



dynamics - free fall

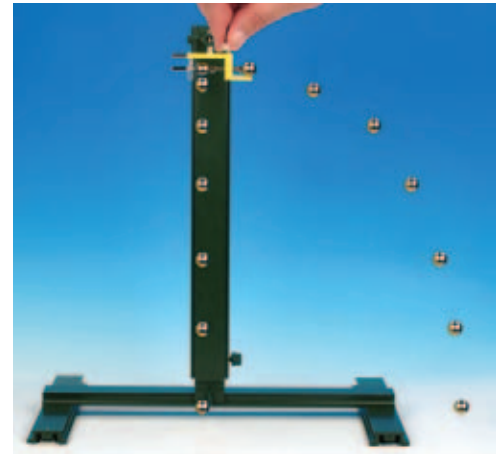


DM340-1F Falling body apparatus, demo

consisting of:

Ball holder with mechanical release; may be used for demonstrating "free fall" and the "principle of independence"; two special 4 mm jacks for connecting to timer DM341-1T or P3120-2Z; support rod $D=10$ mm, $L=30$ mm
 collector with contact plate, stops the timer on ball contact; container $D=80$ mm, $H=45$ mm, with two special 4 mm jacks for connecting to timer DM341-1T or P3120-2Z with connecting cable for counter "inno" P1323-9A;
 support rod $D=10$ mm, $L=40$ mm
 DM340-2S Steel balls fl" (19 mm), set of 2

Experiment:
Principle of independence



DM341-1T Timer for falling body apparatus

Easy-to-use timer displaying the difference between start and stop in milliseconds; 26 mm LED display, 2 pairs of safety jacks, on-off switch, reset switch for zero readjustment; powered by batteries (4x1.5 mignon) or mains transformer 6V/500 mA P3120-6N

(available as accessory)
 Dimensions: approx. 160x120x45 mm
 Weight: approx. 385 g



P3120-2Z Universal timer "inno"

Digital timer with magnetic holder for universal use, can be connected to light gates P1320-3LR and to falling body apparatus DM340-1F, with LED display 26 mm in height, resolution: 1 ms

Functions:

- Time measurement during free fall
- Time measurement in dynamics (L1 start - L2 stop)
- Counting pulses (L1 count)
- Time measurement of pendulum (L1 start - stop)
- Measurement of transit time (L1 - gate)
- L1 start - automatic stop after 10 s

Reset button, LED display for pulse and second mode
 Signal input by way of 2 5-pin DIN jacks

Power supply: 4 x 1.5 V mignon cells (included) or external power supply 6 V/500 mA, P3120-6N

Case: plastic, ABS

Dimensions: approx. 160x120x45 mm

Weight: approx. 425 g



Experiment:

Free fall - measuring gravitational acceleration (time measured with the "timer inno" P3120-2Z)

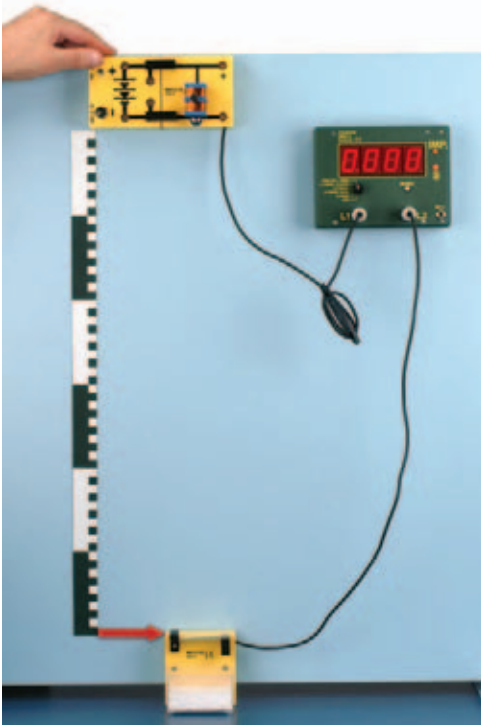
Detail:

Collector with contact plate

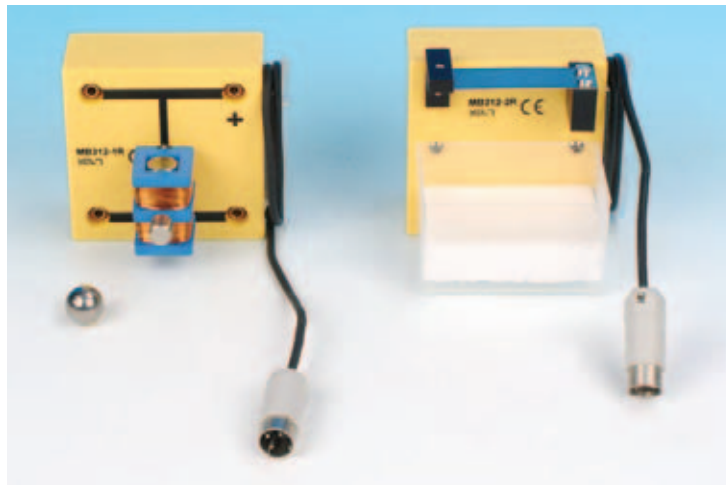
Suggested accessories:

2x P1323-9A connecting cable for counter "inno" (not shown)

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Experiment: Free fall - gravitational acceleration (with falling body apparatus "compact system" magnetically attached to assembly panel)



MB312-1F Falling body apparatus "compact system"

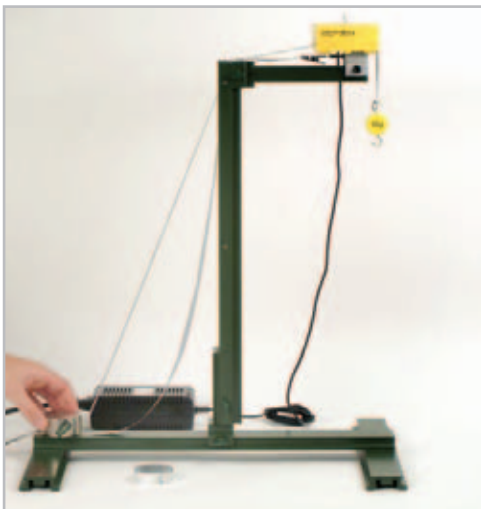
consisting of:

MB312-1R Ball holder, electromagnetic

Compact module, magnetic, with 4 jacks, permanently mounted coil with iron core, steel ball, DIN connecting lead for electronic timer
Power supply: 4.5 - 6 V DC
Dimensions: 84x95x35 mm

MB312-2R Collector unit with contact plate

Compact module, magnetic, with metal contact plate (70x20 mm) for signalling electronic timer by way of DIN connecting lead, collector box (75x55 mm) with shock-absorbing inlay
Dimensions: 84x90x84 mm



Experiment: Free fall (time recorded using ticker tape timer and metallic paper)



Detail: Free-fall tube with stopcock for evacuating and falling objects



DM560-1F Free-fall tube

For investigating free fall in a vacuum glass tube open at one end with 2 falling objects of varying weight (chick's feather, small metal plate), silicone stopper and glass stopcock with connecting tubes
Length (net falling distance): 1000 mm
Total length: 1130 mm;
Diameter: 46 mm

Experiment: Free fall in vacuum (evacuating air from the free-fall tube)

