MULTIPULSE HOPLUS

WHEN POWERFUL VERSATILITY MEETS UNMATCHED PRECISION

JENA SURGICAL

LASER AT YOUR SIDE

POWER IN YOUR HANDS

MULTIPULSE HOPLUS

The **MultiPulse HoPLUS** is a high power holmium laser device characterized by great flexibility and efficiency. Ideal for both, surgical treatment of benign prostatic hyperplasia (BPH) and endoscopic treatments for lithotripsy it is highly recommended for long-lasting procedures requiring high power thanks to its laser source reaching 150 W.

The **MultiPulse HoPLUS** guarantees superior surgical performance thanks to high levels of energy and pulse repetition rate, guaranteeing reduced operating time and at the same time, effective and delicate cutting procedures with an excellent hemostatic effect.

ADVANTAGES FOR THE SURGEON

- High power laser
- High pulse repetition rate
- Fast vaporization and cutting with excellent hemostasis
- Ability to immediately remove the enucleated tissue with the integrated morcellator available as an optional accessory
- High versatility in endourology
- Dual pedals to select the required mode without changing the laser fiber and without looking away from the operating field, e.g. for cutting and coagulation
- Easy to install and operate

ADVANTAGES FOR THE PATIENT

- Minimally invasive surgery
- Low probability of bleeding: recommended also for patients treated with anticoagulants
- Low rate of side effects
- Shorter catheter application time in the post-operative phase
- Shorter hospital stay and recovery time
- Low rate of recurrences
- Immediate relief of symptoms

MULTIPULSE HOPLUS

ASPIRATION PUMP
for integrated morcellator (optional)

PORT
for the blast shield holder

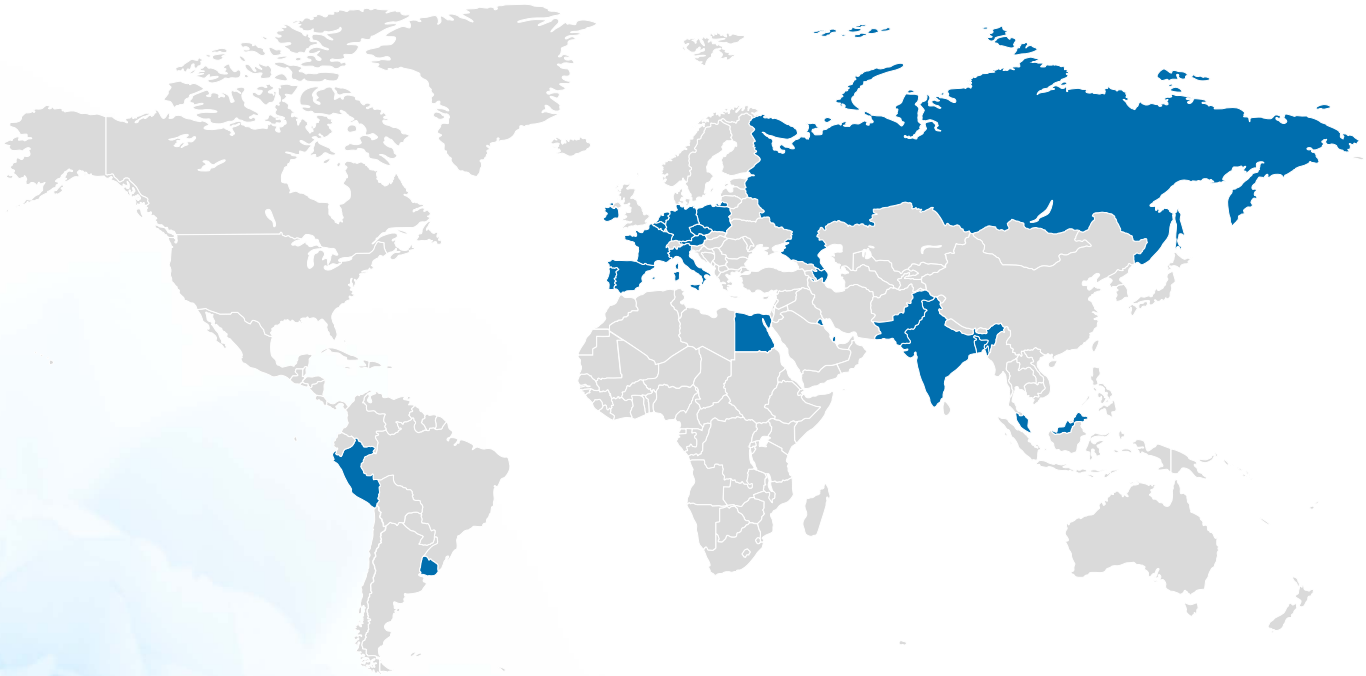
IMPROVED COOLING
for low noise Holmium laser

RFID
recognition system

2 KW
less power consumption

FACILITATED MAINTENANCE
due to sliding covers

MULTIPULSE HOPLUS WORLDWIDE



OUR SERVICE REGIONS

Asclepion creates the latest generation workstations used in urology, gynecology, oncology and otolaryngology for surgical teams all around the world.

For our portfolio of high quality "Made in Germany" laser devices, Asclepion ensures high availability worldwide as well as high performance service care through our global distributor network.

VERSATILITY

PREMIUM

150 W / 100 HZ
no upgrade
230V ~50/60Hz; 32A
integrated Morcellator
optional

MULTIPULSE HOPLUS

UPGRADES

POWERKIT^{50}
additonal 50W of power for the
high power Holmium laser
with 100W and 100Hz
easy and fast to upgrade

POWERKIT^{20}
additional 20W of power for the
high power Holmium laser
with 80W and 75Hz
easy and fast to upgrade

100 W / 100 HZ
upgradable to
150W/100Hz
230V ~50/60Hz; 32A
integrated Morcellator
optional

BASIC

100 W / 75 HZ
no upgrade
230V ~50/60Hz, 32A
no integrated
Morcellator

80 W / 75 HZ
upgradable to
100W/75Hz
230V ~50/60Hz, 32A
no integrated Morcellator

THE MULTICUT

MULTICUT

The MultiPulse HoPLUS laser system contains an **integrated morcellation module***, which allows the morcellation of enucleated adenoma within the bladder to be performed very quickly. Thanks to the peristaltic pump, the aspiration is highly efficient and additionally ensures a maximum of safety and protection against unintended bladder wall injuries.

* for the 100 Hz system

ADVANTAGES

- Ergonomic design, independent right or left handed use
- Light and easy to clean handpiece
- No consumables except for blades
- Excellent blade design, two different sizes
- New and facilitated coupling – *Plug and Cut*
- Optimized cutting teeth geometry guarantees enough tissue for a histopathological examination
- Suction of the peristaltic pump is highly efficient and additionally ensures a maximum of safety and protection against unintended bladder wall injuries
- Possibility to always perform the histopathological examination of enucleated tissue samples
- Unique combination of laser and morcellation system in one device (optional)

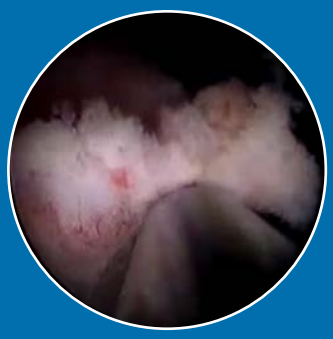
INTEGRATED MORCELLATION MODULE

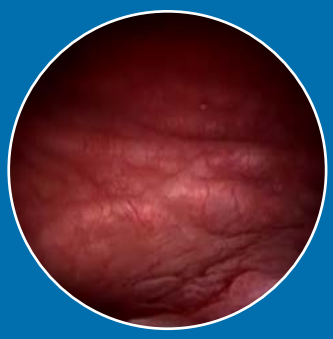
LIGHT & EASY
ergonomic design

Accessories | Tube set, morcellation handpiece with blades
Dimensions | 15 Fr x 350 or 400 mm (diameter x free length)
Aspiration pump flow rate | Adjustable
Oscillation frequency | 0 or 2 – 5 Hz
Rotation speed | 500 – 3000 rpm

NEW
Coupling system

CLINICAL CASES





MORCELLATION, 250 CC ADENOMA, APPROX. 6 MINUTES
[Courtesy of Dr. Edmundo Guarnizo Olivera - Clinica Monterrico - Perú]

APPLICATIONS AND CLINICAL CASES

The **MultiPulse HoPLUS** is undoubtedly the most versatile laser system for urology. It offers a wide set of applications ranging from treatment of strictures (urethrotomy) or bladder neck incision (BNI), but also being universally recognized as the gold standard in endoscopic lithotripsy for stone fragmentation and pulverization, regardless of their composition and anatomical location.

UROLOGY (HOLEP, BNI, URETHROTOMY, LITOTRIPSY)

The MultiPulse HoPLUS is best suited for the surgical treatment of benign prostatic hyperplasia and endoscopic lithotripsy. It is recommended for long-lasting use thanks to its power of up to 150 watts.

GYNECOLOGY (TREATMENT OF VVF)

The Holmium (Ho:YAG) laser wavelength is intended for ablation, vaporization, incision, excision, welding and coagulation of soft tissue. Treating VVF (vesicovaginal fistula) can be done with the MultiPulse HoPLUS.

ENT (FRAGMENTATION OF SALIVARY DUCT STONES)

Sialolithiasis can cause blockage of salivary ducts resulting in painful inflammation. Most salivary stones occur in the submandibular gland, followed by the parotid gland and infrequently in the sublingual or minor salivary glands. While smaller stones may pass on their own, larger stones generally require medical or surgical intervention.

Minimally invasive and nonsurgical techniques of treating salivary stones have been evolving rapidly. One of the possible treatments is laser assisted minimal invasive therapy. The Holmium Laser Lithotripsy offers a useful tool to destruct those salivary stones.

GENERAL SURGERY (GASTROENTEROLOGY)

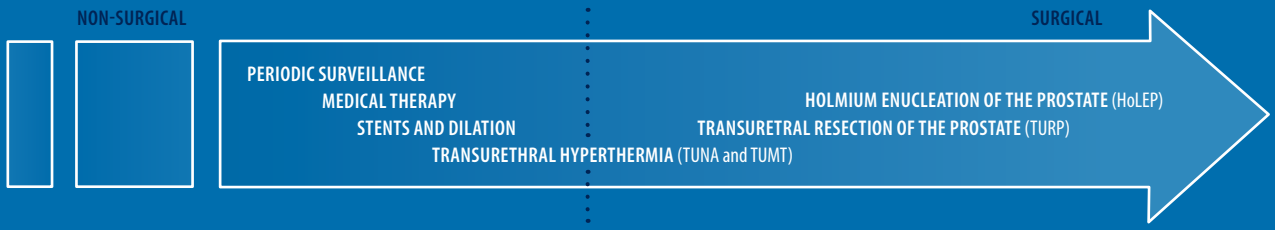
Bile duct stones (Choledocholithiasis) are gallstones that are present in the bile ducts, sometimes within the cystic duct of the gallbladder, but more frequently in the common bile duct. Ho:YAG laser lithotripsy can be done via percutaneous or peroral access to the biliary tree under an appropriate direct visual control. Once the stones are fragmented, the debris is flushed out the access catheter or may pass through the sphincter of Oddi into the duodenum.

