# Coriolis Force Apparatus (SMT-TM-44)

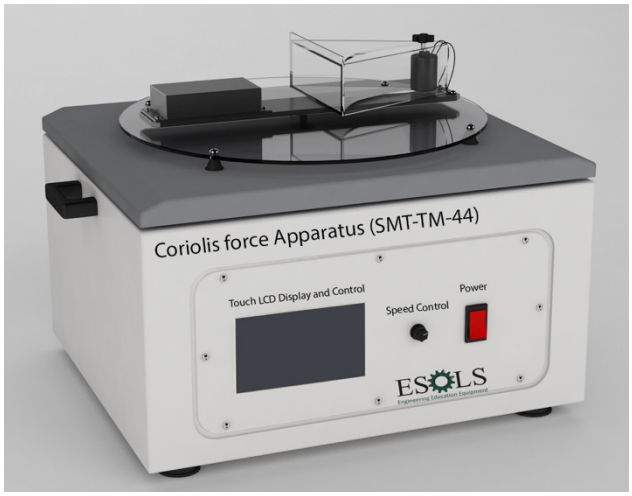
This apparatus demonstrates the phenomena of Coriolis force in rotating system. As we know When a mass moves relative to the reference system within a rotating reference system, this movement is deflected. This deflection is caused by the Coriolis force, an apparent or inertial force. The Coriolis force plays a crucial role in meteorology and physical oceanography, since it influences the course of air and water currents due to the Earth's rotation.
A transparent water tank with submersible pump is placed on a rotatable arm and then rotated. Within the rotating reference system, the pump produces a water jet in a radial direction. Depending on the flow rate of the pump or the water velocity, as well as speed and direction of rotation, the water jet is visibly deflected due to the Coriolis force. The degree of deflection can be determined by means of a scale on the water tank. The speed is continuously adjustable, electronically controlled and digitally displayed.

This Apparatus has Touch LCD Display and control. The unit has Optional Software for computer connectivity, monitoring & display and data analysis on computer.

## TECHNICAL SPECIFICATIONS

### Specifications:

- Touch LCD Display and control
- Visualisation of the Coriolis force effect
- Rotating reference frame consisting of transparent water tank with submersible pump on a rotating arm
- Deflection of a water jet in radial direction dependent on the speed and direction of rotation
- Scale to read the deflection of the water jet
- Closed water circuit
- Speed sensor with LCD display





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## Technical Data:

- Rotating arm
  - continuously adjustable speed: 0 to 60min$^{-1}$
  - adjustable direction of rotation

- Submersible pump
  - flow rate: 10L/min

- This Apparatus has Touch LCD Display and control.
- The unit has Optional Software for computer connectivity, monitoring & display and data analysis on computer.
- LxWxH: 425x400x325mm
  Weight: approx. 25kg

## Technical Data:

- Inertial or apparent force
- Interference of a rotational movement on a translational movement
- Visualisation of the Coriolis force effect


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