

The Atlas Copco logo is positioned in the top right corner of the page. It consists of the company name 'Atlas Copco' in a white, serif font, centered between two horizontal white bars. The background of the logo is a solid teal color.

Atlas Copco

A large, semi-transparent teal triangle is overlaid on the bottom left of the image. Inside this triangle is a white technical drawing of a wind turbine component, showing various circular and rectangular shapes with dimension lines and labels. The drawing is partially obscured by the main text.

Solutions for the construction of wind turbines

From the factory to the field

Industrial manufacturing of wind turbines

At Atlas Copco Tools, we can help you optimize your production at all locations so that - based on standards - you deliver the same high quality worldwide.



Tailwind for production, construction and maintenance

Every minute a wind turbine is down, it costs money.

With our tools, assembly solutions and service concepts, you save time and money, control your quality and improve the ergonomics and safety of your employees. In production, construction and maintenance: onshore and offshore.



Reduce costs

Small quantities, a high number of variants and global competition: When the wind blows from the front, we help to reduce your costs with well thought-out solutions.



Ergonomics & Occupational Safety

Narrow spaces, poorly accessible tightening locations, heavy weights of components and tools: All of this poses numerous hazards for your employees. We know your work situations and offer ergonomic and safe solutions.



Control quality

You have process reliability and quality in your own hands - and you can prove it: We show you how to optimize your processes without reinventing the wheel.




Quicker Safer Smarter

Don't throw standards to the wind - use them to become more efficient

The production of wind turbines is teeming with poorly accessible bolting points, and employees have to handle heavy components and tools. Some bolts require to be tightened five times before all safety requirements are met. By relying on intelligent technology and defining clear tightening regulations, you can save yourself a lot of testing work after the turbine has been installed, for example.

Maybe you know these processes?

Mounting example: 124 screws/780 Nm	Solution: 124 screws/780 Nm
<ol style="list-style-type: none"> Step: Pre-tighten Step: Mark Step: Tighten Step: Waiting time Step: 100% check 	<ol style="list-style-type: none"> 124 x modern assembly process Random process inspection
<p>Effort: 620 process steps</p>	<p>Effort: 130 process steps</p>


70% Saving

This example is actually an absolute no-go. Nevertheless, complex processes like this are unfortunately very common in the wind energy industry. There is more at stake here than the safety of the subsequent turbine and the safety of your team. It is about the profitability of your production and your competitiveness!

Optimize and standardize assembly

Many assembly steps and downstream testing processes become superfluous when you set standards and use the possibilities of modern bolting and intelligent testing technology.

How to do it?

By looking at the entire process with you, keeping an eye on all current standards and guidelines, and involving the relevant specialist departments: Design, planning and manufacturing, quality assurance and maintenance.

Together, we develop an efficient and sustainable solution. For all your locations, worldwide.




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Create solutions and optimize processes in no time at all

Before we talk about possible assembly solutions, we look over your shoulder. This is the most efficient way we can discover the most effective manufacturing process, together with your design engineers, manufacturing specialists and quality assurance.


Only then do we select the best technology for you!

A few examples from the field - and how we were able to help:




From 30 hours of waiting to 45 minutes!

By analyzing the setting behavior of certain bolts and optimizing the process, one of our customers was able to drastically reduce the unproductive waiting time between two assembly steps.



Post-tensioning processes eliminated

During assembly, our customer carried out some clamping operations in different steps. Through intelligent technology and processes, they were then able to avoid operations and, in particular, shorten the downstream inspection processes.



Bolt design and tightening procedure verified

Our customer wanted to know how high the preload forces remained after an initial dynamic load. As well as whether it is possible to relocate downstream testing processes from the plant to production. We were happy to verify this data for them.

Despite the high safety requirement, we were able to eliminate a large part of the assembly or manufacturing steps in all cases!

This is how you become more efficient with us:

01	02	03	04	05	06
We take the goals of your construction as a basis	Analysis of the current production flow	Identify possible savings potential	Select technology to be used	Calculate payback period	Implement solution

This gives you clear decision criteria for your investment in your production technology.

