



**MEDICINE AND AESTHETICS**

**SMARTXIDE<sup>2</sup>**

**CO<sub>2</sub> and RF: Valuable Synergies  
for Skin Rejuvenation**

**SmartXide<sup>2</sup> System: Unique, Versatile,  
Multidisciplinary**

**DEKA Intelligent Technologies:  
Experts from the Start**

**DOT Therapy  
Periocular Lifting  
Dermatological Surgery  
Plastic and Aesthetic Surgery**



The Code of Excellence

## SMARTXIDE<sup>2</sup>

### SMARTXIDE<sup>2</sup> DOT/RF: COMBINED ACTION, TOTAL REJUVENATION

With SmartXide<sup>2</sup> DOT/RF DEKA has developed an innovative and exclusive configuration designed for aesthetic medicine and dermatological surgery, introducing for the first time the combined action of CO<sub>2</sub> laser with radiofrequency to combat skin alterations as never before.

SmartXide<sup>2</sup> corrects skin imperfections and counteracts the effects of aging, such as wrinkles and flabbiness, by exerting a unique action on the tissues with effective stimulation of neocollagenesis. It is also ideal for areas hitherto considered untreatable such as the neck, décolleté and pericardial area.

DEKA, world leader in the development of advanced laser systems, concentrated the results of thirty years of know-how into the technological advancements of the SmartXide<sup>2</sup>. The CO<sub>2</sub> laser source with exclusive **PSD**<sup>®</sup> (Pulse Shape Design) technology, achieves performance levels never attained before in dermatological applications. The therapeutic action selectively reaches surface tissues and deeper areas, ensuring maximum reliability in controlling the application, with minimum thermal damage and extremely rapid recovery times for patients. In line with the ongoing quest for innovation, DEKA paves the way towards a new multidisciplinary, avant-garde laser system.

*"I have been using SmartXide<sup>2</sup> DOT/RF since 2010 with fantastic results. SmartXide<sup>2</sup> is clearly superior to all the other CO<sub>2</sub> laser sources. Thanks to the **PSD**<sup>®</sup> technology it works in continuous mode and in a multitude of pulsed modes with very different features. This versatility makes it possible to select the optimal pulse shape for the required treatment. I can work in "cold" mode when I have to vaporise with minimal heat damage to the surrounding tissues, in "hot" mode to coagulate, and also in "heat selection" mode when I have to operate in depth on small areas, as with skin resurfacing and fractionated rejuvenation. It is precisely in this type of application that the new HiScan DOT/RF offers unique performance with amazing results and fewer sessions. All this is made possible by the option, offered exclusively by HiScan DOT/RF, of using a radiofrequency source combined with CO<sub>2</sub> laser."*

**Prof. Nicola Zerbinati, MD**  
Department of Dermatology  
University of Insubria - Varese, Italy

# MEDICINE AND AESTHETICS

## SMARTXIDE<sup>2</sup>

### SMARTXIDE<sup>2</sup> CO<sub>2</sub> LASER: UNCOMPROMISING VERSATILITY

The high emission SmartXide<sup>2</sup> CO<sub>2</sub> laser system generates optimal pulses for multidisciplinary applications, especially in aesthetic medicine and dermatological surgery. This is the result of the development of a CO<sub>2</sub> RF laser source with the exclusive **PSD<sup>®</sup>** (*Pulse Shape Design*) technology.

The SmartXide<sup>2</sup> unique features and power allows for the creation of fractional laser pulses with variable durations and peak powers, something completely new in CO<sub>2</sub> laser technology.

The benefits for physicians and patients are evident: it is no longer necessary to use a single pulse shape for all treatments since a range of pulse modes designed to offer the utmost benefits with least invasiveness and best results are now available.

Exploiting the synergistic action of the CO<sub>2</sub> laser and RF source, the innovative **HiScan DOT/RF** can selectively reach all the layers of the skin. Perfectly controlled heat is generated on the surface tissue and also in deeper areas, acting rapidly and effectively with great benefits for the patients.

