maXium® smart Vac

The innovative system for
efficient smoke evacuation

Enhanced visibility and maximum safety at the operating site – surgical smoke is a trouble of the past!

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KLS Martin has a huge expertise in laser- and electrosurgery. With the innovative smoke evacuation system maXium® smart Vac, KLS Martin is setting a new standard in the evacuation of surgical smoke.

In the recent years the demand for devices with the possibility to extract the smoke directly from the OR field has grown. The smoke evacuator maXium® smart Vac in combination with our innovative high-frequency generators are reliable partners in your operating theater.
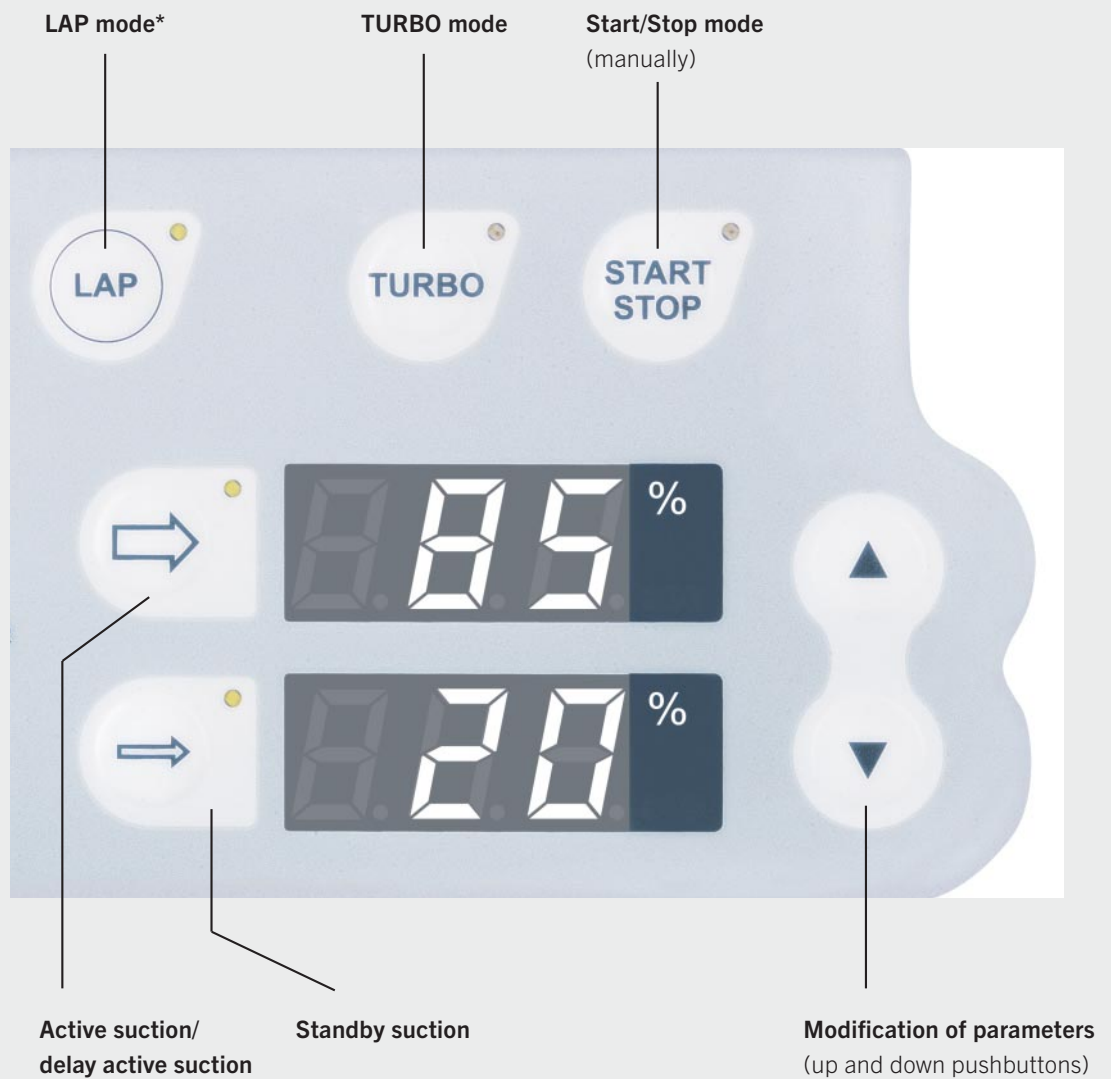
Convince yourself!

