

HF SURGICAL UNITS
HF SURGICAL UNITS



HF Surgical Generator



HF Surgical Units

HF SURGICAL GENERATOR



16-2000-120

High frequency surgical unit, 120 W

Accessories | Zubehör

16-2000-120-100

Bipolar cable for **16-2000-120**



Specification	16-2000-120
Main supply	220 V / 110V
Power input	120 VA
Frequency	50 Hz
Operation frequency	416 kHz
Safety class / type	1 / CF
Dimensions (h x w x d)	24 cm x 11 cm x 35 cm
Weight	1,5 kg
Patient circuit	floating type
Leakage current in conformity of	DIN IEC 60601-2-2

Additional Features for 16-2000-120

- > Three pin international standard of monopolar handle (Valleylab®, ERBE® Int.)
- > Two pin international standard of bipolar handle (as above)
- > Standard 6,3 mm neutral electrode socket
- > Power step distinction - small power (1 VA steps) and higher power (5 VA)
- > CF protection class and are defibrillator proof
- > All certificates

For every endoscopic and surgical application

Rating power of generator	
Pure cut	120 VA / 300 Ohm
Coagulating cut 1	80 VA / 300 Ohm
Coagulating cut 2	-
Cut in water medium	-
Soft coagulation	80 VA / 150 Ohm
Forced coagulation	80 VA / 150 Ohm
Spray coagulation	-
Bipolar cut	100 VA

16-2000-120; it is an universal, high quality diathermy of the 16-2000 series from Ackermann®. It is a versatile system for applications in gynaecology, dermatology and cosmetic treatments as well as for a large number of surgical operations.





HF SURGICAL GENERATOR



16-2000-300 High Frequency surgical unit, 300 W
Monopolar and bipolar

Accessories | Zubehör

16-2000-1217 Double footswitch pedal supplementary



Specification	16-2000-300
Main supply	220 V
Power input	500 VA
Frequency	50 Hz
Operation frequency	500 kHz
Safety class / type	1 / CF
Dimensions (h x w x d)	34 cm x 16 cm x 36 cm
Weight	6,0 kg
Patient circuit	floating type
Leakage current in conformity of	DIN IEC 60601-2-2

Additional Features for 16-2000-300

- > Three pin international standard of monopolar handle (Valleylab®, ERBE® Int.)
- > Two pin international standard of bipolar handle (as above)
- > Standard 6,3 mm neutral electrode socket
- > Power step distinction - small power (1 VA steps) and higher power (5 VA)
- > CF protection class and are defibrillator proof
- > All certificates
- > Neutral electrode control circuit
- > Overload protection
- > Bipolar automatic start
- > Bipolar time driven stop
- > Protection against wrong connection

For every endoscopic and surgical application

16-2000-300; it is an universal electrosurgery system designed for surgery room and most applications in the operating theatre. It meets its tasks in an excellent way in laparoscope techniques.

Rating power of generator	
Cut	250 VA / 300 Ohm
Coagulating cut 1	150 VA / 300 Ohm
Coagulating cut 2	-
Cut in water medium	-
Soft coagulation	150 VA / 150 Ohm
Forced coagulation	150 VA / 150 Ohm
Spray coagulation	-
Bipolar coagulation	99 VA / 40 Ohm



