

## CATALOG KS

## IMAGE1 S™ Camera System

IMAGE1 S



TC201EN\*

**IMAGE1 S CONNECT® II**, connect module, for use with up to 3 link modules, 4K technology, 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, including:

**Mains Cord**, length 300 cm  
**DVI-D Connecting Cable**, length 300 cm  
**DisplayPort Cable**, length 300 cm  
**SDI Cable**, length 300 cm  
**SCB Connecting Cable**, length 100 cm  
**USB Flash Drive**, 32 GB  
**USB Silicone Keyboard**, with touchpad, US

\* **Available in the following languages:** DE, ES, FR, IT, PT, RU  
 Please specify the desired language when placing your order.

## Technical Specifications

Video outputs	2x Display Port 1.2, 1x 12G/3G-SDI, 1x DVI-D
Format of signal outputs	max. 3840 x 2160p, 50/60 Hz
Link video inputs	3x
USB interface	4 x USB, (2x front, 2x rear)
Unit communication	1 x 6-pin Mini-DIN

Power supply	200–240 VAC
Power frequency	50/60 Hz
Protection class / degree	1 / CF-Defib
Dimensions (w x h x d)	305 x 54 x 320 mm
Weight	3.1 kg

## For use with IMAGE1 S CONNECT® II Module TC201EN



TC304

**IMAGE1 S 4U-LINK**, link module, for use with IMAGE1 S™ 4U camera heads, power supply 100 – 240 VAC, 50/60 Hz, including:

**Mains Cord**, length 300 cm  
**Link Cable**, length 20 cm, for use with IMAGE1 S CONNECT® TC200EN or IMAGE1 S CONNECT® II TC201EN

## Technical Specifications

Interfaces	1x link output
Power consumption	86 VA
Power frequency	50/60 Hz
Power supply	200–240 VAC
Dimensions (B x H x T)	305 x 54 x 320 mm

Weight	1,86 kg
Cleaning	wipe disinfection
Degree of ingress protection	IPX0
Protection class / degree	1 / CF-Defib

**IMAGE1 S™**

Camera Head 4U One-Chip 4K UHD and Camera Head 4U RUBINA Two-Chip 4K UHD



**IMAGE1 S™ 4U One-Chip 4K UHD camera head, for use with TC304, IMAGE1 S 4U-LINK, module for 4K endoscopy**



TH120

**IMAGE1 S™ 4U One-Chip 4K UHD Camera Head**, S-technologies available, progressive scan, soakable, EtO sterilization, H<sub>2</sub>O<sub>2</sub> (hydrogen peroxide), focal length f = 18 mm, 2 freely programmable camera head buttons, for use with IMAGE1 S™ 4U-LINK

**Technical Specifications**

Frame rate	50 / 60 Hz
Image sensor	One-chip
Resolution	3840 x 2160 pixels
Scanning mode	progressive scan
Lens	fixed focus
Focal length	f = 18 mm
Dimensions (w x h x l)	46 x 37 x 133 mm
Weight	210 g

Cable length	300 cm
Cable routing	angled
Camera head buttons	freely programmable
Grip mechanism	standard eyepiece adaptor
Reprocessing	soakable, EtO sterilization, H <sub>2</sub> O <sub>2</sub> (hydrogen peroxide)
S-Technologies	CLARA, CHROMA, SPECTRA*
Degree of protection	in conjunction with camera control unit IMAGE1S™: CF-Defib

\* SPECTRA A / SPECTRA B: **Not for sale in the U.S.A.**

**IMAGE1 S™ 4U RUBINA, OPAL1® NIR/ICG, Two-Chip 4K UHD Camera Head for use with TC201EN, IMAGE1 S CONNECT® II and TC304, IMAGE1 S 4U-LINK, module for 4K endoscopy**



TH121

**IMAGE1 S™ 4U RUBINA, OPAL1® NIR/ICG, Two-Chip 4K UHD Camera Head**, S-technologies available, for NIR/ICG fluorescence imaging in combination with Power LED RUBINA, OPAL1® NIR/ICG, progressive scan, soakable, EtO sterilization, H<sub>2</sub>O<sub>2</sub> (hydrogen peroxide), focal length f = 19 mm, 2 freely programmable camera head buttons. for use with IMAGE1 S CONNECT® II and IMAGE1 S 4U-LINK

**Technical Specifications**

Frame rate	50 / 60 Hz
Image sensor	Two-chip
Resolution	3840 x 2160 pixels
Scanning mode	progressive scan
Lens	fixed focus
Focal length	f = 19 mm
Dimensions (w x h x l)	150 x 55 x 41 mm
Weight	260 g

Cable length	300 cm
Cable routing	angled
Camera head buttons	freely programmable
Grip mechanism	standard eyepiece adaptor
Reprocessing	soakable, EtO sterilization, H <sub>2</sub> O <sub>2</sub> (hydrogen peroxide)
S-Technologies	CLARA, CHROMA, SPECTRA*
Degree of protection	in conjunction with camera control unit IMAGE1S™: CF-Defib

\* SPECTRA A / SPECTRA B: **Not for sale in the U.S.A.**



## Product details

### The New 4K-NIR/ICG Camera Head

- Native 4K image resolution
- OPAL1® NIR/ICG visualization modes: Overlay, Monochromatic and Intensity Map
- S-Technologies available
- Enhanced NIR/ICG telescopes in comparison with previous models and new variants
- Compatible with IMAGE1 S™ 4U-LINK

- Technical details

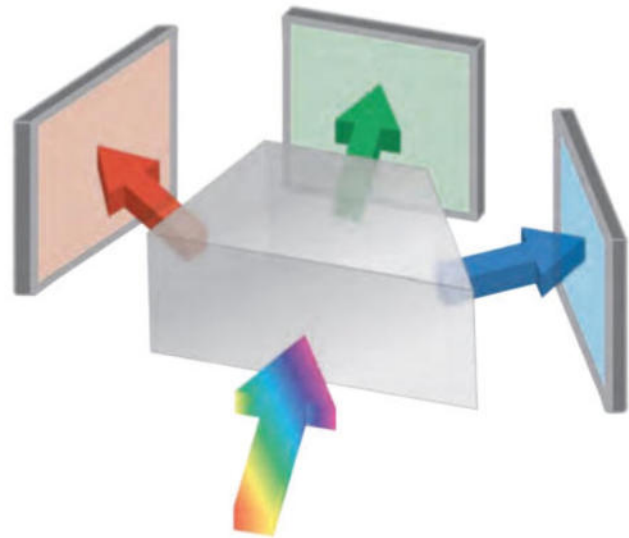
Image sensor resolution	4K
Connection	4U-Line
Fluorescence imaging (NIR/ICG)	yes, in conjunction with POWER LED Rubina®
Fluorescence imaging (Blue Light Imaging, BLI)	no
S-Technologies	CLARA; CHROMA; SPECTRA A + B
Frame rate	50/60 Hz
Image sensor type	CMOS
Number of image sensors	2
Aspect ratio	16:9
Lens	Focus adjustable via focus ring
Zoom function	yes, digital
Focal length	19 mm
Width	41 mm
Height	55 mm
Length	150 mm
Weight	260 g
Cable length	300 cm
Cable, detachable	no

Cable routing	straight
Adaptive zoom	yes, in combination with TC304 and TC201
Camera head buttons	3 buttons, 2 freely programmable
Grip mechanism	standard eyepiece adaptor
Soakable	yes
Autoclavable	no
EO sterilization	yes
H2O2 (hydrogen peroxide)	yes
Wipe disinfection	yes
Sterile concept	single-use covers
Brand	IMAGE1 S Rubina®
Scanning method	progressive scan



<https://www.karlstorz.com/gb/en/product-detail-page.htm?productID=1000108831&cat=1000071971>

**Special Features:**

- Best image quality and display due to sensor chip technology
- Enhanced signal quality through Digital Signal Processing (contrast and filter enhancement for rigid, semirigid and flexible endoscopes)
- Optimal image size display, regardless of the telescope used, thanks to patented Parfocal Optical Zoom Lens
- Simplified operation reduces camera movement to, e.g., prevent damage to or soiling of the lens
- Consistent illumination due to the auto-exposure system ensures seamless transitions between images, regardless of imaging area or available light
- Functionality at the touch of a button with easy -to-program operating elements via intuitive control of all functions in the sterile area
- Parameters of the OR equipment used, light sources, etc. can be displayed and controlled (KARL STORZ Communication Bus) on the monitor
- Digital video output (DV) for digital recording
- Digital zoom 1 – 2x can be adjusted to 4 levels
- “Freeze Frame” function can be activated via camera head buttons or an external footswitch
- Fluorescence imaging mode available



