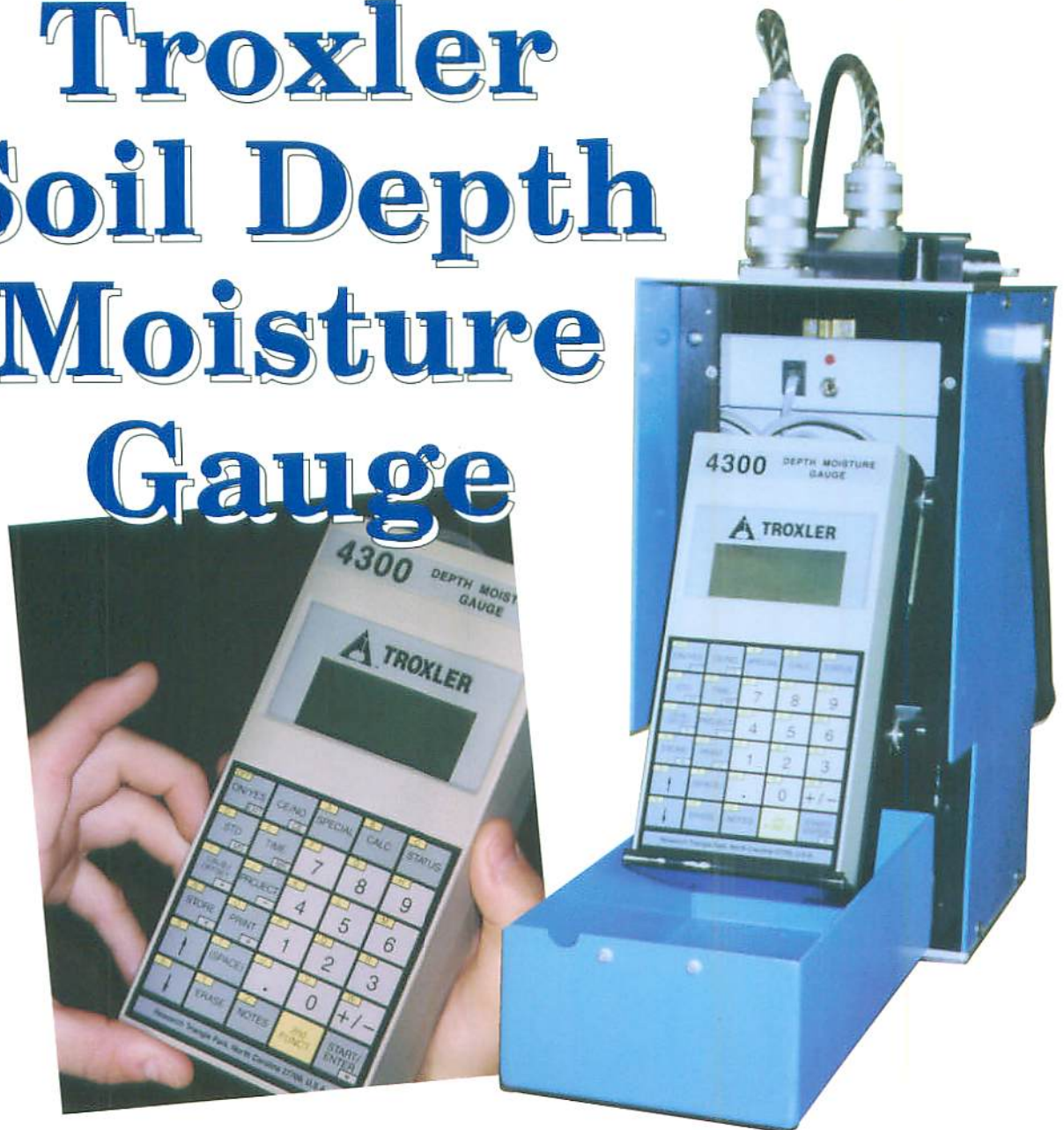


Model 4300

# Troxler Soil Depth Moisture Gauge



- **Profile Moisture Measurements from Root Zone to Over 30.49 m (100 feet) deep.**
- **Exclusive Notebook Feature**  
Allows user to tailor entry of data for research analysis or for irrigation scheduling requirements. 1000 lines of readings, notes, and auto notes can be stored and transferred to a printer or spreadsheet. Also stores 64 individual calibrations.
- **Readings Not Affected by Salts, Temperature, or Barometric Pressure.**
- **Proven Accuracy/Dependability Around the World.**
- **Thousands Sold For a Variety of Research and Field Applications.**



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## Order Information

- Model 4301 is used with 38.1 mm (1.5") ID 1.6" OD access tubing
- Model 4302 is used with 47.0 mm (1.85") ID 2.0" OD access tubing
- Aluminum access tubing can be ordered through Troxler. Tubing comes in boxes of 4 pieces in 10 ft. lengths. Tube plugs to prevent water infiltration after placement in soil are available as an optional accessory.

