

# Raise performance

## with tandem operation

Do you have to move particularly long or bulky goods safely and securely in your operation? Is a single crane just not enough? Do you view the use of two independently controlled cranes as potentially risky?



ABUS ABUControl tandem control offers the safest solution for this particular logistical challenge. It makes it possible to move two cranes simultaneously via radio remote control. The operator can choose his optimal location according to the actual operating conditions.

The distance between the cranes and the position of the hoist units is monitored by laser distance sensors. Any fault or change in distance beyond preset limit values causes all crane and hoist movements to be simultaneously switched off.

A change in distance during tandem travel due to a fault is thus kept within narrow limits. A system fault is indicated to the operator. With cranes and hoist units that run in tandem, the travel speeds are regulated. Two cranes, a maximum of four hoist units, all regulated.





## Sensitive

handling

In addition, the ABUS synchronised operation of two hoist units on one crane offers safe handling of long products. A divergence of hoisting speeds is also effectively prevented by means of continuous monitoring, even with different wire rope hoists, provided the crane is equipped with a frequency converter for lifting. Two cranes in tandem operation function as one machine.

The operating and safety functions are designed accordingly: If one of the cranes or one of the hoists is driven into a travel limit switch, both cranes stop. Between the travel limit switch points of slow-down and stop, the crane can continue to travel at slow speed; the same applies for the limit switch points on the lifting path. If the overload protection device of one hoist is activated, all hoists are stopped. Various indicator lights with long-life LEDs signal the operating status of the cranes to the crane operator.

The ABURemote radio control is suitable for operating cranes with ABUS tandem control. Corresponding control elements enable user-friendly control and monitoring of the various crane movements. Via preset options in the ABURemote, the tandem control function can be switched on or off, so that each crane or hoist can also be used individually.

## Two to one

for your operation

The conventional ABUS contactor tandem control is also a professional solution for this transport task. For special operational requirements, motor control via frequency inverter is also recommended as an alternative. It allows fine tuning in the respective direction of movement.

ABUS tandem cranes with contactor control are also equipped with a safety PLC (programmable logic controller) and communicate with each other optically via light barriers. The two cranes and their hoists are normally largely identical in construction and move in tandem at the same speed in the controlled directions with the same load distribution, i.e. they perform crane travel, cross travel and lifting or lowering of the load as a duo.

Since the PLC of the contactor control only controls and does not regulate the respective movements in tandem operation, different lifting, cross and long travel speeds may occur during operation of the hoist pairs and/or crane pairs despite the same nominal values. The travel differences can be adjusted, depending on requirements, by means of the selector function '1 / 1+2 / 2' by the operator. Existing crane systems can be retrofitted with contactor tandem controls provided the technical requirements are in place.





## Lengthwise

or crosswise

The tandem control for two parallel cranes is particularly suitable for the transport of goods in the long travel axis of the building. For movements in the cross travel axis, a tandem variant with two hoists on one crane is offered.

## Your safety

is our focus

When designing ABUS tandem controls, the following directives, regulations and standards, among others are taken into account:

Machinery directive	Crane accident prevention regulations
2006/42/EC	BGV D6
Machine safety	
Electrical equipment	Safety-related parts of control systems
DIN EN 60204-32	DIN EN ISO 13849-1
Cranes	
Overhead and goliath cranes (Type C – Standard) DIN EN 15011	Power-driven hoists (Part 2) DIN EN 14492-2
Tandem operation of cranes/hoist units VDI 4467	

All safety-related parts of the ABUS tandem control units comply with Performance Level C Category 2 in accordance with Section 5.3.4.1 of EN 15011.

## All

firmly under control

The ABUS tandem control systems cope with challenging requirements in the operational material flow. They improve safety when transporting large or bulky goods and increase operational efficiency for special transport tasks. In the combination of tandem and radio control, an experienced crane operator has even large handling tasks safely under control.

