

Quality Monitoring Improved & Cleaning Time Reduced (Powdered Therapeutic Nutrition)



A leading Japanese manufacturer of nutritional therapy foods produces powdered formulations for patients with swallowing disorders and those requiring tube feeding. Maintaining hygiene is a top priority in their facility. The company were looking to improve the monitoring of their powder production and optimize their cleaning processes. They also wanted to eliminate powder leaking into the plant from a free-fall hopper transition. This proved difficult with their existing setup of fully steel hoppers, buffer tanks, and traditional clamped sleeves. Seeking a versatile and hygienic solution, they turned to the BFM® fitting connector system.



Steel buffer tank/hopper



Hopper connection under Piab vacuum conveyor



BFM® two-part hopper solution with transparent Seeflex O40E



Hopper connection under Piab vacuum conveyor

The Challenge:

The plant used 840L steel buffer tanks that often encountered clogging, bridging and ratholing problems that were difficult to clear.

There was no product flow visibility to alert the operators to bridging or ratholing. These large steel tanks also required cleaning once per month which involved a difficult removal, relocation and replacement process that took four days and multiple staff.

In addition to the buffer tanks, the company had a problem with dust leaking from a hopper connection under a Piab vacuum conveyor. The powdered product was being fed into the hopper via freefall with just a short, one-ended clamped connector surrounding the product flow. This meant the product was not fully contained and leaked into the production area causing a health and safety concern.

The Solution:

Local BFM® fitting distributor, JP Next, designed a two-piece hopper system using BFM®'s durable, transparent Seeflex O40E polyurethane. The customer now has constant visibility of the product flow and the anti-static nature of the material has helped reduce powder adhering to the walls of the hopper. Any blockages can be easily seen and manually remedied by massaging the flexible walls of the tapered connector to free up the product flow.

Cleaning time has also been significantly reduced as it now requires only one person who can easily remove and transport the flexible connectors to the cleaning area.

On the other hopper connection, a BLUEBAND™ connector system was installed to fully encase the gravity feed powder providing a 100% sealed system, improving hygiene for both product and staff.

The Benefits:



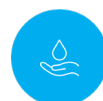
PRODUCT FLOW VISIBILITY: The transparent Seeflex material allows staff to constantly monitor the product flow and detect any quality issues.



NO PRODUCT LOSS: The internal fit and 100% seal of the BFM® fitting has ensured there is no product leaking into the factory.



LESS DOWNTIME: The cleaning process is now much faster and can be undertaken by just one staff member as the connectors are easy to remove, clean & replace.



BETTER HYGIENE: Sealing the hopper connection has eliminated any dust leaking out of the process, improving both product and factory hygiene.

"We undertook lots of product tests on various options before deciding on changing to the BFM® fitting system. The transparency of the new hopper system lets us visually see the product and detect any issues before they become a problem. The ease of removal and refitting has also made our regular cleaning processes much more efficient." - Maintenance Manager

(Case Study courtesy of BFM® Distributor JP Next, Japan)