



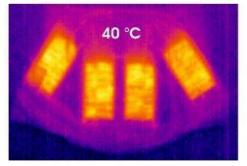


# **TermoWear Waistcoat** Warmth enveloping and safe





Internal thermography of the opened waistcoat



#### Highlights

- \* Waistcoat / under jacket of new generation
- ★ Quick starter and constant efficiency
- ★ Heating adjustable and diffused over four large areas
- Innovative materials and 100% advanced Italian technology (patented)
- ★ Heating resistors made of silver fibers
- High efficiency and low energy consumption
- ★ Rechargeable lithium polymer battery: High capacity with reduced weight and size
- ★ Long battery life: up to 4 hours in standard mode
- \* Quick batteries charging : less than 2 hours for 100% charge
- Car cigarette lighter charger (optional)
- \* Guarantees a high breathability for absolute comfort
- \* Machine washable no Tumbler

## TERMOTEX

### Dealer

#### Morini Competition Arm SA

Via ai Gelsi 11 - CH-6930 Bedano - Switzerland - Tel. : +41 91 935 22 30 - Fax: +41 91 935 22 31 WEB: www.morini.ch

### Main features

**TermoWear** represents a family of new generation products designed to offer maximum comfort even in the most adverse environmental conditions.

All products are powered by rechargeable lithium polymer batteries characterized by a high capacity despite having reduced size and weight. Quickly rechargeable for thousands of cycles and free from memory phenomena and therefore always efficient for a long time.

An evoluted electronic control unit incorporates a microprocessor dedicated to the optimal heating management, maximizing thus the autonomy of the devices.

The heating part operates at extra low voltage (from 3.7 to 7.4 volts). It ensures maximum safety even in case the device is accidentally wetted and excludes any electric shock risk.

The startup is rapid and the efficiency is constant. It reaches the set temperature in minutes and keep the warmth for the desired time.

The innovative technology, which uses carbon / silver fiber resistors, ensures that the heat is distributed more homogeneously than traditional solutions. A strong radiating component provides a feeling of warmth spread definitely more pleasant.

This implies an increase in the overall efficiency and a consequent reduction in energy consumption which results in increased autonomy on battery power.

#### <u>TermoWear Waistcoat</u>

Handy to use as under-jacket or alone. It offers an excellent breathability and provides comfort in all situations. Machine washable (40 °C, warm cycle, no aggressive additives).

#### Manufacturing features

TermoWear products are made of innovative materials and advanced technology 100% Italian. They are based on HTS<sup>®</sup> (Heating Textile Sandwich) technology which consists of an heating fabric made from polyester yarns, two powering conductive bands and resistive elements integrated in the weave. The fabric is then protected like a sandwich by two layers of textile insulating materials. This technology is covered by an international patent.

The resistive elements which generate heat are made of carbon or silver fibers yarns which ensure high mechanical strength combined with an excellent flexibility, reliability and durability.

The carbon/silver fibers are characterized by an electrical conductivity which, due to the Joule effect, generates heat when they are through by an electrical current at low voltage. TermoWear is powered by an extra low voltage (3.7–7.4  $V_{DC}$ ).

All yarns are 100% polyester and this confers to TermoWear a good reaction to fire (self extinguishing) and a 100% recyclablility.

TermoWear complies with CE standards.

## **Technical Specifications**

#### <u>Waistcoat</u>

- Fabric: polyestere, breathable
- Isolation: stuffing with VALTHERM<sup>®</sup>wadding
- Cleaning: Machine washing delicate at 40 °C, no aggressive additives

#### TermoWear models and codes

Model	Colour	Size	Code
CLASSIC	Black	S	TWE-GC00S-NE
		м	TWE-GC00M-NE
		L	TWE-GC00L-NE
		XL	TWE-GC1XL-NE
		XXL	TWE-GC2XL-NE

#### Inner heating part

Heating element:	HTW: woven fabric made of polyester yarns, tinned copper powering bands and silver fibers resistive filaments
Power:	12 W @ 7.4 V
Power supply:	LiPo battery 7.4 V <sub>DC</sub> – 3.6 Ah
Recharger:	90-250 V <sub>AC</sub> 50/60 Hz / 12 V <sub>DC</sub> – 40 W
Controls:	ON/OFF + 3 power levels
Autonomy:	up to 4 hours in standard mode
Recharge time:	less than 2 hours for 100% charge

Storage temp.  $T_{STO}$ : Usage temp.  $T_{FNV}$ : -20 .. +50 °C - HR < 80% -20 .. +40 °C

#### **CONFORMITY**

This product complies with the EN 60335-2-17 Standard and the RoHS Directive 2002/95/EC





Battery pack



Backlit button, positioned on the chest, with ON/OFF function and power level selection.

CF





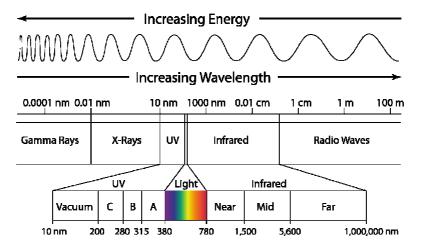
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# Knowledge base: Far Infrared Carbon Effects

#### The sunlight

The complete spectrum of sunlight consists of visible and invisible rays that are actually electromagnetic waves with different frequency / wavelength. The visible rays are red, orange, yellow, green, indigo, blue, and violet in color. The invisible rays are Ultra Violet, X-rays, Gamma, Cosmic, Microwave, Long Wave, Electrical Wave, and Infrared. Far infrared ray is part of the sunlight spectrum that is invisible to the human eye.

