Boston Scientific

Advancing science for life™

Lumenis Pulse™ 120H and 60H Holmium Laser Systems with MOSES™ Technology

Innovative urology laser platforms revolutionising urology care

MOSES™ Technology

Efficiency and control at your fingertips

The MOSES Technology advances the next generation of Lithotripsy and BPH treatments by leveraging versatility, speed and power[#1,2]

- Increased Efficiency[*, #,3,4]
- Optimal Energy Delivery[3,5,15]
- Comprehensive Versatility for Urological Procedures
- Demonstrated Economic Value[6,7,#]

The initial laser pulse separates the fluid by creating a vapour bubble ahead of the fiber tip[8]

The second laser pulse is then emitted through the vapour bubble, delivering an optimised laser pulse to the target[8]

Only applicable to Lumenis Pulse 120H
* Compared to standard holmium.

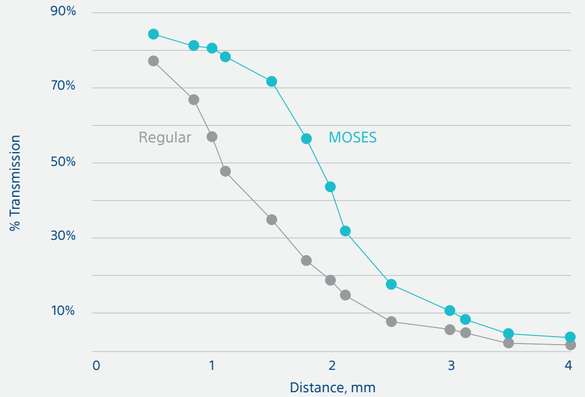
MOSES™ Technology optimised for Lithotripsy

Improving the gold standard for laser lithotripsy[9]

Be it a kidney, ureteral or bladder stone, soft or hard – MOSES Technology provides you with the speed and power you need for both ureteroscopic and percutaneous treatments.[*3,8,10,11,16]

Offering new laser pulse optimisation, MOSES Contact and MOSES Distance modes are uniquely optimised to improve stone ablation, enabling work at a distance from the stone without compromising ablation efficiency.[3,9,16,**]

Efficient energy transmission for each working distance[**,#,12]



Bench test, a representative case[*,12]
BSC recreated graph[12]

* Bench test results may not necessarily be indicative of clinical performance.
** Compared to standard holmium.
# Only applicable to Lumenis Pulse 120H.

Focus on what matters in your percutaneous approach

Standard, Mini and UltraMini PCNL

MOSES 2.0 Technology provides smaller stone particles compared to standard holmium, allowing you to miniaturise your percutaneous access.*,13-15

12 % REDUCTION IN TOTAL OPERATIVE TIME†,**,11

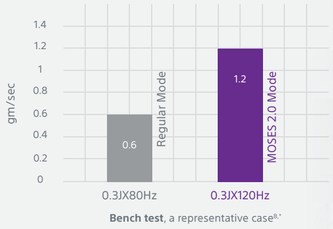
33 % IMPROVEMENT IN EFFICIENCY†,**,11

* Bench test results may not necessarily be indicative of clinical performance.
** MOSES Technology compared to standard holmium laser.
*** Data on file.
† Boston Scientific calculations for improvement in total operative time & treatment efficiency respectively: 85.9 vs 98.1 min, p=0.03 | 2.4 vs 1.8 mm3/s, p=0.03.

MOSES™ 2.0 Technology increased efficiencies

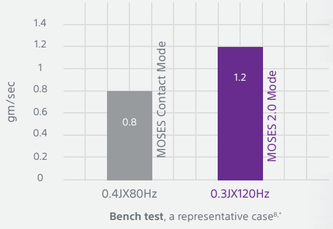
MOSES 2.0 offers the highest frequency for commercial holmium laser in the market*** – up to 120Hz, improving the efficiency of laser lithotripsy and making every shot count.3,9

92% greater stone ablation at same energy



Bench test, a representative case[R,*]

42% greater stone ablation at similar power



Bench test, a representative case[R,*]

Lumenis Pulse™ 120H with MOSES™ Technology

Lithotripsy Performance, Unleashed
Embrace best-in-class combination of the MOSES™ laser and fibers

The Lumenis Pulse™ 120H comes in different configurations, with the Lumenis Pulse™ 120H with MOSES™ 1.0 Technology reaching up to 80Hz , and the Lumenis Pulse™ 120H with MOSES™ 2.0 Technology, offering a special optimisation for extended frequency range of up to 120Hz, the highest frequency available for commercial holmium laser, resulting in up to 92% greater ablation efficiency and smaller stone particles, which can reduce the need for retrieval devices or ureteral access sheaths*,+,[8,28]

