

# Mobile Machine Anti-Collision System

Comprehensive machine collision avoidance system for stockyard and wharf equipment.



## System Features

- > Real-time calculation of collision zones with multiple machines
- > Independent processing units for maximum flexibility and reliability
- > Integrated 3D HMI with full diagnostics and condition reporting
- > Direct communications interfaces to PLC based control system for position, status and alarming data
- > Ruggedised industrial components capable of operating in the harshest environment
- > Event and data logging to built-in Microsoft™ SQL or networked database server

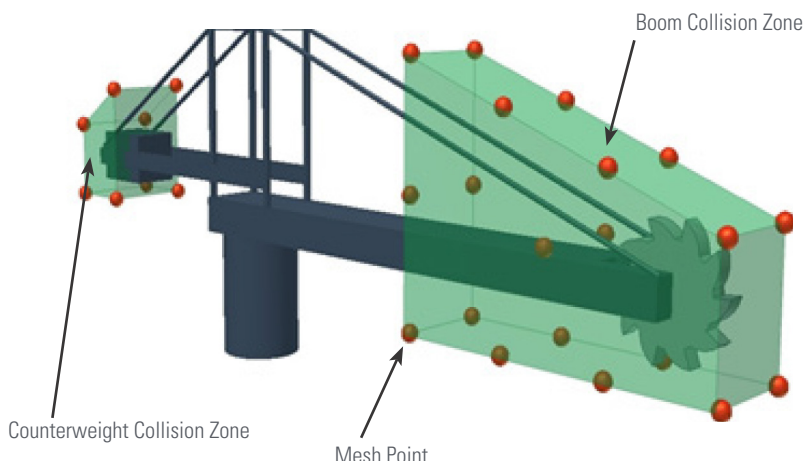
## Safety through Innovation

The BEC Anti-Collision System (ACS) is a self-contained, model-based system designed to prevent stackers, reclaimers and ship loaders from entering an area of proximity to each other in which an actual collision could occur.

The ACS uses existing instrumentation on the machines to calculate machine-to-machine collision distances and enables or disables the travel, slew, and luff movement for each of the machines based on the calculated collision distances.

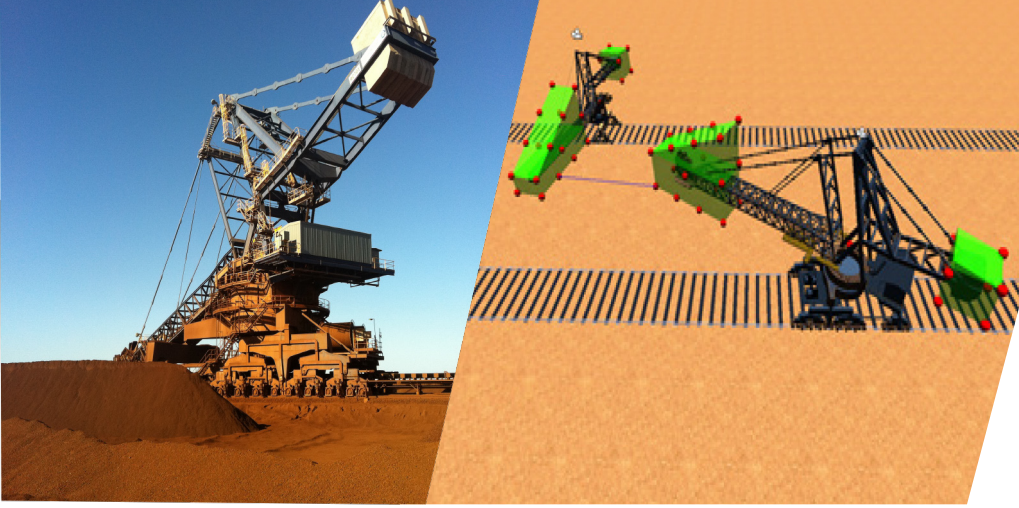
## Turnkey Solution

The ACS system comes complete as a single panel mount industrial PC (optional IP65) and is fully modular enabling the straightforward addition of more machines and levels of ACS functionality.



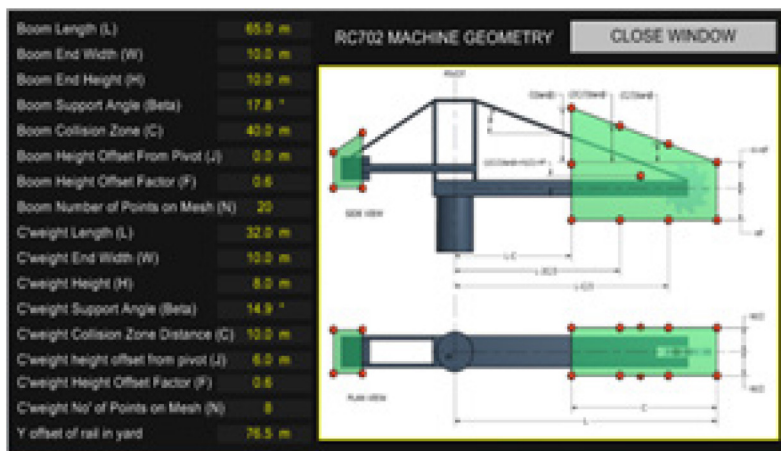
## Zone Protection

Using a unique zone protection system, the ACS enables machine operation to remain functional in the closest of operating proximities, minimising yard conflicts and maximising machine operating time.



## Intuitive Operation and Configuration

The ACS advanced 3D touch screen interface provides the user an intuitive, friendly environment making configuration and operation simple.



## Active Sensor Options

With the addition of planar lasers or radar instrumentation, the ACS can optionally perform:

- > active machine boom and portal protection;
- > active collision avoidance with stockpile and other equipment or light vehicles; and
- > obstacle mapping.

## Control System Integration

With built in support for industry standard communications protocols, the ACS integrates seamlessly into your existing control network.

- > Modbus/TCP
- > Rockwell Automation Ethernet/IP
- > GE-Fanuc STRP

## Integration and Support

BEC has the capabilities and experience to provide a complete turnkey solution.

Our team includes dedicated individuals specialising in the fields of:

- > project management;
- > electrical design and integration;
- > PLC and HMI programming;
- > mechanical design;
- > documentation and design drafting; and
- > site installation, commissioning and training.

BEC is an engineering consultancy providing professional services to the mining, utilities, materials handling, oil and gas, industrial and petrochemical industries across Australia and around the world.

Established in 1996, has completed projects for major clients throughout Australia, North and South America, Africa, Asia, Europe and the Pacific.

We have proven capabilities across all aspects of:

- > project management;
- > power generation;
- > power systems;
- > control systems;
- > information and communication technology (ICT);
- > automation;
- > plant integrity; and
- > operations support.

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