

SURGITRON® DUAL RF™

Advanced 4.0 MHz Radiowave Technology

PRECISION • VERSATILITY



Surgitron® Dual Frequency 4.0 MHz Radiowave Technology

The patented Surgitron® Dual Frequency unit represents advanced radiowave technology that provides unparalleled surgical control, precision and versatility. The high frequency of 4.0 MHz minimizes heat dissipation and thus cellular alteration.

Clinical Benefits Include:

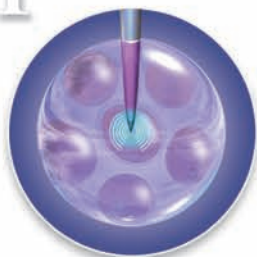
- **Reduced post-operative discomfort¹**
- **Minimal scar tissue formation²**
- **Maximum readability of histologic specimen³**
- **Enhanced healing⁴**
- **Excellent cosmetic results⁵**

Ellman's technology has received worldwide acclaim and recognition from leading surgeons, clinics, and universities.

How Our Patented Radiowave Technology Works

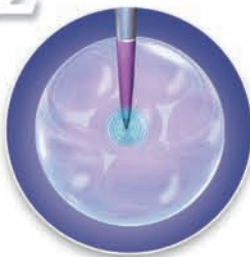
Cellular Radiowave Absorption

1



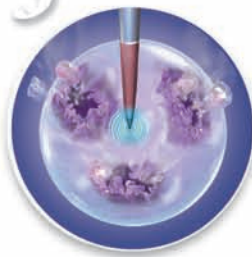
High frequency Radiowave energy has a strong affinity for water.

2



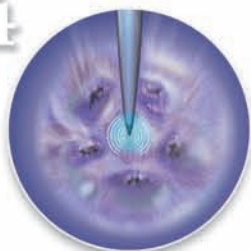
Targeted tissue / cell readily absorbs energy due to high water content.

3



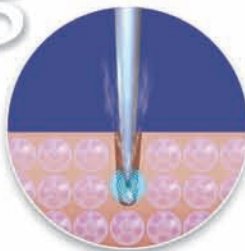
Intracellular pressure increases as water molecules expand.

4



Volatilization results in cell conversion to vapor. Process emits steam which aids in coagulation.

5



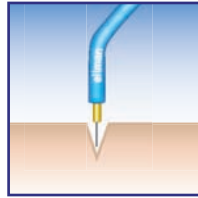
Cellular interaction enables meticulous precise dissection with tissue preservation.

Five Distinct Waveforms for Optimum Results

1. Fully Filtered (Cut)



- Micro-smooth cutting
- Negligible lateral heat
- Minimal cellular destruction
- Best cosmetic results. Fastest healing^{4,5}
- Ideal for skin incision and biopsy
- 4.0 MHz



4. Fulguration



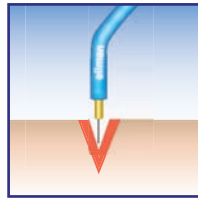
- Maximum penetration and hemostasis
- Ideal for intentional tissue destruction
- 4.0 MHz



2. Fully Rectified (Cut/Coag)

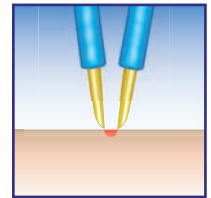


- Cutting with hemostasis
- Ideal for sub-cutaneous tissue dissection and planing. Especially useful in vascular areas while producing minimal amounts of lateral heat and tissue damage
- 4.0 MHz

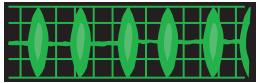


5. Bipolar

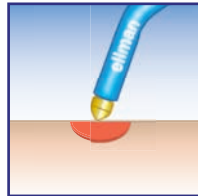
- Pinpoint, micro-coagulation
- Minimal tissue adherence to forceps
- Minimal charring or tissue necrosis
- Ideal for coagulation in and around critical anatomy
- 1.7 MHz



3. Partially Rectified (Hemo)



- Coagulation / Shrinkage
- Hemostasis with controlled penetration
- Ideal for cutting with hemostatic control
- 4.0 MHz



