

MODEL 3440 SURFACE MOISTURE-DENSITY GAUGE

Specifications

Measurement (U.S. Customary Units)			
Direct Transmission Density (6")	15 sec.	1 min.	4 min.
Precision at 120 pcf	±0.42 pcf	±0.21 pcf	±0.11 pcf
Composition error at 120 pcf	±1.25 pcf	±1.25 pcf	±1.25 pcf
Surface error (0.05", 100% Void)	-1.1 pcf	-1.1 pcf	-1.1 pcf
Backscatter (98%) (4")			
Precision at 120 pcf	±1.00 pcf	±0.50 pcf	±0.25 pcf
Composition error at 120 pcf	±2.50 pcf	±2.50 pcf	±2.50 pcf
Surface error (0.05", 100% Void)	-4.7 pcf	-4.7 pcf	-4.7 pcf
Moisture at 15 pcf			
Precision at 15 pcf	±0.64 pcf	±0.32 pcf	±0.16 pcf
Surface error (0.05", 100% Void) Depth of measurement @ 15 pcf (8.45")	-1.12 pcf	-1.12 pcf	-1.12 pcf
Measurement (S.I. Units)			
Direct Transmission Density-150mm	15 sec.	1 min.	4 min.
Precision at 2000 kg/m ³	±6.8 kg/m ³	±3.4 kg/m ³	±1.7 kg/m ³
Composition error at 2000 kg/m ³	±20.0 kg/m ³	±20.0 kg/m ³	±20.0 kg/m ³
Surface error (1.25mm, 100% Void)	-17.0 kg/m ³	-17.0 kg/m ³	-17.0 kg/m ³
Backscatter (98%) (100mm)			
Precision at 2000 kg/m ³	±16.0 kg/m ³	±8.0 kg/m ³	±4.0 kg/m ³
Composition error at 2000 kg/m ³	±40.0 kg/m ³	±40.0 kg/m ³	±40.0 kg/m ³
Surface error (1.25mm, 100% Void)	-75.0 kg/m ³	-75.0 kg/m ³	-75.0 kg/m ³
Moisture			
Precision at 250 kg/m ³	±10.3 kg/m ³	±5.1 kg/m ³	±2.6 kg/m ³
Surface error (1.25mm, 100% Void) Meas. Depth @ 250 kg/m ³ - 212.5mm	-18.0 kg/m ³	-18.0 kg/m ³	-18.0 kg/m ³
Calibration			
Accuracy of Density Standards	±0.2%		
Accuracy of Moisture Standards	±2.0%		
Calibration Range	70-170 pcf (1100-2700 kg/m ³) Density 0-40 pcf (0-640 kg/m ³) Moisture		

Radiological	
Gamma Source	8 mCi ±10% Cs-137
Neutron Source	0.060 mCi ±10% Cf-252 or 40 mCi ±10% Am-241:Be
Source Housing	Stainless Steel Encapsulation
Shielding	Tungsten, lead and cadmium
Surface Dose Rates	20.5 mrem/hr max., neutron and gamma
Source Rod Material	Stainless Steel
Shipping Case	DOT 7A, Type A
Sealed Source Approved for Domestic and International Shipments	Special Form

Mechanical

Case	High Impact Plastic 29.5 L x 14 W x 17 T in.
Vibration Test	0.1 in. (2.5 mm) @ 12.5 Hz
Drop Test	300 mm on 25 mm diameter steel ball
Operating Temp:	Ambient: 14 to 158°F (-10 to 70°C) Surface: 350°F (175°C)
Storage Temp.	-70 to 185°F (-55 to 85°C)
Gauge Size (no handles)	14.8 x 9.1 x 7.2 in. (376 x 231 x 183 mm)
Gauge Height (with handles)	12": 23.25 in. (591 mm) 8": 19.25 in. (489 mm)
Weight	29 lbs. (13.2 kg)
Shipping Weight	90 lbs. (40.8 kg) w/case
Available Models	8" or 12" index rod with 1" or 2" increments (200 or 300 mm index rod with 25 or 50 mm increments)

Electrical

Time Accuracy and Stability	0.005%, 0.0002% / °C
Power Supply Stability	0.01% / °C
Stored Power	30 watt hours
Battery Recharge Time	14-16 hours (automatic cutoff)
Charger	110/220 VAC, 50-60 Hz or 12-14 V DC
Readout	4 x 16 alpha-numeric liquid crystal display

Notes:

Gauge returns to Gauge Ready (power saving mode) after two minutes of inactivity, except in standard, stat test, drift test, and in nomograph programs when a 30-minute delay is provided. After 5 hours of inactivity, gauge performs complete power shutdown.

Battery packs are fully protected against overcharge and over discharge. Remaining battery voltage is indicated on the display.

Emergency Use - Capable of operation with D size alkaline batteries.

