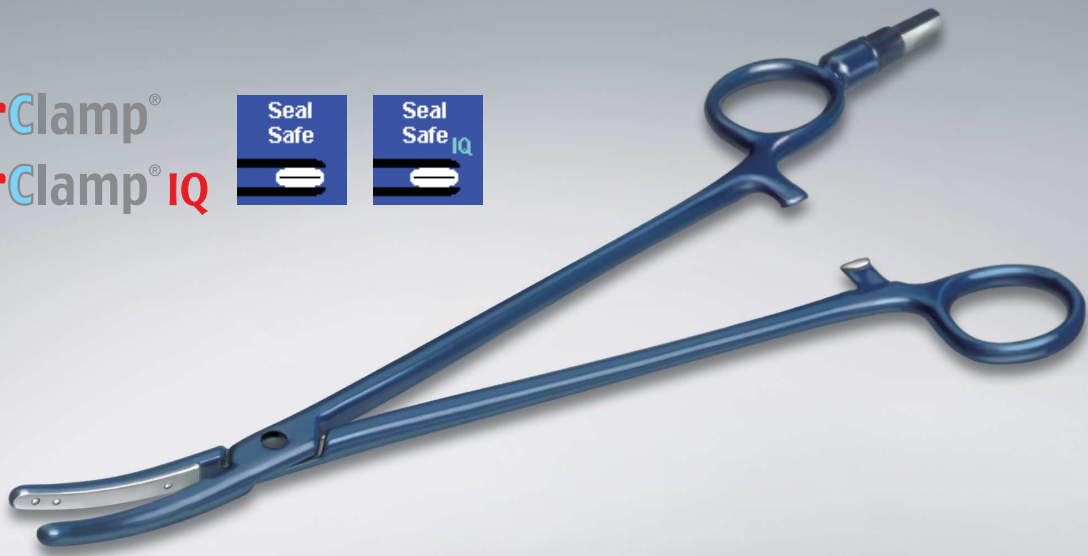


marClamp®

marClamp® IQ



marClamp® instruments and maxium®

*The SealSafe® bipolar vessel sealing
system for open surgery*





marClamp®
Instruments for bipolar
vessel sealing with SealSafe®

The reusable marClamp® and marClamp® IQ instruments are intended for bipolar vessel sealing in conjunction with the maxium® HF generator.

The marClamp® instruments without IQ function can be used with any maxium® unit that has been placed on the market, whereas marClamp® IQ instruments are compatible only with maxium® units with hardware status 06 or higher.

marClamp® IQ instruments are equipped with a special plug by which the instrument is automatically assigned the required type of current, SealSafe®, and an output power suitable for the instrument.

The maxium®'s proven program philosophy is fully preserved. If the required type of current has already been assigned to the connecting socket as part of the active program, the values saved therein are not automatically overwritten with the IQ values – in other words, the original values of the program are maintained. This ensures that the marClamp® IQ instruments can be used either in “plug & play” mode or in the customary way offered by the maxium®'s program philosophy.

SealSafe® is a process-controlled current with continuous measurement of target tissue impedance and automatic adjustment of the output power throughout the sealing process. Completion of the process is indicated by an acoustic signal (sequence of tones). This automatically stops the flow of current.

Bipolar vessel sealing system with maxium® and marClamp®

With the new maxium® HF generator, KLS Martin relies on the latest technology and advanced design. Based on the SealSafe® current used in conjunction with marClamp® bipolar instruments, the maxium® offers you a reliable vessel sealing system in addition to all the classical HF application options. The system is primarily intended for use in gynecology, general surgery, urology and ENT.



SealSafe®

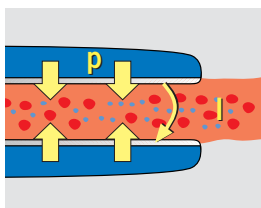
The bipolar vessel sealing system consisting of the maxium® high-frequency generator with its SealSafe® current and the bipolar marClamp® instruments allows you to seal vessels and tissue bundles effectively and lastingly without any need for previous dissection or detailed exposure of the tissue to be sealed.

