STEMA

ENDOSCOPY
STEMA PRODUCTS





UNITS



WWW.STEMA-MEDIZINTECHNIK.DE

ABOUT US

SINCE 20 YEARS

EXPORT IN +70 COUNTRIES

MADE IN GERMANY

+ 10.000 PRODUCTS

LOCATED IN THE WORLD CENTER FOR MEDICAL TECHNOLOGY

CERTIFICATED

STEMA Medizintechnik GmbH is certified in accordance with the highest standards:
- EN ISO 13485:2016 + AC:2018 + A11:2021- ISO 13485:2016
- EU 2017/745 **(MDR)**
- Council Directive 93/42/EEC Annex II excluding Section 4
- Council Directive 93/42/EEC Annex V excluding Section 3
- FDA

These standards create an essential base for our company and our partners. They also symbolize the commitment and strive to keep up the quality of our products.

STEMA

PRODUCT RANGE

The current product range of STEMA Medizintechnik GmbH includes more than 10.000 different items.
We cover the following areas in surgery with high quality products:

ARTHROSCOPY
CARDIAC MIS
CONTAINER-SYSTEMS
ENT
GASTROENTEROLOGY
GYNAECOLOGY
HF-SURGERY
HOLDING SYSTEMS
LAMINECTOMY
LAPAROSCOPY
MICRO MOTOR SYSTEMS
PROCTOSCOPY
SPINE-SURGERY
TITANIUM PLATING SYSTEM
UNITS
UROLOGY



STEMA

CONTENT UNITS

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1. CAMERAS

1.1 | STEMA ECO SERIES
1/2" CMOS HD CAMERA
TV-ADAPTOR

1.2 | STEMA PRO SERIES
1/3" CMOS FULL HD CAMERA
3 CMOS FULL HD CAMERA
4K ULTRA HD CAMERA
TV-ADAPTOR

1.3 | STEMA PRO 2S SERIES
1/3" CMOS FULL HD CAMERA
3 CMOS FULL HD CAMERA
4K ULTRA HD CAMERA

1.4 | ACCESSORIES

1.5 | INFORMATION RECORDING MODULES

1.1 CAMERAS | STEMA ECO SERIES



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1.1 | STEMA ECO SERIES
1/2" CMOS HD CAMERA

- **Full HD imaging**
- **Intuitive multilingual menu**
- **High-speed shutter**
- **8 configurable endoscope presets**



CA-001-027

Ordering No.	Description
CA-001-027	STEMA ECO HD PRO

Technical data

Control unit

Image resolution	Full HD 1920 × 1080 (1080p)
TV resolution	> 900 lines
Sensitivity	< 3 Lux (1/1.4)
White balance	Automatic (data hold)
Shutter speed	1/50 to 1/10.000 s
Video output	HDMI, DVI, SDI, Video
Recording	Image format: JPG (1920 × 1080)
Interfaces	Video format: Full HD (1920 × 1080) Storage: USB-A USB-A (e.g. USB keyboard), Remote IN (e.g. footswitch), 2 × RJ45 (Service)
Voltage range	100–240 V (25 VA)
Frequency	50/60 Hz
Dimensions	360 × 125 × 351 mm (W × H × D)
Weight	4.5 kg
Device protection	2 × T3, 15 A
Protection class (acc. IEC 60601-1)	I
Safety class	BF
IP code	IP20
Standard	IEC 60601-1-2
Device classification (EU) 2017/745, Annex VIII	I

Camera head (with 3 push buttons)

Aspect ratio	16:9
Image sensor	**1/2" CMOS**
Dimensions	38 × 79 mm (D x L)
Weight	180 g
Features	Double programmable

Delivery contains
Camera control unit, camera head with cable (3.05 m), operating manual, cables: power cord, HDMI-DVI, HDMI

1.1 | STEMA ECO SERIES
TC ADAPTOR

All STEMA TV adaptors are immersible and with a C-Mount (standardized threaded connection) for optimal compatibility.



Ordering No.	Description
CD-001-019	Beam splitter, f = 18 mm



Ordering No.	Description
CD-001-021	TV **HD** adaptor, f = 28 mm
CD-001-024	TV **HD** adaptor, f = 28 mm
CD-001-034	TV **HD** adaptor, f = 28 mm
CD-001-023	TV **HD** adaptor, f = 28 mm



Ordering No.	Description
CD-001-046	TV **HD** adaptor, f = 18 mm



Ordering No.	Description
CD-001-037	TV **HD Zoom** adaptor (automatic coupling) f = 15–35 mm

1.2 CAMERAS | STEMA PRO SERIES



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1.2 | STEMA PRO SERIES
1/3" CMOS FULL HD CAMERA

- **Full HD imaging**
- **High-speed shutter**
- **2.5 × digital zoom**
- **Freeze & boost functions**
- **Optional image & video capture**



CA-001-012



CA-001-014

Ordering No.	Description
CA-001-012	STEMA PRO 1
CA-001-014	STEMA PRO 1 CAPTURE

Technical data

Control Unit

Image resolution	Full HD 1920 × 1080
TV resolution	> 1000 lines
Sensitivity	< 3 Lux (1/1.4)
White balance	Automatic (data hold)
Shutter speed	1/50 (1/60) to 1/10.000 sec
Video output	HDMI, Y-Pb-Pr (component), Video (PAL/NTSC), S-Video (PAL/NTSC), 2 × HD SDI (optional)
Recording (capture version only)	Image format: JPG (1920 × 1080) Video format: Full HD (1920 × 1080, H.264); image rate 60 fps, Storage: USB-A
Interfaces	USB-A (e.g. USB keyboard), Remote IN (e.g. footswitch), Remote OUT (e.g. video printer, video recorder), RJ45 (Service)
Voltage range	100–240 V (25 VA)
Frequency	50/60 Hz
Dimensions	355 × 103 × 253 mm (W × H × D)
Weight	4.5 kg
Device protection	2 × T3, 15 A
Protection class (acc. IEC 60601-1)	I
Safety class	BF
IP code	IP20
Standard	IEC 60601-1-2
Device classification (EU) 2017/745, Annex VIII	I

Camera head (with push buttons)

Aspect ratio	16:9
Image sensor	**1/3" CMOS**
Immersible	Yes (using the attached cap)
Dimensions	34 × 73 mm (D × L)
Weight	105 g

Delivery contains
Camera control unit, camera head with cable (3.05 m), operating manual, cables: power cord, HDMI-DVI, HDMI

1.2 | STEMA PRO SERIES
3 CMOS FULL HD CAMERA

- **Full HD imaging**
- **High-speed shutter**
- **2.5 × digital zoom**
- **Freeze & boost functions**
- **Optional image & video capture**



CA-001-013



CA-001-015

Ordering No.	Description
CA-001-013	STEMA PRO 2
CA-001-015	STEMA PRO 2 CAPTURE

Technical data

Control Unit

Image resolution	Full HD 1920 × 1080
TV resolution	> 1000 lines
Sensitivity	< 3 Lux (1/1.4)
White balance	Automatic (data hold)
Shutter speed	1/50 (1/60) to 1/100.000 sec
Video output	2 × HD-SDI, 1 × HDMI/DVI, Y-Pb-Pr (component), Y/C (PAL/NTSC), CVBS (PAL/NTSC)
Recording (capture version only)	Image format: JPG (1920 × 1080) Video format: Full HD (1920 × 1080, H.264); image rate 60 fps, Storage: USB-A
Interfaces	USB-A (e.g. USB keyboard), Remote IN (e.g. footswitch), Remote OUT (e.g. video printer, video recorder), RJ45 (Service)
Voltage range	100–240 V (25 VA)
Frequency	50/60 Hz
Dimensions	360 × 125 × 351 mm (W × H × D)
Weight	4.5 kg
Device protection	2 × T3, 15 A
Protection class (acc. IEC 60601-1)	I
Safety class	BF
IP code	IP20
Standard	IEC 60601-1, IEC 60601-1-2
Device classification (EU) 2017/745, Annex VIII	I

Camera head (with push buttons)

Aspect ratio	16:9
Image sensor	**3 × 1/3" CMOS**
Immersible	Yes (using the attached cap)
Dimensions	38.5 × 81 mm (D × L)
Weight	145 g

Delivery contains
Camera control unit, camera head with cable (3.05 m), operating manual, cables: power cord, HDMI-DVI, HDMI, Y/C, BNC

1.2 | STEMA PRO SERIES
4K ULTRA HD CAMERA

- 4K UHD resolution
- Zoom, freeze & smoke reduction
- Image enhancement of colour and structure
- 10 User presets for surgical application
- Intuitive multilingual menu
- Optional image & video capture



CA-001-016



CA-001-017

Ordering No.	Description
CA-001-016	STEMA FOUR K PRO 1+
CA-001-017	STEMA FOUR K PRO 1++ CAPTURE

Technical data

Control Unit

Image resolution	Ultra HD 3840 × 2160
TV resolution	1600 lines
Signal-to-noise ratio	54 dB
White balance	Automatic (data hold)
Video output	HDMI 4K (3840 × 2160), HDMI Full HD (1920 × 1080), SDI 4K (4 x BNC- 3840 × 2160), SDI Full HD (BNC- 1920 × 1080)
HDMI output	3840 × 2160, 59.94p, 3840 × 2160, 50p, 1920 × 1080, 59.94p, 1920 × 1080, 59.94i, 1920 × 1080, 50 p, 1920 × 1080, 50i
SDI output	3840 × 2160, 59.94p, 3840 × 2160, 50p, 1920 × 1080, 59.94p, 1920 × 1080, 59.94i, 1920 × 1080, 50p, 1920 × 1080, 50i
Voltage range	100–240 V (60 VA)
Frequency	50/60 Hz
Dimensions	360 × 125 × 351 mm (W × H × D)
Weight	6.2 kg
Device protection	2 × T3, 15 A
Protection class (acc. IEC 60601-1)	I
Safety class	BF
IP code	IP20
Standard	IEC 60601-1, IEC 60601-1-2
Device classification (EU) 2017/745, Annex VIII	I

Camera head 4K (with 4 push buttons)

Aspect ratio	16:9
Image sensor	**3 × 1/3" CMOS**
Immersible	Yes (using the attached cap)
Dimensions	43 × 85.7 mm (D × L)
Weight	500 g

Delivery contains
Camera control unit, camera head with cable (3.05 m), operating manual, cables: power cord, HDMI

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1.2 | STEMA PRO SERIES
OPTIONAL 4K CAMERA HEAD



Ordering No.	Description
CA-001-029	**CAMERA HEAD FULL HD 3 CMOS** Image sensor ..... **3 × 1/3" CMOS** (progressive) Sensor resolution ..... 3840 × 2160 Aspect ratio ..... 16:9 Buttons ..... 4 Push buttons Weight ..... Approx. 500 g Diameter ..... 43 mm Length ..... 85.7 mm

1.2 | STEMA PRO SERIES
TV ADAPTER

All STEMA TV adaptors are immersible and with a C-Mount (standardized threaded connection) for optimal compatibility.



Ordering No.	Description
CD-001-019	Beam splitter, f = 18 mm



Ordering No.	Description
CD-001-021	TV **HD** adaptor, f = 28 mm
CD-001-024	TV **HD** adaptor, f = 28 mm
CD-001-034	TV **HD** adaptor, f = 28 mm
CD-001-023	TV **HD** adaptor, f = 28 mm



Ordering No.	Description
CD-001-046	TV **HD** adaptor, f = 18 mm



Ordering No.	Description
CD-001-037	TV **HD Zoom** adaptor (automatic coupling) f = 15–35 mm

1.2 | STEMA PRO SERIES
TV ADAPTOR | 4K ULTRA HD CAMERA

All STEMA TV adaptors are immersible and with a C-Mount (standardized threaded connection) for optimal compatibility.



Ordering No.	Description
CD-001-040	TV **4K** adaptor, f = 14 mm
CD-001-050	TV **4K** adaptor, **rotating**, f = 14 mm
CD-001-041	TV **4K** adaptor, f = 18 mm
CD-001-051	TV **4K** adaptor, **rotating**, f = 18 mm
CD-001-042	TV **4K** adaptor, f = 22 mm
CD-001-052	TV **4K** adaptor, **rotating**, f = 22 mm
CD-001-043	TV **4K** adaptor, f = 25 mm
CD-001-053	TV **4K** adaptor, **rotating**, f = 25 mm
CD-001-044	TV **4K** adaptor, f = 28 mm
CD-001-054	TV **4K** adaptor, **rotating**, f = 28 mm



Ordering No.	Description
CD-001-045	TV **4K Zoom** adaptor, f = 15–30 mm
CD-001-055	TV **4K Zoom** adaptor, **rotating**, f = 15–30 mm

1.3 CAMERAS | STEMA PRO 2S SERIES



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1.3 | STEMA PRO 2S SERIES
1/3" CMOS FULL HD CAMERA

- **Full HD imaging**
- **Full HD image capture via USB**
- **Automatic gain control (AGC)**
- **Dynamic contrast enhancement**
- **Integrated smoke reduction**
- **Selective Colour Enhancement (SCE)**
- **Grid removal function**
- **Camera presets for multiple disciplines**
- **MIS-Bus interface**



CA-001-040

Ordering No.	Description
CA-001-040	STEMA PRO 2S+ | Camera control unit

Technical data

Control Unit

Image resolution ..... Full HD 1920 × 1080

Video output ..... 2 × DVI, 2 × HD-SDI

Interfaces ..... MIS-Bus, 2 × Remote IN (e.g. footswitch), 2 × Remote OUT (e.g. video printer, video recorder), 2 × USB (e.g. USB keyboard)

Voltage range ..... 100–240 V AC

Current consumption ..... 0.8–0.4 A

Frequency ..... 50/60 Hz

Dimensions ..... 295 × 100 × 355 mm (W × H × D)

Weight ..... 4.39 kg

Protection class (acc. IEC 60601-1) I

Directive compliance ..... CE-mark

IP code IP21

Standard ..... IEC 60601-1-2

Device classification (EU) 2017/745, Annex VIII I

Camera Heads ..... All matching camera heads as well as the corresponding technical data please find on **page 19**

Delivery contains

Camera control unit, operating manual, cables: power cord, MIS-Bus, DVI, stereo jack

1.3 | STEMA PRO 2S SERIES
FULL HD CAMERA HEADS



Ordering No.	Description
CA-001-041	**CAMERA HEAD FULL HD ZOOM** Image sensor ..... **1/3" CMOS** (progressive) Sensor resolution ..... 1920 × 1080, 50/60 p Function keys ..... 3 programmable, illuminated keys Endo coupler ..... Standard ocular, lockable Parafocal zoom ..... f = 14.25–28 mm Connection plug ..... Waterproof Reprocessing ..... STERRAD® compatible Length cable ..... 3.5 m Dimensions ..... 39 × 40 × 134 mm (W × H × D) Weight ..... 210 g



Ordering No.	Description
CA-001-042	**CAMERA HEAD FULL HD FIX FOCAL LENGTH** Image sensor ..... **1/3" CMOS** (progressive) Sensor resolution ..... 1920 × 1080, 50/60 p Function keys ..... 3 programmable, illuminated keys Endo coupler ..... Standard ocular, lockable Parafocal zoom ..... f = 14.25 Connection plug ..... Waterproof Reprocessing ..... STERRAD® compatible Length cable ..... 3.5 m Dimensions ..... 39 × 40 × 134 mm (W × H × D) Weight ..... 200 g



Ordering No.	Description
CA-001-043	**CAMERA HEAD FULL HD 90° ANGLED** Image sensor ..... **1/3" CMOS** (progressive) Sensor resolution ..... 1920 × 1080, 50/60 p Function keys ..... 3 programmable, illuminated keys Endo coupler ..... Standard ocular, lockable Parafocal zoom ..... f = 14.25 Connection plug ..... Waterproof Reprocessing ..... STERRAD® compatible Length cable ..... 3.5 m Dimensions ..... 57 × 52 × 165 mm (W × H × D) Weight ..... 190 g

1.3 | STEMA PRO 2S SERIES
3 CMOS FULL HD CAMERA

- **Full HD imaging**
- **Full HD image and video capture via USB**
- **Picture out of picture mode (POP)**
- **Colour Shift 1 + 2**
- **Selective Colour Enhancement (SCE)**
- **Smoke reduction**
- **Grid removal**
- **MIS-Bus interface**
- **Automatic light control**



CA-001-050

Ordering No.	Description
CA-001-050	STEMA PRO 2S++ | Camera control unit

Technical data

Control Unit

Image resolution	Full HD 1920 × 1080
Video output	2 × DVI (1080 p), 2 × 3G-SDI (1080 i)
Interfaces	MIS-Bus, 2 × Remote IN (e.g. foot switch), 2 × Remote OUT (e.g. video printer, video recorder), 2 × USB
Voltage range	100–240 V AC
Current consumption	0.8–0.4 A
Frequency	50/60 Hz
Dimensions	295 × 100 × 355 mm (W × H × D)
Weight	5.7 kg
Standard	IEC 60601-1, IEC 60601-1-2
Directive compliance	CE-mark
Protection class (acc. IEC 60601-1)	I
IP code	IP21
Device classification (EU) 2017/745, Annex VIII	I
Classification as per IEC/CISPR 11	Group 1 Class B

Camera Heads ..... All matching camera heads as well as the corresponding technical data please find on **page 21-22**

Delivery contains
Camera control unit, operating manual, cables: power cord, MIS-Bus, DVI, stereo jack

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1.3 | STEMA PRO 2S SERIES
FULL HD CAMERA HEADS



Ordering No.	Description
CA-001-041	**CAMERA HEAD FULL HD ZOOM** Image sensor ..... **1/3" CMOS** (progressive) Sensor resolution ..... 1920 × 1080, 50/60 p Function keys ..... 3 programmable, illuminated keys Endo coupler ..... Standard ocular, lockable Parafocal zoom ..... f = 14.25–28 mm Connection plug ..... Waterproof Reprocessing ..... STERRAD® compatible Length cable ..... 3.5 m Dimensions ..... 39 × 40 × 134 mm (W × H × D) Weight ..... 210 g



Ordering No.	Description
CA-001-042	**CAMERA HEAD FULL HD FIX FOCAL LENGTH** Image sensor ..... **1/3" CMOS** (progressive) Sensor resolution ..... 1920 × 1080, 50/60 p Function keys ..... 3 programmable, illuminated keys Endo coupler ..... Standard ocular, lockable Parafocal zoom ..... f = 14.25 Connection plug ..... Waterproof Reprocessing ..... STERRAD® compatible Length cable ..... 3.5 m Dimensions ..... 39 × 40 × 134 mm (W × H × D) Weight ..... 200 g



Ordering No.	Description
CA-001-043	**CAMERA HEAD FULL HD 90° ANGLED** Image sensor ..... **1/3" CMOS** (progressive) Sensor resolution ..... 1920 × 1080, 50/60 p Function keys ..... 3 programmable, illuminated keys Endo coupler ..... Standard ocular, lockable Parafocal zoom ..... f = 14.25 Connection plug ..... Waterproof Reprocessing ..... STERRAD® compatible Length cable ..... 3.5 m Dimensions ..... 57 × 52 × 165 mm (W × H × D) Weight ..... 190 g

1.3 | STEMA PRO 2S SERIES
FULL HD CAMERA HEADS

*This camera head (1/3" CMOS) can be used with the control units **CA-001-050** and **CA-001-060** only.*
*Can be used only in connection with an **additional TV Adaptor (page 25).***



Ordering No.	Description
CA-001-055	**CAMERA HEAD FULL HD (AUTOCLAVABLE)** Image sensor ..... **1/3" CMOS** (progressive) Sensor resolution ..... 1920 × 1080, 50/60 p Function keys ..... 3 programmable, illuminated keys Connection plug ..... Waterproof Reprocessing ..... AUTOCLAVABLE Length cable ..... 3.5 m Weight ..... 230 g **TECHNICAL DATA ENDOCOUPLER** Focal length ..... 13–29 mm Maximum weight ..... 150 g Interface endoscope ..... Snap-on mechanism



Ordering No.	Description
CA-001-054	**CAMERA HEAD FULL HD 3 CMOS ZOOM** Image sensor ..... **3 × 1/3" CMOS** (progressive) Sensor resolution ..... 3 × 1920 × 1080, 50/60 p Function keys ..... 3 programmable, illuminated keys Endo coupler ..... Standard ocular, lockable Parafocal zoom ..... f = 14.25–28 mm Connection plug ..... Waterproof Reprocessing ..... STERRAD® compatible Length cable ..... 3.5 m Weight ..... 330 g

1.3 | STEMA PRO 2S SERIES
4K ULTRA HD CAMERA

- **4K UHD imaging (3840 × 2160, 50/60p)**
- **BT2020 colour space**
- **USB image and video capture**
- **4K UHD and Full HD camera heads**
- **Picture out of picture mode (POP)**
- **Colour shift 1 + 2**
- **Selective Colour Enhancement (SCE)**
- **Smoke reduction**
- **Grid removal**
- **MIS-Bus interface**



CA-001-060

Ordering No.	Description
CA-001-060	STEMA PRO 2S 4K | Camera control unit

Technical data

Control Unit

Image resolution	4K Ultra HD (3840 × 2160)
Video Outputs	4 × 3G-SDI (3840 × 2160p, 50/60p) 2 × 3G-SDI, 2 × DVI **(HDMI requires video signal converter CF-003-046)**
Interfaces	MIS-Bus, 2 × Remote IN (e.g. foot switch) 2 × Remote OUT (e.g. video printer, video recorder), 2 × USB
Supply voltage	100–240 V
Current consumption	50/60 Hz
Frequency	1.2–0.5 A
Dimensions	295 × 129.5 × 355 mm
Weight	Approx. 7 kg
Standard	IEC 60601-1, IEC 60601-1-2
Directive compliance	CE-mark
Protection class (acc. IEC 60601-1)	I
IP code	IP21
Device classification (EU) 2017/745, Annex VIII	I
Classification as per IEC/CISPR 11	Group 1 Class B

