

# Ultrasound therapy



Ultrasounds are high frequency sound vibrations that cannot be perceived by the human ear. In the therapeutic field, the application of ultrasounds to human tissue provides a cellular and inter-cellular high frequency massaging action. Also, ultrasounds can also be used under water. The head is immersed in water along with the area to be treated. The tissues irradiated by ultrasounds vibrate in turn, resulting in energy being released, which produces heat. This summarizes the biological effects of ultrasounds:

- The Mechanical effect: is produced by the rhythmic compression and decompression of tissue. The particles in tissue covered by the vibrating band are all activated alternately, with the same acceleration and speed.
- The Diathermal mechanism: with possible biological effects begins to be possible at energy levels of  $1 \text{ Watt/cm}^2$ . As the sound is propagated through the tissues it is absorbed and converted into heat. The distribution of the temperature produced by the ultrasound in the tissues, is unique among the various forms of deep heating: in fact, it brings about an increase in temperature that is relatively small on the surface of the tissue and is more likely to penetrate the muscles and soft tissue than diathermia produced by microwaves or short circuits.

## Therapeutic effects

The therapeutic effects of ultrasounds are partly due to the increase in temperature. These take the form of analgesia, relaxation of the muscles, and a fibrolytic and trophic effect.

- **Analgesia** - The analgesic effect is due to the heat, and probably also the direct action of the ultrasounds on the sensitive nerve endings.
- **Relaxation of contracted muscles** - Relaxation of contracted muscles is associated with the thermal effect and micro massaging of the tissue, induced by the passage of the ultrasounds.
- **Fibrolytic effect** - Oscillation of the tissue particles, caused by the ultrasounds, results in disruption of the collagen fibers in fibrous and sclerotized tissue.
- **Trophic effect** - Vasodilation, which results from a rise in temperature, facilitates the removal of catabolites and puts nutritive substances and oxygen into the tissue. In this way ultrasounds improve trophism of the tissue, facilitate repair of tissue damage and speed up resolution of inflammatory processes.

## ACCESSORIES

2



Our ultrasound handpieces get activated by contact with the patient. The activation can be seen by means of a LED placed on the handpiece itself and on the screen of the device. These ergonomic handpieces can be used also in the water due to their high IP67 protection level. The handpieces can be used in automatic mode, or they can be activated by contact with the patient. They can work in continuous emission mode as well. In this latter possibility, a support arm may be a useful accessory.

**EL0017 HANDPIECE CM<sup>2</sup> 1**  
1-3 MHz cm, dual frequency, IP67 protection.

**EL0018 HANDPIECE CM<sup>2</sup> 3**  
1-3 MHz cm, dual frequency, IP67 protection.

**EL0019 HANDPIECE CM<sup>2</sup> 5**  
1-3 MHz cm, dual frequency, IP67 protection.

**EL0020 HANDPIECE CM<sup>2</sup> 8**  
1-3 MHz cm, dual frequency, IP67 protection.



**EL0001 PERSONAL SMART CARD**  
It's possible to save customized treatments based on specific setting of parameters. Set of 10 pieces.



**EL0016 CARRY CASE**  
Universal carry case for transport of portable unit. That's available for all Chinesport electro-medical equipment of the Excellent, Plus and Basic lines.



**EL0024 GEL CANISTER**  
Specific gel for ultrasound therapy, 5 kg



**EL0025 DISPENSER**  
Pump for canister code EL0024.



**EL0023 CONTACT GEL**  
Specific gel for ultrasound therapy, 250 g



**EL0082 LINK CABLE**  
Cable to connect electrotherapy and ultrasound machines.



EL0021

EL0022

**EL0021 SONIC ARM**  
Suitable for all handpieces. Can be mounted on trolley code EL12003.

**EL0022 SONIC ARM P**  
Swivel arm. Free mount.



**EL12003 TROLLEY**  
Trolley with tabletop and possibility of fixing non wheeled electromedical equipment and the arms.

# Ultrasound therapy

## EL12085 SONIC EXCELLENT

Ultrasound equipment with two independent channels and three frequencies: 1, 2 and 3 MHz, in both continuous and pulsating mode. Smart card included. Important note: a specific handpiece is needed in order to use the 2 MHz frequencies.

EXCELLENT



### Distinctive elements

- Wide display: 6" colour touch-screen.
- Waterproof multifrequency probes 1/3 MHz, suitable for submerged treatments.
- Self-calibrating probes with working frequency internal storage system.
- Therapeutic suggestions grouped according to anatomical areas, specialist branches and waveforms.
- I/T curve and after treatment.
- Patient file for storing all patient's data, treatments and short case history.
- Help button. Each therapeutic suggestion shows indications on its use and where to place electrodes.
- Connection link for ultrasound-electrotherapy combined treatments.
- Smart card to store many personalised treatments and patient files.