Thanks to the precise SealSafe® current specially adapted to this kind of application, only the tissue located between the instrument's jaws is sealed – lateral thermal tissue damage can thus be kept to an absolute minimum. This is explained by the high power-to-voltage ratio (high output power but low voltage) that is typical of the SealSafe® current, distinguishing it from the conventional bipolar HF technique.

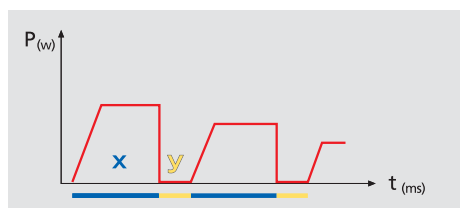
Besides, the SealSafe® current has been optimized to reduce tissue adhesion or instrument incrustation drastically and prevent tissue carbonization as long as the current is used as intended.

Due to the effective combination of high pressure (p) and electric current (I), a permanently sealed zone is reliably created on arteries, veins or tissue bundles. The instrument's ratchet plays a vital role here because it is important for the pressure to be maintained and kept constant throughout the sealing process.

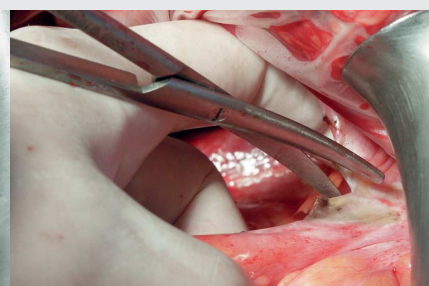
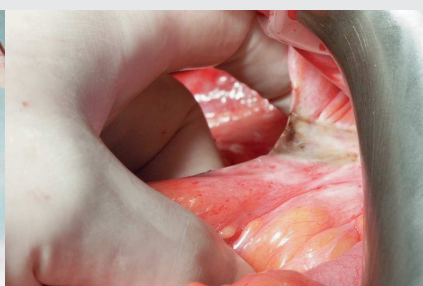
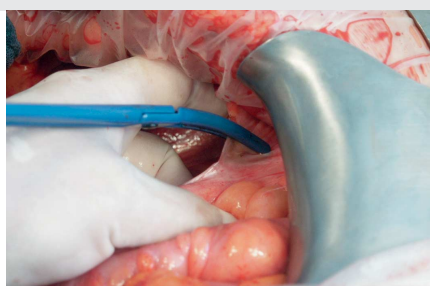
During this process, endogenous structural proteins such as collagen and elastin are transformed so that a permanently sealed zone is created as a result.



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



x = sealing current
y = impedance monitoring



The sealing process is started by grasping the tissue with the bipolar marClamp® instrument and closing the ratchet. This strongly compresses the tissue.

The HF current is now activated via the foot switch until the sealing process stops automatically. Completion is confirmed by an acoustic signal.

Finally, the sealed tissue can be safely transected with a conventional pair of scissors.

marClamp® applications

- General and visceral surgery
 - Gastrectomy
 - Sigmoidectomy
 - Colectomy
 - Cholecystectomy
 - Cystectomy
 - Mastectomy
 - Splenectomy
 - Appendectomy
- Gynecology
 - Abdominal hysterectomy
 - Vaginal hysterectomy
 - Adhesiotomy
 - Cystectomy
- Urology
 - Prostatectomy
 - Cystectomy
- ENT
 - Thyroidectomy
 - Strumectomy
 - Parotidectomy
 - Neck dissection
- Proctology
 - Hemorrhoidectomy

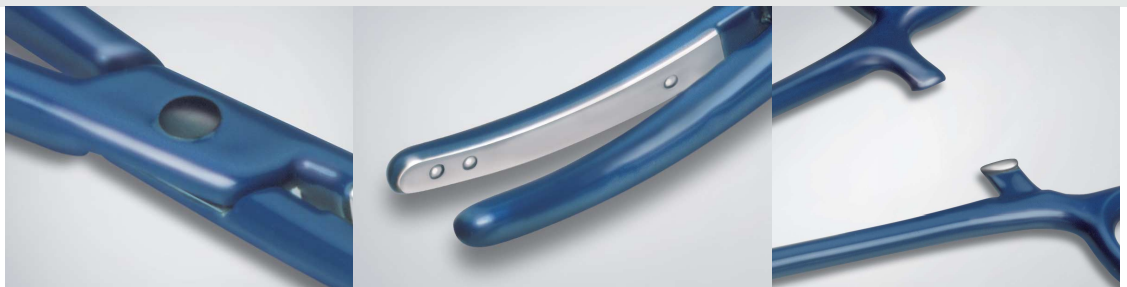
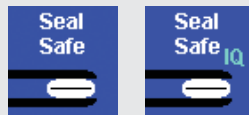
SealSafe® and marClamp®

