



BELCO CABLE SERIES

High Voltage Cable Splicing Habitat

Description

The Belco Cable Splicing Habitat is a purpose-engineered, field-deployable cable jointing enclosure built for high-voltage splicing operations. Based on a modified 40' ISO shipping container, the unit delivers a climate-controlled, fume-managed, and structurally certified workspace capable of housing full HV cable jointing crews and equipment.

The habitat features a 3-bay overhead monorail system with 18 chain hoist stations for controlled cable handling, cold room insulated panelling, a dual split system HVAC suite with variable-speed outside air supply and interlocked fume extraction, and a fully rated weatherproof electrical distribution system with 63A generator inlet.

The structure has been assessed and certified by a Registered Professional Engineer of Queensland (RPEQ) via full Finite Element Analysis (FEA) covering operational, lifting, transit, wind, and seismic load cases. The habitat is designed for trench-side deployment — positioned over a concrete slab with cable entry at each end — and is compatible with reach stacker or side loader crane operations for placement and relocation.

An optional soundproofed diesel generator package provides a complete standalone power solution for remote or mine-site deployment.

Engineered to AS1418.1, AS3990, AS1554 SP, and AS/NZS1170.



Key Features

- FEA-verified for lifting, transit (0.8g longitudinal / 0.5g transverse), wind, and seismic (EDC II) load cases
- 3 x overhead monorail bays — rated 500kg per bay / 1,000kg total per monorail, classified A02 per AS5246.1
- 18 x chain blocks and push trolleys — AS1418.2 compliant
- Cold room insulated sandwich panel lining — walls, ceiling, and all access doors
- Dual 10kW hi-wall split system air conditioning with Bluetooth temperature and humidity data logging
- Variable-speed outside air supply fan — 140 L/s normal / 350 L/s during lead jointing, spring-close damper on power loss
- Articulating fume extraction arm — HEPA H12 + G4 pre-filter, VSD controlled, interlocked with outside air fan
- Fully rated WP electrical distribution — multi-pole board, RCBO circuit protection, 63A CEE 5-pin generator inlet
- Barn doors and personnel access doors at each end — fully sealed for dust and weather ingress
- Top-lift and side-loader rated — cross braces fitted at end openings and monorail portals for all lifts and movements
- Optional 46kVA soundproofed diesel generator — up to 21hr tank, ATS capable, <68dBA at 7m





Certified for Field Deployment

The Splicing Habitat is built on a modified 40' ISO shipping container, independently assessed and RPEQ-certified using full Finite Element Analysis. The structure is verified for reach stacker and side loader crane operations, road transit at 0.8g longitudinal and 0.5g transverse, and wind loading to Region D conditions. Designed for trench-side deployment over a concrete slab with cable entry at both ends, the unit is transport-ready with removable external services and cross braces fitted at all openings and monorail portals prior to every movement. Estimated finished weight is ~5,600kg.



Cable Handling & Workspace

The interior features three full-length 200mm I-beam monorail bays with 18 chain block and push trolley hoist stations, rated at 500kg per bay and 1,000kg total per monorail, classified A02 to AS5246.1. Cold room insulated sandwich panel lines all walls, the ceiling, and access doors to maintain a controlled internal environment. Barn doors at each end provide sealed cable access, with dedicated personnel doors at both entries. Work benches, tool storage, and provisions for aerosol and gas cylinder cages equip the space for the full duration of a jointing operation without crew needing to leave the habitat.



Operating Controls

The habitat runs dual 10kW hi-wall split systems with a variable-speed outside air fan delivering 140 L/s during normal activities and automatically ramping to 350 L/s during lead jointing via an OAF and fume extraction interlock. A 160mm articulating fume extraction arm with HEPA H12 and G4 pre-filtration manages airborne contaminants at source. A Bluetooth temperature and humidity data logger provides real-time environmental monitoring. The fully rated weatherproof electrical distribution board includes RCBO circuit protection and a 63A IP67 generator inlet. An optional 46kVA soundproofed diesel genset with 270L tank provides up to 21 hours of standalone runtime.

