

Electrosurgery

Convincing Precision!



marSeal

Seal
Safe

80

max. Watt

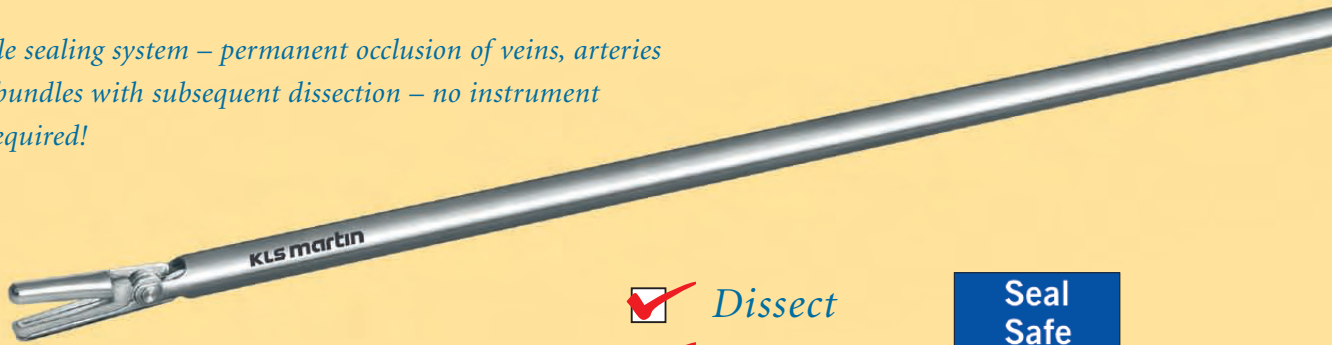
marSeal and maxium®

THE SYSTEM FOR BIPOLAR VESSEL SEALING

KLS martin
GROUP

marSeal and maxium® – Bipolar Sealing System with the marSeal Instrument

The reusable sealing system – permanent occlusion of veins, arteries and tissue bundles with subsequent dissection – no instrument exchange required!

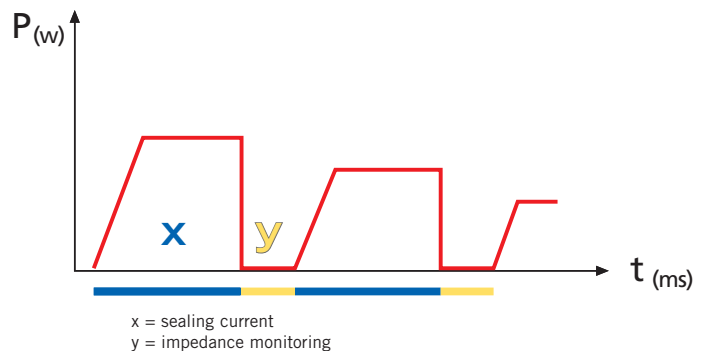


mar Seal

- Dissect*
- Seal*
- Cut*



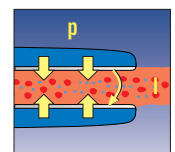
SealSafe® Bipolar Vessel Sealing



The combination of SealSafe® current and marSeal instrument provides a bipolar application technique for effective sealing of vessels and tissue bundles that spares you the need for previous dissection and exposure of individual structures. Unlike the conventional bipolar HF technique, this unique system combines a relatively high output power with a low voltage.

The entire sealing process is continuously monitored by the maxium® HF generator, whose features include a dedicated tissue impedance monitoring function. During this process, individual energy “packages” are sequentially delivered into the tissue in the form of high-frequency pulses. Once the preset sealing degree has been reached, the maxium® terminates the process automatically.

The “secret” behind the sealing process lies in the fact that endogenous structural proteins (such as collagen and elastin) are transformed to create a permanently sealed zone. This is mainly due to the effective combination of high pressure (p) and electric current (I). The instrument’s ratchet plays a vital role here because it is important for the pressure to be maintained and kept constant throughout the application.



Pressure (p) plus electric current (I) achieves the sealing

Thanks to the precise, specially adapted SealSafe® current and its use in conjunction with the marSeal instrument, only the tissue held between the instrument’s jaws is actually sealed – lateral thermal tissue damage can thus be kept to an absolute minimum. Besides, the SealSafe® current has been further optimized with a view to minimizing tissue adhesion drastically and preventing carbonization as long as the system is used as intended.



marSeal

The marSeal instrument is a universally applicable instrument that, thanks to its modular design offering different shaft lengths, can be used for laparoscopic applications as well as open surgery.

marSeal allows you to occlude veins, arteries and tissue bundles permanently and reliably. Besides, the instrument features an integrated blade mechanism by which the sealed zone can be conveniently cut in the middle once the sealing process has been completed – without any need for exchanging instruments!

The instrument can be completely taken apart and autoclaved, with the blade being the only disposable part used in its design. This offers a further benefit in the form of a significant cost reduction, compared with an entirely disposable instrument.

