

# CSI Tank Sumps

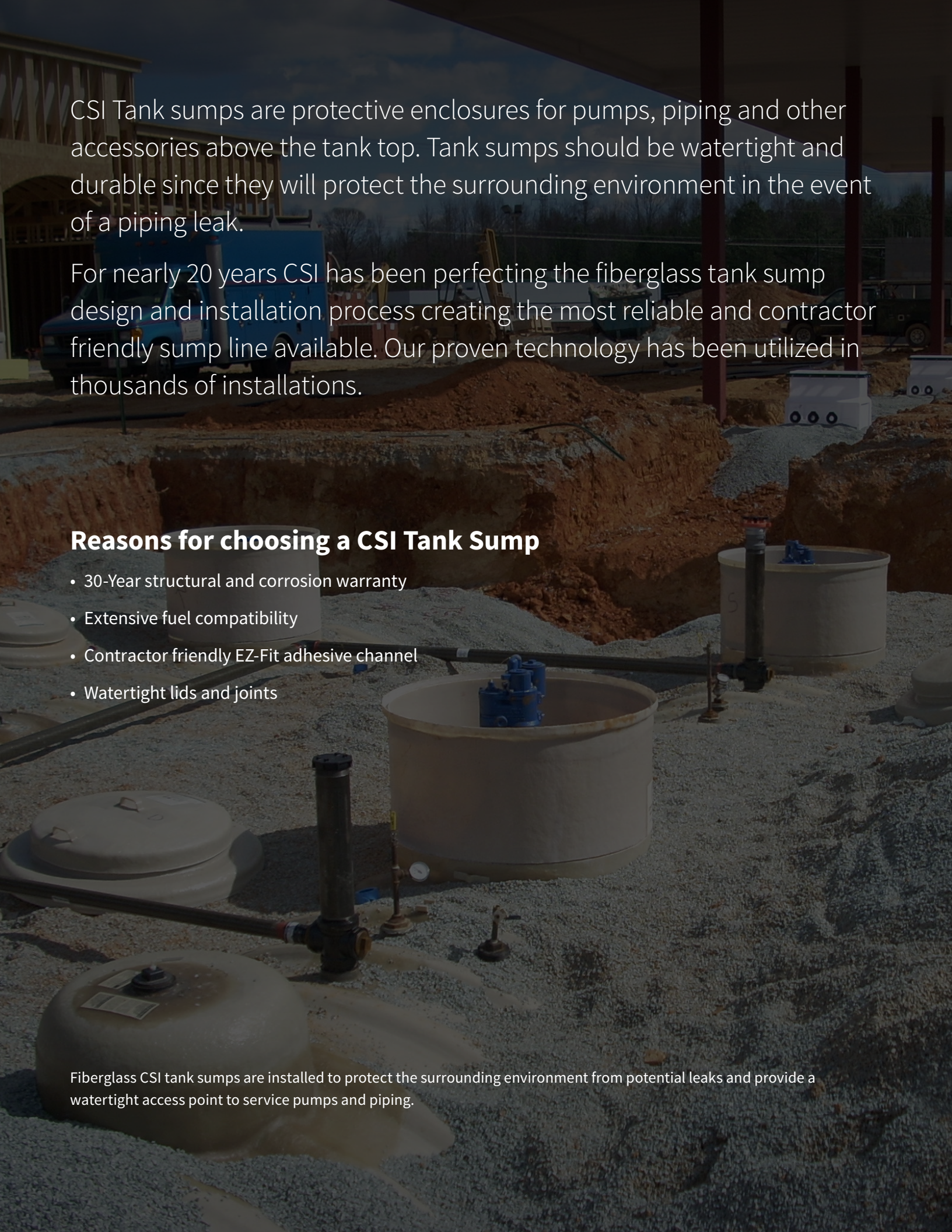
CONTAINMENT  
SOLUTIONS

CSI US PAT. NO. 6,006,390

98C01736SSR37

270 LBS

Fiber Glass Systems | 

A construction site showing several large, cylindrical fiberglass tank sumps installed in a trench. The sumps are light-colored and have various pipes and valves connected to them. The background shows a building under construction and some construction equipment.