The advantages at a glance

- Simultaneous evacuation to high-frequency activation
- Individual parameters can be memorized in the user program of the maXium®
- Extended filter-capacity due to special filter technology
- Two suction hoses can be connected, each individually or simultaneously
- TURBO mode
- LAP mode
- Obstruction control
- Connection to central suction device possible

maXium® smart Vac
Easy selection and adjustment of parameters

The smoke evacuator maXium® smart Vac offers reliable protection from particles, viruses, gases and carcinogenic substances capable of invading the lung. When used in automatic mode, the smoke evacuator is only active when needed, triggered by HF- or laser activation.

LAP mode*   **TURBO mode**   **Start/Stop mode**
(manually)

Active suction/   **Standby suction**   **Modification of parameters**
delay active suction   (up and down pushbuttons)
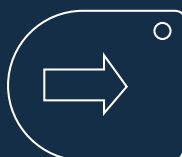
TURBO Mode
Huge quantity of smoke can be
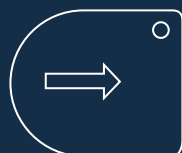eliminated effectively from the OR field.

LAP Mode*
Specially designed for laparoscopic procedures;
suction parameters will be automatically limited
and the reflux of gas will be reduced to a
minimum.

START/STOP
Alternatively, the smoke evacuator
can also be activated manually.

Active suction / standby suction
Active suction, stand-by suction and delay
time can be selected as required before
and during the surgical procedure.
These parameters can be easily adjusted
by pressing the up and down buttons.

Modification of parameters
(up and down pushbuttons)

* only when ordering maXium® smart Vac with LAP mode

5

maXium® smart Vac
Changeable main filter unit

The specially designed filter system which corresponds to **ULPA***
standard provides safe and effective protection in the operating
theater. The large inner-filter-surface provides a long-lasting lifetime.

The main filter unit provides two different connections. Suction tubes
with Ø 22 mm as well as with Ø 10 mm can be connected individually
or simultaneously.

The filter status will be measured
permanently and shown on the
indicator. A required filter change
will be displayed by the smoke
evacuation system, early in advance.
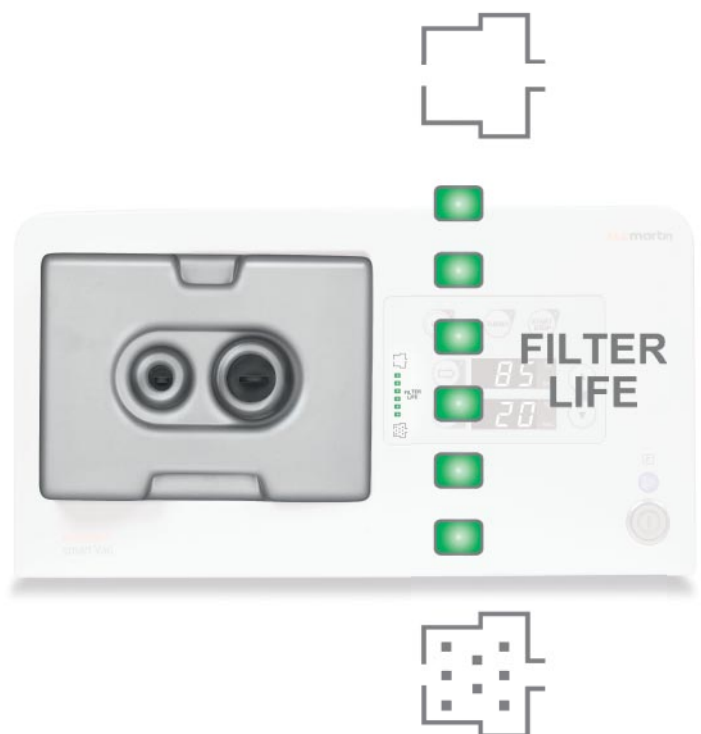
If required, the smoke evacuator can be connected
to a central-OR-suction system. This optional feature
can be ordered on request.

