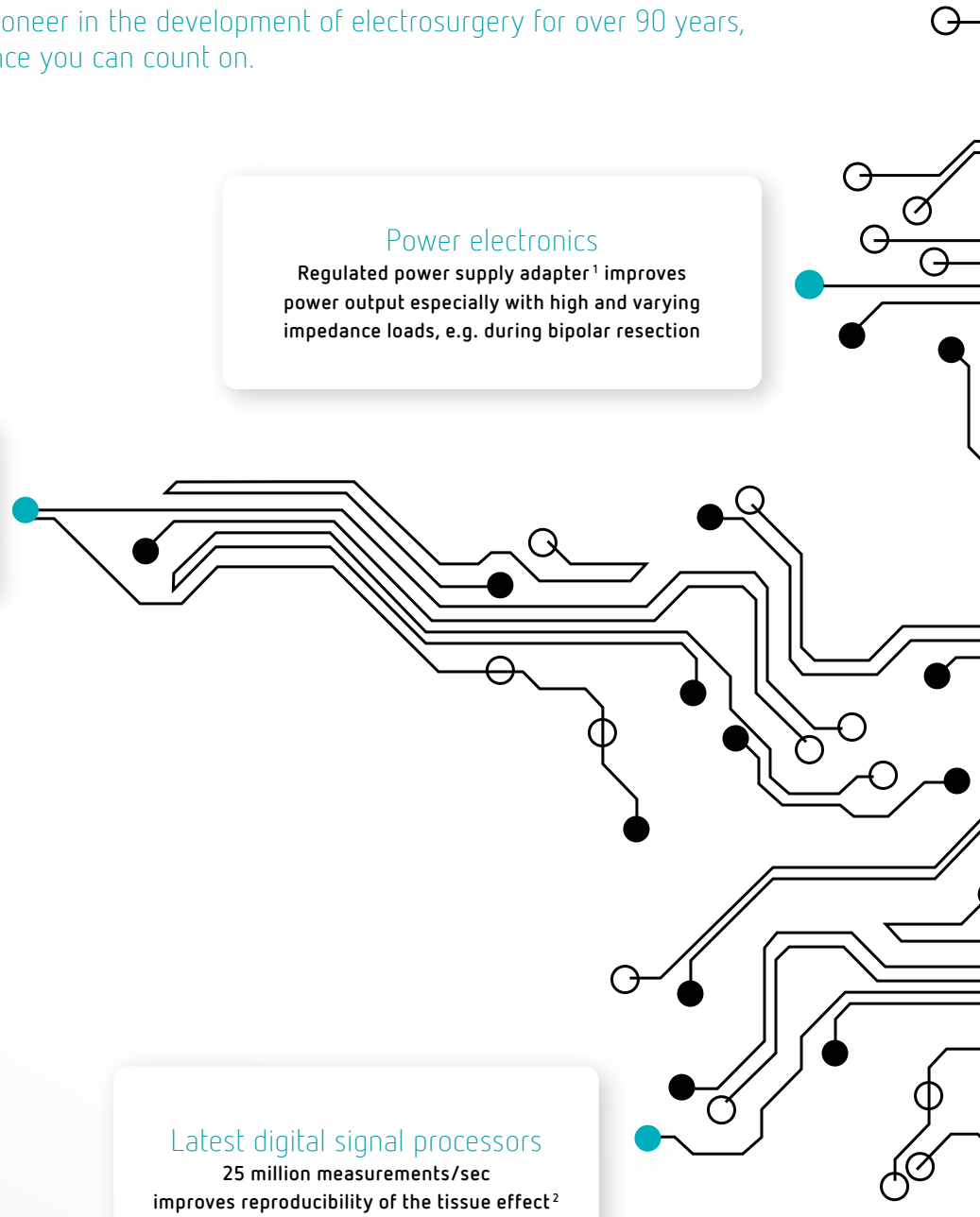
ELECTROSURGERY

Our promise when it comes to technology:

High-tech and safety are our passion.

We have been a pioneer in the development of electrosurgery for over 90 years, gathering experience you can count on.



