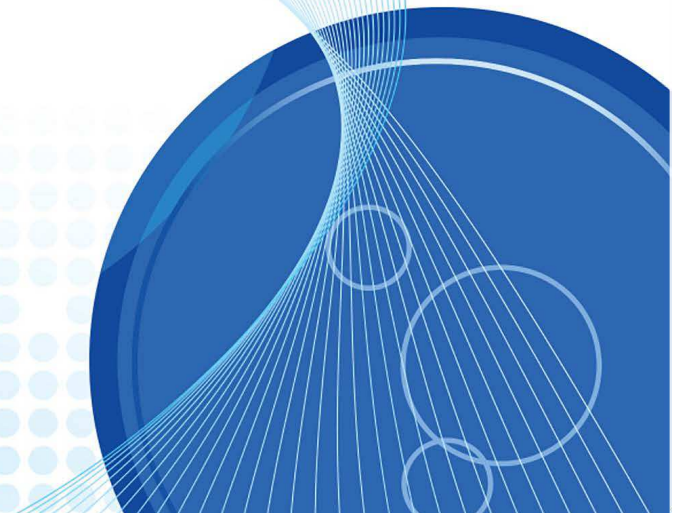
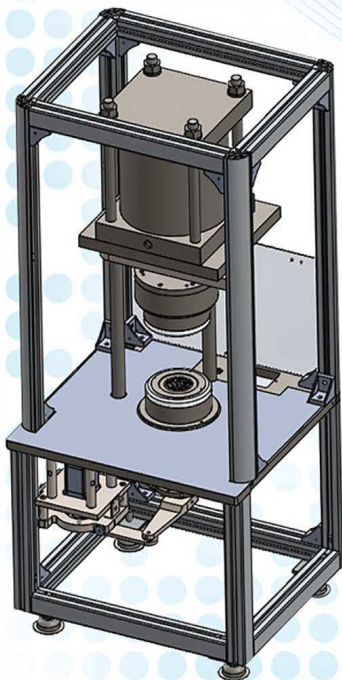


Moving Die Rheometer MDR-01



APPLICATION

The CGM Rheometer MDR-01 (Moving Die Rheometer - 01) measures the cure characteristics of compound rubber. It has a heated, sealed and rotorless moving die system. A sample is sealed in a cavity formed by directly heated dies.

The lower die moves at 1.66Hz (100cpm). The reaction torque, measured at upper Die, correlates with the degree of vulcanization as a function of cure time.

FEATURES

OPERATION

Direct Torque Measurement

High quality torque transducer and accurate torque measurement

Peak Torque Detection function – a function to automatically stop testing after highest torque value has been reached

Auto Torque Calibration

Test data stored in Touch Screen Panel up 40 samples

Flexible operations

- Standalone mode with touch screen – set test conditions, display test progress and results
- Direct connection to printer
- Can be connected to computer and controlled by software
- Can use the same data sheet as Plastimeter H-01 (Data receiver by CGM Technologies)

Certified Temperature Standard ISO17025

DESIGN

Designed for easy maintenance

Main parts are made of strong and anti-rust materials

Die-cooling System

Over-heating Protection System

Overload protection function

Machine only starts when door is closed



REFERENCE STANDARD	ISO 6502, ASTM D5289
TEST REPORT	ML, MH, MH-ML, Ts1, Ts2, T10, T50, T90, S" at ML, MH
MEASURED TIME	1/60 sec, 1/100 sec Unit (min-min/ min-sec/ sec)
DIE CONFIGURATION	Biconical Die, close die system, sealed
TEMPERATURE SYSTEM	PID Microprocessor Controlled Probe RTD Pt 100 Ω (Class A)
TEMPERATURE RANGE	Room Temp. (+25 °C) to 250 °C Accuracy 0.1 °C, Resolution 0.1 °C Units °C/ °F
OSCILLATION FREQUENCY	100 cpm. (1.667 Hz)
OSCILLATION ANGLE	0.5° \pm 0.03°, 1° \pm 0.03°
DRIVE MOTOR	Servo Motor
TORQUE MEASUREMENT	Torque Transducer (Direct Torque Measurement)
TORQUE RANGE	0.01 – 250 dNm
TORQUE CALIBRATION	Standard Torque Reference value
OPERATION PANEL	Capacitive Touch Screen, 5 Inches (Standalone)
COMMUNICATION DATA	RS-232, USB
ASSOCIATED PROGRAM (OPTION)	Data Processing Software
DATA EXPORT FILE	Excel
POWER SUPPLY	220 VAC \pm 10 VAC, 50/60 Hz, 6 A
PRESSURE SYSTEM	Air cylinder system
AIR PRESSURE	4.0 bar to 5.0 bar
DIMENSION	Width 50.0 cm., Depth 57 cm., Height 117 cm.
WEIGHT	170 kg.

File Setup Preferences

COMPOUND ID: 177X12

TEST TYPE: RHEOMETER

WORK STATION: CGM

Test Parameters History Data

MIX DATE: 14/10/2020

14/10/2020 ID: (Refresh F5)

Test Parameter

Heading	coeffA	coeffB	upLimit	lowLimit	Temp. Point	Temp. Unit	upLimitTemp	lowLimitTemp	judge
ML	0	0	0	0	177	C	0	0	
MH	0	0	0	0	177	C	0	0	
Ts1	1	0	0	0	177	C	0	0	
Ts2	2	0	0	0	177	C	0	0	
Tc10	10	0	0	0	177	C	0	0	
Tc90	90	0	0	0	177	C	0	0	

General

Temp. Point: 177.0 Temp. Unit: Celsius(C)

Test Time: 4 (Min.Sec) Preheat: 0 (Min.Sec)

Time Result Unit: Min.mSec Angle: 0.5 Degree

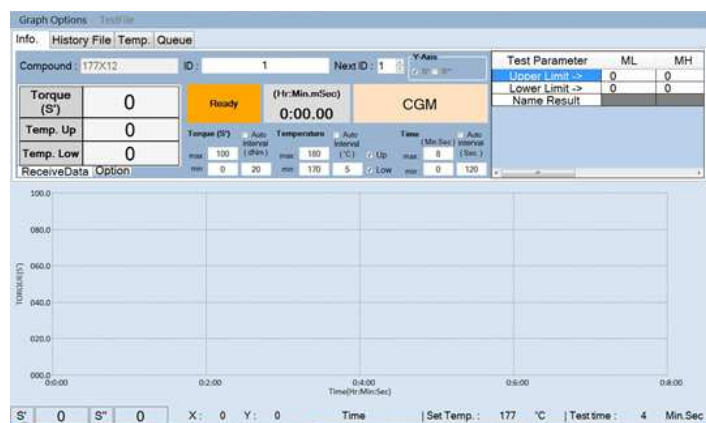
Unit: dNm Speed: 100 (CPM)

Measurement

Data point: coeff A 0

Heading: Delta Torque (MH-ML) Initial Torque (MH) Max Torque (MH) Min Torque (ML) Scorch Time Ts(A) Final value Cure Time Tc(A)

Add Del Save



Print

Company Name: CGM Technologies Co., Ltd

Title: RHEo

Compound: 177X12

Max Date: 02/10/2020

Test Type: RHEOMETER

Work Station: CGM

Temperature: 177 °C

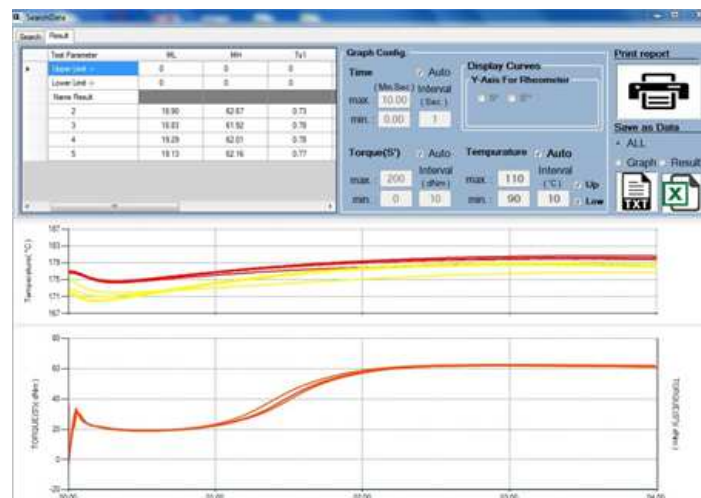
Table align: Left Center

Chart type: ChartData

Stat: Max. Min. Mean Value SD

Test Parameter	ML	MH	Ts1	Ts2	Tc10	Tc50	Tc90	Pass/Fail
Upper Limit ->	0	0	0	0	0	0	0	
Lower Limit ->	0	0	0	0	0	0	0	
Name Result								
2	18.90	62.67	0.73	0.83	1.00	1.42	1.97	Pass
3	18.83	61.92	0.78	0.88	1.05	1.43	2.00	Pass
4	19.29	62.01	0.78	0.88	1.05	1.52	2.02	Pass
5	19.13	62.16	0.77	0.87	1.05	1.48	2.00	Pass

Print

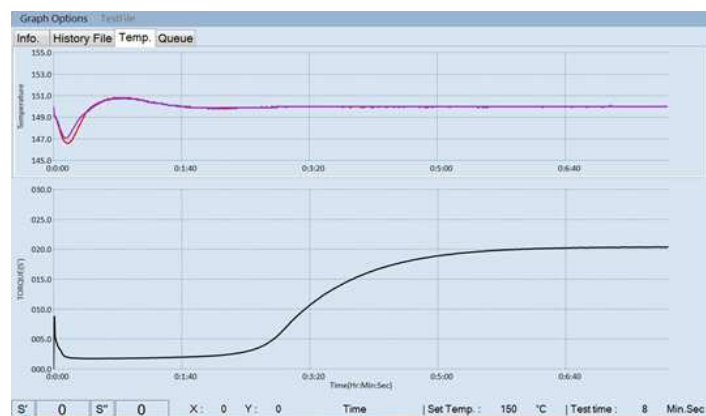
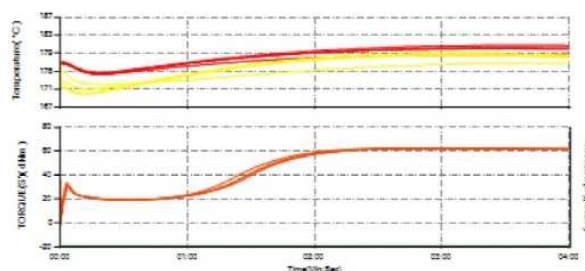


CGM Technologies Co., Ltd

RHEo

Report Date: 14/10/2020 09:35:52
Compound: 177X12
Mix Date: 02/10/2020
Test Type: RHEOMETER
Work Station: CGM
Temperature: 177 °C
Degree arc: 0.5 °

Page 1 Of 1



Test Parameter	ML	MH	Ts1	Ts2	Tc10	Tc50	Tc90	Pass/Fail
Upper Limit ->	0	0	0	0	0	0	0	
Lower Limit ->	0	0	0	0	0	0	0	
Name Result								
2	18.90	62.67	0.73	0.83	1.00	1.42	1.97	Pass
3	18.83	61.92	0.78	0.88	1.05	1.43	2.00	Pass
4	19.29	62.01	0.78	0.88	1.05	1.52	2.02	Pass
5	19.13	62.16	0.77	0.87	1.05	1.48	2.00	Pass
Minimum	18.83	61.92	0.00.0	0.00.0	1.00	1.42	1.97	-
Maximum	19.29	62.67	0.00.0	0.00.0	1.05	1.52	2.02	-
Mean	19.04	62.18	0.00.0	0.00.0	1.04	1.48	2.00	-
Standard deviation	0.21	0.33	0.00.0	0.00.0	0.03	0.04	0.02	-

End of Result