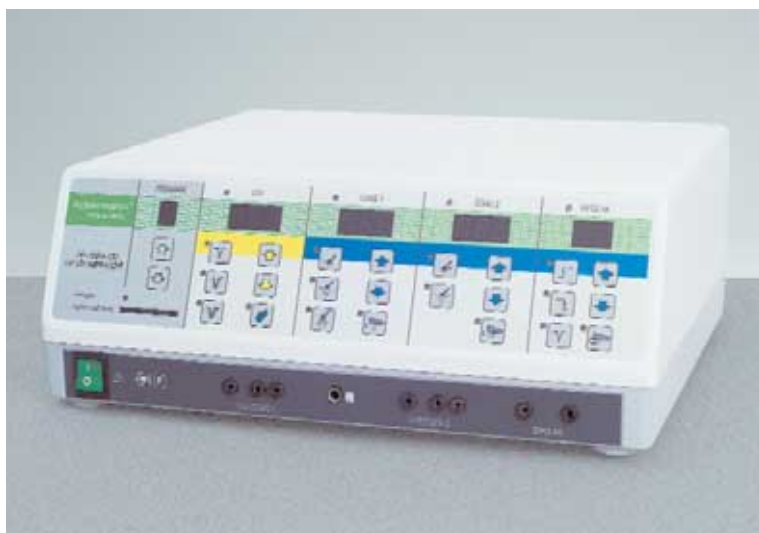


HF Surgical Generator



HF Surgical Units

HF SURGICAL GENERATOR



16-2000-350

High frequency surgical unit, 350 W

Accessories | Zubehör

16-2000-1217

Double footswitch pedal supplementary



Specification	16-2000-350
Main supply	220 VAC
Power input	600 VA
Frequency	50 Hz
Operation frequency	416 kHz
Safety class / type	1 / CF
Dimensions (h x w x d)	38 cm x 16 cm x 42 cm
Weight	9,0 kg
Patient circuit	floating type
Leakage current in conformity of	DIN IEC 60601-2-2

Additional Features for 16-2000-350

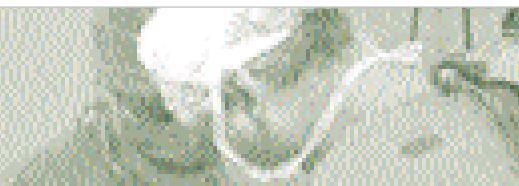
- > Three pin international standard of monopolar handle (Valleylab®, ERBE® Int.)
- > Two pin international standard of bipolar handle (as above)
- > Standard 6,3 mm neutral electrode socket
- > Power step distinction - small power (1 VA steps) and higher power (5 VA)
- > CF protection class and are defibrillator proof
- > All certificates
- > Neutral electrode control circuit
- > Overload protection
- > Bipolar automatic start
- > Bipolar time driven stop
- > Protection against wrong connection
- > TUR cut
- > Programming
- > Easy to use and preset
- > Five complete settings

Rating power of generator	
Cut	350 VA / 300 Ohm
Coagulating cut 1	180 VA / 300 Ohm
Coagulating cut 2	150 VA / 125 Ohm
Cut in water medium	350 VA / 300 Ohm
Soft coagulation	180 VA / 125 Ohm
Forced coagulation	180 VA / 300 Ohm
Spray coagulation	150 VA / 1000 Ohm
Bicoagulation	120 VA
Bipolar coagulation	120 VA / 40 Ohm
Bipolar cut	100 VA

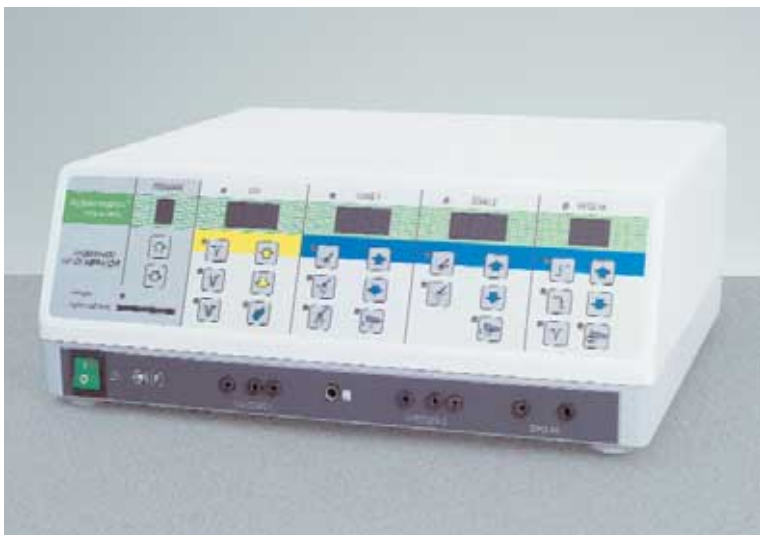
For every endoscopic and surgical application

16-2000-350; it is a versatile electrosurgery system meeting all the requirements of the operating theatre. It is equipped with spray coagulation options and the memory of five settings. It has also a special cut mode for polypectomy and papillotomy. It is adapted to the TUR procedure.





