

Electrosurgery



KLS Martin MB 181

THE IDEAL POWER PACK FOR
ADVANCED ARGON PLASMA SURGERY

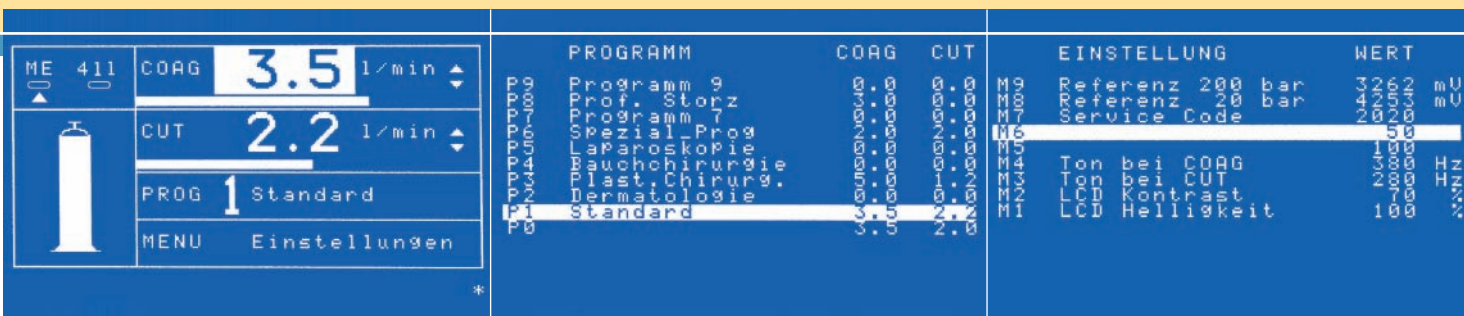
KLS martin
GROUP

KLS Martin Argon Beamer System (MABS)

Together with the electrosurgical units ME 411, ME MB 1 or ME MB 2

the KLS Martin Argon Beamer MB 181 forms a multifunctional workstation

for open and endoscopic argon plasma surgery.



During operation, the clearly arranged graphic display provides information on:

- the cylinder gas level
- the selected gas flow rate for coagulation
- the selected gas flow rate for cutting
- the selected program

The Program Selection sub-menu can be accessed at the touch of a button. This sub-menu offers 10 storage positions for storing customized settings. So each surgeon will have his/her preferred settings/configurations available at any time.

Freely assignable beamer port

Fields of use in open, laparoscopic and endoscopic surgery

- Plastic and reconstructive surgery
- Liver surgery
- Cardiac surgery
- Gynecology
- Casualty surgery
- Laparoscopy and pelviscopy
- General surgery
- Gastroenterology
- Thoracic surgery



*The ideal device combination
for excellent results:*

*KLS Martin Argon Beamer
MB 181*

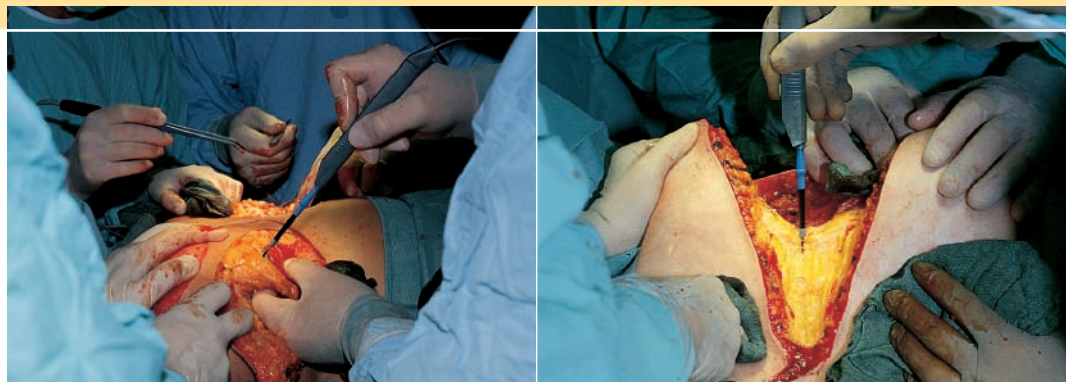
*KLS Electrosurgical Unit
ME 411*

*Furthermore the MB 181 can be
combined with the electrosurgery
units ME MB 1 and ME MB 2.*

KLS Martin Argon Beamer System for argon plasma surgery

The coagulation method mainly used so far is electrocoagulation in the monopolar or bipolar mode.

