

HARMONIC FOCUS®+ Shears with Adaptive Tissue Technology

The Latest Breakthrough in Ultrasonic Technology for Head and Neck

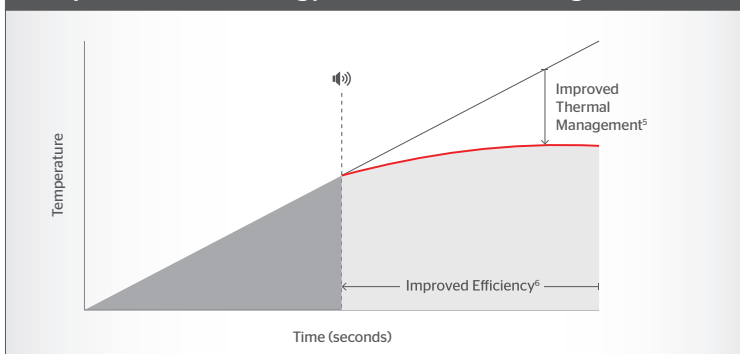


19% slimmer design¹ helps improve visualization

Improved thermal management with next-generation Adaptive Tissue Technology²

- Reduces clamp arm temperature by 15.7°F, after 10 successive transections vs HARMONIC FOCUS Shears³
- Delivers improved performance with intelligent response to changing tissue conditions
- HARMONIC FOCUS+ Shears cause less than 2 mm of lateral thermal spread.⁴

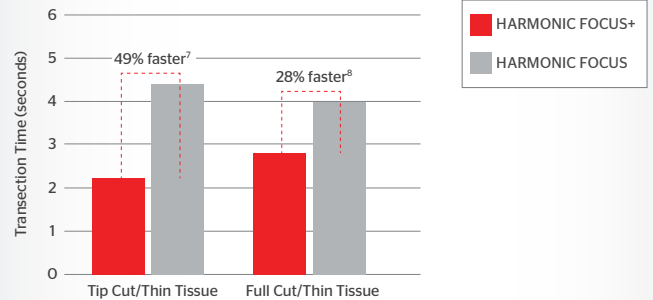
Adaptive Tissue Technology: Advanced Ultrasonic Algorithm



5. In a benchtop study on porcine vessels, the clamp arm of the HARMONIC FOCUS+ Shears with Adaptive Tissue Technology was, after 10 successive transections, 15.7° cooler vs FOCUS Shears (108.8°F vs 124.5° F, P<0.05; PRC063417). 6. HARMONIC FOCUS+ Shears were 49% faster than HARMONIC FOCUS at transecting thin tissue at the tip (2.22 seconds vs 4.41 seconds, P=0.045; PRC0634158).

49% faster sealing and transection at the tip⁷

Significant Improvement in Transection Time vs Current HARMONIC FOCUS Shears



Seals vessel with the strength⁹ you've come to expect from HARMONIC FOCUS Shears.

Use of HARMONIC® Devices in Surgery

HARMONIC technology, the proven leader in advanced energy with more than 16 million procedures worldwide.¹⁰ HARMONIC is the leading ultrasonic technology for precise delivery of energy. HARMONIC technology is supported by more than 1,000 peer-reviewed clinical articles, more than any other Advanced Energy device.¹¹

HARMONIC Portfolio – Precision Across Multiple Procedures

Ethicon has been the leader in energy-based surgical devices since 1992, with the introduction of HARMONIC technology. Devices using HARMONIC technology have been designed for use in numerous procedures and specialties, enhancing surgeons' ability to handle multiple jobs with superior precision, including:



COLORECTAL SURGERY



GENERAL SURGERY



BIARIATRIC SURGERY



GYNECOLOGY



THORACIC SURGERY



ENT

¹Device measurements based on a metrology study (profile is clamp arm + pad + blade area [0.0079 sq in vs. 0.0098 sq in]).

²In a benchtop study on porcine vessels, the clamp arm of the HARMONIC FOCUS+ Shears with Adaptive Tissue Technology was, after 10 successive transections, 15.7° cooler vs FOCUS Shears (108.8°F vs 124.5° F, P<0.05; PRC063417).

³Versus HARMONIC FOCUS Shears without Adaptive Tissue Technology, as exhibited in a benchtop transection study on porcine vessels using an IR camera (108.8°F [HAR9F] vs 124.5°F [CS9], P=0.05) (PRC063417).

⁴As exhibited in a preclinical model (n=16) mean lateral thermal spread of 1.68mm. (PSPO03870).

⁵Versus HARMONIC FOCUS Shears without Adaptive Tissue Technology, as exhibited in a benchtop study performed with devices on porcine tissue (median transection time of 2.22 sec vs 4.41 sec for tip cuts on thin tissue, P=0.045).

⁶Versus HARMONIC FOCUS Shears without Adaptive Tissue Technology, as exhibited in a benchtop study performed with devices on porcine tissue (median transection time of 2.81 sec vs 3.99 sec for full cuts on thin tissue, P=0.022).

⁷As exhibited in an animate, porcine vessel model (63/64 [HAR9F] vs 31/32 [FCS9]) seals passing blood pressure challenge, P=1.

⁸Internal sales data as of June 10, 2013.

⁹As per a literature search conducted in MEDLINE® and Embase™ between 01/01/1990 and 10/01/2012 that identified publications which specifically discussed a given product within an article. Data on file.