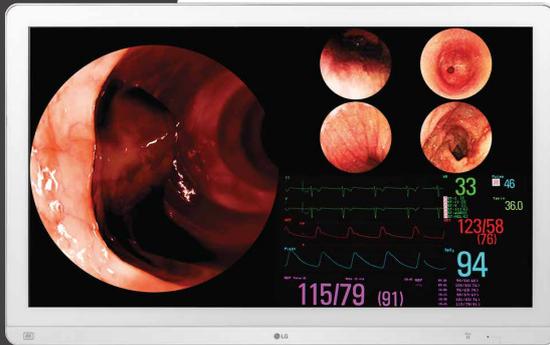


4K monitorius
p. 1.1; p. 2.1;
p. 3.4



31.5-inch 4K IPS Surgical Monitor

| 32HL710S |

Superior Picture Quality for Fine Surgery

31.5-inch 4K (3840x2160) IPS Display | 178° Wide Viewing Angle

The larger 32HL710S, 31.5-inch 4K display with IPS, helps surgeons easily identify details, presenting accurate, realistic images during a procedure. In addition, when multiple doctors take part in the surgery, the wide viewing angle of the IPS panel allows each doctor to view content on the monitor from different angles with minimal color shift.



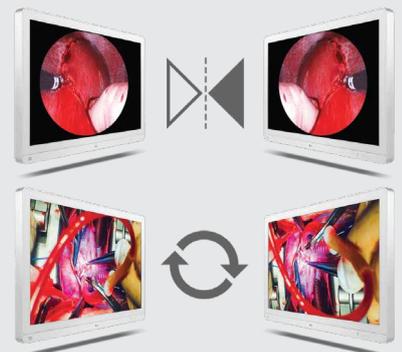
HDR 10

The 32HL710S allows accurate reproduction of HDR contents from devices such as surgical cameras that support HDR. This ensures image from HDR-supported endoscope cameras are displayed in a way that closely resembles how it would appear to actual visual observation.

Optimized for Surgical Environments

Mirror & Rotation Mode

Conveniently flip and rotate the monitor to adjust to your surgery needs with the Mirror & Rotation Mode setting. Depending on the situation, use Mirror Mode to share the ongoing surgical procedure in real-time, or Rotation Mode to adjust the screen for an easy-to-operate angle regardless of the surgical camera position.



IP35 (Front) | IP32 (Except for Front) | IK06

The 32HL710S is ideal for surgical environments and highly reliable with an IP35 protection rating in the front, and an IP32 protection rating everywhere but the front, protecting it from all directions. It is also highly durable, protecting the glass from external mechanical impact with a IK06 rating. For this reason, 32HL710S reduces potential risk in a demanding surgical environment.

Enhanced Connectivity for Multi Modalities

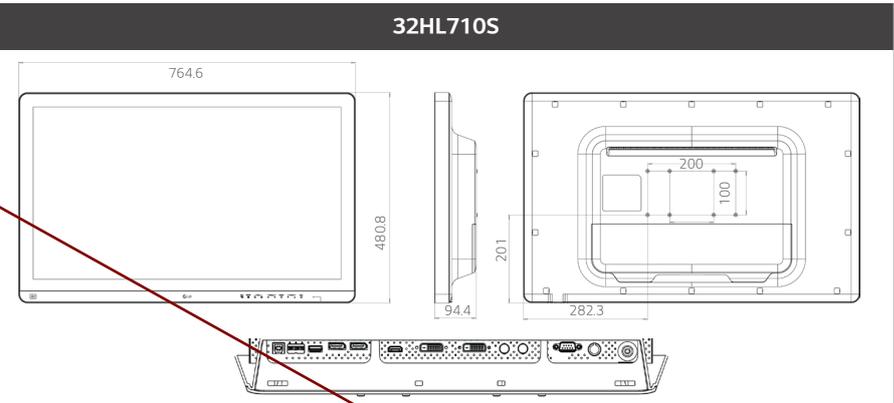
Up to 4PBP (Picture by Picture) | PIP Multi-Modality Connectivity

The 32HL710S allows you to use 2PBP, 3PBP, and even 4PBP. The support up to 4PBP allows medical professionals to see a combination of endoscopic and fluoroscopic images while monitoring vital signs. In other words, different input signals, through 3G-SDI, DVI, DisplayPort and HDMI, can be viewed on one monitor simultaneously.



Specification

Modelis
 Matricos tipas: IPS;
 Istrižainė: 31,5"=80 cm.
 Raiška: 3840x2160;
 Šviesumas: 800 cd/m²;
 p. 1.1.3; p. 1.1.4; p. 1.1.5
 p. 2.1.2; p. 2.1.3; p. 2.1.4; p. 2.1.5
 p. 3.4.2; p. 3.4.3; p. 3.4.4; p. 3.4.5



		32HL710S	
Panel	Panel Type	IPS ■	
	Inch (Aspect Ratio)	■ 31.5-inch (16:9)	
	Resolution	8MP (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)	178° (Right/Left), 178° (Up/Down)	
	Brightness (Typ.)	800cd/m ² ■	
	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	HDR 10	
Video Signals	Input Terminals	HDMI x1, DisplayPort x1, DVI x1, 3G-SDI x1	
	Output Terminals	DisplayPort x1, DVI x1, 3G-SDI x1	
Connectivity	USB	1 upstream, 1 downstream	
Power	Power Requirements	100-240Vac, 50-60Hz	
	Power Consumption (Max.)	120W	
	Power Consumption (DC Off)	Less than 0.3W	
Resistance Rating		IP35 (Front), IP32 (Except for Front), 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) FCC (FCC part 15 Class A), FDA (Rgistration (Class I)), RoHS, REACH, WEEE	
User Convenience	Screen Filp	Mirror Mode & Rotation Mode	
	PBP / PIP	PBP (2/3/4PBP) / PIP	
	Failover Input Switch	Yes	
Physical Specifications	Weight (without stand)	12.4 kg (27.3 lb)	

Apšvietumas 800 cd/m² (Techniniai pranašumai T1)

Video signalo įvestys: HDMI x 1, DVI x 1. p. 1.1.6; p. 2.1.6; p. 3.4.6

Video signalo išvestys: DVI x 1 p. 1.1.7; p. 2.1.7; p. 3.4.7

Svoris: 12,4 kg p. 1.1.8; p. 2.1.8; p. 3.4.8

* GTG : Gray to gray response time



CLOSE ^

DISPLAY

LED monitorius
p. 1.1.1; p. 2.1.1
p. 3.4.1

Aspect Ratio	16:9	Backlight Dimming Technology	Global Dimming
Backlight Technology	LED	Brightness (Typ.)	800cd/m ²
Brightness (Stabilization)	500 cd/m ²	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)		

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 Hz.

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 (H₂O₂)
- CIDEX, Reset XL HLD

Fixed camera cable (3 m).

Skaitmeninė dviejų lustų kameros galvutė 4K UHD baltai šviesai ir artimajai infraraudonųjų (NIR) Indocianino žalią (ICG) fluorescenciniam taikymui, su dviem laisvai programuojamais kameros galvos mygtukais, suderinama su inovatyviomis vizualizacijos technologijomis, spalvų spektro sukeitimui, homogeniškam apšvietimu ir kontrasto didinimui.
p. 1.2; p. 1.2.1; p. 1.2.2; p. 2.2; p. 2.2.1; p. 2.2.2; p. 3.3; p. 3.3.1; p. 3.3.2

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:**

Monochromatinis režimas
p. 1.2.4; p. 2.2.4; p. 3.3.4

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.

Kombinuotas baltos šviesos ir ICG fluorescencinis vaizdavimas vienu metu su galimybe pasirinkti ICG spalvą (angl. overlay)
p. 1.2.4; p. 2.2.4; p. 3.3.4

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).



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

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
- 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

Laisvai programuojami kameros galvos mygtukai (4 f-jos)
(Techniniai pranašumai T2; T3; T4)

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

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.

SPIES Clara
Režimas suvienodinantis viso lauko apšviestumą.
p. 1.2.3; p. 2.2.3; p. 3.3.3



White light image



SPIES CLARA

SPIES CHROMA

SPIES Chroma
Režimas padidinantis spalvų kontrastą,
struktūrų ir audinių diferenciacijai pagerinti
p. 1.2.3; p. 2.2.3; p. 3.3.3

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

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



TO WHOM IT MAY CONCERN

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

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

DECLARES

Su vaizdų įrašymo modulių p. 1.3.4;
p. 2.3.4; p. 3.1.4

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.

Techniniai duomenys:
Jungtys:
1 x 12/3G-SDI išėjimo
1 x DVI išėjimo
Raiška 3840 x 2160
4 x USB jungtys
p. 1.3; p. 1.3.1; p. 1.3.3; 1.3.4
p. 2.3; p. 2.3.1; p. 2.3.3; p. 2.3.4
p.3.1; p. 3.1.1; p. 3.1.3; p. 3.1.4

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. ←

Integruta dokumentacija per USB;
p. 1.3.4; p. 2.3.4; p. 3.1.4

Video capturing in FULL HD quality (MPEG4 format).

Still image capturing in 4K UHD quality (JPEG format).

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 reduces 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.

TH121 NIR ICG, dviejų lustų 4K UHD kameros galvutė.
p. 1.3.2; p. 2.3.2; p. 3.1.2

- 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, H₂O₂ (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 supply 100-240 VAC, 50/60 Hz, wall mount with VESA 400 x 400 and VESA 200 adaptors
- 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

TH120 4K UHD kameros galvutė.
p. 1.3.2; p. 2.3.2; p. 3.1.2

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

** For use with HOPKINS® RUBINA™ NIR/ICG telescopes

TIPCAM[®]1 Rubina[®]

The new 4K-3D NIR/ICG videoendoscope

4K raiškos 3D tipo
video endoskopas

Discover new technologies
**that change the way you
look at your patients**



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, for use with IMAGE1 S CONNECT® II and IMAGE1 S™ 4U-LINK ■
26606BCA	Same , direction of view 30°
TL400	Cold Light Fountain Power LED Rubina® , for NIR/ICG fluorescence imaging and standard endoscopic diagnosis, with two LEDs and one KARL STORZ light cable connection, with integrated unit communication via KS HIVE®, power supply 100-125/220-240VAC, 50/60 Hz
495TIP	Fiber Optic Light Cable , with straight connector, extremely heat-resistant, enhanced light transmission, with safety lock, diameter 4.8 mm, length 300 cm
39501XTC	Wire Tray , for cleaning, sterilization and storage of TIPCAM®1 S 3D videoendoscopes 26605AA/BA or TIPCAM®1 Rubina®, 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

Galima naudoti 4K raiškos 3D tipo video endoskopus.
(Techniniai pranašumai T5)

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

LED baltos šviesos/fluorescencinis šviesos šaltinis.
p. 1.4; p. 14.1; p. 2.4; p. 2.4.1; p. 3.2; p. 3.2.1

TL400 LED white light/fluorescence cold light source with one light connection for use with suitable 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).

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.

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.

Tinkamas baltos šviesos arba fluorescencinėms artimųjų infraraudonųjų spindulių procedūroms (pvz. ICG).
p. 1.4.2; p. 2.4.2; p. 3.2.2

Šviesos intensyvumo reguliavimas: nuoseklus rankinis
p. 1.4.3; p. 2.4.3; p. 3.2.3

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.