Advantages offered by the marSeal instrument

- Reliable sealing with subsequent tissue dissection
- Cost reduction due to minimal share of disposables
- Modular system with different shaft lengths for laparoscopic as well as open-surgical applications
- Easy cleaning as the instrument can be taken apart completely
- Autoclavable at 134°C (273°F)
- Validated cleaning
- Additional benefits deriving from marSeal's use in conjunction with the maximum® and its specially adapted SealSafe® current:
 - minimized tissue adhesion and corresponding contact surface incrustation
 - reduced tissue damage by lateral heat spread
 - efficient, time-saving sealing process
- The ratchet integrated into the handle ensures that a constant pressure is applied to the target tissue as required for effective sealing
- The ergonomic design of the handle provides for ease of working, preventing fatigue in the surgeon's hand during the sealing process and subsequent dissection
- Easy application of the instrument to the target tissue as the tubular shaft can be rotated by 360°

Modular System

Instruments for laparoscopic applications and open surgery

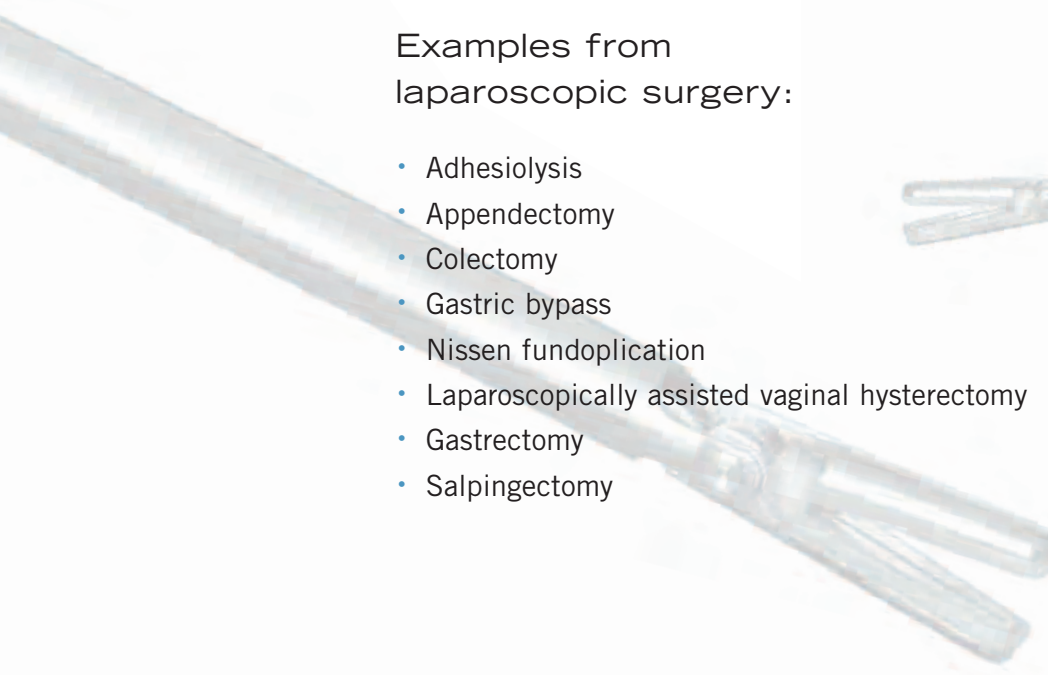
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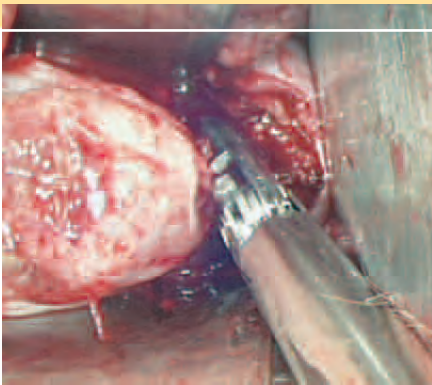


Laparoscopic salpingectomy

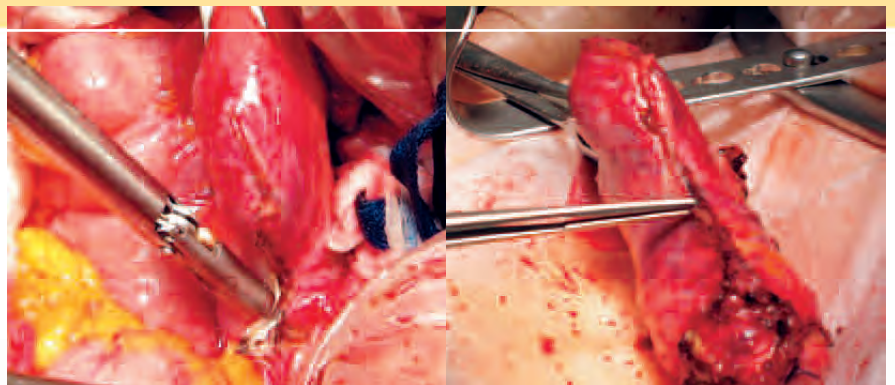
Examples from
laparoscopic surgery:

- Adhesiolysis
- Appendectomy
- Colectomy
- Gastric bypass
- Nissen fundoplication
- Laparoscopically assisted vaginal hysterectomy
- Gastrectomy
- Salpingectomy





Vaginal hysterectomy



Abdominal hysterectomy

Examples from
open surgery:

- Adhesiolysis
- Abdominal hysterectomy
- Vaginal hysterectomy
- Colon resection
- Gastrectomy
- Gastric bypass
- Radical prostatectomy
- Cystectomy
- Salpingectomy



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