

Product Code . EL-TWL-11804

## Equipment For Studying Centrifugal Force



### Description

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#### Equipment For Studying Centrifugal Force

##### Description:-

When the rail driven by a geared motor starts turning, the truck is pushed by centrifugal force towards the external end of the rail.

The radius will lead to verify the well-known formula of centrifugal force.

This wire passes through the pulley and it is connected to a force sensor.

The equipment for studying centrifugal force consists of a rail where a low-friction truck can slide.

The truck is connected to a pulley available at one of the rail ends.

The rotation machine turns with variable speed so that centrifugal force is determined even versus angular velocity,

besides versus mass and versus the distance from the rotation center.

The speed of rotation of the rail is detected by a photogate sensor connected with the datalogger.

The truck can be loaded with variable masses.

The equipment enables to assess the trend of centrifugal force versus the truck mass, versus the angular velocity and versus the radius.

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The system is equipped with mechanical protection.

Knowing the speed of rotation of the equipment, the force developed by the truck sliding along the rail.

### **Specification:-**

40 cm long rail with a graduated scale

Truck provided with weight holder

Pulley

Supports photogate sensor and force sensor

Safety protection of polycarbonate

Geared motor CC 24V, 170 rpm

Inextensible wire

Support base 64 x 30 cm

Weights of 10 g, 50 g

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