Email : sales@scilabexport.com
Phone: +91-7082934803

**Product Name :**

Free And Forced Vibrations

**Product Code :**

SLE/ETM/13



Email : sales@scilabexport.com
Phone: +91-7082934803

## Description :

**Free And Forced Vibrations** (Product Code: SLE/ETM/13) is a beam vibration apparatus usedto study free, forced and damped oscillations in engineering and theory of machines laboratories. Students can set the beam vibrating by hand or force it with a variable-speed servomotor drivinga rotating offset mass, while a non-contacting sensor records displacement without addingdamping. It is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, an OEMmanufacturer, at its own factory in Ambala, India.

### Key Details

| Parameter | Detail |
|---|---|
| Beam | High-grade ground steel |
| Pivots | High-quality ball races for lowest friction and incidental damping |
| Excitation | Manual, or a variable-speed servomotor driving a rotating offset mass (‘exciter’) |
| Speed control | Servomotor with its own encoder and advanced controller for accurate speed regulation |
| Exciter position | Encoder linked to the rotating exciter mass measures its dynamic position |
| Displacement sensing | Non-contacting sensor with no physical contact with the oscillating system |
| Acceleration sensing | Accelerometer built into the exciter assembly |
| Damping | Variable-area viscous dashpot damper, with non-toxic fluid of stable viscosity (supplied) |
| Set-up | Simple and quick set-up and changeover; designed for repeatable results over a range of ambient temperatures |
| Analysis | Software compares measured acceleration with that derived from displacement |
| Product code | SLE/ETM/13 |
| Manufacturer | Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM |
| Country of origin | India (made in Ambala, Haryana) |

### What Is the Free And Forced Vibrations Apparatus Used For?

Engines, pumps and building floors all vibrate, and engineers need to know the natural frequency of a structure and how strongly it responds when something drives it near that frequency. With this apparatus, a class first plucks the beam by hand to watch free vibration die away, then switches on the exciter and raises the servomotor speed step by step to trace the forced response and find resonance.

Fittin can see h s the beam neter

Email : sales@scilabexport.com
Phone: +91-7082934803