VIO® 3
plug and operate
We have been a pioneer in the development of electrosurgery for over 90 years, gathering experience you can count on.

Our promise when it comes to technology:
High-tech and safety are our passion.

Multiprocessor technology
15 processors facilitates superior system performance

Power electronics
Regulated power supply adapter\(^1\) improves power output especially with high and varying impedance loads, e.g. during bipolar resection

Latest digital signal processors
25 million measurements/sec improves reproducibility of the tissue effect\(^2\)
We have shaped electrosurgery, developing it into today’s leading-edge operating room technology. This has made us an essential and reliable partner for many users. VIO 3 is yet another of our milestones in technology, following the ICC unit series and VIO 300/200. Utilize the innovative advantages the VIO 3 has to offer.

WHY ERBE?

☑ Experts in electrosurgery for over 90 years
☑ Highest priority of our products: safety
☑ We set benchmarks and drive innovative developments
☑ Global sharing of experience and knowledge transfer
☑ Presence and support worldwide
☑ Internationally trusted partner

The WiFi communication interface
The basis for wireless communication, e.g. for future OR integration
With its logical and intuitive interface, the VIO 3 is designed to ensure optimal user-friendliness. The size of the touchscreen display alone speaks for itself: from the operating field, the surgeon always has a clear view of all control elements. As your stepGUIDE, VIO 3 provides guidance by suggesting experienced starting settings used in various clinical applications. This results in less setting adjustment or modifications.

**Plug and operate. It couldn’t be easier.**

90% of all users feel VIO 3 is easier to use.
plug and operate

RAPID ACCESS TO THE REQUIRED PROGRAM

EASY MODE ADJUSTMENT VIA EFFECT SETTINGS

INCREDDIBLY SIMPLE, GUIDED OPERATION USING “stepGUIDE”

REMODE® FUNCTION: SELECTION OF UP TO 6 SUB-PROGRAMS DIRECTLY FROM THE OPERATING FIELD

MULTILINGUAL INTERFACE

PROGRAM-SPECIFIC SETTING, ALSO FOR STANDARD INSTRUMENTS
Multi-modality modes for various clinical specialities

VIO 3 has the right mode for your application, supporting monopolar and bipolar techniques and our proprietary hybrid technology – a combination of different technology.

It has never been easier to achieve the desired mode-specific tissue effect using just one setting – the effect setting.

The effects can be selected in extremely fine increments using just one adjustment control. The change in effect is shown on the display.

19 OPTIMIZED MODES

The right modes for your application adapted to your instrument selection

PRECISE EFFECT SETTINGS

Adjusting the selected mode has never been easier via the effect setting

HIGH REPRODUCIBILITY

Advanced measurement technology
Consistent cutting and coagulation effects

HOMOGENOUS TISSUE EFFECTS

VIO 3 responds to parameter changes in the tissue immediately
Regardless of the electrode shape or incision technique
The new VIO 3 modes

preciseSECT
Low-smoke exposure

Dynamic adjustment of the modulation frequency makes this new mode ideally suited for exposing structures. preciseSECT facilitates rapid and effective coagulation with limited tissue-separating properties, in combination with less development of smoke and carbonization.

Disciplines: general / visceral surgery, gynecology, urology

highCUT bipolar
Bipolar resection

This new mode has been optimized for bipolar resection in a saline solution. The power peak system (PPS) enables rapid incision. The stable plasma facilitates rapid cutting.

Instruments: bipolar resectoscopes

thermoSEAL®
Rapid vessel sealing

With the new AUTOSTART, thermoSEAL is twice as fast as the BiClamp mode. And this mode permanently measures the tissue parameters while sparing lateral tissue. This makes thermoSEAL ideal for sealing tissue bundles and vessels as well as for coagulating bleedings extremely efficiently.

Disciplines: general / visceral surgery, gynecology, urology

softCOAG®
Accelerated coagulation

Now with QuickStart in the case of bipolar and monopolar softCOAG, a short pulse of energy on contact with tissue results in accelerated coagulation.

Application: coagulation for laparoscopic procedures

92% of all users feel preciseSECT is better
Overview of modes

Our modes are regulated to a constant voltage level continually adapting output power to changing parameters to achieve reproducible tissue effects. Fine adjustment has never been easier, simply by selecting an effect. You can choose from 19 finely-adjustable CUT and COAG modes:

- **autoCUT**
  - Smooth incisions, minimum to moderate hemostasis

- **highCUT**
  - Smooth incisions, minimum to moderate hemostasis. For tissue with poor conductive properties and monopolar resection using non-conductive irrigation liquids

- **dryCUT®**
  - Controlled incision with significant hemostasis

- **autoCUT bipolar**
  - Smooth incisions, minimum to moderate hemostasis, e.g. for BiSect laparoscopic scissors

- **highCUT bipolar**
  - Smooth incisions, minimum to moderate hemostasis. For bipolar resection in a saline solution

- **endoCUT® Q**
  - Fractionated cutting mode with cutting and coagulation intervals, e.g. for polypectomy snare

- **endoCUT® I**
  - Fractionated cutting mode with cutting and coagulation intervals, e.g. for sphincterotome
Intensive coagulation, enhanced with slight tissue-separating properties

Effective and fast “standard” coagulation with moderate to intense hemostasis

Non-contact, efficient surface coagulation with low penetration

Special COAG mode for sealing highly-vascularized tissue bundles and blood vessels with a diameter of up to 7 mm using appropriate Erbe instruments

Optimized exposure as a result of dynamically adapting modulation.

