

UTIMS



HIFU device

High-intensity focused ultrasound

Capactuel
MEDICAL

Esthétique préventive et réparatrice

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UTIMS

INNOVATIVE HIFU MEDICAL DEVICE FOR LIFTING AND FIRING FACE AND BODY.

Non-invasive and easy to use, UTIMS devices offer excellent performance by the quality of their transducers and the safety of their heat damage analysis system.

HIFU (HIGH-INTENSITY FOCUSED ULTRASOUND) TREATMENT MECHANISM

HIFU is a highly precise medical procedure that applies high-intensity focused ultrasound energy to locally heat and destroy diseased or damaged tissue through ablation. Ultrasound beams are focused on diseased tissue, and due to the significant energy deposition at the focus, temperature within the tissue can rise to levels from 65° to 85°C, destroying the diseased tissue by coagulation necrosis. Higher temperature levels are typically avoided to prevent boiling of liquids inside the tissue. HIFU is delivered into SMAS (Superficial Muscular Aponeurosis System), fascia, deep dermis and subcutaneous fibrous tissue and generates the temperature increased. When the temperature grows more than 47°C (the threshold of protein denaturation), the coagulation zone is generated. The zone is filled out by the tissue/muscle surrounded and in this moment, the skin muscle gets elastic and the wrinkle is attenuated.

Reached layers during a skin treatment according to the technologies :

1970	1990	2000	2004	2005	2010	
Lasers	Intense pulsed light		Radiofréquence	Fractionnal	HIFU	Treated layers
↓	↓	↓	↓	↓	↓	Epidermis
↓	↓	↓	↓	↓	↓	Dermis
↓	↓	↓	↓	↓	↓	Subcutaneous
↓	↓	↓	↓	↓	↓	Muscle

STRENGTHS OF UTIMS DEVICES.

COMPACT AND LIGHTWEIGHT :

A simple design, a sleek design, high modularity.

FACILITY OF USE :

- 1 - A very high maneuverability of the handpiece :
 - Thinner handpieces and transducers compared to competitors devices
 - Improved comfort by the transducers system of delivering energy
 - The devices are designed to limit interference during treatment.
 - The devices are adapted and designed for left and right handed.
- 2 - optional footswitch simplifying management of ultrasonic emissions.
- 3 - Save time by using different transducers and a simple interface.
- 4 - LCD touch screen for easy navigation in the interface.
- 5 - Transducers allowing a treatment zone going up to 30 mm
- 6 - Transducers with varying depths and frequencies depending on the treatment area.



Transducteur
visage étroit



Transducteur
visage standard



Transducteur
corps UTIMS A3

INCREASED SECURITY

- 1 - Non-toxic heatless film.
- 2 - Heat lesion is shaped like an egg reducing the risk of pain and burns.
- 3 - Heat lesion valuation by « Phantom » (THLVS)
- 4 - individual control of high accuracy et stable transducers (HAST)

UTIMS A1



LCD touch screen 7 inches
6 Transducers HIFU for face.

UTIMS A3



LCD touch screen 10 inches
6 Transducers HIFU for face.
6 Transducers HIFU for body.
Compatible with CENTERLESS System.

STABLE, VARIOUS AND SAFE TRANSDUCERS

HIGH ACCURACY AND STABLE TRANSDUCERS (HAST) :

UTIMS Transducer are distinguished by their stability and shape compared to competitors. Through a patented manufacturing Ceramic process which allows a heat lesion shaped like an egg and more concentrated, the transducers can get a safer and more effective result. In fact, more heat lesion has a vertical shape and longer form, more it may cause accidental burns around the eyes. High frequencies of HIFU provide a lot of energy and a high quality of heat lesion. This makes it safe and effective to use high frequency on the shallow layers of the skin. Very few companies in the world coming to market such transducers. UTIMS used for this purpose several types of transducers 3, 4, 7 or 10 MHz and a depth sensor of 1.5mm. The transducers are practical and efficient to use : fast transmission, easy coupling, less time per line delivery, Improved positioning visualization, specific transducers depending on the purpose and treatment area, no need to shorten lines.

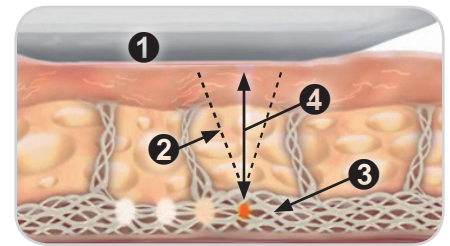
1. Stable Focal Points (heat lesion) for best results during processing.
2. Heat lesion with short vertical line for a safer treatment even at high intensity.
3. Reduction of lesions in the deep dermis.

HEAT LESION VALUATION (THLVS)

The HIFU devices are usually very dangerous and hard to control. Excessive use of heat lesions can cause side effects such as burns. The main advantage of HIFU system lies in the controlled and precise transmission of the frequencies. The heat lesion sensor system (THLVS) is developed for this purpose for 10 years in cooperation with university researchers for assessing the safety of transducers. The main component of the system called «Phantom» is produced with strict quality control.

1. Heat lesions simulated with 3 preliminary stages of control.
2. Certified and extensively tested transducers. Phantom HIFU self-developed and manufactured

Heat lesion with UTIMS transducer :



1. Ultrasound HIFU transducer with High frequency.
2. Ultrasound beam with Issue of high intensity.
3. Necrosis coagulation at the focal point.
4. Untouched tissue between transducer and focal point.

