

IMAGE1 S™ Camera System



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



Item no: TC304

IMAGE1 S 4U-LINK

Quantity:

–

1

+

On the offer list

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Scope of delivery

TC011 Link Cable, 30 cm (1)

Product details

Module for Rigid Endoscopy, 4K Technology

- Link module for 4K and 4K/3D
- Compatible with IMAGE1 S™ 4U as well as the IMAGE1 S™ 4U Rubina® camera head and TIPCAM®1 Rubina®
- 4K resolution and modern image processing technology
- Fluorescence imaging NIR/ICG in combination with the Rubina® product family

Technical details	Documents & Films	Product group / field of application
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Number of link outputs	1
Power consumption	86 VA
Line frequency	50/60 Hz
Power supply	100 – 240 VAC
Width	305 mm
Height	54 mm
Depth	320 mm
Weight	1.86 kg
Wipe disinfection	Yes
IP protection class	IPX0
Electrical protection class	Protection class 1
Degree of safety	CF-Defib
Brand	IMAGE1 S™ 4U-LINK

Show less ^

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, H₂O₂ (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 ₂ O ₂ (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, H₂O₂ (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 ₂ O ₂ (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.**



Item no: TH121

IMAGE1 S 4U RUBINA, OPAL1 NIR/ICG

Quantity:

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1

+

On the offer list

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	Documents & Films	Product group / field of application
Image sensor resolution	4K	
Resolution	3840 x 2160 px	
Connection	4U-Line	
Autoclavable	No	
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	3x digital zoom	
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	
H2O2 (hydrogen peroxide)	Yes	
Wipe disinfection	Yes	
Sterile concept	Single-use covers	
Brand	IMAGE1 S Rubina®	
Scanning method	Progressive scan	
Zoom levels	1x, 1.25x,1.5x, 1.75x, 2x, 2.5x, 3x	

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

55" 4K Medical Display

FM-A5504DS FM-A5504DG

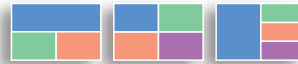
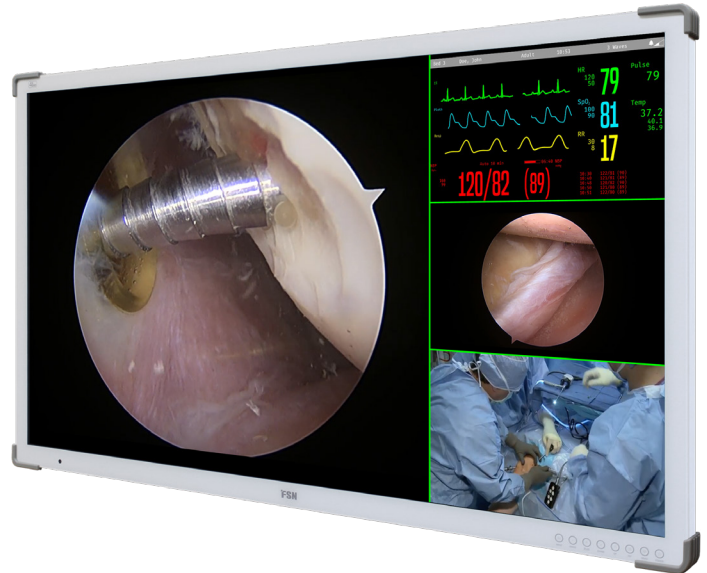


- Excellent color and detail reproduction on a large screen.
- Wide selection of signal input choices.
- Built in multi-window layouts.



See Every Detail

This monitor delivers ultra-sharp picture clarity with maximum viewing angles, allowing several clinicians to view high levels of detail without loss of image quality or distortion. Its 3,840 x 2,160 resolution greatly enhances images from endoscopic camera systems. Input source options include DVI, HDMI, SDI, and DisplayPort. The FM-A5504DG model adds 12G SDI to the impressive selection of signal choices.



