

SMARTXIDE DOT®



MEDICINE AND AESTHETICS

SMARTXIDE DOT®

**Fractional and Traditional Skin Resurfacing
Skin Surgery
Plastic and Aesthetic Surgery**

Advanced CO₂ Fractional Technology

**Exclusive SmartPulse Technology
Innovative SmartStack Function**



The Code of Excellence

SMARTXIDE DOT®

EXCELLENCE, TECHNOLOGY AND RELIABILITY

The natural effects of aging, sunlight and exposure to air pollution cause a gradual deterioration in both the structure and functions of the skin. SmartXide DOT has paved the way for a new generation of CO₂ lasers. Yet another DEKA breakthrough, melding scientific knowledge and technological advances to bring physicians innovative solutions to enhance and facilitate their work. The SmartPulse technology and the SmartStack function guarantee maximum reliability in controlling the depth of vaporization and the non-ablative thermal effect on the skin. Minimal thermal damage to the surrounding tissue guarantees rapid recovery for the patient.

"SmartXide DOT means that I can use fractional technology in a completely safe manner in my daily work. The fact that you can precisely set all the parameters - such as power, DOT dwell time, SmartStack level and distance between DOTs - allows me to treat all my patients successfully and without complications, even when they have phototype IV or V skin."

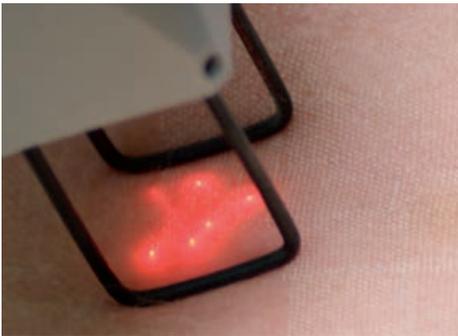
Anne Le Pillouer-Prost, MD

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MEDICINE AND AESTHETICS

SMARTXIDE DOT®

SMARTXIDE DOT EXPANDS PHYSICIANS' CAPABILITIES WHILE IMPROVING PATIENTS' LIFE



In addition to the traditional and interlaced scan methods, SmartXide DOT also features the special SmartTrack algorithm. Developed to enhance post-treatment recovery, SmartTrack optimizes the scanning of the treatment area, minimizing the local increase in temperature.

SmartXide DOT is the only CO₂ laser that works through pulsed emission, utilizing two innovative technologies: SmartPulse and SmartStack.

This is a major breakthrough compared to other fractional systems that utilize a continuous source or traditional pulsed emission.

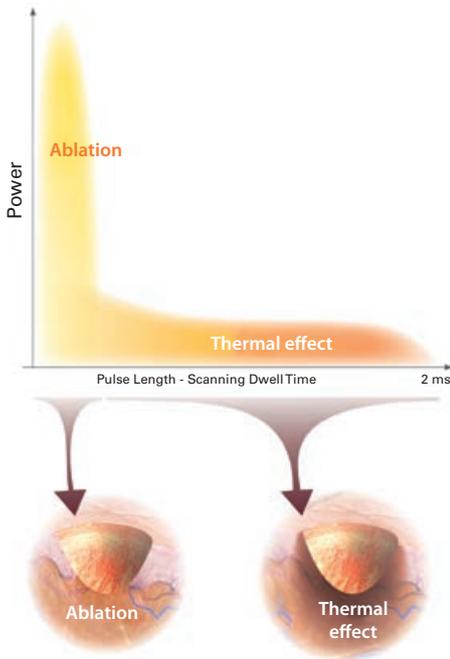
The unique SmartXide DOT technology makes it the only system capable of treating even the most complex cases, such as scarring, surface pigmentation and deep wrinkles, tailoring treatments and downtime to the patient's needs. Areas such as the neck and eyelids, and even phototypes with a high PIH (Postinflammatory Hyperpigmentation) risk – to date considered out of reach – can now be treated successfully and safely.

SIMPLE, PRECISE AND EFFICIENT

Power, distance between DOTs, DOT dwell time, SmartStack level, scanning methods, shape and size of the treatment area: these are the parameters that can be individually adjusted to precisely tailor each treatment to the patient's needs.



3	Scanning methods (Normal, Interlaced, SmartTrack).
5	SmartStack levels.
5	Adjustable scanning: size, height, width ratio.
19	DOT dwell times.
29	Power levels.
38	Treatment densities.
1.570.350	Possible combinations.



