

## The Power of Choice

**Surgical Energy Portfolio** 



## Surgical Energy Portfolio

#### Introduction

The Olympus surgical energy portfolio combines standard and advanced energy devices powered by a single surgical energy system — with smoke management solutions to protect the OR team.

Olympus offers you the power to choose which solutions best fit your surgical needs.

Focus all your power on what matters most:

**Improved Patient Outcomes** 



## Surgical Energy Portfolio

### Content



The Power of Choice — Innovation, Inspired by You	
A Confident Choice	6
Visualize Your Energy	7
The Right Energy Tools for Advanced Surgery	
THUNDERBEAT Device — Hybrid Energy	Ĝ
POWERSEAL Sealer/Divider — Advanced Bipolar	10
SONICBEAT Device — Ultrasonic Energy	11
HICURA and HiQ+ Series — Laparoscopic Hand Instruments	12
Simplifying Complexity in Various Procedures and Specialties	
Surgical Energy System — Generators	14
Solutions for Gynecology	16
Solutions for Urology	18
Standard HF Solutions for Open Surgery	19
Solutions for Smoke Management	20
Olympus Support — Streamlined Efficiency	
Consultative Services	22
Your Goal Is Our Commitment	23

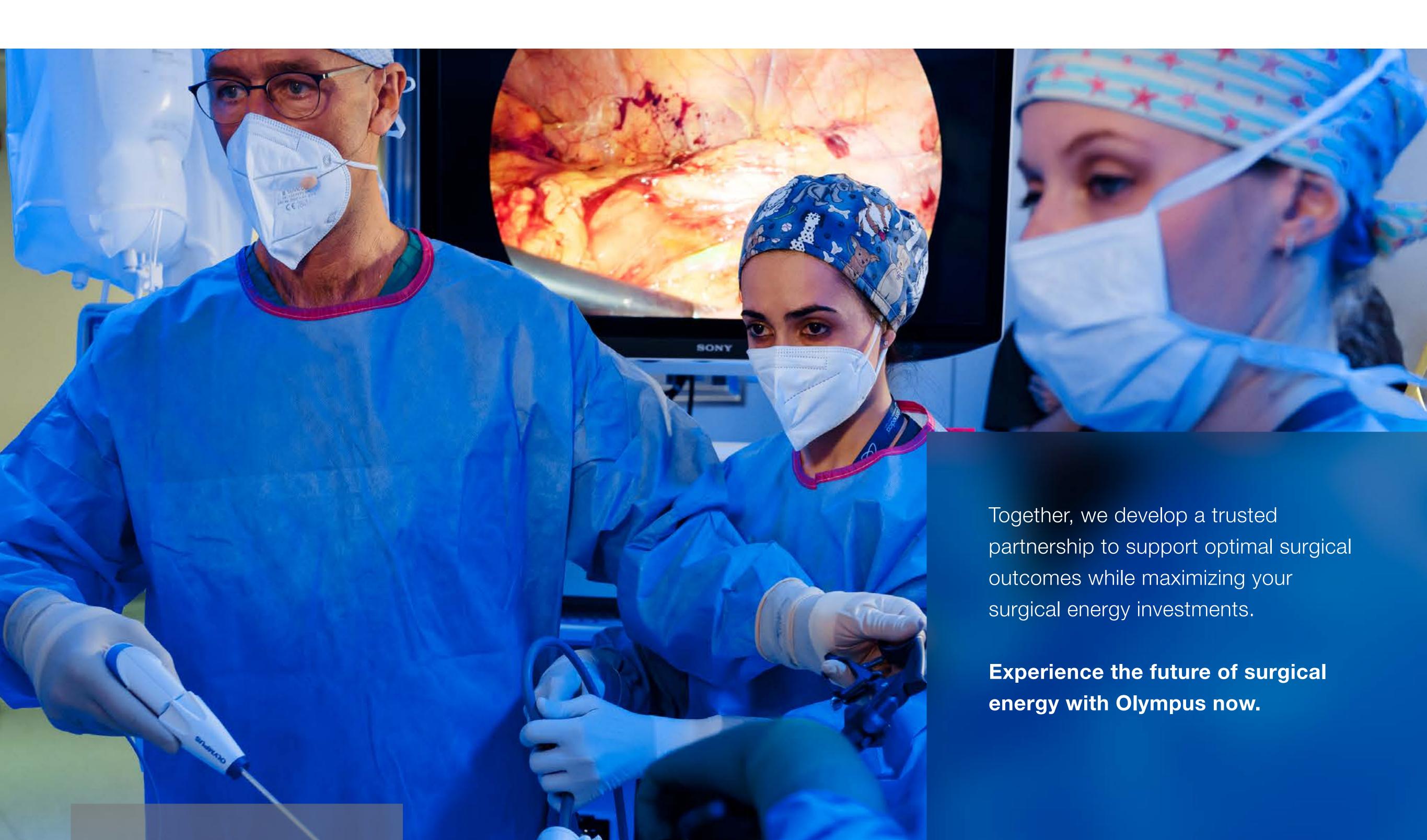
## Surgical Energy Portfolio

At a Glance



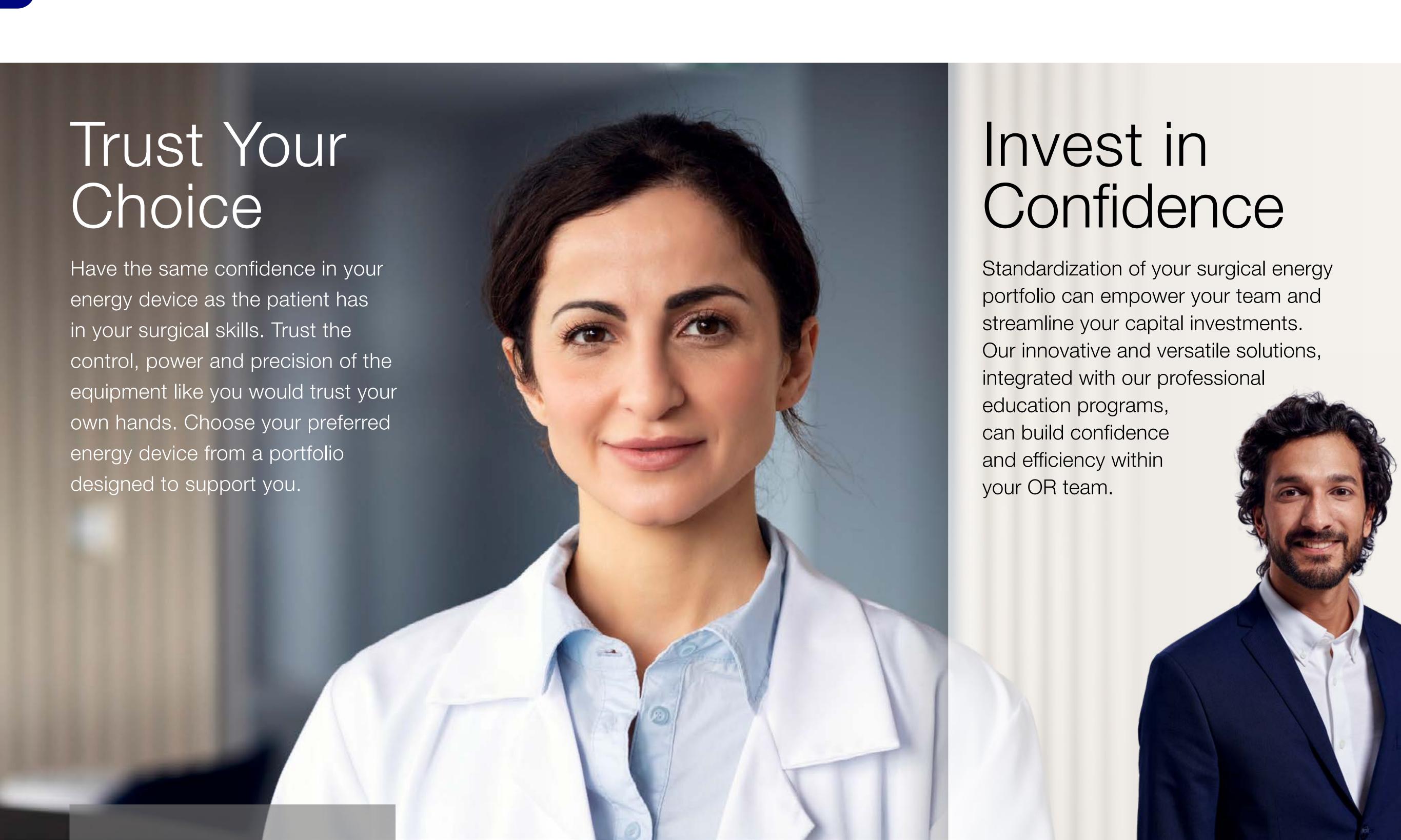
