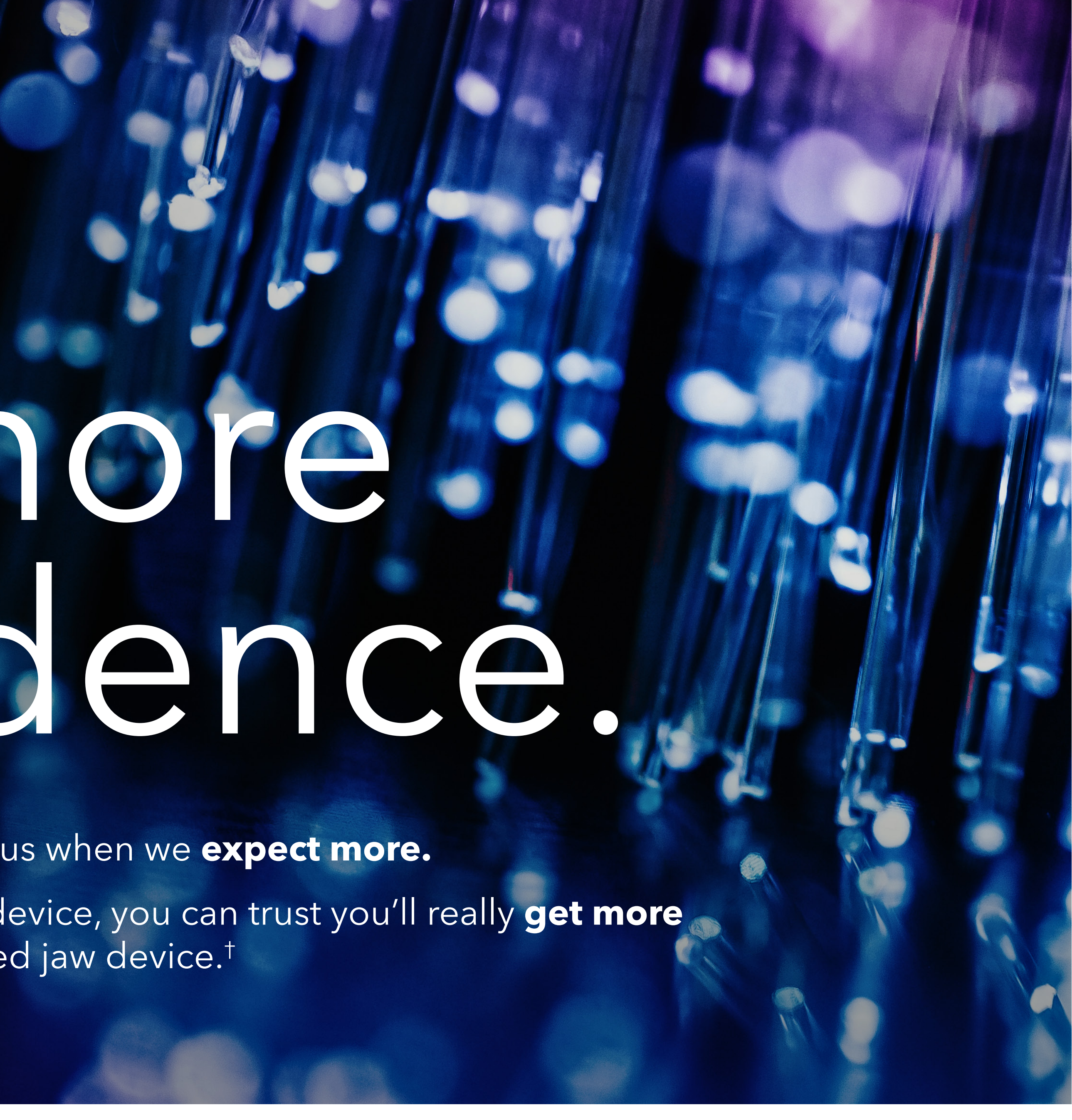
Medtronic
Engineering the extraordinary



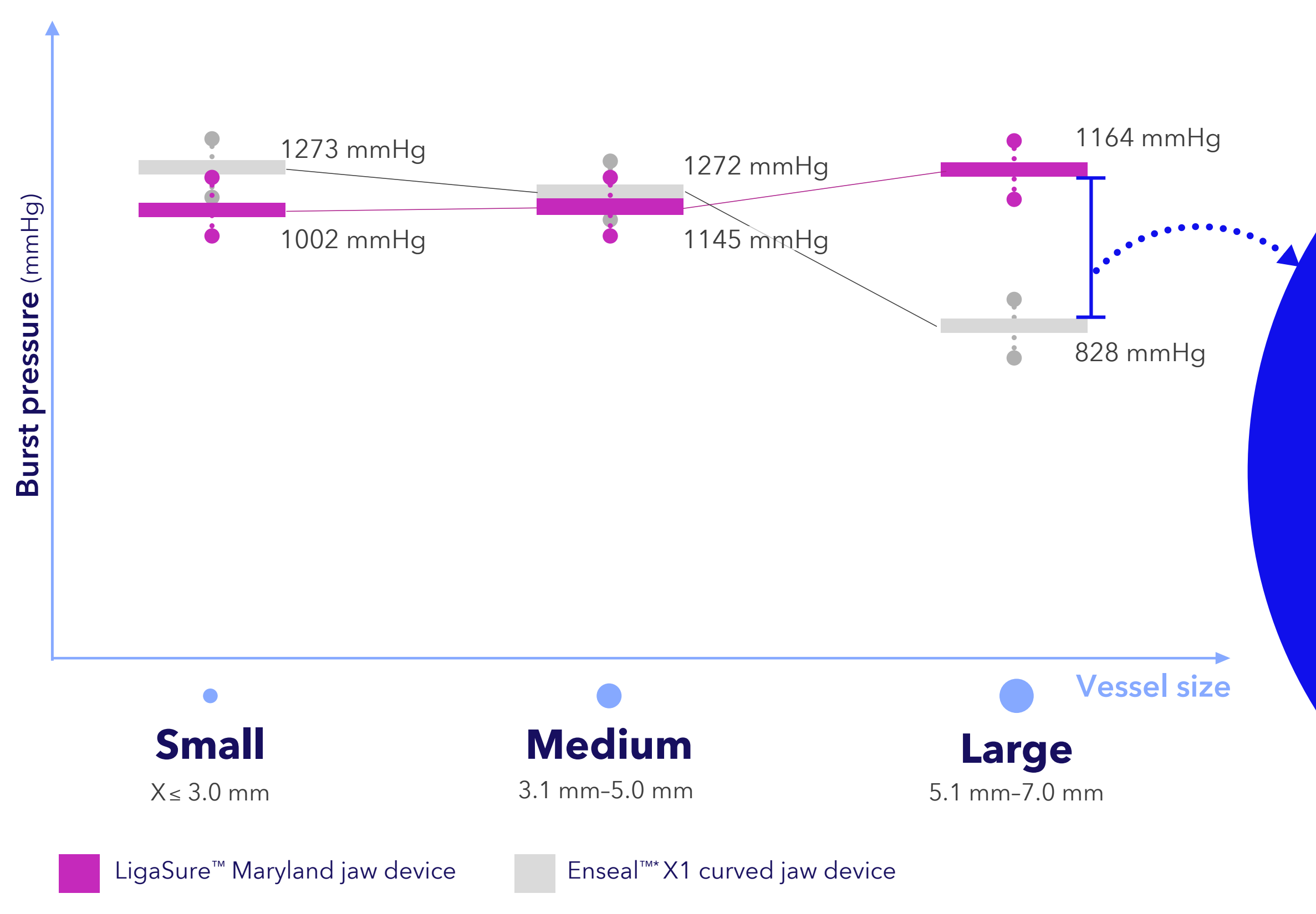
Get more confidence.

Expectations can get the better of us when we **expect more.**

With the LigaSure™ Maryland jaw device, you can trust you'll really **get more** compared to the Enseal™* X1 curved jaw device.†

Confidence in reliability

Get high burst pressures – with less variability in larger vessels[1]



