



Sealing of vessels

With the VIO® BiClamp® mode and
Erbe instruments

Erbe vessel sealing –

efficient, durable and economical

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 electro-surgical 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 electro-surgical 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 plasma-surgery, hydrosurgery 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

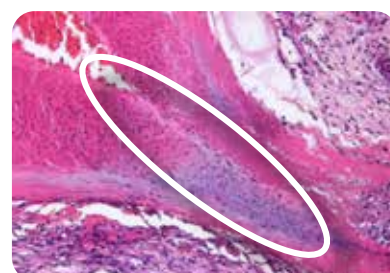
The tissue fluid vaporizes, the tissue that has been gripped dries out. BiClamp® mode responds to the changes in tissue impedance and continually adjusts the power.

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.



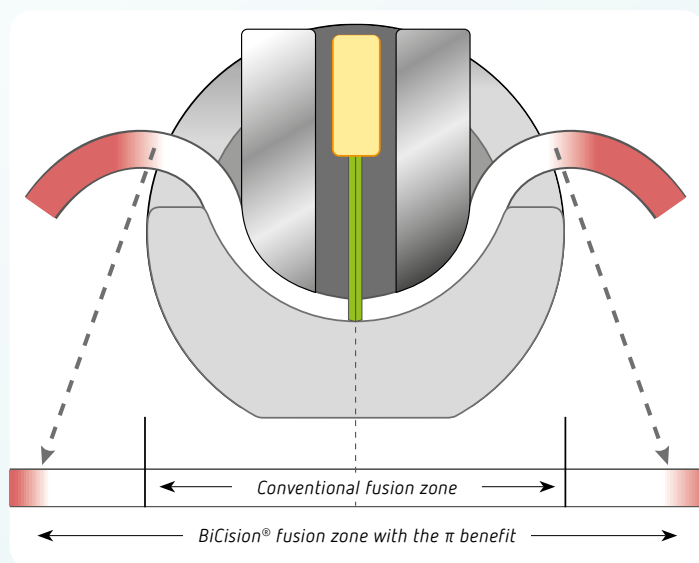
* Richter, S.; Kollmar, O.; Neunhoefer, E.; Schilling, M.; Pistorius, M. and G.: Differential Response of Arteries and Veins to Bipolar Vessel Sealing: Evaluation of a Novel Reusable Device; Journal of Laparoendoscopy & Advanced Surgical Techniques; Vol. 16, No. 2, 2006.
Richter, S.; Kollmar, O.; Schilling, M.; Pistorius, G.; Menger, M.: Efficacy and quality of vessel sealing; Surg. Endosc. 2006 Jun; 20(6): 890–894.

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 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)



The disposable instrument BiCision® M for standard procedures in laparoscopy

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

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

BiClamp® —

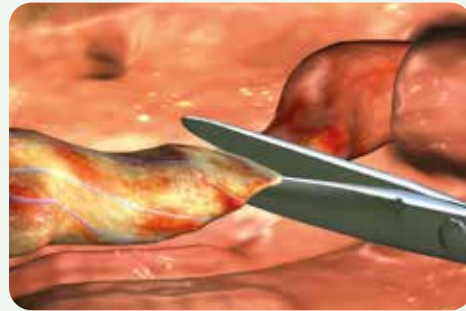
sealing of vessels and tissue structures ...

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.

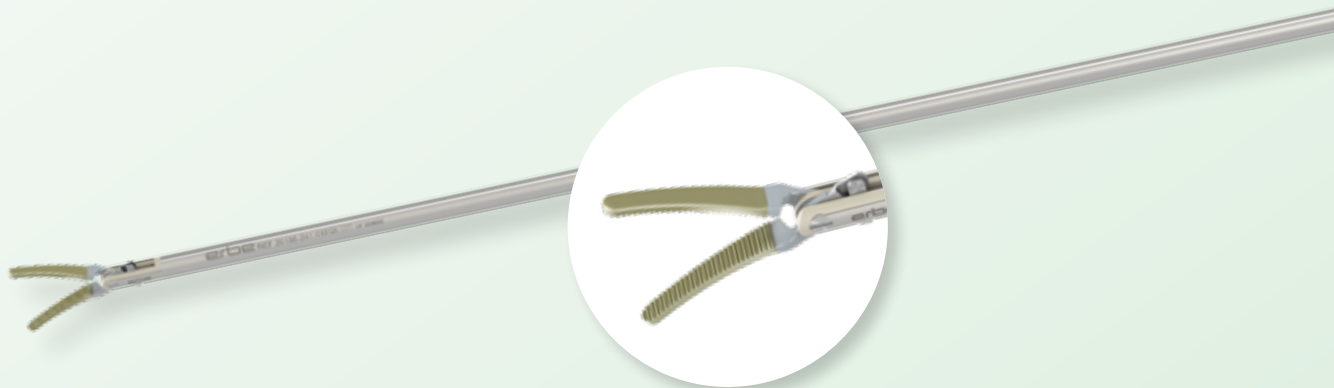
All BiClamp® instruments, both the BiClamp® models used for open surgery, as well as the BiClamp® LAP forceps, are reusable. An aspect that contributes to reducing surgery costs*.



