

SelectCoat™ and DuraCoat™

Epoxy Coated Storage Tanks

CST

VULCAN™
by CST



» LIQUID STORAGE TANK BROCHURE & SELECTION GUIDE

» Pre-Designed Storage Solutions With Legacy Built-In

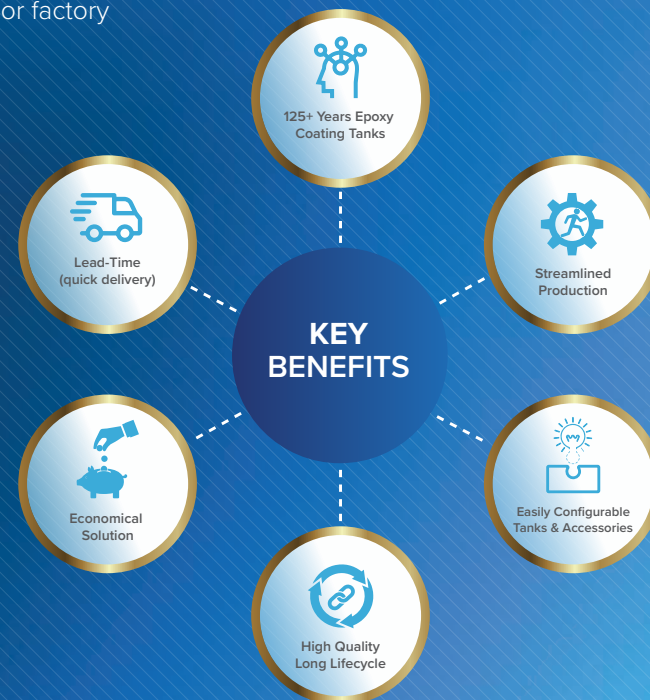
The business roots for CST Industries run deep – all the way back to 1893 following our heritage as Columbian Steel Tank Company™, Peabody TecTank and Columbian TecTank®.

With over 350,000 field proven storage tank installations in more than 125 countries, no other company can match CST's world-renowned brands, premium engineered designs, world-class manufacturing or construction experience.

CST's legendary product portfolio continues to expand with Vulcan™ by CST, a pre-engineered, pre-configured flat panel bolted storage tank line.

Backed by 125 years of experience, Vulcan by CST's SelectCoat™ and DuraCoat™ epoxy coated products are designed to be available from capacities of 15m³ to 3000m³ offering local based storage solutions that are made for quick delivery at a lower cost than custom designed tank offerings. The pre-engineered "fast tank" bolted storage tanks are available via a streamlined order to delivery process ensuring customers get what they want, when they need it.

For customers that require custom designed applications, CST offers its premium epoxy coated storage solution, TecTank™, built to customer's exact specifications and available in flat panel, chime panel or factory welded designs.



Benefits of Pre-Engineered Designs

CST's pre-engineered, pre-configured standard tank designs and accessories allow for quicker delivery of your storage solution. These bolted tank systems are constructed and put into operation faster than any other tank system in the market. Volume capacity ranges from 15m³ to 3000m³ and are engineered for liquid applications.

Benefits include:

- » Fit for Purpose – Products are designed to fit a wide range of applications
- » Simplified Ordering – Guided step selection process
- » Pre-engineered Configurations – Eliminates the need for design time and allows for fast selection and delivery
- » Short Lead Time – On the shelf panels, getting your product delivered and installed faster
- » Complies with Standards – Designed to Eurocode
- » Safety – Tanks are built from the ground up
- » Factory Coated – Tanks are factory coated in environmentally controlled conditions for quality and durability
- » ISO Certified – DuraCoat is manufactured in an ISO Certified manufacturing facility, all tanks are manufactured using strict process controls
- » Assembled with Mastic Sealant – Tank does not require a liner



