

Dosing Ceramic Powders Into Blending Tanks



Dosing Ceramic Powders

The use of dry powdered ingredients can cause a number of problems for producers of ceramic goods.

A reliance on manual handling can cause dust to be released into the atmosphere and operator involvement can be excessive when trying to dose the correct ratios of materials for batch recipes.

For this reason, Spiroflow loss-in-weight bulk bag dischargers are ideal for the dosing of powders used in the manufacture of white goods. High levels of dust containment maintain a hygienic atmosphere while accurate dosing ensures a consistent mix of product is maintained for every batch.

Spiroflow can supply a complete system capable of automating the process of discharging and metering of powdered ingredients for manufacturing of ceramic products including sinks and baths.

Customer Requirements

The production of ceramics requires very accurate dosing of powders preferably with a high level of automation. This automation frees up operator time that would otherwise be spent creating and mixing the correct ratio of ingredients.

The equipment must be designed for dust free operation to maintain a safe and healthy working atmosphere in the plant.

Any new system should be as compact as possible to keep operator walkways clear.

Purchasing materials in bulk (1 ton FIBCs) lowers the cost of materials.

The equipment should incorporate all of the above criteria, require very little maintenance and be easy to operate.

Spiroflow Solution

Spiroflow supplied three bulk bag dischargers to weigh and empty raw ingredients into three integral Model 55 flexible screw conveyors.

These conveyors then transport the product very steeply to another flexible screw conveyor mounted centrally above two blending tanks.

This central conveyor is fitted with 2 outlets at each end. Each outlet feeds a separate blending tank where the ceramic ingredients are mixed. The conveyor spiral is designed to work in both directions allowing each blending tank to be filled separately.

Resin is then pumped into the mixers with other minor ingredients being added manually as required.

The controls for the system allow for the whole dosing process to be automated.