

**Product Name :**  
Vibrations on Machine Foundations

**Product Code :**  
TN109



#### Description :

Vibrations on Machine Foundations

#### Technical Specification :

Vibrations On Machine Foundations The unit is perform the following experiments and investigations: Learning Objectives / Experiments: Familiarisation with vibration phenomena on machine foundations Adjust the foundation for different excitation forces Investigate vibration absorbers Investigate the effect of additional damping Compare metal springs and rubber springs Measure and analyse vibrations Determine operational vibration modes To be supplied with: Piston compressor PC1 Computer-System with 21" TFT-Monitor Win 10 engl. Specification: Display and study vibrations on machine foundations Vibration generator excites vibrations by imbalance Vibration-free laboratory operation thanks to additional vibration isolation of the foundation 2 brushless high-performance servomotors to drive the vibration generator Eccentricity, rotational frequency, direction of rotation, adjustable phase position and frequency ratio Variable arrangement of vibration absorbers Vibration measurement via acceleration sensors Inductive displacement sensor records the eccentricity of the imbalance masses Software with control functions and data acquisition via usb under windows 7, 8.1, 10 including pc1 Computer-System with 21" TFT-Monitor Win 10 engl. Piston compressor can be used as alternative "real" vibration generator Technical Data: Drive motors Speed: 6000rpm Torque: 3,40Nm "Machine" mounted on a plate Mass: max. 26kg (incl. Extra weights 4x 2kg) Imbalance: 2x 500cmg Imbalance force: 2x 500n (up to 3000rpm) Foundation Mass: max. 73kg (incl. Extra weights 5x 9,4kg) Min. Natural frequency: 2,66hz Compression springs Spring stiffness C: 2,44N/mm...139,53N/mm Transverse stiffness Cq: 0,30N/mm...90,0N/mm Measuring ranges Acceleration: 490m/s<sup>2</sup> 230V, 50Hz, 1 phase 230V, 60Hz, 1 phase; 230V, 60Hz, 3 phases Dimensions and Weight Length x Width x Height: 1140x800x1170mm Weight: 311kg 1. Piston compressor for Vibrations on Machine Foundations In conjunction with trainer: Generating vibrations on machine foundations with a "real machine" Specification: Air-cooled single cylinder piston compressor for

installation in trainer Compressor as vibration generator Vibration generator simulates machine vibrations Speed adjustable using frequency converter. Technical Data: Air-cooled single cylinder compressor with frequency converter Mass: 16kg Speed: 500...1800rpm 230V, 50Hz, 1 phase 230V, 60Hz, 1 phase 120V, 60Hz, 1 phase Dimensions and Weight Length x Width x Height: 420x300x300mm Weight: 22kg

## Naugralabequipments

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