

Shown with Surgitron® Dual EMC 90, Surg-e-Vac™ and Cart



Surgitron® Dual EMC 90 Specifications

Product Code: IEC3A-S30-90
Description: Surgitron® 4.0 Dual RF™/90 IEC

Dimensions	Output frequency
Height: 5 inches	4.0 MHz Monopolar
Width: 9 inches	1.7 MHz Bipolar
Depth: 13 inches	Line Frequency
Weight: 18 lbs	50 - 60 Hz

Line Voltage
 110/120/220/240 volts

Output Power
 Monopolar Cut: 90 Watts
 Monopolar Blend: 65 Watts
 Monopolar Coag: 45 Watts
 Monopolar Fulgurate: 35 Watts
 Bipolar: 90 Watts

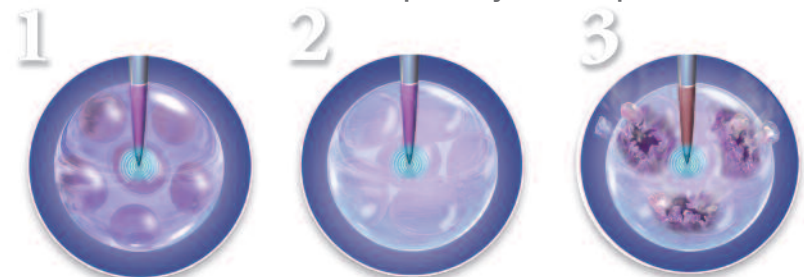
SURGITRON® DUAL EMC 90

Advanced 4.0 MHz Radiofrequency Technology

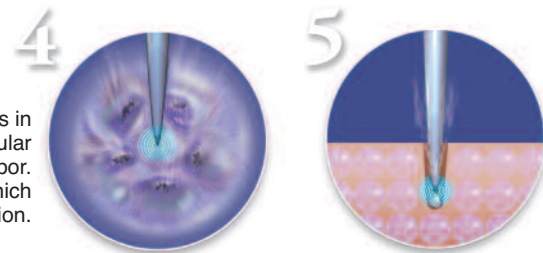
The **PRECISION** you require
 with the **VERSATILITY** you need

How Our Patented Radiofrequency Technology Works

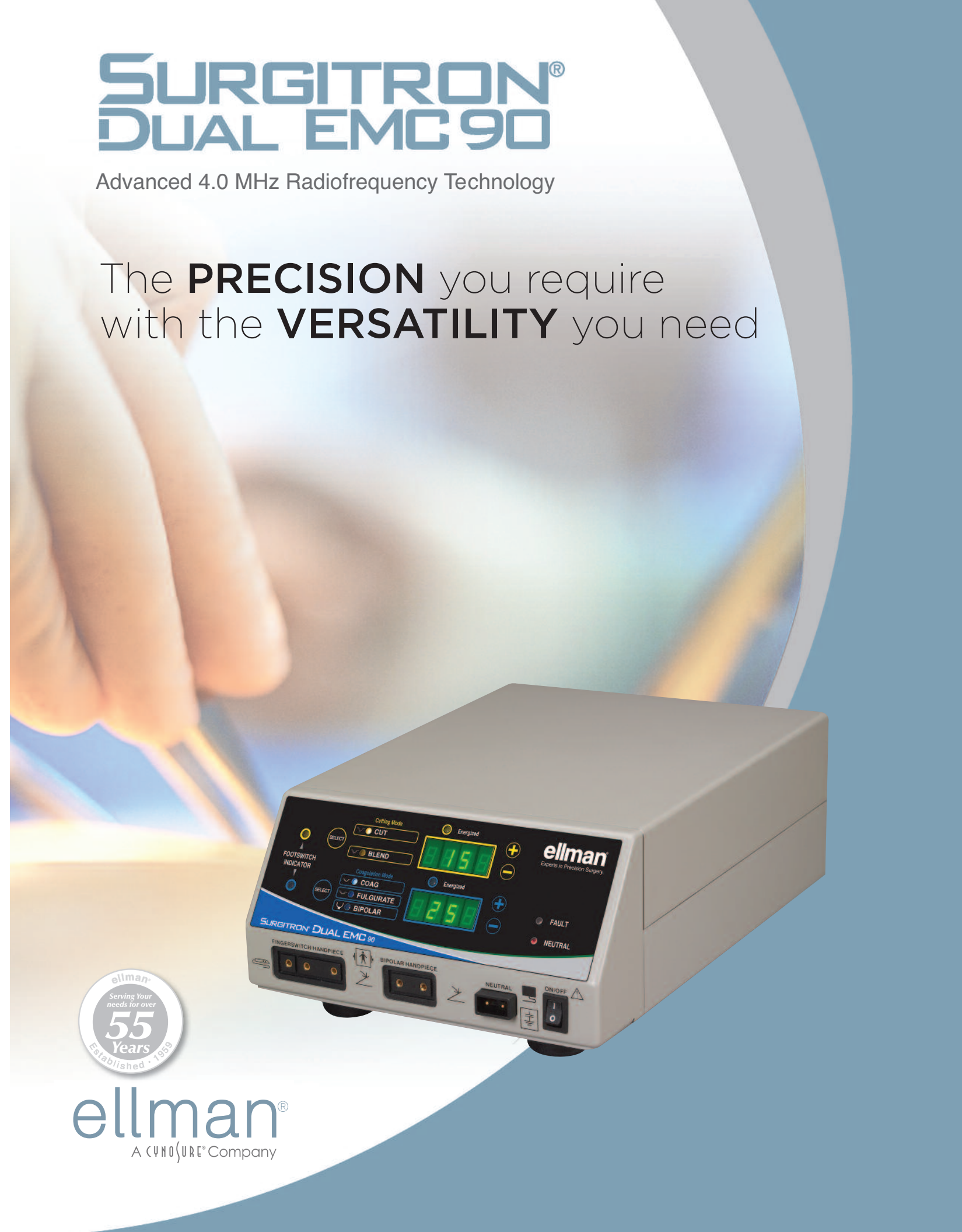
Cellular Radiofrequency Absorption



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 conversion of intracellular water to vapor. Process emits steam which aids in coagulation.
5 Cellular interaction enables precise dissection with tissue preservation.



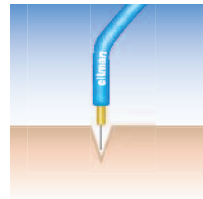
ellman®
 A CYNOSURE® Company

Surgitron® Dual EMC 90 Energy Source

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 Surgitron® Dual EMC 90 unit represents advanced radiofrequency technology that provides unparalleled surgical control, **precision, versatility** and **safety**. The high frequency of 4.0 MHz minimizes heat dissipation and thus cellular alteration.

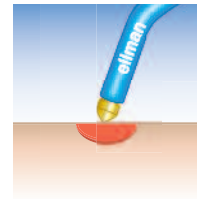
Five Distinct Waveforms for Optimum Results

1. Fully Filtered (Cut)



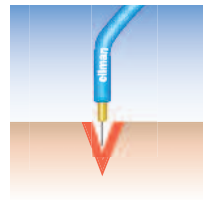
- Micro-smooth cutting
- Negligible lateral heat
- Minimal cellular destruction
- Best cosmetic results. Fastest healing^{4,5}
- Ideal for skin incision and biopsy
- 4.0 MHz

3. Partially Rectified (Coag)



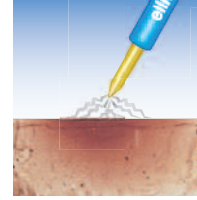
- Coagulation / Shrinkage
- Ideal hemostasis with controlled penetration
- For cutting with maximum hemostatic control
- 4.0 MHz

2. Fully Rectified (Blend)



- 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

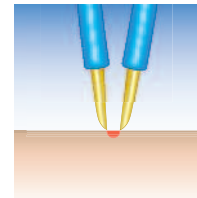
4. Fulguration



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

5. Bipolar

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



Clinical Citations

1. Olivar, A.C., et al, Ann Clin Lab Sci. (1999); 29(4): p281-5.
2. Data on file.
3. Niamtu, J., Chapter 4B, "Radiowave Surgery in Oral and Maxillofacial Surgery", in Bell, W., et al, *Distraction Osteogenesis of the Facial Skeleton*, 2007, p30-37.
4. Bridenstine, J.B., Derm Surgery (1998); vol 24, p397-400.
5. Ericsson, E., et al, The Laryngoscope (2007); vol 117, p654
6. Aferzon, M, Derm Surgery (2002); vol 28, p735-738
7. Eremia, S., et al, Dermatol Surg (2001); 27: p1052-1054.