#### HiScan DOT/RF

The first scanning system that integrates a CO<sub>2</sub> fractional laser with a radiofrequency energy source.

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SmartStack Levels, the function that controls the depth of vaporisation in the skin and the heat action produced by each laser pulse.

#### SmartTrack

Exclusive randomised fractional scanning algorithm to minimise local temperature increases.

5

Scanning figures adjustable in size and height/width ratio.

More than  
2,000,000

Different treatment combinations available.

#### PSD<sup>®</sup> Technology

SmartXide<sup>2</sup>, the first and only CO<sub>2</sub> laser system with the exclusive Pulse Shape Design technology enables total modularity of the pulse shape: the ability to combine the S-pulse, D-pulse, H-pulse and U-pulse with the CW mode, greatly expand the surgical capabilities of the SmartXide<sup>2</sup> making it an effective, versatile and powerful system.

#### Database

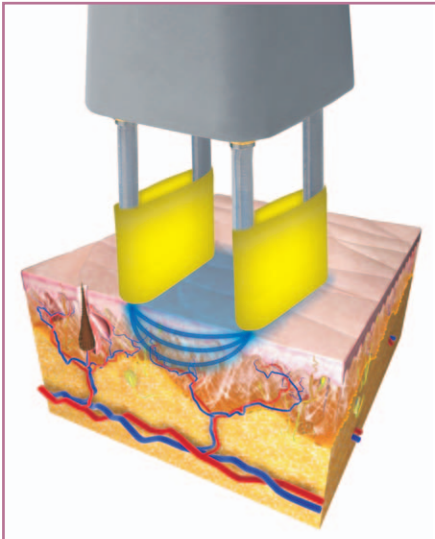
Integrated protocols designed for aesthetic dermatology and skin surgery.

#### Multimedia

Integrated photo and video database makes it easy to learn how to use the system.



## RADIOFREQUENCY: MORE POWER AND EFFECTIVENESS FOR LASER APPLICATIONS



The RF-bipolar technology of HiScan DOT/RF activates a selective heating of the derma and allows for a deep stimulation of neocollagenesis.

Radiofrequency enhances the effects of CO<sub>2</sub> laser treatment by remodelling tissue in-depth, toning flabbiness and stimulating fibroblast activity to produce new collagen.

The HiScan DOT/RF scanning system comes with two special spacers that utilize RF-bipolar technology to generate selective heating and a deep and localised action in the skin. The combined and simultaneous action of RF and CO<sub>2</sub> laser allows to reduce the recovery time and to accelerate the healing of the dermal tissues. An accessory is also available to connect the scanner to the SmartCryo system to enable continuous cooling and thus preserve the more superficial layers of the skin, reducing sensitivity to the treatment and recovery times. A similar accessory is used for smoke evacuation through a dedicated connection adaptable to the most diffused smoke evacuators.

## DOT TECHNOLOGY: EFFECTIVENESS AND QUALITY



The new **HiScan DOT/RF** scanner system.

The SmartXide<sup>2</sup> DOT technology enables accurate selection of all the operating parameters, modulating treatments in line with the characteristics of the patient and the target tissues.

