

TT
DUAL
PARALLEL
ACTION





TT DUAL PARALLEL ACTION

HIRO TT is the new therapeutic strategy developed by **ASAlaser** capable of combining the specific laser source of Hilterapia® (pulsed Nd:YAG) with a cooling system which lowers the temperature of the skin and the underlying tissues, called SmartCooler, for an innovative, **dual and parallel treatment** that combines the very high intensity of the laser (3 kW and 15,000 W/cm²) to the effectiveness of the thermal exchange. Such synergy allows the target area to be irradiated with evident and long-lasting results.



TT Advantages and Innovations

- 
 INTERVENTION IMMEDIACY
- 
 1 OPTIC FIBRE
3 LASER HANDPIECES
- 
 SAFETY
- 
 + INTENSITY + DEPTH
- 
 DUAL AND PARALLEL ACTION



Hilterapia®



ASAlaser effective innovation

We have been building up our experience day by day since 1983, successfully dedicating ourselves to the development of therapeutic solutions for Pain Management and Tissue Repair.

Our tireless research has made possible the production of effective medical devices for laser therapy (Hilterapia® and MLS® Laser Therapy) and Magnetotherapy in physiotherapy, orthopaedics, traumatology, rheumatology, dermatology, sports and rehabilitation medicine.

HIRO TT

HIRO TT is the ultimate application of Hilterapia®, the new therapeutic strategy in the treatment of painful pathologies of the musculoskeletal system based on the principle of thermal exchange.

HIRO TT combines the Nd:YAG pulsed laser source with a cooling system which lowers the temperature of the skin and the underlying tissues, called SmartCooler, producing a dual and parallel action based on the principle of thermal exchange, which allows you to treat with superior efficacy the pathologies of the patient, from superficial conditions to deeper ones.



Science at the service of health

Hilterapia® is an innovative therapeutic technique based on high-intensity laser emission. While being absolutely safe for the patient, it provides extremely effective action in depth.

HIGH INTENSITY LASER THERAPY

Hilterapia®

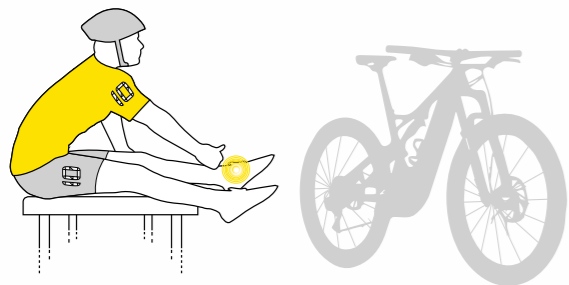
Therapy at the forefront of effectiveness and intensity thanks to the revolutionary HILT® laser pulse patented in the United States. The targeted, anti-inflammatory, analgesic, and biostimulant action of Hilterapia® is able to show results already from the first session, initiating the rehabilitation process for a **long-lasting pain relief**.

Hilterapia® occupies today a position of utmost importance in the field of scientific research worldwide, thanks to the results obtained in the treatment of painful pathologies for joints, tendons, ligaments, and muscles: with no side effects nor pain during the treatment, it is a rapid and safe solution for the physical recovery of the patients.

// INTERVENTION IMMEDIACY



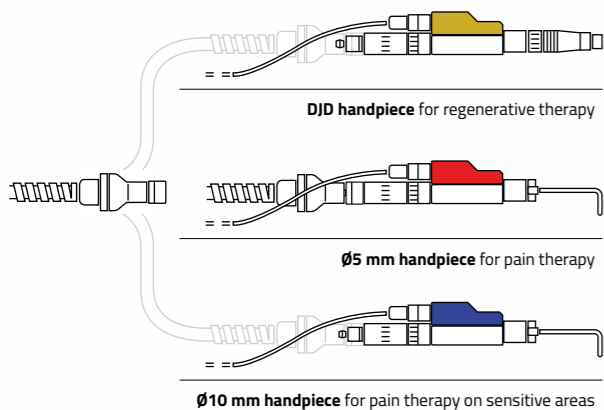
Thanks to the effects of the thermal exchange, **HIRO TT** allows an immediate intervention even in the most acute conditions, such as traumas, muscle lesions and contusions.



