



LAPAROSCOPY

AESCULAP® Endoscopy Units and Accessories

AESCULAP® ENDOSCOPY UNITS



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AESCULAP® 2D CAMERA PLATFORM



- CMOS chip technology produces true to life images.
- 4k image visualization in combination with 2D 4K monitor.
- Three different 2D camera heads allow a wide range of applications.
- Optical parfocal zoom lens with 2x magnification for detail magnification.
- Multiple camera functions can be activated via the remote control buttons on the camera head.
- Special modes support the camera settings for the respective indication.
- Progressive scan technology provides a delay-free monitor image.
- The 16:9 aspect ratio expands the field of view and allows earlier recognition of instruments.

- Camera head design supports fatigue-free operation.
- Integrated bus system controls activation / standby function of the LED light source from the sterile area.
- Easy to use locking mechanism for fixing the endoscope in the desired position.









2D camera platform

PV481
2D CMOS pendulum camera head

PV482 2D CMOS zoom camera head

Accessories PV480 (inclusive)

See page 49

PV485 2D 3CMOS zoom camera head

Image sensor	1 x 1/3" CMOS
Sensor resolution	Native Full HD
	(1920 x 1080 pixel)
Scan mode	Progressive Scan
	(1080p 50/60 signal)
On-screen Display	Yes
Integrated algorithms	Red Enhancement, Smoke
	Reduction, Image Noise
	Reduction, De-Vignetting,
	Dynamic Contrast, Automatic
	Brightness Adjustment
Video signal output	2 x 3G HD-SDI (1080p)
	2 x DVI-D (1080p)
	1 x HD-SDI (1080i)
Remote control buttons	4
Remote control functions	8 (7 are freely selectable)
Focal length	14 mm (PV481)
	14 to 28 mm (PV482, PV485)
Optical zoom	2.0 x
Digital zoom	1.8 x
Shutter speed	1/60 to 1/60.000 s
Length of camera cable	approx. 3.5 m
Weight camera platform	approx. 7 kg
Dimension camera platform	(w x h x d)
	330 x 101 x 353 mm

Weight camera head	(without cable)
PV481	280 g
PV482	294 g
PV485	380 g
Dimension camera head	(w x h x d)
PV481	50 x 38 x 171 mm
PV482	43 x 43 x 188 mm
PV485	46 x 47 x 188 mm
Maximum power	60 W
consumption CCU	
Applied part Type	CF defibrillation safe
Classification acc. to	T
93/42/EEC	

DVI-D cable	Length 3.0 m (1x)
MIS bus-cable	Length 0.75 m (1x)
Accessories (to be ordered separately)	
See page 49	Power cable

Potential equalization cable

AESCULAP® 2D & 3D CAMERA PLATFORM







red<mark>dot</mark> design award winner 2017

- Spatial, three-dimensional vision in combination with a future-oriented sterile supply concept for all laparoscopic indications in the fields of general surgery, gynecology, urology and cardiothoracic surgery.
- Permanent prevention of endoscope fogging due to integrated heating elements in the endoscope tip.
- Consistently high image quality due to unique sterile supply concept.
- 4K image visualization in combination with 3D 4K monitor.
- Permanent availability of 3D camera heads in the OR.
- Focus-free image.
- Camera platform design enables the adaptation of 2D or 3D camera heads.

- All-in-one 3D camera head design with 0° or 30° viewing angle.
- Box-shaped camera head design enables a proper orientation for the viewing position.

General advantages of 3D Technology:

- Simplified intracorporeal suturing.
- Targeted grasping, exact positioning of needles and precise cutting of finest tissue structures.
- Spatial vision enables good hand-eye coordination.
- Shorter learning curve for physicians in training.



PV630 2D & 3D camera platform *EinsteinVision*®



PV631 3D EV3.0 camera head 0°



PV632 3D EV3.0 camera head 30°

Image sensor	2 x 1/3" CMOS
Sensor resolution	Native Full HD
	(1920 x 1080 pixel)
Scan mode	Progressive Scan
On-screen Display	Yes
Integrated algorithms	Red Enhancement, Smoke
	Reduction, Image Noise
	Reduction, De-Vignetting,
	Dynamic Contrast, Automatic
	Brightness Adjustment
Video signal output	2 x 3D via 3G HD-SDI (1080p)
	2 x 3D via DVI-D (1080p)
	2 x 2D via DVI-D (1080p)
	1 x 2D via HD-SDI (1080i)
Remote control buttons	4
Remote control functions	8 (7 are freely selectable)
Focal length	4.6 mm
Depth of field	approx. 20 – 200 mm
Aperture angle at endoscope	72°
tip	
Endoscope working length (shaft)	approx. 315 mm
Endoscope outer shaft	9.3 mm (10.0 mm including
diameter	sterile camera drape)
Light cable integrated in	Yes
camera cable	
Digital zoom	1.8 x

Endoscope tip with anti- fogging function	Integrated electronically controlled heating element
Image rotation	180°
Sterile handling	via single use sterile camera drape
Cable length	approx. 4.1 m
Weight camera platform	approx. 10.2 kg
Dimension camera platform (w x h x d)	330 x 146 x 353 mm
Maximum power consumption CCU	120 W
Applied part Type	CF defibrillation safe
Classification acc. to	I (camera platform)
93/42/EEC	lla (camera heads)

Accessories PV630 (inclusive)	
BNC cable (red)	Length 3.0 m (1x)
BNC cable (green)	Length 3.0 m (1x)
MIS bus cable	Length 0.75 m (1x)

Accessories (to be ordered separately)	
See page 49	Power cable
See page 49	Potential equalization cable

2D/3D CAMERA ACCESSORIES

CONNECTING CABLE AND ACCESSORIES

	ltem number	Description
	PV436	DVI-D connecting cable, 2 m
	PV437	DVI-D connecting cable, 3 m
	PV427	SDI/BNC connecting cable, 1 m
4	TA014803	BNC-cable (red), 3 m
	TA014804	BNC-cable (green), 3 m
	OP942	MIS-Bus cable, 0.75 m
	PV968	Remote control cable, 2 m, 3.5 mm / 3.5 mm stereo jack plug (for PV480, PV630, PV640)

	Item number	Description
	JG904	Single use sterile camera drape, ring type, pack of 25
	JG910	Single use sterile anti-fog solution, pack of 10
	PV641SU	Single use sterile cover for 0° camera head, pack of 10
	PV642SU	Single use sterile cover for 30° camera head, pack of 10
60	PV621	3D polarization glasses, pack of 15
600	PV622	3D Anti-fog polarization glasses, pack of 5
A L	PV623	3D polarization glasses clip
	PV624	3D eye shield polarization glasses kit (1 reusable shield frame and 3 single use 3D eye shields)

AESCULAP® LED LIGHT SOURCE



- LED lamp module has an average lifetime of approx. 30,000 working hours. In comparison to a Xenon light source this means significant cost savings (average lifetime of xenon lamp between 500 and 700 working hours).
- LED technology provides bright light intensity and a lifelike color rendering.
- Built-in light cable measuring device for testing the light transmission of the light cable. This facilitates on-site information about optical quality of light cable.
- Universal light cable adaptor for light cable adaptation of different manufacturers (such as Olympus, Storz, Richard Wolf and others).
- Built-in anti-glare protection (if light cable is not connected to light source).
- Automatic light output control for minimum light exposure in cavity (reducing risk of thermal damage).
- Light intensity can be continuously adjusted via a rotary knob.
- BUS interface allows activation (light source on /standby) via connected 2D/3D Aesculap camera head.