Camera head ..... All matching camera heads as well as the corresponding technical data please find on **page 24-26**

Delivery contains
Camera control unit, operating manual, cable: power cord, MIS-Bus, DVI, stereo jack

1.3 | STEMA PRO 2S SERIES
4K ULTRA HD CAMERA HEAD

- **4K Ultra HD imaging**
- **Large UHD colour space**
- **3 CMOS sensor**
- **2 × optical zoom (plus 3 × digital zoom)**
- **Unique lockable endoscope connection**
- **STERRAD compatible**



CA-001-061

Ordering No.	Description
CA-001-061	Camera head zoom STEMA PRO 2S 4K

Technical data

Camera Head

Image sensor	**3 × 1/3" CMOS** progressive scan
Function buttons	3 individually programmable and illuminated buttons
Endocoupler	For standard ocular, lockable
Parafocal zoom	f = 14.25–28 mm
Waterproof connection plug	Yes
Lockable endoscope connection	Yes
Length camera cable	3.5 m
Weight	330 g
Dimensions (incl. endocoupler)	39 × 40 × 134 mm (W × H × D)
Applied part as per IEC 60601-1	Type CF defibrillation-proof

Delivery contains
Camera head, operating manual, cable: power cord

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1.3 | STEMA PRO 2S SERIES
FULL HD CAMERA HEADS



Ordering No.	Description
CA-001-041	**CAMERA HEAD FULL HD ZOOM** Image sensor ..... **1/3" CMOS** (progressive) Sensor resolution ..... 1920 × 1080, 50/60 p Function keys ..... 3 programmable, illuminated keys Endo coupler ..... Standard ocular, lockable Parafocal zoom ..... f = 14.25–28 mm Connection plug ..... Waterproof Reprocessing ..... STERRAD® compatible Length cable ..... 3.5 m Dimensions ..... 39 × 40 × 134 mm (W × H × D) Weight ..... 210 g



Ordering No.	Description
CA-001-042	**CAMERA HEAD FULL HD FIX FOCAL LENGTH** Image sensor ..... **1/3" CMOS** (progressive) Sensor resolution ..... 1920 × 1080, 50/60 p Function keys ..... 3 programmable, illuminated keys Endo coupler ..... Standard ocular, lockable Parafocal zoom ..... f = 14.25 Connection plug ..... Waterproof Reprocessing ..... STERRAD® compatible Length cable ..... 3.5 m Dimensions ..... 39 × 40 × 134 mm (W × H × D) Weight ..... 200 g



Ordering No.	Description
CA-001-043	**CAMERA HEAD FULL HD 90° ANGLED** Image sensor ..... **1/3" CMOS** (progressive) Sensor resolution ..... 1920 × 1080, 50/60 p Function keys ..... 3 programmable, illuminated keys Endo coupler ..... Standard ocular, lockable Parafocal zoom ..... f = 14.25 Connection plug ..... Waterproof Reprocessing ..... STERRAD® compatible Length cable ..... 3.5 m Dimensions ..... 57 × 52 × 165 mm (W × H × D) Weight ..... 190 g

1.3 | STEMA PRO 2S SERIES
CAMERA HEADS | STEMA PRO 2S 4K

*This camera head (1/3" CMOS) can only be used with the control units **CA-001-050** and **CA-001-060** and in connection with an **additional TV Adaptor.***





Ordering No.	Description
CA-001-055	**CAMERA HEAD FULL HD (AUTOCLAVABLE)** Image sensor ..... **1/3" CMOS** (progressive) Sensor resolution ..... 1920 × 1080, 50/60 p Function keys ..... 3 programmable, illuminated keys Connection plug ..... Waterproof Reprocessing ..... AUTOCLAVABLE Length cable ..... 3.5 m Weight ..... 230 g **TECHNICAL DATA ENDOCOUPLER** Focal length ..... 13–29 mm Maximum weight ..... 150 g Interface endoscope ..... Snap-on mechanism



Ordering No.	Description
CA-001-054	**CAMERA HEAD FULL HD 3 CMOS ZOOM** Image sensor ..... **3 × 1/3" CMOS** (progressive) Sensor resolution ..... 3 × 1920 × 1080, 50/60 p Function keys ..... 3 programmable, illuminated keys Endo coupler ..... Standard ocular, lockable Parafocal zoom ..... f = 14.25–28 mm Connection plug ..... Waterproof Reprocessing ..... STERRAD® compatible Length cable ..... 3.5 m Weight ..... 330 g

CAMERA HEAD COMPATIBILITIES

	CAMERAS		
	 CA-001-040	 CA-001-050	 CA-001-060
CAMERA HEADS			
CA-001-041 CAMERA HEAD FULL HD **ZOOM** 	✓	✓	✓
CA-001-042 CAMERA HEAD FULL HD **FIX FOCAL LENGTH** 	✓	✓	✓
CA-001-043 CAMERA HEAD FULL HD **90 ° ANGLED** 	✓	✓	✓
CA-001-055 CAMERA HEAD FULL HD **WITH ENDOCOUPLER** 		✓	✓
CA-001-054 CAMERA HEAD FULL HD **3 CMOS ZOOM** 		✓	✓
CA-001-061 CAMERA HEAD **4K** UHD **ZOOM** 			✓

1.4 | ACCESSORIES



Ordering No.	Description
CD-010-003	Keyboard waterproof, **German layout**
CD-010-004	Keyboard waterproof, **US layout**



Ordering No.	Description
CD-010-005	Foot switch



Ordering No.	Description
CD-010-006	USB stick (32 GB)



Ordering No.	Description
CD-010-007	Basket used for camera heads

1.5 | INFORMATION RECORDING MODULE

The information concerns the recording modules of the following cameras:
STEMA ECO / **STEMA PRO 1** / **STEMA PRO 2** / **STEMA FOUR K PRO 1**

Recording time (approximately)			
MPEG4 (H.264)	1920 × 1080p / 60fps	1920 × 1080p / 60fps	1920 × 1080p / 60fps
BIT rate	**24 Mbps** (*best quality*)	**12 Mbps**	**4 Mbps**
USB-Stick- 4GB	22 minutes	45 minutes	2 hours 15 Minutes
USB-Stick- 16GB	1 hour 30 minutes	3 hours	9 hours
USB-Stick- 32GB	3 hours	6 hours	18 hours
USB-Stick- 64GB	6 hours	12 hours	36 hours
USB-Stick- 128GB	12 hours	24 hours	72 hours
USB-Stick- 256GB	24 hours	48 hours	144 hours

The information concerns the recording modules of the following cameras:
STEMA PRO 2S+ / **STEMA PRO 2S++** / **STEMA PRO 2S 4K**

Recording time (approximately)			
MPEG4 (H.264)	1920 × 1080p / 60fps	1920 × 1080p / 60fps	1920 × 1080p / 60fps
BIT rate	**24 Mbps** (*best quality*)	**12 Mbps**	**4 Mbps**
USB-Stick- 4GB	20 minutes	44 minutes	2 hours 10 Minutes
USB-Stick- 16GB	1 hour 25 minutes	3 hours	9 hours
USB-Stick- 32GB	3 hours	6 hours	18 hours
USB-Stick- 64GB	6 hours	12 hours	36 hours
USB-Stick- 128GB	12 hours	24 hours	72 hours
USB-Stick- 256GB	24 hours	48 hours	144 hours

2. LIGHT SOURCES

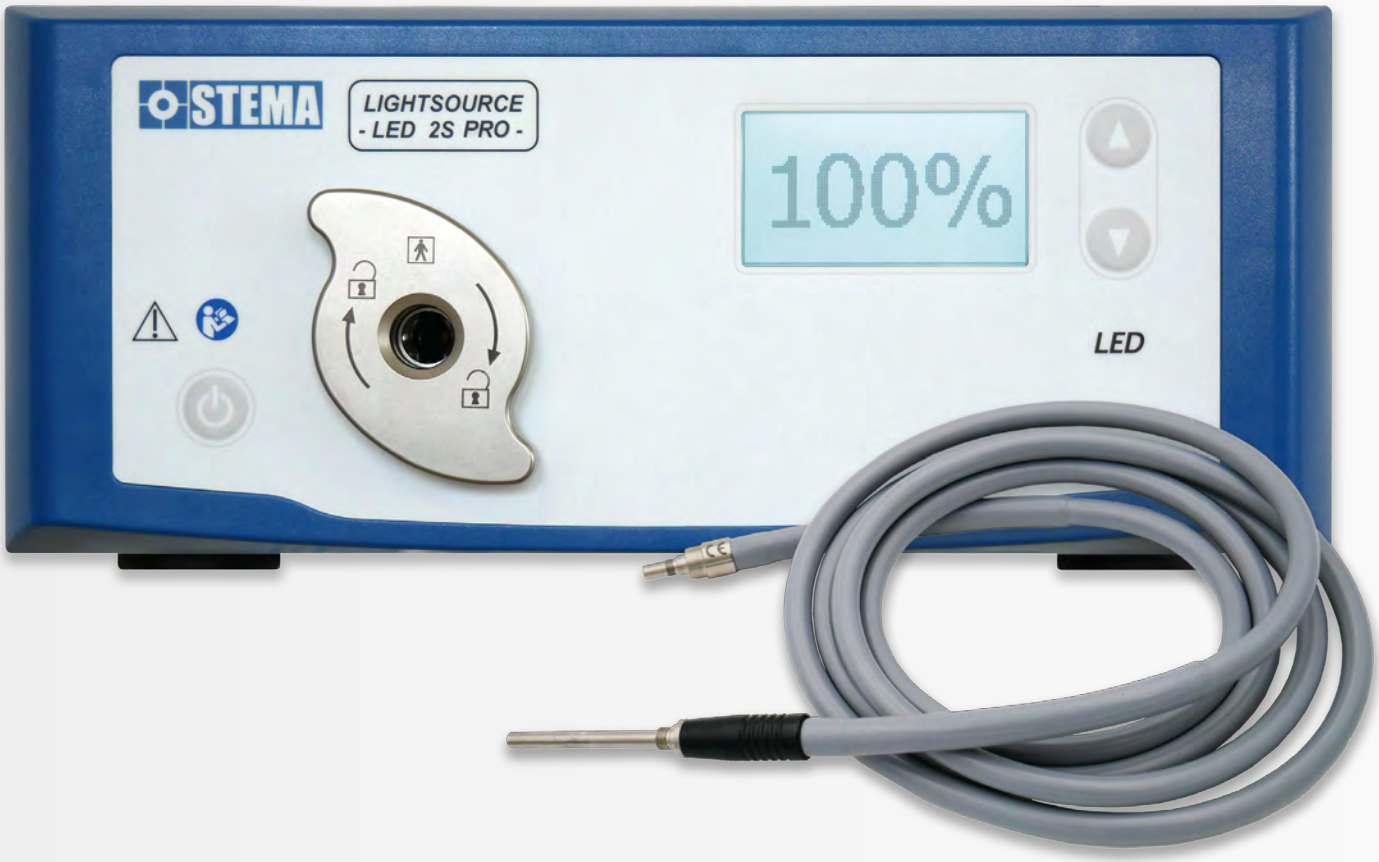
2.1 | LED LIGHT SOURCES
STEMA LED 1
STEMA LED 2 | 2T
STEMA LED 2S
STEMA LED 2S PRO

2.2 | LIGHT GUIDES

2.3 | ADAPTORS FOR LIGHT GUIDES
SCOPE SIDE
UNIT SIDE

2.4 | SPARE LAMPS XENON AND HALOGEN

2. LIGHT SOURCES



2.1 | LED LIGHT SOURCES
STEMA LED 1

- **Low noise**
- **Daylight quality**
- **Low heat conduction**
- **Electronic light control via buttons**
- **Waterproof control panel**



CB-004-002

Ordering No.	Description
CB-004-002	STEMA LED 1 | Light source control unit

Technical data

Control Unit

Lamp	LED 2500
Colour temperature	Approx. 6500 K
Colour rendering index (CRI)	70
Lifetime	> 20.000 h
Setting light intensity	Automatic and manual
Light guide connection	STEMA, Storz
Video In	1 × Video (BNC)
Other connections	RJ45 (Service)
Supply voltage	100–240 V AC
Power consumption	130 VA
Frequency	50/60 Hz
Fuse	2 × T3.15 A
Dimensions	360 × 125 × 251 mm (W × H × D)
Weight	Approx. 5 kg
Standard	IEC 60601-1-2
Protection class (acc. IEC 60601-1)	I
Safety class	BF
IP code	IP20
Device classification (EU) 2017/745, Annex VIII	I

Delivery contains
Light source control unit, operating manual, cables: power cord, BNC (optional)

ACCESSORIES



CK-001-012
High performance fiber optic light cable
Ø 4.8 mm, length 230 cm



CK-010-001
Fiber optic light cable adaptor, scope side
STEMA, Storz, Olympus, Stryker



CK-010-011
Fiber optic light cable adaptor, unit side
STEMA, Storz

2.1 | LED LIGHT SOURCES
STEMA LED 2 | LED 2T

- **High intensity light source**
- **Low noise**
- **Daylight quality**
- **Low heat conduction**
- **Electronic light control via buttons**
- **Waterproof control panel**



CB-005-007



CB-005-008

Ordering No.	Description
CB-005-007	STEMA LED 2 | Light source control unit
CB-005-008	STEMA LED 2T with turret adaptor | Light source control unit

Technical data

Control Unit

Lamp	LED 3000
Colour temperature	6500 K
Colour rendering index (CRI)	70
Lifetime	> 20.000 h
Setting light intensity	Automatic and manual
Light guide connection	CB-005-007: STEMA, Storz CB-005-008: Turret adaptor: Wolf, ACMI, Olympus, Storz
Video In	1 × Video (BNC)
Other connections	RJ45 (Service)
Supply voltage	100–240 V AC
Power consumption	130 VA
Frequency	50/60 Hz
Fuse	2 × T6.3 A
Dimensions	355 × 120 × 340 mm (W × H × D)
Weight	10 kg
Standard	IEC 60601-1, IEC 60601-1-2
Protection class (acc. IEC 60601-1)	I
Safety class	BF
IP code	IP20
Device classification (EU) 2017/745, Annex VIII	I

Delivery contains
Light source control unit, operating manual, cables: power cord, BNC (optional)

ACCESSORIES



CK-001-012
High performance fiber optic light cable
Ø 4.8 mm, length 230 cm



CK-010-001
Fiber optic light cable adaptor, scope side
STEMA, Storz, Olympus, Stryker



CK-010-011
Fiber optic light cable adaptor, unit side
STEMA, Storz

2.1 | LED LIGHT SOURCES
STEMA LED 2S PRO

- **Outstanding light quality with CRI> 90 for best colour rendering**
- **Light output comparable to 300 W Xenon**
- **Fully automatic light control**
- **LCD display showing luminance level**
- **Very silent device only producing 25 dB of noise**
- **Multi light guide adaptor to STEMA, Storz, Wolf, Olympus light guides**



CB-005-006

Ordering No.	Description
CB-005-006	STEMA LED 2S PRO | Light source control unit

Technical data

Control Unit

Lamp	High power white light LED
Colour temperature	5600 K
Colour rendering index (CRI)	> 90
Lifetime	> 20.000 h
Luminous flux	1420 lm
Noise rate	25 dB
Light guide connection	STEMA, Storz, Wolf, Olympus
Interfaces	MIS-Bus
Supply voltage	100–240 V AC
Power consumption	Approx. 140 W
Frequency	50/60 Hz
Dimensions	295 × 130 × 355 mm (W × H × D)
Weight	5 kg

Standard	IEC 60601-1, IEC 60601-1-2
Directive compliance	CE-mark
Protection class (acc. IEC 60601-1)	I
Applied part as per IEC 60601-1	Type CF defibrillation-proof
IP code	IP21
Device classification (EU) 2017/745, Annex VIII	I
Applicable EU guidelines	Class I medical device
Classification as per IEC/CISPR 11	Group 1 Class B

Delivery contains
Light source control unit, operating manual, cable: power cord

ACCESSORIES


CK-001-012
High performance fiber optic light cable
Ø 4.8 mm, length 230 cm


CK-010-001
Fiber optic light cable adaptor, scope side
STEMA, Storz, Olympus, Stryker


CK-010-011
Fiber optic light cable adaptor, unit side
STEMA, Storz

2.2 | LIGHT GUIDES

All STEMA fiber optic light cables have (compared to conventional fiber optic light cables) 20 % higher light transmission and improved temperature resistance.
*Furthermore our fiber optic light cables are **disinfectable** as well as **autoclavable**.*



Ordering No.	Description	Diameter	Length
CK-002-011	Glass fibre light guide, flexible	Ø 4.8 mm	**180 cm**
CK-002-012	Glass fibre light guide, flexible	Ø 4.8 mm	**230 cm**
CK-002-013	Glass fibre light guide, flexible	Ø 4.8 mm	**300 cm**



Ordering No.	Description	Diameter	Length
CK-004-001	Y-Glass fibre light guide 2 × instrument side	Ø 3.5–5 mm	**180 cm**
CK-004-002	Y-Glass fibre light guide 2 × instrument side	Ø 3.5–5 mm	**230 cm**
CK-004-003	Y-Glass fibre light guide 2 × instrument side	Ø 3.5–5 mm	**300 cm**

STEMA

2.2 | LIGHT GUIDES

All STEMA fiber optic light cables have (compared to conventional fiber optic light cables) 20% higher light transmission and improved temperature resistance.
*Furthermore our fiber optic light cables are **disinfectable** as well as **autoclavable**.*



Ordering No.	Description	Diameter	Length
CK-001-005	High performance fiber optic light cable	Ø 2.8 mm	**180 cm**
CK-001-007	High performance fiber optic light cable	Ø 2.8 mm	**300 cm**
CK-001-001	High performance fiber optic light cable	Ø 3.5 mm	**180 cm**
CK-001-002	High performance fiber optic light cable	Ø 3.5 mm	**230 cm**
CK-001-003	High performance fiber optic light cable	Ø 4.8 mm	**300 cm**
CK-001-011	High performance fiber optic light cable	Ø 4.8 mm	**180 cm**
CK-001-012	High performance fiber optic light cable	Ø 4.8 mm	**230 cm**
CK-001-013	High performance fiber optic light cable	Ø 4.8 mm	**300 cm**
CK-001-014	High performance fiber optic light cable	Ø 4.8 mm	**350 cm**

2.3 | ADAPTORS FOR LIGHT GUIDES
SCOPE SIDE



Adaptor pieces to
use with endoscope



Ordering No.	Description
CK-010-001	Fiber optic light cable adaptor, scope side **STEMA/STORZ/OLYMPUS/STRYKER**



Ordering No.	Description
CK-010-002	Fiber optic light cable adaptor, scope side **WOLF/HSW**



Ordering No.	Description
CK-010-003	Fiber optic light cable adaptor, scope side **ACMI**



Ordering No.	Description
CK-010-021	Scope adaptor **STORZ**



Ordering No.	Description
CK-010-022	Scope adaptor **WOLF**

2.3 | ADAPTORS FOR LIGHT GUIDES
UNIT SIDE



Adaptor pieces to use with light source



Ordering No.	Description
CK-010-011	Fiber optic light cable adaptor, unit side **STEMA/STORZ**
CK-010-015	Fiber optic light cable adaptor (Xenon only), unit side **STEMA/STORZ**



Ordering No.	Description
CK-010-012	Fiber optic light cable adaptor, unit side **WOLF/HSW**
CK-010-016	Fiber optic light cable adaptor (Xenon only), unit side **WOLF/HSW**



Ordering No.	Description
CK-010-013	Fiber optic light cable adaptor, unit side **ACMI/STRYKER**
CK-010-017	Fiber optic light cable adaptor (Xenon only), unit side **ACMI/STRYKER**



Ordering No.	Description
CK-010-014	Fiber optic light cable adaptor, unit side **OLYMPUS**
CK-010-018	Fiber optic light cable adaptor (Xenon only), unit side **OLYMPUS**

2.4 | SPARE LAMPS FOR XENON LIGHT SOURCES

The light sources STEMA 110M/100A, 180M/180A, 24M, 250, 150 are not available anymore.
Spare lamps for these devices are still available.

