

erbe  
power your performance.



VIO<sup>®</sup> 3  
plug and operate

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

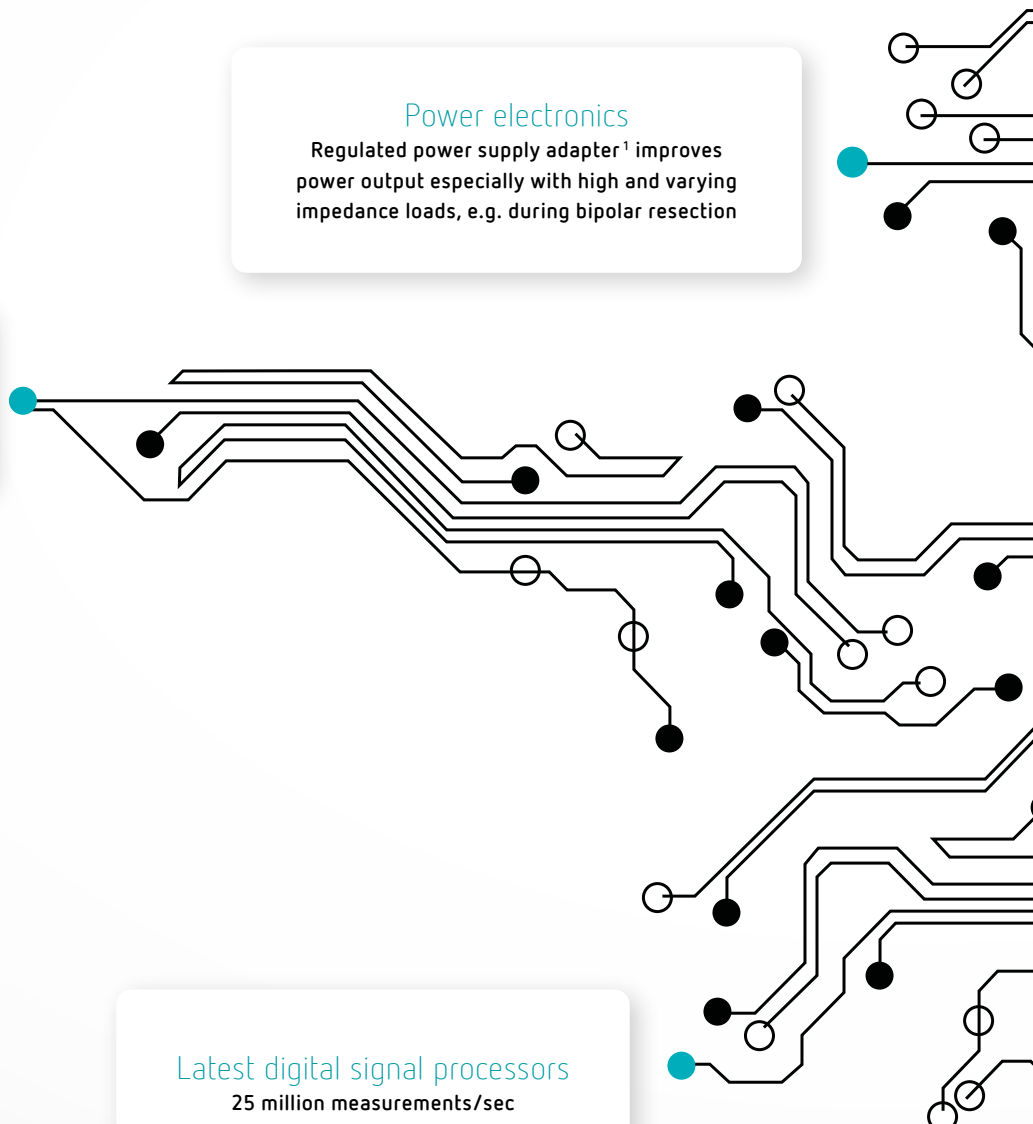


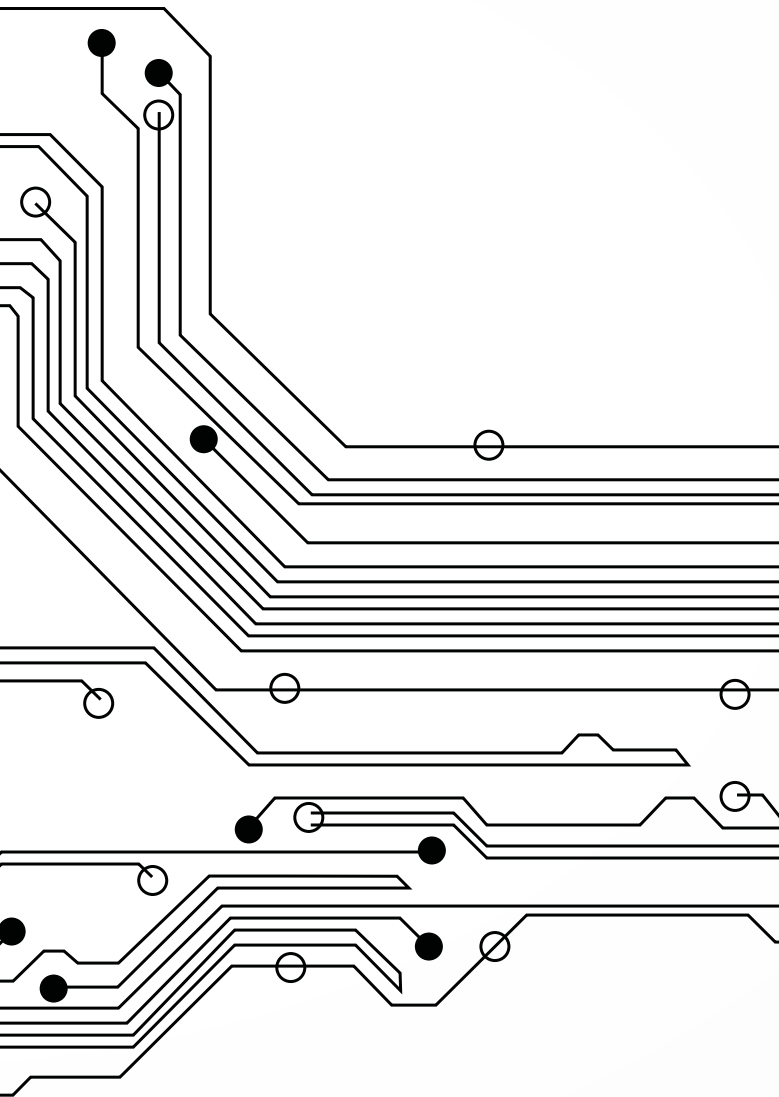
We have been a pioneer in the development of electrosurgery for over 90 years, gathering experience you can count on.

Multiprocessor technology  
15 processors facilitates  
superior system performance

Power electronics  
Regulated power supply adapter<sup>1</sup> 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<sup>2</sup>





### The WiFi communication interface

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

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<sup>®</sup> 3 is yet another of our milestones in technology, following the ICC unit series and VIO<sup>®</sup> 300/200. Utilize the innovative advantages the VIO<sup>®</sup> 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

With its logical and intuitive interface, the VIO<sup>®</sup> 3 is designed to ensure optimal user-friendliness<sup>3</sup>. 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<sup>®</sup> 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<sup>®</sup> 3  
is easier to use<sup>4</sup>

# VIO<sup>®</sup> 3

**LARGE  
TOUCHSCREEN  
DISPLAY**

**GUIDED ERROR  
ANALYSIS, DIGITAL  
INSTRUCTIONS  
FOR USE**

**FOCUSVIEW:  
ACTIVE INSTRUMENTS  
ARE SHOWN  
ON THE DISPLAY**



# plug and operate

RAPID ACCESS  
TO THE REQUIRED  
PROGRAM

EASY MODE  
ADJUSTMENT  
VIA EFFECT  
SETTINGS

INCREDIBLY  
SIMPLE, GUIDED  
OPERATION USING  
"stepGUIDE"



MULTILINGUAL  
INTERFACE

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

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<sup>4</sup>.

