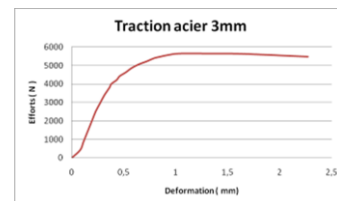
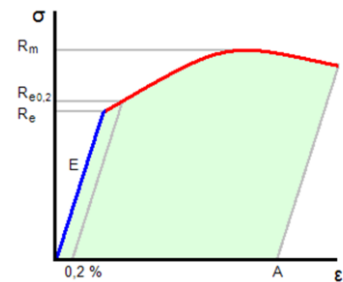


## UNIVERSAL TEST UNIT



### Experimental capabilities

Depending on retained tools

- **Tensile material characterization.**
- **Determination of the Young's modulus of the material.**
- **Characterization of material in hardness Brinell**
- **Characterization of material in compression**
- **Characterization of material in bending**
- **Characterization of material in shearing**
- **Stamping testing, plastic deformation**

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# STC600



## Operating principle

The bench STC 600 is a bench destined to the test conduct of characterization of materials such as the tests of tensile, compression, bending, hardness, shear, or stamping up to 20kN

The load necessary to conduct of tests is performed manually.

The characteristics such as the Young modulus, the elastic limit of the materials and the limit of fracture can be studied.

The load measurement is performed using a dynamometric ring for digital display, and the measurements of displacement by means of a specific comparator at 0.01mm.

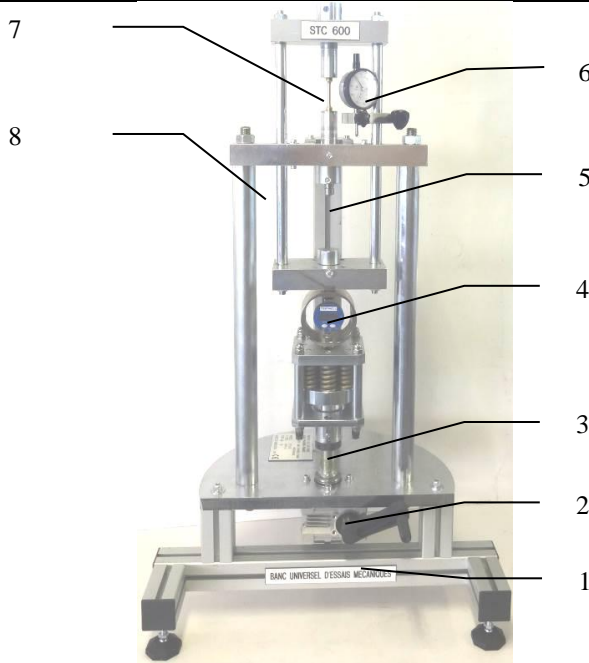
The bench is supplied in its basic version only equipped with a tensile testing equipment.

All other tools compatible with this bench are proposed in this technical sheet to enable an à la carte selection to suit your needs.

The specimens corresponding to each type of test can be replenished at any time with the company DIDATEC (see at the end of technical sheet).

But in order to guarantee optimum replenishment cost, we provide in the technical file of the machine, the plans of definition of these specimens. Thus, the institutions will have free choice of specimens embodiment (internally, through DIDATEC or sub-contractor of their choice).

## Illustrations



## Technical details

1. Base structure in anodized aluminum mounted on 3 adjustable feet (perfect stability)
2. Crank handle allowing to apply a progressively load & maintained through system of springs
3. Presetting nut of the spacing between the movable part and the fixed part of the tool according to the test specimen to be tested, in order to facilitate the adjustments
4. Digital dynamometric ring for the direct measurement on the display of the force exerted
5. Integration area of the specimens and tools requiring a compression work (hardness, shear, compression, stamping, bending)
6. Comparator for measuring relative displacements of the fixed part of the tools and the mobile part
7. Integration area of tensile specimens
8. Steel gantry of sections adapted to the stresses exerted

## Accessories included

### Kit for tensile tests :

- Tools made of 2 treated steel supports
- For cylindrical specimen to screw M10x100mm, section 3 to 5mm depending on material
- Tensile force supported: 20kN
- Set of 8 specimens to screw M10x100mm (2 steel, 2 alu, 2 copper, 2 brass)

- Ref : STC610

## Services required

- Dimensions : (LxWxH mm): 500 x 400 x 900
- weight (Kg): 40

Note : if the equipment installation is operated by our staff, all supplies and exhaust connections required must stand at less than 2m from the machine

## Documentation

- User's manual
- Pedagogical manual
- Technical documentation of the components
- Lab exercises
- Certificate of conformity CE

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# STC600



## Options

### Kit for compression tests :

- Support tools
- Set of 8 specimens (4 Alu, height 20mm for compression-type "buckling"  
4 Alu height 10mm for compression-type "barrel")

• Ref : STC620

### Kit for Brinell hardness tests:

- Tools for Brinell hardness test (ball indenter 5mm diameter)
- Compatible tests at 7.5kN
- Support samples
- Set of 8 specimens (2 steel, 2 alu, 2 copper, 2 brass)

• Ref : STC630

### Kit for bending tests :

- Punch
- Support dual bearing
- Set of 8 specimens (2 steel, 2 alu 2 copper, 2 brass)

• Ref : STC640

### Kit for shear tests :

- Punch
- Matrix
- Set of 8 specimens (4 Alu, 4 copper)

• Ref : STC650

### Kit for stamping tests :

- Stamping punch equipped with hold-down spring
- Forming matrix
- Set of 8 specimens (4 round steel Ø80 x 0.5mm and 4 round aluminum Ø80 x 1.0mm)

• Ref : STC660

## Additional specimens for replenishment

- 8 specimens / for tensile testing
- 8 specimens / for compression testing
- 8 specimens / for hardness testing
- 8 specimens / for bending testing
- 8 specimens / for shear testing
- 8 specimens / for stamping testing

- Ref : STC611
- Ref : STC621
- Ref : STC631
- Ref : STC641
- Ref : STC651
- Ref : STC661