HOLA ELLA
Minimally invasive laser therapy in Gynaecology

__ Precise
__ Excellent haemostasis
__ Versatile
__ Working in non-contact or contact
The biolitec® diode laser systems are characterized by a compact, maintenance-free design for effective and safe use in surgery. Since almost 20 years biolitec® has been developing methods and procedures in many medical disciplines and offers established and sophisticated devices with a selection of optical fibers for different applications. The laser systems used worldwide are developed in Germany at the Bonn location and are characterized by high quality and safety standards. Whether in the operating room or in the outpatient OR centre, the use of biolitec® diode lasers significantly expands the spectrum of users.

In gynaecology, biolitec® offers a wide range of treatment options in both hysteroscopy and laparoscopy. Myomas, polyps, dysplasia, cysts and condylomas can be treated by cutting, enucleation, vaporization and coagulation. Controlled cutting with laser light has hardly any effect on the uterine muscles and thus avoids painful contractions. The simultaneous coagulation guarantees excellent haemostasis and therefore a good view on the surgical field at all times. The defined penetration depth allows very precise and tissue-friendly working and is therefore the method of treatment with a great contribution to preserving fertility.

Easy to use, precise & versatile in
__ Hysteroscopy
__ Laparoscopy and
__ minimally-invasive surgery
The 1470nm/980nm wavelengths ensure high absorption in water and haemoglobin. The thermal penetration depth is significantly lower than, for example, the thermal penetration depth with Nd: YAG lasers. These effects enable safe and precise laser applications to be performed near sensitive structures while providing thermal protection of the surrounding tissue. Compared to the CO\(_2\) laser, these special wavelengths offer significantly better haemostasis and prevent major bleeding during surgery, even in haemorrhagic structures.

With thin, flexible glass fibres you have very good and precise control of the laser beam. The penetration of laser energy into deep structures is avoided and surrounding tissue is not affected. Working with quartz glass fibers in non-contact and contact offers tissue-friendly cutting, coagulation and vaporization.

**LEONARDO\(^\text{®}\) DUAL**

**Easy**
- Easy handling
- Reduced surgery time

**Safe**
- Intuitive interface
- RFID for sterility assurance
- Defined penetration depth

**Flexible**
- Contact- or non-contact with tactile feedback
- Cutting, coagulation, haemostasis
About one third of all women aged 30 and over is affected by myomas. The gentle and above all uterine preserving treatment of myomas is especially important for women who wish to have children.

Myomas can be enucleated quickly and gently with the MyoFiber® glass fibers in a variety of designs. The use of standard diagnostic hysteroscopes with small diameter allows direct treatment during diagnosis. The laser energy avoids contraction of the uterine muscles and can therefore be used without or under minimal local anaesthesia. The extremely gentle intervention with continuous irrigation with saline solution ensures a quick return to normal activities.

### Advantages
- Safe working in saline solution
- Outpatient possible without anaesthesia
- Use of standard instruments
- Almost painless for patients

### Applications
- Myoma
- Polyp
- Septum
- Isthmocele

### Instruments and fibers

<table>
<thead>
<tr>
<th>REF</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>400500200</td>
<td>High Flow Hysteroscope ID 5 Fr. for optics 2 mm, 30°, 260 mm</td>
</tr>
<tr>
<td>400500120</td>
<td>ASAP Hysteroscope optics HD, 2 mm, 30°, 260 mm for High Flow Hysteroscope</td>
</tr>
<tr>
<td>503200775</td>
<td>MyoFiber® CS, IC</td>
</tr>
<tr>
<td>503200760</td>
<td>MyoFiber® CC, IC</td>
</tr>
<tr>
<td>503200770</td>
<td>MyoFiber® CA, IC</td>
</tr>
</tbody>
</table>

Enucleation of a myoma with MyoFiber® CC
ELLA – Endometriosis
Laparoscopic Laser Application

Endometriosis is one of the main causes of endometriosis in women with abdominal pain and unfulfilled desire to have children. In women with symptoms, the primary goal is the laparoscopic removal of endometriosis lesions. Laser energy, delivered via the glass fiber optic, is used to precisely remove endometriosis lesions. Especially the resection of ovarian cysts is particularly gentle. First results of a study confirm the rapid recovery of the AMH value and the significant maintenance of the ovarian reserve*.

Advantages
- Working in non-contact or contact with tactile feedback
- Defined penetration depth without impact on surrounding tissue
- Preservation of ovarian reserve and fertility
- Excellent haemostasis
- Reduced scarring and avoidance of adhesions

Applications
- Peritoneal Endometriosis
- Ovarian Endometriosis
- Adhesiolyses
- Salpingectomy
- Cysts
- Twin-to-twin Syndrome TTTS

