

KLASER®

**THE MOST
EFFECTIVE ENERGY**
in VETERINARY
MEDICINE

 **CUBE**
VET



LEADER IN VETERINARIAN LASER THERAPY



K-LASER IN THE WORLD

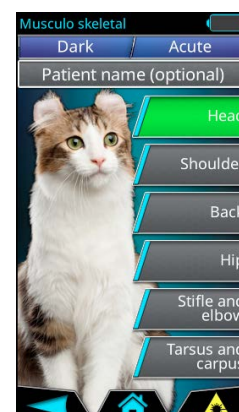
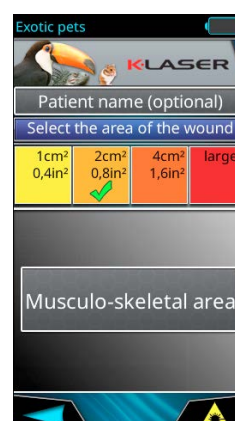
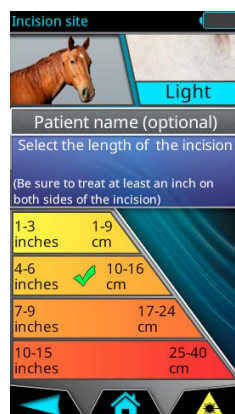
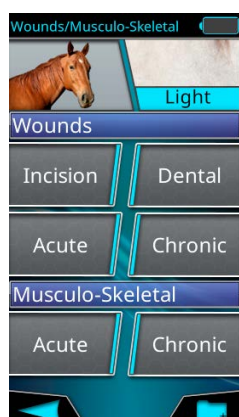
Eltech K-Laser company designs, manufactures and markets high quality professional laser equipment all over the world, ensuring the best reliability with a special long-term K-Laser warranty.

Leader in the veterinary field, **K-Laser** expresses **Made in Italy** at its best with its extremely qualified staff, which every day cooperates with competent professionals and renowned teaching hospitals, investing its resources in Research and Development in order to deliver the most cutting-edge products on the global market: **K-Laser Cube VET**.

FAST, INTUITIVE AND VERSATILE K-LASER TREATMENTS

In modern Veterinary Medicine, the use of the device **K-Laser Cube VET** for severe and chronic pain therapy has proved to be highly effective, accelerating the healing of muscle-tendon and post-traumatic pathologies.

With its proven characteristics, **K-Laser Cube VET** also offers an ideal solution in post-surgical rehabilitation and in rehabilitative therapy treatments.



CUSTOMIZED DYNAMIC PROGRAMS

The possibility to create customized programs aimed at the animal patient's problem allows you to provide the veterinary a valid and authentic help in his work by having a flexible and versatile device which is suitable for all needs.

Selecting the most suitable protocol for the pathology to treat, you can interact with different application areas, from the musculoskeletal area for the treatment for severe and chronic pain, to ulcers area which includes the treatment for traumatic injuries borne by soft tissues and infected lesions, plus dental treatment.

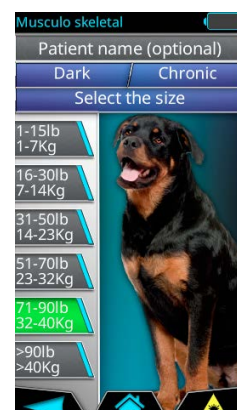
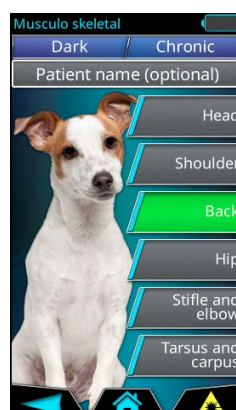
The selection of the dark or light coat color allows you to set the optimal therapy for the individual patient.



REDEFINED THERAPY FOR ALL KINDS OF PATIENTS



K-Laser Cube VET guides you to the correct energy dose according to each variation thanks to the menus selection that indicates the body part to be treated and the related weight category in lb/Kg.



