

Geodesic Aluminum Domes

For Petrochemical Applications

CST

OptiDome®



SAFE | EFFECTIVE | ECONOMICAL



» INNOVATIVE COVER SOLUTIONS

» The Worldwide Leader in Custom Aluminum Domes



CST Industries, Inc., formerly Temcor and Conservatek®, has supplied over 19,000 covers in more than 90 countries worldwide. CST employs geodesic dome engineering principles and lightweight aluminum materials to produce aluminum domes with superior strength and design flexibility instrumental in meeting the increased regulatory demands of the petroleum and chemical storage industries.

Ideal for both new construction and retrofit projects, CST's aluminum domes are an economical solution that require almost no maintenance, are easy to install and provide long-term protection to valuable owner assets. They also can be constructed quickly, usually with no interruptions of tank operation.

CST's products are non-combustible and remain unaffected by the corrosive effects from petrochemical emissions. By helping control hazardous vapors and preventing water intrusion, our covers provide environmental efficacy, protect stored product and reduce remediation costs associated with treatment of contaminated "bottom water." Tanks can remain in service while the dome is being built since no hot work is required.

CST's Competitive Advantage:

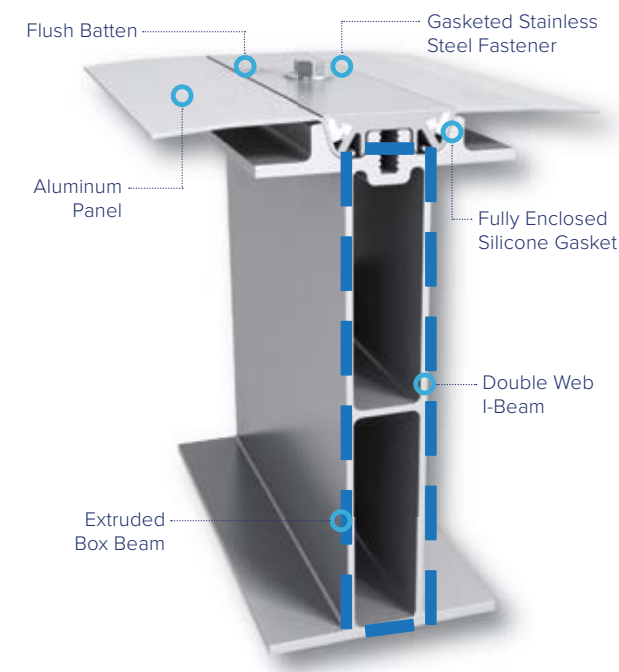
- » Quality Reputation — Unparalleled reputation for quality products and customer service
- » Unmatched Experience — Temcor and Conservatek have 90+ years of combined experience in the design, fabrication and installation of aluminum cover systems
- » In-House Manufacturing — CST operates its own manufacturing facility to provide fabrication flexibility and ensure on-time deliveries
- » Increased Coverage — With multiple offices across the country, CST is poised to provide the best and most timely customer service regardless of the location of the project
- » Quality Control — All CST facilities are ISO 9001:2015 certified
- » Aluminum Advantage — All CST structures are all-aluminum construction providing benefits unsurpassed by other materials used in the industry

All-Aluminum Flush Batten Dome Roof

Combining premium features and incorporating the engineering experience and heritage of Temcor and Conservatek®, OptiDome® sets a higher standard in engineered aluminum cover technology. The optimized design has features that result in a more robust, customizable, efficient and economical cover solution.

- » Structural Design
- » Batten Seal Technology
- » Aesthetics

CST's OptiDome is designed with the most modern computer technology to check all loading combinations to ensure safety and integrity under all conditions. As an industry leader, CST is dedicated to resolving the challenges confronting the Petroleum Storage Tank Industry by creating cost effective, innovative and sustainable cover solutions.



» Structural Design

CST's advanced OptiDome design efficiently complies with torsional buckling requirements which have been adopted by Eurocode, 2015 Aluminum Design Manual and International Building Code 2015. The Double Web I-Beam, combined with aluminum's excellent strength-to-weight ratio, provides reliable performance under the most stringent environmental conditions including heavy snow loads and high wind speeds.

OptiDome is designed to meet the latest design codes including: Eurocode, Aluminum Association's 2015 Aluminum Design Manual, IBC 2015, AWWA D108 and API 650G. The unique properties of OptiDome make it far superior to other materials and alloys used for covers due to its:

- » Corrosion Resistance — Aluminum is inherently corrosion resistant compared to other materials. It will last the lifetime of the structure and will not need to be painted or repainted for protection from the elements.
- » Low Lifetime Maintenance Cost — With no need to maintain a protective finish to prevent corrosion over time, there are little-to-no maintenance costs associated with an aluminum dome.
- » Clear-Span Capability — Aluminum's lightweight characteristics allow for larger clear-span cover capability than structures utilizing steel, concrete and other materials.
- » Fast & Low-Cost Construction — Creative design and lightweight components provide for installation in 1/3 the time it takes to install other cover systems. Less time, labor and equipment needs combine for a low total cost of installation.
- » Design Flexibility — Aluminum's excellent strength-to-weight ratios and creative component designs yield covers and structures that cannot be achieved with other materials.
- » Aluminum is a "Green Material" — Not only are aluminum cover systems recyclable after their service life, but more than 50% of the aluminum used in the cover systems is made from recycled aluminum.

Every CST aluminum cover is custom designed to meet the specific requirements of each project and engineered for any snow, wind or suspended load capacity, as well as span-to-rise-ratio.

OptiDome® Batten Seal Technology

At the core of OptiDome is its superior batten seal technology. This system increases water shedding and eliminates ponding, even on a low profile design, while providing a water-tight cover solution.

Featuring an enclosed gasket design, the batten protects against ultra-violet exposure and sealant degradation. Since battens are flush with dome panels, it eliminates ponding. They are easy to install and require less sealant than typical geodesic domes.

OptiDome Batten Seal Technology

- > Gasketed stainless steel fasteners
- > Flush batten bar
- > Eliminates ponding
- > Easy to install
- > Protection from UV and sealant degradation

» Aesthetics

Efficient in Design.

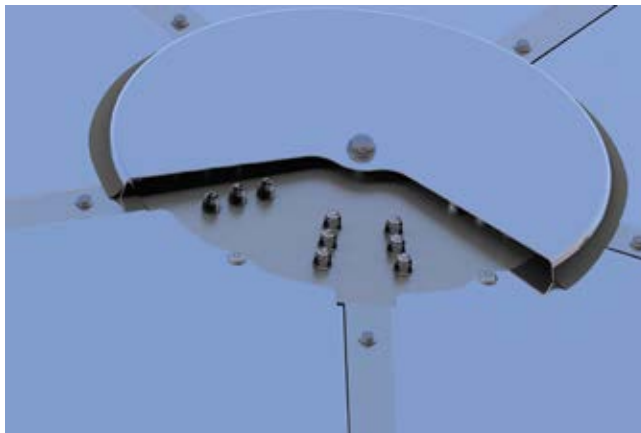
Distinctive in Appearance.

Unsurpassed in Quality and Value.

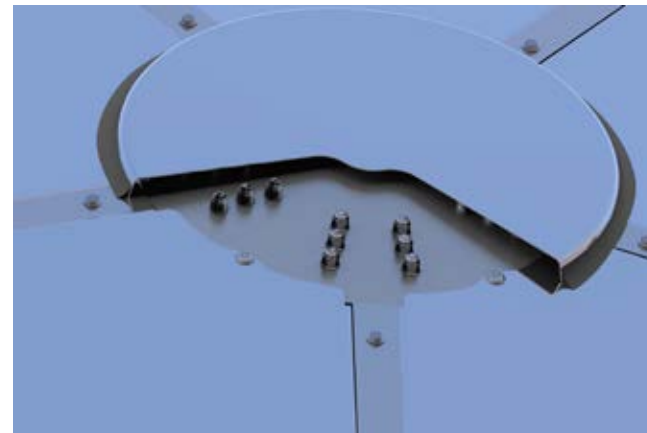
CST has combined proven dome design with modern engineering and materials to produce a flush batten aluminum geodesic dome that offers significant economic advantages.

In addition to the optimized design and superior seal technology, the OptiDome has a smooth, sleek appearance. OptiDome utilizes proven, water-tight technology and customers get the most functional, longest lasting dome solution in the industry.

» Optional Gusset Cover Designs



» Gusset cover with bolt



» Gusset cover without bolt

High Tolerance Manufacturing and Design

The use of aluminum allows for unique structural sections (extrusions) to be designed to meet specific project needs. The performance characteristics of a design can be optimized for any petrochemical project.

CST is committed to safe and secure construction practices using simple tools, lightweight materials and qualified personnel. With over 127+ years of experience, CST has perfected its field erection practices by developing safe and proven construction methodologies that lower the chances for field errors, promote worker safety and reduce construction time.



Safe, Lightweight and Economical

CST is the first choice for thousands of petrochemical applications worldwide. Always featuring all-aluminum construction, CST's products are lightweight, corrosion-resistant and maintenance free, which translates to longer life and lower costs. They don't rust like steel, they don't degrade with ultraviolet light like fiberglass, and they don't spall like concrete. Their strength and versatility are unmatched.

Because CST's aluminum domes are prefabricated, field construction time and labor costs are minimal compared to alternate materials. A typical CST dome weighs 2.5 pounds per square foot, just one-fifth the weight of a comparable steel roof.

» CST Stands Behind It's Products

SAFETY	Only simple tools and lightweight materials are utilized	All construction can be achieved at ground level	No welding required
CAPITAL COST	Lighter foundations/less civil work (foundations up to 20% lighter than for similar steel structures)	Faster construction/ lower labor costs	Single source responsibility
CONSTRUCTION	Constructed in half the time of steel domes and 33% faster than competing aluminum domes	Reduced labor requirements (up to 33% lower than for steel)	Precision manufacturing eliminates field errors – all parts are match-marked for accurate installation
COST OF OWNERSHIP	Corrosion resistant	Leak-tight	Superior lifetime value
	Low maintenance	No painting or re-coating	



Ideal for New Construction and Retrofit Projects



» Bullenbaai, Curacao
315 ft. (96 m) diameter



» Amsterdam, Netherlands
(3) 230 ft. (70 m) diameter



» Amsterdam, Netherlands
(4) 89 ft. (27 m) diameter



» Beaumont, Texas
162 ft. (49 m) diameter

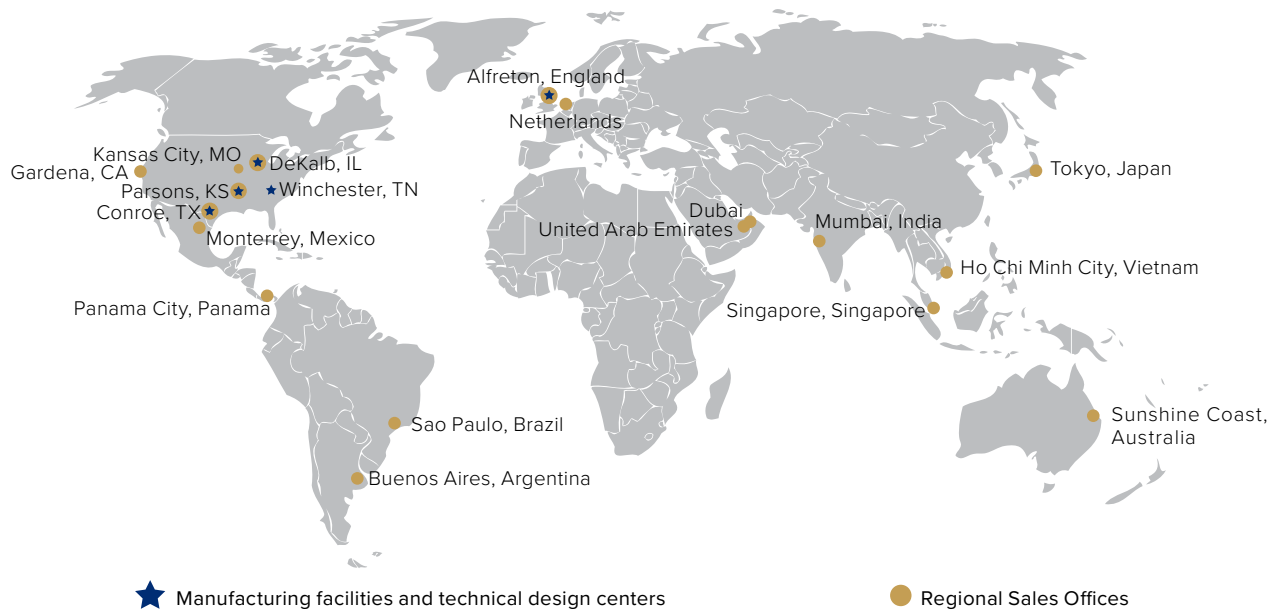


» Port Arthur, Texas
265 ft. (81 m) diameter



» St. Eustatius, Netherlands
Various sizes

CST is committed to providing its customers with the highest engineered quality, best service, longest product life and greatest value for every storage and cover solution we supply.



Certifications and Capabilities:

- ISO 9001:2015
- Aluminum Association's 2015 Aluminum Design Manual
- IBC 2015
- API 650G

For more information, call +1 844-44-TANKS or visit us online at cstindustries.com

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