

Features of pliance horse system:

- can measure English and Western saddles
- adapts perfectly to horseback and saddle shape
- measures in static and dynamic mode
- stores data on a flash card up to one hour
- collects accurate, calibrated values
- scans 40 frames per second
- synchronises with video systems
- can operate with telemetric systems
- works with notebook or pocket PC's

Technical data of pliance horse

dimensions analyser(mm³)	169 x 105 x 45
weight analyser(g)	860
number of sensors	2 x 112 or 2 x 128
sensor mat thickness (mm)	2.6
measurement range (N/cm²)	0.1 - 6
scanning rate (sensors/second)	10,000
sync. in and out	TTL
accuracy	better than 5%
computer interface	RS232 at 115 kB

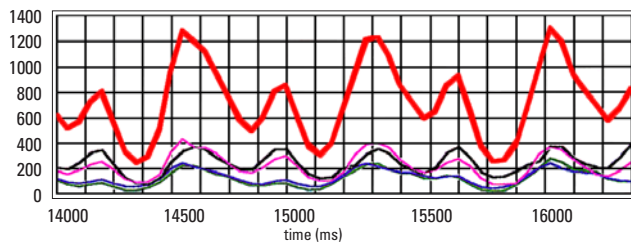


fixation of pliance horse sensor mat



saddle with sensor mat

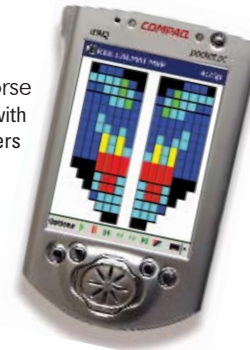
force (n) Total force during gallop



pliance horse



pliance horse can be used with PDA handheld computers



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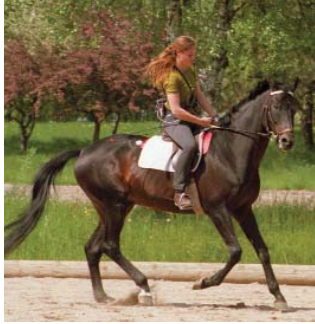


horse_eng_prlh 21/05/2002



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The pliance horse system marks the beginning of a new era in the assessment of the dynamic interaction between the horse, the saddle, and the rider.



How does the rider sit?
How does the saddle fit?
What does the horse feel?

pliance horse measures the dynamic pressure distribution between the saddle and the horse using a thin elastic sensor mat.

It is possible to assess quantitatively the commands of the rider and the subsequent reaction of the horse. The technique of the rider can be objectively assessed and corrected. Data can be immediately viewed with easy to use software.

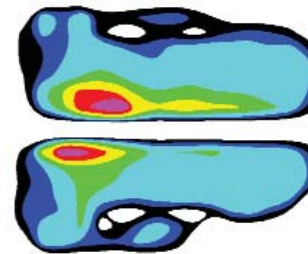
Using novel player software, the dynamic pressure distribution can be directly compared to time synchronised video pictures.

Harmful pressure points that arise from poor saddle fit can be recognised and corrected. During dynamic movement, such as trotting and galloping, substantially higher loads occur on the back and shoulders of the horse as compared to stand-

ing. The pressure distribution under the saddle during dynamic movement of the horse can be measured in order to assess the fit.

The pliance horse sensor mat contains up to 224 sensors which are scanned with a scanning speed of 10,000 sensors per second. Dynamic measurements can be recorded for all paces, from the walk to the gallop.

Gait asymmetry of the horse, possibly associated with physiological back problems or poor saddle fit, can be assessed quantitatively.



2 D pressure picture

The pliance horse system is accurate and reliable. The sensor mat is calibrated in a simple, computer aided procedure which calculates the calibration curves for each individual sensor. The calibration remains stable with time.



pliance horse system in use

The pliance horse software operates as a Windows application and displays dynamic pressure distribution on screen as a 2D or 3D color picture. The pictures can be printed in their original size to allow the user to relate the pressures precisely to the horse's anatomical landmarks or to the saddle. All data are fully compatible with novel scientific software packages and can also be exported in ASCII format. The pliance horse system can be connected to a notebook PC or an extremely portable handheld computer.

With the help of the pliance horse system and its powerful software one can analyse the quality of the saddle and obtain a better understanding of the interaction between the rider, the saddle, and the horse.