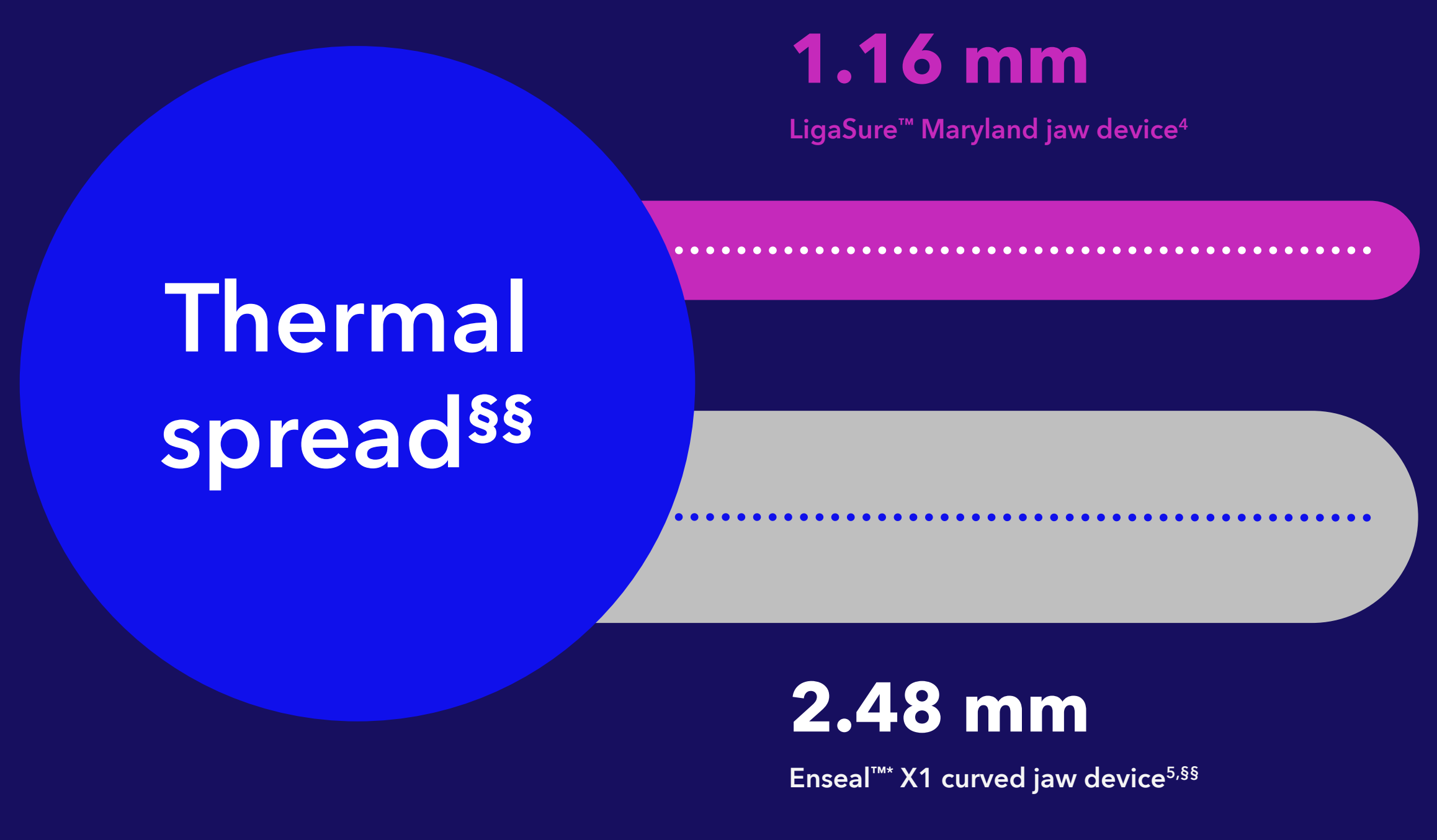
LigaSure™ Maryland jaw device

29%

higher seal strength in larger vessels[1]

Confidence in innovation

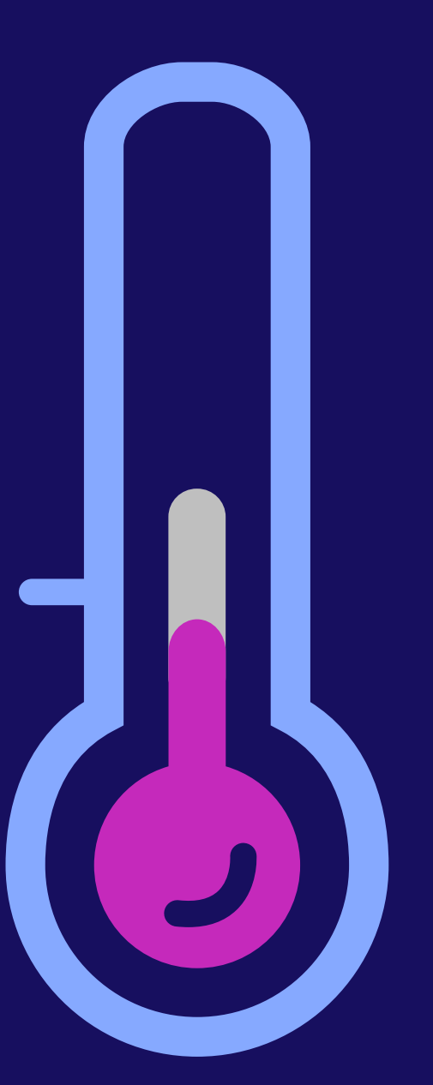
Get more seals – with less heat[2,3]



