Harmonic®

Unprecedented clinical **performance and usability**

HARMONIC® HD 1000i Shears

- ✓ **Unmatched precision** — Unique shape mimics a mechanical dissector, reducing the need to use a separate, dedicated dissecting instrument[1]
- ✓ **Unparalleled strength** — Unique blade design delivers more secure seals, even in the most challenging conditions[2]
- ✓ **Optimal efficiency** — Increased sealing speed, multifunctionality and simplified steps for use allow for optimal efficiency[3]

VS.

Medtronic LigaSure™ Maryland

- ✗ Jaw design and wider footprint may **decrease surgical precision**[4,5,6]
- ✗ Produces **significantly weaker seals**[7]
- ✗ Slower tissue transection[8] and shorter cut length[9]

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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.[4]
- The HARMONIC HD 1000i jaw is **29% more tapered** than the LigaSure Maryland.[5]

Burst pressure

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

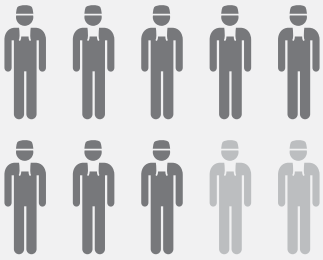
- HARMONIC HD 1000i median **burst pressure is 160% greater** than LigaSure Maryland median burst pressure when sealing 5-7mm vessels in Advanced Hemostasis mode.[7]
- Exceptional sealing strength as evidenced by **burst pressures 150% greater than small and large jaw devices**.[2]

Efficiency

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

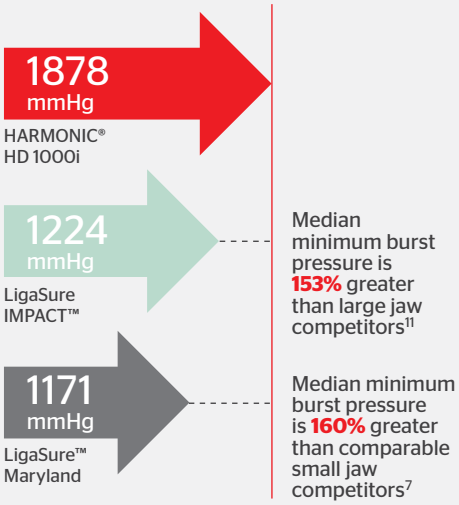
- The HARMONIC HD 1000i enables **efficient dissection** by completing distal tip transections faster than LigaSure Maryland.[10]
- HARMONIC HD 1000i has a **longer cut length** than LigaSure Maryland.[9]

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.[6]

5-7mm vessel burst pressure



Time difference

The HARMONIC® HD 1000i transection times are

33%

faster than LigaSure™ Maryland[8]

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

1 Based on a pre-clinical study (C2089) **2** 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) **3** Based on a benchtop study (C2087) **4** Device measurements based on a metrology study (median jaw aperture of 15.32mm vs. 14.07mm). (C2044) **5** Taper defined as using distal jaw width divided by proximal jaw width (median jaw taper 0.36 vs. 0.51). (p=0.0061) (C2065) **6** 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) **7** 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) **8** 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) **9** Device measurements based on a metrology study (median cut length of 18.87mm vs. 18.65mm, p=0.0404). (C2049) **10** 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) **11** 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)

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