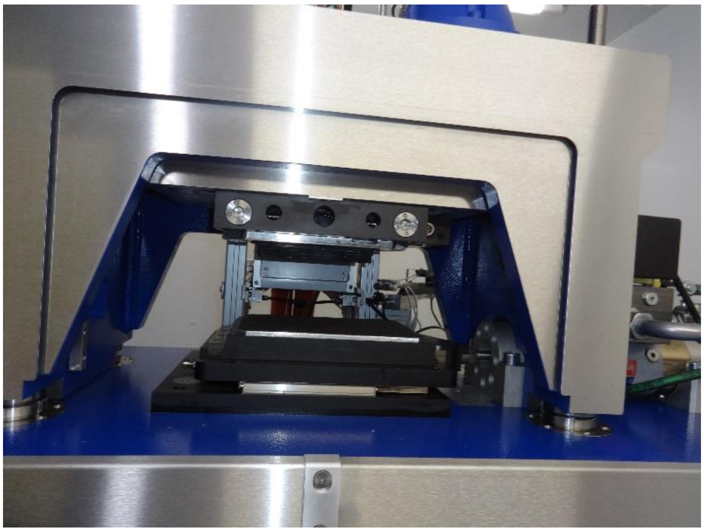
HDOT - High Dynamic Oscillation Tester

Biaxial transient tread oscillation machine

HDOT is a system to measure the transient response of tread-rubbers on different friction-/ road surfaces. It is based on the customers experience with the HSLFT and advanced customer needs. Geometrically standardized rubber samples are activated with high frequency in various loading conditions, bi-axial in longitudinal and vertical direction.

Road surfaces and samples are replaceable and free to configure and may be conditioned with various temperatures. This machine opens complete new opportunities to describe the material properties of elastomers.

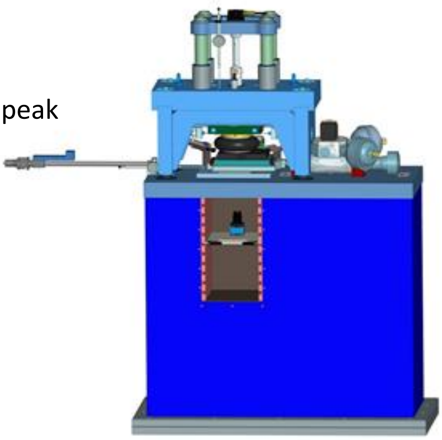


The activation may happen selectively with different signal wave forms with a defined number of cycles or also one-time activation with force- or stroke-control. The amount of cycles per test is limited under maximum conditions to keep the temperature of the rubber sample during the test on a constant level.

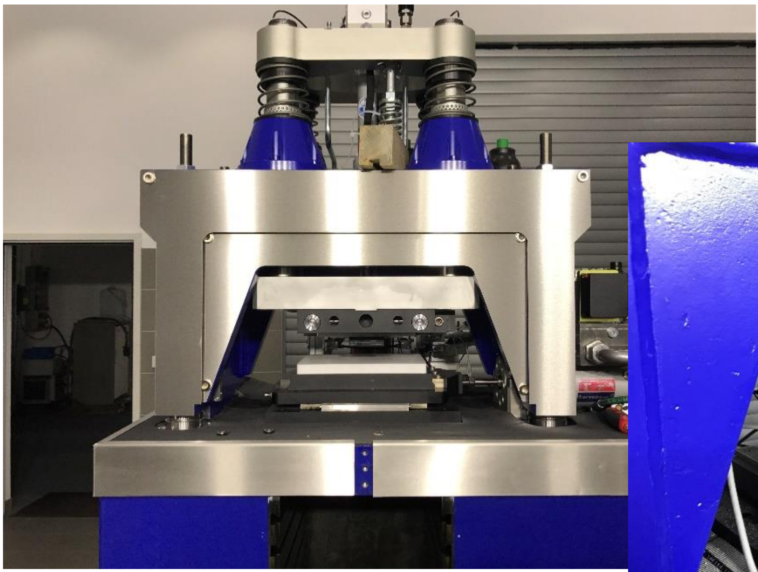
The HDOT perfectly supplements the capabilities of the HSLFT for dynamic measurements in higher frequency ranges with unique hydraulic equipment developed by Altracon. A MUST to learn about the material properties of new developed elastomers.

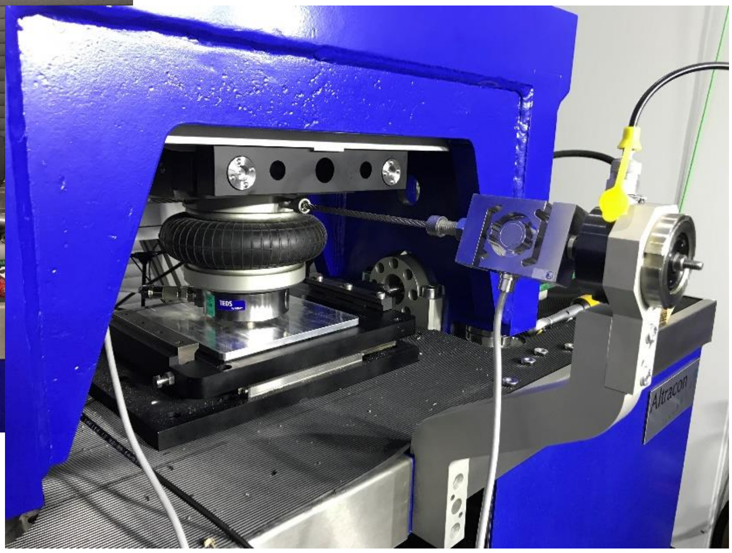
Key Performance Data:

- Max. excitation frequency: 200Hz
- Max. Amplitude: 25mm (50mm p/p)
- Max. hydraulic power: 50kW (continuous) / 300kW peak
- Max. track carrier weight: 15kg
- Track Size: 310 x 180mm
- Max. Sample Size: 250 x 250mm
- Max. load Fz: 10.000N



Altracon S.A. ▪ 56, rue de la Gare ▪ L - 6440 Echternach
www.altracon.com





Input/ Output measured

Force-control:

1) frequency; force-amplitude Fx max./ min. → output dx (n) (n = amount of cycles)
2) frequency; force-amplitude Fz max./ min. → output dz (n) (n = amount of cycles)

Stroke-control:

3) frequency; stroke-amplitude max./ min. dx → output Fx (n) (n = amount of cycles)
4) frequency; stroke-amplitude max./ min. dz → output Fz (n) (n = amount of cycles)

Additional output calculated

- μ
- M(y) *(for verification of exact sample positioning)*