

## Application Notes...



# Lorry side lifter crane

Eliminating the need for a separate crane to load containers onto lorries, one company has developed a hydraulic side lifting system for the lorry itself

### Brief given

Container transport is a huge industry. Conventionally, to move containers, you need both a lorry to transport the container and a crane to load the container onto the lorry. But this adds cost to the operation, and it isn't always possible to have a crane when and where you need it.

With the hydraulic side lifting system that fits onto the side of the lorry, such problems are a thing of the past. The design comprises two cranes (the front and back lifting arms) and a control system. The control system give the operator full control over the vehicle's engine to power the crane hydraulics and provides the operator with feedback about the load – including potential overloads and weight distribution so that the operator can adjust the lifting according.

Sensor-Technik was asked to develop a CANbus control system, complete with HMI, that focused on both controllability and safety.

### The solution

Sensor-Technik's ESX range of CANbus controllers carry hardware and software

approvals to international vehicle specifications and so can be readily used without the need for further testing. A Graf AT3 operator panel was selected for the HMI.

### Implementation

Sensor-Technik's in-house engineering team integrated the hardware and developed the application software, providing on-site trials with and ongoing support for the crane manufacturer. Once the prototype equipment was proven, a few vehicles were made and given to end customer for evaluation and feedback. First production began shortly after.

### Conclusion

With its simple and flexible control system, the lorry side lifter crane has now proven its capabilities in military and commercial applications across the globe. In far flung corners of the world particularly, the vehicles provide savings in both time and cost through not having to organise a crane to load or unload the container.

# Sensor-Technik

## The UK's CANbus specialist

Making the move to a bus-based control system is a big step, but it needn't be a difficult one. Whether you require fully-approved components with a track record, or complete system design, Sensor-Technik has the answer. And we'll be with you every step of the way.

CANbus provides the ideal system for integrating electronic controls into vehicles and machinery, particularly because it's a system which is to ISO standard and which is supported by so many different manufacturers.

## ESX Controllers

The ESX family of freely programmable controllers from STW is specially designed for mobile applications such as agricultural machinery, construction equipment, man and material lifts and many other demanding tasks. Robust cast-aluminum housings with an IP65 rating (optionally IP67) offer a high degree of safety in terms of EMC and the extremes of outdoor environments.

## Graf-Syteco operator panels

Graf-Syteco offers the industry's most complete range of CANbus enabled operator panels, for general industrial, building management and mobile vehicle applications. The products are available in a range of sizes and with different levels of functionality to allow the precise needs of the application to be met with the most cost-effective solution.

The units are also available with additional built-in control functionality and with additional on-board I/O to provide direct control of external CANbus nodes. Further, the units can be supplied without the operator panel to provide compact, standalone CAN nodes.

The products can be supplied to meet demanding environmental conditions. Front panels are protected to IP64, and the panels are suitable for use in extreme temperatures from  $-20^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ .

Graf-Syteco has also developed associated programming software which provides the simplest means of setting up a system. Easy to use, the software guides even the novice programmer through application development and operator-interface design. Graf-Syteco offers comprehensive, free telephone support, and provides regular updates.

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