



Endoscopic Units

Advanced units
for endoscopic surgery

Endoscopy



Table of Contents

Since more than 60 years:

Quality and Safety

Know How and Innovation

Technology and Precision

Service and Flexibility

Quality Management:

Certified according to: ISO 13485;
Annex II, section 3 of the directive
93/42/EEC

Our Products:

Instruments for MIS (Laparoscopy,
Hysteroscopy, Arthroscopy, Urology)

Endoscopy units

Electrosurgery and accessories

Plastic surgery

Titanium-implant-systems for maxillo-
facial as well as hand- and radius
surgery, mandibular reconstruction

Scissors and micro-scissors, also with
TC-inserts or "super cut"

Instruments for general surgery

Endoscopic Units..... Page

Light sources..... 4-5

Cameras 10

Camera accessories..... 11

Cold light cables..... 12

Arthroscopes..... 13

Laparoscopes 13

Endoscopes 13

Cystoscopes..... 13

Hysteroscopes 13

Insufflators..... 14-15

HF-Generators 16-21

Foot switches 22

Trolley 23

Suction / Irrigation Unit 24

Universal Fluid pump 25

Monitors and accessories 26-27

Trolleys 28

Trolleys / Accessories 29

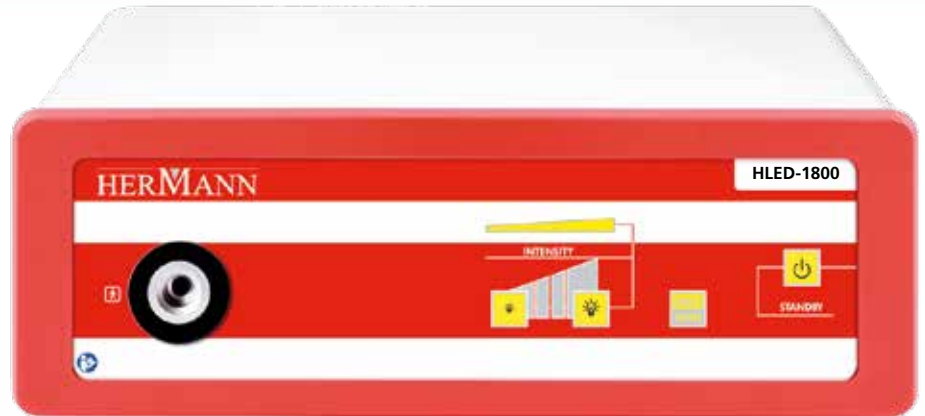
We reserve the right for alterations.



LED Light Sources

LED 1800 / LED 2500
HIGH INTENSITY LIGHTSOURCE

- Low noise, low heat conduction
- Electronical light control via buttons
- Pure daylight quality



LED 3000 - HIGH INTENSITY
LIGHTSOURCE

- PHASER ® technology included
- Low noise, low heat conduction
- Pure daylight quality
- TURRET multi connector (optional)



	H90-500-180	H90-500-250	H90-500-300
Type	HLED-1800	HLED-2500	HLED-3000
LED module:	LED CRI 90; approx. 5700K; daylight quality	LED CRI 70; approx. 6500K; daylight quality	6000K (+/- 500K); daylight quality
Lifetime:	>20.000hr	>20.000hr	<=30.000hr
Light guide connection:	Storz, Wolf		Storz
Voltage range (current consumption):	100-240 V (130VA)		100-240 V (130VA)
Frequency:	50-60 Hz		50-60 Hz
Device protection:	2x T3,15 A		2x T6,3 A
Video In:	1x Video, BNC		1x Video, BNC
Other connections:	Service (RJ45)		Service (RJ45)
Protection class:	I		I
Safety class:	BF		BF
IP code:	20		20
Standard:	IEC 60601-1-2		IEC 60601-1-2
Device classification (acc. to MDD 93/42/EEC):	I		I
Dimensions (WxHxD):	360x124x335mm		355x120x340mm
Weight:	approx. 5kg		approx. 10kg
Delivery contains:	Light source, mains cable, user manual, BNC cable (optional)		
Options:			H90-500-302 with TURRET multi connector (Wolf, Storz, Olympus, ACMI-adapter system)



Xenon Light Sources

The HX-0180 / HX-0300 offers the professional user the most advanced pure daylight quality (5600°K colour temperature).

It contains an improved high intensity and low heat conductive XENON lamp.

	H90-180-001	H90-300-001
Type	HX-0180	HX-0300
Lamp:	daylight quality, 5600 K Lifetime: 500 hr (expected) Xenon arc lamp	
Light guide connection:	Interchangeable, one included, please state lightguide fitting	
Voltage range (current consumption):	100-240 V	
	210 VA	370 VA
Frequency:	50-60 Hz	
Device protection:	2x T6,3 A	
Video In:	Optional	
Protection class:	I	
Safety class:	BF	
IP code:	20	
Standard:	IEC 60601-1-2	
Device classification (acc. to MDD 93/42/EEC):	I	
Dimensions (WxDxH):	355x120x340mm	
Weight:	approx. 11,0kg	approx. 12,5kg
Delivery contains:	Light source, mains cable, user manual, BNC cable (optional)	
Options:		
With TURRET, Wolf, Storz, Olympus, ACMI-adapter- system		H90-300-002
With built-in LED lamp as emergency illumination		H90-300-003
Spare parts:		
Xenon light lamp 180 W	H90-180-001E	
Xenon light lamp 300 W		H90-300-001E

LAMP

The built-in lamp is a specially developed XENON gas discharge lamp, filled with non-polluting XENON gas. The lamp design is optimized for endoscopic applications. Its design features a high efficiency reflector (and lens-system HX-300) which focusses light more effectively on the fiberoptic light guide. When the lifetime of the lamp (500 hrs.) has expired, the lamp is simply replaced by a new one within minutes - no tools and no adjustments are required.

LIGHT CONTROL

The output intensity is controlled steplessly via a motor driven, mechanical diaphragm. This ensures a constant colour temperature. The output intensity is set by push buttons.

CONNECTION

An interchangeable adapter system for all types of endoscopes, fibrescopes and microscopes ensures that the light sources can be operated in all applications. For more flexibility the light source is available with a TURRET-adapter system. The TURRET-adapter contains four adapters (Storz / Wolf / Olympus / ACMI) in a simple turning mechanism.

QUALITY

The light sources fulfill all essential safety demands. The rugged desk housing and the flat, waterproof touch control panel withstands all daily used requirements.

For highest safety requirements, we offer the HX- series also with built-in LED lamp as emergency illumination. In case of lamp defects during operation the emergency lamp is auto-matically switched on.

Digital 1-CCD Video Camera

HC-1000 represents our range of 1-CCD-cameras for endoscopic applications. Full digital signal processing guarantees true colour reproduction and out-standing image quality. A high sensitive, high resolution 1/3" CCD ensures high clarity and sharp detailed images for every endoscopic application. It is easy and flexible to use. The HC-1000 can be adjusted individually via integrated On-Screen-Menu. The Camera head is very small and light-weight. It can be immersed in disinfectant solution for sterilisation (using the attached cap).

- Multilingual on-screen-menue
- Character generator
- Capture module (image, video, USB at front side)
- HDMI out
- Digital zoom

WHITE BALANCE

White Balance is done automatically via push-button.

WINDOW FUNCTION

Window Function is programmed for different brightness measurement fields in case of difficult illumination conditions. Size can be adjusted via On-Screen-Menu.

ON-SCREEN

Camera settings (like contrast, brightness, window size) can be made in the On-Screen-Menu. Settings are stored in memory.

