

HF Surgery



KLS Martin ME MB 3

The efficient solution for the OR





The new HF surgical unit ME MB 3 from KLS Martin
The efficient solution for the OR

With its ME MB 3, KLS Martin presents an HF surgical unit that utilizes proven technology for the best ergonomics and handling. Power setting is conveniently done with a rotary pushbutton and a sealed keyboard is in place for easy selection of the different types of current.

A high standard of patient safety, a straightforward design and superior application versatility round off a user-friendly profile. Yet a special highlight is still to mention, as different connecting sockets are available to ensure that you can continue to use your existing accessories.

In short, the KLS Martin ME MB 3 is the efficient solution for your OR.

KLS Martin electrosurgical unit The main features



① Display

Power setting constantly under visual control

② High patient safety thanks to PCS NE monitoring (Patient Control System)

In high-frequency surgery, the thermal effect must be strictly limited to the point of application of the active electrode. In other words, no heat must be allowed to develop underneath the neutral electrode (NE). To ensure this, HF units from KLS Martin are equipped with NE monitoring functions designed to keep the neutral electrode under constant control, blocking monopolar HF energy output as soon as an NE problem occurs due to lack of skin contact. A split neutral electrode is required for this function.

The PCS system, in fact, continuously monitors correct attachment of the NE to the patient's skin. If the NE detaches in any way, the user is immediately alerted – well before critical situations could arise.

③ Functional test

Each time the unit is turned on, the KLS Martin ME MB 3 performs a self-test. If an error or malfunction is detected, no acknowledgement signal is emitted and HF current output is automatically blocked. This ensures that the KLS Martin ME MB 3 can be used only under perfect operating conditions.

④ Monopolar handle connections

In the “m” version, the KLS Martin ME MB 3 allows you to connect handles with a KLS Martin plug or a US 3-pin plug. The “i” version, in turn, is designed for connection of monopolar handles with Bovie plug or US 3-pin plug.

The KLS Martin HF accessories program offers you a wide selection of handles for various applications. For details, please refer to our special HF Accessories Catalog.



ME MB 3, “m” version
for KLS Martin accessories



ME MB 3, “i” version
for international accessories



⑤ **Progressive power adjustment**

This function allows you to adjust the power output precisely to your specific needs when working in the lower power range. This is particularly useful for the hemostatic treatment of delicate vessels, for example. In the upper range, however, the ME MB 3 provides a steadily increasing power output. It is this high “power reserve” that warrants the universal applicability of the KLS Martin ME MB 3.

⑥ **Monopolar cutting and coagulation using the foot switch**

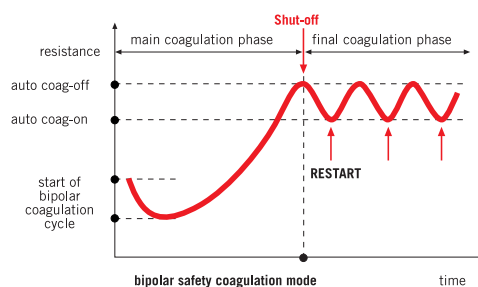
The double-pedal foot switch (for cutting/coagulation) can be used for monopolar as well as bipolar operation.

⑦ **Bipolar coagulation with the foot switch**

The power spectrum of the KLS Martin ME MB 3 is rounded off by the “Bipolar Coagulation” option used in conjunction with the foot switch. This reliable bipolar coagulation function from KLS Martin allows you to combine high-precision work with large-volume yet safe coagulation.

⑧ **Bipolar ON/OFF automatic function**

Button for bipolar coagulation with automatic start/stop function in manual operation using the handle. With this function, bipolar safety coagulation is automatically performed as soon as the electrodes make tissue contact. The pulse-type follow-up coagulation phase ensures the best possible coagulation result.



⑨ **Multifunctional connector for bipolar instruments**

This is a bipolar combination socket for active electrodes, allowing you to connect the small coaxial plug (KLS Martin standard) or international accessories from other manufacturers.

