DE MATTIA FATIGUE CHECK

DYNAMIC TESTER FOR THE EXECUTION OF FATIGUE TESTS IN TRACTION AND BENDING IN COMPLIANCE WITH INTERNATIONAL STANDARDS

gibitre®
INSTRUMENTS

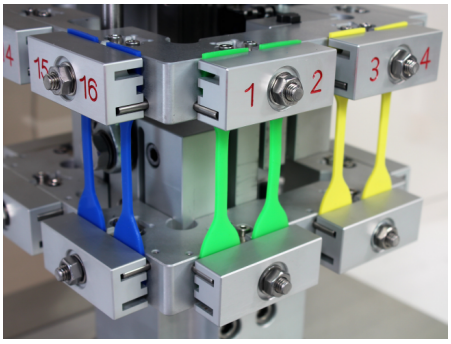
Standards the instrument complies with:

ASTM D813; ASTM D430-B; ISO 132; ISO 6943; JIS K_6260;

Overview

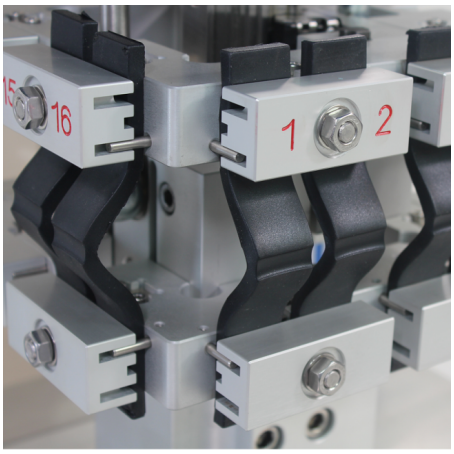
The instrument permits to perform dynamic tests for the determination of fatigue resistance of vulcanized rubbers under repeated deformations.

This instrument permits to perform:
• De Mattia Flex Cracking and Crack Growth test in Bending (**ISO 132, ASTM D 430-B, DIN 53 522 1/2/3**)
• Traction Fatigue tests in Traction (**ISO 6943**)



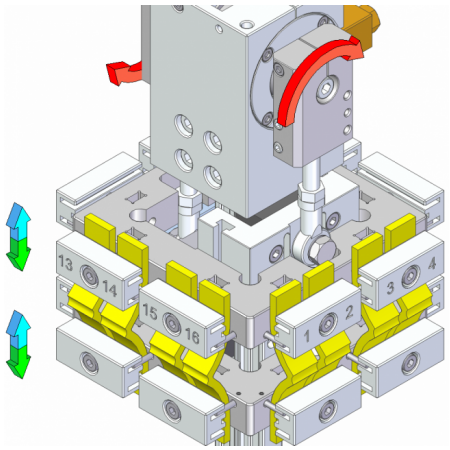
Instrument Regulation

According to the test method and the type of sample, the test cycle can be set by the user:
• The frequency can be set between 60 and 300 rpm
• The stroke can be set between 0 and 60 mm
• The distance of the grips can be set (up to 100 mm)
• The number of cycles before automatic stop can be set
• Up to 16 samples can be tested at the same time.



Construction

• **Specimen holder with 16 positions**
• Exclusive movement system with both sample holders moving in opposite directions to ensure **low levels of noise and vibrations.**
• **CE labelling**



Control device

The instrument is controlled via a **Touch-Screen display** that allows you to set:

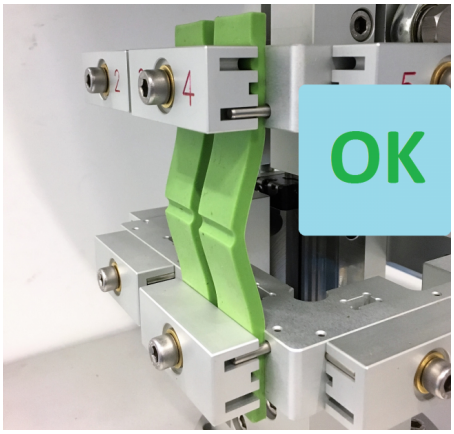
- The number of cycles to be performed before the next interruption
- The Oscillation Frequency

Automatic Stop with grips opened

The new version of the instrument incorporates a feature that **automatically brings the specimens to the fully open position when the test is stopped.**

Fatigue and crack growth tests are very sensitive to test variables.