## The Power of Choice

### **Innovation Inspired by You**



## A Confident Choice

**Made for All Needs** 



## Visualize Your Energy

#### A Wider Ecosystem of Surgical Imaging and Collaboration

# Experience our versatile, multispecialty endoscopic visualization platform.

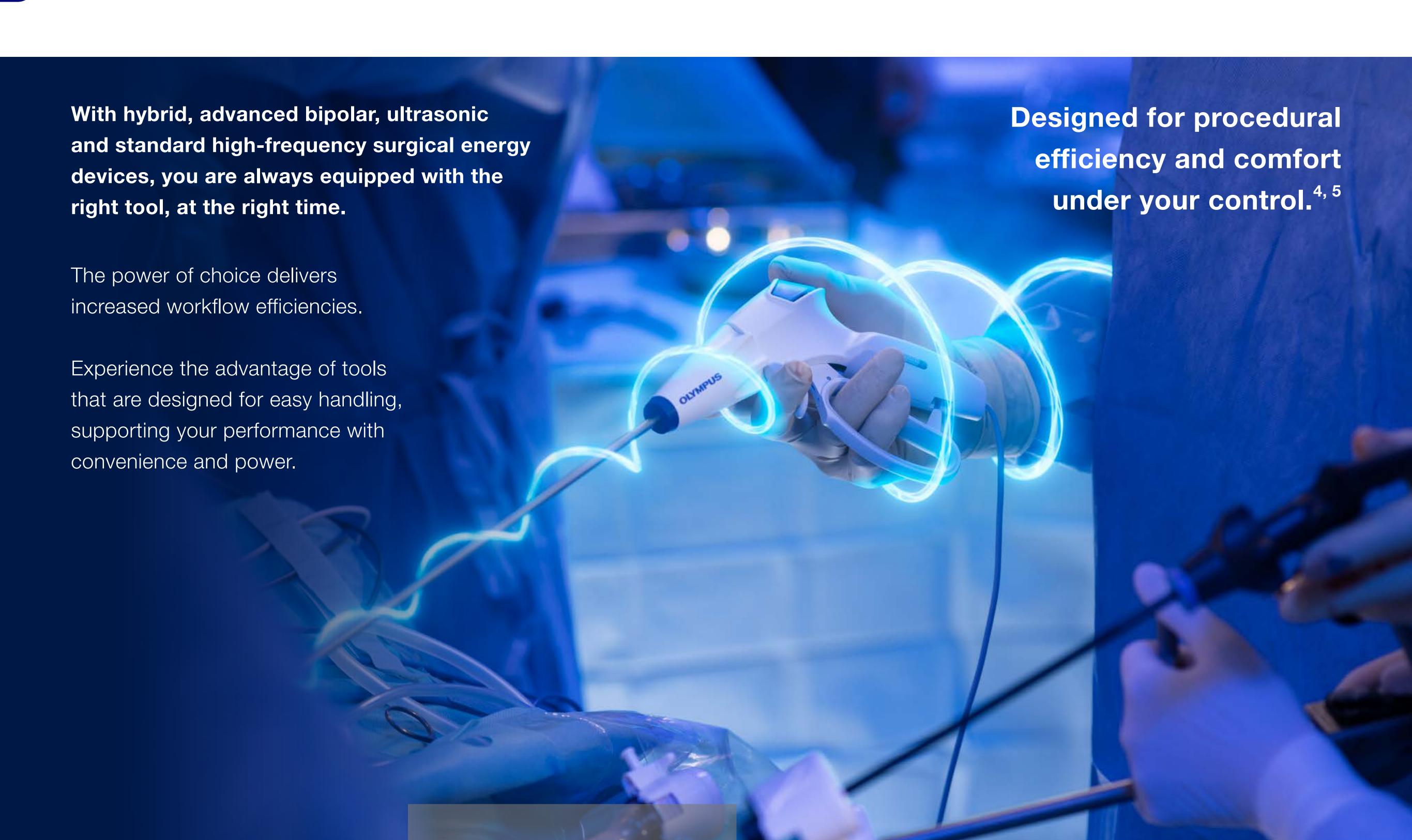
- · Latest image quality.
- · Fluorescence-guided surgery.
- Improved surgical efficiency, for reduced complications.<sup>1,2,3</sup>

Integrate Olympus recording, telecollaboration and medical content management solutions with the surgical energy portfolio as part of a wider ecosystem that supports clinicians like you at every step.



## The Right Energy Tools

For Advanced Surgery





## THUNDERBEAT Device

#### **Achieving More with Unique Hybrid Energy**

Hybrid energy, combining ultrasonic and advanced bipolar energy together in one device, results in advanced hemostasis and fastest-in-class tissue cutting.<sup>6</sup>

Rapid dissection when you want it, and reliable vessel sealing when you need it. It's the best of both worlds in one device.



#### Reliable Sealing and Secondary Hemostasis

- · Reliable 7 mm vessel sealing.<sup>7</sup>
- · Highest average burst pressure.7
- Pre-sealing and spot coagulation without cutting with SEAL mode.

#### Fine Dissection and Grasping Capabilities

- · Fast cutting and precise fine dissection.8
- High opening and closing force thanks to wiper jaw design.<sup>9</sup>