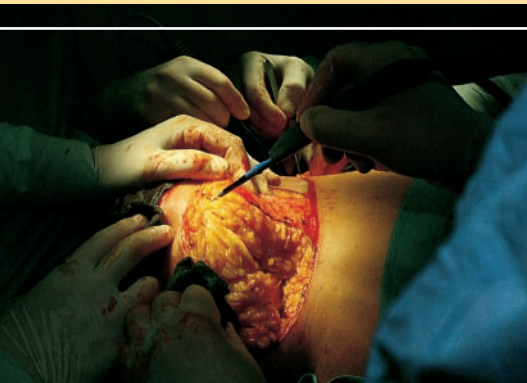
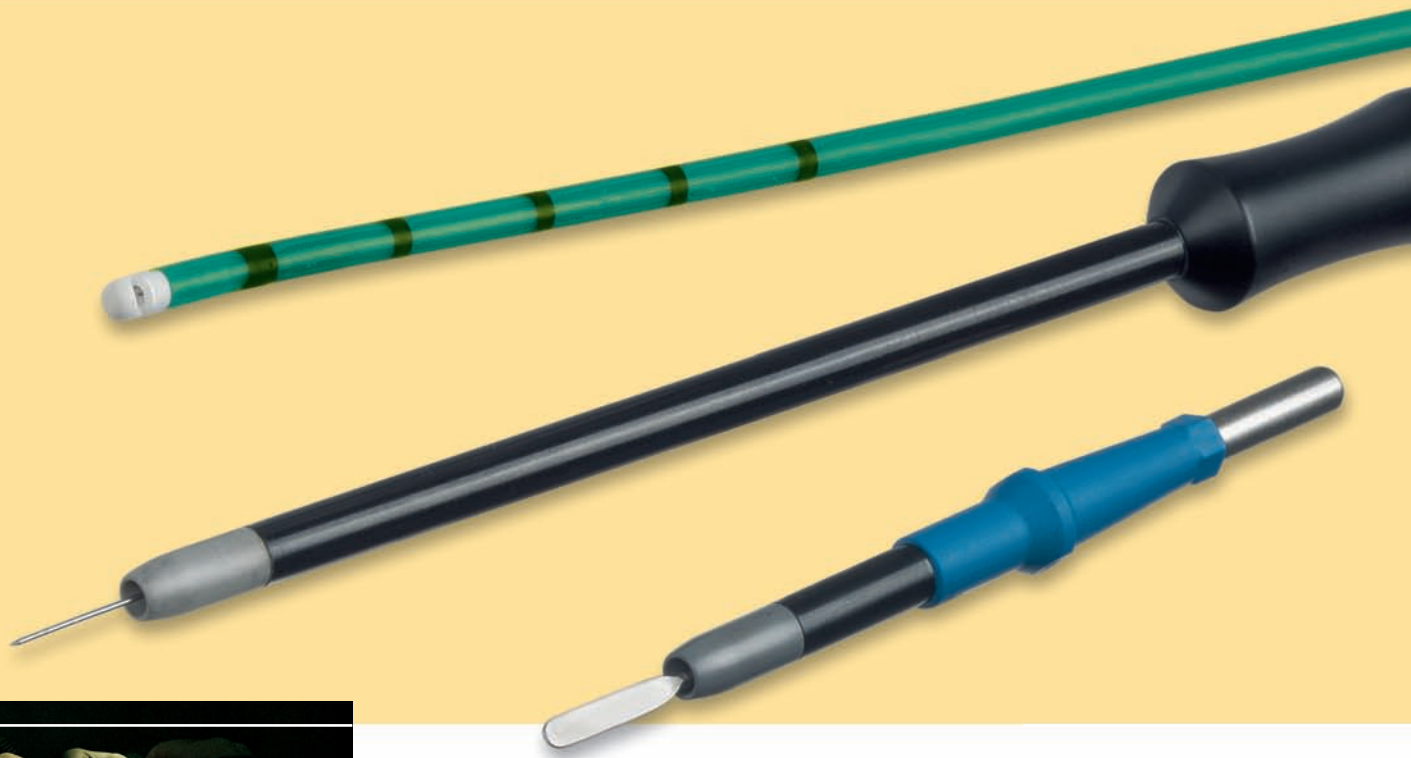
As, however, this method requires direct contact between the electrode and the tissue, the electrode tends to become encrusted. Moreover, thermal necroses hard to control in their horizontal and vertical spread are frequently caused.



