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SURTRON 120 surgical diathermy (New)

New
Italian production,
It has the ability to monopolar cutting, soft, forced or bipolar coagulation.
Controlled by a microprocessor, equipped with the most technologically advanced elements and circuits, including LSI microcontrollers, which informs about any problems or about exceeding the recommended working power during cutting or coagulation
Patient safety thanks to the possibility of using a neutral electrode.
Allows constant monitoring of the output circuit parameters.
They remember the last used settings, thanks to which after restarting the diathermy or after changing the operating mode it is possible to recall previously used parameters
The volume of signaling the operation of surgical diathermy can be adjusted.
Activation of the device can be done using the buttons on the handle or foot pedal, which is equipped with Surtron surgical diathermy.
The device can be controlled from the front panel of the device or by using buttons on the work handle.
It is possible to use both a single passive and split electrodes, designed to control the quality of contact with the patient's skin during surgical intervention.
Application of diathermy:
Vascular surgery,
Dentistry,
Maxillary surgery,
Dermatology,
Laryngology,
Gynecology,
With first aid,
Veterinary medicine,
Diathermy functions:
Coagulation - A temperature of 60 to 70°C in the area around the active electrode causes slow heating of intracellular fluid; Water in the cells evaporates, we get the effect of coagulation and stopping blood flow.
Cutting - A temperature of more than 100°C in the area around the active electrode causes the evaporation of intracellular fluid and destruction of cells. The vapors around the electrode begin a sequence of reactions in the direction of the active electrode. Energy is conducted to neighboring tissues. In this case, such cutting is not equivalent to mechanical cutting. When the temperature reaches 500 ° C, cauterization occurs.
Mixed currents - combine cutting and coagulation effects. During the cutting procedure, blood loss is limited and a scab is formed.
Operational techniques used with Surtron120 diathermy:
Monopolar cutting involves the division of biological tissue achieved by the high density of flowing high frequency current that is concentrated on the small area of the active electrode. The cutting effect arises when the tension between the tissue and the active electrode is sufficient to create an arc between them. With the help of this arc, a point flow of electric current to the tissue is created. A very high temperature is created at the flow site causing tissue to evaporate or burn. Cutting is achieved by moving the electrode through the tissue and destroying the cells one by one. The movement of the electrode prevents the heat from spreading sideways, thus limiting the destruction of cells to a single line. The best high-frequency current for cutting has a purely sinusoidal course, without any modulation, which cuts very smoothly and produces the smallest thermal effect with low hemostasis during cutting. Because its effect can be precisely regulated, it can be used safely, although, because good coagulation is one of the major benefits of using electrosurgery, current with a certain level of modulation is desirable.
Monopolar coagulation is hemostasis of small blood vessels of body tissues by the flow of high frequency current. When the current density is reduced and we use a large surface electrode to disperse energy over a large area, the effect is to dry the cells on the surface without deeper penetration, resulting in coagulation. These coagulated cells on the surface form an insulation layer to prevent deeper penetration. The current normally used for coagulation is modulated and, depending on the degree of modulation, we obtain smooth cut, quality of haemostasis, and degree of tissue destruction. Deeper current modulation results in more effective coagulation.
Bipolar coagulation causes hemostasis of small blood vessels between the tips of bipolar forceps. When the current density is reduced, drying of the cells on the surface is obtained, without deep penetration. Gently coagulated cells act as an insulation layer preventing deeper heat penetration.
Programs for diathermy:
CUT (smooth cut)
The best current for cutting with an electrosurgical knife is a pure sine wave without modulation, i.e. with a 100% duty cycle. Such current is intended for cutting without coagulation.
BLEND (coagulated cutting)
Mixed coagulation-cutting current is used when deep coagulation together with cutting is required. The current thus obtained is suitable for cutting with coagulation, without the formation of scabs and carbonization.
Forced coagulation modulated current has the ability to quickly surface coagulate, with the likelihood of partial tissue carbonization. The advantage of this mode of operation is to obtain a quick coagulation effect on the treated surface.
SOFT COAG (soft coagulation)
The low-voltage and modulated course allows coagulation of deeper layers of tissue in which coagulation of cells takes place without carbonization. Soft coagulation is more time consuming than strenuous.
BIPOLAR (bipolar coagulation)
This mode of operation is suitable for gentle coagulation without the effect of both monopolar and bipolar carbonization. The use of bipolar pliers is allowed BIPOLAR only in this operating mode. To enable connection of a bipolar tweezer cable, it is necessary to use an optional adapter (REF 00498.04), which protects against activation in another mode of operation.
Equipment:
Reusable handle with multi-functional buttons,
Electrode set 5 cm (10 pcs):
L1 - thin thin wire electrode,
L2 - bent thin wire electrode,
L3 - 4mm loop electrode,
L4 - 8mm loop electrode,
L5 - folded hooked electrode,
L6 - bent thin wire electrode,
L7 - teardrop electrode,
L8 - loop electrode,
L9 - 3mm straight ball electrode,
L10 - bent ball electrode,
120x160mm steel neutral electrode with wire,
Foot switch (waterproof),
2 m power cable.
Technical data:
Maximum output power:
CUT - 120 W - 250 Ω,
BLEND - 90 W - 200 Ω,
FORCED COAG - 80 W - 150 Ω,
SOFT COAG - 60 W - 100 Ω,
BIPOLAR - 40 W - 100 Ω,
Operating frequency - 600 kHz,
Passive electrode - F,
Power to choose - 115-230 Vac,
Mains frequency - 50-60 Hz,
Maximum power consumption - 300 VA,
Weight - 5 kg
Device dimensions WxHxD - 254x104x288 mm,
Has a valid Technical Passport issued,
12 months warranty,