LigaSure™ Maryland jaw device

Less heat buildup[2,§]
after single activation

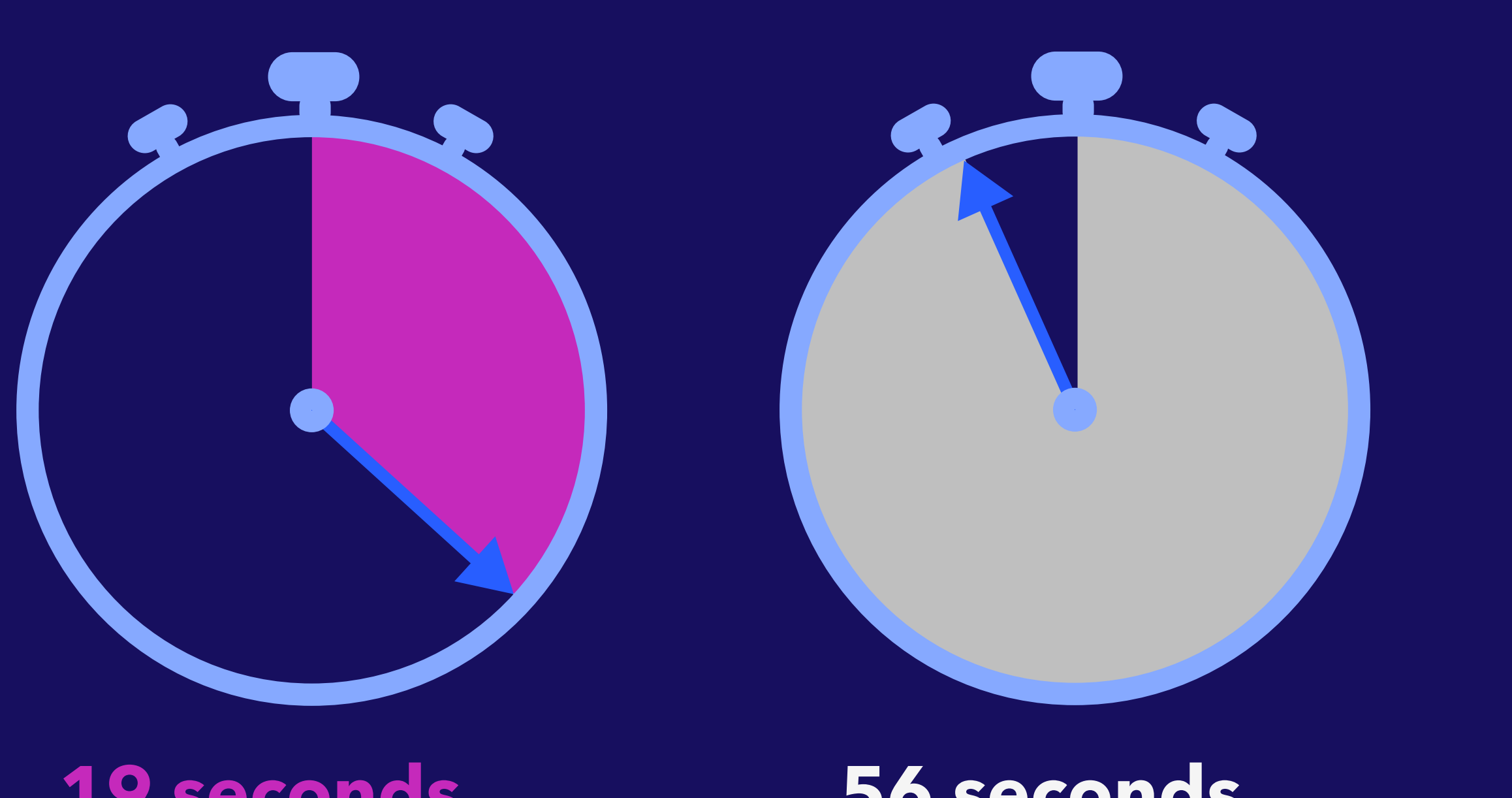
Avg max jaw temp
exceeds 60°C[2,§]
Enseal™* X1 curved jaw device