// 1 OPTIC FIBER 3 LASER HANDPIECES



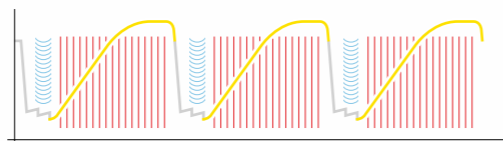
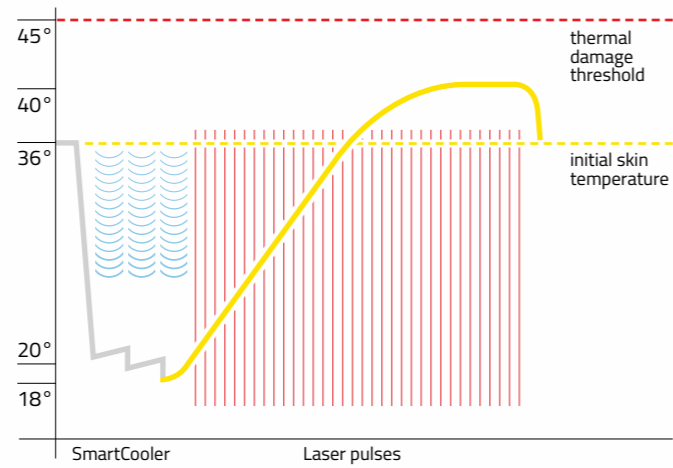
HIRO TT has been designed to connect all three handpieces with a single optic fiber, thus optimising the change of handpiece with a quick and easy connection to ensure ease of use, multifunctionality, and rapidity.



// SAFETY



The proven safety of the HILT® pulse, enhanced by the localised action of the thermal exchange, ensures patient comfort during the treatment also in cases of very acute inflammation and on highly sensitive subjects.

