

## **CALIBRATION SERVICES**

Declaration of Conformance	
UKAS Accredited Calibration Certification	
Other Certification	
Global Service	

A calibration 'priority booking' service is available, please contact the Customer Relations Department a minimum of one month prior to the required recalibration due date.

- Tel: +44 (0)1295 753635
- Fax: +44 (0)1295 753636
- Email: service@norbar.com

# **CALIBRATION SERVICES**

Devices sent in for UKAS accredited calibration certification will be calibrated and the 'As Found' readings recorded. The calibration will be performed to the appropriate standard as specified in our schedule of accreditation.

- a) Should the device be in specification 'As Found', a certificate will be raised and the device returned.
- b) Should the device be out of specification, but capable of adjustment, it will be adjusted, 'As Left' readings taken, and one certificate raised with 'As Found' and 'As Left' readings on it.
- c) Should the device require repair that is not covered by a combined calibration and service, we will do so where possible, after consultation with the customer.

measurements between 0.005 N·m and 108,500 N·m or the imperial equivalents. Our Schedule of Accreditation gives further details (please refer to www.norbar.com).





## **DECLARATION OF CONFORMANCE**

## UKAS ACCREDITED CALIBRATION CERTIFICATION

# TORQUE WRENCH & TORQUE SCREWDRIVER (INCLUDING PROTRONIC) DECLARATION OF CONFORMANCE (DOC)



ONE DIRECTION	
DOC1.CW	Up to 400 N·m / 300 lbf·ft
DOC2.CW	Up to 1,000 N·m / 750 lbf·ft
DOC3.CW	Up to 2,000 N·m / 1,475 lbf·ft

ONE DIRECTION & REPAIR COMBO		
RCDOC1.CW	NorTorque and Professional wrenches up to 400 N·m	
RCDOC2.CW	Industrial wrenches up to 5R/5R-N	
RCDOC3.CW	Industrial wrench 5AR & 5AR-N & 6R, 6R-N	
RCDOC4.CW	Large Professional 550 & 650 N·m	
RCDOC5.CW	Large Professional 800 - 1,500 N·m	

TWO DIRECTIONS	
DOC1.CW+CCW	Up to 400 N·m / 300 lbf·ft
DOC2.CW+CCW	Up to 1,000 N·m / 750 lbf·ft
DOC3.CW+CCW	Up to 2,000 N·m / 1,475 lbf·ft

TWO DIRECTIONS & REPAIR COMBO		
RCDOC1.CW+CCW	NorTorque and Professional wrenches up to 400 N·m	
RCDOC2.CW+CCW	Industrial wrenches 2R - 5R & 3AR-N - 5R-N	
RCDOC3.CW+CCW	Industrial wrench 5AR & 5AR-N & 6R, 6R-N	
RCDOC4.CW+CCW	Large Professional 550 & 650 N·m	
RCDOC5.CW+CCW	Large Professional 800 - 1,500 N·m	

# TORQUE WRENCHES & TORQUE SCREWDRIVERS (INCLUDING NORBAR PROTRONIC PLUS) UKAS ACCREDITED CALBRATION CERTIFICATION

On receipt, an 'As Found' calibration certificate will be carried out where possible. If the results do not fall within specification the torque wrench or torque screwdriver will be adjusted and if the adjustment does not bring the torque tool back within specification then it will either be repaired or a service replacement will be offered – see page 127 for further details. Calibration certificates are in accordance with the current standard for hand torque tools BS ISO 6789-2:2017. The certificate shows the nominal torque applied and the measured torque readings.

For guidance on Norbar's procedure for torque wrenches or torque screwdrivers sent in for repair, see page 127. If the same tool is required to be returned, i.e. if you do not want the torque tool to be service replaced, then this should be made clear on the purchase order which accompanies the tool.

ONE DIRECTION	
TWCC1.CW	Up to 400 N·m / 300 lbf·ft
TWCC2.CW	Up to 1,000 N·m / 750 lbf·ft
TWCC3.CW	Up to 3,000 N·m / 2,200 lbf·ft

TWO DIRECTIONS	
TWCC1.CW+CCW	Up to 400 N·m / 300 lbf·ft
TWCC2.CW+CCW	Up to 1,000 N·m / 750 lbf·ft
TWCC3.CW+CCW	Up to 3,000 N·m / 2,200 lbf·ft