Test of heat lesions :



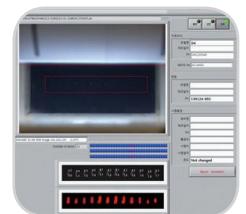
Competitor Phantom



Phantom UTIMS - Short vertical lines and stable focal points egg-shaped.



Phantom HIFU



Lesions Analyzer

NEW CENTERLESS HIFU TRANSDUCERS

CENTERLESS HIFU is a new and innovative HIFU system that use a special concave-type piezoelectric ceramic with a hole at the center. A tube is inserted through the hole to prevent generation of ultrasound at the center of the ceramic.



ENHANCED STABILITY

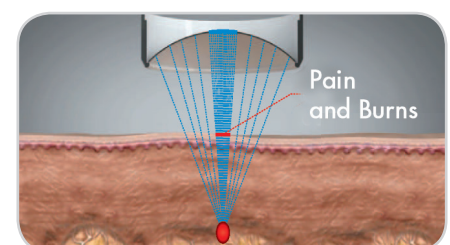
As the ultrasound passes through the water in the transducer, microbubbles are formed (cavitation effect). Due to the concave shape of the piezoelectric ceramic, these microbubbles gather at the surface of the ceramic, which interferes the transmission of ultrasonic energy. CENTERLESS HIFU discharges the microbubbles, caused by cavitation effect, through the hole at the center to rear of the ceramic, which in turn allows total energy generated by the piezoelectric ceramic to be focused within the skin, and thereby improve the safety of ultrasonic energy.

ENHANCED SAFETY AND PERFORMANCE

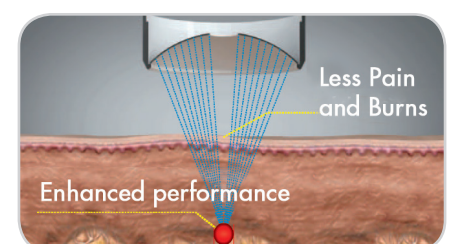
Most of the products lower the ultrasonic energy in order to reduce side effects. However, lowering the energy reduces the size of the heat lesion accordingly, and hence this will result in deterioration in performance of the transducer. CENTERLESS HIFU fundamentally resolves the problem of creating excessive heat on the skin surface caused by concentration of ultrasonic energy at the center of piezoelectric. According to experimental results, it has shown to reduce side effects as well as improving the performance of the heat lesion by more than 50%. The new HIFU transducers equipped with a ceramic surface with a hole at center enable a more targeted heat lesion and egg-shaped, able to provide a safer and better treatment.

1. Increase the stability of Focal Points and results are maximized .
2. Reduce side effects : pain and burns. An even safer treatment.

CENTERLESS HIFU



Current limit of transducer



CENTERLESS HIFU transducer

UTIMS

SPECIFICATIONS

- Energy Type : High Intensity Focused Ultrasound
- Rated Voltage : AC 100~264V, 50/60Hz
- Power Consumption : 80~150 VA
- Intensity : 0.1 ~ 2.0 J (MAX. ~ 4.0 J)
- Spacing : 1.0 ~ 5.0 mm
- Treated energy : less than 2.0 J

CONTROL UNIT

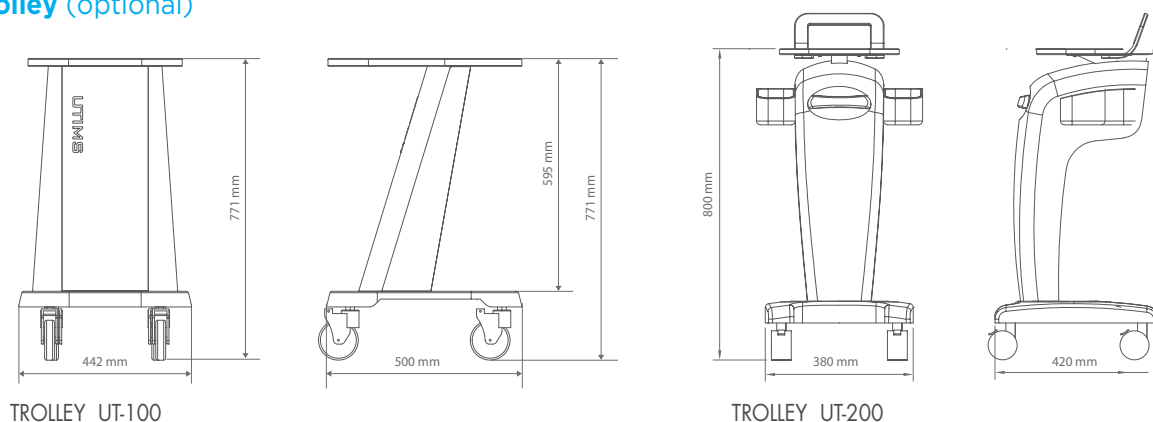


TRANSDUCERS



Model	FACE						BODY		
	C10S	N10S	N7M	C7M	C7D	C4D	C3N	C3C	C3F
Frequency	10MHz (±20%)		7MHz (±20%)			4MHz (±20%)	3MHz (±20%)		
Length	5.0~30mm (1.0 step)	5.0~15mm (1.0 step)		5.0~30mm (1.0 step)					
Depth	1.5mm		3.0mm		4.5mm		8.0mm	13.0mm	18.0mm

Trolley (optional)



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