EFFECTIVENESS AND BENEFITS FOR PAIN THERAPY IN THE VETERINARY FIELD

K-Laser Dynamic Therapy is an excellent multidisciplinary therapy

K-Laser Dynamic therapy uses several pulse frequencies to produce a combination of **analgesia, inflammation reduction, biostimulation and antimicrobial effect**, thus accelerating the regeneration of tissues and increasing cellular energy.

Cells can thus absorb nutrients more quickly as well as eliminate waste substances. As a result of the exposition to laser light, the cells that constitute tendons, ligaments and muscles are repaired more quickly.

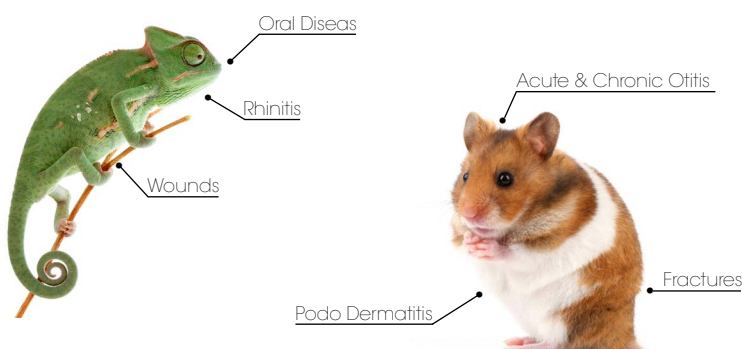
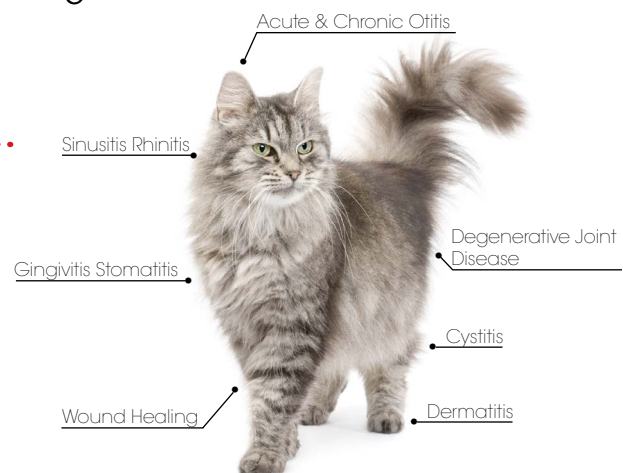
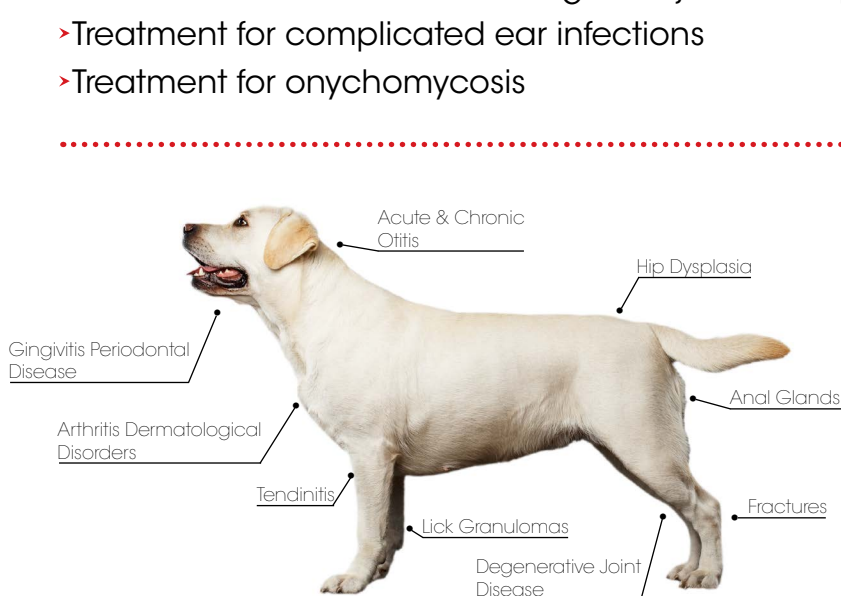
K-Laser Dynamic Therapy has anti-oedemic effects since it produces vasodilation while activating the lymphatic drainage system, which results in swelling reduction.