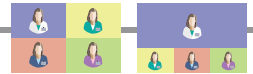


	<p><b>Zoom:</b> Hier können Sie die Darstellung digital vergrößern.</p>	<p><b>Zoom:</b> This enables digital magnification of the display.</p>	<p><b>Zoom:</b> Permite aumentar digitalmente el tamaño de la imagen.</p>
	<p><b>Adaptive Zoom (Adaptiver Zoom):</b> Diese Funktion kann ausgewählt werden, wenn</p> <ul style="list-style-type: none"> <li>- eine IMAGE1 S CONNECT® II TC201 und ein 4U-LINK in Kombination mit den 4U Kameraköpfen TH120 oder TH121 genutzt werden. Bei Anwendung eines Weißabgleichs erkennt das System die Größe des endoskopischen Bildes unter Anwendung eines individuell optimalen Zoomfaktors. Das endoskopische Bild wird bei kleinen Optiken gezoomt, um das Display vertikal zu füllen. Bei Optiken bei denen das endoskopische Bild die vertikalen Grenzen bereits überschreitet, wird auf Vollbild gezoomt, wobei möglichst wenige Peripherinformationen verloren gehen.</li> </ul> <p><b>ⓘ HINWEIS:</b> Führen Sie vor jedem Gebrauch einen Weißabgleich durch.</p> <p><b>ⓘ HINWEIS:</b> Wenn das Endoskop während der Operation ausgetauscht werden muss, führen Sie einen Weißabgleich durch, um die endoskopische Bildgröße richtig zu erkennen.</p> <ul style="list-style-type: none"> <li>- eine IMAGE1 S CONNECT® I TC200 oder IMAGE1 S CONNECT® II TC201 und ein D3-LINK in Kombination mit einer 4 mm TIPCAM®1 S 3D genutzt werden. Wenn die Funktion aktiviert ist, wird das endoskopische Bild beim Einstecken der TIPCAM auf ein Vollbild aufgezoomt.</li> <li>- eine IMAGE1 S CONNECT® I TC200 oder IMAGE1 S CONNECT® II TC201 und ein X-LINK in Kombination mit den C-MOS-basierten X-Line Videoendoskopen genutzt werden. Wenn die Funktion aktiviert ist, wird das endoskopische Bild beim Einstecken der X-Line Videoendoskope optimal aufgezoomt.</li> </ul>	<p><b>Adaptive Zoom:</b> that function can be selected if</p> <ul style="list-style-type: none"> <li>- an IMAGE1 S CONNECT® II TC201 and a 4U-LINK are used in combination with the 4U camera heads TH120 or TH121. When applying a white balance, the system will detect the size of the endoscopic image, applying an individually and optimal zoom factor. Small scopes will be zoomed to fit into the vertical borders of the display. Scopes exceeding the vertical borders are zoomed to full screen with minimal loss of peripheral information.</li> </ul> <p><b>ⓘ NOTE:</b> Perform a white balance before every use.</p> <p><b>ⓘ NOTE:</b> If the endoscope must be exchanged during surgery, perform white balance for proper detection of the endoscopic image size.</p> <ul style="list-style-type: none"> <li>- an IMAGE1 S CONNECT® I TC200 or IMAGE1 S CONNECT® II TC201 and a D3-LINK can be used in combination with a 4 mm TIPCAM®1 S 3D. If the function is activated, the endoscopic image is zoomed to a full screen when the TIPCAM is inserted.</li> <li>- an IMAGE1 S CONNECT® I TC200 or IMAGE1 S CONNECT® II TC201 and an X-LINK can be used in combination with the C-MOS-based X-Line video endoscopes. If the function is activated, the endoscopic image is optimally zoomed up when the X-Line video endoscopes are inserted.</li> </ul>	<p><b>Zoom adaptable ("Adaptive Zoom"):</b> puede seleccionarse esta función si:</p> <ul style="list-style-type: none"> <li>- se usan un IMAGE1 S CONNECT® II TC201 y un 4U-LINK en combinación con los cabezales de cámara 4U TH120 o TH121. Al ejecutar un balance de blancos, el sistema detectará el tamaño de la imagen endoscópica, aplicando un factor de zoom individual y óptimo. En los endoscopios pequeños se aplicará un factor de zoom para ajustar la imagen a los bordes verticales de la pantalla. En el caso de los endoscopios que sobresalgan de los bordes verticales, se aplica un factor de zoom para que la imagen se ajuste en modo pantalla completa con una pérdida mínima de información periférica.</li> </ul> <p><b>ⓘ NOTA:</b> Antes de cada aplicación, lleve a cabo un balance de blancos.</p> <p><b>ⓘ NOTA:</b> Si fuera necesario sustituir el endoscopio durante la intervención quirúrgica, realice un balance de blancos para la detección adecuada del tamaño de la imagen endoscópica.</p> <ul style="list-style-type: none"> <li>- se usan un IMAGE1 S CONNECT® I TC200 o IMAGE1 S CONNECT® II TC201 y un D3-LINK en combinación con una TIPCAM®1 S 3D de 4 mm. Si la función está activada, se ajustará la imagen endoscópica a pantalla completa al insertar la TIPCAM.</li> <li>- se usan un IMAGE1 S CONNECT® I TC200 o IMAGE1 S CONNECT® II TC201 y un X-LINK en combinación con los videoendoscopios X-Line basados en C-MOS. Si la función está activada, se ajustará de forma óptima la imagen endoscópica al insertar los videoendoscopios X-Line.</li> </ul>



## FM-A5504DS

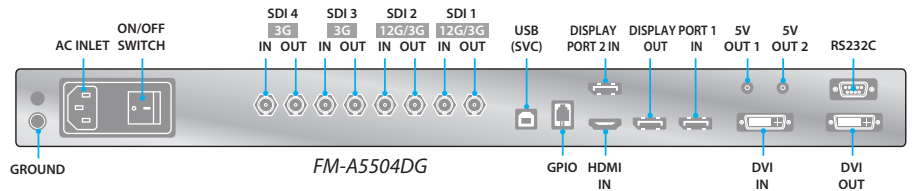
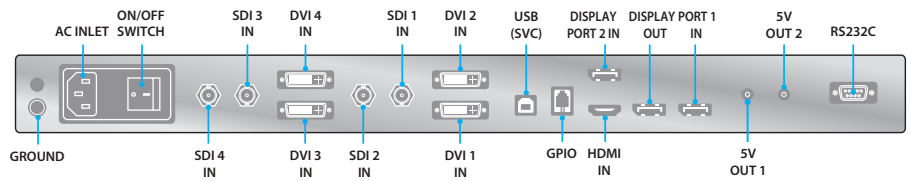
## FM-A5504DG



**55** inch

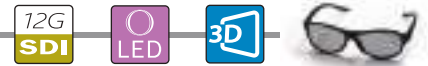
- 3840 x 2160 resolution
- Contrast Ratio (typical) 1100 : 1

- Brightness (typical) 500 cd/m<sup>2</sup>
- Multi window (2, 3, 4) layouts



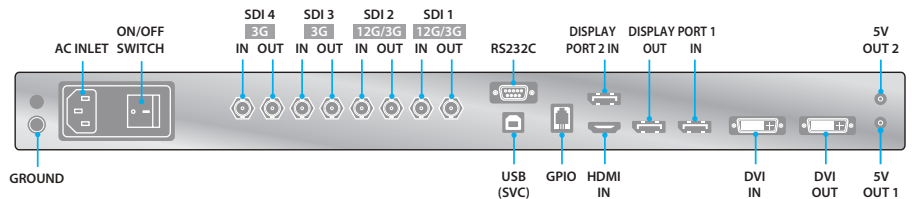
## FM-A5505DGC

## FM-A5505DGC (Rev.01)



**55** inch

- 3840 x 2160 resolution • OLED, 3D • Contrast Ratio (Rev.01 peak) 475,000 : 1
- Luminance (Monitor, 2D, Bypass/ Default Mode) Range 87-260 cd/m<sup>2</sup>
- Luminance Rev.01 (Monitor, 2D, Bypass/ Default Mode) Range 110-575 cd/m<sup>2</sup>



**OLED**

- ✓ Deep Black Levels - High Contrast Ratio
- ✓ Optimal 3D Viewing Angles

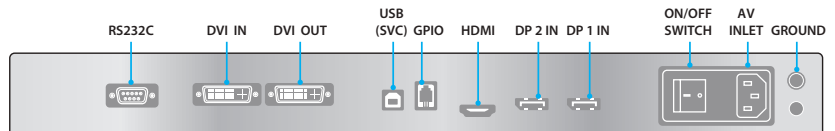
## FM-A5503DC

## FM-A5503DC (Rev.01)



**55** inch

- 3840 x 2160 resolution • OLED, 3D • Contrast Ratio (Rev.01 peak) 475,000 : 1
- Luminance (Monitor, 2D, Bypass/ Default Mode) Range 87-260 cd/m<sup>2</sup>
- Luminance Rev.01 (Monitor, 2D, Bypass/ Default Mode) Range 110-475 cd/m<sup>2</sup>

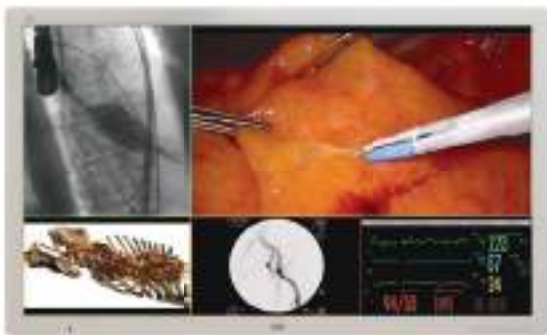
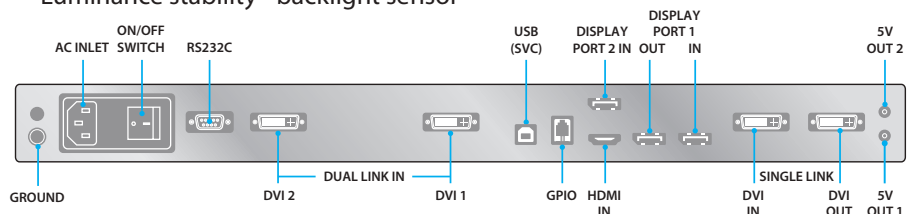
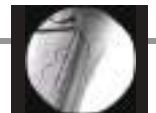


## FM-D5801DV

**58** inch

- 3840 x 2160 resolution
- Contrast Ratio (typical) 4000 : 1
- Luminance stability - backlight sensor

- DICOM mode
- Brightness (typical) 700 cd/m<sup>2</sup>





# 55" 3D 4K Medical Display

## FM-A5505DGC



- *OLED technology. High contrast ratio. Perfect blacks.*
- *Reduced blue light emission and eye fatigue.*
- *Immersive 3D viewing is ideally suited for large screens.*



### More Surface Textures More Depth of Field

FM-A5505DGC, the 55" 3D display monitor from FSN, delivers OLED technology for true blacks, better contrast, power efficiency, and lighter weight. The immersive viewing experience of 3D is ideally suited for a large screen of this size.

FM-A5505DGC is compatible with highly specialized visualization equipment used in operating rooms and surgical suites. It is suitable for showing multiple images at sizes big enough to remain visible across the operating room. Picture quality is crystal clear, and the user interface allows for complete control of image color and multi-window layouts.



