



**TANK CONNECTION**

# LIQUID CONTAINMENT SOLUTIONS

EMPLOYEE OWNED | AMERICAN MADE | GLOBAL LEADERS







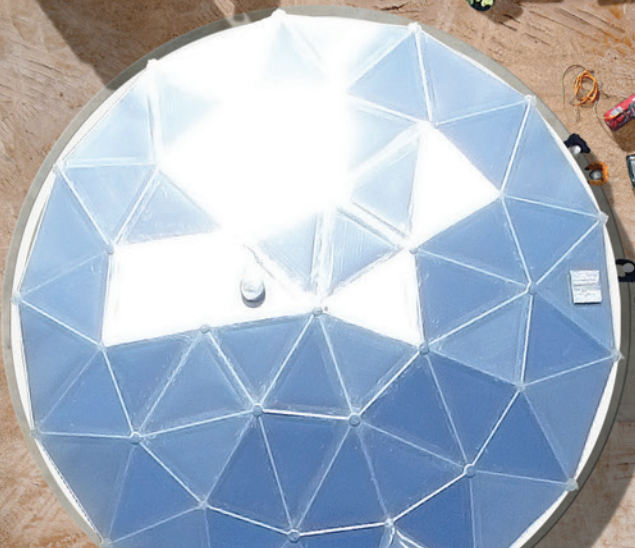
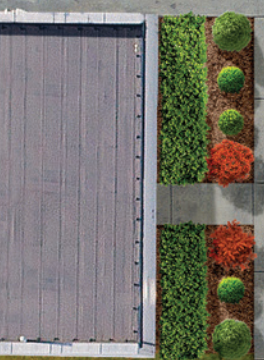
DELIVERING THE TOP ENGINEERED TANK DESIGNS AVAILABLE