Larger-area hemorrhages, in particular, such as they tend to occur in parenchymal tissue for example, are hard to control by means of the classical method. In this field of application, the argon plasma coagulation method therefore represents a valuable supplement to traditional HF application, providing quite a number of important advantages:

- Argon gas coagulation means that the HF current required for coagulation is transported right up to the target tissue via the ionized - and thus electro-conductive - argon gas beam, ensuring flat, gap-free coagulation. As the gas beam is luminous, it can be easily kept under visual control when moving it over the surface to be coagulated.
- Application is non-contact, with a distance of 3 to 20 mm between the electrode and the tissue. If the distance exceeds 20 mm, the gas beam goes out.
- Due to the heat generated in the tissue, the surface dries out. This automatically limits the coagulation depth to a maximum of 3 mm. In areas with a perforation risk, therefore, the beamer is the method of choice.
- The argon gas generates an inert atmosphere. This prevents tissue carbonization and means faster and better wound healing.
- No odors and no smoke are produced during application - the surgeon has always an excellent view of the operating site.

So argon gas-supported coagulation is a really new, universally applicable therapeutic method – not just another variety of the classical HF method.



Advantages of the KLS Martin Argon Beamer System

- Utmost ease of operation thanks to the backlit graphic display, with all parameter settings clearly arranged and displayed.
- The flow value displayed is a real output value, corresponding to the gas flow present at the distal end of the electrode.
- The KLS Martin MB 181 offers an exceptionally wide range of flow rates, selectable from 0.1 l/min to 12 l/min.
- 10 program storage positions allow storage of customized settings for special interventions or different surgeons.
- For gas supply, 5-l or 10-l cylinders or the central supply system may be used.
- All display and signal settings can be selected individually.
- The beamer and the electro-surgical units ME 411, ME MB 1 and ME MB 2 can be activated jointly either via the foot switch or via the handle. In combination with ME MB 1 activation only via foot switch.

Application accessories (rigid) for the MABS system

All MABS electrodes share the following features:

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



80-181-02

MABS handle for rigid applicators
Two pushbuttons for coagulating and cutting
Connection cable 4.5 m/15 ft. in length,
for HF current and argon gas
Autoclavable at 134°C



80-181-08

MABS needle electrode, adjustable



80-181-05

Fixing equipment for rigid MABS electrodes



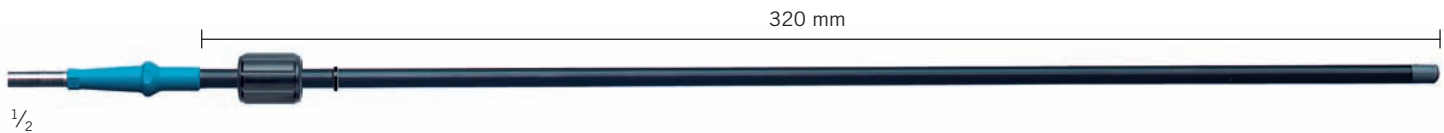
80-181-10

MABS beam electrode for open surgery
High-temperature-resistant ignition tip



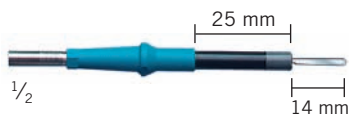
80-181-11

MABS beam electrode for open surgery
High-temperature-resistant ignition tip



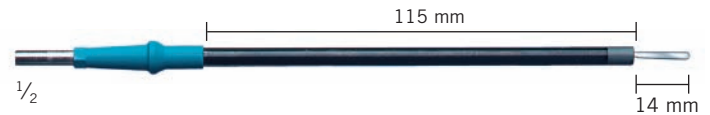
80-181-12

MABS beam electrode for laparoscopy and pelviscopy, high-temperature-resistant ignition tip