Storage Tank Comparison Chart



TANK TYPE		SELECTCOAT™ (GOOD)	DURACOAT™ (BETTER)	TECTANK™ FLAT PANEL (BEST)	TECTANK CP™ (BEST)
1 DESIGN STANDARD	Eurocode	Standard		Optional	N/A
	AWWA D103-09	N/A		Standard	
	WIND	Wind Design Code: ASCE 7-05 / CST Standard Wind Speed (3-s gust): 44.7 m/s (100 mph) Wind Exposure Factor B		Any	
SEISMIC	Optional		Any		
2 COMPLIANCE	NSF 61 Compliant Coating	Standard		Standard	
	API 12-B	N/A		N/A	Optional
	FM	N/A		Optional	Optional
3 APPLICATIONS	Typical	Fire Protection Municipal Water Municipal Wastewater Irrigation Potable Water River/Raw Water	Fire Protection Municipal Water Municipal Wastewater River / Raw Water Desalinization Mining Digester Industrial	Fire Protection Municipal Water Municipal Wastewater River / Raw Water Desalinization Mining Digester Industrial Petroleum	
	pH Range	5 - 10		Trico Bond SD: 3 - 11 Trico Bond EP: 4 - 11	
	Maximum Temperature	120° F (49° C)		Trico Bond EP: 140° F (60° C) Trico Bond SD: 200° F (93° C)	
4 DIAMETER (FT)	Minimum	10 ft. (3 m)		11 ft. (3.35 m)	9 ft. (2.74 m)
	Maximum	61 ft. (19 m)		243 ft. (74 m)	184 ft. (56 m)
5 HEIGHT (FT)	Minimum	4 ft. (1 m)		4 ft. (1 m)	8 ft. (2.43 m)
	Maximum	44 ft. (13 m)		138 ft. (42 m)	120 ft. (37 m)
6 CAPACITY (M³)	Minimum	15m³		76m³	15m³
	Maximum	3,000m³		36,752m³	13,268m³
7 FLOOR	Flange Mount	Standard		N/A	
	Concrete Slot Mount	Optional		Optional	
	Concrete Embedded	N/A		Optional	Standard
	Steel	N/A		Standard	
8 ROOF	Trough Deck	Optional		Optional	
	Low Profile Roof	Optional		N/A	Optional
	Dome	N/A		Standard	Standard
	Steel Column Supported	N/A		N/A	Standard
	Steel Externally Supported	N/A		Optional	
9 COATING	Galvanized	N/A	Optional	Optional	
	SelectCoat Epoxy	Standard	N/A	N/A	
	DuraCoat Epoxy	N/A	Standard	Standard	
	Trico Bond EP Epoxy	N/A		Standard	
	Trico Bond SD Epoxy	N/A		Optional	
	Stainless	N/A		Optional	
10 EPOXY COLORS	Standard	Tan, White and Cobalt Blue	Tan, White, Forest Green and Cobalt Blue	Tan	
	Options	N/A		White, Grey, Light Green, Forest Green, Light Blue and Cobalt Blue	
11 ACCESSORIES	Level Indicator	N/A	Standard	Optional	
	Overflow	Optional		Optional	
	Manway	Standard		Standard	Optional
	Roof Vent	Optional		Optional	
	Roof Manway	Optional		Optional	
	Ladder	Optional		Optional	
	Platforms	Optional		Optional	
	Drain Connection	N/A	Optional	Optional	
	Inlet/Outlet Nozzle	Optional	Optional	Optional	
	Ball Valve Housing	N/A	Optional	Optional	
	Pipe Brackets	Optional		Optional	
	Test Return	Optional		Optional	
	Protective Bolt Covers	Optional		Optional	
	Thief Hatch	N/A		N/A	Optional
	Clean Out	N/A		Optional	Optional
Spiral Stairway	N/A		Optional	Optional	

*Europe, Middle East and Africa, Latin America and Asia Pacific

Selection Guide

This selection guide provides an easy tool to evaluate various CST storage tanks to determine the good, better, and best options for you. When selecting the right storage solution, it is important to weigh several factors. While the method of use is very important, taking into account the state and local requirements, ease of installation, coatings and lead time are also important. CST offers a range of storage tank configurations to meet the specific requirements of your unique application.

This Selection Guide will help you walk through the necessary steps to find the right tanks. If upon completing these steps, you find you need an engineered to order storage solution, CST can provide you with a custom designed TecTank to fit your unique application.



Validate Design Requirements

When considering your options for a storage solution, it is important to know the various codes and regulations that dictate the specification and construction of your tank to ensure optimum design and safe operation. See chart on left to identify the requirements necessary for your project.



