Inspired by Light

MultiPulse Ho

Holmium:YAG Laser
Fast and Safe Workstation.
The Gold Standard for Lithotripsy.

Main Application Fields
Urology | General Surgery

Manufactured by Asclepion Laser Technologies GmbH

Jena Surgical
**MultiPulse Ho**

**INSPIRED BY LIGHT**

The MultiPulse Ho is a surgical holmium laser dedicated to **endourology** with a max power of **35 W**. The MultiPulse Ho is the go-to device for **endoscopic laser lithotripsy** for the treatment of urinary tract stones and common bile duct stones.

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**UROLOGY - applications**

**Urinary lithotripsy | Urethrotomy**

**Laser Lithotripsy**

The MultiPulse Ho is a perfect lithotripter optimized for pulverization and fragmentation of ureteral, bladder and kidney stones. Effective for the treatment of various types and chemical stones composition, it represents the optimal solution, even for those particularly difficult to reach. Moreover, its **higher power of 35 W** allows to manage large calculi with **efficient and faster** surgeries.

The **pulsed laser emission**, with a **2,100 nm wavelength** highly absorbed by water, producing a cavitation bubble which will implode generating a shock wave resulting in the pulverization or fragmentation of the stone without invasive surgical procedures.

**Lithotripsy** with the MultiPulse Ho is an excellent alternative to the traditional ESWL (Extracorporeal Shockwave Lithotripsy), as it involves less risk of complications and a higher degree of efficiency and safety, regardless of the stone type to be treated. Compared to other surgical procedures, it features the undeniable advantage of minimizing bleeding during surgery.

The wide range of multiple combinations of frequency and energy enables the urologist to choose the right setting for any treatment. High energy and low frequency are used for fast and rough fragmentation while low energy and high frequency settings allows stones dusting in so small particles that can be expelled with minimal discomfort to the patient.
Advantages for the surgeon

- Specific for ureteral and kidney stones fragmentation/pulverization
- Effective for various types of stones
- High success rate
- Low percentage of complications
- High peak power and wide power range
- Short learning curve
- Easy to install and operate

Advantages for the patient

- Minimally invasive surgery
- Immediate relief from symptoms and short recovery time
- Minimal side effects

Clinical Cases

Retrograde intrarenal surgery for staghorn calculus occurring in the renal pelvis, with branches extending into the medium and inferior calyces. RIRS was performed with flexible ureterorenoscopy and using MultiPulse Ho laser with 200 µm fiber.

[Courtesy of Prof. M. S. Minervini, M.D. - Head of Urological Division - Hospital of Sondrio, Italy]

Bladder stone treatment (pulverization and fragmentation) with MultiPulse Ho.

[Courtesy of S. Piesche, MD - Clinic of Urology and Urological Oncology, Sana Klinikum Hof – Germany]

Urethral Strictures

Treatment of urethral stricture, resulting from spongiosis due to different causes such as inflammation or trauma, can now be quickly and effectively treated with holmium laser urethrotomy using the MultiPulse Ho. This minimally invasive and safe procedure is suitable for short urethral strictures as well as for more significant strictures or for the treatment of urethral atresia. The laser ablates damaged tissue with a clean cut, free of bleeding and without penetrating too deeply. This reduces the risk of lateral thermal damage, complications, recurrences or the formation of post-surgery fibrosis, resulting in complete restoration of normal urinary flow.
Find out how surgical applications are faster, more performing and safer with our laser devices.

### Applications

**UROLOGY**
Urinary lithotripsy | Urethrotomy

**GENERAL SURGERY**
Common bile duct stones

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**MultiPulse Ho**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laser Source</td>
<td>Ho:YAG</td>
</tr>
<tr>
<td>Wavelength</td>
<td>2,100 nm</td>
</tr>
<tr>
<td>Emission Mode</td>
<td>Pulsed Wave (pw)</td>
</tr>
<tr>
<td>Power</td>
<td>up to 35 W</td>
</tr>
<tr>
<td>Energy/Pulse</td>
<td>0.2 - 8.0 J</td>
</tr>
<tr>
<td>Repetition Rate</td>
<td>3 - 30 Hz</td>
</tr>
<tr>
<td>Pulse Duration</td>
<td>95 - 1900 μs</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>10° - 30 °C</td>
</tr>
<tr>
<td>Rel. Humidity</td>
<td>30 % - 75 % (no condensation)</td>
</tr>
<tr>
<td>Cooling</td>
<td>Internal water cooling</td>
</tr>
<tr>
<td>Beam Delivery</td>
<td>Wide Range of Flexible Optical Fiber</td>
</tr>
<tr>
<td>Aiming Beam</td>
<td>Laser Diode @ 532 nm ~&lt;5 mW, adjustable</td>
</tr>
<tr>
<td>Control Panel</td>
<td>7&quot; LCD TFT touchscreen display</td>
</tr>
<tr>
<td>Accessories</td>
<td>Fiber handpieces and diverse cannulas</td>
</tr>
<tr>
<td></td>
<td>Bare fibers (reusable and single use)</td>
</tr>
<tr>
<td></td>
<td>available in following diameters: 200, 272, 365, 400, 550, 600, 800, 1000 μm</td>
</tr>
<tr>
<td>Electrical Requirements</td>
<td>115 VAC, 50/60 Hz, 16 A</td>
</tr>
<tr>
<td></td>
<td>230 VAC, 50 Hz, 10 A</td>
</tr>
<tr>
<td>Dimensions and Weight</td>
<td>50 (W) x 40 (D) x 54 (H) cm - 53 kg</td>
</tr>
</tbody>
</table>

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JenaSurgical is the brand of the surgical business unit of Asclepion Laser Technologies.

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