Dornier Medilas H Solvo and UroPulse
Leading Holmium Lasers in Endourology
ERGONOMIC
USER-FRIENDLY
EFFICIENT
POWERFUL
SAFE
Leading holmium lasers in endourology
for effective stone management and soft tissue applications

With the incidence of urolithiasis increasing around the globe, urinary stone therapy represents an essential mainstay in the daily routine of the urologist. Since the 1980s, Dornier MedTech has been a specialist in stone management and offers innovative products covering a broad range of indications, from ESWL to minimally invasive surgical techniques.

The use of holmium lasers is considered the most elegant procedure in minimally invasive stone removal.

Dornier MedTech was the first company to develop a therapy system for urinary stones and offers decades of experience in holmium laser technology. This new generation of Dornier holmium lasers combines utmost quality with innovative, user-friendly features designed to streamline the routines in the urological operating room.

Dornier Medilas H Solvo and UroPulse are ideal for the destruction of urinary stones of any chemical composition and offer versatility for minor urological soft tissue procedures. The compact and spacesaving designs make both models ideal assets for the operating room.

Thanks to its four large and smooth-rolling wheels, the Medilas H Solvo can be moved easily between operating rooms. With 30 watts output at the fiber tip, it is extremely efficient at destroying even large stones. Medilas H UroPulse is one of the smallest systems in its product class. It can be mounted on device trolleys or integrated into endoscopy towers and ceiling supply units. Operation is extremely user-friendly. After selecting the desired treatment method, the device offers appropriate treatment parameters.
ERGONOMIC & USER-FRIENDLY
### Convenient operation
thanks to ergonomic and user-friendly design

<table>
<thead>
<tr>
<th>Easy to use and straightforward control</th>
<th>Hands-free control from the sterile field</th>
<th>Outstanding operating ergonomics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well-designed and ergonomic display</td>
<td>Foot switch with three buttons enables direct control of all relevant functions, including treatment parameters, by the surgeon</td>
<td>Display of treatment parameters on the endoscopy monitor</td>
</tr>
<tr>
<td>Excellent readability</td>
<td>Rapid adjustment of treatment parameters shortens treatment time</td>
<td>Flexible placement of the foot switch</td>
</tr>
<tr>
<td>Large touch screen with clear display of the selected treatment parameters</td>
<td>Operating room staff can focus on their main duties</td>
<td>Very quiet operation</td>
</tr>
<tr>
<td>One touch individually programmable pre-set buttons for saving personal settings</td>
<td></td>
<td>Optional: Wireless foot switch</td>
</tr>
<tr>
<td>Direct selection of all relevant setting options, with no tedious scrolling required</td>
<td></td>
<td>Positioning of the foot switch not limited by cable length</td>
</tr>
</tbody>
</table>

“Dornier holmium lasers fit perfectly into the urological operating room. Their operation is very ergonomic. As the laser display can be viewed on the endoscopy monitor and a wireless foot switch is available, the device itself does not need to be within the view and working area of the surgeon.”

Ass. Prof. Dr. H.-M. Fritsche, University of Regensburg, Germany
Efficient and gentle treatment
with the support of specially developed application modes

Easy and quick setting of the required parameters
through selection of the relevant treatment method

- Six different application modes, developed in collaboration with surgeons, meet all treatment requirements
- Automatic adjustment of all parameters, including the pulse length and characteristic for the set application
- Maximum treatment efficiency for all types of stone destruction and soft tissue applications

1. **Standard Mode**
Basic mode, including all energy and frequency settings and possible combinations available on the laser. That is why it is suitable not only for the disintegration of urinary stones, but also for minor procedures on soft tissue.

2. **Single Pulse Mode**
Transmission of single pulses with preset energy offers precise and controlled energy transmission to the stone. This makes it easier for the surgeon to ensure that the laser pulse is only delivered to the desired area. That is why this mode is particularly well-suited for small stones in high risk areas.

3. **Dusting Mode**
Pre-selection of stone disintegration in smallest possible fragments. Through maximum frequency of the selected energy, urinary stones are completely destroyed very quickly, yet gentle to the surrounding tissue. The residual stone dust or sand is small enough to pass naturally. The recovery of fragments is no longer necessary.

**Pulse shape**: Standard / Dusting / Single Pulse Mode

---

Pulse shape diagram:

- P: Power
- t: Time

---

1. Image 1
2. Image 2
3. Image 3
**Fragmenting Mode**
Special laser pulse with energy and duration optimized for stone fragmenting which, unlike dusting, leaves no dust residue in the urinary tract after the procedure. Following the laser disintegration, the stone fragments can be completely removed using recovery instruments. Aided by endoscopic visual control, the surgeon can more easily verify that the patient is free of stone fragments after the procedure.

**Advanced Mode**
Unique pulse characteristic for minimizing stone movements during treatment. The emitted energy builds up and dissipates slowly, thus reducing stone movement. This enables a controlled, more rapid procedure, thanks to fewer readjustments of the endoscope or laser fiber, and less use of instruments for fixation of the stone in the working channel.

**Soft Tissue Mode**
Laser pulse specially developed for soft tissue applications. The pulse duration, energy and frequency are optimized for cutting and coagulating. This mode complements the application options of the holmium laser, thus simplifying the surgeon's laser settings for all indications.

"The six new application modes make treatments significantly more efficient for me. Once you select the treatment mode, the Dornier Medilas H Solvo recommends the appropriate parameters for beginning the treatment. What's more, the energy transmission is optimized for the particular treatment to ensure time-saving disintegration, dusting or cutting."

