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**Product Name :**

G By Freefall Apparatus and Timer

**Product Code :**

SLE/PHY/122



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# Description :

**G By Freefall Apparatus and Timer** (Product Code: SLE/PHY/122) is an electromagnetic release apparatus used to measure the acceleration due to gravity, g, by timing a falling steel ball in school and college physics laboratories. An electromagnet in a plastic moulded case holds a heavy steel sphere, and a platform unit containing a microswitch has terminals for an external timer, so the fall time is captured electrically. It is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, an OEM manufacturer of physics lab equipment in India, at its own factory in Ambala.

## Key Details

| Parameter | Detail |
|---|---|
| Release unit | Electromagnet housed in a plastic moulded case, with connections for an external timer |
| Falling mass | Heavy steel sphere, supplied |
| Landing unit | Platform unit containing a microswitch and terminals for the external timer |
| Timing start | Timer is triggered as soon as the ball release button is pressed |
| Priming | Electromagnet is primed when the stopping plate and solenoid are connected with the leads provided |
| Timer | External timer connected through the terminals — confirm with us whether a timer is part of your quotation |
| Product code | SLE/PHY/122 |
| Manufacturer | Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM |
| Country of origin | India (made in Ambala, Haryana) |

## What Is the G By Freefall Apparatus Used For?

The G By Freefall Apparatus gives students a direct measurement of g. With the sphere held on the electromagnet, pressing the release button drops the ball and starts the timer at the same instant; the ball striking the platform operates the microswitch and ends the timing. Measuring the drop height and the fall time lets students apply $h = \frac{1}{2}gt^2$ to calculate g.

Repeating the drop from several heights and plotting height against the square of the time gives a straight line whose gradient is half of g, a standard mechanics practical. Measure the height from the bottom of the sphere to the platform, take several readings at each height, and stand the platform on a firm, level surface so the microswitch responds cleanly.

## What to Specify When Ordering

- Timer — the apparatus connects to an external timer; state whether you need a timer quoted with it.
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OEM

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