UNMATCHED COATING TECHNOLOGY

#1 BOLTED DESIGN GLOBALLY

SAFEST FIELD CONSTRUCTION

THE SINGLE SOURCE PROVIDER FOR STORAGE SOLUTIONS



SUPERIOR CUSTOMER SERVICE

ALUMINUM DOMES THAT OUTPERFORM





**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 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**

**PREMIER ALUMINUM  
DOME COVERS**

**GOLDEN RULE  
CUSTOMER SERVICE**



# **BOLTED RTP DESIGN**

## **PRECISION ENGINEERING PERFECTED.**

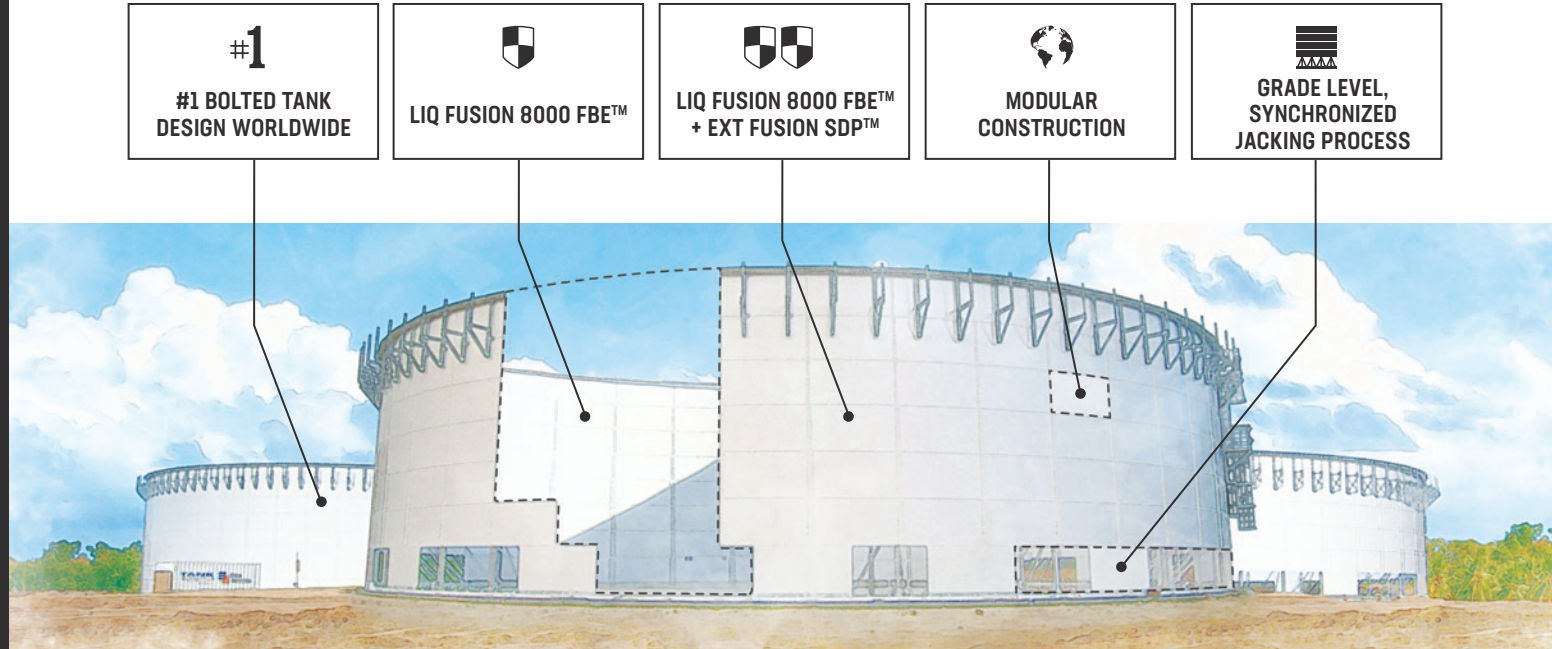






## THE BOLTED RTP ADVANTAGE

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.



- #1  
#1 BOLTED TANK DESIGN WORLDWIDE
- LIQ FUSION 8000 FBE™
- LIQ FUSION 8000 FBE™ + EXT FUSION SDP™
- MODULAR CONSTRUCTION
- GRADE LEVEL, SYNCHRONIZED JACKING PROCESS

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



# 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.

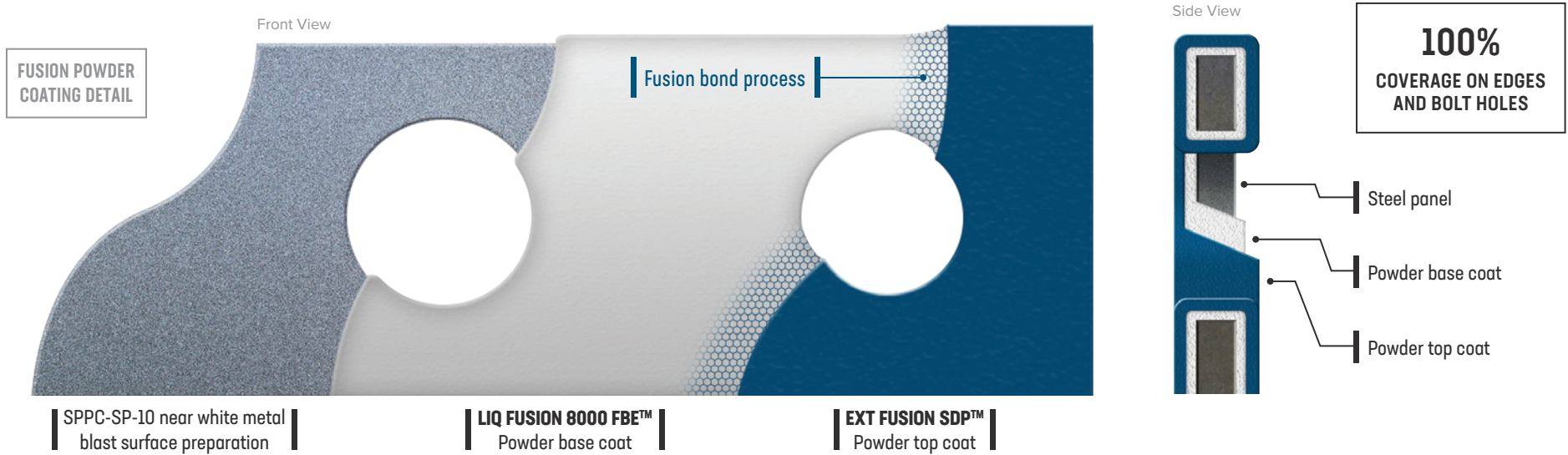
## UNBREAKABLE BOND

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.



