

## Marian Technologies

# PT-Tracker

## Model 1013



- Monitors Pressures and Computes Torque
- Ideal for Helical Pier/Anchor installations
- Generates graphs of torques and pressures
- Requires no 'special' factory setup
- Real-time display of Torque and Pressures
- Easily adaptable of all types of equipment
- Provides accurate and lasting records
- Confirms engineering analysis
- Requires no operator intervention for use
- Crosscheck material usage
- Rugged and reliable
- Data uploads to a standard PC
- Easy click and paste report generation
- Internal real-time clock
- Non-volatile data memory – weeks of data
- Quick & easy to install
- Heavy Duty cables – custom lengths

The PT-Tracker Model 1013 is the latest in electronic torque indicators / data loggers. Model 1013 is similar to the popular PT-Tracker Model 1003c. It also has several features of its smaller brother of the **DPD Series**. It is the best of both worlds. It can start out as the low-end torque indicator and can be upgraded in the future to a full featured data logger.

The **PT-Tracker** is the field-proven industry standard for helical pier/anchor torque indication and data logging. It provides the most accurate pressure, differential pressure and torque readings. It differs from the other methods of installation monitoring in that it creates an electronic data log of the entire installation process. This data can be transferred to a PC and graphs can be easily generated using the application software that comes with the unit. Data can also be manipulated using typical spreadsheet software such as Microsoft® Excel. By looking at the plotted data it is possible to imply pier depth information and cross check actual material usages.

As the helical pier/anchor is turned into the ground, the hydraulic pressure of the installation equipment increases. The difference between the inlet and outlet side of the drive motor is directly related to the amount of torque being delivered to the pier sections. By applying the parameters of the equipment specifications along with the differential pressure, the actual torque value is computed and displayed in real time.

The **PT-Tracker** continuously monitors, records and displays the measurements taken by pressure transducers installed in the hydraulic lines of the drive equipment. Unique and proprietary data collection algorithms compress the data. The **PT-Tracker** can typically store several weeks worth of actual installation data. Increased memory options are available to expand active data collection capabilities for several months. The unit also has a real-time clock that is battery backed-up so all the data is properly tagged with the actual time.

The unit is usually located where operators can have easy access to view it. This can be inside the cab of the equipment or outside just about anywhere the operator is positioned. It has a large, 6 digit very readable LCD display. It displays the torque, input pressure, output pressure, differential pressure readings and time & date. Individual threshold setting can be set such that if a threshold value is exceeded, the displayed value flashes to alert the operator. An auxiliary communication port is used up-load data to a laptop computer.

Pressure Transducers sense the hydraulic pressure in the inlet and output sides of the hydraulic drive and converts the pressure into a voltage that can be stored in the event memory. Two 5,000 psi pressure transducers are supplied with each unit.

All electrical cables can be supplied to specific customer lengths. Initial set-up on equipment usually takes less than an hour. Subsequent set-ups only take a few minutes.

## Technical Specifications:

### **Robust Commercial/Industrial Packaging**

Environmentally sealed (IEC class IP65)  
Aluminum die-cast enclosure / powder coat finish

**Accuracy:** Pressure +/- 1% of reading

**Compact Size** = 4.7" x 7.4" x 1.5"

**Power** = 12vDC @ <150ma

### **Cable Connections**

Environmentally sealed  
IP68 – watertight protection  
High quality & reliable  
Threaded Locking rings

### **Microprocessor Control**

High performance RISC CPU / 24Mhz  
Memory: 32k program, 1.5kRam, 256 EEPROM

### **Operating Temperature**

-22f to 130f (-30c to 55c)

### **Serial Communications**

Connects directly to PC or laptop  
RS232 standard

### **External User Mark**

Adds a user mark to data

### **Advanced Data Logging**

Data compression  
Selectable sampling rates  
Advanced digital filtering

### **OPTIONS:**

#### **Cables**

Transducer junction box – up to 50ft  
PT Cables – up to 25 ft  
Power cable – 25ft  
Communications RS232 – 12 ft  
Dual speed contact – 6ft