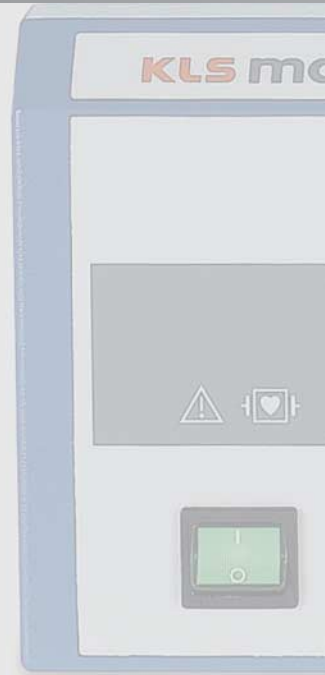
KLS Martin electrosurgical unit Types of current



m "m" version, ME MB 3
for KLS Martin accessories



i "i" version, ME MB 3
for international accessories



Monopolar Cut 1 (Pure Cut)

for a smooth cut without any eschar formation. This so-called "pure cut" comes closest to the classic scalpel cut, thus providing the best basis for effective wound healing.



Monopolar Cut 2 (Blend Cut)

for a pure cut with some eschar formation.



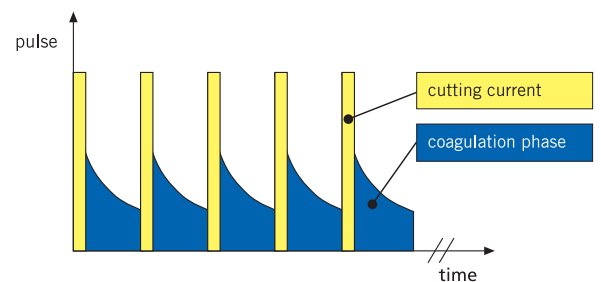
Monopolar Cut 3 (Super Blend Cut)

Super Blend is a cutting current with even more eschar formation than Blend Cut. As the wound edges are simultaneously coagulated during the cutting process, bleeding from dissected capillary vessels is stopped at once and extended hemorrhages are prevented.



ENDO Mode

This is a time-controlled cutting mode offering a fractionated and therefore controlled cut intended for special applications, e.g. for endoscopic papillotomy and endoscopic polypectomy.



Power Peak – the power boost for "cutting under water"

This function provides an increased HF power level to facilitate starting the cut. It is intended for use in urology/gynecology (cutting in liquid environments*)

* Activation only by foot switch



Monopolar Contact Coagulation

Coagulation current with depth effect (electrode in direct contact with the tissue).



Monopolar Spray Coagulation

Coagulation current for surface coagulation (fulguration). It is especially suited for hemostasis during TUR procedures using small-surface electrodes (e.g. loop electrodes).



Forced Prep

Forced coagulation current enabling fast coagulation. An ideal current for dissecting tasks because it provides effective cutting capability despite its dominant coagulation feature.

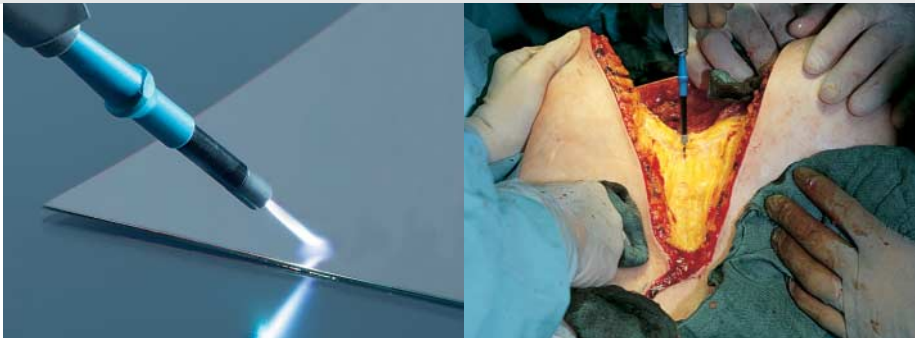
Bipolar Coagulation

KLS Martin offers users a wide range of bipolar accessories:

- marCut® instruments
- NON-STICK-**red**-forceps
- NON-STICK-**flush**-forceps
- marLap instruments



KLS Martin Argon Beamer System (MABS) ME MB 3 and MB 181



Combining the ME MB 3 with the MB 181 Argon Beamer provides new opportunities for open and endoscopic surgery. This is a “non-contact” coagulation procedure in which HF current is applied to the tissue using ionized argon gas as a medium.

The advantages include:

- Fast and effective coagulation of extended hemorrhages
- Tissue-friendly procedure minimizing blood loss
- Low-carbonization coagulation
- Low coagulation depth
- Fast wound healing



A special signal cable (80-181-51-04) is available for connecting the KLS Martin ME MB 3 with the MB 181 Beamer.

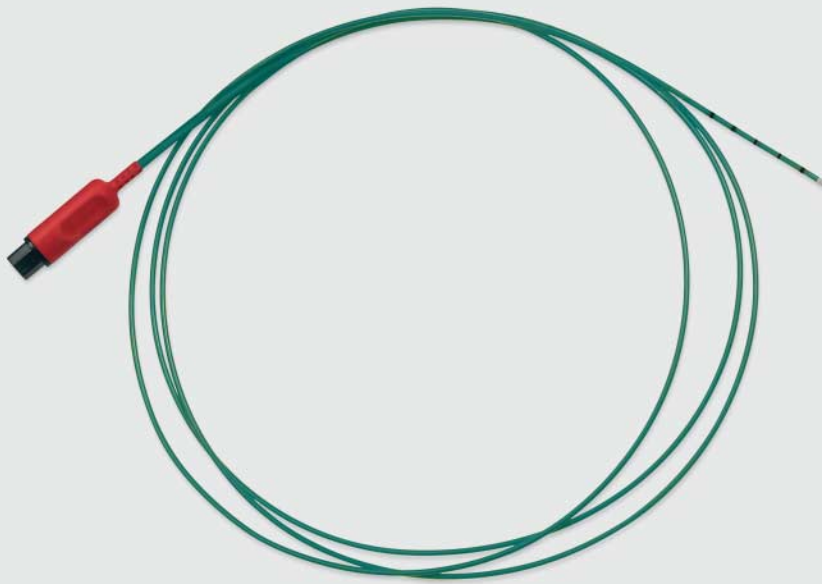
KLS Martin Argon Beamer System (MABS) ME MB 3 and MB 181



Application accessories, rigid	
80-181-02-04	MABS handle for rigid applicators, with 2 pushbuttons (for coagulation and cutting), connecting cable (4.5 m / 15 ft.) for HF current and argon gas, autoclavable at 134°C (273.2°F)
80-181-10-04	MABS beam electrode for open surgery, high temperature-resistant ignition tip, working length 25 mm
80-181-11-04	MABS beam electrode for open surgery, high temperature-resistant ignition tip, working length 100 mm
80-181-12-04	MABS beam electrode for laparoscopy and pelviscopy, high temperature-resistant ignition tip, including fixing cap, working length 320 mm
80-181-13-04	MABS lancet electrode for open surgery, working length 40 mm, lancet length 14 mm
80-181-14-04	MABS lancet electrode for open surgery, working length 115 mm, lancet length 14 mm
80-181-15-04	MABS needle electrode for open surgery, working length 40 mm, needle length 14 mm
80-181-16-04	MABS needle electrode for open surgery, working length 115 mm, needle length 14 mm
80-181-60-04	MABS beam electrode, 320 mm, flexible
80-181-62-04	MABS beam electrode, 115 mm, flexible
80-181-07-04	MABS needle electrode for open surgery, adjustable, working length 40 mm
80-181-08-04	MABS needle electrode for open surgery, adjustable, working length 110 mm
80-181-05-04	Fixing cap, suitable for all rigid electrodes
80-181-90-04	MABS sterile filter (50 items/pack)