Avg max jaw temp
stays below 60°C[2,§]
LigaSure™ Maryland jaw device

LigaSure™ Maryland jaw device

3x
faster cooldown[2,‡,§]



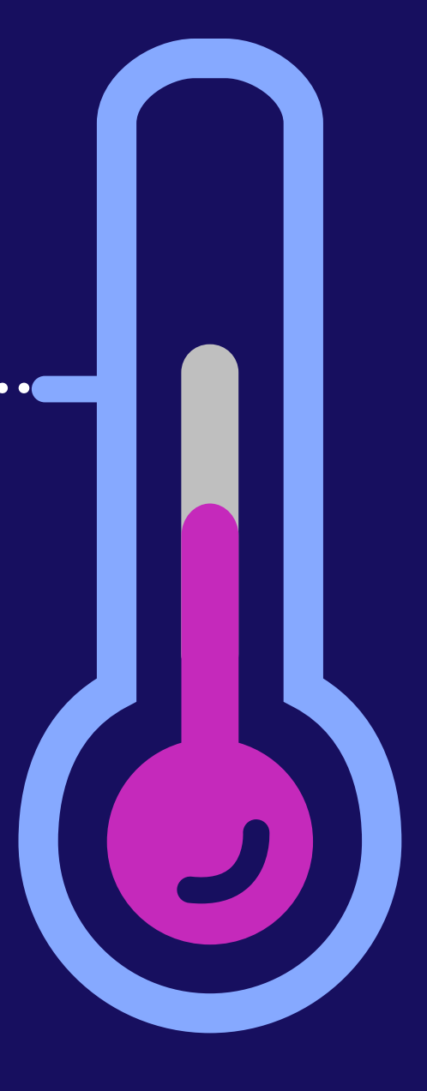
19 seconds
on avg to cool below 60°C[2,‡,§]
LigaSure™ Maryland jaw device

