

Advancing Smooth Surgery



# Ultrasonic Industry Association Product Awards

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Ethicon Endo-Surgery R&D

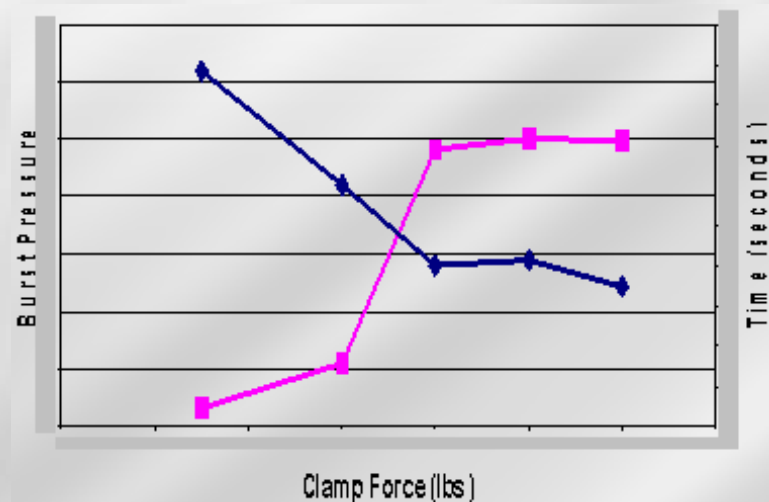
# ACE Design – Listening to the customer

- Top three customer needs for Harmonic
  - Hemostasis of Larger Vessels
  - Faster Transection
  - Reduced Technique Sensitivity

# ACE Design – Larger Vessels



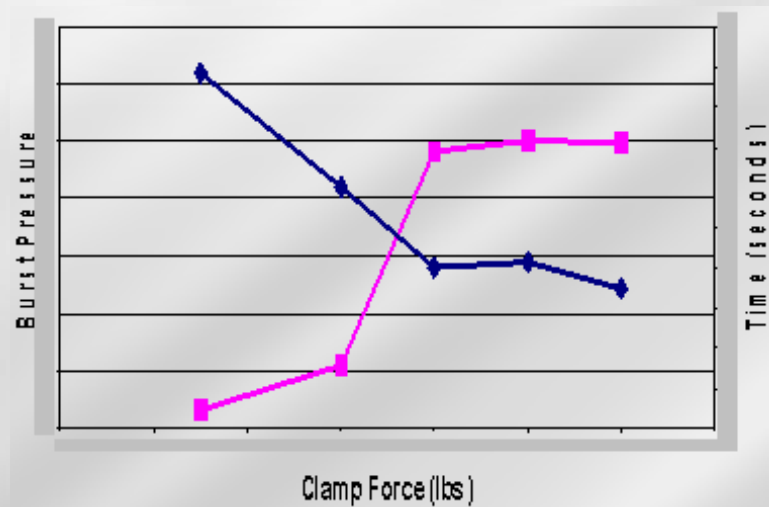
- Significant development work completed to develop design variables leading to larger vessel hemostasis.
- Final analysis indicated that an increase in clamp pressure was the major enabling variable.



