

S8/WT, S8-390/WT Tank Sump Systems



STOP

(Inspecting Parts and Achieving Correct Sump Height)



DO NOT STORE SUMPS ON THEIR SIDES PRIOR TO INSTALLATION

Failure to follow this instruction may cause the sumps to deform and become "out of round." Store sumps on either round end to prevent this from happening.

Using the packing list and the drawing on the front page of these instructions as a reference, confirm that all sumps, manholes and related parts and accessories have been received.

Install string lines at finished grade level (manhole grade level) across the length and width of the tank farm (as shown below) in order to accurately measure the distance from grade level to the tank top.



Place the sump base onto each of the tank manways and place the corbels onto the sump bases ("dry fit" the sump bases and corbels at this stage). Use a marker to mark each sump to reflect the tank it is installed on. Measure the distance from grade level to the top of the sump corbel for each sump and note the measurement in a log or on the side of the sump. Compare each measurement against the measurement chart in Instruction 4 below and take the appropriate action.



Refer to this measurement chart;

Distance from Grade Level	Action
Min. 8" Max. 12"	No trimming or extensions required, proceed with installation.
Less than 8"	Sump base only (do not trim corbel) must be trimmed to allow for minimum 8" clearance – follow instructions on next page.
	Do not trim more than 13" from sump base – contact distributor for shorter base if required.
More than 12"	Install 12" extension to sump base – contact distributor and order S8-EXT12 extension. Follow "Bonding the Extension" instructions.







As shown in the drawing to the right, the top of the tank sump corbel must be approximately 8" to 12" below finished grade. In the example shown in the drawing, the top of the sump corbel is only $2 \frac{1}{2}$ " below grade level. As a result, the sump base will need to be trimmed down by at least 5 $\frac{1}{2}$ ".





As shown in the drawing to the right, mark the trim line on the sump base using an indelible marker make sure to mark a level line on the tank sump for cutting (use a locked tape measure as shown). If the line is not level, re-measure and re-mark until the marked line is correct and level. The sump and corbel will not seal properly if the cut is jagged or uneven.





- Use an appropriate cutting tool and blade such as a diamond blade cutter (as shown in the drawing) to ensure that the sump is cut evenly.
- A jagged or uneven cut made with a reciprocating saw will be difficult to seal when the corbel is installed.

INSTALLATION INSTRUCTIONS (Sump Installation)



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Clean the tank connection flange and ensure it is free of all grit etc. Check for flatness and deformation as this can cause the sump to become distorted or fail to seal. If in doubt contact our technical department (860) 599-6081.



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Remove protective cover from base of chamber and position chamber onto tank flange, aligning the holes. Ensure the seal on the base of chamber is not damaged and is free from grit etc.



10

Fit a bolt and washer into each of the 24 holes (use only those supplied). Fit a washer and nut to each of the bolts. Tighten each bolt to 13.5Nm/10lbft torque, employing the following method, to avoid distortion of chamber.



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Starting with any bolt tighten to 7Nm/5lbfft torque. Move to the bolt positioned at 180° and tighten to 7Nm/5lbffttorque. Move 180° plus one bolt pitch and tighten to 7Nm/5lbfft of torque. Repeat until all bolts are tightened to 7Nm/5lbfft torque. Now repeat the procedure tightening all bolts to 13.5Nm/10lbfft torque.

Note: The seal will initially relax and it is an advantage if each bolt is tighten to 13.5Nm/10lbfft torque after a period of 24 to 48 hours after initial assembly.









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If a tank flange sealant collar (as shown to the right) is installed on the tank flange, it should be filled with approximately 2 gallons of Fibrelite CM200PF sealant. The sealant should be installed after the Fibrelite S8 reverse flange tank sump has been installed on the tank flange as set forth in steps 8-11.



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The inside surface of the tank flange sealant collar must be sanded or abraded to ensure that the sealant will adhere to it. The mating surface of the S8 reverse flange tank sump is factory sanded – it should be cleaned prior to pouring the sealant.



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Each tank flange sealant collar will require 2 kits of CM200PF sealant (approximately 2 gallons total). If the outside temperature is below 60°F, the sealant must be kept warm until just prior to installation (keep it in a heated area at approximately 68°F). Do not install the sealant in the rain or if rain is expected in the next 24 hours.



(Pouring Tank Flange Sealant Collar)





mixed as set forth in the follow steps. The two part cold poured sealant consists of one large tin pack A and one small tin pack B. The combined contents of pack A and B is 1 gallon so repeat twice to get the two gallons.



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Using the provided plastic cup, carefully pour the mixed sealant into the sealant channel. Allow the sealant to self-level so that it fills the entire channel. Do not overfill and clean any spilled sealant off the tank flange before it cures. Allow 24 hours for the sealant to cure before testing.







in two stages.



NOTE : When backfilling ensure the pipework is not disturbed. **WARNING :** Do not backfill until the sump has been vacuum tested.

INSTALLATION INSTRUCTIONS (Pipe seal kits fitting instructions)





NB. Where appropiate, it is recommended that a drill piloted hole saw be used to cut the pipe/cable seal entry hole in the chamber.

