



**TANK CONNECTION**

# LIQUID CONTAINMENT SOLUTIONS

EMPLOYEE OWNED | AMERICAN MADE | GLOBAL LEADERS





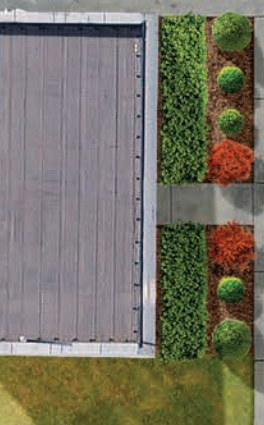
DELIVERING THE TOP ENGINEERED TANK DESIGNS AVAILABLE

UNMATCHED COATING TECHNOLOGY

#1 BOLTED DESIGN GLOBALLY

SAFEST FIELD CONSTRUCTION

THE SINGLE SOURCE PROVIDER FOR STORAGE SOLUTIONS



ALUMINUM COVERS THAT OUTPERFORM



SUPERIOR CUSTOMER SERVICE





**TANK CONNECTION**

**DON'T COMPROMISE. GET CONNECTED.**

### **WE ENGINEER EXCELLENCE**

Tank Connection is the leading international bolted tank manufacturer for factory coated bolted storage tanks and aluminum geodesic dome and flat covers for liquid and dry bulk storage applications.

### **WE EXCEED EXPECTATIONS**

Tank Connection is committed to helping clients find success with their projects. Utmost devotion to the customer drives an unyielding pursuit of excellence that is the embodiment of Tank Connection.

### **WE OWN A REPUTATION OF SUCCESS**

Tank Connection is an employee owned company, manufacturing American made products in ISO 9001:2015 Certified QMS facilities in the U.S. Tank Connection has built a reputation of success with a passion for safety, innovation and continuous improvement.

### **WE FACILITATE COMPREHENSIVE SOLUTIONS**

Tank Connection focuses on listening to clients and providing them with factual information on different types of storage containment options. This approach to service clients is based on the development of a broad product line of superior storage tank products, designs and field services.

**ADVANCED  
DESIGN**

**INDUSTRY  
EXPERTS**

**SUPERIOR  
QUALITY**

**UNMATCHED  
COATINGS**

**EMPLOYEE OWNED  
AMERICAN MADE**

**GAME CHANGING  
INNOVATION**

**HIGH QUALITY  
ALUMINUM COVERS**

**GOLDEN RULE  
CUSTOMER SERVICE**

# **BOLTED RTP DESIGN**

## **PRECISION ENGINEERING PERFECTED.**

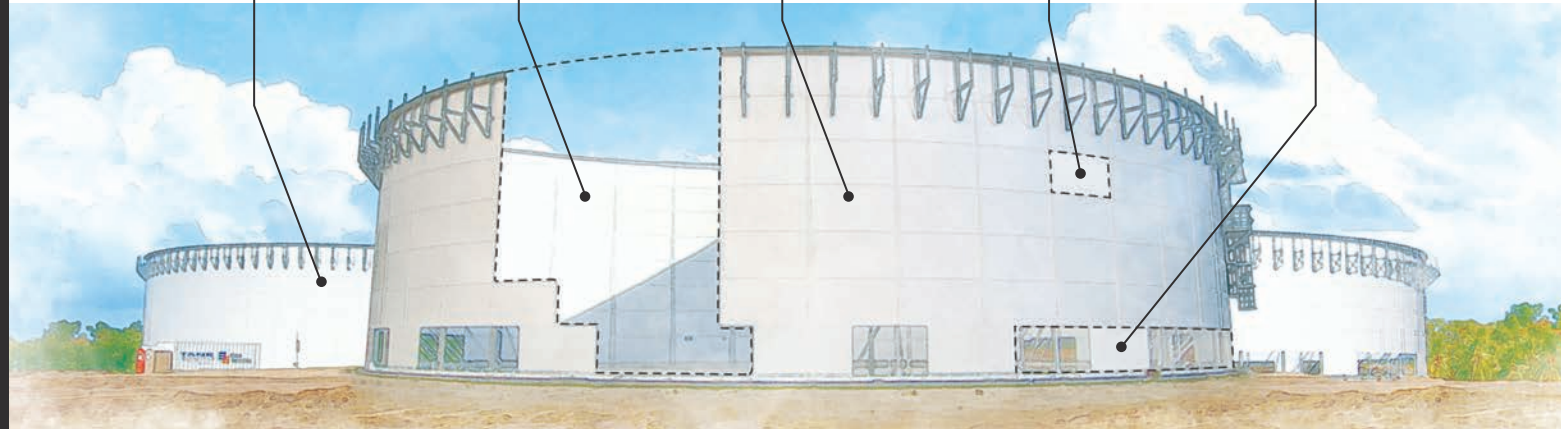




## THE BOLTED RTP ADVANTAGE

Tank Connection's bolted RTP (Rolled, Tapered Panel) tank design is a culmination of experience, innovation, and vision to create the highest quality tank in the storage industry. Distinguished for outstanding quality, longevity and reliability, Tank Connection's bolted RTP tanks feature advanced engineering, precision fabrication and premier coating technology.