Bipolar vessel sealing with the KLS Martin marClamp® instrument is supported by KLS Martin's maxium® HF generator.

No additional unit is required because the maxium® HF generator features SealSafe®, a current that has been specially developed for use with the bipolar marClamp® instruments!



marClamp®
marClamp® IQ



The instrument can be reused after autoclaving it at 134°C (273.2°F). Due to the special current flow, no insulation is needed in the joint or box lock. This makes it highly resistant to wear.

One of the instrument's jaws features ceramic pins that ensure a defined distance between the jaws over their entire length, thus preventing a short. Besides, the pins prevent tissue slippage as well.

To apply the necessary pressure to the tissue and maintain it throughout the sealing process, the marClamp® instruments feature a ratchet.

SealSafe® and marClamp®

SealSafe® is a current specially designed for use with the bipolar marClamp® instruments. Continuous tissue impedance monitoring ensures tissue coagulation to exactly the intended degree.

In this process, individual "energy packets" are released into the tissue on a time-controlled, continuously system-monitored basis until the intended coagulation degree is achieved and the sealing completed. Completion is acknowledged by an acoustic signal. At the same time, the maxium® HF generator automatically blocks power output.

The marClamp® instrument, in conjunction with the SealSafe® current, spares you the need for time-consuming suture ligations. But apart from saving time, this novel technique has the important advantage that no exogenous materials (suture, clips) are left in the patient's body.

In a nutshell, the new system allows you to seal tissue or vessels quickly, gently and securely.



Advantages of the new system

- Reliable sealing of vessels or tissue bundles without any previous dissection and detailed exposure
- Precise application due to limited lateral heat spread
- Less encrustation and carbonization thanks to the maximum® generator's special SealSafe® current
- Reliable surgical results without any need to use exogenous materials such as suture or clips
- Time savings compared with suturing; a single application is usually enough
- High efficiency, reusable instruments, no expenses for consumables, time-saving technique
- Instruments with ratchet for defined pressure application
- Ceramic pins in one jaw of the instrument ensure a defined distance between the jaws and prevent tissue slippage
- Compatible with existing KLS Martin standard bipolar connecting cables
- Simple, yet highly reliable design
- No extra costs when using the new maximum® HF unit – no special generator required

Types of forceps and connecting cables

*Different models give each user the right
instrument for the task at hand.*

marClamp®
maxium®



*Please note that the marClamp® models
are intended for exclusive use with the
maxium® HF generator and its SealSafe®
current.*





80-287-33-04
3 m/10 ft.

Connection cable for bipolar instruments,
for maxium® "m" version



80-286-30-04 80-286-50-04
3 m/10 ft. 5 m/16 ft.

Connection cable for bipolar instruments,
for maxium® "e" version



80-287-89-04 80-287-90-04
3 m/10 ft. 5 m/16 ft.