Ordering No.	Description
CJ-001-001	Spare lamp for xenon light sources **STEMA 100M** and **STEMA 100A**
CJ-001-002	Spare lamp for xenon light sources **STEMA 180M** and **STEMA 180A**
CJ-001-003	Spare lamp for xenon light sources **STEMA 300M** and **STEMA 300A**
CJ-001-004	Spare lamp for xenon light sources **STEMA 24M**

Ordering No.	Description
CJ-001-011	Spare lamp for halogen light sources **STEMA 250**
CJ-001-012	Spare lamp for halogen light sources **STEMA 150**

3. ICG

3.1 | ICG CAMERA SYSTEM
CAMERA CONTROL UNIT
CAMERA HEAD

3.2 | ICG LIGHT SOURCE
LIGHT SOURCE CONTROL UNIT
LIGHT GUIDES

ICG CAMERA SYSTEM & LIGHT SOURCE



4K Imaging

ICG Fluorescence

NIR & Visible light

High-Power LED Source

3.1 | ICG CAMERA SYSTEM
CAMERA CONTROL UNIT

- **Advanced colour management system**
- **Four imaging modes**
- **Gradient fluorescence imaging**
- **Protocol control support**
- **ISP 5.0 advanced image processing**
- **Real-time autofocus algorithm**



CA-001-070

Ordering No.	Description
CA-001-070	STEMA 4K VISION PRO | ICG camera control unit

Technical data

Control Unit

Image resolution	3840 × 2160 and 1920 × 1080
Video output	3G-SDI OUT, HDMI OUT, DVI OUT, DP OUT, 12G-SDI OUT, 12G-SDI OUT (4 × 3G-SDI OUT)
Video input	3G-SDI IN, HDMI In, Audio In
Recording	3840 × 2160, 30 fps or 1920 × 1080, 60 Hz (H.264 Codec)
Interfaces	RS-232, RJ45, Equipotential interface, Endoscope interface, 4 × USB 2.0, USB 3.0, 2 × HCOM (light source control)
Imaging modes	Fusion, grayscale, white light, fluorescence
Image processing feature	Gradient fluorescence visualization, ISP 5.0 image processing, real-time autofocus
Image adjustment	White balance, brightness, contrast, sharpness, digital noise reduction (DNR), gamma control
Advanced image adjustment	Gamma, hue, gain, chroma, detail filter, dark-improve, de-highlight, de-fog, RDE image capture: JPG/BMP 3840 × 2160
Exposure & Intelligence	APAE (Automatic Peripheral Area Exposure), AGD (Auto Gaze Detection)
Zoom & display	Zoom+ (X1.0 to X5.0), Zoom- (X0.5 to X1.0) , optical zoom (X0.5 to X2.3) Flip (horizontal/vertical/mirror), dual view (multi-layout display)
Fluorescence	F-Light display mode (full/split screen) F-Light fusion colour adjustment Fluorescence intensity labeling Fluorescence brightness/contrast/chroma/gain (1–10)
User interaction	Touch screen interaction Camera head keys Support OSD screen menu and prompt tone
User interface	New patient, surgical application, user mode, file management, accessories, F-Mode, footswitch control

3.1 | ICG CAMERA SYSTEM
CAMERA CONTROL UNIT

Ordering No.	Description
CA-001-070	STEMA 4K VISION PRO | ICG camera control unit

Technical data

System control	Switch settings (programmable camera keys), light source control, video quality modes (4 presets)
Operating temperature	5 °C to 40 °C
Operating Humidity	< 90%
Voltage range	100–240 V AC
Power consumption	80 W or less
Frequency	50/60 Hz
Storage & Transportation	Temperature: -20 ° to 55 °C Humidity: 20–80 % (non-condensation) Air pressure: 700–1060 hPa
Dimension	345 × 139.7 × 338 mm (W × H × D)
IP code	IP21

Delivery contains
ICG camera control unit, operating manual, cables: power cord, HDMI

3.1 | ICG CAMERA SYSTEM
CAMERA HEAD

- **Variable focal length module inside**
- **F 14-32 mm optical zoom**
- **Switch between long shot and close-up backside illuminated CMOS sensor**
- **4K resolution of 3840 × 2160 pixels**
- **IPX8 protection**
- **Dual-sensor fluorescence technology**
- **Adaptive auto-exposure**
- **Optional autofocus camera**



CA-001-071

Ordering No.	Description
CA-001-071	STEMA 4K VISION PRO | ICG camera head

Technical data

Image sensor	4 × 1/2.8" CMOS
Sensor resolution	Visible: 3840 × 2160, 50/60p Infrared: 1920 × 1080, 50/60 p
TV resolution	> 1800 lines
Aspect ratio	16:9
Scanning mode	Progressive
SNR	50 dB
Image processing	Gain: OFF Gamma: standard DNR: High
Lens function	Variable focal length & auto focus
Focal length	14–32 mm
Fluorescence optics	Prisms dual sensor
Camera buttons	4 Buttons with short press and long press function
Operating temperature	5 °C to 40 °C
Operating humidity	< 90 %
Dimensions	143 × 53 × 52 mm (W × H × D)
Weight	263 g (without cable)
Camera cable length	2.9 m
Degree of protection	IPX8

Delivery contains
ICG camera head, operating manual, cables: power cord, HDMI

3.2 | ICG LIGHT SOURCE
LIGHT SOURCE CONTROL UNIT

- **785 Nm fluorescence light**
- **High colour rendering index**
- **Low consumption LED light source**
- **Service life of 30.000 h**
- **Provides stable light source continuously**
- **Supports touch screen operation and linkage**



CB-005-010

Ordering No.	Description
CB-005-010	STEMA VISION ICG | ICG light source

Technical data

Control Unit

Visible light source	LED module
Fluorescence light source	LED module
Fluorescence wavelength	785 Nm ± 5 Nm
Adjustment range of brightness	5 % ~ 100 %
Beam full divergence	Visible light: 65 ± 10°
	Fluorescence light: 65 ± 0°
Lamp power	Visible light bulb: 30.000 h
	Fluorescence light bulb: 20.000 h
Lamp supply voltage	Visible light LED: ≤ 16 V
	Fluorescence light LED: ≤ 5 V
Lamp lifetime	Visible light LED: ≤ 90 W
	Fluorescence light LED: ≤ 50 W
Operating mode	Continuous running
Continuous operating time	Continuous working for 10 days
Power supply	100–240 V
Frequency	50/60 Hz
Power consumption	160 VA
Fuse	T2AL250V
Dimensions	338 × 345 × 139.7 mm (W × H × D)
Weight	7.3 kg
Protection class	Class I
Electrical protection rating	Type CF (the front end of light guide cable is type CF applied part)
IP rating	IPX0

Delivery contains
ICG Light source, operating manual, cables: power cord, HDMI

STEMA

3.2 | ICG LIGHT SOURCE
LIGHT GUIDES

Ordering No.	Description	Diameter	Length
CK-001-062	ICG glass fibre light guide	Ø 3.5 mm	**230 cm**
CK-001-063		Ø 3.5 mm	**300 cm**
CK-001-064		Ø 3.5 mm	**350 cm**
CK-001-052		Ø 4.8 mm	**230 cm**
CK-001-053		Ø 4.8 mm	**300 cm**
CK-001-054		Ø 4.8 mm	**350 cm**



4. COMBINATION

4.1 | CAMERA + LIGHT SOURCE

COMBINATION



STEMA

4.1 | COMBINATION
CAMERA + LIGHTSOURCE

- **Full HD resolution**
- **Multifunctional system**
- **Camera and light source**
- **Image and video recording**
- **Multilingual menu**
- **8 endoscope presets available**



CE-003-005

Ordering No.	Description
CE-003-005	STEMA COMBI UNIT PRO | 1 CMOS camera + 80 W LED light source

Technical data

Control Unit

Image resolution	Full HD 1920 × 1080 (1080p)
TV resolution	> 900 lines
Sensitivity	< 3 Lux (1/1.4)
White balance	Automatic (data hold)
Video output	HDMI, DVI, SDI, Video
Recording	Image format: JPG (1920 × 1080) Video format: Full HD (1920 × 1080) Storage: USB-A
Interfaces	USB-A (e.g. USB keyboard), Remote IN (e.g. footswitch), RJ45 (Service)
Lamp	LED, comparable 50 W
Light guide connection	STEMA, STORZ
Voltage range	100–240 V (95 VA)
Frequency	50/60 Hz
Dimensions	295 × 128 × 278 mm (W × H × D)
Weight	Approx. 3 kg
Device protection	2 × T3, 15 A
Protection class (acc. IEC 60601-1)	I
Safety class	BF
IP code	IP20
Standard	IEC 60601-1-2
Device classification (EU) 2017/745, Annex VIII	I

Camera head (with 3 push buttons)

Aspect ratio	16:9
Image sensor	**1/2" CMOS**
Dimensions	38 × 79 mm (D × L)
Weight	180 g
Features	Programmable and double allocable

Please find the accessories for our light sources on **pages 35-38**

Delivery contains
Combination control unit, camera head with cable (3.05 m), operating manual, cables: power cord, HDMI-DVI, HDMI

5. INSUFFLATORS

5.1 | INSUFFLATORS
STEMA FLOW 20
STEMA FLOW 20-H
STEMA FLOW 30
STEMA FLOW 30-H
STEMA FLOW 45
STEMA FLOW 45-H

5.2 | ACCESSORIES

5.3 | SURGICAL SMOKE EVACUATION

INSUFFLATORS





STEMA

5.1 | INSUFFLATORS STEMA FLOW
STEMA FLOW 20 | STEMA FLOW 20-H

- **Full automatic**
- **Filter system for sterility**
- **Gas flow up to 20 liters / minute**
- **Microprocessor controlled**



CC-001-002



CC-001-012

Ordering No.	Description
CC-001-002	STEMA FLOW 20
CC-001-012	STEMA FLOW 20-H | with system gas heater

Technical data

Gas	Carbon dioxide (medical)
Gas flow	Max. 20 l/min.
Gas connection	UNF 7/16"
Insufflation pressure	0–30 mmHg
Power supply	100–240 VAC,
Frequency	50/60 Hz
Power consumption	**STEMA FLOW 20: 25–40 VA** **STEMA FLOW 20H: 25–105 VA**
Device protection	2 × T3, 15 A
Dimensions	355 × 105 × 253 mm (W × H × D)
Weight	6.7 kg
Protection class (aa. IEC 60601-1)	I
Safety class	BF
IP code	IP20
Standard	IEC 60601-1, IEC 60601-1-2
Device classification (EU) 2017/745, Annex VIII	IIb

*Please find the accessories for our insufflators on **pages 56-60***

Delivery contains CC-001-002 + CC-001-012:
Insufflator control unit, CO^2 high pressure tube with UNF to German gas connection, wrench set SW17/SW30, sterile filter, silicone tube, operating manual, cable: power cord. **CC-001-012: additionally system gas heater with silicone tube set**

5.1 | INSUFFLATORS STEMA FLOW
STEMA FLOW 30 | STEMA FLOW 30-H



CC-001-003



CC-001-013

- **Full automatic**
- **Filter system for sterility**
- **Gas flow up to 30 liters / minute**
- **Microprocessor controlled**

Ordering No.	Description
CC-001-003	STEMA FLOW 30
CC-001-013	STEMA FLOW 30-H | with system gas heater

Technical data

Gas	Carbon dioxide (medical)
Gas flow	Max. 30 l/min.
Gas connection	UNF 7/16"
Insufflation pressure	0–30 mmHg
Power supply	100–240 VAC,
Frequency	50/60 Hz
Power consumption	**STEMA FLOW 30: 25–40 VA** **STEMA FLOW 30-H: 25–105 VA**
Device protection	2 × T3, 15 A
Dimensions	355 × 105 × 253 mm (W × H × D)
Weight	6.7 kg
Protection class (aa. IEC 60601-1)	I
Safety class	BF
IP code	IP20
Standard	IEC 60601-1, IEC 60601-1-2
Device classification (EU) 2017/745, Annex VIII	IIb

*Please find the accessories for our insufflators on **pages 55-59***

Delivery contains CC-001-003 + CC-001-013:
Insufflator control unit, CO^2 high pressure tube with UNF to German gas connection, wrench set SW17/SW30, sterile filter, silicone tube, operating manual, cable: power cord. **CC-001-013: additionally system gas heater with silicone tube set**

5.1 | INSUFFLATORS STEMA FLOW
STEMA FLOW 45 | STEMA FLOW 45-H



CC-001-004



CC-001-014

- **Full automatic**
- **Filter system for sterility**
- **Gas flow up to 45 liters / minute**
- **Microprocessor controlled**

Ordering No.	Description
CC-001-004	STEMA FLOW 45
CC-001-014	STEMA FLOW 45-H | with system gas heater

Technical data

Gas	Carbon dioxide (medical)
Gas flow	Max. 45 l/min.
Gas connection	UNF 7/16"
Insufflation pressure	0–30 mmHg
Power supply	100–240 VAC,
Frequency	50/60 Hz
Power consumption	**STEMA FLOW 45: 25–40 VA** **STEMA FLOW 45-H: 25–105 VA**
Device protection	2 × T3, 15 A
Dimensions	355 × 105 × 253 mm (W × H × D)
Weight	6.7 kg
Protection class (aa. IEC 60601-1)	I
Safety class	BF
IP code	IP20
Standard	IEC 60601-1, IEC 60601-1-2
Device classification (EU) 2017/745, Annex VIII	IIb

*Please find the accessories for our insufflators on **pages 55-59***

Delivery contains CC-001-003 + CC-001-013:
Insufflator control unit, CO^2 high pressure tube with UNF to German gas connection, wrench set SW17/SW30, sterile filter, silicone tube, operating manual, cable: power cord. **CC-001-014: additionally system gas heater with silicone tube set**

5.2 | ACCESSORIES

Ordering No.	Description
CJ-002-001	Gas heater for insufflators, autoclavable



Ordering No.	Description
CJ-002-002	Silicone tubing set, length 2.5 m, autoclavable



Ordering No.	Description
CJ-002-003	Silicone tubing set, for use with system gas heater, length 2.5 m, autoclavable





Ordering No.	Description
CJ-002-004	Sterile filters, 1 box = 50 pieces
CJ-002-019	Sterile filters, 1 box = 100 pieces

5.2 | ACCESSORIES

Ordering No.	Description
CJ-002-008	High pressure tube (CO^2) for STEMA insufflators, connections: **UNF/GER**, length 1 m



Ordering No.	Description
CJ-002-012	High pressure tube (CO^2) for STEMA insufflators, connections: **DIN GER/DIN GER**, length 1 m



Ordering No.	Description
CJ-002-014	High pressure tube (CO^2) for STEMA insufflators, connections: **UNF/UNF**, length 1 m



Ordering No.	Description
CJ-002-031	Membrane for high pressure reducer, insufflators

5.2 | ACCESSORIES

Ordering No.	Description
CJ-002-016	High pressure tube (CO^2) for STEMA insufflators, connections: **UNF/GER**, length 1 m



Ordering No.	Description
CJ-002-018	High pressure tube (CO^2) for STEMA insufflators, connections: **UNF/ISO**, length 1 m



Ordering No.	Description
CJ-002-026	Gas bottle (CO^2), connection: **GER,** 0.75 kg
CJ-002-027	Gas bottle (CO^2), connection: **PIN index**, 0.75 kg



5.3 | SURGICAL SMOKE EVACUATION

- **Ideal flow for physician offices and outpatient surgery centers**
- **Customizable filter life**
- **Compact shelf design**
- **3-port filter with filter life tracking technology**



CG-005-015

Ordering No.	Description
CG-005-015	Smoke evacuation system

Technical data

Flow control	Variable 1–10 Steps, in step of 1
OFF time delay control	Setting from off to 10 sec, in step of 1 sec
Footswitch activation	Standard pneumatic
Remote control activation	RF sensor in range 350–600 kHz
Noise level, dBA	55 dB
Filter status	Green | New Orange | Middle >16 h Red | High >33 h Violet | Service 40 h
Vaccum level	Yes, bargraph
Choice of three programs	1. Open tubing, 100% maximal flow 2. Electrosurgical pencil attachment, integrated smoke evacuation pencil, 85% maximal flow 3. Laparoscopic tubing, 75 % maximal flow
Choice of activation method	Footswitch, display, remote control
Motor static suction	21 kPa
Power supply	220–240 V
Frequency	50/60 Hz
Input power	Max: 460 VA (PF = 0.5) Standby: 6 VA (PF = 0.4)
Fuses	230 V, 2 × T6.3A
Dimensions	370 × 144 × 375 mm (W × H × D)
Weight	10 kg
Standard	EN 60601-1
Protection class	I

Delivery contains
Smoke evacuation system control unit, operating manual, cable: power cord

5.3 | SURGICAL SMOKE EVACUATION
ACCESSORIES



Ordering No.	Description
CG-005-016	Pneumatic footswitch used for the smoke evacuation system



Ordering No.	Description
CG-005-017	Clip cable used for the smoke evacuation system



Ordering No.	Description
CG-005-018	Liquid trap for smoke evacuation system



Ordering No.	Description
CJ-005-100	Laparoscopic smoke evacuation tubing set, suction regulator used for **CG-005-015**, 3 m, LL-connection, Ø 22 mm, 1 box = 22 pieces

6. SUCTION-IRRIGATION SYSTEMS

6.1 | IRRIGATION PUMPS
STEMA HYS | URO | ARTHRO
STEMA I
ACCESSORIES

6.2 | SUCTION-IRRIGATION PUMPS
STEMA PRO 2S
ACCESSORIES

SUCTION-IRRIGATION SYSTEMS



STEMA

6.1 | IRRIGATION PUMP
STEMA HYS / URO / ARTHRO

- **Full automatic**
- **Performance according to indication**
- **Exact pressure measuring**
- **Highest safety and user comfort**



CG-001-001

Ordering No.	Description
CG-001-001	STEMA HYS | Irrigation pump for Hysterescopy
CG-001-002	STEMA URO | Irrigation pump for Urology
CG-002-001	STEMA ARTHRO | Irrigation pump for Arthroscopy

Technical data

Irrigation ..... **STEMA HYS: max. 500 ml/min**
STEMA URO: max. 1000 ml/min
STEMA ARTHRO: max. 1.500ml/min

Pressure range ..... **STEMA HYS: 10–200 mmHg**
STEMA URO: 10–150 mmHG
STEMA ARTHRO: 10–150 mmHG

Power supply ..... 100–240 VAC or 220–240 VAC
Frequency ..... 50/60 Hz
Power consumption ..... 90 VA max.

Dimensions ..... 304 × 115 × 345 mm (W × H × D)
Weight ..... Approx. 7.0 kg

Protection class (aa. IEC 60601-1) I
Safety Class ..... BF
Certificates ..... CE, DIN EN 60601-1:2005

Please find the accessories for our irrigation pumps on pages 64-65.

Delivery contains
Pump control unit, silicone tubing set autoclavable, 2 × fuses, operating manual, cable: power cord

6.1 | IRRIGATION PUMP
STEMA I

- **Full automatic**
- **Irrigation capacity up to 3 l/min**
- **Suction capacity up to 3 l/min**
- **Highest safety and user comfort**



CG-003-001

Ordering No.	Description
CG-003-001	STEMA I

Technical data

Irrigation ..... Max. 3.000 ml/min
Suction ..... Max. 3.000 ml/min
Pressure range ..... 0–750 mmHg

Power supply ..... 100–240 V AC or 220–240 V AC
Frequency ..... 50/60 Hz
Power consumption ..... 36 W

Dimensions ..... 300 × 93 × 260 mm (W × H × D)
Weight ..... 6.5 kg

Protection class (aa. IEC 60601-1) I
Safety Class ..... BF
Certificates ..... CE, IEC 601-1, EN 60601-1, 93/42 ECC

Please find the accessories for our irrigation pumps on **pages 64-65**

Delivery contains
Pump, pneumatic manual control incl. double lumen connection tube, double adaptor, silicone tubing set autoclavable, 2 × fuses, operating manual, cable: power cord

6.1 | ACCESSORIES
STEMA HYS/URO/ARTHRO | STEMA I



Ordering No.	Description
CJ-005-005	Euro power cord, 2 m



Ordering No.	Description
CJ-005-006	Fuse T 400 mA, 5 x 20, 1 box = 10 pieces



Ordering No.	Description
CJ-005-012	Pneumatic hand control, autoclavable



Ordering No.	Description
CJ-005-011	Silicone tubing set, autoclavable

6.1 | ACCESSORIES
STEMA HYS/URO/ARTHRO | STEMA I



Ordering No.	Description
CJ-005-023	Pressure measuring chamber for **CG-001-001**, **CG-001-002** and **CG-002-001,** autoclavable



Ordering No.	Description
CJ-005-020	Silicone tubing set, autoclavable



Ordering No.	Description
CJ-005-022	PVC tubing set, single use, 1 box = 20 pcs.

