

# RTC 800

Reaction Torque Calibrator

Guarding Your Load<sup>®</sup>

Operator friendly two-line display with clear indication of Applied Torque from torque wrench.

The tool accommodates up to 2-1/2" square drive and 3-5/8" hex drive. Larger drive sizes available, including capacities to 50,000 ft-lbs.



**RTC-800 Display & Transducer (Typical)**

**SENTINEL**  
*The Load Management People<sup>®</sup>*

Proudly Serving the Petroleum Industry Since 1984.

- Rugged Construction
- Outstanding Accuracy
- Easy Maintenance
- Simple Diagnostics
- Solid State for Reliability

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## Operator's Display & Torque Transducer (One of Each Supplied)

The operator's display and torque transducer are intended for use in conjunction with the torque calibration fixture (pictured below) as a means of performing initial and periodic calibration checks of the Sentinel RT-800 bolt torque indicating system. The transducer has a working range from zero to as high as 50,000 ft-lbs (depending upon model), with the display providing real-time digital readout of the torque being applied to the transducer from the torque wrench drive socket. Because the transducer is not mechanically or electronically coupled to the torque wrench, the system provides an independently accurate measurement of output torque from the wrench.

The operator's display is provided with a mounting bracket which allows for temporary attachment to the calibration fixture while the system is in use. In addition, a storage case is provided to protect the display and transducer between uses.

Calibration of the transducer is performed to an internationally recognized standard and is traceable to a recognized standards laboratory.

## Torque Calibration Fixture



The torque calibration fixture (pictured to the left) is designed to replicate the mechanical and geometrical configuration of the flanged riser systems commonly in use in deepwater drilling operations. The mechanical strength of the fixture is such that it provides the ideal environment for calibration of the RT-800 bolt torque indicating system using the calibration transducer discussed in the previous section. The fixture allows for complete calibration of the RT-800 system prior to initiating riser running operations. The fixture may also be used for periodic calibration checks of the RT-800 while running riser.

The curvature of the simulated riser body is equivalent to 22", although alternative diameters are offered to meet client requirements. The entire assembly is hot-dip galvanized to prevent corrosion. In addition, a mounting bracket for the calibration display is provided, as well as two lifting pad-eyes and a two-legged sling.

## Technical Specifications (Transducer)

Torque Capacity:	25,000 – 50,000 ft-lbs, continuous
Overload:	150% of Capacity without damage
Sensors (8):	Full bridge 1000 ohm strain gauge
	Torque Transducer Body manufactured of 17-4PH stainless steel.
End Connections	2-1/2” Square Drive, male x female 3-5/8” Hex Drive, male x female Other end connections by request.
Accuracy & Non-Linearity:	< +/- 0.25%
Non-Repeatability:	< +/- 0.05%
Display Input Power:	4 x 1.5 Volt D-Cell Batteries.
Excitation Voltage:	5 Vdc recommended, 15 vdc maximum
Insulation Resistance:	> 500 Mohms @ 100 vdc
Data Exchange:	Instrument grade data cabling, run inside hydraulic hose conduit.
Operating Temperature:	20 to 135 degrees F
Compensated Temperature Range:	14 to 135 degrees F
Zero Temperature Coefficient:	< +/- 0.010 of Rated Load/deg F
Span Temperature Coefficient:	< +/- 0.010 of Rated Load
Environmental Protection Level:	IP67 (heavy pressure washing)
Calibration Error:	+/- 0.1% Capacity, full scale

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