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## Surgical diathermy SURTRON 80 D (New)

New,

Made in Italy.

It has the possibility of cutting, cutting with coagulation and monopolar coagulation and microcoagulation alone.

Controlled by a microprocessor equipped with the most advanced technological components and circuits, including LSI microcontrollers, which informs of any problems or of exceeding the recommended operating power during cutting or coagulation

Stores the most recently used settings, so after restarting diathermy or changing the work mode it is possible to recall the previously used parameters It is possible to adjust the volume of surgical diathermy signaling.

The device may be activated using buttons on the handle or the foot pedal, which is supplied with Surtron surgical diathermy.

The device can be controlled from the front panel of the device or by using the buttons on the work handle.

Application of diathermy:

Trauma surgery,

Vascular surgery,

**Dentistry** 

Dermatology, First aid,

Veterinary medicine (small animals),

Diathermy functions:

Coagulation - Temperatures of 60 to 70°C in the area around the active electrode cause slow heating of the intracellular fluid; the water in the cells evaporates, a coagulation effect is obtained and blood flow is stopped.

Cutting - Temperatures over 100°C in the area around the active electrode cause evaporation of the intracellular fluid and destruction of the cells. The vapour around the electrode starts a sequence of reactions, according to the direction of the active electrode. The energy is conducted to the adjacent tissues. In this case, such cutting is not equivalent to mechanical cutting. When the temperature reaches 500°C, the phenomenon of cauterisation occurs. Mixed currents - combine the effects of cutting and coagulation. During the cutting procedure, blood loss is limited and a scab is formed.

Surgical techniques used with the Surtron80D diathermy:

Monopolar cutting is the cutting of biological tissue through a course of dense high frequency current concentrated at the end of the active electrode. When applied through the active electrode, the high frequency current intensely heats the cells, causing their destruction. The cutting effect is achieved by moving the electrode on the tissue and destroying more cells. The movement of the electrode prevents the heat from spreading sideways, so that the area of cell destruction is limited to a single line. The best high frequency current for cutting is a pure sine wave without modulation. The cut is then smooth and the thermal effect is small, so that only a small amount of haemostasis occurs during operation. Since the effects of this wave can be precisely controlled, it can be safely used to cut bone. Furthermore, since good coagulation during cutting is one of the basic advantages of electrosurgery, a certain level of modulation is also desirable.

Monopolar coagulation is the hemostasis of small blood vessels by high-frequency current flowing in an active electrode. When the current density is reduced and a wide surface electrode is used to spread the energy over a larger area, the effect is to dry out the surface cells without penetration, resulting in coagulation. The coagulated surface cells then form an insulating coating to prevent heat penetration too deep during subsequent applications. The current used for coagulation is usually modulated. The degree of modulation determines the smoothness of the cut, the degree of haemostasis and the likelihood of tissue damage. Greater modulation of current favours less precise cutting and involves some risk of damaging deeper tissues, but it also gives more effective coagulation.

Diathermy programmes:

**CUT** 

The best current for electrosurgical knife cutting is a pure sinusoidal wave without modulation, i.e. with 100% duty cycle. This current is designed for cutting without coagulation.

BLEND (mixed current)

Mixed coagulation-cutting current is used when deep coagulation together with cutting is required. The resulting current is suitable for cutting with coagulation, without scabbing or carbonization.

COAG (coagulation)

Modulated current is characterized by good surface coagulation properties and, at the same time, by the probability of scabbing and partial carbonization.

The advantage of this type of current is the speed of obtaining the coagulation effect. MICRO (microcoagulation)

MICRO modulated current is designed for coagulation of small blood vessels. The coagulation process is then easier to control and more precise. Included:

Foot attachment.

Steel patient passive electrode,

Handle and electrode holder,

Electrodes 5 cm - 10 pcs,

Power cord,

Handle without switch, Cable for neutral electrode,

Instruction manual in languages: PL, EN,

Technical data:

CORTE max cutting power: 80 W - 400  $\Omega$ ,

Mixed cutting max power MEZCLA:  $60 \text{ W} - 400 \Omega$ ,

COAG max coagulation power: 50 W - 400 Ω,

MICRO microcoagulation max power: 20 W - 600  $\Omega$ ,

Basic operating frequency: 700 kHz,

Neutral electrode for increased patient safety: F,

Power supply: 115-230 V / 50-60 Hz,

Input power: 200 W,

Weight: 2.5 kg,

Dimensions: 190x85x239 mm, Holds a valid Technical Passport,

Warranty: 24 months,

If you have any questions, please do not hesitate to contact us!

In case you don't find the product you are interested in, please get in touch with us and we will do our best to find the perfect solution for YOU.

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