New

penetroLOG

PLG2040

DIGITAL SOIL COMPACTION METER



\+

GPS
USB
Bluetooth

FALKER

Soil Compaction

Soil is the basis of any crop and the greatest asset of the producer. Soil life demands specific and continuous care to remain healthy and thus allow maximum productive capacity.

One of the problems that affect the development of the crop and that is hidden from the eyes of those who evaluate visually, is the soil compaction. Several factors contribute to the densification of the soil, such as the traffic of heavy machinery and implements, especially in activities with very humid soil. In areas with the presence of animals, continuous trampling also represents considerable pressure and can cause soil compaction.

In addition to soil fertility, physical condition must be monitored to allow good root development and water storage. Forming a good soil profile to sustain high productivity can be a long work, but very important for those who want to produce more and with stability.

Preserve the value of the soil.

Compacted | Uncompacted

Low productivity
Poor crop quality

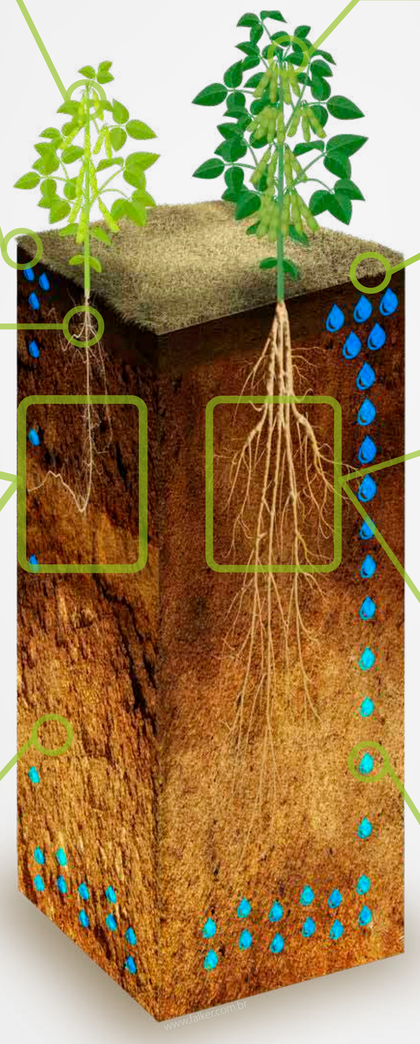
Reduces water infiltration
Causes leaching on the surface, soil erosion and reduced water storage in the soil

Lower aeration capacity
Facilitating the occurrence of diseases

Creates resistance to root penetration
Preventing plant development due to reduced nutrition capacity, resulting in productivity losses of up to 60%

Susceptibility to root diseases
A weakened plant suffers a greater impact from diseases that attack the root system

Less survivability
In situations of water stress, the plant suffers and even interrupts the development process



High performance growth
With direct effects on productivity

Water infiltration without hurdles
Unimpeded water permeability of the soil provides greater water holding capacity

Full root development
The penetration of the plant's roots occurs without physical impediments, providing optimal root development for each plant species

Healthy crop, superior productivity
A plant with well-developed roots is healthier and persists more easily in the event of phytopathologies

Resistance even in the event of water stress
In situations of water stress, greater availability of water in the soil and a well-developed root system allow the plant to withstand longer periods of drought

The 3 Dimensions of Compaction

To understand and be able to act on compaction, it is needed a complete characterization in 3 dimensions



Location
Which areas of the field suffer from compaction and which do not.

Intensity
What is the degree of compaction? Can I tackle the problem with cover crops and rotation or need a mechanical intervention?

Depth
For plants and soil structure, a compacted layer at 20 cm or 35 cm is very different.

The Accurate Diagnosis

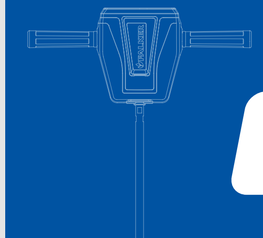
penetroLOG, Falker's digital penetrometer, is the ideal tool to diagnose the presence of soil compaction in your crops.

