



IA

INNATE ABILITY

## SMARTXIDE<sup>2</sup>

CO<sub>2</sub> and Radiofrequency:  
Combined Action Total Rejuvenation

- DOT/RF Therapy
- DOT Therapy
- Periocular Lifting
- Dermatological Surgery
- Plastic and Aesthetic Surgery

**DEKA**  
Innate Ability

All it takes  
is a touch!



SmartXide<sup>2</sup>

## DOT/RF Therapy: valuable synergies for skin rejuvenation

DEKA, world leader with more than thirty years' experience in advanced laser systems, has developed an innovative and exclusive configuration designed for aesthetic medicine and dermatological surgery. This device, called SmartXide<sup>2</sup>, can be equipped with the HiScan DOT/RF scanner system using the combined action of CO<sub>2</sub> laser with radiofrequency (RF).

**“** I have been using **DOT/RF Therapy** 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 exclusive **PSD®** (Pulse Shape Design) 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 fractioned rejuvenation. It is precisely in this type of application that the new **HiScan DOT/RF** offers unique performance with amazing results, fewer sessions and extremely rapid recovery times for patients. 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. **”**

Nicola Zerbinati, M.D.  
Department of Dermatology  
University of Insubria - Varese, Italy





## The Most Advanced CO<sub>2</sub> Laser Technology for Dermatology

DEKA 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®** (Pulse Shape Design) technology, achieves performance levels never attained before in dermatological applications. **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.

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. It is also ideal for areas until now considered untreatable such as the neck, décolleté and periocular area.

In line with the ongoing quest for innovation, DEKA opens the way towards a new multidisciplinary, avant-garde laser system.

**Scientific  
knowledge and  
technological  
advances to provide  
physicians with  
innovative  
solutions**



### SmartXide<sup>2</sup> PLUS

|                     |                                                                                                                                                                                                                              |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HiScan DOT/RF       | The first scanning system that integrates CO <sub>2</sub> fractional laser with bipolar RF energy source.                                                                                                                    |
| 5                   | SmartStack levels, for a precise control of the thermal effect and vaporization depth.                                                                                                                                       |
| 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 | Combination settings available.                                                                                                                                                                                              |
| PSD® Technology     | The exclusive Pulse Shape Design technology enables the maximum flexibility of the pulse shape: S-Pulse, D-Pulse, H-Pulse, U-Pulse and the CW mode, greatly expand the surgical capabilities of the SmartXide <sup>2</sup> . |
| Database            | Integrated protocols designed for Aesthetic Dermatology and other applications (as V <sup>2</sup> LR, Gynaecology and Dentistry). An easy way to learn how to use such a complete system with so many functions.             |
| Multimedia Features | Integrated photo and video tutorial providing quick and targeted training for specialists and their staff.                                                                                                                   |

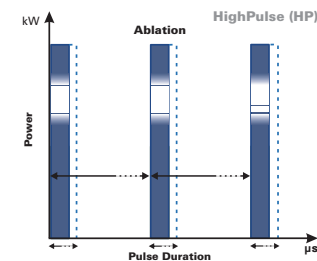
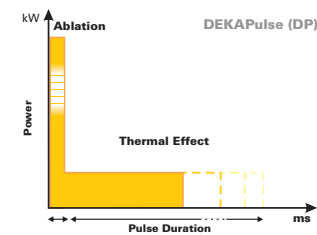
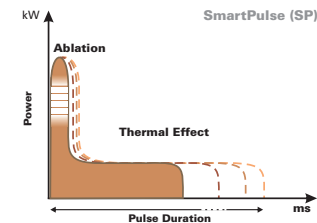


## PSD® Technology: Uncompromising Versatility

The **SmartXide<sup>2</sup>** generates optimal pulses for multidisciplinary applications, especially in aesthetic medicine and dermatological surgery. This is the result of the development of RF CO<sub>2</sub> laser source equipped with the exclusive proprietary PSD® (Pulse Shape Design) technology that makes it possible to have the complete control of duration, energy and shape of each pulse. With Smart-Pulse (SP), DEKAPulse or D-Pulse (DP) and HighPulse (HP) the user always has the best solution for all patient's needs in skin resurfacing and surgical treatments.

