

Vibration (HVT)



FREE & FORCED VIBRATIONS HVT12G



1 study

Features

• The experiment consists of a rigid steel beam, pivot, springs, supports and damper accessory

Description

This programme of experiments is designed to illustrate the vibrational characteristics and controlling properties of a simple mechanical system. The importance of understanding the behaviour of this elementary (or basic) system is that the vibration of more complicated systems, such as cars, ships and aircraft, can be analysed in terms of the behaviour of a set of such elementary systems. One experiment illustrates how it is possible to suppress the resonant vibration of a primary system by attaching to it a smaller secondary system.

Related Laws/Applications

- · Characteristics of Vibration
- Single Degree of Freedom
- Natural Frequency
- Mechanical Engineeing
- · Aeronautical Engineering
- Structural Engineering
- Resonance
- · Newton's Second Law
- Conservation of Energy

Learning capabilities

- Free vibration
- Damped Vibration
- Spring Stiffness
- Forced vibration
- Resonant frequency
- Damping ratio
- · Amplitude response and phase response



Technical Specification

- Beam: 25.4(W) x 12.7(H) x 840(L)mm, coated steel
- Beam: 2.1kg (approx)
- 4 x Springs: spring rates 2.5, 0.75, 1.5, 3.0N/mm
- 8 x 5N weights

Essential Ancillaries

Requires HVT12F, HAC90, HAC110, HAC120 and HVT12K for operation

Recommended Ancillaries

- HVT12C
- HVT12A
- HVT12B

What's in the Box?

- 1 x Spring assembly
- 1 x Side bracket assembly
- 1 x Beam
- 4 x springs
- 8 x 5N weights
- Damping accessory and media
- · Tools set
- · Instruction manual
- Packing list
- · Test sheet

Weights & Dimensions

- Weight: 5Kg
- Length: 900mm
- Width: 450mm
- Height: 400mm

Essential Services

 Requires HVT12F, HAC90, HAC110, HAC120 and HVT12K for operation

Ordering information

To order this product, please call PA Hilton quoting the following code: $\ensuremath{\mathsf{HVT12G}}$

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