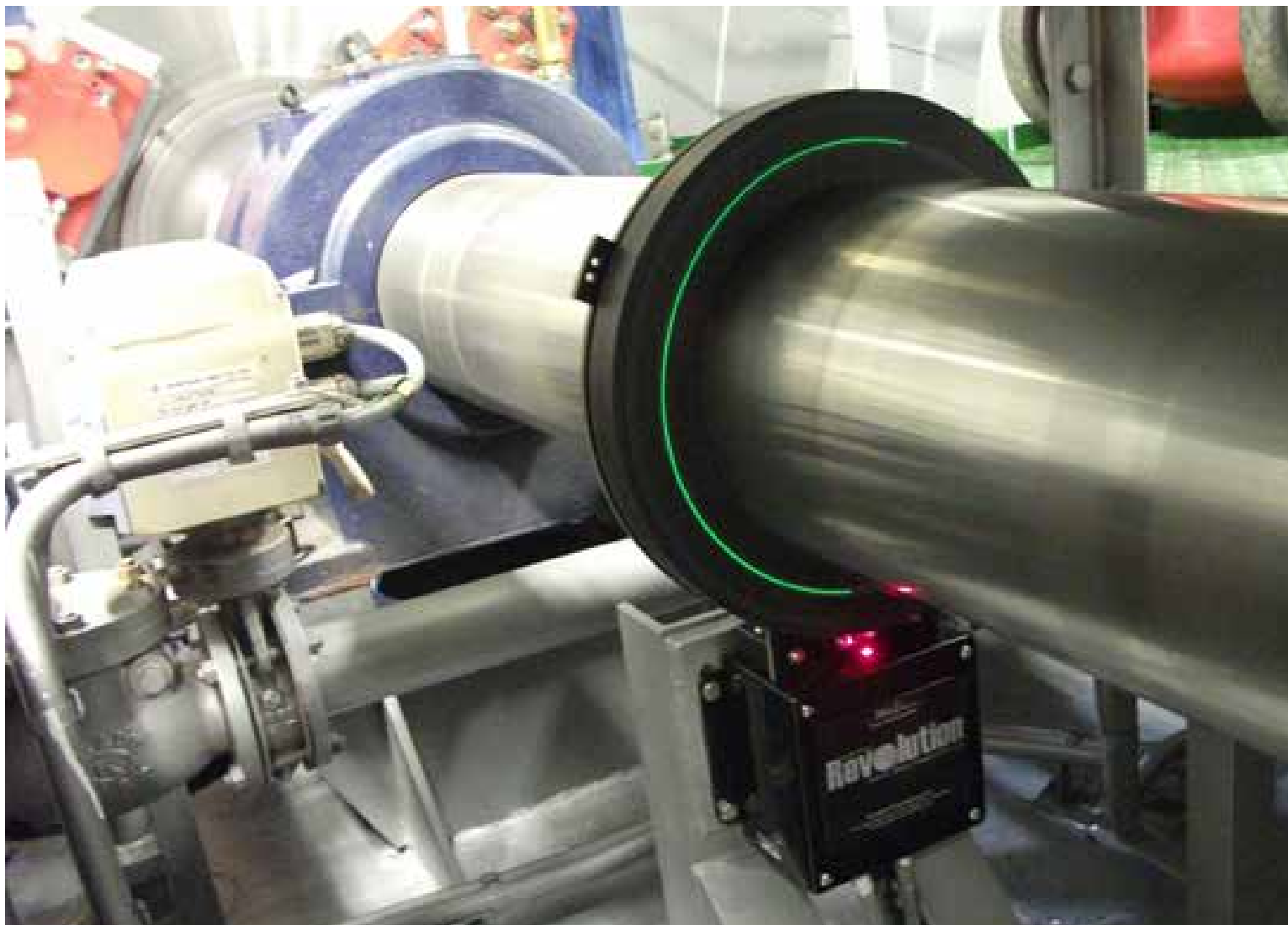


Torque & Power



Measure Torque & Power of any rotating shaft

Measure Torque & Power of any rotating shaft

Why do I need to measure torque and power?