OP950

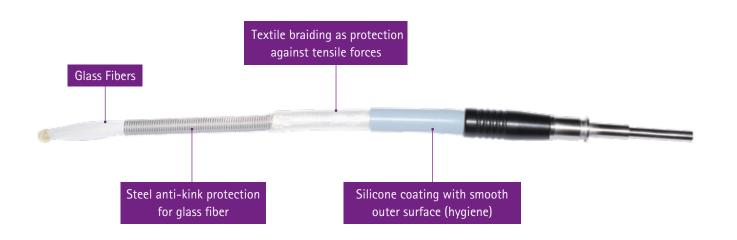
LEB		
	₋ight Sou	rce
	ignt Jou	100

System	LED module
Color temperature	5,665 K (±6.3 %)
Light flux of LED module	2,510 lumen (±5,665 %)
Universal light cable connector	Aesculap/Storz/Olympus/Richard Wolf/etc.
Integrated replacement bulbs	No
Light intensity adjustment	Continuously
Automatic light control	Yes
Light output measuring device	Integrated
Maximum power consumption	240 W
Dimensions (w x h x d)	330 x 146 x 362 mm
Weight	8.5 kg
Applied part Type	CF defibrillation safe
Classification acc. to 93/42/EEC	ı

Accessories (to be ordered separately)	
See page 49	Power cable
See page 49	Potential equalization cable
OP941	Light cable adapter (for measuring light trans- mission of light cables under sterile or non-sterile conditions)
OP942	MIS-Bus cable, 0.75 m

AESCULAP® LIGHT CABLES AND ACCESSORIES





Light cable, autoclavable, Ø 4.8 mm		
	OP923	4K / Full HD fiber optic light cable 250 cm length
	OP906	Fiber Optic Light Cable 180 cm length
	OP913	Fiber Optic Light Cable 250 cm length
	OP914	Fiber Optic Light Cable 350 cm length
AISCULAP Opticion tops A	OP917	Light cable tester (battery operated, 9V) For testing light transmission output of light cables with Aesculap connector (e. g. Storz, Olympus)
# B		

Light cable adapter for light source of other manufacturer:		
	TE683R	Olympus
	TE688R	Olympus-Xenon
	TE684R	Wolf
Light cable adapter for endoscopes of other manufacturer:		
Light Cable adapter for endoscopes of other mandracturer.		
	TE687R	Wolf

AESCULAP® EDDY 3D DOCUMENTATION SYSTEM



- Recording of 2D/3D still images and video sequences in Full HD resolution (1920 x 1080 pixel)
- Post-op data saving to DVD/CD ROM, USB, hard disk or network
- Optional intraoperative data storage to DVD
- Video recording available with pre-recording function
- Networkable (also via WLAN)
- Double layer DVD drive with an 8.5 GB max. storage capacity
- Security backup (recorded data always stored on internal hard disc regardless of whether other storage media are connected or not)
- Integration into almost any existing endoscopy tower
- Easy documentation via camera head, USB mouse, USB keyboard or touch screen monitor
- DICOM 3.0 compatibility (integration with DICOM configuration wizard)
- Search function for displaying existing patient data

- Multiple patient selection to copy data and print images
- Software wizard helps to remove recorded data from internal hard drive
- Eddy image viewing software (compatible with Windows and Apple OS)
- Printable OR report (local color printer/network printer)
- PDF export of OR report
- Encryption of patient data (transport mode)



PV640	2D/3D documentation system "l	Eddy 3D"
Image and video documentation	2D or 3D	Others
Image resolution		
2D/3D still images	1920 x 1080 pixel (native)	
2D/3D video sequences	1920 x 1080 pixel (native)	
Data storage	Internal hard disk, CD/DVD, USB, LAN or PACS server	
Internal hard disk capacity	1TB	Opera
Double Layer Drive	Yes	
DVD System	DVD-R/-RW; DVD+R/+RW; DVD-RAM; DVD-RDL/+RDL	Maxin
Patient data transfer from	DICOM 3.0 (worklist)	Dimer
PACS server		Weigh
Patient data transfer from KIS	HL7	Stand
System		EN 60
2D format for still images	JPEG, Bitmap, PNG	Classi
2D format for videos	MPEG-2 and MPEG-4	93/42
	(AVC/H.264)	
3D format for still images	MPO, PNS	Includ
3D format for videos	MVC format	PV640
Recording format of 2D/3D	16:9	PV640
video data		PV640
Video with pre-recording	Yes	PV640
function		PV640
Signal format for 2D and 3D	1080p 50/60	PV640
recording	-	PV968
Hard disk delete wizard	Yes	1 7 3 0 0
Video inputs	2 x 3G-SDI (3D camera system)	
	1 x 3G-SDI (2D camera system)	Acces
	1 x HD-SDI	PV643
	1 x 3G-SDI (2D monitor)	See pa
Video output	1 x Display port (3D monitor)	See pa
	1 x DVI-D (2D operating	
	monitor)	

Others	2 x USB 3.0 (front side)
	4 x USB 3.0 (back side)
	4 x USB 2.0 (back side)
	1 x potential equalization
	1 x RJ 45 (Ethernet)
	2 x remote (3.5 mm mono jack
	for 2D and 3D)
Operating system	Windows 8.1 Embedded
	Industry Pro (64bit)
Maximum power consumption	Maximum power consumption
	180 VA
Dimensions (w x h x d)	330 x 146 x 353 mm
Weight	8.1 kg
Standard conformity acc. to	CF defibrillation safe
EN 60601-1	
Classification acc. to	1
93/42/EEC	

Included access	ories
PV640240	1 x USB mouse
PV640241	2 x SDI cable (1 m)
PV640242	4 x SDI adapter cable
PV640243	1 x Displayport – DVI cable (3 m)
PV640244	1 x WLAN dongle
PV640245	1 x Ethernet connector
PV968	1 x Remote control cable (2 m)

Accessories (to be ordered separately)		
PV643	DICOM 3.0 USB Upgrade Set	
See page 49	Power cable	
See page 49	Potential equalization cable	

AESCULAP® DIGITAL COLOR PRINTER

- Medically approved A4 high-end printer
- Printing of still images and OR reports
- Photorealistic print quality
- Can be connected to any existing endoscopy recording device via USB (e.g. Eddy 3D)
- Laminating technology coats each print for long term storage
- Printing in A4 format



