CASE STUDY: BULK MATERIAL HANDLING

Silos & Pneumatic Conveying

Hygroscopic products attract and retain moisture. From transporting of these materials to finished production and all stops in-between, any moisture problems can become costly.
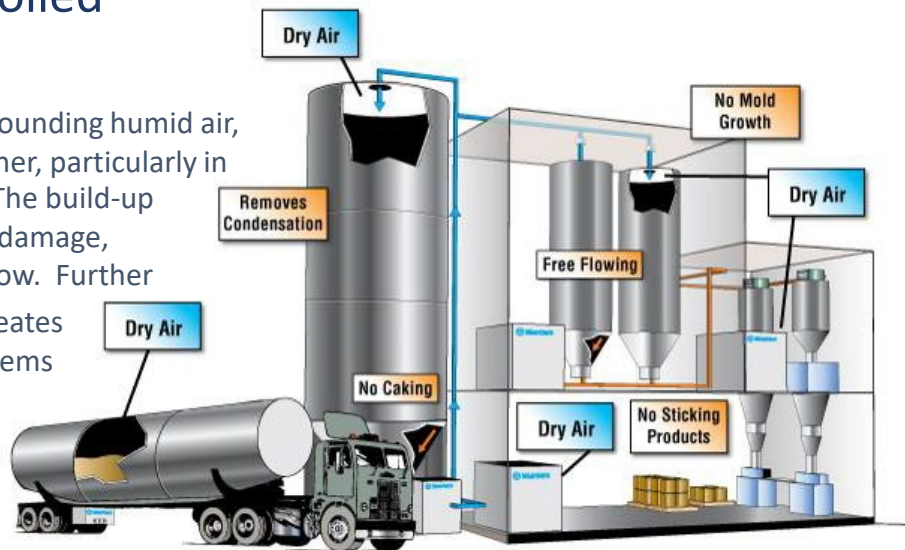
Industry: Food & Beverage
Application: Silo Powder Storage & Conveying
End User: Leading American multinational cereal and snack food manufacturer
Product: Munters Desiccant Dehumidification System, Model HCD

The Challenge: Uncontrolled Humidity

Product will absorb moisture from surrounding humid air, causing product to stick & clump together, particularly in product with hygroscopic ingredients. The build-up from sticky product can cause product damage, blockages and disruptions in product flow. Further slowing down process in production creates waste, sanitation and food safety problems and overall causing costly downtime.
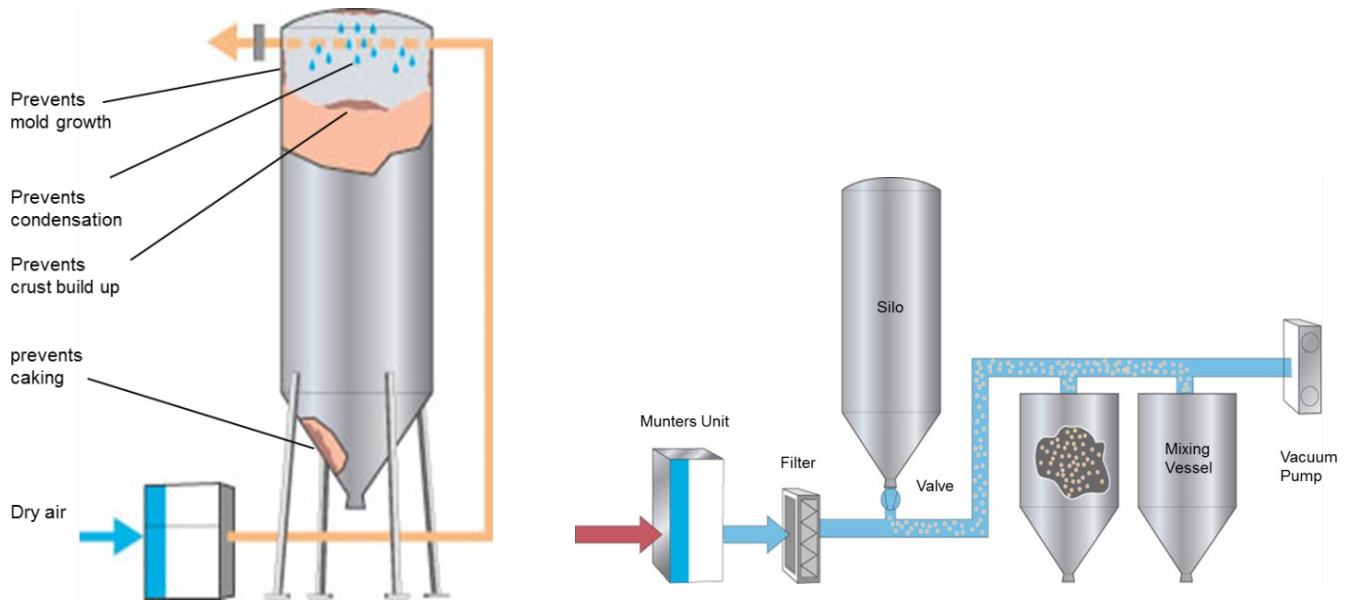

The Solution:

Replace existing system with a Munters dehumidification unit. To avoid downtime, new unit installed outdoors by silos and ducted into existing blower room header. Munters unit sized for continuous operation to provide on-demand dehumidified air to any of the four (4) silo aeration blowers. Excess dehumidified air is bypassed to the top of silos and to the warehouse.

✓ No product clumping and bridge formation
✓ No condensation
✓ No mold
✓ Reduced bacterial contamination
✓ No transportation duct and filter blockage
✓ Better hygiene
✓ Less dust downs and bridge removal

No condensation.
No clumping.

Prevents mold growth
Prevents condensation
Prevents crust build up
prevents caking
Dry air

Munters Unit
Filter
Silo
Valve
Mixing Vessel
Vacuum Pump

Munters dehumidification systems for bulk storage and handling are widely used to prevent condensation and other moisture related issues in all bulk handling and storage processes. By providing conditioned air with silo and bulk handling dehumidifiers at the correct humidity and temperature levels for the specific product, silos, conveyors and mixing equipment operate more efficiently, reducing the cost and time required for cleaning.