Lempos tarnavimo laikas: 30000 valandų.
(Techniniai pranašumai T1; T2)

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

Didžiausias dujų padavimo greitis 50 l/min.
p. 1.5.1; p. 2.5.1; p. 3.5.1
(Techniniai pranašumai T3; T4)

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

Žarnelės su šildymo elementais
p. 1.5.6; p. 2.5.6; p. 3.5.6

SCB jungtis, sujungimui su kitais įrenginiais.
p. 3.6.1

CO2 dujų insufliatorius
p. 1.5; p. 2.5; p. 3.5



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



2 darbo režimai
p. 1.5.3; p. 2.5.3; p. 3.5.3

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

Didžiausias slėgis 30 mmHg
p. 1.5.2; p. 2.5.2; p. 3.5.2



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

Components/Spare Parts see chapter 21

PRODUCT LAUNCH

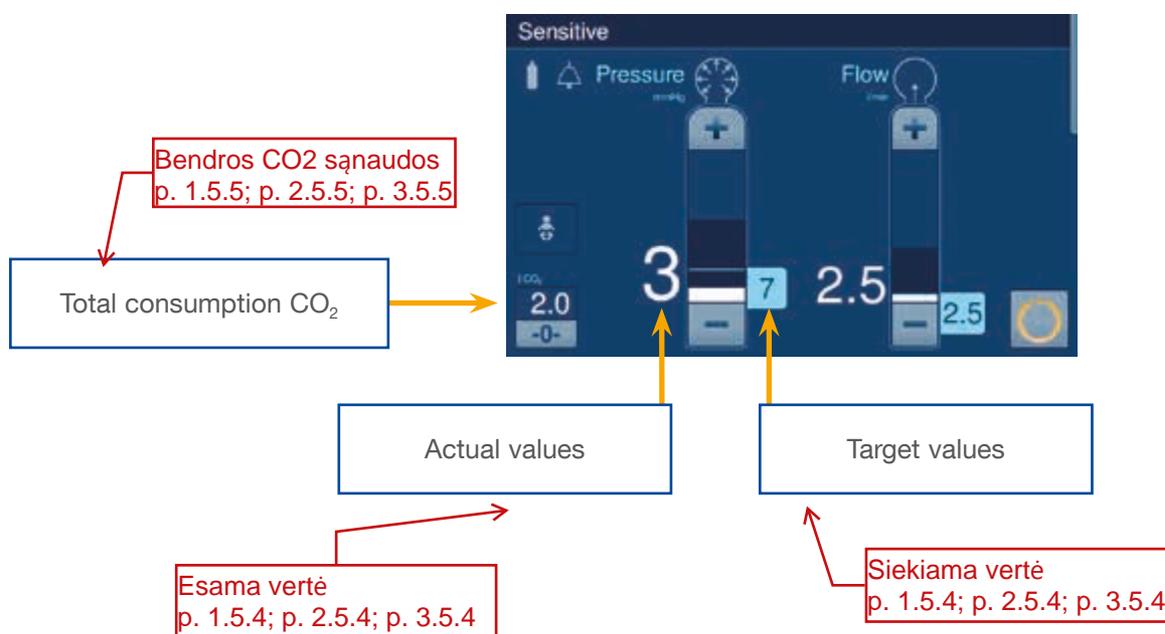
ENDOFLATOR® 40

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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 CO₂ and can be reset if necessary.



Žarnelė insufliacijai,
sterilizuojama
p. 1.5.7; p. 2.5.7; p. 3.5.7

<p>Patient Tube</p> 	<p>UI004</p>	<p>Insufflation Tube, sterilizable, inner diameter 9 mm, length 250 cm, for use with ENDOFLATOR® 40 UI400 or ENDOFLATOR® 50 UI500</p>
<p>Patient Tube mtp*</p> 	<p>031622-10</p>	<p>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</p>
<p>Supply Tube</p> 	<p>UI001 UI002 UI003</p>	<p>Low Pressure Tube, for the central CO₂ gas supply, length 150 cm Low Pressure Tube, for the central CO₂ gas supply, length 300 cm Low Pressure Tube, for the central CO₂ gas supply, length 600 cm</p>
<p>Supply Tube</p> 	<p>20 4000 21 20 4000 27 20 4000 22 20 4000 28 20 4002 22</p>	<p>High Pressure Tube, American connection/ German connection, length 55 cm High Pressure Tube, American connection/ German connection (CO₂), length 102 cm High Pressure Tube, American connection/ Pin-Index connection, length 55 cm High Pressure Tube, American connection/ Pin-Index connection (CO₂), length 102 cm High Pressure Tube, American connection/ ISO connection, length 102 cm</p>
<p>Universal Wrench</p> 	<p>20 4000 30</p>	<p>Universal Wrench</p>
<p>Bottle Holder</p> 	<p>UI005</p>	<p>Bottle Holder, fold-away, holder for KARL STORZ CO₂ gas bottles 1000 ml, including attachments, can be mounted to ENDOFLATOR® 40 UI400 and ENDOFLATOR® 50 UI500</p>
<p>CO₂ Bottle</p> 	<p>26 4000 90 26 4000 91</p>	<p>CO₂ Bottle, empty, with German connection CO₂ Bottle, empty, with Pin-Index connection</p>



PRODUCT INFO

UNITS

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UI500 S1 **ENDOFLATOR® 50 SCB, Set**, 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, for single use, hydrophobic on both sides, with 3 m insufflation tube and male LUER-Lock, sterile, package of 10, for use with insufflation units with a maximum gas flow of 50 l/min

PRODUCT INFO
UNITS

Accessories:

Tubing Set mtp*



031210-10 **Insufflation Tubing Set**, heatable, with gas filter, for single use, hydrophobic on both sides, with 3 m insufflation tube and male LUER-Lock, sterile, package of 10, for use with insufflation units with a maximum gas flow of 50 l/min

Šīldomos žarnelēs.
p. 1.5.7; p. 2.5.7; p. 3.5.7

Tubing Set mtp*



031200-10 **Insufflation Tubing Set**, with gas filter, for single use, hydrophobic on both sides, with 3 m insufflation tube and male LUER-Lock, sterile, for use with insufflation units with a maximum gas flow of 50 l/min

Gas Filter mtp*



031122-25 **Single-use Gas Filter**, ISO connector, hydrophobic on both sides, sterile, package of 25, for use with insufflation units with a maximum gas flow of 50 l/min

Filtraī dujoms
p. 1.5.7; p. 2.5.7; p. 3.5.7

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Aukšto dažnio elektrochirurginis įrenginys
p. 2.6; p. 3.9

AUTOCON® III 300 High Frequency Surgical Unit

With the AUTOCON® III 300 (UH 300), KARL STORZ has created another high-frequency generator for the HF surgery product family.

Please note:

AUTOCON® III 300 will replace AUTOCON® II 200 in future.

Product description:

The unit is equipped with 2 socket modules: 1 connection socket for unipolar applications and 1 connection socket for bipolar applications can be activated.

Via the settings menu, the bipolar connection socket can be split to increase the total number of sockets to 2.

An additional connection socket for connecting a neutral electrode is located on the unipolar application side.



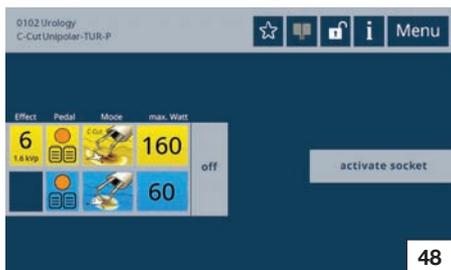
For the cutting and coagulation applications, four different modes are available on the display for universal, everyday use and ease of operation.



PRODUCT INFO

UNITS

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5.11.12 Basis-Programme (Prozeduren)

Prozeduren sind Programme, in denen Parameter wie Spannung und Leistung, für fachgebiets-spezifische, medizinische Eingriffe festgelegt sind. Sie können entweder eigene Prozeduren/ Programme erstellen (siehe Abschnitt 5.11.8) oder auf von KARL STORZ definierte Prozeduren zurückgreifen. Diese Prozeduren sind unterschiedlichen Fachgebieten, wie z. B. Urologie, Laparoskopie usw. zugeordnet und beginnen mit der Nummer 0100. Standardmäßig (Auslieferungszustand) sind alle fachgebietsspezifischen KARL STORZ Prozeduren/Programme sowie ein Standard-Programm freigeschaltet (sichtbar). Diese Programme sowie neu erstellte können nicht verändert oder gelöscht werden (außer die entsprechende Einstellung im Menü Service-Program Restrictions – Abschnitt 5.11.4 – wurde geändert). In diesem Menü können Sie auch die Fachgebiets-prozeduren »anwendergerecht« ein-/ausblenden. Zur Auswahl siehe Abschnitt 5.11.6 Menü »Programme«.

i Der Prozedurname ist jeweils in der Statuszeile angezeigt (siehe Abschnitt 5.2.2).



Beim AUTOCON® III 300 sind die werkseitig eingestellten vordefinierten Prozeduren/Programme in folgende Benutzergruppen eingeteilt:

- Fachgebiet Urologie (0102-0105; siehe Abb. 48 bis 51)
- Fachgebiet Gynäkologie (0200-0208; siehe Abb. 52 bis 58)
- Fachgebiet Laparoskopie (0300-0302; siehe Abb. 59 bis 61)
- Fachgebiet Gastroenterologie (0400-0401; siehe Abb. 62 bis 63)
- Anwendungsbereich offene Chirurgie (0500; siehe Abb. 64)
- Fachgebiet Pädiatrie (0600; siehe Abb. 65)
- Fachgebiet Orthopädie und Sportmedizin (0700; siehe Abb. 66)
- Fachgebiet Hals-, Nasen- und Ohrenheilkunde (0800; siehe Abb. 67)

i Eine Übersicht (Screenshots) der vordefinierten Prozeduren finden Sie auf dieser sowie der folgenden Seite.



5.11.12 Basic programs (procedures)

Procedures are programs in which parameters such as voltage and output are determined for specialist medical interventions. You can either create your own procedures/ programs (see section 5.11.8) or use procedures defined by KARL STORZ. These procedures are assigned to different disciplines, e.g. urology, laparoscopy and start with the number 0100. All specialist KARL STORZ procedures/programs and a standard program are enabled (visible) as standard (upon delivery). These programs and newly created ones cannot be changed or deleted (unless the corresponding setting in the menu Service – Program Restrictions, section 5.11.4, has been changed). In this menu you can display/ hide the specialist procedures to suit your needs. For selection see section 5.11.6 Menu 'Programs'.

Užprogramuojamomis gamintojo rekomacijomis standartinėms procedūroms p. 2.6.1; p. 3.9.1

i The procedure name is displayed in the status bar (see section 5.2.2).

The predefined procedures/programs set in the factory for the AUTOCON® III 300 are divided into the following user groups:

- Specialization urology (0102-0105; see Fig. 48 to 51)
- Specialization gynecology (0200-0208; see Fig. 52 to 58)
- Specialization laparoscopy (0300-0302; see Fig. 59 to 61)
- Specialization gastroenterology (0400-0401; see Fig. 62 to 63)
- Application open surgery (0500; see Fig. 64)
- Specialization pediatrics (0600; see Fig. 65)
- Specialization orthopedics and sports medicine (0700; see Fig. 66)
- Specialization ENT (0800; see Fig. 67)

i An overview (screenshots) of the predefined procedures can be found on this page and the following page.

5.11.12 Programas básicos (procedimientos)

Los procedimientos son programas en los que parámetros tales como tensión y potencia se han determinado de forma fija para intervenciones médicas en especialidades específicas. Usted puede generar sus propios procedimientos/ programas (véase la sección 5.11.8) o utilizar los procedimientos definidos por KARL STORZ. Estos procedimientos están asignados a diferentes especialidades, tales como urología, laparoscopia, etc., y comienzan con el número 0100. De forma estándar (estado de suministro) están habilitados (visibles) todos los procedimientos/programas KARL STORZ específicos de especialidades, así como un programa estándar. Estos programas, así como otros creados nuevos, no pueden ser modificados o borrados (salvo que se haya modificado el ajuste correspondiente en el menú Servicio – Restricciones de programa – sección 5.11.4 –). En este menú también puede insertar/ocultar los procedimientos de especialidades conforme a los deseos del usuario.

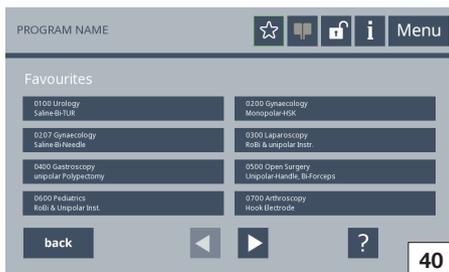
Con respecto a la selección, véase la sección 5.11.6 del menú "Programas".

i El nombre del procedimiento aparece indicado en cada caso en la línea de estado (véase la sección 5.2.2).

