The screen image is simulated for illustrative purposes only

31.5-inch 4K UHD IPS Surgical Monitor

■| 32HL714S |

Excellent Picture Quality for Surgical Procedure

31.5-inch 4K UHD (3840 x 2160) IPS Color Display | 178º Wide Viewing Angle

The LG 32HL714S surgical display monitor is well-equipped with a 31.5" IPS color display and 4K UHD (3840 x 2160) resolution to produce vibrant and vivid colors to help surgeons see complex images during the surgical procedure. Plus, this surgical display monitor features a 178° wide viewing angle for surgeons to view the screen from virtually any angle.

31.5"

The screen image is simulated for illustrative purposes only

HDR10 Support

The LG 32HL714S 4K UHD surgical display monitor supports advanced High Dynamic Range (HDR10) video content, displaying impressive color depth during the surgical procedure.

*12G-SDI Support

The LG 32HL714S is built on the IPS display with an added hardware component of a 12G-SDI input module, in-supporting long distance* transmission of 4K signals over a single coaxial cable with low latency.

*12G-SDI input transmission distance: max. 70m

Simple Connection to Multi-Input Sources

Up to *4PBP (Picture-by-Picture) | PIP (Picture-in-Picture) Connection Mode

Surgeons can view multiple surgical procedure images simultaneously on one monitor, either side by side using PBP (Picture-by-Picture) or one above the other using the PIP (Picture-in-Picture) mode. This distinctive feature included in the LG 32HL714S surgical display monitor can be helpful in various instances, such as when there is a need to display a patient's vital signs with their surgical images. Moreover, the LG 32HL714S surgical display monitor comes with DisplayPort, DVI, and HDMI input/output sources featuring the *4PBP/PIP functions and the 12G-SDI for 4K video signal transmission.

"4PBP refers to the ability to view up to four pictures on the monitor in side by side mode, as simulated above with the following images, which are for illustrative purposes only."

Optimized for Surgical Suites

Mirror & Rotation Mode

The LG 32HL714S surgical display monitor provides Mirror & Rotation features that help optimize the operating view in the surgical suites. Surgeons can select the 180º rotated images or the mirror image of the surgical procedure.

Failover Input Switch

When the primary image source is missing, the display will automatically switch to a failover (backup) source and restore the main source once the signal is back. Users can set the main input and failover input in the setting menu of the monitor.

The screen image is simulated for illustrative purposes only

SPECIFICATIONS

	32HL714S
Model	1.1.1 Ekranas IPS technologijos. 764.6 · 480.8 · 200 · 100 · 201 · 94.4 · 282.3

1.1.4 Ekrano įstrižainė – 31,5 colių.

Panel	Panel Type	IPS
	Inch (Aspect Ratio)	31.5-inch (16:9)
	Resolution	4K UHD (3840 x 2160)
	Surface Treatment	Protection Glass (1.6t, Anti-reflection, Anti-fingerprint)
	Color Gamut (Typ.)	sRGB 115% (Area), sRGB over 99% (Coverage)
	Viewing Angles (CR≥10)	178⁰ (Right/Left), 178⁰ (Up/Down)
	Brightness (Typ.)	800cd/m²
	Contrast Ratio (Typ.)	1300:1
	Response Time (GTG*)	14ms (Off- setting), 5ms (Faster- setting)
Feature	DICOM Compliant	Yes
	HW Calibration	Yes (True Color Pro)
	HDR	HDR10
Video Signals	Input Terminals	HDMI x1, DisplayPort x1, DVI x1, 12G-SDI x1
	Output Terminals	DisplayPort x1, DVI x1, 12G-SDI x1
Connectivity	USB	1 upstream, 1 downstream
Power	Power Requirements	100-240Vac, 50-60Hz
	Power Consumption (Max.)	180W
	Power Consumption (DC Off)	Less than 0.3W
Resistance Rating		IP35 (Front), IP32 (Rear), IK06
Certifications & Standards		IEC(IEC 60601-1 / IEC 60601-1-2), EN(EN 60601-1 / EN 60601-1-2) IEC(IEC 60950-1 / IEC 55032, 55024), EN (EN 60950-1 / EN 55032, 55024) cUL (ANSI/AAMI ES 60601-1, CSA CAN/CSA-C22.2 NO. 60601-1) RoHS, REACH, WEEE
User Convenience	Screen Filp	Mirror Mode & Rotation Mode
	PBP / PIP	PBP (2/3/4PBP) / PIP
	Failover Input Switch	Yes
	User Preset Quick Setting	Save or load up to 10 picture quality settings in each preset
Physical Specifications	Weight (without stand)	13.5 kg (29.8 lb)

1.1.5 Raiška 3840 x 2160 taškų.

1.1.3 Apšviestumas 800 cd/m2.

1.1.2 Maksimalus stebėjimo kampas 89°

1.1.6 Signalų įvestys: DVI; HDMI; 12G-SDI;

1.1.7 Signalų išvestys: 12G-SDI.

1.1.8 Svoris 13,5 kg.

*GTG: Gray to gray response time

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SCAN QR CODE TO CONTACT US

SPEC_32HL714S_102522_JK

LG 31.5" 4K IPS Surgical Monitor

OVERVIEW   SPECS   RESOURCES

DISPLAY

Aspect Ratio	16:9	Backlight Dimming Technology	Global Dimming
Backlight Technology	LED	Brightness (Typ.)	800cd/m²
Brightness (Stabilization)	500 cd/m²	Color Bit	10bit
Color Gamut (Typ.)	sRGB 115% (Area), sRGB Over 99% (Coverage)	Contrast Ratio (Typ.)	1000:1
Pixel Pitch(H x V)	0.18159mm x 0.18159mm	Resolution	3840 x 2160
Response Time (GTG)	14ms(Off-setting), 5ms(Faster-setting)	Size (Diagonal, Inch)	31.5
Size (H x V)	697.31 x 392.23 mm (27.45 x 15.44")	Surface Treatment	Protection Glass (1.6t, Anti-Reflection, Anti-fingerprint)
Viewing Angle (CR≥10)	178° (Right/Left), 178° (Up/Down)		

https://www.lg.com/global/business/medical-displays/lg-32hl714s#pdp_spec

Digital two-chip camera head for 4K UHD white light and near infrared (NIR)/ Indocyanine Green (ICG) fluorescence applications with 2 freely programmable camera head buttons, compatible with systems with integrated, innovative visualization technologies, for shifting the color spectrum and for homogeneous illumination and contrast enhancement.

Specifications:
Image sensor: 2 x 1/2.5″ CMOS chip.
Pixels: 3840 (H) x 2160 (V) pixels.
CMOS chip supports 16:9 input format.
Progressive scan (full frame) for display of 50 or 60 full frames per second.
Lens: Integrated lens, f = 19 mm.
Camera head buttons: 3 (2 of them freely programmable).
Dimensions (h x w x d): 55 mm x 41 mm x 150 mm.
Weight: 260 g.
Integrated camera cable (3 m) with special plug for CCU.
CF with defibrillation rating acc. to EN 60601 allows the use of camera for thoracic and heart surgery (in combination with the camera control unit).
The camera head is suitable for the following sterilization methods:

- Sterrad® 100S, NX 100NX
- Steris® System1, V-Pro1
- ETO gas sterilization
- FO sterilization (H_2O_2)
- CIDEX, Reset XL HLD

Fixed camera cable (3 m).

Special Features:
Camera head for fluorescence imaging, suitable for white light endoscopy and NIR/ICG fluorescence applications.
Various display options for NIR/ICG fluorescence applications:

- Overlay:
  White light image with superimposed display of NIR/ICG fluorescence.
  Possible to select the preferred color for NIR/ICG imaging:
  Either blue or green.

- Monochromatic:
  NIR/ICG fluorescence signal in white. Background in black for maximum contrast.
- Intensity Map:
  White light image with superimposed display of NIR/ICG fluorescence. NIR/ICG signal display will appear in different colors depending on the strength of the detected NIR signal.

Image display in 16:9 format with 3840 x 2160 pixels and progressive scan.
Programmable image refresh rate 50 or 60 Hz.
Digital through and through: This system allows the optical image to be converted into a digital image at the earliest possible stage: Directly in the CMOS sensor chip.
The 16:9 CMOS chip in the camera head allows image capture and image display on widescreen monitors without the need for conversion. Software scaling of the image leading to deterioration of the image is thus avoided.
With an input resolution of 8 million pixels, the camera yields a resolution that is 4 times higher than FULL HD.

3x digital zoom.
Ergonomic design – compact, lightweight design that fits comfortably in the hand.
2 freely programmable camera head buttons.
Compatible with systems with integrated, innovative visualization technologies, for shifting the color spectrum and for homogeneous illumination and contrast enhancement.

- Suitable light sources can be controlled by the camera head buttons by means of a communication protocol.
Suitable insufflators can be controlled by the camera head buttons by means of a communication protocol.
In combination with this camera head, suitable camera control units can output 4K UHD images as well as FULL HD videos to a USB storage medium.
In combination with this camera head, suitable camera control units can output images to a suitable video printer.

Consisting of:
Digital two-chip 4K UHD camera head with integrated camera cable (3 m).

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7. 1   Neutral datasheets

▪ **TC304: IMAGE1 S™ 4U-Link**
Digital camera module for operating UHD 4K camera heads.

Technical data:
Camera input: 1 x UHD 4K camera head
Maximum resolution: 3840 x 2160 pixels

<div style="border:1px solid red">1.3.1 Maksimali raiška – 3840 x 2160 taškų;</div>

Output: DisplayPort
Automatic shutter
Automatic Gain Control: Microprocessor-controlled
Connection: Module connecting cable to the video processor module
Dimensions (w x h x d): 305 mm x 54 mm x 320 mm
Weight: Less than 2.5 kg
Operating voltage: 100-120 VAC, 50/60 Hz, 200-240 VAC, 50/60 Hz.
Power consumption: 100 VA
Type: IEC 601-1, 601-2-18, CSA 22.2 No. 601, UL2601-1 and CE according to MDD, safety rating 1/CF defib.

Special features:
- Modular design: Operation requires the combination with a video processor module and a compatible camera head.
- When connecting selected camera heads, the following modes can be activated without special light sources or filter systems:
    – Color inversion by shifting the color spectrum
    – Brightening of dark areas in the endoscopic image
    – Contrast enhancement

<div style="border:1px solid red">Kokybės kriterijus nr. 4 Režimas suvienodinantis viso lauko apšviestumą - apšviestumo padidinimas tik tamsiose vaizdo srityse.</div>

- Resolution of 3840 x 2160 pixels
- Progressive scan for an extremely steady image without flickering and noise.
- With compatible camera heads, two freely programmable camera head buttons with up to 4 assignable functions, implemented in combination with the IMAGE1 S CONNECT™ module.
- Change of visualization modes, device control, digital zoom, brightness, video capture, still image capture, printing orders, picture-in-picture mode, image alignment, white balance, and setup can be controlled from the sterile area through camera head buttons, implemented in combination with the IMAGE1 S CONNECT™ module.
- Integrated digital image processing module for brightness adjustment in 5 levels and with 2 electronic anti-Moiré filters for fiberscopes.

Consisting of:
4K UHD camera module
Network cable, length 300 cm
Link cable, length 20 cm

<div style="border:1px solid red">1.2.2 Laisvai programuojami kameros galvos mygtukai 4 funkcijoms</div>

<div style="border:1px solid red">1.2.4 Galimybė kameros mygtukų pagalba pasirinkti specialius vizualizacijos režimus vaizdų optimizavimui (1.3 punkto 6 dalis).</div>

Innovative Visualization Tools for Surgery and Diagnosis via Homogeneous Illumination and Contrast Enhancement

Kokybės kriterijus nr. 4
Režimas suvienodinantis viso lauko apšviestumą - apšviestumo padidinimas tik tamsiose vaizdo srityse.

SPIES CLARA

A good endoscopic image features a clear display of details in both light and dark areas. SPIES CLARA supports proper illumination in each part of the endoscopic image.

