The **ESU 70** provides radio-frequency current for smooth cutting in air and **under water** and contact coagulation. The blended (modulated) current permits cutting with increased hemostasis and spray coagulation.

This unit is in particular suitable for **UROLOGICAL OFFICE PROCEDURES**. It is used for the management of small bladder tumors. A variety of cystoscopic electrode tips for the rigid and flexible cystoscopes are being offered.

You will also obtain satisfactory results for vasectomy. Select from ball, needle tips to delicate Adson coagulation forceps.
ESU 70 B
ELECTROSURGICAL UNIT

The ESU 70 B is a modern electrosurgical unit for minor and specialty surgical interventions for the general surgeon, dermatologist, gynecologist, proctologist, urologist and E.N.T. specialist, as well as the outpatient department of the hospital. The relatively high output permits the employment of all kinds of cutting and coagulation electrodes, including wire loops up to 10 mm 0, as well as snares, suction coagulators, biopsy punches, coagulation forceps and many specialty instruments. The ESU 70B provides a bipolar output for precise coagulation.

List No. 5196 ESU 70 B, ELECTROSURGICAL UNIT with
SMART-O-MATIC circuit (select accessories as required)

Printed and solid state circuits, representing the state-of-the-art technology, permit this compact design and makes service an easy task.

THE ESU 70 B PROVIDES

- Extremely smooth, non-modulated, rectified RF-current for scalpel-like cutting and contact coagulation
- Blended current for cutting with pronounced coagulation On Blend II spray coagulation with ball electrodes is also possible
- Sufficient output, continuously adjustable for all minor specialty surgical procedures in the office and ambulatory surgery
  Available are a wide selection of accessories such as needle, lancet, knife, ball, and loop electrodes and forceps. By means of adapters, all other competitive electrodes and instruments may be used
- Bipolar output socket takes conventional bipolar cable and footswitch operated bipolar forceps
ADVANTAGES OF ELECTROSURGERY WITH THE ESU 70 B

Cuts with smooth current, permitting first intention healing
Sterilizes the tissue surface as it cuts, seals lymphatic vessels and capillaries and thus, prevents absorption of toxic substances and postoperative bleeding
Bipolar output accepts standard bipolar accessories
Hemostasis while cutting, reducing blood loss
Biopsies suitable for pathological examinations
Excellent cosmetic results
Simple operation
Durability with advanced digital and solid state circuits

SMART-O-MATIC, automatic compensation circuit which provides the desired output for all electrodes or tissue conditions. The automatic range control, which is divided into ten steps, requires no readjustment within the set range.

TECHNICAL DATA OF THE ESU 70 B

The generator employs modern and sophisticated, space-saving printed solid state circuits for long, trouble-free service.

Output Power:

**Monopolar Generator:** Sufficient output for all cutting and coagulation procedures, precisely adjustable
- Pure Mode: 70 Watts at 350 Ohm load (non-modulated current)
- Blend I Mode: 70 Watts at 350 Ohm load (modulated current)
- Blend II Mode: 55 Watts at 350 Ohm load (modulated current)

**Bipolar Generator:** Isolated (floating) output of extremely low tension RF, (maximum 370 Volts, 50 Watts at 50 Ohms, precisely adjustable

Frequency: 1.7 MHz, RF (Radio Frequency current)
Power Supply: 117 V/60 Hz, other voltages available on request
Dimensions: 13" W x 11" D x 5" H
Weight: 9 lbs

Optional Accessories:

- List No. 5707 Single pedal footswitch, lever action
- List No. 5010 Handle, monopolar, for footswitch operation
- List No. 5021 Monopolar RF-cable for handle List No. 5010
- List No. 5230 Bipolar RF-cable for forceps
- List No. 5990 Bipolar RF-cable for forceps with two-pin connector

Select electrodes, monopolar accessories, bipolar accessories and patient return accessories from their respective data sheets.

Unit meets latest electrical safety standards of UL 544, CSA, NFPA, and IEC proposed standards.
Shaft insulation color code: 3Fr-Black; 4Fr-Red; 5Fr-Gray; 6Fr-green; 7Fr-Orange; 8Fr-Blue

<table>
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# 5103 straight needle tip

# 5010 handle, foot operation ; # A-3 10ft, connecting cable

# 5176 coagulation needle, to be threaded in to the vas ends

# 425C coagulation forceps, used for vas ends and general hemostasis

#5182 wire loop, 8mm
ELECTRO SURGICAL SYSTEM FOR OUTPATIENT UROLOGICAL PROCEDURES

Based on over 20 years experience in the design and manufacture of electro surgical instrumentation, we developed a complete electro surgical system for outpatient urological procedures.

With our **Model 170U** we are offering generators without the addition of unnecessary and costly features found on equipment made only for general application.