Delivery contains

CCU, camera head, mains cable, Y/C cable, BNC cable, HDMI - DVI cable (opt.), HDMI cable (opt.), USB stick, User manual

Options

Freeze function, Remote camera head, Remote footswitch, Keyboard with connector
Other options on request



HC-1000	H97-200-001
Video System	PAL / NTSC
Camera head	<ul style="list-style-type: none"> · Image sensor: 1/3" CCD · Aspect ratio: 4:3 · C-mount thread; light flexible cable -3 meter; immersable · Dimensions: Ø 29 mm; l = 55 mm · Weight: 80 gr.
System	<ul style="list-style-type: none"> · Image resolution: PAL 752 x 582 / NTSC 768 x 494 · TV resolution: > 470 lines · Sensitivity: < 1 lux (1/1.4) · White balance automatically, with data hold; shutter speed PAL (NTSC): 1/50 (1/60) to 1/100.000 sec · Power supply: 100/240 V (25VA) 50-60 Hz
Video out terminal	2x Video; 2x S-Video; 1x Y-Pb-Pr (Component); 1x SDI; 1x USB 2.0
Standard	<ul style="list-style-type: none"> · Protection class: I · Application part: Type BF · Classification acc. 93/42/EEC: I · EN ISO 13485 92/42/EEC IEC 601-1 EN 60601-1c
Dimensions Control unit	355 x 103 x 253 mm (WxHxD)
Weight Control unit	4,4 kg



HD Digital 1-MOS ECO Camera

HHD-1500 represents an economically designed version of our HD line. Full HD resolution guarantees an excellent image quality for endoscopic applications. This camera provides all necessary features and connections for daily use.

- Full HD resolution
- High speed shutter
- Multilingual menu
- 3 user settings storable

HHD-1500	H97-202-501
Camera head	<ul style="list-style-type: none"> · Aspect ratio: 16:9 · Image sensor: 1/3" MOS · Immersible (using the attached cap)
Voltage range (current consumption)	100 - 240 V (25VA)
Frequency	50 - 60 Hz
Device protection	2x T3, 15 A
VideonSystem	<ul style="list-style-type: none"> · Image resolution: full HD 1920 x 1080 · TV resolution: > 900 lines · Sensitivity: < 3 lux (1/1.4) · White balance automatically, with data hold · shutter speed: 1/50 (1/60) to 1/100.000 sec
Video out terminal	1x HDMI
Other connentions	<ul style="list-style-type: none"> 1x USB (A) (USB-Keyboard) 1x Remote IN (Footswitch) 1x Remote OUT (Footswitch) 1x RJ45 (Service)
Standard	<ul style="list-style-type: none"> · Protection class (acc. to IEC 601-1) I · Safety class BF · IP code 20 · Standard IEC 6060-1-1-2
Dimensions	360 x 124 x 335 mm (WxHxD)
Weight	4,7 kg

OPTIONAL ACCESSORIES

Waterproof keyboard
Footswitch

Swift 1HD camera head:

Weight: 150 g
Diameter: 36,5mm
Length: 65,2mm (without grommet)

HD Digital 1-MOS Video Camera

HHD-1100 are single chip video cameras of the latest generation with excellent image quality and outstanding colour reproduction for professional requirements.

They can be used for every endoscopic application with high demands. They are easy and flexible to use.

The cameras can be adjusted individually via integrated On-Screen-Menu. Settings are stored in an internal memory. The camera head is very small and light weighted designed. A wide range of different TV-Adapters can be attached to the C-Mount thread to choose the best focus length to the appropriate scope.



- Full HD resolution
- High speed shutter
- Multilingual menu
- Remote camera head
- Capture module (image, video) only for H97-202-101

DIGITAL ZOOM

Up to 2,5 digital Zoom via push-buttons.

FREEZE FUNCTION

The image on the screen can be freed via push-buttons on the camera head or an optional footswitch.

ON-SCREEN MENU

Camera settings (like color, brightness, area) can be made in the On-Screen-Menu. Settings are stored in memory.

3 USER SETTINGS STORABLE

AREA FUNCTION

Is a multitude of different brightness measurement fields. Quantity of measurement fields and form of this area is changeable. This function controls the Shutter-Level for best illuminated picture.

STERILISATION

Camera head with cable and connector (using attached cap) can be immersed in a disinfectant solution.

CHARACTER GENERATOR

Creates on-screen-information on all video outputs by using keyboard.

CAPTURE MODULE (only H97-202-101)

- image and video
- by USB at front side

OPTIONAL ACCESSORIES (see page 9)

- waterproof keyboard
- footswitch



HHD-1100	H97-202-001 H97-202-101 (with USB capture module)
Camera head	<ul style="list-style-type: none"> · Image sensor: 1/3" MOS · Aspect ratio: 16:9 · C-mount thread; three push-buttons; light flexible cable -3 meter; immersable · Dimensions: Ø 34 mm; l = 73 mm · Weight: 105 gr.
System	<ul style="list-style-type: none"> · Image resolution: full HD 1920 x 1080 · TV resolution: > 1000 lines · Sensitivity: < 3 lux (1/1.4) · White balance automatically, with data hold; shutter speed: 1/50 (1/60) to 1/100.000 sec · Power supply: 100/240 VAC, 50-60 Hz · Fuses: 2 Fine fuses, 5x20 mm, delay acting 3,15 AH (I=1500A) · Power consumption: 20 VA
Video out terminal	1x HDMI/DVI; 1x Y-Pb-Pr (Component); 1x Video (PAL/NTSC); 1x S-Video (PAL/NTC); 2x HD SDI (opt.); LAN (opt.)
Standard	<ul style="list-style-type: none"> · Protection class: I · Application part: Type BF · Classification acc. 93/42/EEC: I · EN ISO 13485 92/42/EEC IEC 601-1 EN 60601-1c
Dimensions Control unit (WxHxD)	355 x 103 x 253 mm
Weight Control unit	4,5 kg

Delivery contains

CCU, camera head, mains cable, Y/C cable, BNC cable, HDMI-DVI cable, HDMI cable, RGB cable, User manual.



HD Digital 3-MOS Video Camera

HHD-3100 are 3-MOS video cameras of the latest generation with excellent image quality in High Definition and outstanding natural colour reproduction for professional requirements. The HD camera can be used for every endoscopic application with high demands. It is easy and flexible to use.

The cameras can be adjusted individually via integrated On-Screen-Menu. Settings are stored in an internal memory. High speed, complete digital image processing, separated for red, green and blue colour channels, enables high end image quality.



- Full HD resolution
- High speed shutter
- Multilingual menu
- Remote camera head
- Capture module (image, video) by USB (H97-2002-103 only)
- Digital Zoom - up to 2,5; via push-buttons
- Freeze Function via push-buttons (camera head) or footswitch (optional)
- On-Screen-Menu for Camera settings
- 3 User Settings Storable

HHD-3100	H97-202-003 H97-202-103 (with USB capture module)
Camera head	<ul style="list-style-type: none"> · Image sensor: 3 x 1/3" · Aspect ratio: 16:9 · C-mount thread; light flexible cable -4 meter; immersable · Dimensions: 82 x 53 x 39 mm · Weight: 160 gr.
System	<ul style="list-style-type: none"> · Image resolution: full HD 1920 x 1080 · TV resolution: > 1000 lines · Sensitivity: < 3 lux (1/1.4) · White balance automatically, with data hold; shutter speed: 1/50 (1/60) to 1/100.000 sec · Power supply: 100/240 VAC, 50-60 Hz · Fuses: 2 Fine fuses, 5x20 mm, delay acting 3,15 AH (I=1500A) · Power consumption: 20 VA
Video out terminal	2x HD SDI; 1x HDMI/DVI; 1x Y-Pb-Pr (Component); 1x Video (PAL/NTSC); 1x S-Video (PAL/NTC);
Standard	<ul style="list-style-type: none"> · Protection class: I · Application part: Type BF · Classification acc. 93/42/EEC: I · EN ISO 13485 92/42/EEC IEC 601-1 EN 60601-1c
Dimensions Control unit (WxHxD)	355 x 103 x 253 mm
Weight Control unit	4,5 kg

AREA FUNCTION

Is a multitude of different brightness measurement fields. This function controls the Shutter-Level for best illuminated picture.

