Humboldt’s HS-5001EZ Moisture/Density Gauge is just that — easy. Easy to operate, easy to power and easy to service. The EZ gauge features a menu-driven control panel with easy-to-use, built-in test routines and auto features, making testing a quick and accurate operation. It also features our innovative trigger release handle that eliminates pinched fingers while providing smooth operation.

The EZ’s versatility allows it to measure density through direct transmission and backscatter modes, as well as including thin lift and trench modes, as well as moisture determinations. The gauge uses an advanced microprocessor-based technology to provide highly-accurate measurements of density and moisture that are automatically computed for direct readouts of wet density, dry density, moisture content, percent of moisture, percent of compaction (Proctor or Marshall), void ratio and air voids. The EZ Gauge complies with all pertinent standards: ASTM D6938, D2950, C1040 and AASHTO T310 and is calibrated by the Five-block calibration method.

**Easy to Operate**
Humboldt’s HS-5001EZ Moisture/Density Gauge is just that — easy to operate. The EZ gauge features a menu-driven control panel with easy-to-use, built-in test routines and auto features, making testing a quick and accurate operation.

**Easy to Power**
The EZ is powered by six standard AA alkaline batteries, which provide up to 1400 hrs of service. No chargers are needed and you can buy batteries almost anywhere, including the corner convenience store.

**Easy Self Repairs**
The EZ gauge also uses a modular design, which allows it to be serviced in the field, if ever necessary. With this gauge, you don’t have to send it back to the factory for repairs, we’ll send you the necessary components and walk you through many of the repair procedures.
### Radioactive Materials Data Needed for License Application

<table>
<thead>
<tr>
<th>Radioactive Material</th>
<th>Chemical/Physical Form</th>
<th>Maximum Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cesium-137</td>
<td>Sealed Source Humboldt 2200064</td>
<td>Not to exceed 11 millicuries per source</td>
</tr>
<tr>
<td>Americium-241:Be</td>
<td>Sealed Source Humboldt 2200067</td>
<td>Not to exceed 44 millicuries per source</td>
</tr>
</tbody>
</table>

### Electrical

- **Displays**
  - HS-5001SD: TFT, color LCD with back-light, 16:9, 480 x 272 pixel
  - HS-5001EZ: 4 lines x 20 alphanumeric w/ backlit liquid crystal display
- **Timer Stability:** 0.01%
- **Power Supply Stability:** 0.10%
- **Power Source**
  - HS-5001SD: NiMH battery (AA battery optional)
  - HS-5001EZ: Six alkaline AA-size batteries
- **Power Consumption**
  - HS-5001SD: Active—110mA — Battery Life—60 hours runtime
  - HS-5001EZ: Active—6.5mA — Battery Life—1400 hours
- **Power Protection**
  - Main Batteries—Circuit Breaker
  - Regulated Supplies—Short Circuit Proof
- **Low Battery Condition**
  - LOBAT Alarm and Auto Shutoff for low and dead battery conditions
- **Battery Life**
  - Remaining Battery Life Automatically Estimated at Power-up by activating TEST routine

### Radiological

- **Gamma Source**
  - Material, Type and Amount: Cs-137, 370MBq (10mCi)
  - Special Form Registration: USA/0356/S-96 Rev 12
  - ANSI and ISO Class: ANSI 77C6653
- **Neutron Source**
  - Material, Type and Amount: Am-241: Be, 1.48GBq (40mCi)
  - Special Form Registration: CZ/1009/S-96 Rev 1
  - ANSI and ISO Class: ANSI 77C66545
- **Source**
  - Type: Sealed Source, Special Form
  - Housing: Stainless Steel, Double Encapsulated
  - Surface Dose Rates: 18.7 mrem/hr Maximum (Neutron and Gamma)
  - Transit (shipping) Case: DOT 7A, Type A, Yellow II Label, O.2 TI

### Mechanical

- **Operating Temperature:** 14 to 158°F (-10 to 70°C) ambient, 347°F (175°C) Material Surface
- **Storage Temperature:** -70 to 185°F (-55 to 85°C)
- **Humidity:** 98% without condensation, Rain-Resistant Construction
- **Vibration:** 0.1" (2.5mm) at 12.5 Hz

### Measurements

- **Density at 125 pcf (2000 kg/m3)**
  - Direct Transmission, 6° (150mm): 15 seconds (Fast), 1 minute (Std.), 4 minutes (Slow)
  - Precision, pcf (kg/m³): ±0.5 (8), ±0.25 (4), ±0.13 (2)
  - Chemical Error, pcf (kg/m³): ±1.0 (16), ±0.5 (8), ±0.1 (4)
  - Surface Error, pcf (kg/m³): ±0.5 (8), ±0.5 (8), ±0.5 (8)
  - Measurement Depth: 2 to 12" (50 to 300mm)
- **Backscatter, 3.5° (88mm)**
  - Precision, pcf (kg/m³): ±1.0 (16), ±0.5 (8), ±0.25 (4)
  - Chemical Error, pcf (kg/m³): ±2.5 (40), ±2.5 (40), ±2.5 (40)
  - Surface Error, pcf (kg/m³): ±3.0 (48), ±3.0 (48), ±3.0 (48)
  - Measurement Depth: 3.5° (88mm)
- **Moisture at 10pcf (160kg/m3)**
  - Precision, pcf (kg/m³): ±0.5 (8), ±0.25 (4), ±0.13 (2)
  - Surface Error, pcf (kg/m³): ±0.25 (4), ±0.25 (4), ±0.25 (4)
  - Measurement Depth: 4-8" (100 to 200mm)

### Dimensions/Weight

- **Gauge**
  - Dimensions (base): 15.75" x 8.66" x 5.5" (400 x 220 x 140mm)
  - Handle Height: 18" or 21.5" (450 or 550mm)
  - Weight: 30 lbs (13.6kg)
- **Reference Standard**
  - Dimensions: 13.8" x 7.8" x 3" (350 x 200 x 75mm)
  - Weight: 10 lbs (4.5kg)
- **Transit Case**
  - Dimensions: 31" x 14" x 19.5" (787 x 356 x 495mm)
  - Weight: 31 lbs (11.8kg)
- **Accessory Case (loaded)**
  - Dimensions: 19.7" x 9.8" x 5" (500 x 250 x 125mm)
  - Weight: 16 lbs (7.3kg)
  - Total Shipping Weight: 90 lbs (41kg)