20%

FASTER PROCEDURES

As shown in a randomized clinical trial, the MOSES Technology reduces procedure time by 20%, making your treatments faster and more efficient.[3,*]

33%

IMPROVED FRAGMENTATION EFFICIENCY

MOSES Technology high precision and optimized impact on the target stone makes the most of every shot, leading to a greater ablation rate compared to standard pulses.[3]

50%

REDUCED RETROPULSION

The MOSES Technology has taken retropulsion reduction to the next level, decreasing retropulsion levels by 50%.[3,*]

120Hz

COMPREHENSIVE STONE MANAGEMENT

The use of MOSES Technology enables the full spectrum of stone management techniques, both dusting and fragmentation.[8] The extended frequency range of >80Hz is available only with the MOSES 2.0 configuration.

*Compared to standard holmium laser

*Compared to standard holmium laser

+ Bench tests may not be necessarily indicative of clinical performance

Lumenis Pulse™ 60H with MOSES™ Technology

Efficiency and control at your fingertips

The Lumenis Pulse 60H benefits from the patent-protected MOSES pulse optimisation that is designed to optimise energy transmission for improved fragmentation and dusting, while in contact or at a distance, for various stone sizes, shapes, locations, or densities throughout the urinary tract.*[8,16]

The Lumenis Pulse™ 60H with MOSES™ Technology is a comprehensive solution for laser lithotripsy, contributing to a growing renal stone service line, and is also designed for BPH and soft tissue procedures.*[8,16]

37%

FASTER PROCEDURES

The MOSES Technology with Lumenis Pulse™ 60H reduces procedure time by 37%, potentially reducing your OR time.*,**[16]

97%

INITIAL STONE-FREE RATE

MOSES Technology has demonstrated an initial stone-free rate of 97%**[3]

45Hz

COMPREHENSIVE LITHOTRIPSY SOLUTION

Up to 45 Hz with the MOSES Technology, enables physicians to treat various stone densities, locations and compositions[8]

*Compared to standard holmium laser
**Single-site, single-surgeon study

Holmium Laser Fibers

Available in multiple diameters, our single-use and multi-use fibers include the MOSES™, SlimLine™ and Xpeeda™ dedicated families of fibers, designed to offer you a full range of urological procedures.*

SMOOTH PROCESS, MORE CONFIDENCE

Advanced ball-shaped tip enables a smooth initial insertion of the MOSES™ 200 D/F/L fiber through a flexible scope, designed to minimise potential scope damage.**

LEAVE NO STONE BEHIND

MOSES™ and SlimLine 200 D/F/L fibers are designed to minimise scope deflection loss, and enable users to reach difficult-to-access stone locations[8,**]

SECURE IDENTIFICATION SYSTEM (SIS) TECHNOLOGY

Integrated within the fiber, the SIS technology enables compatible system detection of which fiber has been connected and allows the device to adjust emission settings based on the connected fiber diameter.

*LP fibers are compatible with the Lumenis Pulse™ 60H System. Refer to the Holmium Laser Fiber Line for more information on fibers compatibility and specifications.
**Applicable for MOSES™ 200 D/F/L and SlimLine™ 200 D/F/L only

HoLEP with MOSES™ Technology

Shifting paradigms

HoLEP provides excellent and durable clinical outcomes (PVR, Qmax, IPSS and QoL) with a reoperation rate as a result of recurrent obstruction from residual adenoma of only 0.7% at 10-year follow-up.[17]

Moreover, HoLEP demonstrates better outcomes with regards to haemoglobin loss, bladder irrigation, catheterisation time, hospital stay and blood transfusion.*,18,†

The groundbreaking MOSES 2.0 Technology offers an efficient treatment for a wide range of patients including a broad range of prostate sizes and patients treated with anticoagulants.[2,19]

90+%
Same-day Discharge[5]

40%
Faster Haemostasis**,5

15%
Faster Enucleation**,5

Pulse optimisation for BPH is available for both MOSES 1.0 and MOSES 2.0 system configurations

* HoLEP vs. TURP
** Compared to standard holmium
† In patients with small to mid-size prostates.