White light image

SPIES CLARA

1.3.6.1 Specialūs vizualizacijos režimai vaizdų optimizavimui:
Režimas padidinantis spalvų kontrastą, struktūrų ir audinių diferenciacijai pagerinti,

SPIES CHROMA

Surgical interventions are more efficient if clear differentiation of tissue is possible. SPIES CHROMA intensifies the color contrast in the image. Clearly visible structure surfaces are given added emphasis while retaining the natural color perception in the image.

White light image

SPIES CHROMA

:spies™ – Storz Professional Image Enhancement System

Innovative Visualization Tools for Surgery and Diagnosis by Shifting the Color Spectrum

1.3.6.2 Susiaurinto šviesos spektro audinių vizualizacijos režimas;

SPIES SPECTRA

SPIES SPECTRA allows recognition of the finest tissue structures. The bright red portions of the visible spectrum are filtered out and the remaining color portions are expanded. This makes it easier to differentiate between tissue types.

White light image

SPIES SPECTRA A

SPIES SPECTRA offers two different modes so that the user can select the display that suits best.

White light image

SPIES SPECTRA B

KARL STORZ SE & Co. KG • PO Box 230 • 78503 Tuttlingen/Germany

TO WHOM IT MAY CONCERN

WE SUPPORT

Your ref.	Date of your letter	Our ref. Exp.E / KB	Date 06.11.2018

Dear Sirs,

Herewith, KARL STORZ SE & Co. KG., Dr. Karl-Storz-Str. 34, D-78532 Tuttlingen (Germany)

D E C L A R E S

1.3.5 Su integruotu moduliu nuotraukų ir video vaizdų įrašymui į USB tipo laikmenas

that our listed products are fully responding technical characteristics as follows:

TC201EN

Digital 4K UHD video processor module with integrated documentation function for image and video capturing for use with camera heads and 2D and 3D video endoscopes in combination with compatible camera modules. Modular expendable to future technologies.

Technical data:
Connections:
- 2 x Display Port 1.2 output
- 1 x 12/3G-SDI output
- 1 x DVI output
- 3 x camera input for communication with compatible camera modules
- LAN connection
-4 x USB connection (2 x front, 2 x back)
Max. resolution: 3840 x 2160 pixels.
Color space: BT.2020 and BT.709.
Dimensions (wxhxd): 30.5 cm x 5.4 cm x 32.0 cm.
Weight: < 4 kg.
Power supply: 100-240 VAC, 50/60Hz.

1.3.4 Signalų išvestys: 12G-SDI.

Power consumption: < 180VA.
Certified to: IEC601-1, 601-2-18, CSA 22.2 No. 601, UL2601-1 and CE acc. to MDD, protection class 1.

Optional: USB to ACC adapter for device control.

Special features:
Modular design: For use in combination with at least one camera module.
Modular design: Just in time acquisition based on demand.
Modular design: Expandable to future technologies.
Modular design: Replacement of components instead of complete replacement.
Three different menu structures for optimized settings for service OR personnel and the surgeon.
3D, 2D rigid/flexible, Molecular Imaging representable via one system, dependent on additionally used modules.
Regular software updates for enhanced functionality.
Parallel live display of visualization modes besides white light mode (picture-in-picture).
Up to three different camera modules can be connected to the video processor module.
Integrated picture-in-picture mode of two different camera modules in five different display sizes available.
Primary and secondary signal source change in picture-in-picture mode can be performed easily via camera head buttons.
Integrated communication bus for device control and information display of connected devices.
Resolution of 3840 x 2160 pixels.
➤ Integrated documentation unit via USB.

1.3.5 Su integruotu moduliu nuotraukų ir video vaizdų įrašymui į USB tipo laikmenas

- Video capturing in FULL HD quality (MPEG4 format).
- Still image capturing in 4K UHD quality (JPEG format).

1.3.5.1 Video vaizdų įrašymas Full HD formatu, įrašomų nuotraukų kokybė atitinkanti 4K standartą

Still image (4K UHD quality) and video capturing (FULL HD quality) in picture-in-picture mode for both signal sources simultaneously.
Medical USB printer compatible (plug & play).
Data capturing functions can be released by optional USB footswitch.
Automatic adjustment of light intensity of light source via communication bus.
White balance button on front plate of video processor module.
Control of complete camera system can be realized from camera head from sterile area.
Short learning curve due to familiar handling, which reduceds starting time and parameter adjustment.
Grid and pointer can be displayed for improved orientation and communication during surgery.
Grid and pointer can be displayed individually and together in the center of the image.
Possibility of 180° image rotation.
Possibility of vertical and horizontal image mirroring.
Storage of up to 20 individual presets.
Storage of up to 50 individual patient data.
Temporary display of connected video-endoscope and camera head data on the screen.
Display of date and time on the monitor.
Display of brightness and of light source intensity for compatible light sources on the monitor.
System overview is individually configurable and setup status can be directly displayed with intelligent icons.
Number of menu icons can be customized individually for optimal system adjustment for the user.
Modular design for integration of up to 3 camera modules and easy upgradeability with new technologies.
Future ready thanks to integrated and extendable architecture.

93 703 10

1.3.2.2 Suderinama su:
4K (3840 x 2160 taškų) standarto
ICG kamerų galvutėmis

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 TC 201

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 ■

TH120 **IMAGE1 S™ 4U One-Chip 4K UHD Camera Head,** S-Technologies available,
progressive scan, soakable, EO sterilization, H_2O_2 (hydrogen peroxide), focal length f = 18 mm,
2 freely programmable camera head buttons, for use with IMAGE1 S™ 4U-LINK ■

TM440 **58" 4K Monitor,** screen resolution 3840 x 2160, image format 16:9, power
100-240 VAC, 50/60 Hz, wall mount with VESA 400 x 400 and VESA 400 x

1.3.2.1 Suderinama su:
4K (3840 x 2160 taškų)
standarto kamerų galvutėmis.

TM 343 **32" 4K Monitor,** screen resolution 3840 x 2160, image format 16:9, power supply
100-240 VAC, 50/60 Hz, wall mount with VESA 100 and VESA 200 adaptors

TM450 **55" 4K/3D Monitor,** screen resolution 3840 x 2160, image format 16:9, power supply
100-240 VAC, 50/60 Hz, 100-240 VAC, 50/60 Hz, wall mount with VESA 200 and VESA 300 adaptors

TM009 **Signal Converter Set,** 12G-SDI – 4x 3G-SDI, for use with 55" 4K/3D Monitor TM450

TM350 **32" 4K/3D Monitor,** screen resolution 3840 x 2160, image format 16:9, power supply
100-240 VAC, 50/60 Hz, wall mount with VESA 100 adaptor

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

TL300 **Cold Light Fountain POWER LED 300 SCB,** with integrated KARL STORZ-SCB,
high-performance LED module and one KARL STORZ light outlet, power supply
100-240 VAC, 50/60 Hz

495NAC **Fiber Optic Light Cable,** with straight connector, extremely heat-resistant, with safety lock,
enhanced light transmission, diameter 3.5 mm, length 230 cm

495NCSC **Same,** diameter 4.8 mm, length 250 cm

495TIP **Same,** diameter 4.8 mm, length 300 cm

* Also available in the following languages: DE, ES, FR, IT, PT, RU
** For use with HOPKINS® RUBINA™ NIR/ICG telescopes

TL400 LED white light/fluorescence cold light source with one light connection for use withsuitable endoscopes, with two separately or simultaneously active high-performance
LEDs for white light and near infra applications with high light intensity and minimal energy consumption and suitable for white light as well as fluorescence applications in near infrared (e.g. ICG).

1.4.2 Pritaikytas standartinei baltos šviesos ir ICG fluorescencinei diagnostikai

Specifications:
Lamp type: Two high-performance LEDs, white light LED and near infrared LED, which are active individually or simultaneously.
Color temperature: White light 5700 K.
Color rendering index (CRI): 65.
Number of light outlets: 1.
Light intensity adjustment: Continuously manual or via communication channel.
Power supply: 100-240 VAC.

1.4.4 Reguliuojamas šviesos intensyvumas

Frequency: 50-60 Hz.
Power consumption 220 VA.
Dimensions (w x h x d): 305 x 120 x 370 mm.
Weight: 7.4 kg.
Light color: Pure white and near infrared.
Certified to: IEC 60601-1, IEC 60601-2-18, CE acc. to MDD, protection class I/safety class for protection against electric shock, CF at least; with KS light cables, CF defib.

1.4.3 NIR/ICG lempos darbo resursas 30000 valandų

Special Features:
Extremely long average LED lamp life of 30,000 hours.
Natural color rendition.
Very high energy efficiency with the latest LED technology.
Light adaptor with anti-glare shield.
Standby button with memory function (remembers last brightness level selected).
Light intensity can be manually fine-tuned in 20 steps.
Light intensity can be fine-tuned in 99 steps via communication channel.
Manual control from the sterile field using camera head buttons via a communication channel in combination with compatible camera system.
Integrated color touch screen for straightforward and intuitive control via light source functions.
Communication interface on the light source for connection to other units.
Extremely quiet operation.
Very environmentally friendly as LEDs are free of lead and mercury. RoHS 2 compliant.
LED technology for extremely high light output.
Light output comparable with XENON 300 W light sources.
Very low decrease in light output throughout the LED lamp life (white light and NIR LEDs).
Protection class CF defib for KARL STORZ light cables (protection class CF when using light cables from other manufacturers).
No use of laser light, thus eliminating the need for laser safety measures.

Consisting of:
LED white light/fluorescence light source.
Mains cord.
Communication Interface connecting cable.
NIR/ICG demonstration card.

ENDOFLATOR® 50 SCB *NEW*

with Speed-Flow Insufflation (50 l/min),
Recommended Standard Set Configuration

KARL STORZ — ENDOSKOPE

Special Features:

- Ease of use due to large, color 7" touch screen
- Simultaneous display of set values and actual values facilitate monitoring of the insufflation process
- Automatic adjustment of insufflation rate to diverse instrument resistance values ensures the fastest possible insufflation
- Fully automatic, electronically controlled gas refill (e.g. in case of gas loss when changing instruments)
- SECUVENT® Safety System: Constant monitoring of intraabdominal pressure

- Especially suitable for providing a high gas flow when using smoke generating techniques
- Powerful high-flow mode for fast insufflation of large gas volumes up to 50 l/min
- A high-capability trocar (HICAP®) that allows ideal flow conditions is included in the set
- Tubing set with integrated heating element for preheating gas to body temperature to prevent peritoneum from cooling down
- With connection possibilities to the KARL STORZ Communication Bus (KARL STORZ-SCB) for unit integration

UI 500 S1 **ENDOFLATOR® 50 SCB,** with integrated SCB module, power supply 100 – 240 VAC, 50/60 Hz

including:

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

> 1.5.1 Maksimalus dujų padavimo greitis 50 l/min.

