CLUTCH PLATE FRICTION APPARATUS

HFN3

Year 2
study

Features

- Wall mounted apparatus
- Can be mounted to HST1, HST100, HAC10, HAC14, HVT12f frames
- Three Friction discs supplied
- Each friction disc with different diameter
- Discs tested individually or ALL together
- Contact pressure applied vertically.
- Pure torque applied using weights.
- Bench top mounting frame available.

Description

The wall mounted apparatus comprises a lower stationary plate attached to a sturdy wall mounting bracket. On top of this stationary disc sits an upper aluminium alloy plate whose shaft rotates in ball bearings but which is in direct contact with the stationary plate. Sandwiched between the lower and upper plate are three friction discs, each of different diameters. Each disc is positively located on pins to ensure they remain stationary. The minimum force on the friction disc is the self weight of the upper plate, but the contact pressure can be increased by adding weights to the upper plate. Pure torque is applied to the upper plate through two loaded cords and pulleys. The cords wrap around a groove in the upper plate. A set of calibrated weights is supplied which enable the loading force to be varied and applied torque to be adjusted also.

Related Laws/Applications

- Automotive
- Friction
- Machines
- Clutches
- Brakes
- Plate pressure
- Wear
- Torque
- Slip

Learning capabilities

- To determine the coefficient of friction of the plate material
- To show that the minimum torque to maintain rotation is proportional to the axial load and diameter of the friction disc

Technical Specification

- 3 x Friction discs: Ø300, Ø200, Ø100mm diameters, 5mm thick
- Friction disc material: Ferodo brake material
- Turntable diameter: Ø250mm
- Weights set: 6 x 0.1N, 8 x 0.2N, 2 x 1N; 4 x 2N; 2 x 5N; 2 x 10N; 2 x 20N; 2 x 50N; 1 x 100N
- 2 x Load hangers

Recommended Ancillaries

- HAC10
- HAC14
- HST1
- HST100
- HVT12f

What's in the Box?

- 1 x HFN3
- 1 x Friction disc set
- 2 x Load hanger
- 1 x Tape measure
- 6 x 0.1N; 8 x 0.2N; 2 x 1N; 4 x 2N; 2 x 5N
- 2 x 10N; 2 x 20N; 2 x 50N; 1 x 100N
- Instruction manual
- Packing list
- Test sheet

You might also like

- HFN11
- HTM21

Weights & Dimensions

- Weight: 16kg
- Length: 340mm
- Width: 280mm
- Height: 190mm

Essential Services

- Rigid Vertical Support

Ordering information

To order this product, please call PA Hilton quoting the following code: HFN3

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