|   |                             |   |                                 |  |
|---|-----------------------------|---|---------------------------------|--|
| <p>#1<br/>#1 BOLTED TANK<br/>DESIGN WORLDWIDE</p> | <p>LIQ FUSION 8000 FBE™</p> | <p>LIQ FUSION 8000 FBE™<br/>+ EXT FUSION SDP™</p> | <p>MODULAR<br/>CONSTRUCTION</p> | <p>GRADE LEVEL,<br/>SYNCHRONIZED<br/>JACKING PROCESS</p> |
|---|-----------------------------|---|---------------------------------|--|



|   |   |   |                               |  |
|---|---|---|-------------------------------|--|
| <p>ROBUST DESIGN</p>                      | <p>UNMATCHED IN ALL<br/>CATEGORY RANKINGS</p> | <p>PRECISION<br/>ENGINEERING</p>          | <p>NO LEAK DESIGN</p>         | <p>SAFE FIELD<br/>INSTALLATION</p>                         |
| <p>LONG LIFE +<br/>LOW MAINTENANCE</p>    | <p>DIVERSE +<br/>VERSATILE DESIGN</p>         | <p>PROPRIETARY COATING<br/>TECHNOLOGY</p> | <p>ECONOMICS<br/>OF VALUE</p> | <p>HEAVY TANK<br/>DESIGN</p>                               |
| <p>EXACT MANUFACTURING<br/>TOLERANCES</p> | <p>CAPACITIES UP TO<br/>8 MILLION GALLONS</p> | <p>SMOOTH WALL<br/>CONSTRUCTION</p>       | <p>QUICK INSTALLATION</p>     | <p>FACTORY DIRECT<br/>INSTALLATION CREWS<br/>AVAILABLE</p> |

# COATING TECHNOLOGY

UNMATCHED PROCESSES. UNRIVALED RESULTS.

UNMATCHED SYSTEM  
AND CONTROLLED  
STATION PROCESSES

PROPRIETARY AND  
EXCLUSIVE COATING +  
APPLICATION  
PROCESSES

OUTPERFORMS  
ALL OTHER TANK  
COATINGS

LONG LIFE + LOW  
MAINTENANCE

**10X**  
IMPACT RESISTANCE  
OF GLASS COATINGS

**14**  
CONTROL STATIONS

**21**  
COATING STAGES

**100+**  
APPLICATION  
PROCESSES

## THE COATING PROCESS

Tank Connection's fusion powder coating systems are formulated from thermosetting resins, binder, pigments and additives. The fusion powder coating formulations are created by blending the various components and processing them through an extruder into a continuous mass with a completely uniform composition. This homogeneous mass is then cooled and broken down into small chips, which are then ground into a fine powder. Each particle of powder contains within it the necessary components for reforming into the finished coating after fusion application and oven baking. LIQ Fusion 8000 FBE™ and EXT Fusion SDP™ powder coating systems are electrostatically applied from an automated fusion powder coating line.

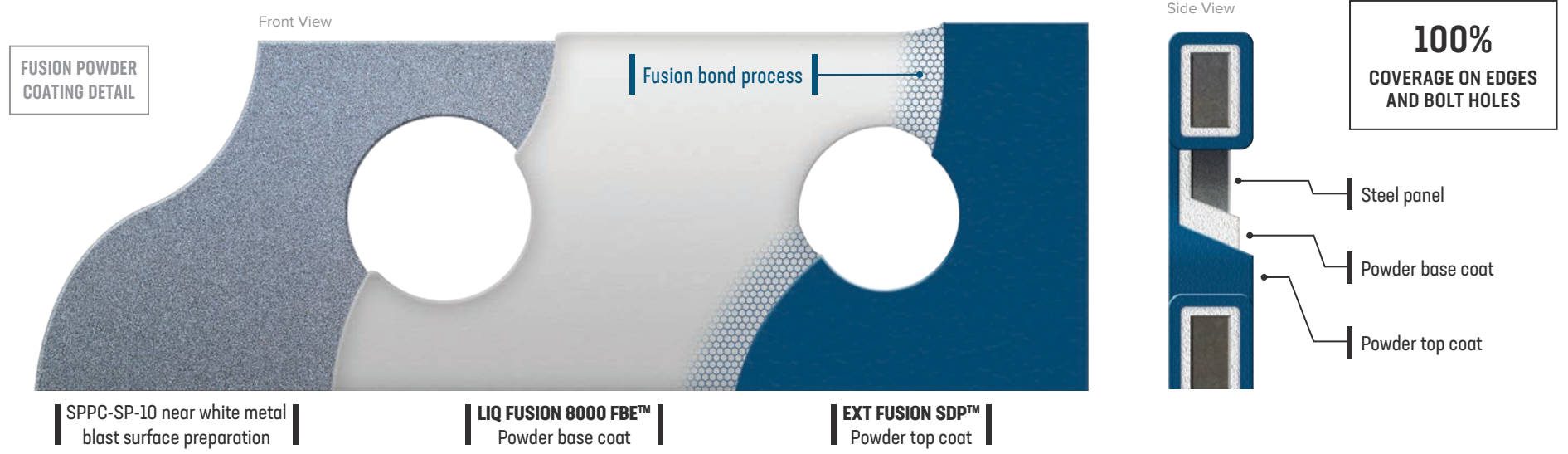
The pre-stages of the LIQ Fusion 8000 FBE™ application are critical to provide the best substrate surface and anchor profile. All bolted steel panels are chemically washed and blasted to an SSPC-SP-10 near white finish. LIQ Fusion powder is fed pneumatically from a reservoir into automated spray guns where a low amperage, high voltage charge is imparted to the particles. The bolted panels to be coated are grounded, so that the charged particles will seek the opposite charged metal surfaces. This coating process produces a uniform, monolithic, fusion-bonded surface with complete edge and bolt hole coverage.

## UNBREAKABLE BOND

The thermoset powders, utilized by Tank Connection, incorporate low molecular weight solids that go through a fusion and chemical reaction to form higher molecular weight polymers. Once the powder is applied, the bolted steel panels enter an oven where the resins, pigments and other reactive agents crosslink to produce a high molecular weight binder system, Tank Connection's thermoset processes are irreversible. Once the curing and crosslink takes place, the powder coating can not be returned to its original form by any means.

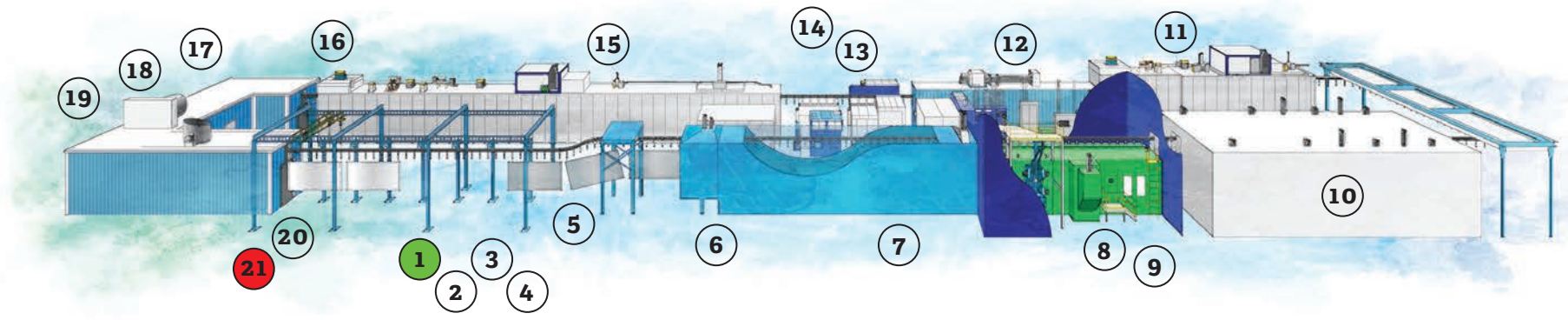
**POWDER ON POWDER  
DUAL APPLICATION  
AND CURING PROCESS**

Tank Connection's powder on powder coating process creates a top coat layer that can not be removed independently from the base coat. This top coat, fused to the primer substrate, offers superior protection and unparalleled longevity and performance. The electrostatically applied fusion bond process provides 100% coating coverage on all edges and bolt holes.



**FUSION POWDER  
COATING LINE**

- |  |   |                              |                                   |
|--|---|------------------------------|-----------------------------------|
| 1. Component staging                       | 7. Component drying                     | 13. Topcoat powder booth     | 19. DFT coating test              |
| 2. Manifest operator                       | 8. Shot blast metal surface preparation | 14. 2nd powder process booth | 20. Visual inspection & unloading |
| 3. Coating line oven temp. setting changes | 9. Blast profile inspection             | 15. Final cure oven          | 21. Skid crating & shipping       |
| 4. Coating line color requirements         | 10. E-room                              | 16. Final cool down tunnel   |                                   |
| 5. Hanging tank components                 | 11. Gel oven                            | 17. Holiday/pin hole testing |                                   |
| 6. Component wash                          | 12. 1st cool down tunnel                | 18. Cross hatch testing      |                                   |



# LIQ FUSION 8000 FBE™

## CHARACTERISTICS

- Fusion bonded to substrate surface
- Abrasion, chip and scrape resistant
- Can be repaired in the field if damaged
- Superior test performance compared to all other coatings
- Does not crack or spall
- Excellent chemical and corrosion resistance

## CERTIFICATIONS

- **NSF/ANSI Standard 61:**  
Drinking Water Systems
- **FDA - 21 CFR 175.300:**  
Resinous and Polymeric Coatings

## PHYSICAL PROPERTIES

| CONDITION              | TEST METHOD                                  | PERFORMANCE                 |
|------------------------|--|-----------------------------|
| Adhesion               | ASTM D3359                                   | 100%                        |
| Abrasion Resistance    | ASTM D4060-07<br>(CS-10, 1000g, 3000 cycles) | < 70mg Loss                 |
| Abrasion Resistance    | ASTM D968<br>(690 liters)                    | No wear through             |
| Chip Resistance        | ASTM D3170-03                                | 7B                          |
| Heat Resistance: Dry   | Temperature (°F)                             | 300°F (149°C)               |
| Heat Resistance: Water | Temperature (°F)                             | 212°F (100°C)               |
| Impact Resistance      | ASTM D2794                                   | 160/160<br>direct/reverse   |
| Hardness               | ASTM D3363                                   | 6H                          |
| Flexibility            | ASTM D522                                    | 1/8" (270° bend)            |
| Pull Testing           | ASTM D4541                                   | 3,000+ psi                  |
| Corrosion Resistance   | ASTM B117<br>Salt spray test                 | 11,000 hrs<br>no change     |
| Cathodic Disbondment   | G95  | 13 mm<br>(90 days, ambient) |

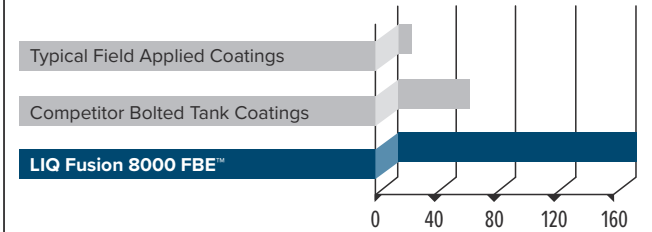
## SPECIFICATION & PERFORMANCE

|          |   |
|----------|---|
| Mils     | 5-9 mils DFT  |
| pH Range | 3-14 pH (contingent upon liquid stored and temperature) |
| Testing  | Factory holiday free - per ASTM D5162                   |

