



## Scope of Work:

- FEED Study
- Value Engineering
- Geotechnical Analysis
- Material-Handling Systems Engineering
- Structural Engineering
- Mechanical Engineering
- Electrical Engineering
- Procurement & Subcontract Management
- Dome Construction
- Tunnels Construction
- Material-Handling Systems Installation
- Explosion Relief Installation
- Additional Steel & Concrete Construction
- None    Some    All

Proprietary explosion panels, pioneered by Dome Technology, are affixed near the apex to safeguard the structure.

The DomeSilo™ maximizes storage capacity on minimal real estate.

The sugar's purity is ensured by a protective elastomeric coating on the inside of the dome.

## Overview:

Located in Montgomery, Illinois, Dome Technology has constructed the largest freestanding sugar-storage facility in the United States for American Crystal Sugar Company. The dome can store 60,000 metric tons of refined sugar, and although ACSC owns the facility, United Sugars Corporation oversees operations.

The dome is equipped with mechanical systems providing a fill rate of 200 metric tons per hour and a reclaim rate of 150 metric tons per hour.

The dome is a first for American Crystal Sugar Company, which previously relied upon concrete silos and steel Weibull bins. According to Aaron Bjerke, who oversees business development for ACSC, the cost of constructing a dome versus concrete silos was equivalent per unit stored, but savings could be found in the material-handling systems. Because the company will be able to achieve its storage needs with one dome, just one handling system will be installed, as opposed to a redundant cost of one material-handling system per silo.

In addition to building the dome, Dome Technology installed the reclaim screw, a clean-sweep model made of stainless steel to complement food-safe requirements. A food grade-quality coating was sprayed on the entire inner dome shell, and the applied VersaFlex product ensures cleanliness in storage. The dome also features temperature and humidity control, a dust-collection system, and explosion panels.

According to an ACSC press release, the dome will not be attached to a producing sugar factory, making it the United States' largest freestanding sugar-storage facility.

"For nearly four decades we've relied on a collaborative approach with companies—they're in the driver seat, and we help navigate. In every project Dome Technology incorporates innovative technology to maximize storage capacity and system performance with an economical solution," Bradley Bateman, CEO, Dome Technology



Read more about this project at: [link.dometechnology.com/6459](http://link.dometechnology.com/6459)

## Storage & Reclaim:

- 1 Dome: 56m (183.7ft) Wide x 40.8m (134ft) Tall
- 60,000 Metric Tons, Refined Sugar
- Reclaim Screw, 1 Tunnel  
65% Live Reclaim