HF SURGICAL GENERATOR



16-2000-400 High frequency surgical unit, 400 W

Accessories | Zubehör

16-2000-1217 Double footswitch pedal supplementary



16

Specification	16-2000-400
Main supply	220 VAC
Power input	600 VA
Frequency	50 Hz
Operation frequency	416 kHz
Safety class / type	II / CF
Dimensions (h x w x d)	38 cm x 16 cm x 42 cm
Weight	9,0 kg
Patient circuit	floating type
Leakage current in conformity of	DIN IEC 60601-2-2

Additional Features for 16-2000-400

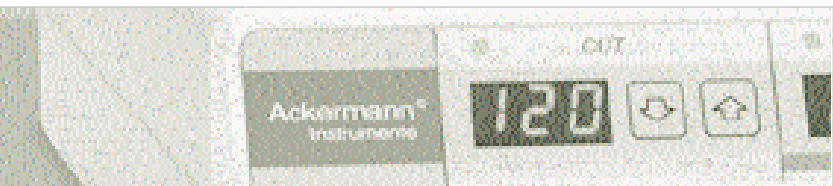
- > Three pin international standard of monopolar handle (Valleylab®, ERBE® Int.)
- > Two pin international standard of bipolar handle (as above)
- > Standard 6,3 mm neutral electrode socket
- > Power step distinction - small power (1 VA steps) and higher power (5 VA)
- > CF protection class and are defibrillator proof
- > All certificates
- > Neutral electrode control circuit
- > Overload protection
- > Bipolar automatic start
- > Bipolar time driven stop
- > Protection against wrong connection
- > TUR cut
- > Programming
- > Easy to use and preset
- > Five complete settings
- > Two monopolar outlets
- > Two separate settings of coagulation (for each outlet)

Rating power of generator	
Cut	350 VA / 300 Ohm
Coagulating cut 1	180 VA / 300 Ohm
Coagulating cut 2	150 VA / 125 Ohm
Cut in water medium	350 VA / 300 Ohm
Soft coagulation	180 VA / 125 Ohm
Forced coagulation	180 VA / 300 Ohm
Spray coagulation	150 VA / 1000 Ohm
Bicoagulation	99 VA / 40 Ohm
Bipolar cut	100 VA

For every endoscopic and surgical application

16-2000-400; this system has all the features of 16-2000-350. In addition, it is equipped with an alternative monopolar output with independent settings for coagulation.





HF ACCESSORIES | HF ZUBEHÖR



- 16-2000-1212** Neutral rubber electrode with 5 m connection cable
- 16-2000-1212D** Neutral rubber electrode with 5 m connection cable, disposable



- 16-2000-1213** Cable for Neutral rubber electrode, 3 m, reusable
- 16-2000-1213DD** Cable for Neutral rubber electrode, 3 m, reusable for disposable neutral electrodes **16-2000-1212D**
- 16-2000-1215** Cable for Neutral rubber electrode, 3 m, disposable



- 16-2000-1214** Monopolar handpiece with 2 switches, reusable
- 16-2000-1214OS** Monopolar handpiece without switches



- 16-2000-1216** Bipolar cable standard, 3 m



- 16-2000-1217** Double footswitch pedal for HF surgical generators



- 16-2000-1218** Bipolar forceps 0,3 mm pointed straight 180 mm, blunt
- 16-2000-1218A** Bipolar forceps 1,0 mm blunt straight 180 mm
- 16-2000-1218B** Bipolar forceps 0,3 mm pointed angled 180 mm
- 16-2000-1218C** Bipolar forceps 1,0 mm blunt angled 180 mm
- 16-2000-1218D** Bipolar forceps 0,3 mm pointed bajonett 180 mm, straight
- 16-2000-1218E** Bipolar forceps 1,0 mm blunt bajonett 180 mm, straight
- 16-2000-1218F** Bipolar forceps 0,3 mm pointed curved 180 mm
- 16-2000-1218G** Bipolar forceps 1,0 mm blunt curved 180 mm
- 16-2000-1218H** Bipolar forceps 0,3 mm pointed 180 mm, angled
- 16-2000-1218I** Bipolar forceps 1,0 mm blunt bajonett 180 mm, angled
- 16-2000-1218J** Bipolar forceps 0,3 mm pointed 200 mm
- 16-2000-1218SPE** Bipolar forceps 200 mm, angled 1 mm tip
- 16-2000-1240** Bipolar forceps 165 mm, **straight**, 1 mm tip



