Cyber TM family
Thulium Surgical Laser System
150W / 200W

Taking care of people, our masterpieces

This brochure is not intended for the U.S. market. Certain Intended Uses/Configurations/Models/Accessories are not cleared for U.S.
CYBER TM family
THULIUM SURGICAL LASER SYSTEM
150W / 200W

Cyber TM represents the family of Thulium:YAG laser manufactured by Quanta System and dedicated to applications practiced in open, laparoscopic or endoscopic surgery to perform excision, resection, ablation, vaporization, coagulation and hemostasis of soft tissues.

Cyber TM emits with a wavelength of 2µm that is strongly absorbed by water which is highly present in all tissues. For this reason the speed of cutting and vaporization remains relatively constant during the procedures, regardless of tissue vascularization. The laser beam penetrates only a fraction of a millimeter in the tissue, providing the surgeon with a high degree of control and reducing substantially the risk of inadvertent injury.

Cyber TM, a laser scalpel, is fast, accurate and safe in the hands of surgeon.
The enucleation technique involves the “detachment” of the prostatic obstructive lobes using the endoscopic instrument for the mechanical action, the laser beam to cut/ablate the resistant tissue components or for a quick hemostatic action.

**ENUCLEATION (ThuLEP)**

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**VAPO-ENUCLEATION (ThuVEP)**

Tha Vapo-Enucleation technique uses mainly the laser cutting/vaporization effect instead of the mechanical action. The use of this technique decreases the irritative phenomena and gives advantages in patients with coagulative problems. This technique has shorter learning curve.

**VAPO-RESECTION (ThuVARP)**

The technique involves the reduction of blocking lobes into small pieces (removable endoscopically without the aid of a Morcellator) via laser resection.

**VAPORIZATION (ThuVAP)**

This procedure involves the reduction of prostate lobes by laser vaporization of blocking tissue. Thanks to the characteristics of laser vaporization, with Cyber TM you can use optical fibers with side firing or with frontal emission (reusable). Acting on the water component contained in the tissue, vaporization remains constant throughout the procedure, preserving the characteristics of low-depth coagulation (also using the 200W), a key factor for the reduction of dysuria and other postoperative problems.

**BENEFITS FOR THE SURGEON**

**PRECISION:** You will able to see what you are, treating and observe the effect of your work in real time. Observable surgical effect - “what you see is what you get” - no unseen deep tissue effects occur.

**VERSATILITY:** The ability to vaporize, resect or ablate tissue as needed. These features in the treatmet of BPH, allow to choose the surgical technique (enucleation, resection or vaporization) best suited to the size and morphology of the treated prostate.

**HIGH SAFETY LEVEL:** By allowing the visualization of the treatment area and precise control of the laser delivery, along with a great hemostasis, Cyber TM provides a high level of safety. The the high coefficient of absorption in water and the limited coagulation’s depth, reduce the chance of unexpected tissue damage.

**CLEAR SURGICAL FIELD:** The consistent power delivery of the Cyber TM’s continuous wave mode creates even and clean vaporization or cutting effect which keeps the surgical field clear of bubbles, blood or debris that can impair the surgeon’s vision.

**USER FRIENDLINESS:** The Cyber TM laser is easy to use with a short learning curve. The double footswitch allows one to use two power output dedicated to the ablation/vaporization action and to the coagulation effect.

**BPH - Benign Prostatic Hyperplasia**

Using the Cyber TM for the BPH procedures, the surgeon can choose to perform:

- **Enucleation**
- **Vapo - Resection**
- **Vapo - Enucleation**
- **Vaporization**

**ENUCLEATION (ThuLEP)**

**VAPO-ENUCLEATION (ThuVEP)**

**VAPO-RESECTION (ThuVARP)**

**VAPORIZATION (ThuVAP)**

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BENEFITS TO THE PATIENT

Thanks to the special characteristics of wavelength interaction with the tissue, Cyber TM provides a high efficient cutting action with an effective coagulative effect.

For patients treated for BPH, deeper coagulation may be a key factor influencing increased dysuria rates and other post-procedural complications. Thulium laser has a very low value of coagulation depth (0.1-0.2 mm) providing great haemostatic effects and extremely limited thermal issues.

These features allow to have a laser procedure with shorter hospital stay, minimal post-operative catheterization time and quick return to the quality life.

