

CONVEYING POWDER DETERGENT

Design Requirements

Product Type: Powder Detergent

Capacity: 20,000 Pounds Per Hour
(10 Tons Per Hour)

Duty: 24/7

Conveyor Pan Size: 18"W x 6"D x 70' L

Customer Challenge

An existing customer who is focused on providing beauty; grooming; health care; fabric and home care, and baby, feminine and family care, contacted Triple/S Dynamics. Due to capacity expansion needs driven by increasing product demand in the powder detergent market, they were looking to add an additional Slipstick Horizontal Motion Conveyor to go along with the dozens already in operation on-site. Installation floor space was a premium, and the elevated 70 foot conveyor needed to provide ample clearance underneath the pan. The Slipstick drive unit needed to be located and configured in such a way that their maintenance staff could have access to other overhead equipment. Additionally, the detergent had a tendency to adhere to carbon and stainless steel which would in turn retard or inhibit flow.

Triple/S Solution

After consultation with the client's engineers, Triple/S Dynamics' Industrial Product team designed the Slipstick Horizontal Motion Conveyor with a 18" wide UHMW lined stainless steel pan, complete with latched gasket covers running the full length and multiple access ports. Suspended at 9 to 11 foot intervals from the support pedestal structures, the pan provided six feet of clearance underneath the conveyor's pan.

With the capability of locating the Slipstick HDC drive unit at any point down the length of the pan, Triple/S Dynamics positioned the drive a quarter of the way from the infeed point. Because the client required access overhead, Triple/S Dynamics performed an FEA analysis on the drive tower, then strengthened the structure to accept the client's maintenance platform.

Advantages the Slipstick Conveyor will provide to this customer is the mechanical simplicity of the conveyor requires significantly less maintenance eliminating the need to purchase new equipment every few years, highly configurable to fit in confined spaces, and is designed with multiple discharges with gates for product distribution.

Triple/S and the Customer

Beginning in the late 1990s, this customer has placed into operation over three dozen Slipstick Horizontal Motion Conveyors ranging from 23 feet to 201 feet in length with continuous one piece pans and design detergent capacities conveying up to 100,000 lb/hr (50 TPH).

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