

# MULTIPULSE HO

INSPIRED BY LIGHT



**JENA SURGICAL**  
LASER AT YOUR SIDE

# FAST AND SAFE WORKSTATION

## MULTIPULSE HO - THE GOLD STANDARD FOR LITHOTRIPSY

The **MultiPulse Ho** is a surgical holmium laser for endourology with a maximum power of 35 watts – known as the Gold Standard tool for endosurgical laser lithotripsy for the treatment of ureter stones and common bile duct stones.

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

### 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

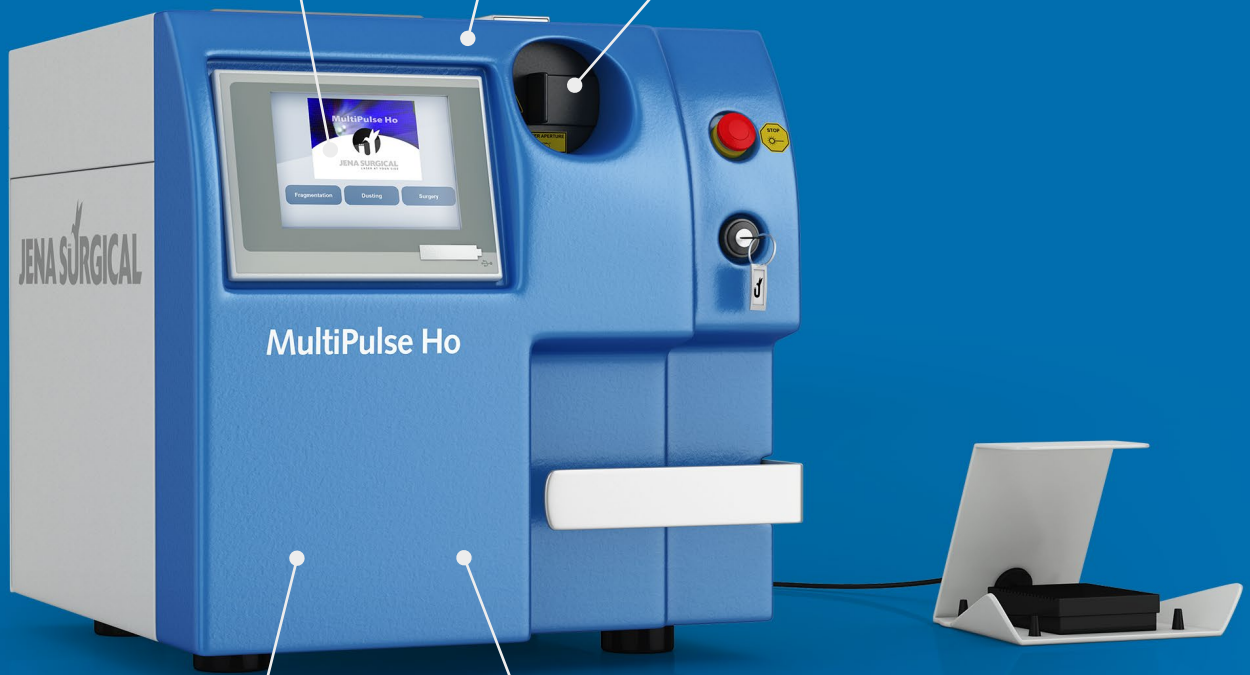


# MULTIPULSE HO

**SHORT LEARNING CURVE**  
intuitive user interface

**VERSATILITY**  
multiple combinations  
of frequency and energy

**ADJUSTABLE PULSE DURATION**  
between 95 - 1900  $\mu$ s



**HIGH PEAK POWER**

**SPECIALISED TOOL FOR  
LITHOTRIPSY**  
known as the  
Gold Standard

# APPLICATIONS AND CLINICAL CASES

The **MultiPulse Ho** laser device is intended for use in open, laparoscopic and endoscopic surgical procedures for incision, excision, resection, ablation, vaporization, coagulation and hemostasis of soft and hard tissue in use in the following medical specialties:

## UROLOGY

The **MultiPulse Ho** is a surgical holmium laser for endourology with a maximum power of 35 watts – known as the Gold Standard tool for endosurgical laser lithotripsy for the treatment of ureter stones, bladder and kidney stones.