Distinct Benefits for Your Practice and Your Patients

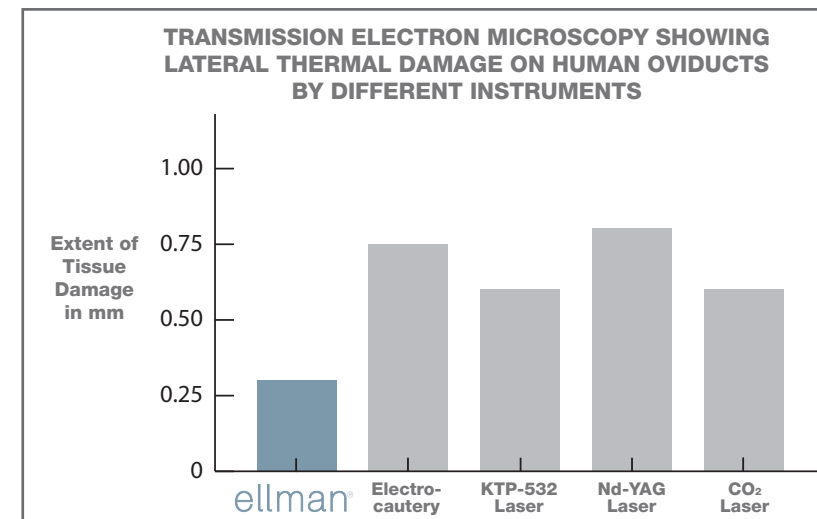
- **Precision** – create precise incisions in a variety of tissue structures³
- **Versatility** – no other energy-based technology has the surgical versatility of Ellman²
- **Quick Recovery** – with less tissue destruction, healing is hastened and your patients can recover quickly⁴
- **Decreased Post-Operative Pain** – 4.0 MHz causes less trauma⁵
- **Decreased Post-Surgical Edema** – low temperature equals less tissue destruction⁶
- **Less Burning or Charring of Tissue** – 4.0 MHz minimizes burning of tissue, unlike laser or conventional lower frequency electrosurgery¹

Features

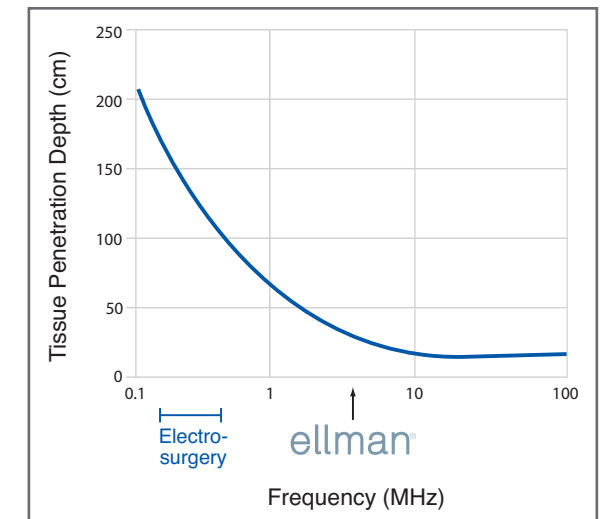
- **Dual Frequency** combining two optimized frequencies – Monopolar (4.0 MHz) and Bipolar (1.7 MHz) for maximum surgical benefits – for outstanding precision and control
- **Digital Control Panel** facilitates easy operation and a clear view of settings
- **Solid State Circuitry** for dependable and consistent energy emission
- **Safety Indicators** provide visual and auditory alerts
- **Parameter Recall** allows rapid set-up for subsequent procedures



4.0 MHz Minimizes Lateral Thermal Damage and 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