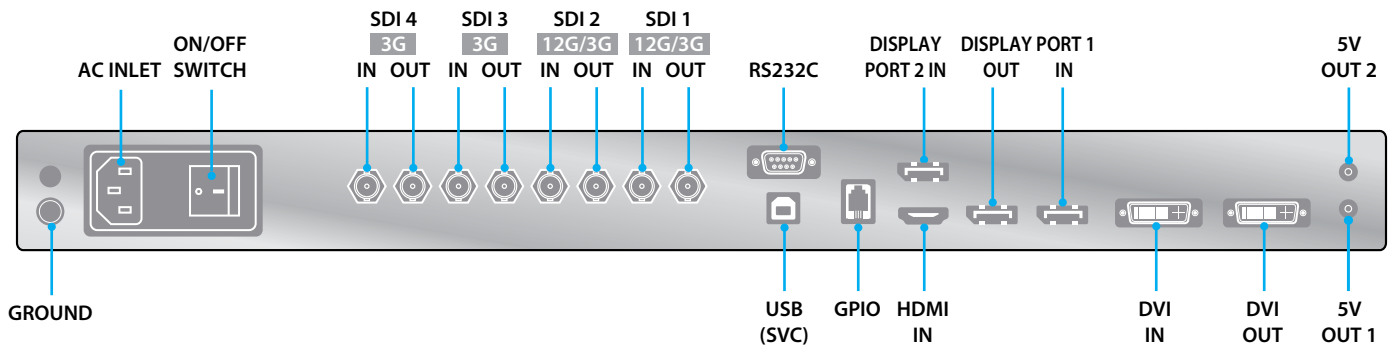
3D eye wear included.



### Complete Control

A detailed 3D menu offers control for the best possible image format. Side By Side, Line By Line, Top Bottom, SDI level B-DS, SDI Dual Input.

FSN's attention to engineering details, such as rounded bezel corners, backlit touch buttons, and easy to use interface menu controls, allow for safe and efficient interaction. This large screen delivers everything that professionals need in a 3D, 4K UHD medical-grade monitor.



[www.fsnmed.com](http://www.fsnmed.com)

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Tel: 86-21-6113-4188

# 55" 3D 4K Medical Display

## FM-A5505DGC



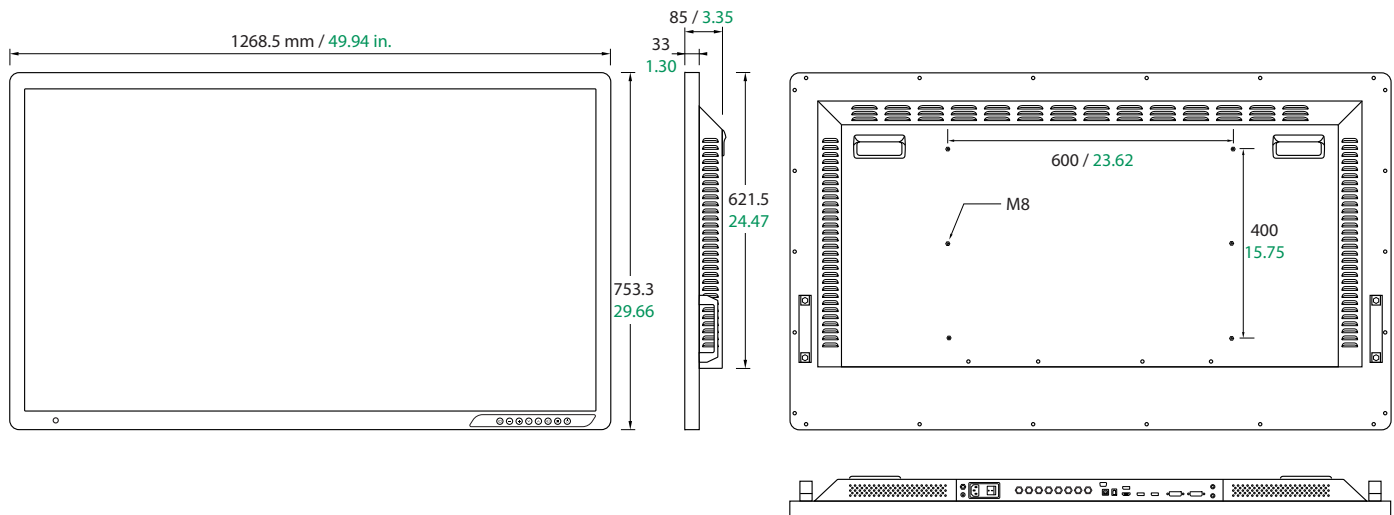
## Specifications

### General Features

Item	Description
Panel	55 inch OLED
Resolution	3840 x 2160 pixels
Aspect Ratio	16 : 9
Active Area	1209.60 (H)mm x 680.40 (V)mm
Response Time (typical)	0.5 ms (gray to gray)
Number of Colors	1.07 Billion
Brightness (typical)	(2D) 575 cd/m <sup>2</sup> peak (3D) 175 cd/m <sup>2</sup> peak
Gamut	BT.709 and BT.2020 compatible
Contrast Ratio (typical)	100,000 : 1
Surface Treatment	Anti-glare
Viewing Angle	(2D) R/L 120°, U/D 120° (3D) U/D 8.6°
Input Signal	1 x HDMI (2.0, HDCP 2.2) 2 x DP (1.2 SST) 4 x SDI (3G), 2 x SDI (12G) 1 x DVI (single link, HDMI 1.4, HDCP 1.4)

FSN Medical Technologies products meet EU RoHS Directive 2011/65/EU+2015/863/EU and Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) obligations. FSN manages the information flow as required by regulations.

Item	Description
Output Signal	1 x DP 1.2 (SST) 4 x SDI (3G), 2 x SDI (12G) 1 x DVI (single link, HDMI 1.4, HDCP 1.4)
Power Supply	SMPS (AC 100 ~240V)
Power Consumption	250W max
Accessories Included	User manual, AC power cord, DP cable, HDMI cable, DVI-D cable, BNC cable, Remote control and batteries
Unit Dimension	1268.5(W) x 753.3(H) x 85(D) mm 49.94(W) x 29.66(H) x 3.35(D) inch
Package Dimension	1450(W) x 930(H) x 305(D) mm 57.09(W) x 36.61(H) x 12(D) inch
Weight	29.8 kg, 65.7 lbs. (monitor only) 44.7 kg, 98.55 lbs. (shipping package)
Certifications	ANSI/AAMI ES60601-1(UL60601-1), CAN/CSA C22.2 No. 60601-1, FCC Class B, EN60601-1, EN60601-1-2, CE, MDR(EU) 2017/745 Class I Medical Device



### Multiple Windows

There is plenty of room on the FM-A5505DGC monitor for multi-window requirements. Choose from PIP, PBP, Triple, or Quad layouts that are preset and ready-to-go.

Specifications are subject to change with or without notice. Doc. # FSN2032 Rev. 4/22

[www.fsnmed.com](http://www.fsnmed.com)

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Tel: 86-21-6113-4188

# Possible Configuration Examples

Note: The lists do not include units

## Telepresence:

### Rubina®

The new housing design includes a special shelf for equipment.



- UG803      **Subrack**, COR mobile stand, low
- UG811      **Cover**, monitor holder for COR mobile stand
- UG820      **Shelf**, narrow, COR mobile stand
- UG823      **Special Equipment Shelf**, COR mobile stand
- UG854      **Stainless Steel Tube**, COR mobile stand, length 400 mm
- UG857      **Monitor Module**, COR mobile stand













## Monitors

The new COR mobile stand is offered with a monitor holder that is suitable for monitors larger than 55".



- UG804      **Subrack**, COR mobile stand, high
- UG811      **Cover**, monitor holder for COR mobile stand
- UG817      **Counterweight**, for monitors larger than 55", COR mobile stand
- UG820      **Shelf**, narrow, COR mobile stand
- UG858      **55"/58" Monitor Module**, COR mobile stand

**IMAGE1 S™ RUBINA™ Technology for NIR/ICG Fluorescence Imaging**  
 based on the IMAGE1 S™ camera platform

	2D / 3D Endoscopy		Accessories for 2D / 3D Endoscopy
<b>Wide-Screen Monitor</b>	 <p>TM350 (32") <b>4K 3D Monitor</b> or TM450 (55") <b>4K 3D Monitor</b></p>		 <p><b>3D Polarization Glasses</b>                      Item required for 3D endoscopy with <b>TIPCAM® 1 RUBINA™</b></p>
<b>Camera Control Unit connect module</b>	 <p>TC201 <b>IMAGE1 S CONNECT® II</b></p>		
<b>Camera Control Unit link module</b>	 <p>TC304 <b>IMAGE1 S™ 4U-LINK</b></p>		
<b>Camera Head</b>	 <p>TH121 <b>IMAGE1 S™ 4U RUBINA™</b></p>		
<b>Telescopes</b>	 <p>26003ARA/26003BRA/26003FRA/26003FREA                  26046ARA/26046BRA/26046FRA  <b>HOPKINS® RUBINA™ NIR/ICG Telescopes</b></p>	 <p>26606ACA / 26606 BCA <b>TIPCAM® 1 RUBINA™</b></p>	 <p>96240726  <b>NIR/ICG Demonstration Card *</b></p>
	 <p>20916025AGA  <b>VITOM® II NIR/ICG Telescope 0°</b></p>		
<b>Cold Light Fountain</b>	 <p>TL400 <b>POWER LED RUBINA™</b></p>		 <p>UF101 <b>One-Pedal Footswitch *</b></p>
<b>Light Cable</b>	 <p>495NCSC/495NAC/495TIP <b>Fiber Optic Light Cable</b></p>		

\* Optional accessory.





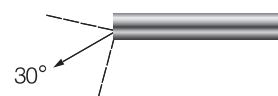
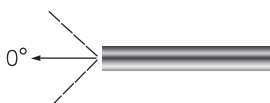
**TIPCAM®1 RUBINA® –  
The new 4K/3D NIR/ICG videoendoscope**

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. Whether for laparoscopy, gynecology, urology or cardiothoracic surgery – the new TIPCAM®1 RUBINA® features a wide range of applications.

