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## **25 years aluminium crane**

### **Lifting technology in the course of time**

**Introduced for the first time at the “Roof + Wall” trade fair back in 1989, it now belongs to the proven solutions for conveying roofing materials: the Böcker aluminium crane. Today, just as it did then, it is still a rational alternative to inclined lifts and heavy steel cranes, particularly in the roofing trade. The 25-year history of aluminium crane technology is accompanied by the increased significance of building site logistics.**

Machines have always made work easier for mankind. They automate procedures, reduce physical stress and accelerate processes. The safe and economic transportation of materials plays a decisive role on building sites, too. For more than 50 years, Böcker Maschinenwerke in Werne, Westphalia, have developed and manufactured lifting technology solutions that set standards in safety and efficiency. In 1989, Böcker, as the inventor of aluminium cranes, introduced a new crane technology in lightweight design for the first time at the Roof + Wall trade fair. For more than 25 years now, this technology has not only proven to be helpful in the roofing and carpentry trade, but is also a real competitive advantage.

### **Inclined lifts in the roofing trade**

Right up into the nineties, inclined lifts are mainly used in the roofing trade. The roof tiles are loaded from the pallet onto the platform bed of the lift and then manually unloaded and distributed on the roof. The lift safely transports loads of up to 300 kilograms to a maximum height of 36 metres. However, the personnel requirement is relatively high here: The lift needs to be operated, a roofer must unload on the roof, more roofers are responsible for distribution – and of course, personnel for laying the roof tiles must also be included in the calculation. The efficiency of the inclined lifts can be increased for example by using roof tile fitting platforms or transport systems such as sack barrows and loading devices. However, the inclined lifts are limited in terms of lifting height and load capacity.

### **Crane technology as an alternative**

This problem can be resolved by means of lightweight crane technology: The roofing materials can be picked up and directly deposited in their exact installation position on the roof surface using pallet forks, special single or double-row brick nippers, span sets or tipper baskets. Here, much larger lifting heights and loads are possible compared to the inclined lift. That saves personnel and costs. One decisive advantage: The rear side of the roof can also be reached using a crane.

Until 1989, steel is the material predominantly used in crane technology. The heavy machines with a high transport capacity are, however, not only over-dimensioned for most roofers in terms of the necessary investment.

The use of aluminium is an economic and at the same time efficient alternative. Although the maximum load-bearing capacity – with possible loads of up to 6,000 kilograms and a lifting height of up to 44 metres - is reduced due to its lighter weight, the aluminium crane is still a rational alternative for many application fields. Due to its low dead weight, the aluminium crane can also be mounted onto a compact and particularly flexible carrier vehicle.

### **Significance of building site logistics**

Today, a sophisticated logistics system is more than ever one of the decisive factors on building sites. Time and cost-saving solutions must not only be easy and flexible in use, but must also offer safety and durability. Downtimes and idling need to be avoided in order to ensure fast building progress. At the same time, increased personnel costs and frequently also personnel shortage need to be included in calculation. On this note, machines for height transport play an increasingly decisive role.

### **Intelligent crane technology**

Therefore, Böcker places particular value on the performance, reliability, durability and safety of its aluminium cranes. Developed on practical experience, it has well thought-out details, which allow a more flexible and easier organisation of everyday work. It has proven to be powerful even in confined building site conditions and can also be used as a working platform. As the crane supports can be extended flexibly and individually, and as the crane only requires very little space, work is frequently possible in many locations in normal traffic conditions. The PLC control, amongst other elements, ensures safety. Depending on the position of the supports and the suspended load, it automatically calculates the maximum possible slewing range of the crane. Two separate safety circuits with reciprocal control function ensure consistent operational safety. All crane functions are effected by the HBC remote control unit, which is very easily and accurately controllable, and which supports the operator during control by way of easily comprehensible pictographs in full graphic display.

### **Reliable and durable drive solutions**

The crane is driven via the truck engine. This leads to several practical advantages in comparison to small, less powerful drive units: Only one engine needs fuelling, the risk of failure is substantially lower, operating and maintenance costs are minimal, and platform operation does not require an auxiliary aggregate in the work basket – thus reducing noise and emissions. The truck engine is also designed for a long service life and has large power reserves in crane operation. Hence, the maximum load can always be lifted without problems, and several crane functions can be operated together.

### **Compact and powerful**

The continuous aluminium profiles in special alloy design are extremely resilient and are easier to service, as complicated controlling of the welding seams is not necessary. Böcker therefore grants manufacturer's guarantee of up to 10 years on the entire mast system. Thanks to the sophisticated control and hydraulic mast system, precise telescoping is possible, even under load and at the shallowest mast angles.

The AK 35/3000 is one of the top models of the compact aluminium cranes. With a permissible total weight of 7.49 tons (depending on the type of truck), this machine has a maximum load capacity of 3 tons – and can be operated with a normal driving license. Therefore, flexible personnel deployment is given. With its comparatively low dead weight, the truck-mounted guarantees excellent driving properties. At the same time it has a large lateral range, such that the unloading points of the roof tile pallets can be freely chosen on the building site, for example

Böcker has used aluminium in combination with a particularly high-performance steel for its powerful trailer cranes since they were added to the comprehensive program in 1997. They can be transported to the place of use with a suitable passenger vehicle. With a total weight of 3.5 tons, the AHK 34/1800, for example, offers an extension length of 34 metres, a lateral range of up to 27 metres and a load capacity of 1,800 kilograms. It is therefore an alternative to the aluminium truck-mounted crane, particularly for smaller companies.

**Comprehensive service**

High-quality components and solid workmanship ensure the special robustness of the Böcker lifting technology. If, however, any damage should arise, Böcker offers a mobile on-site service. A team of qualified employees is available 24 hours a day to solve any potential problems. Apart from at the headquarters in Werne, they are deployed at five other locations in the Federal Republic – thus ensuring a short distance to the place of action. Modern customer service vehicles with a GPS tracking system additionally guarantee fast response times.

*approx. 7,900 characters*



[Aluminium crane anniversary]

For 25 years now, aluminium crane technology has been making everyday work easier, especially in the roofing trade.

Photo: Böcker Maschinenwerke, Werne



[Aluminium crane accessories]

Roof tiles, loose materials or solar modules can be transported without any problems with the extensive range of accessories. All truck-mounted cranes can also be used as mobile lifting work platforms by attaching a work basket.

Photo: Böcker Maschinenwerke, Werne.



[Aluminium crane\_use]

Powerful and flexible in use: the aluminium crane made by Böcker Maschinenwerke.

Photo: Böcker Maschinenwerke, Werne



[Aluminium crane\_space-saving]

Space-saving: Due to its compact design, use is possible on the road in normal traffic conditions.