



GeoMate™ Continuous Dry Material Feeders Pulseless Feeding to a Mill

Manufacturer – 3Sigma

Product – Diatomaceous Earth & Molybdenum

Case History #116

Background

Rio Tinto, a western mining operation, was in process in opening a new Greenfield facility. Within this process they required two volumetric feeders to feed two products, diatomaceous earth and molybdenum, in a pulseless fashion to their mills. This is critical in allowing the mills to run without excessive loading thereby eliminating surges, yielding a more tightly defined product.

The Solution

A local supplier, who was awarded a large contract with the mine, contacted 3Sigma in order to provide the solution their customer desired. Their requirements:

- Provide a pulseless dry material feed for diatomaceous earth at a rate of 400 PPH.
- Provide a pulseless dry material feed for molybdenum at a rate of 7,600 PPH.
- Provide two identically sized dry material feeders to minimize spares and ease of operator use.
- Provide load cells, which will be connected to the client's PLC, to maintain a constant head pressure.
- Provide a trouble free system that will allow for proper operation for years with minimal maintenance issues.

To Meet These Requirements 3Sigma Provided:

- Two 18" GeoMate™ dry material feeders, each coupled with 15 CF MassMate™ mass flow hoppers and each with a three point scale.
- The scale is integrated with the client's control system to maintain the hopper level at all times.
- The MassMate™ hopper has been designed for mass flow and with the hopper outlet designed to be greater than the products arching dimension to ensure mass flow.
- The feeder is flexibly connected at the inlet and discharge to provide dust tight operation.

18" GeoMate™ Dry Material Feeder Post Production Testing



15 CF MassMate™ Mass Flow Hopper

Three Point Scale System

Flexible Sleeve to Isolate the FeedTray from the Hopper

18" SS GeoTray™ with a 6" dia. outlet

**Mass Flow Design + No Moving Parts =
Highest Reliability, Period**



[Watch Video Here](#)

Results

- The GeoMate™ dry material feeders are scheduled to be installed in the third quarter of 2012.

Due to confidentiality agreements we cannot provide detailed customer information.
We may be able to schedule a conference call upon request.

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07/12