

Pixel CO₂

Fractional Ablative CO₂ Laser



System Brochure

Skin Rejuvenation

Aesthetic Surgery

Scars

Melasma

iTED



The only CO₂ laser that offers multiple treatment applications via a wide array of handpieces and scanners.

Pixel CO₂ - Perform at a Higher Level

The high power Pixel CO₂ fractional ablative laser offers faster treatment, enhanced clinical capabilities, reduced patient downtime and unmatched versatility.

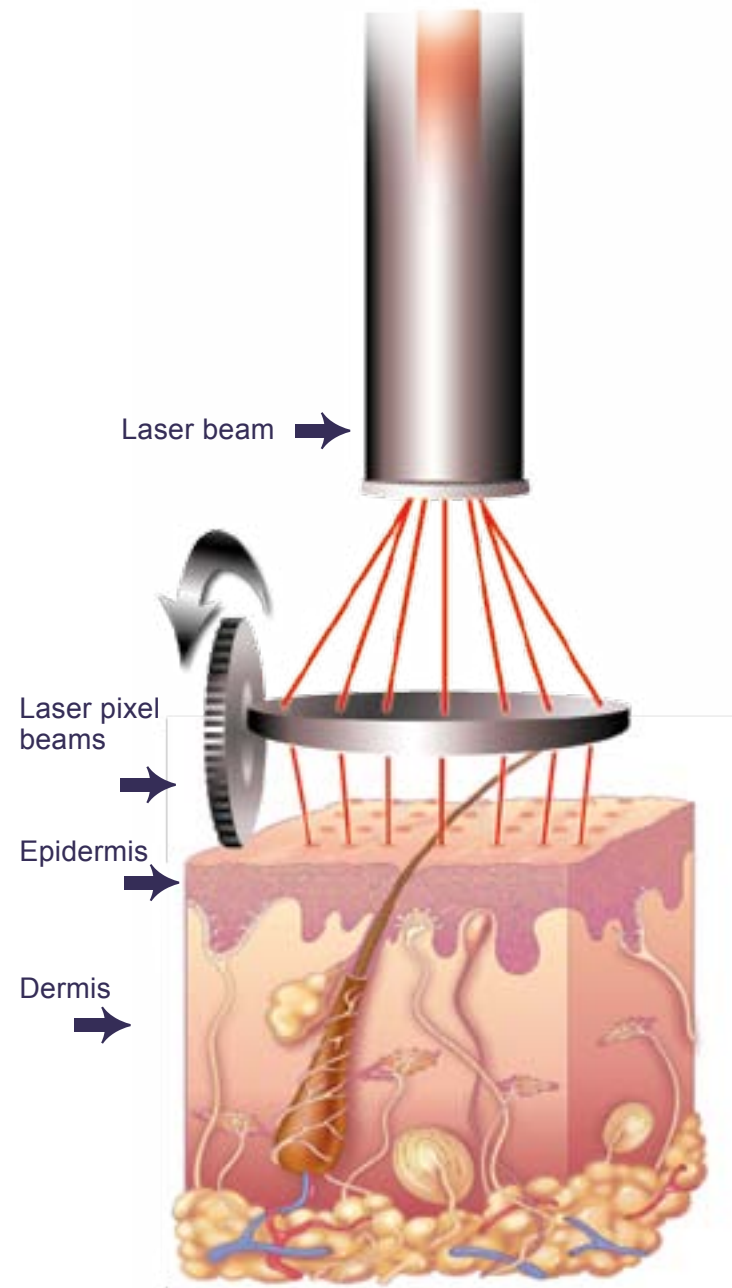
Maximum Results

Alma Lasers' CO₂ is a high powered laser that brings unparalleled precision and innovation to the medical aesthetic field. Supporting the most advanced assortment of rollers, scanners and surgical tools, Alma's Pixel CO₂ opens the door to new possibilities in aesthetic and surgical care.

With over a decade of proven leadership in laser technology, Alma Lasers' CO₂ laser is dictating the new standard in precision and innovation.

Pixel CO₂ Advantages

- **iTED** - Trans epidermal delivery of cosmeceuticals with IMPACT accelerates healing, improve results and reduce downtime.
Resurfacing & Tightening- HIGH mode high peak power pulses, and LOW mode for stronger thermal effect.
- **Less Downtime** - Fractional technology causes less tissue damage and less downtime.
- **Faster Treatment** - Treat a whole face in 5-10 minutes.
- **Options** - Pixel CO₂ comes with a wide array of advanced scanners, rollers and surgical tools.
- **System Endurance** - Pixel CO₂ uses a Coherent RF-excited tube that works at 300 volt, compared to a DC tube that excites at 20,000 volts.



