

FASTENING, JOINING, & BOLTING

Making bolting sockets smarter

New World Technologies Inc
www.radtorque.com

An advanced torque tool that combines transducers in a custom socket measures the torque applied directly to individual nuts and bolts during a torque cycle. The new RAD Smart Socket by RAD Torque Systems is no larger than the standard socket it replaces.

Users of controlled bolting equipment, such as wind technicians and construction crews, apply a particular torque to a nut or bolt to induce a specified clamp load

in a joint. This ensures the fastener is adequately tight and will not come loose under general working conditions. This torque is typically applied using a torque wrench, impact wrench, hydraulic torque wrench, or pneumatic torque tool, which has been calibrated and certified to ensure accuracy and traceability. Accurate and repeatable applications of the required torque are essential to guarantee the joint's integrity.

Before the advent of Smart Sockets, traditional in-line or annular transducers were the only ways to control critical joints. But conventional tools can be cumbersome to use and add to the overall tool weight that must eventually be lugged uptower. Such drawbacks led the company to invent a smarter, streamlined solution to the audit process.

The Smart Socket uses the developer's transducer technology combined with a custom socket to measure the torque applied directly to each individual bolt or nut during a torque cycle. Peak torque levels are preset and fully calibrated at the factory and can be managed with the intuitive three-button display. The patent-pending design, which includes built-in display and connectivity to simplify its use, is no larger than a standard socket. The tool replaces a technician's existing standard socket and yet provides improved control and accuracy. The size and function make it a useful audit tool for inspecting bolted joints and on site calibrations. It comes in seven sizes with torque capacities to 6,000 ft-lbs.

In a standard audit mode the Smart Socket will display and log every peak torque value that is applied. When connected to a computer, the log provides a time stamp and measure for actual torque



The RAD Smart-Socket works with any torque applicator. Stored values download to a computer by a USB connection.

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on each fastener. Up to 750 peak torque values can be stored before it is necessary to upload this log to a computer and clear the memory. Alternatively, these values can be downloaded when needed at the end of the job or shift for integrity records and traceability.

The Smart Socket can be connected to any Windows based computer by USB cable. Once connected, a user-friendly software interface lets supervisors and managers set tool parameters, download the audit log, and switch between audit and target mode. From the interface, the socket can be configured for target mode to indicate a 'pass' or 'fail' with respect to a target torque within a user set degree of tolerance. This log will provide a time stamp, target torque, measured torque, and pass/fail rating for each use when connected to a computer. **WPE**

The **RAD Smart Socket** comes in seven standard sizes and tell of torques up to 6,000 ft-lb. End users will appreciate the reliability of the tool. It is 100% Canadian designed and manufactured.



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