Pile Installation Recorder (PIR-Q) 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® 10; 32-bit Microprocessor with 10-bit Analog to Digital Converter
Data Storage: Internal 128 GB Solid State Drive (SSD)
Data Export: USB
Printer Interface: USB

Flow Tube-Meter

Type: Magnetic Flow Meter
Mounting: In line with main grout line, 76 to 152mm diameter
Size: 775mm x 405mm x 470mm
Weight: 47 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><strong>Type:</strong></td>
<td>Rotary encoder on spring tensioned arm-assembly</td>
<td>Rotary encoder on a self-retracting reel</td>
</tr>
<tr>
<td><strong>Mounting:</strong></td>
<td>Attaches to auger gear box</td>
<td>In boom of crane, cable attaches to gear box</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>600mm x 150mm x 150mm</td>
<td>305mm x 910mm x 910mm</td>
</tr>
<tr>
<td><strong>Weight:</strong></td>
<td>12kg</td>
<td>73kg</td>
</tr>
<tr>
<td><strong>Max Range:</strong></td>
<td>200m</td>
<td>49m</td>
</tr>
<tr>
<td><strong>Resolution:</strong></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 24 hours  
**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  
One-year warranty on main unit  
Technical manual provided in PDF form on a USB drive