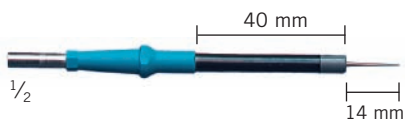
80-181-13

MABS lancet electrode for open surgery



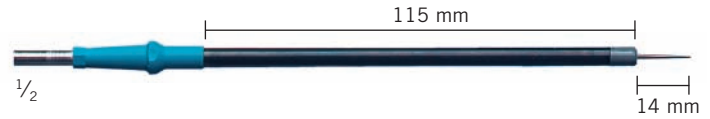
80-181-14

MABS lancet electrode for open surgery



80-181-15

MABS needle electrode for open surgery

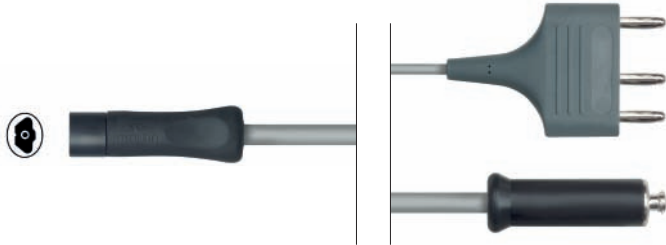


80-181-16

MABS needle electrode for open surgery

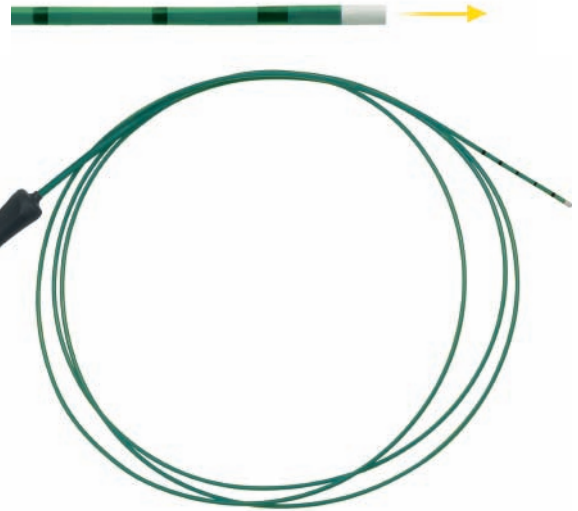
All MABS flexible probes have the following features in common:

- Distal ceramic nozzle
- Scaled probe tip
- Autoclavable at 134°C (only reusable probes)
- Reduced gas consumption (50% lower than previous probes)

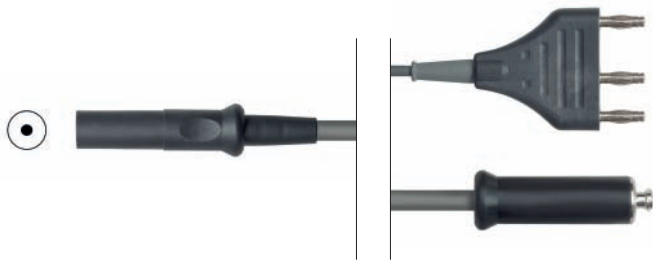


80-181-30

MABS connection cable for flexible probes (disposable + reusable)
 Connection cable, 2.5 m, for HF current and argon gas
 HF-current and gas-flow activation via foot switch
 Autoclavable at 134°C

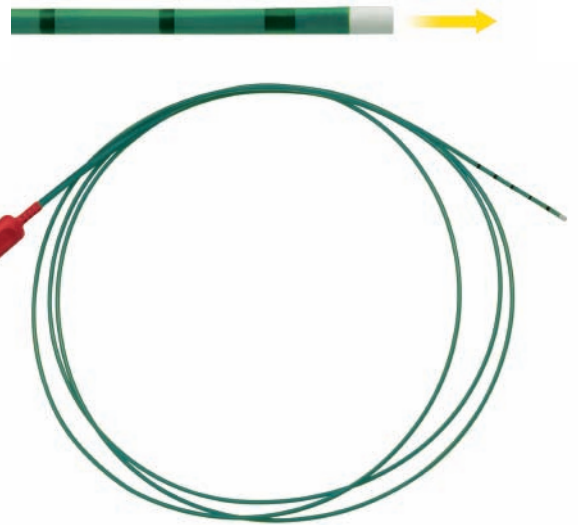


Argon probe (disposable)



