



NORBAR - TORQUE TOOLS FOR INDUSTRY

NEW
PRODUCTS
INSIDE



ABOUT NORBAR

GLOBAL SERVICE

We are the world's foremost specialist in torque control and we are engaged solely in the design, development and production of torque tightening and measuring equipment.

Our customers include manufacturers and engineering services in such diverse sectors as aerospace, energy, oil and gas, mining and sub-sea.

We operate sales and service branches in North America, Australia, New Zealand, Singapore, China and India. In addition, we have distributors of our torque control products in more than 60 countries around the world.

A FAMILY BUSINESS

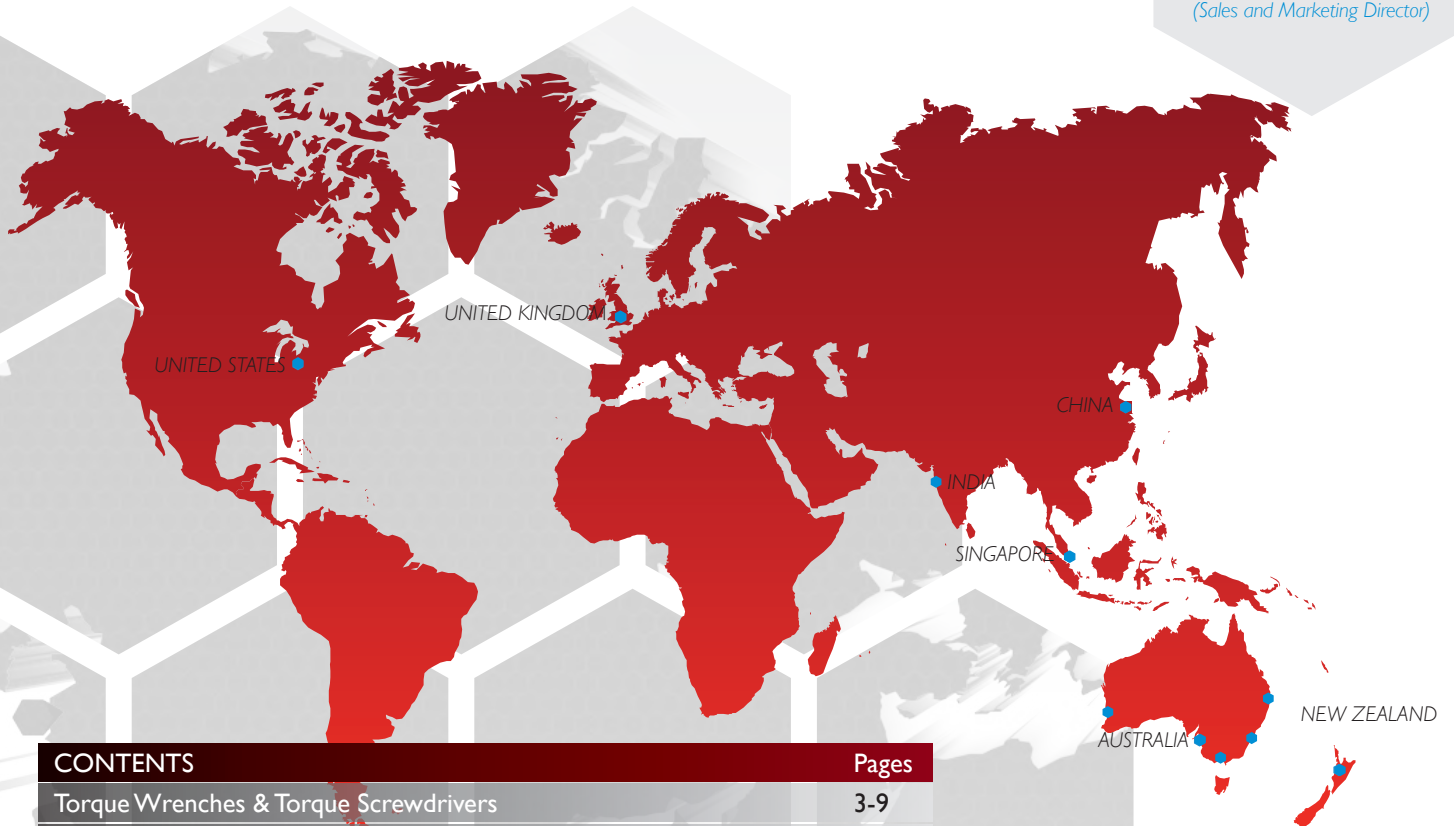
The Brodey family has owned Norbar since Bill Brodey founded the company in 1942. We are now the third generation of the family to manage the business and are passionate about its every aspect.