Confirm Application

CST's Vulcan epoxy coated pre-configured storage systems are an ideal solution for the following liquid applications.

- > Municipal Water
- > Municipal Wastewater
- > Fire Protection
- > Potable Water
- > Raw River Water
- > Irrigation

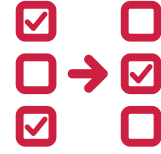
Applications are available from pH 5-10 and a max temperature of 120° F (49° C) for pre-configured models.





» SelectCoat and DuraCoat Tank Size Selection

Select tank height and diameter if known or select volume to determine list price. If flexible on diameter, choose from the pre-configured tanks or diameters to minimize lead times.



Product Lead Times



TANK TYPE	SELECTCOAT™ (GOOD)	DURACOAT™ (BETTER)	TECTANK™ (BEST)
FAST TANK	*6 weeks	*6 weeks	Design/Application Dependent
TANK + LIGHT DUTY TROUGH DECK ROOF	Best in Market	Best in Market	
TANK + LIGHT DUTY LOW PROFILE ROOF			

Minimum Freeboard	Height Diameter	4 ft.	6 ft.	8 ft.	10 ft.	12 ft.	14 ft.	16 ft.	18 ft.	20 ft.	22 ft.	24 ft.	26 ft.	28 ft.	30 ft.	32 ft.	34 ft.	36 ft.	38 ft.	40 ft.	42 ft.	44 ft.	
		(1.26 m)	(1.81 m)	(2.46 m)	(3.01 m)	(3.66 m)	(4.21 m)	(4.86 m)	(5.41 m)	(6.06 m)	(6.61 m)	(7.26 m)	(7.82 m)	(8.46 m)	(9.01 m)	(9.66 m)	(10.21 m)	(10.86 m)	(11.41 m)	(12.06 m)	(12.61 m)	(13.26 m)	
0.150 m	10 ft. (3.10 m)			17	22	26	31	36	40	45	49	54	58	63									
0.150 m	12 ft. (3.87 m)		20	27	34	41	48	56	62	70	76	84	90	98	104	112							
0.200 m	15 ft. (4.65 m)	18	27	38	48	59	68	79	88	99	109	120	129	140	149	161	170						
0.200 m	17 ft. (5.42 m)	24	37	52	65	80	93	108	120	135	148	163	176	191	203	219	231	246					
0.230 m	20 ft. (6.20 m)	31	48	67	84	103	120	140	156	176	192	212	229	248	265	285	301	321	337				
0.230 m	22 ft. (6.97 m)	39	60	85	106	131	152	177	198	223	243	268	289	314	335	360	381	406	427	452			
0.260 m	25 ft. (7.75 m)	47	73	104	129	160	186	217	243	273	299	330	356	387	412	443	469	500	525	556	582		
0.270 m	27 ft. (8.52 m)	56	88	125	156	193	224	262	293	330	361	399	430	467	498	536	567	604	635	673	704	741	
0.305 m	30 ft. (9.30 m)	65	102	146	183	228	265	309	346	391	428	472	509	554	591	635	672	717	754	798	835	879	
0.305 m	33 ft. (10.07 m)	76	120	172	215	267	311	363	406	459	502	554	598	650	693	745	789	841	884	937	980	1032	
0.345 m	35 ft. (10.85 m)	85	135	195	246	306	357	417	468	528	578	639	689	750	800	861	911	972	1022	1083	1133	1193	
0.345 m	38 ft. (11.62 m)	97	155	224	282	352	409	479	537	606	664	734	791	861	919	988	1046	1115	1173	1243	1301	1370	
0.400 m	40 ft. (12.40 m)	104	170	249	314	393	459	538	604	683	749	828	894	973	1039	1118	1183	1262	1328	1407	1473	1552	
0.230 m	43 ft. (13.17 m)	140	215	304	378	467	542	631	705	794	869	958	1032	1121	1196	1285	1359	1448	1523	1612	1686	1775	
0.230 m	45 ft. (13.95 m)	157	241	341	424	524	607	707	791	891	974	1074	1157	1257	1340	1440	1524	1624	1707	1807	1890	1990	
0.230 m	48 ft. (14.72 m)	175	268	380	472	584	677	788	881	992	1085	1196	1289	1401	1494	1605	1698	1809	1902	2013	2106	2218	
0.230 m	51 ft. (15.50 m)	194	297	421	523	647	750	873	976	1099	1202	1326	1429	1552	1655	1778	1881	2005	2107	2231	2334	2457	
0.260 m	53 ft. (16.27 m)	208	321	457	571	707	820	956	1070	1206	1319	1455	1569	1705	1818	1954	2068	2204	2317	2453	2567	2703	
0.260 m	56 ft. (17.04 m)	228	353	502	626	776	900	1050	1174	1323	1448	1597	1722	1871	1996	2145	2269	2419	2543	2693	2817		
0.260 m	58 ft. (17.82 m)	249	385	549	685	848	984	1147	1283	1446	1583	1746	1882	2045	2181	2344	2480	2644	2780	2943			
0.305 m	61 ft. (18.60 m)	259	407	585	733	911	1059	1237	1385	1563	1711	1889	2037	2215	2363	2540	2688	2866	3014	3192			

