

ELECTROSURGERY

VIO® 300 D

**THE SYSTEM OF THE FUTURE:
THE ENTIRE ELECTROSURGICAL SPECTRUM
IN A MODULAR SINGLE UNIT.**



VIO
300 D

ERBE

Perfection for Life

ALL REGULATIVE TECHNOLOGIES IN ONE: VIO® 300 D. CUSTOMIZED PERFECTION IN ELECTROSURGERY.

ERBE has set an innovative standard with the newly developed VIO electrosurgical system, which provides optimal support for operative procedures in virtually all medical fields. And many more indications can be included.

With the **VIO 300 D** generator module, a high-end unit, for the first time in electrosurgery ERBE offers **automatic output dosage for all regulative technologies:**

- **Voltage regulation** for sparing, reproducible cutting and coagulation
- **Arcing regulation** for high-energy cutting and coagulation and for cutting under water
- **Output regulation** to maintain constant power levels during coagulation and devitalization

The new and improved electrosurgical modes, effects and application programs make new operative procedures possible.



We configure the VIO 300 D – both the hardware and the software – individually according to your needs:

According to the medical specialty, the indication and the specific requirements of the operative procedures. This means that operative interventions can be carried out even more efficiently, precisely and sparingly for the patient. For example, you can choose between **different socket modules and software**

upgrades – the choice is all yours. And even in the future, **the latest upgrades and specific systems software for different countries** will help

you to remain up-to-date with the newest electrosurgical technology. In spite of its wide choice of output and functions, operating the **VIO 300 D** is both simple and comfortable. It is individually configured to the needs of the specific operative procedure.

This brochure gives a general overview of the choice of features. The VIO's modular concept and capacity for custom configuration mean that many functions are optional.



**Tailored to your needs –
both hardware and software**

- ✦ All currently available electrosurgical regulative technologies in a single unit – with automatic output dosage
- ✦ New and improved CUT and COAG functions
- ✦ Can be individually configured to meet the requirements of different medical specialties, indications and procedures
- ✦ Widest choice of socket modules and functions
- ✦ Upgrades for specific medical specialties are possible at any time
- ✦ Simple, interactive and safe operation using the TFT display and FocusView: Information is reduced to the essential.
- ✦ Individually configurable programs in simple text: switch on the unit and begin working
- ✦ Plug and play: plug in the instrument, start work
- ✦ ReMode function: “remote control” via the handle or foot switch straight from the sterile field
- ✦ The VIO 300 D – the master control unit for other modules of the VIO electrosurgical system, for example Argon Plasma Coagulation, smoke plume evacuation, endoscopy irrigation pump and more
- ✦ Neonatal surgery: additional safety with the new VIO 2nd generation
- ✦ Additional option: integrated counter records how often an instrument is used, e.g. for the BiClamp
- ✦ VIO technology can be integrated with other operating systems (Storz OR 1, Wolf CORE, daVinci)

Variable configuration with socket modules

You decide which sockets you need:

ERBE standard sockets or international 3-PIN sockets, 4 mm sockets for endoscopic interventions, two bipolar or two monopolar sockets... everything is possible, even multi-functional sockets which feature the plug and play principle.



Precise power output adjusted to the individual indication

The user-friendly VIO 300 D generator module functions as the central control unit, providing the right amount of power at the right time. Modern regulative technologies provide the optimal power dosages for the new and improved electrosurgical functions.



VEM 2, the VIO extension module has 2 additional sockets allowing you an even greater choice of sockets.



VIO CART: the ergonomic systems cart for the VIO 300 D and other system components. The VIO 300 D can also be used as a stand-alone unit mounted on a ceiling support.

PRECISE CUTTING. IN EVERY CONCEIVABLE MODE.



CUT

You do the cutting – the **VIO 300 D** will automatically adjust the power output. Intelligent microprocessor technology will deliver the required minimal amount of power according to your current needs.

The advantages of **automatic power dosage**: efficient operation with optimal results and the highest degree of safety; the ERBE Power Peak System takes specific features during the initial cutting stage into account and provides automatic support; improved cutting effects and reduced thermal damage to tissue; less stress for the patient. You can individually choose the most effective treatment option from a unique selection of tried-and-tested or new electrosurgical modes for every medical specialty and every indication.