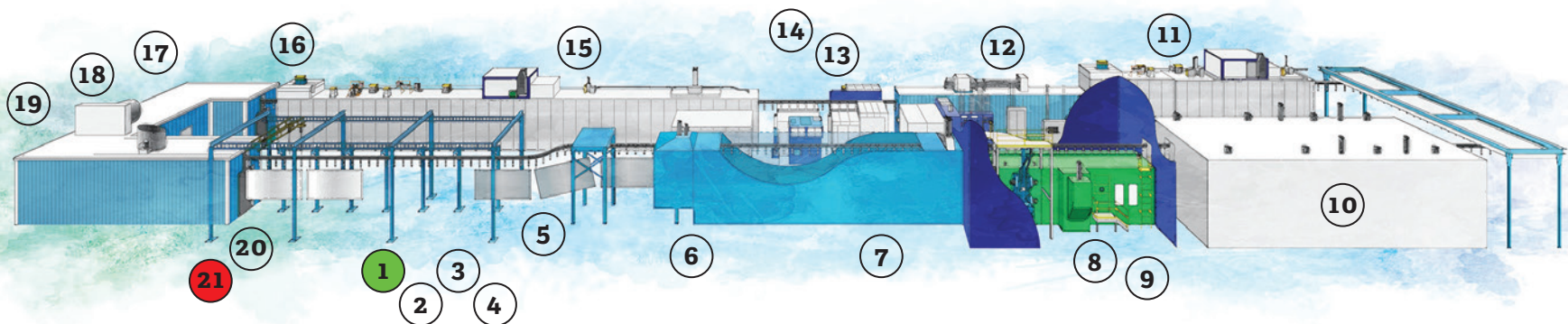
## POWDER ON POWDER DUAL APPLICATION AND CURING PROCESS

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





# 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 (CS-10, 1000g, 3000 cycles)	< 70mg Loss
Abrasion Resistance	ASTM D968 (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 direct/reverse
Hardness	ASTM D3363	6H
Flexibility	ASTM D522	1/8" (270° bend)
Pull Testing	ASTM D4541	3,000+ psi
Corrosion Resistance	ASTM B117 Salt spray test	11,000 hrs no change
Cathodic Disbondment	G95	13 mm (90 days, ambient)

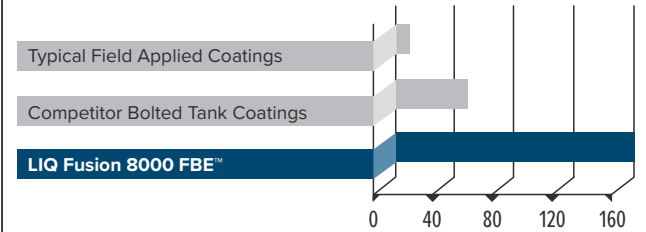
## SPECIFICATION & PERFORMANCE

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

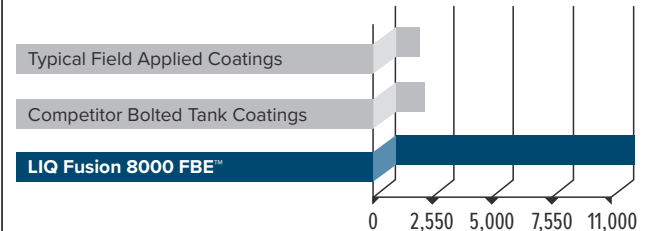
**MEASUREMENT:** Inch-pound units



## LOW pH (ACID) RESISTANCE

Test terminated without failure: Per ASTM B117 salt spray test

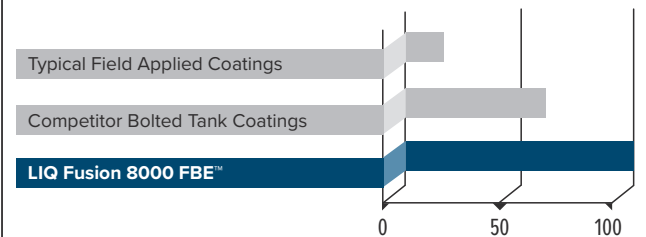
**MEASUREMENT:** Hours without failure



## 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
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## 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