Dr. F. Strittmatter, LMU Munich, Germany
High-performance technology and superior quality standards distinguish Dornier Medilas H Solvo and UroPulse as first-class lasers.
Effective and gentle procedures

- Up to 30 watts of maximum power for more efficient procedures
- Fine stone pulverization through low pulse energy of 200mJ
- A low minimum frequency of 3 Hz helps eliminate stone movement
- Application modes for efficient and safe treatment
- High quality light guides from Dornier provide excellent energy transmission

Quick and easy preparation

- Compact, lightweight design, dual handles and large, smooth-rolling wheels facilitate preparation and clean-up in the operating room
- Maximum flexibility and freedom of movement, thanks to a wireless foot switch.
- No warm-up time, fully operational when turned on

Occupational safety and convenience

- No tripping hazards with wireless control
- The surgeon controls the laser status: standby or ready
- Intelligent light guide recognition system prevents damage of output-restricted light guides
- State-of-the-art light guide technology protects the laser optics and provides for lower maintenance overhead – no need to replace safety mechanisms
- Surgeon-friendly green aiming beam for strong contrast and recognition
- Well-designed accessories such as a special perforated tray for light guides and autoclavable strippers facilitate routines for reprocessing and sterile use of the light guides
- Integrated storage compartment offers quick access to laser accessories
- Hygienic friendly design thanks to easy cleaning and use of corrosion-proof materials on the foot switch
Dornier **Medilas H Solvo** and **UroPulse** offer the ideal solution for your requirements

**Features of both lasers at a glance**

- Compact, lightweight designs
- User-friendly control panels
- Foot switch with three function keys (wireless model available)
- DVI interface for transmitting screen information to an external monitor
- Six different application modes
- Intelligent light guide recognition system
- High quality holmium light guides from Dornier
- Integrated laser optics protection
- Up to five individual treatment pre-sets can be stored
**Laser specifications**

<table>
<thead>
<tr>
<th></th>
<th><strong>Medilas H Solvo</strong></th>
<th><strong>Medilas H UroPulse</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Laser model</strong></td>
<td>Holmium (Ho:YAG), pulsed solid-state laser</td>
<td></td>
</tr>
<tr>
<td><strong>Wavelength</strong></td>
<td>2080 nm (commonly referred to as 2.1 μm)</td>
<td></td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
<td>115/208 – 240 VAC, single-phase, 50/60 Hz</td>
<td></td>
</tr>
<tr>
<td><strong>Energy consumption</strong></td>
<td>2.0 kVA max. @ 115 VAC, 2.8 kVA max. @ 208-240 VAC</td>
<td>2.0 kVA max.</td>
</tr>
<tr>
<td><strong>Output (max.)</strong></td>
<td>30 W @ 3000 mJ/10 Hz (208 - 240 VAC) 20 W @ 2500 mJ/8 Hz (115 VAC)</td>
<td>20 W @ 2500 mJ/8 Hz (2000 mJ/10 Hz)</td>
</tr>
<tr>
<td><strong>Pulse frequency</strong></td>
<td>3 – 20 Hz</td>
<td></td>
</tr>
<tr>
<td><strong>Pulse energy</strong></td>
<td>200 – 3500 mJ</td>
<td>200 – 2500 mJ</td>
</tr>
<tr>
<td><strong>Pulse duration</strong></td>
<td>150 – 500 μsec</td>
<td></td>
</tr>
<tr>
<td><strong>Aiming beam</strong></td>
<td>Green, 532 nm, 0–390 μW adjustable to 5 levels, continuous wave or interval setting</td>
<td></td>
</tr>
</tbody>
</table>

**Device specifications**

<table>
<thead>
<tr>
<th></th>
<th><strong>Medilas H Solvo</strong></th>
<th><strong>Medilas H UroPulse</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Weight</strong></td>
<td>62 kg (137 lbs.)</td>
<td>35 kg (77 lbs.)</td>
</tr>
<tr>
<td><strong>Dimensions WHD</strong></td>
<td>31 cm x 109 cm x 53 cm (12.20” x 42.91” x 20.87”)</td>
<td>45 cm x 36 cm x 50 cm (17.72” x 14.17”x 19.68”)</td>
</tr>
<tr>
<td><strong>Cooling system</strong></td>
<td>Internal closed-loop water-air cooling system</td>
<td></td>
</tr>
<tr>
<td><strong>Foot switch</strong></td>
<td>wired (wireless model available)</td>
<td></td>
</tr>
</tbody>
</table>

**Light Guides**

- Beam transmission: Wide selection of Dornier light guides with SMA connectors

**Standards and licenses**

<table>
<thead>
<tr>
<th></th>
<th><strong>Medilas H Solvo</strong></th>
<th><strong>Medilas H UroPulse</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Laser class</strong></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td><strong>Medical Device Class</strong></td>
<td>IIb</td>
<td></td>
</tr>
<tr>
<td><strong>Standards</strong></td>
<td>IEC 60601, IEC 60825, UL (ANSI/AAMI ES 60601-1 and CAN/CSA-C22.2 No. 60601-1)</td>
<td></td>
</tr>
<tr>
<td><strong>Cleared</strong></td>
<td>CE Mark (European Medical Device Directive 93/42/EEG), FDA (USA)</td>
<td></td>
</tr>
</tbody>
</table>

"I really enjoy working with the Medilas H Solvo! It’s extremely efficient. The stones break up so quickly, it’s a real joy. It’s easy to operate, and I can constantly monitor all the parameters. I also have total control of the laser during a procedure, using the 3-pedal foot switch."

Dr. F. De Marco, Gruppo INI, Grottaferrata, Italy
Distributor of Dornier MedTech

"Concern - Energomash" CJSC
Azatutyun avenue 26/8, Yerevan 0014, Armenia
Tel.: 20 97 77, 20 97 75, 20 97 74
E-mail: info@c-e.am
www.analytica.am, www.c-e.am