

INTRODUCTION

The simple machine called, wheel and axle, consists of an assembly formed by two wheels (or cylinders) of different diameters attached to an axle, so that both wheels rotate together transferring a force from one to the other.

The Wheel and Axle Unit, "MRYE1", allows to demonstrate the equilibrium of moments of the mechanics of a simple wheel and axle machine.

GENERAL DESCRIPTION

The Wheel and Axle Unit, "MRYE1", is a unit which allows to investigate the mechanics of a simple wheel and axle machine and to demonstrate the laws of the formation of equilibrium of moments in static systems.

Two pulleys with different diameter have an axle supported on pivots with ball bearings in a base plate. Each pulley (wheel) has a cord wrapped around its periphery. The cords can be wrapped in either direction around each pulley.

A weights holder is added to each cord, allowing the loading of the pulleys using the set of weights provided. These weights can be easily changed, thus allowing to quickly vary the peripheral force on the pulleys.

Using the holders and weights the velocity ratio can be experimentally determined and compared with the calculated values. Students can also determine the variation of effort with load and the variation of efficiency with load.



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

Anodized aluminum frame and panels made of painted steel.

Diagram in the front panel with distribution of the elements similar to the real one.

The unit is self-contained and includes an anodized aluminum base plate.

The unit includes:

Two pulleys (wheels):

Material: anodized aluminum.

Pulley no.1 diameter = 150 mm.

Pulley no.2 diameter = 75 mm.

Two cords can be wrapped in either direction around each pulley.

One axle:

Material: stainless steel.

This axle is supported on pivots with two ball bearings.

Set of weights:

4 x 5N.

4 x 2N.

5 x 1N.

5 x 0.5N.

It includes two 1N 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

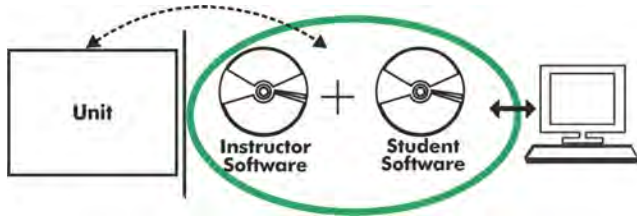
- 1.- Study of equilibrium of moments.
- 2.- Determination of velocity ratio and comparison with calculated value.
- 3.- Determination of variation of effort with load.
- 4.- Determination of variation of efficiency with load.

DIMENSIONS AND WEIGHTS

MRYE1:

- Dimensions: 400 x 400 x 800 mm approx.
(15.75 x 15.75 x 31.49 inches approx.).
- Weight: 22 Kg approx.
(48.4 pounds approx.).

MRYE1/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.

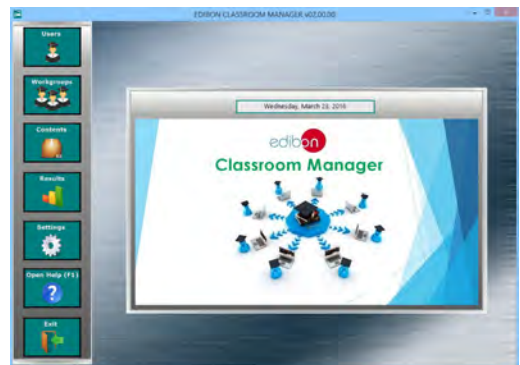
Instructor Software

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

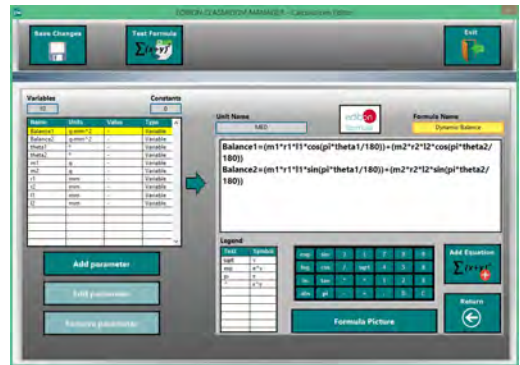
ECM-SOF is the application that allows the Instructor to register students, manage and assign tasks for workgroups, create own content to carry out Practical Exercises, choose one of the evaluation methods to check the Student knowledge and monitor the progression related to the planned tasks for individual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

Innovative features:

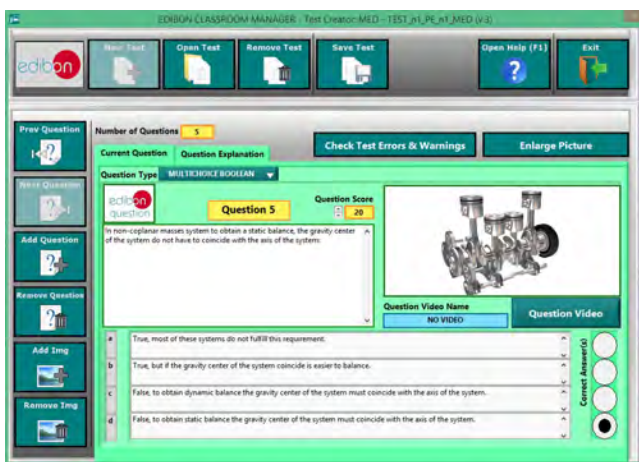
- User Data Base Management.
- Administration and assignment of Workgroup, Task and Training sessions.
- Creation and Integration of Practical Exercises and Multimedia Resources.
- Custom Design of Evaluation Methods.
- Creation and assignment of Formulas & Equations.
- Equation System Solver Engine.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

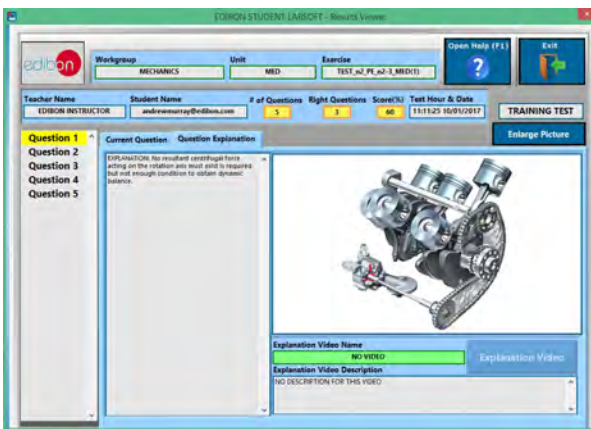
www.edibon.com/en/files/expansion/ICAI/catalog



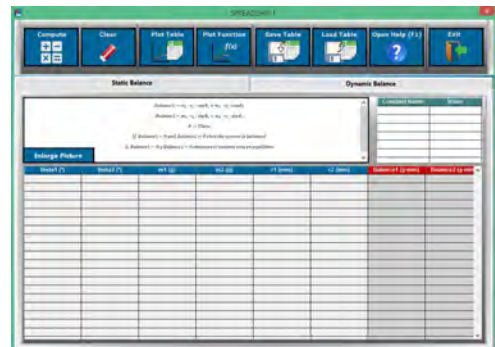
ESL-SOF. EDIBON Student LabSoft (Student Software)
Application Main Screen



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:

