## **MEASUREMENT & CALIBRATION**

### FLANGE MOUNTED TRANSDUCERS (FMT)

- Classified to BS7882:2017, typically better than Class 1 for the primary classification range (±0.5% of reading from 20% to 100% of full scale)
- Smart TST, TTT, TTL-HE and T-Box instruments will automatically recognise calibration details
- Supplied with UKAS accredited certificate
- Transducers are supplied with precision made square drive adapters

#### STATIC TORQUE TRANSDUCERS

- Robust, heat treated, alloy steel torsion shaft design
- Calibration up to 100,000 N·m with a UKAS accredited certificate
- Smart transducers have a built in memory circuit which contains essential information about the transducer. This information can be read by Norbar's TST, TTT, TTL-HE & T-Box<sup>™</sup> 2 instruments

### TORQUE WRENCH CALIBRATOR (TWC)

For accurate torque wrench testing and calibration Available in both auto and manual versions

- TWC Auto is a powered and automated loader with intelligent rate control. Programmable workflow guides the user through the ISO 6789-2:2017 calibration or can support bespoke workflows
- Enables torque wrench calibration or testing in accordance with ISO 6789:2017 Part 1 and 2
- Counterbalance Reaction system is designed to allow the tool to level to reduce parasitic loads or movements

TWC 1500 N·m Auto shown with Counterbalance Reaction Post

- TWC Auto supplied with a powerful yet simple touchscreen user interface
- Works with Flange Mounted Transducers and Static Transducers
- During calibration, the TWC maintains a fixed position on the handle of the torque wrench
- Rotating transducer design ensures that the load is applied 90° to the torque wrench handle. The benefit of this precise alignment is that forces are applied squarely to the load point of the handle

Patented in the UK, Germany, France and Italy (EP2864745 and in the USA (US9921122)

# **SERVICE & SPECIALS**

### **CALIBRATION SERVICES**

- UKAS accredited calibration services
- Service Replacement Policy
   Our policy is that all Norbar wrenches will, at
   Norbar's discretion, either be repaired or a
   'service replacement tool' will be offered



### **ENGINEER TO ORDER**

Our wide range of standard equipment notwithstanding, there are applications when something special is required. As an ISO 9001 accredited company, Norbar will undertake the design and manufacture of special equipment against agreed customer specifications

For more information on Norbar's Engineer to Order service please email your enquiry to technical@norbar.com or visit www.norbar.com/ Services/Engineer-to-Order

### **GLOBAL SERVICE**

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

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.



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### NORBAR PRODUCT PORTFOLIO



Torque Screwdrivers

TIEN

Torque Wrenches

Electronic Torque Wrenches



Manual Torque Multipliers



Pneumatic Torque Tools



Electronic Torque Tools



Battery Torque Tools



Torque Measurement Instruments



Torque Transducers



Ultrasonic Bolt Measurement



Calibration Services

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# TORQUE TOOLS FOR INDUSTRY



# **TORQUE WRENCHES**

### **PROTRONIC® PLUS**

High-precision electronic torque and angle wrench with Bluetooth®

- Works alongside newly developed TorqApp<sup>®</sup> designed for live streaming and readings as they are taken
- Four alert modes (LCD, progressive LED, audible, vibration) provide excellent feedback in all working conditions
- The ability to programme up to 50 pre-sets in the tools saves time in setting up frequently occurring applications
- Patent pending Torque & Angle combo modes allow the user to monitor torque and angle simultaneously
- A wide range of advanced features allow the user to tailor the tool to their work preferences

ProTronic<sup>®</sup> Plus Electronic Torque Wrench

ProTronic<sup>®</sup> standard versions (without Bluetooth®) also available

### PROFESSIONAL

Setting the standard for accuracy and ease of use

- Accurate to ±3% of reading which meets the requirements of ISO 6789-2:2017
- Large scale for better visibility and more accurate setting
- Light and fast adjustment saves operator time and effort
- Ergonomic handle with a high proportion of soft-feel, high grip material
- Unique on a torque wrench, the TimeStrip<sup>®</sup> gives a visual indication that the wrench is due for re-calibration
- Supplied with a traceable calibration certificate allowing end users to adhere to more stringent quality control processes

### **INDUSTRIAL**

- Simple to accurately set and split for ease of transportation
- Robust construction gives accurate results to ±4%, even in arduous working conditions meeting the requirements of ISO 6789-1:2017
- Easy to read scale is shielded from dust, dirt and spray
- Unique profiled cam and reaction plate gives much clearer 'torque break point' reducing the possibility of over-torqueing
- Push-through ratchet allows two direction torqueing
- Can be split and packed into two parts for a smaller, easier to transport package

from 3 - 400 N·m



### **HANDTORQUE®**

For reducing the effort of applying high torque safely

- Mean torque multiplication accuracy of better than ±4%
- Multipliers consist of one or more precisely engineered gear stages
- No correction charts are needed to determine torque output
- Anti Wind-Up Ratchets that eliminate backlash for safer and more comfortable operation are available on most models
- A wide selection of reaction arms make HandTorque® multipliers adaptable for most applications
- Electronic torque transducers available for most models for precise torque control

For accurate torgue control with

- PneuTorgues consist of a durable air motor driving a Norbar epicyclic gearbox
- Depending on the ratio of the attached gearbox, torque from 100 - 300,000 N·m can be generated
- Tools are supplied with their own unique air pressure versus torque graph and traceable calibration certificate
- Electronic torgue transducers for precise torque monitoring or closed loop 'shut-off' systems are available
- PneuTorques offer reduced operator fatigue and make a massive contribution to the reduction of noise and vibration in the workplace compared with other tightening methods



**Compact Series** HandTorque<sup>®</sup> Multipliers

PneuTorque® PTS™ Multiplier

New Professional Torque Wrenches range Production 'P' Type wrenches also available

New Generation Industria

### **PNEUTORQUE®**

minimal noise and vibration





Highly accurate, user friendly, electronic, versatile torque tools

EvoTorque<sup>®</sup>2

- Multiple units of torque measurement, N·m, lbf·ft, ft·lb and kgf·m
- Torque, Torque & Angle and Torque Audit modes available
- Complimentary PC software EvoLog for data management and tool configuration
- USB and Bluetooth<sup>®</sup> 4.0 data transfer (also called Bluetooth® Smart)

#### EvoTorgue<sup>®</sup> Battery Tool

- Tool is not constrained by power cable or hose, improving safety convenience and versatility
- 18V, 5.0Ah battery and efficient motor give outstanding fastening performance per charge
- Traceable calibration certificate for Torque & Angle provided as standard
- Available in single speed and two speed configurations



EvoTorque<sup>®</sup> Battery Tool

# **MEASUREMENT & CALIBRATION**

### TRUCHECK<sup>™</sup> 2

For simple, cost effective testing of screwdrivers and torque wrenches

- Allows torque wrench performance to be monitored as part of your strategy to keep wrenches in peak condition
- 2 versions available, TruCheck<sup>™</sup> 2 and TruCheck<sup>™</sup> 2 Plus
- Basic version has limited settable options. Ideal for non-expert users
- TruCheck<sup>™</sup> 2 Plus allows selection of torgue units and modes for 'click' and dial type wrenches
- Plus version allows operator to set a target value and tolerance
- Supplied with traceable calibration certificate



Above: TruCheck<sup>™</sup> 2 Plus 0.1 - 3 N·m Below: TruCheck™ 2 Plus 10 - 350 N·m



**PRO-TEST** 

For high accuracy, robust construction and versatile mounting

- The first choice of industrial. military and laboratory customers worldwide
- Tough, cast aluminium casing
- 2 part display / transducer unit allows for numerous mounting possibilities
- User can select language of operation (most European languages available)
- Pictorial mode selection incorporated for ease of use
- Memory function displays the 5 previous readings taken
- Supplied with a UKAS accredited calibration certificate

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Pro-Test

### T-BOX<sup>™</sup> 2

For the complete solution to torque and angle measurement and data collection

- Features a 10.1" multi-touch screen with on-screen graphic icons for simple and easy tool navigation and selection
- User configurable to allow a selection of Torque, Torque and Angle, Rate Targets and the ability to set thresholds
- 2 transducer ports gives you the ability to perform 2 tasks simultaneously
- Can export reading and graphs to CSV and JSON format allowing for third party software integration
- Continuous output of up to 100 readings per second via RS-232 or USB virtual serial devices
- Includes 6 modes for torque tool measurement: Track, Click, Dial & Electronic, Stall, Screwdriver and Hydraulic
- Ability to network via USB adapter