Optimize Fuel Efficiency, Marine – Verify the true Power output of the engine(s). The true Power output is critical in the propulsion efficiency analysis and emissions analysis. Compare Fuel Input to Engine Power Output to Vessel Speed.

Diagnostics – Learn how much mechanical Power (Hp or kW) is truly needed to accomplish a task. Learn why there is a humming noise (torsional vibration.) Learn why the coupling broke (excessive start-up torque.)

Preventive Maintenance – Diagnose and eliminate a torsional vibration condition that, if left unchecked, will result in premature fatigue and/or failure of the equipment.

Load Management – Continuously monitor the material load on conveyor equipment, as indicated by the Torque on the drive shaft, and speed up or slow down the process accordingly; even stop the process altogether in the case of a material jam, before any damage can occur to the equipment. TorqueTrak Revolution monitoring instrument, Response Time: 2 msec max.

High/Low Torque Alarm – Continuously monitor the shaft Torque to make sure the load stays within safe operating limits, thereby preventing premature fatigue and/or failure of the equipment. Use the TorqueTrak Revolution output signal to sound an alarm and/or shut down the equipment when the load exceeds the safe limit. TorqueTrak Revolution Response Time: 2 msec max.

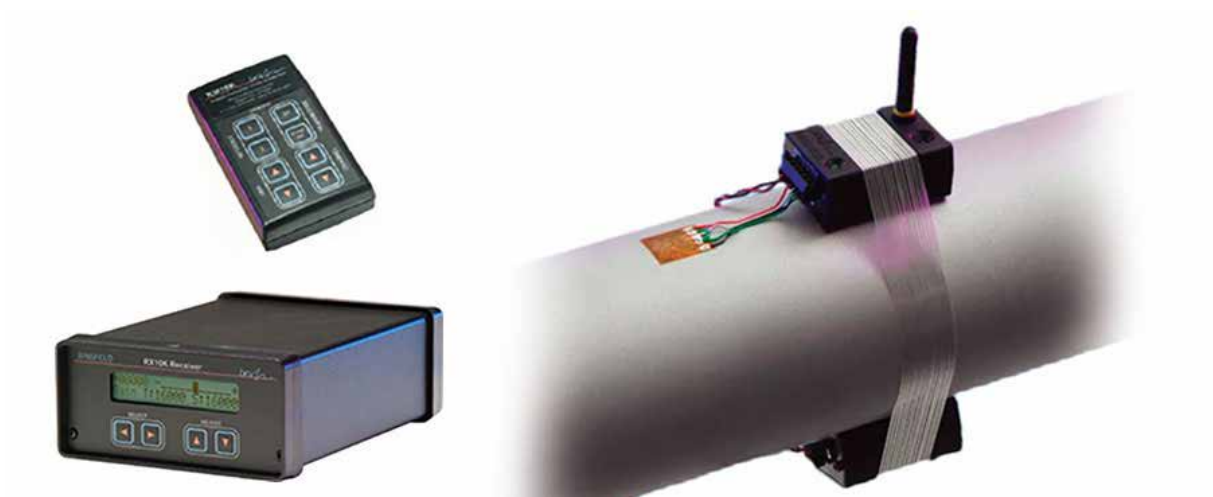
These are some of the basic ways Torque & Power measurement can save time and money for just about any operation where there is a rotating shaft.

The TorqueTrak instruments are used in many different industries and applications all around the world.

TorqueTrak 10K

TEMPORARY TEST MEASUREMENT

Measuring live torque in real time is easier than ever with the new TorqueTrak 10K telemetry system. Convert virtually any drive shaft into a rotating torque sensor by simply mounting the wireless torque transmitter, battery and a torque sensitive strain gage to the shaft. Use the infrared remote control to adjust transmitter gain, activate the remote shunt calibration or switch the transmitter to standby power mode. The multi-line LCD receiver display and keypad make system adjustments straightforward. Low power consumption in the rugged transmitter allows longer battery life while sophisticated electronics assure accurate and reliable torque data output.