> 1.5.3 Su integruotu moduliu dujų pašildymui

Specifications:

Operating mode	- High-flow mode - Sensitive mode
Gas flow	- Sensitive mode: 0.1-15 l/min - High-flow mode: 1-50 l/min
Pressure	- Sensitive mode: 1-15 mmHg - High-flow mode: 1-30 mmHg
Gas	CO_2
Measuring/control system	Electronic
Parameter display	- Set pressure - Actual pressure (intraabdominal) - Gas flow - Gas consumption: 0-999 l - Status display gas consumption

SECUVENT® safety system	●
Gas heating	●
Power supply	100-240 VAC, 50/60 Hz
Dimensions w x h x d	305 x 164 x 315 mm
Weight	7.8 kg
Certified to	IEC 601-1, CE acc. to MDD

> 1.5.2 Maksimalus pasiekiamas slėgis 30 mmHg

* mtp

Optional Accessories for ENDOFLATOR® 50 SCB see pages U 10-11

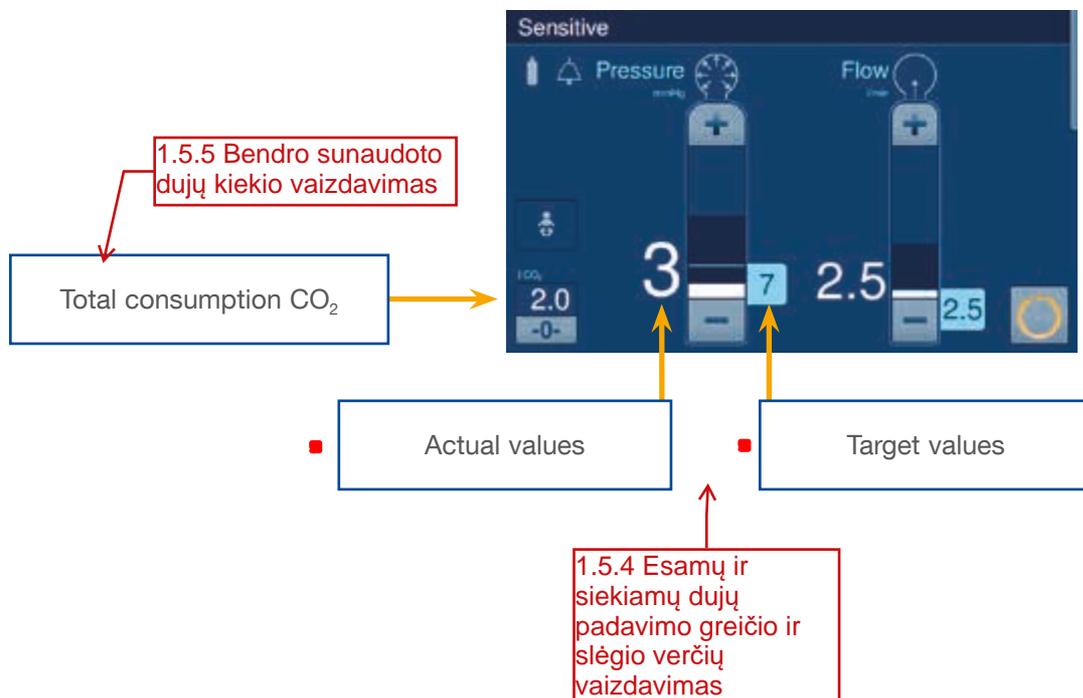**Components/Spare Parts** see chapter 21

3.6 Insufflation

Once insufflation has started, the actual pressure and flow values are indicated by a white bar. The numerical values appear on the left side of the bar. The light-blue line denotes the target values. The indicator in the lower left-hand corner shows the total consumption of CO_2 and can be reset if necessary.

1.5.5 Bendro sunaudoto dujų kiekio vaizdavimas

Total consumption CO_2

Actual values

Target values

1.5.4 Esamų ir siekiamų dujų padavimo greičio ir slėgio verčių vaizdavimas

STORZ
KARL STORZ—ENDOSKOPE

Patient Tube	UI004	**Insufflation Tube,** sterilizable, inner diameter 9 mm, length 250 cm, for use with ENDOFLATOR® 40 UI400 or ENDOFLATOR® 50 UI500
Patient Tube mtp*	031622-10	**Insufflation Tubing Set,** bifurcated, with gas filter, for single use, hydrophobic on both sides, with 4 m insufflation tube, two patient-side tube connections with rotatable male LUER-Lock, sterile, package of 10, for use with KARL STORZ insufflation units
Supply Tube	UI001	**Low Pressure Tube,** for the central CO_2 gas supply, length 150 cm
	UI002	**Low Pressure Tube,** for the central CO_2 gas supply, length 300 cm
	UI003	**Low Pressure Tube,** for the central CO_2 gas supply, length 600 cm
Supply Tube	20 4000 21	**High Pressure Tube,** American connection/ German connection, length 55 cm
	20 4000 27	**High Pressure Tube,** American connection/ German connection (CO_2), length 102 cm
	20 4000 22	**High Pressure Tube,** American connection/ Pin-Index connection, length 55 cm
	20 4000 28	**High Pressure Tube,** American connection/ Pin-Index connection (CO_2), length 102 cm
	20 4002 22	**High Pressure Tube,** American connection/ ISO connection, length 102 cm
Universal Wrench	20 4000 30	**Universal Wrench**
Bottle Holder	UI005	**Bottle Holder,** fold-away, holder for KARL STORZ CO_2 gas bottles 1000 ml, including attachments, can be mounted to ENDOFLATOR® 40 UI400 and ENDOFLATOR® 50 UI500
CO_2 Bottle	26 4000 90	**CO_2 Bottle,** empty, with German connection
	26 4000 91	**CO_2 Bottle,** empty, with Pin-Index connection

PRODUCT INFO

UNITS

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Optional Accessories

for Insufflators

1.5.6.3 CO2 dujų filtrai 25 vnt.

				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®)	STERILE ②	●	●
	031210-10*	**Same,** heatable	STERILE ②	–	●
	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 ②	●	●
	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 ②	●	●
	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		●	●

* mtp

Components/Spare Parts see chapter 18

ENDOMAT® SELECT *NEW*

Roller pump for the irrigation of fluids

1.6.1.2/1.6.2.2 Skirtas irigacijai

1.6.1.1/1.6.2.1 Ratukinio tipo;

Special Featues:

● **Roller pump system for pressure-controlled irrigation**

● **Max. pressure setting: 150 mmHg**

● **Interface and communication with UNIDRIVE® S III ARTHRO SCB supports reliable joint distension**

● **Unit and accessories extremely easy to use**

● **Multidisciplinary use**

● **With connection option for KARL STORZ Communication Bus (KARL STORZ-SCB)**

● **Boost mode: For stabilization of the cavity when shaver is activated or for hemostasis by activating an additional one-pedal footswitch**

2 Normal use

2.1 Intended purpose

Suction and irrigation pumps

Suction/irrigation pumps are used for the introduction of irrigation fluids into organs, joints, and operating fields as well as the suctioning of irrigation fluids and bodily fluids, secretions, tissue, and gases. Suction/irrigation pumps do not come into contact with the body.

Control cable

The connecting cables are used for electrical signal transmission. Connecting cables do not come into contact with the body.

2.2 Indications

1.6.2.2 Skirtas siurbimui ir irigacijai (nurodytos funkcijos neprivalo veikti vienu metu);

Suction and irrigation pumps

The product provides irrigation or suction functions for the following disciplines:

– Urology
– Gynecology
– Surgery (thoracoscopy, laparoscopy, and proctology)
– Arthroscopy
– Spinal surgery

In addition, the pump with suction or irrigation function can be used for cleaning lenses.

For the product specifications, see the see chapter *Technical data* [p. 21].

Control cable

The connecting cable is used for electrical signal transmission. It does not depend on special indications.

2.3 Contraindications

Suction and irrigation pumps

The medical devices must not be used for procedures in direct contact with the central nervous system (CNS) and central cardiovascular system. The accessories must only be used with the intended devices. In general, medical devices must not be used on patients who are not part of the defined patient group, or if the operation itself is contraindicated. The use of pump systems is contraindicated if, in the opinion of the attending physician, the surgical method as such is contraindicated, or if the patient is not able to undergo surgery or anesthesia due to his or her general condition.

Use is contraindicated if, in the opinion of the attending physician, the device is not compatible with successful completion of the planned procedure due to its technical design.

The ENDOMAT SELECT must not be used for:

– ERCP
– Cholangioscopy (gastro)
– Spine lumbar (interlaminar access)
– Spine cervical
– Applications that require a non-pulsatile flow

2.6 Intended application areas on the patient

The product can be used on patients in the following areas:

1.6.2 Plovimo įrenginys laparoskopijai

1.6.1 Plovimo įrenginys histeroskopijai

Discipline	Application area
SURG	Abdomen, thorax, procto
GYN	Uterus
URO	Lower and upper urinary tract
ART	Joints in the foot, knee, hip, shoulder, hand or finger
SPINE	Thoracic and lumbar vertebral column
ENT/NEURO	Cleaning endoscope lenses
GI	Upper and lower gastrointestinal tract

2.7 Intended conditions of use

The product may only be used in hospitals and doctors' offices in suitable ambient conditions.

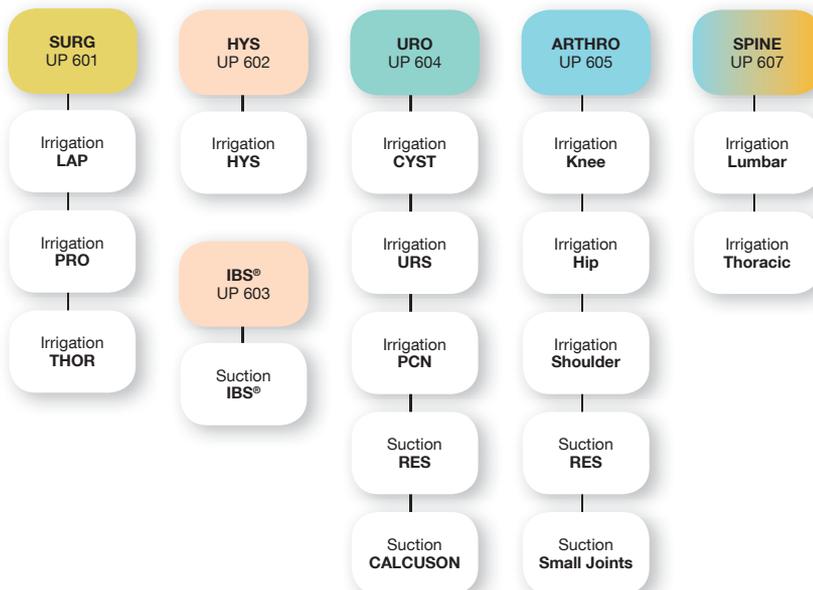| Condition	Operation
Frequency of use	One or more times a day
Length of use	Several minutes to several hours a day
Place of installation	Positioning on a level, vibration-free surface
Mobility	Can be moved if placed on a cart.
Combination	Can be used on the patient at the same time as other devices.
Control	Can be controlled via the KARL STORZ HIVE.

STORZ
KARL STORZ—ENDOSKOPE

The following software modules are currently available for use with ENDOMAT® SELECT*

UP 601   **Surgery, Software, License,** allows selection of the procedures "LAP", "THOR" and "PROCTO", for use with ENDOMAT® SELECT UP 220

UP 602   **Hysteroscopy, Software, License,** allows selection of the procedure "HYS", for use with ENDOMAT® SELECT UP 220

UP 603   **IBS® Shaver, Software, License,** allows selection of the procedure "IBS® Shaver", for use with ENDOMAT® SELECT UP 220

UP 604   **Urology, Software, License,** allows selection of the procedures "CYST", "RES", "URS", "CALCUSON" and "PCN", for use with ENDOMAT® SELECT UP 220

UP 605   **Arthroscopy, Software, License,** allows selection of the procedures "KNEE", "HIP", "SHOULDER" and "Small Joints", for use with ENDOMAT® SELECT UP 220

UP 607   **Spine, Software, License,** allows selection of the procedures "Lumbar" and "Thoracic", for use with ENDOMAT® SELECT UP 220

PRODUCT INFO

UNITS

SURG UP 601	HYS UP 602	URO UP 604	ARTHRO UP 605	SPINE UP 607
Irrigation LAP	Irrigation HYS	Irrigation CYST	Irrigation Knee	Irrigation Lumbar
Irrigation PRO	IBS® UP 603	Irrigation URS	Irrigation Hip	Irrigation Thoracic
Irrigation THOR	Suction IBS®	Irrigation PCN	Irrigation Shoulder	
		Suction RES	Suction RES	
		Suction CALCUSON	Suction Small Joints	

Confidential – for internal use only!

*Please note that at least one software package must be ordered to ensure a fully functional unit.

