



ENDOSCOPY STEMA PRODUCTS



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.



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



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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





1.1 | STEMA ECO SERIES

1/2" CMOS HD CAMERA

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



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 × 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, $f = 18 \text{ mm}$



Ordering No.	Description
CD-001-021	TV HD adaptor, $f = 28 \text{ mm}$
CD-001-024	TV HD adaptor, $f = 28 \text{ mm}$
CD-001-034	TV HD adaptor, $f = 28 \text{ mm}$
CD-001-023	TV HD adaptor, $f = 28 \text{ mm}$



Ordering No.	Description
CD-001-046	TV HD adaptor, $f = 18 \text{ mm}$



Ordering No.	Description
CD-001-037	TV HD Zoom adaptor (automatic coupling) $f = 15\text{--}35 \text{ mm}$

1.2 CAMERAS | STEMA PRO SERIES





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

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



CA-001-012



CA-001-014

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

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

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 × 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



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, $f = 18 \text{ mm}$



Ordering No.	Description
CD-001-021	TV HD adaptor, $f = 28 \text{ mm}$
CD-001-024	TV HD adaptor, $f = 28 \text{ mm}$
CD-001-034	TV HD adaptor, $f = 28 \text{ mm}$
CD-001-023	TV HD adaptor, $f = 28 \text{ mm}$



Ordering No.	Description
CD-001-046	TV HD adaptor, $f = 18 \text{ mm}$



Ordering No.	Description
CD-001-037	TV HD Zoom adaptor (automatic coupling) $f = 15\text{--}35 \text{ mm}$



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, $f = 15\text{--}30$ mm
CD-001-055	TV 4K Zoom adaptor, rotating , $f = 15\text{--}30$ mm

1.3 CAMERAS | STEMA PRO 2S SERIES





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 Parafoal 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 Parafoal 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 Parafoal 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



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 Parafoal 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 Parafoal 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 Parafoal 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 Parafoal 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
Parafoal 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



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 Parafoal 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 Parafoal 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 Parafoal 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 Parafoal 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