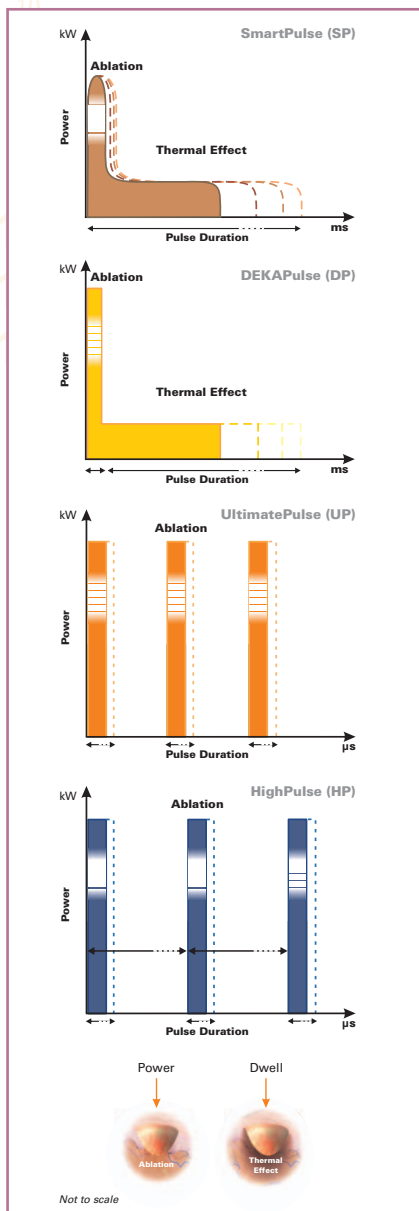
This makes it especially useful in more complex treatments such as scars, surface pigmentation, deep rhytidosis, and in skin phototypes with a high risk of PIH (*Postinflammatory Hyperpigmentation*).

Ideal for treating delicate areas such as the neck and décolleté, SmartXide<sup>2</sup> is also indicated for minimally invasive lifting of the periorcular area.

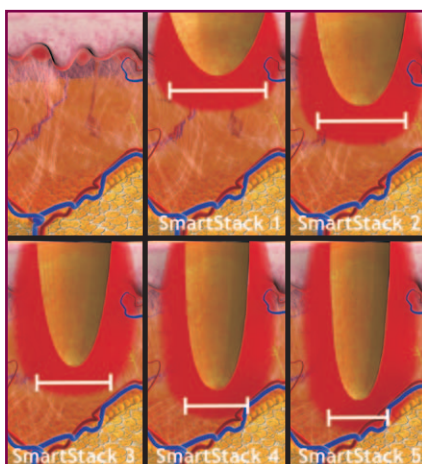
### Versatile, Precise, Safe Technology

Power, scanning mode with *SmartTrack* algorithm, shape and size of treatment area, distance between DOTs, DOT dwell-time, and *SmartStack* level are all parameters which, when appropriately set, make it possible to perform all types of aesthetic and dermatological treatment in the most efficient manner, facilitating the patient's post-op recovery.





Ablation and thermal denaturation, two effects modulated by the new SmartXide<sup>2</sup> pulses.



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.

## PSD®: TOTAL CONTROL OF THE PULSED EMISSIONS

Complete control of duration, energy and shape of each pulse makes SmartPulse (SP), DEKAPulse (DP) and HighPulse (HP) the best solution for all the needs in Skin Resurfacing treatments. SP, DP and HP can modulate the ablation and the coagulation (thermal effect) in fractional scanning modes.

**Ablation.** The high peak power emitted in the first part of the pulse releases a great amount of energy very rapidly and causes immediate ablation of the epidermis and the topmost skin layers, less rich in water.

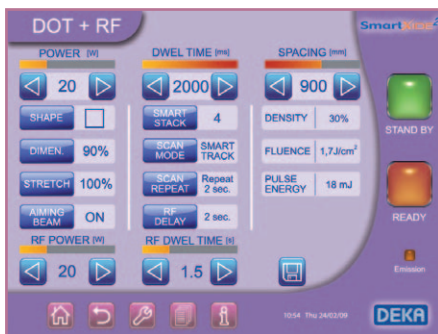
**Thermal effect.** Following rapid vaporisation, the energy generated propagates in the form of heat deep down in the water-rich derma. The result is immediate “shrinkage” of the tissues and direct stimulation of the cells to produce new collagen. Damage to the skin is minimal and recovery times are greatly reduced.

