

Enseal®

ENSEAL® X1 Tissue Sealers Expect more.^{1,2,3}



ENSEAL® X1 CURVED JAW TISSUE SEALER

ENSEAL® X1 STRAIGHT JAW TISSUE SEALER

ENSEAL® X1 LARGE JAW TISSUE SEALER

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 1.1mm) 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).

ETHICON
PART OF THE *Johnson & Johnson* FAMILY OF COMPANIES

Shaping
the future
of surgery

ENSEAL[®] X1 Tissue Sealers **offer more** than LigaSure[™]

More secure⁴



More efficient^{5,6}

The ENSEAL X1 Tissue Sealers are 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) (p < 0.001). (093775-210608).

ENSEAL® X1 Curved Jaw Tissue Sealer

More efficient than LigaSure™ Maryland⁷

Curved, tapered tip
designed for fine dissection¹¹

- Can **capture more tissue** per bite with a longer jaw and wider jaw aperture⁸
- **32% stronger distal tip grasping** compared to LigaSure™ Maryland⁹
- **360° continuous shaft rotation** to enable easy access to targeted tissue¹⁰

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

9%
wider jaw
aperture⁸

16%
longer jaw⁸

19%
longer cut⁷
length

ENSEAL® X1 Curved Jaw

LigaSure™ Maryland

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 ENSEAL X1 Curved Jaw Tissue Sealer has a 9% (or 1.15mm) wider jaw aperture than LigaSure™ Maryland (LF1937) (p < 0.001). (145041-200629). **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).

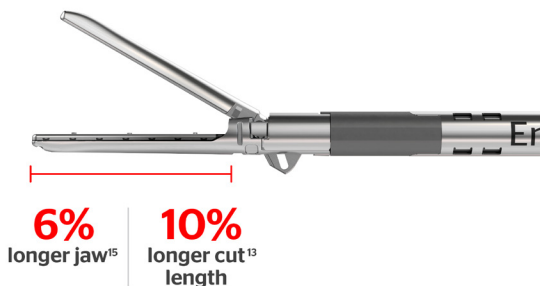
ENSEAL® X1 Straight Jaw Tissue Sealer

More efficient than LigaSure™ Blunt Tip¹²

- Can **capture more tissue** per bite with a longer jaw¹²
- **Transect more tissue** at a time with a 10% longer cut length¹³
- **360° continuous shaft rotation** to enable **easy access** to targeted tissue¹⁴

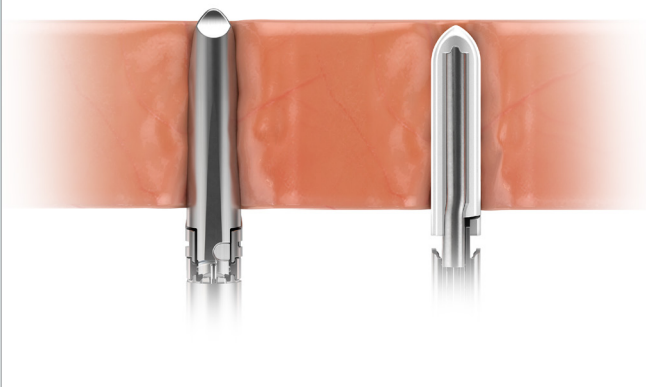


ENSEAL® X1 Straight Jaw can capture more tissue per bite with a longer jaw compared to LigaSure™ Blunt Tip¹⁵



ENSEAL® X1 Straight Jaw

LigaSure™ Blunt Tip



12. 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). **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**¹⁷
- Has a **better design** with convenient controls and 360° rotation¹⁸

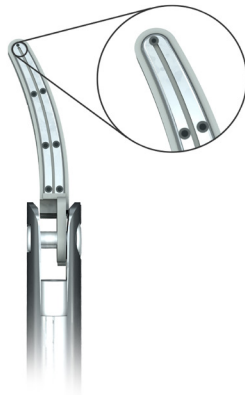


With a larger distal electrode surface area,¹⁹ ENSEAL X1 Large Jaw had significantly less bleeding at the distal tip vs LigaSure Impact™ in thick tissue¹⁶