Connection cable for bipolar instruments,
for maxium® "i" version



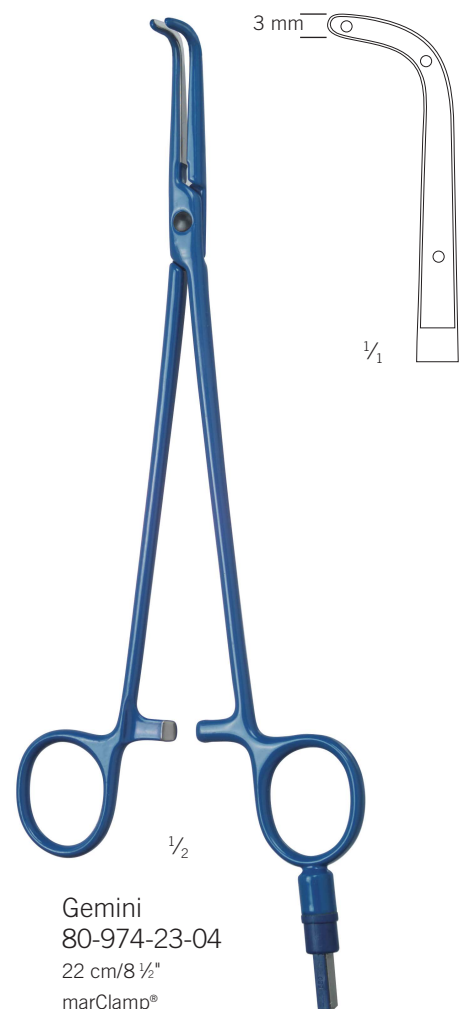
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3 m/10 ft.

Connection cable for bipolar instruments,
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5 m/16 ft.



80-286-30-04
3 m/10 ft.

Connection cable for bipolar instruments,
for maxium® "e" version

80-286-50-04
5 m/16 ft.



80-287-89-04
3 m/10 ft.

Connection cable for bipolar instruments,
for maxium® "i" version

80-287-90-04
5 m/16 ft.



Kalem
80-973-24-04
23 cm/9"
marClamp® Uro



For more detailed information,
please refer to our "marClamp® Uro 'Kalem'"
application brochure.

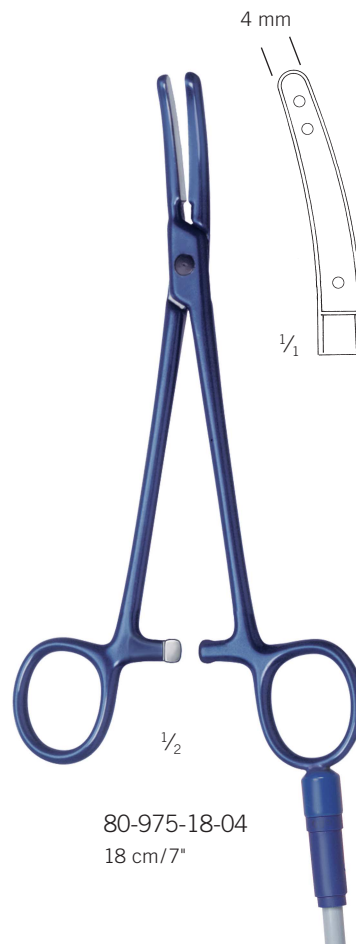
Types of forceps and connecting cables

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marClamp® IQ
maxium®



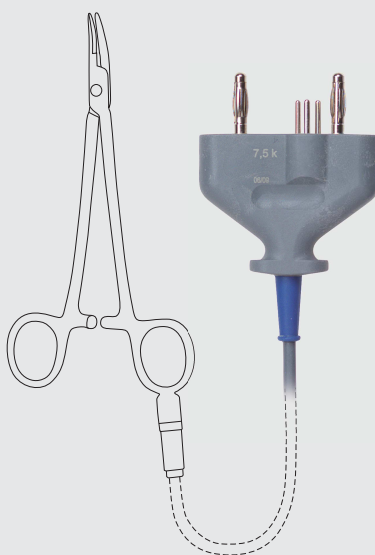
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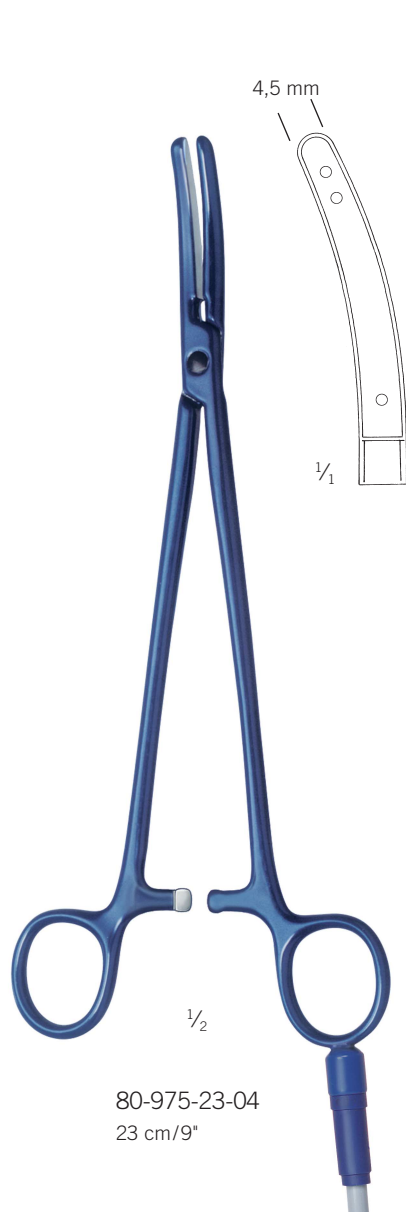
marClamp® IQ