## THE INNOVATIVE SMARTSTACK FUNCTION

The *SmartStack* function guarantees maximum precision in controlling the vaporisation depth of the skin and the thermal effect (or damage), with the possibility of varying subsequent pulse emissions between 1 and 5 in the same point (DOT), making the SmartXide<sup>2</sup> DOT/RF system safer and more effective than other pulsed laser systems with only ablative effect. This results in rapid recovery times and enhanced patient comfort

**Control of thermal effect:** the physician can release the laser energy in a single pulse or in several consecutive pulses, always on the same DOT. By increasing the SmartStack level the tissue cools between one pulse and the next, thus reducing thermal damage and the risk of undesirable side effects in particularly delicate areas or in patients with dark or Asian phototypes.

**Precise control of the vaporisation depth:** even where greater ablation depth is called for, as in the treatment of scars, SmartXide<sup>2</sup> DOT/RF prevents heavy bleeding of the skin and the consequent lengthy recovery times.



Software Deka: user-friendly right from the start.

## DEKA SOFTWARE: SIMPLICITY AND KNOW-HOW SERVING THE PHYSICIAN

SmartXide<sup>2</sup> new graphic interface is designed to simplify and facilitate control of all the functions available. The large *LCD Touch Screen* ensures easy selection of the operating parameters.

The integrated database allows for rapid selection of the most suitable settings for carrying out the medical treatment, considerably reducing the time usually needed to learn how to use such a complete system with so many functions. The multimedia content with photos and videos provides quick and targeted training for the specialists and their staff.



The simplicity and practicality of the diode laser, coupled with the speed and precision of the CO<sub>2</sub> laser, make the SmartXide<sup>2</sup> an extremely versatile and powerful system.

## SMARTXIDE<sup>2</sup> SYSTEM: UNIQUE, VERSATILE, MULTIDISCIPLINARY

Versatility, high performance and efficacy in the pursuit of excellence: with its multidiscipline and poly-functional properties, the SmartXide<sup>2</sup> system represents a real innovation for the range of CO<sub>2</sub> and diode lasers. In fact, SmartXide<sup>2</sup> comes with a complete series of accessories that can be adapted for use in dermatology and aesthetic medicine, surgery (ENT and Gynaecology), V<sup>2</sup>LR (*Vulvo-Vaginal Laser Reshaping*) and dentistry.

Each system comes with a complete database and specific handpieces as well as optional accessories designed to enhance and intensify the four specialities depending on the physician's requirements.

Physicians can select the most suitable configuration for their specific needs, indicating source type and power when placing their order. The accessories can also be upgraded to extend the applications later on.

SmartXide<sup>2</sup> can also be upgraded with an additional diode laser module.

Diode lasers are well known and widely used in the surgical sector since they are user-friendly and ensure the benefits that only a versatile optic fibre transmission system can offer, especially in difficult-to-treat areas.

Available with 2 different wavelengths (940 nm or 980 nm), 2 different maximum powers (30 W and 50 W), they also come with a wide range of optical fibres from 200 to 600 microns that can be sterilised as many as 10 times.

## SYNERGISTIC TECHNOLOGIES FOR ADVANCED TREATMENTS

Combining the benefits of a CO<sub>2</sub> laser with an RF source, SmartXide<sup>2</sup> with the HiScan DOT/RF scanner offers physicians a wide range of applications and benefits thus becoming an indispensable tool in modern medical-aesthetic practices. SmartXide<sup>2</sup> 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 CO<sub>2</sub> lasers.



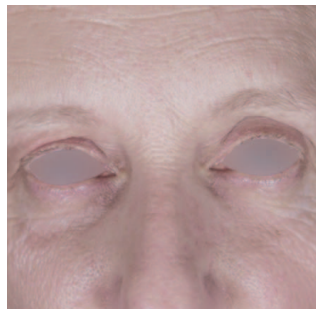
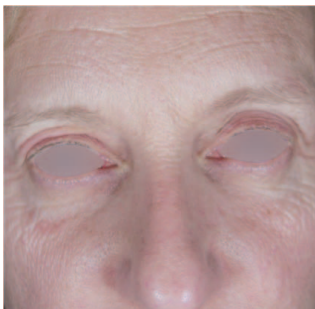
### Combined treatment of scars with DOT + RF.

