

# AQUA☞STORE

Tanks & Domes

Glass Tanks with a Heart of Steel™



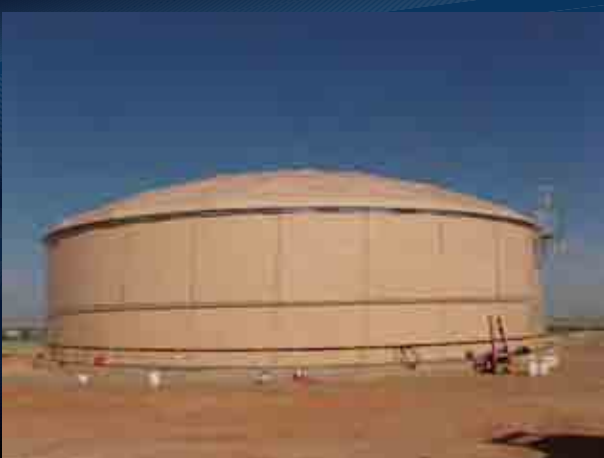
## Clear Span Aluminum Geodesic Dome Systems

# Aluminum Geodesic Aquastore Domes

Engineered Storage Products Company (ESPC) has a proud history of turning coated steel into the finest liquid storage tanks available today. Those same glass-fused-to-steel bolted tanks often require a low maintenance cover that is equal in quality and construction. To complete the Aquastore® tank package, ESPC manufactures and installs aluminum geodesic Aquastore Domes. From the beginning, Aquastore Domes have been designed and manufactured to the highest standards in ESPC's ISO 9001:2000 certified facility.

Advanced materials and structural design of Aquastore Domes offer superior features:

- Clear span, self supporting
- Corrosion and chemical resistant
- Lightweight, durable and strong
- Speed of installation and service
- Application flexibility
- Color choices



## Applications

Aquastore Domes are used for a number of different applications:

- Potable water
- Wastewater treatment
- Process water for industry
- Industrial/petrochemical
- Leachate storage and treatment
- Fire suppression water

**Aquastore Dome aluminum clear span covers deliver several advantages:**

- Low maintenance
- Cost efficiency and lifetime value
- Safety
- Ability to meet exacting live load requirements for all applications
- Superior aluminum alloys
- Dome calculations and assumptions validated using finite element analysis
- Manufactured in the same ISO 9001:2000 facility alongside Aquastore tanks



# Design

Aquastore domes are individually designed using a proprietary design program that incorporates an Algor finite element analysis. The design of each dome incorporates factors for snow load, wind pressure, geometric shape and seismic conditions. They can be manufactured up to 350 feet in diameter in various height profiles.



**Hand Rails  
& Walkways**



**Vents**



**Option to Match Tank Color**



**Skylights**



**Dormers**

## Aluminum Alloy Advantages

Aquastore domes are manufactured using only the finest aluminum alloys to ensure performance and longevity. The structure is resistant to corrosive or harmful vapors that can affect dome life. Consider the following when evaluating our panels, frames, battens and struts:



- Corrosive-resistant
- Won't swell, chip or rust
- Does not deteriorate
- Gaskets protected from UV rays
- No protective coating required
- Rigid and lightweight
- Increased strength & durability

The compact struts on the Aquastore Dome are fabricated with the highest quality aluminum, giving better protection and extrudability. The Aquastore Dome utilizes advanced batten bar design which locks panels in place and protects the gasket from UV rays. Gasket material options include Silicon and Neoprene.

### Material Specifications

- Struts & perimeter tension/compression ring: AA6005A-T6 aluminum
- Node plates: AA6061-T6 or AA5052-H32 aluminum
- Triangular dome panels: AA3003-H16 aluminum sheet
- Fasteners: AA2024-T4 aluminum or austenitic series 300 stainless steel as required by the manufacturers design

## Dome Construction

The Aquastore Dome is designed for ease and speed of erection. Depending on the construction situation, it can be constructed using one of three methods:



### In-Place Erection

The In-Place Erection construction method is most often used on Aquastore tanks. The Aquastore Dome is built directly on a tank. The dome is assembled from the outside toward the center.



### Crane Erection

Aquastore Domes are erected on the ground and then lifted into place with a crane. This process can save valuable construction time since the dome and tank or support walls can be built simultaneously.



### Tower Erection

Using this construction method, the Aquastore Dome is erected from the center outward to the perimeter using a center erection tower. Workers assemble the frame on the ground or tank floor, lifting the dome up as each strut ring is completed.



# The Authorized Dealer Difference

ESPC tanks and domes are available and erected through a network of Authorized Aquastore Dealers.

These organizations and their sales representatives have installed thousands of tanks and domes and have many years of experience. They are available to discuss project specifications and requirements from inception to completion. Application knowledge and regional experience are valuable assets during all development and construction stages. Plus, dealers are trained to provide superior customer service. Aquastore Domes carry the best factory-written warranty in the business.



When building an Aquastore tank, don't settle for just any cover. Look to your Aquastore dealer to finish your Aquastore tank with the cover that was designed for it, the Aquastore Dome.

Find your nearest Aquastore Tank and Dome dealer in the dealer locator section at [www.aquastore.com](http://www.aquastore.com).

**AQUASTORE**<sup>®</sup>  
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