While we continually strive for perfection, we are thinking of the individual as we continue to improve our systems.
How individual, adaptable and economic can a new electrosurgical system get? ERBE VIO is the answer to that question, offering new opportunities for electrosurgery: as modular and economic as you like, where you have a choice of focusing on a specific medical specialty or using it in interdisciplinary areas.

ERBE VIO represents a new flexibility in the OR. V stands for variable expansion and individual configuration, the yellow I graphically symbolizes electrosurgical cutting, the blue O stands for coagulation. This latest development, based on the time-tested ICC-range, offers a greater range of performance and is even simpler to operate. Covers the whole spectrum of electrosurgical interventions: cutting, coagulation, devitalization and vaporization. With new areas of application and effects.

You just choose the functions you require and we will configure your VIO system – both the hardware and the software – according to your needs. The system is available ranging from the basic electrosurgical unit to the universal electrosurgical workstation. With a choice of output sockets which can be freely and individually configured, an interactive display and the ERBE Communication BUS to connect your chosen modules. You can be confident that the totally interactive user interface will make controlling the system very simple for the OR team and will support the team during every stage of the procedure. You will be able to concentrate entirely on the task at hand.

*This brochure gives a general overview of the different features. The modular concept and the ability for custom configuration of the VIO system means that many functions are optional.*

### The right unit for every surgical discipline

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Caption:  
++ very advisable  
+ advisable
Tailored to meet your needs – the advantages of the new VIO system

- Can be individually configured to meet the requirements of different medical specialties, indications and procedures
- New and improved CUT and COAG functions
- Argon-Plasma Coagulation (APC) with new regulation, modes and effects
- Automatic dosage of power output
- Numerous integrated functions in a single unit make separate units for particular procedures unnecessary
- Large choice of socket modules and functions
- Can be upgraded and updated for different medical specialties with specific functions
- Interactive, simple and safe operation with the use of simple text dialog function
- FocusView: reduces the visual information to the essentials, simplifying the operation of the unit
- PreView: graphic depiction of tissue effects with different parameters, shown on the display prior to activation
- Plug and play: plug in the instrument, start work
- ReMode function: “Remote Control” of functions/parameters via the handle/foot switch “straight from the operating table”
- Improved safety with the neutral electrode NESSY Ω
- ECB ERBE Communication BUS to connect the modules
IMAGINE A SYSTEM WHICH MEETS YOUR NEEDS BY OFFERING YOU A CHOICE OF HARDWARE AND SOFTWARE MODULES.

The more an electrosurgical system is customized to meet individual needs and fit the specific requirements of different medical specialties and procedures, the more precise and efficient the operation will be, and the less of a stress the procedure will be for the patient.

That is the reason why we made the VIO HF system so flexible and why we offer so many configuration choices. The concept is unique and economically convincing. You get exactly those functions you really need – but you also have the choice of expanding your system any time through upgrades.

The core element is the VIO electrosurgical unit as the master control system. You can choose from a whole range of options: these may range from the stand-alone unit to the complete system. All options are open to you because all components are perfectly coordinated and connected.

APC 2
With the new VIO electrosurgical unit and the APC 2, for the first time enables a better dosage of the penetration depth during Argon Plasma Coagulation.

Nerve test NT 2 for intraoperative localization of nerve and muscle structures.

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

ERBEJET 2, the new dimension in water jet surgery. The ERBEJET 2 was developed to be compatible with the ERBE VIO, with respect to both its size and functionality.
Variable configuration with socket modules
You decide which sockets you need: ERBE standard sockets, international 3-PIN sockets, 4 mm sockets for endoscopic interventions, two bipolar or two monopolar sockets ... almost everything is possible.

VIO electrosurgery generator
For the first time, with this electrosurgical generator all regulative technologies are available together: voltage, arcing and output regulation. New electrosurgical functions are just some of the functions, which have been integrated. We will configure your choice of system based on one of the two power output classes, with either 200 or 300 watt: VIO 200 D, VIO 300 D, VIO 200 S and VIO 300 S.

Smoke Evacuation System IES 2
For quiet and efficient evacuation of smoke plume and aerosols.

EIP 2
Irrigation Pump For Endoscopic Procedures

ESM 2
Suction module for ERBEJET 2

Practical storage area

Suction unit
WE HAVE SOLVED THE QUESTION OF THE RIGHT SETTING AT A GLANCE: WITH AN INTERACTIVE USER INTERFACE.