56 seconds
on avg to cool below 60°C[2,‡,§]
Enseal™* X1 curved jaw device

LigaSure™ Maryland jaw device

Lower temperature[2,‡,§]
after multiple activations

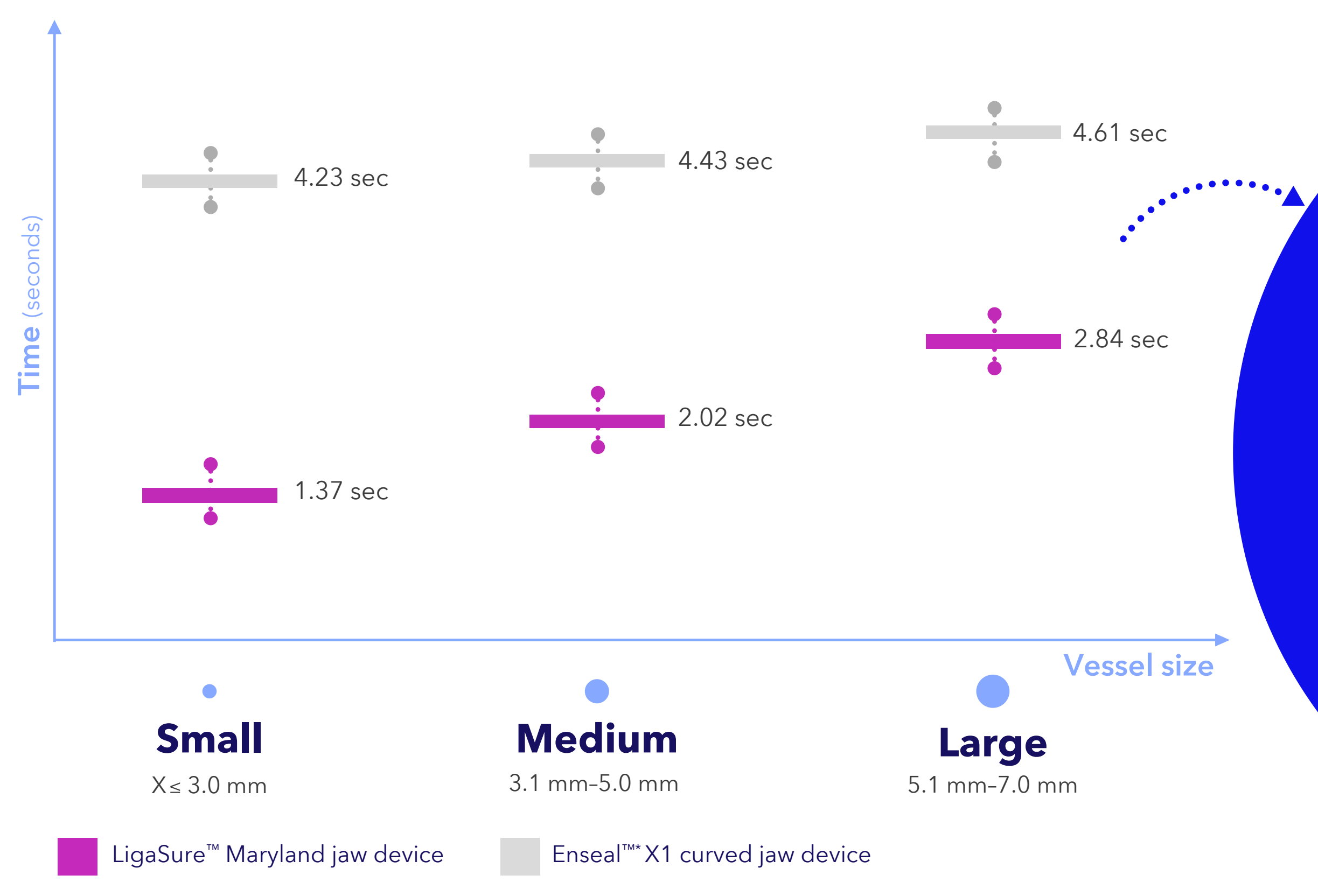
Avg max jaw temp
exceeds 100°C[2,‡,§]
Enseal™* X1 curved jaw device



Avg max jaw temp
stays below 86°C[2,‡,§]
LigaSure™ Maryland jaw device

Confidence in performance

Get more seals – in less time, with less sticking[1,6,‡‡]