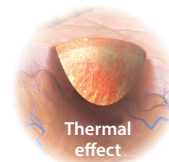
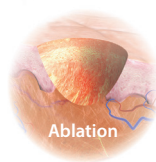
PSD® can modulate the ablation and the coagulation (thermal effect) freehand and fractional scanning modes:

- **Ablation.** The high peak power delivered in very short time releases a great amount of energy rapidly and causes immediate ablation of the epidermis and the topmost skin layers, which are less rich in water.
- **Thermal effect.** Following rapid vaporisation, the CO<sub>2</sub> laser energy is transformed in heat propagating deep down in the water-rich derma. The result is an immediate tissue shrinkage and direct stimulation of the cells to produce new collagens.



Power

Dwell Time



Pulse selection allows for perfect modulation of ablation and thermal denaturation effects in the most efficient way, according to the patient's needs. The specific features of each pulse shape is able to specifically perform several treatments offering utmost benefits, with least invasiveness, quicker recovery time and excellent results with evident advantages for physicians and patients!



## Synergistic Technologies for Advanced Treatments

**DOT/RF Therapy  
acts rapidly and  
effectively!**

### Radiofrequency: more power and effectiveness for laser applications

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 bipolar RF technology to generate selective heating of derma with a deep and localised action on the skin. Exploiting the synergy of the CO<sub>2</sub> laser and RF source, the innovative HiScan DOT/RF can selectively reach all skin layers. RF activates a selective action on the derma. The heat generated is perfectly controlled in depth, allowing for a deep stimulation of neocollagenesis with a rejuvenating and tighten effect on the skin.



effectiveness



safety



innovation



versatility

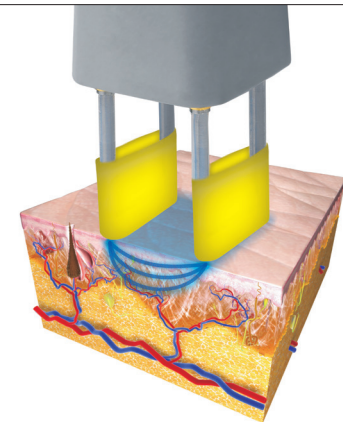
### HI-Scan DOT/RF: versatile, precise, safe technology

The SmartXide<sup>2</sup> laser with DOT/RF technology enables accurate selection of all the operating parameters thus making it possible to perform all types of aesthetic and dermatological treatments in the most efficient way, facilitating the patient's post-op recovery. This makes it especially proper in more complex treatments such as scars, cutaneous pigmentation, deep rhythidosis, and in the darkest skin phototypes, SmartXide<sup>2</sup> virtually eliminates the risk of PIH (Post Inflammatory Hyperpigmentation).

Ideal for treating delicate areas such as the neck and décolleté, SmartXide<sup>2</sup> is also particularly suitable for minimally invasive periocular lifting.

The scanner can be connected to a 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.

Combining the benefits of a CO<sub>2</sub> laser with bipolar 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.



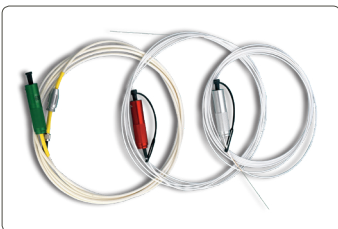
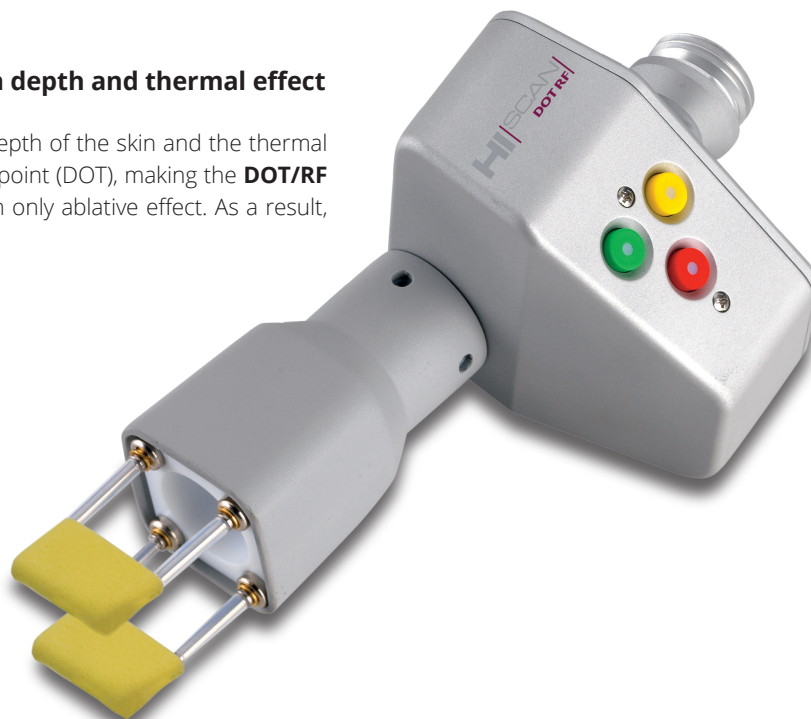
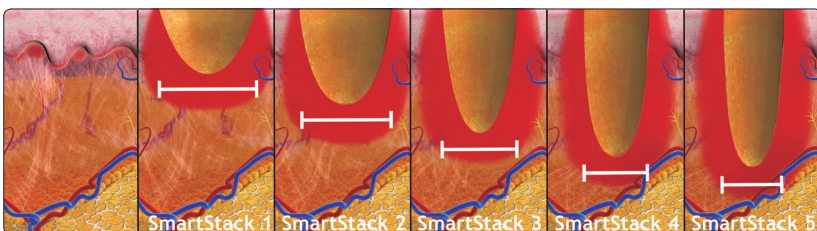


