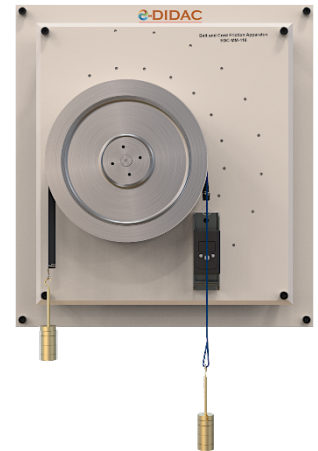


## Belt and Cord Friction Apparatus (EDC-MM-116)

### EXPERIMENTAL DATA:

- To determine the coefficient of friction between the steel pulley and various belts of different materials and profiles
- To study effect of varying lap angle on the belt drive tension



### DESCRIPTION:

Belt drives are usually classified as traction mechanism machine elements. They mainly are used to transfer torque and rotation between members such as wheels or pulleys. Toothed belts and chains transmit with a very rare possibility of slippage while traction mechanisms such as cables, flat belts and V-belts, on the contrary, are more prone to slippage. This experimental unit allows the study by experiment of belt drives and belt friction. The main component of experimental unit is an aluminium pulley, whose circumference comprises of profiles for V-belts and flat belts. The pulley is mounted on ball bearings and its moment of inertia ensures an even rotation of the pulley. The wrap angle can be varied between  $30^\circ$  and  $180^\circ$  in increments of  $15^\circ$ .

Two flat belts made of different materials, a V-belt and a cable belong to the scope of delivery. The experiments compare different belt types and materials and investigate the effect of the wrap angle. In addition, for V-belts, it is possible to study how the groove shape affects the coefficient of friction.

### TECHNICAL DATA:

- Flat belts
  - 1x leather/polyamide, 15x2.2mm
  - 1x polyamide, 15x0.6mm
- V-belt
  - ISO 4184
- Cable
- Pulley
- •  $\varnothing=300\text{mm}$



### RELATED LAWS:

- Automotive
- Friction
- Torque
- Slip
- Belt drives
- Angle of lap

### SCOPE OF DELIVERY:

- 1 x EDC-MM-116
- 2 x Flat Belts
- 1 x V Belt
- 2 x Load Hanger
- 2 x Weight Sets
- 1 x Instructional Manual

### WEIGHT AND DIMENSIONS:

- L x W x H (mm): 650 x 600 x 120
- Weight (approx): 30kgs