



# PROTECH

HORSE BOOTS



**COMPOSITI**  
jump into innovation

The **ventilated PROTECH tendon and fetlock boot** allows the horse perfect mobility and reduces the risk of friction injuries. The ventilated design reduces overheating of the horse's leg, during and especially after exertion. The ergonomic design fits the tendons perfectly to provide lateral support during exercise.

#### Uses

Daily work

#### Advantages

- Ventilation & flexibility
- Prevention
- Easy care
- Replaceable fastenings
- One size

#### Colors

- Black, brown, white

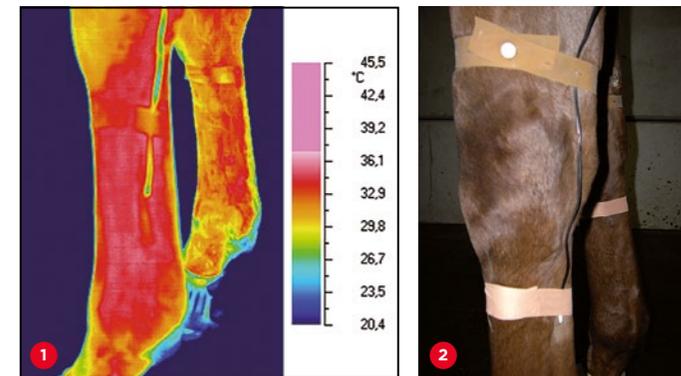
#### Packaging



## PROTECH HORSE BOOTS

The **COMPOSITI Protech Horse Boot** is a result of a three- year R&D program, conducted by Professor Serteyn and his team from the veterinary faculty at **ULG University in Belgium**, and the “**Centre Européen du Cheval**” (European Horse Centre).

This centre is entirely devoted to studies of horse behavior and dynamics. It also studies horse diseases, injuries and ways of preventing them. The institute is equipped by a state of the art test facilities (*fig. 1*), reproducing indoors the environment of horses galloping at various speeds. The test rig is equipped with infrared cameras and probes attached to the horse (*fig. 2*) to measure in real time temperature and strains in many locations, (*fig. 3*).



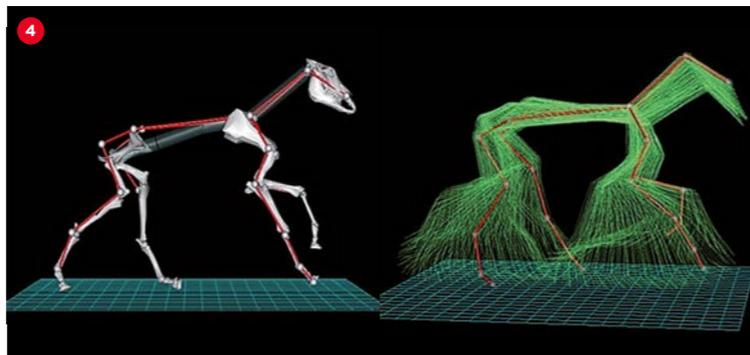
**Cameras register the horse dynamic simultaneously. Results are analyzed by computers and adapted programs (fig. 4).**

The study concerning the Protech Horse Boot was aimed at understanding the reasons of horse's legs and tendons injuries. The methodology was based on the comparison of existing leg-protections, and the understanding of their advantages, shortcomings and conceptual mistakes.

The research team observations led to a set of practical recommendations allowing the design of a revolutionary horse boot that responds to protection and comfort concerns.

**Main requirements in horse leg protection as defined by the research team.**

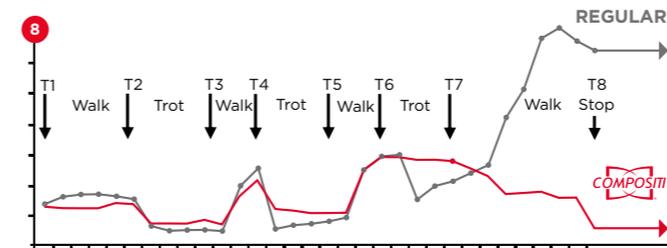
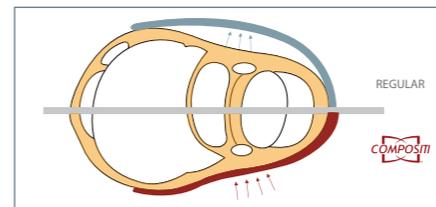
1. Protection against shock caused by friction, impacts of horse's legs or external obstacles.
2. Protection against overheating of the tendon during and immediately after the effort.
3. Preventing tendon buckling while jumping, especially when landing on front legs.
4. No hindering of blood circulation.
5. Avoiding rubbing by objects trapped between the protector and the horse skin.
6. Keep horse's legs mobility as close as possible to its natural dynamics.
7. Easy fitting and care.
8. Protection should be and remain lightweight.



