

alkitronic[®]

SYSTEM SOLUTIONS FOR WIND POWER
alkitronic Torque Multipliers and Services



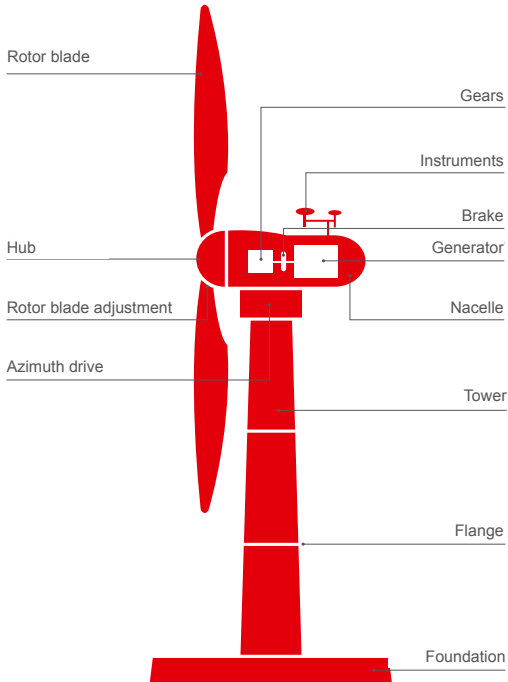
TORQUE POWER WORLDWIDE

YOU'VE GOT THE APPLICATIONS.
WE'VE GOT THE SOLUTIONS.

Wind power systems need to resist high environmental strains. Often many tons of weight must be held up in lofty heights, yet with absolute reliability. When exposed to extreme forces or weather conditions high precision fastening methods are decisive for success. alkitronic convinces with complete system solutions covering all aspects of tightening of bolted fasteners.



Selected applications on wind power systems



We know your applications and tightening requirements.

alkitronic provides everything – from competent consultancy services to a wide product spectrum and assembly instruction documentation – all in a comprehensive system for everything you need, on or off shore.

- ✓ Compact hydraulic torque wrenches, e.g. for azimuth drives
- ✓ Fast electric torque multipliers, e.g. for turbo assembly applications
- ✓ Efficient manual tools, e.g. for simple maintenance tasks
- ✓ Tools for the torque angle procedure, e.g. ideal for the assembly of rotor blades

Advantages in all Areas

WORK WITH US – QUICK AS THE WIND

Whether in production, assembly or maintenance: the perfect work result when fastening components of wind power plants depends on the best suitable tightening method. Because of the universal alkitronic programme you will never have to make compromises, not when it comes to speed, precision, efficiency or productivity. In addition to our system consultancy services we have electric, hydraulic and manual torque multipliers and wrenches in our product range – so you will find the best tool for every conceivable application and are not restricted to a single technology. And the performance of our tools is enhanced by the unique alkitronic quality made in Germany.

Advantages in production



- High working speeds
- Safe switching off with high repeatability
- No failure times due to overload
- High tightening frequency
- Unbreakable and durable gears for long service lives
- Documentable quality using the assembly documentation system

Advantages in assembly



- Heavy duty cast aluminium motor case, suitable for construction sites
- Synchronous motor, suitable for any voltage, also mobile aggregates. Current fluctuations are no problem
- Protection IP54 against moisture and dust
- No more switching between speed and power mode
- No performance loss at higher operating temperatures

Advantages in maintenance



- 100 % mobile aggregates suitable (!) no performance losses
- Programmable torques, also for tightening with torque angle
- Can be used as a test wrench as it cannot be overturned
- Excellent handling with the simple single finger rocker switch

Our complete Programme for Wind Power

Electric torque multipliers



Hydraulic wrenches



Manual torque multipliers



WE'LL MAKE MORE OF

You have the application; we provide the consulting competence to find the best solution for your requirements, together with you. With alkitronic as your system partner you will be able to collaborate on a high technical level: everything around the tightening and the wind power plant, including calibration and documentation. We know your facility type and applications. This way we can provide you with the right tool package to meet all your requirements. Through our high level of service we always achieve long-lasting partnerships. Check us out, and just inquire.



YOUR APPLICATION

- Competence team & project management all around your application
- Field service, sales, technical support and expert advice
- Technical implementation of special support arms
- Fast implementation of specialist solutions
- After sales support, increase of the life cycle value
- Staff training on site, e.g. repair and maintenance of hydraulic aggregates



Calibration system (calibra)



Mounting documentation system (MDS)



Service / training



Electric Torque Multipliers

Electric Torque multipliers with all-weather qualities



Electric torque multipliers of the alkitronic brand are ideal for working on wind power plants.