80-181-17

MABS connection cable for Erbe probes, with circular connector



Argon probe (reusable)



80-181-31

Rinsing adapter for reusable flexible argon probes
 SU = 5/pack



80-181-90

MABS Sterile filter
 SU = 50/pack

MABS probes				
Item No.:				
80-181-30	MABS connection cable, 3 m – PIN connection			
80-181-23	MABS GIT Probe,	reusable,	Ø 2.3 mm,	Length 2.3 m
80-181-24	MABS GIT Probe,	reusable,	Ø 3.2 mm,	Length 2.3 m
80-181-25	MABS TBS Probe,	disposable,	Ø 1.5 mm,	Length 1.6 m (10/pack)
80-181-26	MABS GIT Probe,	disposable,	Ø 1.8 mm,	Length 3.2 m (10/pack)
80-181-27	MABS GIT Probe,	disposable,	Ø 2.3 mm,	Length 2.3 m (10/pack)
80-181-28	MABS GIT Probe,	disposable,	Ø 3.2 mm,	Length 2.3 m (10/pack)
80-181-29	MABS GIT Probe,	disposable,	Ø 2.3 mm,	Length 3.4 m (10/pack)
80-181-32	MABS GIT Probe, Side Fire	disposable,	Ø 2.3 mm,	Length 2.3 m (10/pack)

General accessories for the MABS system

ME 200 (monopolar only)
ME 401/411 (monopolar only)
ME M1/ME MB1
ME CD1
ME MB2
maxium®



80-811-30
Double foot switch,
anti-explosive
Cable length: 5 m

ME 200 (monopolar only)
ME 401/411 (monopolar only)
ME M1/ME MB1
ME CD1
ME MB2
maxium®



80-821-02
Double foot switch,
anti-explosive
Cable length: 5 m



80-344-05
Disposable neutral electrode for adults and children,
single surface 118 cm², without connection cable, 50/pack



80-344-09
PCS DuoSafe disposable neutral electrode for adults and children,
split contact surface 107 cm², without connection cable, 50/pack

Further neutral electrodes (reusable) are mentioned in the HF accessories catalog.



80-294-40
4 m / 12 ft.
Connecting cable for disposable
electrodes



80-294-44
5 m / 16 ft.
Connecting cable for disposable electrodes
maxium® i-Version
ME MB2 i-Version/Valleylab

ME 411
ME CD1



80-181-50

1 m/3 ft.

MABS interface cable

ME 200
ME MB1/ME M2



80-181-51

Foot switch signal cable

MABS pressure reducer		
Item no.	Standard	Countries
80-181-52	DIN 477, No. 6	D, A, CH, F, P, E, GR
80-181-53	DIN 477, No. 10	NL, DK, S, NOR, B
80-181-54	UNI 4412	I
80-181-55	BS 341, No. 3	UK, AUS, MY, IN, TR, former Commonwealth
80-181-56	CGA, Nr. 580	USA, MX, TH, South America



MABS pressure reducer with flexible tube and quick-action coupling
2.5 to 4.5 bar, tube length: 1 m/3 ft.



94-179-58

Gas bottle with "4.8 quality" argon gas filling or available through your local supplier

Please note special shipping regulations!

94-179-59

Argon gas cylinder, empty

Overview of MABS basic equipment

Technical accessories

80-046-00	maxium® Cart
80-081-00	Argon Beamer unit MB 181
80-041-01	Electrosurgical unit ME 411
80-040-08	ME MB1
80-040-06	ME MB2 m
80-040-07	ME MB2 i
80-181-51	MABS foot switch signal cable (for ME MB1/ME MB2)
80-181-50	MABS foot switch signal cable (for ME 411)

Selection of pressure reducers (acc. to national standards)