Los procedimientos/programas predefinidos ajustados de fábrica en el AUTOCON® III 300 están distribuidos en los siguientes grupos de usuario:

- Especialidad de urología (0102-0105; véanse las figs. 48-51)
- Especialidad de ginecología (0200-0208; véanse las figs. 52-58)
- Especialidad de laparoscopia (0300-0302; véanse las figs. 59-61)
- Especialidad de gastroenterología (0400-0401; véanse las figs. 62-63)
- Campo de aplicación de cirugía abierta (0500; véase la fig. 64)
- Especialidad de pediatría (0600; véase la fig. 65)
- Especialidad de ortopedia y medicina deportiva (0700; véase la fig. 66)
- Especialidad de otorrinolaringología (0800; véase la fig. 67)

i Una vista general (capturas de pantalla) de los procedimientos predefinidos la encontrará en esta página y en la página siguiente.



Im Menü »Programme« können gespeicherte Programme gelöscht werden (sofern die Funktion unter »Programmeinstellungen« im Abschnitt 5.11.4 freigeschaltet ist).

1. Hierzu in der Programmliste das zu löschende Programm durch Tippen auf den Programmnamen auswählen (siehe Abb. 36 oder 37). Um vertikal in der Programmliste zu navigieren, die entsprechende Taste ▲/▼ drücken.
2. Um das gewählte Programm unwiderruflich zu löschen, die Taste »Papierkorb« wählen.

☛ Das gewählte Programm wird nach Bestätigung einer Sicherheitsabfrage gelöscht.

5.11.7 Menü »Favoriten«

Im Menü »Favoriten« können die festgelegten Favoriten ausgewählt werden. Eine Schnellauswahl ist im Hauptbildschirm über das Sternsymbol möglich.

Über die Tasten ◀/▶ im unteren Bildschirmbereich gelangen Sie auf die nächste Seite der Favoritenliste (siehe Abb. 40).

1. Mit »OK« bestätigen, um die Auswahl zu übernehmen.
2. Die Taste »zurück« drücken, um zum Hauptbildschirm zu gelangen.

5.11.8 Menü »Programm speichern«

Im Menü »Programm speichern« (siehe Übersicht unter 5.11.1) kann die aktuelle Einstellung unter demselben oder einem anderen Programmnamen abgespeichert werden (siehe Abb. 41). Diese Funktion ist standardmäßig (bei Auslieferung) freigeschaltet; siehe »Programmeinstellungen« im Abschnitt 5.11.4.

Mit einer Tastatur können Programmnamen erstellt werden. Zur Wahl stehen Symbole, Groß- und Kleinbuchstaben, sowie Nummern.

Mit der Taste »Enter« können zweizeilige Programmnamen vergeben werden.

1. Mit »OK« bestätigen, um die Auswahl zu übernehmen.
2. Die Taste »zurück« drücken, um zum Hauptbildschirm zu gelangen.

Saved programs can be deleted in the 'Programs' menu (if the function is enabled under 'Program settings' in section 5.11.4).

1. To this end, select the program to be deleted in the program list by clicking on the program name (see Fig. 36 or 37). To navigate vertically in the program list, press the corresponding button ▲/▼.
 2. To delete the selected program permanently, select the 'recycle bin' button.
- ☛ The selected program is deleted upon confirmation of a prompt.

5.11.7 Menu 'Favorites'

The defined favorites can be selected in the 'Favorites' menu. A fast selection of the favorites is possible using the star symbol in the main screen.

Access the next page of the favorites list using the buttons ◀/▶ in the lower part of the screen (see Fig. 40).

1. Confirm with 'OK' to accept the selection.
2. Press the 'back' button to return to the main screen.

5.11.8 Menu 'Save program'

In the 'Save program' menu (see overview under 5.11.1) the current setting can be saved under the same or another program name (see Fig. 41). This function is enabled as standard (upon delivery); see 'Program settings' in section 5.11.4.

Program names can be created using the keyboard. Symbols, capital or small letters or numbers are selection options.

Program names spread over two lines can be assigned using the 'Enter' button.

1. Confirm with 'OK' to accept the selection.
2. Press the 'back' button to return to the main screen.

En el menú "Programas" se pueden borrar programas guardados (siempre que la función correspondiente esté habilitada en "5 Ajustes de programa" según el apartado 5.11.4).

1. Para ello, seleccione dentro de la lista de programas el programa que desee borrar pulsando el nombre del programa correspondiente (véanse las figs. 36 o 37). Para desplazarse verticalmente en la lista de programas, presione la tecla ▲/▼ correspondiente.
 2. Para borrar de forma definitiva el programa seleccionado, presione la tecla "Papeleras".
- ☛ Ahora se acepta un mensaje de confirmación y, acto seguido, el programa seleccionado queda borrado.

5.11.7 Menú "Favoritos"

En el menú "Favoritos" pueden seleccionarse los favoritos. El símbolo de estrella disponible en la pantalla principal permite efectuar una selección rápida.

Para acceder a la página siguiente de la lista de favoritos, presione las teclas ◀/▶ en el área inferior de la pantalla (véase la fig. 40).

Su nustatymais p. 2.6.1; p. 3.9.1

☛ Cuando la tecla "Volver".

5.11.8 Menú "Guardar programa"

El menú "Guardar programa" (véase la vista general en el apartado 5.11.1) permite almacenar el ajuste actual con el mismo nombre de programa o un nombre de programa diferente (véase la fig. 41). Esta función está habilitada de forma estándar (en el suministro); véase "Ajustes de programa" en el apartado 5.11.4.

Usando el teclado pueden crearse nombres de programa, pudiéndose elegir símbolos, mayúsculas y minúsculas y números.

Con la tecla "Intro" pueden denominarse programas con nombres de dos líneas.

1. Confirme para aplicar la selección pulsando la tecla "OK".
2. Para acceder a la pantalla principal, presione la tecla "Volver".

Netzeingang	220 – 240 V (UH 300)	100 – 127 V (UH 300U)
Min. Leistungsaufnahme	3 W / 40 VA	3 W / 40 VA
Min. Stromaufnahme	200 mA	400 mA
Max. Leistungsaufnahme	700 W / 1150 VA	700 W / 1150 VA
Max. Stromaufnahme	5 A	10 A @100 V 8 A @127 V
Netzsicherung (nur durch autorisiertes Servicepersonal zu wechseln)	2 x 5 AH träge, 250 V	2 x 10 AH träge, 250 V
Eingangsspannungsbereich	198 V bis 264 V	90 V bis 139,7 V
Netzfrequenz	50/60 Hz	50/60 Hz
Anschluss für Potentialausgleich	✓	✓

Power input	220 – 240 V (UH 300)	100 – 127 V (UH 300U)
Min. power consumption	3 W / 40 VA	3 W / 40 VA
Min. current consumption	200 mA	400 mA
Max. power consumption	700 W / 1150 VA	700 W / 1150 VA
Max. power consumption	5 A	10 A @100 V 8 A @127 V
Line fuse (to be changed only by authorized service personnel)	2 x 5 AH slow-blow, 250 V	2 x 10 AH slow-blow, 250 V
Input voltage range	198 V to 264 V	90 V to 139.7 V
Power frequency	50/60 Hz	50/60 Hz
Connection for potential equalization	✓	✓

Entrada de corriente	220 – 240 V (UH 300)	100 – 127 V (UH 300U)
Consumo de potencia mín.	3 W / 40 VA	3 W / 40 VA
Consumo de corriente mín.	200 mA	400 mA
Potencia consumida máx.	700 W / 1150 VA	700 W / 1150 VA
Consumo de corriente máx.	5 A	10 A @100 V 8 A @127 V
Fusible (el recambio debe ser llevado a cabo exclusivamente por personal de servicio técnico autorizado)	2 x 5 AH lento, 250 V	2 x 10 AH lento, 250 V
Margen de tensión de entrada	198 V hasta 264 V	90 V hasta 139,7 V
Frecuencia de red	50/60 Hz	50/60 Hz
Conexión equipotencial	✓	✓

Abmessungen und Gewicht	
Produktabmessungen (HxBxT)	177 x 447 x 457 mm
Nettogewicht	12,5 kg
Verpackungsangaben/-abmessungen Karton (HxBxT)	498 x 530 x 650 mm
Bruttogewicht	18,2 kg

Dimensions and weight	
Device dimensions (HxWxD)	177 x 447 x 457 mm
Net weight	12.5 kg
Packaging information/dimensions (HxWxD)	498 x 530 x 650 mm
Gross weight	18.2 kg

Dimensiones y peso	
Dimensiones del producto (al x an x pr)	177 x 447 x 457 mm
Peso neto	12,5 kg
Indicaciones/dimensiones del embalaje caja de cartón (al x an x pr)	498 x 530 x 650 mm
Peso bruto	18,2 kg

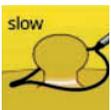
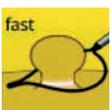
Programme	
Anzahl der Programmplätze	300
Vorgegebene Fixprogramme	Ja
Individuell programmierbar	Ja
Anzeige von Informationen auf dem Display	Ja

Programs	
Number of programs in the device	300
Default programs, factory set	Yes
Individually programmable	Yes
Information shown on the display	Yes

Programas	
Número de programas	300
Programas fijos predefinidos	Sí
Programable individualmente	Sí
Indicación de información en pantalla	Sí

Monopoliniai pjovimo režimai.

Unipolar Cutting Modes

	LAPAROSCOPY		GASTRO LOOP 1
	STANDARD		GASTRO LOOP 2
	MICRO		GASTRO LOOP 3
	RESECTION		GASTRO KNIFE 1
	RESECTION C-CUT®		GASTRO KNIFE 2
	SUPRALOOP		GASTRO KNIFE 3
	DRY		ARGON

Unipolar Coagulation Modes

	LAPAROSCOPY		FORCED CUTTING
	MODERATE		GASTRO COAG
	FORCED COAG		ARGON FLEXIBLE
	RESECTION		ARGON FLEX. PULSED
	SPRAY		ARGON OPEN
	FORCED MIXED		

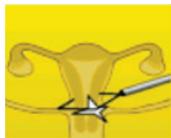
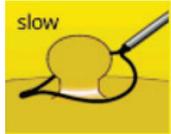
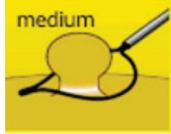
Monopolinės koaguliacijos režimai



PRODUCT INFO

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Mode symbol	Designation	CCS	ARC Control	HF voltage form	HF power limitation		Peak voltage	Default values	
					Effect	Power range		Effect	Max. Watt
Unipolar cutting modes									
	SupraLoop	Yes	Yes	sinusoidal constant	1 2 3	300 W 350 W 400 W	650 Vp	1	---
	Dry	Yes	Yes	sinusoidal modulated	1 2 3 4 5 6 7 8 9	1 W – 200 W	1.6 kVp 1.6 kVp 1.6 kVp		
	Gastro Loop 1	Yes	Yes	sinusoidal alternating Cut, Coag and Pause phases	1 2 3 4 5	400 W	750 Vp	3	---
	Gastro Loop 2	Yes	Yes	sinusoidal alternating Cut, Coag and Pause phases	1 2 3 4 5	400 W	750 Vp	3	---
	Gastro Loop 3	Yes	Yes	sinusoidal alternating Cut, Coag and Pause phases	1 2 3 4 5	400 W	750 Vp	3	---

Monopolinis pjovimo režimas, galia 400 W. p. 2.6.2; p. 3.9.2 (Techniniai pranašumai T1)

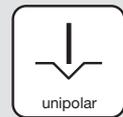
Mode symbol	Designation	CCS	ARC Control	HF voltage form	HF power limitation		Peak voltage	Default values	
					Effect	Power range		Effect	Max. Watt
Unipolar coagulation modes									
	Laparoscopy			sinusoidal modulated	-	1 W – 120 W	1.8 kVp	---	60
	Moderate			sinusoidal constant	1 2 3	1 W – 120 W	250 Vp	2	60
	Forced coag			pulsed modulated	-	1 W – 80 W	3.5 kVp	---	50
	Resection			sinusoidal modulated	-	1 W – 120 W	2.2 kVp	---	60
	Spray			pulsed modulated	1 2 3 4	1 W – 120 W	3.0 kVp 3.8 kVp 4.6 kVp 5.0 kVp	2	80
	Forced mixed			sinusoidal modulated	1 2 3	1 W – 120 W	1.5 kVp 2.0 kVp	2	60
	Forced cutting			sinusoidal modulated	1 2 3 4	1 W – 250 W	1.5 kVp 1.5 kVp 1.3 kVp 1.3 kVp	2	80