* **ULPA** = **U**ltra **L**ow **P**enetration **A**ir

maXium® smart Vac
maXium®
maXium® smart Cart

The HF generator as well as the smoke evacuation
system can be positioned on a specially designed trolley.
Alternatively, the system can be placed on a pendant.

**User-friendly set-up of parameters via
MCB (=Martin-Communication-Bus)**

The parameters for the maXium® smart Vac
can be selected and adjusted through the
HF generator maXium® and memorized in
the user-program.*
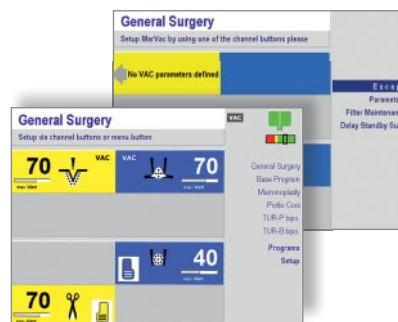
* Please consider that maXium® HW06 and software V3.398 are required.

High Efficiency –
Surgical smoke can be extracted directly from the surgical site, where it is created.

KLS Martin offers a wide range of accessories for the elimination of surgical smoke created from electrosurgery or medical laser systems.

Various clip-on attachments offer in combination with the smoke evacuation system maXium® smart Vac reliable protection from surgical smoke.
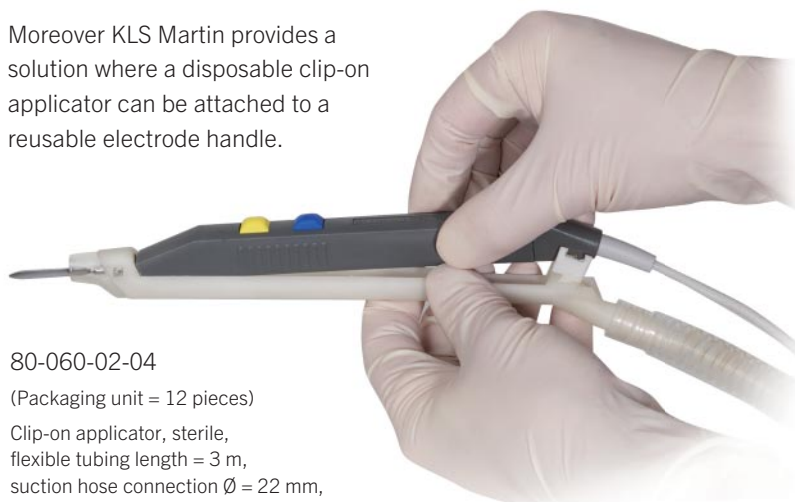
80-060-03-04

(Packaging unit = 12 pieces)

Electrode handle with electrode Ø 2.4 mm, with attached clip-on applicator, sterile, flexible tubing length = 3 m, suction hose connection Ø = 22 mm

Moreover KLS Martin provides a solution where a disposable clip-on applicator can be attached to a reusable electrode handle.