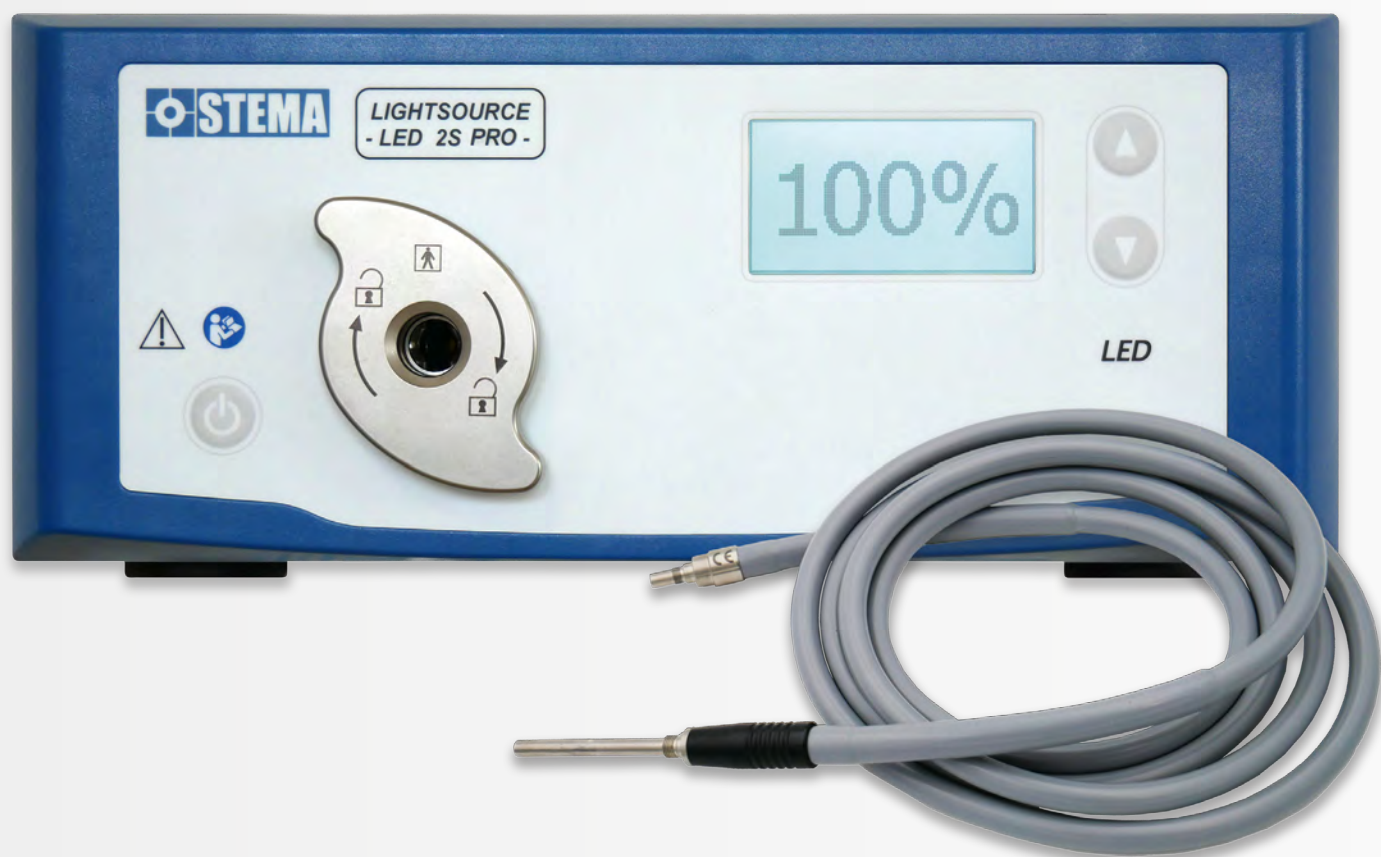
2.3 | ADAPTORS FOR LIGHT GUIDES

SCOPE SIDE

UNIT SIDE

2.4 | SPARE LAMPS XENON AND HALOGEN

2. LIGHT SOURCES

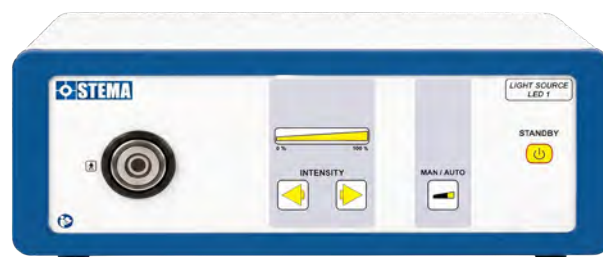




2.1 | LED LIGHT SOURCES

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

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



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 $\pm$ 5 Nm
Adjustment range of brightness	5 % ~ 100 %
Beam full divergence	Visible light: $65 \pm 10^\circ$ Fluorescence light: $65 \pm 0^\circ$
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

