

ESTU SERIES

Client:

Explosives and pyrotechnics manufacturer.

Basic Requirement:

- Man portable primary explosives transit container. The container is intended for use in an explosives manufacturing facility and will be used to safely transit volatile primary explosives to device construction areas.
- Capable of containing 6 individual volumes of explosives without the possibility of propagation.
- Upon accidental detonation of the contained materials the explosive effects are to be reduced to safe levels for the carrier, with no external fragmentation or pressures above a threshold for hearing damage.
- The container must weigh no more than 25Kg.
- The design must be proven in explosive trials.

Method:

- A detailed specification was established with the client, to ensure that all of the required bespoke features were considered in the design.
- Concept designs were created and presented to the client for discussion.
- Development of first stage prototypes that would be used in explosive trials.
- Trials protocols were constructed and agreed with the client. These included propagation detonations, and extensive use of data capture equipment to gain pressure readings and high speed imagery.
- Results and development considerations were obtained from the trials which lead to modifications of the design. The modifications were quickly implemented into the revised design and a second batch of prototypes were constructed for further explosive trials.
- The final design was put into production. The flexibility of the design allows for alteration to the internals to cater for various quantities and sizes of explosive containers. This makes this product ideal for a wide variety of explosive transit conditions that can be tailored to suit the client's needs.