LigaSure™ Maryland jaw device

2x

faster sealing[1,Ω] on average

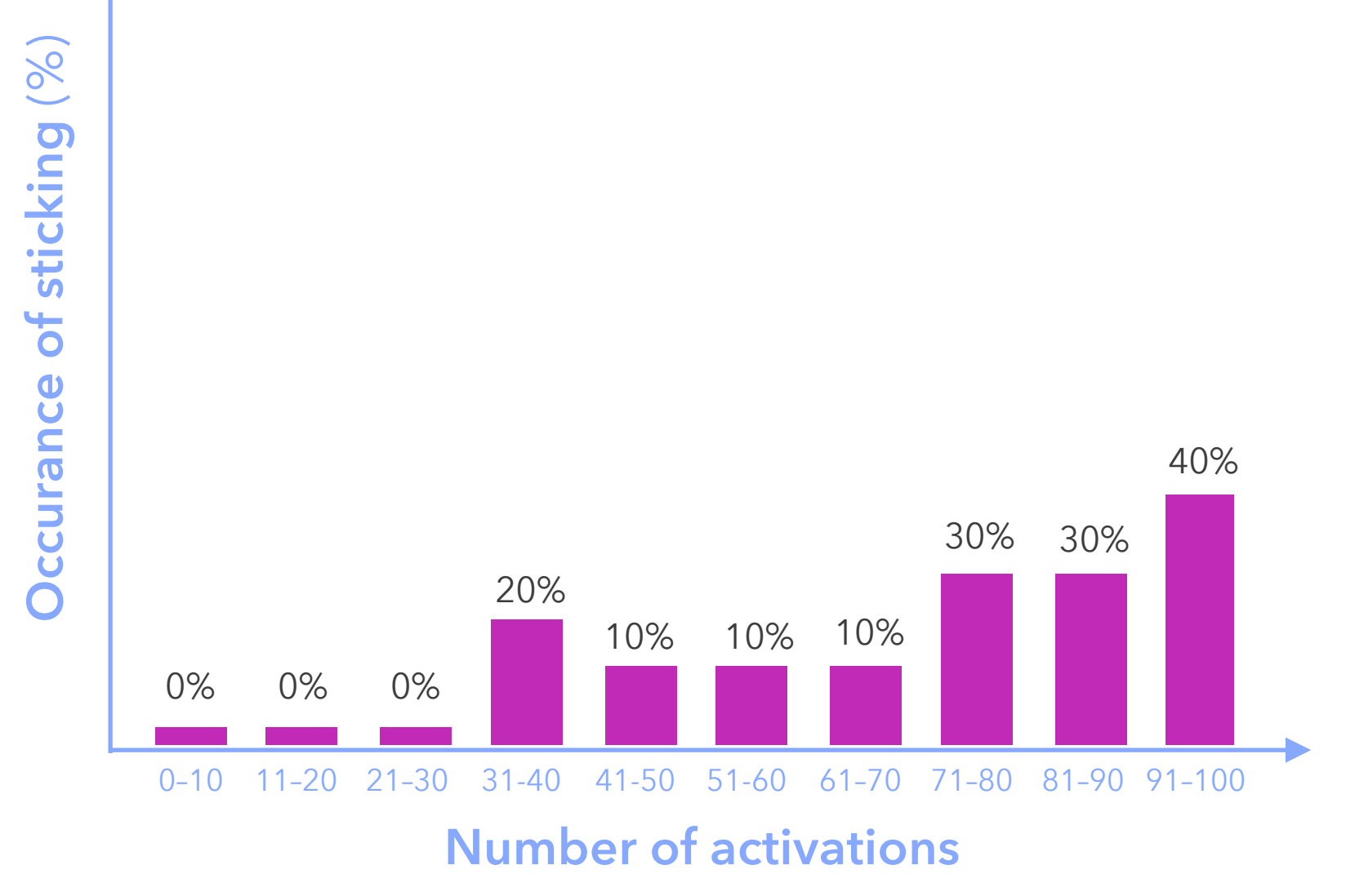
LigaSure™ Maryland jaw device

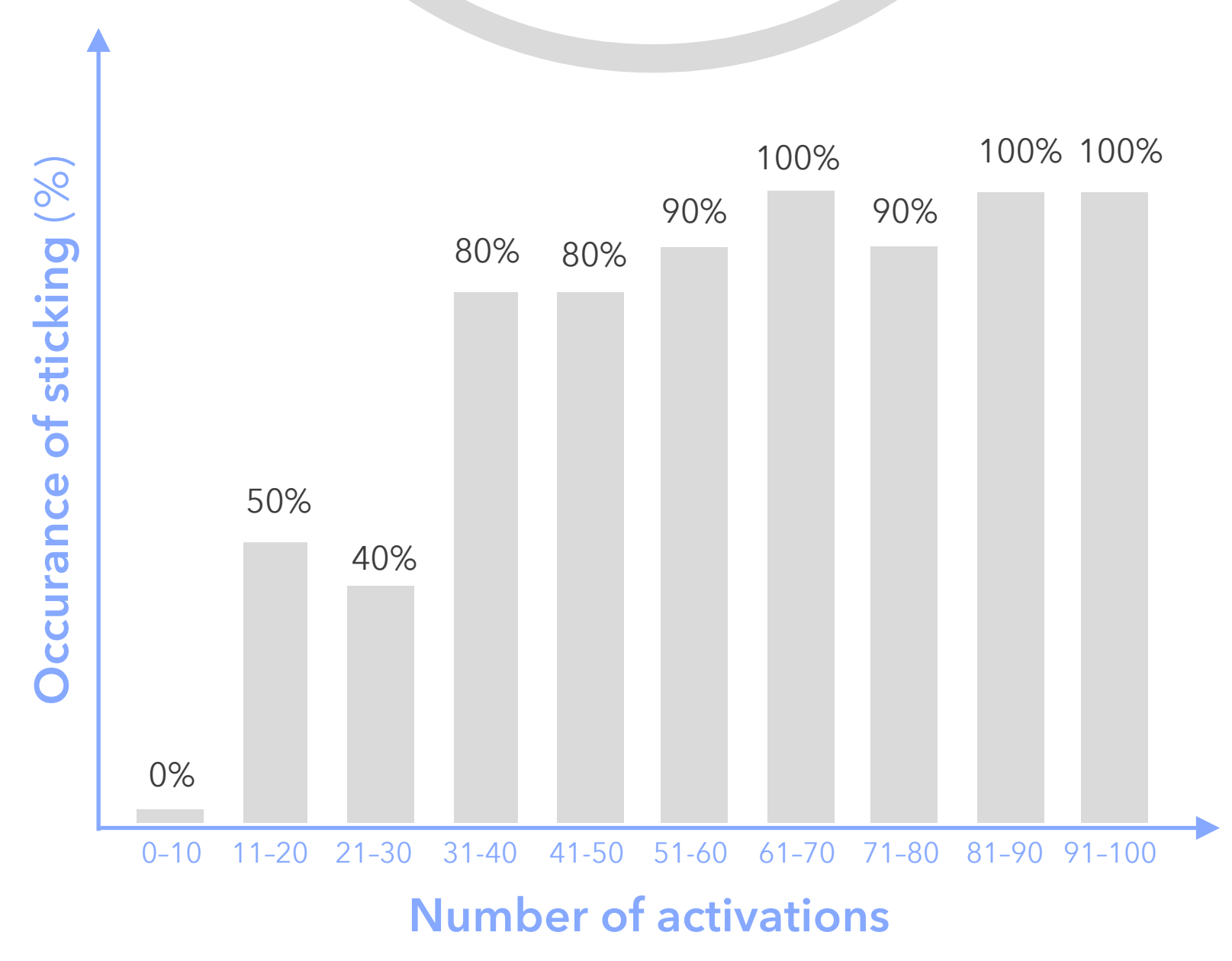
5x

less sticking[6,ΩΩ]

15%
sticking occurrence[6,††]
15 out of 100 seals
LigaSure™ Maryland jaw device

73%
sticking occurrence[6,††]
73 out of 100 seals
Enseal™* X1 curved jaw device





Bench test data may not be indicative of clinical performance.

†Based on comparisons between sealing times, cool-down times, jaw temperatures, burst pressures, thermal spread, and tissue sticking.

‡ Multiple activation results were measured after 10 successive activations.

§ Jaw temperature refers to lower jaw temperature measurements.

ΩAverage seal time measured over all vessel size categories for LigaSure™ Maryland jaw using the Valleylab™ FT10 energy platform, and Enseal™* X1 Curved Jaw using Ethicon™* Gen11 generator

††Tissue sticking device jaws instances measured 100 seals per device using the LigaSure™ Maryland Jaw with Valleylab™ FT10 energy platform, and Enseal™* X1 Curved jaw using the Ethicon™* Gen11 generator. ($p < 0.0001$)

§§Data from different studies.

ΩΩTissue sticking device jaws instances measured 100 seals per device using the LigaSure™ Maryland Jaw with Valleylab™ FT10 energy platform, and Enseal™* X1 Curved jaw using the Ethicon™* Gen11 generator.