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



4.1 | COMBINATION CAMERA + LIGHTSOURCE

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



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

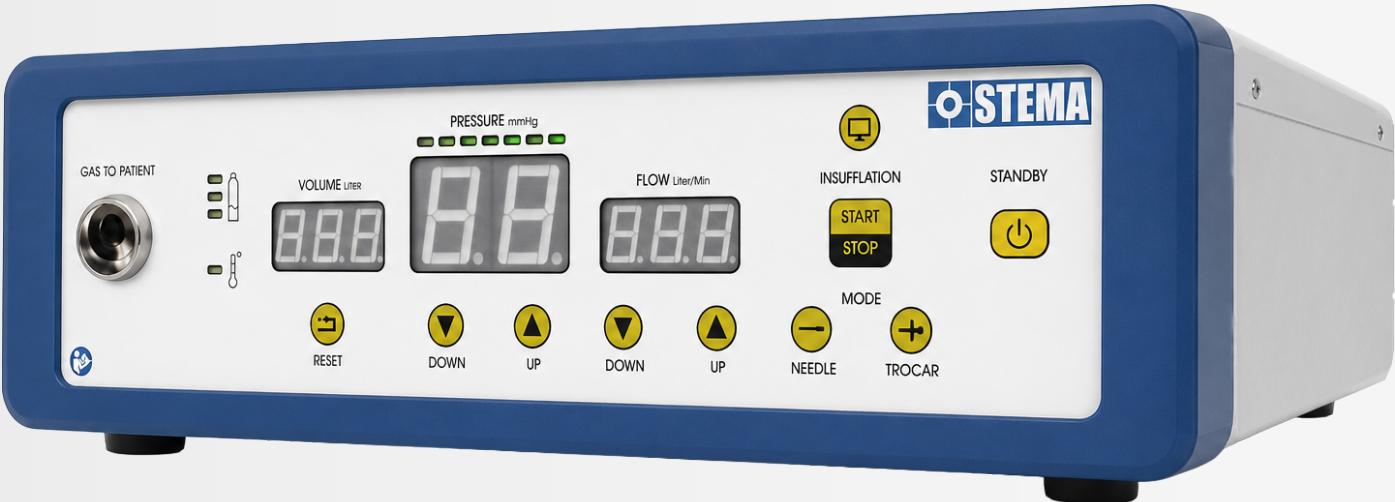
5.1 | INSUFFLATORS

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





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, CO² 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

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



CC-001-003



CC-001-013

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, CO² 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

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



CC-001-004



CC-001-014

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	I Ib



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

Delivery contains CC-001-003 + CC-001-013:

Insufflator control unit, CO² 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
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CJ-002-001	Gas heater for insufflators, autoclavable
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Ordering No.	Description
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CJ-002-002	Silicone tubing set, length 2.5 m, autoclavable
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Ordering No.	Description
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CJ-002-003	Silicone tubing set, for use with system gas heater, length 2.5 m, autoclavable
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Ordering No.	Description
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CJ-002-004	Sterile filters, 1 box = 50 pieces
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CJ-002-019	Sterile filters, 1 box = 100 pieces
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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
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CJ-002-016	High pressure tube (CO ²) for STEMA insufflators, connections: UNF/GER , length 1 m
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Ordering No.	Description
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CJ-002-018	High pressure tube (CO ²) for STEMA insufflators, connections: UNF/ISO , length 1 m
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Ordering No.	Description
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CJ-002-026	Gas bottle (CO ²), connection: GER , 0.75 kg
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CJ-002-027	Gas bottle (CO ²), connection: PIN index , 0.75 kg
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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 dBA
Filter status	Green New Orange Middle >16 h Red High >33 h Violet Service 40 h
Vacuum 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
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CG-005-016	Pneumatic footswitch used for the smoke evacuation system
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Ordering No.	Description
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CG-005-017	Clip cable used for the smoke evacuation system
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Ordering No.	Description
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CG-005-018	Liquid trap for smoke evacuation system
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Ordering No.	Description
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CJ-005-100	Laparoscopic smoke evacuation tubing set, suction regulator used for
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CG-005-030 , 3 m, LL-connection, Ø 22 mm, 1 box = 22 pieces
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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





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 $\pm$ 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 $\pm$ 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 x 133 x 354 mm (W x H x D)
Weight	9.8 kg
Protection class	I, type BF, IP 41
Classification according appendix IX of MDD	Ila
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



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



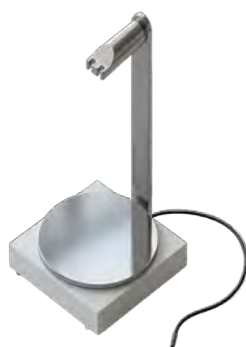
Ordering No.	Description
CJ-005-041	Measuring chamber with pump segment, autoclavable, non sterile

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

6.2 | ACCESSORIES | STEMA PRO 2S



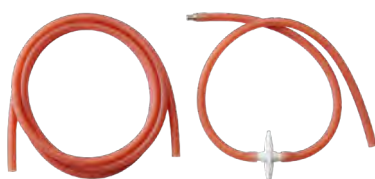
Ordering No.	Description
CJ-005-030	Foot switch used for CG-001-030, incl. charger
CJ-005-031	Charger for CJ-005-030



