



# PRECISION TOOLS FOR MANUFACTURING & ASSEMBLY



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## NORBAR IN MANUFACTURING

Norbar equipment is used by world class manufacturers around the globe. All of them see reliability and accuracy as critical to their success. Our aim is to give you peace of mind that your bolted connections have been completed to your requirements.

Our torque wrenches have been developed with the input of customers' engineers, technicians and operators. This has created a product range that is ideal for many standard assembly line applications. Where your needs are more specialised we can work with you to design tooling to give consistent results in your application.

With a range of torque application tools from 1 to 300,000 N.m we have the widest range of torque tools in the world. The entire range is supported by our electronic torque measurement programme and all transducers up to 100,000 N.m can be provided with UKAS certification to ISO17025 to give you the level of traceability that every modern business will require.

Norbar distributors around the world are chosen for their ability to give you local support when you need it. Within our family of distributors we share applications and can often recommend solutions that have been tried and tested elsewhere.



*Professional 'P' Type  
Torque Wrench*



*Pneutorque®  
PTM-72*

**Take Pride – Torque Norbar**

## ASSEMBLY LINE PRODUCTS

Your production facilities are constantly striving to improve performance whether in cost reduction, traceability or consistency. Norbar can help with your continuous improvement projects in a number of ways:

### ASSEMBLY TOOLS

We can offer a wide range of 'P' Type manual torque wrenches without scale for Production use. These wrenches have clear sound and feel when they reach torque. Along with good technique this ensures the operator applies the correct torque. We can provide training courses for operators on the safe and accurate use of torque wrenches.

For larger fasteners the Pneutorque® range of pneumatic torque controlled tools provides a versatile solution to meet your torque, or torque & angle needs. Whether controlled by air pressure or transducer shutoff systems with data logging, we have a solution for you.

### TOOL CHECKING, CALIBRATION AND MAINTENANCE

Many customers already have torque wrench testers for setting and verifying manual torque wrenches. Some of these systems are mechanical and not capable of the accuracy required today. Other, earlier electronic systems often have drift issues that cast doubt on the real torque values. Norbar is renowned for its cost effective torque tool testing systems.

T-Box™ is the latest Norbar measuring instrument, with its TDMS software, designed to store trend data and assist you in setting appropriate recalibration or maintenance intervals.



*T-Box™ torque and angle measuring instrument*

## HOW TIGHT IS TIGHT?

We can often offer solutions through your local distributor to assist your Process Capability studies. A combination of our torque measurement equipment and the distributors' knowledge can help improve your processes.

One of the key analysis tools is the USM-3 Ultrasonic Measurement Instrument. This device measures the change in length of the bolt due to the tightening process and allows for detailed analysis of the torque versus tension relationship.



*USM-3 Ultrasonic Measurement Instrument*



*Pneutorque® PTM-52-IC features a torque transducer and internal solenoid valve to shut off the tool at the desired torque*

## CHANGEOVER AND MAINTENANCE

It is not just on the line that Norbar can help you. Your desire to reduce set-up or changeover times can often be helped by our tools, as can your goal of reduced maintenance down-times:

### SET-UP AND CHANGEOVER

Many fixtures are screwed in place. The use of torque wrenches to achieve the correct degree of fixture for sub-table clamping will give consistent results without guesswork or trial and error. Many customers also use torque wrenches or screwdrivers to clamp components into fixtures during processing or to prevent carbide cutting tool inserts from being overstressed.

### MAINTENANCE

To keep major items of plant such as power presses in top condition it is vital to carry out preventive maintenance. This often involves the loosening and tightening of large or awkward fasteners. Norbar specialise in small powerful torque multipliers that make short work of these difficult fasteners. With a Norbar Handtorque™ in your maintenance toolkit and the support of your local distributor for the design of specialised torque reaction arms, you can tackle those difficult jobs in less time and with more confidence.



*HT-52 1000 N.m  
Torque Multiplier*



*Professional Torque Wrench*



*Torque Screwdriver Tester (TST)*

*Professional Torque Wrench  
with ring end fitting*

## AFTER SALES SERVICE

Your customers do not always have ideal conditions in which to perform field maintenance of your products. Norbar is able to supply suitable products for field disassembly and reassembly of threaded fasteners on your equipment:

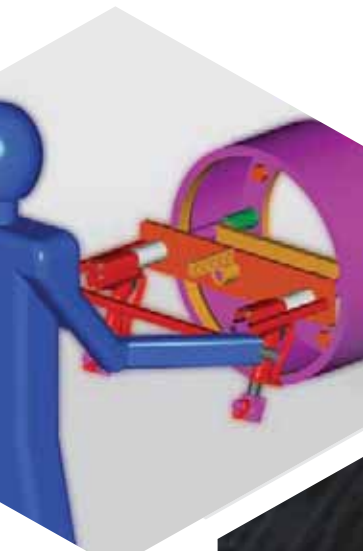
### SERVICE TOOLS

We can offer a wide range of Norbar branded or OEM branded tools in single piece or kit form. Ask us for details and help your equipment run longer and better after it leaves your facility.

### “SPECIAL” ENGINEER TO ORDER PRODUCT SERVICE

Your designers are always finding ways to challenge manufacturing with smaller, lighter, more highly stressed components. If we have not got the right solution in our range, our Engineer To Order team will work with you and your distributor to specify, design and produce it in a cost effective manner.

*Twin spindle unit comprising of a Pneutorque® stall tool, special nose extensions, reaction plates and frame*



*Handtorque multiplier fitted with torque bar adaptor, special torque reaction arm and angle gauge assembly*



*Special fitting for torque tightening of tool collets. Under tightening can result in the collet not holding the tool whereas over tightening can cause damage to the collet.*

## GLOBAL SERVICE

Norbar is the only torque equipment manufacturer able to offer tool and instrument recalibration services to the original factory standard on four continents. The accredited laboratories in Australia, USA and Singapore use the same equipment and procedures as the factory's UKAS accredited laboratory in the UK. A further Norbar laboratory is in operation in Shanghai.



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## NORBAR PRODUCT PORTFOLIO



Torque Wrenches



Hand Torque Multipliers



Pneumatic Torque Multipliers



Torque Measurement



Torque Transducers



Ultrasonic Bolt Measurement



Calibration Services

Distributed by