamped needle by turning the rotary wheel
- Axial handle design
- The smooth-running, precisely settable ratchet allows secure positioning of the needle

The clamped needle in the needle holder can be introduced with a 11 mm trocar (Fig. 1). Using the rotary wheel (Fig. 2), the needle can be brought into an upright position (Fig. 3).

Fig. 1



Fig. 2

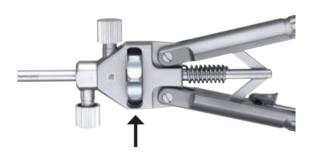


Fig. 3



26173HA

Macro Needle Holder, with needle righting function, straight handle with ratchet, ratchet position right, jaws straight, with tungsten carbide inserts, diameter 5 mm, length 33 cm

In addition to the needle holder with needle righting function, KARL STORZ offers a wide range of other needle holders. Further information is available in the Laparoscopy catalog.



KARL STORZ KOH Macro Needle Holder, dismantling

The dismantling KOH macro needle holder (diameter 5 mm) consists of three individual parts: Handle, outer sheath and working insert. A choice of six different handles and four different working inserts allows an individual configuration of the needle holder – depending on the surgeon's preferences.

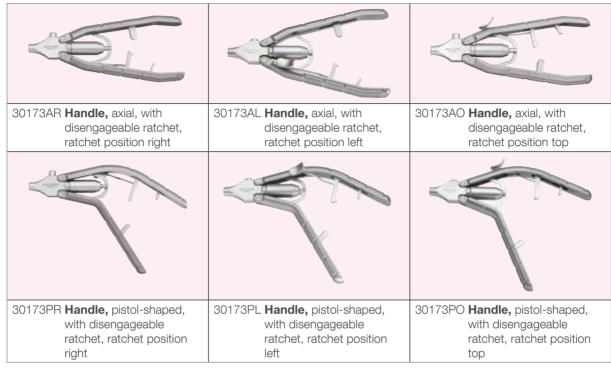
Special Features:

- The tungsten carbide inserts hold the needle and suture material
- The smooth-running, precisely settable ratchet enables the positioning of the needle
- Axial and pistol-shaped handles
- Can be dismantled into three parts: Handle, outer sheath and working insert
- Thanks to the modular design, only the component with the defect needs to be replaced in the event of damage

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Handles and Outer Sheaths for KOH Macro Needle Holders

Handles, axial and pistol-shaped, with disengageable ratchet



Metal Outer Sheath Size 5 mm



size 5 mm, length 33 cm

30178A Same, length 43 cm

KOH Macro Needle Holder

Dismantling, size 5 mm

Operating instruments, lengths 33 and 43 cm, **with axial handle** for use with trocars size 6 mm

Longth	Handle		
Length	30173AR	30173AL	30173AO
33 cm			
43 cm			

Single action jaws

	Complete Instrument	
30173RAR	30173RAL	30173RAC
30178RAR	30178RAL	30178RA0
		ght,
30173LAR	30173LAL	30173LAC
30178LAR	30178LAL	30178LAC
30173FAR	30173FAL	
	00 17 01 AL	30173FA0
30178FAR	30178FAL	30173FAC 30178FAC
30178FAR KOH Macro Needle H with tungsten carbide in	30178FAL older, straight jaws,	
	30178RAR KOH Macro Needle H with tungsten carbide ir 30173LAR 30178LAR KOH Macro Needle H with tungsten carbide ir	30178RAR 30178RAL KOH Macro Needle Holder, jaws curved to rig with tungsten carbide inserts 30173LAR 30173LAL

KOH Macro Needle Holder

Dismantling, size 5 mm

Operating instruments, lengths 33 and 43 cm, **with pistol grip handle,** for use with trocars size 6 mm

Longith	Har	ndle	
Length	30173PR	30173PL	30173PO
33 cm			
43 cm			

Single action jaws

onigie dottori jawo	1		
Working Insert	Complete Instrument		
30173R	30173RPR	30173RPL	30173RPO
30178R	30178RPR	30178RPL	30178RPO
	KOH Macro Needle I with tungsten carbide	Holder, jaws curved to rig inserts	ht,
30173L	30173LPR	30173LPL	30173LPO
30178L	30178LPR	30178LPL	30178LPO
30173F	with tungsten carbide	Holder, jaws curved to lef inserts 30173FPL	30173FPO
30173F 30178F	30173FPR 30178FPR	30173FPL 30178FPL	30173FPO 30178FPO
KOH Macro Needle Holder, straight jaws, with tungsten carbide inserts			
30173G	30173GPR	30173GPL	30173GPO
	KOH Macro Assistar	nt Needle Holder, straigh	t jaws

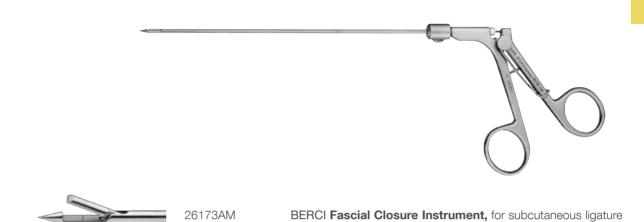


BERCI Fascial Closure Instrument

To prevent the risk of hernia, large trocar sites should be closed after laparoscopic interventions. KARL STORZ offers a special reusable fascial closure instrument for this purpose.