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
CJ-005-036	Suction 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



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
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CF-006-006	SONY HD Recorder HVO-3300MT
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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 recording on internal harddrive and external media
- Video recording in Full HD
- Long recording times in Full HD



CF-006-004

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

Recording video format	MPEG4 AVC/H.264
Recording device.....	Internal hard drive with 500 GB, external USB-Mass storage, network (CIFS)
Resolution	1920 × 1080/50i, 1920 × 1080/59,94i, 1280 × 720/59,94p, 1280 × 720/50p, 720 × 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
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CF-006-005	SONY Full HD 4K 3D Recorder HVO-4000MT
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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, external 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



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.

7.2 | FULL HD VIDEO RECORDER

MVR 460

DICOM
UPGRADE
AVAILABLE



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.



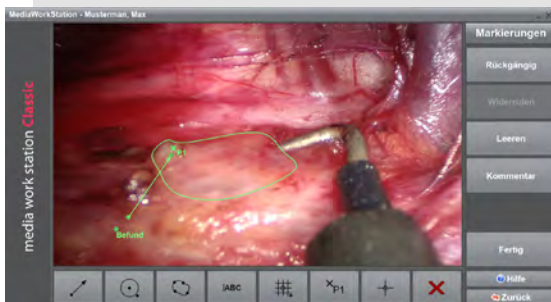
DIAGNOSTICS & RECORDING

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 comments 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



RECORD VIDEOS AND PICTURES



EDIT GRAPHICAL MARKERS





DOCUMENTATION & MANAGEMENT

FEATURES

- Creation of reports in HTML format including patient information, pictures, videos and comments
- 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

EDIT PATIENT DATA



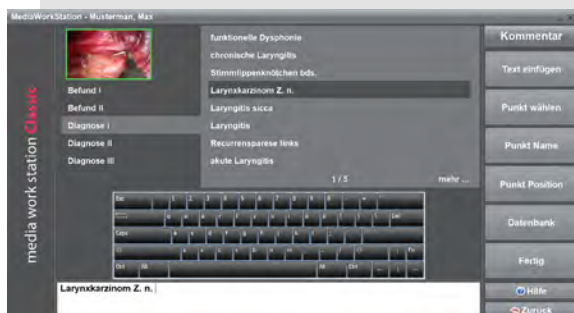
OPTION:

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

ARCHIVE



ARCHIVE



EDIT COMMENTS

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
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8.1 | IMAGE AND DATA ARCHIVING SYSTEM | STEMA PRO

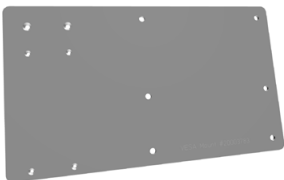
HARDWARE

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
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Specification | VESA Mount Video Converter



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

STEMA HF-U HYS

ACCESSORIES STEMA HF-U SERIES

9.2 | HF UNITS STEMA MASTER

STEMA MASTER

STEMA MASTER SDS

ACCESSORIES STEMA MASTER SERIES

HF UNITS



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



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 concerning: - 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





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

9.2 | HF UNITS

STEMA HF-U PRO HYS

- For bipolar use
- Double foot-switch
- 2 separate controls
- Specific display



Ordering No.	Description
CI-001-032	STEMA HF-U PRO-HYS
CI-001-042	Double pedal footswitch STEMA HF-U PRO-HYS

Technical data

Panel	Smooth, with digital displays and keys
Operation check	Complete self-diagnosis using microprocessor, and possible operation lock with alarm by means of specific error codes in the event of problems relating to: - general operation or activation errors (general error control) - output power (output error control)
Power self-adjustment.....	By microprocessor with: 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.
Outputs	1 Bipolar only
Foot operated controls	Double pedal control
Micro/macro power adjustment	0–30 W = 1 W, over 30 W = 2W
Power supply.....	230 or 115 V, 50/60 Hz
Power consumption at 230 V	370 VA
Frequency	450 kHz
Cooling	Convection, without fan
Dimensions	250 × 240 × 120 mm (W × D × H)
Weight.....	4.5 kg
HF generator compliant with	Meets 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.



