Sealing of vessels

With the VIO® BiClamp® mode and Erbe instruments
Many of our users take advantage of the possibility of sealing vessels and tissue structures effectively and gently. That’s because Erbe sealing technology can be trusted to deliver – both in open surgery and in laparoscopic procedures. In urology, gynecology, and in general and visceral surgery.

The advantages that we have summarized to the right have been demonstrated by scientific studies. As the clips or sutures are generally not required, Erbe sealing is not only efficient and durable, but also economic, saving surgical time as well as money.

YOUR ADVANTAGES WITH ERBE VESSEL SEALING

☑ Effective and reliable sealing that is easy to carry out
☑ Preservation of neighboring structures thanks to a minimal coagulation seam
☑ The AUTO STOP function interrupts the current flow as soon as the tissue is optimally sealed
☑ Reduced smoke plume generation
☑ Wide variety of instruments: besides reusable instruments, disposable products are also available
☑ Plug & Play: plug in the instrument and the unit automatically sets the appropriate parameters
☑ Economic: vessel sealing saves time and suture material

A multifunctional unit for all electrosurgical procedures

VIO 300 D can do a whole lot more than just vessel sealing: it is also suitable for cutting, coagulation and devitalization. With this in mind, more than 20 CUT and COAG modes are provided – for every electrosurgical procedure. Monopolar or bipolar.

The VIO 300 D is the multifunctional basic module of a workstation. On equipment carts, you can configure VIO 300 D with devices for argon plasma coagulation, waterjet surgery and other surgical modules to create your own individual workstation.
Reliability – the name of the sealing game

Erbe sealing is based on the following components: Instruments, the unit and BiClamp mode, which supports all sealing instruments.

Gripping and clamping vessel structures

The jaws of the Erbe vessel sealing instruments are used to grasp the tissue, and to securely grip and compress it. As a result of the pressure, tissue fluid and blood in the tissue are expelled, and the vessel walls pressed together. When they engage, the jaws of the BiCision instruments apply a defined, optimal force to the tissue that has been gripped — without the user having to exert any effort. With the BiClamp instruments, the user regulates the pressure applied to the tissue. However, the maximum force cannot be exceeded due to the design and geometry of the instruments.

BiClamp current flow between the jaws

When BiClamp mode is activated, the generator initiates an electrical charge between the two electrodes of the jaws. The tissue that has been gripped is heated from within by this locally-limited current. BiClamp mode adapts to the condition, vascularization and water content of the target tissue, and monitors the sealing process. Vessel sealing differs from conventional bipolar coagulation in terms of the current profile and the force applied to the tissue, as well as with regard to the instrument geometry.

Monitoring and regulation of the BiClamp current

The tissue fluid vaporizes, the tissue that has been gripped dries out. BiClamp mode responds to the changes in tissue impedance and continually adjusts the power. As soon as sealing in the tissue has been completed, the AUTO STOP function interrupts the current flow. The tissue is now denatured and sealed, and the collagen fibers are linked without any necrosis. Once the jaws are opened, vessels and vessel structures in the tissue are permanently sealed in a manner that can be reproduced.

The reliability of BiClamp sealing

Thermofusion with BiClamp allows effective sealing of blood vessels up to a diameter of 7mm* and vascularized tissue. The histological cross-section shows that the sealing zone has been irreversibly fused. Additional ligation or coagulation of the sealing zone prior to separation is thus generally not required.

* individual models, depending on the specification

BiCision®
sealing and dissection with the π benefit

BiCision – the single use instrument

BiCision enables you to prepare, coagulate, seal and subsequently dissect without changing instruments. This also saves time and costs.

