

## Dry powder blending company standardise on BFM<sup>®</sup> fitting flexible connectors

### The challenge

Manufacturers often use many flexible connectors in a wide variety of sizes, shapes, materials and media throughout their plant. This can make streamlining operations a challenge and limits the ability to optimise production processes.

Allicio Nutrition Ltd, a dry powder blending company in the UK, use around 35 different flexible connectors across 7 processing lines at one of their sites. The lines are split between Customer Packed Goods (CPG) and Bulk Blending, producing around 120 tonnes of diverse nutritional products each week.

Product is changed regularly on site, requiring a team of 3 to clean the line between each product blend to prevent cross-contamination. Allergens such as dairy are regularly handled too, so when switching from an allergen, a full clean is required. This takes approximately 4 hours on CPG lines and 12 on Bulk lines.

During a full clean, each flexible connector is either removed for cleaning or replaced entirely. The flexible connectors in question do vary in size, shape and material but the majority are connected with jubilee clips. Jubilee clips are time consuming to attach and remove. So, a significant portion of the clean is spent on this. For example, on Bulk lines, it takes 2 team members around 4 hours just to remove or replace the flexible connectors.

Additionally, the jubilee clips frequently caused product leakage due to the poor seal they provide, leading to increased dust levels and even longer cleaning times for the team.

Furthermore, 2% more product was regularly added to each finished batch to account for this product leakage.

### 25+ connection points improved

- Many BFM<sup>®</sup> connector types, all with consistent size ranges
- It takes a quarter of the time to change BFM<sup>®</sup> connectors
- Product leaks eliminated where BFM<sup>®</sup> fitting is installed
- BFM<sup>®</sup> fitting helps improve health and safety on site



2 different connector types, with jubilee clips, on site

## The solution and improvement

The site first contacted ProSpare in 2017, looking to make their process cleaner, safer and more efficient with BFM® fitting. The system combines a unique, BLUEBAND™ flexible connector with specially formed spigots, creating a 100% dust-tight seal. There are a wide range of connectors, suitable for many applications on a plant, with consistent sizes to simplify and streamline inventory.

Over the past 8 years, we have worked closely with the team to upgrade 25+ connection points to BFM® fitting across the factory. The Safety, Health and Environment Coordinator spoke to us about the positive impact installing BFM® fitting has had on the plant and shared some pivotal success stories:

“BFM® fitting has improved health and safety on site. At one point, our staff were required to wear masks due to dust levels. I'd say BFM® has directly contributed to the team no longer being required to wear masks.

Standardising our flexible connectors has helped massively. BFM® is far quicker to changeover. It takes a quarter of the time to change BFM® connectors compared to ones with jubilee clips and only requires 1 staff member *[instead of 2]* - freeing the other staff to just focus on cleaning and reduce the time it takes.

Time we spend cleaning, we aren't making money so reducing how long this takes is critical. There are no product leaks where BFM® is installed, further reducing cleaning time. Also, because there's no leaks, we no longer add extra product into the batch.”

### BFM® connectors last longer - Fig 2

The Seeflex 040E connector was one of the first installed -



around 6 years ago. It is still in great working condition which shows just how durable BFM® fitting really is. The success experienced with this install was the catalyst for the wider rollout.

### Sieve area stays cleaner with BFM® fitting - Fig 1

The previous breather and connector installed on the sieve did not seal effectively, resulting in regular product leaks and 4.5 hours cleaning each week. With BFM® breathers and connectors, there's no product leakage and cleaning takes 1 hour each week.

### Adjustable filling with BFM® flexi connectors - Fig 3 & 4

The hoppers under the sieve connect to filling machines that move up and down depending on the size of the packaging being filled. With 3:1 compression ratio, BFM® 'flexi' connectors adjust to required lengths, whilst still providing a 100% dust-tight seal.

The next project Allicio are working with us on is upgrading the Bulk Blending lines on site with BFM® fitting Bulk Bag Loaders.