CO₂ roller for fast fractional ablation



Fractional ablation results in less edema and downtime

Fractional Ablative Technology

The Pixel CO₂ laser penetrates the skin with 10.6 um thermal microchannels, creating a targeted ablative and thermal effect – without disturbing the surrounding tissue. These micro-injury sites enhance the results and jumpstart the healing process by stimulating collagen strengthening and neo collagenesis.

Fractionation Devices

Alma offers a variety of unique scanners and applicators which offer advantages over all other CO₂ lasers. The Pixel CO₂ applies the laser energy through holographic lenses which pixelate the beam to 7, 49 or 81 microscopic beams or pixels. This results in the creation of ablated epidermis and microscopic columns of thermal damage that penetrate deep into the dermis and strongly stimulates the growth of new collagen.

Roller

The Pixel CO₂ roller is a manual and passive applicator that is rolled across the skin, releasing a 7X1 laser pattern.

Scanner

LiteScan is the industry's most advanced laser scanner, allowing char-free fractional ablation in multiple sizes and patterns.

Stamping

Traditional 7X7 and 9X9 stamping is also available on the versatile PixelCO₂ system.

Reduced Risk

The high powered Pixel CO₂ can control and reduce the risks of delayed hypopigmentation, scarring, post-inflammatory hyperpigmentation, infection and persistent erythema.

Patients will also benefit from a significantly shorter downtime compared to traditional CO₂ applicators.



Advanced Tips & Applicators

Pixel CO₂ has the widest selection of accessory handpieces, allowing you to treat more indications with greater clinical results.

CO₂ Fractional Roller

The CO₂ Roller rests on two wheels which glide across the skin, triggering a 70W laser pulse that is channeled into a horizontal line of seven evenly spaced laser spots. As the turning of the wheels trigger the laser, a symmetrical track of high thermal fractional ablation is created regardless of treatment speed.

Power

Compared to passive fractional applicators with a 7X7 or 9X9 laser spot pattern, the roller delivers up to 10 times more energy per laser spot. The added strength of the roller causes deeper penetration with shorter pulse duration; improving treatment results while also reducing patient downtime.

Number of Pixels	7 per row
Spot Width	1.1 mm
Pattern	Additive
Treatment Area	XY ~1 cm width passes
Beam Delivery	Direct
Maximum Pulse Energy	2500mJ/Pulse
Maximum Pixel Energy	350 mJ/Pixel

The CO₂ roller is used during a Platelet-rich plasma procedure.

Photo courtesy of Taimur Shoaib, MD Plastic Surgeon, Edinburgh, UK



LiteScan



IMPACT



CVD



Surgical

LiteScan

LiteScan is the most advanced CO₂ scanner available today, offering char-free tissue ablation and vaporization with multiple scanning patterns.

- Vaporization layer-by-layer
- Precision
- Penetration depth
- Ease-of-use
- Control
- Adjustable patterns
- Versatility
- Performance

Continuous Variable Defocus (CVD)

Alma offers the only CO₂ CVD tip. The CVD can change the focus of the laser spot from 1mm - 4mm. With a single tip, it is not possible to manipulate the beam strength during treatment.

IMPACT

The IMPACT module opens up new treatment possibilities by enhancing the delivery of cosmeceuticals to the deeper skin tissue. IMPACT is a sonotrode that releases acoustic waves and air pressure which advance cosmeceuticals through micro-channels (created by the fractional ablative CO₂ scanner or roller), creating a push and pull effect within the channels to release the buildup of inter-cellular fluid and deliver the cosmeceuticals to the targeted tissue depth.

Surgical

Alma Lasers offers a wide variety of 3rd party micromanipulators and access devices for use with the Surgical hand pieces and scanners. This versatility makes Alma Lasers the leading choice for plastic surgery, laparoscopy, gynecology, proctology and 60 other surgical applications.



Combination Therapies

With the Pixel CO₂, you can treat a wide variety of skin conditions. But when treating scars, hyperhidrosis, melasma, stretch marks or skin rejuvenation, PixelCO₂ allows you to perform iTED; the world's most advanced technique for trans-epidermal delivery.

iTED is a minimally invasive skin barrier breakthrough solution that offers unprecedented potential for skin repair and aesthetic enhancement. It is the synergy of multiple technologies, brought together to provide patients with a quick, easy and virtually pain-free answer to their most difficult skin problems.

iTED begins with microperforation of the skin using the fractional ablative roller, followed by the application of advanced cosmeceutical compounds chosen per skin condition. The IMPACT module then emits acoustic pressure that forces the active ingredients in the cosmeceutical compounds to the sub-epidermal tissue for effective skin repair and improvement.