APPLICATIONS

INTENDED USE

The Cyber TM family and its accessories are intended for use in surgical procedures using open, laparoscopic and endoscopic incision, excision, resection, ablation, vaporization, coagulation and hemostasis of soft tissue in use in medical specialties including: Urology, Gastroenterology, Thoracic and Pulmonary, Gynecology, ENT, Dermatology, Plastic Surgery, General Surgery and Neurology.

| UROLOGY |

<table>
<thead>
<tr>
<th>BPH</th>
<th>(ThuVAP - ThuVARP - ThuLEP - ThuVEP)</th>
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<tbody>
<tr>
<td>Tumors of the Upper Urinary Tract - Bladder Tumors - Strictures Partial Nephrectomy</td>
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MULTIDISCIPLINARY APPLICATIONS

Thoracic Surgery - ENT - Neurology - General Surgery
Power Output - 150W / 200W
High precision action without affecting the surrounding tissue
Minimal post-operative catheterization time
Reduction of time of hospitalization time and return to normal quality of life
Minimal blood loss also for high-risk patients (ex. anticoagulant therapy)
Multidisciplinary system for minimally invasive surgery
Double footswitch with Ready/Standby element
Transparent color of safety goggles

Conservation of Antegrade Ejaculation:
“Thulium laser enucleation of the prostate is an efficient technique, which is performed with a safe energy source. ThuLEP represents a simple new shift in the endoscopic management of BPH and can be used to treat prostates of any size. This technique improves the scores of questionnaires that are used to assess urinary symptoms and their effect on the QoL in patients. Antegrade ejaculation is mainly conserved in patients who undergo ThuLEP, with good effects on erectile function.”*

Sexual outcome of patients undergoing Thulium laser enucleation of the prostate for benign prostatic hyperplasia

- Optical fibers with frontal emission
  - Sterile - Single Use or Reusable
  - Core diameter from 200 µm to 1000µm
  - 3m long
- Optical fibers with lateral emission
  - Sterile - Single Use
  - Core diameter 600µm
  - 3m long

- Adjustable Stripper for Optical Fibers
- Special Sterilizable Stripper for Optical Fibers
- Ceramic Scissors
### TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
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<tbody>
<tr>
<td>Wavelength</td>
<td>2010 nm</td>
</tr>
<tr>
<td>Laser Class</td>
<td>4 (IEC/EN 60825-1:2007)</td>
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<tr>
<td>Power</td>
<td>Up to <strong>200 W</strong> depending on each local clearance</td>
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<tr>
<td>Power setting</td>
<td>1 W to 200 W in 1, 2, 5 W increment steps</td>
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<tr>
<td>Treatment mode</td>
<td>Continuous wave or pulsed (min 5 ms - up to 100 Hz)</td>
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<tr>
<td>Beam delivery</td>
<td>Wide range of flexible silica frontal and side-firing fibers</td>
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<tr>
<td>Aiming beam</td>
<td>Red (650nm) or green (532nm) on choice, (adjustable &lt;5 mW) - Class 3R</td>
</tr>
<tr>
<td>Electrical requirements</td>
<td>230/208 VAC, single phase; 50/60 Hz; 16/18A</td>
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<tr>
<td>Cooling</td>
<td>Air cooled (closed water-air cooling circuit)</td>
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<tr>
<td>Noise level</td>
<td>Less than 58 dBA</td>
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<tr>
<td>Operating temperature</td>
<td>10°C - 30°C</td>
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<tr>
<td>Humidity</td>
<td>30% - 90% - Non condensing</td>
</tr>
<tr>
<td>Dimensions</td>
<td>21.6 in/55 cm (W) x 29.5 in/75 cm (D) x 43.3 in/110 cm (H)</td>
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<tr>
<td>Weight</td>
<td>440 lbs. 200 kg</td>
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Note: National local authorities may put restrictions to the parameters indicated in the above table, or may limit or remove certain intended uses. Specifications are subject to change without notice.

Quanta System products are manufactured according to the International standards and have been cleared by the most important International notified bodies. The Company is EN ISO 9001:2008 and EN ISO 13485:2012 certified. Quanta System S.p.A. was founded in 1985 and belongs to the EI En. Group (a public company listed in the Star segment of the Italian Stock Exchange) since January 2004. The company, divided into three business units (medical, scientific and industrial) is specialized in manufacturing of laser and opto-electronic devices.