



Pile Installation Recorder (PIR) Specifications

February 2014

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

PIR Viewer (optional)

Physical:

Size: 135 X 104 X 52 mm

Weight: 0.45 Kg

Sunlight readable VGA color display for any lighting conditions, resolution 640 x 840 pixels

Screen size: 9.4 cm (3.7")

Temperature Range: Operating: 0 to 40° C; Storage 20 to 65° C

Powered by Internal Battery (8 hours duration)

Electronic

Microprocessor: PXA270 @ 520 MHz

Data Storage: Built in 2 GB drive

Data Retrieved: USB

Wireless: 30m range; 802.11b/g/n (WIFI) Link with PIR Main Unit

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: $\pm 2\%$

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



Pile Dynamics, Inc.

Quality Assurance for Deep Foundations

Depth Measurement Unit

	Wireless (US patent No. 8612175)	Conventional (wired)
Type:	Rotary encoder on spring tensioned arm-assembly	Rotary encoder on a self-retracting reel
Mounting:	Attaches to auger gear box	In boom of crane, cable attaches to gear box
Size:	600mm x 150mm x 150mm	305mm x 910mm x 910mm
Weight:	12kg	73kg
Max Range:	200m	49m
Resolution:	0.6mm	0.6mm

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.