



Case Study

Reducing Bulk Powder Loss

Requirement

The Customer: Grupo Leti, Venezuela

Grupo Leti manufactures large volumes of pharmaceuticals and was experiencing a monthly bulk powder loss of over 14% during compression.

Much of the API powder blend was being lost to HVAC systems resulting in the loss of expensive material, blocked ventilation filters, and unable to account for the loss in batch yields.

They were looking for a solution that would reduce this significant bulk powder loss capturing powder in the process room in a hygienic manner while also saving them money.

Solution

After discovering the Uni-Dust powder recovery cyclone on Hanningfield's stand at a trade show, Grupo Leti realised this piece of equipment could help reduce their bulk loss.

The Uni-Dust cyclone is specifically designed for the recovery of powder from pharmaceutical OSD processes such as compression and encapsulation. Grupo Leti connected the Uni-Dust directly to their tablet press and deduster with flexible pipes. The crevice-free, GMP stainless steel construction (316L contact parts with FDA compliant seals) of the cyclone means it is suitable to be mounted inside the process room. To minimise production downtime, the Uni-Dust has an easy clean design as it is assembled entirely using Tri-Clamps for quick and simple dismantling.

Various mounting options are available (including portable trolley and wall-bracket), and Grupo Leti opted for a fixed post stand so it could be stood next to the tablet press. The company further customised the Uni-Dust cyclone by adding a sight glass with wiper, so operators know when to empty the catch pot, and an isolation valve which means the catch pot can be removed while extraction continues. This avoids stopping production while also sealing the material inside the catch pot.

Results

Grupo Leti found that bulk **powder loss decreased from 14% to 1%**. The Uni-Dust cyclone enabled previously lost powder to be recovered in a sanitary manner.

The captured powder can be used for batch loss reconciliation, or even reintroduced to the process (where protocol permits). As powders are no longer blocking up ventilation filters, the cost to replace these expensive filters is minimised. The Uni-Dust cyclone also has almost zero maintenance costs as it is designed with no moving parts or filters.

Given the success of this first cyclone installation, significantly reducing powder loss and associated costs, the company now have plans to purchase more units for other production lines at their facility.

The Equipment

Uni-Dust Type 5





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