Medium coagulation

Slow, deep coagulation with no tissue carbonization, e.g. for use with ball electrode for tissue devitalization or with monopolar scissors

Consistent tissue effects, even when two monopolar instruments are activated at the same time with just one unit

Slow, deep coagulation with no tissue carbonization, e.g. for use with bipolar coagulation instruments and bipolar resectoscopes

Fast bipolar coagulation with moderate to intense hemostasis

Special COAG mode for sealing highly-vascularized tissue bundles and blood vessels with a diameter of up to 7 mm using appropriate Erbe instruments

Fast “standard” argon plasma coagulation, e.g. for hemostasis of diffuse bleeding, ablation and tissue reduction

Argon plasma coagulation with reduced application of energy as a result of pulses, e.g. flexible APC probes

Fine argon plasma coagulation, largely independent of the distance to the target tissue. e.g. for flexible APC probes, where tissue thickness is a concern
Expanded choice in instrument selection

You can plug standard instruments into any universal socket reducing risk of confusion. Use up to 6 instruments of your choice (including APC) in accordance with your procedure. The connection options offered by VIO 3 support a larger number instrument combination. Each socket supports the AUTO START function for bipolar instruments.

**EXPANDED INSTRUMENT SELECTION**

- 4 monopolar, 4 bipolar, 4 plug & play instruments (e.g. BiClamp) or any combination thereof.

**RECOMMENDED CONNECTION**

- Based on pre-programmed settings the stepGUIDE supports you in selecting a socket for your chosen instrument.

**UNIVERSAL SOCKET**

- Standard instruments can be inserted into any universal socket.

**SLOT ASSIGNMENT**

- The active slot and the instrument in use are shown on the display and through the illuminated socket frame.
When using APC 3, you can extend your options and insert up to 6 instruments of your choice.

Sockets can easily be replaced without opening the casing.
With the support app, you can generate and update user programs using templates and archive these on our server. Our staff and distributors can update and upgrade your VIO 3 on site using VIO WiFi (PC or tablet).

Using our support app, you can expand the performance spectrum of the VIO 3. You can procure it from the app Store. It will be cleared for use after successful registration on our website.

With our support app you can also use your personal programs on other in-house VIO 3 systems or externally, for example for live surgeries and workshops. This gives you access to your own personal setting configurations anywhere, anytime.
WHY VIO 3?

- Reliably reproducible tissue effects thanks to state-of-the-art processor technology
- Fine-tuning of tissue effects using our improved effect setting is easy and more precise
- Multi-modality modes for various applications
- Multi-disciplinary ESU
- User-friendly with logical, convenient and visual user navigation (stepGUIDE)
- Selection of up to 6 different settings for your procedure from the operating field
- Use of up to 6 instruments of your choice
- Supports proprietary Erbe hybrid technology
- Upgrade compatibility with software, hardware and workstation modules

BENEFITS FOR YOU:

96% of all users would recommend VIO 3.
## Technical data

### Power connection

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated supply voltage</td>
<td>100–120 VAC (± 10%)</td>
</tr>
<tr>
<td></td>
<td>220–240 VAC (± 10%)</td>
</tr>
<tr>
<td>Rated supply frequency</td>
<td>50 / 60 Hz</td>
</tr>
<tr>
<td>Line current (averaged)</td>
<td>Max. 6.3 A</td>
</tr>
<tr>
<td>Power consumption in standby mode</td>
<td>&lt; 30 watts</td>
</tr>
<tr>
<td>Power consumption at max. HF power</td>
<td>550 watts</td>
</tr>
<tr>
<td>Max. pulse power consumption</td>
<td>1,600 watts</td>
</tr>
<tr>
<td>Potential equalization connection</td>
<td>Yes</td>
</tr>
<tr>
<td>Power fuse</td>
<td>T 6.3 A H / 250 VAC</td>
</tr>
</tbody>
</table>

### Type of operation

- Intermittent operation: 25 % duty cycle

### Dimensions and weight

- Width x height x depth: 415 x 215 x 375 mm
- Weight: 12 kg
- Display size: 10.4 inches

### Ambient conditions for transport and storage of the unit

- Temperature: -30 °C to +70°C
- Relative humidity: 10 % - 90 %

### Ambient conditions for operating the unit

- Temperature: +10°C to +40 °C
- Relative humidity: 15 % – 80 %, non-condensing

### Standards

- Classification in accordance with EU directive 93/42/EEC: II b
- Protection class in accordance with EN 60 601-1: I
- Type in accordance with EN 60 601-1: CF

### Programs

- Program groups: 20; program storage capacity per group: 15
- Programs / applications: Up to 300
- ReMode levels / settings: Up to 1800
References/publications/documents:

1. Patent pending (Power supply module, Universal socket, Socket insert, Contact coagulation)
2. Technical specification of Measurement and Control module
3. Design patent pending
4. Based on a protocol of a user acceptance test (12/2014, 06/2016)
5. B. Nold et al.: thermoSEAL bench test VIO3 Y4