UROLOGY

Prostate enucleation (BPH treatment) | Urinary lithotripsy | Urethrotomy

BENIGN PROSTATIC HYPERPLASIA

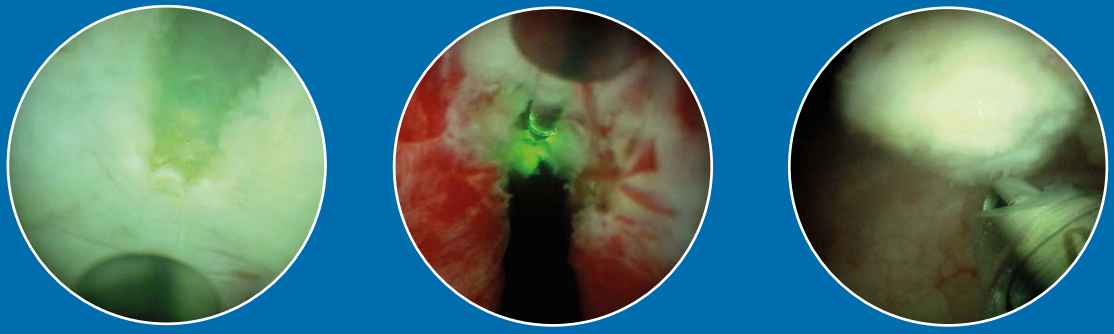
The MultiPulse HoPLUS enables the enucleation of the prostate as a minimally invasive alternative to the traditional techniques of prostatectomy such as transurethral resection (TURP) and open surgery. HoLEP, together with the presence of the integrated mechanical morcellator (optional), makes it possible to reduce operating time and treat prostates of any size.



The MultiPulse HoPLUS does not produce carbonization or necrosis, leaving the surgical field free and clearly visible. The holmium laser emits a light of 2,100 nm wavelength, which is well absorbed in water, resulting in photothermal and photomechanical effects which lead to effective vaporization and good hemostasis within the tissue.

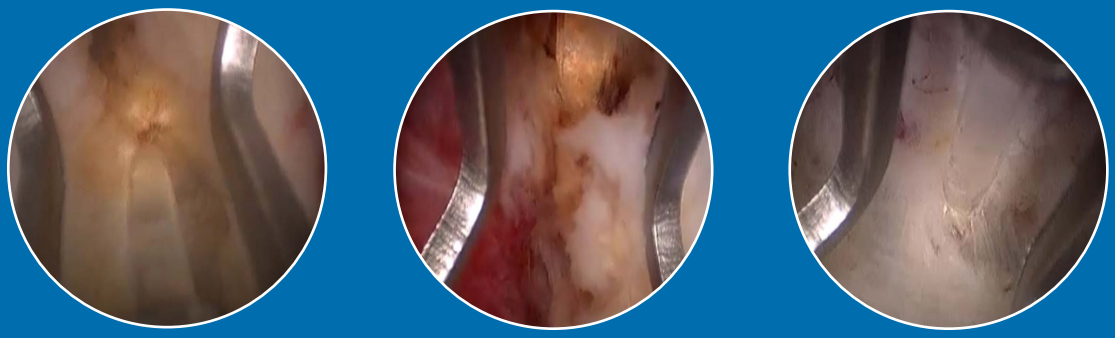
DIFFERENT STEPS OF HOLEP FOR THE TREATMENT OF BENIGN PROSTATIC HYPERPLASIA (BPH), PERFORMED USING THE MULTIPULSE HOPLUS LASER SYSTEM.

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



DIFFERENT STEPS OF HOLEP (BPH TRILOBULAR, BIG VOLUME) PERFORMED USING THE MULTIPULSE HOPLUS LASER SYSTEM.

[Courtesy of Dr. Edmundo Guarnizo Olivera - Clinica Monterrico - Peru]



DIFFERENT STEPS OF HOLEP (BPH, 360 CC) PERFORMED USING THE MULTIPULSE HOPLUS LASER SYSTEM.

