

PLASSON PRV: A GAME-CHANGER IN HYPER-SALINE CONDITIONS

Frog Legs Gold Mine | Mangari, WA

TACKLING SAFETY AND CORROSION CHALLENGES AT FROG LEGS GOLD MINE:

The Frog Legs mining site, more than 1 km underground, faced serious pressure regulation issues due to its hyper-saline environment—three times saltier than seawater. Traditional metal valves corroded rapidly, lasting only 1–1.5 years and driving up costs through frequent replacements and maintenance. To address this, the team looked for a more durable, cost-effective solution to improve reliability and reduce downtime.

LOCATION:



FROGS LEGS
UNDERGROUND MINE
KALGOORLIE, WA



RESULTS AND IMPACT:

The Plasson PRV significantly improves operations of underground mining operations:



LONGER VALUE LIFE:

The Plasson PRV lasts over three years without a service, more than twice as long as the 1–1.5-year lifespan of other PRV's currently on the market.



COST SAVINGS:

Switching to Plasson PRVs eliminated the need for costly valve replacements—previously totalling around \$11,000 per valve over five years, including servicing. It also removed the ongoing labour costs tied to scheduled maintenance. With no need for shutdowns (saving 70 hours of downtime), the Plasson design offers a smarter, safer, and more efficient solution.



INCREASED EFFICIENCY:

The lightweight, pre-set Plasson PRVs reduced installation time and eliminated the need for manual pressure adjustments.



CONTINUOUS RUNTIME:

The Plasson PRV eliminated downtime completely—no servicing required and no unexpected failures. Previously, each issue meant 3 hours offline, a 3-person crew, and platform equipment just to get the job done.



IMPROVED SAFETY:

The tamper-proof design of the Plasson PRV coupled with the lightweight design improved safety by maintaining consistent performance and reducing maintenance risks.

CASE STUDY

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In underground mining, trust in your equipment is critical and we trust the Plasson PRV.

It's proven reliable in the harsh, hyper-saline conditions we work in, helping us eliminate unexpected downtime, reduce safety risks, and cut maintenance costs. Few products deliver this kind of performance without constant attention. And the support from Plasson has been excellent; responsive, knowledgeable, and easy to work with.

ADAM VANHEERDEN | FROGS LEG SUPERINTENDENT UNDERGROUND MINING

CHALLENGES:

Operating in harsh hyper-saline abrasive conditions, the Frog Legs Gold mine site faced several critical issues:

- > **Short Valve Lifespan:** Other valves lasted only 1–1.5 Years, even with refurbishments.
- > **High Maintenance Costs:** Replacements and services added up to over \$11,000 in five years, plus 70 hours of downtime for annual servicing by a 3-man crew.
- > **Increased Risks:** Frequent manual pressure adjustments often caused line blowouts, increasing maintenance demands and reducing system efficiency. Replacing valves carries significant safety risks, making the process even more challenging.
- > **Demand For Durability:** A more reliable solution was essential to reduce disruptions and improve operational stability.

SOLUTION:

The Plasson PRV was introduced as a robust alternative, offering several advantages:



EXTENDED DURABILITY

Tested to last over 48 months without failure, even in extreme conditions.



SAFER INSTALLATION

Its lightweight design and pre-set components reduced installation time and eliminated the risks associated with manual adjustments, ensuring a safer and more efficient process overall.



COST EFFICIENCY

A one-time purchase with no need for regular refurbishments, significantly lowering long-term expenses.



MATERIAL

Made from the same proven plastic components used in Plasson's compression fittings and trusted for over 50 years in Australia's toughest mining conditions, these fittings resist corrosion even in extreme, hyper-saline environments to deliver long-lasting, low-maintenance performance.