**π BENEFIT: THE ADVANTAGES OF THE BOWL SHAPE**

☑ Larger thermofusion zone than other instruments with 5 mm shaft and parallel jaw geometry
☑ The homogenous cut is always centered on the sealing zone
☑ The cutting line is easy to visually monitor from the yellow marking on the cutter

**THE ADVANTAGES OF LOW THERMAL CAPACITY**

☑ Minimal coagulation seam, as the jaws are thermally insulated and cool down quickly
☑ Minimal tissue adhesion to the jaw

**SHAFT ROTATION FACILITATES ERGONOMIC WORKING**

☑ The stop-free rotation allows the jaws to be precisely and conveniently positioned on the target tissue

**CUTTING SAFETY**

☑ The lever position on the side of the handle prevents inadvertent cutting

**ACTIVATION OF THE ELECTROSURGERY FUNCTION**

☑ Sealing is activated on the handle or with the footswitch

**FUNCTION AND ERGONOMICS OF THE HANDLE**

☑ You can perform all work steps from the handle without changing your grip
BiCision® for surgery, gynecology, urology, ...

The disposable instrument BiCision M for standard procedures in laparoscopy.

The jaw length makes rapid resection of the colon from the peritoneum and mesenterium possible.

Comfortable and fatigue-free work in gynecology due to the rotatable shaft.

Minimized risk of thermal injury to sensitive structures in urology (such as ureter or nerves).

See these procedures at www.medical-video.com for surgery, gynecology, urology, ...

BiCision S
ø 5 mm, shaft length 200 mm
No. 20195-310

BiCision M
ø 5 mm, shaft length 350 mm
No. 20195-311

BiCision L
ø 5 mm, shaft length 450 mm
No. 20195-312

BiCision is used for these procedures:

<table>
<thead>
<tr>
<th>GENERAL SURGERY:</th>
<th>GYNECOLOGY:</th>
<th>UROLOGY:</th>
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<tbody>
<tr>
<td>☑ Sigmoidectomy</td>
<td>☑ Hysterectomy (TLH, LAX, LAVH)</td>
<td>☑ Prostatectomy</td>
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<tr>
<td>☑ Gastrectomy</td>
<td>☑ Wertheim operation</td>
<td>☑ Cystectomy</td>
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<tr>
<td>☑ Fundoplication</td>
<td>☑ Oophorectomy</td>
<td>☑ Nephrectomy</td>
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<tr>
<td>☑ Adrenalectomy</td>
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<tr>
<td>☑ Colectomy</td>
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<tr>
<td>☑ Liver surgery</td>
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<tr>
<td>☑ Adhesiolysis</td>
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<td>☑ Splenectomy</td>
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<tr>
<td>☑ Appendectomy</td>
<td></td>
<td></td>
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<tr>
<td>☑ Adipositas surgery</td>
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</table>
Erbe BiClamp is an instrument series with which tissue bundles can be permanently and effectively sealed. The vessels do not have to be treated individually. Foreign material, such as clips and sutures, can usually be dispensed with.

All BiClamp instruments, both the BiClamp models used for open surgery, as well as the BiClamp LAP forceps, are reusable. An aspect that contributes to reducing surgery costs*.

The operating principle

The reliability of sealing results from these factors:
- BiClamp mode
- Defined contact pressure of the jaws
- Energy input with dynamic adaptation
- Continuous monitoring of the tissue state

All these factors change the cell biological protein structure during the sealing and generate a parchment-like sealing zone. It is the visual indication of reliably sealed vessels.

* see cost-effectiveness analysis 85110-100
The ERGO handle helps relax the posture

E stands for ergonomics. Because the stop-free rotation of the handle allows the surgeon to operate the instrument more flexibly and therefore in a more relaxed way. The handle can be locked in any position, as required.

Long operation times, restricted room for movement and unaccustomed and rigid postures lead to various stress symptoms. Thanks to the handle rotation, BiClamp E LAP prevents cramped working.

