



Features

- Self-contained bench or desktop mounting unit, suitable for student use and for classroom demonstrations
- Demonstrates balancing a horizontal shaft with two, three or four rotating masses
- Independent analysis of static and dynamic balancing
- Includes four removable rotating masses (balance blocks) with different inserts for a range of moments
- Protractor, horizontal scale and sliding indicator to help accurately position the rotating masses
- Flexible mountings allow test shaft assembly to vibrate in dynamic balancing tests
- Fully interlocked transparent safety cover

Tesca Static & Dynamic Balancing Apparatus allows students to do experiments in balancing a rotating mass system and check their results against accepted theory.

A sturdy base unit holds a test assembly on four flexible mounts. The test assembly includes a balanced steel shaft mounted horizontally on low friction bearings. The equipment includes a set of four rotating masses (balance blocks). The balance blocks fix in any horizontal position and relative angle on the shaft. Each block contains a different (and removable) circular insert, allowing students to create four blocks of different mass and moment. Without the inserts, the blocks become four identical masses for simple balancing tests.

Students fit an extension shaft and pulley (supplied) to the end of the balance shaft. They then add

weights (supplied) to a cord wound round the pulley to measure accurately the moment of each balance block.

The test assembly includes a protractor at the end of the shaft and a linear scale with slider under the shaft. These allow accurate measurement of balance block angles and horizontal positions.

An electric motor and belt turns the shaft to test for dynamic balancing. The flexible mounts allow the assembly to vibrate, showing imbalance during dynamic balancing tests. Students remove the belt to check for static balance (the shaft should remain static at any angular position).

Technical Specifications

- Speed controlled motor shaft: 0...1400rpm
- Balance mass radius: 30....70mm
- Balance masses: 50, 75, 100g
- Linear adjustment: scale in millimetres
- Angular adjustment: 360°, 1° resolution

Experiments

- Demonstration of simple static and dynamic balancing of two, three and four rotating masses
- Dynamic balancing of rotating mass systems by calculation and vector diagrams (triangle and polygon)

Manuals

- This unit is supplied with the manuals showing theory, product explanation, experiments & maintenance details.

Note: Specifications are subject to change.

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