With the latest technology and wind behind you



Save time and money.

Rotating tools, ergonomic assembly solutions, hydraulic clamping technology up to 2,200 kN and sophisticated service concepts: With our solutions, you control your quality, increase safety, and incidentally improve ergonomics for your employees. And you save from the very first minute: On the assembly line, when setting up the plant onshore and offshore, as well as during every maintenance operation.



Machine carrier: Ergonomic assembly

For example, assemble with torques of 16,000 Nm in tight spaces, count the bolts and document - all automatically! At the same time, the tool is weightless for the operator.



Wing production and surface finishing

Grinding with turbine power means: You only invest a little more money in the machine and then save continuously. Removing more material than you would with a conventional air or electric grinders - and work much more ergonomically.



Switchgears and electronics

How many different screws are installed in your electrical switchgear? Our modern cordless screwdrivers automatically set the correct torque, detect thread errors, for example, and count them. It doesn't get any safer than that.



Gearbox or bearing assembly

You can assemble and document up to 16,000 Nm electronically controlled with our Tensor Revo HA electric nutrunner. Do you need even more mobility and flexibility? Then you can rely on our SRB HA cordless high-torque smart battery nutrunner with up to 4,000 Nm.



Tower building

When things get really tight and components weighing several tons have to be mounted, the hydraulically driven RT torque wrenches are an advantage. Even with more extreme demands are placed on the pretensioning force, our clamping cylinders are just the right choice.



Data Management

Everything in view: Analyze your processes using the bolting data that our systems transmit wirelessly on request. They ensure your quality and intervene at the assembly line in the event of impending errors. Before the wind turbine is erected out in the field.



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Quicker



Safer



Smarter

Well thought-out solutions - from planning to quality assurance

For the assembly and manufacturing of wind turbines and components, you will find the right equipment from us. We not only offer you tools, but also well thought-out solutions that we develop individually for our customers - from special socket wrenches to documentation-capable bolt tensioners.

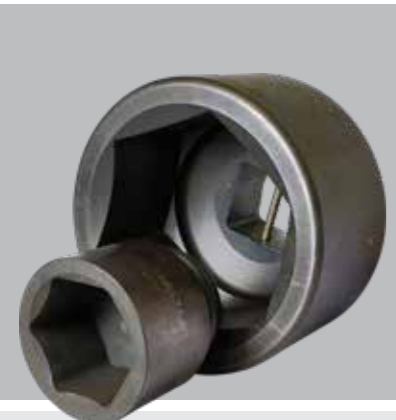


Smart electric nutrunner

The computer assisted Tensor Revo HA Electronic Nutrunners are ready for Industry 4.0! They can detect errors, are fully documentable and suitable for torques up to 16,000 Nm.

Software

Statistical analysis, process optimization or documentation: Our screwdriving technology is ready for Industry 4.0. We offer for the For example, plant- or group-wide networking of all production data and systems, as well as workplace solutions with worker guidance and visualization.



Large and custom made sockets

With decades of experience, we also manufacture sockets for large torques. Our portfolio also includes high-quality custom-made products such as thin-walled sockets with reduced outer diameter for confined bolting applications.

Tensor IxB Platform

The Tensor IxB tools are designed to provide feedback to operators about the assembly process using tool or station displays. No special software or expert IT knowledge is required. Our systems have been designed to allow easy access via web browsers with the familiar interface of previous systems, speeding up familiarization and saving time on training and familiarization. This means that even smaller bolting cases, e.g. in electrical assembly, can be assembled correctly and automatically documented at the first attempt.



Quality assurance

Assure your quality with analytical equipment, electronic torque wrench or a fully equipped measuring bench. Or assign these tasks to us. We also calibrate all your measuring equipment!

Hydraulic wrench

Our RT and RTX series hydraulic wrenches are suitable for assembly with very high torques - up to 71,000 Nm - in tight spaces. Their robust design ensures reliability and durability.