The exit position of the pipework through the chamber wall must be as close as possible to 90°. The pipe kit should be fitted so that the pipework is centrally positioned to the seal. When backfilling ensure that the pipework is not disturbed from this central position.



(Conduit entry seal kit installation guide)



24 PEC KITS

Refer to pipe entry boot instructions on positioning of the hole.

Conduit must be installed at 90° angle to the side wall.

Use Fibrelite entry seal kit model PEC/32 to fit UPP + NUPI 32mm conduit.

PEC/27, PEC/33, PEC/50 to fit metal conduit sizes $\frac{3}{4}$ ", 1" and $\frac{1}{2}$ " respectively.





NB: Use the correct size drill piloted hole saw for each entry kit. The cable entry seal must be fitted perpendicular to the chamber wall and the conduit must enter the entry kit perfectly aligned. When backfilling ensure the conduit is not disturbed.

ENTRY KIT	HOLE SIZE
PEC-27	Ø2"
PEC-32	Ø2"
PEC-33	Ø2 ³ /8"
PEC-50	Ø2 ⁷ /8"



25 After all piping and conduit penetration fittings have been installed into the sump base, the sump may be tested using either vacuum or hydrostatic testing.

Refer to Fibrelite's "Sherlock Vacuum Testing Procedures" or "Hydrostatic Testing Procedures" for more details on testing.



(Bonding the extension to the sump base)

(Bonding the corbel to the sump base or extension)

30 Prepare the mating surfaces of the tank sump base (or extension) and the downward facing groove on the corbel (as shown at right).

Use heavy grit sandpaper to ensure that the fiberglass surface is exposed. After sanding, clean both surfaces using acetone (or equivalent solvent).

Dry fit the corbel on the sump to ensure it fits - push corbel groove onto sump wall,

If the corbel does not fit properly onto the sump wall, measure the inside diameter of the sump walls (as shown to the right). The measurement should be between 45 $^{1\!/_2"}$ and 46" (+/- $^{1\!/_4"}$). If the measurement is not within these specifications, the sump may have become out-of-round due to improper storage or installation.

32 To fix an out-of-round sump base, first find the shortest distance between any 2 sump walls. Using a wooden 2x4 cut to 45 1/2" length, install the 2x4 at an angle into the sump and use it to brace out the sump walls to the correct size. Repeat this process on all sump walls to return the sump to its correct size.

34 Place the corbel on the sump using 2 people and push it into

position.

45 1/2"

33 Apply 2 tubes of sealant in the groove of the corbel. Sealant should fill half the groove.

35 Seal around the inside edge of the corbel joint from inside the sump. Smooth off the sealant with soapy water.

36 Seal around the outside joint and smooth off sealant with soapy water. Note: If also fiberglassing the outside corbel joint as set forth in steps 29 to 34 , clean off any residual sealant on the flat surface of either the corbel lip or the top of the sump base.

(Optional - Fiberglassing the corbel to the sump base)

(Performing Corbel Vacuum Test)

- 43 Wait a min of 12 hours before vac testing, preferably overnight to allow sealant to set before vacuum testing.

Do not disturb the sump during this time.

44 Ensure all pipework and electrical entries have been completed before vacuum testing, this is a final test for all penetrations in the sump.

Warning: Test the corbel at a 24" depth setting only or irreparable damage may occur.

Refer to vacuum testing instructions for correct method.

Installation of Watertight Lids: Once the sumps are properly installed and tested, the watertight lids should be installed to ensure that the lids fit properly onto the stainless steel retaining rings.

NOTE : If the T-handle cannot be fully engaged or if the lid is not compressing the gasket tightly against the stainless steel ring, it may be necessary to adjust the nut at the base of the cam-lock latch. If this is the case, contact Fibrelite technical support at (860) 599-6081.

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Once the sump and corbel have successfully passed vacuum or hydrostatic tightness testing, the area around the sump can be carefully backfilled with peagravel or sand. Back-fill equally around the sump in layers to prevent damage or deformation.

(Installing the Skirt & Frame to Grade Level)

NOTE : This section is only relevant if installing FL90 manhole covers. Please skip if installing any other manhole cover.

Ensure the void between corbel and skirt is kept free from concrete and a depth of 3 1/2" overlap minimum is maintained.

Ensure foam spacers are in position to locate the skirt centrally around the corbel.

52 Complete backfilling to appropriate level. Frame must be supported by a minimum depth of 8" of concrete

Concrete reinforcement must be positioned as close to the frame as possible. Minimum block of 20" square around the frame. Joint must be tied as per diagram. Continuous pour preferred if possible.

VERY IMPORTANT

To allow for drainage, Fibrelite recommends that the concrete be sloped away from the top outer edge of the frame (\overline{A}) a minimum of $\frac{1}{2}$ over a 12" distance. Do not expose the top outer edge of the frame (A) - the concrete pad must be flush with the top outer edge of the frame.

S8-390 WT INSTALLATION

53 After minimum concrete cure time, hangers can be removed. Loosen the 'T' knob, push down on the rod, turn the rod through 90° and pull rod up to remove.

Complete other third party equipment installation inside the sump.

(Final Testing)

Optional vacuum test on corbel.

Once completed a final test can be performed.

Warning: Test the corbel at 24" depth setting only or irreparable damage may occur.