## DURABILITY

Impact Resistance: Per ASTM D2794

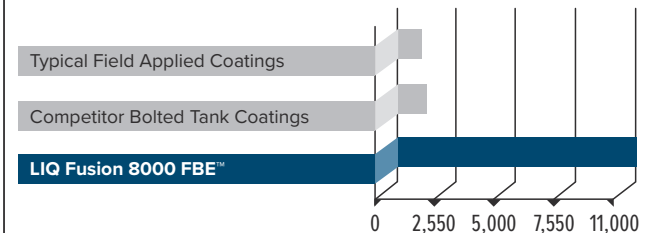
**MEASUREMENT:** Inch-pound units



## LOW pH (ACID) RESISTANCE

Test terminated without failure: Per ASTM B117 salt spray test

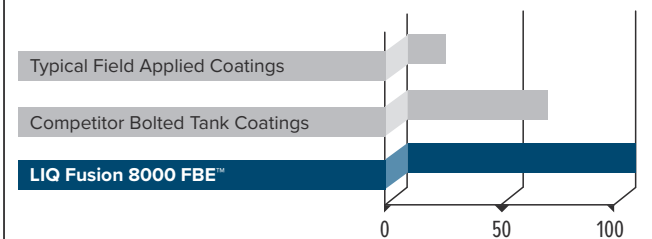
**MEASUREMENT:** Hours without failure



## FLEXIBILITY

100% Intact - After bending over 1/8" mandrel: Per ASTM D522

**MEASUREMENT:** Percentage of coating





# EXT FUSION SDP™

## CHARACTERISTICS

- Outstanding toughness with proven weatherability
- Fusion bonded to FBE base coat
- Gloss retention > 30%
- Enhanced resistance to chalking or fading
- Superior exterior durability
- Can not be scratched off independent of the base coating

## PHYSICAL PROPERTIES

| CONDITION            | TEST METHOD  | PERFORMANCE    |
|----------------------|--------------|----------------|
| Adhesion             | ASTM D3359   | 4+             |
| Impact Resistance    | ASTM D2794   | 40+            |
| Elongation           | ASTM D522    | 1/2" or better |
| Exterior Durability  | AAMA 2604-05 | 5 year Florida |
| Hardness             | ASTM D3363   | H+             |
| Corrosion Resistance | ASTM B117    | > 10,000 hrs   |

## SPECIFICATION & PERFORMANCE

|                |               |
|----------------|---------------|
| Film Thickness | 6-10 mils DFT |
|----------------|---------------|

## LIQ FUSION 8000 FBE™ + EXT FUSION SDP™

Tank Connection's external coating utilizes its exclusive base coat and top coat fused together. The combination of the protective properties of both the primer and top coat creates an external coating that outperforms all other coating systems. **In recognized exposure testing (Southern Florida Exposure Tests) this system is rated at 5 years without change.**



## COATING COLORS

TC WHITE  
RAL9016

**Note:**  
All colors shown are printed representations only. See RAL samples for actual colors.

TC GRAY  
RAL7035

TC TAN  
RAL1001

TC LIGHT GREEN  
RAL6019

TC LIGHT BLUE  
RAL5024

TC FOREST GREEN  
RAL6005

TC COBALT BLUE  
RAL5011

STANDARD COATING COLORS

PREMIUM COATING COLORS

# FUSION | VERSUS | GLASS

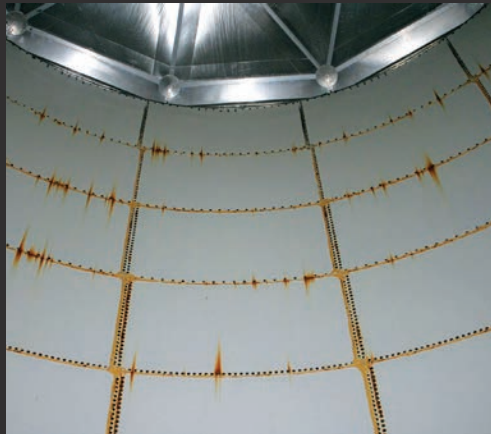
## FUSION COATINGS OUTPERFORM GLASS/VITREOUS ENAMEL COATINGS

Glass is subject to enamel slip, leading to insufficient coating coverage in the bolt holes and panel edges.

Due to the inflexibility of glass coating, it often cracks at the bolt heads.

Tank panels must be offset to minimize cracking during installation.

Panel unzipping as a result of corrosion and joint failure.



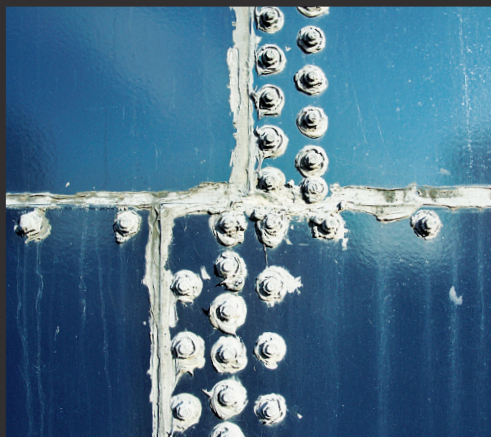
Mastic sealant being used to attempt to cover up deficiencies.

Glass tanks can never be recoated.

Light glass tank design requires web truss support.

