



marSeal[®]5 plus and **marSeal[®]5 plus Maryland**

Advanced bipolar vessel sealing





Together with our customers, we are committed to innovating reliable and trendsetting energy-based surgical solutions. Every day, we passionately work on developing products and services that assist in optimizing clinical results, and which contribute to the wellbeing of the patient.

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marSeal®5 plus and marSeal®5 plus Maryland Advanced bipolar vessel sealing

The marSeal®5 plus instruments expand KLS Martin's portfolio of bipolar sealing instruments. They have been systematically refined and tailored to meet the needs of users in terms of performance and ergonomics.

Discover the marSeal®5 plus bipolar sealing instrument, a state-of-the-art, reusable solution designed to meet the highest standards of surgical efficiency and safety. Engineered with the user in mind, marSeal®5 plus adapts seamlessly to your needs and due to its reusability, it helps to improve your clinic's carbon footprint and to ease the cost budget.

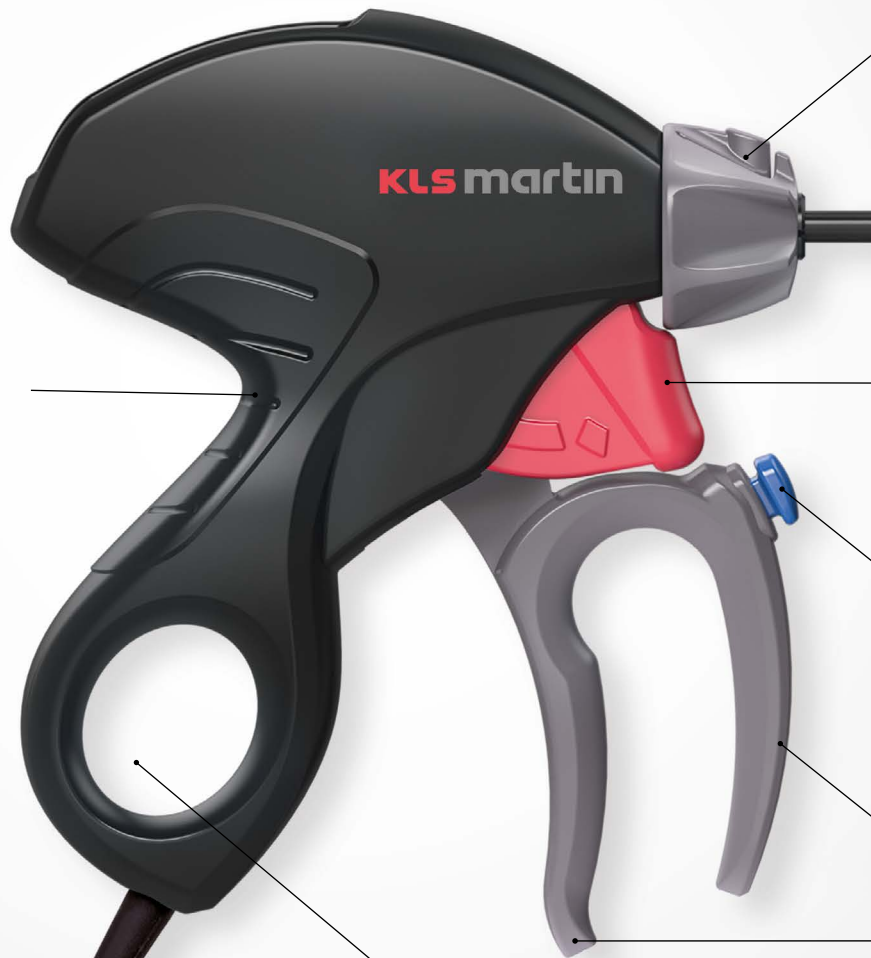
- ✓ Safe
- ✓ Efficient
- ✓ Reusable

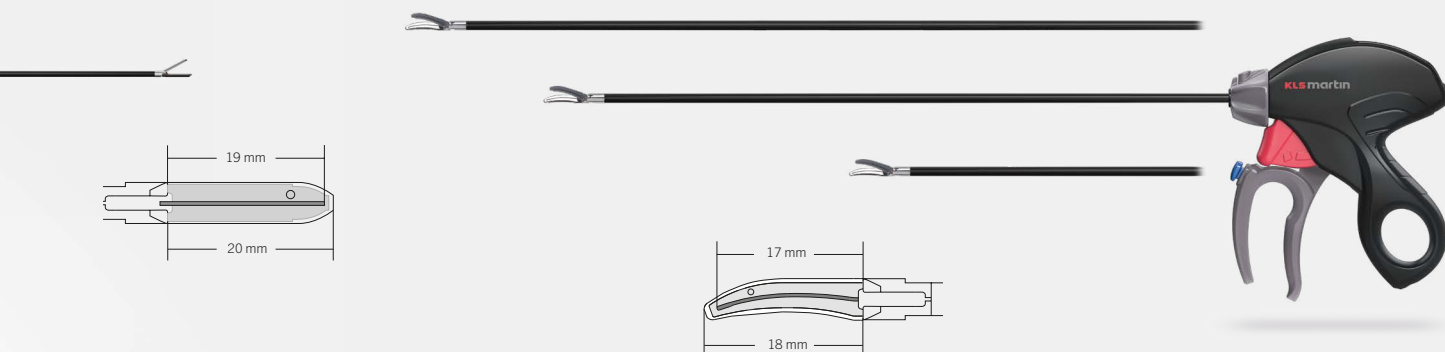
marSeal®5 plus
marSeal®5 plus Maryland
Ergonomic handle design



Slim and ergonomic
handle design

Ergonomic
handle for
fatigue-free
working





360° rotary control

Ø 5 mm



Learn more –
watch our product
[video](#).

**Blade activation
for tissue cutting**

**Activation of
the sealing current**

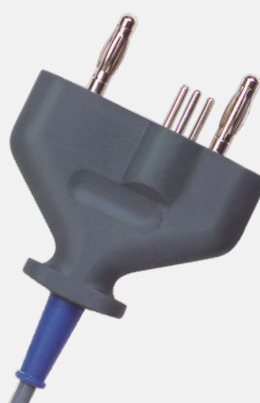


**Activation of the sealing current and the
tissue separation by means of the index finger –
without any additional movement!**