#### **Real Time Clock**

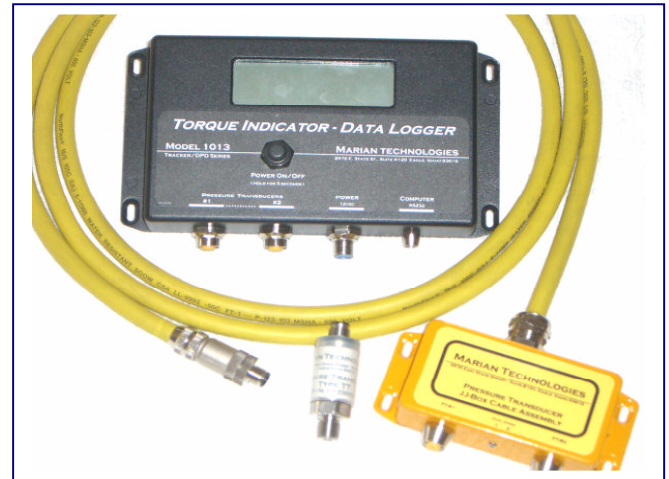
Accuracy +/- 2 seconds per day  
Automatic leap year adjustment

#### **Non-Volatile On-Board Data Storage Memory**

128k standard = approx 12 days of use  
Expandable to 2 M (optional)

#### **Front Panel Controls**

Function selection  
Programmable threshold  
User mark



## Application Software Features:

- Password security
- Quick upload mode
- Memory clear function
- Programmable baud rates
- Communication port selections
- Selectable pressure transducers
- Set time & date
- Programmable sampling rate
- Standard motor selections
- Programmable motors
- Programmable alarm thresholds
- Real time displays

## PC Requirements:

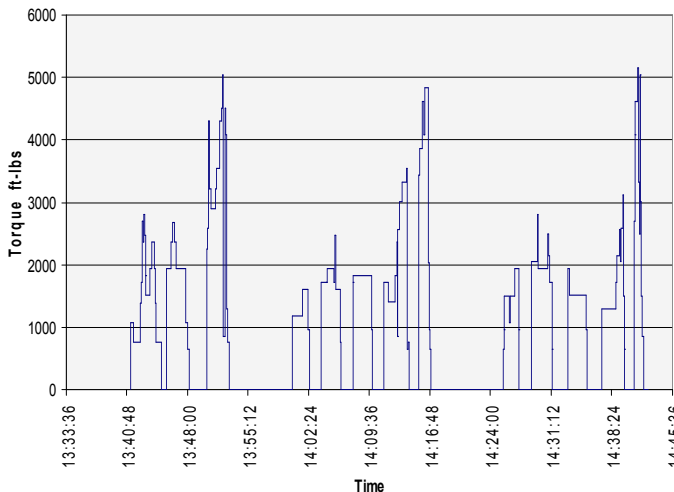
To install the client software you must have one of the following operating systems with Microsoft Internet Explorer 5.01 or later installed on the host computer.

#### **Operating System Compatibility:**

Microsoft Windows 98  
Microsoft Windows 98 Second Edition  
Microsoft Windows Millenium Edition (Windows ME)  
Microsoft Windows NT 4 (Workstation or Server) service pack 6a  
Microsoft Windows 2000 (Professional, Server, or Advanced Server)  
Microsoft Windows XP (Home or Professional)  
Windows Servers 2003 family

**CPU:** Pentium 90MHz or minimum to run the operating system, whichever is greater.

**RAM:** 32MB minimum, 96+ recommended.



### **Marian Technologies**

**2976 East State Street**  
Suite #120 - 301  
**Boise Idaho 83616**  
**Phone: (208) 938 - 1818**  
**Fax: (208) 938 - 4245**