Power electronics

Regulated power supply adapter[1] improves power output especially with high and varying impedance loads, e.g. during bipolar resection

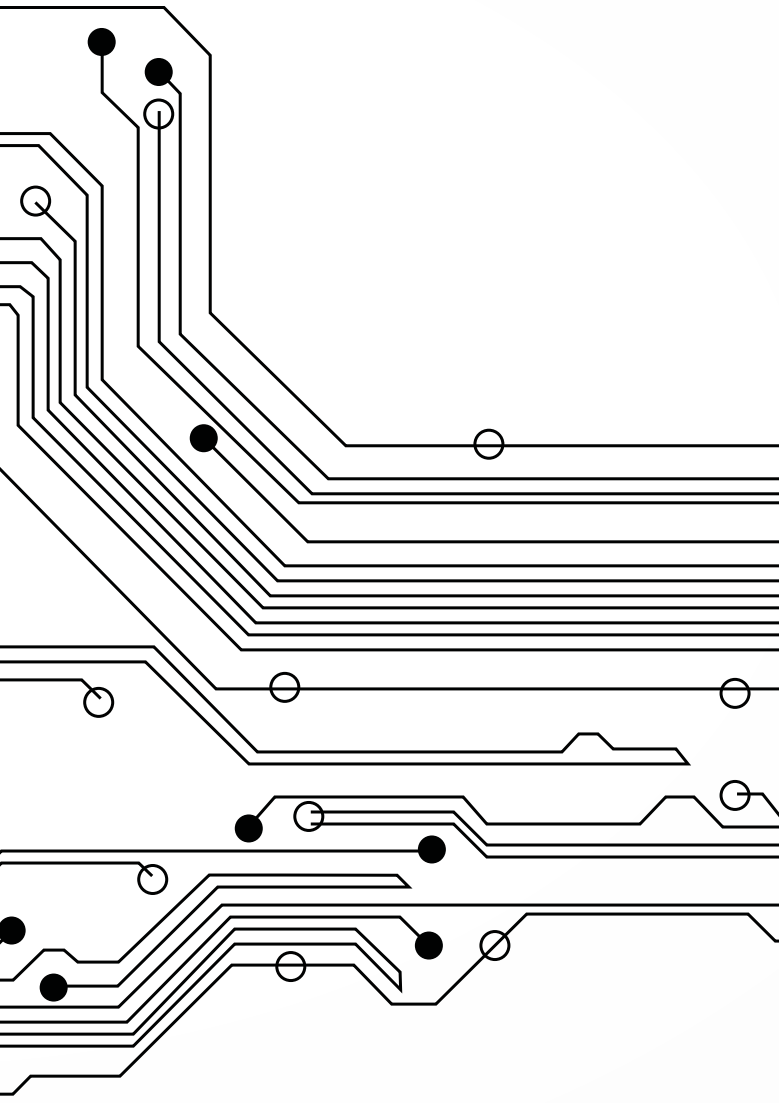
Multiprocessor technology

15 processors facilitates superior system peformance

Latest digital signal processors

25 million measurements/sec improves reproducibility of the tissue effect[2]

We have shaped electro-surgery, 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.



The WiFi communication interface

The basis for wireless communication, e.g. for future OR integration

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

VIO® 3

With its logical and intuitive interface, the VIO® 3 is designed to ensure optimal user-friendliness[3]. 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*[4]

plug and operate

RAPID ACCESS TO THE REQUIRED PROGRAM

EASY MODE ADJUSTMENT VIA EFFECT SETTINGS

INCREDIBLY 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

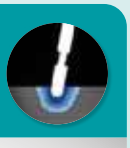
HOMOGENOUS TISSUE EFFECTS

VIO® 3 responds to parameter changes in the tissue immediately

Regardless of the electrode shape or incision technique

The new VIO® 3 modes

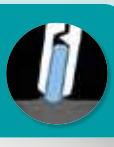
preciseSECT
Low-smoke exposure



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[4].

Disciplines: General / visceral surgery, gynecology, urology

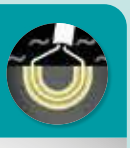
thermoSEAL®
Rapid vessel sealing



With the new AUTO START, thermoSEAL® is twice as fast as the BiClamp® mode[5]. 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

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[1].

Instruments: Bipolar resectoscopes

softCOAG®
Accelerated coagulation

Now with QuickStart[1]: 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[4]

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

CUT

preciseSECT

Optimized exposure as a result of dynamically adapting modulation. Medium coagulation

swiftCOAG®

Intensive coagulation, enhanced with slight tissue-separating properties

softCOAG®

Slow, deep coagulation with no tissue carbonization[6], e.g. for use with ball electrode for tissue devitalization or with monopolar scissors

forcedCOAG®

Effective and fast "standard" coagulation with moderate to intense hemostasis

sprayCOAG®

Non-contact, efficient surface coagulation with low penetration[6]

twinCOAG®

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

softCOAG® bipolar

Slow, deep coagulation with no tissue carbonization[6], e.g. for use with bipolar coagulation instruments and bipolar resectoscopes

forcedCOAG® bipolar

Fast bipolar coagulation with moderate to intense hemostasis

thermoSEAL®

Special COAG mode for sealing highly-vascularized tissue bundles and blood vessels with a diameter of up to 7 mm using appropriate Erbe instruments[5]

forcedAPC

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

pulsedAPC®

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

preciseAPC®

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 [1]

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.