## Innovative Solutions for Cutting-Edge CO<sub>2</sub> Laser Systems

### SmartStack function: maximum precision in controlling skin vaporisation depth and thermal effect

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

- **Control of thermal effect:** The laser energy can be delivered 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, particularly in delicate areas or in patients with dark or Asian phototypes.
- **Precise control of the vaporisation depth:** **SmartXide<sup>2</sup>** prevents heavy bleeding and the consequent lengthy recovery times, even where greater ablation depth is called for, as in the treatment of scars.



### Diode laser: flexibility and practicality coupled with the speed and precision of the CO<sub>2</sub> laser for the maximum of versatility

Available with 2 wavelengths (940 nm or 980 nm), 2 maximum power of 30 W or 50 W, the diode laser can work with optical fibres from 200 to 600 microns, single use or 10 times sterilisable. A disposable kit for endovascular laser therapy is also available. If not integrated already in the system at time of purchase, the diode laser can upgrade the equipment at any time. A wide range of applications are possible, especially in endovascular laser therapy as well as in Dermatology, General Surgery and Endoscopy thanks to the versatile delivery of the laser beam in the optical fiber.



## Clinical Cases



A



B

Combined scars treatment with DOT + RF.  
*Courtesy of: N. Zerbinati, M.D. Varese - Italy.*



A



B

Combined scars treatment with DOT + RF.  
*Courtesy of: N. Zerbinati, M.D. Varese - Italy.*



A



B

Periocular Lifting.  
*Courtesy of: P. Campolmi, M.D. - G. Cannarozzo, M.D. - P. Bonan, M.D. Florence - Italy.*



A



B

DOT Therapy.  
*Courtesy of: P. Campolmi, M.D. - G. Cannarozzo, M.D. - P. Bonan, M.D. Florence - Italy.*



A

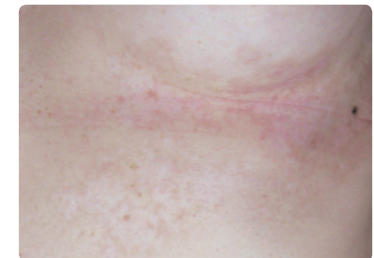


B

Dermatosis papulosa Nigra.  
*Courtesy of: P. Campolmi, M.D. - G. Cannarozzo, M.D. - P. Bonan, M.D. Florence - Italy.*



A



B

Inflammatory Linear Verrucous Epidermal Nevus.  
*Courtesy of: P. Campolmi, M.D. - G. Cannarozzo, M.D. - P. Bonan, M.D. Florence - Italy.*