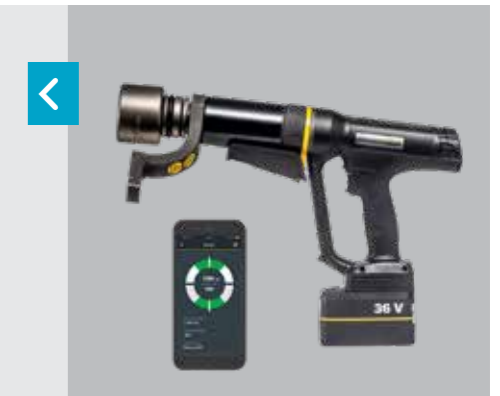


Bolt tensioning

We support you with specially developed bolt tensioners for the construction of wind turbines. Developed over many years, our solutions for bolt tensioning in wind turbines offer advanced, safe, fast and at the same time user-friendly tools. Upon customer request, we also implement process control and automatic documentation - even for the most critical applications.

Smart battery nutrunner

With our new range of high torque, battery powered, cordless nutrunners, we are putting our knowledge and experience to work to bring the Smart Factory to the field for you. Atlas Copco's new cordless range is equipped with a torque transducer for maximum reliability. All tools feature a powerful motor and a new dual-trigger design that minimizes the risk of injury.



Grinders

The ergonomically lightweight turbine grinders of the GTG series grind, rough and cut far faster than any conventional air grinder in the world with comparable performance. This means you use your personnel efficiently and save on consumables. Our LSF and LSV lamellar grinders for milling, deburring or polishing are also ergonomic.

We make a big fuss
about our customers

So, this is how we can help

We would like to be **your strategic partner**: We work with our customers on everything from preventive maintenance and servicing of the entire production technology to process optimization, training or calibration. Worldwide, more than 1,500 service technicians are on duty around the clock in our Industrial Technology business unit alone.

Service, repair, maintenance



We repair all compressed air, electric and hydraulic tools in our central workshops or directly at our customers' sites. We maintain your tools of all kinds preventively as well as - if desired - your entire production technology. We also counter-measure your screwdriving tools or offer you equipment to take over these tasks yourself.

Calibrations of ALL measuring equipment



Atlas Copco is your competent and experienced specialist in all aspects of testing and calibration. Our core competence lies in the measured variables of torque, angle of rotation and force. Our range of services includes the calibration of hydraulic wrenches in a measuring range of up to 71,000 Newton meters. With our calibration laboratories in Essen and Dingolfing, which are certified by the German Accreditation Body, we always guarantee you the highest quality and precision.

Individual training for your employees



We train employees in the correct use of tools, technical and physical principles, ergonomic workplace design, and current standards and guidelines. In this way, you can safeguard your processes and become more productive and efficient. Our seminars and workshops on bolting and fastening technology are particularly popular. Please do not hesitate to contact us for individual requests: We also develop training courses that are specially tailored to your requirements.



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Cool head even in lofty heights



For more safety and quality with less effort

Secure your assembly processes by using the current guidelines as a basis for their planning.

For example, VDI/VDE Guideline 2862 Sheet 2, which has applied to general mechanical engineering since 2015. It defines "Minimum requirements for the use of screwdriving systems and tools". Or the VDI 2230 and others for a professional constructive design. The VDI/VDE 2862 sheet 2 and also the 2645 sheet 2 and 3 for professional assembly and testing processes. Or the VDI/VDE 2646 and 2648 for the subject of calibration of torque and angle of rotation in screwdriving technology.

Does this make your head spin? Don't worry! We know our stuff! Our experts will tell you how to:

Raise your assembly to the "state of the art";

Detect and eliminate errors and problems at an early stage;

Efficiently balance effort and quality while meeting the industry's high safety standards ... and still make 70 % of your assembly steps and test procedures superfluous.

Whether batch size 1 or large-scale production: We give you the security of selecting your production equipment on the basis of transparent, standardized processes and getting a grip on the high costs involved.

Ensure high manufacturing quality at all your production sites - worldwide! We will be happy to support you in this.



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