PV986

Digital A4 color printer

Interface	USB 2.0
Printing method	Color sublimation thermal printing
Print size A4	287 mm x 202 mm
Effective print pixels A4	3400 x 2392
Color gradation	> 16.7 million colors
Resolution	301 dpi
Printing time	approx. 76 sec.
Maximum power consumption	320 VA
Dimensions (w x h x d)	317 x 207 x 425 mm
Weight	11.5 kg
Classification acc. to 93/42/EEC	1

Accessories (included)	
1 x	USB cable
1 x	Cleaning ribbon
2 x	Paper holder
1 x	CD (with printer driver)

Accessories (to be ordered separately)	
PV987	2 x paper roll for 50 prints each and 2 x ink ribbon
See page 49	Power cables

AESCULAP® HIGH RESOLUTION ENDOSCOPES



- Made from rust-proof stainless steel for problem-free reprocessing
- Fully autoclavable at 134°C
- The external tube is made from a high-strength special alloy which enables a high bending strength
- High-quality fiber optics for luminous illumination
- In-house manufactured glass prisms and lenses for natural color rendition, high contrast and sharpeness
- Service-friendly endoscope design

Discipline	Item no.	Description	Storz*	Diameter	Working	Viewing
			connection		length	angle
Arthroscopy/ENT	PE182A	Arthroscope		2.7 mm	11 cm	0°
	PE202A	Arthroscope		2.7 mm	11 cm	30°
	PE185A	Arthroscope	Yes	2.7 mm	19 cm	0°
	PE484A	Arthroscope, short		4.0 mm	14 cm	0°
	PE514A	Arthroscope, short		4.0 mm	14 cm	30°
	PE485A	Arthroscope	Yes	4.0 mm	18 cm	0°
	PE505A	Arthroscope	Yes	4.0 mm	18 cm	30°
	PE525A	Arthroscope	Yes	4.0 mm	18 cm	70°
Urology/Gynecology	PE218A	Hysteroscope	Yes	2.9 mm	30 cm	30°
	PE522A	Cystoscope	Yes	4.0 mm	30 cm	0°
	PE528A	Cystoscope/Hysteroscope	Yes	4.0 mm	30 cm	12°
	PE508A	Cystoscope/Hysteroscope	Yes	4.0 mm	30 cm	30°
	PE530A	Hysteroscope	Yes	4.0 mm	30 cm	70°
Laparoscopy	PE590A	Laparoscope		5.0 mm	31 cm	0°
	PE610A	Laparoscope		5.0 mm	31 cm	30°
	PE889A	Laparoscope		10.0 mm	33 cm	0°
	PE909A	Laparoscope		10.0 mm	33 cm	30°
	PE969A	Laparoscope		10.0 mm	33 cm	45°
	PE898A	Operating Laparoscope		10.0 mm	28 cm	0°
Neurosurgery	PE184A	MINOP Trend Neuroscope		2.7 mm	18 cm	
	PE204A	MINOP Trend Neuroscope		2.7 mm	18 cm	30°
	PE206A	MINOP Trend Neuroscope		2.7 mm	18 cm	70°
	PE487A	MINOP Trend Neuroscope		4.0 mm	19.5 cm	0°
	PE507A	MINOP Trend Neuroscope		4.0 mm	19.5 cm	30°
	PE486A	Neuroscope		4.0 mm	16 cm	0°
	PE506A	Neuroscope		4.0 mm	16 cm	30°
	PE526A	Neuroscope		4.0 mm	16 cm	70°

AESCULAP® SCOPE TRAYS



- Silicone shock absorbers help to protect the endoscopes from glass breakage
- Quick lock system for easy opening and closing
- Large perforations for great washing results
- High stability at low weight
- Made from rust-proof stainless steel
- Smooth surface

Item number	Description
JF431R	Scope tray for one endoscope with shaft length < 340 mm dimensions: 454 x 84 x 41 mm
JF432R	Scope tray for two endoscopes with shaft length < 340 mm dimensions: 454 x 104 x 41 mm
JF433R	Scope tray for 2 endoscopes with shaft length < 340 mm with additional silicone shock absorber dimensions: 454 x 104 x 41 mm
JF434R	Scope tray for hysteroscope with shaft diameter < 4.0 mm dimensions: 454 x 104 x 41 mm
JF436R	Scope tray for one endoscope with shaft diameter 2.7 – 4.0 mm / shaft length 140 – 200 mm dimensions: 273 x 84 x 41 mm



For more information please see in out brochure C26502 Optic Containers

AESCULAP® 2D AND 3D MONITORS





potential equalization cable



		Replaced by PV648	Availability expected in 3 rd quarter 2	
	PV644	PV646	PV648	
	31" 4K UHD 3D monitor	32" Full HD 3D monitor	32" Full HD 3D monitor	
Medically approved monitor	Х	X	X	
Panel quality/ - type	TFT LCD (IPS)	LCD (IPS)	LCD (IPS)	
Viewable diagonal (inches)	31	32	32	
LED backlight	x	х	Х	
Anti-reflective panel	x	x	X	
Max. brightness (cd/m²)	435	400	650	
Monitor resolution (H x V)	4096 x 2160	1920 x 1080	1920 x 1080	
Viewing angle (horizontal /vertical)	178°	178°	178°	
Contrast ratio	1450:1	1200:1	1400:1	
Aspect ratio	17:9	16:9	16:9	
Video signal input	5x BNC (3G/HD/SD-SDI);	2x 3G-SDI; 1x S-Video;	2x 3G-SDI; 1x S-Video;	
- '	1x HDMI; 1x DVI-D	1x Video; 2x DVI; 1x RGB	1x Video; 2x DVI; 1x RGB	
Video signal output	5x BNC (3G/HD/SD-SDI);	2x 3G-SDI; 1x DVI; 1x S-	2x 3G-SDI; 1x DVI; 1x S-	
,	1x DVI-D	Video; 1x Video; 1x RGB	Video; 1x Video; 1x RGB	
4K upscaler	X			
2D/3D switching button	X	X	X	
Wider Color Gamut	X			
(complies with BT. 2020)				
Picture-in-Picture function (PiP)	X	X	X	
Picture-out-Picture function (PoP)	X	X	X	
Power-Save mode	X	X	X	
Multlingual user menu	X	X	X	
Key lock (on/off)	X	X	X	
VESA mounting (mm)	100 x 100, 100 x 200	200 x 200	100 x 100, 200 x 200	
Max. power consumption (W)	180	88	97	
Dimensions in mm (w x h x d)	754 x 456 x 69	776 x 473 x 114	760 x 463 x 96	
Weight (kg)	11.8	14.3	10.2	
Dim. ext. power supply in mm (wxhxd)		64 x 37 x 160	64 x 37 x 160	
Weight external power supply (kg)	1.38	0.7	0.7	
Classification acc. to directive 93/42/EEC	1		- (
Accessories (inclusive)				
	DVI to HDMI cable	3D anti-fog glasses (3 pcs.)	3D anti-fog glasses (3 pcs.)	
	USB cable; 3D eye shield kit	Cable connection cover	Cable connection cover	
	External power supply 24V	External power supply 24V	External power supply 24V	
Accessories (to be ordered separately)				
	PV647 Monitor stand PV646203 Monitor protecting cover See page 49 power cable and potential equalization cable	PV647 Monitor stand PV837 Adapter VESA200 PV646203 Monitor protecting cover See page 49 power cable and	PV647 Monitor stand PV646203 Monitor protection cover See page 49 power cable an potential equalization cable	







