TECAR THERAPY

HR TEK



EME® ITALY physio

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HR TEK

The Tecar Therapy device is an innovative electromedical device that utilizes radiofrequency energy to generate therapeutic heat within the tissues. This endogenous heat stimulates natural repair processes and effectively reduces pain, inflammation, and muscle stiffness, promoting faster and longer-lasting recovery.

HOW DOES IT WORK?

The device uses two complementary treatment modes:

- **Capacitive Mode:** acts on soft tissues such as muscles, blood vessels, and connective tissue, stimulating microcirculation and oxygenation.
- **Resistive Mode:** penetrates tissues with greater resistance such as joints, tendons, and bones, accelerating cellular regeneration even at depth.

Thanks to a special mobile electrode and a fixed plate, the device closes a therapeutic electrical circuit, ensuring a safe, targeted, and personalized treatment.

TYPICAL APPLICATIONS:

- **Sports injuries and post-operative trauma**
- **Musculoskeletal problems** (contractures, tendonitis, bursitis, arthrosis)
- **Post-injury functional rehabilitation and prevention**
- **Management of chronic and acute pain**

KEY ADVANTAGES:

- Rapidly relieves pain and inflammation.
- Reduces post-trauma or post-operative rehabilitation time and functional recovery.
- Stimulates microcirculation with a natural vasodilator effect.
- Improves joint mobility and muscular flexibility.
- Accelerates healing and tissue regeneration.
- Non-invasive and comfortable therapy with a massaging effect.
- Versatile treatment for trauma, contractures, tendonitis, arthrosis, and more.

TECHNICAL FEATURES:

- Multifunction accessories: electrodes of various sizes and types.
- Various frequencies to treat different tissues at various depths.
- Continuous (CW) and pulsed (PULS) emissions: pulsed emission prevents overheating.
- Intuitive 10.1" touchscreen display with 47 customizable predefined protocols for different therapeutic effects (biostimulating, anti-inflammatory, analgesic, muscle-relaxing, anti-edema).
- Compact and lightweight design, ergonomic handpieces.
- Navigable anatomical maps.
- 3 different working modes: athermia, homeothermy and hyperthermy.

2 AVAILABLE MODELS

- **HR TEK** – **3 Frequencies** (445 KHz, 900 KHz and 1200 KHz)
- **HR TEK SP** – **Single frequency** (445 KHz)

The frequency differences in a Tecar device primarily relate to the treatment's depth of action.

- Lower frequencies (445 KHz) penetrate deeper into the tissues, making them suitable for treating deeper structures such as joints or deep muscles.
- Intermediate frequencies (900 KHz) are used for balanced effects between depth and a more superficial action, suitable for medium-depth muscular tissues or inflammatory conditions.
- Higher frequencies (1200 KHz) act more superficially, and are therefore used for treatments targeting more superficial structures like scars or skin.

In summary, as the frequency increases, the penetration depth of the Tecar energy decreases, thus influencing the type of tissue and the pathology to be treated. This allows the frequency to be selected based on the specific therapeutic goal.

* The bipolar handpiece in Tecar is useful because it allows for a more dynamic and comfortable treatment compared to the traditional system with a neutral plate. In the bipolar system, both electrodes are located in the same handpiece or very close to each other, eliminating the need for the return plate.

This offers several advantages:

- Greater patient comfort, for example by eliminating the discomfort of the cold plate applied to the body.
- Greater specificity in stimulating the target tissue, as the current acts on a more circumscribed and targeted area.
- Dynamism and ease of treatment, allowing the treatment to be integrated with therapeutic exercise or manipulation, which is difficult with the traditional unipolar system.

The presence of two active electrodes close together means the circuit is closed only in the treated area, resulting in a more localized and less dispersive energy transfer.

INCLUDED ACCESSORIES

ELECTRODES



CAPACITIVE
30 -50 -70mm



RESISTIVE
30 -50 -70mm



HANDPIECE



BIPOLAR HANDPIECE 50mm



RETURN PLATE



OPTIONAL ACCESSORIES

TROLLEY



BIPOLAR HANDPIECE
30 - 70mm



ADHESIVE ELECTRODE



FOR DYNAMIC OR HANDS
FREE TREATMENT


Pathologies
GASTROCNEMIUS MUSCLE STRAIN
QUADRICEPS FEMORIS STRAIN
BICEPS FEMORIS STRAIN
POST SURGICAL TREATMENT OF FEMORAL FRACTURES 2ND DAY
POST SURGICAL TREATMENT OF FEMORAL FRACTURES 3RD DAY
POST SURGICAL TREATMENT OF FEMORAL FRACTURES 4TH-5TH DAY
POST SURGICAL TREATMENT OF FEMORAL FRACTURES 2ND-6TH WEEK
POST SURGICAL TREATMENT OF FEMORAL FRACTURES 7TH-12TH WEEK
TENDINITIS - ACHILLES TENDON
MUSCLE CONTUSION OF THE QUADRICEPS
EMF
ITALY

TECHNICAL FEATURES			
Mains power supply			230 Vac, 50-60 Hz, ±10%
			115 Vac, 50-60 Hz, ±10%
Maximum mains power draw			145 VA
Double time-lag (T) protection fuse on the mains		**230 Vac**	3,15 A-T - 5 x 20 mm
		115 Vac	6,3 A-T - 5 x 20 mm
Backlit LCD display, for viewing and controlling operating parameters			10.1" color touch screen
Programmable treatment time			Up to 60 minutes
Power			250 W
Peak voltage for resistive use			150 V max which corresponds to 180 W
Peak voltage for capacitive use			440VA max
Handpieces supplied			Resistive electrode handpiece
			Capacitive electrode handpiece
			Bipolar electrode handpiece
Handpiece emission frequency		**HR TEK**	445 KHz
			900 KHz*[1]
			1200 KHz*[1]
		HR TEK SP	445 KHz
Type of electrodes used			Resistive, made of stainless steel
			Capacitive, made of stainless steel and coated in nylon
			Bipolar, made of stainless steel and coated in ABS
Diameter of capacitive and resistive electrodes			Ø 30 mm
			Ø 50 mm
			Ø 70 mm
Bipolar electrode diameter			Small (Ø 30mm)
			Medium (Ø 50mm)
			Big (Ø 70mm)
Type of power delivered by the machine			Low
			Medium
			High
Electrode working area	**Ø 30mm**		7.1 cm^2
	Ø 50mm		19.6 cm^2
	Ø 70mm		38.5 cm^2
Classification according to directive 93/42/EEC			II B
Insulation class / applied parts according to standard EN 60601-1			I / BF
Degree of protection against ingress of liquids according to standard EN 60601-1			IPX0
Temperature			(34-45) °C ± 1°C
Output channels			2 independent (1 output channel for capacitive use and 1 output channel for resistive and bipolar use)
Protocols storable in the internal memory			200
Patient records storable in the internal memory			200
External dimensions of the enclosure (Width x Depth x Height)			41x35x19 cm
Weight of the device			10Kg
Operating Conditions	**Ambient temperature**		(+10 : +35) °C
	Relative humidity		(10 : 80) % Non-condensing
Storage/Transport Conditions	**Ambient temperature**		(-40 : +70) °C
	Relative humidity		(10 : 100) % Non-condensing

*[1] Not covered by medical CE.

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