

# Corrugated Bolted Steel Tanks

## Large Capacity

### Corrugated Bolted Steel

Innovative, long-lasting, corrugated bolted tanks are perfect for commercial, industrial and municipal projects. Our tanks are engineered for your specific application and locations. Approved for wastewater, fire protection, bio-solids, sludge, and more, corrugated tanks are ideal for storage of 722 gallons up to 2.9 million gallons. Materials for corrugated tanks are cost effective, have an extended life span, and come with an unprecedented warranty of up to 20 years.

### The Right Choice

Designed with corrosion resistant panels and flexible heavy membrane liners our tanks are AWWA approved. Store liquids for manufacturing, industrial or commercial use.

#### Perfect for:

- Water storage
- Fire Protection
- Petroleum products
- Chemicals Storage
- Potable and Non-water storage
- Irrigation
- Rainwater storage
- Bulk materials and dry goods



# Corrugated Bolted Steel Tanks



## Corrugated Bolted Steel Tanks

Our corrugated bolted steel tanks are engineered to site specifications with carbon steel panels, based on tank use and application. Tanks are built with AWWA approved structural standards, corrosion resistant panels, and heavy, flexible membrane liners. Made with zinc galvanized steel, our tanks are designed with three levels of corrosion resistance: barrier protection, cathodic protection, and zinc patina. Corrugated steel tanks are more cost effective, and labor and installation are significantly less.

## Features

- High-strength zinc galvanized corrugated steel
- Sizes up to 2.9 million gallons
- NSF-61 certified liners and coatings for potable water
- Site specific structural calculations
- On-site construction
- 20 year warranty



# Corrugated Bolted Steel Tanks

## Wall Panels:

Corrugated bolted steel tanks are made of carbon steel panels with galvanized zinc at different thicknesses. Sheets range in gauges depending on the engineering calculation for a specific tank, and on usable gallon requirement, project coordinates, and tank use/application.

## Floors:

Tanks are commonly installed on a concrete foundation. No steel floor is needed, as the concrete foundation becomes the floor of the tank. Steel floors are only used in the case that the tank is engineered to be self-anchored. We also install tanks on grated gravel pads instead of a concrete foundation in certain circumstances, saving you money on your tank installation.

## Anchors:

Anchoring is required when installing on a concrete foundation, unless the tank has a steel floor and is engineered self-anchored. Anchors meet ASCE7-10 and all AWWA requirements with the use of tall anchor saddles and A36 F1554 zinc or galvanized all thread anchor rods.

## Roof Structures:

Corrugated bolted steel tanks have multiple roof style options to suit many applications, both structural and aesthetic. Available in 10 degree to 30 degree roof design for flat and open J rib or V rib roofs.



For more complete information on One Clarion products and solutions, visit us on the web at: [www.clarionmunicipal.com](http://www.clarionmunicipal.com) or call us at : (+1) 863-261-8388 | [info@oneclarion.com](mailto:info@oneclarion.com)

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# Corrugated Bolted Steel Tanks Specs

**Tank Material:** Corrugated Galvanized Bolted Steel Tanks

**Capacity:** Capacities up to 2.9 Million Gallon

**Coating:** Field Applied Interior & Exterior Coatings  
Zinc Galvanized Steel - G115 & G140  
Mastic Sealants  
30 mil - 60 mil Flexible Membrane Liners

**Structural Design:** IBC and ASCE7 Structural codes  
Site Specific Structural Calculations  
Sismic Anchoring Designs  
High Wind Designs

**Fittings & Appurturances** ASTM Bolts  
Flanges - ANSI 150  
Side Shell Manways - 24" & 36"  
Roof Vent - 24' - 42"  
Liquid Level Gauge Board & Target  
Suction Flanges with Anti Vortex Plate- NFPA22

## Benefits

- Strong, reusable construction
- Corrosion resistant
- On-site construction
- Meets AWWA requirements with ASCE structural codes
- Wide range of fittings and capacities
- Variety of applications
- Cost savings

See: [Individual Tank Line Drawings](#)  
(Sizes 700 to 6,500 gallons)



# Corrugated Bolted Steel Tank Corrosion Protection

Projects exposed to the atmosphere and other harsh environments require coated steel for corrosion protection. Galvanize steel provides durable, long-lasting corrosion protection. Hot-dip galvanizing (HDG) gives three levels of corrosion resistance to our steel: barrier protection, cathodic protection, and zinc patina.