Clinical Studies

iTED with the Pixel CO₂ has been the subject of numerous clinical studies, all of which has proven the technique to improve clinical results and cause fewer side effects and downtime.

Combining laser and ultrasound technologies to deliver platelet-rich plasma

Taimur Shoaib, Consultant Plastic Surgeon, Glasgow, UK



Treatment of Striae Distensae Combined Enhanced Penetration Platelet-Rich Plasma and Ultrasound after Plasma Fractional Radiofrequency

Dong-Hye Suh, Dermatologist, Seoul, Korea



Topical delivery of Triamcinolone via skin pretreated with ablative radiofrequency: a new method in hypertrophic scar treatment

Maria C. A. Issa, Dermatologist, Rio de Janeiro, Brazil



Clinical Results



Before
Fractional Ablation
 Photos courtesy: Dr. Irene Bermejo, Argentina



After



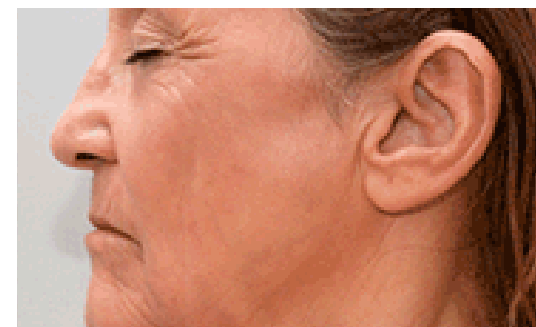
Before
Fractional Ablation
 Photos courtesy: Dr. Irene Bermejo, Argentina



After



Before
Fractional Ablation
 Photos courtesy: Dr. Irene Bermejo, Argentina



After



Before
Fractional Ablation
 Photos courtesy: Dra. Patricia Gutierrez, Mexico



After



Before
Fractional Ablation
 Photos courtesy: Dr. Irene Bermejo, Argentina



After



Before *After*
Fractional Ablation
 Photos courtesy: Dr. Michael Shochat



Before
IMPACT for Acne Scars
 Photos courtesy: Maria Claudia Issa, MD, PhD



After



Before
iTED for Melasma
 Photos courtesy: Dr. Michael Shochat



After

Listen to the Experts



Michael Gold, MD

Medical Director, Gold Skin Care, Nashville TN

“Pre-clinical and clinical results have demonstrated that the IMPACT technology with cosmetic products enhances the delivery of topical creams and lotions in a variety of skin imperfections.”



Michael Shochat, MD

Dermatologist

“The iPixel CO₂ is brilliant; it is a must have device for all dermatologists and plastic surgeons.”



Taimur Shoaib, MD

Plastic Surgeon, Edinburgh, UK

“These non-invasive treatments are the future and as technology improves, so do the results.”



Maria Claudia Issa, MD

Professor of Dermatology, Rio de Janeiro, Brazil

“ITED can also be used to eliminate some disadvantages such as needles discomfort and irregularity of drug distribution in the lesion to be treated, minimizing collateral effects, typical to conventional treatment.”



Tania Meneghel, MD

Dermatologist, Brazil

“Pixel CO₂ with the iPixel handpiece is an unbeatable combination when treating scars and stretch marks.”



Maria Angelo-Khattar, PhD

Director Aesthetica Clinic, Dubai

“ITED really helps you deliver what you promise to the patient.... IMPACT and Alma Lasers iTED concept are the future of skin repair.”

Alma Lasers is the leading supplier of innovative medical aesthetic technologies. Alma Lasers is recognized by industry practitioners for its whole-hearted commitment to providing complete solutions to professional practices. Alma Lasers offers innovative technologies, dependable equipment, knowledgeable sales staff and years of industry expertise. We seek the creation of a strong and lasting relationship with our doctors and aesthetic clinics based on trust and a genuine desire for the success of the practice.



System Specifications

Laser Type RF-excited CO ₂ laser	100-120 VAC, 20A, 50/60 Hz 220-240 VAC, 10A, 50/60 Hz
Wavelength	10.6 μm
Operational Mode	CW, Super Pulse
Laser Output Power	40 / 70 Watts CO ₂ source from Coherent Inc.
Electrical	120 VAC, 16 A, 50/60 Hz or 230 VAC, 8 A, 50/60 Hz
Dimensions	(HxWxD) 52" x 17" x 21" (132 cm x 43 cm x 53 cm)
Weight	135 lbs. (61 kg)



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