LOW TEMPERATURE CHECK

AUTOMATIC INSTRUMENT FOR THE DETERMINATION FOR BOTH TR TEST AND BRITTLENESS POINT

STANDARDS: ASTM D746; ASTM D1329; ASTM D1414; ASTM D2137; FIAT 50416; FIAT 50419; ISO 812; ISO 974; ISO 2921;

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

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INSTRUMENTS

Tests at low temperatures permit to evaluate the crystallization effects and to compare viscoelastic properties of rubber and rubber-like materials at low temperatures and are useful for the selection of materials suitable for low-temperature service.
The structure of the Low Temperature Check has been designed to permit the installation of arrangements for TR and Brittleness point tests and includes the common parts required for low temperature testing: stainless steel tank, temperature control devices, stirrer, electronic control device, safety devices and CE Labelling.

Cooling systems available are nitrogen tank or refrigeration unit.
The cooling is automatically controlled by the instrument according to the temperature set of the test procedure in use.
The arrangement for TR test includes:
• Sample holder for the simultaneous test of 6 samples
• Temperature Retraction Software, which permits to enter samples identification, cool and condition the samples, start the test, plot retraction curves for each sample, calculate test results, check tolerance limits, Save results and curves
The arrangement for Brittleness Point test includes:
• Pneumatically actuated striker in conformity with international standards
• Sample holder for 10 specimens
• Brittleness Point Software, which permits to cool and condition the samples, activate the striker, record the temperature and the speed of the striker, allow the user to enter test results after visual inspection, calculate and save Brittleness Point Temperature

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Test Temperature: -120 ÷ +20 °C (with liquid nitrogen tank); -73 ÷ +20 °C (with refrigeration unit)
Sample holders for TR Test: Permits to test 6 samples at the same time; Resolution for retraction reading: 0.02 mm
Numerical Test Data - TR test: TR-Test: TR10, TR30, TR50, TR70, TRx (x customer defined) Time at set TR.
Graphic representation and printout: Curves of % Retraction vs. Temperature for each sample. Temperature vs Time

Sample holders for Brittleness Point: Sample holder for 10 samples.
Test Results Stored - Brittleness Point: Test temperature, Striker Speed, Result of visual inspection (passed - failed)
Speed of striker for Brittleness Point test: Pressure regulator for pneumatic piston Striker with automatic or manual start-up
Personal Computer (optional): Minimum Setup: Windows 10/11, Intel Core i3, 5GB RAM