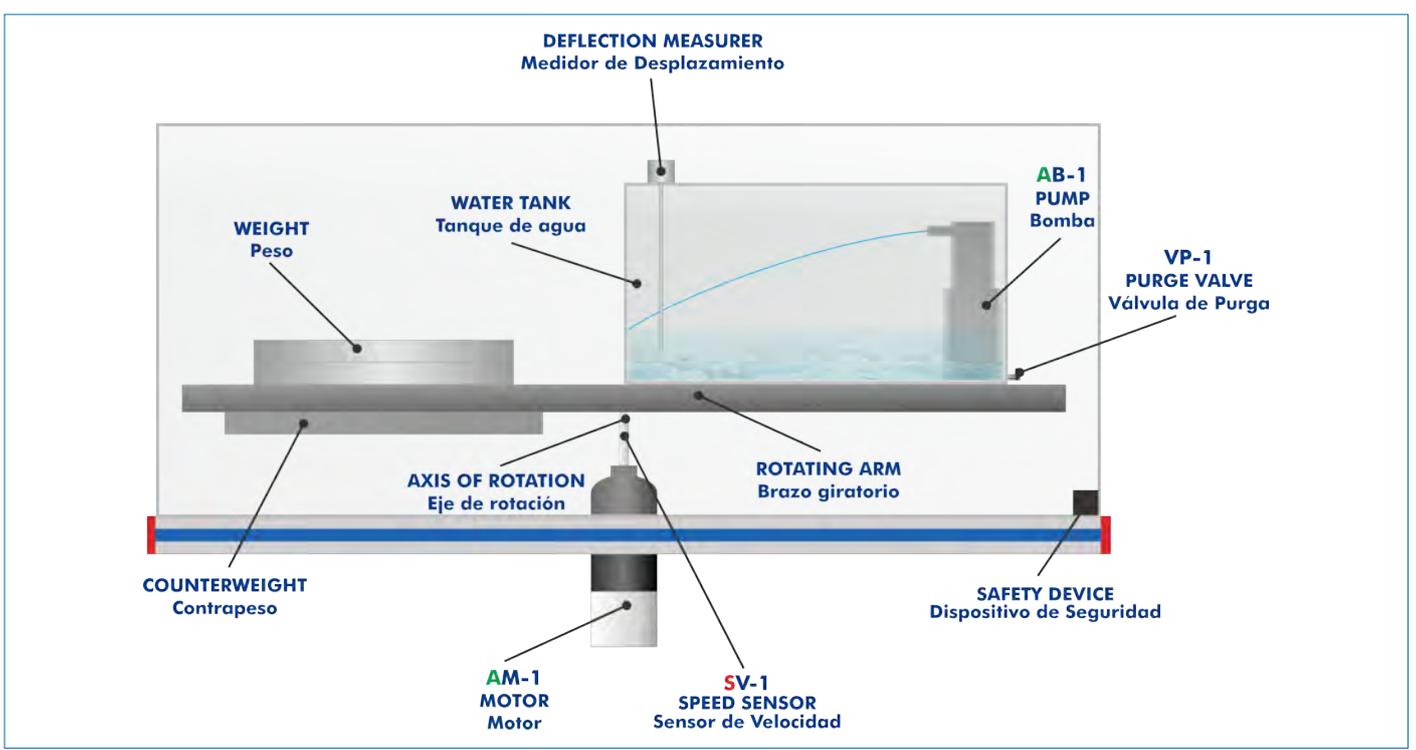


PROCESS DIAGRAM AND UNIT ELEMENTS ALLOCATION



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

INTRODUCTION

The Coriolis force is a deflection of moving objects when they are observed from a rotating reference system.

It is a fictitious force that affects the movement of currents and winds in the ocean, the movement of the icebergs in each hemisphere and clouds formation, for instance. It also allows explaining the deflection of airplanes and projectiles which gets around over the earth's surface.

The Coriolis Force Demonstration Unit, "MDFC", allows the visual demonstration of the Coriolis Effect (force) in a rotating reference system, using a jet of water as moving mass.

GENERAL DESCRIPTION

The Coriolis Force Demonstration Unit, "MDFC", is used to observe the deflection of a jet of water generated by a pump attached to a rotating arm that rotates to different speeds in a horizontal plane. An electronically controlled motor rotates the arm at different speeds.

The pump is immersed in a transparent water tank and projects a jet of water in the tank. This jet is directed towards the center of rotation of the rotating arm in a closed circuit.

Depending on the speed and direction of rotation, as well as the water flow rate of the pump, the jet of water is deflected under the Coriolis force. The amount of deflection can be seen in the water tank and determined by means of a scale on the tank and a measuring rod that can be adjusted so that the jet beats the rod.