- ✓ Plug & Play – smart bipolar vessel sealing forceps with instrument identification function
- ✓ maxium® HF generator automatically offers the correct current and power setting
- ✓ Fully complies with the proven maxium® program philosophy

These instruments can be used with a maxium® HF generator with hardware 06 or higher and software V3.400 or higher.



maxium®



Types of forceps and connecting cables

*Different models give each user the right
instrument for the task at hand.*

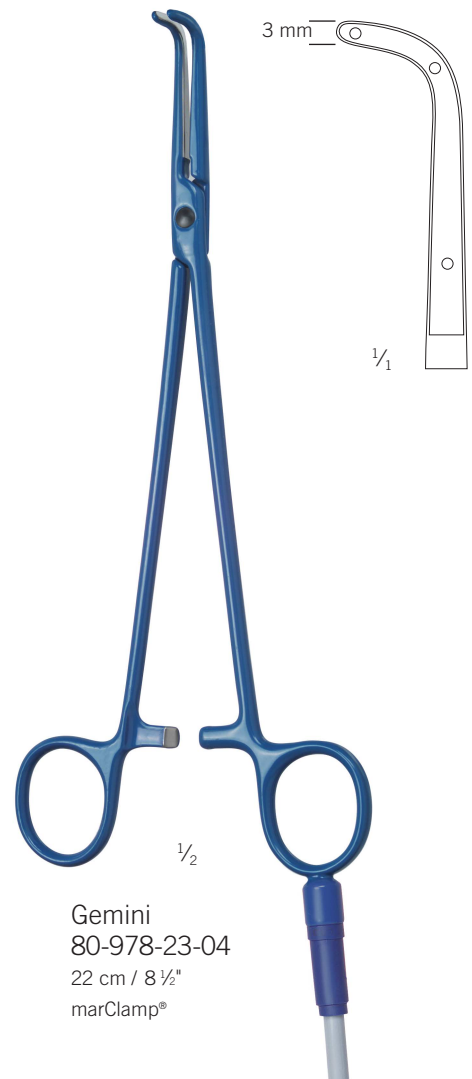
marClamp® IQ
maxium®



*Please note that the marClamp® models
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maxium® HF generator and its SealSafe®
current.*



„Shark“
80-976-23-04
23 cm / 9"
marClamp®

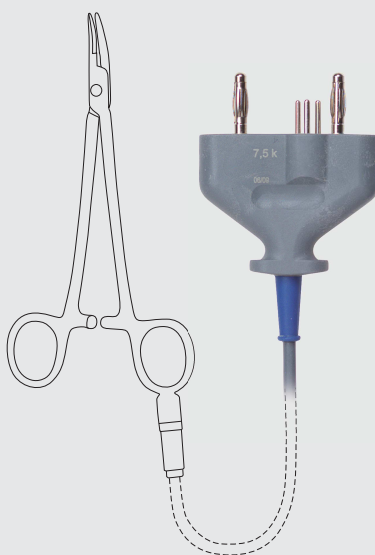


Gemini
80-978-23-04
22 cm / 8 1/2"
marClamp®

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maxium®



Kalem
80-977-23-04
23 cm / 9"
marClamp® Uro



For more detailed information, please refer to our "marClamp® Uro 'Kalem'" application brochure.

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