#### **Efficient Cutting**

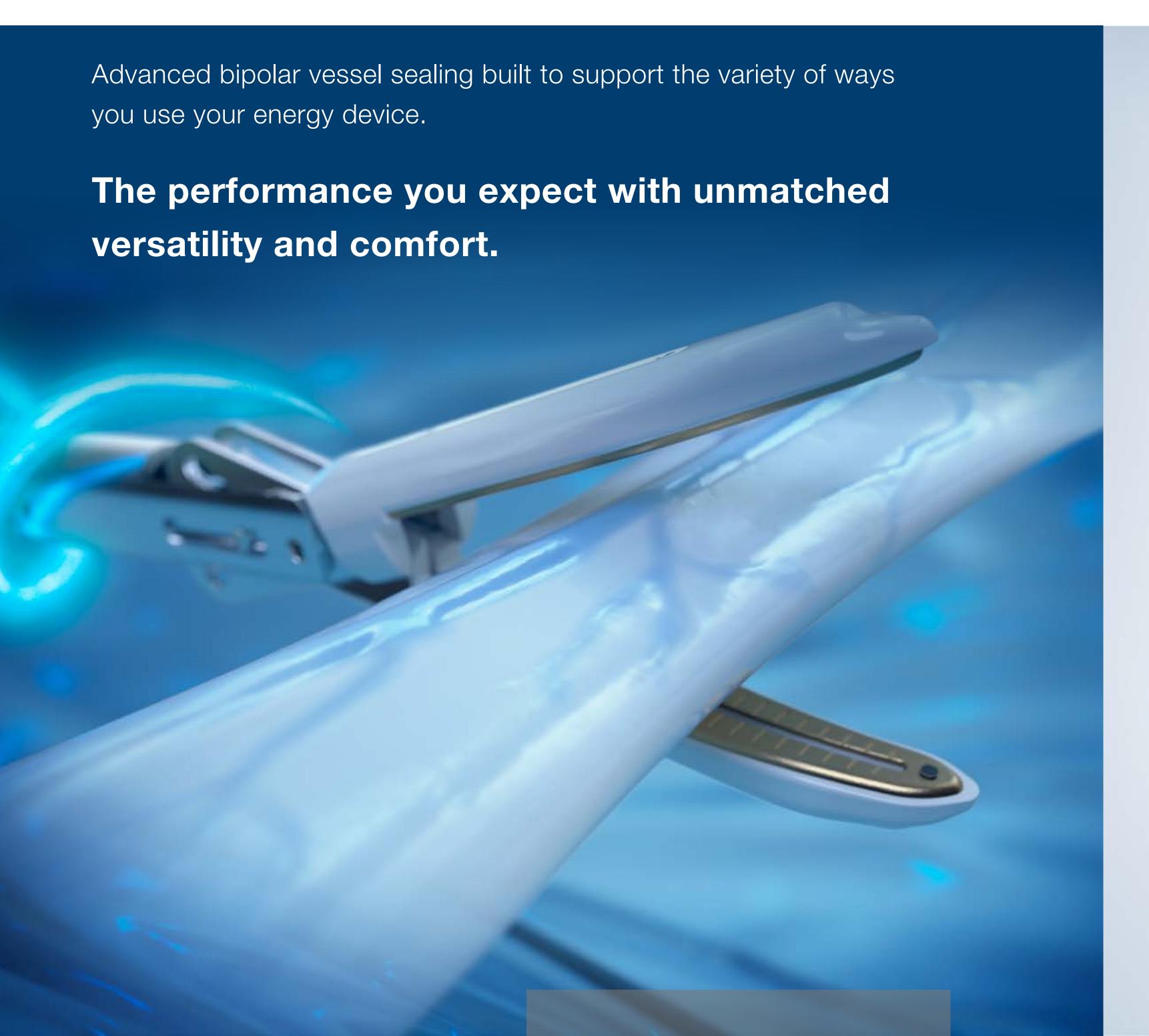
- · One-step SEAL & CUT mode with minimal bleeding.
- Fewer instrument changes for possible OR time savings.<sup>6</sup>





## POWERSEAL Sealer/Divider

#### **Next Level of Advanced Bipolar Technology**



#### Strong and Reliable Sealing 10,11

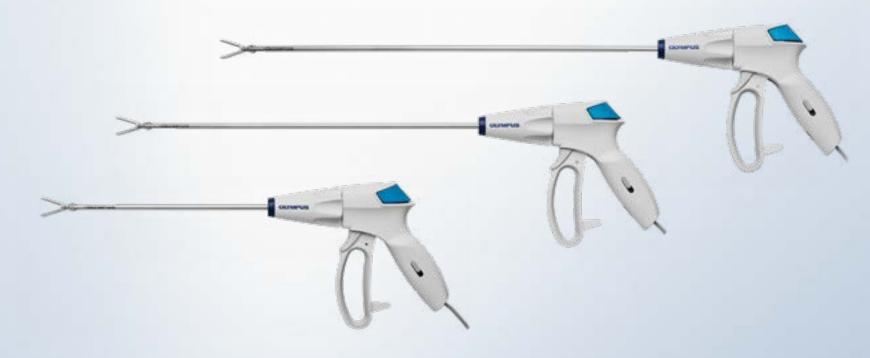
- Built to deliver strong, consistent vessel sealing on vessels up to 7 mm, including pulmonary vessels, tissue bundles and lymphatics.<sup>10</sup>
- Proprietary waveform continuously monitors tissue conditions and adjusts energy delivery accordingly.

#### Multifunctional Design and Performance<sup>12</sup>

- · Wider aperture with improved jaw force and dissection force for enhanced grasping and dissection capability. 12
- Unique latch-on/latch-off setting adjusts to surgical technique and preference.
- Energy activation when needed, without the requirement to fully close the jaws.

#### Improved Ergonomics<sup>12</sup>

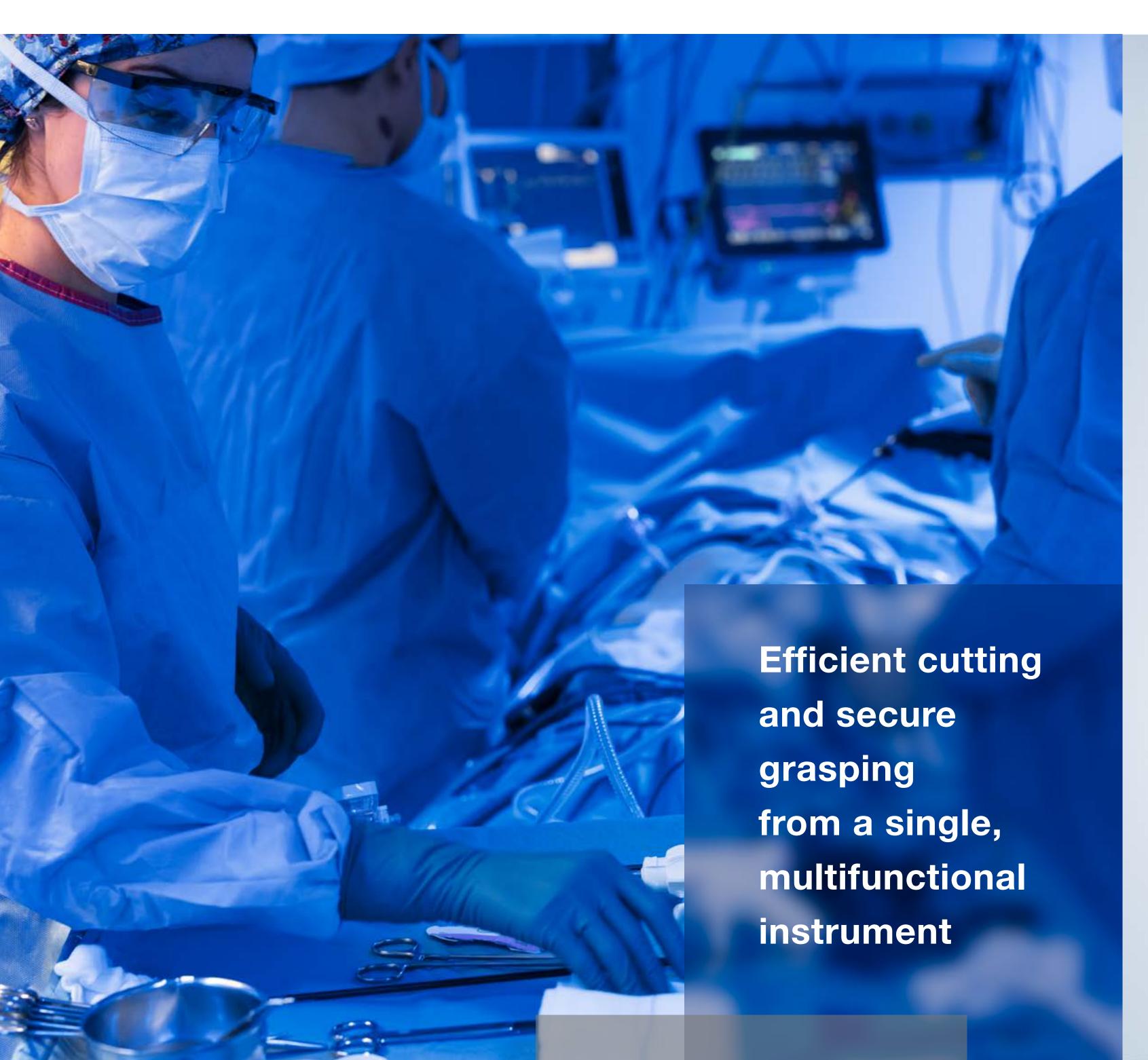
- Reduced squeeze force to close the jaws without sacrificing vessel-sealing strength.<sup>12</sup>
- Reduced reach distances support utilization regardless of glove size.<sup>12</sup>





