

Troxler EGauge Model 4590

Nuclear Soil Density Gauge



A Nuclear Density Gauge Exempt from NRC Licensing!

Troxler, the industry leader in nuclear density gauges, now offers a license exempt* option for soil quality control testing! The EGauge uses proven nuclear technology for density measurements unlike other non-licensed density measurement devices.

- Accurate and reliable readings
- As easy to use as Troxler's current gauges
- Meets ASTM D8167

Exempt from the Hassles of Licensing

Maintaining a radioactive materials license can be complicated and time consuming for owners of "Specifically Licensed" gauges. In the United States, the EGauge is exempt from the radioactive materials license: no special training classes for operators, no TLD badges, no special shipping documents, and no reciprocity needed to use it in other states.

Easy to Use

The operation of the Model 4590 is similar to that of the traditional Troxler nuclear density gauges and therefore, the experienced operator can use the gauge with little additional training.

Reliable and Repeatable Density Results

Data collected by multiple agencies show excellent correlation between the EGauge and Troxler's Model 3440 Density Gauge (R^2 values ranged from 0.93 to 0.98). EGauge repeatability is also equal to that of the current density gauges as listed in the applicable ASTM specification (0.3 lb/ft^3 (4.8 kg/m^3)).

Complete with Moisture Probe

The Troxler Model 6760 Moisture Probe is provided with each EGauge. The electromagnetic probe measures the moisture of the soil in the same prepared hole that is used for the density measurement. Bluetooth technology enables the probe to communicate the moisture data to the EGauge allowing the gauge to display complete results. The EGauge also accepts moisture data using the keypad if another method is used. A field offset is generally required to assure reliable moisture results when using electromagnetic technology.

EGauge

Model 4590 Soil Density Gauge

Additional Features and Options

- Easy to Read Display – easy to read enlarged LCD screen with back-lighting for viewing in low light conditions.
- Automatic Depth Mode – detects the source rod depth during each measurement.
- Data Storage and Output – stores up to 1000 test readings under multiple projects for later recall or downloading.
- Auto-Store Function – when enabled automatically stores sample data under the active project.
- USB Port – access for outputting stored data to a printer or removable storage “thumb drive.”
- GPS – records GPS information with each measurement with Wide Area Augmentation System (WAAS) capabilities for better accuracy.



Each EGauge equipped with a Model 6760 Moisture Probe

Measurement Specifications

Parameters at 6 inch (150 mm) Depth Parameters at 135 lb/ft ³ (2163 kg/m ³) Sample Density	Measurement Time = 2 min; Background Time = 1 min
--	--

Precision

Repeatability (1-standard deviation)	0.3 lb/ft ³ (4.8 kg/m ³)
Reproducibility (1-standard deviation)	0.5 lb/ft ³ (8.0 kg/m ³) ¹
Composition Error	0 lbs/ft ³ (0 kg/m ³)

Mechanical Specifications

EGauge Size (H x L x W)	24.6" x 15.4" x 9.2" 625mm x 391mm x 234mm
Moisture Probe Size (H x L x W)	8.2" x 13.6" x 5.6" 208mm x 346mm x 142mm
Case Dimensions (H x L x W)	31.3" x 20.4" x 15.5" 795mm x 518mm x 393mm
Weight	35 lbs (13.8 kg)
Shipping Weight	83 lbs (38 kg)
Operating Temperature	0° to 50° C (32° to 122° F)
Storage Temperature	-18° to 60° C (0° to 140° F)

Electrical Specifications

Main Power Source	NiMH rechargeable batteries
Backup Power Source	5 AA alkaline batteries
Charge Source	12 V DC, 2A
Battery Recharge Time	3 hours maximum, (may be charged incrementally without damaging the batteries)
Time Before Automatic Shutdown	5 hours of inactivity

*Exempt in the United States as determined by the NRC.

Made in USA

¹ Reproducibility as measured is consistent with that stated in ASTM-D6938-10



The Leader in Construction Testing Equipment

Information provided herein is based on test data believed to be reliable. In as much as Troxler Electronic Laboratories, Inc. has no control over the manner in which others may use this information, it does not guarantee the results to be obtained. In addition, Troxler does not make any express or implied warranty of merchantability or fitness for a particular purpose other than that for which the equipment is originally intended.

3008 E. Cornwallis Road
Research Triangle Park, NC 27709
1-877-TROXLER (1-877-876-9537)
1-919-549-8661 (International)
www.troxlerlabs.com