

# CASE STUDY

## CUSTOM AIR CABINETS FOR MINING CLIENT

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# PRESSURE DYNAMICS

## INTRODUCTION

Pressure Dynamics was engaged by a mining client to design and deliver custom air cabinets to improve the performance of air cannon systems across their fixed plant operations. The existing setup was contributing to material build-up issues, impacting efficiency within bulk material handling processes. To address this, the client required a fit-for-purpose solution that would enhance system reliability, optimise air delivery, and support ongoing operational performance in a demanding mining environment.

## PROCESS

Pressure Dynamics' engineering team designed and manufactured custom air cabinets tailored to the specific operational requirements of the site. Fabricated in Karratha, the cabinets were engineered to integrate seamlessly with the client's existing infrastructure and air cannon systems. The solution focused on; Optimising air flow and pressure delivery to improve air cannon effectiveness, Ensuring robust, durable construction suited to harsh mining conditions and Delivering a fully customised design aligned with site-specific requirement. Leveraging in-house OEM capabilities, the project was managed end-to-end—from design and fabrication through to final delivery—ensuring quality control and consistency throughout.

## OUTCOME

The custom air cabinets improved air cannon performance, enhancing material flow and reducing iron ore build-up across reclaimer and transfer chutes. This resulted in greater efficiency, improved plant reliability and throughput, and reduced manual intervention and safety risks. The project demonstrates Pressure Dynamics Karratha's capability to deliver engineered solutions that optimise fixed-plant performance.

