PK TECHNOLOGY
Powering Gynecology.
PK TECHNOLOGY: POWERING GYNECOLOGY

PK TECHNOLOGY is an impedance-controlled bipolar energy system that is designed specifically to enhance performance and versatility in laparoscopic gynecological surgery. It offers a complete range of multifunctional laparoscopic instruments, each individually designed for a specific application area.

PK TECHNOLOGY instruments have been established on the market for more than ten years and are used by gynecologists all over the world in various procedures.

The surgeon benefits from:
- high patient satisfaction and effective performance,
- potentially shorter procedure times,
- potentially improved operating-room efficiency,
- the confidence that comes with ten years proven clinical history.

PK TECHNOLOGY System with ESG-400 Generator

PK TECHNOLOGY provides surgeons with the ability to seal, transect, coagulate, dissect, vaporize, resect, and mobilize tissue all with precision and control from one energy platform: the ESG-400 – a fully equipped, latest-generation HF generator that provides the PK TECHNOLOGY instruments with advanced bipolar energy. An auto-detection function and dedicated sealing and cutting modes for PK TECHNOLOGY instruments and other Olympus devices help simplify the OR workflow.

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

Clinically Proven for Over Ten Years

PK TECHNOLOGY is an effective technology that has over ten years of proven clinical history and that:
- is safer than traditional energy technologies, such as monopolar or conventional bipolar,
- is associated with reduced operation time and high patient satisfaction,
- eliminates the risk of electrical injury,
- minimizes thermal damage to the tissue.

The PK TECHNOLOGY Instrument Portfolio


2 Vilos GA, Rajakumar C, 2013, JMIG, Electrosurgical Generators & Monopolar and Bipolar Electrosurgery

3 Odell RC, 2013, JMIG, Surgical Complications Specific to Monopolar Electrosurgical Energy: Engineering Changes That Have Made Electrosurgery Safer


5 Shuman IE, 2001, Dentistry Today, Bipolar versus Monopolar Electrosurgery: Clinical Applications


7 Vilos GA, Rajakumar C, 2013, JMIG, Electrosurgical Generators & Monopolar and Bipolar Electrosurgery

8 Odell RC, 2013, JMIG, Surgical Complications Specific to Monopolar Electrosurgical Energy: Engineering Changes That Have Made Electrosurgery Safer

9 Brill AI, et al., 1998, JSLS, Patient Safety during Monopolar Electrosurgery – Principles and Guidelines

10 Shuman IE, 2001, Dentistry Today, Bipolar versus Monopolar Electrosurgery: Clinical Applications

Clinically Proven and Convincing for More Than Ten Years
PK Cutting Forceps may shorten procedure times due to:
- reliable coagulation,
- potentially fewer instrument changes,
- controlled and precise mechanical cutting,
- strong grasping.

It is particularly suitable for LSH, TLH, LAVH, and BSO.

Innovative Jaw Design
Smooth trigger and sticking prevention due to non-sticky coated stainless-steel jaw.


2 Zupi E: “Hysteroscopic endometrial resection vs laparoscopic supracervical hysterectomy for menorrhagia”, Am J Obstet Gynecol 2002;188(1);

PK LAP LOOP

The Lap Loop offers higher patient safety in addition to fast, immediate, and straight cutting of the uterus during LSH procedures\(^\text{10}\). The gynecologist performing advanced laparoscopic surgery benefits especially from:

**Patient Safety**
- Blue-coated wire for optimal visibility in the placement of the loop
- White ceramic tip helps identify whether the bowel has been caught in the loop

**Efficiency**
- Fast, clean, and immediate bipolar cutting

**Easy and Convenient Handling and Placement**
- Large loop for big cases
- Pop-up diamond-shaped loop opens up automatically in the abdomen
- Consistent loop shape
- Ergonomic handle design

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PK LOKI

**PK Spatula**
The PK Spatula cuts, coagulates, and dissects with unique bipolar precision, thus allowing for potentially faster procedures and enhanced effectiveness. The tip design allows for both pinpoint and broad tissue coagulation. The PK Spatula is indicated for resection and coagulation of soft tissue and blood vessels in laparoscopic surgery. It is particularly suitable for myomectomy and the amputation of the uterus\(^\text{11}\).

**PK J-Hook**
The PK J-Hook can reduce the operating time by cutting and coagulating simultaneously. The unique tip design is excellent for skeletonization and mobilization, thus potentially enabling smooth operation. The PK J-Hook is particularly suitable for adhesiolysis and the amputation of the uterus.

