Metravib

ROB 100
Automatic specimen loader for robotized DMA systems

MATERIALS CHARACTERIZATION AT ITS BEST!

ROB100 is an automatic specimen loader, which turns a DMA+ into a robotized Dynamic Mechanical Analyzer.

The analysis of a large number of specimens is possible continuously and autonomously, without any action from the operator during the tests.

ROB 100 offers a free choice in the definition of tests and the combination of experiments applied to each specimen.
Based on an original mechanical system (ACOEM patent), **ROB 100** ensures the mastery of mounting conditions of each specimen and guarantees unique measurement reproducibility.

ROB 100 allows optimizing the laboratory's productivity in meeting the requirements of industrials who have to analyze large number of formulations of materials.

Main assets

- Enhanced analysis productivity
- Autonomous and continuous use without any operator
- Independent test on each specimen
- Multiple tests possible on each specimen
- Enhanced test reproducibility
- Mastery of mechanical constraints applied to specimen
- High specimen storage capability
- Adaptable and polyvalent system

Main uses

- Industrial routine tests
- Quality control tests
- Products performances modelization
- Robotized DMA tests
- Robotized fatigue tests

Composition ROB 100 includes

- Control/command automatic system
- Specimen conveyer (moves horizontally the specimen from the rack's outlet to the test place)
- Specimen gripping system
- Specimen loading system using a suction extractor
- Thermal chamber opening system
- Dedicated software module included in DYNATESTsoftware

Main functions

- Specimen tests sequenced automatically with specimen loading
- Test series capability for one single specimen
- Thermal chamber automatic opening
- Exportation of data selection in ASCII files
- Data files automatic designation
- Identification of faults (specimen break,specimen gripping fault,...)
- Repeating mode
- Operator alert at end of tests
- Manual use possible

Main technical specifications

- Test storage capacity of the standard rack: 100 specimens
- Modes: shear / options: tension-compression-bending
- Cycle duration (handling /loading of specimen): < 57s
- Electrical supply: 200-250 Volts / 50-60 Hz / 150 Watts
- Compressed air supply: Pressure: 6 bars / Flow: 43 l/min
- Dimensions: Height: 1800 mm / Width: 775 mm / Depth: 676 mm

Options

The "in line"architecture adopted for **ROB 100** makes it easy to evolve with the changing needs of laboratory:

- Automatic identification of specimen
- Additional storage racks
- Specimen dimensions measuring system
- Automatic specimen assembling system
- Adaptation to a specific specimen geometry
- Adaptation to a specific excitation modes
- External thermal chamber (pre-heating)