

Troxler Model 3430 and 3440 Moisture Density Gauges

*New! Updated!
Simply Better Gauges*



- **New look**
 - Rugged, larger display screen; easy to use
- **Updated electronics**
 - Upgradeable and consistently reliable
- **Many user-friendly features**

3430

Troxler nuclear moisture density gauges are used by many contractors, engineers, and highway departments for compaction control of soil, aggregate, concrete, and full-depth asphalt. The operator selects the density mode (backscatter or direct transmission) based on the material type and the thickness of the layer being measured.

The Model 3430 is the simplest and most economical gauge offered by Troxler. The Model 3440 includes a larger keypad and more available features that are needed for some construction projects. Both models meet or exceed ASTM standards D6938, D2950, and C1040 and can be customized to meet your testing needs.

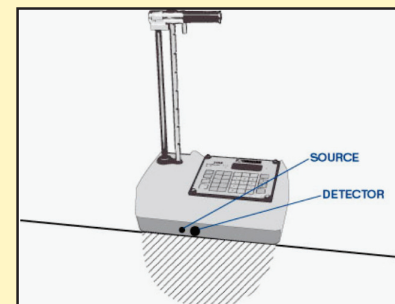
The Model 3430 is a simple gauge for users who don't need many extras.

The enhanced platform offers many updates and advantages, such as:

- Updated electronics
- Nickel-metal hydride (NiMH) batteries with fast recharge
- A larger, backlit display screen (eight-millimeter characters)
- An alkaline battery backup feature
- Optional user-friendly features
 - An external beeper
 - A remote start keypad on the handle
 - Data storage
 - A USB port for data transfer
 - Spanish and French language options



Moisture Measurement



Moisture content is measured in a nondestructive test mode. Moisture is determined through the detection of thermalized neutrons (i.e., "fast" neutrons that have been slowed by the hydrogen present in the material [normally in the form of water]).

Troxler also offers the enhanced platform for the Model 3440, which includes an updated display screen and updated electronics and batteries. Users can customize the gauge by adding the features that meet their needs.

Standard features include:

- An Auto-Depth function
- A USB port
- Data storage
- A remote keypad
- An alkaline battery backup

Optional features include:

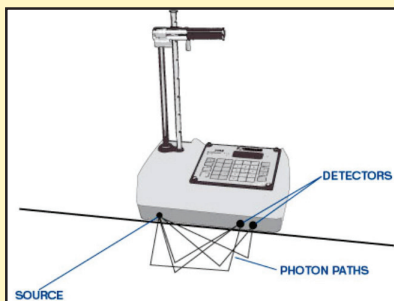
- An external beeper
- A backlit keypad
- Spanish and French language options
- Global Positioning System (GPS) locations for measurements

Both models offer

- density measurement capability in backscatter or direct transmission mode and moisture measurement in backscatter mode to allow quick, nondestructive testing of soil, asphalt, and concrete materials;
- direct readout of test results (wet density, dry density, moisture, % moisture, % voids, and % compaction);
- multiple count time options (fifteen seconds, one minute, and four minutes);
- moisture, density, and trench offsets;
- user-friendly software menus and keypads; and
- an eighteen-month warranty.

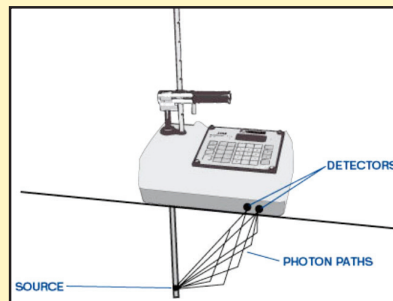


Backscatter Measurement



This is a rapid, nondestructive means of testing materials (usually asphalt and concrete) that are approximately 4 in (10 cm) in depth. The gamma source remains inside the gauge, and the gamma rays that are scattered back toward the detectors are counted to determine the density.

Direct Transmission Measurement



The source rod extends through the base of the gauge into a predilled hole up to 12 in (30 cm) deep in the material being tested. Gamma rays are transmitted from the density source through the test material and counted by detectors located within the gauge.