9.1 | HF UNITS

STEMA HF-U PRO HYS | BIPOLAR CURRENTS

Bipolar currents	
Pure	Cut for use in Open Surgery or Laparoscopy.
P Pulsed	Pulsed Fast Cut, suitable to achieve detailed results, minimum thermal effect and reduction of surgical smoke.
Blend	Coagulating Cut, with greater thermal effect.
Macro	Coagulation, to be used with forceps, scissors, double-needle electrodes and laparoscopic instruments.
M Pulsed	Pulsed Coagulation. Similar to Macro, but more delicate and useful to reduce surgical smoke.
Micro	Micro-Coagulation, to be used with forceps, scissors, double-needle electrodes and laparoscopic instruments.

9.1 | HF UNITS

STEMA HF-U PRO HYS | OUTPUT POWERS

	Bipolar Cutting			Bipolar Coagulation		
	Pure	P Pulsed	Blend	Macro	M Pulsed	Micro
Delivered Power	120 W	60 W	100 W	100 W	50 W	100 W
Nominal loads	400 Ω	400 Ω	400 Ω	100 Ω	100 Ω	100 Ω
Peak/No-Load Peak Voltages (Vpp)	975	990	975	640	640	600
Crest factors	2,75	3,98	2,8	3,6	5	3,4
Modulation	-	50 %	-	-	-	-
Duty Cycle	100 %	100 %	80 %	80 %	50 %	50 %

9.1 | HF UNITS

ACCESSORIES | STEMA HF-U SERIES



Ordering No.	Description
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CI-001-040	Double Pedal Footswitch, 5 m cable used for STEMA HF-U PRO TOUCH
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Ordering No.	Description
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CI-001-043	Double Pedal Footswitch, 5 m cable used for STEMA HF-U PRO TOUCH , only bipolar
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Ordering No.	Description
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CI-001-042	Double foot switch, 5 m cable used for STEMA HF-U PRO-HYS
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9.1 | HF UNITS

ACCESSORIES | STEMA HF-U



Ordering No.	Description
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EK-015-060	Universal adaptor used for monopolar HF cables
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Ordering No.	Description
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EK-015-061	Universal adaptor used for bipolar HF cables, double banana plug Ø 4 mm, Valleylab/Conmed
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Ordering No.	Description
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EK-015-062	Universal adaptor used for bipolar HF-cables, Storz/Erbe
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Ordering No.	Description
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EK-015-063	Universal adaptor used for bipolar HF-cables, Martin/Berchtold
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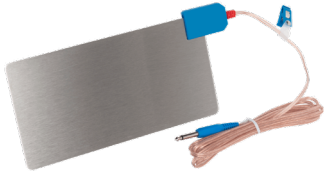


Ordering No.	Description
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EK-015-064	Universal adaptor used for bipolar HF-cables, Olympus
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9.1 | HF UNITS

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 $\times$ SDS, 2 $\times$ Standard)
Power supply	110 V AC, 220–230 VAC
Frequency	50/60 Hz
Dimensions	495 $\times$ 415 $\times$ 225 mm (W $\times$ H $\times$ 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 x SDS)

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

Delivery contains

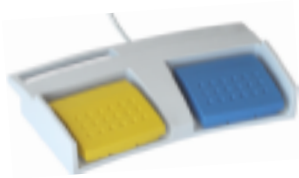
HF unit, operating manual, cable: power; The suitable electrodes you will find in our catalogue for HF surgery.