### TECHNICAL FEATURES

Power supply:	230 Vac, 50-60Hz, $\pm 10\%$ 115 Vac, 50-60Hz, $\pm 10\%$ (on request)
Maximum mains power absorption:	70 VA
LCD display:	Graphics 320 x 240 pixel Touchscreen
Programmable treatment time:	up to 30 minutes
Electrical insulation class UNI EN 60601-1 standard:	I / BF
Device class in compliance with the 93/42/CEE directive:	II B
Degree of protection against the input of liquids UNI EN 60601-1 standard:	IPX0
Emission frequency:	1 MHz $\pm 15\%$ 2 MHz $\pm 15\%$ (optional) 3 MHz $\pm 15\%$
Duty Cycle adjustable:	10% - 100%
Continuous peak power:	2 W / cm <sup>2</sup> $\pm 20\%$
Pulsed peak power:	3 W / cm <sup>2</sup> $\pm 20\%$
Output channels:	2 independent
Stored protocols:	91
Storable protocols on the user memory:	250
Storable protocols on the smart-card:	250
Dimensions	39 x 13 x 32 cm
Weight	6,55 Kg

### Standard Accessories

	Q.TY
Power cable	1
Fuses	2
Manual of therapies	1
Handpieces 5cm <sup>2</sup> 1/3 MHz	2
Touchscreen Pen	1
Contact sensor with wire	2
Smart Card	1

### Optional Accessories

EL0001	PERSONAL SMART CARD
EL0016	CARRY CASE
EL0017	HANDPIECE CM <sup>2</sup> 1
EL0018	HANDPIECE CM <sup>2</sup> 3
EL0019	HANDPIECE CM <sup>2</sup> 5
EL0020	HANDPIECE CM <sup>2</sup> 8
EL0021	SONIC ARM
EL0022	SONIC ARM P
EL0023	CONTACT GEL
EL0024	GEL CANISTER
EL0025	DISPENSER
EL0082	LINK CABLE
EL12003	TROLLEY

## EL12056 SONIC 1

Single output ultrasound therapy equipment, with 1 output, complete with 1/3 MHz multifrequency handpiece. Display 320x240 px, treatment time up to 60 minutes, 200 storable protocols. Smart Card included.

### Distinctive elements

- Waterproof multifrequency probes 1/3 MHz, suitable for submerged treatments.
- Self-calibrating probes with working frequency internal storage system.
- Sonic 2: two completely independent channel ultrasound device, able to perform two autonomous treatment at the same time.
- Smart Card included.



2



### TECHNICAL FEATURES

Power supply:	230 Vac, 50-60Hz, ±10% 115 Vac, 50-60Hz, ±10% (on request)
Maximum mains power absorption:	40 VA
LCD display:	B/W graphics 320 x 240 pixels
Programmable treatment time:	up to 60 minutes
Electrical insulation class UNI EN 60601-1 standard:	I / BF
Device class in compliance with the 93/42/CEE directive:	II B
Degree of protection against the input of liquids UNI EN 60601-1 standard:	IPX0
Emission frequency:	1 MHz and 3 MHz ± 15%
Duty Cycle adjustable:	10% - 100%
Continuous peak power:	2 W / cm <sup>2</sup> ± 20%
Pulsed peak power:	3 W / cm <sup>2</sup> ± 20%
Output channels:	1
Stored protocols:	60
Storable protocols on the user memory:	200
Storable protocols on the smart-card:	200
Dimensions	39 x 13 x 32 cm
Weight	4,2 Kg

### Standard Accessories

	Q.TY
Power cable	1
Fuses	2
Manual of therapies	1
Handpieces 5cm <sup>2</sup> 1/3 MHz	1
Contact sensor with wire	1
Smart Card	1

### Optional Accessories

EL0001	PERSONAL SMART CARD
EL0016	CARRY CASE
EL0017	HANDPIECE CM <sup>2</sup> 1
EL0018	HANDPIECE CM <sup>2</sup> 3
EL0019	HANDPIECE CM <sup>2</sup> 5
EL0020	HANDPIECE CM <sup>2</sup> 8
EL0021	SONIC ARM
EL0022	SONIC ARM P
EL0023	CONTACT GEL
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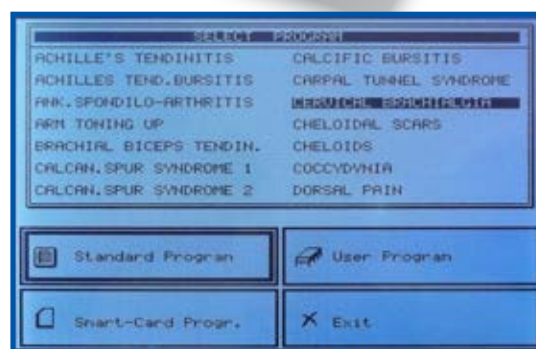
# Ultrasound therapy

## EL12057 SONIC 2

Ultrasound therapy equipment with two independent outputs. Complete with 1/3 MHz multi-frequency handpiece. Display 320x240, treatment time up to 60 minutes, 200 storable protocols. Smart Card included.