PV628	PV638	PV904
31" 4K UHD 2D monitor	27" Full HD 2D monitor	21.5" Full HD 2D Touch monitor
Х	Х	Х
LCD (IPS)	TFT (IPS)	TFT LCD (IPS) Touch
31	27	21
X	x	X
X	X	X
350	900	250
3840 x 2160	1920 x 1080	1920 x 1080
178°	178°	178°
1500:1	1000:1	1000:1
16:9	16:9	16:9
4x BNC (3G-SDI); 1x Display-	1x Fiber Optic; 1x DVI-I;	HDMI
Port; 2x DVI-D (with HDCP)	1x DVI-D; 2x 3G SDI; 1x VGA	Display Port
4x BNC (3G-SDI)	1x DVI-I; 1x DVI-D;	_
1x DVI-D	2x 3G SDI	
х		
х		
	x	
X		
x	x	
X	x	X
	X	
100 x 100, 200 x 200	100 x 100	100 x 100
146	70	48
760 x 444 x 87	678 x 445 x 84	537 x 329 x 59
11.2	8.9	5.5
89 x 37 x 218	64 x 46 x 209	60 x 34 x 133
1.0	0.7	0.4
1	1	1
External power supply 48V	External power supply 24V	DVI to HDMI cable USB cable
		External power supply 24V
DVC47 Manitor stand	DVC 17 Manitor stand	PV908 Monitor stand
PV647 Monitor stand PV646203 Monitor protecting	PV647 Monitor stand PV638203 Monitor protecting	See page 49 power cable and
cover	cover	potential equalization cable
See page 49 power cable and	See page 49 power cable and	p
potential equalization cable	potential equalization cable	

AESCULAP® FLOW50 INSUFFLATOR



- Various indication modes: Visceral surgery, bariatric surgery, pediatrics, endoscopically assisted cardiac surgery and endoscopic vein removal
- With integrated gas heating
- Exchangeable smoke evacuation filter cassette
- Pediatric indication flow increments (0.1 I until 20 I)
- Automatic overpressure gas release
- Pressure preselection in mmHg
- Pre-settable flowrate
- Universal US gas connector for bottle and central gas supply
- Display of gas consumption in liter
- Gas supply monitoring by symbols and acoustic signal
- Information line for error reporting in the menu display



PG150

Flow 50 - Insufflator with smoke evacuation

Gas type	Medical CO ₂
Max gas flow	50 l/min.
Set pressure	1 - 30 mmHg
Max. suction rate	6 I/min or 12 I/min
Smoke evacuation	Activation via footswitch, timer 1 – 30 min or unlimited
Indications	Standard, Bariatric, Pediatric, Cardio
Supports gas heating	Yes
User interface	17 languages
Central information display	Touch screen
Inlet pressure range	2.7 - 80 bar
Gas supply monitoring	5 levels
Dimensions (w x h x d)	330 x 200 x 400 mm
Weight	12 kg
Max. power consumption	120 VA
Applied part Type	CF
Classification acc. to 93/42/EEC	lla

Accessories (to be ordered separately)	
See page 49	Power cable
See page 49	Potential equalization cable

AESCULAP® FLOW50 INSUFFLATOR

ACCESSORIES (TO BE ORDERED SEPARATELY)

Item number	Description
PG003	VERESS insufflation needle, length 100 mm, Ø 2.1 mm
PG008	VERESS insufflation needle, length 120 mm, Ø 2.1 mm
PG011	VERESS insufflation needle, length 150 mm, Ø 2.1 mm
EJ995	Single use VERESS insufflation needle, length 120 mm, pack of 20
EJ996	Single use VERESS insufflation needle, length 150 mm, pack of 20
PG056	Hose for CO ₂ gas bottle supply DIN/US 1.5 m
PG057	Hose for CO ₂ gas bottle supply ISO/US 1.5 m
PG058	Hose for CO ₂ gas bottle supply PIN/US 1.5 m
PG061	Hose for CO ₂ central gas supply DIN/US 3.0 m
PG090	Angled CO ₂ gas connector for FLOW50 Insufflator
PG091	Hose for CO ₂ central gas supply DIN/US 5.0 m
PG092	Hose for CO ₂ central gas supply NF/US 5.0 m
PG093	Hose for CO ₂ central gas supply UNI/US 5.0 m
PG094	Hose for CO ₂ central gas supply AGA/US 5.0 m

	Item number	Description
	PG065	Hose for CO ₂ central gas supply DISS/DISS 3.0 m
	PG066	DISS Adapter for central gas supply
	PG067	NIST Adapter for central gas supply
	PG012	Single use tube set incl. CO_2 Filter, sterile length 3 m, pack of 10
	PG014	Tube set for insufflation, length 3 m
	PG014200	ISO connector for PG014, 22 mm
	PG019	Single use CO ₂ Filter, pack of 25
410 010	PG068	Switch valve for gas bottles
	PG082	Insufflation tube with gas warming, 3 m
	PG097	Heating tube set for insufflation length, 3 m (100 x autoclavable)
	PG096SU	Single use heating tube set for insufflation length, 3 m, pack of 10
	PG106	Smoke evacuation filter cassette, pack of 30
	PG107SU	Single use tube set for smoke evacuation, length 3 m, pack of 10

AESCULAP® MULTI FLOW



Multi-functional

- Four indications covered by one device
- Individual irrigation and suction performance

Comfortable

- Transponder technology
- Intelligent irrigation bag monitoring system
- Hygienic disposable tube sets

Very easy to operate

- Large colour display
- Touch-screen operated
- Comprehensive tube portfolio
- Single hand tube fitting





PG130	Multi Flow Pump (irrigation pump)	PG145	Multi Flow Pump Plus (irrigation and suction pump)
	Max. flow rate/pressure		
	Laparoscopy	3.5 l/min	
-	Arthroscopy	2.5 l/min / 15-200 n	nmHg
-	Hysteroscopy	0.5 l/min / 15-150 n	nmHg
-	Urology	0.5 l/min / 15-90 m	mHg
-	Negative suction pressure	700 mbar vacuum į	pump (PG145 only)
-	Max. suction rate	4.0 I/min	
-	Dimensions (w x h x d)	305 x 183 x 305 m	m
-	Weight	8.2 kg	
-	Max. Power Consumption	90 VA	
-	Protection level	Typ BF acc. to EN 6	0601-1
-	Classifiction acc. to directive 93/42/EWG	II b	

Accessories (to	be ordered separately)	
See page 49		Power cable
See page 49		Potential equalization cable