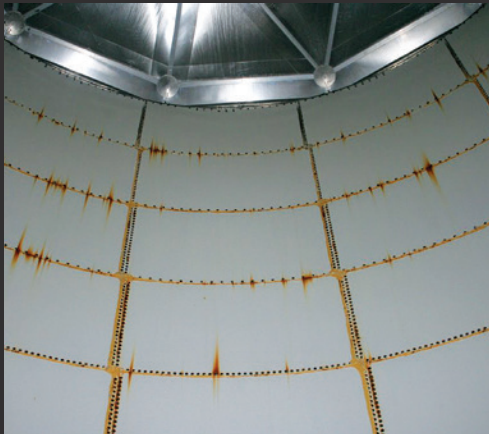


# FUSION | VERSUS | GLASS

## FUSION COATINGS OUTPERFORM GLASS/VITREOUS ENAMEL COATINGS

GLASS COATING EXAMPLES

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.



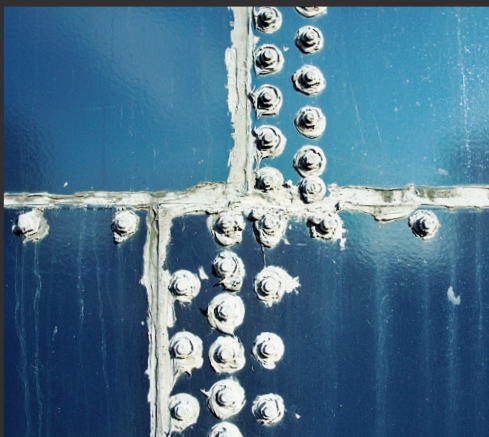
Tank panels must be offset to minimize cracking during installation.



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



# 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.

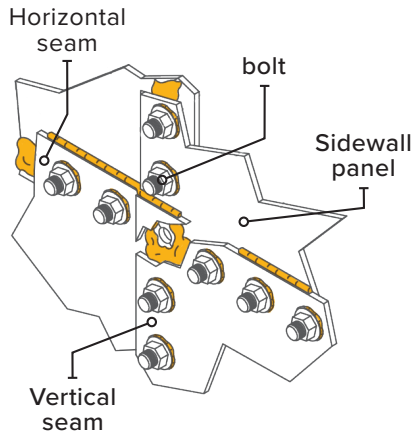




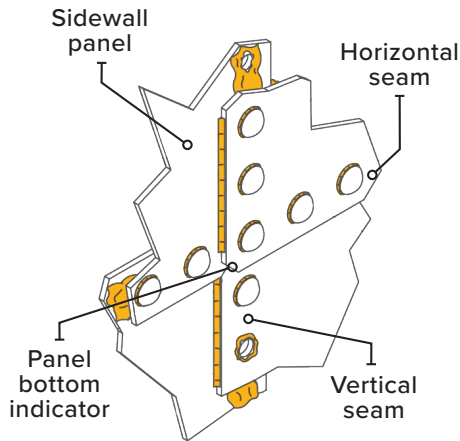
# BOLTED RTP LAP JOINT PANEL CONSTRUCTION

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**

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FIELD WELD  
TANK DESIGN

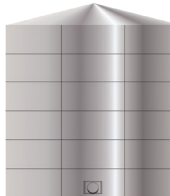


APPLICATION CODE	AWWA D103
PANEL TYPE	Horizontal rolled panels
PANEL SIZE	varies
WEB STIFFENERS	None
QUALITY	Best Quality

**CATEGORY 1**

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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

