



Engineering
America



THINK TANK

“Tohono O’odham Utility Authority (TOUA) in Arizona has been using the Aquastore® tanks since 1994. We feel this is a quality product that has exceeded our expectations for reduced maintenance costs, general appearance and ease of repairs. The manufacturer, and their distributor for our projects, provides excellent customer support, warranty and repair service. During a recent tour of their plant I was impressed with the emphasis on quality control, safety and the satisfaction of the end-user.”

DAVID SADDLER
MANAGER, WATER DEPARTMENT
SELLS, AZ

“Since the initial installation in 1984, Starbuck has added two other Aquastore tanks. I literally cannot tell the difference in the appearance of the glass-fused-to-steel coatings between the old and newer tanks.”

GARY KOOS
COMMUNITY SUPERINTENDENT
CITY OF STARBUCK, MN

“It was a pleasure working with Engineering America management and field personnel. Best of all there were no change orders – and Engineering America finished up ahead of schedule.”

GREG ENGESET
PUBLIC WORKS DIRECTOR
VILLAGE OF ELLSWORTH, WI

POTABLE WATER TANKS

Reservoirs
Composite Elevated
Standpipes

WASTEWATER TREATMENT

Sludge Storage Tanks
SBR Tanks
Equalization Tanks
Clarifier Tanks
Anaerobic Digesters

LEACHATE TANKS

FIRE PROTECTION

ALUMINUM GEODESIC DOMES



We Are Engineering America

Established in 1980, Engineering America is the reliable and experienced resource for liquid storage tanks. We are an authorized dealer for Engineered Storage Products Company, DeKalb, Illinois. From the Aquastore premier glass-fused-to-steel product line to composite elevated tanks, we offer durability in the toughest environments.

WE ARE PROBLEM SOLVERS

Our breadth of experience, expertise and resources puts us in a unique position to bring intelligent solutions to even the most complex projects.

We will help you determine the ideal storage solution for your unique application, then provide the materials, factory-trained and certified labor, equipment and services to take your liquid storage tank project from paper to reality – on time, within budget and to your satisfaction.

Whatever your liquid storage tank needs, we have the knowledge to help you choose and build the solution that's right for you. Since 1980, we've installed more than 700 liquid storage tanks and counting.



When it comes to water storage, Aquastore tanks are your greenest alternative. An Aquastore tank has many “green” advantages other tank designs cannot offer.

- **Never needs painting**
- **Factory-controlled clean environment and reduced energy consumption and emissions based on the manufacturing process**
- **Minimized construction footprint**

Built in 1980, and Has Never Needed Painting

LOCATION: City of Dennison, MN
TANK TYPE: Aquastore Standpipe
TANK SIZE: 20' Diameter x 52' High
CONDITION: Excellent

“The tank works. It works and that’s it! Other than normal cleaning and inspections, no painting has ever been required for this tank.”

Paul Gillispie
Water Superintendent
City of Dennison, MN



Porcelain Enamel Coating Is the Durable Premium Technology Choice for Use in the Potable Water Tank Market

ENGINEERING SUCCESS

Our designs incorporate long-established standards, which ensure the highest quality. Careful selection and inspection of all materials conforms with rigid specifications. For decades our tanks remain standing monuments to exceptional quality.

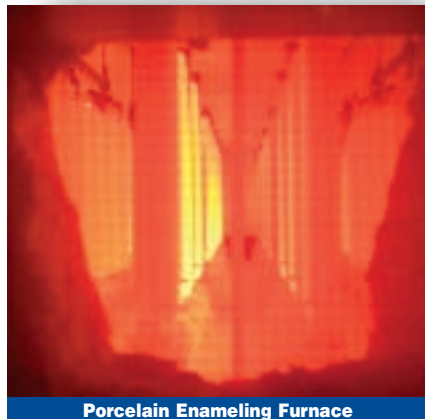
APPROPRIATE PRODUCT

The physical properties are particularly suited to municipal storage applications. The factory-applied silica glass coating on Aquastore® tanks forms a hard, inert barrier for both the interior and exterior tank surfaces to guard against weather and corrosion.

