

# UltraPulse™ DUO CO<sub>2</sub> Laser System

For those who demand excellence







## The UltraPulse™ DUO CO<sub>2</sub> Laser System is an innovative solution.

The UltraPulse DUO CO<sub>2</sub> Laser System caters to surgical centres and doctors that demand excellence from themselves and their laser system.

The system is designed to deliver CO<sub>2</sub> laser energy via an articulated arm or through a CO<sub>2</sub> laser fibre providing an innovative approach to meet a growing number of clinical challenges. With the UltraPulse DUO System, you don't have to compromise – you can have the precision you desire as well as access to hard-to-reach anatomies.<sup>1-4</sup>





## How can the UltraPulse DUO Laser System benefit your practice?

**Seamlessly alternate between the CO<sub>2</sub> energy deliveries to facilitate individualised patient care.**

### Address unexpected challenges

The comprehensive set of tools are designed to facilitate a variety of indications and surgical conditions.

### Experience clear and clean margins

Achieve controlled pathological sample outcomes as a result of margin visibility.<sup>5,6</sup> Clear and clean margins are valued in today's operating room.

### Smart tissue management

Preservation of adjacent delicate tissue results in few adhesions and quick recovery time.<sup>3,7,8-9\*</sup>

## Combining precision with flexibility.

The UltraPulse™ DUO System combines the precision of the Digital AcuBlade™ Scanning Micromanipulator with the flexibility of the FiberLase™ CO<sub>2</sub> Laser Fiber.

The Digital AcuBlade™ Micromanipulator with SurgiTouch Scanner, delivers laser energy inside a user-defined geometric shape.<sup>10</sup> The rapid motion of the scanner takes the energy delivery and the entire operation to high precision levels designed to:

### Enable control

over incision length, shape, ablation area and treatment depth.

### Replicate tissue interaction

customised to a patient's anatomy and the shape of the undesired tissue.

### The CO<sub>2</sub> laser fibre is designed for durability and flexibility.

Accompanied by a collection of dedicated operational tools, the CO<sub>2</sub> fibre facilitates access to difficult-to-reach anatomy and provides a variety of treatment options.<sup>1,4</sup>

### Adjustable aiming beam

enables precise positioning to help target desired tissue.

### Renewable tip

cleavable for consecutive focused laser transmission.

### Energy transmission

designed for efficient energy transmission >60%.<sup>11\*</sup>

### 2 m long fibre

designed for extended flexibility and manoeuvring.



## Optimising your surgical tool to the fullest.

The UltraPulse™ DUO Laser System has an advanced user interface designed to be user friendly, easy to adopt and provide the ability to customise and save set parameters during a procedure. During the high peak power, the laser energy is delivered rapidly, which is designed to vaporise the targeted tissue.

The lasing modes (UltraPulse and Continuous Wave) can be alternated according to the desired tissue interaction. The three exposure modes (Repeat, Single and Constant) are designed to allow comprehensive, time-controlled energy delivery.

## Offers a variety of uses within the healthcare facility.

The UltraPulse™ DUO System is intended for use in surgical applications requiring the ablation, excision, incision and coagulation of soft tissue. A wide range of indications for use will ensure the laser system is fully utilised within the healthcare facility. A partial list of indications include:

### Otolaryngology

(ENT)



- Benign and malignant lesions: oral, nasal, pharynx, larynx, trachea and ear
- Papillomatosis
- Tonsillectomy
- Subglottic and tracheal stenosis
- Cordectomy
- Myringotomy

### Gynaecology

(including laparoscopy and robotic assisted surgery)



- Endometriosis
- Excision/lysis of adhesions
- Uterine myomas and fibroids
- Ovarian fibromas and follicle cysts
- Uterosacral ligament ablation
- Hysterectomy
- Cone biopsy of the cervix

### Risk information

CO<sub>2</sub> lasers (10.6 µm wavelength) are intended solely for use by trained doctors. Incorrect treatment settings or misuse of the technology can present risk of serious injury to patient and operating personnel. The use of CO<sub>2</sub> laser is contraindicated where a clinical procedure is limited by anaesthesia requirements, site access or other general operative considerations. Risks may include excessive thermal injury and infection. Read and understand the CO<sub>2</sub> systems and accessories operator manuals for a complete list of intended use, contraindications and risks.



## UltraPulse™ DUO technical specifications

|                                     |  |                              |  |
|-------------------------------------|--|------------------------------|--|
| <b>Laser type</b>                   | Sealed CO <sub>2</sub> laser, RF excited   |                              |  |
| <b>Wavelength</b>                   | 10.6 micron, (invisible, infra-red, TEM00)   |                              |  |
| <b>Delivery modes</b>               | Free Beam (articulated arm) and Fibre  |                              |  |
| <b>Power modes</b>                  | Continuous Wave (CW), UltraPulse (UP)  |                              |  |
| <b>Pulse energy and power range</b> | <b>System voltage (VAC)</b>  | <b>Power range arm/fibre</b> | <b>Energy per UP pulse and available power range</b> |
|                                     | 200/208/220/230/240  | 1–60/1–40 W                  | 2–225 mJ    1–60 W                                   |
|                                     | 100/110/115/120  | 1–60/1–40 W                  | 2–175 mJ    1–60 W<br>176–225 mJ    1–20 W           |
| <b>Pulse duration</b>               | Up to 2 ms   |                              |  |
| <b>Timed-exposure modes</b>         | Single, Repeat and Constant  |                              |  |
| <b>Electrical</b>                   | 100–120 VAC input power, 20A, 50/60Hz<br>200–240 VAC input power, 16A, 50/60 Hz  |                              |  |
| <b>Aiming beam</b>                  | Red diode laser (635 nm)<br>6 settings (up to 5 mW maximum)<br>Electable for continuous or blinking modes                                    |                              |  |
| <b>Air flow</b>                     | Electronically controlled with user controls<br>Internal (low flow) or external (high flow) with bacterial filter; electronically controlled |                              |  |
| <b>Purge air exiting fibre</b>      |  |                              | <b>Maximum pressure</b>                              |
|                                     | From internal pump   |                              | 8~10 psi   |
|                                     | From external source set to 60 psi   |                              | 60 psi   |
| <b>Dimensions</b>                   | Base footprint (W X D X H): 34 X 51 X 100 cm (13.6" X 20" X 40")<br>System height to top of folded arm: 195 cm (77 in)                       |                              |  |
| <b>Weight</b>                       | 132 kg (291 lbs)   |                              |  |

\*Bench test results may not necessarily be indicative of clinical performance.

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- Testing was performed by or on behalf of BSC. Data on file. Fiberlase energy transmission decreases with decreased bend radius.

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