How Our Patented Radiofrequency Technology Works

Cellular Radiofrequency Absorption





High frequency RF energy has a strong affinity for water.

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

dily Intracellular pressure high increases as water molecules expand.

ar pressure Volatilization results as water conversion of intrace s expand. waterto vapor. Proce steam which aids in coagulation.

Volatilization results in the conversion of intracellular waterto vapor. Process emits



Cellular interaction enables precise dissection with tissue preservation.



NEW! Improved Hemostasis*

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



Product Code: IEC3a-S30Description: Surgitron 4.0 Dual RF/120 IECDimensionsOutput frequencyHeight: 7.1 inches4.0 MHz MonopolarWidth: 9.5 inches1.7 MHz BipolarDepth: 16.5 inchesLine FrequencyWeight: 19 lbs50/60 Hz

Surgitron[®] Dual RF Specifications

Line Voltage 100-240 volts

Output Power

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





A (UND(URE°Company

*as compared to previous mode

Surgitron® Dual Frequency 4.0 MHz Radiofrequency Technology

With over 55 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 ideal 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 tissue^{4,5}
- · 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 Tissues high frequency RF surgery minimizes burning of tissue, unlike laser or conventional electrosurgery¹
- Minimal Heat Dissipation maximum readability of histologic specimens⁸



- 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





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

- 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)



FULLY RECTIFIED (Blend) planing • Especially useful in vascular areas while producing minimal amounts of lateralheat and tissue damage



| PARTIALLY RECTIFI | ED | (Coa |
|---------------------------|-----|--------|
| Coagulation / Shrinkage • | Ide | al for |
| For cutting with maximum | her | nosta |

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

4.0 MHz minimizes Lateral Thermal Spread & maximizes Precision





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

Micro-smooth cutting • Negligible lateral heat • Minimal cellular destruction • Ideal for skin incision and biopsy • Best cosmetic results • Fastest healing 6.7

Cutting with hemostasis • Ideal for subcutaneous tissue dissection and

ag)

hemostasis with controlled penetration • atic control