## SONICBEAT Device

#### **The Right Ultrasonic Performance**



#### **Precise and Fine Dissection**

· Precise fine dissection with fine curved tip. 13

#### **Secure Tip Grasping**

- · Strong tip-grasping force thanks to wiper jaw design. 13
- · Reduces the need for an additional grasper.

#### **Faster Cutting and Reliable Sealing**

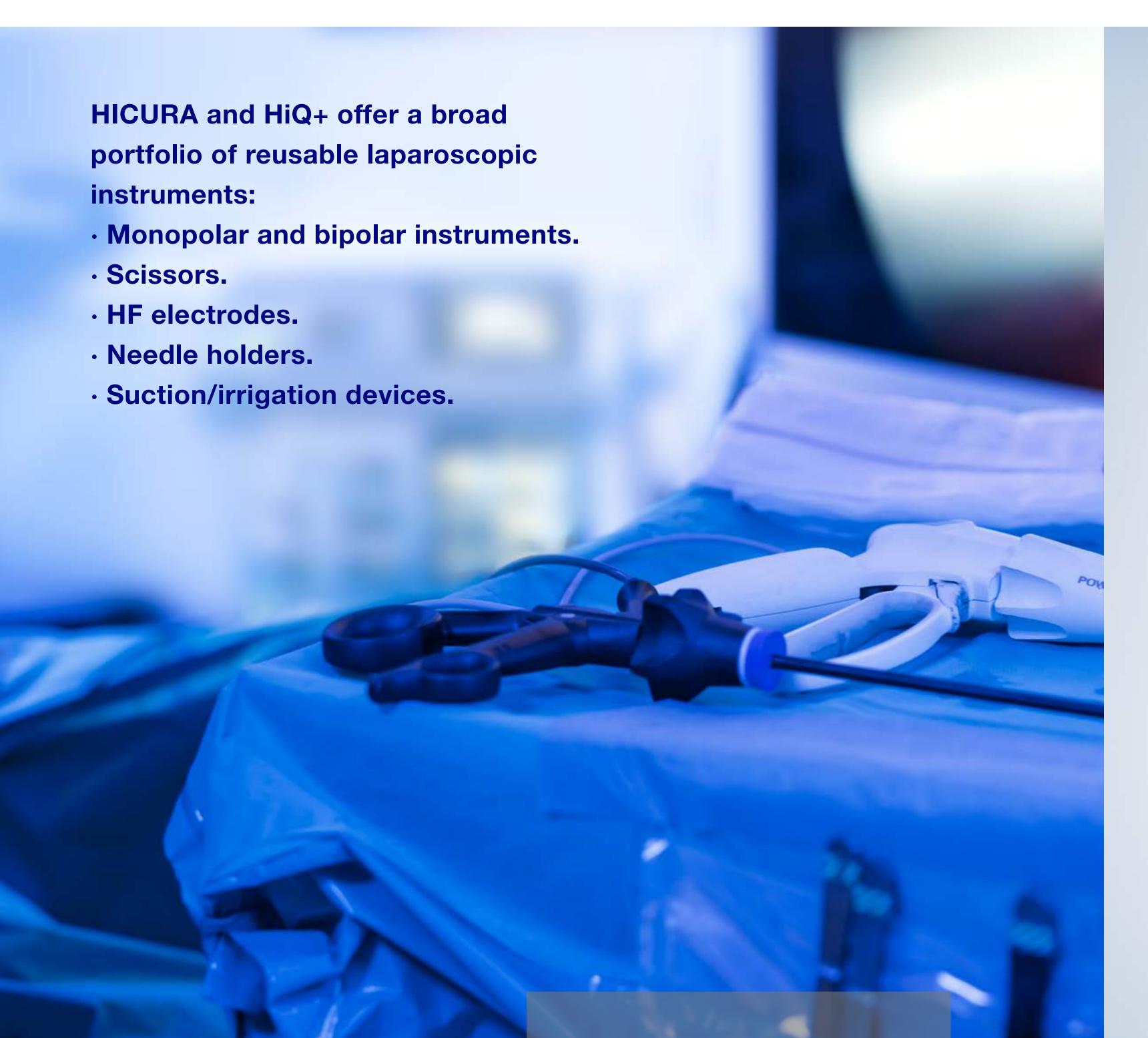
- Fast cutting with less mist.<sup>14</sup>
- · Reliable 5 mm vessel sealing. 15





## HICURA and HiQ+ Series

#### **Customizable and Versatile Laparoscopic Hand Instruments**



#### **HICURA Laparoscopic Hand Instruments**

#### **Versatility and Comfort**

- A broad variety of configurations to meet your needs, based on clinical preferences or field of application.
- · Two handle sizes, (deactivatable) ratchets, three different shaft lengths and a wide choice of jaw inserts.

#### **Modular Three-Part System**

- Assembly in just three steps without any spare parts that could get lost or misplaced.
- Individual customization and replacement of worn components.

