

# Pneumatic Density Control Box



## Customer Pain:

The original setup and maintenance were considered a nightmare by the client. They considered the feedback response questionable, and they questioned whether the cylinders were controlling the flow of coal or not. Additionally, they wanted to improve the system and environment the cylinders were operating in.

The client was clear that they wanted us to help them make these troubles go away. To that end, they determined they needed to control the ingress of coal surrounding the external positioner. With that cylinder feeding back feedback to their PLC for smooth and continuous control.

## Solution:

SKEANS provided a full stainless-steel pneumatic cylinder with completely internal feedback controls. A brass scraper was added to further protect the cylinder's gland seals, resulting in no further leakage past the cylinder rod. Finally, SKEANS worked with TRD to develop a custom stainless steel internal transducer. A hole was drilled down the cylinder rod and the transducer was installed inside of it. It was determined this was the best way to ensure the reliability of the design, and as an added bonus made the solution completely self-contained.

This solution restored the client confidence in feedback control, ensuring they would no longer receive any incorrect measurements going forward.

## Results:

The client's team experienced significantly better control of the metering and much more consistent control over the flow of coal. Meaning we saved their team financially, prevented future maintenance, and help streamline their processes for the future with this solution.

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