Glass-fused-to-steel is impermeable to liquids and vapors, controls undercutting caused by corrosion and offers excellent impact and abrasion resistance. The color won't fade or chalk and most graffiti can easily be removed. It never needs painting.

Our glass coatings are specifically designed for improved resistance for the demands of water storage. Our potable water tank interiors feature glass coatings formulated with decades of experience catering to the North American market.

With our patented application technology, Aquastore glass coatings have exceptional quality. Laboratory testing and extended field service have proven the toughness and durability of these proprietary formulations.



Porcelain Enameling Furnace

MULTI-STEP PROCESS

- **Fabricated sheets are grit-blasted to a uniform, near-white surface**
- **Proprietary formulations of borosilicate, minerals, water and clays are blended into a sprayable slurry called “slip”**
- **After inspection, the slurry is fused to the steel sheets at temperatures above 1,500° F to produce the distinctive glossy Aquastore finish**
- **The molten glass reacts with the profiled steel surface to form an inert, inorganic chemical and mechanical bond**

CLEAR BENEFITS

- **NO PAINTING (the “green” tank since 1950)**
- **Lowest maintenance requirements over tank life**
- **Greater lifetime value than welded or factory painted tanks**
- **Faster construction**
- **Expandable**
- **10-year warranty with manufacturer’s provided cathodic protection system**

MANUFACTURING SUCCESS

The factory at Engineered Storage Products Company is ISO 9001:2000 quality system certified. Engineers design tanks for a wide range of standards including AWWA D103 Standard for Bolted Steel Water Storage Tanks, AISC, FM codes and NFPA Standard 22, IBC and UBC.

Additionally, glass coatings meet ANSI/NSF Standard 61 requirements for indirect additives, making Aquastore ideal for potable water storage. Most importantly, extreme pride is taken in craftsmanship for a tank that endures the test of time.

Glass-fused-to-steel tanks are built from the ground up, meaning no cranes for installation are required. This allows for the avoidance of common weather delays that welded steel tank construction can have.



Edge Coating Process

In 1980 we made an innovative promise that our tanks would never need to be painted. No Aquastore tank has been painted since – we are the authentic glass-fused-to-steel!

