

# Liquid Containment Solutions

*GET CONNECTED  
with Unmatched  
Performance!!!*

Bolted RTP™ Construction  
Field-Weld Construction  
Shop-Weld Tanks  
Hybrid Tank Designs  
LIQ Fusion FBE™ System

Potable Water Storage  
Elevated Water Tanks  
Standpipes  
Wastewater Treatment  
Fire Protection  
Digesters  
Industrial Liquids

**GET  
CONNECTED**

## SPECIFY the BEST in Liquid Storage!

**Tank Connection Affiliate Group** - For potable water, wastewater, fire protection and industrial liquids, only ONE company provides the complete performance package. Tank Connection is the only tank manufacturer worldwide that offers all four types of steel tank construction. This includes Bolted RTP (rolled, tapered panel), Field-Weld, Shop-Weld and Hybrid Tank construction. At TC, our product quality, powder coat systems, field installation and customer service remain unmatched in the industry.

### We provide the COMPLETE PERFORMANCE PACKAGE

- SPECIFICATION
- DESIGN
- MANUFACTURE
- FIELD CONSTRUCTION
- "GOLDEN RULE" CUSTOMER SERVICE

**At Tank Connection, our precision RTP bolted tank construction is the #1 bolted tank design selected worldwide!**

**RTP BOLTED TANK CONSTRUCTION** - The BEST features of bolted and field-weld tank construction have been combined together in the RTP (rolled, tapered panel) tank design. In liquid storage, it remains unmatched in all category ratings.

- Best design – Precision RTP bolted tank design
- Best powder coat system – LIQ Fusion 7000 FBE™
- Long life... Low maintenance storage
- The NO LEAK bolted storage tank
- Outdates the API 12B flanged panel tanks
- Modular construction – Shipped worldwide
- Field construction process is rated #1 in safety
- Economics of value
- The RTP bolted tank design is the ONLY tank design recognized as a replacement for field-weld tank construction

RTP bolted tanks feature exact manufacturing tolerances and the top rated Fusion 7000 FBE™ powder coat process available for bolted tank construction worldwide. Tank connection also provides complete turnkey field installation service, utilizing direct factory crews and international supervisors. Field installation is accomplished utilizing a synchronized, hydraulic screw jack process, which allows field crews to install tanks/silos at grade level. This process receives the highest industry ratings for quality control and safety in the field.

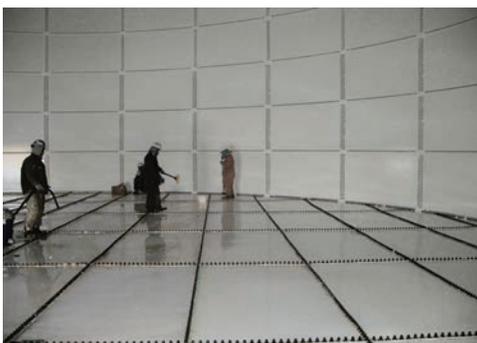
For potable water, wastewater, fire protection and industrial liquids, Tank Connection offers unlimited configurations in bolted tank construction from ground reservoirs to elevated water tanks. Standard liquid tank capacities range from 25,000 to 8,000,000 gallons. In all cases, RTP tank construction outperforms other types of bolted tank construction through its superior design, proprietary coating systems and safe field installation processes.



RTP Construction - Pure Water Storage  
4.5 million gallons/ 17,000 m<sup>3</sup>



XL Municipal Water Storage Interior  
Base Setting Ring with Concrete Bottom



Bolted Steel Floor



Power Utility - Process Water



Standpipe - jacked from grade level



Clarifier

## Engineering by Tank Connection

**The Recognized Experts in Storage** – Tank Connection Affiliate Group is a collection of the recognized experts in RTP (rolled tapered panel), API 12B (flanged panel), FP (flat panel), Field-weld, Shop-weld and Hybrid tank fabrication. **With over 2,100 years of combined experience in storage applications, Tank Connection stands alone as a global leader in storage containment!**

TC provides assistance at every stage of your project. Our capacity calculators are easy to use and have become the industry standard for quick reference. Specifications for AWWA D103, AWWA D100, EN 1991-4, Factory Mutual, NFPA 22, RTP (rolled, tapered panel), AISC and API 650 can easily be downloaded and custom tailored for your applications.



