This test method describes the use of rheometer for determining selected vulcanization characteristics of vulcanizable rubber compounds and its performed according to ASTM D2084, BS1673, ISO 3417 STANDARDS.

Standard features:
- Computerized data acquisition
- Digital temperature indication and controller
- Pneumatic clamping
- Heat efficient platens

Software is used to collect and analysis the data. The rheometer curve is continuously displayed during the test. Data results can be sorted by specification data (OK or NG). Normal reports specifies test conditions and graphs and results (maximum torque, minimum torque, scorch time, cure time) and can be printed. X-R chart and Histogram shows CP and CPK.

SPECIFICATION:
- Power: AC 220V, 50/60Hz, 6A, single phase
- Oscillating Angle: $1 \pm 0.01^\circ$ ($3 \pm 0.03^\circ$)
- Oscillating Frequency: 100 CPM (1.66Hz)
- Compressed Air: 4.2 ~ 6.0 kg/cm2
- Temperature control: PID Control
- Temperature Tolerance: $\pm 0.3^\circ$C
- Temperature Probe: Pt 100 Ω
- Datas: MH (maximum torque), ML (minimum torque), Scorch time (ts1, ts2...), Cure time (tc10, tc50, tc90...)
- Computer system

Windows software: included
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- Computerized data acquisition
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- Oscillating Frequency: 100 CPM (1.66Hz)
- Compressed Air: 4.2 ~ 6.0 kg/cm²
- Temperature control: PID Control
- Temperature Tolerance: $\pm$0.3°C
- Temperature Probe: Pt 100 Ω
- Datas: MH (maximum torque) and ML (minimum torque), Scorch time (ts1, ts2..), Cure time (tc10, tc50, tc90...)
- Computer system

Windows software: included
RHEOMETER DMR2020

- This test method describes the use of rheometer for determining selected vulcanization characteristics of vulcanizable rubber compounds and its performed according to ASTM D5289, ISO 6502 STANDARDS

- Standard features
  - Computerized data acquisition
  - Digital temperature indication and controller
  - Heat efficient platens

- Software is used to collect and analysis the data. The rheometer curve ($S'$, $S''$, tan$\delta$) is continuously displayed during the test. Data results can be sorted by specification data (OK or NG). Normal reports specifies test conditions and graphs and results (maximum torque, minimum torque, scorch time, cure time) and can be printed. X-R chart and Histogram shows CP and CPK.

- SPECIFICATION
  - Power : AC 220V, 50/60Hz, 6A, single phase
  - Oscillating Angle : $1 \pm 0.01^\circ$ (0.5 ± 0.03°)
  - Oscillating Frequency : 100 CPM (1.66Hz)
  - Compressed Air : 4.2 ~ 6.0 kg/cm2
  - Temperature control : PID Control
  - Temperature Tolerance : ±0.3°C
  - Temperature Probe : Pt 100 Ω
  - Datas : MH(maximum torque) ML(minimum torque) $S''$, tan$\delta$
  - Scorch time(ts1,ts2..)
  - Cure time(tc10,tc50,tc90...)
  - Computer system
  - Operating S/W : Delpai 5.0
  - Statistics : X-R chart, Histogram
  - Dimension : 590(W) X 610(D) X 1310(H)mm
  - Weight : 200Kg

- Windows software : included
MOONEY VISCOMETER MV2015

- This test method describes the use of mooney viscometer for determining viscosity and scorch characteristics of rubber compounds and its performed according to ASTM D1646, BS 1673, ISO R289 STANDARDS

- Standard features
  - Computerized data acquisition
  - Digital temperature indication and controller
  - Pneumatic calibration
  - Heat efficient platens

- Software is used to collect and analysis the data. the mooney curve is continuously displayed during the test. data results can be sorted by specification data (OK or NG). Normal reports specifies test conditions and graphs and results (Initial mooney, minimum mooney, viscosity time, scorch time) and can be printed. X–R chart and Histogram shows CP and CPK.

