

MODEL MUE-404

Testing machines for tensile/compression/flexure from 600 to 2000 kN



MUE-404 Description

MUE-404 machines allow static and low-frequency dynamic tests, tensile and compression in the same testing area, through a double acting actuator.

Recommended for metallic tests as steel sheets or round bars, both smooth and ribbed.

They are built from 600 to 2000 kN (up to 5000 kN upon request).

For a static purposes they use to include a hydraulic power supply between 13 and 38 l/min, to get displacement speed of approximately 3 mm/sec.

For dynamic purposes the flow rate must be studied depending on the test. Maximum frequency 10 Hz.

They normally incorporate standard hydraulic wedge action grips, being possible to use the lower one as a flexure bridge (optional).

They can also incorporate side action grips.



MUE 404/120t

Upper crosshead is hydraulically displaced and blocked. Standard stroke 700 mm.

They incorporate servoactuators model CH4, with sealing system based on low-friction and high speed joints, which includes a drainage circuit to collect the small leaks that dynamic work normally cause.

Force capacity and stroke of the actuators are selected depending on the customer requirements. They can be mounted on the bench.

Control station (electronic amplifying unit, computer and testing software) can be installed into a 19" industrial rack, or on a working table.

A wide range of grips and accessories as extensometers are available, according to specimen varying and test requirements.



MUE 404/60t

MUE-404 Description

MAIN ACTUATOR

HYDRAULIC ACTUATOR MODEL CH4



They are designed to work in static and pseudo-static tests, and they can occasionally be used in cyclic tests up to 10 Hz.

Sealing system is based on low friction and high speed joints.

They have a drainage circuit to collect the small leaks that dynamic work normally cause.

Minimum available dimensions are: Stroke 50 mm; Load capacity 10 kN. We select in each case the most suitable actuator.

GRIPS



4011 ACH



4013 ALH

MODEL	LOAD RANGE	ACTION	CLAMPING SYSTEM	LOAD CAPACITY THROUGH THE WEDGES
4011 ACH	50- 1000 kN	Hydraulic. Oil 200 Bar	Wedge	100% Tensile 10 % Compression
4013 ALH	100-2500 kN	Hydraulic. Oil 200 Bar.	Side	100% Tensile 100% Compression
4011 ACH	50- 1000 kN	Hydraulic. Oil 200 Bar	Wedge	100% Tensile 100% Compression

MUE-404 accessories: Extensometers

Model CDD

Axial extensometer for tensile tests through specimen failure.



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



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



Epsilon extensometers

For several purposes.

Model 3560.- Biaxial extensometer:

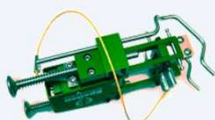
Provides simultaneous lateral (transverse) and axial strain measurement.



Model 3542.- Axial extensometer

Gauge length 10-80 mm.

Operating principle: wheatstone bridge.



Model 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.



MUE-404 accessories: Extensometers

CDO Videoextensometers



Model CDO / 1 / 50

Optical extensometer for general purpose

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

Laser Extensometer



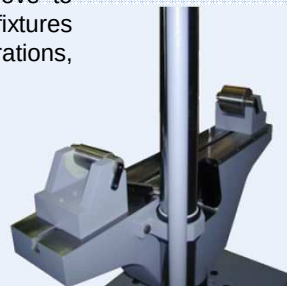
Laser extensometer

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

MUE-404 ACCESSORIES:

FLEXURE TEST ACCESSORIES

The lower grip can be built with a longitudinal groove to locate the rollers for flexure tests. We offer different fixtures to be placed in the upper grip for 3 or 4 point configurations, and also deflection transducers.



COMPRESSION TEST ACCESSORIES

Wide variety of compression platens diameters.

Easy to assembly on grips.

Machined to allow other fixtures assembly.

Hardening process.



ENVIROMENTAL TESTS

We manufacture systems for climate and controlled temperature testing, allowing tempeprature control by software PCD2K.

- ☐ Furnaces.
- ☐ Cold-heat chambers.
- ☐ Heated platens.



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

MUE-404 Features

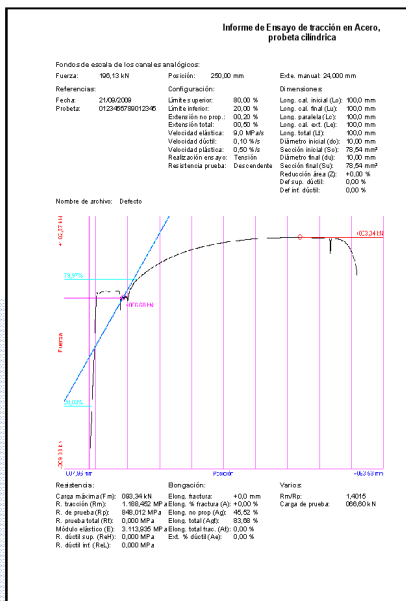
	MUE 404/60t	MUE 404/100t	MUE 404/150t	MUE 404/200t
Number of columns	4	4	4	4
Static/Dynamic capacity (kN)	600/500	1000/850	1500/1300	2000/1700
Accuracy	FORCE: $\pm 1\%$ between 1 and 100% Nominal. (optional $\pm 0,5\%$) DISPLACEMENT: $\pm 1\%$ between 1 and 100% Nominal (optional $\pm 0,5\%$)			
Actuator stroke (mm)	Standard ± 125 . Other optional			
Working frequency ranges (Hz)	0,01-10			
* Upper bridge displacement	Automatic with up/down buttons Stroke between 700 and 1000 mm (optional 1500 mm)			
Electrical analog output signal (V)	± 10 VDC for Force, Displacement and Strain measures			
Communication PC	Through interface AD/DA 16 bits			
Maximum working speed (mm/sg)	Depending on the hydraulic power supply selected. It will be set with the order.			
Columns diameter (mm)	90	100	110	120
* Axial free distance without grips (mm)	700			
* Lateral distance between columns	560			
Test frame dimensions (mm)	900/600/2750	1100/600/2900	1150/700/3100	1200/800/3250
Test frame approximate weight (Kg)	2400	3100	3900	5600
Electrical power (kW)	Depending on the hydraulic power supply selected.			
Electrical requirements	220/380 VAC / 50/60Hz $\pm 10\%$			

* Options to be set in the order

MUE-404 Control software

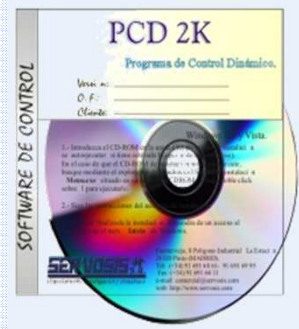


Test window



Test report.

Customized with your logo



The machine is controlled by PCD2K test software, where the user has different possibilities 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 of 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.

