



Optional accessory MVV/1

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 Products
 Products range
 Units
 7.- Mechanics & Materials

INTRODUCTION

The Unsymmetrical Cantilever Unit "MVV" is designed to demonstrate the unsymmetrical bending of beams.

Simple experiments may be carried out to determine the deflections Δ_u and Δ_v at the free end of cantilevers of different sections for varying angles of applied load from which the relationship between Δ_u/W and Δ_v/W may be determined graphically.

GENERAL DESCRIPTION

The system consists of a vertical cantilever rigidly clamped at its lower end to the main column which is attached to a rigid structure. Beams of different sections may be used.

A loading head, located at the upper end of the column, can rotate freely around the vertical axis of the beam at 15° intervals.

A horizontal load may be applied to the free end of the beam by means of a cord attached to the beam and passing over a pulley mounted on the rotating head.

The Δ_u and Δ_v deflections of the beam are measured by means of two dial gauges mounted perpendicularly to each other on the head.

To compensate any lateral deflection of the beam, the line of action of the applied load can be adjusted by lateral adjustment of the load pulley.

Two steel beams are supplied, one with rectangular section and the other one with L shape section.



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 adjustable legs.

Anodized aluminum frame and panels in painted steel.

The MVV unit mainly consists of:

Main column, made in aluminum, (the vertical cantilever is clamped at its lower end to this main column to carry out the experiment).

Loading head, made in aluminum, located at the upper end of the column, which can rotate 180° at 15° intervals around the vertical axis of the beam.

Set of pulley, located at the loading head, to apply a horizontal load.

Two dial gauges of 0-25 mm and 0.01 mm accuracy, to measure Δ_u and Δ_v deflections.

Two steel beams are supplied, one with rectangular section and the other one with L shape section.

In order to carry out some of the practices with MVV unit, an "B Type" Set of weights is required. (See "Required Accessories" section).

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

Optional models and accessories (not included):

- MVV/1. Accessory for determining the torsion centre of a beam.

EXERCISES AND PRACTICAL POSSIBILITIES

- 1.- Determining the deflection of the beam depending on the intensity of the force applied.
- 2.- Determining the deflection of the beam depending on the direction of the force applied.
- 3.- Determining the Δ_u and Δ_v deflections at free ends of cantilevers.
- 4.- Studying the deflections at two planes, for several sections.
- 5.- Determining deflections for different angles of force applied.
- 6.- Studying the rigidity variation.
- 7.- Determining the position of the torsion centre of the beam (It requires the optional accessory MVV/1).

REQUIRED ACCESSORIES (Not included)

- 1 "B Type" Set of weights. Each "B Type" Set includes:
 - 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 (hanger) of 100 gr. (0.22 pounds).

DIMENSIONS AND WEIGHT

- Dimensions: 400 x 300 x 400 approx.
(15.75 x 11.81 x 15.75 inches approx.)
- Weight: 14 Kg. approx.
(30.86 pounds approx.).

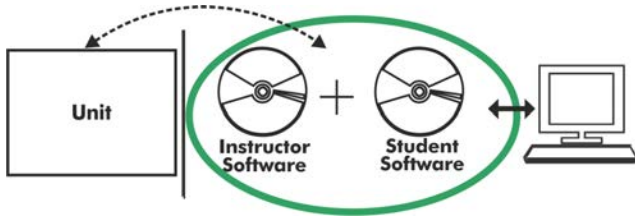
OPTIONAL MODELS AND ACCESSORIES (Not included)

MVV/1. Accessory for determining the torsion centre of a beam:

- Accessory for using with MVV.
- Four aluminum beams of different sections are included.

Optional

MVV/ICAI. Interactive Computer Aided Instruction Software System:



With no physical connection between unit and computer (PC), 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 Workgroups, Tasks and Training sessions.

Creation and Integration of Practical Exercises and Multimedia Resources.

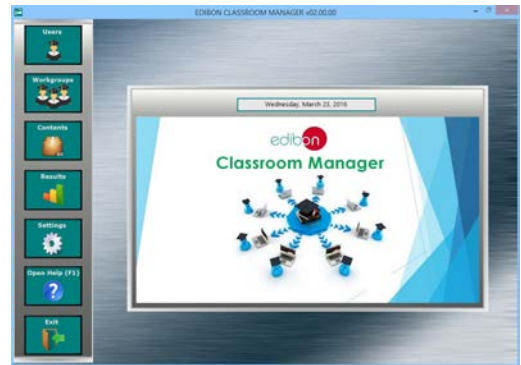
Custom Design of Evaluation Methods.

Creation and assignment of Formulas & Equations.

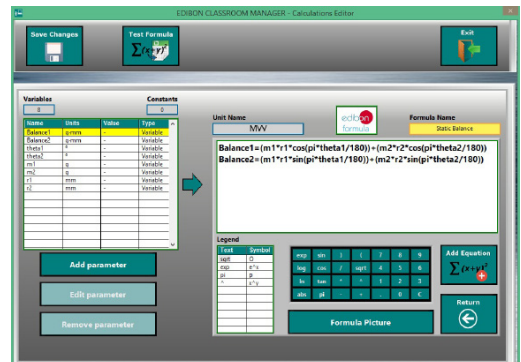
Equation System Solver Engine.

Updatable Contents.

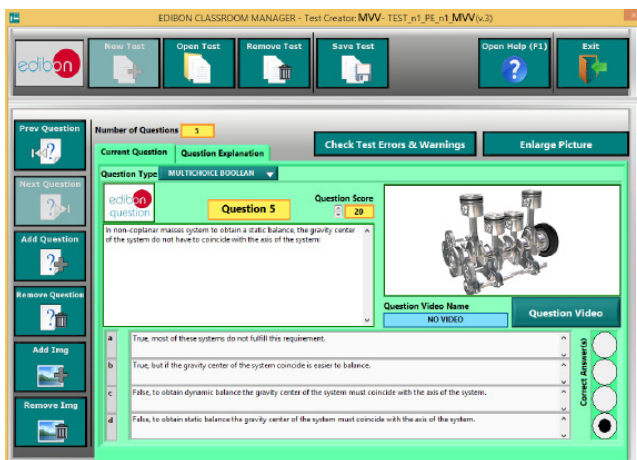
Report generation, User Progression Monitoring and Statistics.



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

-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.

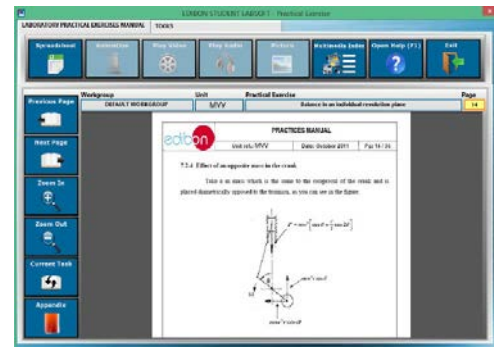
Innovative features:

- 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.**

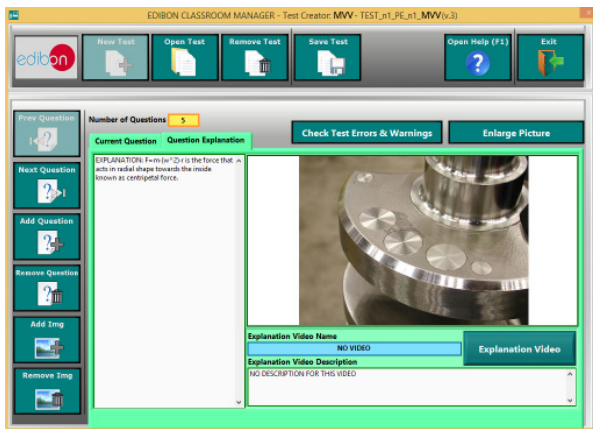
For more information see ICAI catalogue. Click on the following link:
www.edibon.com/products/catalogues/en/ICAI.pdf



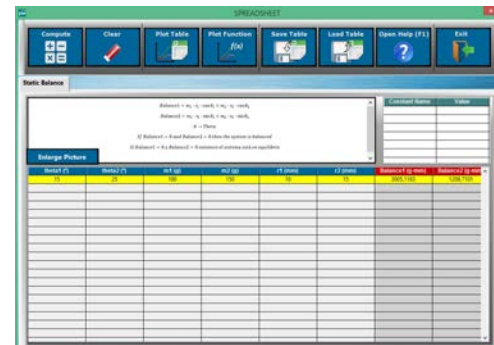
ESL-SOF. EDIBON Student LabSoft (Student Software) Application Main Screen



EPE. EDIBON Practical Exercise Program Package Main Screen



ERS. EDIBON Results & Statistics Program Package-Question Explanation



ECAL. EDIBON Calculations Program Package Main Screen

BDAS. Basic Data Acquisition System and Sensors.

For being used with mechanical modules.
BDAS is designed to monitor the measurements of each mechanical module from a computer (PC).

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



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REPRESENTATIVE:

