ME MB 3
The efficient solution for the OR
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

Display
Power setting constantly under visual control

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.

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.

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
**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.

**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.

**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.

**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.

**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

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*)
Monopolar Contact Coagulation

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

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.

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).

Bipolar Coagulation

KLS Martin offers users a wide range of bipolar accessories:
- marCut® instruments
- nonStick-red-forceps
- nonStick-flush-forceps
- marLap instruments
HF trolleys

maXium® smart Cart
HF trolley
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
- 80-217-13-04 1 Electrode handle smartPen with two pushbuttons, large coax plug and permanent cord of 4 m
- 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

- 80-220-02-04 1 Electrode handle smartPen without pushbuttons, large coax plug and permanent cord of 4 m
- 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
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- 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 1/4"
- 80-924-20-04 1 Bipolar forceps, straight, blunt, 20 cm/8"
- 80-925-16-04 1 Bipolar forceps, angled, blunt, 16 cm/6 1/4"
- 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 nonStick 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, nonStick red, straight, blunt, 16 cm/6 1/4"
- 80-992-20-04 1 Bipolar forceps, nonStick red, bayonet-shaped, blunt, 20 cm/8"
- 80-987-17-04 1 Bipolar forceps, nonStick red, angled, blunt, 16 cm/6 1/4"
- 80-987-20-04 1 Bipolar forceps, nonStick red, angled, blunt, 20 cm/8"
- 80-986-20-04 1 Bipolar forceps, nonStick red, straight, blunt, 20 cm/8"
### Ordering information for HF units and accessories

| m       | 80-040-11-04 | ME MB 3 electrosurgical unit, with mains cable, without accessories, KLS Martin ("m") version, 220–240 V |
|         | 80-040-11-10 | ME MB 3 electrosurgical unit, with mains cable, without accessories, KLS Martin ("m") version, 100–127 V |

| i       | 80-040-12-04 | ME MB 3 electrosurgical unit, with mains cable, without accessories, international ("i") version, 220–240 V |
|         | 80-040-12-10 | ME MB 3 electrosurgical unit, with mains cable, without accessories, international ("i") version, 100–127 V |
# Technical data

**ME MB 3** from KLS Martin

## ME MB 3 technical data

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

## HF output power:

<table>
<thead>
<tr>
<th>Type of current</th>
<th>Power at 300 Ω</th>
<th>Crest factor at 300 Ω</th>
<th>Voltage max. Vpp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut 1 (pure)</td>
<td>max. 400 W</td>
<td>1.6</td>
<td>2,300</td>
</tr>
<tr>
<td>Cut 2 (blend)</td>
<td>max. 300 W</td>
<td>1.9</td>
<td>2,500</td>
</tr>
<tr>
<td>Cut 3 (super blend)</td>
<td>max. 200 W</td>
<td>2.4</td>
<td>2,700</td>
</tr>
<tr>
<td>Forced Prep</td>
<td>max. 120 W</td>
<td>4.9</td>
<td>3,900</td>
</tr>
<tr>
<td>Endo Mode</td>
<td>max. 100 W</td>
<td>1.6</td>
<td>2,800</td>
</tr>
<tr>
<td>Contact coagulation</td>
<td>max. 250 W</td>
<td>3.4</td>
<td>3,200</td>
</tr>
<tr>
<td>Spray coagulation</td>
<td>max. 120 W</td>
<td>5.6</td>
<td>9,000</td>
</tr>
<tr>
<td>Bipolar coagulation</td>
<td>max. 100 W</td>
<td>2.1</td>
<td>600</td>
</tr>
</tbody>
</table>

| Duty type        | intermittent 10 s / 30 s = duty factor of 25%                          |
| Line fuses       | 220–240 V: T 4 A (slow-blow)                                           |
| Sound level      | HF current activation: 40 - 65 dB (adjustable)                          |
| Weight           | 8.6 kg                                                                 |
| Interference suppression | Limits in conformity with EN 55011                                    |
| Dimensions       | Width: 405 mm; height: 135 mm; depth: 380 mm                           |
| CE-marking       | according to 93/42/EEC                                                 |
marVac®/maxium® smartVac –
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® and maxium® smart marVac® smoke evacuation system, please refer to our separate product brochures.
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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