Ergonomic grip recesses

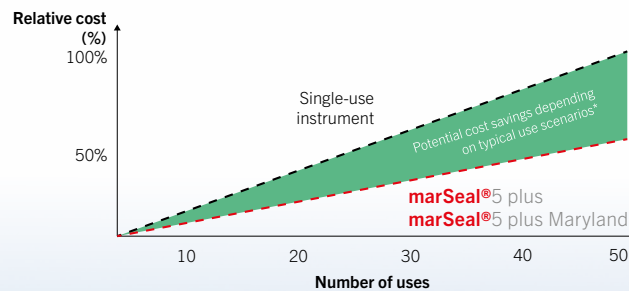
**Thumb ring for
overhead working**

**IQ connector (Plug and Play) for
automatic instrument identification
at our vessel sealing generators.**

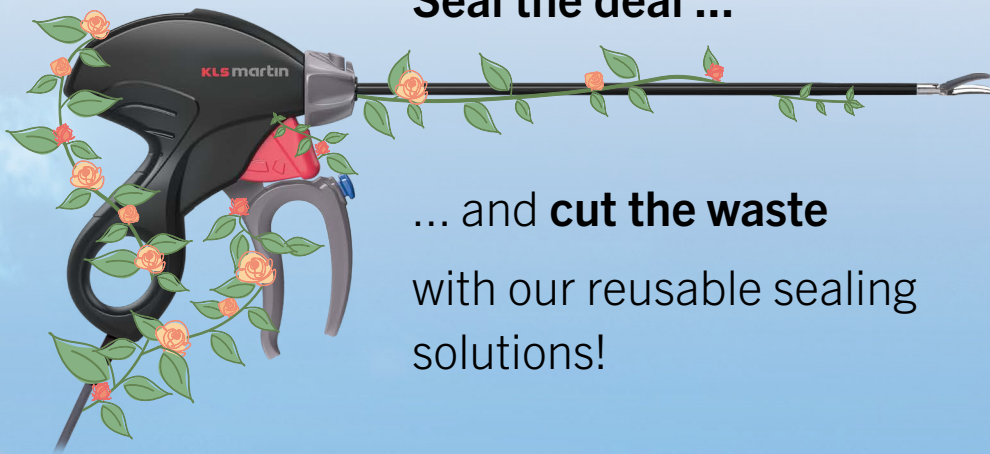


Sustainability and cost efficiency through our reusable vessel sealing instruments

Example scenario:



*Illustrative cost comparison based on internal data. Actual values may vary depending on market, competitor pricing and usage patterns.



Seal the deal ...

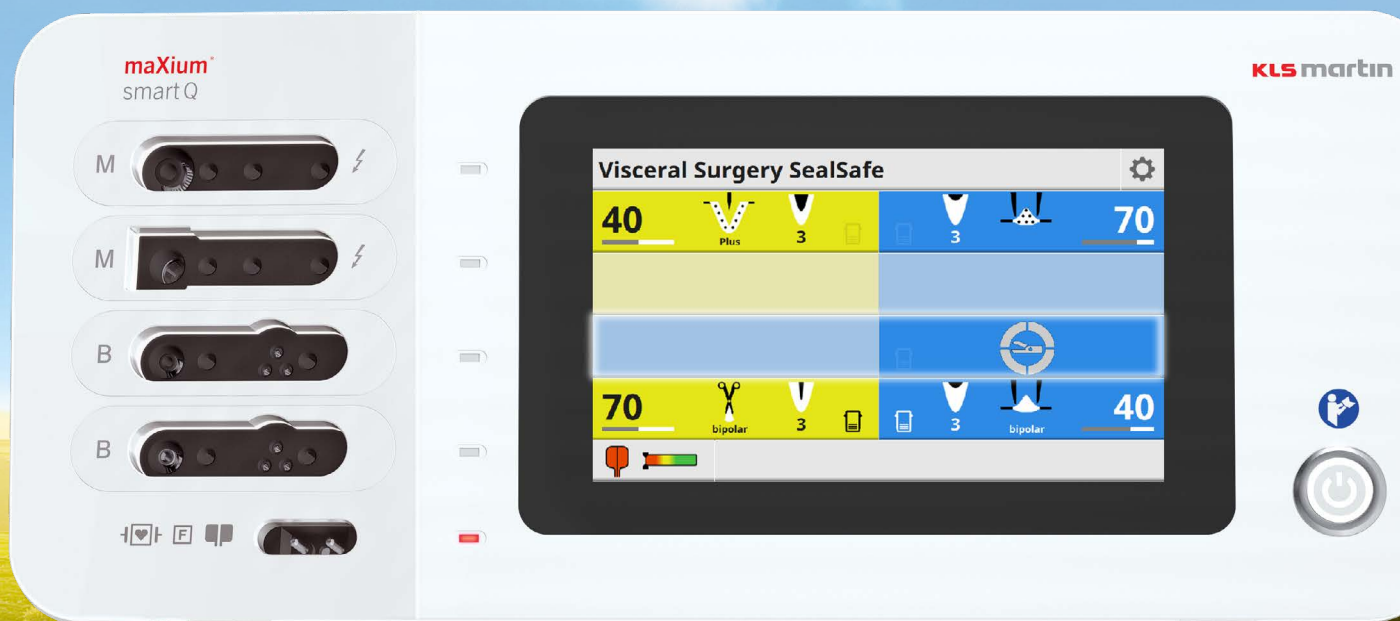
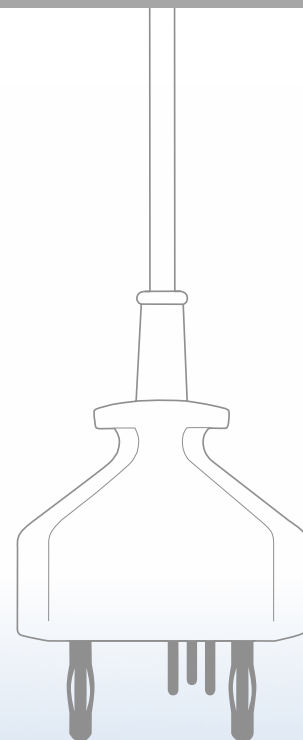
... and **cut the waste**
with our reusable sealing solutions!