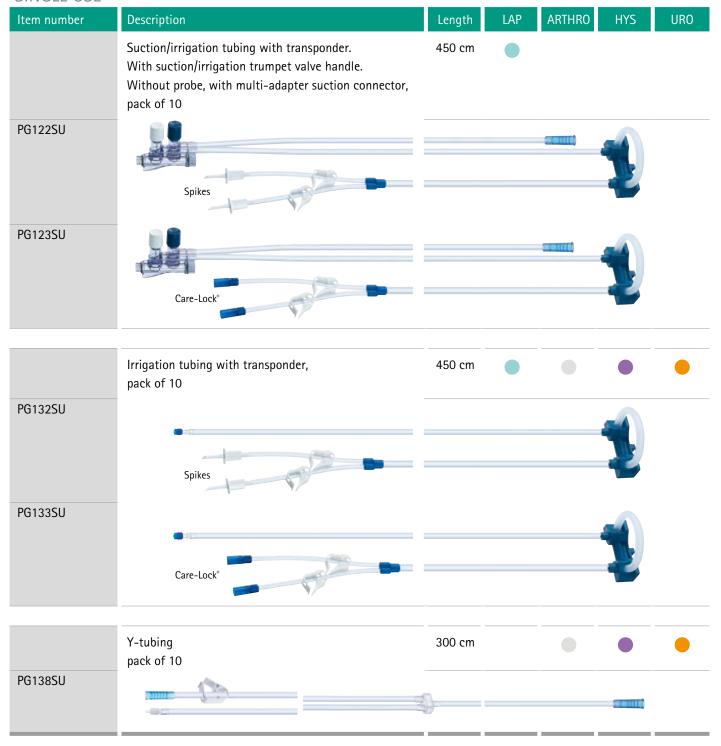
	Item no.	Description	LAP	ARTHRO	HYS	URO
	PG140	LAP Transponder*				
	PG141	ARTHRO Transponder*				
AESCULAP*	PG142	HYS Transponder*		- <u></u> .		
Package with one piece	PG143	URO Transponder*				

^{*} Every transponder is supplied with three PG132SU tubes

	Item no.	Description	LAP	ARTHRO	HYS	URO
	PG124	Foot control "WASH"				
MARKATAN MARKATAN	PG125	Wireless remote control				
	PG126SU	Single use cover for remote control, pack of 10				
	PG144	Difference-in-volume scale, max. load: 7 kg				

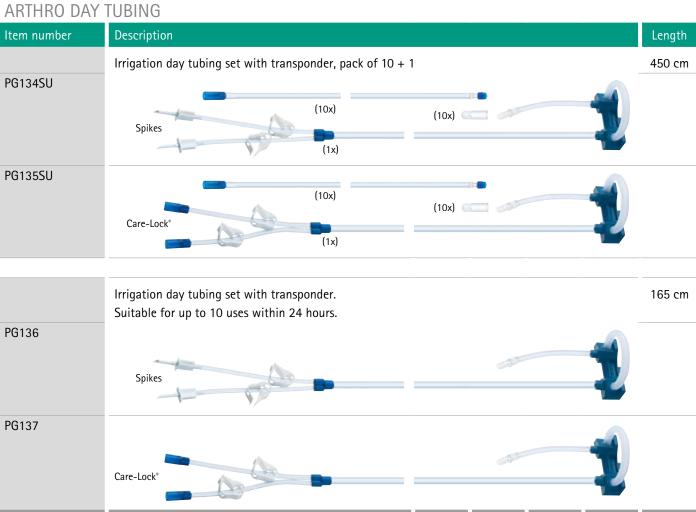
AESCULAP® MULTI FLOW TUBE SETS

SINGLE USE



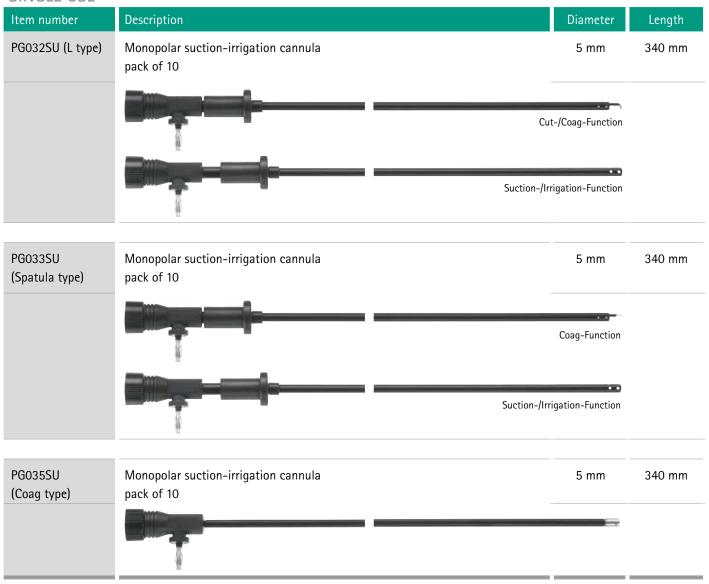
RFIISARIF

Item number	Description	Length	LAP	ARTHRO	HYS	URO
	Irrigation tubing with transponder pack of 1	450 cm				
PG131	Spikes				C	
	Vacuum suction tube, with hydrophobic filter, with multi-adapter suction connector, for PG145 only, pack of 10	200 cm				
PG139						



AESCULAP® MULTI FLOW CANNULAS

SINGLE USE



SINGLE USE

Item number	Description	Diameter	Length
PG042SU	Suction-irrigation cannula, pack of 10	5 mm	330 mm
PG043SU	Suction-irrigation cannula, pack of 10	5 mm	450 mm
		3	

REUSABLE

Item number	Description	Diameter	Length
PG041R	Suction-irrigation cannula	3.5 mm	310 mm
		::	
PG038R	Suction-irrigation cannula	5 mm	330 mm
		?3	
PG039R	Suction-irrigation cannula	10 mm	330 mm
		,,,,	

AESCULAP® Caiman®



Advanced Bipolar Seal and Cut Technology

Caiman® is intended to be used as a multipurpose vessel sealing instrument in laparoscopic and open surgery within the surgical fields of general surgery, gynecology, urology and thoracic surgery.



GN200

High frequency surgical device

Mains voltage ranges (Current intake)	100V~-240 V~ (6.7 A-2.8 A)
Frequency	50–60 Hz
Protection class (acc. to IEC / DIN EN 60601-1)	I
Foot switch circuit	ignition-safe acc. to IEC/DIN EN 60601, approved for use in "medical environment"
Output power	2 x 150 W on 50 Ohm
Device protection	T8 AH/250 V
Time-Current characteristic	T (Time lag)
Breaking capacity	H (1 500 A)
Construction	5 mm x 20 mm
HF operating frequency	460 kHz ± 1 %, Quasi-Sinus
Operating mode	Int 10 s/30 s
Weight	8.1 kg
Dimensions (w x h x d)	355 x 100 x 400 mm
Application part type acc. to IEC/DIN 60601-1	CF
Recovery time of the defibrillation- protected output	0 seconds
CISPR11	Class A
EMC	IEC/DIN EN 60601-1-2
Conforming to standard	IEC/DIN EN 60601-1
	IEC/DIN EN 60601-2-2
Classification acc. to Directive 93/42/EEC	Ilb



Accessories (to be ordered separately)	
See page 49	Power cable
See page 49	Potential equalization cable
GN330	Unit cart with sliding handle for electrosurgical units, w x h x d: 520 x 900 x 570 mm
PV951R	Wire basket w x h x d: 370 x 225 x 285 mm
GN201	Single pedal foot switch for GN200

AESCULAP® Caiman®



ADVANCED BIPOLAR AND CUT TECHNOLOGY

■ One seal confidence

State of the art vessel sealing with only one energy activation

■ Uniform tissue compression

Leads to consistent sealing quality from distal to proximal tip

■ Tip first closure

Retains tissues within the jaws for improved compression

Tissue Dissection

Fine curved Maryland jaw design allows increased dissection performance and enhanced tip visualization

■ Long jaw tip

Enlarged vessel sealing length and improved surgical efficiency

■ 80 degree articulation jaw

Allows simplified navigation in challenging anatomy

■ Caiman® instruments

seal vessels up to 7 mm in diameter and feature an average thermal spread of less than 1 mm.* Effectively seals with virtually no adhesion or charring.

■ 80° Articulating jaw

The Caiman® line are the first RF tissue and vessel sealing instruments with an articulating jaw – providing a more flexible, agile device for surgical procedures.

Strong uniform compression

within the jaw is key to creating a confident seal. Compression force in other devices may decline from proximal to distal end influencing the sealing quality.*

^{*}Data on file at Aesculap AG.

GN200	Item number	Shaft diameter	Working length	Pcs. per pack
	Caiman® 5, NON ARTICULATING JAW			
	PL718SU* / PL738SU**	5 mm	24 cm	6
	PL720SU* / PL740SU**	5 mm	36 cm	6
	PL722SU* / PL742SU**	5 mm	44 cm	6
	Caiman® 5, NON ARTICULATING MARYLAND	JAW		
	PL754SU* / PL774SU**	5 mm	12.5 cm	6
	PL755SU* / PL775SU**	5 mm	17 cm	6
	PL750SU* / PL770SU**	5 mm	36 cm	6
	PL752SU* / PL772SU**	5 mm	44 cm	6
	Caiman® 5, ARTICULATING JAW			
	PL719SU* / PL739SU**	5 mm	24 cm	6
	PL721SU* / PL741SU**	5 mm	36 cm	6
	PL723SU* / PL743SU**	5 mm	44 cm	6
	Caiman® 5, ARTICULATING MARYLAND JAW			
	PL751SU* / PL771SU**	5 mm	36 cm	6
	PL753SU* / PL773SU**	5 mm	44 cm	6
	Caiman® 12, ARTICULATING JAW			
	PL730SU	12 mm	24 cm	3
	PL731SU	12 mm	44 cm	3

 $^{^{\}star}$ $\,$ Ordering number for the following countries: CN, KR, BR, JP, RU, BO, CO, MY, SG, AR, EC, TW $\,$

^{**} Ordering number for the following countries: UK, DE, FR, ES, PL, IT, SE, CZ, NL, BE, LU, PT, AT, CH, BA, DK, FI, IE, SK, NO, TR, HU, RO, BG, CY, SI, GR, KZ, US, ID, PH, AU, NZ, HK, MX, PE, AZ, CL, JO, KW, LY, NC, IN, VN

AESCULAP® ELECTROSURGERY



GN640

Nelson® deluxe electrosurgical unit, monopolar/bipolar without power cord and accessories

Nelson® deluxe Electrosurgical Unit

Voltage range		100-240 V ±10 %
Mains frequency		50 - 60 Hz
Max. power consumption		418 W
HF output monopolar	Microcut 1 + 2 Powercut 1 Powercut 2 Powercut 3 Powercut 4 SEALCUT SoftCoag ContactCoag ForcedCoag SprayCoag	300 W at 500 Ohm 300 W at 500 Ohm 250 W at 500 Ohm 200 W at 500 Ohm 150 W at 500 Ohm 100 W at 150 Ohm 100 W at 300 Ohm 120 W at 500 Ohm 120 W at 1000 Ohm 120 W at 800 Ohm
HF output bipolar	Bicut 1 Bicut 2 Coag	100 W at 600 Ohm 100 W at 100 Ohm 100 W at 100 Ohm
Output frequency		447 kHz
Weight		8.6 kg
Dimensions (w x h x d)		305 x 175 x 305 mm
Safety Class acc. to EN 60601-1		1
Classification acc. to directive 93/42/EEC		IIb
Protection level acc. to EN 60601-1		CF
EMV		EN 60601-1-2
Tested acc. to norm		EN 60601-1 EN 60601-2-2

Accessories (to be ordered separately) See page 49 Power cable See page 49 Potential equalization cable

Accessories (to be ordered separately)	Item no.	Description
Tion is	GN325	Vario double foot switch, explosion-proof, cable 4 m
	GN230	Electrode handle with double push buttons bottons, cable 4.5 m
	GN174R	Electrode Set, containing 12 different electrodes diam. 4 mm, rack and holder
	GN205	Cable for electrode handle, 5 m
	GK107	Disposable split neutral electrode for children and adults, 110 cm ² , pack of 50
-3000	GN245	Cable for disposable neutral electrodes, 5 m
	GN130	Bipolar cable with tab connector, 4 m
	GN202	Monopolar cable, 4 mm socket, 3.5 m

AESCULAP® GN300 ELECTROSURGICAL UNIT*



GN300*

Electrosurgical unit, monopolar and bipolar without mains cord and accessories

* Product is not available in EU markets (CE Markets):
Belgium, Bulgaria, Denmark,
Germany, Estonia, Finland, France,
Greece, Great Britain, Northern Ireland, Ireland, Italy, Croatia, Latvia,
Lithuania, Luxembourg, Malta,
Netherlands, Austria, Poland,
Portugal, Romania, Sweden, Switzerland, Slovakia, Slovenia, Spain,
Czech Republic, Hungary, Cyprus,
Iceland, Liechtenstein, Norway.

Electrosurgical Unit			
Voltage range		100 - 120 V 220 - 240 V	
Mains frequency		50 - 60 Hz	
Max. power consumption		550 W	
HF output monopolar	CUT 1 (PURE)	300 W at 500 Ohm	
	CUT 2 (Modulated 1)	200 W at 500 Ohm	
	CUT 3 (Modulated 2)	150 W at 500 Ohm	
	CUT 4 (Modulated 3)	100 W at 550 Ohm	
	CONTACT COAG	120 W at 500 Ohm	
	SPRAY COAG	80 W at 1000 Ohm	
HF output bipolar	CUT	80 W at 1000 Ohm	
	COAG	80 W at 100 Ohm	
Output frequency		447 kHz	
Weight		9.3 kg	
Dimensions (w $x h x d$)		305 x 155 x 305 mm	
Safety Class acc. to EN 60601-1		I	
Classification acc. to directive 93/42/EEC		IIb	
Protection level acc. to EN 60601-1		CF	
EMV		EN 60601-1-2	
Tested acc. to norm		EN 601-1	
		EN 601-2-2	

