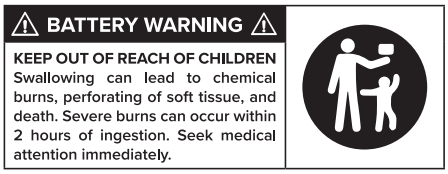
1/2”SQ DRIVE DIGITAL TORQUE ADAPTOR WITH ANGLE FUNCTION 20-200NM

MODEL NO: **STW291**

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.

Refer to instructions



1. SAFETY

- ❑ **WARNING! DO NOT** use the digital torque adaptor if damaged or thought to be faulty.
- × **DO NOT** apply force to the adaptor when the power is off. Always turn the adaptor on before using it otherwise the adaptor will be damaged.
- × **DO NOT** turn off the torque adaptor while torque force is being applied.
- × **DO NOT** exceed the permitted maximum torque value for this torque adaptor. To do so will cause it to break.
- × **DO NOT** subject the 1/2” connectors on the top and bottom of the adaptor to any force other than a rotational one.
- ✓ Ensure that all components including all adaptors, extensions, drivers and sockets are rated to match or exceed the torque being applied.
- ✓ Observe all equipment, system and manufacturer’s warnings, cautions and procedures when using this torque adaptor.
- ✓ Use the correct size socket for the fastener.
- × **DO NOT** use sockets showing wear or cracks.
- ✓ Check that the torque adaptor capacity matches or exceeds each application before proceeding.
- ✓ Ensure all workshop safety rules, regulations, and conditions are complied with when using this digital torque adaptor.
- ✓ Maintain correct balance and footing. Ensure the floor is not slippery and wear non-slip shoes.
- ✓ Keep children and unauthorised persons away from the working area.
- × **DO NOT** press, pressure, or damage the LCD display.
- × **DO NOT** use the torque adaptor near strong magnetic fields .
- × **DO NOT** subject the digital torque adaptor to excessive force or shocks.
- × **DO NOT** drop or throw the digital torque adaptor.
- × **DO NOT** leave the digital torque adaptor in any place exposed to excessive heat, humidity or direct sunlight.
- × **DO NOT** use organic solvents such as alcohol or thinners to clean the digital torque adaptor.
- × **DO NOT** submerge the digital torque adapter in water or any other liquid.
- × **DO NOT** disassemble the digital torque adaptor.
- ✓ To ensure accurate measurement periodic re-calibration is necessary.
- ✓ After use clean with a soft dry cloth and store in a safe, dry, childproof location.

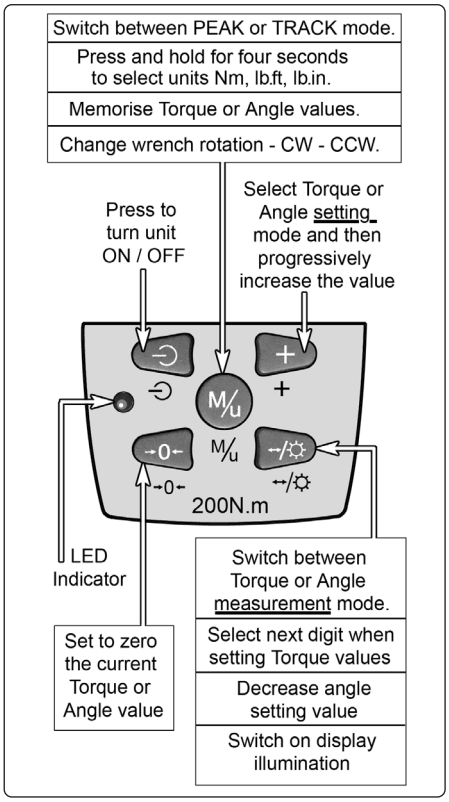
2. INTRODUCTION

Designed for use with a standard ratchet or breaker bar. Ideal for work around the engine bay and the tightening of wheel nuts to factory specifications. Large LCD display with LED/audible alarm indicating achieved and target torque levels. Selectable readings in Nm, lb.ft, lb.in or kg.m. Accurate to ±2% of stated capacity and operates in either direction. Features angle mode, eliminating the need for angle gauges and protractors providing an accurate and fast way to measure torque plus angle tightening sequences. Will also accumulate angle measurement when multiple turns are required, ideal for use where access is restricted. Includes auto shut off. Supplied with test certificate and storage case.

3. SPECIFICATION

Model No..... STW291
Drive ..... 1/2”Sq
Length..... 100mm
Range
.... 20-200Nm(14.7-147.5lb.ft, 354-1770lb.in, 2.04-20.4kgf.m)
Angle Range .....360°
Battery .....2 x CR2032 (supplied)

4. KEYPAD CONTROL FUNCTIONS



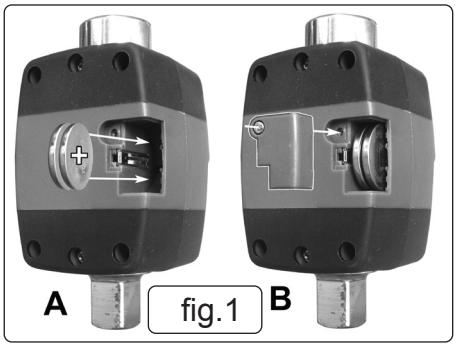


fig.1

5. OPERATION

NOTE: ENERGY SAVINGS FUNCTION:
If left on and unused, the torque adaptor will turn off automatically after a period of 4 minutes.