... in open surgery and for laparoscopic procedures

THE ADVANTAGES OF ERBE BICLAMP

- High level of cost efficiency: Erbe BiClamp is reusable and the technique reduces surgery time and costs*

- The shaping of the jaws is anatomically adapted to safely access the target tissue, even with limited surgical access

- Wide indication-specific selection of models
The complete BiClamp product program: BiClamp® for open surgery

Goiter surgery with BiClamp 150 C: ceramic insulated jaws, no risk of thermal injury. Jaw shaping allows the small incision technique.

Vaginal Hysterectomy with BiClamp 201 T: “cool” jaws reduce the risk of injuring the uterus; safe fixation of the tissue, optimal jaw shape supports minimal-invasive character of the procedure.

Cystectomy with BiClamp 280: the length and shape of the jaws is designed for urological procedures.

BiClamp is used for these open surgery procedures:

**GENERAL SURGERY:**
- Sigmoidectomy
- Gastrectomy
- Fundoplication
- Adrenalectomy
- Colectomy
- Liver surgery
- Adhesiolysis
- Splenectomy
- Appendectomy
- Adipositas surgery

**GYNECOLOGY:**
- Hysterectomy (TLH, LAX, LAVH)
- Wertheim operation
- Oophorectomy

**UROLOGY:**
- Prostatectomy
- Cystectomy
- Nephrectomy

<table>
<thead>
<tr>
<th>BiClamp 150 C</th>
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<tr>
<td>bent 23°, smooth, length 150 mm</td>
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<tr>
<th>BiClamp 201 T</th>
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<tr>
<td>bent 18°, smooth, length 200 mm</td>
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<tr>
<th>BiClamp 280</th>
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<tr>
<td>bent 25°, smooth, length 280 mm</td>
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See these procedures at www.medical-video.com
Open surgery BiClamp instruments are available in various lengths and shapes, as well as indication-specific jaws.

<table>
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<tr>
<th>BICLAMP</th>
<th>LENGTH/SHAPE</th>
<th>APPLICATION</th>
<th>ARTICLE NUMBER</th>
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<tr>
<td>BiClamp 150 C</td>
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<tr>
<td>BiClamp 201 T</td>
<td>200 mm bent 18°, smooth</td>
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<td>No. 20195-202</td>
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<td>BiClamp 210</td>
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<td>BiClamp 260 C</td>
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<td>270 mm gebogen 18°, glatt</td>
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<td>BiClamp 280</td>
<td>280 mm bent 25°, smooth</td>
<td>Cystectomy, Prostatectomy</td>
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</tr>
</tbody>
</table>
The complete BiClamp product program:

BiClamp® for laparoscopy

Lap. hysterectomy with the BiClamp LAP forceps (fenestrated): effective sealing of vessels and ligaments

Lymphadenectomy with the BiClamp LAP forceps Kelly: sealing reduces the risk of tumor cell spreading

Fundoplication with the BiClamp LAP forceps Kelly: good preparation and sealing in the smallest of spaces

The BiClamp LAP forceps are used for these procedures:

**GENERAL SURGERY:**
- Liver surgery
- Adhesiolysis
- Appendectomy

**AS AN INSTRUMENT ACCOMPANYING SURGERY:**
- Sigmoidection
- Gastrectomy
- Fundoplication
- Adrenalectomy
- Colectomy
- Splenectomy
- Adipositas surgery

**GYNECOLOGY:**
- Hysterectomy (TLH, LAX, LAVH)
- Wertheim operation
- Oophorectomy

**UROLOGY:**
- Prostatectomy

**AS AN INSTRUMENT ACCOMPANYING SURGERY:**
- Cystectomy
- Nephrectomy

BiClamp Kelly E LAP forceps
semi-deep, shaft ø 5 mm, length 340 mm
No. 20195-229

See these procedures at www.medical-video.com
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The BiClamp LAP forceps Kelly is especially suited for sealing and preparing fine structures.
The models with fenestrated jaws are suitable for sealing wide structures.
You will find a complete list of all BiClamp instruments at www.erbe-med.com or in the
accessories catalog in chapter no. 85100-168.