**170 U** was designed to be used for the following procedures:

- Removal of small tumors and lesions within the bladder, through the cystoscope, flexible or rigid, with special electrodes from 4 Fr to 7 Fr.
- Coagulation of biopsy site following bladder biopsy.
- Vasectomy and micro surgical vasectomy reversal.
- Coagulation of small blood vessels, using either unipolar or bipolar forceps.
- Removal of skin lesions.
TECHNICAL DATA OF THE ESU 170 U:

Output Power:

- PureCutting (non-modulated) 110 Watts at 500 Ohm load
- Blended Cutting (30% modulated) 110 Watts at 500 Ohm load
- Spray Coagulation (modulated) 55 Watts at 500 Ohm load
- Bipolar Coagulation (non-modulated) 50 Watts at 100 Ohm load

Dimensions:
- Height 6"
- Length 15.5"
- Depth 12.5"

Weight: 14 lbs.

Power Requirements: 117 Volts, 60 Hz, 3 A
(Other power requirements upon request)

Unit meets the latest electrical safety standards of OSHA, NFPA, CSA and UL 544.

ORDERING DATA FOR THE ELECTROSURGICAL SYSTEM FOR OUTPATIENT UROLOGICAL PROCEDURES AND ESU 170 U:

List No. 5795 OUR ELECTROSURGICAL SYSTEM FOR OUTPATIENT UROLOGICAL PROCEDURES, Consisting of: ESU 170 U Generator for hand/foot activation
  - List No. 5709 Dual Pedal Footswitch, List No. 56.8795 case of disposable patient plates, List No. 5501116 adapter, List No. 75504 box of disposable hand switch pencils List No. 5260 Cable for Flexible Electrodes
  - List No. CET 107K Flexible Bugbee Electrode, 5 Fr. 13" long;
  - List No. EET 107-C-04 Flexible Bugbee Electrode, 4 FR, 65 cm long

List No. 5785 ESU 170 U Electrosurgical Generator for Outpatient Urology, unipolar and bipolar, footswitch operated, for foot activation only

List No. 5709 Dual-Pedal Footswitch, UL approved

List No. 5302 Bipolar RF-Connection Cable for bipolar forceps and ESU.
List No. 5332 Recommended Bipolar Forceps for general applications in outpatient urology 17 cm long, bayonet shaped, fine tips, insulated.
List No. 42510-CW Bicoagulation forceps for vas
FEATURES OF THE EQUIPMENT CARTS:

- Modular design, permits easy assembly and modification
- Cart may be equipped with one, two or three drawers, or provided without drawers. Drawer and respective hardware may be added at later date, assembly without tools
- Tabletop is 25" x 18". Laminated fiberboard may be mounted for level or tilted positioning of the equipment.
- Convenient height 32" for operating the respective equipment
- Great mobility, electrically conductive ball bearing casters
- Equipment guard on three sides
- One, two or three drawers and bottom storage shelf

L. No. 4755 Equipment Cart with one drawer
L. No. 4756 Drawer including hardware (additional drawers if needed)
Shipping weight: 40 lbs, can be drop shipped by UPS
To perform surgical procedures through flexible urethroscopes and cystoscopes, special flexible electrodes are required. They are insulated to the tip; exposed tip length approx. 3mm

**FEATURES:**

- Color coded TEFLON shaft insulation:
  - 2 FR...BLUE
  - 3 FR...BLACK
  - 4 FR....RED
  - 5 FR....GRAY
- Most complete selection of tip styles.
- All tips are genuine nickel silver.
- Accepts most standard TUR cords.
- Shaft length:
  - 60 cm
  - 90 cm
  - 120 cm
  - Custom Length Available

Special custom sizes available
INTRODUCING

HOT BIOPSY FORCEPS

With our dedicated under water coagulators you will be able to take a biopsy (without destroying the specimen) and coagulate the site at the same time. The instrument can be passed through the biopsy channel of your flexible cystoscope. The steel coil is insulated up to the distal end. The handle has a connector for the cautery cord.

# 21665
65cm long, 1.8mm i

# 5029 connecting cable to fit our generators

Please observe this device was exclusively build to work with a generator that delivers RF current, such as our ESU-70.
INTRODUCING

HOT SNARE

Should you be prepared to tackle somewhat larger biopsies in the office we have a hot snare available that will allow you “to lasso” the specimen. The transection away from the bladder wall will take place by applying the Radio Frequency Current (RF) of our dedicated ESU. It is imperative that RF current will be applied for the sake of safety and pinpoint accuracy.

The hot snare is built to fit through the channel of your flexible cystoscope.

Please observe how this crescent loop is ballooning out to capture the tissue with more ease.

Insulated handle with ESU connector

# 5029 connecting cable to fit our generators
ERBE ICC 200 ELECTROSURGICAL UNIT + APC 300

Unit has the following control functions: Auto CUT-max 300W Auto-COAG-max. 120W. Available coagulation modes: SOFT, FORCE D, BIPOLAR; Accessories: dual footswitch
The Argon Plasma Coagulation module includes gas flow regulator (argon) from 0.1L/min to 9L/min in eight working modes.