4 Product description

4.1 Description of operation

The ENDOMAT SELECT is a roller pump that can be used for irrigation and suction of fluids during operations in various disciplines of human and veterinary medicine. It is not possible to combine disciplines of human and veterinary medicine.

The device automatically adapts to suit the type of operation being performed by providing the optimum operating parameters when a tubing set for a specific discipline is attached, provided the product is enabled for the area of application. The product can be configured in such a way that only the areas of application that the user wants to use are displayed. Further disciplines can be retrofitted, and extended setting options are available with the Advanced software package.

In urological and arthroscopic applications, the irrigation pressure can also be increased briefly with a BOOST function. In other applications, either the irrigation flow or the irrigation pressure can be limited.

1.6.1.3 Valdymas lietimui jautriu ekranu

The product is operated and controlled via a touch screen. The current operating state can be checked by displaying the set and actual values of the irrigation pressure or flow. If the set value deviates continuously, an electronic safety circuit blocks the delivery or suction, and acoustic signals sound. An electronic auto-check system tests the various system components when the product is started and notifies the operator of any failures detected.

(i) The range of functions of the product varies according to the installed software package. For the required accessories for the respective software package, see see chapter *Accessories and spare parts* [p. 66].
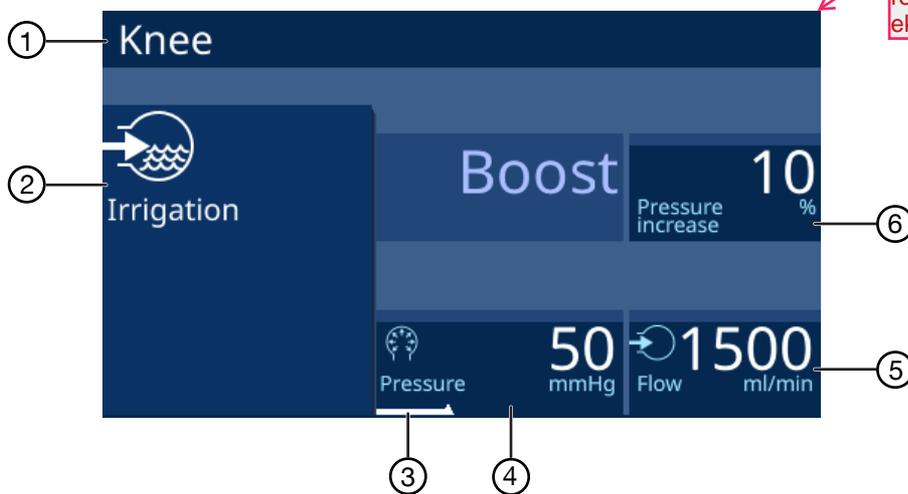
4.2 Product overview

ENDOMAT SELECT – Front view

1 Standby button
2 ■ TFT touchscreen
3 Pump lever (cartridge locking lever)
4 Light barrier
5 Pump rollers

4.3 Touchscreen

1	Discipline name	4	Limitation of pressure
2	Start/stop irrigation/suction	5	Limitation of flow
3	Irrigation/suction display	6	Boost pressure increase

Irrigation or suction display

The irrigation or suction function is activated:

– Actual value: orange-colored line
– Set value: white marking

Limitation of pressure or flow

Whether the flow or pressure can be limited depends on the discipline and the installed Advanced software package.

Boost pressure increase

Boost pressure increase is only available in the disciplines of arthroscopy and urology. The boost pressure increase can be set with the button or footswitch in 10% steps from 10% – 50%.

Reusable Tubing Sets for ENDOMAT® SELECT

Reusable tubing sets for the irrigation or suction of fluids are now available for the multidisciplinary ENDOMAT® SELECT single roller pump.

The following reusable tubing sets are now available for ENDOMAT® SELECT:

- For flow-controlled applications, e.g., in laparoscopy, thoracoscopy and proctology.

UP 007   **Tubing Set,** irrigation, FC, reusable, sterilizable, for use with ENDOMAT® SELECT SCB UP 220 and HAMOU® ENDOMAT® SCB **26** 3311 20-1

- For pressure-controlled applications, e.g., in hysteroscopy, cystoscopy or interventions in arthroscopy and spine surgery

UP 008   **Tubing Set,** irrigation, PC, reusable, sterilizable, for use with ENDOMAT® SELECT SCB UP 220 and HAMOU® ENDOMAT® SCB **26** 3311 20-1

- For use in hysteroscopic tissue ablation with the IBS® shaver system or for the removal of tissue chips during resection (TUR-B/P)

UP 009   **Tubing Set,** suction, DS, reusable, sterilizable, for use with ENDOMAT® SELECT SCB UP 220

PRODUCT INFO

UNITS

The following tubing sets can be used with the system:

For pressure-controlled applications, for example, in hysteroscopy, cystoscopy or interventions in arthroscopy and spine surgery.

031523-10   **Tubing Set, Irrigation,** pressure-controlled, for single use, sterile, package of 10, for use with KARL STORZ HAMOU® ENDOMAT® **26** 3311 20 and ENDOMAT® SELECT UP 220

For flow-controlled applications, for example, in laparoscopy, thoracoscopy and proctology.

031524-10   **Tubing Set, Irrigation,** flow-controlled, for single use, sterile, package of 10, for use with KARL STORZ HAMOU® ENDOMAT® **26** 3311 20 and ENDOMAT® SELECT UP 220

For use during the hysteroscopic removal of tissue with the IBS® shaver system or removal of tissue chips during resection (TUR-B/P)

030647-10   **Tubing Set, Suction,** direct suction,
for single use, sterile, package of 10,
for use with KARL STORZ ENDOMAT® SELECT

For use in combination with the CALCUSON lithotripsy unit in urology

031647-10   **Tubing Set, Suction,** bottle suction,
for single use, sterile, package of 10,
for use with KARL STORZ ENDOMAT® SELECT

For the ordering process, please use Configuration Flyer 96311002.

Further information is available in the Product Highlight ENDOMAT® SELECT 96311003.

Availability

The ENDOMAT® SELECT unit as well as the above-mentioned software modules and corresponding single-use tubing sets are now in stock.

More software packages will be available in the near future for utilization of ENDOMAT® SELECT during GI, ENT and NEURO surgeries and for further features regarding the general unit settings as well as the enhancement of certain software modules.

PRODUCT INFO

UNITS

Confidential – for internal use only!

HOPKINS® Telescopes

for fluorescence-supported perfusion evaluation using ICG
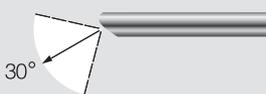
Diameter 10 mm, length 31 cm, 42 cm

Trocars size 11 mm

1.7 Matymo kryptis 0⁰
Skersmuo 10 mm;
Ilgis 31 cm;
Pritaikyta darbui fluorescenciniu
ICG režimu, pilnai suderinama su
siūloma kameros galva (1.2 poz.);
Autoklavuojama

26003 ARA

0°	26003 ARA	**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
30°	26003 BRA	**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
45°	26003 FRA	**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
	26003 FREA	**Same,** length 42 cm

Diameter 5 mm, length 29 cm

Trocars size 6 mm

26046 BRA

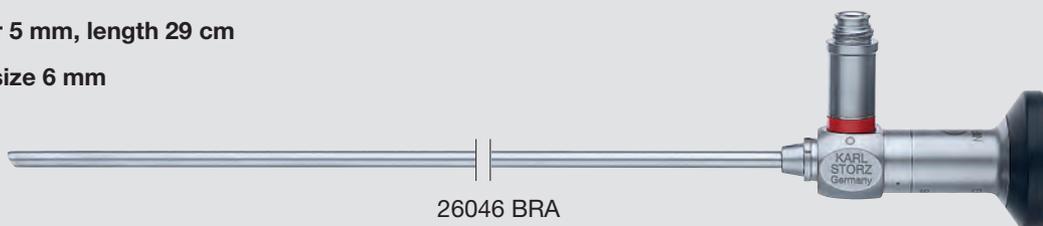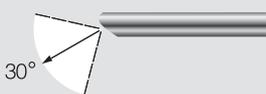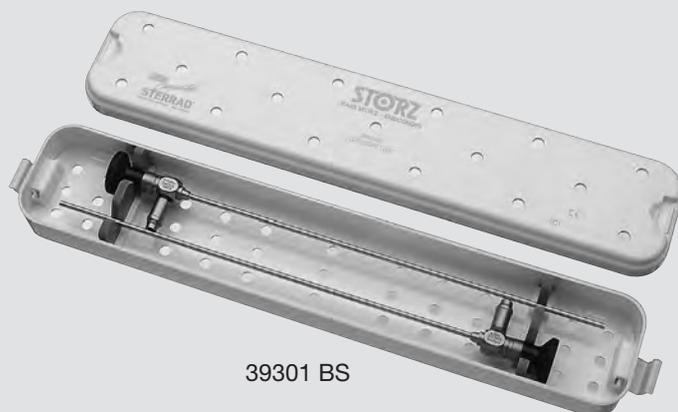|		
0°	26046 ARA	**HOPKINS® RUBINA® 0°,** NIR/ICG, straight forward telescope 0°, enlarged view, diameter 5 mm, length 29 cm, **autoclavable,** for indocyanine green (ICG), fiber optic light transmission incorporated, color code: green
30°	26046 BRA	**HOPKINS® RUBINA® 30°,** NIR/ICG, forward-oblique telescope 30°, enlarged view, diameter 5 mm, length 29 cm, **autoclavable,** for indocyanine green (ICG), fiber optic light transmission incorporated, color code: red
45°	26046 FRA	**HOPKINS® RUBINA® 45°,** NIR/ICG, forward-oblique telescope 45°, enlarged view, diameter 5 mm, length 29 cm, **autoclavable,** for indocyanine green (ICG), fiber optic light transmission incorporated, color code: black

Components/Spare Parts see chapter 18

Plastic Containers for Sterilization and Storage
of endoscopes

39301 BS

39301 AS	**Plastic Container for Sterilization,** suitable for steam, gas, and hydrogen peroxide (Sterrad®) sterilization and storage, perforated, with lid, for use with two rigid endoscopes up to max. 20 cm working length, external dimensions (w x d x h): 321 x 90 x 45 mm
39301 BS	**Plastic Container for Sterilization,** especially suited for hydrogen peroxide (Sterrad®) sterilization and storage, perforated, with lid, for use with two rigid endoscopes up to max. 32 cm working length, external dimensions (w x d x h): 446 x 90 x 45 mm
39301 CS	**Plastic Container for Sterilization,** suitable for steam, gas, and hydrogen peroxide (Sterrad®) sterilization and storage, perforated, with lid, for use with two rigid endoscopes with a working length of over 34 cm, external dimensions (w x d x h): 520 x 90 x 45 mm
39301 D	**Plastic Container for Sterilization and Storage of Endoscopes,** perforated, with transparent lid, with silicone telescope holder, external dimensions: (w x d x h): 670 x 116 x 80 mm

1.7.6/1.8.6/1.9.6 Su konteineriu sterilizavimui bei laikymui

Please note: The instruments displayed are not included in the plastic containers.
Components and Spare Parts see pages 57 ff.

KARL STORZ HOPKINS® Telescopes:
Quality – Value Preservation – Reliability

4K

The KARL STORZ HOPKINS® rod lens system maintains its impressive image quality with each new telescope. With more than 75 years of experience, the name KARL STORZ stands for high quality standards.

The innovative technologies from KARL STORZ

- Quality improvements of the KARL STORZ telescopes through the continuous optimization of manufacturing processes and the use of high-quality materials

- Fine adjustment of the optical system with state-of-the-art manufacturing technologies

- Detailed and precise reproduction of tissue structures thanks to the harmonization of KARL STORZ telescopes, light sources and the IMAGE1 S™ camera platform.

1.7.4 Pritaikyta darbui fluorescenciniu ICG režimu, pilnai suderinama su siūloma kameros galva (1.2 poz.)

Conventional KARL STORZ HOPKINS® telescopes can be used with all camera platforms, whether HD, 4K or future developments. With KARL STORZ telescopes, you are – according to our philosophy "the future has tradition, and tradition has a future" – ready for the next step.

1.8.2/1.9.2 4K raiška (suderinama su 4K raiškos kameromis)

Quality and service pay off:

The KARL STORZ repair-exchange program creates a closed service cycle: Replacement with original products from KARL STORZ ensures the long-term value preservation of your investments at repair prices. We will be happy to generate a specific cost calculation for you. In the long term, costs are reduced and product life is maximized in accordance with the total cost of ownership model.

HOPKINS® Telescopes

Diameter 10 mm, length 31 cm

Trocars size 11 mm

1.8 Matymo kryptis 0°
Skersmuo 10 mm
Ilgis 31 cm
Autoklavuojama

26003 AA

0°	26003 AA	**HOPKINS® Straight Forward Telescope 0°,** enlarged view, diameter 10 mm, length 31 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green
30°	26003 BA	**HOPKINS® Forward-Oblique Telescope 30°,** enlarged view, diameter 10 mm, length 31 cm, **autoclavable,** fiber optic light transmission incorporated, color code: red
45°	26003 FA	**HOPKINS® Telescope 45°,** enlarged view, diameter 10 mm, length 31 cm, **autoclavable,** fiber optic light transmission incorporated, color code: black

1.9 Matymo kryptis 30°
Skersmuo 10 mm
Ilgis 31 cm
Autoklavuojama

Diameter 10 mm, length 42 cm

Trocars size 11 mm
Recommended for use for surgery in the adipose patient

26003 BEA

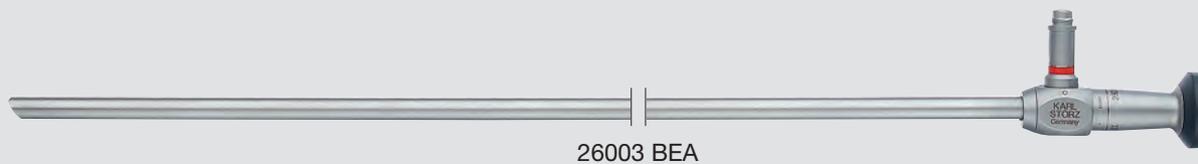|		
0°	26003 AEA	**HOPKINS® Straight Forward Telescope 0°,** enlarged view, diameter 10 mm, length 42 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green
30°	26003 BEA	**HOPKINS® Forward-Oblique Telescope 30°,** enlarged view, diameter 10 mm, length 42 cm, **autoclavable,** fiber optic light transmission incorporated, color code: red
45°	26003 FEA	**HOPKINS® Telescope 45°,** enlarged view, diameter 10 mm, length 42 cm, **autoclavable,** fiber optic light transmission incorporated, color code: black
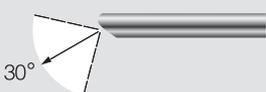
Trocars for use with telescopes with diameter 10 mm see pages 47-48, 54, 61, 66 and 69
Containers for Sterilization and Storage of Telescopes see HYGIENE catalog
Components/Spare Parts see chapter 18

7-111

Fiber Optic Light Cables and Antifog Solution

1.10.4 Su tiesia jungtimi

Fiber Optic Light Cables with Straight Connector

Light Cable and Endoscope Combination

Please note: Symbol coding on the light cable and endoscope allows easier identification and light cable/endoscope combination.

	Light Cable Diameter	Endoscope Diameter		
◉	2 – 2.5 mm	0.8 – 2.9 mm	495 NT	**Fiber Optic Light Cable,** diameter 2.5 mm, length 180 cm
			495 NTA	**Fiber Optic Light Cable,** diameter 2.5 mm, length 230 cm
◉	3 – 3.5 mm	3 – 6.5 mm	495 NL	**Fiber Optic Light Cable,** diameter 3.5 mm, length 180 cm
			495 NA	**Fiber Optic Light Cable,** diameter 3.5 mm, length 230 cm
			495 NAC *NEW*	**Fiber Optic Light Cable,** diameter 3.5 mm, length 230 cm, extremely heat-resistant, with safety lock, enhanced light transmission, can be used for ICG applications
			495 ND	**Fiber Optic Light Cable,** diameter 3.5 mm, length 300 cm
◉	4.8 – 5 mm	10 – 11 mm	495 NB	**Fiber Optic Light Cable,** diameter 4.8 mm, length 180 cm
			495 NCS	**Fiber Optic Light Cable,** diameter 4.8 mm, length 250 cm, extremely heat-resistant, enhanced light transmission
			495 NCSC *NEW*	**Fiber Optic Light Cable,** diameter 4.8 mm, length 250 cm, extremely heat-resistant, with safety lock
			495 NE	**Fiber Optic Light Cable,** diameter 4.8 mm, length 300 cm

1.10 Fibrooptinis Skersmuo 4,8 mm Ilgis 300 cm

Antifog Solution

15006 B	15006 C	15006 D

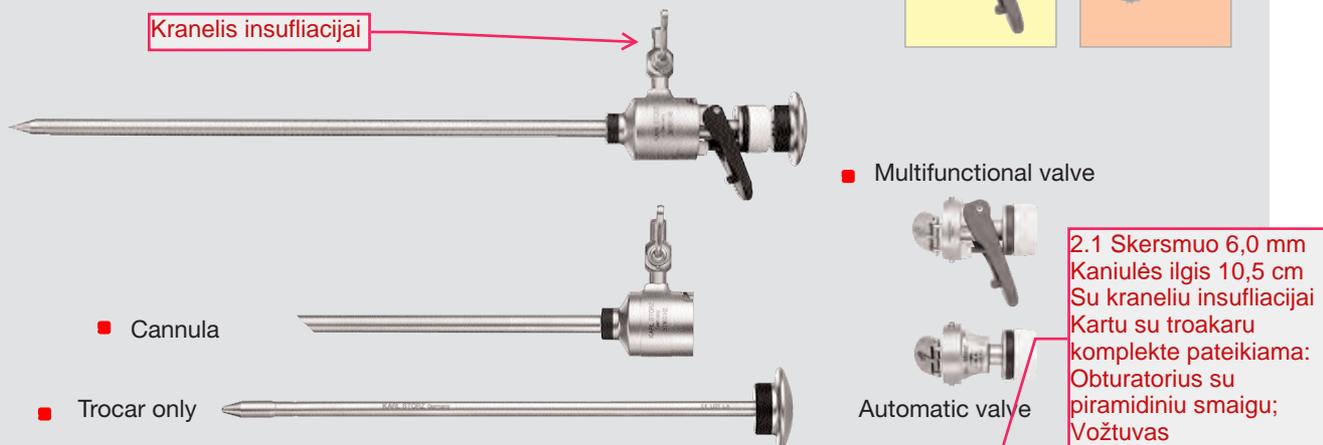| 15006 B	"ULTRA STOP" **Antifog Solution,** 25 ml, pipette bottle
15006 C	**Same,** 30 ml, sterile pierce bottle
15006 D	**Same,** 15 ml, atomizer bottle

Adaptor for connecting KARL STORZ fiber optic light cables with endoscopes and light sources from other manufacturers see catalog TELEPRESENCE

Trocars

For use with instruments and telescopes diameter 5 mm

Kranelis insufliacijai

■ Multifunctional valve

Automatic valve

■ Cannula

■ Trocar only

2.1 Skersmuo 6,0 mm
Kaniulės ilgis 10,5 cm
Su kraneliu insufliacijai
Kartu su troakaru komplekte pateikiama:
Obturatorius su piramidiniu smaigu;
Vožtuvas

Size:		■ 6 mm			
Working length: Color code:		8.5 cm black-white	■ 10.5 cm black	8.5 cm black-white	10.5 cm black
		■ **Multifunctional Valve**		**Automatic Valve**	
	Trocar, with conical tip including:	**30160 WY**	**30160 MC**	**30160 FY**	**30160 AC**
	Cannula	30160 H1	30160 H2	30160 H1	30160 H2
	Trocar only	30160 Y	30160 C	30160 Y	30160 C
	Ventil	30160 M1	30160 M1	30160 A1	30160 A1
	■ **Trocar,** with pyramidal tip including:	**30160 WZ**	**30160 MP**	**30160 FZ**	**30160 AP**
	■ **Cannula**	30160 H1	30160 H2	30160 H1	30160 H2
	■ **Trocar only**	30160 Z	30160 P	30160 Z	30160 P
	■ **Valve**	30160 M1	30160 M1	30160 A1	30160 A1
	Trocar, with blunt tip including:	**30160 WX**	**30160 MA**	**30160 FX**	**30160 AA**
	Cannula	30160 H1	30160 H2	30160 H1	30160 H2
	Trocar only	30160 X	30160 A	30160 X	30160 A
	Valve	30160 M1	30160 M1	30160 A1	30160 A1
	Trocar including:	–	**30160 MB**	–	**30160 AB**
	Cannula		30160 H2		30160 H2
	Trocar only		30160 B		30160 B
	Valve		30160 M1		30160 A1

Telescopes for use with trocars size 6 mm see pages 27 and 32-33
Dilation Sleeves see page 74, **Accessories for Trocars** see pages 72-73
Components/Spare Parts see chapter 18

2-15

Conversion of Sealing Caps

It has been observed on the market that the durability of the colored friction-optimized sealing caps for all existing trocars (with automatic valves, multifunctional valves and silicone leaflet valves), reduction sleeves and reducers does not adequately meet requirements.

With this product information sheet we would like to inform you that we are switching back to the former, white sealing caps.

Replacement:
For all existing trocars (with automatic valves, multifunctional valves and silicone leaflet valves), reduction sleeves and reducers in the field of laparoscopy, the colored friction-reduced sealing caps will be replaced with white sealing caps. The changeover will take place with immediate effect. Sealing caps already delivered need not be returned.

Colored Sealing Cap with reduced friction	White Sealing Cap	Application
11603-X2 **Sealing Cap,** for instruments size 2 mm, package of 10, color code: blue	6127290-10 **Sealing Cap,** (50/2.2), package of 10	For use with trocars size 2.5 mm
30114-X3 **Sealing Cap,** for instruments sizes 3 and 3.5 mm, package of 10, color code: green	6127390-10 **Sealing Cap,** (50/2.6), package of 10	For use with trocars size 3.5 mm
30160-X5 **Sealing Cap,** for instruments size 5 mm, package of 10, color code: black	6127590-10 **Sealing Cap,** (50/4), package of 10	For use with trocars size 6 mm
30101-X6 **Sealing Cap,** for instruments size 6 mm, package of 10, color code: yellow	6127790-10 **Sealing Cap,** (50/6), package of 10	For use with trocars size 7 mm
30103-X10 **Sealing Cap,** for instruments size 10 mm, package of 10, color code: green	7616690-10 **Sealing Cap,** (60/10), package of 10	For use with trocars size 11 mm
30108-X13 **Sealing Cap,** for instruments size 13 mm, package of 10, color code: blue	7416090-10 **Sealing Cap,** (60/13), package of 10	For use with trocars size 13 and/or 13.5 mm

2.1.4.3/2.3.4.3 Kepurėlės vožtuvui 10 vnt.

2.2.4.3/2.4.4.3 Kepurėlės vožtuvui 10 vnt.

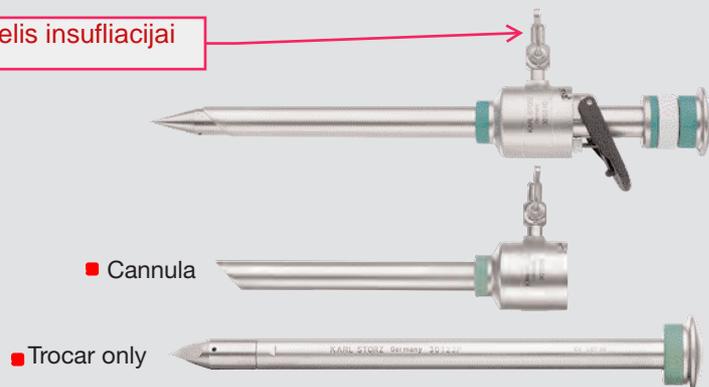*Confidential – internal use*

Availability:
The white sealing caps are available with immediate effect.

