



DE MATTIA FATIGUE CHECK - PLUS

DYNAMIC TESTER FOR THE EXECUTION OF FATIGUE TESTS AT CONTROLLED TEMPERATURE (-40 ÷ +200°C)

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

NOTE: COMPLIANCE WITH SOME STANDARDS MAY REQUIRE OPTIONAL ACCESSORIES OR SETUPS.



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

This instrument permits to perform Flex Cracking, Crack Growth and Tension fatigue tests.

Technical Characteristics

According to test specification, the instrument can be easily adjusted by setting:

- Test Temperature (-40 to +200°C)

- Test frequency (60 to 300 rpm: 1 to 5 Hz)
- Test stroke (0 to 60 mm)
- The distance of the grips (up to 100 mm)
- The number of cycles before automatic stop (up to 1.000.000)

Key Features

- Cooling of environmental chamber by refrigeration unit integrated into the instrument
- Inspection window with internal led lighting for sample inspection

- Sample-holder for 12 samples
- Exclusive movement system with both sample holders moving in opposite directions to ensure low levels of noise and vibrations
- CE labelling.

Accessories

- Piercing tool
- Mould for sample preparation.

Speed adjustment: from 60 to 300 Cycles/min - 1 to 5 Hz

Run adjustment: Between 0 and 60 mm

Set of the number of cycles before automatic stop: Between 1 and 10⁹

Distance of the grips: Maximum 100 mm

Data displayed: Number of oscillations, test Temperature

Sample holder: 12 samples can be tested at the same time

Test temperature (with refrigeration unit): From -40°C to 200°C (1°C resolution).

Noise level: < 50 dB





DE MATTIA FATIGUE CHECK - A.I. CAMERA

**INSTRUMENT FOR FATIGUE RESISTANCE TESTS
IN BENDING AND IN TENSION AT CONTROLLED
TEMPERATURE (-40 ÷ + 200°C) WITH AUTOMATIC
INSPECTION OF THE SPECIMENS THROUGH VIDEO
CAMERAS**

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

NOTE: COMPLIANCE WITH SOME STANDARDS MAY REQUIRE OPTIONAL
ACCESSORIES OR SETUPS.



Instrument for temperature-controlled fatigue testing with recording of specimen images by high-speed video cameras, analysis and identification of the crack by artificial intelligence.

Technical characteristics

- You can set the frequency of the deformation cycle (between 60 and 300 rpm), the stroke (between 0 and 60 mm), the distance between the clamps (max 100 mm), the number of cycles before the stop (max 1.000 .000)
- 12-position specimen holder
- Movement system with both sample holders moving in opposite directions to ensure low noise

and vibration levels

- CE marking

Environmental Chamber

- settable temperature between -40 and + 200 °C
- cooling of the climatic chamber by means of a refrigeration unit integrated in the instrument

Registration of the images of the samples

- N ° 6 high resolution video cameras record the images of the bending area of the 12 samples with a settable frequency
- Image recording is synchronized with deformation and is performed during instrument operation

The **15" touch screen display with dedicated**

software allows:

- Electronic recording of images of each of the 12 samples
- Storage of images for each sample with a frequency defined by the customer
- Image analysis with AI algorithm for automatic detection of the crack start
- Automatic generation of a video of the progressive degradation of the specimen with indication of the number of cycles.
- Download via USB port or network connection of images and video for each specimen.

Speed adjustment: from 60 to 300 Cycles/min - 1 to 5 Hz

Run adjustment: Between 0 and 60 mm

Set of the number of cycles before automatic stop: Between 1 and 10⁹

Distance of the grips: Maximum 100 mm

Sample holder: 12 samples can be tested at the same time

Test temperature (with refrigeration unit): From -40°C to 200°C (1°C resolu-

tion).

Control display and Software: Touch-screen Display 15"

Video cameras for image acquisition: 6 BW video cameras with resolution 600x450 pixels. Each camera captures the image of 2 samples

Lighting system: Led lighting system. Ignition synchronized with oscillation

Noise level: < 50 dB