*Courtesy of Prof. N. Zerbinati, MD. Varese – Italy.*



### Combined treatment of scars with DOT + RF.

*Courtesy of Prof. N. Zerbinati, MD. Varese – Italy.*



### Periocular Lifting.

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



### DOT Therapy.

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



### Dermatosis papulosa nigra.

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



### Inflammatory Linear Verrucous Epidermal Nevus.

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



## TECHNICAL DATA

### SMARTXIDE<sup>2</sup> - Configuration in Dermatology and Aesthetic Medicine

Model	C40	C60	C80
Laser Type	CO <sub>2</sub> RF-PSD®		
Wavelength	10.6 µm		
Emission Beam Mode	TEM <sub>00</sub>		
Emission Modes	CW - SP - DP - HP	CW - SP - DP - UP - HP	
CW Power	From 0.5 to 40 W	From 0.5 to 60 W	From 0.5 to 70 W
UP Power	From 0.5 to 40 W	From 0.5 to 60 W	From 0.5 to 80 W
Repetition Rate in UP	NA	Up to 2,000 Hz	
HP Power	From 0.1 to 4.0 W	From 0.1 to 8.0 W	From 0.1 to 15.0 W
Repetition Rate in HP	From 5 to 100 Hz	From 5 to 100 Hz	From 5 to 200 Hz
Emission Time	From 0.001 to 1 s		
Delay Emission Time	From 0.1 to 1 s		
Beam Delivery	Articulated arm with 7 mirrors and counterweight		
Aiming Beam	Laser diode @ 635 nm - 5 mW - Adjustable intensity from 1 to 100% - Aiming light OFF while lasing (DOWL).		
User's Database Lines	150		
Control Panel	Wide LCD Colour Touch Screen (10.4")		
Accessories*	HiScan DOT/RF Scanner System Laser diode @ 940 or 980 nm - 30 or 50 W Wide range of handpieces		
Electrical Requirements	9 A @ 230 Vac	9,5 A @ 230 Vac	10 A @ 230 Vac
Dimensions and Weight	162 (H) x 59 (L) x 56 (D) cm - kg 95 63.8 "(H) x 23.2 "(W) x 22.0" (D) - 267 Lb		

### HiScan DOT/RF Scanning System

Max Scanning Area	15 x 15 mm
Dwell Time	from 100 to 2,000 µs
DOT Spacing	from 0 to 2,000 µm
Scanning Shapes	DOT, Line, Triangle, Parallelogram, Exagon, Square
Scanning Modes	Normal, Interlaced, SmartTrack
SmartStack	From 1 to 5
RF Power	From 1 to 50 W

\*In this catalogue only the characteristics inherent to Dermatology and Aesthetic Medicine are listed. Please refer to the SmartXide<sup>2</sup> General Catalogue for the complete list of characteristics.

### Integrated Laser Diode (optional)

Model	D430	D830	D450 (only available for CO <sub>2</sub> models C60 and C80)	D850 (only available for CO <sub>2</sub> models C60 and C80)
Wavelength	940 nm	980 nm	940 nm	980 nm
CW Power	30 W		50 W	
Aiming Beam	Diode @ 635 nm - 3 mW			
Beam Delivery	Optical fibres from 200 to 600 µm that can be sterilised as many as 10 times.			



**DOTTHERAPY - PERIOCCULAR LIFTING - DERMATOLOGICAL SURGERY  
PLASTIC AND AESTHETIC SURGERY**

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# SmartXIDE<sup>2</sup>



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Dealer stamp



[www.dekalaser.com](http://www.dekalaser.com)

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**DEKA The Code of Excellence**  
A spin-off of the Ei.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/EC and its quality assurance system, certified by  is in accordance with the ISO 9001 and ISO 13485 standards.