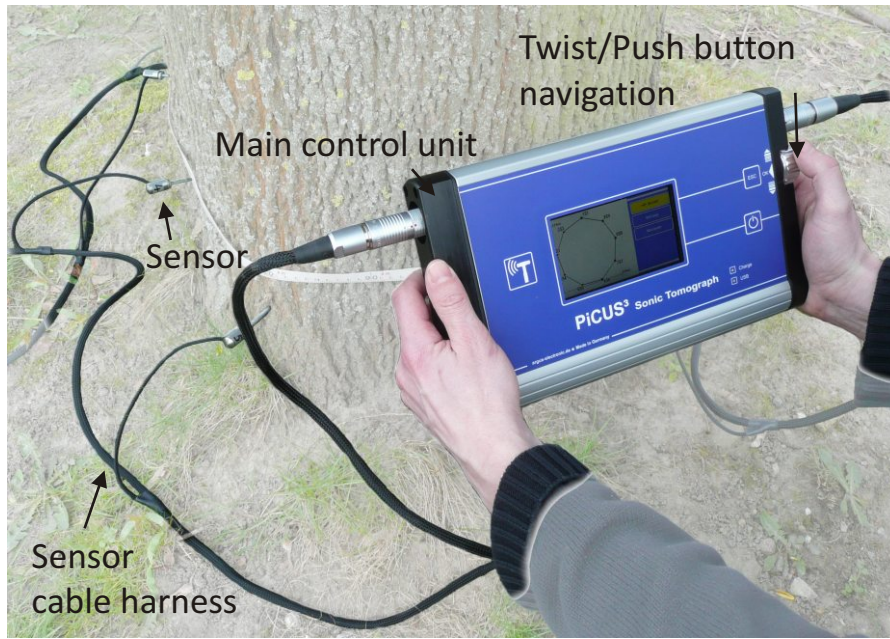


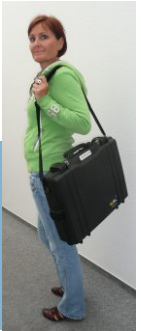
# PiCUS 3 Sonic Tomograph

## Easiest, smallest and fastest Tomograph ever!

- **New compact system design:** one main control unit, no extra sensor-supply boxes.
- **Two cables only:** sensors are assembled to a robust sensor cable harness.

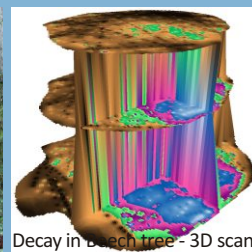
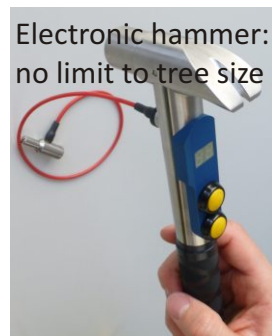


Compact system design - all fits in this ruggedized laptop case.



- **Rapid data collection.**
- Up to **12 sensors** can work on up to **24 measuring points** using the electronic hammer.
- **NO PC needed** in the field. Can operate the entire tomography scan with or without PC
- **Preview sonic tomogram** shown on-screen **on-site**.
- **Three-point-measurements to quick-test** the tree to help decide whether a full tomogram is needed.
- Main control unit **saves hundreds of scans** on solid state memory.
- **Lightweight** - much less weight than previous models.
- Built in **GPS** and **Bluetooth**.

Electronic hammer: no limit to tree size



**Tree Tomography Specialists since 1999**  
[www.picus-info.com](http://www.picus-info.com)

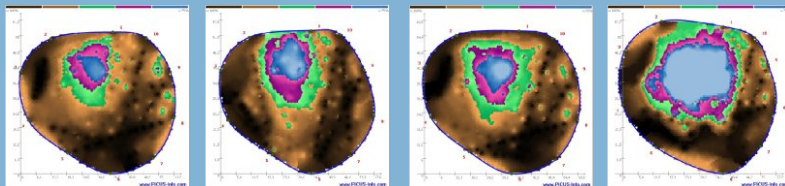
# PiCUS 3 Sonic Tomograph

## Benefits of PiCUS Sonic Tomography

- **Tomograms** are **easy to understand** and **to explain to clients**
- Information for **long-term tree maintenance**
- High resolution with few sonic sensors
- **Crack detection** function
- Works **independently of ambient conditions** (noise of cars, wind etc.)
- **Easy to use** right to ground level and on trees with buttress roots
- Accurate and **fast geometry** with PiCUS electronic calliper
- **Compatible with Treetric** Electric Resistance Tomography providing the latest in tree imaging technologies on trees
- **Rootfinder** Kit available - get a rough idea about the location of roots



## Time lines to estimate the progress of decay



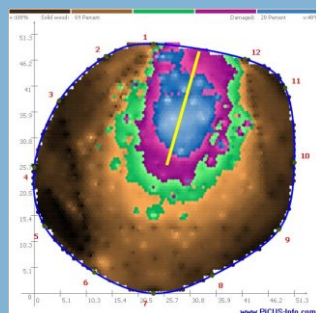
These tomograms show the development of decay in a beech tree from 2004 to 2011.