REHABILITATION AND PHYSIOTHERAPY FOR OUR FOUR-LEGGED FRIENDS

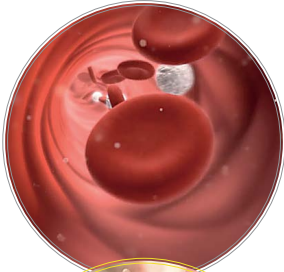
Treatments of acute and chronic pathologies with the K-Laser Cube VET for all the species

- Healing of surgical wounds
- Regeneration and healing of traumatic wounds borne by soft tissues
- Regeneration and healing of infected wounds borne by soft tissues
- Recovery and healing of indolent ulcers
- Treatment for granulomas caused by licking
- Treatment for infections borne by perianal bags
- Recovery of bone fractures after surgical interventions
- Treatment for musculoskeletal pain, both severe and chronic
- Treatment for odonto-stomatological injuries and pathologies
- Treatment for complicated ear infections
- Treatment for onychomycosis



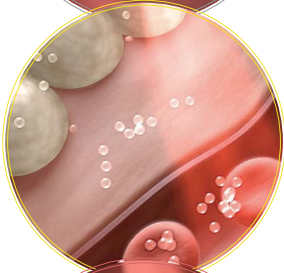


4 WAVELENGTHS



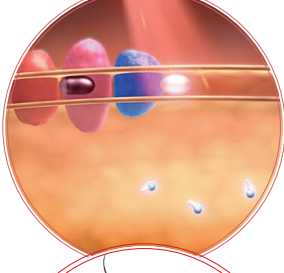
◀ 970 nm

Blood, the main transport system, provides the cells with all the elements which are necessary to their metabolism, such as oxygen and nutritional substances, thus removing catabolic products. This wavelength is able to absorb most of the water contained in our body and a large part of the energy delivered by the therapy is transformed into heat. The deep tissue layers are thus transformed into localised heat points that create temperature gradients at cellular level. They also boost local microcirculation thanks to the increase in oxygen provided to the cells.



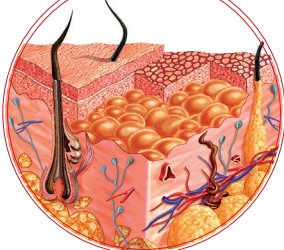
◀ 905 nm

Oxygen is released in variable percentages in the blood: the faster it is released, the more oxygen needs to be transported to the cell in order for the natural healing processes to take place. This wavelength is absorbed by haemoglobin, water, melanin and Cytochrome C oxidase. When it is absorbed, more oxygen is available to the cells.



◀ 800 nm

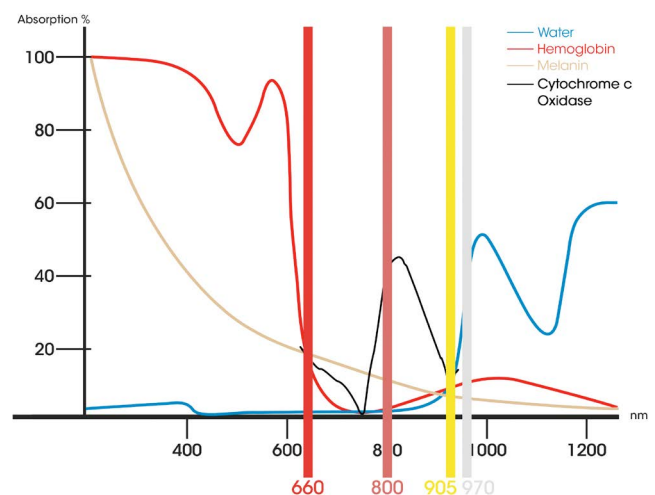
Cytochrome C oxidase is the terminal enzyme of the respiratory chain that determines the amount of oxygen to be turned into ATP according to cellular efficiency. Enzymes are better absorbed at 800 nm: an ATP molecule is generated for each oxygen-reduction cycle accomplished. The photon absorption accelerates such process while increasing the ATP cellular production.