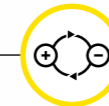


// + INTENSITY + DEPTH

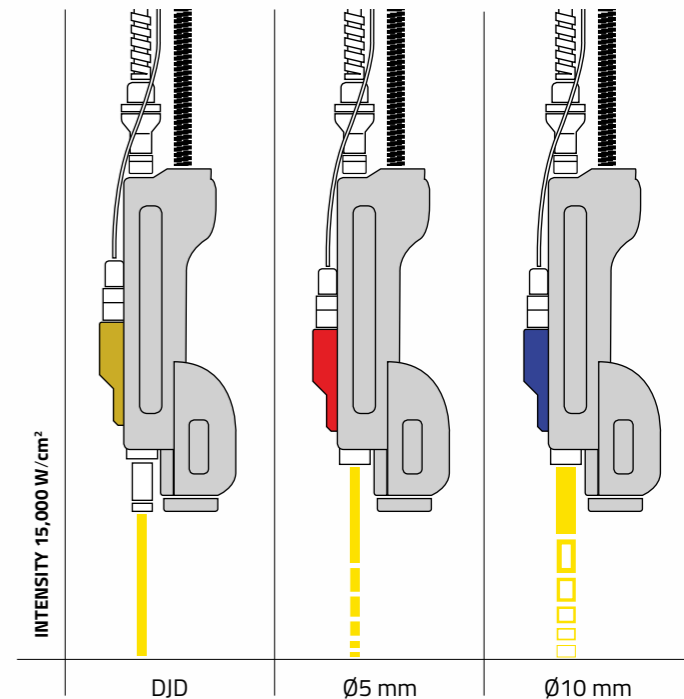


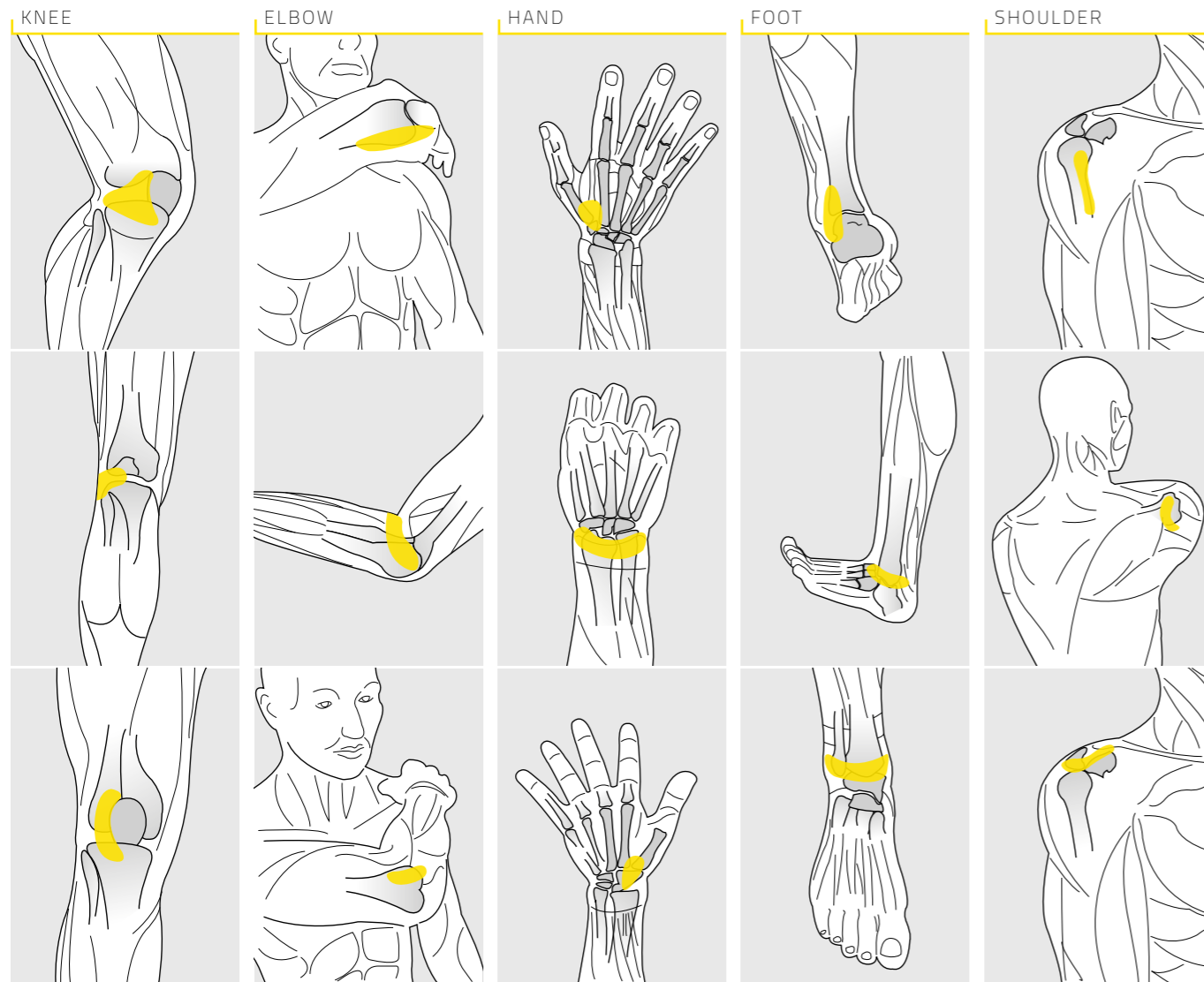
The SmartCooler skin temperature regulation system allows you to make the best use of **HILT® pulse, conveying a larger quantity of photons** faster and deeper. Hilterapia® reaches intensities up to **15,000 W/cm²**, unprecedented for laser technology applied therapeutically. The Nd:YAG laser pulsed at 1064 nm has in fact a remarkable penetration capability that combines with the high pulse peak power **reaching 3 Kw** for an effective action even in deeper tissues.

// DUAL AND PARALLEL ACTION



The thermal exchange triggered by the SmartCooler and by the high intensity laser source shows more significant and longer-lasting results.





THE EFFICACY OF THERMAL EXCHANGE

The application of the SmartCooler allows a controlled decrease of tissue temperature (between 28°C and 18°C) in the treated area. Cooling followed by laser application creates temperature gradients that **enhance the therapeutic effects** which already distinguish Hilterapia®.

