INSTALLATION INSTRUCTIONS S16-390 and S16-3100 Tank Chamber Systems





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: + 44 (0) 1756 799 773



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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.



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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.





When backfilling ensure the pipework is not disturbed. Do not backfill until the sump has been vacuum tested. (Pipe Sealkit Fitting Instructions)







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)

9b 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.

(Conduit Entry Seal Kit Installation Guide)

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

INSTALLATION INSTRUCTIONS (Sump Vacuum Test)

10 After penetrations have been fitted, ensure all connections on the manway lid are sealed. Perform vacuum test. Refer to Vacuum test instructions.

Do not backfill around sump or cut material off the sump until the test has passed successfully.

INSTALLATION INSTRUCTIONS

(Achieving the Correct Height)

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Fix string lines 10mm above grade level across the sump - across length and width of the tank farm to highlight any falls.

2 Place the corbel onto the sump (only 'dry fit' the corbel do not bond at this stage). Check the measurement from the top of the corbel to the string line, which is set 10mm above the general grade level. Check all sides of the sump and select the largest and smallest measurement to take account of falls across the forecourt.

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IMPORTANT

Refer to this measurement chart;

| Measurement (clearance dimension) | Action | |
|--------------------------------------|--|--|
| Max. 325mm Min. 225mm | No trimming required, corbel can be bonded onto the sump. Adjust frame height using hangers. | |
| less than 225mm | Option 1: If by trimming material (max of 175mm) from the corbel turret increases the 'clearance dimension' into the 325 - 225mm range then material only needs to be trimmed from the corbel turret and skirt. Trim the skirt so that the overlap between the corbel turret and skirt is between 90 and 120mm. | |
| | Option 2: If by trimming 175mm from the corbel turret does not bring the 'clearance dimension' into the 325 - 225mm range then the remaining material must be removed from the sump. A maximum of 450mm can be removed from the sump. Trim the corbel and skirt as described above in option 1. | |
| more than 325mm | The burial depth of the tank is greater than the maximum burial depth of the standard S16-3100 sealed system. Bond a 300mm extension onto the sump. Then proceed as above. | |

See page 10 for extension bonding instructions

INSTALLATION INSTRUCTIONS

(Achieving the Correct Height)

Before trimming the sump check pipe entry positions allow 50mm from top edge to be able to fit the corbel in position.

If necessary cut a smaller amount off the sump height, then cut the remaining material from the corbel and skirt.

Important Note: Trim the corbel and skirt so that the clearance from the top of the frame to the top of the corbel falls in the range 225 to 325mm and that the overlap between the skirt and corbel ranges between 90 and 120mm.

Ensure that you have a min overlap of 90mm between the skirt and corbel, to allow space to install the seal kit.

NB. On installations with very high water tables (up to concrete pad) refer to special instructions, overlap increases to 120mm.

WARNING Do not trim sump until sump has been vacuum tested with pipework installed and completed.

INSTALLATION INSTRUCTIONS

(Bonding the Extension / Chamber)

Apply a fillet of adhesive sealant (same nozzle size) to the external horizontal joint and smooth off.

Abrade and wipe with a degreasing solvent the chamber or extension top edge/wall and the corbel groove.

- Dry fit the corbel on the sump to ensure it fits push corbel groove onto sump wall. If it does not fit, pipework may have distorted the
 - If it does not fit, pipework may have distorted the sump wall shape.

22 Measure distance between opposite walls, this should be 1516mm. If less than this you will need to brace out the sump.

Using wooden batons (1516mm \pm 5mm long) with timber spreader plates (150 x 150) to spread the load, brace out the sump to the correct size.

Repeat this process on all walls to get the correct shape.

23 Apply 2 tubes of soudaflex 40fc sealant in the groove of the corbel. Sealant should fill 1/2 the groove.

INSTALLATION INSTRUCTIONS (Bonding the Corbel)

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 - Seal around the inside edge of the corbel joint from inside the sump. Smooth off the sealant with soapy water.
 - Use 1.5 tubes of soudaflex 40fc sealant.

- Seal around the outside joint and smooth off sealant with soapy water.
 - Use 1.5 tubes of 40fc sealant.

(Performing Corbel Vacuum Test)

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Once the corbel test has been performed with a PASS result, 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.

(Installation of Corbel / Skirt Sealant)

33 Ensure the void between corbel and skirt is kept free from concrete and a depth of 90mm overlap minimum is maintained, (120mm on high water table installations).

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

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Complete backfilling to appropriate level. Frame must be supported by a minimum depth of 200mm of concrete

Concrete reinforcement must be positioned as close to the frame as possible. Minimum block of 500mm square around the frame. Joint must be tied as per diagram. Continuous pour preferred if possible.

CONCRETE RAMPED AWAY OVER 300MM.

VERY IMPORTANT OUTER EDGE "A" OF FRAME SET 5 - 10MM

ABOVE GENERAL FORECOURT AREA WITH

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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.

(Installation of Corbel / Skirt Sealant)

(Installation of Corbel / Skirt Sealant)

10 Mixing and Application

Application Temperature +5 to +45°C

(Do not apply at temperatures below +4 degrees °C)

| Pot Life | 45 minutes @ 25°C | |
|-------------------|-------------------|----------|
| Cure Times @ 25°C | Tack Free | 2 1/2hrs |
| | Full Cure | 2 days |

Using a suitable container stir the contents of Pack B and add the entire contents to Pack A to give a combined content of 4.5Ltrs. Ensure white sediment from can B is put into can A before mixing. Stir for a full 5 minutes using a slow speed electric drill (400 -500 rpm) with a mixer paddle until a completely homogeneous mix is obtained. Take care to avoid including excess air. Mixing is made easier if the Pack B is added and mixed in two stages.

WARNING If white sediment is not added to mixture, or contents are not mixed thoroughly using an electric mixer - the sealant will not set and will need replacing

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1 set of cans A+B will seal 2 sumps. Decant mixture from can A into can B to have more control when puring the mixture into the void, onto the sand base. Avoid spilling the contents to ensure a clean finish on the side walls of corbel and skirt. The sealant shall be poured to level 30mm below the top edge of the Corbel (the amount of sealant required is dependant on the height of the system but should be between 1.5 and 1.7 Litres).

When the sealant is tack free the bottle hanger may be fitted. Ensure that when the bottle hanger is fitted the water will drain down the spout.

Mark out the position of the two holes to be drilled 24mm down from the top edge of the Corbel and 60mm cross centre. Drill the two Ø7mm holes into the Corbel walls.

Also mark out the position of the drain hole to align with the hole in the drain spout and drill 1 No. Ø16mm through the corbel wall.

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Ensure the rubber gasket is fitted to the mating surface of the bottle hanger. Secure the Bottle Hanger to the Corbel wall with 2 No. M6 x 15 Dome Head Screws and Washers.

Locate the Condensation Bottle into the Bottle carrier and suspend the Bottle Carrier from the Bottle Hanger.

45 Do not install the internal lid until the sealant has set. Wait overnight.

46 Test completed system.

Warning: Test the corbel at a 0.6m depth setting only or irreparable damage may occur.

When testing at this stage the drain hole which is drilled in the corbel turret must be blanked off to achieve a test.