1. Based on internal bench testing report RE00337466 Comparison of the renal artery seal burst pressure with the Ethicon Enseal™* X1 curved jaw tissue sealer device vs. the LigaSure™ LF18XX and LF19XX conducted on June 8-9, 2021. $p< 0.0001$.
2. Based on internal test report RE00337472 Thermal profile comparison of the Ethicon Enseal™* X1 curved jaw tissue sealer device vs. the LigaSure™ LF18XX and LF19XX conducted June 30 - July 1, 2021. $p< 0.0001$.
3. Based on internal test report RE00337464 Acute porcine study comparison of the Ethicon Enseal™* X1 curved jaw tissue sealer device vs. the LigaSure™ LF18XX and LF19XX conducted July 6, 2021. $p< 0.0001$.
4. Based on internal test report RE00068259 Verification of the LF1923/LF1937/LF1944 Maryland devices in an acute hemostasis porcine study. Nov 15, 2016.
5. Singleton DW, Ricketts CD, Boguszewski D, Cummings J, Lewis KM, Paulin-Curlee G, et al. Effectiveness and useability of a newly designed advanced bipolar tissue sealer, Enseal™* X1 curved jaw tissue sealer. *World J Surg Surgical Res.* 2021; 4: 1304.
6. Based on internal test report RE00337469 Sticking evaluation with the Ethicon Enseal™* X1 curved jaw tissue sealer device vs. the LigaSure™ LF18XX and LF19XX conducted July 1, 2021.

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