The disposable materials share of our bipolar vessel sealing instruments has been reduced to the bare minimum. After the procedure, only the blade has to be replaced. By using our reusable solutions, you can save up to 58% of CO₂ emissions¹.

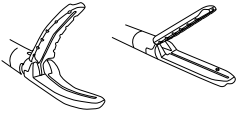
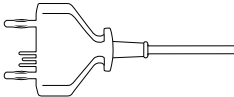
¹Reference: Elevating surgical sustainability marSeal®5 plus: The advantage of reusable devices in healthcare (KLS Martin Group, 2025).

Plug and Play – automatic recognition of instruments with smart IQ connectors

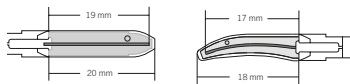
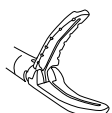
Our KLS Martin vessel sealing generators recognize the intelligent IQ instruments when plugged in and automatically set the corresponding default values for an optimal result. Convincingly simple!



Feature-function-benefit-matrix

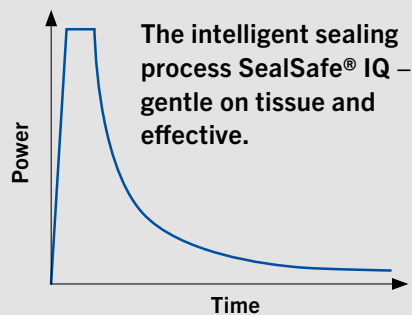
Feature	Function	Benefit
Advanced bipolar vessel sealing 	Sealing of tissues using an impedance-controlled sealing method.	Reliable sealing of vessels ≤ 7 mm with a mean burst pressure of over 360 mmHg and minimal lateral heat spread.
Multifunctional instrument 	The instrument combines vessel sealing, preparation and cutting of tissue.	Therefore, it is not necessary to change the instrument during the procedure and saves valuable time.
Reusable instrument 	The instrument is reusable, only the blade is a disposable item.	The reusability of the instrument not only helps to reduce the environmental footprint of your clinic, but also allows you to reduce costs.
Ergonomic design 	The instrument ensures intuitive and ergonomically optimized handling.	The well-thought-out design offers safe and fatigue-free handling as well as an optimal view of the work area.
IQ connector 	The Plug and Play function recognizes the plugged instrument and automatically sets the current to a matching default.	No settings are required, which means that it is very easy and uncomplicated for surgical staff to use.
Concave disposable blades 	The sterile blade is used to cut the tissue after sealing.	Clean cutting results due to the sharp and concave blades.



Feature	Function	Benefit
Maryland and straight jaw geometries 	Straight and curved Maryland jaw according to anatomic conditions.	Especially the Maryland-shaped jaw ensures enhanced tissue preparation capabilities and finest dissection.
Different working lengths with Maryland jaw 	Three different working lengths: ■ 23 cm for open surgery ■ 37 cm for laparoscopic surgery ■ 45 cm for bariatric surgery.	The instrument can be used for various applications in open and laparoscopic surgery.
Integrated current trigger 	The current trigger to start the bipolar vessel sealing is integrated in the handpiece and close to the knife lever.	Activation of the sealing current and the tissue separation by means of the index finger – without any additional movement!
Bipolar function 	The instrument can be used with open jaws for surface coagulation. Only the tissue between the jaws is coagulated.	The instrument can be used as a bipolar coagulation forceps.
Magnetic clasp 	The handle of the instrument is closed by a magnet.	This allows very easy disassembly and assembly during the resterilization process.

