Harmonic®

Best in class 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

- **Unparalleled strength**—Unique blade design delivers more secure seals, even in the most challenging conditions

- **Optimizing efficiency**—Increased sealing speed, multifunctionality and simplified steps for use allow for optimal efficiency

VS.

Medtronic LigaSure™ Maryland

- **X** Jaw design and wider footprint may decrease surgical precision

- **X** Produces significantly weaker seals

- **X** Slower tissue transection and shorter cut length

ETHICON

PART OF THE JOHNSON & JOHNSON FAMILY OF COMPANIES
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.\(^10\)

<table>
<thead>
<tr>
<th>Design validation study</th>
<th>5-7mm vessel burst pressure</th>
<th>Time difference</th>
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</thead>
<tbody>
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In a design validation study, **81% of surgeons** indicated that HARMONIC HD 1000i had dissection capability superior to other advanced energy devices.\(^7\)

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

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

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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=0.005) (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 (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=0.005).\(^9\)
9. In a benchtop study, the HD 1000i full bite transection time for porcine mesentery tissue was 19% faster than LigaSure Maryland (median 2.22 seconds vs. 3.00 seconds) (p=0.008) (C2053).
10. Device measurements based on a metrology study (median cut length of 18.87mm vs. 18.65mm, p=0.0040) (C2049).
11. In a pre-clinical study, the HD 1000i tip transection time for porcine jejunum as 19% faster than LigaSure Maryland LF637 (median transection time 2.65 seconds vs. 3.24 seconds) (p=0.008) (C2065).
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=0.005) (C2032).

For complete product details, refer to the relevant package inserts, with particular attention paid to the indications, contraindications, warnings and precautions, and steps for use of the device. The third-party trademarks used herein are trademarks of their respective owners. ©2018 Ethicon, Inc. All rights reserved. 061307180208