

Harmonic®

Best in class performance and usability¹



HARMONIC® HD 1000i Shears

- ✓ **Unmatched precision**—Unique shape mimics a mechanical dissector, reducing the need to use a separate, dedicated dissecting instrument²
- ✓ **Unparalleled strength**—Unique blade design delivers more secure seals, even in the most challenging conditions³
- ✓ **Optimizing efficiency**—Increased sealing speed, multifunctionality and simplified steps for use allow for optimal efficiency⁴

VS.

Medtronic LigaSure™ Maryland

- ✗ Jaw design and wider footprint may **decrease surgical precision**^{5,6,7}
- ✗ Produces **significantly weaker seals**⁸
- ✗ Slower tissue transection⁹ and shorter cut length¹⁰

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Shaping
the future
of surgery

HARMONIC® HD 1000i **vs.** Medtronic LigaSure™ Maryland



Access and precision

Jaw design of **LigaSure™ Maryland may decrease surgical precision**

- HARMONIC® HD 1000i jaw **aperture is 8.9% wider** than LigaSure™ Maryland, potentially enhancing the ability to separate tissue planes.⁵
- The HARMONIC HD 1000i jaw is **29% more tapered** than the LigaSure Maryland.⁶



Burst pressure

Overall **durability of seals produced with LigaSure Maryland is lower**

- HARMONIC HD 1000i median **burst pressure is 160% of** LigaSure Maryland median burst pressure when sealing 5-7mm vessels in Advanced Hemostasis mode.⁸
- Exceptional sealing strength as evidenced by **burst pressures 150% of small and large jaw devices.**³



Efficiency

Tissue transection **performance of LigaSure Maryland is slower**

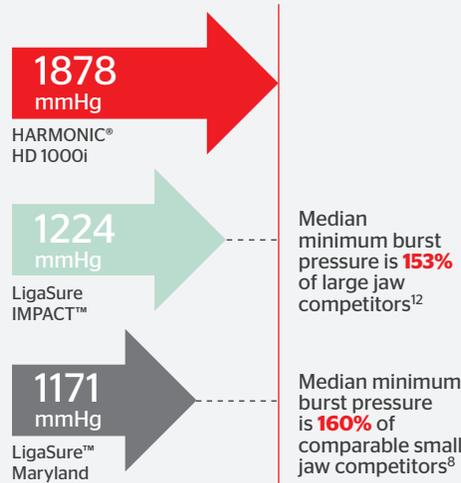
- The HARMONIC HD 1000i enables **efficient dissection** by completing distal tip transections faster than LigaSure Maryland.¹¹
- HARMONIC HD 1000i has a **longer cut length** than LigaSure Maryland.¹⁰

Design validation study



In a design validation study, **81% of surgeons** indicated that HARMONIC HD 1000i had dissection capability superior to other advanced energy devices.⁷

5-7mm vessel burst pressure



Time difference

The HARMONIC® HD 1000i transection times are



33% faster than LigaSure™ Maryland⁹

For more information, contact your local Ethicon sales professional or go to www.Ethicon.com

¹ Based on a pre-clinical study (C2614) ² Based on a pre-clinical study (C2089) ³ Based on a benchtop study with 5-7mm porcine carotid arteries. HARMONIC® HD 1000i (1878 mmHg) vs. LigaSure Maryland (1171 mmHg) and LigaSure Impact (1224 mmHg). (p<0.05) (C2090) ⁴ Based on a benchtop study (C2087) ⁵ Device measurements based on a metrology study (median jaw aperture of 15.32mm vs. 14.07mm). (C2044) ⁶ Taper defined as using distal jaw width divided by proximal jaw width (median jaw taper 0.36 vs. 0.51). (p=0.0061) (C2065) ⁷ Design Validation Study with surgeons (n=31) who have used other advanced bipolar devices (Olympus Thunderbeat, LigaSure Maryland, LigaSure Impact, HARMONIC ACE+7 and HARMONIC ACE+), operating in simulated procedures in an animate porcine laboratory model. (26/31) (C2027) ⁸ In a benchtop study with 5-7mm porcine carotid arteries that compared median burst pressure. HARMONIC® HD 1000i (1878 mmHg) vs. LigaSure™ Maryland (1171 mmHg) (p<0.0001). (C2035) ⁹ In a benchtop study, the HD 1000i full bite transection time for porcine mesentery tissue was 33% faster than LigaSure Maryland (median 2.22 seconds vs 3.30 seconds). (p=0.001) (C2053) ¹⁰ Device measurements based on a metrology study (median cut length of 18.87mm vs. 18.65mm, p=0.0404). (C2049) ¹¹ In a pre-clinical study, the HD 1000i tip transection time for porcine jejunum as 19% faster than LigaSure Maryland LF1637 (median transection time 2.65 seconds vs 3.28 seconds) (p=0.001). (C2064) ¹² In a benchtop study with 5-7mm porcine carotid arteries that compared median burst pressure. HARMONIC® HD 1000i (1878 mmHg) vs. LigaSure Impact™ (1224 mmHg) (p<0.0001). (C2032)