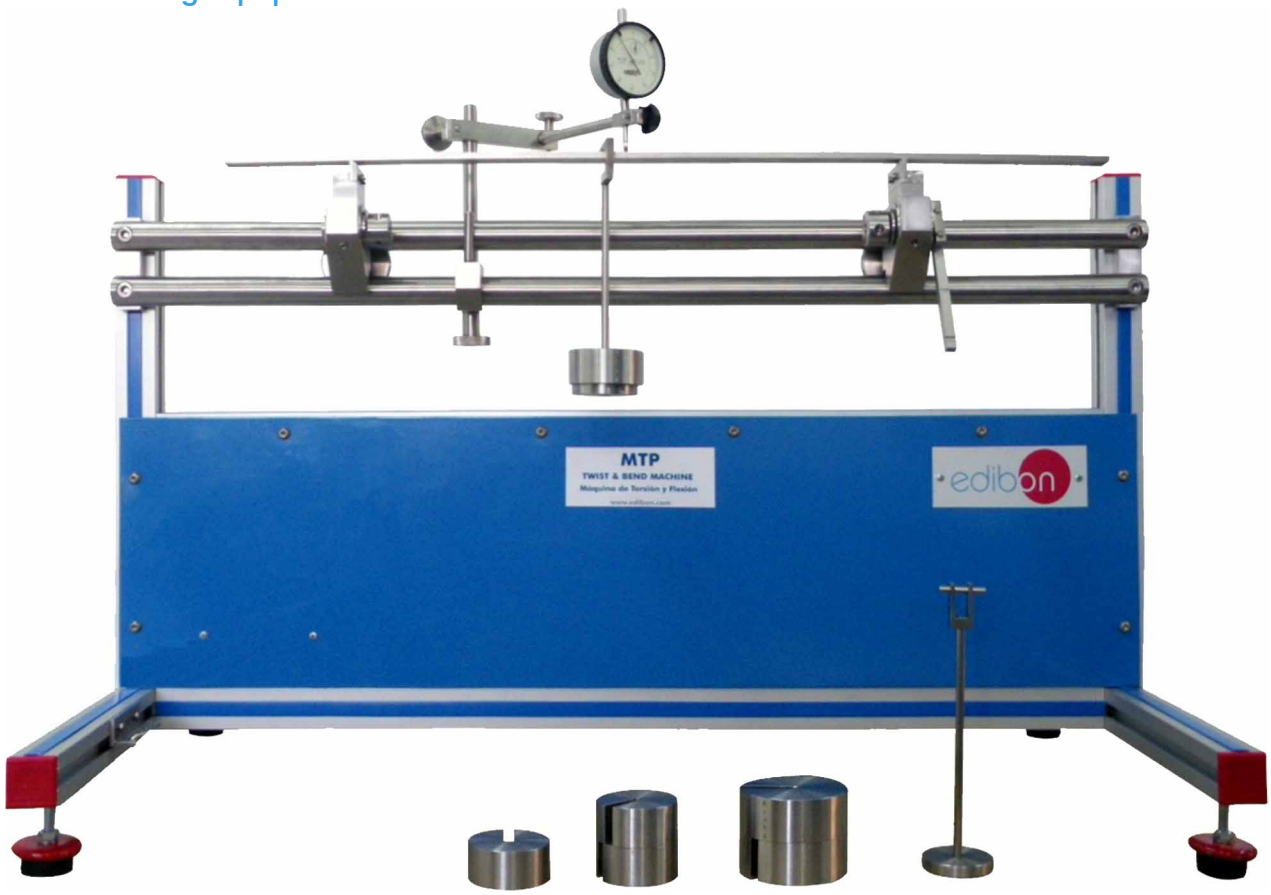
Twist & Bend Machine

MTP

Technical Teaching Equipment



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DESCRIPTION

The MTP apparatus designed by EDIBON is a unit to demonstrate the phenomenon of torsion and flexion in steel beams. Its dimensions and weights make it ideal to develop the practices in only one classes session.

The MTP unit consists of two transversal guides on which the supports of the beam being studied slip. The supports can be placed at different distances between them, thus the student can check the effect produced by this variation in the deformations of the beam subjected to flexion or torsion efforts.

In flexion experiments, the student will be able to calculate the Elasticity Modulus of different materials, demonstrating the relation load-deformation.

In torsion experiments, the student will also be able to check the relation load-deformation and get the Rigidity Modulus of different materials.

The test pieces used for flexion experiments are made in stainless steel with different rectangular cross section. Therefore, circular section test pieces of different materials can be used.

The test pieces to carry out torsion experiments are made in different materials and with circular section, what will allow the student to compare the Rigidity Modulus of different materials.

A dial gauge with its assembly accessories is supplied to measure the beam deformations both in flexion and torsion experiments.

To complete the supply, a set of weights adequate for the unit is provided, with hooks adapted to each type of experiment.

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

Bench-top unit with structure made in anodized aluminum profiles, with in painted steel panel (epoxy paint).

It is mounted on 4 regulable in height gum legs.

The unit includes:

Universal Torsion and Flexion machine, which allows to carry out both types of experiment.

It consists of two stainless steel guides of 800 mm, which allow to displace the supports in the whole range. This allows the student to carry out the experiment of beams of different length.

4 Test pieces with circular section, of 8 mm diameter, of different materials (steel, aluminum, brass, bronze). They have marks every 50 mm to facilitate the measurement of the beam length.

7 Test pieces with different rectangular cross section made in stainless steel. It also has marks every 50 mm to facilitate the measurement of the beam length being studied.

Dial gauge of 0-10 mm to measure the deformations.

Allen key to assemble the beams in the supports.

Set of weights adapted to the MTP unit with special hooks for each type of experiment:

2 weights of 1 Kg.

4 weights of 500 g.

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

EXERCISES AND PRACTICAL POSSIBILITIES

Some Practical Possibilities of the Unit:

1.- Study of the beams flexion for different sections and lengths.

2.- Determination of the Elasticity Modulus for stainless steel.

3.- Study of the relation between the torsional moment, beam length and torsion angle of one shaft.

4.- Determination of the Rigidity Modulus for steel, bronze and aluminum.

DIMENSIONS & WEIGHT

-Dimensions: 850 x 500 x 650 mm. approx.

-Weight: 18 Kg. approx.

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

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