5.1. **PREPARATION:**

5.1.1. Unscrew the battery cover and install the two batteries supplied as shown below, ensuring the correct polarity as indicated in fig.1A. Refix the battery cover as shown in fig.1B.

5.1.2. Press the ON/OFF button once to turn the meter on. The display will initially show four zeros (“0000”) before reverting to a “0.0” torque reading.

5.1.3. To select the required unit of measurement, press and hold the “M/u” button for 4 seconds. As soon as the display jumps to the next unit of measurement let go of the button. Repeat this process until the display shows the unit you require. (Nm / lb.ft / lb.in).

5.1.4. Ascertain the correct size and type of socket for the fixing to be tightened and attach it to the square drive connection (1/2”) at the base of the adaptor.

5.1.5. Insert the required ratchet wrench/drive bar into the socket at the top of the adaptor

× **DO NOT** use a tool that will allow you to apply excessive force through the adaptor.

5.2. **SELECTING THE TORQUE OR ANGLE MEASUREMENT MODE:**

5.2.1. By default, the adaptor switches on in Torque Measurement Mode. Press “ →/☼ “ button to switch to Angle Measurement Mode or back into Torque Measurement Mode when required.

5.3. **SETTING THE TORQUE OR ANGLE VALUE:**

5.3.1. In order to set the torque or angle value, press the “ + “ button for 2 seconds. NOTE: If no buttons are then pressed, the display will revert to zero after 6 seconds.

5.4. **(a) TORQUE setting mode:** The display will initially show “ SET “ for 1 second and then revert to the last saved torque or “ 000.0 “. The first digit of this value (“000.0“) will be flashing, indicating that the value can now be set/altered. (To zero the last saved torque setting press the “ →0← “ button). By repeatedly pressing the “ + “ button, the value of the flashing digit will be progressively increased. When the required value is reached, press the “ →/☼ “ button to move to the next digit. Repeat this process for all digits (ones, tens, hundreds etc) until the desired value has been set.

5.4.1. This value can then be stored by pressing the “ M/u “ button. Once the value is stored, taking 2 to 3 secs, the display will revert to “ 000.0 “.

5.4.2. If you attempt to store a torque value that is below the minimum value or above the maximum value defined in the specification, the abbreviation “Erro” will be shown on the display. After 1 second, the torque adaptor will revert to torque measuring mode. The preset value will not have been stored, and the warning indicators will not work until a valid value has been stored.

5.5. **(b) ANGLE setting mode:**

NOTE: Before setting the angle, the adaptor (with wrench and socket attached) should be positioned onto the fitting to be tightened so that the adaptor has a datum starting point against which to set the angle.

5.5.1. To set the angle value, press the “ →/☼ “ button briefly. (NOTE: If no buttons are then pressed, the display will revert to zero after 6 seconds). To enter angle set mode press “ + “ for 2 second

5.5.2. The display will initially show “ SET “ for 1 second and then revert to the last saved angle or “ 0° “. (To zero the last saved angle setting press the “ →0← “ button).By repeatedly pressing the “ + “ button, the angle value will be progressively increased until the required angle value is reached.

5.5.3. This value can then be stored by pressing the “ M/u “ button. Once the value is stored, taking 2 to 3 secs, the display will revert to “ 0°“.

5.5.4. When in ANGLE measuring mode the direction of rotation of the adaptor can be changed from clockwise (CW) to counterclockwise

(CCW) and back again by pressing the " M/u " button.

5.6. **Mode Select:**

5.6.1. The "TRACK" mode is the default when the torque adaptor is switched on. In "TRACK" mode the display shows the reading in real time during the torque process both when the pressure is increased or released. When the programmed value is reached the unit signals both audibly and visually whilst the adaptor is under pressure. As soon as the pressure is released the display reverts to zero.

5.6.2. Press the "M/u" button to shift into "PEAK" mode. The display shows "peak" in the top left of the display.

5.6.3. In "PEAK" mode the display will always hold the current value reached, even if the pressure is slightly released.When the programmed value is achieved, the unit signals both audibly and visually and the value shown on the display will begin to flash after approx. one second. If further pressure is applied after the programmed value has been reached the unit assumes that further torque is to be applied up to the current programmed value and the display again shows torque ascending from zero. Alternatively, you can zero the display and apply the programmed torque to another fixing.

5.7. **Turning the display illumination on/off.**

The display illumination can be turned on prior to or after programming the torque. In order to do this, press and hold the " ⇢/☼ " button for 2 secs.

5.8. **OPERATION:**

5.8.1. When you approach within +/- 5 Nm of the programmed torque value the unit will beep intermittently.

5.8.2. When you approach within +/- 2 Nm of the programmed value the unit will emit a quicker sound sequence.

5.8.3. When the programmed torque has been achieved, the unit will emit a continuous tone and the LED light will illuminate.

5.8.4. When the programmed ANGLE has been achieved, the buzzer will sound for 1 second. NOTE: When wishing to work in a counter-clockwise direction, press the " M/u " button. The display will then show a minus (-) sign on the left side of screen.

NOTE: Never use the torque adaptor when the battery is in a low state of charge as this will affect the products accuracy.

6. MAINTENANCE

6.1. **Battery care and use.**

6.1.1. Keep batteries dry at all times.

6.1.2. **DO NOT** combine used batteries with new ones or mixbattery types.

6.1.3. Insert/remove the batteries carefully as described in the Section 5.1.

6.1.4. Never use a battery if it is cracked or broken.

6.1.5. Never heat or incinerate batteries.

6.1.6. See battery disposal information below.

6.1.7. Remove the batteries if stored for a long period of time.

6.2. **Calibration**

6.2.1. Periodic Calibration is required for this product, contact your Sealey dealer for details.

6.3. **General Precautions**

STORAGE - **DO NOT** store this product in dusty, sandy or humid conditions or near any heat source. **DO NOT** leave it in places where it may be subject to high temperatures. Always keep the torque adaptor dry.Water or other liquid, will damage the electronic components inside.

MAINTENANCE - If the tool is not used for a longer period of time, please remove the batteries in order to prevent damage from leaking

CLEANING – Always turn off this product before cleaning. Use only a damp cloth for cleaning. Never use any type of liquid or aerosol cleaner, or any type of organic solvent to clean this product.

MODEL:	STW291 (Full Specification)
Range:	20 - 200Nm (15 - 147.5lb.ft, 354 - 1770lb.in)
Accuracy:	±2%
Resolution:	0.1Nm / 0.1 lb.ft / 1lb.in
Drive:	1/2"
Units:	Nm / lb.ft / lb.in.
Angle Range	0º - 360º (CW / CCW)
Angle Accuracy	±1% of reading ±1º
Angle velocity	> 10º / Sec < 360º / Sec
Display resolution	1º
Operating Modes	Track & Peak
Power	6V, Lithium batteries CR2032 x 2
Operating temp:	0 ~ 40ºC / -32 ~ 104ºF
Storage temp:	-20 ~ 45ºC / -4 ~ 113ºF
Humidity	Humidity up to 60% Non condensing

ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

REGISTER YOUR PURCHASE HERE

WEEE REGULATIONS

Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.

BATTERY REMOVAL see section 5.1

Under the Waste Batteries and Accumulators Regulations 2009, Jack Sealey Ltd are required to inform potential purchasers of products containing batteries (as defined within these regulations), that they are registered with Valpak's registered compliance scheme. Jack Sealey Ltd Batteries Producer Registration Number (BPRN) is BPRN00705.

Note: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

Important: No Liability is accepted for incorrect use of this product.

Warranty: This product comes with a lifetime guarantee against manufacturing defects.

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TORQUE TOOL CALIBRATION CERTIFICATE

Declaration of Conformance

(in accordance with BS EN ISO 6789-1:2017)[1]

Test machine type/name	TORQUE TESTER
Test machine serial No.	
Test machine calibration date	
Measurement error[2]	±1%

Measurement uncertainty	0.20%
Ambient temperature	26°C
Humidity	52%
Test units: (Nm, lb/ft etc)	Nm

1	Min Torque:	20	Clockwise					
	Max torque:	200						
Target Torque N.m	Maximum Permissible Deviation (± 4 %) N.m		Completed test reading[3]					
	Min	Max	1	2	3	4	5	Average
40	38.40	41.60						
120	115.20	124.80						
200	192.00	208.00						

2	Min Torque:	20	Anti-clockwise					
	Max torque:	200	(This part 2 to be completed only where applicable)					
Target Torque N.m	Maximum Permissible Deviation (± 4 %) N.m		Completed test reading[3]					
	Min	Max	1	2	3	4	5	Average
40	38.40	41.60						
120	115.20	124.80						
200	192.00	208.00						

Tool Model Number	STW291
Tool Serial Number	
Tested by (print name)	
Date of test[4]	

Notes: [1] Testing is in compliance with International Standard procedures, with test equipment calibrated by a laboratory traceable to International Standards.

[2] Measurement error shall be less than ¼ of the maximum permissible relative deviation of the torque tool.

[3] The observed values fall within the maximum permissible deviation (tolerance). For tools with a flexible head, the result is valid only if the measuring axis is perpendicular to the axis of the tool.

[4] This Sealey Declaration of Conformance is issued at the time of manufacture. Its' validity is open ended until the torque tool is used for the first time. The default re-calibration period of 12 months (or 5,000 cycles, whichever occurs first) starts after first use of the torque tool (BS EN ISO 6789-1:2017, clause 5.3 refers).