## GASTROENTEROLOGY

The **MultiPulse Ho** is indicated for open and endoscopic gastroenterology surgery (incision, excision, resection, ablation, vaporization, coagulation and hemostasis) including but not limited to gall bladder calculi, biliary/bile duct calculi, benign and malignant neoplasm, polyps, colitis as a few examples.





## ENT

The **MultiPulse Ho** is indicated for endoscopic vaporization, ablation, incision, and coagulation of soft tissue and cartilage during endonasal/sinus surgery procedures, including the following applications like reduction of turbinates (mucosa, bone), shrinkage of nasal polyps, shrinkage of benign tumors of the larynx, dacryocystorhinostomy (DCR) or functional endoscopic sinus surgery (FESS).



## GENERAL SURGERY

The **MultiPulse Ho** is indicated for open, laparoscopic, and endoscopic general surgery (vaporization, ablation, incision, and coagulation of soft and hard tissue) including but not limited to excision of external tumours and lesions, complete or partial resection of internal organs, tumours and lesions, but also cholecystectomy, lysis of adhesions, appendectomy, skin incision or tissue dissection.



## ARTHROSCOPY

The **MultiPulse Ho** is indicated for arthroscopy/orthopedic surgery (excision, ablation and coagulation of soft, hard and cartilaginous tissue) in small and large joints of the body, excluding the spine but including the following examples: meniscectomy, plica removal, ligament and tendon release or contouring and sculpting of articular surfaces.

# UROLOGY

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## UROLOGY APPLICATIONS

The following applications are indicated for urology while using the Ho:YAG wavelength in open and endoscopic surgery (incision, excision, resection, ablation, vaporization, coagulation and haemostasis) including:

- Ureteral Strictures
- Bladder Neck Incisions (BNI)
- Transurethral incision of the prostate (TUIP)
- Ablation of Benign Prostatic Hypertrophy (BPH)
- Ablation and resection of Bladder Tumours, Ureteral Tumours and Kidney Tumours
- Condylomas
- Lesions of external genitalia

## URINARY LITHOTRIPSY | URETHROTOMY | LASER LITHOTRIPSY

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.

## HOLMIUM LASER LITHOTRIPSY VS. ESWL

	ESWL	HOLMIUM
Number of treatments	2,5	1
Single treatment success	20 – 60 %	90 – 100 %
Result	Smaller stones	Stone free
Mechanism	Shatter	Vaporize
Potential 'seeds'	Yes	No



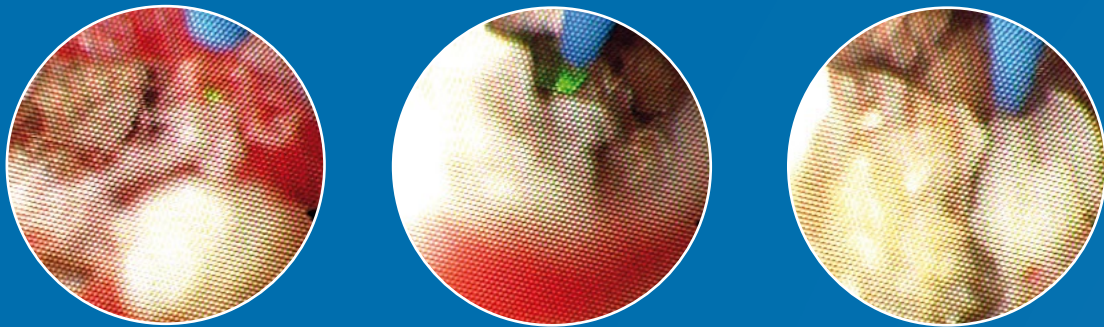
# MultiPulse Ho

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# UROLOGY

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## LASER LITHOTRIPSY CLINICAL CASES