- SPECIFICATION
  - Power: AC 220V, 50/60Hz, 6A, single phase
  - Rotor size: Large, Small
  - Rotor speed: 2 RPM
  - Compressed Air: 4.2 ~ 6.0 kg/cm²
  - Temperature control: PID Control
  - Temperature Tolerance: ±0.3°C
  - Temperature Probe: Pt 100Ω
  - Datas: Initial(Initial mooney)
    - ML(minimum mooney)
    - ML1+4
    - Scorch time(t5, t30, t35 or t3, t15, t18)
  - Computer system
  - Operating S/W: Delpai 5.0
  - Statistics: X–R chart, Histogram
  - Dimension: 590(W) X 610(D) X 1310(H)mm
  - Weight: 200Kg

- Windows software: included
MOONEY VISCOMETER MV2020

This test method describes the use of mooney viscometer for determining viscosity and scorch characteristics of rubber compounds and its performed according to ASTMD1646, BS1673, ISO R289 STANDARDS

Standard features
- Computerized data acquisition
- Digital temperature indication and controller
- Pneumatic calibration
- Heat efficient platens

Software is used to collect and analysis the data. the mooney curve is continuously displayed during the test.

Data results can be sorted by specification data (OK or NG).

Normal reports specifies test conditions and graphs and results (Initial mooney, minimum mooney, viscosity time, scorch time) and can be printed.

X-R chart and Histogram shows CP and CPK.

SPECIFICATION
- Power : AC 220V, 50/60Hz, 6A, single phase
- Rotor size : Large, Small
- Rotor speed : 2 RPM
- Compressed Air : 4.2 ~ 6.0 kg/cm2
- Temperature control : PID Control
- Temperature Tolerance : ±0.3°C
- Temperature Probe : Pt 100 Ω
- Datas : Initial(Initial mooney)
  ML(minimum mooney)
  ML1+4
  Scorch time(t5,t30,t35 or t3,t15,t18)
- Computer system
- Operating S/W : Delpai 5.0
- Statistics : X-R chart, Histogram
- Dimension : 590(W) X 610(D) X 1310(H)mm
- Weight : 200Kg
UNIVERSAL TEST MACHINE

■ This materials test machine is designed to test a wide range of materials including: Rubber, silicon, plastic, films, fabrics, leather, foils, etc. This machine can be used for several test functions: Tensile, Tear, Compression, Adhesion, Cord, Cycle, etc

■ Standard features
  - Computerized data acquisition
  - Digital Force and Distance indication
  - Pneumatic clamping
  - High speed Return

■ Software is used to collect and analysis the data. The curve is continuously displayed during the test. Normal reports specifies test conditions and graphs and results and can be printed.

■ SPECIFICATION
  - Power : AC 220V, 50/60Hz, 3A, single phase
  - Force Capacity : Max 100kg, 500kg, 1000 kg
  - Crosshead Speed : Max 1000 mm/min
  - Speed Resolution : 1 mm/min
  - Crosshead stroke : 800 mm
  - Extension Accuracy : within 0.5 %
  - Force Accuracy : within 0.5 %
  - Force Resolutions : within 0.04 %
  - AC Servo Motor
  - Pneumatic Air Grip : within 4.5 ~ 7 kg/cm2 Compressed Air
  - Operating S/W : Delpai 5.0
  - Dimension : 620(W) X 570(D) X 1600(H)
  - Weight : 200Kg

■ Windows software: included
UNIVERSAL TEST MACHINE 5TON, 10TON

- This materials test machine is designed to test a wide range of materials including: Rubber, silicon, plastic, films, fabrics, leather, foils, etc.
- This machine can be used for several test functions: Tensile, Tear, Compression, Adhesion, Cord, Cycle, etc.

SPECIFICATION
- Power : AC 220V, 50/60Hz, 3A, single phase
- Force Capacity : Max 5000 Kg, 10000 Kg
- Crosshead Speed : Max 250 mm/min
- Speed Resolution : 1 mm/min
- Crosshead stroke : 700 mm
- Extension Accuracy : within 0.5 %
- Force Accuracy : within 0.5 %
- Force Resolutions : within 0.04 %
- AC Servo Motor
- Operating S/W : Delpai 5.0
- Dimension : 1030(W) X 700(D) X 2000(H)
- Weight : 600 kg
LOW TEMPERATURE CHAMBER

This test method used for evaluating resistibility of deterioration of properties with time caused by Low temperature aging.