### GLASS CHARACTERISTICS

- Requires web truss support
- No flexibility, subject to cracking
- Zero impact resistance
- Inherent flaking and spalling issues
- High factory reject rates
- Utilizes light tank designs
- Coating defects (holidays)
- Cannot be recoated or repaired
- Insufficient bolt hole coverage
- Insufficient panel edge coverage
- Short product life
- High maintenance



GLASS COATING EXAMPLES

# STORAGE TANK DESIGN EXPERIENCE MEETS INNOVATION



**THE SAFEST  
FIELD INSTALLATION  
IN THE INDUSTRY.**

## THE STORAGE AUTHORITY

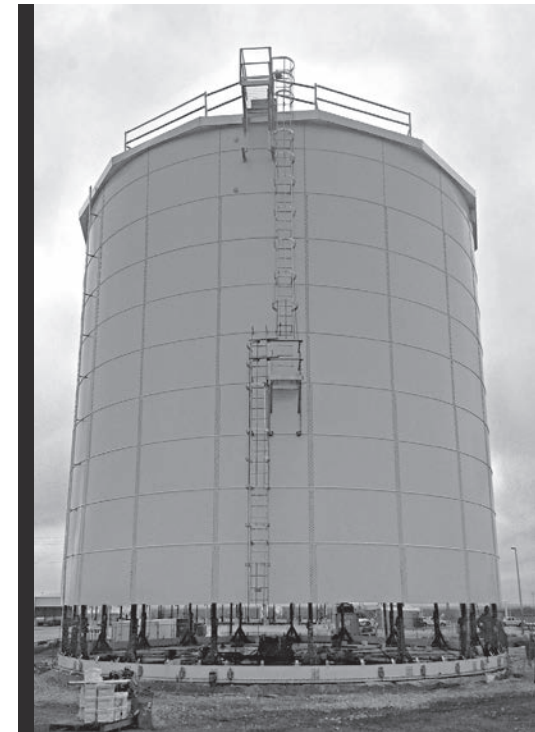
When it comes to precision design and expert knowledge, Tank Connection maintains one of the most extensive engineering departments in the tank industry, with P.E.'s that sit on AWWA D103, AWWA D104, AWWA D106 and AWWA D108 committees. Tank Connection also maintains an expanded listing of P.E. stamps throughout the U.S. Starting with steel procurement at the mill and finishing with construction services in the field, all design, manufacturing, project management, system integration and field installation services are available through Tank Connection's experienced personnel.

Tank Connection's storage products are designed for low maintenance and long term performance. Bolted RTP tank construction outperforms all other types of bolted tank construction through superior design, proprietary coating systems and safe and expedient field installation processes. Let Tank Connection's expert industrial designers and shop technicians, with decades of experience in tank production, turn your specifications into a specialized tank built to last.

## WHEN IT COMES TO SAFETY, WE'VE GOT BOTH FEET ON THE GROUND

At Tank Connection, quality and safety are second nature. Tank Connection's field installation utilizes a synchronized jack process, which allows field crews to install tanks at grade level. This process promotes cost and time efficiency and receives the highest industry ratings for quality control and safety in the field.

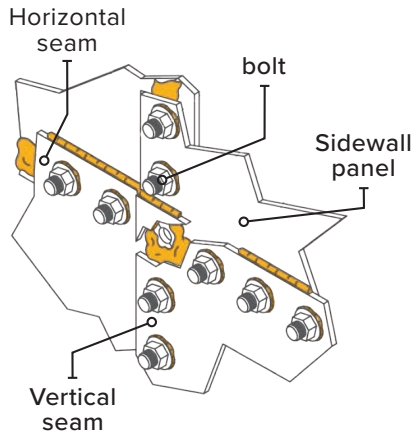
Tank Connection jacking systems are stored at various global locations for expeditious results at the lowest factored cost.



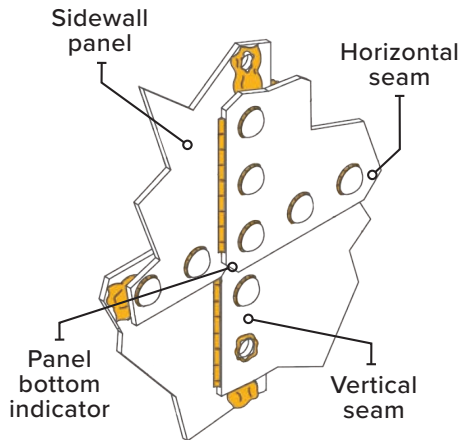
# BOLTED RTP LAP JOINT PANEL CONSTRUCTION

Tank Connection's bolted RTP tanks are heavy, modular tank designs. This Category 1 design does not require external web truss support. Tank Connection's RTP panel construction utilizes lap joint panel connections, which require exact manufacturing tolerances. The precision fabricated panels form vertical bolt seam patterns for improved strength, enhanced aesthetics and accurate panel connections. When combined with the appropriate gasket and sealant, a leak-free barrier is maintained between panels.

