

# Tolteq iSeries Directional Module (iDM)

The Tolteq™ iSeries directional module (iDM) offers extensive logging capabilities and data analysis through the Tool Tracker™ system. The iDM provides accurate data on parameters such as inclination, azimuth, and RPM, and a team of experienced technical experts stands ready to assist. The iDM’s compact design gives it improved resistance to the harsh effects of shock and vibration, and the tool typically surpasses 9,000 hours of working time. This reliability, combined with the tool’s constant maintenance and updating through firmware updates, ensures the iDM’s value for your drilling operation.



## Features and Benefits

- Operational time and environment history recorded in internal memory\*
- On-board rotation detection
- Shock, vibration, and RPM pulsed to surface in real time
- Addition of new rotation sequence
- Advanced internal logging\*
- Internal current usage logged to memory\*
- Smart power management—efficient battery switching and logging of voltage and current
- Fluxgate magnetometers
- Quartz-flexure accelerometers
- Legacy compatible
- Enhanced circuit protection
- Calibration coefficients included directly into module memory
- Quality Tolteq wiring inside with strain relief connectors and high-temperature mesh covering for wires
- Shorter, more rugged design

\*Requires Tool Tracker to download

## Electrical Specifications

Operating voltage range:.....10 to 30 V  
 Current at 28 V:.....100 mA max, 10 mA idle  
 Power usage: .....0.25 W idle, 3 W peak

## Mechanical and Environmental Specifications

Outside diameter.....1.875 in. (47.6 mm)  
 Length (w/end caps)..... 56.73 in. (1.44 m)  
 Operating temperature.....32 to 347°F (0 to 175°C)  
 Survival temperature.....-40 to 365°F (-40 to 185°C)  
 Vibration, random.....20 g RMS, 10 to 200 Hz  
 Shock.....1,000 g, 0.5 mSec, half-sine

## Instrument Accuracy Specifications

Inclination:  
 Absolute.....±0.1°  
 Spread.....±0.1°  
 Azimuth (magnetic dip angle at <70°):  
 at 5° inclination: absolute.....±1.2°  
 spread.....±1.0°  
 at 10° inclination: absolute.....±1.0°  
 spread..... ±0.75°  
 at 90° inclination: absolute..... ±0.5°  
 spread..... ±0.5°  
 Toolface accuracy, axial rotation, 10 through 90 inc..... ±1.0°  
 Total g field accuracy, absolute..... ±3.0 mg  
 Total H field accuracy, absolute..... +/- 4.0 mGauss  
 RPM measurements, 10 to 255 RPM.....±0.5% of value