



Packaging Industry



Customized Eriez® Feeder is Ideal for Dry Ice Unloading/Feeding System Used in Distribution of COVID-19 Vaccine

Headquartered in Allegan, MI, Material Transfer & Storage (MTS) is an industry leader in the custom design and manufacture of bulk bag filling, conditioning and discharging systems for dry powders and bulk solids. When they were called upon to design and build customized equipment that would dispense dry ice into temperature-controlled containers carrying COVID-19 vaccines, the Material Transfer team worked faster than ever before to meet the tight deadlines and compliance requirements of this vital project. Leveraging the talents of its experienced, committed staff and vendors, Material Transfer produced discharging systems in just eight weeks.

“Designing and building customized equipment this rapidly involves a level of knowledge and experience we are fortunate to have on our talented team,” says Scott Nyhof, Material Transfer president. “It’s good to have suppliers like Eriez® that we can trust.”

When it came to vaccine distribution, Material Transfer needed to maintain ice pellet size consistency, meter ice evenly to protect each vaccine, and monitor ice discharged during packaging, all while automating the process. The integrated process includes a crusher, scale system, and customized feeder and controls required to report diagnostics to the vaccine manufacturer.

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Eriez Customized Feeder

An essential part of the success of the Material Transfer dry ice unloading/feeding system is the integration of the Eriez 65B Electromagnetic Feeder. The rush to move the vaccine to distribution centers around the globe demanded that Eriez respond swiftly and effectively.

Eriez created engineered drawings and CAD models for Material Transfer within days. They delivered a custom-engineered solution to meet the demanding timeline for the project. It helped tremendously that Material Transfer and Eriez have a long history of success together.

The Eriez feeder was required to handle the sub-zero temperatures of dry ice to protect the new vaccine and precise feed control was critical. Just as vital, this feeder model handled the specific capacity and proprietary requirements of this special application.

“The customization includes an over-tray electromagnetic drive configuration for

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~ Rob Yandrick
Eriez Product Manager-
Vibratory/Screening

maximum clearance below the feeder tray and closed-loop control to maintain precise tray vibration under changing conditions,” says Rob Yandrick, Eriez Product Manager-Vibratory/Screening. “The Eriez two-mass feeder design provides excellent vibration isolation and helps ensure there is no interference with the ice weighing process.”

Eriez feeders and controls integrated

easily with the Material Transfer dry ice handling system and master control.

According to Yandrick, electromagnetic feeders are ideal for packaging applications because they can be rapidly cycled on/off and feed material quickly, evenly and consistently.

Control Panel Reporting

Material Transfer custom-built a system that also includes a customized touch-screen control panel to monitor system performance and send diagnostic reports back to the vaccine manufacturer.

“We have always held ourselves to a higher standard, believing that doing things right and serving others well are the most important things that we do,” says Nyhof. “We are humbled to play a role in delivering the COVID-19 vaccine to millions of Americans.”

About Material Transfer

For more than 30 years, MTS has been guided by the principle of building products the way they should be built: robust in design, elegant in operation, simple to use and easy to maintain. Headquartered in Allegan, MI, Material Transfer & Storage (MTS) is an industry leader in the custom design and manufacture of bulk bag filling, conditioning and discharging systems for dry powders and bulk solids. For more information, visit www.materialtransfer.com.

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The Eriez electromagnetic feeder provides precise feed control to protect the new vaccine.



Eriez is recognized as the world authority in separation technologies. The company’s magnetic separation, metal detection, materials feeding, screening, conveying and controlling equipment have application in the process, metalworking, packaging, plastics, rubber, recycling, mining, aggregate and textile industries. Eriez manufactures and markets these products through 12 international facilities located on six continents.

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