

Lithotripsy Laser **U100***Plus* 



# **U100***Plus***:** The Lithotripsy Laser

Since its introduction to the market, the FREDDY<sup>®</sup> technology has proven itself as a highly efficient and extremely safe lithotripsy system in the fields of urology and gastroenterology.

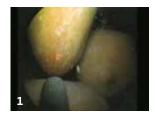
## Universal Application in the Entire Urinary Tract & Bile Duct

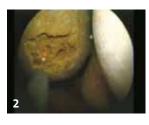
In addition to its standard use in the ureter with semi-rigid instruments, the U100Plus is also well suited for the treatment of kidney stones within the scope of a therapy. Concrements located in the lower renal calyx, for example, are also easily reached and fragmented due to the highly flexible, super thin quartz fiber. Even large bladder stones are treated faster and with that more time- and cost-efficient using the U100Plus.

The extraordinary high performance potential of the U100*Plus* and the possibility to set different energy levels as well as single and dual pulses with frequencies of up to 20 Hz, provides urologists and gastroenterologists with an extremely universal, highly efficient, and with that also very economically to operate lithotripsy system.

The trend towards therapeutic outpatient treatments, evident in all sectors of the health system due to rising costs, is decisively supported and facilitated with the use of the FREDDY<sup>®</sup> lithotriptor.

Urinary calculus: Progress of fragmentation status











### **Technical Data**

Laser wavelengths:	532 nm and 1064 nm, dual pulse
Laser pulse energy:	120 mJ and 160 mJ
Laser pulse duration:	1.2 μs (at 1064 nm)
Laser pulse rate:	1, 3, 5, 10, 15, 20 Hz single and double pulses
Power requirements:	100-240 V~ / 50-60 Hz 610 VA (6 A @ 110 V)
Dimension (W x H x D):	250 x 850 x 600 mm
Weight:	approx. 45 kg/99 lbs.

Technical data subject to modification, revision and improvement without notice

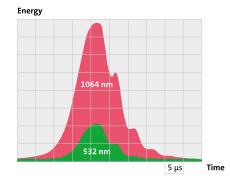
## The FREDDY® Technology — Highest Levels of Efficiency and Safety

The energy of the FREDDY<sup>®</sup> lithotriptor is transferred to the stone via a highly flexible quartz glass fiber and effects fragmentation with shockwaves generated directly on the application site.

The dual laser pulse of the FREDDY® technology contains a primary infrared part ( $\lambda = 1064$  nm) as well as a green part ( $\lambda = 532$  nm), which is optimally absorbed by the stones. Plasma is generated at the absorption site that is amplified by the infrared part. The plasma energy then converts to a shockwave with a mechanical effect, which in turn fragments the stone in a highly efficient manner. Because the surrounding tissue practically does not absorb the emitted green part level, plasma with a subsequent shockwave is not generated here either. This means the non-thermal method of this method neither coagulates nor perforates tissue even in case of accidental direct fiber contact.

This functional principle is the basis for the demonstrably high safety standard of the lithotripsy laser U100*Plus*.

Dual pulse of the U100Plus; pulse energy up to 160 mJ







FREquency-Doubled Dual Pulse Nd:YAG

#### **Device and Accessories**

U100P-L01	Lithotripsy Laser U100Plus
Z0889-01	Laser Fiber SiliconeFlex300R plus reusable Ø 560 μm x 3.5 m, 10 x autoclavable
Z0890-01	Laser Fiber SiliconeFlex300plus disposable Ø 560 μm x 3.5 m, 1 box = 5 pieces
Z0829-01	Ceramic knife
Z0864-01	Silicon pad
Z0824-01	Safety goggles KTP/YAG Type Full View
Z0888-01	Autoclavable Fiber Stripper for 400 - 430 $\mu m$ Laser Fiber
Z0878-01	Fiber holder for U100/U100Plus
Z0879-01	Foot switch for Laser U100/U100 <i>Plus</i> with connection cable (3 m) and plug
Z0823-01	Cover for U100/U100Plus

Further accessories available upon request

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