◀ 660 nm

This wavelength is perfectly absorbed by the melanin contained in the skin, thus guaranteeing energy concentration in the most superficial tissue layers. Laser therapy allows obtaining excellent results in wounds healing as the light both inhibits bacterial proliferation and increases cellular growth.

K-Laser Cube VET is Laser Therapy's world innovation:
it completes the wavelengths range,
delivering up to 15 different combinations.



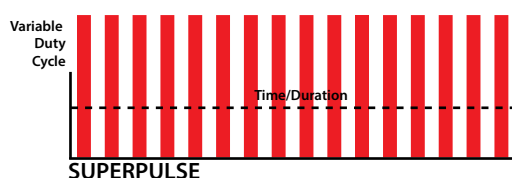
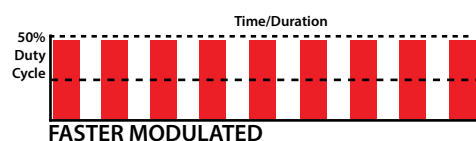
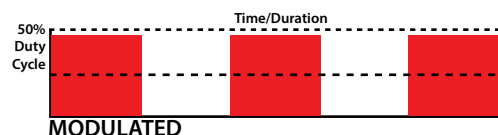
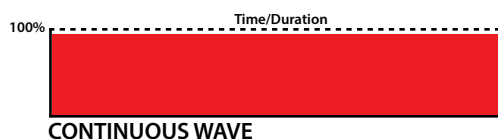
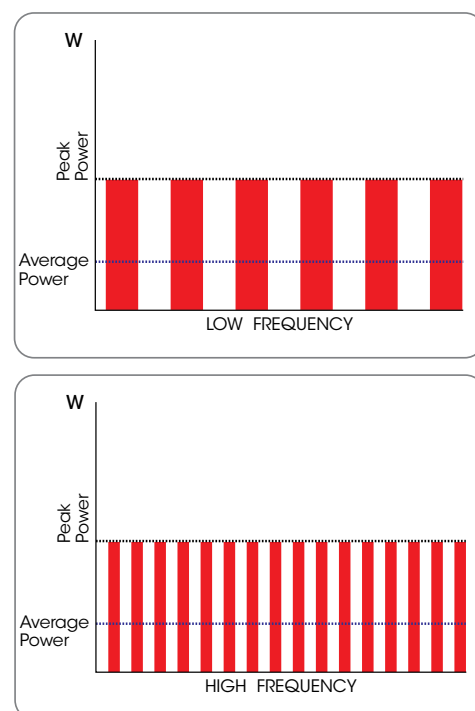
MORE POWER AND MORE ENERGY IN DEPTH

ISP INTENSE SUPER PULSE

K-Laser Cube VET is the only laser that has the exclusive and exceptional **K-Laser ISP** modality, a more evolved technology which allows the provided power to be independent from the frequency modulation, while working by high peak power pulses.

K-Laser ISP modifies the width of the impulse automatically, keeping the energy transferred to the patient stable at any frequency modulation, achieving all the desired effects.

The pulse frequency can be chosen starting from the **lowest ones (Low Frequency)** for analgesic treatments, to the **highest ones (High Frequency)** for biostimulation. Average power is independent and adjustable so as to deliver the right type of energy for the tissue to be treated.



DIFFERENT TYPES OF TISSUE CORRESPOND TO DIFFERENT MODULATION PARAMETERS

The parameters of the new **K-Laser Cube VET** line are distinguished according to the type of pulse (**CW** mode, pulse mode with adjustable frequencies, **ISP** super-pulse mode), with diversified tissue response.