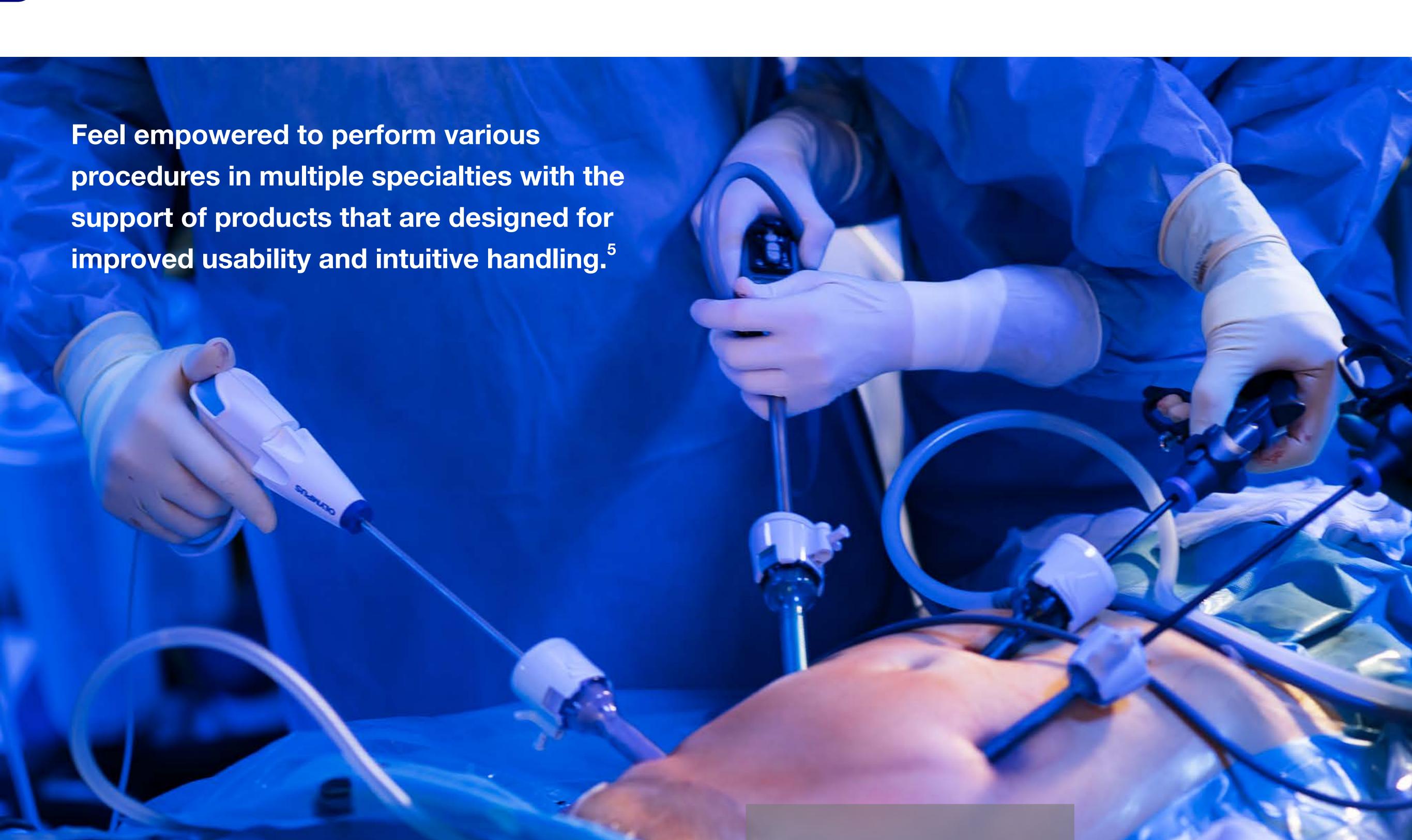
#### **Adapted Jaw Mechanism**

· Two dedicated joint mechanisms provide adaptive tissue control during grasping and dissection.



## Simplifying Complexity

In Various Procedures and Specialties





## Enabling Standardization

#### **Surgical Energy System**



Our energy portfolio is united by one surgical energy system to simplify complexity. Benefit from standardization across the OR so that your health care team can focus on what matters most: where the energy flows.

The Olympus surgical energy system integrates all common forms of surgical energy into a single system. By combining both the USG-410 Ultrasonic Bipolar Generator and the ESG-410 Electrosurgical Generator, you will be able to achieve the desired energy outcome for the best possible procedural results.

You can now standardize your workflow with a remarkably versatile solution.



## Enabling Standardization

#### **Surgical Energy System**



## **ESG-410 Electrosurgical Generator**

The ESG-410 Electrosurgical Generator can be used in general surgery, urology and gynecology procedures.

- Multiple standard high-frequency and advanced bipolar outlets.
- Olympus universal sockets offer automatic instrument recognition of Olympus devices, e.g., POWERSEAL.
- Intuitive menu structure with8.4" LCD touchscreen.
- New basic modes for quick access and fast procedure start.
- · USB portfolio updates, import and export of data.

## **USG-410 Ultrasonic Bipolar Generator**

Activate ultrasonic or hybrid energy in a single unit.

- Stand-alone generator for THUNDERBEAT and SONICBEAT devices.
- · Intelligent Tissue Monitoring (ITM) stops the activation of energy automatically when tissue is cut.





## Advanced Bipolar and Morcellation Devices

#### **Solutions for Gynecology**



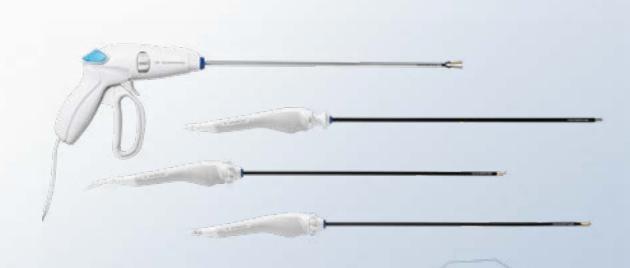
The PK TECHNOLOGY portfolio is a user-driven, impedance-controlled bipolar energy solution for laparoscopic gynecologic and general surgical procedures.

#### **Clinically Proven for Over 15 Years**

- · Safer and more effective than traditional energy technologies, such as monopolar or conventional bipolar. 16,17,18,19,20,21,22,23,24
- Associated with reduced operation time and high patient satisfaction.<sup>25,26,27</sup>
- Reduces the risk of electrical injury.<sup>25</sup>
- · Minimizes thermal damage to the tissue. 24,28

Provides surgeons with the ability to transect, coagulate, dissect, vaporize, resect and mobilize tissue with precision and control.

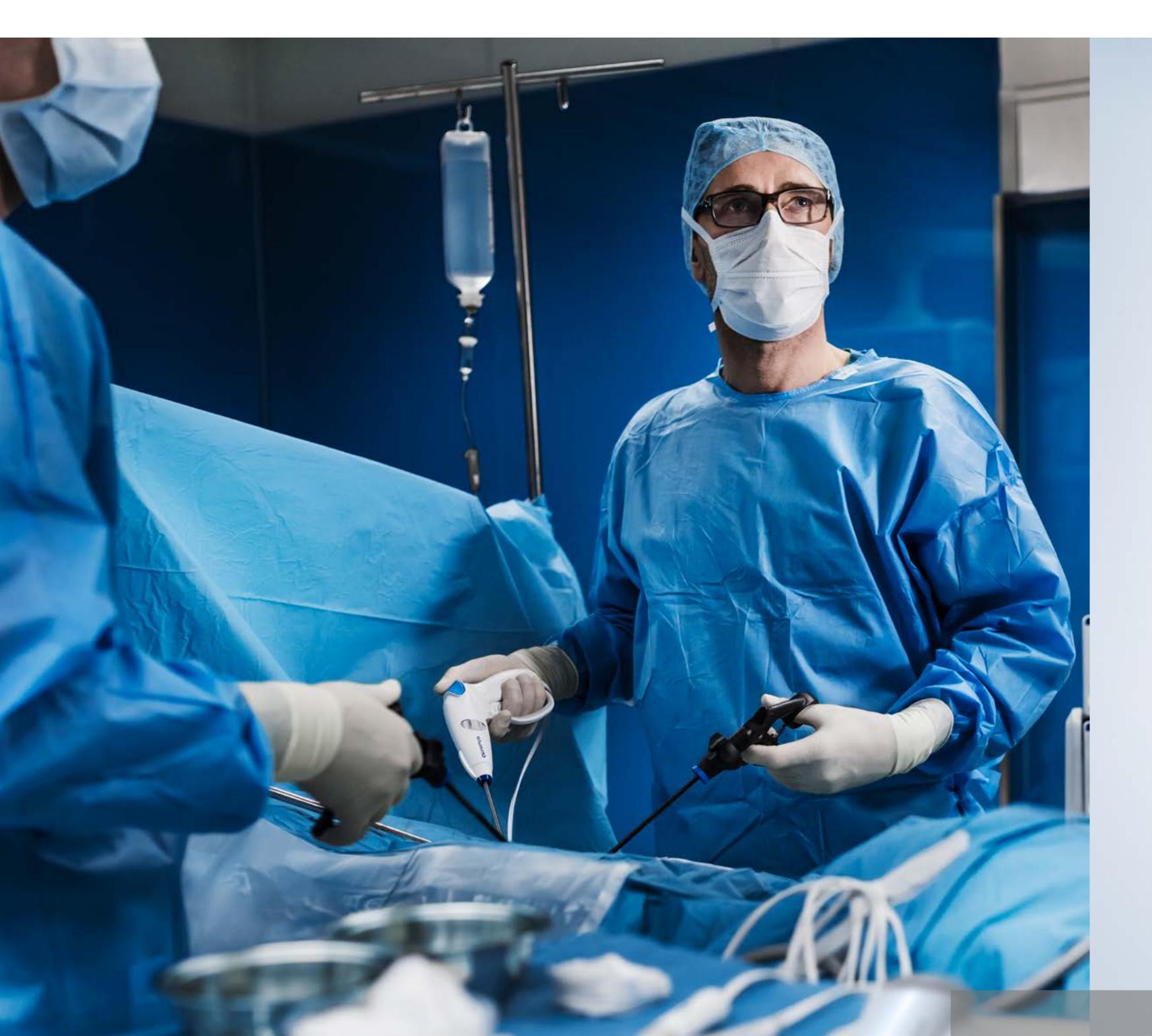
- PK Cutting Forceps
- PK Spatula
- · PK J-Hook
- · PK Needle
- · PK Lap Loop