Bolted RTP, Field-weld & Hybrid Tank Construction

## Potable Water Storage

### Tank Connection Outperforms Competitor Storage Tank Products with Extended Service Life

Design Code	Construction Type	LIQ Fusion 7000 FBE™ Tanks Service Life**	Other Coated Tanks Service Life**	Glass / Vitreous Enamel Tanks Service Life**
AWWA D103	Bolted	50+	25+	25+
AWWA D100	Welded	N/A	40+	N/A
FM 4020	Bolted, Welded	50+	25+	25+
FM Principles	(not a valid listing)	N/A	15+	N/A
NFPA - 22	Bolted, Welded	50+	25+	25+
AISC	Bolted, Welded, Hybrid	50+	20+	25+
EN 1991-4	Bolted - Glass Coated	N/A	N/A	25+
API 650	Welded	N/A	50+	N/A

\*\* Service Life in years. A function of periodic maintenance and coatings.

## Typical Liquid Tank Capacities *(Reference TC's Capacity Charts for "diameter x height" sizing)*

### **BOLTED RTP TANK DESIGNS - Reservoirs**

- 25,000 up to 8,000,000 gallons
- 95 up to 30,284 cubic meters

### **BOLTED RTP TANK DESIGNS - Elevated**

- 200,000 up to 1,200,000 gallons
- 760 up to 4,540 cubic meters

### **BOLTED RTP TANK DESIGNS - Standpipe**

- 50,000 up to 1,000,000 gallons
- 190 up to 3,780 cubic meters

### **HYBRID TANK DESIGNS\***

- 25,000 up to 12,000,000 gallons
- 95 up to 45,420 cubic meters

### **FIELD-WELD TANK DESIGNS**

- 100,000 up to 25,000,000 gallons
- 380 up to 94,620 cubic meters

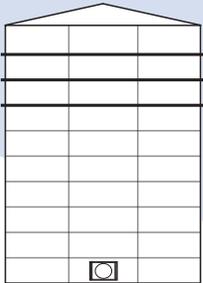
*\*Note: Hybrid construction combines bolted RTP construction with field-weld and concrete component features.*

# Understanding Steel Water Tank Designs

What level of design and quality does your application require?

## TYPE: Flat Panel

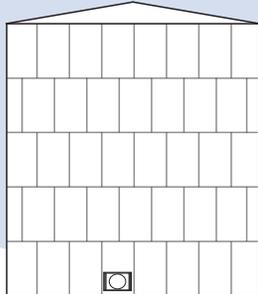
Panel type: Horizontal panel  
Panel size: varies  
Web stiffeners: 2 or more  
Application: Ag, Water



Design "D"

## TYPE: API 12B

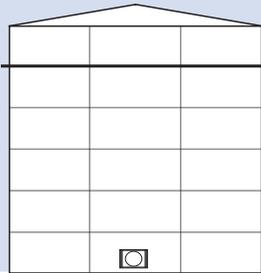
Panel type: Vertical flanged panel  
Panel size: 5' wide x 8' ht.  
Web stiffeners: none  
Application: Ag, Water, Fire Protection



Design "C"

## TYPE: Bolted RTP (rolled, tapered panel)

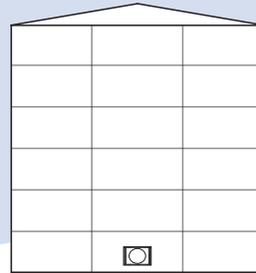
Panel type: Horizontal rolled, tapered panel  
Panel size: 10' wide x 5' ht.  
Web stiffeners: 1  
Application: Power, Potable Water, Wastewater, Fire Protection, Industrial Liquids