Regulation of voltage and arcing in a single system – for a superior cut

Depending on your choice of mode you will be able to utilize two different regulatory techniques provided by the VIO 300 D generator. **ERBE voltage regulation** constantly regulates the pre-selected voltages during the entire cutting process and automatically controls the power output – creating reproducible cutting results which are largely independent of the cutting speed, type of electrode and

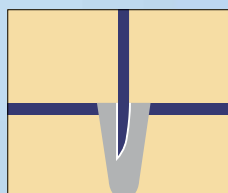
tissue type.

ERBE arcing regulation controls the intensity and size of the arcs required for the cut between the active electrode and the target tissue and constantly adjusts them. This means that the power output is controlled and optimized. Modes which are based on the regulation of arcing are particularly suitable for cuts carried out in adipose tissue or under water.



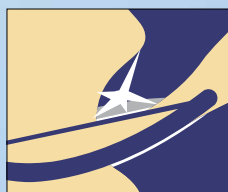
Remain “up-to-date” in your field with the help of upgrades

Thanks to the maximum variability and the modular concept of the VIO 300 D you will be able to update your system at any time with upgrades of newly developed or future ERBE functional components for medical specialties, indications or new operative procedures.



PRECISE UPGRADE (CUT/COAG)

Permits tiny modifications to be carried out while maintaining the highest degree of safety. For precise adjustments of power output and changes of effects required in microsurgical procedures.

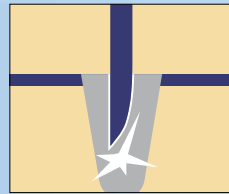


ENDO CUT IQ UPGRADE

The fractionated cut with cutting and coagulation intervals. For snare or needle/wire applications in endoscopic procedures.

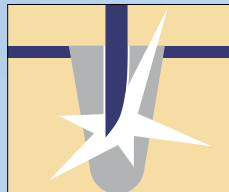
For the optimal cut

- ✦ Dosage of power output: ERBE voltage regulation for reproducible cuts with optimally adjusted power output
- ✦ Dosage of power output: ERBE arcing regulation for reproducible, efficient cuts in tissue with a high impedance
- ✦ Can be used in many specialties, from micro-surgery to high-powered vaporization
- ✦ Cutting results are largely independent of the cutting speed, the shape of the electrode and the tissue type
- ✦ DRY CUT with voltage regulation for cuts requiring maximum hemostasis and minimal smoke plume formation
- ✦ Reproducible adjustment of effects
- ✦ Newly developed electrosurgical monopolar and bipolar CUT modes
- ✦ Bipolar cutting: more safety, current flow only at the target tissue
- ✦ Power Peak System for optimal support during the initial cutting stage



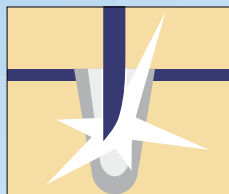
AUTO CUT

Automatically regulates the cutting quality, adjusting it according to the current flow requirement through regulation of the voltage. VIO adapts itself to the working mode of the operating physician. Minimal necrosis and reproducible cutting quality – largely independent of the electrode, the cutting process and the target tissue.



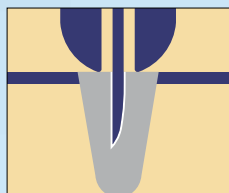
HIGH CUT

For use in special areas such as cutting adipose tissue or cutting under water. The regulatory system controls the arcing intensity and ensures that the cut will be precisely regulated with minimal power output.



DRY CUT

A combination of voltage regulation and modulated waveforms which produces an electrosurgical cut with a unique quality of hemostasis. Ideal for operative procedures which require a good initial hemostasis.



BIPOLAR CUT

BIPOLAR CUT+/++

Bipolar cutting with all the advantages provided by voltage regulation in 8 pre-determined cutting qualities. The cutting current is only present at the target tissue. This ensures more safety and guarantees precise cuts.

New: resect in saline solution with the BIPOLAR CUT+/++ and optimal initial incision (e.g. during TUR).



ALL REGULATED AUTOMATICALLY. FOR EXACT COAGULATION AND DEVITALIZATION.

COAG

The concept of the VIO electrosurgical generator is so variable that it offers all known types of monopolar and bipolar electrosurgical coagulation for all requirements – and much more. From the new SOFT coagulation to coagulation types which call for the simultaneous activation of two separate instruments.

