

Harmonic®

# Best in class performance and usability<sup>1,3,7,8,9</sup>



## HARMONIC® HD 1000i Shears

- ✓ **Precision**—shape mimics a mechanical dissector, reducing the need to use a separate, dedicated dissecting instrument<sup>2</sup>
- ✓ **Strength**—blade design delivers more secure seals, even in the most challenging conditions<sup>3</sup>
- ✓ **Optimizing efficiency**—Increased sealing speed, multifunctionality and simplified steps for use allow for optimal efficiency<sup>4</sup>

VS.

## Medtronic LigaSure™ Maryland

- ✗ Jaw design and wider footprint may **decrease surgical precision**<sup>5,6,7</sup>
- ✗ Produces **significantly weaker seals**<sup>8</sup>
- ✗ Slower tissue transection<sup>9</sup> and shorter cut length<sup>10</sup>

**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.<sup>5</sup>
- The HARMONIC HD 1000i jaw is **29% more tapered** than the LigaSure Maryland.<sup>6</sup>



## 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.<sup>8</sup>
- Exceptional sealing strength as evidenced by **burst pressures 150% of small and large jaw devices.**<sup>3</sup>



## Efficiency

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

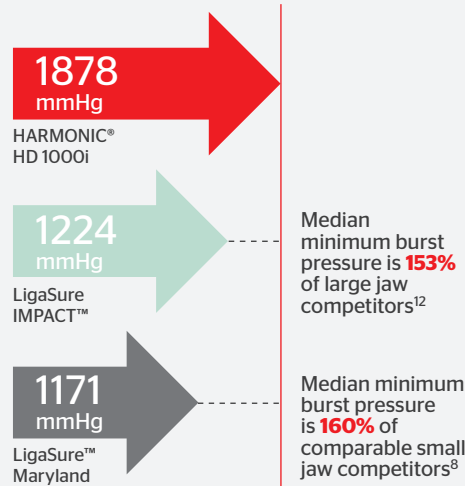
- The HARMONIC HD 1000i enables **efficient dissection** by completing distal tip transections faster than LigaSure Maryland.<sup>11</sup>
- HARMONIC HD 1000i has a **longer cut length** than LigaSure Maryland.<sup>10</sup>

### 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.<sup>7</sup>

### 5-7mm vessel burst pressure



### Time difference

The HARMONIC® HD 1000i transection times are



**33%** faster than LigaSure™ Maryland<sup>9</sup>

## For more information, contact your local Ethicon Product Specialist

<sup>1</sup> Based on a pre-clinical study (C2614) <sup>2</sup> Based on a pre-clinical study (C2089) <sup>3</sup> 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) <sup>4</sup> Based on a benchtop study (C2087) <sup>5</sup> Device measurements based on a metrology study (median jaw aperture of 15.32mm vs. 14.07mm). (C2044) <sup>6</sup> Taper defined as using distal jaw width divided by proximal jaw width (median jaw taper 0.36 vs. 0.51). (p=0.0061) (C2065) <sup>7</sup> 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) <sup>8</sup> 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) <sup>9</sup> 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) <sup>10</sup> Device measurements based on a metrology study (median cut length of 18.87mm vs. 18.65mm, p=0.0404). (C2049) <sup>11</sup> In a pre-clinical study, the HD 1000i tip transection time for porcine jejunum was 19% faster than LigaSure Maryland LF1637 (median transection time 2.65 seconds vs 3.28 seconds) (p=0.001). (C2064) <sup>12</sup> 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)

AUSTRALIA: Johnson & Johnson Medical Pty Ltd, 1-5 Khartoum Road, North Ryde, NSW 2113  
 NEW ZEALAND: Johnson & Johnson (NZ) Ltd, 507 Mt Wellington Highway, Mt Wellington, Auckland 1060  
 109468-190313 | March 2019