The new feature contributes substantially to the increase in the repeatability of the results.

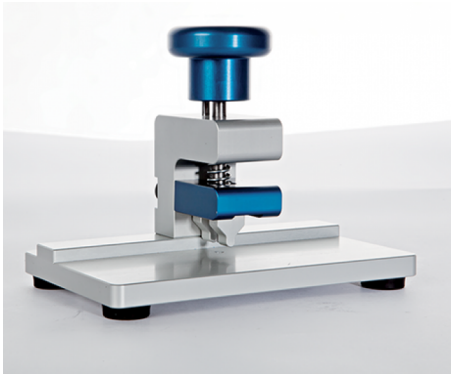


Mould for De Mattia Flexure test

Mould for De Mattia dynamic tester according to ISO 132, ASTM D 430-method B, DIN 53 522 standards.

Piercing tool

The piercing tool allows to realize the standard notch to carry out crack-growth tests.

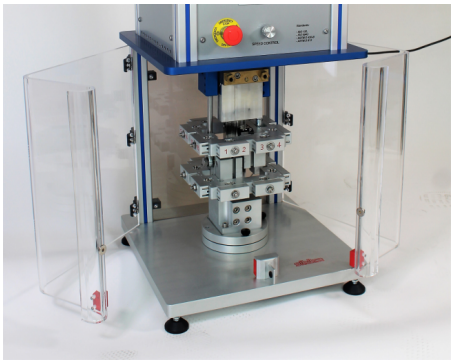


Development and production

The instrument is totally developed and produced in the plant of Gibitre Instruments in Italy.
All the mechanical parts are produced in the **company workshop using modern CNC machines**.
Components and sensors from well-known brands are selected in order to ensure the maximum reliability in the measures
Internal trained personnel takes care of all the production stages: **assembly, start-up, calibration, packing, shipment and installation**.

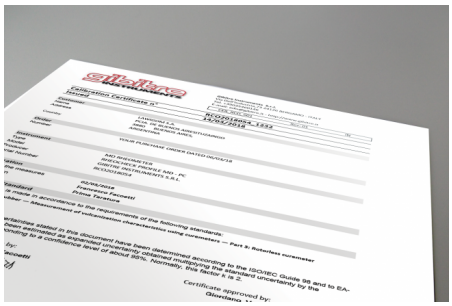
Safety devices

- Safety protection doors fitted with safety switch.
- Safety Push-button
- Digital Motor controller with torque overload control.
- CE labelling



Standard Calibration service for De Mattia Fatigue Check

The calibration is performed with reference to the requirements of ISO 132 standard.
The service includes:
- Ordinary maintenance of the instrument
- Calibration of the oscillation speed.
- Calibration of the dimension of the templates.
- Calibration of the temperature inside the environmental chamber at 4 temperatures (for flexometers with environmental Chamber)
- Issue and e-mail shipment of the Calibration Certificate with traceability to primary standards.



Instrument Characteristics	
Speed adjustment	from 60 to 300 Cycles/min - 1 to 5 Hz
Run Adjustment	Between 0 and 60 mm
Distance of the clamps	Max 100 mm
Sample Holder	16 samples can be tested at the same time
Set of the number of cycles before automatic stop	Between 1 and 10^9
Maximum force in traction	600 N (at 1 Hz oscillation speed)
Data displayed	Set number of cycles, Cycles performed, oscillation Frequency
Safety Devices	
Safety Devices	Safety protection doors with safety switches Safety Pushbutton Motor controller with torque overload control CE labelling
Labelling	CE Labelling
Calibration	
Calibration	Calibration Report conforming to ISO 132 and ISO 6943, with traceability to primary references
Technical specifications	

Power supply	220 VAC ±10%,50 Hz ±3, 10 A, single phase, 1kW - - 110 VAC ±10%, 60 Hz ±3 on request
Test piece holder dimensions	Ø 200 X 400 mm
Instrument Dimensions	(Width x Depth x Height) 550 x 550 x 900 mm
Weight	80 Kg
Noise Level	<50 dB

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