

# UNIVERSAL TORQUE WRENCH CALIBRATION MACHINE



Photo above shows a UTWCM with AWS Intelligent Inline Torque Transducers, Professional Transducer Display, and Laptop/Computer running ADMS Kepler 4 Software for Calibration & Conformity to ISO 6789:2017 Parts 1 and 2.

## DESCRIPTION

The all new AWS Universal Torque Wrench Calibration Machine (UTWCM) provides an efficient means of calibrating and testing manually operated torque wrenches to ISO 6789:2017, ISO 6789:2003 or company specific standards and specifications.

The UTWCM is available in 6 versions; Automated or Semi-automated operation and ranges up to either 500Nm, 1500Nm or 3000Nm. All versions apply the force to the tool via a linear carriage stepper motor and an AWS microcontroller. An important feature is the minimization of parasitic forces applied to the torque wrench handle, due to the method of mounting the torque wrench. All versions of the machine can be used with our new ADMS Kepler 4 software to speed up completion of the calibration & certification process to ISO 6789:2017, ISO 6789:2003 or type approval for manufacturers.

The automated UTWCM uses AWS Intelligent Inline Torque Transducers (IITT's) and a Professional Transducer Display (PTD) to provide feedback to the microcontroller, automatically detecting a first peak signal for setting type wrenches, stopping the machine and returning to zero, greatly speeding up the calibration process and reducing operator input.

The semi-automated UTWCM, using its push buttons, controls the force on the tool. It relies on the operator to detect the target torque and stop the machine.

## SPECIFICATION

Model: UTWCM -	500 - S	500 - A	1500 - S	1500 - A	3000 - S	3000 - A
Range:	500 Nm	500 Nm	1500 Nm	1500 Nm	3000 Nm	3000 Nm
Manual or Semi- Automated:	Semi- Automated	Automated	Semi - Automated	Automated	Semi - Automated	Automated

## SHARED FEATURES

- Designed to calibrate/test wrenches up to either 500, 1,500 or 3,000 N-m.
- The 500Nm version of the AWS Universal Torque Wrench Calibration Machine can be desktop mounted, meaning it requires less footprint to house the machine.

- Removes the need for operators to apply high application forces to the handle of large torque wrenches. Force is applied using inbuilt AWS proprietary firmware, a stepper motor and linear track system.
- Hand controls for fast movement or jog facilitate quick setting up of individual wrenches.
- Multiple safety features ensure that the machine, transducers and torque wrench are not overloaded in operation or over driven due to a wrench fault.
- Inbuilt microcontroller for accurate control of force applied and operation speeds. Four different pre-programmed, switch selected speed settings for different ranges of tools. The microcontroller ensures the adherence to the minimum target torque approach times, complying with the ISO standard 6789:2017, for the capacity of wrench being calibrated.
- Parasitic forces acting on the wrench during calibration are greatly reduced by the method of mounting the torque wrench.
- Multiple or single transducer cassette variations for different transducer manufacturers are available or built to suit customer requirements.
- To accommodate wrenches with fixed heads the transducer can be rotated 360 ° in steps of 30°.



UTWCM with 60N-m Torque Wrench

## AUTOMATED FEATURES

- A Customer's existing transducers can be converted into IITTs using AWS's Intelligent Instrumented Transducer Cables. Each cable has an inline module converting the analogue output of the transducer into a digital torque signal for display on the PTD.
- Connecting an AWS IITT automatically programs the AWS PTD to the correct range.
- When operating the AWS PTD in First Peak mode for click wrenches, the machine will run a complete operation cycle automatically.



Simple and Intuitive Handheld Controller

## DIMENSIONS

### Dimensions for mounting on floor:

UTWCM-500: Approx. 110cm W by 90cm H. Requires desk space of 75cm D by 70cm W. Overhangs front of desk by 45cm, and requires 56cm of space above the table.

UTWCM-1500: Approx. 77cm D by 205cm W by 135cm H. Footprint is approx. 77cm D by 165cm W.

UTWCM-3000: Approx. 77cm D by 266cm W by 135cm H. Footprint is approx. 77cm D by 165cm W.

Depth, Width and Height can be altered if required within certain parameters.

**MORE INFORMATION ON THE INTELLIGENT INLINE TORQUE TRANSDUCERS RANGE, PROFESSIONAL TRANSDUCER DISPLAY AND KEPLER 4 SOFTWARE IS AVAILABLE IN SEPARATE DATA SHEETS ON THE AWS WEBSITE [WWW.AWSTORQUE.CO.UK](http://WWW.AWSTORQUE.CO.UK).**

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### SUPPLIER INFORMATION