CSI Tank sumps are protective enclosures for pumps, piping and other accessories above the tank top. Tank sumps should be watertight and durable since they will protect the surrounding environment in the event of a piping leak.

For nearly 20 years CSI has been perfecting the fiberglass tank sump design and installation process creating the most reliable and contractor friendly sump line available. Our proven technology has been utilized in thousands of installations.

### **Reasons for choosing a CSI Tank Sump**

- 30-Year structural and corrosion warranty
- Extensive fuel compatibility
- Contractor friendly EZ-Fit adhesive channel
- Watertight lids and joints

Fiberglass CSI tank sumps are installed to protect the surrounding environment from potential leaks and provide a watertight access point to service pumps and piping.

## Watertight Dependability

CSI single and double-wall tank sumps utilize a unique EZ-Fit adhesive channel, facilitating a permanent and watertight joint.

The joint allows sumps to be installed in manageable pieces making installation more convenient and avoiding confined space requirements.



Single-Wall Tank Sump Joint



Double-Wall Tank Sump Joint

## CSI Tank Sumps

### Full Line of Protection

Protecting your storage system and the surrounding environment starts with selecting the right storage tank but the tank only protects the product it contains. A complete fuel storage system should also include protecting the components that connect to the tank. Pumps and piping often require annual or semi-annual maintenance and testing. Once buried, the components are difficult to access and impossible to safeguard without watertight tank sumps.

CSI tank sumps are available in 42, 48, and 54 in. diameters.

### Single-Wall Tank Sumps

CSI tank sumps are manufactured using the same technology as our fiberglass tanks. We use a special blend of glass and resin which is carefully metered during fabrication to ensure a consistent wall thickness.

Most CSI non-corrosive fiberglass tank sumps are light enough to be installed without mechanical equipment, and all are durable enough to protect critical components for decades. Tank sumps typically fit on the same truck as the tank which reduce shipping expenses, and like our tanks, CSI sumps with EZ-Fit adhesive channels carry a 30-year structural and corrosion warranty, which is the most comprehensive coverage in the industry.