## Barrier Protection

Galvanized coating isolates your corrugated steel from the environment. Corrosion will not occur with an intact barrier. However, once the barrier is breached, steel can be attacked and lead to rusting. With hot-dip galvanization, coating adheres to the base metal and provides abrasion resistance, leading to stronger barrier.



## Cathodic Protection

The second level of HDG corrosion resistance is cathodic protection. Zinc is anodic to steel leading it to corrode and protect underlying metal. Zinc also offers protection for small, exposed areas such as cut edges, drill holes, scratches or surface abrasion. Even with damaged HDG coating exposing bare steel, no corrosion will start until surrounding zinc is destroyed. When larger areas are exposed, the zinc keeps corrosion isolated to that area.



## Zinc Patina

Zinc corrodes when exposed to the atmosphere creating zinc patina. This exposure to natural wet/dry cycles creates zinc corrosion byproducts on the galvanized coating's surface, creating a soluble barrier for the hot-dip galvanized coating. This zinc patina slows the corrosion rate and forms a long-lasting layer of protection.



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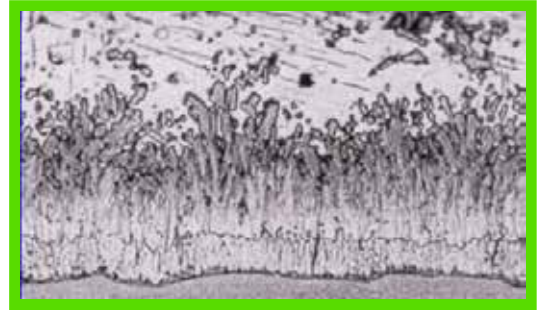


# Hot-dip Galvanized Steel Durability

Hot-dip galvanized (HDG) coated steel has proven durability, and is indicated for chemical, industrial, power/utility, and bridge/highway projects because of its unequalled strength in harsh environments. This is because of its to abrasion resistance, uniform protection, and complete coverage.

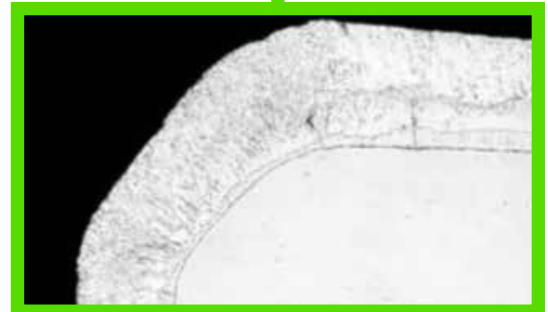
## Abrasion Resistance

A distinctive characteristic of the HDG coating is the bonded, corrosion resistant intermetallic layers. During the galvanizing process, layers develop between the iron in the steel and zinc in the kettle. These layers provide pliability, making damaging the coating very difficult. Abrasion resistance provides protection against damage during transportation, handling and erection, as well as in service.



## Uniform Protection

Galvanized coating is naturally as thick on corners and edges as flat surfaces. Because coating damage often occurs at edges, additional protection in these areas is important. Brush or spray-applied coatings tend to leave corners and edges susceptible to corrosion. The uniform protection of HDG provides protection against accelerated corrosion.



## Complete Coverage

The total immersion process of HDG means steel is fully submerged, coating all interior and exterior surfaces. As corrosion tends to occur at an increased rate where humidity and condensation are high, interior coverage is valuable. Fully coating fasteners are just as important, as they are used at connection points, and are critical to structural integrity.



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# Safety Accessories

Safety Accessories	Liners	Roof
<p>Full guardrails/OSHA caged exterior</p> <p>Ladder systems</p> <p>Anti climb for ladder rungs and cage</p> <p>Deck access openings</p> <p>Side shell manway</p> <p>Catwalks</p> <p>Roof cap walk arounds</p> <p>Frost free vents</p> <p>Bridges</p>	<p>Up to 60 mil flexible membrane liner barrier to elongate lifespan of steel structure.</p> <p>Available:</p> <p>Hypalon</p> <p>Polypropylene</p> <p>PVC</p> <p>Standard approved NSF61 liner materials</p>	<p>Options include:</p> <p>30 degree V Rib</p> <p>10 Degree V Rib</p> <p>Structured 30 degree V Rib</p> <p>Structured 10 Degree J Rib</p> <p>Flat Corrugated</p> <p>30 Degree Flat Panel</p>



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