

VAC-U-MAX

Case History

VAC-U-MAX Pneumatic Conveying System Tunes Up Toner Cartridge Packaging Line Production

Pneumatic conveyor system integral in reducing labor and materials costs, while increasing production flow.

When Duraline Imaging Inc., leading supplier of remanufactured laser toner cartridges, installed a VAC-U-MAX pneumatic conveying system, coupled with an Allfill automated filling machine, to accommodate a growing customer base, Duraline quickly realized that the system provided more than streamlined production, such as reduced labor and reduced material costs.

VAC-U-MAX specializes in design and manufacture of pneumatic conveying systems and support equipment for conveying, weighing and batching of dry materials.

Prior to installing the new system toner arrived at the facility in small pre-measured bottles that were emptied manually into toner cartridges. Because toner is a difficult powder to work with, due to its fine particle size, manual filling was inefficient, messy and tedious, resulting in drifting dust and spills.

Initially, Tom Dunn, Duraline's President, opted to purchase an auger filler machine from Allfill which discharged toner accurately, with excellent repeatability and was much faster than performing the task manually; however, he still needed a solution to the haphazard manual loading method.

After recommendation of others in the toner industry and with the assistance of Solid Design, a local Vac-U-Max representative, Tom Dunn, Duraline's President, decided on the VAC-U-MAX pneumatic conveying system.



The conveyor system draws the 3pm toner from drums at floor level, transfers the material vertically 10 feet into a unique flared tube receiver, and then discharges it into the filling machine automatically, according to the demand set by the level control in the filler.

A special internal dust filter prevents the toner from leaving the vacuum receiver during transfer and the filter is cleaned during each discharge cycle using a unique automatic shaking method which ensures a clean dust filter that maintains efficiency.

A single jet venturi power unit which uses a modest amount of plant compressed air supplies power for the pneumatic conveying system to create the vacuum and airflow for conveying.

"The speed of production is great," says Dunn about Vac-U-Max's conveying system and Allfill's filling unit. "Waste and drift is reduced. Setup and cleanup time has also improved."

The new system has made it possible for Duraline to purchase toner in bulk quantities and cut nearly 25 percent from raw material costs. This says Alan Stepp, Duraline's Plant Manager, saves "a couple thousand dollars a month in material costs alone."

Labor costs are also down. According to Stepp, operating the Vac-U-Max conveyor cuts two to three hours a day in operating costs, or nearly \$6,000 per year.

Duraline reports that the new system, allows it to meet demands of potential customers while ensuring a safe work environment for its employees.

For more information about pneumatic conveying systems for fine difficult powders, please call 800-VAC-U-MAX (822-8629) or visit our website at www.vac-u-max.com.

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