

# CST

THE GLOBAL LEADER IN STORAGE  
AND COVERS SOLUTIONS



## GALVANIZED WATER STORAGE TANKS

Fire Sprinkler | Potable Water | Irrigation

# CST INDUSTRIES., INC

CST Industries Inc. is the world's largest manufacturer of engineered above ground bolted steel sectional storage tanks and silos for liquid and dry bulk applications. With over 250,000 tanks worldwide, and our ISO 9001 accreditation, CST ensures consistent quality and service for the design, manufacture and installation of galvanized steel liquid storage tanks.

CST manufactures in Vietnam an advanced option in the design and manufacturing of cylindrical galvanized steel bolted storage tanks. These tanks are primarily used for storing water in the fire sprinkler, potable water and irrigation markets.

The tanks are assembled on site by overlapping and bolting galvanized steel panels. Tanks are sealed using a liner in conjunction with a roof cover to provide a reliable and low maintenance solution for water storage.



## GALVANIZED STEEL

Storage tanks manufactured from galvanized steel offer many benefits over other steel corrosion protection systems. Unlike other protective coatings that rely solely on steel panel preparation to obtain adequate adhesion, galvanizing produces a coating that is bonded metallurgically to the steel.

- Economical solution
- Provides a tough and abrasion resistant coating
- Selfhealing and long lasting

### Evolution of CST

1890's

**COLUMBIAN**  
STEEL TANK COMPANY

1940's

**Smith**  
CORPORATION  
**HARVESTORE**

1960's

**TEMCOR**  
**WEAVER**  
RECLAIMER SYSTEMS  
**AQUASTORE**  
Tanks & Domes

1970's

**CONSERVATEK**  
Peabody TecTank  
**VULCAN TANK**

1990's

**COLUMBIAN**  
TecTank  
ENGINEERED STORAGE  
PRODUCTS COMPANY

2000's

**CST**  
**CST**  
STORAGE  
**CST**  
COVERS

# CYLINDRICAL TANKS

Standard cylindrical designed tanks consist of galvanized steel sheets 2.5m long x 1.25m high with thickness varying dependent upon tank size and design requirements. Tank diameters range from 3.1m to 31.0m with height dependent upon diameter providing capacities up to 4000m<sup>3</sup>.

## Application:

- Potable Water
- Fire Protection Water
- Irrigation
- Manufactured from mill galvanized steel in accordance with JIS G3302 or steel in accordance with JIS G3101 which is subsequently hot dip galvanized to ASTM A1203-02 standard.
- Sheets are assembled on site using a lap joint and galvanized silo bolts. The tank shell is fixed to the concrete foundation using a pre-rolled galvanized angle, clamps and parabolts with a similar stiffening angle fixed to the top of the tank shell.
- The tank is supplied with a roof cover, a galvanized access ladder and platform and inlet and outlet connections.

## Potable Water Storage

Cylindrical tanks are compatible for the storage of drinking water by utilizing a PVC liner that is approved by various water authorities.





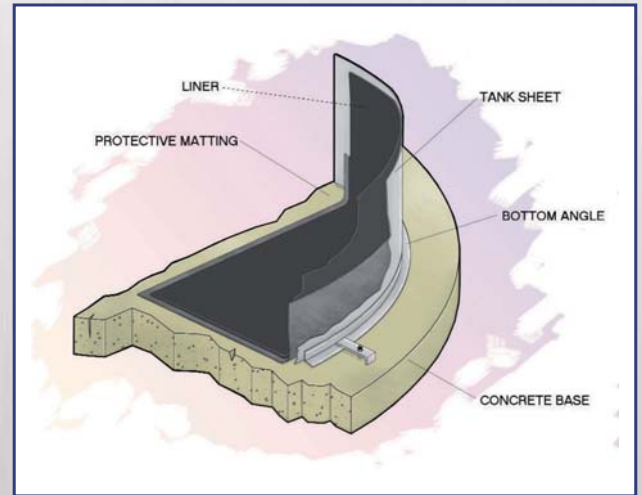
# LINERS

Cylindrical galvanized tanks are sealed using liners manufactured of tough PVC , EPDM, or Butyl material to create a completely waterproof seal. Each liner is designed to have outstanding aging, environmental and weather-resistant properties. Strength and elasticity remains virtually unchanged over many years, without shrinking, hardening or cracking. The type of liner is selected based on the storage application.

Liners are bolted to the top angle of the tank through re-enforced eyelets. Additional protection during installation and use is obtained from Polyester geotextile matting on the tank floor and protective tape on all interior tank sheet edges.

- Liners have received approval from the various water authorities for use in storage of potable water.

For further information on liner use, application and installation refer to liner data sheets.



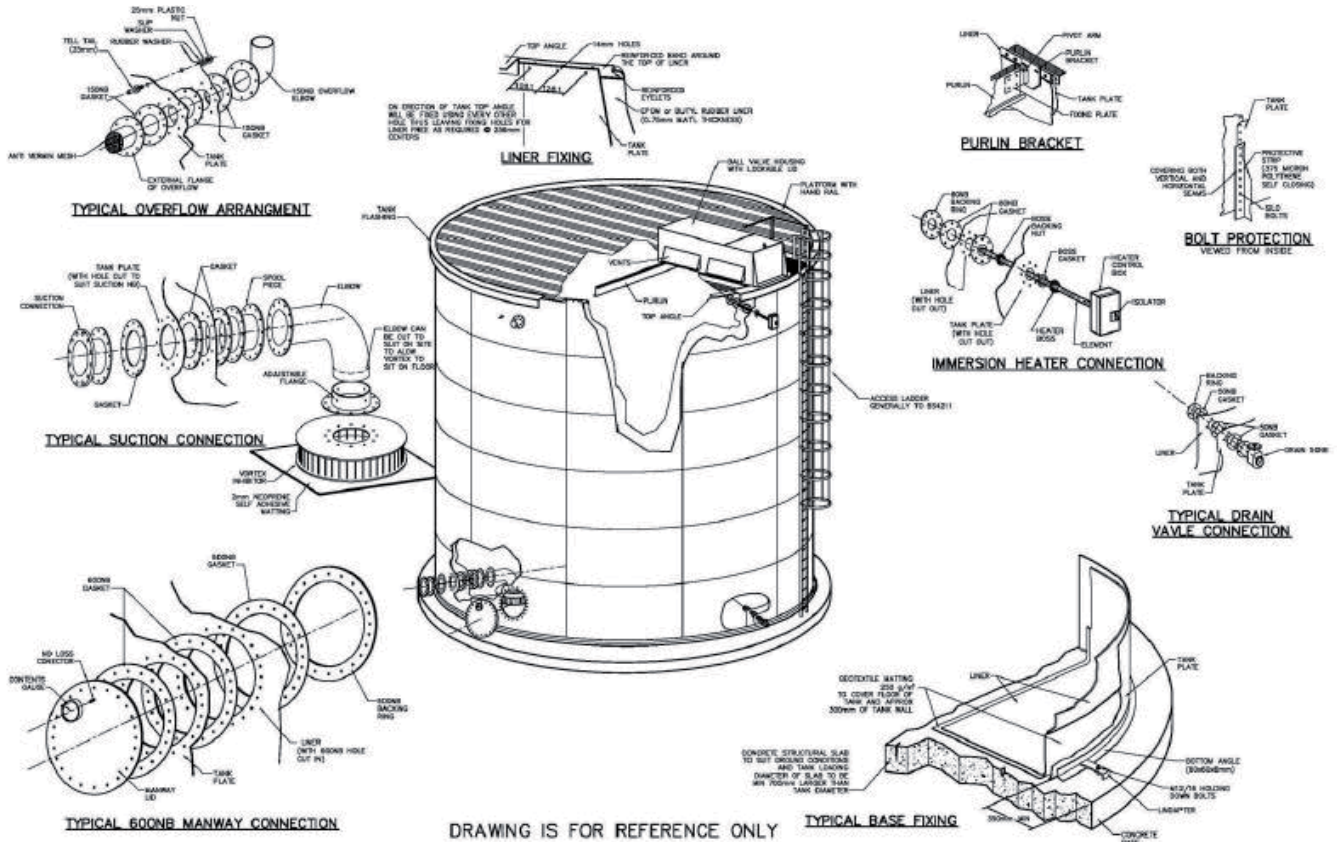
# TROUGH DECK ROOFS

The Trough Deck roof is a versatile and economical solution for covering water storage tanks. It is designed and packaged to be quickly installed using simple construction tools. Designs up to 20m in diameter are self-supporting depending on roof load. This allows the roof to be installed at a low level, minimizing the need for working at height. For very large diameters and/or high roof loadings, column supports are utilized.



- Galvanized purlins/beams secured to brackets bolted to the tank shell are used to support roof deck.
- Flashing is screwed to the perimeter of the tank shell and roof to provide an aesthetically pleasing finish.
- The roof cover is made from corrugated sheets, high strength material G550Mpa, with primary coating Zinalume® and top coat Colorbond®. Cover sheets are secured to the zinc coating purlins, with high specification of zinc coating.
- For potable water storage, all the columns which are soaked into water, if any, are coated with ANSI/NSF61 approved epoxy painting system to ensure compliance with statutory requirements.
- Access hatches, vents etc. are easily accommodated to meet specific requirements. Roof live load 0.75 kpa are offered, and others depending on customer's requirements.

# CONSTRUCTION SEQUENCES



1



2



3



1. Packaging and Storage
2. Shipment arrives at site, unloading container.
3. Bottom Angle and Liner Positioning
4. Top Ring Assembly
5. Top Angle Assembly
6. Setting and jacking up the tank.
7. Fitting liner and put on the trough deck roof.



4



7



6



5



# TANK CONSTRUCTION

Every CST Storage tank is factory engineered to customer specifications. CST Galvanized tanks can be installed in many types of situations where field-welded steel and concrete applications cannot.

1. Construction at ground level.
2. Tank is jacked up ring by ring/Another option is scaffold build.
3. The final ring is constructed and tank is lowered onto foundation.



## STANDARD MODEL RANGES

Best value and ready for quick ship

Model	Diameter (mm)	Height (mm)	Effective Capacity (m <sup>3</sup> )
12 16	3,875	4,862	54
17 16	5,423	4,860	105
25 16	7,748	4,860	205
30 16	9,297	4,860	310
35 16	10,847	4,860	421
38 20	11,622	6,060	611

**Note:** Various sizes and models are available based on customer's requirement.

- **Capacity:** Up to 4,000 m<sup>3</sup>.
- **Diameter:** Up to 31m.
- **Height:** Up to 20m.



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