## Technical Data

### Smartxide<sup>2</sup> - Configurations in Dermatology and Aesthetic Medicine

| Models                             | C40                                                                                                                        | C60                                                                           | C80                                                                            |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| <b>Laser Type &amp; Wavelength</b> | CO <sub>2</sub> RF - PSD® emitting at 10.6 µm with emission beam mode TEM <sub>00</sub>                                    |                                                                               |                                                                                |
| <b>Emission Modes</b>              | CW - SP - DP - HP                                                                                                          | CW - SP - DP - HP - UP                                                        |                                                                                |
| <b>Power</b>                       | CW: 0.5 - 40 W; SP: 0.1 - 12 W; DP: 0.2 - 12 W; HP: 0.1 - 4 W; UP: N/A                                                     | CW: 0.5 - 60 W; SP: 0.1 - 15 W; DP: 0.2 - 15 W; HP: 0.1 - 8 W; UP: 0.5 - 60 W | CW: 0.5 - 70 W; SP: 0.1 - 15 W; DP: 0.2 - 15 W; HP: 0.1 - 15 W; UP: 0.5 - 80 W |
| <b>Emission Time &amp; Delay</b>   | Emission Time: from 0.01 to 0.9 s. Delay: from 0.3 to 5 s                                                                  |                                                                               |                                                                                |
| <b>Beam Delivery</b>               | 7 Mirrors articulated arm with counterweight                                                                               |                                                                               |                                                                                |
| <b>Aiming Beam</b>                 | Laser diode @ 635 nm - 4 mW - Adjustable intensity from 1% to 100% - Diode OFF while lasering (DOWL).                      |                                                                               |                                                                                |
| <b>Internal Database</b>           | About 150 factory stored protocols, upgradable by USB. Possibility of storing unlimited number of custom user's protocols. |                                                                               |                                                                                |
| <b>Control Panel</b>               | Wide LCD Colour Touch Screen (10.4")                                                                                       |                                                                               |                                                                                |
| <b>Accessories* (optional)</b>     | HiScan DOT/RF Scanner System. Wide range of handpieces. Laser diode @ 940 or 980 nm - 30 or 50 W                           |                                                                               |                                                                                |
| <b>Electrical Requirements</b>     | From 100 to 230 Vac (automatic selection). 1,600 VA - 50/60 Hz                                                             |                                                                               |                                                                                |
| <b>Dimensions** and Weight</b>     | 162 (H) x 59 (W) x 56 (D) cm - 95 kg                                                                                       |                                                                               |                                                                                |

### HiScan DOT/RF Scanning System

|                          |                                                                             |
|--------------------------|-----------------------------------------------------------------------------|
| <b>Max Scanning Area</b> | 15 x 15 mm                                                                  |
| <b>Dwell Time</b>        | From 100 µs to 2,000 µs, steps of 100 µs                                    |
| <b>Dot Spacing</b>       | From 0 to 2,000 µm, steps of 50 µm                                          |
| <b>Scanning Shapes</b>   | DOT, Line, Triangle, Parallelogram, Exagon, Square                          |
| <b>Scanning Modes</b>    | Normal, Interlaced, SmartTrack                                              |
| <b>SmartStack</b>        | From 1 to 5                                                                 |
| <b>Emission Modes</b>    | SP, DP, HP*** (DOT Fractional Scanning Mode)<br>CW (Standard Scanning Mode) |
| <b>RF Power</b>          | From 5 to 50 W                                                              |
| <b>RF Dwell Time</b>     | From 0.5 to 10 sec                                                          |

### Integrated Laser Diode (optional)

|                                                     |                                                                                                                                |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Wavelength</b>                                   | 940 nm or 980 nm                                                                                                               |
| <b>CW Power</b>                                     | 30 W 50 W                                                                                                                      |
| <b>Operating Modes</b>                              | CW and PW                                                                                                                      |
| <b>Exposure Modes</b>                               | Continuous, single pulse, burst or repeated burst                                                                              |
| <b>Emission time (Ton) &amp; Dealy (Toff) in PW</b> | Ton: from 5 ms to 2,000 ms; Toff: from 5 ms to 2,000 ms                                                                        |
| <b>Burst pulses in PW</b>                           | From 2 to 50                                                                                                                   |
| <b>Burst pulses in PW</b>                           | From 2 to 50                                                                                                                   |
| <b>Delay between bursts</b>                         | From 0.5 sec to 5 sec                                                                                                          |
| <b>Beam Delivery</b>                                | Optical Fibers of 200 µm, 300 µm, 400 µm, 500 µm and 600 µm, single use or 10 times sterilisable, with chip; SMA 905 connector |

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

\*\* Height with folded articulated arm. \*\*\* Not available for C40 model.

This brochure is not intended for the market of USA.

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**SmartXIDE<sup>2</sup>**

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#### DEKA Innate Ability

A spin-off of the Elen 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, Japan and USA. 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.

**Hitech Lasers**  
Leading with Quality

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