



ETW-A Series Expert™ Electronic Torque Audit Wrench



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The new Ingersoll-Rand **ETW-A Expert** Electronic Torque Audit Wrench is designed to operate in two distinct modes. First, it can be used as a torque audit wrench for accurately auditing the residual torque on previously tightened threaded fasteners. It can also be used as a standard digital electronic torque wrench, either in peak torque or dynamic (track) torque mode.



To audit the residual torque dynamically, only two settings are required:

- Set the threshold 'snug' torque to approximately 50% of the expected residual torque.
- Set the capture angle.

With the initial application of torque, no rotation occurs. Torque is applied until the static friction is overcome and forward breakaway occurs, causing the fastener to rotate. At this point, the torque usually drops as the friction changes from static friction to dynamic friction.

Torque Mode (Normal)

When used in the **Normal (peak)** mode, the status of the tightening is compared to the upper and lower set process limits and is indicated by the tri-colored LED. This provides the user with a clear indication of the current tightening status at any point during the assembly process.

- Applied torque is between the set low torque and high torque limits – Green light is lit.
- Applied torque is between the set threshold and low torque limit – Yellow light is lit.
- Applied torque exceeds the set high torque limit – Red light is lit.

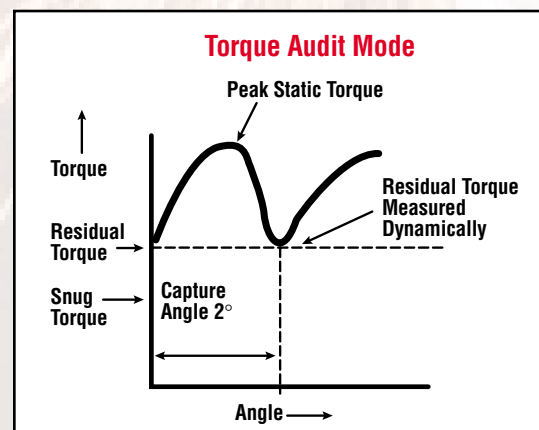
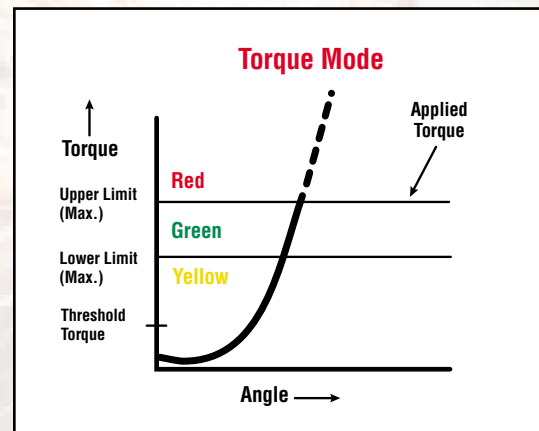
When used in the **Normal (track)** mode:

- The display shows the applied torque at the current moment in time.
- As the torque is released, the display will return to zero.

Torque Audit Mode (Instant)

When used in the **Instant** mode:

- The residual torque of a fastener is measured dynamically in the fastening direction.
- The torque is captured as the fastener is rotated through a pre-set small angle, usually 2° to 4° .
- The wrench ignores the static peak torque required to start the fastener and then takes a dynamic torque measurement.
- Variation due to operator influence in the process is reduced or eliminated by this mode.



Features and Benefits

- Large character LCD display for ease of programming and visual monitoring of torque values.
- Two modes, Normal for use as an electronic torque wrench and Instant for use as a torque audit wrench.
- Suitable for use with many styles of Sturtevant Richmond® interchangeable heads.
- Tri-color LED indicates cycle status.
- Right and left hand operation.
- Multiple torque units (Nm, Ncm, Kgm, Kgcm, lbft, lbin) to comply with global standards.
- Data transfer function to PC or printer via RS 232 port.
- Password protected.
- Stores data from last 200 cycles.
- Features IR TouchSync™ asset management connector.
- Powered by two 'C' cells (either 1.5v alkaline manganese or 3.6V lithium chloride cells).
- Low battery indicator with auto power-down to conserve battery life when not in use.
- On-board statistics (mean, range, sigma, max, min, %NOK, Cp, Cpk).
- Diagnostics for testing on-board circuits.
- Requires no ground reference for angle measurement.



Included with each ETW-A kit:

- ETW-A Torque Audit Wrench (25Nm, 75Nm or 180Nm).
- Carrying Case.
- User Operation and Maintenance Manual.
- Calibration Certificate traceable to NIST (National Institute of Standards and Technology).

Optional Accessories:

Printer Cable..... Part Number 80097777
PC Cable.....Part Number 80097793

Technical Data:

Model Number		ETW-A25	ETW-A75	ETW-A180
Torque Capacity	Nm/lbft	25 / 18	75 / 55	180 / 133
Torque Range	Nm/lbft	2.5-25 / 1.8-18	7.5-75 / 5.5-55	18-180 / 13-133
Torque Accuracy	%	±0.5 FS		
Torque Overload Capacity	Nm/lbft	30 / 22	90 / 66	225 / 164
Torque Modes		Normal: Peak / Track	Instant: Dynamic Torque Audit	
Torque Units		Ncm-Nm Kgcm – Kgm ozin – lbin – lbft	Ncm-Nm Kgcm – Kgm lbin – lbft	
Tightening Direction		CW/CCW		
Audit Angle Range		1° – 20°		
Angle Resolution		1°		
Operating Temperature		5° – 40° Celsius (42° – 104° Fahrenheit)		
Temperature Stability		±0.1% per °C		
Humidity		5% – 75% non-condensing		
Sealing		IP 40		
Weight		1Kg (2.2 lb)		
Length		510 mm (20 inch)		
Handle Diameter		38mm (1.5 inch)		
Square Drive A/F inches		1/4	3/8	1/2
Power		2 'C' Cells 1.5V alkaline manganese (3 months life approx.) 2 'C' Cells 3.6V lithium chloride (6 months life approx.)		

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