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MARTIN: V-PLOW DESIGN DELIVERS

COMPANY NEWS

The global leader in bulk handling conveyor accessories has redesigned one of its most popular tail protection devices to be a lighter weight, modular unit delivered in a compact package for improved safety and convenience. The re-engineered Martin® V-Plow HD achieves the gains with no compromise in performance.

“The result is a package that fits most local delivery trucks and can be easily carried by workers to sites that may have accessibility issues, with the components assembled as they are installed to reduce the risk of injury,” says Martin Engineering conveyor products manager Dave Mueller.

“Tail pulley protection is essential for efficient conveyor operation, but because of their size, the components can be cumbersome to ship and install,” Mueller continues. “In most designs, the wide V-shaped unit is typically delivered with mounting equipment in a large box that can pose a logistical problem to both air and ground transport, due to the weight and size. This can lead to frustrating delays during tight installation schedules.”

Mueller further points out that, once the previous design was delivered, getting it to the installation point could be a challenge with potential safety issues. Often workers needed to carry the oddly-shaped box by hand up several flights of stairs, through corridors, or to areas with limited accessibility. According to the US Occupational Safety and Health Administration, workplace injuries caused by lifting, carrying and falling/dropped debris are among the most prevalent.

The Martin V-Plow HD prevents tail pulleys from becoming fouled and damaged by spillage travelling on the return side of the conveyor belt. Fugitive material commonly migrates from the cargo side to the return side during normal operation. If this spillage reaches the tail pulley, two things can happen.



THE V-PLOW HD HUB MOUNTS CAN BE WELDED OR BOLTED TO THE HANGER BARS



THE V-PLOW HD PREVENTS TAIL PULLEYS FROM BECOMING DAMAGED BY SPILLAGE ON THE RETURN SIDE



THE MODULAR REDESIGN IS EASIER AND SAFER TO TRANSPORT, REQUIRING MINIMAL ASSEMBLY ON-SITE

One is that lumps get caught between the pulley and the belt, gouging and damaging both the belt and pulley face. The other is spillage being crushed by the pressure between the pulley and the belt, adhering to the pulley face and the return side of the belt, causing pulley slippage and fouling of idlers along the system.

Engineered for belts as wide as 3,048mm with speeds up to 4.6 m/sec, the Martin V-Plow HD redesign has made the equipment modular, segmented into a few pieces that are arranged in a box that fits almost any form of delivery transport. This also makes the equipment easier and safer to carry to the installation area.

With easy-to-understand instructions for the tongue-and-groove assembly, the rugged painted steel parts can be snapped and securely bolted together in minutes, creating a strong structure. The

time saved on delivery to the facility and the work area more than makes up for the few minutes of assembly time.

Mounted to hanger bars by clamps or welding, the unit glides on the return side of the conveyor belt using a hinge system, deflecting any fugitive debris off of the belt. The assembly holds an easily replaceable 100 mm wide, 25 mm thick blade, which provides 50 mm of wear life.

Blades are available in 60 Shore A durometer nitrile rubber or long-wearing 90 Shore A durometer urethane and the unit can be ordered with specialised blades that are chemical resistant or designed for high temperature applications.

The Martin V-Plow HD mounting system and security cable assembly is safer, longer-lasting and less damaging to the belt than competing units. If the Martin

V-Plow HD detaches from one mount, the other mount and safety cables keep it in place, protecting the belt and workers until the system can be stopped and the unit can be repaired.

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