Accessories (to be ordered separately)	
See page 49	Power cable
See page 49	Potential equalization cable

Accessories (to be ordered separately)	Item no.	Description
	GN324	Vario double foot switch, explosion-proof, cable 4 m
	GN230	Electrode handle with double push buttons bottons, cable 4.5 m
	GN235	Electrode handle without finger push buttons, cable 4.5 m
	GN174R	Electrode Set, containing 12 different electrodes diam. 4 mm, rack and holder
	GK107	Disposable split neutral electrode for children and adults, 110 cm ² , pack of 50
·= 30000	GN245	Cable for disposable neutral electrodes, 5 m
0-	GN130	Bipolar cable with tab connector, 4 m
	GN202	Monopolar cable, 4 mm socket, 3.5 m

* Product is not available in EU markets (CE Markets):
Belgium, Bulgaria, Denmark, Germany, Estonia, Finland, France,
Greece, Great Britain, Northern Ireland, Ireland, Italy, Croatia,
Latvia, Lithuania, Luxembourg, Malta, Netherlands, Austria, Poland,
Portugal, Romania, Sweden, Switzerland, Slovakia, Slovenia, Spain,
Czech Republic, Hungary, Cyprus, Iceland, Liechtenstein, Norway.

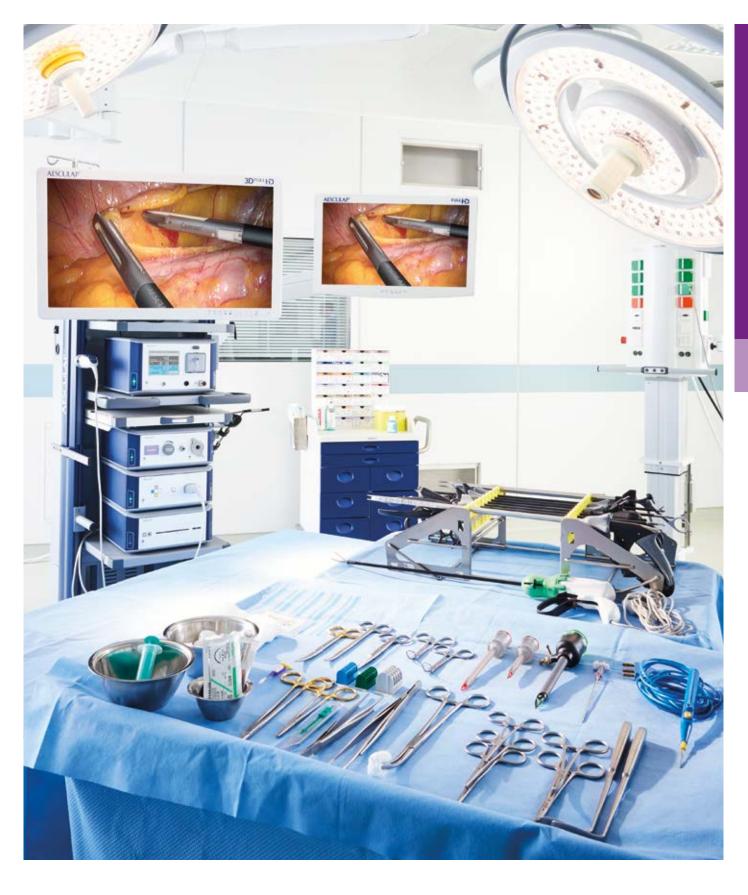
Our goal is to offer a **tailor-made system solution for your need.** For this reason we offer a large selection of disposable products in addition to our reusable instruments.

For further information about AESCULAP® HF accessories, please ask for our special brochure C30481.



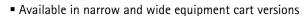
AESCULAP® ELECTROSURGICAL ACCESSORIES

Foot switch and Accessories (to be ordered separately)	ltem number	Description
Turo	GN325	Vario double foot switch, explosion-proof, cable 4 m
The second secon	GN327	Transport bracket, only



AESCULAP® EQUIPMENT CARTS



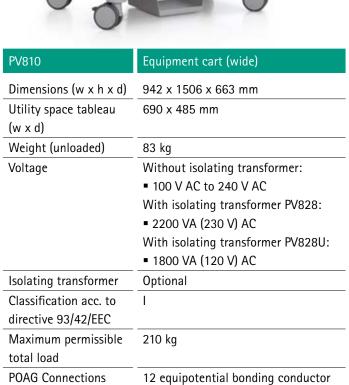


- Modular construction
- Interdisciplinary use
- Drawer with lock
- Four shelves, three of them are height-adjustable and one shelf with corner push handles on the front
- Four anti-static twin castors with wall guards, all lockable (diameter 125 mm)
- Integrated cable channels in the columns
- Double upper and lower lockable rear wall with two power strips each with six cold-device plugs
- Upper rear wall with integrated cable outlet on each side
- Base socket for isolating transformer
- Lateral main switch
- Isolating transformers as safety features
- Wide range of accessories



PV800	Equipment cart (narrow)
Dimensions (w x h x d)	703 x 1506 x 663 mm
Utility space tableau (w x d)	450 x 485 mm
Weight (unloaded)	64 kg
Voltage	Without isolating transformer: ■ 100 V AC to 240 V AC
	With isolating transformer PV828:
	■ 2200 VA (230 V) AC
	With isolating transformer PV828U:
	■ 1800 VA (120 V) AC
Isolating transformer	Optional
Classification acc. to directive 93/42/EEC	I
Maximum permissible total load	210 kg
POAG Connections	8 equipotential bonding conductor connections





connections



GN330	Unit Cart with sliding handle	
Dimensions (w x h x d)	520 x 900 x 570 mm	
Accessories (to be ordere	ed separately)	
PV951R	Wire basket; Dimensions (w x h x d) 370 x 225 x 285 mm	
	370 x 225 x 285 IIIII	

AESCULAP® EQUIPMENT CART ACCESSORIES

ACCESSORIES (to be ordered separately)



PV821 Standard rail



PV826 Camera holding device for 2D camera head



PV824 Clamp for standard rail



PV636 EV3.0 camera head holder



PV822 CO₂ cylinder holder



PV827 Foot switch holder



PV823 Infusion bottle holder



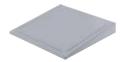
PV825 Wire basket for accessories 300 x 300 x 200 mm



PV830 Lifting handle



PV839 Cable clamp for fixation of camera cables



PV836 Additional lateral plate 330 x 330 mm



PV801 Shelf narrow with screws for PV800



PV811 Shelf wide with screws for PV810



PV838 Twin caster kit with cable rollover protection



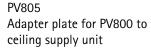
PV816 Protective cover for PV810



PV802 Shelf extendible with lateral pullout for PV800



PV812 Shelf extendible with lateral pullout for PV810



PV815 Adapter plate for PV810 to ceiling supply unit



PV819 Hook and loop fastener set

PV800222 Central back panel for PV800

PV810221 Central back panel for PV810

PV800219 Lateral handle for column

PV800229 Equipotential bonding pin



TA011388 Cable wrap

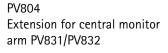
MONITOR ARMS AND ACCESSORIES



PV803 Crossbar narrow for central monitor arms



PV831 Height-adjustable central monitor arm, load range 13-19 kg





PV834 Lateral height-adjustable montior arm with extension, load range 5-8.5 kg

PV837 Adapterplate for PV646



PV813 Crossbar wide for central monitor arms



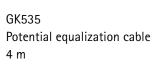
PV832 Height-adjustable central monitor arm, load range 7-12 kg



