



New technologies
dedicated to your safety



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ANTICOLLISION DEVICE FOR MOBILE MACHINES

The DCS 61-M meets the increasing need for preventing collision risks between tower cranes and mobile cranes on a job site.



ANTICOLLISION

Our solution offers an automatic movement detection as well as the automatic control of the tower cranes in case of a possible collision. Through the GNSS localization the user obtains precise coordinates and angles of the mobile cranes' jib position.

Thus, the systems placed on the tower and mobile cranes constantly know the position of each machine thanks to the radios transferring information between the devices.

When the mobile cranes move and reposition themselves in a different place, the systems on the tower cranes register their positions and automatically create interference zones for the machines.

The device calculates in real time and in 3D the distances between each element of the cranes as well as the movement speeds to take control of the mechanisms of the cranes to ensure a slowdown, followed by a complete immobilization of the tower crane at a pre-set distance from the mobile crane.

The safety device takes automatically control of the tower crane's motion to make it slow down and stop as the hazard approaches.

The DCS 61-M gives the mobile cranes drivers driving assistance information with an intuitive graphical display of their environment (cranes in the area) as well as sound and light alarm when the hazard gets closer.



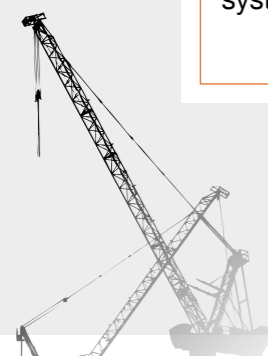
3 KEY FUNCTIONS



ANTICOLLISION OPTIMAL AND AUTONOMOUS SAFETY SYSTEM

The device calculates in real time and in 3D the distances between each element of the cranes as well as the speeds of their movements. This in order to take control of the crane to ensure a slowdown then a complete immobilization at a pre-set distance from the obstacle.

- Real-time display of interferences and the elements concerned by the risk of collision
- Radio network communication
- Management of interferences between tower cranes, mobile cranes, placing booms, gantries, luffing jib cranes, travelling cranes and retractable boom cranes



ZONING SIMPLE AND INTUITIVE PROGRAMMING

The system enables to quickly create prohibited overflight areas in 3D (hook height management) directly on the screen by associating geometric shapes with perimeters and static obstacles.

- Real-time display of prohibited zones around the crane
- Management of overflight limits for the jib and/or the load
- Possibility to create prohibited overflight zones such as straight lines, polygons, circles and sectors
- Consideration of a minimum and maximum height for hook management
- Possibility to selectively activate/deactivate zones via the bypass unit

These zones can also be remotely activated/deactivated thanks to our SUP-61 supervisor connected to the radio network.



DISPLAY UNIT AND DATA LOGGER IMMEDIATE MEMORISATION

Continuous recording and storing of the events related to "prohibited area" and "interference" management functions, allowing direct displaying and/ or downloading to a flash drive. An additional function enables a dynamic recording of certain information concerning the system and/or crane status.

Whatever the type of crane (saddle jib or luffing jib), the device creates an "adjustable" safety envelope around the machine components.

This envelope takes into account the jib, counter-jib, mast, tower peak and jib tie components as well as the cabin and the hoist cable.



KEY FEATURES

- Multiple target positions can be stored for easy loading and unloading
- Possibility to bypass the system temporarily. The choice is multiple (possibility to bypass zoning (even by selectable zones) and/or anticollision function)
- An integrated SIM card to upload information and events related to the crane on a web portal
- The programming of the system can also be done at the crane's base
- Display of the wind speed as well as the pre-alarm and alarm threshold on the screen

A SYSTEM COMPLYING WITH CURRENT STANDARDS

Complies with the European standard for anticollision devices EN 17076 requiring a performance level PLc as specified in the standard EN 13849-1, this system goes beyond the standard and offers a PLd performance level. It is also SIL-2 certified as per the EN 61508 standard.

These features make it compatible with the future lifting machine controllers.



WHAT ELEMENTS DOES IT INCLUDE ?



UN 61
A bypass unit to selectively activate/deactivate the functions of the system



ULM 61
A universal I/O machine interface designed to adapt to any crane type

UAF 61
An 8" graphic display for interfacing with the crane driver



AL 61
An external warning light to indicate the status of the system



UC 61
A central sensor unit to calculate and process all the DCS 61-S tasks



CDD 61 and CO 61
Absolute multi-turn encoder sensors to detect machine movements precisely



ULR 69
A radio modem for communication between devices

The DCS 61-S is a scalable product, designed to integrate progressively anticollision and zoning functions for new machines.

Its modular architecture and its advanced configuration possibilities are the assets of this new system.

These advanced capabilities enable the system to meet the various technical requirements of construction sites. This system is universal and adapts to all brands and models of cranes.

It has been designed to integrate anticollision management for different machines and now also integrates anticollision between tower cranes and concrete placing booms, as well as tower cranes and mobile cranes.

TECHNICAL FEATURES

- High safety level sensors
- A CANopen Safety communication system
- Secured sensors mounting with protection of moving parts





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- ● ● ● Historical and quality relationships with the world's major construction companies
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