3440

	3430	3440	3440 w/ GPS
Keypad	Ten keys (simple)	Thirty keys	Thirty keys
Auto-Depth	NA	✓	✓
Display	Enlarged, Backlit	Enlarged, Backlit	Enlarged, Backlit
Alkaline Battery Backup	✓	✓	✓
Data Storage	Optional (100 readings)	✓ (1,000 readings)	✓ (1,000 readings)
USB Port	Optional	✓	✓
Remote Start Keypad (Near Handle)	Optional	Optional	✓
GPS	NA	NA	✓
External Beeper	Optional	Optional	Optional
Language Options (Spanish or French Software and Manual)	Optional	Optional	Optional
Backlit Keypad	NA	Optional	✓

Troxler Service Center Locations

- North Carolina
- California
- Florida (Fort Myers)
- Florida (Orlando)
- Illinois
- Louisiana
- Texas (Dallas)
- Texas (Houston)

Visit www.troxlerlabs.com for address and contact information.

Meets ASTM standards D6938, D2950, and C1040, and AASHTO standards T310 and T355

All gauges offer the option of 12 in/1 in or 8 in/2 in measurement positions.

MEASUREMENT SPECIFICATIONS			
	.25 Minutes	1 Minute	4 Minutes
Direct Transmission (150 mm)			
Precision (kg/m ³) (pcf)	±6.8 (±0.42)	±3.4 (±0.21)	±1.7 (±0.11)
Composition Error (kg/m ³)	±20.0	±20.0	±20.0
Surface Error (kg/m ³) (100% Void)	-17.0	-17.0	-17.0
Backscatter (98%, 100 mm)			
Precision (kg/m ³)	±16.0	±8.00	±4.00
Composition Error (kg/m ³)	±40.0	±40.0	±40.0
Surface Error (kg/m ³) (100% Void)	-75.0	-75.0	-75.0
Surface Error (kg/m ³) (100% Void)	-75.0	-75.0	-75.0
Moisture at 240 kg/m ³			
Precision (kg/m ³)	±10.3	±5.1	±2.6
Surface Error (kg/m ³) (1.25 mm, 100% Void, kg/m ³)	-18.0	-18.0	-18.0

ELECTRICAL SPECIFICATIONS	
Main Power Source	5 C NiMH rechargeable pack
Backup Power Source	Model 3430 = optional Model 3440 = 5 AA alkaline batteries
Stored Power	4 A hours
Battery Recharge Time	3 hours maximum; automatic cutoff
Charge Source	110/220 VAC 50 or 60 Hz or 12 to 14 VDC
Current Consumption Average	35 mA
Time Before Auto Shutdown	Five hours of inactivity
Readout	Four lines, twenty characters per line; alphanumeric
Sealed Membrane Keypad	Model 3430 = ten keys Model 3440 = thirty keys

RADIOLOGICAL SPECIFICATIONS	
Gamma Source	0.30 GBq (8 mCi) ±10% Cs-137
Neutron Source	1.48 GBq (40 mCi) ±10% Am-241:Be
Source Housing	Stainless steel, encapsulated
Surface Dose Rate	(5 cm) 19 mrem/hr maximum, neutron and gamma
Case	DOT 7A, Type A, Yellow II label, TI = 0.3

MECHANICAL SPECIFICATIONS	
Gauge Dimensions (Including Handles) (L x W x H)	12 in = 14.5 x 9 x 23.5 in (36 x 22.9 x 59 cm) 8 in (H) = 19.5 in (49.5 cm)
Case Dimensions (L x W x H)	29.4 x 13.9 x 16.5 in (75 x 35 x 42 cm)
Shipping Weight	83 lb (37.6 kg)
Weight	31 lb (14.1 kg)
Operating Temperature	Ambient = 32°F to 158°F (0°C to 70°C) Surface = 350°F (175°C) for 15 minutes
Storage Temperature	-70°F to 185°F (-55°C to 85°C)