Aquastore® Tanks with a Heart of Steel™



ENVIRONMENTALLY SOUND
LOW MAINTENANCE
DURABLE

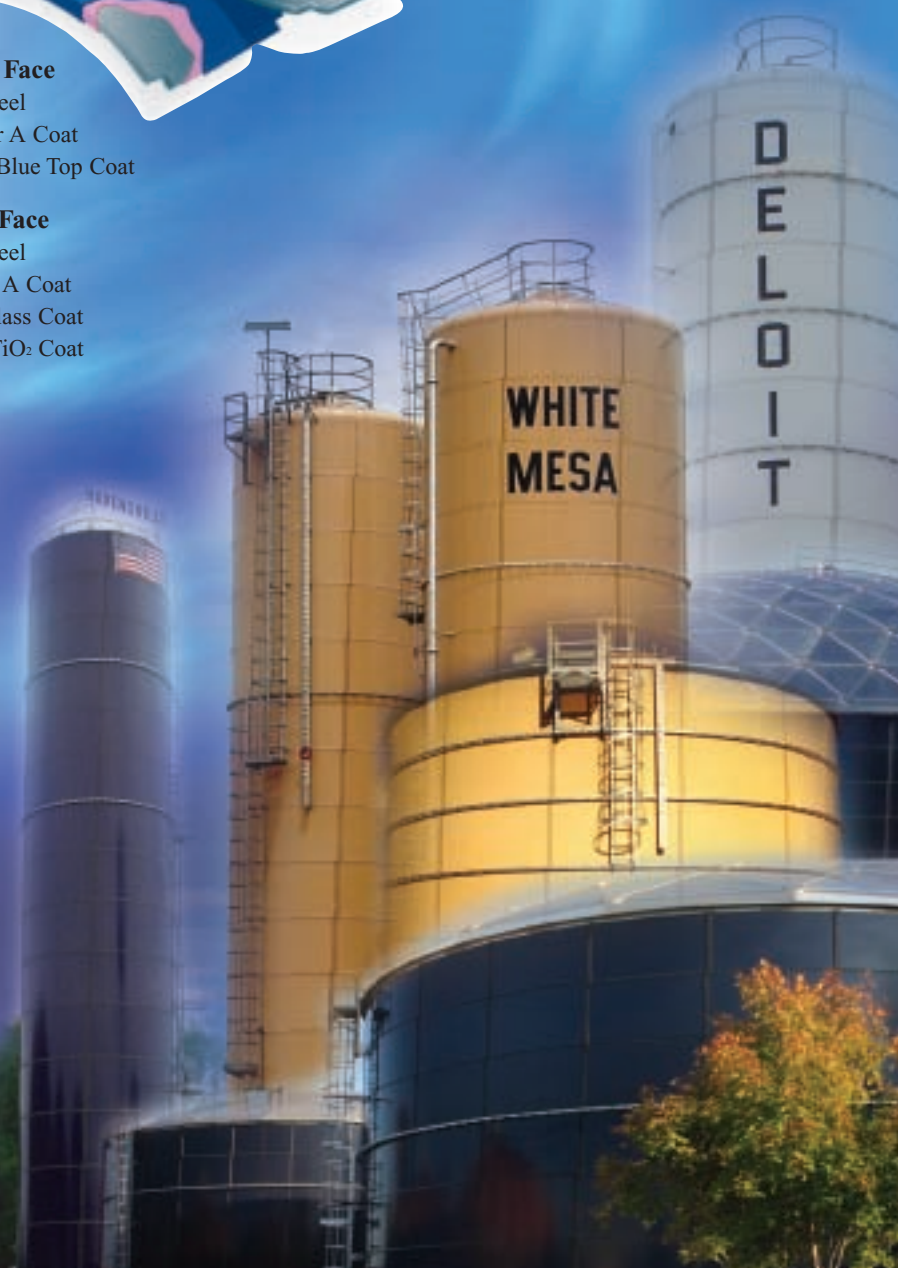


Exterior Face

- Base Steel
- Exterior A Coat
- Cobalt Blue Top Coat

Interior Face

- Base Steel
- Interior A Coat
- Base Glass Coat
- White TiO₂ Coat



20 Reasons to Choose Aquastore

- 1** No Painting for the Life of the Tank
- 2** Glass-Fused-To-Steel (Porcelain Enamel)
- 3** Low Life Cycle Cost
- 4** 10-Year Coating Warranty
- 5** Cathodic Protection
- 6** Best Edgecoat System Available
- 7** White Interior Coating
- 8** Coating Thicknesses
 - Interior: 10-18 MILS DFT
 - Exterior: 7-15 MILS DFT
- 9** 100% Holiday-Free Factory
- 10** Low Maintenance
- 11** Easily Cleaned
- 12** Expandable
- 13** The “Green” Tank
- 14** Timely Installations
- 15** Factory-Provided Professional Engineering Stamp
- 16** Multiple Sealer Options
- 17** Multiple Color Options
- 18** Clear Span Dome Design
- 19** Bullet Damage Is Easily Repaired
- 20** The Engineering America Dealer Connection!
 - Turn-key Installation
 - Service After the Sale
 - Factory-Trained Crews
 - Jack Installation
 - Operating in 16 States
 - Over 700 Tanks in Territory

Building Success From the Ground Up with Our Teams of On-site Seasoned Professionals

TURN-KEY SOLUTIONS

At Engineering America, we'll help you determine the ideal storage solution for your unique system, then provide the materials, factory-trained and certified labor, equipment and services to take your storage tank project from paper to reality – on time and within budget.

OUR OWN CREWS

Engineering America's team of project managers and construction personnel continues to build a solid reputation for integrity and commitment to our clients. We employ and have trained some of the top tank builders in the nation. Our construction crews have installed over 700 tanks ranging from 15,000 gallons to 3.0 million gallons since 1980.

