Phone: +91-9896600003
Email : sales@naugralabequipments.com

Product Name :	**Product Code :**
Vibration Trainer	TN714

Description :

Vibration Trainer

Technical Specification :

Vibration Trainer
The unit is perform the following experiments and investigations:

Learning Objectives / Experiments:
Experiments with pendulums
Katerâ€™s pendulum
Reduced pendulum length
Spring-mass system
Bar-type oscillator
Undamped oscillation
Damped oscillation
Forced vibration
Damped and undamped resonance
Absorber effect in multi-mass oscillators

To be supplied with;
Free and damped torsional vibrations
System for data acquisition
PC1 Computer-System with 21" TFT-Monitor Win 10 engl.

Specifications:
Vibration trainer with experiments on damping, resonance, dual-mass system and vibration absorption
6 pendulum oscillators, 2 bar-type oscillators and 1 spring-mass oscillator
Electrical imbalance exciter
Control unit for the imbalance exciter
A digital frequency display and a ttl output for triggering external devices
Tuneable absorber with a leaf spring
Adjustable oil damper
Electrically operated drum recorder for recording free vibrations
Polar chart recorder for determining the amplitude and phase of forced vibrations

Technical Data:
Beam, rigid: Length x Width x Height: 700x25x12mm, 1,6kg
Beam, elastic: Length x Width x Height: 700x25x4mm, 0,6kg
Tension-pressure springs
0,75N/mm
1,5N/mm
3,0N/mm
Imbalance exciter
0...50Hz
100cmg
Oil damper: 5...15Ns/m
Absorber
Leaf spring: wxh: 20x1,5mm
Total mass: 1,1kg
Tuneable: 5...50Hz
Drum recorder: 20mm/s, width 100mm
Polar chart recorder: Ã˜ 100mm
230V, 50Hz, 1 phase
230V, 60Hz, 1 phase; 120V, 60Hz, 1 phase
Dimensions and Weight
Length x Width x Height: 1010x760x1800mm
Frame opening Width x Height: 870x650mm
Weight: 150kg

1. Free and Damped Torsional Vibrations
Natural frequency of a rotary oscillator
Influence of torsional stiffness, mass and damping

Specification:
Supplementary experiment for torsional vibrations for the Vibration trainer
3 torsion bars with different diameters, freely selectable effective length
3 different mass disks with clamping chuck
3 with ball bearings and clamping chuck
Oil damper for damped vibrations
Recorder for recording the vibrations in the Vibration trainer

Technical Data:
Torsion bars, stainless steel
Ã˜ 3mm, 5mm, 6mm
Length: 800mm
Mass disks
Small: Ã˜ 150mm 2,7kg

Large: Ã˜ 228mm 4,8kg
Clamping chuck: Ã˜ 0,5...8,0mm
Dimensions and Weight
Length x Width x Height: 480x240x1180mm
Weight: 33kg

2. System for Data Acquisition
natural vibration of a bar-type oscillator
damped vibration of a bar-type oscillator
forced vibration of a bar-type oscillator (damped and undamped resonance)
frequency and period time measurements
Kater's pendulum

Specification:
Data analysis for Vibration trainer
Measurement, recording and analysis of frequency response and transfer function
Functions as a digital storage oscilloscope
Interface box with 3 sensor inputs and 3 analogue outputs
1 inductive displacement sensor (amplitude), 1 reference sensor (exciter force)
Software for data acquisition via USB under Windows 7, 8.1, 10
Including PC1 Computer-System with 21" TFT-Monitor Win 10 engl.

Technical Data:
Sensor input channels: 3
Inputs in oscilloscope mode: 2
Time basis: 10...750ms/DIV
Record length: 2000 points
Displacement sensors
Measuring range: 5...10mm
Frequency range: 0...50hz
230V, 50Hz, 1 phase
230V, 60Hz, 1 phase
120V, 60Hz, 1 phase; UL/CSA optional
Dimensions and Weight
Length x Width x Height: 265x260x110mm (interface box)
Weight: 7kg
Length x Width x Height: 600x400x170mm (storage system)

Naugralabequipments

Website: www.naugralabequipments.com, **Email:** sales@naugralabequipments.com

Address: 6148/6, Guru Nanak Marg,Ambala Cantt,Haryana,India. **Phone:** +91-9896600003