

Clamshell (grab bucket) unloaders are the work-horses of the material handling industry and are used for unloading many materials including coal, grain, lime, sugar, and more. Capable of moving multiple tons of material in a single grab, it is no wonder why clamshells are relied on heavily. However, many of these giants have been in service for several decades with the original or the nearly original control systems in place. With antiquated control system components such as drives, load-share boards (black box), PLCs, or motors, one failure can mean devastating and costly down-time.

At Prokuma, we have successfully upgraded many clamshell unloaders and their supporting equipment's control systems including:

- Hold and close DC drives with unbalanced load sharing
- Enclosure rebuilds
- Programmable encoder-based limits for easy cable replacement
- Trolley drives with anti-sway technology
- Barge hauls with tension control
- Automatic dumping take-over
- Safety design
- IP cameras for monitoring conveyors and motor rooms
- PLC based control systems
- PLC-free control systems
- Operator chairs and joy sticks with dig mode
- Flat-Close bucket mode
- Operator interface screens
- Tonnage reporting
- Localization for easy troubleshooting in your language

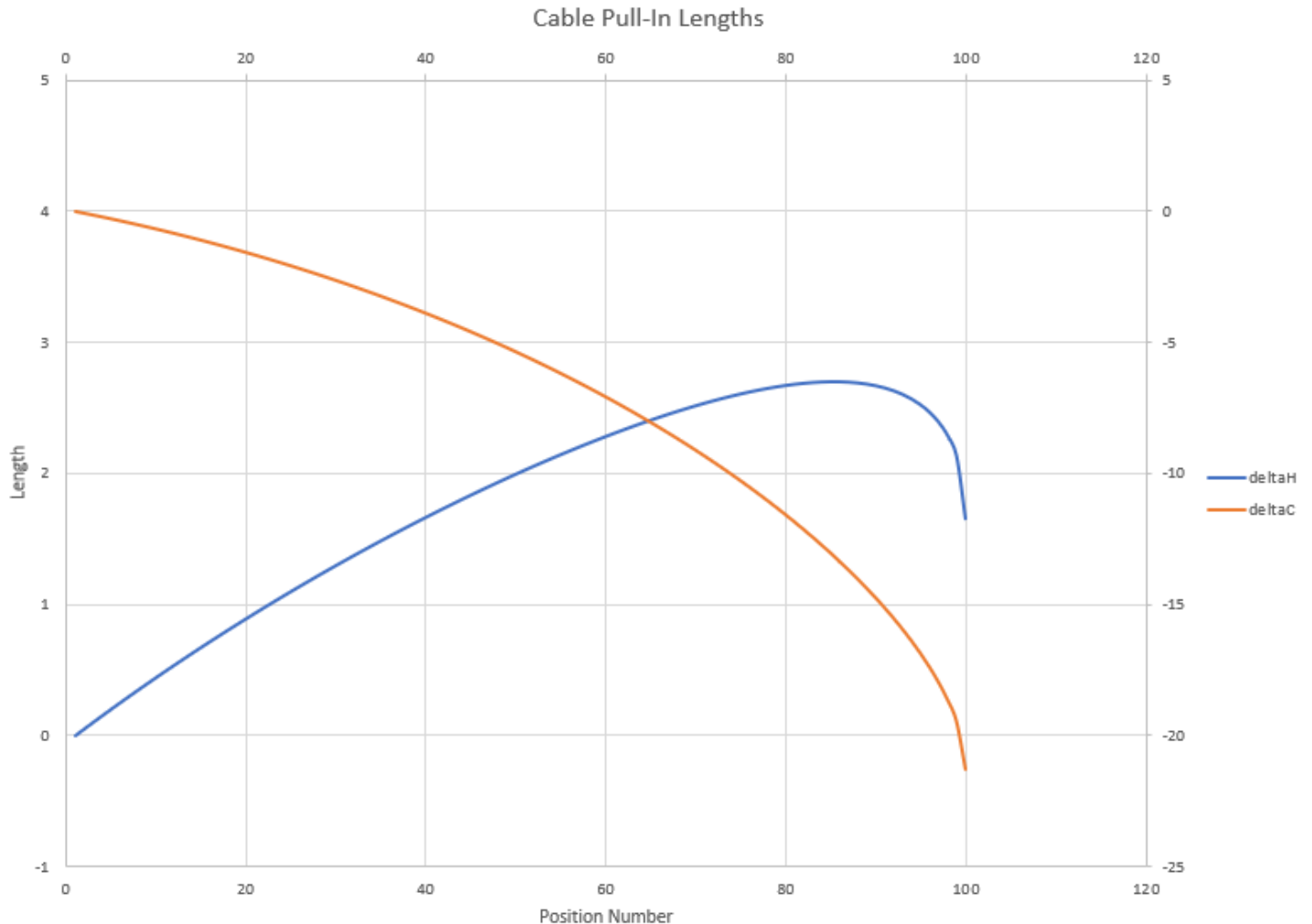


Our designs are proven using several major brands and models including:

- Allen-Bradley [PowerFlex DC](#)
- Siemens [Sinamics DCM](#)
- ABB [DCS](#)

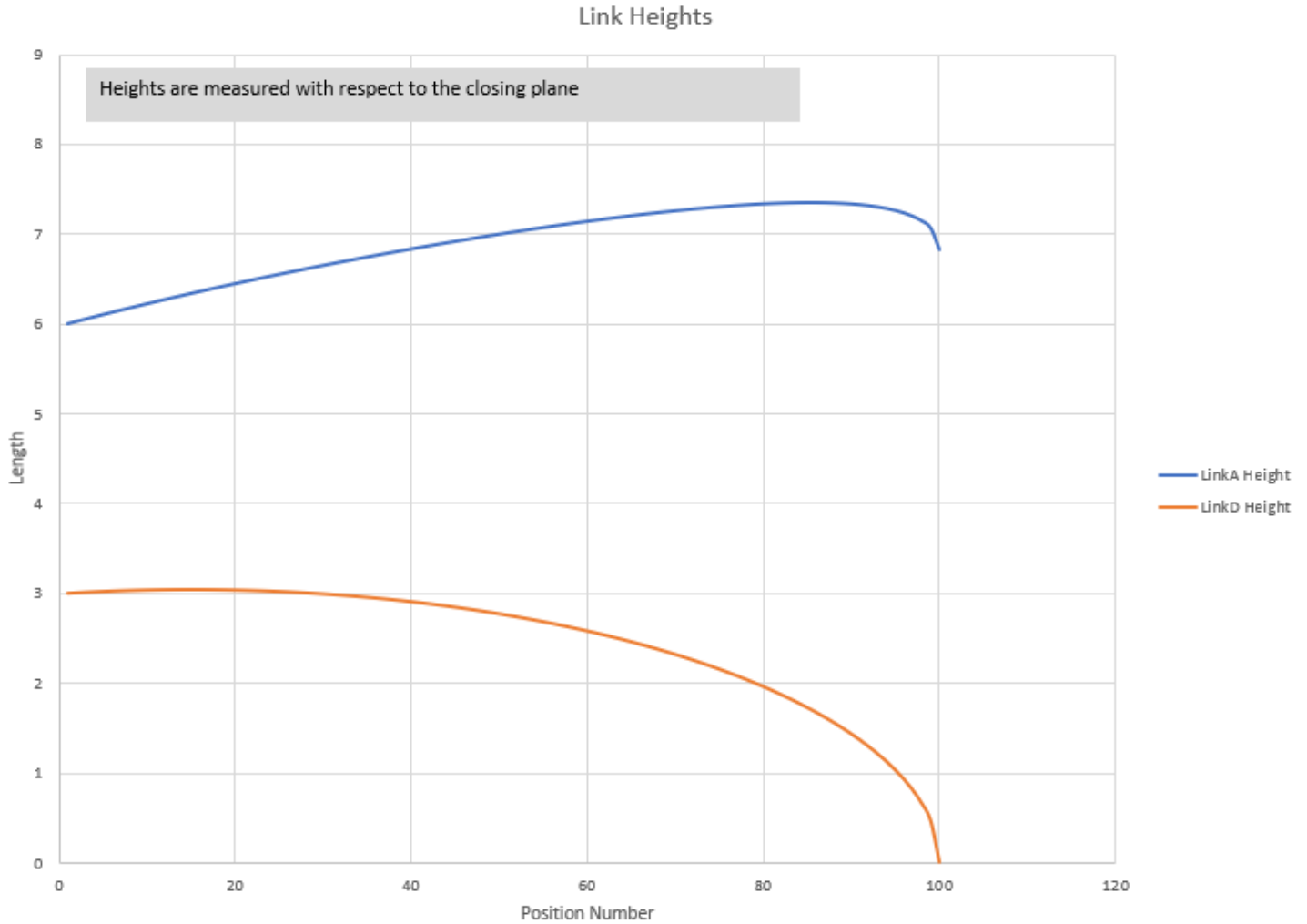
Call for a quote: 1 812-461-1681 or email questions to sales@prokuma.com

Our complete understanding of the physical characteristics of grab buckets gives Prokuma the advantage and ability to deliver a superior control system. Our proprietary, parameterized analysis tools allow us to make control decisions based on exactly where the grab bucket is in relation to any defined point in the system. This allows our grab bucket control system to avoid unnecessary transfer of weight to the hull of a ship or barge and eliminate collisions with equipment.