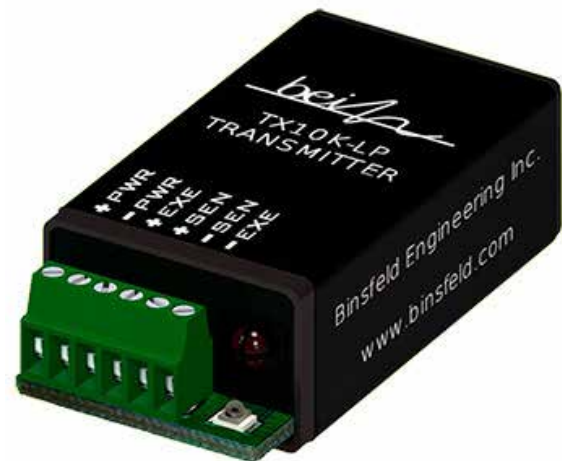
Features and benefits:

- Easy to Use - Fits any size shaft, any torque level. No machine modifications or disassembly required. Calibration is done off-the-shaft. Receiver display and keypad offer user-friendly interface.
- Infrared Remote Control - Control transmitter operation including channel select, gain/range, shunt calibration and low-power standby mode.
- Reliable Data Transmission - Clean, noise-free data signal through analog voltage output or digital data output via RS-232.
- Standby Power Mode - Extends transmitter battery life without disconnecting battery.
- 16 Channels - 500 Hz Frequency Response Use multiple systems simultaneously.
- Rugged - Reinforced, injection-molded transmitter housing is built for demanding applications and features V-groove and tape slot for secure mounting.
- User Adjustable Gain - Amplify the strain/torque signal to the most useful level.

TorqueTrak 10K-LP

COMPACT, TEMPORARY TEST MEASUREMENT

Measuring live torque in real time is easier than ever with the new TorqueTrak 10K-LP (Low Profile) telemetry system. Convert virtually any drive shaft into a rotating torque sensor by simply mounting the wireless torque transmitter, battery and a torque sensitive strain gage to the shaft. At only 0.70 inches tall, the LP is ideal for applications with very low radial clearance (area around the shaft) such as on vehicle drive shafts. Use the infrared remote control to adjust transmitter gain, activate the remote shunt calibration or switch the transmitter to standby power mode. The multi-line LCD receiver display and keypad make system adjustments straightforward. Low power consumption in the rugged transmitter allows longer battery life than the TorqueTrak 10K while sophisticated electronics assure accurate and reliable torque data output.



Features and benefits:

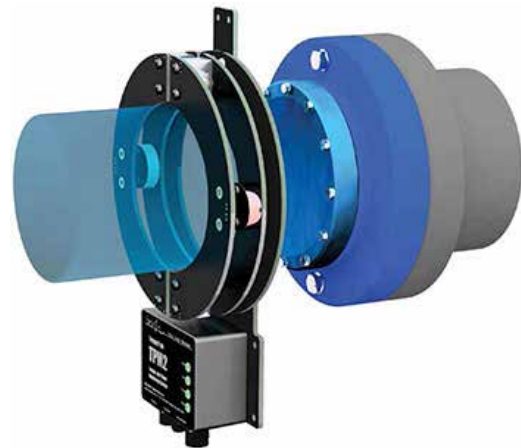
- Easy to Use - Fits any size shaft, any torque level. No machine modifications or disassembly required. Calibration is done off-the-shaft. Receiver display and keypad offer user-friendly interface.
- Infrared Remote Control - Control transmitter operation including channel select, gain/range, shunt calibration and low-power standby mode.
- Reliable Data Transmission - Clean, noise-free data signal through analog voltage output or digital data output via RS-232.
- Standby Power Mode - Extends transmitter battery life without disconnecting battery.
- 16 Channels - 500 Hz Frequency Response Use; multiple systems simultaneously.
- User Adjustable Gain - Amplify the strain/torque signal to the most useful level.

TorqueTrak TPM2

CONTINUOUS TORQUE AND POWER DATA FROM A ROTATING SHAFT

The TorqueTrak Torque and Power Monitoring System (TPM2 series) is a rugged precision instrument designed to measure torque and/or power on rotating shafts in real time. The TPM2 uses RS422 full duplex, point - to - point serial interface communication. The TPM2 is custom designed to fit on shafting up to 40 inches (1016 mm) in diameter. Machine disassembly is not required.