Electromagnetic waves between visible light and the microwave are called infrared waves. The wavelength of infrared waves range from 0.76 micron to 1,000 microns. This range is further subdivided into the ranges of Near, Medium, and Far-Infrared Rays with following wavelength: 0.76 to 1.5microns; 1.5 to 4 microns; and 4 to 1,000 microns respectively.



Far infrared waves are thermal. In other words, we experience this type of infrared radiation every day in the form of <u>heat</u>. Unlike ultraviolet light, FIR is harmless to the body.

All surfaces radiate Far Infrared Rays (FIR) waves as a function of surface temperature. However, some materials can generate more Infrared Rays waves than ordinary materials. The discovery of these materials, and their capabilities to generate Infrared Rays waves was made by NASA. Carbon based materials, like **carbon fibers**, belongs to this family.

#### Far Infrared and Human Body

Human bodies radiate infrared energy through the skin at 3 to 50 microns (also commonly called Biogenetic rays), with the most output at 9.4 microns. Our palms emit infrared energy in the level of 8 to 14 microns. Palm healing, an ancient tradition in China, has used the healing properties of infrared rays for 3,000 years. Yogis in India also employ palm healing and recommend it especially for relieving eyestrain.

Our tissues normally produce infrared energy for warmth and tissue repair. Tissue production of infrared energy is associated with a variety of healing responses. At times, the infrared energy in our tissues may require a boost to a higher level to ensure the fullest healing possible for tissue repair.

Body tissues that need an infrared boost selectively absorb infrared rays, realigning for proper cell communication and function. After far infrared therapy has boosted a tissue's infrared energy, the remaining rays pass onward harmlessly. This phenomenon is called "**resonant absorption**".

The following thermographies show the body behaviour before, during and after being irradiated by a Far Infrared source.

BEFORE



Body IR thermal emission before irradiation

DURING

Body IR thermal emission during irradiation



Body IR thermal emission after irradiation

#### Far Infrared effects

During research of the heat effect of a radiating source, it was found that the temperature rises when the color is changed from purple toward red, and even without color after passing red. This light (with a strong heat function) was named Long Wave Infrared Rays. Long Wave Infrared Rays not only warm our bodies, but they stimulate various bodily functions. They can make our bodies feel fully changed.

When Long Wave Infrared Rays are beemed into the body, they are absorbed by the body and they resonate through it, similiar to the sound and energy waves of a bell when it is struck.

Long Wave Infrared Rays penetrate 14 to 15cm (6 inches) into the body. Therefore, these rays not only benefit the muscles on the surface of the body, but all cells including blood vessels, lymph glands, and nerves in the deepest parts of our body. These Long Wave Infrared Rays penetrate through the skin to the subcutaneous tissues transforming from light energy to heat energy that relieves shoulder pain, lumbago, and fatigue of the body muscles.

Moreover, the thermal effect within the deep layers of tissues causes blood vessels in capillaries to dialate, promoting better blood circulation, an overal improved metabolism, and the heat produced promotes perspiration which helps expel body toxins, metabolic waste and unhealthy materials such as urea, nitrogen, uric acid, sodium, and chlorine which cause kidney infections and other problems.

Far Infrared Rays also increase the heart rate and blood circulation which are both crucial to maintaining your health. The heart rate increases as more blood flow is diverted from the inner organs toward the extremities of the skin without heightening blood pressure.

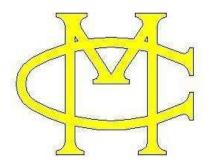
Some demostrated effects are listed below:

- Puts people in a Delta Brainwave state so they can relax and fall asleep
- Powerful detoxifier shown to destroy cancer and viral cells without harming surrounding healthy cells (Harvard Medical School)
- Deeply penetrates muscles for relaxation and healing, warming you from the inside out
- NASA discovered as the most healing, beneficial light for the body
- Revitalizes the biological function of cells
- Increases blood circulation, creates antibacterial function
- Promotes perspiration to cleanse toxins from the body
- Relieves neuralgia, backache, arthritis, Fibromyalgia
- Natural weight loss, burns calories
- Balances pH by decreasing acidity (the main cause of aging and disease)

Far infrared sunlight in all, it most in-depth skin and subcutaneous tissue to promote blood circulation to maintain a certain body temperature, infrared or a wave, can be rapidly absorbed by the human body. The human body into the far infrared will cause the atomic and molecular vibration resonance absorption through again formed reflect heat, the temperature rose to the skin deep, tiny blood vessels to dilate blood circulation to be bruises prejudice metabolic remove all obstacles to a clean, re-organization to revive and promote growth enzyme.

In the original stranded in the old waste and hazardous substances, as metabolism excreted by the sweat glands, which exist in the pore in the remnants of cosmetics, we can not through the kidneys directly from the skin and sweat together excreted can avoid increasing the burden on the kidney. These benefits can be from the temperature about 40 degrees from the low-temperature infrared study results are confirmed.

It is possible to find on Internet many scientific studies on the beneficial effects of exposure to far infrared ray which demonstrate the effectiveness of thermotherapy (search for "thermal therapy far infrared").







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