80-060-02-04

(Packaging unit = 12 pieces)

Clip-on applicator, sterile,
flexible tubing length = 3 m,
suction hose connection Ø = 22 mm,
attachable for KLS Martin electrode handles
80-217-xx-04, 80-210-12-04*

* Electrode-handle needs to be ordered separately.

smartLap

Electrodes with smoke evacuation
for laparoscopy

Premium quality working tips

L-hook	J-hook	Needle
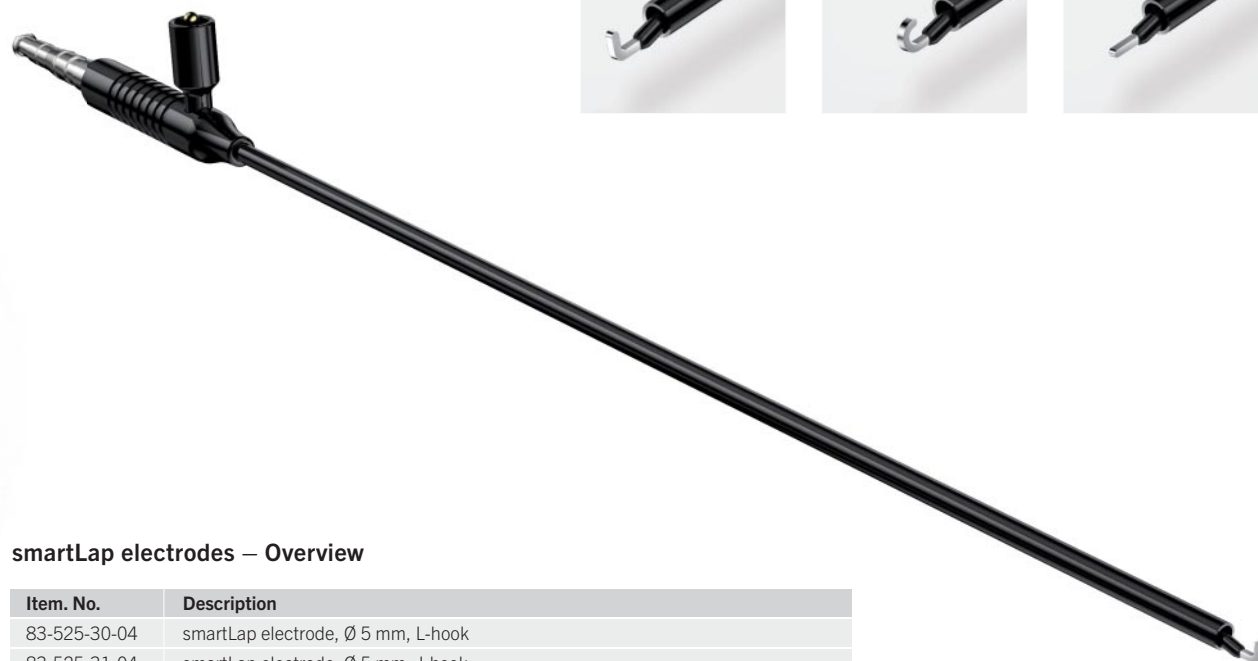
smartLap electrodes – Overview

Item. No.	Description
83-525-30-04	smartLap electrode, Ø 5 mm, L-hook
83-525-31-04	smartLap electrode, Ø 5 mm, J-hook
83-525-32-04	smartLap electrode, Ø 5 mm, needle-tip

Accessories	
80-060-04-04	Single-use tubing for smoke evacuation, Ø 10 mm, with Luer-lock connector
83-120-51-04	Connector cord, monopolar, Ø 4 mm, 3-pin

Ordering information for
smoke evacuation system **maXium**® smart Vac
and accessories

Item No.	Product description
80-062-00-04	Smoke evacuation system maXium® smart Vac with **LAP-Mode**, 220 V incl. main filter unit (item 80-060-01-04)
80-062-00-10	Smoke evacuation system maXium® smart Vac with **LAP-Mode**, 100 V incl. main filter unit (item 80-060-01-04)
80-062-01-04	Smoke evacuation system maXium® smart Vac, 220 V incl. main filter unit (item 80-060-01-04)
80-062-01-10	Smoke evacuation system maXium® smart Vac, 100 V incl. main filter unit (item 80-060-01-04)

Item No.	Individual components
80-060-01-04	Main filter unit for smoke evacuator maxium® smart Vac (ULPA standard)
80-811-50-04	Single-pedal foot switch for manual activation
80-060-06-04	Adapter for connection to a central suction (Ø 22 mm)