**Disciplines:** General / visceral surgery, gynecology, urology

## thermoSEAL®

Rapid vessel sealing



With the new AUTO START, thermoSEAL® is twice as fast as the BiClamp® mode<sup>5</sup>. 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<sup>1</sup>.

**Instruments:** Bipolar resectoscopes

## softCOAG®

Accelerated coagulation



Now with QuickStart<sup>1</sup>: 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<sup>4</sup>

# 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<sup>6</sup>, 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<sup>6</sup>

## 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<sup>6</sup>,  
e.g. for use with bipolar coagulation inst-  
ruments 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<sup>5</sup>

## 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<sup>1</sup>



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<sup>1</sup>



Sockets can easily be replaced without opening the casing.

CONNECTION  
OPTIONS



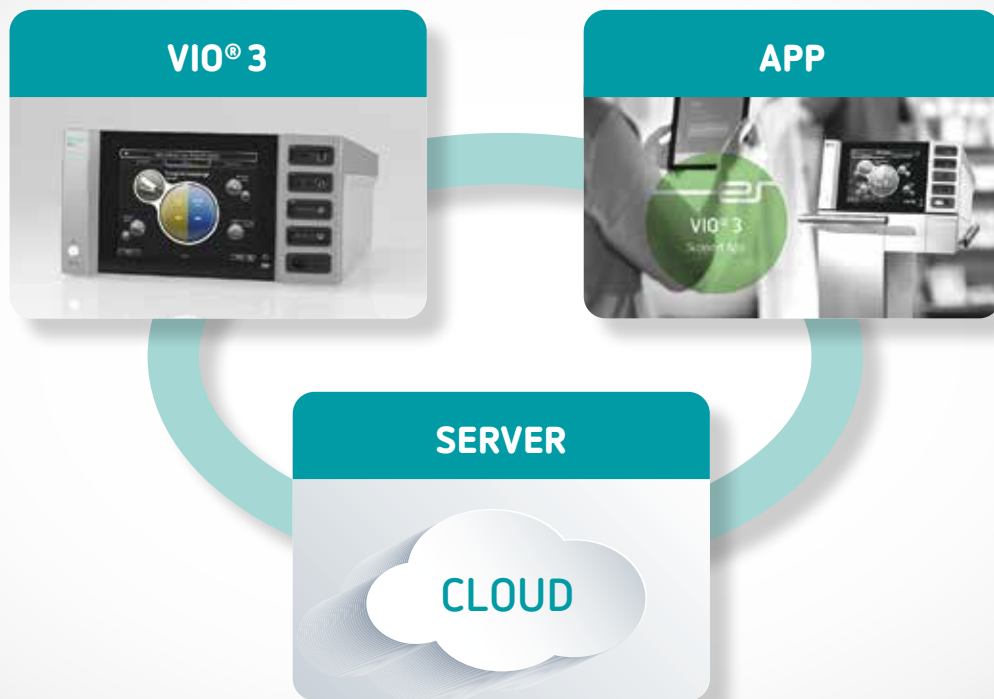
EASY SOCKET  
EXCHANGE



# 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 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.



*96 % of all users  
would recommend VIO® 3<sup>4</sup>*

## 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
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## 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

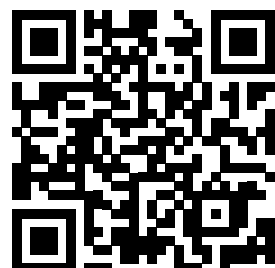
Program groups	20; program storage capacity per group: 15
Programs/applications	Up to 300
ReMode levels/settings	Up to 1800



[vio.erbe-med.com](http://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 acceptance 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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