All MABS electrodes have the following features in common:

- Insulated, rigid shaft with a diameter of 5 mm
- Distal ceramic nozzle
- Autoclavable at 134°C (273.2°F)

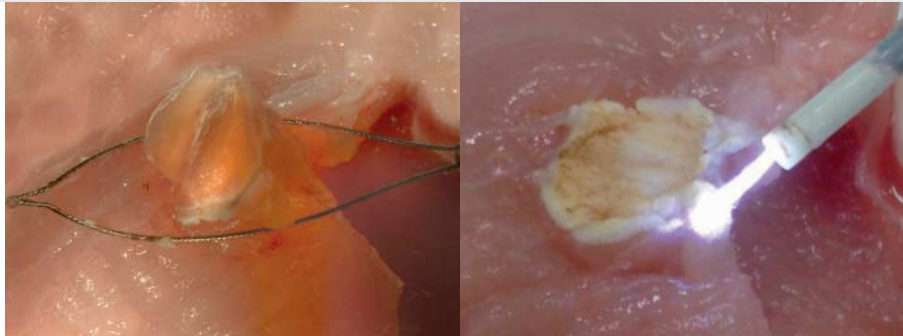
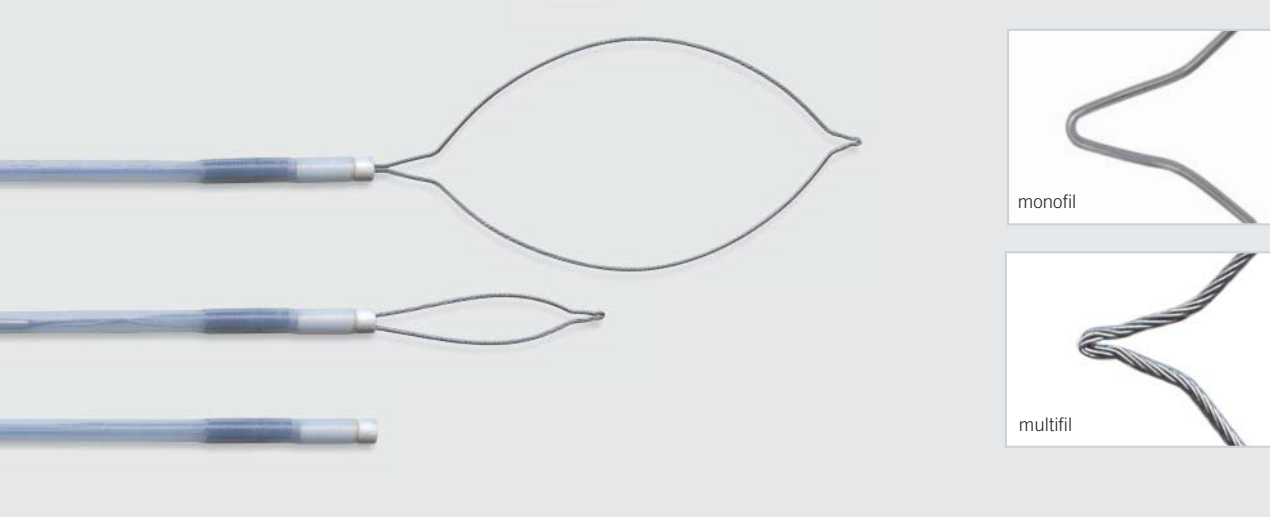