Contact pressure, current profile and energy input define the stability of vessel sealing



Tissue sections can be sealed alongside one another; the cut is made in the middle of the zone



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

... in open surgery and for laparoscopic procedures

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.



THE ADVANTAGES OF BICLAMP®

- ✓ High level of cost efficiency: 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



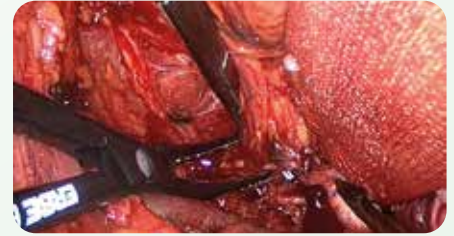
The complete BiClamp® product program:
BiClamp® for open surgery



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

BiClamp® 150 C
bent 23°, smooth, length 150 mm
No. 20195-221









BiClamp® 201 T
bent 18°, smooth, length 200 mm
No. 20195-202



BiClamp® 280
bent 25°, smooth, length 280 mm
No. 20195-280



Open surgery BiClamp® instruments are available in various lengths and shapes, as well as indication-specific jaws.

BICLAMP®	LENGTH/SHAPE	APPLICATION	ARTICLE NUMBER
BiClamp® 150 C 	150 mm bent 23°, smooth	Thyroidectomy	No. 20195-221
BiClamp® 201 T 	200 mm bent 18°, smooth	Intestinal surgery Stomach surgery Abdominal hysterectomy	No. 20195-202
BiClamp® 210 	210 mm bent 25°, corrugated	Vaginal hysterectomy	No. 20195-200
BiClamp® 260 C 	260 mm bent 18°, smooth	Prostatectomy Pediatric surgery	No. 20195-299
BiClamp® 271 T 	270 mm bent 18°, smooth	Intestinal surgery Stomach surgery Abdominal hysterectomy	No. 20195-203
BiClamp® 280 	280 mm bent 25°, smooth	Cystectomy Prostatectomy	No. 20195-280

The complete BiClamp® product program:

BiClamp® for laparoscopy



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



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:

- Sigmoidectomy
- Gastrectomy
- Fundoplication
- Adrenalectomy
- Colectomy
- Splenectomy
- Adipositas surgery

GYNECOLOGY:

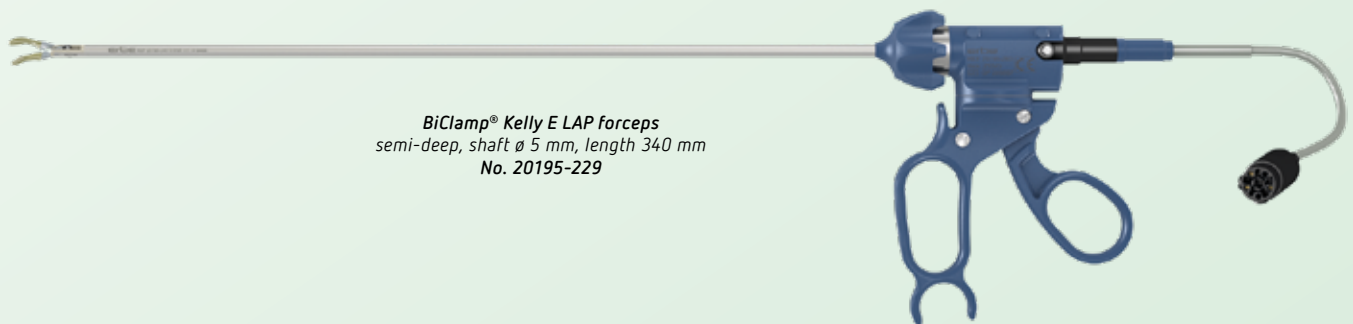
- Hysterectomy (TLH, LAX, LAVH)
- Wertheim operation
- Oophorectomy

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*

HANDLE

No. 20195-145



SHAFT TUBE

No. 20195-141



INSERTS

No. 20195-236



No. 20195-146



No. 20195-147



No. 20195-148



No. 20195-149



No. 20195-234



No. 20195-232



COMPLETE INSTRUMENT

No. 20195-228

BiClamp® LAP forceps,
Kelly, semi-deep

No. 20195-134

BiClamp® LAP forceps,
Maryland, semi-deep

No. 20195-135

BiClamp® LAP forceps,
Maryland, smooth

No. 20195-136

BiClamp® LAP forceps,
fenestrated, semi-deep

No. 20195-137

BiClamp® LAP forceps,
fenestrated, smooth

No. 20195-230

BiClamp® LAP forceps,
smooth

E-HANDLE

No. 20195-240



E-SHAFT TUBE

No. 20195-241



INSERTS

No. 20195-236



No. 20195-146



No. 20195-147



No. 20195-148



No. 20195-149



E-COMPLETE INSTRUMENT

No. 20195-229

BiClamp® E LAP forceps,
Kelly, semi-deep

No. 20195-246

BiClamp® E LAP forceps,
Maryland, semi-deep

No. 20195-247

BiClamp® E LAP forceps,
Maryland, smooth

No. 20195-248

BiClamp® E LAP forceps,
fenestrated, semi-deep

No. 20195-249

BiClamp® E LAP forceps,
fenestrated, smooth

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.

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