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Our company is a startup formation of the TU Berlin. We are your specialist for innovative tribological engineering services and measurement devices.

Our simulation method in the field of polymer friction is worldwide unique. It is the first quantitative simulation method for the calculation of friction forces in polymer contacts.

Due to our simulation method, you get the possibility of carrying out material and functional optimizations fast and efficiently.

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berlin

x tribo

Tribology & Damping Solutions

Design: www.CaroKoll.de

SIMULATION SOFTWARE

Many contact problems can be solved with our simulation software. A particularly fast method is the „Method of Dimensionality Reduction“ (MDR). The original 3D system is replaced by the contact with an elastic or viscoelastic bedding and thus convicted into a 1D system. The macroscopic contact qualities agree exactly or very well with those of the original system.

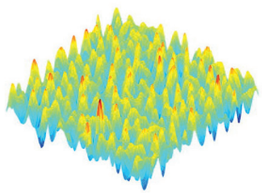
Benefits:

– fast contact calculation without measuring
– low amount of work in spite of wide parameter spectrum
– no time expensive test constructions
– fast calculation for unusual material couples
– low cost of materials

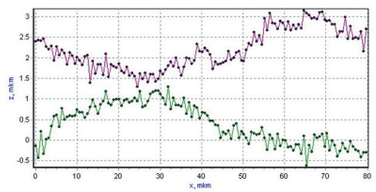
Basic Ideas of MDR

Procedure for the calculation of the friction coefficient between a rough rigid surface and an elastomer with arbitrary linear material law.

Real 3D surface topography

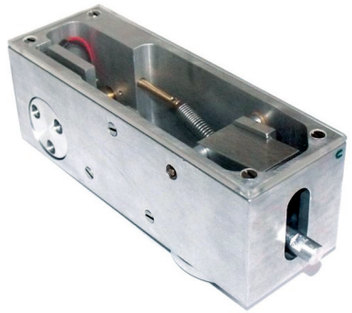


Set of 1D-Elements



EXPRESS-RHEOMETER

Material Tester



Traditional measuring methods require complicated testing instruments for the determination of the material parameters of elastomers, are time expensive and make special demands on the shape of the samples. Our gauge doesn‘t need a specific rehearsing geometry, is nondestructive, extremely fast and mobile. E. g. it is suitable for a speedy and simple goods vendor inspection department or for measuring on the way.

Properties:

– no specific demands on the profile of the sample
– fast and exact measuring
– no long series of experiments
– guarantee of the goods vendor inspection department
– control of conditioning processes
– lower costs of material

VIBRATION MEASUREMENTS AND DEVELOPMENT OF INNOVATIVE DAMPING SYSTEMS

Dynamic Behavior of Structures

Long-standing experimental experiences in the fields of material and structure testing and vibration measuring with stationary and mobile test equipment are the basis for a comprehensive supply of engineering achievement. We measure vibrations of civil buildings and machines, e. g. of bridges and bridge elements and advise our customers on vibration dampers and vibration absorbers.

Our services:

– development of complete experimental setups
– measuring and automation software
– modal analysis
– stationary and mobile vibration measuring
– measuring at buildings and machines
– recommendations for use of conventional vibration dampers
– dimensioning of dynamic vibration absorbers
– development of innovative structure optimized vibration dampers