Application accessories, flexible		
80-181-30-04	MABS connecting cable for flexible probes (disposable + reusable), connecting cable 2.5 m, for HF current and argon gas, HF current and gas activation via foot switch; autoclavable at 134°C (273.2°F)	
80-181-23-04	MABS GIT probe, Ø 2.3 mm, length 2.3 m, reusable (1 item/pack)	
80-181-24-04	MABS GIT probe, Ø 3.2 mm, length 2.3 m, reusable (1 item/pack)	
80-181-25-04	MABS TBS probe, Ø 1.5 mm, length 1.6 m, disposable (10 items/pack)	
80-181-26-04	MABS GIT probe, Ø 1.8 mm, length 3.2 m, disposable (10 items/pack)	 Double balloon enteroscopy
80-181-27-04	MABS GIT probe, Ø 2.3 mm, length 2.3 m, disposable (10 items/pack)	
80-181-28-04	MABS GIT probe, Ø 3.2 mm, length 2.3 m, disposable (10 items/pack)	
80-181-29-04	MABS GIT probe, Ø 2.3 mm, length 3.4 m, disposable (10 items/pack)	 Double balloon enteroscopy
80-181-32-04	MABS GIT probe, Ø 2.3 mm, length 2.3 m, disposable (10 items/pack)	 Side Fire
80-181-31-04	MABS flushing adapter for reusable argon probes	
80-181-90-04	MABS sterile filter (50 items/pack)	

All MABS flexible probes have the following features in common:

- Distal ceramic nozzle
- Scaled probe end
- Autoclavable at 134°C (273.2°F) (only reusable probes!)
- 50% reduction in gas consumption (compared with previous probes)

MABS Snare probes – the two-in-one solution



MABS Snare probes are combination probes allowing you to remove polyps with subsequent argon coagulation of the site.

The great advantage of these probes: you don't need to exchange instruments for performing the coagulation in a second step. Following ablation, you just pull the snare back into the instrument to use the probe as a "normal" MABS beam probe. Moreover, the probe can be conveniently used in this way for coagulating/vaporizing minor polyps.

Why coagulation following polypectomy? The answer is that additional coagulation cuts the recurrence rate.



80-181-41-04
MABS Snare probe
(multifilament, disposable)

MABS Snare Probes						
Item No.	Designation		Ø	Length	Items/Pack	
80-181-40-04	MABS TBS Snare	15 mm, multifil., disposable	2.5 mm	1.6 m	5	
80-181-41-04	MABS GIT Snare	15 mm, multifil., disposable	2.5 mm	2.3 m	5	
80-181-42-04	MABS GIT Snare	30 mm, multifil., disposable	2.5 mm	2.3 m	5	
80-181-43-04	MABS GIT Snare	15 mm, monofil., disposable	2.5 mm	2.3 m	5	
80-181-44-04	MABS GIT Snare	30 mm, monofil., disposable	2.5 mm	2.3 m	5	



80-289-40-04 **max. 4000 V_p**
4 m/12 ft.
Monopolar connecting cable
for KLS Martin HF units



80-289-41-04 **max. 4000 V_p**
4 m/12 ft.
Monopolar connecting cable
for HF units with 3-pin connectors



For further information on our MABS snare probes please refer to our separate product brochure.

Accessory sets and ordering information



80-160-00-04		Standard Set A for ME MB 3, "m" version (and other major HF units from KLS Martin)
80-221-02-04	10	Disposable handles
80-344-09-04	10	PCS disposable neutral electrodes
80-294-40-04	1	KLS Martin neutral electrode connecting cable
80-811-30-04	1	Double-pedal foot switch

80-160-01-04		Standard Set B for ME MB 3, "i" version
80-221-02-04	10	Disposable handles
80-344-09-04	10	PCS disposable neutral electrodes
80-294-44-04	1	Valleylab neutral electrode connecting cable
80-811-30-04	1	Double-pedal foot switch