SPECIFICATION

- Power: AC220V, 50/60Hz, 15A, single phase
- Temperature measuring: CA type sensor
- Temperature Control: PID controller
- Maximum temperature: Room Temp. ~ -70 ℃
- Insulation: Glass Wool
- Compressor type
- Chamber size: 500(W) x 500(D) x 500(H)
- Dimension: 1070mm x 670mm x 1180mm
- Weight: About 200 kg
OZONE TEST CHAMBER

■ SPECIFICATION

- Main Power : AC220V, 50/60Hz, 1.5KW, 1Ø
- Ozone Measurement : Ultraviolet Absorption
- Ozone Range : 0 ~ 250 pphm / Vol
- Accuracy : 3% of Reading
  4% of Set point
- Temperature Range : Room Temp. ~ 90°C
- Oven Air Velocity : Excess of 2 Feet/Sec.
- Inlet Air Flow : 0 ~ 6CFM
- Chamber size : 500(W) x 500(D) x 500(H)
- Dimension : 1370mm(W) x 630mm(D) x 1380mm(H)
- Weight : About 200 kg
AUTO DENSIMETER (COMPUTER TYPE)

- This test method used for calculating the density of the material by weight of rubber in air and liquid according to ASTMD-865 Standards.

- Software is used to collect and analysis the data. Data results can be sorted by specification data (OK or NG). Normal reports specifies test conditions and graphs and results. X-R chart and Histogram shows CP and CPK.

SPECIFICATIONS
- Power : AC220V, 50/60Hz, 2A, single phase
- Measuring weight : Max 200g
- Measuring Range : 0.0000 - 20.0000
- Linearity : ± 1 mg(F.S)
- Sensitivity : 1 mg(F.S)
- Dimension : 380(w) X 400(d) X 560(h) mm
- Weight : ABOUT 30KG

- System
- Computer system : options
DENSICOM (ONE-CHIP PROCESSOR TYPE)

**SPECIFICATIONS**
- Supply power: 220V, 2A, 1Φ 50/60 Hz
- Supply air: 4~6kg/cm² COMPRESSED
- Measuring range: 0.001 ~ 20,000
- Measuring weight: 2000 Gram (MAX)
- Linearity: ±0.01g
- Resolution: 0.01g
- Input key: 26 alphabetic/10 numeric/10 Function key
- Display: 20 character x 4 line VFD
- Output: 24 pin dot printer
- Bath size: 490 x 145 x 250mm
- Machine size: 550 x 350 x 1340mm
AUTO HARDNESS TESTER (ONE-CHIP PROCESSOR TYPE)

■ SPECIFICATION

- Type: ASTM-D-2240, MIL, DIN, ISO, JIS STANDARDS AND AVAILABLE IN TYPES A, B, C, D, O, & DO
- Range: 00.0~99.9 HARDNESS
- Accuracy: ±1 HARDNESS
- Analysis Capacity: 0.2 HARDNESS
- Thickness of Sample: Max 20mm (Changable)
- Display: VFD 20 Char x 4 Line
- Dimensions: 480(w) X 340(d) X 540(h)mm
DIN ABRASION TESTER

■ SPECIFICATION
- Power : AC 220V, 50Hz
- Drum speed : 40 ±5 rpm
- Drum diameter : 150mm
- Sample loading : 5N or 10N or 20N
- Sandpaper : 40 mesh
- Test distance : 40M
- Lateral displacement : 4.2mm
- Sample diameter : 16mm
- Sample thickness : 6 ~ 16mm
- Standards : DIN 53516, JIS K 6369
- Weight : 60Kg
- Size (W×D×H) : 1110 × 340 × 360(m/m)
Tube type Oil Aging tester (OIL BATH)

- This test method used for evaluating resistibility of deterioration of properties with time caused by oxidative and thermal aging according to ASTMD-865 Standards

**SPECIFICATION**

- Power : AC220V, 50/60Hz, 6A, single phase
- Tube size : dia. 38mm x length 280mm
- Tube hole : 2 unit x 4 hole
- Operating temperature range : 70 ~ 200℃
- Temperature control : PID Control
- Temperature Tolerance : ±0.3℃
- Temperature Probe : Pt 100 Ω
- Heating material : Aluminium Bath
- Case : SUS (stainless steel)
- Dimension : 700mm x 340mm x 400mm
- Weight : ABOUT 65KG
MELT FLOW INDEXER

■ SPECIFICATION
- Power : AC220V, 50/60Hz
- Temperature : 25° C ~ 350° C
- Motor : 220V, 15W
- Cylinder : 160mm / 9.550 ±0.007mm
- Piston Head : 9.474 ±0.007mm
- Standards : KS M 3073
- Weight : 50kg