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Products
Products range
Units
7.-Mechanics & Materials

INTRODUCTION

The Geneva mechanism produces intermittent motion from continuous circular motion. It is a positive drive mechanism in which the driven wheel is positively moved or locked.

The Geneva wheel contains a number of slots into which the driving crank engages, and the number of slots determines the velocity ratio during periods of motion.

When the Geneva wheel is not being indexed, it is locked by means of a locking plate, whose convex surface mates with the concave surface of the Geneva wheel except during the indexing period.

GENERAL DESCRIPTION

The Geneva Stop Mechanism (MME), designed by EDIBON, is a mechanism that transforms continuous circular motion into intermittent motion. It is a positive drive in which the driven wheel is positively moved or locked.

It is made of aluminum and consists of a rotating drive wheel and a driven wheel with six slots. The drive wheel has a pin that reaches into a slot of the driven wheel, advancing it by one step. The drive wheel also has a raised half-moon blocking disc that locks the driven wheel in position between steps.

The drive wheel and the driven wheel are mounted in two graduated discs, where the angle of both wheels can be measured.



ISO 9000: Quality Management
(for Design, Manufacturing,
Commercialization and After-sales service)



European Union Certificate
(total safety)



**Certificates ISO 14000 and
ECO-Management and Audit Scheme**
(environmental management)



**Worlddidac Quality Charter
Certificate**
(Worlddidac Member)

SPECIFICATIONS

The unit is a bench top-unit with an anodized aluminum profile structure, and painted steel panel.

The main metallic elements are made of anodized aluminum.

This unit is composed of:

A rotating drive wheel with a pin and a raised half-moon blocking disc.

A driven wheel with six slots. The pin of the drive wheel reaches into a slot of the driven wheel, advancing it by one step. The raised half-moon blocking disc of the drive wheel locks the driven wheel in position between steps.

The drive wheel and the driven wheel are mounted in two rotary elements with a graduated disc to read the angle.

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

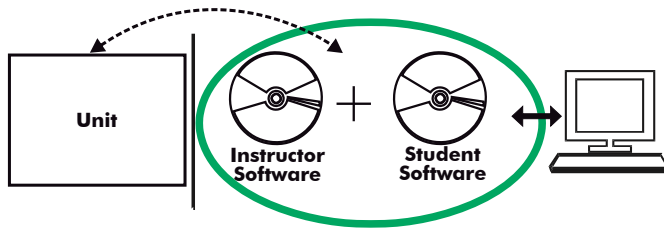
- | | |
|---|--|
| 1.- Demonstrating the action of a Geneva mechanism during the indexing and dwell periods. | 3.- Determining the velocity and acceleration of the Geneva wheel by graphical differentiation. |
| 2.- Plotting the relationship between the angular displacement of the input crank and the output Geneva wheel during the indexing period. | 4.- Comparing the values obtained by the equations of motion or the use of velocity and acceleration diagrams. |

DIMENSIONS & WEIGHT

-Dimensions: 400 x 300 x 160 mm. approx. (15.74 x 11.81 x 6.29 inches approx.).

-Weight: 3 Kg. approx. (6.61 pounds approx.).

MME/CAI. Computer Aided Instruction Software System:



With no physical connection between unit and computer (PC), this complete software package consists on an Instructor Software (INS/SOF) totally integrated with the Student Software (MME/SOF). Both are interconnected so that the teacher knows at any moment what is the theoretical and practical knowledge of the students.

