

# **MonTech MV 3000**

## **Industry standard Mooney Viscometer**



### **The Mooney Viscometer MV 3000**

is the leading test instrument for measurement of viscosity, scorching and stress relaxation on polymers and rubber compounds.

The MV 3000 is suitable for quality control as well as research and development purposes with excellent repeatability and reproducibility due to its low-mass die design, direct heating and a unique direct drive design with snap-in mechanics.

The massive aluminum frame of the MV 3000 with its 270° accessible die area allows easy sample loading while integrated rotor ejection simplifies rotor handling. Operation is made easy by 4 illuminated pushbuttons providing clear information about the machine state. A motorized safety shield separates the die area before the test sequence is started.

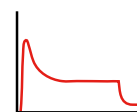
Die temperatures are accurately and precisely measured by calibrated probes and controlled with a precision of  $\pm 0.03$  °C by heaters, dies and rotors with an extremely fast thermal response

The MV 3000 is fitted with built-in software-controlled systems for automatic balancing and calibration, including a double dead-weight system to apply a defined torque of 100 Mooney units, ensuring the utmost data accuracy and eliminating the needs of any external tools or fixtures.

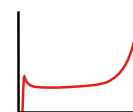
## Technical specification

<b>International standards</b>	ISO 289:2005, ASTM D 1646, DIN 53523, BS 903: Part 58, AFNOR T43-00/005, BS 1673, GOST 10722-76, JIS K6300, TGL 25-689
<b>Die configuration / Rotor</b>	According to international standards large (ø 38.1 mm) and small (ø 30.48 mm) Rotor
<b>Force measurement</b>	In-line torque transducer
<b>Closing force</b>	11.5 kN
<b>Rotor speed</b>	2.00 turns per minute (0.21 Radians / second)
<b>Rotor shaft seal</b>	Standard or longlife seals available
<b>Stress Relaxation</b>	According to ISO 289:2005, DIN 53523 Part 4
<b>Torque range</b>	0.01 to 230 MU
<b>Sample volume</b>	Two specimens having a combined volume of 25 cm <sup>3</sup>
<b>Temperature control system</b>	Ambient to 232 °C, precision +/- 0.03 °C, digital, microprocessor controlled
<b>Temperature check system</b>	Recordings of the temperature gradient on the screen, PID microprocessor monitored
<b>Calibration</b>	Fully automatic by built in calibration weights, Software guided
<b>Measured data</b>	Mooney - value (MU) Temperature (°C, °F) Time (min - min / min - sec / sec)
<b>Data Interface</b>	Ethernet (10/100 MBit), USB (int.), CF card (int.), RS232 (opt.)
<b>Data points</b>	Over 3500 data points available Including: Initial viscosity, ML / ML 1+X, Y+X+Z, Stress Relaxation (log-log), Slope, Intercept, Regression coefficient, Scorch viscosities and cure times
<b>Pneumatics</b>	min. 4.5 Bar / 60 psi
<b>Electrical</b>	200 V - 240 V, 6 Amps, 50/60 Hz
<b>Instrument options</b>	<ul style="list-style-type: none"> <li>- Instrument control panel with 5" touchscreen display and printer</li> <li>- Easy access and encapsulated electronic system</li> <li>- Double channel forced air cooling system</li> <li>- Low-temperature cooling system MCool 10</li> <li>- M-VS 3000 constant volume sample cutter</li> </ul>

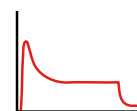
## Calculated results



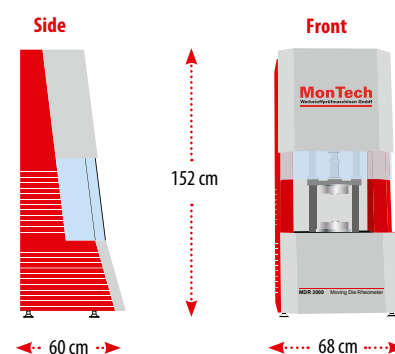
Mooney Viscosity



Mooney Scorch



Stress Relaxation



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