HF ACCESSORIES | HF ZUBEHÖR



16-2000-1219 Knife electrode, straight



16-2000-1220 Lancet electrode, straight



16-2000-1221 Lancet electrode, angled



16-2000-1222 Knife electrode, angled



16-2000-1223 Needle electrode, angled



16-2000-1224 Loop electrode, 5 mm



16-2000-1225 Loop electrode, 10 mm



16-2000-1226 Loop electrode, 17 mm, ribbon style



16-2000-1227 Loop electrode, 10 mm, ribbon style



HF ACCESSORIES | *HF ZUBEHÖR*



16-2000-1228

Ball electrode, angled, 5 mm



16-2000-1229

Ball electrode, angled, 2 mm



16-2000-1230

Ball electrode, angled, 1,5 mm



16-2000-1232

Ball electrode, straight, 6 mm



16-2000-1233

Ball electrode, 4 mm



16-2000-1234

Ball electrode, straight, 1,5 mm



16-2000-1235

Needle electrode, fine, 0,8 mm



16-2000-1236

Needle electrode, fine, 0,5 mm



16-2000-1237

Electrode extension, 100 mm



HF ACCESSORIES | HF ZUBEHÖR



16-2000-1238 Rubber band with button

16



16-2000-1231 Special long power connection cable, 4,5 m

16-2000-1239 Special long power connection cable, 4,5 m,
for US power connect styles

16-2000-1241 Special long power connection cable, 4,5 m,
for Southamerica power connect styles



16-2000-1500 Trolley for ES Unit, steel coated with small shelf and rubber rolls



Argon Beam Coagulator

ARGON BEAM COAGULATOR



16-2001 Argon Beam coagulator for the HF surgical generators **16-2000-350** | **16-2000-400**

Accessories | Zubehör

16-2001-100 Argon cylinder, empty, 5 L

16-2001-200 Argon regulator

16-2001-300 Trolley with bottle holders

Specification	16-2001
Main supply	220 Volt ± 10%
Power input	20 VA
Frequency	50 Hz
Safety class / type	I / CF
Dimensions (h x w x d)	42 cm x 38 cm x 8,7 cm
Weight	5,0 kgr
Low freq. leakage current	DIN IEC 601-1
High freq. leakage current	DIN IEC 601-2-2
Gas input pressure	0,25 - 0,4 MPA
Gas outflow	1-10 L/min

Additional Features for 16-2001

- > The attachment **16-2001** allows the performance of electro surgical operations in an argon atmosphere.
- > Its function is to control gas flow and pressure, gas availability, from the bottle and from the diathermy operations.

16-2000-400



16-2001



HF SURGICAL UNITS



16-2001-400 APC -handle, 2 switches, cable 3,5 m, 3 pin Luer lock

16-2001-700 Cable 2,5 m, 3 pin Luer lock

16



16-2001-500 APC-electrode,rigid, insulated shaft, Ø 5 mm, 25 mm working length
for ARGON cutting



16-2001-501 APC-electrode,rigid, insulated shaft, Ø 5 mm, 100 mm working length
for ARGON cutting



16-2001-502 APC-electrode,rigid, insulated shaft, Ø 5 mm, 350 mm working length
for ARGON cutting



16-2001-600 APC-electrode,rigid, insulated shaft, 115 mm working length
needle 14 mm, Ø 5 mm, for ARGON cutting



16-2001-601 APC-electrode,rigid, insulated shaft, 40 mm working length
needle 14 mm, Ø 5 mm, for ARGON cutting