Monopolinēs koaguliacijos režimas, galia 250 W. p. 2.6.3; p. 3.9.3

Footswitches

	UF 901	One-Pedal Footswitch , with button for switchover function, for use with HF generators
	UF 902	Two-Pedal Footswitch , with button for switchover function, for use with HF generators

Kojinis jungiklis
p. 2.6.4; p. 3.9.4



Neutral Electrodes

	27805	Neutral Electrode , of conductive silicone with 2 rubber ties for fastening, contact surface A = 500 cm ² , for use with Connecting Cable 27806
	27806 UR	Neutral Electrode Connecting Cable , for Neutral Electrode 27805
	27806 US	Neutral Electrode Connecting Cable , for Neutral Electrode 27802
	27802	Neutral Electrode , for single use, contact surface divided into two, A = 169 cm ² , package of 50, Connecting Cable 27801 required

Jungiamasis laidas
neutraliems elektrodams
p. 2.6.4; p. 3.9.4



Neutralūs elektrodai, pak. 50 vnt.
p. 2.6.4; p. 3.9.4

ENDOMAT® SELECT ^{NEW}

Roller pump for the irrigation of fluids

STORZ
KARL STORZ — ENDOSKOPE

Ratukinė pompos sistema. Slėgio kontroliuojamai irigacijai.
p. 2.7; p. 2.7.1; p. 2.7.2; p. 3.7; p. 3.7.4

Special Features:

- 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



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

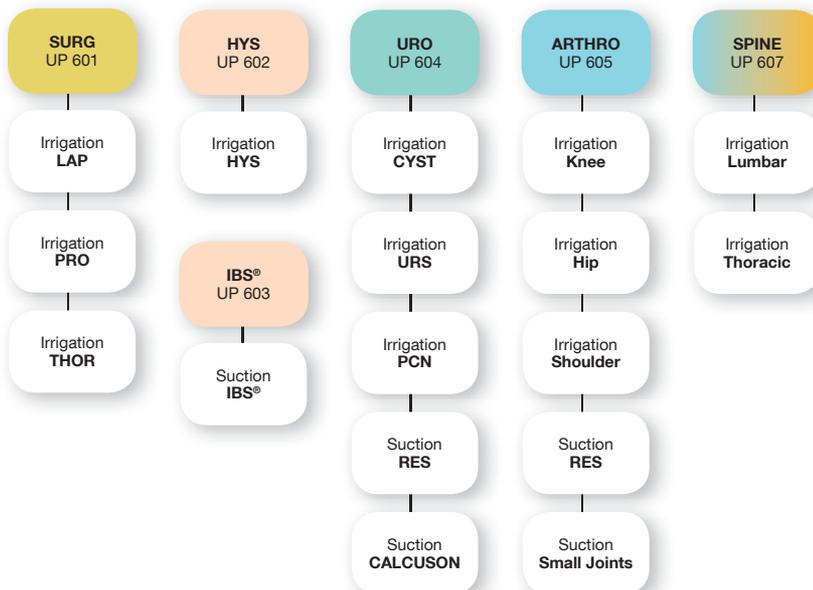
Programinės įrangos licencija LAP, THOR ir PROCTO p. 2.7.2; p. 3.7.5

Programinės įrangos licencija urologijai p. 2.7.2



PRODUCT INFO

UNITS



*Confidential –
for internal
use only!*

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

Daugkartinių žarnelių rinkiniai skirti
Endomat Select.
p. 2.7.3; p. 3.7.6

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 210 and HAMOU® ENDOMAT® SCB 263311 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 210 and HAMOU® ENDOMAT® SCB 263311 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 210



PRODUCT INFO

UNITS

*Confidential –
for internal
use only!*



Irigacijos greitis 2,5 l/min.
p. 3.7.2

6.13 ENDOMAT® SELECT als Spülpumpe einsetzen

Je nach Einsatzgebiet (durch die Schlauchkassette vorgegeben) kann entweder der Spülfluss oder der Spüldruck frei gewählt werden. Für den jeweils anderen Parameter (Druck bzw. Fluss) kann eine 3-stufige Begrenzung festgelegt werden.*

i ***HINWEIS:** Sind auf Ihrem System einige Einstellparameter nicht sichtbar, ist möglicherweise das »Advanced«-Paket nicht freigeschaltet.

6.13.1 Spülfluss vorgeben (SURG, GI, VET SURG)

Im Anzeigefeld **4** wird der Soll-Wert (digitaler Zahlenwert mit orangefarbenen Begrenzungsmarkierungen) und der Ist-Wert (weiße Balkenanzeige) für den Spülfluss (in ml/min) angezeigt (Abb. 45).

Mit installiertem Advanced Paket wird im Anzeigefeld **8** die Begrenzung des Drucks (in mmHg) angezeigt.

Mit dem dazugehörigen Start/Stopp-Button **5** wird die Rollenpumpe aktiviert und deaktiviert.

Fluss einstellen: Über die \pm Buttons **3** den Sollwert in 100 ml/min-Schritten einstellen. Dies ist unabhängig vom Pumpenstatus.

SURG: 100...2 500 ml/min
(ADVANCED: 100...3 500 ml/min)

VET SURG: 100 ... 3 500 ml/min

GI: 100...1 000 ml/min

Druckbegrenzung einstellen (Voraussetzung: installiertes Advanced Softwarepaket oder VET Softwarepaket): Über die Taste \blacktriangleright die Druckbegrenzung einstellen (Bereich 100 mmHg --> 300 mmHg --> 500 mmHg --> 100 mmHg...).

i **HINWEIS:** Der Standardwert der Druckbegrenzung ohne installiertes »Advanced«-Paket beträgt 500 mmHg.

6.13 Using the ENDOMAT® SELECT as an irrigation pump

Depending on the field of application (determined by the tubing cartridge), either the irrigation flow or irrigation pressure can be freely selected. For the other parameters (pressure or flow), a 3-level limitation can be specified.*

i ***NOTE:** If some setting parameters are not visible on your system, it is possible that the 'Advanced' package has not been enabled.

6.13.1 Specifying the irrigation flow (SURG, GI, VET SURG)

In the display field **4** the setpoint (digital numerical value with orange limitation triangles) and the actual value (white bar display) are shown for the irrigation flow (in ml/min) (Fig. 45).

If the Advanced package is installed, the limitation of pressure (in mmHg) is shown in display field **8**. The roller pump is activated and deactivated with the associated Start/Stop button **5**.

Setting the flow: Set the setpoint in 100 ml/min increments using the \pm buttons **3**. This is not affected by the pump status.

SURG: 100...2,500 ml/min
(ADVANCED: 100...3,500 ml/min)

VET SURG: 100...3,500 ml/min

GI: 100...1 000 ml/min

Set the pressure limit (prerequisite: installed Advanced software package or VET software package): Set the pressure limitation using the button \blacktriangleright (range 100 mmHg --> 300 mmHg --> 500 mmHg --> 100 mmHg...).

i **NOTE:** If the Advanced package is not installed, the default value for pressure limitation is 500 mmHg.

6.13 Empleo de la ENDOMAT® SE- LECT como bomba de irrigación

En función del campo de aplicación (determinado por el cartucho de tubos flexibles), puede seleccionarse libremente el flujo de irrigación o la presión de irrigación. Para el otro parámetro (presión o flujo, según el caso) puede definirse un límite de 3 niveles.*

i ***NOTA:** Si algunos parámetros de ajuste no son visibles en su sistema, ello puede deberse a que no está habilitado el paquete "Advanced".

6.13.1 Especificación del flujo de irrigación (SURG, GI, VET SURG)

En el campo indicador **4** aparecen representados el valor nominal (valor numérico digital con marcas de limitación de color naranja) y el valor real (indicador de barra blanca) del flujo de irrigación (en ml/min) (fig. 45).

Si está instalado el paquete "Advanced", el límite de presión (en mmHg) aparece representado en el campo indicador **8**.

La bomba de rodillos se activa y desactiva con el botón de inicio/parada **5** correspondiente.

Ajuste del flujo: Ajuste el valor nominal en incrementos de 100 ml/min usando los botones \pm **3**. Esto es independiente del estado de la bomba.

SURG: 100...2 500 ml/min
(ADVANCED: 100...3 500 ml/min)

VET SURG: 100 ... 3 500 ml/min

GI: 100...1 000 ml/min

Ajuste del límite de presión (requisito previo: paquete de software "Advanced" o paquete de software VET instalado): Ajuste el límite de presión con la tecla \blacktriangleright (margen: 100 mmHg --> 300 mmHg --> 500 mmHg --> 100 mmHg...).

i **NOTA:** Si el paquete "Advanced" no está instalado, el valor predeterminado del límite de presión es 500 mmHg.

Vežimėlis įrangai, važiuoja ant 4 antistatinių dvigubų ratukų su užrakinamais stabdžiais, centrinis kirtiklis ant dangčio, sija įvadui su 12 elektros įvadų, komplekte:
 bazinis modulis, dangtis, sija, 3 lentynos, stalčius su užraktu, 2 bėgeliai įrangai, laikiklis kamerai, 100 cm ilgio maitinimo laidai.
 p. 2.10; p. 2.10.1; p. 2.10.2; p. 2.10.3; p. 2.10.4
 p. 3.8; p. 3.8.1; p. 3.8.2; p. 3.8.3; p. 3.8.4



UG 220

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

Dimensions:

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

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

Caster diameter: 150 mm

including:

Base Module, equipment cart, wide

Cover, equipment cart, wide

Beam Package, equipment cart, high

3x **Shelf**, wide

Drawer Unit with Lock, wide

2x **Equipment Rail**, long

Camera Holder

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



UG 120

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

Dimensions:

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

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

Caster diameter: 150 mm

including:

Base Module, equipment cart, narrow

Cover, equipment cart, narrow

Beam Package, equipment cart, large

3x **Shelf**, narrow

Drawer Unit with Lock, narrow

2x **Equipment Rail**, long

Camera Holder

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

Product Number	Quantity	Description
UG520	1	Monitor Holding Arm, long, height and side adjustable, tilting, swivel range up to 320°, reach 760 mm, loading capacity max. 15 kg, with monitor holder VESA 75/100, for use with Equipment Carts UGxxx



Artikuluojama alkūne monitoriui pakabinti p. 2.10.5; p. 3.8.5

Sistema dūmu evakuācijai
p. 3.6

S-PILOT™

The solution for smoke evacuation



Endoscopy has become an indispensable tool in modern medicine. Numerous interventions are performed every day that require the use of energy application systems such as HF units or lasers.

Thermal reactions, particularly during HF surgery, may cause unpleasant odors or surgical smoke. These are often inhaled for hours at a time, depending on the type of procedure performed. It is not uncommon for OR personnel to experience headaches, nausea or nose and throat irritation.

The toxicity of the pollutants in this mixture is still controversial. It is clear, however, that the protective masks worn are unable to filter all particles.

Furthermore, the generated smoke disturbs endoscopic visualization which presents further risks. The view of the OR field is obstructed and the surgeon is thus hindered in their work.

To avoid these problems, the S-PILOT™ from KARL STORZ is a compact device that ideally complements the existing product range for endoscopic interventions.

The S-PILOT™ provides excellent visibility through effective smoke evacuation and extracts unpleasant odors. This creates pleasant working conditions without disturbing noises.

Communication between the S-PILOT™ and other units connected in the SCB is possible via the KARL STORZ Communication Bus (SCB). The pinch valve (and hence suction) is automatically opened as soon as a HF generator, e.g. KARL STORZ AUTOCON® II 400, is activated.

In general, the S-PILOT™ can also be activated via a separate footswitch. This allows application wherever ultrasound, HF, motor systems and laser applications are used in surgical interventions.

CF classification allows the unit to be used for multiple application possibilities.

Thanks to its smooth surface, the S-PILOT™ also meets the most demanding hygiene requirements.

Integruotas į CO2 dujų insuflatorių, sujungtas SCB jungtimi, skirtas dūmų evakuacijai.

p. 3.6.1

(Techniniai pranašumai T3)



Prof. Luigi Boni

The combination of ENDOFLATOR® 50 and S-PILOT™ represents a substantial improvement of viewing conditions for transanal procedures.