In this case high forces and quick working speeds are essential – as found in numerous bolting situations. The devices are really ideal for turbo installation applications. Because contrary to hydraulic wrenches there is no “reverse” ratchet movement, which results in enormous time savings.

On top of that, alkitronic cannot be stopped by wind, weather and other environmental influences. Many tool types are designed with the protection type IP54 (protected against moisture and dust) and therefore perfect for the use in the offshore environment. For the range of 100 Nm to 42,500 Nm there is no faster and more precise technology.

TORQUE – ANGLE – PROCEDURE

This is used wherever high quality is required and friction effects must be minimized: e.g. when mounting 50 meter long rotor blades on the hub. Research has shown that 80 % of the torque is necessary for overcoming the friction below the head and on the thread. Wherever friction effects must be minimized the torque angle procedure is your first choice. Here the friction factor in the thread and of the bolt has no effect on the achieved mounting tightening force. If you want to eliminate negative effects with alkitronic you are always on the safe side.

EFCip



From 60 to 6,500 Nm
ip = protection IP54.

ECWip



From 60 to 6,500 Nm
ip = protection IP54
ECWip = angled
version.

EF / EFW



From 400 to 42,500 Nm
EFW = angled
version.

EFC



From 60 to 5,000 Nm

ECW



From 60 to 5,000 Nm
ECW = angled
version.

Plus Versions



There is a plus version
for many models =
with LCD

- The automatic shut-off system guarantees a precise reaching of the torque, precisely set values, high repeatability
- The working speed is tremendous
- The brushless synchronous motor is very efficient due to highly minimized failure risks
- The IP54 models are not affected by moisture or dust
- The devices can be used in all international power grids (100 to 253 VAC / 45 to 66 Hz) with stable torque precision
- The plus version with the comfortable control via display

Hydraulic Torque Wrenches and Pumps

Hydraulic wrenches for positions difficult to access: AS or AX



AS

Up to 37,600 Nm



AX

Up to 49,200 Nm, Combination wrench with exchangeable head.

For certain industrial applications sometimes hydraulic wrenches are the first choice, because of the technical requirements. For example in tight spots and such difficult to access, and for maintenance purposes. **In wind power applications, e.g. for flange fittings inside the towers or on the shaft-hub connections, as well as in azimuth brakes.**

Electric hydraulic pumps



Electric hydraulic pump Nova
up to 700 bar, max. 15 l/min.

NOVA: high speed in permanent operation

Any hydraulic system should work as quickly as possible. Here the electrical hydraulic pump NOVA is your first choice. As one of the fastest aggregates available on the market it helps reduce the "idle" working time during ratcheting. **In the wind power sector it is ideal because of its quick work performance. In assembly it reduces costs, e.g. when erecting cranes.**

- Manual or automatic operation with remote control
- Wear free and suitable for construction sites – robust compact case with handle
- Delivered in the "Multibox" with eyelets and handles, certified for crane transport

Manual power wrenches HG



Alkitronic manual torque multipliers replace impact spanners, pipe extensions and other insufficient bolting methods. Because they provide reliable tightening quality without cables, energy supplies or hydraulic pressure lines they are particularly suitable for maintenance purposes. **In wind power applications THE essential service tool. Every service vehicle should be equipped with at least one "HG".**

Mounting documentation system (MDS)



Torque measurement directly on the bolt (integrated sensors)

- Transmission of predefined fastening parameters to the tool
- Monitoring and graphic display
- Recall and archiving of protocols
- Hydraulic and electric systems with MDS; electrical systems incl. torque angle procedure

Calibration system (calibra)

In wind power applications there are extremely high quality standards. Don't leave anything to chance, so use the calibra calibration system to regularly test and validate your tool.

For precision torque measurements, optimization of torque values, pre-setting specifications.

- Torque measurement systems for testing devices
- Interface IFcalibra with USB
- Software calibra KS for Windows® PCs

The measurement and calibration system Calibra checks all common torque tightening devices: electric, air, manual, and hydraulic.



alkitronic®

YOUR PLUS FOR MORE POWER

Increased quality

Premium production
Use of high-quality materials
Long product life cycles
30 years' experience in bolting technology
Made in Germany – international patents

Increased precision

Precise, customer-specific torques
High repeatability
Reliability in permanent operation
Recordable tightening outputs
Automatic shut-off

Increased productivity

Quicker tightening without reworking
No environmentally caused failures
(IP54, ATEX)
High work safety
Simple use – easy instruction
Low maintenance and cost efficient

Better service

Technical advice on site
Training offers
Manufacturer's calibration and certification
Lifecycle support
Spare part and repair service

TORQUE POWER WORLDWIDE

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Development, Production and Distribution of Bolting Systems

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