



INTRODUCTION

A slotted link mechanism consists of a rotary element, called crank, connected to a rigid bar, called connecting rod, so that when the crank rotates, the connecting rod moves back and forward. This mechanism transforms circular motion into reciprocating linear motion. It is a reversible system.

It is one of the most important and numerous mechanisms able to transform the rotational motion of a piston into linear motion of a crankshaft. Its main application is in internal combustion engines.

The Slider Crank Mechanism, "MBD", has been designed to study the action of a simple in-line slider-crank mechanism.

GENERAL DESCRIPTION

The Slider Crank Mechanism, "MBD", designed by EDIBON, is an example of slider-crank mechanism.

This mechanism is made of aluminum and consists of a rotary element (graduated disc), called crank, connected to a rigid bar, called connecting rod. When the crank rotates, the connecting rod moves backwards and forwards.

The input angle is set on the ball bearing mounted crank disc and read on an angle measuring scale. A millimeter scale is fitted for the linear motion of the connecting rod. The "MBD" unit includes two connecting rods of different length so that they can be compared.



ISO 9001: Quality Management (for Design, Manufacturing, Commercialization and After-sales service)



European Union Certificate (total safety)



Certificates ISO 14001 and ECO-Management and Audit Scheme (environmental management)



"Worlddidac Quality Charter" and Platinum Member of Worlddidac

SPECIFICATIONS

Bench-top unit.

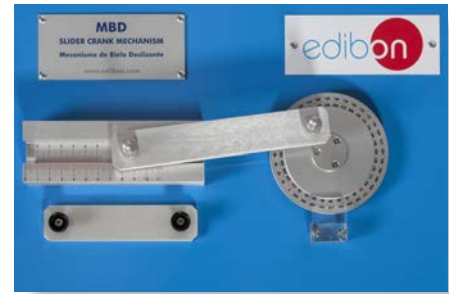
Anodized aluminum frame and panels made of painted steel.

Main metallic elements made of stainless steel.

The MBD unit mainly consists of:

- Rotary element (crank) with a graduated disc and indicator to read the angle.
- Rigid bar with a millimeter scale to measure the linear motion.
- Two connecting rods of different length.

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



MBD detail

EXERCISES AND PRACTICAL POSSIBILITIES

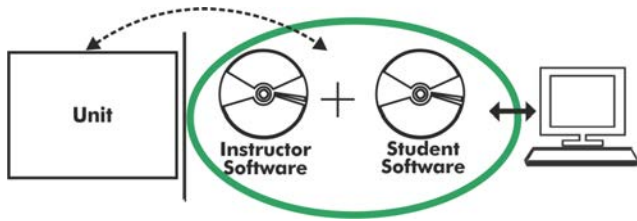
- 1.- Demonstration of the action of a simple in-line slider-crank mechanism.
- 2.- Study of the relationship between the linear displacement of the sliding block (connecting rod) and the angular displacement of the rotary element (crank).
- 3.- To illustrate graphically and study the effect of changing the length of the connecting rod.
- 4.- Determination of the velocity and acceleration of the sliding block by graphical differentiation and compared with the values obtained by equations of motion or by velocity and acceleration diagrams.

DIMENSIONS AND WEIGHTS

MBD:

- Dimensions: 400 x 300 x 100 mm approx.
(15.75 x 11.81 x 3.94 inches approx.)
- Weight: 3 Kg approx.
(6.6 pounds approx.)

MBD/ICAI. Interactive Computer Aided Instruction Software System:



With no physical connection between unit and computer, this complete software package consists of an Instructor Software (EDIBON Classroom Manager -ECM-SOF) totally integrated with the Student Software (EDIBON Student Labsoft -ESL-SOF). Both are interconnected so that the teacher knows at any moment what is the theoretical and practical knowledge of the students.

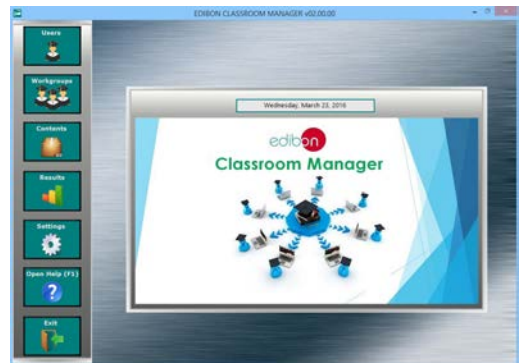
Instructor Software

- ECM-SOF. EDIBON Classroom Manager (Instructor Software).

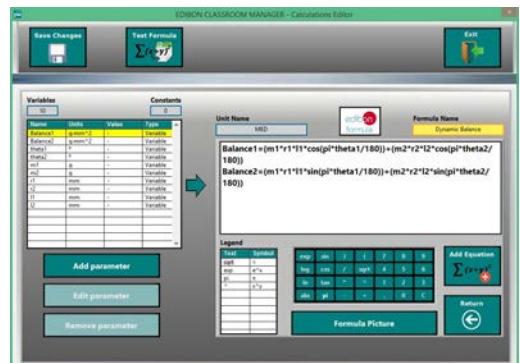
ECM-SOF is the application that allows the Instructor to register students, manage and assign tasks for workgroups, create own content to carry out Practical Exercises, choose one of the evaluation methods to check the Student knowledge and monitor the progression related to the planned tasks for individual students, workgroups, units, etc... so the teacher can know in real time the level of understanding of any student in the classroom.

Innovative features:

- User Data Base Management.
- Administration and assignment of Workgroup, Task and Training sessions.
- Creation and Integration of the system Practical Exercises and Multimedia Resources.
- Custom Design of Evaluation Methods.
- Creation and assignment of Formulas & Equations.
- Equation System Solver Engine.
- Updatable Contents.
- Report generation, User Progression Monitoring and Statistics.



ECM-SOF. EDIBON Classroom Manager (Instructor Software) Application Main Screen



ECAL. EDIBON Calculations Program Package - Formula Editor Screen



ETTE. EDIBON Training Test & Exam Program Package - Main Screen with Numeric Result Question



ERS. EDIBON Results & Statistics Program Package - Student Scores Histogram