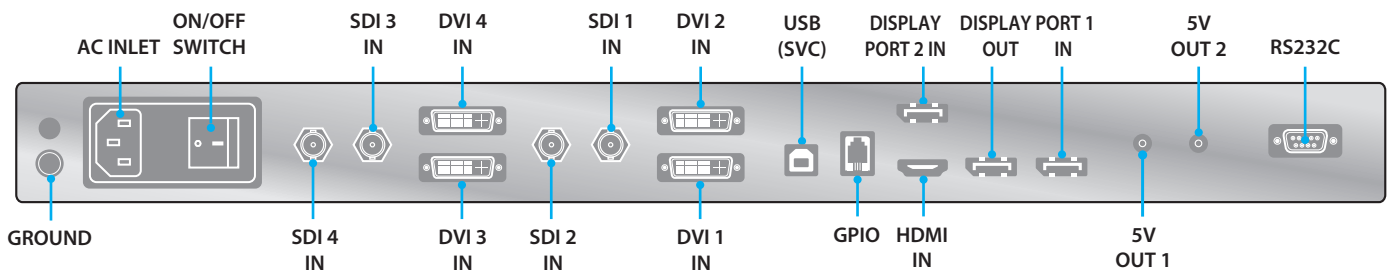
Multiple Windows

There is plenty of room on the FM-A5504D monitor series for multi-window requirements. Choose from PIP, PBP, Triple, or Quad layouts that are preset and ready-to-go in the on-screen display menus.

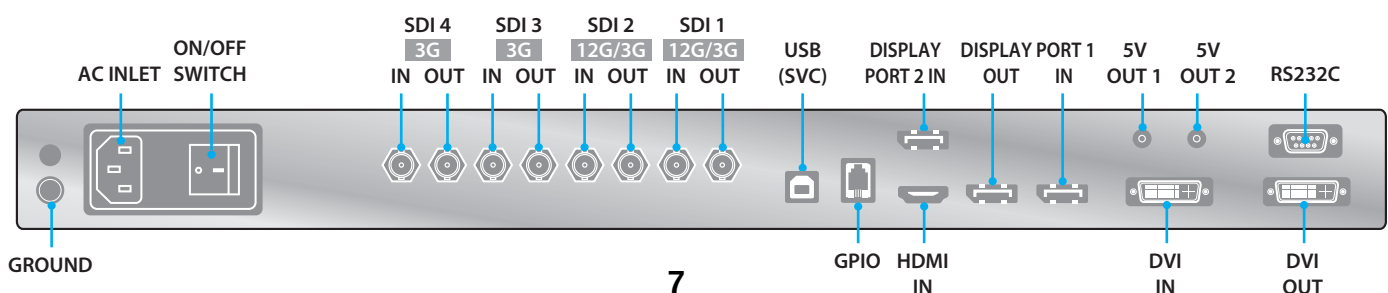
Edge-to-edge protective front glass gives this monitor a slim, sleek appearance, and allows for easy cleaning of the front surface. Rounded bezel corners help reduce bumping injuries, especially in today's active operating room environments. A back cable cover is provided with each monitor to manage cords and wires.