ADVANTAGES OF NEW SMARTPULSE PULSED EMISSION TECHNOLOGY

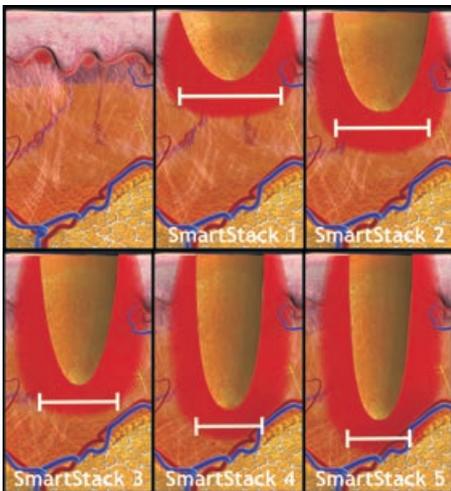
SmartPulse allows to generate perfectly-controlled energy pulses, making it the ideal solution for Skin Resurfacing treatments. The SmartPulse technology eliminates the side effects of constant scanning and is always active, during both the traditional and fractional scanning phases and during the use of handpieces.

Ablation The high power peak of the first part of the pulse releases a large quantity of energy in a very short time, for rapid ablation of the epidermis and the first layers of the derma with a lower water content.

Thermal Effect After this rapid vaporization, the energy of the pulse spreads the heat in the water-rich deep derma, generating immediate shrinkage and the production of new collagen. The damage to the epidermis is minimal and recovery times are dramatically reduced.

SmartPulse: Ablation and thermal denaturation, two effects in a single pulse.

THE INNOVATIVE SMARTSTACK FUNCTION



The SmartStack function works by emitting a series of pulses in rapid succession (from 1 to 5) into the same point (DOT), and is designed to precisely control the depth of skin vaporization and the thermal action. This makes SmartXide DOT more effective and safer even than pulsed laser systems with an ablative effect only.

SmartStack technology helps reducing recovery times while enhancing patient comfort.

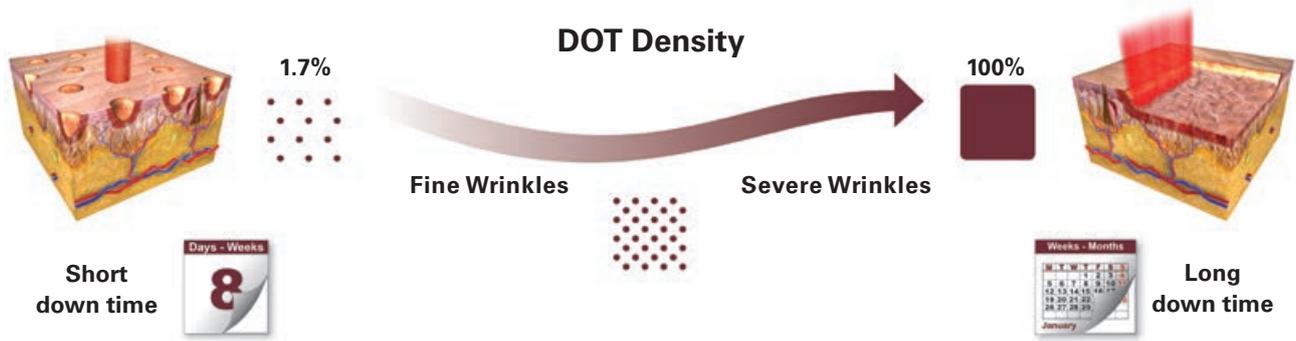
Control of Thermal Effect on Tissues: physicians can choose whether to deliver the laser energy in a single pulse or in a series of successive pulses in the same scanning DOT. When more than one pulse is utilized, the tissue cools down between the two successive pulses, reducing thermal damage. This also diminishes the risk of undesirable side effects on particularly delicate areas, and in patients with dark or Asiatic phototypes.

Effects of the laser pulses on the skin in proportion to increase of the SmartStack level. A progressive narrowing of the ablation channel due to the enhanced shrinkage effect can be observed.

Precise Control of Vaporization Depth: even when a greater depth of ablation is required, as in the treatment of scars, SmartXide DOT prevents severe skin bleeding, with consequent faster recovery time.

