

**Product Name :**  
Astra Scientific Centrifugal Force Apparatus

**Product Code :**  
Applied-Lab-0005



**Description :**

Astra Scientific Centrifugal Force Apparatus

**Technical Specification :**

The device is composed of a track where a low friction bobbin can run. By rotating the device with the rotation device, it is possible to read the value of the centrifugal force on the Newton spring scale fixed about the rotation axis. Moreover, it is possible to verify the centrifugal force formula too, knowing the radius. Measuring the frequency of rotation is required and can be achieved using any of our light gates.

**Experiment description**

The centrifugal force apparatus enables experimental investigation of the centrifugal force  $F$  as a function of the rotating mass  $m$ , the distance  $r$  of the mass from the center of rotation and the angular velocity  $\omega$ , thus making it possible to confirm the relation  $F = m \cdot \omega^2 \cdot r$  for the centrifugal force.

In the centrifugal force apparatus, the force  $F$  acting on a rotating mass  $m$  is transmitted via a lever with ball-and-socket joint and a push pin in the axis of rotation to a leaf spring, whose deflection is measured electrically by means of a bridge-connected strain gauge. In

the measuring range relevant for the experiment, the deformation of the leaf spring is elastic and thus proportional to the force

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## Astra Scientific

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