Tip: If you are flexible on capacity or diameter and would like to minimize your lead time, choose from the pre-configured roof diameter.

Example: 33 ft. diameter x 22 ft. height tank will have a shorter lead time and provides 500m³ of capacity.

Notes:

- Listed capacities are for non-seismic designs, seismic designs will reduce volume from what is shown, contact CST for available seismic designs and capacities.
- Nominal diameter and height listed in feet and should be used to reference tank model.
- The listed volumes are based on the minimum freeboard and a flange mount without a concrete seal pour, typical for a non-seismic design.
- The minimum freeboard is based on the clearance required for the Trough Deck Roof structure. Additional freeboard may be required for a Low Profile Roof, or the deck structure beams can be partially submerged without causing harm.

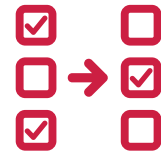
- Tank designs based on 44.7 m/s (100 mph) maximum wind speed.
- The listed volumes are in m³.
- Limited Warranty: SelectCoat and DuraCoat: 1 year and TecTank: 1.5 years.
- *FOB ship point from released date.

- Fast Tank
- Pre-configured Roofs
- DuraCoat™ Only
- Not Available

4 STEP

» Roof Selection

Need a roof? CST's pre-configured storage tanks are available with trough deck and low profile roofs. Refer to the images below for roof options available to you.



Roofs are designed for maximum loads of 0.75 kN/m2. Greater roof loads are available with engineered to order tanks.



Trough Deck and Low Profile Roofs are available in any diameter between 10 ft. (3 m) and 61 ft. (19 m), but lead times will increase for diameters other than the pre-configured sizes (33', 43', 51', 56' and 61'). CST also offers domes, steel column and externally supported roof options for engineered to order tanks.

5 STEP

» Color Selection

CST offers standard and custom colors. Refer to the chart below for color selection available by tank design.



PRE-CONFIGURED		CUSTOM DESIGNED (TECTANK)	
SELECTCOAT™ (GOOD)	DURACOAT™ (BETTER)	TRICO BOND EP® OR TRICO BOND SD™ (BEST)	
INTERIOR COLORS			
Grey	Blue	Sahara Gold	
EXTERIOR COLORS			
Tan, White and Cobalt Blue	Tan, White, Forest Green and Cobalt Blue	Tan (Standard) Optional: White, Grey, Light Green, Forest Green, Light Blue and Cobalt Blue	



5 STEP

» Coating Selection

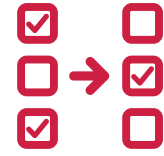
Whether you plan to store potable water, wastewater, chemicals or other liquids, it is important to remember each material is unique and has its own specific requirements. SelectCoat and DuraCoat coatings are perfect for water, municipal wastewater, fire protection and irrigation storage.