80-181-52	MABS pressure reducer, DIN 477 No. 6, for D, A, CH, F, P, E, GR
80-181-53	MABS pressure reducer, DIN 477 No. 10, for NL, DK, S, NOR, B
80-181-54	MABS pressure reducer, UNI 4412, for I
80-181-55	MABS pressure reducer, BS 341 No. 3, for GB, AUS, Malaysia, India, former Commonwealth, Turkey
80-181-56	MABS pressure reducer, CGA No. 580, for USA, South America, Mexico, Thailand

Clinical accessories (rigid) for open surgery (Ø 5 mm)

80-181-02	MABS handle, for rigid electrodes
80-181-05	Fixing equipment for rigid MABS electrodes
80-181-08	MABS needle electrode, adjustable
80-181-10	MABS beam electrode, working length 25 mm
80-181-11	MABS beam electrode, working length 100 mm
80-181-13	MABS lancet electrode, working length 40 mm
80-181-14	MABS lancet electrode, working length 115 mm
80-181-15	MABS needle electrode, working length 40 mm
80-181-16	MABS needle electrode, working length 115 mm

Clinical accessories (rigid) for laparoscopic surgery

80-181-02	MABS handle, for rigid electrodes
80-181-12	MABS beam electrode, working length 320 mm
80-181-05	Fixing equipment for rigid MABS electrodes
80-181-08	MABS needle electrode, adjustable

Clinical accessories (flexible) for endoscopic surgery

80-181-30	MABS connection cable, 3 m PIN connection
80-181-23	MABS GIT probe, flexible, reusable, Ø 2.3 mm, working length 2.3 m
80-181-24	MABS GIT probe, flexible, reusable, Ø 3.2 mm, working length 2.3 m
80-181-25	MABS TBS probe, flexible, disposable, Ø 1.5 mm, working length 1.6 m (10/pack)
80-181-26	MABS GIT probe, flexible, disposable, Ø 1.8 mm, working length 3.2 m (10/pack)
80-181-27	MABS GIT probe, flexible, disposable, Ø 2.3 mm, working length 2.3 m (10/pack)
80-181-28	MABS GIT probe, flexible, disposable, Ø 3.2 mm, working length 2.3 m (10/pack)
80-181-29	MABS GIT probe, flexible, disposable, Ø 2.3 mm, working length 3.4 m (10/pack)
80-181-32	MABS GIT probe, flexible, disposable, Side Fire Ø 2.3 mm, working length 2.3 m (10/pack)

Optional

80-181-51	MABS foot switch signal cable
80-181-50	MABS interface cable (for ME 411 only)
80-821-02	MABS foot switch (monop.), heavy-duty design
80-811-30	MABS foot switch (monop.), light-duty design
80-294-40	Connection cable for disposable neutral electrodes
80-181-90	Sterile filter

Notes:

1. Smooth OR processes require the seamless integration of the hospital's instrument processing cycles and, consequently, the availability of a sufficient quantity of accessories.
2. "4.8 quality" argon gas may be obtained from local suppliers (to be delivered in commonly used 5-l or 10-l cylinders).

Technical Specifications
KLS Martin Argon Beamer MB 181

Power requirements	100-240 V AC; 50/60 Hz, universal power supply unit
Line fuses	2 x T 0.8 A (slow-blow.)
Power input	max. 70 VA
Class of protection	I
Type of equipment/method of connection	CF; defibrillator-proof
Potential equalization	Connector on rear side
Flow rate increments	0.1 to 12 l/min (measured at the distal end of the applicator)
Resolution (l/min)	0.1 to 1 l / 0.2 to 3 l / 0.5 to 5 l / 1 to 12 l
Gas cylinder to be used	5 l or 10 l (only with KLS Martin pressure reducer)
Max. gas-cylinder pressure	200 bar
Connection to central gas supply system:	
min. supply pressure	2.5 bar
max. supply pressure	4.5 bar
Minimum purity of argon gas	99.998%
Dimensions	405 x 135 x 380 mm (W x H x D)
Weight	6.9 kg
Classification of unit and accessories	II b
Approval/mark of conformity	CE 0297, in compliance with 93/42/EEC

Ordering data

80-081-00	KLS Martin Argon Beamer MB 181 with connecting cable, without accessories
80-041-01	KLS Martin Electrosurgical Unit ME 411 with connecting cable, without accessories
80-080-00	Trolley



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