

Mechanical test of elastomeric bearings



Specific software.
Standardized products.
Custom designs.

Experience

Servosis has a vast experience in the testing world for pieces and materials. More than three decades working support us as a benchmark in the sector.

Our range of products include all fields: aeronautic, automotive, construction, lumber, composites, railway...

Innovation

We are in contact with the main manufacturers and research institutes of the sector, in order to be able to offer updated products adapted to the most recent regulations.

Custom-made

Our competitive advantage is our ability to offer customized solutions, according to the specific needs of each of our customers.

All these characteristics have allowed us to develop a new product, based on our compression testing machine series MES .

This is model ME-408, specifically designed to test elastomeric bearings.

It allows tests to be performed in both simple and shear compression, combining axial and lateral stresses on the specimen.

It meets ISO-EN 1337-3 requirements, annexes F,G,H.



Description.

Monoblock testing frame with hydraulic action, specifically designed to meet ISO-EN 1337-3 requirements:

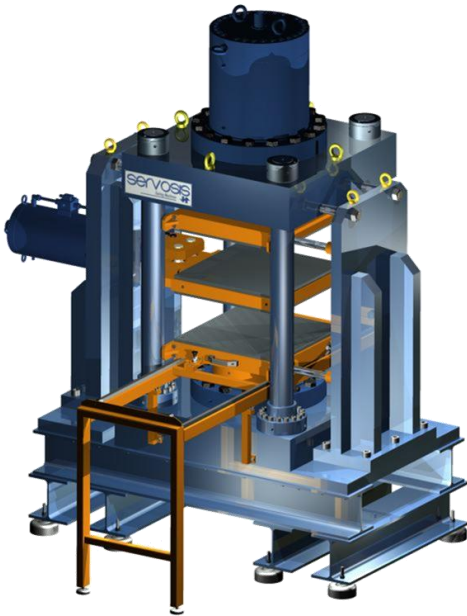
- Annexe F: Shear modulus.
- Annexe G: Shear joints.
- Annexe H: Compression

The system is composed of:

- 2 linear double-acting hydraulic actuators, high capacity for axial load application, 6 MN.
- 1 linear double-acting hydraulic actuator 1,5 MN for lateral displacement application on the specimen.

All actuators have integrated Moog servovalve and linear displacement transducer.

Force measurement by load cell in lateral actuator, and by pressure transducer in the high capacity actuators.



Control system is developed by Servosis. It is a reliable and high performance piece of equipment, with great accuracy, resolution and a quick response.

It is composed of:

Interface hardware AD/DA integrated in control PC:

- 8 analog input channels ± 10 VDC.
- 4 analog output channels ± 10 VDC for actuators control.
- 16 digital input/output.
- **Control frequency 10 KHZ.**

Control and analysis software PCD2K:

- Multiactuator system, with synchronized control up to 6 actuators.
- **User-friendly window system, customized under Standard:**
 - References, test parameters and test results in a single window.
 - Real-time graphic display of measurement channels.
 - Reporting.
 - Data export to different file formats: data sheets, data bases.

All these features make the ME-408 machine a powerful testing solution for a high accuracy need, an innovative product in the market, capable to meet the most strict requirements.

SPECIFICATIONS	MODEL	ME 408/600/24	ME 408/600/42
Axial load capacity			2 x 6 MN
Lateral load capacity			1,5 MN
Accuracy force measure			Class 1 under ISO 17025
Axial maximum speed		120 mm/min	220 mm/min
Axial maximum speed		400 mm/min	800 mm/min
Hydraulic actuators displacement system		Linear transducer integrated. Resolution 0,005mm	
Hydraulic actuators control valve		Moog D633 servovalve	
Hydraulic power supply flow rate		24 l/min	48 l/min
Measurements (Height/width/depth)		3500x3200x3100 mm	
Approximated weight		22,000 Kg	



ACCESSORIES	MODEL	ME 408/600/24	ME 408/600/42
Flat surfaces compression platens		Included 800 x 800 mm	
Saw-tooth shear test platens		Included 1000 x 1000 mm	
Sample carriage		Included	
Safety enclosure		Optional	
Manual acting panel		Optional	
Low noise level faired hydraulic power supply		Optional	
Industrial rack 19" for control station		Optional	

PCD2K Control software

Servosis control system is a powerful product, versatile and ready to meet the most strict requirements in a testing machine.

Some of its main features are:

Multiactuator system, a single piece of equipment can control up to 6 actuators simultaneously, with or without synchronism.

Closed control servoloop at 10 KHz.

ACCURACY.


- PC control system, based on software PCD2K.
- Closed servoloop with any measurement channel, 10 Hz.
- 8 measurement analog channels, strain deflectometers reading.
- Custom test windows under Standard.
- Different test graphic displays:
 - Shear strength.
 - Shear joint.
 - Simple compression.
- Custom reporting.
- Data export to different file formats.
- Data base connection.



Ensayo de Módulo de Cizalla en Apoyos Elastoméricos, UNE-EN 1337-3:2005, Anexo F

Archivo Opciones Base de Datos

Medidas



Fuerza

+0.000,0 kN

Posición

- 105,14 mm

Fuerza SUP

-0.013,5 kN

Posición SUP

- 189,85 mm

Fuerza INF

+0.012,4 kN

Posición INF

- 190,12 mm

Macro

Tensión: 6,00 MPa >>

Precarga: 0,03 MPa >>

Referencias Paráms. 1 Paráms. 2 Results.

Esfuerzo cizalla: 2,0 MPa

Deformación cizalla: 0,880

Módulo cizalla: 2,2 MPa

Controles

+000,00 mm

Parám. en control

Ensayo Actuador

Actuador

HORIZONTAL

Sumador

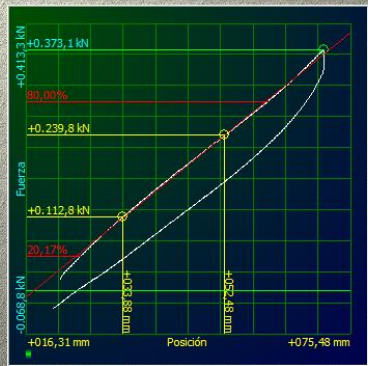
Ganancia: 000,0 %

Filtro: 2^0

+000,00 mm

Búsqueda Ciclos: 0.000.003.213

Trazador



Zoom

Cursor **+0.212,4 kN**
+016,50 mm

Ensayo

Trazador

Presión

Grupo hidráulico

Parámetro en control

Indicadores

Módulo

Ext. 1 Ext. 2 Cfr. Alm. G1 G2 G3 G4
Osc. Sam. G5 G6 G7 G8 Tz1 Tz2 Tz3 Tz4
Val. Tz5 Tz6

Abri: 151020-1228 MC TPT TensayoApoyosElastomericosModuloCizallaExCauchoCelular1

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