16-2001-602 APC-electrode,rigid, insulated shaft, 115 mm working length
lancet 14 mm, Ø 5 mm, for ARGON cutting



16-2001-603 APC-electrode,rigid, insulated shaft, 40 mm working length
lancet 14 mm, Ø 5 mm, for ARGON cutting



16-2001-701 Flexible electrode TBS, Ø 1,5 mm, length 1,5 m

16-2001-702 Flexible electrode TBS, Ø 2,3 mm, length 2,2 m

16-2001-703 Flexible electrode TBS, Ø 3,2 mm, length 2,2 m



HF SURGICAL UNIT



16-2002-400 High frequency surgical unit. Monopolar and Bipolar with integrated Argon beam

Unique HF - Argon beam coagulation unit with both features of a high quality Argon beam coagulator in the HF surgical unit.

Specification	16-2002-400
Main supply	220 Volt
Power input	600 VA
Frequency	50 Hz
Operation frequency	416 kHz
Safety class / type	1 / CF
Dimensions (h x w x d)	38 cm x 16 cm x 42 cm
Weight	9,0 kg
Patient circuit	floating type
Standards	DIN IEC 60601-2-2
Gas input pressure	0,25 - 0,4 MPA
Gas outflow	1-10 L/min

Rating power of generator	
Cut	350 VA / 300 Ohm
Coagulating cut 1	180 VA / 300 Ohm
Coagulating cut 2	150 VA / 125 Ohm
Cut in water medium	350 VA / 300 Ohm
Soft coagulation	180 VA / 125 Ohm
Forced coagulation	180 VA / 300 Ohm
Spray coagulation	150 VA / 1000 Ohm
Bicoagulation	120 VA
Bipolar coagulation	120 VA / 40 Ohm
Bipolar cut	100 VA

Additional Features for 16-2002-400

- > Its function is to control gas flow and pressure, gas availability, from the bottle and from the diathermy operations
- > Three pin international standard of monopolar handle (Valleylab®, ERBE® Int.)
- > Two pin international standard of bipolar handle (as above)
- > Standard 6,3 mm neutral electrode socket
- > Power step distinction - small power (1 VA steps) and higher power (5 VA)
- > CF protection class and are defibrillator proof
- > All certificates
- > Neutral electrode control circuit
- > Overload protection
- > Bipolar automatic start
- > Bipolar time driven stop
- > Protection against wrong connection
- > TUR cut
- > Programming
- > Easy to use and preset
- > Five complete settings

For every endoscopic and surgical application

16-2002-400; it is a versatile electrosurgery system meeting all the requirements of the operating theatre. It is equipped with spray coagulation options and the memory of five settings. It has also a special cut mode for polypectomy and papillotomy. It is adapted to the TUR procedure.





CAMERAS | KAMERAS



16-2008	CCD camera head soakable. HAD chip 1/3" water resistant
16-2008NTSC	CCD camera head soakable. HAD chip 1/3" water resistant



Specification	16-2008
Resolution	752 x 582
Definition	825 lines
Sensitivity	0,9 lux
Signal / Noise ratio	64 dB
Electronic shutter	1/100 000 sec.
Auto exposure	2 areas
White Balance	Automatic push
Cable length	3,0 meters
Video composite outputs	1 BNC
Y/C video output	1 YC
Size of the control unit	L = 300 P = 300, H = 65 mm
Weight of the control unit	1,25 kg
Power supply	115 - 240 Volt, 47 - 63 Hz
Power consumption	27 VA
Fuses	2 x T 500 mA - 250 V
Standards	Classification 93/42 EG Protection Class 1 Type BF IEC 601.1, IEC 601.1.2 MPG

Additional Features for 16-2008 | 16-2008NTSC

- > Electronic shutter for camera controlled brightness regulation
- > Noise free image resolution
- > HAD chip technology (Hyper Active Digital)
- > No flickering image or loss of signal data due to digital processing
- > Easy and safe handling due to user friendly design and function
- > One hand quick focusing
- > Usable for left and right hands use
- > Aperture, brightness and window function
- > Water proof camera head



CAMERAS | KAMERAS



- 16-2010** Single chip high resolution operating room camera. HAD chip 1/4", water resistant.
- 16-2010NTSC** Single chip high resolution operating room camera. HAD chip 1/4", water resistant.



