KSM-057 **SIMPLE BALANCING APPARATUS MODEL**

Simple Balancing Apparatus Model KSM-057 is a unit designed to study and analyze oscillations and vibrations, and to explore methods for eliminating or reducing them.

The unit is supported by anodized aluminum profiles, onto which steel panels are mounted, providing both stability and lightness.

The **Simple Balancing Apparatus Model KSM-057** consists of a shaft mounted on bearings. This shaft is coupled to an electrical motor with variable speed via a pulley, allowing it to rotate. The entire system is fixed to the support structure by springs, which allow the unit to oscillate in response to unbalanced vibrations or forces.

The shaft has two discs: one is a pulley, and the other is a graduated disc. These discs feature holes for attaching masses, which are used to destabilize the system, followed by balancing it through adjustments.

A ruler is provided to easily measure the displacement of the system, with a needle positioned on the right side of the unit for accurate readings.

The unit is supplied with an Auxiliary Module for electrical supply and motor speed control. Additionally, it comes with a set of sector masses and weights of various values for conducting experiments.

Specifications

- **Unit Construction**:
  - Bench-top unit mounted on a structure made of anodized aluminum profiles, with a painted steel panel and legs.
  - All elements of the MES unit are made of aluminum, stainless steel, and treated steel.
- **Motor and Transmission**:

Note: Specifications and Photos can be altered without prior notice in our constant efforts for improvement.

    - Electrical motor with variable speed, reaching up to 8300 r.p.m.
    - Transmission from the motor to the shaft through a pulley and belt system.
- **Graduated Disc**:
    - Aluminum external disc, with a diameter of 150 mm.
    - Disc has drilled holes for fixing masses to destabilize the system, followed by balancing.
- **Auxiliary Module**:
    - Provides electrical supply and motor control.
    - Includes connections at the back and a potentiometer at the front to control motor speed.
- **Additional Components**:
    - Set of sector masses and weights for performing balancing practices.
- **Manuals Provided**:
    - Required Services Manual
    - Assembly and Installation Manual
    - Starting-up Manual
    - Safety Manual
    - Maintenance Manual
    - Practices Manual

Experiment Possibilities

- Demonstrations and experiments in the balancing of coplanar rotating systems.
- Balance in a single plane of revolution.
- Observation of the effects on oscillations under various balancing conditions.

Required Services

- **Electrical Supply**: Single-phase, 220V/50Hz.