The range introduction of the EvoTorque® torque tool, the NorTronic® electronic torque wrench and a new generation of T-Box herald a major milestone in Norbar's continued quest to provide the very best solutions for our customers.

We continue to invest in the very latest design, manufacturing and quality control technology to achieve the highest level of innovation and precision in the field of torque control and equipment.



The Norbar Directors
front row, left to right:
Neill Brodey (Managing Director)
Craig Brodey
back row, left to right:
Catherine Rohll (Commercial Director)
Philip Brodey
(Sales and Marketing Director)



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TORQUE WRENCHES

NEW

NORTRONIC® WRENCH

Wireless and traceable electronic torque and angle control

- Supplied with traceable calibration certificate for torque and certificate of angle calibration
- Accurate to $\pm 1\%$ from 20% to 100% of full scale. $\pm 2\%$ from 10% to 19% of full scale
- Angle accurate to $\pm 1\%$ plus one digit (clockwise)
- Supplied with a robust ratchet and compatible with Norbar's huge range of spanner end fittings
- Test results are time and date stamped
- Performs to IP44 for resistance to dust and water ingress
- Displays torque only or torque and angle
- Two full colour OLED displays positioned at 90° for great visibility
- Colour indicator on display changes when target torque/angle has been reached
- Audible and vibration feedback when set target of torque/angle has been reached
- TDS (Torque Data System) software included
- Torque and angle readings can be sent to TDS in real time (or downloaded) via the USB and wireless interfaces
- Wireless PC adapter available separately. Each adapter can register up to 8 NorTronic® wrenches
- NorTronic® can be set up either on the wrench or via the TDS software. Settings can be locked from the TDS software



Range N·m	Model
NorTronic Wrench	
5-50	50
20-200	200
30-330	330

TORQUE SCREWDRIVERS

TT SCREWDRIVER

Versatile, accurate and easy torquing for smaller fasteners and restricted spaces

- Accuracy exceeds the requirements of ISO6789
- Supplied with 1/4" hexagon bit holder
- Bit holder can be removed and replaced with widely available screwdriver blades
- Single scale, either N·m or lbf·in

Range N·m	Model
0.3-1.5	TTs1.5
0.6-3.0	TTs3.0
1.2-6.0	TTs6.0



TORQUE WRENCHES

TTf Fixed Head



TTi Ratchet Head



TTfth Torque Handle



TT WRENCH

For no-nonsense torquing - comfortable, accurate and easy to use

- Supplied with traceable calibration certificate
- Accurate to $\pm 3\%$ of reading
- Micrometer scale for simple and error free setting
- Available with either dual scale (N·m and lbf·ft) or single denomination torque scale
- Can be supplied as TTi (Ratchet), TTf (Fixed Head) or TTfth (9x12 or 14x18mm Torque Handle)
- 'Push Through' ratchets adapt for torque control in both the clockwise and anticlockwise directions
- Tough ratchets with narrow engagement angles allow for easy positioning of the tool in confined spaces
- All models feature a lock to prevent accidental adjustment of the set torque
- Handle and lens materials resistant to commonly used industrial chemicals

Range N·m	Model
TT Wrench	
1-20	TT 20
10-50	TT 50
12-60	TT 60
20-100	TT 100
30-150	TT 150
40-200	TT 200
50-250	TT 250
60-300	TT 300

TORQUE WRENCHES

PROFESSIONAL 'P' TYPES

For production line applications requiring a sealed torque setting

'P' Type wrenches have no scale and must be set against a suitable torque measuring device (see pages 16 and 17).