## Combining Sonic and Electric Resistance Tomography

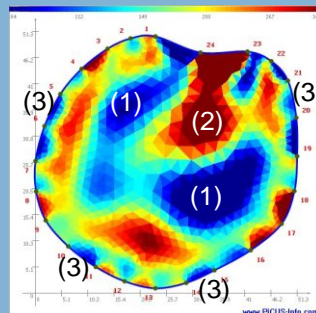
The Treetric Electric Resistance Tomograph uses electric current/voltage to investigate trees. The Treetric creates 2-D Tomograms (ERT) showing the electrical resistance of the wood.

By analyzing both SoT and ERT it is frequently possible to:

- Distinguish between different types of damage (for instance crack/cavity vs. decay)
- Detect early stages of decay
- Provide information about areas above or below the measuring level. This is beneficial for analyzing root decay problems.



The Sonic Tomogram clearly shows the defect. What type of damage did it find?



The ERT shows high and low resistance of the wood - active (1) and dead decay (2). Living sapwood is on the edge(3).



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# PiCUS : Calliper 3



The digital calliper for tomography on trees

## PiCUS : Calliper 3 - small, large and lightweight

- **Configurable in 2 sizes:** arm extensions.
- **Large working range:** 0 - 1630 and 0 - 2150 mm!
- **High precision:** New electronic angle sensor.
- **Low weight:** Tubes are made of carbon.
- Optimised for **tomography scans** on trees.
- **Bluetooth connection** to PC and PiCUS 3 / Treetric 3
- Large number LED's on both arms show pins to touch



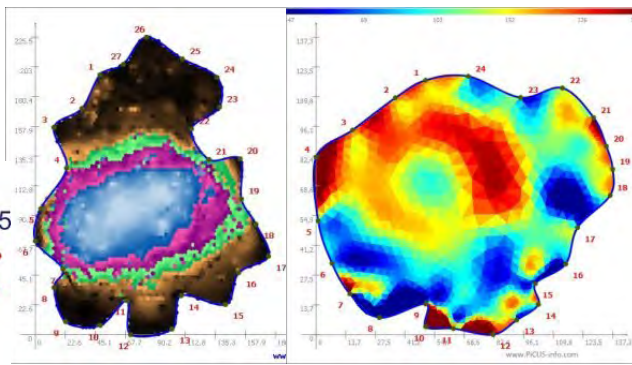
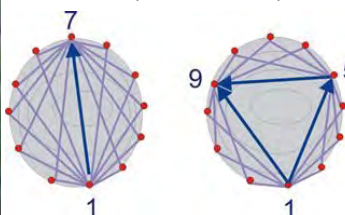
## Triangulation - measuring the tree's cross section

Virtually all cross-sections of trees can be accurately measured using the triangulation method.

Even the shape of older trees with complex buttress roots can be scanned in 2 to 3 minutes. Both sonic and electric resistance tomograms are more accurate if the positions of measuring points are calculated precisely.



Each test-pin in the cross section is part of a triangle. The length of each side of those triangles is measured with the PiCUS calliper. Using this data the program calculates the positions of all pins.



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# PiCUS



The digital calliper for tomography on trees

PiCUS : Calliper 3 - small, large and lightweight

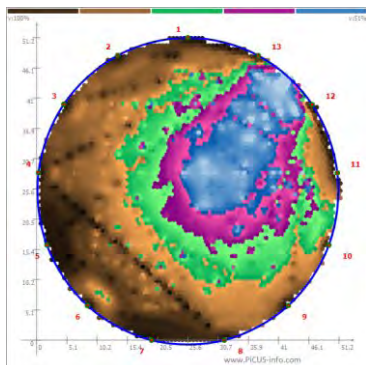
- **Configurable in 2 sizes:** arm extensions.
- **Large working range:** 0 - 1630 and 0 - 2150 mm!
- **No extra transportation case needed!** Calliper fits into the case of the PiCUS3 or in the case of the TreeTronic 3 when disassembled.



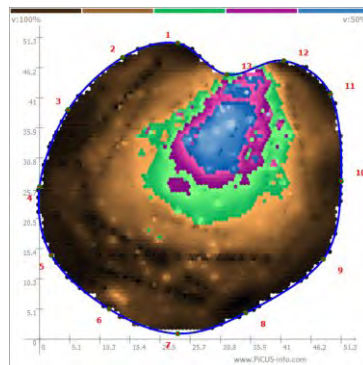
Calliper disassembled and stowed in the PiCUS 3 measuring case.

## Example - Geometry estimate vs. accurate outline

The images show tomograms and cross section of a tilia tree when circular geometry (left image) or correct PiCUS Calliper geometry (Middle) is used for the calculation.



Geometry estimate



Real shape: PiCUS calliper



Photo of tree after cut



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