Operating principle

Reliable vessel sealing with
the **marSeal®5 plus**



Vessel sealing:
Reliable sealing of vessels
≤ 7 mm with a mean burst
pressure of over 360 mmHg

Minimal lateral thermal
spread:
< 2 mm

Safe vessel sealing with SealSafe® IQ

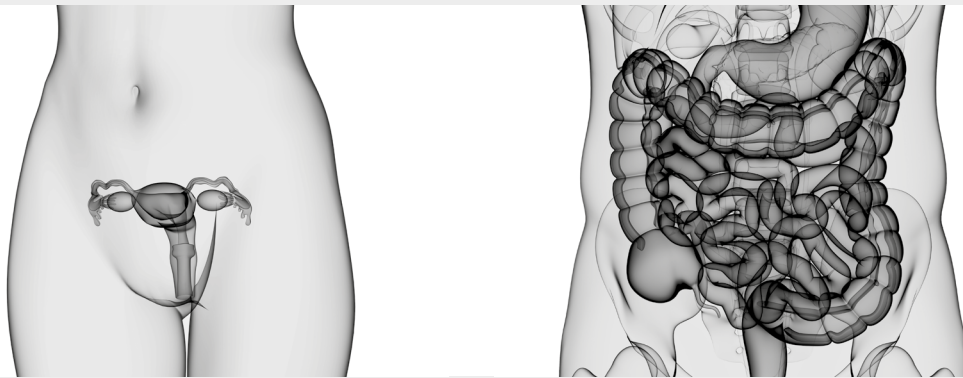
The bipolar vessel sealing system, consisting of a KLS Martin HF generator with the SealSafe® IQ current and our marSeal®5 plus, allows vessels or tissue bundles to be effectively and permanently sealed without the need for prior individual exposure or necessary preparation. During the sealing process, the body's own structures such as collagen and elastin are converted so that a permanently sealed zone is created.

SealSafe® IQ is a process-controlled current mode in which a continuous exchange of information takes place between the HF generator and the IQ instrument. The impedance of the tissue being sealed is monitored continuously during the whole sealing process. With the SealSafe® IQ current, which is specifically designed for this type of application, safety is paramount. Only the tissue located between the instrument's jaws is sealed, thus reducing lateral thermal damage to a minimum. SealSafe® IQ guarantees minimal tissue adhesion and, when used correctly, prevents tissue carbonization.



maXium®

Fields of application



The marSeal®5 plus was developed for both open surgical and laparoscopic procedures across multiple surgical disciplines. These may include, but are not limited to:

- Gynecology
- General and visceral surgery
- Bariatric surgery
- Colorectal surgery
- Urology



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Our reference: Prof. DD/BG Date: 09.10.2024

Prof. Dr. Dominik Denschlag

Application report on the use of the marSeal®5 plus Maryland from KLS Martin for bipolar vessel sealing

We are using the KLS Martin's marSeal®5 plus Maryland instrument for laparoscopic vessel sealing since January 2021. The instrument is part of the SealSafe® IQ sealing system which consists of the marSeal®5 plus Maryland (5 mm shaft diameter) featuring instrument detection IQ, along with the maxium® HF generator. At our hospital, we use the device combination for various gynecological interventions. It is used in particular for laparoscopic interventions such as TLH, LASH or Salpingoophorectomy. The reusable marSeal®5 plus Maryland has been used for a very wide range of sealing procedures and tissue separations.

The handling of the instrument, which can be activated by hand, is suitable for a variable preparation of different tissue layers. The handle provides a secure and natural grip, allowing for precise control and manipulation. The sealing process is fast and lateral thermal spread is reduced to an absolute minimum. The fact of complete disassembly and reassembly of the instrument ensures reliable cleaning and sterilization.

