RheoCheck Profile Moving Die - PC

Moving Die (MD) Rheometer controlled by Personal Computer.

Gibitre MD Rheometer measures the cure characteristics of a rubber compound in conformity with the international standards.
The measure of the vulcanisation is carried our by measuring the change in the mechanical characteristics of the sample. The instrument permits to apply a cyclic strain to a test piece and to measure the associated force. The test is carried out at a constant temperature and the measure of stiffness recorded continuously as a function of time.

Instrument Characteristics

Pressurized Testing chamber
Torque measurement reaction transducer positioned in the upper test chamber to minimize the influence of friction and vibrations.
Easily accessible test area with transparent safety panel and safety lock.
Test chamber in compliance with international standards.
Direct test chamber heating controlled by thermoregulators with PID microprocessor with 0.1 °C accuracy.
Easy change of oscillation angle of lower die.
Control system for compressed air pressure, cleaning and lubrication.
Designed for eventual application of a fume aspiration system.

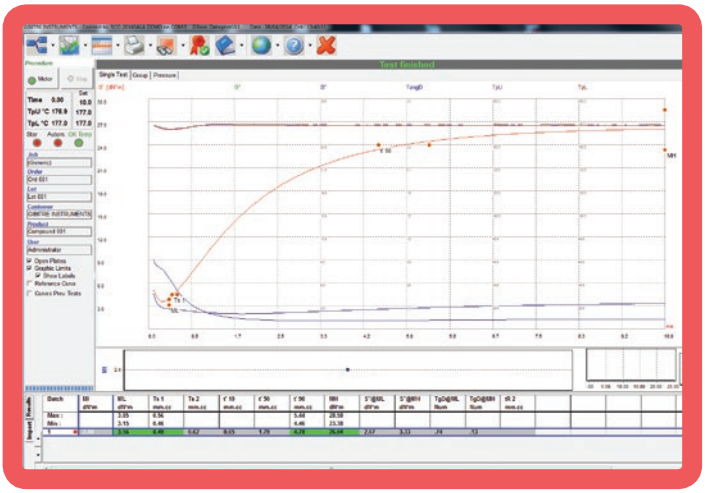
Software

Graphic representation of the following curves: Elastic (S'), Viscous (S''), Complex (S*), storage shear Modulus (G'), loss shear Modulus (G''), Curing Speed, Tan-Delta, upper and lower test chamber temperatures.
Display and printing in different colours of the relative test curves for rapid test identification.
Customizable test procedure with possibility of selecting up to 20 test results to be stored and printed (see table).
Checking of whether results comply with tolerance limits and relative statistical analysis (Mean, St. Dev., Max, Min, Cp, Cpk).
Automatic generation of tolerance limits from statistical analysis (mean and standard deviation) of stored results.

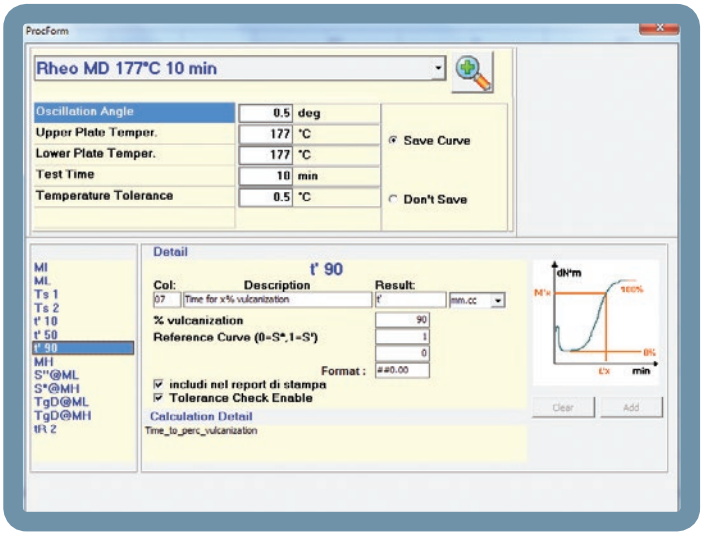
Automatic sample loader

The device permits:
- positioning of 5 samples on the loading trail
- automatic performance of the test sequence for all the samples.

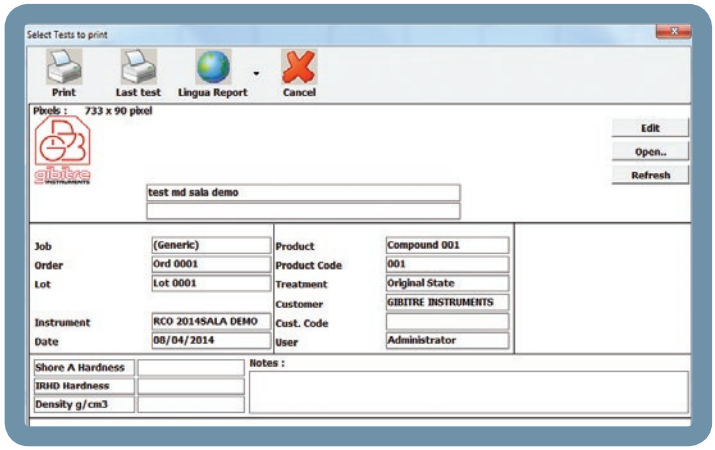
Laboratory instruments for rubber and plastic testing



The main page of Rheocheck software: the test curves, test results and tolerance limits.



The page for selection of the test procedure to be used. The instrument automatically regulates according to the test parameters defined in the test procedure.



The printout setup page: the company logo, report descriptions, language, printout options and notes can be edited.

Accessories

Pressure sensor for testing of the espansion of cellular rubber.
Volumetric die cutter.
Polyamide or Polyester Film (foils and rolls) for the protection of the dies during the test.

Standards the instrument complies with	ISO 6502; ASTM D 5289; DIN 53 529-3
Numerical Test Data (for each test procedure up to 20 test results can be selected)	Torque Values: MI, ML, M90, MX, MH, PCR, S''@ML, S"@MH, TanD@ML, TanD@MH, G'@ML, G'@MH, G''@ML, G''@MH Scorch Time: tS1, tS2, tSX Cure Time: t90, tX, tML, tMH, tPCR, tRX (X=customer-defined) Pressure (optional) PL, PH, tP, MPR, tMPR
Graphic representation	Elastic Torque (S'), Viscose Torque (S"), Complex Torque (S*), Tan-Delta curve, storage shear Modulus (G'), loss shear Modulus (G''), Curing speed, Upper and Lower test chamber temperature
Units	Torque: dN*m or Lbf*in
	Temperature: °C or °F
Torque sensor	Resolution 0.01 dN*m Max torque 200 dN*m
Oscillation frequency	100 cycles /minute (1.67 Hz)
Oscillation amplitude	0.5°, 1°, 3°
Temperature	50 ÷ 230 °C - Resolution 0.1 °C
Pressure sensor (optional)	Resolution 0.1 bar
Automatic sample loader	Automatic testing of 5 samples
Power supply	220 VAC ±10%, 50 Hz ±3, 4 A, single phase - 110 VAC ±10%, 60 Hz ±3 on request
Power	600 Watt
Compressed air	6 bar
Dimensions of instrument	(W x D x H) 750 x690 x 1330 mm
Weight	180 Kg
Calibration	Certificate with traceability to primary standard Torque calibration spring for instrument verification supplied with the device
Personal computer	Minimum Configuration: Intel Core i3 2 GB RAM; Compatible operating Systems: 7 and 8 (64 bits); Connection to the instrument via USB cable (included)
Software usage Languages	Italian, English, French, Spanish, German, Portuguese, Russian, Chinese, Japanese, Turkish, Polish

For the latest news about Gibitre Instruments: new products; software updates; fairs and exhibitions etc. please visit
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We reserve the right to make changes in design and specifications without further notice

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