The pump is counterbalanced to ensure a smooth and steady rotation at high speeds.

The unit includes an electronic console with a speed controller for the motor and a digital display to view the different speeds of the motor; a flow rate controller for the pump and a digital display for the speed of the jet of water.

The unit is protected by a safety cover that disconnects it automatically when the lid is opened.

SPECIFICATIONS

Bench-top unit.

Anodized aluminum frame and panels made of painted steel.

Main metallic elements made of stainless steel.

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

Transparent water tank. It Includes:

- Scale to read the deflection of the water jet.

- Purge Valve.

Measuring rod for an easy measurement of the jet deflection.

Submersible pump. Range: 0 - 10 l/min. Operation range: 0 - 5 l/min.

Motor with speed control. Speed range: 0 - 60 rpm.

Rotating arm with counterweight to ensure a smooth and steady rotation at high speeds.

Safety device to disconnect the unit when opening the protection cover.

Electronic console:

- Metallic box.

- Main switch.

- Pump switch.

- Motor switch.

- Switch to select the direction of rotation.

- Motor speed controller.

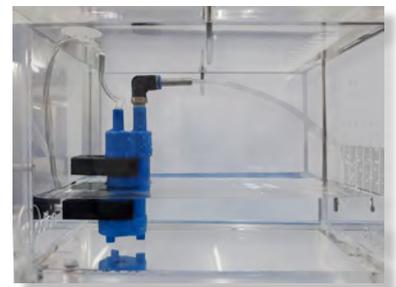
- Flow rate controller for the pump.

- Digital display for the motor speed.

- Digital display for the speed of the jet of water (pump flow rate)

Cables and Accessories, for normal operation.

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



MDFC Detail

EXERCISES AND PRACTICAL POSSIBILITIES

- 1.- Study of the influence of the deflection of a water jet depending on the rotation speed and direction.
- 2.- Study of the influence of the deflection of a water jet depending on the flow of a pump and the rotation direction.
- 3.- Comparison of the experimental deflection and the theoretical deflection of the jet for different rotation speeds.
- 4.- Comparison of the experimental deflection and the theoretical deflection of the jet for different water flow rates.
- 5.- Comparison of the experimental deflection of the jet for each rotation direction.

REQUIRED SERVICES

- Electrical supply: single-phase 220 V/50 Hz or 110 V/60 Hz.

DIMENSIONS AND WEIGHTS

MDFC:

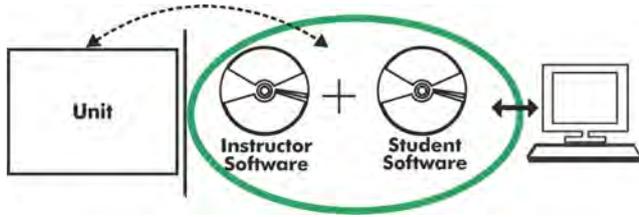
Unit:

- Dimensions: 650 x 610 x 750 mm approx.
(25.59x 24.01 x 29.52 inches approx.)
- Weight: 30 Kg approx.
(66 pounds approx.)

Electronic console:

- Dimensions: 300 x 190 x 130 mm approx.
(11.81 x 7.48 x 5.12 inches approx.)
- Weight: 3 Kg approx.
(6.6 pounds approx.)

MDFC/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.

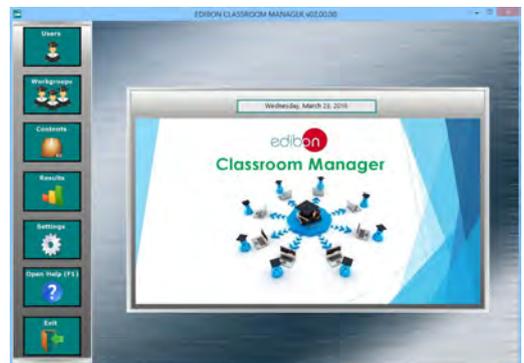
Instructor Software

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

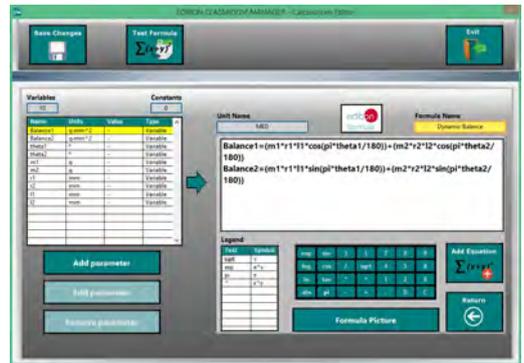
ECM-SOF is the application that allows the Instructor to register students, manage and assign tasks for workgroups, create own content to carry out Practical Exercises, choose one of the evaluation methods to check the Student knowledge and monitor the progression related to the planned tasks for individual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

Innovative features:

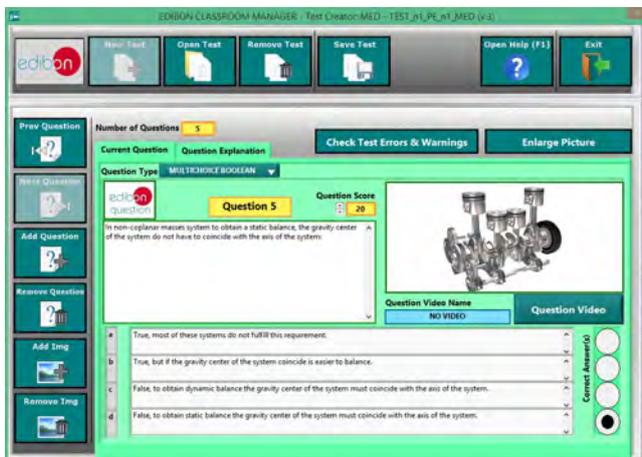
- User Data Base Management.
- Administration and assignment of Workgroup, Task and Training sessions.
- Creation and Integration of Practical Exercises and Multimedia Resources.
- Custom Design of Evaluation Methods.
- Creation and assignment of Formulas & Equations.
- Equation System Solver Engine.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



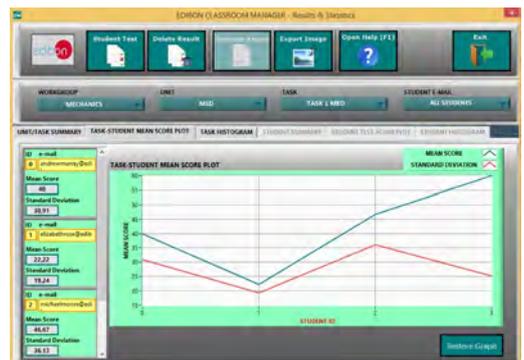
ECM-SOF. EDIBON Classroom Manager (Instructor Software) Application Main Screen



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).

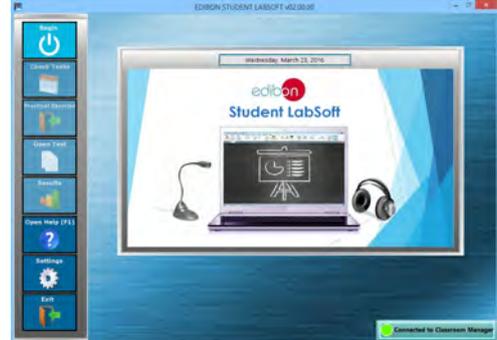
ESL-SOF is the application addressed to the Students that helps them to understand theoretical concepts by means of practical exercises and to prove their knowledge and progression by performing tests and calculations in addition to Multimedia Resources. Default planned tasks and an Open workgroup are 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:

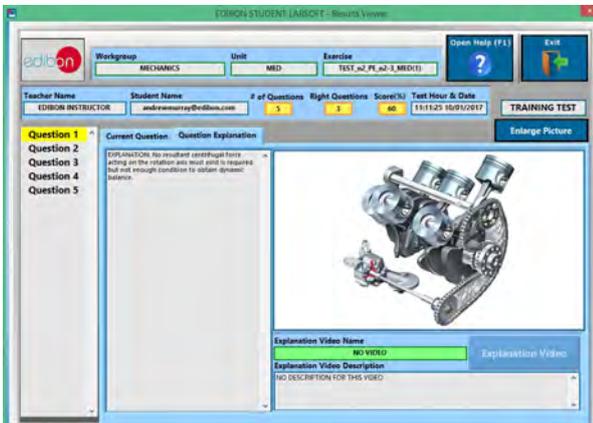
www.edibon.com/en/files/expansion/ICAI/catalog



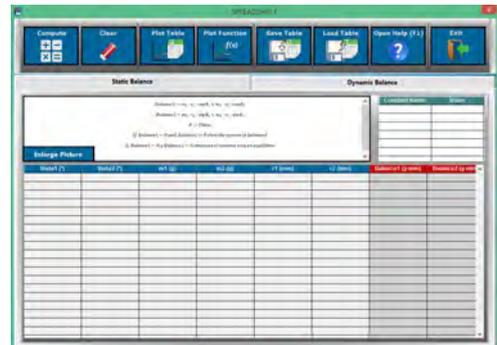
ESL-SOF. EDIBON Student LabSoft (Student Software)
Application Main Screen



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:

