



DOME TECHNOLOGY™

PROUD MEMBER OF NGFA AND GEAPS

GRAIN STORAGE

CAPACITY • THROUGHPUT • FLEXIBILITY • LOW COST • PROTECTION

STEEPED IN TRADITION. STRENGTHENED BY INNOVATION.

The world of grain has grown from hands in the dirt to big business that requires innovation to stay ahead. For more than 40 years Dome Technology has built a reputation around its innovative steel-reinforced concrete domes, and companies continue to select the high-capacity, small-footprint DomeSilo™ that stores more for less.

Expect the strongest structure available for cyclic throughput? You've got it. Need to incorporate existing systems? Done. Want to boost margins? No problem. We provide storage, conveyance, safety, and savings in one robust package. That's efficiency that pays for itself. That's the Dome Technology way.



"This is our first time using concrete domes for this type of storage, and Dome Technology was determined to be the most qualified for this application and location."
Louis Dreyfus project manager Ross McElhiney

Louis Dreyfus Commodities | Cahokia, Illinois, USA

- 1 DomeSilo: 38.7m (127ft) wide x 30.2 (99ft) tall
- 18,000 metric tons, grain
- No-entry sweep system

www.youtube.com/user/DomeTechnologyMedia

Key benefits



High capacity, small footprint



Cyclic throughput



