

UltraPulse® DUO

For those who demand excellence




When it comes to precision and high-end performance, UltraPulse CO₂ laser is the ultimate solution.


Now, Lumenis brings to you the UltraPulse DUO, a CO₂ laser system that caters to physicians and surgical centers who demand excellence from themselves and their laser system. The UltraPulse DUO was meticulously developed with physicians and is based on decades of accumulated experience and the Lumenis innovative approach, to meet a growing number of clinical challenges today.

The UltraPulse DUO system is designed to deliver CO₂ laser energy via an articulated arm or through a Lumenis CO₂ laser fiber. With UltraPulse DUO you don't have to compromise – you can have the precision you desire as well as access to hard-to-reach anatomies.

The Lumenis UltraPulse DUO is the CO₂ laser system that allows surgeons to achieve the Master's Touch.



How can
UltraPulse DUO
benefit your
practice?



Seamlessly alternate between the CO₂ energy deliveries to ensure individualized patient care.

Address unexpected challenges

With the vital combination of precision and flexibility, you can be prepared to address unexpected challenges during a procedure. The comprehensive set of tools enables a complete operation without the need for additional procedures and hospitalization.

Smart tissue management

High preservation of adjacent delicate tissue results in fewer adverse events, adhesions and quicker recovery time.

Experience clear and char-free margins

Achieve controlled pathological sample outcomes as a result of adequate margin visibility. Clear and clean margins are a true value in pathology and a top goal in today's operating room.

Progress to the outpatient environment

Expand out of the traditional OR setting and periodically treat on recurring conditions under local anesthesia.

Combining unparalleled precision with flexibility.

UltraPulse DUO combines the unparalleled precision of the Digital AcuBlade™ Scanning Micromanipulator with the flexibility of the FiberLase CO₂ laser fiber.

Exclusively shaped for the articulated CO₂ laser arm, the Digital AcuBlade Micromanipulator with SurgiTouch scanner delivers laser energy inside a user defined geometric shape. The rapid motion of the scanner, faster than a human hand can produce, takes the energy delivery and entire operation to its highest precision, resulting in:

Maximum control over incision length, ablation area and treatment depth.

Replicated tissue interaction, customized to patient anatomy and the shape of the undesired tissue.

The rapid scanning movement may reduce the procedure time compared with conventional CO₂ laser microsurgery.

"I've used lasers for 30 years, primarily CO₂ lasers. I find the Digital AcuBlade a game changer by providing precise control and automatic treatment of large areas on the vocal cords in shapes of lines and circles that conform to the anatomy in a much faster and precise technique than the one that can be achieved by a human hand controlling the micromanipulator."

Mark Courey, M.D., Professor, University of California, San Francisco
Otolaryngology – Head and Neck Surgery Director, Division of Laryngology

The CO₂ laser fiber is highly durable and flexible. Accompanied by a collection of dedicated operational tools, the CO₂ fiber allows easy access to difficult-to-reach anatomy and provides a variety of delicate treatment options.

Adjustable aiming beam

that enables precise positioning to ensure the desired tissue is targeted.

Renewable tip

that can be cleaved and revived during use, facilitating smooth operation and cost effectiveness.

60% greater energy transmission

that enables sufficient delivery of CO₂ laser energy (in comparison with other CO₂ fibers based on Lumenis internal bench test).

30% longer fiber

that provides extended steering capabilities and greater convenience in the operating sphere (in comparison with other CO₂ fibers).

"While scanning free beam technology is the gold standard for CO₂ laser surgery, ENT surgeons are often faced with patients who have access challenges to line-of-sight techniques, including the distal airway, that cannot be addressed with one single laser modality." "With the scanning free beam and fiber integration in one CO₂ laser solution, only available in the UltraPulse DUO, I am able to deliver unparalleled treatments throughout the larynx and aero digestive tract with full flexibility and precision."

Paul Castellanos, M.D., Associate Professor of Surgery at the University of Alabama at Birmingham.





The advanced user interface is not only user friendly and easy to adopt but provides the ability to customize and save any set of parameters during a procedure.

Optimizing your surgical tool to the fullest.

UltraPulse DUO is an advanced computer-controlled, user-friendly CO₂ pulsed laser platform. It is based on a patented CO₂ laser tube providing up to 60 watts of power. It can generate a continuous series of short-period, high-peak-power pulses. During the high peak power, the laser energy is delivered very rapidly, resulting in vaporization of the targeted tissue without the creation of collateral injury.

The Lasing modes (UltraPulse and Continuous Wave) can be alternated according to the desired tissue interaction while the three exposure modes (Repeat, Single & Constant) will allow comprehensive timed-controlled energy delivery.

Opening a whole new sphere of care.

UltraPulse DUO 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 utilized within the healthcare facility. A partial list of indications includes:



Otolaryngology (ENT)

Benign and malignant lesions:
Oral, Nasal, Pharynx, Larynx,
Trachea and Ear.

Papillomatosis,
Tonsillectomy, Bronchoscopy,
Subglottic and Tracheal
Stenosis, Stapedotomy,
Cholesteatoma, Myringotomy



Gynecology

(including laparoscopy and
robotic assisted surgery)

Endometriosis, Excision/
lysis of adhesions, Uterine
myomas and fibroids, Ovarian
fibromas and follicle cysts.
Uterosacral ligament ablation,
Hysterectomy, Conization of
the cervix



Neurology

(Neurological indications
for treatment of the
Central Nervous System
are only for USA)

Posterior fossa tumors,
Peripheral neurectomy.
Benign and malignant tumors
and cysts, acoustic neuromas,
lipomas. Arteriovenous
malformation, Pituitary
gland tumors

The UltraPulse Technology yielded substantial clinical evidence throughout the years, which are published in leading reviewed journals. Please contact your Lumenis representative for a comprehensive list of publications.

Risk Information

CO₂ lasers (10.6 μm wavelength) are intended solely for use by trained physicians. Incorrect treatment settings or misuse of the technology can present risk of serious injury to patient and operating personnel. The use of Lumenis CO₂ laser is contraindicated where a clinical procedure is limited by anesthesia requirements, site access, or other general operative considerations. Risks may include excessive thermal injury and infection. Read and understand the CO₂ systems and accessories operator manuals for a complete list of intended use, contraindications and risks.

Achieve the master's touch.

Laser Type	Sealed CO ₂ Laser, RF excited		
Wavelength	10.6 micron, (invisible, infrared, TEM00)		
Delivery Modes	Free Beam (articulated arm) and Fiber		
Power Modes	Continuous Wave (CW), UltraPulse (UP)		
Pulse Energy and Power Range	System Voltage (VAC)	Power Range Arm/Fiber	Energy per UP Pulse and Available Power Range
	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 176-225 mJ 1-20 W
Pulse Duration	Up to 2 ms		
Timed-Exposure Modes	Single, Repeat and Constant		
Electrical	100-120 VAC input power, 20A, 50/60Hz 200-240 VAC input power, 16A, 50/60 Hz		
Aiming Beam	Red diode laser (635 nm) 6 settings (up to 5mW maximum) Electable for Continuous or blinking modes		
Air flow	Electronically controlled with user controls Internal (low flow) or external (high flow) with bacterial filter; electronically controlled		
Purge air exiting fiber			Maximum Pressure
	From internal pump	8~10 psi	
	From external source set to 60 psi	60 psi	
Dimensions	Base footprint (W X D X H): 34 X 51 X 100 cm H* (13.6" X 20" X 40" H*) System height to top of folded arm: 195 cm (77 in)		
Weight	132 kg (291 lbs)		



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