STERILISATION

Camera head with cable and connector can be immersed in a disinfectant solution (using attached cap).

PROGRESSIVE SCAN

Creates a picture signal with double the scan lines of a conventional interlaced picture to create a noticeably sharper image. It offers higher picture quality and eliminates virtually all motion artifacts.

CHARACTER GENERATOR

Creates On-Screen-Information on all video outputs by using keyboard.

OPTIONAL ACCESSORIES

- waterproof keyboard
- footswitch

Delivery contains

CCU, camera head, mains cable, HDMI- DVI cable, HDMI cable, RGB cable, Y/C cable, BNC cable, User manual.

4K - Ultra High Definition Camera 3-Mos

- 4K UHD resolution
- Zoom 2,5 digital
- Freeze Function
- Fog reduction
- Image enhancement of colour and structure
- 10 USER presets for surgical application
- Multilingual menu
- White balance
- Camera head included
- Capture module (image, video) by USB (H97-300-103 only)
- On-Screen-Menue

H4K-3100	H97-300-003 H97-300-103 (with USB capture module)
Camera head	· Aspect ratio: 16:9 · Sensor: 3 x 1/3" · Immersible (using the attached cap)
Voltage range (current consumption)	100 - 240 V (60VA)
Frequency	50 - 60 Hz
Device protection	2x T3, 15 A
VideonSystem	· Image resolution: UHD 3840 x 2160 · TV resolution: 1600 lines · S/N-ration 54 dB · White balance automatically, with data hold
Video output	1x HDMI 4K (3840 x 2160) 1x HDMI Full HD (1920 x 1080) 1x SDI 4K (4 x BNC) (3840 x 2160) 1x SDI Full HD (1 x BNC) (1920 x 1080) HDMI output: 3840 x 2160 / 59.94p, 3840 x 2160 / 50p 1920 x 1080 / 59.49p, 1920 x 1080 / 59.94i 1920 x 1080 / 50p, 1920 x 1080 / 50i SDI output: 3840 x 2160 / 95.94p, 3840 x 2160 / 50p 1080 / 59.49p, 1080 / 59.94i 1080 / 50p, 1080 / 50i
Standard	· Protection class (acc. to IEC 601-1) I · Safety class BF · IP code 20 · Standard IEC 601-1-2 · Device classification (acc. to MDD 93/42/EEC) I
Dimensions	360 x 124 x 335 mm (WxHxD)
Weight	approx. 6,2 kg



Option

- Image recording (1920 x 1080)
- Video recording, mpeg4 (1920 x 1080)

Colour space

The camera is able to reproduce the extended colour space BT.2020 in addition to the BT.709 colour space for HDTV. (Prerequisite is a BT.2020 compatible monitor)

Accessories for Cameras

Keyboard with connector H97-200-001-K	Suitable for all Hermann-cameras waterproof
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Footswitch H97-200-001-P	Suitable for all Hermann-cameras
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Recording Option

Capture module - 1MOS HD / 3MOS HD Cameras

Video format	Full HD 1920 x 1080 p Mpeg4 (H-264 Codec) Frame rate 60fps
Image format	JPG (1920 x 1080)

Recording time (approximately)

H-264	1920 x 1080 / 60 fps		
BIT Rate	24 Mbps (best quality)	12 Mbps	Mpbs
USB Stick 4 GB	22 Min.	45 Min.	2 H, 15 Min.
USB Stick 16 GB	1 H, 30 Min.	3 H	9 H
USB Stick 32 GB	3 H	6 H	18 H
USB Stick 64 GB	6 H	12 H	36 H
USB Stick 128 GB	12 H	24 H	72 H
USB Stick 256 GB	24 H	48 H	144 H

TV-Adapter



Focus	TV-Adapter
15 mm	H97-250-000
21 mm	H97-250-001
28 mm	H97-250-002
35 mm	H97-250-003



Focus	HD TV-Adapter
14 mm	H97-250-503
25 mm	H97-250-501
28 mm	H97-250-502



Focus	UHD-Adapter
14 mm	H97-250-601
18 mm	H97-250-602
22 mm	H97-250-603
25 mm	H97-250-604
28 mm	H97-250-605



Focus	Vario-Zoom-Adapter
15 mm - 35 mm	H97-250-400



Focus	TV-Zoom manual focus
15 mm - 25 mm	H97-250-100
25 mm - 40 mm	H97-250-101



Focus	Beamsplitter
25 mm	H97-250-300
30 mm	H97-250-301

Cold light cables with adapters

Autoclavable, high flexibility and tensile strength

Ø 3,5 mm

Ø 4,8 mm

180 cm	H91-180-035	180 cm	H91-180-045
230 cm	H91-230-035	230 cm	H91-230-045
300 cm	H91-300-035	300 cm	H91-300-045

Interchangeable adapters ensure, that the light sources can be operated with all types of endoscopes. If not stated differently we will supply fitting to Storz connection.

These cables are also available in blue, green, yellow and red - just mention colour behind reference number

Cold light cables without adapters

Autoclavable, high flexibility and tensile strength

Ø 3,5 mm

Ø 4,8 mm

180 cm	H91-180-135	180 cm	H91-180-145
230 cm	H91-230-135	230 cm	H91-230-145
300 cm	H91-300-135	300 cm	H91-300-145



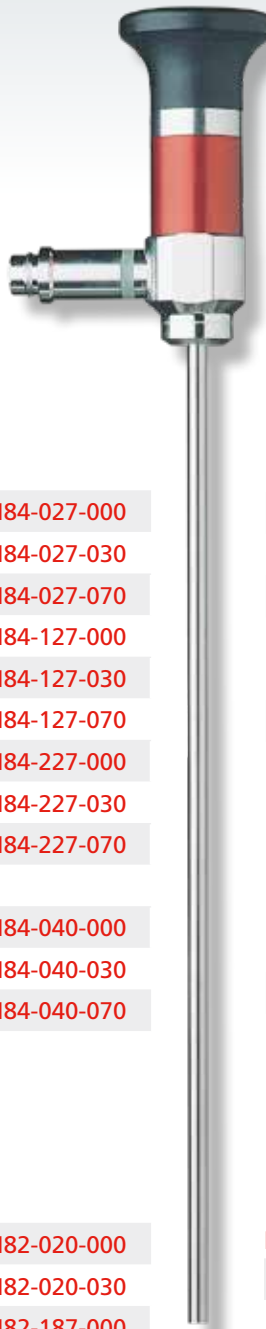
Light guide adapters

Instrument side

Adapter Storz / Winter / Olympus / B. Braun	H91-100-001
Adapter HSW / Wolf / Richards / Dyonics	H91-100-002
Adapter ACMI / British Standard / Stryker	H91-100-003

Projector side

Adapter Storz	H91-100-010
Adapter Wolf / Richards	H91-100-020
Adapter Olympus	H91-100-030
Adapter ACMI / British Standard / Stryker	H91-100-050