Trocars

- Size 11 mm

For use with instruments and telescopes diameter 10 mm

Kranelis insufliacijai

- Multifunctional valve

- Cannula

- Trocar only

Automatic valve

2.2 Skersmuo 11 mm
Kaniulės ilgis 10,5 cm
Su kraneliu insufliacijai
Kartu su troakaru
komplekte pateikiama:
Obturatorius su
piramidiniu smaigu
Vožtuvas

| Size:		11 mm			
Working length: Color code:		8.5 cm green-white	10.5 cm green	8.5 cm green-white	10.5 cm green
		Multifunctional Valve		**Automatic Valve**	
	Trocar, with conical tip including: **Cannula** **Trocar only** **Ventil**	**30103 WY** 30103 H1 30103 Y 30103 M1	**30103 MC** 30103 H2 30103 C 30103 M1	30103 FY 30103 H1 30103 Y 30103 A1	**30103 AC** 30103 H2 30103 C 30103 A1
	Trocar, with pyramidal tip including: **Cannula** **Trocar only** **Ventil**	**30103 WZ** 30103 H1 30103 Z 30103 M1	**30103 MP** 30103 H2 30103 P 30103 M1	**30103 FZ** 30103 H1 30103 Z 30103 A1	**30103 AP** 30103 H2 30103 P 30103 A1
	Trocar, with blunt tip including: **Cannula** **Trocar only** **Ventil**	**30103 WX** 30103 H1 30103 X 30103 M1	**30103 MA** 30103 H2 30103 A 30103 M1	**30103 FX** 30103 H1 30103 X 30103 A1	**30103 AA** 30103 H2 30103 A 30103 A1
	MOTSON **Trocar,** with conical, blunt tip including: **Cannula** **Trocar only** **Ventil**	– 	**30103 MMO** 30103 H2 30103 MO 30103 M1	– 	**30103 AMO** 30103 H2 30103 MO 30103 A1
	Trocar including: **Cannula** **Trocar only** **Ventil**	– 	**30103 WSB** 30103 H2 30103 SB 30103 M1	– 	**30103 FSB** 30103 H2 30103 SB 30103 A1

Telescopes for use with trocars size 11 mm see pages 27, 30 and 34-35
Dilation Sleeves see page 74, **Accessories for Trocars** see pages 72-73
Components/Spare Parts see chapter 18

2-845

XL

Kranelis insufliacijai

Cannula

Multifunctional valve

Trocar only
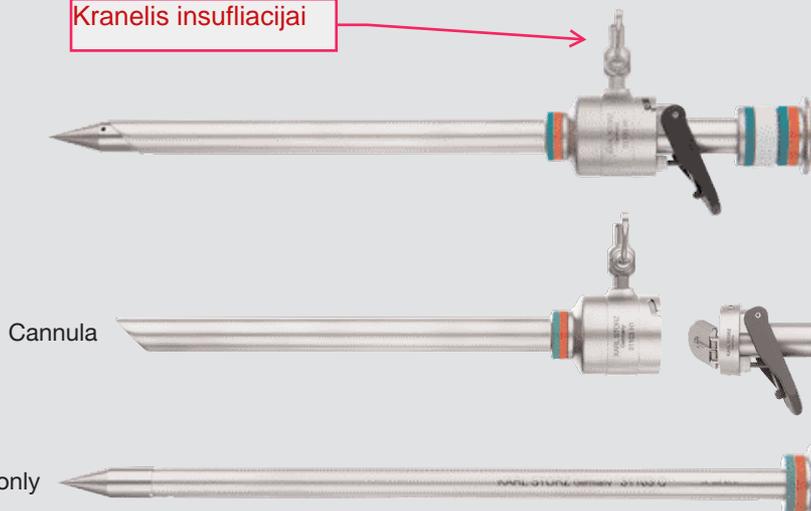
2.4 Skersmuo 11 mm
Kaniulės ilgis 15 cm
Su kraneliu insufliacijai
Kartu su troakaru
komplekte pateikiama:
Obturatorius su
piramidiniu smaigu
Vožtuvas;

2.3 Skersmuo 6 mm
Kaniulės ilgis 15 cm
Su kraneliu insufliacijai
Kartu su troakaru
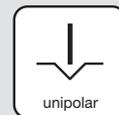komplekte pateikiama:
Obturatorius su
piramidiniu smaigu
Vožtuvas;

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 co... including:		**31160 MC**	**31103 MC**	–
Cannula		31160 H1	31103 H1	
Trocar only		31160 C	31103 C	
Multifunctional Valve		30160 M1	30103 M1	
▪ **Trocar,** with pyramidal tip including:		**31160 MP**	**31103 MP**	**31108 MP**
Cannula		31160 H1	31103 H1	31108 H1
Trocar only		31160 P	31103 P	31108 P
▪ **Multifunctional Valve**		30160 M1	30103 M1	30108 M1
Trocar, with blunt tip including:		**31160 MA**	**31103 MA**	–
Cannula		31160 H1	31103 H1	
Trocar only		31160 A	31103 A	
Multifunctional Valve		30160 M1	30103 M1	

2-15

Dissecting and Grasping Forceps

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

STORZ
KARL STORZ — ENDOSKOPE

unipolar

Size 5 mm

2.5.8/2.6.8
Darbinės dalies skersmuo 5 mm

2.5.3/2.5.4/2.5.7
2.6.3/2.6.4/2.67
Rotuojamos
Išrenkamos
Su jungtimi monopolinei koaguliacijai

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

2.5.9/2.6.9
Darbinės dalies ilgis 36 cm

Length	Handle						
	33151	33152	33153	33156	33121	33125	33149
30 cm							NEW
36 cm							
43 cm							

Double action jaws

2.5.10/2.6.10
Su plastikine (ne metaline) rankena be užrakto.

2.5.6/2.6.6
Abi judančios žiaunos

Working Insert	Complete Instrument						
33210 MD	33251 MD	33252 MD	33253 MD	33256 MD	33221 MD	33225 MD	33249 MD
33310 MD	▪33351 MD	33352 MD	33353 MD	33356 MD	33321 MD	33325 MD	33349 MD
33410 MD	33451 MD	33452 MD	33453 MD	33456 MD	33421 MD	33425 MD	33449 MD

├─ 16 ─┤

CLICK*line* KELLY **Dissecting and Grasping Forceps**

2.6.1/2.6.2/2.6.5
Kelly tipo
Skirtos disekcijai ir sugriebimui
Žiaunų ilgis 16 mm

33210 ML	33251 ML	33252 ML	33253 ML	33256 ML			9 ML
33310 ML	▪ 33351 ML	33352 ML	33353 ML	33356 ML			9 ML
33410 ML	33451 ML	33452 ML	33453 ML	33456 ML			9 ML

├─ 22 ─┤

CLICK*line* KELLY **Dissecting and Grasping Forceps,** long

33310 DK	33351 DK	33352 DK	33353 DK	33356 DK	33321 DK	33325 DK	33349 DK

├─ 31 ─┤

CLICK*line* DeBAKEY **Grasping Forceps,**
curved and slender jaws, atraumatic

2.5.1/2.5.2/2.5.5
Kelly tipo
Skirtos disekcijai ir sugriebimui
Žiaunų ilgis 22 mm

33310 UY	33351 UY	33352 UY	33353 UY	33356 UY	33321 UY	33325 UY	33349 UY

├─ 30 ─┤

CLICK*line* UYAMA **Dissecting and Grasping Forceps,**
long jaws, with reservoir, fine, for dissection

33310 NO	33351 NO	33352 NO	33353 NO	33356 NO	33321 NO	33325 NO	33349 NO

├─ 16 ─┤

CLICK*line* NOSHIRO **Dissecting and Grasping Forceps,**
short jaws, fine, for dissection

7-111

Dissecting and Grasping Forceps

CLICK'line – rotating, dismantling, insulated,
with connector pin for unipolar coagulation

Size 5 mm

unipolar

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	33125	33149
30 cm							NEW
36 cm							
43 cm							

Single action jaws

Working Insert	Complete Instrument						
33210 ON	33251 ON	33252 ON	33253 ON	33256 ON	33221 ON	33225 ON	33249 ON
33310 ON	◾33351 ON	33352 ON	33353 ON	33356 ON	33321 ON	33325 ON	33349 ON
33410 ON	33451 ON	33452 ON	33453 ON	33456 ON	33421 ON	33425 ON	33449 ON

⊢ 26 ⊣

CLICK'line Grasping Forceps, with especially fine atraumatic serration,
fenestrated

33210 LF	33251 LF	33252 LF	33253 LF	33256 LF			
33310 LF	33351 LF	33352 LF	33353 LF	33356 LF	33321 LF	33325 LF	33349 LF
33410 LF	33451 LF	33452 LF	33453 LF	33456 LF	33421 LF	33425 LF	33449 LF

⊢ 30 ⊣
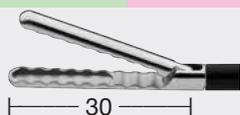
CLICK'line Grasping Forceps, atraumatic, with hollow jaws

33210 CC	33251 CC	33252 CC	33253 CC	33256 CC	33221 CC	33225 CC	33249 CC
33310 CC	33351 CC	33352 CC	33353 CC	33356 CC	33321 CC	33325 CC	33349 CC
33410 CC	33451 CC	33452 CC	33453 CC	33456 CC	33421 CC	33425 CC	33449 CC

⊢ 27 ⊣

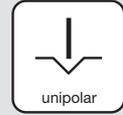**CLICK'line CROCE-OLMI Grasping Forceps,** atraumatic, fenestrated, curved

5 mm

7-111

Dissecting and Grasping Forceps

CLICK*line* – 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

unipolar

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

Double action jaws

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

CLICK*line* BABCOCK **Grasping Forceps,** atraumatic, fenestrated
├── 18 ──┤

33210 C	33251 C	33252 C	33253 C	33256 C	33221 C	33249 C
33310 C	■ 33351 C	33352 C	33353 C	33356 C	33321 C	33349 C
33410 C	33451 C	33452 C	33453 C	33456 C	33421 C	33449 C

CLICK*line* **Bowel Grasper,** fenestrated
├──── 37 ────┤

33310 CK	33351 CK	33352 CK	33353 CK	33356 CK	33321 CK	33349 CK
33410 CK	33451 CK	33452 CK	33453 CK	33456 CK	33421 CK	33449 CK

CLICK*line* **Bowel Grasper,** fenestrated, short
├── 18 ──┤

33310 UK	33351 UK	33352 UK	33353 UK	33356 UK	33321 UK	33349 UK

CLICK*line* KOH **Urethra Grasping Forceps,** insulated jaws, concave inwardly
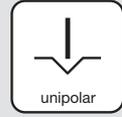curved jaws, continuously toothed
├── 21 ──┤

7-112

Dissecting and Grasping Forceps

CLICK'line – rotating, dismantling, insulated,
with connector pin for unipolar coagulation

STORZ
KARL STORZ — ENDOSKOPE

unipolar

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	33125	33127
30 cm	NEW	NEW	NEW	NEW			
36 cm							
43 cm							

Single Action Jaws

Insert	Complete instrument						
33310 M	33351 M	33352 M	33353 M	33356 M	33321 M	33325 M	33327 M

├—14—┤ **CLICK'line** MANHES **Grasping Forceps,** jaws with multiple teeth, width of jaws 3 mm, for atraumatic and accurate grasping

Insert	Complete instrument						
33310 FM	33351 FM	33352 FM	33353 FM	33356 FM	33321 FM	33325 FM	33327 FM
33410 FM	33451 FM	33452 FM	33453 FM	33456 FM	33421 FM	33425 FM	33427 FM