- Software for setup and configuration
- Digital RS422 output
- Splash resistant control box
- Selectable input ranges
- High RPM / centrifugal g-force rating



Features and benefits:

- Easy Installation - Rotating Collar and Stationary Ring are split and bolt together around the shaft. No Machine assembly or Shaft modification is required.
- Robust Construction - Sturdy hardware and electronics, built for demanding environments.
- Reliable Operation - Inductive power and data transfer with generous clearance between stationary and rotating parts. No wear surfaces.
- System Status Indicators - Confirm proper operation at a glance. Expedites troubleshooting.
- Easy-on Collar - Rotating Collar is designed to accommodate small variations in shaft diameter and clamps to the shaft using standard tools.
- Communications Made Easy - High-speed bi-directional communications link interfaces with PC or PLC. User-selectable sample rate up to 4800 samples/second.
- Product Support - Backed by BEI's proven outstanding customer service, before and after the sale.

TorqueTrak Revolution

CONTINUOUS TORQUE AND POWER (HP OR KW) DATA FROM A ROTATING SHAFT

The TorqueTrak Revolution Series is a torque and power monitoring and control system that features inductive (non-contact) power and data transfer for continuous operation. Designed for applications that require ongoing measurement of torque and/or horsepower, the TorqueTrak Revolution system is custom-machined to install on existing shafting up to 40 inches (1016 mm) in diameter. Machine disassembly is not required. The microprocessor-based system features 14-bit signal processing to provide precise, reliable data in real time during actual machine operation.



Features and benefits:

- Easy Installation - Rotating Collar and stationary Power Coil are split and bolt together around the shaft. Shaft modification is not required.
- Convenient Calibration - Use at factory settings or utilize easy scaling and adjustment tools. No tuning required.
- Reliable Operation - Inductive power and data transfer with generous clearance between stationary and rotating parts. No wear surfaces.
- Digital Data Transmission - Delivers a clean, noise-free data signal with 14-bit resolution.
- Robust Construction - Sturdy hardware and electronics, built for demanding environmental conditions.
- Onboard Intelligence - System status indicators confirm proper operation and aid in troubleshooting.
- Product Support - Backed by BEI's proven outstanding customer service, before and after the sale.



MARINE

- Torque Measurement Reveals Hull Fouling
- Ship Power Plant Protected by High Torque Alarm
- Ship Propulsion System: Navy Relies on Telemetry for Sea Trials
- Ghost Torque Captured Onboard Navy Ship
- Steam Engines: Determine Horsepower Demand
- Marine Propulsion System Upgrade Trials
- Setting Engine Maximum Power Output
- Damaging Torsional Vibration Identified & Eliminated
- Torsional Vibration on Tanker Shaft



ENERGY

- Water Turbine Performance Testing
- Bending Strain on Wind Turbine Blades
- Torsional Vibration on Refinery Fan
- Coupling Meltdown on Pumping Station
- Torque Data Key to Wind Turbine Design and Production
- Determining Stresses on Life-Limited Components
- Torsional Analysis Resolves Pump Motor Failure
- Reciprocating Compressor System Failure: Resolved
- Torque and Temperature on Methane Booster



INDUSTRIAL

- Torque Data Reveals Gearbox Weakness
- Column Pump Torque: Quick and Easy with Binsfeld Telemetry
- Viscosity Measurement in Mixer Tanks
- High Torque Alarm Prevents Damage to Gearbox
- Steel Roll Stand: Torque Measurements Detect Binding



MANUFACTURING

- Automotive Stamping Press: Data Reveals Design Weakness
- Rolling Mill Performance Problem Diagnosed and Solved
- Paper Machine: More Horsepower or More Motor?
- Hot Strip Mill: Source of Torque Overloads Identified
- Automated Torque Measurement Saves Time And Money
- Conveyor Damage Avoided by Continuous Torque Monitoring



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