- 4K image chain
- 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: Overlay, Monochromatic and Intensity Map
- Easy integration into the IMAGE1 S™ platform



**10 mm videoendoscope**



**26606ACA**

**TIPCAM®1 RUBINA®, OPAL1® NIR/ICG, 4K/3D,** high-resolution videoendoscope with two distally integrated video chips, for NIR/ICG fluorescence imaging in combination with POWER LED RUBINA®, for use with IMAGE1 S CONNECT® II and IMAGE1 S™ 4U-LINK

**26606BCA**

**Same,** direction of view 30°

**Specifications**

Frame rate	50/60 Hz	Cable length	300 cm
Image sensor	2-chip	Cable routing	straight
Resolution	3840 × 2160 pixels	Camera head buttons	freely programmable
Scanning method	progressive scan	Reprocessing	<b>autoclavable,</b> hydrogen peroxide sterilization
Direction of view	26606ACA: 0° 26606BCA: 30°	S-Technologies	CLARA, CHROMA, SPECTRA in 2D and 3D
Outer diameter	10 mm	Protection class	in conjunction with Camera Control Unit IMAGE1 S™: CF-Defib
Working length	32 cm		
Weight	420 g		

# Product information



TC201EN\*

**IMAGE1 S CONNECT® II**, connect module, for use with up to 3 link modules, resolution 3840 x 2160 and 1920 x 1080 pixels, with integrated KARL STORZ-SCB or KS HIVE® and digital Image Processing Module, power supply 100–240 VAC, 50/60 Hz



TC304

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



TH121

**IMAGE1 S™ 4U Rubina®**, Opal1® NIR/ICG, two-chip 4K UHD camera head, S-Technologies available, for NIR/ICG fluorescence imaging in combination with POWER LED Rubina®, Opal1® NIR/ICG, progressive scan, low-temperature sterilization, focal length f=19 mm, 2 freely programmable camera head buttons, for use with IMAGE1 S CONNECT® II and IMAGE1 S™ 4U-LINK



26606ACA /  
26606BCA

**TIPCAM®1 Rubina®**, Opal1® NIR/ICG, 4K/3D, high-resolution videoendoscope with two distally integrated video chips, for NIR/ICG fluorescence imaging in combination with POWER LED Rubina®, direction of view 0° (26606ACA) and 30° (26606BCA), diameter 10 mm, length 32 cm, autoclavable, S-technologies available, freely programmable camera head buttons, for use with IMAGE1 S CONNECT® II and IMAGE1 S™ 4U-LINK



TL400

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

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



## Product details

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

- Automatic horizon control for better orientation and handling
- Available with 0° and 30° directions of view
- Easy toggle from 3D to 2D
- OPAL1® NIR/ICG visualization modes: Overlay, Monochromatic and Intensity Map

- Technical details

Image sensor resolution	4K
Direction of view	30°
Outer diameter	10.3 mm
Working length	320 mm
Fluorescence imaging (NIR/ICG)	yes, in conjunction with POWER LED Rubina®
Connection	4U-Line
Weight	420 g
Cable length	300 cm
Cable routing	straight
Frame rate	50/60 Hz
Image sensor type	CMOS
Number of image sensors	2
Zoom function	yes, digital
Camera head buttons	3 buttons, 2 freely programmable
Autoclavable	yes
H2O2 (hydrogen peroxide)	yes
S-Technologies	CLARA; CHROMA; SPECTRA A + B
degree of protection in conjunction with the IMAGE1 S™ camera control unit	CF defib
Scanning method	progressive scan
Brand	TIPCAM®1



# 3D Camera Platforms

Accessories

## Accessories for IMAGE1 S 3D in FULL HD



### USB Silicone Keyboard, with touchpad

Character Sets:

20 0402 40DE German

20 0402 40FR French

20 0402 40IT Italian

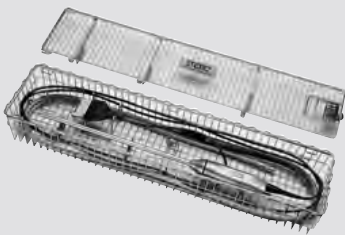
20 0402 40PT Portuguese

20 0402 40ES Spanish

20 0402 40RU Russian

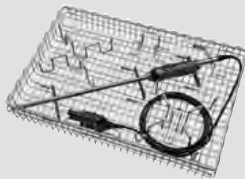
20 0402 40US US-English

## Accessories for 3D Video Endoscopes



39501 XTC

**Wire Tray for Cleaning, Sterilization and Storage** of TIPCAM®1 S 3D LAP Video Endoscopes 26605 AA/BA and one light cable, **autoclavable**, external dimensions (w x d x h): 640 x 150 x 87 mm



39501 TC

**Wire Tray for Cleaning, Sterilization and Storage** of TIPCAM®1 Video Endoscopes 266x3 AA/BA, TIPCAM®1 3D Video Endoscopes 266x4 AA/BA and one light cable, **autoclavable**, external dimensions (w x d x h): 480 x 320 x 75 mm

## Accessories for 3D FULL HD Monitors



9800 GF

**3D Polarization Glasses**, fogless, passive, package of 2, for use with 3D monitors

9800 GP

**3D Polarization Glasses**, passive, package of 2, for use with 3D monitors



9800 C

**3D Clip-on Glasses**, circularly polarized

### Please note:

The instruments displayed in the trays are not included in delivery.



TL400

## POWER LED Rubina® – The New LED Light Source for White Light and NIR/ICG Applications

Power, efficiency, durability and flexibility are the hallmarks of the POWER LED Rubina® cold light source based on LED technology. The light source can be used for white light as well as fluorescence applications for displaying NIR/ICG or autofluorescence in the near infrared range.

- Laser-free LED light source for white light and NIR/ICG excitation
- OPAL1® NIR/ICG technology with new functionalities
- Min. 30,000 hours of lamp service life
- Straightforward user interface thanks to intuitive touch screen
- Constant light intensity throughout the entire service life
- Very low volume

## Technical details

Fluorescence imaging (NIR/ICG)	Yes	Line frequency	50/60 Hz
Fluorescence imaging (Blue Light Imaging, BLI)	no	Degree of safety	CF
Control via touch screen	yes	Degree of safety with KARL STORZ light cables	CF-Defib
Illumination technology	LED	Wipe disinfection	yes
Average lamp service life	30000 h	Electrical protection class	1
Integrated pump for air insufflation	no		
Color temperature approx.	5700 K		
Unit communication KS HIVE®	yes		
Unit communication SCB	no		
Light intensity adjustment	Automatic via HIVE and manual		
Weight	7.4 kg		
Width	305 mm		
Height	120 mm		
Depth	370 mm		
Power supply	100 - 125 / 220 - 240 VAC		
IP protection class	IPX0		
Electrical protection class	protection class 1		
KARL STORZ light outlet	yes		
Power consumption	220 VA		

# Adaptor Series

for LED and XENON Light Sources

		POWER LED 300	Cold Light Fountain XENON 100 SCB	Cold Light Fountain VETERINARY	CO <sub>2</sub> MBI® LED
20 0300 30	<b>Adaptor</b> , with insufflation connector, for connecting KARL STORZ fiberscopes and videoendoscopes with KARL STORZ standard light connector to XENON 100 and Olympus cold light fountains	-	●	-	●
TL 005	<b>Triple Adaptor</b> , for use with POWER LED 300 cold light fountain in combination with KARL STORZ, Olympus, Stryker and Wolf light cables	●	-	-	-
69487 KVE	<b>Adaptor</b> , for KARL STORZ videoendoscopes, for use with light sources XENON NOVA® and XENON 175, compatible with POWER LED 300, with integrated heat filter and lateral connector for insufflation	●	-	-	-






# Cold Light Fountains

Accessories

## Optional Accessories for Cold Light Fountain CO<sub>2</sub>MBI® LED

	TL 001	<b>Irrigation Bottle Holder</b> , for use with Cold Light Fountain CO <sub>2</sub> MBI® LED SCB TL 100
	TL 002	<b>Holding Ring</b> , for Water Bottle 13992 BS, for use with Irrigation Bottle Holder TL 001
	TL 003	<b>Holding Ring</b> , for use with Ampuwa Plastipur irrigation bottles, in combination with Irrigation Bottle Holder TL 001
	TL 004	<b>CO<sub>2</sub> Bottle Holder</b> , for CO <sub>2</sub> bottles, for use with Cold Light Fountain CO <sub>2</sub> MBI® LED SCB TL 100
	495 KS	<b>Adaptor</b> , for standard KARL STORZ fiber optic light cables (not 495 NCS/TIP/NAC/NCSC), for connection to cold light fountains with videoendoscope adaptor
	* 20 0300 30	<b>Adaptor</b> , with insufflation connector

## Accessories for Cold Light Fountain POWER LED 300

	* TL 005	<b>Triple Adaptor</b> , for use with POWER LED 300 cold light fountain in combination with KARL STORZ, Olympus, Stryker and Wolf light cables
	20 0901 70	<b>SCB Connecting Cable</b> , length 100 cm
	69487 KVE	<b>Adaptor</b> , for KARL STORZ videoendoscopes, for use with light sources XENON NOVA® and XENON 175, compatible with POWER LED 300, with integrated heat filter and lateral connector for insufflation

\*Adaptors are also for use with Cold Light Fountains XENON 100 SCB

# Fiber Optic Light Cables

for Cold Light Fountains



## Fiber Optic Light Cable with Straight Connector

495 NE	<b>Fiber Optic Light Cable</b> , diameter 4.8 mm, length 300 cm
495 NCS	<b>Fiber Optic Light Cable</b> , extremely heat-resistant, diameter 4.8 mm, length 250 cm
<b>NEW</b> 495 NCSC	<b>Fiber Optic Light Cable</b> , extremely heat-resistant, with safety locking device, diameter 4.8 mm, length 250 cm
495 NB	<b>Fiber Optic Light Cable</b> , diameter 4.8 mm, length 180 cm
495 ND	<b>Fiber Optic Light Cable</b> , diameter 3.5 mm, length 300 cm
495 NA	<b>Fiber Optic Light Cable</b> , diameter 3.5 mm, length 230 cm
<b>NEW</b> 495 NAC	<b>Fiber Optic Light Cable</b> , with safety locking device, diameter 3.5 mm, length 230 cm
495 NL	<b>Fiber Optic Light Cable</b> , diameter 3.5 mm, length 180 cm
495 NTA	<b>Fiber Optic Light Cable</b> , diameter 2.5 mm, length 230 cm
495 NT	<b>Fiber Optic Light Cable</b> , diameter 2.5 mm, length 180 cm
<b>NEW</b> 495 TIP	<b>Fiber Optic Light Cable</b> , highly heat resistant, diameter 4.8 mm, length 300 cm, optimized for 3D TIPCAM®1 and TIPCAM®