Flexible design & reclaim



Low cost

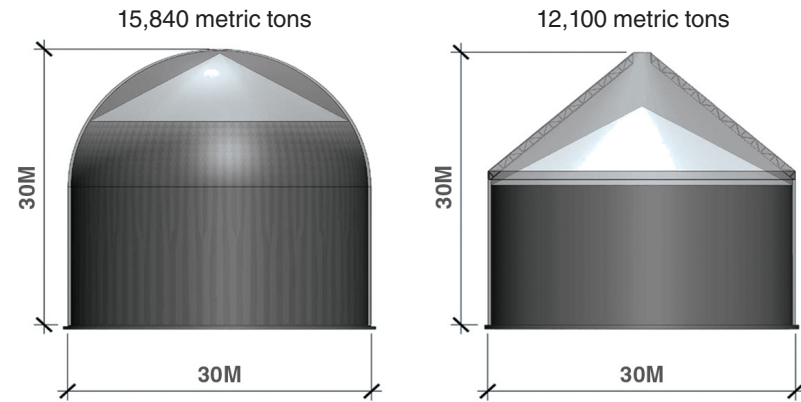


Protection

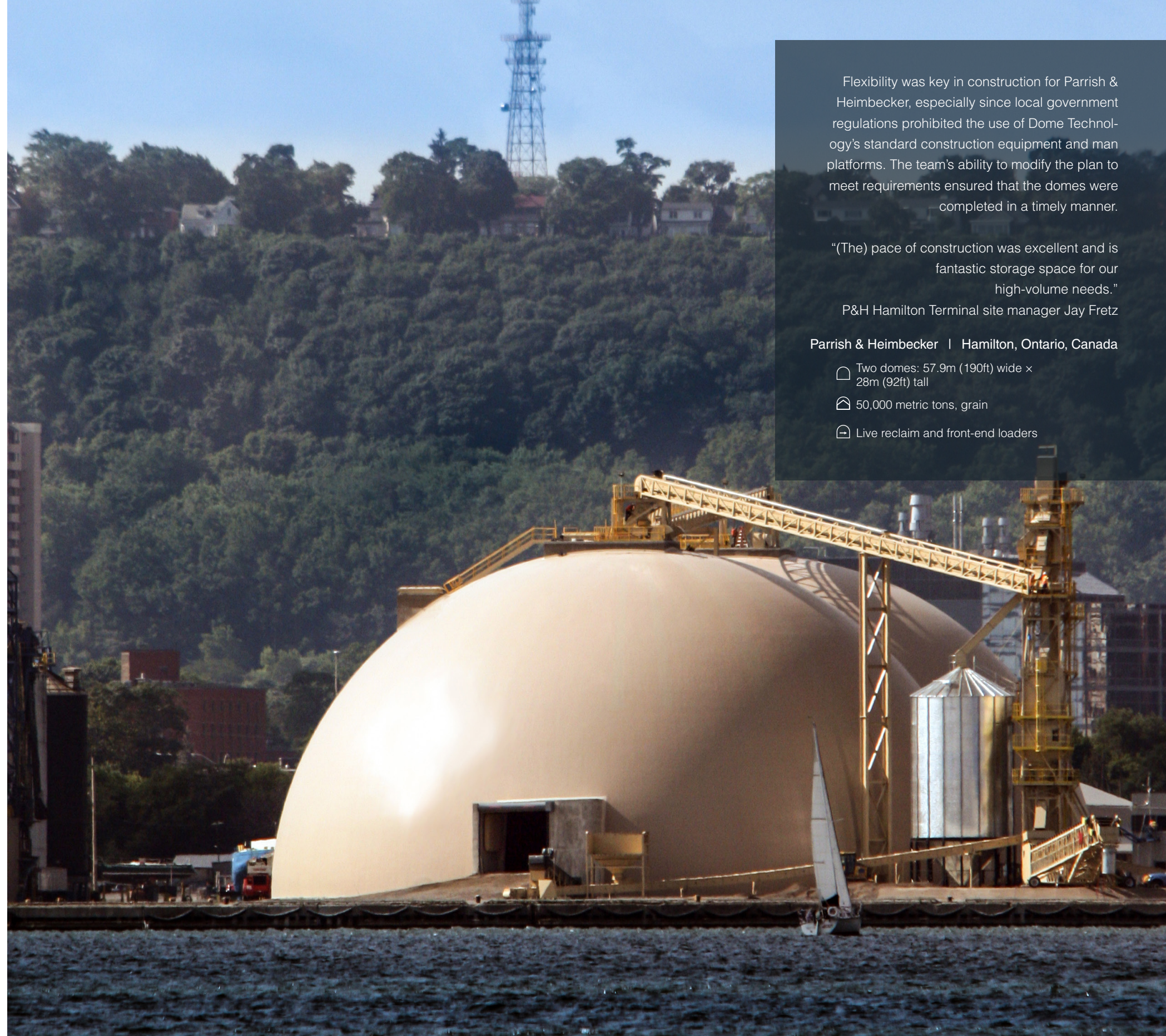
Higher capacity, smaller footprint

Oftentimes those who buy land on a port get less property for their money, requiring decisions on how to achieve the necessary storage on a smaller parcel of land.

Because of its height, a dome allows companies to stack product deeper, taking up less property at the site. The double curvature of a dome lends itself to the ability to build up, rather than out, and that curve provides strength at all points of the structure, even near the apex. The entire interior of a dome, then, can be used to contain product.



If a product having a specific gravity equal to 1.0 and angle of repose of 30 degrees is stored in each option, the DomeSilo provides 3,740 additional metric tons—an additional 30 percent.



Flexibility was key in construction for Parrish & Heimbecker, especially since local government regulations prohibited the use of Dome Technology's standard construction equipment and man platforms. The team's ability to modify the plan to meet requirements ensured that the domes were completed in a timely manner.

"(The) pace of construction was excellent and is fantastic storage space for our high-volume needs."