6.2 | SUCTION-IRRIGATION PUMP
STEMA PRO 2S

Ordering No.	Description
CG-001-030	STEMA PRO 2S
CG-001-031	License key Laparoscopy
CG-001-032	License key Arthroscopy
CG-001-033	License key Hysteroscopy
CG-001-034	License key Urology
CG-001-035	License key Spine



CG-001-030

Technical data

Suction capacity ..... Vacuum max. -480 mmHg ± 10% – Flow max 2.200 ml/min

Flow range .....
Laparoscopy: 100–2200 ml/min
Arthroscopy: 100–2200 ml/min
Hysteroscopy: 100–500 ml/min
Urology: 100–1000 ml/min
Spine: 100–750 ml/min

Pressure range .....
Laparoscopy: Max. 300 mmHg
Arthroscopy: 10–150 mmHg
Hysteroscopy: 10–200 mmHg
Urology: 10–150 mmHg
Spine: 10–100 mmHg

Balance unit ..... Fluid loss detection: 0–2 l ± 10 %, relative to total inflow volume
Load on scale ..... Max. 25 kg
Operating conditions ..... Temperature: +10 °C to +40 °C
Rel. humidity: 15–75% (non condens.)
Air pressure: 70–106 kPa
Max. operating altitude: 3000 m above sea level
Storage/transport conditions ..... Temperature: -20 °C to +40 °C
Relative humidity: 10–85 % (non cond.)
Air pressure: 70–106 kPa
Interfaces ..... RS 232, USB 1.1 type A, wireless connection footswitch max. 20 m
Power supply ..... 100–240 V AC
Frequency ..... 50/60 Hz
Power consumption ..... 100 VA
Power input ..... 400–700 mA
Mains fuse ..... T3, 15 AH, 250 V (5 x 20 mm), 2 pcs.
Dimensions ..... 360 × 133 × 354 mm (W × H × D)
Weight ..... 9.8 kg
Protection class ..... I, type BF, IP 41
Classification according appendix IX of MDD ..... IIa
Certificates ..... IEC 60601-1, IEC 60601-1-2

6.2 | SUCTION-IRRIGATION PUMP
STEMA PRO 2S

Ordering No.	Description
CG-001-030	STEMA PRO 2S
CG-001-031	License key Laparoscopy
CG-001-032	License key Arthroscopy
CG-001-033	License key Hysteroscopy
CG-001-034	License key Urology
CG-001-035	License key Spine

Technical data

Standard ..... IEC 60601-1, IEC 60601-1-2
Protection class I
Safety class ..... BF
IP code IP41
Classification according appendix IX of MDD ..... IIa

Delivery contains
Pump control unit incl. Laparoscopy and one further license, suction container, autoclavable tubing set for irrigation (silicone), autoclavable tubing set for suction (silicone) incl. filter, spare fuses, operating manual, cable: power cord

ACCESSORIES

Balance unit
CJ-005-032



Foot switch
CJ-005-030



Tubing set
CJ-005-033



Tubing set
CJ-005-034



6.2 | ACCESSORIES | STEMA PRO 2S



Ordering No.	Description
CJ-005-043	Euro power cord, 2 m



Ordering No.	Description
CJ-005-044	Spare fuses, 1 box = 10 pieces



Ordering No.	Description
CJ-005-041	Measuring chamber with pump segment, autoclavable, **non sterile**

Ordering No.	Description
CJ-005-042	Spare membran used for measurement chamber, 1 box = 10 pieces

6.2 | ACCESSORIES | STEMA PRO 2S



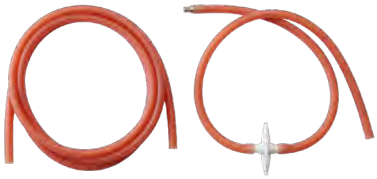
Ordering No.	Description
CJ-005-030	Foot switch used **for CG-001-030, incl. charger**
CJ-005-031	Charger for **CJ-005-030**



Ordering No.	Description
CJ-005-032	Balance unit
CJ-005-045	Balance pan for balance **unit CJ-005-032**



Ordering No.	Description
CJ-005-033	Tubing set for irrigation (silicone) **for CG-001-030,** autoclavable, non sterile



Ordering No.	Description
CJ-005-034	Suction tubing set (silicone) **for CG-001-030,** autoclavable, non sterile
CJ-005-035	Irrigation tubing set (PVC) **for CG-001-030, disposable, sterile,** 1 box = 20 pieces

6.2 | ACCESSORIES | STEMA PRO 2S

Ordering No.	Description
CJ-005-037	Vacuum suction tubing set used for pump **CG-001-030,** single use, used for all indication, 1 box = 40 pieces



Ordering No.	Description
CJ-005-038	Suction container, 2 l, autoclavable, **non sterile**



Ordering No.	Description
CJ-005-039	Holder for suction container **CJ-005-038**



Ordering No.	Description
CJ-005-040	Hydrophobic filter for tubing sets of silicone, autoclavable, **non sterile**

7. RECORDING

7.1 | HD DVD RECORDER

SONY HD RECORDER HVO-3300MT

7.2 | FULL HD VIDEO RECORDER

SONY FULL HD RECORDER HVO-550 MD
SONY FULL HD RECORDER HVO-4000MT
MEDICAPTURE MVR 460

RECORDING





STEMA

7.1 | HD DVD RECORDER
SONY FULL HD + 3D RECORDER HVO-3300MT

- **3D/2D Full HD Video recording**
- **Simultaneous recording onto two external media**
- **Live streaming**
- **Network data transmission**
- **Supports a wide range of media**
- **DICOM Linkage for effective content management**
- **CMS linkage**
- **External touch panel capability**



CF-006-006

Ordering No.	Description
CF-006-006	SONY HD Recorder HVO-3300MT

Technical data

Recording video format	MPEG4 AVC/H.264
Recording audio format	AAC LC
Recording file format	MP4
Recording device	Internal hard disk drive (2 TB)
Recordable media	Internal HDD (2TB), external network (CIFS), DVD-R, BD-R SL/BD-R DL,
3D Recording	Side by side, top and bottom
3D Input	Side by side, line by line, dual stream
Inputs	2 × 3G/HD/SD-SDI (BNC), 2 × DVI-D (Single-Link), S-Video (Mini-DIN, 4 pins),
Outputs	3G/HD/SD-SDI (BNC-Typ), DVI-D (Single-Link), S-Video (Mini-DIN, 4 pins), Video (BNC), Audio (Stereo mini jack)
Other interfaces	2 × USB 3.0 (Type A), 4 × USB 2.0 (Type A), USB 2.0 (Type B), Network (RJ-45, 1000 Base-T/100 Base-TX), Remote RS-232C (D-Sub, 9 pins), 4 × Remote contact switch (Stereo mini jack), Menu monitor (Mini-D-Sub, 15 pins)
Power supply	100–240 V AC
Frequency	50/60 Hz
Dimensions	305 × 115.5 × 329 mm (W × H × D)
Weight	6.5 kg
Certificates	CE, IEC 60601-1

Delivery contains
Recorder, operating manual (CD-ROM), infrared remote control unit, warranty booklet, cable: power cord

7.2 | FULL HD VIDEO RECORDER
SONY FULL HD RECORDER HVO-550 MD

- **Easy handling**
- **Simultaneous recordingon internal harddrive and external media**
- **Video recording in Full HD**
- **Long recording times in Full HD**



CF-006-004

Ordering No.	Description
CF-006-004	SONY FULL HD Recorder HVO-550MD

Technical data

Recording video format	MPEG4 AVC/H.264
Recording device	Internal hard drive with 500 GB, erternal USB-Mass storage, network (CIFS)
Resolution	1920 × 1080/50i, 1920 × 1080/59,94i, 1280 × 720/59,94p, 1280 × 720/50p, 720 x 480/59,94i
Inputs	HDMI (Type A), DVI-D (DVI, 19-polig), S-Video (Mini-DIN, 4 pins), Video (BNC), Audio (stereo jack socket)
Other interfaces	3 × USB-Connection (Type A), USB (Type B), Network (RJ-45, 1000 Base-T/ 100 Base-TX), Remote RS-232C (D-Sub 9-pins), 2 × Remote Contactswitch (Stereo jack socket)
Supply voltage	12–24 V DC, supply through power adaptor AC-80MD
Input voltage	3.2 A to 1.6 A
Dimensions	212 × 287.7 × 105.5 mm (W × H × D)
Weight	2.9 kg
Certificates	CE, IEC 60601-1

Delivery contains
Recorder control unit, operating manual (CD-ROM), power adaptor AC-80MD, cable: power cord

7.2 | FULL HD RECORDER
SONY FULL HD 4K 3D RECORDER HVO-4000MT

- **4K video recording**
- **Simultaneous recording in 4K and HD**
- **Simultaneous recording on internal HDD and external media**
- **Long recording times in Full HD**
- **Network compatibility and DICOM storage**
- **Touch panel support**



CF-006-005

Ordering No.	Description
CF-006-005	SONY Full HD 4K 3D Recorder HVO-4000MT

Technical data

Recording video format	MPEG4 AVC/H.264
Recording audio format	LPCM, AAA LC
Recording file format	XAVC S, MP4
Recording device	Internal hard drive with 4 TB, erternal USB-Mass storage, network (CIFS), DVD-R, BD-R/BD-R DL, BD-RE/BD-RE DL
Resolution input	4096 × 2160, 3840 × 2160
Resolution output	3840 × 2160, 1920 × 1080
Recording 4K (bit rate)	150 Mbps (best), 100 Mbps (high), 60 Mbps (standard)
Recording HD (bit rate)	24 Mbps (best), 18 Mbps (high), 12 Mbps (standard)
Recording 3D	Line by line, top and bottom
Input	4 × 3G-SDI (BNC type), AUDIO (Stereo mini jack), MIC (Stereo mini jack), AC Inlet (3-pin)
Output	4 × 3G-SDI (BNC type), HDMI (Type A), Audio (Stereo mini jack)
Other interfaces	2 × USB 3.0 (Type A), 4 × USB 2.0 (Type A), USB 2.0 (Type B), Network (RJ-45, 1000 Base-T / 100 Base), Remote RS-232C (D-sub 9-pin)
Supply voltage	100–240 V AC
Frequency	50/60 Hz
Input voltage	1.25–0.52 A
Dimensions	305 × 115.5 × 329 mm (W × H × D)
Weight	6.5 kg
Certificates	CE, IEC 60601-1

Delivery contains
Recorder control unit, operating manual (CD-ROM), infrared remote control unit, warranty booklet, cable: power cord

STEMA

MVR 460

THE NEXT GENERATION VIDEO RECORDER

SIMPLE.

CONNECTED.

POWERFUL.

DICOM UPGRADE AVAILABLE



The Next-Generation Video Recorder

Multi-featured, the MVR 460 benefits from MediCapture´s unique Smart Workflow that enables surgical teams to control the recorder according to preference including touchscreen or tablets4. It also enables the user to jump from recording to managing data with the swipe of a finger.

Full Patient Workflow

The MVR 460 comes with full patient workflow, including a DICOM Upgrade Package1 option, for easy and fast retrieval of patient information and transfer of studies to PACS.

Medical Imaging Environment (OR)

Makes it easy to record and archive medical imaging and manage the Patient Worklist.

Robot-Assisted Surgical Units

Ensures maximum efficiency in robot-assisted surgeries with an easy-mount design for quick installation.

MVR Manager

Browse and review all patient files. Zoom, take snapshots, cut video. Add notes, report in PDF, print and archive as you wish.

STEMA

7.2 | FULL HD VIDEO RECORDER
MVR 460



CF-004-017

Ordering No.	Description
CF-004-017	MVR 460
CF-004-019	DICOM Upgrade

Technical data

Case & buttons	Aluminium alloy case, VESA100 on bottom, stainless steel buttons (fluid resistant)
Monitor	7" diagonal
Recording video format	MP4: H.264 / HEVC H.265 high efficiency video coding
Recording audio format	MIC-in (low level), 3.5 mm Mono TS (2-pin), USB microphone, line-in 1Vpp, 3.5 mm stereo TRS (3-pin), HDMI
Recording file format	MP4
Image format	JPG, PNG
Recording resolution	3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720, 1024 × 768
Input	MIC-in (low level), 3.5 mm Mono TS (2-pin), USB Microphone, line-in 1Vpp, 3.5mm Stereo TRS (3-pin), HDMI
Output	Integrated speaker, line-out 1Vpp, 3.5 mm stereo TRS (3-pin), headset output: 3.5 mm, stereo TRS (3-pin)
Video connections	2 selections: HDMI 4K, DisplayPort 4K, USB camera 4K, SDI up to 12G SDI
Internal storage	HDD 2TB (Larger internal storage by order)
External storage	USB drives (flash drives or hard drives), FAT32 / NTFS / exFAT
USB support	USB 3.0, super speed, front connector, 2 × rear connectors
Remote control	3.5 mm mini jack, compatible with standard footswitches (not included) and closed-contact camera triggers
LAN	RJ45, Ethernet, max. 2.5 GB/s
Upgrades	**DICOM** - easily retrieve patient DICOM worklist and store to your PACS
Power supply	100–240 V AC
Frequency	50/60 Hz
Input voltage	0.6–0.3 A
Dimensions	195 × 220.3 × 71 mm (W × H × D)
Weight	2.1 kg
Ingress protection	IP40
Certificates	EN 60601-1- Medical Equipment Safety, EN 60601-1-2- EMC, EN IEC 63000:2018-Restriction of hazardous substances CE (MDR 2017/745/EU), UKCA, WEEE, RoHS, FCC, GDPR and HIPAA compliant
Classification	Class I equipment/mode of operation: continuous no AP/APG, no applied part

Delivery contains
MVR recorder control unit, user manual (english), USB flash drive, split remote cable adaptor, 4 × rubber feet,
cables: power cord, HDMI, display port cable, 12G-SDI-cable, audio cable M-M, audio cable M-F, network patch cable RJ45

8. IMAGE AND DATA ARCHIVING SYSTEM

8.1 | IMAGE AND DATA ARCHIVING SYSTEM

8.2 | OPTIONS

IMAGE AND DATA ARCHIVING SYSTEM STEMA PRO



IMAGE AND DATA ARCHIVING SYSTEM – SOFTWARE FOR MEDICAL VIDEO DOCUMENTATION

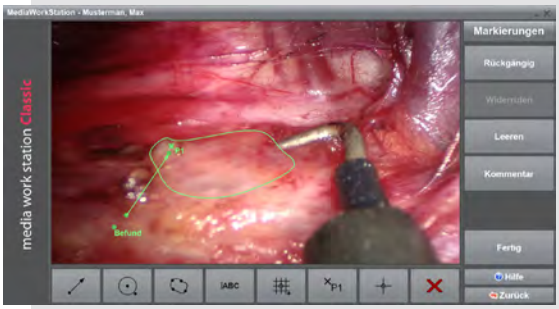
The „STEMA PRO | IMAGE DATA ARCHIVING SYSTEM" enables the efficient acquisition, documentation, and archiving of medical images and videos in high quality. It supports the structured creation of diagnostic reports and ensures streamlined workflows through seamless integration into existing IT infrastructures.

Its powerful database provides secure long-term storage of image and video data with virtually unlimited capacity, ensuring reliable availability of clinical findings whenever needed.
An ideal solution for daily use in hospitals, medical practices, and diagnostic environments.

DIAGNOSTICS & RECORDING



RECORD VIDEOS AND PICTURES



EDIT GRAPHICAL MARKERS

FEATURES

- Simple and intuitive user interface
- Recording of videos and individual pictures
- Direct switching between four cameras
- Preview with split display for „live" image and individual images
- Structured saving of all recordings in a database
- Network mode with centralized storage of patient and findings data
- Playing videos with random seek, enlargement and extraction of individual images
- Video and picture comparison
- Manual input of co mments for sessions and recordings
- Graphical markers with individual comments
- By medical field separated databases for comments
- Video cut functionality
- Remote control for the recording function via foot switch, USB or by camera
- Compatible to all cameras and converters with
- DirectShow technology
- Context sensitive help system



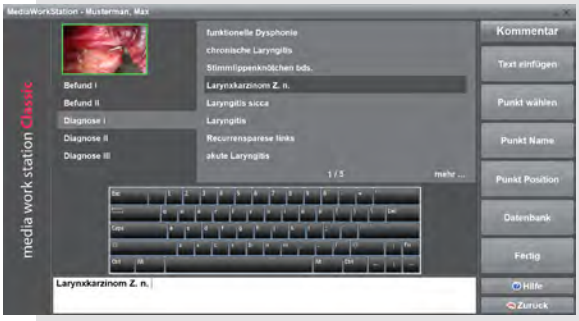
DOCUMENTATION & MANAGEMENT



EDIT PATIENT DATA



ARCHIVE



EDIT COMMENTS

FEATURES

- Creation of reports in HTML format including patient information, pictures, videos and co mments
- Communication with EPR (DICOM Worklist, GDT)
- User management including separation for special patients
- Operation by touch screen including screen keyboard
- Direct control of camera settings of supported types of cameras
- Automatic database backup
- Language selection for German, English, French, Italian, Spanish, Russian, Turkey, Chinese

OPTION:
DICOM Worklist | DICOM export of medical reports and pictures via DICOM. License is required for each workstation

8.1 | IMAGE AND DATA ARCHIVING SYSTEM
STEMA PRO

- **Simple and intuitive user interface**
- **Recording of videos and pictures**
- **Direct switching between four cameras**
- **Structured saving of all recordings in a database**
- **PACS support DICOM Worklist/Store**
- **Playing videos with abstraction of individual images**
- **Manual input of comments for sessions and recordings**



Ordering no.	Description
CO-002-001	STEMA PRO | Image and data archiving system includes: **Hardware:** PC Medical workstation Terra AIO i5 Plug adaptor Video converter Mount video converter Footswitch **Software:** Mediaworkstation classic Maintenance agreement Language plus Preinstallation

Ordering no.	Options
CO-002-010	Keyboard glas cleankeys CK5 US/EU
CO-002-011	DICOM worklist with SMA

8.1 | IMAGE AND DATA ARCHIVING SYSTEM | STEMA PRO
HARDWARE

Specification | PC Medical Workstation Terra AIO i5



Display	1920 × 1080 (Full HD) 21,6"/54,6 cm TN-LCD, LED-backlight
Operating system	Windows 10 Pro x64
CPU	Intel Core i5 (12. Gen)
RAM	2 × 8G RAM
Storage	SSD 500 GB M.2 module
Graphic card	Intel UHD Graphics 730
Network	2 × LAN 10/100/1000 Mbps
Warranty	24 months
Features	10-point multitouch, Audio system integrated

Specification | AIO Power supply medical 19V 135W plug adaptor



Input	100–240 V, mains plug
Output	Output 19 V/7, 1, A, 135 Watt, 90° DC connector, 7.4/5.1 mm, cable length 1.2 m
Classification	TÜV IEC 60601-1, CE, RU, RoHS, MPG conform acc. DIN EN 60601-1

Specification | Footswitch wireless two pedals HD



Features	Footswitch for MediaWorkStation 2 Pedals Compatible to Windows 10/8/7 Automatic driver installation Controls image AND video recording Wireless, receiver USB connection, Bluetooth

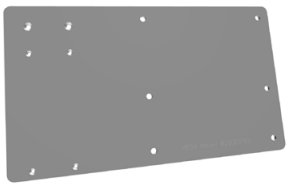
8.1 | IMAGE AND DATA ARCHIVING SYSTEM | STEMA PRO
HARDWARE

Specification | Video Converter 4K30 SDI to USB3



Features ..... Video Converter 4K30 SDI to USB3
One channel 4K capture device,
Capture SD/HD/3G/2K/6G SDI + embedded audio, Loop-through SD/HD/3G/2K/6G SDI,
Audio input via Line in, Extract SDI embedded audio and output via Line out
1920 × 1080 YUY2 (up to 90fps), 3840 × 2160 NV12 (up to 30fps)
Windows 7/8/8.1/10,
Dimensions: 98.1 mm × 56.8 mm × 17 mm (W × H × D)
5 V max current: ~1.4 A,
Operating temperature: 0 to 40 deg C,
Storage temperature: –20 to 70 deg C,
Relative Humidity: 5 % to 90 %, non-condensing

Specification | VESA Mount Video Converter



Features ..... VESA mount for video converter HDMI/SDI to USB3
VESA 100 × 100, 100 × 40, 100 × 60 mm standard

8.1 | IMAGE AND DATA ARCHIVING SYSTEM | STEMA PRO
SOFTWARE

Media Workstation Classic Software

- Software "MediaWorkStation- Classic Edition" for video documentation in medicine

Maintenance Agreement

- Support by phone and e-mail, remote support
- Response time of one work day
- Minimum contract duration 1 year

Language Plus

- Windows 10
- German, English, French, Spanish, Italian, more languages on request only in connection with Medical Workstation

Specification | Preinstallation

- MediaWorkStation installation (only DEMO license), activation if license is available, configuration, function test, documentation, language according to system language, only in connection with Medical Workstation

8.2 | IMAGE AND DATA ARCHIVING SYSTEM | STEMA PRO
OPTIONS

Specification | Keyboard glass cleankeys CK5 US/EU



- USB Keyboard with complete flat Gorilla glass surface
- Washable and disinfectable
- 98 keys with integrated touchpad
- Volume and sensitivity are adjustable
- Key lock to disable
- Output: USB
- Colour: grey-white
- VESA mounting
- Dimensions: ca. 405 × 167 × 22.5 mm (W × H × D)
- Weight: 750 g
- Language: US English international

Specification |DICOM Worklist

DICOM℠
Digital Imaging and Communications in Medicine

- DICOM Worklist processing
- Export of medical reports, pictures and videos
- Including Support by phone and e-mail, remote support
- Response time of one work day,
- Software upgrades with special conditions,
- Minimum contract duration 1 year

9. HF UNITS

9.1 | HF UNITS STEMA HF-U
STEMA HF-U PRO TOUCH
ACCESSORIES

9.2 | HF UNITS STEMA MASTER
STEMA MASTER
STEMA MASTER SDS
ACCESSORIES

HF UNITS


STEMA
TYPE MEMO1_
1
menu
PURE CUT
MONOPOLAR
FULG FORCED COAG
400
150
STANDARD BICUT
BIPOLAR
SOFT MICRO BICOAG
200
140
H.F. LEAKAGE
LARGE
STEMA HF-U
- PRO TOUCH -
ARGON
PEDAL - 1
MONO
BIP
PEDAL - 2
BIP
MONOPOLAR - 1
HAND-SWITCHED
MONOPOLAR - 2
HAND-SWITCHED
NEUTRAL PLATE
NP-1
NP-2
BIPOLAR - 1
BIPOLAR - 2
FOOT-SWITCHED
FOOT-SWITCHED

9.2 | HF UNITS
STEMA HF-U PRO TOUCH

- **For all monopolar & bipolar techniques**
- **With 7" touch screen display**
- **Provided to perform the most advanced electrosurgery**
- **ADC/ APC System**



CI-001-030

CI-001-040

Ordering No.	Description
CI-001-030	STEMA HF-U Pro Touch
CI-001-040	Double pedal footswitch | STEMA HF-U Pro Touch

Technical data

Panel ..... 7" touch screen LCD display

Operation memorisation ..... 100 programs

Operation check ..... **Main self-check:** when turned on
Standard self-check: during operation and, if any, operation lock (within 100 milliseconds), with alarm signalling to operators through specific Error Codes, in the event of problems concering:
- General operation or activation errors (General Error Control)
- Output power (Output Error Control)

HF leakage control: continuous verification, by means of a specific circuit, of any HF current dispersion to earth and possible automatic power reduction by means of an alarm signal

Power self-adjustment..... By means of a microprocessor with two different systems:
ADC system: Constant power: self-adjusts the power, controlling voltage and current, based on real-time feedback (7000 checks/sec) between device and patient´s tissue. The powers are equipped with Micro and Macro progressive regulation with steps from 0.1 W to 10 W. Monopolar (from 1 W to 10 W), Bipolar (from 0.1 W to 5 W).
APC system: Constant voltage: self-adjusts the power, keeping the voltage constant, based on a real-time feedback (7000 checks(sec) between device and patient´s tissue.

Outputs ..... 2 Monopolar and 2 Bipolar

Foot operated controls ..... A double pedal control with push button selector for monopolar functions The pedal is compliant with IEC 60601-2-2, waterproof (IP67), electric with 12 V DC low voltage power supply.

