



Case Study

Automated drum tipper

Howorth engineers integrate an automated drum tipping mechanism into a containment isolator.

Challenge

The pharmaceutical industry utilises Lean Manufacturing processes to boost productivity and ultimately achieve quicker delivery to the customer.

In parallel, manufacturing of API's and HPAPI's is becoming more complex with a large number of hazardous compounds required during the production of each drug particularly during the dispensing phase when the materials are accurately dispensed into the process utilising High Containment systems which also require a high level of cleaning validation.

Solution

An automated drum tipping mechanism, supplied by Mechandling, was integrated with the containment system by Howorth Engineers. As raw materials are supplied in a variety of container types, sizes and volumes, Howorth utilise a donor drum in conjunction with the tipper, which is designed to accommodate all drums/containers within the process whilst ensuring consistent integration into the containment system.

Once connected to the tipping mechanism, the donor drum can be raised into position and sealed via inflatable seal with PLC controlled safety locks which ensures safe introduction and removal of the drum.

Following safe docking of the donor drum, the operator can access the product within the containers and

commence the dispensing operation, often into proprietary IBC's, FIBC's or small containers via SBV's. Following completion, the product can be removed via continuous bag liner systems or back into the product containers, which can then be removed from the containment system following a validated CIP process.

Outcome

In addition to ensuring the products (which are typically OEB 4-5 compounds) are handled safely including consideration of all ergonomic challenges, the equipment can now be utilised to accelerate the processing phase. This typically includes dispensing and sampling activities, which are paramount to the design of Howorth UltraSAFE High Containment systems.