

# SURGITRON® DUAL RF™ 120

Advanced 4.0 MHz Radiofrequency Technology

**NEW!** Improved Hemostasis\*

**PRECISION • VERSATILITY**



**ellman®**  
INTERNATIONAL, INC.

\*as compared to previous model

# Surgitron® Dual Frequency 4.0 MHz Radiofrequency Technology

With over **50 years of experience**, over 70 patents and more than 200 journal articles, Ellman is your trusted worldwide partner for surgical products and services.

The patented Surgitron® Dual RF™ unit represents advanced RF technology that provides unparalleled surgical control, **precision, versatility** and **safety**. It generates 120 watts of power and operates at 4.0 megahertz (MHz) in monopolar mode and 1.7 MHz in bipolar mode. The high frequency is up to eight times greater than traditional electrosurgery units. This minimizes thermal damage along the incision path and is the deal choice for your soft tissue cutting and coagulation needs, regardless of setting- private office, surgery center or hospital.

## Features of the Surgitron Dual RF 120

- **Advanced Technology** reflects 50 years of innovation and enhancement
- **Dual Frequency** combines two distinct frequencies – Monopolar (4.0 MHz) and Bipolar (1.7 MHz) – for outstanding precision and control
- **Digital Control Panel** facilitates easy operation and clear view of settings
- **Solid State Circuitry** for dependable and consistent energy emission
- **Parameter Recall** enables rapid set-up for subsequent procedures
- **Safety Indicators** provide visual and auditory alerts

## Distinct Benefits for Your Practice

- **Precision**– sculpt precise incisions in very thin, mobile or tension-free tissues (e.g. eyelid skin, earlobe, etc...)²
- **Versatility**– more versatility than other energy-based technologies³
- **Value**– our patented technology is a high return on investment (ROI) purchase for both hospital and office environments

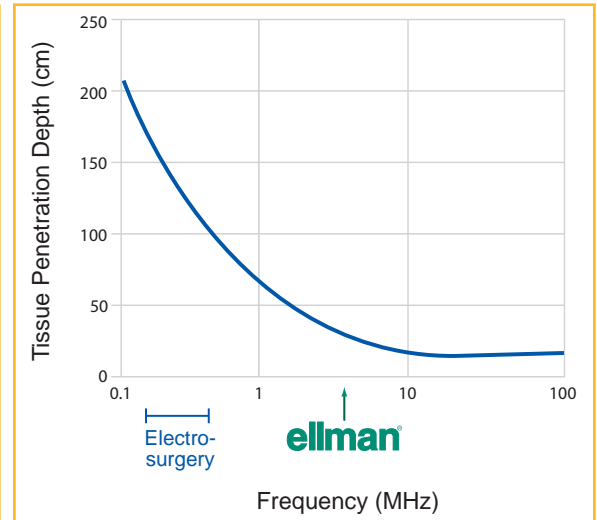
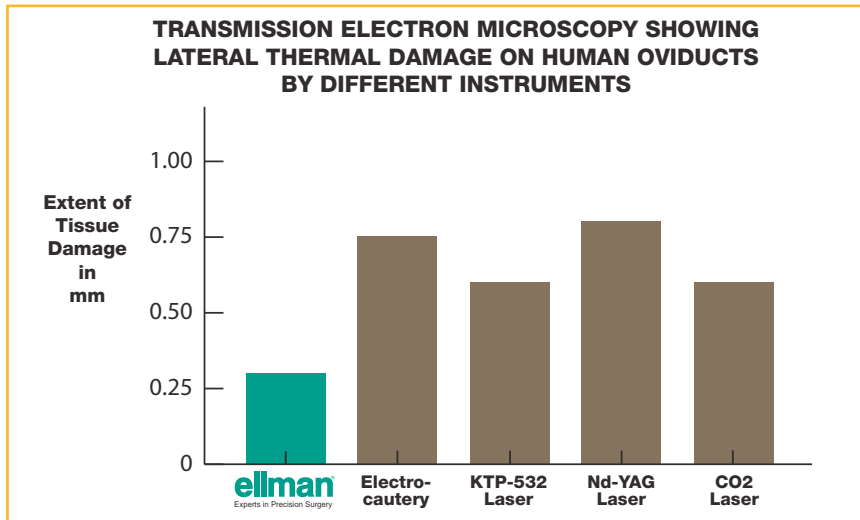
## Clinical Outcomes for Your Patients

- **73% Less Thermal Spread** as compared to Bovie® 1250 and Valleylab® ForceFX™ in porcine tissue³
- **Excellent Cosmetic Results** causes minimal scar tissue⁴,⁵
- **Quick Recovery**– with less tissue destruction, healing is hastened and your patients can recover quickly⁶
- **Decreased Post-Operative Pain** high frequency RF surgery causes less trauma⁷
- **Less Burning or Charring of Tissue** high frequency RF surgery minimizes burning of tissue, unlike laser or conventional electrosurgery¹
- **Minimal Heat Dissipation** maximum readability of histologic specimens⁸

## Procedures

- Biopsy for pathology
- Bipolar coagulation
  - Blepharoplasty
- Endoscopic brow lift
  - Epilation
  - Face-lifts
- Flaps & grafts in reconstructive surgery
- Hair transplant (micro grafts)
  - Keloids
- Lesion removal (skin tags, nevus, etc..)
- Matrixectomy
- Mohs surgery
- Rhinophyma
- Scar revision
- Telangiectasia
- Wart removal

## 4.0 MHz minimizes Lateral Thermal Spread & maximizes Precision



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

Source: Golio, JM, et al, "RF and Microwave Applications and Systems", The RF and Microwave Handbook, p21-2.