# ACE Design – Faster Transections

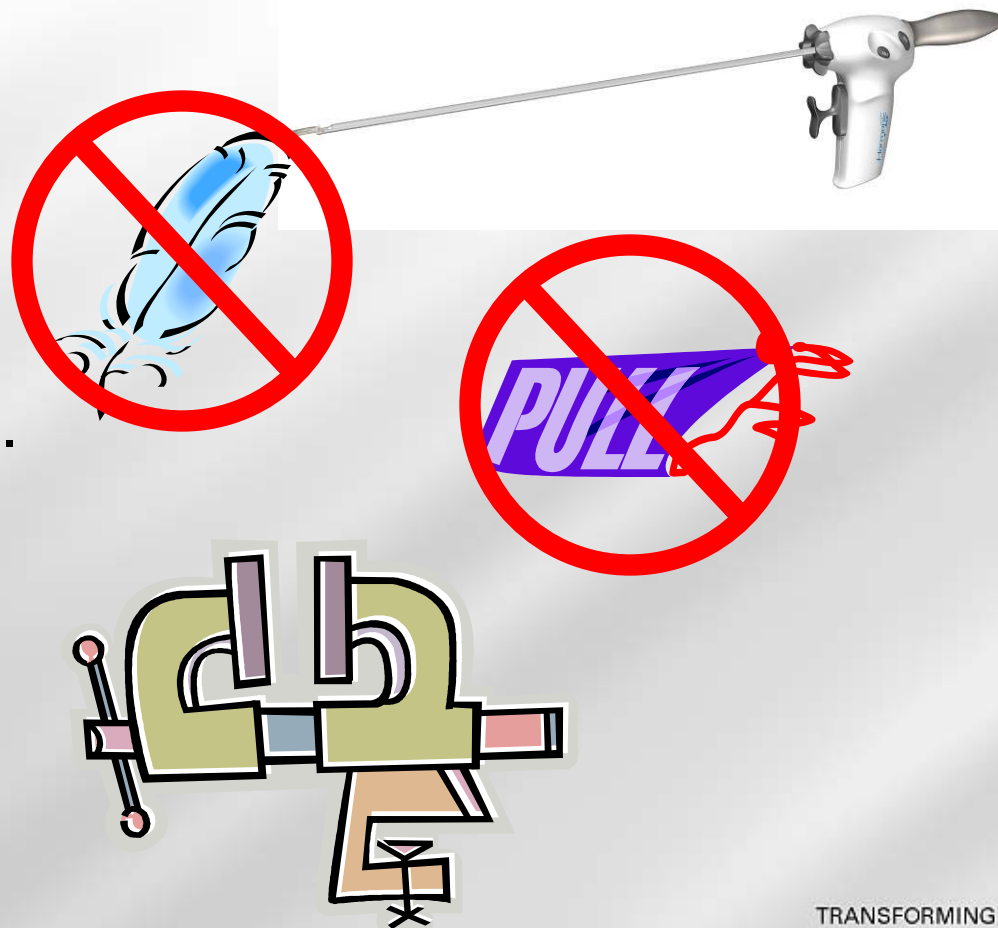


- The same variable that enabled larger vessels also played a major role in transection speed.
- Higher clamp pressure allows for faster transections, even with lower amplitude.



# ACE Design – Reduced Technique

- By providing improved hemostasis, need to “feather” is reduced.
- Increased transection speed reduces need to “speed up” transections.
- Higher clamp force makes ACE a better grasper.
- Click design allows for reduced learning curve.



- **Seals vessels up to 5mm in diameter**
- **Vessels and bundles can be sealed and divided in 4-6 seconds**



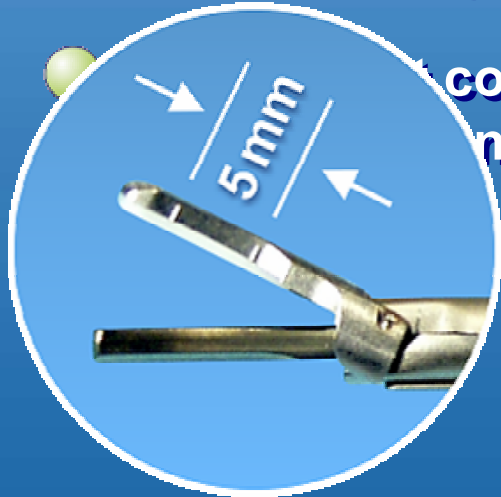
- **43% faster transection times vs LCSC5**
- **Grasping force increased by 2 times and improved clamp profile**
- **Rotation forces decreased 30% vs LCSC5**
- **Seal strength in excess of 2 times systolic pressure\***  
\*tested in porcine and caprine arteries and veins





- **Improved ergonomics**

- **Harmonic ACE codes have hand activation, and a maximum button**



- **Audible feedback „click“ when optimal closure point is reached to maximise outcome**

- **Indicator to measure 5mm at both sides of the tissue pad jaw**



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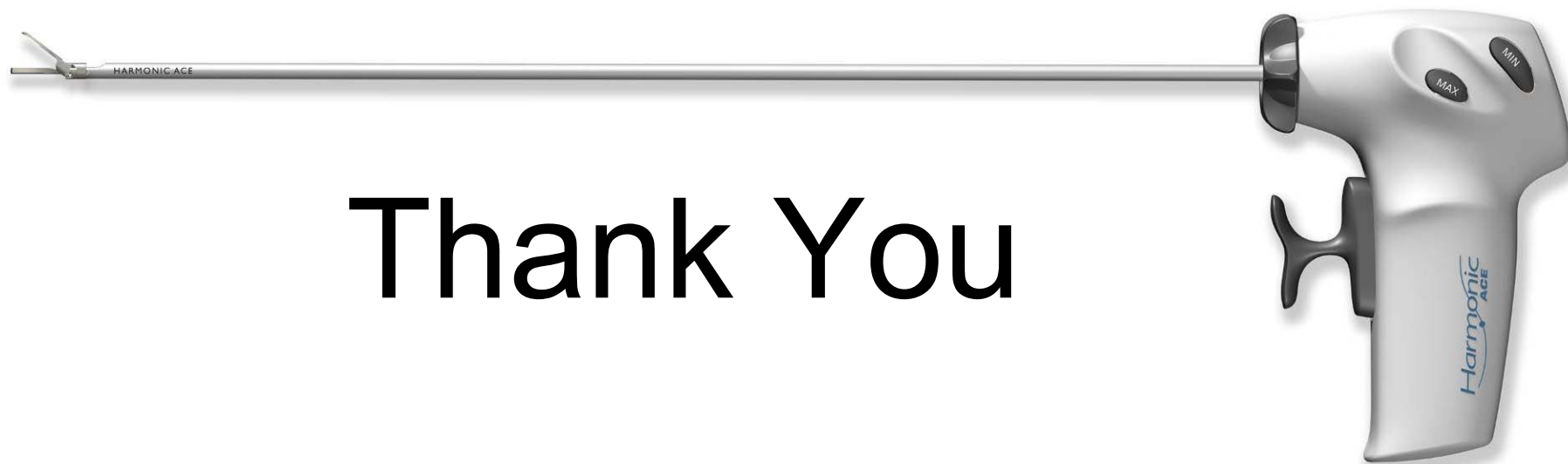
From the



team and



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Thank You



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