### Distinctive elements

- Waterproof multifrequency probes 1/3 MHz, suitable for submerged treatments.
- Self-calibrating probes with working frequency internal storage system.
- Sonic 2: two completely independent channel ultrasound device, able to perform two autonomous treatment at the same time.
- Smart Card included.



ELECTRO-MEDICAL EQUIPMENT

### TECHNICAL FEATURES

Power supply:	230 Vac, 50-60Hz, ±10% 115 Vac, 50-60Hz, ±10% (on request)
Maximum mains power absorption:	70 VA
LCD display:	B/W graphics 320 x 240 pixels
Programmable treatment time:	up to 60 minutes
Electrical insulation class UNI EN 60601-1 standard:	I / BF
Device class in compliance with the 93/42/CEE directive:	II B
Degree of protection against the input of liquids UNI EN 60601-1 standard:	IPX0
Emission frequency:	1 MHz and 3 MHz ± 15%
Duty Cycle adjustable:	10% - 100%
Continuous peak power:	2 W / cm <sup>2</sup> ± 20%
Pulsed peak power:	3 W / cm <sup>2</sup> ± 20%
Output channels:	2 independent
Stored protocols:	60
Storable protocols on the user memory:	200
Storable protocols on the smart-card:	200
Dimensions	39 x 13 x 32 cm
Weight	4,2 Kg

### Standard Accessories

	Q.TY
Power cable	1
Fuses	2
Manual of therapies	1
Handpieces 5cm <sup>2</sup> 1/3 MHz	2
Contact sensor with wire	2
Smart Card	1

### Optional Accessories

EL0001	PERSONAL SMART CARD
EL0016	CARRY CASE
EL0017	HANDPIECE CM <sup>2</sup> 1
EL0018	HANDPIECE CM <sup>2</sup> 3
EL0019	HANDPIECE CM <sup>2</sup> 5
EL0020	HANDPIECE CM <sup>2</sup> 8
EL0021	SONIC ARM
EL0022	SONIC ARM P
EL0023	CONTACT GEL
EL0024	GEL CANISTER
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## EL12055 SONIC BASIC

Table-top ultrasound therapy equipment, with 1 output, complete with 1/3 MHz multi-frequency handpiece. Display 240x64, treatment time up to 30 minutes, 10 storable protocols.

### Distinctive elements

- 1/3 MHz Multifrequency probe.
- Graphic display with a very good resolution.
- Easy to use: clear and easy interface.
- Waterproof probes for underwater treatments.
- Multilingual software.
- 50 therapeutic suggestions.



2



### TECHNICAL FEATURES

Power supply:	230 Vac, 50-60Hz, $\pm 10\%$ 115 Vac, 50-60Hz, $\pm 10\%$ (on request)
Maximum mains power absorption:	40 VA
LCD display:	B/W graphics 240 x 64 pixels
Programmable treatment time:	up to 30 minutes
Electrical insulation class UNI EN 60601-1 standard:	I / BF
Device class in compliance with the 93/42/CEE directive:	II B
Degree of protection against the input of liquids UNI EN 60601-1 standard:	IPX0
Emission frequency:	1 MHz and 3 MHz
Duty Cycle adjustable:	10% - 100%
Continuous peak power:	2 W / cm <sup>2</sup> $\pm$ 20%
Pulsed peak power:	3 W / cm <sup>2</sup> $\pm$ 20%
Output channels:	1
Stored protocols:	20
Storable protocols on the user memory:	10
Dimensions	39 x 13 x 32 cm
Weight	3,6 Kg

### Standard Accessories

	Q.TY
Power cable	1
Fuses	2
Manual of therapies	1
Handpieces 5cm <sup>2</sup> 1/3 MHz	1
Contact sensor with wire	1

### Optional Accessories

EL0016	CARRY CASE
EL0017	HANDPIECE CM <sup>2</sup> 1
EL0018	HANDPIECE CM <sup>2</sup> 3
EL0019	HANDPIECE CM <sup>2</sup> 5
EL0020	HANDPIECE CM <sup>2</sup> 8
EL0021	SONIC ARM
EL0022	SONIC ARM P
EL0023	CONTACT GEL
EL0024	GEL CANISTER
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