



progress in surgery

RZ
Endoscopic
DEVICE
FAMILY



DEVICES

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SUCTION & IRRIGATION

SUCTION & IRRIGATION SYSTEMS



LAP Suction and Irrigation Pump P3000

300-000-300



Features:

- Double roll pump for precise suction- and irrigation during Laparoscopic surgeries
- Optional footswitch for comfortable operation during surgery
- Digital display of actual suction and irrigation pressures
- High efficiency with rates up to 3L/min
- Color coded tubing sets
- Standby function

DELIVERY CONTAINS:

- Pump device (300-000-300)
- Cannula 5mm (300-000-302)
- Cannula 10mm (300-000-303)
- Silicone Tubing Set (300-000-301)
- Tube Adapter (300-000-304)
- Pneumatic Control Handle (300-000-305)
- Double-Lumen Control Tube (300-000-306)
- Mains cable • 2 Spare fuses • Operating manual

RECOMMENDED FOR **LAP**

SUCTION & IRRIGATION

Technical Data

Line Voltage	100-240 V, 50-60 Hz
Power Input	36 W
Irrigation Power	0 - 3.000 ml/min
Suction Power	0 - 3.000 ml/min
Max. Pressure	0 - 750 mmHg
Measurements	380 x 130 x 400 mm (WxHxD)
Weight	Ca. 11 kg

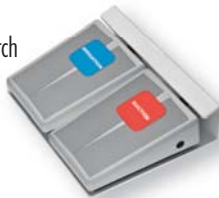
Optional available:

300-000-308

Adapter with instrument connector, autoclavable

300-000-307

Pneumatic double footswitch



LAP Suction and Irrigation Pump P1000

300-000-100



RECOMMENDED FOR **LAP**

Features:

- Independently digital pre-setting for maximum suction and irrigation pressures
- Digital display of actual suction and irrigation pressures
- High efficiency with rates up to 3 L/minute
- Color coded tubing sets
- Standby function
- Low noise level
- Hydrophobic disposable filters for maximum patient safety
- Stainless steel housing for maximum lifetime
- Complete Set consisting of suction and irrigation tubing set, aspiration bottle, holders, puncture tube and sterile filters

DELIVERY CONTAINS:

- Pump device (300-000-100)
- Suction and irrigation tubing set (300-000-102)
- Aspiration bottle 2L with overflow valve (300-000-101)
- Puncture tube 235mm (300-001-521)
- Set of 10 Hydrophobic disposable sterile filters (300-000-103)
- 2 Bottle Holders with screws
- Mains cable • 2 Spare fuses • Operating Manual

SUCTION & IRRIGATION

Technical Data

Line Voltage	100-240 V, 50-60 Hz
Power Input	80 VA
Irrigation Power	3 L/min
Suction Power	3 L/min
Max. Vacuum	- 525 mmHg
Max. Pressure	0 - 750 mmHg
Measurements	380x120x360 mm (WxHxD) with Aspiration Bottle-Retainers ca. 440x120x360 mm
Weight	Device ca. 11 kg
Aspiration Bottle-Retainer	(for 1 Liter=0.34 kg 2 Liter=0.44 kg)

Optional available:



ARTHRO Dual Pump P9

225-920-000



Features:

- High-End Suction-Irrigation Pump for advanced Arthroscopic procedures
- Automatic adjustment of suction flow according to preset irrigation flow and actual pressure to prevent the joint from collapsing
- Lavage function provides increased flow for a short time to irrigate the joint fast and intensely. It is activated by footswitch. When Lavage time is expired, pump will automatically return to previous operating parameters.
- Double foot switch

DELIVERY CONTAINS:

- Pump device (225-920-000)
- Suction and irrigation tubing set (225-920-001)
- Double Footswitch (225-920-005)
- Mains cable • 2 Spare fuses • Operating manual

RECOMMENDED FOR: **ARTH**

SUCTION & IRRIGATION

Technical data

Line Voltage	100-240 V, 50-60 Hz
Power Input	80 VA
Irrigation Power	0 - 2.5 l/min
Suction Power	0 - 1.0 l/min
Pressure Range	10 - 200 mmHg
Measurements	380 x 130 x 400 mm (WxHxD)
Weight	Ca. 11 kg

Accessories

225-920-001	Suction + Irrigation tubing set, silicone, autoclavable (225-920-002/-003)	non-sterile	included
225-920-002	Tubing Set "Suction", silicone, autoclavable	non-sterile	optional
225-920-003	Tubing Set "Irrigation", silicone, autoclavable	non-sterile	optional
225-910-002	Irrigation tubing set, PVC, 20 pieces	sterile	optional
225-910-003	Patient tube, PVC, 2,5m, 40 pieces	sterile	optional
225-920-005	Double Footswitch	non-sterile	included



Double Footswitch included



HYS Pump Pro P5

351-100-300



RECOMMENDED FOR: **HYS**

Features:

- Advanced fluid management system for Hysteroscopy that compares input and output continuously. Tolerable difference and maximum tank volume can be adjusted. The scale works with a great variety of containers. Overflow of liquid is prevented automatically.
- Scale for fluid management
- Hydrostatic pressure compensation (level)
- Acoustic and visual air bubbles warning system

