

ULTRASONIC



The ultrasounds are high-frequency acoustic vibrations not perceived by human ears.

The application of ultrasounds for therapeutical use on human tissues involves a high-frequency cellular and intercellular massage. Moreover ultrasounds can also be used in immersion, the head is immersed in the water together with the body region to be treated.

The tissues irradiated with ultrasounds start vibrating with a following energy waste and heat production.

All this shows the ultrasounds' biological effects, namely the mechanical and the diathermic effect:

- **Mechanical effect:** expands through the rhythmic tissue compression and decompression.

The tissue particles receiving the vibrating flux are all stressed one after the other at the same speed and acceleration rate.

- **Diathermic mechanism:** probably with biological effects is becoming possible with watt/cm² energy flux.

While the sound spreads through the tissues it is absorbed and converted into heat.

The temperature distribution caused by the ultrasound in the tissues is unique within all forms of deep

heating: the temperature increases relatively little in the tissue surface and it is more likely to penetrate into the muscles and the soft tissues compared to the diathermic effect produced with short waves or microwaves.

- **Chemical effect:** it is strictly connected to a typical phenomenon caused by ultrasounds, the so called "cavitation", which takes place in the fluid components of the tissues where the small gas bubbles tend to increase their dimension and starts the oxidation, polymerization and the destruction of macromolecules.

THERAPEUTIC EFFECTS

The ultrasounds therapeutic effects are partly caused by the increase in temperature which takes place and are: analgesia, muscle relaxation and the fibrolitic and trophic effect.

- **Analgesia** - The analgesic effect is caused by the heat action and probably also by a direct action of the ultrasounds on the sensitive nerve-endings.

- **Contracted muscle relaxation** - The relaxation of contracted muscles is linked to the thermal effect and the action of tissue micro massage induced by ultrasounds.

- **Fibrolitic action** - The vibrations of the tissue particles produced by ultrasounds cause the disarrangement of the collagen fibres of the filamentous connective or sclerotized tissues.

- **Trophic effect** - The vasodilation, following the thermal increase, helps the elimination of catabolites letting nutrients and oxygen penetrate into the tissues; therefore ultrasounds improve the tissue trophism, facilitate the repairing of tissue damages and accelerate the resolution of inflammatory processes.

ULTRASONIC - TABLE BASED EQUIPMENT

MAC I208 - ULTRASONIC I300

MAC I209 - ULTRASONIC I500

Devices for table ultrasound therapy

TECHNICAL SPECIFICATIONS

■ ULTRASONIC I300

- 1 output channel
- Frequency 1/3 Mhz
- Duty cycle 10%-90%
- Stored protocols: 100
- User memory: 100 free protocols
- Smart Card
- Power can be regulated from 0 to 3W cm²
- Probe equipped with a contact automatic sensor; with visual and sound signal
- Water-resistant probe

■ ULTRASONIC I500

- 2 independent output channels
- Frequency 1/3 Mhz
- Duty cycle 10%-90%
- Stored protocols: 100
- User memory: 100 free protocols
- Smart Card
- Power can be regulated from 0 to 3W cm²
- Probe equipped with a contact automatic sensor; with visual and sound signal
- Water-resistant probe

SUPPLIED ACCESSORIES

■ ULTRASONIC I300

Power cable	1
User's guide	1
Fuses 630 mA-T	2
Probe 1/3 Mhz 5 cm ²	1

■ ULTRASONIC I500

Power cable	1
User's guide	1
Fuses 630 mA-T	2
Probe 1/3 Mhz 5 cm ²	2



• MAC I208 - ULTRASONIC I300

• MAC I209 - ULTRASONIC I500

ULTRASONIC - MODELS ON TROLLEY

■ MAC 1210 - ULTRASONIC 2100

■ MAC 1211 - ULTRASONIC 2500

Apparecchio per ultrasuoniterapia montato su carrello

TECHNICAL SPECIFICATIONS

■ ULTRASONIC 1300

- 1 output channel
- Frequency 1/3 Mhz
- Duty cycle 10%-90%
- Stored protocols: 100
- User memory: 100 free protocols
- Smart Card
- Power can be regulated from 0 to 3W cm²
- Probe equipped with a contact automatic sensor; with visual and sound signal
- Water-resistant probe

■ ULTRASONIC 1500

- 2 independent channels
- Frequency 1/3 Mhz
- Duty cycle 10%-90%
- Stored protocols: 100
- User memory: 100 free protocols
- Smart Card
- Power can be regulated from 0 to 3W cm²
- Probe equipped with a contact automatic sensor; with visual and sound signal
- Water-resistant probe