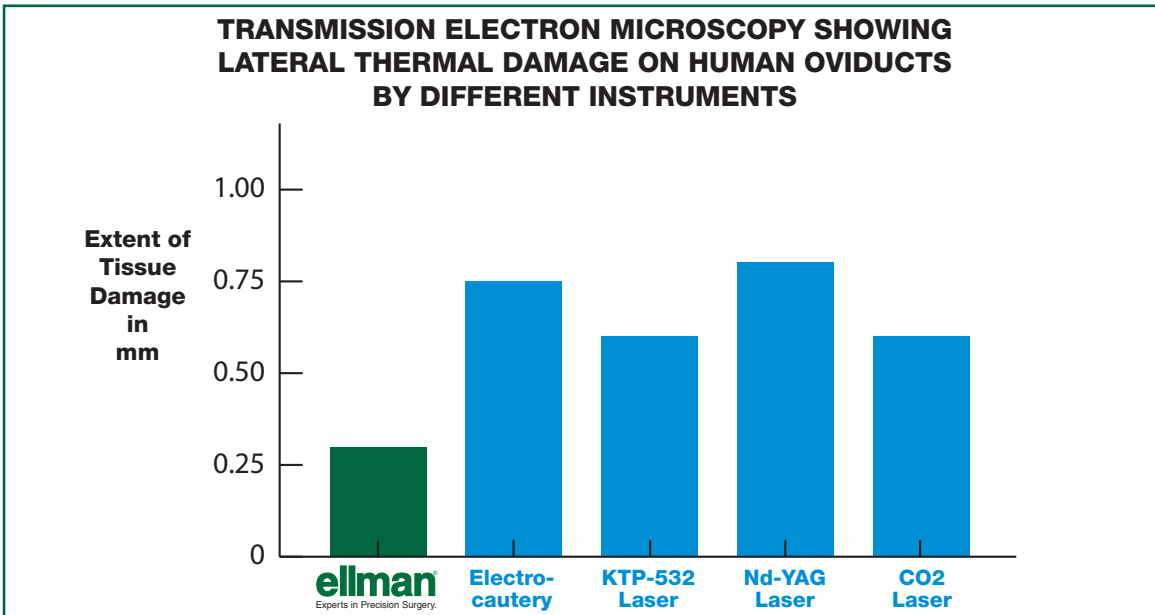
Features and Benefits

- **Patented Technology** reflecting 50 years of innovation and enhancement
- **Dual Frequency** combining two optimized frequencies Monopolar (4.0 MHz) and Bipolar (1.7 MHz) for maximum surgical benefits - outstanding control and precision
- **Digital Operation** for accurate parameter selection and viewing
- **Solid State Circuitry** for dependable, consistent energy emission
- **Safety Indicators** provide visual and auditory alerts.
- **Parameter Recall** allows rapid set-up for subsequent procedures
- **Surg-e-Doc** provides procedural efficiency with an extra monopolar port and simultaneous activation of Surg-e-Vac™



Surgitron® Dual RF™ with Surg-e-Doc™

Less Lateral Thermal Alteration and More Precision with the 4.0 MHz



Reference - Olivar, AC, et al, Ann Clin Lab Sci. 1999 Oct-Dec; 29(4): p281-5.

- Ellman radiowave technology produces one-third the lateral thermal damage as compared to conventional electrocautery
- Ellman radiowave technology produces one-half to one-third of the lateral thermal damage as compared to most lasers