Fractional Skin Resurfacing

Traditional Skin Resurfacing



FRACTIONAL AND TRADITIONAL SKIN RESURFACING

With SmartXide DOT physicians can select treatment parameters ranging from fractional, superficial and delicate treatments (minimum density 1.7%) to increasingly deeper treatments such as skin resurfacing (density 100%). Physicians can now offer the most appropriate treatment based on patients' need.

A fractional treatment calls for a number of sessions, but the post-op care is much simpler, with rapid recovery times and minimal complications.

A full resurfacing treatment is usually performed in just one session, but it requires longer and more complex post-op care.

The thermal control of the emissions offered by the SmartPulse technology reduces recovery time even in skin resurfacing treatments.



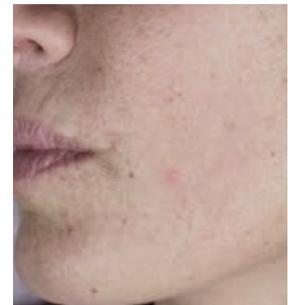
Fractional Skin Resurfacing

Courtesy of Dr. D. S. Sarnoff - New York City - NY, USA.



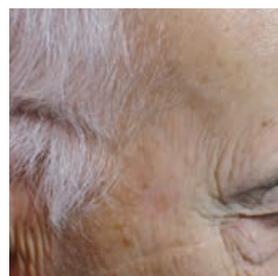
Traditional Skin Resurfacing

Courtesy of Prof. P. Campolmi, Prof. G. Cannarozzo, Prof. P. Bonan Florence - Italy.



DERMATOLOGICAL SURGERY

SmartXide DOT can be utilized for a wide range of dermatological surgical treatments. The excellent results are guaranteed by DEKA's lengthy experience dating back to the emergence of CO₂ lasers.



Seborrheic Keratosis

Courtesy of Prof. P. Campolmi, Prof. G. Cannarozzo, Prof. P. Bonan Florence - Italy.



Nevus Sebaceous

Courtesy of Prof. P. Campolmi, Prof. G. Cannarozzo, Prof. P. Bonan Florence - Italy.

TECHNICAL DATA - Laser System and Hi-Scan DOT

SMARTXIDE

Laser Type	CO ₂
Wavelength	10.6 µm
Power on Tissue	30 W (max.)
Repetition Rate	From 5 to 100 Hz
Pulse Duration	From 0.2 to 80 ms
Pulse Technology	Smartpulse
Beam Delivery	Titanium articulated arm with 7 mirrors
Aiming Beam	Diode laser, 3 mW @ 635-670 nm
Control Panel	LCD Colour Touch Screen
Electrical Requirements	230 Vac / 2.4 A (max.) / 50-60 Hz 115 Vac / 3.7 A (max.) / 50-60 Hz
Dimensions & Weight	120 cm (H), 48 cm (W), 55 cm (D), 38 Kg

HI-SCAN DOT

Scanning Area	Max. 15 x 15 mm - Min. 1 x 4 mm
Scanning Methods	Normal, Interlaced and SmartTrack (only in DOT mode)
DOT Mode (Fractional)	
DOT Size	120 µm
Dwell Time	From 0.2 to 2 ms
DOT Spacing	From 200 to 2000 µm
SmartStack Level	From 1 to 5
Traditional Mode	
Dwell Time	From 0.2 to 20 ms

CAUTION

Visible and invisible laser radiation.
Avoid eye or skin exposure to direct or scattered radiation.
Class 4 laser product.

This brochure is not intended for the market of USA.



FRACTIONAL AND TRADITIONAL SKIN RESURFACING SKIN SURGERY - PLASTIC AND AESTHETIC SURGERY

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The Code of Excellence

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DEKA The Code of Excellence

A spin-off of the EL.En. Group, DEKA is a world-class leader in the design and manufacture of lasers and light sources for applications in the medical field. DEKA markets its devices in more than 80 countries throughout an extensive network of international distributors as well as direct offices in Italy, France, Germany, Japan and USA. Excellence is the hallmark of DEKA's experience and recognition garnered in the sphere of R&D in over thirty years of activity. Quality, innovation and technological excellence place DEKA and its products in a unique and distinguished position in the global arena. DEKA manufactures laser devices in compliance with the specifications of Directive 93/42/EEC and its quality assurance system is in accordance with the ISO 9001 and ISO 13485 standards.