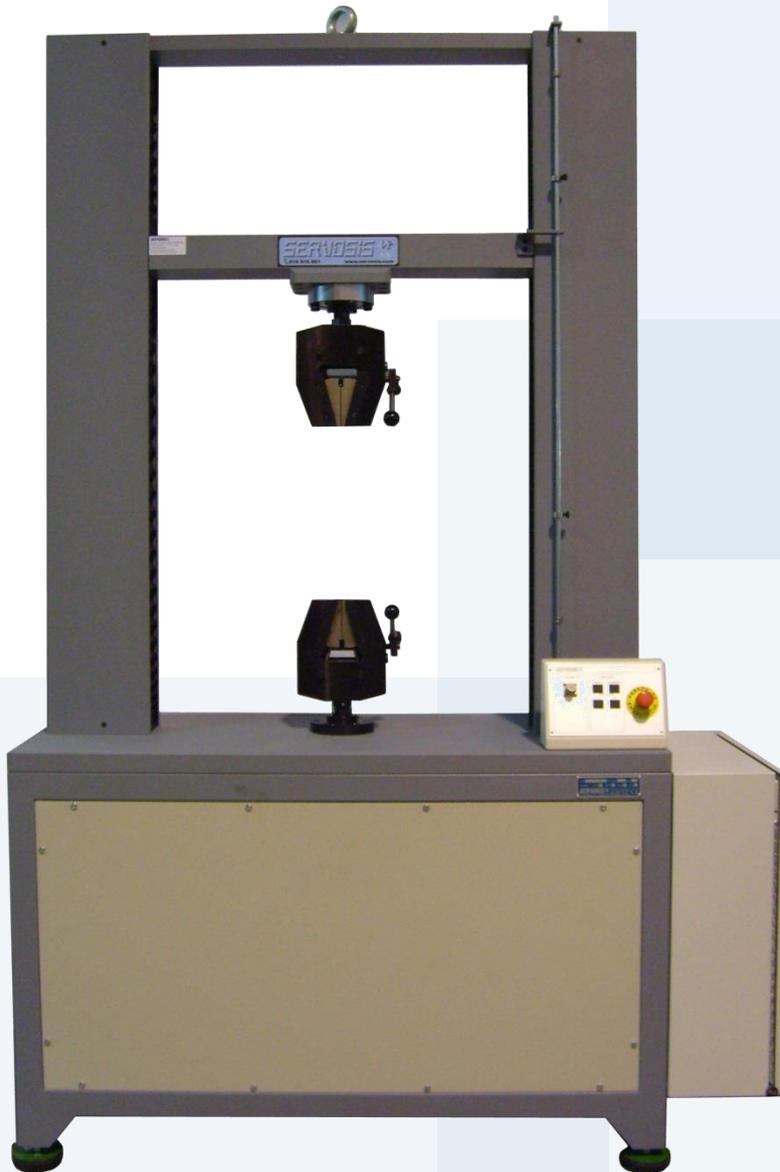


## MODEL ME-405

Universal testing machines for tension/compression/flexure 5 to 500 kN



## ME-405 description

ME-405 machines cover a range of low forces for pseudo-static tests for all materials, such as plastics, rubber, steel, aluminium, construction, soils, asphalt, etc.

The accuracy of both force and displacement channels meets ISO 7500-1 Class 1

They are built from 5 to 500 kN force capacities.

Its versatility allows it to be used in most standard tests. It can perform tensile and compression tests in the same frame, with the suitable accessories.

It is composed of a bench, side columns, upper bridge, lower bridge, load cell, grips, compression platens, flexure fixtures, etc, and control equipment.

Standard test speed:

- Smax = 200 mm/min.
- Smin = 0,0001 mm/min.
- Optional Smax. = 500 mm/min.



ME 405 + ACTUATOR MOD CH9



ME 405 WITH ENVIROMENTAL CHAMBER



ME 405 + SIDE ACTION GRIPS MODEL 4013  
+ 4 POINT FLEXURE FIXTURE



ME 405 + MANUAL WEDGE ACTION  
GRIPS MODEL 4012

## ME-405 accessories: extensometers

### Model CDD

Axial extensometer for tensile tests through specimen failure.



- Gauge length 100-200 mm (can be built in other sizes).
- Maximum strain 50 -100 mm (can be built in other sizes).
- Manual or automatic clamp.
- For round or flat specimen.
- Operating principle: digital encoder.

### Model CDA

Axial extensometer for tensile tests through failure.



- Gauge length 100,-200 - 500 mm (can be built in other sizes),
- Maximum strain 50 -100 mm (can be built in other sizes).
- Automatic clamp from PC.
- For round or flat specimen.
- Operating principle: digital encoder.

### Epsilon extensometers

For several purposes.

Model 3560.- Biaxial extensometer:

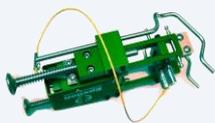
Provides simultaneous lateral (transverse) and axial strain measurement.



Model 3542.- Axial extensometer

Gauge length 10-80 mm.

Operating principle: wheatstone bridge.



### Model CDR

Extensometer for yield strength and young modulus



- Gauge length 50-100 mm.
- Max. Strain 2,5 mm.
- Possibility of double mounting.
- Manual clamp.
- For round or flat specimen.
- Operating principle: wheatstone bridge

### Model CDL

Diametral extensometer

- Manual clamp.
- Nominal stroke: 3 to 10 mm.
- Resolution: 0,001 mm.
- Linearity: 1 %,
- Specimen width: 10-25 mm. (it can be modified upon request)
- Operating principle: LVDT transducer.