Scopes HD and 4K autoclavable

Arthroscopes

Ø mm	Direction of view	working lengths mm	
HD			
2.7	0°	110	H84-027-000
2.7	30°	110	H84-027-030
2.7	70°	110	H84-027-070
2.7	0°	175	H84-127-000
2.7	30°	175	H84-127-030
2.7	70°	175	H84-127-070
2.7	0°	187,5	H84-227-000
2.7	30°	187,5	H84-227-030
2.7	70°	187,5	H84-227-070

4K (to be used for HD systems as well)

4.0	0°	175	H84-040-000
4.0	30°	175	H84-040-030
4.0	70°	175	H84-040-070

Cystoscopes

Ø mm	Direction of view	working lengths mm	
HD			
2.0	0°	187.5	H82-020-000
2.0	30°	187.5	H82-020-030
2.7	0°	187.5	H82-187-000
2.7	30°	187.5	H82-187-030
2.7	70°	187.5	H82-187-070
2.7	0°	302	H82-027-000
2.7	30°	302	H82-027-030
2.7	70°	302	H82-027-070

4K (to be used for HD systems as well)

4.0	0°	302	H82-430-000
4.0	30°	302	H82-430-030
4.0	70°	302	H82-430-070
4.0	12°	302	H82-430-012

Laparoscopes

Ø mm	Direction of view	working lengths mm	
HD			
5.0	0°	300	H83-050-000
5.0	30°	300	H83-050-030
5.0	45°	300	H83-050-045
5.0	70°	300	H83-050-070

4K (to be used for HD systems as well)

10.0	0°	310	H83-100-000
10.0	30°	310	H83-100-030

Endoscopes

Ø mm	Direction of view	working lengths mm	
HD			
3.0	0°	187,0	H83-030-100
3.0	30°	187,5	H83-030-130

Hysteroscopes

Ø mm	Direction of view	working lengths mm	
HD			
2.7	0°	302	H85-027-000
2.7	12°	302	H85-027-012
2.7	30°	302	H85-027-030
2.7	70°	302	H85-027-070

4K (to be used for HD systems as well)

4.0	0°	302	H85-040-000
4,0	12°	302	H85-040-012
4,0	30°	302	H85-040-030
4,0	70°	302	H85-040-070

Insufflators

The HI-series is a complete new designed line of CO₂ insufflators with outstanding technical features. The units are controlled by microprocessors of the latest generation. Stable pressure balance in the abdomen is guaranteed by high gas flow performance and low insufflation pressure.

HI-series meets all your needs in minimally invasive surgery. Its unique feature is a 15, 20, 30 or 45 liter per minute gas insufflation that delivers maximum performance and highest level of patient safety.

ADVANCE CONTINUOUS FLOW

The HI-series stands for ACF (advanced continuous flow insufflation) that means no more disruptions between gasflow and pressure reading phases.

No more guessing - indicated gasflow is the actual gasflow.

SOFTWARE

Software controlled pressure release mechanism prevents dangerous pressure build up in the abdomen when using such apparatus as laser or argon beamers.

SAFETY

Automatic self check, activated each time unit is switched on, makes sure all electronic and pneumatic components are in good running order. This safety feature carries a guarantee for the lifetime of the unit. The changeable sterile filter prevents reflux of liquids and contamination of the gas way.

SYSTEM GAS HEATER

For reduction of post surgery problems the HI-series is available with a high efficient gas heater. The gas heater is preadjusted and works on a plug and play base full automatically. The heat exchanger can be autoclaved with the tube set.

VIDEO OSDD (optional)

The OSDD (On-Screen-Data-Display) gives the surgeon the possibility to display the important values on the video monitor of the endoscopic camera.

FLEXIBLE GAS SUPPLY

The HI-series can be used with gas bottles or central gas supply systems. The gas supply mode can be changed very easily by integrated software.

Delivery contains:

Insufflator, Mains Cable

CO₂ high pressure tube UNF to German gas connection

Wrench set: SW 15 / SW 30, Sterile filter

Standard silicone tube set

(only for Insufflator without gas heater)

System gas heater with tube set

(only for Insufflator with gas heater)

user manual

Accessories for Insufflator and Hystro-Insufflator

Sterile-filter package with 50 pcs	H95-000-050
Sterile-filter package with 100 pcs	H95-000-100
Sterile-filter package with 250 pcs	H95-000-250
Sterile-filter package with 500 pcs	H95-000-500
CO ₂ high pressure silicon tube set (autoclavable) package with 5 pcs	H95-000-600
CO ₂ high pressure tube set (autoclavable) with heater exchanger package with 5 pcs	H95-000-601

Insufflator



max. gas flow	basic	basic with gas heater
15 l/min Type	H95-015-230 HI-0015	H95-015-231 HI-0115
20 l/min Type	H95-020-230 HI-0020	H95-020-231 HI-0120
30 l/min Type	H95-030-230 HI-0030	H95-030-231 HI-0130
45 l/min Type	H95-043-230 HI-0045	H95-043-231 HI-0145
Insufflation pressure	0-30 mm Hg	
Power supply	100 - 240 VAC, 50 - 60 Hz	
Power consumption	25 - 40 VA (25 - 105 VA with gas heating)	

Standard	Protection class: I Application part: Type BF Classification acc. 93/42/EEC: II EN ISO 13485 / 93/42/EEC / IEC 601-1, EN 60601-1C
Gas	Carbon Dioxide (medical)
Gas connection	UNF 7/16"
Class/Type	2b / BF
External dimensions	355 x 105 x 285 mm (W x H x D)
Weight	6,2 kg

HF-Generator



- Small size
- Monopolar and bipolar modes
- Recognition of the footswitch
- Separate bipolar panel
- Automatic power regulation

HHF 120	H98-120-000
SAFETY FEATURES	
Protection against electric shock	I
Class	CF
Grade	according to IEC 60601-1
Low-frequency leakage currents	according to IEC 60601-2-2
High-frequency leakage currents	333 kHz
Generator operation frequency	according to EN 60601-1
Defibrillation impulse resistance	neutral electrode control
NEM System	automatic
AUTOTEST	self-test of generator and accessories after switching the power on, service codes display
OVERLOAD	generator overload protection

CUTTING	
Pure monopolar cutting	120 W for 300 Ω
Blend monopolar cutting	120 W for 300 Ω
COAGULATION	
Soft monopolar coagulation	120 W for 50 Ω
Forced monopolar coagulation	120 W for 300 Ω
Bipolar coagulation	120 W for 50 Ω
POWER SUPPLY	
Supply voltage	220-240 V +/-10%, 50/60 Hz or 110-120 V +/-10%, 50/60 Hz
Rated power input	480 VA
WEIGHT AND DIMENSIONS	
Length	330 mm
Width	285 mm
Height	105 mm
Weight	3,5 kg

Delivery contains: HF-Generator, Mains cable, User manual

HF-Generator



- New design of control panel
- Monopolar and bipolar modes
- Activation of bipolar coagulation: footswitch or AutoStart
- AutoStop in bipolar coagulation

HHF 300	H98-300-000
SAFETY FEATURES	
Protection against electric shock Class	I
Grade	CF
Low-frequency leakage currents	according to EN 60601-1
High-frequency leakage currents	according to EN 60601-2-2
Generator operation frequency	357 kHz
Defibrillation impulse resistance NEM System	according to EN 60601-1 neutral electrode control
AUTOTEST	self-test of generator and accessories after switching the power on, service codes display
OVERLOAD	generator overload protection

CUTTING	
Pure monopolar cutting	250 W for 300 Ω
Blend monopolar cutting	250 W for 300 Ω
COAGULATION	
Soft monopolar coagulation	150 W for 50 Ω
Forced monopolar coagulation	150 W for 300 Ω
BIPOLAR COAGULATION	
Bipolar coagulation	100 W for 50 Ω
Auto-Start / Auto-Stop	automatic start and stop of bipolar coagulation
OTHER FEATURES	
PowerStart System	simplify the beginning of cutting process
SURGILOGIC System	automatic power regulation depends on needs
POWER SUPPLY	
Supply voltage	220-240 V +/-10%, 50/60 Hz or 110-120 V +/-10%, 50/60 Hz
Rated power input	450 VA
WEIGHT AND DIMENSIONS	
Length	380 mm
Width	340 mm
Height	165 mm
Weight	6.8 kg

Delivery contains: HF-Generator, Mains cable, User manual

HF-Generator



- Special endoscopic modes
- New monopolar modes
- Monopolar modes activation: footswitch or handle
- Activation of bipolar coagulation: footswitch or AutoStart
- Flat front panel, easy to clean, with push-buttons for modes and power regulation
- Bipolar resection

HHF 400

H98-350-002

SAFETY FEATURES

Protection against electric shock Class	I
Grade	CF
Low-frequency leakage currents	according to IEC 60601-1
High-frequency leakage currents	according to IEC 60601-2-2
Generator operation frequency	333 kHz
Defibrillation impulse resistance	according to EN 60601-1
NEM System	neutral electrode control
AUTOTEST	self-test of generator and accessories after switching the power on, service codes display
OVERLOAD	generator overload protection

MONOPOLAR CUTTING

Pure cutting	400 W for 150 Ω
Blend cutting I	180 W for 200 Ω
Blend cutting II	150 W for 200 Ω
Blend cutting III	150 W for 200 Ω
Urological cutting	400 W for 200 Ω
Endoscopic cutting	400 W for 200 Ω

MONOPOLAR COAGULATION

Soft coagulation	180 W for 50 Ω
Forced coagulation	180 W for 200 Ω
Spray coagulation	80 W for 1250 Ω
Hybrid coagulation	180 W for 200 Ω

BIPOLAR CUTTING

Bipolar cutting (4 levels of haemostasis)	150 W for 200 Ω
Urological bipolar cutting	400 W for 50 Ω

BIPOLAR COAGULATION

Bipolar coagulation	120 W for 50 Ω
Auto-Start / Auto-Stop	automatic start and stop of bipolar coagulation

OTHER FEATURES

Spectrum Result System	automatic power regulation
Constant control	real-time monitoring off all parameters
Volume control	5 levels
Program memory	9 different memory locations
MultiSwitch	remote program selection by footswitch
Outputs	2 monopolar, 1 bipolar

POWER SUPPLY

Supply voltage	220-240 V +/-10%, 50/60 Hz or 110-120 V +/-10%, 50/60 Hz
Rated power input	1080 VA

WEIGHT AND DIMENSIONS

Length	410 mm
Width	415 mm
Height	180 mm
Weight	9.8 kg

Delivery contains: HF-Generator, Mains cable, User manual

HF-Generator with Argon gas



- **MultiSwitch: remote program change**
- **Special endoscopic modes**
- **New monopolar modes**
- **Activation of bipolar coagulation: footswitch or AutoStart**
- **Flat front panel, easy to clean, with push-buttons for modes and power regulation**
- **Argon pulse coagulation**
- **Bipolar resection**
- **Monopolar and bipolar modes can be activated by one footswitch**

HHF 350 A	H98-350-001
SAFETY FEATURES	
Protection against electric shock Class	I
Grade	CF
Low-frequency leakage currents	according to IEC 60601-1
High-frequency leakage currents	according to IEC 60601-2-2
Generator operation frequency	333 kHz
Defibrillation impulse resistance	according to EN 60601-1
NEM System	neutral electrode control
AUTOTEST	self-test of generator and accessories after switching the power on, service codes display
OVERLOAD	generator overload protection
MONOPOLAR CUTTING	
Pure cutting	400 W for 150 Ω
Blend cutting I	180 W for 200 Ω
Blend cutting II	150 W for 200 Ω
Blend cutting III	150 W for 200 Ω
Argon cutting	350 W for 200 Ω
Urological cutting	400 W for 200 Ω
Endoscopic cutting	400 W for 200 Ω

MONOPOLAR COAGULATION

Soft coagulation	180 W for 50 Ω
Forced coagulation	180 W for 200 Ω
Spray coagulation	80 W for 1250 Ω
Hybrid coagulation	180 W for 200 Ω
Argon coagulation	80 W for 1250 Ω
Argon pulse coagulation	80 W for 1250 Ω

BIPOLAR CUTTING

Bipolar cutting (4 levels of haemostasis)	150 W for 200 Ω
Urological bipolar cutting	400 W for 50 Ω

BIPOLAR COAGULATION

Bipolar coagulation	120 W for 50 Ω
Auto-Start / Auto-Stop	automatic start and stop of bipolar coagulation

ARGON

Gas type	pure argon 4.8 (99,99%) or higher
Inlet gas pressure	0.3 – 0.5 MPa
Gas outflow	0.1 – 9.9 l/min, regulated 0.1 l/min in whole range
Pressure gauge	reducer (0.4MPa) on argon cylinder

OTHER FEATURES

Spectrum Result System	automatic power regulation
Constant control	real-time monitoring off all parameters
Volume control	5 levels
Program memory	9 memory locations
MultiSwitch	remote program selection by footswitch
Outputs	2 monopolar, 1 bipolar

POWER SUPPLY

Supply voltage	220-240 V +/-10%, 50/60 Hz or 110-120 V +/-10%, 50/60 Hz
Rated power input	1080 VA W

WEIGHT AND DIMENSIONS

Length	420 mm
Width	415 mm
Height	180 mm
Weight	10,0 kg

Delivery contains: HF-Generator, Mains cable, User manual

HF-Generator with Argon gas and ThermoStapler



- MultiSwitch: remote program change
- Special endoscopic modes
- New monopolar modes
- Monopolar modes activation: footswitch or handle
- Activation of bipolar coagulation: footswitch or AutoStart
- Flat front panel, easy to clean, with push-buttons for modes and power regulation
- Argon pulse coagulation
- ThermoStapler® bipolar sealing of blood vessels - up to 7 mm
- Bipolar resection
- Monopolar and bipolar modes can be activated by one footswitch

HHF 350 ARGON ThermoStapler **H98-350-003**

SAFETY FEATURES

Protection against electric shock Class	I
Grade	CF
Low-frequency leakage currents	according to IEC 60601-1
High-frequency leakage currents	according to IEC 60601-2-2
Generator operation frequency	333 kHz
Defibrillation impulse resistance	according to EN 60601-1
NEM System	neutral electrode control
AUTOTEST	self-test of generator and accessories after switching the power on, service codes display
OVERLOAD	generator overload protection

MONOPOLAR CUTTING

Pure cutting	400 W for 150 Ω
Blend cutting I	180 W for 200 Ω
Blend cutting II	150 W for 200 Ω
Blend cutting III	150 W for 200 Ω
Argon cutting	350 W for 200 Ω
Urological cutting	400 W for 200 Ω
Endoscopic cutting	400 W for 200 Ω

MONOPOLAR COAGULATION

Soft coagulation	180 W for 50 Ω
Forced coagulation	180 W for 300 Ω
Spray coagulation	80 W for 1250 Ω
Hybrid coagulation	180 W for 200 Ω
Argon coagulation	80 W for 1250 Ω
Argon pulse coagulation	80 W for 1250 Ω

BIPOLAR CUTTING

Bipolar cutting (4 levels of haemostasis)	150 W for 200 Ω
Urological bipolar cutting	400 W for 50 Ω

