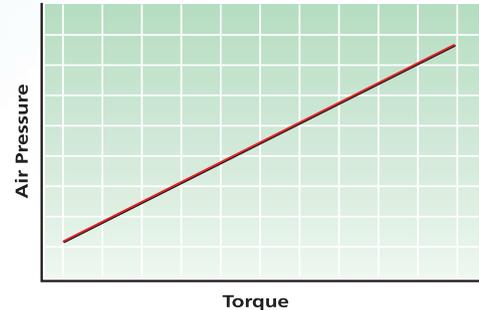


Pneutorque® Pneumatic Multipliers

What is a Pneutorque® Pneumatic Wrench?

The Pneutorque consists of a robust air motor driving a Norbar multiplier with three or more stages of epicyclic gearing.

Torque control is achieved by adjustment of the air pressure. An air pressure versus torque graph and a calibration certificate is supplied with each tool and allows specific torque values to be set. For more critical applications, Pneutorques can be fitted with a torque transducer and the precise torque output displayed. The tool can then be shut off at the desired torque either manually or automatically using suitable control circuitry.



Air pressure graph supplied with each tool.



The Lubro Control Unit, 16074, is Norbar's filter / regulator / lubricator. It is supplied with 3m of high quality steel braided air hose and a 100mm pressure gauge for accurate setting.



The Twin Lubro, 16075, allows for a quick change of air pressure or direction by virtue of a two direction switch on the side.



The Multi Channel Lubro, 60290, offers an ideal solution for customers wishing to use a Pneutorque or other pneumatic tool on multiple applications without having to refer constantly back to air pressure graphs.

Why use Pneutorque® Pneumatic Wrenches?

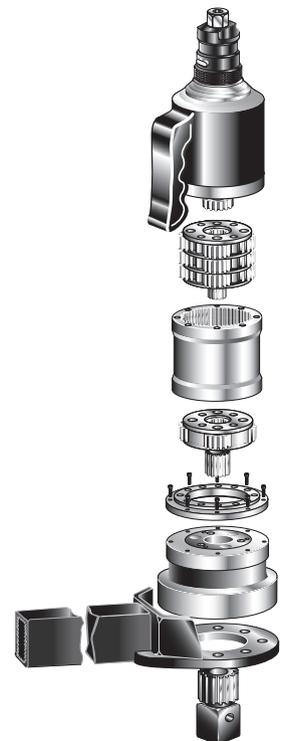
Hand operated torque multipliers are ideal for low volume or intermittent use or when there is no power source available. However, for production lines or whenever a large number of bolts is involved, a powered multiplier will save a considerable amount of time.

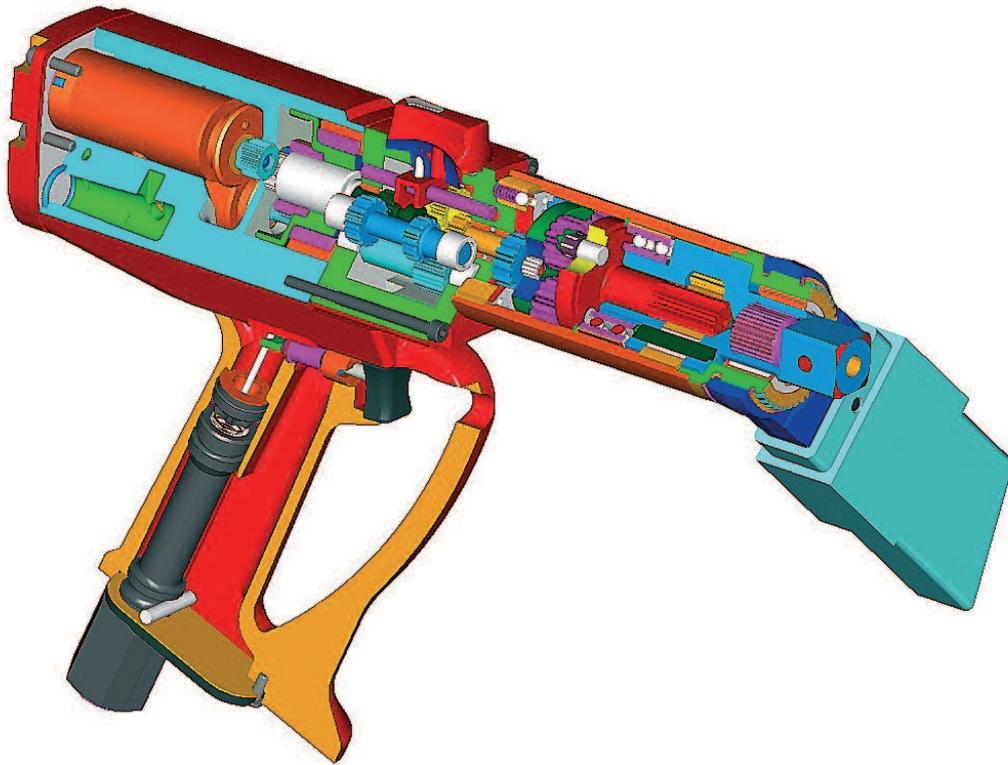
Pneutorque operation is quiet – less than 85dB(A) with absolutely no impacting. These two factors make Pneutorques comfortable for the operator to use, reducing fatigue and consequently increasing safety.

Pneutorques provide accurate torque control – on a given joint they will stall repeatedly to within $\pm 5\%$. Using electronic shut off, this repeatability can be improved to $\pm 2\%$.

Summary of Pneutorque® Advantages

- Sound pressure level does not exceed 85dB(A) when tested in accordance with ISO3744:1994.
- No impacting means less damage to the tool, socket and bolted assembly.
- Less operator fatigue, results in increased safety.
- Powerful – models available up to 300,000 N.m (220,000 lbf.ft).
- Repeatability of $\pm 5\%$ for accurate torque control.
- A wide range of attachments and accessories make Pneutorques adaptable to many applications.





Pneutorque Applications

The smooth and continuous torque output of the Pneutorque makes these tools suitable for a wide range of bolting and non-bolting applications.

Bolting

Pneutorques are ideally suitable for tightening and untightening bolts of up to 150mm diameter. The following is just a small selection of applications:

- Wheel nuts on trucks, buses and large machinery.
- Structural steelwork.
- High pressure joints eg. Pipelines, boiler feed pumps and pressure vessels.
- Engine head bolts.
- Injector heads on plastic injection moulding machines.
- Heat exchangers.
- Heavy vehicle production eg. Chassis and suspension bolts.

Non-bolting

Whenever a high continuous torque is needed, Pneutorques can be used as the power source. Typical applications include:

- Ball valve operation.
- Powering wagons and gantries.
- Barring of large diesel engines (turning the crankshaft) during build.
- Weld testing by applying test torques.
- Roller adjustment in steel mills and paper mills.
- Valving of gas bottles.



Ball valve actuation using PT13



Gas bottle valving and de-valving using PT1500