Such effects have been thoroughly analysed, paying particular attention to:

- the amount of energy administered depending on the effect obtained;
- the response obtained at different tissue depths;
- the effects of laser light penetration related to the most suitable administration modalities according to the kind of tissue to be treated.

BIOLOGICAL EFFECTS

Clinical results form the basis for K-Laser **Dynamic Therapy** in both physiotherapy and veterinarian rehabilitation, with **very important protocols**.



anti-inflammatory ➤

Bibliography:

- Pryor B et al. Therapeutic laser in veterinary medicine. *Vet Clin North Am Small Anim Pract.* 2015 Jan;45(1):45-56. doi: 10.1016/j.cvsm.2014.09.003. Review.
- Perego R et al. Low-level laser therapy: Case-control study in dogs with sterile pyogranulomatous pododermatitis. *Vet World.* 2016 Aug;9(8):882-7. doi: 10.14202/vetworld.2016.882-887. Epub 2016 Aug 22. .

K-Laser produces an anti-oedema effect: in fact, it both reduces vasodilation and activates the lymphatic drainage system (draining the oedematous areas). Thus, swelling caused by traumas and/or inflammation is reduced.

analgesic ➤

Bibliography:

- Mota FC et al. Low-power laser therapy for repairing acute and chronic-phase bone lesions. *Res Vet Sci.* 2013 Feb;94(1):105-10. doi: 10.1016/j.rvsc.2012.07.009. Epub 2012 Jul 31.
- Gagnon D et al. An in vitro method to test the safety and efficacy of low-level laser therapy (LLLT) in the healing of a canine skin model. *BMC Vet Res.* 2016 Apr 8;12:73. doi: 10.1186/s12917-016-0689-5.

K-Laser therapy positively affects pain receptors: it increases pain threshold while reducing the transmission of pain stimuli to the brain. Pain is also reduced thanks to the anti-inflammatory and anti-oedema effect. **K-Laser** therapy triggers **endorphins production**.

improved vascular activity ➤

Bibliography:

- Olivieri L et al. Efficacy of low-level laser therapy on hair regrowth in dogs with noninflammatory alopecia: a pilot study. *Vet Dermatol.* 2015 Feb;26(1):35-9, e11. doi: 10.1111/vde.12170. Epub 2014 Sep 16.
- Rogatko CP et al. Preoperative low level laser therapy in dogs undergoing tibial plateau levelling osteotomy: A blinded, prospective, randomized clinical trial. *Vet Comp Orthop Traumatol.* 2017 Jan 16;30(1):46-53. doi: 10.3415/VCOT-15-12-0198. Epub 2016 Dec 9.

K-Laser therapy significantly increases the formation of new capillaries, thus accelerating the healing process of damaged tissues, **quickly healing wounds and reducing the damaged area**.

In addition, benefits include increased angiogenesis, which causes vessels to dilate temporarily with the augmentation of the blood vessels diameter. The increased supply of blood in the damaged area facilitates the healing process and reduces pain.

improvement of nerve function



K-Laser therapy is used to treat nerve injuries such as traumatic or iatrogenic paresthesias, dysesthesias and anaesthesias using reference protocols.

K-Laser therapy increases the production of specific enzymes for the transport of oxygen, thus facilitating the repair and the regeneration of damaged cells.



metabolic activity increase



improvement of wounds of soft tissues



K-Laser therapy allows wounds, ulcers and mucositis to heal faster thanks to tissue biostimulation and consequent better wound healing.

Bibliography:

- **Bennaim M** et al. Preliminary evaluation of the effects of photobiomodulation therapy and physical rehabilitation on early postoperative recovery of dogs undergoing hemilaminectomy for treatment of thoracolumbar intervertebral disk disease. *Am J Vet Res.* 2017 Feb;78(2):195-206. doi: 10.2460/ajvr.78.2.195.
- **Kurach LM** et al. The Effect of Low-Level Laser Therapy on the Healing of Open Wounds in Dogs. *Vet Surg.* 2015 Nov;44(8):988-96. doi: 10.1111/vsu.12407. Epub 2015 Oct 8.