BIPOLAR COAGULATION

Bipolar coagulation	120 W for 50 Ω
Auto-Start / Auto-Stop	automatic start and stop of bipolar coagulation

ARGON

Gas type	pure argon 4.8 (99,99%) or higher
Inlet gas pressure	0.3 – 0.5 MPa
Gas outflow	0.1 – 9.9 l/min, regulated 0.1 l/min in whole range
Pressure gauge	reducer on argon cylinder

THERMOSTAPLER

Vessel sealing system	300 W for 50 Ω
Auto-Stop	automatic stop of sealing process after achieving the optimal effect

OTHER FEATURES

Spectrum Result System	automatic power regulation
Constant control	real-time monitoring off all parameters
Volume control	5 levels
Program memory	9 memory locations
MultiSwitch	remote program selection by footswitch
Outputs	2 monopolar, 1 bipolar, 1 ThermoStapler®

POWER SUPPLY

Supply voltage	220-240 V +/-10%, 50/60 Hz or 110-120 V +/-10%, 50/60 Hz
Rated power input	1080 VA

WEIGHT AND DIMENSIONS

Length	420 mm
Width	415 mm
Height	180 mm
Weight	10,0 kg

Foot switches for HERMANN generators



H98-912-010 Single foot switch MINI,
6-pin plug, 5 m cable for
H98-120-000 generator



H98-912-021 Double foot switch,
6-pin plug, 5 m cable
OR proofed for
H98-120-000
H98-300-000
H98-350-001
H98-350-002
H98-350-003 generators



H98-912-030 Big double foot switch,
„MultiSwitch“
three button foot switch,
6-pin plug, 5 m cable for
H98-300-000
H98-350-001
H98-350-002
H98-350-003 generators

Trolley



H98-913-001 Trolley for
Hermann generators

H98-912-002 Argon Filter Set, sterile, single use,
packing unit 50 pcs.

Suction - Irrigation Pump Laparoscopy

FEATURES

- Autonomous suction and irrigation channels
- Irrigation based on the peristaltic pump module
- Suction based on the high quality vacuum pump module
- Predefined suction and irrigation parameters
- Working parameters controlled by suction-irrigation laparoscopic instruments

STRENGTHS

- Minimally invasive technique of transporting fluid to and from a surgical site
- Easy in use
- Acoustic and visual warning in case of incorrect tubing placement
- Remote control option
- Esthetic and modern design

	H94-001-000
Type	HSS4000
Max. flow rate in the irrigation channel	1,8 l/min (+/-10%)
Max . flow in the suction channel	1,8 l/min (+/-10%)
Max. pressure in the irrigation channel	400 mmHg (+/- 50mmHG)
Suction pressure	-50 kPa to -60 kPa
Weight	8,0 kg
External dimensions	330 x 120 x 306 mm (WxHxD)
Supply voltage	100-240V AC
Power frequency	50/60 Hz
Class of protection	Applied part –BF type
Casing safety standard	IP X1
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%
CE Standard	EN60601-1; EN60601-1-2



Tubing for the irrigation channel

Tubing sets for Hermann Fluid Pumps are designed in the way to make it easy for medical staff to prepare a pump for a surgery. There are different options available:

SINGLE USE TUBING SET

H94-001-050

Installed directly to the pump control unit and to suction-irrigation instrument. Use of single-use tubing sets enforces their change after each surgery.



ECONOMIC-USE TUBINGS, consisting of:

DAY-USE PUMP PART

H94-001-056

installed directly to the pump control unit and a single-use patient part



SINGLE-USE PATIENT PART

H94-001-055

installed directly to a day-use pump part and to a suction-irrigation instrument



MULTI USE TUBING SET

H94-001-060

REMOTE CONTROL

H94-001-200



Universal Fluid Pump

STRENGTHS

- Minimally invasive method of delivering fluid to an operating area
- Precise calibration of the measuring system through LEVEL function
- FLUSH function for an efficient rinsing of an operating area
- Non-volatile memory of recent settings
- Three working modes of the Universal Fluid Pump
- Acoustic and visual signals ensuring correct tubing installation
- Optional control by a remote control
- Big and clear display, an intuitive menu
- Esthetic and modern design

		H94-201-000		
Type	HSS4500	Arthroscopy	Urology	Hysteroscopy
Pressure	10-150 mm Hg	10-150 mm Hg	10-150 mm Hg	10-150 mm Hg
Flow	0,1-2,0 l/min	0,1-2,0 l/min	0,1-2,0 l/min	0,1-2,0 l/min
Weight	7,6 kg			
External dimensions	330 x 120 x 306 mm (WxHxD)			
Supply voltage	100-240V AC			
Power frequency	50/60 Hz			
Class of protection	Applied part –BF type			
Casing safety standard	IP X1			
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%			
CE Standard	EN60601-1; EN60601-1-2			



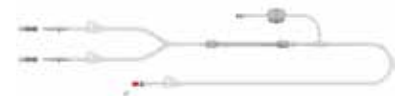
Tubing Sets

Tubing sets for Hermann Fluid Pumps are designed in the way to make it easy for medical staff to prepare a pump for a surgery. There are different options available:

SINGLE USE TUBING SET

H94-001-050

Installed directly to the pump control unit and to suction-irrigation instrument. Use of single-use tubing sets enforces their change after each surgery.



ECONOMIC-USE TUBINGS, consisting of:

DAY-USE PUMP PART

H94-001-056

installed directly to the pump control unit and a single-use patient part



SINGLE-USE PATIENT PART

H94-001-055

installed directly to a day-use pump part and to a suction-irrigation instrument



MULTI USE TUBING SET

H94-001-060

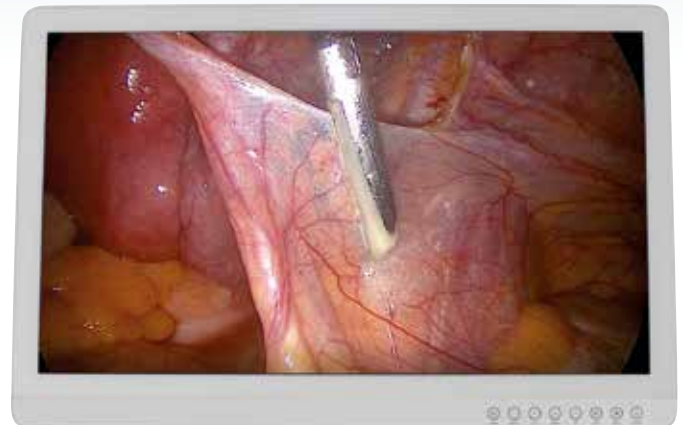
REMOTE CONTROL

H94-201-200

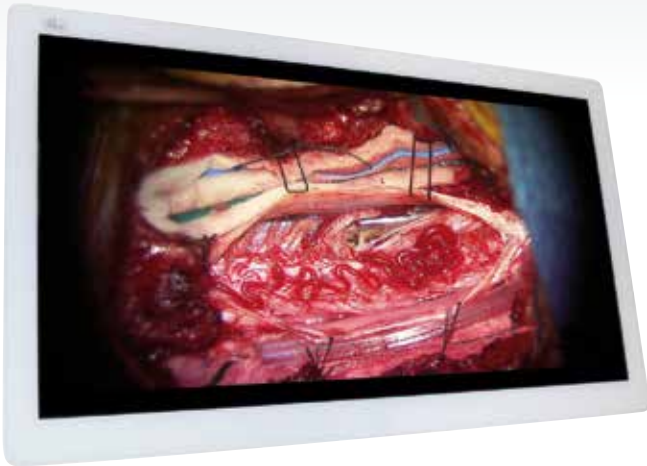


HD Medical Monitors

The High-Definition Hermann-Monitors medical-grade have the latest technology needed to reproduce super-sharp HD images. They are designed for patient safety and clinical reliability, especially for presenting images from surgical endoscopic camera systems or other medical imaging devices. Hermann monitors offer superior color reproduction, and display exact visualization of critical anatomy being captured by the camera. Flush-front glass without interface control is easy to clean and allows for fast procedure turnaround. Hermann monitors come with extensive compatibility as standard. For more details please see the table below.



