

- **Overall structure:**

Frame with precise hard stone plate for mounting the system models.
Laser protection class 1.

- **Laser:**

Source: Fiber laser, 1090nm.
Power: 50W or 100W output power.
Modulation frequency: CW to 50 khz.
Beam quality: $M^2 < 1.1$.
Cooling: Air.

- **Cutting optics:**

Dual-head version: Beam splitter (50/50) supplies the two cutting heads, each with 50% of the laser power.
Focal distance: 50 mm.
Exchangeable Cutting nozzles.
Cutting optic with Z adjustment.
Focus optics in X/Y direction adjustable for optimal alignment to laser focus.
Tube collect in X/Z direction adjustable for optimal alignment to the axes unit.
Minimum cutting gap: 10 μ m.

- **Motion System 4a:**

One rotating axis (hollow-shaft direct drive) with pneumatic-opening clamps to receive stent tubes with diameters ranging from 0.5mm to 7mm (in dual-head version: 2 rotating axes).
Resolution: 2048 cycles/rev.
Reproducibility: +/- 3 arc sec.
Speed: 2000 RPM.

- **Motions System 4b:**

Linear axis with brushless linear motor drive.
Travel: 200 mm.
Resolution: 5 nm.
Repeatability accuracy: +/- 0.5 μ m.
Travel speed: Up to 2 m/s.
Acceleration: 3 g / 30m/s².

- **Control:**

Aerotech A3200 NC controller with all options for the stent cutting application as well as drive electronics with fire-wire interface for 8 kHz control pulse.

- **PC:**

Industrial personal computer.
For controlling all system functions; optional interface expansion and interface card for drive control of the laser unit.

- **TFT display / keyboard:**

Combined with swivel arm, mounted on frame.

- **Operating system:**

Windows OS, single workstation license.

- **Gas supply:**

Two different process gases are supported, up to a max. pressure of 20 bar. Regular compressed air is supported. Software controlled. The machine is adapted for oxygen as process gas.

- **Process monitoring:**

Separate camera monitoring for each processing head via display and monocular



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Stent cutting laser

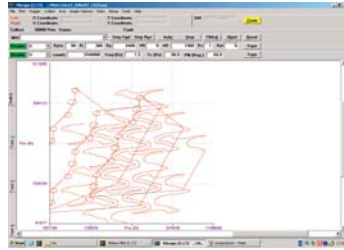
SCS 50

SCS 100 DH

**setting
new
standards**

**High Efficiency
Cutting Systems**

Profitability through Innovation



Software

Specially developed software makes control of the SCS smooth and efficient.

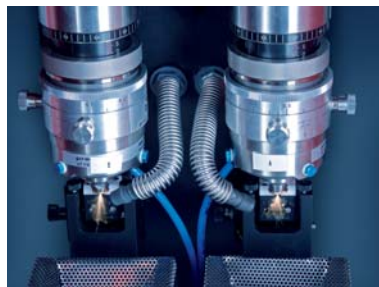


Low Investment Costs—Doubled Productivity

Doubled productivity:

The SCS 100 DH from Trotec is the only machine in its class to operate as a **dual-head system**. With only one laser source you can now produce twice as many stents within the same amount of time.

Patents pending!



Low investment costs:

The SCS 50 with one working head is the ideal entry level solution for lower production capacities. Low investment costs combined with the possibility of upgrading the machine with an automatic feed system provide utmost flexibility—a machine that grows with your capacity requests.

Automatic Feed:

Optional automatic feed system allows continuous operation of up to 48 hours without an operator. In combination with the stent sorting machine it is possible to produce four different stent designs automatically. The stents are filed into designated boxes and are then removed. Monitoring and failure reporting are assured via an assigned mobile telephone connection.

Patents pending!





Economical Fiber Laser Technology:

The SCS is equipped with an air-cooled fiber laser. This latest technology exhibits extremely compact construction, very long lifetime and higher reliability compared to lamp pumped or slab laser technology. Fiber lasers also ensure low operating costs due to its long service intervals.

A Stable Platform for Precision:

On the SCS the laser source and moving components are mounted to a **hard stone plate** weighing 1200 lbs providing absolute rigidity to the machine. This unique single-frame system guarantees 100% cutting precision of the moving components and laser system.

Intelligent Pipe Guidance for Precision

A new and patented pipe guidance keeps the the stent pipe constantly in the exact focus at lowest possible friction. Continuously high quality within your tolerance range is guaranteed.

Global Play—Local Support

Trotec lasers are in use across the globe. Our expertise and the trust of our customers are founded upon our field experience with thousands of installed systems. Trotec is supported by a global network of service partners. Therefore we can service your Trotec laser systems locally and professionally.

At Trotec our customers come first. We want to support your success. Our innovations will guarantee you the lowest overall costs for your laser system, together with quality, efficiency and thereby productivity.