PRE-CONFIGURED		CUSTOM DESIGNED (TECTANK)
SELECTCOAT™ (GOOD)	DURACOAT™ (BETTER)	TRICO BOND EP® OR TRICO BOND SD™ (BEST)
INTERIOR COATINGS		
4 mil (100 µm) to 10 mil (250 µm) average dry film thickness. Manually-applied liquid epoxy coating.	6 mil (150 µm) to 10 mil (250 µm) average dry film thickness. Electrostatically applied powder coating.	5 mil (130 µm) to 9 mil (225 µm) average dry film thickness. Electrostatically applied powder coating.
EXTERIOR COATINGS		
6 mil (150 µm) to 13 mil (325 µm) average dry film thickness. Manually-applied combination of liquid epoxy coating and liquid UV protectant topcoat.	6 mil (150 µm) to 9 mil (225 µm) average dry film thickness. Electrostatically applied combination of powder epoxy coating and powder UV protectant topcoat.	4.5 mil (115 µm) to 7 mil (180 µm) average dry film thickness. Electrostatically applied combination of Trico Bond powder epoxy coating and liquid performance urethane topcoat.
OPERATING TEMPERATURES		
SelectCoat 120° F (49° C)	DuraCoat 120° F (49° C)	Trico Bond EP 140° F (60° C) Trico Bond SD 200° F (93° C)
CERTIFICATIONS/OPTIONS		
NSF 61 approved coating	NSF 61 approved coating	NSF 61 compliant with FM optional Available in chime or flat panel design API-12B compliance available on chime models

7 STEP

» Accessories Selection

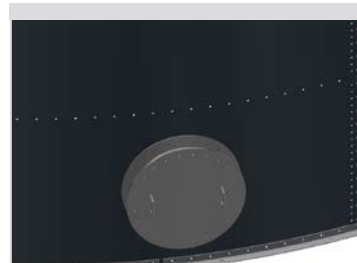
Common features available for tanks include vent(s), overflow, inlet, side and roof access manways, ladders, and drain connections. Confirm your needs from the accessory list and size offering below.



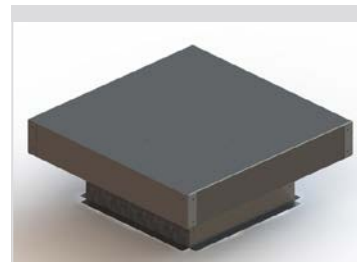
Description
Level Indicator (Included with Tank Kit)



Description **Size**
Overflow DN150



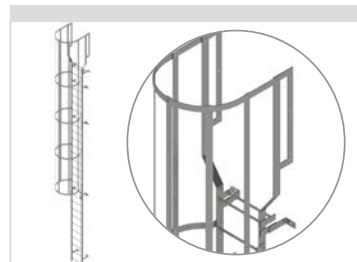
Description **Size**
Manway (Included with Tank Kit) 600 mm



Description **Size**
Roof Vent (Mill Galvanized) 600 mm x 600 mm



Description **Size**
Roof Manway (Aluminum) 600 mm x 600 mm



Description **Size**
Ladder Height from 6 ft. (1.81 m) to 44 ft. (13.26 m)



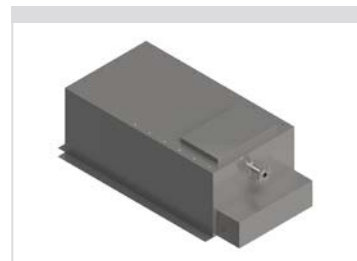
Description **Size**
Roof Manway Platform 738 mm x 750 mm
2-Sided Ball Valve Housing Platform 738 mm x 750 mm



Description **Size**
Drain Connection DN50
DN80
DN100



Description **Size**
Inlet/Outlet Nozzle (Single Flange Connection) DN150
DN200
DN250



Description **Size**
Ball Valve Housing (Optional with Trough Deck, Mill Galvanized) DN50
DN80
DN100



Description **Size**
Pipe Brackets DN100
DN150
DN200
DN250



Description **Size**
Test Return DN80
DN100
DN150
DN200
DN250

Notes:
• Accessories are hot-dip galvanized unless stated otherwise.
• Accessories not pictured: Protective Bolt Covers, Thief Hatch, Clean Out and Spiral Stairway.

Storage Tank Selection Form

Fill in your selections below and email your completed order form to sales@estindustries.com.