The thermal gradients (ΔT), that are created between tissues at different depths after the alternating application of SmartCooler and Hilterapia® generate a **thermal exchange** that creates a synergy of effects resulting in an analgesic and anti-inflammatory action. The alternating and intermitted application of the sources which generate the thermal exchange is particularly suitable to stimulate the reactivation of microcirculation and biological healing process, to facilitate edema resorption, to restore homeostasis and to promote muscle relaxation and pain inhibition.

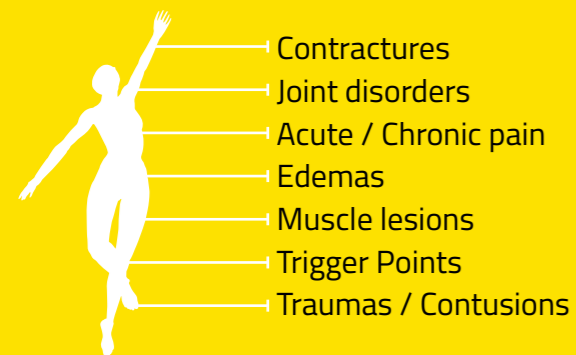
Additionally, the cooling action is dosed to mitigate acute inflammation, and favour early interventions on trauma and acute lesions.

HIRO TT provides a gentle therapy to the patient, with a measured application of the SmartCooler and Hilterapia® sources in order to achieve a therapeutic action based on combined effects and not on thermal shock.

By virtue of its characteristics, HIRO TT effects are immediate and durable in the treatment of numerous pathologies including: osteoarthritis and peri-arthritis, muscle contractures, traumas, edema, contusions, tendinitis, and in post-surgical rehabilitation (with or without wounds).



TT DUAL PARALLEL ACTION



1. SHOULDER

- . A-C JOINT OSTEOARTHRITIS
- . GLENOHUMERAL OSTEOARTHRITIS
- . ROTATOR CUFF TENDINOPATHIES
- . TENOSYNOVITIS OF THE LONG BICEPS

2. ELBOW

- . GOLFER'S ELBOW
- . OLECRANON BURSTITIS
- . OLECRANON IMPINGEMENT
- . TENNIS ELBOW
- . TRICEPS TENDONITIS

3. WRIST - HAND

- . CARPAL TUNNEL SYNDROME
- . DE QUERVAIN SYNDROME
- . RADIOCARPAL OSTEOARTHRITIS
- . RHIZARTHRITIS
- . TENDINOPATHIES

4. NECK

- . CERVICOBRACHIAL PAIN
- . NECK OSTEOARTHRITIS
- . WHIPLASH

5. BACK

- . DORSAL OSTEOARTHRITIS
- . DORSAL PAIN
- . LUMBAR OSTEOARTHRITIS
- . LUMBAR PAIN
- . LUMBOSCIATIC PAIN

6. HIP - PELVIC GIRDLE

- . COXARTHROSIS
- . COXITIS
- . PIRIFORMIS SYNDROME
- . RECTUS ADDUCTOR SYNDROME
- . SACROILIAC OSTEOARTHRITIS
- . TROCHANTERIC ENTHESOPATHY

7. KNEE

- . GONARTHROSIS
- . ILIOTIBIAL BAND SYNDROME
- . MENISCOPATHIES
- . PATELLOFEMORAL SYNDROME
- . PES ANSERINE TENDINOPATHY
- . TENDINOPATHIES

8. ANKLE - FOOT

- . ACHILLES TENDINOPATHY
- . HALLUX OSTEOARTHRITIS
- . PLANTAR FASCIITIS
- . TIBIOTARSAL SPRAIN

ENHANCEMENT OF THE PHOTOMECHANICAL EFFECT

The significant temperature gradient created in the thermal exchange triggered by **HIRO TT** can enhance the photomechanical effect which is already a distinguishing feature of Hilterapia®: this enhanced effect acts on microcirculation, can create an important signal for the cellular component of the tissues, and can induce the activation of various biological processes, including tissue repair ones.