Conclusion:

In conclusion, the marSeal®5 plus Maryland from KLS Martin is a highly effective vessel sealing instrument which provides excellent performance and reliability. Its excellent sealing capabilities, combined with the economic and environmental benefits of its reusable design, make it a valuable addition to any surgical practice. The marSeal®5 plus Maryland stands as a testimonial to the fact that reusable instruments can match the standards set by single-use devices, offering both quality and sustainability.

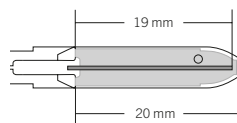
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Item numbers at a glance

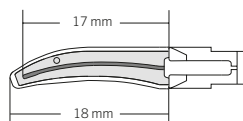
marSeal®5 plus



Article number	Designation
Complete instrument	
80-633-00-04	marSeal®5 plus, complete, consisting of handle, tubular shaft Ø 5 mm, shaft length 370 mm, including cleaning tool and flushing adapter, without blades*
Individual components	
80-633-04-04	Handle marSeal®5 plus
80-633-05-04	Tubular shaft marSeal®5 plus, Ø 5 mm, shaft length 370 mm, consisting of outer and inner shaft, including cleaning tool, without blades*
Consumables	
80-633-09-04	Blade holder for marSeal®5 plus, 370 mm, sterile, sales unit = 10 pieces
80-633-11-04	Blade holder for marSeal®5 plus, 370 mm, non-sterile, sales unit = 10 pieces
Cleaning and reprocessing tools	
80-633-12-04	Cleaning tool for marSeal®5 plus
80-633-13-04	Rinsing adapter for marSeal®5 plus
55-803-71-04	Cleaning and sterilization tray for marSeal®5 plus

* Blades have to be ordered separately.

marSeal®5 plus Maryland



Article number	Designation
Complete instrument	
80-633-01-04	marSeal®5 plus Maryland, complete, consisting of handle, tubular shaft Ø 5 mm, shaft length 450 mm, including cleaning tool and flushing adapter, without blades*
80-633-02-04	marSeal®5 plus Maryland, complete, consisting of handle, tubular shaft Ø 5 mm, shaft length 370 mm, including cleaning tool and flushing adapter, without blades*
80-633-03-04	marSeal®5 plus Maryland, complete, consisting of handle, tubular shaft Ø 5 mm, shaft length 230 mm, including cleaning tool and flushing adapter, without blades*
Individual components	
80-633-04-04	Handle marSeal®5 plus
80-633-06-04	Tubular shaft marSeal®5 plus Maryland, Ø 5 mm, shaft length 450 mm, consisting of outer and inner shaft, including cleaning tool, without blades*
80-633-07-04	Tubular shaft marSeal®5 plus Maryland, Ø 5 mm, shaft length 370 mm, consisting of outer and inner shaft, including cleaning tool, without blades*
80-633-08-04	Tubular shaft marSeal®5 plus Maryland, Ø 5 mm, shaft length 230 mm, consisting of outer and inner shaft, including cleaning tool, without blades*
Consumables	
80-633-10-04	Blade holder for marSeal®5 plus, 230 mm, sterile, sales unit = 10 pieces
80-633-14-04	Blade holder for marSeal®5 plus, 230 mm, non-sterile, sales unit = 10 pieces
80-633-09-04	Blade holder for marSeal®5 plus, 370 mm, sterile, sales unit = 10 pieces
80-633-11-04	Blade holder for marSeal®5 plus, 370 mm, non-sterile, sales unit = 10 pieces
80-633-15-04	Blade holder for marSeal®5 plus, 450 mm, sterile, sales unit = 10 pieces
80-633-16-04	Blade holder for marSeal®5 plus, 450 mm, non-sterile, sales unit = 10 pieces
Cleaning and reprocessing tools	
80-633-12-04	Cleaning tool for marSeal®5 plus
80-633-13-04	Rinsing adapter for marSeal®5 plus

* Blades have to be ordered separately.

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