Design "B"

## TYPE: Bolted RTP (rolled, tapered panel)

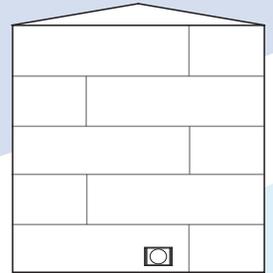
Panel type: Horizontal rolled, tapered panel  
Panel size: 10' wide x 5' ht.  
Web stiffeners: none  
Application: Power, Potable Water, Wastewater, Fire Protection, Standpipes, Industrial Liquids



Design "A"

## TYPE: Field-Weld

Panel type: Horizontal rolled panels  
Panel size: varies, typical 25' wide x 8' ht.  
Web stiffeners: none  
Application: Power, Potable Water, Wastewater, Standpipes, Industrial Liquids



Design "A"

In today's market, there is a wide variety of steel tank designs and quality available for water storage applications. Understanding the differences may prevent the purchase of products and designs, that will not fulfill your requirements for high quality water storage systems.



Tank Connection is the only tank supplier worldwide that designs, manufactures and installs all four types of steel storage tanks including bolted RTP (rolled tapered panel), field-weld, shop-weld and hybrid tank designs. Our precision RTP construction is the #1 bolted tank design selected for liquid storage applications. The BEST features of bolted and field-weld tank construction have been combined together in the RTP design. It remains unmatched in the industry in all category ratings.

## Optional Tank Accessories:

### Access stairways & ladders

- Access stairways
- Outside caged ladder with lockable hoop & rest platform
- Outside un-caged straight-run ladder with SAF-T-Climb
- Inside straight run ladders

### Maintenance access platforms

- Radial access platforms
- Walkway platforms

### Level indicators

- Ultrasonic
- High & low level
- Liquid level indicator with gauge board & high visibility target

### Perimeter guardrails

- Full perimeter guardrail
- Partial deck PGR extended ~5' (1.5m) on both side of exterior ladder

### Agitator supports

Flange nozzles

Baffles

Aluminum dome covers

Encapsulated hardware

AWWA sidewall manways

- 24" (61cm) diameter
- 30" (76cm) diameter
- 36" (91cm) diameter

Overflow nozzle with weir box & downcomer

Deck manways/vents

- 20" (50.8cm) diameter mushroom ventilator
- 24" (61cm) square roof manway

Pumping stations

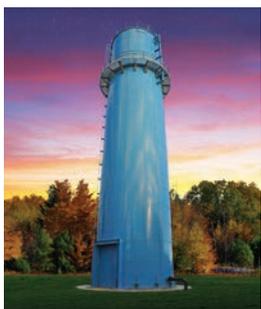
Cathodic protection

Immersion heaters

Insulation – vertical clad standing seam system

Agitators and agitator supports

Foundation design



Elevated Designs



Bolted RTP - Process Storage



Potable Water Storage



Anaerobic Digester Tanks

## The Unmatched Performance of Tank Connection's Fusion FBE™ System

At Tank Connection, we have raised the benchmark of coatings performance in liquid storage applications. At TC, we rightfully claim the premier powder coat system for bolted storage tanks worldwide. Our proprietary system and controlled station processes are unmatched by any other tank manufacturer.

How good is LIQ Fusion 7000 FBE™ & EXT Fusion 5000 FBE™ + EXT Fusion SDP™?