9.2 | HF UNITS

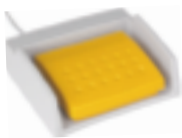
ACCESSORIES | STEMA MASTER



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



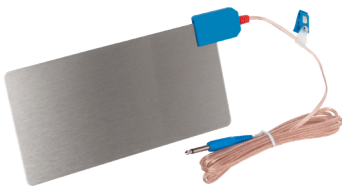
Ordering No.	Description
CI-001-021	One pedal foot switch used for STEMA MASTER, 5 m cable, coagulation only
CI-001-023	Wireless one pedal foot switch for STEMA MASTER, 5 m cable, coagulation only



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



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+A1:2013; 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 oscillation 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 $\varnothing$ 7.0 mm, for round and triangular shanks with chuck key
ZA-005-006	Quick-action-chuck, for drill wires from $\varnothing$ 0.8 mm up to $\varnothing$ 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



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 x V)
Resolution	1920 x 1080
Aspect ratio.....	16:9
Pixel pitch.....	0.2479 x 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/m ²
Inputs.....	2 x 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 x 100 mm)
IP code	IP33
Dimensions	527.9 x 334.5 x 58.9 mm (W x H x 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**

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 x V)
Resolution	1920 x 1080 pixels
Pixel Pitch	0.36375 x 0.36375
Aspect ratio	16:9
Response time (typical)	25 ms
Number of colours	16.7 Million
Brightness (typical)	500 cd/m ²
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 x HDMI (1.4), DP (1.2), 2 x SDI (3G, HD, SD), DVI-D
Outputs	HDMI (1.4), 2 x 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 x 478 x 75.2 mm (W x H x 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 x 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/m ²
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 x HDMI 2.0, DP 1.4 (SST), 2 x SDI (3G, 12G)
Outputs	HDMI 2.0, 2 x 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 x 423 x 74.2 mm (W x H x 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

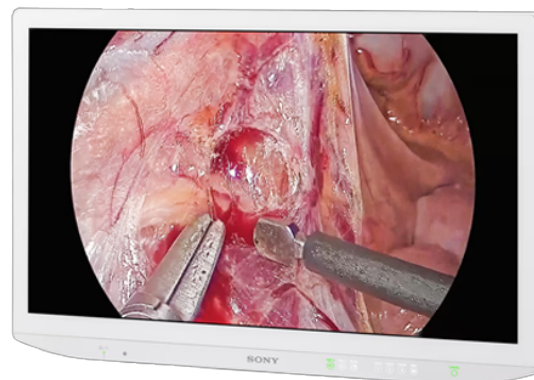
Delivery contains

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/m ² (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



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

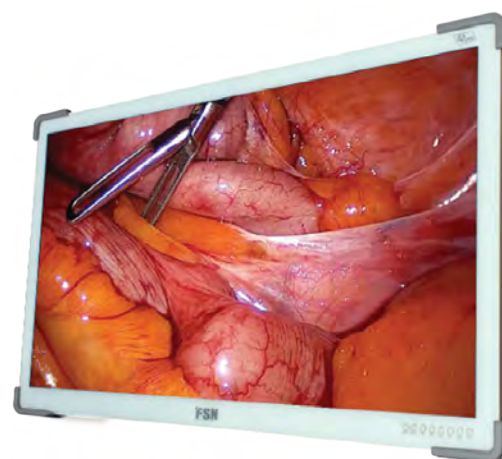
11.2 | 4K ULTRA HD MONITORS

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

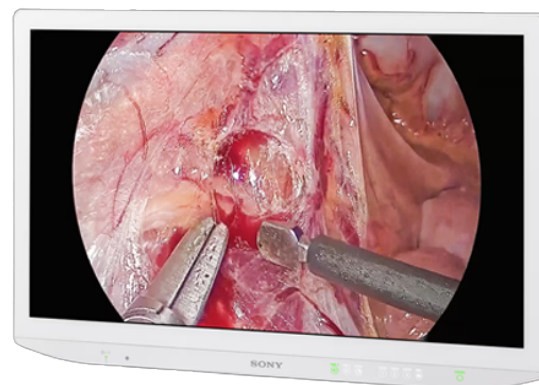
Delivery contains

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/m ² (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