Portable, lightweight and an easy to operate equipment, it is capable of generating the compaction profile up to 60 cm deep, allowing to assess the compaction in deeper layers. The result is accurate with Cone Index values for each centimeter of the measurement, identifying where the roots suffer the greatest development impediment.

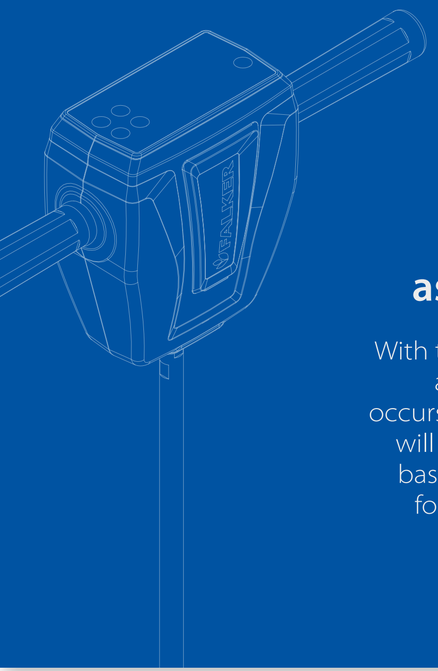
With the precise diagnosis of where and at what depth the soil compaction is presented, actions to correct the soil profile can be carried out with precision and economy of resources, as it allows intervention according to the need, generating cost savings. In addition to the accuracy of where to make the correction, the result may indicate less drastic and more sustainable interventions, such as crop rotation and use of cover crops that have strong root development.

Whatever the cause of compaction, penetroLOG is the tool that accurately informs you where the problem is, allowing you to make a decision for a tailored solution for the situation, avoiding excessive costs and field operations that are aggressive to the soil.

Know the soil.



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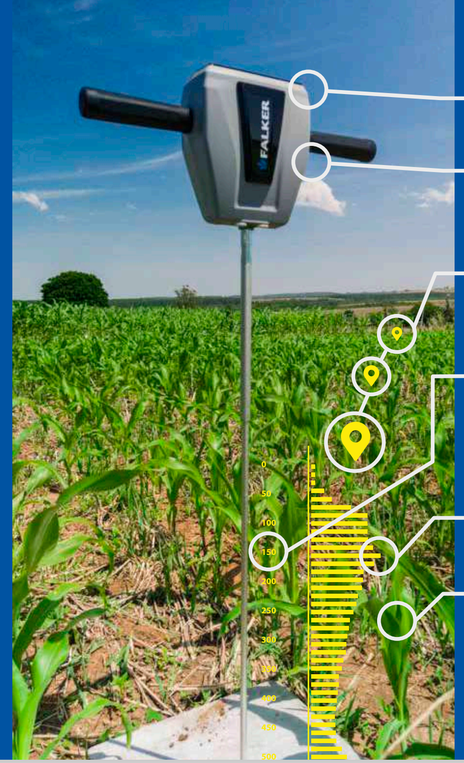
penetroLOG

PLG2040

DIGITAL SOIL
COMPACTION METER

Accurate data for assertive decision making

With the precise results of where, how much and to what depth the soil compaction occurs, the corrective actions to the problem will be as necessary. Rational management based on accurate data is an essential step for professional management in the field.