CONNECTION OPTIONS

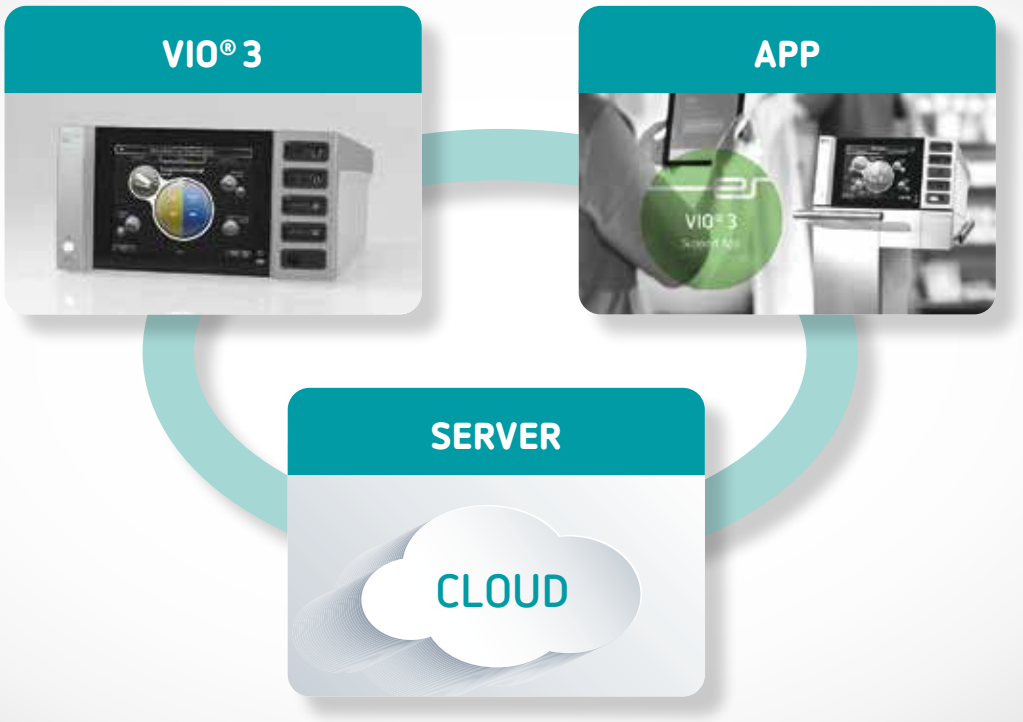
When using APC 3, you can extend your options and insert up to 6 instruments of your choice.

EASY SOCKET EXCHANGE [1]

Sockets can easily be replaced without opening the casing.

Your direct link – the Erbe support app

With the support app, you can generate and update user programs using templates and archive these on our server. Our staff and distributers 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.

96 % *of all users would recommend VIO® 3* [4]

BENEFITS FOR YOU:

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

Technical data

Power connection	
Rated supply voltage	100–120 VAC (±10 %) 220–240 VAC (±10 %)
Rated supply frequency	50/60 Hz
Line current (averaged)	Max. 6.3 A
Power consumption in standby mode	< 30 watts
Power consumption at max. HF power	550 watts
Max. pulse power consumption	1,600 watts
Potential equalization connection	Yes
Power fuse	T 6.3 A H / 250 VAC
Power output	
Maximum CUT output	400 watts at 300 ohm
Maximum COAG output	up to 360 watts
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

vio.erbe-med.com

References/publications/documents:

1 Current patents: https://www.erbe-med.com/ip
2 Technical specification of measurement and control module
3 Design registered
4 Based on a protocol of a user aceptance test (12/2014, 06/2016)
5 B. Nold et. al.: thermoSEAL® bench test VIO® 3 Y4
6 Various publications (e. g. Arima 2009, Sakuragi, T. 2008 und 2009, Repici 2012, Neugebauer, A. 2012)

Important information

We have prepared this document with care. Nonetheless, we cannot completely rule out errors in this document.

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