## Fiber Optic Light Cable with 90° Deflection to the Light Source

495 NWL	<b>Fiber Optic Light Cable</b> , with 90° deflection to the cold light fountain on the fountain side, diameter 3.5 mm, length 300 cm
495 NWM	<b>Fiber Optic Light Cable</b> , with 90° deflection to the cold light fountain on the fountain side, diameter 3.5 mm, length 230 cm
495 NW	<b>Fiber Optic Light Cable</b> , with 90° deflection to the cold light fountain on the fountain side, diameter 3.5 mm, length 180 cm
495 NTX	<b>Fiber Optic Light Cable</b> , with 90° deflection to the cold light fountain on the fountain side, diameter 2.5 mm, length 230 cm
495 NTW	<b>Fiber Optic Light Cable</b> , with 90° deflection to the cold light fountain on the fountain side, diameter 2.5 mm, length 180 cm



495 NVC



495 NV/NVL/NVB

## Fiber Optic Light Cable with 90° Deflection to the Instrument

<b>NEW</b> 495 NVC	<b>Fiber Optic Light Cable</b> , with 90° deflection to the instrument, very narrow radius of curvature, diameter 4.8 mm, length 300 cm
495 NVB	<b>Fiber Optic Light Cable</b> , with 90° deflection to the instrument, diameter 4.8 mm, length 300 cm
495 NVL	<b>Fiber Optic Light Cable</b> , with 90° deflection to the instrument, diameter 3.5 mm, length 300 cm
495 NV	<b>Fiber Optic Light Cable</b> , with 90° deflection to the instrument, diameter 3.5 mm, length 230 cm



## Light Adaptor, angled 90°

495 EW	<b>Light Adaptor</b> , angled 90°, diameter 4.8 mm, free rotatable, to connect with standard telescopes
--------	---

Adaptor for connecting KARL STORZ fiber optic light cables with endoscopes and light sources from other manufacturers, see page TP 132



Length	300 cm
Diameter	4.8 mm
Cable connection light source	straight
Cable connection telescope	straight
Safety lock	yes
Fluorescence imaging (NIR/ICG) (CE)	yes
Fluorescence imaging (NIR/ICG) (FDA)	no
Fluorescence imaging (Blue Light Imaging, BLI)	no
Heat resistance	high
Enhanced light transmission	Yes
Light cable type	Fiber optic
Autoclavable	yes (at 134°)
Number of instrument ports	1

**ENDOFLATOR® 50 SCB**

UI500S1

**ENDOFLATOR® 50 SCB**,  
integrated SCB module,  
power supply 100–40 VAC, 50/60 Hz  
including:

**ENDOFLATOR® 50 SCB**

**SCB Connecting Cable**, length 100 cm

**Universal Wrench**

**Heated Insufflation Tubing Set**, with gas filter,  
sterile, for single use, package of 3\*

**HiCap® Trocar**, size 11 mm

**Subject to the customer's application-specific requirements additional accessories must be ordered separately.**

**HAMOU® ENDOMAT® with KARL STORZ SCB**

Suction and Irrigation System



**26331101-1 HAMOU® ENDOMAT® SCB**,  
power supply 100–240 VAC, 50/60 Hz  
including:

**Mains Cord**

5x **HYST Tubing Set\***, for single use

5x **LAP Tubing Set\***, for single use

**SCB Connecting Cable**, length 100 cm

**VACUsafe Promotion Pack Suction\***, 2 l

**Subject to the customer's application-specific requirements additional accessories must be ordered separately.**



# ENDOFLATOR® 40 SCB <sup>NEW</sup>

System Components

CO<sub>2</sub> Bottle, empty,  
Pin-Index connector



26 4000 91

CO<sub>2</sub> Bottle, empty,  
German connector



26 4000 90

High Pressure Tube,  
Pin-Index connector



20 4000 22 length 55 cm  
20 4000 28 length 102 cm

High Pressure Tube,  
German connector



20 4000 21 length 55 cm  
20 4000 27 length 102 cm

High Pressure Tube,  
ISO connector



20 4002 22 length 102 cm

Low Pressure Tube,  
for central CO<sub>2</sub> gas supply



UI001, length 150 cm  
UI002, length 300 cm  
UI003, length 600 cm

UNIT SIDE

PATIENT SIDE



Gas Filter, sterile, for single use



031122-01\*

Insufflation Tubing Set



031200-01\*

Insufflation Tube, sterilizable



UI004

Operating Rectoscope Tubes



24941 T, 24941 A, 24941 BA

INSUFFLATORS






# Optional Accessories

for Insufflators

for use with

ENDOFLATOR® 40 SCB  
UI 400S1

ENDOFLATOR® 50 SCB  
UI 500S1

	031200-10	<b>Insufflation Tubing Set with Gas Filter</b> , length 300 cm, hydrophobic on both sides, sterile, for single use, package of 10, for use with insufflation units with a maximum gas flow of 50 l/min (Electronic ENDOFLATOR®, THERMOFLATOR®, ENDOFLATOR® 40 and ENDOFLATOR® 50)	STERILE 	•	•
	031210-10*	Same, heatable	STERILE 	-	•
	031122-25	<b>Gas Filter</b> , with ISO connectors, hydrophobic on both sides, sterile, for single use, package of 25, for use with insufflation units with a maximum gas flow of 50 l/min (Electronic ENDOFLATOR®, THERMOFLATOR®, ENDOFLATOR® 40 and ENDOFLATOR® 50)	STERILE 	•	•
	UI 004	<b>Insufflation Tube</b> , sterilizable, inner diameter 9 mm, length 250 cm		•	•
	031622-10	<b>Insufflation Tubing Set with Gas Filter</b> , length 400 cm, two patient-side tube connections, hydrophobic on both sides, sterile, for single use, package of 10, for use with insufflation units with a maximum gas flow of 30 l/min (Electronic ENDOFLATOR®, THERMOFLATOR®, ENDOFLATOR® 40 and ENDOFLATOR® 50)	STERILE 	•	•
	26120 J	<b>VERESS Pneumoperitoneum Needle</b> , with spring-loaded blunt inner cannula, LUER-Lock, autoclavable, diameter 2.1 mm, length 10 cm		•	•
	30103 HP	<b>HICAP® Trocar</b> , size 11 mm, color code: green		•	•

INSUFFLATORS AND SURGICAL SMOKE MANAGEMENT

\* 





# Butelie otel (10 litri)

Buteliile pentru gaze comprimate cu conectare DIN-1 sunt destinate transportului, stocării și distribuției unei game variate de gaze cum ar fi: oxigen, hidrogen, azot, metan, amestecuri de gaze, heliu etc. Aceste butelii sunt utilizate în mod curent în procesele de sudare, tăiere oxigaz și procese conexe, ca rezervoare de combustibil, de oxigen (pentru aparate medicale) etc.

Material: 34CrMo4

Presiunea de încărcare: 200 bar

Presiunea de testare: 300 bar

În set cu furtun de conectare CO<sub>2</sub> de presiune înaltă, 3 m



# Suction and Irrigation Systems

HAMOU® ENDOMAT® SCB

Components / Spare Parts

Catalog page

- 26331101-1** HAMOU® ENDOMAT® SCB
- 26331120-1 HAMOU® ENDOMAT® SCB
- 20090170 **SCB Connecting Cable**, length 100 cm
- 031523-10\* **Cassette Tubing Set PC**, sterile, for single use
- 031524-10\* **Cassette Tubing Set FC**, sterile, for single use

U 26



26331120

## Spare Part



2027590  
**Mains Fuse,**  
T 2.0 AL (SB),  
package of 10

Components / Spare Parts

Catalog page

- 26331142** **Silicone Tubing Set**, for suction, sterilizable

U 29



## Spare Parts



27500  
**LUER-Lock Tube**  
**Connector**, male,  
tube diameter 9 mm

59351111018  
**LUER-Lock Connector,**  
male



20300180  
**Tubing Connector Set**

# HAMOU® ENDOMAT® SCB


Suction and Irrigation System,  
Recommended Standard Set Configuration

**STORZ**  
KARL STORZ — ENDOSKOPE

## Special Features:

- Pressure-regulated suction and irrigation system for use in laparoscopy and gynecology
- Modern color touch screen as user interface
- Maximum parameters for LAP and HYST mode are automatically fixed by the choice of the tubing cassette
- Ergonomic tubing cassette system
- Simultaneous display of set values and actual values enables continuous monitoring of suction and irrigation parameters
- With connection possibilities to the KARL STORZ Communication Bus (SCB) as of Software Release 20090001-45 and higher



- 263311 01-1 HAMOU® ENDOMAT® SCB, with integrated SCB module, power supply 100 – 240 VAC, 50/60 Hz including:  
SCB Connecting Cable, length 100 cm  
Cassette Tubing Set, for single use   
VACUsafe Suction\*, 2 l

## Specifications:

Pressure	- HYST 0-200 mmHg - LAP 100/ 300/ 500 mmHg	Power supply	100-240 VAC, 50/60 Hz
Flow	- LAP 0-1300 ml/min - HYS 200/400/600 ml/min	Dimensions w x h x d	305 x 164 x 375 mm
Suction pressure regulated	- HYST 0.1-(-)0.8 bar (-80 kPa) - LAP 0.1-(-)0.8 bar (-80 kPa)	Weight	9.3 kg
		Certified to	IEC 601-1, CE acc. to MDD





Optional Accessories for HAMOU® ENDOMAT® SCB see pages U 24-27  
Components/Spare Parts see chapter 21


## CASSETTE TUBING SET for single use


The following tubing sets for the irrigation and suction of fluids are available for single use:




031523-10\* **Tubing Set**, irrigation, PC<sup>1</sup>, **STERILE**   
sterile, for single use, package of 10,  
for use with HAMOU® ENDOMAT® 26331120 and  
ENDOMAT® SELECT UP 210

031524-10\* **Tubing Set**, irrigation, FC<sup>2</sup>, **STERILE**   
sterile, for single use, package of 10,  
for use with HAMOU® ENDOMAT® 26331120 and  
ENDOMAT® SELECT UP210

030647-10\* **Tubing Set**, suction, DS<sup>3</sup>, **STERILE**   
sterile, for single use, package of 10,  
for use with ENDOMAT® SELECT UP210

031647-10\* **Tubing Set**, suction, BS<sup>4</sup>, **STERILE**   
sterile, for single use, package of 10,  
for use with ENDOMAT® SELECT UP210

031529-10\* **Tubing Set**, irrigation, CV<sup>5</sup>, **STERILE**   
sterile, for single use, package of 10,  
for use with ENDOMAT® SELECT UP210



**Note:**

Reusable tubing sets are also available. If interested, please contact your KARL STORZ representative.