## Advanced Bipolar and Morcellation Devices

#### **Solutions for Gynecology**



#### moresolution®

The moresolution<sup>®</sup> Laparoscopic Power Morcellator is advanced in the powerful and controlled cutting of large, contained tissue specimens<sup>29,30</sup> — especially during the morcellation of calcified tissue, when consistent performance of the cutting blades is required.<sup>31</sup>

- · Easy to assemble. 32
- Smooth and fast morcellation of calcified tissue.<sup>33</sup>
- High torque with low revolutions per minute (rpm).<sup>34</sup>





## One System for Individual Plasma Treatment

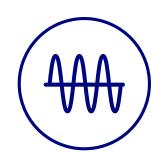
#### **Solutions for Urology**



Better resection performance, safety, cost and time efficiency; Olympus PLASMA+ expands your treatment options with:

- Loop electrodes for PLASMA+ resection of the prostate.
- Round and oval button for PLASMA+ vaporization.
- Specialized loop electrodes for PLASMA+ prostate enucleation.
- Specialized loops for NMIBC PLASMA+ resection.





## A Broad Portfolio of Choices

#### **Standard HF Solutions for Open Surgery**

Olympus offers a wide range of HF instruments, to provide even more choice and value.

#### The portfolio includes:

- · Disposable monopolar electrodes.
- · Disposable monopolar pencils.
- Disposable scissors.
- · Disposable smoke evacuation pencil.
- · Disposable suction coagulators.
- · Reusable bipolar forceps.

Further accessories are also available.

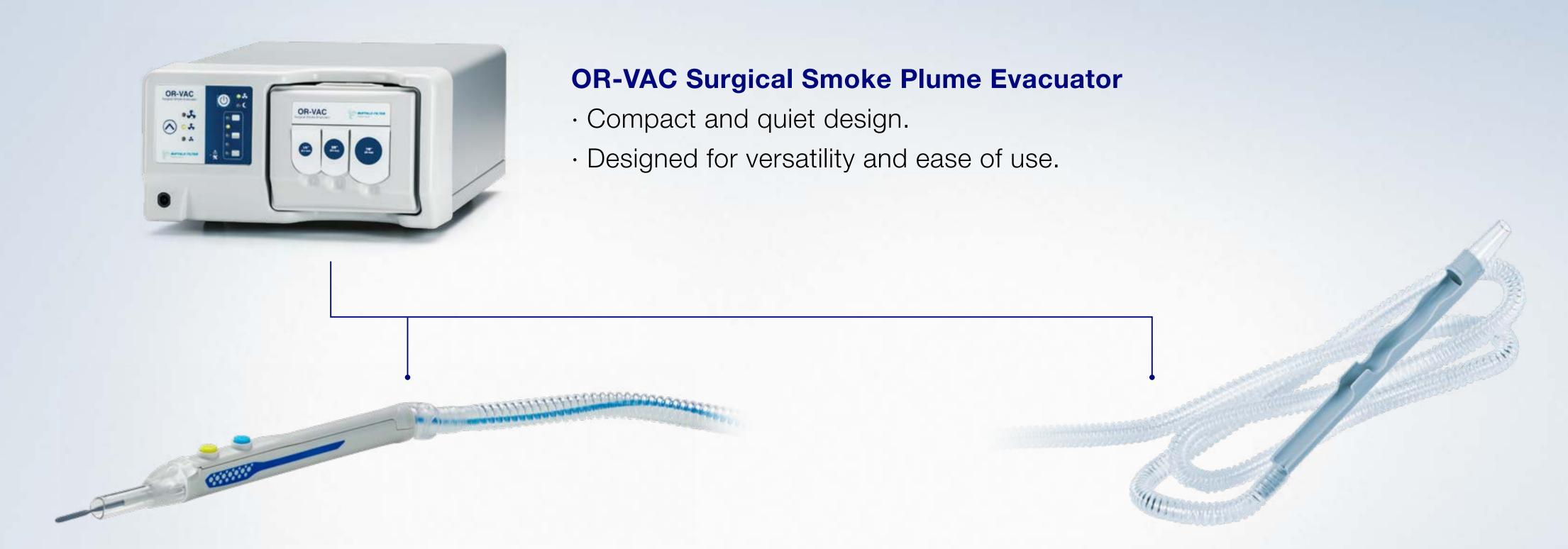




## Promoting a Healthier Work Environment

#### **Solutions for Smoke Management**

The OR-VAC Surgical Smoke Plume Evacuation System provides smoke management for ORs, physicians' offices and outpatient surgery centers. It features a compact design and three-port filter with filter life tracking capabilities.



#### **Telescopic Smoke Evacuation Pencil**

- · Premium design for everyday electrosurgical applications.
- · Simultaneous activation of energy and evacuation of surgical smoke plume.
- · No need to spend precious time exchanging electrodes.

#### **Snap-On Smoke Evacuation Adapter**

- · Cost-effective solution.
- · Efficient workflow by eliminating the need to hold tubing.
- · Transparent capture port designed to improve visibility.

## Streamlined Efficiency Throughout

#### **Olympus Support**

Streamlined workflow efficiencies through one portfolio for all surgical energy requirements, familiar technologies and standardized user interfaces.

Reduced complexity is beneficial for both OR teams and hospital management.

You can count on our experienced product experts, flexible financial offerings, comprehensive repair programs and world-class professional training — all working together to help deliver efficient, effective and safe treatment.



