

SECURE BOLTING CONNECTIONS IN CRANE CONSTRUCTION WITH ALKITRONIC CASE STUDY: BKL BAUKRAN LOGISTIK GMBH, FORSTINNING, GERMANY

"Cranes at the highest level." This is what BKL Baukran Logistik GmbH stands for. At dizzying height, safety and optimally bolted joints are indispensable. This is made possible with the help of robust tools. Therefore BKL uses torque multipliers from alkitronic®.

COMPANY PROFILE

Founded in 1969, BKL Baukran Logistik GmbH specialises in selling and renting cranes. The portfolio also includes associated services such as logistics, assembly and a 24-hour emergency service.

**Some move mountains.
BKL moves cranes.**

With more than 500 tower cranes and over 100 mobile cranes, as well as around 300 employees, BKL Baukran Logistik GmbH is one of Europe's largest manufacturer-independent suppliers of crane solutions.

THE INITIAL SITUATION

One vitally important bolt joint in the assembly of cranes is the bolt joint of the crane elements. These are Liebherr tower bolting connections.

As a rule, bolting connections with SW 55 and 2900 Nm tightening torque are used for 120/140 towers.

Tower system 256 is bolted with 5830 Nm and SW 70 tightening torque. The cranes provided by BKL must be quickly assembled, dismantled and transported. To achieve this, the bolting process must be as simple as possible and always feasible.

Tools suitable for all weather conditions are required, which must be easy to use in both confined and large space conditions. BKL approached alkitronic® with this initial situation in mind.

BKL has now been a customer of alkitronic® for many years. Our nearby location is a big plus point. Our area sales manager Georg Stein recommended alkitronic® torque multipliers in order to solve the problems with limited space and speed up assembly. These devices were then successfully tested by BKL and have been used since then.

THE SOLUTION

Both, electric torque multipliers and hydraulic wrenches, are suitable for these applications. In crane assembly, the all-weather housing with IP 54 standard is particularly important. Die-cast aluminium housings are robust and therefore suitable for construction sites.

The standard support and the heavy-duty motor housing of the ECWip 100 make it a very robust tool. This simplifies and accelerates the assembly of the crane. It offers several advantages such as 1-finger operation and freedom from maintenance. In addition alkitronic® offers a mobile service and a reliable customer service.



Figure 1: alkitronic® ECWip 100 in use

The **EFCip 100** in Figure 2 is equipped with a custom support, specially developed for SAEZ and Liebherr.



Figure 2: EFCip 100 with special support

Valuable time is saved by using the hydraulic pump alkitronic® **Nova** including the Multibox. The Multibox has a factory certificate. In combination with the Multibox, the alkitronic® Nova is therefore suitable for use in the areas of crane suspension or crane transport.

With 100-253 V / 45-66 Hz and up to 700 bar it works very fast and has a very short set-up time.



Figure 3: Nova hydraulic pump incl. Multibox

The hydraulic torque wrench X-Driver 8 with **A-Drive SW 70** and IN/Out nut is used for Liebherr bolting connections. The special feature is the flat design without protruding edges. These make it easy to reach narrow places without great effort.

**Precise, safe and robust:
alkitronic® torque multipliers are
designed to meet the high
requirements of the
in crane construction.**

The tool can be swivelled through 360°, it simplifies assembly and disassembly. Since the tool does not have to be dismantled beforehand it also saves time.



Figure 4: Hydraulic torque wrench X-Driver 8 with A-Drive SW 70

FURTHER INFORMATION

You can also find out more here
www.bkl.de.

If you have questions about alkitronic® products and applications or are interested in a partnership, please [contact us](#).

Our employees and partners at home and abroad will be pleased to offer you tailor-made solutions so that your challenges can be solved in an uncomplicated and reliable manner.

TECHNICAL DATA OF USED AL-KITRONIC® TOOLS

Electric Torque Multiplier EFCip

- ✓ Innovative motor protection with automatic switch-off to ensure bolting connection quality
- ✓ Torques from 60 to 6,500 Nm
- ✓ Intelligent processor-controlled switch-off electronics for consistent exact reproduction of the preselected torque
- ✓ Angular gearbox with optimized efficiency and excellent running characteristics (ECWip models)
- ✓ Exceptionally robust cast aluminium motor housing



Hydraulic Pump Nova

- ✓ alkitronic® NOVA is the fastest electric hydraulic pump
- ✓ Usable worldwide: With 100-253 V / 45-66 Hz and up to 700 bar, hydraulic tools are operated with single or double-acting cylinders.
- ✓ Available in Duo or Quattro version
- ✓ Robust compact design for the roughest construction site use



Hydraulic Multiplier X-DRIVER

- ✓ Hydraulic bolting system in flattest design
- ✓ Suitable for narrow and hard-to-reach areas
- ✓ Sustainable construction
- ✓ Safety and precision when using professional equipment
- ✓ Innovative articulated coupling: 360° swivel or can be converted to 360° x 360° with just one additional element.



Find out more about alkitronic® [here](#).