Even with continuous smoke evacuation the system provides a reliable stability of the pneumorectum.

These benefits, along with the fog-free viewing provided by heated insufflation gas, make my everyday surgical tasks significantly easier.

Luigi Boni, MD, FACS
Associate Professor of Surgery
Minimally Invasive Surgery Research Center
Department of Surgical and Morphological Sciences
University of Insubria - Varese – Italy

S-PILOT™



- UP 501 S1 **S-PILOT™**, set incl. footswitch
including:
One-Pedal Footswitch
Suction Tubing Set, sterile,
for single use, package of 5
SCB Connecting Cable, length 100 cm
- UP 501 S3 **S-PILOT™**, set
including:
Suction Tubing Set, sterile,
for single use, package of 5
SCB Connecting Cable, length 100 cm

Installation and startup

Despite its modest exterior, this new unit offers a feature-rich functionality.

After pressing the on/off key, the S-PILOT™ starts and performs a self-test – this only takes a moment. As soon as the S-PILOT™ is ready to start, a confirmation signal is emitted.

The “open/close valve” button opens the pinch valve. Activate this button to insert the Tubing Set (031447-01).

Once the tube is in position, the “open/close valve” button is pressed again to close the valve.

The distal end of the tubing set is connected via a LUER-Lock connector to the appropriate trocar in the OR field whereas the other end is connected with the suction container.

The tubing set furthest from the patient is equipped with a Y-tube. This allows fluid and smoke to be suctioned in parallel and directed to the same collecting container.

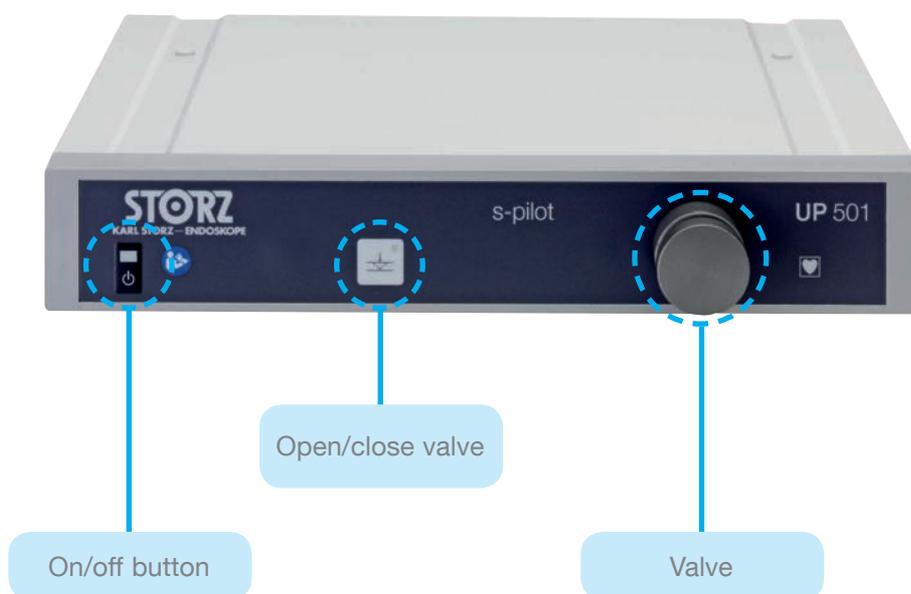
Depending on the application, the connection to the appropriate HF generator must be established, alternatively, the device can also be operated via a separate footswitch.

If an additional footswitch is used, the camera assistant is put in charge of imaging in many operating rooms. This means that the assistant is not only responsible for camera guidance but can also decide when smoke is to be evacuated from the OR field.

Please note: If the unit is directly activated via a footswitch, the valve closes as soon as activation of the footswitch stops. If coupled with HF units via SCB, the valve closes briefly after HF activation stops this way smoke can be completely removed from the cavity and tubing set.

Galimybė prijungti pasirinktinai prie centrinės vakuumo sistemos arba mobilaus vakuuminio siurblio p. 3.6.2

Valdymas kojiniu jungikliu p. 3.6.3



Žarnelės siurbimui
p. 3.6.4

Filtrai
p. 3.6.4

Recommended accessories

Product	Order No.
Tubing Set , for smoke, gas and fluid suction, sterile, for single use, package of 10	031447-10
Smoke Evacuation Filter , unsterile, for single use, package of 10	031111-10
Secretion Container , 2.5 l	030320-40
Secretion Container , 2.5 l	030302-01
Clampholder, standard , plastic	030350-05
Connecting Tube , short, for use with UNIMAT® 30	25320083
One-Pedal Footswitch	20014130
SCB Connecting Cable , length 100 cm	20090170
S-PILOT™ Connecting Cable , 3.5 mm / 3 m for use with ConMed System 2450 and 5000	UP 004
S-PILOT™ Connecting Cable , 2.5 mm / 3 m for use with Covidien Force Triad and Covidien Valleylab Force FX	UP 005
Set for SCB/ERBE VIO Interface Box	20090013
Set for SCB/KLS MARTIN maxium	20091290
KARL STORZ-SCB Interface control Set	20090501
Mains Cord , length 300 cm	400 A
Mains Cord , US version, length 200 cm	400 B
User Manual	96116047D

Specifications S-PILOT™

Line voltage	100...240 V
Power frequency	50/60 Hz
Power consumption	30 W
Dimensions (w x h x d)	305 mm x 50 mm x 320 mm

PRODUCT INFO

Units

Order nos.

Atskiri įrenginiai -
siurblys.
p. 3.7.1



UP031

KARL STORZ SENATOR Vacuum Pump,
Set consisting of:

UP030 Senator Vacuum Pump, incl. mains cord,
1x connecting cable, 3x bacterial filters



UP032

Secretion Application Set, 2 l

consisting of:

UP030-5000168 Secretion Bottle, 2 l
UP030-500008 Bottle Cap for Secretion Bottle
UP030-500002 Patient Tube, for use with
UP030, UP030C

Accessories:

UP030-500001 Connecting Tube, with 2 right-angle push-fit couplings, 1.70 m
UP030-500084 Float for Overflow Protection
UP030-500002 Patient Tube, for use with UP030, UP030C
UP030-5000168 Secretion Bottle, 2 l
UP030-500005 1x Hydrophobic Bacterial Filters

Maksimalus siurbimo
slėgis 100 kPa
p. 3.7.3

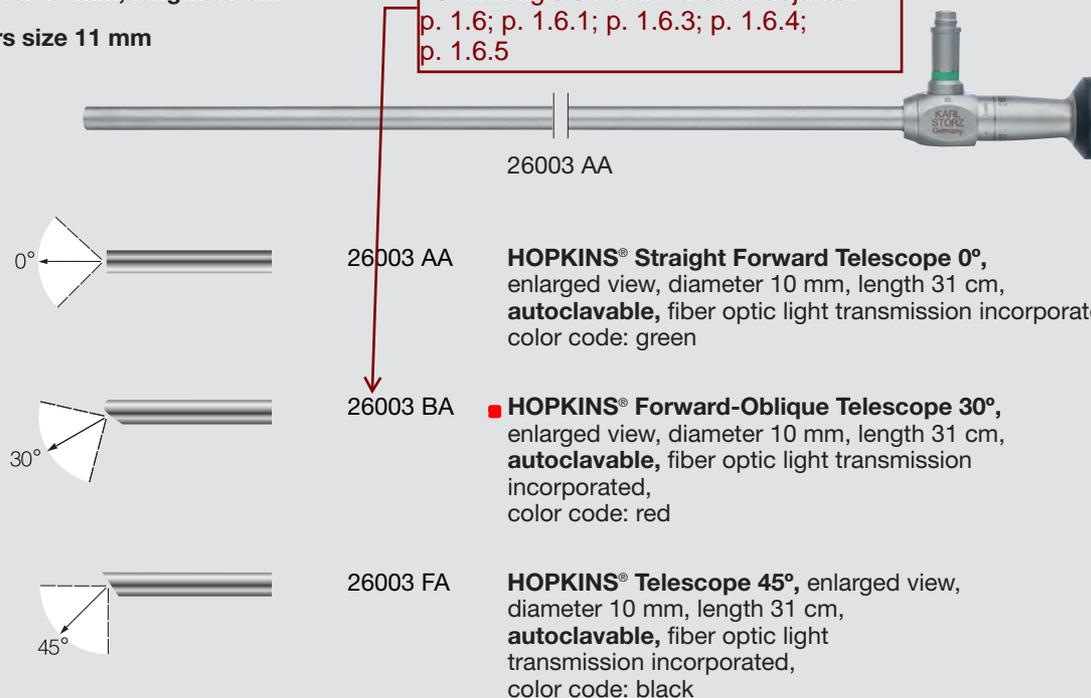
Specifications

Suction capacity	30 l/min
Vacuum	0 – 100 kPa, 0 – 700 mmHg, +/-2,5 %
Voltage	230 VAC, 50/60 Hz
Rated current/ power consumption	0,45 A, 115 W (230 VAC)
Dimensions (w x d x h)	250 mm x 285 mm x 335 mm
Weight	7,4 kg
Protection class	Classe I; BF; IIA; IP20
Inspections/Certifications	EN 60601-1, EN 60601-1-2, EN 60601-1-6, EN ISO 10079-1, EN 62366-1, EN ISO 14971, UL 2601-1/52YA

■ Diameter 10 mm, length 31 cm

Trocars size 11 mm

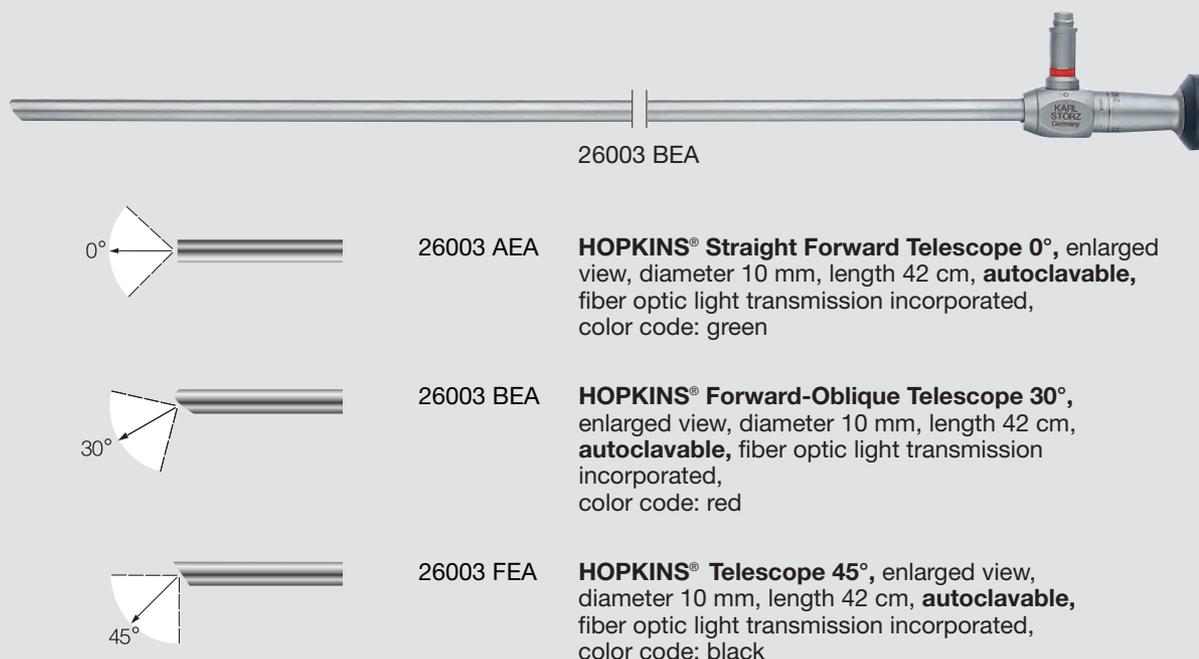
Optika, matymo kryptis 30°. Skersmuo 10 mm. Ilgis 31 cm. Autoklavuojama. p. 1.6; p. 1.6.1; p. 1.6.3; p. 1.6.4; p. 1.6.5



Diameter 10 mm, length 42 cm

Trocars size 11 mm

Recommended for use for surgery in the adipose patient



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

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



The KARL STORZ HOPKINS® rod lens system retains its impressive image quality with every new telescope. With over 75 years of experience, the name KARL STORZ is synonymous with high quality standards.

