

# RevoLix<sup>jr</sup>.

YOUR TABLE TOP SURGICAL 2 MICRON LASER

ENT  
Pneumology  
Neurosurgery  
Gynaecology  
Gastroenterology  
Urology  
Visceral Surgery  
Laparoscopy  
Robotic Surgery



COMPETENCE IN SURGICAL LASER SINCE 1989  
LASER TECHNOLOGY - MADE IN GERMANY  
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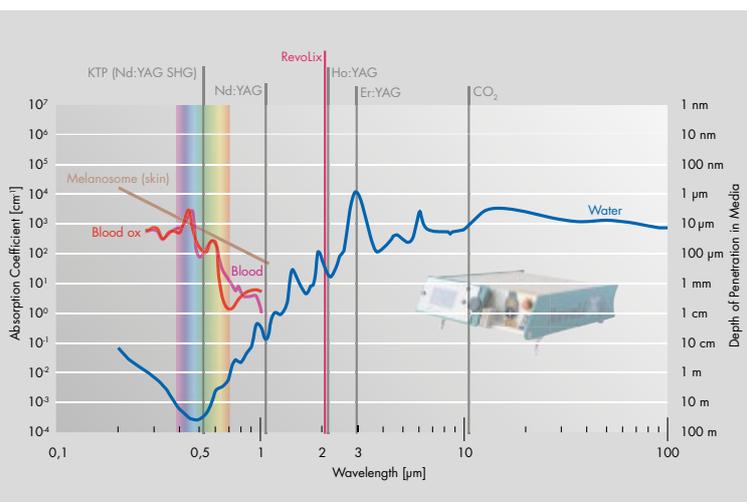
## RevoLix jr. - what is new ?

For the first time a surgical laser is available for soft tissue surgery which unifies all advantageous properties of existing laser principles in a single unit:

- ★ **RevoLix jr.** offers the cutting and ablation properties like the well known CO<sub>2</sub> laser from a flexible fibre - no need for an articulated mirror arm or hollow waveguide.
- ★ **RevoLix jr.** laser radiation achieves excellent haemostasis like Nd:YAG and diode lasers – without the risk of deep tissue penetration.
- ★ **RevoLix jr.** tissue effect is shallow like the Holmium laser – however there is no trauma. Cutting edges are smooth and clean. In open surgery there is no splattering.
- ★ **RevoLix jr.** laser radiation is delivered to the surgical site by flexible fibres – ideal for endoscopic, laparoscopic, minimally invasive and robotic surgery.

## RevoLix jr. - why Two Micron ?

The **RevoLix jr.** wavelength at 2.0 micron is almost identical to the well established Holmium laser. This wavelength is known for its suitability for resection and ablation, safe application in an aqueous medium and it generates excellent haemostasis. These excellent properties are due to the efficient absorption of 2.0 micron laser radiation by water which is ubiquitous in any tis-



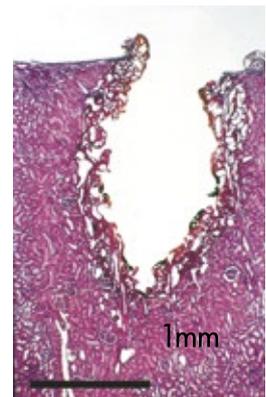
sue. At the **RevoLix jr.** wavelength of 2.0 micron the absorption is 2.5 times stronger than at the Holmium wavelength providing even more precise cutting in soft tissue surgery.

## RevoLix jr. - why Two Micron cw laser ?

In soft tissue surgery efficient and even cutting combined with strong haemostasis is required. This is provided by the **RevoLix jr.** laser in an unmatched manner. The new **RevoLix jr.** laser operates in a continuous wave mode and cuts and vaporizes circulated and white tissue without deep penetration or uncontrolled necrosis. Clean cuts and excellent haemostasis are achieved by moving the beam across the surgical site. Generous Two Micron laser power capacity allows high vaporization and resection rates at no bleeding and short theatre time.

## What are the advantages ?

Cutting efficiency of soft tissue and haemostasis is superior to any known alternative. Tissue effect is restricted to less than 1 millimetre beneath the cut. **RevoLix jr.** preserves excellent vision to the surgical site. There is no vision impairment due to bleeding, excessive bubble formation, tissue fragments or ruptured tissue. Unlike visible lasers (KTP, LBO and some diode wavelengths) the surgical site is free of visible glare. The colour neutral laser safety eyewear does not generate discolouration like KTP. Endoscope lenses remain free from splatter when used in open surgery or in laparoscopy.



