### **Enseal**®

# ENSEAL® X1 Tissue Sealers

# Expect more. 1,2,3





1. ENSEAL® X1 Curved Jaw has a longer jaw, longer cut length and wider jaw aperture compared to LigaSure Maryland (LF1937) (p < 0.001). In benchtop testing on porcine arteries, vessels sealed with ENSEAL® X1 Curved Jaw had a 22% higher average burst pressure than vessels sealed with LigaSure™ Maryland (LF1937), (1055mmHg vs. 862mmHg, p < 0.001). (145171-200630). 2. Based on metrology data, ENSEAL® X1 Straight Jaw Tissue Sealer has a 6% (or 11mm) longer jaw than LigaSure™ Blunt Tip (LF1837) (p < 0.001). (093775-210608). 3. Preclinical test of distal tip bleeding (ENSEAL® vs. Impact-LF4318) in thick porcine mesentery base (p=0.001). (093443-201029).

### ENSEAL® X1 Tissue Sealers **offer more** than LigaSure™

### More secure



### More efficient<sup>5,6</sup>

advanced bipolar devices designed for use in open or laparoscopic surgical procedures.\* They have been completely redesigned to provide secure sealing with more intuitive, simplified steps-for-use.

\*ENSEAL X1 Large Jaw is intended for use in open surgical procedures

4. Preclinical test of distal tip bleeding (ENSEAL® X1 Large Jaw vs Impact-LF4318) in thick porcine mesentery base (p=0.001). (093443-201029). 5. ENSEAL® X1 Curved Jaw Tissue Sealer can capture, seal and transect a longer length of tissue per single activation due to a 16% (or 3.4mm) longer jaw (p < 0.001) and a 19% (or 3.5mm) longer cut length (p <0.001) compared to LigaSure™ Maryland (LF1937). (145163-200630). 6. Based on metrology data, ENSEAL® X1 Straight Jaw Tissue Sealer has a 6% (or 1.1mm) longer jaw than LigaSure™ Blunt Tip (LF1837) (n < 0.001) (093775-710608)</p>

### ENSEAL® X1

### **Curved Jaw Tissue Sealer**

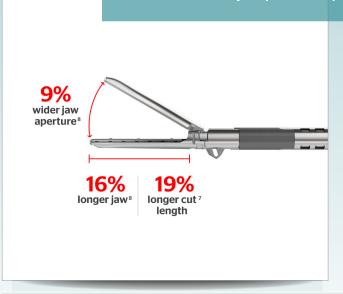
### More efficient

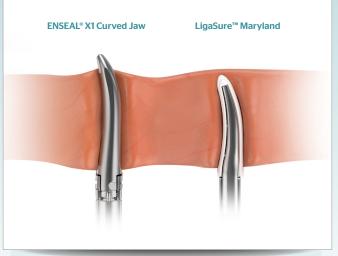
than LigaSure™ Maryland7

- Can capture more tissue per bite with a longer jaw and wider jaw aperture<sup>8</sup>
- 32% stronger distal tip grasping compared to LigaSure™ Maryland<sup>9</sup>
- 360° continuous shaft rotation to enable easy access to targeted tissue<sup>10</sup>



ENSEAL® X1 Curved Jaw can capture more tissue per bite with a longer jaw and wider jaw aperture compared to LigaSure™ Maryland8





REFERENCES: 7. ENSEAL® X1 Curved Jaw Tissue Sealer can capture, seal and transect a longer length of tissue per single activation due to a 16% (or 3.4mm) longer jaw (p < 0.001) and a 19% (or 3.5mm) longer cut length (p < 0.001) compared to LigaSure™ Maryland (LF1937). (093769-210528). 8. Based on metrology data, ENSEAL® X1 Curved Jaw Tissue Sealer has a 16% (or 3.4mm) longer jaw than LigaSure™ Maryland (LF1937) (p < 0.001) and Tissue Sealer has a 16% (or 1.15mm) wider jaw aperture than LigaSure™ Maryland (LF1937) (p < 0.001). (1450.41-2.00629). 9. Grasping force measured as the maximum amount of force required to pull porcine jejunum from the distal tip of device jaws. Comparison of ENSEAL® X1 Curved Jaw to LigaSure™ Maryland (LF1937) (p < 0.001) (149828-200813). 10. (093778-210601). 11. (095323-210604).

