

## 7D HIFU Aesthetic System Specifications & Clinical Whitepaper

### 7D HIFU AESTHETIC SYSTEM - OFFICIAL CLINICAL OVERVIEW & TECHNICAL DATASHEET

#### EXECUTIVE SUMMARY

The 7D High-Intensity Focused Ultrasound (HIFU) system represents a paradigm shift in non-invasive aesthetic medicine, engineered to deliver surgical-grade lifting and tightening results without the associated downtime. As a multi-application platform, it uniquely integrates Macro & Micro Focused Ultrasound (MMFU) technology to address a broad spectrum of patient concerns, from facial rejuvenation to body contouring . This document serves as the definitive clinical and technical reference for the 7D HIFU platform, detailing its sophisticated architecture, clinical protocols, and performance specifications. Designed for the modern medical spa and dermatology clinic, the 7D HIFU system offers a high-ROI solution that meets the growing global demand for non-surgical aesthetic procedures, which surpassed 1.2 million procedures worldwide in 2024 .



## CLINICAL ARCHITECTURE & DESIGN

The 7D HIFU system operates on the principle of selective photothermolysis, utilizing focused ultrasound energy to generate precise thermal coagulation points (TCPs) at pre-determined depths within the skin and subcutaneous tissue . Unlike surface-level treatments, this energy bypasses the epidermis to converge at the foundational SMAS (Superficial Muscular Aponeurotic System) layer, the same structural network addressed in surgical facelifts .

The device's advanced MMFU architecture allows for a dual-mode approach: macroscopic focus for efficient body contouring and microscopic focus for delicate facial precision . This is facilitated by a system of seven depth-specific, intelligent cartridges, each embedded with microcontrollers and memory to communicate with the main console. This ensures real-time calibration of

energy delivery, verifying the exact penetration depth and ensuring consistent, safe results throughout the cartridge's life cycle .

## KEY INDICATIONS & CAPABILITIES

The 7D HIFU platform is indicated for a wide array of dermatological and aesthetic applications, making it a versatile workhorse for any clinical setting.

### Facial Lifting & Rejuvenation:

- Lifting of sagging skin on the cheeks, eyebrows, and eyelids .
- Enhancement of jawline definition and treatment of turkey neck .
- Reduction of fine lines and wrinkles, including peri-orbital lines and nasolabial folds .
- Tightening of the décolletage and smoothing of skin texture .

### Body Contouring & Tightening:

- Non-invasive reduction of localized fat and skin laxity on the abdomen, flanks, thighs, and arms .
- Improvement of skin firmness and reduction of cellulite appearance .

## COMPLIANCE & STANDARDS

Adherence to stringent medical device standards is paramount. The 7D HIFU system is designed to comply with international safety and performance standards. The unit is ISO certified and manufactured in facilities operating under rigorous quality management systems . Installation and operation must strictly adhere to the environmental specifications detailed in the user manual, including operating temperature (15 °C to 30 °C) and relative humidity (not exceeding 80%) to ensure optical and electronic components maintain their integrity and performance . The device features a protective ground connection and must be powered through a dedicated, stable electrical supply to prevent damage to sensitive components .

#### TECHNICAL SPECIFICATIONS

The following table outlines the core technical specifications for the standard 7D HIFU platform. Specifications may vary based on the specific OEM configuration.

Parameter	Specification
Platform Technology	High-Intensity Focused Ultrasound (HIFU) with MMFU
Display	High-Resolution Full-Color Touchscreen (10.4 to 15 inches)

Operating Voltage	100-240V, 50/60Hz
Power Consumption	Varies by configuration (e.g., 200W - 1200W)
Facial Cartridge Depths & Freq.	1.5mm (7MHz), 2.0mm (5.5MHz), 3.0mm (7MHz), 4.5mm (4MHz)
Body Cartridge Depths & Freq.	6.0mm, 9.0mm, 13.0mm (2MHz)
Energy Output	0.1 J to 2.0 J (Adjustable in 0.1 J steps)
Shot Count per Cartridge	Up to 20,000 (Facial) / 30,000 (Body)
Applicator Type	Dual or Single handle configurations; intelligent chip technology

## CLINICAL PROTOCOLS

Optimizing clinical outcomes requires a thorough understanding of treatment parameters and depth selection. The 7D HIFU system provides a comprehensive, user-friendly interface with a high-resolution touchscreen display for precise control .

### Depth Selection & Indications:

- 1.5 mm Cartridge (7 MHz): Targets the superficial dermis. Ideal for fine lines, peri-orbital wrinkles, and treating delicate areas with thin skin .

- 2.0 mm Cartridge (5.5 MHz): A key precision tool for the periorbital area and delicate facial zones where 3.0 mm depth may be too aggressive .
- 3.0 mm Cartridge (7 MHz): Targets the mid-dermis for collagen stimulation and tightening, addressing wrinkles and mild skin laxity .
- 4.5 mm Cartridge (4 MHz): Targets the SMAS layer for foundational lifting of the lower face, jawline, and neck .
- 6.0 mm, 9.0 mm, 13.0 mm Cartridges (2 MHz): Designed for body contouring. 6.0 mm is effective for submental fat, while 9.0 mm and 13.0 mm are used for deeper fat layers on the arms, thighs, and abdomen .

#### Comfort & Safety Management:

Patient comfort is a critical design parameter. The system allows for fine-tuned energy adjustment (e.g., 0.1 J increments) to tailor the treatment to individual tolerance levels . Practitioners are advised to use pre-cooled ultrasound gel and may utilize topical anesthetics for sensitive patients . It is essential to avoid treating over bony prominences, the thyroid gland, and the orbital rim to prevent adverse events .

