



Electronic console

INTRODUCTION

Transmission components are those that spread motion and regulate or modify it, as appropriate.

The most important drive systems range from reducers, couplings and motors to variable frequency drives.

Misalignment is one of the most frequent vibration problems in rotary machines. It is caused by the difficulty in the alignment of two rotors with their respective supports. Misalignment may be due to different causes, such as over-reliance on the use of elastic couplings and self-aligning ball bearings, distortions in the machine during operation that cause displacements of the driving or driven system, etc.

Alignment is the process of making the center lines of the shaft of an element belonging to a machine coincide with the extension of the center lines of the shaft of another machine.

The Unit to Study the Alignment of Drives, Shafts and Gears, "ADSG", allows for mounting, aligning transmission components and checking the operation of the units.

GENERAL DESCRIPTION

The Unit to Study the Alignment of Drives, Shafts and Gears, "ADSG", allows for checking the operation with the Combined Gear Assembly Unit, "CGA", and the Unit to Study a Shaft with Journal Bearings Assembly, "SJBA". Any of the elements included in those two units will be correctly mounted in this unit in order to align the elements, mount the system and check the operation. Heat generation, vibrations during operation and possible leaks can also be assessed.

The unit includes a rigid bench with aluminum profile with T slots. The single-phase asynchronous drive motor with metal bellows coupling and the driving element to be checked are located on that bench.

The T slots allow for changing the mounting space, adapting it to the size of the drive element. It also has a magnetic particle brake with adjustable braking torque regulated by a potentiometer, a switch box with digital indication elements and control and a base plate with elastic elements to dampen vibrations.

The drive element is coupled to the motor and the brake through two couplings protected by removable guards. The objective of the student will be to perform the element-brake and element-motor alignments.

The excitation current of the magnetic brake, indicated in a display, is used to measure the braking torque. The magnetic brake includes a fan with claw clutch and a temperature sensor.

The Unit to Study the Alignment of Drives, Shafts and Gears, "ADSG", allows for studying the coupling and uncoupling, maintenance and repair of the related units.



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 made of painted steel.

Machine bench made of aluminum with T slots to allow the displacement.

Drive motor:

Two-pole asynchronous motor.

Maximum power: 0.55 Kw.

Number of revolutions: 1500 min^{-1} (synchronous speed).

Magnetic particle brake:

Rated braking torque with excitation current 0 - 0.4 A: 0 - 0.6 Nm.

Maximum braking torque with 1 A: 1.20 Nm.

Bimetal thermal protection: $70 \text{ }^{\circ}\text{C}$.

Electronic console:

Metal box.

Motor switch.

Brake switch.

Adjustable braking current drive.

Digital display of the braking torque measurement.

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.

EXERCISES AND PRACTICAL POSSIBILITIES

- 1.- Assembly and alignment of gears ("CGA" unit required).
- 2.- Testing the final operation of a spur gear with worm gear ("CGA" unit required).
- 3.- Familiarization with gear components and their functions ("CGA" unit required).
- 4.- Checking the gear behavior when working with a variable load ("CGA" unit required).
- 5.- Study and assessment of vibrations and noise during the operation of the gear with a variable load and checking for leaks ("CGA" unit required).
- 6.- Study and analysis of the gear function assembled with a test load ("CGA" unit required).
- 7.- Assembly and alignment of a shaft with journal bearings ("SJBA" unit required).
- 8.- Testing the final operation of a shaft with journal bearings ("SJBA" unit required).
- 9.- Familiarization with gear components and their functions ("SJBA" unit required).
- 10.-Checking the sliding quality of the journal bearing.

DIMENSIONS AND WEIGHTS

ADSG:

Unit:

Dimensions: 950 x 500 x 450 mm approx. (37.40 x 19.68 x 17.71 inches approx.)

Weight: 75 Kg approx. (165 pounds approx.)

Bench:

Mounting space: 640 x 160 mm approx. (25.19 x 6.30 inches approx.)

ADSG/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.