FM-A5504DS



FM-A5504DG



55" 4K Medical Display

FM-A5504DS FM-A5504DG



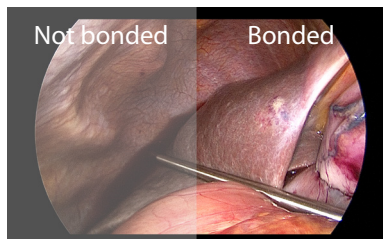
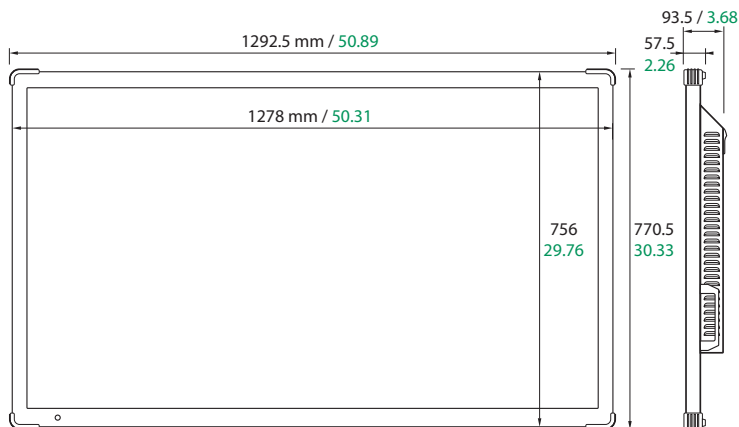
Specifications

General Features

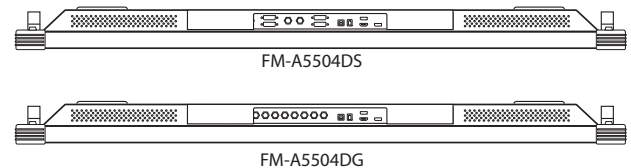
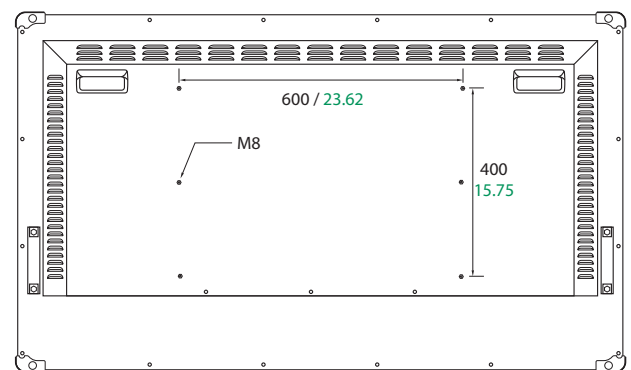
Item	Description
Panel	55 inch TFT LCD (LED)
Resolution	3840 x 2160 pixels
Aspect Ratio	16 : 9
Active Area	1209.60 (H)mm x 680.40 (V)mm
Pixel Pitch (mm)	0.315 x 0.315
Response Time (typical)	8 ms (gray to gray)
Number of Colors	1.07 Billion
Brightness (typical)	500 cd/m ²
Gamut	BT.709 and BT.2020 compatible
Contrast Ratio (typical)	1100 : 1
Surface Treatment	Anti-glare
Viewing Angle (CR>10)	R/L 178°, U/D 178°
Input Signal	FM-A5504DS 1 x HDMI 2.0 2 x DP 1.2 (SST) 4 (Quad) x DVI (single link) 4 (Quad) x SDI (3G)
	FM-A5504DG 1 x HDMI 2.0 2 x DP 1.2 (SST) 1 x DVI (single link) 4 (Quad) x SDI (3G), 2 x SDI (12G)

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	FM-A5504DS 1 x DP 1.2 (SST)
	FM-A5504DG 1 x DP 1.2 (SST) 1 x DVI (single link) 4 (Quad) x SDI (3G), 2 x SDI (12G)
Power Supply	SMPS (AC 100 ~240V)
Power Consumption	140W max
Accessories Included	User manual, AC power cord, DP cable, HDMI cable, DVI-D cable, BNC cable, Remote control and batteries
Unit Dimension	1292.5(W) x 770.5(H) x 93.5(D) mm 50.89(W) x 30.33(H) x 3.68(D) inch
Package Dimension	1450(W) x 930(H) x 305(D) mm 57.09(W) x 36.61(H) x 12(D) inch
IP Rating	IP30 - overall, IP42 - front side
IK Rating	IK07 with 5H AR glass
Weight	FM-A5504DS 36.65 kg, 80.80 lbs. (monitor with cover) 49.73 kg, 109.64 lbs. (shipping package)
	FM-A5504DG 36.65 kg, 80.80 lbs. (monitor with cover) 50.23 kg, 110.74 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



FSN's optical bonding process (right) improves contrast ratio and brightness, and increases humidity resistance and breakage resistance.