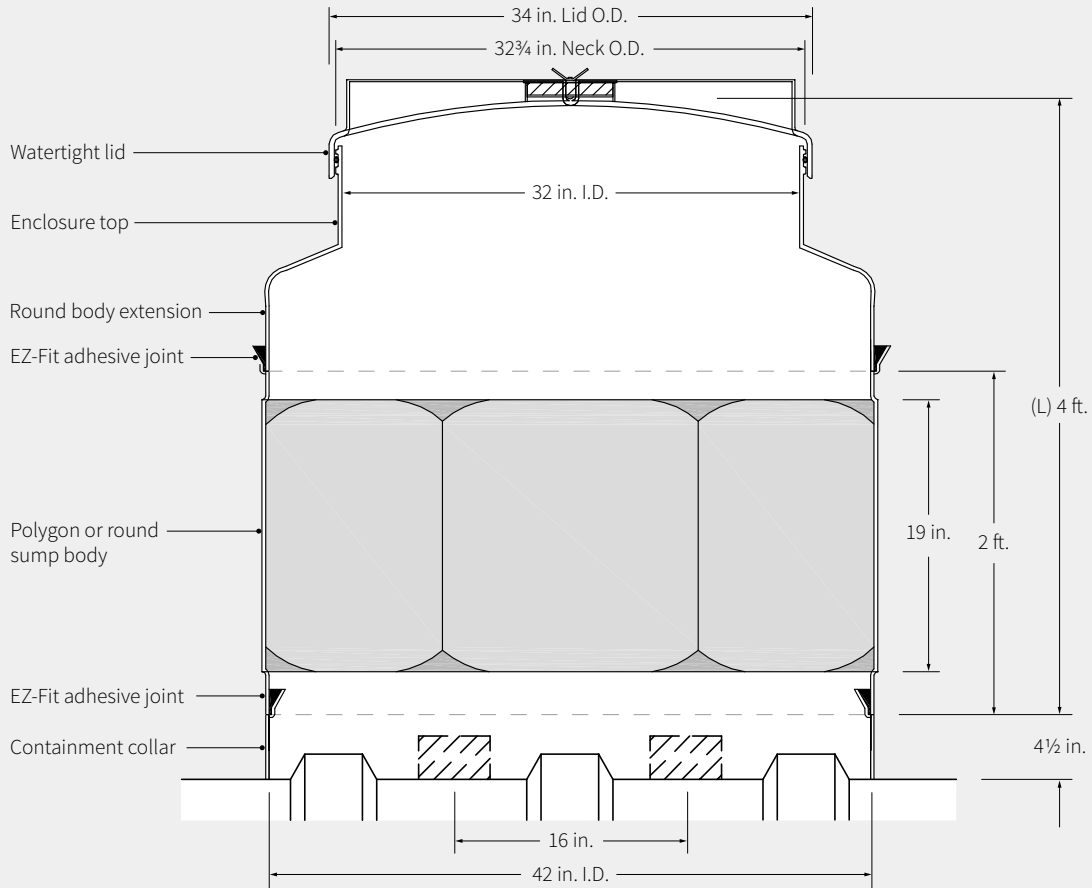
### Double-Wall Tank Sumps

Containment Solutions has earned a reputation for double-wall reliability as a result of our hydrostatic tank monitoring technology. We have simply adapted the same expertise to the fiberglass tank sump. CSI double-wall tank sumps were designed to satisfy current regulations while anticipating future requirements.

Competitor sumps bond the inner and outer sump walls with fiberglass fabrics which often cause communication errors triggering false alarms in the monitoring system. CSI double-wall sumps are built with 100% separation between sump walls. This open environment offers an unobstructed pathway for fluid monitoring which means 360° protection and true secondary containment.

# Typical Sump Design

**Single-Wall Tank Sump with Fill/Vapor Lid - Model: SW PTS (WT34) (FV 2/15/16) 42/8 - 4**



## Tank Sump Options

	··· Single-Wall (SW) or ··· Double-Wall (DW) ··· construction	··· Watertight Lid (WT) ··· 34 in. O.D. ··· 40 in. O.D.	··· Sump diameter ··· 42, 48, or 54 in. ··· 8 flat panels on polygon base				
<b>Model</b>	<b>SW</b>	<b>PTS</b>	<b>(WT34)</b>	<b>(FV 2/15/16)</b>	<b>42/8</b>	<b>-</b>	<b>4</b>
		··· Polygon Tank Sump (PTS) ··· Round Tank Sump (RTS)		··· Fill/Vapor Cuff orientation: 1st number - # of cuffs 2nd number - size of cuff O.D. 3rd number - radius of cuffs			··· Total length (L) of body Extension, enclosure top and lid RTS - 3', 4', 5', 6', 7' PTS - 3', 4', 5', 6', 7'

## Containment Collars

The protection of storage system components above the tank top begins with the containment collar. CSI containment collars are factory bonded to the tank wall and are available in single and double-wall models. The containment collars are built to fit CSI tank sumps and come with an EZ-Fit adhesive channel for hassle free installation. Double-wall containment collars, when combined with CSI

double-wall sumps will continuously monitor the entire containment area for leaks from tank top to grade providing secondary containment for spilled liquids.

## Polygon Body

Containment Solutions tank sump bodies are available in both round and polygon shapes. Polygon body styles are octagonal with 8 flat sides which allows piping to penetrate the sump at 45° and 90° angles. Electrical connections, submersible pumps, anything protected by the sump can be accessed easier using a flat-paneled polygon sump body.

## Round Body Extension and Enclosure Top

Round fiberglass sump body extensions are available in one foot increments to accommodate the final tank burial depth.