The advantages at a glance

- Simple operation despite wide choice of functions
- **FocusView** reduces the information displayed to the essentials, showing only the parameters of the instruments attached to the unit or currently activated
- Programs with simple text for easy storage, modification and recall of programs or OR parameters (procedures, specific medical specialties, individual settings)
- **PreView** function of the VIO D units shows the expected effect on the target tissue on the display prior to activation
- Dialog-info system gives helpful information and offers recommendations on changes of settings
- Display-supported neutral electrode safety system provides interactive assistance when placing the patient plate
- The display supports future upgrades of new electrosurgical effects or programs for future functions
- The display makes it possible to assign the foot switches or even just one foot switch pedal to the output socket of choice – simple and flexible
- Plug and play of the VIO D units defines and automatically adjusts the specific application parameters when an ERBE instrument is plugged in

Simple structure, user-friendly operation

You only see the settings of the instrument which you are currently using and are free to concentrate on the essentials. Only a few steps and the procedure can begin. The programs can be modified using simple text. This means that you can store your individual physician program or your program for a medical specialty or a procedure and recall it using your list of programs.

The user interface of the VIO 300 S and VIO 200 S allows the operating physician and his team to directly access the program parameters.

**FocusView** limits the amount of information displayed to the essentials, showing only the parameter settings of the instruments either currently plugged into the unit or activated.
To make things even simpler and save time during applications, with Focus View we have integrated a new type of user interface structure in the new ERBE VIO system. During operative interventions you will see only the parameter settings which you actually need for the current procedure: clearly and in the form of a simple text dialog.

This simple user interface does not mean, however, that you will lose any functionality. Instead, this user interface focuses on the essentials, creating almost limitless variability and expanding the functions possible.

The new PreView function of the VIO 300/200 D offering even better patient safety is unique. When adjusting the parameters you can see in advance how the setting will approximately affect the target tissue. This means that efficiency is increased while the patient is subjected to less stress.

You have a choice of up to 100 freely configurable programs which can be selected using the high-resolution color display. VIO will show you which socket the instrument should be plugged into for activation. A self-explanatory system which also offers extensive user support, for example by reporting errors, as it provides information by giving user recommendations.
AUTOMATICALLY regulates the cutting quality according to the current requirements through regulation of the voltage. Minimal necrosis and reproducible cutting quality – largely independent of the cutting electrode, the cutting process and the target tissue.

Remain “up-to-date” in your field with the help of upgrades
Thanks to the variable and the modular concept of the VIO system you will be able to update your system at any time with upgrades: newly developed or future ERBE functional components for medical specialties, procedures and new operative techniques. It will not be necessary to buy an additional unit. Together with our clinical partners we will continue to develop custom-made electrosurgical solutions for specific needs, which can be economically integrated in the VIO concept in the future.

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

BICLAMP UPGRADE
Supports the ERBE BiClamp. The bipolar clamp for the coagulation of vasculature with a large lumen and vascularized tissue structures. With the appropriate software and hardware modifications the VIO 300 D can be adapted to accommodate these applications. ERBE does not require an additional electrosurgical unit.

PRECISE UPGRADE
Slightest modifications with the highest degree of safety. For precise adjustments of power output and changes of effects in microsurgery.

TWIN COAG UPGRADE
This upgrade will update your VIO 300 D and enable you to simultaneously activate two separate instruments.

AUTO CUT
Automatically regulates the cutting quality according to the current requirements through regulation of the voltage. Minimal necrosis and reproducible cutting quality – largely independent of the cutting electrode, the cutting process and the target tissue.
CUT
You do the cutting – the VIO electrosurgical system will automatically adjust the power output. Intelligent microprocessor technology will deliver the required amount of power, thereby reducing patient stress. The advantages of automatic power adjustment: 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 for an optimal recovery. You can individually choose the most effective treatment from a unique selection of tried-and-tested or new electrosurgical modes for every operation, each type of tissue and every medical specialty.

Regulation of voltage and arcing in a single system – for a better cut
When executing an electrosurgical cut, your choice of mode will take advantage of the two different regulatory techniques provided by the VIO generator. ERBE voltage regulation constantly regulates the pre-selected voltages during the entire cutting process and automatically controls the extent of power output – creating reproducible cutting results independent of the cutting speed, type of electrode and tissue type.

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

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

HIGH CUT
For use in special areas such as cutting adipose tissue or underwater cutting (e.g. in TURP). The regulatory system records the arcing intensity and ensures that the cut will be precisely controlled with minimal power output.

DRY CUT
A combination of voltage regulation and modulated waveforms which produces an electrosurgical cut with an unique quality of hemostasis. Ideal for operations requiring a good initial hemostasis.

BIPOLAR CUT/BIPOLAR CUT +
Bipolar cutting with all the advantages provided by voltage regulation in eight pre-determined cutting qualities. 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).
COAG

The concept of the electrosurgical VIO generator is so variable that it offers all known types of monopolar and bipolar electrosurgical coagulation: for all specialties, every tissue type and all types of procedures – and much more. From the new SOFT coagulation to a coagulation which allows simultaneous activation of two separate instruments.

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

The ERBE voltage regulation constantly maintains the pre-set voltage during the entire coagulation process. This ensures that the system will deliver the precise amount of power required. Even under widely different conditions it is possible to create a reproducible and optimal coagulation effect at all times. With a precisely limited or minimal power output – adapted to different requirements. If you have to use a contact coagulation with minimal carbonization quickly and with as little sticking to the electrode as possible, then the new ERBE Soft Coagulation is the method of choice. The ERBE power regulation will maintain a constant pre-set power output over a longer period which creates an effective, previously unknown soft coagulation.