### Consultative Services

#### **Olympus Support**

## Innovative and Economical Surgical Solutions

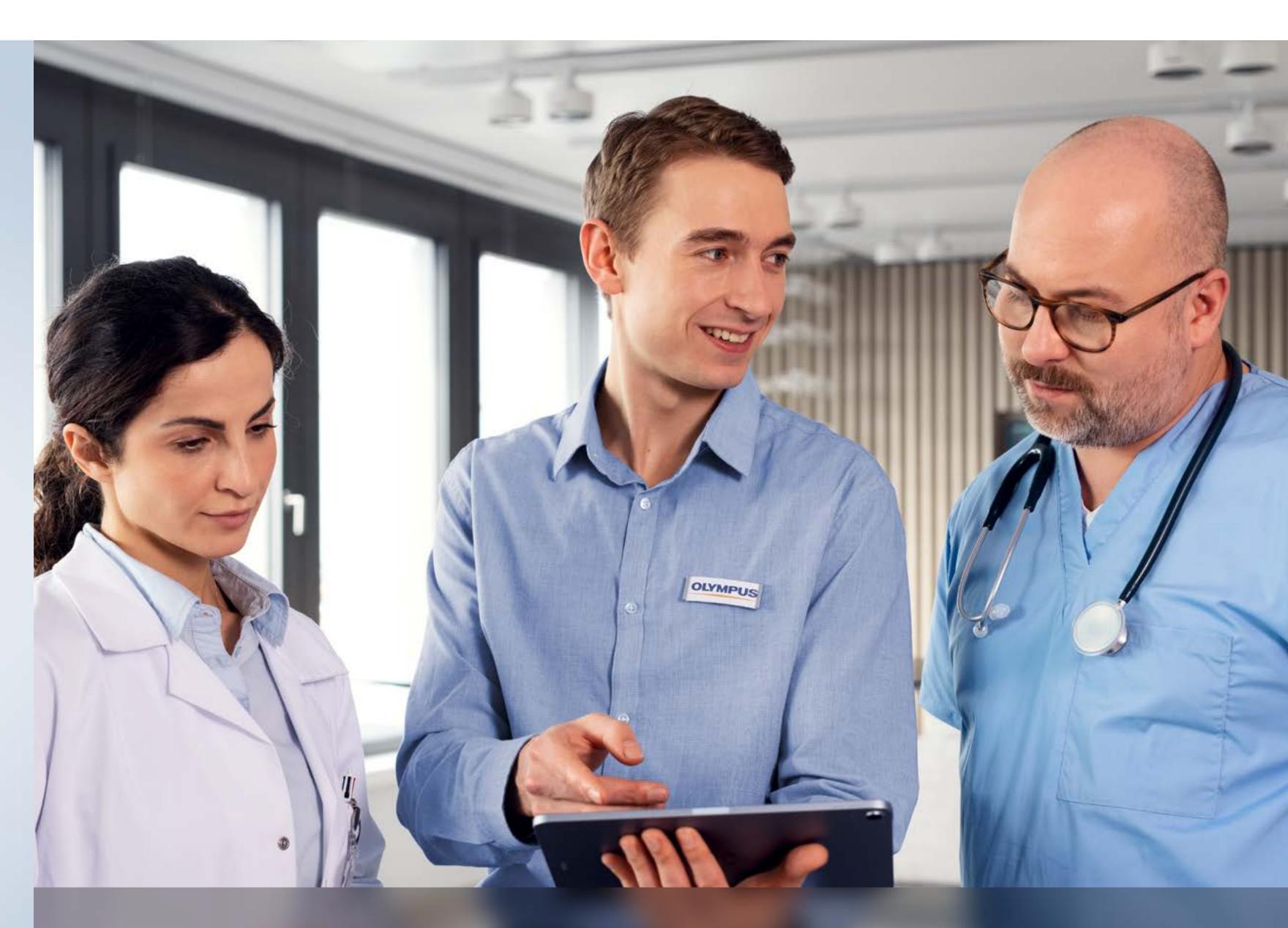
Rely on Olympus as a **full-service partner** and benefit from our continued investment in innovative and economical surgical solutions, our salesforce and clinical specialists, our reliable technical support network and unique program offerings.

#### **Surgical Solutions Salesforce**

Olympus supports you with highly trained field staff, regional sales managers and executive teams dedicated to your individual product and service needs.

#### **Olympus Financial Services**

Unique to the industry, our financial service professionals provide customized financing options based on your individual needs to create cost-effective ways to maximize the value of our products and technology.



Personalized, value-based offerings and continuous partnership aligning workflow efficiencies and promoting value-oriented investments.

### Your Goal Is Our Commitment

#### **Olympus Support**

#### **Product Training**

Our in-servicing standards, product training and portfolio of educational programs focus on the **safe and effective use** of Olympus products to support the clinical team.

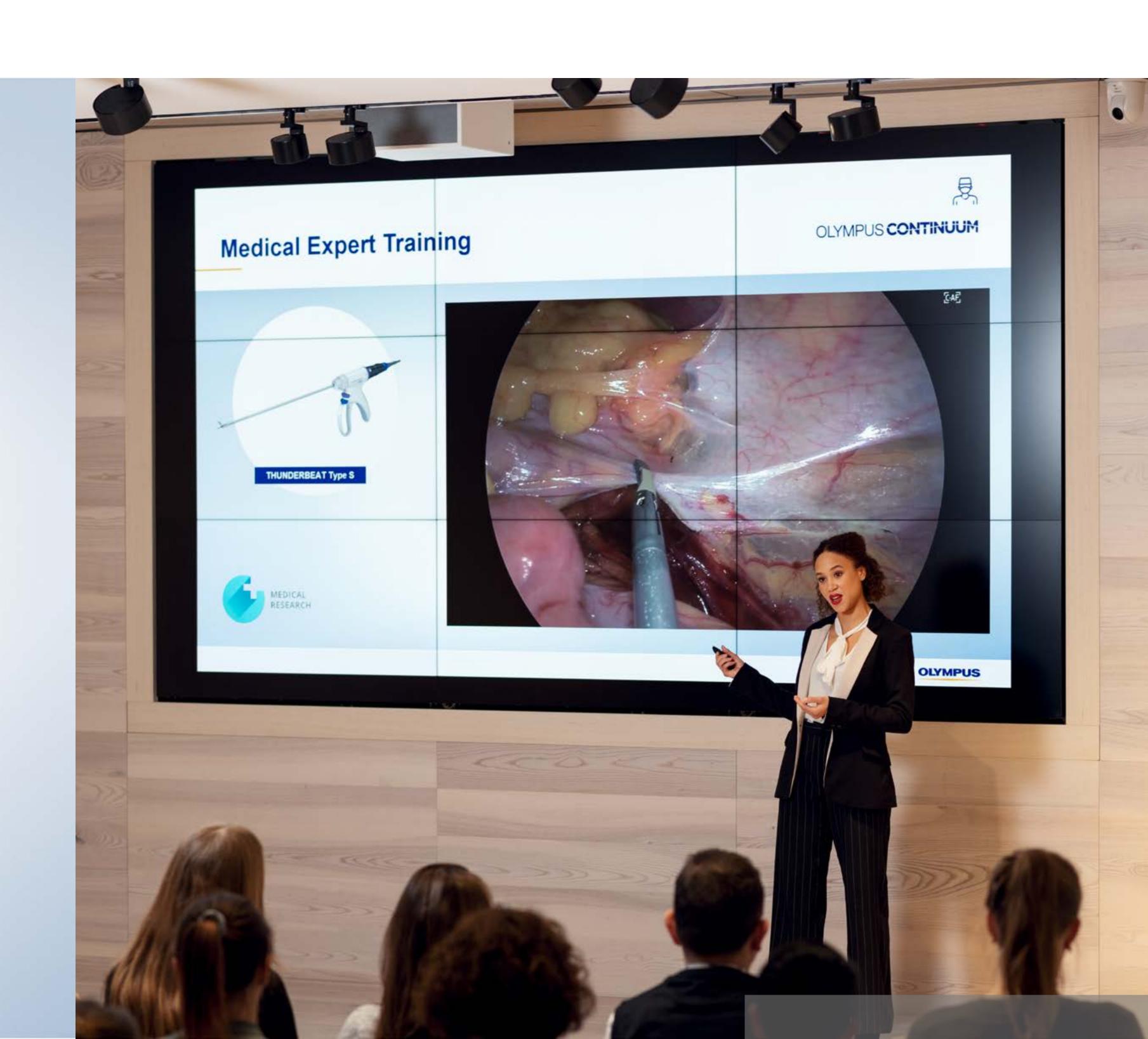
- State-of-the-art learning centers around the world.
- · Today's newest medical technology.