## ME-405 accessories: extensometers

### Model CDO. Videoextensometers

#### Model CDO / 1 / 50

#### Optical extensometer for general purpose



- Non-contact measurement.
- Includes a highly accurate camera.
- For all kind of materials.
- Accuracy: 0,01mm to 0,002 mm.
- Local strain measurements (fracture mechanics...)

### Laser extensometer

#### Laser extensometer



- Non-contact measurement.
- Includes a highly accurate camera.
- For all kind of materials.
- Accuracy: 0,01mm to 0,002 mm.
- Local strain measurements (fracture mechanics...)

## ME-405 accessories:

### FLEXURE TESTS FIXTURES

We manufacture all kinds of flexure fixtures.

Some of them can be mounted on the bench, others on the load cell, or on other independent equipment. They are custom made, to allow for the assembly of deflection transducers.

Specific fixtures for:

- Flexural strength of concrete.
- Flexural strength of insulators.
- Wood bending test.
- ...



### COMPRESSION PLATENS

- Wide variety of diameters.
- With or without center.
- Hardened surfaces.
- Machined for the assembly other fixtures as deflectometers...



### ENVIROMENTAL TESTS

- Two-zone split furnace up to 1000°C.
- Cold/heat enviromental chamber.
- Heated compression platens...



### STANDARD TESTS

- Asphalt compression.
- Concrete compression.
- Wood compression.
- Insulator compression.
- ...
- Designs in constant evolution, adapted to the current regulations.



Servosis designs and manufactures all types of accessories, both standard and custom made, to help you meet the needs of your application.

ME-405 accessories:

**GRIPS**

ME 405 series may include different types of grips for tensile tests, both standard and custom designs.

MODEL	LOAD RANGE	ACTION	Clamping
4012 ACM	5-200 kN	Manual. Mechanic with spring	Wedge.
4011 ACN	5- 100 kN	Pneumatic. Air 8 Bar.	Wedge.
4011 ACH	50- 1000 kN	Hydraulic. Oil 200 Bar	Wedge.
4013 ALH	100-2500 kN	Hydraulic. Oil 200 Bar.	Side.

Hydraulic action grips can be connected to the machine's hydraulic power supply (if available) or provided with its own hydraulic power supply.

All models have easily changeable wedges available to suit specimen varying by shape, size and surface textures.

Models 4011 and 4013 have a locking system to allow tensile-compression tests through zero load as an option.



4012 ACM



4011 ACN



4011 ACH



4013 ALH

## ME-405 features

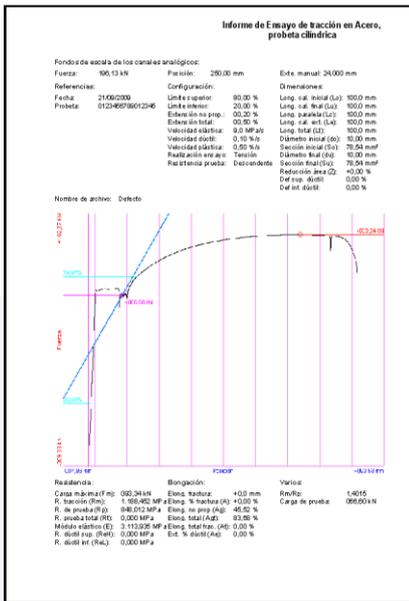
	ME 405/1t	ME 405/2t 405/5t	ME 405/10t	ME 405/20 t	ME 405/30t	ME 405/40 t	ME 405/50 t
Load capacity (kN)	10	20/50	100	200	300	400	500
Maximum working speed (mm/min)	200. Optional up to 500 mm/min						
Max. axial free distance, without grips (mm)	1350						
Min. axial free distance, without grips (mm)	0						
Lateral free distance between columns (mm)	350	520 Opt. 610	520 Opt. 610	610	610	610	610
Test frame dimensions. Width (mm)	650	800 Opt. 900	800 Opt. 900	900	900	900	900
Test frame dimensions. Depth (mm)	400	500	500	500	500	500	500
Test frame dimensions. Height (mm)	1900	2100	2100	2150	2200	2250	2400
Test frame approximate weight (Kg)	380	630	710	840	910	1010	1300
Electrical requirements	220/380 VAC / 50/60Hz ± 10%						

We can build other capacities upon request.

## ME-405 control software

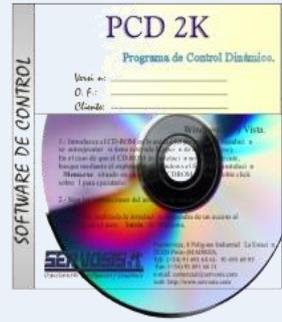


Test window



Test report.

Customized with your logo.



The machine is controlled by PCD2K test software, where the user has different ways of managing:

The **general purpose**, where you can have the maximum possibilities in test performance. The customer can set up a custom test, and obtain the intended data.

The **custom test windows under Standard**, which brings together in a single window only the necessary elements for a specific test. All necessary calculations required by the Standard are directly obtained.

You can have as many Standard windows as you need in the same machine, with the only limit being the force and speed capacity of the test frame, or the hydraulic power supply.

You will have a test report with the Standard reference, required calculations and test results, data and graphics.