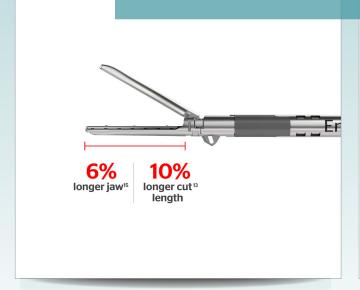
# ENSEAL® X1 **Straight Jaw Tissue Sealer**

### More efficient

than LigaSure™ Blunt Tip12

- Can capture more tissue per bite with a longer jaw<sup>12</sup>
- Transect more tissue at a time with a 10% longer cut length<sup>13</sup>
- 360° continuous shaft rotation to enable easy access to targeted tissue<sup>14</sup>

### ENSEAL® X1 Straight Jaw can capture more tissue per bite with a longer jaw compared to LigaSure™ Blunt Tip¹5





12. Based on metrology data, ENSEAL® X1 Straight Jaw Tissue Sealer has a 6% (or 1.1mm) longer jaw than LigaSure™ Blunt Tip (LF1837) (p < 0.001). (093775-210608). 13. Metrology report comparing ENSEAL® X1 Straight Jaw to LigaSure™ Blunt Tip (LF1837) (p < 0.001). (093768-210608). 14. (093778-210601). 15. Metrology report comparing ENSEAL® X1 Straight Jaw to LigaSure™ Blunt Tip (LF1837) (p < 0.001). (093770-210608).

## ENSEAL® X1 **Large Jaw Tissue Sealer**

### More secure

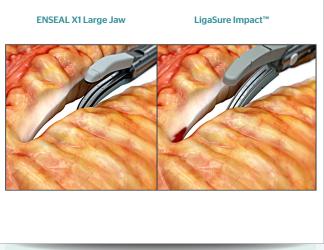
than LigaSure Impact™16

- Enabled better sealing with less bleeding at the distal tip16
- Had 41% less lateral thermal spread<sup>17</sup>
- Has a **better design** with convenient controls and 360° rotation<sup>18</sup>



With a larger distal electrode surface area,¹9 ENSEAL X1 Large Jaw had significantly less bleeding at the distal tip vs LigaSure Impact™ in thick tissue¹6





**16.** Preclinical test of distal tip bleeding (ENSEAL® X1 Large Jaw vs Impact-LF4318) in thick porcine mesentery base (p=0.001). (093443-201029). **17.** Preclinical testing on porcine carotids (ENSEAL® vs Impact-LF4318) that measured mean max lateral thermal damage via histology (p=0.005). (062746180228). **18.** (059270-160831). **19.** (062722-161103).

### **Expect more** with ENSEAL® X1 devices

### Intelligent energy delivery

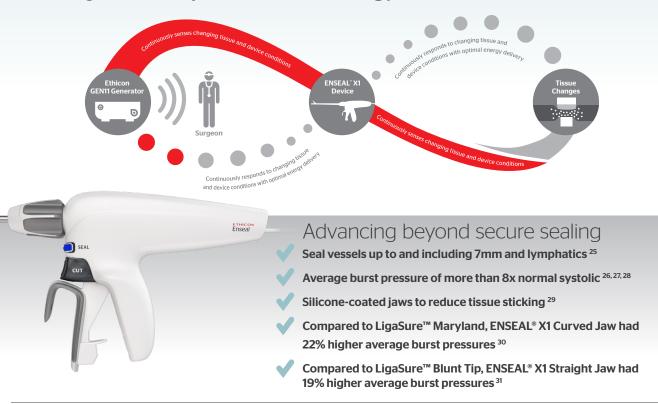
**Adaptive Tissue Technology,** powered by the Ethicon GEN11 Generator, uses an advanced algorithm for intelligent and efficient energy delivery. In ENSEAL® X1 devices, it continuously:

- **Senses** changes in tissue and device conditions
- **Responds** with the optimal amount of energy
- **Delivers** precision<sup>20</sup> and efficiency<sup>21</sup>