CUBE & PERFORMANCE



CUBE 2 VET

10W-ISP - 8W-CW
2 wavelengths



CUBE 3 VET

15W-ISP - 12W-CW
3 wavelengths



CUBE 4 VET

20W-ISP - 15W-CW
4 wavelengths



CUBE PERFORMANCE VET

25W-ISP - 18W-CW
4 wavelengths

The last generation **CUBE PERFORMANCE VET** has more power and a PLUS optic which defines a more precise energy output and a maximum therapeutic efficiency.

K-LASER QRT QUICK RELEASE TECHNOLOGY

K-Laser developed handpieces with **interchangeable optics** for different application areas.

OPTICAL ZOOM PROVIDED

Variable Zoom
from 1 to 5 cm²



OPTIONAL OPTICS

Surgical contact optics



Pointed Tip



Scalpel Tip



Surgical Optic



Complete handpiece

ENT Fiber



High Energy Optics



K-Laser Zoom Plus

A more performing and uniform therapy thanks to **K-Laser Zoom Plus**.



K-Laser Optic Plus: 12 cm²

With **K-Laser Optic plus** treating extended areas is easier.

OPTIONAL ACCESSORIES



K-LASER TROLLEY

Light, transportable and safe, it guarantees the stability of the device on the base of the trolley.



PROTECTIVE GOGGLES

K-Laser studied some specific goggles to protect your animals' eyes during **K-Laser** treatments.



ALUMINIUM TRANSPORT CASE

K-Laser studied a comfortable transport case.



PROVIDED PACKAGING

K-Laser Cube VET will be accompanied by the comfortable and solid box "**Cube**"



IN DETAIL

REDUCED WEIGHT

(<1,5 kg)

Compactness and portability are a feather in the cap of K-Laser devices, the ideal tools to operate in Veterinarian Rehabilitation fields.



LCD FULL COLOUR GRAPHIC DISPLAY touch screen

Liquid crystal display and high definition full colour graphics make for high visibility even with strong ambient light. The **Touchscreen technology** allows better interaction between **K-Laser Cube VET** and the user.

CUBE SOFTWARE UPDATES

K-Laser technology provides for the periodic update of Cube devices in order to guarantee high-quality performance at all times.

ELECTRONIC THERAPY RECORDS:

Patients' historical record

The software **Cube VET** provides for a **chronology of the treatments** done on an individual patient, with the possibility to customize the patients' protocols and to export them to the powerful portal **K-Laser ON DEMAND**, or to different formats for computers through a **USB** stick.



RECHARGEABLE BATTERY of lithium-ion

K-Laser Cube VET has a rechargeable and long-lasting autonomy battery.

Departments



K-Laser Research
R & D Engineering
Design
Production and Service
Quality Management
Software Management
Purchasing
Advanced Training
Customer Service
Sales & Marketing
Accounting & Administration



ON DEMAND

CONTRIBUTE TO THE OPENING OF A SPECIALIZED K-LASER CENTRE!

Thanks to a sophisticated technology, **K-Laser** created **K-Laser ON DEMAND**.
K-Laser Cube VET has become a device available to anyone!.





**ELTECH
KLASER**



ELTECH K-LASER S.r.l.
Strada Castagnole, 20/H
31100 TREVISO - ITALY
Tel. +39 0422 210 430
Fax +39 0422 297 137
com@klaser.it

**ELTECH
KLASER**

**CUBE
VET**

K-LASER and CUBE
are registered trademarks
by Eltech K-Laser srl



UNI ISO 13485:2012



K-Laser Cube VET 2.0 ENGL
K-Laser reserves the right to modify the contents if necessary without any prior notice.
Reproduction of the content or any part thereof is prohibited.