16

Specification	16-2010
Resolution	752 x 582
Definition	855 lines
Sensitivity	0,23 lux
Signal / Noise ratio	72 dB
Electronic shutter	1/100 000 sec.
Auto exposure	5 window areas
White Balance	Automatic push
Video enhancement	Yes
Cable length	3,6 meters
Video composite outputs	2 BNC / 75 Ohm
Y/C video output	2 YC / 75 Ohm
Size of the control unit	L = 300 P = 300, H = 66 mm
Weight of the control unit	2,5 kg
Power supply	115 - 240 Volt, 47 - 63 Hz
Power consumption	25 VA
Fuses	2 x F 500 mA - 250 V
Standards	Classification 93/42 EG
	Protection Class 1
	Type BF
	IEC 601.1, IEC 601.1.2
	MPG
	IPX 0

Additional Features for 16-2008 | 16-2008NTSC

- > Electronic shutter for camera controlled brightness regulation
- > Noise free image resolution
- > HAD chip technology (Hyper Active Digital)
- > No flickering image or loss of signal data due to digital processing
- > Easy and safe handling due to user friendly design and function
- > One hand quick focusing
- > Usable for left and right hands use
- > Aperture, brightness and window function
- > Water proof camera head
- > Programable buttons in the camera head
- > Memo function for brightness, aperture, red shift, and blue shift
- > Gamma correction for video printers or external connected storage units, for language and color bar
- > Memory for user settings, both for different users and also different endoscopes connected to the unit



CAMERAS | KAMERAS



16-2011	Three chip CCD HAD 1/4" camera, water resistant.
16-2011NTSC	Three chip CCD HAD 1/4" camera, water resistant.



Specification	16-2010
Resolution	3 x 752 x 582
Definition	1155 lines
Sensitivity	0,18 lux
Signal / Noise ratio	75 dB
Electronic shutter	1/100 000 sec.
Auto exposure	Variable
White Balance	Automatic push
Video enhancement	Yes
Cable length	3,6 meters
Video composite outputs	1 RGB - s-video output
Y/C video output	1 BNC / 75 Ohm; 1 YC / 75 Ohm
Size of the control unit	L = 300 P = 300, H = 66 mm
Weight of the control unit	2,8 kg
Power supply	115 - 240 Volt, 47 - 63 Hz
Power consumption	25 VA
Fuses	2 x 500 mA - 250 V
Standards	Classification 93/42 EG
	Protection Class 1
	Type BF
	IEC 601.1, IEC 601.1.2
	MPG
	IPX 0

Additional Features for 16-2008 | 16-2008NTSC

- > Electronic shutter for camera controlled brightness regulation
- > Image adjustment on screen with intuitive on display menu
- > Noise free image resolution
- > HAD chip technology (Hyper Active Digital)
- > No flickering image or loss of signal data due to digital processing
- > Easy and safe handling due to user friendly design and function
- > Camera head buttons for remote control of video recorder and video printer
- > Camera head buttons can be programmed with other functions
- > One hand quick focusing
- > Control unit with auto aperture, automatic signal amplifier, spot signal measuring technology, white balance memory, automatic sensor for light regulation and operating errors.
- > With the memory function all parameters such as colors (red, green, blue), brightness, aperture, window, language settings, color bar, can be set intuitively on screen display
- > Memory for user settings, both for different users and also different endoscopes connected to the unit
- > There is also a data input connector allowing to individually factory program the settings to even meet parameters for most crucial surgical procedures and individual surgeons preferences.



LIGHTSOURCES | LICHTQUELLEN



16-2020 Xenon 300 with lamp life indicator and power intensity meter

16

Specification	
Type of lamp	Xenon lamp
Performance	100 W / comparable with 300 W
Lamp geometry	Ackermann® Xenon lamp with focusing mirror
Color temperature	6000 Kelvin
Usable light cable	Ackermann (Wolf, Olympus with other adapters)
Durability of halogen lamp	500 hours (Av. value: 30 min ON / 15 min. OFF)
Current supply	100 - 230 Volt, 50/60 Hz
Power consumption	260 VA
Fuses	2 x T 4A
Dimensions (w x h x d)	311 mm x 125 mm x 300 mm
Weight	5,0 kg
Temperature range	+10° C to + 40° C - in function
Max. relative air humidity	85% - in function
Temperature range	-20° C to + 45° C - in storage
Max. relative air humidity	85% - in storage
Classification	CF (cardiac floatation)
Electr. protection class	IPX0, not protected against waterfalls
CE standard	Conform to the European directive 93/42/CEE
Safety measurements	Not adapted to a use close to a mixture of inflammable anaesthetic with air, oxygen or nitrous oxide

Xenon endoscopic light source, perfect illumination which can be used for all types of medical cameras.

> Practicable: For minimal invasive surgery and general endoscopy

Special Xenon lamp

- > Highest light output with low lamp power - due to latest lamp technology
- > 50 % higher lamp life compared to normal Xenon lamps
- > Considerably reduced temperature
- > Simple and fast lamp change
- > Without special tools and additional adjustments
- > Automatic light intensity control

Additional Features

- > Manual increase and decrease of light intensity
- > Stand by function to protect the lamp for longer life
- > Power on + off LED indicator
- > LCD display for the technical functions
- > Mechanical iris
- > Iris control: manual
- > Indication of the minimal and maximal levels of light
- > Continuous service
- > All Electromagnetic Compatibility (EMC) requirements were held into account in the development of this lightsource.

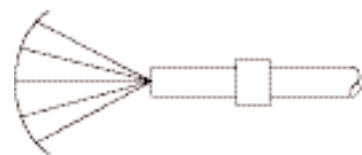


LIGHTSOURCES | LICHTQUELLEN



16-2021 Xenon 600 with lamp life indicator and power intensity meter

High focus light equivalent to 600 W light sources due to parabolic mirror focusing the light.



Competitors (no focus)



Specification	
Type of lamp	Xenon lamp
Performance	180 W / comparable with 600 W
Lamp geometry	Ackermann® Xenon lamp with focusing mirror
Color temperature	6000 Kelvin
Usable light cable	Ackermann (Wolf, Olympus with other adapters)
Durability of halogen lamp	500 hours (Av. value: 30 min ON / 15 min. OFF)
Current supply	100 - 230 Volt, 50/60 Hz
Power consumption	260 VA
Fuses	2 x T 4A
Dimensions (w x h x d)	311 mm x 125 mm x 300 mm
Weight	5,0 kg
Temperature range	+10° C to + 40° C - in function
Max. relative air humidity	85% - in function
Temperature range	-20° C to + 45° C - in storage
Max. relative air humidity	85% - in storage
Classification	CF (cardiac floation)
Electr. protection class	IPX0, not protected against waterfalls
CE standard	Conform to the European directive 93/42/CEE
Safety measurements	Not adapted to a use close to a mixture of inflammable anaesthetic with air, oxygen or nitrous oxide

Xenon endoscopic light source, perfect illumination which can be used for all types of medical cameras.

> Practicable: For minimal invasive surgery and general endoscopy

Special Xenon lamp

- > Highest light output with low lamp power – due to latest lamp technology
- > 50 % higher lamp life compared to normal Xenon lamps
- > Considerably reduced temperature
- > Simple and fast lamp change
- > Without special tools and additional adjustments
- > Automatic light intensity control

Additional Features

- > Manual increase and decrease of light intensity
- > Stand by function to protect the lamp for longer life
- > Power on + off LED indicator
- > LCD display for the technical functions
- > Mechanical iris
- > Iris control: manual
- > Indication of the minimal and maximal levels of light
- > Continuous service
- > All Electromagnetic Compatibility (EMC) requirements were held into account in the development of this lightsource.
- > High focus light equivalent to 600 W light sources due to parabolic mirror focusing the light

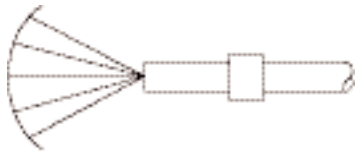


LIGHTSOURCES | LICHTQUELLEN

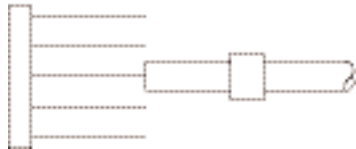


16-2022 Xenon 900 with lamp life indicator and power intensity meter

High focus light equivalent to 900 W light sources due to parabolic mirror focusing the light.