P&H Hamilton Terminal site manager Jay Fretz

Parrish & Heimbecker | Hamilton, Ontario, Canada

🏠 Two domes: 57.9m (190ft) wide × 28m (92ft) tall

🏠 50,000 metric tons, grain

🏠 Live reclaim and front-end loaders

Key benefits



High capacity,
small footprint



Cyclic
throughput



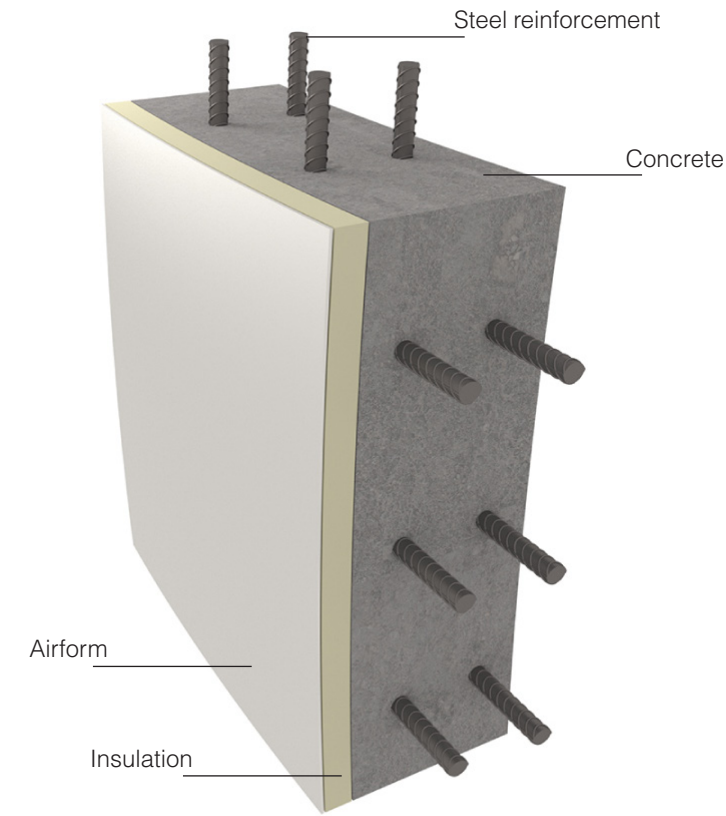
Flexible design
& reclaim



Low cost



Protection



The source of our strength

The materials we use are key. The airform acts as an impermeable membrane that keeps moisture at bay. The insulation and concrete shell provide better climate control inside. Combined with steel reinforcement and nature's perfectly strong shape, our domes are undeniably robust, making them ideal for weathering any storm.

But the real secret of our strength lies in our team's expertise. With longtime leadership who pioneered the dome-building process, engineers who specialize in dome geometry and design, and crews who take pride in their craftsmanship, we provide the most dependable bulk storage available.

Robust enough for cyclic throughput

The DomeSilo boasts greater ability to allow frequent loading and unloading. A dome's tolerance for cyclic loading and unloading is high because of its structural integrity, compared to steel bins built with fasteners or welded seams.

Flexible design & reclaim

As the pioneer of the dome-building construction process, Dome Technology continues to innovate, design, and build robust storage structures. Reclaim systems are designed specific to each project, providing the desired throughput and tying in with existing systems as needed.

Our team is made stronger with support from internal and external engineers who specialize in customized dome structures. When you select Dome Technology for your project, you also get the benefit of engineering expertise.



Innovative explosion paneling

Until now, square and rectangular explosion venting has been the norm, but Dome Technology's team has pioneered a round hybrid model being installed on bulk-storage domes today.

Pre-manufactured rectangular panels or a metal cladding piece creates a weak spot when used for venting. A round panel is ideal because there are no sharp corners for stress concentrators. If an explosion occurs, the round vent's fabric accepts the load and transfers it uniformly around the ring's circumference.

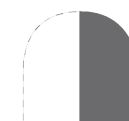
Key benefits



High capacity, small footprint



Cyclic throughput



Flexible design & reclaim



Low cost



Protection

Low capital & maintenance costs

Distinguish your company with a building that looks different because it is different. One of the most important distinctions is found in cost savings. Here are some of the ways a DomeSilo from Dome Technology cuts costs:

- Built on a smaller footprint—ideal for port sites where property comes at a premium.
- Promises a longer life cycle than a concrete silo or steel bin.
- Stores more product, often resulting in a single reclaim system versus multiple systems for multiple structures.
- Built with locally available concrete and reinforcing steel.
- Requires fewer construction materials with significantly less waste.
- Built quickly; once the outer weatherproof membrane is in place, equipment moves inside, so construction continues regardless of the weather.
- Utilizes diverse foundation systems that may reduce deep-foundation costs.
- Requires very little maintenance.



“One of our strengths as a design-build team is our ability to adapt to changes and implement them in a short time frame. Our working relationship with the owner and design team creates the dynamic needed to make these changes possible during the construction process and goes a long way in mitigating the financial pain associated with delays due to these design changes.”

Daren Wheeler
Dome Technology sales manager

Louis Dreyfus Commodities | Yorkton, Saskatchewan, Canada

- 🏠 One DomeSilo: 33.5m (110ft) wide x 31.7m (104ft) tall
- 🏠 11,500 metric tons, canola pellets
- 🏠 Laidig under-pile reclaimer screw



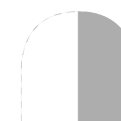
Key benefits



High capacity, small footprint



Cyclic throughput



Flexible design & reclaim



Low cost



Protection



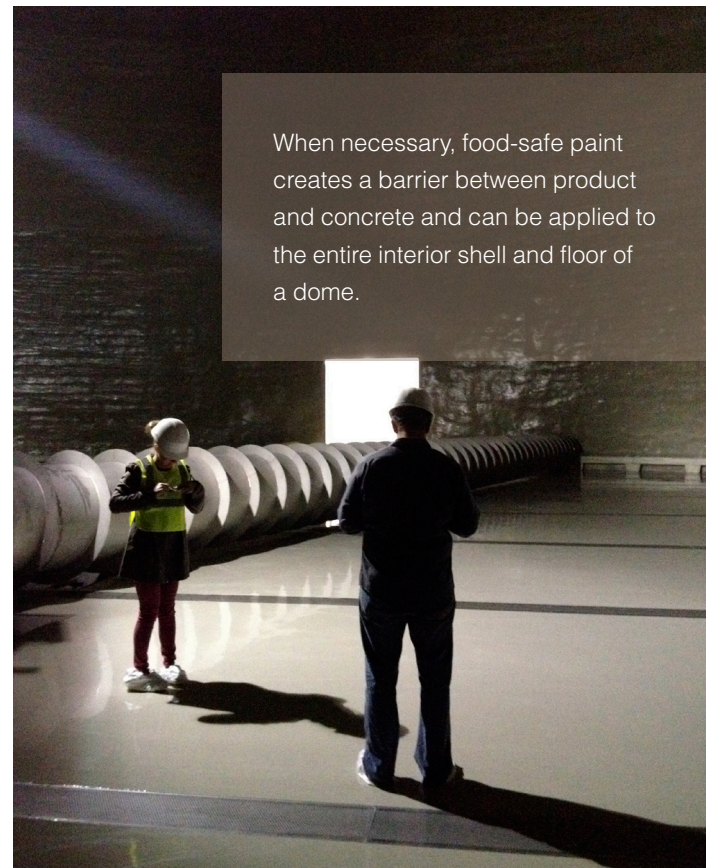
Superior product protection

Insulation doesn't come standard with traditional storage facilities like bins and silos, and fluctuations in external and internal temperature, plus the possibility of moisture or condensation inside the structure, can compromise product integrity.

In contrast, a dome staves off some boundary issues other structures face. First, the airform covering the entire dome prevents water and moisture from seeping in. Important for moisture-affected products, this feature eliminates introduction of outside water into the stored pile.

Secondly, the combination of waterproof membrane, reinforced concrete shell, and continuous layer of polyurethane foam prevents extreme interior temperature fluctuation; these features reduce heating and cooling of the walls and air inside, preventing condensation.

Aeration systems and temperature and moisture cables further ensure internal conditions are ideal.



When necessary, food-safe paint creates a barrier between product and concrete and can be applied to the entire interior shell and floor of a dome.

Our latest innovation: the Drive-Thru DomeSilo

In 2017 Dome Technology's team introduced its Drive-Thru DomeSilo to the marketplace. This tall, skinny dome with drive-through capability was designed to store more product on a smaller footprint than a silo of comparable dimensions; this increased storage is made possible by the dome itself, which can be filled to the top since it can support the pressure of the product at all points of the structure.

The first Drive-Thru DomeSilo was built for the cement industry to meet demands in the marketplace, but the same model will work for a variety of products, including grain.

The Drive-Thru DomeSilo incorporates all structural, mechanical, electrical, and control systems to provide a complete turnkey solution from receiving to truck or rail car. Companies can save by building a single drive-through storage facility that eliminates the need for multiple mechanical systems, operators, and structures. The Drive-Thru DomeSilo complete package is less expensive to build than a silo-centric system of similar capacity.

The new model also allows for direct load-out, where stored product flows through a spout for loading into truck or rail.

Dome Technology published news of its Drive-Thru DomeSilo concept in June 2017 and contracted with Continental Cement Company shortly thereafter, thanks in part to cost savings. "It came down to price that allowed us to capture the first opportunity. We were given the opportunity because we were able to compete very well against a steel-bolted tank, so that allowed us to be able to promote the benefits of the dome," Dome Technology sales manager Lane Roberts said. The project was completed in August 2018.



Key benefits



High capacity,
small footprint



Cyclic
throughput



Flexible design
& reclaim



Low cost



Protection



Louis Dreyfus Commodities | Cahokia, Illinois, USA



DOME TECHNOLOGY™

4946 N. 29th East
Idaho Falls, ID 83401
+1 208.529.0833
www.dometechnology.com

© 2018 Dome Technology, LLC. All rights reserved.



www.facebook.com/dometechnology



www.youtube.com/dometechnology