PANEL LAP EXTERIOR VIEW



PANEL LAP INTERIOR VIEW



HEAVY TANK DESIGN

LIGHT TANK DESIGN

**CATEGORY 1**

---

**FIELD WELD**  
TANK DESIGN



|                  |                          |
|------------------|--------------------------|
| APPLICATION CODE | AWWA D103                |
| PANEL TYPE       | Horizontal rolled panels |
| PANEL SIZE       | varies                   |
| WEB STIFFENERS   | None                     |
| QUALITY          | Best Quality             |

**CATEGORY 1**

---

**BOLTED RTP**  
TANK DESIGN



|                  |                |
|------------------|----------------|
| APPLICATION CODE | AWWA D103      |
| PANEL TYPE       | Horizontal RTP |
| PANEL SIZE       | 10' x 5'       |
| WEB STIFFENERS   | None           |
| QUALITY          | Best Quality   |

**CATEGORY 2**

---

**BOLTED RTP**  
TANK DESIGN



|                  |                |
|------------------|----------------|
| APPLICATION CODE | AWWA D103      |
| PANEL TYPE       | Horizontal RTP |
| PANEL SIZE       | 10' x 5'       |
| WEB STIFFENERS   | 1-2            |
| QUALITY          | Best Quality   |

**CATEGORY 3**

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**BOLTED RTP**  
TANK DESIGN

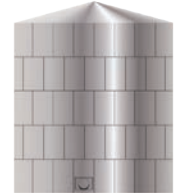


|                  |                |
|------------------|----------------|
| APPLICATION CODE | AWWA D103      |
| PANEL TYPE       | Horizontal RTP |
| PANEL SIZE       | 10' x 5'       |
| WEB STIFFENERS   | 3-4            |
| QUALITY          | Good Quality   |

**CATEGORY 4**

---

**BOLTED API 12B**  
**FLANGED PANEL**  
TANK DESIGN



|                  |                               |
|------------------|-------------------------------|
| APPLICATION CODE | AWWA D103                     |
| PANEL TYPE       | Vertical flanged              |
| PANEL SIZE       | 5' x 8'                       |
| WEB STIFFENERS   | Horizontal flange connections |
| QUALITY          | Marginal Quality              |

**CATEGORY 5**

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**BOLTED FLAT PANEL**  
**& CORRUGATED PANEL**  
TANK DESIGN



|                  |                               |
|------------------|-------------------------------|
| APPLICATION CODE | Varies                        |
| PANEL TYPE       | Horizontal & corrugated panel |
| PANEL SIZE       | Varies                        |
| WEB STIFFENERS   | Varies + vertical stiffeners  |
| QUALITY          | Lowest Quality                |



# APPLICATIONS



**MUNICIPAL WATER**  
REPUBLIC OF SINGAPORE



**HYBRID TANK**  
GUAM, US TERRITORIES



**PROCESS WATER**  
WEST VIRGINIA, USA



**WASTEWATER**  
ST. CROIX, USVI



**ELEVATED WATER TANK**  
WEST VIRGINIA, USA



**FIRE PROTECTION**  
MEXICO



**ANAEROBIC DIGESTION**  
SPAIN



**STAINLESS STEEL**  
KANSAS, USA



**LIQUID CHEMICAL**  
IOWA, USA



**PETROLEUM**  
PANAMA



**ALUMINUM COVERS**  
COLOMBIA

# TANK CONNECTION COVERS

















Tank Connection's growing line of premier aluminum tank covers take product protection to the next level. Tank Connection Covers feature enhanced design and manufacturing methods that provide increased flexibility and strength.

Tank Connection Covers' proprietary design components are the result of decades of experience that remove problematic installation issues commonly faced with other aluminum covers in the industry. Lighter overall aluminum covers are now possible without sacrificing strength. Advanced features offer superior vapor and product loss protection for geodesic domes; and easier access and higher field performance in aluminum flat covers.

## APEX DOMES

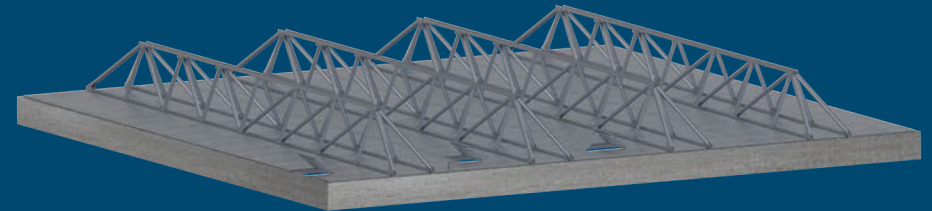
All the components of an APEX Dome are engineered to achieve the highest performance. The result is a premier dome design that maximizes strength and flexibility with enhanced protection against leaks, vapor loss, or product loss.