├— 26 —┤ **CLICK'line** **Claw Forceps,** 2 x 3 teeth

Insert	Complete instrument						
33210 ME	33251 ME	33252 ME	33253 ME	33256 ME	33221 ME	33225 ME	33227 ME
33310 ME	■ 33351 ME	33352 ME	33353 ME	33356 ME	33321 ME	33325 ME	33327 ME
33410 ME	33451 ME	33452 ME	33453 ME	33456 ME	33421 ME	33425 ME	33427 ME

├ 14 ┤ **CLICK'line** MANHES **Grasping Forceps,** jaws with multiple teeth, width of jaws 4.8 mm, for atraumatic and accurate grasping

Insert	Complete instrument						
33210 MG	33251 MG	33252 MG	33253 MG	33256 MG	33221 MG	33225 MG	33227 MG
33310 MG	33351 MG	33352 MG	33353 MG	33356 MG	33321 MG	33325 MG	33327 MG
33410 MG	33451 MG	33452 MG	33453 MG	33456 MG	33421 MG	33425 MG	33427 MG

├ 14 ┤ **CLICK'line** MANHES **Grasping Forceps,** "tiger jaws", 2 x 4 teeth, for grasping and removal of solid organs, in particular during adhesiolyses

7-11

ROBI® Bipolar Grasping Forceps

rotating, dismantling, with connector pin for bipolar coagulation,
CLERMONT-FERRAND **Model**

STORZ

KARL STORZ — ENDOSKOPE

RoBi

bipolar

- **Size 5 mm**

2.10.3/2.10.4/2.10.5
Išrenkamos
Rotuojamos;
Su jungtimi bipolinei koaguliacijai

Operating instruments, **length 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

2.10.7
Darbinės dalies
skersmuo 5 mm

Outer Sheath	Handle
	38151

2.10.8
Darbinės dalies ilgis 36 cm

2.10.9
Su plastikine (ne
metaline) rankena be
užrakto

■ Length 36 cm	
Length 43 cm	

- **Double action jaws**

2.10.6
Abi žnyplių žiaunos judančios

Working Insert	Complete Instrument
38610 ON	38651 ON
38710 ON	38751 ON
⊢— 18 —⊣	ROBI® Grasping Forceps, CLERMONT-FERRAND model, fenestrated, with fine atraumatic serration
38610 WA	38651 WA
⊢— 19 —⊣	ROBI® WATTIEZ Grasping Forceps, CLERMONT-FERRAND model, with multiple teeth, for atraumatic and accurate grasping
38610 MD	■ 38651 MD
38710 MD	38751 MD
⊢— 19 —⊣	ROBI® KELLY Dissecting and Grasping Forceps, CLERMONT-FERRAND model
38610 ML	38651 ML
⊢— 24 —⊣	ROBI® KELLY Dissecting and Grasping Forceps, CLERMONT-FERRAND model
38610 MA	38651 MA
⊢— 24 —⊣	ROBI® MALZONI Dissecting and Grasping Forceps, CLERMONT-FERRAND model

2.10.1/2.10.2
Skirtos disekcijai ir
sugriebimui
Kelly tipo

Please note:
For the instrument 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.

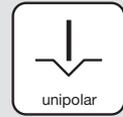**Bipolar High Frequency Cords** see accessories on page 151

Accessories

Unipolar and Bipolar High Frequency Cords

Unipolar High Frequency Cords

KARL STORZ Instrument	High Frequency Surgery Units		

unipolar

		26002 M	**Unipolar High Frequency Cord,** with 4 mm plug, length 300 cm, for use with AUTOCON® III and AUTOCON® II, compatible with Erbe type T older models and Ellman
		26004 M	**Unipolar High Frequency Cord,** with 4 mm plug, length 300 cm, compatible with Martin HF units
		26005 M	**Unipolar High Frequency Cord,** with 5 mm plug, length 300 cm, for use with AUTOCON® III and AUTOCON® II, compatible with Erbe type ICC and Erbe VIO 301
		26006 M	**Unipolar High Frequency Cord,** with 8 mm plug, length 300 cm, for use with AUTOCON® III and AUTOCON® II, compatible with Valleylab models

Bipolar High Frequency Cords

bipolar

KARL STORZ Instrument	High Frequency Surgery Units		

		26176 LE	**Bipolar High Frequency Cord,** length 300 cm, for use with AUTOCON® III and AUTOCON® II, compatible with Erbe-Coagulator, T and ICC series
		26176 LM	**Bipolar High Frequency Cord,** length 300 cm, compatible with Martin HF units
		26176 LV	**Bipolar High Frequency Cord,** length 300 cm, pin distance on unit side 28.58 mm, for AUTOCON® III and AUTOCON® II, compatible with Valleylab coagulators, for use with high frequency surgical units with bipolar sockets with 28.58 mm pin distance
		26176 LW	**Bipolar High Frequency Cord,** length 300 cm, pin distance on unit side 22 mm, compatible with high frequency surgical units with bipolar sockets with 22 mm pin distance

5-16₁

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 M**L**, 26176 LV**L**.

Biopsy Forceps and Punch Forceps

**CLICK'line® – rotating, dismantling,
with and without connector pin for unipolar coagulation**

**2.11.3/2.11.4/2.11.7
Rotuojamos
Išrenkamos
Su jungtimi monopolinei koaguliacijai**

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

**2.11.8
Darbinės dalies skersmuo 5 mm**

**2.11.9
Darbinės dalies ilgis 36 cm**

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

**2.11.10
Su plastikine (ne metaline)
rankena be užrakto**

Single action jaws

**2.11.6
Viena judanti žiauna**

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

├─ 14 ─┤

CLICK'line® BLAKESLEY **Dissecting and Biopsy Forceps**

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

├─ 15 ─┤

CLICK'line® **Biopsy Forceps**

**2.11.1/2.11.2/2.11.5
Disekcijai ir biopsijai
Blakesley tipo
Žiaunų ilgis 14 mm**

Working Insert	Complete Instrument					
34310 DZ	34351 DZ	34321 DZ	34349 DZ	34361 DZ	34331 DZ	34347 DZ
34410 DZ	34451 DZ	34421 DZ	34449 DZ	34461 DZ	34431 DZ	34447 DZ

├─ 13 ─┤

CLICK'line® **Biopsy Punch Forceps,** with two teeth

Working Insert	Complete Instrument					
34310 DZL	34351 DZL	34321 DZL	34349 DZL	34361 DZL	34331 DZL	34347 DZL

├─ 15 ─┤

CLICK'line® **Biopsy Punch Forceps,** long, with two teeth

2-98.4

Spoon Forceps

CLICK*line* – rotating, dismantling,
without connector pin for unipolar coagulation

Size 10 mm

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

Length	Handle		
	33161	33131	33147
36 cm			

Single action jaws

Working Insert	Complete Instrument		
34510 GS	■ 34561 GS	34531 GS	34547 GS
⊢— 32 —⊣	**CLICK*line*** Spoon Forceps		
34710 GSG	34761 GSG	34731 GSG	34747 GSG
⊢— 32 —⊣	**CLICK*line*** Spoon Forceps, reinforced jaws, for use with Outer Sheath 33700		

Scissors

CLICK'linĕ – 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

├— 15 —┤ **CLICK'linĕ 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

├— 20 —┤ **CLICK'linĕ 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

├— 15 —┤ **CLICK'linĕ 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

├— 15 —┤ **CLICK'linĕ Scissors,** straight

2-014

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 6 mm trocars**

Length	Instrument
30 cm	
■ 36 cm	
43 cm	

Distal End	Instrument	
	26172 BN	■ **Suction and Irrigation Tube,** anti-reflex surface, with lateral holes, with two-way stopcock for single-hand control
	26173 BN	
	26174 BN	
	26173 BL	**Suction and Irrigation Tube,** anti-reflex surface, with two-way stopcock for single-hand control, with two female LUER-lock connectors
	26173 BK	**Suction and Irrigation Tube,** anti-reflex surface, with protective basket, with two-way stopcock for single-hand control
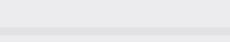
Size 10 mm

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

Length	Instrument
36 cm	

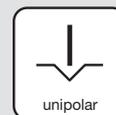| Distal End	Instrument	
	37560 LH	**Suction and Irrigation Tube,** with lateral holes

Please note:
Handles for use with Suction and Irrigation Tubes see pages 225-226
Units for use with Handles for Suction and Irrigation see chapter 17, UNITS
Components/Spare Parts see chapter 18

2-98₅

Coagulation and Dissection Electrodes

without suction channel, insulated sheath,
■ with connector pin for unipolar coagulation

STORZ

KARL STORZ — ENDOSKOPE

unipolar

■ **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 Tip	Instrument	
	26772 UF	
	26775 UF	■ **Coagulation and Dissection Electrode,** L-shaped
	26778 UF	
	26775 UE	**Coagulation and Dissection Electrode,** spatula-shaped, blunt
	26778 UE	
	26775 S	**Coagulation and Dissection Electrode,** knife-shaped
	26775 R	MANGESHIKAR **Coagulation Electrode,** with ball end

Special Features:

● The hook electrode is suitable for resection, insulating structures as well as dissection and coagulation.

● The distal tip is semicircular: The thick outer curvature enables dissection.

Length	Instrument
36 cm	
43 cm	

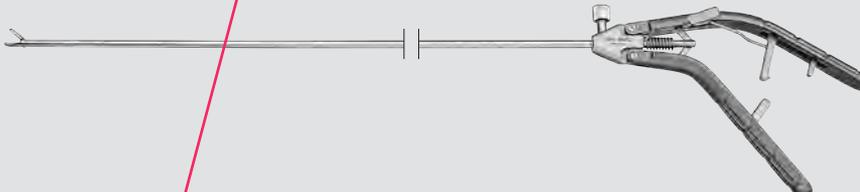| Distal Tip	Instrument	
	26775 C	CADIERE **Coagulation and Dissection Electrode,** L-shaped, with cm-marking, distal tip tapered
	26775 CL	

Units for use with Coagulation and Dissection Electrodes see chapter 17, UNITS

7-11₂

KOH **Macro Needle Holders**,
# KOH **Assistant Needle Holder**

■ **Size 5 mm**

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

2.17
Tiesiomis žiaunomis
Su pistoleto formos rankena
Skersmuo 5 mm
Darbinės dalies ilgis 33 cm

Length	Instrument
■ 33 cm	
43 cm	

Distal Tip		Instrument
	■ 26173 KPF	KOH **Macro Needle Holder,** straight jaws, with tungsten carbide insert, pistol handle with disengageable ratchet, ratchet position left
	26178 KPF	
	26173 KPL	KOH **Macro Needle Holder,** jaws curved to left, with tungsten carbide insert, pistol handle with disengageable ratchet, ratchet position left
	26178 KPL	
	26173 KPR	KOH **Macro Needle Holder,** jaws curved to right, with tungsten carbide insert, pistol handle with disengageable ratchet, ratchet position right
	26178 KPR	
	26173 KG	KOH **Assistant Needle Holder,** straight jaws with distal hole, pistol handle with disengageable ratchet, ratchet position left

Length	Instrument
33 cm	
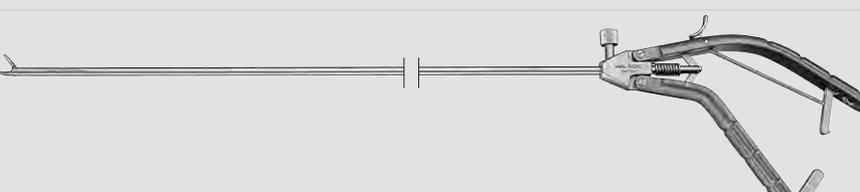
Distal Tip		Instrument
	26173 KL	KOH **Macro Needle Holder,** jaws curved to left, with tungsten carbide insert, handle with ratchet, ratchet position on top
	26173 KC	KOH **Macro Needle Holder,** jaws curved to right, with tungsten carbide insert, handle with ratchet, ratchet position on top

Components/Spare Parts see chapter 18

8-07₃

KOH Macro Needle Holders

- **Size 5 mm**

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

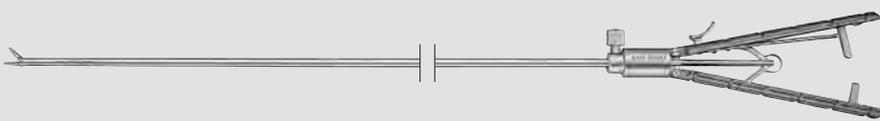The 5 mm KOH macro needle holder allows precise holding of the needles.