PV833 Lateral height-adjustable montior arm, load range 5-8 kg



PV835 Lateral double joint arm for additional monitor, load range 1–18 kg



POWER SUPPLY AND ACCESSORIES



PV829 Power distributor with counterweightplate



PV828 Isolating transformer 2200 VA, 230 V with ISO guard



PV829U Power distributor with counterweight for Japan/USA



PV828U Isolating transformer 1800 VA, 100 -120 V with ISO guard

CABLES

PV790	Mains cord orange Euro-Plug Type E/F
PV791	Mains cord orange Type K
PV792	Mains cord orange Type G
PV793	Mains cord orange Type L
PV794	Mains cord orange Type 23
PV795	Mains cord orange Type A
PV796	Mains cord black Type B
PV797	Mains cord orange Type I
TA008205	Potential equalization cable, 0.8 m
GK534	Potential equalization cable 1.5 m
GK537	Potential equalization cable 5 m
TE676	Extension cord 1 m
TE636	Extension cord 2.5 m

OTHERS

TA015055	Plastic groove coverage, 1300 mm
TA015056	Screws and spring nuts set for PV800/PV810
TA015057	Touch-Up pens RAL 5003 and RAL 7040

AESCULAP® EQUIPMENT CARTS





PV818

Mobile Monitor stand

- Mobile stand for 2D/3D monitors (max. load of 16 kg)
- Four conductive, antistatic, double swivel castors with parking brake, diameter 100 mm
- Mechanically height-adjustable (500 mm)
- Counterweight plate under chassis
- Wire basket on the backside
- Utility space shelf, max. 2 kg load capacity
- Front and rear push handle
- Holding device for two monitor power supplies
- Fixing clamps for connecting cable
- Cable wrap for winding up the power cable
- Dimensions (w x h x d) 530 x 2002 x 610 mm

Accessories (to be ordered separately)	
Power cable	
Potential equalization cable	

ZeroWire® - Wireless video transmission

- Medical-Grade HD-Video Wireless System
- Wireless 3D and 2D video transmission
- Compatible with multiple monitors (2D, 3D, 27", 31", 32")
- Auto-tracking video signal function
- User-feedback with on-screen messages
- Transmitter (Tx) Video Input DVI-D, 3G-SDI
- Receiver (Rx) Video Input DV-D



Item number	Description		
PV845	ZeroWire® G2 transmitter		
PV846	ZeroWire® G2 receiver		
PV843	Accessory kit for 26"/27" monitors including 4 M4 x16 mm screws		
PV849	Accessory kit for 31"/32" monitors including 4 M4 x 16 mm screws		
PV847	3D / 4K / 2D Switch		
PV848	Power supply for PV845, PV846		
PV969	Video signal cable HDMI to DVI, 3 m		
PV979	Video signal cable HDMI to DVI, 2 m		

POWER CABLES

	Item number	Description
	TE780	Mains cord (Euro Plug), 1.5 m
	TE730	Mains cord (Euro Plug), 5.0 m
	TE676	Extension cord 1 m
iii liii liii liii liii liii liii liii	TE736	Extension cord 2.5 m
	PV790	Mains cord orange Type E/F (Euro plug), 5 m
	PV791	Mains cord orange Type K, 5 m
U	PV792	Mains cord orange Type G, 5 m
	PV793	Mains cord orange Type 23, 5 m
	TA008205	Potential equalization cable, 0.8 m
	GK534	PPotential equalization cable, 1.5 m
	GK535	PPotential equalization cable, 4 m
	GK537	Potential equalization cable, 5 m

AESCULAP® TECHNICAL SERVICE - ATS

OUR COMMITMENT

Those who bear large responsibility deserve reliable and fully functional surgical equipment at all times.

Functionality is related to every single component starting from the optical camera system to the electrosurgical devices. At AESCULAP® Technical Service we want to be the trusted partner for our customers. We know everything about our systems, we are capable of maintaining them to assure an excellent condition so that they are ready whenever they are needed.











With our dedicated customer service team and skilled service technicians, we provide a comprehensive service portfolio. Our service offer is transparent, clear and easily implementable. With our knowledge and experience we contribute to your smooth workflow so that you could concentrate on your most important tasks.

EMERGENCY RESPOND

In the case of unexpected service you need a quick solution. A service contract brings you to the safe side and grants a timely response to your service call.

We restore the function of your equipment so that you could continue your daily routine.

HOTLINE

Our competent consultants assist you in all questions around the technical service for your equipment. Central coordination assures that your request is addressed to the right person in our team, who will get back to you with a solution as soon as possible.

HOTLINE

Phone: +49 (0) 7461 95-31374 E-Mail: ATS_endo@aesculap.de

INSTALLATION

Our skilled technicians make sure the system is safely and fully functional right from the beginning. A full technical installation report is provided for your legal certainty.

INTEGRATION INTO HOSPITAL'S NETWORK SYSTEM (DICOM)

If foreseen, we integrate your documentation system into the hospitals network system, so that OR data could be stored or shared appropriately.



SERVICE CONTRACTS

We offer different service contract levels in order to best suit various hospitals demand and budget. Thanks to the contracts' transparency the service for your system is granted at a fixed cost.

MAINTENANCE

Prevention is key to a long life and functionality of the system. No one knows this better than medical professionals. For this purpose maintenance is already included in all levels of our service contracts. Please contact your sales representative to learn more.

RFPAIR

Our 150-years-experience allows us to carry out all types of repair and provide you with a one year guarantee on all repair work.

ON-SITE SERVICE

Inspection, maintenance and repair services for large systems are a logistical challenge. Thanks to our steadily growing service network we could offer an onsite service. That way we do not lose time and avoid unnecessary and laborious transportations of sensitive equipment.

LOAN SERVICE

In urgent cases we could provide you with a loan device. Thereby the OR down-time could be reduced significantly.





DIALOG - DEDICATED TO LIFE.

The Aesculap Academy is one of the leading medical forums for everyone who is professionally, passionately and ambitiously committed to people's health. To those medical professionals we offer top quality knowledge transfer based on globally recognized quality criteria using innovative methods and technologies.

The Aesculap Academy has its roots in the company B. Braun, which has been protecting and improving people's health for more than 175 years. With our courses, hands-on trainings and symposia we help to honor our parent company's promise of SHARING EXPERTISE.

The courses at the Aesculap Academy offer participants who want to continue to learn in an inspiring environment knowledge transfer and teaching that are adapted to real life: lifelong learning, true-to-life training situations and realistic content for a better life for patients and medical staff.





AESCULAP AKADEMIE GMBH

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