Example of software screens

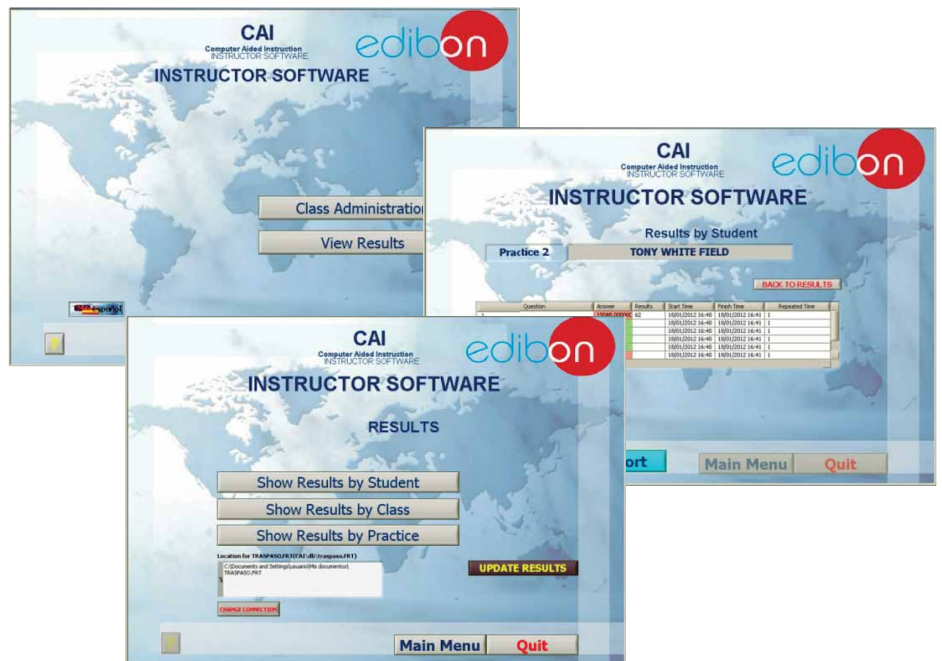
Instructor Software

INS/SOF. Classroom Management Software (Instructor Software):

The Instructor can:

- Organize Students by Classes and Groups.
- Create easily new entries or delete them.
- Create data bases with student information.
- Analyze results and make statistical comparisons.
- Generate and print reports.
- Detect student's progress and difficulties.
- ...and many other facilities.

This software, working in network configuration, allows controlling all the students in the classroom.



Student Software

MME/SOF. Computer Aided Instruction Software (Student Software):

It explains how to use the unit, run the experiments and what to do at any moment.

- This software contains:

Theory: gives the student the theoretical background for a total understanding of the studied subject.

Exercises: divided by thematic areas and chapters to check out that the theory has been understood.

Guided Practices: presents several practices to be done with the unit, showing how to perform the exercises and practices.

Exams: set of questions to test the obtained knowledge.



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

MME/CAL. Computer Aided Learning Software (Results Calculation and Analysis):

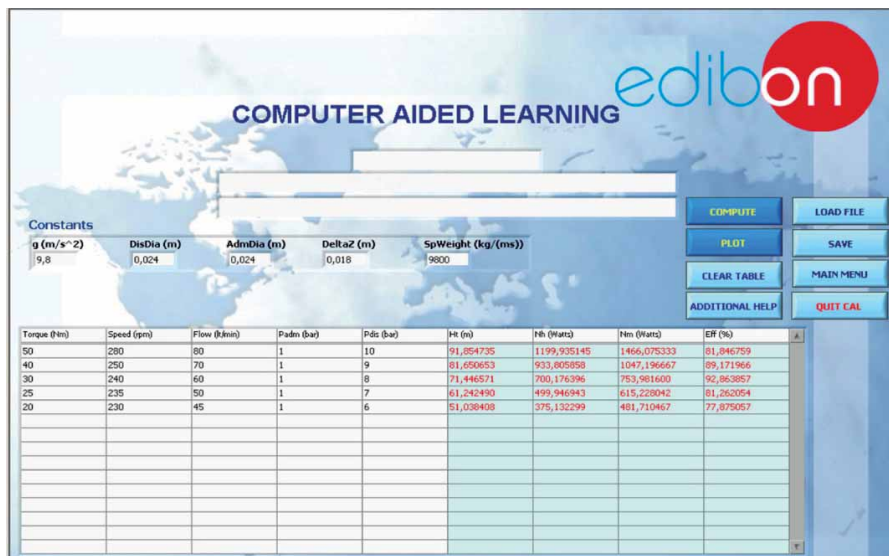
This Computer Aided Learning Software (Results Calculation and Analysis) "CAL" is a Windows based software, simple and very easy to use, specifically developed by EDIBON.