## 4300 Specifications

### Calibration Specification (Factory)

Metric Calibration (kg/m<sup>3</sup>) at 200 kg/m<sup>3</sup>

Count Time:	15 sec.	30 sec.	1 min.	4 min.
Precision:	4.9	3.4	2.4	1.2

### Universal Calibration (% Volume of Water) at 20% by Volume

Count Time:	15 sec.	30 sec.	1 min.	4 min.
Precision:	0.49	0.34	0.24	0.12

### U.S. Customary Calibration (pcf) at 12.5 pcf

Count Time:	15 sec.	30 sec.	1 min.	4 min.
Precision:	0.30	0.21	0.15	0.07

### U.S. Irrigation Calibration (in/ft) at 2.4 in/ft

Count Time:	15 sec.	30 sec.	1 min.	4 min.
Precision:	0.059	0.041	0.029	0.014

Number of Moisture Standards: 6

Moisture Standards Accuracy: ±3%

Calibration Range: 0-340 kg/m<sup>3</sup> (0-212 pcf)

**Calibration Method:** Computer regression of count rate data and associated moisture values of calibration standards to a linear (first order polynomial) equation.

### Electrical Specifications

Stored Power	Control Unit	: 4.5 W-H
	Shield Unit	: 13-14 4 W-H
Power Consumption	Control Unit	: 90-220 mW
	Shield Unit	: 130-220 mW
Battery Recharge		
Time		: 14-16 hours
Charge Source		: 110/220 VAC, 50-60 Hz or 12-14 VDC
Readout (LCD)		: 4 Lines x 16 Characters (Alphanumeric)
ROM		: 512 Kbits
RAM		: 512 Kbits (Non-Volatile)
User Calibrations		: 64
Stored Readings		: > 1,000 lines
Auto Notes		: > 1,000 lines
Notes		: > 1,000 lines

### Mechanical Specifications

Cabinet	: Acrylic over Chromated Aluminum
Vibration Test	: 2.5 mm (0.1 inch) at 12.5 Hz
Operating Temperature	: -10°C to 70°C (-14°F to 158°F)
Storage Temperature	: -55°C to 85°C (-67°F to 185°F)
Size (Handle Down)	
Control Unit	: 48.2 mm (Deep) x 96.5 mm (Wide) x 193 mm (High) (1.9"x3.8"x7.6")
Shield Unit	: 221 mm (Deep) x 152.4 mm (Wide) x 330.2 mm (High) (8.7"x6"x13")
Overall Height (with Probe)	: 431.8 mm (17")
Probe Material	: Aluminum
Probe Diameter	4301 : 38.1 mm (1.5") 4302 : 47.0 mm (1.85")
Probe Length	: 311 mm (13.75")
Standard Cable Length (Probe)	: 3.66 m (12 feet)
Weight	: 10 kg (22 lbs.)
Shipping Weight	: 14.5 kg (32 lbs.)

### RS-232 Serial Communications Port (4300)

Connector	: Female DB-9
Number of Data Bits	: 8
Start Stop Bits	: 12
Parity	: None
Baud Rate	: 110-2400

### Radiological Specifications

Neutron Source and Dwg	: 10 ±10 mCi Americium-241:Beryllium with 25,000 n/sec Yield TEL-A-102700
Source Housing	: Stainless Steel, Double Encapsulated
Shielding	: Polyethylene and Lead
Shipping Case	: Excepted radioactive material
Special Form Certificate	: GB/29/S
ANSI Classification	: C-64444

### Licensing and Training

The radioactive source contained in the 4300 is by-product material and requires a special license issued by the "Agreement State" or by the U.S. Nuclear Regulatory Commission. Troxler will assist the customer in obtaining and completing the proper license application. Troxler office or field training may be arranged for a fee covering the instructor's time and expenses. For international licensing and training information, consult Troxler International Ltd. or the local Troxler distributor.

### Standard Accessories

Cable Stops, Charger/Adapter.

### Optional Accessories

Dummy Probe Assembly, Aluminum Access Tube 4/Box (2"D x .05"WAL x 10"L or 1.5"D x .05" WAL x 10"L); TLD Radiation Monitoring Service, Radiation Sign Kit, Leak Test Kit, Printer RS232 Cable, Computer Cable Assy, Survey Meter with Beeper, Access Tube Plugs.

#### Western Branch & Service Ctr.

Rancho Cordova, CA  
(916) 631-0234  
(916) 631-0541 FAX

#### Midwestern Branch & Service Ctr.

Elgin, IL  
(847) 695-0900  
(847) 695-5094 FAX

#### Southwestern Branch & Service Ctr.

Arlington, TX  
(817) 275-0571  
(817) 275-8562 FAX

#### Southern Branch

Nashville, TN  
(615) 331-8537  
(615) 331-8537 FAX

#### Central Branch

RTP, NC  
(919) 549-8661 ext. 136  
(919) 549-0761 FAX

#### Northwestern Branch

Puyallup, WA  
(253) 770-7864  
(253) 840-1142 FAX

#### Maryland Service Ctr.

Baltimore, MD  
(410) 780-2601  
(410) 780-2603 FAX

#### Northeastern Branch

Baltimore, MD  
(301) 924-3336  
(301) 299-1899 FAX

#### Rocky Mountain Branch

Lakewood, CO  
(303) 969-0950

#### European Branch & Service Ctr.

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