The innovative technologies from KARL STORZ

- Quality improvements of the KARL STORZ telescopes through the continuous optimization of manufacturing processes and use of innovative materials.
- Fine adjustment of the optical system with state-of-the-art manufacturing technologies.
- Sharpness of detail and precise display of tissue structures based on the coordinated interaction between KARL STORZ telescopes, light sources and the IMAGE1 S™ camera platform.

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

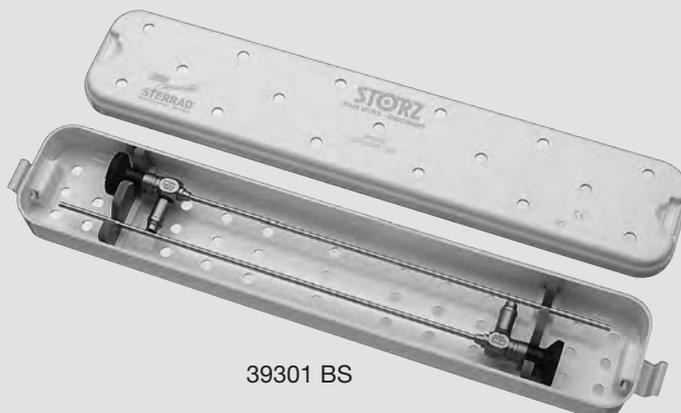
Quality and service pay off:

The KARL STORZ repair-exchange program creates a closed service cycle: Replacement by original products 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, repair costs are reduced and product life is maximized in accordance with the total cost of ownership model.

Įprastos Karl Storz optikos gali būti naudojamos su visomis kamerų platformomis, nesvarbu ar HD, 4K ar ateities patobulinimai.
p. 1.6.2; p. 2.8.2; p. 3.10.2

Plastic Containers for Sterilization and Storage

of endoscopes



Su konteneriu sterilizavimui bei laikymui
p. 1.6.6; p. 2.8.7; p. 3.10.7

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

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

Fiber Optic Light Cables and Antifog Solution

■ **Fiber Optic Light Cables with Straight Connector**

Su tiesia jungtimi
p. 1.7.4; p. 2.9.4; p. 3.11.4

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	Fiber Optic Light Cable , extremely heat-resistant, with safety lock, enhanced light transmission, can be used for ICG applications, diameter 3.5 mm, length 230 cm
			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 , extremely heat-resistant, enhanced light transmission, diameter 4.8 mm, length 250 cm
			495 NCSC	Fiber Optic Light Cable , extremely heat-resistant, enhanced light transmission, with safety lock, diameter 4.8 mm, length 250 cm
			495 NE	Fiber Optic Light Cable , diameter 4.8 mm, length 300 cm

Antifog Solution

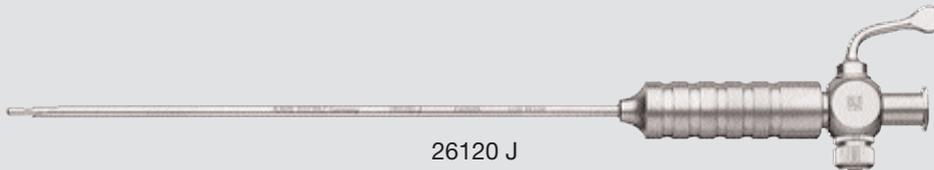
Fibrooptinis šviesolaidis
Skersmuo 4,8 mm. Ilgis 300 cm.
p. 1.7; p. 1.71; p. 1.7.2; p. 1.7.3
p. 2.9; p. 2.9.1; p. 2.9.3; p. 2.9.4
p. 3.11; p. 3.11.1; p. 3.11.2; p. 3.11.3



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

VERESS Pneumoperitoneum Needles

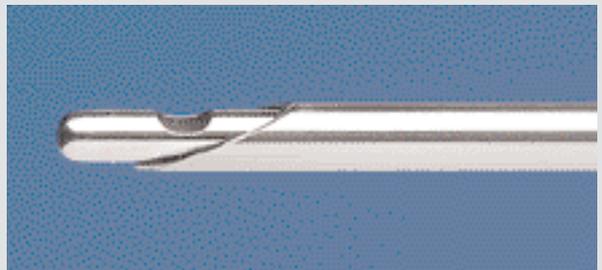
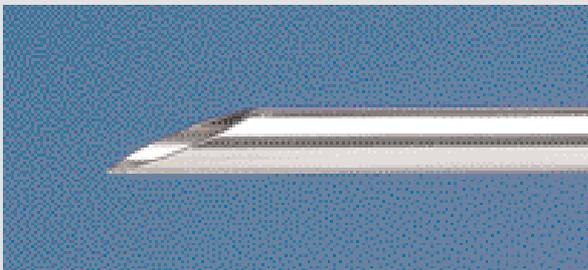


26120 J

- 26120 JK ■ VERESS Pneumoperitoneum Needle, with spring-loaded blunt inner cannula, LUER-Lock, autoclavable, diameter 2.1 mm, length 7 cm
- 26120 J Same, length 10 cm
- 26120 JL Same, length 13 cm
- 26120 JLL Same, length 15 cm
- 26120 XL Same, length 18 cm

Adata VERESS tipo, ilgis 13 cm
p. 3.16; p. 3.16.1;
p. 3.16.2

Veress adata, 15 cm.
ilgio.
p. 1.8; p. 1.8.1; p. 1.8.2



2-984

Insufflation Units for use with VERESS Pneumoperitoneum Needles see chapter 17 UNITS
Components/Spare Parts see chapter 18

■ Trocars

Size 11 mm

Troakaras 11 mm. skersmens, sudarytas iš obturatoriaus su kūginiu smaigu, 10,5 cm ilgio metalinės kaniulės su kraneliu insufliacijai bei vožtuvo.
p. 3.15; p. 3.15.1; p. 3.15.2

For use with instruments and telescopes diameter 10 mm



Multifunctional valve

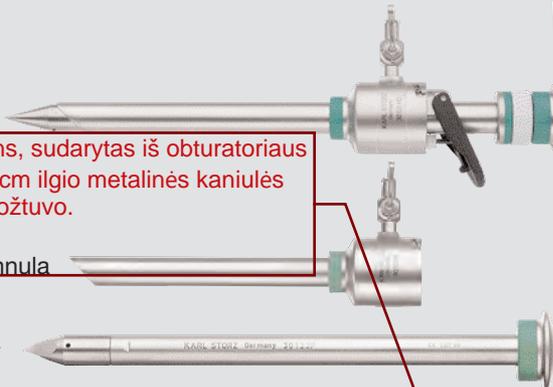


Automatic valve

Troakaras 11 mm. skersmens, sudarytas iš obturatoriaus su piramidiniu smaigu, 10,5 cm ilgio metalinės kaniulės su kraneliu insufliacijai bei vožtuvo.
p. 1.9; p. 1.9.1; p. 1.9.2
p. 3.14; p. 3.14.1; p. 3.14.2

Cannula

Trocar only



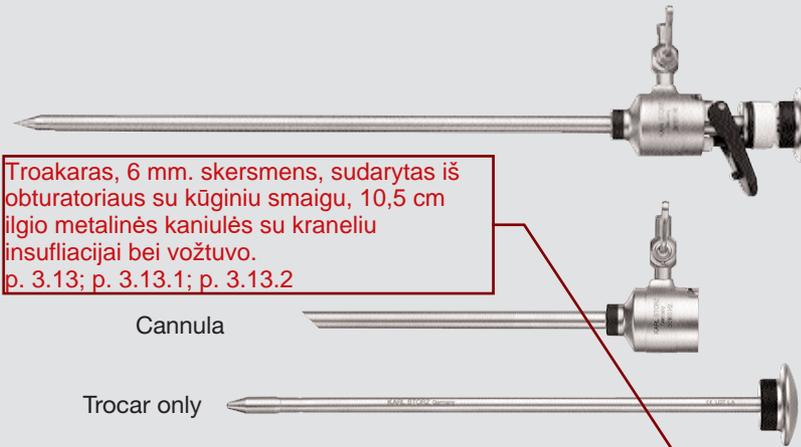
Size:		■ 11 mm			
Working length:		8.5 cm green-white	■ 10.5 cm green	8.5 cm green-white	10.5 cm green
Color code:					
		Multifunctional Valve		Automatic Valve	
	Trocar, with conical tip ■ including: Cannula ■ Trocar only ■ Ventil ■	30103 WY	30103 MC	30103 FY	30103 AC
		30103 H1	30103 H2	30103 H1	30103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

Trocars

Size 6 mm

For use with instruments and telescopes diameter 5 mm



Troakaras, 6 mm. skersmens, sudarytas iš obturatoriaus su kūginiu smaigu, 10,5 cm ilgio metalinės kaniulės su kraneliu insufliacijai bei vožtuvo. p. 3.13; p. 3.13.1; p. 3.13.2

Cannula

Trocar only

Multifunctional valve



Automatic valve

Troakaras, 6 mm. skersmens, sudarytas iš obturatoriaus su piramidiniu smaigu, 10,5 cm ilgio metalinės kaniulės su kraneliu insufliacijai bei vožtuvo. p. 1.10; p. 1.10.1; p. 1.10.2 p. 3.12; p. 3.12.1; p. 3.12.2

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

2-15

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

Accessories

Reduction Sleeves/Extractors and Reducers

Reduction Sleeves/Extractors

Reduktorius, movos tipo;
5 mm instrumentų įvedimui į 10 mm
skersmens troakarą
p. 1.11; p. 1.11.1; p. 1.11.2



30140 DB

Instrument Diameter	Outer Diameter of Trocar Cannula – Color Code				
	6 mm black	11 mm green	13 mm black	15 mm	22 mm
3 mm	30140 KA	30140 DA	–	–	–
5 mm	–	30140 DB	30140 HB	30140 FB	30140 GB
8 mm	–	30140 DD	–	–	–
10 mm	–	–	30140 HE	30140 FE	30140 GE

Reducers, for use with trocars with automatic valves and TERNAMIAN ENDOTIP cannulas with automatic valves



30141 AA



30141 DB

- 30141 AA **Reducer, 6/3 mm**
- 30141 DB **Same, 11/5 mm**
- 30141 HB **Same, 13/5 mm and 13.5/5 mm**
- 30141 HE **Same, 13/11 mm**

Double Reducer



30142 HB

- 30142 HB **Double Reducer, 13/10 mm, 13.5/10 mm, 13/5 mm and 13.5/5 mm**

Reducers, for use with trocars with silicone leaflet valves and TERNAMIAN ENDOTIP cannulas with silicone leaflet valves



30160 RE

- 30160 RE **Reducer, 6/3 mm**
- 30103 RE **Same, 11/5 mm**

Components/Spare Parts see chapter 18

■ **ROBI® Bipolar Grasping Forceps**
 ■ rotating, dismantling, with connector pin for bipolar coagulation,
 CLERMONT-FERRAND Model



■ Size 5 mm

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

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

Outer Sheath	Žnyplės Griebimui Su jungtimi bipolinei koaguliacijai Abi perforuotos žiaunos Dydis 5 mm Ilgis 36cm Su rankena be užrakto p. 1.12; p. 1.12.1; p. 1.12.2. p. 1.12.3 p. 1.12.4; 1.12.5; p. 1.12.6 p. 3.22; p. 3.22.1; p. 3.22.2; p. 3.22.3; p. 3.22.4; p. 3.22.5; p. 3.22.6; p. 3.22.7	Handle	38151
■ Length 36 cm			
Length 43 cm			

Double action jaws

Working Insert	Complete Instrument
38610 ON	38651 ON
38710 ON	38751 ON



■ **ROBI® Grasping Forceps**, CLERMONT-FERRAND model, fenestrated,
 with fine atraumatic serration

38610 WA

38651 WA



ROBI® WATTIEZ Grasping Forceps, CLERMONT-FERRAND model,
 with multiple teeth, for atraumatic and accurate grasping