DELIVERY CONTAINS:

- Pump device (351-100-300)
- Irrigation tubing set (351-100-201)
- Scale (351-100-301)
- 2 Spare fuses • Mains Cable • Screws • Suspension
- Operating manual

SUCTION & IRRIGATION

Technical Data

Line Voltage	100-240 V, 50-60 Hz
Power Input	80 VA
Irrigation Power	0 - 0.500 l/min
Pressure Range	10 - 200 mmHg
Aspiration Bottle-Retainer	for 1 Liter = 0.34kg 2 Liter = 0.44kg

Scale:

Container Volume	0 - 9.9 L
Fluid Balance	0 - 2.0 L
Measurements	380 x 130 x 400 mm (WxHxD)
Weight	Ca. 11 kg
Scale	Rated load up to 35 Kg
- Measurements	270x270x400mm (WxHxD)
- Weight	Ca. 5kg

Accessories:

351-100-201	Tubing Set "Irrigation", silicone, autoclavable	non-sterile	included
351-100-202	Irrigation tubing set, PVC, 20 pieces	sterile	optional
351-100-206	Patient tube, PVC, 2,5m, 40 pieces	sterile	optional
351-100-301	Scale incl. mounting accessories	non-sterile	included



ARTHRO Pump P3

225-910-000



Features:

- Advanced Irrigation Pump for Arthroscopic surgeries
- Lavage function for fast and intense irrigation, controlled by footswitch

DELIVERY CONTAINS:

- Pump device (225-910-000)
- Tubing set (225-910-001)
- Footswitch (300-000-110)
- Mains cable
- 2 Spare fuses • Operating manual

RECOMMENDED FOR: **ARTH**

SUCTION & IRRIGATION

Technical data

Line Voltage	100-240 V, 50-60 Hz
Power Input	80 VA
Irrigation Power	0 - 2.5l/min
Pressure Range	10 - 200 mmHg
Measurements	380 x 130 x 400 mm (WxHxD)
Weight	Ca. 11 kg



Footswitch included

Accessories:

225-910-001	Irrigation tubing set, silicone, autoclavable	non-sterile	included
225-910-002	Irrigation tubing set, PVC, 20 pieces	sterile	optional
225-910-003	Patient tube, PVC, 2,5m, 40 pieces	sterile	optional



ARTHRO/URO/HYS Pump P1

225-906-000 for Arthroscopy
253-910-000 for Urology
351-100-200 for Hysteroscopy



Features:

- Advanced Irrigation Pump for different areas

DELIVERY CONTAINS:

- Pump device (225-906-000/253-910-000/351-100-200)
- Tubing set (225-910-001)
- Mains cable
- 2 Spare fuses • Operating manual

RECOMMENDED FOR: **ARTH** **HYS** **URO**

SUCTION & IRRIGATION

Technical data

Line Voltage	100-240 V, 50-60 Hz	
Power Input	80 VA	
Irrigation Power	Arthroscopy:	0 - 1.5 l/min
	Urology:	0 - 1.0 l/min
	Hysteroscopy:	0 - 0.5 l/min
Pressure Range	Arthroscopy:	10 - 150 mm Hg
	Urology:	10 - 150 mm Hg
	Hysteroscopy:	10 - 200 mm Hg
Measurements	380 x 130 x 400 mm (WxHxD)	
Weight	Ca. 11 kg	

Accessories (Arthroscopy)

225-910-001	Irrigation tubing set, silicone, autoclavable	non-sterile	included
225-910-002	Irrigation tubing set, PVC, 20 pieces	sterile	optional
225-910-003	Patient tube, PVC, 2,5m, 40 pieces	sterile	optional

Accessories (Urology)

253-910-001	Irrigation tubing set, silicone, autoclavable	non-sterile	included
253-910-002	Irrigation tubing set, PVC, 20 pieces	sterile	optional
253-910-003	Patient tube, PVC, 2,5m, 40 pieces	sterile	optional

Accessories (Hysteroscopy)

253-910-001	Irrigation tubing set, silicone, autoclavable	non-sterile	included
253-910-002	Irrigation tubing set, PVC, 20 pieces	sterile	optional
253-910-003	Patient tube, PVC, 2,5m, 40 pieces	sterile	optional



CAMERA DEVICES



4K 3-Chip UHD Camera K4000

300-001-840

4K



Features:

- 4K UHD resolution with 3-Chip technology
- Image algorithms enhancement of color and structure
- True natural colours for excellent live surgery imaging
- Recording function (video and picture)
- Camera head with 4 push buttons
- Boost function
- Zoom, freeze, fog reduction
- 10 USER modes configurations
- Multilingual menu
- SDI 4K Output

DELIVERY CONTAINS:

- Main Unit (300-001-840)
- Camera head (300-001-842)
- HDMI cable
- USB Pen Drive
- Mains cable
- Operating manual