	H96-500-000	H96-500-050	H96-500-100	H96-500-150
Panel	24" TFT LCD (LED)	26" TFT LCD (LED)	27" TFT LCD (LED)	32" TFT LCD (LED)
Resoluiton	1920 x 1200 pixel	1920 x 1080 pixel	1920 x 1080 pixel	1920 x 1080 pixel
Aspect Ratio	16 : 10	16 : 9	16 : 9	16 : 9
Active Area	518,4(H)mm x 324,0(V)mm	576,0(H)mm x 324,0(V)mm	597,89(H)mm x 336,31(V)mm	698,4(H)mm x 392,9(V)mm
Pixel Pitch (mm)	0,27 x 0,27	0,30 x 0,30	0,3114 x 0,3114	0,36375 x 0,36375
Response Time (typ.)	10 ms (rise time)	10 mx (rise time)	14 mx (gray to gray)	25 ms (gray to gray)
Number of Colors	1,07 Billion	1,07 Billion	1,07 Billion	16,7 Million
Brightness (typical)	400 cd/m ²	500 cd/m ²	800 cd/m ²	450 cd/m ²
Contrast Ratio	1500 : 1 (typical)	1500 : 1	1000 : 1	1300 : 1
Surface Treatment	Anti-glare	Anti-glare	Anti-glare	Anti-glare
Viewing Angle (CR>10)	R/L 178°, U/D 178°	R/L 178°, U/D 178°	R/L 178°, U/D 178°	R/L 178°, U/D 178°
Input Signal	1x DVI-D 1 1x DVI-D 2 (fiber optional) 1x VGA (D-sub) 1x SD/HD/3G-SDI (BNC) 1x C-Video (BNC) 1x S-Video (Y/C) (2x BNC) 1x Component (RGBS, YPbPr) (5x BNC)	1x DVI-D 1 1x DVI-D 2 (fiber optional) 1x VGA (D-sub) 1x SD/HD/3G-SDI (BNC) 1x C-Video (BNC) 1x S-Video (Y/C) (2x BNC) 1x Component (RGBS, YPbPr) (5x BNC)	2x DVI (single link) 1x VGA 1x Component 1x SDI (3G)	2x DVI-D 2x SD/HD/3G-SDI (BNC) 2x SOG 1x VGA (D-sub) 1x C-Video (BNC) 1x S-Video (DIN) 1x Component (RGBS, YPbPr) (5x BNC)
Output Signal	1x DVI-D 1x SD/HD/3G-SDI (BNC)	1x DVI-D 1x SD/HD/3G-SDI (BNC)	1x DVI (single link) 1x SDI (3G)	2x DVI-D 2x SD/HD/3G-SDI (BNC) 2x SOG 1x C-Video (BNC) 1x S-Video (DIN) 1x Component (RGBS, YPbPr) (5x BNC)
Power Supply	AC/DC Adaptor (AC 100~240V, DC 24V 5A)AC/DC Adaptor (AC 100~240V, DC 24V 5A)	AC/DC Adaptor (AC 100~240V, DC 24V 6,6A)AC/DC Adaptor (AC 100~240V, DC 24V 6,6A)	AC/DC Adaptor (AC 100~240V, DC 24V 6,6A)AC/DC Adaptor (AC 100~240V, DC 24V 6,6A)	AC/DC Adaptor (AC 100~240V, DC 24V 6,25A)AC/DC Adaptor (AC 100~240V, DC 24V 6,25A)
Power Consumption	55W max	65W max	100W	75W max
Accessories Included	User manual, AC-DC adaptor, AC power cord, DVI-D cable, BNC cable, Screw BH M4 x 10	User manual, AC-DC adaptor, AC power cord, DVI-D cable, BNC cable, Screw BH M4 x 10	User manual, AC-DC adaptor, AC power cord, DVI-D cable, BNC cable, Screw BH M4 x 14	User manual, AC-DC adaptor, AC power cord, DVI-D cable, BNC cable, Screw BH M4 x 14
Unit Dimension	575 x 392 x 82 mm (WxHxD)	640 x 402 x 78 mm (WxHxD)	673 x 425 x 75 mm (WxHxD)	770 x 472 x 81 mm (WxHxD)
IP Rating	IP33 - overall, IP44 - front side only	IP33 - overall, IP44 - front side only	IP33 - overall	IPX1
IK Rating	IK07 with 5H AR glass	IK07 with 5H AR glass		
Weight	7,42 kg (monitor with cover)	8,44 kg (monitor with cover)	8,73 kg (monitor with cover)	13,18 kg (monitor with cover)



4K UHD Medical Monitors

4K UHD Hermann Monitors show 4 times more pixels compared to a conventional HD monitor. This allows fine details to be seen during minimally invasive procedures such as endoscopy or laparoscopy. Monitors are designed with maximum viewing angles, allowing several persons to view the display from different positions without loss of image quality or distortion. Edge-to-edge front glass protective front glass gives the monitors a slim sleek appearance and allows for easy cleaning of the front surface. A back cable cover is provided with each monitor to organize multiple cords. For more details please see the table below.

	H96-600-100 / H96-600-105	H96-600-115	H96-600-200	H96-600-220
Panel	27" TFT LCD (LED)	27" TFT LCD (LED)	31,5" TFT LCD (LED)	32" TFT LCD (LED)
Resolution	3840 x 2160 pixel	3840 x 2160 pixel	4096 x 2160 pixel	3840 x 2160 pixel
Aspect Ratio	16 : 9	16 : 9	17 : 9	16 : 9
Active Area	596,74 (H)mm x 335,66 (V)mm	596,74 (H)mm x 335,66 (V)mm	697,958 (H)mm x 368,064 (V)mm	708,48 (H)mm x 398,82 (V)mm
Pixel Pitch (mm)	0,1554 x 0,1554	0,1554 x 0,1554	0,1704 x 0,1704	0,1845 x 0,1845
Response Time (typ.)	14 ms (gray to gray)	11ms (rise time)	11ms (rise time)	8ms (rise time)
Number of Colors	1,07 Billion	1,07 Billion	1,07 Billion	1,07 Billion
Brightness (typical)	800 cd/m ²	800 cd/m ²	350 cd/m ²	700 cd/m ²
Contrast Ratio	1000:1	1400:1	1500 : 1	1350 : 1
Surface Treatment	Anti-glare	Anti-glare	Anti-glare	Anti-glare
Viewing Angle (CR>10)	R/L 178°, U/D 178°	R/L 178°, U/D 178°	R/L 178°, U/D 178°	R/L 178°, U/D 178°
Input Signal	1x HDMI 2.0 1x DP 1.2 (SST) 1x DVI (single link) 4x SDI (3G) available only on H96-600-105	1x HDMI 2.0 1x DP 1.2 (MST) 1x DP 1.2 (SST) 1x DVI (single link) 4x SDI (3G), 2x SDI (12G)	1x HDMI 2.0 1x DP 1.2 (MST) 1x DP 1.2 (SST) 1x DVI (single link)	1x HDMI 2.0 1x DP 1.2 (SST) 1x DVI (single link) 4x SDI (3G), 2x SDI (12G)
Output Signal	1x DVI (single link) 1x DP 1.2 (SST) 4x SDI (3G) available only on H96-600-105	1x DP 1.2 (SST) 1x DVI (single link) 4x SDI (3G), 2x SDI (12G)	1x DP 1.2 (SST) 1x DVI (single link)	1x DP 1.2 (SST) 1x DVI (single link) 4x SDI (3G), 2x SDI (12G)
Power Supply	AC/DC Adaptor (AC 100~240V, DC 24V 6,6A)	AC/DC Adaptor (AC 100~240V, DC 24V 6,6A)	AC/DC Adaptor (AC 100~240V, DC 24V 6,6A)	AC/DC Adaptor (AC 100~240V, DC 24V 6,6A)
Power Consumption	90W max H96-600-100 110W max H96-600-105	100W max	90W max	125W max
Accessories Included	User manual, AC-DC adaptor, AC power cord, DP cable, HDMI cable, DVI-D cable, BNC cable (SDI model), Screw BH M4 x 14	User manual, AC-DC adaptor, AC power cord, DP cable, HDMI cable, DVI-D cable, BNC cable Screw BH M4x14	User manual, AC-DC adaptor, AC power cord, DP cable, HDMI cable, DVI-D cable, Screw BH M4 x 14	User manual, AC-DC adaptor, AC power cord, DVI-D cable, BNC cable, Screw BH M4 x 14
Unit Dimension	659 x 426 x 60 mm (WxHxD)	673 x 425 x 75 mm (WxHxD)	762 x 442 x 71 mm (WxHxD)	773 x 478 x 75 mm (WxHxD)
IP Rating	IP 31 overall	IP33- overall	IP33 - overall	IP33 - overall
Weight (monitor)	8,18 kg H96-600-100 8,8kg H96-600-105	9,2 kg	10,45 kg	11,80 kg