# Suction and Irrigation Systems

DUOMAT®

Components / Spare Parts

20300034 **Bottle Cap**

Catalog page

U 16



## Spare Parts



20300580  
**Overflow Case**, gray,  
for Bottle Cap 20300034



2911590  
**Plunger Ball**, green,  
to overflow case,  
2 pcs required



031124-10\*  
**Filter**, to block fluid during  
suction, for single use,  
unsterile, package of 10

10-11



mtp medical technical promotion gmbh,  
Take-Off GewerbePark 46, D-78579 Neuhausen ob Eck, Germany

20300034



Bottle Cap,  
for suction bottles 1.5 l and 5 l, sterilizable





# Optional Accessories

for Suction and Irrigation Systems

		for use with		
		ENDOMAT® n. HAMOU® SCB 26 3311 01-1	ENDOMAT® LC SCB 20 3303 01-1	DUOMAT® 20 3210 08
	26 3100 50 <b>Irrigation Liquid Bottle, 1 l, sterilizable</b>	-	-	●
	20 3000 50 <b>Suction Bottle, 5 l, sterilizable</b>	●	-	●
	20 3000 34 <b>Bottle Cap, for suction bottles 1.5 l and 5 l, sterilizable</b>	●	-	●
	20 3000 32 <b>Bottle Stand, for suction bottle 5 l</b>	●	-	●
	20 3000 33 <b>Bottle Stand Holder, for Bottle Stand 20 3000 32</b>	●	-	●
	20 0142 30 <b>One-Pedal Footswitch, digital, two-stage, for activating a higher flow for improved visibility</b>	-	●	-
	20 0141 30 <b>One-Pedal Footswitch, digital, one-stage, for irrigation</b>	-	●	-
	20 3004 82 <b>Connector Set, for ENDOMAT® LC, for use with Silicone Tubing Sets 20 3303 40, 20 3303 41 and 20 3303 43</b>	-	●	-
	20 3303 82 <b>Pump Tube, sterilizable, package of 25</b>	-	●	-

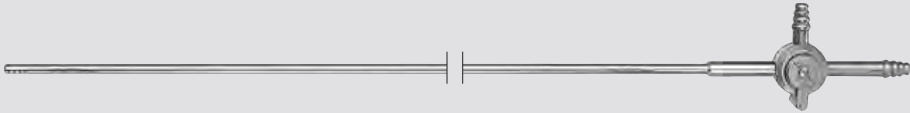
SUCTION AND IRRIGATION SYSTEMS


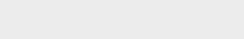
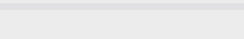


## Suction and Irrigation Tubes

### Size 5 mm

Operating instruments, **lengths 30 and 36 cm**,  
for use **with trocars size 6 mm**


Operating instruments, **length 43 cm**,  
for use with telescopes with inbuilt  
working channel **and trocars size 6 mm**


Length	Instrument
30 cm	
36 cm	
43 cm	

Distal End	Instrument
	26172 BN <b>Suction and Irrigation Tube</b> , anti-reflex surface, with lateral holes, with two-way stopcock for single-hand control
	26173 BN <b>Suction and Irrigation Tube</b> , anti-reflex surface, with two-way stopcock for single hand control, with two female LUER-lock connectors
	26174 BN <b>Suction and Irrigation Tube</b> , anti-reflex surface, with two-way stopcock for single hand control, with two female LUER-lock connectors
	26173 BL <b>Suction and Irrigation Tube</b> , anti-reflex surface, with two-way stopcock for single hand control, with two female LUER-lock connectors
	26173 BK <b>Suction and Irrigation Tube</b> , anti-reflex surface, with protection basket, with two-way stopcock for single hand control

### Size 10 mm

Operating instruments, **length 36 cm**,  
for use **with trocars size 11 mm**

Length	Instrument
36 cm	

Distal End	Instrument
	37560 LH <b>Suction and Irrigation Tube</b> , with lateral holes

**Please note:**

**Handles for use with Suction and Irrigation Tubes** see pages 242-247

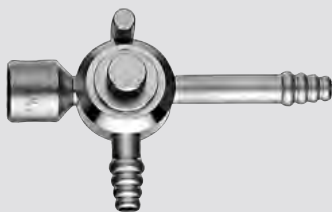
**Units for use with Handles for Suction and Irrigation** see chapter 20, UNITS

# Handles for Suction and Irrigation



30804

**Handle with Trumpet Valve**, for suction or irrigation, **autoclavable**, for use with 5 mm coagulation suction tubes as well as 3, 3.5 and 5 mm suction and irrigation tubes



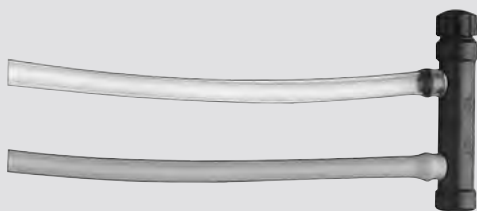
30805

**Handle with Two-Way Stopcock**, for suction and irrigation, **autoclavable**, for use with suction and irrigation tubes size 3, 3.5 and 5 mm



30810

**Handle**, for suction and irrigation, **autoclavable**, for use with 5 mm coagulation suction tubes as well as 3, 3.5 and 5 mm suction and irrigation tubes



30811

**Silicone Tubing Set, autoclavable**, for use with Handle 30810

031132-10\*

**Tubing Set**, sterile, for single use, package of 10, for use with Handle 30810



2-985



**Please note:**  
Units for use with Handles for Suction and Irrigation see chapter 17, UNITS  
Components/Spare Parts see chapter 18

## Sample Model Variations from the COR Equipment Cart Series



UG220

**Equipment Cart**, wide, high, rides on 4 antistatic dual wheels equipped with locking brakes, mains switch on cover, central beam with integrated electrical subdistributors with 12 sockets, grounding plugs,

Dimensions:

Equipment Cart: 830 x 1474 x 730 mm (w x h x d),

Shelf: 630 x 25 x 510 mm (w x h x d),

Caster diameter: 150 mm

including:

**Base Module**, equipment cart, wide

**Cover**, equipment cart, wide

**Beam Package**, equipment cart, high

3x **Shelf**, wide

**Drawer Unit with Lock**, wide

2x **Equipment Rail**, long

**Camera Holder**



UG120

**Equipment Cart**, narrow, high, rides on 4 antistatic dual wheels equipped with locking brakes, mains switch on cover, central beam with integrated electrical subdistributors with 12 sockets, grounding plugs,

Dimensions:

Equipment Cart: 660 x 1474 x 730 mm (w x h x d),

Shelf: 450 x 25 x 510 mm (w x h x d),

Caster diameter: 150 mm

including:

**Base Module**, equipment cart, narrow

**Cover**, equipment cart, narrow

**Beam Package**, equipment cart, high

3x **Shelf**, narrow

**Drawer Unit with Lock**, narrow

2x **Equipment Rail**, long

**Camera Holder**



UG 310 **Isolation Transformer**, 200 – 240 V, 2000 VA, with 3 special mains socket, automatic cutout, 3 grounding plugs, Dimensions in mm: 330 x 90 x 495 (w x h x d), for use with Equipment Carts UG xxx

UG 300 **Same**, 100 – 120 V



UG 410 **Earth Leakage Monitor**, 200 – 240 V, for mounting to equipment carts, Control panel dimensions: 44 x 80 x 29 mm (w x h x d), for use with Isolation Transformer UG 310

UG 400 **Earth Leakage Monitor**, 100 – 120 V, for mounting to equipment carts, Control panel dimensions: 44 x 80 x 29 mm (w x h x d), for use with Isolation Transformer UG 300



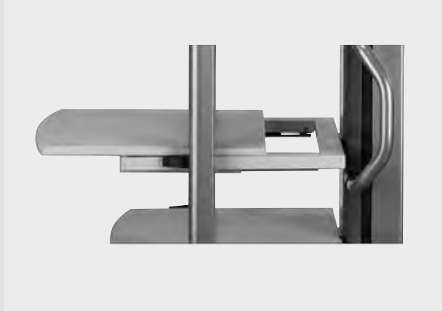
UG 700 **Mains Cord**, with angled plug, length 100 cm



- 20 0102 70 **Potential Equipotential Cable**, length 500 cm
- 20 0103 70 **Potential Equipotential Cable**, length 200 cm
- 20 0105 70 **Potential Equipotential Cable**, length 150 cm
- 20 0106 70 **Potential Equipotential Cable**, length 100 cm



29005 PA-DR **Potential Equipotential Cable Set**, for equipment carts, for 5 units, including Potential Equipotential Cable 5x 20 0106 70, 1x 20 0105 70, 1x 20 0102 70 for 5 units, for use with COR equipment carts and Equipment Cart 29005 DRB/DRS