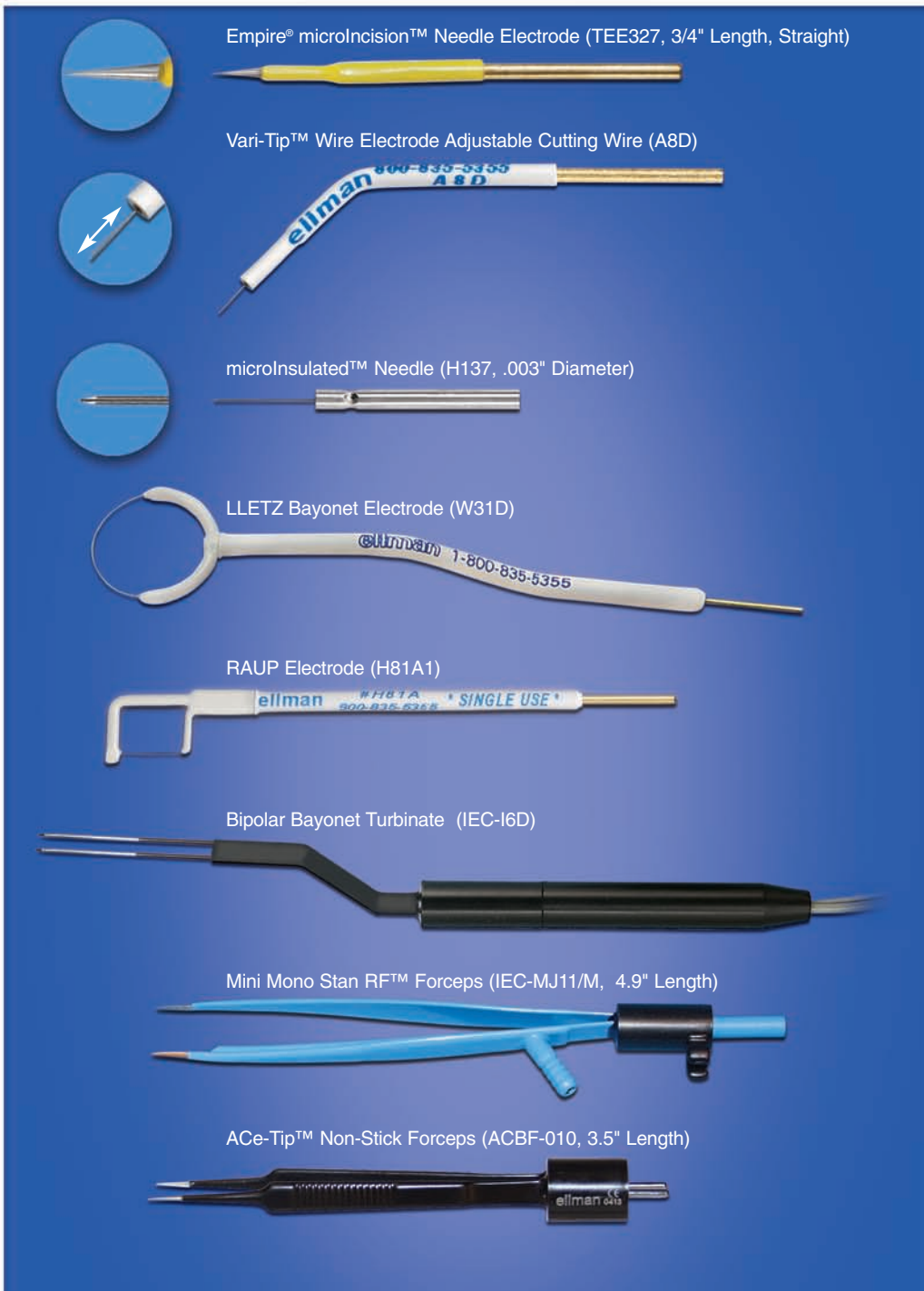
Maximum Precision Cutting and Control

Histological evidence of minimal cellular distortion using high frequency monopolar Radiosurgery® to excise tissue.⁶



Surgitron® Dual RF™
4.0 MHz

The **PRECISION** you require with the **VERSATILITY** you need



**Hundreds of electrodes & accessories are
available for most medical specialties.**
(See Product Catalog for full listing)

Dermatology

Ear, Nose, and Throat (ENT)

Facial Plastic

General Surgery

Gynecology

Ophthalmology / Oculoplastics

Oral / Maxillofacial Surgery

Plastic Reconstructive

Primary Care

Podiatry

Proctology

ellman®

Experts in Precision Surgery.

established 1959

Radiowave Technology

Radiowave Technology



Shown with Surgitron® Dual RF™, Surg-e-Vac™ and Cart

Clinical Citations

1. Ericsson, E et al, The Laryngoscope (2007); vol 117, p654
2. Botero, G.E.S, J Otol Head Neck Surgery (1996); vol 24 (1), p69
3. Silverman, E.B et al, Veterinary Surgery (2007); vol 36, p50-56
4. Bridenstine, J.B., Derm Surgery (1998); vol 24, p397-400
5. Aferzon, M, Derm Surgery (2002); vol 28, p735-738
6. Dr. Constantin Stan, Data on file.

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