

Product Name :
Vibrations On Machine Foundations

Product Code :
NLAB-ENGINEERINGLB25005



Description :

Vibrations On Machine Foundations

Technical Specification :

Vibrations On Machine Foundations Lab Equipments Manufacturer, Suppliers & Exporters Technical description of Vibrations On Machine Foundations

An indispensable element of machine design is targeted reduction of vibrations. An elastic, vibration insulating installation of the machine avoids the transmission of harmful vibrations to the surroundings. The can be used to investigate the problems of foundations and vibration isolation using a practical example. To do this, vibrations are generated and measured on a foundation. Springs are then used to try out different tunings and vibration absorbers are used to investigate absorption effects. This is installed on a foundation using springs and dampers. The foundation represents the surroundings and can be used to measure the effectiveness of the vibration isolation. Additional helical springs connect the foundation to the actual frame of the trainer. This double vibration isolation, combined with the high fixed weight of the frame, guarantees vibration-free laboratory operation, even under unfavourable experimental conditions.

Specification of Vibrations On Machine Foundations

Representing and investigating vibrations on machine foundations

Vibration generator generates vibrations by imbalance

Vibration-free operation due to additional vibration isolation of foundation

2 brushless high power servo motors as the machine drive

Eccentricity, rotation frequency, direction of rotation, phasing and frequency ratio adjustable

Variable arrangement of vibration absorbers for absorption of vibrations

Vibration measurement using acceleration sensors

Inductive position sensor records the eccentricity of the imbalance masses

Software with control functions and data acquisition via usb under windows vista or windows 7

Piston compressor for use as alternative real vibration generator

Technical data Vibrations On Machine Foundations

Drive motors

Max. Speed: 6.000min⁻¹

Max. Torque: approx. 3,40nm

Machine mounted on a plate

Mass: max. 26kg (incl. Additional weights 4x 2kg)

Max. Imbalance: 2x 5kgmm

Max. Imbalance force: 2x 500n (up to 3.000min⁻¹)

Foundation

Mass: max. 73kg (inc. Additional weights 5x 9,4kg)

Min. Natural frequency: 2,66hz

Compression springs

Spring constant c: 2,44n/mm...139,53n/mm

Transverse rigidity cq: 0,30n/mm...90,0n/mm

Measuring range

Acceleration: 50g

Dimensions and weight Vibrations On Machine Foundations

Lxwxh: 1.300x1.120x800mm

Weight: approx. 150kg

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