Software upgrade/calibration..... Upgrade via serial port connected to a PC, on-site calibration

Neutral electrode safety circuit NPCC System ..... Control of the connection of the neutral electrode and of the quality of the contact using double selection/split electrodes with alarm signal and possible lock of delivered power. It can be used in two different ways: Large electrodes for adults, small electrodes for paediatric patients/ newborns. It allows using cables with both European "Ø 6,35 mm" and USA "2 pins" connectors.

9.2 | HF UNITS
STEMA HF-U PRO TOUCH

Ordering No.	Description
CI-001-030	STEMA HF-U Pro Touch
CI-001-040	Double pedal footswitch | STEMA HF-U Pro Touch

Technical data

Micro/macro power adjustment	Monopolar: 030 W = 1 W, 30–100 W = 2 W, 100–200 W = 5 W, over 200 W = 10 W Bipolar: 0–10 W = 0.5 W, 10–30 W = 1 W, 30–100 W = 2 W, over 100 W = 5 W
Monopolar and bipolar working frequency	440 kHz
Power supply	230 or 115 V
Frequency	50/60 Hz
Power consumption	Max power 3.6 A = 828 VA, Stand-by 0.4 A = 92 VA
Equipotential bonding	Standard DIN 42801 plug
Cooling	Convection, without fan
Dimensions	38 × 38 × 20 cm (W × D × H)
Weight	10 kg
HF generator compliant with	IEC 60601-1 and IEC 60601-2-2
CE Classification	IIb
Protection class (acc. IEC 60601-1)	I CF
IEC-60601-2-2 output circuit	Floating- protected for the use of a defibrillator (HF dispersion <150 mA)

Delivery contains
HF unit, operating manual, cable: power; The suitable electrodes you will find in our catalogue for HF surgery.

ACCESSORIES

Urology

AD-010-003
HF Monopolar cable



AD-010-013
HF Bipolar cable



Laparoscopy

EE-010-003
HF Monopolar cable



EK-010-014
HF Bipolar cable



Adaptor

EK-015-060
Universal adaptor monopolar



EK-015-061
Universal adaptor bipolar



STEMA

9.2 | HF UNITS
STEMA HF-U PRO TOUCH | MONOPOLAR CURRENTS

Currents for monopolar cutting	
Pure Cut	Pure cut without coagulating effect. For open or laparoscopic surgery and for under liquid endoscopy (TURP, TURV).
Blend Cut 1	Blended cut with a medium coagulating effect. For open or laparoscopic surgery and for under liquid endoscopy (TURP, TURV).
Blend Cut 2	Blended cut with a very high coagulating effect. For open or laparoscopic surgery.
Pure Cut Pulsed	Pure pulsed cut without coagulating effect. For open or laparoscopic surgery (suitable to reduce surgical smoke).
Blend Cut Pulsed	Blended pulsed cut with medium coagulating effect. For open or laparoscopic surgery (suitable to reduce surgical smoke).
Auto Pure Cut Micro	"Constant voltage" delicate pure cut without coagulating effect. For open or laparoscopic surgery and for under liquid endoscopy (TURP, TURV).
Auto Blend Cut Micro	"Constant voltage" delicate cut blended with a medium coagulating effect. For open or laparoscopic surgery and for under liquid endoscopy (TURP, TURV).
Auto Papillo Pure Cut	"Constant voltage" pure cut, without coagulating effect, for flexible endoscopy. With four modes of delivery: continuous and pulsed (slow, medium, fast)
Auto Polipo Blend Cut	"Constant voltage" cut, blended with a medium coagulating effect, for flexible endoscopy. With four modes of delivery: continuous and pulsed (slow, medium, fast).
Auto Endo Cut	"Constant voltage" cut with alternating phases of cutting and blended cut, for flexible endoscopy. With four modes of delivery: 90% BLEND and 10% CUT, 80% BLEND and 20% CUT, 60% BLEND and 40% CUT, 50% BLEND and 50% CUT.
Currents for monopolar coagulation	
Fulg Forced Coag	High voltage, contact free coagulation. For open or laparoscopic surgery, under liquid endoscopy (TURP, TURV) and for flexible endoscopy.
Spray Coag	Very high voltage, contact free coagulation. For open or laparoscopic surgery, for under liquid endoscopy (TURP, TURV) and for flexible endoscopy.
Pulsed Spray Coag	Identical to the Spray coag current, but pulsed and more delicate.
Pinpoint Contact Coag	Medium voltage, contact coagulation. For open or laparoscopic surgery, for under liquid endoscopy (TURP, TURV) and for flexible endoscopy.
Soft Micro Coag	Delicate, low voltage coagulation. For open or laparoscopic surgery.

9.2 | HF UNITS
STEMA HF-U PRO TOUCH | BIPOLAR CURRENTS

Currents for bipolar cutting	
Standard Bicut	Cut for open or laparoscopic surgery.
Blend Bicut	Blended cut with a very high coagulating effect (Coagulation = 95%) for open or laparoscopic surgery.
Saline Uro-Gyn Cut	Cut in saline (TURPis, TURVis) with two modes of delivery: continuous and pulsed. For urology and gynaecology. The continuous delivery is suitable to perform the vaporization.
Saline Arthro Cut	Cut in saline with two modes of delivery: continuous and pulsed. For arthroscopy. The continuous delivery is suitable for vaporization.
Currents for bipolar coagulation	
Soft Micro Bicoag	Very precise and delicate coagulation. For open or laparoscopic surgery, for endoscopy in saline (TURPis, TURVis) and for flexible endoscopy.
Forced Macro Bicoag	Fast coagulation. For open or laparoscopic surgery.
Auto Soft Micro Bicoag	Identical to the Soft Micro Bicoag, but with Impedance sensing automatic activation/deactivation. It is not suitable for the endoscopy in saline. Activation with delay adjustable from 0 to 5 seconds and deactivation with bitonal, grave, acoustic signal.
Sealing	Current to coagulate/seal vessels up to 7 mm in open and laparoscopic surgery. Activation with pedal and automatic Impedance sensing deactivation with two-tone, acute, acoustic signal.
Auto Sealing	Identical to Sealing, but with Impedance sensing automatic activation/deactivation. It is not suitable for the endoscopy in saline. Activation with delay adjustable from 0 to 5 seconds and deactivation with two-tone, grave, acoustic signal

9.2 | HF UNITS
STEMA HF-U PRO TOUCH | OUTPUT POWERS

Monopolar Cutting										
	Pure Cut	**Blend Cut 1**	**Blend Cut 2**	**Pure Cut Pulsed**	**Blend Cut Pulsed**	**Auto Pure Cut Micro**	**Auto Blend Cut Micro**	**Auto Papillo Pure Cut**	**Auto Polipo Blend Cut**	**Auto Endocut**
Delivered Power	400 W	300 W	250 W	200 W	150 W	300 W	300 W	300 W	300 W	300 W
Nominal loads	400 Ω	400 Ω	400 Ω	400 Ω	400 Ω	300 Ω	300 Ω	300 Ω	300 Ω	300 Ω
Peak/No-Load Peak Voltages (Vpp)	2550	3390	3330	2640	3330	1137	1500	1140	1490	1670
Crest factors	1,46	1,94	2,29	2	3,2	1,5	1,98	1,5	1,98	2,2
Modulation	-	17 kHz	17 kHz	3 Hz	50 Hz	no	17 kHz	no	17 kHz	-
Duty Cycle	100%	95%	65%	50%	50%	100%	90%	100%	95%	-
	ADC System | Constant Power					APC System | Constant Voltage				

Monopolar Coagulation					
	Fulg Forced Coag	**Spray Coag**	**Pin Point Contact Coag**	**Pulsed Spray Coag**	**Soft Micro Coag**
Delivered Power	150 W	200 W	300 W	100 W	280 W
Nominal loads	300 Ω	700 Ω	400 Ω	700 Ω	300 Ω
Peak/No-Load Peak Voltages (Vpp)	4500	7750	3700	7850	3300
Crest factors	6,45	7,75	2,2	11,54	2,16
Modulation	60 kHz	30 kHz	17 Hz	3 Hz	17 kHz
Duty Cycle	18%	7%	85%	50%	75%
	ADC System | Constant Power				

9.2 | HF UNITS
STEMA HF-U PRO TOUCH | OUTPUT POWERS

Bipolar Cutting				
	Standard Bicut	**Blend Bicut**	**Saline Uro-Gyn Cut**	**Saline Arthro Cut**
Delivered Power	200 W	160 W	300 W	230 W
Nominal loads	300 Ω	200 Ω	350 Ω	350 Ω
Peak/No-Load Peak Voltages (Vpp)	1070	740	1070	1070
Crest factors	1,5	1,57	1,5	1,5
Modulation	no	17 kHz	no	no
Duty Cycle	100%	95%	100%	50%
	ADC System | Constant Power			

Bipolar Coagulation					
	Soft Micro Bicoag	**Auto Soft Micro Coag**	**Sealing**	**Auto Sealing**	**Forced Macro Bicoag**
Delivered Power	140 W	140 W	320 W	320 W	200 W
Nominal loads	100 Ω	100 Ω	50 Ω	50 Ω	100 Ω
Peak/No-Load Peak Voltages (Vpp)	460	4600	780	780	550
Crest factors	1,56	1,56	2,47	2,47	1,6
Modulation	0	0	0	0	0
Duty Cycle	100%	100%	100%	100%	100%
	APC System | Constant Voltage				ADC System Constant Power

9.1 | HF UNITS
ACCESSORIES | STEMA HF-U SERIES



Ordering No.	Description
CI-001-040	Double Pedal Footswitch, 5 m cable used for **STEMA HF-U PRO TOUCH**



Ordering No.	Description
CI-001-043	Double Pedal Footswitch, 5 m cable used for **STEMA HF-U PRO TOUCH**, only bipolar

STEMA

9.1 | HF UNITS
ACCESSORIES | STEMA HF-U



Ordering No.	Description
EK-015-060	Universal adaptor used for monopolar HF cables



Ordering No.	Description
EK-015-061	Universal adaptor used for bipolar HF cables, double banana plug Ø 4 mm, Valleylab/Conmed



Ordering No.	Description
EK-015-062	Universal adaptor used for bipolar HF-cables, Storz/Erbe

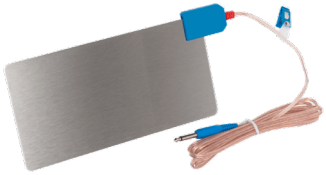


Ordering No.	Description
EK-015-063	Universal adaptor used for bipolar HF-cables, Martin/Berchtold



Ordering No.	Description
EK-015-064	Universal adaptor used for bipolar HF-cables, Olympus

9.1 | HF UNITS
ACCESSORIES | STEMA HF-U



Ordering No.	Description
EK-015-054	Neutral electrode, **250 × 125 mm** stainless steel, incl. cable, used for STEMA, Martin, Berchtold, Erbe Units, 2.5 m



Ordering No.	Description
EK-015-055	Single use neutral electrode TWIN SAFE, for adults and children, without connecting cable, **176 × 122 mm,** 1 box = 600 pieces
EK-015-059	Single use neutral electrode TWIN SAFE, for adults and children, with connecting cable for STEMA units, **176 × 122 mm**, 1 box = 96 pieces



Ordering No.	Description
EK-015-056	Single use neutral electrode TWIN SAFE, for children and babies, **without** connecting cable, **181 × 76 mm,** 600 pcs.
EK-015-072	Single use neutral electrode TWIN SAFE, for children and babies, **with** connecting cable for STEMA units, **181 × 76 mm,** 96 pcs.

Ordering No.	Description
EK-015-070	Cable used for neutral electrode **EK-015-055/EK-015-056**, for VALLEYLAB with pin units, **5 m**
EK-015-071	Cable used for neutral electrode **EK-015-055/EK-015-056**, for VALLEYLAB, BOWA units, **5 m**
EK-015-058	Cable used for neutral electrode **EK-015-055/EK-015-056**, for STEMA units, **3 m**
EK-015-057	Cable used for neutral electrode **EK-015-055/EK-015-056**, for STEMA units, **5 m**

9.1 | HF UNITS
ACCESSORIES | STEMA HF-U

Connection unit side



Connection instrument Side	Ordering No.	Description
	AD-010-003	HF-Monopolar connecting cable suitable for Valleylab/Conmed, Ø 8 mm, **3 m**
	AD-010-008	HF-Monopolar connecting cable suitable for Valleylab/Conmed, Ø 8 mm, **5 m**
	EE-010-003	HF-Monopolar connecting cable suitable for Valleylab/Conmed, Ø 8 mm, **3 m**
	EE-010-013	HF-Monopolar connecting cable suitable for Valleylab/Conmed, Ø 8 mm, **5 m**

Connection unit side



Connection instrument Side	Ordering No.	Description
	EK-010-014	HF-Bipolar cable, Valleylab/flat plug, **3 m**
	EK-010-015	HF-Bipolar cable, Valleylab/flat plug, **5 m**
	EK-010-064	HF-Bipolar cable, Valleylab/flat plug, square, **3 m**
	EK-010-065	HF-Bipolar cable, Valleylab/flat plug, square, **5 m**

9.1 | HF UNITS
ACCESSORIES | STEMA HF-U SERIES

Connection instrument side



Connection Unit Side	Ordering No.	Description
	AD-010-013	HF-Bipolar resectoscope connecting cable suitable for Valleylab, Lamidey, **4.5 m**
	AD-010-015	HF-bipolar resectoscope connecting cable suitable for Erbe Vio 3, **4.5 m**

9.2 | HF UNITS
STEMA MASTER

- **Perfect use in various fields**
- **Automatic power regulation**
- **Voice communication**
- **10" High resolution screen**



CI-001-006

Ordering No.	Description
CI-001-006	STEMA MASTER Touchscreen HF-Electrosurgical unit

Technical data

Operating modes

Mono cut	400 W at 100-150 Ω
Precise cut	50 W at 50-750 Ω
Mixed cut	150 W at 50-100 Ω
Muco cut	400 W at 50 Ω
Polipo cut	400 W at 50 Ω
Papillo cut	400 W at 50 Ω
Arthro cut	400 W at 100-250 Ω
Uro cut	400 W at 50-300 Ω
Hystero cut	400 W at 100-250 Ω
Soft coagulation	50 W at 200 Ω
Forced coagulation	200 W at 150-500 Ω
Hybrid coagulation	200 W at 150-500 Ω
Spray coagulation	80 W at 1250-1750 Ω
Endo coagulation	30 W at 2000 Ω
Arthro coagulation	200 W at 50 Ω
Uro coagulation	200 W at 50 Ω
Hystero coagulation	200 W at 50 Ω
Bipolar cut	120 W at 50-400 Ω
Bipolar cut „Arthro"	400 W at 100 Ω
Bipolar cut „Uro"	400 W at 125-250 Ω
Bipolar coagulation „Soft"	120 W at 50-100 Ω
Bipolar coagulation „Forced"	120 W at 100-500 Ω
Bipolar coagulation „Arthro"	350 W at 25 Ω
Bipolar coagulation „Uro"	350 W at 25 Ω
Connections	Monopolar, bipolar, neutral electrode, argon (2 × SDS, 2 × Standard)

Power supply	110 V AC, 220–230 VAC
Frequency	50/60 Hz
Dimensions	495 × 415 × 225 mm (W × H × D)
Weight	12.2 kg
Classification	I/CF
Certificates	CE, EN 60601-1, EN 60601-2-2

Delivery contains
HF unit, operating manual, cable: power; The suitable electrodes you will find in our catalogue for HF surgery.

9.2 | HF UNITS
STEMA MASTER SDS

- *Perfect use in various fields*
- *Recognition of instruments - SDS*
- *Automatic power regulation*
- *Voice communication*
- *10" High resolution screen*



CI-001-008

Ordering No.	Description
CI-001-008	STEMA MASTER Touchscreen HF-Electrosurgical unit, SDS Version

Technical data

Operating modes

Mono cut	400 W at 100-150 Ω
Precise cut	50 W at 50-750 Ω
Mixed cut	150 W at 50-100 Ω
Muco cut	400 W at 50 Ω
Polipo cut	400 W at 50 Ω
Papillo cut	400 W at 50 Ω
Arthro cut	400 W at 100-250 Ω
Uro cut	400 W at 50-300 Ω
Hystero cut	400 W at 100-250 Ω
Soft coagulation	50 W at 200 Ω
Forced coagulation	200 W at 150-500 Ω
Hybrid coagulation	200 W at 150-500 Ω
Spray coagulation	80 W at 1250-1750 Ω
Endo coagulation	30 W at 2000 Ω
Arthro coagulation	200 W at 50 Ω
Uro coagulation	200 W at 50 Ω
Hystero coagulation	200 W at 50 Ω
Bipolar cut	120 W at 50-400 Ω
Bipolar cut „Arthro"	400 W at 100 Ω
Bipolar cut „Uro"	400 W at 125-250 Ω
Bipolar coagulation „Soft"	120 W at 50-100 Ω
Bipolar coagulation „Forced"	120 W at 100-500 Ω
Bipolar coagulation „Arthro"	350 W at 25 Ω
Bipolar coagulation „Uro"	350 W at 25 Ω
Connections	Monopolar, bipolar, neutral electrode, argon (4 × SDS)

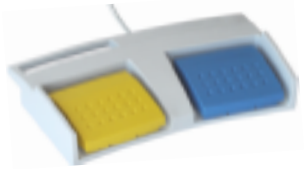
Power supply	110 V AC, 220–230 VAC
Frequency	50/60 Hz
Dimensions	495 × 415 × 225 mm (W × H × D)
Weight	12.2 kg
Classification	I/CF
Certificates	CE, EN 60601-1, EN 60601-2-2

Delivery contains
HF unit, operating manual, cable: power; The suitable electrodes you will find in our catalogue for HF surgery.

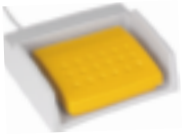
9.2 | HF UNITS
ACCESSORIES | STEMA MASTER



Ordering No.	Description
CI-001-015	Triple pedal foot switch used for STEMA MASTER, 5 m cable
CI-001-019	Wireless triple foot switch used for STEMA MASTER, 5 m cable



Ordering No.	Description
CI-001-016	Double foot switch used for STEMA MASTER, 5 m cable, multiswitch
CI-001-017	Double pedal foot switch used for STEMA MASTER, 5 m cable
CI-001-018	Wireless double pedal foot switch used for STEMA MASTER, 5 m cable, multi switch



Ordering No.	Description
CI-001-020	One pedal foot switch used for STEMA MASTER, 5 m cable, cutting only
CI-001-022	Wireless one pedal foot switch used for STEMA MASTER, 5 m cable, cutting mode only

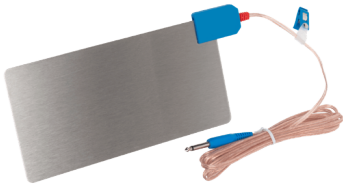


Ordering No.	Description
CI-001-021	One pedal foot switch used for STEMA MASTER, 5 m cable, coagulation only
CI-001-023	Wireless one pedal foot switch for STEMA MASTER, 5 m cable, coagulation only

9.2 | HF UNITS
ACCESSORIES | STEMA MASTER



Ordering No.	Description
EK-015-050	Neutral electrode, reusable, 170 × 300 mm, incl. 4 m cable, used for STEMA MASTER unit
EK-016-001	Rubber band for reusable neutralelectrodes, perforated, 500 mm
EK-016-003	Button for rubber band



Ordering No.	Description
EK-015-054	Neutral electrode, 25 × 12.5 cm stainless steel, incl. cable, used for STEMA, Martin, Berchtold, Erbe Units, 2.5 m

BIPOLAR CABLE

Connection unit side





Ordering No.	Description
EK-010-102	HF cable bipolar, angled, SDS identification for STEMA MASTER, flat plug **3 m**
EK-010-103	HF cable bipolar, angled, SDS identification for STEMA MASTER, flat plug cable **5 m**

10. SHAVER

10.1 | SHAVER SET
SHAVER SYSTEM
CONTROL UNIT
ACCESSORIES

10.2 | DRIVEN DRILL

STEMA SHAVER BARRACUDA



BS-001-032

BS-001-033

BS-001-034

Ordering No.	Description
BS-001-032	STEMA shaver Barracuda | control unit
BS-001-031	STEMA shaver Barracuda set (consisting of): BS-001-032 | Control unit BS-001-033 | Handpiece BS-001-034 | Footswitch

BENEFITS

- Unique handpiece head design - easy, efficient and reliable cleaning and disinfection process
- Sophisticated oscillation modes to meet requirements of the most demanding operators
- Smooth and stable work within the entire range of rotational speed
- Single-use and reusable shaver blades with uniquely designed hub eliminating
- problematic articulation effect
- Large and clear user interface - facilitates instant reading of essential parameters
- On-screen display - presentation of significant parameters on the medical monitor
- Ergonomic handpiece with buttons for comfortable holding and operating

FEATURES

- Wide range of rotational speed
- Window calibration feature
- Available direction modes:
- forward, oscillation, reverse
- Nine oscillation modes
- Automatic handpiece detection
- Controlled directly via buttons on the handpiece or via footswitch
- Fully autoclavable, light and ergonomic handpiece
- Dedicated shaver blades

10.1 | SHAVER SET
CONTROL UNIT



BS-001-032

Technical data | Control unit

Power supply	100–240 V AC, 50/60 Hz
Power consumption	65 VA
External dimension	250 mm × 330 mm × 96 mm
Weight	4.8 kg
Ambient temperature	During operation: +10 °C to +40 °C
	During storage and transport: -20 °C to +45 °C
Max. relative humidity	During operation: 70 %
	During storage and transport: 70 %
Class of protection	Class 1
CE Standard	EN 60601-1:2006+Al:2013; EN 60601-1-2:2015;

