



Quality Assurance for Deep Foundations

## ***Shaft Quantitative Inspection Device\* (SQUID) Specifications***

February 2016

### **SQUID Body**

Size (height x hexagon largest diagonal): 629 x 647 mm (24.75 x 25.5 inches)  
Weight (including penetrometers and contact plates): 188 kg (415 lbs)  
Material: Stainless Steel and Aluminum  
Standard Kelly bar connection sizes: 101.6 mm<sup>2</sup> (4 in<sup>2</sup>), 152.4 mm<sup>2</sup> (6 in<sup>2</sup>), 203.2 mm<sup>2</sup> (8 in<sup>2</sup>)  
Cable Length: 61 m (200 ft) standard; 152m (500ft) cable length optional  
Temperature Range: -20 to 55°C operating; -40 to +85°C Storage  
Applied force limit: 135 kN (30 kips)

### **SQUID Penetrometers**

Material: Stainless Steel  
Number of penetrometers: 3 standard  
Penetrometer tip: area 10 cm<sup>2</sup> (1.55 in<sup>2</sup>) standard, larger tips optional; replaceable  
Maximum penetrometer pressure: 100 MPa (14 ksi/2000 ksf)  
Penetrometer pressure measurement resolution: 0.1 MPa (14 psi/2 ksf)  
Maximum depth of penetration: 150 mm (6 in)

### **SQUID Contact Plate(s)**

Size: 152 mm (6 in) OD; 46 mm (1.8 inch) ID; thickness 25.4 mm (1 inch)  
Weight each contact plate assembly: in air 6.75 kg (14.9 lbs); in water: 5.85 kg (12.9 lbs)  
Contact Plate pressure (free to move): in air 4 kPa (0.58 psi/0.083 ksf); in water 3.5 kPa (0.50 psi/0.072 ksf)  
Contact plate displacement measurement resolution: 0.004 mm (0.0002")  
Maximum contact plate movement: 150 mm (6 in)

### **Wireless Transmitter**

Transmission Range: 100m  
Frequency: 2.4 GHz  
Output power: 18 dBm  
Mounting: On cable reel  
Temperature Range: -10 to 55°C operating; -20 to 70°C storage

### **SQUID Tablet**

Size: 320 X 250 X 68 mm (12.6 x 9.8 x 2.7 inches)  
Weight: 5 Kg (11 lbs.)  
Temperature range: 0 to 40°C operating; -20 to 65°C storage  
Display: 26.4cm (10.4"), sunlight readable, resolution 1024 X 768; capacitive touch screen  
Video Outputs: HDMI, VGA  
Battery Power: 4 hour continuous data collection 12 V battery + back-up battery standard  
Charging time: 6 Hours max; 120/240 charger input voltage  
Operating System: Microsoft Windows® 7  
Data storage and ports: 60 GB SSD internal drive; Ethernet port; 4 USB ports  
Optional external accessories: USB keyboard and mouse  
Remote Operation: SQUID Tablet is equipped for high speed internet access and remote operation  
Technical support: SQUID Tablet is equipped for remote error checking and updating  
Units of operation: Traditional US, SI, or Metric  
Full one year warranty on parts and labor

\*Patent Pending