### OLYMPUS CONTINUUM

**Elevating Patient Care. Together.** 

Olympus Continuum, our platform for educational programs that are led by health care experts from around the world, aims to further promote procedural excellence and innovative practices to meet everyone's bottom line:

## **Optimal Patient Outcomes**



#### The Power of Choice

#### References

- 1 Roy, M., Dip, F., Nguyen, D., Simpfendorfer, C. H., Menzo, E. L., Szomstein, S. and Rosenthal, R. J. Fluorescent incisionless cholangiography as a teaching tool for residents. (2017).
- Dip, F., LoMenzo, E., Sarotto, L., Phillips, E., Todeschini, H., Nahmod, M. and Rosenthal, R. J. Randomized Trial of Near-Infrared Incisionless Fluorescent Cholangiography. Ann Surg, 270(6), 992-999. doi:10.1097/SLA.0000000000003178. (2019).
- Broderick, R. C., Lee, A.M., Cheverie, J.N. et al. Fluorescent cholangiography significantly improves patient outcomes for laparoscopic cholecystectomy. Surg Endosc. (2020).
- 4 868-4378, 868-4375, 868-4410, 869-3749 (In-House Bench Top Testing approved in 510(k) under #K172610)
- 5 Approved in 510(k) under #K172610"

#### **THUNDERBEAT**

- 6 868-4378, 868-4375, 868-4410, 869-3749 (In-House Bench Top Testing approved in 510(k) under #K172610)
- 7 868-4378 (In-House Bench Top Testing approved in 510(k) under #K172610)
- 8 868-4375, 868-4410, 869-3749 (In-House Bench Top Testing approved in 510(k) under #K172610)
- 9 868-4410, 868-4411, 869-3749 (In-House Bench Top Testing approved in 510(k) under #K172610)

#### **POWERSEAL**

- 10 Based on internal test reports and acute and chronic animal studies reports DN0044705, DN0044706
- 11 Based on internal test reports DN0043725, DN0044288, DN0044291, DN0044706, DN0046942, DN0044249
- 12 Internal test report DN0046457

#### **SONICBEAT**

- 13 869-2368 (In-House Bench Top Testing approved in 510(k) under #K111202)
- 14 869-2512 (In-House Bench Top Testing approved in 510(k) under #K111202)
- 15 869-2370 (In-House Bench Top Testing approved in 510(k) under #K111202)

#### PK Technology

- 16 Vilos, G. A. and Rajakumar, C. Electrosurgical Generators & Monopolar and Bipolar Electrosurgery. JMIG. (2013).
- Odell, R. C. Surgical Complications Specific to Monopolar Electrosurgical Energy: Engineering Changes That Have Made Electrosurgery Safe. JMIG. (2013).
- 18 Brill, A. I. et al. Patient Safety during Monopolar Electrosurgery Principles and Guidelines. JSLS. (1998).
- 19 Shuman, I.E. Bipolar versus Monopolar Electrosurgery: Clinical Applications. Dentistry Today. (2001).
- Lee, C. L. et al. Laparoscopic Radical Hysterectomy Using Pulsed Bipolar System: Comparison with Conventional Bipolar Electrosurgery. Gynecol Oncol. 105(3): 620-4; Competitor: Kleppinger. (2007).

- Su, H. et al. Comparison of the efficacy of the pulsed bipolar system and conventional electrosurgery in laparoscopic myomectomy A retrospective matched control study. Taiwanese Journal of Obstetrics & Gynecology 50 (2011) 25-28
- 22 Cho, H. Y. et al. Comparison of Two Bipolar Systems in Laparoscopic Hysterectomy. JSLS (2012)16:456–460
- Park, S. et al. Comparison of the Efficacy of the Pulsed Bipolar System and Conventional Bipolar Electrosurgery in Total Laparoroscopic Hysterectomy (TLH). 432, Abstracts / Journal of Minimally Invasive Gynecology 15 (2008) S1-S159
- 24 Cimsir, M. T. et al. Comparison of Gyrus PKS™ PlasmaSpatula Versus Vectec™ Monopolar L-Hook During Colpotomy Step in Total Laparoscopic Hysterectomy in Terms of Vaginal Cuff Thermal Damage. Cerrahpaşa Med J 2022; 46(1): 66-70
- Erian, J. et al. Time Needed for Changing of Laparoscopic Instruments Has Been Minimized by the Use of the PK System. One Hundred Cases of Laparoscopic Subtotal Hysterectomy Using the PK and Lap Loop Systems. Journal of Minimally Invasive Gynaecology 12: 365–9. (2005)
- Jain, P. et al. Decreasing the Incidence of Vaginal Cuff Dehiscence after Total Laparoscopic Hysterectomy Using a Novel Surgical Technique. 233, Abstracts / Journal of Minimally Invasive Gynecology 19 (2012) 71-122
- Zupi, E. Hysteroscopic Endometrial Resection vs Laparoscopic Supracervical Hysterectomy for Menorrhagia. Am J Obstet Gynecol 188(1); Literature No.: 6862-0305. (2002).
- Wang, C. J. et al. Comparison of Efficacy of Pulsed Bipolar System and Conventional Electrosurgery in LAVH. J Laparoendosc Adv Surg Tech 15(4): 361-4; Competitor: Kleppinger. (2005).

#### moresolution

- Driessen, S. R., Arkenbout, E. A., Thurkow, A. L. and Jansen, F. W. Electromechanical morcellators in minimally invasive gynecologic surgery: an update. J Minim Invasive Gynecol. 2014 May-June; 21(3):377-83. doi: 10.1016/j.jmig.2013.12.121. Epub 2014 Jan 21. PMID: 24462590.
- Van den Haak, L. et al. Power morcellator features affecting tissue spill in gynecologic laparoscopy: an in-vitro study. Journal of Minimally Invasive Gynecology 23.1: 107-112. (2016).
- 31 Test data on file with Trokamed, investigation report 2013-11-06 / 2014-04-17
- 32 Test data on file with Trokamed, Testimonial Feedback Feb. 2014.
- Bekhit, M. F., Jackson, T. and Advincula, A. P. Simulation Study Comparing the Effectiveness of the Gynecare Morcellex, the MOREsolution, and the Rotocut G1 Tissue Morcellators. Journal of Minimally Invasive Gynecology 20.6 (2013): S47-S48.
- 34 Test data on file with Trokamed, Report 16th Feb. 2016

#### Urology

- 35 Data on file, as of Dec. 2020
- 36 Includes ACMI SuperPulse generator technology.

Some devices featured in this brochure may not be available for sale in your local region. Please contact your local Olympus sales representative to find out more. As medical knowledge is constantly growing, technical modifications or changes to the product design, product specifications, accessories and service offerings may be required.

DISTRIBUTOR



#### **OLYMPUS EUROPA SE & CO. KG**

Postbox 10 49 08, 20034 Hamburg, Germany Wendenstrasse 20, 20097 Hamburg, Germany Phone: +49 40 23773-0, Fax: +49 40 233765 www.olympus-europa.com

MANUFACTURER

Olympus Surgical
Technologies Europe
Olympus Winter & Ibe GmbH
Kuehnstrasse 61
22045 Hamburg, Germany
www.olympus-oste.eu

Olympus Surgical Technologies America

9600 Louisiana Ave. North Brooklyn Park, MN 55445 610-366-3000 Olympus Medical Systems Corp 2951 Ishikawa-cho, Hachioji-shi, Tokyo 192-8507, Japan

www.olympus-global.com