The suitable shaverblades you will find in our catalogue for Arthroscopy

Delivery contains (control unit | BS-001-032)
Control unit, operating manual, cable: power

Delivery contains (shaver set | BS-001-031)
Control unit, handpiece, footswitch, operating manual, cable: power

10.1 | SHAVER SET
HANDPIECE & FOOTSWITCH



BS-001-033

Technical data | Handpiece

Length	164 mm
Weight	325 g
Shaver blade chuck	Automatic/Barracuda type
Speed range	FWD, REV: 500–10 000 RPM (+/- 10%) OSC: 500–3500 RPM (+/- 10%)
Oscillation modes	9 different modes
Cable length	3.2 m
Sterilization method	Steam sterilization 134 °C
Ambient temperature	During operation: +10 °C to +40 °C During storage and transport: -20 °C to +45 °C
Max. relative humidity	During operation: 100 % During storage and transport: 90 %
Class of protection	Applied part, BF type
Buttons	ON/OFF, window calibration, direction change (FWD, OSC, REV), change of oscilation modes

Delivery contains (BS-001-033)
Handpiece, operating manual, cable: power



BS-001-034

Technical data | Footswitch

Dimensions	215 × 280 × 28 mm (W × H × D)
Weight	2.45 kg
Cable length	3.2 m
Casing safety standard functions	IP X8
Ambient temperature	Speed up, speed down, START/STOP, window size, direction (FWD, OSC, REV), during operation: +10 °C to +40 °C
Max. relative humidity	During storage and transport: -20 °C to +45 °C, during operation: 100 %, during storage and transport: 90 %

Delivery contains (BS-001-034)
Footswitch, operating manual, cable: power

10.2 | STEMA SHAVER
AIR DRIVEN DRILL



ZA-005-000

Ordering No.	Description
ZA-005-000	Air driven drill only, without tube | 0-950 rpm, operating pressure min. 6 bar
ZA-005-047	Tube for air driven drill ZA-005-000, 3 m
ZA-005-048	Tube for air driven drill ZA-005-000, 5 m
ZA-005-005	Three jaw-chuck up to Ø 7.0 mm, for round and triangular shanks with chuck key
ZA-005-006	Quick-action-chuck, for drill wires from Ø 0.8 mm up to Ø 3.0 mm
ZA-005-007	Adaptor for AO attachments
ZA-005-008	Adaptor for DIN attachments
ZA-005-009	Adaptor for oscilating saw, for standard attachment saw blades 3 m
ZA-005-010	Adaptor for acetabulum and medullary reamers, with AO coupling 100 rpm

10.2 | DRIVEN DRILL
BATTERY DRIVEN DRILL



ZA-005-001

Ordering No.	Description
ZA-005-001	Battery driven drill only, without tube
ZA-005-002	Battery pack for drill ZA-005-001
ZA-005-003	Charger, 220 V, for 1 batterie
ZA-005-004	Charger, 220 V, for 2 batteries
ZA-005-005	Three jaw-chuck up to Ø 7.0 mm, for round and triangular shanks with chuck key
ZA-005-006	Quick-action-chuck, for drill wires from Ø 0.8 mm up to Ø 3.0 mm
ZA-005-007	Adaptor for AO attachments
ZA-005-008	Adaptor for DIN attachments
ZA-005-009	Adaptor for oscilating saw, for standard attachment saw blades 3 m
ZA-005-010	Adaptor for acetabulum and medullary reamers, with AO coupling 100 rpm

11. MONITORS

11.1 | FULL HD MONITORS

FSN 21.5" LCD MEDICAL MONITOR
FSN 27" LCD MEDICAL MONITOR
SONY 27" FULL HD MEDICAL MONITOR
FSN 32" FULL HD MEDICAL MONITOR

11.2 | 4K ULTRA HD MONITORS

FSN 27" 4K ULTRA HD MEDICAL MONITOR
SONY 32" 4K ULTRA-HD MEDICAL MONITOR
FSN 32" 3D 4K ULTRA-HD MEDICAL MONITOR
FSN MEDICAL VIDEO SIGNAL CONVERTER
SONY 43" 4K ULTRA-HD MEDICAL MONITOR
EIZO 43" 4K ULTRA-HD MEDICAL MONITOR
SONY 55" 4K ULTRA-HD MEDICAL MONITOR
FSN 55" 4K ULTRA-HD MEDICAL MONITOR

11.3 | 3D 4K ULTRA HD MONITORS

SONY 32" 3D 4K ULTRA-HD MEDICAL MONITOR
FSN 32" 3D 4K ULTRA HD MEDICAL MONITOR
SONY 55" 3D 4K ULTRA HD MEDICAL MONITOR
FSN 55" 3D 4K ULTRA HD MEDICAL MONITOR

MONITORS



STEMA

11.1 | FULL HD MONITORS
FSN 21.5" FULL HD MEDICAL MONITOR

- **High brightness Full HD backlight**
- **Rapid video signal detection**
- **Triple window layout support**
- **Intuitive on-screen menu**
- **Lightweight design**



CF-003-038

Ordering No.	Description
CF-003-038	FSN FS-E2102D 21.5" Full HD medical monitor

Technical data

Panel	21.5" TFT LCD (LED)
Active area	476.06 mm x 267.79 mm (H × V)
Resolution	1920 × 1080
Aspect ratio	16:9
Pixel pitch	0.2479 × 0.2479
Number of colours	16.7 million
Contrast ratio	1.000:1 (typical)
Response time	22 ms (rise and fall)
Viewing angle	R/L 178°, U/D 178°
Surface treatment	Anti-reflection, anti-fingerprint
Brightness	350 cd/m²
Inputs	2 × HDMI (1.4), DP (1.2)
Outputs	HDMI (1.4)
Power supply	AC/DC Adaptor (AC 100–240 V, DC 12 V / 5 A)
Power consumption	45 W max.
Latency (typical)	2 ms max.
Mounting	VESA MIS-D 100 (100 × 100 mm)
IP code	IP33
Dimensions	527.9 × 334.5 × 58.9 mm (W × H × D)
Weight	5.48 kg
Certifications	ANSI/AAMI ES60601-1(UL60601-1), CAN/CSA C22.2 No. 60601-1, FCC Class B, EN60601-1, EN60601-1-2, CE, MDR(EU) 2017/745 Class I Medical Device

Delivery contains
Monitor, operating manual, AC-DC adaptor, screw BH M4 x 14, cables: power cord, HDMI cable

11.1 | FULL HD MONITORS
FSN 27" FULL HD MEDICAL MONITOR

- **High brightness Full HD backlight**
- **Rich colour calibration**
- **User friendly**
- **Ergonomic design**
- **Medical technologies**



CF-003-037

Ordering No.	Description
CF-003-037	FSN FS-A2702DS 27" Full HD medical monitor

Technical data

Panel	27" TFT LCD (LED)
Active area	597.89 mm × 336.31 mm (H × V)
Resolution	1920 × 1080
Aspect	16:9
Pixel pitch	0.3114 × 0.3114
Number of colours	Approx. 16.7 million
Response time	14 ms (gray to gray)
Viewing angle	R/L 178°, U/D 178°
Contrast ratio	1000 : 1 (typical)
Brightness	800 cd/m²
Inputs	2 × HDMI (1.4), DP (1.2), 2 × SDI (3G, HD, SD)
Outputs	HDMI (1.4), 2 × SDI (3G, HD, SD)
Power supply	AC/DC Adaptor (AC 100–240 V, DC 24 V / 6.6 A)
Power consumption	110 W
Latency (typical)	2 ms max.
Mounting	VESA MIS-D 100 (100 × 100 mm)
Standard	IEC 60601-1, IEC 60601-1-2
Dimensions	673 × 425 × 75.2 mm (W × H × D)
Weight	8.52 kg (monitor with cover)

Delivery contains
Monitor, operating manual, AC-DC adaptor, screw BH M4 × 14, cables: power, HDMI, SDI

11.1 | FULL HD MONITORS
SONY 27" FULL HD MEDICAL MONITOR

- **High quality Full HD image with 27"**
- **Control panel with LED lighting navigation**
- **Variety of display modes**
- **Ergonomic design**
- **Easy handling**
- **Energy-saving function**



Ordering No.	Description
CF-003-025	SONY LMD-2735MD Medical 27" Full HD LCD monitor
CF-010-009	Stand base for monitor CF-003-025

Technical data

Size	A-Si TFT Active Matrix LCD
Picture size	597.9 mm × 336.3 mm (H × V)
Resolution	1920 × 1080 pixels
Pixel Pitch	0.3114 × 0,3114 mm
Aspect	16:9
Number of colours	Approx. 16.700.000
Contrast ratio	1.000 : 1
Viewing angle	89°/89°
Panel Technology	LCD with IPS
Inputs	Y/C (Mini DIN 4 pins), Composite (BNC), RGB/Component (D-Sub 15 pins), DVI-D, ext. Sync (D-Sub 15 pins), SDI (BNC, HD/SD-SDI), D-Sub 9 pins
Outputs	1 × DVI-D
Power supply	AC/DC adaptor (AC 100–240 V, DC 24 V / 2.2 A)
Power consumption	Maximum 57 W
Mounting	VESA MIS-D 100 (100 × 100 mm)
Standard	IEC 60601-1
Dimensions	660 × 427 × 78 mm (W × H × D), without stand base
Weight	8.7 kg

Delivery contains
Monitor, plug holder, operating manual, warranty book, CD-ROM, cable: power cord - **delivery without stand base**

STEMA

11.1 | FULL HD MONITORS
FSN 32" FULL HD MEDICAL MONITOR

- **High quality Full HD pictures with 32"**
- **More screen window layouts to choose from**
- **Protective corner guards for a safer work area**
- **Power outputs for 5 V and 12 V accessories**
- **Full front glass, free of ridges for effortless cleaning**



CF-003-045

Ordering No.	Description
CF-003-045	FSN FS-A3202DS 32" Full HD LCD monitor

Technical data

Panel	32" TFT LCD (LED)
Active Area	698.40 mm x 392.85 mm (H × V)
Resolution	1920 × 1080 pixels
Pixel Pitch	0.36375 × 0.36375
Aspect ratio	16:9
Response time (typical)	25 ms
Number of colours	16.7 Million
Brightness (typical)	500 cd/m²
Calculated Gamut	BT.709 calibrated
Contrast ratio	1.300 : 1
Viewing angle	R/L 178°, U/D 178°
Panel Technology	LCD with IPS
Surface Treatment	Anti-reflection, anti-fingerprint
Inputs	2 × HDMI (1.4), DP (1.2), 2 × SDI (3G, HD, SD), DVI-D
Outputs	HDMI (1.4), 2 × SDI (3G, HD, SD)
Power supply	AC/DC Adaptor (AC 100–240 V, DC 24 V / 6.6 A)
Power consumption	90 W max
Latency	2 ms max
IP Rating	IP33- overall
Dimensions	773 × 478 × 75.2 mm (W × H × D)
Weight	11.5 kg (monitor with cover), 17.3 kg (shipping package)
Certification	ANSI/AAMI ES60601-1(UL60601-1), CAN/CSA C22.2 No. 60601-1, FCC Class B, EN60601-1, EN60601-1-2, CE, MDR(EU) 2017/745 Class I Medical Device

Delivery contains
Monitor, operating manual, AC-DC adaptor, screw BH M4 x 14, cables: power, HDMI, SDI

11.2 | 4K ULTRA HD MONITORS
FSN 27" 4K ULTRA HD MEDICAL MONITOR

- **Outstanding image clarity and colour reproduction.**
- **BT.709 and BT.2020 compatible**
- **Full edge bumper guard**
- **Image rotate (90, 180, 270) and mirror (horizontal, vertical)**
- **HDMI, display port, 3G/12G SDI connections**

In combination with the Camera unit CA-001-060, the video signal converter CF-003-046 (p. 122) is required.



CF-003-033

Ordering No.	Description
CF-003-033	FSN FM-E2701DG | 27" 4K Ultra HD medical monitor

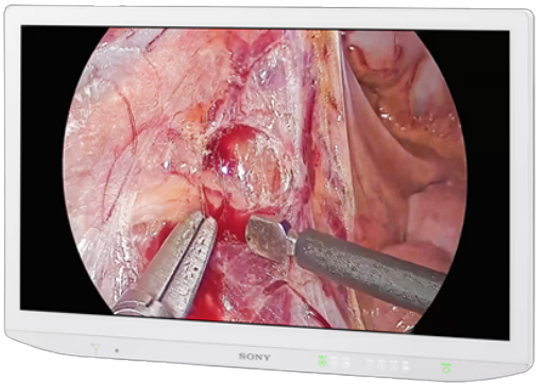
Technical data

Panel	27 inch LCD (LED)
Resolution	3840 x 2160
Active Area	596.16 mm x 335.34 mm (H × V)
Response time	< 16 ms (rise + fall time)
Pixel Pitch (mm)	0.15525 x 0.15525
Pixels arrangement	RGB vertical stripes
Number of colours	1.07 Billion
Brightness	700 cd/m²
Colour Gamut	BT.709 and BT.2020 compatible
Contrast ratio	1.000:1
Surface treatment	Anti-reflection
Viewing angle	R/L 178°, U/D 178°
Inputs	2 × HDMI 2.0, DP 1.4 (SST), 2 × SDI (3G, 12G)
Outputs	HDMI 2.0, 2 × SDI (3G, 12G),
Power Input	AC/DC Adaptor (AC 100–240 V, DC 24 V / 6.6 A)
Power Output	DC Output (12 V / 2 A, 5 V / 2 A)
Power consumption	110 W max
IP rating	IP33- overall
Dimensions	671 × 423 × 74.2 mm (W × H × D)
Weight	9.17 kg (monitor with cover)
Certifications	ANSI/AAMI ES60601-1(UL60601-1), CAN/CSA C22.2 No. 60601-1, FCC Class B, EN60601-1, EN60601-1-2, CE, MDR(EU) 2017/745 Class I Medical Device

Delivery contains
Monitor, user manual, AC-DC adaptor, screws M4, cables: power, DP, HDMI, SDI

11.2 | 4K ULTRA HD MONITORS
SONY 32" 4K ULTRA HD MEDICAL MONITOR

- **Advanced local dimming technology (backlight master drive)**
- **Full edge bumper guard**
- **Wide colour gamut for realistic visualisation**
- **Clarity in light and dark areas**
- **Minimised screen reflection in brightly-lit operating rooms**
- **Intuitive navigation and custom buttons**



CF-003-030

Ordering No.	Description
CF-003-030	SONY LMD-32M1MD | 32" 4K Ultra HD medical monitor

Technical data

Panel	TFT Active Matrix LCD
Picture size (diagonal)	800.1 mm
Effective picture size	697.3 × 392.2 mm (H × V)
Pixel pitch	0.181 × 0.181 mm
Resolution	3840 × 2160
Aspect	16:9
Pixel efficiency	99.99%
Backlight	Mini LED
Panel technology	LCD with IPS
Luminance (panel specification)	1850 cd/m² (typical, peak)
Contrast ratio	1.000.000:1 (typical)
Colours	10 bit colours (1.073.741.824)
Panel frame rate	50/60 Hz
Viewing angle (panel specification)	89°/89°/89°/89° (typical) (up/down/left/right, contrast 10:1)
Gamma	1.8, 2.0, 2.2, 2.4, 2.6, DICOM, HLG, PQ

Input

HDMI input	HDMI (HDCP 2.3 correspondence)
DVI-D input	DVI-D (TMDS single link, HDCP 1.4 correspondence)
SDI input	BNC 12G/6G/3G/HD/SD-SDI
Display port	Display port (SST HDCP 1.3 correspondence)
Serial remote (LAN	D-sub 9-pin (RS-232C), RJ-45 (ETHERNET)
Remote	Stereo mini jack
AC input	AC input connector, 100–240 V, 50/60 Hz
DC input	DC input connector, DC 26 V

STEMA

11.2 | 4K ULTRA HD MONITORS
SONY 32" 4K ULTRA HD MEDICAL MONITOR

Ordering No.	Description
CF-003-030	SONY LMD-32M1MD | 32" 4K Ultra HD medical monitor

Output

DVI-D (TMDS single link)	DVI-D (TMDS single link)
SDI output	2 × BNC 12G/3G/HD-SDI, BNC 3G/HD/SD-SDI
CLONE output	BNC 12G/3G-SDI
DC 5 V / 12 V output	5 V Output: 2.0 A max., 12 V Output: 2.5 A max.
Input/output	Type A, Hi-Speed USB (USB 2.0 compliant), for USB memory

General

Power requirements	DC IN: 26 V, 5.8 A (max.) (supplied from AC adaptor) AC IN: 100–240 V, 50/60 Hz, 1.7–0.7 A
Power consumption	Approx. 165 W (max.)
Operating temperature	0 °C to 40 °C
Operating humidity	30 % to 85 % (no condensation)
Storage/transport temperature	-20 °C to +60 °C
Storage/transport humidity	20 % to 90 %
Operating/storage/transport pressure	700 hPa to 1060 hPa
Dimensions	754.8 × 482.8 × 79.9 mm (W × H × D)
Weight	Approx. 11.2 kg
Mounting	100 × 100 mm (W × H)
IP Code	IP45 (front)/IP32 (others)

Delivery contains
Monitor, user manual, 2 × plug holder for the supplied AC power cord, before using this unit, CD-ROM (including the instructions for use), instructions for use (Chinese) service contact list, screw 4 × M4 x 12 mm, already attached to the rear panel, cables: power cord

STEMA

11.2 | 4K ULTRA HD MONITORS
FSN 32" 4K ULTRA HD MEDICAL MONITOR

- **Support HDR for incredible picture quality**
- **Options for 12G-SDi or 10G SPF+ support**
- **Web-based network control system**

In combination with the Camera unit CA-001-060, the video signal converter CF-003-046 (p. 122) is required.



CF-003-028

Ordering No.	Description
CF-003-028	FSN FM-E3230D | 32" 4K Ultra HD medical monitor
CF-010-007	Stand base for monitor CF-003-028

Technical data

Size	32" TFT LCD (LED)
Resolution	3840 × 2160
Aspect	16:9
Number of colours	Approx. 1.07 billion
Contrast ratio	1.500:1 typical
Active area	708.48 × 398.82 mm (H × V)
Response time	20 ms
Pixel pitch	0.1845 × 0.1845
Viewing angle	R/L 178°, U/D 178°
Inputs	2 × HDMI 2.0, DP 1.2
Outputs	HDMI 2.0
Power supply	AC/DC Adaptor (AC 100–240 V, DC 24 V / 8.3 A)
Power consumption	150 W
Mounting	VESA MIS-D 100 (100 × 100 mm)
Dimensions	773 × 478 × 75.2 mm (W × H × D), without stand base
Weight	10.5 kg (monitor with cover) | 16.3 kg (shipping package)
Standard	IEC 60601-1, IEC 60601-1-2
IP Rating	IP-33- overall
Certifications	ANSI/AAMI ES60601-1 (UL60601-1), CAN/CSA C22.2 No. 60601-1, FCC Class B, EN60601-1, EN-60601-1-2, CE, MDR(EU), 2017/745 Class I, Medical Device

Delivery contains
Monitor, AC/DC adaptor, operating manual, cables: power cord, DP, HDMI, BNC, DVI-D - **delivery without stand base**

11.2 | 4K ULTRA HD MONITORS
MEDICAL VIDEO SIGNAL CONVERTER

- **Quad SDI to 12G SDI/HDMI 4K converter**
- **Mode selects switch configuration allows for quick setup**
- **Dual SDI 3D inputs and converts 3D into SDI or HDMI output**
- **Meets medical certification requirements**
- **Controls and settings are accessed through a USB interface**
- **Firmware updates are fast and easy**



CF-003-046

Ordering No.	Description
CF-003-046	Medical video signal converter (for CF-003-028)

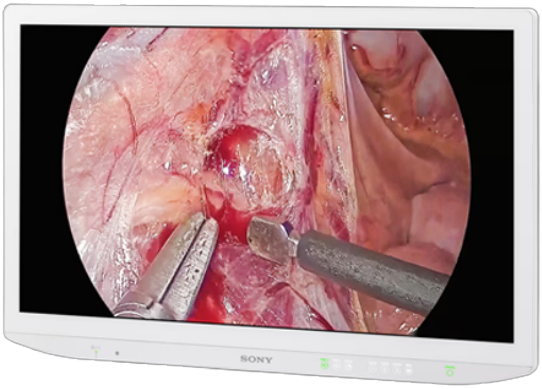
Technical data

Mode select	Manual mode: 8 pin DIP switch Software mode: RS232 (PC Program through USB)
Input signal	4 × SDI (SD/HD/3G/12G)
Output signal	HDMI (2.0) SDI (HD/3G/12G)
External control	USB (2.0)
Power supply	12 V DC
Power consumption	20 W max.
Unit dimension	130.5 × 103 × 40 mm (W × H × D)
Package dimension	250 × 190 × 75 mm (W × H × D)
Weight	0.48 kg | 1.01 kg shipping package

Delivery contains
Converter, operating manual, cable: power cord

11.2 | 4K ULTRA HD MONITORS
SONY 43" 4K ULTRA HD MEDICAL MONITOR

- **Advanced Local dimming technology (backlight master drive)**
- **Full edge bumper guard**
- **Wide colour gamut for realistic visualisation**
- **Clarity in light and dark areas**
- **Minimised screen reflection in brightly-lit operating rooms**
- **Intuitive navigation and custom buttons**



CF-003-039

Ordering No.	Description
CF-003-039	SONY LMD-43M1MD | 43" 4K Ultra HD medical monitor

