

SphinxXjr.™

Holmium Laser



Applications

- Laser lithotripsy
- PCNL
- Choledocholithiasis
- Strictures
- Incisions
- Bladder tumours
- Tissue ablation

Performance Benefits

- Touch screen
- Whisper technology
- Real time pulse display
- 18 kW pulse peak power
- Ergonomic fibre connectivity
- Flexible laser fibre for URS
- Proven LISA Laser Products quality

Sphinx jr. - Masterpiece in Holmium laser technology

Why Sphinx jr.?

Sphinx jr. is a masterpiece made from the latest laser technology, more than 25 years of experience in the design of Holmium lasers and in depth understanding of laser tissue interaction - for the highest customer satisfaction.

Flexible and intuitive

The **Sphinx jr.** is made for "Dusting" and fragmentation of hard and soft calculi and hemostatic cutting of tissue.

The **Sphinx jr.** is the ideal laser for endoscopic lithotripsy with rigid and flexible endoscopes.

Setting of pulse energy, repetition rate and StoneEffect™ on the high resolution touch screen is like on your favorite smartphone.

The **Sphinx jr.** is designed for the comprehensive range of LISA's compatible reusable laser fibres (for steam sterilization) and disposable laser fibres. The fibre sizes range from 200 µm to 1,000 µm.



Powerful and lasting: StoneEffect™

The **Sphinx jr.** delivers unmatched 18 kW pulse peak power at 100% StoneEffect™ - best for fragmentation of the hardest stones.

Stone retropulsion vs. fragmentation is controlled by adjusting the StoneEffect™.

Instant accuracy: The first laser pulse is emitted instantly with pressing the footswitch – exactly at the selected pulse energy.

The **Sphinx jr.** operates continuously without overheating, power reduction or cut off to cool down. This laser masters both extensive stone work and continued use in soft tissue surgery.

Full laser power is available at any rated mains supply voltage.

Real time pulse display

The **Sphinx jr.** is the only laser which displays the laser pulse in a real time oscillogram - what you see is what you get.

Comprehensive information about the character of the laser emission is easily collected from this real time graph: more pulse peak power for stone fragmentation at high StoneEffect™ setting – less stone retropulsion, more hemostasis at low StoneEffect™ setting – all at a glance.

Family of Kix footswitches

To activate the laser device two footswitches are available. The footswitch **Kix** has a single pedal. The double pedal **Kix DUO** footswitch makes 2 selectable power settings available at the tip of your toe. This optional feature allows switching between power settings like burst mode vs. pulsed operation or high energy single pulse vs. a laser setting for stone dusting.

User-friendly and no noise

The innovative operating concept enables intuitive operation of the **Sphinx jr.** laser.

Laser settings are on the touch screen at your finger tip. The brilliant high resolution 7" wide-screen colour display is highly visible even from a less favourable viewing angle.

Pulse energy, repetition rate and the StoneEffect™ parameter are intuitively set by touch sliders on bar graphs.

The fibre port opens automatically when a fibre connector is entered.

Up to 60 individual sets of treatment parameters may be stored in memory for future use.

For your comfort: The noise emission of the **Sphinx jr.** is not noticeable in a standard OR environment.

Economical and ecological

The **Sphinx jr.** requires a standard power supply. No additional installations are required.

Long-live reusable laser fibres reduce clinical waste and cost per application.

The durable and service friendly design minimizes costs for maintenance.

Reliability

Benefit from more than 25 years of experience in the development and manufacture of Holmium lasers.

StoneEffect 10 → 100 = Adjustable pulse peak power



StoneEffect 10:

5 kW peak pulse power & long pulse duration 610 µs

- ✓ low repulsion
- ✓ removal/cutting of soft tissue
- ✓ coagulation



StoneEffect 100:

18 kW peak pulse power & short pulse duration 160 µs

- ✓ efficient fragmentation
- ✓ removal of hard tissue
- ✓ lithotripsy

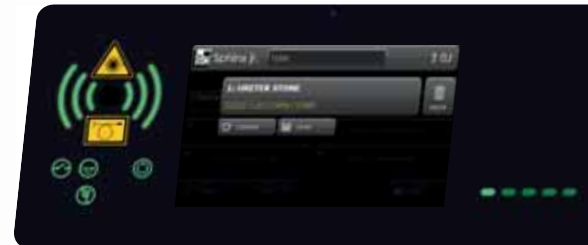
Visualisation by real time pulse display
 Example shown here: same pulse energy of 2.5 J for stone effects 100 and 10



Kix footswitch
 Order No. 101 630 147

Kix DUO footswitch
 Order No. 101 630 144

Memo function



Touch screen operation





Technical Specifications

SphinxXjr.

Laser system	Holmium-YAG laser
Wavelength	2123 nm
Power at fibre tip	30 W (adjustable)
Pulse energy	0.3 - 3.5 J
Frequency	Single pulse, 1 - 25 Hz
Pulse peak power	6 - 18 kW (adjustable)
Pulse duration	100 - 650 μ s (FWHM, energy regulated operation)
Aiming beam	635 nm (red) or 532 nm (green), 1.3 mW (adjustable), laser class 3R
Mains supply	210 V - 230 V, 50/60 Hz 10 A (1~, N, PE) or 110 V - 115 V, 50/60 Hz 20 A (1~, N, PE), automatic range selection
Cooling system	Air cooling
Dimensions	H 1000 x W 450 x L 740 mm
Weight	approx. 95 kg
Environmental conditions	15 - 28 °C / 10 - 90 % humidity (non-condensing)

Safety Standards: IEC 60601

CE acc. Council Directive 93/42/EEC

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

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.

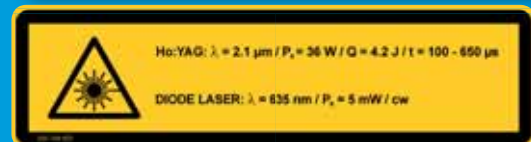
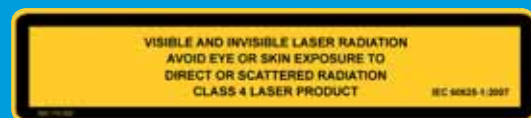
* In the USA the products are not intended for use in clinical applications in neurosurgery.

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Specifications are subject to change without notice.

Made in Germany 2019 - 02

Brochure Order no. 036 006 070



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