1 What are your tank requirements? (Codes and/or regulations)

- *AWWA D103 *FM *API 12-B Seismic Design (List AWWA D103-97 seismic zone) _____
 Eurocode NSF 61 ASCE 7-05 Wind Design (≤ 44.7 m/s (100 mph)) *Other Wind Design (List maximum wind speed and design code) _____

2 What is your application?

- Municipal Water Municipal Wastewater Fire Protection *Other
 Potable Water Raw River Water Irrigation

3 What size tank do you require?

Height: _____ Diameter: _____ Capacity: _____

4 What type of roof do you need?

- Light Duty Trough Deck Roof (0.75 kN/m²) *Steel Externally Supported *Domes
 Light Duty Low Profile Roof (1:12 Slope) (0.75 kN/m²) *Steel Column Supported (> 0.75 kN/m²)

5 What coating fits your specific requirements?

- SelectCoat™ DuraCoat™ *Trico Bond EP® *Trico Bond SD™

6 What is your tank color preference?

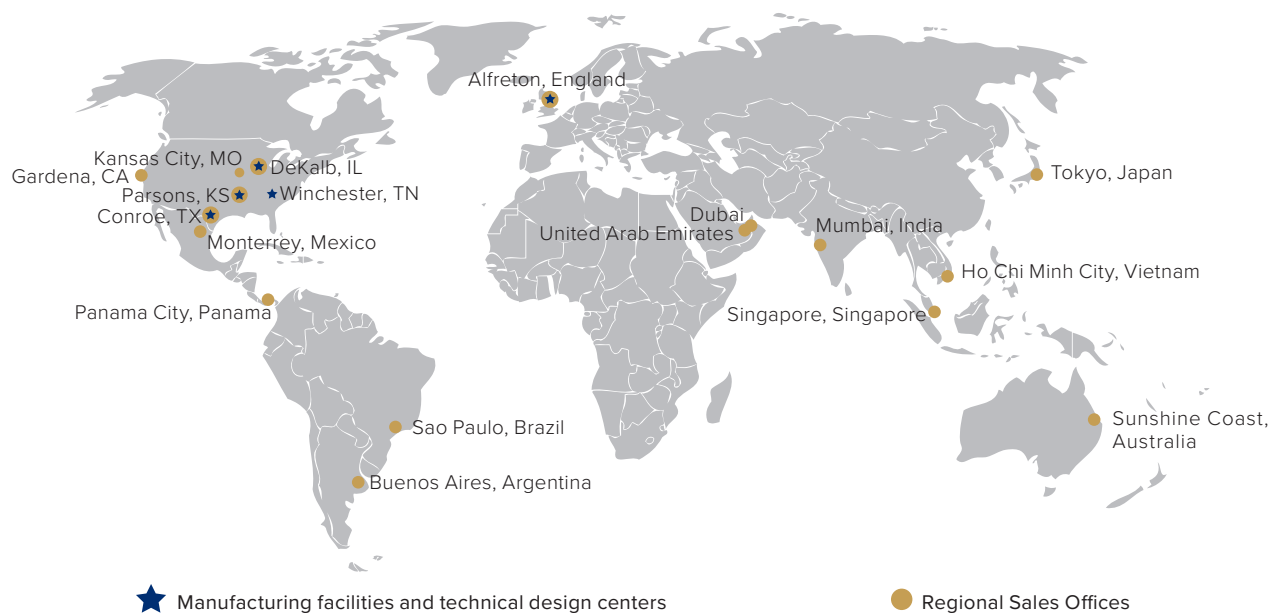
- Tan Cobalt Blue *Light Green *Light Blue
 White *Grey Forest Green

7 What tank accessories do you need? (List size or type with each selection, where applicable.)

- Overflow _____ Ladder _____ Inlet/Outlet Nozzle _____ Test Return _____ *Clean Out _____
 Roof Vent _____ Platforms _____ Ball Valve Housing _____ Protective Bolt Covers _____ *Spiral Stairway _____
 Roof Manway _____ Drain Connection _____ Pipe Brackets _____ *Thief Hatch _____

*Only available on engineered to order tanks.

CST is committed to providing its customers with the highest engineered quality, best service, longest product life and greatest value for every storage solution we supply. Contact CST for all your storage tank needs.



For more information, visit us online at cstindustries.com or call **+1 844-44-TANKS**.

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SCDC-BR-1904