UG 605 **Keyboard Tray**, narrow, for mounting under narrow Shelf UG 603, load capacity max. 10 kg, Dimensions: 430 x 480 mm (w x d), for use with Equipment Carts UG xxx

UG 606

**Keyboard Tray**, wide, for mounting under wide Shelf UG 604, load capacity max. 10 kg, Dimensions: 630 x 480 mm (w x d), for use with Equipment Carts UG xxx

## CO<sub>2</sub> Adaptor Set for Bottle Holder



UG812

**Adaptor Set for Bottle Holder**, COR mobile stand, two elements, dimensions in mm (w x h x d): 49 x 162 x 65 and 49 x 252 x 65, for use with Beam Modules UG801 and UG802 and CO<sub>2</sub> Bottle Holder UG609

UG609

**Bottle Holder**, for CO<sub>2</sub> bottles, max. diameter 210 mm, dimensions in mm (w x h x d): 230 x 280 x 210, for use with Equipment Carts UGxxx

## Suction Canister Holder for COR Mobile Stand



UG814

**Suction Canister Holder**, COR mobile stand, dimensions in mm (w x h x d): 210 x 276 x 256, for use with Guardian Suction Canister 030306-04

## Footswitch Holders



UG901

**Footswitch Holder**, for use with One-Pedal Footswitch UF901



UG902

**Footswitch Holder**, for use with Two-Pedal Footswitch UF902 and one- and two-pedal universal footswitches



29005EFH

**Footswitch Holder**, for one-pedal footswitch



29005DFH

**Footswitch Holder**, for two- and three-pedal footswitches



29005KHN

**Camera Holder**, for mounting camera heads, with removable inserts, compatible with all KARL STORZ endoscopic camera heads, for mounting to equipment rails





Puterea (W)

**2.4 kW**

Tensiune (V)

**150 - 250 V**

Opțiuni

**Cleme**

Model

**HTND-3kVA**

Tensiunea la ieșire (V)

**230 V**

Număr de faze

**Monofazat**

Brand

**Himel**

Tip

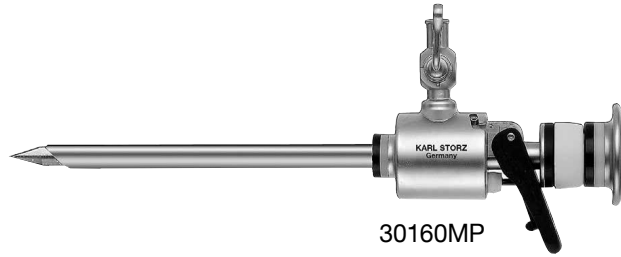
**Releu**

Metoda de prindere

**Pe podea**

## Trocars and Accessories

Size 6 mm



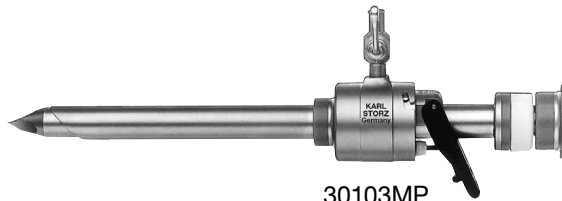
30160MP



30160MP

**Trocar**, with pyramidal tip, with insufflation stopcock, size 6 mm, working length 10.5 cm, color code: black, including:  
**Cannula**, without valve  
**Trocar only**  
**Multifunctional Valve**

Size 11 mm



30103MP

30103MP

**Trocar**, with pyramidal tip, with insufflation stopcock, size 11 mm, working length 10.5 cm, color code: green, including:  
**Cannula**, without valve  
**Trocar only**  
**Multifunctional Valve**



30140DB

**Reduction Sleeve**, reusable, instrument diameter 5 mm, trocar cannula outer diameter 11 mm, color code: green



30142HB

**Double Reducer**, 13/10 mm, 13.5/10 mm, 13/5 mm and 13.5/5 mm

# Щипцы для захвата и диссекции

CLICK'line® – поворотные, разборные, изолированные, с соединением для монополярной коагуляции

размер 5 мм

Операционные инструменты, **длина 36 см**, для использования с троакарами размером 6 мм

Операционные инструменты, **длина 43 см**, для использования с оптикой со встроенным рабочим каналом, а также с троакарами размером 6 мм



длина	рукоятка						
	33151	33152	33153	33156	33121	33125	33149
36 см							
43 см							

НОВИНКА

Одна бранша подвижна

рабочая вставка	номер инструмента в сборе						
	33351 BB	33352 BB	33353 BB	33356 BB	33321 BB	33325 BB	33349 BB
33310 BB	33351 BB	33352 BB	33353 BB	33356 BB	33321 BB	33325 BB	33349 BB
33410 BB	33451 BB	33452 BB	33453 BB	33456 BB	33421 BB	33425 BB	33449 BB



**Захватывающие щипцы CLICK'line® по BAVCOCK**, атравматические, многозубчатые, окончатые, длинные

33310 AA	33351 AA	33352 AA	33353 AA	33356 AA	33321 AA	33325 AA	33349 AA
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**Захватывающие щипцы CLICK'line® по MOURET**, атравматические, окончатые, тонкие

33310 AB	33351 AB	33352 AB	33353 AB	33356 AB	33321 AB	33325 AB	33349 AB
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**Захватывающие щипцы CLICK'line® по MOURET**, атравматические, окончатые, бранши круглые, узкие

33310 MA	33351 MA	33352 MA	33353 MA	33356 MA	33321 MA	33325 MA	33349 MA
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**Захватывающие щипцы CLICK'line® по MANHES**, «Зев кобры», с зубцами 1 x 2

5 мм


## Dissecting and Grasping Forceps

**CLICKLINE®** – rotating, dismantling,  
insulated, with connector pin for unipolar coagulation  
size 5 mm, trocar size 6 mm

Working Length		Handle 33151	Handle 33152	Handle 33153	Handle 33156
30 cm					
36 cm					
43 cm					

### Double-action jaws


Working Insert No.	Catalog number of the complete instrument			
33210ML	33251ML	33252ML	33253ML	33256ML
33310ML	33351ML	33352ML	33353ML	33356ML
33410ML	33451ML	33452ML	33453ML	33456ML



**CLICKLINE® Dissecting and Grasping Forceps, long**

— 22 —


33210AF	33251AF	33252AF	33253AF	33256AF
33310AF	33351AF	33352AF	33353AF	33356AF
33410AF	33451AF	33452AF	33453AF	33456AF



**CLICKLINE® Grasping Forceps, atraumatic, fenestrated**

— 24 —

33310DF	33351DF	33352DF	33353DF	33356DF
33410DF	33451DF	33452DF	33453DF	33456DF




**CLICKLINE® Dissecting and Grasping Forceps, atraumatic**

— 17 —

### Ein Maulteil beweglich:

33210ON	33251ON	33252ON	33253ON	33256ON
33310ON	33351ON	33352ON	33353ON	33356ON
33410ON	33451ON	33452ON	33453ON	33456ON



**CLICKLINE® Grasping Forceps, with fine atraumatic serration, fenestrated**

— 26 —

### Please note:

For **CLICKLINE®** instruments only the **individual component parts** are numbered. The catalog number for the **complete instrument** is not on the instrument. Instruments with **insulated handles with connector pin** for unipolar coagulation, are shown against the **red** background. The colour **green** indicates the inserts.




Item no: 33356MD

## CLICKLINE KELLY Grasping Forceps

Quantity:

− 1 +

On the offer list 

### Scope of delivery

- 33156 Plastic Handle, with ratchet (1)
- 33300 Metal Outer Sheath, insulated, 36 cm (1)
- 33310MD CLICKLINE Forceps Insert (1)

### Technical details

### Product group / field of application

Size 5 mm

Insulated Yes

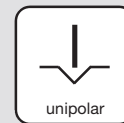
Handle shape Pistol grip

Handle With disengageable ratchet

Working length 36 cm

# Dissecting and Grasping Forceps

CLICK*liné* – rotating, dismantling, insulated,  
with connector pin for unipolar coagulation



## Size 5 mm

Operating instruments, lengths **30 and 36 cm**,  
for use **with trocars size 6 mm**

Operating instruments, length **43 cm**,  
for use with telescopes with inbuilt  
working channel and trocars size 6 mm

Length	Handle					
	33151	33152	33153	33156	33121	33149
30 cm						
36 cm						
43 cm						

## Double action jaws

Working Insert	Complete Instrument					
33210 MD	33251 MD	33252 MD	33253 MD	33256 MD	33221 MD	33249 MD
33310 MD	33351 MD	33352 MD	33353 MD	33356 MD	33321 MD	33349 MD
33410 MD	33451 MD	33452 MD	33453 MD	33456 MD	33421 MD	33449 MD



**CLICK'liné KELLY Dissecting and Grasping Forceps**

33210 ML	33251 ML	33252 ML	33253 ML	33256 ML	33221 ML	33249 ML
33310 ML	33351 ML	33352 ML	33353 ML	<b>33356 ML</b>	33321 ML	33349 ML
33410 ML	33451 ML	33452 ML	33453 ML	33456 ML	33421 ML	33449 ML



**CLICK'liné KELLY Dissecting and Grasping Forceps, long**

33310 DK	33351 DK	33352 DK	33353 DK	33356 DK	33321 DK	33349 DK
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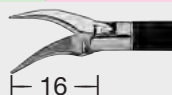
**CLICK'liné DeBAKEY Grasping Forceps,**  
curved and slender jaws, atraumatic

33310 UY	33351 UY	33352 UY	33353 UY	33356 UY	33321 UY	33349 UY
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**CLICK'liné UYAMA Dissecting and Grasping Forceps,**  
long jaws, with reservoir, fine, for dissection

33310 NO	33351 NO	33352 NO	33353 NO	33356 NO	33321 NO	33349 NO
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**CLICK'liné NOSHIRO Dissecting and Grasping Forceps,**  
short jaws, fine, for dissection