-  EXACT MANUFACTURING TOLERANCES
-  PRECISION FABRICATION
-  ALL-ALUMINUM CONSTRUCTION
-  LONG LIFE + LOW MAINTENANCE
-  PRECISION ENGINEERING
-  DIAMETERS OVER 500 FT (152.4 M)
-  STRONG SPACE FRAME DESIGN
-  OPTIMUM COST EFFICIENCY
-  ENHANCED VAPOR LOSS PROTECTION
-  INCREASED LOAD STRENGTH
-  CORROSION RESISTANT
-  FACTORY DIRECT INSTALLATION CREWS
-  WATERTIGHT DESIGN
-  PRECISION FIT + QUICK INSTALLATION
-  PROPRIETARY DESIGN COMPONENTS
-  CLEAR SPAN CONSTRUCTION

## APEX FLAT COVERS

The Tank Connection Covers design team have developed a solution that remedies common issues with existing flat cover designs in the industry. Tank Connection's flat cover design team have accumulated decades of experience in design innovation for multiple, high profile, large scale, complex projects around the world.



-  LOW DEFLECTION WALKING SURFACE
-  EPDM GASKETS
-  SLIP RESISTANT WALKING SURFACE
-  ODOR REDUCTION
-  EASE OF ACCESSIBILITY FOR MAINTENANCE
-  REDUCED AIR VOLUME THAT NEEDS TO BE SCRUBBED
-  OPTIMAL PANEL ATTACHMENT METHOD TO BASIN WALL
-  LIGHTWEIGHT ACCESS LIDS
-  FREEDOM OF HINGED ACCESS LID PLACEMENT ON COVER
-  REDUCED SHIPPING SPACE = LOWER SHIPPING COSTS
-  LIGHT WEIGHT + STRONG STRUCTURAL PANELS
-  QUALITY DRIVEN STRUCTURAL ANALYSIS PROGRAMS
-  UP TO 70" X 70" SINGLE HINGED ACCESS LIDS
-  100% CNC PRECISION FABRICATED FLAT COVER COMPONENTS
-  UP TO 70" X 140" DOUBLE HINGED ACCESS LIDS
-  ALL ALUMINUM, CORROSION RESISTANT CONSTRUCTION
-  REDUCED COST OF AIR SCRUBBING EQUIPMENT

# GOLDEN RULE CUSTOMER SERVICE

Tank Connection provides a full service approach to storage tank construction and field services. Whether its consulting, project management or tank and auxiliary design, Tank Connection's Golden Rule customer service will meet and exceed client expectations.



PROJECT  
MANAGEMENT



TESTING &  
INSPECTIONS



SPECIALTY  
FABRICATION



CONSULTING  
SERVICES



STRUCTURAL  
SUPPORTS



TANK DESIGN



INSTALLATION  
SERVICES



FOUNDATION  
DESIGN



FIELD REPAIR

## WE WILL MEET & EXCEED YOUR EXPECTATIONS.

- Tank Connection designs and builds the highest quality products that will stand the test of time.
- Honesty, integrity and a targeted focus on client success and satisfaction are paramount.
- Tank Connection is home to the leading experts with the most experience in the industry.
- Quality, technological innovation and accountability are driven by a progressive vision.



### CERTIFICATIONS

- **ISO 9001:2015** (International Standards Organization)
- **FM 4020/4021** (Factory Mutual)
- **NSF/ANSI/CAN 61**  
(National Sanitation Foundation) Drinking Water System Components
- **ANQAS** - Indonesian Potable Water Storage
- **AS/NZS 4020** - Australia/New Zealand Potable Water Storage

## REQUEST A QUOTE AND GET CONNECTED WITH REAL PERFORMANCE FROM THE INDUSTRY LEADER, TANK CONNECTION!

**TANK CONNECTION:** 3609 North 16th Street, Parsons, KS 67357

**PHONE:** +1 620.423.3010 | **EMAIL:** sales@tankconnection.com

**WEB:** TANKCONNECTION.COM | TANKCONNECTIONCOVERS.COM

STAY **CURRENT**  
STAY **CONNECTED**