[Courtesy of Dr. Edmundo Guarnizo Olivera - Clinica Monterrico - Perú]

ADVANTAGES

- Use of saline not glycine – long operations on large prostates (>200 gm) possible
- No TURP syndrome
- Identical surgical cavity as TURP
- Urodynamic outcomes identical to TURP
- Enough tissue for histology
- No electromagnetic interaction with patient
- Minimal bleeding
- Minimal risk of transfusion
- Shorter catheter time, shorter hospital stays (outpatient/24 hour stay)
- Fewer nursing requirements, lower costs

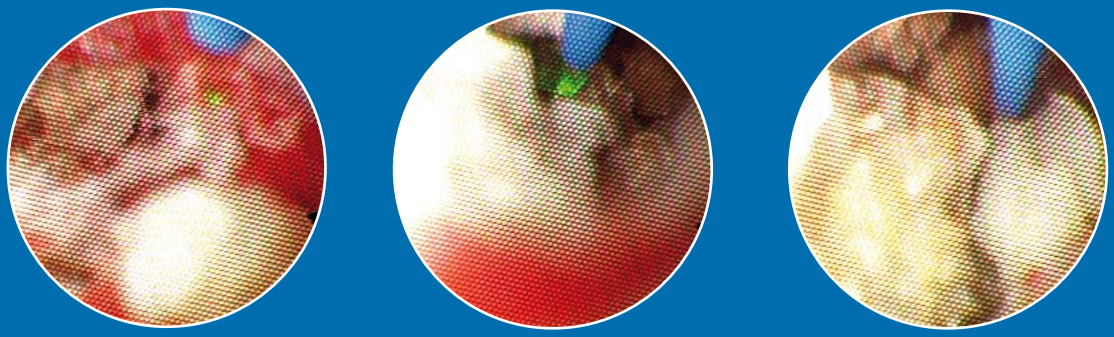
UROLOGY

Prostate enucleation (BPH treatment) | Urinary lithotripsy | Urethrotomy

LITHOTRIPSY

The MultiPulse HoPLUS laser has the capability of fragmenting calculi but can also ablate tissue. The Ho:YAG laser (2,100 nm) is very rapidly absorbed in water and thus has a thermal effect. It produces a very small steam bubble which quickly expands and contracts. The water content of uroliths and other calculi turned out to be high enough for adequate energy absorption; therefore calculi can be destroyed regardless of their color, hardness or composition.

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 HoPLUS 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 the MultiPulse HoPLUS.

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

DIFFERENT STEPS OF REMOVING BLADDER STONES performed by using the MultiPulse HoPLUS laser system.

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

LITHOTRIPSY BENEFITS WITH THE MULTIPULSE HOPLUS

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

UROLOGY

UROTHROTOMY - TREATMENT OF URETHRAL STRICTURES

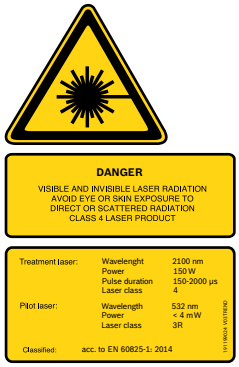
Urethrotomy is an operation for men who have a decreased urinary stream and problems passing urine because of a bladder neck stenosis or a urethral stricture. The aim of the urethrotomy is to cut through these bands of tissue to resolve the narrowing and allow for an improved urinary stream and relief of symptoms. The narrowing caused by a urethral stricture can cause bladder obstruction that leads to incomplete bladder emptying.

ADVANTAGES

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

TECHNICAL SPECIFICATIONS

MultiPulse HoPLUS	
Laser Source	Ho:YAG
Wavelength	2,100 nm
Emission Mode	Pulsed Wave (pw)
Power	up to 150 W (depending on the configuration)
Pulse Energy	0.25 - 6 J
Repetition Rate	Up to 100 Hz
Pulse Duration	150 - 1,700 µs
Cooling	Internal water cooling
Control Panel	10.1" LCD display 16:9
Integrated Morcellation Module (Optional)	Integrated auxiliary morcellator Ergonomic handpiece Exchangeable blades
Device Accessories	Fiber Handpieces and Cannulas Bare fibers (reusable and single use) availabe in following diameters: 200, 272, 365, 400, 550, 600, 800, 1000 µm
Dimensions and Weight	116 (H) x 105 (D) x 46 (W) cm - 285 kg



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