CAL is a class assistant that helps in doing the necessary calculations to extract the right conclusions from data obtained during the experimental practices. With a single click, CAL computes the value of all the variables involved and performs the calculations.

Also, CAL allows to plot and print the results. Within the plotting options, any variable can be represented against any other.

Available different plotting displays.

It has a wide range of information, such as constant values, unit conversion factors and integral and derivative tables.



On a table, we introduce data obtained during the development of the exercise.

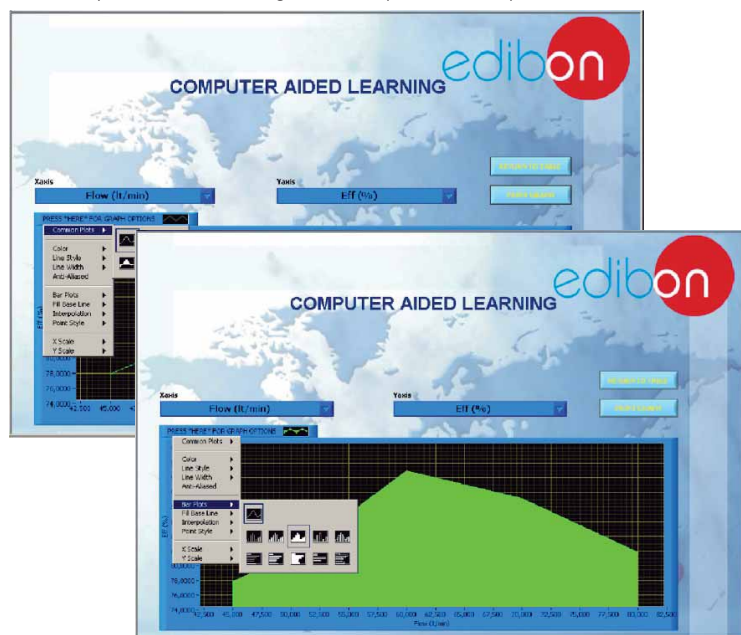
Above this table, it is shown "Constants" theoretically involved with the field of study. The values of these "Constants" may be modified to our convenience, assigning the appropriate values.

Simply, by clicking on "COMPUTE", CAL performs the calculations of the desired variables.

We can save and print the data of the experiment or calculations.

Also we can load any data file saved previously.

With the calculated variables, CAL gives the option of plotting the results. It is possible to represent any variable against any other. It has the option of representing the graph with different layouts. Screens below give an example of the multiple choices.



CAL has a wide range of help information. By clicking the button "ADDITIONAL HELP" opens a window where we have information about typical Constants, International System Units, Conversion Factors, and Table of Main Integrals and Derivatives (General), and there is other specific help for the particular unit.

General		
CONSTANTS		
SI base units		
Name	Symbol	Quantity
metre	m	Length
kilogram	kg	Mass
second	s	Time
ampere	A	Electrical current
kelvin	K	Thermodynamic temperature
mole	mol	Amount of substance
candela	cd	Luminous intensity
SI Prefixes		
Name	Symbol	Factor
yotta	Y	10 ²⁴
zetta	Z	10 ²¹
exa	E	10 ¹⁸
peta	P	10 ¹⁵
tera	T	10 ¹²
giga	G	10 ⁹
mega	M	10 ⁶
kilo	k	10 ³
hecto	h	10 ²
deca	da	10 ¹
deci	d	10 ⁻¹
centi	c	10 ⁻²
milli	m	10 ⁻³
micro	μ	10 ⁻⁶
nano	n	10 ⁻⁹
pico	p	10 ⁻¹²
femto	f	10 ⁻¹⁵
atto	a	10 ⁻¹⁸
zepto	z	10 ⁻²¹
yocto	y	10 ⁻²⁴

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

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



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