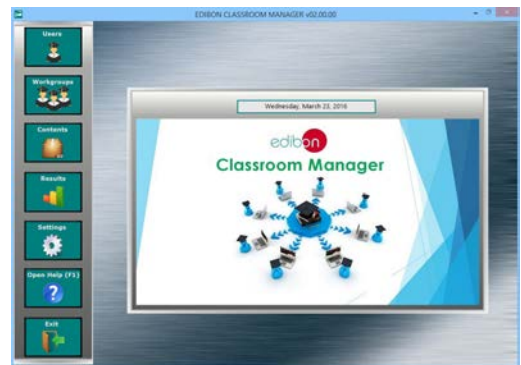
Instructor Software

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

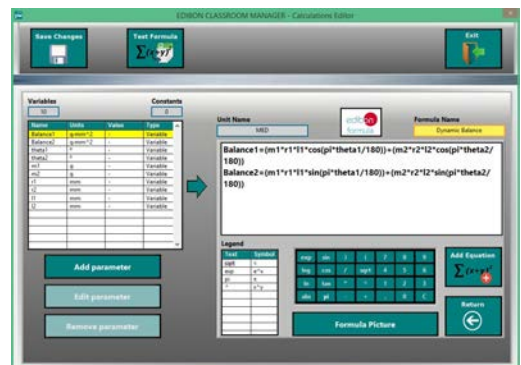
ECM-SOF is the application that allows the Instructor to register students, manage and assign tasks for workgroups, create own content to carry out Practical Exercises, choose one of the evaluation methods to check the Student knowledge and monitor the progression related to the planned tasks for individual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

Innovative features:

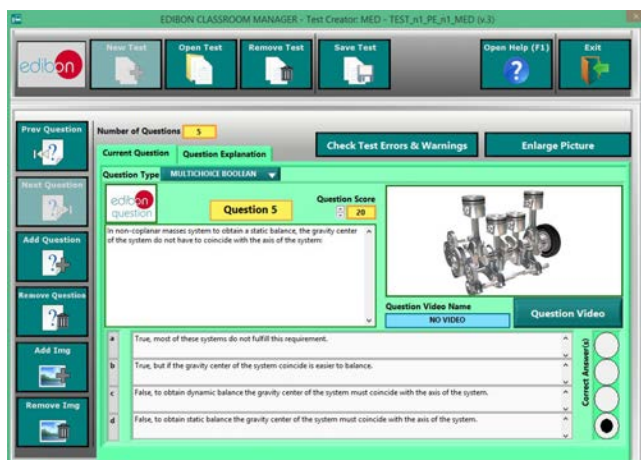
- User Data Base Management.
- Administration and assignment of Workgroup, Task and Training sessions.
- Creation and Integration of Practical Exercises and Multimedia Resources.
- Custom Design of Evaluation Methods.
- Creation and assignment of Formulas & Equations.
- Equation System Solver Engine.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

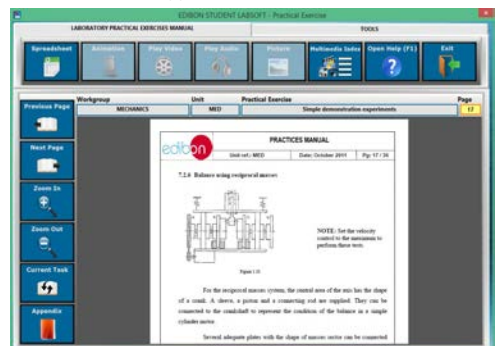
- Student Log-In & Self-Registration.
- Existing Tasks checking & Monitoring.
- Default contents & scheduled tasks available to be used from the first session.
- Practical Exercises accomplishment by following the Manual provided by EDIBON.
- Evaluation Methods to prove your knowledge and progression.
- 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:

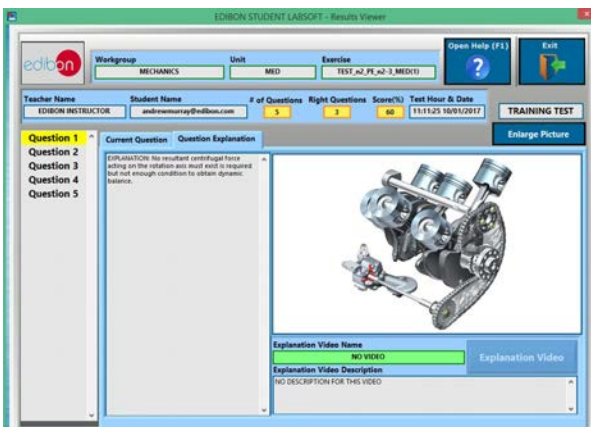
www.edibon.com/en/files/expansion/ICAI/catalog



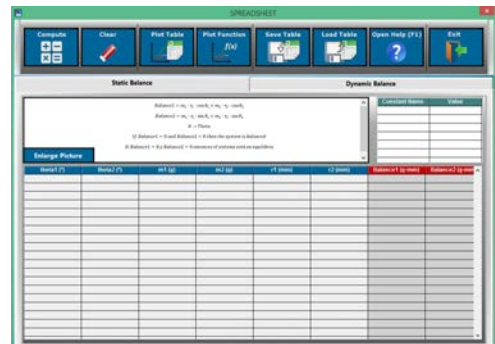
ESL-SOF. EDIBON Student LabSoft (Student Software)
Application Main Screen



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:

