

generating solutions
for the global market

WIND ENERGY



WIND ENERGY

introduction

Cooper and Turner is a well established company with an enviable pedigree in the UK as a manufacturer of industrial fasteners.

The company is a major player in the global fastener market with a portfolio of 'blue-chip' customers and a reputation for quality, service and product innovation. With established operations in UK, Denmark and China, Cooper and Turner has a global vision and a commitment to mutual support and growth with customers in all of its key market sectors.

The Wind Turbine Market

Cooper and Turner has serviced the wind turbine market for more than 10 years, long before it became fashionable. The manufacture and provision of high quality, safety critical fasteners with the ability to operate in some of the most hostile environments in the world has gained Cooper and Turner an unrivalled reputation in the wind turbine marketplace.

A good understanding of this specialist market, in-house technical expertise and the manufacture of first-class products make Cooper and Turner an excellent choice for the supply of fasteners to this demanding market.

All of this is backed up by tangible quality and an extensive and industry accredited product range.

Product Ranges

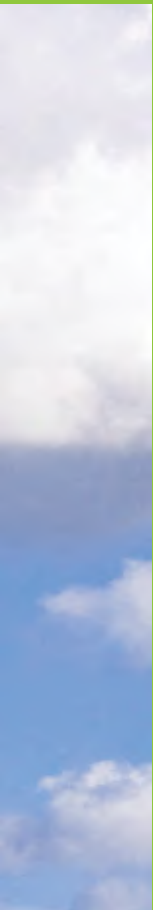
Cooper and Turner currently service all aspects of the wind turbine market, providing a range of fasteners, both standard and customer bespoke for:

- *Nacelles*
- *Blade to Hub*
- *Foundation Fixings*
- *Tower Construction*

This flexibility allows wind turbine manufacturers to 'single source' all of their fastener requirements with all of the advantages that this brings.

Cooper and Turner - Overview of Wind Turbine Market Advantages

- *Established brand*
- *Longstanding expertise within the wind turbine market*
- *Industry specific technical knowledge*
- *Flexibility through manufacturing the product range*
- *Superior testing facilities*
- *TUV Nord certification*
- *ISO 9001 - 2000 certification*
- *Proactive product development*
- *Cost competitive*
- *Business and production facilities ideally suited to the wind turbine marketplace*





foundation studs

WIND ENERGY



Cooper and Turner manufacture a range of anchor fasteners designed specifically for wind turbine towers.

The studs are manufactured from high tensile steel ranging in diameter from M24 to M64 in property classes up to 10.9.

We offer various corrosion protection systems including metal spraying of the exposed shank.

Studs can be fitted with heat shrink or rigid plastic debonding sleeves, allowing uniform stressing of the anchor bolt after they have been cast into the concrete foundation of the tower. Information on tensioning equipment and loading can be supplied with the order.

Various fabricated 'one piece' cradles can also be supplied to customer specifications.





tower construction

For the standard 'flange-jointed' design of the tower, Cooper and Turner possess full TUV Nord approval for the manufacture and supply of EN14399-4 products in hot-dip galvanized finish in accordance with ISO 10684.

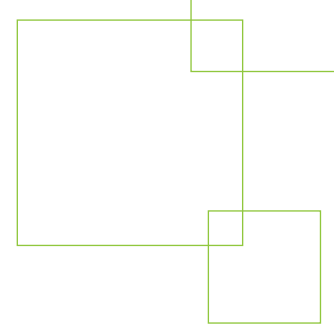
Sizes range from M16 to M64. Cooper and Turner are currently developing this range to include products up to 80mm.

Cooper and Turner can also offer various special fastener assemblies to suit customer's design for other forms of tower (eg lattice).

In addition, Cooper and Turner can manufacture and supply ASTM A490M bolts, ASTM A563M 10S nuts and ASTM F436M washer assemblies which can be supplied with zinc flake coatings in accordance with ISO 10683.



WIND ENERGY





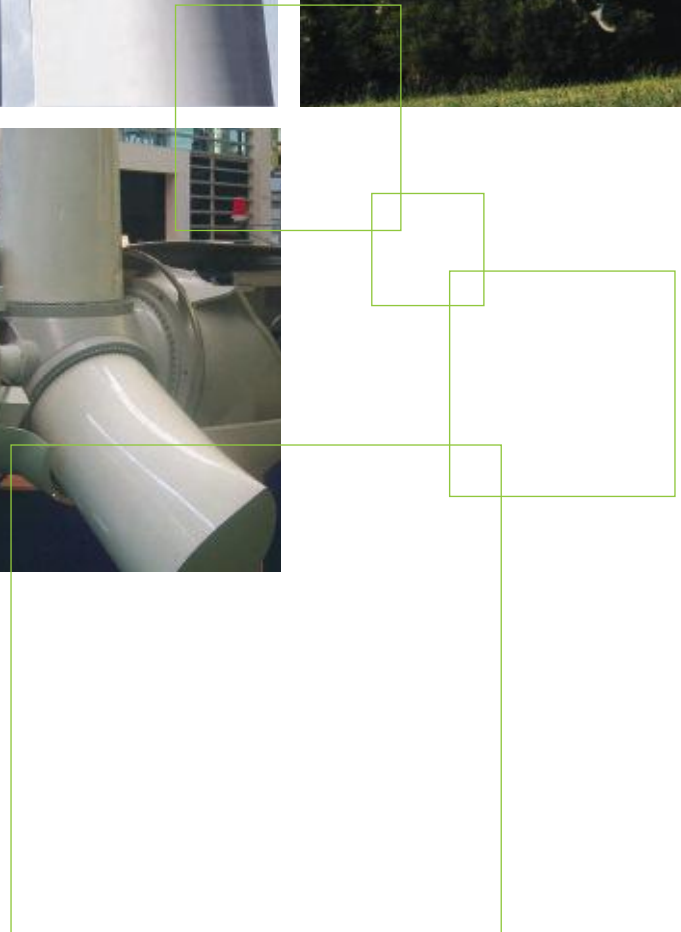
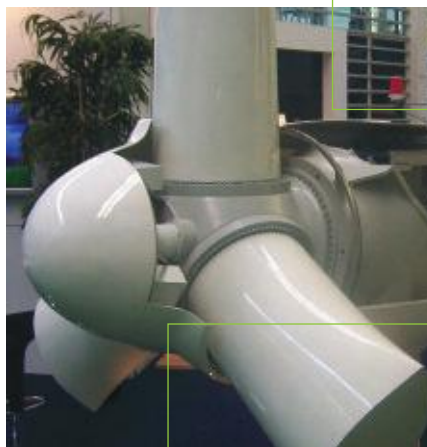
nacelle bolts & studs

WIND ENERGY



Cooper and Turner manufacture a range of ISO 4014 bolts in diameters M16 to M64 plus a range of ISO 4017 setscrews in property classes 8.8, 10.9 and 12.9 or in accordance with special requirements. The company also offers a range of machined studs to customer specifications.

In addition, Cooper and Turner also manufacture a range of special studs in diameters M16 to M80 and in property classes 8.8 and 10.9 or in accordance with customer special requirements.



blade to hub studs

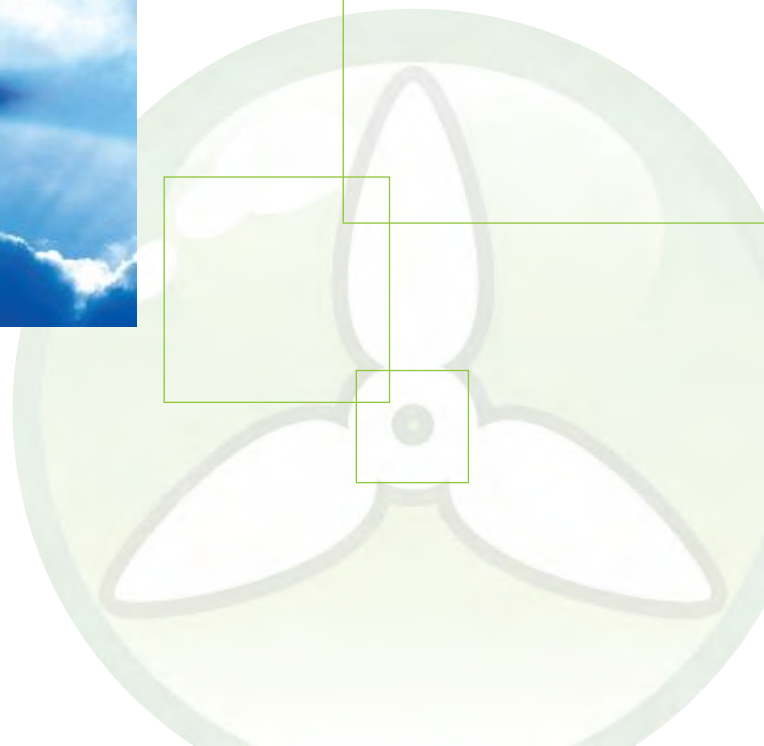


A manufactured range of studs suitable for 'blade-to-hub' connections are offered by Cooper and Turner, including scant shank (thread roll effective diameter) and waisted studs.

Diameters range from M20 to M36 and in property classes 8.8 and 10.9, or in accordance with customer special requirements.



WIND ENERGY



protective coatings

WIND ENERGY



Hot-dip galvanizing in accordance with ISO 10684 can be provided on bolts and studs in property classes 8.8 and 10.9 and their associated nuts.

Zinc flake coatings of Delta or Geomet in accordance with ISO 10683 can be provided on bolts in property classes 8.8, 10.9 or 12.9 and their associated nuts and on studs in property classes 8.8 or 10.9 and their associated nuts.



CONSTRUCTION | WIND ENERGY | TUNNELLING | RAIL | OEM

Cooper & Turner Limited | Sheffield Road | Sheffield S9 IRS
Telephone +44 (0)114 256 0057 | **Fax** +44 (0)114 244 5529
Email sales@cooperandturner.co.uk | **Website** www.cooperandturner.co.uk

