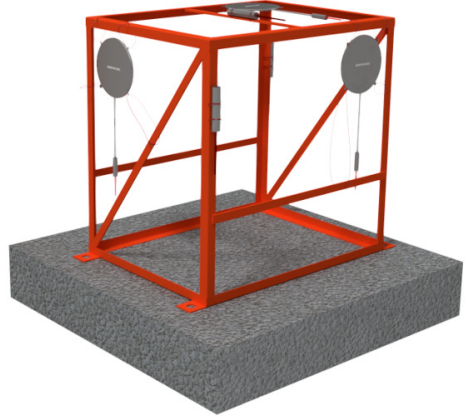




aranzu.

Backfill Monitoring System

The **aranzu** Backfill Monitoring System is a cutting-edge solution designed to optimise the entire lifecycle of stope backfilling in the mining industry.



Design ➔ The **aranzu** Backfill Monitoring System is engineered with precision and durability, featuring three total pressure earth cells and one piezometer. These sensors are strategically placed to measure critical parameters during different stages of the backfill process. The robust design ensures reliable performance in harsh mining environments, providing accurate data to support informed decision-making. The system includes a state-of-the-art, 16-channel data logger housed in an IP65 plastic enclosure, offering superior protection against dust and water ingress. This data logger is equipped with remote monitoring capabilities, allowing real-time data access via an Ethernet connection. Users can conveniently monitor all data from their PC, ensuring seamless integration into existing monitoring systems. The logger is powered by a 512 W/hour combined battery and charger, providing adequate operational life between charges depending on the data collection interval. For added convenience, the data logger and instruments are supplied with quick couplers, minimising the risk of incorrect wiring and simplifying setup. Additional functions include live data monitoring, mains powered options, and rugged protective cages to safeguard against accidental damage.

Application ➔ This system is ideal for use in underground mining operations where stope backfilling is essential. It plays a crucial role in the:
Pouring Stage: Measuring pressure against the bulkhead to ensure safe and even filling. **Curing Period:** Detecting the cement plug at the end of the curing period of the first lift. **Post-Pour Monitoring:** Monitoring the effects of the remaining pour once the load is removed from the bulkhead. **Final Curing:** Measuring the stress taken on by the backfill itself after curing to ensure long-term stability.

Variations ➔ The **aranzu** Backfill Monitoring System is versatile and can be adapted to various mining operations. It offers several variations to meet specific needs:
Standard Configuration: For typical stope backfilling processes.
Enhanced Sensor Package: For operations requiring additional data points and higher precision. **Wireless Monitoring:** For remote monitoring capabilities, reducing the need for manual data collection.

Custom Requirements ➔ Units are customised to meet client needs.