RECOMMENDED FOR ALL ENDOSCOPIC APPLICATIONS, SPECIALLY **LAP**

Technical Data

Mains voltage	100-240 V, 50-60 Hz
Power Consumption	60 VA
Sensor	3 MOS
TV resolution	3840 x 2160 pixels (4K)
Image resolution	1600 TV lines
Index ratio	16:9
S/N Ratio	54dB

Video outputs:	1x HDMI 4K 1 x HDMI Full HD 1x SDI 4K 1x SDI Full HD
Dimensions	Control unit: 355 x 103 x 350 mm (WxHxD); Weight 6.2 kg
Camera Head	145g

Optional available:



300-001-610
Footswitch for HD Cameras,
cable length: 2m



300-001-615
Title generator keyboard, waterproof IP68
US-Layout, cable 1.8m, color: grey
305x140x15mm, 600gr.



3 CHIP HD-CAMERA F4

300-001-804

PURE NATURAL COLORS 



RECOMMENDED FOR ALL ENDOSCOPIC APPLICATIONS, SPECIALLY **LAP**

Features:

- 3-Chip Full HD camera with latest MOS technology for brilliant picture quality
- Pure Natural Colors technology
- Multitude of digital video outputs
- 3 programmable remote control buttons
- User-friendly multilingual menu
- Full HD 60fps video recording
- Full HD image saving
- USB pen drive included
- Boost function
- On-screen-menu
- 3 user settings storable
- 2.5x digital zoom
- Freeze function
- Text generator (optional with keyboard)

DELIVERY CONTAINS:

- Main Unit (300-001-804)
- Camera head (300-001-802)
- YPbPr/RGB cable • 2x BNC cable
- HDMI - DVI cable • HDMI cable • S-Video cable • Jack Cable
- USB Pen Drive • Mains cable • Operating manual

Technical Data

Mains voltage	100-240 V, 50-60 Hz
Power Input	20 W
Sensor	3 MOS
TV resolution	1920x1080 pixels (Full HD)
Image resolution	>1000 TV lines, horizontal
Index ratio	16:9
Min. sensitivity	< 3lx (1/1.4)

Video outputs

Digital:	2 x HD SDI 1 x HDMI / DVI 2 x CVBS
Analog:	1 x YPbPr / RGB 1 x Y/C (Pal / NTSC) 1 x CVBS (Pal / NTSC)
Shutter speed	1/50 (1/60) to 1/100.000 sec
Dimensions	Control unit: 380 x 120 x 360 mm (WxHxD); 11 kg
Camera Head	145g

Optional available:



300-001-610
Footswitch for HD Cameras,
cable length: 2m



300-001-615
Title generator keyboard, waterproof IP68
US-Layout, cable 1.8m, color: grey
305x140x15mm, 600gr.



HD-Camera F3 - High End

300-001-800

PURE NATURAL COLORS 



Features:

- 3-Chip Full HD camera with latest MOS technology for brilliant picture quality
- User-friendly multilingual menu
- Ergonomic camera head with 3 programmable remote control buttons
- Multitude of digital video outputs
- Full HD
- HDMI output
- White balance, boost function
- On-screen-menu
- 3 user settings storable
- 2.5x digital zoom
- Freeze function
- Character generator

DELIVERY CONTAINS:

- Main Unit (300-001-800)
- Camera head (300-001-802)
- YPbPr/RGB cable • 2x BNC cable
- HDMI - DVI cable • HDMI cable • S-Video cable • Jack Cable
- Mains cable • Operating manual

RECOMMENDED FOR ALL ENDOSCOPIC APPLICATIONS, SPECIALLY 

Technical Data

Camera head

- Aspect ratio: 16:9
- Image sensor: 3 - Chip
- Immersible (using the attached cap)
- Image resolution: 1920 x 1080

System

- TV resolution: > 1000 lines
- Sensivity: < 3 lux (1/1.4)
- White balance automatically
- Shutter speed: 1/50 (1/60) to 1/100.000 sec
- Power supply: 100 / 240 V, 50-60 Hz
- Power consumption: 20W

Video out terminal

- 2 x HD SDI
- 1 x HDMI / DVI
- 1 x YPbPr (Component)
- 1 x Y/C (Pal / NTSC)
- 1 x CVBS (Pal / NTSC)

Standard

- Protection class: I
- Application part: Type BF
- IEC 601-1, EN 60601-1; classification acc. 93/42/EEC: I

Dimensions

- Control unit: 380 x 120 x 360 mm (WxHxD)
11 kg

Optional available:



300-001-610
Footswitch for HD Cameras,
cable length: 2m



300-001-615
Title generator keyboard, waterproof IP68
US-Layout, cable 1.8m, color: grey
305x140x15mm, 600gr.