80-140-00-04		Set of monopolar accessories for manual operation, large, for ME MB 3, "m" version
80-217-02-04	1	Handle with 2 pushbuttons, 4-m cable
80-342-03-04	1	Rubber neutral electrode, 15 x 26 cm, 4-m cable
80-371-00-04	2	Rubber bands, with holes, 100 cm
80-371-01-04	2	Buttons for rubber band
80-416-00-04	1	Electrode stand for 16 electrodes
80-510-04-04	1	Lancet electrode, straight
80-511-04-04	1	Lancet electrode, angled
80-515-04-04	1	Knife electrode
80-520-04-04	1	Needle electrode
80-525-04-04	1	Neutral electrodes (dozen), extra-fine
80-532-00-04	1	Adapter for needle electrodes
80-540-04-04	1	Wire loop electrode, Ø 5 mm
80-542-04-04	1	Wire loop electrode, Ø 10 mm
80-550-04-04	1	Ribbon loop electrode, Ø 10 mm
80-552-04-04	1	Ribbon loop electrode, Ø 15 mm
80-560-04-04	1	Ball electrode, Ø 2 mm
80-562-04-04	1	Ball electrode, Ø 4 mm
80-563-04-04	1	Ball electrode, Ø 5 mm
80-570-04-04	1	Plate electrode, 8 x 10 mm



80-140-01-04 Set of monopolar accessories or foot switch operation, large, for ME MB 3, "m" version

80-220-00-04	1	Handle without pushbuttons, 4-m cable
80-342-03-04	1	Rubber neutral electrode, 15 x 26 cm, 4-m cable
80-371-00-04	2	Rubber bands, with holes, 100 cm
80-371-01-04	2	Buttons for rubber band
80-416-00-04	1	Electrode stand for 16 electrodes
80-510-04-04	1	Lancet electrode, straight
80-511-04-04	1	Lancet electrode, angled
80-515-04-04	1	Knife electrode
80-520-04-04	1	Needle electrode
80-525-04-04	1	Neutral electrodes (dozen), extra-fine
80-532-00-04	1	Adapter for needle electrodes
80-540-04-04	1	Wire loop electrode, Ø 5 mm
80-542-04-04	1	Wire loop electrode, Ø 10 mm
80-550-04-04	1	Ribbon loop electrode, Ø 10 mm
80-552-04-04	1	Ribbon loop electrode, Ø 15 mm
80-560-04-04	1	Ball electrode, Ø 2 mm
80-562-04-04	1	Ball electrode, Ø 4 mm
80-563-04-04	1	Ball electrode, Ø 5 mm
80-570-04-04	1	Plate electrode, 8 x 10 mm
80-821-02-04	1	Double-pedal foot switch, anesthetics-proof, 5-m cable, explosion-protected

80-150-00-04 Set of bipolar accessories, for ME MB 3, "m" version

80-287-53-04	1	Connecting cable for bipolar forceps
80-924-16-04	1	Bipolar forceps, straight, blunt, 16 cm/6 ¼"
80-924-20-04	1	Bipolar forceps, straight, blunt, 20 cm/8"
80-925-16-04	1	Bipolar forceps, angled, blunt, 16 cm/6 ¼"
80-925-20-04	1	Bipolar forceps, angled, blunt, 20 cm/8"
80-945-20-04	1	Bipolar forceps, bayonet-shaped, blunt, 20 cm/8"

80-150-01-04 Set of bipolar accessories with NON-STICK red forceps, for ME MB 3, "m" version

80-287-53-04	1	Connection cable for bipolar forceps
80-986-17-04	1	Bipolar forceps, NON-STICK red, straight, blunt, 16 cm/6 ¼"
80-992-20-04	1	Bipolar forceps, NON-STICK red, bayonet-shaped, blunt, 20 cm/8"
80-987-17-04	1	Bipolar forceps, NON-STICK red, angled, blunt, 16 cm/6 ¼"
80-987-20-04	1	Bipolar forceps, NON-STICK red, angled, blunt, 20 cm/8"
80-986-20-04	1	Bipolar forceps, NON-STICK red, straight, blunt, 20 cm/8"

