Pile Installation Recorder (PIR) Specifications 

Main Unit
Size: 60 x 180 x 228 mm
Weight: 1.5 kg
Mounting: Inside crane cabin
User Interface: High Visibility Color LCD with LED Backlighting
Power: 12 or 24 V DC (Typically uses crane battery).
Temp Range: 0° to 40° C, operating; -20° to 65° C storage.
Electronics: PC compatible processor, running Microsoft Windows® XP; 32-bit Microprocessor with 10-bit Analog to Digital Converter
Data Storage: Internal 40 GB Solid State Drive (SSD)
Data Export: USB
Printer Interface: USB

Flow Meter
Type: Magnetic Flow Meter
Mounting: In line with main grout line, 76 to 152mm diameter
Size: 450mm x 450mm x 915mm
Weight: 45 kg
Max Flow Rate: 625gpm with 76mm grout line; 2440gpm with 152mm grout line
Accuracy: ±2%

Grout Pressure Measurement Unit
Type: Pressure transducer
Mounting: On magnetic flow tube
Max Range: Up to 1000 PSI
Output Signal: 4-20mA output

Torque Measurement Unit
Type: Pressure transducer (hydraulic pressure applied to gear motor - “torque pressure” – relates to auger torque)
Mounting: On Hydraulic line powering the gear box
Max Range: Up to 10000 PSI
Output Signal: 4-20mA output

Depth Measurement Unit

<table>
<thead>
<tr>
<th></th>
<th>Wireless (US patent No. 8612175)</th>
<th>Conventional (wired)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type:</td>
<td>Rotary encoder on spring tensioned arm-assembly</td>
<td>Rotary encoder on a self-retracting reel</td>
</tr>
<tr>
<td>Mounting:</td>
<td>Attaches to auger gear box</td>
<td>In boom of crane, cable attaches to gear box</td>
</tr>
<tr>
<td>Size:</td>
<td>600mm x 150mm x 150mm</td>
<td>305mm x 910mm x 910mm</td>
</tr>
<tr>
<td>Weight:</td>
<td>12kg</td>
<td>73kg</td>
</tr>
<tr>
<td>Max Range:</td>
<td>200m</td>
<td>49m</td>
</tr>
<tr>
<td>Resolution:</td>
<td>0.6mm</td>
<td>0.6mm</td>
</tr>
</tbody>
</table>
**Wireless Rotation Measurement Unit**
- Type: Proximity switch
- Mounting: Mounts on gear box
- Size (diameter x length): 18mm x 50mm
- Weight: 114g
- Functionality: Normally open
- Max Switching Frequency: 200 Hz
- Sensing range: 10 mm
- Repeatability: .01 mm

**Wireless Transmitter**
- Size: 60mm x 76mm x 175mm
- Weight: 0.7 kg
- Transmission Range: 100m
- Frequency: 2.4Ghz
- Electronics: 32 bit 24 MHz microcontroller, 12 bit digital to analog converter
- Mounting: On auger gear box
- Power: Rechargeable battery, size 60mm x 76mm x 175mm, run time at least 24hrs
- Temp Range: 0° to 40° C, operating; -20° to 65° C storage.

**Other**
- Paper Summary Print Out for each Pile
- User selectable depth increment
- Results in SI or English units
- Includes PIRPLOT Software License
- Technical manuals and support
- One year warranty on main unit.