Specifications are subject to change with or without notice. Doc. # FSN2032 Rev. 11/21

www.fsnmed.com

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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.**



8.5 Technische Daten

8.5 Technical data

8.5 Datos técnicos

ENDOFLATOR® 50	ENDOFLATOR® 50	ENDOFLATOR® 50	UI 500
Netzversorgungsspannung	Line voltage	Tensión de alimentación de la red	100...240 V~
Netzfrequenz	Line frequency	Frecuencia de la red	50/60 Hz
Netzsicherung	Line fuse	Fusible para la red	2 x T 2.5 AH 250V
Mittlere Leistungsaufnahme bei Flow 40 l/min (Eingangsdruck 60 bar)	Average power consumption with flow of 40 l/min (input pressure 60 bar)	Consumo medio de potencia con un flujo de 40 l/min (presión de entrada 60 bares)	240 VAC: 230 W 100 VAC: 130 W
Maximale Stromaufnahme	Maximum current consumption	Consumo de corriente máximo	240 VAC: 1.8 A 100 VAC: 1.3 A
Gaseingang (maximaler Druck)	Gas inlet (maximum pressure)	Entrada de gas (presión máxima)	100 bar
Temperatur Patientenschlauchheizung	Temperature patient tube heating	Temperatura calefactor del tubo flexible para paciente	37 °C
Betriebsart »PÄDIATRIE«	'PEDIATRICS' mode	Modo de servicio "PEDIATRÍA"	
Intrakavitärer Druck	Intracavitary pressure	Presión intracavitaria	1...15 mmHg (Auflösung/resolution/resolución: 1 mmHg)
Flow	Flow	Flujo	0.1...15 l/min (Auflösung/resolution/resolución 0.1...2 l/min: 0.1 l/min; 2...9.5 l/min: 0.5 l/min 10...15 l/min: 1 l/min)
Insufflationsdruck	Insufflation pressure	Presión de insuflación	max./máx. 30 mmHg
Betriebsart »HIGH FLOW«	'HIGH FLOW' mode	Modo de servicio "HIGH FLOW"	
Intrakavitärer Druck	Intracavitary pressure	Presión intracavitaria	1...30 mmHg (Auflösung/resolution/resolución: 1 mmHg)
Flow	Flow	Flujo	1...50 l/min (Auflösung/resolution/resolución: 1 l/min)
Insufflationsdruck	Insufflation pressure	Presión de insuflación	max./máx. 50 mmHg
Abmessungen (B x H x T)	Dimensions (W x H x D)	Dimensiones (an x al x pr)	305 mm x 164 mm x 315 mm
Gewicht	Weight	Peso	7.8 kg
Betriebsbedingungen:	Operating conditions:	Condiciones de servicio:	
Luftfeuchtigkeit (rel. Feuchte, nicht kondensierend)	Humidity (rel. humidity, non-condensing)	Humedad del aire (humedad relativa, sin condensación)	15%...85 %
Temperatur	Temperature	Temperatura	10...35 °C
Max. Betriebshöhe	Max. operating altitude	Altura máxima de servicio	3000 m
Lager-/Transportbedingungen:	Storage/transport conditions:	Cond. de almacenamiento/transporte:	
Luftfeuchtigkeit (rel. Feuchte, nicht kondensierend)	Humidity (rel. humidity, non-condensing)	Humedad del aire (humedad relativa, sin condensación)	5%...95 %
Temperatur	Temperature	Temperatura	-10 °C...60 °C
Atmosphärischer Druck	Atmospheric pressure	Presión atmosférica	+500hPa...+1080hPa