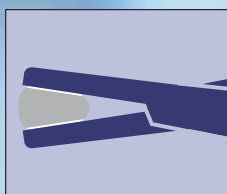


Voltage and power regulation in a single system – for even better coagulation

ERBE voltage regulation constantly maintains a pre-set voltage during the entire coagulation process. This ensures that the precise amount of power required is delivered. Even under widely differing conditions it is possible to create reproducible and optimal coagulation effects at all times. With a precisely limited or minimal power output – adapted to individual requirements. If the procedure requires contact coagulation with minimal carbonization, quick coagulation and as little sticking to the electrode as possible, then ERBE Soft Coagulation is the method of choice. The **ERBE power regulation** will maintain a constant pre-set power output level over a longer period, thereby creating an effective, previously unknown soft coagulation.

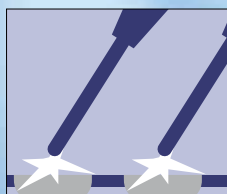
“Upgrades” for new COAG functions

You can easily upgrade your system with newly developed or future COAG and devitalization functional components for medical specialties, indications and new operative procedures.



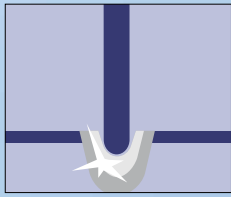
BICLAMP UPGRADE

Supports the ERBE BICLAMP. The bipolar clamp for the coagulation/resp. thermofusion of vessels with a large lumen and vascular tissue structures. The VIO 300 D can be adapted to accommodate this application with appropriate software and hardware modifications. ERBE VIO does not require an additional electrosurgical unit.



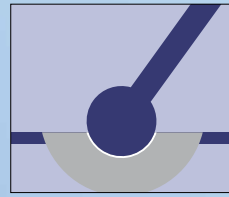
TWIN COAG UPGRADE

This upgrade will extend the range of your VIO 300 D, permitting you to simultaneously activate two separate monopolar instruments.



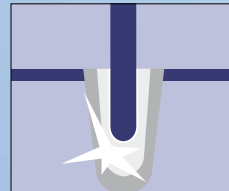
CLASSIC COAG

Gentle, layer-specific preparation and dissection. Immediate incision, minimal carbonization, limited thermal lateral damage to the edges of the incision. The mode for visceral and cardiac surgery.



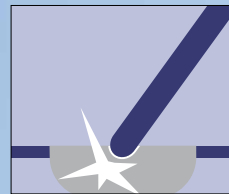
SOFT COAG

The new, rapid soft coagulation with regulation of power output. Coagulation without carbonization and almost no sticking of the electrode. Provides in-depth coagulation with minimal tissue damage.



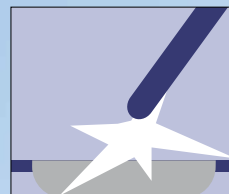
SWIFT COAG

Coagulation – also suitable for dissection. This mode makes it possible to carry out effective and rapid coagulation or dissection while achieving pronounced hemostasis; the voltage regulation means that there is minimal formation of smoke plume.



FORCED COAG

Permits rapid and effective operation which meets all the requirements of a standard coagulation. Can be carried out either directly using the coagulation electrode or indirectly, for example, with the help of insulated surgical forceps.



SPRAY COAG

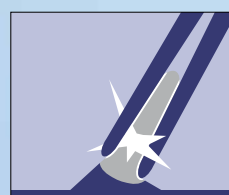
For efficient, non-contact coagulation of surfaces. The expected penetration depth of this type of coagulation is limited. This makes Spray Coagulation very suitable for the treatment of diffuse bleeding or for superficial tissue devitalization.



BIPOLAR SOFT COAG

BIPOLAR SOFT COAG+/++

Bipolar coagulation. The low voltages used in this mode prevent the instrument from sticking and distinctly reduce tissue carbonization. Effects – can be subtly adjusted with 8 different effects. The new mode BIPOLAR SOFT COAG+/++: reliable coagulation for bipolar resection with saline solution.



BIPOLAR FORCED COAG

A quicker form of bipolar coagulation compared to SOFT COAG. Suitable for all bipolar coagulations where vasculature must be coagulated quickly and effectively.

