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Large UCS Press

UCS is one of the most commonly used test procedures today to assess the shear strength of backfill. **aranzu** provides Unconfined Compressive Strength (UCS) testing presses.



Design → The UCS machine has an integrated datalogger for data capturing and an automated hydraulic power pack, capable of applying a maximum load of 75 Tonnes. The load and displacement are measured and captured using the dedicated datalogger supplied with the unit. The data can then be downloaded onto a USB thumb drive or by using a computer (LAN connection) for data analysis.

Application → The Large UCS press is used to determine the unconfined compressive strength of large aggregate, backfill mixtures. This is important for quality control measures and backfill recipe design. The strength is typically estimated by casting specimens according to a proposed mix design and then crushing them in a laboratory while measuring the displacement and load. UCS tests are typically carried out on specimens of smaller sizes, 150 mm in diameter by 300 mm in height. Large aggregate are normally added to backfill mixtures resulting in these smaller specimens not being of an adequate size. To overcome this problem larger test specimens are required, typically 300 mm in diameter by 600 mm in height or even larger. Mainstream UCS testing equipment is not large enough to test such large backfill samples and this is why **aranzu** supplies large UCS test machines able to test these large backfill test specimens.

Variations → The Large UCS Test Press is sized for a maximum sample size of 300mm OD x 600mm high.

Custom Requirements → **aranzu** can supply larger or smaller UCS load frames on request.