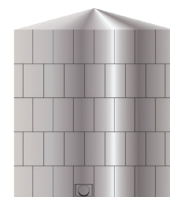


APPLICATION CODE	AWWA D103
PANEL TYPE	Horizontal RTP
PANEL SIZE	10' x 5'
WEB STIFFENERS	3-4
QUALITY	Good Quality

**CATEGORY 4**

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BOLTED API 12B  
FLANGED PANEL  
TANK DESIGN

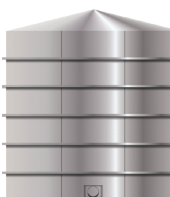


APPLICATION CODE	AWWA D103
PANEL TYPE	Vertical flanged
PANEL SIZE	5' x 8'
WEB STIFFENERS	Horizontal flange connections
QUALITY	Marginal Quality

**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





# APEX DOMES

**AI** ALL-ALUMINUM  
CONSTRUCTION  
26.981539

**W** WATERTIGHT  
DESIGN

**V** VAPOR LOSS  
REDUCTION

**\$** OPTIMUM  
COST EFFICIENCY

**S** STRONG SPACE  
FRAME DESIGN

**G** LONG SERVICE LIFE  
LOW MAINTENANCE

**L** QUICK FIELD  
INSTALLATION

**C** CLEAR SPAN  
CONSTRUCTION

**F** FACTORY DIRECT  
INSTALLATION

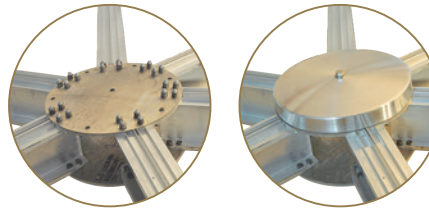
**C** CORROSION  
RESISTANT

## THE APEX OF PRECISION ENGINEERED COVERS

APEX Domes by Tank Connection offers strength, flexibility, proprietary design and innovative engineering. Advanced design creates superior leak protection, maximum vapor loss protection and enhanced load capacity.

### APPLICATIONS

LIQUID COVERS | DRY BULK COVERS | NEW CONSTRUCTION  
CUSTOMIZED DESIGNS | RETROFITS | PRESSURIZED DOMES

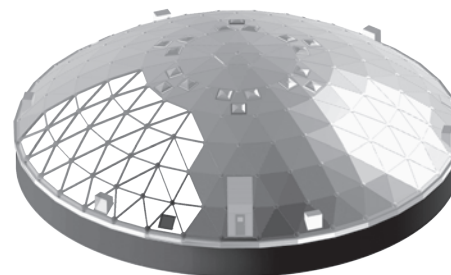
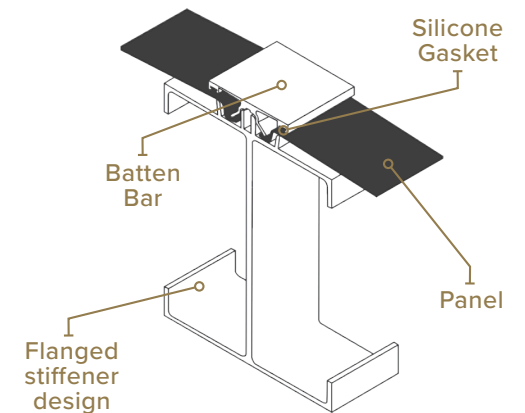


An APEX Domes engineered node detail utilizes a proprietary extrusion design. The spun aluminum gusset cover provides a precision seal.

APEX Domes beam design includes flange stiffeners for enhanced rigidity.

The batten bar attachment center groove is designed so that fasteners can be installed and removed multiple times in the same slot.

Triple protective features against leaking.



### TAILORED TO YOUR REQUIREMENTS

INTERIOR INSULATION | SKYLIGHTS  
INTERNAL WALKWAYS  
SPECIALIZED COATINGS | DORMERS  
WALL EXTENSIONS | HATCHES  
VENTILATION | DOORS  
EMISSION & ROOF OPTIONS



# 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 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 | APEXDOMES.COM

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