MOSES™ Technology for HoLEP

Versatility for different prostate sizes, patients, techniques[19-21]

90+% SAME-DAY DISCHARGE*

With more efficient procedures and significantly reduced blood loss# – MOSES Technology for BPH results in over 90% of patients being discharged on the same day[4,5]

90% SAME-DAY CATHETER-FREE SUCCESS RATE*

Same-day catheter removal has been demonstrated with a 90% success rate.[2,†]

DEMONSTRATED ECONOMIC VALUE**

HoLEP with MOSES Technology demonstrated $721 lower cost of fiber and operating room time per case, compared to standard high power HoLEP, due to lower mean operative time.[7]

* In select patients
** Randomised study of 56 patients in the USA. Assumes MOSES fibers at $119 premium to SlimLine™ fibers; cost of operating room time per minute assumed at $37. This may not be representative in all the countries for EMEA region.
# Compared to standard holmium.
† Applicable to MOSES 2.0 only

FASTER PROCEDURES

With 15% faster enucleation and 40% faster haemostasis* – MOSES™ Technology for BPH provides the ability to ablate, which can significantly reduce surgical time and overall operating room time.[5]

FASTER LEARNING CURVE

20 cases

The MOSES Technology allows the ability to learn the HoLEP technique, and build confidence after 20 procedures supervised by an experienced urologist.[22]

With faster haemostasis, MOSES 2.0 Technology for BPH can enable a tapered learning curve by providing better vision clarity and control during the procedure.*[5,23]

*Compared to standard holmium.

"With MOSES the learner can focus on mastering HoLEP without distractions. Minimal fiber burnback and movement, and improved haemostasis decreasing surgery interruptions and allowing for more precise laser control."

Dr. Amy E. Krambeck
Professor of Urology, Northwestern Medical

A Powerful MOSES™ Technology Solution for Vaporisation[24]

HIGHER VAPORISATION RATE AND EFFICACY

Holmium Laser Vaporisation of the Prostate (HoLVP)* with MOSES Technology demonstrates 95%** higher ablation efficiency compared to standard HoLVP.[24,†]

LONG-LASTING RESULTS***

HoLVP demonstrates durable results of 83%. Qmax improvement and 47% decrease in AUA score.[25]

MAINTAIN HAEMOSTASIS

Holmium laser provides precise and quick vaporisation of tissue with the ability to maintain haemostasis without causing deep thermal injury, deep coagulation & charring.[26,27,29,*]

* HoLAP (ablation) was recognised and used interchangeably with HoLVP (vaporisation) in the AUA guidelines through 2011 and the EAU guidelines through 2014.[27,28]
** BSC Calculations: 0.91 ± 0.54 g/min vs 1.77 ± 1.41 g/min, P= 0.01
*** Study of 7 years, compared to baseline, N=34.
† Applicable to Lumenis Pulse 120H only

Technical specifications

Lumenis Pulse™ 120H and 60H Holmium Laser Systems with MOSES™ Technology

	Lumenis Pulse™ 120H with MOSES™ 2.0 Technology	Lumenis Pulse™ 120H with MOSES™ 1.0 Technology	Lumenis Pulse™ 60H with MOSES™ Technology
MOSES™ Technology	Lithotripsy & BPH	Lithotripsy & BPH	Lithotripsy
Maximum Optical Power	120 W	Up to 120 W*	60 W
Wavelength	Holmium (2.1 µm)	Holmium (2.1 µm)	Holmium (2.1 µm)
Repetition Rate	5-120Hz	5 – 80 Hz	5 – 45 Hz
Pulse Energy	0.2-6 J	0.2 – 6 J	0.2 – 6 J
Case Saver Mode	Yes	Yes	No
Dual Pedal Footswitch	Yes	Yes	Yes
Pulse Width	Adjustable (Short, Medium, Long)	Adjustable (Short, Medium, Long)	Adjustable (Short, Medium, Long)
Fibers	Reusable and single-use fibers	Reusable and single-use fibers	Reusable and single-use fibers
Smart Identification System (SIS)	Yes	Yes	Yes
Aiming Beam	Green	Green	Green
Fiber Support Arm	Optional	Optional	No
Voice confirmation indicating system's operational status	Yes	Yes	Yes
Dimensions [W / L / H]	47 x 116 x 105 cm	47 x 116 x 105 cm	46 x 106 x 117 cm
Weight	260 kg	242 kg	176 kg
Electrical	200-240 VAC, <46 Amp, 50/60 Hz	200 – 240 VAC, <46 Amp, 50/60 Hz	200 – 240 VAC, 24 Amp, 50/60 Hz
Warranty	One year parts and labor	One year parts and labor	One year parts and labor

*Maximum optical power may vary based on system configuration.

RISK INFORMATION:

The Lumenis Pulse™ laser systems and delivery devices in urology are contraindicated for patients who are unable to receive endoscopic or laparoscopic treatments or are intolerant to anesthesia, as well as for resection or excision of large, highly vascularized organs. Holmium lasers are intended solely for use by physicians trained in the use of the Ho:YAG (2.1 µm) wavelength. Incorrect treatment settings can cause serious tissue damage. The laser should be used only on tissues that are fully observable. See the system's user manual for a complete list of contraindications and risks.

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The MOSES™ 2.0 Technology is inclusive of all MOSES™ 1.0 settings and features.

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