Special Features:

- Solution for trocar site closures
- Integrated grasping forceps for passing and retrieving sutures during wound closure
- Another possible application in laparoscopic hernia surgery for the fixation of the synthetic mesh to the abdominal wall



trocar incision wounds

of trocar incisions, size 2.8 mm, length 17 cm, for closure of



KARL STORZ Suction and Irrigation Systems

KARL STORZ offers a wide range of suction and irrigation systems. Diverse combination possibilities for handles as well as suction and irrigation tubes can be selected to achieve the desired suction or irrigation results. The appropriate tubing systems are also available from KARL STORZ.

Special Features:

- A broad range of suction and irrigation tubes available in various lengths and diameters allows the user to select KARL STORZ suction and irrigation systems to meet individual needs.
- The modular system allows KARL STORZ handles to be combined with various suction and irrigation tubes as well as tubing sets.
- Suction and irrigation systems provide powerful suction and irrigation thanks to the customary KARL STORZ high quality standards.

Discover our range of suction and irrigation systems and assemble your preferred KARL STORZ suction and irrigation system.

071101

3/112A	Handle, straight, with clamping valve, for suction and irrigation, autoclavable
37113A	Handle, pistol grip, with clamping valve, for suction and irrigation, autoclavable
37112RV	Suction and Irrigation Handle, straight, with roller valve, for suction and irrigation, autoclavable
26167ANL	Suction and Irrigation Tube, with lateral holes, size 3.5 mm, length 36 cm, for use with handles for irrigation and suction
37360LH	Suction and Irrigation Tube, with lateral holes, size 5 mm, length 36 cm, for use with suction and irrigation handles
37460LH	Suction and Irrigation Tube, with lateral holes, size 5 mm, length 43 cm, for use with suction and irrigation handles
37560LH	Suction and Irrigation Tube, with lateral holes, size 10 mm, length 36 cm, for use with suction and irrigation handles

For use with the following tubing sets

031133-10* **Tubing Set,** sterile, for single use, package of 10,

for use with KARL STORZ Handles 37112A (straight), 37113A (pistol grip) and 37112RV

031524-10* **Tubing Set,** irrigation, FC, sterile, for single use, package of 10,

for use with HAMOU® ENDOMAT® SCB 26331120-1 and

ENDOMAT® SELECT UP210 (laparoscopy)

Note: Tubing Set 031134-10* is required when using Handles 37112A, 37113A and 37112RV

in conjunction with Cassette Tubing Set 031524-10*.

Tubing sets for older models are available in the MTP Single-Use Products catalog.

031134-10* **Tubing Set,** sterile, for single use, package of 10,

for use with KARL STORZ Handles 37112A (straight), 37113A (pistol grip) and 37112RV

in combination with silicone tube inner diameter 5 mm at the patient end



Further combination possibilities for handles for suction and irrigation, suction and irrigation tubes as well as tubing sets are available in the Laparoscopy catalog.

Further information on KARL STORZ suction and irrigation pumps is available in the Laparoscopy catalog.

STERILE (2)

STERILE (2)



Surgical Sponge Holder

The surgical sponge holder from KARL STORZ is available in two different sizes (5 mm and 10 mm) and can be used for blunt exposition and dissection in laparoscopic surgery.

Special Features:

- For sponge fixation (self-retaining)
- Available in sizes 5 mm and 10 mm
- Also suitable for blunt exposition and dissection
- The clamped sponge can also be used intraoperatively for cleaning soiled trocar seals



32340PT **Surgical Sponge Holder,** self-retaining, size 5 mm, length 30 cm

including: **Handle**

Outer Sheath, insulated Sponge Holder Insert

32540PT **Surgical Sponge Holder,** self-retaining, size 10 mm, length 30 cm

including: **Handle**

Outer Sheath, insulated Sponge Holder Insert



TRAPBAG Extraction Bag with Fish Trap Seal

- Each extraction bag pre-packaged in an insertion aid for insertion through a 10 mm trocar
- After the insertion aid is removed, the trocar is no longer blocked and can then be used for other instruments
- Fish trap seal prevents the leakage of tissue or fluid samples, even when bag is open
- Nitinol memory wire for opening and closing the extraction bag
- Transparent material

040343-05* **TRAPBAG Extraction Bag,** opening diameter 6 cm, volume 200 ml, sterile, for single use, package of 5, for use with trocars size 10 mm







MiniTwin TRAPBAG

For the laparoscopic removal of lymph nodes

- Two extraction bags pre-packaged in one insertion aid: Bags can be inserted separately via a 10 mm trocar
- After the insertion aid is removed, the trocar is no longer blocked and can then be used for other instruments
- Both extraction bags feature a different design for the differentiation of tissue samples
- Fish trap seal prevents the leakage of tissue or fluid samples, even when bag is open
- Nitinol memory wire for opening and closing the extraction bag
- Transparent material

040302-05* **MINITWIN TRAPBAG,** 2 mini extraction bags, opening diameter 3 cm, volume 20 ml, sterile, for single use, package of 5, for use with trocars size 10 mm







Shaping the Future of Endoscopy with you



THE DIAMOND STANDARD

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