For perfect coagulation

- ✦ Dosage of power output: Voltage regulation for reproducible coagulation with optimal power output
- ✦ Power regulation for rapid non-sticking coagulation with minimal carbonization
- ✦ Newly developed electrosurgical COAG effects
- ✦ Monopolar and bipolar coagulation for all every requirement
- ✦ AUTO START and AUTO STOP functions
- ✦ Simultaneous activation of 2 electrodes/instruments for dissection
- ✦ Reproducible adjustment of effects
- ✦ SWIFT COAG – coagulation with voltage regulation for dissection and pronounced hemostasis with minimal smoke plume

INNOVATIVE USER INTERFACE AND SAFETY CONCEPT. VERSATILE AND COMFORTABLE.



With the **FocusView** function the new ERBE VIO 300 D has been provided with an innovative user interface: you will see only the parameter settings which you actually need for each current procedure.



Unique: the new PreView function

When the parameters are adjusted, the resulting changes to the CUT and COAG symbols on the display will show you how the setting will approximately affect the target tissue during the application.

ReMode

With the modern ReMode activation concept ERBE has developed a “remote control” which is very user-friendly. Using the VIO foot switch the operating physician can switch between pre-set instrument settings – without another person having to change the settings on the system.

Innovative development: the Neutral Electrode Safety System NESSY

With the NESSY safety concept and the ERBE patient plate NESSY Ω the VIO 300 D sets new standards for patient safety.



NESSY monitors the application of the patient plate, providing the user with information which is graphically displayed on the monitor



Because of its new shape the **NESSY Ω Neutral Electrode** can be applied irrespective of direction. It practically precludes the troublesome “leading edge” effect, i.e. the development of high current densities at the electrode edges.

WELL DESIGNED ACTIVATION CONCEPT WITH REMOTE ACTIVATION. FROM THE OPERATING TABLE – JUST WHAT YOU ALWAYS WANTED.

Advantages at a glance

- ✦ Simple to operate (despite wide choice of functions) due to the Help Screens
- ✦ **FocusView** reduces the information shown to the essentials, showing only the parameters of the instruments currently plugged into the unit
- ✦ **PreView** function shows you the expected target tissue effect on the display even prior to activation
- ✦ Display-supported neutral electrode safety system **NESSY** provides interactive assistance when positioning the patient plate
- ✦ Assignment of the foot switch: the display makes it possible to assign the foot switches or even just one foot switch pedal to the output socket of choice – simply and flexibly
- ✦ VIO supports the automatic activation functions **AUTO START** and **AUTO STOP**



Plug and play

using digital instrument recognition

ERBE is the first manufacturer of electro-surgical instruments to offer digital instrument recognition. When you plug in an ERBE applicator for a specific treatment into the VIO electro-surgical system, the entire system will be automatically configured accordingly.

