One Instrument = All Measurement Capabilities

The Model 3450 controls compaction at every stage of your project.

- Thin layer mode measures the density of asphalt and concrete overlays between one and four inches (two-and-a-half and ten centimeters) in thickness without influence from the underlying material.
- Backscatter mode is an ideal nondestructive density measurement method for full depth asphalt and concrete approximately four inches (ten centimeters) thick.
- Direct transmission mode is the density measurement method of choice for lifts of soil, soil aggregate, and stone up to twelve inches (thirty centimeters) in depth.
- The moisture system provides a nondestructive moisture measurement for soil and aggregate materials.

Quick Density and Moisture Measurements

In as little as one minute, the gauge provides both density and moisture measurements—including wet density, dry density, moisture, percent moisture, percent compaction, percent voids, and percent air voids—without time-consuming calculations.

Easy Operation

For all its sophistication, the Model 3450 is simple to use. An expanded keypad and easy-to-follow prompts provide access to all major gauge functions.
### RoadReader Model 3450
**Thin Layer & Full Depth Density Gauge**

#### Additional Features
- A backlit screen provides exceptional viewing for low-light and nighttime testing.
- An adjustable beeper signals test completion over the roar of traffic or heavy equipment.
- The gauge stores up to 1,000 test readings under multiple projects for future use and/or download.
- The free Troxler App makes data transfer to a portable device simple.

#### Measurement Specifications (pcf [kg/m³])

<table>
<thead>
<tr>
<th>Mode</th>
<th>15 Seconds</th>
<th>1 Minute</th>
<th>4 Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct Transmission</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Precision</td>
<td>0.32 (5.2)</td>
<td>0.15 (2.6)</td>
<td>0.08 (1.3)</td>
</tr>
<tr>
<td>Composition Error</td>
<td>0.5 (0.8)</td>
<td>0.5 (0.8)</td>
<td>0.5 (0.8)</td>
</tr>
<tr>
<td>Surface Error (0.05&quot;, 100% Void)</td>
<td>-1.1 (-18)</td>
<td>-1.1 (-18)</td>
<td>-1.1 (-18)</td>
</tr>
<tr>
<td><strong>Backscatter Mode</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Precision</td>
<td>1.0 (16.0)</td>
<td>0.50 (8.0)</td>
<td>0.25 (4.0)</td>
</tr>
<tr>
<td>Composition Error</td>
<td>0.87 (14.0)</td>
<td>0.87 (14.0)</td>
<td>0.87 (14.0)</td>
</tr>
<tr>
<td>Surface Error (0.05&quot;, 100% Void)</td>
<td>-5 (-80)</td>
<td>-5 (-80)</td>
<td>-5 (-80)</td>
</tr>
<tr>
<td><strong>Moisture at 15 pcf (240 kg/m³)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Precision</td>
<td>0.69 (11)</td>
<td>0.34 (5.5)</td>
<td>0.17 (2.8)</td>
</tr>
<tr>
<td>Surface Error (0.05&quot;, 100% Void)</td>
<td>-1.2 (-19)</td>
<td>-1.2 (-19)</td>
<td>-1.2 (-19)</td>
</tr>
</tbody>
</table>

#### Thin Overlay Mode
**Precision at 15 pcf (240 kg/m³)**

<table>
<thead>
<tr>
<th>Time (Minutes)</th>
<th>Thickness 1 in (2.5 cm)</th>
<th>2 in (5.2 cm)</th>
<th>2.5 in (6.3 cm)</th>
<th>4 in (10 cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>±1 (±16)</td>
<td>±0.6 (±10)</td>
<td>±0.5 (±8)</td>
<td>±0.5 (±8)</td>
</tr>
<tr>
<td>4</td>
<td>±0.50 (±8)</td>
<td>±0.30 (±5)</td>
<td>±0.25 (±4)</td>
<td>±0.25 (±4)</td>
</tr>
</tbody>
</table>

#### Radiological Specifications
- **Gamma Source**: 0.30 GBq (8 mCi) ±10% Cs-137
- **Neutron Source**: 1.48 GBq (40 mCi) ±10% Am-241:Be
- **Source Type**: Sealed source, special form
- **Source Housing**: Stainless steel, double encapsulated
- **Case**: DOT 7A, Type A, Yellow II label, TI = 0.3

#### Electrical Specifications
- **Average Power Consumption**: 0.12 W
- **Idle Mode**: 0.17 W
- **Stored Power**: 32 W/h
- **Time Before Automatic Shutdown**: 5 hours of complete inactivity
- **Power Sources**: NiCad and AA alkaline batteries
- **Charge Source**: 12 VDC nominal, 800 mA minimum
- **Battery Recharge Time**: 4 hours maximum (automatic cutoff)
- **Liquid-Crystal Display (LCD)**: Four lines, twenty characters per line; alphanumeric; backlit
- **Keypad**: Thirty-three-key sealed membrane

#### Mechanical Specifications
- **Gauge Dimensions** (L x W x H): 8 in rod = 16.2 x 9.0 x 19.8 in (411 x 229 x 503 mm) 12 in rod = 16.2 x 9.0 x 23.8 in (411 x 229 x 604 mm)
- **Case Dimensions** (L x W x H): 13.9 x 17.9 x 30.8 in (353 x 455 x 782 mm)
- **Weight**: 37.5 lb (17 kg)
- **Shipping Weight**: 96 lb (43 kg)

#### Environmental Specifications
- **Operating Temperature**: 32°F to 158°F (0°C to 70°C)
- **Storage Temperature**: -67°F to 185°F (-55°C to 85°C)
- **Maximum Test Material at Surface Temperature**: 350°F (175°C) for 15 minutes
- **Humidity**: 98%, noncondensing

Made in USA.

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