Trolley



Trolley Basic / Comfort

H99-000-000

(Chassis only – electricity package has to be chosen and ordered separately)

- 5 shelves (width 45cm)
- 1 drawer
- 4 wheels \varnothing 125mm (front wheels lockable)
- 2 handles
- 1 camera holder
- 1 standard rail 48cm
- cable duct
- POAG – Pin (equipotential pin)

→ Please CHOOSE the electricity package below!

Electricity packages

(only available in conjunction with trolley H99-000-000)

Multiple socket - Schuko

H99-001-000

- 6-fold
- German version with On/Off-switch
- unplug protection
- assembly on back side of the chassis frame



Power Box

H99-002-000

- integrated in back side panel
- central On/Off-switch
- multiple socket 6-fold
- 6x POAG-Pin (equipotential pin)
- mains cable 5m Type E/F
- POAG cable (equipotential cable)



Isolating transformer 2000VA

H99-003-000

- (subcase)
- central On/Off-switch
- power consumption 1120VA
- 5 IEC 320 sockets
- mains cable 3m Type E/F
- POAG cable (equipotential cable)





Bottle holder

H99-000-102

- for O2 bottles á 5 / 10 liters
- max. ø145mm
- holding bow and tension strap
- mounted on carrier section

**please state in your order on which side (right/left)
it should be pre-assembled**



Monitor holding arm

H99-000-111

- double joint
- Integrated cable duct
- range of outreach 2 x 150mm
- load max. 12kg

**please state in your order on which side (right/left)
it should be pre-assembled**

Cable set - power cable extension

H99-003-100

- 2x cable 1 meter
- 2x cable 2 meters
- 2x cable 3 meters

to be used only with isolating transformer H99-003-000

**Order Number
Index**

<i>art.-no.</i>	<i>page</i>	<i>art.-no.</i>	<i>page</i>	<i>art.-no.</i>	<i>page</i>
H82-020-000	13	H84-027-030	13	H90-300-001E	5
H82-020-030	13	H84-027-070	13	H90-300-002	5
H82-027-000	13	H84-040-000	13	H90-300-003	5
H82-027-030	13	H84-040-030	13	H90-500-180	4
H82-027-070	13	H84-040-070	13	H90-500-250	4
H82-187-000	13	H84-127-000	13	H90-500-300	4
H82-187-030	13	H84-127-030	13	H90-500-302	4
H82-187-070	13	H84-127-070	13	H91-100-001	12
H82-430-000	13	H84-227-000	13	H91-100-002	12
H82-430-012	13	H84-227-030	13	H91-100-003	12
H82-430-030	13	H84-227-070	13	H91-100-010	12
H82-430-070	13	H85-027-000	13	H91-100-020	12
H83-030-100	13	H85-027-012	13	H91-100-030	12
H83-030-130	13	H85-027-030	13	H91-100-050	12
H83-050-000	13	H85-027-070	13	H91-180-035	12
H83-050-000	13	H85-040-000	13	H91-180-045	12
H83-050-030	13	H85-040-012	13	H91-180-135	12
H83-050-045	13	H85-040-030	13	H91-180-145	12
H83-050-070	13	H85-040-070	13	H91-230-035	12
H83-100-000	13	H90-180-001	5	H91-230-045	12
H83-100-030	13	H90-180-001E	5	H91-230-135	12
H84-027-000	13	H90-300-001	5	H91-230-145	12

<i>art.-no.</i>	<i>page</i>	<i>art.-no.</i>	<i>page</i>	<i>art.-no.</i>	<i>page</i>	<i>art.-no.</i>	<i>page</i>
H91-300-035	12	H95-030-230	15	H97-250-001	11	H98-350-003	20/21
H91-300-045	12	H95-030-231	15	H97-250-002	11	H98-912-002	23
H91-300-135	12	H95-043-230	15	H97-250-003	11	H98-912-010	22
H91-300-145	12	H95-043-231	15	H97-250-100	11	H98-912-021	22
H94-001-000	24	H96-500-000	26	H97-250-101	11	H98-912-030	22
H94-001-050	24/25	H96-500-050	26	H97-250-300	11	H98-913-001	23
H94-001-055	24/25	H96-500-100	26	H97-250-301	11	H99-000-000	28
H94-001-056	24/25	H95-500-150	26	H97-250-400	11	H99-000-102	29
H94-001-060	24/25	H96-600-100	27	H97-250-501	11	H99-000-111	29
H94-001-200	24	H96-600-105	27	H97-250-502	11	H99-001-000	28
H94-201-000	25	H96-600-115	27	H97-250-503	11	H99-002-000	28
H94-201-200	25	H96-600-200	27	H97-250-601	11	H99-003-000	28
H95-000-050	14	H96-600-220	27	H97-250-602	11	H99-003-100	29
H95-000-100	14	H97-200-001	6	H97-250-603	11		
H95-000-250	14	H97-200-001-K	11	H97-250-604	11		
H95-000-500	14	H97-200-001-P	11	H97-250-605	11		
H95-000-600	14	H97-202-001	8	H97-300-003	10		
H95-000-601	14	H97-202-003	9	H97-300-103	10		
H95-015-230	15	H97-202-101	8	H98-120-000	16		
H95-015-231	15	H97-202-103	9	H98-300-000	17		
H95-020-230	15	H97-202-501	7	H98-350-001	19		
H95-020-231	15	H97-250-000	11	H98-350-002	18		



Hermann Medizintechnik GmbH
Württembergische Straße 26
D-78567 Fridingen/Tuttlingen
GERMANY
Tel. ++49 - 74 63 / 99 67-0
Fax ++49 - 74 63 / 99 67-50
info@hermann-medizintechnik.de
www.hermann-medizintechnik.de
