

TWO CHAMBER DRUM TIPPING ISOLATOR

The Extract Two Chamber Drum Tipping Isolator is designed for bulk operations where potent powdered compounds need to be sub-divided or charged into vessels or IBC's. Our experience and independent validation on many High Containment projects has shown that operator protection $< 1\mu\text{g}/\text{m}^3$ (task duration) is achievable when defined SOP's are followed.

Process Description

Prior to the dispensing/charging operation commencing, the initial raw material container is loaded onto the drum tipping mechanism in the first chamber via a door that is then closed and sealed. At this stage the closed loop control system ensures a net inflow preventing any migration of airborne contamination. The drum is then de-lidded, and the operator activates the tipper, so that the drum can rotate and then rest against an innovative inflatable sealing head on the rear bulkhead of the second chamber. The bulkhead door is then opened, and the liner pulled through and sealed onto the bulkhead

port. The second chamber allows the products to be sampled, sub-divided and weighed or charged through a hopper in the Isolator base directly to the vessel underneath. The bulk material drum is returned to the start point, resealed and removed. Waste bags, scoops, liners and ties are taken out through a bag disposal spigot or bag-out port.

The fan system maintains the correct pressure regimes for each stage of the operation, removing airborne particles into the filtration system.



Design Advantages

- Ergonomically designed glove ports with single piece gauntlets
- Fully welded 316L stainless steel construction with fully radiused corners
- Manual/automatic CIP system allied to a sloping Isolator base and then a common drain point
- Powered drum manipulators to aid mechanical handling
- Closed loop control maintaining operating conditions
- Large areas of glazing to provide maximum viewing of all process operations

Optional Features

- Multi chamber arrangements
- State-of-the-art transfer port technology easily incorporated
- Safe change filter systems
- Ex-rated electrical systems
- Pneumatic or manual drum tipping systems
- Integrated weighing and dispensing systems with flush mounted displays
- PLC based control systems
- Inert atmospheres within dispensing chamber