38610 MD

38651 MD

38710 MD

38751 MD



■ **ROBI® KELLY Dissecting and Grasping Forceps**,
 CLERMONT-FERRAND model

38610 ML

38651 ML



ROBI® KELLY Dissecting and Grasping Forceps,
 CLERMONT-FERRAND model

38610 MA

38651 MA



ROBI® MALZONI Dissecting and Grasping Forceps,
 CLERMONT-FERRAND model

Žnyplės
 Kelly tipo
 Disekcijai
 Su jungtimi bipolinei koaguliacijai
 Dydis 5 mm
 Ilgis 36cm
 Su rankena be užakto
 p. 1.13; p. 1.13.1; p. 1.13.2; p. 1.13.3
 p. 1.13.4; p. 1.13.5; p.1.13.6

2-151

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

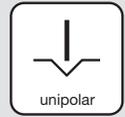
Accessories

Unipolar and Bipolar High Frequency Cords

Unipolar High Frequency Cords

KARL STORZ High Frequency
Instrument Surgery Units

Monopoliniams instrumentams, ilgis 300 cm.
p. 1.15; p. 1.15.1; p. 1.15.2
p. 3.29; p. 3.29.1; p. 3.29.2



	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

KARL STORZ High Frequency
Instrument Surgery Units

Bipoliniams instrumentams, ilgis 300 cm.
p. 1.14; p. 1.14.1; p. 1.14.2
p. 3.30; p. 3.30.1; p. 3.30.2



	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

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

Coagulation and Dissection Electrodes

without suction channel, insulated sheath,

- 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

Elektrodas, L formos, su jungtimi monopolinei koaguliacijai, dydis 5 mm., ilgis 36 cm
p. 1.16; p. 1.16.1; p. 1.16.2; p. 1.16.3; p. 1.16.4
p. 3.23; p. 3.23.1; p. 3.23.2; p. 3.23.3; p. 3.23.4

Length	Instrument
30 cm	
36 cm	
43 cm	

Distal Tip	Instrument
	26772 UF 26775 UF 26778 UF Coagulation and Dissection Electrode, L-shaped
	26775 UE 26778 UE Coagulation and Dissection Electrode, spatula-shaped, blunt
	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 26775 CL CADIERE Coagulation and Dissection Electrode, L-shaped, with cm-marking, distal tip tapered

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

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.

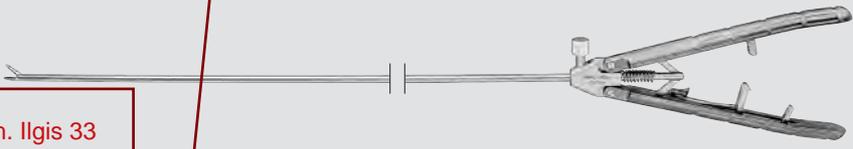
Special Features:

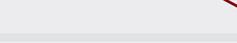
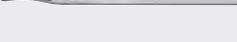
- Tungsten carbide inserts for secure holding of the needle

Adatkotis
Žiaunos tiesios
Su tiesia rankena su užraktu
Dydis 5 mm
Ilgis 33cm
p. 1.17; p. 1.17.1; p. 1.17.2; p. 1.17.3; p. 1.17.3

- Precise adjustable ratchet
- Axial and pistol handles

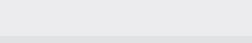
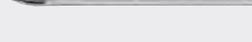
Adatkotis. Žiaunos lenktos į kairę pusę
Su tiesia rankena su užraktu. Dydis 5 mm. Ilgis 33 cm.
p. 3.25; p. 3.25.1; p. 3.25.2; p. 3.25.3; p. 3.25.4

Length	Instrument
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

Adatkotis. Žiaunos lenktos į dešinę pusę. Su tiesia rankena su užraktu. Dydis 5 mm. Ilgis 33 cm.
p. 3.24; p. 3.24.1; p. 3.24.2; p. 3.24.3; p. 3.24.4

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

Optional Accessories

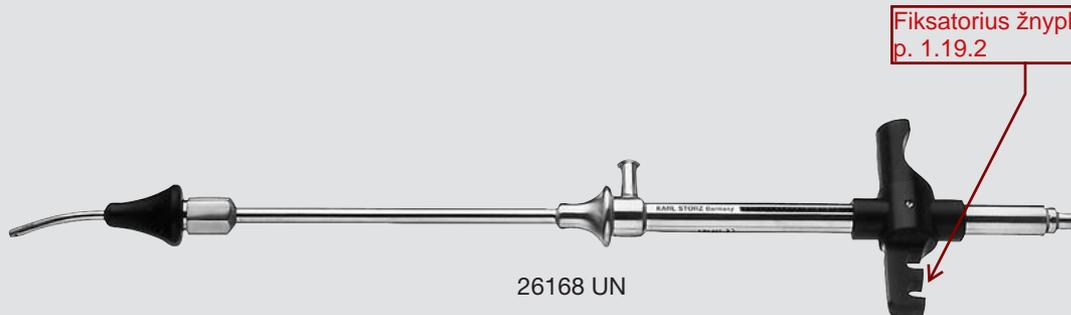
for suction and irrigation systems

		for use with	
		ENDOMAT® SELECT UP 210	ENDOMAT® n. HAMOU® SCB 26331101-1
	26 3100 35 Bottle Cap , sterilizable, for use with irrigation bottles 1 l and 1.5 l, sterile (cylindrical and square) type Abbott and Baxter Laboratories	-	-
	26 3102 35 Bottle Cap , sterilizable, for use with irrigation bottle 1 l, sterile (round), type Fresenius and B. Braun (old type) and Delta Pharma (round)	-	-
	26 3103 35 Bottle Cap , sterilizable, for use with irrigation bottle 1 l, sterile (round or square), type B. Braun (old type) and Delta Pharma	-	-
	20 3000 52 Suction Bottle , 1.5 l, sterilizable	●	●
	20 3000 34 Bottle Cap , for suction bottles 1.5 l and 5 l, sterilizable	●	●
	20 3001 30 Bottle Stand , for suction bottle 1.5 l or irrigation bottle 1 l	●	●
	26173 BN Suction and Irrigation Tube , with lateral holes, anti-reflex surface, with two-way stopcock for single-hand control, size 5 mm, length 36 cm	●	●
	26173 VG Puncture Needle , for sterile infusion solution 1 l, sterilizable, working length 22 cm	-	-
	860015 B Puncture Needle , for sterile infusion solution 500 ml, sterilizable, working length 18 cm	-	-
	26 3100 50 Irrigation Liquid Bottle , 1 l, sterilizable	-	-

Adata punkcijai
Sterilių infuzinių tirpalų buteliams
p. 1.18; p. 1.18.1

Uterine Cannula, Uterine Grasping Forceps

for laparoscopy and pertubation

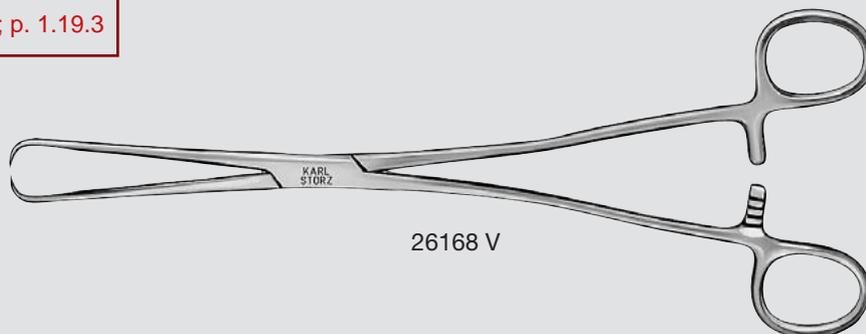


Fiksatorius žnyplėms
p. 1.19.2

26168 UN

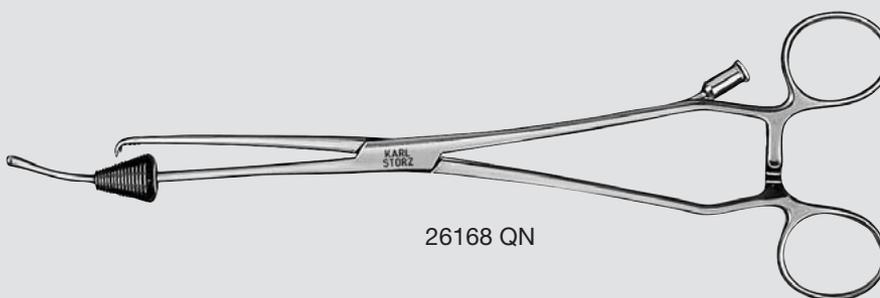
COHEN **Uterine Cannula**, with 1 large cone 26168 UL and small cone 26168 US, spring-loaded fixation for Uterine Tenaculum Forceps 26168 V, with LUER-Lock adaptor for cleaning

Kaniulė gimdai
Cohen tipo
Komplektuojama su: dideliu
ir mažu kūgiais
p. 1.19; p. 1.19.1; p. 1.19.3



26168 V

26168 V **Uterine Tenaculum Forceps**,
length 22 cm



26168 QN



26168 QB **QUINONES Uterine Grasping Forceps**,
blunt jaws, with 1 large and small cone,
with channel for pertubation, length 24 cm



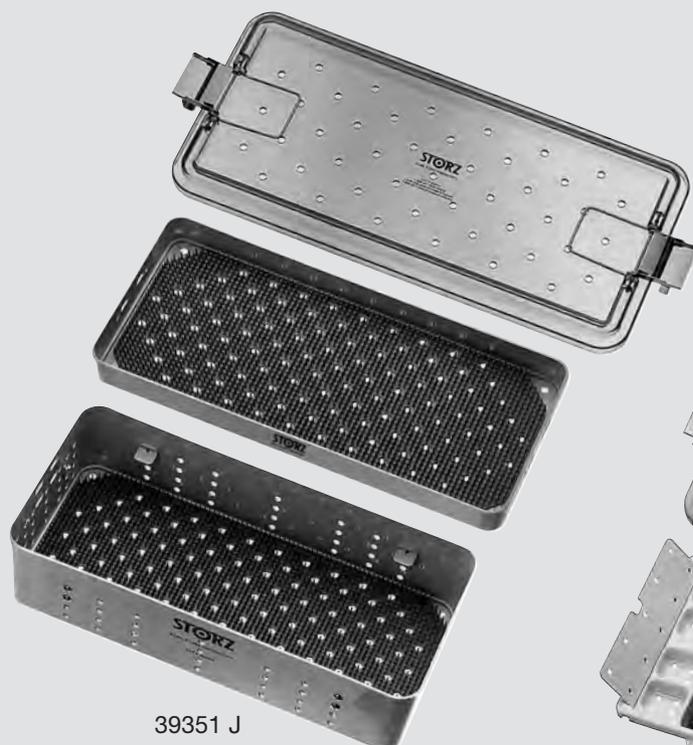
26168 QN **QUINONES-NEUBUESER Uterine Grasping Forceps**,
toothed jaws, with 1 large and small cone,
with channel for pertubation, length 24 cm

■ 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.