Instruments and fibers

<table>
<thead>
<tr>
<th>REF</th>
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</tr>
</thead>
<tbody>
<tr>
<td>400400110</td>
<td>Laparoscopic sheath 30 cm</td>
</tr>
<tr>
<td>400400115</td>
<td>Laparoscopic sheath 40 cm</td>
</tr>
<tr>
<td>503200745</td>
<td>Bare Fiber 600 μm, Flat Tip, IC</td>
</tr>
<tr>
<td>503200750</td>
<td>Bare Fiber 600 μm, Ball Tip, Adj. Luer, IC (1 × 6 h)</td>
</tr>
<tr>
<td>503300415</td>
<td>Bare Fiber 1000 μm Flat Tip Adj. Luer</td>
</tr>
</tbody>
</table>

* Study finalized in January 2018
Minimally-invasive surgery

Laser surgery is also excellently suited for the treatment of condylomas or dysplasia in the areas of vulva, vagina and cervix. During conization, laser energy, delivered via the glass fiber optic, replaces the scalpel with the added benefit of excellent haemostasis. The defined penetration depth of the laser energy is less invasive, leading to fewer complications and a quick recovery of the patients.

**Advantages**
- Precise cutting and coagulation
- Short rehabilitation time
- Optimal protection of surrounding tissue
- Almost blood-free procedure

**Applications**
- Condyloma
- Conization
- Dysplasia

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**Instruments and fibers**

<table>
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<tr>
<th>REF</th>
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<tbody>
<tr>
<td>400100100</td>
<td>Universal Dual Luer Handpiece</td>
</tr>
<tr>
<td>AB2594</td>
<td>Biopsy Needle</td>
</tr>
<tr>
<td>503200745</td>
<td>Bare Fiber 600 μm, Flat Tip, IC</td>
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<tr>
<td>503200750</td>
<td>Bare Fiber 600 μm, Ball Tip, Adj. Luer, IC (1 × 6 h)</td>
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</tbody>
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Universal Dual Luer Handpiece
LEONARDO®

One device for multiple applications in Gynaecology

LEONARDO® DUAL 45
universal & ingenious

LEONARDO® DUAL 200
versatile & powerful

LEONARDO® Mini
basic & specialist

<table>
<thead>
<tr>
<th>Model</th>
<th>LEONARDO® Mini Dual</th>
<th>LEONARDO® DUAL 45</th>
<th>LEONARDO® DUAL 200</th>
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<tbody>
<tr>
<td>REF</td>
<td>SL 980+1470nm14W</td>
<td>SL 980+1470nm45W</td>
<td>SL 980+1470nm200W</td>
</tr>
<tr>
<td>Wavelength</td>
<td>980 nm and 1470 nm</td>
<td>980 nm and 1470 nm</td>
<td>980 nm and 1470 nm</td>
</tr>
<tr>
<td>Power</td>
<td>10 W (980 nm) / 4 W (1470 nm)</td>
<td>45 Watt (1470 nm/15 Watt + 980 nm/30 Watt), separately adjustable</td>
<td>200 Watt (1470 nm/40 Watt + 980 nm/160 Watt), separately adjustable</td>
</tr>
<tr>
<td>Fiber diameter</td>
<td>≥ 360 μm</td>
<td>≥ 360 μm</td>
<td>≥ 360 μm</td>
</tr>
<tr>
<td>Aiming beam</td>
<td>635 nm, max. 4 mW</td>
<td>532 nm and 635 nm, green 1 mW, red 4 mW, user controlled intensity</td>
<td>532 nm and 635 nm, green 1 mW, red 4 mW, user controlled intensity</td>
</tr>
<tr>
<td>Treatment mode</td>
<td>CW, Pulse Mode (optional)</td>
<td>CW, Pulse Mode, ELVeS® Signal, ELVeS® Segment, Derma Mode</td>
<td>CW, Pulse Mode, ELVeS® Signal, ELVeS® Segment, Derma Mode</td>
</tr>
<tr>
<td>Pulse duration / break</td>
<td>0.01 – 60 Sek. / 0.01 – 60 Sek.</td>
<td>0.01 – CW / 0.01 – 60 Sek.</td>
<td>0.01 – CW / 0.01 – 60 Sek.</td>
</tr>
<tr>
<td>Power supply</td>
<td>110 – 240 VAC, 50 – 60 Hz (7.2 VDC @ 36 W)</td>
<td>110 – 240 VAC, 50 / 60 Hz, 450 VA</td>
<td>110 – 240 VAC, 50 / 60 Hz, 850 VA</td>
</tr>
<tr>
<td>Batteries</td>
<td>Li-ion Batterien</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Dimensions (H × W × D)</td>
<td>6.0 cm × 9.0 cm × 21.5 cm</td>
<td>approx. 28 cm × 37 cm × 9 cm</td>
<td>approx. 20 cm × 37 cm × 26 cm</td>
</tr>
<tr>
<td>Weight</td>
<td>900 g</td>
<td>approx. 8,5 kg</td>
<td>approx. 15 kg</td>
</tr>
</tbody>
</table>

All laser sets incl. 3 safety goggles, foot switch, interlock connector, power cord and manual in a carrying case.
Contact us to learn more about a whole new world of minimally invasive laser therapies.

Venous diseases
Hemorrhoids and fistulas
Wide spectrum of ENT diseases
BPH and urological tumors
Uterine tumors
Cervical and lumbar disc herniation
Lung metastases and bronchial tumors

biolitec® worldwide