# Scissors

CLICK'linē – rotating, dismantling,  
with and without connector pin for unipolar coagulation

## Size 5 mm

Operating instruments, **length 30, 36 cm**,  
for use **with trocars size 6 mm**

Operating instruments, **length 43 cm**,  
for use with telescopes with inbuilt  
working channel and trocars size 6 mm

Length	Handle					
	33151	33121	33149	33161	33131	33147
30 cm						
36 cm						
43 cm						

## Double action jaws

Working Insert	Complete Instrument					
34210 MS	34251 MS	34221 MS	34249 MS	34261 MS	34231 MS	34247 MS
34310 MS	34351 MS	34321 MS	34349 MS	34361 MS	34331 MS	34347 MS
34410 MS	34451 MS	34421 MS	34449 MS	34461 MS	34431 MS	34447 MS



CLICK'linē METZENBAUM Scissors, curved

34210 MA	34251 MA	34221 MA	34249 MA	34261 MA	34231 MA	34247 MA
34310 MA	34351 MA	34321 MA	34349 MA	34361 MA	34331 MA	34347 MA
34410 MA	34451 MA	34421 MA	34449 MA	34461 MA	34431 MA	34447 MA



CLICK'linē Scissors, serrated blades, spoon-shaped, curved

34210 MW	34251 MW	34221 MW	34249 MW	34261 MW	34231 MW	34247 MW
34310 MW	34351 MW	34321 MW	34349 MW	34361 MW	34331 MW	34347 MW
34410 MW	34451 MW	34421 MW	34449 MW	34461 MW	34431 MW	34447 MW



CLICK'linē Scissors, serrated, curved, conical

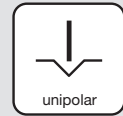
34210 MD	34251 MD	34221 MD	34249 MD	34261 MD	34231 MD	34247 MD
34310 MD	34351 MD	34321 MD	34349 MD	34361 MD	34331 MD	34347 MD



CLICK'linē Scissors, straight





# Accessories

## Unipolar High Frequency Cords



### Unipolar High Frequency Cords

KARL STORZ High Frequency  
Instrument Surgical Units

	26002 M	<b>Unipolar High Frequency Cord</b> , with 4 mm plug for models KARL STORZ, Erbe type T, older models and Ellman, length 300 cm
	26004 M	<b>Unipolar High Frequency Cord</b> , with 4 mm plug for models Berchtold and Martin, length 300 cm
	26005 M	<b>Unipolar High Frequency Cord</b> , with 5 mm plug for AUTOCON® II 400 SCB system (111, 115, 122, 125), AUTOCON® II 200, AUTOCON® II 80, KARL STORZ AUTOCON® system (50, 200, 350) and Erbe type ICC, length 300 cm
	26006 M	<b>Unipolar High Frequency Cord</b> , with 8 mm plug for models KARL STORZ AUTOCON® II 400 SCB system (112, 116) and Valleylab, length 300 cm

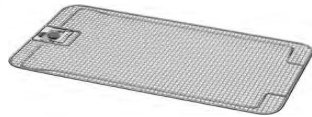
**Please note:** All high frequency cords of this page are delivered with a length of 300 cm. If a length of 500 cm is requested please add letter **L** to the part number, e. g. 26002 **ML**, 26176 **LVL**.

## Wire Trays



39502ZH

Wire Tray for Cleaning, Sterilization and Storage of instruments, long, stackable, including holeplate walls and foldaway handles, external dimensions (wxdxh): 535x250x66mm, in set with Lid, for use with Wire Tray 39502 ZH



39100PS

**Fixation Pin**, including screw and washer, to screw instruments into position in wire trays, height 38 mm, package of 12, for use with Silicone Tie-Downs 39360AS



39360AS

**Silicone Tie-Downs**, package of 12, for use with Fixation Pins 39100PS and 39360AP

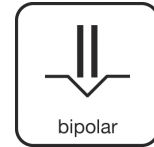


39501XS

**Small Parts Basket**, for Wire Trays 39501X, 39501XK and 39501FR, external dimensions (w x d x h): 80 x 40 x 40 mm



**ROBi® Bipolar Grasping Forceps**  
 rotating, 3-part, dismantling, with connector pin for bipolar  
 coagulation, CLERMONT-FERRAND model





**Size 5 mm**

Operating instruments, **length 36 cm**,  
 for use with trocars size 6 mm

<b>Outer Sheath</b>	<b>Handle</b>
	38151
Length 36 cm	

**Double action jaws**

Working Insert	Complete instrument
38610OM	38651OM
   18 mm	<b>ROBi® Grasping Forceps</b> , CLERMONT-FERRAND model, with fine atraumatic serration, fenestrated jaws, with large proximal recess
38610MA	38651MA
   24 mm	<b>ROBi® MALZONI Dissecting and Grasping Forceps</b>

| — | Jaw length in mm (approximate measurements)

**Please note:**

For instruments only the **individual component parts** are numbered. The catalog number for the **complete instrument** is not on the instrument. Please take this number from the numbers indicated in the red background of the table above. The color green indicates the **working inserts**.






# Skull Base and Endoscopic Pituitary Surgery

Accessories, High Frequency Cords,  
for use with TAKE-APART® bipolar forceps

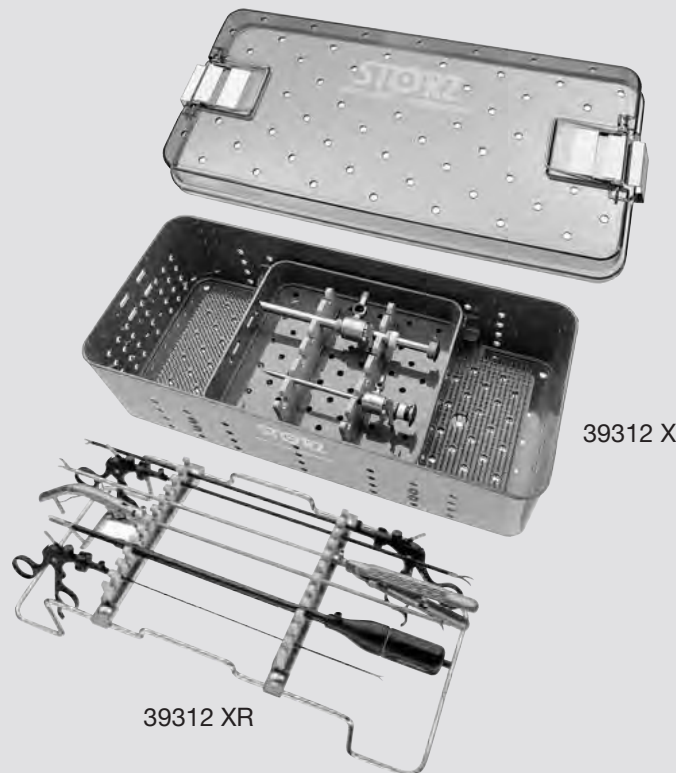
## Bipolar High Frequency Cords



KARL STORZ High Frequency  
Instrument Surgical Units

	<p>26176 LE</p> <p><b>Bipolar High Frequency Cord</b>, for AUTOCON® II 400 SCB system (111, 113, 115, 122, 125), AUTOCON® II 200, AUTOCON® II 80, KARL STORZ Coagulator 26021 B/C/D, 860021 B/C/D, 27810 B/C/D, 28810 B/C/D, AUTOCON® system (50, 200, 350), Erbe-Coagulator, T and ICC series, length 300 cm</p>
	<p>26176 LM</p> <p><b>Bipolar High Frequency Cord</b>, for Martin and Berchtold coagulators, length 300 cm</p>
	<p>26176 L</p> <p><b>Bipolar High Frequency Cord</b>, with 2 x 4 mm banana plug for KARL STORZ Coagulator 26020 XA/XB and Ellman, length 300 cm</p>
	<p>26176 LA</p> <p><b>Bipolar High Frequency Cord</b>, with 2 x 4 mm banana plug for KARL STORZ Coagulator 26020 XA/XB and Valleylab, length 300 cm</p>
	<p>26176 LV</p> <p><b>Bipolar High Frequency Cord</b>, for KARL STORZ AUTOCON® II 400 SCB system (112, 114, 116, 122, 125) and Valleylab coagulators, length 300 cm</p>

# Plastic Containers for Sterilization and Storage of Instruments



39312 X

**Plastic Container for Sterilization and Storage**, with removable Instrument Rack 39312 XR and insert tray for storage of up to 12 instruments with diameter 2.5 to 10 mm and up to 6 trocars, perforated, with transparent lid, external dimensions (w x d x h): 532 x 254 x 165 mm

39312 XR

**Instrument Rack for Storage** of up to 12 instruments with diameter 2.5 to 10 mm, including 2 bars with silicone holders

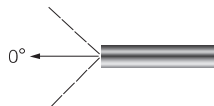


39312 B

**Plastic Container for Sterilization and Storage**, perforated, with transparent lid and silicone mat, for use with up to 15 instruments with working length up to 43 cm, external dimensions (w x d x h): 680 x 325 x 155 mm

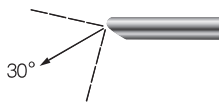
**Please note:** The instruments displayed are not included in the plastic containers.

Diameter 10 mm, length 31 cm  
Trocar size 11 mm



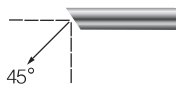
**26003ARA**

**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, color code: green



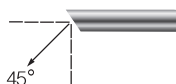
**26003BRA**

**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, color code: red



**26003FRA**

**HOPKINS® RUBINA® 45°**, NIR/ICG, forward-oblique telescope 45°, enlarged view, diameter 10 mm, length 31 cm, **autoclavable**, for indocyanine green (ICG), fiber optic light transmission incorporated, color code: black



**26003FREA**

**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, color code: black

**Recommended light cables for fluorescence-assisted perfusion assessment with ICG**



**495NCSC**

**Fiber Optic Light Cable**, with straight connector, extremely heat-resistant, enhanced light transmission, with safety lock, diameter 4.8 mm, length 250 cm

**495NAC**

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