**MOHR™ MDT-2 Series**

**Computerized Agricultural Penetrometer and Texture Analyzer**

Sophisticated materials testing in a rugged portable package

**Key Features**

- Constant rate, Creep, and Crispness testing
- Eliminates operator and transcription errors
- Tension and compression modes
- 5 mg (1x10^-5 lb.) force sensitivity (24-bit ADC)
- ±30 kg (±65 lb.) standard load cell range
- 0.001 mm (1x10^-5 in.) distance precision
- Precision external scale / automated calibrator
- 2+ GB storage, enough for thousands of tests
- USB host/client, 10/100 Ethernet
- Lightweight with bright color touchscreen

**MOHR MDT-2 Series instruments** are the industry's most capable portable agricultural firmness testers, featuring unmatched precision, unique texture analysis capabilities, intuitive data visualization tools, and rugged portability.

**Optimized for Fruit and Vegetable Testing**

Specialized probes and test routines for:
- Apples
- Pears
- Cherries
- Kiwi
- Grapes
- Tomatoes
- Potatoes
- Watermelon
- Many more

**Unique, Meaningful Test Data**

- Repeatable, accurate results every time
- Complete fruit maturity data:
  - **Constant rate** penetrometer testing
  - **Internal and external** fruit pressure
  - **Crispness** textural characteristics
  - **Creep** viscoelastic properties
  - **Quality Factor (QF):** Variety-specific statistical measure helps guide picking, packing, and retail handling decisions
- Real-time graphics and **instant statistics** as you test

**Major Cost and Efficiency Savings**

- Save 50% or more of the time you spend testing and managing data
- Fast testing — 25+ tests/minute
- Automated reports with network integration
- Barcode scanning
- Automatic diameter and weight measurements
- Store titrable acidity, soluble solids, color data

**MOHR**

Test and Measurement Solutions for Industry™

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Specifications

Force System Characteristics
Standard internal and external load cells:
  Type: Stainless-steel S-beam with overstress guards
  Range: ±30 kg (±65 lbs.)
  Sensitivity: 5 mg (1x10^-5 lbs.) at default gain settings
Instrumentation amplifiers (internal, external channels):
  Type: Differential input, zero drift, programmable gain
  Default gain: 176x
Analog-to-digital conversion (internal, external channels):
  Sample resolution: 24 bits
  Sample rate: up to 14 kHz

Distance System Characteristics
Type: Brushless DC servo with optical quadrature feedback
Range: 7.3 cm (2.9 in.)
Precision: 0.001 mm
Sampling resolution: 32 bits
Velocity: 0 ~ 100 mm/s
Velocity resolution: 32 bits
Acceleration resolution: 32 bits

Test Capabilities
Multi-region testing
Thousands of samples per test
Simple and/or complex test parameters:
  Constant velocity
  Creep: Deformation under constant force
  Crispness: Time-dependent fracture characteristics

Software Features
Real-time graphical display
User-configurable fruit types
Powerful easy-to-use relational database
Instant comparative statistics

Data Storage
2+ GB flash memory, thousands of tests
USB thumbdrive ready
Remote data storage over Ethernet

Connectivity
4x USB host for keyboard, barcode, and/or external instrumentation USB client and 10/100/1000 Mb Ethernet for PC connection
Remote testing with real-time data using Winapples™ software

Display
Color LED-BL 14.5 cm (5.7 in.) VGA TFT-LCD, > 600 cd/m2

Power System
AC Power: 110/220 VAC (±10%), 50/60 Hz 1-phase, using AC adapter
Battery Power: Internal NiMH DC battery
Battery Life: >1000 tests (typical use)
Battery Charging: <1 h low-battery, <4 h fully-discharged

Environmental and Mechanical
Operating / Non-Operating Temp.: +0°C to +50°C / -20°C to +60°C
Dimensions: 42.0(H) x 17.8(W) x 20.3(L) cm (16.5 x 7.0 x 8.0 in.)
Weight: ~ 4.5 kg (10 lbs.)

Regulatory
Complies with all applicable EU directives, as specified by the Declaration of Conformity supplied with the instrument.

Ordering Information

General Options
MDT-2 Base Unit

Standard Accessories
Test probe
Winapples™ software
Calibration kit
Quick-load Teflon® base
Precision external scale
AC power adapter and cable
USB and Ethernet cables
Operator’s manual
12-month limited warranty

Optional Accessories
USB Add-Ons
Flexible Waterproof Keyboard MDT2-AC-KBD
Barcode Reader Kit MDT2-AC-BCD

Test Probes
Probe 4 mm MDT2-AC-P4M
Probe 8 mm MDT2-AC-P8M
Probe 11 mm MDT2-AC-P11M
Probe Cherry MDT2-AC-PCH
Probe Compress MDT2-AC-PCM
Probe Rheology MDT2-AC-PRH

This product or use of this product covered by U.S. Patent #6643599; other patents pending.