The enclosure top is a factory bonded transition point from the body extension to the lid and includes a watertight gasket. The enclosure top and lid are designed to fit inside standard manholes at grade.

On hydrostatic double-wall models, the enclosure top includes a built in reservoir which houses a sensor for electronic monitoring.



Fill/Vapor lids come in two popular cuff sizes and include an observation port as a standard feature.

## Testable Sump Lid

Watertight tank sumps are vacuum testable with the purchase of a testable sump lid. The ability to vacuum test is an efficient way of managing periodic sump testing and avoids costly disposal expenses of traditional integrity tests.

The lid is equipped with quick-connect fittings exclusively designed for the CSI Watertight Test Kit. The kit includes a vacuum gun, gauge, and a bi-metal thermometer to monitor temperature change during the test.



# Watertight Lids

## Watertight Sump Lid Assemblies

Selecting the right single-wall or double-wall tank sump has never been easier. You simply choose the sump dimensions and level of protection you need for your project and then choose the lid based on the tank configuration.

## Turbine Tank Sump Lids

Turbine tank sump lids are used at the submersible turbine end of the tank when access is infrequent and the area must be watertight. The turbine lid is made of rigid fiberglass and fits into place by simply pushing down on the lid.

## Fill/Vapor Tank Sump Lids

Fill/Vapor tank sump models are available for the fill end of the tank when multi-port manholes are used. We offer two access opening options to accommodate the most popular shroud boots and spill containment systems. 40 in. Quad Fill lids are also available for 48 in. and 54 in. tank sumps, contact a representative for more information.

All configurations include an observation port allowing easy access for internal sump inspections.

## Water Tested and Watertight

Each lid assembly is tested to 1' of hydrostatic head pressure to ensure a watertight seal. Accessing a 34 in. lid (any model) is possible through a standard 36 in. manhole, and 40 in. lids through 42 in. manholes.



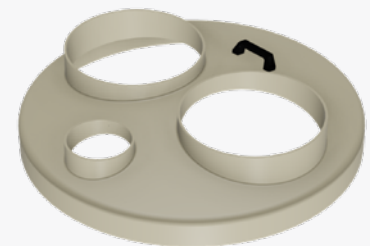
Photo caption: The observation port is a convenient access point to inspect the monitoring sensor on double-wall sump models and perform a visual inspection of the sump interior.



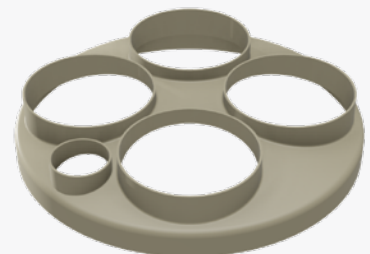
Turbine Lid



Fill/Vapor Lid  
with 15 in. access openings  
and 6 in. observation port



Fill/Vapor Lid  
with 13 in. access openings  
and 6 in. observation port



Quadfil Lid



## Installation

### Simple Steps to Install:

1. Sand and clean all joint mating surfaces
2. Position sump on collar
3. Add catalyst to adhesive and thoroughly mix
4. Pour adhesive into grout bag

5. Using the grout bag, fill channel with adhesive making 2 consecutive 360° passes around each channel
6. Smooth adhesive, filling any gaps
7. Allow adhesive to cure 24 hours without moving the joined parts

**Follow the same procedures for all adhesive channels.**

### The Adhesive Channel is the Key

Engineers might specify a CSI tank sump for a number of reasons including the impressive 30-year warranty, but contractors prefer CSI sumps for the ease of installation.

Each sump section is manufactured with an EZ-Fit adhesive channel which has enough room for the adjoining sump component and our adhesive mix which seals and hardens, creating a permanent joint. This new joint is leak free and watertight. The two part design eliminates the need to perform a confined space entry on deeper burials.



With our adhesive kits (Kit-AD), a permanent watertight connection has never been easier.

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