SUPPLIED ACCESSORIES

■ ULTRASONIC 2100

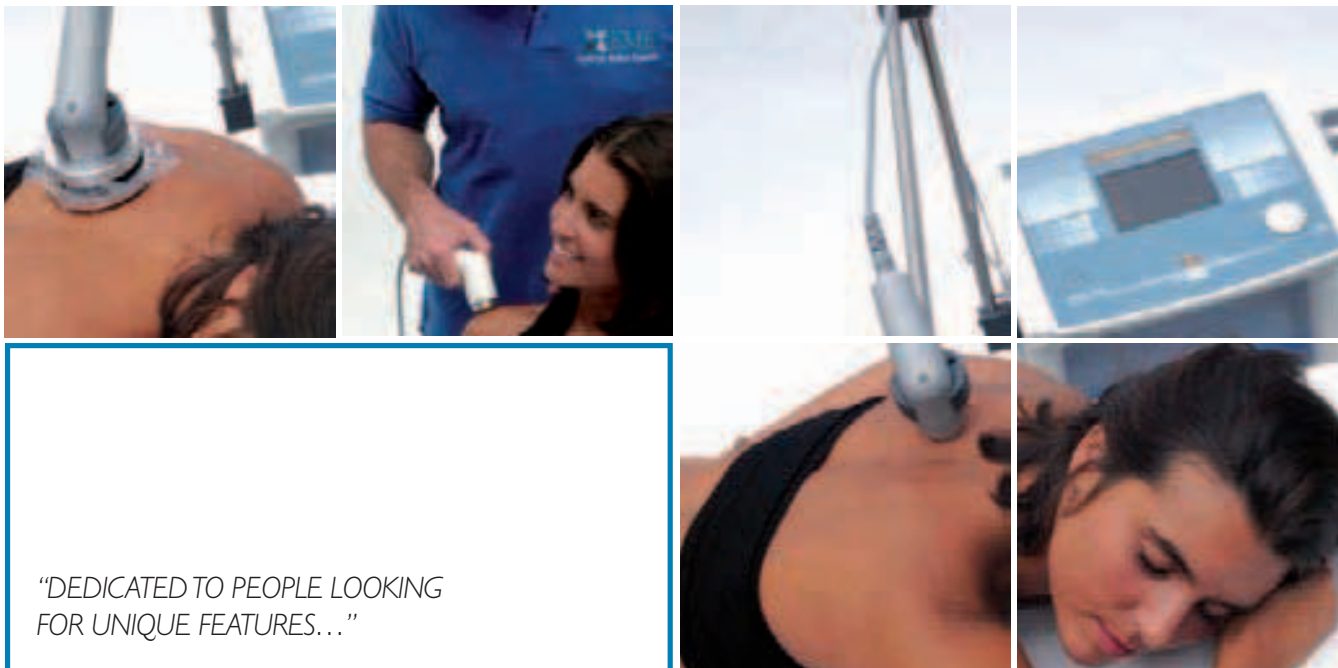
Power cable	1
User's guide	1
Fuses 630 mA-T	2
Probe 1/3 Mhz 5 cm ²	1
Orthostatic arm	1

■ ULTRASONIC 2500

Power cable	1
User's guide	1
Fuses 630 mA-T	2
Probe 1/3 Mhz 5 cm ²	2
Orthostatic arm	2



• MAC1211 - ULTRASONIC 2500



*"DEDICATED TO PEOPLE LOOKING
FOR UNIQUE FEATURES..."*

ULTRASONIC - OPTIONAL ACCESSORIES

ULTRASOUND PROBES

- ACC526 TV1 1/3 Mhz 1 cm2
- ACC529 TV3 1/3 Mhz 3 cm2
- ACC528 TV5 1/3 Mhz 5 cm2
- ACC527 TV8 1/3 Mhz 8 cm2



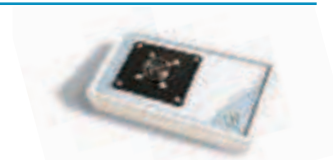
LINK CABLE ELECTROTHERAPY

- ACC624



VOCAL KIT

- ACC501



WATER BOLUS KIT

- ACC666



ORTHOSTATIC ARM

- ACC605 BO-U



KIT OF 10 PATIENTSMART CARD

- ACC606



GEL

- ACC917 gel 260 ml
- ACC918 gel 1000 ml
- ACC919 canister of gel 5000 ml



3 SHELVES TROLLEY

- ACC604



TNT CASE FOR TRANSPORTATION

- CONT72



KIT FOR SOFTWARE UPDATING

- ACC607