UG 230

Equipment Cart LC, rides on 4 antistatic dual wheels equipped with locking brakes, energy beam with integrated electrical subdistributors with 6 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: 125 mm

including:

Base Module, equipment cart LC

Cover, equipment cart LC

Beam Package, equipment cart LC

Shelf, wide

Drawer Unit with Lock, wide

Camera Holder

2x **Mains Cord**, length 100 cm



Insufflation tubing set, heatable, with gas filter, for single use

- Insufflation tubing set with integrated filament for gas heating to body temperature (approx. 37 °C)
- Length approx. 3 m
- Maximum gas flow of 50 l/min
- Compatible with the ENDOFLATOR® 50 insufflation unit
- Packing unit with 10 items

031210-10 **Insufflation Tubing Set with Gas Filter**, heatable, 3 m, hydrophobic on both sides, sterile, for single use, package of 10, for use with KARL STORZ ENDOFLATOR® 50

STERILE



Smoke evacuation filter set, for single use

The smoke evacuation filter set is used for filtration and to regulate the removal of smoke vapor generated in laparoscopic procedures in order to reduce risks for the patient and OR personnel.

- Filtration of microorganisms, particles and toxic chemical substances
- Filter efficiency of > 99.9999% for the tested sample
- Length approx. 0.5 m
- LUER-Lock connector male
- Flow rate up to 8 l/min at 15 mmHg
- Roller clamp for setting the flow rate
- Passive smoke evacuation: No additional equipment required to use the smoke evacuation filter set.
- Packing unit with 10 items

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



Smoke gas filter for single use

The smoke gas filter is used to remove smoke vapor generated during surgical suction in order to reduce risks for the patient and OR personnel.

- Filtration of microorganisms, particles and toxic chemical substances
- Filter efficiency of > 99.9999% for the tested sample
- Flow rate up to 8 l/min at 15 mmHg
- For use in combination with, e.g., the s-pilot® with Tubing Set 031447-10 as well as a suction pump or central suction system
- The s-pilot® smoke evacuation management system provides smoke-free visibility during endoscopic interventions and helps remove surgical plume
- Smoke evacuation filter placed between the suction canister and the suction pump
- Packing unit with 10 items

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



UG 603

Shelf, narrow, load capacity max. 60 kg, dimensions: 450 x 25 x 510 mm (w x h x d), for use with Equipment Carts UG xxx

UG 604

Shelf, wide, load capacity max. 60 kg, dimensions: 630 x 25 x 510 mm (w x h x d), for use with Equipment Carts UGxxx

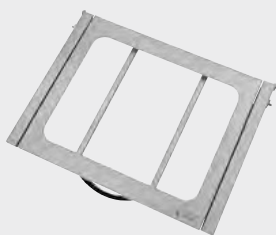


UG 601

Drawer Unit with Lock, small, max. shelf load 60 kg, max. drawer load 5 kg, with cable slot, dimensions: 450 x 126 x 510 mm (w x h x d), for use with Equipment Carts UG xxx

UG 602

Drawer Unit with Lock, wide, max. shelf load 60 kg, max. drawer load 5 kg, with cable slot, dimensions: 630 x 126 x 510 mm (w x h x d), for use with Equipment Carts UG xxx



UG 610

Sliding Tray Holder, narrow, load capacity max. 10 kg, dimensions: 450 x 510 mm (w x d), for use with Equipment Carts UG xxx

UG 611

Sliding Tray Holder, wide, load capacity max. 10 kg, dimensions: 630 x 510 mm (w x d), for use with Equipment Carts UG xxx



UG 608

Equipment Rail, long, for mounting to side of equipment cart, dimensions: 300 x 25 x 10 mm (w x h x d), for Equipment Carts UG xxx

UG 607

Equipment Rail, short, for mounting to side of equipment cart, dimensions: 170 x 25 x 10 mm (w x h x d), for Equipment Carts UG xxx