Special Features:
- Tungsten carbide inserts for secure holding of the needle
- Precise adjustable ratchet
- Axial and pistol handles

Length	Instrument
■ 33 cm	
43 cm	

2.18
Tiesiomis žiaunomis
Su tiesia rankena
Skersmuo 5 mm
Darbinės dalies ilgis 33 cm

| Distal Tip		Instrument
	26173 KAF	KOH **Macro Needle Holder,** straight jaws, with tungsten carbide insert, straight handle with disengageable ratchet, ratchet position right
	26178 KAF	
	26173 KAL	KOH **Macro Needle Holder,** jaws curved to left, with tungsten carbide insert, straight handle with disengageable ratchet, ratchet position right
	26178 KAL	
	26173 KAR	KOH **Macro Needle Holder,** jaws curved to right, with tungsten carbide insert, straight handle with disengageable ratchet, ratchet position left
	26178 KAR	

Length	Instrument
33 cm	
43 cm	

Distal Tip		Instrument
	26173 ML	KOH **Macro Needle Holder,** jaws curved to left, with tungsten carbide insert, straight handle with ratchet, ratchet position on top
	26178 ML	
	26173 MC	KOH **Macro Needle Holder,** jaws curved to right, with tungsten carbide insert, straight handle with ratchet, ratchet position on top
	26178 MC	

Components/Spare Parts see chapter 18

8-07₂

Myoma Fixation Instruments

Operating instruments,
for use with trocars size 6 or 11 mm
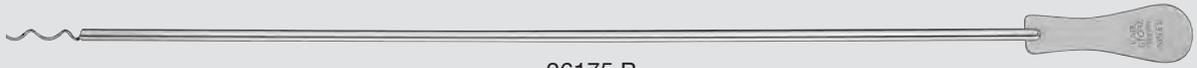
26175 B

26175 B	**Myoma Fixation Instrument,** with spiral tip, size 5 mm
26175 BA	**Same,** size 10 mm

26175 BL

26175 BL	**Myoma Fixation Instrument,** screw-shaped, size 5 mm

2.19
Varžto formos (įsriegiamas)
Skersmuo 5 mm

• Needles, Injection Needles

Size 3.5 mm

Operating instruments, **length 30 cm,**
for use **with trocars size 3.5 mm**

26167 GN	

	26167 GN	MENGHINI **Liver Biopsy Needle,** LUER-Lock, size 3.5 mm, needle diameter 1.6 mm, length 30 cm

26167 NN	

	26167 NN	KOH **Ultramicro Injection Cannula,** size 3.5 mm, length 30 cm

■Size 5 mm

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

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

Length	Instrument
■ 36 cm	
43 cm	

Distal End	Instrument	
	26175 G	MENGHINI **Liver Biopsy Needle,** LUER-Lock, needle diameter 1.6 mm
	26178 G	
	26175 PD	**Injection Needle,** LUER-Lock, diameter 0.8 mm
	26175 P	**Injection Needle,** LUER-Lock, diameter 1.2 mm
	26178 P	
	26175 R	**Injection Needle,** LUER-Lock, diameter 1.6 mm
	26178 R	

2.20
Skirta punkcijai
Su Luer Lock tipo jungtimi;
Adatos skersmuo 1,6 mm;
Instrumento darbinės dalies (kaniulės) skersmuo 5 mm
Instrumento darbinės dalies (kaniulės) ilgis 36 cm.

Plastic Containers for Sterilization and Storage
of instruments

Plastic containers with transparent lid for secure fixation of instruments during sterilization and storage.

The plastic containers are suitable for sterilization with steam.

39351 J

27717 A

2.22
Skirtas laparoskopinių instrumentų (siūlomo komplekto) sterilizavimui bei laikymui
Perforuotas;
Su silikoniniais kilimėliais;
Dviejų aukštų.

39351 J	**Plastic Container for Sterilization and Storage,** perforated, with transparent lid, with silicone mat, **for two-level storage,** for use with 16 forceps and 8 instruments, external dimensions (w x d x h): 530 x 250 x 145 mm
27717 A	**Plastic Container for Sterilization and Storage,** perforated, with transparent lid and silicone mat, **for two-level storage,** external dimensions (w x d x h): 543 x 255 x 112 mm

9-01₃

NIR/ICG visualization modes

The Rubina® components offer users various new modes for visualizing the NIR/ICG signal. This includes the overlay of NIR/ICG data onto the standard white light image or alternatively the monochromatic visualization of the infrared signal alone.
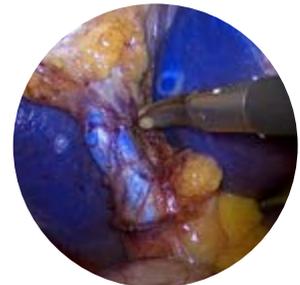
Overlay

In overlay mode, the regular white light image is combined with the NIR/ICG data to generate an overlay image.
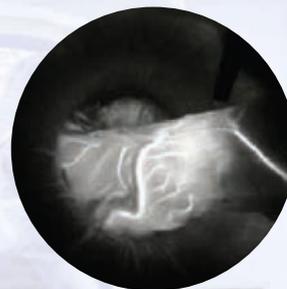
Source: Boni, Milan, Italy

Patient satisfaction
is our priority

Green or blue - you decide

Depending on your preferences and application, the NIR/ICG data can be displayed as a green or blue overlay.

Source: Carlini, Rome, Italy

Kokybės kriterijus nr. 3 ICG fluorescencinis režimas: fluorescencinio signalo intensyvumo atvaizdavimas skirtingomis spalvomis santykinėje skalėje.

Monochromatic

In this mode, the NIR/ICG signal alone is displayed in white on a black background to achieve the greatest possible differentiation.

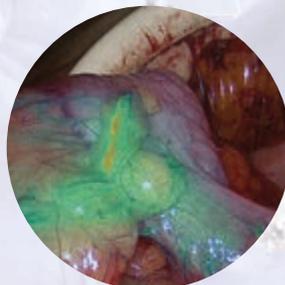Source: Boni, Milan, Italy

Intensity Map

Displays the intensity of the NIR/ICG signal using a color scale in an overlay image.

Source: Zuend, Baar, Switzerland

Overview of IMAGE1 S™ Rubina® Components

TC201   **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   **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®, Opal1® NIR/ICG and Sync Connecting Cable TL006, direction of view 0°, diameter 10 mm, length 32 cm, **autoclavable,** S-Technologies available, freely programmable camera head buttons, including video connecting cable, <mark>for use with IMAGE1 S CONNECT® II and IMAGE1 S™ 4U-LINK</mark>

26606BCA   **Same,** direction of view 30°

TL400   **Cold Light Fountain Power LED Rubina®,** for NIR/ICG fluorescence imaging and endoscopic diagnosis, with two LEDs and one KARL STORZ light cable connection, unit communication via KS HIVE®, power supply 100-125/220-240VAC, 50/60 Hz

> Kokybės kriterijus nr. 1 Vaizdo apdorojimo įrenginys (techninės specifikacijos 1.3 punktas) suderinamas su 4K (3840 x 2160 taškų) raiškos 3D vaizdo endoskopais su ICG funkcija.

495TIP   **Fiber Optic Light Cable,** with straight connector, extremely heat-resistant, enhanced transmission, with safety lock, diameter 4.8 mm, length 300 cm

39501XTC   **Wire Tray,** for cleaning, sterilization and storage of TIPCAM®1 S 3D videoendoscopes 26605AA/BA or TIPCAM®1 Rubina®, Opal1® NIR/ICG, 4K/3D 26606ACA, 26606ABCA, 26616ACA, 26616BCA and one light cable, **autoclavable**, external dimensions (w x d x h): 640 x 220 x 87 mm

UF101   **One-Pedal Footswitch,** one-stage

TM450   **55" 4K/3D Monitor,** screen resolution 3840 x 2160, image format 16:9, power supply 100-240 VAC, 50/60 Hz, wall-mounted with VESA 200 and VESA 300 adaptors

TM009   **Signal Converter Set,** 12G-SDI – 4x 3G-SDI, for use with 55" 4K/3D Monitor TM450

TM351   **32" 4K/3D Monitor,** screen resolution 3840 x 2160, image format 16:9, power supply 100-240 VAC, 50/60 Hz, wall-mounted with VESA 100 adaptor

* For use with HOPKINS® Rubina® NIR/ICG telescopes or the VITOM® II ICG exoscope
  for open surgery

IMAGE1 S™

As individual as your requirements

STORZ
**KARL STORZ — ENDOSKOPE**

Innovative Design

- Side-by-side view: Parallel display of standard images and S-Technologies possible
- Multiple source management: Allows simultaneous control, display and documentation of image data from two connected image sources (e.g., for hybrid surgical procedures)
- Intuitive menu navigation (dashboard, live and setup menu)

- Icons show changes to settings or change of status
- Individual presets possible
- 50 patient datasets can be stored
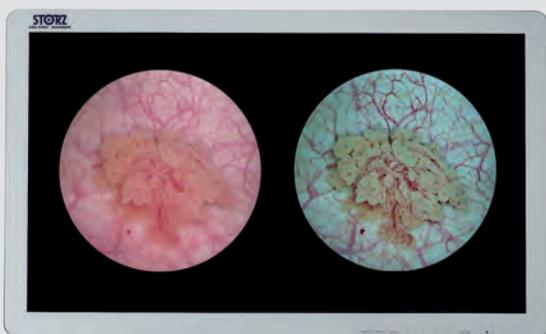
Side-by-side view: Parallel display of a standard image and SPECTRA A

Dashboard

Kokybės kriterijus nr. 2
Režimas vienu metu, šalia vienas kito (angl. side by side) monitoriuje vaizduojantis ir paprastą, ir susiaurinto šviesos spektro vaizdą.

10-18
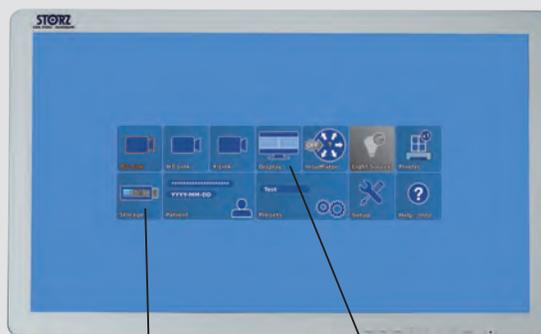
4 Product description

4.1 Product overview

Kokybės kriterijus nr. 6 Kameros galva (techninės specifikacijos 1.2 punktas) su rankinio fokusavimo žiedu.

1	Instrument coupler	4	Scroll up / Select
2	Focus ring	5	Call up menu / Select
3	Scroll down / Activate camera function		

4.2 Possible combinations

It is recommended that the suitability of the products for the intended procedure be checked prior to use. Please note that the products listed here may not yet be available in all countries due to differences in approval requirements.

Combination with camera control unit (CCU)

Camera head	CCU	LINK module
TH121	IMAGE1 S CONNECT II (TC201)	IMAGE1 S 4U-LINK (TC304)

Combination with endoscopes or adaptors

The product can be connected to endoscopes or adaptors via the eyepiece connection.

4.3 Technical data

Description	Value
Image sensor	2x 1/2.5" CMOS
Image format	16:9
Image refresh rate	50/60 Hz
Focal length	19 mm