sentinel
HEIGHT & SLEW





Height and Slew Limiting Systems

The Australian made Sentinel Height and Slew Limiters enable the safe operation of excavators, loaders, skid steers and backhoes near overhead powerlines, around bridges and inside tunnels.

Available in Height and Slew, Height Only and Slew Only versions, they can be installed on both new and existing vehicles. Each version includes an impressive range of features to ensure your machinery operates safely and meets all the required construction or rail operating specifications.

Sentinel Height and Slew Limiters integrate with in-cab alarms. On-screen warnings notify operators before the machinery reaches its safe operating limits. For extra safety, key and password protection enables supervisor restricted control of the operating parameters, such as height or slew limits.

Each arm on each machine can be individually limited to maximise the available operating room in each location.

Additionally, different machine attachments can also be set and selected from the user interface, which then automatically adjusts the height settings for the current attachment. This is a huge timesaver for operators with a wide range of attachments.

Feature rich, the Sentinel Height and Slew range has evolved to feature practical and user-friendly functions to maximize safe use in all condition and protect against operator error.

Sentinel's SIL 2 / PLd system option is for high-risk use cases such as working under rail power lines. Currently it is the only system designed in Australia that achieves SIL 2/MPL d (AS ISO 19014, AS/NZS 62061:2019). It meets and exceeds both Aurizon and QR requirements.

By eliminating the risk of human error, Sentinel Height and Slew limiter systems significantly improve reliability by providing consistent, real-time protection.

AUSTRALIAN MADE AND OWNED

Designed & made in Australia, with local support, national installers and local engineering.

PRM ENGINEERING SERVICES

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SAFE HEIGHT AND SLEW LIMITS

- Includes Height & Slew, Height Only and Slew Only models
- Compatible with all machines that have articulating booms
- Key lockable to prevent deactivation
- Motion-cut, predictive cut-off and slow-stop functionality all prevent height limit overshoot
- Features both on-screen and audible alarms
- Configurable for up to ten different attachment types
- Suitable for railways, construction and council demands
- Reliable and robust components designed for heavy machinery and Australian conditions
- Designed & Australian Made, with local support, national installers and local engineering.

EXTENSIVE FEATURES

Height Indication: Displays the current maximum height of the machine, enabling operators to gauge how close they are to the limit

Ruggedised Hardware: Extensive mobile plant experience across diverse industries means that our systems are built for robust performance, and feature industry standard screens and PLC designed specifically for mobile plant

Easy to Integrate Solution: Our products only requires power, ignition and access to the pilot lines, enabling integration to both pilot driven and electric-over-hydraulic machines

Fault Detection: Redundancy in both sensors and outputs allow for immediate detection of failures, and fail-to-safe

Height Limit: Can be set easily by the supervisor (protected via key switch and password)

Predictive Stop: Prevents overshoot at any speed by taking into account the speed of the machine

Redundant Hydraulic Valves: Redundant fail to safe hydraulic valves provides exceptional hydraulic reliability

Blade and Offset Boom Stop: To prevent operators inadvertently going beyond height or slew limits

Internal Datalogging: Black-box functionality records all events when the system is running.

Optional Capabilities Include: Blade and offset boom stops, which can be implemented to prevent operators inadvertently going beyond height or slew limits, and safety lock lever inputs which reduce current draw when the machine is not is use

System Upgrades: can be made at any time

Hi-Rail: integration and movement prevention to most hi-rail systems

NEW Slow-Stop: Decelerates fast-moving machine boom before the height limit is reached to prevent hard stop jolt. This minimises bucket content spillage and enable more predictable behaviour closer to the limit.

When the boom speed is low, or far from the limit, the full machine strength is maintained

Safety Lock Lever Input: To reduce current draw when the machine is not in use and improve battery life

Customised systems are available for forklifts, vacuum trucks and other rail machines.

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CONTACT US NOW TO FIND OUT MORE ABOUT HOW SENTINEL HEIGHT AND SLEW LIMITERS CAN IMPROVE THE SAFETY OF YOUR OPERATION

Call **+61 (0)7 3711 2779** Email **engineering@prmeng.com.au** Visit **prmeng.com.au**