

INTRODUCTION

A lever is a simple machine consisting of a beam pivoted at a fixed hinge or fulcrum. The lever arm of a force applied to a solid is the distance from the fulcrum to the line of action of this force. Equilibrium is reached when the algebraic sum of the moments of forces in relation to the fulcrum is zero.

The Unit for studying Equilibrium of Moments on a Two Arm Lever, "MEMB2", provides a simple way of understanding experiments on the equilibrium of moments.

GENERAL DESCRIPTION

The Unit for studying Equilibrium of Moments on a Two Arm Lever, "MEMB2", allows to study the fundamentals of the equilibrium of moments and the application of the law of levers on a two-arm lever.

A pivoted beam in the extreme of a vertical support represents a two-arm lever. Several loads can be applied at various positions of the lever with movable riders, weights and weight holders. These loads will make the beam rotate. The equilibrium is attained by moving the loads, and the moment necessary to overcome this rotation and keep the beam level can be determined.

The beam is graduated in each direction from the central pivot to read the distances from the pivot point – the lever arms. The calculation of the lever arms can be verified in the exercises.

Three movable riders, weight holders and a set of weights are included for applying loads.



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.

The unit includes:

Two-arm lever:

Ball bearing-mounted beam. This beam is pivoted at a vertical support.

Beam dimensions: 700 x 30 x 10 mm.

The beam is graduated in each direction from the central pivot.

Arm lever length: 350 mm, each one.

Three movable riders to vary the positions of the loads in the levers.

Set of weights:

3 x 0.5 N.

12 x 1 N.

6 x 5 N.

It includes three 1 N weight holders.

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

EXERCISES AND PRACTICAL POSSIBILITIES

- 1.- Investigation of the equilibrium of moments on a two-arm lever: applied forces, generated moments and equilibrium.
- 2.- Demonstration of the simple equilibrium of moments by loading a pivoted beam.
- 3.- Study of the stable system of a loaded pivoted beam.
- 4.- Comparison of the experimental values with the theoretical values using simple moments.
- 5.- Study of the action of forces dependent on the lever arm.

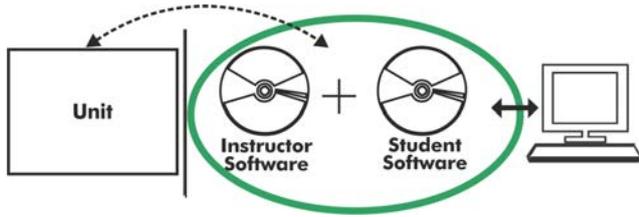
DIMENSIONS AND WEIGHTS

MEMB2:

-Dimensions: 700 x 350 x 420 mm approx. (27.56 x 13.78 x 16.54 inches approx.)

-Weight: 13 Kg approx. (28.6 pounds approx.)

MEMB2/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.

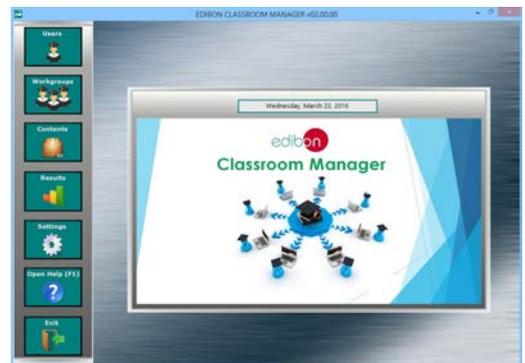
Instructor Software

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

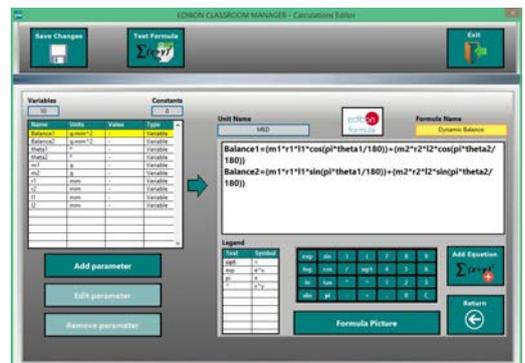
ECM-SOF is the application that allows the Instructor to register students, manage and assign tasks for workgroups, create own content to carry out Practical Exercises, choose one of the evaluation methods to check the Student knowledge and monitor the progression related to the planned tasks for individual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

Innovative features:

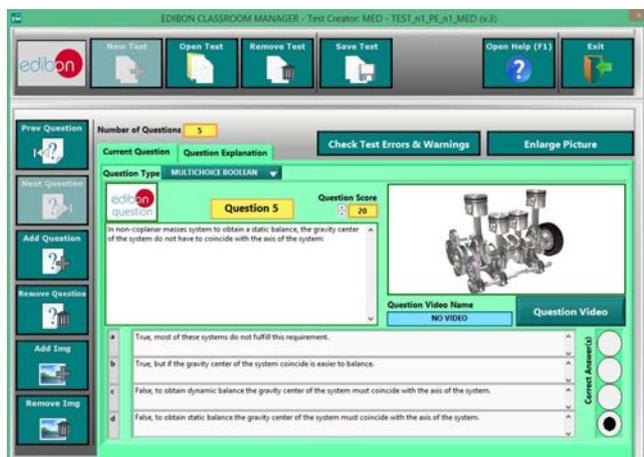
- User Data Base Management.
- Administration and assignment of Workgroup, Task and Training sessions.
- Creation and Integration of Practical Exercises and Multimedia Resources.
- Custom Design of Evaluation Methods.
- Creation and assignment of Formulas & Equations.
- Equation System Solver Engine.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



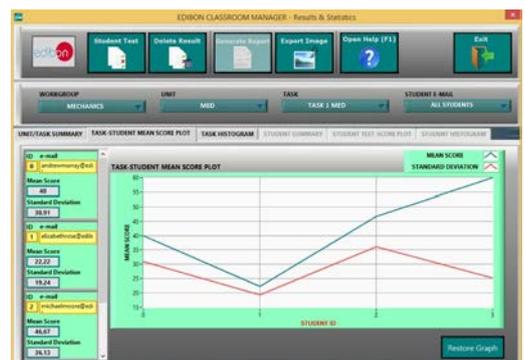
ECM-SOF. EDIBON Classroom Manager (Instructor Software) Application Main Screen



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

Optional
Student Software

- ESL-SOF. EDIBON Student Labsoft (Student Software).

ESL-SOF is the application addressed to the Students that helps them to understand theoretical concepts by means of practical exercises and to prove their knowledge and progression by performing tests and calculations in addition to Multimedia Resources. Default planned tasks and an Open workgroup are provided by EDIBON to allow the students start working from the first session. Reports and statistics are available to know their progression at any time, as well as explanations for every exercise to reinforce the theoretically acquired technical knowledge.

Innovative features:

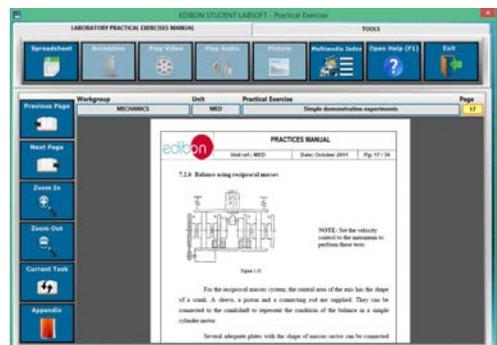
- Student Log-In & Self-Registration.
- Existing Tasks checking & Monitoring.
- Default contents & scheduled tasks available to be used from the first session.
- Practical Exercises accomplishment by following the Manual provided by EDIBON.
- Evaluation Methods to prove your knowledge and progression.
- Test self-correction.
- Calculations computing and plotting.
- Equation System Solver Engine.
- User Monitoring Learning & Printable Reports.
- Multimedia-Supported auxiliary resources.

For more information see ICAI catalogue. Click on the following link:

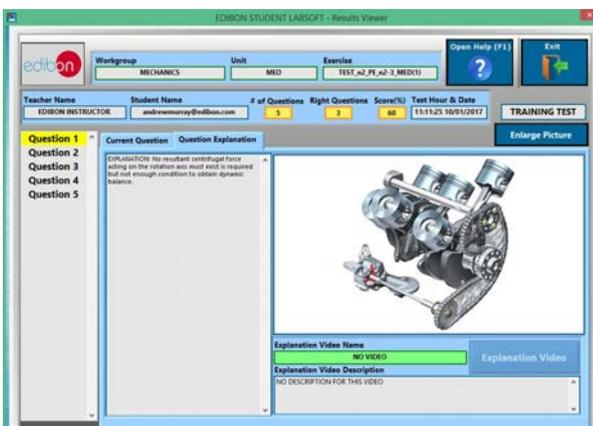
www.edibon.com/en/files/expansion/ICAI/catalog



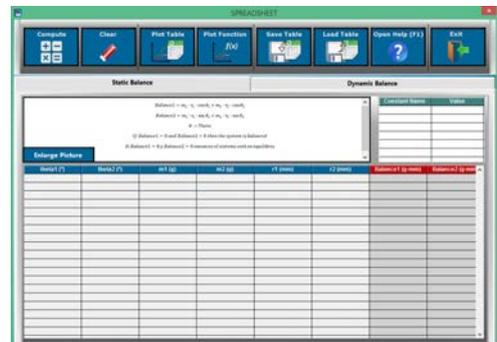
ESL-SOF. EDIBON Student LabSoft (Student Software)
Application Main Screen



EPE. EDIBON Practical Exercise Program Package Main Screen



ERS. EDIBON Results & Statistics Program Package - Question Explanation



ECAL. EDIBON Calculations Program Package Main Screen

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



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REPRESENTATIVE:

