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Products  
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Units  
7.-Mechanics & Materials



Detail of the sector masses and weights



## DESCRIPTION

The Static and Dynamic Balancing Unit developed by EDIBON is an unit to study and analyze the oscillations and vibrations and how to eliminate or diminish them.

This unit is sustained by anodized aluminum profiles on which are mounted steel panels. This gives to the unit stability and lightness.

The MED unit is basically formed by a shaft mounted on bearings. This shaft is coupled by pulleys to an electrical motor with variable speed that will make it turn. The whole is fixed to the support structure by means of springs which make the unit oscillate in case there are vibrations or forces without being balanced.

This shaft has 4 discs coupled: one of them is the pulley, 2 are balancing discs and at the end there is a graduated disc. The discs have drills to proceed, through fixing the masses, to the system destabilization and then to its subsequent balancing.

On another hand, it can be coupled to our system a piston whose movement will be an alternative perpendicular to the shaft. The connection of the piston to the shaft is made with a connecting rod.

A ruler can be used in the MED Unit to see easily the measurement of the system displacement with a needle placed at the right side of the unit.

The unit is supplied with an Auxiliary Module for the electrical supply and the motor speed control.

The unit is completed with a set of sector masses and weights of different values for doing the experiments.



**ISO 9000: Quality Management**  
(for Design, Manufacturing,  
Commercialization and After-sales service)



**European Union Certificate**  
(total safety)



**Certificates ISO 14000 and  
ECO-Management and Audit Scheme**  
(environmental management)



**Worlddidac Quality Charter  
Certificate**  
(Worlddidac Member)

## SPECIFICATIONS

Desktop unit mounted on a structure made of anodized aluminum profiles, with a painted steel panel and with legs.

All the elements of the MED unit are made of aluminum, stainless steel and treated steel.

This unit has:

An electrical motor with variable speed which can reach 8,300 r.p.m.

It has a transmission through pulleys and a belt from the motor to the shaft.

2 Balancing discs. They are made of aluminum and have a diameter of 150 mm.

An aluminum external disc, that we will name Graduated disc. It has a diameter of 150 mm.

The unit is completed with a set of sector masses and weights to do the practices:

2 Sector masses of 27° angle.

2 Sector masses of 114° angle.

2 Sector masses of 43° angle.

2 Sector masses of 72° angle.

18 weights of 60 gr., 40 gr., 30 gr., 20 gr. and 15 gr., to do the balance of masses in rotation experiments.

Auxiliary module for the electrical supply and the motor control. At its back, there are connections and at its front part it has a potentiometer to control the speed of the motor.

**Manuals:** This unit is supplied with the following manuals: Required services, Assembly and Installation, Starting-up, Safety, Maintenance & Practices Manuals.

## EXERCISES AND PRACTICAL POSSIBILITIES

Some Practical Possibilities of the Unit:

- 1.- Balance on an individual plane of revolution.
- 2.- Balance on separated planes of revolution.
- 3.- Easy demonstration experiments.
- 4.- Illustrate the dynamic balance of rotation and reciprocating systems.
- 5.- Balance of reciprocating masses.
- 6.- Observe the effects on oscillations of various conditions of partial balance in the reciprocating systems.

## REQUIRED SERVICES

-Electrical supply: single-phase, 220V./50Hz or 110V./60Hz.

## DIMENSIONS & WEIGHTS

MED:

Unit:

-Dimensions: 450 x 550 x 600 mm. approx.

-Weight: 30 Kg. approx.

Auxiliary module:

-Dimensions: 310 x 220 x 145 mm. approx.

-Weight: 2 Kg. approx.

\*Specifications subject to change without previous notice, due to the convenience of improvements of the product.



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