

# The Measuring of Thin Pavement Layers is now a reality!

Dynatest has in collaboration with Professor, Eyal Levenberg, from the Technical University of Denmark (DTU) developed a new solution to increase the quality of the bearing capacity evaluation using **FWD** and **Fast FWD**.



## → The study

**Presented at TRB in Washington, January 2024**

The study was driven by the need for improved moduli back-calculation of the upper layers in asphalt pavements.

The improvement was achieved by modifying the Falling Weight Deflectometers design to host an extra geophone at a nontraditional offset of 100mm, i.e., within the loading plate.

## → More accuracy

Adding an extra geophone at 100 mm from the center of the load, inside the load plate, the deflection basin is collected with more accuracy to improve the back-calculation results.

## → More value for you

This new feature will provide significant value for both existing and NEW Dynatest Falling Weight Deflectometer equipment (applies for FWD and Fast FWD), particularly for users testing thin top asphalt layers or similar materials and even block pavements.

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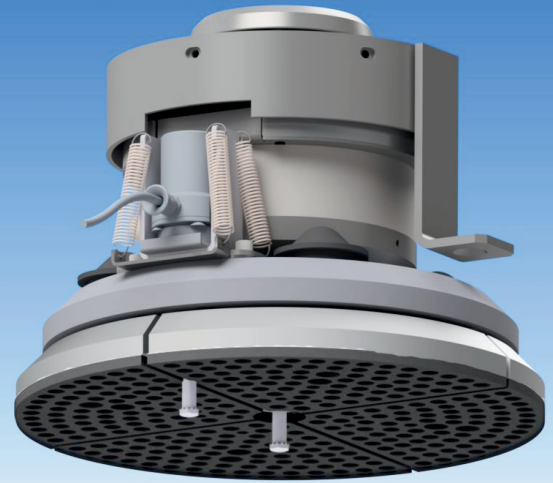
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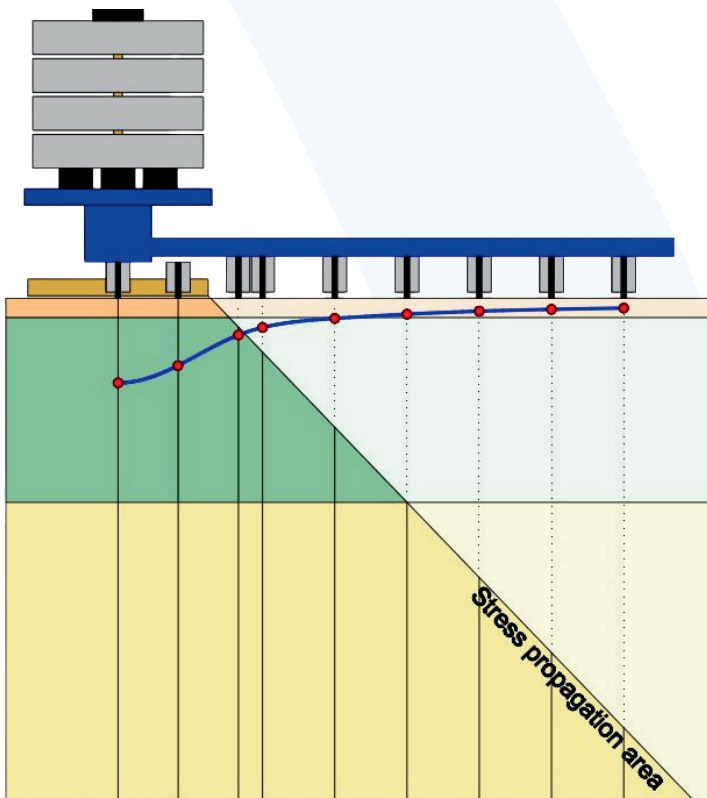
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# Upgrade your Pavement Analysis today!

You can with Dynatest's geophone conversion pack improve your measuring results on thin asphalt layer pavement and other types of surface layer like block pavements.



## → Increase the quality of the back-calculation process!



If you add an extra geophone at 100mm from the center of the load, inside the load plate, the additional 100mm geophone improves the accuracy of the deflection bowl trend.

In case of thin layer asphalt, assuming a theory stress distribution of 45°, the deflection recorded by the second geophone, placed at 200mm, is not influenced by the first layer.

By introducing the 100mm geophone it is possible to have two geophones recording the influence of the first layer in the pavement deflection, adding key elements to increase the quality of the back-calculation process.

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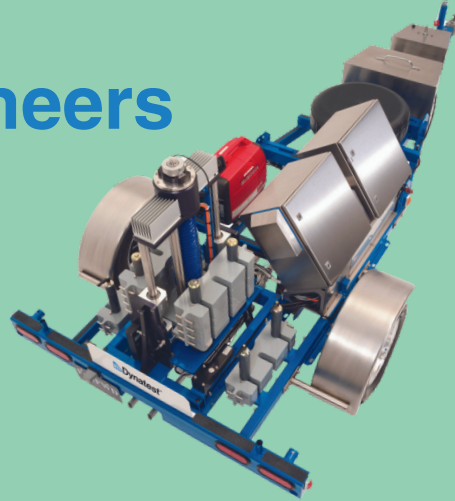
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pavement engineers  
for pavement  
engineers!**



**Get started right  
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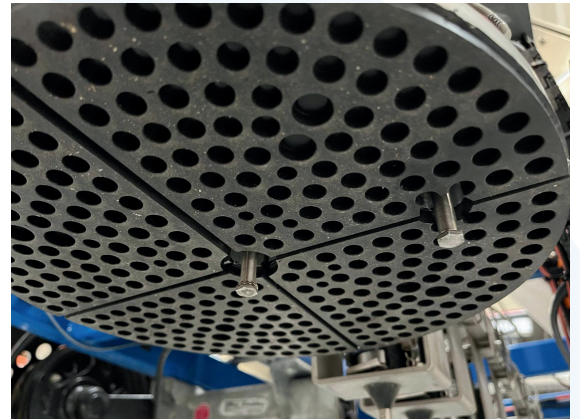
Seamless integration process, making it easy for pavement engineers to measure thinner asphalt pavement layers and other types of surface layer even block pavements.

## Plug & play - Upgrade your FWD and Fast FWD

→ **Complete conversion pack includes:**

- 1 pcs. Upper loading plate
- 2 pcs. Quarter plate segment
- 1 pcs. Geophone 80 or 100mil
- 1 pcs. Geophone holder
- 1 pcs. Upper flange for loadcell
- 1 pcs. Mount Ring for raise-lower Guide

*Only convertible with a split plate on the loadcell.*



→ **All you have to do is...**

Buy the Geophone Conversion Pack + Calibration.

- ➔ Hassle-free service at our Gainesville, FL facility!  
Calibration is done in accordance with AASHTO R32  
Load cell removal and installation included!



→ **Contact us for a quote or if you have any questions.**

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