HD Camera F2 PRO

300-001-601



RECOMMENDED FOR: **HYS** **LAP** **ENT** **URO** **SPINE**

Features:

- 1-Chip Full HD camera, latest generation
- Natural color reproduction
- High-end image quality is provided by fully digital, high-speed image processing, separated for red, green and blue channels
- Full HD 60fps video recording
- Full HD image storage
- USB pen drive included
- HDMI out
- White balance, boost function
- On-screen-menu
- 3 user settings storable
- 2.5x digital zoom
- Freeze function
- Character generator (optional with keyboard)

DELIVERY CONTAINS:

- Main Unit (300-001-601)
- Camera head with 3m cable (300-001-602)
- YPbPr/RGB cable • 2x BNC cable • HDMI - DVI cable
- HDMI cable • S-Video cable • Jack cable • USB Pen Drive
- Operating manual • Mains cable

Technical Data

Line Voltage	100-240 VAC
Sensor	1/3" MOS
TV resolution	1920x1080 pixels (Full HD)
Recording	Full HD / Mpeg 4, 60fps jpg (1920 x 1080)
Image resolution	>1000 TV lines, horizontal
Index ratio	16:9
Min. sensitivity	<3lx (1/1.4)
Video Outputs	2 x HD SDI 1 x HDMI / DVI 1 x Y-Pb-Pr (Component) 1 x Video (PAL/NTSC) 1 x S-Video (PAL/NTSC)

Optional available:



300-001-610
Footswitch for HD Cameras,
cable length: 2m



300-001-615
Title generator keyboard, waterproof IP68
US-Layout, cable 1.8m, color: grey
305x140x15mm, 600gr.

Standards

Protection Class: I
Application Part: Type BF
IEC 601-1, EN 60601-1C
Classification Acc. 93/42/EEC: I

Dimensions

Control Unit: 380 x 120 x 360 mm
(WxHxD), 11kg
Camera Head: 145g



HD-Camera F1

300-001-600



RECOMMENDED FOR: **HYS** **LAP** **ENT** **URO** **SPINE**

Features:

- 1-Chip Full HD camera, latest generation
- Natural color reproduction
- High-end image quality is provided by fully digital, high-speed image processing, separated for red, green and blue channels
- HDMI out
- White balance, boost function
- On-screen-menu
- 3 user settings storable
- 2.5x digital zoom
- Freeze function
- Character generator

DELIVERY CONTAINS:

- Main Unit (300-001-600)
- Camera head with 3m cable (300-001-602)
- YPbPr/RGB cable • 2x BNC cable • HDMI - DVI cable
- HDMI cable • S-Video cable • Jack cable
- Operating manual • Mains cable

Technical Data

Line Voltage	100-240 VAC
Sensor	1/3" MOS
TV resolution	1920x1080 pixels (Full HD)
Image resolution	>1000 TV lines, horizontal
Index ratio	16:9
Min. sensitivity	<3lx (1/1.4)
Video Outputs	1 x HDMI 1 x YPbPr / RGB 1 x S-Video (Y/C; Pal / NTSC) 1 x Video (CVBS; Pal / NTSC)

Manufactured and tested according to	IEC 601-1, EN 60601-1, MDD 93/42/EEC
CE marking according to	MDD 93/42/EEC
Protection Class	I
Application part	BF
Dimensions	Control Unit: 380 x 120 x 360 mm (WxHxD), 11kg Camera Head: 105g

Optional available:



300-001-610
Footswitch for HD Cameras,
cable length: 2m



300-001-615
Title generator keyboard, waterproof IP68
US-Layout, cable 1.8m, color: grey
305x140x15mm, 600gr.



Camera Z2

300-001-410



RECOMMENDED FOR: **HYS** **URO** **ENT**

Features:

- State-of-the-art CCD-Camera, true colour reproduction
- All features of the camera can be directly controlled and set up on a menu
- Digital Anti Moiré filter automatically eliminates disturbing distortions when using flexible endoscopes
- To be prepared to work under extreme illumination conditions, the control unit offers further features to improve the image quality (WINDOW- and PEAK-function)
- Lightweight camera head
- 3 programmable remote control buttons on the camera head
- Additional USB port for flash drives allows external storage of recorded data.

DELIVERY CONTAINS:

- Main Unit (300-001-410)
- Camera head (300-001-410.1)
- S-Video cable
- BNC cable
- Jack cable
- 4GB USB Pen Drive
- Mains cable
- Operating manual

Technical Data

Line Voltage	100-240 VAC, 50-60 Hz	Protection Class	I
Resolution	active pixels: - 752 H x 582 V - 768 H x 494 V	Application part	BF
TV resolution	470 lines	Manufactured and tested according to	IEC 601-1ff, EN 60601-1ff
Sensitivity	1 lux (1/1.4)	CE marking according to	MDD 93/42/EEC
Aspect ratio	4:3	Dimensions	Control Unit: 380 x 120 x 360 mm (WxHxD), 11kg Camera Head: 105g
Image Sensor	1/3" CCD		
Video Outputs	<ul style="list-style-type: none"> • 2 x CVBS (1Vpp/75Ω), BNC • 2 x Hosiden (Y/C) • 1 x YPbPr • 1 x SDI • 1 x USB 		

Optional available:



300-001-610
Footswitch
cable length: 2m



300-001-615
Title generator keyboard, waterproof IP68
US-Layout, cable 1.8m, color: grey
305x140x15mm, 600gr.