- **Instant results**
- **Precise digital equipment**
- **Georeferenced measurements**
  Integrated GPS records the exact location of the measurement
- **Diagnosis of the compacted layer**
  Identification of the depth of the compacted layer with results for every centimeter of the analyzed profile up to 60 cm
- **Compaction Intensity**
- **Allows measurement at any stage of crop development**

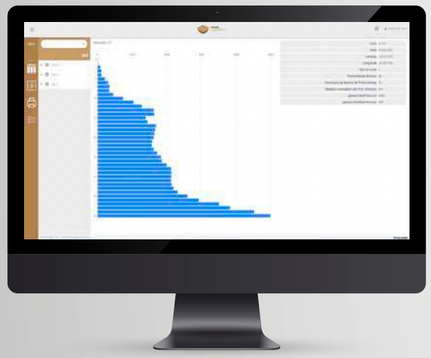
GPS	Georeferenced measurements
USB	Saves to flash drive
Bluetooth	Communication with App
Design	Modern and robust, with protected connectors
Dust Protected	Sealed ultrasonic sensor
Graphic Display	Ease of reading

FALKER
COMPACT

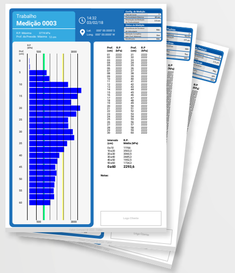
penetroLOG has a specific Web Application and an App for viewing and analyzing the collected data.

With an online system, data is saved in the cloud and automatically synchronizes between Web and App. You can access information from anywhere for analysis or sharing.
It also allows the generation of reports of measurements for presentation.





Reports
Ease of presenting the collected data



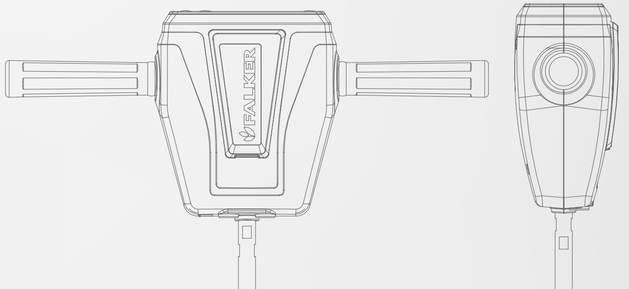
GET IT ON Google Play

Download on the App Store



Simple to use interface.

Available in English, Spanish and Portuguese.



Simple operation. Instant results.



Step 1: after starting the measurement, position penetroLOG on the reflective base



Step 2: follow the onscreen instructions



Step 3: audible and visual signals warn about speed and depth in real time



Step 4: when reaching the selected depth, penetroLOG will indicate the end of the measurement

Step 5: data available on the App and on the web

Technical Specifications

		PLG2040
Maximum Penetration Depth	Type 1*and 2 Cone	60 cm
	Type 3*Cone	40 cm
Maximum Cone Index	Type 1*Cone	3,100 kPa
	Type 2 Cone	7,700 kPa
	Type 3*Cone	15,100 kPa
Depth Measurement Resolution		1 or 2.5 cm, configurable
Cone Index Measurement Resolution	Type 1*Cone	3.1 kPa
	Type 2 Cone	7.7 kPa
	Type 3*Cone	20.1 kPa
Maximum Insertion Speed		5 cm/s
Memory Capacity		3000 measures
Power Supply		Internal rechargeable battery Autonomy> 12 hours of use
Battery Charging Port		USB-C Connector**
User Interface		Graphic LCD display with backlight 1 multifunction LED, audible indication
Keys		4 operation keys and 1 on / off key
Equipment Weight		3 kg
Briefcase weight with equipment and accessories		6 kg
Cones Diameter (according to ASAE standard S.313.3)	Type 1*Cone	20.27 mm
	Type 2 Cone	12.83 mm
	Type 3*Cone	7.94 mm
Maximum Supported Force on the Rod	Type 1*and 2 Cone	100 kgf
	Type 3*Cone	75 kgf

* Rods with Type 1 and Type 3 cones are optional and must be purchased separately.

** Compatible with cell phone chargers. Charger is sold separately.

Included Items



1. penetroLOG
2. Rod with cone type 2
3. Reflective Base
4. Gauging template
5. USB-A USB-C cable
6. Briefcase w / foam cradle
7. Carrying handle
8. "First Steps" Card

Accessories

purchased separately

- USB-A output socket charger
- Rod with Type 1 Cone
- Rod with Type 3 Cone

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