

Test System for Dynamic Stiffness

according to EN 29052-1

The dynamic stiffness indicates the suspension ability dam-laminated including in its enclosed air and is one of the parameters, which determines the sound absorption of floor superstructures in residential buildings.

Loadable insulating materials for the impact sound insulation should indicate a sufficient suspension ability, i.e. possess as small dynamic a rigidity as possible.

The company Fellner in close co-operation with the nationally authorized test laboratory of the City of Vienna developed such a system. The substantial constituents of the system including hard- and software are to correspond to the requests of the standard EN 29052-1.

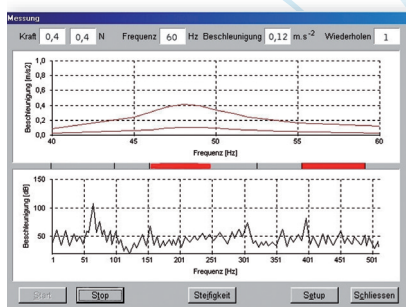


The standard EN 29052-1 requires:

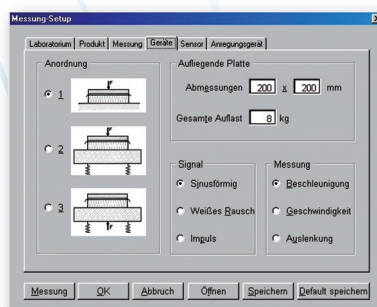
- appropriate edition of the sample test specimen
- correct suspension of the swinging exciter
- vertical force insertion inclusive integration of the force sensor

The measurement principle:

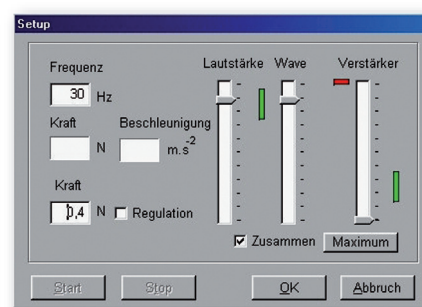
- A sample of a material of 200 x 200 mm is located on an plain plate.
- Whereupon comes a steel plate, has to have a weight of 8 kg including measuring sensors.
- This arrangement is excited by a shaker, whereby the brought in force has to be constant between 0,1 and 0,8 N.
- The excitation takes place with a sine signal with changeable suggestion frequency.
- By means of an acceleration adaptor the resonant frequency is determined with the smallest possible energizing strength.



measurement



input



setup

The measuring software controls the entire system, regulates the feeding strength and measures the resonant frequency. A report generator is also integrated in the program. Thus it is not a problem to configure the necessary logs and create concomitantly customized report.

Test System