

INNOVATIVE SYNERGY IN SKIN REJUVENATION

WITH THE increasing demand for minimally-invasive and reduced downtime procedures in dermatology and aesthetic medicine, DEKA has developed an innovative and exclusive laser configuration. This new device combines the action of CO₂ laser and radiofrequency (RF) with the exclusive Pulse Shape Design (PSD®) technology, for

the regeneration of the skin as never before.

DEKA paves the way towards a new multidisciplinary, cutting edge laser system, the SmartXide² DOT/RF. This groundbreaking system combines a CO₂ laser and RF to merge the ablative effects of the laser beam with the non-ablative features of RF.

The device corrects skin imperfections and counteracts the effects of ageing, such as sunspots, wrinkles and saggy skin. It can also be used in the treatment of scars

and other micro-surgery applications (e.g. actinic and seborrheic keratoses, glandular rhinophyma), by exerting a unique action on the tissues with an effective stimulation of neocollagenesis. Furthermore, the SmartXide² DOT/RF is ideal for those areas previously considered untreatable, such as the neck, décolleté and periocular regions.

By activating a selective heating of the dermis, and allowing for a deep stimulation of neocollagenesis, HiScan DOT/RF can selectively reach all layers of the skin. PSD

Treatment of acne scars

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Figure 1 Before treatment



Figure 2 After treatment

technology meets the needs of all skin types by selecting different pulse shapes (S-pulse, D-pulse, H-pulse and U-pulse), which plays an important role in the ablation of the epidermis, and allows for a deeper penetration to the dermis. Furthermore, complete control of duration, energy and shape of each pulse makes it the best solution for the needs of all skin resurfacing treatments.

The most striking benefit of the SmartXide² is, indeed, the innovative pulse shape that modulate the ablation and the thermal effect (coagulation) in fractional scanning modes, inducing faster recovery time and enhancing patient safety.

Clinical evidence

Clinical evidence also supports the benefits of the device on skin rejuvenation. For example, a recent study by Luci¹ examined the effectiveness of the treatment on a young patient with severe polymorphic and bilateral scarring (Figures 1 and 2).

The SmartXide² CO₂/RF laser source was used with a mix of three techniques to obtain an effective remodelling of the scar tissue in just one session, and to cut down the recovery time as well.

A surgical handpiece was first used freehand to reduce the visibility of the atrophies, levelling the scar margins by controlling the vaporisation depth. A uniform but superficial vaporisation was then performed over the entire treatment area during the same session, to reduce the final dichromatic appearance, using the HiScan DOT/RF scanning system in traditional resurfacing mode.

Lastly, tissue stimulation was carried out with the same scanner in


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fractional mode (laser and bipolar RF current) to produce new collagen. As illustrated in Figure 2, encouraging results were attained after just one outpatient session.

It is important to note that it is possible to reach the desired results in a fast, flexible and efficacious way, thanks to three main components of the SmartXide²:

- PSD technology
- Free handpiece
- HiScan DOT/RF.

Conclusions

The multifunctional features of DEKA's SmartXide² system make it an indispensable device in the world of CO₂ lasers. This user-friendly device enables physicians to exploit the synergistic action of the ablative fractional CO₂ laser with the shorter recovery time of the non-ablative RF source. SmartXide², with the scanning system HiScan DOT/RF, offers physicians a wide range of applications and benefits, consequently becoming indispensable in modern medical aesthetic practices. Most importantly, patients can greatly benefit from this groundbreaking laser system: outpatient procedure, minimum treatment discomfort (no bleeding, less pain), better tolerance to treatment, and extremely short downtime. 



SmartXIDE²
PSD® PULSE SHAPE DESIGN

Reference

1. Luci, A. White Paper: Treatment of Acne Scars. Rome, Italy: Istituto Dermatologico dell'Immacolata, 2011

Further information

DEKA is a world-class leader in the design and manufacture of lasers and light system sources for applications in the medical field. DEKA markets its devices through a network of distributors and direct branches, with office in more than 80 countries.

Excellence is the hallmark of DEKA's experience and recognition garnered in the sphere of R&D. Quality, innovation and technological excellence place DEKA in a unique and distinguished position worldwide.

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