UG 619

Cable Manager, 2-piece, for mounting to vertical beam, package of 2, for use with Equipment Carts UG xxx



CO₂ 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 CO₂ Bottle Holder UG609

UG609

Bottle Holder, for CO₂ bottles, max. diameter 210 mm, dimensions in mm (w x h x d): 230 x 280 x 210, for use with Equipment Carts UGxxx



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



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

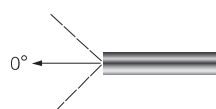
Footswitch Holder, for two- and three-pedal footswitches



29005KHN

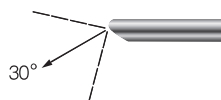
Camera Holder, for mounting camera heads, with removable inserts, compatible with all KARL STORZ endoscopic camera heads, for mounting to equipment rails

Diameter 10 mm, length 31 cm
Trocar size 11 mm



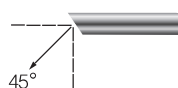
26003ARA

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



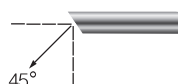
26003BRA

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

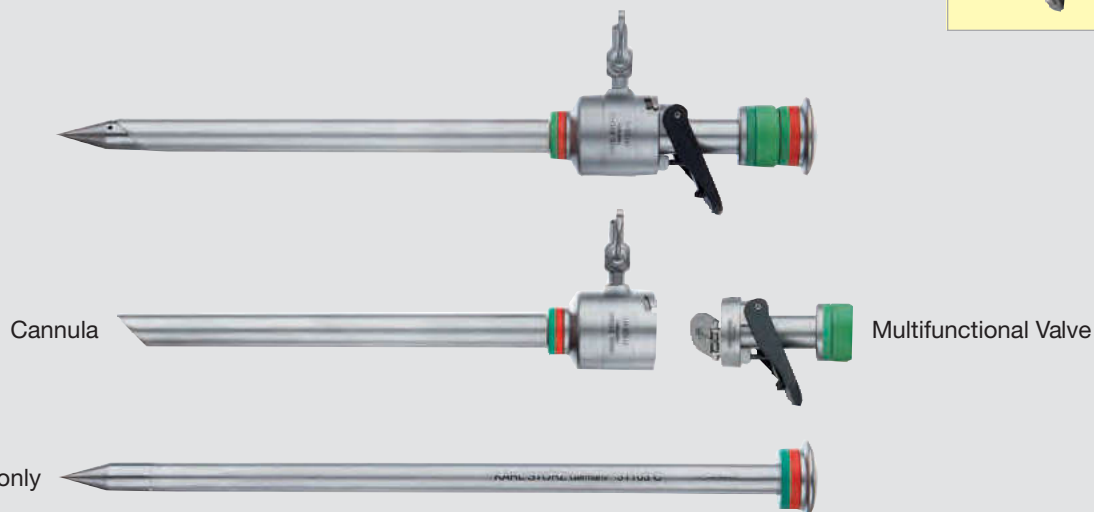
Fiber Optic Light Cable, with straight connector, extremely heat-resistant, enhanced light transmission, with safety lock, diameter 4.8 mm, length 250 cm

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

Trocars for Adipose Patients

Size 6, 11 and 13.5 mm



Size:		6 mm	11 mm	13.5 mm
Working length:		15 cm	15 cm	15 cm
Color code:		black-red	green-red	blue-red
	Trocar, with conical tip	31160 MC	31103 MC	—
	including:			
	Cannula	31160 H1	31103 H1	
	Trocar only	31160 C	31103 C	
	Trocar, with pyramidal tip	31160 MP	31103 MP	31108 MP
	including:			
	Cannula	31160 H1	31103 H1	31108 H1
	Trocar only	31160 P	31103 P	31108 P
	Trocar, with blunt tip	31160 MA	31103 MA	—
	including:			
	Cannula	31160 H1	31103 H1	
	Trocar only	31160 A	31103 A	
Multifunctional Valve		30160 M1	30103 M1	