Competitors (no focus)



Specification	
Type of lamp	Xenon lamp
Performance	300 W / comparable with 900 W
Lamp geometry	Ackermann® Xenon lamp with focusing mirror
Color temperature	6200 Kelvin
Usable light cable	Ackermann (Wolf, Olympus with other adapters)
Durability of halogen lamp	500 hours (Av. value: 30 min ON / 15 min. OFF)
Current supply	100 - 230 Volt, 50/60 Hz
Power consumption	460 VA
Fuses	2 x T 4A
Dimensions (w x h x d)	311 mm x 125 mm x 300 mm
Weight	5,0 kg
Temperature range	+10° C to + 40° C - in function
Max. relative air humidity	85% - in function
Temperature range	-20° C to + 45° C - in storage
Max. relative air humidity	85% - in storage
Classification	CF (cardiac floatation)
Electr. protection class	IPX0, not protected against waterfalls
CE standard	Conform to the European directive 93/42/CEE
Safety measurements	Not adapted to a use close to a mixture of inflammable anaesthetic with air, oxygen or nitrous oxide

Xenon endoscopic light source, perfect illumination which can be used for all types of medical cameras.

> Practicable: For minimal invasive surgery and general endoscopy

Special Xenon lamp

- > Highest light output with low lamp power - due to latest lamp technology
- > 50 % higher lamp life compared to normal Xenon lamps
- > Considerably reduced temperature
- > Simple and fast lamp change
- > Without special tools and additional adjustments
- > Automatic light intensity control

Additional Features

- > Manual increase and decrease of light intensity
- > Stand by function to protect the lamp for longer life
- > Power on + off LED indicator
- > LCD display for the technical functions
- > Mechanical iris
- > Iris control: manual
- > Indication of the minimal and maximal levels of light
- > Continuous service
- > All Electromagnetic Compatibility (EMC) requirements were held into account in the development of this lightsource.
- > High focus light equivalent to 900 W light sources due to parabolic mirror focusing the light



FLATSCREENS | FLACHBILDSCHIRME



16-2030

Flatscreen for medical applications 17" size

With powertransformer and arm

Specification	16-2030 MMD Medical LCD Monitor
Screen	17" Flatscreen
Horizontal resolution	920 TV-lines
Automatic selection	PAL / SECAM / NTSC / M-NTSC
Colour temperature	6500° K to 10000° K
Input	RGB-terminal
Dimensions (w x h x d)	392 x 338 x 123 mm
Weight	5600 gr
Power supply	85 - 265 Volt, 47 - 63 Hz
Power consumption	35 VA
Standards	Complies with IEC 601 / VDE 0750

Additional Features for 16-2030

> For medical cameras

Note: This medical flatscreen monitors are suitable for all high end camera systems



FLATSCREENS | FLACHBILDSCHIRME



16-2031 Flatscreen for medical applications 19" size

With powertransformer and arm

16

Specification	16-2031 MMD Medical LCD Monitor
Screen	19" Flatscreen
Horizontal resolution	1090 TV-lines
Automatic selection	PAL / SECAM / NTSC / M-NTSC
Colour temperature	6500° K to 10000° K
Input	RGB-terminal
Dimensions (w x h x d)	442 x 338 x 123 mm
Weight	6600 gr
Power supply	85 - 265 Volt, 47 - 63 Hz
Power consumption	35 VA
Standards	Complies with IEC 601 / VDE 0750

Additional Features for 16-2031

> For medical cameras

Note: This medical flatscreen monitors are suitable for all high end camera systems

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