ENSEAL X1 Tissue Sealers produce

minimal lateral thermal spread<sup>22, 23, 24</sup>

### The Intelligence of **Adaptive Tissue Technology**



20. Preclinical testing on porcine carotids (ENSEAL® vs Impact-LF4318) that measured mean max lateral thermal damage via histology (p=0.005) (062746180228). 21. (061415-161010). 22. Mean thermal spread measured via histology on porcine carotid arteries. Care should be taken near thermally sensitive tissues. See IFU for complete warnings and precautions. (095300-210020). 23. Mean thermal spread measured via histology on porcine carotid arteries. (095309-200520). 24. Preclinical testing in porcine cartoids that measured mean max lateral thermal damage via histology. (062963-210728). 25. (093781-210527). 26. In benchtop testing on porcine arteries, average burst pressure was 1055 mmHg. (145156-200630). 27. In benchtop testing on porcine arteries, average burst pressure was 1077 mmHg. (094359-210601). 28. Benchtop testing on 1-7mm porcine splenic, thyrocervical and carotid arteries (mean burst pressure of 1400mmHg). (064971491205). 29. (095690-180724). 30. Comparison of ENSEAL® XI Curved Jaw to LigaSure™ Maryland (LF1937). Benchtop testing on porcine arteries (1055mmHg vs. 862mmHg, p<0.001). (145069-200629). 31. Comparison of ENSEAL® XI Straight Jaw to LigaSure™ Blunt Tip (LF1837). Benchtop testing on porcine arteries (1023mmHg vs. 863mmHg, p<0.001). (145069-200629). 31. Comparison of ENSEAL® XI Straight Jaw to LigaSure™ Blunt Tip (LF1837). Benchtop testing on porcine arteries (1023mmHg vs. 863mmHg, p<0.001). (145069-200629). 31. Comparison of ENSEAL® XI Straight Jaw to LigaSure™ Blunt Tip (LF1837). Benchtop testing on porcine arteries (1023mmHg vs. 863mmHg, p<0.001). (145069-200629). 31. Comparison of ENSEAL® XI Straight Jaw to LigaSure™ Blunt Tip (LF1837). Benchtop testing on porcine arteries (1023mmHg vs. 863mmHg, p<0.001). (145069-200629). 31. Comparison of ENSEAL® XI Straight Jaw to LigaSure™ Blunt Tip (LF1837).

# ENSEAL® X1 devices feature ergonomic engineering

- Intuitive design<sup>32</sup> with separate seal and cut functionality<sup>33</sup>
- Conveniently placed control buttons designed for less hand movement<sup>34</sup>
- 360° shaft rotation designed to improve access to targeted tissue<sup>35</sup>

DESCRIPTION	PRODUCT CODE	SHAFT LENGTH (cm)	SHAFT DIAMETER (mm)	QUANTITY/SALES UNIT
ENSEAL X1 Curved Jaw	NSLX125C	25	5	3
ENSEAL X1 Curved Jaw	NSLX137C	37	5	3
ENSEAL X1 Curved Jaw	NSLX145C	45	5	3
ENSEAL X1 Straight Jaw	NSLX125S	25	5	3
ENSEAL X1 Straight Jaw	NSLX137S	37	5	3
ENSEAL X1 Large Jaw	NSLX120L	20	13	6

- ENSEAL X1 Curved Jaw, ENSEAL X1 Straight Jaw, and ENSEAL X1 Large Jaw are supplied sterile for singlepatient use
- X1 Tissue Sealers are compatible with the Ethicon GEN11 Generator (software version 2016-1 or later versions)

#### How to order

#### **Electronic ordering options**

All purchase orders are made to Johnson & Johnson Health Care Systems, Inc. (JJHCS). The following electronic order placement methods are preferred:

- J&J Gateway (www.jnjgateway.com) For questions about your order, please visit the website or call 1-866-JNJ-GATE
- Electronic Data Interchange JJHCS Help Line: 1-800-262-2888

#### Non-electronic/Manual ordering options

JJHCS - Call 1-800-255-2500 between the hours of 8:30 am and 8:00 pm Eastern time, or fax your order to 1-732-562-2212.

#### **Customer support**

For product use assistance, clinical guidelines, service and repair, emergency assistance, copy of 501(k) clearance letters, or complaints, please contact our Customer Service Support Center by calling 877-ETHICON (384-4266). Our support center is staffed 24 hours a day, 7 days a week by qualified nurses to answer your product-related questions.

### Visit www.ENSEAL.com/X1 for more information about the ENSEAL X1 Tissue Sealers.

For complete product details, see Instructions for Use available at www.e-ifu.com.

**32.** (095687-210203). **33.** (093782-210528). **34.** (095686-210203). **35.** (093778-210601).