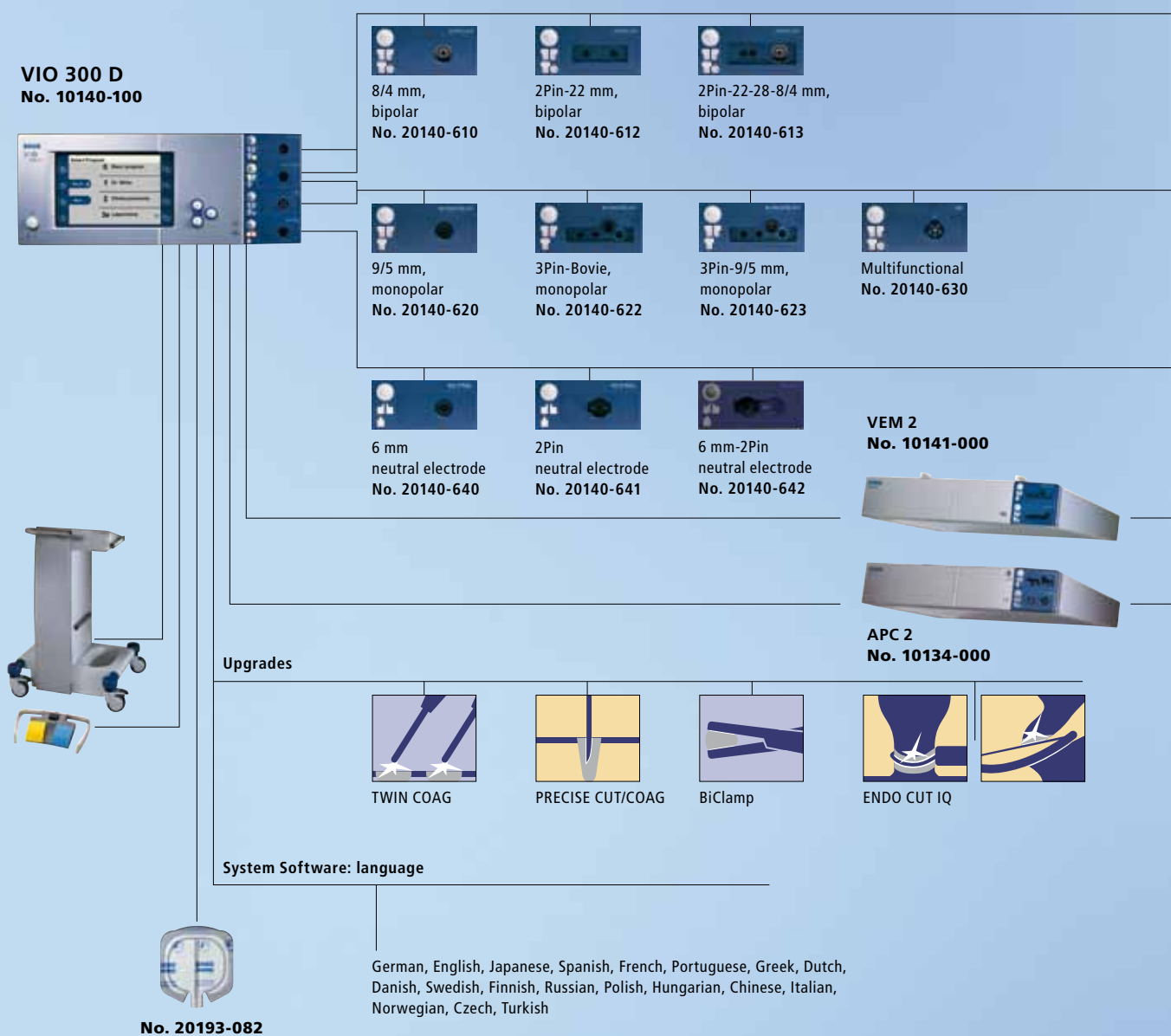


New VIO footswitches

User-friendly due to tactile feedback and improved ergonomics. Modular design, easier maintenance. Can be cleaned in the automatic washer-disinfector.

INDIVIDUAL CONFIGURATION ACCORDING TO YOUR REQUIREMENTS.

The ERBE VIO 300 D – open to future developments with modular hardware and software. We configure the system according to your requirements – which can range from the basic “stand-alone” electrosurgical generator to the full electrosurgical system. This diagram offers you a first overview of the range of possible options for configuration. Our experts are on hand to offer professional advice. We would like to help you make the right choice.



TECHNICAL DATA AT A GLANCE.



Power output	
Maximum CUT output	300 Watt at 500 ohms (with PPS temporary 400 Watt)
Maximum COAG output	up to 200 Watt
Safety system	NESSY
Frequency	350 kHz
Mains connection	
Supply voltage	100 V – 120 V/220 V – 240 V \pm 10%
Frequency	50/60 Hz
Mains current	max. 8 A/4 A
Power input during stand-by	40 Watt
Power input during max. electrosurgical output	500 Watt/920 VA
Potential equalization connection	yes
Fuse	T 8 A/T 4 A
Dimensions and weight	
Width x Height x Depth	410 x 160 x 370 mm
Weight	9.5 kg
Ambient temperature for the transport and storage of the unit	
Temperature	–40° C to +70° C
Relative humidity	10% – 95%
Ambient temperature during operation of the unit	
Temperature	+10° C to +40° C
Relative humidity	15% – 85%
Standards	
Classification acc. to the EC-Directive 93/ 42/ EEC	IIb
Protective class acc. to EN 60 601-1	I
Type acc. to EN 60 601-1	CF

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BiClamp, SWIFT COAG, ReMode, VIO.

ELECTROSURGERY
VESSEL SEALING
ARGON PLASMA COAGULATION
CRYO SURGERY
WATERJET SURGERY

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