- The proprietary formulations are unmatched
- The factory application processes are unmatched
- The field performance is unmatched

Interior Lining System:

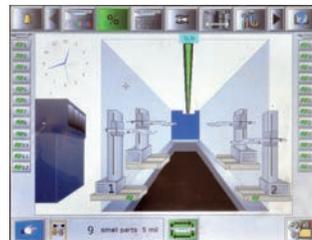
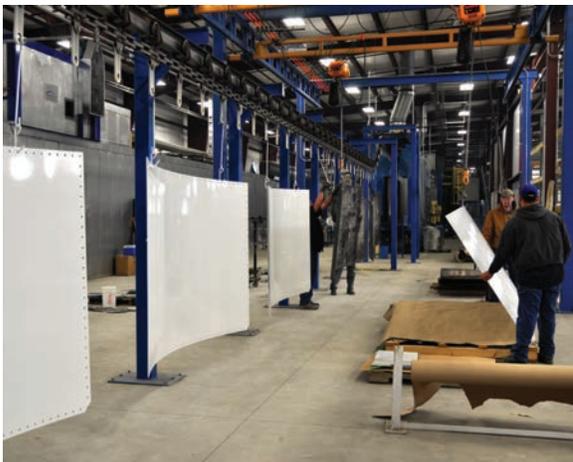
### LIQ FUSION 7000 FBE™ @ 6-9 mils average DFT (NSF certified)

- The ultimate interior tank lining system ever developed for water, wastewater, fire protection and industrial liquid applications. Outperforms ALL bolted tank interior coating systems offered today worldwide. In potable water storage, our standard warranty starts at 5 years!
- Unmatched in all performance standards including low maintenance and cost efficiency.
- The BEST CHOICE to specify for Liquid Storage Tanks

Exterior System – Primer + Topcoat:

### EXT FUSION 5000 FBE™ + EXT FUSION SDP™ @ 6-10 mils average DFT

- The ultimate exterior tank lining system ever developed for water, wastewater, fire protection and industrial liquid applications. Outperforms ALL tank exterior coating systems offered today worldwide. This coating system utilizes the protective properties of our exclusive FBE epoxy powder fused to substrate with a fused topcoat of SD polyester.
- In recognized exposure testing (Southern Florida Exposure Tests) our exclusive system was rated at "5 years" without change!



- Chemical Wash, Rinse & Dry
- SSPC - SP10 Blast (Steel Shot Media)
- Interior LIQ Fusion 7000 FBE™ Application
- Initial Coating Cure @ 350° F
- Infrared Convection
- Exterior EXT Fusion 5000 SDP™
- Oven Crosslink Cure @ 400° F
- Testing & Final Inspection

**Standard Colors:**



**Premium Colors:**



The colors shown are printed approximations. The exact color can be viewed using RAL standard color samples.

## Aluminum Geodesic Domes

Tank Connection aluminum domes set a new benchmark of performance in geodesic dome construction. Constructed entirely of aluminum utilizing our proprietary component fabrication, TC domes are corrosion resistant, maintenance free and designed for extended service life. Whether installing on a new tank application, or retrofitting on an existing structure, aluminum geodesic domes are today's technology for cover and containment applications.



Secondary Containment

## Field-Weld Tank Construction

In field-weld construction, TC provides premier tank designs including API 650, API 620, ASME and AWWA D100 construction. We minimize the large piece count shipped to the field to minimize field construction timeframes. We are a turnkey supplier providing specification design, manufacturing and field construction services, supported by the best engineering team in liquid storage systems.



Powder Coated Aluminum Dome

## Hybrid Tank Construction

Tank Connection is credited as the innovator of hybrid tank construction. This storage design combines the best features of bolted RTP, shop-weld, field-weld and concrete tank construction. Manufactured in state-of-the-art facilities, our hybrid designs offer unsurpassed quality and coatings that remain unmatched in the industry today. Complemented by the #1 construction process in the field, hybrid construction raises the bar for premier field performance in select storage applications.