For perfect coagulation

- Dosage of power output with voltage regulation: reproducible coagulation with optimal power output
- Power regulation for rapid non-sticking coagulation with minimal carbonization
- Newly developed electrosurgical COAG effects
- AUTO START and AUTO STOP functions
- TWIN COAG: 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

COAG

The new, rapid soft coagulation with regulation of power output. Coagulation without carbonization and with less sticking of the electrode. Provides deep coagulation with minimal patient stress.

SOFT COAG

SWIFT COAG

COAG

FORCED COAG

Rapid and effective operation which meets all the requirements of a standard coagulation. Carried out using the coagulation electrode with the help of insulated surgical forceps.
The new Argon-Plasma Coagulation with APC 2
The underlying physical principles (self-limiting, non-contact) of electrosurgical Argon-Plasma Coagulation (APC) make it one of the most innovative operative procedures. With the new electrosurgical system VIO, ERBE has now made a decisive step forward in the development of APC. APC Depth Control enables better dosage of the penetration depth of APC – within the given physical limits: creating coagulation results ranging from superficial to deep coagulation. The integrated ignition support improves the initial ignition of the APC plasma while keeping ignition voltage below critical values.

The VIO system’s APC with argon-supported cutting and coagulation also sets new standards. Argon Cut/Coag reduces smoke plume formation and carbonization and can be used in many functions of the VIO system.
Well Designed:
Precision Instruments and Accessories – The Latest Concept of Remote Activation from the Operating Table.

We focus on the individual. For ERBE this is particularly the case when developing new instruments and accessories. So when we developed the new VIO with a Dialog Display, we created a forward-looking activation concept: ERBE ReMode – a “remote control” for the operating physician. Using either the new, third button on the ergonomically developed APC handle or additional control elements on the VIO foot switch the physician can switch between two instrument settings – without another person having to change the settings on the system. For example, you can start by applying Argon-Plasma Coagulation and then quickly and safely switch over to FORCED COAG by pressing a button. Straight from the operating table. VIO is also supported by the AUTO START and AUTO STOP activation functions. A safe activation concept for optimal flexible control at every stage during the procedure.

New, ergonomically optimized APC multifunctional handle with ReMode function using a third button.

New VIO-footswitches: User-friendly due to tactile feedback and improved ergonomics. Modular design, easier maintenance. Can be cleaned in the automatic washer-disinfector.
Plug and play using digital instrument recognition
ERBE is the first manufacturer of electrosurgical instruments to offer digital instrument recognition. A heat resistant semi-conductor element in the instrument stores numerous parameters. When you plug in an ERBE applicator into the VIO electrosurgical system for a specific treatment, the entire system will be automatically configured – while maintaining highest safety standards and offering optimal results.

Choice of foot-switch pedals
One or both pedals on the foot-switch can be assigned to the output socket, depending on your preference. This means that you can either control several instruments with just one pedal or only program one pedal on the footswitch for use, eliminating any danger of confusing the yellow and the blue foot-switch pedals.

Quality instruments: compatible and open to future developments
The high-quality ERBE accessories from the ICC-generation are fully compatible with the new VIO electrosurgical system. They remain as reliable and functional as ever. This means that you can continue to use any ICC-accessories you may have. Ask for our special accessories brochure.
When designing the new VIO system we included patient safety. In addition to the technical safety installations and monitoring systems, the integrated INFO system actively promotes safety. It provides support for the user at all times, offering help and information; it interactively shows changes of parameter settings, gives safety recommendations and reports errors in simple text, offering the opportunity to intervene at all times.

In addition to standard control functions such as sensors for HF current leaks, monitor systems to prevent false current dosages and the monitoring of inadvertent or excessive activation of the system, we have developed the Neutral Electrode Safety System (NESSY) a step further. Together with the new ERBE patient plate NESSY Omega (Ω) the VIO system sets new standard.

NESSY monitors the application of the neutral electrode, 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.
The new VIO system’s modularity, capacity to be upgraded and high safety standards are based on up-to-date flash microprocessor technology. In order to protect the electronic components, we have housed them in a new E-Pack® casing system of foamed plastics which offers excellent insulation against shocks and cools specific components. The “Safety Pack” system simplifies servicing, maintenance and recycling of the components.

In an extensive series of tests the man/machine interface of the VIO system was optimized in order to ensure that while the system is highly functional and can be expanded in the future, the operation of the system would be logical, simple and interactive. For example, the vertical arrangement of the sockets prevents connecting cables from obscuring the operating panels of the modules below. The asymmetric construction of the system makes it possible to plug in additional modules laterally and creates more room in the OR.

And finally: the VIO System is compatible with all commonly used OR systems.