**PK Needle**
The PK Needle is a unique bipolar cutting device that allows the surgeon to perform precise, safe, and fast procedures. The PK Needle is indicated for resection of soft tissue in laparoscopic surgical procedures. It is particularly suitable for the treatment of ectopic pregnancy, myomectomy, and the amputation of the uterus.

**Ergonomic Handles with Hand Activation**

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\(^{11}\) Hoffmann CP, et al.: “Since changing to the PK ZIP needle to detach the cervix, we have seen much less significant delayed cuff bleeding.” Laparoscopic Hysterectomy: The Kaiser Permanente San Diego experience; J Min Invasive Gyn 2005;12: 16–24.
Olympus Energy Solutions Work Together to Provide:

**Electrosurgery**

**ESG-400 – A Fully Equipped, Latest-Generation HF Generator**
Optimizing your state-of-the-art electrosurgery in all surgical disciplines for monopolar, bipolar, and advanced bipolar modes for open, laparoscopic, and endoscopic applications, as well as transurethral or transcervical resection (TURis/TCRis).

**Ultrasound Surgery**

**USG-400 – Ultrasonic Energy for Advanced Tissue Management**
The USG-400 Generator provides ultrasonic energy for the SONICBEAT Ultrasonic Dissector.

**Combined Energy Surgery**

**Surgical Tissue Management System (THUNDERBEAT Platform)**
Both surgical energy generators combined provide a unique platform that delivers the most widely used energy requirements to the surgical suite, eliminating the need for multiple devices in the operating room.

**Visibility**
The Olympus Surgical Tissue Management System communicates intelligently with the Olympus insufflators (UHI-3 and UHI-4) in order to evacuate any smoke and mist whenever required during laparoscopic surgery. Coupled with the reduced mist production of the THUNDERBEAT laparoscopic instruments and Olympus imaging equipment, the surgeon enjoys the best possible visualization.

**Utility**
Olympus energy devices can be seamlessly integrated into the Olympus ENDOALPHA OR solutions. This enables clinical staff to easily select the desired function of THUNDERBEAT or PK TECHNOLOGY directly from the HomeScreen user interface of UCES-3. It also allows for intuitive navigation through the device using the touch screen or voice control.
UCES-3 offers a centralized one-touch control for all sterile and/or non-sterile medical devices – for example, electrosurgical generators, surgical cameras, or surgical lights and tables – providing greater efficiency and improved ergonomics during procedures. Finally, the Scene Selection function, an intelligent combination of user-and procedure-specific actions operated using one-touch control,
- helps to standardize procedures,
- decreases turnaround time,
- enhances quality and overall workflow.
### PK TECHNOLOGY Instruments

<table>
<thead>
<tr>
<th>Order Number</th>
<th>Description</th>
<th>Diameter</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGPK-CF0533</td>
<td>PK Cutting Forceps</td>
<td>5 mm</td>
<td>33 cm</td>
</tr>
<tr>
<td>WA90300A</td>
<td>PK Lap Loop</td>
<td>5 mm</td>
<td>33 cm</td>
</tr>
<tr>
<td>EGPK-NE0533</td>
<td>PK Needle</td>
<td>5 mm</td>
<td>33 cm</td>
</tr>
<tr>
<td>EGPK-JH0533</td>
<td>PK J-Hook</td>
<td>5 mm</td>
<td>33 cm</td>
</tr>
<tr>
<td>EGPK-SP0533</td>
<td>PK Spatula</td>
<td>5 mm</td>
<td>33 cm</td>
</tr>
</tbody>
</table>

### Generators and Accessories

<table>
<thead>
<tr>
<th>Order Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB91051W</td>
<td>ESG-400* electrosurgical generator</td>
</tr>
<tr>
<td>WA956215</td>
<td>Power cable, Europlug (2×)</td>
</tr>
</tbody>
</table>

* Including one double-foot switch

Note: PK TECHNOLOGY instruments are compatible with all new ESG-400 generators (with software version 4.09). Existing generators need to be upgraded. Please ask your Olympus sales representative for further information.

### Optional Equipment

<table>
<thead>
<tr>
<th>Order Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>N3635730</td>
<td>Energy cart, TC-E400</td>
</tr>
<tr>
<td>WB50403W</td>
<td>Foot switch, single (bipolar) pedal</td>
</tr>
<tr>
<td>N3809530</td>
<td>Adapter for the connection to UHI-2 or UHI-3 insufflator**</td>
</tr>
<tr>
<td>E0427213</td>
<td>Neutral electrode cable (reusable)</td>
</tr>
</tbody>
</table>

** Required for the automatic mist- and smoke-evacuation function

Specifications, design, and accessories are subject to change without any notice or obligation on the part of the manufacturer.