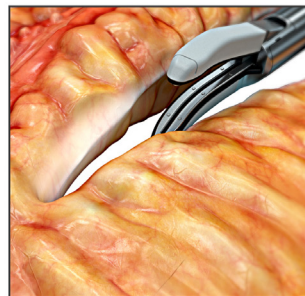
ENSEAL X1 Large Jaw



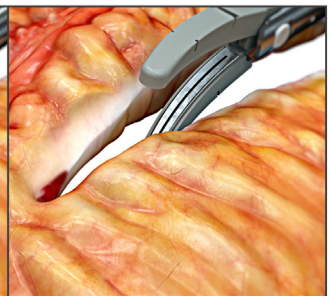
LigaSure Impact™



ENSEAL X1 Large Jaw



LigaSure Impact™



¹⁶. Preclinical test of distal tip bleeding (ENSEAL® X1 Large Jaw vs Impact-LF4318) in thick porcine mesentery base ($p=0.001$). (O93443-201029). ¹⁷. Preclinical testing on porcine carotids (ENSEAL® vs Impact-LF4318) that measured mean max lateral thermal damage via histology ($p=0.005$). (O62746-180228). ¹⁸. (O59270-160831). ¹⁹. (O62722-161103).

Expect more with ENSEAL® X1 devices

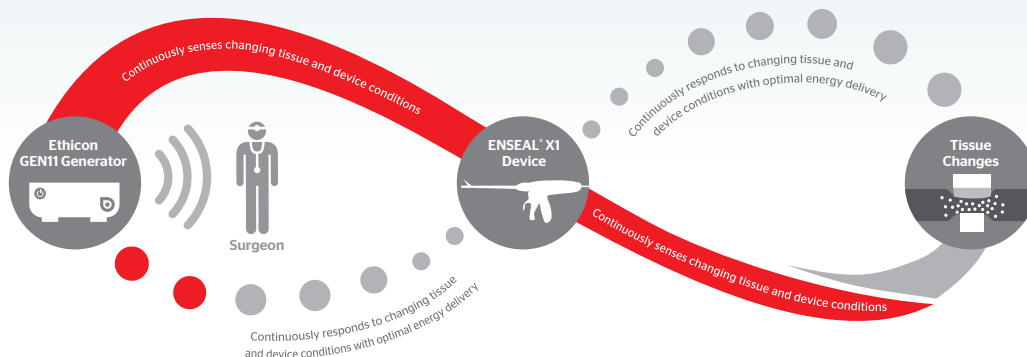
Intelligent energy delivery

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** precision²⁰ and efficiency²¹

ENSEAL X1 Tissue Sealers produce **minimal lateral thermal spread**^{22, 23, 24}

The Intelligence of Adaptive Tissue Technology



Advancing beyond secure sealing

- ✓ Seal vessels up to and including 7mm and lymphatics²⁵
- ✓ Average burst pressure of more than 8x normal systolic^{26, 27, 28}
- ✓ Silicone-coated jaws to reduce tissue sticking²⁹
- ✓ Compared to LigaSure™ Maryland, ENSEAL® X1 Curved Jaw had 22% higher average burst pressures³⁰
- ✓ Compared to LigaSure™ Blunt Tip, ENSEAL® X1 Straight Jaw had 19% higher average burst pressures³¹

²⁰. Preclinical testing on porcine carotids (ENSEAL® vs Impact-LF4318) that measured mean max lateral thermal damage via histology ($p=0.005$) (O62746-180228). ²¹. (O61415-161010). 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. (O95310-210202). ²³. Mean thermal spread measured via histology on porcine carotid arteries. (O95309-200520). ²⁴. Preclinical testing in porcine carotids that measured mean max lateral thermal damage via histology. (O62963-210728). ²⁵. (O93781-210527). 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. (O94359-210601). ²⁸. Benchtop testing on 1-7mm porcine splenic, thyrocervical and carotid arteries (mean burst pressure of 1400mmHg). (O64971-191205). ²⁹. (O95690-180724). ³⁰. Comparison of ENSEAL® X1 Curved Jaw to LigaSure™ Maryland (LF1937). Benchtop testing on porcine arteries (1055mmHg vs. 862mmHg, $p < 0.001$). (145069-200629). ³¹. Comparison of ENSEAL® X1 Straight Jaw to LigaSure™ Blunt Tip (LF1837). Benchtop testing on porcine arteries (1023mmHg vs. 863mmHg, $p < 0.001$) (194427-211102).

ENSEAL® X1 devices feature ergonomic engineering

- **Intuitive design**³² with separate seal and cut functionality³³
- **Conveniently placed control buttons** designed for less hand movement³⁴
- **360° shaft rotation** designed to improve access to targeted tissue³⁵

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 single-patient 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).

For complete indications, contraindications, warnings, precautions, and adverse reactions, please reference full package insert.

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