## RevoLix jr. - why is it safe ?

In an aqueous medium the laser effect to tissue is restricted to less than 2 millimetres in front of the tip of the fibre. Any tissue further afield is shielded of by the medium. The same mechanism is protecting tissue and organs adjacent to the cut. Any tissue more distant than 2 millimeters beneath the cut is unaffected by the **RevoLix jr.** laser. Opposed to KTP, LBO, Nd:YAG and diode lasers this property eliminates the risk of unintentional tissue damage during laser surgery.

## What are the applications ?

The **RevoLix jr.** laser system has demonstrated its superior performance in surgical disciplines such as ENT, Pneumology, Neurosurgery, Gynaecology, Gastroenterology, Urology, Visceral Surgery, Laparoscopy and Robotic Surgery.



**RevoLix jr. - delivery systems**

LISA offers a wide range of specialised delivery systems. Please refer to the Medical Laser Accessories brochure and to the Medical Laser Fibres brochure for applicators like front firing surgical fibres and applicators.

All fibres match with the surgical instrumentation recommended and approved by LISA laser products.

**How does RevoLix jr. match with your theatre ?**

The new laser is extremely theatre friendly **RevoLix jr.** does not cause noise strain to theatre personnel. The table top laser fits into any video tower. A laser trolley is available on option. Regular theatre utilities are sufficient (standard power outlet 100 - 240 VAC, no cooling water required). The laser has proven its extreme sturdiness during routine transportation between theatres and other departments.

**RevoLix jr. - operation of the laser**

The new laser is easy and safe to operate. The display is easy to understand. Operational modes such as continuous or chopped are selected by push buttons. The power setting is adjusted with a large adjustment wheel. Large characters display the settings on the easy to read display.

**RevoLix jr. robotic assisted laser surgery**

**RevoLix jr.** is the ideal choice for cutting and coagulation in laser assisted robotic surgery.

The special designed laser fibre is extremely flexible.

The full precision and articulation of the robot instruments can be utilized.



**Urology**

- Vaporisation and excision of bladder tumours
- UUT-TCC
- Bladder neck incision
- Opening of strictures
- Partial nephrectomy
- Laparoscopy



**Haemorrhoids**

**Gynaecology**

- Excision of polyps
- Endometriosis
- Hysterectomy
- Adhesiolysis
- Conisation
- Condylomata
- Myomectomy



**Neurosurgery\***

- Fenestration of cysts
- Ventriculocysternostomy
- Catheter recovery
- 3rd ventriculostomy
- Tumour resection
- Haemostasis



**ENT**

- Excision of tumours
- Excision of granulomas
- Tonsillectomy
- Stapedectomy
- UVPP



**Pneumology**

- Bronchoscopy
- Airway recanalization
- Desobstruction
- Tissue coagulation



**General Surgery**

**Robotic Surgery**

- Gynaecology
- Urology
- ENT



## Technical Specifications

### RevoLixXjr.



### RevoLixXjr. 30

<b>Laser system</b>	continuous wave DPSS laser	continuous wave DPSS laser
<b>Wavelength</b>	2013 nm	2013 nm
<b>Power at fibre tip</b>	1 - 15 Watt cw (adjustable)	1 - 30 Watt cw (adjustable)
<b>Chopped mode</b>	50 - 1000 ms	50 - 1000 ms
<b>Frequency</b>	0.5 - 10 Hz	0.5 - 10 Hz
<b>Beam delivery</b>	wide range of fibres	wide range of fibres
<b>Aiming beam</b>	635 nm (red) or 532 nm, (green) max. 1.3 mW (adjustable) regular, 3R	
<b>Mains supply</b>	100 - 240 VAC 50/60 Hz, 6 A max.	100 - 240 VAC 50/60 Hz, 6 A max.
<b>Cooling system</b>	Air cooling	Air cooling
<b>Dimensions</b>	H 160 x W 460 x L 630 mm	H 160 x W 460 x L 630 mm
<b>Weight</b>	20 kg	20 kg
<b>Environmental conditions</b>	15 - 28 °C / 10 - 90 % humidity (non-condensing)	

#### IMPORTANT NOTICE:

The information provided is a general overview of potential clinical applications of the described products.

National health care regulations vary between countries and may exclude certain clinical applications at your location.

The user assumes responsibility to be updated about national deviations from the applications listed above.

\*In the USA the products are not intended for use in clinical applications in neurosurgery.

Safety Standards: IEC 60601 CE acc. Council Directive 93/42/EEC

U.S. federal law restricts this device to sale by or on the order of a physician.

Specifications are subject to change without notice.

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#### Laser Trolley

Optional laser trolley



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**LISA LASER PRODUCTS**  
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