

MODEL MUE-403

Testing machine for tension, compression, flexure 50 to 1000 kN



MUE-403 Description

MUE-403 machines are well-suited for static and dynamic tests, from 50 to 1000 kN, up to 5 Hz.

Specially designed for metallic and rigid materials tests as steel sheets or round bars, both smooth and ribbed.

High stiffness (more than 2 Fn/mm), wide variety of tests, quick and easy placement of different samples, and a small maintenance are some of its main features.

The whole system is hydraulically servo controlled, including the activation of grips, movements and blocking of the upper bridge.

Includes hydraulic power supply with pressure regulation, pressure line filter with electrical display, displays for low oil level and high temperature, and air-oil exchanger cooling system.

The hydraulic supply can be far from the testing machine.



MUE 403/20



MUE 403/60

Main components:

- Mobile upper bridge with hydraulic blocking system and automatic action.
- Upper grip and load cell to measure tensile or compression force.
- Lower grip and support for compression or flexure platen.
- Hydraulic actuator integrated in the bench:
 - Model CH4: Low friction actuator. Working frequency up to 5 Hz.
 - All actuators include control servovalve and displacement transducer in the rod.
- Control station (electronic amplifying unit, computer and software). It can be installed in the hydraulic supply rack, or on a side table.
- Control panel for gripping action and upper bridge displacement.

Wide range of grips and accessories available, according to specimen varying and test requirements.

MUE-403 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 5 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 causes.

Minimum available dimensions are: Stroke 50 mm; Load capacity 10 kN. In every case, we select the most suitable actuator for the client's purpose.

GRIPS



4011 ACH

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



4013 ALH

MUE-403 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.

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 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.



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.

MUE-403 accessories: extensometers

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

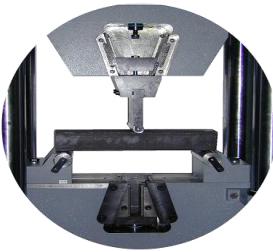


- Non-contact measurement.
- Includes a highly accurate camera.
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- Accuracy: 0,01mm to 0,002 mm.
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MUE-403 ACCESORIES:

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 platen diameters.

Easy to assemble grips.

Machined to allow the assembly of other fixtures.

Hardening process.



ENVIRONMENTAL TESTS

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



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

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

MUE-403 Features

	MUE 403/5t	MUE 403/40t	MUE 403/60t	MUE 403/100t
Number of columns	2	2	2	2
Static/Dynamic capacity (kN)	50/40	400/300	600/500	1000/750
Accuracy	FORCE: ±1 % between 1 and 100% Nominal. (optional ± 0,5%) DISPLACEMENT: ± 1% between 1 and 100% Nominal (optional ± 0,5%)			
Actuator stroke (mm)	± 50; ± 75; ± 100; ± 125; ± 150			
Working frequency ranges (Hz)	ACTUATOR MODEL CH4: 0,01-5			
* Upper bridge displacement	Automatic with up/down buttons Stroke between 700 and 1000 mm (optional 1500 mm)			
Electrical analog output signal (V)	± 10VDC for Force, Displacement and Strain measures			
Communication PC	Through interface AD/DA 16 bits			
Maximum working speed (mm/sec)	Depending on the hydraulic power supply selected. It will be set with the order.			
Columns diameter (mm)	60	90	110	120
* Axial free distance without grips (mm)	To be determined with the order. Between 1500 and 2500			
* Lateral distance between columns	2 versions: A= 600mm; B= 800mm			
Test frame dimensions (mm)	Width: Version A=1200; Version B= 1400 Depth: 800mm Heigh: between 2700 and 3700 (depending on the axial distance)			
Test frame approximate weight (Kg)	650	1900	2350	2900
Electrical power (kW)	Depending on the hydraulic power supply selected.			
Electrical requirements	220/380 VAC / 50/60Hz ±10%			

* Options to be set in the order.

MUE-403 Control software



Test window



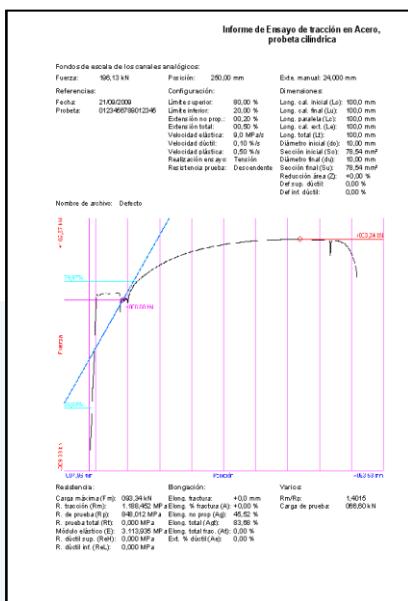
The machine is controlled by PCD2K test software, where the user has different ways of managing:

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.



Test report.

Customized with your logo.

