



Powder Silos

Powder silos usually need some sort of 'activator' at the bottom which vibrates to ensure product continues to flow and doesn't clog the outlet.

Because of the vibrating movement involved, two flexible connectors are needed to connect the activator to the silo above and to the outlet below. The upper connector is usually of a fairly large diameter, and the lower connector is much smaller as it leads to the connecting pipes or rotary valves.

TRADITIONAL CONNECTORS LEAKY & AWKWARD TO FIT

The large diameter connector is typically installed in difficult to reach places and because of the sheer size, can be very time consuming to replace.

Usually, silo connectors are held in place with traditional hose clamps around the outside of the connector, or, with an internal clamp system which means that the connector needs to be pulled through two sets of steel rings that are then fastened with screws all around the whole circumference of the connector.

The hose clamp has the usual disadvantages of product leakage and poor pressure resistance; the ring connector is a slight improvement but is even harder to replace because of the numerous screws and the difficult process of pulling the connector into the correct position.

Both connectors are subject to the usual leaking from around the clamp and are particularly vulnerable to major hygiene issues of product being caught for long periods of time between the flanges and the connectors.

SIMPLE SOLUTION

In the example shown adjacent, the upper connector was 1600mm diameter and the lower a 200mm diameter (both 100mm long).

Below the lower connector was a tapered steel part enlarging the exit of the silo to the rotary valve underneath. Quite often the vertical space is limited in such areas and the space requirement for BFM® connectors including the necessary spigots can be a challenge.

The solution was to remove the tapered steel part at the bottom; lower the complete activator down far enough to allow for the four spigots to be installed and still leave enough height for each connector. A tapered BFM® connector at the bottom solved the difference in outlet and inlet diameter.



BEFORE



AFTER

BFM® FITTING SOLVES COMMON SILO CHALLENGES

What previously took up to two days to replace, can now be done within 15 minutes, max. The lower connector which was previously held in place with hose clamps is now completely dust tight and when using the correct connector material, will withstand exceptional inside pressures. In the past, hose clamp connectors would sometimes fly off when the valve below was not working properly and inside pressure was exceeding the normal range.

Now the customer has a safe, hygienic and easy to maintain piece of equipment.