

TECHNICAL DATA

TorqueTrak SPM-iON

Torque and Power Monitoring System



MODULAR

The chain link design of the collar allows for easy change between shaft diameters. Chain links are quickly added or removed using standard hardware.

FAST LEAD TIMES

Due to the chain links design of the collar, parts are stocked and ready to ship. No time-extensive machining required.

NO BASE MOUNT REQUIRED

The stand-alone shaft “clamp-on” collar assembly requires no base mount. This eliminates the need for custom mounting brackets or on-site welding. Installation is dramatically simplified.

HIGH ACCURACY

The use of a strain gage sensor and a 24-bit ADC ensure the most accurate measurements possible.

MULTIPLEXING

A single receiver can work with up to four shaft collar transmitters, helping reduce install complexity and overall cost.

BUILT-IN GYRO

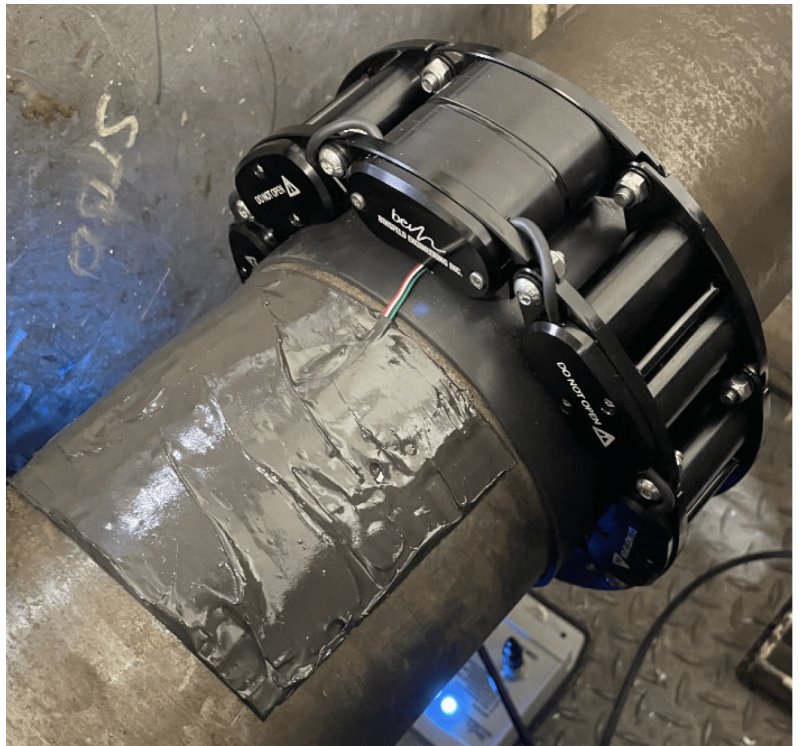
Shaft speed is measured with internal gyro, eliminating need for more cable runs. Power is automatically calculated from torque and speed measurements.

LOW MAINTENANCE

Highly optimized electronics ensure minimal electricity consumption for the TX, with battery autonomy of two years. Sleep mode is also available when the shaft is not turning, extending the battery life even longer. Battery replacements take minutes.

Shaft Power Meter Made Easy.

The TorqueTrak SPM-iON is a state-of-the-art strain gage based solution designed to provide torque, RPM, and power measurements on rotating shafts, without the need for shaft disassembly or modification. The system only includes two primary components and does not require a base mount. The innovative chain link design allows for fast lead times, simplified installation, and easy interchangeability between shaft sizes. Electronics are encased in potting and protected by a strong metallic housing, ensuring reliable long-term operation in the most abusive environments.



PRODUCT SPECIFICATIONS

TorqueTrak SPM-iON Shaft Collar Transmitter

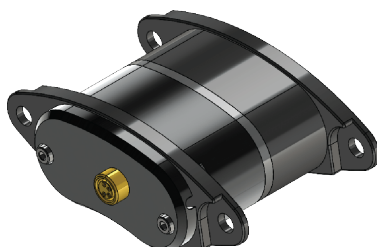
Electrical Consumption	<1 mA @ 3.6 V
Batteries	3.6 V LiSoCl2 (lowest self-discharge)
Strain Gage Sensor	350 Ω torque pattern, welded or bonded
Autonomy	2 years on 10x 3.6 AH, 3.6 V batteries
ADC Resolution	24 bits
Torque Accuracy	$\pm 0.1\%$
RPM Accuracy	$\pm 1\%$
Maximum RPM	3000 rpm
Protection Rating	IP 65
Minimum Shaft Diameter	127 mm (5.5 in)
Signal Transmission	Up to 20 m (65 ft) line of sight

TorqueTrak SPM-iON Receiver

Supply Voltage	9 – 36 VDC
Current Consumption	40 mA max
Electrical Isolation	500 V
Storage Temperature	-40° C to 85° C (-40° F to 185° F)
Operating Temperature	-40° C to 85° C (-40° F to 185° F)
Humidity	10% to 90% non-condensing
Vibration	5 – 50 Hz @ 20 mm/s ± 1.0 g max
Conformity	CE Compliant
Degree of Protection	IP 65
Sampling Rate	4 samples per second
Protocol	Modbus RTU over RS-485
Multiplexing	Up to 4 TS shaft collar transmitters



Battery Link



Transmitter Link



Expansion Link



Wireless Receiver

