FRACTIONAL CO_2 LASER · 10,600 NM

2027 MD Lasers Fractional CO_2

A 70-watt fractional CO_2 workstation for resurfacing, scars, wrinkles and pigment, with surgical and gynecology handpieces, a high-speed scanner and a guided touchscreen interface.



70 W
MAXIMUM OUTPUT POWER

10,600 nm
CO_2 WAVELENGTH

5
OPERATING MODES

7
BUILT-IN TREATMENT PRESETS

Built for

- Skin Resurfacing
- Acne Scars
- Wrinkles
- Pigmentation

LASER SOURCE
70 W RF-excited
Metal CO_2 tube with RF driver

SCANNER
20×20 mm scan
7 shapes, 3 patterns, spot ≤ 0.1 mm

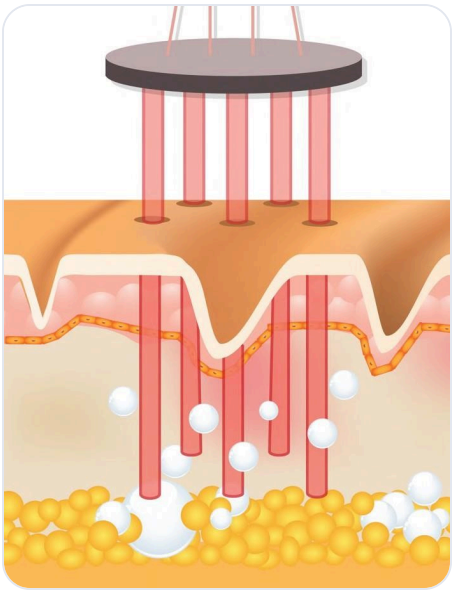
DELIVERY
7-joint arm
Gold-plated mirrors, ZnSe lens

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THE TECHNOLOGY

How fractional CO_2 resurfacing works

CO_2 lasers emit infrared light at 10,600 nm, a wavelength that is strongly absorbed by the water in skin tissue. Instead of treating the whole surface at once, a fractional scanner divides the beam into a grid of microscopic columns.

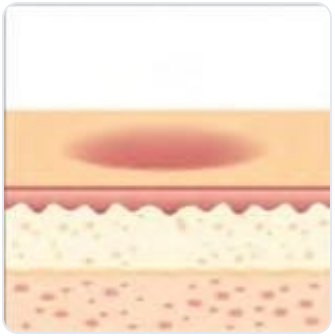


Micro-columns of energy

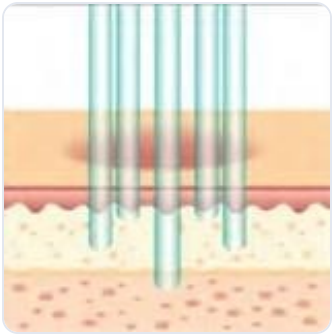
Each micro-beam passes through the epidermis and into the dermis, creating a tiny, controlled treatment zone. Bridges of untreated skin are left between the columns.

The body's own repair process

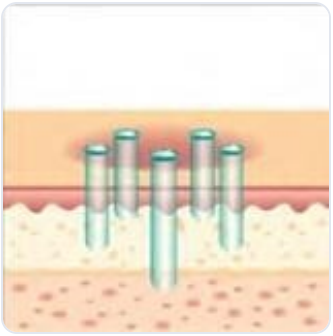
The surrounding untouched tissue supports the natural healing response. As the skin repairs the treated zones it produces new tissue and collagen, which is how scars can soften and texture can become more even over time. Power, pulse width, spacing and passes are all adjustable to suit the area and the skin.



1 · Before
Scarring or damage in the upper dermis.



2 · Micro-beams
The scanner places a precise grid of fine CO_2 beams.



3 · Treatment zones
Microscopic columns form, surrounded by intact skin.



4 · Renewal
Natural healing replaces treated tissue with new tissue.

Six reasons to choose it

1. **70 W output** — High power headroom for surgical and fractional work.
2. **RF tube driver** — Radio-frequency excited source for stable output.
3. **7-joint arm** — Free movement with low transmission loss.
4. **USA-made scanner** — Fast, accurate nano-sensor scanning.
5. **Smart software** — Five modes and seven one-touch presets.
6. **Sliding scan mode** — In-motion scanning for large areas.