**Identification of solutions for adequate horse leg protection and discussion of shortcomings in existing concepts.**

1. Using of shock absorbent material should lead to optimal protection. There are many light weight foams and polymers developed for sport, industrial protection and automobile shock absorption. Their density varies according to shock intensity and level of the demanded protection.

One of the typical misconceptions in existing protectors is the use of a hard shell (fig. 6) as it does not absorb shock but merely distributes it on a larger surface. It increases the weight and stiffness of the protector. A properly designed boot should be made of an adequate material, with variable thickness, to provide extra protection where needed at minimum weight.

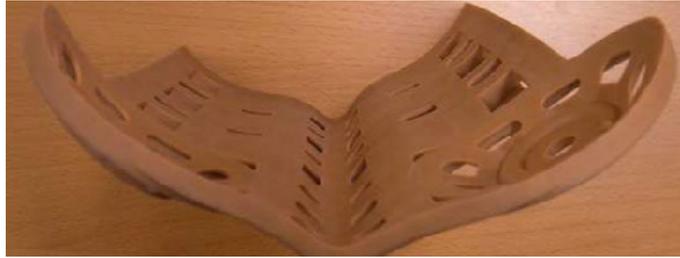
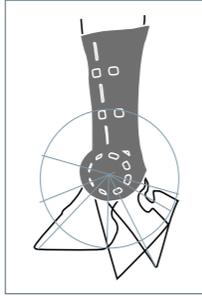


2. Temperature rise of the horse's leg during and after effort is critical to tendonitis and other leg accidents. Ventilation prevents heating. Most horse boots wrap the leg all around leaving no possibility for ventilation or sweat evaporation. For that reason riders remove horse boots immediately after effort and replace them with cooling boots.

Compositi Protech boots are ventilated through the large web designed openings and the shock absorbent polymers assure protection (fig. 8). It keeps the leg at a constant temperature even after the effort (fig. 7). Riders may keep the boots on after the effort and even wash the horse's legs without removing the boot.

3. Tendon buckling is an important risk factor in jumping. The tendons need lateral protection and support (fig. 10). This can only be achieved by an ergonomic design of the inner part of the boot (fig. 11, 12). Thick and tightly wrapped padding does not solve the problem it still allows the tendon to move laterally (fig. 10).

A constant and proper blood irrigation of the leg during an effort is paramount to horse's health and performance. It is important not to wrap the boot too tightly. Many boots are fitted with a buckle which allows very tightly fastening. As a result, the boot will not turn around the leg, but it will also hinder dangerously blood circulation. It may cause wounds as well.



More adequate solution is a boot design that integrates horse's leg anatomy, figures (11 + 12). When boot is correctly designed, there is no reason for the boot to turn as the leg is not cylindrical.

4. Sometimes small stones are trapped in a tightly attached boot, it can cause major injuries. A boot with many openings, close to skin but not too tightly attached, allows trapped stones to slip out of it, diminishing the prospect of wounds.

5. The weight of the boot is an important factor in horses comfort and overall performances. For protective reasons the boot must have a certain weight. If made in a non absorbent material its weight will remain constant. Boots that are made of open cell materials absorb sweat, water and mud and increase weight significantly, during exercises.

6. The lower part of a horses leg is complex fragile and highly mobile, fig. (4). Hindering the mobility will definitely affect performances and cause major discomfort that can result in injuries. A correctly designed boot should be flexible on its entire surface allowing the articulations to move freely, Fig (13). Hard shell protectors will have exactly opposite effect. Producers of this type of protectors have improved them by adding a flexible boundary on the upper and lower edges of the boot.

#### Lab and field results

Final version of the Compositi Protech Horse Boots was tested on different horses in jumping, endurance and dressage disciplines for more than 6 months at the "Centre Européen du Cheval".

Lab and field results, as well as riders' comments, point to improved performance and decrease in side effects of the protector. It also shows a better acceptance of the boots by the horse. Riders find the product friendly and easy to use.

#### COMPOSITI Protech horse boots integrates all the considerations detailed above:

- It is **sufficiently protective**.
- It is **highly ventilated** and keeps leg temperature low.
- It provides **lateral tendon support** for front legs
- It is **ergonomically designed** for both tendon and fetlock boots and does not need excessive tightening.
- It **rejects naturally small stones** from under its surface.
- It is **lightweight**, perfectly water and sweats tight to ensure that weight remains constant.
- It is **flexible** on its entire surface. It does not hinder the horse leg movements.

#### COMPOSITI Protech horse boots are also friendly to the rider:

- **Easy use and care**. It should simply be washed with normal water, (fig. 15) even on horse legs.
- Boots **hardly wear-out**; the Velcro closure system can be easily replaced when damaged.
- It has **no parts that might rust**.
- Boots are **hygienic**. They are treated against fungi and bacteria and may be used on several horses with low risk of infection.





[www.compositi.be](http://www.compositi.be)

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