

## Press Release

# Loader Crane with a Vibrating Pile Driver

The ATLAS loader crane used as a pile driver and pulling unit offers very robust technology and can move beams with a length of up to 12 meters. Fast operation with few ambient vibrations and it allows for very fast travel between work sites.

With a reach of up to 20.5 meters, the unit can lift a maximum load of 4.5 tons at a load torque of 300 kNm, and is used as an extremely flexible pile driver and pulling unit. We are of course talking about the ATLAS AK300.2V loader crane, mounted in this case to an Actros chassis and operated from a top-seat, with a four-fold stabilizer support that is 4.95 m wide in the front and 6.00m at the back of the truck. This particular unit belongs to the machinery pool of Göllnitz Umwelttechnik GmbH.

### **Pulling 10 meters of double-T-beams**

This crane is working at a construction site in Hamburg, Germany, where a six-storey building with about 12,000 m<sup>2</sup> floor space is being erected. The foundation pit had been secured with a wooden lining. Since the shell of the building has now reached an advance stage, securing the pit is no longer required and the wooden beams have already been removed. Now the double-T-beams must be pulled. Each of them has a length of 10 meters of which about 50 centimeters are above ground. The attachment vibrator – a Müller MS3 – is put on top and bolted in position, and the compact and light device starts to work right away. Controlled from a top-seat and driven by the on-board hydraulic system, vibrating pile driver and loader crane do their job. It only takes a minute for the beam to be pulled out. Then it is gently placed on the ground and the next one gets pulled.

### **Quiet and vibration-free operation**

Mike Engelmann, the operator of this special crane, comments: "Working with this equipment combination is quite comfortable. The vibrations are not transmitted to the loader crane". The distinguishing feature of this loader crane AK 300.2V is its robust built – just like in the other models of ATLAS cranes. This means that design and material are chosen based on their

durability to withstand the strain which goes along with the many diverse and tough applications for which Atlas cranes can be used. This means that the basic weight of an ATLAS loader crane is slightly higher than that of comparable other products. The positive effect for the user is, however, that wear or excessive strain – caused for example by tremors – have no real significance to the structure of the crane. This can be demonstrated on this application in Hamburg. There is no sagging, twisting or tilting – the movements of the loading arm are fast and smooth, no matter whether pulling the beam or placing it on the ground.

### **Ideal design for fast travel between working locations**

This truck-mounted driving unit is based at Rostock-Mönchhagen but used wherever it is needed. Göllnitz Umwelttechnik GmbH was established in 1992 as a company specializing in sheet piling, driven and drilled foundation piles, groundwater reduction, etc. "Although it is unusual to use a loader crane for driving piles, we have been successful in doing so for 20 years. We can get to any working site very quickly", says Alf Göllnitz, managing director of Göllnitz Umwelttechnik. It goes without saying that it is easier to drive a truck from site A to site B than to transport an excavator serving as a carrier machine. Göllnitz took advantage of this and designed the ATLAS loader crane to serve as a driver and pulling unit. This solution has proven its worth, in particular in town centers, where available space is often limited. One of the many advantages is that the machine can be driven to three or four construction sites in the same day, but also because the long arm of the loader crane can reach into places which, due to their distance, are unaccessible with an excavator. "We have been working with this concept and ATLAS loader cranes for 20 years, and our experience with the special kinematics with two cylinders and box girder profile and the robust built of the loader cranes is excellent", Göllnitz comments.

### **Safety**

This ATLAS loader crane is also equipped with ACM (Atlas Crane Management), which is the reliable central element for controlling the ATLAS loader cranes and lets the driver fully concentrate on his job while ACM monitors the safety of the operation. The complete control of the system happens in real-time to ensure trouble-free operation, overload protection, emergency-shut down, and monitoring of other safety-relevant devices.

### **Competent support**

The company gets its support from the regional dealer ATLAS Rostock who provided the

technical advice and completed the modification of the crane. This requires a lot of expertise in order to select, for example, a suitable hydraulic pump for such applications, because this must not only be compatible with the on-board drive but also match the loader crane and the driver unit. The complete unit (truck, hydraulic system and ATLAS loader crane) is of course tested and approved. The AK300.2V belongs to the ATLAS loader crane line which consists of 45 base versions – a very diversified performance range starting from the T5, the smallest model with a reach of 4 meters and a maximum load capacity of 1.3 tons, all the way to the ATLAS 990, the largest with a reach of 18.5 meters and a load capacity of 20.6 tons. Depending on customer wishes, this huge range can be considerably expanded. In the end the basis for everything is the structural resilience of ATLAS loader cranes.

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*Images 1-6: ATLAS loader crane AK 300.2V, mounted on an Actros truck and equipped with a vibrating pile driver attachment, pulling double-T-beams from a foundation pit in Hamburg, Germany.*



Image #1



Image #2





Image #3



Image #4



Image #5





*Image #6*

*Images: © ATLAS GmbH*