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



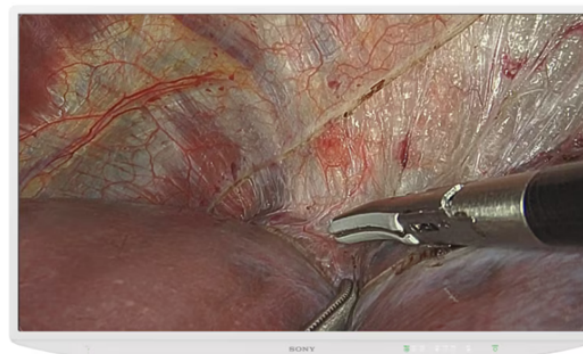
CF-003-031

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/m ² (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



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 × 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/m ²
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 × DVI, 4 (Quad) × SDI (3G), 2 × SDI (12G)
Outputs.....	1 × DP 1.2, 1 × DVI, 4 (Quad) × 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/m ² (typical), 1750 cd/m ² (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

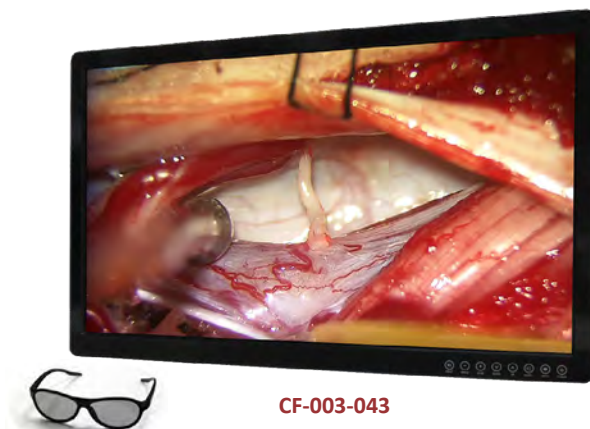
Monitor, 3D Eye shield kit: CFV-E30SK, user manual (CD-ROM), instructions for use of the 3D eye shield kit, service contact list, 2 × plug holder for the supplied AC power cord, 4 × M4 x 12 mm screw, cables: 2 × power cord



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/m ² , (3D) 300 cd/m ²
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

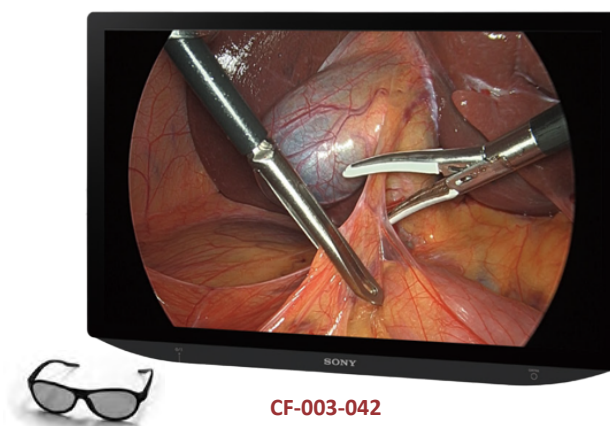
Delivery contains

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



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/m ² (typical), 1500 cd/m ² (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

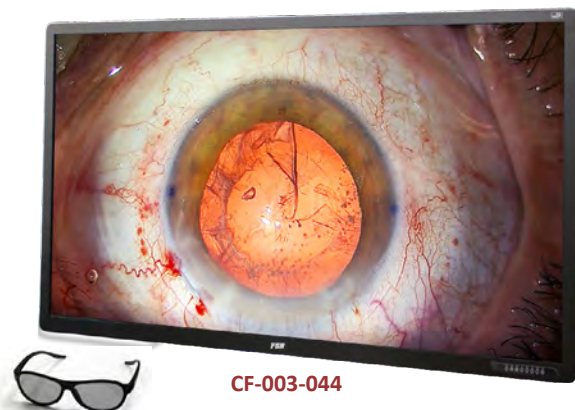
Monitor, 3D Eye shield kit: CFV-E30SK, user manual (CD-ROM), instructions for use of the 3D eye shield kit, service contact list, 2 × plug holder for the supplied AC power cord, 4 × M6 x 12 mm screw, cables: power