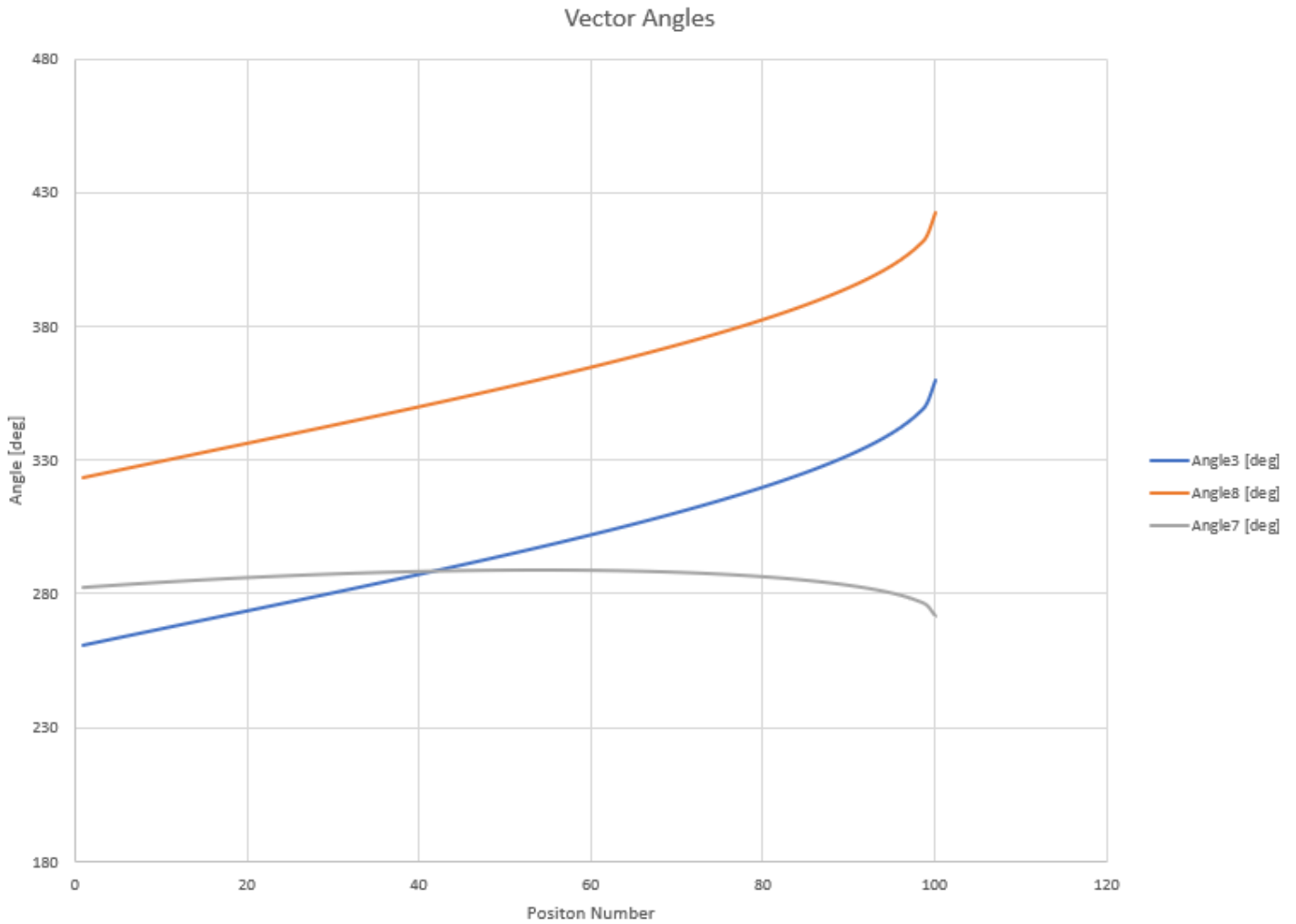


Our Flat-Close mode takes guess work and re-work out of the operator's hands. By closing the grab bucket along a horizontal plane corresponding to the position of the edge of the bucket's mouth at the start of a Flat-Close operation, cleanup of the vessel has never been easier.

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