Konteineris
Dviejų aukštų
Su silikoniniais kilimėliais
Skirtas įvairių instrumentų rinkinių
apuošimui bei laikymui.
p. 1.20; p. 1.20.1; p. 1.20.2;
p. 1.20.3;

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

Hopkins Rubina 30 laips., NIR/ICG, skersmuo 10 mm, ilgis 31 cm, autoklavuojama.

p. 2.8.1; p. 2.8.3; p. 2.8.4; p. 2.8.6

p. 3.10.1; p. 3.10.3; p.3.10.4; p. 3.10.6

NIR/ICG optikos

p. 2.8; p. 2.8.5;

p. 3.10; p. 3.10.5

NIR/ICG Telescopes:

- 26003ARA **HOPKINS® RUBINA™ 0°**, NIR/ICG, diameter 10 mm, 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, diameter 10 mm, 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, diameter 10 mm, 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 **Same**, length 42 cm
- 26046ARA **HOPKINS® RUBINA™ 0°**, NIR/ICG, diameter 5 mm, 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
- 26046BRA **HOPKINS® RUBINA™ 30°**, NIR/ICG, diameter 5 mm, 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
- 26046FRA **HOPKINS® RUBINA™ 45°**, NIR/ICG, diameter 5 mm, 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

TIPCAM®1 Rubina™

- 26606ACA **TIPCAM®1 RUBINA™**, OPAL1® NIR/ICG, 4K/3D, direction of view 0°, diameter 10 mm, length 32 cm, **autoclavable**, including video connecting cable
- 26606BCA **TIPCAM®1 RUBINA™**, OPAL1® NIR/ICG, 4K/3D, direction of view 30°, diameter 10 mm, length 32 cm, **autoclavable**, including video connecting cable

IMAGE1 S™ 4U Rubina™ System Components

- TC201 **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 and digital Image Processing Module, power supply 100-120 VAC/200-240 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, S-Technologies available, progressive scan, low-temperature sterilization, 2 freely programmable camera head buttons, for use with IMAGE1 S™ 4U-LINK
- TL400 **Cold Light Fountain POWER LED RUBINA™**, with high-performance light unit for perfusion assessment and standard endoscopic diagnosis, including a LED and a KARL STORZ light cable connection, power supply 100-125/220-240 VAC, 50/60 Hz including:
Mains Cord
Patch Cable
Sync Connecting Cable
- UF101 **One-Pedal Footswitch**, one-stage

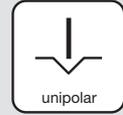
Dissecting and Grasping Forceps

- 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



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

Double action jaws

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



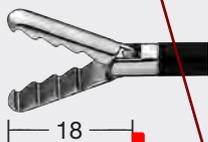
CLICK'line Dissecting and Grasping Forceps, jaws right-angled

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



CLICK'line REDDICK-OLSEN Dissecting and Grasping Forceps, robust

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



CLICK'line Dissecting and Grasping Forceps, "alligator jaws"

Žnyplės. Griebimui. Su jungtimi monopolinei koaguliacijai. Abi judančios žiaunos. Darbinė dalis 18 mm. Dydis 5 mm. Ilgis 36 cm. Su rankena be užrakto. p. 3.17; p. 3.17.1; p. 3.17.2; p. 3.17.3; p. 3.17.4; p. 3.17.5; p. 3.17.6; p. 3.17.7

Dissecting and Grasping Forceps

CLICK*liné* – rotating, dismantling, insulated,

- with connector pin for unipolar coagulation

Size 5 mm

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

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

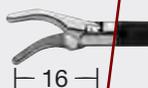


Length	Handle					
	33151	33152	33153	33156	33121	33149
30 cm						
36 cm						
43 cm						

Žnyplės. Kelly tipo. Griebimui ir disekcijai. Abi judančios žiaunos. Žiaunų ilgis 22 mm. Dydis 5 mm. Ilgis 36 cm. Su jungtimi monopolinei koaguliacijai. Su plastikine rankena be užrakto.
p. 3.18; p. 3.18.1; p. 3.18.2; p. 3.18.3; p. 3.18.4; p. 3.18.5; p. 3.18.6; p. 3.18.7; p. 3.18.8

Double action jaws

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



CLICK*liné* KELLY Dissecting and Grasping Forceps

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



CLICK*liné* KELLY Dissecting and Grasping Forceps, long

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

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

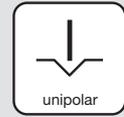
33310 NO	33351 NO	33352 NO	33353 NO	33356 NO	33321 NO	33349 NO
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CLICK*liné* NOSHIRO Dissecting and Grasping Forceps, short jaws, fine, for dissection

Dissecting and Grasping Forceps

- CLICK^{liné} – rotating, dismantling, insulated,
- with connector pin for unipolar coagulation



Size 5 mm

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

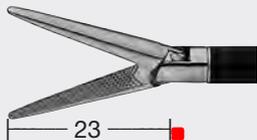
Operating instruments, length 43 cm, for use with telescopes with inbuilt working channel and trocars size 6 mm

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

Žnyplės. Disekcijai. Abi judančios žiaunos. Žiaunų ilgis 23 mm. Dydis 5 mm. Ilgis 36 cm. Su rankena ir jungtimi monopolinei koaguliacijai. p. 3.19; p. 3.19.1; p. 3.19.2; p. 3.19.3; p. 3.19.4; p. 3.19.5; p. 3.19.6

Double action jaws

Working Insert	Complete Instrument					
33310 MH	33351 MH	33352 MH	33353 MH	33356 MH	33321 MH	33349 MH



CLICK^{liné} Dissecting and Grasping Forceps, atraumatic

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



CLICK^{liné} Dissecting and Grasping Forceps, atraumatic

Žnyplės. Atraumatinės. Griebimui. Dydis 5 mm. Ilgis 36 cm. Darbinė dalis 17 mm. Su jungtimi monopolinei koaguliacijai. Su rankena be užrakto. p. 3.26; p. 3.26.1; p. 3.26.2; p. 3.26.3; p. 3.26.4; p. 3.26.5; p. 3.26.6; p. 3.26.7

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



CLICK^{liné} Dissecting and Grasping Forceps, "dolphin nose"

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



CLICK^{liné} REDDICK-OLSEN Dissecting and Grasping Forceps

Scissors

- CLICK^{liné} – 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

Žirklių įdėklas. Metzenbaum tipo. Dydis 5 mm. Ilgis 36 cm. Daugkartinis. p. 3.21; p. 3.21.1; p. 3.21.2; p. 3.21.3; p. 3.21.4

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

Žirklys. Metzenbaum tipo. Rotuojamos, išrenkamos Su jungtimi monopolinei koaguliacijai. Ašmenų dydis 15 mm. Dydis 5 mm. Movos ilgis 36 cm. Su rankena be užrakto. p. 3.20; p. 3.20.1; p. 3.20.2; p. 3.20.3; p. 3.20.4 p. 3.20.5; p. 3.20.6; p. 3.20.7

Double action jaws

Working Insert

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



CLICK^{liné} METZENBAUM Scissors, curved

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



CLICK^{liné} Scissors, serrated blades, spoon-shaped, curved

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



CLICK^{liné} Scissors, serrated, curved, conical

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



CLICK^{liné} Scissors, straight

Suction and Irrigation Tubes

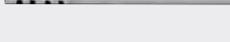
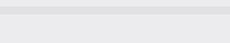
■ **Size 5 mm**

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**

Apiplovimo - siurbimo rankena.
Siurbimo kanalo dydis 5 mm.
Siurbimo vamzdelio ilgis 36 cm.
p. 3.27; p. 3.27.1; p. 3.27.2

Length	Instrument
30 cm	
■ 36 cm	
43 cm	

Distal End	Instrument
	26172 BN
	26173 BN
	26174 BN
	26173 BL
	26173 BK

Suction and Irrigation Tube, anti-reflex surface, with lateral holes, with two-way stopcock for single-hand control

Suction and Irrigation Tube, anti-reflex surface, with two-way stopcock for single-hand control, with two female LUER-lock connectors

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

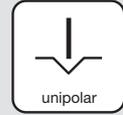
Dissecting and Grasping Forceps

- CLICK^{linē} – rotating, dismantling, insulated,
- with connector pin for unipolar coagulation

Size 5 mm

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

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



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

Žnyplės. Griebimui. Su jungtimi monopolinei koaguliacijai. Abi judančios žiaunos. Darbinė dalis 37 mm. Dydis 5 mm. Ilgis 36 cm. Su rankena su užraktu. p. 3.28; p. 3.28.1; p. 3.28.2; p. 3.28.3; p. 3.28.4; p. 3.28.5; p. 3.28.6; p. 3.28.7

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^{linē} BABCOCK Grasping Forceps, atraumatic, fenestrated

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^{linē} Bowel Grasper, fenestrated

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^{linē} Bowel Grasper, fenestrated, short

33310 UK	33351 UK	33352 UK	33353 UK	33356 UK	33321 UK	33349 UK
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CLICK^{linē} KOH Urethra Grasping Forceps, insulated jaws, concave inwardly curved jaws, continuously toothed

Needles, Injection Needles

Size 3.5 mm

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



26167 GN

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



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

Punkcinė adata. Ilgis 36 cm.
Darbinė dalis 1.6 mm.
p. 3.31; p. 3.31.1; p. 3.31.2

■ **Suction and Irrigation Tubes**



Size 3.5 mm

Operating instruments, **lengths 20 and 36 cm**, for use **with trocars size 3.5 mm**

Length	Instrument
20 cm	
36 cm	

Distal End	Instrument
	26167 ANS
	26167 ANL

Suction and Irrigation Tube, with lateral holes, for use with handles for irrigation and suction

■ **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
	37260 LH
	37360 LH
	37460 LH
	37360 SC
	37360 CP

Suction and Irrigation Tube, with lateral holes

Suction and Irrigation Tube

Suction and Irrigation Tube, for puncture and suction of cysts

Siurbimo kaniulė. Ilgis 36 cm. Darbinė dalis 5 mm.
p. 3.32; p. 3.32.1; p. 3.32.3

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

Fan Retractors

Size 5 mm

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

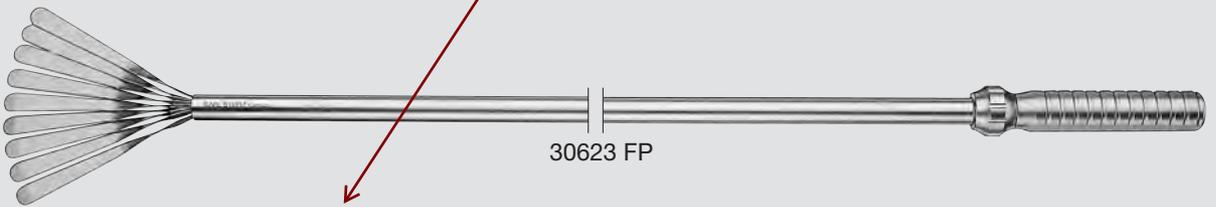


30623 F

Fan Retractor, dismantling, retractable,
size 5 mm, length 36 cm, opening angle in
extended position approx. 16°

■ Size 10 mm

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

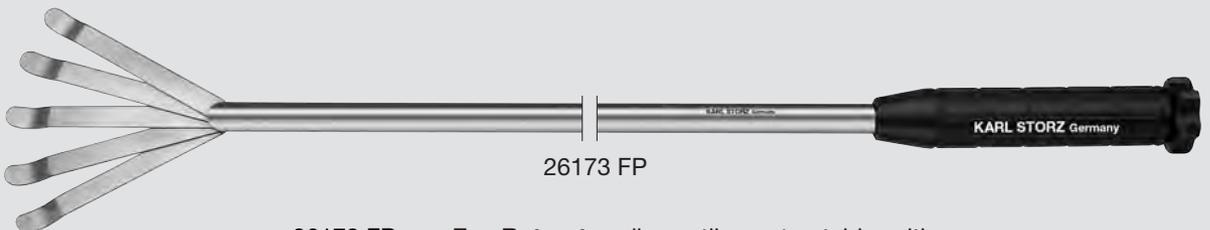


30623 FP

Fan Retractor, dismantling, retractable,
size 10 mm, length 36 cm, opening angle in
extended position approx. 60°

Size 12 mm

Operating instrument, **length 36 cm**,
for use **with trocars size 13 mm**



26173 FP

Fan Retractor, dismantling, retractable, with
proximal rotating wheel for expansion, size 12 mm,
length 36 cm, opening angle in extended position
approx. 60°

Components/Spare Parts see chapter 18

■ Plastic Handles

for Dissecting and Grasping Forceps, insulated, with large contact area,

- CLICK'liné – rotating, with connector pin for unipolar coagulation



Plastic Handles, insulated, with and without ratchets, with large contact area at the finger ring – made of high-quality plastics



33151 **CLICK'liné Plastic Handle, without ratchet, with large contact area at the finger ring**



33152 **CLICK'liné Plastic Handle, with ratchet, with large contact area at the finger ring**



33153 **CLICK'liné Plastic Handle, with hemostat style ratchet, with large contact area at the finger ring**



33156 **CLICK'liné Plastic Handle, with disengageable ratchet, with large contact area at the finger ring**

Instrumento rankena. Tinkanti siūlo miems monopoliniams instrumentams. Be užrakto. p. 3.34; p. 3.34.1; p. 3.34.2

Instrumento rankena. Tinkanti siūlo miems monopoliniams instrumentams. Užrakinama p. 3.35; p. 3.35.1; p. 3.35.2

Example for TH121

1. Define your favorite camera head buttons configuration in the „Head button“ menu within the live menu

Galima iřsaugoti 4 f-jas.

