



## SUCCESS STORY:

### STAKKABOX™ FORTRESS; OUT-PERFORMING TRADITIONAL PIT ASSEMBLIES ON INSTALLATION AND DELIVERY



CUBIS Systems recently trialed the STAKKAbOX™ Fortress and its application capabilities to Australian rail networks. Comparing the Fortress to traditional pit and cover assemblies, the trial provided an opportunity to demonstrate the innovative modular pit system and its versatility in both Greenfield and Brownfield applications.

The installation took place at the Dubbo testing facility in New South Wales, with specific focus on product application to regional rail sites. CUBIS Systems provided a 900 x 900 x 900 Class C STAKKAbOX™ Fortress. For the trial CUBIS utilized the STAKKAbOX™ 'flat-packing' capabilities to increase delivery efficiency and minimise transportation costs.

On the day, the need for using multiple heavy-lifting machinery was eliminated with only one excavator required. This is due to the pits lightweight twinwalled design of each sectional piece. This enabled easy and efficient manual construction of the access pit whilst reducing any WHS risks and equipment expenses.

CUBIS also provided on-site product training with the contractor actively participating and experiencing first-hand the simplicity of constructing STAKKAbOX™ Fortress. The base was connected, secured and then positioned within the excavated site. The WHS features and fast installation capabilities were clearly visible during the assembly of the access pit system. Individual sections of the Fortress could then be swiftly lifted and fitted into place manually due to the lightweight to strength properties, causing minimal impact to site works when experiencing time or labour constraints. The modular design provides additional flexibility for contractors when installing over existing cables with additional duct entries also possible via the use of standard tools.



To simply bore duct entries into the STAKKAbox™ Fortress, the contractor used a hole saw measuring the size of the outside duct entry required. To test how the Fortress would handle load bearing, a wide duct entry was cut using a cutting saw on-site. Once the steel pit 'collar' was secured the CUBIS AX-S™ GMS locking access pit covers were fitted and backfill was poured and compacted into the excavated site.

The verticle and horizontal ribs designed into the access pit structure enables the Fortress to be strong vertically and on the sidewall. No concrete or specialist backfills are required to safeguard the structural integrity of the STAKKAbox™ Fortress. CUBIS have specifically designed and manufactured the STAKKAbox™ range, to eliviate the installation and remediation costs currently experienced by contractors in regards to traditional pit products.

Using a 1 Tonne excavator to complete the load bearing test, the STAKKAbox™ Fortress showed now flux or signs of stress in meeting the Class C load testing. The Fortress further proved to match that of a concrete pit product, with the access pit lid showing no stress indicators or bend. Following trial completion, it was evident that the STAKKAbox™ Fortress out-performed traditional pit assemblies by way of both installation and delivery.

The modular and structural performed access pit demonstrates the innovative link between CUBIS' STAKKAbox™ Fortress and providing a lightweight affordable solution without compromising on strength.

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