CONCRETE FOUNDATIONS

Engineering America has been installing concrete tank foundations since 1980. We have the resources to design and install your concrete tank foundation, whether it is a water, wastewater or dry bulk application.

ON-SITE SUPERVISION

Each project receives on-site supervision by one of our skilled superintendents, each of whom has completed extensive training and certification by the tank manufacturer, Engineered Storage Products Company of DeKalb, Illinois.

SERVICE

Ask our customers – there is no substitute for experience. We have been constructing water storage tanks since 1980. Our cumulative knowledge and proven track record ensures that our clients will receive superior service and support at the highest value.

MAINTENANCE

When you select an Engineered Storage Products Company (ESPC) Aquastore® storage tank, you select a tank with one of the lowest maintenance requirements of any tank available today. However, even with the quality of Aquastore tanks, it is recommended that periodic inspections be performed. Knowing that preventive maintenance is good policy, Engineering America will perform these inspections throughout the life of your tank.

Engineering America's service department provides other service needs as well, including cathodic protection, panel replacements and touch-ups.

TANK INSULATION SERVICES



If your tank needs insulation, Engineering America's experienced construction crews have

installed many insulation systems for tanks around the country.

If you need to establish a budget, our estimators are readily available to assist.

Aquastore® Glass-Fused-to-Steel Versatility

From Conception and Design, to Construction and Commissioning, Engineering America Provides One-Source Solutions for Your Application

SLUDGE STORAGE TANKS



Aquastore tanks are an economical storage solution helping municipalities comply with local bio-solids regulations. Engineering America's Aquastore tanks have become the preferred choice for municipal bio-solids storage.

EQUALIZATION TANKS



Aquastore tanks have proven to be a reliable and cost-effective solution to the adverse impact of storm events and infiltration at many wastewater treatment plants. Low maintenance and no painting set us apart as the life cycle tank of choice.

CLARIFIER TANKS



Engineering America tanks shine brightly in tough industrial water and wastewater applications, including clarifiers. Competitive pricing and quality construction make the decision easy. No other company beats our completion times.

LEACHATE TANKS



Our primary and secondary containment tanks offer reliable leachate storage with a

glass-fused-to-steel coating that resists corrosive contaminants. Aquastore tanks are in service in hundreds of leachate storage applications.

ANAEROBIC DIGESTERS

Constructing anaerobic digesters out of pre-engineered sectional steel tanks is an effective, reliable, and economical solution compared to poured-in-place concrete tanks.



WASTEWATER TANKS

Our tanks are dependable, versatile and cost-effective when used in wastewater treatment and storage.

Single-use applications range from storm water runoff storage, equalization and trickling filters to sludge digestion and sludge storage/mixing.



POTABLE WATER

We know it is essential to safeguard water from the damaging effects of microbial and chemical contamination.

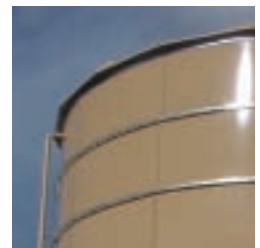


The physical properties of the glass-fused-to-steel premium tank coating technology are specifically suited for municipal and industrial liquid storage applications.

Comparative bacteriological studies by the Division of Clinical Research for Instituti Ospedalieri (DCRIO) underscore the universal importance of safe drinking water. The results show that our unique glass-fused-to-steel technology provides outstanding chemical and physical resistant properties, and provides the cleanest and lowest bacterial level for potable water tanks in the industry.

FIRE PROTECTION

Engineering America provides turn-key installations of NFPA-22 and Factory Mutual (FM) fire protection water storage tanks. Our industry-leading fire protection storage tanks are available with various accessories to ensure compliance with National and State Fire Codes, such as Tank Insulation, Tank Heaters and Water Level Indicators.



We provide individual state required P.E. stamped foundation designs and turn-key foundation installations.

The Quality and Value of Our Composite Elevated Tanks (CET) Tower Above Traditional Field Welded Tanks

A SOLID CHOICE

Elevated storage doesn't have to drain your maintenance budget! For elevated storage, you want the most rapid construction, most advanced coatings, lowest maintenance and most effective pricing. Look no further than Engineering America.

Composite elevated tanks are used in water distribution systems to satisfy demand in periods of high water usage. They provide storage capacity for almost any system up to 1 million gallons capacity.

Authorized municipal Aquastore® dealers have installed over 100 CETs across the country.

CET BENEFITS

- **An Aquastore composite elevated tank NEVER NEEDS PAINTING!**
- **Higher quality tank manufacturing and construction**
- **Higher quality factory-applied coating that eliminates weather delays and variables that can affect field coating quality**
- **Lower costs – both initial and maintenance – providing lowest total ownership costs**
- **Fastest construction and lead times**
- **Best service and support**



Pedestal Under Construction, Bar Nunn, WY

SWIFT CONSTRUCTION

Tight completion deadlines are nearly impossible with other forms of elevated tank construction but they become easily attainable for Engineering America composite elevated tanks. Commissioning will often be completed in half the time of conventional composite elevated tank fabrication. Aquastore construction can proceed in adverse weather conditions that would make welding or field-painting impossible.

SERVICE AND SUPPORT

Engineering America is where you need us to be with four regional offices. Our clients have close accessibility to us. We are there when you need us most – with reliable service, support and accountability.

ECONOMICS AND SECURITY

The cost of our glass-fused-to-steel composite elevated tank is typically less than conventional composite construction. Our tanks offer more savings: shorter commissioning time schedules, no painting (unlike field-painted tanks), and low routine maintenance costs. This all adds up to savings and the best price-to-performance product in the market. With the option of a factory-designed cathodic protection system, you also receive a 10-year extended manufacturer's warranty.

Access ladders, intake piping, overflow, the storage of equipment and even the pumping station can be housed inside the column, adding to security and reducing the risk of vandalism. Obvious environmental limitations and liabilities of outdoor welding, sandblasting and painting are eliminated with an Aquastore composite elevated tank.

ALUMINUM DOMES

Aluminum geodesic domes are available with all our composite elevated tanks. Having a tank and dome provided by the same manufacturer and installed as a turn-key package by Engineering America is efficient and saves money.

Our Aquastore composite elevated tanks stand taller than the rest.

Composite Elevated Tanks



ECONOMICALLY SOUND
LOW MAINTENANCE
HIGH SECURITY

Case Study

City of Lyons, Nebraska

Tank Description:

- Aquastore composite elevated tank
- 200,000 gallons
- 31' diameter by 33' high, two-toned water tank
- 24' diameter by 112' high concrete column poured with a formed rustication
- City name glass-fired logo

The Lyons City Council made the unanimous award after a life cycle analysis was completed by the engineering firm JEO Consulting Group, Inc. of Norfolk, Nebraska. The minimal maintenance required for the glass-fused-to-steel Aquastore tank, along with the extra cold storage the base of the tank provides, confirmed an obvious choice – smart economics.

Case Study

Douglas County, Kansas

RWD No. 3 District

Tank Description:

- Aquastore composite elevated tank
- 500,000 gallons
- 48' diameter by 38' high, sky blue water tank
- 36' diameter by 131' high concrete column poured with a formed rustication
- District name vinyl logo

The Douglas County RWD No. 3 board made the unanimous award after a life cycle analysis was completed by the engineering firm Bartlett & West of Topeka, Kansas.

The board concluded the minimal maintenance of the Aquastore CET tank, along with the extra cold storage the pedestal provides, justified their economical decision.

Heavy Duty, Lightweight Aluminum Roof Systems for a Broad Array of Settings

ENGINEERING INTEGRITY

Engineering America's geodesic domes and flat covers are a unique example of leading edge design technology and engineering innovation coming together to develop products and solutions that address the needs of our clients.

Every dome structure has a built-in level of engineering integrity that only an experienced team of professionals using proven design technologies can produce. A proprietary computer-aided design (CAD) system is used that analyzes the individual characteristics of each project and quickly determines the structural behavior and frame size. This process results in the strongest and most efficient structure – one capable of withstanding the harshest conditions.

PRECISION MANUFACTURING

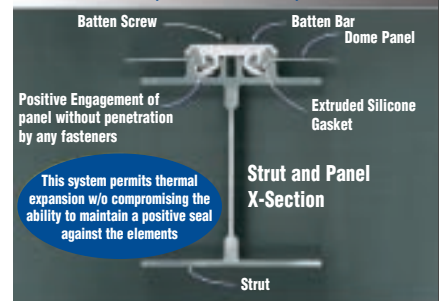
These structures utilize lightweight components and precision manufacturing. We maintain stringent quality control standards using premium grade materials, with all components built to strict tolerances. As a result, our products can be assembled on-site quickly and efficiently by our own construction teams.

- **Corrosive-resistant material**
- **Won't crack, chip or rust**
- **Reduced weight**
- **Increased strength and durability**



Colorado Springs, CO

Strut, Seal and Panel Engagement (Cross Section)



Typical Gusset Connection

DESIGN FLEXIBILITY

Our products offer unmatched design flexibility and can be custom-engineered to accommodate a wide variety of building envelopes and geometric configurations. Designed to meet both overhead and vertical wall applications, innovated structural systems provide the ultimate selection of exciting design options. We are committed to meeting our customers' most rigorous requirements as efficiently and economically as possible.

Aluminum Geodesic Domes and Covers

Consider Our Following Alternatives When Additional Options Are Needed for Your Particular Application

EPOXY-COATED BOLTED TANKS

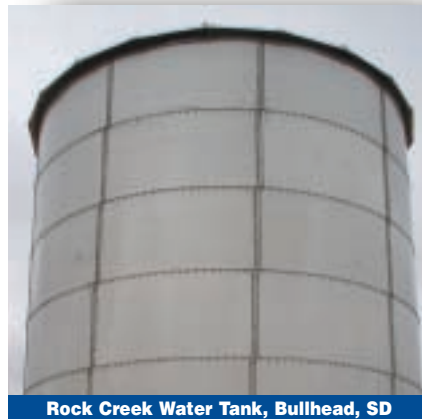
Where initial out-of-pocket expense is the driving factor, and life cycle analysis is not a consideration, a factory epoxy-coated tank is a low-cost option.

Epoxy-coated tanks have an interior thermosetting liquid immersion coating system that meets NSF Standard 61 for potable water.

Factory epoxy-coated tanks offer the convenience of bolted storage tanks with many options of coatings to meet a wide variety of applications. The product line also offers the same style tanks in stainless steel and hot-dipped galvanized steel. This allows the tank to be put in the toughest of industrial and municipal environments.



University of Wisconsin, Superior, WI



Rock Creek Water Tank, Bullhead, SD

STAINLESS STEEL BOLTED TANKS

For those unique applications where the temperature requirement, pH or chloride levels are above and beyond the normal range, consider one of the following stainless steel options:

- 316L stainless steel tanks
- 304L stainless steel tanks

Stainless steel tanks do not suffer uniform corrosion when exposed to water environments. On the other hand, they can be susceptible to localized corrosion under certain circumstances, which designers and end-users need to recognize and avoid.

The guidelines in the table below are recommendations of the Nickel Institute and are based on lab tests and service over many years.

Chloride Level ppm	Stainless Steel Grade
<200ppm	304L, 316L
200-1000ppm	316L, duplex alloy 2205

BURIED CONCRETE TANKS

For those applications where out-of-sight is the major requirement and/or freezing is a concern, then consider one of the following buried concrete tank options:

- Conventional poured-in-place tanks
- AWWA D110 type 1 wall, wire and strand wound concrete tanks
- AWWA D115 tendon-prestressed concrete tanks

We offer a wide range of tank size options in capacities from 50,000 gallons up to 10,000,000 gallons. Choice of tank size can be determined by capacity, design criteria, seismic zones and end-user preferences.

Whatever your particular considerations, we can construct the right tank for your needs.



Worland, WY

Other Tank Offerings



Engineering America

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Arizona, New Mexico
and Southern Nevada

*Engineering America
Provides Communities
Lifetime, Economical and Environmental
Water Storage Tanks and
Process Solutions*

THINK TANK

