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↳ PRODUCTS
↳ 70.- MECHANICS

GENERAL DESCRIPTION

One of the main problems in the study of loads distribution on horizontal beams is related to vertical loads. Such loads, transverse to the beam direction, can generate bendings, with the consequent breaking risk. The greatest advantage of arched beams is that they are able to distribute these vertical loads between a horizontal and a vertical component, so that the total load in the vertical axis is reduced, and the breaking possibilities diminish.

This is applicable when big spans must be covered with only two support points. The arched beam has the advantage of supporting greater vertical loads than a straight beam, which can present, in these cases, great bending signs.

The unit (MFL) enables to determine experimentally the horizontal component of the abutment thrust of a two hinged arch beam.

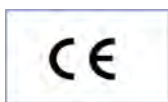
The beam is supported on ball bearing rollers attached to each end of the beam and the horizontal movement of the free end is indicated by a dial gauge so that the beam can be returned to its original unloaded span.

The horizontal thrust force is applied to the free end of the beam by means of masses or weights attached to a cord passing over the ball bearing pulleys.

Varying loads can be applied to the beam by means of load hangers and masses. A dial gauge enables to measure the vertical displacement.



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)



Certificate and Worlddidac Member

SPECIFICATIONS

Bench-top unit with structure made in anodized aluminum and steel.

Steel arch beam.

2 Dial gauges:

Range: 0-10 mm. (0 - 0.4 inches).

Accuracy: 0.01 mm. (0.0004 inches).

Cord with a hook.

In order to carry out some practices with MFL unit, 1 set of weights "B type" is required. (See section "Required Accessories (Not Included)").

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

EXERCISES AND PRACTICAL POSSIBILITIES

- 1.- Demonstration of the characteristics of a two pinned arch.
- 2.- To examine the relationship between applied loads and horizontal thrust.
- 3.- Determination of the horizontal thrust in a support point of an arch beam subjected to a vertical load.
- 4.- Study of the horizontal force change with the magnitude of the applied load.
- 5.- To determine the experimental value of the horizontal component thrust at the abutment end of a two pinned arch beam subjected to a vertical load.

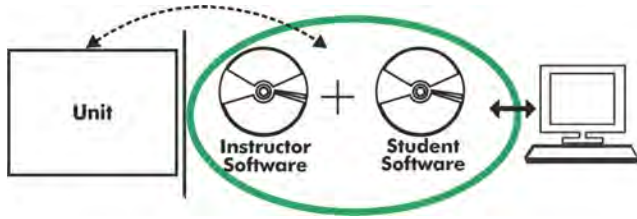
REQUIRED ACCESSORIES (Not Included)

- Set of weights "B type" (set B):
 - 6 weights of 200 gr. (0.44 pounds).
 - 6 weights of 100 gr. (0.22 pounds).
 - 2 weights of 50 gr. (0.11 pounds).
 - 2 weights of 20 gr. (0.044 pounds).
 - 2 weights of 10 gr. (0.022 pounds).
 - 1 support hook of 100 gr. (0.22 pounds).

DIMENSIONS AND WEIGHTS

- MFL:
- Dimensions: 700 x 400 x 700 mm. approx.
(27.56 x 15.75 x 27.56 inches approx.).
 - Weight: 15 Kg. approx.
(33 pounds approx.).

MFL/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.

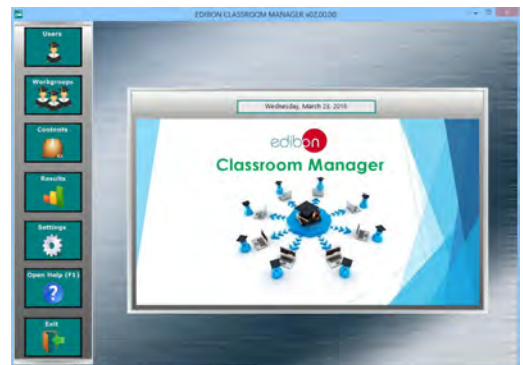
Instructor Software

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

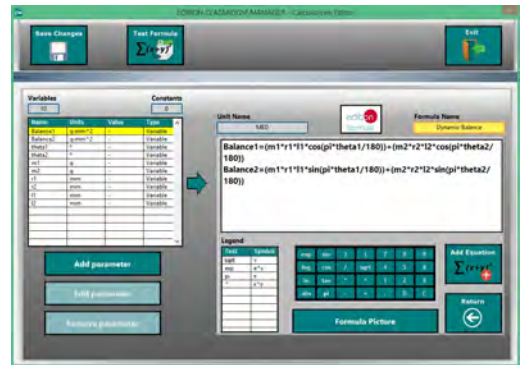
ECM-SOF is the application that allows the Instructor to register students, manage and assign tasks for workgroups, create own content to carry out Practical Exercises, choose one of the evaluation methods to check the Student knowledge and monitor the progression related to the planned tasks for individual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

Innovative features:

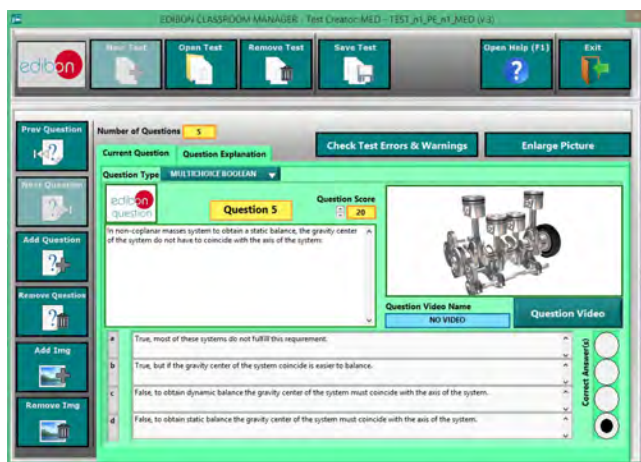
- User Data Base Management.
- Administration and assignment of Workgroup, Task and Training sessions.
- Creation and Integration of Practical Exercises and Multimedia Resources.
- Custom Design of Evaluation Methods.
- Creation and assignment of Formulas & Equations.
- Equation System Solver Engine.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

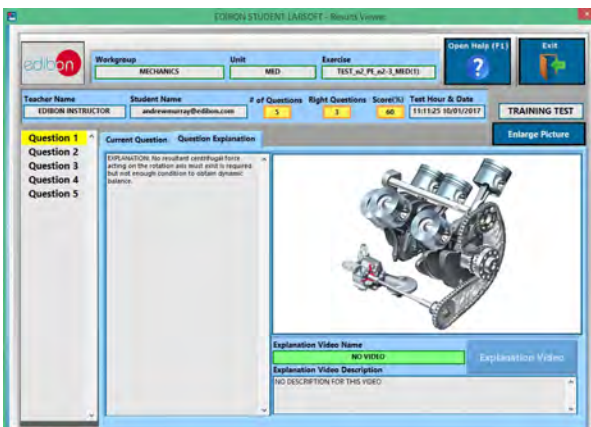
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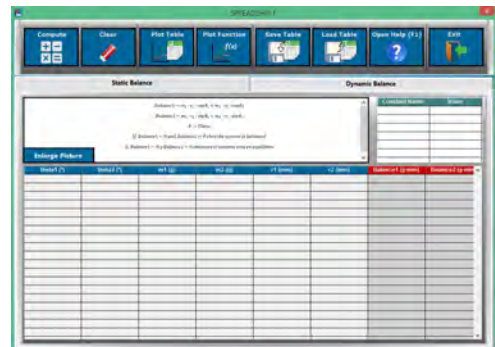
ESL-SOF. EDIBON Student LabSoft (Student Software)
Application Main Screen



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:

