



New Screw Conveyor Transfers Urea Prills from Storage to a Mixer

Conveying Urea Prills from Storage Silo to Mixer

General Description

Arclin provides advanced chemicals and fertilizers that are environmentally friendly and increase product yield. Urea prills are used in one of its fertilizer products to help reduce nitrogen loss by hindering the conversion of nitrogen to ammonia and carbon dioxide giving crops more time to absorb vital nutrients and prevent harmful runoff.

KWS designed and manufactured a screw conveyor to transfer urea prills from a storage silo to a mixer inside the building. Urea can quickly dissolve in water therefore it is difficult to handle and store due to its hygroscopic properties.

Design Parameters

- Product Type:** Urea Prills
- Material Density:** 50 Lbs. per Cubic Foot
- Capacity:** 800 Cubic Feet per Hour
- Duty:** 24 Hours per Day

KWS Advantages

A screw conveyor was needed to transfer urea prills from storage to a mixer 35-feet away. KWS met with Arclin and provided a design to fit in the constrained area. Together, KWS and Arclin coordinated the layout and dimensions, so the screw conveyor fit perfectly without compromising the process or functionality.

KWS Special Features

Urea prills can be corrosive, especially if moisture is present. KWS manufactured the screw conveyor from 304 stainless steel to resist corrosion. The covers were bolted on all four sides to prevent moisture from entering the unit. KWS used CEMA standard components where possible to reduce cost while keeping a robust design. The motor met Class 1 Division 2 rating due to location and the product being conveyed.

KWS supplied a cable safety stop control unit for the conveyor. A cable safety stop control unit provides quick shutoff of a conveyor in an emergency. A cable is externally mounted around all sides of a conveyor and connected to a control unit. By pulling the cable, output contacts located inside the control unit are activated. The output contacts can be wired to two separate circuits, one for an alarm and one for conveyor shutdown.



KWS Manufacturing

3041 Conveyor Drive
Burlleson, Texas 76028

Toll Free: (800) 543-6558
Phone: (817) 295-2247
Fax: (817) 447-8528

www.kwsmfg.com



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Testimonial

Shawn Scriven, Corporate Project Manager - Arclin

"I give KWS a rating of 10 out of 10. The communication I received was appreciated as well as the offer to ship the screw conveyor ahead of receipt of the drive unit. If I require bulk material handling equipment in the future, I will keep KWS in mind."



Covers are Bolted on All Four Sides to Keep Out Moisture



Cable Safety Stop Control Unit Provides Quick Shutoff



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