

Advantages

- Easy to set up
- Precise measurement of time with no systematic errors
- Height of fall can be set to the nearest millimetre
- No searching for lost balls

Free-Fall Apparatus

Apparatus for measuring the time it takes for a ball to fall a certain distance using a digital timer. Very easy to set up and use but nevertheless highly accurate. Includes 3 steel balls. A micro-magnet holds the ball in its start position. Three contact pins under the release mechanism ensure that the start position of the ball can be reproduced and act as the contacts of a switch that opens when the ball is released, thus triggering the beginning of the timing measurement. When the ball strikes the contact plate at the bottom, the timer is stopped. The ball is also held firmly on the plate so that it does not bounce. The height through which the ball drops can be adjusted to a fraction of a millimetre and read off a scale on the column.

Height scale: 20 – 960 mm

Scale divisions: 10 mm

Scale precision: 0.2 mm

Balls: Steel, 16 mm diam.

Dimensions: 200x130x1000 mm³ approx.

Weight: 1.6 kg approx.

P-1000738

Additionally required:

P-1012832 Millisecond Counter (230 V, 50/60 Hz)

or

P-1012833 Millisecond Counter (115 V, 50/60 Hz)

P-1002848 Set of 3 Safety Experiment Leads for Free-Fall Experiments

Set of 3 Steel Balls

Spare balls for the free-fall apparatus (P-1000738), launcher S (P-1000740) and marble in a bowl (P-1017332).

Diameter: 16 mm

P-4003748

P-4003748

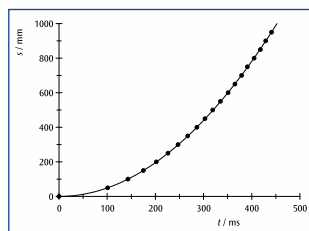
Holder for Light Barrier

Holder to allow a light barrier (P-1000563) to be used with the free-fall apparatus (P-1000738).

P-1018448



P-1018448



Time-displacement diagram for free fall

Free-Fall Tube

(Guinea and Feather Apparatus)

This glass pipe can be evacuated to compare the free falling characteristics of different objects in a vacuum. A cork, duck feathers and plastic parts are included as falling objects.

Length: approx. 800 mm

Diameter: 36 mm diam.

Hose nipple: 10 mm

Weight: approx. 1 kg

P-1000801

Additionally required:

P-1012855 Rotary-Vane Vacuum Pump, One-Stage

P-1000801



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