

Boger Slump Cylinder

The **Aranzu** Boger Slump Cylinder is a precision test device used to assess the consistency and flow behaviour of paste backfill or cemented tailings mixtures prior to placement (e.g. filling stopes).

Unlike traditional conical slump tests, the Boger design uses a cylindrical mould, which improves the correlation to the material's yield stress, a fundamental rheological parameter.

By filling a standard cylinder with the test mixture, then lifting it under controlled conditions, the backfill "slumps" outward under its own weight. The resulting deformation (height drop and spread) is measured and interpreted to infer the yield stress of the mixture.

This approach offers greater sensitivity, improved repeatability, and better linkage to pipeline transport behaviour compared to purely empirical cone slumps.



Design ➔

Cylindrical Mould:

Instead of a conical shape, the test uses a vertical cylinder geometry to simplify the relation between slump and yield stress.

Robust Materials:

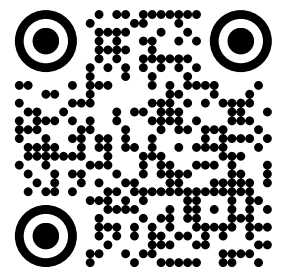
Constructed from stainless steel.

↑ Boger Slump Cylinder cont...

Application ➔ The **Aranzu** Boger Slump Cylinder is intended for use in mining operations, paste backfill plants, and underground distribution systems to provide quality control (QC) and process verification of backfill consistency before pouring into stopes.

Typical applications include:

- Confirming that the paste mixture from surface plant meets design rheological specifications before underground injection
- Monitoring consistency from batch to batch to detect deviations in solids concentration, binder addition, or mixing efficiency
- Correlating slump-derived yield stress to pipeline pressure loss and hydraulic behaviour in underground distribution lines
- Verifying that the backfill will flow adequately without segregation or blockage, yet retain sufficient strength when cured
- Performing routine spot checks in underground laboratories or backfill control labs
- Many mining operations combine Boger slump tests with other rheological tests (e.g. vane yield stress, viscometer, flow-loop tests) as a practical QC tool



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