Illustrations are schematic and not to scale.

APPLICATIONS

What it is used for

Fractional and full-surface CO_2 treatments address texture, tone and scarring on the face, neck and body.

- Fine lines and wrinkles
- Rough or uneven skin texture
- Lax skin on the face and neck
- Enlarged pores
- Unwanted pigmentation
- Acne scars, surgical scars and stretch marks
- Sun damage, incl. actinic keratoses*
- Surgical cutting and ablation



Wrinkles Before · After



Under-eye area Before · After



Acne scars Before · After



Enlarged pores Before · After



Pigmentation Before · After



Full-face resurfacing Before · After



Surgical scar Before · After



Stretch marks Before · After

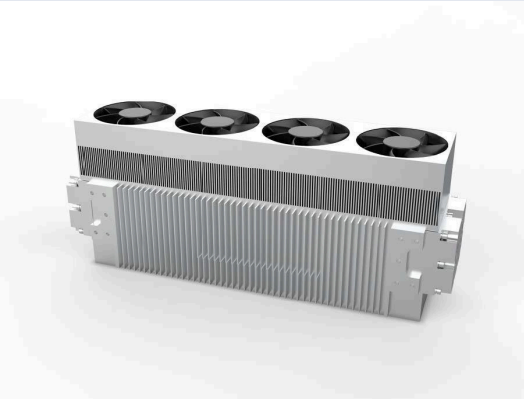
*Medical indication; for use by or under the supervision of a licensed practitioner. Representative images; results vary.

LASER SOURCE

70 W RF-excited CO_2 source

The system is built around a sealed metal CO_2 laser tube excited by a radio-frequency (RF) driver. RF excitation gives fast, clean pulses and a steady output, and the tube is designed for a long service life, with a rated life of about 30,000 hours.

Higher available power means the same energy can be delivered in a shorter pulse, so less time for heat to spread beyond the target, and more headroom for surgical cutting and ablation.



70 W compared with a typical 40 W system

Comfort
Shorter pulses at the same energy

Recovery
Designed for less downtime

Pigment risk
Designed to lower hyperpigmentation risk

Working life
Tube runs well below its limit

BEAM DELIVERY

7-joint articulated arm & precision optics



Seven joints, full reach

The beam travels through a seven-joint mirror arm that moves freely around the patient while keeping transmission loss low, so the energy reaching the skin is stable and evenly distributed.

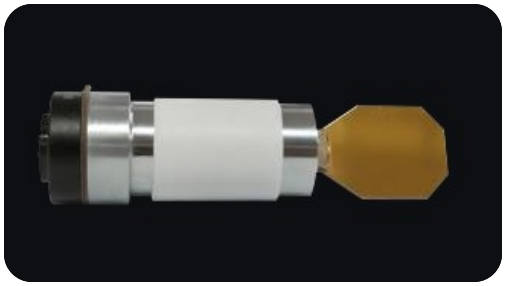
Gold-plated mirrors and ZnSe focusing lens



Gold-coated reflectors raise reflectivity at 10,600 nm, and a zinc selenide (ZnSe) lens, a standard material for CO_2 optics, focuses the beam into fine, uniform dots for a consistent output.

SCANNER

High-speed nano-sensor scanner

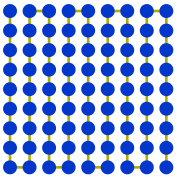


The scanner is driven by a USA-made nano-sensor motor that positions the beam quickly and accurately. Combining shapes, sizes, densities and patterns gives more than 3,000 scan configurations, with a scan area of up to 20 × 20 mm and a focused spot of 0.1 mm or less.

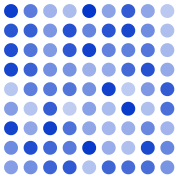
Seven scan shapes



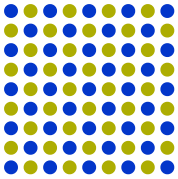
Three scan patterns



Standard
Dots fired in order, row by row.



Random
Dots fired in a random order across the area.