Camera Z1

300-001-400



RECOMMENDED FOR: **HYS** **URO** **ENT**

Features:

- State-of-the-art CCD-Camera, true colour reproduction
- All features of the camera can be directly controlled and set up on a menu
- Digital Anti Moiré filter automatically eliminates disturbing distortions when using flexible endoscopes
- To be prepared to work under extreme illumination conditions, the control unit offers further features to improve the image quality (WINDOW- and PEAK-function)
- Lightweight camera head
- 3 programmable remote control buttons on the camera head

DELIVERY CONTAINS:

- Main Unit (300-001-410)
- Camera head (300-001-410.1)
- S-Video cable • BNC cable • Jack cable
- Mains cable • Operating manual

Technical Data

Line Voltage	100-240 VAC, 50-60 Hz	Protection Class	I
Resolution	active pixels: - 752 H x 582 V - 768 H x 494 V	Application part	BF
TV resolution	470 lines	Manufactured and tested according to	IEC 601-1ff, EN 60601-1ff
Sensitivity	1 lux (1/1.4)	CE marking according to	MDD 93/42/EEC
Aspect ratio	4:3	Dimensions	Control Unit: 380 x 120 x 360 mm (WxHxD), 11kg Camera Head: 105g
Image Sensor	1/3" CCD		
Video Outputs	<ul style="list-style-type: none"> • 2 x CVBS (1Vpp/75Ω), BNC • 2 x Hosiden (Y/C) • 1 x YPbPr • 1 x SDI 		

Optional available:



300-001-610
Footswitch
cable length: 2m



300-001-615
Title generator keyboard, waterproof IP68
US-Layout, cable 1.8m, color: grey
305x140x15mm, 600gr.



TV COUPLER



300-001-813 f=14mm
300-001-814 f=25mm
300-001-815 f=28mm
c-mount, soakable, Full HD



250-015-036
Zoom-TV-Adapter
f=15 - 36mm
c-mount, soakable
Full HD



250-020-025 F=25mm (splitting 90/10)
250-020-030 F=30mm (splitting 90/10)
Beamsplitter, allows simultaneous video and
direct views, c-mount, soakable, Full HD



250-022-025 F=25mm
250-022-030 F=30mm
Angled 90°, with swivel and fixation,
c-mount, soakable, Full HD

LIGHT SOURCE

LIGHT SOURCES



LUMEN LED 3

300-900-300

PHASER® TECHNOLOGY



Features:

- More than 10.000h lamp lifetime
- 300 Watt daylight quality
- Latest PHASER® – Technology
- Waterproof touch control panel
- High color rendering
- High luminance
- Daylight color temperature
- Low noise level
- No UV or IR light
- Low power consumption

DELIVERY CONTAINS:

- Main Unit (300-900-300)
- BNC cable
- Mains cable
- Operating manual

RECOMMENDED FOR ALL ENDOSCOPIC APPLICATIONS, SPECIALLY 

LIGHT SOURCE

Technical Data

Mains voltage	100-240 VAC, 50-60 Hz
Power consumption	300W
Mains fuses	2 Fine fuses, 5x20mm, delay acting 6,3 AT, with high breaking capacity (Ia = 1500 A)
LED Lifetime	> 10.000h
Color temperature	6000 – 6500° K
Connections	Light guide STORZ
Video-IN terminal	1 x VHS (BNC)
Service	1 x RJ45
Storage temperature	- 20°C to +60°C
Operation temperature	+10°C to +40°C

Relative humidity	
Storage:	10% to 90%
Operation:	30% to 75%
Atmospheric pressure	
Storage:	600 mbar to 1300 mbar
Operation:	700 mbar to 1060 mbar
Classification / Conformity	1 / BF
Test according to	IEC 601-1ff, EN 60601-1ff
CE marking according to	MDD 93/42/EEC
Dimensions	380 x 125 x 360 mm (WxHxD)
Weight	approx. 12.5 kg



LUMEN LED 1

300-900-180



RECOMMENDED FOR: **HYS** **LAP** **ENT** **URO** **SPINE**

Features:

- More than 20.000h lamp lifetime
- 180 Watt Daylight Quality
- Manual or automatic light control
- Waterproof touch control panel
- Low heat conduction by improved LED technology
- Daylight color temperature 6000 – 6500° K for accurate color representation
- Boost function: temporarily increase of light power of 20% additionally to the 100% light output

DELIVERY CONTAINS:

- Main Unit (300-900-180)
- BNC cable
- Mains cable
- Operating manual

LIGHT SOURCE

Technical Data

Lamp	100W LED (approx. 1300 lm) Daylight quality, 6000-6500 K Lifetime: more than 20.000 hr
Light guide connection	RZ/Storz adapter
System	Power supply: 100/240 VAC, 50-60 Hz Fuses: 2 Fine fuses, 5x20mm, delay 6,3 AT (I=1500A) Power consumption: 100W

Video In (opt.)	1x Video, 1x S-Video (Y/C) (automatic Version only)
Standard	Protection class: I Application part: Type BF IEC 601-1, EN 60601-1; classification acc. 93/42/EEC: I
Dimensions	380 x 120 x 360 mm (WxHxD); 11 kg