- Accurate to within $\pm 3\%$ of torque setting
- Colour coded adjustment seals and locking tool provided
- On request 'P' Type wrenches can be set, marked with the setting and certified

Range N·m	Model
'P' Type Ratchet	
8-60	60P
20-100	100P
40-200	200P
60-300	300P
80-400	400P

PROFESSIONAL TORQUE HANDLES

For situations where an alternative end-fitting is required

- Two styles of fitting are catered for: 16mm spigot and rectangular female type, 9 x 12mm and 14 x 18 mm
- Accessories available include a huge range of open, ring and flare spanners in metric and imperial sizes
- Special fittings can be manufactured to order (see page 19)
- Torque handles are available either as adjustable type or 'P' Type



Torque Wrench fittings and accessories

Professional Torque Handles



Range N·m	Model
Adjustable Torque Handle	
8-60	60TH
20-100	100TH
40-200	200TH
60-300	300TH
80-400 (only female ended version)	400TH
'P' Type Torque Handle	
8-60	60THP
20-100	100THP
40-200	200THP
60-300	300THP
80-400 (only female ended version)	400THP

Professional 'P' Type Torque Wrench





PROFESSIONAL TORQUE WRENCH

For applications that demand an accurate, robust and versatile wrench

- Accurate to $\pm 3\%$ of reading
- Supplied with traceable calibration certificate
- Clear scale for simple, error free setting
- Lock prevents inadvertent change to torque setting
- Push through ratchet on 'Industrial' models allows clockwise and anti-clockwise torque control
- Supplied in moulded box for protection and storage

Range N·m	Model
8-60	60
20-100	100
40-200	200
60-300	300
60-330	330
80-400	400

TORQUE WRENCHES

INDUSTRIAL TORQUE WRENCH

For ultimate torque control in heavy duty applications

- Unique 'break action' mechanism gives unparalleled control over the applied torque
- Perfect for wheel nuts and many other applications
- Accurate to $\pm 4\%$ of reading
- Supplied with traceable calibration certificate
- Supplied in carry case (except Torque Handle version)
- Split versions available for when storage space is limited such as vehicle tool kits

Range N·m	Model
100-500	3AR
150-700	4R
200-800	4AR
300-1000	5R
700-1500	5AR
900-2000	6R





PROFESSIONAL TORQUE WRENCH MODELS 650 – 1500

For precision applications to 1,500 N·m

- Exceptionally clear torque signal from unique mechanism
- Non length dependant so can be used with or without the supplied extension handle (optional on Model 650)
- Extension handle significantly reduces operator effort to achieve high torque values
- Accurate to $\pm 3\%$ of reading
- Supplied with traceable calibration certificate
- Supplied in carry case

Range N·m	Model
130-650	650
200-800	800
300-1000	1000
500-1500	1500

ELECTRONIC TORQUE TOOLS

EVOTORQUE®

Norbar's Electronic Torque Tool utilises patent pending motor technology to give unprecedented joint control.

- Each tool is factory calibrated to $\pm 3\%$
- Dual torque units, N·m or lbf·ft can be set by the operator
- Performs to IP44 for resistance to dust and water ingress
- Correct torque output from hard through to soft joints
- Can safely be used on pre-tightened bolts as part of a joint verification process
- Torque Control or Angle Control is selected by the operator on the tool
- Clear signalling on the tool that correct torque and angle has been achieved
- Easily removable secondary handle for balanced handling of tool
- Reaction spline arrangement is identical to corresponding PneuTorque®
- 110v and 230v versions available





NEW



Range N·m	Model
200-1000	ET-72-1000-B
270-1350	ET-72-1350-B
400-2000	ET-72-2000-B
800-4000	ET-92-4000-B
1200-6000	ET-119-6000-B

HANDTORQUE™ TORQUE MULTIPLIERS

For reducing the effort of applying high torque, safely

- Multipliers consist of one or more precisely engineered gear stages
- Handtorques are typically offered in ratios of 5:1, 25:1 or 125:1 for easy calculation of input torque
- Multiplication accuracy of better than $\pm 4\%$
- 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

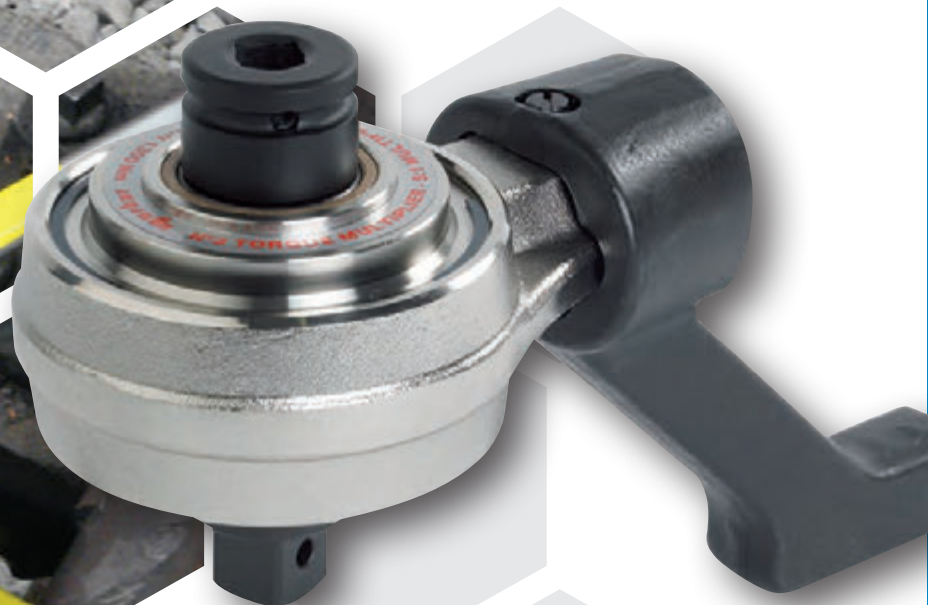


HANDTORQUE™ HT3 TORQUE MULTIPLIER

For tough, versatile and well priced multiplier kits

- True 5:1 torque multiplication
- Supplied with two reaction styles for maximum versatility
- Supplied in carry case
- Ideal for heavy vehicle tool kits

Range N·m	Model
1300	HT3/1300
2700	HT3/2700



HT3 1300 N·m



Handtorque Compact Series HT-92



HT-52 Series



HANDTORQUE™ COMPACT SERIES

For applications where compact size and weight are critical

- The smallest and lightest multipliers available for their output
- HT-52 combined with a suitable torque wrench has a combined weight of under 3.5 kg – half the weight of a typical 1,000 N·m torque wrench

Range N·m	Model
1000	HT-52
2000	HT-72
4000	HT-92
7000	HT-119

HANDTORQUE™ SMALL DIAMETER AND STANDARD SERIES

For the most comprehensive selection of manual torque multipliers

- Models from 1,700 to 300,000 N·m for every conceivable application
- Hugely versatile reaction system with both standard and customised arms available
- Precision engineered for accuracy and durability
- The Norbar HT range is unrivalled in both breadth and quality

Range N·m	Models
1700	HT1 & HT2
3000	HT30
3400	HT5 & HT6
4500	HT45
6000	HT7 & HT60
9500	HT9
20000	HT11
34000	HT12
47500	HT13
300000	HT18

PNEUTORQUE® TORQUE MULTIPLIERS

For accurate torque control with minimal noise and vibration

- Pneutorques consist of a durable air motor driving a Norbar epicyclic gearbox
- Depending on the ratio of the attached gearbox, torque from 100 N·m to 300,000 N·m can be generated
- Tools are supplied with their own, unique air pressure versus torque graph and traceable calibration certificate
- Electronic torque 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
- Pneutorques are not just for bolting. They can be used in any application where smooth, controlled torque is required. They are frequently used for valve actuation and barring over of heavy machinery such as turbines, industrial and marine engines

PNEUTORQUE® PTM-52 AND PTM-72

For light weight and high speed

- Exceptionally compact 52mm and 72mm gearboxes result in light, well balanced tools
- Fast operation for rapid bolt run-down – 800 N·m version has a free speed of 224 rpm
- Internal Control (IC) versions incorporate torque transducer; torque setting and display panel and solenoid valve to shut off the air supply at the desired torque
- External Control (EC) versions incorporate torque transducer and output for an external controller. Ideal for production lines
- PTME versions have an integral extended reaction nose for reaching recessed bolts. The perfect tool for truck and bus wheel nuts

Range N·m	Model
100-500	PTM-52 500
160-800	PTM-52 800
200-1000	PTM-72 1000
270-1350	PTM-72 1350
400-2000	PTM-72 2000

PNEUTORQUE® PTM-92 AND PTM-119

For an ideal balance of speed, weight and robustness

- Fast operation for rapid bolt run-down – 2,700 N·m version has a free speed of 46 rpm
- Gearboxes designed for durability but 4,000 N·m version still weighs just 8.5 kg
- All models supplied as standard with light but robust aluminium reaction plate
- Optional torque transducers for precise torque control

Range N·m	Model
540-2700	PTM-92 2700
700-4000	PTM-92 4000
900-4500	PTM-119 4500
1200-6000	PTM-119 6000



Pneutorque PTM-52 Series Stall Model

Pneutorque PTM-72 Series Stall Model





PneuTorque PTM-92 Series
Stall Model



PNEUTORQUE® SMALL DIAMETER AND STANDARD SERIES

For longevity and versatility

- The original pneumatic torque wrench and, in many respects, still the best
- Durable air motors and gearboxes. There are many examples of tools lasting more than 20 years that are still in daily use
- All tools available with Manual Two Speed (MTS) as an option to increase run-down speed by a factor of five
- Tools up to PT9 (9,500 N·m) available with Automatic Two Speed (AUT) as an option to increase run down speed by a factor of five
- Over-slung handle gives better balance than pistol grip on larger capacity tools
- Huge range of tools – by far the largest available – for almost limitless applications right up to 300,000 N·m
- Optional torque transducers for precise torque control
- Optional angle sensor or turns counter which can be combined with torque measurement for torque angle (or turns) analysis
- All models are also available fitted with a remote motor

Range N·m	Models
160-680	PT1
270-1200	PT1A
515-1700	PT2
880-2700	PT2700
880-3400	PT5 & PT6
900-4500	PT4500
1200-5500	PT5500
1762-6000	PT7
2710-9500	PT9
440-20000	PT11
9500-34000	PT12
13550-47000	PT13
22375-100000	PT14
85000-300000	PT18



PT7 AUT

MEASUREMENT & CALIBRATION

TRUCHECK™ AND TRUCHECK™ PLUS

For simple, cost effective testing of torque wrenches

- Allows torque tool performance to be monitored and tools kept in peak condition
- Two versions, TruCheck™ and TruCheck™ Plus
- Basic version has no settable options. Ideal for non-expert users
- TruCheck™ Plus allows selection of torque units and modes for 'click' and dial type wrenches
- 'Plus' version allow operator to set a target value and tolerance
- Supplied with traceable calibration certificate

Range N·m	Model
0.1-3.0	TruCheck 3.0
1.0-10	TruCheck 10
1.0-25	TruCheck 25
10-350	TruCheck 350
100-1000	TruCheck 1000
200-2000	TruCheck 2000

PROFESSIONAL TORQUE TESTER - PRO-TEST™

For high accuracy, robust construction and versatile mounting

- The first choice of industrial, military and laboratory customers worldwide
- Tough, cast aluminium casing
- Two part display / transducer unit allows for numerous mounting possibilities
- User can select language of operation (most European languages available)
- ISO 6789 mode calculates the torque wrench calibration points and tolerance
- Memory function displays the 5 previous readings taken
- Supplied with a UKAS accredited calibration certificate

Range N·m	Model
0-60	Pro-Test 60
0-400	Pro-Test 400
0-1500	Pro-Test 1500

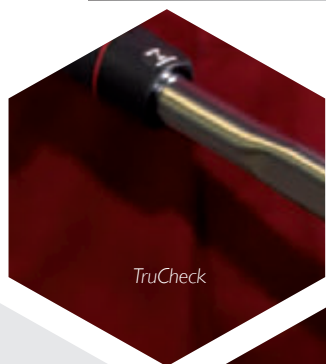
TORQUE TOOL TESTER - TTT™

For laboratory level accuracy and access to Norbar's complete transducer range

- Can be connected to a huge range of Norbar transducers
- 'SMART' intelligence for transducer recognition (no transducer set-up)
- Up to three transducers can be connected simultaneously
- Pictorial display panel for ease of calibration mode selection
- User can select language of operation (most European languages available)
- Supplied with a UKAS accredited calibration certificate



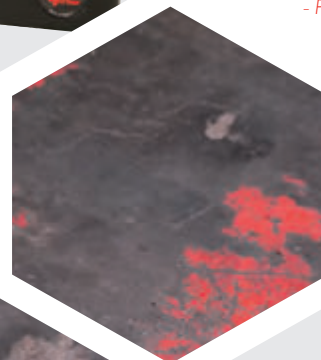
Professional Torque Tester - Pro-Test



TruCheck

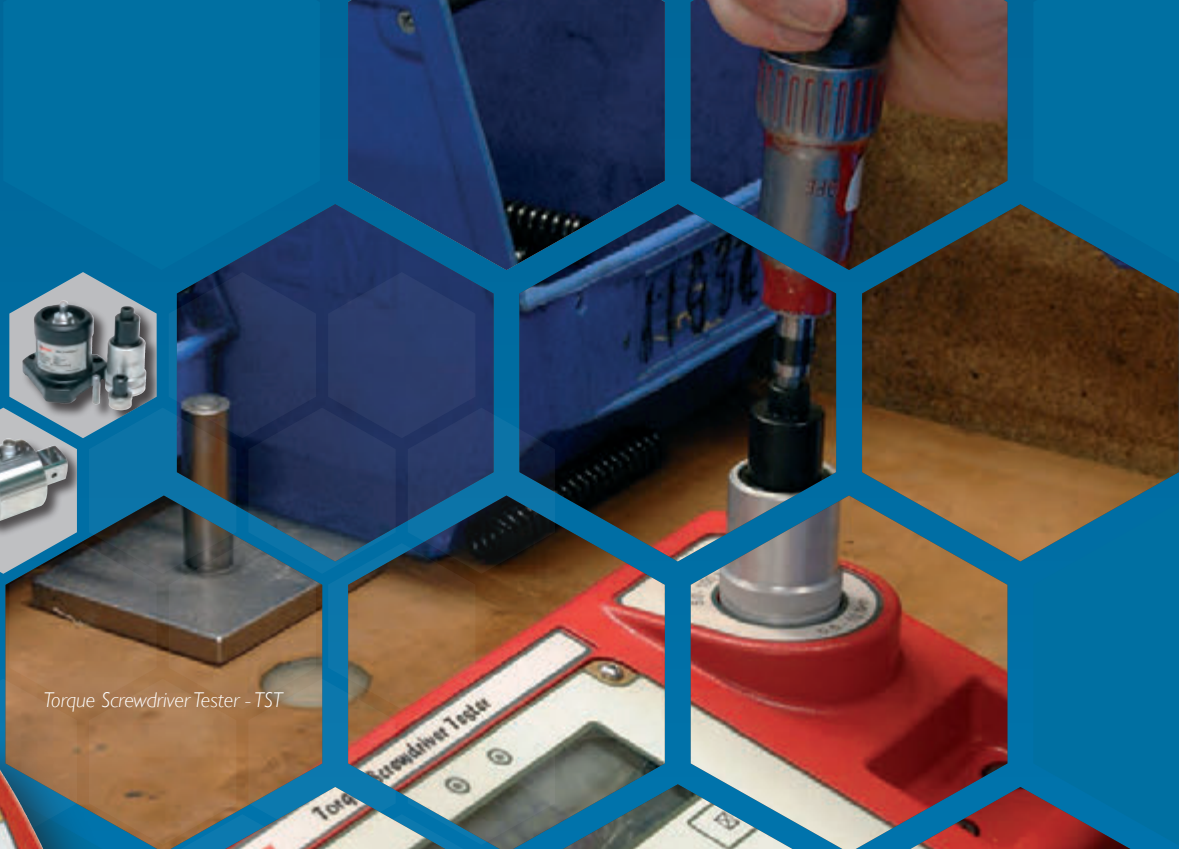


TruCheck Plus 3.0 N·m





Range of Transducers



Torque Screwdriver Tester - TST



Torque Tool Tester - TTT



COMING SOON



TORQUE SCREWDRIVER TESTER - TST™

For calibrating manual and powered torque screwdrivers

- Features an integral torque transducer for testing low capacity torque tools
- For power tools, a Joint Simulator Rundown Assembly is provided
- One connector for external transducers is provided giving access to Norbar's complete transducer range
- All other features are as Torque Tool Tester - TTT™

Range N·m	Model
0.04-2	TST 2
0.5-10	TST 10
125-25	TST 25

Connectivity with any of Norbar's torque transducers

T-BOX XL™

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

- Colour touch screen and icons to guide the user through T-Box's comprehensive functions
- Suitable for use with all torque controlled power tools. Features a 'Pulse Tool Mode' to accurately determine the output from impulse tools
- Graphical analysis and display of joint profiles
- Up to four transducers can be connected simultaneously
- Large capacity memory can store in excess of 100,000 test results
- Can connect to external devices via USB, RS-232-C and analogue 'Ancillaries' port
- Case design allows for portable use or bench mounting using the supplied stand
- Supplied with Norbar's Torque Data Management System (TDMS) software for complete tool management and data archiving
- TDMS enables data to be viewed graphically, in an SPC format or as a calibration certificate
- Supplied with a bi-directional UKAS accredited calibration certificate

MEASUREMENT & CALIBRATION

CALIBRATION BEAM

For the static calibration of torque transducers

- Norbar calibration beams are designed for the precise application of a known torque as a reference value to torque transducers
- Calibration Disc and Radius Ended beams have no bearings to cause energy loss during loading
- Designed to minimise the bending moment in the transducer during torque loading
- Radius ended beams allow calibration to the highest class of accuracy specified by BS7882:2008
- Radius Ended Beams are designed with a ± 8 degree usable arc within which the calibration accuracy is unaffected
- Square drives are precision machined to minimise play between the beam and transducer

TORQUE WRENCH LOADER

For accurate torque wrench calibration

- Loaders remove much of the 'human element' from torque wrench calibration and allow more repeatable results than loading by hand
- Wrenches are loaded in accordance with the relevant international standard, ISO 6789:2003
- ISO 1500 loader is available in a powered version to further reduce human influence on the test and remove physical effort
- ISO 1500 and ISO 3000 allow for quick and easy interchange of transducers
- TWL 1500 loader utilises the wide calibration range of up to 1,500 N·m with three simultaneously mounted transducers



Torque Wrench Loader

Calibration Beam



SERVICE & SPECIALS

UKAS ACCREDITED CALIBRATION LABORATORY (Laboratory number 0256)

Norbar was the first torque equipment manufacturer to have an in-house UKAS (United Kingdom Accreditation Service) torque calibration laboratory and continues to offer the most comprehensive service available. The laboratory has approval for torques between 0,005 N·m and 108,500 N·m. A UKAS accredited calibration service is available for all makes of torque wrenches, torque multipliers and torque measuring devices within this range.

Norbar's laboratory operates to BS EN ISO/IEC 17025:2005 which sets standards for the technical competence of the laboratory. This should not be confused with laboratories claiming ISO 9000:2000 which relates only to a laboratory's quality management systems.

- UKAS accredited laboratory for torques between 0,005 N·m and 108,500 N·m.
- UKAS accredited for the calibration of manual torque multiplying gearboxes to 6,800 N·m.
- UKAS accredited for voltage calibration of torque display instruments.
- UKAS accredited for length certification of Norbar calibration beams.



0256

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.

These projects range from modified torque wrench end fittings to complete torque and angle control of multi-spindle nut runners. Relevant European safety directives are applied where appropriate, leading to well engineered, reliable products that are designed to make tasks safer and easier.

*Example of an
engineer to order
project for the
sub sea industry*





GLOBAL SERVICE

Norbar is the only torque equipment manufacturer capable of offering tool and instrument recalibration services to the original factory standard on four continents. Our accredited laboratories in Australia, USA and Singapore operate the same equipment and procedures as the UKAS accredited laboratory within our headquarters in the UK. A further Norbar laboratory is in operation in China and our laboratory in India opens in 2014.



NORBAR TORQUE TOOLS LTD
 Beaumont Road, Banbury, Oxfordshire,
 OX16 1XJ
 UNITED KINGDOM
 Tel + 44 (0)1295 753600
 Email sales@norbar.com



NORBAR TORQUE TOOLS (NZ) LTD
 B3/269A Mt Smart Rd, Onehunga,
 Auckland 1061
 NEW ZEALAND
 Tel + 64 9579 8653
 Email nz@norbar.com.au



**NORBAR TORQUE TOOLS INDIA
 PVT. LTD**
 Plot No A – 168 Khairme Industrial Area
 Thane Belapur Road, Mahape, Navi
 Mumbai – 400 709
 INDIA
 Tel + 91 22 2778 8480
 Email enquiry@norbar.in



NORBAR TORQUE TOOLS PTY LTD
 45-47 Raglan Avenue, Edwardstown,
 SA 5039
 AUSTRALIA
 Tel + 61 (0)8 8292 9777
 Email enquiry@norbar.com.au



NORBAR TORQUE TOOLS PTE LTD
 194 Pandan Loop, #07-20 Pantech
 Business Hub
 SINGAPORE 128383
 Tel + 65 6841 1371
 Email singapore@norbar.com.au



NORBAR TORQUE TOOLS INC
 36400 Biltmore Place, Willoughby,
 Ohio 44094
 USA
 Tel + 1 866 667 2272
 Email inquiry@norbar.us



**NORBAR TORQUE TOOLS
 (SHANGHAI) LTD**
 E Building - 5F, No. 1618 Yishan Road,
 Minhang District, Shanghai
 CHINA 201103
 Tel + 86 21 6145 0368
 Email sales@norbar.com.cn



www.norbar.com