XL Aluminum Dome

### Typical Range of Tank Capacities:

- ▶ 100,000 up to 25,000,000 gallons
- ▶ 380 up to 94,620 cubic meters

### Liquid Service Markets:

- ▶ Industrial Liquids
- ▶ Municipal Water & Wastewater



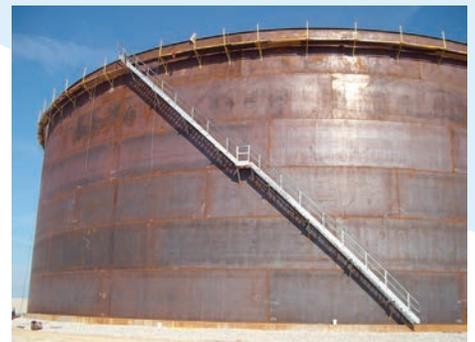
Stainless Steel Bolted



XL Liquid Tank



Potable Water Storage



XL Field Welded Liquid Tank

## About Tank Connection

The Tank Connection Affiliate Group is an integrated family of companies that specialize in liquid and dry bulk storage applications worldwide. Unlike tank suppliers that offer a single choice in tank construction, TC is the only global tank manufacturer that designs, fabricates and installs all four types of steel storage tanks including **Bolted RTP, Field-weld, Shopweld and Hybrid Tank construction**. TC products also command the top performance ratings in the industry.

TC Affiliate Companies include:

- **Tank Connection®** – Global leader in bolted RTP (rolled, tapered panel) tank fabrication and integrated storage systems
- **LiquidTanks.com** – Tank Connection liquid division
- **BOSS Tank®** – Industry leader in shop-weld and hybrid tank fabrication
- **Alliance Constructors®** – Leading bolted tank field installation company providing tank erection services worldwide

There's a reason why Tank Connection is recognized as the new leader in liquid storage and it all starts with consistent, reliable performance on every project. If our project involves a single silo or an integrated storage system, no one offers more services and creative solutions than TC. From the quote stage through order process, drawing approval, material fabrication and field installation, Tank Connection will provide streamlined processing and "Golden Rule" customer service.



Field-Weld Standpipe      Bolted RTP Standpipe



Process Water

## Liquid Tank Storage & Process Applications

Potable Water • Power Generation • Fire Protection • Industrial Liquids • Petroleum

- |                      |                            |                      |
|----------------------|----------------------------|----------------------|
| Aeration tanks       | Filter tanks               | Raw water            |
| Anaerobic digester   | Fire protection water      | Slurry tanks         |
| Aerobic digester     | Industrial process water   | Settling tanks       |
| Brine water          | Industrial liquids         | Secondary treatment  |
| Brackish water       | Industrial effluent        | Sludge dewatering    |
| Chemicals            | Municipal sludge treatment | Standpipe            |
| Clarifiers           | Municipal potable water    | Storm water run-off  |
| Crude Oil            | Leachate storage           | Trickling filters    |
| Deionized water      | Petroleum                  | Ultrapure water      |
| Demineralized water  | Potable water              | Wastewater Treatment |
| Desalinated water    | Process water              |                      |
| Elevated Water Tanks | Primary treatment          |                      |



Bolted RTP Standpipe



Aluminumdomes.com



Water & Wastewater Facility

# The Leading Tank Manufacturing Facility for Bolted RTP Fabrication

With multiple facilities and over 300,000 sq. ft. of manufacturing space dedicated to storage tank fabrication, TC Affiliates has created the ultimate SINGLE SOURCE approach to liquid storage systems. . . and they back it with the largest support team of recognized industry experts in storage containment applications.



*Tank Connection's 85,000 sq. ft., state-of-the-art manufacturing facility was brought on line in early 2009. The facility commands the top position in bolted tank manufacturing worldwide!*

## Tank Connection Global Services

- Telephone & email consultation
- Specification development
- Budget assistance
- Professional engineering services
- Customized tank design
- Foundation design
- Integrated storage system design
- Firm bid proposals – materials & field installation
- CAD & 3D general arrangement drawings
- Professional project management services
- Direct factory supervisors & field installation crews
- Tank inspections, testing & commissioning
- Storage tank retrofit & repair service
- “Golden rule” customer service

**TC products are available exclusively through Tank Connection, TCI (Tank Connection International), BOSS Tank, LiquidTanks.com, OEM suppliers, Tank Connection Dealers & Factory Representatives worldwide!**



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