- Ellman radiofrequency technology produces one-third the lateral thermal damage as compared to conventional electrosurgery
- Ellman radiofrequency technology produces one-half to one-third of the lateral thermal damage versus most lasers

## Five Distinct Waveforms for Optimal Clinical Outcomes



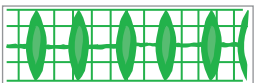
### Fully Filtered(Cut)

Micro-smooth cutting • Negligible lateral heat • Minimal cellular destruction • Ideal for skin incision and biopsy • Best cosmetic results • Fastest healing <sup>6,7</sup>



### FULLY RECTIFIED(Blend)

Cutting with hemostasis • Ideal for subcutaneous tissue dissection and planing • Especially useful in vascular areas while producing minimal amounts of lateral heat and tissue damage



### PARTIALLY RECTIFIED(Coag)

Coagulation / Shrinkage • Ideal for hemostasis with controlled penetration • For cutting with maximum hemostatic control

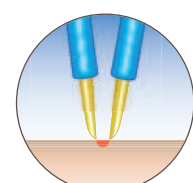
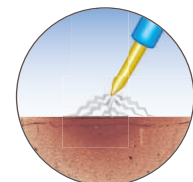
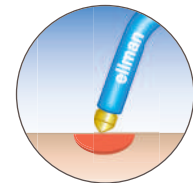
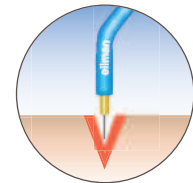
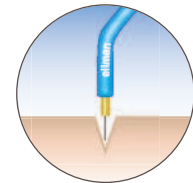


### FULGURATION

Maximum hemostasis • Ideal for intentional tissue destruction

### BIPOLAR

Pinpoint, micro-coagulation • Minimal charring or tissue necrosis • Ideal for coagulation in and around critical anatomy

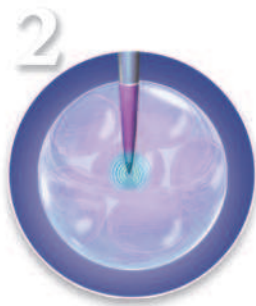


# How Our Patented Radiofrequency Technology Works

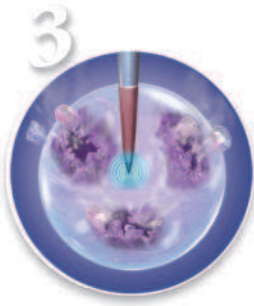
## Cellular Radiofrequency Absorption



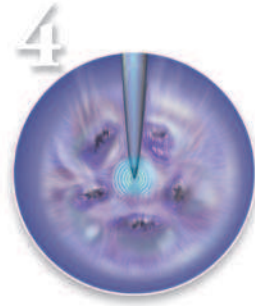
1 High frequency RF energy has a strong affinity for water.



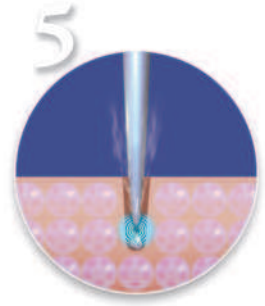
2 Targeted tissue / cell readily absorbs energy due to high water content.



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.

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

### Surgitron Dual RF Specifications

<b>Product Code:</b> IEC3a-S30	
<b>Description:</b> Surgitron 4.0 Dual RF/120 IEC	
<b>Dimensions</b> Height: 7.1 inches Width: 9.5 inches Depth: 16.5 inches Weight: 19 lbs	<b>Output frequency</b> 4.0 MHz Monopolar 1.7 MHz Bipolar
	<b>Line Frequency</b> 50/60 Hz
<b>Line Voltage</b> 100-240 volts	
<b>Output Power</b> Monopolar Cut: 120 Watts Monopolar Blend: 90 Watts Monopolar Coag: 60 Watts Monopolar Fulgurate: 45 Watts Bipolar: 120 Watts	



#### Clinical Citations

1. Olivar, AC, et al, Ann. Clin. Lab Sci. (1999); 29 (4): p281-5.
2. Niamtu, J. Chapter 4B, "Radiowave Surgery in Oral and Maxillofacial Surgery", in Distraction Osteogenesis of the Facial Skeleton, 2007, p30-37.
3. Data on file.
4. Botero, G.E.S, J Otol Head Neck Surgery (1996); vol 24 (1), p69.
5. Aferzon, M, Derm Surgery (2002); vol 28, p735-738.
6. Bridenstine, J.B., Derm Surgery (1998); vol 24, p397-400.
7. Ericsson, E, et al, The Laryngoscope (2007); vol 117, p654.
8. Silverman, EB, et al, Veterinary Surgery (2007); vol 36, p50-56.

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