Ordering information for HF units and accessories

		Ordering information
	m	80-040-11-04 ME MB 3 electro-surgical unit, with mains cable, without accessories, KLS Martin ("m") version, 220–240 V 80-040-11-10 ME MB 3 electro-surgical unit, with mains cable, without accessories, KLS Martin ("m") version, 100–127 V
	i	80-040-12-04 ME MB 3 electro-surgical unit, with mains cable, without accessories, international ("i") version, 220–240 V 80-040-12-10 ME MB 3 electro-surgical unit, with mains cable, without accessories, international ("i") version, 100–127 V
		80-081-00-04 KLS Martin Argon Beamer MB 181, with connecting cable, without accessories 80-181-51-04 MABS foot switch signal cable (for connecting ME MB 3 with MB 181)
		80-070-00-04 HF trolley (cart) 80-070-01-04 Support for argon gas cylinder
		MABS pressure reducer with flexible tube and quick-action coupling, 2.5 to 4.5 bar, tube length 1 m / 3 ft.
		Reference standard Countries
	80-181-52-04	DIN 477, No. 6 D, A, CH, F, P, E, GR
	80-181-53-04	DIN 477, No. 10 NL, DK, S, NOR, B
	80-181-54-04	UNI 4412 I
	80-181-55-04	BS 341, No. 3 UK, AUS, MY, IN, TR, former Commonwealth
	80-181-56-04	CGA, No. 580 USA, MX, TH, South America
	80-181-57-04	China
	94-179-58-04	Gas cylinder filled with "4.8 quality" argon gas (May also be obtained from local supplier. Be sure to observe special shipping instructions!)
94-179-59-04	Argon gas cylinder, empty	

Características técnicas

ME MB 3 de KLS Martin



ME MB 3 technical data

Power requirements	220–240 V, 50–60 Hz; or 100–127 V, 50–60 Hz (adjustable by Technical Service via plug-in jumper inside unit)
Power input	without HF output: approx. 26 VA at max. power output: approx. 800 VA
Protection class	I
Classification acc. to MDD	II b
Leakage currents	LF and HF in compliance with IEC 601, Part 2-2
Type	CF; defibrillation-proof
Nominal frequency	450 kHz
Modulation frequency	30 kHz

HF output power:

Type of current	Power	Crest factor	Voltage
Cut 1 (pure)	max. 400 W at 300 Ω	1.6 at 300 Ω	max. 2,300 V _{pp}
Cut 2 (blend)	max. 300 W at 300 Ω	1.9 at 300 Ω	max. 2,500 V _{pp}
Cut 3 (super blend)	max. 200 W at 300 Ω	2.4 at 300 Ω	max. 2,700 V _{pp}
Forced Prep	max. 120 W at 200 Ω	4.9 at 200 Ω	max. 3,900 V _{pp}
Endo Mode	max. 100 W at 200 Ω	1.6 at 200 Ω	max. 2,800 V _{pp}
Contact coagulation	max. 250 W at 200 Ω	3.4 at 200 Ω	max. 3,200 V _{pp}
Spray coagulation	max. 120 W at 300 Ω	5.6 at 300 Ω	max. 9,000 V _{pp}
Bipolar coagulation	max. 100 W at 100 Ω	2.1 at 100 Ω	max. 600 V _{pp}
Duty type	intermittent 10 s / 30 s = duty factor of 25%		
Line fuses	220–240 V: T 4 A (slow-blow) 100–127 V: T 8 A (slow-blow)		
Sound level	HF current activation: 40 - 65 dB (adjustable) Alarm: 65 dB(A)		
Weight	8.6 kg		
Interference suppression	Limits in conformity with EN 55011 Interference immunity in conformity with IEC 801		
Dimensions	Width: 405 mm; height: 135 mm; depth: 380 mm		
CE-marking	according to 93/42/EEC		

marV^{ac}®

- ✓ Effective
- ✓ Ergonomic
- ✓ Safe



marVAC® – the innovative system for efficient removal of surgical plume

Unobstructed view and maximum safety at the surgical site – smoke is a thing of the past



For additional information on our marVAC® smoke evacuation system, please refer to our separate product brochure.

Should you have any queries ...
... we'll be glad to be at your service!



Our HF Accessories Catalog contains the complete range of KLS Martin HF instruments.

You can reach us in person either via e-mail or through our customer hotline.

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INNOVATION

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