Telescopes for use with trocars size 6 mm see page 33

Telescopes for use with trocars size 11 mm see pages 31, 35, 38-40

HEINKEL-SEMM Dilation Set see page 78, Accessories for Trocars see pages 76-77

Fiber Optic Light Cables

for Cold Light Fountains



Fiber Optic Light Cable with Straight Connector

495 NE	Fiber Optic Light Cable , diameter 4.8 mm, length 300 cm
495 NCS	Fiber Optic Light Cable , extremely heat-resistant, diameter 4.8 mm, length 250 cm
NEW 495 NCSC	Fiber Optic Light Cable , extremely heat-resistant, with safety locking device, diameter 4.8 mm, length 250 cm
495 NB	Fiber Optic Light Cable , diameter 4.8 mm, length 180 cm
495 ND	Fiber Optic Light Cable , diameter 3.5 mm, length 300 cm
495 NA	Fiber Optic Light Cable , diameter 3.5 mm, length 230 cm
NEW 495 NAC	Fiber Optic Light Cable , with safety locking device, diameter 3.5 mm, length 230 cm
495 NL	Fiber Optic Light Cable , diameter 3.5 mm, length 180 cm
495 NTA	Fiber Optic Light Cable , diameter 2.5 mm, length 230 cm
495 NT	Fiber Optic Light Cable , diameter 2.5 mm, length 180 cm
NEW 495 TIP	Fiber Optic Light Cable , 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	Fiber Optic Light Cable , with 90° deflection to the cold light fountain on the fountain side, diameter 3.5 mm, length 300 cm
495 NWM	Fiber Optic Light Cable , with 90° deflection to the cold light fountain on the fountain side, diameter 3.5 mm, length 230 cm
495 NW	Fiber Optic Light Cable , with 90° deflection to the cold light fountain on the fountain side, diameter 3.5 mm, length 180 cm
495 NTX	Fiber Optic Light Cable , with 90° deflection to the cold light fountain on the fountain side, diameter 2.5 mm, length 230 cm
495 NTW	Fiber Optic Light Cable , 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

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



Light Adaptor, angled 90°

495 EW	Light Adaptor , angled 90°, diameter 4.8 mm, free rotatable, to connect with standard telescopes
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Adaptor for connecting KARL STORZ fiber optic light cables with endoscopes and light sources from other manufacturers, see page TP 132

Insufflation Tubing Sets, Gas Filters and Accessories



Special Features:

- Protects patients and equipment against contamination
- Gas flow of up to 50 l/min
- Preheated gas for better view and patient comfort (031210-10)



For use with electronic ENDOFLATOR®, THERMOFLATOR®, ENDOFLATOR® 40 and ENDOFLATOR® 50



031122-25



031200-10



031210-10

- 031122-25 **Gas Filter**, 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)
- 031200-10 **Insufflation Tubing Set with Gas Filter**, 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)
- 031210-10 **Insufflation Tubing Set with Gas Filter**, length 300 cm, heatable, hydrophobic on both sides, sterile, for single use, package of 10, for use with ENDOFLATOR® 50

Optional Accessories

for Insufflators

for use with

ENDOFLATOR® 40 SCB
UI 400S1

ENDOFLATOR® 50 SCB
UI 500S1

	031200-10	Insufflation Tubing Set with Gas Filter , 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	Gas Filter , 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	Insufflation Tube , sterilizable, inner diameter 9 mm, length 250 cm		•	•
	031622-10	Insufflation Tubing Set with Gas Filter , 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	VERESS Pneumoperitoneum Needle , with spring-loaded blunt inner cannula, LUER-Lock, autoclavable , diameter 2.1 mm, length 10 cm		•	•
	30103 HP	HICAP® Trocar , size 11 mm, color code: green		•	•