



PROBLEM SOLVED™ PAPER

SOLUTION: Martin® Rotary Brush Cleaner

INDUSTRY: Mining

LOCATION: Malelane, Mpumalanga, South Africa

TITLE: A customized mounting bracket for cleaner saves time & increase safety



Unsafe, time consuming Brush Cleaner maintenance with restricted one-sided walkway access

PROBLEM

At an anthracite mine producing more than 300,000 tonnes per annum, a Martin® Rotary Brush Cleaner was installed to prevent material carryback and maintain conveyor belt cleanliness. However, during the maintenance schedules for the brush cleaner, the adjustment process to ensure the cleaner's contact level with the belt became challenging due to the restricted access caused by a one-sided walkway. To level the brush cleaner, workers had to manually lift it from the center, which created two significant issues: manual lifting in a confined space posed a serious safety risk for the team, and the process was time-consuming, leading to increased downtime and reduced overall productivity.



Customizing the rotary brush adjustment bracket was recommended to ensure safe, easy maintenance.

SOLUTION

Martin® Rotary Brush Cleaner was the ideal choice due to its consistent cleaning performance with abrasive anthracite material and lower maintenance requirements. However, to address the maintenance-related accessibility, safety and downtime concerns, Martin's expert service technicians conducted a site visit and recommended customizing the rotary brush adjustment bracket to make it more accessible and user-friendly. The custom-made mounting bracket design and installation directly resolved the core accessibility challenge, ensuring safer and efficient adjustments. This case demonstrates how the Martin Engineering understands customer pain points and responds with engineered solutions that deliver cleaner, safer and more productive performance.



The customised bracket now allows quick, simple access, making maintenance safer and more efficient.

RESULT

A targeted design upgrade to the Brush Cleaner focused on safety and ease of maintenance, resulting in a complete operational improvement. By eliminating hazardous lifting tasks, simplifying adjustments to minimize downtime, and ensuring reliable conveyor performance in a demanding coal mining environment, Martin Engineering effectively solved the maintenance challenge. The customised bracket now allows quick, simple access, even with only one walkway, making maintenance safer and more efficient. The customer confirmed their satisfaction with the improved adjustment process and expressed confidence in the cleaner's overall performance.