LUMEN X 7

300-001-308



Features:

- Automatic and manual light intensity control
- 2 turret adapters
- 300 Watt daylight quality
- 150W halogen spare lamp guarantees continuous working even in the event that the main Xenon lamp becomes inoperative
- Powerful 300W xenon glow-discharged lamp fixed in a reflector, calibration is not necessary
- Mechanical diaphragm is used to adjust the output intensity without any influence on the colour temperature.
- Easy lamp replacement

DELIVERY CONTAINS:

- Main Unit (300-001-308)
- BNC cable
- Mains cable
- Operating manual

RECOMMENDED FOR ALL ENDOSCOPIC APPLICATIONS, SPECIALLY **LAP**

LIGHT SOURCE

Technical Data

Mains voltage	100-240 V, 50-60 Hz
Power consumption	370W (\pm 5%)
Daylight Quality	5600° K
Lamp Lifetime	> 500 h
Lamp	Main lamp: Xenon short arc gas discharge lamp 300 Watt / 5600°K Back-Up-Lamp: Halogen reflector lamp 150 Watt, 15V; 3600°K, HLX



300-001-301
XENON Spare Lamp
300 Watt

Connections	Via TURRET (revolvable)
Light guide	• Storz • Olympus • Wolf • ACMI
Video-IN terminal	1 x VBS (1Vpp/75 Ω), BNC
Dimensions	380x125x360mm (WxHxD)
Weight	11 kg



LUMEN X 5

300-001-305



RECOMMENDED FOR: **HYS** **LAP** **ENT** **URO** **SPINE**

Features:

- Automatic light intensity control
- Turret adapter
- Powerful 300W (180W for LUMEN X 2) xenon glow-discharged lamp fixed in a reflector, calibration is not necessary
- Pure daylight quality
- Mechanical diaphragm is used to adjust the output intensity without any influence on the colour temperature
- Easy lamp replacement

DELIVERY CONTAINS:

- Main Unit (300-001-305)
- BNC cable
- Mains cable
- Operating manual

LIGHT SOURCE

Technical Data X5

Mains voltage	100-240 VAC, 50-60 Hz
Power consumption	370W (\pm 5%)
Lamp Lifetime	> 500 h
Lamp	Xenon short arc gas discharge lamp 300 Watt, 5600°K
Light guide	Via TURRET (revolvable) <ul style="list-style-type: none">• RZ, Storz • Olympus• Wolf • ACMI
Video-IN terminal	1 x VBS (1Vpp/75 Ω), BNC
Dimensions	380x125x360mm (WxHxD)
Weight	11 kg



300-001-301 300Watt
XENON Spare Lamp



LUMEN X 3

300-001-300 Lumen X3 (300W)



Features:

- Manual light intensity control
- Powerful 300W xenon glow-discharged lamp fixed in a reflector, calibration is not necessary
- Pure daylight quality
- Mechanical diaphragm is used to adjust the output intensity without any influence on the colour temperature

DELIVERY CONTAINS:

- Main Unit (300-001-300)
- Mains cable
- Operating manual

RECOMMENDED FOR: **HYS** **LAP** **ENT** **URO** **SPINE**

LIGHT SOURCE

Technical Data X3

Mains voltage	100-240 V, 50-60 Hz
Power consumption	370W (\pm 5%)
Lamp Lifetime	> 500 h
Lamp	Xenon short arc gas discharge lamp 300 Watt, 5600°K
Light guide	RZ, STORZ
Dimensions	380x125x360mm (WxHxD)
Weight	10 kg



300-001-301 300Watt
XENON Spare Lamp



LIGHT GUIDE CABLES

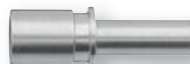


Features:

- Melt protection
- XENON/LED suitable
- Bending protection

Light guide cable, without adaptor pieces

250-035-180	∅ 3.5 mm, 1800 mm
250-035-230	∅ 3.5 mm, 2300 mm
250-035-300	∅ 3.5 mm, 3000 mm
250-048-180	∅ 4.8 mm, 1800 mm
250-048-230	∅ 4.8 mm, 2300 mm
250-048-300	∅ 4.8 mm, 3000 mm



Adaptor pieces, generator end

250-039-000	RZ/Storz
250-038-000	ACMI/British Standard CUDA
250-048-000	Luxtec
250-051-000	Stryker
250-037-000	Wolf
250-044-000	Olympus
250-045-000	Olympus - Standard
250-052-000	Heine
250-059-000	Pentax



Adaptor pieces, endoscope end

250-042-000	RZ/Storz/Olympus
250-040-000	Wolf
250-041-000	ACMI/British Standard

INSUFFLATION

INSUFFLATION DEVICES



AIRFLOW A2/3/4

- 300-900-020 20L/min
- 300-900-021 20L/min, with heating unit
- 300-900-030 30L/min
- 300-900-031 20L/min, with heating unit
- 300-900-040 40L/min
- 300-900-041 40L/min, with heating unit



RECOMMENDED FOR: **LAP**

Features:

- User-friendly interface
- Highest safety standard for patients
- Available with CO₂ heating system
- Pre-insufflation mode for use with Verres Cannulas
- Non-heating unit features same gasflow rates as heating unit models

DELIVERY CONTAINS:

- Main Unit (300-900-020/-021/030/-031/-040/-041)
- Sterile Filter (300-902-007)
- Wrench Set (300-902-006)
- CO₂ High Pressure Tube (300-902-003)
- Standard Silicone Tube (300-902-005)
- Silicone Tube (300-902-004), only Heater-Version
- Gas Heater with tube (300-902-001), only Heater-Version
- Operating manual • Mains cable

INSUFFLATION

Technical Data

Line Voltage	100-240 V/AC - Fuse T 3, 15A
Frequency	50-60 Hz
Power Consumption	25-40W 25-105W (with gas heating) max. 0,4A (max. 1A with gas heating)
Insufflation Pressure	1-30 mmHg
Gas Flow	1-20L/min (300-900-020 / -021) 1-30L/min (300-900-030 / -031) 1-45L/min (300-900-040 / -041)



Optional available:
300-902-008
CO₂ Bottle, 0.75kg, empty

Gas connection	UNF 7/16" male
Gas	Medical Grade Carbon Dioxide
Dimensions	380 x 120 x 360 mm (WxHxD)
Weight	11 kg



AIRFLOW A2/3/4 ACCESSORIES

Included in the set



Sterile Filter
300-902-007



Wrench Set (SW30/SW14)
300-902-006



CO₂ High Pressure Tube
300-902-003



Standard Silicone Tube
300-902-005



Silicone Tube (only Heater-Version)
300-902-004



Gas heater with tube (only Heater-Version)
300-902-001

LITHOTRIPSY

LITHOTRIPSY DEVICES



LITHOTRIPTER L100

253-750-100



RECOMMENDED FOR: **URO**

Features:

- Energy transmission occur purely mechanically
- The smallest probe diameter is only 0.6mm, which ensures a larger lumen
- Auxiliary instruments can also be inserted
- Very simple handling, all parts are easy to disassemble for cleaning purposes
- Compatible to other RZ and other instruments for the therapy of ureteric, renal and bladder stones
- Non-conductive hand piece to ensure safety for patients as well as users against current conduct

DELIVERY CONTAINS:

- Main Unit (253-750-100)
- Operating manual • Mains cable

LITHOTRIPSY

Technical Data

Power Supply	115 / 230 V AC (50/60 Hz.)
Pneumatic Power Source	3.5 – 6.5 bar, compressed medical air
Pulse Rate Control (ppm)	50 – 600 ppm 10 ppm increments between 50 - 100 ppm 50 ppm increments between 100 - 600 ppm

Operating Temperature	10 °C to + 30 °C
Relative Humidity	30% to 75% and hygienic environment
Unit Weight	6.5 Kg
Unit Dimensions	113 x 254 x 305mm (HxWxD)



Optional available:
253-750-010
Air compressor, 4 bar maximum



LITHOTRIPTER L100 ACCESSORIES

Litho Probe, 605mm working length

253-850-006	0.6mm	253-850-016	1.6mm
253-850-008	0.8mm	253-850-020	2.0mm
253-850-010	1.0mm	253-850-025	2.5mm

253-750-150

Footswitch

253-750-200

Hand piece, annodised

253-970-000

Adapter piece

HF SURGERY

HF SURGERY DEVICES



HF UNIT G400

700-350-400 230V
700-350-410 110V



Features:

- Detects and identifies connected instrument automatically
- Powerstart System simplifies the beginning of cutting process
- Automatic power regulation
- 105 different memory locations in 7 groups
- Various output configuration of the sockets available
- 10" Touchscreen
- Titable Display
- Footswitch (optional)
- Available with Argon and / or the RZeal

DELIVERY CONTAINS:

- Main Unit
- Mains Cable

RECOMMENDED FOR ALL ENDOSCOPIC AND OPEN SURGERY APPLICATIONS

Technical Data

Supply voltage	230 V +/- 10% 50 Hz or 110 V +/- 10% 60 Hz
Rated power input	500W
Generator operation frequency	333 kHz
Defibrillation impulse resistance	acc. to EN 60601-1
NEM System	neutral electrode control optical indication 7 levels required resistance < 240 Ω
Gas Type	pure argon 4.8 (99,998%) or higher
Inlet gas pressure	0.25-0.4 [MPa]
Gas Outflow	0.1-10 l/min, regulated 0.1 l/min in whole range

Optional available:

700-350-405

2-Button-Footswitch, length: 5m

700-350-402

3-Button-Footswitch, length: 5m, quick access key



Pressure Range	reducer (0.4 MPa) on argon cylinder
Vessel sealing system	9 effects/300W
AutoStop	automatic stop of sealing process after achieving the optimal effect
Weight	12.2kg
Dimensions	495 x 415 x 225mm (LxWxH)



HF UNIT G44

700-340-400 230V
700-340-410 110V



Features:

- Intelligent Instrument detection system
- Intuitive Touchscreen
- Automatic power regulation
- Configurable working modes
- Real-time parameter control
- Special endoscopic modes
- Bipolar resection
- Easy software update

DELIVERY CONTAINS:

- Main Unit
- Mains Cable

RECOMMENDED FOR: **HYS** **URO** **ARTH**

Technical Data

Rated power input	1100 VA
Power Supply Voltage	220-240 V \pm 10% 50/60 Hz or 110-120 V \pm 10% 50/60 Hz
Display	TFT 7" WVGA
SpectrumResult system	automatic power regulation
Generator operation frequency	333 kHz

NEM System	neutral electrode control, optical indication, required resistance < 240 Ω
Dimensions	385 x 305 x 141mm (LxWxH)
Weight	7kg

Optional available:

700-350-405

2-Button-Footswitch, length: 5m

700-350-402

3-Button-Footswitch, length: 5m, quick access key



MONITORS



The **iLumen Endovue** delivers the image performance of a high-end surgical display at a fraction of the cost. Targeted for cost-sensitive emerging markets this monitor is a great value. It features an LED backlight and supports both digital and analog high-definition video inputs. The iLumen Endovue is an affordable alternative to a full-featured surgical display.

It accommodates high-definition signals from a variety of medical imaging sources, including endoscopes, ultrasound, PACS, and vital signs. It also features a fanless cooling design to minimize the risk of spreading airborne contaminants within the sterile field.

Model / Type	300-001-138	300-001-148	300-001-158	300-001-168
Screen Size / Image Size	19" / 14.8 x 11.9"	21.5" / 18.8 x 10.6"	24" / 24.4 x 12.8"	32" / 27.5 x 15.5"
Resolution	1280x1024 (SXGA)	1920x1080 (FULL HD)	1920x1200 (WUXGA)	1920x1080 (FULL HD)
Signal Input	DVI-D, RGBS/VGA, YPbPr (HD-15 or DVI-I via adapter), S-Video, Composite			
Viewing angle	178°			

MONITORS



The **RZ HD iLumen RADIANCE** surgical flat panel display is the worldwide LCD monitor of choice for surgeons and operating rooms. Its superior HDTV capabilities including HD — SDI and YPbPr — and sophisticated signal processing produce sharp, accurate, true and very bright images. The RZ iLumen is the only medical-grade flat panel for simultaneous use as a Radiology, Fluoroscopy, Physiology, and/or minimally Invasive Surgery display.

Full HD and Digital Capable, Full Range of Analog Surgical Inputs, DICOM Response DVI Input for PACS, Fingertip/Footswitch Instant Remote Switching between sources, High Resolution, High Bright LCD with Wide Viewing Angle, Re- Drive Capability. Enables Image Viewing on Multiple Display, Traditional 4:3 Aspect Ratio, Surgeon- Specific User Selectable Settings.

Model / Type	300-010-219	300-010-224	300-010-226	300-010-232
Screen Size / Image Size	19" / 14.8 x 11.9"	21.5" / 18.8 x 10.6"	24" / 24.4 x 12.8"	32" / 27.5 x 15.5"
Resolution	1280x1024 (SXGA)	1920x1200 (WUXGA)	1920x1080 (FULL HD)	1920x1080 (FULL HD)
Signal Input	SDI, HD-SDI, RGBS, YPbPr, SVideo, Composite, DVI, VGA			
Viewing angle	178°			
LCD Panel	TFT Active Matrix with IPS, LED-Backlight			

TROLLEY / TOWER



300-002-001
RZ High-End Trolley

300-001-999
RZ Basic Trolley

FEATURES:

- Optional doors and rear panel in order to protect valuable equipment
- Optional main on/off switch
- Power columns for cables
- Endoscope Holder
- Variable height support arms
- Conductive rolls

TROLLEY / TOWER



300-900-918
High-End Tower
System Set

- 300-001-840 4K 3-Chip UHD Camera K4000
- 300-900-300 LUMEN LED 3
- 300-000-300 LAP Pump P3000
- 300-900-041 AIRFLOW A4 Insufflator with heating unit
- 300-010-232 RZ iLumen RADIANCE 32" Monitor
- 300-001-138 RZ HD iLumen EndoVue 19" Monitor
- 300-002-001 RZ High-End Trolley



300-900-919
Medium-End Tower
System Set

- 300-001-600 HD Digital Camera System F2
- 300-001-305 LUMEN X5 Xenon Light Source
- 300-000-100 LAP Pump P1000
- 300-900-030 AIRFLOW A3 Insufflator
- 300-001-158 RZ iLumen EndoVue 24" Monitor
- 300-001-999 RZ Basic Trolley



300-900-920
Basic Line Tower
System Set

- 300-001-410 Digital Camera System Z2
- 300-900-180 LUMEN LED1 Light Source
- 300-000-100 LAP Pump P1000
- 300-900-020 AIRFLOW A2 Insufflator
- 300-001-148 RZ iLumen EndoVue SE 21.5" Monitor
- 300-001-999 RZ Basic Trolley



progress in surgery

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