Scatter
Neighboring dots fired apart to spread heat.

SURGICAL

Two surgical handpieces



Two focused handpieces, rated 50 mm and 100 mm, let the operator switch between fine detail work and larger treatment areas in surgical mode.

50 mm handpiece | 100 mm handpiece

Pattern diagrams are schematic and simplified.

CONTROL

Intelligent touchscreen software

A 12.1-inch touch display runs five operating modes from a single home screen.



Fractional
Grid-based resurfacing for the face and body.

Surgical
Focused-beam cutting and ablation.

Scan-Fractional
Sliding, in-motion fractional treatment.

Gynecology & **Vulvar**
Modes for the dedicated gynecology handpieces.

Seven one-touch presets

Fractional mode stores starting parameters for seven common treatments. The operator picks the treatment and the system loads the settings, which can then be fine-tuned, so new users get up to speed quickly.

- Skin resurfacing
- Wrinkles
- Scars
- Acne scars
- Stretch marks
- Large pores
- Pigmented lesions



Scan-fractional: treat while moving



Instead of placing one stamp after another, the handpiece fires continuously as it glides over the skin. This sliding method greatly cuts the time needed for full-face resurfacing.

Shape, size, power, duration, interval and density are all set from the same screen.

GYNECOLOGY HANDPIECES

Dedicated intimate-health handpieces

Separate gynecology and vulvar modes work with a set of dedicated handpieces for internal and external procedures.





Internal probes

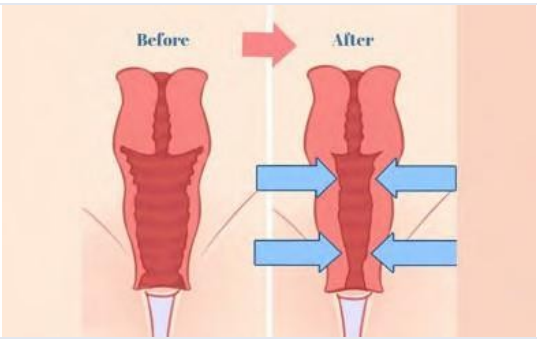
Interchangeable reflector tips, a 180° conical reflector and a 45° angled reflector, adapt the probe to different procedures.

Applications: vaginal rejuvenation, vaginal atrophy, vaginal laxity.

External handpieces

Open-tip and angled handpieces are used in vulvar mode for work on the external tissue.

Applications: vulvar reshaping, postpartum perineal scars, labial and clitoral hypertrophy, genital lightening, stress urinary incontinence.





How it works

The CO_2 beam is delivered along the vaginal wall in a precise fractional pattern, creating a controlled thermal effect in the mucosa. The heat is intended to trigger tissue contraction and new collagen formation in the surrounding tissue.

Practitioner use only. Indications, clearances and regulatory status for gynecologic use vary by country and are not represented in this brochure. Confirm local requirements before offering these procedures. Contact MD Lasers for details.

Schematic illustrations.

TECHNICAL DATA

Specifications

Laser type	Carbon dioxide (CO_2), 10,600 nm
Laser source	RF-excited metal tube
Maximum output power	70 W
Focused spot diameter	≤ 0.1 mm
Pulse width	0.1–10 ms, in 0.1 ms steps
Repeat count	1–20, in steps of 1
Scan shapes	Square, rectangle, circle, triangle, hexagon, ellipse, line
Maximum scan area	20 × 20 mm
Scan patterns	Standard, random, scatter
Operating modes	Fractional, surgical, scan-fractional, gynecology, vulvar
Treatment presets	7 (fractional mode)
Beam delivery	7-joint articulated arm
Optics	Gold-plated mirrors, ZnSe focusing lens
Handpieces	Fractional scanner; 50 mm & 100 mm surgical; gynecology (180° conical / 45° angled) and vulvar
Display	12.1" LCD touchscreen
Power supply	AC 110 V 60 Hz or AC 220 V 50 Hz
Dimensions	22 × 19 × 47 in



Sales, service & support from MD Lasers

We buy, sell, refurbish and service aesthetic lasers.

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Specifications subject to change without notice. Regulatory status and indications vary by market; contact MD Lasers for details.