Item No.	Connection options for automatic operation (HF generator or laser)
80-091-01-04	MCB connection cable (maXium® and maXium® smart Vac)
80-060-05-04	Adapter for mains current detection
76-100-60-04	Extension cable for smoke evacuation with laser
80-091-02-04	Connection cable ME MB2/3 with maXium® smart Vac
79-800-02-04	Interlink cable to Limax® 60/diomax® 980/1550®

Item No.	Accessories and consumables
80-060-02-04	Clip-on applicator, sterile, disposable, flexible tube length 3 m, Ø 22 mm for reusable electrode handles KLS Martin 80-217-xx-04 and 80-210-12-04 (packaging unit = 12 pieces)
80-060-03-04	Clip-on and electrode handle, Ø 2.4 mm, sterile, disposable, flexible tube length 3 m, Ø 22 mm (packaging unit = 12 pieces)
80-060-04-04	Air hose, sterile, Ø 10 mm with Luer-Lock connection, 2.5 m long, (e.g. for connection of trocar) (packaging unit = 20 pieces)
79-225-02-04	Funnel, flattened on one side, with Ø 22 mm connection, can be autoclaved 50 times at max. 134°C (273°F)
79-225-03-04	Plastic suction tube with cone connection for suction hose Ø 22 mm, can be autoclaved 50 times at max. 134°C (273°F)
79-225-06-04	Hose connector, straight, Ø 22 mm (female) to Ø 10 mm (male); can be autoclaved 50 times at max. 134°C (273°F)
79-225-07-04	Hose connector, straight, Ø 22 mm (female) to Ø 22 mm (male); can be autoclaved 50 times at max. 134°C (273°F)
79-225-08-04	Air hose Ø 22 mm, 3.0 m long, multi-use; can be autoclaved 50 times at max. 134°C (273°F)
79-225-09-04	Air hose Ø 10 mm, 2.0 m long, multi-use; can be autoclaved 50 times at max. 134°C (273°F)
79-225-10-04	Suction hose, sterile, Ø 22 mm, single-use (packaging unit = 25 pieces)
79-225-11-04	Prefilter (HEPA standard), Ø 22 mm, sterile, single-use (packaging unit = 20 pieces)

Technical specifications	
Power supply	100-240 V ± 10%; 50/60 Hz
Appliance air flow	> 750 l/min
Power input	< 500 W / 740 VA
Activation	Automatic activation, front-panel button, optionally by foot switch
	Mains current detection (adapter)
Interfaces	Foot switch, MCB (Martin Communication Bus), USB
Protection class	I
Classification acc. to MDD	IIa
Type of applied part	CF; defibrillation-proof
Main filter	ULPA efficient 99.9995% @ 0.1 - 0.2 µm for tube size Ø 22 mm and Ø 10 mm
Filter lifetime	40 hours. Filter change will be indicated at the unit.
Weight	Smoke evacuation system maXium® smart Vac, 220 - 240 V, 10.6 kg
	Smoke evacuation system maXium® smart Vac with LAP mode, 220 - 240 V, 11.6 kg
	Smoke evacuation system maXium® smart Vac, 100 V / 110 V / 120 V / 127 V, 12.6 kg
	Smoke evacuation system maXium® smart Vac with LAP mode, 100 V / 110 V / 120 V / 127 V, 13.6 kg
EMI	Keeps limits according to EN 55011 and IEC 60601-1-2
	Immunity according to IEC 801
Dimensions	Width 390 mm
	Height 218 mm
	Depth 460 mm (with main filter)
Environmental conditions for transportation and storage	Ambient temperature -25°C to +70°C (-13°F to 158°F)
	Relative humidity 10% to 100%
	Atmospheric pressure 500 hPa to 1060 hPa
Environmental conditions for operation	Ambient temperature +10°C to +40°C (+50°F to 104°F)
	Relative humidity 30% to 75%
	Atmospheric pressure 700 hPa to 1060 hPa
CE-marking: conform with 93/42/EEC	Classified acc. to MDD (Medical Device Directive) IIa

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