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 × 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

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



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 gradation	> 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 cartridge, 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 gradation	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 gradation	256 gradations (8 bit) for cyan, magenta and yellow
Picture elements	UPC-21L: 2132 × 1600 dots UPC-21S: 1600 × 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 (x1) for optional FS-24 Foot Switch RS-232C (Computer control interface): D-sub 9-pin connector (x1)
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 gradation	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
KEYBOARD TRAY
GAS BOTTLE / DRIP HOLDER
IV POLE / STANDARD RUNNER
TRANSFORMER / SOCKET STRIP
EQUIPOTENTIAL BONDING

TROLLEYS



13.1 | TROLLEYS

STEMA TROLLEY 1 + 2

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



CH-001-001 | CH-001-002

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 shelves
- 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 Monitor: CF-003-024
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 fixation 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

13.2 | TROLLEYS ACCESSORIES

HEIGHT-ADJUSTABLE SUPPORT ARMS ON SWIVEL ARM

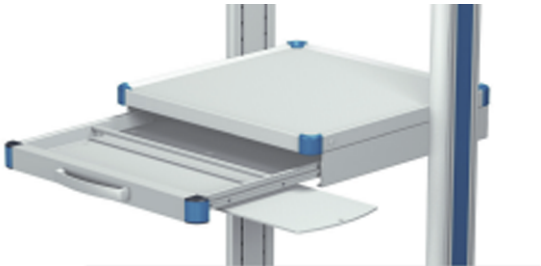


Ordering No.	Used for	Width	Description
CH-010-037	CH-001-002	300 mm + 350 mm	• Load capacity: 8–14 kg • Monitor depth at max load: max. 13 cm • Cable routing in a large-volume cable channel • Adjustable swivel joints and fixing option for the desired support arm position in any orientation • Individual 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 key-board 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
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CH-010-011	Drip bowl
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Ordering No.	Description
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CH-010-016	Gas bottle holder, for gas bottles with 3/5/10 liters
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Ordering No.	Description
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CH-010-017	Gas bottle holder, for gas bottles with 20 liters
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13.2 | TROLLEYS ACCESSORIES

IV POLE/STANDARD RUNNER



Ordering No.	Description
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CH-010-018	Stand for infusion bottle, one hand use
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Ordering No.	Description
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CH-010-019	Stand for infusion bottle
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13.2 | TROLLEYS ACCESSORIES

TRANSFORMER



Ordering No.	Description
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CH-010-022	Transformer, 660 V
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CH-010-022	Transformer, 660 V
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Ordering No.	Description
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CH-010-021	6-way socket strip with 5m main cable
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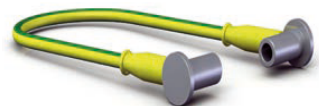
CH-010-021	6-way socket strip with 5m main cable
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13.2 | TROLLEYS ACCESSORIES

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 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

- ❶ Trolley | CH-001-002
- ❷ Camera head holding device | CH-010-001
- ❸ Gas bottle holder | CH-010-016
- ❹ Holder for flat screen | CH-010-024
- ❺ Socket strip | CH-010-021



MONITOR

- ❻ SONY LMD-2735MD 27" | CF-003-025



CAMERA

- ❼ STEMA PRO 1 CAPTURE | CA-001-014
- ❽ TV Adaptor HD Zoom | CD-001-037



LIGHT SOURCE

- ❾ STEMA LED 2 | CB-005-007



INSUFFLATOR

- ❿ STEMA FLOW 20-H | CC-001-012



SUCTION IRRIGATION PUMP

- ⓫ STEMA PRO 2S | CG-001-030
- ⓬ License key laparoscopy | CG-001-031
- ⓭ Please select an additional license key without extra charge on [p.68](#)



YOU PREFER
A DIFFERENT SOLUTION?
WE WILL CREATE
AN INDIVIDUAL OFFER
FOR YOU.

(if available)

Do you have a question about our products?

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