Technical data

Panel	TFT Active Matrix LCD
Picture size (diagonal)	1079.9 mm
Effective picture size	941.2 × 529.4 mm (H × V)
Pixel pitch (mm)	0.2451 × 0.2451 mm
Resolution	3840 × 2160
Aspect	16:9
Pixel efficiency	99.99%
Backlight	Mini LED
Panel technology	LCD with IPS
Luminance (panel specification)	2000 cd/m² (typical, peak)
Contrast ratio	1.000.000:1 (typical)
Colours	10 bit colours (1.073.741,824)
Panel frame rate	50/60 Hz
Viewing angle (panel specification)	89°/89°/89°/89° (typical) (up/down/left/right, contrast 10:1)
Gamma	1.8, 2.0, 2.2, 2.4, 2.6, DICOM, HLG, PQ

Input

HDMI input	HDMI (HDCP 2.3 correspondence)
DVI-D input	DVI-D (TMDS single link, HDCP 1.4 correspondence)
SDI input	BNC 12G/6G/3G/HD/SD-SDI
Display port	Display port (SST HDCP 1.3 correspondence)
Serial remote (LAN)	D-sub 9-pin (RS-232C), RJ-45 (ETHERNET)
Remote	Stereo mini jack
AC input	AC input connector, 100–240 V, 50/60 Hz

STEMA

11.2 | 4K ULTRA HD MONITORS
SONY 43" 4K ULTRA HD MEDICAL MONITOR

Ordering No.	Description
CF-003-039	SONY LMD-43M1MD | 43" 4K Ultra HD medical monitor

Output

DVI-D (TMDS single link)	DVI-D (TMDS single link)
SDI output	2 × BNC 12G/3G/HD-SDI, BNC 3G/HD/SD-SDI
CLONE output	BNC 12G/3G-SDI
DC 5 V / 12 V output	5 V output: 2.0 A max., 12 V output: 2.5 A max.
Input/output	Type A, Hi-speed USB (USB 2.0 compliant), for USB memory

General

Power requirements	AC IN: 100–240 V, 50/60 Hz, 2.1–0.9 A
Power consumption	Approx. 203 W (max.)
Operating temperature	0 °C to 40 °C
Operating humidity	30 % to 85 % (no condensation)
Storage/transport temperature	- 20 °C to + 60°C
Storage/transport humidity	20 % to 90 %
Operating/storage/transport pressure	700 hPa to 1060 hPa
Dimensions	1005.1 × 623.0 × 83.7 mm (W × H × D)
Weight	Approx.16.9 kg (Approx. 37 lb 5 oz)
Mounting	200 × 200 mm (W × H)
IP Code	IP45 (front)/IP32 (others)

Delivery contains
Monitor, user manual, 2 × plug holder for the supplied AC power cord, before using this unit, CD-ROM (including the instructions for use), instructions for use (Chinese), information for customers in europe, service contact list, screw 4 × M6 x 12 mm, already attached to the rear panel, cables: power cord

11.2 | 4K ULTRA HD MONITORS
EIZO 43" 4K ULTRA HD MEDICAL MONITOR

- **Wide colour gamut for distinguishing tones**
- **HDR compatibility**
- **Fully flat design**
- **Cable cover for safety and hygiene**
- **Streamlined connectivity**
- **Output images directly to multiple monitors**



CF-003-031

Ordering No.	Description
CF-003-031	EIZO EX4342 | 43" 4K Ultra HD medical monitor

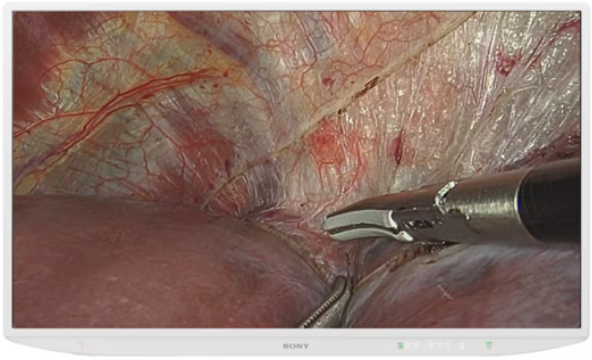
Technical data

Panel type	TFT Colour-LCD Panel (IPS)
Backlight	LED
Size	43" / 109.2 cm
Native resolution	3840 × 2160 (16:9 aspect ratio)
Viewable image size	941.2 × 529.4 mm
Pixel pitch	0.2451 × 0.2451 mm
Display colours	10-bit colours (SDI): 1.07 billion colours (maximum) 8-bit colours: 16.77 million colours
Simultaneous display	Picture-by-Picture (2 PbyP), Picture-in-Picture (PinP)
Contrast ratio	1000:1
Viewing angle	178° / 178°
Inputs	BNC (3G-SDI), BNC (12G-SDI), DVI-D, DisplayPort, HDMI
Outputs	BNC (12G-SDI), DVI-D, DisplayPort
Power supply	AC adaptor input: 100–240 V, 50/60 Hz Monitor input: DC 48 V, 3.0 A
Power consumption	144 W (maximum)
Dimensions	974 × 567 mm
Weight	approx. 17 kg
OSD languages	English, German, French, Spanish, Italian, Swedish, Japanese, simplified Chinese, traditional Chinese, Russian, Portuguese
Certifications	CE / UKCA (Medical Device), ANSI/AAMI ES60601-1, CAN/CSA-C22.2 No. 60601-1, IEC/EN 60601-1, VCCI-A, FCC-A, CAN ICES-3(A), R cm, RoHS, China RoHS, WEEE, CCC, BIS

Delivery contains
Monitor, AC/DC Adaptor, operating manual, cables: power, DP, HDMI, BNC, DVI-D - **Delivery without stand base**

11.2 | 4K ULTRA HD MONITORS
SONY 55" 4K ULTRA HD MEDICAL MONITOR

- **Advanced local dimming technology (backlight master drive)**
- **Full edge bumper guard**
- **Wide colour gamut for realistic visualisation**
- **Clarity in light and dark areas**
- **Minimised screen reflection in brightly-lit operating rooms**
- **Intuitive navigation and custom buttons**



CF-003-040

Ordering No.	Description
CF-003-040	SONY LMD-XH550MD | 55" 4K Ultra HD medical monitor

Technical data

Panel	TFT Active Matrix LCD
Picture size (diagonal)	1387.8 mm
Effective picture size	1209.6 × 680.4 mm (H × V)
Pixel pitch	0.315 × 0.315 mm
Resolution	3840 × 2160 (H × V)
Aspect	16:9
Pixel efficiency	99.99 %
Backlight	LED
Panel technology	LCD with IPS
Luminance (panel specification)	1500 cd/m² (typical, peak)
Contrast ratio	1.000.000:1 (typical)
Colours	10 bit colours (1.073.741.824)
Panel frame rate	50/60 Hz
Viewing angle (panel specification)	89 °/89 °/89 °/89 ° (typical) (up/down/left/right, contrast 10:1)
Gamma	1.8, 2.0, 2.2, 2.4, 2.6, DICOM, Highlight, HLG

Input

HDMI input	HDMI (HDCP 2.3 correspondence)
DVI-D input	DVI-D (TMDS single link, HDCP 1.4 correspondence)
SDI input	2 × BNC 12G/3G/HD-SDI, BNC 3G/HD/SD-SDI
Display port	Display Port (SST HDCP 1.3 correspondence)
Serial remote (LAN)	D-sub 9-pin (RS-232C), RJ-45 (Ethernet, 10BASE-T/100BASE-TX)
Remote	Stereo mini jack
AC input	AC input connector AC 100–240 V, 50/60 Hz

STEMA

11.2 | 4K ULTRA HD MONITORS
SONY 55" 4K ULTRA HD MEDICAL MONITOR

Ordering No.	Description
CF-003-040	SONY LMD-XH550MD | 55" 4K Ultra HD medical monitor

Output

SDI output ..... 2 × BNC 12G/3G/HD-SDI, BNC 3G/HD/SD-SDI
CLONE output ..... BNC 12G/3G-SDI
DC 5 V / 12 V output ..... 5 V output: 2.0 A max, 12 V output: 2.5 A max

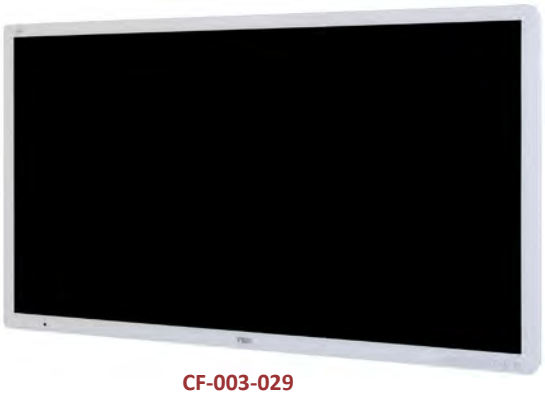
General

Power requirements ..... AC IN: 100–240 V, 50/60 Hz, 3.1–1.1 A
Power consumption ..... Approx. 290 W (max.)
Operating temperature ..... 0 °C to 40 °C
Operating humidity ..... 30 % to 85 % (no condensation)
Storage/transport temperature ..... -20 °C to +60 °C
Storage/transport humidity ..... 20 % to 90 %
Operating/storage/transport pressure ..... 700 hPa to 1060 hPa
Dimensions ..... Approx. 1249.6 × 763.3 × 92.8 mm (W × H × D)
Weight ..... Approx. 25 kg
Mounting ..... 200 × 200 mm, 400 x 200 mm
IP Code ..... IP45 (front)/IP32 (others)

Delivery contains
Monitor, user manual, 2 × plug holder for the supplied AC power cord, before using this unit, CD-ROM (including the instructions for use), service contact list, screw 4 × M6 x 12 mm, cables: power cord

11.2 | 4K ULTRA HD MONITORS
FSN MEDICAL 55" 4K ULTRA HD LCD MONITOR

- **Excellent colour and detail reproduction on a large screen**
- **Wide selection of signal input choices**
- **Built in multi-window layouts**
- **Not available with standard STEMA trolleys**



CF-003-029

Ordering No.	Description
CF-003-029	FSN FM-A5504DG | 55" 4K ULTRA-HD MEDICAL MONITOR

Technical data

Size	55" TFT LCD (LED)
Resolution	3840 × 2160
Aspect	16:9
Number of colours	Approx. 1.07 billion
Contrast ratio	1.100:1 typical
Active Area	1209.60 mm x 680.40 mm (H × V)
Brightness	500 cd/m²
Gamut	BT.709 and BT.2020 compatible
Viewing angle	R/L 178°, U/D 178°
Inputs	HDMI 2.0, 2 × DP 1.2, DVI, 4 x DVI, 4 (Quad) x SDI (3G), 2 × SDI (12G)
Outputs	1 × DP 1.2, 1 × DVI, 4 (Quad) x SDI (3G), 2 × SDI (12G)
Power supply	AC 100–240 V
Power consumption	Maximum 140 W
Mounting	VESA 600 × 400 mm
Standard	IEC 60601-1, IEC 60601-1-2
Dimensions	1278 × 756 × 88 mm (W × H × D), without stand base
Weight	36.42 kg
Certifications	ANSI/AAMI ES60601-1(UL60601-1), CAN/CSA C22.2 No. 60601-1, FCC Class B, EN60601-1,EN60601-1-2, CE, MDD(93/42/EEC) Class I Medical Device

Delivery contains
Monitor, operating manual, remote control (incl. batteries), cables: power cord, DP, HDMI, BNC, DVI-D
Delivery without stand base

11.3 | MEDICAL 3D 4K ULTRA HD MONITORS
SONY MEDICAL 32" 3D 4K ULTRA HD MONITOR

- **4K Ultra HD resolutions | HDR-compatible**
- **Various display formats in 3D**
- **Advanced Image Multiple Enhancer (A.I.M.E.™)**
- **Wider colour gamut**
- **CLONE output**



CF-003-041

Ordering No.	Description
CF-003-041	SONY LMD-XH320MT | 32" 3D 4K Ultra HD medical monitor

Picture performance

Panel	32" TFT Active Matrix LCD
Picture size	800.757 mm
Effective picture size	697.92 × 392.58 mm
Pixel pitch	0.18175 × 0.18175 mm
Resolution	3840 × 2160 (H × V)
Aspect	16:9
Pixel efficiency	99.99%
Backlight	LED
Panel technology	LCD with IPS
Luminance (panel specification)	650 cd/m² (typical), 1750 cd/m² (typical, peak)
Contrast ratio	1.000.000:1 (typical)
Colours	10 bit colours (1.073.741.824)
Panel frame rate	50/60 Hz
Viewing angle	89°/89°/89°/89° (typical) (up/down/left/right, contrast > 10:1)
Vertical viewing angle (3D mode)	32°at a viewing distance more than 690 mm, crosstalk ratio less than 7% (typical)
Gamma	1.8, 2.0, 2.2, 2.4, 2.6, DICOM, Highlight, HLG

Input

HDMI input	HDMI (HDCP 2.3 correspondence)
DVI-D input	DVI-D (TMDS single link, HDCP 1.4 correspondence)
SDI input	2 × BNC 12G/3G/HD-SDI, BNC 3G/HD/SD-SDI
Display port	Display port (SST HDCP 1.3 correspondence)
Serial remote (LAN)	D-sub 9-pin (RS-232C), RJ-45 (Ethernet, 10BASE-T/100BASE-TX)
Remote	Stereo mini jack
AC input	AC input connector AC 100–240 V, 50/60 Hz
DC input	DC input connector DC 26 V

11.3 | 3D 4K ULTRA HD MONITORS
SONY MEDICAL 32" 3D 4K ULTRA HD MONITOR

Ordering No.	Description
CF-003-041	SONY LMD-XH320MT | 32" 3D 4K Ultra HD medical monitor

Output

SDI output	2 × BNC 12G/3G/HD-SDI, BNC 3G/HD/SD-SDI
CLONE output	BNC 12G/3G-SDI
DC 5 V / 12 V output	5 V Output: 2.0 A max., 12 V Output: 2.5 A max.

General

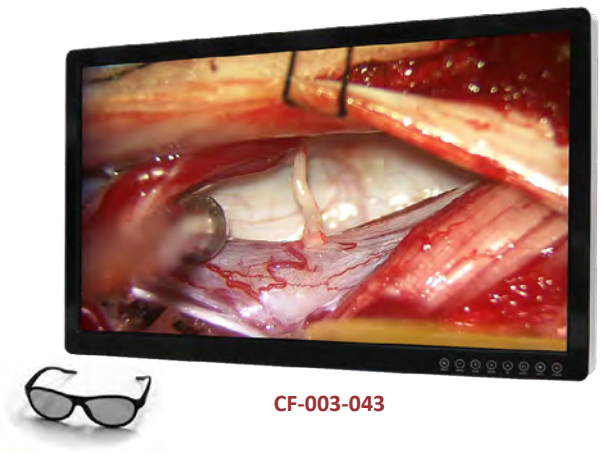
Power requirements	AC IN: 100–240 V, 50/60 Hz, 2.4–1.1 A DC IN: 26 V, 8.8 A (max) (supplied from AC adaptor)
Power consumption	Approx. 230 W (max.)
Operating temperature	0 °C to 40 °C
Operating humidity	30 % to 85 % (no condensation)
Storage/transport temperature	-20 °C to + 60 °C
Storage/transport humidity	20 % to 90 %
Operating/storage/transport pressure	700 hPa to 1060 hPa
Dimensions	753.9 × 476.3 × 84.7 mm (W × H × D)
Weight	Approx. 10.5 kg
Mounting	100 × 100 mm (W × H)
IP Code	IP45 (front)/IP32 (others)

Delivery contains
Monitor, 3D Eye shield kit: CFV-E30SK, user manual (CD-ROM), instructions for use of the 3D eye shield kit, service contact list, 2 × plug holder for the supplied AC power cord, 4 × M4 x 12 mm screw, cables: 2 × power cord

11.3 | 3D 4K ULTRA HD MONITORS

FSN MEDICAL 32" 3D 4K ULTRA HD MONITOR

- **HDR support (DisplayPort, HDMI, SDI)**
- **3D (X-POL™) ready**
- **Expanded intuitive OSD interface**
- **Fast detection of MIS camera system video**



CF-003-043

Ordering No.	Description
CF-003-043	FSN FM-E3204DGC | 32" 3D 4K Ultra HD medical monitor

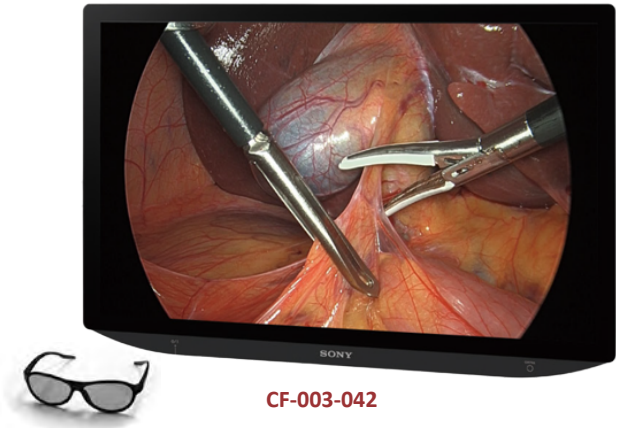
Technical data

Panel	32" TFT LCD (LED)
Resolution	3840 × 2160
Active area	708.48 mm × 398.52 mm (H × V)
Pixel pitch	0.1845 × 0.1845 mm
Response time (typical)	9 ms (gray to gray)
Number of colours	1.07 Billion
3D type	Side-by-side, line-by-line, top bottom, SDI level B-DS, SDI dual input
Brightness (typical)	(2D) 700 cd/m², (3D) 300 cd/m²
Gamut	BT.709 and BT.2020 compatible
Contrast ratio (typical)	1750 : 1
Surface treatment	Anti-glare
Viewing angle (CR>10)	(2D) R/L 178°, U/D 178°(3D) U/D 16°
Input	HDMI 2.0 (HDCP 2.3), 2 × DP 1.2 (SST), DVI (single link, compatible HDMI 1.4 and HDCP 1.4) 4 × SDI (3G), 2 × SDI (12G)
Output	DP 1.2 (SST), DVI (single link, HDCP 1.4) 4 × SDI (3G), 2 × SDI (12G)
Power consumption	AC/DC Adaptor (AC 100–240 V, DC 24 V / 6.6 A)
Latency	1.2 ms
Unit dimension	760 × 465 × 71.4 mm (W × H × D)
Package dimension	905 × 744 × 230 mm (W × H × D)
Weight	11.6 kg (monitor only), 18.3 kg (shipping package)
Certifications	ANSI/AAMI ES60601-1(UL60601-1), CAN/CSA C22.2 No. 60601-1, FCC Class B, EN60601-1, EN60601-1-2, CE, MDR(EU) 2017/745 Class I Medical device

Delivery contains
Monitor, 3D glasses, user manual, 4 × screw BH M4 x 14, cables: power, DP, HDMI, DVI-D, SDI

11.3 | 3D 4K ULTRA HD MONITORS
SONY MEDICAL 55" 3D 4K ULTRA HD MONITOR

- **4K Ultra HD resolutions | HDR compatible**
- **Various display formats in 3D**
- **Advanced Image Multiple Enhancer (A.I.M.E.™)**
- **Wider colour gamut**
- **CLONE output**



CF-003-042

Ordering No.	Description
CF-003-042	SONY LMD-XH550MT | 55" 3D 4K Ultra HD medical monitor

Picture performance

Panel	TFT Active Matrix LCD
Picture size	1387.8 mm
Effective picture size	1209.6 × 680.4 mm
Pixel pitch	0.315 × 0.315 mm
Resolution	3840 × 2160
Aspect	16:9
Pixel efficiency	99.99 %
Backlight	LED
Panel technology	LCD with IPS
Luminance (panel specification)	550 cd/m² (typical), 1500 cd/m² (typical, peak)
Contrast ratio	1.000.000:1 (typical)
Colours	10 bit colours (1.073.741.824)
Panel frame rate	50/60 Hz
Viewing angle	89°/89°/89°/89° (typical) (up/down/left/right, contrast > 10:1)
Vertical viewing angle (3D mode)	37°at a viewing distance more than 1.000 mm, crosstalk ratio less than 7 % (typical)
Gamma	1.8, 2.0, 2.2, 2.4, 2.6, DICOM, Highlight, HLG

Input

HDMI input	HDMI (HDCP 2.3 correspondence)
DVI-D input	DVI-D (TMDS single link, HDCP 1.4 correspondence)
SDI input	2 × BNC 12G/3G/HD-SDI, BNC 3G/HD/SD-SDI
Display port	Display port (SST HDCP 1.3 correspondence)
Serial remote (LAN)	D-sub 9-pin (RS-232C), RJ-45 (Ethernet, 10BASE-T/100BASE-TX)
Remote	Stereo mini jack
AC input	AC input connector AC 100–240 V, 50/60 Hz

11.3 | 3D 4K ULTRA HD MONITORS
SONY MEDICAL 55" 3D 4K ULTRA HD MONITOR

Ordering No.	Description
CF-003-042	SONY LMD-XH550MT | 55" 3D 4K Ultra HD medical monitor

Output

SDI output ..... 2 × BNC 12G/3G/HD-SDI, BNC 3G/HD/SD-SDI
CLONE output ..... BNC 12G/3G-SDI
DC 5 V / 12 V Output ..... 5 V output: 2.0 A max., 12 V output: 2.5 A max.