EFFECTIVE

Arthrosis and degenerative processes

Bursitis, synovitis, capsulitis, epicondylitis, impingement syndrome

Tendinitis and tenosynovitis

Edema and trauma ematomas

Contractures

Acute muscle injuries

Post-trauma pathologies, also due to over-loading

Adductors syndromes, tibio-tarsal sprains, insertional inflammations, patellar chondral conditions, in sport Traumatology

BECAUSE

Joints

Reduces joint inflammation and edema

Muscular system

Quick muscle relaxation

Provides instant, long-lasting pain relief

Circulatory and Lymphatic system

Promotes nutrients supply and the activation of biological processes (e.g. tissue repair)

It boosts microcirculation and the re-absorption of edema



Early treatment after trauma

Speed, safety and ease of application

Immediate relief from the first sessions

Long-lasting benefits

Dual and parallel action, more effective and targeted

High capability of tissue penetration

Hilterapia® results recognised and validated by the international scientific community

Front view


TECHNICAL FEATURES

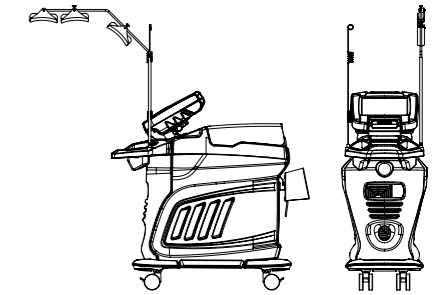
- /// Laser system employing the patented HILT® pulse
- /// High Intensity pulsed Nd:YAG laser source
- /// Peak Power (max): over 3,000 W
- /// Intensity (max): 15,000 W/cm²
- /// Energy per pulse (max): 350 mJ
- /// Frequency: 10-30 Hz
- /// Average power (max): 10.5 W
- /// Fluence (max): 1780 mJ/cm²
- /// Pulse duration: ≤ 100 μs
- /// Auto-calibration of the laser emission to optimize the power delivery to the tissue

Side view



- /// "Top-Hat Spot Size" technology to ensure homogeneous distribution of energy over the target area
- /// SmartCooler Cooling system: 18° -28° C
- /// User interface with 10" graphic color touch screen display
- /// Pre-set protocols
 - /// Standard protocol
 - /// Fast protocol
 - /// Focused Protocol (by pathology)
- /// Free programs to modify and save personal parameters

HIRO TT THE SCIENTIFIC FRONTIER FOR YOUR HEALTH


ALARMS AND SAFETY FEATURES

- /// Acoustic signal of laser emission during the therapy
- /// Date and time
- /// Language option
- /// Machine status signals and alarms
- /// Emergency stop button for laser emission
- /// Laser emission warning light
- /// Interlock
- /// Handpiece Test
- /// Emission control - Footswitch or Fingerswitch

SIZE AND WEIGHT

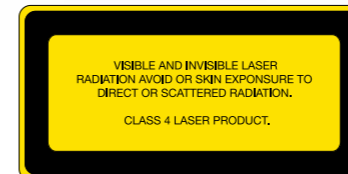
- /// 40 x 85 x 103 cm (width x depth x height)
- /// 45 kg

POWER SUPPLY

- /// 115V/230V 50-60Hz 1840VA

ACCESSORIES INCLUDED

- /// Standard Ø5 mm handpiece for pain therapy
- /// Standard Ø10 mm handpiece for pain therapy on sensitive areas
- /// Patented DJD handpiece for regenerative therapy
- /// SmartCooler applicator
- /// N.2 fiber/cable holders
- /// N.2 laser safety goggles



HIRO TT SOFTWARE

HIRO TT is equipped with a user-friendly graphic interface with a large 10" touch screen display for a clear and immediate visualization of all the therapy parameters.

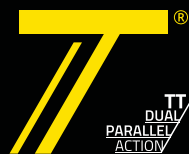
The software allows you to manage different operating modes including the *standard* protocol (for general pain treatment), the *fast* protocol (for a specific action on trigger points, contractures, intra-articular windows, edemas), and the *focused* protocol, dedicated to the specific treatment of the most common pathologies afflicting the different anatomical regions.

Each protocol is graphically supported by sequences of images and videos depicting the target areas and the location of the pathology that requires treatment.

HIRO TT allows the treatment to be fully customised according to the morphometric characteristics of the patients and the colour of their skin, making it possible to calibrate the energy and optimize treatment times, maintaining high standards of safety and efficacy.







Hilterapia®



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