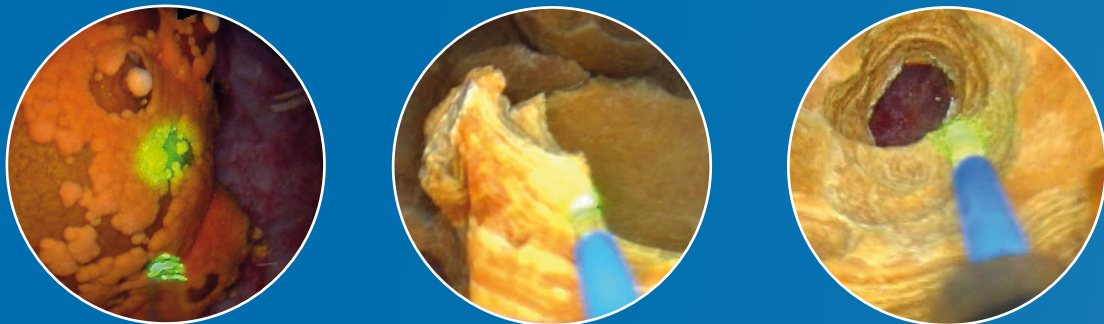


[Courtesy of Prof. M. S. Minervini, MD - Head of Urological Division - Hospital of Sondrio, Italy]

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  $\mu$ m fiber.

## BLADDER STONE TREATMENT

(pulverization and fragmentation) with the MultiPulse Ho.

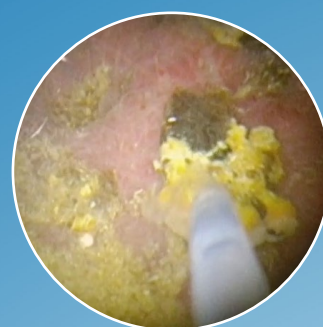
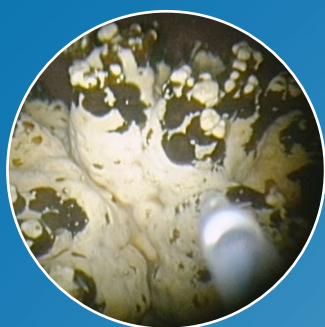


[Courtesy of S. Piesche, MD - Clinic of Urology and Urological Oncology, Sana Klinikum Hof – Germany]



## DIFFERENT STEPS OF REMOVING BLADDER STONES

performed by using the MultiPulse Ho laser system.



[Courtesy of Dr. med. MD Martin Kanne – Königin Elisabeth Herzberge Krankenhaus – Germany]

## LITHOTRIPSY BENEFITS WITH THE MULTIPULSE HO

- More effective in removing embedded stones
- Works well on all stone compositions - unlike EHL, ultrasound or lithoclast
- Small fibers used with either flexible or rigid scopes
- Minimal stone movement
- Virtually no bleeding

MultiPulse Ho

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# UROLOGY

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## URETHRAL STRICTURES

Treatment of urethral stricture, resulting from spongiofibrosis 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.

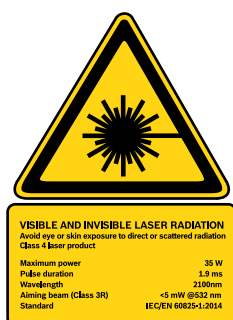
## URETHROTOMY BENEFITS

- Minimally invasive and safe procedure suitable for short urethral strictures and for more significant strictures or for the treatment of urethral atresia
- Resulting in complete restoration of normal urinary flow
- Reduces the risk of lateral thermal damage, complications, recurrences or the formation of post-surgery fibrosis
- Ablation of damaged tissue with a clean cut and without penetrating too deeply
- Virtually no bleeding procedure

# TECHNICAL SPECIFICATIONS

MultiPulse Ho	
Laser Source	Ho:YAG
Wavelength	2,100 nm
Emission Mode	Pulsed Wave (pw)
Power	up to 35 W
Pulse Energy	0.2 - 8 J*
Repetition Rate	3 - 30 Hz
Pulse Duration	95 - 1900 $\mu$ s
Cooling	Internal water cooling
Control Panel	7" LCD TFT touchscreen
Device Accessories	Fiber handpieces and diverse cannulas Bare fibers (reusable and single use) available in following diameters: 200, 272, 365, 400, 550, 600, 800, 1000 $\mu$ m
Electrical Requirements	115 VAC, 50/60 Hz, 16 A 230 VAC, 50 Hz, 10 A
Dimensions and Weight	50 (W) x 40 (D) x 54 (H) cm - 53 kg

\* MultiPulse Ho for the USA is limited to 6 J.



**JENA SURGICAL**  
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JenaSurgical is the brand of the surgical  
business unit of Asclepion Laser Technologies.  
Specifications are subject to change without notice.



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FOLLOW US

Asclepion Laser Technologies GmbH  
Brüsseler Str. 10  
07747 Jena | Germany

[www.jenasurgical.com](http://www.jenasurgical.com)