## NORTRONIC (INCLUDING NON-NORBAR DIGITAL WRENCHES) UKAS ACCREDITED CALIBRATION CERTIFICATION



## ONE DIRECTION & ANGLE

NTCC1.CW NorTronic all sizes

## TWO DIRECTIONS & ANGLE

NTCC1.CW+CCW NorTronic all sizes

## MANUAL TORQUE MULTIPLYING GEARBOXES, UKAS ACCREDITED CALIBRATION CERTIFICATION



The part numbers shown below are for Certification 'As Found',

## ONE DIRECTION

HTCC1.CW Up to 6,000 N·m / 5,000 lbf·ft

## TWO DIRECTIONS

HTCC1.CW+CCW Up to 6,000 N·m / 5,000 lbf·ft



## **UKAS ACCREDITED CALIBRATION CERTIFICATION**

Calibration



### ELECTRONIC DEVICES

In accordance with the current standards for calibration of torque measurement devices, it is desirable to calibrate transducers with the display that is normally used. In this case the 'system' is calibrated. If it is not possible to supply the display unit, an equivalent calibrated display unit from the laboratory will be used. The calibration will then be valid for the transducer with the original display as long as the original display has been calibrated within the last 24 months.

Calibration certificates are in accordance with the current standard for torque measuring devices BS 7882:2017, and show the nominal torque applied, and the measured torque readings. Measured readings may be given in mV/V on request. Details of the standard are available on request.

It is not our intention to offer a full repair service for torque devices from other manufacturers. Where a device is in need of repair, the customer is advised to have this performed by an approved service agent or the manufacturer before submitting the device for UKAS accredited calibration. Some electronic transducer systems from other manufacturers may incur an additional calibration cost; the electronics department repair technicians will clarify this point if required. Occasionally it will be necessary to manufacture special adaptors to enable the calibration to be performed. This will of course affect the price and delivery, and will be discussed with the customer as the need arises.

## CALIBRATION TO BS7882:2017 CLASS 0.1

Norbar's UKAS accredited laboratory performs standard calibrations on torque measuring devices to BS 7882:2017 class 0.2 increasing torques only. However the laboratory is able to calibrate devices to class 0.1 at the customer's request. Class 0.1 requires calibration in four different mounting positions each rotated 90° about the measurement axis. Classification to class 0.1 is dependent on the devices performance. Calibrations including a decreasing series of torques can also be provided if required. A price for these services is available on request.

This section contains combined calibration and service fixed part numbers for Norbar products. Other manufacturers' equipment will be handled by individual quotation. Provided that the product is in serviceable condition\*, we guarantee to carry out all calibration, function checks and repair work in order to bring the equipment back to its original functionality.

\*Product would be regarded as unserviceable if either it or the components required for the repair are obsolete or unavailable. Serviceability also implies that the product is capable of repair without complete replacement.

Service replacements are available for some products.

# ELECTRONIC TORQUE TRANSDUCERS, UKAS ACCREDITED CALIBRATION CERTIFICATION (WITH SQUARE DRIVE, FLANGE MOUNTED & PRE 2004 ROTARY)





The part numbers shown below are for Combined Calibration and Service, 'As Found' and 'As Left'

ONE DIRECTION	
TDCCS1.CW	Up to 1,500 N·m / 1,000 lbf·ft
TDCCS5.CW <sup>®</sup>	From 1,501 to 7,000 N·m / 1,001 - 5,000 lbf·ft
TDCCS3.CW <sup>+</sup>	Square/Splined Drive From 7,001 to 100,000 N·m / 5,001 to 100,000 lbf·ft
TDCCS4.CW <sup>+</sup>	Flange Drive From 7,001 to 100,000 N·m / 5,001 to 100,000 lbf·ft
ADDCALPOINTS.CCS	Additional calibration steps below 10% of rated capacity to 2% for transducers up to 7,000 N·m (5,000 lbf·ft)

TWO DIRECTIONS	
TDCCS1.CW+CCW	Up to 1,500 N·m / 1,000 lbf·ft
TDCCS5.CW+CCW <sup>®</sup>	From 1,501 to 7,000 N·m / 1,001 - 5,000 lbf·ft
TDCCS3.CW+CCW <sup>+</sup>	Square/Splined Drive From 7,001 to 100,000 N·m / 5,001 to 100,000 lbf·ft
TDCCS4.CW+CCW <sup>+</sup>	Flange Drive From 7,001 to 100,000 N·m / 5,001 to 100,000 lbf·ft

- WKAS accredited calibration up to 6,000 N·m. A non-accredited value at 7,000 N·m is extrapolated and provided for reference only.
- + UKAS accredited calibration up to 80,000 lbf·ft. A non-accredited value at 100,000 lbf·ft is extrapolated and provided for reference only.

For part numbers TDCCS3.CW and TDCCS4.CW, static transducers with  $2\frac{1}{2}$ " square drives and annular transducers to fit HT/PT 9 & HT/PT 11, a secondary calibration to extend the range below 10% of the rated capacity may be ordered using part number TDCCS5.CW

For part numbers TDCCS3.CW+CCW and TDCCS4.CW+CCW, static transducers with  $2\frac{1}{2}$ " square drives and annular transducers to fit HT/PT 9 & HT/PT 11, a secondary calibration to extend the range below 10% of the rated capacity may be ordered using part number TDCCS5.CW+CCW



## **UKAS ACCREDITED CALIBRATION CERTIFICATION**

Calibration



## ROTARY TRANSDUCERS (2004 ONWARDS), UKAS ACCREDITED CALIBRATION CERTIFICATION (PART CODE 50708.XXX-50724.XXX)



The part numbers shown below are for combined calibration and service, 'As Found' and 'As Left'

ON	E DI	REC	TIC	NC

TDCCS2.CW Up to 1,500 N·m / 1,000 lbf·ft

### TWO DIRECTIONS

TDCCS2.CW+CCW Up to 1,500 N·m / 1,000 lbf·ft

#### TRUCHECK VERSIONS 1 & 2





The part numbers shown below are for combined calibration and service, 'As Found' and 'As Left'

ONE DIRECTION		
TCCCS1.CW	TruCheck versions 1 & 2 All Sizes up to 1,500 N·m (UKAS Accredited Calibration Certification)	
TCCCS3.CW	TruCheck versions 1 & 2 All Sizes over 1,500 N·m (UKAS Accredited Calibration Certification)	
TCCCS2.CW*	TruCheck versions 1 & 2 All Sizes up to 1,500 N·m	
TCCCS4.CW*	TruCheck versions 1 & 2 All Sizes over 1,500 N⋅m	

TWO DIRECTIONS		
TCCCS1.CW+CCW	TruCheck versions 1 & 2 All Sizes up to 1,500 N·m (UKAS Accredited Calibration Certification)	
TCCCS3.CW+CCW	TruCheck versions 1 & 2 All Sizes over 1,500 N·m (UKAS Accredited Calibration Certification)	

<sup>\*</sup>Issued with traceable certification.

## PRO-TEST, UKAS ACCREDITED CALIBRATION CERTIFICATION



The part numbers shown below are for combined calibration and service, 'As Found' and 'As Left'

ONE DIRECTION	
PROCCS.CW	Pro-Test All sizes
TWO DIRECTIONS	

## PROCCS.CW+CCW Pro-Test All Sizes

# PRO-LOG, TTT, T-BOX, T-BOX XL, T-BOX 2 & TTL-HE, UKAS ACCREDITED CALIBRATION CERTIFICATION





The part numbers shown below are for combined calibration and service, 'As Found' and 'As Left'

ONL DIRECTION	
INSTCCS3.CW	Pro-Log or TTT
TWO DIRECTIONS	
INSTCCS3.CW+CCW	Pro-Log or TTT
INSTCCS4.CW+CCW	TTL-HE, T-Box, T-Box XL or TWC Auto Control Box
INSTCCS5.CW+CCW	T-Box 2
ANBCC.CW+CCW	AnB Module (Calibration Certification only)

#### TST, UKAS ACCREDITED CALIBRATION CERTIFICATION



The part numbers shown below are for combined calibration and service, 'As Found' and 'As Left' This includes both an instrument and system calibration

TSTCCS.CW	TST
TWO DIRECTIONS	
TSTCCS.CW+CCW	TST
Section with combined	calibration & service ends here

## CALIBRATION BEAMS & WEIGHTS, UKAS ACCREDITED CALIBRATION CERTIFICATION



The part numbers shown below are for Length Certification, 'As Found' and 'As Left'

CBLC1	Disc or Beam up to 150 N·m / 100 lbf·ft
CBLC2	Disc or Beam up to 1,500 N·m / 1,000 lbf·ft
CBLC3*	Disc or Beam up to 6,800 N·m / 5,000 lbf·ft
WEIGHT.CC1	Calibration of Weights up to 25 kgf / 245 N / 55 lbf

\* The part number shown is for length certification, 'As Found'



## **UKAS ACCREDITED CALIBRATION CERTIFICATION**

Calibration details



# MECHANICAL TORQUE TESTING DEVICES, UKAS ACCREDITED CALIBRATION CERTIFICATION



The part numbers shown below are for combined calibration and service, 'As Found' and 'As Left'

ONE DIRECTION	
MCCS1.CW	Up to 5,000 N·m / 5,000 lbf·ft

TWO DIRECTIONS	
MCCS1.CW+CCW	Up to 5,000 N·m / 5,000 lbf·ft

## TWA, UKAS ACCREDITED CALIBRATION CERTIFICATION



ONE DIRECTION	
TWACCS.CW	TWA All Sizes
TWO DIRECTIONS	

## ETS, UKAS ACCREDITED CALIBRATION CERTIFICATION



The part numbers shown below are for combined calibration and service, 'As Found' and 'As Left'

NSTCCS1.CW	ETS
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## DTS, UKAS ACCREDITED CALIBRATION CERTIFICATION



ONE DIRECTION	
DTSCCS1.CW <sup>®</sup>	DTS up to 7,000 N·m or 5,000 lbf·ft
DTSCCS2.CW <sup>+</sup>	DTS from 7,001 to 100,000 N·m / 5,001 to 100,000 lbf-ft Square and Spline drive
DTSCCS3.CW <sup>+</sup>	DTS from 7,001 to 100,000 N·m / 5,001 to 100,000 lbf·ft Flange drive

TWO DIRECTIONS	
DTSCCS1.CW+CCW <sup>®</sup>	DTS up to 7,000 N·m or 5,000 lbf·ft
DTSCCS2.CW+CCW <sup>+</sup>	DTS from 7,001 to 100,000 N·m / 5,001 to 100,000 lbf·ft Square and Spline drive
DTSCCS3.CW+CCW <sup>+</sup>	DTS from 7,001 to 100,000 N·m / 5,001 to 100,000 lbf·ft Flange drive

- @ UKAS accredited calibration up to 6,000 N·m. A non-accredited value at 7,000 N·m is extrapolated and provided for reference only.
- + UKAS accredited calibration up to 80,000 lbf·ft. A non-accredited value at 100,000 lbf·ft is extrapolated and provided for reference only.

### ETTA, UKAS ACCREDITED CALIBRATION CERTIFICATION



The part numbers shown below are for combined calibration and service, 'As Found' and 'As Left'  $\,$ 

ETTACCS.CW	FTTA
LIIACCS.CVV	

## GENERAL DEVICES, UKAS ACCREDITED CALIBRATION CERTIFICATION

EMCC	Mechanical Enclosure Meter Calibration
	(CW + CCW)



## OTHER CERTIFICATION

## **GLOBAL SERVICE**

### **EVOTORQUE AND PNEUTORQUE CERTIFICATES**



These devices are outside the scheduled accreditation issued by UKAS.

HTCERT	Compact Series Calibration
PTCERT	PneuTorque Calibration - PneuTorque Calibration (including PT1 to PT5)
PTCERT1	PT108 Calibration PT5 to PT9
PTCERT2	PT108 Calibration PT11 and above
PTICEC	PTM IC/EC Certificate of air pressure vs torque
ETCERT	EvoTorque 1, 2 & EBT Certificate of torque and angle

#### **ULTRASONIC MEASUREMENT DEVICE CERTIFICATES**





These devices are outside the scheduled accreditation issued by UKAS.

USMCC	Ultrasonic Stress Meter certificate of calibration

## GENERAL DEVICES

These devices are outside the scheduled accreditation issued by UKAS.

Weight Set Certificates accredited by UKAS or other certified bodies

ETSDPFT	ETS Data Printer. Function Test
ETSBPUFT	ETS Battery Power Unit. Function Test
FWSUFT	ETS or ETTA 5 Way Switch Unit. Function Test
TWSUFT	ETS or ETTA 2 Way Switch Unit. Function Test

TRANSDUCER CONVERSIONS	
SQ8888	ETS Transducer conversion to Smart Transducer (does not include calibration)
SQ2005	ETTA Transducer conversion to Smart Transducer (does not include calibration)

Norbar is the only torque equipment manufacturer capable of offering tool and instrument calibration services to the original factory standard on four continents.



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Accredited laboratories in Australia, USA, Singapore, China and India operate the same equipment and procedures as the UKAS accredited laboratory within our headquarters in the UK.