General

Power requirements ..... AC IN: 100–240 V, 50/60 Hz, 3.1–1.1 A
Power consumption ..... Approx. 290 W (max.)
Operating temperature ..... 0 °C to 40 °C
Operating humidity ..... 30 % to 85 % (no condensation)
Storage/transport temperature ..... -20 °C to +60 °C
Storage/transport humidity ..... 20 % to 90 %
Operating/storage/transport pressure ..... 700 hPa to 1060 hPa
Dimensions ..... 1249.6 × 763.3 × 92.8 mm (W × H × D)
Weight ..... Approx. 27 kg
Mounting ..... 200 × 200 mm, 400 × 200 mm (W × H)
IP Code ..... IP45 (front)/IP32 (others)

Delivery contains
Monitor, 3D Eye shield kit: CFV-E30SK, user manual (CD-ROM), instructions for use of the 3D eye shield kit, service contact list, 2 × plug holder for the supplied AC power cord, 4 × M6 x 12 mm screw, cables: power

STEMA

11.3 | 3D 4K ULTRA HD MONITORS

FSN MEDICAL 55" 3D 4K ULTRA HD MONITOR

- **OLED technology**
- **High contrast ratio, perfect blacks**
- **Supports HDR for an incredible image**
- **Immersive 3D viewing is ideally suited for large screens**



CF-003-044

Ordering No.	Description
CF-003-044	FSN FM-A5505DGC | 55" 3D 4K Ultra HD medical monitor

Technical data

Panel	55" OLED
Resolution	3840 × 2160
Aspect ratio	16:9
Active area	1209.60 mm × 680.40 mm (H × V)
Pixel pitch (mm)	0.315 × 0.315
Response time (typical)	1 ms (gray to gray)
Number of colours	1.07 Billion
Gamut	BT.709 and BT.2020 compatible
Contrast ratio (D65, 2D, typical)	420.000:1 (peak), 170.000:1 (normal)
Surface treatment	Anti-glare
Viewing angle	(2D) R/L 120 ° U/D 120 ° (3D) U/D 16 °
Input	HDMI (2.0, HDCP 2.3), 2 × DP (1.2 SST), 4 x SDI (2 × SDI 3G), (2 × SDI 12G), DVI (single link, HDMI 1.4, HDCP 1.4)
Output	DP 1.2 (SST), 4 × SDI (2 × SDI 3G), (2 × SDI 12G), DVI (single link)
Power supply	SMPS (AC 100–240 V)
Power consumption	350 W max, 160 W typ
Unit dimension	1268.5 × 753.3 × 85 mm (W × H × D)
Package dimension	1453 × 937 × 300 mm (W × H × D)
Weight	33.0 kg (monitor only), 43.8 kg (shipping package)
Certifications	ANSI/AAMI ES60601-1 (UL60601-1), CAN/CSA C22.2 No. 60601-1, FCC Class B, EN60601-1, EN60601-1-2, CE, MDR(EU) 2017/745 Class I Medical Device

Delivery contains
Monitor, operating manual, remote control and batteries, cables: power, DP, HDMI, BNC, 3D

		Minimum	Typical	Measurement
Luminance, Bypass (2D / 3D) cd/m²	Peak	376/151	470/192	25% white box
	Normal	144/58	80/73	100% white pattern
Luminance, D65 (2D / 3D) cd/m²	Peak	366/135	420/174	25% white box
	Normal	136/55	170/69	100% white pattern
Luminance, D65 (2D / 3D, HDR) cd/m²	Peak	496/202	620/252	10% white box
	Normal	336/135	420/170	25% white pattern

12. PRINTER

12.1 | ANALOG COLOUR VIDEO PRINTERS

12.2 | DIGITAL COLOUR PRINTERS

12.3 | ANALOG AND DIGITAL BLACK AND WHITE PRINTERS

PRINTER



STEMA

12.1 | ANALOG COLOUR VIDEO PRINTERS
SONY UP-25MD

- **Compact design**
- **HDTV signal support 1080i and 720p**
- **PAL and NTSC compatible**
- **Excellent print quality**



CF-005-001

Ordering No.	Description
CF-005-001	SONY UP-25MD | Colour video printer

Technical data

TV System ..... PAL, NTSC (via switch on the unit)
Printing method ..... Dye sublimation thermal printing

Resolution ..... 423 dpi
Colour gradiation ..... > 16.7 million colours, 256 gradations (8 bit) for cyan, magenta and yellow

Picture size ..... UP-21L/24LA: 127.9 × 96.0 mm, UP-21L/24SA: 96.0 × 75.6 mm
Print speed ..... UP-21L: 29 s, UP-21S: 19 s

HDTV in/out signals ..... 1080i/59.94i, 1080/50i (2:1 interlace), 720/59.94p, 720/50p (progressive)
Paper capacity ..... Size L: max. 50 sheets, size S: max 80 sheets
Video inputs ..... 3 × RGB/YPbPr (BNC), S-Video (4-pin min-DIN), composite video (BNC)

Power supply ..... 100–240 VAC
Frequency ..... 50/60 Hz

Dimensions ..... 212 × 98 × 398 mm (W × H × D)
Weight ..... 5.7 kg
Certificates ..... CE, UL 60601-1, UL 60950-1, CSA C22.2 No. 601.1

Delivery contains
Printer control unit, operating manual (CD-ROM), paper tray (L size), cleaning cartidge, cable: power cord

12.2 | DIGITAL COLOUR PRINTERS
SONY UP-D25MD

- **Compact design**
- **Direct connection to ultrasound or endoscopic units via USB 2.0**
- **Excellent print quality**
- **Wireless printing capability**
- **Automatic feed roller cleaning**
- **Colour adjustment and gray balance**



CF-005-011

Ordering No.	Description
CF-005-011	SONY UP-D25MD | Digital A6 colour printer

Technical data

Printing method	Dye sublimation thermal printing
Resolution	423 dpi
Colour gradiation	256 gradations (8 bit) for cyan,magenta and yellow
Picture size	UP-21L/24LA: 126 × 96 mm, UP-21L/24SA: 96 × 72 mm
Print speed	UP-21L: 29 s, UP-21S: 19 s
Paper capacity	Size L: max. 50 sheets, size S: max 80 sheets
Interface	High-Speed-USB (USB 2.0) typ B
Power supply	100–240 V AC
Frequency	50/60 Hz
Dimensions	212 × 98 × 398 mm (W × H × D)
Weight	5.5 kg
Certificates	CE, UL 60601-1, UL 60950-1, CSA C22.2 No. 601.1

Delivery contains
Printer UP-D25MD, operating manual (CD-ROM), paper tray (Size L), cleaning cartidge, cables: power, USB

12.2 | COLOUR VIDEO PRINTERS
SONY UP-27MD | COLOUR VIDEO PRINTER

- **Compact size**
- **Superb print quality and colour at 423 dpi resolution**
- **Useful front operation and user-friendly LCD display**
- **Split-image prints**
- **Automatic feed roller cleaning**
- **Colour adjustment and gray balance**
- **SDI compatibility**
- **Large front LCD**



CF-005-010

Ordering No.	Description
CF-005-010	SONY UP-27MD | Colour video printer

Technical data

Printing method	Dye sublimation thermal printing
Resolution	423 dpi
Colour gradiation	256 gradations (8 bit) for cyan, magenta and yellow
Picture elements	UPC-21L: 2132 × 1600 dots UPC-21S: 1600 x 1260 dots
Picture area	UPC-21L: 127.9 x 96.0 mm (5 1/8 x 3 3/4 inches) UPC-21S: 96.0 x 75.6 mm (3 3/4 x 3 inches)
Print speed	UP-21L: 29 s, UP-21S: 19 s
Paper capacity	Size L: max. 50 sheets, size S: max 80 sheets
Interface	SDI IN: BNC (x1) 3G/HD/SD-SDI SDI OUT: BNC (x1) 3G/HD/SD-SDI
Control connectors	REMOTE: Stereo mini jack (×1) for optional FS-24 Foot Switch RS-232C (Computer control interface): D-sub 9-pin connector (×1)
Power supply	100–240 VAC
Frequency	50/60 Hz
Dimensions	212 × 98 × 398 mm (W × H × D)
Weight	5.7 kg
Certificates	CE, UL 60601-1, UL 60950-1, CSA C22.2 No. 601.1

Delivery contains
Printer UP-27MD, operating manual (cd rom), paper tray (L size), cleaning cartidge, cables: power, USB

12.3 | ANALOG AND DIGITAL BLACK AND WHITE PRINTERS
SONY UP-971AD | HYBRID GRAPHIC PRINTER

- **Processing of analog and digital input signals**
- **Compact design**
- **High-quality printouts**
- **Extreme user friendly**



CF-005-008

Ordering No.	Description
CF-005-008	SONY UP-971AD | Hybrid graphic printer
CF-005-009	SONY UP-991AD | With blue-based transparent film print and usb connection

Technical data

Printing method	Direct thermal printing
Resolution	325 dpi
Colour gradiation	256 gradations
Picture size	Digital: 200 × 150 mm, NTSC: 188 × 143 mm, PAL: 188 × 140 mm
Print speed	8 s per image (standard mode)
Picture storage	Digital: 70 MBit, NTSC: 31 MBit, PAL: 38 MBit
Interface	Hi-Speed-USB, Video (BNC), Composite
Power supply	100–240 VAC
Frequency	50/60 Hz
Dimensions	316 × 132.5 × 265 mm (W × H × D)
Weight	7 kg
Certificates	CE, UL 60601-1, UL-60950, EN60601-1, EN60601-1-2

Delivery contains
Printer UP-971AD, operating manual (cd rom), cleaning sheet for print head, software, cables: power, BNC, USB

13. TROLLEYS

13.1 | TROLLEYS

13.2 | ACCESSORIES
ENDOSCOPE HOLDER
CAMERA HOLDER
MONITOR HOLDER
SUPPORT ARMS ON SWIVEL ARM
KEYBORD TRAY
GAS BOTTLE / DRIP HOLDER
IV POLE / STANDARD RUNNER
TRANSFORMER / SOCKET STRIP
EQUIPOTENTIAL BONDING

TROLLEYS



STEMA

13.1 | TROLLEYS
STEMA TROLLEY 1 + 2



CH-001-001 | CH-001-002

- **Individual arrangement**
- **Adjustable shelfs**
- **Safe placement of different units**
- **Easy moving through special roles**
- **Only for screens with a maximum of 32 inches**

Ordering No.	Description
CH-001-001	STEMA Trolley 1
CH-001-002	STEMA Trolley 2

Technical data

Surface	Basic colour RAL 7035 (light grey), decor colour RAL 5013 (cobalt blue), powder coated, further colours on request
Addition information	**CH-001-001:** Combinable only with holders for flat screen CH-010-003 and CH-010-004 **CH-001-002:** Combinable only with holders for flat screen CH-010-023 and CH-010-024
Dimension trolley	**CH-001-001:** 71.4 × 143.5 × 62.5 cm (W × H × D) **CH-001-002:** 61.4 × 143.7 × 62.5 cm (W × H × D)
Dimension racks	**CH-001-001:** 60 × 50 cm (W × D) **CH-001-002:** 50 × 50 cm (W × D)
Weight	64 kg (basic version)
Condition on delivery	Disassembled

Delivery contains
Basic unit, 4 × racks - 1 of them with handle, drawer, 2 × energy columns, 4 × double wheels - 2 of them lockable

13.1 | TROLLEYS

STEMA TROLLEY 3 + 4

- **Individual arrangement**
- **Adjustable shelfs**
- **Safe placement of different units**
- **Easy moving through special roles**
- **Only for screens with a maximum of 32 inches**



CH-001-004



CH-001-005

Ordering No.	Description
CH-001-004	STEMA Trolley 3
CH-001-005	STEMA Trolley 4

Technical data

Surface ..... Basic colour RAL 7035 (light grey), decor colour RAL 5013 (cobalt blue), powder coated, further colours on request

Addition information ..... **CH-001-005:** See CH-001-004 but with 2 racks, without drawer

Dimension trolley ..... 61.4 × 82.9 × 62.5 cm (W × H × D)

Dimension racks ..... 50 × 50 cm (W × D)

Weight ..... 48 kg (basic version)

Condition on delivery ..... Disassembled

Delivery contains (CH-001-004)
Basic unit, rack with handle, drawer, 4 × double wheels - 2 of them lockable

Delivery contains (CH-001-005)
Basic unit, rack with handle, rack without handle, 4 × double wheels - 2 of them lockable

13.1 | TROLLEYS
STEMA TROLLEY FOR 55" MONITORS



- **4 Fittings**
- **Safe placement of different units**
- **Easy moving through special roles**
- **With push handle and winding aid for cables**

Ordering No.	Description
CH-001-003	STEMA Trolley for 55" monitor

Technical data

Surface	Basic colour RAL 7035 (light grey), decor colour RAL 5015 (sky blue), decor colour RAL 1003 (signal yellow),powder coated
Addition information	**For all 55" Monitors**
Dimension trolley	153.6 × 61 × 62 cm (W × H × D)
Dimension racks	45 × 40 cm (W × D)
Block of drawers	45 × 40 cm (W × D) Interior: 34 cm × 24 cm
Weight	50 kg
Condition on delivery	Disassembled

Delivery contains (CH-001-003)
Basic unit, 3 × rack without handle, drawer, 4 × double wheels lockable, push handle, winding aid for cable

13.1 | TROLLEYS

TROLLEY USED FOR STEMA ESU

- **Just few minutes to assembly**
- **Shelves adjustable in steps of 25 mm**
- **Front wheels with breaks**
- **Light and resistant**
- **Versatile**
- **Easy to clean**
- **Made in steel and aluminium**
- **Only for screens with a maximum of 32"**



CH-001-011

Ordering No.	Description
CH-001-011	Trolley used for STEMA ESU

Technical data

Dimension trolley ..... 48.2 × 50 × 77.8 cm (L × W × H)

Dimension racks ..... 40 × 36 × 2 cm (L × W × H)

Weight ..... 80 kg (basic version)
Condition on delivery ..... Disassembled

Delivery contains (CH-001-011)
Basic unit, 2 × rack with handle, drawer, 4 × double wheels - 2 of them lockable

13.2 | TROLLEYS ACCESSORIES
ENDOSCOPE HOLDER



Ordering No.	Description
CH-010-012	Endoscope holder, single, for flexible scopes, mounting in the vertical profile

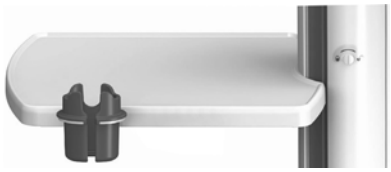


Ordering No.	Description
CH-010-013	Endoscope holder, single, for flexible scopes, mounting at the rack



Ordering No.	Description
CH-010-014	Endoscope holder, double, for flexible scopes, mounting in the vertical profile

13.2 | TROLLEYS ACCESSORIES
CAMERA HOLDER



Ordering No.	Description
CH-010-009	Camera head fixiation device



Ordering No.	Description
CH-010-001	Camera head holding device



Ordering No.	Description
CH-010-002	Camera head holding device with fixation pin

13.2 | TROLLEYS ACCESSORIES
MONITOR HOLDER



Ordering No.	Description
CH-010-004	Holder for flat screen monitors, VESA 75/100, 20 ° tilt, 170 ° swivel, monitor weight: 14–18 kg, **for CH-001-001**
CH-010-023	Holder for flat screen monitors, VESA 75/100, 15 ° tilt, 35 ° swivel, monitor weight: 0–14 kg **for CH-001-002**
CH-010-024	Holder for flat screen monitors, VESA 75/100, 20 ° tilt, 170 ° swivel, **for CH-001-002**



Ordering No.	Description
CH-010-005	Medical monitor support arm

STEMA

13.2 | TROLLEYS ACCESSORIES

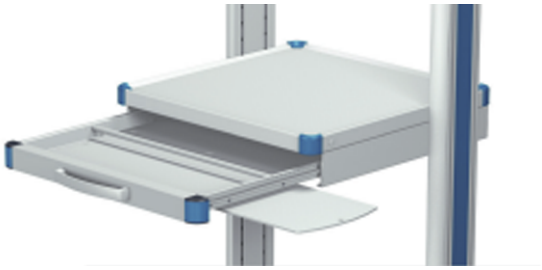
HEIGHT-ADJUSTABLE SUPPORT ARMS ON SWIVEL ARM



Ordering No.	Used for	Width	Description
CH-010-037	CH-001-002	**300 mm + 350 mm**	• Load capacity: **8–14 kg** • Monitor depth at max load: **max. 13 cm** • Cable routing in a large-volume cable channel • Adjustable swivel joints and fixing option for the desired support arm position in any orientation • Individual adjustment of the monitor weight within the load range ensures balance of the monitor in any position • Mounting of monitors with VESA 75/100 adaptor • Tilt of the monitor forwards or backwards with low force due to spring force support • ± 20 ° tilt range, ± 90 ° swivel range, and ± 5 ° rotation • Easy compensation of display misalignment through rotation • Installation height: 5 E (160 mm)
CH-010-038	CH-001-002	**400 mm + 350 mm**	
CH-010-039	Counterweight 15 kg **Note: Required when using CH-010-037 or CH-010-038 to ensure stability and prevent the tower from tipping over.**		

Delivery contains (CH-010-037 or CH-010-038)
Support arm, height-adjustable, including mounting material, counterweight **CH-010-039** required for safe operation.

13.2 | TROLLEYS ACCESSORIES
KEYBORD TRAY



Ordering No.	Used for	Width	Description
CH-010-035	CH-001-002	**500 mm** Suitable for keyboard widths up to max. 457 mm	• With 345 mm extension • Installation height: 2 E (64ml) • Use via a full extension of 345 mm • Allows two small keyboards to be positioned one behind the other • Integrated mouse pad (left or right) • Adjustable strut for keyboard • Load capacity up to 5 kg • Material: steel
CH-010-036	CH-001-001	**400 mm + 350 mm**	

Delivery contains (CH-010-035 or CH-010-036)
Keyboard tray including mounting and feature to prevent slipping, pre-assembled

13.2 | TROLLEYS ACCESSORIES
DRIP HOLDER | GAS BOTTLE HOLDER



Ordering No.	Description
CH-010-011	Drip bowl



Ordering No.	Description
CH-010-016	Gas bottle holder, for gas bottles with 3/5/10 liters



Ordering No.	Description
CH-010-017	Gas bottle holder, for gas bottles with 20 liters

13.2 | TROLLEYS ACCESSORIES
IV POLE/STANDARD RUNNER



Ordering No.	Description
CH-010-018	Stand for infusion bottle, one hand use



Ordering No.	Description
CH-010-019	Stand for infusion bottle

STEMA

13.2 | TROLLEYS ACCESSORIES
TRANSFORMER



Ordering No.	Description
CH-010-022	Transformer, 660 V

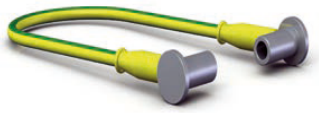


Ordering No.	Description
CH-010-021	6-way socket strip with 5m main cable

13.2 | TROLLEYS ACCESSORIES
EQUIPOTENTIAL BONDING POAG



Ordering No.	Description
CH-010-029	Plate with 9 equipotential bonding connectors



Ordering No.	Description
CH-010-030	Equipotential bonding cable, length 0,3 m
CH-010-031	Equipotential bonding cable, length 0,5 m
CH-010-032	Equipotential bonding cable, length 1,0 m
CH-010-033	Equipotential bonding cable, length 1,5 m
CH-010-034	Equipotential bonding cable, length 5,0 m

We recommend you the set:

1 × CH-010-029 | 2 × CH-010-031
3 × CH-010-032 | 1 × CH-010-033

14. STEMA SOLUTION

14.1 | STEMA SOLUTION 4K

14.2 | STEMA SOLUTION 1 CMOS HIGH

14.3 | STEMA SOLUTION 1 CMOS ECO

STEMA SOLUTION FOR ENDOSCOPY



STEMA

STEMA SOLUTION 4K

TROLLEY

1. Trolley | CH-001-002
2. Camera head holding device | CH-010-001
3. Gas bottle holder | CH-010-016
4. Holder for flat screen | CH-010-024
5. Socket strip | CH-010-021

MONITOR

6. FSN FM-F3203DG 32" 4K | CF-003-028

CAMERA

7. STEMA FOUR K PRO 1++ | CA-001-017
8. TV Adaptor 4K UHD Zoom | CD-001-045

LIGHT SOURCE

9. LED 2 | CB-005-007

INSUFFLATOR

10. STEMA FLOW 45-H | CC-001-014

SUCTION IRRIGATION PUMP

11. STEMA PRO 2S | CG-001-030
12. License key laparoscopy | CG-001-031
13. Please select an additional license key without extra charge on p.68















STEMA SOLUTION 1 CMOS HIGH

TROLLEY

1. STEMA Trolley 2 | CH-001-002
2. Camera head holding device | CH-010-001
3. Gas bottle holder | CH-010-016
4. Holder for flat screen | CH-010-024
5. Socket strip | CH-010-021

MONITOR

6. FSN FM-E2701DG 27" 4K | CF-003-033

CAMERA

7. STEMA PRO 2S+ | CA-001-040
8. Camera head FULL HD Zoom| CA-001-041

LIGHT SOURCE

9. STEMA LED 2S PRO | CB-005-006

INSUFFLATOR

10. STEMA FLOW 20-H | CC-001-012

SUCTION IRRIGATION PUMP

11. STEMA PRO 2S | CG-001-030
12. License key laparoscopy | CG-001-031
13. Please select an additional license key without extra charge on p.68























STEMA SOLUTION 1 CMOS ECO

TROLLEY

1. Trolley | CH-001-002
2. Camera head holding device | CH-010-001
3. Gas bottle holder | CH-010-016
4. Holder for flat screen | CH-010-024
5. Socket strip | CH-010-021

MONITOR

6. SONY LMD-2735MD 27" | CF-003-025

CAMERA

7. STEMA PRO 1 CAPTURE | CA-001-014
8. TV Adaptor HD Zoom | CD-001-037

LIGHT SOURCE

9. STEMA LED 2 | CB-005-007

INSUFFLATOR

10. STEMA FLOW 20-H | CC-001-012

SUCTION IRRIGATION PUMP

11. STEMA PRO 2S | CG-001-030
12. License key laparoscopy | CG-001-031
13. Please select an additional license key without extra charge on p.68

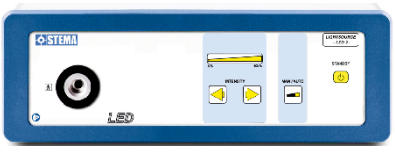
















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